

Aerolinas Argentinas

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
CHAPTER 25 TAB EQUIPMENT/FURNISHINGS			25-00-11		CONT.	25-10-0		
			236	AUG 01/06	01	1	DEC 01/04	01
			237	DEC 01/04	01	2	DEC 01/04	09
			238	DEC 01/04	01	25-11-0		
			239	DEC 01/04	01	1	DEC 01/04	05
			240	DEC 01/04	01	2	DEC 01/04	04
			241	DEC 01/04	01	3	DEC 01/04	04
			242	DEC 01/04	01	4	DEC 01/04	03
			243	DEC 01/04	01	5	DEC 01/04	01
			244	DEC 01/04	01	6	DEC 01/04	01
			245	AUG 01/06	01	25-11-11		
			246	DEC 01/04	01	401	DEC 01/04	01
			247	DEC 01/04	01	402	DEC 01/04	01
			248	DEC 01/04	01	25-11-21		
			249	DEC 01/04	01	401	DEC 01/04	01
			250	BLANK		402	DEC 01/04	03
25-CONTENTS			25-09-100			25-11-31		
R 1	AUG 01/07	ARG.1	1	DEC 01/04	01	201	DEC 01/04	01
R 2	AUG 01/07	ARG.1	2	DEC 01/04	11	202	DEC 01/04	01
R 3	AUG 01/07	ARG.1	3	DEC 01/04	11	25-14-0		
R 4	AUG 01/07	ARG.1	4	DEC 01/04	11	1	DEC 01/04	04
R 5	AUG 01/07	ARG.1	5	DEC 01/04	10	2	DEC 01/04	04
R 6	AUG 01/07	ARG.1	6	DEC 01/04	09	3	DEC 01/04	03
R 7	AUG 01/07	ARG.1	7	DEC 01/04	07	4	BLANK	
R 8	AUG 01/07	ARG.1	8	BLANK		25-14-11		
R 9	AUG 01/07	ARG.1	25-09-111			401	DEC 01/04	01
10	AUG 01/06	ARG	201	AUG 01/05	10	402	DEC 01/04	01
R 11	AUG 01/07	ARG.1	202	DEC 01/04	11	25-14-21		
R 12	AUG 01/07	ARG.1	203	DEC 01/04	11	401	DEC 01/04	01
25-00-11			204	DEC 01/04	11	402	DEC 01/04	01
201	AUG 01/06	01	205	DEC 01/04	11	25-15-0		
202	AUG 01/06	01	206	BLANK		1	DEC 01/04	01
203	DEC 01/04	01	25-09-121			2	BLANK	
204	AUG 01/06	01	201	AUG 01/05	10	25-16-0		
205	DEC 01/04	01	202	DEC 01/04	10	1	DEC 01/04	01
206	DEC 01/04	01	203	DEC 01/04	10	2	DEC 01/04	01
207	DEC 01/04	01	204	DEC 01/04	10	3	DEC 01/04	01
208	AUG 01/06	01	205	DEC 01/04	10	4	DEC 01/04	01
209	AUG 01/06	01	206	BLANK		25-16-11		
210	AUG 01/06	01	25-09-131			401	DEC 01/04	01
211	DEC 01/04	01	201	AUG 01/05	01	402	DEC 01/04	01
212	AUG 01/06	01	202	DEC 01/04	10	25-16-21		
213	DEC 01/04	ARG	203	DEC 01/04	10	401	AUG 01/06	01
214	DEC 01/04	01	204	DEC 01/04	10	402	AUG 01/06	01
215	AUG 01/06	01	205	DEC 01/04	10	403	AUG 01/06	01
216	DEC 01/04	01	206	BLANK		404	AUG 01/06	01
217	AUG 01/06	01	25-09-141			405	AUG 01/06	01
218	DEC 01/04	01	201	AUG 01/05	01	406	BLANK	
219	DEC 01/04	01	202	DEC 01/04	10	25-10-0		
220	DEC 01/04	01	203	DEC 01/04	10	1	DEC 01/04	01
221	DEC 01/04	01	204	DEC 01/04	10	2	DEC 01/04	09
222	DEC 01/04	01	205	DEC 01/04	10	25-11-0		
223	AUG 01/06	01	206	BLANK		1	DEC 01/04	05
224	AUG 01/06	01	25-09-111			2	DEC 01/04	04
225	AUG 01/06	01	201	AUG 01/05	10	3	DEC 01/04	04
226	AUG 01/06	01	202	DEC 01/04	10	4	DEC 01/04	03
227	AUG 01/06	01	203	DEC 01/04	10	25-11-11		
228	AUG 01/06	01	204	DEC 01/04	10	401	DEC 01/04	01
229	AUG 01/06	01	205	DEC 01/04	10	402	DEC 01/04	01
230	AUG 01/06	01	206	BLANK		25-11-21		
231	DEC 01/04	01	25-09-121			401	DEC 01/04	01
232	DEC 01/04	01	201	AUG 01/05	01	402	DEC 01/04	01
233	DEC 01/04	01	202	DEC 01/04	10	25-14-0		
234	DEC 01/04	01	203	DEC 01/04	10	1	DEC 01/04	04
235	AUG 01/06	01	204	DEC 01/04	10	2	DEC 01/04	04
			205	DEC 01/04	10	3	DEC 01/04	03
			206	BLANK		4	BLANK	

R = REVISED, A = ADDED OR D = DELETED  
F = FOLDOUT PAGE  
30  
AUG 01/07

D6-12030

CHAPTER 25  
EFFECTIVE PAGES  
PAGE 1  
CONTINUED

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

Aerolineas Argentinas

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
25-16-21			25-21-31			25-21-82		CONT.
801	AUG 01/06	01	401	DEC 01/04	03	407	DEC 01/04	06
802	BLANK		402	DEC 01/04	03	408	DEC 01/04	06
25-16-31			25-21-41			25-21-91		
401	DEC 01/04	01	401	DEC 01/04	03	401	DEC 01/04	13
402	AUG 01/06	01	402	DEC 01/04	08	402	DEC 01/04	14
25-16-41			403	DEC 01/04	07	403	DEC 01/04	14
401	DEC 01/04	01	404	DEC 01/04	04	404	DEC 01/04	14
402	DEC 01/04	01	405	DEC 01/04	04	405	DEC 01/04	14
25-19-0			406	DEC 01/04	04	406	DEC 01/04	12
1	DEC 01/04	01	407	DEC 01/04	02	407	DEC 01/04	12
2	DEC 01/04	01	408	BLANK		408	DEC 01/04	12
25-20-0			25-21-51			409	DEC 01/04	10
1	DEC 01/04	ARG	401	DEC 01/04	04	410	BLANK	
2	DEC 01/04	20	402	DEC 01/04	04	25-21-92		
3	DEC 01/04	16	25-21-51			401	DEC 01/04	03
4	BLANK		801	DEC 01/04	03	402	DEC 01/04	05
25-20-01			802	DEC 01/04	03	403	DEC 01/04	05
1	DEC 01/04	02	803	DEC 01/04	03	404	DEC 01/04	05
2	DEC 01/04	09	804	DEC 01/04	03	405	DEC 01/04	04
25-20-100			25-21-61			406	DEC 01/04	03
1	DEC 01/04	01	401	DEC 01/04	ARG	407	DEC 01/04	05
2	BLANK		402	DEC 01/04	03	408	DEC 01/04	06
25-21-0			403	DEC 01/04	04	409	DEC 01/04	04
1	DEC 01/04	03	404	BLANK		410	BLANK	
2	DEC 01/04	03	25-21-71			25-21-101		
3	DEC 01/04	05	401	DEC 01/04	04	401	DEC 01/04	03
4	DEC 01/04	06	402	BLANK		402	DEC 01/04	03
25-21-11			25-21-71			25-21-111		
401	DEC 01/04	03	801	DEC 01/04	03	401	DEC 01/04	03
402	DEC 01/04	03	802	BLANK		402	DEC 01/04	03
25-21-21			25-21-81			403	DEC 01/04	03
401	DEC 01/04	ARG	401	DEC 01/04	12	404	BLANK	
402	DEC 01/04	03	402	DEC 01/04	08	25-21-300		
403	DEC 01/04	03	403	DEC 01/04	13	1	DEC 01/04	ARG
404	BLANK		404	DEC 01/04	14	2	DEC 01/04	08
25-21-25			405	DEC 01/04	15	3	DEC 01/04	08
401	DEC 01/04	01	406	DEC 01/04	15	4	DEC 01/04	05
402	DEC 01/04	09	407	DEC 01/04	15	5	DEC 01/04	06
25-21-25			408	DEC 01/04	14	6	BLANK	
701	DEC 01/04	01	409	DEC 01/04	14	25-21-311		
702	DEC 01/04	07	410	DEC 01/04	14	401	DEC 01/04	04
25-21-25			411	DEC 01/04	14	402	DEC 01/04	04
801	DEC 01/04	03	412	BLANK		403	DEC 01/04	04
802	DEC 01/04	03	25-21-82			404	BLANK	
			401	DEC 01/04	01	25-21-313		
			402	DEC 01/04	05	401	DEC 01/04	06
			403	DEC 01/04	05	402	DEC 01/04	13
			404	DEC 01/04	03	403	DEC 01/04	01
			405	DEC 01/04	03	404	BLANK	
			406	DEC 01/04	05			

R = REVISED, A = ADDED OR D = DELETED  
F = FOLDOUT PAGE  
30  
AUG 01/07

D6-12030

CHAPTER 25  
EFFECTIVE PAGES  
PAGE 2  
CONTINUED

Aerolinas Argentinas

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
25-21-313			25-21-339		CONT.	25-21-361		CONT.
701	DEC 01/04	02	821	AUG 01/06	01	407	DEC 01/04	12
702	DEC 01/04	07	822	AUG 01/06	01	408	DEC 01/04	12
25-21-313			823	AUG 01/06	01	409	DEC 01/04	15
801	DEC 01/04	06	824	AUG 01/06	01	410	BLANK	
802	DEC 01/04	06	825	AUG 01/06	01	25-23-0		
25-21-315			826	BLANK		1	DEC 01/04	17
401	DEC 01/04	03	25-21-341			2	DEC 01/04	18
402	DEC 01/04	03	201	AUG 01/05	05	3	DEC 01/04	16
25-21-321			202	AUG 01/05	06	4	DEC 01/04	08
401	DEC 01/04	05	203	DEC 01/04	04	5	DEC 01/04	09
402	DEC 01/04	05	204	DEC 01/04	04	6	DEC 01/04	10
25-21-325			205	DEC 01/04	04	25-23-11		
401	DEC 01/04	05	206	AUG 01/05	05	201	DEC 01/04	03
402	DEC 01/04	08	207	DEC 01/04	04	202	DEC 01/04	03
403	DEC 01/04	03	208	DEC 01/04	03	203	DEC 01/04	03
404	DEC 01/04	01	209	DEC 01/04	03	204	DEC 01/04	03
25-21-331			210	BLANK		205	DEC 01/04	03
401	DEC 01/04	08	25-21-347			206	DEC 01/04	03
402	DEC 01/04	08	401	AUG 01/05	01	25-23-11		
25-21-335			402	AUG 01/05	01	401	DEC 01/04	03
401	DEC 01/04	05	403	AUG 01/06	01	402	DEC 01/04	03
402	DEC 01/04	05	404	AUG 01/06	01	403	DEC 01/04	03
25-21-339			405	AUG 01/06	01	404	DEC 01/04	03
401	AUG 01/05	06	406	BLANK		405	DEC 01/04	03
402	AUG 01/06	06	25-21-349			406	BLANK	
403	AUG 01/06	06	401	AUG 01/05	08	25-23-11		
404	AUG 01/06	06	402	AUG 01/06	06	701	DEC 01/04	03
405	AUG 01/05	06	403	AUG 01/06	06	702	BLANK	
406	AUG 01/05	06	404	AUG 01/06	08	25-23-11		
25-21-339			25-21-349			801	DEC 01/04	04
801	AUG 01/06	01	801	AUG 01/06	01	802	DEC 01/04	03
802	AUG 01/06	01	802	BLANK		803	DEC 01/04	03
803	AUG 01/06	01	25-21-351			804	BLANK	
804	AUG 01/06	01	401	DEC 01/04	17	25-23-31		
805	AUG 01/06	01	402	DEC 01/04	18	401	DEC 01/04	06
806	AUG 01/06	01	403	DEC 01/04	19	402	DEC 01/04	02
807	AUG 01/06	01	404	DEC 01/04	19	25-23-32		
808	AUG 01/06	01	405	DEC 01/04	19	401	DEC 01/04	01
809	AUG 01/06	01	406	DEC 01/04	18	402	DEC 01/04	01
810	AUG 01/06	01	407	DEC 01/04	17	25-23-41		
811	AUG 01/06	01	408	DEC 01/04	17	401	DEC 01/04	02
812	AUG 01/06	01	409	DEC 01/04	15	402	DEC 01/04	02
813	AUG 01/06	01	410	DEC 01/04	15	25-23-61		
814	AUG 01/06	01	411	DEC 01/04	15	401	DEC 01/04	01
815	AUG 01/06	01	412	DEC 01/04	15	402	DEC 01/04	01
816	AUG 01/06	01	25-21-361			25-23-61		
817	AUG 01/06	01	401	DEC 01/04	17	401	DEC 01/04	01
818	AUG 01/06	01	402	DEC 01/04	18	402	DEC 01/04	01
819	AUG 01/06	01	403	DEC 01/04	17			
820	AUG 01/06	01	404	DEC 01/04	18			
			405	DEC 01/04	17			
			406	DEC 01/04	16			

R = REVISED, A = ADDED OR D = DELETED  
F = FOLDOUT PAGE  
30  
AUG 01/07

D6-12030

CHAPTER 25  
EFFECTIVE PAGES  
PAGE 3  
CONTINUED

Aerolineas Argentinas

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
25-23-71			25-24-132			25-25-12		
401	DEC 01/04	04	401	DEC 01/04	04	201	DEC 01/04	08
402	DEC 01/04	11	402	DEC 01/04	04	202	DEC 01/04	04
403	DEC 01/04	02				203	DEC 01/04	04
404	BLANK		25-24-133			204	BLANK	
25-23-311			401	DEC 01/04	12	25-27-0		
201	DEC 01/04	03	402	DEC 01/04	12	1	DEC 01/04	07
202	DEC 01/04	03	403	DEC 01/04	08	2	BLANK	
203	DEC 01/04	03	404	BLANK				
204	DEC 01/04	03	25-24-141			25-27-100		
205	DEC 01/04	03	401	DEC 01/04	11	1	DEC 01/04	08
206	DEC 01/04	03	402	DEC 01/04	11	2	BLANK	
207	DEC 01/04	03						
208	DEC 01/04	03	25-24-142			25-27-100		
25-23-311			401	DEC 01/04	02	401	DEC 01/04	19
501	DEC 01/04	07	402	DEC 01/04	02	402	DEC 01/04	16
502	DEC 01/04	03				403	DEC 01/04	16
503	DEC 01/04	03	25-24-143			404	DEC 01/04	13
504	DEC 01/04	03	401	DEC 01/04	06	405	DEC 01/04	10
25-23-311			402	DEC 01/04	07	406	DEC 01/04	04
701	DEC 01/04	02	403	DEC 01/04	07	407	DEC 01/04	01
702	BLANK		404	BLANK		408	BLANK	
25-23-311			25-24-151			25-27-200		
801	DEC 01/04	02	401	AUG 01/05	01	1	DEC 01/04	14
802	DEC 01/04	02	402	AUG 01/05	01	2	BLANK	
803	DEC 01/04	02	403	AUG 01/05	01			
804	BLANK		404	AUG 01/05	01	25-27-211		
25-24-0			405	AUG 01/05	01	401	DEC 01/04	01
1	DEC 01/04	20	406	BLANK		402	DEC 01/04	01
2	DEC 01/04	20	25-24-311			403	DEC 01/04	01
3	DEC 01/04	15	401	DEC 01/04	07	404	DEC 01/04	01
4	DEC 01/04	09	402	DEC 01/04	07	405	DEC 01/04	07
5	DEC 01/04	09	403	DEC 01/04	07	406	DEC 01/04	01
6	DEC 01/04	05	404	BLANK		407	DEC 01/04	01
25-24-111						408	DEC 01/04	01
401	DEC 01/04	15	25-24-311			409	DEC 01/04	01
402	DEC 01/04	17	501	DEC 01/04	02	410	BLANK	
403	DEC 01/04	13	502	DEC 01/04	02	25-27-271		
404	BLANK		503	DEC 01/04	02	401	DEC 01/04	02
25-24-121			504	BLANK		402	DEC 01/04	02
R 401	AUG 01/07	07.101	25-24-315			25-28-0		
R 402	AUG 01/07	07.101	401	DEC 01/04	10	1	DEC 01/04	01
25-24-122			402	DEC 01/04	07	2	DEC 01/04	14
401	DEC 01/04	03	25-24-381			25-28-0		
402	DEC 01/04	03	401	DEC 01/04	ARG	401	DEC 01/04	03
25-24-123			402	DEC 01/04	02	402	DEC 01/04	03
401	DEC 01/04	08	25-25-0			25-28-01		
402	DEC 01/04	08	1	DEC 01/04	20	1	AUG 01/05	09
			2	BLANK		2	AUG 01/05	08
						3	AUG 01/05	07
						4	AUG 01/05	02

R = REVISED, A = ADDED OR D = DELETED  
 F = FOLDOUT PAGE  
 30  
 AUG 01/07

D6-12030

CHAPTER 25  
 EFFECTIVE PAGES  
 PAGE 4  
 CONTINUED

Aerolneas Argentinas

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
25-28-11			25-31-151			25-40-6		CONT.
401	DEC 01/04	04	401	DEC 01/04	03	405	DEC 01/04	02
402	DEC 01/04	04	402	DEC 01/04	03	406	DEC 01/04	02
403	DEC 01/04	03						
404	BLANK		25-31-161			25-40-7		
			401	DEC 01/04	04	401	DEC 01/04	01
25-28-12			402	DEC 01/04	04	402	BLANK	
401	DEC 01/04	03						
402	DEC 01/04	05	25-31-271			25-40-8		
403	DEC 01/04	06	401	DEC 01/04	04	401	AUG 01/05	03
404	BLANK		402	DEC 01/04	04	402	AUG 01/05	03
						403	DEC 01/04	03
25-28-21			25-40-0			404	DEC 01/04	03
401	DEC 01/04	03	1	DEC 01/04	05	405	DEC 01/04	01
402	DEC 01/04	03	2	DEC 01/04	03	406	DEC 01/04	01
			3	DEC 01/04	05	407	DEC 01/04	01
25-28-31			4	DEC 01/04	05	408	DEC 01/04	03
201	DEC 01/04	01				409	DEC 01/04	02
202	DEC 01/04	01	25-40-0			410	BLANK	
203	DEC 01/04	01	601	DEC 01/04	01			
204	DEC 01/04	01	602	BLANK		25-40-9		
205	DEC 01/04	01				401	DEC 01/04	01
206	BLANK		25-40-1			402	DEC 01/04	01
			401	DEC 01/04	02			
25-28-31			402	DEC 01/04	02	25-41-11		
401	DEC 01/04	04	403	DEC 01/04	06	401	DEC 01/04	06
402	DEC 01/04	04	404	DEC 01/04	02	402	DEC 01/04	06
403	DEC 01/04	06	405	DEC 01/04	01	403	DEC 01/04	06
404	DEC 01/04	05	406	BLANK		404	BLANK	
25-28-31			25-40-2			25-42-11		
501	DEC 01/04	02	401	DEC 01/04	01	401	DEC 01/04	03
502	DEC 01/04	02	402	DEC 01/04	01	402	DEC 01/04	03
503	DEC 01/04	02	403	DEC 01/04	01	403	DEC 01/04	03
504	DEC 01/04	02	404	DEC 01/04	01	404	BLANK	
			405	DEC 01/04	01			
25-29-0			406	BLANK		25-51-0		
1	DEC 01/04	03				1	DEC 01/04	04
2	BLANK		25-40-3			2	DEC 01/04	01
			401	DEC 01/04	01			
25-31-0			402	DEC 01/04	01	25-51-01		
1	DEC 01/04	20				401	DEC 01/04	01
2	DEC 01/04	20	25-40-4			402	DEC 01/04	01
			401	AUG 01/05	01	403	DEC 01/04	01
25-31-51			402	DEC 01/04	01	404	DEC 01/04	01
401	DEC 01/04	15	403	AUG 01/06	01			
402	DEC 01/04	15	404	BLANK		25-51-01		
403	DEC 01/04	15				601	DEC 01/04	01
404	DEC 01/04	15	25-40-5			602	DEC 01/04	01
			401	DEC 01/04	01	603	DEC 01/04	01
25-31-61			402	DEC 01/04	01	604	DEC 01/04	01
401	DEC 01/04	16	403	DEC 01/04	01			
402	DEC 01/04	16	404	BLANK		25-52-0		
403	DEC 01/04	16				1	DEC 01/04	06
404	DEC 01/04	16	25-40-6			2	DEC 01/04	08
			401	DEC 01/04	02	3	DEC 01/04	06
			402	DEC 01/04	02	4	DEC 01/04	12
			403	DEC 01/04	10	5	DEC 01/04	18
			404	DEC 01/04	02	6	DEC 01/04	07

R = REVISED, A = ADDED OR D = DELETED  
F = FOLDOUT PAGE  
30  
AUG 01/07

D6-12030

CHAPTER 25  
EFFECTIVE PAGES  
PAGE 5  
CONTINUED

Aerolineas Argentinas

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
25-52-0		CONT.	25-52-131			25-56-51		
7	DEC 01/04	06	401	DEC 01/04	01	401	DEC 01/04	01
8	BLANK		402	DEC 01/04	01	402	DEC 01/04	01
25-52-0			403	DEC 01/04	01	25-56-61		
701	DEC 01/04	01	404	DEC 01/04	01	401	DEC 01/04	01
702	DEC 01/04	01	25-52-141			402	DEC 01/04	01
703	DEC 01/04	01	401	AUG 01/06	01	403	DEC 01/04	05
704	BLANK		402	AUG 01/06	01	404	BLANK	
25-52-51			403	AUG 01/06	01	25-56-71		
401	DEC 01/04	01	404	AUG 01/05	01	401	DEC 01/04	01
402	DEC 01/04	01	25-52-141			402	DEC 01/04	01
403	DEC 01/04	01	801	AUG 01/06	01	25-56-81		
404	DEC 01/04	01	802	BLANK		401	DEC 01/04	01
405	DEC 01/04	01	25-56-0			402	DEC 01/04	01
406	DEC 01/04	01	1	DEC 01/04	08	25-56-91		
407	DEC 01/04	01	2	DEC 01/04	08	401	DEC 01/04	01
408	BLANK		3	DEC 01/04	08	402	DEC 01/04	01
25-52-100			4	DEC 01/04	08	25-56-91		
1	DEC 01/04	02	5	DEC 01/04	07	501	DEC 01/04	01
2	DEC 01/04	02	6	DEC 01/04	07	502	DEC 01/04	01
3	DEC 01/04	01	7	DEC 01/04	08	25-56-111		
4	BLANK		8	DEC 01/04	08	401	DEC 01/04	01
25-52-100			9	DEC 01/04	07	402	DEC 01/04	01
601	DEC 01/04	01	10	DEC 01/04	07	403	DEC 01/04	01
602	BLANK		11	DEC 01/04	05	404	DEC 01/04	01
25-52-100			12	AUG 01/05	06	25-60-0		
801	AUG 01/05	01	13	DEC 01/04	07	1	DEC 01/04	03
802	AUG 01/06	01	14	DEC 01/04	06	2	BLANK	
803	AUG 01/06	01	15	DEC 01/04	06	25-61-0		
804	AUG 01/06	01	16	DEC 01/04	05	1	DEC 01/04	04
805	AUG 01/05	01	17	AUG 01/05	07	2	DEC 01/04	04
806	AUG 01/05	01	18	DEC 01/04	06	25-61-100		
807	AUG 01/05	01	19	DEC 01/04	06	1	DEC 01/04	06
808	BLANK		20	DEC 01/04	05	2	DEC 01/04	06
25-52-111			25-56-11			25-61-100		
401	DEC 01/04	02	401	DEC 01/04	01	401	DEC 01/04	06
402	DEC 01/04	04	402	DEC 01/04	01	402	DEC 01/04	03
403	DEC 01/04	04	403	DEC 01/04	01	25-61-100		
404	DEC 01/04	04	404	BLANK		601	DEC 01/04	01
405	DEC 01/04	04	25-56-21			602	BLANK	
406	DEC 01/04	04	401	DEC 01/04	01	25-61-200		
407	DEC 01/04	04	402	DEC 01/04	01	1	DEC 01/04	01
408	BLANK		25-56-31			2	DEC 01/04	01
25-52-123			401	DEC 01/04	01			
401	DEC 01/04	05	402	DEC 01/04	01			
402	DEC 01/04	04	25-56-41					
403	DEC 01/04	04	401	DEC 01/04	01			
404	BLANK		402	DEC 01/04	01			
			403	DEC 01/04	01			
			404	BLANK				

R = REVISED, A = ADDED OR D = DELETED  
F = FOLDOUT PAGE  
30  
AUG 01/07

D6-12030

CHAPTER 25  
EFFECTIVE PAGES  
PAGE 6  
CONTINUED

Aerolineas Argentinas

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
25-61-200			25-61-332					
401	DEC 01/04	01	601	DEC 01/04	03			
402	DEC 01/04	01	602	BLANK				
25-61-200			25-61-332					
601	DEC 01/04	01	701	DEC 01/04	03			
602	BLANK		702	BLANK				
25-61-300			25-62-0					
1	DEC 01/04	16	1	DEC 01/04	17			
2	DEC 01/04	15	2	DEC 01/04	11			
3	DEC 01/04	19	25-63-0					
4	BLANK		1	DEC 01/04	19			
25-61-311			2	DEC 01/04	18			
201	AUG 01/06	04	25-69-0					
202	AUG 01/06	03	1	DEC 01/04	ARG			
203	AUG 01/06	07	2	DEC 01/04	18			
204	DEC 01/04	10						
205	DEC 01/04	05						
206	DEC 01/04	04						
207	AUG 01/06	06						
208	AUG 01/06	06						
209	MAR 18/05	04						
210	MAR 18/05	04						
25-61-311								
401	AUG 01/06	03						
402	AUG 01/06	03						
403	DEC 01/04	07						
404	BLANK							
25-61-311								
501	AUG 01/06	01						
502	BLANK							
25-61-312								
601	DEC 01/04	01						
602	DEC 01/04	01						
25-61-331								
401	DEC 01/04	10						
402	DEC 01/04	12						
403	DEC 01/04	02						
404	BLANK							
25-61-331								
601	AUG 01/05	02						
602	BLANK							
25-61-331								
701	AUG 01/05	02						
702	BLANK							
25-61-332								
401	AUG 01/06	03						
402	AUG 01/06	03						

R = REVISED, A = ADDED OR D = DELETED  
 F = FOLDOUT PAGE  
 30  
 AUG 01/07

**D6-12030**

CHAPTER 25  
 EFFECTIVE PAGES  
 PAGE 7  
 LAST PAGE



MAINTENANCE MANUAL

CHAPTER 25 - EQUIPMENT/FURNISHINGS

TABLE OF CONTENTS

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
<u>EQUIPMENT/FURNISHINGS</u>	25-00-00		
<u>INTERIOR MATERIALS</u>	25-00-11		
Maintenance Practices		201	ALL
CABIN ACCOMMODATION CONVERSIONS	25-09-100		
Description and Operation		1	[*]
[*] Passenger/Cargo Convertible Airplanes			
CABIN CONVERSION (PASSENGER/ALL-CARGO)	25-09-111		
Maintenance Practices		201	ALL
CABIN CONVERSION (PASSENGER/CARGO)	25-09-141		
Maintenance Practices		201	ALL
CABIN CONVERSIONS (PASSENGER/CARGO, ALL-CARGO)	25-09-131		
Maintenance Practices		201	ALL
CABIN CONVERSIONS (PASSENGER, PASSENGER/CARGO)	25-09-121		
Maintenance Practices		201	ALL
<u>FLIGHT COMPARTMENT</u>	25-10- 0		
Description and Operation		1	ALL
CAPTAIN'S AND FIRST OFFICER'S EQUIPMENT	25-11- 0		
Description and Operation		1	ALL
CAPTAIN'S AND FIRST OFFICER'S SEATS	25-11-11		
Removal/Installation		401	ALL
LIGHTSHIELD	25-11-21		
Removal/Installation		401	ALL
SEAT ADJUSTMENT SIGHT GUIDE	25-11-31		
Maintenance Practices		201	ALL
OBSERVERS' EQUIPMENT	25-14- 0		
Description and Operation		1	ALL
FIRST OBSERVER'S SEAT	25-14-11		
Removal/Installation		401	ALL
SECOND OBSERVER'S SEAT	25-14-21		
Removal/Installation		401	ALL
CONTROL CABIN STOWAGE PROVISIONS	25-15- 0		
Description and Operation		1	ALL
LINING AND INSULATION	25-16- 0		
Description and Operation		1	ALL

25-CONTENTS



**MAINTENANCE MANUAL**

**CHAPTER 25 - EQUIPMENT/FURNISHINGS**

TABLE OF CONTENTS

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
CONTROL CABIN CRASH PADDING Removal/Installation	25-16-41	401	ALL
CONTROL CABIN DRIP PAN Removal/Installation	25-16-31	401	ALL
CONTROL CABIN INSULATION Removal/Installation	25-16-21	401	ALL
Approved Repairs		801	ALL
CONTROL CABIN LINING Removal/Installation	25-16-11	401	ALL
CONTROL CABIN MISCELLANEOUS EQUIPMENT	25-19- 0		
Description and Operation		1	ALL
<u>PASSENGER COMPARTMENT</u>	25-20- 0		
Description and Operation		1	[*]
[*] Standard Passenger Airplanes			
PASSENGER COMPARTMENT	25-20-01		
Description and Operation		1	[*]
[*] Passenger/Cargo Convertible Airplanes			
Description and Operation		1	ALL
PASSENGER CABIN LINING AND INSULATION	25-21- 0		
Description and Operation		1	[*]
[*] Airplanes without New Look Interior			
PASSENGER CABIN LINING AND INSULATION	25-21-00		
AFT LOWERED CEILING PANELS	25-21-91		
Removal/Installation		401	[*]
[*] Standard Passenger Airplanes without New Look Interior			
AFT LOWERED CEILING PANELS	25-21-92		
Removal/Installation		401	[*]
[*] Passenger/Cargo Convertible Airplanes			
AIR RETURN GRILLE	25-21-11		
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			

**25-CONTENTS**



MAINTENANCE MANUAL

CHAPTER 25 - EQUIPMENT/FURNISHINGS

TABLE OF CONTENTS

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
CEILING INSULATION	25-21-71		
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			
Approved Repairs		801	[*]
[*] Airplanes without New Look Interior			
CEILING LINING	25-21-61		
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			
COVE LIGHT COVERS	25-21-101		
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			
COVE LIGHT RACEWAY	25-21-111		
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			
DADO PANELS	25-21-31		
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			
DOORWAY SIDEWALL LININGS	25-21-41		
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			
FORWARD LOWERED CEILING PANELS	25-21-81		
Removal/Installation		401	[*]
[*] Standard Passenger Airplanes without New Look Interior			
FORWARD LOWERED CEILING PANELS	25-21-82		
Removal/Installation		401	[*]
[*] Passenger/Cargo Convertible Airplanes			
SIDEWALL INSULATION	25-21-51		
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			
Approved Repairs		801	[*]
[*] Airplanes without New Look Interior			

25-CONTENTS



MAINTENANCE MANUAL

CHAPTER 25 - EQUIPMENT/FURNISHINGS

TABLE OF CONTENTS

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
WINDOW PANELS	25-21-21		
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			
WINDOW SHADES	25-21-25		
Removal/Installation		401	ALL
Cleaning/Painting		701	ALL
Approved Repairs		801	[*]
[*] Airplanes without New Look Interior			
PASSENGER CABIN LINING AND INSULATION	25-21-300		
Description and Operation		1	[*]
[*] New Look Interior			
AFT LOWERED CEILING PANELS	25-21-361		
Removal/Installation		401	[*]
[*] New Look Interior			
AIR RETURN GRILLE	25-21-315		
Removal/Installation		401	[*]
[*] New Look Interior			
CARPET RISER PANEL	25-21-321		
Removal/Installation		401	[*]
[*] New Look Interior			
CEILING INSULATION	25-21-349		
Removal/Installation		401	[*]
[*] New Look Interior			
Approved Repairs		801	ALL
CURVED CEILING PANEL	25-21-341		
Maintenance Practices		201	[*]
[*] WIDE BODY LOOK INTERIOR			
FORWARD LOWERED CEILING PANELS	25-21-351		
Removal/Installation		401	[*]
[*] New Look Interior			
INSULATION BLANKET	25-21-347		
Removal/Installation		401	ALL

25-CONTENTS



MAINTENANCE MANUAL

CHAPTER 25 - EQUIPMENT/FURNISHINGS

TABLE OF CONTENTS

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
SIDEWALL INSULATION Removal/Installation [*] New Look Interior	25-21-339	401	[*]
Approved Repairs		801	ALL
SIDEWALL LINING PANELS (FORWARD ENTRY DOORWAY) Removal/Installation [*] New Look Interior	25-21-331	401	[*]
SIDEWALL LINING PANELS (FORWARD GALLEY DOORWAY) Removal/Installation [*] New Look Interior	25-21-335	401	[*]
SIDEWALL LINING PANELS AFT ENTRY AND AFT SERVICE DOORWAYS Removal/Installation [*] New Look Interior	25-21-325	401	[*]
WINDOW PANEL Removal/Installation [*] New Look Interior	25-21-311	401	[*]
WINDOW SHADES Removal/Installation [*] New Look Interior	25-21-313	401	[*]
Cleaning/Painting		701	ALL
Approved Repairs		801	[*]
[*] New Look Interior			
PASSENGER SERVICE UNITS Description and Operation	25-23- 0	1	ALL
AFT CABIN ATTENDANTS' SERVICE UNITS Removal/Installation	25-23-71	401	ALL
AFT LAVATORY SERVICE UNITS Removal/Installation	25-23-41	401	ALL
FORWARD CABIN ATTENDANTS' SERVICE UNIT Removal/Installation	25-23-61	401	ALL

25-CONTENTS



**MAINTENANCE MANUAL**

**CHAPTER 25 - EQUIPMENT/FURNISHINGS**

**TABLE OF CONTENTS**

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
FORWARD LAVATORY OXYGEN SERVICE UNIT	25-23-32		
Removal/Installation		401	[*]
[*] Passenger/Cargo Convertible Airplanes			
FORWARD LAVATORY SERVICE UNIT	25-23-31		
Removal/Installation		401	[*]
[*] ALL EXCEPT ATI INTERIOR			
PASSENGER SERVICE UNIT	25-23-311		
Maintenance Practices		201	[*]
[*] New Look Interior			
Adjustment/Test		501	[*]
[*] New Look Interior			
Cleaning/Painting		701	[*]
[*] New Look Interior			
Approved Repairs		801	[*]
[*] New Look Interior			
PASSENGER SERVICE UNITS	25-23-11		
Maintenance Practices		201	[*]
[*] Airplanes without New Look Interior			
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			
Cleaning/Painting		701	[*]
[*] Airplanes Without New Look Interior			
Approved Repairs		801	[*]
[*] Airplanes without New Look Interior			
PASSENGER CABIN PARTITIONS AND COMPARTMENTS	25-24- 0		
Description and Operation		1	ALL
AFT CENTERLINE STOWAGE CLOSET	25-24-381		
Removal/Installation		401	ALL

**25-CONTENTS**



MAINTENANCE MANUAL

CHAPTER 25 - EQUIPMENT/FURNISHINGS

TABLE OF CONTENTS

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
AFT LEFT WINDSCREEN Removal/Installation [*] Passenger/Cargo Convertible Airplanes	25-24-132	401	[*]
AFT LEFT WINDSCREEN Removal/Installation [*] New Look Interior	25-24-133	401	[*]
AFT RIGHT WINDSCREEN Removal/Installation [*] Passenger/Cargo Convertible Airplanes	25-24-142	401	[*]
AFT RIGHT WINDSCREEN Removal/Installation [*] New Look Interior	25-24-143	401	[*]
AFT WINDSCREEN Removal/Installation [*] Standard Passenger Airplanes without New Look Interior	25-24-141	401	[*]
CARGO/PASSENGER DIVIDING PARTITION Removal/Installation	25-24-151	401	ALL
FORWARD LEFT WINDSCREEN Removal/Installation [*] Standard Passenger Airplanes	25-24-111	401	[*]
FORWARD RIGHT WINDSCREEN Removal/Installation [*] Standard Passenger Airplanes	25-24-121	401	[*]
FORWARD RIGHT WINDSCREEN Removal/Installation [*] Passenger/Cargo Convertible Airplanes	25-24-122	401	[*]
FORWARD RIGHT WINDSCREEN Removal/Installation [*] Airplanes with New Look Interior	25-24-123	401	[*]
OVERHEAD STOWAGE COMPARTMENT Removal/Installation [*] New Look Interior	25-24-311	401	[*]

25-CONTENTS



MAINTENANCE MANUAL

CHAPTER 25 - EQUIPMENT/FURNISHINGS

TABLE OF CONTENTS

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
Adjustment/Test [*] New Look Interior		501	[*]
PASSENGER CABIN TEMPERATURE SENSOR AIR INLET GRILLE Removal/Installation [*] New Look Interior	25-24-315	401	[*]
CABIN ATTENDANTS' STATIONS Description and Operation	25-25- 0	1	ALL
CABIN ATTENDANTS' SEAT Maintenance Practices	25-25-12	201	ALL
PASSENGER CABIN FLOOR COVERING Description and Operation	25-27- 0	1	ALL
CARPETS Description and Operation	25-27-100	1	ALL
Removal/Installation		401	ALL
ENTRY AND SERVICE AREA FLOOR COVERING Description and Operation	25-27-200	1	ALL
AFT ENTRY AREA FLOOR PAN Removal/Installation [*] Airplanes WITH Aft Airstairs	25-27-271	401	[*]
ENTRY AND SERVICE AREA FLOOR COVERING Removal/Installation	25-27-211	401	ALL
HATRACKS Description and Operation	25-28- 0	1	ALL
Removal/Installation [*] Standard Passenger Airplanes without New Look Interior		401	[*]
FOLDING HATRACK CLOSURE PANELS Removal/Installation [*] Passenger/Cargo Convertible Airplanes without New Look Interior	25-28-12	401	[*]
FOLDING HATRACKS Maintenance Practices [*] Passenger/Cargo Convertible Airplanes	25-28-31	201	[*]
Removal/Installation [*] Passenger cargo Convertible Airplanes without New Look		401	[*]

25-CONTENTS



MAINTENANCE MANUAL

CHAPTER 25 - EQUIPMENT/FURNISHINGS

TABLE OF CONTENTS

<u>Subject</u>	Chapter Section <u>Subject</u>	<u>Page</u>	<u>Effectivity</u>
Adjustment/Test		501	[*]
[*] Passenger/Cargo Convertible Airplanes without New Look Interior			
HATRACK CLOSURE PANELS	25-28-11		
Removal/Installation		401	[*]
[*] Standard Passenger Airplanes without New Look Interior			
PASSENGER CABIN HATRACKS	25-28-01		
Description and Operation		1	[*]
[*] PASSENGER/CARGO CONVERTIBLE AIRPLANES WITHOUT NEW LOOK INTERIOR			
PASSENGER CABIN TEMPERATURE SENSOR AIR INLET GRILLE	25-28-21		
Removal/Installation		401	[*]
[*] Airplanes without New Look Interior			
PASSENGER CABIN MISCELLANEOUS EQUIPMENT	25-29- 0		
Description and Operation		1	ALL
GALLEY	25-31- 0		
Description and Operation		1	ALL
AFT GALLEY	25-31-61		
Removal/Installation		401	ALL
AFT GALLEY DECORATIVE PANELS	25-31-161		
Removal/Installation		401	ALL
FORWARD GALLEY DECORATIVE PANELS	25-31-151		
Removal/Installation		401	ALL
FORWARD GALLEYS	25-31-51		
Removal/Installation		401	ALL
GALLEY HEADER ASSEMBLY	25-31-271		
Removal/Installation		401	ALL
<u>LAVATORIES</u>	25-40- 0		
Description and Operation		1	ALL
Inspection/Check		601	ALL
AFT LAVATORY CEILING PANEL	25-40- 9		
Removal/Installation		401	ALL
AFT LAVATORY DOOR AND HEADER	25-40- 7		
Removal/Installation		401	ALL
AFT LAVATORY PARTITION	25-40- 6		
Removal/Installation		401	ALL
AFT LAVATORY SIDEWALL PANEL	25-40- 8		
Removal/Installation		401	ALL

25-CONTENTS



MAINTENANCE MANUAL

CHAPTER 25 - EQUIPMENT/FURNISHINGS

TABLE OF CONTENTS

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
FORWARD LAVATORY CEILING PANEL Removal/Installation	25-40- 5	401	ALL
FORWARD LAVATORY DOOR AND HEADER Removal/Installation	25-40- 3	401	ALL
FORWARD LAVATORY PARTITION Removal/Installation	25-40- 2	401	ALL
FORWARD LAVATORY SIDEWALL PANEL Removal/Installation	25-40- 4	401	ALL
LAVATORY SINK CABINET Removal/Installation	25-40- 1	401	ALL
DISPENSER CABINET ASSEMBLY Removal/Installation	25-41-11	401	ALL
DISPOSAL CABINET ASSEMBLY Removal/Installation	25-42-11	401	ALL
ELECTRONIC COMPARTMENT Description and Operation	25-51- 0	1	ALL
ELECTRONIC COMPARTMENT DRIP PAN AND MOISTURE SHROUD Removal/Installation	25-51-01	401	ALL
		601	ALL
Inspection/Check			
CARGO COMPARTMENT Description and Operation	25-52- 0	1	ALL
Cleaning/Painting		701	ALL
Cargo and Accessory Compartments		701	
CARGO COMPARTMENT FLOOR PANELS Removal/Installation	25-52-51	401	ALL
CARGO COMPARTMENT LINING AND INSULATION Description and Operation	25-52-100	1	ALL
Inspection/Check		601	ALL
Approved Repairs		801	ALL
CARGO COMPARTMENT BULKHEAD LINING Removal/Installation	25-52-131	401	ALL
CARGO COMPARTMENT CEILING LINING Removal/Installation	25-52-111	401	ALL
CARGO COMPARTMENT INSULATION Removal/Installation	25-52-141	401	ALL
Approved Repairs		801	ALL
CARGO COMPARTMENT SIDEWALL LINING Removal/Installation	25-52-123	401	ALL

25-CONTENTS



MAINTENANCE MANUAL

CHAPTER 25 - EQUIPMENT/FURNISHINGS

TABLE OF CONTENTS

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
MAIN CABIN CARGO EQUIPMENT	25-56- 0		
Description and Operation		1	[*]
[*] LV-JNE			
AFT STOPS	25-56-81		
Removal/Installation		401	ALL
GUIDE RAIL ASSEMBLIES	25-56-31		
Removal/Installation		401	ALL
PALLET BRAKES	25-56-71		
Removal/Installation		401	ALL
PALLET LOCKS	25-56-61		
Removal/Installation		401	ALL
RETRACTABLE SIDE GUIDE	25-56-41		
Removal/Installation		401	ALL
ROLLER TRAY	25-56-21		
Removal/Installation		401	ALL
SIDE RESTRAINT GUIDES	25-56-51		
Removal/Installation		401	ALL
THRESHOLD ASSEMBLY	25-56-91		
Removal/Installation		401	ALL
Adjustment/Test		501	ALL
TRANSFER PANEL	25-56-11		
Removal/Installation		401	ALL
CARGO BARRIER NET	25-56-111		
Removal/Installation		401	ALL
<u>EMERGENCY EQUIPMENT</u>	25-60- 0		
Description and Operation		1	ALL
ESCAPE EQUIPMENT	25-61- 0		
Description and Operation		1	ALL
ESCAPE ROPES/STRAPS (PASSENGER CABIN)	25-61-100		
Description and Operation		1	ALL
Removal/Installation		401	ALL
Inspection/Check		601	ALL
ESCAPE ROPES/STRAPS (CONTROL CABIN)	25-61-200		
Description and Operation		1	ALL
Removal/Installation		401	ALL
Inspection/Check		601	ALL
ESCAPE SLIDE ASSEMBLY (DOOR-MOUNTED)	25-61-300		
Description and Operation		1	ALL

25-CONTENTS



**MAINTENANCE MANUAL**

**CHAPTER 25 - EQUIPMENT/FURNISHINGS**

TABLE OF CONTENTS

<u>Subject</u>	<u>Chapter Section Subject</u>	<u>Page</u>	<u>Effectivity</u>
ESCAPE SLIDE ASSEMBLY (DOOR-MOUNTED)	25-61-311		
Maintenance Practices		201	ALL
Removal/Installation		401	ALL
Adjustment/Test		501	ALL
ESCAPE SLIDE BATTERY	25-61-312		
Inspection/Check		601	[*]
[*] Airplanes with Door-Mounted Escape Slide Integral			
ESCAPE SLIDE FLOOR BRACKETS	25-61-331		
Removal/Installation		401	ALL
ESCAPE SLIDE FLOOR BRACKETS	25-61-332		
Removal/Installation		401	[*]
[*] Airplanes with steel floor brackets			
ESCAPE SLIDE FLOOR BRACKETS	25-61-331		
Inspection/Check		601	[*]
[*] Airplanes with aluminum floor brackets			
ESCAPE SLIDE FLOOR BRACKETS	25-61-332		
Inspection/Check		601	[*]
[*] Airplanes with steel floor brackets			
ESCAPE SLIDE FLOOR BRACKETS	25-61-331		
Cleaning/Painting		701	[*]
[*] Airplanes with aluminum floor brackets			
ESCAPE SLIDE FLOOR BRACKETS	25-61-332		
Cleaning/Painting		701	[*]
[*] Airplanes with steel floor brackets			
LIFESAVING EQUIPMENT	25-62- 0		
Description and Operation		1	ALL
EMERGENCY SIGNALLING EQUIPMENT	25-63- 0		
Description and Operation		1	ALL
MISCELLANEOUS EMERGENCY EQUIPMENT	25-69- 0		
Description and Operation		1	ALL

**25-CONTENTS**



## MAINTENANCE MANUAL

### INTERIOR MATERIALS – MAINTENANCE PRACTICES

#### 1. General

- A. This section describes the procedures to be used when cleaning or repairing various decorative materials of the airplane interior. It incorporates information in Boeing Document D6-1910, Repair Procedures for Interior Materials on Commercial Aircraft.
- B. Cleaning procedures for fabric and carpet are included.
- C. Figure 201 tabulates the various decorative materials and specifies the number of the cleaning and repair methods recommended for each type of material.
- D. Decorative interiors are originally finished with lacquers or enamels in a controlled factory environment. However, certain latex paints of equivalent color may be used as optional decorative finishes. Such paints may be applied without normal safety precautions normally required during lacquer applications, and thus may be applied with power on the aircraft. The recommended brands of latex paints are as follows:
  - (1) Atlas AC500 – XX, Atlas Chemical Co., Miami, Florida
  - (2) Walker W32 – XXXX, Walker Paint Co., Sunnyvale, California

NOTE: In both cases, the identification "X" indicates color-code letter or digit.

- E. Detergent solutions should be mixed in the proportions indicated and stored in dispensing containers. Put solvents in clean polyethylene wash bottles prior to use.

#### 2. Cleaning Methods

- A. General
  - (1) The following Cleaning Methods numbered 1 thru 9, correspond with the numbers listed in Fig. 201 as methods of cleaning aircraft interiors.
- B. Cleaning Methods No. 1
  - (1) Equipment and Materials
    - (a) Soap – Orvus or Vel
  - (2) Clean
    - (a) Clean vinyl surfaces by use of mild soap (Orvus WA Paste or Vel and lukewarm water).
    - (b) Rinse with clean water and wipe dry with clean cloth.
- C. Cleaning Method No. 2
  - (1) Equipment and Materials
    - (a) Cleaning Solution – Terecote No. 60-1 and -2
  - (2) Clean
    - (a) Wash with clean cloth saturated with Terecote No. 60, Cleaning Solution No. 1.
    - (b) Wash thoroughly with cloth saturated with Terecote No. 60, Cleaning Solution No. 2.

EFFECTIVITY

ALL

25-00-11

01

Page 201  
Aug 01/06



## MAINTENANCE MANUAL

(c) Wipe dry with clean cloth. Allow surface to dry thoroughly before applying finish.

- \*[1] Type I Damage: Scratches and small cuts; damage, which affects only the surface texture
- \*[2] Type II Damage: Cuts or tears, which completely penetrate the decorative material
- \*[3] Type III Damage: Bubbled or delaminated areas of decorative material bonded to a substrate
- \*[4] Unpainted
- \*[5] Painted
- \*[6] Remove old adhesive by light sanding or scraping. Clean faying surfaces with ethyl alcohol prior to bonding.
- \*[7] Rebonding, Method 15
- \*[8] Non-Skydrol areas only

### D. Cleaning Method No. 3

- (1) Equipment and Materials
  - (a) Ethyl alcohol
  - (b) Gauze pads
- (2) Clean
  - (a) Mix 1 part ethyl alcohol with 1 part water.
  - (b) Clean greasy material by swabbing on ethyl alcohol and water solution with a clean gauze pad.
  - (c) Wipe off with a clean dry gauze pad (do not allow solvents to evaporate from surface).
  - (d) Wipe dry.

**WARNING:** ETHYL ALCOHOL (ETHANOL/DENATURED) IS FLAMMABLE AND MAY AFFECT EYES, SKIN AND RESPIRATORY TRACT. USE IN A WELL-VENTILATED AREA. AVOID PROLONGED BREATHING OF VAPORS. AVOID EYE AND REPEATED SKIN CONTACT. KEEP AWAY FROM SPARKS AND FLAMES.

### E. Cleaning Method No. 4

- (1) Equipment and Materials
  - (a) Solvent - acetone
  - (b) Swab - gauze pad taped to tongue depressor
- (2) Clean
  - (a) Moisten swab with solvent.
  - (b) Rub soiled area with swab.
  - (c) Dry with dry gauze pad.
  - (d) Repeat (b) and (c) if necessary.

EFFECTIVITY

ALL

25-00-11

01

Page 202  
Aug 01/06

MATERIAL	CLEANING METHOD NO.	REPAIR METHOD NO.		
		TYPE I *[1]	TYPE II *[2]	TYPE III *[3]
Vinyl-Aluminum Laminate	1, 3, 4	2, 4	5, 12, 13	<del>30</del>
Unsupported Semirigid Vinyl	1, 3, 4	2, 4	5, 6, 14	30
Fabric Supported Vinyl and Vinyl-Coated Fabrics	1, 3, 4	2, 4	5, 6, 14	<del>30</del>
ABS Plastics - Boltaron, Royalite, Cycolac and Kydex	1, 2, 3, 4 *[4] 1, 3, 4 *[5]	1, 4, 7	3, 4, 5, 7	<del>30</del>
Polysulfane and Polycarbonate	1,	29	29	<del>30</del>
Silk-Screened Rigid Vinyl	1, 3, 4	1, 2	<del>30</del>	<del>30</del>
PVC Extrusions and Moldings	*[6]	*[7]	*[7]	<del>30</del>
Leather	3	1	8	<del>30</del>
Flexible Urethane Foam	3	<del>30</del>	9, 10	<del>30</del>
Fabric and Carpet	7, 8, 9	<del>30</del>	<del>30</del>	<del>30</del>
Nylon	4, 5	11	<del>30</del>	<del>30</del>
Stainless Steel	1, 3, 4	16	<del>30</del>	<del>30</del>
Anodized Aluminum	1, 3, 4	17	<del>30</del>	<del>30</del>
Decorative Formica	1, 4, 6	19	18, 21	<del>30</del>
Tedlar-Covered Vinyl	1, 2, 3	20 *[8] 23	<del>30</del>	<del>30</del>
Tedlar-Covered Conolite	3, 4, 6	19 23	21, 27	<del>30</del>
Perforated Panels	1, 3	22	24	<del>30</del>
Textured Finishes	6	25	25	<del>30</del>
Duracote 200A	1, 3	26	<del>30</del>	<del>30</del>
Pearlescent Decorative Vinyl Sandwich Laminates	1, 3, 4	28	<del>30</del>	<del>30</del>

Decorative Materials Cleaning and Repair Methods  
 Figure 201

EFFECTIVITY \_\_\_\_\_  
 ALL

**25-00-11**

F. Cleaning Method No. 5

- (1) Equipment and Materials
  - (a) Hydrogen peroxide

**WARNING:** HYDROGEN PEROXIDE IS EXTREMELY TOXIC AND SHOULD NOT BE ALLOWED TO COME IN CONTACT WITH THE SKIN.

- (b) Swab - gauze pad taped to tongue depressor
- (2) Clean
  - (a) Mix solution of 37 percent hydrogen peroxide in water.
  - (b) Moisten swab with solution.
  - (c) Rub stained area with swab.
  - (d) Dry with dry gauze pad.
  - (e) Repeat (c) and (d) if necessary.

G. Cleaning Method No. 6

- (1) Equipment and Materials
  - (a) Solvent - Aliphatic Naphtha TT-N-95A

- (2) Clean
  - (a) Moisten gauze pad with solvent.
  - (b) Rub soiled area with gauze pad.
  - (c) Dry with clean dry gauze pad. (Do not allow solvents to evaporate from the surface.)

**WARNING:** NAPHTHA IS FLAMMABLE AND HAZARDOUS. USE IN A WELL VENTILATED AREA. AVOID PROLONGED BREATHING OF VAPORS. AVOID EYE AND SKIN CONTACT. KEEP AWAY FROM SPARKS AND FLAMES.

H. Cleaning Method No. 7

**NOTE:** Detergents listed below have no flash point.

- (1) Equipment and Materials
  - (a) High Concentrate 40.1 Soapless Base - Rug, Carpet and Upholstery Shampoo, mix 1 part cleaner to 32 parts water
  - (b) Spraywhite E - mix 1 part cleaner to 10 parts water
  - (c) Clean quick - mix 1 part cleaner to 64 parts water
  - (d) Orvus W.A. Paste - mix 1 part cleaner to 30 parts water
  - (e) Glo Do-All Formula 3B Rug Shampoo - mix 1 part cleaner to 30 parts water
  - (f) Glo Do-All Formula 1B - mix 1 part cleaner to 20 parts water
- (2) Regular Cleaning
  - (a) Vacuum carpet or upholstery thoroughly to remove loose particles.

EFFECTIVITY

ALL

25-00-11

01

Page 204  
Aug 01/06



## MAINTENANCE MANUAL

- (b) Prepare a solution of one of the detergents listed. Work shampoo solution into a thick, foamy lather.

**WARNING:** WEAR PROTECTIVE GLOVES WHEN USING SOLVENTS AND CLEANERS. USE ONLY WITH ADEQUATE VENTILATION.

- (c) Apply foam only to carpet or upholstery with a sponge or medium fiber bristle brush. Scrub gently using a circular motion, overlapping each circle. Work only a small area at one application. Do not soak material.
- (d) Brush pile in one direction to lift and straighten fiber. Avoid excessive brushing or rubbing on pile surfaces as this may result in unsightly fuzzing or distortion of surface.
- (e) Dry material thoroughly, then vacuum suspended soils.

### I. Cleaning Method No. 8

**NOTE:** Detergents listed below have no flash point.

#### (1) Equipment and Materials

- (a) High Concentrate 40.1 Soapless Base, Rug, Carpet and Upholstery Shampoo – mix 1 part cleaner to 32 parts water
- (b) Spraywhite E – mix 1 part cleaner to 10 parts water
- (c) Clean quick – mix 1 part cleaner to 64 parts water
- (d) Orvus W.A. Paste – mix 1 part cleaner to 30 parts water
- (e) Glo Do-All Formula 3B Rug Shampoo – mix 1 part cleaner to 30 parts water
- (f) Glo Do-All Formula 1B – mix 1 part cleaner to 20 parts water

#### (2) Cleaning of Soft or Uncured Spots

**NOTE:** Remove spots as soon as possible. Many spots become difficult or impossible to remove with age. This procedure applies to removal of soft or uncured soils such as fresh paint, grease, permanent ink, oil, jet fuel, hydraulic fluid, powdered graphite, and powdered aluminum.

- (a) Where applicable, blot up as much of stain as possible using absorbent paper or wipers.
- (b) Spray one of the detergent solutions listed onto soiled area. Allow to soak 30 seconds.

**WARNING:** WEAR PROTECTIVE GLOVES WHEN USING SOLVENTS AND CLEANERS. USE ONLY WITH ADEQUATE VENTILATION.

EFFECTIVITY

ALL

25-00-11

01

Page 205  
Dec 01/04



## MAINTENANCE MANUAL

- (c) Add an additional amount of detergent solutions to spot and work fibers with blunt end of a bone scraper. As detergent works into a foam, minute particles of soil are carried up into foam mass.
  - (d) Pick up foam with a wet-pickup hand vacuum cleaner or with a scraper such as a spatula.
  - (e) Blot up retained moisture with paper toweling or wipers.
  - (f) Reapply detergent to soiled area.
  - (g) Repeat steps (a) thru (f) as required until soil has been removed.
  - (h) Brush pile in one direction to lift and straighten fibers.
- (3) Inspect carpets, identify dirty spots and clean up as follows:
- (a) Mop up with paper towels if damp. Wipe up butter, chocolate, jam, sauces and other dirt that cannot be vacuumed with paper towels.
  - (b) Vacuum carpet.
  - (c) Using a mixture of cold water and detergent/shampoo wash any spots on the carpet using a soft nylon bristle brush.

NOTE: Water and detergent/shampoo solution must be mixed per manufacturers instructions.

The carpet pile must not be soaked/wet unnecessarily while removing the spots.

- (d) Mop with paper towel to remove as much of the solution as possible.
- (e) Rinse spot with fresh water and dry with paper towels. Leave to air dry.
- (f) If it was not possible to remove spots as per paragraph (a) and (c) above, a solution of 1 part vinegar and 1 part water should be used.

NOTE: Perchloroethylene can be used on spots that could not be cleaned per the above procedures once the carpet is dry.

EFFECTIVITY

ALL

25-00-11

01

Page 206  
Dec 01/04



## MAINTENANCE MANUAL

- (g) If a spot could not be removed as per above, place a metal plate under the carpet to protect the floor, cut out the stain and fit a new piece of carpet into the cut out. Stick carpet and patch to the floor using double sided tape.

**CAUTION:** CUTTING THE SKIN FIBRES OF THE FLOOR PANEL WILL RESULT IN PREMATURE FAILURE OF THE FLOOR PANEL.

**NOTE:** To produce an aesthetically acceptable carpet, it may be necessary to remove a piece of carpet the full width of the run.

### J. Cleaning Method 9

**NOTE:** Solvents listed below have no flash point.

- (1) Equipment and Materials
  - (a) Tetrachloroethylene (perchloroethylene) - Technical Grade, 0-T-236
- (2) Cleaning of Hard-Set or Cured Spots

**NOTE:** Remove spots as soon as possible. Many spots become difficult or impossible to remove with age. This procedure applies to the removal of hard-set or cured soils such as adhesives, sealants, paint, asphalt, and gum.

- (a) Vacuum carpet or upholstery in areas adjacent to soil to remove all loose particles.
- (b) Mask or cover all plastic and painted materials which surround area where spot removal will be made.

**CAUTION:** KEEP CHLORINATED SOLVENT AWAY FROM POLYCARBONATE, POLYSULFONE, ABS, AND ACRYLIC PLASTICS.

- (c) Using a nozzle-type wash bottle, saturate soil with one of solvents listed. Soak for 30 seconds to soften soil.

**WARNING:** SOLVENTS SHALL NOT BE APPLIED BY AIR SPRAY AND SHALL NOT BE KEPT IN OPEN CONTAINERS. DO NOT USE FLAMMABLE SOLVENTS IN AIRPLANE.

SOLVENT MATERIALS USED IN CLEANING CONTAIN TOXIC INGREDIENTS. AVOID CONTACT OF THESE MATERIALS WITH SKIN OR EYES. USE WITH ADEQUATE VENTILATION OR RESPIRATOR MASKS. WEAR PROTECTIVE GLOVES WHEN USING SOLVENTS AND CLEANERS. CONSULT APPLICABLE HEALTH AND SAFETY REGULATIONS FOR FURTHER PRECAUTIONS.

EFFECTIVITY

ALL

25-00-11

01

Page 207  
Dec 01/04



## MAINTENANCE MANUAL

- (d) Apply additional solvent to soil as required and work fibers carefully with a bone scraper. This action should agitate each fiber causing soil to loosen and release. Wash spot from outer edge toward center to avoid ring marks.

**CAUTION:** SOLVENTS HAVE A CAPACITY FOR WETTING AND WILL CARRY RESIDUAL SOIL PARTICLES AROUND AND AWAY FROM SPOT CAUSING SLIGHT RING MARKS. USE ONLY ENOUGH SOLVENT TO WET SOIL SPOTS.

- (e) Blot up dissolved and loosened residual with paper toweling or wipers. Repeat steps (a) thru (d) as required until soil has been removed.

- (f) Complete cleaning per Method 7.

### 3. Repair Methods

#### A. General

- (1) The following Repair Methods are numbered to correspond with the numbers in Fig. 201.

#### B. Repair Method No. 1

##### (1) General

- (a) This method is used to repair slight surface abrasions.

##### (2) Equipment and Materials

- (a) No. 400 sandpaper, or finer

##### (3) Repair: (Sanding)

- (a) Rub damaged area with No. 400 sandpaper.

#### C. Repair Method No. 2

##### (1) General

- (a) This method is used to repair small cracks, gaps, or slits in the decorative material.

##### (2) Equipment and Materials

- (a) Mechanical agitator (paint shaker)

- (b) Tetrahydrofuran - 200 grams

- (c) Cyclohexanone - 200 grams

- (d) Scrap material (Boltaron, Royalite, Vinyl) - 85-130 grams

- (e) Adhesive - General Electric RTV-174

- (f) White Silk Screen Vinyl Ink - BAC712, 50 grams (vinyl ink is used only to match BAC712 white)

##### (3) Repair (Touchup Solution)

- (a) Mix touchup solution as follows:

- 1) From scrap of the same type and color material to be repaired, cut quantity of small pieces.

- 2) Measure equal portions by weight of Tetrahydrofuran and Cyclohexanone.

- 3) Pour Tetrahydrofuran into quart can (with seal-tight lid).

EFFECTIVITY

ALL

25-00-11

01

Page 208  
Aug 01/06



## MAINTENANCE MANUAL

- 4) Combine one half of cut scrap material in can with Tetrahydrofuran and put on mechanical agitator (paint shaker). Scrap material will dissolve in 5 to 15 minutes depending on temperature of solvent.
  - 5) When first half of scrap material is dissolved, add Cyclohexanone and other half of cut scrap material to solution. Continue agitation until all of scrap material is dissolved. Since specific properties of these scrap materials vary, it may be necessary to make adjustments in solvent (equal parts of Tetrahydrofuran and Cyclohexanone) and/or scrap material proportions in order to obtain desired viscosity.
  - 6) There is a slight difference in touchup solution after formulation when compared to basic vinyl color. This factor (when important) may be corrected by addition of 50 grams of silkscreen vinyl ink of required BAC color to one quart of touchup solution.
  - 7) When solution is stored for any length of time, it may gel slightly. Addition of a small amount of equal parts of Cyclohexanone and Tetrahydrofuran to solution and agitation will restore it to proper viscosity.
  - 8) Very small cracks, cuts, or slits may be touched up using an artist's brush and touchup solution. Quality of repair will depend upon the skill of repairman. Repair of silk screened rigid vinyl shall be performed as follows:
    - a) Sufficient touchup solution shall be applied, in the form of a bead, to crack, cut, or slit in cleaned decorative material. Bead shall be approximately 1/16 of an inch higher than surface texture of damaged material.
    - b) When material has cured but can still be dented with fingernail, a razor blade shall be held flat against surface of damaged material and bead cut off.
- (4) Repair Using RTV-174 Adhesive (Alternate Method)
- (a) Clean decorative surfaces in area to be repaired using cleaning methods No. 1, 3, or 4.
  - (b) Mask edges of repair areas.
  - (c) Extrude a small quantity of RTV-174 adhesive into a clean container.
  - (d) Mix one or two drops of semigloss lacquer or vinyl ink with RTV-174 adhesive to provide a color match with material to be repaired.
  - (e) Apply small amount of mixture to a sample of material to be repaired and check for color match.
  - (f) Adjust color as necessary by adding more tint or adhesive.

EFFECTIVITY

ALL

25-00-11

01

Page 209  
Aug 01/06



## MAINTENANCE MANUAL

- (g) Apply color-matched adhesive with an artist's brush to fill small cracks, cuts or slits in decorative material. Use color-matched adhesive as soon as possible after preparation.
- (h) Allow adhesive to cure for 2 to 4 hours at 70°F or for 60 to 90 minutes at 120 ±10°F. Quality of repair will depend upon the skill of repairman.

### D. Repair Method No. 3

#### (1) General

- (a) This method is used to repair cracks, cuts, or slits in decorative material.

#### (2) Equipment and Materials

- (a) Ungar soldering iron (with shaped tip)
- (b) Variable Autotransformer - Powerstat type 116 (powerstat setting 120 to 125)
- (c) Shaped Tips for Soldering Iron - Copper, chrome plated (Fig. 202)

NOTE: Tip used will depend upon type and location of damage and skill of repairman.

#### (3) Repair (Heat Fused Patch)

- (a) After cleaning damaged area, cut piece of material same size, color, shade, and surface texture as damaged material.
- (b) Place patch in damaged area.
- (c) Using soldering iron with shaped tip, point heat fuse decorative patch to match surrounding material.
- (d) After damaged material has been heated sufficiently to flow, patch shall be fused to surrounding material, using stippling motion.

NOTE: Quality of re-embossing will depend upon skill of operator.

- (e) A patch that is over 1/8 inch wide shall be bonded with appropriate adhesive as called out on engineering drawing prior to heat fusing operation.

### E. Repair Method No. 4

#### (1) General

- (a) This method of repair is used to re-emboss small cuts and scratches where no base material is removed.

#### (2) Equipment and Materials

- (a) Ungar soldering iron (with shaped tip)

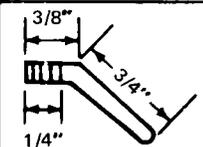
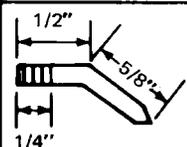
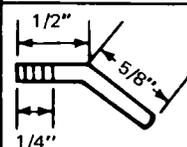
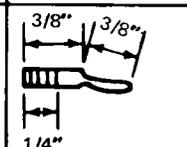
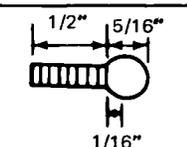
EFFECTIVITY

ALL

25-00-11

01

Page 210  
Aug 01/06

COPPER SMOOTH BLUNT CONE	COPPER SHARP POINTED CONE	COPPER SMOOTH ROUND END	COPPER SPOON-LIKE END	COPPER SPHERE LIKE END
				

Soldering Iron Tips (Repair Method No. 3)  
 Figure 202

EFFECTIVITY	ALL
-------------	-----

25-00-11



## MAINTENANCE MANUAL

- (b) Variable Autotransformer - Powerstat, Type 116-- See Table 1.

NOTE: Tip used will depend upon type and location of damage and skill of repairman.

(3) Repair (Hot Point Embossing)

- (a) Use soldering iron with shaped tip and point heat fuse re-emboss small cuts and scratches in decorative part where no base material is removed.
- (b) After damaged material has been heated sufficiently to flow, part shall be re-embossed to produce correct surface texture by using stippling motion.

NOTE: Quality of re-embossing will depend upon skill of operator.

(4) Repair (Cold Point Embossing)

- (a) Any appropriate tool may be used, such as leather working tools.
- (b) Re-emboss damaged material by pressing tool into surface with a stippling motion to produce correct surface texture.

F. Repair Method No. 5

(1) General

- (a) This method is used to repair cuts or tears which completely penetrate decorative material.

(2) Equipment and Materials

- (a) Screws
- (b) Traffic Wax - Johnson's Heavy Duty, or equivalent
- (c) Decorative materials - similar to material being repaired
- (d) Wood frame
- (e) C-clamps
- (f) Hardener - Kish 50-AM
- (g) Resin - Kish 426-M
- (h) Mylar film
- (i) Metco SF Aluminum
- (j) Cloth - Osnaburg
- (k) Resin - Epibond 126
- (l) Hardener - HN 9812
- (m) Ferro No. 7005 (white titanium dioxide)
- (n) Calcium carbonate
- (o) X-Acto Knife No. 1 and X-Acto Blade No. 11
- (p) Bell jar and vacuum pump

EFFECTIVITY

ALL

25-00-11

01

Page 212  
Aug 01/06



MAINTENANCE MANUAL

(3) Repair: (Epoxy Sweep - Fairing)

(a) Splash Casting Procedure for Embossing Mylar Film.

- 1) With wood details, construct frame to one square foot (inside dimension). Nails or screws shall be used to hold frame together. Joints of frame must be tight as possible.
2) Apply heavy duty traffic wax to all side of wooden frame. Three coats shall be applied in order to form reliable parting surface to the wood.
3) Obtain piece of decorative material that will match surface texture of material to be repaired. Size of material must be at least 4 inches in excess of inside dimensions of wooden frame.
4) Clean decorative side of material with aliphatic naphtha (TT-N-95) in accordance with cleaning Method 7.

WARNING: NAPHTHA IS FLAMMABLE AND HAZARDOUS. USE IN A WELL-VENTILATED AREA. AVOID PROLONGED BREATHING OF VAPORS. AVOID EYE AND SKIN CONTACT. KEEP AWAY FROM SPARKS AND FLAMES.

US
US
US
US

- 5) Place decorative material texture side up on small surface table.
6) Apply parting film of heavy duty traffic wax to textured surface of vinyl. Remove excess wax by polishing.
7) Place wood frame on decorative material and clamp to table surface with C clamps.
8) Accurately weigh and thoroughly mix the following materials: (Stir slowly. Do not mechanically agitate.)
a) 100 parts by weight - Kish 426M Resin
b) 18 parts by weight - Kish 50AM Hardener

NOTE: Total volume of resin to be used will depend on size of splash casting required. This procedure is not limited to casting size. 12 x 12 inch casting described herein is an arbitrary dimension. Dimensions of splash castings are limited to platen size of press to be used for embossing mylar film.

- 9) Deaerate mixture for approximately 10 minutes using Bell jar and vacuum pump.
10) Pour resin slowly onto prepared surface of decorative material. Mixture shall be poured as close as possible to surface of decorative material in order to prevent air inclusions in the casting.
11) Casting shall be at least 1/4 inch in thickness.
12) Cure casting for 8 hours at room temperature or 4 hours at 120°F.
13) After cure, carefully remove wood frame and decorative material from casting.
14) Smooth edges (flash) of casting by sanding or filing.

EFFECTIVITY

ALL

25-00-11

ARG

Page 213
Dec 01/04



## MAINTENANCE MANUAL

- (b) Metal Spraying of Plastic Coating
- 1) Metal spray a  $0.055 \pm 0.005$  inch buildup of Metco SF aluminum over plastic casting to obtain a metal positive of surface texture.
  - 2) Carefully remove metal sprayed positive from plastic casting.
  - 3) Trim rough edges if present.
- (c) Embossing Textures onto Mylar Film
- 1) Place double layer of Osnaburg cloth on surface of lower platen of a hydraulic press.
  - 2) Place metal sprayed positive, textured side up, on Osnaburg cloth.
  - 3) Place single sheet of mylar film, 0.001 inch x metal sprayed positive dimension, on metal positive.
  - 4) Place sheet of silicone rubber, 0.125 inch x platen dimension, dusted with talcum powder, over mylar film.
  - 5) Place sheet of stainless steel, 0.040 to 0.050 inch x platen dimension, over rubber sheet.
  - 6) Close platens of press and apply pressure of 225 psi (to total embossing area) at a temperature of  $375 \pm 10^\circ\text{F}$  for 8 minutes.
- NOTE: Excessive heating will cause mylar film to break down and discolor. This will cause mylar film to adhere to Epibond 126 when making repairs.
- 7) Mylar film shall be cooled to temperature of  $100 \pm 10^\circ\text{F}$  before pressure is released.
  - 8) Before removing mylar film from embossing plate, make a spiral line on top side of mylar from center to edges, using felt-point marking pen. Spiral lines shall be kept approximately 1/2 inch apart. Purpose of marking is to provide identification of negative side of film no matter how or where it is cut.
- (d) Definitions of negative and positive surface textures. To clarify use of terms negative and positive surface textures, following definitions are offered:
- 1) Texture on decorative material - positive
  - 2) Texture on plastic splash casting - positive
  - 3) Texture on metal sprayed plate - positive
  - 4) Texture on unmarked surface of embossed mylar - negative
  - 5) Texture on sweep-fair patch (Epibond 126) - positive
- (e) Repair Procedures
- 1) Trim ragged edges of damaged material with No. 1 X-Acto knife and No. 11 blade.

EFFECTIVITY

ALL

25-00-11

01

Page 214  
Dec 01/04



## MAINTENANCE MANUAL

- 2) Clean material to be repaired as described in material section (Fig. 201).
- 3) Apply film of heavy-duty traffic wax from edge of damaged area outward. Wax shall be applied at least 2 inches in all directions from edge of damage.

**NOTE:** Care should be exercised to keep wax out of area to be repaired.

- 4) Accurately weigh and thoroughly mix the following materials: 10.0 parts by weight - Epibond 126 resin; 6.5 parts by weight - HN 9812 Hardener; 1.5 parts by weight - Ferro No. 7005 white titanium dioxide pigment; 16.0 parts by weight - calcium carbonate.
- 5) Apply sufficient resin to fill damaged area.
- 6) Cut a piece of embossed mylar 1/4 inch larger than periphery of damaged area and place over resin. Unmarked or negative side of mylar should be against resin.
- 7) Lubricate upper surface of mylar film with light machine oil.
- 8) Working from center of repair sweep and fair resin to desired contour using 1/16 x 3 x 4-inch rigid squeegee.

**NOTE:** It is very important that as much as possible of excess resin be swept out from under mylar film.

- 9) Allow resin to cure for 8 hours at 70°F or 2 hours at 120°F.
- 10) After cure, strip mylar film from resin.
- 11) Using stiff bristle brush which has been dipped in aliphatic naphtha (TT-N-95A), remove excess resin and wax from area surrounding repair.

**WARNING:** RESIN IS FLAMMABLE AND MAY AFFECT EYES, SKIN, AND RESPIRATORY TRACT. USE IN A WELL VENTILATED AREA. AVOID PROLONGED BREATHING OF VAPORS. AVOID EYE AND REPEATED SKIN CONTACT. KEEP AWAY FROM SPARKS AND FLAMES. CHEMICAL GLOVES AND GOGGLES WILL BE WORN. RESPIRATOR IS REQUIRED UNLESS WAIVED BY THE BIOENVIRONMENTAL ENGINEER.

**NOTE:** Any excess resin left in area surrounding damage will show up when repair is painted.

EFFECTIVITY

ALL

25-00-11

01

Page 215  
Aug 01/06



## MAINTENANCE MANUAL

### G. Repair Method No. 6

#### (1) General

(a) This method is used to repair cuts or tears which completely penetrate decorative material. Size of patch required shall be determined by extent and type of damage.

#### (2) Equipment and Materials

(a) Patch Material

(b) Tape (Permacel No. 94)

(c) X-Acto Knife - No. 1 and X-Acto Blade No. 11

(d) Adhesive, Eastman 910

#### (3) Repair (Patching)

(a) Patch material shall be selected from scrap materials. Patch material to be used shall match damaged area as closely as possible in shade of color, design, and surface texture. Correct matching may be accomplished by holding various pieces of scrap material over damaged area and observing color, design, and texture compatibility.

NOTE: Color matching of patch materials is of primary importance. Mismatching of color will tend to make patch repair very apparent. Since different rolls of same decorative material will have slight color variances, extreme care should be taken in selecting material for each repair. Of secondary importance is matching material design and texture as closely as possible. Improper design or texture matching will also make repaired area apparent.

(b) Sufficient double-backed tape (Permacel No. 94) shall be applied over damaged area to hold patch material securely while patch cutout is made.

(c) Patch material shall then be carefully aligned (design and texture) over damaged area and pressed down firmly onto double-backed tape.

NOTE: It is very important that patch material be indexed and registered in line with damaged area as closely as possible.

EFFECTIVITY

ALL

25-00-11

01

Page 216  
Dec 01/04



## MAINTENANCE MANUAL

- (d) Shape of patch shall be as shown in Fig. 203.

**NOTE:** Several shapes and sizes of patches have been evaluated to determine which configuration blended best with textured vinyl surfaces. "Cup cake" patch (Fig. 202) has proved to have best "hiding power" of any of configurations tested.

- (e) Patch for those materials which have geometric designs shall be cut following design or pattern of material.

**NOTE:** It is extremely important to align design of patch material to damaged material. If patch cutout does not match damaged area, mismatch will not be acceptable from an appearance standpoint.

- (f) Position of "cup cake" patch's indexing line shall be as follows: 1) When patch repairing "grass cloth" embossing (10-60199-103, -105, -136, -148, -158 -162, -185 and -1002), indexing line of "cup cake" patch shall always be perpendicular (at right angles or 90 degrees) to direction of lines in surface texture of damaged material.

- (g) When patch repairing all other types of surface textures (embossing), position of cup cake patch's indexing line will be to discretion of repairman.

- (h) Patch material and damaged material shall be cut through simultaneously using an X-Acto No. 1 knife with an X-Acto No. 11 blade only.

**NOTE:** It is very important that knife blade be sharp and held perpendicular to repair when cutting out patch. If knife is slanted or held at an angle, result will be an undersized or oversized patch. If this occurs, a new and larger patch must be made.

- (i) Patch and damaged material shall then be removed. Old adhesive shall then be removed by sanding or scraping.

**NOTE:** If old adhesive is not removed, it may cause patch to be high and not acceptable from an appearance standpoint.

- (j) Area to be patched shall be cleaned with ethyl alcohol and water in accordance with Cleaning Method III.

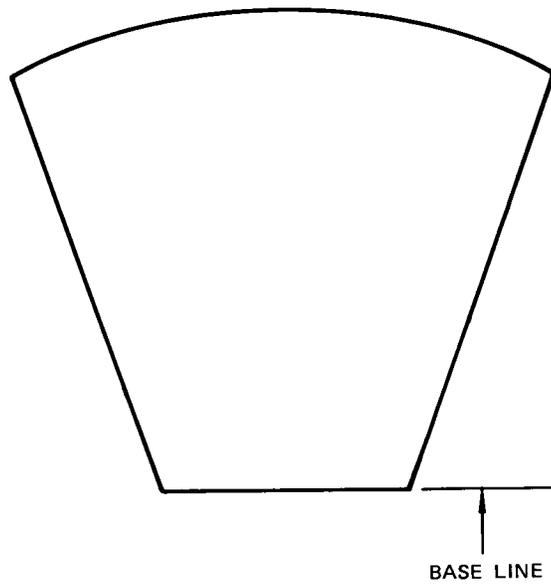
EFFECTIVITY

ALL

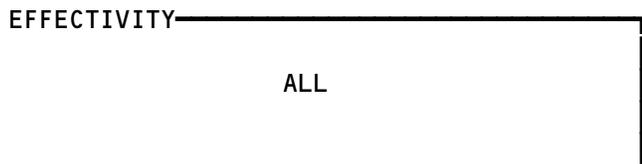
25-00-11

01

Page 217  
Aug 01/06



Typical Patch Shape (Repair Method No. 6)  
Figure 203



455055

25-00-11

01

Page 218  
Dec 01/04



## MAINTENANCE MANUAL

- (k) A light film of Eastman 910 adhesive shall be applied to sides and surface of area to be patched. A small spatula shall be used to spread adhesive.

**NOTE:** Do not apply an excessive amount of adhesive as an excess will inhibit cure. Eastman 910 adhesive shall be kept in a closed container when not in use and preferably stored in a cool place.

- (l) Using indexing line, patch shall be aligned and worked down lightly and progressively at all edges (do not apply pressure at this point). When patch edges are in place, X-Acto knife handle shall be used to roll down patch tightly. Work from center of patch to edges until patch is free of air inclusions, wrinkles, and all edges are down evenly.
- (m) Maximum hand pressure shall then be applied until a bond is assured (approximately 60 seconds).
- (n) Remove double-backed tape.

### H. Repair Method No. 7

#### (1) General

- (a) This method is used for retexturing and repair of scrapes, cuts, gouges and holes in Boltaron, Royalite, Cicolac, and Kydex decorative material.

#### (2) Equipment and Materials

- (a) Polyvinyl alcohol film  
(b) Epibond 126  
(c) Hardener - HN 9812  
(d) Calcium carbonate  
(e) Glass Cloth - Volan No. 128  
(f) Methyl Ethyl Ketone  
(g) Silicone Rubber - Dow Corning RTV "B", "E" 587, 93072 or 93079, General Electric RTV 41 or RTV 631  
(h) Scrap Material (Boltaron, Royalite, Cicolac or Kydex)  
(i) Lacquer thinner  
(j) Methyl chloride

#### (3) Repair Smooth or Scraped Areas

- (a) Prepare silicone replica of surface adjacent to area being repaired:
- 1) Clean surface which is to be copied per cleaning method No. 1, 2 or 3.
  - 2) Construct a frame, approximately 3/8 inch wide by 1/2 inch high, around clean surface to be copied.

**NOTE:** Wood, clay, or high temperature vacuum sealant tape may be used to construct frame.

EFFECTIVITY

ALL

25-00-11

01

Page 219  
Dec 01/04



## MAINTENANCE MANUAL

- 3) Brush thin layer of prepared silicone rubber onto textured surface within frame. Continue brushing until no air bubbles are visible.

NOTE: Almost any brand, type, or color of castable silicone rubber may be used except dark red varieties which contain finely divided iron oxide. Dow Corning Silastic RTV "B", "E", 587, 93072 or 93079 and General Electric RTV 41 or RTV 631 are suggested for use. Prepare silicone rubbers for use per manufacturer's instructions.

- 4) Pour remaining silicone rubber onto brushed surface to a thickness of 1/4 inch and allow to cure at room temperature for 48 hours.

NOTE: One pound of prepared silicone rubber will make a 10- by 10- by 1/4-inch replica.

- 5) After cure, peel silicone replica from textured surface.
  - (b) Soften damaged decorative surface with methyl ethyl ketone for 1 to 2 minutes.
  - (c) Apply textured silicone rubber replica to softened area and hold in position for 1 to 2 minutes.
  - (d) Remove silicone rubber replica and allow decorative material to harden.
  - (e) Remove surface gloss from decorative surface by rubbing with a pencil eraser.
- (4) Repair Cuts and Gouges that do not Penetrate Decorative Material
    - (a) Prepare repair paste.
      - 1) From scrap material of same type and color material to be repaired, cut quantity of small pieces.
      - 2) Pour methyl chloride into a pint or quart can (with seal-tight lid) until can is 1/2 to 2/3 full.
      - 3) Fill can containing methyl chloride with cut scrap material and install lid on can.
      - 4) Put can on mechanical agitator (paint shaker) and agitate until scrap material has dissolved to a smooth paste.
      - 5) Add more methyl chloride or scrap material and agitate to obtain desired consistency.

NOTE: If desired, up to 50% lacquer thinner can be added to slow drying time of mixture.

EFFECTIVITY

ALL

25-00-11

01

Page 220  
Dec 01/04



## MAINTENANCE MANUAL

- (b) Fill cut or gouge with repair paste flush with decorative surface and allow paste to dry.
  - (c) If repair paste shrinks during drying, repeat step (b) as required.
  - (d) If necessary, retexture decorative surface using procedure in step (3).
- (5) Repair Small Holes
- (a) Prepare repair paste as described in step (4)(a).
  - (b) Place masking tape over hole on decorative side of panel.
  - (c) Fill hole from the nondecorative side with repair paste and allow paste to dry.
  - (d) If repair paste shrinks during drying, repeat step (c) as required.
  - (e) Retexture repaired hole in decorative surface using procedure in step (3).
- (6) Repair Large Holes (Repair Paste Method)
- (a) Prepare repair paste as described in step (4)(a).
  - (b) Place cloth-backed masking tape over hole on nondecorative side of the panel.
  - (c) Fill hole from decorative side with repair paste and allow paste to dry.
  - (d) If repair paste shrinks during drying, repeat step (3) as necessary.
  - (e) Retexture repaired hole in decorative surface using procedure in step (3).
- (7) Repair Large Holes (Epoxy Method)
- (a) Form an aluminum plate to contour of panel to be repaired.
  - (b) Wrap aluminum plate with polyvinyl film.
  - (c) Thoroughly mix the following materials: 100 parts by weight: Epibond 126 65 parts by weight: HN 9812 Hardener 15 parts by weight: Calcium Carbonate
  - (d) Impregnate Volan No. 128 glass cloth with above mixture.
  - (e) Lay impregnated glass cloth over hole in nondecorative side of damaged part.
  - (f) Clamp aluminum plate over glass cloth.
  - (g) Complete repair in accordance with Repair Method No. 5.
- I. Repair Method No. 8
- (1) General
    - (a) This method is used to repair holes (Type II damage in leather).
  - (2) Equipment and Materials
    - (a) Suitable Adhesive
    - (b) Traffic wax - heavy duty
    - (c) Mylar film
    - (d) Lubricant - light machine oil

EFFECTIVITY

ALL

25-00-11

01

Page 221  
Dec 01/04



## MAINTENANCE MANUAL

- (3) Repair (Leather)
  - (a) Thoroughly mix the adhesive according to manufacturers specifications.
  - (b) Apply heavy duty traffic wax with cotton tipped swab to area surrounding damage.
  - (c) Sufficient resin shall be applied to fill damaged area.
  - (d) Embossed mylar film shall then be placed over resin. Unmarked side of mylar film shall be against resin.
  - (e) Upper surface of mylar film shall be lubricated with light oil.
  - (f) Working from center of repair, resin shall be swept and faired to contour desired, using flexible or rigid squeegee.

NOTE: It is important that as much as possible of excess resin be swept out from under mylar film.

- (g) Allow adhesive time to fully cure.
- (h) Mylar film shall be carefully stripped from cured resin.

### J. Repair Method No. 9

- (1) General
  - (a) This method describes the procedures required for the rework of voids in foam material.
- (2) Equipment and Materials
  - (a) Stabond Adhesive T-100
  - (b) Cork Bore
  - (c) Foam Material
- (3) Repair: (Foam)
  - (a) All voids 1/2 inch in diameter or larger shall be reworked as follows: When a void is located, its size shall be determined. A cylindrical plug of foam shall then be cut out of void area equal to or not more than 1/2 inch larger than void, using a cork bore or other suitable tool.
  - (b) Same tool that was used to core out void shall also be used to cut a plug of foam for bonding into void area. Foam plug shall be of same density and compression deflection as foam that is in part.
  - (c) Foam plug shall be bonded into void area, using Stabond Adhesive T-100.
  - (d) Adhesive shall be applied as follows:
    - 1) Apply one medium brush coat of adhesive to each of faying surfaces.
    - 2) Allow adhesive to dry until tacky but will not transfer to knuckle when lightly touched.
    - 3) Press faying surfaces together with maximum hand pressure.
    - 4) Assemblies may be handled immediately, but do not stress bond for 24 hours.

EFFECTIVITY

ALL

25-00-11

01

Page 222  
Dec 01/04

K. Repair Method No. 10

- (1) General
  - (a) This method describes procedures required for rework of voids in material of the Hatrack Bull nose.
- (2) Equipment and Materials
  - (a) Pro-Seal - BMS 8-40
  - (b) Resin - PR-1201Q
  - (c) Catalyst - PR-1201A
  - (d) Pro-Seal Resin - #727
  - (e) Pro-Seal Paste - #727-A
  - (f) Cork bore
  - (g) Mylar film
  - (h) Machine lubricating oil
  - (i) Masking Tape - #718
  - (j) Squeegee
  - (k) PE-102 Component I (R)
  - (l) PE-102 Component II (C)
  - (m) Gun - Semco Sealant No. 250
  - (n) Polyethylene Nozzle - #420
  - (o) Cartridge - 6-ounce, Polyethylene
- (3) Repair foam in hatrack bullnose prior to bonding nose former in place.

**NOTE:** Three methods are available for this repair. Method No. 9 may be used, or repair may be made with BMS 8-40 or Stafoam PE-102 as described in the following paragraphs.

- (a) Repair with BMS 8-40.
  - 1) Work table shall be covered with clean wrapping paper to protect boltaron cover material from soiling.
  - 2) A cylindrical foam plug shall be cut out of void area equal to or not more than 1/2 inch larger than void, using cork bore or other suitable tool.
  - 3) Kits of BMS 8-40 are coded either as PRC or Pro-Seal. If PRC is designated, mix following materials as follows:
    - a) 100 grams PR-1201Q Resin

EFFECTIVITY

ALL

25-00-11

01

Page 223  
Aug 01/06



## MAINTENANCE MANUAL

- b) 10 grams PR-1201A Catalyst
  - 4) If Pro-Seal is designated, mix following materials as follows:
    - a) 100 grams Pro-Seal #727 Resin
    - b) 12 grams Pro-Seal #727-A Paste
  - 5) Accelerator paste shall be thoroughly mixed to smooth creamy consistency. Base resin shall be stirred until material is smooth and homogenous. Catalyst shall be added to resin and mixed until no catalyst streaks or traces of unmixed compound are visible. Compound can be checked for complete mixing by spreading a drop very thinly over a piece of white paper and checking for streaks or specks. Once mixed, material slowly increases in viscosity and eventually becomes a firm rubbery mass. Pot life is approximately one hour at 75°F.
  - 6) Sufficient material shall be applied to fill void and allow for a slight excess.
  - 7) A piece of mylar film shall be placed over BMS 8-40 compound. Mylar film shall extend about 1/2 inch around outer edge of the filled void area.
  - 8) Upper surface of mylar film shall be lubricated with light machine oil.
  - 9) Working from center of repair, BMS 8-40 shall be swept and faired to desired contour, using a rigid squeegee.
  - 10) Mylar film shall be attached to foam of hatrack nosing with masking tape.
  - 11) Bullnose former shall be inserted in place and wrapped with masking tape (Permacel No. 718) in order to maintain proper contour.
- CAUTION:** IF PERMACEL NO. 718 MASKING TAPE IS NOT AVAILABLE, MASKING TAPE USED SHALL NOT BE APPLIED DIRECTLY TO BOLTARON COVER MATERIAL BECAUSE ADHESIVE ON TAPE WILL TEND TO DISCOLOR BOLTARON.
- 12) BMS 8-40 compound shall then be cured for 1 hour at room temperature and 5 hours at 115°F.
  - 13) Bullnose former shall be removed and mylar film shall be carefully removed from repaired area.
- (b) Repair with Stafoam P.E. 102
- 1) Follow steps (a) 1) and 2) of preceding (BMS 8-40) repair.
  - 2) Thoroughly mix the following materials as described below:  
50 grams P.E. 102 Component I (R) 2.8 grams P.E. 102 Component II (C) Add Component II to Component I. Mix slowly for 10 seconds and rapidly for 20 seconds or until mixture turns white.
  - 3) Void area shall be filled approximately 3/4 full.
  - 4) Immediately cover with mylar film and completely tape mylar in such a way as to restrain foam as it reacts.
  - 5) If possible, hatrack nose former shall be inserted in place. If this is not possible, add weights.

EFFECTIVITY

ALL

25-00-11

01

Page 224  
Aug 01/06

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

- 6) Foam shall be cured 25 minutes at room temperature.
  - 7) Flex or knead foam area thoroughly and post cure for 1 hour at 150°F.
- (4) Repair of foam after bonding Nose Former in place.

**NOTE:** This includes completion of all bonding except Boltaron flap which is bonded to lower flange of nose former.

- (a) Two openings shall be punched above void area through exposed foam adjacent to unbonded flap, using a probe approximately 1/32 inch in diameter. By placing a finger on material (Boltaron) in void area, it is possible to feel when probing instrument has made contact.
- (b) Areas around distorted area shall be protected with asbestos sheet and heat shall be applied with heat gun until the Boltaron snaps back into its original shape.

**CAUTION:** AVOID OVERHEATING.

- (c) BMS 8-40 shall be mixed in accordance with par. (3)(a) and poured into a 6-ounce polyethylene cartridge with a #420 polyethylene nozzle and installed in a pressure gun (Semco Sealant Gun No. 250).
- (d) A hypodermic needle or similar type tube shall be inserted through foam into void area to allow air to escape.
- (e) Nozzle shall be inserted into one of probed openings and BMS 8-40 material shall be forced into void until filled.
- (f) A felt caulplate shall be placed over repaired area and secured with masking tape (Permacel No. 718).

**NOTE:** Do not allow masking tape to come into direct contact with Boltaron unless it is Permacel No. 718 masking tape.

- (5) Repair after complete bonding of Nose Former.

**NOTE:** This method includes foam repair after installation of hatrack bullnose into airplane.

- (a) Cut hole in Boltaron cover material of 1/4 inch to 1/2 inch in diameter using a cork bore or other suitable tool.
- (b) Repair foam in accordance with Repair Method 9 or with BMS 8-40, par. (3)(a).
- (c) Boltaron cover material shall be repaired in accordance with Repair Method 5.

EFFECTIVITY

ALL

25-00-11

01

Page 225  
Aug 01/06

L. Repair Method No. 11

(1) General

(a) This method is used to repair abrasions, scratches, mold lines, and sprue marks on nylon parts.

(2) Equipment and Materials

- (a) Learock - Type BS-30 and B815
- (b) Disc Sander - with No. 400 Sandpaper
- (c) Spindle Shaper
- (d) Sandpaper - No. 600 grit
- (e) Buffing Wheel (4 inch)

(3) Repair (for Abrasions and Scratches)

- (a) Area adjacent to damage shall be sanded flush with abrasion or scratch, using 400 grit wet or dry sandpaper.
- (b) Area surrounding damage shall also be sanded to feather in parts' surface.
- (c) Damaged area shall then be sanded, using 600 grit wet or dry sandpaper.
- (d) Surface gloss shall be restored by buffing with Learock, Type BS-30 or Type B815 buffing compound. Use standard 4-inch buffing wheel.

**CAUTION:** EXTREME CARE SHOULD BE TAKEN TO AVOID OVERHEATING NYLON PART DURING BUFFING OPERATION. BURNISHING OF THE PART WILL RESULT AND CAUSE DISCOLORATION.

(4) Removal of Mold Lines

- (a) Mold lines shall be removed, using a small disc sander (No. 400 or finer sandpaper).
- (b) Mold lines shall be sanded away, using very light pressure.

**CAUTION:** CARE MUST BE TAKEN NOT TO SAND INTO PARTS MOLDED SURFACE.

(c) Procedure outlined in (3)(d) shall be used if polishing is required.

(5) Removal of Gate Flash

**NOTE:** Gate flash is that excess of material which usually remains on any injection molded part after part has been ejected from mold and sprue and runners have been removed.

- (a) A small amount of flash shall be removed, using procedure outlined in (4)(a).
- (b) A large amount of flash shall be removed, using a spindle shaper.

EFFECTIVITY

ALL

25-00-11

01

Page 226  
Aug 01/06



## MAINTENANCE MANUAL

- (c) After removing gate flash with spindle shaper, shaper marks shall be removed, using No. 400 wet or dry sandpaper (sand dry).
- (d) Surface gloss shall be restored using Learock Type BS-30 or Type B-815 buffing compound.

### M. Repair Method No. 12

#### (1) General

- (a) See Repair Method No. 12 (patching), except that vinyl for repairing vinyl-aluminum laminates shall be obtained from scrap vinyl-aluminum materials as follows:

#### (2) Equipment and Materials

- (a) X-Acto knife
- (b) Scrap material
- (c) Heat lamp
- (d) Soldering iron

#### (3) Repair: (Patching of Munster Textural Vinyl-Aluminum Laminate)

- (a) Using an X-Acto Knife, cut a square of vinyl in scrap vinyl-aluminum material.

NOTE: This square shall be larger than damaged area in order that a cupcake patch may be made as in Repair Method 6.

- (b) Heat shall be applied locally to metal side of laminate opposite square cut in vinyl, using a heat lamp, soldering iron, or other heating device.
- (c) When laminate has heated up, knife blade or other similar tool shall be used to lift out square of vinyl material.

CAUTION: EXERCISE CAUTION WHEN REMOVING VINYL AS IT WILL STRETCH VERY EASILY RESULTING IN TEXTURE DISTORTION.

- (d) When patch material has been removed from scrap aluminum laminate, proceed with patch repair, Method No. 6.

### N. Repair Method No. 13

#### (1) General

- (a) This method describes the procedures used to repair holes which completely penetrate vinyl-aluminum panels.

#### (2) Equipment and Materials

- (a) Drill
- (b) Adhesive - Eastman 910
- (c) Backing Plate - Aluminum
- (d) Epibond No. 126
- (e) Ferro No. 7005 White (Titanium Dioxide Pigment)
- (f) Calcium Carbonate
- (g) Glass Cloth - Volan No. 128
- (h) Mylar Film

EFFECTIVITY

ALL

25-00-11

01

Page 227  
Aug 01/06



## MAINTENANCE MANUAL

- (i) Resin
- (j) Hardener - HN 9812
- (3) Repair (Holes in Vinyl-Aluminum Panels)
  - (a) Repair of holes less than 1/2 inch in diameter in solid colored or silk screened vinyl-aluminum panels.
    - 1) Damaged area shall be made circular and uniform in size, using a drill or other suitable tool. Remove all burrs.
    - 2) A piece of embossed mylar shall be taped tightly over hole in decorative (vinyl) side of laminate.
    - 3) Accurately weigh and thoroughly mix the following materials:
      - a) 10.0 parts by weight - Epibond 126
      - b) 6.5 parts by weight - HN 9812 Hardener
      - c) 1.5 parts by weight - Ferro No. 7005 White Titanium Dioxide Pigment
      - d) 1.5 parts by weight - Calcium Carbonate
    - 4) From non-decorative (aluminum) side of panel, sufficient resin shall be applied to fill damaged area.
    - 5) Resin shall be swept and faired to panel contour.
    - 6) A piece of Volan No. 128 glass cloth, approximately 1/4 to 1/2 inch larger than diameter of hole, shall be impregnated with above mixture.
    - 7) Impregnated glass cloth shall be placed over hole on non-decorative (aluminum) side of panel. Sweep glass down tightly over hole and onto panel.
    - 8) Resin shall be allowed to cure 8 hours at 70°F or 2 hours at 120°F.
    - 9) After cure, mylar film shall be stripped from resin.
  - (b) Repair of Holes Less Than 1/2 Inch in Diameter in Multicolored (Munster) Vinyl-Aluminum Panels.
    - 1) Damaged area shall be made circular and uniform in size using a drill or other suitable tool. Remove all burrs.
    - 2) Vinyl shall be cut 1/4 inch in diameter larger than hole in aluminum.
    - 3) A small piece of mylar tape shall be placed tightly over hole on decorative (vinyl) side of panel and flush with aluminum.
    - 4) Damaged area shall be filled in accordance with par. (a)3 thru 8).
    - 5) Vinyl shall be replaced by patching in accordance with Repair Method 6.

EFFECTIVITY

ALL

25-00-11

01

Page 228  
Aug 01/06



## MAINTENANCE MANUAL

(c) Repair of Holes 1/2 Inch or More in Diameter in Vinyl-Aluminum Panels

- 1) Damaged area shall be made circular and uniform in size using a drill or other suitable tool. Remove all burrs.

NOTE: This operation is necessary in order that aluminum disk may be more easily made.

- 2) An aluminum backing plate, approximately 1/4 to 1/2 inch larger than diameter of the hole, shall be bonded over hole on non-decorative (aluminum) side of panel, using Eastman 910 adhesive.
- 3) Eastman 910 adhesive shall be applied as follows:
  - a) Aluminum faying surfaces shall be cleaned with ethyl alcohol.
  - b) Wipe dry.
  - c) Apply a thin coat of Eastman 910 adhesive to faying surfaces.

NOTE: Do not apply an excessive amount of adhesive as an excess will inhibit cure.

- d) Aluminum backing plate shall then be pressed firmly in place on back of panel, using maximum hand pressure until a bond is assured (approximately 60 seconds).
- 4) A disk of aluminum same diameter as hole and same thickness as aluminum of the panel shall be bonded in the hole, using procedures given in par. (c) 2.

NOTE: This disk must be flush with aluminum of panel and free of burrs and other imperfections.

- 5) Complete this repair in accordance with Method No. 12.

0. Repair Method No. 14

(1) General

- (a) This method is used to repair holes that partially or completely penetrate vinyl (cloth-backed or semi-rigid) honeycomb (aluminum or paper) or plywood panels.

(2) Equipment and Materials

- (a) Epibond 126
- (b) Hardener, HN 9812
- (c) Calcium Carbonate
- (d) Masking Tape (Permacel No. 718)

EFFECTIVITY

ALL

25-00-11

01

Page 229  
Aug 01/06



## MAINTENANCE MANUAL

- (3) Repair: (Holes in vinyl-Honeycomb or Plywood)
  - (a) Area adjacent to damaged area shall be masked off (Permacel No. 718 tape) in order to protect face of panel from damage due to filling with potting compound and sanding.
  - (b) Thoroughly mix the following materials as follows:
    - 1) 100 parts by weight - Epibond 126
    - 2) 65 parts by weight - HN 9812 Hardener
    - 3) 15 parts by weight - Calcium Carbonate
  - (c) Hole in panel shall be filled flush with fiberglass skin or plywood beneath decorative sheet material using above compound.

NOTE: It may be necessary to sand potting compound in order for it to be flush with aluminum or fiberglass skin or plywood. This may be accomplished, using a microshaver or equivalent equipment.

- (d) Remove masking tape.
    - (e) Complete repair in accordance with Method No. 6 (patching).

### P. Repair Method No. 15

- (1) General
  - (a) This method describes the procedures used to rebond PVC extrusions and molded parts (BMS 6-8-9) and PVC plastisols, cast and molded (BMS 8-44).
- (2) Equipment and Materials
  - (a) Adhesive, Eastman 910
  - (b) Spatula
- (3) Repair: (Rebonding of PVC Plastisol Parts)
  - (a) After part has been cleaned, a thin film of Eastman 910 adhesive shall be applied with a small spatula to one or other of faying surfaces - approximately 2 square-inches at a time.  
  
NOTE: Do not apply an excessive amount of adhesive as an excess will inhibit cure. Eastman 910 adhesive shall be kept in a closed container when not in use and preferably in a cool place when not in use.
  - (b) Surfaces to be bonded shall be pressed firmly together with maximum hand pressure and held until adhesive sets (approximately 60 seconds).
  - (c) Continue rebonding operation progressively.

### Q. Repair Method No. 16

- (1) General
  - (a) This method is used to repair slight surface abrasions in stainless steel.
- (2) Equipment and Materials
  - (a) Sandpaper, No. 240 grit

EFFECTIVITY

ALL

25-00-11

01

Page 230  
Aug 01/06



## MAINTENANCE MANUAL

- (3) Repair: (Stainless Steel)
  - (a) Sand damaged area, using No. 240 grit sandpaper.
- R. Repair Method No. 17
  - (1) General
    - (a) This method is used to repair slight surface abrasions in anodized aluminum parts.
  - (2) Equipment and Materials
    - (a) Alodine - 1000 Class B
    - (b) Burnishing Tool
  - (3) Repair: (Anodized Aluminum)
    - (a) Remove all burrs and rough edges with burnishing tool.
    - (b) Apply alodine 1000 Class B, Method 2, in accordance with BAC 5719, Process Specification for alodizing to damaged area with cotton swab.
- S. Repair method No. 18
  - (1) General
    - (a) This method is used to repair damaged, decorative paper base laminate faces on interior honeycomb sandwich panels. this repair shall not be used on defects greater than 3/4 inch in the maximum dimension. The minimum spacing between repairs shall be 1 inch.
  - (2) Equipment and Materials
    - (a) Fiber Resin - No. 5-418S or 5-419S
    - (b) Fiber Resin Hardener - No. 5-40A
    - (c) Epocast 4B
    - (d) Hardener #951
    - (e) Epoxy enamel (BMS 10-11, Type 2 Clear Gloss)
  - (3) Repair: (Honeycomb Sandwich Panels)
    - (a) Repair Procedure
      - 1) Area adjacent to damage shall be adequately protected during rework to prevent further damage to decorative panels.
      - 2) Damaged area shall be removed from honeycomb sandwich panel by cutting a hold slightly larger than damage, but not exceeding 3/4 inch in diameter. Do not drill through skin on opposite side of panel.

EFFECTIVITY

ALL

25-00-11

01

Page 231  
Dec 01/04



MAINTENANCE MANUAL

- 3) Hole shall be filled with a slight excess of epoxy resin (listed below) to compensate for shrinkage during cure.

EPOXY RESIN	PARTS BY WT.
Fiber Resin No. 5-418S or 5-419S	100
Fiber Resin Hardener No. 5-40A	12-13
Color match or tint resin using color matching kit from Fiberlay, Inc., or equivalent. Optional Resin to be used in nonperforated panels only.	
PARTS BY WT.	
Epocast 4B	100
*Hardener 951	5-7
Work life at 80 ±10°F is 20-30 minutes, and cure at 80 ±10°F is 18 to 24 hours.	
*Amount of catalyst can be varied within these limits to suit the using Shop.	

- 4) After curing, potting compound shall be finished smooth and flush with face of panel by sanding or machining.
- 5) Spray repaired area with an epoxy enamel (BMS 10-11 Type 2 Clear Gloss) tinted to match panel.
- 6) This repair has been approved for use on D10-60199-308 decorative formica (BAC color No. 588). First repairs on other decorative paper base laminates shall be submitted to the Materials Technology Unit and Passenger Accomodations for approval of color match and color fastness.

T. Repair Method No. 19

(1) General

- (a) This method is used to repair cuts and scratches and other surface damage in decorative paper-base laminates (Formica) and in Tedlar-Conolite laminates.

NOTE: Color match with this repair is very difficult, and an unsatisfactory gloss and color match may result. Resin used in repair is skydrol-resistant when fully cured.

(2) Equipment and Materials

- (a) Sandpaper (400 to 600 grit)
- (b) Fiber Resin No. 5-418S or 5-419S
- (c) Fiber Resin Hardener No. 5-40A
- (d) Color Matching Kit (Fiberlay Inc.)
- (e) Polishing Wheel, cotton
- (f) Buffing Compound (Learock S-30)
- (g) Mylar Tape
- (h) Plexiglass

EFFECTIVITY

ALL

25-00-11

01

Page 232  
Dec 01/04



## MAINTENANCE MANUAL

### (3) Repair: (Epoxy Paste)

#### (a) Repair Procedure

- 1) Area surrounding damage shall be protected during rework to prevent additional damage to decorative panel. Mask a piece of plexiglas with two inch wide Mylar tape. Place masked plexiglas over damaged area, and with a knife cut out a section of tape slightly larger than damaged area. Remove Mylar tape from plexiglas and place tape over damaged area so that cutout is centered over damaged area.
- 2) Remove all burrs or protruding material from damaged area so that all edges are flush with the surface.
- 3) Clean the damaged area with aliphatic naphtha per Method 7.
- 4) Fill remaining void with the following resin tinted to match color.
  - a) Fiber Resin No. 5-418S or 5-419S -100 parts by wt.
  - b) Fiber Resin Hardener No. 5-40A -12-13 parts by wt.
  - c) Color match using white resin and an epoxy color matching kit from Fiberlay Inc., or equivalent.
- 5) Allow resin to cure at temperatures of 70-140°F.
- 6) Sand repaired area until surface is smooth and flush with decorative surface. Final sanding shall be done with 400 to 600 grit paper. To match gloss, polish with a cotton polishing wheel and Learock S-30 or 888 buffing compound.

### U. Repair Method No. 20

#### (1) General

- (a) This method is used to repair cuts and scratches and other surface damage in the decorative surface of Tedlar-vinyl laminates

#### (2) Equipment and Materials

- (a) Sandpaper (400 to 600 grit)
- (b) Duracote S-25 (top finish)
- (c) Air brush
- (d) Duracote 027.5 (dulling agent)
- (e) Hi-speed lacquer
- (f) Polyurethane Paint - BMS 10-83, Type II
- (g) Primer - BMS 10-82, Type I
- (h) Methyl Ethyl Ketone (MEK) - TT-M261

#### (3) Repair: (Vinyl Paste and Clear Coat)

- (a) Repair vinyl per Method 2.
- (b) Sand repaired area until surface is smooth. Final sanding shall be done with 400 or 600 grit paper.

EFFECTIVITY

ALL

25-00-11

01

Page 233  
Dec 01/04



## MAINTENANCE MANUAL

- (c) Thoroughly wipe surface using cheesecloth wet with MEK.

**CAUTION:** DO NOT ALLOW SOLVENT TO REMAIN IN CONTACT WITH PLASTICS FOR PROLONGED PERIODS. DAMAGE TO SURFACE CAN RESULT.

- (d) Dry surface with clean dry wiper before MEK evaporates.  
(e) Mask area surrounding surface to be painted.  
(f) Prime area to be painted with BMS type 1 primer.  
(g) Select polyurethane paint which matches color of surrounding surface and thin as required.  
(h) Apply several cross coats of paint to achieve color match with surrounding area as base coat.

**WARNING:** PAINTS, PRIMERS, LACQUERS AND VARNISHES MUST BE HANDLED CAREFULLY AND USED ONLY IN WELL-VENTILATED APPROVED AREAS. AVOID PROLONGED BREATHING OF VAPORS. AVOID EYE AND REPEATED SKIN CONTACT. KEEP AWAY FROM SPARKS AND FLAMES. RESPIRATOR USE IS REQUIRED UNLESS WAIVED BY THE BIOENVIRONMENTAL ENGINEER.

- (i) Remove masking and allow base coat to cure for 2 hours at 70 to 80°F before handling or 1 hour before applying a texture coat.  
(j) If desired, a texture coat of same paint without thinning may be applied to match existing interior. Allow to dry 3 hours before handling.  
(k) To match decorative color patterns, apply silkscreen vinyl ink of required color, using an artist's brush.  
(l) If required to match surrounding area, coat repaired area with Duracote S-25 top finish or Sherwin-Williams Hi-Speed lacquer. Apply 4 or 5 passes by spraying with an Air-Brush; allow drying time between passes. Gloss can be altered by adding Duracote 027.5 dulling agent (15% by weight) to S-25 top finish. Sherwin-Williams Hi-Speed lacquer can be obtained in various degrees of gloss. S-25 may be thinned with a 50-50 mixture (by volume) of tetrahydrofuran and cyclohexanone for spraying.

**WARNING:** PAINTS, PRIMERS, LACQUERS AND VARNISHES MUST BE HANDLED CAREFULLY AND USED ONLY IN WELL VENTILATED APPROVED AREAS. AVOID PROLONGED BREATHING OF VAPORS. AVOID EYE AND REPEATED SKIN CONTACT. KEEP AWAY FROM SPARKS AND FLAMES. RESPIRATOR USE IS REQUIRED UNLESS WAIVED BY THE BIOENVIRONMENTAL ENGINEER.

### V. Repair Method No. 21

#### (1) General

- (a) This method is used for the repair of damage that penetrates decorative paper base laminates (Formica) and Tedlar-Conolite laminates. This is a sweep fairing repair method.

#### (2) Equipment and Materials

- (a) Fiber Resin - No. 5-418S or 5-419S

EFFECTIVITY

ALL

25-00-11

01

Page 234  
Dec 01/04

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

- (b) Hardener - Fiber Resin No. 5-40A
  - (c) Embossed mylar
  - (d) Teflon squeegee
  - (e) Mosite 1440 (Silicone Rubber)
  - (f) Sandpaper (600 grit)
  - (g) Epoxy Enamel - BMS 10-11, Type 2
  - (h) Aluminum (0.060 inch thick)
  - (i) Color matching kit (Fiberlay Inc.)
  - (j) Decorative material
  - (k) Wax parting agent
- (3) Repair: (Epoxy Sweep Fairing - Colored)

**CAUTION:** COLOR MATCHING WITH THESE MATERIALS IS VERY DIFFICULT AND A REPAIR WITH AN UNSATISFACTORY COLOR MATCH MAY RESULT.

**NOTE:** This repair shall not be used on defects greater than 3/4 inch in the maximum dimension. Minimum spacing between repairs shall be 1 inch. Materials used in this repair are Skydrol-resistant when fully cured.

- (a) Cut out damaged area and remove honeycomb core in opening. Trim off all loose and ragged edges. Decorative material shall be cut on an angle slanting (inward) toward center of damage.
- (b) Apply wax parting agent to area surrounding damage. Do not allow wax to contact cut edge in decorative sheet (from above item a).
- (c) Fill damaged area to 1/8 inch from decorative surface, with the following resin:
  - 1) Fiber Resin No. 5-418S or 5-419S - 100 parts by wt.
  - 2) Fiber Resin Hardener No. 5-40A - 12 to 13 parts by wt.
- (d) Allow to cure until surface is firm. Temperatures up to 140°F may be used to cure resin.
- (e) Fill remaining void with the following resin tinted to match color.
  - 1) Resin No. 5-418S or 5-419S - 100 parts by wt.
  - 2) Fiber Resin Hardener No. 5-40A - 12-13 parts by wt.
  - 3) Color match using above white resin and an epoxy color matching kit from Fiberlay, Inc., or equivalent.
- (f) Place embossed Mylar over resin, refer to Repair Method No. 5. Use plain Mylar if surface being repaired is not embossed. Mylar shall be 1/2 inch to 1 inch larger in size than damaged area. Working from center of repair, resin shall be swept and faired to desired contour, using a rigid phenolic or Teflon squeegee held perpendicular to the decorative surface.

**NOTE:** It is very important that as much as possible of excess resin be swept out from beneath Mylar film.

EFFECTIVITY

ALL

25-00-11

01

Page 235  
Aug 01/06



## MAINTENANCE MANUAL

- (g) Optional method of embossing mylar or Tedlar sweep fairing film.
  - 1) Place a piece of 2 or 3 mil mylar or Tedlar over decorative surface of 6 inch x 8 inch piece of Tedlar-Conolite laminate or other decorative material of same texture as that to be repaired.
  - 2) Place this between two 1/8 inch thick sheets of silicone rubber (Mosite 1440, or equivalent).
  - 3) Place Item 2, build-up between two pieces of .060 inch thick aluminum.
  - 4) Place this in a press having platen temperatures of  $340 \pm 10^{\circ}\text{F}$ . Pressurize to 190 to 200 psi and hold for 7 to 10 minutes. Cool to less than  $100^{\circ}\text{F}$  under pressure and remove embossed film.
- (h) Allow resin to cure at temperatures of  $70\text{--}140^{\circ}\text{F}$  and then remove sweep fairing film.
- (i) If necessary, sand edges flush with decorative surface using 600 grit abrasive paper. (Andrew Brown Epoxy enamel System per BMS 10-11, Type 2, may be used for color and gloss matching, if desired.)

### W. Repair Method No. 22

- (1) General
  - (a) This method is used to repair cuts and scratches and other surface damage in decorative perforated acoustical panels.
- (2) Equipment and Materials
  - (a) Drill ( $0.027 \pm 0.002$  inch diameter)
  - (b) Drilling Template
  - (c) Decorative Material
- (3) Repair: (Surface Touchup)
  - (a) Repair Procedure
    - 1) Determine type of decorative material that is to be repaired. Locate this type of material and repair surface damage per any method listed under Type I for that decorative material.
    - 2) Perforations may be restored by drilling using  $0.027 \pm 0.002$  inch diameter drill. Use piece of perforated material as a drilling template.

### X. Repair Method No. 23

- (1) General
  - (a) Repair method in item (3)(a)1) is used for deglossing small shiny spots in surface of a Tedlar laminate. this repair is limited to glossy spots less than 1/2 inch in the maximum dimension. Not more than six glossy spots shall be deglossed per panel and minimum spacing between glossy spots shall be one inch. Repair method in item (3)(a)2) is used for repair of scuffs and scratches that do not penetrate the Tedlar.

EFFECTIVITY

ALL

25-00-11

01

Page 236  
Aug 01/06



## MAINTENANCE MANUAL

- (2) Equipment and Materials
    - (a) Scotch Brite, Abrasive disc, type A
    - (b) Sandpaper (600 grit)
    - (c) Buffing Wheel (Cotton Flannel)
    - (d) Buffing Compound, Learock S-30 or 888
  - (3) Repair: (Abrading and Polishing)
    - (a) Repair Procedure
      - 1) Glossy spots may be deglossed by light rubbing with a Scotch Brite abrasive disc, Type A, made by Minnesota Mining & Manufacturing Company or equivalent. Do not abrade through Tedlar.
      - 2) Scuffs and scratches that do not penetrate Tedlar may be repaired as follows: Remove burrs of Tedlar by very light sanding with 600 grit or emery paper. do not sand through Tedlar. Polish to match gloss using a cotton flannel buffing wheel and Learock S-30 or 888 buffing compound.
- Y. Repair Method No. 24
- (1) General
    - (a) This method is for the repair of perforated acoustical panel having damage that penetrates the decorative surface and the fiberglass fly screen. This repair is limited to damage greater than 3/4 inch in diameter and less than 1.5 inch in diameter.
  - (2) Equipment and Materials
    - (a) Female routing template (Dia. 1.5 to 4 inches)
    - (b) Tape (double-back)
    - (c) Mylar tape
    - (d) Male routing template
    - (e) Epibond 126
    - (f) Hardener - Furane #9812
    - (g) Plexiglas (6 X 6 X 8 X 1/4 inch)
    - (h) Fabric -BMS 8-64
  - (3) Repair: (Patch)
    - (a) A femal routing template with a hole diameter of 1.5 to 4 inches shall be centered over damage and held in place with double-back tape. A Formica repair kit has such a template.
    - (b) Rout out damaged area. Set router depth so that fiberglass fly screen beneath decorative face is not cut. Remove flow-resistant fabric.
- NOTE:** On Tedlar-covered laminates, butt several pieces of Mylar tape over damaged area and matching perforated decorative sheets to keep Tedlar film from fraying during routing.

EFFECTIVITY

ALL

25-00-11

01

Page 237  
Dec 01/04



## MAINTENANCE MANUAL

- (c) Using a male template (Formica repair kit), rout out a matching patch from a piece of perforated decorative sheet material. Prefit patch by light sanding high points. Patch should require only light hand pressure to insert. Index patch by marking two places on patch and on surface being repaired. Marking shall be capable of being removed after bonding.
- (d) cut a piece of BMS 8-64 flow-resistant fabric to same size as patch

NOTE: This may be done by bonding fabric to decorative material per Item (g) and then cut patch and fabric together per Item (c).

- (e) Insert flow-resistant fabric and patch in cutout area of panel and adjust for a flush fit of patch to surrounding surface.
- (f) Mask decorative side of patch and area surrounding cutout in panel. Clean faying surfaces with naphtha.
- (g) Spray heavy coat of the following adhesive on faying surface of patch and cutout area.
  - 1) Epibond 126 - 100 parts by weight
  - 2) Furane Hardener 9812 - 60-65 parts by weight
  - 3) Blend together above adhesive and hardener. Dilute with one volume of methyl ethyl ketone and one volume of toluene to one volume of adhesive plus hardener. Allow 10 minutes for air drying after spraying prior to bonding. bond within 30 minutes after spraying.
- (h) Remove masking from patch and panel. Apply double-back (thin as possible) tape to decorative side of patch and to area around cutout in panel. Do not cover up patch index markings.
- (i) Stick patch to 6 X 6 inch or 8 X 1/4 inch piece of Plexiglas. Insert flow-resistant fabric before patch so that it is between patch and flyscreen. Insert patch in cutout area, looking through Plexiglas to line up index markings.
- (j) Apply enough pressure to Plexiglas to assure flush fit. cure for 24 hours at room temperature or 3 hours at 120 ±5°F.

NOTE: A "cupcake" patch per Fig. 203 may be used instead of above circular patch.

- (k) Fill any visible cracks in decorative surface.
- (l) Perforations may be restored by drilling. Use a piece of perforated material as a drilling template.

EFFECTIVITY

ALL

25-00-11

01

Page 238  
Dec 01/04

Z. Repair Method No. 25

(1) General

- (a) This method is for the repair of Textured Finishes.

**CAUTION:** THIS PROCEDURE IS NOT TO BE USED ON POLYCARBONATE OR POLYSULFONE PARTS.

(2) Equipment and Materials

- (a) Spray Gun (DeVilbiss JGA502)
- (b) Spray Gun Head (AV-15-E, 402E Needle)
- (c) Spray Gun Air Cap (765)
- (d) Scotch brite pads
- (e) Lacquer - hi-speed
- (f) Aliphatic Naphtha - TT-N-95A
- (g) Snowite Plastic Mender or Ditzler - DX-888 Mender
- (h) Duratite surfacing putty
- (i) Toluene
- (j) Adhesive - Eastman 910
- (k) Solvent - BMS 3-2

(3) Repair: (Textured Finish)

- (a) Minor Repair of Coating (Scratches, gouges, etc.)
  - 1) Solvent clean area to be repaired using BMS 3-2 solvent or naphtha.
  - 2) Apply coating (Hi-Speed Lacquer, Sherwin-Williams Paint Company) to area to be repaired by brush or conventional spray equipment. If texture is desired in small areas, stippling with a stiff, short bristled brush, or scotch brite pad, using hi-speed lacquer at unthinned consistency, is recommended.
- (b) Minor Repairs in Haircell Textured Surfaces (Cuts, Gouges, Tears)
  - 1) Prepare surface by removing burrs and solvent wiping with naphtha.
  - 2) Prime edges of damaged area with Eastman 910 adhesive to prevent shrinkage of vinyl.

**NOTE:** Do not apply an excessive amount of adhesive as an excess will inhibit cure. Store Eastman 910 adhesive in a closed container and in a cool place when not in use.

- 3) Allow adhesive to dry for 5 minutes.
- 4) Fill damaged area with Snowite plastic or Ditzler DX-888 Mender and sand to fair with panel surface. If Tedlar is on decorative surface, roughen to promote bonding.

EFFECTIVITY

ALL

25-00-11

01

Page 239  
Dec 01/04



## MAINTENANCE MANUAL

- 5) Dilute Duratite surfacing putty with toluene and spray to match surrounding texture. Allow putty to dry for 30 minutes.
  - 6) Spray repaired surface with previously color-matched vinyl ink.
- (c) Major Repair of Coating (Refinish of Large Areas to Restore Texture)
- 1) Solvent clean area to be repaired using BMS 3-2 solvent or naphtha.
  - 2) Mask surfaces surrounding area to be repaired. Apply base coat of hi-speed lacquer to all areas where substrate has been exposed or where color hiding is inadequate. Color of base coat shall be identical to that of texture coat. Base coat is applied with conventional spray equipment to full color hiding and smooth, uniform film. Allow base coat to dry at least 30 minutes before applying texture coat.
  - 3) Texture Coat - Apply hi-speed lacquer without thinning using pressure feed spray equipment. A DeVilbiss JGA 502 spray gun with AV-15-E head, 402E needle and 765 air cap is satisfactory. Line pressure of 25 psi and spray pot pressure of 5 psi are recommended. Spray gun should be held approximately 12 inches from surface to be coated. Apply cross coat to obtain desired texture. Allow to dry at least 30 minutes between spray passes. One cross coat normally consists of two passes of spray gun with one pass crossing the other at right angles. Masking lines can be obliterated by stippling with a stiff, short bristled brush, or scotch brite pad using hi-speed lacquer of unthinned consistency.
- AA. Repair Method No. 26
- (1) General
    - (a) This method is for the repair of Duracote 200A construction, a smoke stain resistant coating.
  - (2) Equipment and Materials
    - (a) Duracote S-25 (top finish)
    - (b) Air brush
    - (c) Duracote 027.5 (dulling agent)
    - (d) Lacquer - hi-speed
  - (3) Repair: (Clear Coat)
    - (a) Repair base material per methods listed in Fig. 201. Base materials are usually vinyl.

EFFECTIVITY

ALL

25-00-11

01

Page 240  
Dec 01/04



## MAINTENANCE MANUAL

- (b) Coat repaired area with Duracote S-25 top finish or Sherwin-Williams Hi-Speed Lacquer. Apply 4 or 5 passes by spraying with an Air Brush, allow drying between passes. Gloss can be altered by adding Duracote 027.5 dulling agent (15% by weight) to S-25 top finish. Sherwin-Williams Hi-Speed Lacquer can be obtained in various degrees of gloss. S-25 may be thinned with a 50-50 mixture (by volume) of tetrahydrofuran and cyclohexanone for spraying.

### AB. Repair Method No. 27

#### (1) General

- (a) This method is for the repair of Tedlar-Conolite paper honeycomb laminates where the Tedlar-Conolite decorative face sheet of panel requires removal due to scuffing, scratching or complete penetration of the Tedlar overlay. The materials used in this repair are Skydrol resistant when fully cured.

#### (2) Equipment and Materials

- (a) Adhesive - Epoxy Polyamide BMS 5-29, type 3
- (b) Aliphatic Naphtha TT-N-95
- (c) Roller or serrated metal spreader
- (d) Clean gauze pads

#### (3) Repair (Tedlar-Conolite paper honeycomb laminates)

- (a) Remove decorative Tedlar-Conolite face sheet from honeycomb by either of the following methods:
  - 1) Remove Tedlar and adhesive from Conolite by sanding. Remove sufficient facing material to ensure a smooth flat surface.
  - 2) Strip Tedlar-Conolite laminate face sheet from paper honeycomb. Use care to prevent damage to honeycomb core and to maintain a flat surface.
- (b) Combine components of adhesive and thoroughly mix together in a clean wax-free container, taking care not to trap excessive air in mixture. Mix components in following proportions:
  - 1) 106 parts by weight: Component AB
  - 2) 100 parts by weight: Component CD

**NOTE:** Adhesive should be used as soon after mixing as possible. Pot life of adhesive is approximately 25 minutes in large volume or 2 hours when spread out.

EFFECTIVITY

ALL

25-00-11

01

Page 241  
Dec 01/04



## MAINTENANCE MANUAL

- (c) Apply adhesive by either of the following methods:
  - 1) Roller Coat Application
    - a) Apply adhesive to surface of honeycomb core using three or four roller coats in criss-crossing directions. Apply adhesive to entire core area until a coating of 8 to 12 grams per square foot is obtained. Eliminate all void areas but do not build up excessive amounts of adhesive.
  - 2) Spread Application
    - a) Obtain a 0.30-inch thick serrated metal spreader with twenty 60-degree teeth per inch.
    - b) Apply a uniform adhesive coating of  $12 \pm 2$  grams per square foot to faying surface of decorative sheet. Eliminate all void areas but do not build up excessive amounts of adhesive.
- (d) Place decorative sheet against honeycomb core.

**NOTE:** Once decorative sheet is brought down on honeycomb core it must not be moved as this can result in displacing adhesive buildup.
- (e) Wipe excess adhesive and all foreign particles from decorative surface of panel with a clean gauze pad saturated in naphtha. Wipe with new clean gauze before solvent dries.
- (f) Apply uniform pressure of 5 to 10 psi to panel and allow adhesive to cure.

### AC. Repair Method No. 28

- (1) General
  - (a) This method is for the repair of gaps at butt joints in vinyl decorative material.
- (2) Equipment and Materials
  - (a) Quart can with sealtight lid.
  - (b) Mechanical agitator
  - (c) Cyclohexanone
  - (d) Tetrahydrofuran
  - (e) Translucent semirigid vinyl sheet
- (3) Prepare Touchup Solution
  - (a) Pour equal weights of cyclohexanone and tetrahydrofuran into a quart can (with a sealtight lid).
  - (b) Cut translucent semirigid vinyl sheet into quantity of small pieces.
  - (c) Place small pieces of vinyl in can with cyclohexane and tetrahydrofuran and put on mechanical agitator (paint shaker).
  - (d) Agitate until all vinyl has dissolved. Add more vinyl or solvent as necessary to obtain desired viscosity.

EFFECTIVITY

ALL

25-00-11

01

Page 242  
Dec 01/04

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

- (e) Add pearlescent powder and silk screen vinyl inks to match desired color and pearlescence.
- (4) Repair Short Butt Joints
  - (a) Apply touchup solution to gaps in butt joint with an artist's brush.

NOTE: Quality of repair will depend on skill of repairman.

- (5) Repair Long Butt Joints
  - (a) Place masking tape on both sides of butt joint.
  - (b) Apply touchup solution along butt joint to form a bead approximately 1/16 inch high.
  - (c) Remove masking tape.
  - (d) When touchup solution has set but still can be dented with fingernail, cut off bead flush with decorative surface using a razor blade.
  - (e) If touchup solution shrinks after drying, repeat steps (a) thru (d) as required.
- AD. Repair Method No. 29
  - (1) General
    - (a) This method is for the repair of polysulfane and polycarbonate plastics.
  - (2) Equipment and Materials
    - (a) Orvus WA paste
    - (b) Clean, dry cheesecloth
    - (c) No. 400 sandpaper
    - (d) Aliphatic naphtha
    - (e) Hysol TE1005 resin; Hysol HD3561 Hardener
    - (f) BMS 10-55 water based paint
    - (g) 181 glass fabric
  - (3) Repair of Scraped or Marred Areas
    - (a) Clean surface with mild soap (Orvus WA Paste) and water. Rinse with clean water and wipe dry with clean cloth.
    - (b) Sand area to be repaired using No. 400 (or finer) sandpaper.
    - (c) Reclean with cold water to remove sandpaper grit and wipe dry with cheesecloth.
  - (4) Repair of Deep Gouges

CAUTION: IF THERE IS A DENT AROUND THE GOUGE, CUT OUT ENTIRE DENTED AREA AND REPAIR AS A CRACK.

- (a) Clean surface with gauze sponge moistened with aliphatic naphtha. Dry with clean dry gauze. Do not allow naphtha to evaporate dry on the surface.
- (b) Sand area to be repaired using No. 400 (or finer) sandpaper.
- (c) Reclean with aliphatic naphtha and dry with clean dry gauze.

EFFECTIVITY

ALL

25-00-11

01

Page 243  
Dec 01/04



## MAINTENANCE MANUAL

- (d) Apply Hysol TE1005 resin mixed 100 parts of resin with 15 parts of Hysol HD3561 hardener to damaged area. Use hand pressure to force resin into recesses. Use of spatula, putty knife, etc. may aid in restoring desired surface contours. Pot life is approximately 45 minutes.
  - (e) Allow resin to cure at room temperature for 24 hours or at 140° for 2 hours.
  - (f) Sand surface to fair out any roughness, and to remove any glossy finish.
  - (g) Paint entire decorative surface of repaired part. Use BMS 10-55 water base paint. Maximum thinning ration 10 parts paint to 1 part water. Maximum dry film thickness, 2.0 mils. Minimum drying time 4 hours at 75°F, or 1.5 hours at 130°F. Spray apply. Allow 30 minutes flash-off time before heating to speed drying.
- (5) Repair of Cracks
- (a) Drill crack stop holes at least 1/16-inch diameter, then machine crack open until width is at least thickness of part.
  - (b) Sand back surface to remove all gloss and clean with naphtha.
  - (c) Apply 181 glass fabric impregnated with Hysol TE1005 mixed with 15 ±2 parts per hundred Hysol HD3561 hardener. Reinforcement must be at least as thick as part where crack was. Step back each layer 1/2 inch on all edges. If crack is at edge, stepping back can be eliminated at that edge.
  - (d) Sweep off excess resin and cure the reinforcement.
  - (e) Prepare decorative surface as in AE.(4), Repair of Deep Gouges.
- AE. Repair Method No. 30
- (1) General
    - (a) this repair is for "bubbled" or delaminated areas of vinyl decorative facing bonded to a substrate.
  - (2) Equipment and Materials
    - (a) Lacquer - hi-speed
    - (b) Syringe (#1011 Jelco 3 c.c. syringe fitted with #20 X 1 inch long monoject 250 needle)
    - (c) Adhesive - Eastman 910
  - (3) Repair: ("bubbled" or delaminated area)

**NOTE:** Do not repair "bubbled" areas under condensing humidity atmospheric conditions. Condensed water in bubble will result in poor adhesion.

- (a) Puncture an entry and exit port at each end of bubbled or delaminated area using a sharp pointed knife or equivalent.
- (b) Cover exit port with masking tape.

EFFECTIVITY

ALL

25-00-11

01

Page 244  
Dec 01/04



## MAINTENANCE MANUAL

- (c) Insert needle of a syringe (#1011 Jelco 3 c.c. syringe fitted with #20 X 1 inch long monoject 250 needle) into entry port and evacuate air.

**NOTE:** Use syringe needle specified in step (c). A larger needle will make repair of port holes difficult and smaller needles will not allow satisfactory delivery of adhesive.

- (d) Remove masking tape covering exit port.
- (e) Inject Eastman 910 adhesive through entry port using syringe.

**NOTE:** Approximately - c.c. of adhesive should be injected for approximately 4 square inches area delaminated. Do not inject an excessive amount of adhesive as an excess may result in a visible ring at edges of delaminated area.

- (f) Starting at center of delaminated area, sweep out excess adhesive through ports using a squeegee.
- (g) Remove squeezed-out adhesive immediately with cheesecloth.
- (h) Rub delaminated area with clean cheesecloth until adhesive has "set-up" (approximately 2 minutes).
- (i) Touch up ports with lacquer (Hi-Speed Lacquer, Sherwin-Williams Paint Company). Match color of lacquer to color of decorative facing material. When necessary, dull lacquered area after it has dried by rubbing with cheesecloth or pencil eraser.

### AF. Repair Method No. 31

#### (1) General

- (a) This repair method is for the repair of Tedlar delamination from vinyl-aluminum panels.
- (b) This repair method is intended for edge delamination of Tedlar from vinyl-aluminum panels where the Tedlar has been peeled back no more than 1/4 inch and has not been torn or stretched. This repair may also be used for overcoating small scratches, tears, etc., with clear lacquer where applicable.

#### (2) Equipment and Materials

- (a) Sherwin Williams semigloss clear high-speed lacquer or clear vinyl-acrylic lacquer.
- (b) Aliphatic Naphtha - TT-N-95A

#### (3) Repair

- (a) Clean surfaces to be repaired with BMS 3-2 solvent or naphtha.
- (b) Apply a light brush coat of high-speed lacquer to both the vinyl and Tedlar facing surfaces (Fig. 204).
- (c) Allow lacquer to dry 3 to 5 minutes until tacky.
- (d) Wipe down loose Tedlar overpanel edge and allow to dry 30 minutes.

EFFECTIVITY

ALL

25-00-11

01

Page 245  
Aug 01/06



## MAINTENANCE MANUAL

- (e) To prevent further delamination, apply clear lacquer as an edge sealer around entire periphery of part.

### AG. Repair Method No. 32

#### (1) General

- (a) This method is for the repair of lavatory doors, aisle and forward/aft partitions. When parts are to be recovered in the airplane, a pressure sensitive film adhesive is to be used. On flat partitions use fiberglass backed vinyl and an unsupported vinyl for radiused or edge-wrapped parts.

#### (2) Equipment and Materials

- (a) Aliphatic Naphtha, TT-N-95A
- (b) Pressure Sensitive Film Adhesive -BMS 5-91
- (c) Snowite plastic mender (Swiss Laboratories, Bedford Heights, Ohio)

#### (3) Repair

##### (a) Doors

- 1) Remove door hardware as required.
- 2) Strip off vinyl from door.
- 3) Make pattern of area to be recovered using wax paper.
- 4) Clean off old adhesive.
- 5) Thoroughly dry door to ensure all solvent has evaporated.
- 6) Resurface dents, cuts and scratches as required with plastic mender.
- 7) Cut vinyl with approximately 1-inch excess.
- 8) Remove backing paper from vinyl.
- 9) Starting at one end, sweep vinyl onto panel. Avoid air entrapment.
- 10) Using cheesecloth, rub vinyl firmly down.
- 11) Trim edges and cutouts.
- 12) Replace door hardware as required.

##### (b) Forward/Aft Facing Partitions

- 1) Remove door and/or edge trim.
- 2) Remove lower trim strip, toilet shroud and support angle.
- 3) Unfasten flat ceiling panel and relocate up and outboard.
- 4) Cut vinyl along facing surface of toilet shroud support angle from insert to insert.
- 5) Strip off vinyl, except in lower corner behind toilet shroud.
- 6) Make pattern of area using wax paper.
- 7) Transfer pattern to back of vinyl and trace partition outline.
- 8) Cut partition pattern from vinyl fiberglass laminate. Use a straightedge on inboard edge to ensure a straight cut.
- 9) Clean off old adhesive.
- 10) Resurface partition area as required with plastic mender.

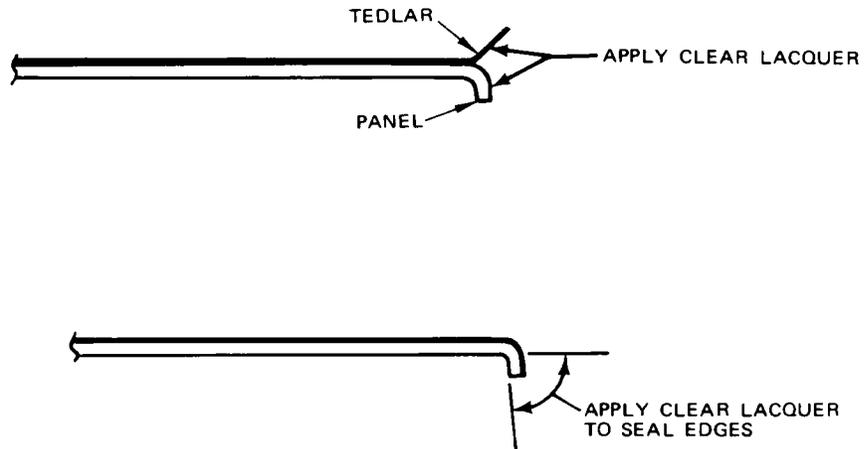
EFFECTIVITY

ALL

25-00-11

01

Page 246  
Dec 01/04



Tedlar Delamination Repair (Repair Method No. 31)  
 Figure 204

EFFECTIVITY	ALL
-------------	-----

25-00-11

01

Page 247  
 Dec 01/04

455057



## MAINTENANCE MANUAL

- 11) Score and remove 6-inch strip of release paper from inboard straight edge of vinyl.
- 12) Align straight edge of vinyl with straight edge of partition and lightly tack down. Smooth vinyl over remainder of partition and check for alignment.

NOTE: If necessary to reposition vinyl, remove vinyl from partition with a sharp jerk.

- 13) When vinyl alignment is correct, remove remainder of release paper and sweep vinyl out panel surface.
  - 14) Using a soft pad or cheesecloth, firmly rub down vinyl over entire surface.
  - 15) Fasten flat ceiling panel.
  - 16) Replace trim, shroud and hardware removed in step 2.
  - 17) Install door and/or edge trim.
- (c) Inside of Aisle Partitions
- 1) Remove door and/or edge trim.
  - 2) Remove fluorescent lamp fixture.
  - 3) Unfasten flat ceiling panel and relocate up and outboard.
  - 4) Remove access door on front and aft LH lavatory partitions.
  - 5) Remove counter moulding. Loosen counter cabinet to provide gap between it and the partition.
  - 6) Strip off visible areas of vinyl.

NOTE: Use unsupported vinyl to cover forward RH and aft LH lavatory partitions. Fiberglass backed vinyl can be used on aft RH lavatory partition.

- 7) Make pattern of area with wax paper.

NOTE: When using unsupported vinyl, allow 1- to 2-inch excess to allow for wrapping access door cutout and to tuck in behind counter.

- 8) Clean off old adhesive.
- 9) Resurface rough or damaged areas as required with plastic mender.
- 10) Score and remove 6-inch strip of release paper from top edge of vinyl.
- 11) Position vinyl at top edge of panel and lightly tack down. Check alignment of vinyl over remainder of panel.
- 12) If alignment is satisfactory, progressively strip off release paper (about a foot at a time) and sweep vinyl onto panel.
- 13) Trim excess vinyl. Wrap vinyl around access door cutout.

EFFECTIVITY

ALL

25-00-11

01

Page 248  
Dec 01/04



## MAINTENANCE MANUAL

- 14) Re-cover access door separately.
- 15) Replace fluorescent lamp fixture.
- 16) Replace access door.
- 17) Fasten flat ceiling panel.
- 18) Install door and/or edge trim.

EFFECTIVITY

ALL

25-00-11

01

Page 249  
Dec 01/04

CABIN ACCOMMODATION CONVERSIONS – DESCRIPTION AND OPERATION

1. General

- A. The interior furnishings and equipment in the main cabin of these airplanes are designed to allow easy and rapid convertibility between several configurations of accommodation for passengers and/or cargo.
- B. Between the forward and aft entry doors the main cabin can be cleared of passenger equipment and converted to accommodate cargo. Alternatively a fume-tight dividing partition may be installed across the cabin at five different positions: cargo is then accommodated forward of the partition and passengers aft of it. Thus, the types of accommodations available are: all-passenger, 2 pallet, 3 pallet, 4 pallet, 5 pallet, 6 pallet, and all-cargo (7 pallet).
- C. This section of the Maintenance Manual describes the procedures necessary to convert the cabin accommodation from any one to any other of the available configurations. For information on how the cargo is secured within the cabin, how much may be loaded and how it should be distributed, reference should be made to the Weight and Balance Control and Loading Manual.

2. Passenger Accommodation

- A. When the whole cabin is furnished for passenger accommodation, the equipment is similar to that of a normal passenger airplane. This includes floor coverings, passenger seats, hatracks, passenger service units and windows.
- B. In the combined configurations the passenger accommodation aft of the dividing partition is fully equipped.

3. Cargo Accommodation

- A. When the whole cabin is converted for cargo accommodation, the passenger seats and floor coverings are removed and the hatracks are folded up. In this configuration use is made of all seven floor tracks, three of which (one along the center of the floor and one along each outboard edge) are filled and covered in the passenger configuration.
- B. In the combined configurations that portion of the cabin forward of the dividing partition is similarly cleared of passenger equipment. A door in the dividing partition provides access between the passenger cabin and the crew area forward.
- C. The various cargo-carrying capacities of the cabin are based on unit loads of palletized cargo and the cargo carrying equipment is designed to accommodate such pallets. The pallets are 88 inches long (fore and aft) x 108 inches wide. The cargo carrying equipment is attached to the floor tracks and consists of a system of rollers and guides on which pallets loaded with freight may be moved as far aft as any particular configuration allows. For further information on the cargo system, refer to 25-56-0, Main Cabin Cargo Equipment.

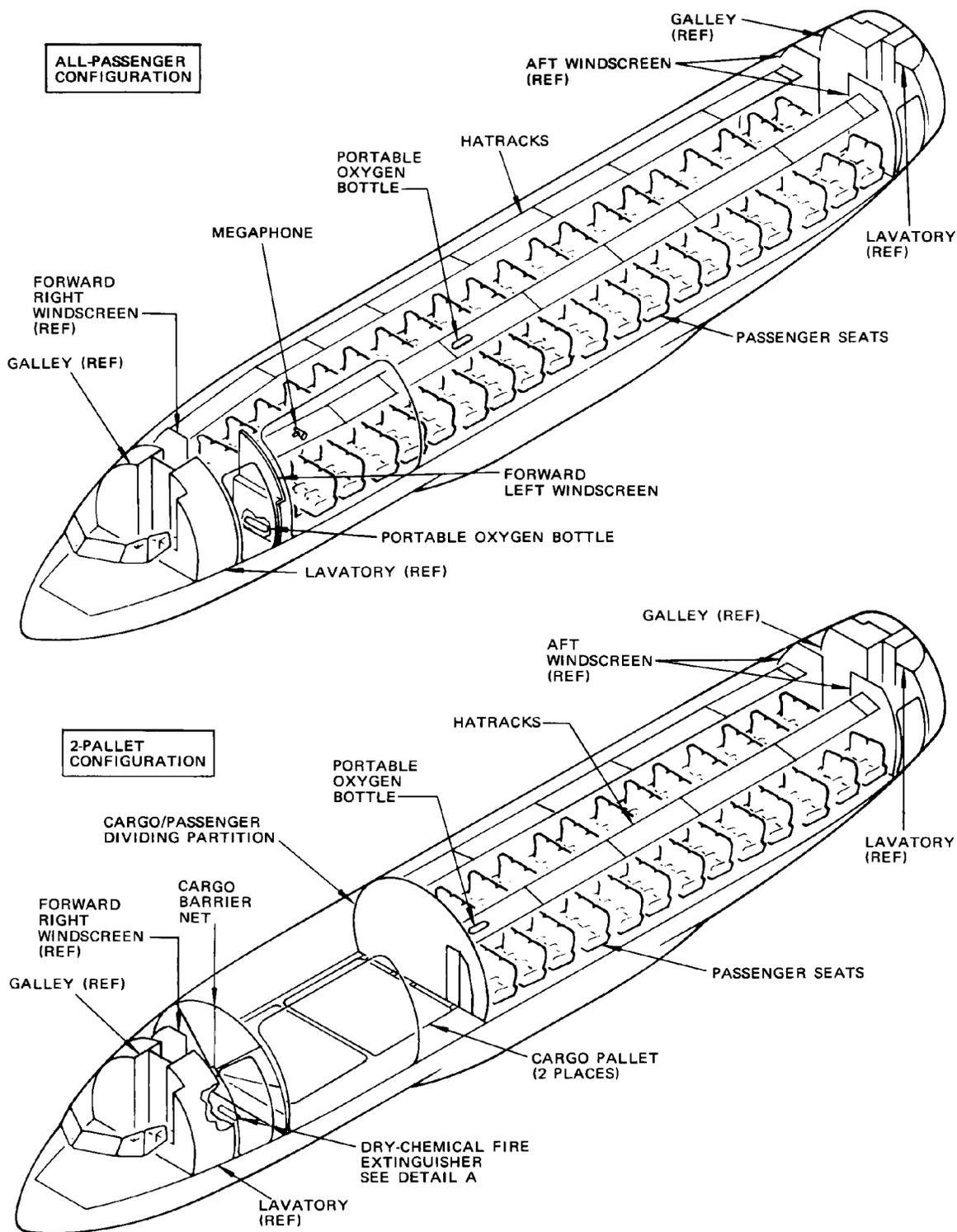


## MAINTENANCE MANUAL

- D. In the all-cargo configuration the capacity of the cabin is 7 pallets. The five capacities of the combined passenger/cargo configurations are: 2, 3, 4, 5, and 6 pallets (Fig. 1).
  - E. If it is desired to carry bulk cargo, instead of palletized, this may be loaded directly on the cabin floor.
  - F. For information on the cargo door, refer to 52-32-0, Main Cargo Door.
  - G. Three electrical receptacles along the lower left sidewall of the cabin provide 115-volt ac power supplies for the cargo pallets, if any should be desired. The receptacles are positioned so as to permit operation of temperature control or similar functions on any three pallets within the cabin. An electrical receptacle is installed on the lower right sidewall at each of the five locations of the cargo/passenger dividing partition. These five receptacles provide 28-volt dc power for an illuminated passenger sign on the partition.
4. All-Passenger Configuration
- A. In this configuration the whole cabin is furnished and equipped for the accommodation of 115 tourist class passengers. The main cargo door is closed and appears indistinguishable from any other portion of the cabin sidewall.
5. Combined Configurations
- A. The five combined passenger/cargo configurations are the 2 pallet/76 passenger, 3 pallet/58 passenger, 4 pallet/34 passenger, 5 pallet/28 passenger, and the 6 pallet/10 passenger configurations.
  - B. In the combined configurations the forward area of the cabin desired for cargo accommodation is cleared of passenger seats and floor covering. The seats and floor covering aft of this cargo area remain in place. The forward left windscreen is removed and hatracks on both sides of the cabin in the cargo area are folded up.
  - C. The cargo system is installed on the floor to accommodate the number of cargo pallets desired. The cargo/passenger dividing partition is installed across the cabin immediately aft of the cargo system.
6. All-Cargo Configuration
- A. In the all-cargo configuration the whole cabin is cleared of passenger seats and floor covering. The forward left windscreen is removed and the hatracks on both sides of the cabin are folded up. The complete cargo system is installed to carry seven cargo pallets. (This is the maximum number of pallets which may be loaded in any configuration.)
7. Emergency Equipment
- A. Certain items of emergency equipment are relocated within the cabin when the accommodation is converted from one configuration to another. (See figure 1.)
  - B. Figure 1 shows only those items of emergency equipment which are affected by conversion, for detailed information on the emergency equipment, refer to 25-60-0.

EFFECTIVITY  
Passenger/Cargo Convertible Airplanes

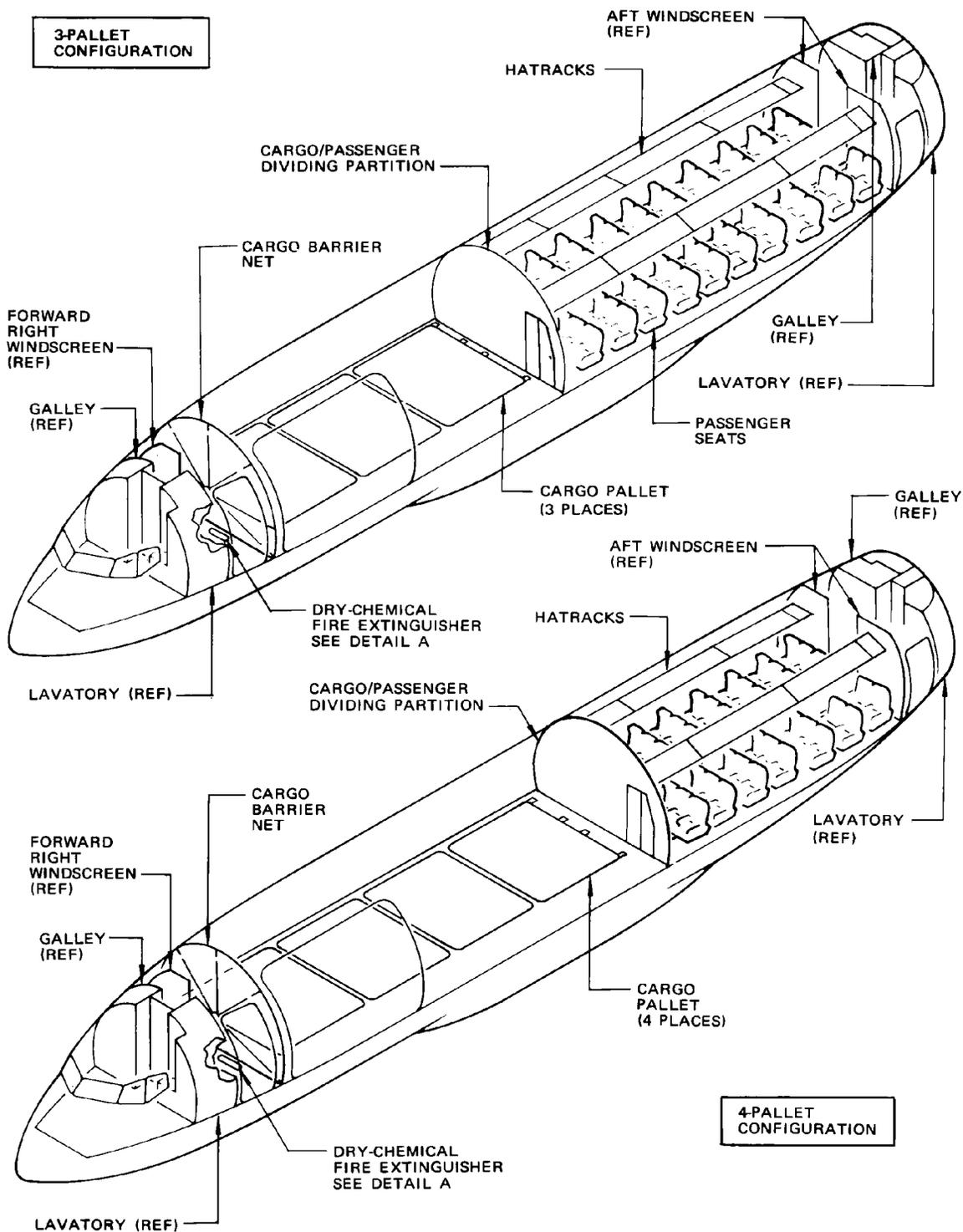
25-09-100



Cabin Accommodation Conversions  
 Figure 1 (Sheet 1)

EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

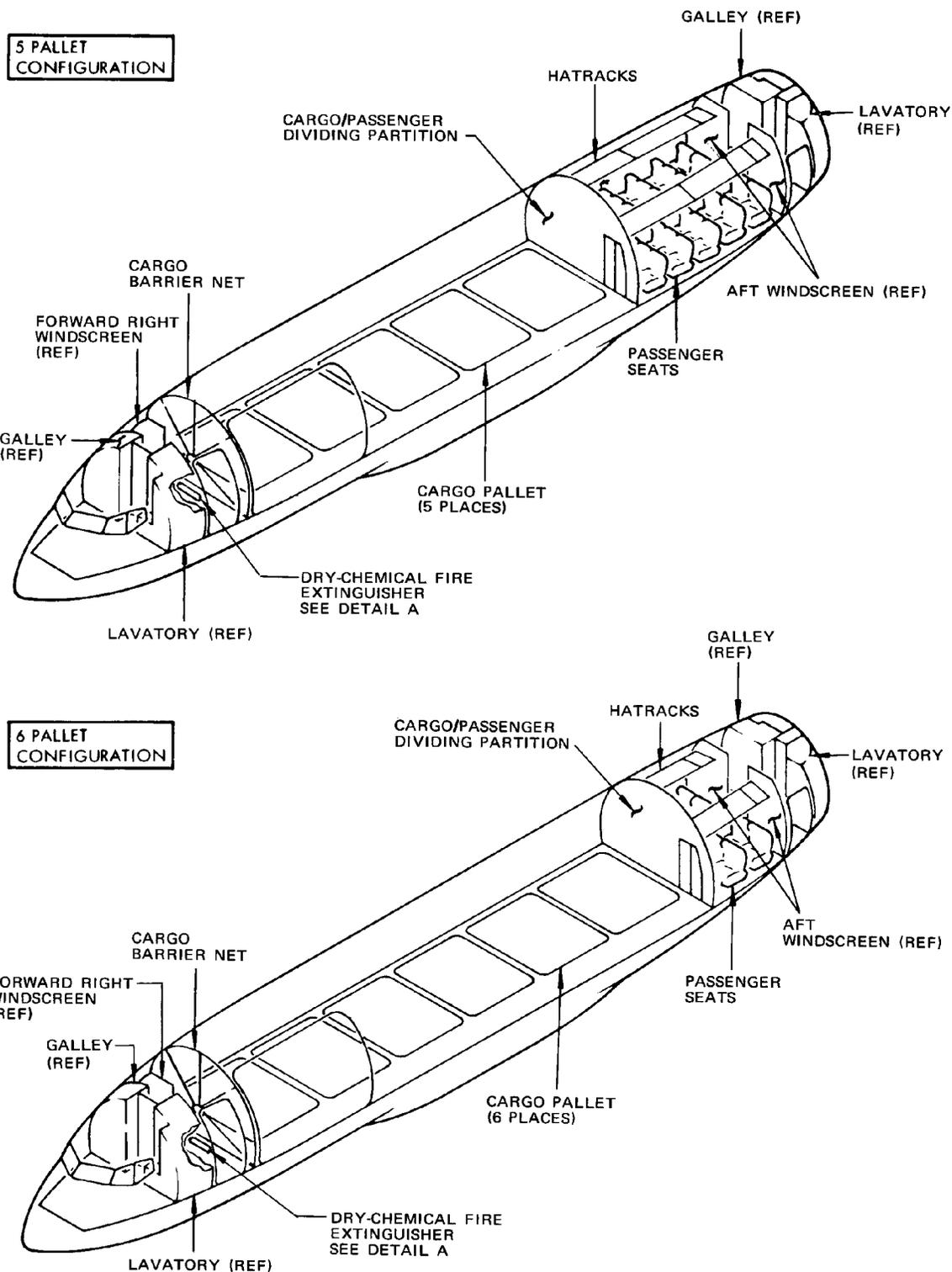
25-09-100



Cabin Accommodation Conversions  
 Figure 1 (Sheet 2)

EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

25-09-100

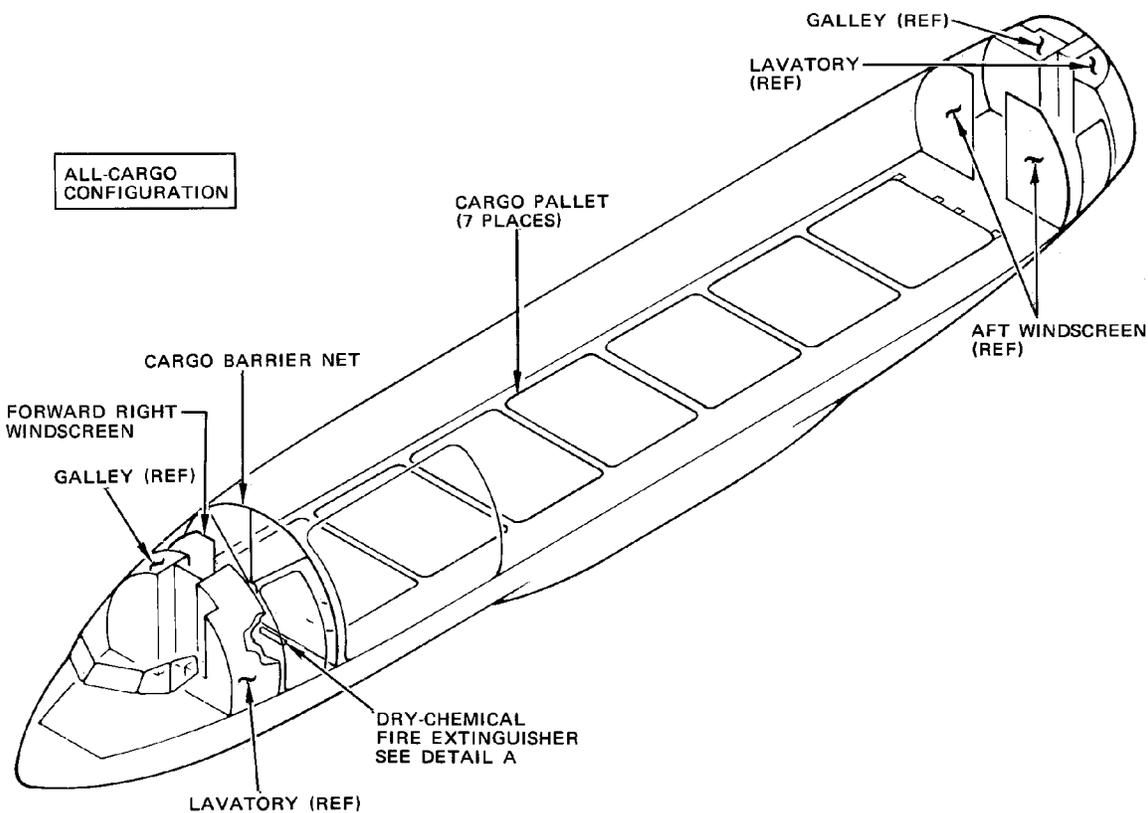


Cabin Accommodation Conversions  
 Figure 1 (Sheet 3)

EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

25-09-100

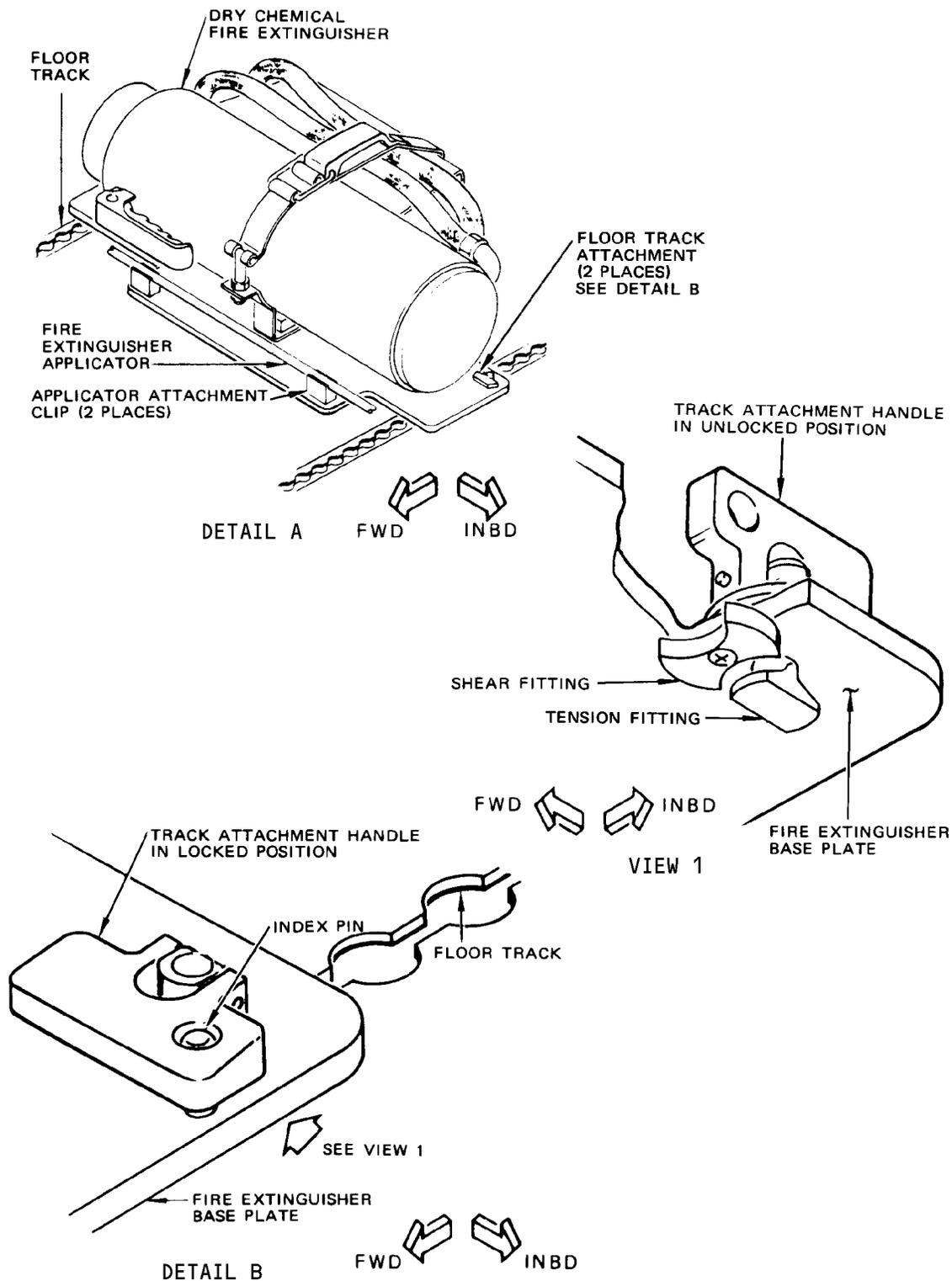
455132



Cabin Accommodation Conversions  
 Figure 1 (Sheet 4)

EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

25-09-100



Cabin Accommodation Conversions  
 Figure 1 (Sheet 5)

EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

25-09-100

CABIN CONVERSION (PASSENGER/ALL-CARGO) – MAINTENANCE PRACTICES

1. General

- A. The instructions in this section provide the steps necessary to convert the cabin between the all-passenger configuration and the all-cargo configuration (Fig. 201).
- B. Certain operations and conditions must be accomplished when converting the cabin to accommodate cargo. These are summarized as follows:
  - (1) The hatracks in that part of the cabin converted to carry cargo must be folded up. The main cargo door hatrack must be folded up to the cargo position before the cargo door can be opened. Individual air outlets on passenger service units, of hatracks to be folded, must be closed, and reading lights switched off. Along both sides of any section of the cabin being converted to carry cargo, all window shades must be pulled down.
  - (2) The personnel safety net is installed across the main cargo door opening while the door is open to protect personnel working in the cabin. When the cargo door is closed in a cargo carrying configuration, the safety net is stowed in a bag installed on the sidewall just aft of the cargo door.
  - (3) The main cargo door threshold assembly is installed temporarily, when no other facilities are available, to aid the movement of cargo pallets through the main cargo door opening. This threshold must be removed before the cargo door can be closed.
  - (4) When the cabin is in one of the cargo carrying configurations a barrier net is installed across the cabin at approximately body station 354.

2. Equipment and Materials

- A. Side cargo door opening safety barrier – F70258-1

3. Convert Cabin from All-Passenger to All-Cargo Configuration

- A. Remove megaphone from forward end of left hatrack.
- B. Remove portable oxygen bottle from left hatrack, just forward of emergency exit.
- C. Remove the tray stowage boxes from each of the two aft folding sections of the right hatrack and from the aft folding section of the left hatrack.
- D. Fold all hatracks to cargo position (Ref. 25-28-01).
- E. Remove seat track covers and place in seat back pocket of adjacent seats (Ref. 25-27-100).
- F. Remove literature stowage bag from sidewall adjacent to each front seat.
- G. Unlock all passenger seats from floor tracks and place a numbered card in a seat back pocket of each seat to identify row number for reinstallation.
- H. Open main cargo door lift actuator access door in cabin ceiling.
- I. Pull down window shades on main cargo door and open door (Ref. Chapter 52, Main Cargo Door).

EFFECTIVITY

ALL

25-09-111

10

Page 201  
Aug 01/05



## MAINTENANCE MANUAL

- J. Remove all passenger seats. Remove seat armrest from each emergency exit.
- K. Install personnel safety net and stowage bag on sidewall aft of cargo door opening. Net should be installed whenever door is not being used for loading or unloading.

**WARNING:** TAKE CARE WHEN WORKING IN VICINITY OF OPEN DOOR. INSTALL DOORWAY SAFETY BARRIER TO PREVENT FALLING THROUGH DOORWAY.

- L. Remove forward left windscreen (Ref. 25-24-111).
- M. Remove floor covering (Ref. 25-27-100). Roll carpet segments at each pallet position together into one roll to aid in reinstallation.
- N. Install complete cargo system (Ref. 25-56-0).
- O. Remove floor covering aft of forward service door and expose floor air grille.
- P. Remove barrier net floor fitting coverplates and stow in personnel safety net stowage bag.
- Q. Install cargo barrier net (Ref. 25-56-111).
- R. Install dry-chemical fire extinguisher on floor at forward end of cabin (Ref. 25-09-100).
- S. Pull down window shades along both sides of cabin.
- T. Fold up emergency exit sign located on air duct opposite overwing emergency exits.
- U. On forward overhead panel, operate GASPER FAN switch on forward overhead panel to OFF. Open GASPER FAN circuit breaker on the P6 panel.
- V. Close all gasper air outlets and switch off reading lights.
- W. Open access door in aft end of forward lowered ceiling and operate passenger oxygen system shutoff valve to closed position (Ref. Chapter 35, Passenger Oxygen System).
- X. Operate the forward overhead light fixture air outlet shutoff valve to the closed position and (when installed) the aft overhead light fixture air outlet shutoff valve to the opened position.

**WARNING:** EMERGENCY PROVISIONS FOR PREVENTING SMOKE PENETRATION INTO THE CREW COMPARTMENT REQUIRE THAT THE FORWARD VALVE BE CLOSED IN THE ALL-CARGO CONFIGURATION.

#### 4. Convert Cabin from All-Passenger to All-Cargo Configuration

- A. Open main cargo door (Ref. Chapter 52, Main Cargo Door).
- B. Install personnel safety net across main cargo door opening while door is open. Net should be installed whenever door is not being used for loading or unloading (Fig. 202).

**WARNING:** TAKE CARE WHEN WORKING IN VICINITY OF OPEN DOOR. INSTALL DOORWAY SAFETY BARRIER TO PREVENT FALLING THROUGH DOORWAY.

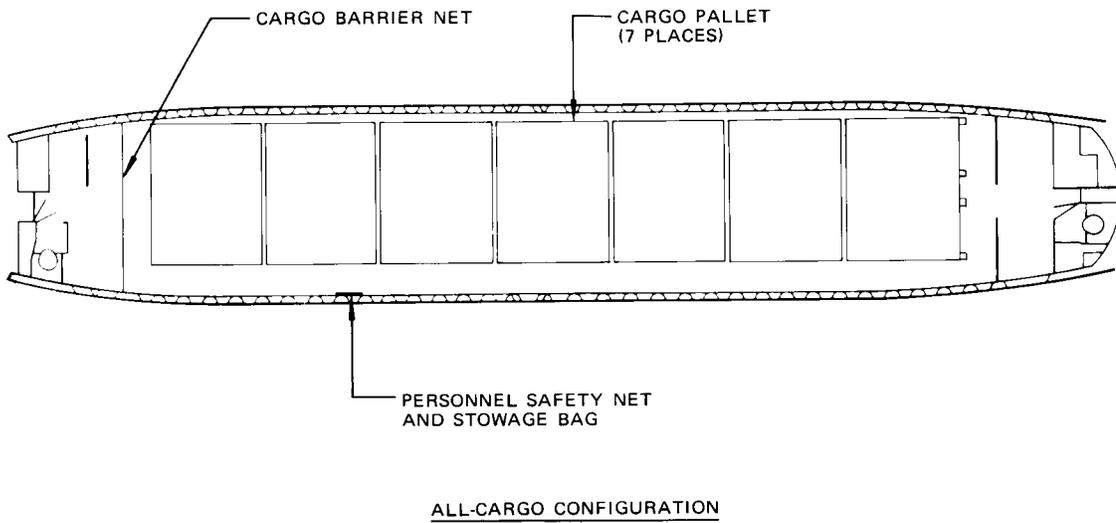
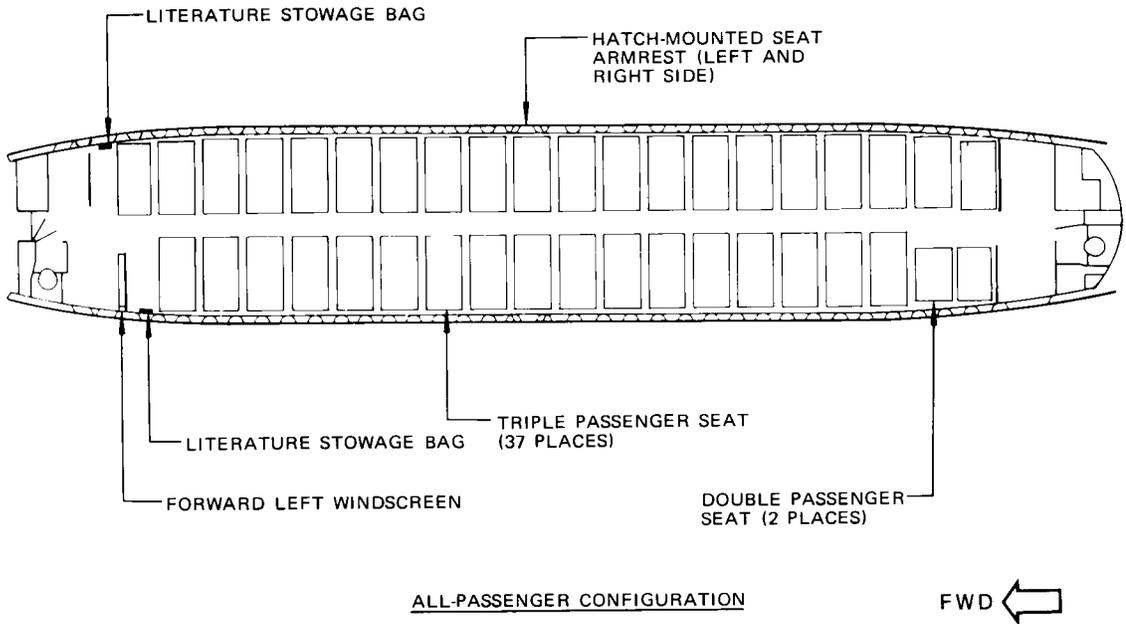
EFFECTIVITY

ALL

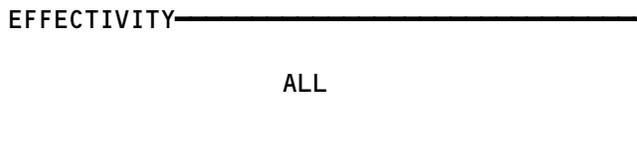
25-09-111

11

Page 202  
Dec 01/04



Cabin Accommodation Conversions  
 Figure 201



25-09-111



## MAINTENANCE MANUAL

- C. Remove dry-chemical fire extinguisher from floor at forward end of cabin (Ref. 25-09-100).
- D. Remove cargo barrier net (Ref. 25-26-111).
- E. Install barrier net floor-fitting coverplates.
- F. Install floor covering over floor air grille.
- G. Remove complete cargo system (Ref. 25-56-0).
- H. Clean cabin floor as necessary.
- I. Install floor covering (Ref. 25-27-100).
- J. Install forward left windscreen (Ref. 25-24-111).
- K. Remove personnel net stowage bag from sidewall aft of cargo door opening.
- L. Install seat armrest on each emergency exit.
- M. Install all passenger seats. Arrange seats in accordance with numbered cards placed in seat back pockets during removal. Lock seats to floor tracks installing seat track covers to determine spacing.
- N. Remove personnel safety net from cargo door opening.
- O. Close main cargo door (Ref. Chapter 52, Main Cargo Door).
- P. Close main cargo door lift actuator access door in cabin ceiling.
- Q. Raise all window shades.
- R. Fold down hatracks to passenger position (Ref. 25-28-01).
- S. Install a tray stowage box on each aft folding section of right and left hatracks.
- T. Install portable oxygen bottle on left hatracks, just forward of emergency exit.
- U. Install megaphone in bracket near forward end of left hatrack.
- V. Fold down emergency exit sign located on air duct opposite the overwing emergency exits.
- W. Install literature stowage bag on left sidewall adjacent to each front seat.
- X. Close GASPER FAN circuit breaker on the P6 panel. Operate GASPER FAN switch on forward overhead panel to ON.
- Y. Operate passenger oxygen system shutoff valve to open position and close access door in aft end of forward lowered ceiling (Ref. 35-21-0).
- Z. Operate the forward overhead light fixture air outlet shutoff valve to the opened position.

EFFECTIVITY

ALL

25-09-111

11

Page 204  
Dec 01/04

CABIN CONVERSIONS (PASSENGER, PASSENGER/CARGO) – MAINTENANCE PRACTICES

1. General

- A. The instructions in this section provide the steps necessary to convert the cabin between the all-passenger configuration and any of the various combined passenger/cargo configurations (Fig. 201).
- B. Certain operations and conditions must be accomplished when converting the cabin to accommodate cargo. These are summarized as follows:
  - (1) The hatracks in that part of the cabin converted to carry cargo must be folded up. The main cargo door hatrack must be raised to the cargo position before the door can be opened. Individual air outlets on passenger service units, of hatracks to be folded, must be closed, and reading lights switched off. Along both sides of any section of the cabin being converted to carry cargo, all window shades must be pulled down.
  - (2) When the cabin is in one of the combined passenger/cargo configurations the floor-mounted portable dry-chemical fire extinguisher, and its applicator, must be installed in the forward part of the cabin. Cargo loading in these circumstances must permit an aisle for access between the crew and passenger compartments, and must permit the use of the portable dry-chemical fire extinguisher, with applicator, to effectively reach fires in all areas of the cargo compartment.
  - (3) The main cargo door threshold assembly is installed temporarily, when no other facilities are available, to aid the movement of pallets through the main cargo door opening.
  - (4) When the cabin is in one of the cargo carrying configurations a barrier net is installed across the cabin at approximately body station 354.
  - (5) The personnel safety net is installed across the main cargo door opening while the door is open to protect personnel working in the cabin. When the main cargo door is closed in a cargo carrying configuration, the safety net is stowed in a bag installed on the sidewall just aft of the cargo door.
  - (6) When the seats adjacent to the emergency exits are removed, or installed, the seat armrests attached to the emergency exits should be removed, or installed, with the seats to which they belong.

2. Equipment and Materials

- A. Side cargo door opening safety barrier – F70258-1

3. Convert Cabin from All-Passenger to Combined Passenger/Cargo Configurations

- A. Remove megaphone from forward end of left hatrack.
- B. Remove portable oxygen bottle from left hatrack as necessary (Ref. 25-09-100).
- C. When converting to 6-pallet configuration, remove forward tray stowage box from right hatrack.

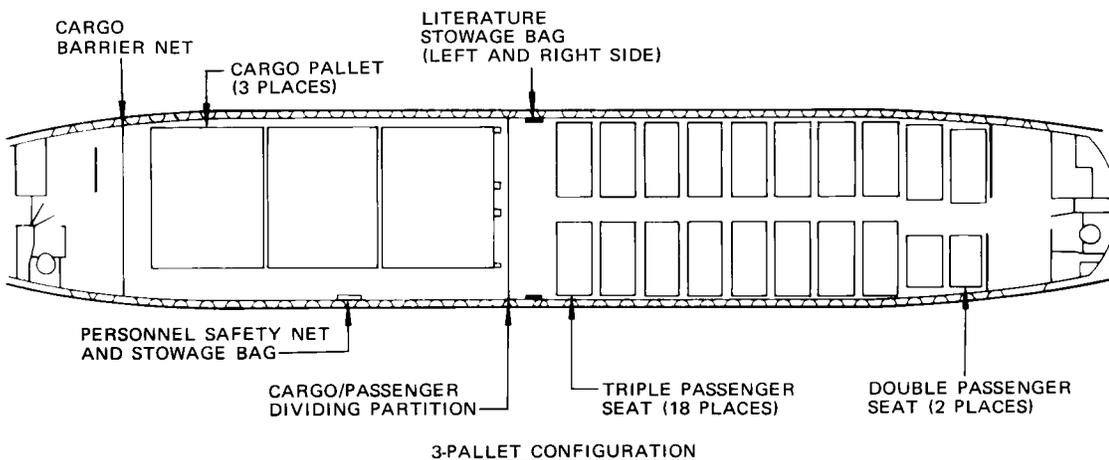
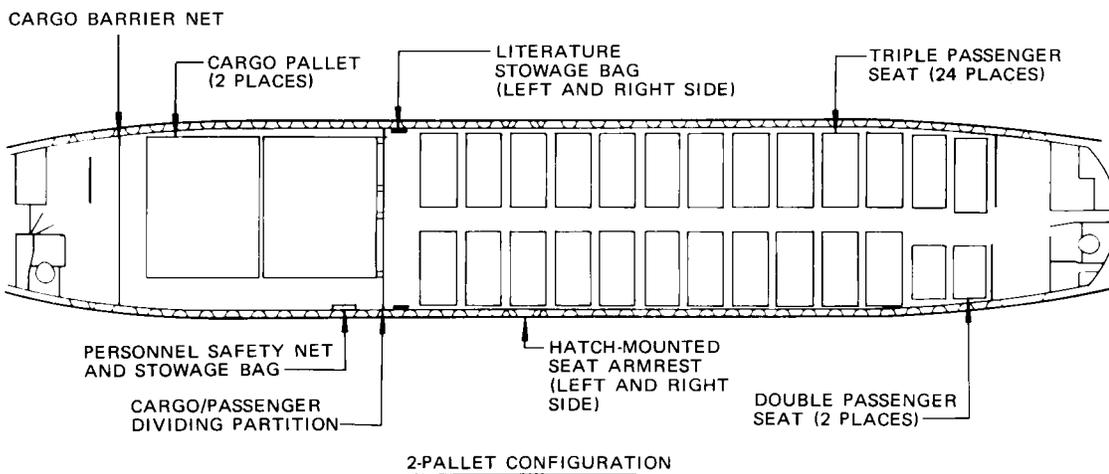
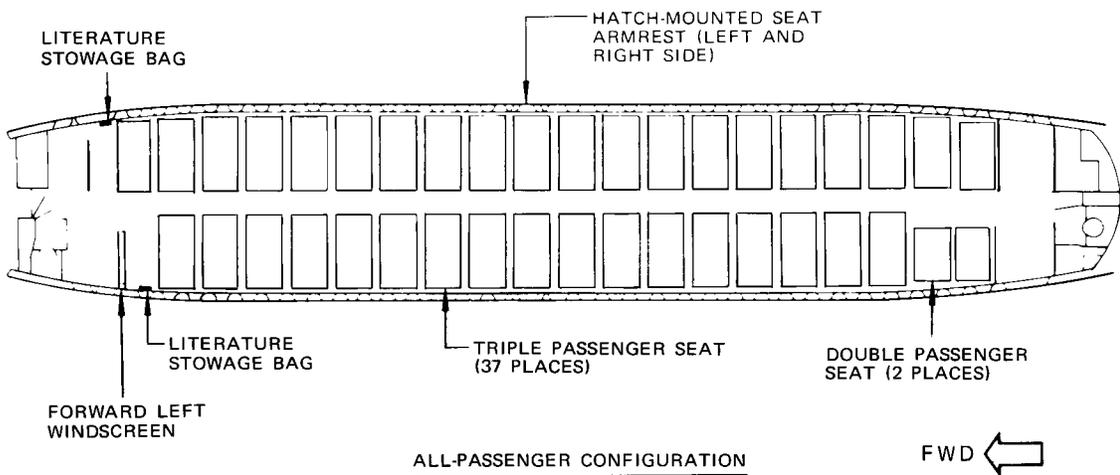
EFFECTIVITY

ALL

25-09-121

10

Page 201  
Aug 01/05



Cabin Accommodation Conversions  
 Figure 201 (Sheet 1)

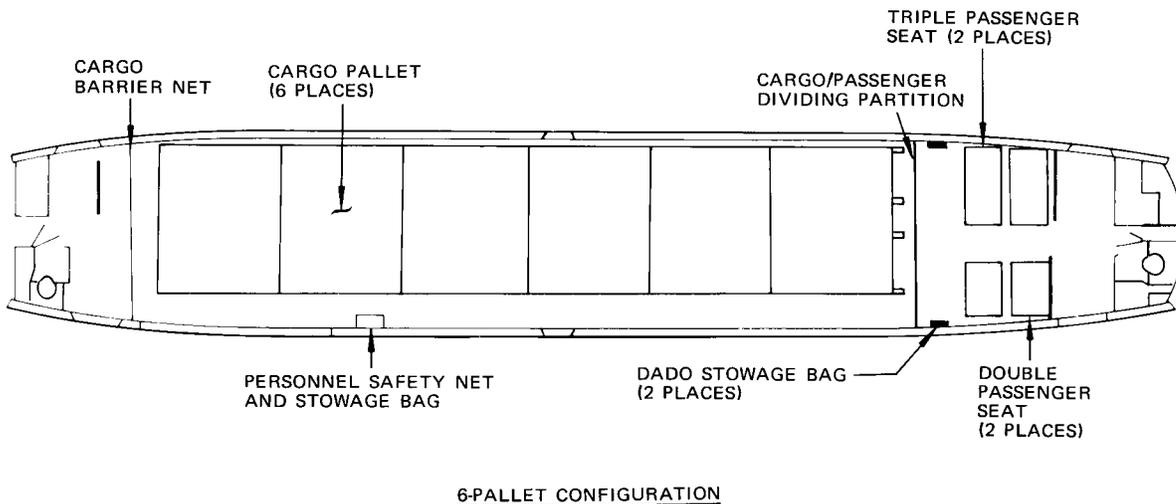
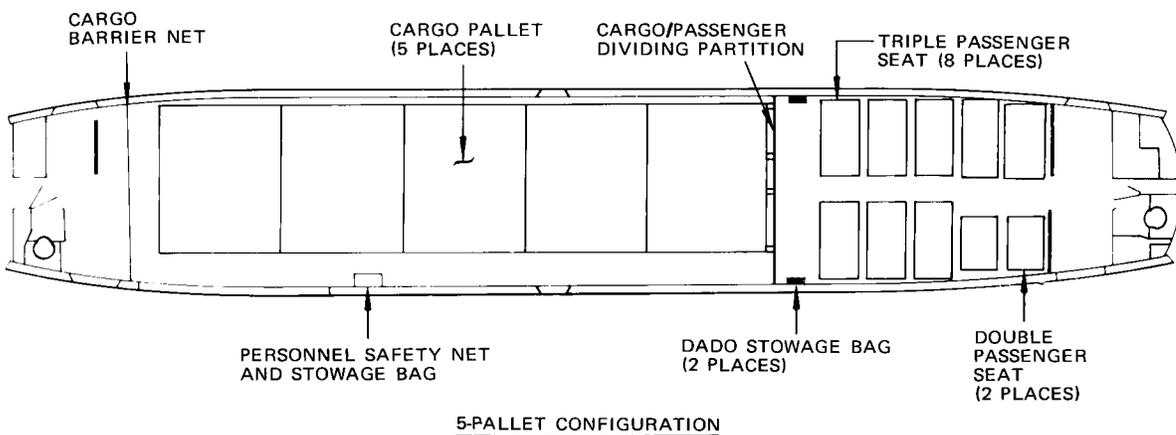
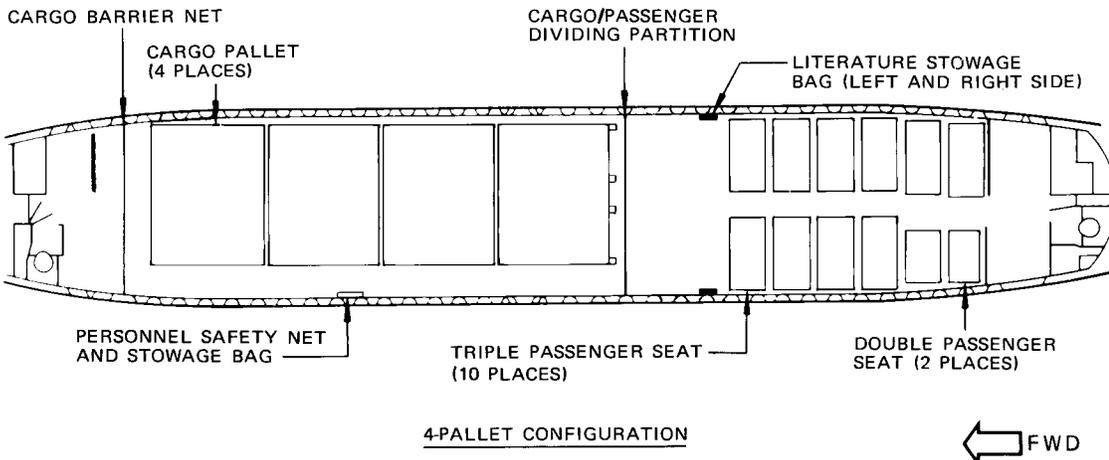
EFFECTIVITY ————

ALL

25-09-121



**MAINTENANCE MANUAL**



Cabin Accommodation Conversions  
Figure 201 (Sheet 2)

EFFECTIVITY	ALL
-------------	-----

25-09-121



## MAINTENANCE MANUAL

- D. Fold hatracks to cargo position in cargo area (Ref. 25-28-01).
- E. Close gasper air outlets and turn off all reading lights on passenger service units located on folded hatrack sections.
- F. Remove literature stowage bag from sidewall adjacent to each front seat.
- G. Remove seat track covers from cargo area and place in seat back pockets of adjacent seats (Ref. 25-27-100).
- H. Open main cargo door lift actuator access door in cabin ceiling.
- I. Pull down window shades on main cargo door and open door (Ref. Chapter 52, Main Cargo Door).
- J. Remove passenger seats from cargo area. Place numbered card in seat back pocket of each seat to identify row number for reinstallation.
- K. Except when converting to the 2-pallet configuration, remove seat armrest from each emergency exit.
- L. Install personnel safety net and stowage bag on sidewall aft of cargo door opening. Net should be installed whenever door is not being used for loading or unloading.

**WARNING:** TAKE CARE WHEN WORKING IN VICINITY OF OPEN DOOR. INSTALL DOORWAY SAFETY BARRIER TO PREVENT FALLING THROUGH DOORWAY.

- M. Install two literature stowage bags to sidewall adjacent to front row of passenger seats.
- N. Remove forward left windscreen (Ref. 25-24-111).
- O. Remove floor covering from cargo area. Roll carpet segments at each pallet position together into one roll to aid in reinstallation.
- P. Install portion of cargo system to accommodate number of cargo pallets desired (Ref. 25-56-0).
- Q. Install cargo barrier net (Ref. 25-56-111).
- R. Install dry-chemical fire extinguisher on floor at forward end of cabin (Ref. 25-09-100).
- S. Pull down window shades along both sides of cabin in area converted for cargo.
- T. Install cargo/passenger dividing partition (Ref. 25-24-151).
- U. If dividing partition is installed aft of over-wing emergency exits, fold up exit sign located on air duct opposite over-wing exits.
- V. Operate the forward overhead light fixture air outlet shutoff valve to the closed position.

**WARNING:** EMERGENCY PROVISIONS FOR PREVENTING SMOKE PENETRATION INTO PASSENGER AND CREW COMPARTMENTS REQUIRE THAT THE FORWARD VALVE BE CLOSED IN THE PASSENGER/CARGO CONFIGURATIONS.

#### 4. Convert Cabin from Combined Passenger/Cargo to All-Passenger Configuration

- A. Open main cargo door (Ref. Chapter 52, Main Cargo Door).

EFFECTIVITY

ALL

25-09-121

10

Page 204  
Dec 01/04

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

- B. Install personnel safety net across main cargo door opening while door is open. Net should be installed whenever door is not being used for loading or unloading (Fig. 202).

**WARNING:** TAKE CARE WHEN WORKING IN VICINITY OF OPEN DOOR. INSTALL DOORWAY SAFETY BARRIER TO PREVENT FALLING THROUGH DOORWAY.

- C. Remove cargo/passenger dividing partition (Ref. 25-24-151).  
D. Remove dry-chemical fire extinguisher from floor at forward end of cabin (Ref. 25-09-100).  
E. Remove cargo barrier net (Ref. 25-56-111).  
F. Install barrier net floor fitting coverplates.  
G. Install section of floor covering over floor air grille.  
H. Remove cargo system (Ref. 25-56-0).  
I. Clean cabin floor as necessary.  
J. Install floor covering (Ref. 25-27-100).  
K. Install forward left windscreen (Ref. 25-24-111).  
L. Remove personnel net stowage bag from sidewall aft of cargo door opening.  
M. Remove literature stowage bag from sidewall adjacent to each front seat.  
N. Install all passenger seats. Arrange seats in accordance with numbered cards placed in seat back pockets during removal. Lock seats to floor tracks installing seat track covers to determine spacing.  
O. If not installed, install seat armrest on each emergency exit.  
P. Install two literature stowage bags on sidewall adjacent to front row of passenger seats.  
Q. Remove personnel net from cargo door opening.  
R. Close main cargo door (Ref. Chapter 52, Main Cargo Door).  
S. Close main cargo door lift actuator access door in cabin ceiling.  
T. Raise all window shades.  
U. Fold down hatracks to passenger position (Ref. 25-28-01).  
V. If not installed, install portable oxygen bottle in bracket on left hatrack, just forward of emergency exit.  
W. Install megaphone in bracket near forward end of left hatrack.  
X. If necessary, fold down emergency exit sign located on air duct opposite over-wing emergency exit.  
Y. If not installed, install tray stowage box on aft folding section of right hatrack.  
Z. Operate the forward overhead light fixture air outlet shutoff valve to the opened position.

EFFECTIVITY

ALL

25-09-121

10

Page 205  
Dec 01/04

CABIN CONVERSIONS (PASSENGER/CARGO, ALL-CARGO) - MAINTENANCE PRACTICES

1. General

- A. The instructions in this section provide the steps necessary to convert the cabin between any of the various combined passenger/cargo configurations and the all-cargo configuration (Fig. 201).
- B. Certain operations and conditions must be accomplished when converting the cabin to accommodate cargo. These are summarized as follows:
  - (1) The hatrack in that part of the cabin being converted to carry cargo must be folded up. The main cargo door hatrack must be raised to the cargo position before the door can be opened. Individual air outlets on passenger service units, of hatracks to be folded, must be closed, and reading lights switched off. Along both sides of any section of the cabin being converted to carry cargo, all window shades must be pulled down.
  - (2) When the cabin is in a cargo carrying configuration the floor-mounted portable dry-chemical fire extinguisher, and its applicator, must be installed in the forward part of the cabin. Cargo loading in any combined configuration must permit an aisle for access between the crew and passenger compartments, and must permit the use of the portable dry-chemical fire extinguisher, with applicator, to effectively reach fires in all areas of the cargo compartment.
  - (3) The main cargo door threshold assembly is installed temporarily, when no other facilities are available, to aid the movement of cargo pallets through the main cargo door opening.
  - (4) The personnel safety net is installed across the main cargo door opening while the door is open to protect personnel working in the cabin. When the main cargo door is closed, in a cargo-carrying configuration, the safety net is stowed in a bag installed on the sidewall just aft of the cargo door.
  - (5) When the seats adjacent to the emergency exits are removed, or installed, the seat armrests attached to the emergency exits should be removed, or installed, with the seats to which they belong.

2. Equipment and Materials

- A. Personnel Safety Net - F70258-1
- B. Threshold Assembly - F80091-1

3. Convert Cabin from the Combined Passenger/Cargo Configurations to the All-Cargo Configuration

- A. Open main cargo door (Ref. Chapter 52, Main Cargo Door).

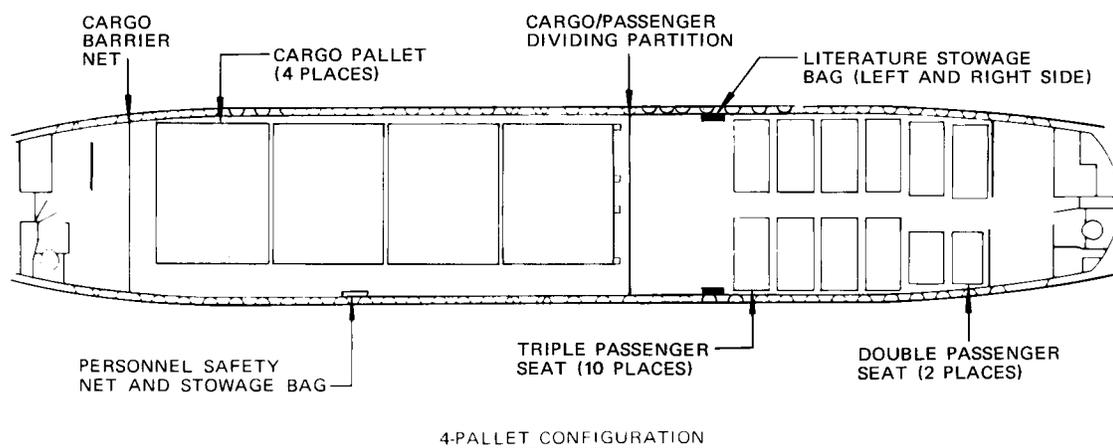
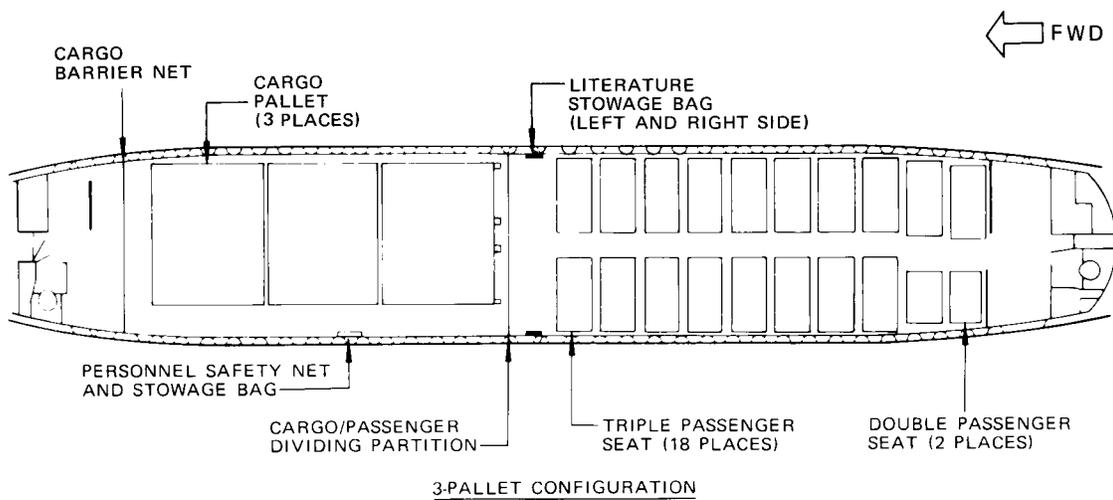
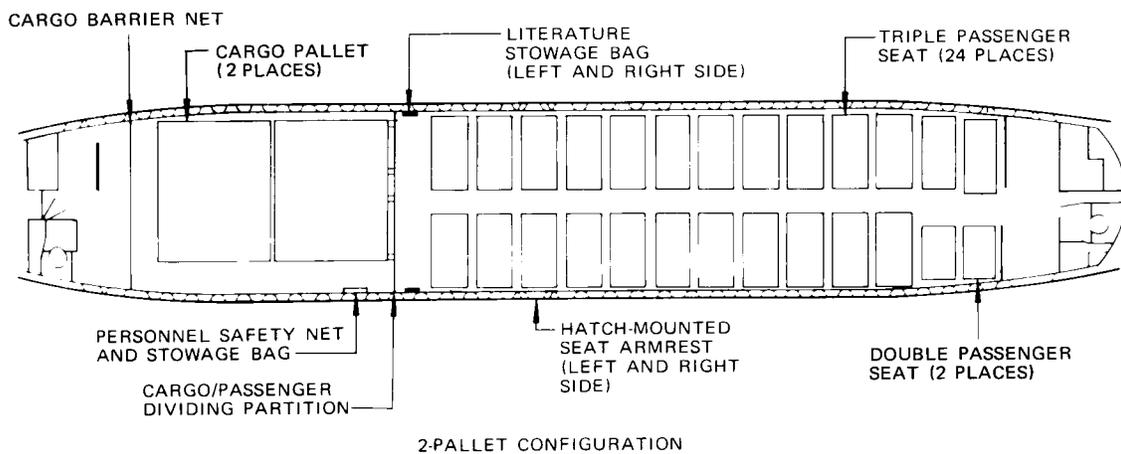
EFFECTIVITY

ALL

25-09-131

01

Page 201  
Aug 01/05



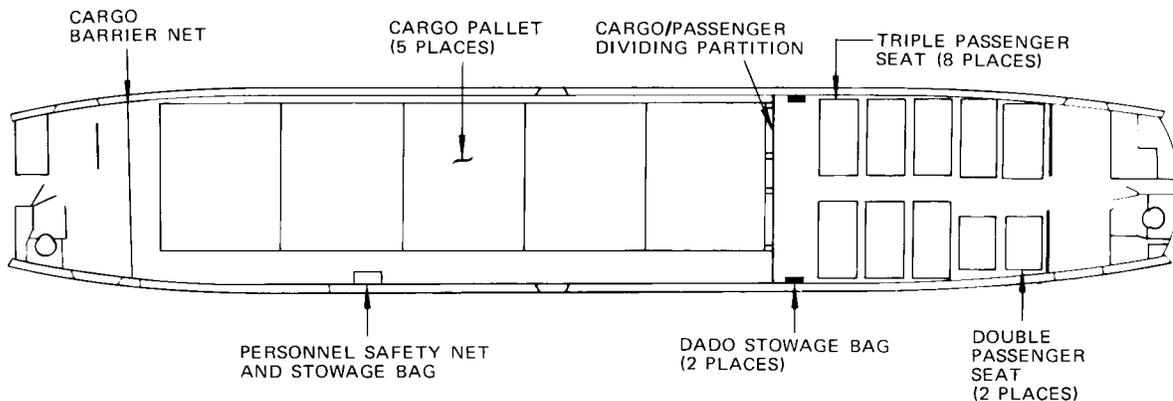
Cabin Accommodation Conversions  
 Figure 201 (Sheet 1)

EFFECTIVITY ————  
 ALL

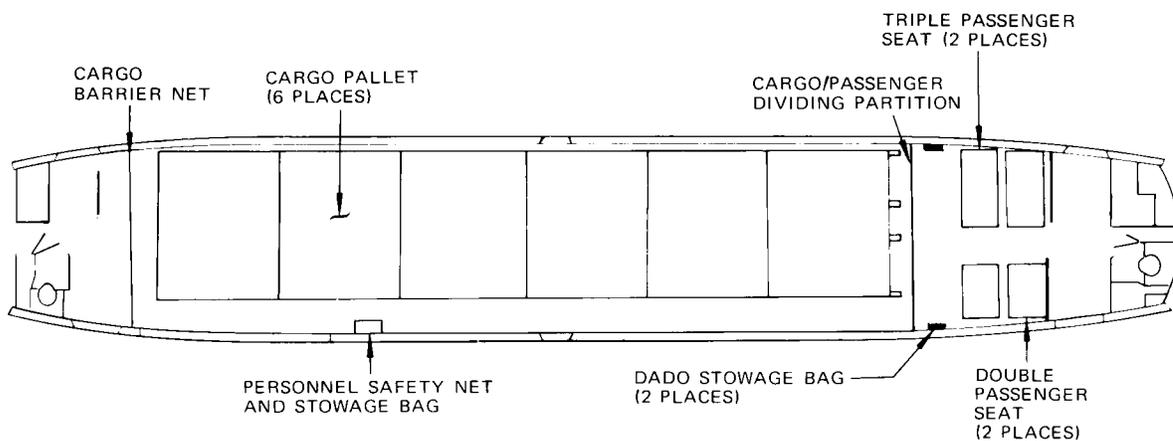
**25-09-131**



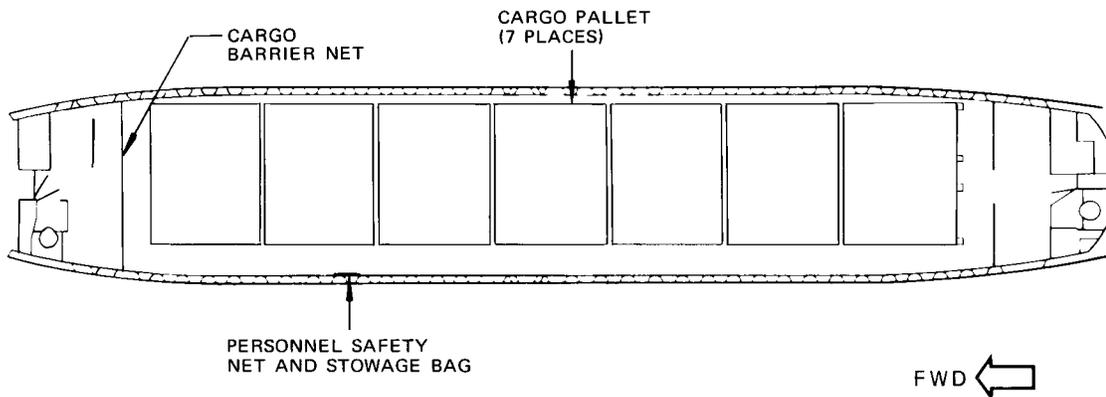
**MAINTENANCE MANUAL**



5-PALLET CONFIGURATION



6-PALLET CONFIGURATION



ALL-CARGO CONFIGURATION

Cabin Accommodation Conversions  
Figure 201 (Sheet 2)

EFFECTIVITY	ALL
-------------	-----

25-09-131



## MAINTENANCE MANUAL

- B. Install personnel safety net across main cargo door opening while door is open. Net should be installed whenever door is not being used for loading or unloading (Fig. 202).

**WARNING:** TAKE CARE WHEN WORKING IN VICINITY OF OPEN DOOR. INSTALL DOORWAY SAFETY BARRIER TO PREVENT FALLING THROUGH DOORWAY.

- C. Remove the cargo/passenger dividing partition (Ref. 25-24-151).
- D. If installed, remove portable oxygen bottles from left and right hatracks.
- E. Remove tray stowage boxes from left and right hatracks.
- F. Fold hatracks to the cargo position (Ref. 25-28-01).
- G. Remove seat track covers and place in seat back pocket of adjacent seats (Ref. 25-27-100).
- H. Remove all passenger seats. Place a numbered card in a seat back pocket of each seat to identify row number for reinstallation.
- I. Remove floor covering (Ref. 25-27-100). Roll carpet segments at each pallet position together into one roll to aid in reinstallation.
- J. Remove two-dado stowage bags from sidewall.
- K. Install additional parts of cargo system to provide complete system (Ref. 25-56-0).
- L. Pull down window shades along both sides of cabin.
- M. If not folded, fold up two halves of emergency exit sign located on air duct opposite the overwing emergency exits.
- N. Remove personnel safety net and close main cargo door.
- O. On the forward overhead panel, operate GASPER FAN switch to OFF. Open GASPER FAN circuit breaker on P6 panel.
- P. On all passenger service units, close all gasper air outlets and switch off all reading lights.
- Q. Open access door in aft end of forward lowered ceiling and operate passenger oxygen system shutoff valve to the fully closed position (Ref. 35-21-0).
- R. Verify the forward overhead light fixture air outlet shutoff valve is at the closed position.

**WARNING:** EMERGENCY PROVISIONS FOR PREVENTING SMOKE PENETRATION INTO THE CREW COMPARTMENT REQUIRE THAT THE FORWARD VALVE BE CLOSED IN THE ALL-CARGO AND PASSENGER/CARGO CONFIGURATIONS.

#### 4. Convert Cabin from the All-Cargo Configuration to the Combined Passenger/Cargo Configuration

- A. Remove that part of cargo system not required for the configuration to which the airplane is being converted (Ref. 25-56-0).
- B. Clean cabin floor as necessary.
- C. Install floor covering, in the area desired for passenger accommodation (Ref. 25-27-100).

EFFECTIVITY

ALL

25-09-131

10

Page 204  
Dec 01/04



## MAINTENANCE MANUAL

- D. Install passenger seats as required for the configuration to which the airplane is being converted. Arrange seats in accordance with numbered cards placed in seat back pockets during removal. Lock seats to floor tracks, installing seat track covers to determine spacing.
- E. Install two dado stowage bags on sidewall; one adjacent to each front seat.
- F. Fold down hatracks to the passenger position in the area desired for passenger accommodation (Ref. 25-28-01).
- G. If required, install portable oxygen bottles on left hatrack, just forward of emergency exit (Ref. 25-09-100).
- H. Install tray stowage box on aft right and left folding hatrack sections with quick-release fasteners. Except when converting to the 6-pallet configuration, also install a tray stowage box on the second aft folding section of the right hatrack.
- I. Install the cargo/passenger dividing partition (Ref. 25-24-151).
- J. If dividing partition is forward of overwing emergency exits, fold down two halves of exit sign on air duct opposite emergency exits.
- K. Raise window shades in the passenger compartment.
- L. Close GASPER FAN circuit breaker on the P6 panel. Operate GASPER FAN switch on forward overhead panel to ON.
- M. Operate passenger oxygen system shutoff valve to the fully open position and close access door in aft end of forward lowered ceiling (Ref. Chapter 35, Passenger Oxygen System).
- N. Verify the forward overhead light fixture air outlet shutoff valve is at the closed position.

**WARNING:** EMERGENCY PROVISIONS FOR PREVENTING SMOKE PENETRATION INTO PASSENGER AND CREW COMPARTMENTS REQUIRE THAT THE FORWARD VALVE BE CLOSED IN THE PASSENGER/CARGO CONFIGURATIONS.

EFFECTIVITY

ALL

25-09-131

10

Page 205  
Dec 01/04

CABIN CONVERSION (PASSENGER/CARGO) – MAINTENANCE PRACTICES

1. General

- A. The instructions in this section provide general steps, which are necessary to convert the cabin between the various combined passenger/cargo configurations (Fig. 201). These conversions are divided into two types; those, which increase the cargo area of the cabin, and those, which decrease the cargo area of the cabin.
- B. Certain operations and conditions must be accomplished when converting the cabin to accommodate cargo. These are summarized as follows:
- (1) The hatracks in that part of the cabin converted to carry cargo must be folded up. The main cargo door hatrack must be raised to the cargo position before the door can be opened. Individual air outlets on passenger service units, of hatracks to be folded, must be closed, and reading lights switched off. Along both sides of any section of the cabin being converted to carry cargo, all window shades must be pulled down.
  - (2) When the cabin is in one of the combined passenger/cargo configurations the floor-mounted portable dry-chemical fire extinguisher, and its applicator, must be installed in the forward part of the cabin. Cargo loading in these circumstances must permit an aisle for access between the crew and passenger compartment, and must permit the use of the portable dry-chemical fire extinguisher, with applicator, to effectively reach fires in all areas of the cargo compartment.
  - (3) The main cargo door threshold assembly is installed temporarily, when no other facilities are available, to aid the movement of pallets through the main cargo door opening.
  - (4) When the cabin is in one of the cargo carrying configurations, a barrier net is installed across the cabin at approximately body station 354.
  - (5) The personnel safety net is installed across the main cargo door opening while the door is open to protect personnel working in the cabin. When the main cargo door is closed in a cargo carrying configuration, the safety net is stowed in a bag installed on the sidewall just aft of the cargo door.
  - (6) When the seats adjacent to the emergency exits are removed, or installed, the seat armrests attached to the emergency exits should be removed, or installed, with the seats to which they belong.

2. Equipment and Materials

- A. Personnel Safety Net – F70258-1  
B. Threshold Assembly – F80091-1

3. Convert Cabin to Increase Cargo Accommodation

- A. Open main cargo door (Ref. Chapter 52, Main Cargo Door).

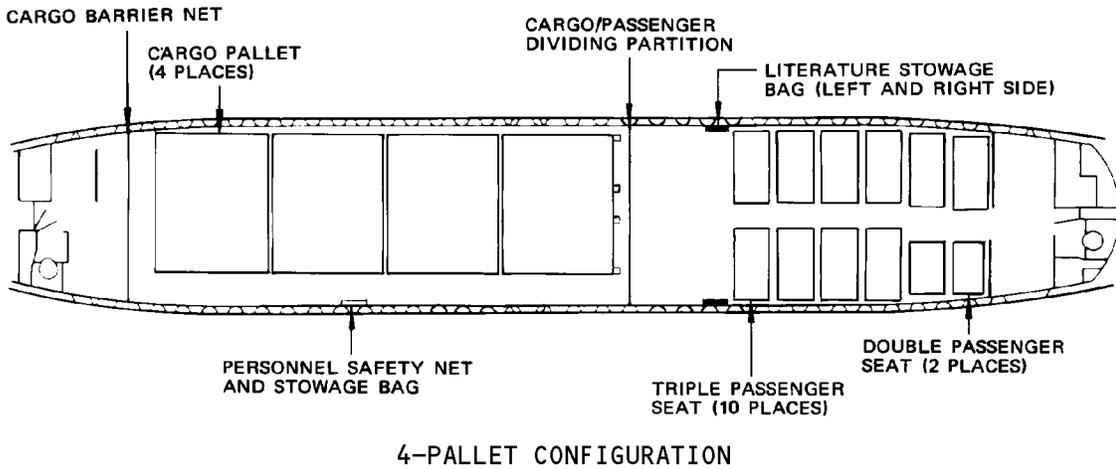
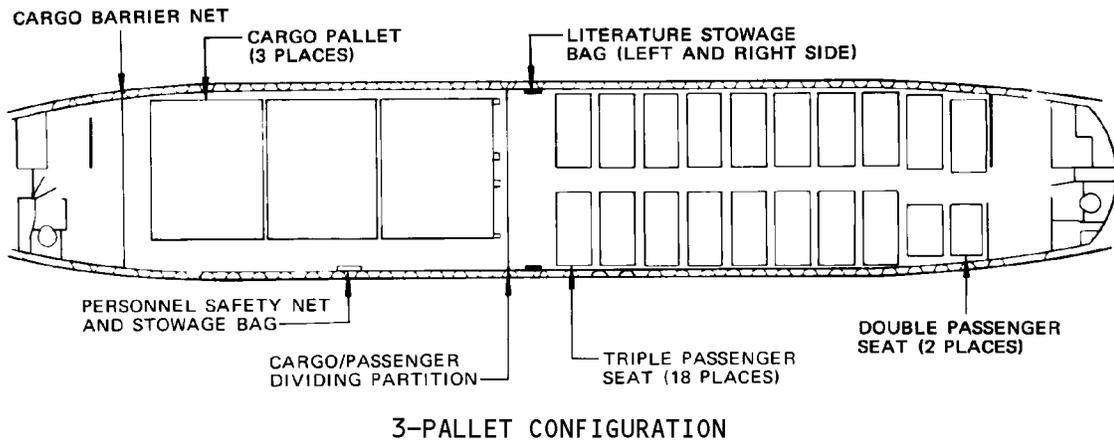
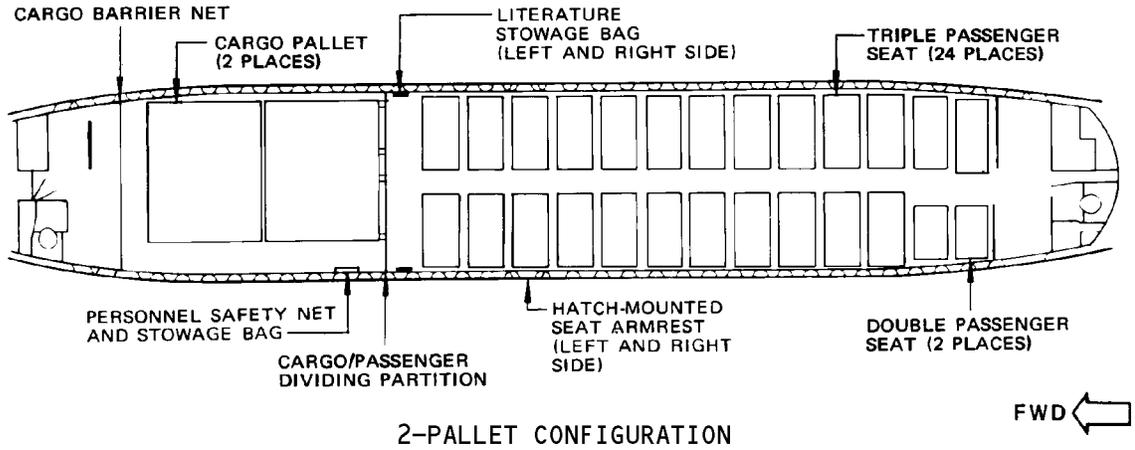
EFFECTIVITY

ALL

25-09-141

01

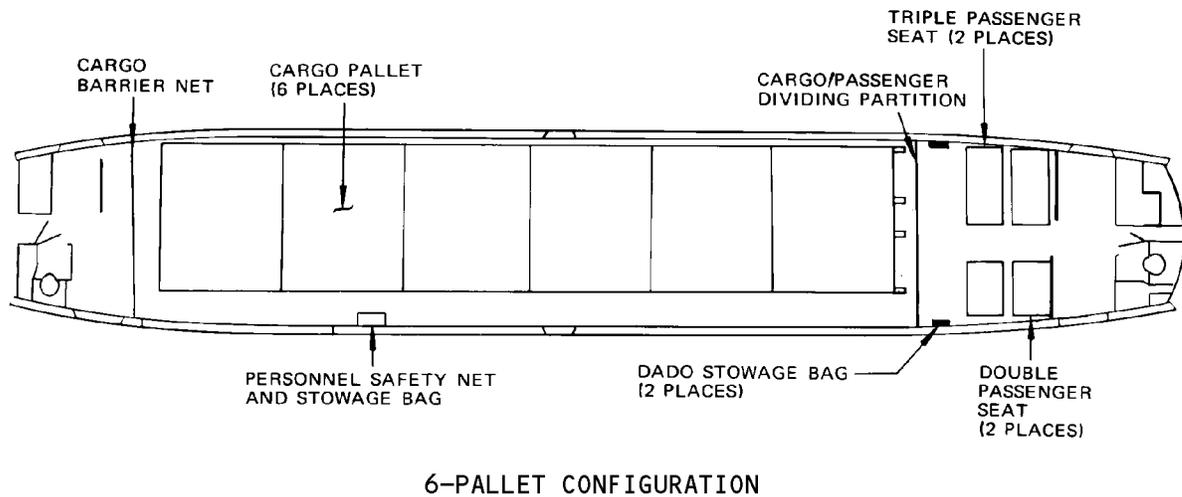
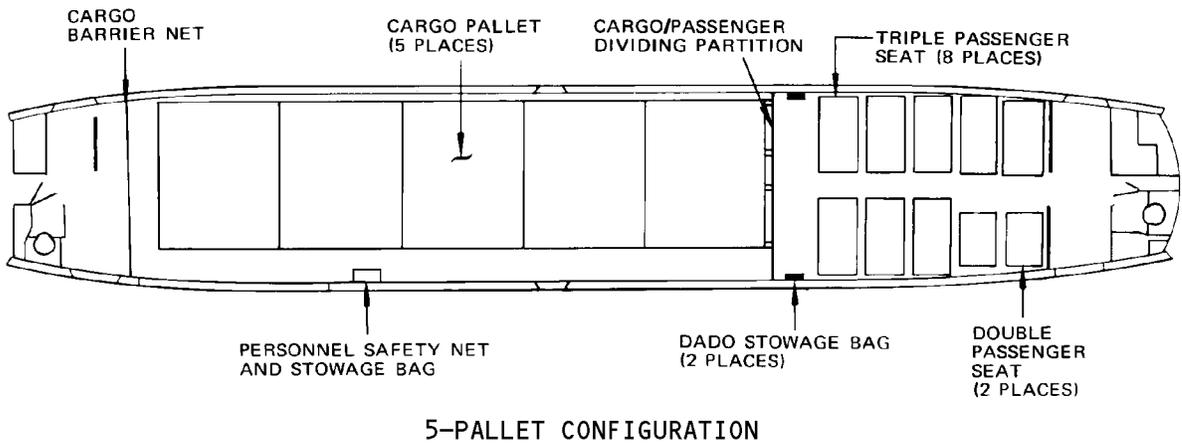
Page 201  
Aug 01/05



Cabin Accommodation Conversions  
 Figure 201 (Sheet 1)

EFFECTIVITY ————  
 ALL

**25-09-141**



Cabin Accommodation Conversions  
 Figure 201 (Sheet 2)

EFFECTIVITY ————  
 ALL

**25-09-141**



## MAINTENANCE MANUAL

- B. Install personnel safety net across main cargo door opening while door is open. Net should be installed whenever door is not being used for loading or unloading (Fig. 202).

**WARNING:** TAKE CARE WHEN WORKING IN VICINITY OF OPEN DOOR. INSTALL DOORWAY SAFETY BARRIER TO PREVENT FALLING THROUGH DOORWAY.

- C. Temporarily remove cargo/passenger dividing partition (Ref 25-24-151).  
D. Remove seat track covers in area desired for cargo accommodation and place in seat back pocket of adjacent seats (Ref. 25-27-100).  
E. Remove seats from area desired for cargo accommodation. Place a numbered card in a seat back pocket of each seat to identify row number for reinstallation.  
F. Remove floor covering from area desired for cargo accommodation (Ref. 25-27-100). Roll carpet segments at each pallet position together into one roll to aid in reinstallation.  
G. Relocate two literature stowage bags aft on sidewall adjacent to front seat row.  
H. If installed, remove portable oxygen bottle from left hatrack (Ref. 25-09-100).  
I. If converting to the 6-pallet configuration, remove the tray stowage box on the second aft folding section of the right hatrack.  
J. Fold hatracks to the cargo position in the area desired for cargo accommodation (Ref. 25-28-01).  
K. Close gasper air outlets and turn off all reading lights on passenger service units located on folded hatracks.  
L. Install additional parts of cargo system as necessary (Ref. 25-56-0).  
M. Reinstall-cargo/passenger dividing partition (Ref. 25-24-151).  
N. If dividing partition is installed aft of over-wing emergency exits, fold up two halves of exit sign located on air duct opposite emergency exits.  
O. Pull down window shades in cabin forward of dividing partition.  
P. Remove personnel safety net and close main cargo door.  
Q. Verify that the forward overhead light fixture air outlet shutoff valve is at the closed position.

**WARNING:** EMERGENCY PROVISIONS FOR PREVENTING SMOKE PENETRATION INTO PASSENGER AND CREW COMPARTMENTS REQUIRE THAT THE FORWARD VALVE BE CLOSED IN THE ALL-CARGO AND PASSENGER/CARGO CONFIGURATIONS.

#### 4. Convert Cabin to Decrease Cargo Accommodation

- A. Open main cargo door (Ref Chapter 52, Main Cargo Door).

EFFECTIVITY

ALL

25-09-141

10

Page 204  
Dec 01/04

**BOEING**  
**737**   
MAINTENANCE MANUAL

- B. Install personnel safety net across main cargo door opening while door is open. Net should be installed whenever door is not being used for loading or unloading (Fig. 202).

**WARNING:** TAKE CARE WHEN WORKING IN VICINITY OF OPEN DOOR. INSTALL DOORWAY SAFETY BARRIER TO PREVENT FALLING THROUGH DOORWAY.

- C. Temporarily remove cargo/passenger dividing partition (Ref. 25-24-151).  
D. Remove aft portion of cargo system as required (Ref. 25-56-0).  
E. Clean cabin floor as necessary.  
F. Install floor covering in area desired for passenger accommodation (Ref. 25-27-100).  
G. Install passenger seats as required. Arrange seats in accordance with numbered cards placed in seat back pockets during removal. Lock seats to floor tracks installing seat track covers to determine spacing.  
H. Relocate two literature stowage bags adjacent to front-seat row.  
I. Fold hatracks to the passenger position in the passenger compartment (Ref. 25-28-01).  
J. If required, install portable oxygen bottle on left hatrack, just forward of emergency exit (Ref. 25-09-100).  
K. If converting from the 6-pallet configuration, install the tray stowage box on the second aft folding section of the right hatrack.  
L. Reinstall cargo/passenger dividing partition (Ref. 25-24-151).  
M. If dividing partition is forward of over-wing emergency exits, fold down two halves of exit sign on air duct opposite emergency exits.  
N. Raise window shades in cabin aft of dividing partition.  
O. Remove personnel safety net and close main cargo door.  
P. Verify that the forward overhead light fixture air outlet shutoff valve is at the closed position.

**WARNING:** EMERGENCY PROVISIONS FOR PREVENTING SMOKE PENETRATION INTO PASSENGER AND CREW COMPARTMENTS REQUIRE THAT THE FORWARD VALVE BE CLOSED IN THE ALL-CARGO AND PASSENGER/CARGO CONFIGURATIONS.

EFFECTIVITY

ALL

25-09-141

09

Page 205  
Dec 01/04



## MAINTENANCE MANUAL

### FLIGHT COMPARTMENT - DESCRIPTION AND OPERATION

#### 1. General

- A. The control cabin is forward of Station 270 except that the entryway extends slightly farther aft.
- B. The control cabin equipment includes the furnishings at each crew station, the circuit breaker panels and the control cabin stowage provisions, lining, insulation, drip pan and miscellaneous equipment (Fig. 1).

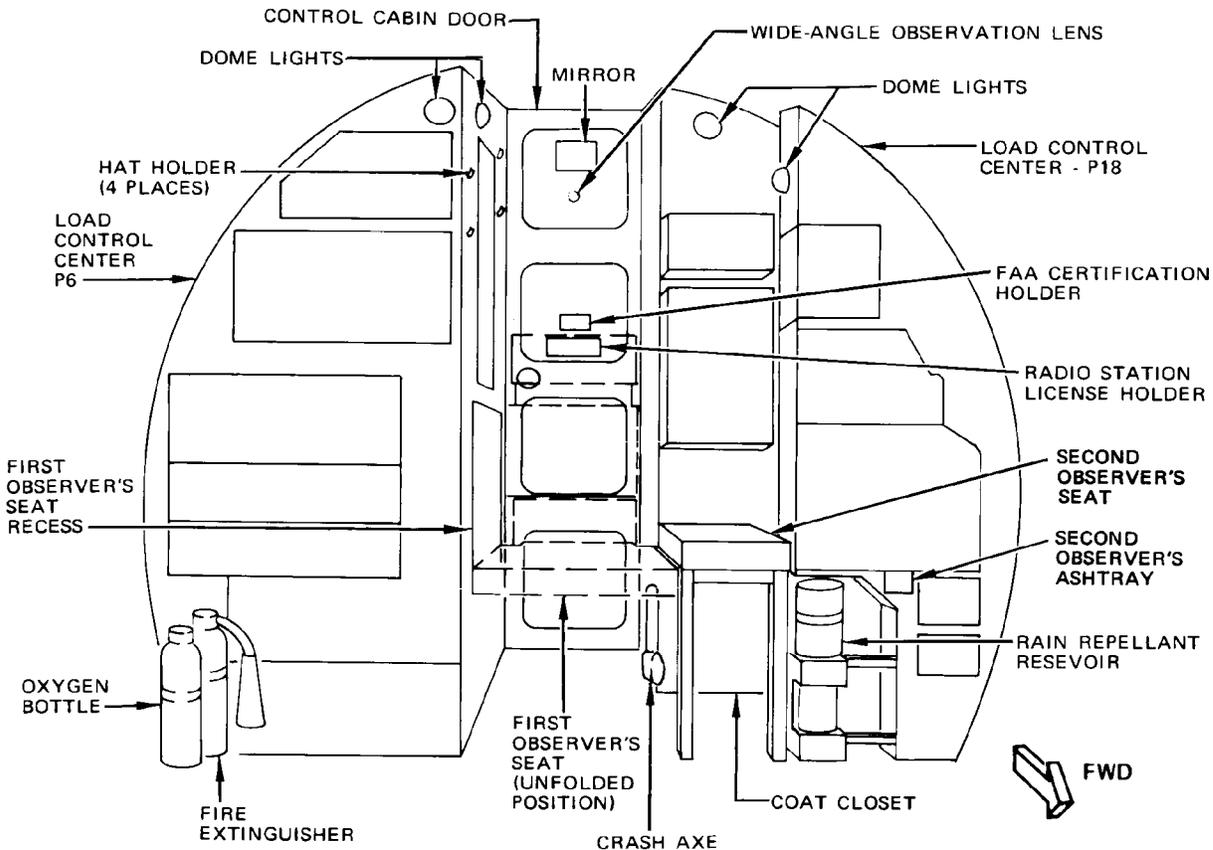
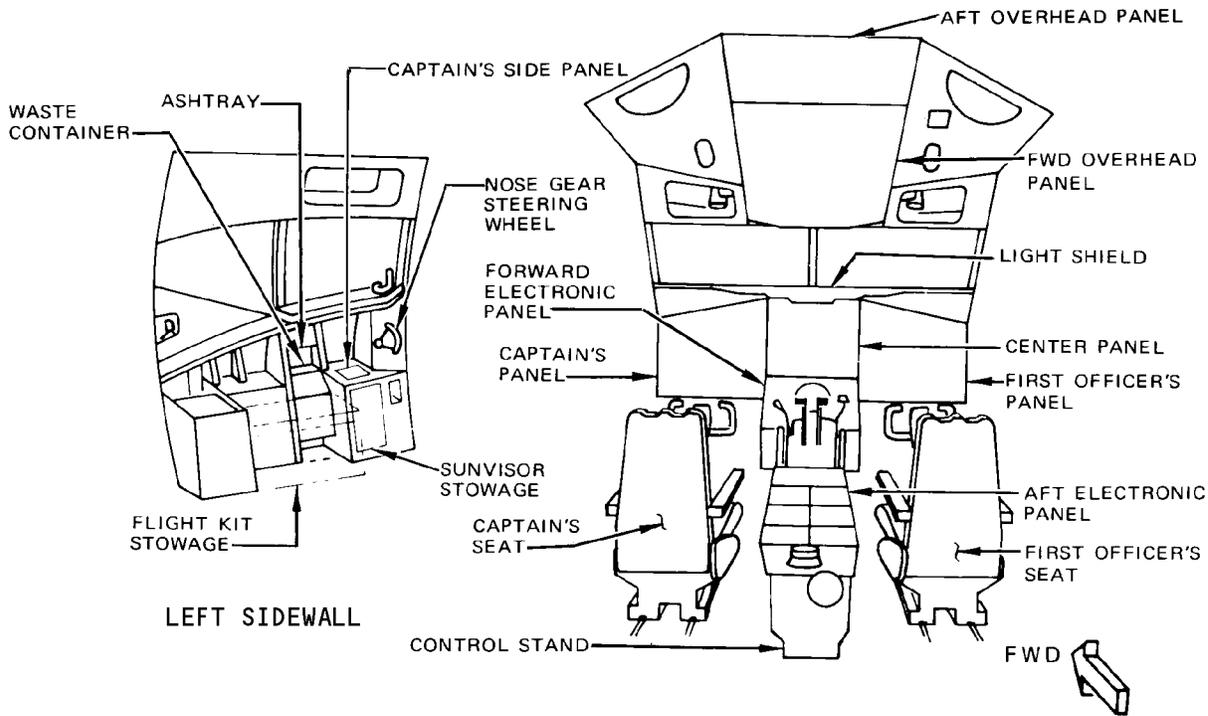
EFFECTIVITY

ALL

25-10-0

01

Page 1  
Dec 01/04



Control Cabin Equipment Location  
 Figure 1

EFFECTIVITY	
ALL	

25-10-0

CAPTAIN'S AND FIRST OFFICER'S EQUIPMENT – DESCRIPTION AND OPERATION

1. General

- A. The captain's and first officer's stations are in the forward part of the control cabin. The captain's station is on the left and the first officer's station is on the right.
- B. The captain's and first officer's station equipment includes their main instrument panels, the captain's and first officer's side panels, the captain's and first officer's seats, the lightshield, the forward and aft electronic control panels and the overhead panels. (See figure 1.)

2. Main Instrument Panels

- A. The main instrument panels are in the forward part of the control cabin under the windshield. The captain's panel is on the left, the first officer's panel is on the right and engine instrument panel is in the middle. See Chapter 31, Instruments, for information on installed instruments.
- B. Modules are fastened in a supporting framework to form the panels. Each module except the one for the landing gear is held in the framework by four quick-release fasteners. Two screws hold the landing gear module.
- C. Three large modules and one small one make up the captain's panel. Three large modules and one small one make up the first officer's panel.
- D. Each large module rests on tracks. When the four quick-release fasteners are released, the module can be slid out of the support framework on the tracks.
- E. Lightplates are installed to light certain areas of the panel faces.

3. Captain's and First Officer's Side Panels

- A. The captain's side panel and the first officer's side panel are each just outboard of the respective crewman's seat. Each panel has its face in a horizontal plane. (See figure 1).
- B. Each panel has three modules. Each module is held to the support framework by quick-release fasteners. The forward inboard module of each panel has a switch and a brightness control for the respective crewman's map light. A lightplate forms the face of this module. The other two modules of each panel are blank.

4. Captain's and First Officer's Seats

- A. The captain's and first officer's seats are opposite hand assemblies. The main elements of each seat are the base, the seat bottom, the seat back, power actuating equipment, a support linkage, and safety harness. (See figure 2.)
- B. The base is bolted to the floor. The base supports the support linkage and the support linkage supports the seat bottom and back.
- C. A metal pan forms the main structure of the seat bottom. A cushion is fastened to the pan and a cover is attached to the cushion by snap fasteners.

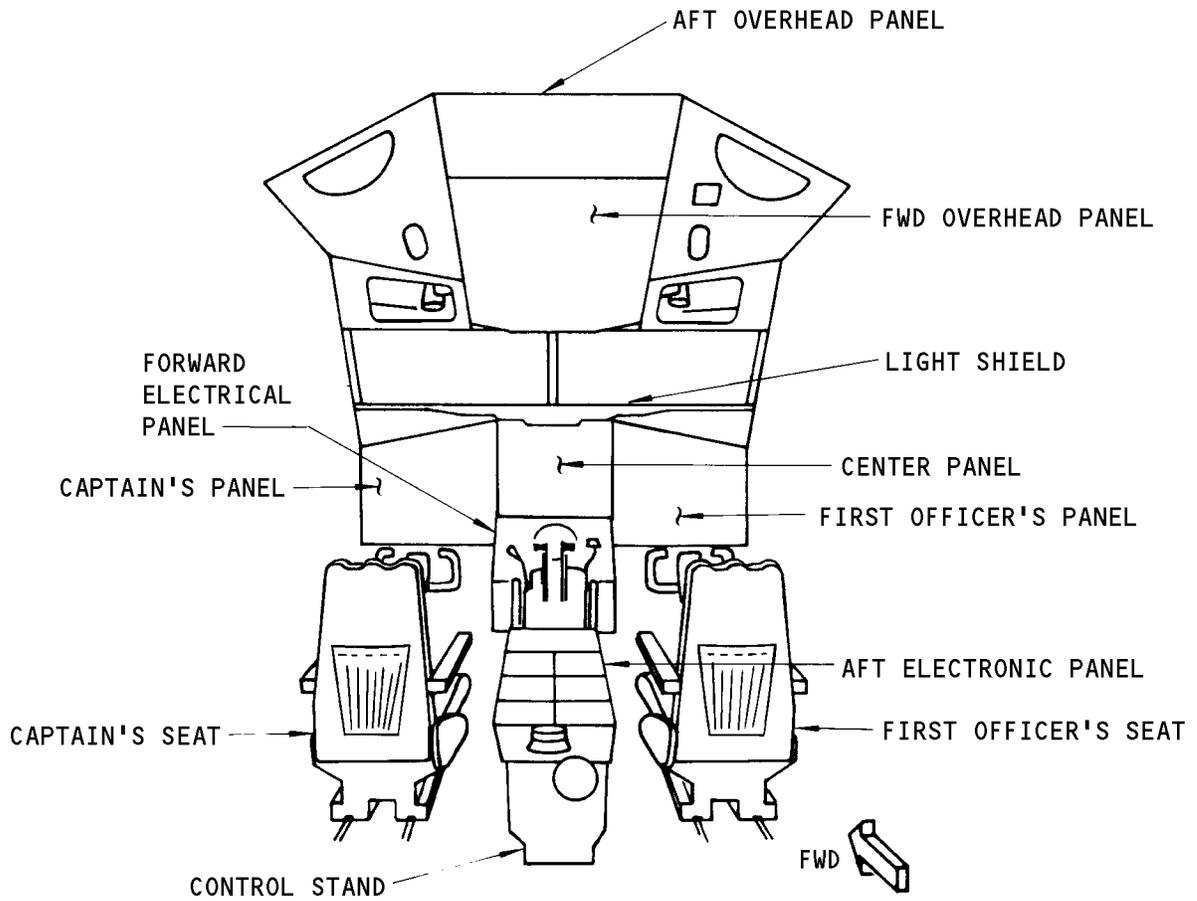
EFFECTIVITY

ALL

25-11-0

05

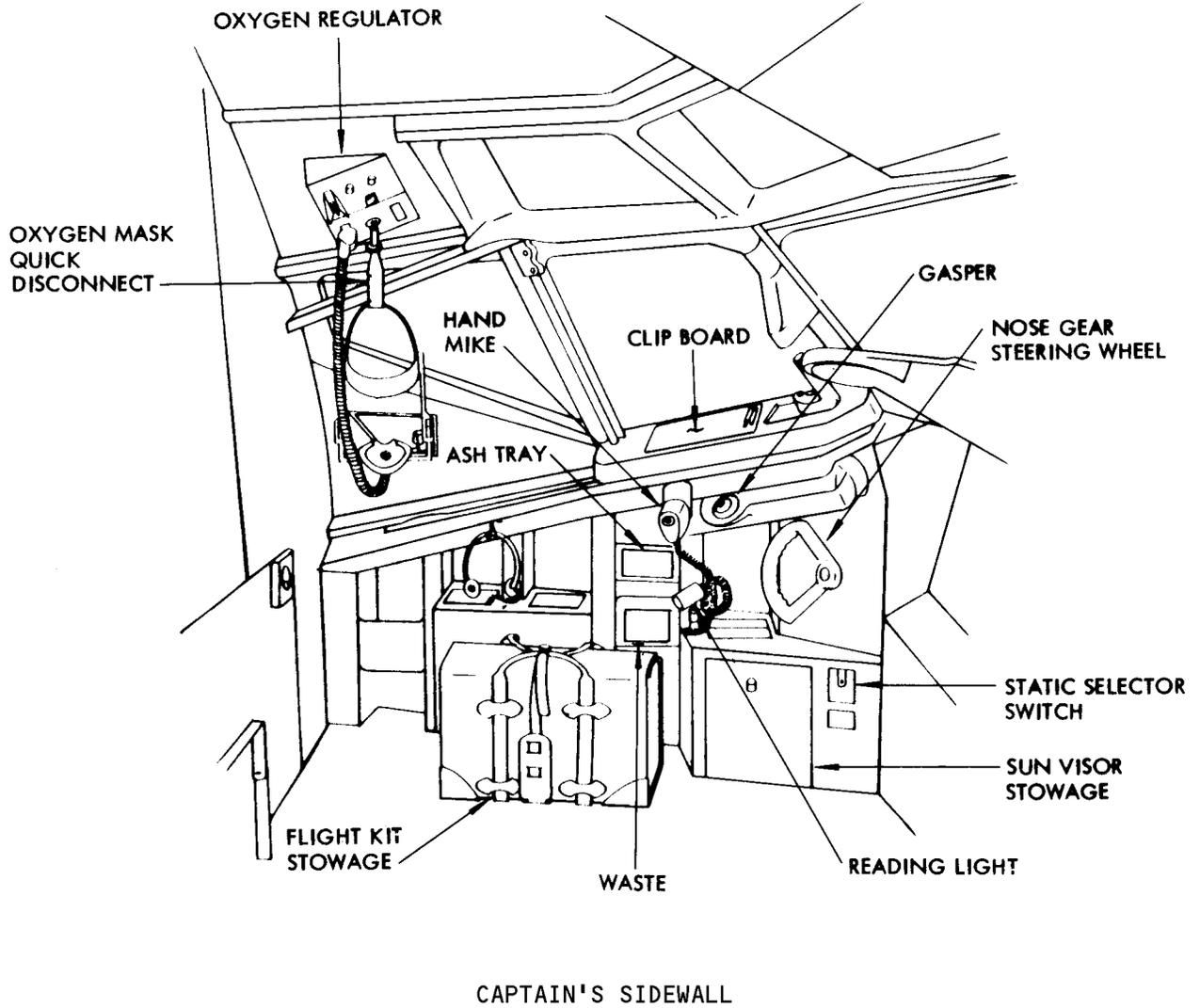
Page 1  
Dec 01/04



Captain's and First Officer's Equipment Location  
 Figure 1 (Sheet 1)

EFFECTIVITY	
ALL	

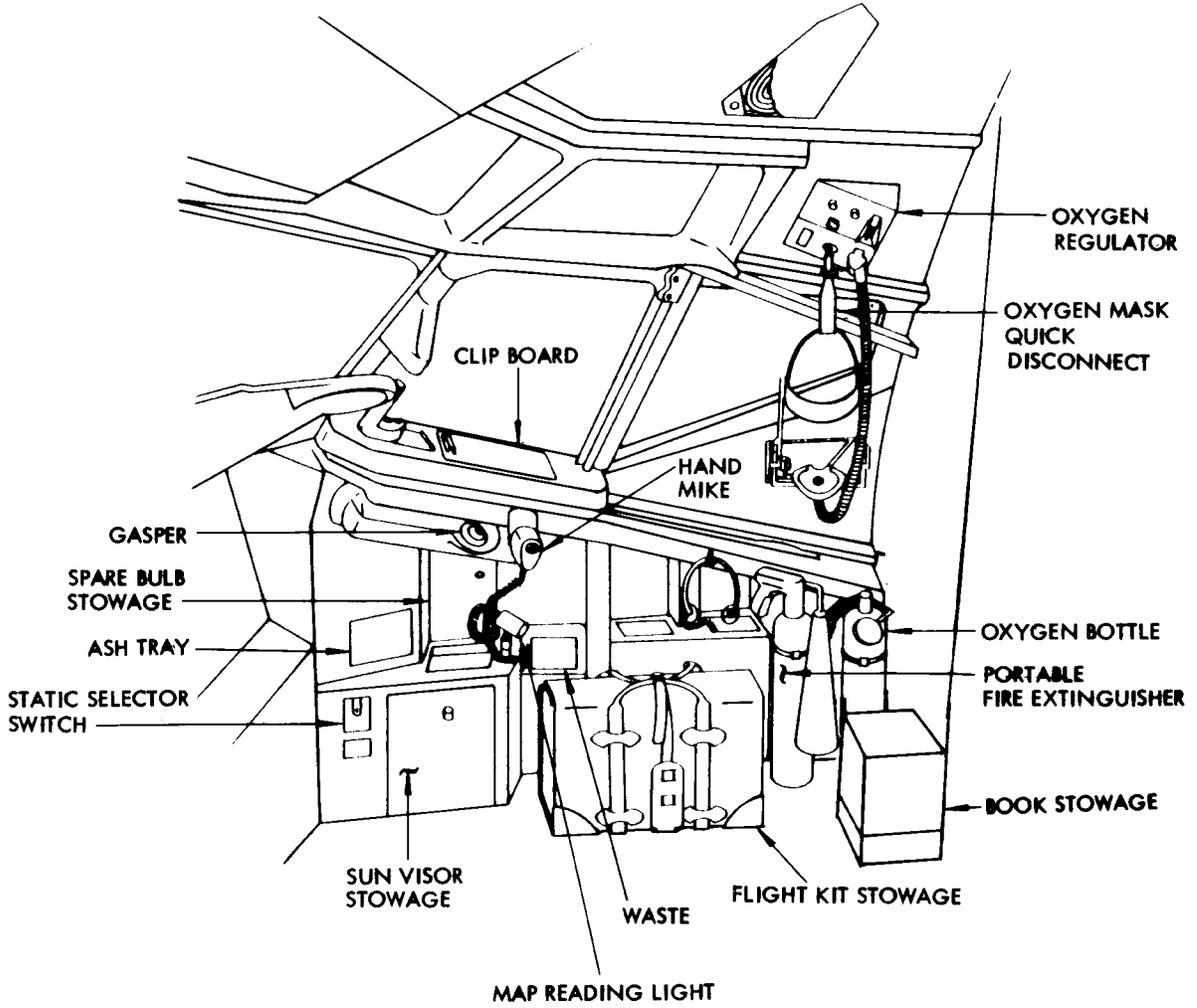
25-11-0



Captain's and First Officer's Equipment Location  
 Figure 1 (Sheet 2)

EFFECTIVITY	
	ALL

25-11-0



FIRST OFFICER'S SIDEWALL

Captain's and First Officer's Equipment Location  
 Figure 1 (Sheet 3)

EFFECTIVITY	ALL
-------------	-----

25-11-0

03

Page 4  
 Dec 01/04

455477

- D. A metal frame forms the main structure of the seat back. A cushion is fastened to the frame and a cover is attached to the cushion by snap fasteners. The back cushion is made of a buoyant material and it is certified as an individual flotation device. It can be easily removed and used as a life vest. The angle of the seat back can be adjusted independently of that of the bottom.
  - E. The seat can be adjusted fore and aft, and up and down; the angles of the seat back and bottom can also be independently varied. Electrical power is available for up and down adjustment but such adjustments can also be made manually. The other adjustments must be made manually. The adjustment control levers are on the inboard side of each seat.
  - F. The seat has inertia shoulder harness, a crotch strap and a lap belt with a rotary buckle. The rotary buckle is fastened to the inboard part of the lap belt.
5. Lightshield
- A. The lightshield is under the windshield and over the main instrument panels.
  - B. A glass fiber plastic hood and a sheet metal framework form the main structure of the lightshield. A crash pad is cemented to each end of the aft edge of the hood. Three small instrument panel sections are fastened to the middle of the aft edge. A check list holder is fastened to the top of the hood. Sheet metal reflectors and sockets for four fluorescent lamps and fourteen incandescent lamps are fastened to the underside of the lightshield to light the instrument panels. The top of the lightshield has a coat of nonreflecting black paint.
6. Forward and Aft Electronic Control Panels
- A. The forward electronic control panel is just forward of the control stand. The panel face slopes somewhat with respect to a horizontal plane. Several small panel sections and a weather radar indicator make up the panel.
  - B. The aft electronics control panel is on top of the control stand and just aft of the throttle levers. The panel face lies in a horizontal plane. Several small panel sections make up the panel.
  - C. Lightplates for the faces of the panel sections that are not blank. Each section is held to the support framework by quick-release fasteners.

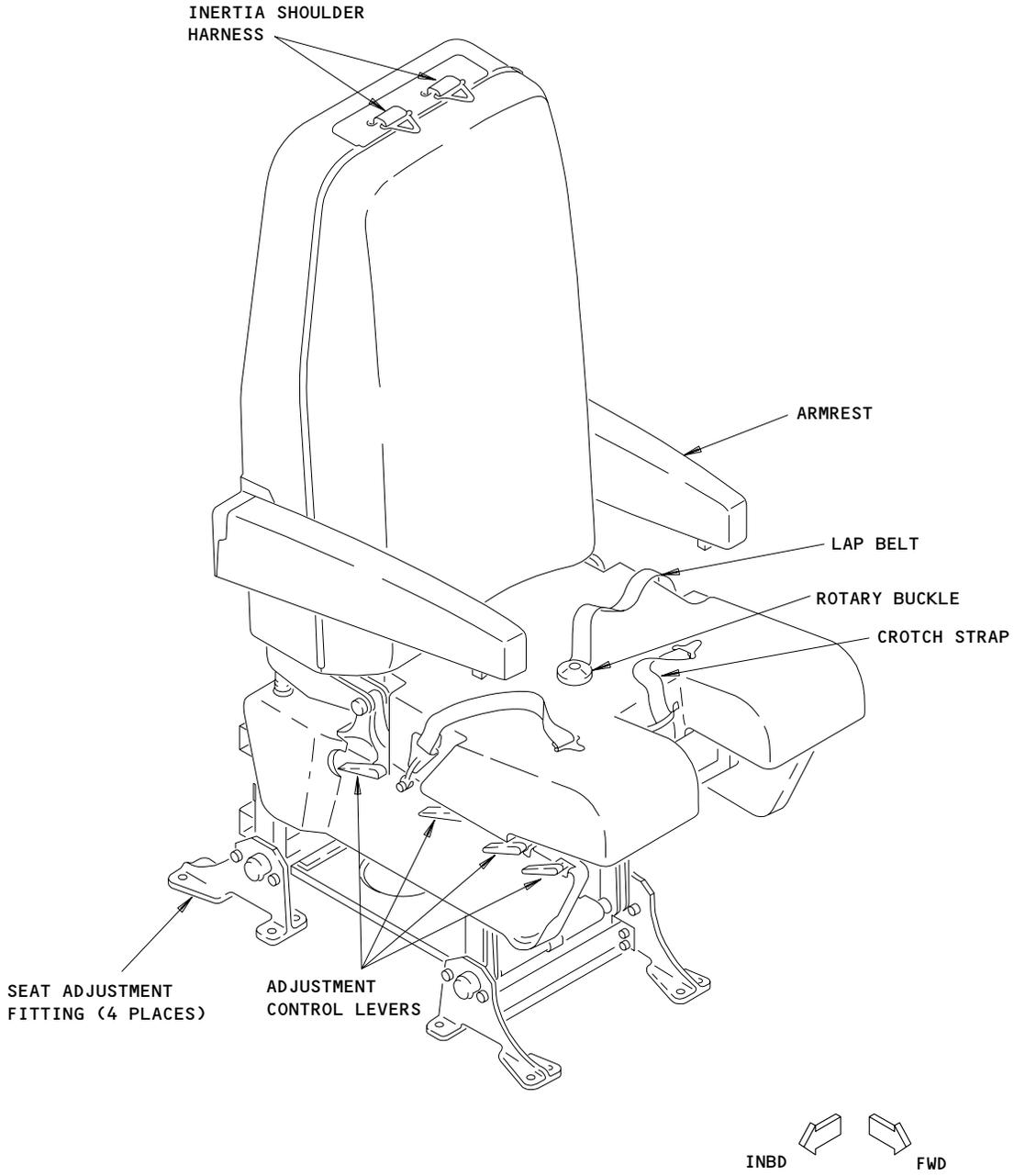
EFFECTIVITY

ALL

25-11-0

01

Page 5  
Dec 01/04



Captain's and First Officer's Seats  
 Figure 2

EFFECTIVITY	ALL
-------------	-----

25-11-0

CAPTAIN'S AND FIRST OFFICER'S SEATS – REMOVAL/INSTALLATION

1. Remove Seat (Fig. 401)
  - A. Adjust seat to lowest position.
  - B. Remove two seat attachment screws from each seat attachment fitting.
  - C. Lift seat from seat attachment fittings.
2. Install Seat (Fig. 401)
  - A. Put seat in position with seat base lugs resting in seat attachment fitting recesses.
  - B. Install two seat attachment screws in each seat attachment fitting and tighten cap nuts.

**NOTE:** If installed seat is binding or hard to operate, loosen floor attachment bolts and retighten bolts in an alternate diagonal pattern while operating seat in fore and aft directions.

- C. Check that seat is operable in all directions.

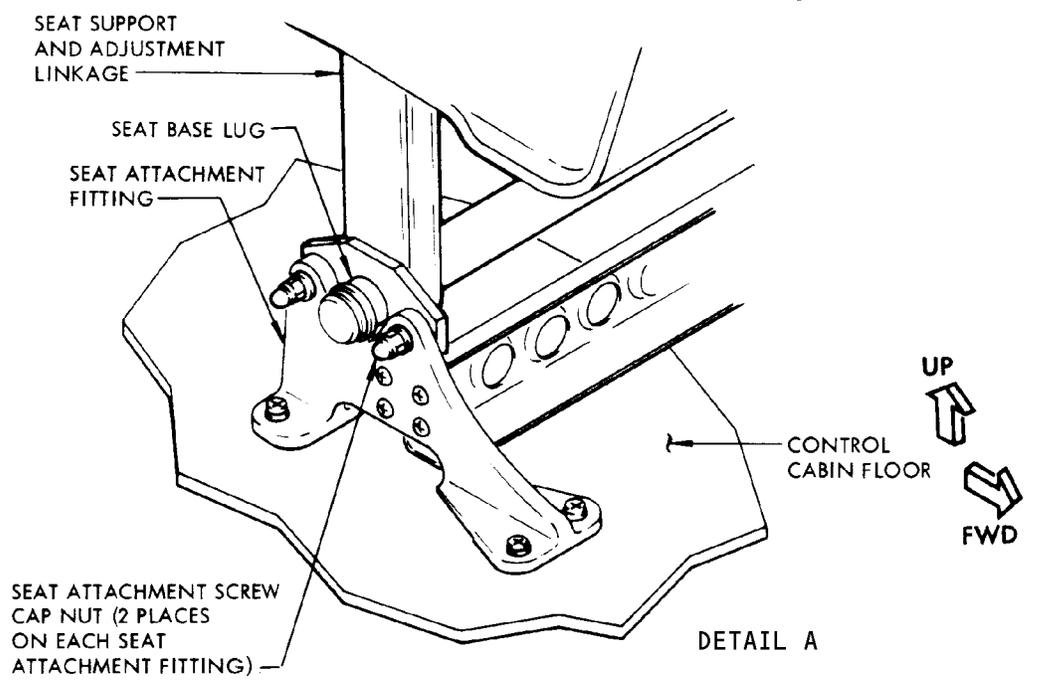
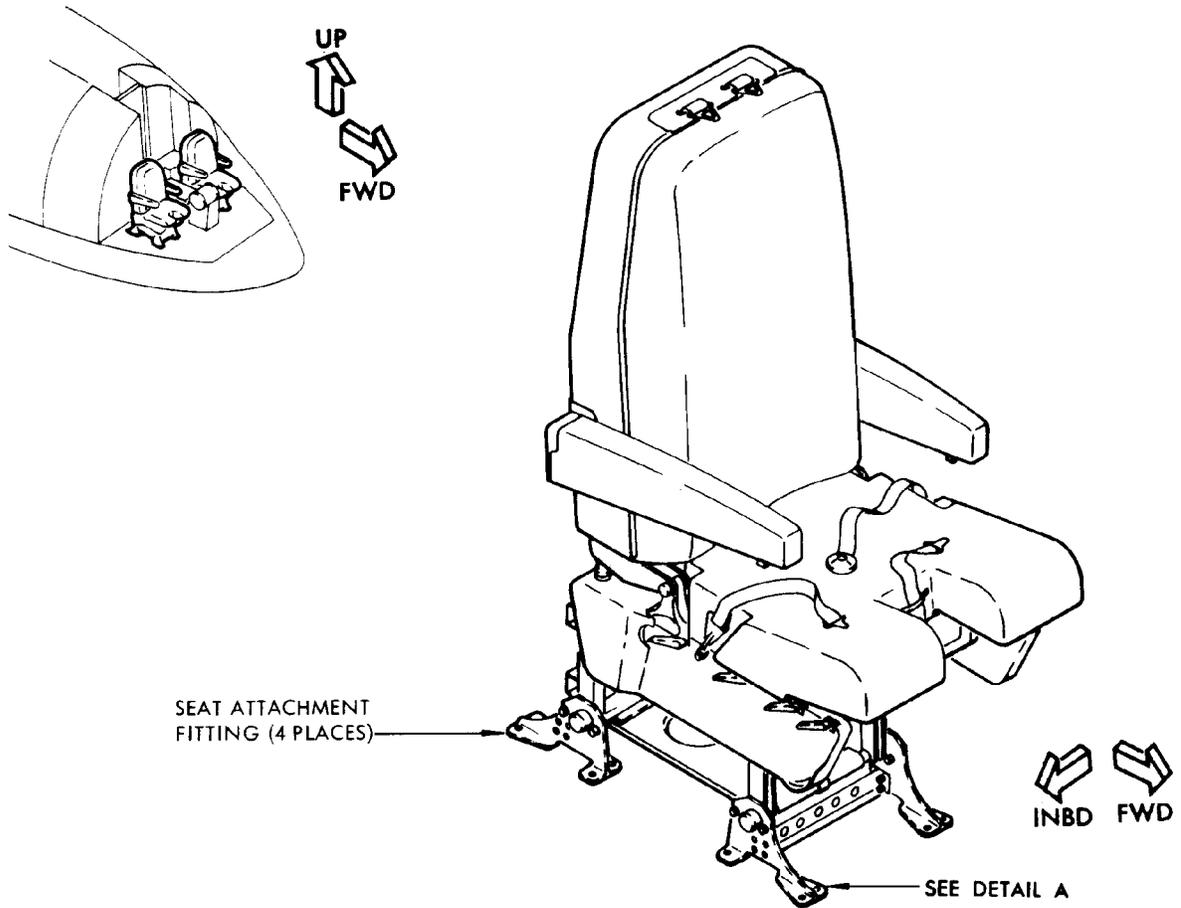
EFFECTIVITY

ALL

25-11-11

01

Page 401  
Dec 01/04



Captain's and First Officer's Seat Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-11-11

455510

LIGHTSHIELD - REMOVAL/INSTALLATION

1. Remove Lightshield (Fig. 401)

- A. Open No. 1 BACKGRD and FLUOR or STBY and FLUOR circuit breakers as applicable (P6).
- B. Remove AFCS mode control panel installed in center of lightshield (Ref 22-11-341 R/I).
- C. Remove lower covers.
  - (1) Remove screws that attach lower cover.

**NOTE:** The screws are not the same and should be identified so that each one can be reinstalled correctly.

- (2) Move lower cover to clear brackets and wiring.
- D. Disconnect cap connectors and tag electrical wiring.
- E. Support lightshield and remove lightshield fastening screws.
- F. Raise rear edge of lightshield to gain access to window antifogging ducts. Disconnect antifogging ducts from nozzles.
- G. Lift lightshield clear of supporting structure.
- H. Secure shimming washers on outboard brackets for installation, if necessary.

2. Install Lightshield (Fig. 401)

- A. Position lightshield with rear edge of lightshield raised. Connect windshield antifogging ducts to nozzles.
- B. Lower lightshield in place and install lightshield fastening screws.
- C. Check that lightshield height dimension is as shown in A-A, Fig. 401.
- D. If required, adjust lightshield height by shimming with washers between support bracket and lightshield as in Fig. 401.
  - (1) After quantity of washers has been determined, bond washers together and to support bracket using Epocast 8543 adhesive, allow 15 minutes to cure before installing screw.
- E. Connect electrical wiring.
- F. Install lower covers with screws as marked in steps 1.B.(1) and (2).
- G. Close circuit breakers on P6 opened in par. 1.A.
- H. Turn BACKGROUND lighting control, on captain's lower main instrument panel, clockwise and check for functioning of lightshield lamps.

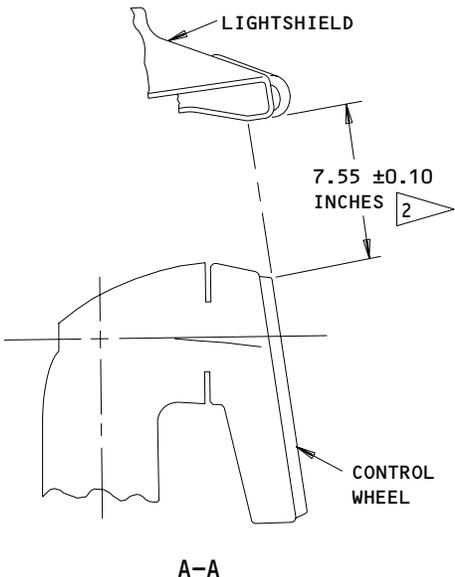
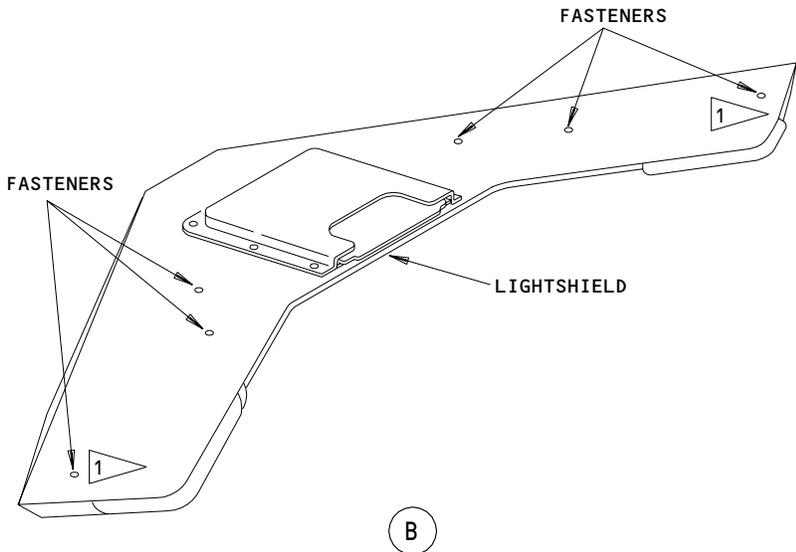
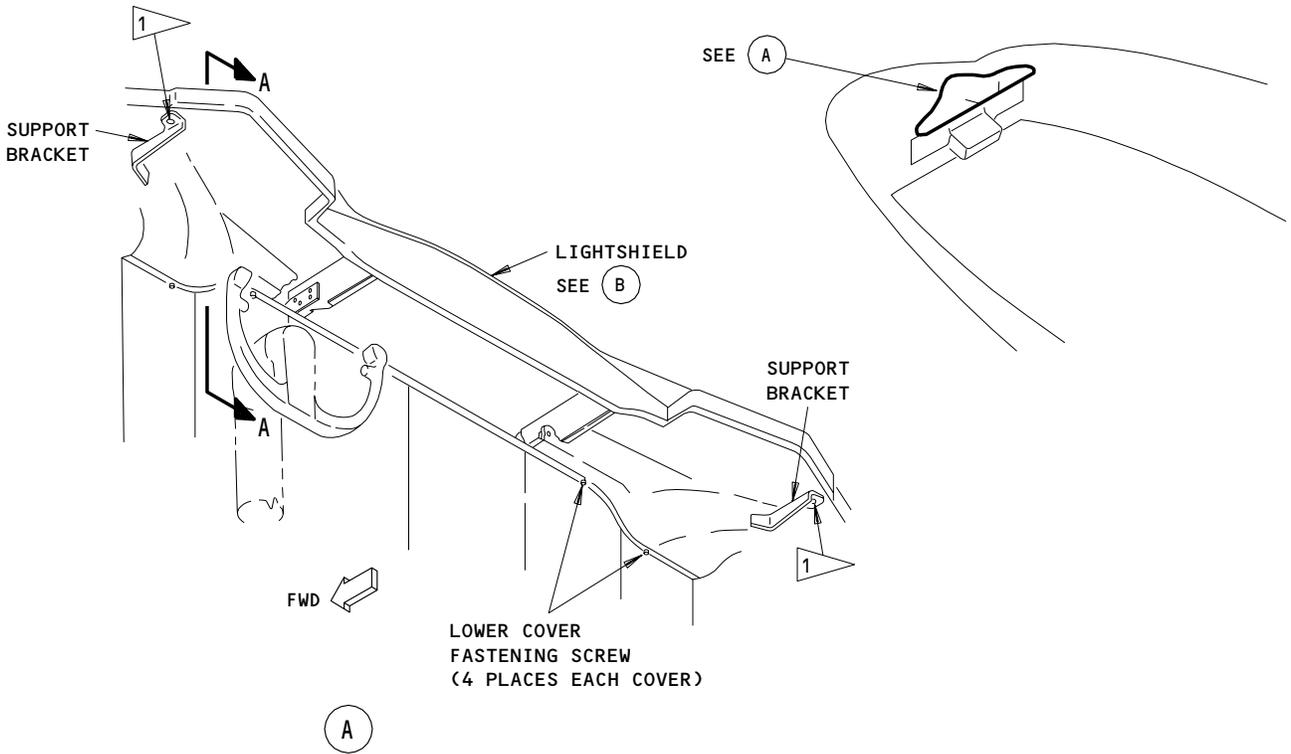
EFFECTIVITY

ALL

25-11-21

01

Page 401  
Dec 01/04



- 1 SHIM WITH WASHERS AS REQUIRED TO OBTAIN LIGHTSHIELD HEIGHT SHOWN IN SECTION A-A
- 2 TAKE VERTICAL MEASUREMENT AT WHEEL CENTERLINE WITH CONTROL WHEEL IN NEUTRAL POSITION

Lightshield Installation  
 Figure 401

EFFECTIVITY	ALL
-------------	-----

25-11-21

455528

SEAT ADJUSTMENT SIGHT GUIDE – MAINTENANCE PRACTICES

1. Removal/Installation Seat Adjustment Sight Guide
  - A. Remove Sight Guide (Fig. 201)
    - (1) Remove nuts from windshield bolts securing sight guide.
    - (2) Remove sight guide. Note number and location of alignment shims.
  - B. Install Sight Guide (Fig. 201)
    - (1) Install sight guide with needed shim (Fourth bolt down from top of windshield).
    - (2) Tighten nut on windshield bolts to 20 to 25 pound-inches (40 pound-inches maximum).
2. Inspection/Check Seat Adjustment Sight Guide
  - A. Ensure airplane is level (Ref 8-11-0).
  - B. Attach one end of string or filament line to center of protractor.
  - C. Locate protractor as shown in Fig. 201. Pull string taut and secure free end to floor midway between right and left hand seat tracks in mid-passenger cabin area.
  - D. Check that angles A and B shown in Fig. 201 are equal within  $\pm 1/2^\circ$  and that sight guide is level.
  - E. Adjust sight guide angular alignment by adding or removing shims as required.

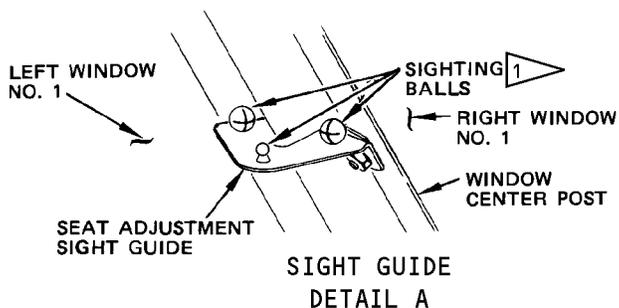
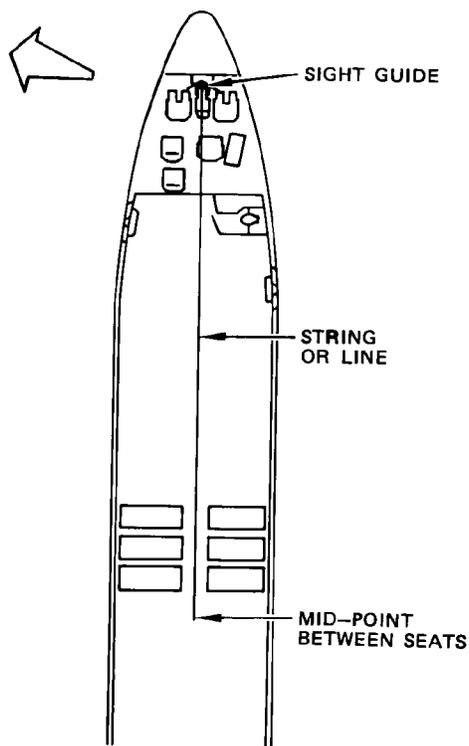
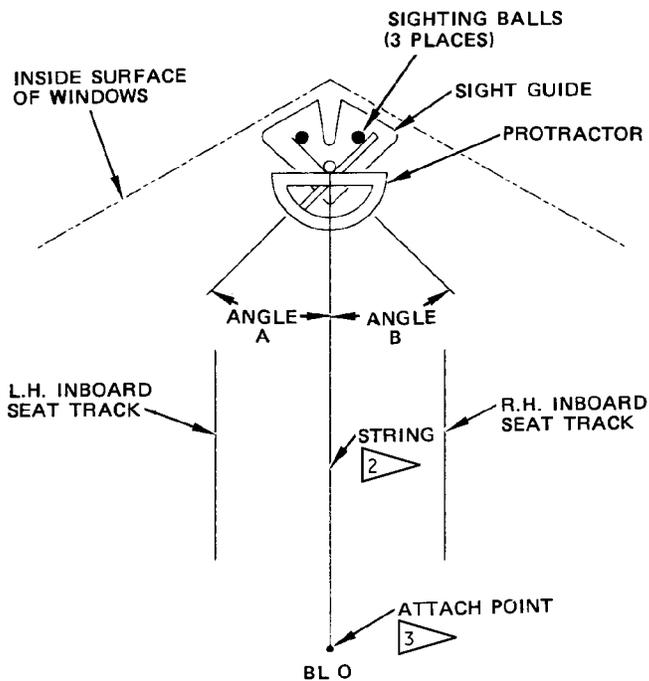
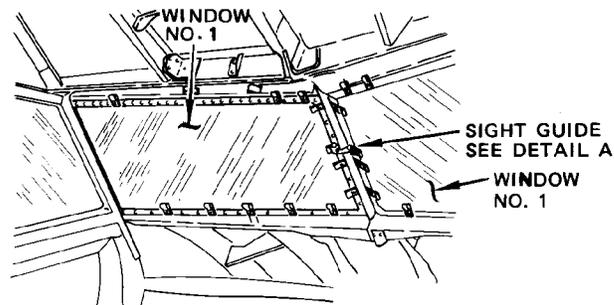
EFFECTIVITY

ALL

25-11-31

01

Page 201  
Dec 01/04



SIGHT GUIDE ALIGNMENT METHOD

- 1 AFT SIGHTING BALL MAY BE SAME SIZE AS FORWARD BALLS OR SMALLER AS SHOWN.
- 2 TAUT STRING MUST PASS DIRECTLY OVER THE 90° MARK OF THE PROTRACTOR.
- 3 ATTACH STRING AT STA 360 OR AFT.

Seat Adjustment Sight Guide Installation  
 Figure 201

EFFECTIVITY	ALL
-------------	-----

25-11-31



## MAINTENANCE MANUAL

### OBSERVERS' EQUIPMENT - DESCRIPTION AND OPERATION

#### 1. General

- A. The first observer's station is directly in front of the control cabin door. A folding seat and an auxiliary panel make up the first observer's equipment.
- B. The second observer's station is aft of the captain's station and left of the first observer's station. A seat and an auxiliary panel make up the second observer's equipment.

#### 2. First Observer's Seat

- A. The unfolded seat is in the control cabin entryway just in front of the control cabin door. (See figure 1.) The right-hand wall of the entryway has a recess into which the seat can be folded. The seat must be folded to allow persons to enter or leave the control cabin. The main elements of the seat are the seat bottom, the seat back and the safety harness.
- B. The seat bottom is a cushion fastened to a metal framework. A continuous hinge on the right side fastens the seat bottom to the wall of the control cabin entryway. There are two retractable pins on the left side of the seat bottom. The pins fit into holes in latch plates on the left wall of the control cabin entryway and thus hold the seat bottom in unfolded position. The seat bottom cushion is made of a buoyant material and it is certified as an individual flotation device. It can be easily removed and used as a life vest.
- C. The seat back is hinged to the seat bottom. The back must be folded down onto the seat bottom before the bottom is folded into the recess in the entryway wall. The seat back is formed of a metal framework with an upper and a lower cushion attached to it. The upper cushion can slide up and down with respect to the lower cushion. There is a retractable pin at each end of the upper cushion. The pins fit into holes in latch plates on the walls of the control cabin entryway and thus hold the seat back upright.
- D. The seat is furnished with fixed shoulder harness, a crotch strap and a lap belt with a rotary buckle. The buckle is on the left-hand part of the lap belt. The crotch strap and lap belt are fastened to the seat bottom and the shoulder straps are fastened to the upper cushion support framework on the seat back.

#### 3. First Observer's Auxiliary Panel

- A. The first observer's auxiliary panel is on the right-hand wall of the control cabin entryway. An upper and a lower section make up the panel. Both sections are held to the support structure by quick-release fasteners.
- B. Oxygen flow regulating equipment is installed in the upper section. A lightplate forms the face of the upper section. The lower section is blank.

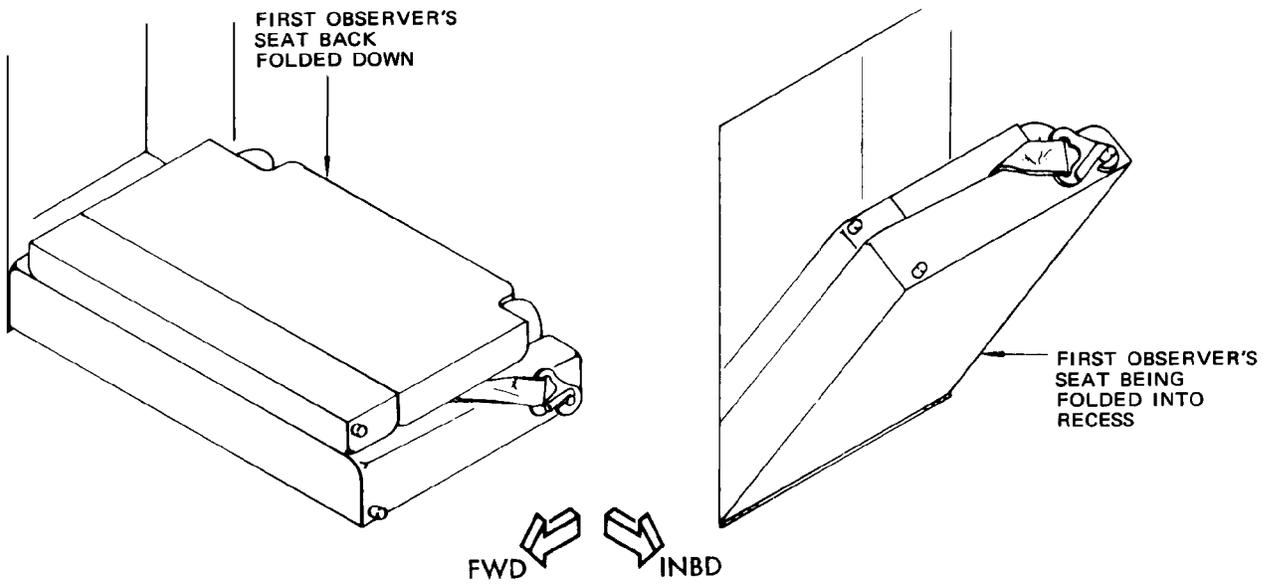
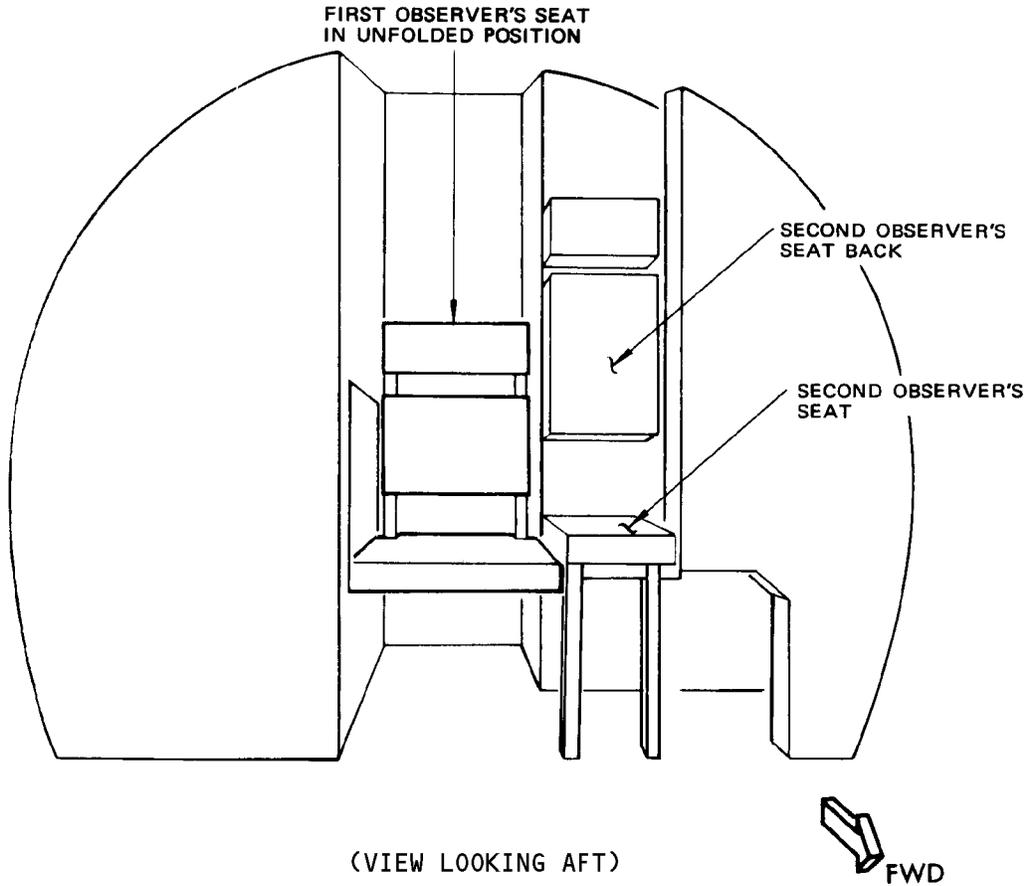
EFFECTIVITY

ALL

25-14-0

04

Page 1  
Dec 01/04



Observer's Seats  
 Figure 1

EFFECTIVITY	
	ALL

25-14-0

4. Second Observer's Seat

- A. The seat is in a large recess in the cabin aft bulkhead. The main elements of the seat are the seat bottom, the seat back and the safety harness.
- B. The seat bottom is a metal frame with a cushion attached to it. The seat bottom rests on tracks which are fastened to the shelf formed by the bottom of the recess. The seat bottom can be adjusted fore and aft on the tracks. The adjustment control lever is at the front of the seat bottom under the cushion.
- C. The seat back consists of a back cushion and a head rest cushion which are joined by straps and fastened by velcro tape to the back of the bulkhead recess. The cushions are made of a buoyant material and they are certified as an individual flotation device. They can be easily removed and used as a life vest.
- D. The seat is furnished with fixed shoulder harness and a lap belt with a rotary buckle. The buckle is on the left-hand part of the lap belt. The lap belt is anchored to the seat bottom framework. The shoulder straps are anchored to the cabin aft bulkhead framework.
- E. A footrest attached to the aft part of the captain's seat is provided for usage with the second observer's seat.

5. Second Observer's Auxiliary Panel

- A. The second observer's auxiliary panel is on the ceiling over the second observer's seat.
- B. An oxygen regulator assembly with a lightplate on its face makes up the panel.

EFFECTIVITY

ALL

25-14-0

03

Page 3  
Dec 01/04

FIRST OBSERVER'S SEAT – REMOVAL/INSTALLATION

1. Remove Seat (Fig 401).
  - A. Put seat in position shown in Fig. 401 (i.e. with seat out of recess and seat back folded down).
  - B. Remove five countersunk-head bolts that fasten hinge to load control center structure. Support right side of seat while removing bolts.
  - C. Lift seat from its place.
2. Install Seat (Fig. 401).
  - A. Hold seat in place.
  - B. Install five countersunk-head bolts.

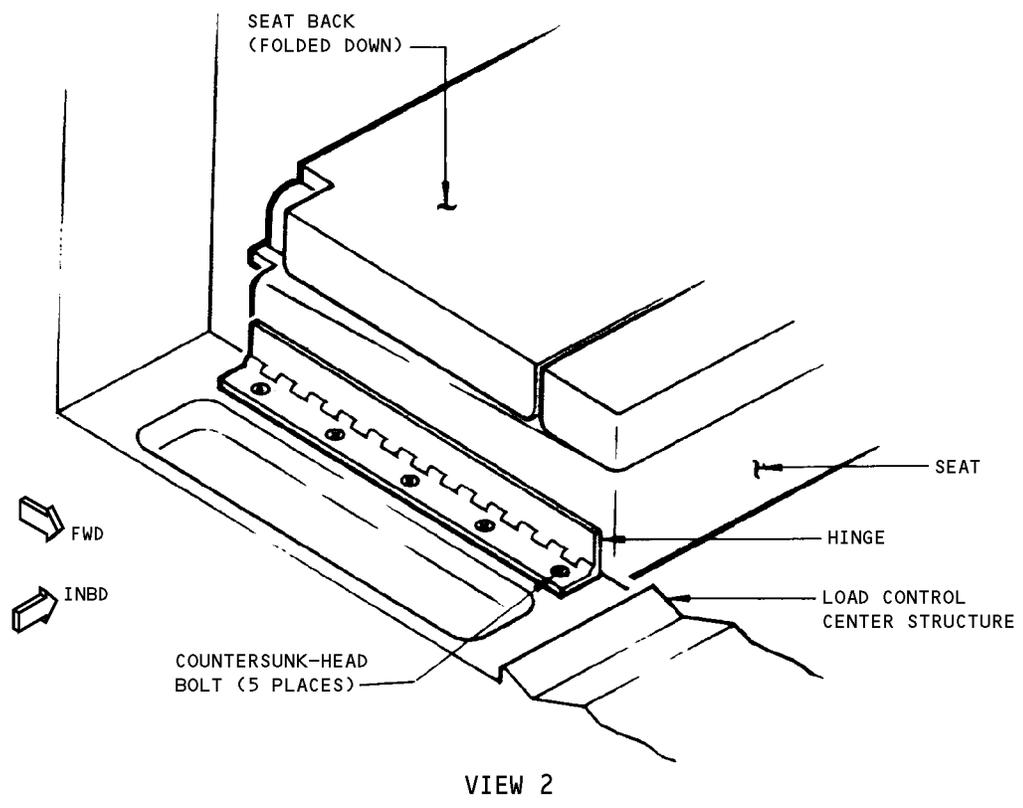
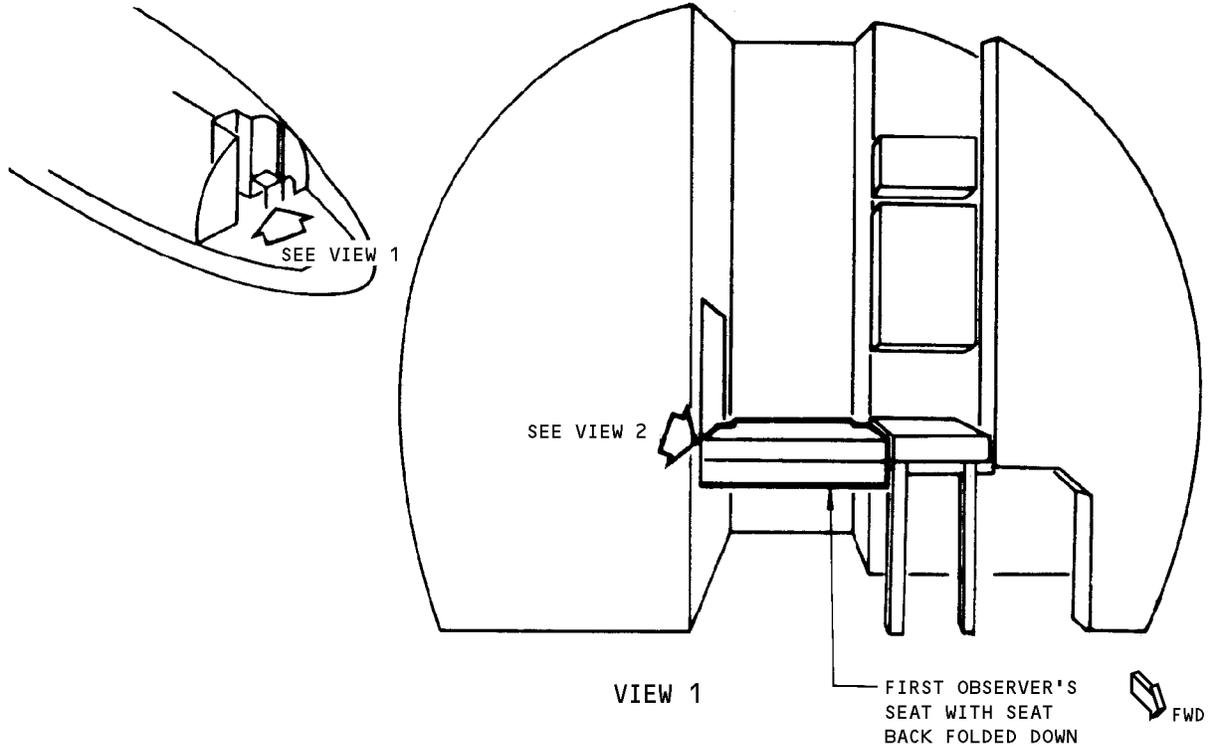
EFFECTIVITY

ALL

25-14-11

01

Page 401  
Dec 01/04



VIEW 2  
 First Observer's Seat Installation  
 Figure 401

EFFECTIVITY	
ALL	

25-14-11

455543

SECOND OBSERVER'S SEAT – REMOVAL/INSTALLATION

1. Remove Seat (Fig. 401)
  - A. Remove headrest and back cushions by pulling them free from velcro tapes that hold them to bulkhead.
  - B. Remove seat bottom.
    - (1) Remove seat retainer pins.
      - (a) Depress pin head button of pin on right side of left seat track and pull pin from hole.
      - (b) Depress pin head button of pin on left side of right seat track and pull pin from hole.
    - (2) Push adjustment control lever to the left and slide seat bottom forward until seat bottom rails are clear of seat tracks.
2. Install Seat (Fig. 401)
  - A. Install seat bottom.
    - (1) Fit aft ends of seat bottom rails into forward ends of seat tracks.
    - (2) Push adjustment control lever to the left and slide seat bottom aft until ends of seat bottom rails are flush with ends of seat tracks.
    - (3) Install seat retainer pins.
      - (a) Depress pin head button of first pin and fit pin into hole in left side of right seat track.
      - (b) Depress pin head button of second pin and fit pin into hole on right side of left seat track.
  - B. Install headrest and back cushions.
    - (1) Line up top, left and right edges of headrest cushion with headrest cushion indexing tapes.
    - (2) Press headrest cushion against bulkhead to engage velcro tapes.
    - (3) Repeat steps (1) and (2) for back cushion.

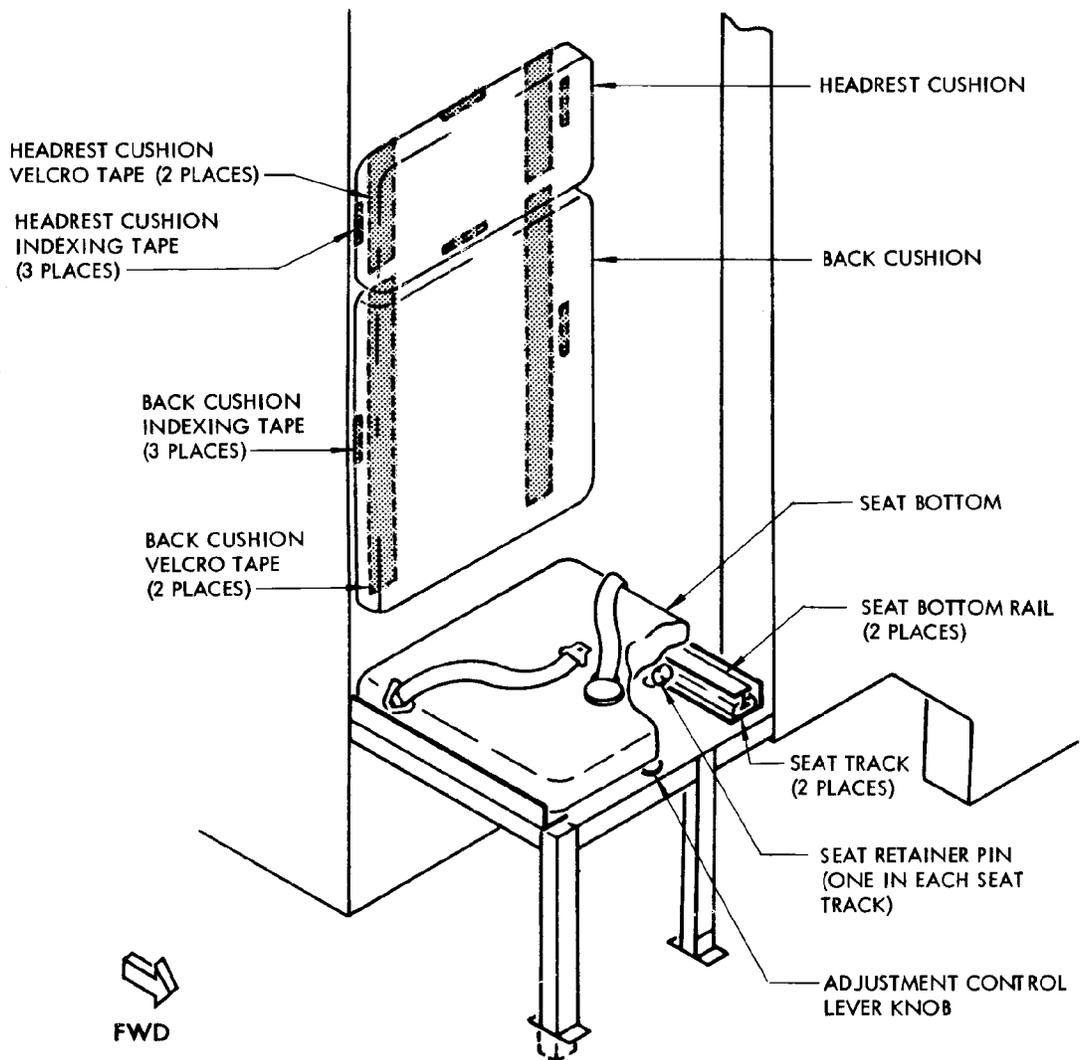
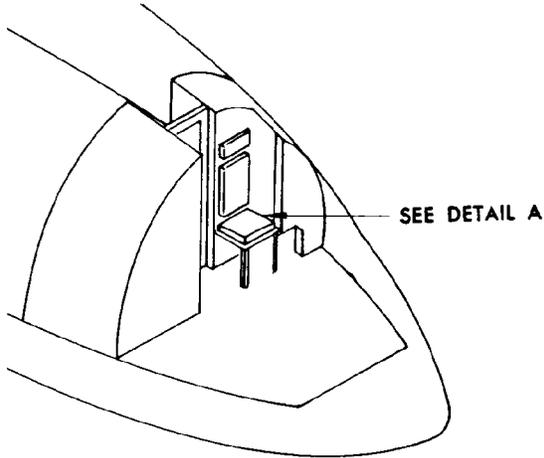
EFFECTIVITY

ALL

25-14-21

01

Page 401  
Dec 01/04



DETAIL A

Second Observer's Seat Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-14-21

CONTROL CABIN STOWAGE PROVISIONS - DESCRIPTION AND OPERATION

1. General

- A. The control cabin has provisions for stowing crewmembers' coats and hats, maps, manuals, the pilots' flight kits and spare bulbs.
- B. There is space to the left of the second observer's seat for stowing crewmembers' coats. A coat hanger rod which is about 8 inches long is just under the second observer's oxygen mask shelf. The rod's aft end is fastened to the control cabin aft bulkhead and the forward end is fastened to another partition.
- C. There are four hat holders on the right-hand wall of the control cabin entryway.
- D. There are four mapholders, one being attached on each side, to the lower forward end of the control stand, and one in the center section at each pilots' control wheel.
- E. Accommodations for stowing manuals are provided aft of the first officer's flight kit stowage space.
- F. There is space outboard and slightly aft of each pilots' seat for stowing the pilots' flight kits. A strap at each stowage space holds the kit to the floor and against the outboard wall.
- G. A spare bulb stowage box is located in the side panel below the No. 2 window outboard of the first officer's seat. The box consists of a base attached to the airplane frame by screws, and a cover which is hinged to the forward edge of the base. The cover is marked SPARE BULBS and is kept closed by a friction catch. The box is lined with 1-inch thick sponge plastic which has holes for stowing the various bulbs.

EFFECTIVITY

ALL

25-15-0

01

Page 1  
Dec 01/04

LINING AND INSULATION – DESCRIPTION AND OPERATION

1. General

- A. The control cabin lining panels (Fig. 1) cover the inside walls and ceiling of the control cabin except the areas covered by instrument panels, circuit breaker panels, and the forward bulkhead.
- B. The control cabin is insulated by fiberglass blankets and a drip pan (Fig. 2).

2. Control Cabin Lining

- A. Formed panels, made from thermo plastic sheet material, line the control cabin walls and ceiling (Fig. 1). The panels are fastened to the airplane structure and to other panels by quick-release fasteners or by screws. Sponge rubber on formed plastic padding is cemented to the structure that surrounds the windows. The panels have openings for instrument panels, lights, fresh air outlets, loudspeakers, waste containers and other equipment.

3. Control Cabin Insulation

A. Fiberglass Blankets

- (1) Fiberglass insulation blankets cover most of the cabin sidewalls and ceiling. The blankets are made in suitable sizes and shapes to ensure fitting the wall structure and to facilitate installation and removal. They have cutouts or slits where necessary to clear equipment, support structure or brackets.
- (2) A typical blanket is made of fiberglass batts cemented with one side to the trim fabric. The other side is covered with backing fabric. All edges of the outline, cutouts and slits are bound with a strip of trim fabric and sewn together with one or two rows of stitches. All stitches are sealed with cement to make blankets moisture and oilproof.
- (3) On some airplanes the stitching along the lower edge may have been removed and the sealant penetrated to allow free drainage of water from the blanket.
- (4) Insulation blankets are attached to the structure and to each other as necessary, by blanket fasteners (plastic studs and washers). Studs only are used in a few places of limited accessibility. A few blankets are spot cemented to the structure along one or more edges.

B. Drip Pan

- (1) The drip pan is installed above the overhead instrument panel. It provides insulation for this area and collects and drains area condensate. (See figure 2.)
- (2) The drip pan is a moulded plastic pan. Pan flanges and ribs are covered with strips of sponge type plastic, cemented to the pan. All other pan surfaces are covered with pads of fiberglass batting, enclosed between two sheets of neoprene coated nylon fabric. The pads are attached to the pan by cementing the pad borders to the sponge plastic strips.

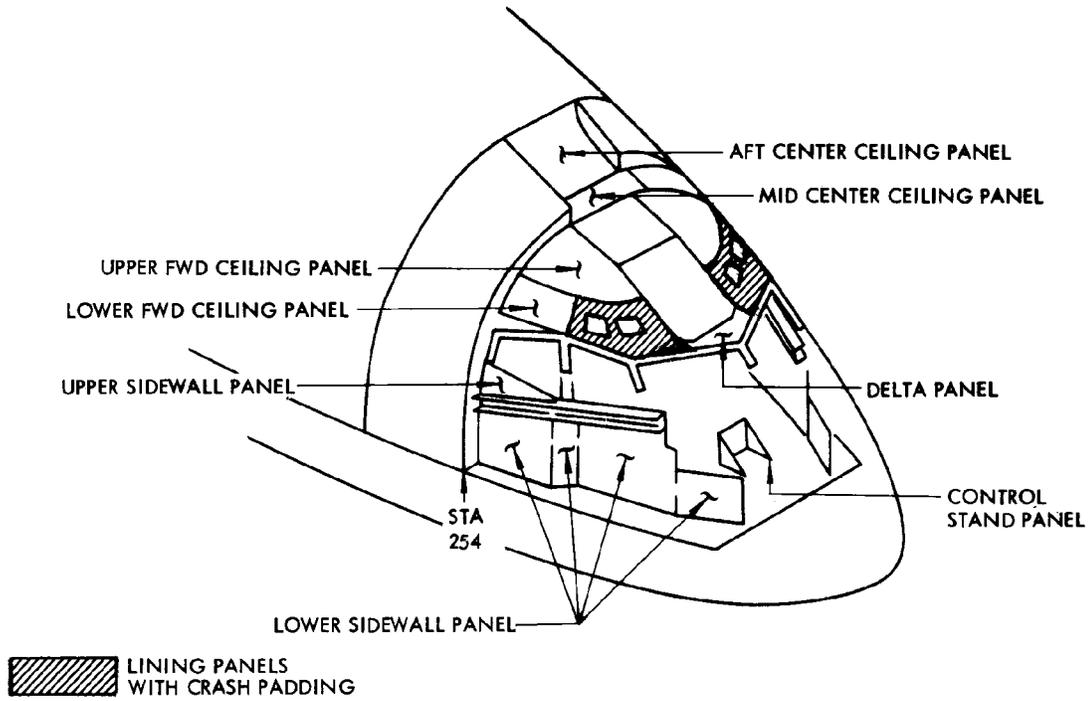
EFFECTIVITY

ALL

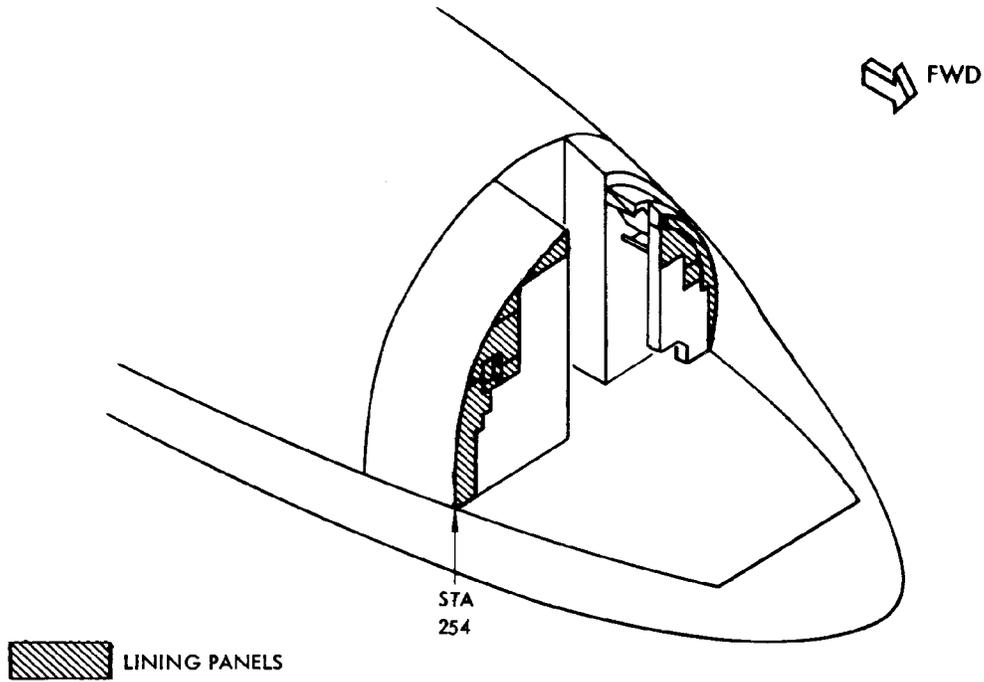
25-16-0

01

Page 1  
Dec 01/04



SIDEWALLS AND CEILING



AFT BULKHEAD

Control Cabin Lining  
Figure 1

EFFECTIVITY	ALL
-------------	-----

**BOEING**  
**737**   
MAINTENANCE MANUAL

- (3) The condensate occurring between the pan and structure is collected on the structure side of the pan. The condensate drains through a tube routed below the lower nose compartment floor, and overboard through the airplane body drain system. See Chapter 51, Airframe Drainage.
- (4) The drip pan is bolted to the structure and supports the overhead panels.

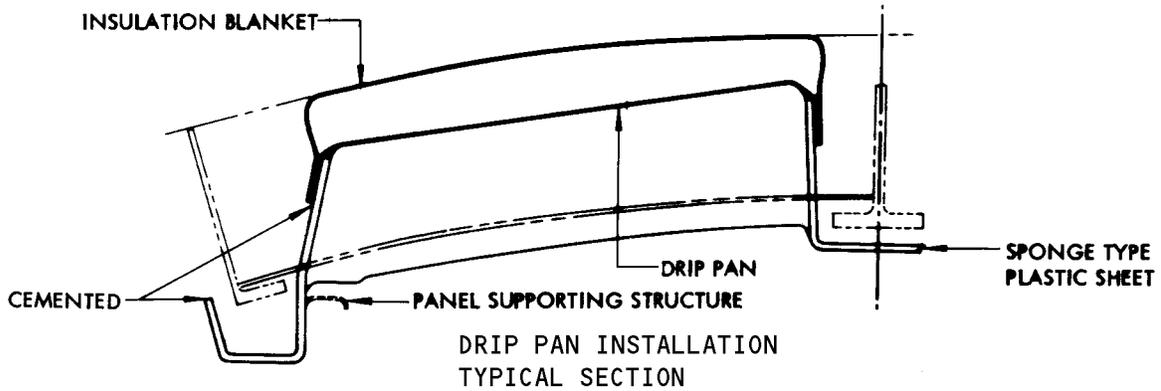
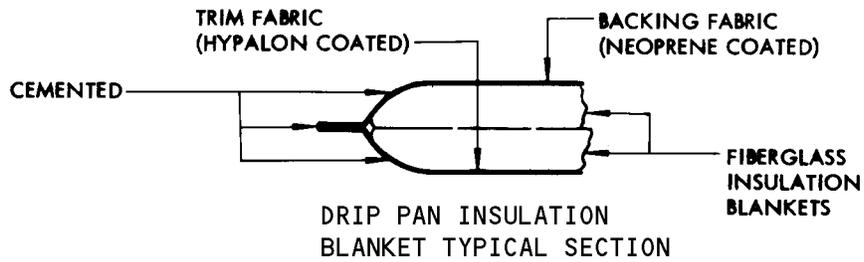
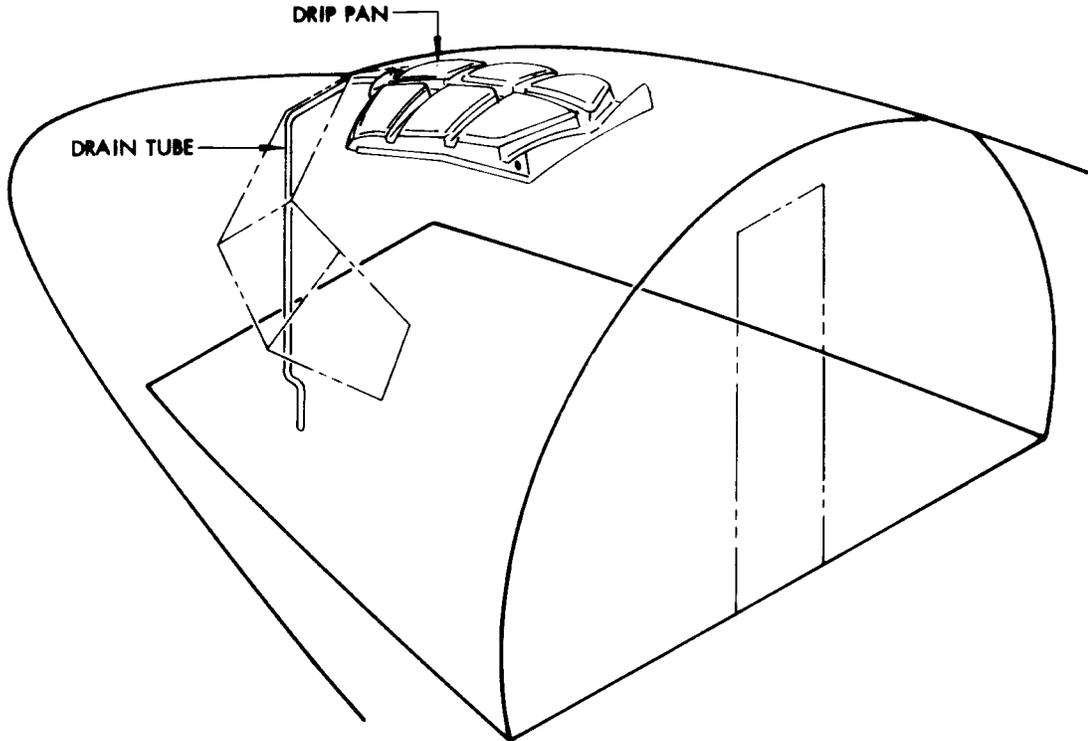
EFFECTIVITY

ALL

01

25-16-0

Page 3  
Dec 01/04



Control Cabin Drip Pan  
 Figure 2

EFFECTIVITY	ALL
-------------	-----

25-16-0

CONTROL CABIN LINING – REMOVAL/INSTALLATION

1. Remove Control Cabin Lining Panels (See figure 401.)
  - A. Remove equipment where necessary to clear.
  - B. Remove or loosen adjacent fittings and panels where necessary to free panel.
  - C. Unscrew and maneuver the panel in suitable directions until completely free.
2. Install Control Cabin Lining Panels (See figure 401.)
  - A. Place the panel in position and secure it with mounting screws.
  - B. Tighten loose fittings or adjacent panels.
  - C. Install fittings and equipment.

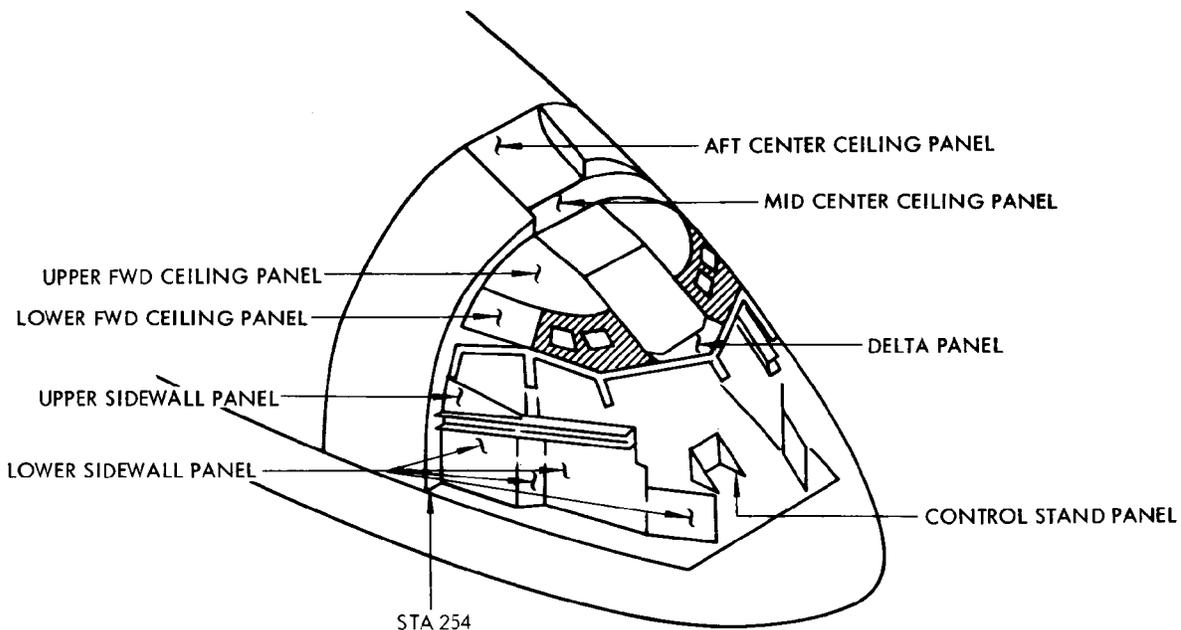
EFFECTIVITY

ALL

25-16-11

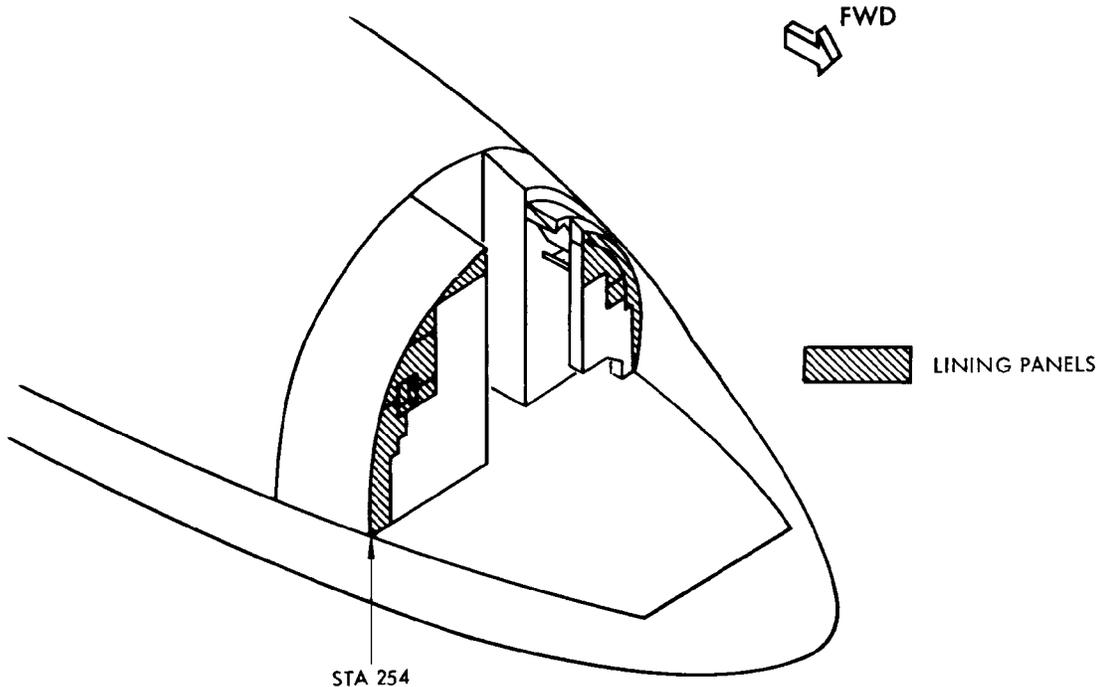
01

Page 401  
Dec 01/04



 LINING PANELS WITH CRASH PADDING

SIDEWALLS AND CEILING



AFT BULKHEAD

Lining Panels Installation  
 Figure 401

EFFECTIVITY	ALL
-------------	-----

25-16-11

01

Page 402  
 Dec 01/04

455554

CONTROL CABIN INSULATION – REMOVAL/INSTALLATION

1. General

- A. This procedure has these tasks:  
(1) Insulation Blanket Removal.  
(2) Insulation Blanket Installation.

2. Insulation Blanket Removal (Fig. 401)

- A. Remove control cabin lining panels (AMM 25-16-11/401).  
B. Remove equipment and equipment support as necessary.  
C. Remove wiring and tubing clips.  
D. Disconnect and remove wiring or tubing where necessary.  
E. Remove blanket fasteners as necessary.  
F. Remove blanket partly or completely, as necessary.  
G. Examine both sides of blanket for damaged covers.

3. Insulation Blanket Installation (Fig. 401)

A. Consumable Materials

- (1) Tape – Insulation Blanket, BMS 5-149  
(2) Tape – Advanced Insulation Blanket, BMS5-157  
(3) Tape – Hook/Loop Fastener, (Polypropylene Hook & Nylon Loop)  
BMS8-285, Type IV  
(4) Tape – Hook/Loop Fastener, Flame Propagation Resistant,  
BMS8-372

- B. Do these steps to check for insulation blanket contamination:

**WARNING:** LET THE CORROSION-INHIBITING COMPOUNDS (CIC) BECOME FULLY DRY. IF CIC GETS ON THE INSULATION BLANKET, THE INSULATION BLANKET WILL BECOME LESS FLAME-RESISTANT. THIS INCREASES THE RISK OF FIRE, WHICH CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (1) To prevent CIC contamination of insulation blankets, let the corrosion-inhibiting compounds fully dry before you install the insulation blankets.  
(a) Let the corrosion-inhibiting compounds dry longer than the minimum times listed below if you have one of these conditions:  
1) Low temperature.

EFFECTIVITY

ALL

25-16-21

01

Page 401  
Aug 01/06



## MAINTENANCE MANUAL

- 2) High humidity.
  - 3) Thick layer of corrosion-inhibiting compounds.
- (b) Ventilate areas, after application of CIC such as BMS 3-23, for a minimum of 1 hour.
- (c) Ventilate areas treated with CIC such as BMS 3-26 or BMS 3-29, for a minimum of 4 hours.

**WARNING:** DO NOT USE DETERGENTS OR SOLVENTS TO CLEAN THE INSULATION BLANKET. IT CAN REMOVE FLAME RETARDANTS AND CAUSE FLAMMABLE RESIDUES ON THE INSULATION BLANKET WHICH INCREASES THE RISK OF FIRE. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (2) If there is CIC contamination, oily or waxy substances, or other fluids (which typically changes the color and appearance of the insulation blanket cover), replace the insulation blanket.
  - (3) If there are dust, lint or other loose debris on the insulation blanket, use a vacuum cleaner or a non-metallic soft brush to remove the contamination.
  - (4) Make sure the area is clean before you install the insulation blanket.
- C. Do these steps to install the insulation blanket:
- (1) If you replace an insulation blanket or a capstrip, install an insulation blanket or a capstrip that complies with FAR 25.856.
    - (a) Replace the part of the hook/loop tape that is installed on the airplane structure where the replacement insulation blanket attaches, with hook/loop tape (BMS8-372), as applicable.

**NOTE:** Hook/loop tape (BMS8-372) is FAR 25.856 compliant.

- (2) Install new studs on the structure, where applicable.
- (3) Align the holes in the insulation blanket with the studs, where applicable.
- (4) Put the insulation blanket in its position.
- (5) Install the clips on the studs, where applicable.
- (6) Install retainers where applicable.
- (7) ALL AIRPLANES PRE SEP 2, 2003 FAR STD; AIRPLANES WITHOUT FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;
  - (a) For insulation blanket with BMS8-142 cover material:  
Use tape (BMS5-149 or BMS5-157) or hook/loop tape (BMS8-285 or BMS8-372), where applicable to close butt joints, overlapping joints, gaps between adjacent insulation blankets or panels, and between insulation blanket and the airplane structure.

**NOTE:** Tape (BMS5-157) and hook/loop tape (BMS8-372) are FAR 25.856. These items are the preferred alternatives to tape (BMS5-149) and hook/loop tape (BMS8-285), respectively.

EFFECTIVITY

ALL

25-16-21

01

Page 402  
Aug 01/06



## MAINTENANCE MANUAL

- (8) ALL AIRPLANES POST SEP 2, 2003 FAR STD; AIRPLANES WITH FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;
- (a) For insulation blanket with BMS8-377 cover material:  
Use tape (BMS5-157) or hook/loop tape (BMS8-372), where applicable to close butt joints, overlapping joints, gaps between adjacent molded insulation panels, and between insulation blanket and the airplane structure.
- (9) For replacement insulation blanket, push on the insulation blanket to remove the air that is inside the insulation blanket through the vent hole(s).
- (a) Peel off the attach release liner on the circle tape and seal the vent hole(s).
- (10) Make sure the insulation blanket does not cover the openings in the intercostals.

NOTE: Air must be free to circulate between frames.

- (11) Make sure moisture penetration through to the inboard side of the insulation blanket is minimized.
- (a) Lap edges or flaps of insulation blanket over or under adjacent blankets as required.

NOTE: Flaps along edges of insulation blankets must overlap adjacent blankets in a manner which will transfer runoff of condensed moisture to adjacent blanket without trapping moisture or allowing it to leak into cabin area.

- (b) Stretch blanket between frames and space away from stringers wherever possible.

NOTE: Insulation blanket should clear stringers if possible to allow free drainage of condensed moisture. Blankets should not be wrapped around stringers.

- (12) Check that insulation blankets fit tightly around any structure or supporting brackets that protrude through inboard surface of insulation.
- (13) Attach blanket with blanket fasteners when using cap strips.

EFFECTIVITY

ALL

25-16-21

01

Page 403  
Aug 01/06

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

- D. Put the Airplane Back to its Usual Condition
- (1) Connect wiring and tubing.
  - (2) Install wiring and tubing clips.
  - (3) Install lining panels (AMM 25-16-11/401).

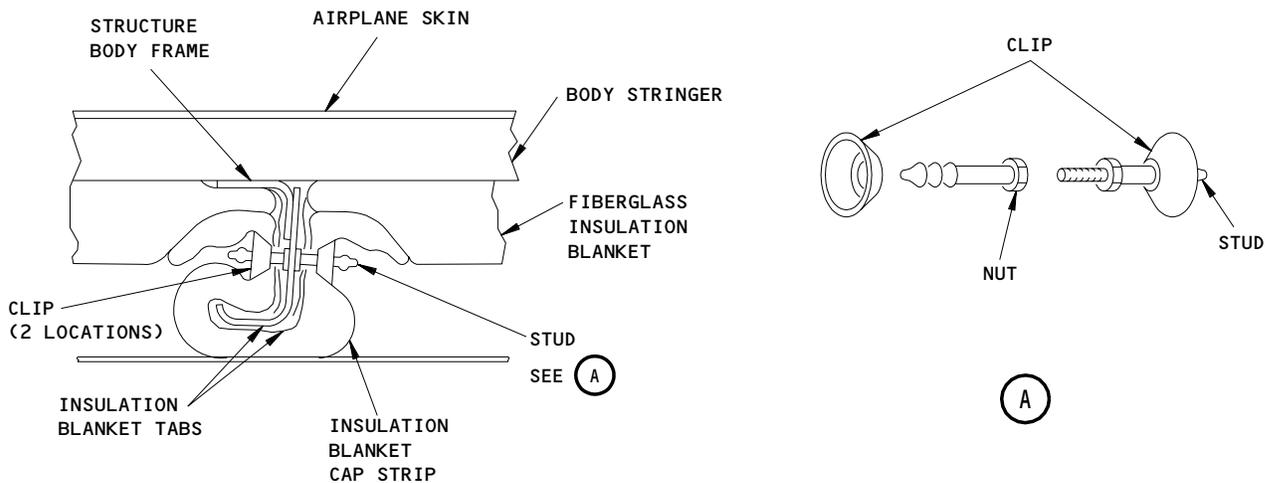
EFFECTIVITY

ALL

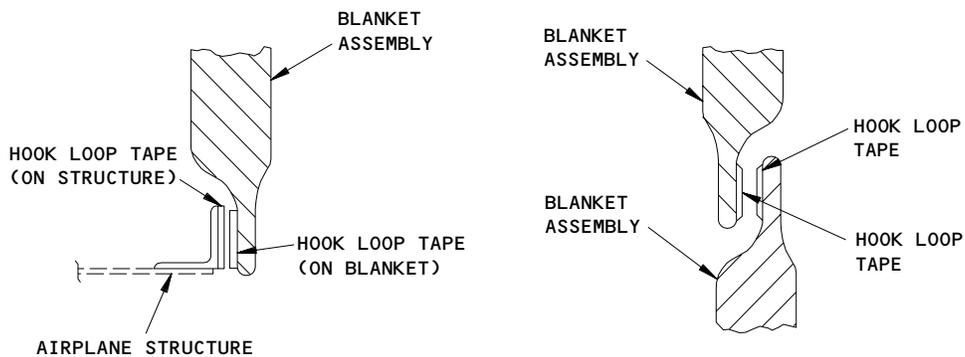
**25-16-21**

01

Page 404  
Aug 01/06

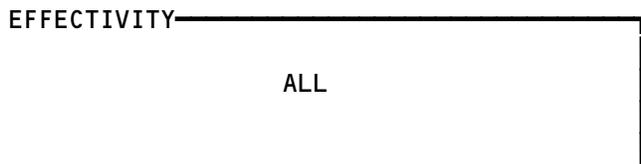


TYPICAL INSULATION BLANKET INSTALLATION



EXAMPLE PROCEDURE TO ATTACH THE BLANKET ASSEMBLIES TO AIRPLANE STRUCTURE OR TO OTHER BLANKET ASSEMBLIES WITH HOOK AND LOOP TAPE

Typical Insulation Blanket Installation  
 Figure 401



25-16-21

01

Page 405  
 Aug 01/06

050830



MAINTENANCE MANUAL

CONTROL CABIN INSULATION - APPROVED REPAIRS

1. General

- A. For approved repairs information refer to AMM 25-21-339/801, Sidewall Insulation - Approved Repairs.

EFFECTIVITY

ALL

25-16-21

01

Page 801  
Aug 01/06

CONTROL CABIN DRIP PAN – REMOVAL/INSTALLATION

1. Remove Control Cabin Drip Pan (See figure 401.)
  - A. Remove overhead instrument panels.
  - B. Remove adjoining lining panels. (Refer to Control Cabin Lining, 25-16-11.)
  - C. Remove structure which supports panels.
  - D. Remove wiring supports and clips.
  - E. Disconnect wiring where necessary.
  - F. Loosen wire bundles where necessary.
  - G. Disconnect the drain tubing.
  - H. Remove remaining fasteners.
  - I. Remove pan; push wire bundles out of holes.
  - J. Examine for loose insulation and for damaged insulation pads.
2. Install Control Cabin Drip Pan (See figure 401.)
  - A. Place pan in position and secure it with bolts.
  - B. Connect the cooling and drain tubing.
  - C. Arrange wire bundles in correct position and rebind bundles where necessary.
  - D. Connect wiring where necessary.
  - E. Install wiring supports and clips.
  - F. Install structure supporting panels.
  - G. Install lining panels. (Refer to Control Cabin Lining, 25-16-11.)
  - H. Install instrument panels.

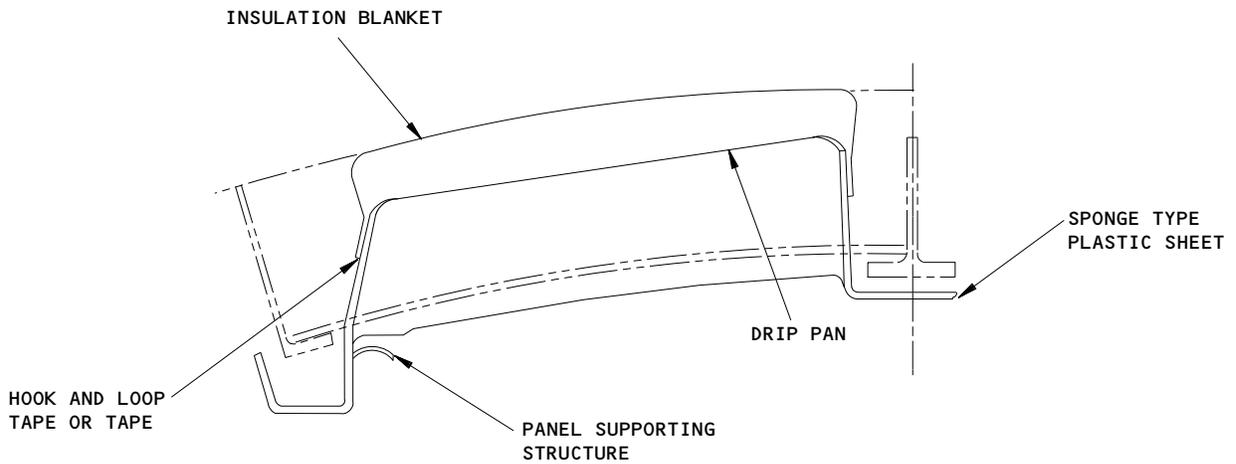
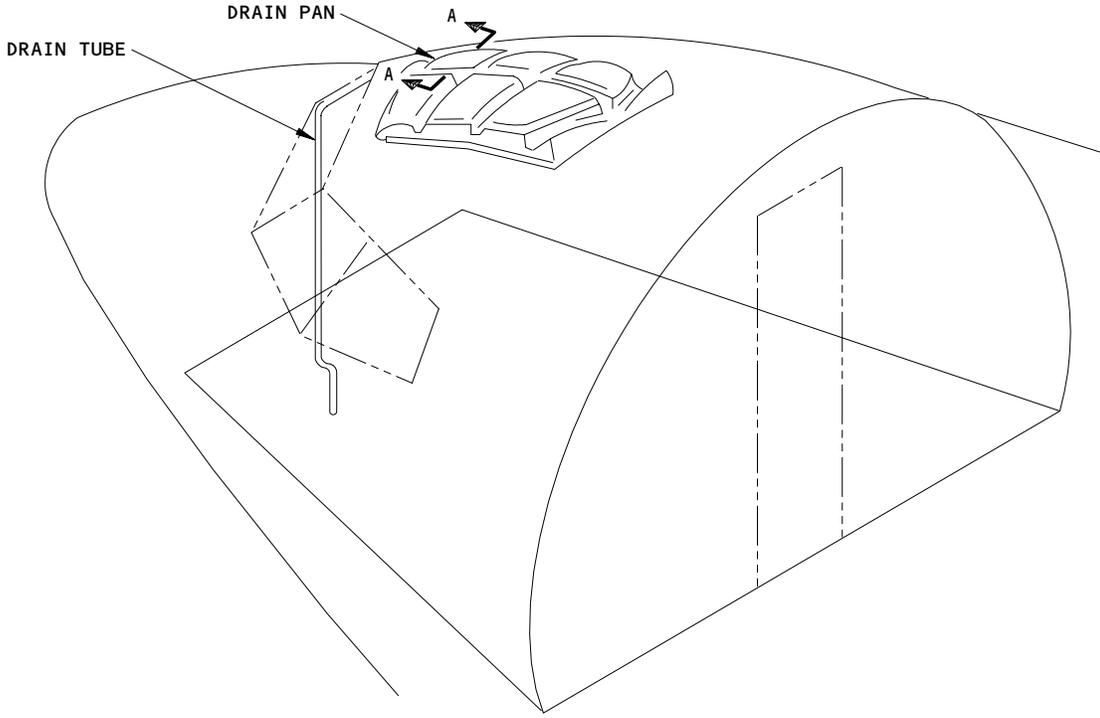
EFFECTIVITY

ALL

25-16-31

01

Page 401  
Dec 01/04



**DRIP PAN INSTALLATION  
 TYPICAL SECTION  
 A-A**

**Typical Drip Pan Installation  
 Figure 401**

EFFECTIVITY	ALL
-------------	-----

**25-16-31**

01

Page 402  
 Aug 01/06

U50772

CONTROL CABIN CRASH PADDING - REMOVAL/INSTALLATION

1. Equipment and Materials
  - A. Adhesive ED-873
  - B. Aliphatic Naphtha TT-N-95
  - C. Methyl Ethyl Ketone
2. Remove Control Cabin Crash Padding (See figure 401.)
  - A. Remove equipment where necessary to gain access to crash padding.
  - B. Pull off crash padding as required.
3. Install Control Cabin Crash Padding (See figure 401.)
  - A. Clean all faying surfaces with methyl ethyl ketone or naphtha.
  - B. Apply a thin even brush coat of adhesive to both the metal and foam faying surfaces.
  - C. Allow adhesive to dry until it becomes quite sticky but does not transfer to the finger.  
  

**NOTE:** This point will be indicated by a color change from milky cream to transparent amber. Drying time can be accelerated by blowing air to evaporate the water base of the adhesive.
  - D. Press surfaces firmly together to join.
  - E. Eliminate dry adhesive with naphtha.

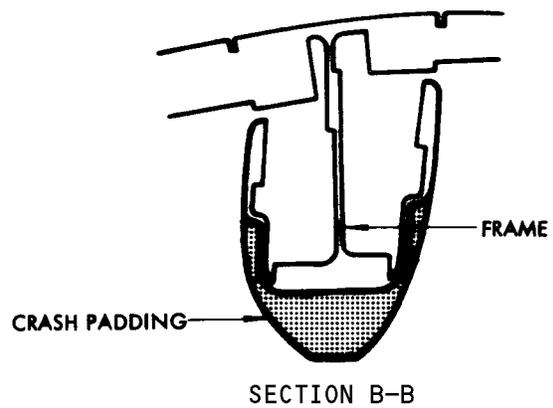
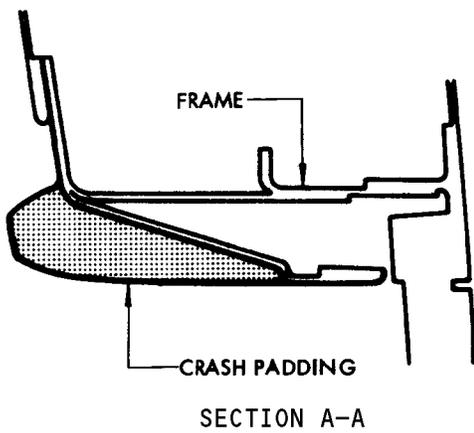
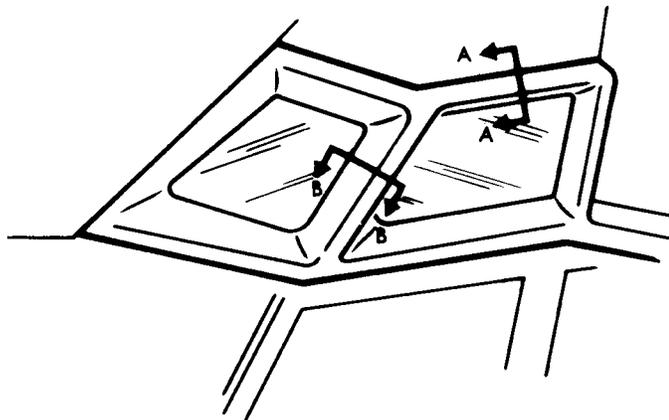
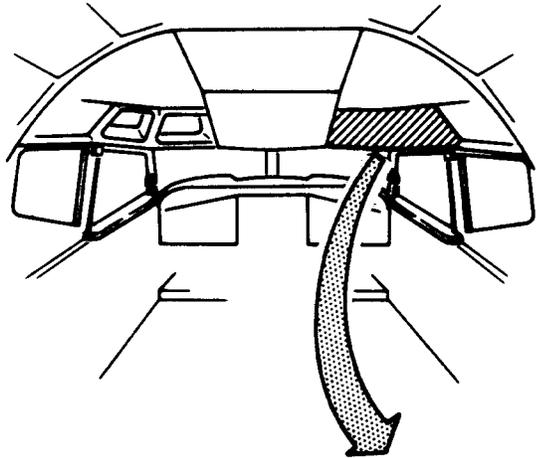
EFFECTIVITY

ALL

25-16-41

01

Page 401  
Dec 01/04



Crash Padding Installation  
 Figure 401

EFFECTIVITY	ALL
-------------	-----

25-16-41

CONTROL CABIN MISCELLANEOUS EQUIPMENT – DESCRIPTION AND OPERATION

1. General

- A. Control cabin miscellaneous equipment includes the captain's and first officer's seat adjustment sight guide, two note pad clipboards, two cupholders, two panel waste containers, the sunshade equipment, four ashtrays, the FAA certificate holder and the radio station license holder.
- B. The captains and first officer's seat adjustment sight guide is fastened to the windshield center post between the No. 1 windows. It consists of three spheres bonded to a metal bracket; two of the spheres (red-orange) are forward of the third sphere (white) forming a triangle. When either pilot adjusts his seat to an eye position where the apex sphere (white) is aligned with a forward sphere (red-orange), the seat is in position to give him a maximum field of vision.
- C. A note pad clipboard is located at the lower edge of each No. 2 window. Each clipboard is attached to the sliding window mechanism cover.
- D. A collapsible cupholder is attached to the upper forward corner on each side of the control stand. Indentations for cups are provided in the first observer's seat stowage recess and atop the ashtray on the lower aft bulkhead outboard of the second observer's seat.
- E. The waste containers are boxes marked WASTE and are inserted in cutouts in the trim panels, flush with the inboard panel surface. One waste container is provided outboard of the captain's seat, and one outboard of the first officer's seat. The waste containers are built up of parts made of fiberglass plastic, and metal fittings. A small flap door on the containers is inward opening and is kept closed by springs. The waste container is retained in its position by an adjustable stop and latch mechanism. The container can be removed simply by pulling the knob at its top, inboard.
- F. Sunvisor equipment at the captain's and first officer's stations consists of green transparent plastic sunvisors (two for each station), and supports. Sunvisors can be attached to supports by means of plastic clips, hinged to edge of visor. Supports are fixed above upper edges of No. 1 and 2 right and left windows. Eyebrow visors fit into eyebrow windows and against the crash padding.

CAUTION: SUNVISOR SHOULD NOT BE PLACED BETWEEN WINDOW AND THERMAL SWITCH, AS OVERHEATING MAY RESULT.

EFFECTIVITY

ALL

25-19-0

01

Page 1  
Dec 01/04



## MAINTENANCE MANUAL

- G. Four ashtrays are provided for the crewmembers. The captain's and first officer's are inserted in cutouts in the trim panel outboard of their respective seats. The first observer's ashtray is located in the first observer's seat stowage recess (to the right of the seat when in open position). The second observer's ashtray is located on the lower aft bulkhead outboard of the second observer's seat. The ash receptacles are removable.
- H. The FAA certificate holder and the radio station license holder are bonded to the forward side of the control cabin entrance door.

EFFECTIVITY

ALL

25-19-0

01

Page 2  
Dec 01/04

PASSENGER COMPARTMENT – DESCRIPTION AND OPERATION

FL 1. General

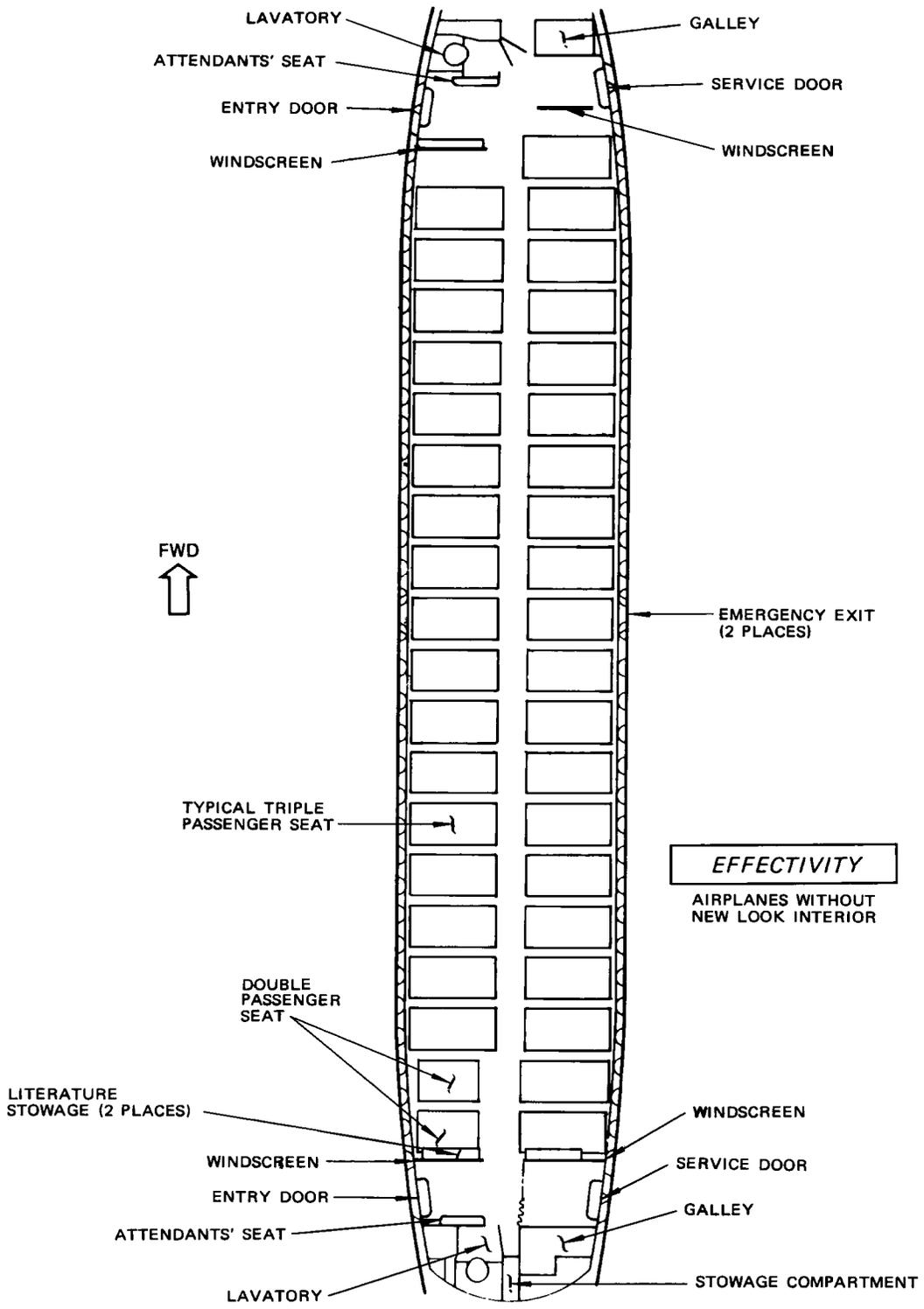
- A. The arrangement of the various equipment installed in the passenger compartment is shown in figure 1.
- B. Passenger cabin lining and insulation is designed to reduce noise level, stabilize cabin temperature, and for decorative means. Refer to 25-21-0, or 25-21-300, Passenger Cabin Lining and Insulation.
- C. Passenger seats are attached to the floor by seat track attachments, and may be rearranged for different passenger configurations by moving the seats forward or aft on the seat tracks.
- D. Passenger service units are provided above each row of seats, in the lavatories, and at attendants' stations to supply air, oxygen and electrical services. Refer to 25-23-0, Passenger Service Units.
- E. Passenger cabin partitions are provided in the airplane to separate different classes of accommodation and to form compartments and closets as required. Refer to 25-24-0, Passenger Cabin Partitions and compartments.
- F. Attendants' stations are provided near the forward and rear entry doors. Each station accommodates two persons, and includes a double seat, service unit, boarding light, and panel. Refer to 25-25-0, Cabin Attendants' Stations.
- G. The passenger cabin floor is covered with carpeting except in the galley and entry door areas where it is covered with a vinyl mat. Refer to 25-27-0, Passenger Cabin Floor Covering.
- H. On airplanes without new look interior, hatracks are installed above the passenger seats along both sides of the passenger cabin. Refer to 25-28-0, Passenger Cabin Hatracks.
- I. Miscellaneous items of passenger equipment are installed at various locations in the passenger cabin. Refer to 25-29-0, Passenger Cabin Miscellaneous Equipment.
- J. The airplane is equipped with galley units providing a facilities for storage and preparation of food. Refer to 25-31-0, Galleys.
- K. The passenger cabin is equipped with lavatories which are similar but slightly different in arrangement. Refer to 25-40-0, Lavatories.

EFFECTIVITY  
Standard Passenger Airplanes

**25-20-0**

ARG

Page 1  
Dec 01/04



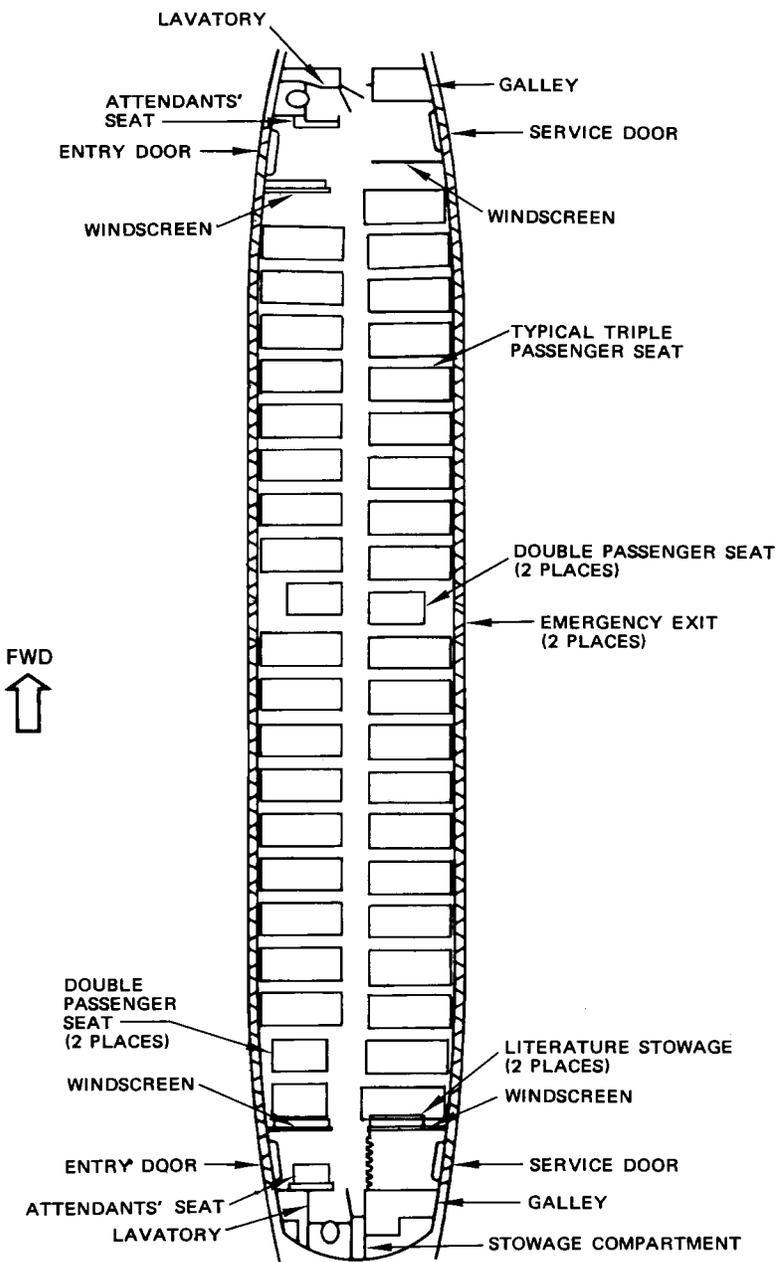
Passenger Compartment Arrangement  
 Figure 1 (Sheet 1)

EFFECTIVITY  
 Standard Passenger Airplanes

**EFFECTIVITY**  
 AIRPLANES WITHOUT  
 NEW LOOK INTERIOR

**25-20-0**

455606



**EFFECTIVITY**  
 AIRPLANES WITH  
 NEW LOOK INTERIOR

Passenger Compartment Arrangement  
 Figure 1 (Sheet 2)

EFFECTIVITY  
 Standard Passenger Airplanes

**25-20-0**

PASSENGER COMPARTMENT – DESCRIPTION AND OPERATION

1. General

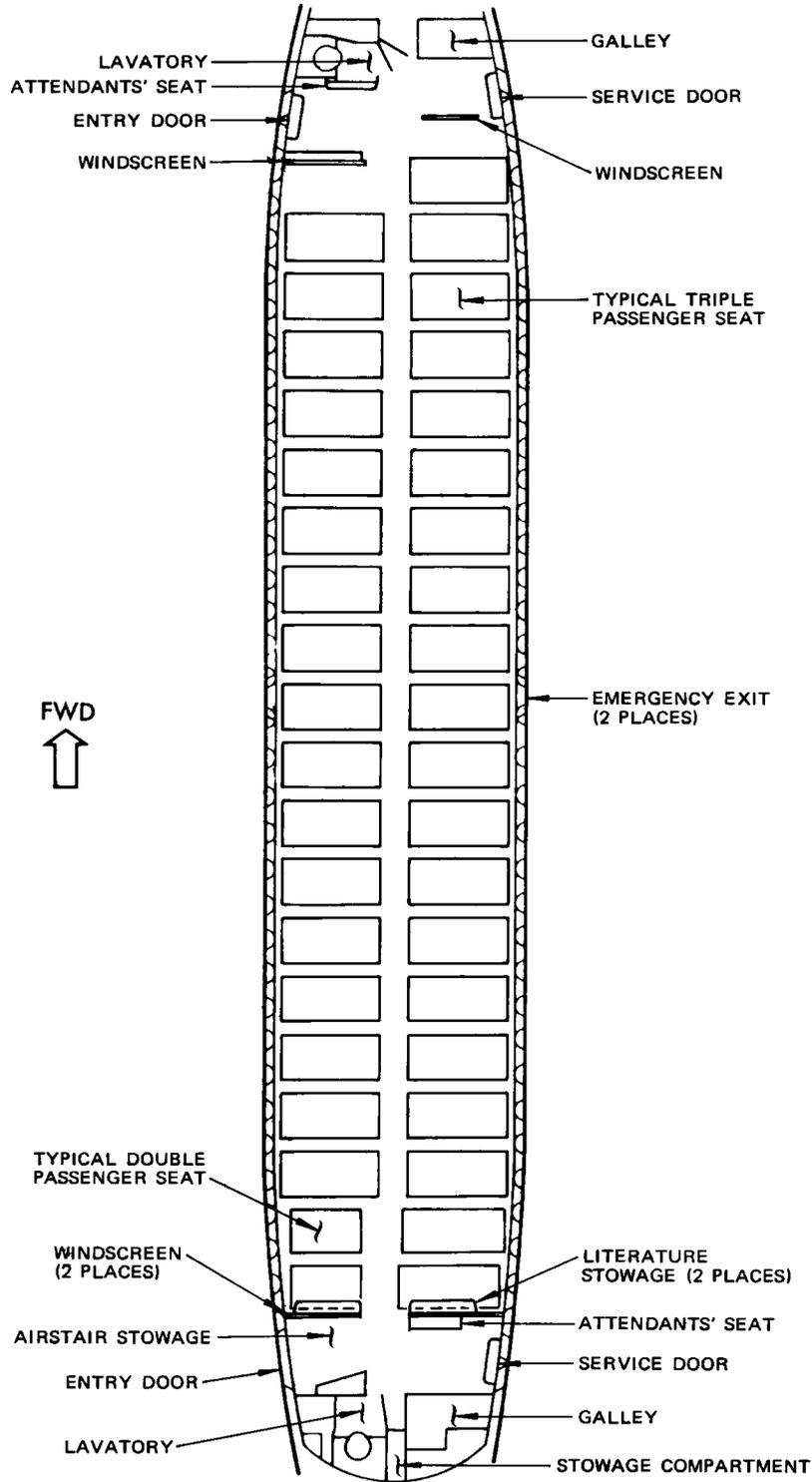
- A. The arrangement of the various equipment installed in the passenger compartment is shown in figure 1.
- B. Passenger cabin lining and insulation is designed to reduce noise level, stabilize cabin temperature, and for decorative means. Refer to 25-21-0, Passenger Cabin Lining and Insulation.
- C. Passenger seats are attached to the floor by seat track attachments, and may be rearranged for different passenger configurations by moving the seats forward or aft on the seat tracks.
- D. Passenger service units are provided above each row of seats, in the lavatories, and at attendants' stations to supply air, oxygen and electrical services. Refer to 25-23-0, Passenger Service Units.
- E. Passenger cabin partitions are provided in the airplane to separate different classes of accommodation and to form compartments and closets as required. Refer to 25-24-0, Passenger Cabin Partitions and Compartments.
- F. Attendants' stations are provided near the forward and rear entry doors. Each station accommodates two persons, and includes a double seat, service unit, boarding light, and panel. Refer to 25-25-0, Cabin Attendants' Stations.
- G. The passenger cabin floor is covered with carpeting except in the galley and entry door areas where it is covered with a vinyl mat. Refer to 25-27-0, Passenger Cabin Floor Covering.
- H. Hatracks are installed above the passenger seats along both sides of the passenger cabin. Refer to 25-28-01, Passenger Cabin Hatracks.
- I. Miscellaneous items of passenger equipment are installed at various locations in the passenger cabin. Refer to 25-29-0, Passenger Cabin Miscellaneous Equipment.
- J. The airplane is equipped with galley units providing facilities for storage and preparation of food. Refer to 25-31-0, Galleys.
- K. The passenger cabin is equipped with lavatories which are similar but slightly different in arrangement. Refer to 25-40-0, Lavatories.

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

25-20-01

02

Page 1  
Dec 01/04



Passenger Compartment Arrangement  
 Figure 1

EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

455725

25-20-01

09

Page 2  
 Dec 01/04

**BOEING**  
**737**   
MAINTENANCE MANUAL

PASSENGER CABIN ARRANGEMENT LIMITATIONS – DESCRIPTION AND OPERATION

1. General

- A. Passenger cabin conversion may be affected by the addition or removal of seats, passenger service units, partitions and auxiliary equipment necessary for passenger accommodation. The conversion limits result from entrance, exit and aisle restrictions set forth in the FAA regulations.
- B. The applicable FAA regulations must be reviewed when revising passenger cabin arrangements to ensure compliance in the following areas:
  - (1) Access from the main aisle to the entry and galley doors.
  - (2) Main aisle width.
  - (3) Access from the main aisle to the overwing exits.
  - (4) Seat arrangement adjacent to overwing exits.
  - (5) Seat-to-bulkhead clearances.

EFFECTIVITY

ALL

25-20-100

01

Page 1  
Dec 01/04

PASSENGER CABIN LINING AND INSULATION – DESCRIPTION AND OPERATION

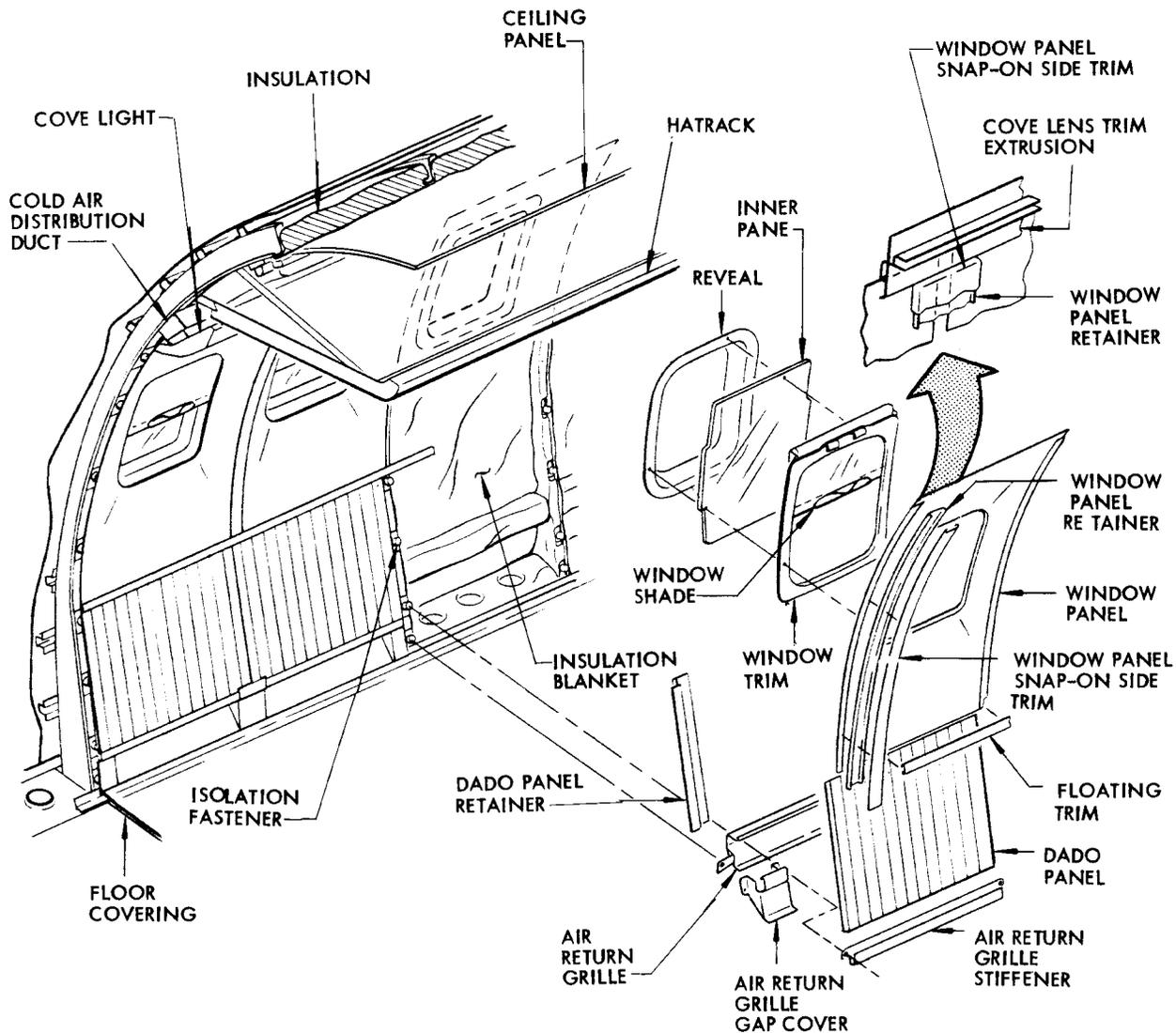
1. General

A. The passenger cabin lining and insulation is designed to reduce noise level, stabilize cabin temperature and to provide a decorative finish. Lining and insulation consists of sidewall lining and insulation, ceiling lining and insulation, and lowered ceiling panels.

2. Sidewall Lining and Insulation

A. Sidewall lining components include air return grilles, dado panels, window panels, window shades, hatrack closure panels and entry and galley door areas sidewall lining. Decorative trim, molding, gap covers and stiffeners are installed at joints and edges. (See figure 1.)

- (1) Aluminum air return grilles provide an exit for cabin conditioning air. The ends of the grille are attached to body structure and the air return grille gap covers attach to the grille. The lower edge of the grille rests on the cabin floor underneath the floor covering. A gap cover is installed at each joint. (See figure 1.)
- (2) Dado panels, vinyl-aluminum laminate, make up the lower sidewall lining. The lower edge of the panel fits into a groove in the air return grille stiffener, the upper edge fits into a groove in a floating trim strip, and the panel is attached to isolation fasteners on the body structure with the dado panel retainers. (See figure 1.)
- (3) Window panels are assemblies which include a decorative panel of vinyl-aluminum laminate with a thin plastic coating to resist cigarette stains, a roll-type window shade and window trim, the inner windowpane, and a plastic reveal. The window panels are connected by a floating trim strip to the dado panels and attached to isolation fasteners on the body structure by the window panel retainers. (See figure 1.)
- (4) Window shades are made of mylar-aluminum foil-vinyl laminate, or vinyl impregnated Tedlar coated fiberglass with one end cemented to a spring-loaded roller and the other end riveted to a stiffener. The roller is installed in brackets mounted on the outboard side of the window panel assembly. (See figure 1.) A spring-loaded shoe in either end of the stiffener rides in a groove in the window trim and a plastic handle is attached to the stiffener.
- (5) Hatrack closure panels provide access to service the ceiling lights, oxygen distribution line, and the electrical and electronic wiring raceway located in the hatrack and cove light sidewall area. The panels are made of vinyl-aluminum laminate, with the upper edge latched to an angle on the ceiling strip lights and the lower end fastened to hatrack structure.



01.01

Typical Passenger Cabin Sidewall  
 Figure 1

EFFECTIVITY  
 Airplanes without New Look  
 Interior

455758

**25-21-0**

03

Page 2  
 Dec 01/04



## MAINTENANCE MANUAL

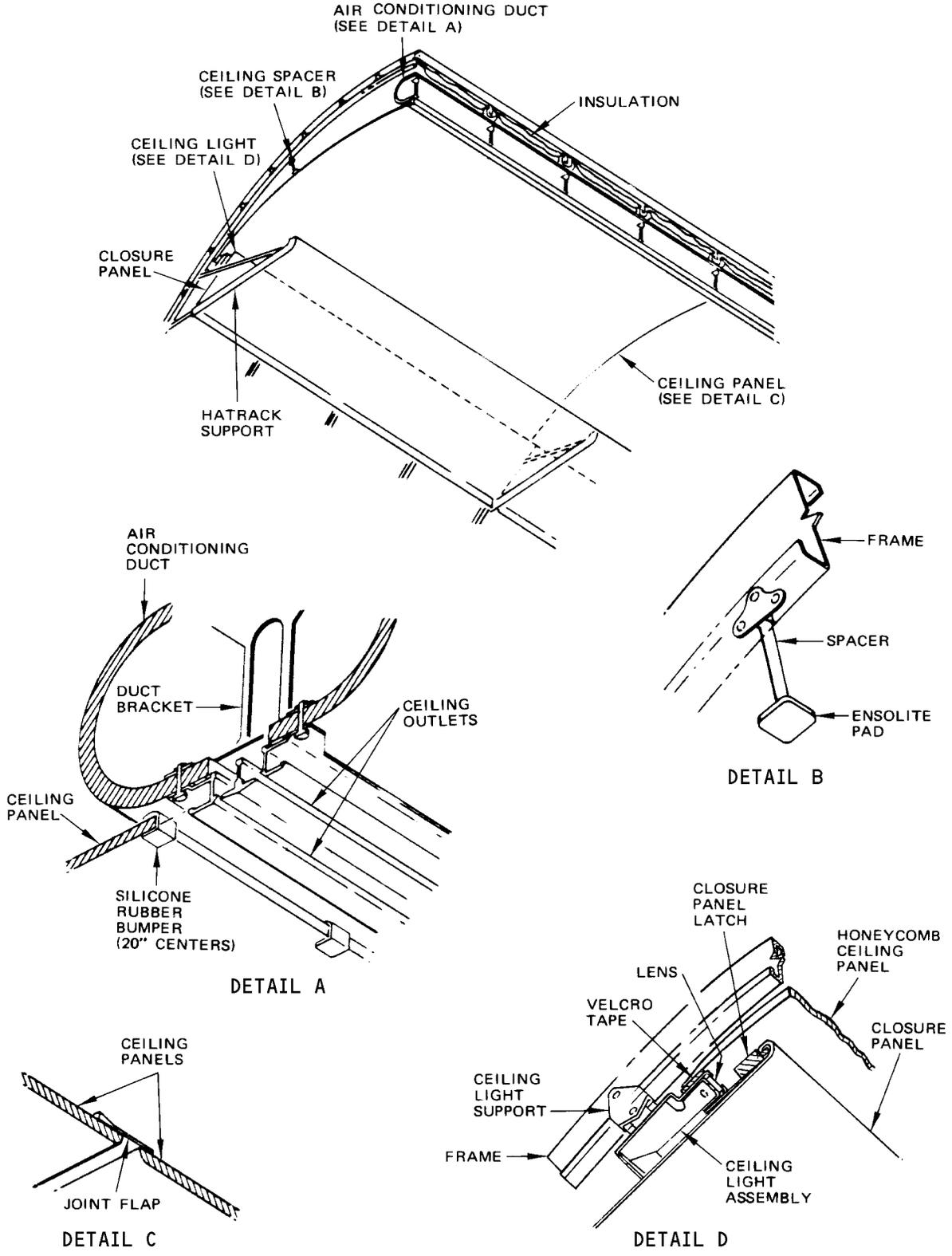
- (6) Vinyl-aluminum laminate sidewall lining panels are attached to structure around the doors. The panels around the forward and aft entry and galley doors are held in place with screws, quick-release fasteners and retainer strips.
  - (7) Snap-on side trim conceals the window panel joints, dado panel retainers cover the joints in the dado panels, and floating trim connects the window panel to the dado panel. The upper edge of the window panel is concealed by fitting into the cove lens trim extrusion.
- B. The lining in the galley areas and entry door areas is made of vinyl-aluminum laminate panels. It is held in place by quick-release fasteners and is easily removed. The lining on the galley and entry doors is vinyl-aluminum laminate panels attached by screws and quick-release fasteners.
  - C. The sidewall thermal acoustical insulating blankets are installed on the body structure behind the sidewall lining. The material is flexible type fiberglass insulation. It is covered with a moisture and flame resistant nylon fabric. The insulation blankets are attached to body structure with plastic lining retainer studs and are also held in place by the installation of sidewall interior and system items. In each sidewall bay, adjacent blankets are overlapped to form continuous insulation which extends from the floor to the ceiling strip lights.
3. Ceiling Lining and Insulation
- A. The panels are made of honeycomb with a fiberglass skin on the outer side and a laminated fiberglass, acoustical material and perforated vinyl skin on the inner side. The inboard edge of the ceiling panel, which slides into a channel on the air conditioning nozzle, is protected by a small rubber bumper strip every 20 inches. The outboard edge is attached to ceiling strip light structure by velcro tape, and also, on later airplanes, by spring clips. The correct ceiling contour is maintained by ceiling spacers attached to structure every 40 inches. (See figure 2.)
  - B. The body structure above the curved ceiling panels is insulated with flexible type blanket insulation panels covered with moisture and flame resistant nylon fabric. Plastic lining retainer studs are used to attach the blankets to the body structure. The blankets are overlapped to drain moisture into the sidewalls.
4. Lowered Ceiling Panels
- A. The lowered ceiling panels are made of honeycomb faced with fiberglass and a decorative vinyl covering.
  - B. The body structure above the lowered ceiling panels is insulated with flexible type blanket insulation panels covered with moisture and flame resistant nylon fabric. Plastic lining retainer studs are used to attach the blankets to the body structure. The blankets are overlapped to drain moisture into the sidewalls.

EFFECTIVITY  
Airplanes without New Look  
Interior

25-21-0

05

Page 3  
Dec 01/04



Ceiling Panels  
 Figure 2

EFFECTIVITY  
 Airplanes without New Look  
 Interior

25-21-0

455759

AIR RETURN GRILLE – REMOVAL/INSTALLATION

1. General

A. The air return grille consists of sections of air return grille and air return grille stiffeners with gap covers at the section joints. The air return grille and the air return grille stiffener may be removed independently of each other. They are provided with separate removal/installation instructions in this section.

2. Removal/Installation Air Return Grille

A. Equipment and Materials

(1) Interior Trim Remover Assembly – F70033 or equivalent, for removing gap covers

B. Remove Air Return Grille (Fig. 401.)

- (1) Remove two attachment screws from both gap covers at each end of air grille section to be removed.
- (2) Pull floor covering away in area of grille and gap covers.
- (3) Pull out on top of gap cover with special tool so as to clear stiffener while pulling down and inboard on gap cover.
- (4) Disengage quick-release fastener on both ends of air return grille.
- (5) Remove air return grille.

C. Install Air Return Grille (Fig. 401.)

- (1) Place air return grille in position with bottom edge under floor covering.
- (2) Install quick-release fastener in both ends of air return grille.
- (3) Place gap cover in position with bottom edge under floor covering.
- (4) Install two attachment screws through gap cover and air return grille.

3. Removal/Installation Air Return Grille Stiffener

A. Equipment and Materials

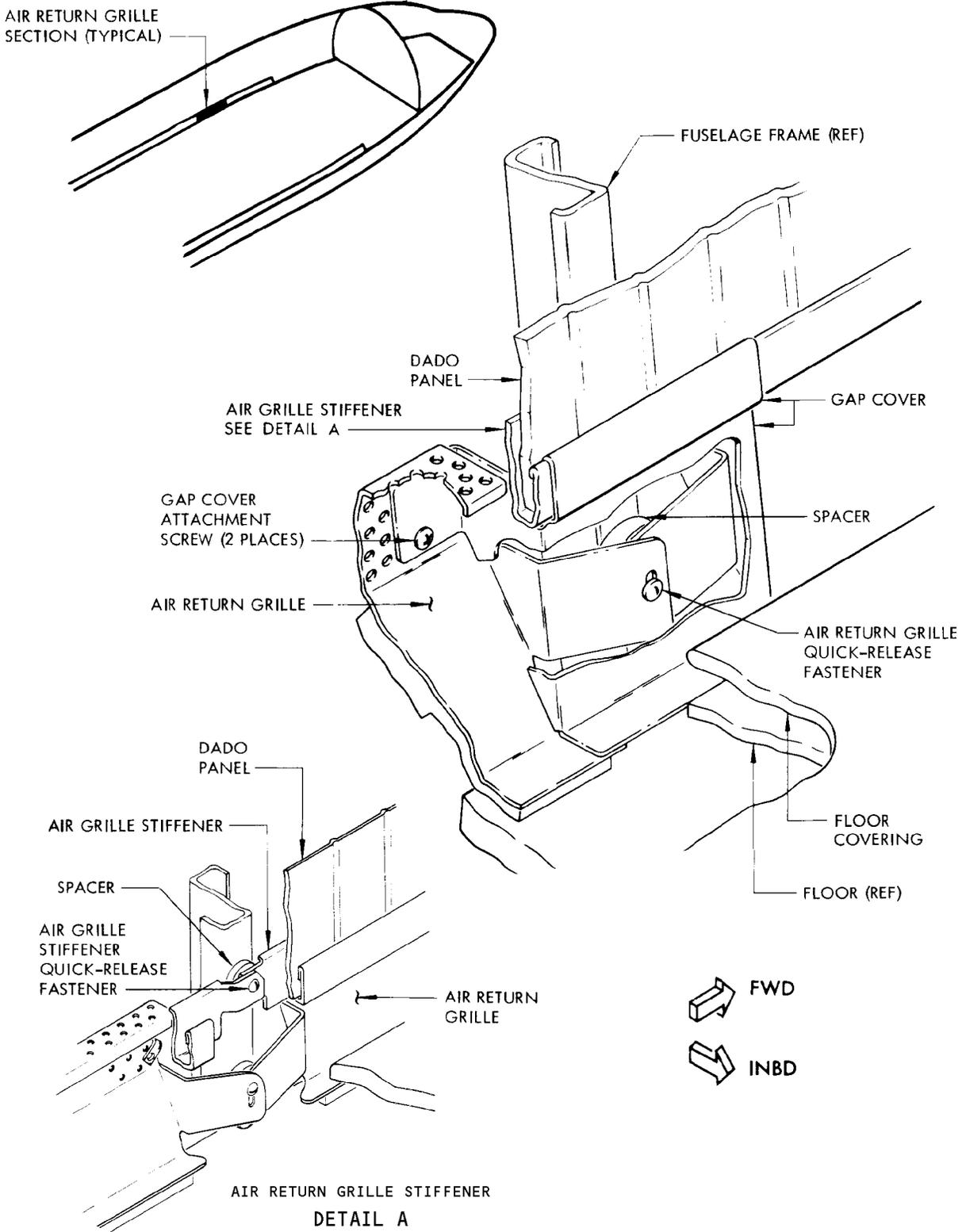
(1) Interior Trim Remover Assembly – F70033 or equivalent, for removing gap covers

B. Remove Air Return Grille Stiffener (Fig. 401.)

- (1) Remove sidewall dado panels in area of stiffener sections to be removed. Refer to 25-21-31, Dado Panels.
- (2) Remove two screws from gap covers at each end of air grille stiffener section.
- (3) Pull out on top of gap covers with special tool so as to clear stiffener while pulling down and inboard on gap covers.
- (4) Disengage quick-release fastener securing each end of air return grille stiffener to sidewall frame.

C. Install Air Return Grille Stiffener (Fig. 401.)

- (1) Set stiffener section in position and install quick-release fastener in each end.
- (2) Install dado panels. Refer to 25-21-31, Dado Panels.
- (3) Place gap covers in position and install two attachment screws to secure each gap cover.



Air Return Grille Installation  
 Figure 401

EFFECTIVITY  
 Airplanes without New Look  
 Interior

25-21-11

455767

WINDOW PANELS - REMOVAL/INSTALLATION

1. General

- PEX A. It may be necessary or desirable to remove passenger seats before  
PEX attempting to dismantle window panels.

2. Equipment and Materials

3. Remove Window Panel (Fig. 401)

- A. Interior Trim Remover Assembly - F70033 or equivalent, for removing snap-on trim.  
B. Remove window panel side trim on both sides of window panel.  
(1) Snap floating trim loose at bottom with special tool.  
(2) Pull inboard on side trim to disengage from retainer and pull down at top.  
C. Remove window panel retainers on both sides of window panel with four quick-release fasteners in each.  
D. Slide panel up to free bottom edge from floating trim; then pull inboard on bottom and remove panel.

4. Install Window Panel (Fig. 401)

- A. Engage upper edge of window panel in cove light lens support and push up so that bottom of panel clears floating trim strip.  
B. Pull panel down so as to fit into floating trim strip.

NOTE: Check that seal on window panel reveal seats smoothly on center windowpane.

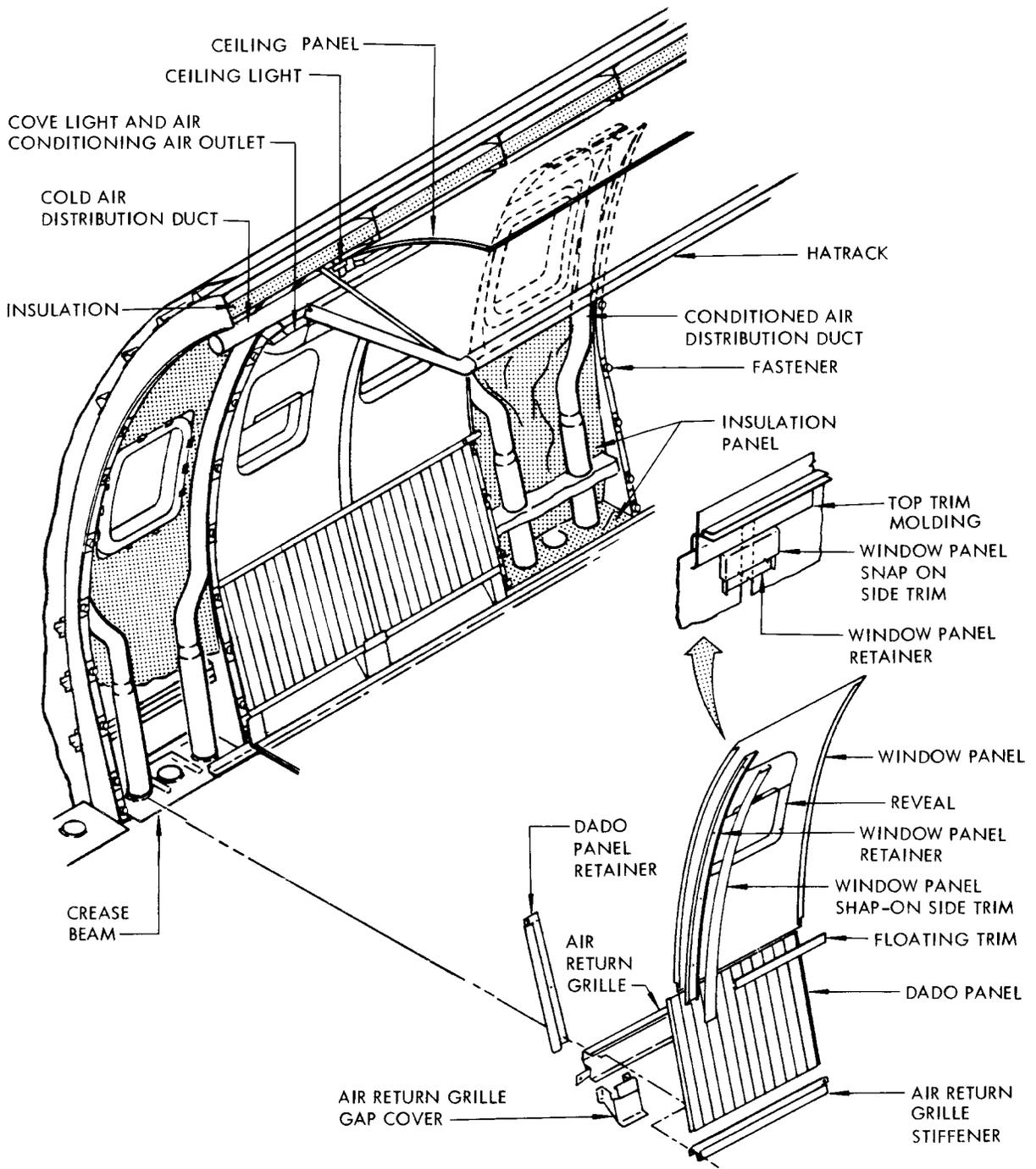
- C. Position window panel retainer and engage four quick-release fasteners per retainer.  
D. Press on window panel snap-on side trim.  
E. Engage snap-on floating trim along panel bottom.

EFFECTIVITY  
Airplanes without New Look Interior

25-21-21

ARG

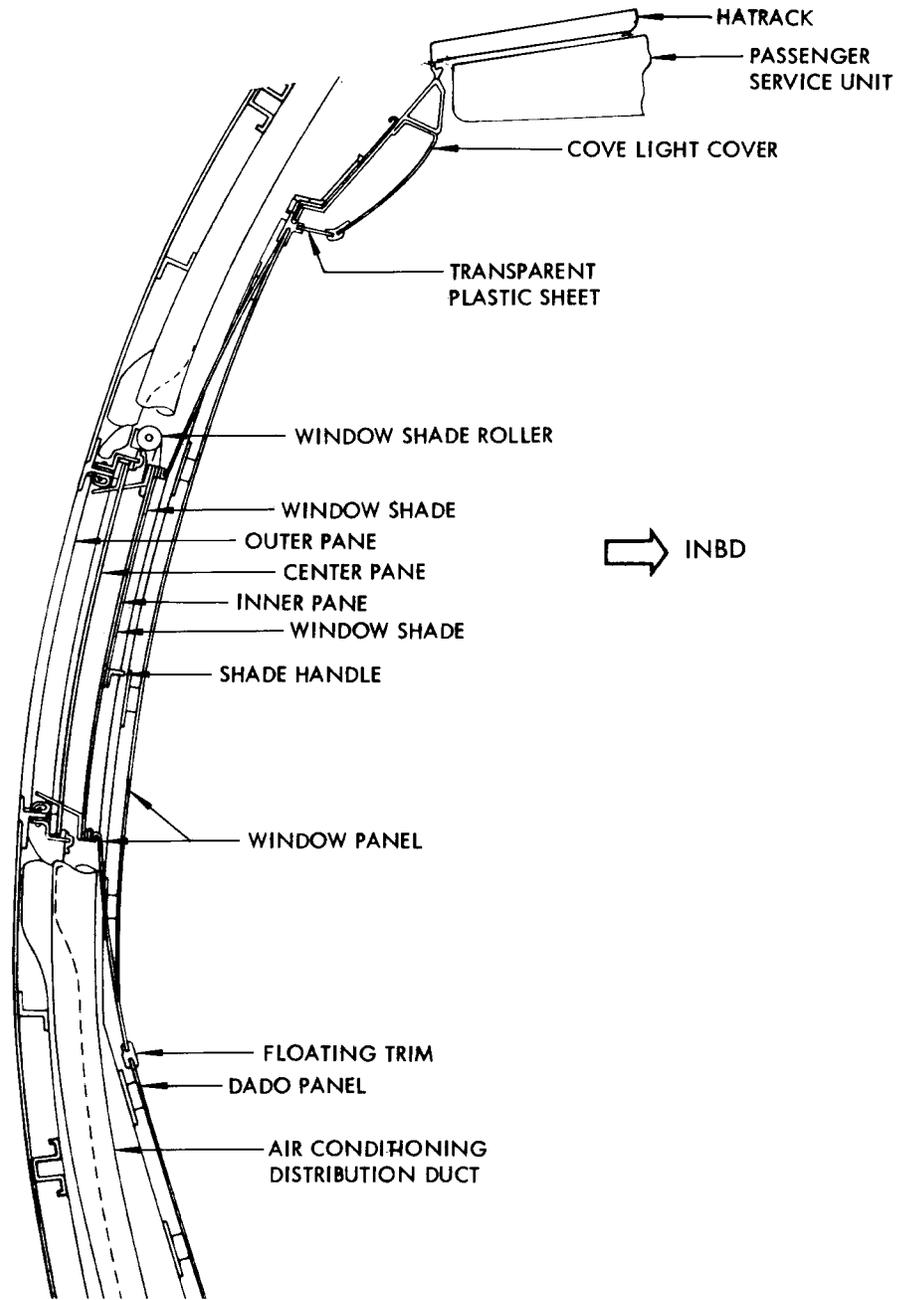
Page 401  
Dec 01/04



Window Panel Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 Airplanes without New Look Interior

**25-21-21**



Window Panel Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 Airplanes without New Look Interior

25-21-21

WINDOW SHADES - REMOVAL/INSTALLATION

1. Remove Window Shade (Fig. 401)
  - A. Remove window panel for access to window shade. Refer to 25-21-21, Window Panels - Removal/Installation.
  - B. Remove window shade handle by pressing in spring studs and sliding to disengage. (See figure 401.)
  - C. Remove one screw and loosen the other on the bracket which has the slotted hole.
  - D. Disengage shade assembly by sliding stiffener out of track in window trim.
2. Install Window Shade (Fig. 401)
  - A. Check that track in window trim is clean (Ref Cleaning/Painting).
  - B. Install spring and shoe in either end of stiffener.
  - C. Engage shoes in track and insert shade in window panel.
  - D. Roll up window shade and insert one end of roller in bracket.
  - E. Prewind roller spring five turns clockwise with shade rolled up and engage other end of roller in slotted bracket.
  - F. Install bracket screws and adjust so that shade movement is parallel to track in window trim.
  - G. Install shade handle.
  - H. Operate shade several times through complete up and down positions. Shade must operate smoothly without sticking or wrinkling shade material. If shade sticks or operates unevenly, remove window shade and check shoes in stiffener for smooth finish on sliding surface.
  - I. Pull shade to down position and tap window panel with fingers. Shade must not creep up.
  - J. Install window panel (Ref 25-21-21, Removal/Installation).

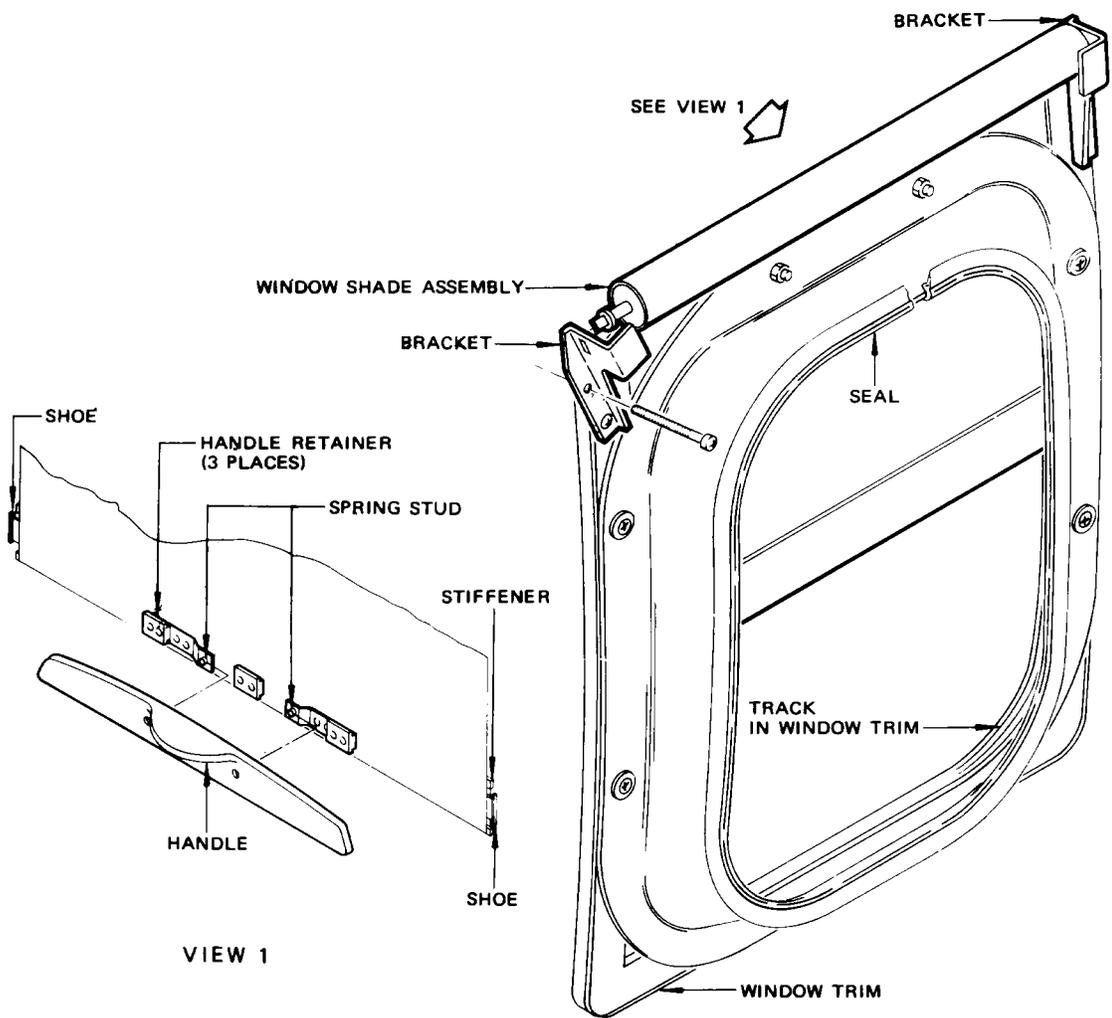
EFFECTIVITY

ALL

25-21-25

01

Page 401  
Dec 01/04



Window Shade Installation  
 Figure 401

EFFECTIVITY  
 Airplanes without New Look  
 Interior

25-21-25

455778

**BOEING**  
**737**   
MAINTENANCE MANUAL

WINDOW SHADES - CLEANING/PAINTING

1. Window Shade Track Cleaning

- A. Fabricate shade track cleaning tool. (See figure 701.)
- B. Slip gauze covered edge of tool in window track and slide up and down until track is clean.

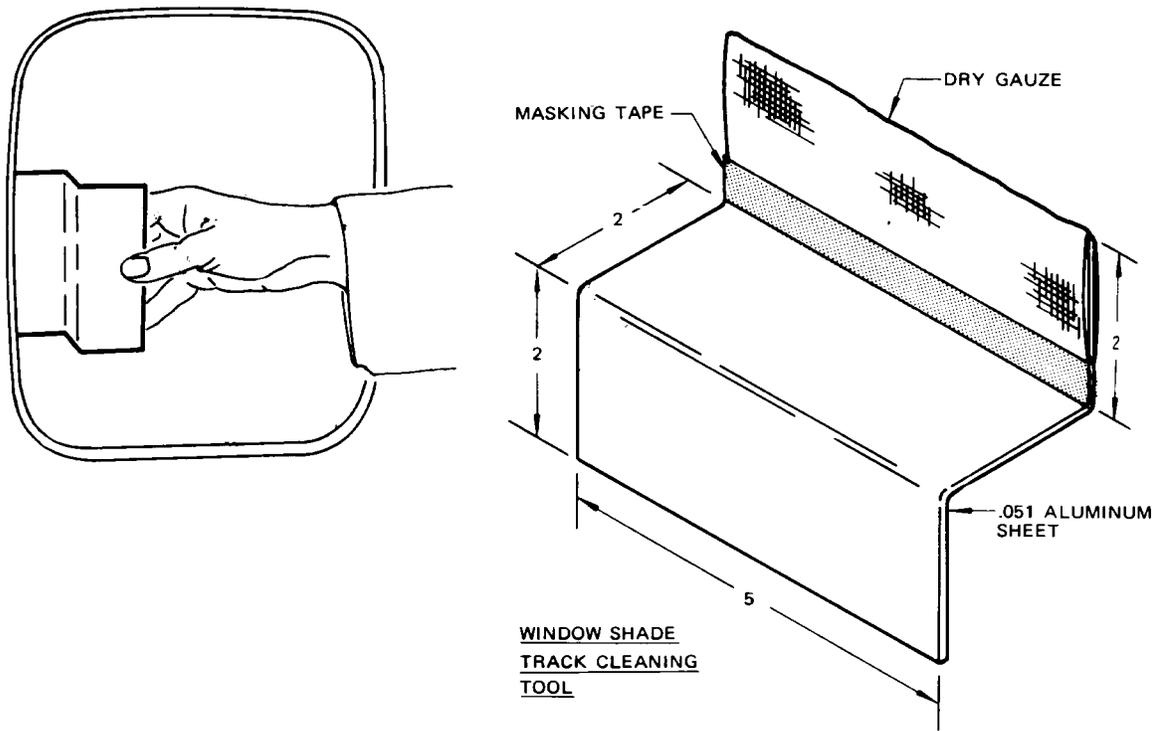
EFFECTIVITY

ALL

25-21-25

01

Page 701  
Dec 01/04



Window Shade Track Cleaning  
 Figure 701

EFFECTIVITY  
 Airplanes without New Look  
 Interior

455782

25-21-25

07

Page 702  
 Dec 01/04



## MAINTENANCE MANUAL

### WINDOW SHADES – APPROVED REPAIRS

#### 1. General

- A. Damaged window shade assemblies may be replaced with new assemblies if desired, however, the shade material may be renewed according to the following procedure.
- B. A fixture should be constructed to assure proper alignment of shade material on roller and stiffener.

#### 2. Equipment and Materials

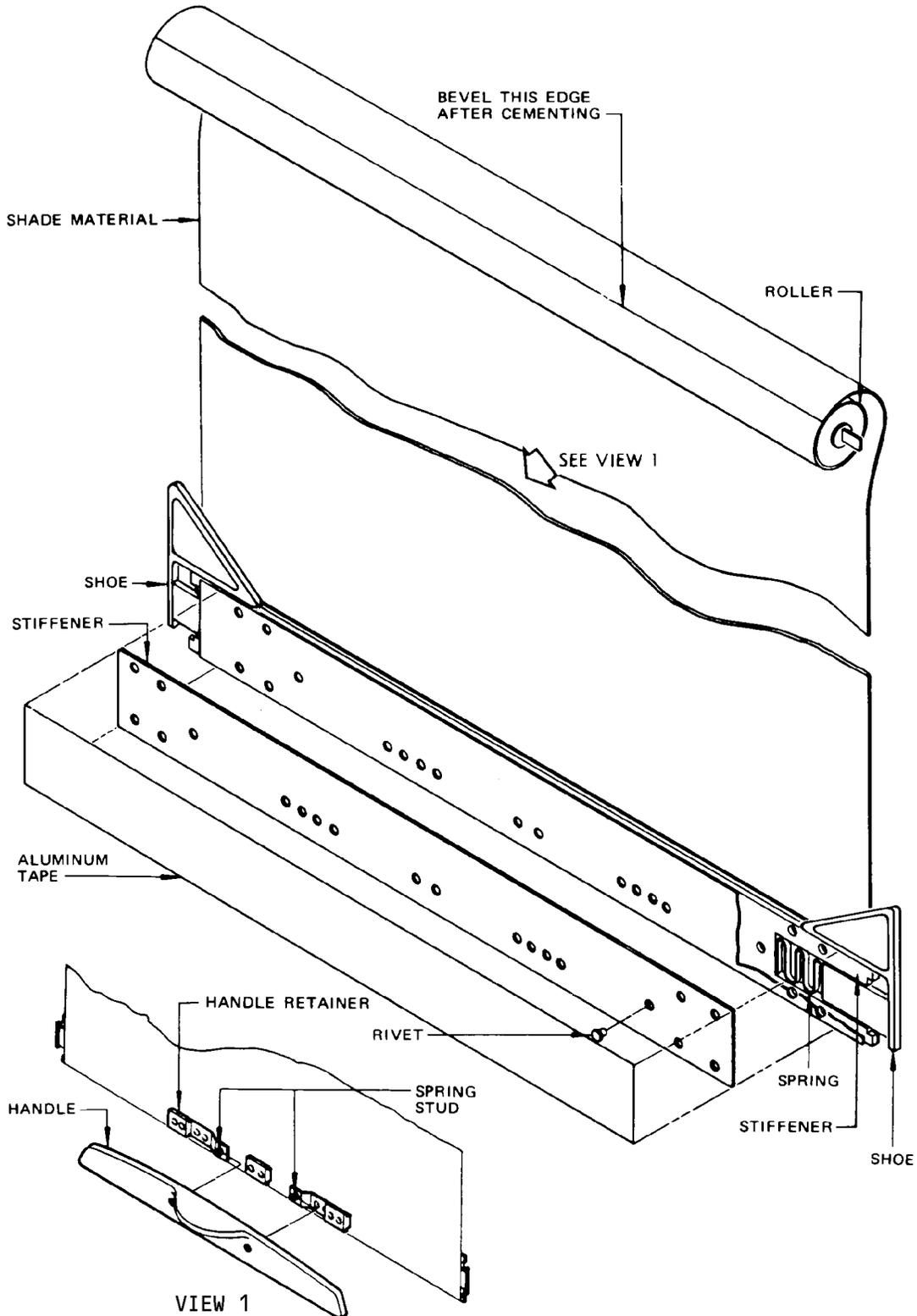
- A. Repair Materials (Preferred) (Ref 20-30-51)
  - (1) Window Shade Material – Mylar, aluminum foil, vinyl laminate 0.014 inch thick; John Schneller and Associates
  - (2) Aluminum Pressure Sensitive Tape – No. 425
- B. Repair Materials (Optional) (Ref 20-30-51)
  - (1) Adhesive – Pro-Seal 501
  - (2) Window Shade Material – Mylar, aluminum foil, vinyl laminate 0.007-0.009 inch thick; Seiberling Rubber Co.
  - (3) Aluminum Pressure Sensitive Tape – No. 3659
  - (4) Adhesive – Pro-Seal 501

#### 3. Repair Window Shade

- A. Replace damaged shade material (Fig. 801).
  - (1) Remove window shade assembly.
  - (2) Remove shade from roller and clean roller.
  - (3) Remove aluminum tape on stiffener.
  - (4) Carefully drill out rivets in stiffener.
  - (5) Cut shade material to proper size.
  - (6) Rivet shade material to stiffener with Mylar (silver) side down.
  - (7) Rivet handle retainers and spring studs in place.
  - (8) Cement Mylar (silver) side of shade to roller. (Apply cement to a 90-degree arc of roller.) When cement has dried bevel edge of shade by sanding to fair with roller surface.
  - (9) Install aluminum tape on stiffener.
  - (10) Install window shade assembly.

EFFECTIVITY  
Airplanes without New Look Interior

25-21-25



Window Shade Assembly Repair  
 Figure 801

EFFECTIVITY  
 Airplanes without New Look Interior

25-21-25

455784

DADO PANELS - REMOVAL/INSTALLATION

1. General

- A. It may be necessary or desirable to remove passenger seats before attempting to dismantle dado panels.
- B. In order to remove the dado panels window panels must be removed. Refer to 25-21-21, Window Panels.

2. Equipment and Materials

3. Remove Dado Panel (Fig. 401)

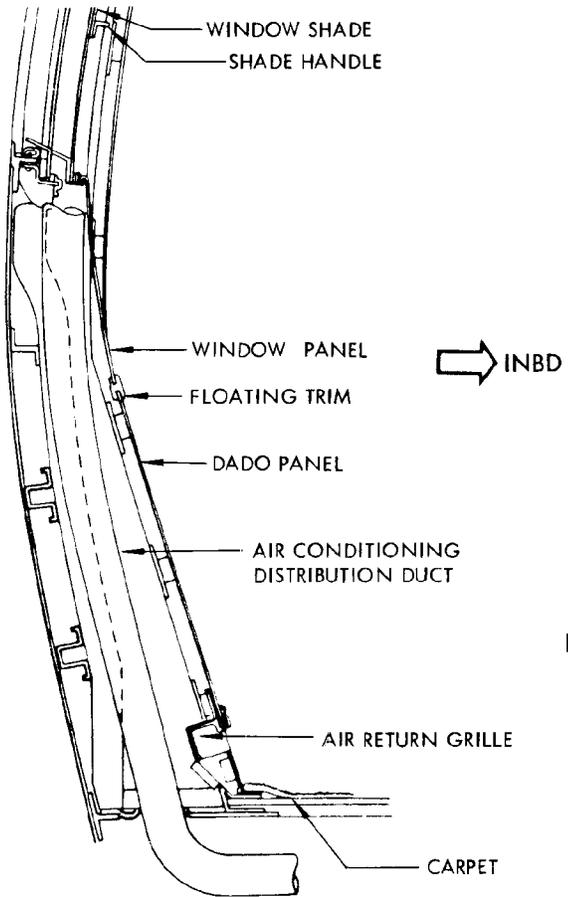
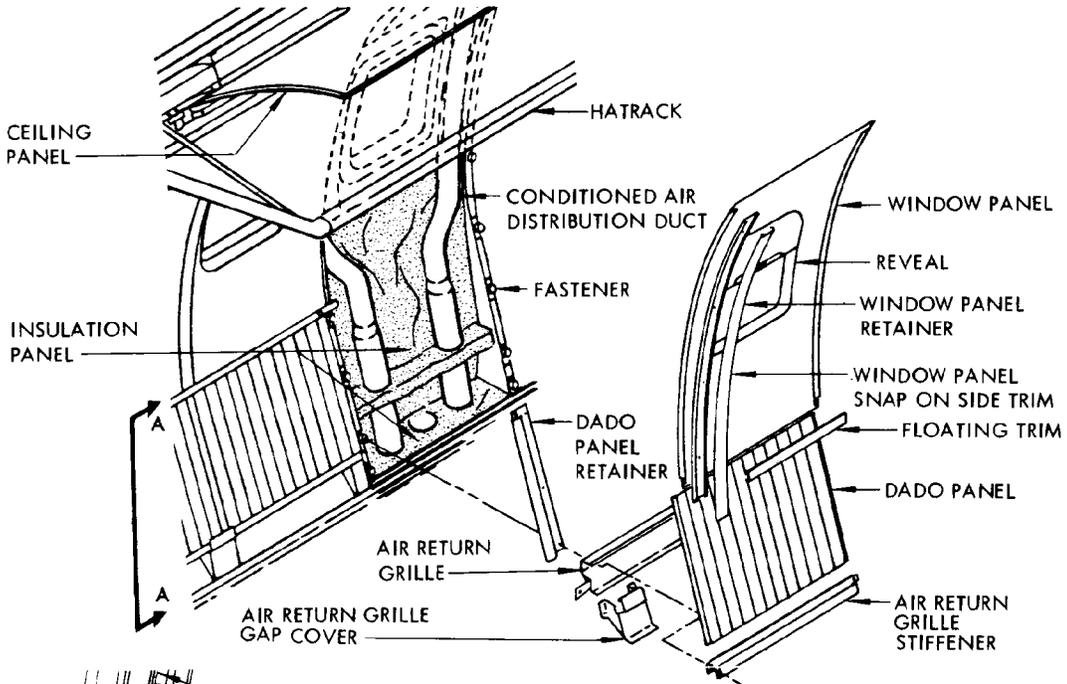
- A. Interior Trim Remover Assembly - F70033 or equivalent, for removing snap-on trim
- B. Remove required number of consecutive window panels over one floating trim strip. Refer to 25-21-21, Sidewall Window Panels.
- C. Remove floating trim strip by sliding off dado panel.
- D. Remove dado panel by sliding upward to disengage lower edge from groove in air return grille stiffener, and flexing with care to disengage edges from dado panel retainers.

4. Install Dado Panel (Fig. 401)

- A. Disengage three dado panel retainer quick-release fasteners per retainer and remove retainer and air return grille stiffener.
- B. Position dado panel retainer and two adjacent air return grille stiffeners simultaneously and engage three retainer quick-release fasteners per retainer.

NOTE: The lower retainer fastener is common to both air return grille stiffeners and the dado panel retainer.

- C. Install dado panel by flexing carefully and sliding edges into grooves in dado panel retainers.
- D. Work dado panel downward into groove in air return grille stiffener.
- E. When dado panels are in position, install dado panel floating trim by sliding on to top edge of dado panels.
- F. Install window panels removed for access to dado panels. Refer to 25-21-21, Sidewall Window Panels.



DADO PANEL SIDE VIEW  
 SECTION A-A

Dado Panel Installation  
 Figure 401

EFFECTIVITY  
 Airplanes without New Look Interior

**25-21-31**

DOORWAY SIDEWALL LININGS – REMOVAL/INSTALLATION

1. General

A. These procedures apply to the sidewall lining attached to the structure around the forward and aft entry doors and galley doors. It may be necessary or desirable to remove passenger seats before attempting to dismantle the sidewall lining.

2. Removal/Installation Aft Entry Door and Aft Service Door Sidewall Lining (Fig. 401 and 402).

A. Remove Aft Entry Door and Aft Service Door Sidewall Lining

- (1) Remove rubber seal installed around door opening.
- (2) Remove seal retainer if applicable.
- (3) Remove lining aft of door by sliding forward.
- (4) Remove lining around upper part of door opening by sliding it down and inboard.
- (5) Remove assist handle forward of entry door if installed.
- (6) Remove quarter-turn fasteners attaching gap-cover to structure forward of door.
- (7) Remove lining forward of door by sliding aft and inboard.

B. Install Aft Entry Door and Aft Service Door Sidewall Lining

- (1) Install sidewall linings by sliding lining edges into slot in trim angle.
- (2) Install seal retainer if applicable.
- (3) Install rubber seal around door opening.
- (4) Install assist handle forward of entry door if applicable.
- (5) Install quarter-turn fasteners attaching gap-cover to structure forward of door.

3. Removal/Installation Forward Entry Door Sidewall Lining (Fig. 403)

A. Remove Forward Entry Door Sidewall Lining

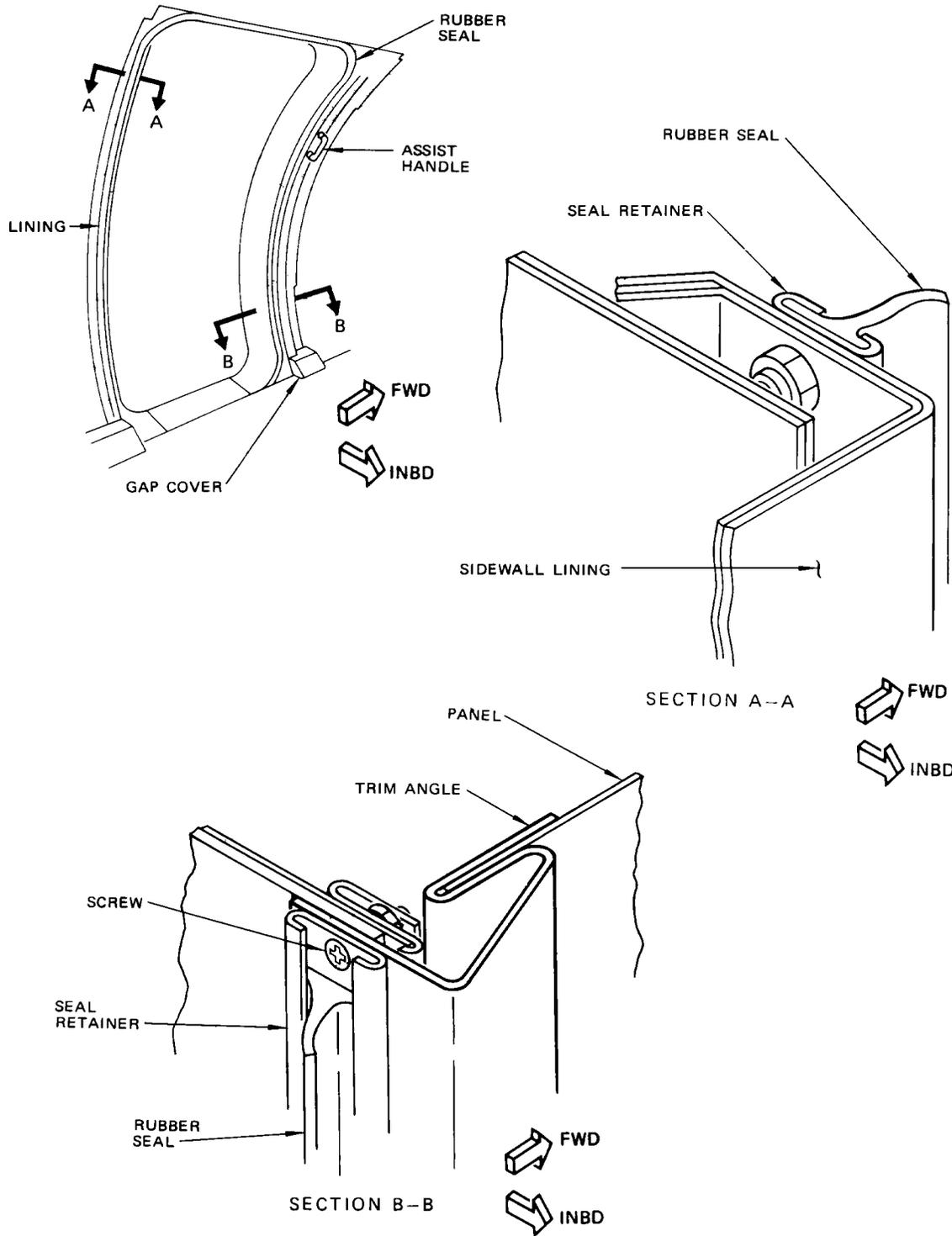
- (1) Remove windscreen.
- (2) On airplanes with forward airstairs remove handrail support cover.
- (3) Remove assist handle aft of entry door.
- (4) Remove hinge cover panels.
- (5) Remove rubber seal from retainer around door opening.
- (6) Remove screws that attach trim angle and remove forward and aft side trim angles.
- (7) Remove forward and aft kickplates.
- (8) Remove quarter-turn fasteners attaching panels forward of door to sidewall structure.
- (9) Remove panels forward of door by sliding aft.
- (10) Remove panel aft of door by pulling forward and inboard to clear windscreen attachment brackets and sliding forward.

B. Install Forward Entry Door Sidewall Lining

- (1) Install panel aft of door by sliding aft under trim strip.

EFFECTIVITY  
Airplanes without New Look  
Interior

25-21-41

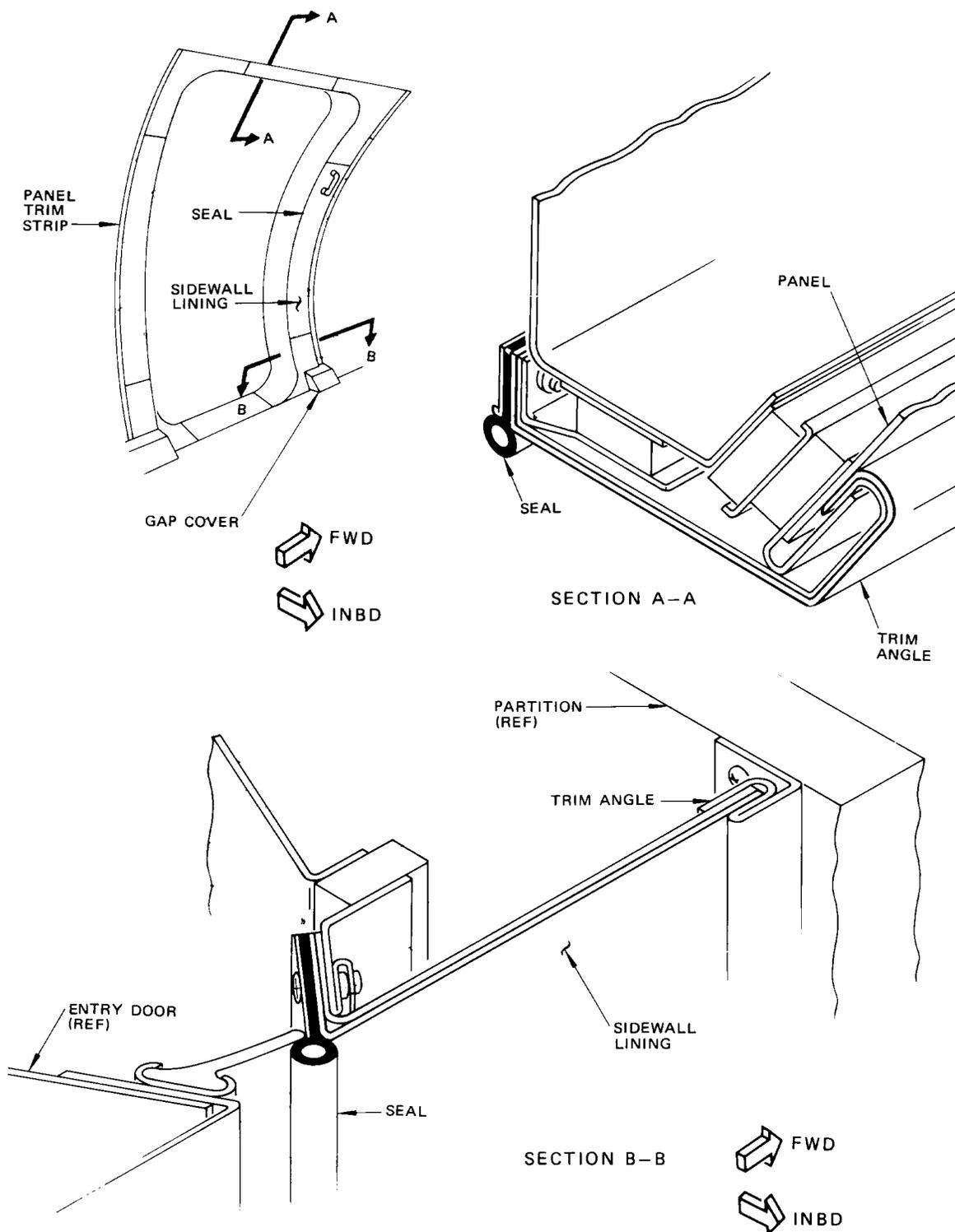


Aft Entry Door Sidewall Lining Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 AIRPLANES WITHOUT AFT  
 AIRSTAIRS

455794

**25-21-41**



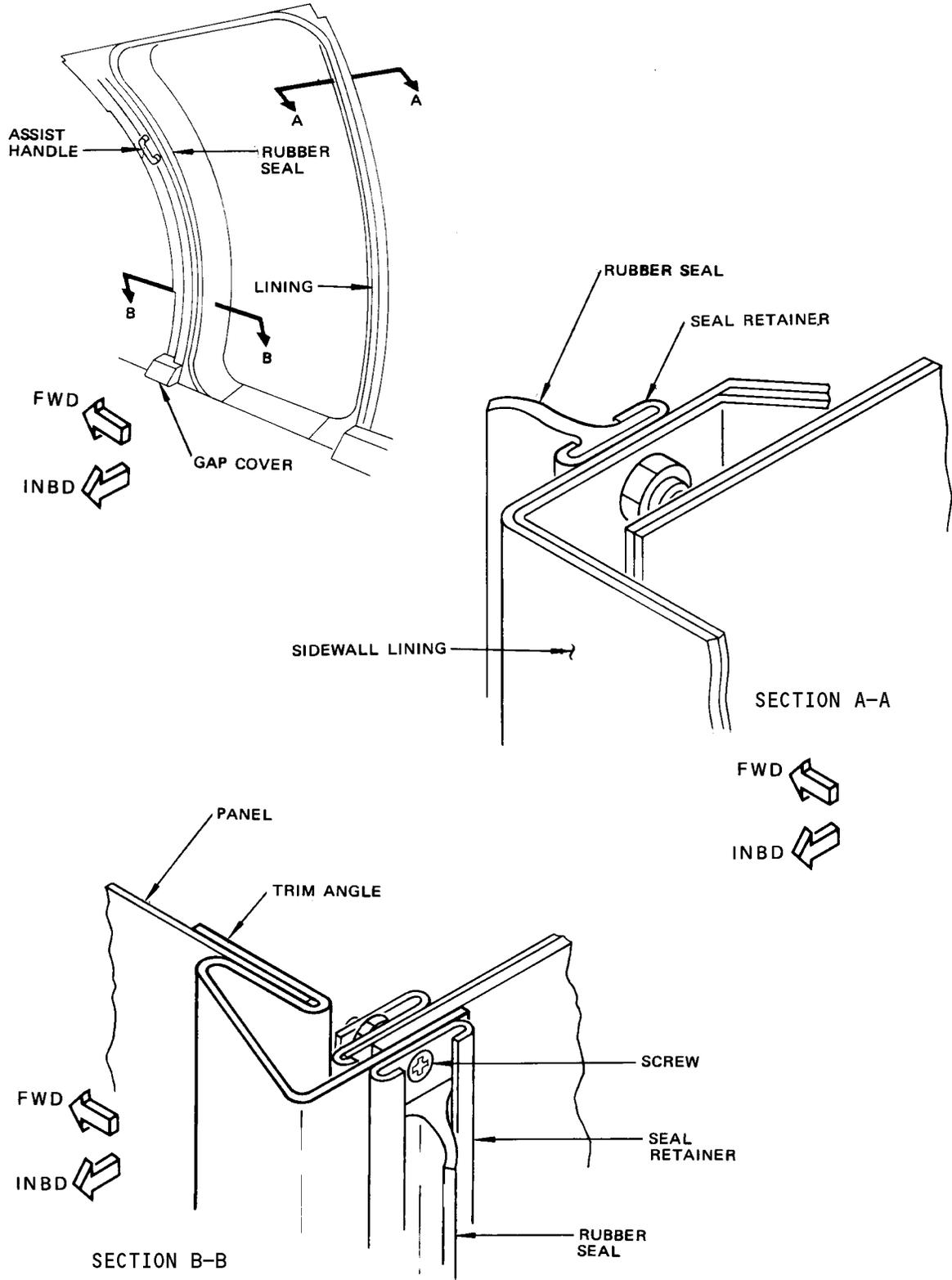
Aft Entry Door Sidewall Lining Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 AIRPLANES WITH AFT  
 AIRSTAIRS

25-21-41

07

Page 403  
 Dec 01/04



Aft Service Door Sidewall Lining Installation  
 Figure 402

EFFECTIVITY  
 Airplanes without New Look  
 Interior

25-21-41

455798

- (2) Install panels forward of door by sliding aft into slot on trim strip and secure with quarter-turn fasteners.
- (3) Install trim angles and seal retainer.
- (4) Install rubber seal.
- (5) Install kickplates.
- (6) Install assist handle.
- (7) Install hinge cover panels.
- (8) On airplanes with forward airstairs install handrail support cover.
- (9) Install windscreen.

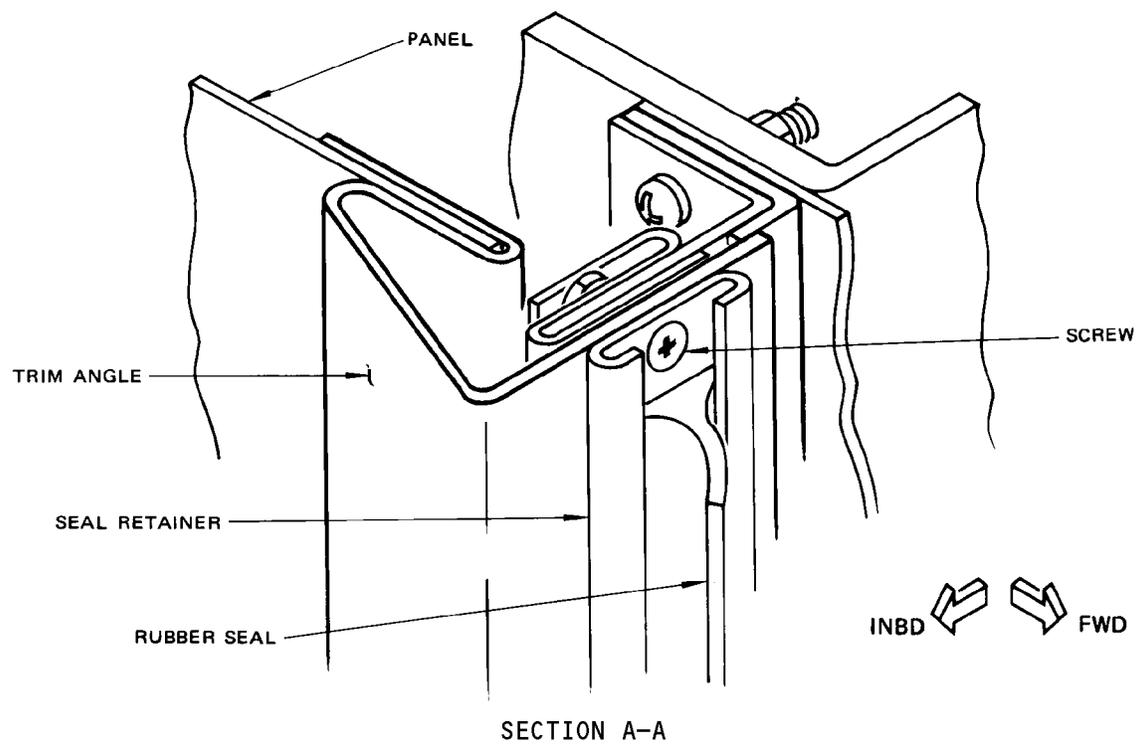
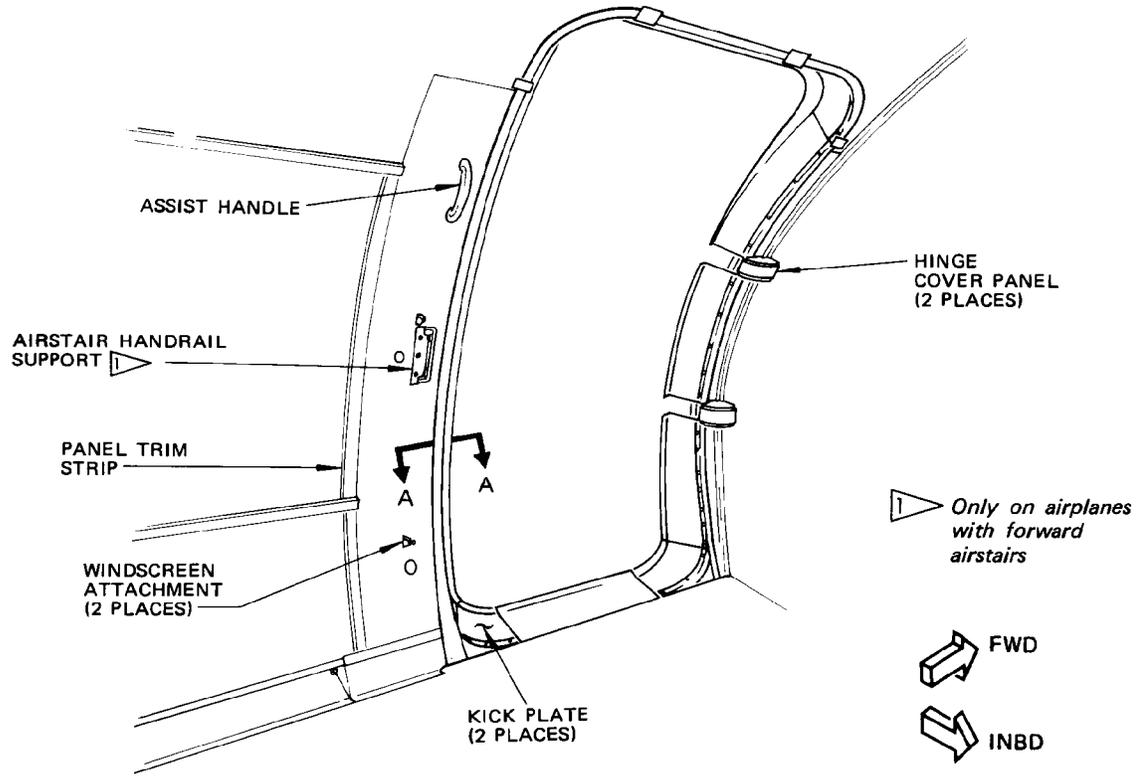
4. Removal/Installation Forward Galley Door Sidewall Lining (Fig. 404)

A. Remove Forward Galley Door Sidewall Lining

- (1) If installed, remove assist handle forward of galley door.
- (2) Remove rubber seal from retainer around door opening.
- (3) Remove screws that attach trim angle and remove trim angles with seal retainer.
- (4) Remove quarter-turn fasteners attaching panel on forward side of door to sidewall structure.
- (5) Remove forward and aft kick plates.
- (6) Remove panel on forward side of door by sliding aft.
- (7) Remove panel aft of door by sliding forward.

B. Install Forward Galley Door Sidewall Lining

- (1) Install panel aft of door by sliding aft under trim strips.
- (2) Install panel on forward side of door by sliding into slot on trim strip.
- (3) Install trim angle to secure panels.
- (4) Install rubber seal in seal retainer.
- (5) Install kick plates.
- (6) Install assist handle forward of door, if applicable.

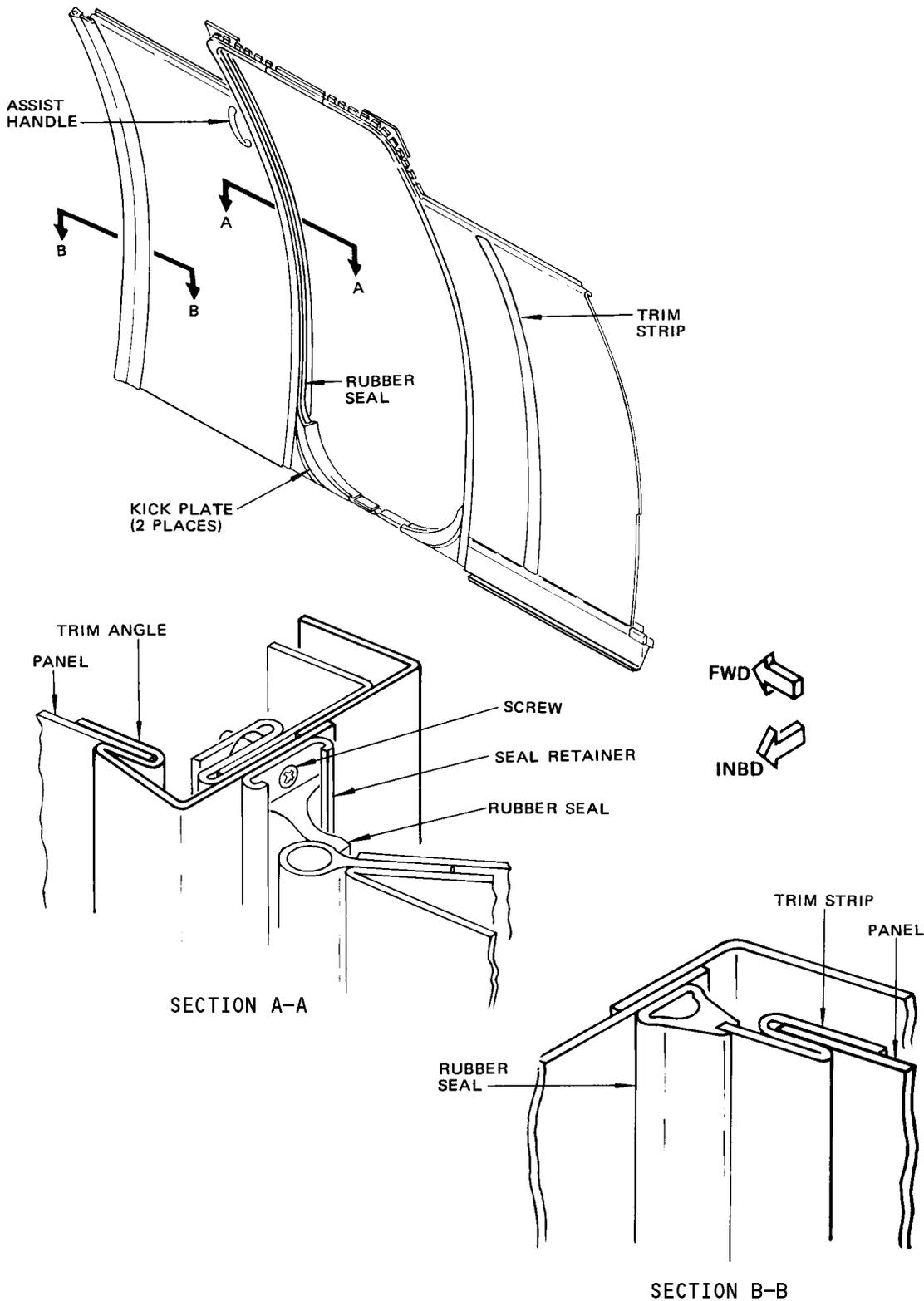


Forward Entry Door Sidewall Lining Installation  
 Figure 403

EFFECTIVITY  
 Airplanes without New Look  
 Interior

**25-21-41**

455801



Forward Galley Door Sidewall Lining Installation  
 Figure 404

EFFECTIVITY  
 Airplanes without New Look  
 Interior

25-21-41

SIDEWALL INSULATION - REMOVAL/INSTALLATION

1. General

A. Removal and installation of all or any part of the sidewall insulation may be accomplished. However, due to the variety of installation methods and the lack of a typical example, the instructions which follow are of a general nature.

2. Equipment and Materials

- A. Tape - double-faced, Permacel, Type No. 50, 1.00 inch wide
- B. Tape - single-faced, No. 474, 2.00 inches wide, Minnesota Mining and Manufacturing Co.

3. Remove Sidewall Insulation

A. Remove one or more components of sidewall lining as may be required in order to gain access to any particular section of sidewall insulation. Refer to 25-21-21, Window Panels, and 25-21-31, Dado Panels, as required.

**NOTE:** It will not be necessary to remove the air distribution ducts for access to insulation panels; when the flexible ducts are pulled slightly inboard the insulation panels may be released from behind the ducts. It may be necessary to remove certain equipment that is installed by attachments that extend through the insulation panels.

- B. Remove joint tape and retainers as required. Tape and retainers securing insulation around stringers and air ducts should be removed first.
- C. When all obstructions have been removed, remove insulation panels. (In some places it may be necessary to peel the panel free of the velcro tape which is used to retain it against airplane structure.)

**NOTE:** Mark insulation components as they are removed so that they may be located properly when reinstalled.

4. Install Sidewall Insulation

- A. Position insulation panels in proper location on sidewall outboard of air distribution ducts.
  - (1) When installing insulation panels around windows, the blanket should contact the window reveal around the entire window periphery, with no gaps, to form an air seal.
  - (2) When installing the insulation panels that are held in place with velcro tape it is necessary to align the tape on the panel with the tape that is bonded to airplane structure and then press panel down to make tape contact.
- B. Install retainers where applicable.
- C. Apply tape to close butt joints, overlapping joints, gaps between adjacent molded insulation panels, and between insulation panels and the airplane structure.



## MAINTENANCE MANUAL

- D. Check to ensure that all insulation components are in proper places so as not to interfere with sidewall lining or other equipment installed on the sidewall.
- E. Install equipment and sidewall lining that was removed to facilitate removing sidewall insulation. Refer to 25-21-21, Window Panels, and 25-21-31, Dado Panels as required.

EFFECTIVITY  
Airplanes without New Look  
Interior

25-21-51

04

Page 402  
Dec 01/04

SIDEWALL INSULATION – APPROVED REPAIRS

1. General

- A. Extensively damaged insulation blankets must be replaced with locally fabricated new ones using damaged blankets as patterns.
- B. The following information is applicable to the repair of sidewall and ceiling insulation blankets located in the passenger compartment.

2. Replacement of Extensively Damaged Insulation Blanket

A. Equipment and Materials

- (1) Thermal – acoustical fiberglass insulation – BMS 8-48 Type III, Class III (used in passenger cabin area)
- (2) Insulation covering, self extinguishing – BMS 8-142, Type XI, Class I Inbd, Class III Outbd (this material is used as the inboard and outboard covering for insulation blankets installed throughout the passenger cabin) (AMM 20-30-51/201)
- (3) Fabric, lead coated – BMS 8-47, Types I, III, and IV (this material is used inside blankets between layers of fiberglass in some areas of the passenger cabin)
- (4) 4 cord cotton thread – Federal Specification V-T-276, Type 1B3, Ticket No. 16 and 24
- (5) Cement – Low Odor Synthetic Rubber BMS 5-30

B. Remove Damaged Insulation Blanket

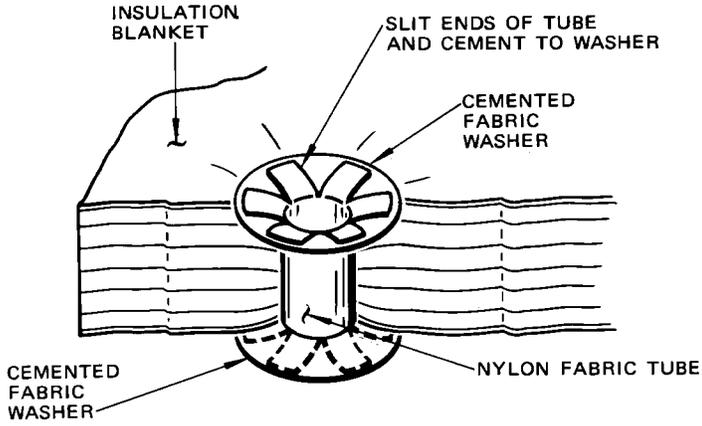
- (1) For removal of sidewall insulation blanket, refer to AMM 25-21-51/401.
- (2) For removal of ceiling insulation blanket, refer to AMM 25-21-71/401, Ceiling Insulation.

C. Prepare New Insulation Blanket

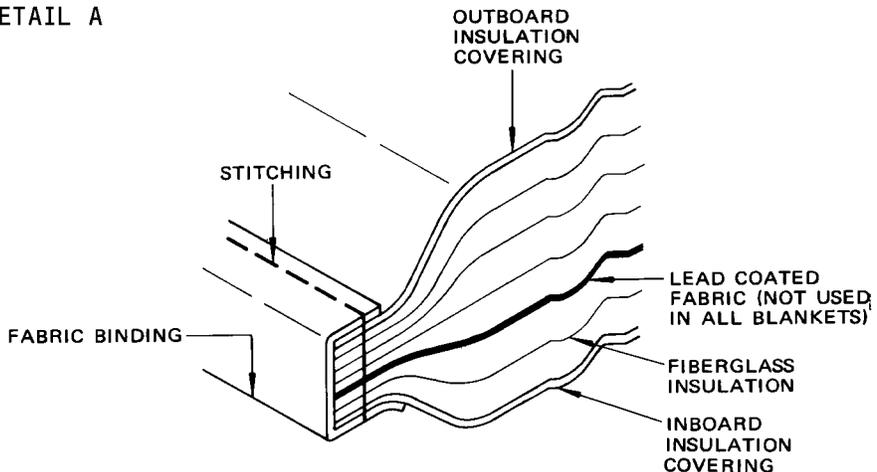
- (1) Make paper template using damaged blanket as pattern.
- (2) Cut thermal-acoustical fiberglass insulation to same shape as template.

NOTE: Use same quantity and thickness of layers as used in damaged blanket.

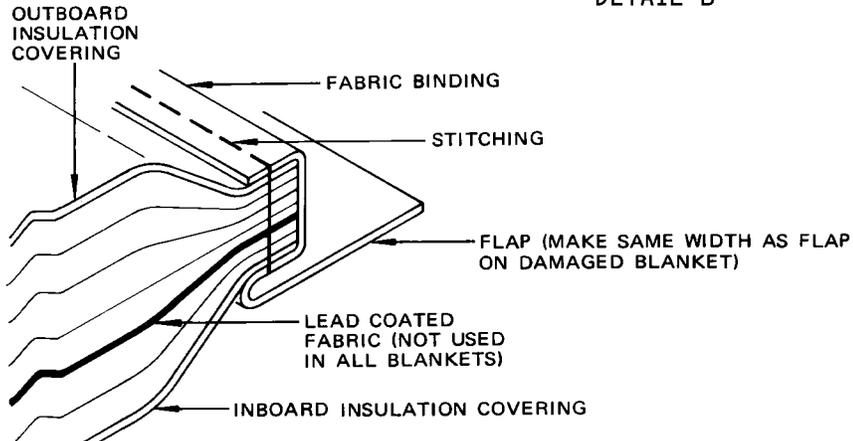
- (3) Place fiberglass insulation layers between the inboard and outboard fabric covering. When using a fabric covering which has different surfaces, position the covering to have the same surface toward fiberglass as in the damaged blanket.



GROMMET INSTALLATION ON INSULATION BLANKETS  
 DETAIL A



EDGE BINDING WITHOUT FLAP  
 DETAIL B



EDGE BINDING WITH FLAP  
 DETAIL C

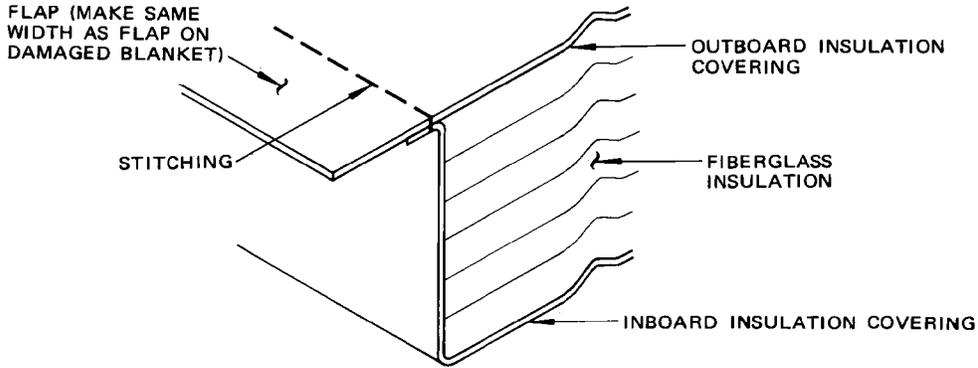
Insulation Blankets Details  
 Figure 801 (Sheet 1)

EFFECTIVITY  
 Airplanes without New Look Interior

25-21-51

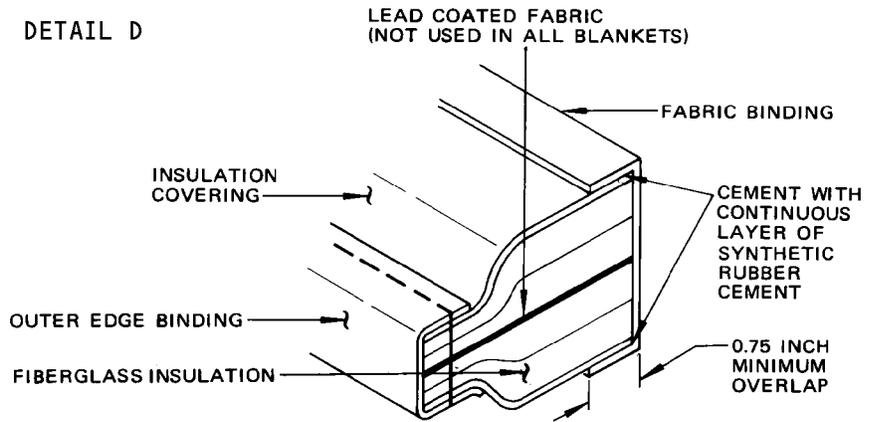
455808

**MAINTENANCE MANUAL**



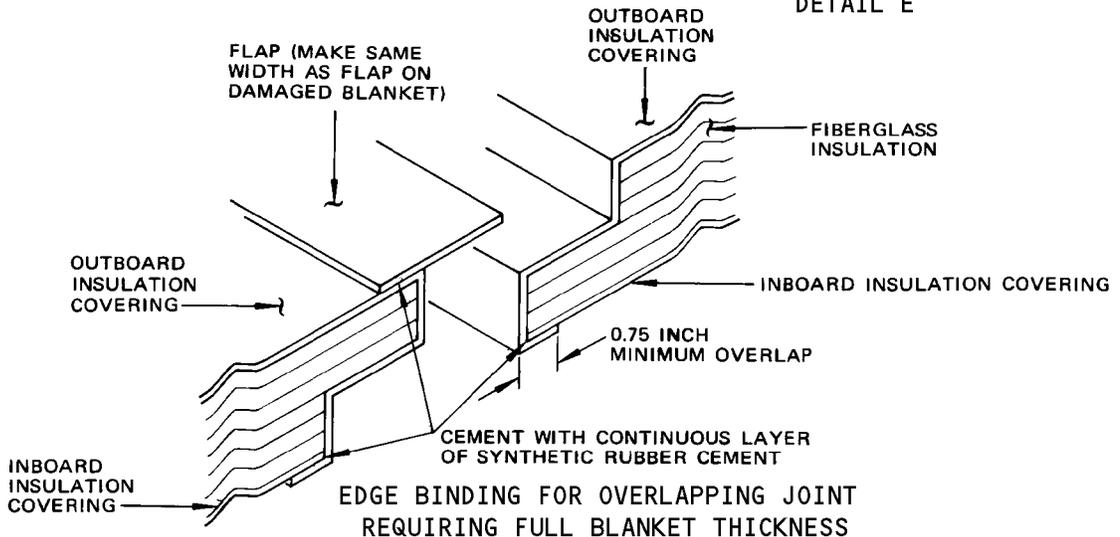
EDGE BINDING FOR FULL BLANKET THICKNESS ALONG EDGE

DETAIL D



CEMENTED BINDING FOR EDGE OF CUTOUTS IN BLANKETS

DETAIL E



DETAIL F

Insulation Blankets Details  
Figure 801 (Sheet 2)

EFFECTIVITY  
Airplanes without New Look Interior

25-21-51



## MAINTENANCE MANUAL

- (4) If damaged blanket contained lead coated fabric, insert a sheet of this material between insulation layers same as damaged blanket.

**NOTE:** The lead coated fabric must be equipped with 0.25 inch diameter air vent holes. Insulation blankets less than 12 inches wide require one vent hole through the lead coated fabric for each 10 inch length. Blankets more than 12 inches wide require two vent holes for each 10 inch length.

- (5) Trim fabric covering and lead coated fabric, if installed.
- (6) The edges of the blanket may be stapled as required to facilitate stitching and handling of blanket. The staples must be located between the stitching and the outer edge of the blanket and must not be visible on the completed blanket.
- (7) Bind all edges and cutouts of the blanket with fabric strips. On edges where flaps are required, make flaps the same width as on damaged blanket.
  - (a) On edges where full thickness of blanket is maintained, cement nylon binding with synthetic rubber cement.
  - (b) On edges where binding is to be sewn, use 4-cord cotton thread and space stitches four to the inch minimum and six to the inch maximum (minimum spacing is recommended).
  - (c) Install nylon fabric grommets through holes in blanket and bond to blanket with synthetic rubber cement.
- (8) On passenger cabin ceiling blankets, seal stitching on outboard side of blanket with a continuous bead of synthetic rubber cement.

**NOTE:** To facilitate sealing, cement may be thinned with methyl ethyl ketone.

### D. Install New Insulation Blanket

- (1) For installation of sidewall insulation blanket, refer to the applicable page block.
- (2) For installation of ceiling insulation blanket, refer to 25-21-71, Ceiling Insulation.

CEILING LINING - REMOVAL/INSTALLATION

PEX 1. Remove Ceiling Lining (Fig. 401)

- A. Push lining up and outboard at outboard end of panel to break Velcro tape seal.

**NOTE:** On later airplanes it will be necessary to gain access to outboard attachment of ceiling panels by reaching over closure panel to retract each closure panel latch and lower panel. This facilitates removal of spring clips (three on each panel) holding ceiling panel in place.

- B. Slide lining panel outboard to remove inboard edge from slot in air conditioning outlet nozzle.  
C. Remove forward and aft panels from lowered ceiling attachment brackets.  
D. Remove lining panel by lifting outboard edge from behind ceiling light.

2. Install Ceiling Lining (Fig. 401)

- A. Position ceiling lining outboard of closure panel and ceiling light, making sure spring clips are properly installed (later airplanes only).  
B. Insert forward and aft panels into lowered ceiling attachment brackets.  
C. Place inboard end of panel with silicone rubber bumper strips in recess along air conditioning outlet nozzle. (Bumper should be completely hidden by air condition nozzle.)  
D. Release lining panel.

**NOTE:** The spacers will exert pressure against lining panel to seal Velcro tape.

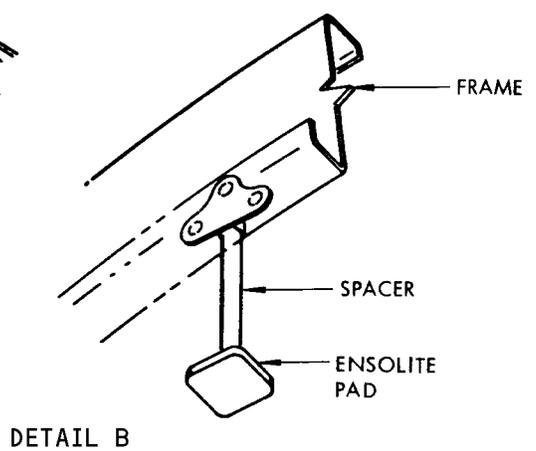
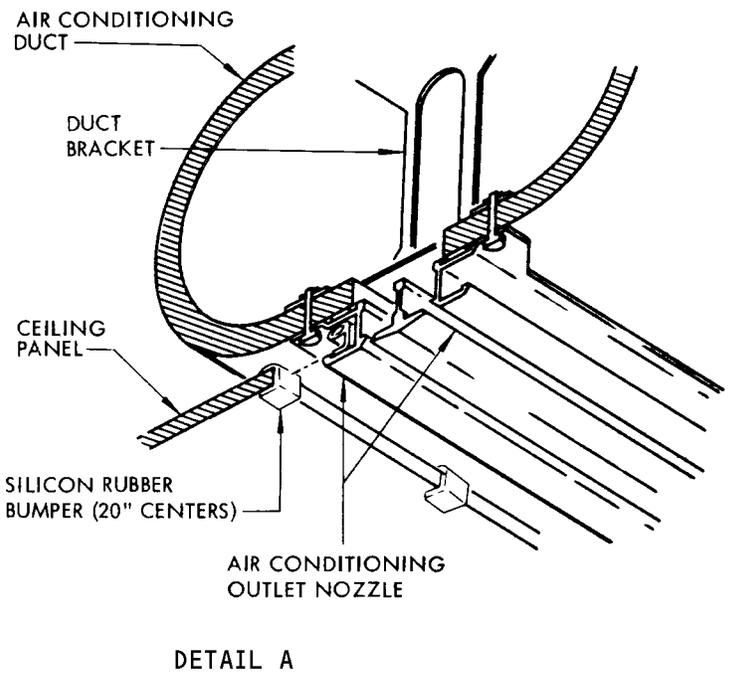
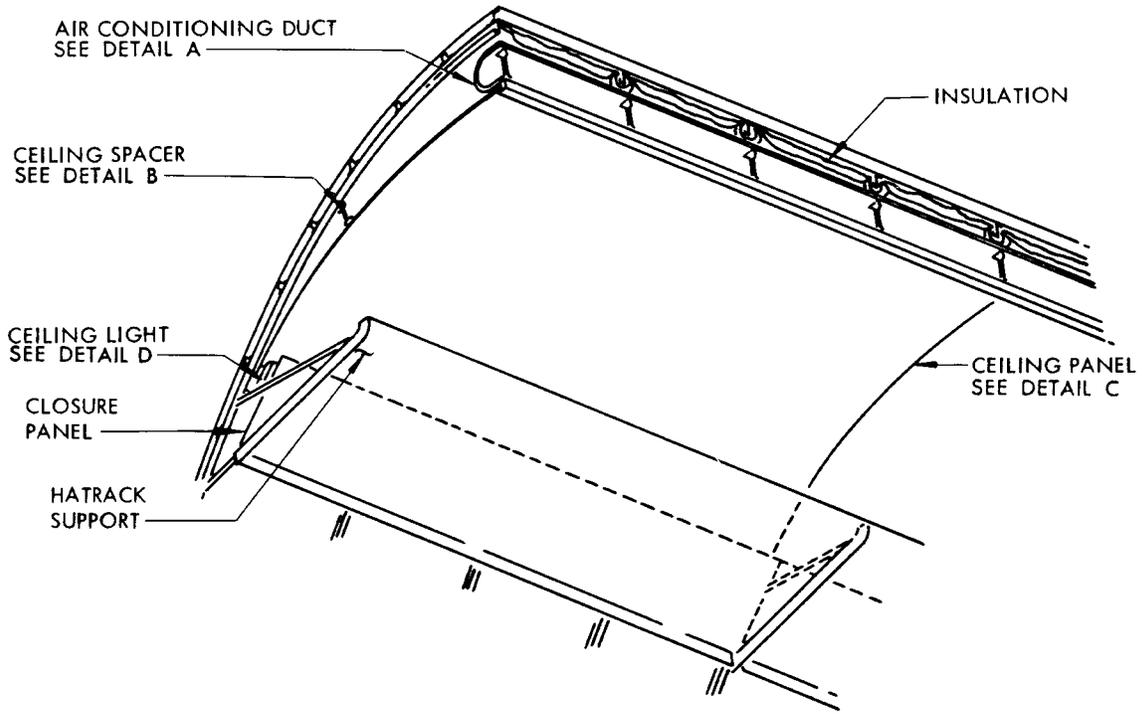
- E. Slip joint flap above forward and aft edges of adjacent panels by running finger along full length of joint.

EFFECTIVITY  
Airplanes without New Look Interior

25-21-61

ARG

Page 401  
Dec 01/04

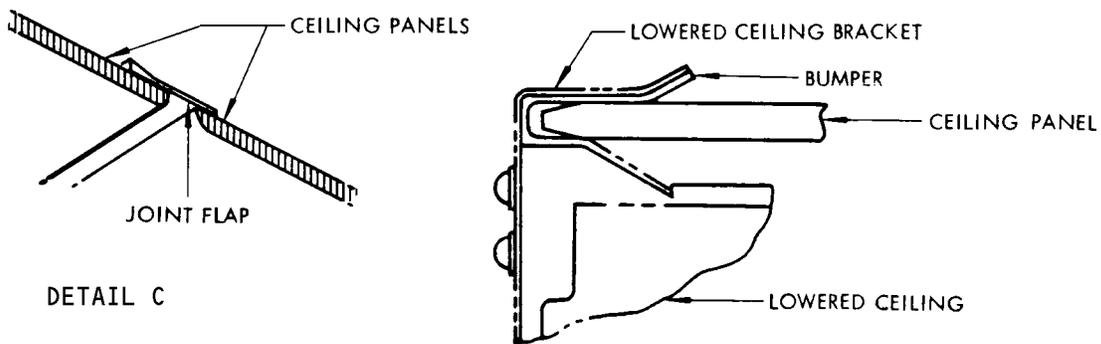
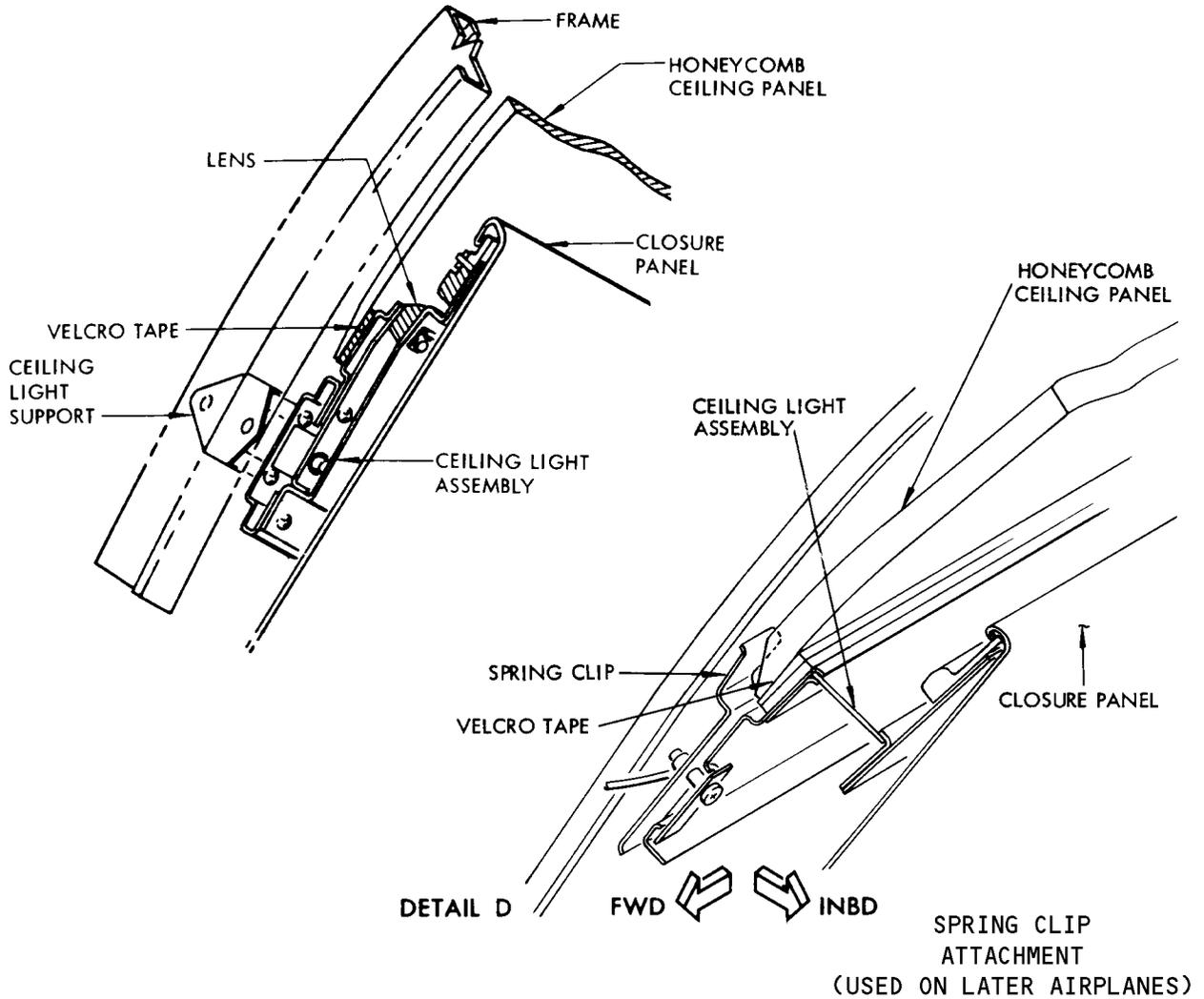


Ceiling Lining Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 Airplanes without New Look Interior

25-21-61

455811



PANEL ATTACHMENT TO LOWERED CEILING  
(FORWARD AND AFT ENDS OF CABIN)

Ceiling Lining Installation  
Figure 401 (Sheet 2)

EFFECTIVITY  
Airplanes without New Look Interior

25-21-61

CEILING INSULATION - REMOVAL/INSTALLATION

1. General

A. Removal and installation of all or any part of the ceiling insulation may be accomplished. However, due to the variety of installation methods and the lack of a typical example, the instructions which follow are of a general nature.

2. Equipment and Materials

- A. Tape - double-faced, Permacel, Type No. 50, 1.00 inch wide
- B. Tape - single-faced, No. 474, 2.00 inches wide, Minnesota Mining and Manufacturing Co.

3. Remove Ceiling Insulation

- A. Remove one or more components of ceiling lining, as may be required in order to gain access to any particular section of ceiling insulation. Refer to 25-21-61, Ceiling Lining.
- B. Remove joint tape and retainers as required.
- C. When all obstructions have been removed, remove insulation panels. (In some places it may be necessary to peel the panel free of the Velcro tape which is used to retain it against airplane structure.)

NOTE: Mark insulation components as they are removed so that they may be located properly when reinstalled.

4. Install Ceiling Insulation

- A. Position insulation panels in proper location on ceiling.
  - (1) When installing the insulation panels that are held in place with velcro tape it is necessary to align the tape on the panel with the tape that is bonded to airplane structure and then press panel down to make tape contact.
- B. Install retainers where applicable.
- C. Apply tape to close butt joints, overlapping joints, gaps between adjacent molded insulation panels, and between insulation panels and the airplane structure.
- D. Check to ensure that all insulation components are in proper places so as not to interfere with ceiling lining or other equipment installed on the sidewall.
- E. Install equipment and ceiling lining that was removed to facilitate removing ceiling insulation. Refer to 25-21-61, Ceiling Lining, as required.



MAINTENANCE MANUAL

CEILING INSULATION – APPROVED REPAIRS

1. General

- A. For approved repairs information refer to 25-21-51, Sidewall Insulation – Approved Repairs.

EFFECTIVITY  
Airplanes without New Look  
Interior

25-21-71

03

Page 801  
Dec 01/04

FORWARD LOWERED CEILING PANELS – REMOVAL/INSTALLATION

1. General

- A. The forward lowered ceiling comprises individual panels as described in this section. The panels are arbitrarily numbered, as shown in figure 401, to assist in identification within this section only.
- B. Each procedure which follows describes the operations necessary to remove any one desired lowered ceiling panel. However, the entire lowered ceiling may be removed most easily by performing the individual procedures in the sequence given.
- C. All of the equipment or fasteners above the forward lowered ceiling are accessible through one or more of the lowered ceiling access door openings. The assigned panel numbers for the access doors are Panel No. 1, Panel No. 2 and Panel No. 9.

2. Removal/Installation Forward Lowered Ceiling Panel No. 1

A. General

- (1) Panel No. 1 is an access door. Many operations require only that it be hinged open.

B. Remove Forward Lowered Ceiling Panel No. 1 (See figure 401.)

- (1) Open lowered ceiling panel by releasing the two latches.
- (2) Disconnect electrical leads to speaker and call light on panel No. 1.
- (3) Detach lowered ceiling panel from hinges.

C. Install Forward Lowered Ceiling Panel No. 1 (See figure 401.)

- (1) Attach lowered ceiling panel to hinges.
- (2) Connect electrical leads to speaker and call light on panel No. 1.
- (3) Hinge lowered ceiling panel up to engage the two latches.

3. Removal/Installation Forward Lowered Ceiling Panel No. 2

A. General

- (1) Panel No. 2 is an access door. Many operations require only that it be hinged open.

B. Remove Forward Lowered Ceiling Panel No. 2 (see figure 401.)

- (1) Open lowered ceiling panel by releasing the two latches.
- (2) Detach lowered ceiling panel from hinges.

C. Install Forward Lowered Ceiling Panel No. 2 (see figure 401.)

- (1) Attach lowered ceiling panel to hinges.
- (2) Hinge lowered ceiling panel up to engage the two latches.

4. Removal/Installation Forward Lowered Ceiling Panel No. 3

A. Prepare for Removal of Panel No. 3

- (1) Hinge open forward lowered ceiling panels No. 1 and No. 2.
- (2) Remove top attachment plate of forward left windscreen. Refer to 25-24-111, Forward Left Windscreen.
- (3) Remove forward service panel cover over forward entry door.
  - (a) Remove quick-release fasteners in upper corners of service panel cover.



## MAINTENANCE MANUAL

- (b) Remove screws attaching service panel cover to hinges at bottom corners of panel.
- (4) Remove forward airstair controls.
  - (a) Open circuit breaker to forward airstair controls on circuit breaker panel P6-4.
  - (b) Remove two screws attaching faceplate to controls casing and pull faceplate with attachments inboard through cutout in lowered ceiling panel.
  - (c) Disconnect wiring as required and completely remove airstair controls.
  - (d) Remove screws attaching controls casing to frame structure and remove casing.
- B. Remove Forward Lowered Ceiling Panel No. 3 (Fig. 401.)
  - (1) Remove fasteners at aft and inboard edges of panel.
  - (2) Pull panel inboard to release outboard edge and then aft to release forward edge.
- C. Install Forward Lowered Ceiling Panel No. 3 (Fig. 401).
  - (1) Insert forward edge of panel into trim strip on panel No. 4 and slide panel outboard to engage outboard edge with sidewall trim.
  - (2) Install fasteners at aft and inboard edges of panel.
- D. Restore Lowered Ceiling to Normal Configuration
  - (1) Install forward airstair controls.
    - (a) Ensure that forward airstair controls circuit breaker on circuit breaker panel P6-4 is open.
    - (b) Insert controls casing through cutout in lowered ceiling panel and thread electrical wires through grommet in casing.
    - (c) Install screws attaching casing to frame structure.
    - (d) Insert controls, attached to faceplate, into casing and connect wiring as required.
    - (e) Install screws attaching faceplate to controls casing.
    - (f) Close forward airstair controls circuit breaker on panel.
  - (2) Install forward service panel cover over forward entry door.
    - (a) Attach service panel cover to hinges.
    - (b) Install quick-release fasteners in upper corners of service panel cover.
  - (3) On some airplanes, install top attachment plate of forward left windscreen. Refer to 25-24-111, Forward Left Windscreen,
  - (4) Hinge closed forward lowered ceiling panels No. 1 and 2.

EFFECTIVITY  
Standard Passenger  
Airplanes without New Look  
Interior

25-21-81

08

Page 402  
Dec 01/04



## MAINTENANCE MANUAL

5. Removal/Installation Forward Lowered Ceiling Panel No. 4
  - A. Prepare for Removal of Panel No. 4
    - (1) Hinge open forward lowered ceiling panel No. 1.
    - (2) Remove ceiling panel No. 3.
  - B. Remove Forward Lowered Ceiling Panel No. 4 (Fig. 401)
    - (1) Remove fasteners at inboard edge.
    - (2) Pull panel inboard and aft to release outboard and forward edges.
  - C. Install Forward Lowered Ceiling Panel No. 4 (Fig. 401)
    - (1) Insert outboard and forward edges into interior lining trim attachments.
    - (2) Install fasteners at inboard edge.
  - D. Restore Lowered Ceiling to Normal Configuration
    - (1) Install ceiling panel No. 3.
    - (2) Hinge closed forward lowered ceiling panel No. 1.
6. Removal/Installation Forward Lowered Ceiling Panel No. 5
  - A. Remove Forward Lowered Ceiling Panel No. 5 (See figure 401.)
    - (1) Remove forward lowered ceiling panel No. 1.
    - (2) Release fasteners along aft and inboard panel edges.
    - (3) Pull panel inboard to release outboard edge from sidewall trim and acoustic panel from velcro tape.
  - B. Install Forward Lowered Ceiling Panel No. 5 (See figure 401.)
    - (1) Insert outboard edge of panel into sidewall trim and secure velcro tape on acoustic panel.
    - (2) Install fasteners along aft and inboard panel edges.
    - (3) Install forward lowered ceiling panel No. 1.
7. Removal/Installation Forward Lowered Ceiling Panel No. 6
  - A. Prepare for Removal of Panel No. 6
    - (1) Remove forward lowered ceiling panel No. 1.
    - (2) Remove forward lowered ceiling panel No. 5.
    - (3) Loosen hose clamp on exhaust air hose and disconnect hose from forward galley exhaust air inlet.
    - (4) Remove snap-in exit light lens over forward service door.
  - B. Remove Forward Lowered Ceiling Panel No. 6 (See figure 401.)
    - (1) Remove fasteners at inboard edge.
    - (2) Pull panel inboard and aft to release outboard and forward edges.
  - C. Install Forward Lowered Ceiling Panel No. 6 (See figure 401.)
    - (1) Insert outboard and forward edges of panel into interior lining attachments.
    - (2) Install fasteners at inboard panel edge.
  - D. Restore Forward Lowered Ceiling to Normal Configuration
    - (1) Connect exhaust air hose to forward galley exhaust air inlet and tighten hose clamp.
    - (2) Install forward lowered ceiling panel No. 5.
    - (3) Install forward lowered ceiling panel No. 1.
    - (4) Install snap-in exit light lens over forward service door.
8. Removal/Installation Forward Lowered Ceiling Panel No. 7
  - A. Remove Forward Lowered Ceiling Panel No. 7 (See figure 401.)
    - (1) Hinge open lowered ceiling panels No. 1 and No. 2.
    - (2) Remove fasteners at inboard, forward and aft edges.

EFFECTIVITY  
Standard Passenger  
Airplanes without New Look  
Interior

25-21-81

- (3) Pull panel inboard releasing lowered ceiling panel from sidewall trim attachment and acoustic panel from velcro tape.

NOTE: Acoustic panel will remain attached to lowered ceiling panel.

B. Install Forward Lowered Ceiling Panel No. 7 (See figure 401.)

NOTE: Acoustic panel should be attached to lowered ceiling panel.

- (1) Insert outboard edge of panel into interior lining trim attachment, and secure velcro tape on acoustic panel.
- (2) Install fasteners at inboard, forward and aft edges.
- (3) Hinge up lowered ceiling panel No. 1 and No. 2.

9. Removal/Installation Forward Lowered Ceiling Panel No. 8

A. Remove Forward Lowered Ceiling Panel No. 8 (See figure 401.)

- (1) Remove lowered ceiling panel No. 2.
- (2) Remove fasteners at inboard, forward and aft edges of panel No. 8.
- (3) Pull panel inboard to release velcro tape on acoustic panel.

NOTE: Acoustic panel will remain attached to Panel No. 8.

B. Install Forward Lowered Ceiling Panel No. 8 (See figure 401.)

- (1) Place panel No. 8 in position and secure velcro tape on acoustic panel.
- (2) Install fasteners at inboard, forward and aft edges of panel No. 8.
- (3) Install lowered ceiling panel No. 2.

10. Removal/Installation Forward Lowered Ceiling End Cap

A. Prepare for Removal of Forward Lowered Ceiling End Cap

- (1) Hinge down forward lowered ceiling panel No. 2.
- (2) Remove forward lowered ceiling panels No. 7 and No. 8.

B. Remove Forward Lowered Ceiling End Cap (See figure 401).

- (1) Disconnect all electrical leads at end cap.
- (2) Pull end cap forward to release attachment clips from curved ceiling panels.

C. Install Forward Lowered Ceiling End Cap (See figure 401.)

- (1) Hook attachment clips over curved ceiling panel.
- (2) Push end cap aft as far as possible until attachment clips are fully engaged.
- (3) Connect electrical leads at end cap.

D. Restore Forward Lowered Ceiling to Normal Configuration

- (1) Install forward lowered ceiling panels No. 7 and No. 8.
- (2) Hinge up forward lowered ceiling panel No. 2.

11. Removal/Installation Forward Lowered Ceiling Panel No. 9

A. General

- (1) Panel No. 9 contains an access door. Many operations require only that the door be hinged open.

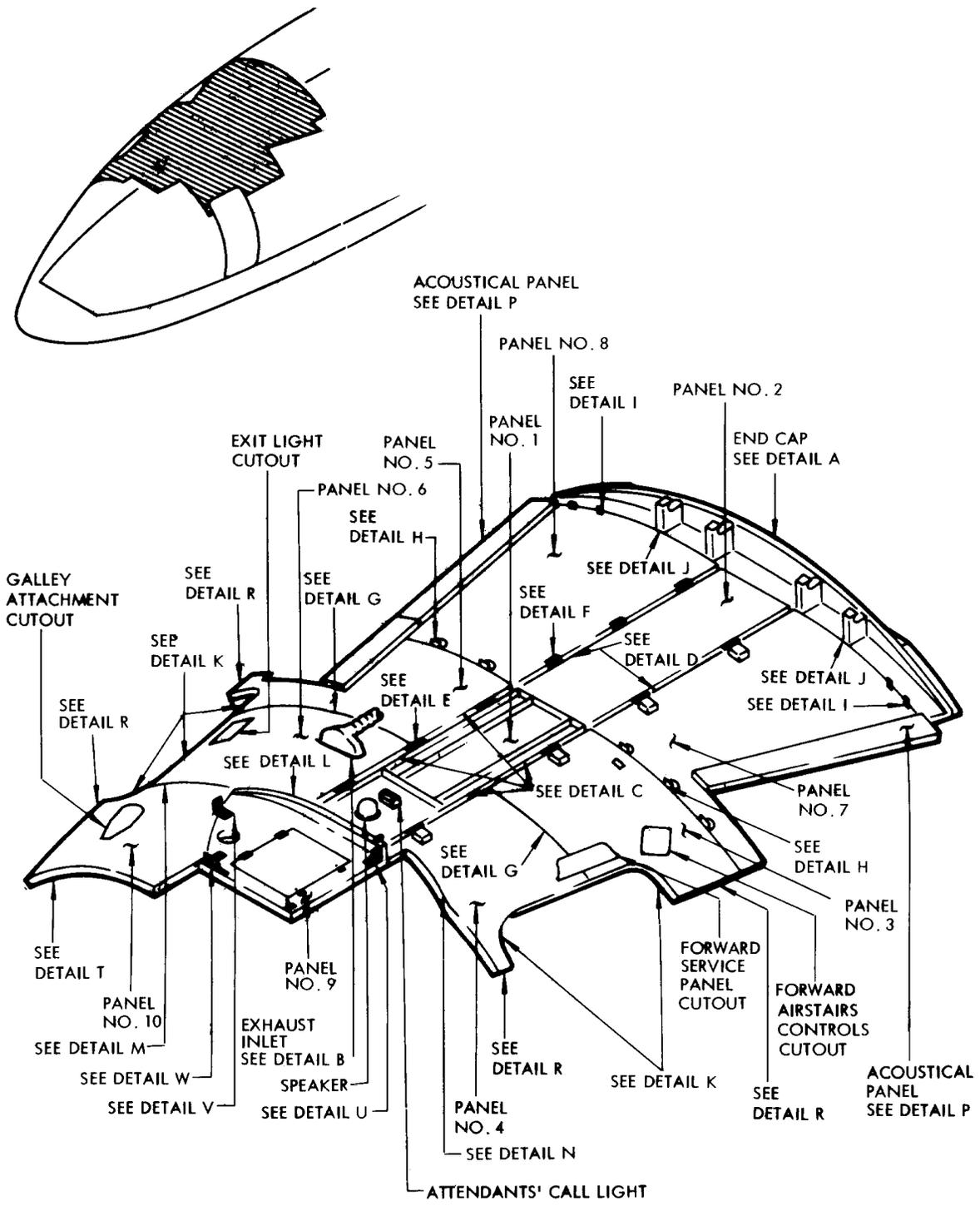


## MAINTENANCE MANUAL

- B. Remove Forward Lowered Ceiling Panel No. 9 (See figure 401.)
    - (1) Open forward lowered ceiling panel No. 1.
    - (2) Remove screws attaching clip to aft left corner of panel No. 9.
    - (3) Remove screws attaching trim strip to right side of the aft edge of panel No. 9.
    - (4) Reach through access door opening and remove screws attaching support bracket to panel on right side of panel.
    - (5) Remove fasteners through support brackets along left edge and in forward corners of panel.
    - (6) Pull panel aft and lower left side first to remove panel.
  - C. Install Forward Lowered Ceiling Panel No. 9 (See figure 401.)
    - (1) With panel No. 9 raised and slightly aft of its installed position, work panel forward until correctly located.
    - (2) Reach through access door opening and install fasteners through support brackets at forward corners of panel and along left edge.
    - (3) Install screws attaching support bracket on right edge of panel.
    - (4) Install screws attaching trim strip to right side of the aft edge of panel No. 9.
    - (5) Install screws attaching clip to the aft left corner of panel No. 9.
    - (6) Close forward lowered ceiling panel No. 1.
12. Removal/Installation Forward Lowered Ceiling Panel No. 10
- A. Prepare for Removal of Panel No. 10
    - (1) Remove galley No. 1. Refer to 25-31-51, Forward Galleys.
    - (2) Remove forward lowered ceiling panel No. 9.
  - B. Remove Forward Lowered Ceiling Panel No. 10 (Fig. 401).
    - (1) From underside of panel, remove quick-release fasteners along forward edge.
    - (2) Pull panel inboard to release outboard and aft panel edges from trim strips.
  - C. Install forward Lowered Ceiling Panel No. 10 (Fig. 401).
    - (1) Insert outboard and aft edges of panel into trim strips on sidewall and ceiling panel No. 6.
    - (2) Install quick-release fasteners along forward edge.
  - D. Restore Lowered Ceiling to Normal Configuration
    - (1) Install forward lowered ceiling panel No. 9.
    - (2) Install galley No. 1. Refer to 25-31-51, Forward Galleys.

EFFECTIVITY  
Standard Passenger  
Airplanes without New Look  
Interior

25-21-81

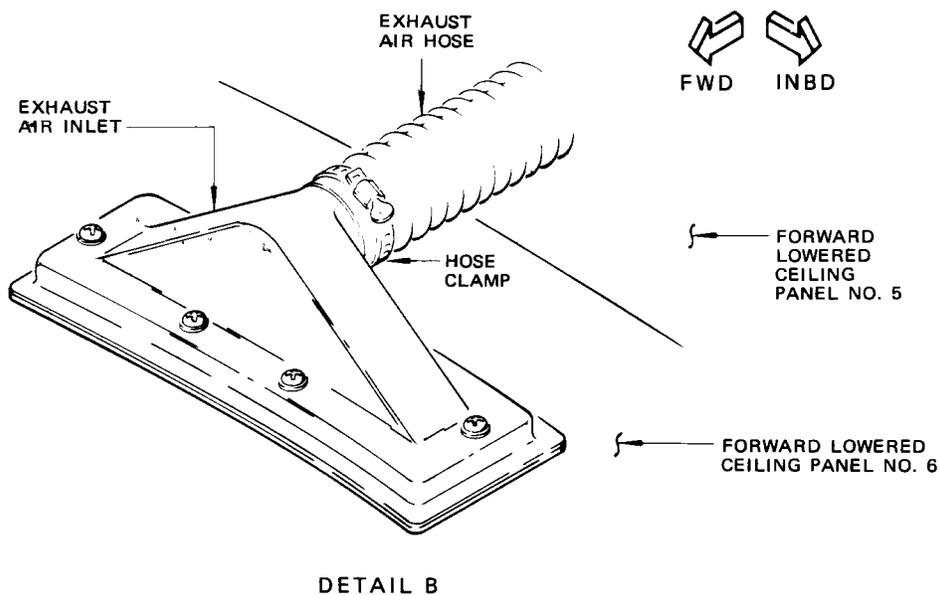
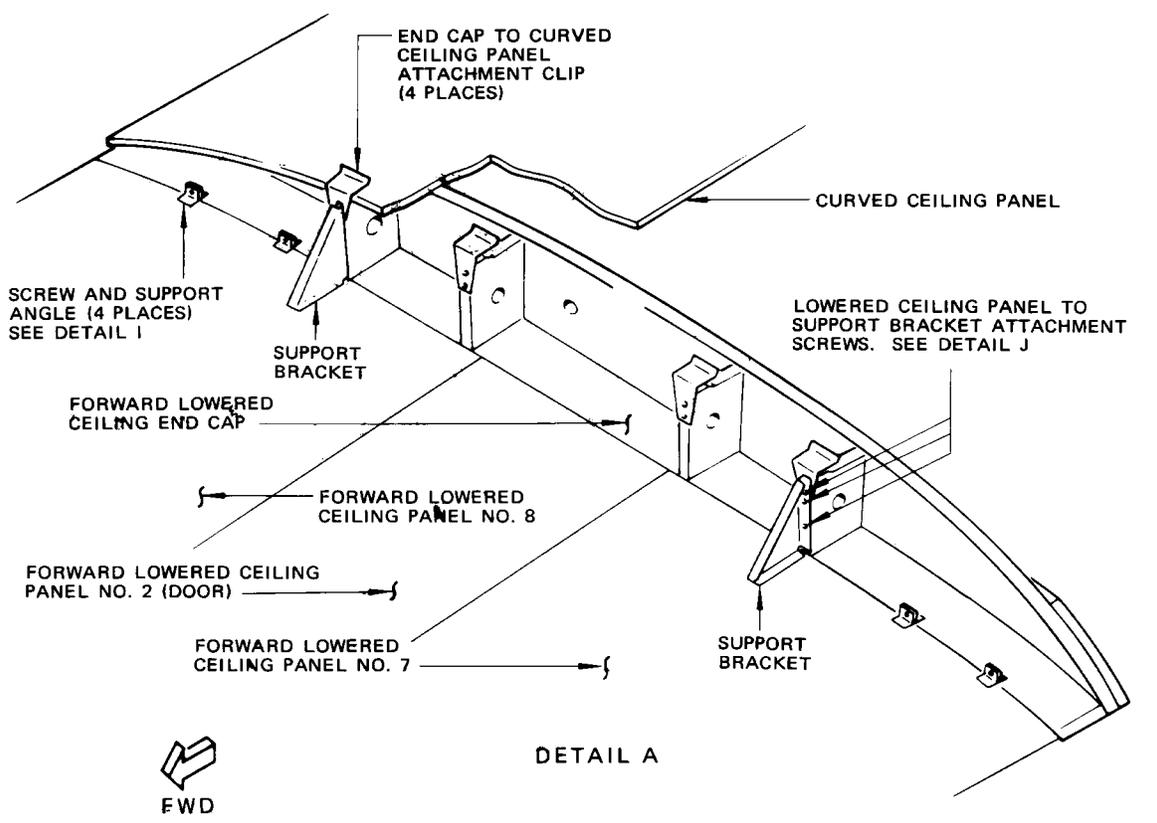


Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 Standard Passenger  
 Airplanes without New Look  
 Interior

25-21-81

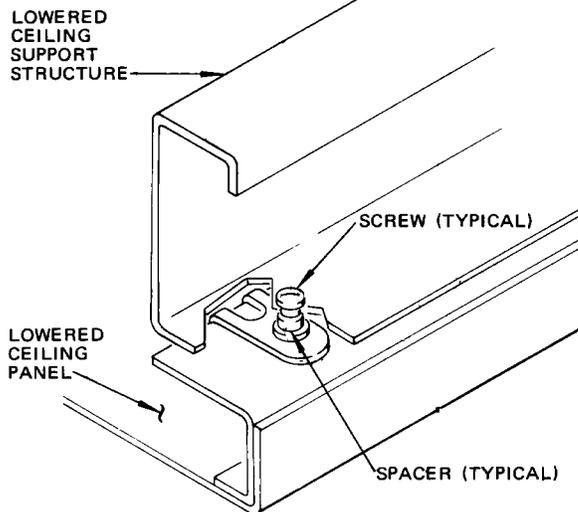
455817



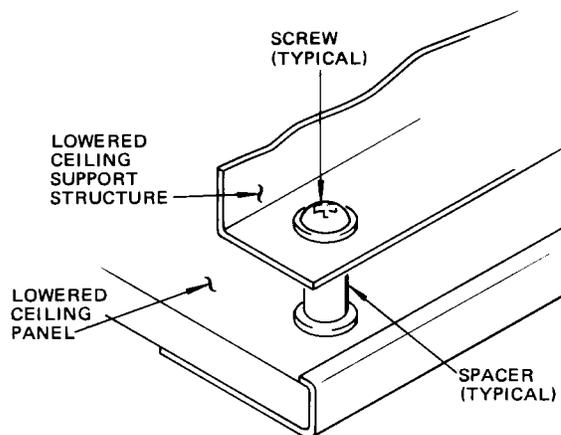
Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 Standard Passenger  
 Airplanes without New Look  
 Interior

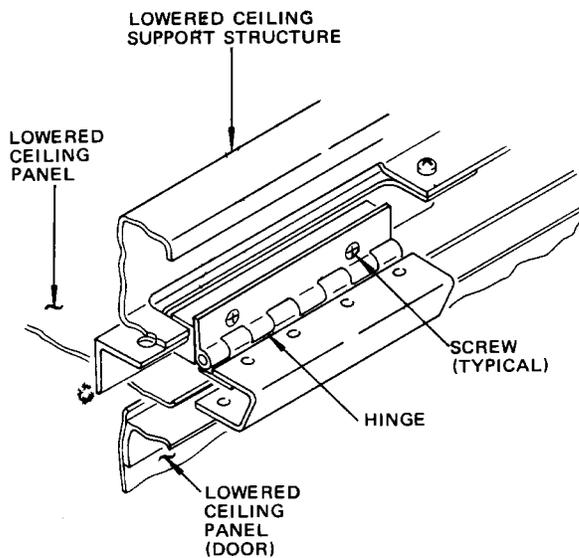
**25-21-81**



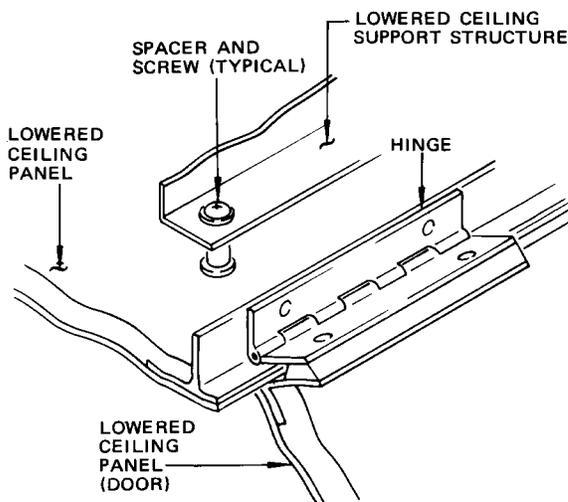
DETAIL C



DETAIL D



DETAIL E



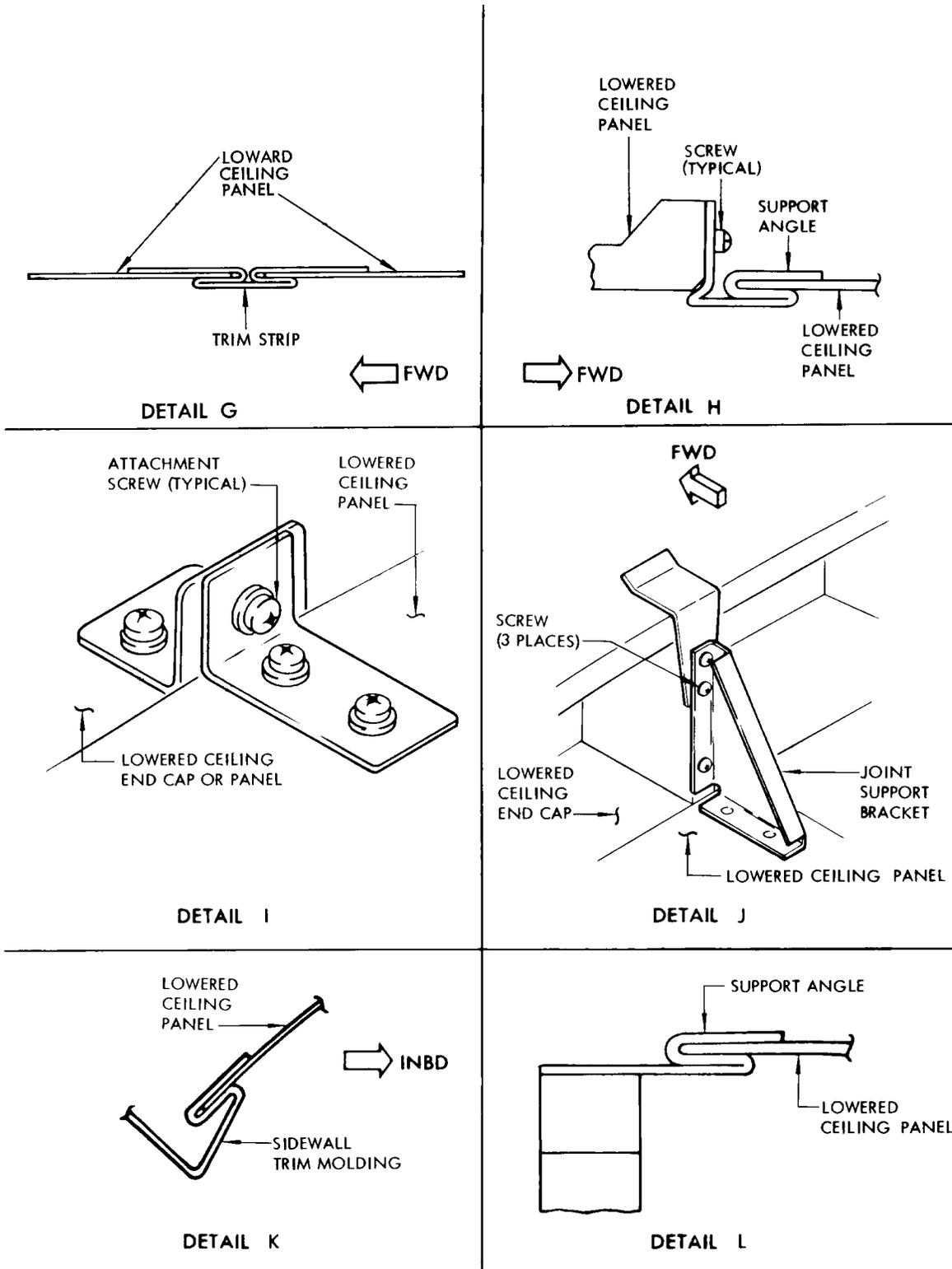
DETAIL F

Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 3)

EFFECTIVITY  
 Standard Passenger  
 Airplanes without New Look  
 Interior

455848

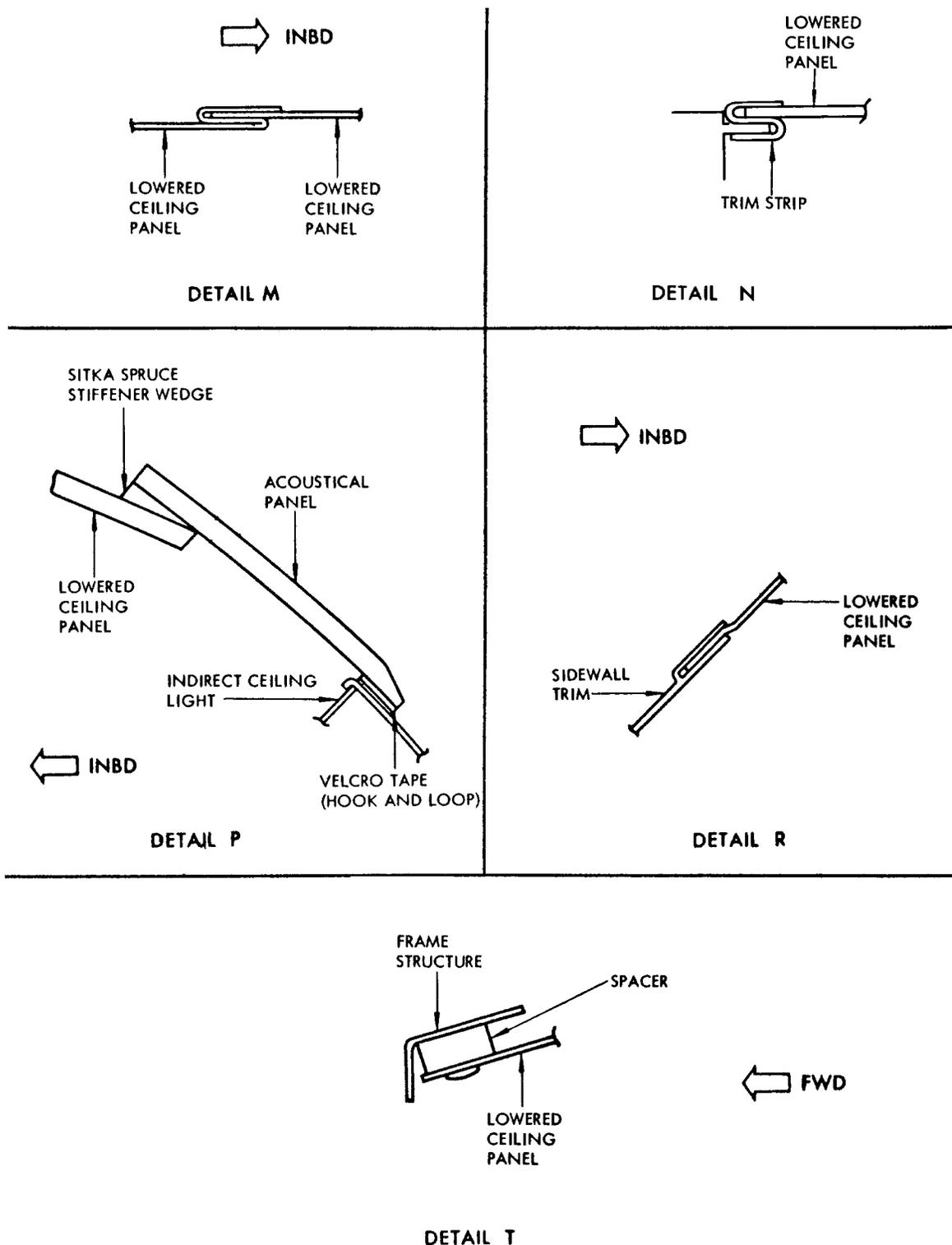
25-21-81



Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 4)

EFFECTIVITY  
 Standard Passenger  
 Airplanes without New Look  
 Interior

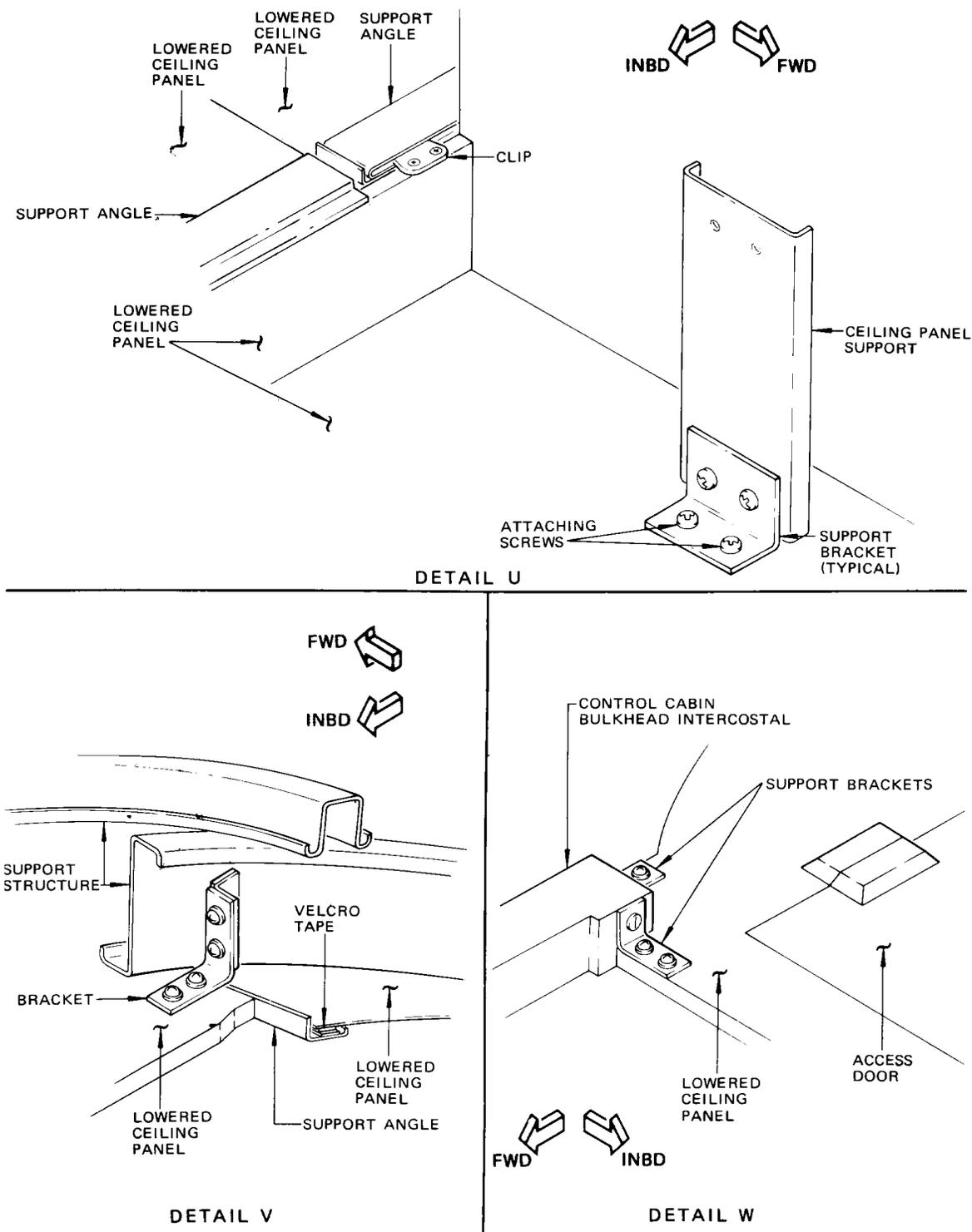
**25-21-81**



Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 5)

455873 EFFECTIVITY  
 Standard Passenger  
 Airplanes without New Look  
 Interior

25-21-81



Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 6)

EFFECTIVITY  
 Standard Passenger  
 Airplanes without New Look  
 Interior

**25-21-81**

FORWARD LOWERED CEILING PANELS – REMOVAL/INSTALLATION

1. General

- A. The forward lowered ceiling comprises individual panels as described in this section. The panels are arbitrarily numbered, as shown in Fig. 401, to assist in identification within this section only.
- B. Each procedure which follows describes the operations necessary to remove any one desired lowered ceiling panel. However, the entire lowered ceiling may be removed most easily by performing the individual procedures in the sequence given.
- C. All of the equipment or fasteners above the forward lowered ceiling are accessible through one or more of the lowered ceiling access door openings. The assigned panel numbers for the access doors are Panel No. 1, and Panel No. 4.

2. Removal/Installation Forward Lowered Ceiling Panel No. 1

A. General

- (1) Panel No. 1 is an access door. Many operations require only that it be hinged open.
- B. Remove Forward Lowered Ceiling Panel No. 1 (See figure 401.)
  - (1) Open lowered ceiling panel by releasing the two latches.
  - (2) Disconnect electrical leads to speaker and call light on panel No. 1.
  - (3) Detach lowered ceiling panel from hinges.
- C. Install Forward Lowered Ceiling Panel No. 1 (Fig. 401)
  - (1) Attach lowered ceiling panel to hinges.
  - (2) Connect electrical leads to speaker and call light on panel No. 1.
  - (3) Hinge lowered ceiling panel up to engage the two latches.

3. Removal/Installation Forward Lowered Ceiling Panel No. 2

A. Prepare for Removal of Panel No. 2

- (1) Hinge open forward lowered ceiling panel No. 1.
- (2) Remove forward service panel cover over forward entry door.
  - (a) Remove quick-release fasteners in upper corners of service panel cover.
  - (b) Remove screws attaching service panel cover to hinges at bottom corners of panel.
- B. Remove Forward Lowered Ceiling Panel No. 2 (See figure 401.)
  - (1) Remove fasteners at aft and inboard edges of panel.
  - (2) Pull panel inboard to release outboard edge and then aft to release forward edge.
- C. Install Forward Lowered Ceiling Panel No. 2 (See figure 401.)
  - (1) Insert forward edge of panel into interior lining trim attachments and slide panel outboard to engage outboard edge with sidewall trim.
  - (2) Install fasteners at aft and inboard edges of panel.
- D. Restore Lowered Ceiling to Normal Configuration
  - (1) Install forward service panel cover over forward entry door.
    - (a) Attach service panel cover to hinges.

- (b) Install quick-release fasteners in upper corners of service panel cover.
- (2) Hinge closed forward lowered ceiling panel No. 1.
- 4. Removal/Installation Forward Lowered Ceiling Panel No. 3
  - A. Prepare for Removal of Panel No. 3
    - (1) Remove forward lowered ceiling panel No. 1.
    - (2) Loosen hose clamp on exhaust air hose and disconnect hose from forward galley exhaust air inlet.
  - B. Remove Forward Lowered Ceiling Panel No. 3 (Fig. 401)
    - (1) Remove fasteners at aft and inboard edges of panel.
    - (2) Pull panel inboard and aft to release outboard and forward edges.
  - C. Install Forward Lowered Ceiling Panel No. 3 (See figure 401.)
    - (1) Insert outboard and forward panel edges into interior lining attachments.
    - (2) Install fasteners at aft and inboard edges of panel.
  - D. Restore Forward Lowered Ceiling to Normal Configuration
    - (1) Connect exhaust air hose to forward galley exhaust air inlet and tighten hose clamp.
    - (2) Install forward lowered ceiling panel No. 1.
- 5. Removal/Installation Forward Lowered Ceiling Panel No. 4
  - A. General
    - (1) Panel No. 4 contains an access door. Many operations require only that the door be hinged open.
  - B. Remove Forward Lowered Ceiling Panel No. 4 (See figure 401.)
    - (1) Open forward lowered ceiling panel No. 1.
    - (2) Remove screws attaching clip to aft left corner of panel No. 4.
    - (3) Remove screws attaching trim strip to right side of the aft edge of panel No. 4.
    - (4) Reach through access door opening and remove screws attaching support bracket to panel on right side of panel.
    - (5) Remove fasteners through support brackets along left edge and in forward corners of panel.
    - (6) Pull panel aft and lower left side first to remove panel.
  - C. Install Forward Lowered Ceiling Panel No. 4 (See figure 401.)
    - (1) With panel No. 4 raised and slightly aft of its installed position, work panel forward until correctly located.
    - (2) Reach through access door opening and install fasteners through support brackets at forward corners of panel and along left edge.
    - (3) Install screws attaching support bracket on right edge of panel.
    - (4) Install screws attaching trim strip to right side of the aft edge of panel No. 4.
    - (5) Install screws attaching clip to the aft left corner of panel No. 4.
    - (6) Close forward lowered ceiling panel No. 1.
- 6. Removal/Installation Forward Lowered Ceiling Panel No. 5
  - A. Prepare for Removal of Panel No. 5
    - (1) Remove forward galley. Refer to 25-23-51, Forward Galley.



## MAINTENANCE MANUAL

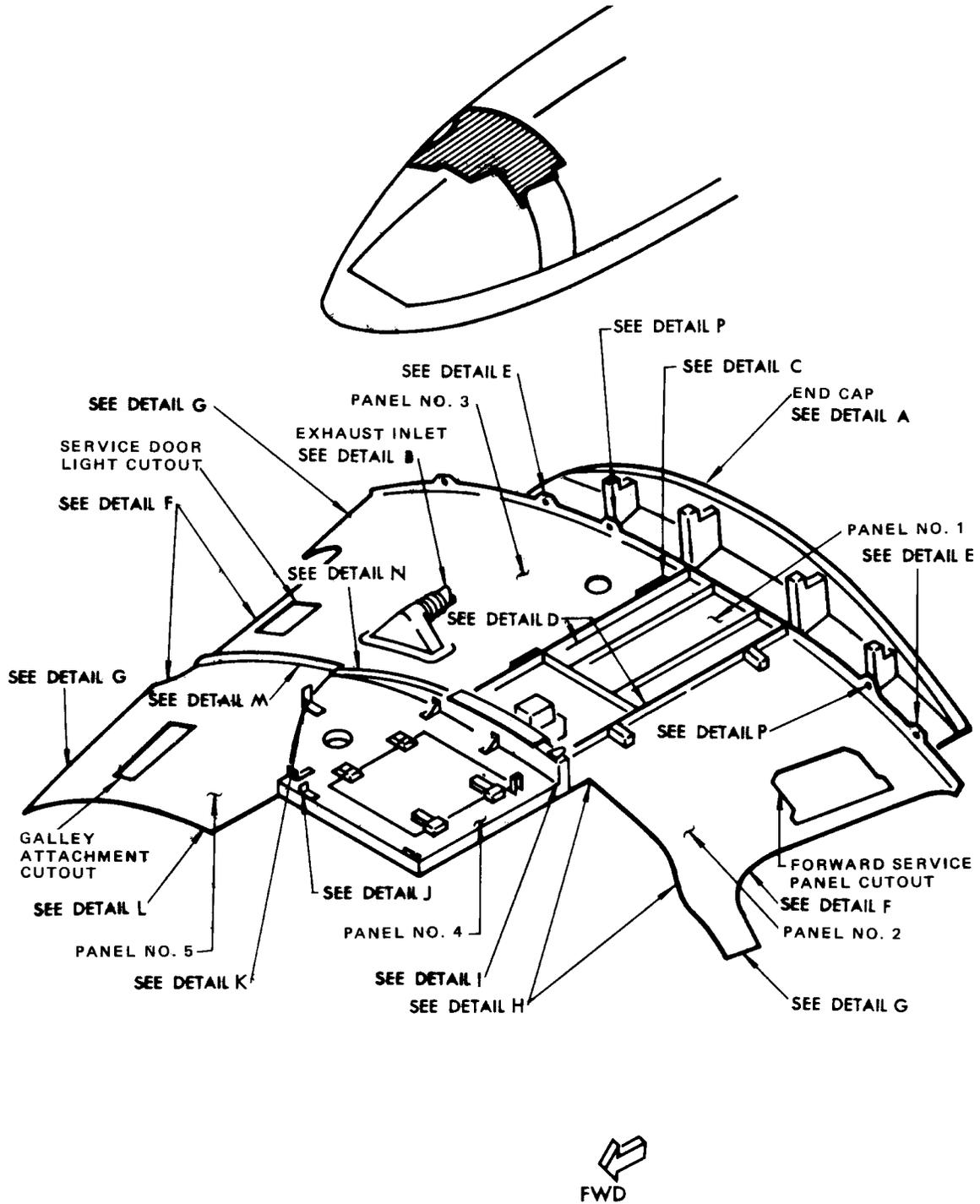
- (2) Remove forward lowered ceiling panel No. 4.
- B. Remove Forward Lowered Ceiling Panel No. 5 (See figure 401.)
  - (1) From underside of panel, remove quick-release fasteners along forward edge.
  - (2) Pull panel inboard to release outboard and aft panel edges from trim strips.
- C. Install Forward Lowered Ceiling Panel No. 5 (See figure 401.)
  - (1) Insert outboard and aft edges of panel into trim strips on sidewall and ceiling panel No. 3.
  - (2) Install quick-release fasteners along forward edge.
- D. Restore Lowered Ceiling to Normal Configuration
  - (1) Install forward lowered ceiling panel No. 4.
  - (2) Install forward galley. Refer to 25-31-51, Forward Galley.
- 7. Removal/Installation Forward Lowered Ceiling End Cap
  - A. Prepare for Removal of Forward Lowered Ceiling End Cap
    - (1) Hinge down forward lowered ceiling panel No. 1.
    - (2) Remove forward lowered ceiling panels No. 2 and No. 3.
  - B. Remove Forward Lowered Ceiling End Cap (See figure 401.)
    - (1) Disconnect all electrical leads at end cap.
    - (2) Pull end cap forward to release attachment clips from curved ceiling panels.
  - C. Install Forward Lowered Ceiling End Cap (See figure 401.)
    - (1) Hook attachment clips over curved ceiling panel.
    - (2) Push end cap aft as far as possible until attachment clips are fully engaged.
    - (3) Connect electrical leads at end cap.
  - D. Restore Forward Lowered Ceiling to Normal Configuration
    - (1) Install forward lowered ceiling panels No. 2 and No. 3.
    - (2) Hinge up forward lowered ceiling panel No. 1.

EFFECTIVITY  
Passenger/Cargo Convertible Airplanes

25-21-82

05

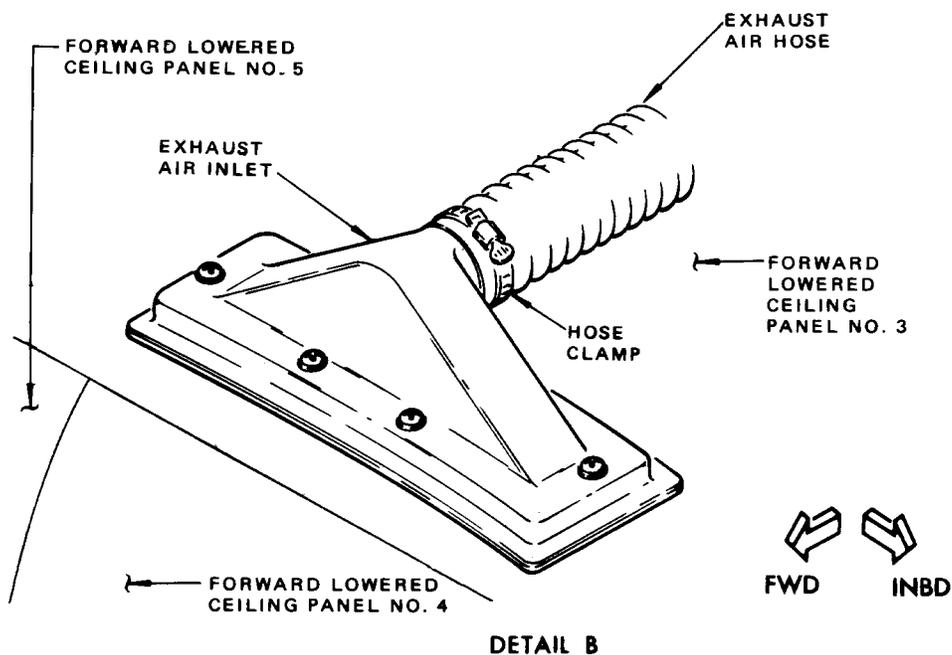
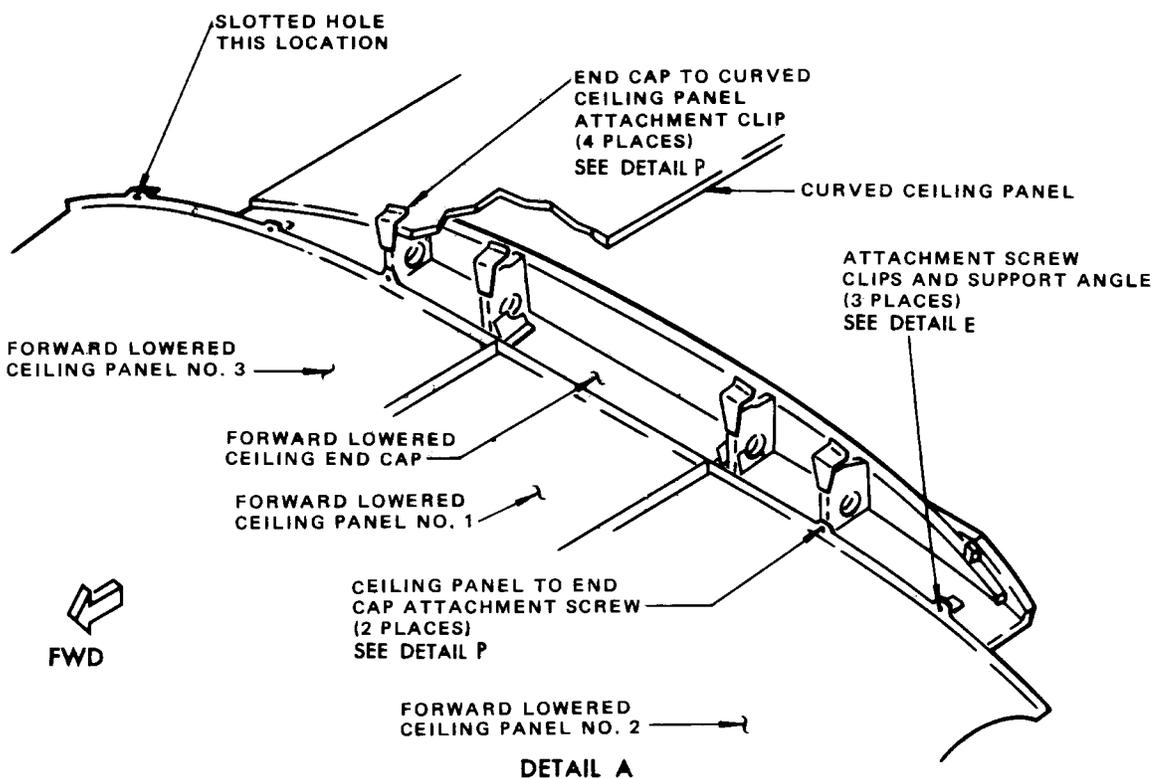
Page 403  
Dec 01/04



Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

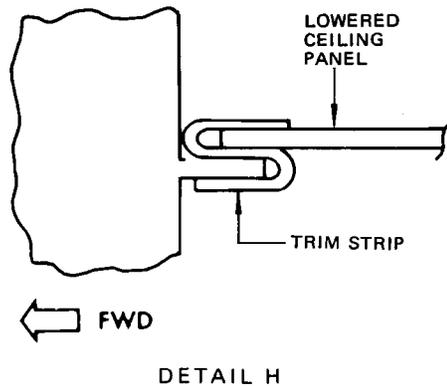
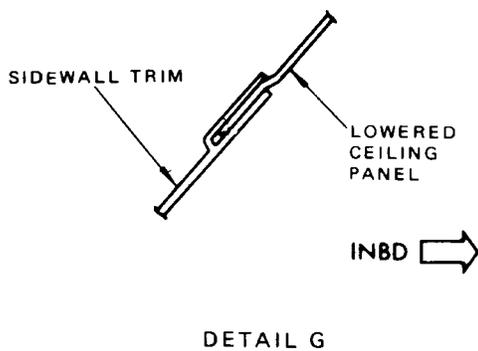
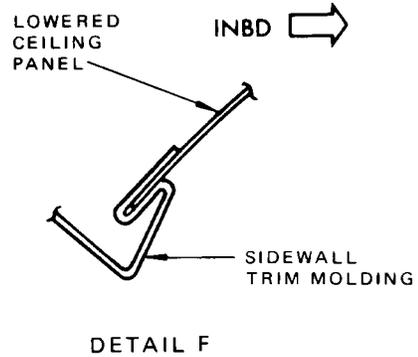
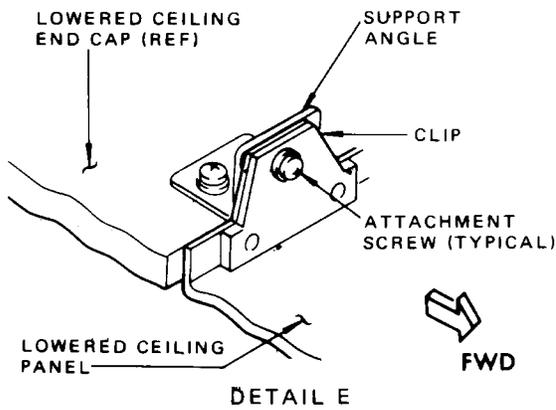
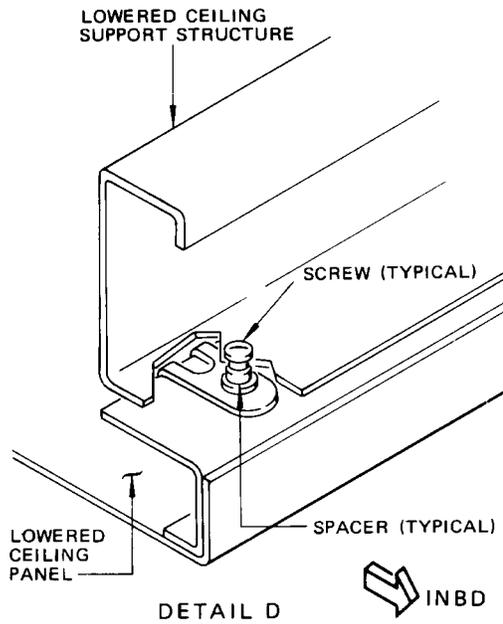
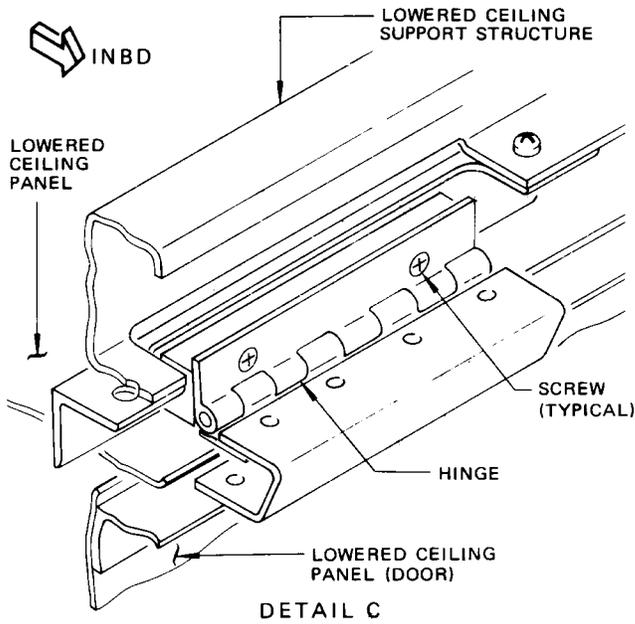
25-21-82



Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

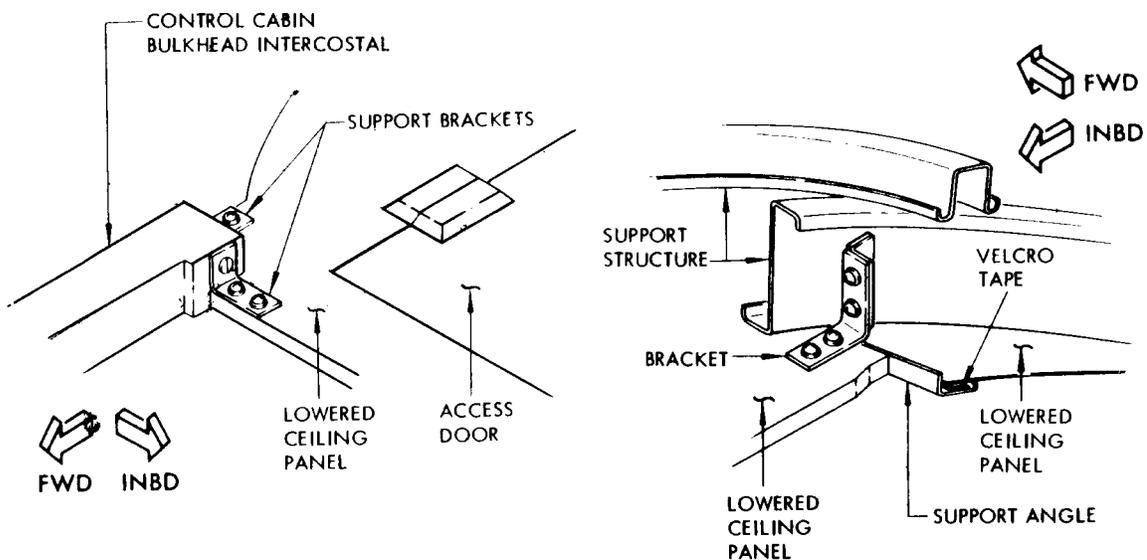
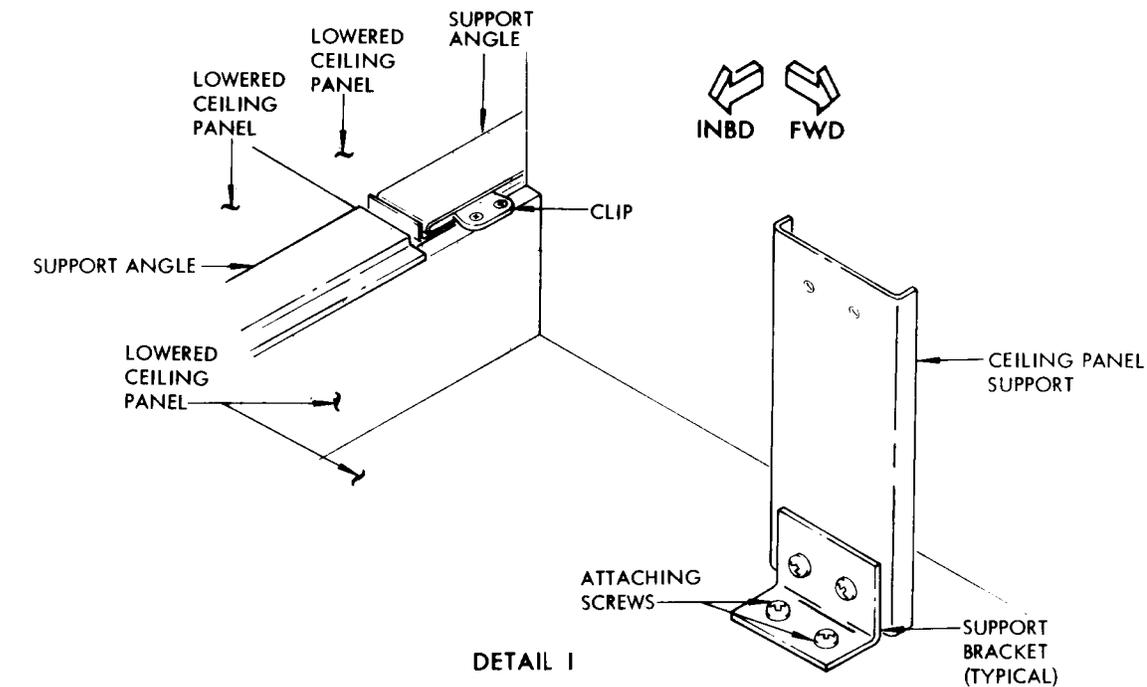
**25-21-82**



Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 3)

EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

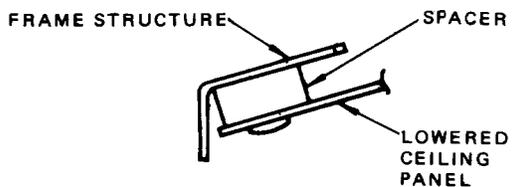
25-21-82



Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 4)

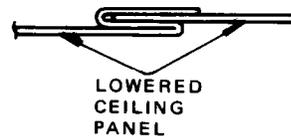
EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

**25-21-82**



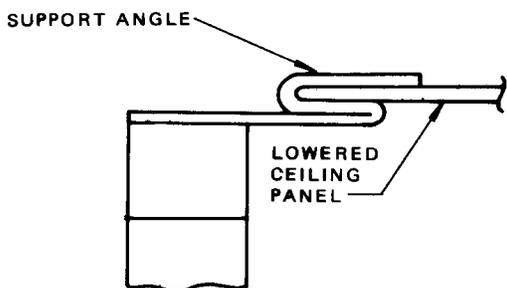
← FWD

DETAIL L

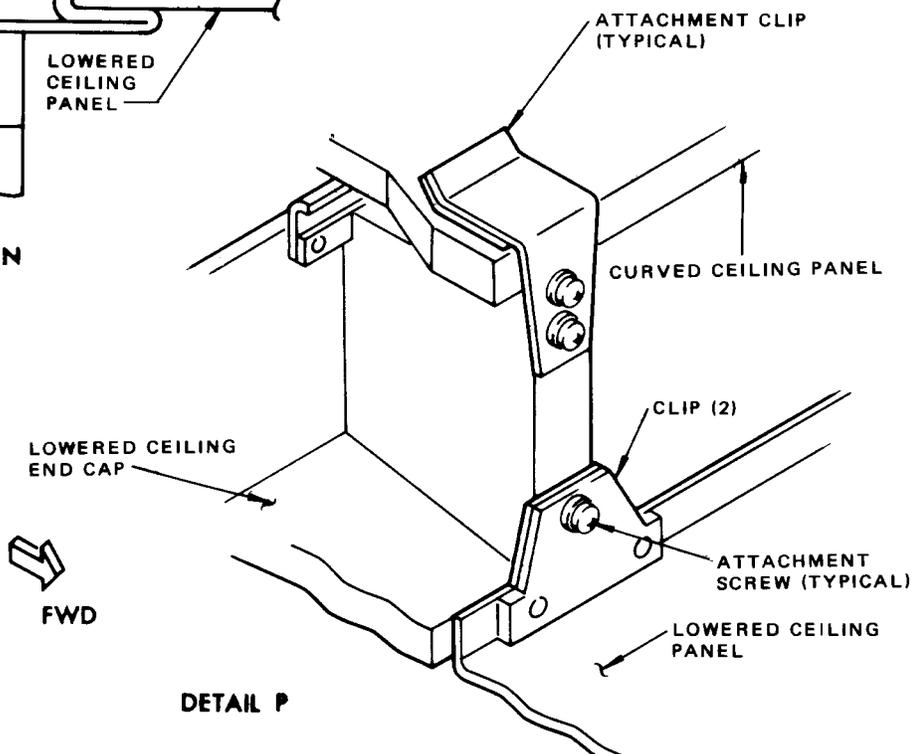


← FWD

DETAIL M



DETAIL N



← FWD

DETAIL P

Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 5)

EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

25-21-82

06

Page 408  
 Dec 01/04

455938

AFT LOWERED CEILING PANELS – REMOVAL/INSTALLATION

1. General

- A. The aft lowered ceiling comprises individual panels as described in this section. The panels are arbitrarily numbered, as shown in figure 401, to assist in identification within this section only.
- B. Each procedure which follows describes the operations necessary to remove any one desired lowered ceiling panel. However, the entire lowered ceiling may be removed most easily by performing the individual procedures in the sequence given.

2. Removal/Installation Aft Lowered Ceiling Panel No. 1 or 2

A. General

- (1) Panels No. 1 and 2 are access doors. Many operations require only that these panels be hinged open.
- B. Remove Aft Lowered Ceiling Panel No. 1 or 2 (See figure 401.)
  - (1) Open lowered ceiling panel by releasing the two latches.
  - (2) Detach lowered ceiling panel from hinges.

**NOTE:** All remaining equipment and fasteners in the lowered ceiling panel are accessible through the access door openings.

- C. Install aft lowered ceiling panel No. 1 or 2 (Fig. 401).
  - (1) Attach lowered ceiling panel to hinges.
  - (2) Hinge lowered ceiling panel up and secure by engaging the two latches.

3. Removal/Installation Aft Lowered Ceiling Panel No. 7

A. Remove Aft Lowered Ceiling Panel No. 7 (Fig. 401)

- (1) Hinge open aft lowered ceiling panel No. 1 for access to upper surface of panel No. 7.
- (2) Remove plug buttons which conceal fasteners on lower surface of panel No. 7 at left, right and forward edges.
- (3) Remove fasteners attaching panel to support structure and remove panel.

B. Install Aft Lowered Ceiling Panel No. 7. (See figure 401.)

- (1) Place panel in position, insert fasteners through lower surface of panel and secure to support structure.
- (2) Install plug buttons in panel No. 7 to conceal fasteners.
- (3) Hinge lowered ceiling panel No. 1 up to engage latches.

4. Removal/Installation Aft Lowered Ceiling Panel No. 9

A. Removal Aft Lowered Ceiling Panel No. 9 (Fig. 401)

- (1) Hinge open lowered ceiling panels No. 1.
- (2) Remove fasteners attaching panel to support brackets at each corner of panel.

B. Install Aft Lowered Ceiling Panel No. 9. (See figure 401.)

- (1) Place panel in position and install fasteners through support brackets at each corner of panel.

EFFECTIVITY  
Standard Passenger Airplanes without New  
Look Interior

25-21-91



## MAINTENANCE MANUAL

- (2) Hinge up aft lowered ceiling panel until latches engage.
5. Removal/Installation Aft Lowered Ceiling Panel No. 3
- A. Prepare for removal of panel No. 3.
- (1) Hinge open aft lowered ceiling panel No. 1.
  - (2) Remove aft lowered ceiling panel No. 9.
  - (3) Remove aft attendant's service unit. Refer to 25-23-71, Aft Cabin Attendants' Service Units.
  - (4) Remove snap-in exit light lens over aft entry door.
- B. Remove aft lowered ceiling panel No. 3. (See figure 401.)
- (1) Remove fasteners at inboard and forward edges.
  - (2) Pull panel inboard and forward to release outboard and aft edges.
- C. Install aft lowered ceiling panel No. 3. (See figure 401.)
- (1) Insert outboard and aft edges into interior lining trim attachments.
  - (2) Install fasteners at inboard and forward edges.
- D. Restore Lowered Ceiling to Normal Configuration
- (1) Install snap-in exit light lens over aft entry door.
  - (2) Install aft attendant's service unit. Refer to 25-23-71, Aft Cabin Attendants' Service Units.
  - (3) Install aft lowered ceiling panel No. 9.
  - (4) Hinge up aft lowered ceiling panel No. 1 until latches engage.
6. Removal/Installation Aft Lowered Ceiling Panel No. 4
- A. Prepare for Removal of Panel No. 4
- (1) Remove aft lowered ceiling panel No. 1.
  - (2) Remove aft lowered ceiling panel No. 9.
  - (3) Remove snap-in exit light lens over aft galley service door.
  - (4) Loosen hose clamp on exhaust air hose and disconnect hose from exhaust air inlet. (See view 2, figure 401.)
- B. Remove Aft Lowered Ceiling Panel No. 4 (See figure 401.)
- (1) Remove fasteners at inboard and forward edges.
  - (2) Pull panel inboard and forward to release outboard and aft edges.
- C. Install Aft Lowered Ceiling Panel No. 4 (See figure 401.)
- (1) Insert outboard and aft panel edges into interior lining attachments.
  - (2) Install fasteners at forward and inboard panel edges.
- D. Restore Aft Lowered Ceiling to Normal Configuration
- (1) Install snap-in exit light lens over aft galley service door.
  - (2) Connect exhaust air hose to aft galley exhaust air inlet and tighten hose clamp. (See view 2, figure 401).
  - (3) Install aft lowered ceiling panel No. 9.
  - (4) Install aft lowered ceiling panel No. 1.
7. Removal/Installation Aft Lowered Ceiling Panel No. 5 or No. 6
- A. Remove aft lowered ceiling panel No. 5 or 6 (Fig. 401).
- (1) Hinge open lowered ceiling panels No. 1 and No. 2.
  - (2) Remove fasteners at inboard, forward and aft edges of panel being removed.

EFFECTIVITY  
Standard Passenger Airplanes without New  
Look Interior

25-21-91

- (3) Pull panel inboard to release outboard edge.

**NOTE:** Acoustical panels will remain attached to lowered ceiling panels and panel No. 2 will remain attached to panel No. 6.

- B. Install aft lowered ceiling panel No. 5 or 6 (Fig. 401).

**NOTE:** Acoustical panels should be attached to lowered ceiling panels and panel No. 2 should be attached to panel No. 6.

- (1) Insert outboard edge of panel into interior lining trim attachment.
- (2) Install fasteners at inboard, forward and aft edges.
- (3) Hinge up and engage latches of lowered ceiling panels No. 1 and 2.

8. Removal/Installation Aft Lowered Ceiling End Cap

- A. Prepare for Removal of End Cap
  - (1) Hinge down aft lowered ceiling panels No. 1 and No. 2.
  - (2) Remove aft lowered ceiling panels No. 5 and No. 6.
- B. Remove aft lowered ceiling end cap (View 1, Fig. 401).
  - (1) Disconnect all electrical leads at end cap.
  - (2) Pull end cap aft to release attachment clips from curved ceiling panels.
- C. Install aft lowered ceiling end cap (View 1, Fig. 401).
  - (1) Hook attachment clips over curved ceiling panel.
  - (2) Push end cap forward as far as possible until attachment clips are fully engaged.
  - (3) Connect electrical leads at end cap.
- D. Restore Aft Lowered Ceiling to Normal Configuration
  - (1) Install aft lowered ceiling panels No. 5 and No. 6.
  - (2) Hinge up and engage latches of lowered ceiling panels No. 1 and No. 2.

9. Removal/Installation Aft Lowered Ceiling Panel No. 8

- A. Prepare for Removal of Aft Lowered Ceiling Panel No. 8
  - (1) Remove aft lowered ceiling panel No. 7.
  - (2) Remove aft galley. Refer to 25-31-61, Aft Galley.
- B. Remove Aft Lowered Ceiling Panel No. 8 (See figure 401.)
  - (1) Remove fasteners along inboard edge of panel No. 8.
  - (2) Pull panel inboard to release outboard edge.
  - (3) Pull aft end of panel down and pull panel aft to release forward edge.
- C. Install aft lowered ceiling panel No. 8 (Fig. 401).
  - (1) Insert forward edge of panel into joint trim and push aft edge of panel up.
  - (2) Push panel outboard to engage outboard edge in interior lining attachment.
  - (3) Install fasteners along inboard edge of panel.

EFFECTIVITY  
Standard Passenger Airplanes without New  
Look Interior

25-21-91

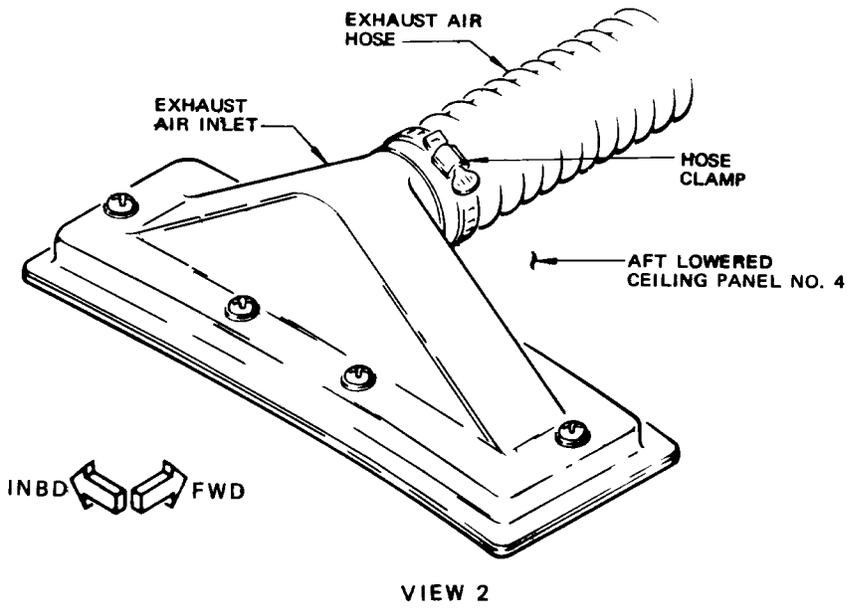
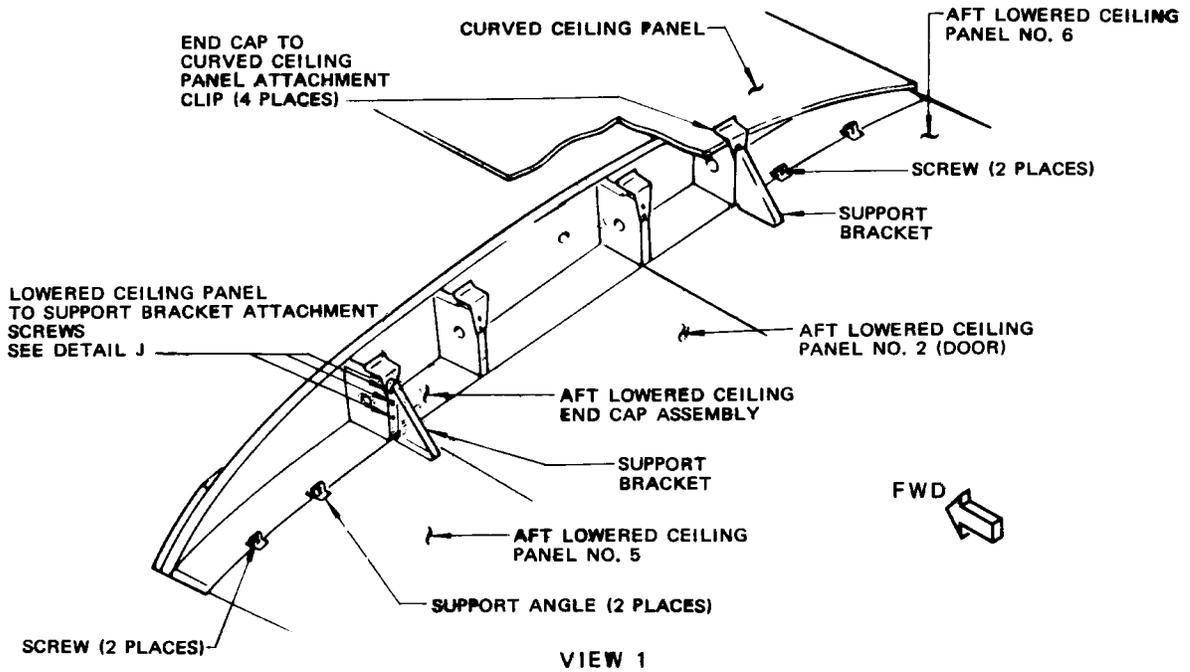
**BOEING**  
**737**   
**MAINTENANCE MANUAL**

- D. Restore Aft Lowered Ceiling to Normal Configuration
- (1) Install aft galley. Refer to 25-31-61, Aft Galley.
  - (2) Install aft lowered ceiling panel No. 7.

EFFECTIVITY  
Standard Passenger Airplanes without New  
Look Interior

**25-21-91**



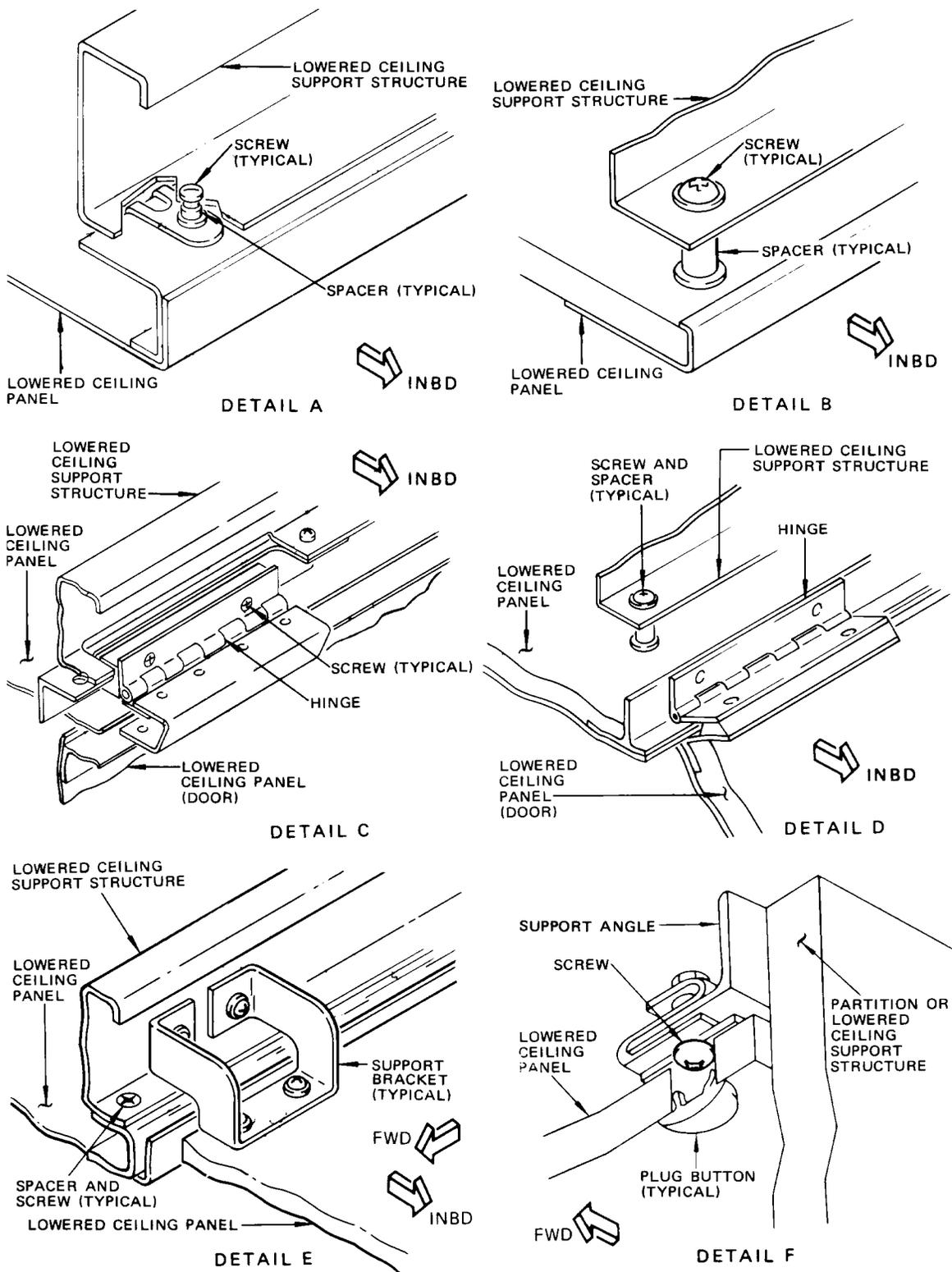


Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 Standard Passenger Airplanes without New  
 Look Interior

25-21-91

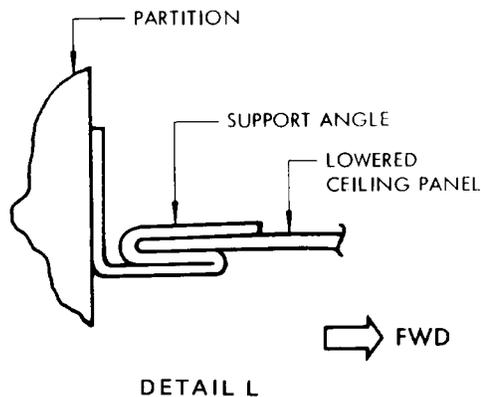
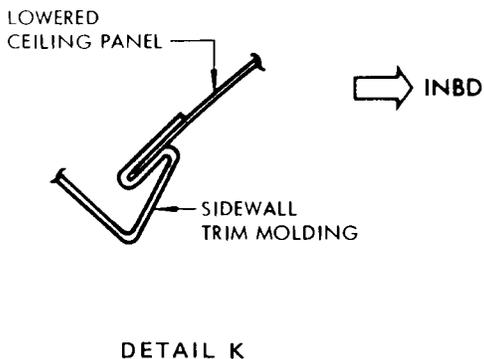
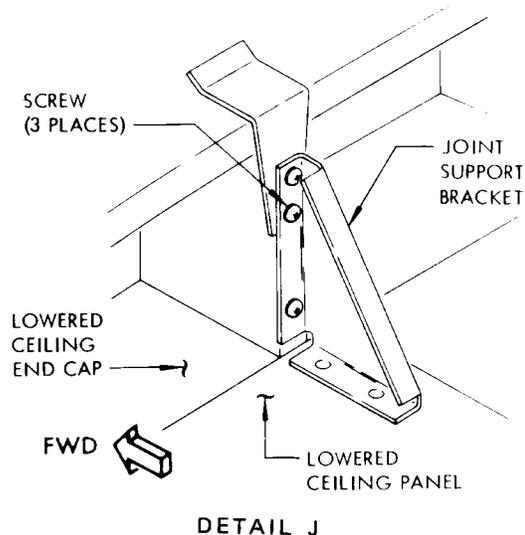
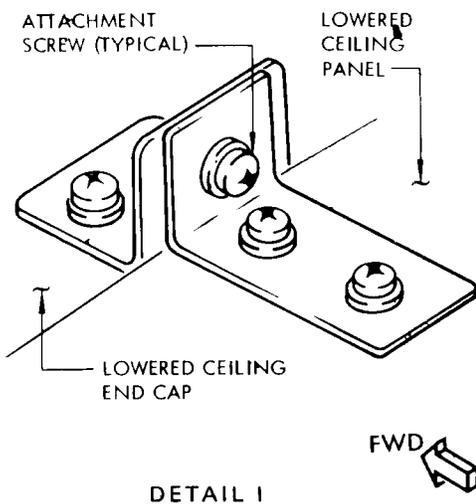
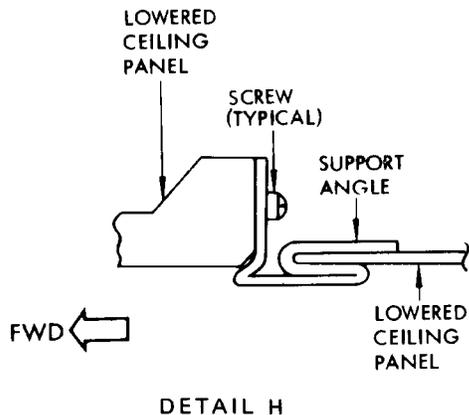
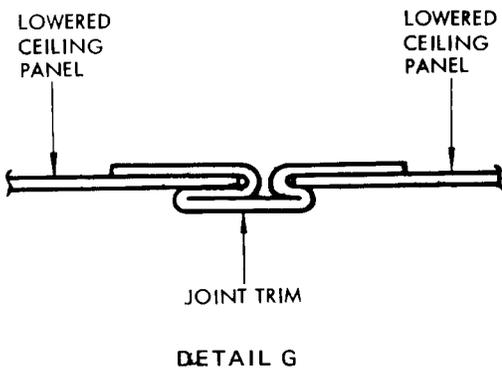
455967



Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 3)

EFFECTIVITY  
 Standard Passenger Airplanes without New  
 Look Interior

**25-21-91**

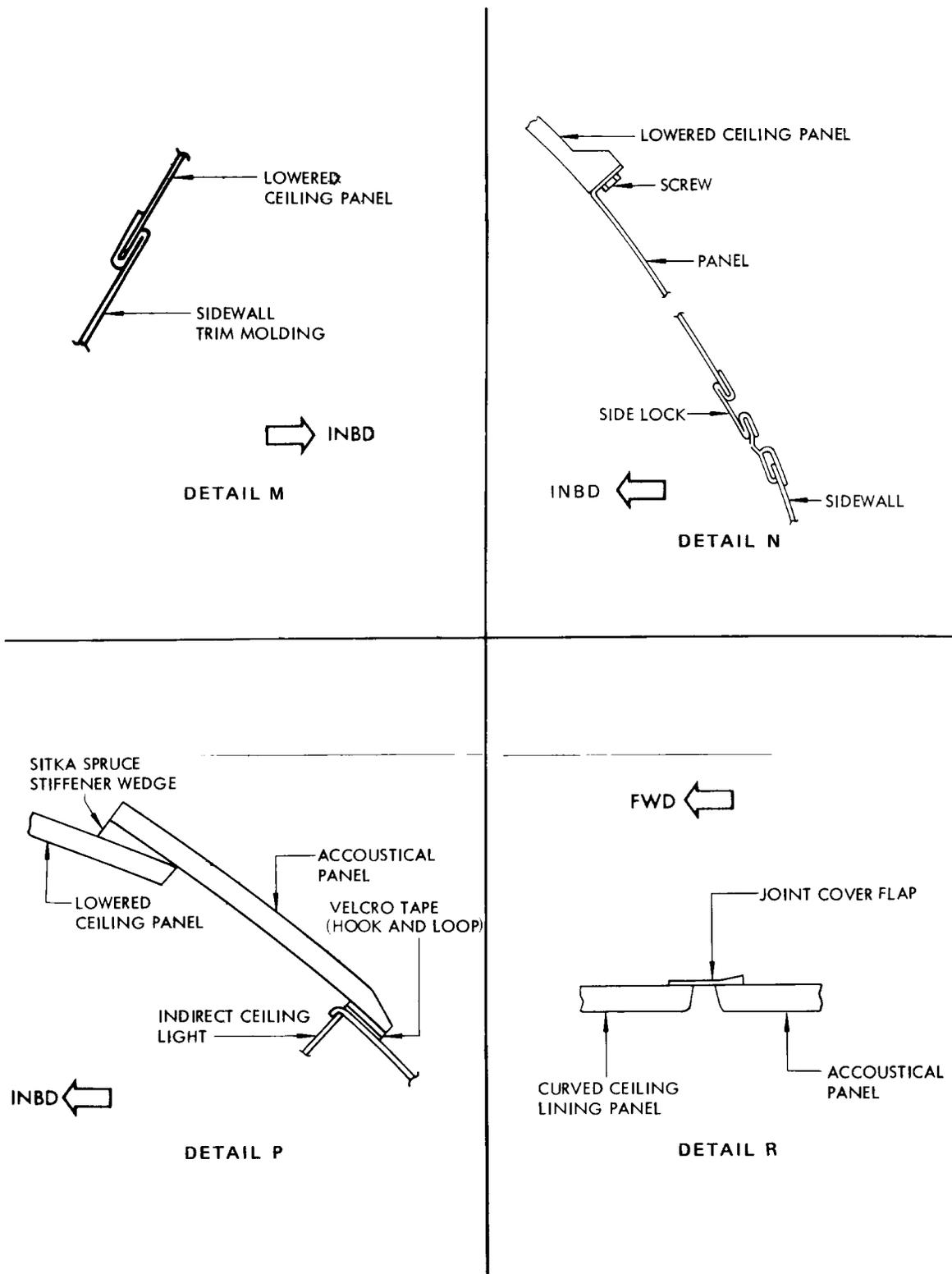


Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 4)

EFFECTIVITY  
 Standard Passenger Airplanes without New  
 Look Interior

455991

25-21-91



Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 5)

EFFECTIVITY  
 Standard Passenger Airplanes without New  
 Look Interior

25-21-91

AFT LOWERED CEILING PANELS – REMOVAL/INSTALLATION

1. General

- A. The aft lowered ceiling comprises individual panels as described in this section. The panels are arbitrarily numbered, as shown in figure 401, to assist in identification within this section only.
- B. Each procedure which follows describes the operations necessary to remove any one desired lowered ceiling panel. However, the entire lowered ceiling may be removed most easily by performing the individual procedures in the sequence given.

2. Removal/Installation Aft Lowered Ceiling Panel No. 1 or No. 2

A. General

- (1) Panels No. 1 and No. 2 are access doors. Many operations require only that these panels be hinged open.
- B. Remove Aft Lowered Ceiling Panel No. 1 or No. 2 (See figure 401).
  - (1) Open lowered ceiling panel by releasing the two latches.
  - (2) Detach lowered ceiling panel from hinges.

**NOTE:** All remaining equipment and fasteners in the lowered ceiling are accessible through the access door openings.

- C. Install Aft Lowered Ceiling Panel No. 1 or No. 2 (Fig. 401).
  - (1) Attach lowered ceiling panel to hinges.
  - (2) Hinge lowered ceiling panel up to engage the two latches.

3. Removal/Installation Aft Lowered Ceiling Panel No. 7

- A. Remove aft lowered ceiling panel No. 7. (See figure 401.)
  - (1) Hinge open aft lowered ceiling panel No. 1 for access to upper surface of panel No. 7.
  - (2) Remove plug buttons which conceal fasteners on lower surface of panel No. 7 at left, right and forward edges.
  - (3) Remove fasteners attaching panel to support structure and remove panel.

- B. Install aft lowered ceiling panel No. 7 (See figure 401.)
  - (1) Place panel in position, insert fasteners through lower surface of panel and secure to support structure.
  - (2) Install plug buttons in panel No. 7 to conceal fasteners.
  - (3) Hinge lowered ceiling panel No. 1 up to engage latches.

4. Removal/Installation Aft Lowered Ceiling Panel No. 9.

- A. Remove Aft Lowered Ceiling Panel No. 9 (See figure 401.)
  - (1) Hinge open aft lowered ceiling panel No. 1.
  - (2) Remove fasteners attaching panel to support brackets at each corner of panel.
- B. Install Aft Lowered Ceiling Panel No. 9 (See figure 401.)
  - (1) Place panel in position and install fasteners through support brackets at each corner of panel.
  - (2) Hinge up aft lowered ceiling panel No. 1 until latches engage/

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

25-21-92

03

Page 401  
Dec 01/04



## MAINTENANCE MANUAL

5. Removal/Installation Aft Lowered Ceiling Panel No. 10
  - A. General
    - (1) Panel No. 10 is an access door. Many operations require only that this panel be hinged open.
  - B. Remove Aft Lowered Ceiling Panel No. 10 (See figure 401.)
    - (1) Remove fasteners at right edge of panel No. 10.
    - (2) Hinge panel No. 10 down and detach hinges from support structure.
  - C. Install Aft Lowered Ceiling Panel No. 10 (See figure 401.)
    - (1) Attach panel No. 10 hinges to support structure and hinge up panel.
    - (2) Install fasteners at right edge of panel.
6. Removal/Installation Aft Lowered Ceiling Panel No. 3
  - A. Prepare for Removal of Panel No. 3
    - (1) Remove aft lowered ceiling panel No. 10.
    - (2) Remove snap-in exit light lens over aft entry door.
  - B. Remove Aft Lowered Ceiling Panel No. 3 (See figure 401.)
    - (1) Remove fasteners at inboard and forward edges.
    - (2) Pull panel inboard and forward to release outboard and aft edges.
  - C. Install Aft Lowered Ceiling Panel No. 3 (See figure 401.)
    - (1) Insert outboard and aft edges into interior lining trim attachments.
    - (2) Install fasteners at inboard and forward edges.
  - D. Restore Lowered Ceiling to Normal Configuration
    - (1) Install snap-in exit light lens over aft entry door.
    - (2) Install aft lowered ceiling panel No. 10.
7. Removal/Installation Aft Lowered Ceiling Panel No. 4
  - A. Prepare for Removal of Panel No. 4
    - (1) Remove aft lowered ceiling panel No. 1.
    - (2) Remove aft lowered ceiling panel No. 9.
    - (3) Remove snap-in exit light lens over aft galley service door.
    - (4) Loosen hose clamp on exhaust air hose and disconnect hose from aft galley exhaust air inlet. (See view 2, figure 401.)
    - (5) Remove aft attendants' service unit. Refer to 25-23-71, Aft Cabin Attendants' Service Unit.
    - (6) Disconnect windscreen upper supports extending through lowered ceiling panel. Refer to 25-24-141, Aft Right Windscreen.
  - B. Remove Aft Lowered Ceiling Panel No. 4 (See figure 401.)
    - (1) Remove fasteners at inboard and forward edges.
    - (2) Pull panel inboard and forward to release outboard and aft edges.
  - C. Install Aft Lowered Ceiling Panel No. 4 (See figure 401.)
    - (1) Insert outboard and aft panel edges into interior lining attachments.
    - (2) Install fasteners at inboard and forward panel edges.
  - D. Restore Aft Lowered Ceiling to Normal Configuration
    - (1) Connect windscreen upper supports extending through lowered ceiling panel. Refer to 25-24-141, Aft Right Windscreen.
    - (2) Install aft attendants' service unit Refer to 25-23-71, Aft Cabin Attendants' Service Unit.

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

25-21-92

05

Page 402  
Dec 01/04



## MAINTENANCE MANUAL

- (3) Connect exhaust air hose to aft galley exhaust air inlet and tighten hose clamp (See view 2, figure 401).
  - (4) Install snap-in exit light lens over aft galley service door.
  - (5) Install aft lowered ceiling panel No. 9.
  - (6) Install aft lowered ceiling panel No. 1.
8. Removal/Installation Aft Lowered Ceiling Panel No. 8
- A. Prepare for Removal of Aft Lowered Ceiling Panel No. 8
    - (1) Remove aft lowered ceiling panel No. 7.
    - (2) Remove aft galley Refer to 25-31-61, Aft Galley.
  - B. Remove Aft Lowered Ceiling Panel No. 8 (See figure 401.)
    - (1) Remove fasteners along inboard edge of panel No. 8.
    - (2) Pull panel inboard to release outboard edge.
    - (3) Pull aft end of panel down and pull panel aft to release forward edge.
  - C. Install Aft Lowered Ceiling Panel No. 8 (See figure 401.)
    - (1) Insert forward edge of panel into joint trim and push aft edge of panel up.
    - (2) Push panel outboard to engage outboard edge in interior lining attachment.
    - (3) Install fasteners along inboard edge of panel.
  - D. Restore Aft Lowered Ceiling to Normal Configuration
    - (1) Install aft galley. Refer to 25-31-61, Aft Galley.
    - (2) Install aft lowered ceiling panel No. 7.
9. Removal/Installation Aft Lowered Ceiling Panel No. 11 or No. 12
- A. Remove aft lowered ceiling panel No. 11 or No. 12. (See figure 401.)
    - (1) Remove fasteners at upper and lower edges of panel being removed.
    - (2) Separate upper edge of panel being removed from lower edge of adjacent acoustical panel at velcro tape connection and remove panel.
  - B. Install aft lowered ceiling panel No. 11 or No. 12. (See figure 401.)
    - (1) Place panel in position and install fasteners at upper and lower edge of panel.
    - (2) Press upper edge of panel No. 11 or No. 12 against lower edge of adjacent acoustical panel to engage velcro tape connection.
    - (3) Install aft galley (left and right, as applicable). Refer to 25-31-61, Aft Galleys.
10. Removal/Installation Aft Lowered Ceiling Panel No. 5 or No. 6
- A. Remove Aft Lowered Ceiling Panel No. 5 or No. 6 (See figure 401.)
    - (1) Hinge open lowered ceiling panels No. 1 and No. 2.
    - (2) Remove fasteners at inboard, forward and aft edges of panel being removed.
    - (3) Separate acoustical panel from velcro tape on upper edge of lowered ceiling panel No. 11 or No. 12 (as applicable).

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

25-21-92

05

Page 403  
Dec 01/04



## MAINTENANCE MANUAL

- (4) Pull panel up and inboard to release outboard edge.

**NOTE:** Acoustical panels will remain attached to lowered ceiling panels and panel No. 2 will remain attached to panel No. 6.

- B. Install Aft Lowered Ceiling Panel No. 5 or No. 6 (See figure 401.)

**NOTE:** Acoustical panels will remain attached to lowered ceiling panels and panel No. 2 will remain attached to panel No. 6.

- (1) Insert outboard edge of panel into the space immediately outboard of upper edge of lowered ceiling panel No. 11 and 12 (as applicable) so that velcro tape on acoustical panel mates properly with velcro tape on adjacent bracket.
- (2) Install fasteners at inboard, forward and aft edges.
- (3) Hinge up and secure lowered ceiling panels No. 1 and No. 2.

### 11. Removal/Installation Aft Lowered Ceiling End Cap

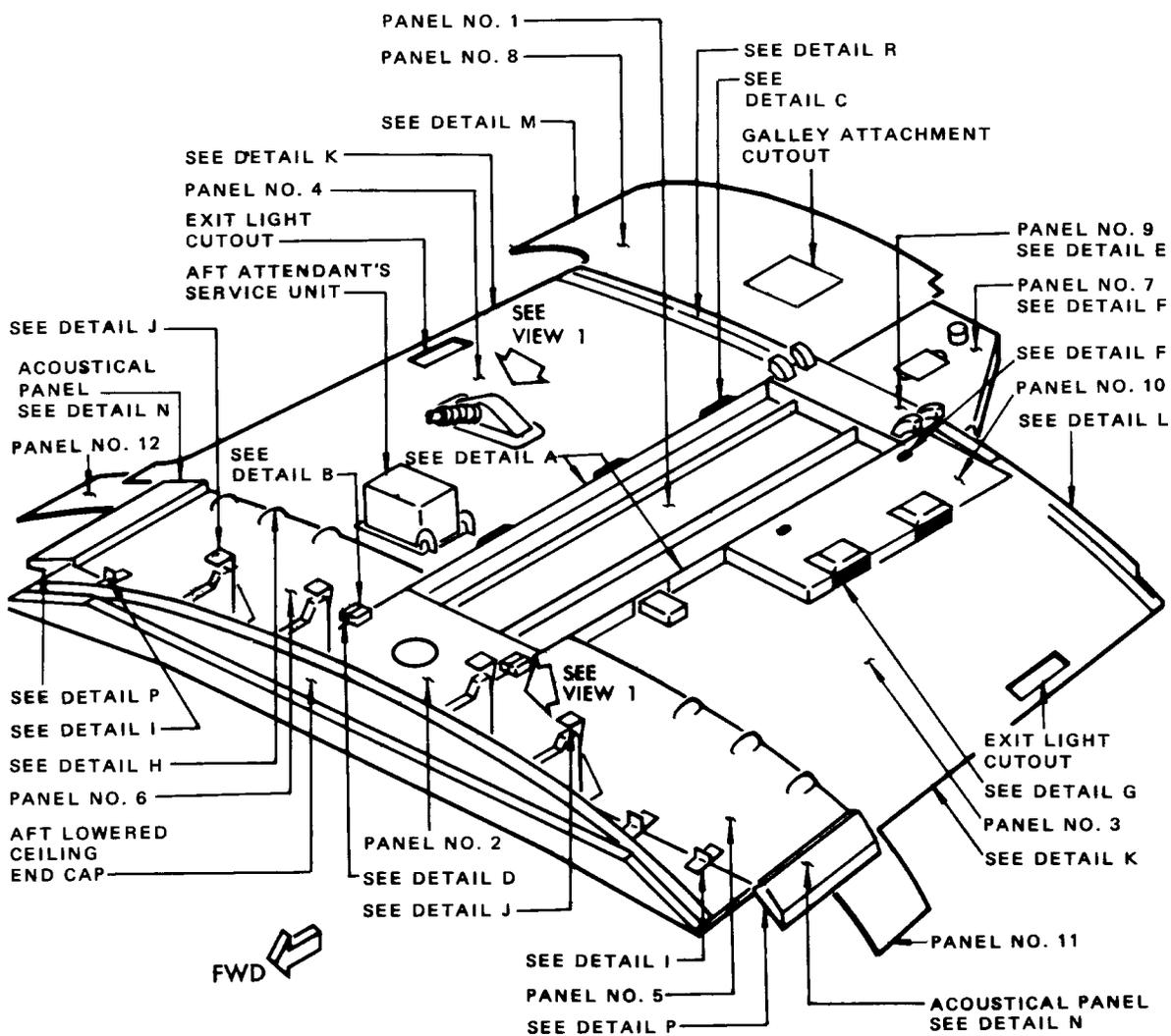
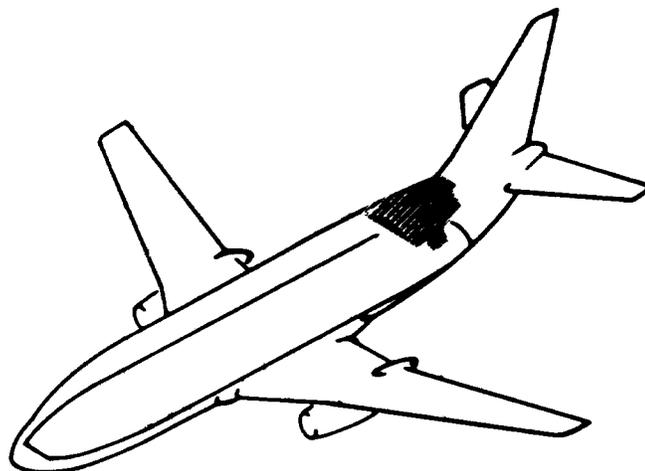
- A. Prepare for removal of end cap
  - (1) Hinge down aft lowered ceiling panels No. 1 and No. 2.
  - (2) Remove aft lowered ceiling panels No. 5 and No. 6.
- B. Remove aft lowered ceiling end cap (See view 1, figure 401.)
  - (1) Disconnect all electrical leads at end cap.
  - (2) Pull end cap aft to release attachment clips from curved ceiling panels.
- C. Install aft lowered ceiling end cap (See view 1, figure 401.)
  - (1) Hook attachment clips over curved ceiling panel.
  - (2) Push end cap forward as far as possible until attachment clips are fully engaged.
  - (3) Connect electrical leads at end cap.
- D. Restore aft lowered ceiling to normal configuration
  - (1) Install aft lowered ceiling panels No. 5 and No. 6.
  - (2) Hinge up aft lowered ceiling panels No. 1 and No. 2.

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

25-21-92

05

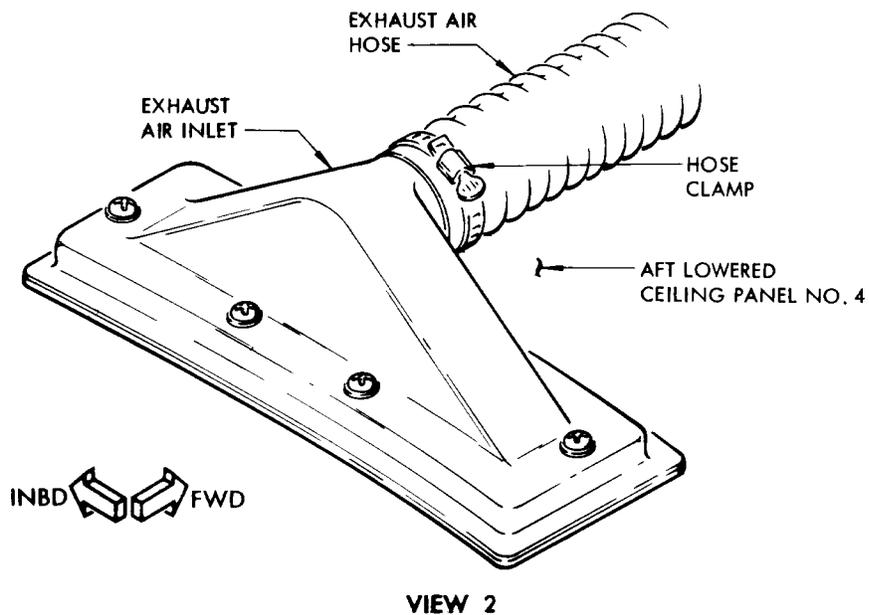
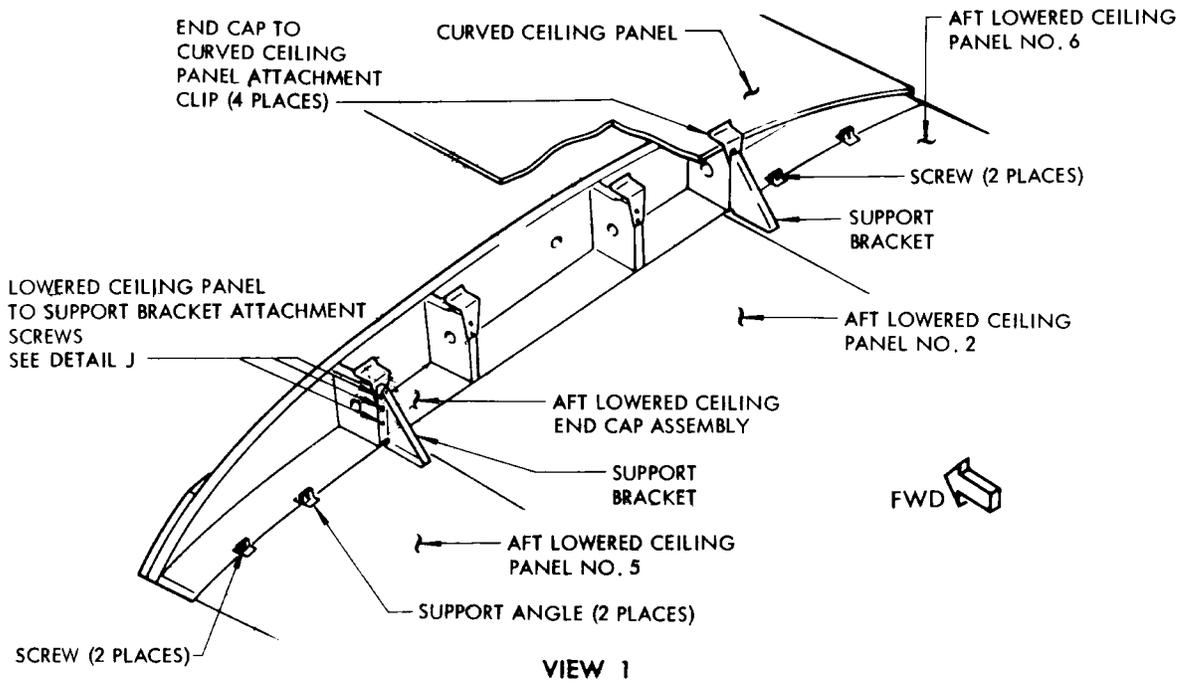
Page 404  
Dec 01/04



Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

25-21-92



Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

456035

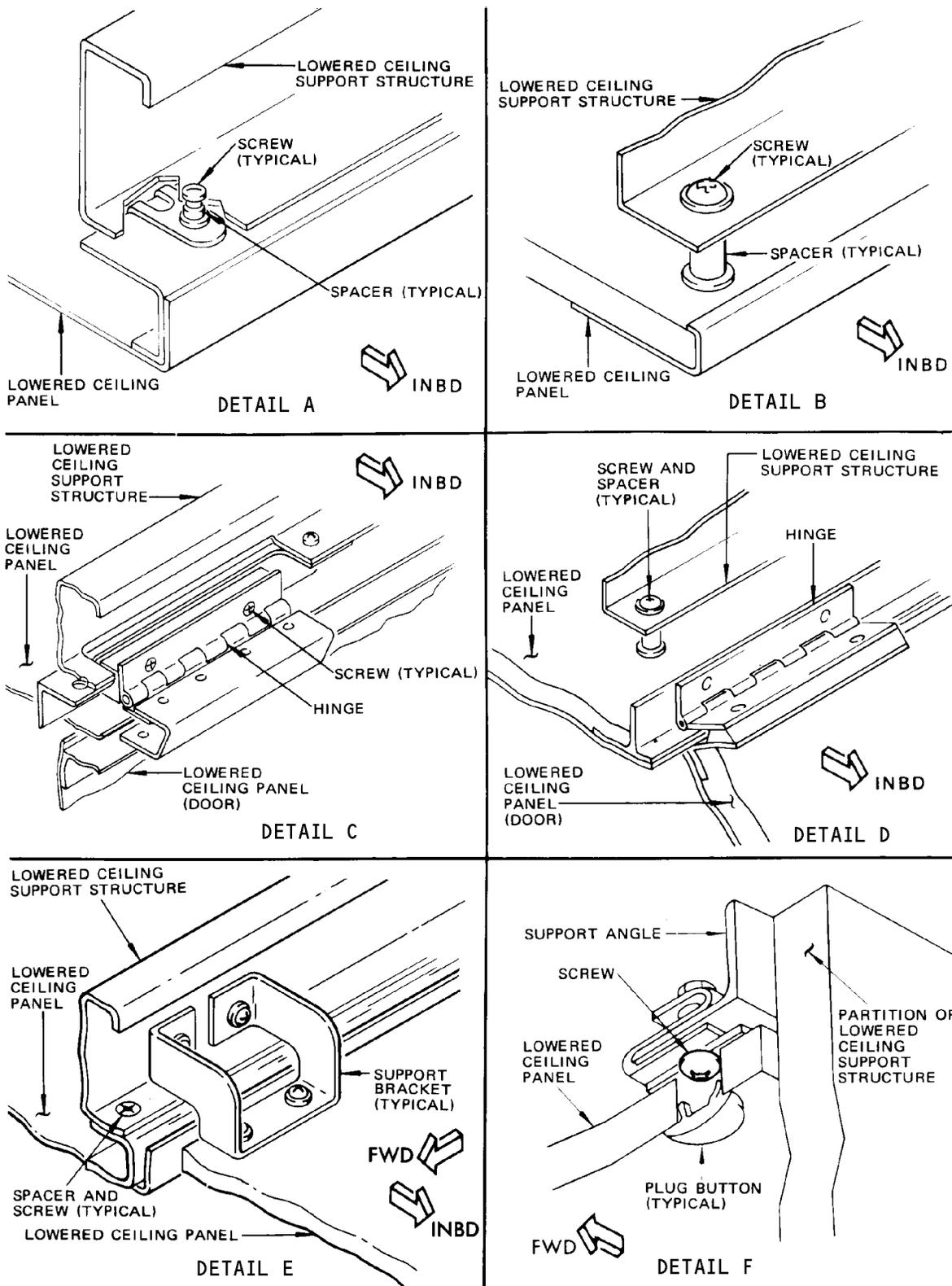
25-21-92

03

Page 406  
 Dec 01/04



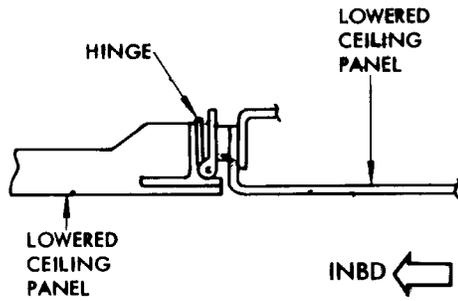
**MAINTENANCE MANUAL**



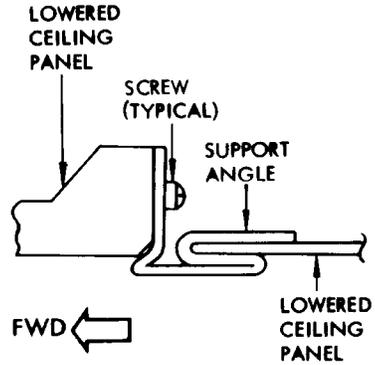
Aft Lowered Ceiling Installation  
Figure 401 (Sheet 3)

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

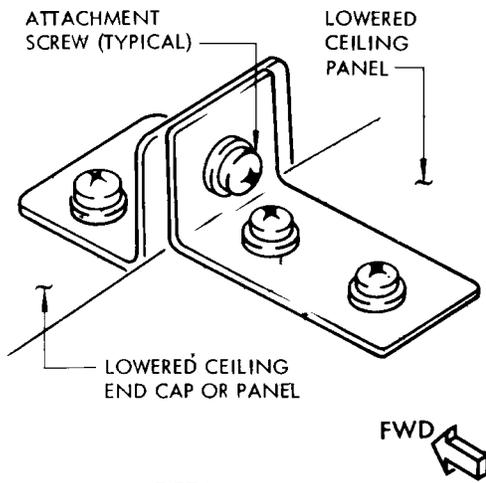
25-21-92



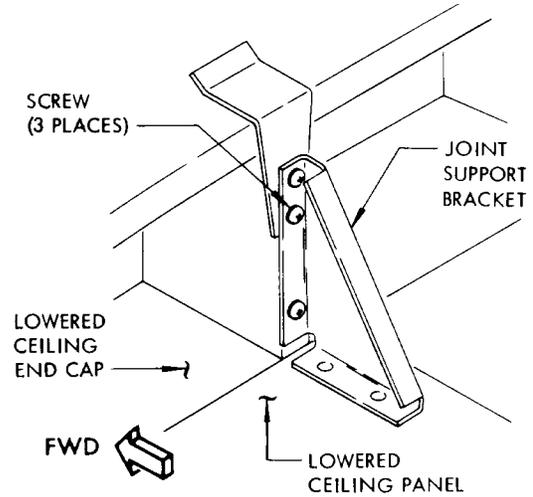
DETAIL G



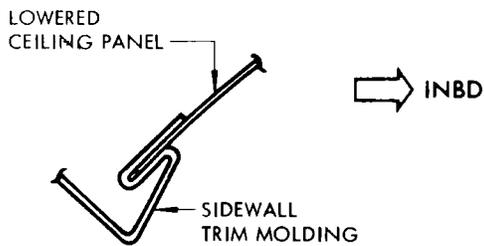
DETAIL H



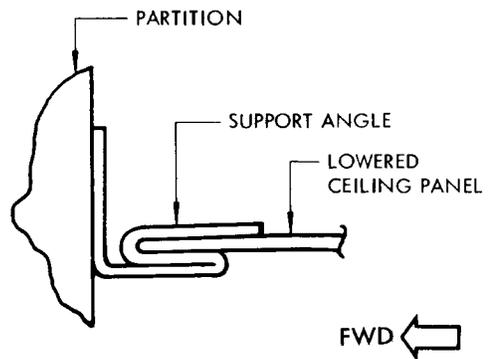
DETAIL I



DETAIL J



DETAIL K



DETAIL L

Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 4)

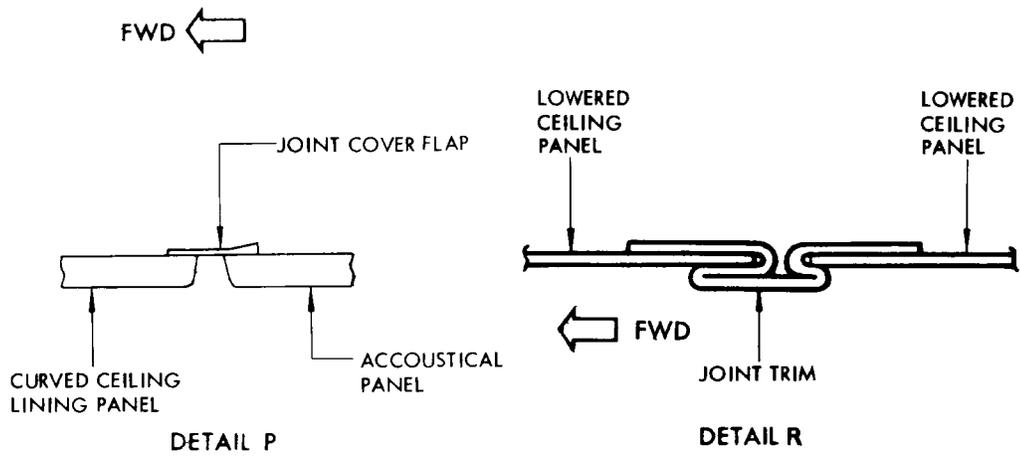
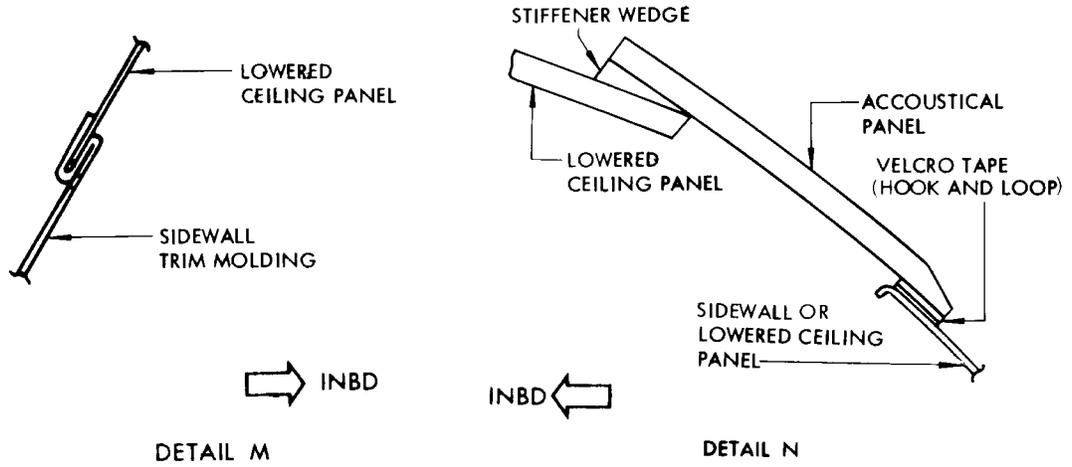
EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

456041

25-21-92

06

Page 408  
 Dec 01/04



Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 5)

EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

25-21-92

456045



## MAINTENANCE MANUAL

### COVE LIGHT COVERS – REMOVAL/INSTALLATION

#### 1. General

- A. The cove light covers comprise upper and lower covers which attach to the cove light raceway.
- B. The lower cove light cover is removed in sections approximately 6 feet in length. The upper cove light cover is removed in sections approximately 3 feet in length.
- C. All parts and fasteners removed should be identified for correct location upon reinstalling.

#### 2. Remove Cove Light Covers (See figure 401.)

- A. Operate cove light switch on galley attendant's panel to its OFF position and open applicable circuit breaker (s), LEFT COVE LIGHT and/or RIGHT COVE LIGHT, on circuit breaker panel P18.
- B. Remove upper trim extrusion by prying it inboard free of upper and lower cove covers.
- C. Lift lower cove cover upward and inboard to free it from gap covers and inboard trim extrusion on raceway.
- D. Remove cove gap covers by removing two screws securing each to upper cove cover assembly.
- E. Remove fluorescent lamps from sockets to gain access to upper cove cover support brackets.
- F. Remove two screws through upper cove cover support bracket at each joint and remove upper cove cover assembly.

#### 3. Install Cove Light Covers (See figure 401.)

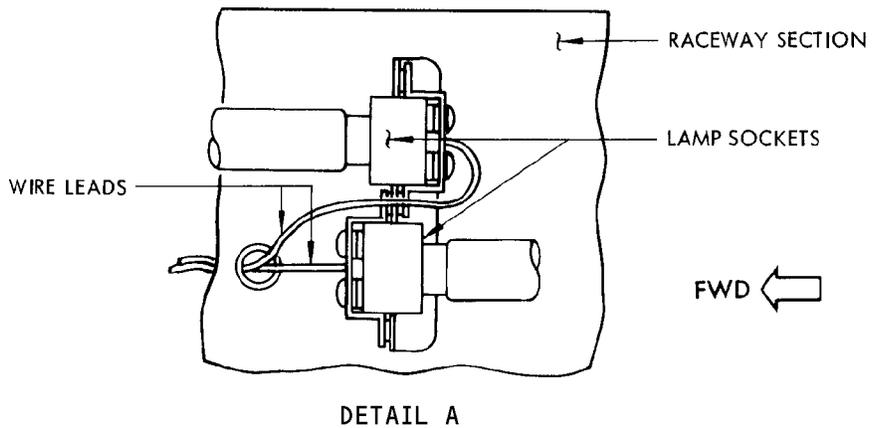
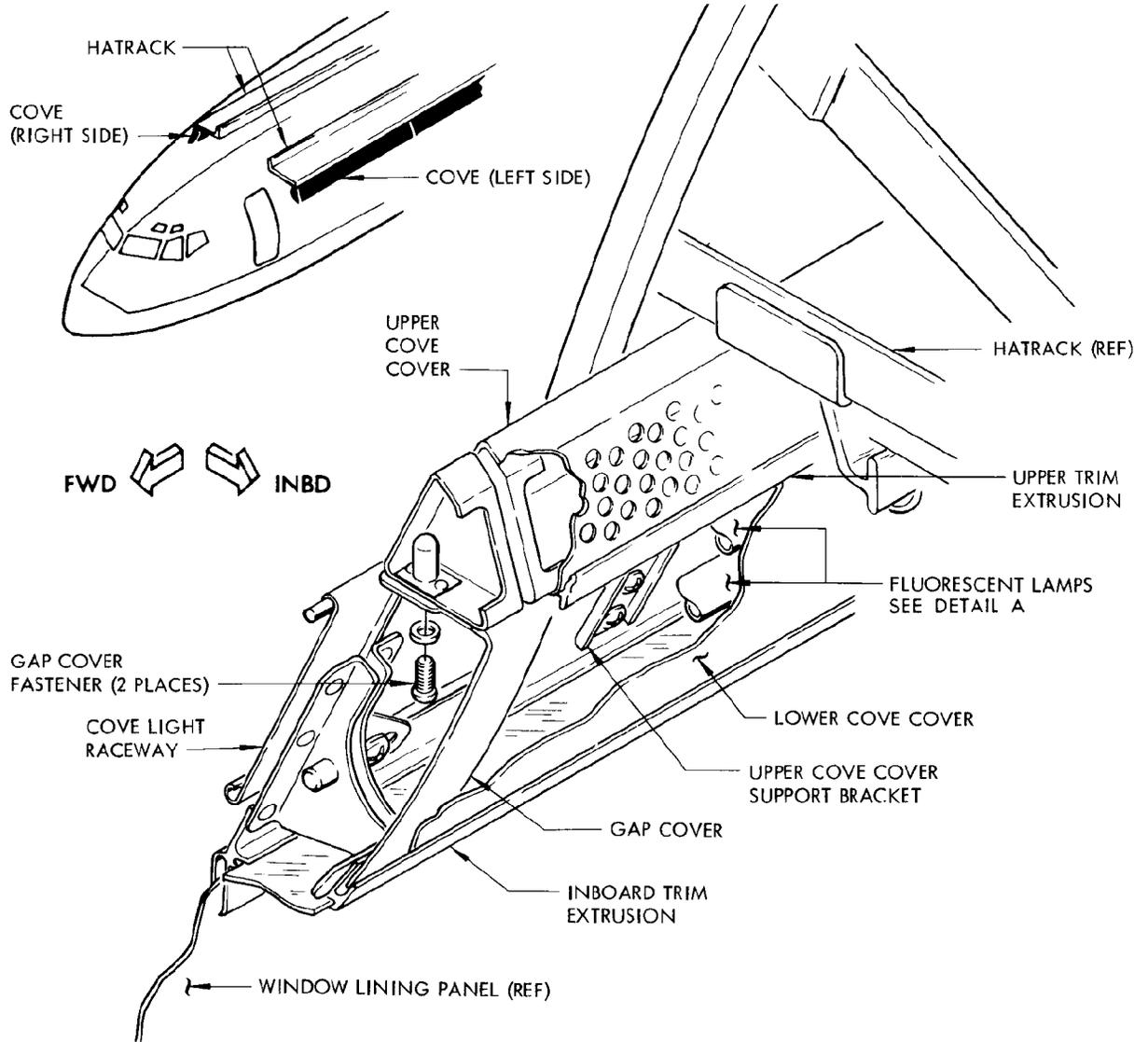
- A. Operate cove light switch on galley attendant's panel to its OFF position and open applicable circuit breaker(s), LEFT COVE LIGHT and/or RIGHT COVE LIGHT, on circuit breaker panel P18.
- B. Set upper cove cover assembly in position and secure with two screws through each support bracket.
- C. Install fluorescent lamps in sockets.
- D. Set cove gap covers in position and fasten to upper cove cover assembly with two screws through each gap cover.
- E. Insert bottom edge of lower cove cover in raceway inboard extrusion and push upper edge of cover into position.
- F. Install upper trim extrusion between upper and lower cove cover assemblies.
- G. Close circuit breaker(s) on circuit breaker panel P18-3 and check that cove lights function by switching on at galley attendant's panel.

EFFECTIVITY  
Airplanes without New Look  
Interior

25-21-101

03

Page 401  
Dec 01/04



Cove Light Cover Installation  
 Figure 401

EFFECTIVITY  
 Airplanes without New Look  
 Interior

456055

**25-21-101**

03

Page 402  
 Dec 01/04

COVE LIGHT RACEWAY – REMOVAL/INSTALLATION

1. General

- A. The cove light raceway is the structure upon which the fluorescent cove lights and the covers are mounted. The lens along the bottom of the raceway is included as part of the raceway assembly.
- B. The raceway assembly is removed in sections approximately 6 feet in length. The lens sections are approximately 3 feet in length.
- C. All parts and fasteners removed should be identified for correct location upon reinstalling.

2. Remove Cove Light Raceway (Fig. 401)

- A. Remove upper and lower cove covers (Ref 25-21-101, Cove Light Covers).

NOTE: This operation includes switching off the cove lights at the galley attendant's panel, and opening the appropriate circuit breaker(s) on circuit breaker panel P18.

- B. Detach electrical leads from fluorescent light at light ballast.
- C. With one hand on inside face of cove light lens and the other on outside face, push lens outboard against force of band spring to free inboard edge of lens from extrusion.
- D. Remove raceway guide pins and spring pins at raceway joints.
- E. Detach remaining screws through raceway assembly and remove cove light raceway.

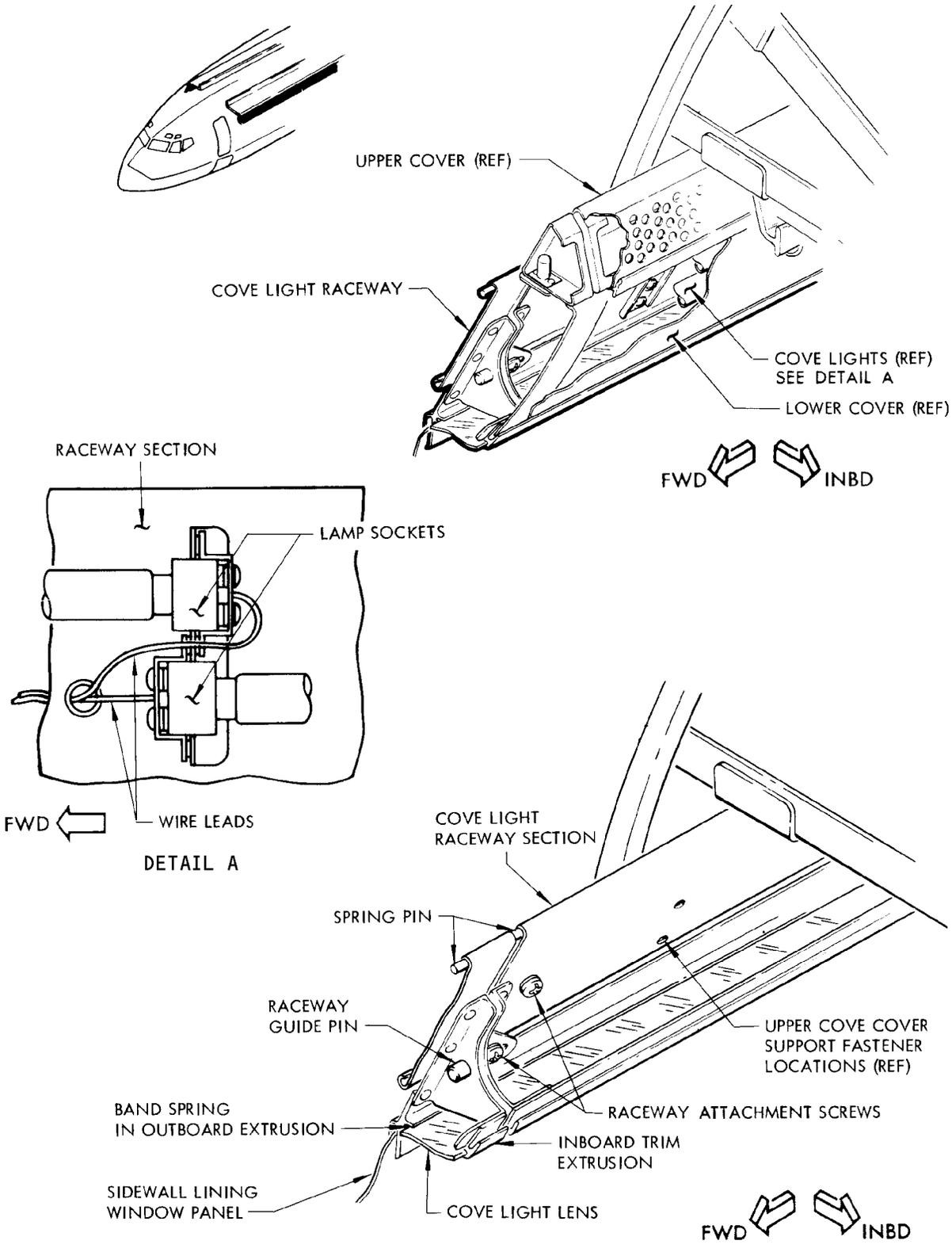
NOTE: The raceway sections at the aft end of the cabin are attached to their adjacent sections by two extra screw/nut assemblies.

3. Install Cove Light Raceway (Fig. 401)

- A. Ensure that cove light switch, at the galley attendant's panel, is OFF, and that the appropriate circuit breaker(s), LEFT COVE LIGHT and/or RIGHT COVE LIGHT, on circuit breaker panel P18, are open.
- B. Install screws attaching raceway assembly to cove supports. Do not completely tighten screws. Pass electrical leads through raceway holes at appropriate socket locations.
- C. Install raceway guide pins and spring pins at raceway joints to align sections.
- D. When raceway sections are aligned, tighten screws securing raceway to supports.

NOTE: Install two extra screw/nut assemblies to attach raceway sections at aft end of cabin to their adjacent sections.

- E. Place band spring in outboard extrusion strip and insert cove light lens. Push lens outboard against spring to engage it in inboard extrusion.
- F. Attach electrical leads to lamp sockets. (See detail A.)



Cove Light Raceway Installation  
 Figure 401

EFFECTIVITY  
 Airplanes without New Look  
 Interior

25-21-111

456057

**BOEING**  
**737**   
MAINTENANCE MANUAL

- G. Install upper and lower cove covers. Refer to 25-21-101, Cove Light Covers.

EFFECTIVITY  
Airplanes without New Look  
Interior

25-21-111

03

Page 403  
Dec 01/04

US

PASSENGER CABIN LINING AND INSULATION – DESCRIPTION AND OPERATION

1. General

A. The passenger cabin lining and insulation is designed to reduce the noise level, stabilize cabin temperature, and provide a decorative finish. The cabin lining and insulation consists of the sidewall lining, the curved ceiling and lowered ceiling panels, and the insulation installed to body structure throughout the passenger cabin. Information on the lining and insulation of all doors is included in the appropriate sections of Doors, Chapter 52.

2. Sidewall Lining

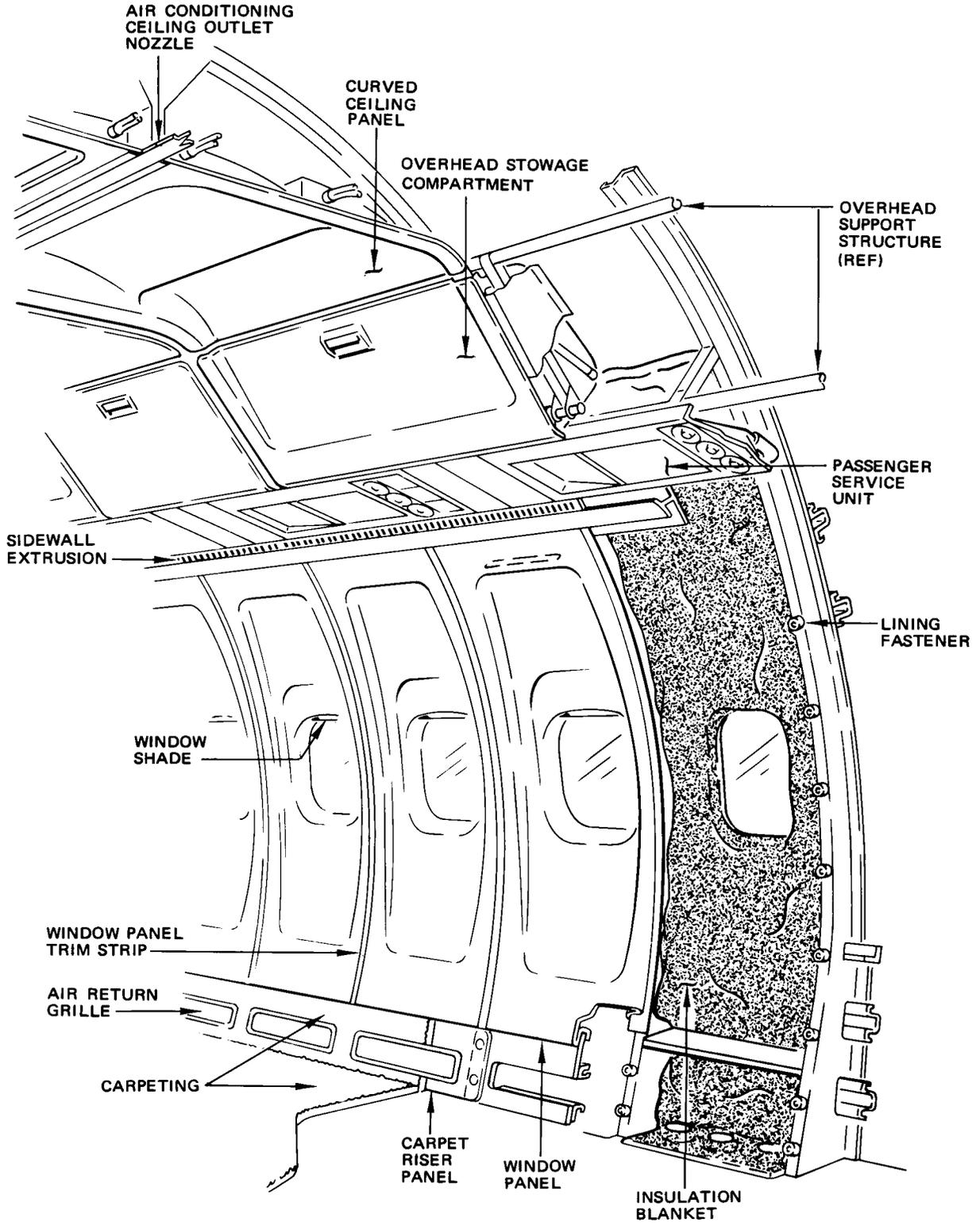
- A. The sidewall lining components include the window panels, carpet riser panels, air return grilles, and doorway lining panels. (See figure 1.)
- (1) A window panel consists of a formed aluminum panel with a stain resistant decorative covering. A roll-type window shade, plastic inner windowpane and the window reveal are attached to the outboard side of the window panel. A light for illumination of the sidewall is mounted in the window panel near the top. The window panels are secured at the top by the sidewall extrusion and by the carpet riser panel along the bottom edge. At each side the window panel is attached with vibration absorbing fasteners to the body structure. These fasteners are hidden by a trim strip which slides into the gap between window panels.
  - (2) A window shade is made of a flexible decorative material with one end attached to a spring-loaded roller and the other end attached to a stiffener. The roller is installed in brackets mounted on the outboard side of the window panel assembly. (See figure 2.) A spring-loaded shoe in either end of the stiffener rides in a groove in the window trim and a plastic handle is attached to the stiffener.
  - (3) Aluminum carpet riser panels provide the support for the carpeting which extends up the sidewall from the floor level to the bottom edge of the window panels. Air return grilles are installed in cutouts in the carpet riser panels to provide an exit for cabin conditioning air. The carpet riser panels overlap at each body frame and are attached to the frame with vibration absorbing fasteners.
  - (4) Aluminum lining panels with a stain-resistant decorative covering are installed in the areas around the entry and service doors. These lining panels are attached to structure with screws and quick-release fasteners. In some areas the panel edges are held by retainer strips.

EFFECTIVITY  
New Look Interior

25-21-300

ARG

Page 1  
Dec 01/04

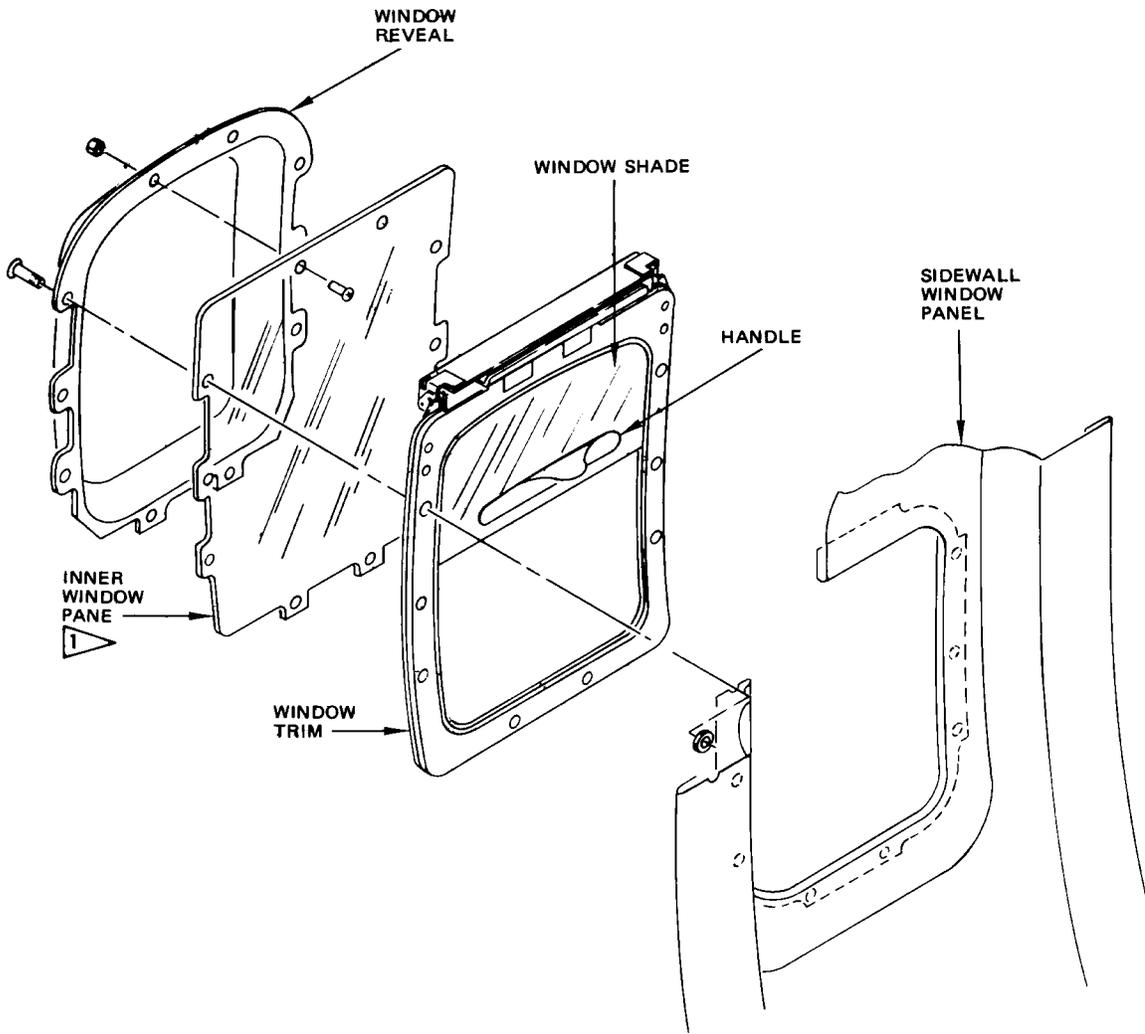


Passenger Cabin Lining and Insulation  
 Figure 1

EFFECTIVITY  
 New Look Interior

25-21-300

456064



 THICKNESS VARIES WITH WINDOW LOCATION

Window Shade  
 Figure 2

EFFECTIVITY  
 New Look Interior

25-21-300

### 3. Ceiling Lining

#### A. General

- (1) The cabin ceiling lining consists primarily of the curved ceiling panels. In the forward and aft ends of the cabin the lowered ceilings are installed to provide a flat ceiling area.

#### B. Curved Ceiling Panels

- (1) The curved ceiling panels cover the area on each side of the cabin between the top of the overhead stowage bins and the air conditioning nozzle that is installed along the center of the passenger cabin. The curved ceiling panels are formed from fiberglass into a shape that gives the ceiling a sculptured or contoured appearance. This shape allows indirect lighting of the cabin with lights installed behind the ceiling panels. These sculptured ceiling panels are separated into groups of two pairs each by the installation of shorter nonsculptured ceiling panels. The length and shape of the ceiling panels match that of the overhead stowage bins.
- (2) The inboard edge of each curved ceiling panel is supported by sliding into a channel on the ceiling air conditioning nozzle. The outboard edge is supported by a hinge which will allow the ceiling panel to move outboard and swing down to permit maintenance of the ceiling lights. Each ceiling panel is equipped with a lanyard to limit rotation.

#### C. Lowered Ceiling Panels

- (1) The flat ceiling panels of the forward and aft lowered ceilings consist of a honeycomb core with a fiberglass facing on each side. The inboard surface is covered with a decorative material.
- (2) Small curved panels are installed along each side of the forward lowered ceiling in areas over the overhead stowage compartments. These panels are similar in shape to the main cabin curved ceiling panels to blend with the stowage compartments and to provide indirect lighting in some sections of the lowered ceiling area. Those panels equipped with ceiling lights are hinged in the same manner as the main cabin curved ceiling panels.
- (3) An end cap is installed across the aft end of the forward lowered ceiling and across the forward end of the aft lowered ceiling. The end caps blend the flat ceiling into the curved ceiling and overhead stowage compartment contours.

### 4. Ceiling Support Structure

#### A. Ceiling Center Support

- (1) The ceiling center support consists of the air conditioning outlet extrusion installed along the centerline of the cabin in the curved ceiling area. The inboard edges of the curved ceiling panels are supported by sliding into a channel in the outlet extrusion.

**BOEING**  
**737**   
MAINTENANCE MANUAL

B. Overhead Support Structure System

- (1) The overhead support structure system consists of two parallel structural members installed along each side of the main cabin. These members support the curved ceiling panels, overhead stowage compartments, passenger service units, and the upper end of partitions.
- (2) The parallel structural members are connected at intervals by vertical members which contain latch and support brackets for the overhead stowage compartments. A series of turnbuckles attach the parallel members to fuselage structure and allows the overhead support structure to be readily removable.

5. Passenger Cabin Insulation

- A. The passenger cabin insulation consists of thermal acoustical insulating blankets which are constructed of a flexible type fiberglass insulation covered with a moisture and flame-resistant fabric. The insulating blankets are attached to the body structure behind the sidewall and ceiling lining with lining retainer studs and double surface tape.
- B. The cabin insulation, besides performing an insulating and sound absorbing function, serves to prevent moisture which condenses on the inner surface of the fuselage skin from leaking into the passenger compartment. The insulation is designed to allow this moisture to drain down behind the sidewall and into the lower fuselage where it can be drained from the airplane. To perform this function the insulation is installed with all edge flaps overlapping adjacent blankets to act as shingles and the blankets are fitted tightly around any structure which protrudes through the insulation.

EFFECTIVITY  
New Look Interior

25-21-300

06

Page 5  
Dec 01/04

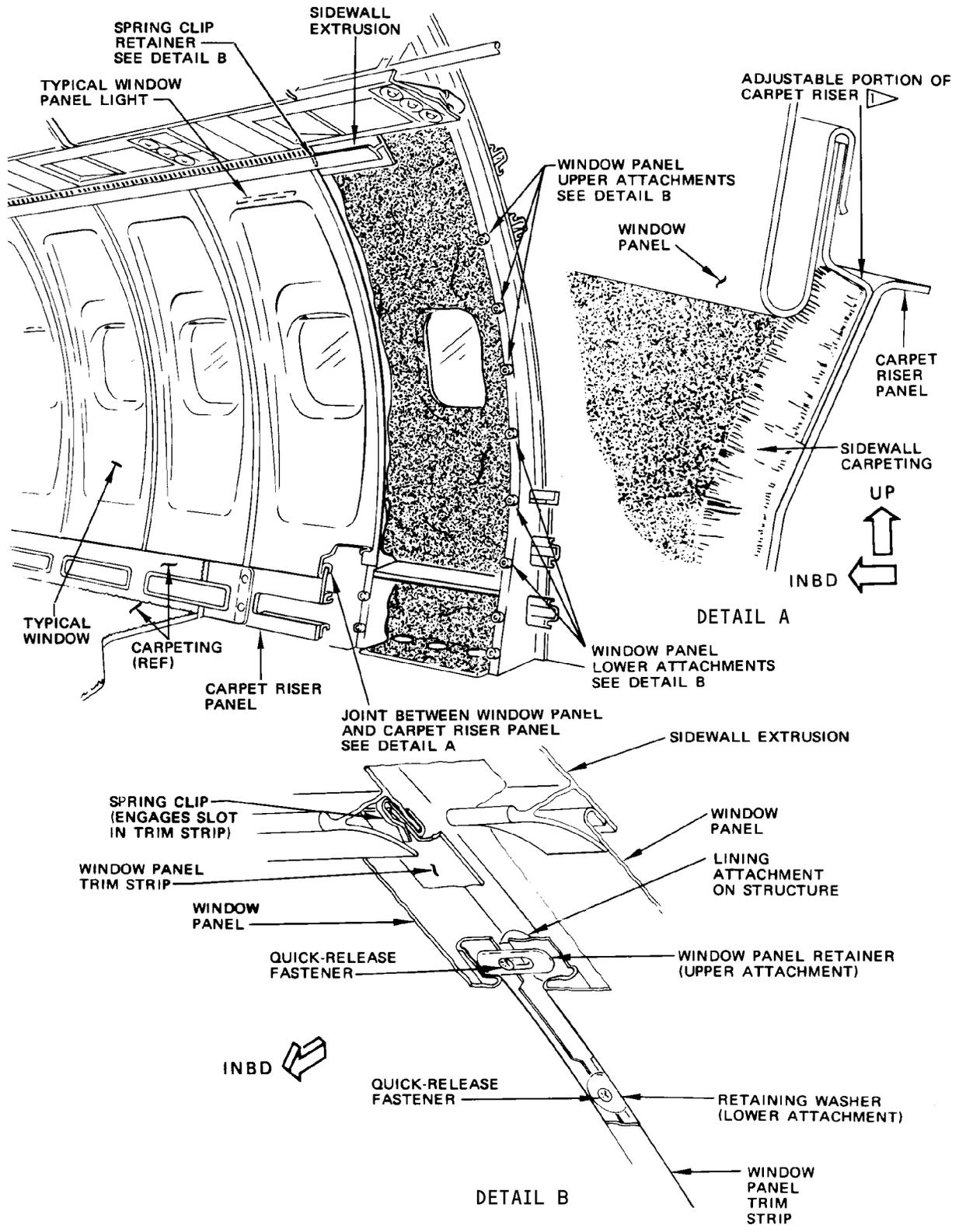
WINDOW PANEL - REMOVAL/INSTALLATION

1. Remove Window Panel

- A. Open WINDOW LIGHTS circuit breaker on panel P18.
- B. Remove passenger equipment such as seats, partitions, and galley units as necessary to gain access to window panel.
- C. Remove trim strip at each side of window panel. (See figure 401.)
  - (1) Insert a screwdriver under spring clip retaining top of trim strip and move trim strip down until slot is free of spring clip.
  - (2) Slide trim strip down between window panels and remove it at bottom edge of window panels.
- D. Remove lining fasteners along each side of window panel.
  - (1) Rotate quick-release fasteners 90 degrees to release.
  - (2) On the upper attachments, turn window panel retainer 90 degrees and remove through gap between window panels.
  - (3) On the lower attachments, remove retaining washer and quick-release fastener through gap between window panels.
- E. Push window panel up into sidewall extrusion until bottom edge of panel is free of carpet riser panel.
- F. Pull bottom of window panel inboard, then pull down on window panel until top edge is free of sidewall extrusion.
- G. Support window panel and disconnect electrical plug from window panel light on outboard side of panel.
- H. Remove window panel.

2. Install Window Panel

- A. Support window panel adjacent to area in which it is to be installed and connect electrical plug to window panel light on outboard side of panel.
- B. Push top edge of window panel up into the air conditioning sidewall outlet until bottom edge will engage the carpet riser panel. (See figure 401.)
- C. Push window panel down to align window panel opening with outer window and to engage tabs on bottom edge of window panel with carpet riser panel.
- D. Check that all three tabs on window panel are engaged with carpet riser panel and adjust riser panel if necessary.
  - (1) Pull back sidewall carpet slightly and loosen screws securing adjustable top edge of riser panel.
  - (2) Move top edge of riser panel up or down as necessary to engage all three tabs on window panel.
  - (3) Tighten screws to secure top edge of riser panel and push carpet back into place.
- E. Position window panel to provide equal gap on each side between adjacent panels. The gap between window panels must be 1.10 ( $\pm 0.25$ ) inch and must not vary more than 0.25 inch from top to bottom of window panel.



Window Panel Installation  
 Figure 401

EFFECTIVITY  
 New Look Interior

25-21-311

456081



## MAINTENANCE MANUAL

- F. Install lining fasteners along each side of window panel.
  - (1) On the upper attachments insert window panel retainer through gap between panels and rotate 90 degrees to engage both panels.
  - (2) On the lower attachments place retaining washer and quick-release fastener in position in gap between window panels.
  - (3) Engage quick-release fasteners by rotating 90 degrees.
- G. Check that any warpage at forward and aft sides of reveal where contact is made with structural window does not exceed  $\pm 0.10$  inch from a straight line.
- H. Install trim strip at each side of window panel.
  - (1) Insert slotted end of trim strip into gap between window panels at bottom edge of panels.
  - (2) Push trim strip up until spring clip-on air conditioning duct engages slot in upper end of trim strip.
- I. Install any passenger equipment removed for access to window panel.
- J. Close WINDOW LIGHTS circuit breakers on panel P18.
- K. Check that window light on sidewall panel operates properly.

EFFECTIVITY  
New Look Interior

25-21-311

04

Page 403  
Dec 01/04



## MAINTENANCE MANUAL

### WINDOW SHADES - REMOVAL/INSTALLATION

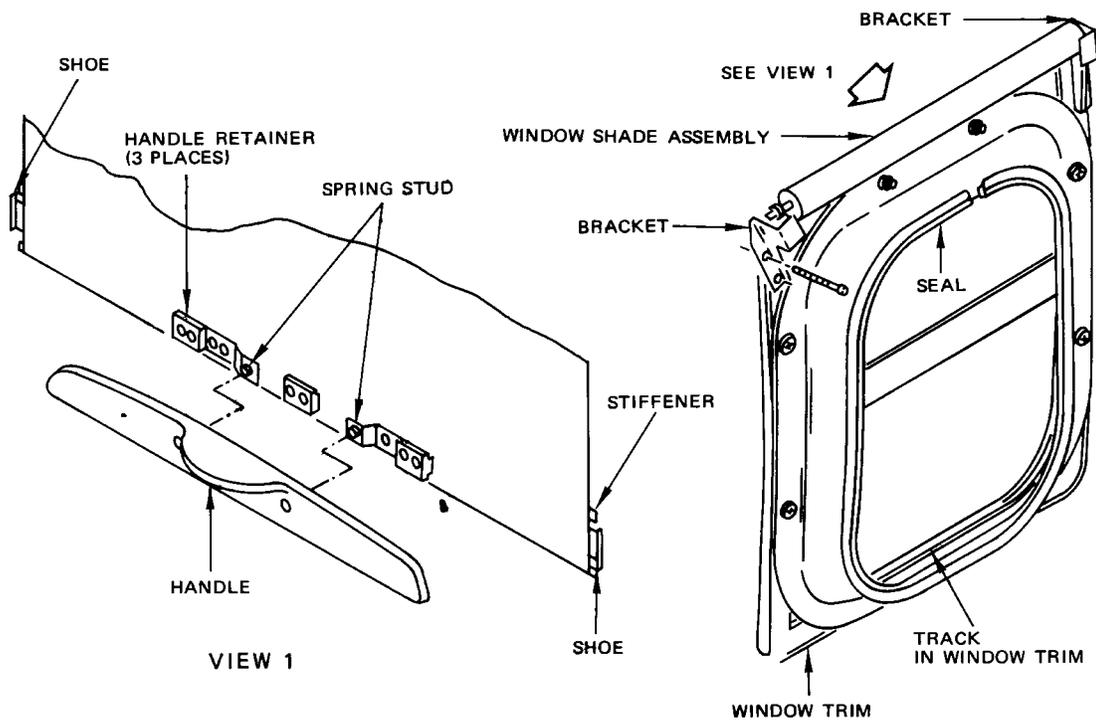
1. Remove Window Shade (Fig. 401)
  - A. Remove window panel for access to window shade (Ref 25-21-311, Removal/Installation).
  - B. Remove window shade handle by pressing in spring studs and sliding to disengage (Fig. 401).
  - C. On LV-JMW thru LV-JMZ, LV-JTD, LV-JTO, LV-LEB, remove shade and brackets.
    - (1) Remove one screw and loosen the other on the bracket which has the slotted hole.
    - (2) Remove shade from brackets and withdraw shade and stiffeners from track in window trim.
  - D. On ALL EXCEPT LV-JMW thru LV-JMZ, LV-JTD, LV-JTO, LV-LEB, remove shade and bracket.
    - (1) Rotate clip back temporarily to allow spring to unwind.
    - (2) Remove two fasteners from each end of bracket and three from front.
    - (3) Remove bracket and withdraw shade and stiffeners from track in window trim. Remove bracket and shade as a unit.
2. Install Window Shade (Fig. 401)
  - A. Check that track in window trim is clean (Ref Window Shades - Cleaning/Painting).
  - B. Install spring and shoe in either end of stiffener.
  - C. On LV-JMW thru LV-JMZ, LV-JDT, LV-JTO, LV-LEB, install and adjust shade.
    - (1) Engage shoes in track and insert shade in window panel.
    - (2) Attach shade handle to prevent shade from fully withdrawing from track.
    - (3) Roll up window shade and insert one end of roller in bracket.
    - (4) Prewind roller spring five turns clockwise with shade rolled up. Engage other end of roller in slotted bracket.
    - (5) Install bracket fasteners and adjust so that shade movement is parallel to track in window trim.
  - D. On ALL EXCEPT LV-JMW thru LV-JMZ, LV-JDT, LV-JTO, LV-LEB, install and adjust shade.
    - (1) Engage shoes in track and insert shade in window panel.
    - (2) Attach shade handle to prevent shade from fully withdrawing from track.
    - (3) Attach bracket to window frame seven places.
    - (4) Withdraw end clip and prewind roller approximately five turns with shade in up position. Engage end clip.
  - E. Operate shade several times through complete up and down positions. Shade must operate smoothly without sticking or wrinkling shade material. If shade sticks or operates unevenly, remove window shade and check shoes in stiffener for smooth finish on sliding surface. Also, check length of shoes.

EFFECTIVITY  
New Look Interior

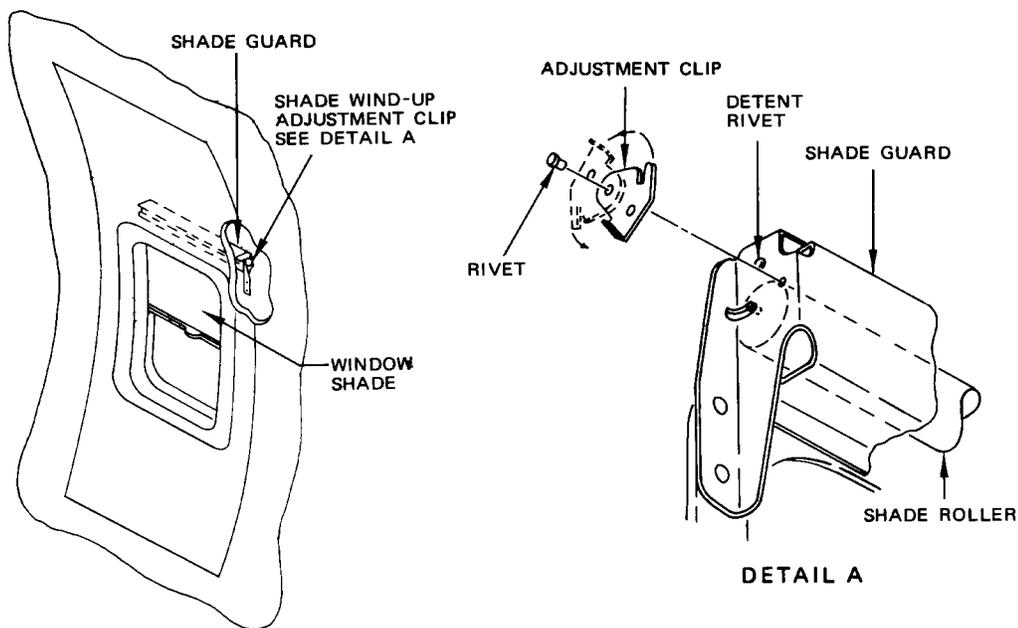
25-21-313

06

Page 401  
Dec 01/04



AR LV-JMW THRU LV-JMZ, LV-JDT, LV-JTO, LV-LEB



AR ALL EXCEPT LV-JMW THRU LV-JMZ, LV-JDT, LV-JTO, LV-LEB

Window Shade Installation  
 Figure 401

EFFECTIVITY  
 New Look Interior

25-21-313

**BOEING**  
**737**   
MAINTENANCE MANUAL

- F. Pull shade to down position and tap window panel with fingers. Shade must not creep up. Adjust shade wind-up as required.
- G. Install window panel (Ref 25-21-311, Removal/Installation).

EFFECTIVITY  
New Look Interior

25-21-313

01

Page 403  
Dec 01/04

WINDOW SHADES - CLEANING/PAINTING

1. Window Shade Track Cleaning
  - A. Fabricate shade track cleaning tool (Fig. 701).
  - B. Slip gauze covered edge of tool in window track and slide up and down until track is clean.

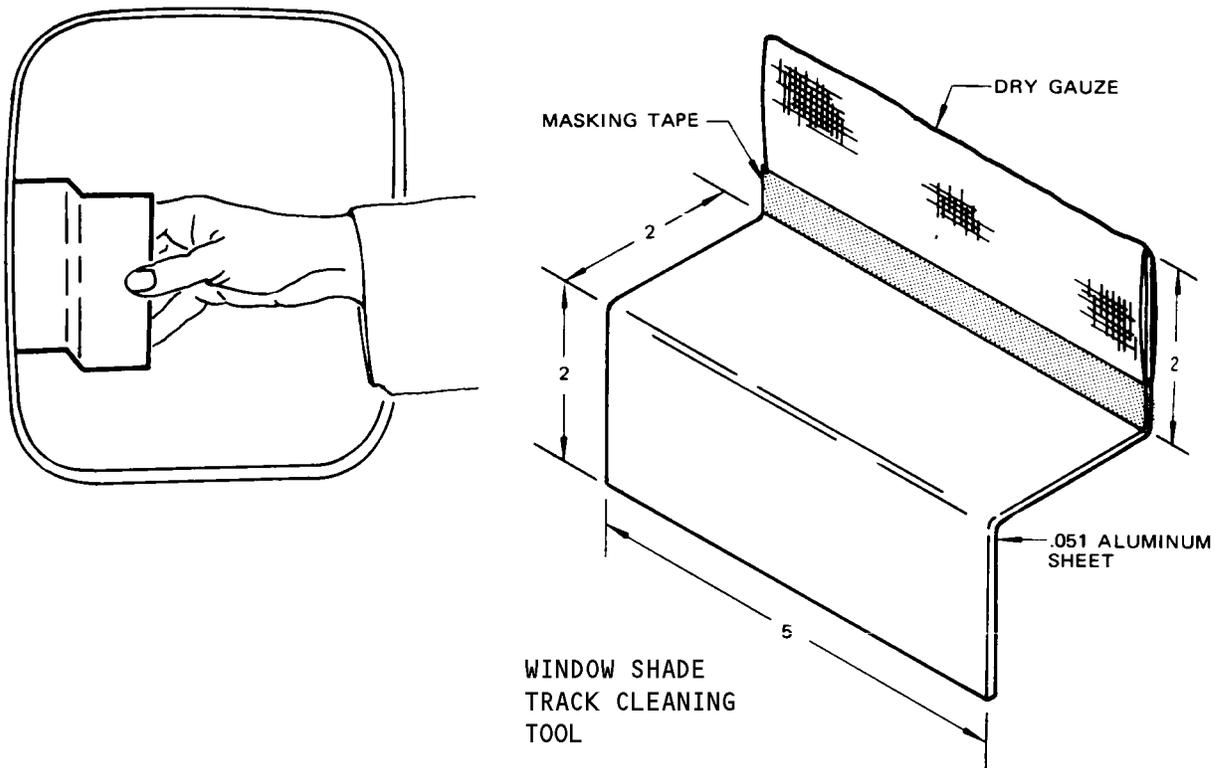
EFFECTIVITY

ALL

25-21-313

02

Page 701  
Dec 01/04



Window Shade Track Cleaning  
 Figure 701

EFFECTIVITY  
 New Look Interior

456101

25-21-313

07

Page 702  
 Dec 01/04



## MAINTENANCE MANUAL

### WINDOW SHADES – APPROVED REPAIRS

#### 1. General

- A. Damaged window shade assemblies may be replaced with new assemblies if desired, however, the shade material may be renewed according to the following procedure.
- B. A fixture should be constructed to assure proper alignment of shade material on roller and stiffener.

#### 2. Equipment and Materials

- A. Repair Materials (Preferred)(Ref 20-30-51)
  - (1) Window Shade Material – Mylar, aluminum foil, vinyl laminate 0.014 inch thick; John Schneller and Associates.
  - (2) Aluminum Pressure Sensitive Tape – No. 425
  - (3) Adhesive – Pro-Seal 501
- B. Repair Materials (Optional)(Ref 20-30-51)
  - (1) Window Shade Material – Mylar, aluminum foil, vinyl laminate 0.007-0.009 inch thick; Seiberling Rubber Co.
  - (2) Aluminum Pressure Sensitive Tape – No. 3659
  - (3) Adhesive – Pro-Seal 501

#### 3. Repair Window Shade

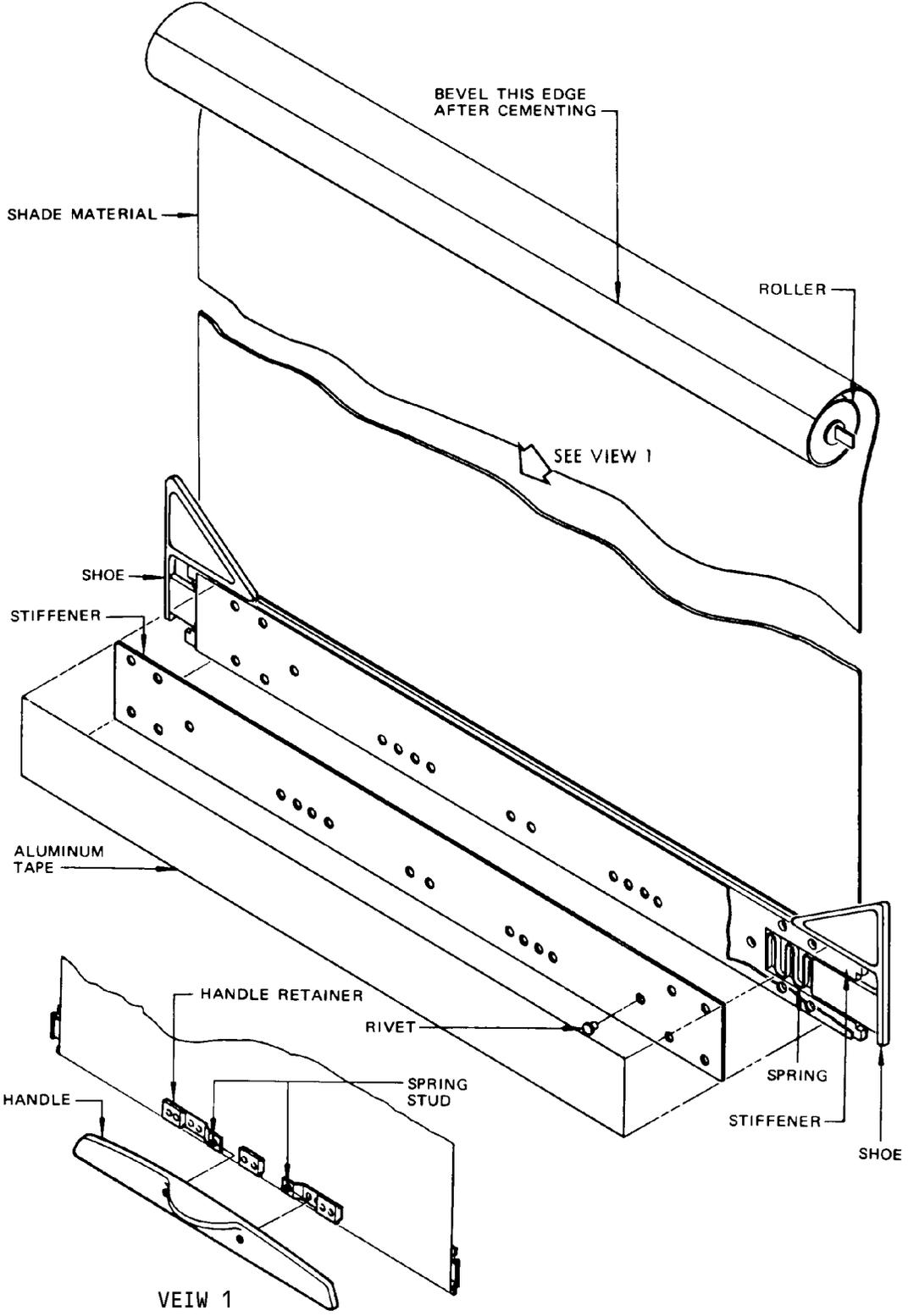
- A. Replace damaged shade material (Fig. 801).
  - (1) Remove window shade assembly.
  - (2) Remove shade from roller and clean roller.
  - (3) Remove aluminum tape on stiffener.
  - (4) Carefully drill out rivets in stiffener.
  - (5) Cut shade material to proper size.
  - (6) Rivet shade material to stiffener with Mylar (silver) side down.
  - (7) Rivet handle retainers and spring studs in place.
  - (8) Cement Mylar (silver) side of shade to roller (apply cement to a 90-degree arc of roller). When cement has dried bevel edge of shade by sanding to fair with roller surface.
  - (9) Install aluminum tape on stiffener.
  - (10) Install window shade assembly.

EFFECTIVITY  
New Look Interior

25-21-313

06

Page 801  
Dec 01/04



Window Shade Assembly Repair  
 Figure 801

EFFECTIVITY  
 New Look Interior

25-21-313



## MAINTENANCE MANUAL

### AIR RETURN GRILLE - REMOVAL/INSTALLATION

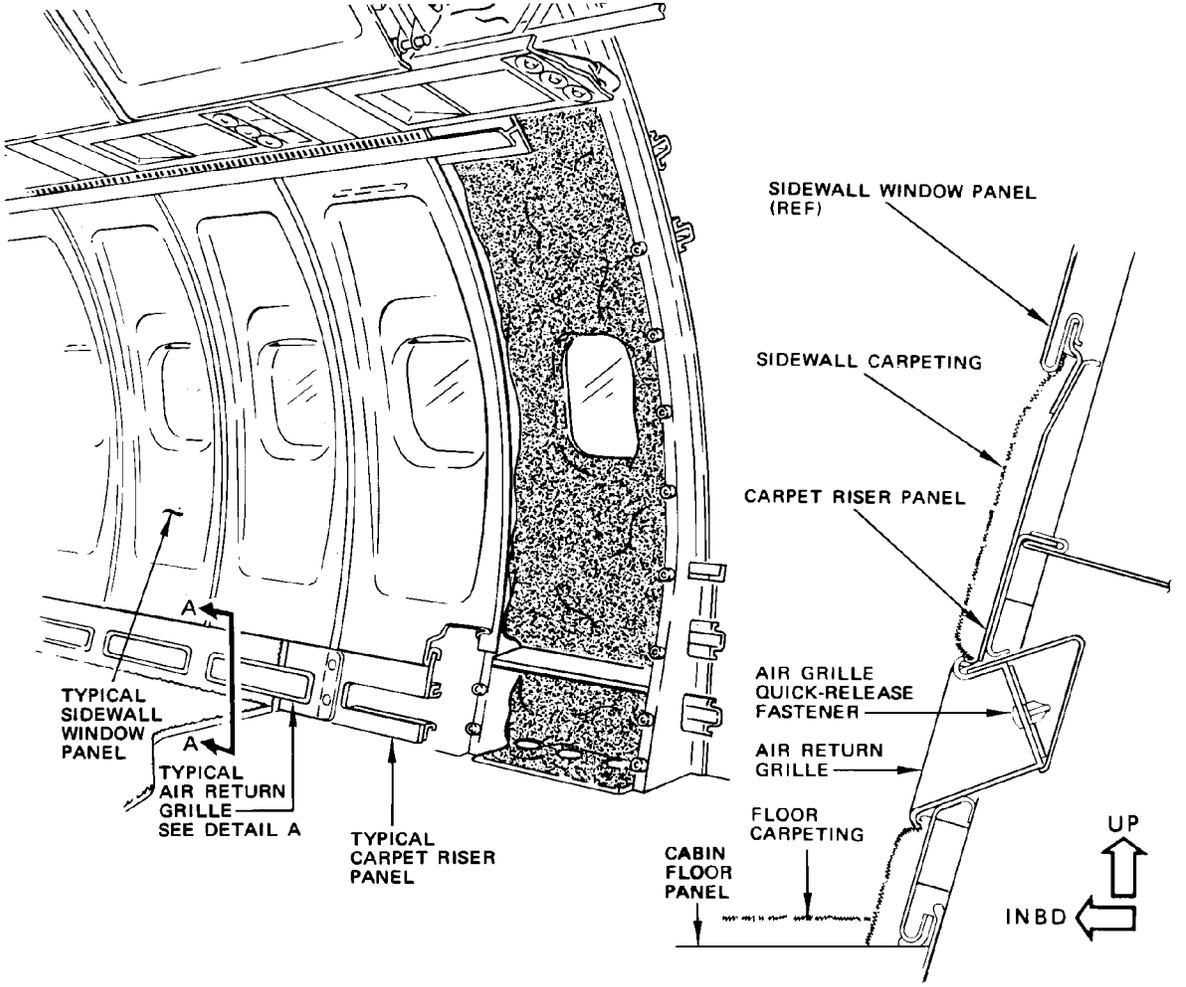
1. Remove Air Return Grille
  - A. At each end of air grille rotate quick-release fastener 90 degrees to unlock. (See figure 401.)
  - B. Pull air grille inboard to remove.
2. Install Air Return Grille
  - A. Position air grille in opening in carpet riser panel with edges overlapping the sidewall carpeting. (See figure 401.)
  - B. At each end of air grille rotate quick-release fastener 90 degrees to lock.

EFFECTIVITY  
New Look Interior

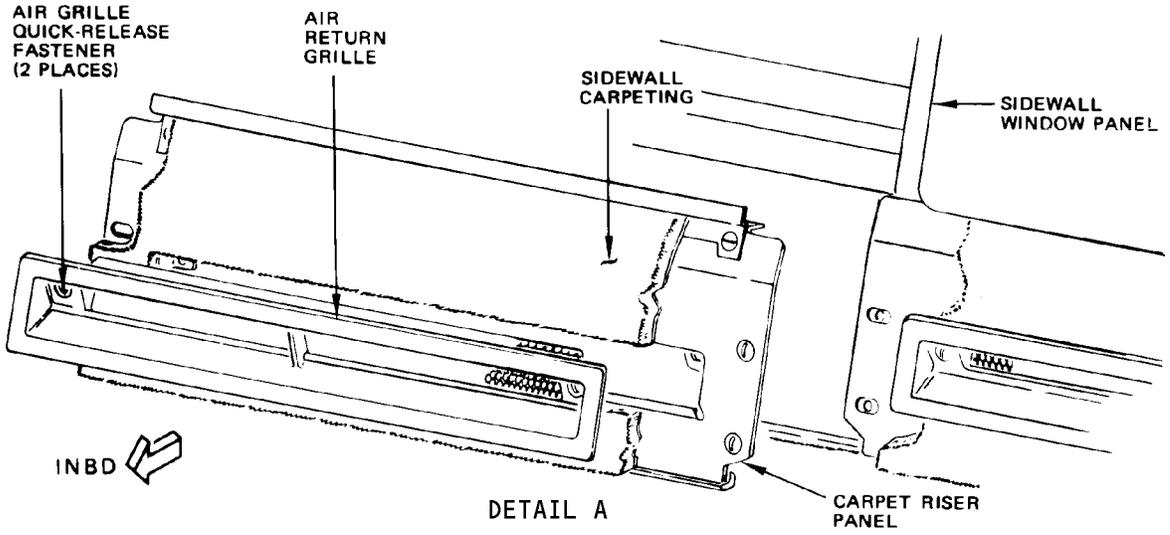
25-21-315

03

Page 401  
Dec 01/04



SECTION A-A



DETAIL A

Air Return Grille Installation  
 Figure 401

EFFECTIVITY  
 New Look Interior

25-21-315

456109

CARPET RISER PANEL – REMOVAL/INSTALLATION

1. Remove Carpet Riser Panel

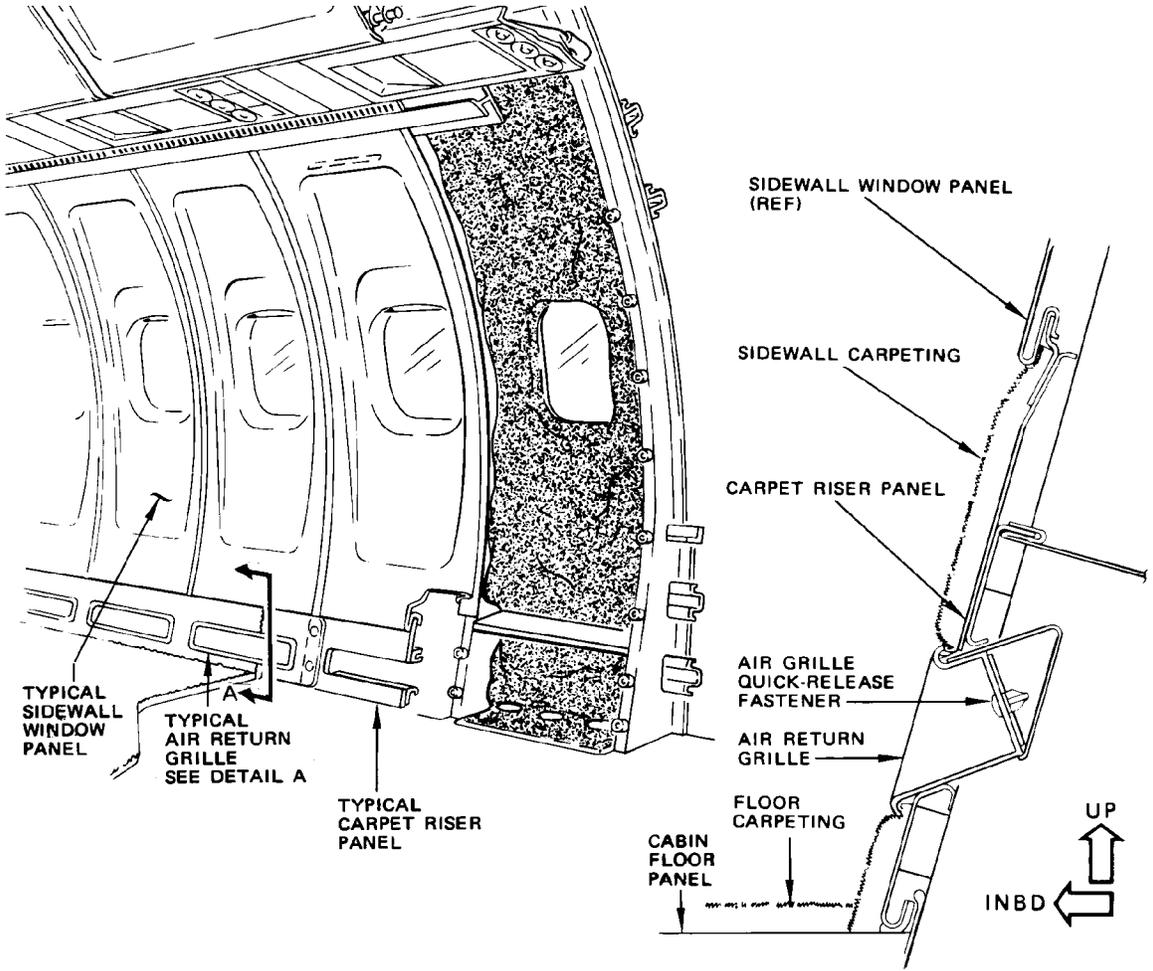
- A. Remove air return grilles from the section of sidewall carpet that covers the carpet riser panel to be removed (Ref 25-21-315, Air Return Grille – Removal/Installation).

**NOTE:** The sidewall carpet is installed in lengths which may span up to three carpet riser panels. Therefore, it is necessary to remove air return grilles from the carpet riser panels covered by that carpet section to allow removal of the carpet.

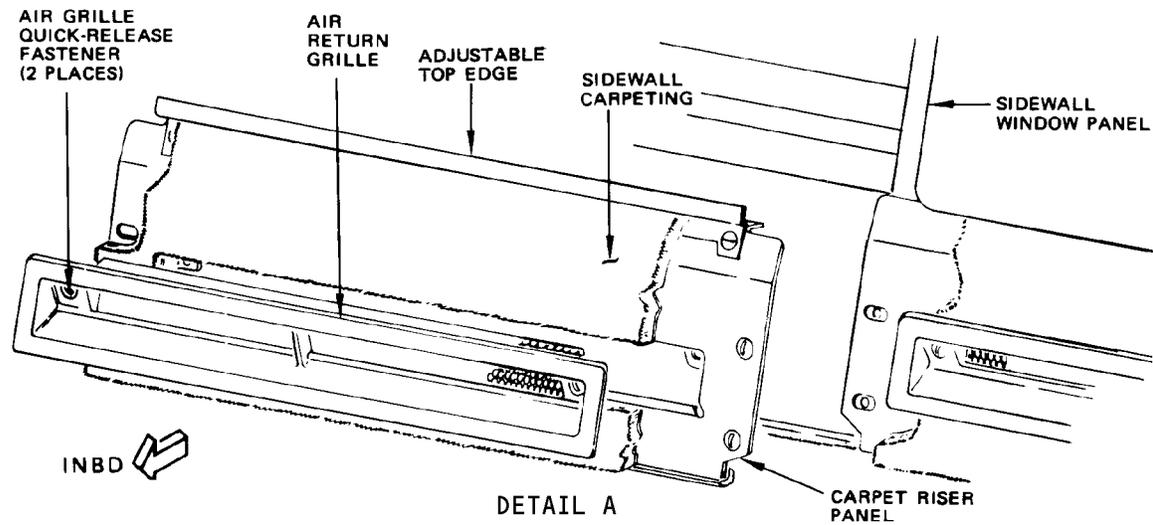
- B. Pull sidewall carpet section away from tape securing it to carpet riser panels.
- C. Loosen screws securing adjustable top edge of carpet riser panel and slide top edge down to clear window panel (Fig. 401).
- D. Rotate two quick-release fasteners on carpet riser panel 90 degrees to unlock. Also unlock fasteners on adjacent overlapping carpet riser panel.
- E. Pull inboard on end of panel containing quick-release fasteners, slide opposite end out from under adjacent carpet riser panel, and remove panel.

2. Install Carpet Riser Panel

- A. Slide end of carpet riser panel that does not contain fasteners under adjacent panel and engage angle on outboard side with fire stop panel in sidewall (Fig. 401).
- B. Lock quick-release fasteners on carpet riser panel and adjacent panel by rotating 90 degrees.
- C. Push up adjustable top edge of carpet riser panel to engage all three tabs on window panel and tighten screws to secure top edge.
- D. Install sidewall carpet section on carpet riser panels by pressing against double-surface tape.
- E. Install air return grilles. Refer to 25-21-315, Air Return Grille – Removal/Installation.



SECTION A-A



DETAIL A

Carpet Riser Panel Installation  
 Figure 401

EFFECTIVITY  
 New Look Interior

**25-21-321**

456127



## MAINTENANCE MANUAL

### SIDEWALL LINING PANELS (AFT ENTRY AND AFT SERVICE DOORWAYS) – REMOVAL/INSTALLATION

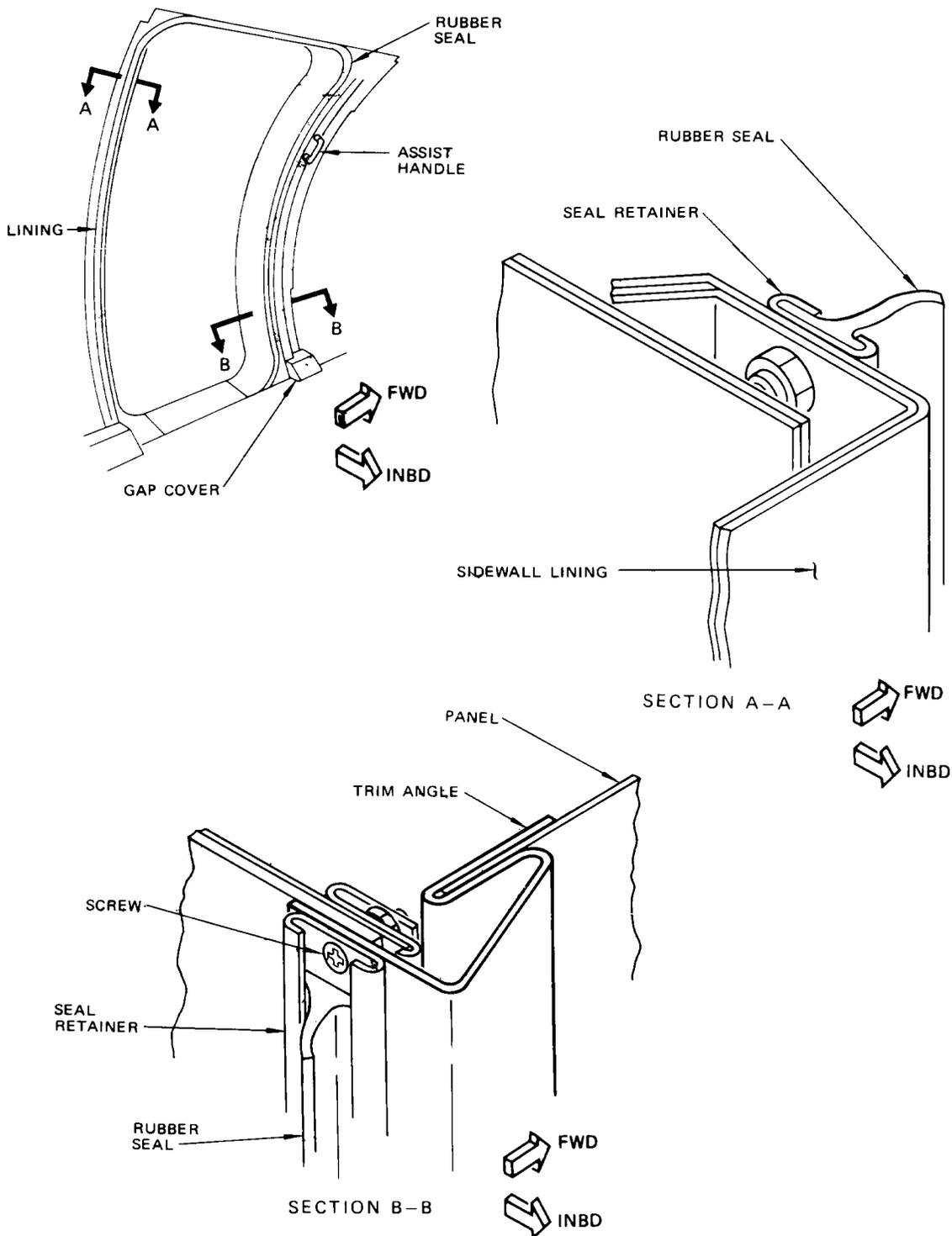
1. General
  - A. These procedures apply to the sidewall lining attached to the structure around the aft entry and aft service door openings.
2. Remove Sidewall Lining Panels (Aft Entry and Aft Service Doorways)
  - A. Remove passenger equipment such as a partition, passenger seat, or galley unit as necessary to gain access to the sidewall lining to be removed.
  - B. Remove rubber seal installed around door opening. (See figure 401.)
  - C. Remove seal retainer if applicable.
  - D. Remove lining aft of door by sliding forward.
  - E. Remove lining around upper part of door opening by sliding it down and inboard.
  - F. Remove assist handle forward of entry door, if installed.
  - G. Remove quarter-turn fasteners attaching gap-cover to structure forward of door.
  - H. Remove lining forward of door by sliding aft and inboard.
3. Install Sidewall Lining Panels (Aft Entry and Aft Service Doorways)
  - A. Install sidewall linings by sliding lining edges into slot in trim angle (Fig. 401).
  - B. Install seal retainer if applicable.
  - C. Install rubber seal around door opening.
  - D. Install assist handle forward of entry door if applicable.
  - E. Install quarter-turn fasteners attaching gap-cover to structure forward of door.
  - F. Install any passenger equipment removed for access to doorway lining panels.

EFFECTIVITY  
New Look Interior

25-21-325

05

Page 401  
Dec 01/04



Sidewall Lining Panels Installation (Aft Entry Doorway)  
 Figure 401 (Sheet 1)

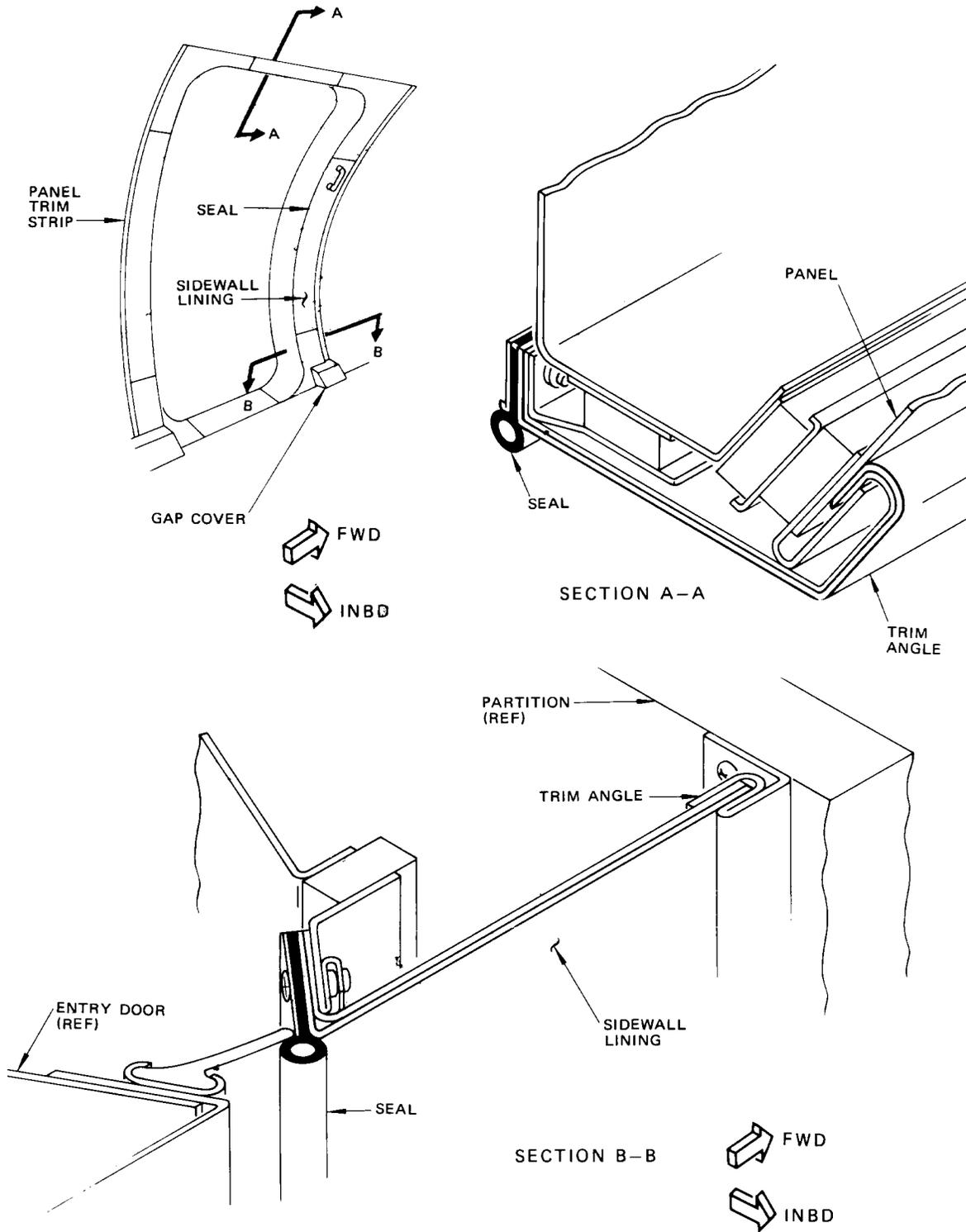
EFFECTIVITY  
 AIRPLANES WITHOUT AFT  
 AIRSTAIR

456131

**25-21-325**

08

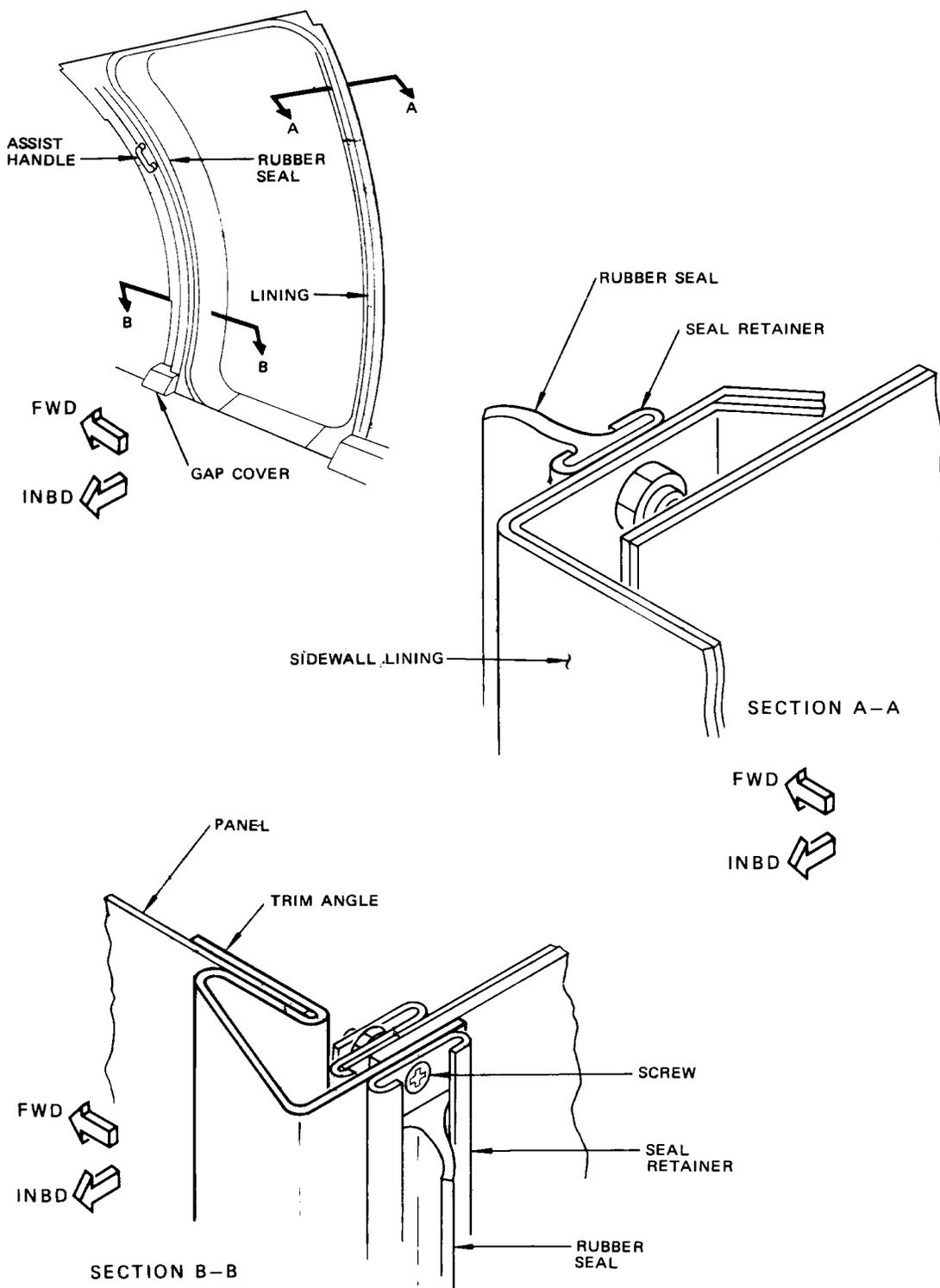
Page 402  
 Dec 01/04



Sidewall Lining Panels Installation (Aft Entry Doorway)  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 AIRPLANES WITH AFT AIRSTAIR

**25-21-325**



Sidewall Lining Panels Installation (Aft Entry Doorway)  
 Figure 401 (Sheet 3)

EFFECTIVITY  
 New Look Interior

**25-21-325**

SIDEWALL LINING PANELS (FORWARD ENTRY DOORWAY) – REMOVAL/INSTALLATION

1. General

A. These procedures apply to the sidewall lining attached to the structure around the forward entry door opening.

2. Remove Sidewall Lining Panels (Forward Entry Doorway) (Fig. 401)

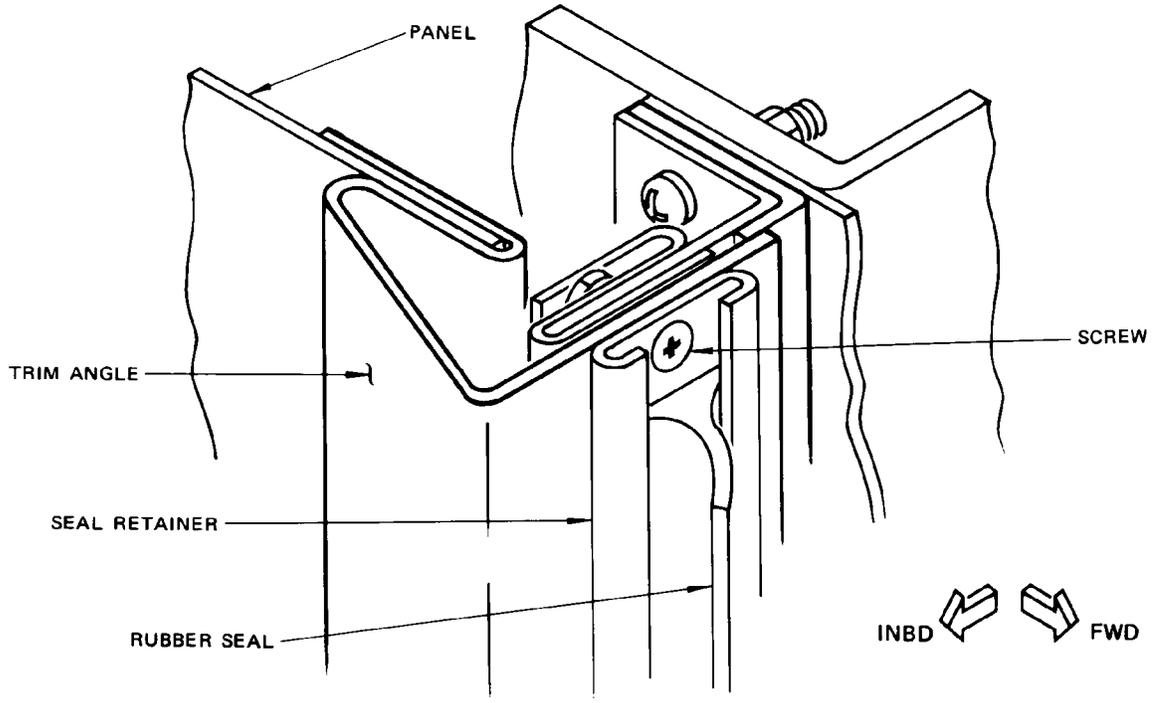
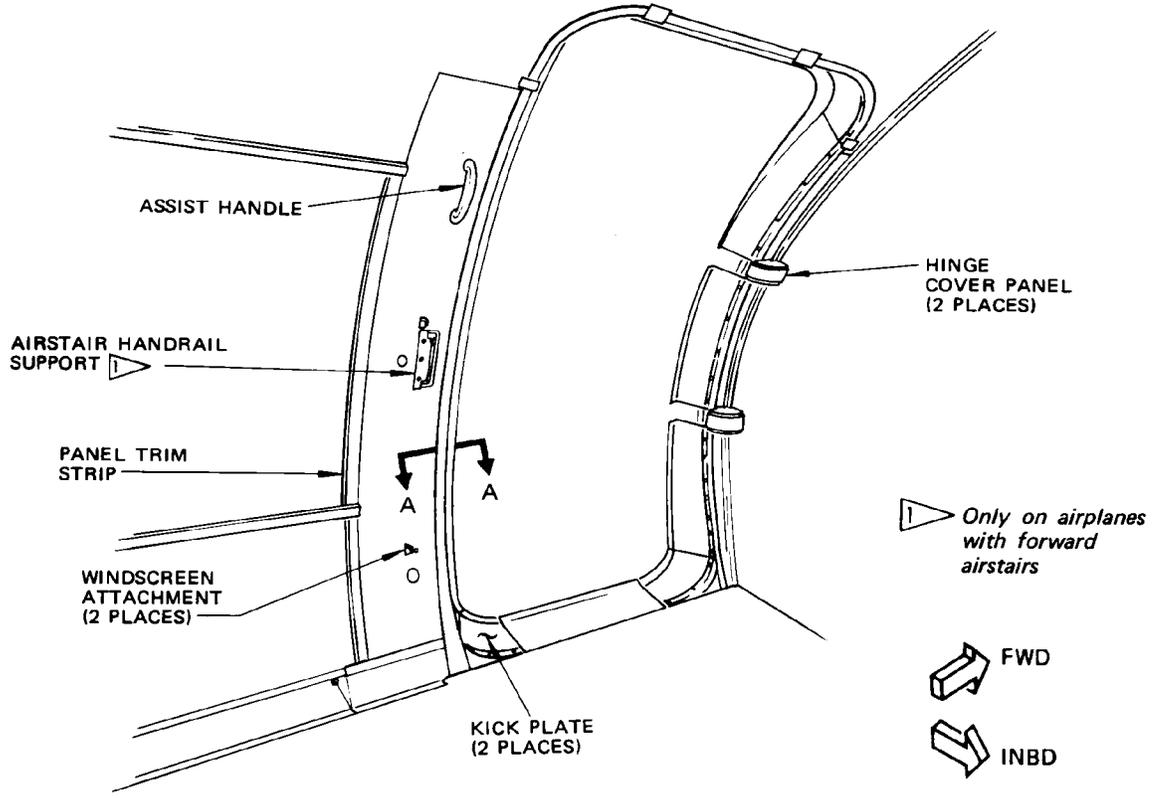
- A. Remove passenger equipment such as a partition, passenger seat, or galley unit as necessary to gain access to the sidewall lining to be removed.
- B. On airplanes with forward airstairs remove handrail support cover.
- C. Remove assist handle aft of entry door.
- D. Remove hinge cover panels.
- E. Remove rubber seal from retainer around door opening.
- F. Remove screws that attach trim angle and remove forward and aft side trim angles.
- G. Remove forward and aft kickplates.
- H. Remove quarter-turn fasteners attaching panels forward of door to sidewall structure.
- I. Remove panels forward of door by sliding aft.
- J. Remove panel aft of door by pulling forward and inboard to clear windscreen attachment brackets and sliding forward.
- K. Install panel aft of door by sliding aft under trim strip.
- L. Install panels forward of door by sliding aft into slot on trim strip and secure with quarter-turn fasteners.
- M. Install trim angles and seal retainer.
- N. Install rubber seal.
- O. Install kickplates.
- P. Install assist handle.
- Q. Install hinge cover panels.
- R. On airplanes with forward airstairs install handrail support cover.
- S. Install any passenger equipment removed from access to doorway lining panels.

EFFECTIVITY  
New Look Interior

25-21-331

08

Page 401  
Dec 01/04



SECTION A-A

Sidewall Lining Panels Installation (Forward Entry Doorway)  
 Figure 401

EFFECTIVITY  
 New Look Interior

**25-21-331**

456137

SIDEWALL LINING PANELS (FORWARD GALLEY DOORWAY) – REMOVAL/INSTALLATION

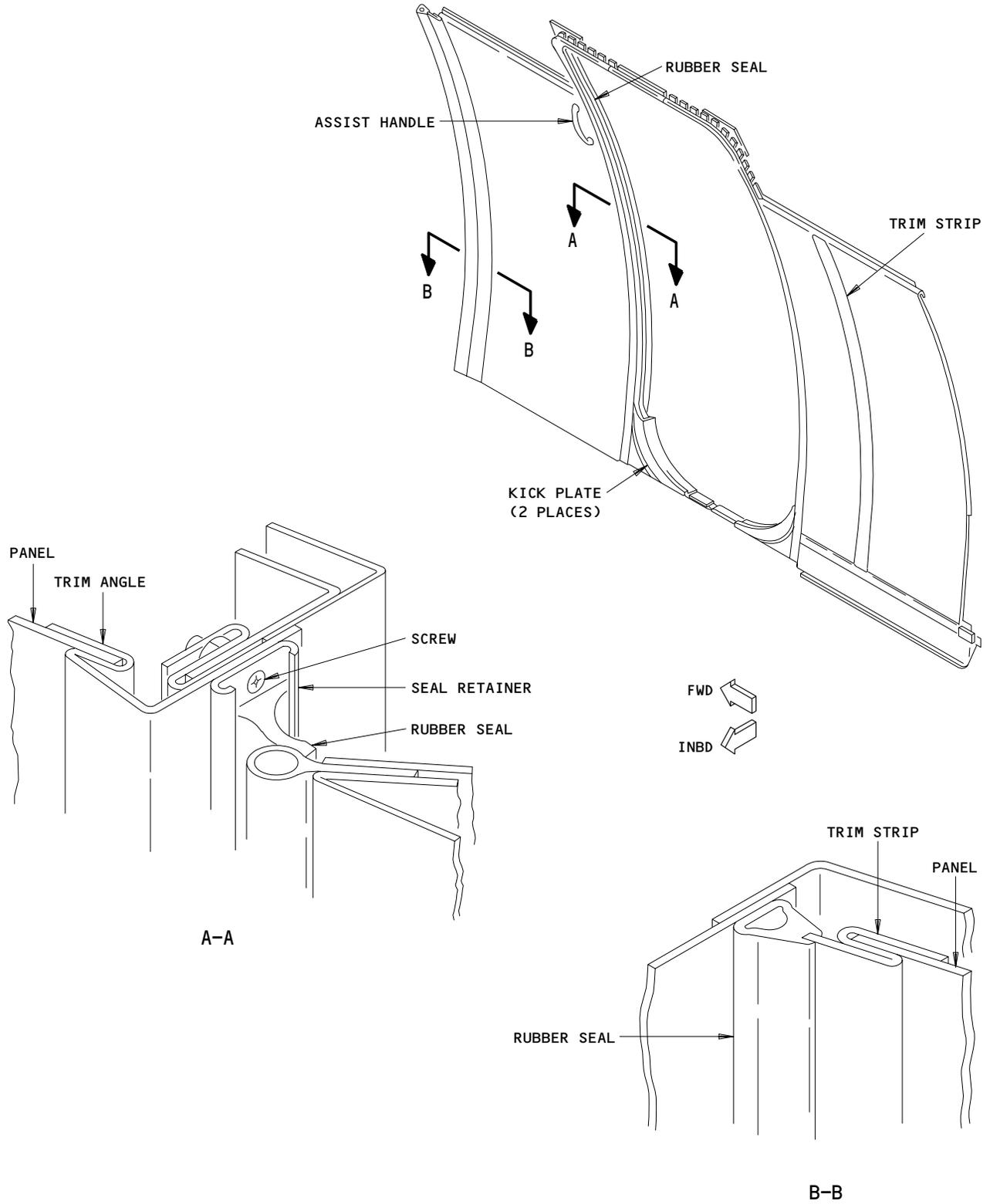
1. General
  - A. These procedures apply to the sidewall lining attached to the structure around the forward galley door opening.
2. Remove Sidewall Lining Panels (Forward Galley Doorway) (Fig. 401)
  - A. Remove passenger equipment such as a partition, passenger seat, or galley unit as necessary to gain access to the sidewall lining to be removed.
  - B. If installed, remove assist handle forward of galley door.
  - C. Remove rubber seal from retainer around door opening.
  - D. Remove screws that attach trim angle and remove trim angles with seal retainer.
  - E. Remove quarter-turn fasteners attaching panel on forward side of door to sidewall structure.
  - F. Remove forward and aft kickplates.
  - G. Remove panel on forward side of door by sliding aft.
  - H. Remove panel aft of door by sliding forward.
3. Install Sidewall Lining Panels (Forward Galley Doorway) (Fig. 401)
  - A. Install panel aft of door by sliding aft under trim strips.
  - B. Install panel on forward side of door by sliding into slot on trim strip.
  - C. Install trim angle to secure panels.
  - D. Install rubber seal in seal retainer.
  - E. Install kickplates.
  - F. Install assist handle forward of door, if applicable.
  - G. Install any passenger equipment removed for access to doorway lining panels.

EFFECTIVITY  
New Look Interior

25-21-335

05

Page 401  
Dec 01/04



Sidewall Lining Panels Installation (Forward Galley Doorway)  
 Figure 401

EFFECTIVITY  
 New Look Interior

**25-21-335**

05

Page 402  
 Dec 01/04

SIDEWALL INSULATION – REMOVAL/INSTALLATION

1. General

A. Removal and installation of all or any part of the sidewall insulation may be accomplished. However, due to the variety of installation methods and the lack of a typical example, the instructions which follow are of a general nature.

2. Sidewall Insulation Removal (Fig. 401)

A. Remove one or more components of sidewall lining as may be required in order to gain access to any particular section of sidewall insulation, do these tasks:

**NOTE:** It will not be necessary to remove the air distribution ducts for access to insulation panels; when the flexible ducts are pulled slightly inboard the insulation panels may be released from behind the ducts. It may be necessary to remove certain equipment that is installed by attachments that extend through the insulation panels.

(1) Window Panel – Removal/Installation (AMM 25-21-311/401).

(2) Carpet Riser Panel – Removal/Installation (AMM 25-21-321/401).

B. Remove joint tape and retainers as required. Tape and retainers securing insulation around stringers and air ducts should be removed first.

C. When all obstructions have been removed, remove insulation blanket (In some places it may be necessary to peel the blanket free of the velcro tape which is used to retain it against airplane structure).

**NOTE:** Mark insulation components as they are removed so that they may be located properly when reinstalled.

3. Sidewall Insulation Installation (Fig. 401)

A. Consumable Materials

(1) Tape – Insulation Blanket, BMS 5-149

(2) Tape – Advanced Insulation Blanket, BMS5-157

(3) Tape – Hook/Loop Fastener, (Polypropylene Hook & Nylon Loop)  
BMS8-285, Type IV



## MAINTENANCE MANUAL

- (4) Tape - Hook/Loop Fastener, Flame Propagation Resistant,  
BMS8-372

B. Do these steps to check for insulation blanket contamination:

**WARNING:** LET THE CORROSION-INHIBITING COMPOUNDS (CIC) BECOME FULLY DRY. IF CIC GETS ON THE INSULATION BLANKET, THE INSULATION BLANKET WILL BECOME LESS FLAME-RESISTANT. THIS INCREASES THE RISK OF FIRE, WHICH CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (1) To prevent CIC contamination of insulation blankets, let the corrosion-inhibiting compounds fully dry before you install the insulation blankets.
- (a) Let the corrosion-inhibiting compounds dry longer than the minimum times listed below if you have one of these conditions:
- 1) Low temperature.
  - 2) High humidity.
  - 3) Thick layer of corrosion-inhibiting compounds.
- (b) Ventilate areas, after application of CIC such as BMS 3-23, for a minimum of 1 hour.
- (c) Ventilate areas treated with CIC such as BMS 3-26 or BMS 3-29, for a minimum of 4 hours.

**WARNING:** DO NOT USE DETERGENTS OR SOLVENTS TO CLEAN THE INSULATION BLANKET. IT CAN REMOVE FLAME RETARDANTS AND CAUSE FLAMMABLE RESIDUES ON THE INSULATION BLANKET WHICH INCREASES THE RISK OF FIRE. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (2) If there is CIC contamination, oily or waxy substances, or other fluids (which typically changes the color and appearance of the insulation blanket cover), replace the insulation blanket.
- (3) If there are dust, lint or other loose debris on the insulation blanket, use a vacuum cleaner or a non-metallic soft brush to remove the contamination.

EFFECTIVITY  
New Look Interior

25-21-339

06 Page 402  
Aug 01/06

- (4) Make sure the area is clean before you install the insulation blanket.
- C. Do these steps to install the insulation blanket:
- (1) If you replace an insulation blanket or a capstrip, install an insulation blanket or a capstrip that complies with FAR 25.856.
    - (a) Replace the part of the hook/loop tape that is installed on the airplane structure where the replacement insulation blanket attaches, with hook/loop tape (BMS8-372), as applicable.

NOTE: Hook/loop tape (BMS8-372) is FAR 25.856.

- (2) Install new studs on the structure, if it is necessary.
- (3) Align the holes in the insulation blanket with the studs.
- (4) Put the insulation blanket in its position.
- (5) Install the clips on the studs.
- (6) Install retainers where applicable.
- (7) Fasten glove fasteners, if applicable.
- (8) ALL AIRPLANES PRE SEP 2, 2003 FAR STD; AIRPLANES WITHOUT FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;
  - (a) For insulation blanket with BMS8-142 cover material:  
Use tape (BMS5-149 or BMS5-157) or hook/loop tape (BMS8-285 or BMS8-372), where applicable to close butt joints, overlapping joints, gaps between adjacent insulation blankets or panels, and between insulation blanket and the airplane structure.

NOTE: Tape (BMS5-157) and hook/loop tape (BMS8-372) are FAR 25.856 compliant. These items are the preferred alternatives to tape (BMS5-149) and hook/loop tape (BMS8-285), respectively.

- (9) ALL AIRPLANES POST SEP 2, 2003 FAR STD; AIRPLANES WITH FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;
  - (a) For insulation blanket with BMS8-377 cover material:  
Use tape (BMS5-157) or hook/loop tape (BMS8-372), where applicable to close butt joints, overlapping joints, gaps between adjacent molded insulation panels, and between insulation blanket and the airplane structure.

EFFECTIVITY  
New Look Interior

25-21-339

06

Page 403  
Aug 01/06



## MAINTENANCE MANUAL

- (10) For replacement insulation blanket, push on the insulation blanket to remove the air that is inside the insulation blanket through the vent hole(s).
  - (a) Peel off the attached release liner on the circle tape and seal the vent hole.
- (11) Make sure the insulation blanket does not cover the openings in the intercostals.

NOTE: Air must be free to circulate between frames.

- (12) Make sure that the insulation blankets are clear from the stringers to permit the condensation moisture to dry easily.

NOTE: The sections of the ceiling and wall insulation blankets must be attached to the stringer No. 4 at their overlap point.

- (13) Make sure moisture penetration through to the inboard side of the insulation blanket is minimized.
  - (a) Lap edges or flaps of insulation blanket over or under adjacent blankets as required.

NOTE: Flaps along edges of insulation blankets must overlap adjacent blankets in a manner which will transfer runoff of condensed moisture to adjacent blanket without trapping moisture or allowing it to leak into cabin area.

- (14) Check that insulation blankets fit tightly around any structure or supporting brackets which protrude through inboard surface of insulation.
- (15) Make sure to position the insulation blankets in the correct location on the sidewall outboard of air distribution ducts.
- (16) Make sure that when you install the insulation blankets around windows, the blanket should contact the window reveal around the entire window periphery with no gaps to form an air seal.
- (17) Check to ensure that all insulation components are in proper places so as not to interfere with sidewall lining or other equipment installed on the sidewall.

#### 4. Restore Airplane to Normal

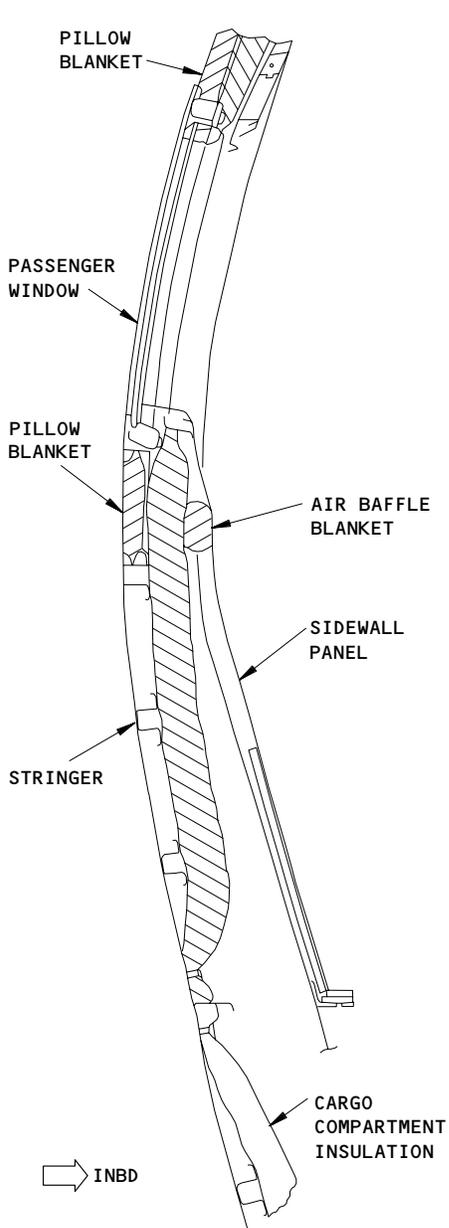
- A. To install equipment and sidewall lining that was removed to facilitate sidewall insulation removal, do these tasks:
  - (1) Window Panel - Removal/Installation (AMM 25-21-311/401).
  - (2) Carpet Riser Panel - Removal/Installation (AMM 25-21-321/401).

EFFECTIVITY  
New Look Interior

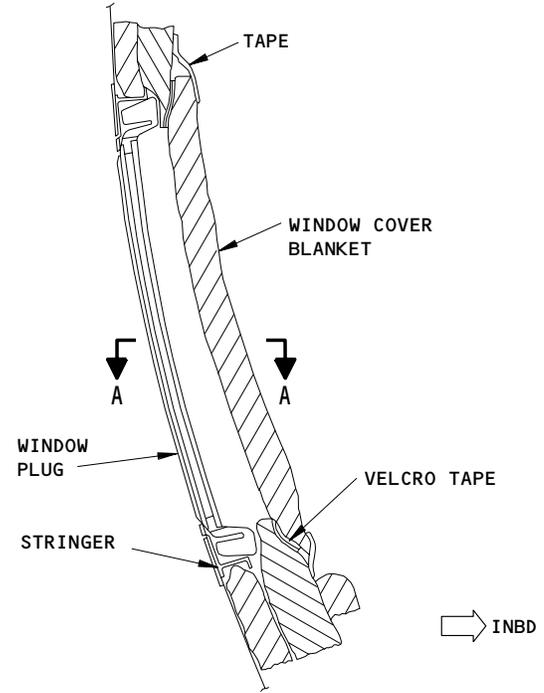
25-21-339

06

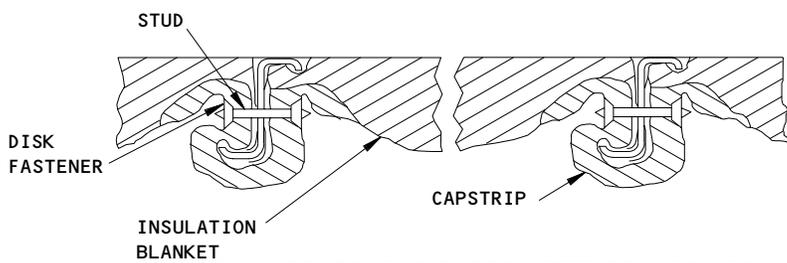
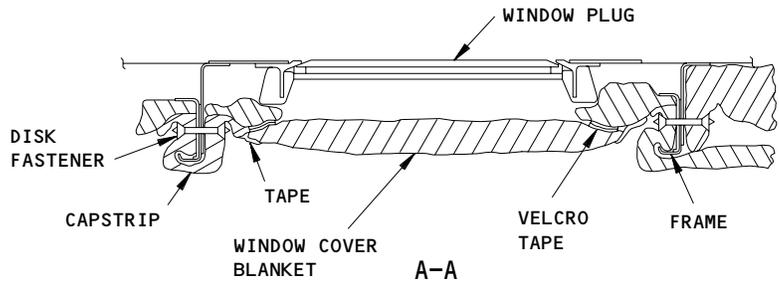
Page 404  
Aug 01/06



**BLANKET CONFIGURATION AT PASSENGER WINDOWS (EXAMPLE)**



**BLANKET CONFIGURATION AT WINDOW PLUG (EXAMPLE)**



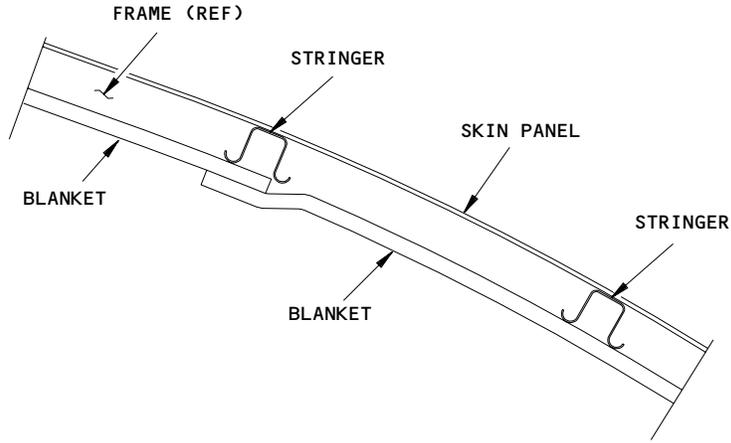
**BLANKET CONFIGURATION BETWEEN FRAMES (EXAMPLE)**

**Sidewall and Ceiling Insulation Installation  
 Figure 401 (Sheet 1)**

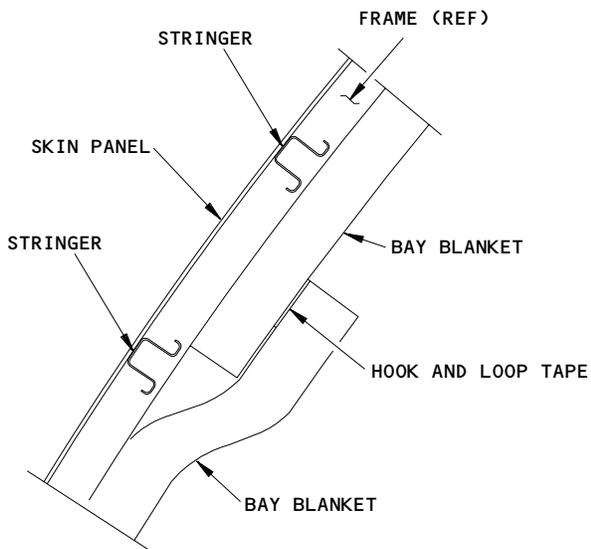
EFFECTIVITY  
 New Look Interior

**25-21-339**

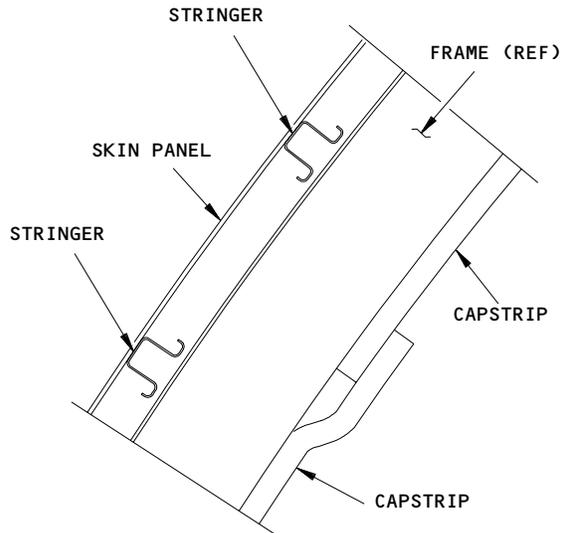
463517



**BLANKET TO BLANKET INSTALLATION  
 (EXAMPLE)**



**BLANKET OVERLAP  
 (EXAMPLE)**



**CAPSTRIP OVERLAP  
 (EXAMPLE)**

**Sidewall and Ceiling Insulation Installation  
 Figure 401 (Sheet 2)**

EFFECTIVITY  
 New Look Interior

**25-21-339**

463519

SIDEWALL INSULATION – APPROVED REPAIRS

1. General

- A. This procedure has these instructions to repair insulation blanket and cover that are damaged:
- (1) ALL AIRPLANES PRE SEP 2, 2003 FAR STD; AIRPLANES WITHOUT FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS:
    - (a) Repair the Insulation Blanket with BMS8-142 Cover Material.
    - (b) Repair the Insulation Blanket with BMS8-115 Cover Material.
  - (2) ALL AIRPLANES POST SEP 2, 2003 FAR STD; AIRPLANES WITH FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS:
    - (a) Repair the Insulation Blanket with BMS8-377 Cover Material.
    - (b) Repair the Insulation Blanket with BMS8-370 Cover Material.
- B. This procedure also has instructions to make new a insulation blanket from FAR 25.856 compliant thermal/acoustic insulation materials.
- C. If the amount of damage on the insulation blanket is more than 25 percent of the total area on either the front side or back side of an insulation blanket, replace the damaged insulation blanket.
- D. The damaged insulation blanket can be used as a template to make a new insulation blanket.

2. Repair the Insulation Blanket and Cover (Fig. 801)

A. Consumable Materials

- (1) Cement – BMS 5-30, EC 1458
- (2) Covering – Insulation, BMS 8-142, Type I
- (3) Insulation – Thermal Acoustical Fiberglass Fabric, BMS8-48, Type III, Class 3
- (4) Fabric – Insulation Cover, Flame Propagation Resistant, BMS8-377
- (5) Fabric – Advanced Polymer Coated, Flame Propagation Resistant, BMS8-370
- (6) Fabric – Flame Resistant, BMS8-115
- (7) Fabric – High Mass Coated, Flame Propagation Resistant, BMS8-374
- (8) Felt – Needled, Flame Propagation Resistant, BMS8-373
- (9) Paper – Abrasive, 180-grit
- (10) Tag – Garment, Commercially Available
- (11) Tape – Insulation Blanket, BMS5-149
- (12) Tape – Advanced Insulation Blanket, BMS5-157, Class 1, Composition MPVF
- (13) Tape – Hook/Loop Fastener, (Polypropylene Hook & Nylon Loop), BMS8-285, Type IV
- (14) Tape – Hook/Loop Fastener, Flame Propagation Resistant, BMS8-372

EFFECTIVITY

ALL

25-21-339

01

Page 801  
Aug 01/06



## MAINTENANCE MANUAL

### B. References

- (1) AMM 25-21-339/401, Sidewall Insulation
- (2) AMM 25-21-349/401, Ceiling Insulation
- (3) AMM 25-52-141/401, Cargo Compartment Insulation

### C. Prepare to Repair the Insulation Blanket

- (1) Visually check the amount of damage to the insulation blanket.
  - (a) If the amount of damage is more than 25 percent of the total area on either the front or back sides of the insulation blanket, replace the applicable insulation blanket.
    - 1) For sidewall insulation replacement, refer to Sidewall Insulation - Removal/Installation (AMM 25-21-339/401).
    - 2) For ceiling insulation replacement, refer to Ceiling Insulation - Removal/Installation (AMM 25-21-349/401).
    - 3) For cargo compartment insulation replacement, refer to Cargo Compartment Insulation - Removal/Installation (AMM 25-52-141/401).
  - (b) If the amount of damage is less than 25 percent of the total area on either the front or back sides of the insulation blanket, continue.

**WARNING:** DO NOT USE DETERGENTS OR SOLVENTS TO CLEAN THE INSULATION BLANKET. IT CAN REMOVE FLAME RETARDANTS AND CAUSE FLAMMABLE RESIDUES ON INSULATION BLANKET WHICH INCREASES THE RISK OF FIRE. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (2) If there is Corrosion-inhibiting Compounds (CIC) contamination, oily or waxy substances or other fluids (which typically changes the color and appearance of the insulation blanket cover), replace the applicable insulation blanket.
  - (a) For sidewall insulation replacement, refer to Sidewall Ceiling Insulation - Removal/Installation (AMM 25-21-339/401).
  - (b) For ceiling insulation replacement, refer to Ceiling Insulation - Removal/Installation (AMM 25-21-349/401).
  - (c) For cargo compartment insulation replacement, refer to Cargo Compartment Insulation - Removal/Installation (AMM 25-52-141/401).
- (3) If there are dust, lint or other loose debris on the insulation blanket, use a vacuum cleaner or a non-metallic soft brush to remove the contamination.
- (4) Make sure the repair area is clean and dry.

EFFECTIVITY

ALL

25-21-339

01

Page 802  
Aug 01/06



## MAINTENANCE MANUAL

- D. ALL AIRPLANES PRE SEP 2, 2003 FAR STD; AIRPLANES WITHOUT FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;  
Repair the Insulation Blanket with BMS8-142 Cover Material

**NOTE:** BMS8-142 cover material is a thin translucent plastic film with an open weave scrim on one side and has a grid-like appearance.

BMS8-142 is replaced by BMS8-377 to comply with the flame propagation requirements of FAR 25.856.

- (1) To repair a grommet hole in the insulation blanket, do these steps:
- (a) Make two round tape patches from tape (BMS5-149) or tape (BMS5-157) with a minimum diameter of 1.5-2.0 inches (38-51 mm) larger than the grommet hole.

**NOTE:** Tape (BMS5-157) is FAR 25.856 compliant, and it is the preferred alternative to tape (BMS5-149).

- (b) Make a fiberglass plug from fabric (BMS8-48) that is equivalent in type/class/grade as those used in the insulation blanket.
  - (c) Put the fiberglass plug into the grommet hole.
  - (d) Put the round tape patches over the grommet hole on both sides of the insulation blanket.
    - 1) Make sure the tape patch overlaps the edge of the grommet hole by a minimum of 0.75 inch (19 mm).
  - (e) Push on the tape patch to make sure there is a good bond with the blanket cover.
- (2) To repair a tear in the insulation blanket, do these steps:
- (a) Make a fiberglass plug from fabric (BMS8-48) that is equivalent in type/class/grade as those used in the insulation blanket and put the fiberglass plug into the damaged area, if necessary.
  - (b) Use your fingers to close the tear.
  - (c) Make a tape patch from tape (BMS8-149) or tape (BMS5-157) that is 0.75-1.50 inches (19-38 mm) larger than the tear on all sides.

**NOTE:** Tape (BMS5-157) is FAR 25.856 compliant, and it is the preferred alternative to tape (BMS5-149).

- 1) Make sure the corners on the tape patch are rounded.
- (d) Put the tape patch over the tear.
  - 1) Make sure the tape patch overlaps the damaged area by 0.75-1.50 inch (19-38 mm) on all sides.
- (e) Push on the tape patch to make sure there is a good bond with the insulation blanket cover.

EFFECTIVITY

ALL

25-21-339

01

Page 803  
Aug 01/06



## MAINTENANCE MANUAL

- (3) To repair a damage that is larger than a tear in the insulation blanket, do these steps:
- (a) Cut a rectangle out of the damaged blanket cover which fully removes the damaged area.
    - 1) Keep the rectangle cutout as a template to make a new replacement cover patch.
  - (b) Use the rectangle cutout template to make a rectangle cover patch that is similar in shape and size as the template from fabric (BMS8-142) or fabric (BMS8-377).

**NOTE:** Fabric (BMS8-377) is FAR 25.856 compliant, and it is the preferred alternative to fabric (BMS8-142).

- (c) If there are damages to the fiberglass batting (BMS8-48) inside the blanket cover, do these steps:
  - 1) If the damaged area is only on the first layer of the fiberglass batting, do these steps:
    - a) Cut a rectangle out of the damaged fiberglass batting to fully remove the damaged area on the first layer of the fiberglass batting, and leave behind a rectangular void in the blanket.
    - b) Cut a ply of replacement fiberglass patch from fabric (BMS8-48) that extends a minimum of 2.0 inch (51 mm) past the edges of the rectangular void.
    - c) Put the replacement fiberglass patch over the center of the rectangular void and under the blanket cover.
  - 2) If the damaged area is on multiple layers of the fiberglass batting, do these steps:
    - a) Cut out the damaged fiberglass batting to fully remove the damaged area on the fiberglass batting.
    - b) Interleave new plies of fiberglass batting from fabric (BMS8-48) that is equivalent in type/class/grade as those used in the insulation blanket, as necessary.
- (d) Put the rectangle cover patch over the cutout on the insulation blanket cover.
- (e) Make a tape patch from tape (BMS5-149) or tape (BMS5-157) that is a minimum of 1.0 inch (25 mm) larger than all sides of the rectangle cutout.

**NOTE:** Tape (BMS5-157) is FAR 25.856 compliant, and it is the preferred alternative to tape (BMS5-149).

- 1) Make sure the corners on the tape patch are rounded.
- (f) Put the tape patches over the joints to keep the rectangle cover patch in place on all sides.
  - 1) Make sure the tape patch overlaps the joint by a minimum of 1.0 inch (25 mm) on all sides.
- (g) Push on the tape to make sure there is a good bond with the blanket cover.

EFFECTIVITY

ALL

25-21-339

01

Page 804  
Aug 01/06



**MAINTENANCE MANUAL**

- (h) Install external garment tags, spaced at 6.0 inches (152 mm) onto the overlapped fiberglass repair area to keep the fiberglass batting in position between the covers.

**NOTE:** The garment tag is a commercially available plastic fastener that is stapled through all layers of the insulation blanket and fastened to keep the fiberglass batting inside the insulation blanket in the same position in relation to the blanket covers.

- 1) Cut a 1.0 inch (25 mm) diameter circle of tape (BMS5-149) or tape (BMS5-157) for use as reinforcement tape.
- 2) Put the reinforcement tape over the area where the external garment tag is to be stapled through on both sides of the blanket.
- 3) Staple the external garment tag through all layers of the insulation blanket, which includes the reinforcement tapes.
- 4) Make sure to use a garment tag of the correct length in relation to the nominal thickness of the insulation blanket, see Table 801.

Table 801 - Insulation Blanket Garment Tag Sizes

Nominal Insulation Thickness (Inch) *	Garment Tag Length (Inch)
4.01 - 7.01	3.00
2.01 - 4.00	2.00
1.26 - 2.00	1.00
0.51 - 1.25	0.50
0.38 - 0.50	0.25

\* This is the total nominal thickness of all layers of raw material used in the insulation blanket.

- 5) Cut a 2.0 inches (51 mm) diameter circle of tape (BMS5-149) or tape (BMS5-157) for use as covering tape.
  - 6) Put the covering tape over the external garment tag and reinforcement tape onto the insulation cover on both sides of the insulation blanket.
  - 7) Push on the tape to make sure there is a good bond with the blanket cover.
- (4) To replace a damaged hook/loop tape on the insulation blanket cover, do these steps:
    - (a) Carefully remove the damaged part of the hook/loop tape from the insulation blanket cover.

EFFECTIVITY

ALL

25-21-339

01

Page 805  
Aug 01/06



## MAINTENANCE MANUAL

- (b) Clean and dry the adhesive surface left by the removal of the damaged hook/loop tape.
- (c) Put a piece of tape (BMS5-149) or tape (BMS5-157) over the area left by the removal of the damaged hook/loop tape on both sides of the insulation blanket assembly, if necessary.

**NOTE:** Tape (BMS5-157) is FAR 25.856 compliant, and it is the preferred alternative to tape (BMS5-149).

- 1) Make sure the tape is larger than the damaged area on the insulation cover by a minimum of 1.0 inch (25 mm) on all sides.
- (d) Install the replacement hook/loop tape (BMS8-285) or hook/loop tape (BMS8-372) at the correct location on the insulation blanket cover.

**NOTE:** Hook/loop tape (BMS8-372) is FAR 25.856 compliant, and it is the preferred alternative to hook/loop tape (BMS8-285).

E. ALL AIRPLANES PRE SEP 2, 2003 FAR STD; AIRPLANES WITHOUT FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;  
Repair the Insulation Blanket with BMS8-115 Cover Material

**NOTE:** BMS8-115 cover material has a smooth and silky surface, typically eggshell color in appearance (it may also be in other colors). It is used in only a few areas of the airplane.

BMS8-115 is replaced by BMS8-370 to comply with the flame propagation requirements of FAR 25.856.

- (1) Do these steps if there are damages on the insulation blanket cover:
  - (a) Identify the perimeter around the damaged area on the insulation blanket for a cover patch area that is larger than the damaged area by 1.0-1.5 inches (25-38 mm) on all sides.
  - (b) If the cover patch area that is identified on the damaged insulation blanket can fit into a 3.0 inches by 3.0 inches (76 mm by 76 mm) square, do these steps:
    - 1) Make a cover patch from fabric (BMS8-115) or fabric (BMS8-370) that is larger than the damaged area by 1.0-1.5 inches (25-38 mm) on all sides.

**NOTE:** Fabric (BMS8-370) is FAR 25.856 compliant, and it is the preferred alternative to fabric (BMS8-115).

- a) Make sure the corners on the cover patch are rounded.
- 2) Lightly abrade the entire adhesive side of the cover patch and the area to be covered by the cover patch with 180-grit or finer paper to remove any gloss.
- 3) Apply adhesive (BMS5-30) on the bonding surface of the cover patch or insulation blanket cover.

EFFECTIVITY

ALL

25-21-339

01

Page 806  
Aug 01/06



## MAINTENANCE MANUAL

- 4) Put the adhesive side of the cover patch over the damaged area of the insulation blanket cover.
  - 5) Make sure there is an overlap of 1.0-1.5 inches (25-38 mm) between the damaged area and the edge of the cover patch on all sides.
  - 6) Wipe off any adhesive (BMS5-30) that is not necessary.
  - 7) Push on the cover patch to make sure there is a good bond with the insulation blanket cover.
- (c) If the cover patch area that is identified on the damaged insulation blanket cannot fit into a 3.0 inches by 3.0 inches (76 mm by 76 mm) square, do these steps:
- 1) Make a cover patch with fabric (BMS8-115) or fabric (BMS8-370) that is larger than the damaged area by 1.0-1.5 inches (25-38 mm) on all sides.

**NOTE:** Fabric (BMS8-370) is FAR 25.856 compliant, and it is the preferred alternative to fabric (BMS8-115).

- a) Make sure the corners on the cover patch are rounded.
- 2) Lightly abrade the periphery of the adhesive side of the cover patch with 180-grit or finer paper to remove any gloss.
- 3) Lightly abrade the area around the periphery of the damaged area to be covered by the cover patch with 180-grit or finer paper to remove any gloss.
- 4) Apply adhesive (BMS5-30) up to 1.0 inch (25 mm) wide on the abraded area.
- 5) Put the adhesive side of the cover patch over the damaged area of the insulation blanket cover.
- 6) Make sure there is an overlap of 1.0-1.5 inches (25-38 mm) between the damaged area and the edge of the cover patch on all sides.
- 7) Wipe off any adhesive (BMS5-30) that is not necessary.
- 8) Push on the cover patch to make sure there is a good bond with the insulation blanket cover.

F. ALL AIRPLANES POST SEP 2, 2003 FAR STD; AIRPLANES WITH FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;  
Repair the Insulation Blanket with BMS8-377 Cover Material

**NOTE:** BMS8-377 cover material is a thin opaque gray plastic film with an open weave scrim on one side and has a grid-like appearance.

- (1) To repair a grommet hole in the insulation blanket, do these steps:
  - (a) Make two round tape patches from tape (BMS5-157) with a minimum diameter of 1.5-2.0 inches (38-51 mm) larger than the grommet hole.
  - (b) Make a fiberglass plug from fabric (BMS8-48) that is equivalent in type/class/grade as those used in the insulation blanket.
  - (c) Put the fiberglass plug into the grommet hole.

EFFECTIVITY

ALL

25-21-339

01

Page 807  
Aug 01/06



## MAINTENANCE MANUAL

- (d) Put the round tape patches over the grommet hole on both sides of the insulation blanket.
  - 1) Make sure the tape patch overlaps the edge of the grommet hole by a minimum of 0.75 inch (19 mm).
- (e) Push on the tape patch to make sure there is a good bond with the blanket cover.
- (2) To repair a tear in the insulation blanket, do these steps:
  - (a) Make a fiberglass plug from fabric (BMS8-48) that is equivalent in type/class/grade as those used in the insulation blanket and put the fiberglass plug into the damaged area, if necessary.
  - (b) Use your fingers to close the tear.
  - (c) Make a tape patch from tape (BMS5-157) that is 0.75-1.50 inches (19-38 mm) larger than the tear on all sides.
    - 1) Make sure the corners on the tape patch are rounded.
  - (d) Put the tape patch over the tear.
    - 1) Make sure the tape patch overlaps the damaged area by 0.75-1.50 inch (19-38 mm) on all sides.
  - (e) Push on the tape patch to make sure there is a good bond with the blanket cover.
- (3) To repair a damage that is larger than a tear in the insulation blanket, do these steps:
  - (a) Cut a rectangle out of the damaged blanket cover which fully removes the damaged area.
    - 1) Keep the rectangle cutout as a template to make a new replacement cover patch.
  - (b) Use the rectangle cutout template to make a rectangle cover patch that is similar in shape and size as the template from fabric (BMS8-377).
  - (c) If there are damages to the fiberglass batting (BMS8-48) inside the blanket cover, do these steps:
    - 1) If the damaged area is only on the first layer of the fiberglass batting, do these steps:
      - a) Cut a rectangle out of the damaged fiberglass batting to fully remove the damaged area on the first layer of the fiberglass batting, and leave behind a rectangular void in the blanket.
      - b) Cut a ply of replacement fiberglass patch from fabric (BMS8-48) that extends a minimum of 2.0 inch (51 mm) past the edges of the rectangular void.
      - c) Put the replacement fiberglass patch over the center of the rectangular void and under the blanket cover.
    - 2) If the damaged area is on multiple layers of the fiberglass batting, do these steps:
      - a) Cut out the damaged fiberglass batting to fully remove the damaged area on the fiberglass batting.
      - b) Interleave new plies of fiberglass batting from fabric (BMS8-48) that is equivalent in type/class/grade as those used in the insulation blanket, as necessary.
  - (d) Put the rectangle cover patch over the cutout on the insulation blanket cover.

EFFECTIVITY

ALL

25-21-339

01

Page 808  
Aug 01/06



**MAINTENANCE MANUAL**

- (e) Make a tape patch from tape (BMS5-157) that is a minimum of 1.0 inch (25 mm) larger than all sides of the rectangle cutout.
  - 1) Make sure the corners on the tape patch are rounded.
- (f) Put the tape patches over the joints to keep the rectangle cover patch in place on all sides.
  - 1) Make sure the tape patch overlaps the joint by a minimum of 1.0 inch (25 mm) on all sides.
- (g) Push on the tape to make sure there is a good bond with the insulation blanket cover.
- (h) Install external garment tags, spaced at 6.0 inches (152 mm) onto the overlapped fiberglass repair area to keep the fiberglass batting in position between the covers.

**NOTE:** The garment tag is a commercially available plastic fastener that is stapled through all layers of the insulation blanket and fastened to keep the fiberglass batting inside the insulation blanket in the same position in relation to the blanket covers.

- 1) Cut a 1.0 inch (25 mm) diameter circle of tape (BMS5-157) for use as reinforcement tape.
- 2) Put the reinforcement tape over the area where the external garment tag is to be stapled through on both sides of the blanket.
- 3) Staple the external garment tag through all layers of the insulation blanket, which includes the reinforcement tapes.
- 4) Make sure to use a garment tag of the correct length in relation to the nominal thickness of the insulation blanket, see Table 801.

Table 801 - Insulation Blanket Garment Tag Sizes

Nominal Insulation Thickness (Inch) *	Garment Tag Length (Inch)
4.01 - 7.01	3.00
2.01 - 4.00	2.00
1.26 - 2.00	1.00
0.51 - 1.25	0.50
0.38 - 0.50	0.25

\* This is the total nominal thickness of all layers of raw material used in the insulation blanket.

- 5) Cut a 2.0 inches (51 mm) diameter circle of tape (BMS5-157) for use as covering tape.

EFFECTIVITY

ALL

25-21-339

01

Page 809  
Aug 01/06



## MAINTENANCE MANUAL

- 6) Put the covering tape over the external garment tag and reinforcement tape, onto the insulation cover on both sides of the insulation blanket.
  - 7) Push on the tape to make sure there is a good bond with the insulation blanket cover.
- (4) To replace a damaged hook/loop tape on the insulation blanket cover, do these steps:
- (a) Carefully remove the damaged part of the hook/loop tape from the insulation blanket cover.
  - (b) Clean and dry the adhesive surface left by the removal of the damaged hook/loop tape.
  - (c) Put a piece of tape (BMS5-157) over the area left by the removal of the damaged hook/loop tape on both sides of the insulation blanket assembly, if necessary.
    - 1) Make sure the tape is larger than the damaged area on the insulation cover by a minimum of 1.0 inch (25 mm) on all sides.
  - (d) Install the replacement hook/loop tape (BMS8-372) at the correct location on the insulation blanket cover.
- G. ALL AIRPLANES POST SEP 2, 2003 FAR STD; AIRPLANES WITH FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;  
Repair the Insulation Blanket with BMS8-370 Cover Material

**NOTE:** BMS8-370 cover material has a smooth and silky surface, typically white in appearance. It is used in only a few areas of the airplane.

- (1) Do these steps if there are damages on the insulation blanket cover:
- (a) Identify the perimeter around the damaged area on the insulation blanket for a cover patch area that is larger than the damaged area by 1.0-1.5 inches (25-38 mm) on all sides.
  - (b) If the cover patch area that is identified on the damaged insulation blanket can fit into a 3.0 inches by 3.0 inches (76 mm by 76 mm) square, do these steps:
    - 1) Make a cover patch from fabric (BMS8-370) that is larger than the damaged area by 1.0-1.5 inches (25-38 mm) on all sides.
      - a) Make sure the corners on the cover patch are rounded.
    - 2) Lightly abrade the entire adhesive side of the cover patch and the area to be covered by the cover patch with 180-grit or finer paper to remove any gloss.
    - 3) Apply adhesive (BMS5-30) on the bonding surface of the cover patch or insulation blanket cover.
    - 4) Put the adhesive side of the cover patch over the damaged area of the insulation blanket cover.
    - 5) Make sure there is an overlap of 1.0-1.5 inches (25-38 mm) between the damaged area and the edge of the cover patch on all sides.
    - 6) Wipe off any adhesive (BMS5-30) that is not necessary.
    - 7) Push on the cover patch to make sure there is a good bond with the insulation blanket cover.

EFFECTIVITY

ALL

25-21-339

01

Page 810  
Aug 01/06

- (c) If the cover patch area that is identified on the damaged insulation blanket cannot fit into a 3.0 inches by 3.0 inches (76 mm by 76 mm) square, the insulation blanket cannot be repaired.
- 1) Replace the insulation blanket.

3. Insulation Blanket Manufacturing (Fig. 802)

A. General

- (1) This procedure has instructions to make new a insulation blanket from FAR 25.856 compliant thermal/acoustic insulation materials.
- (2) The new insulation blanket can either be cut from the assembly of various component materials, or from a semi-finished insulation blanket strip, that is pre-assembled and built from equivalent component materials that are comparable in type/class/grade as those which are not pre-assembled.
- (3) The damaged insulation blanket can be used as a template to make a new insulation blanket.

B. Consumable Materials

- (1) Insulation - Thermal Acoustical Fiberglass Fabric, BMS8-48, Type III, Class 3
- (2) Fabric - Insulation Cover, Flame Propagation Resistant, BMS8-377
- (3) Fabric - Advanced Polymer Coated, Flame Propagation Resistant, BMS8-370
- (4) Fabric - Coated, High Mass, Flexible, BMS8-47
- (5) Fabric - High Mass Coated, Flame Propagation Resistant, BMS8-374
- (6) Felt - Needled, Flame Propagation Resistant, BMS8-373
- (7) Foam - Flexible Polyvinylidene Fluoride, Adhesive on One Side, BMS8-371
- (8) Tag - Garment, Commercially Available
- (9) Tape - Advanced Insulation Blanket, BMS5-157, Class 1, Composition MPVF
- (10) Tape - Hook/Loop Fastener, Flame Propagation Resistant, BMS8-372
- (11) Thread - Kevlar Sewing (T40), Strip Machine Thread (T60) A-A-55220 Bonded Tex 40, Tex 60

C. Make a New Insulation Blanket

**NOTE:** The new insulation blanket can either be cut from the assembly of various component materials, or from a semi-finished insulation blanket strip, that is pre-assembled and built from equivalent component materials that are comparable in type/class/grade as those which are not pre-assembled.

- (1) To cut out a new insulation blanket from component materials, do these steps:
  - (a) Use the damaged insulation blanket as a template to outline its shape.
  - (b) Cut the applicable insulation cover (or combination of covers):
    - 1) Fabric (BMS8-377).
    - 2) Fabric (BMS8-370).
    - 3) Fabric (BMS8-374).
    - 4) Fabric (BMS8-47).
    - 5) Felt (BMS8-373).

EFFECTIVITY

ALL

25-21-339

01

Page 811  
Aug 01/06



## MAINTENANCE MANUAL

- (c) Cut the fiberglass insulation (BMS8-48).
  - 1) Make sure to use fiberglass insulation (BMS8-48) that are equivalent in type/class/grade as those in the template.
  - 2) Interleave fiberglass insulation (BMS8-48) batting, if it is necessary.
- (d) Put the fiberglass insulation (BMS8-48) between the inboard and outboard insulation covers.
- (2) To cut out a new insulation blanket from a semi-finished insulation blanket strip, do these steps:
  - (a) Make sure to use a semi-finished insulation blanket strip that is pre-assembled and built from equivalent component materials that are comparable in type/class/grade as those which are not pre-assembled.
  - (b) Use the damaged insulation blanket as a template to outline its shape on the semi-finished insulation blanket strip.
  - (c) Cut the semi-finished insulation blanket strip to the same shape as the template outline.
  - (d) Interleave fiberglass insulation (BMS8-48) batting, if it is necessary.
- (3) Do these steps to install external garment tag to connect the layers of blanket materials:

**NOTE:** The garment tag is a commercially available plastic fastener that is stapled through all layers of the insulation blanket and fastened to keep the fiberglass batting inside the insulation blanket in the same position in relation to the blanket covers.

- (a) Cut a 1.0 inch (25 mm) diameter circle of tape (BMS5-157) for use as reinforcement tape.
- (b) Put the reinforcement tape over the area where the external garment tag is to be stapled through on both sides of the blanket.
- (c) Staple the external garment tag through all layers of the insulation blanket, which includes the reinforcement tapes.
- (d) Make sure to use a garment tag of the correct length in relation to the nominal thickness of the insulation blanket, see Table 801.

EFFECTIVITY

ALL

25-21-339

01

Page 812  
Aug 01/06

Table 801 - Insulation Blanket Garment Tag Sizes

Nominal Insulation Thickness (Inch) *	Garment Tag Length (Inch)
4.01 - 7.01	3.00
2.01 - 4.00	2.00
1.26 - 2.00	1.00
0.51 - 1.25	0.50
0.38 - 0.50	0.25

\* This is the total nominal thickness of all layers of raw material used in the insulation blanket.

- (e) Cut a 2.0 inches (51 mm) diameter circle of tape (BMS5-157) for use as covering tape.
  - (f) Put the covering tape over the external garment tag and reinforcement tape, onto the insulation cover on both sides of the blanket.
  - (g) Push on the tape to make sure there is a good bond with the blanket cover.
- (4) Do the applicable steps to close the edges and cutouts of the insulation blanket:
- (a) Method 1: Sew the edges.
    - 1) Fold the cover fabric over the edge of the blanket or wrap a strip of cover fabric over the edge of the blanket as applicable to bind the edge on the blanket.
    - 2) Stitch the edge with kevlar sewing thread at 4 to 6 stitches per inch.
    - 3) Make sure the stitches go through the edge binding on both sides of the insulation blanket.
    - 4) Seal the stitching on the blanket with tape (BMS5-157).
  - (b) Method 2: Tape the edges.

**NOTE:** Applicable for BMS8-377 materials only.

- 1) Use tape (BMS5-157) that is sufficiently wide to overlap the top and bottom a minimum of 0.75 inch (19 mm).
- 2) Make the edge the same height as the damaged blanket.

EFFECTIVITY

ALL

**25-21-339**

01

Page 813  
Aug 01/06



## MAINTENANCE MANUAL

(c) Method 3: Heat-seal the edges.

**NOTE:** Not all types of fabric can be heat sealed. Fabric that can be heat sealed may be heavier than fabric that cannot be heat sealed. Make sure you use the correct type of fabric.

- 1) Hold the top and bottom covers together and heat-seal the edges of the blanket.
  - 2) The width of the heat seal must be 0.25 to 0.50 inch (6 to 13 mm).
- (5) Install hook/loop tape (BMS8-372), where applicable.
- (6) Install water diverter on the insulation blanket with foam tape (BMS8-371) or equivalent, where applicable.
- (7) Do one of these steps to make a grommet through a hole in the insulation blanket:
- (a) Use tape (BMS5-157) to cover over the edges of the hole and onto the insulation blanket covers.
  - (b) Use tape (BMS8-377) to cover over the fabric (BMS8-377) against the edges of the hole and bond it to the insulation blanket covers.
- (8) Do these steps to install vents in the insulation blanket cover:
- (a) Make sure you install the vent so that it opens in the same direction as on the template.
  - (b) Cut a hole approximately 1 inch (25 mm) in diameter in the cover fabric.
  - (c) Cut a 2 inches (51 mm) circle of tape (BMS5-157).
  - (d) Remove the release liner from a small part of the circle tape (BMS5-157).
  - (e) Attach the circle tape (BMS5-157) over the hole in the blanket.
- (9) Do these steps to quilt the blanket with kevlar sewing thread, where applicable:
- (a) Quilt through all layers of the insulation blanket, from cover to cover with kevlar sewing thread at 4 to 6 stitches per inch.
  - (b) Make sure the grid size of the quilting is a minimum 1.0 inch by 1.0 inch (25 mm by 25 mm) square or larger.
  - (c) Apply strips of tapes (BMS5-157) over the quilting.
  - (d) Overlap the strips of tapes (BMS5-157) over both sides of the quilting at 0.75 inch (19 mm) intervals.
- (10) To add drain holes to the insulation blanket, cut 0.50 inch (13 mm) diameter drain holes at the bottom edge of the blanket on the inboard side at 2.0 inches (51 mm) intervals, where applicable.
- (11) Add these part information on the inboard side of the completed insulation blanket cover:
- (a) Part Number.
  - (b) Supplier Name.
  - (c) Date of Manufacture.

EFFECTIVITY

ALL

25-21-339

01

Page 814  
Aug 01/06

**BOEING**  
**737**   
MAINTENANCE MANUAL

**CAUTION:** DO NOT COMPRESS THE INSULATION BLANKET BY MORE THAN 50 PERCENT. THIS DECREASES THE THERMAL AND ACOUSTIC PROPERTIES. IF YOU COMPRESS IT TOO MUCH, DAMAGE TO THE INSULATION BLANKET WILL OCCUR.

- (12) Put the insulation blanket in a neat stack on a shelf or in a bag for shipping.

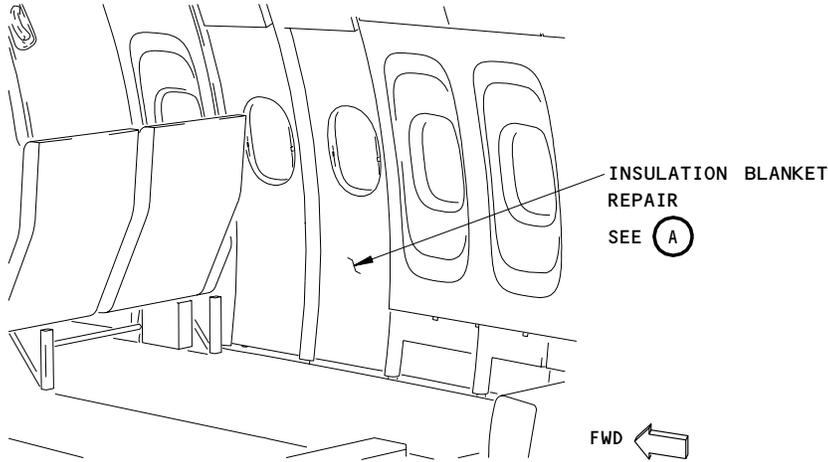
EFFECTIVITY

ALL

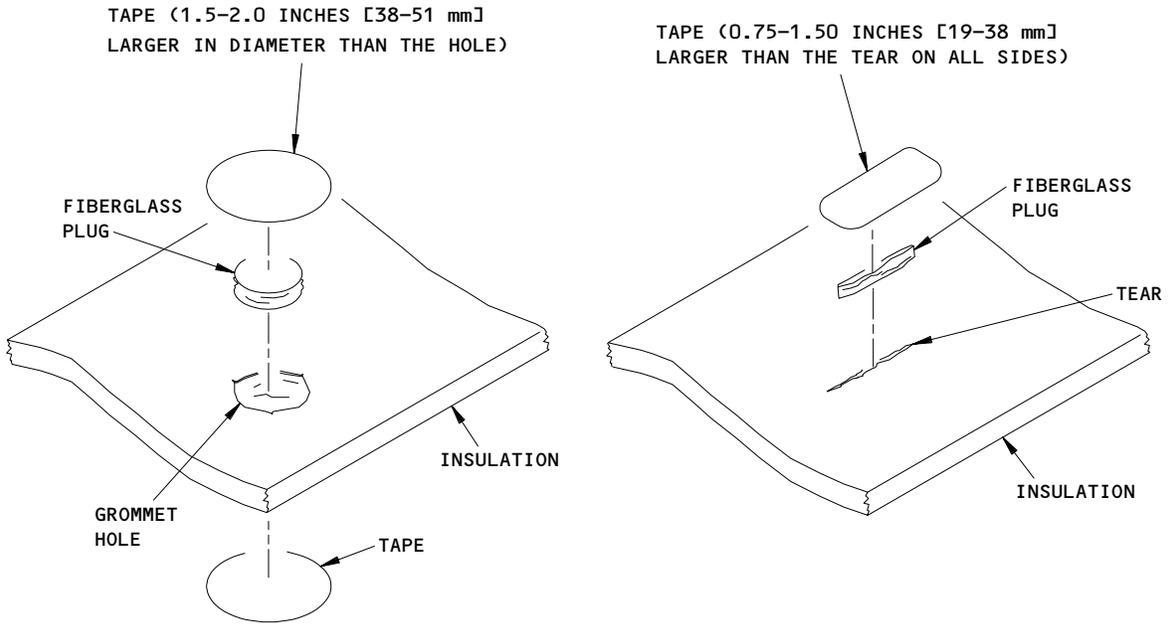
25-21-339

01

Page 815  
Aug 01/06



**PASSENGER COMPARTMENT SIDEWALL  
(LINER REMOVED)**



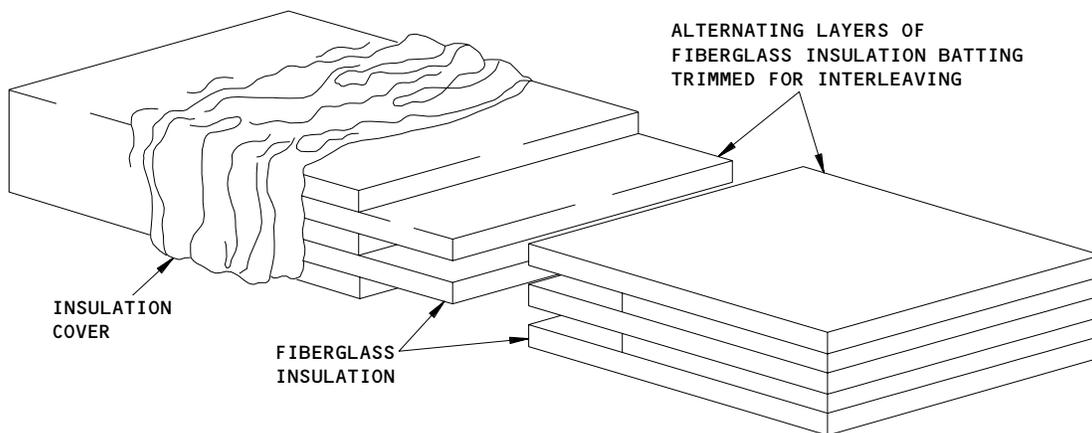
**INSULATION BLANKET REPAIR  
(EXAMPLE)**

(A)

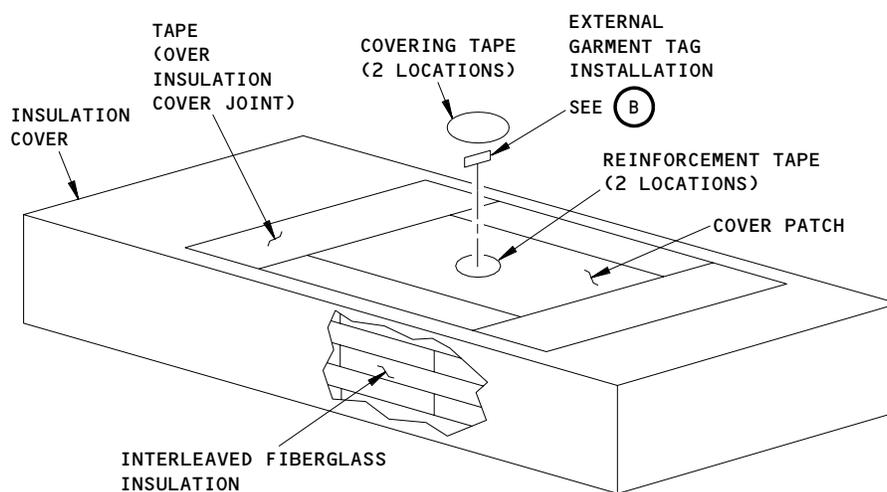
**Insulation Blanket Repair  
Figure 801 (Sheet 1)**

EFFECTIVITY	ALL
-------------	-----

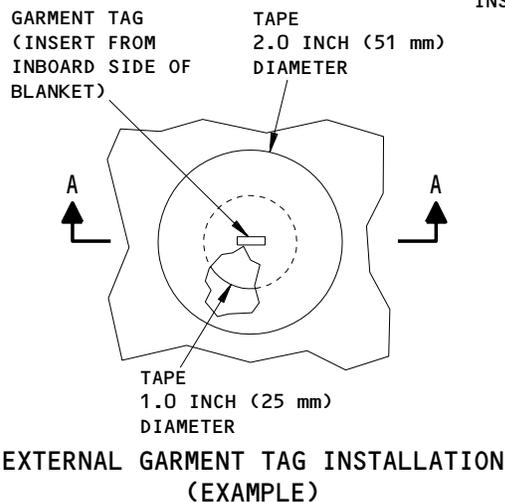
**25-21-339**



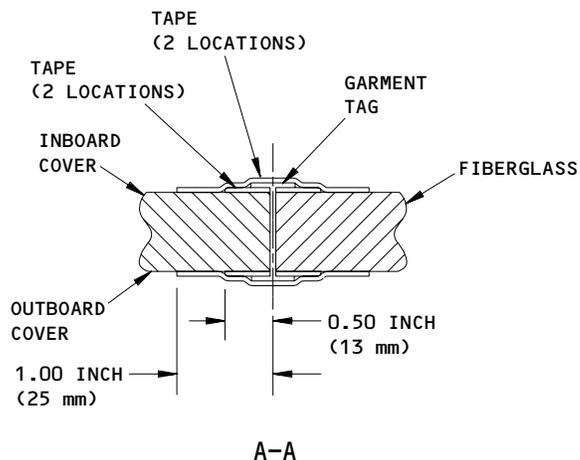
**PROCEDURE TO INTERLEAVE FIBERGLASS INSULATION BATTING**



**ATTACHMENT OF INTERLEAVED PARTS**



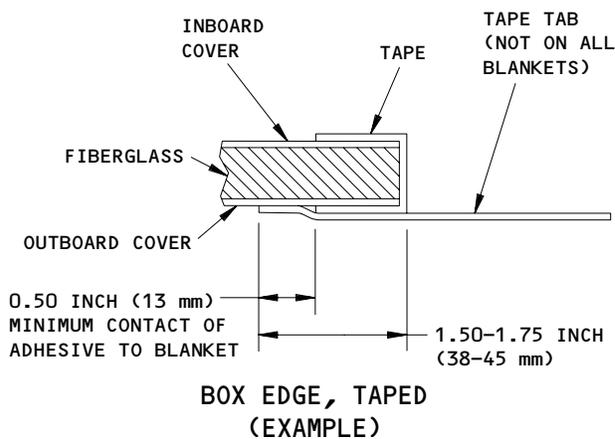
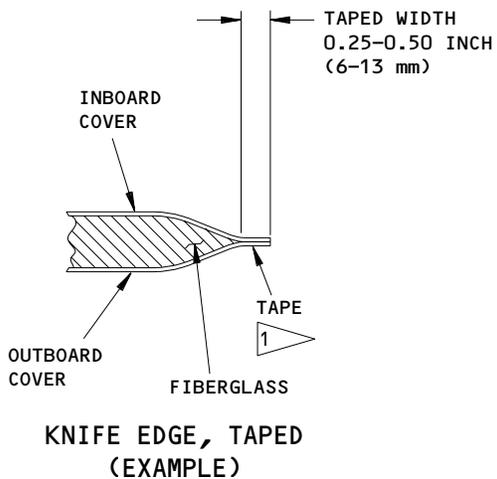
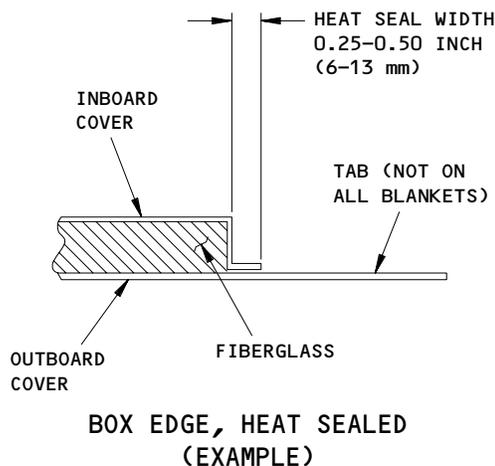
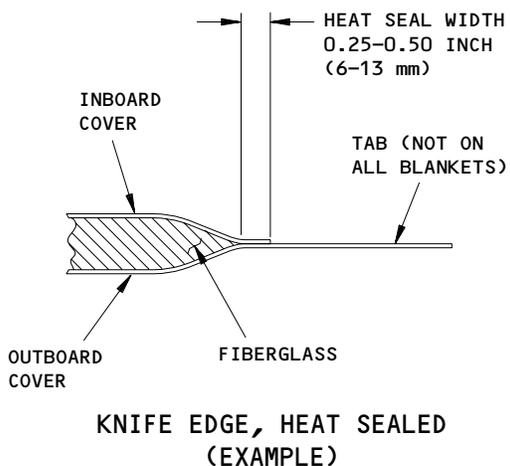
**(B)**



**Insulation Blanket Repair  
 Figure 801 (Sheet 2)**

EFFECTIVITY	ALL
-------------	-----

**25-21-339**



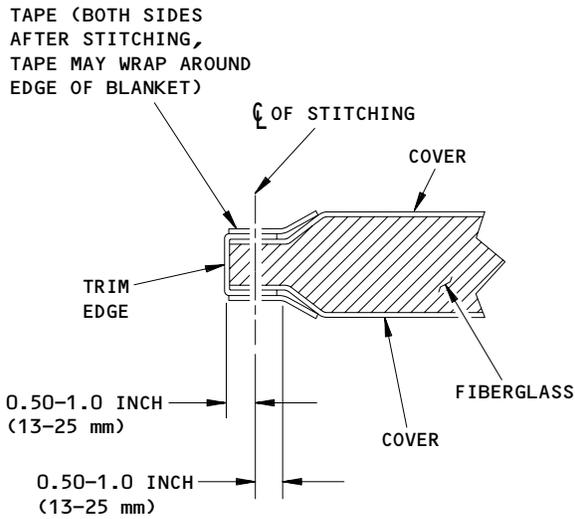
**1** USE DOUBLE BACK TAPE TO ATTACH INBOARD AND OUTBOARD COVER TOGETHER, THEN USE SINGLE BACK TAPE TO WRAP AROUND OUTSIDE OF KNIFE EDGE SEAM.

Insulation Blanket Manufacturing  
 Figure 802 (Sheet 1)

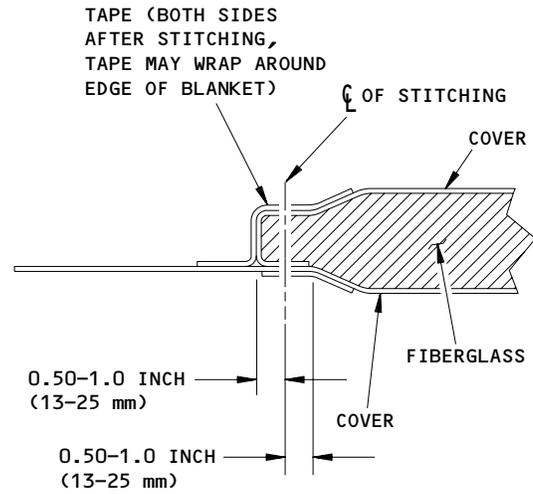
EFFECTIVITY

ALL

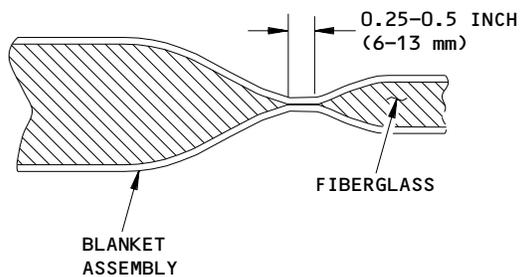
**25-21-339**



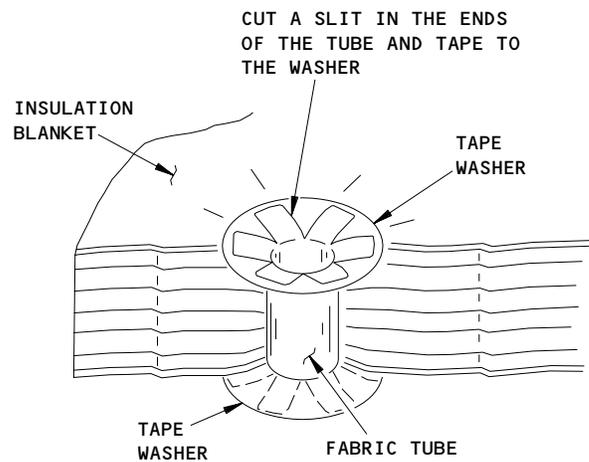
**EDGE BINDING WITHOUT A TAB,  
SEWN EDGE**



**EDGE BINDING WITH A TAB,  
SEWN EDGE**



**HEATSEAL SEAM LINE  
(EXAMPLE)**



**GROMMET INSTALLATION ON  
INSULATION BLANKETS**

**Insulation Blanket Manufacturing  
Figure 802 (Sheet 2)**

EFFECTIVITY	ALL
-------------	-----

**25-21-339**

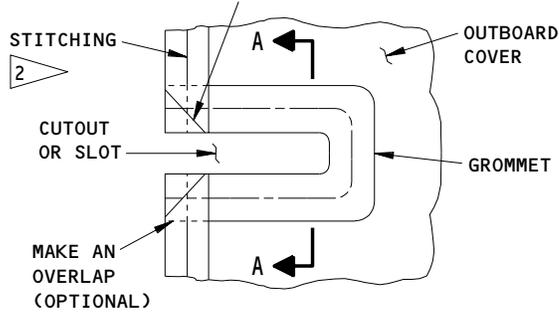
01

Page 819  
Aug 01/06

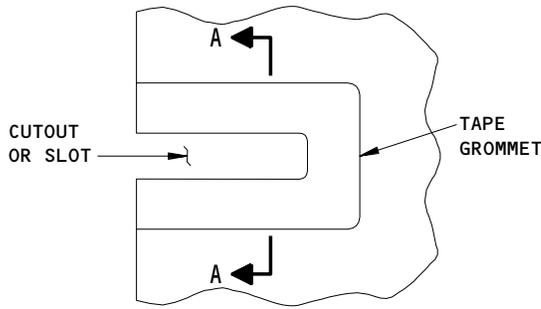
459676

**MAINTENANCE MANUAL**

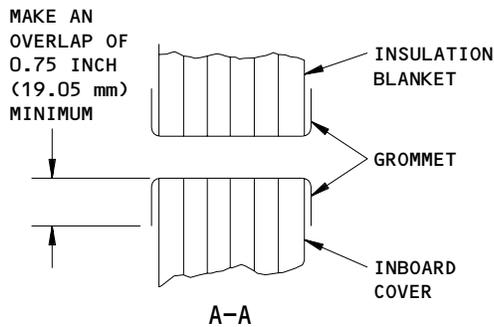
FOLD BACK THE EDGE OF THE TRIM APPROXIMATELY 45° AND STITCH AS SHOWN



**TRIM EDGE STITCHED  
CUTOUT OR SLOT**



**TRIM EDGE TAPED  
CUTOUT OR SLOT**



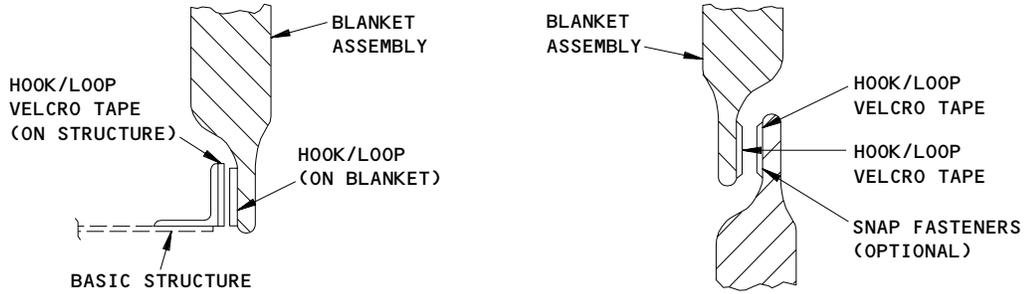
- 2 USE KEVLAR SEWING THREAD TO MAKE 5 ±1 STITCHES FOR EACH INCH.
- 3 USE TAPE TO MAKE GROMMET.

**Insulation Blanket Manufacturing  
Figure 802 (Sheet 3)**

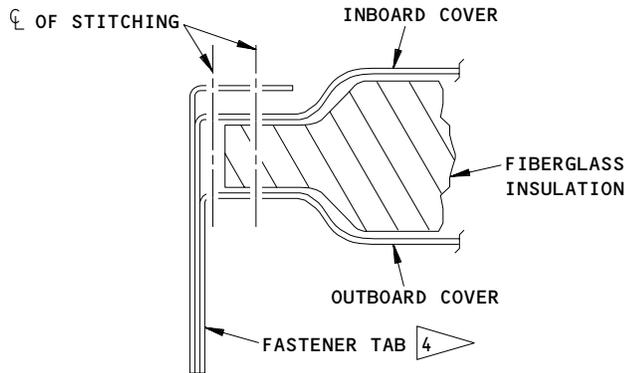
EFFECTIVITY	ALL

**25-21-339**

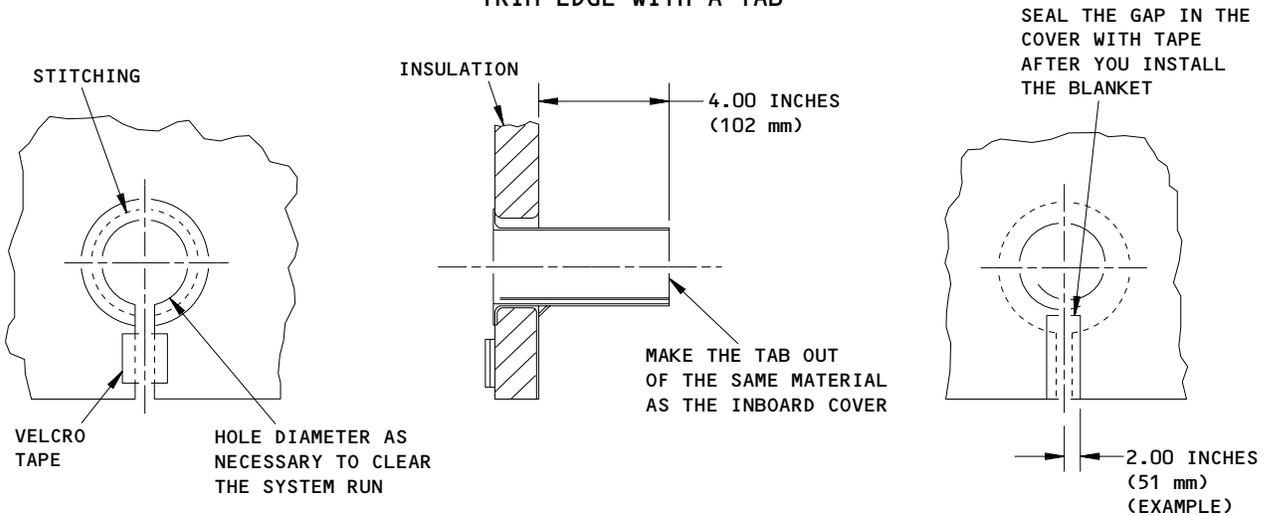
**MAINTENANCE MANUAL**



EXAMPLE PROCEDURE TO ATTACH THE BLANKET ASSEMBLIES TO THE AIRPLANE STRUCTURE OR TO OTHER BLANKET ASSEMBLIES WITH HOOK/LOOP TAPE



**TRIM-EDGE WITH A TAB**



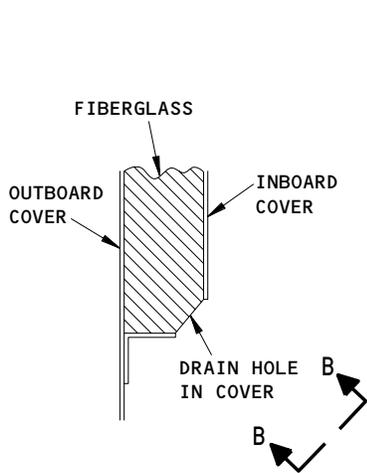
**BLANKET OPENINGS FOR SYSTEM (TUBING, ETC)**

4 MAKE THE FASTENER TAB FROM THE INBOARD AND OUTBOARD COVER, PLUS ONE LAYER OF COVER FABRIC.

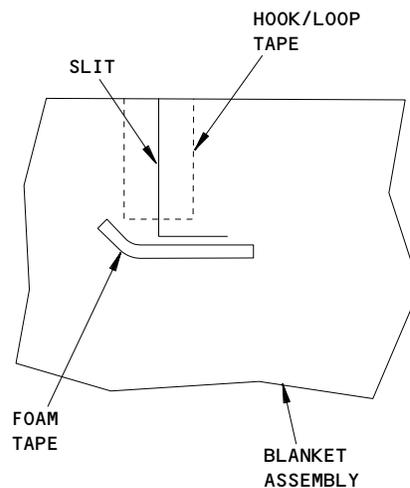
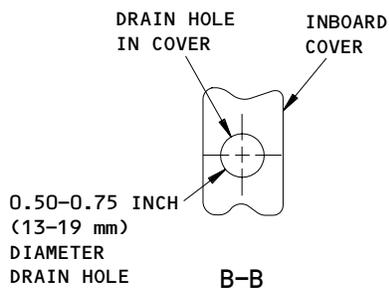
Insulation Blanket Manufacturing  
Figure 802 (Sheet 4)

EFFECTIVITY	ALL
-------------	-----

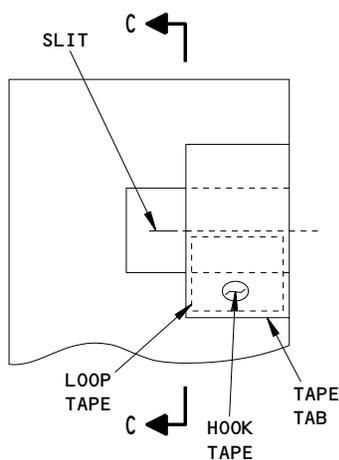
**25-21-339**



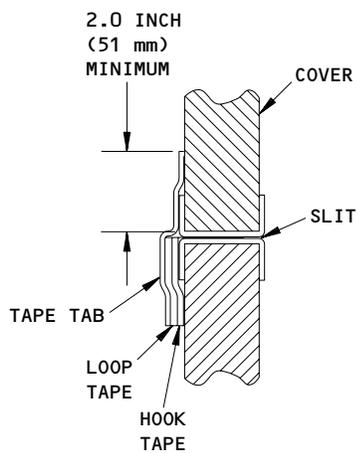
**BOX EDGE DRAIN  
 (EXAMPLE)**



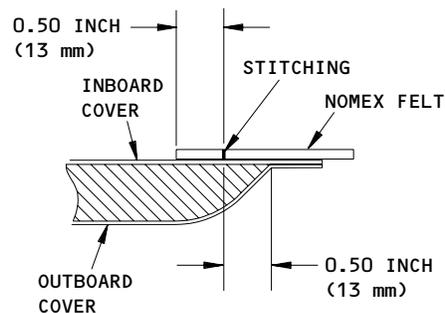
**FOAM TAPE WATER DIVERTER  
 (FOAM TAPE LOCATED ON  
 OUTBOARD SIDE OF CAPSTRIP)  
 (EXAMPLE)**



**CLOSURE FOR SLITS  
 (EXAMPLE)**



**C-C**

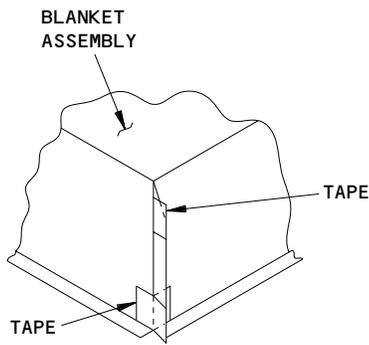


**NOMEX ATTACHMENT  
 (EXAMPLE)**

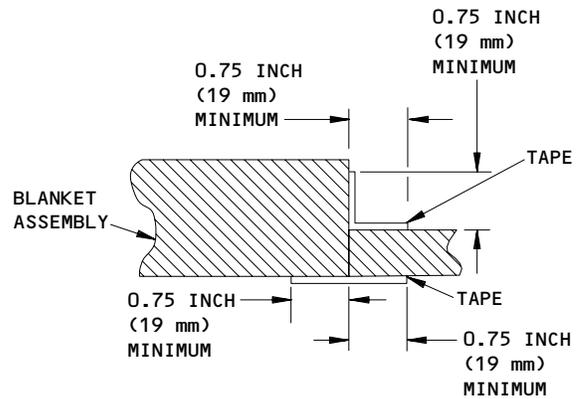
**Insulation Blanket Manufacturing  
 Figure 802 (Sheet 5)**

EFFECTIVITY	ALL

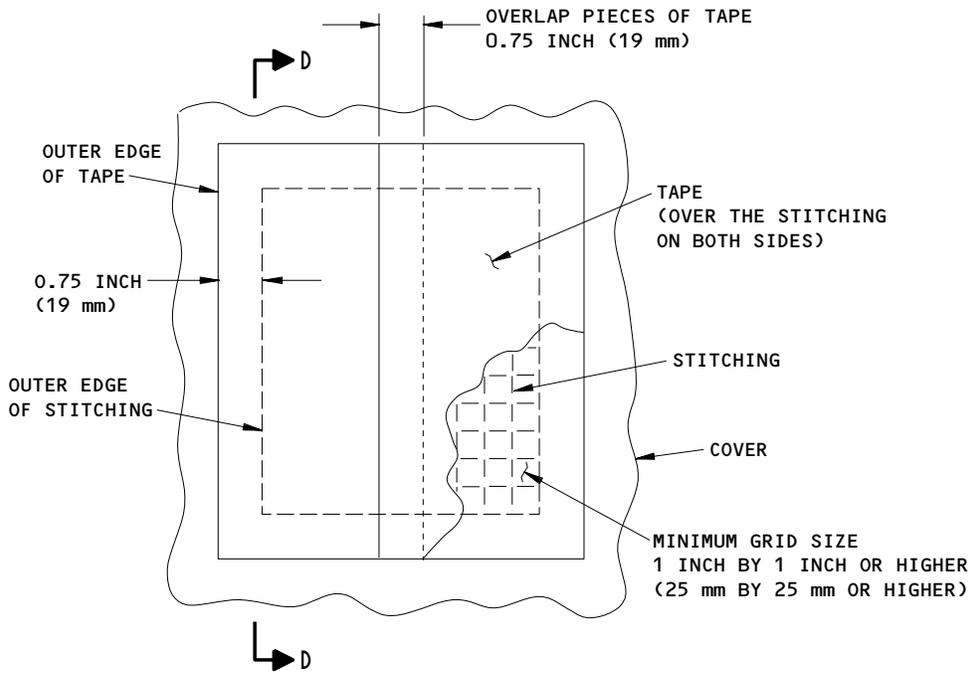
**25-21-339**



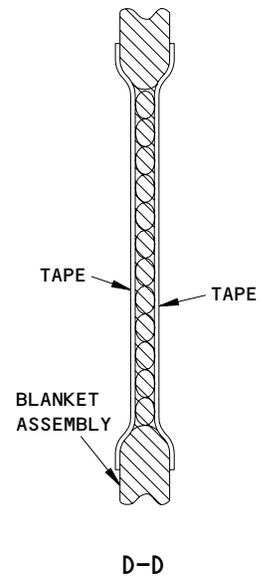
**REINFORCED CORNER  
 OF BOXED BLANKET  
 (EXAMPLE)**



**BLANKET ATTACHMENT  
 (EXAMPLE)**



**QUILTING  
 (EXAMPLE)**



**Insulation Blanket Manufacturing  
 Figure 802 (Sheet 6)**

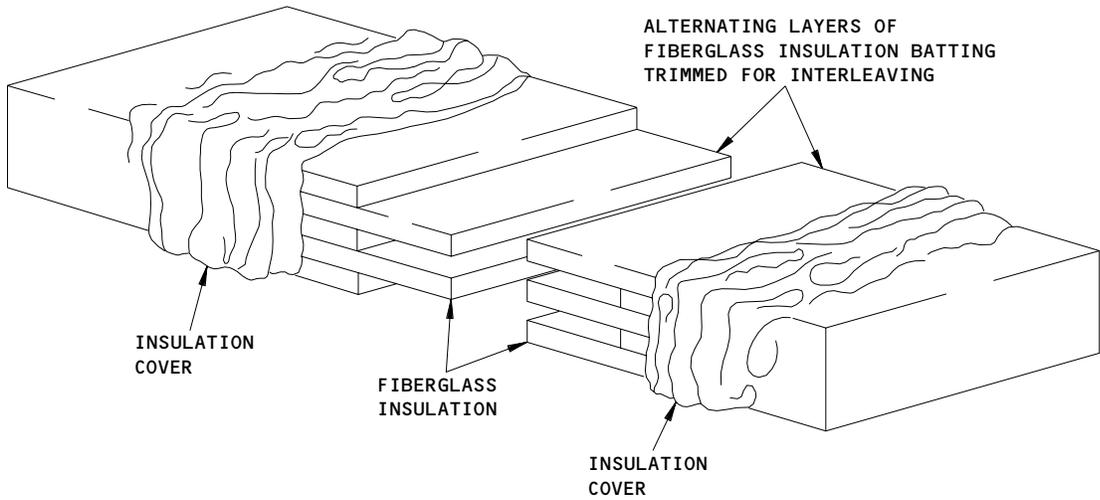
EFFECTIVITY	ALL

**25-21-339**

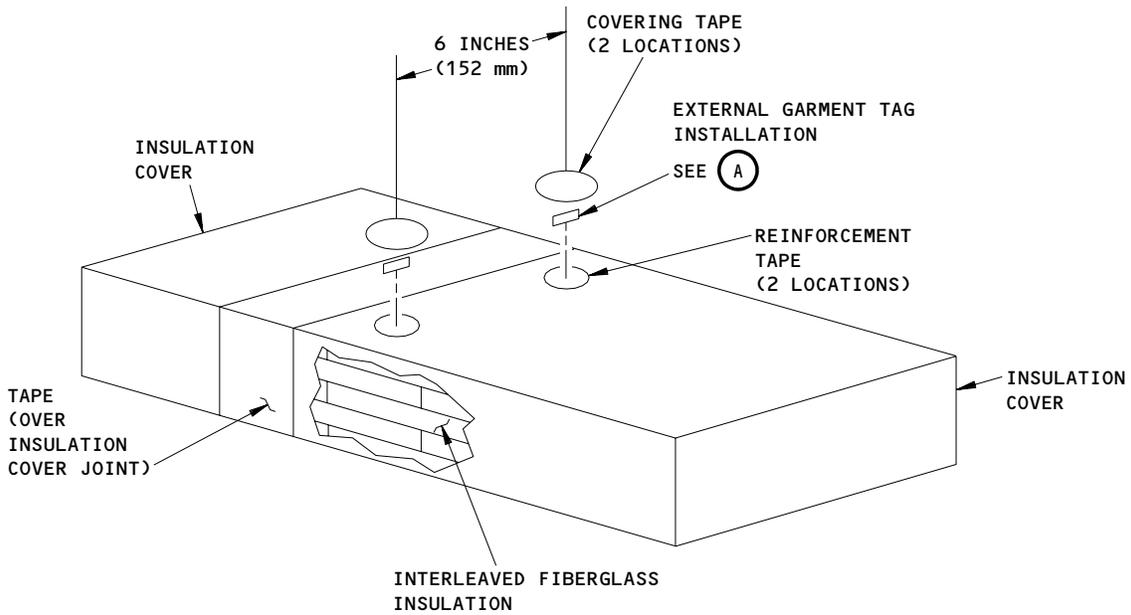
01

Page 823  
 Aug 01/06

459680



**PROCEDURE TO INTERLEAVE FIBERGLASS INSULATION BATTING**

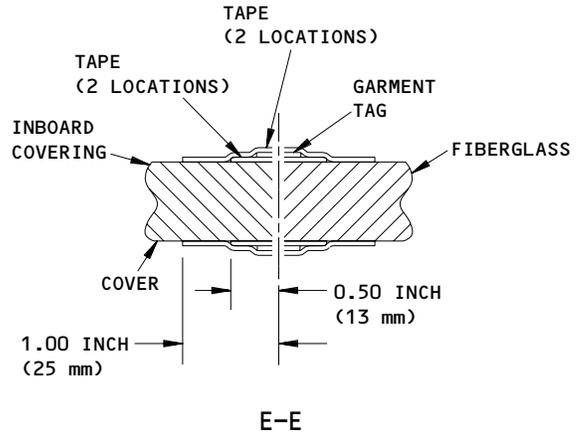
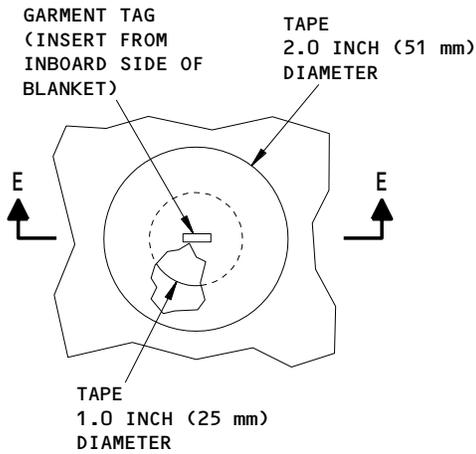


**ATTACHMENT OF INTERLEAVED PARTS**

Insulation Blanket Manufacturing  
 Figure 802 (Sheet 7)

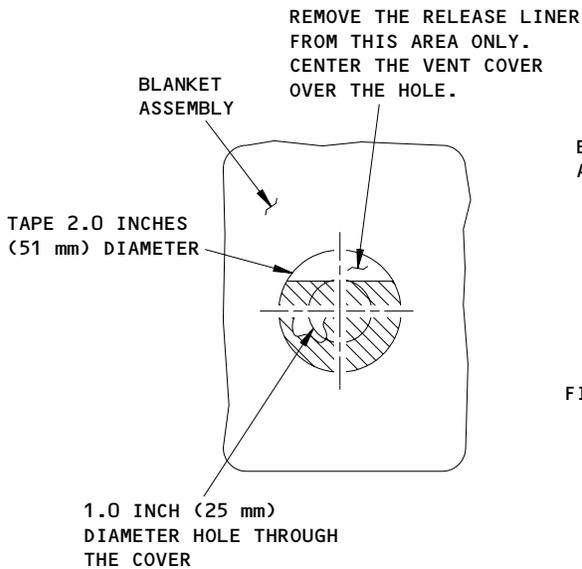
EFFECTIVITY	ALL
-------------	-----

**25-21-339**

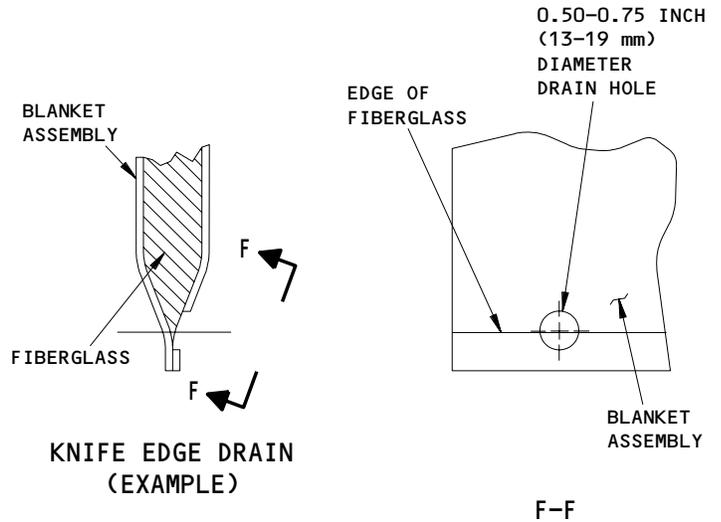


**EXTERNAL GARMENT  
TAG INSTALLATION  
(EXAMPLE)**

(A)



**VENT INSTALLATION  
(EXAMPLE)**



**KNIFE EDGE DRAIN  
(EXAMPLE)**

**Insulation Blanket Manufacturing  
Figure 802 (Sheet 8)**

EFFECTIVITY	ALL
-------------	-----

**25-21-339**

CURVED CEILING PANEL – MAINTENANCE PRACTICES

1. General

A. Curved ceiling panel instructions covered in this section include, lowering and raising for service access, removal/installation, and inspection/check.

2. Lower and Raise Curved Ceiling Panel

A. Lower Curved Ceiling Panel (Fig. 202)

- (1) If an emergency exit light is installed on air conditioning ceiling outlet under the ceiling panel, remove exit light lens and shroud (Ref Chapter 33, Emergency Lights).
- (2) Open overhead stowage compartment beneath ceiling panel to be lowered.
- (3) Push up on the latch trigger of each outboard latch and allow outboard side of ceiling panel to move down.
- (4) Support inboard edge and move ceiling panel outboard until inboard edge is free of air conditioning outlet nozzle.
- (5) Allow ceiling panel to swing down until it is held by the two lanyards.
- (6) Disconnect hook on each lanyard from lanyard brackets on ceiling panel and allow panel to swing down until it is again held by the two lanyards.

B. Raise Curved Ceiling Panel (Fig. 201)

- (1) Raise ceiling panel and attach lanyard hooks to the lanyard attaching brackets.
- (2) Move ceiling panel outboard and raise inboard edge to engage air conditioning outlet nozzle.

**NOTE:** Excess length of lanyard should be stowed along edge of ceiling panel so as not to wedge between panel and air conditioning outlet nozzle.

- (3) Move panel inboard to push inboard edge into air conditioning outlet nozzle and push up on outboard edge to lock both outboard latches.
- (4) Check that flaps along edges of ceiling panels are overlapping adjacent panels properly.
- (5) Close overhead stowage compartment beneath ceiling panel.
- (6) Install emergency exit light lens and shroud if they were removed to allow lowering of ceiling panel (Ref Chapter 33, Emergency Lights).

3. Removal/Installation Curved Ceiling Panel

A. Remove Curved Ceiling Panel (Fig. 201)

- (1) Lower ceiling panel as described in Curved Ceiling Panel – Maintenance Practices. If desired, lower two adjacent panels for access.
- (2) Open the following circuit breakers on panel P18:
  - (a) NIGHT LIGHTS (2 places)



## MAINTENANCE MANUAL

- (b) LEFT AFT PWR
  - (c) RIGHT AFT PWR
  - (d) RIGHT AND LEFT FWD PWR
  - (3) If removing a ceiling panel containing ceiling lights, disconnect ceiling panel wire bundle at bracket installed on structure above ceiling panel. Install stowage cap to open receptacle on bracket.
  - (4) Support ceiling panel and remove screw attaching each lanyard terminal to bracket on air conditioning duct.
  - (5) Support ceiling panel and remove hinge spring pin from both ceiling panel latches.
  - (6) Lower and remove ceiling panel.
  - (7) Reinstall hinge spring pins in trunnion on panel latches.
  - (8) If required for replacement, remove ceiling panel latch.
    - (a) Remove two attaching screws securing panel latch to structure.
    - (b) Remove ceiling panel latch.
- B. Install Curved Ceiling Panel (Fig. 201)
- (1) If panel latches were removed during removal of ceiling panel, install the panel latches.
    - (a) Support each panel latch in position on support angle on structure.
    - (b) Install two attaching screws at each latch to secure latches to support angle.
  - (2) Remove hinge spring pin from trunnion on each panel latch.
  - (3) Support ceiling panel with hinge bases on outboard edge aligned with trunnion on each ceiling panel latch.
  - (4) At each panel latch, push hinge spring pin through hinge base and trunnion.

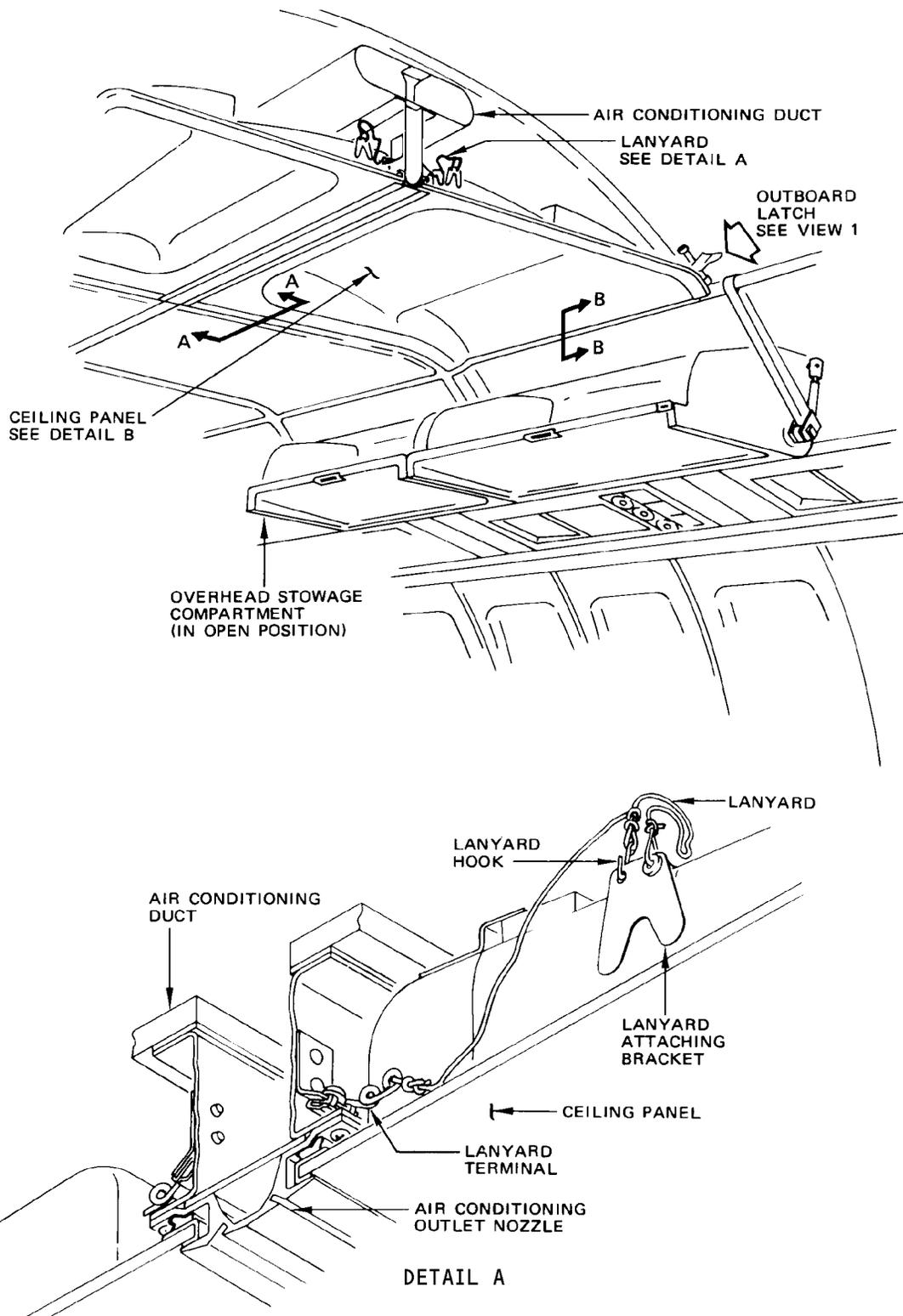
**NOTE:** Access for insertion of hinge spring pins may be improved by having adjacent panels in lowered position.

- (5) Support inboard edge of ceiling panel and install quick-release fastener to attach each lanyard terminal to bracket on air conditioning duct.
  - (6) If installing a ceiling panel containing ceiling lights, uncap electrical receptacle on structure above ceiling panel and connect ceiling panel wire bundle. Install stowage cap on dummy receptacle provided adjacent to electrical receptacle.
  - (7) If panel latches were removed or if a new ceiling panel is being installed, adjust ceiling panel as described in par. 4.
  - (8) Raise ceiling panel as described in par. 2.
4. Adjustment/Test Curved Ceiling Panel
- A. Adjust Curved Ceiling Panel (Fig. 201)
- (1) Open overhead stowage compartment beneath ceiling panel to be adjusted.
  - (2) Lower ceiling panel as described in par. 2.

EFFECTIVITY  
WIDE BODY LOOK INTERIOR

25-21-341

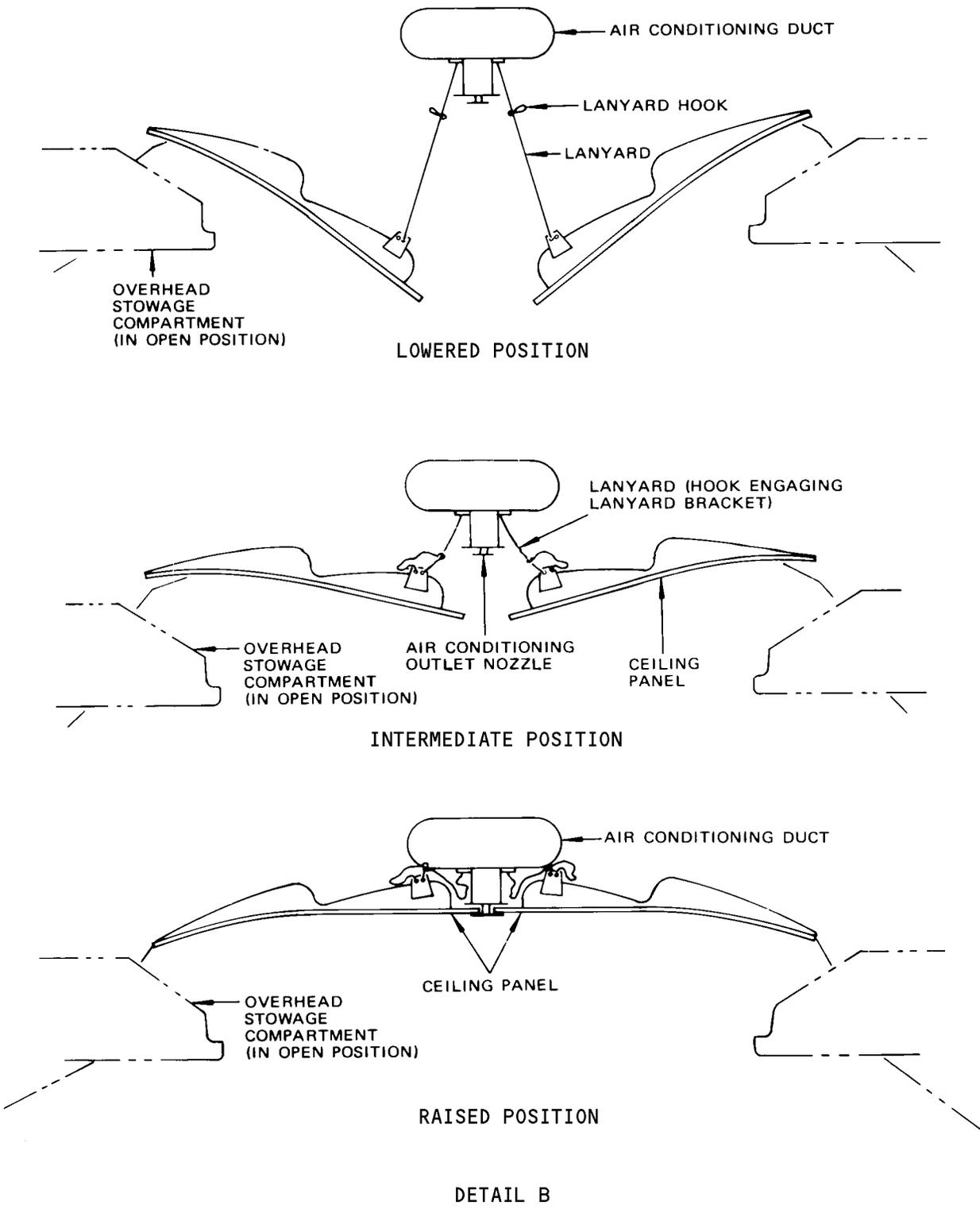
06 Page 202  
Aug 01/05



Curved Ceiling Panel Installation Passenger Areas  
 Figure 201 (Sheet 1)

EFFECTIVITY  
 WIDE BODY LOOK INTERIOR

25-21-341



Curved Ceiling Panel Installation Passenger Areas  
 Figure 201 (Sheet 2)

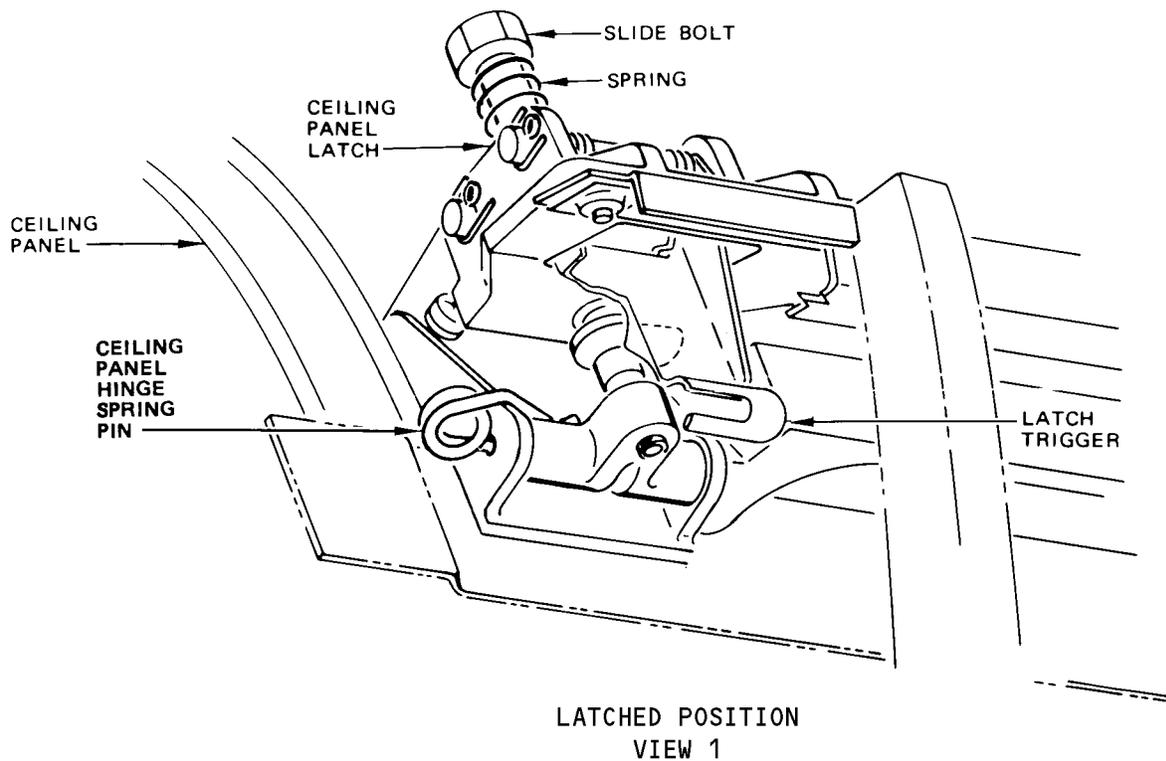
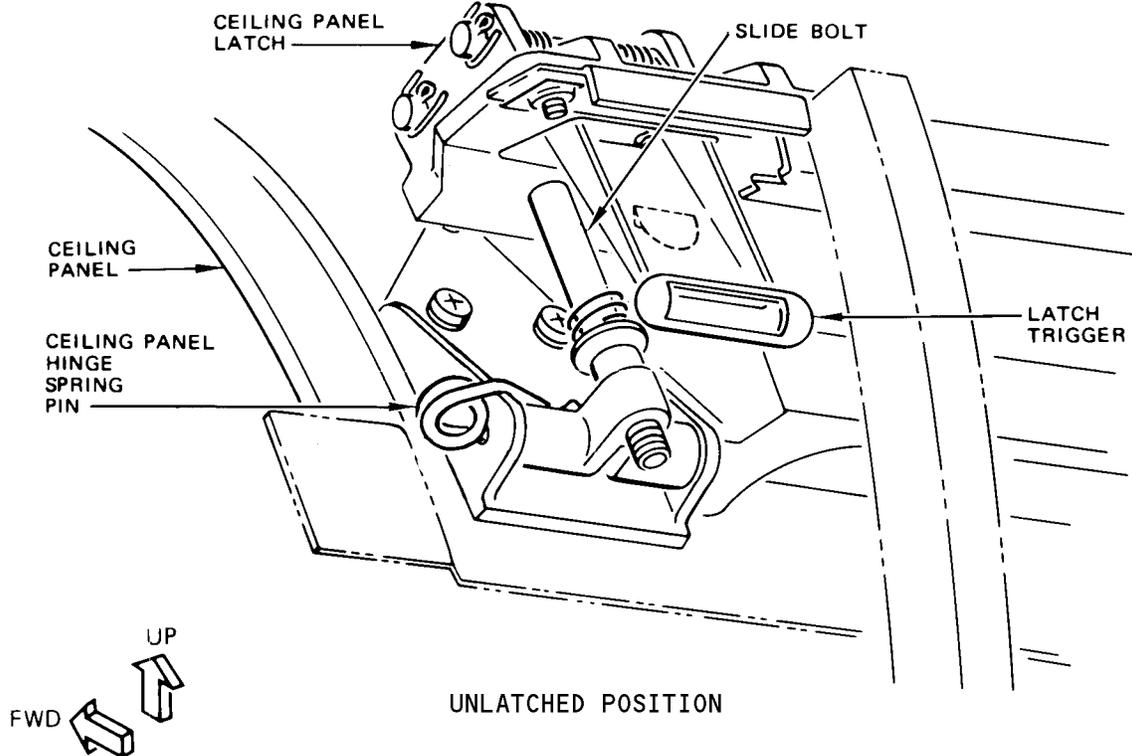
EFFECTIVITY  
 WIDE BODY LOOK INTERIOR

**25-21-341**

456150



**MAINTENANCE MANUAL**



Curved Ceiling Panel Installation Passenger Areas  
Figure 201 (Sheet 3)

EFFECTIVITY  
WIDE BODY LOOK INTERIOR

**25-21-341**



## MAINTENANCE MANUAL

- (3) Loosen screws attaching both outboard latches to support angle.
- (4) Slide ceiling panel forward or aft as required to provide a gap between adjacent panels of  $0.75 \pm 0.10$  inch.
- (5) Move outboard edge of ceiling panel up or down as required to align surfaces of ceiling panel and overhead stowage compartment. These surfaces of ceiling panel and overhead stowage compartment. These surfaces should be aligned within  $\pm 0.2$  inch.
- (6) Tighten screws to secure both outboard latches to support angle.
- (7) Rotate slide bolt in each outboard latch to provide a gap of  $0.30 \pm 0.03$  inch between ceiling panel and overhead stowage compartment.

**NOTE:** Ceiling panel should overlap edge of air conditioning outlet nozzle a minimum of 0.50 inch.

- (8) Raise ceiling panel as described in par. 2.
- (9) Close overhead stowage compartment beneath ceiling panel.

### 5. Adjust Curved Ceiling Panel (Main Cargo Door Area) (Fig. 201)

**NOTE:** The following instructions provide the steps necessary to adjust the curved ceiling panels attached to the main cargo door and the abutting panels attached to upper structure.

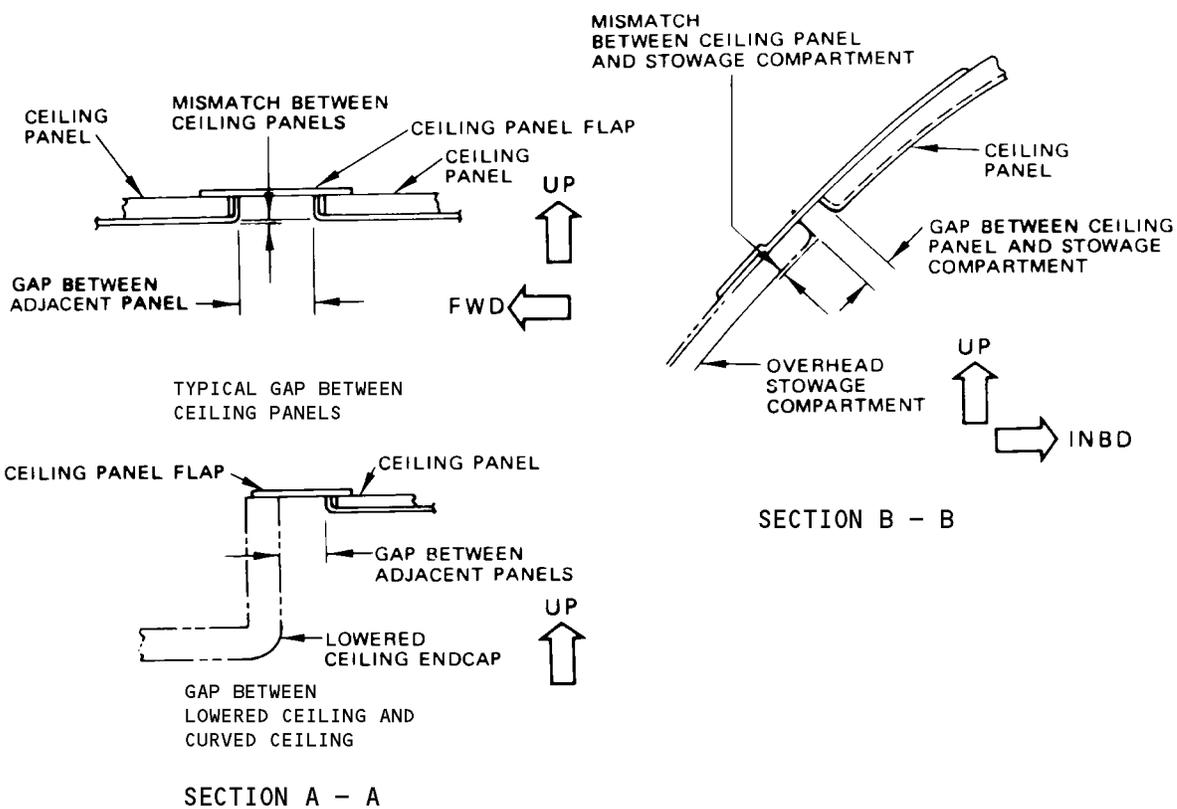
- A. Open overhead stowage compartments on main cargo door.
- B. Push up latch trigger of each outboard latch and allow outboard side of cargo door ceiling panel to move down.
- C. Support inboard edge and move cargo door ceiling panel outboard until inboard edge is free of inboard support clips.
- D. Support cargo door ceiling panel and remove hinge spring pin from both latches.
- E. Lower and remove cargo door ceiling panel and reinstall hinge spring pins in latches.
- F. Loosen screws in slotted holes located in outboard edge of ceiling panels attached to upper structure.
- G. Adjust height of ceiling panels attached to upper structure to align with adjacent ceiling panels and tighten screws.
- H. Remove hinge pin from latch trunnion on cargo door ceiling panel.
- I. Position cargo door ceiling panel with hinge bases on outboard edges aligned with trunnion on each ceiling panel latch and push hinge spring pin through hinge base and trunnion.
- J. Loosen screws attaching both outboard latches to support angle.
- K. Slide cargo door ceiling panel forward or aft as required to provide  $0.75 \pm 0.10$ -inch gap between panels.
- L. Move cargo door ceiling panel outboard and raise inboard end to align support clips, then move panel inboard to engage support slips.
- M. Check height of cargo door ceiling panel in relation to adjacent panels.

EFFECTIVITY  
WIDE BODY LOOK INTERIOR

25-21-341

05

Page 206  
Aug 01/05



Curved Ceiling Panel Installation Passenger Areas  
 Figure 201 (Sheet 4)

EFFECTIVITY  
 WIDE BODY LOOK INTERIOR

25-21-341



## MAINTENANCE MANUAL

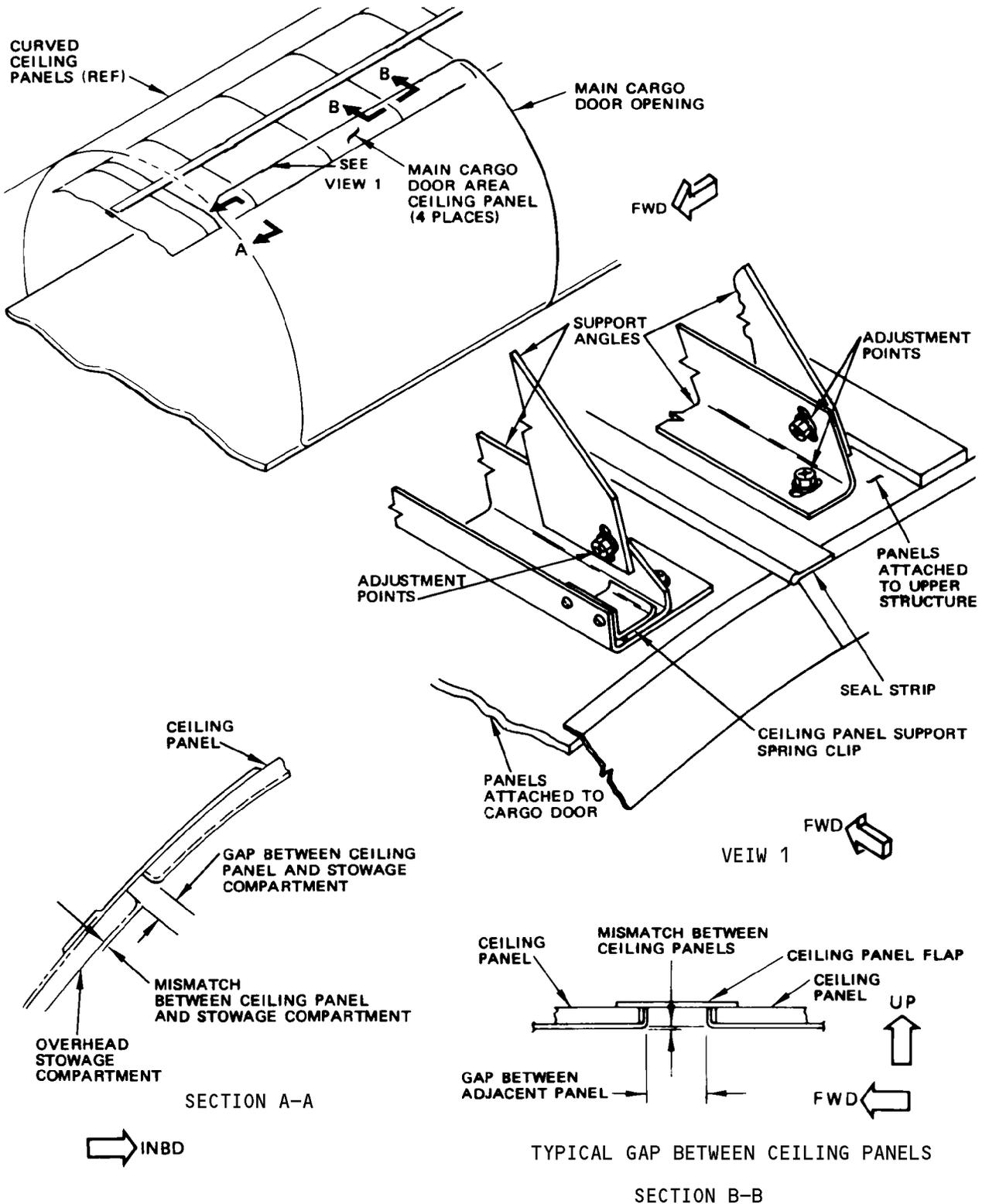
- N. If adjustment is required, lower panel and loosen screws in slotted holes located along support bracket. Adjust to approximate location, tighten screws and check. Repeat until correct adjustment is obtained.
- O. Rotate slide bolt in each outboard latch to provide a gap of 0.03 +0.03 inch between ceiling panel and overhead stowage compartment.

EFFECTIVITY  
WIDE BODY LOOK INTERIOR

25-21-341

03

Page 208  
Dec 01/04



Curved Ceiling Panel Adjustment (Main Cargo Door Area)  
 Figure 202

EFFECTIVITY  
 WIDE BODY LOOK INTERIOR

25-21-341

INSULATION BLANKET – REMOVAL/INSTALLATION

1. General

- A. These removal/installation procedures apply to insulation blankets installed in sidewall and ceiling areas of the passenger cabin. As insulation is located in areas that require a variety of installation methods, only general instructions are given.
- B. Passenger cabin insulation, besides performing an insulating and sound absorbing function, serves to prevent moisture which condenses on the inner surface of fuselage skin from leaking into the passenger compartment. Insulation is designed to allow this moisture to drain down behind sidewall and into the lower fuselage where it can be drained from airplane. To perform this function properly, the insulation must be installed with all edge flaps overlapping adjacent blankets to act as shingles and blankets must fit tightly around any structure which protrudes through insulation.

2. Prepare to Remove Insulation

- A. Removal of one or more components of the sidewall and/or ceiling lining will be required to gain access to any particular section of passenger cabin insulation (Ref 25-21-311 thru 25-21-361 for removal/installation of sidewall and ceiling lining components).
- B. When removing insulation in the window area of the sidewall, it will be necessary to remove the air distribution duct (Ref Chapter 21, Air Distribution System).
- C. Remove any equipment that is installed by attachments that extend through the insulation blanket.

3. Insulation Blanket Removal

- A. Remove washers from lining retainer studs securing insulation to body frames.
- B. Pull insulation loose from lining retainer studs.
- C. Remove any single surface tape used to seal edges of insulation blanket to adjacent blankets or structure.
- D. Remove insulation blanket by pulling inboard to separate halves of velcro tape used in some places to hold insulation against airplane structure.
- E. Mark insulation blanket so that it can be identified for reinstallation.

EFFECTIVITY

ALL

25-21-347

01

Page 401  
Aug 01/05



## MAINTENANCE MANUAL

### 4. Insulation Blanket Installation

#### A. Consumable Materials

- (1) Tape - Insulation Blanket, BMS 5-149
- (2) Tape - Advanced Insulation Blanket, BMS5-157
- (3) Tape - Hook/Loop Fastener, (Polypropylene Hook & Nylon Loop)  
BMS8-285, Type IV
- (4) Tape - Hook/Loop Fastener, Flame Propagation Resistant,  
BMS8-372

#### B. Do these steps to check for insulation blanket contamination:

**WARNING:** LET THE CORROSION-INHIBITING COMPOUNDS (CIC) BECOME FULLY DRY. IF CIC GETS ON THE INSULATION BLANKET, THE INSULATION BLANKET WILL BECOME LESS FLAME-RESISTANT. THIS INCREASES THE RISK OF FIRE, WHICH CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (1) To prevent CIC contamination of insulation blankets, let the corrosion-inhibiting compounds fully dry before you install the insulation blankets.
  - (a) Let the corrosion-inhibiting compounds dry longer than the minimum times listed below if you have one of these conditions:
    - 1) Low temperature.
    - 2) High humidity.
    - 3) Thick layer of corrosion-inhibiting compounds.
  - (b) Ventilate areas, after application of CIC such as BMS 3-23, for a minimum of 1 hour.
  - (c) Ventilate areas treated with CIC such as BMS 3-26 or BMS 3-29, for a minimum of 4 hours.

**WARNING:** DO NOT USE DETERGENTS OR SOLVENTS TO CLEAN THE INSULATION BLANKET. IT CAN REMOVE FLAME RETARDANTS AND CAUSE FLAMMABLE RESIDUES ON THE INSULATION BLANKET WHICH INCREASES THE RISK OF FIRE. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

EFFECTIVITY

ALL

25-21-347

01

Page 402  
Aug 01/05



## MAINTENANCE MANUAL

- (2) If there is CIC contamination, oily or waxy substances, or other fluids (which typically changes the color and appearance of the insulation blanket cover), replace the insulation blanket.
  - (3) If there are dust, lint or other loose debris on the insulation blanket, use a vacuum cleaner or a non-metallic soft brush to remove the contamination.
  - (4) Make sure the area is clean before you install the insulation blanket.
- C. Do these steps to install the insulation blanket:
- (1) If you replace an insulation blanket or a capstrip, install an insulation blanket or a capstrip that complies with FAR 25.856.
    - (a) Replace the part of the hook/loop tape that is installed on the airplane structure where the replacement insulation blanket attaches, with hook/loop tape (BMS8-372), as applicable.

NOTE: Hook/loop tape (BMS8-372) is FAR 25.856 compliant.

- (2) Install new studs on the structure, if it is necessary.
- (3) Align the holes in the insulation blanket with the studs.
- (4) Put the insulation blanket in its position.
- (5) Install the clips on the studs.
- (6) Install retainers where applicable.
- (7) Fasten glove fasteners, if applicable.
- (8) ALL AIRPLANES PRE SEP 2, 2003 FAR STD; AIRPLANES WITHOUT FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;
  - (a) For insulation blanket with BMS8-142 cover material:  
Use tape (BMS5-149 or BMS5-157) or hook/loop tape (BMS8-285 or BMS8-372), where applicable to close butt joints, overlapping joints, gaps between adjacent insulation blankets or panels, and between insulation blanket and the airplane structure.

NOTE: Tape (BMS5-157) and hook/loop tape (BMS8-372) are FAR 25.856 compliant. These items are the preferred alternatives to tape (BMS5-149) and hook/loop tape (BMS8-285), respectively.

EFFECTIVITY

ALL

25-21-347

01

Page 403  
Aug 01/06



## MAINTENANCE MANUAL

- (9) ALL AIRPLANES POST SEP 2, 2003 FAR STD; AIRPLANES WITH FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;
- (a) For insulation blanket with BMS8-377 cover material:  
Use tape (BMS5-157) or hook/loop tape (BMS8-372), where applicable to close butt joints, overlapping joints, gaps between adjacent molded insulation panels, and between insulation blanket and the airplane structure.
- (10) For replacement insulation blanket, push on the insulation blanket to remove the air that is inside the insulation blanket through the vent hole(s).
- (a) Peel off the attached release liner on the circle tape and seal the vent hole.
- (11) Make sure the insulation blanket does not cover the openings in the intercostals.

**NOTE:** Air must be free to circulate between frames.

- (12) Make sure that the insulation blankets are clear from the stringers to permit the condensation moisture to dry easily.

**NOTE:** The sections of the ceiling and wall insulation blankets must be attached to the stringer No. 4 at their overlap point.

- (13) Make sure moisture penetration through to the inboard side of the insulation blanket is minimized.
- (a) Lap edges or flaps of insulation blanket over or under adjacent blankets as required.

**NOTE:** Flaps along edges of insulation blankets must overlap adjacent blankets in a manner which will transfer runoff of condensed moisture to adjacent blanket without trapping moisture or allowing it to leak into cabin area.

- (14) Check that insulation blankets fit tightly around any structure or supporting brackets which protrude through inboard surface of insulation.
- (15) Make sure to position the insulation blankets in the correct location on the sidewall outboard of air distribution ducts.
- (16) Make sure that when you install the insulation blankets around windows, the blanket should contact the window reveal around the entire window periphery with no gaps to form an air seal.
- (17) Check to ensure that all insulation components are in proper places so as not to interfere with sidewall lining or other equipment installed on the sidewall.

EFFECTIVITY

ALL

25-21-347

01

Page 404  
Aug 01/06

**BOEING**  
**737**   
MAINTENANCE MANUAL

5. Restore Airplane to Normal
  - A. Reinstall any brackets or equipment that were removed.
  - B. Reinstall air distribution ducts removed from sidewall area (Ref Chapter 21, Air Distribution System).
  - C. Reinstall any components of the sidewall and ceiling lining which were removed to gain access to the insulation (Ref 25-21-311 thru 25-21-361 for removal/installation of sidewall and ceiling lining components).

EFFECTIVITY

ALL

25-21-347

01

Page 405  
Aug 01/06

CEILING INSULATION – REMOVAL/INSTALLATION

1. General

A. Removal and installation of all or any part of the ceiling insulation may be accomplished. However, due to the variety of installation methods and the lack of a typical example, the instructions which follow are of a general nature.

2. Ceiling Insulation Removal

- A. Remove one or more components of ceiling lining, as may be required in order to gain access to any particular section of ceiling insulation. Refer to 25-21-341, Curved Ceiling Panel – Removal/Installation.
- B. Remove joint tape and retainers as required.
- C. When all obstructions have been removed, remove insulation panels. (In some places it may be necessary to peel the panel free of the velcro tape which is used to retain it against airplane structure.)

**NOTE:** Mark insulation components as they are removed so that they may be located properly when reinstalled.

3. Ceiling Insulation Installation

A. Consumable Materials

- (1) Tape – Insulation Blanket, BMS 5-149
- (2) Tape – Advanced Insulation Blanket, BMS5-157
- (3) Tape – Hook/Loop Fastener, (Polypropylene Hook & Nylon Loop)  
BMS8-285, Type IV
- (4) Tape – Hook/Loop Fastener, Flame Propagation Resistant,  
BMS8-372

B. Do these steps to check for insulation blanket contamination:

**WARNING:** LET THE CORROSION-INHIBITING COMPOUNDS (CIC) BECOME FULLY DRY. IF CIC GETS ON THE INSULATION BLANKET, THE INSULATION BLANKET WILL BECOME LESS FLAME-RESISTANT. THIS INCREASES THE RISK OF FIRE, WHICH CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (1) To prevent CIC contamination of insulation blankets, let the corrosion-inhibiting compounds fully dry before you install the insulation blankets.
- (a) Let the corrosion-inhibiting compounds dry longer than the minimum times listed below if you have one of these conditions:
- 1) Low temperature.



## MAINTENANCE MANUAL

- 2) High humidity.
  - 3) Thick layer of corrosion-inhibiting compounds.
- (b) Ventilate areas, after application of CIC such as BMS 3-23, for a minimum of 1 hour.
- (c) Ventilate areas treated with CIC such as BMS 3-26 or BMS 3-29, for a minimum of 4 hours.

**WARNING:** DO NOT USE DETERGENTS OR SOLVENTS TO CLEAN THE INSULATION BLANKET. IT CAN REMOVE FLAME RETARDANTS AND CAUSE FLAMMABLE RESIDUES ON THE INSULATION BLANKET WHICH INCREASES THE RISK OF FIRE. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (2) If there is CIC contamination, oily or waxy substances, or other fluids (which typically changes the color and appearance of the insulation blanket cover), replace the insulation blanket.
  - (3) If there are dust, lint or other loose debris on the insulation blanket, use a vacuum cleaner or a non-metallic soft brush to remove the contamination.
  - (4) Make sure the area is clean before you install the insulation blanket.
- C. Do these steps to install the insulation blanket:
- (1) If you replace an insulation blanket or a capstrip, install an insulation blanket or a capstrip that complies with FAR 25.856.
    - (a) Replace the part of the hook/loop tape that is installed on the airplane structure where the replacement insulation blanket attaches, with hook/loop tape (BMS8-372), as applicable.

**NOTE:** Hook/loop tape (BMS8-372) is FAR 25.856 compliant.

- (2) Install new studs to the structure, if it is necessary.
- (3) Align the holes in the insulation blanket with the studs.
- (4) Put the insulation blanket in its position.
- (5) Install the clips on the studs.
- (6) Install retainers where applicable.
- (7) Fasten glove fasteners, if applicable.

EFFECTIVITY  
New Look Interior

25-21-349

06

Page 402  
Aug 01/06



## MAINTENANCE MANUAL

- (8) ALL AIRPLANES PRE SEP 2, 2003 FAR STD; AIRPLANES WITHOUT FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;
- (a) For insulation blanket with BMS8-142 cover material:  
Use tape (BMS5-149 or BMS5-157) or hook/loop tape (BMS8-285 or BMS8-372), where applicable to close butt joints, overlapping joints, gaps between adjacent insulation blankets or panels, and between insulation blanket and the airplane structure.

NOTE: Tape (BMS5-157) and hook/loop tape (BMS8-372) are FAR 25.856 compliant. These items are the preferred alternatives to tape (BMS5-149) and hook/loop tape (BMS8-285), respectively.

- (9) ALL AIRPLANES POST SEP 2, 2003 FAR STD; AIRPLANES WITH FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;
- (a) For insulation blanket with BMS8-377 cover material:  
Use tape (BMS5-157) or hook/loop tape (BMS8-372), where applicable to close butt joints, overlapping joints, gaps between adjacent molded insulation panels, and between insulation blanket and the airplane structure.
- (10) For replacement insulation blanket, push on the insulation blanket to remove the air that is inside the insulation blanket through the vent hole(s).
- (a) Peel off the attached release liner on the circle tape and seal the vent hole.
- (11) Make sure the insulation blanket does not cover the openings in the intercostals.

NOTE: Air must be free to circulate between frames.

- (12) Make sure that the insulation blankets are clear from the stringers to permit the condensation moisture to dry easily.

NOTE: The sections of the ceiling and wall insulation blankets must be attached to the stringer No. 4 at their overlap point.

- (13) Make sure moisture penetration through to the inboard side of the insulation blanket is minimized.
- (a) Lap edges or flaps of insulation blanket over or under adjacent blankets as required.

NOTE: Flaps along edges of insulation blankets must overlap adjacent blankets in a manner which will transfer runoff of condensed moisture to adjacent blanket without trapping moisture or allowing it to leak into cabin area.

- (14) Check that insulation blankets fit tightly around any structure or supporting brackets which protrude through inboard surface of insulation.

EFFECTIVITY  
New Look Interior

25-21-349

06

Page 403  
Aug 01/06

**BOEING**  
**737**   
MAINTENANCE MANUAL

4. Restore Airplane to Normal

- A. Install equipment and ceiling lining that was removed to facilitate removing ceiling insulation (Ref 25-21-341, Curved Ceiling Panel - R/I).

EFFECTIVITY  
New Look Interior

25-21-349

08

Page 404  
Aug 01/06



MAINTENANCE MANUAL

CEILING INSULATION – APPROVED REPAIRS

1. General

- A. For approved repairs information refer to AMM 25-21-339/801, Sidewall Insulation – Approved Repairs.

EFFECTIVITY

ALL

25-21-349

01

Page 801  
Aug 01/06

FORWARD LOWERED CEILING PANELS – REMOVAL/INSTALLATION

1. General

- A. The forward lowered ceiling comprises individual panels as described in this section. The panels are arbitrarily assigned numbers, as shown in Fig. 401, to assist in identification within these procedures only.
- B. The procedure which follows describes the operations necessary to remove the entire lowered ceiling. If desired, any one lowered ceiling panel can be removed after opening appropriate access panels for access to panel attachments. In some cases, adjacent lowered ceiling panels will need to be removed to allow removal of the desired panel.
- C. Depending upon the passenger cabin arrangement, certain items of passenger equipment are installed under the lowered ceiling and will obstruct removal of some lowered ceiling panels.

2. Remove Forward Lowered Ceiling Panels (Fig. 401)

- A. Remove Panels No. 7 and 8
  - (1) Open overhead stowage compartment beneath ceiling panel.
  - (2) Push up on latch trigger of each outboard latch and allow outboard side of panel to move down.
  - (3) Support inboard edge and move ceiling panel outboard until inboard edge is free of support angle.
  - (4) Open ceiling light circuit breakers on panel P18.
  - (5) Disconnect wire bundle for ceiling light and unhook lanyard.
  - (6) Support ceiling panel and remove hinge spring pin from both outboard latches.
  - (7) Lower and remove ceiling panel.
  - (8) Reinstall hinge spring pin in trunnion on each outboard latch.
- B. Remove Panel No. 1
  - (1) Open lowered ceiling panel by releasing the two latches.
  - (2) Open appropriate circuit breakers and disconnect electrical leads to speaker and call light on panel No. 1.
  - (3) Detach lowered ceiling panel from hinges.
- C. Remove Panel No. 2
  - (1) Open panel by releasing the two latches.
  - (2) Remove battery power pack from panel.
  - (3) Support panel and detach panel hinges.
- D. Remove Panel No. 11
  - (1) Remove fasteners at inboard and forward edges.
  - (2) Disconnect support bracket from overhead support structure.
  - (3) Pull panel inboard releasing panel from sidewall trim attachment.
- E. Remove Panel No. 5
  - (1) Open overhead stowage compartment beneath ceiling panel.
  - (2) Remove fasteners from bracket which connects panel No. 5 to panel No. 6.
  - (3) Support panel No. 5, remove fasteners along inboard edge.

- (4) Support panel and disconnect support brackets from overhead support structure.
  - (5) Lower and remove ceiling panel.
- F. Remove Lowered Ceiling End Cap
- (1) Lower curved ceiling panels installed adjacent to lowered ceiling end cap (Ref 25-21-341, Maintenance Practices).
  - (2) Open appropriate circuit breakers and disconnect wire bundle from emergency light.
  - (3) Remove emergency exit light.
  - (4) Remove three screws attaching each top panel to end cap support channel and remove both top panels.
  - (5) Lower passenger service unit adjacent to end cap as necessary to gain access to end cap outboard attachments (Ref 25-23-311, Maintenance Practices).
  - (6) Support end cap and remove screws and washers attaching each outboard panel to overhead support structure.
  - (7) Lower and remove end cap.
- G. Remove Panel No. 3
- (1) Remove forward service panel cover over forward entry door.
    - (a) Remove quick-release fasteners in upper corners of service panel cover.
    - (b) Remove screws attaching service panel cover to hinges at bottom corners of panel.
  - (2) Remove forward airstair controls.
    - (a) Open circuit breaker to forward airstair controls on circuit breaker panel P6.
    - (b) Remove two screws attaching faceplate to controls casing and pull faceplate with attachments inboard through cutout in lowered ceiling panel.
    - (c) Disconnect wiring as required and completely remove airstair controls.
    - (d) Remove screws attaching controls casing to frame structure and remove casing.
  - (3) Remove forward left windscreen (Ref 25-24-111).
  - (4) Remove fasteners at aft and inboard edges of panel No. 3.
  - (5) Pull panel inboard to release outboard edge and then aft to release forward edge.
- H. Remove Panel No. 4
- (1) Remove fasteners at inboard edge.
  - (2) Pull panel inboard and aft to release outboard and forward edges.
- I. Remove Panel No. 6
- (1) Remove exit light lens above forward service door.
  - (2) Remove forward right windscreen (Ref 25-24-123).
  - (3) Loosen hose clamp on exhaust air hose and disconnect hose from galley exhaust air inlet.
  - (4) Release fasteners along inboard edge of panel.

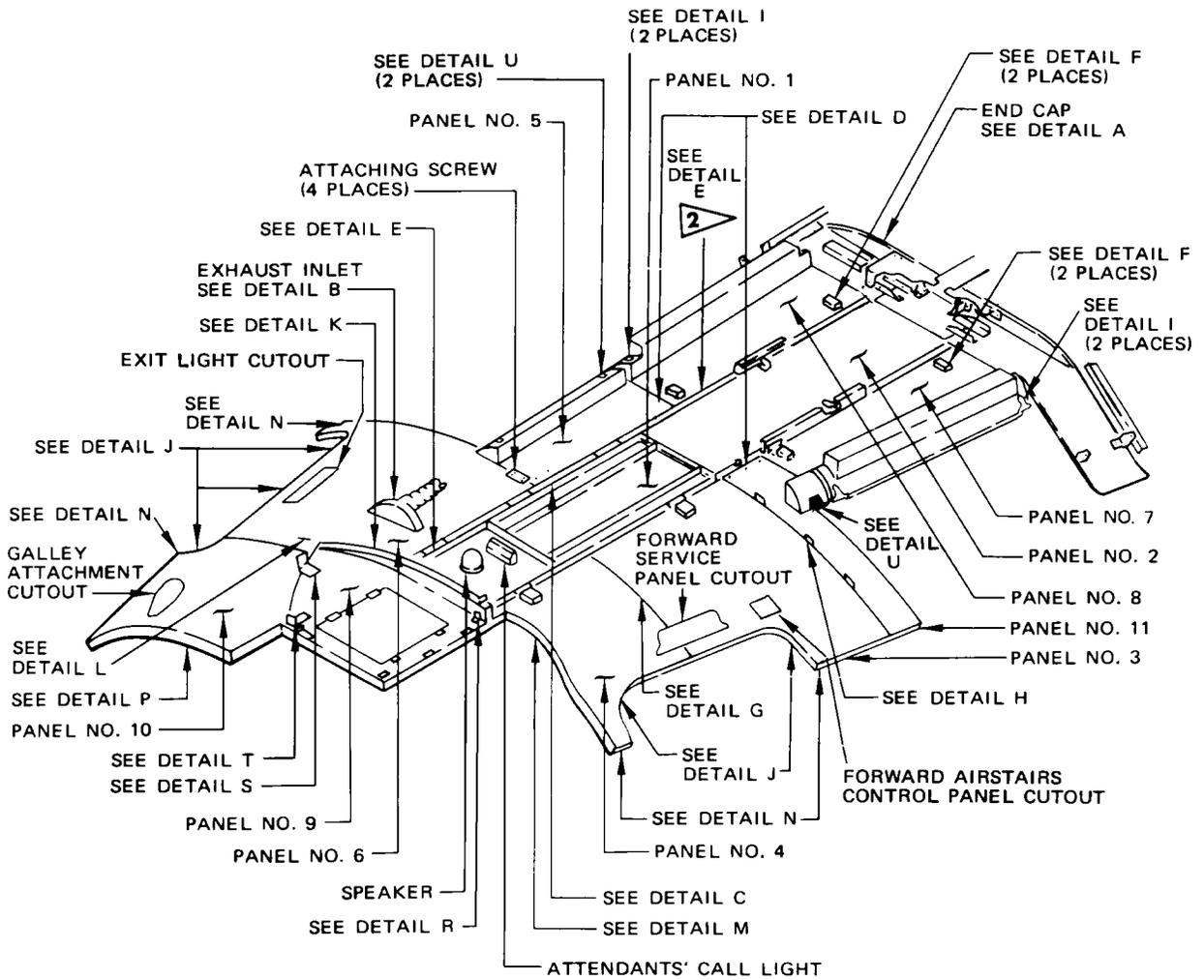
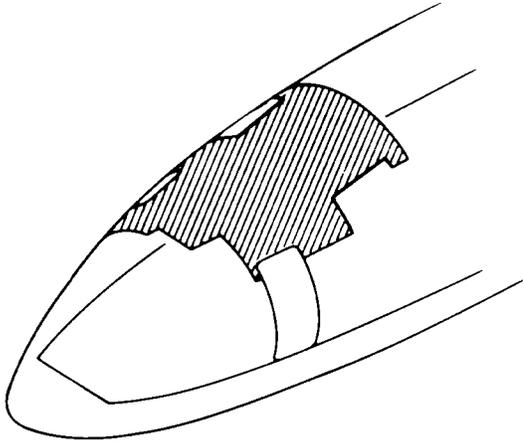
- (5) Pull panel inboard and aft to release forward and outboard edges.
- J. Remove Panel No. 9
  - (1) Open access door in panel No. 9.
  - (2) Remove screws attaching clip to aft left corner of panel No. 9.
  - (3) Remove screws attaching trim strip to right side of the aft edge of panel No. 9.
  - (4) Reach through access door opening and remove screws attaching support bracket to panel on right side of panel.
  - (5) Remove fasteners through support brackets along left edge and in forward corners of panel.
  - (6) Pull panel aft and lower left side first to remove panel.
- K. Remove Panel No. 10
  - (1) Remove galley No. 1 (Ref 25-31-51).
  - (2) From underside of panel, remove quick-release fasteners along forward edge.
  - (3) Pull panel inboard to release outboard and aft panel edges from trim strips.
3. Install Forward Lowered Ceiling Panels (Fig. 401)
  - A. Install Panel No. 10
    - (1) Insert outboard and aft edges of panel into trim strips on sidewall.
    - (2) Install quick-release fasteners along forward edge.
    - (3) Install galley No. 1 (Ref 25-31-51).
  - B. Install Panel No. 9
    - (1) With panel No. 9 raised and slightly aft of its installed position, work panel forward until correctly located.
    - (2) Reach through access door opening and install fasteners through support brackets at forward corners of panel and along left edge.
    - (3) Install screws attaching support bracket on right side of panel.
    - (4) Install screws attaching trim strip to right side of the aft edge of panel No. 9.
    - (5) Install screws attaching clip to the aft left corner of panel No. 9.
    - (6) Close access door in panel No. 9.
  - C. Install Panel No. 6
    - (1) Insert forward and outboard edges of panel into interior lining attachments.
    - (2) Install fasteners along inboard panel edges.
    - (3) Connect exhaust air hose to forward galley exhaust air inlet and tighten hose clamp.
    - (4) Install exit light lens above forward service door.
    - (5) Install forward right windscreen (Ref 25-24-123).
  - D. Install Panel No. 4
    - (1) Insert outboard and forward edges into interior lining trim attachments.
    - (2) Install fasteners at inboard edge.

- E. Install Panel No. 3
- (1) Insert forward edge of panel into trim strip on panel No. 4 and slide panel outboard to engage outboard edge with sidewall trim.
  - (2) Install fasteners at aft and inboard edges of panel.
  - (3) Install forward airstair controls.
    - (a) Ensure that forward airstair controls circuit breaker on circuit breaker panel P6 is open.
    - (b) Insert controls casing through cutout in lowered ceiling panel and thread electrical wires through grommet in casing.
    - (c) Install screws attaching casing to frame structure.
    - (d) Insert controls, attached to faceplate, into casing and connect wiring as required.
    - (e) Install screws attaching faceplate to controls casing.
    - (f) Close forward airstair controls circuit breaker on panel P6.
  - (4) Install forward service panel cover over forward entry door.
    - (a) Attach service panel cover to hinges.
    - (b) Install quick-release fasteners in upper corners of service panel cover.
  - (5) Install forward left windscreen (Ref 25-24-111).
- F. Install Lowered Ceiling End Cap
- (1) Raise end cap into mounting position and loosely install screws and washers to secure it to overhead support structure.
  - (2) Align surface of each end cap outboard panel with adjacent overhead stowage compartment within  $\pm 0.05$  inch and tighten attaching screws.
  - (3) If necessary, loosen screws securing outboard attaching brackets to end cap panels and slide end cap forward or aft as required to provide a gap of  $0.75 \pm 0.10$  inch between end cap panel and adjacent curved ceiling panel.
  - (4) Tighten screws to secure attaching brackets to end cap panels.
  - (5) Place each top panel in position on end cap support channel and push inboard edge into air conditioning ceiling outlet.
  - (6) Install three screws to secure each top panel to support channel.
  - (7) Install emergency exit light.
  - (8) Connect wire bundle to emergency exit light on center panel.
  - (9) Raise curved ceiling panels installed adjacent to lowered ceiling end cap (Ref 25-21-341, Maintenance Practices).
  - (10) Raise passenger service units which were lowered for access to attachments (Ref 25-23-311, Maintenance Practices).
  - (11) Close emergency exit light circuit breakers opened during removal of lowered ceiling end cap.
- G. Install Panel No. 5
- (1) Open overhead stowage compartment beneath ceiling panel.
  - (2) Support ceiling panel in position and secure support brackets to overhead support structure.
  - (3) Install fasteners along inboard edge of panel.

- (4) Install fasteners in bracket which connects panel No. 5 to panel No. 6.
  - (5) Check that flaps along edges of curved portion of panel are overlapping adjacent panels properly.
  - (6) Close overhead stowage compartment beneath ceiling panel.
- H. Install Panel No. 11
- (1) Insert outboard edge of panel into interior lining trim attachment.
  - (2) Secure support bracket to overhead support structure.
  - (3) Install fasteners at inboard and forward edges.
- I. Install Panel No. 2
- (1) Attach panel hinges to support structure.
  - (2) Install battery power pack on panel.
  - (3) Hinge panel up and engage the two latches.
- J. Install Panel No. 1
- (1) Attach lowered ceiling panel to hinges.
  - (2) Connect electrical leads to speaker and call light on panel No. 1.
  - (3) Hinge lowered ceiling panel up to engage the two latches.
- K. Install Panels No. 7 and 8
- (1) Open overhead stowage compartment beneath ceiling panel to be installed.
  - (2) Remove hinge spring pin from trunnion on each outboard latch.
  - (3) Support ceiling panel with hinge bases on outboard edge aligned with trunnion on each outboard latch.
  - (4) At each latch, push hinge spring pin through hinge base and trunnion.
  - (5) Hook lanyard through hole in ceiling support structure and connect wire bundle at bracket containing receptacle.
  - (6) Move ceiling panel outboard and raise inboard edge to engage support angle on structure. Stow excess length of lanyard on top of panel so that lanyard does not wedge between panel and support angle.
  - (7) Move ceiling panel inboard to push support angle under latch plates on inboard edge of panel.
  - (8) Push up on outboard edge of panel to lock both outboard latches. Check that flaps along edges of curved portion of panel are overlapping adjacent panels properly.
  - (9) Check that flaps along edges of curved portion of panel are overlapping adjacent panels properly.
  - (10) Close overhead stowage compartment beneath ceiling panel.
  - (11) Close ceiling light circuit breakers on panel P18 and check that lights operate properly.

EFFECTIVITY  
New Look Interior

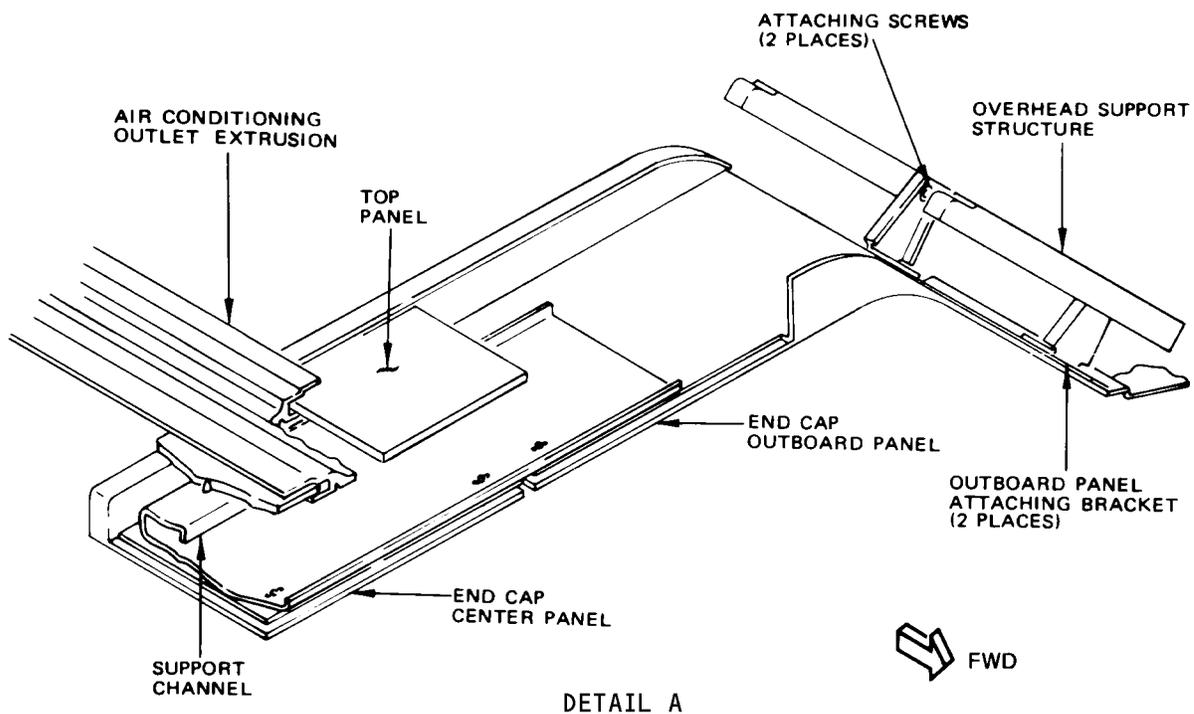
25-21-351



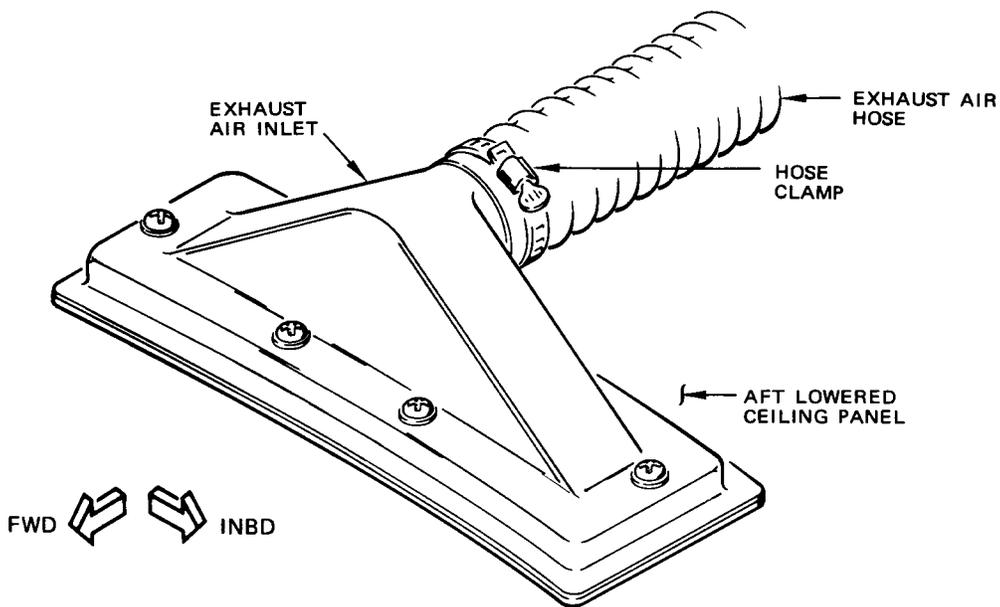
Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 New Look Interior

25-21-351



DETAIL A

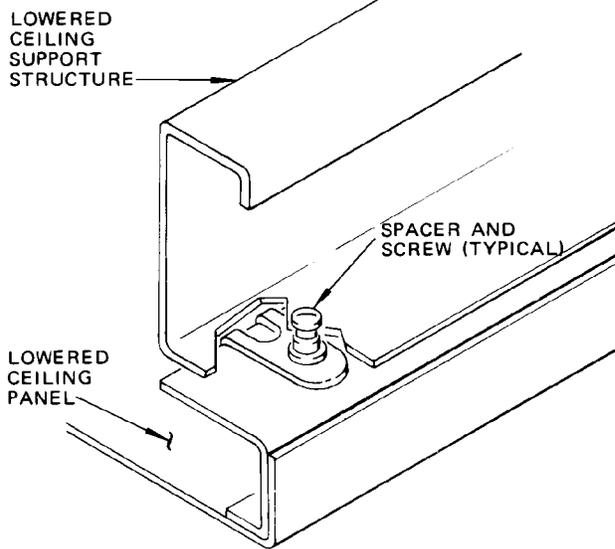


DETAIL B

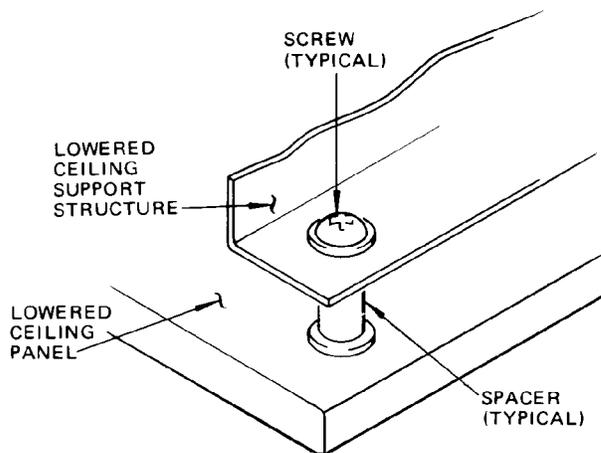
Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 New Look Interior

25-21-351



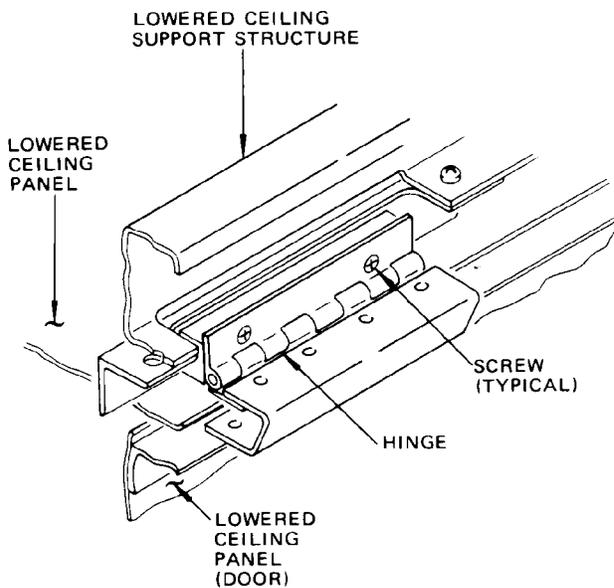
DETAIL C



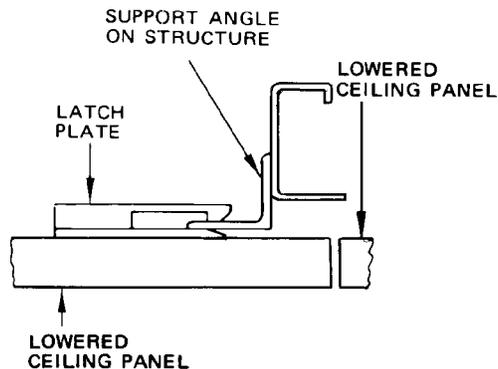
DETAIL D



INBD



DETAIL E



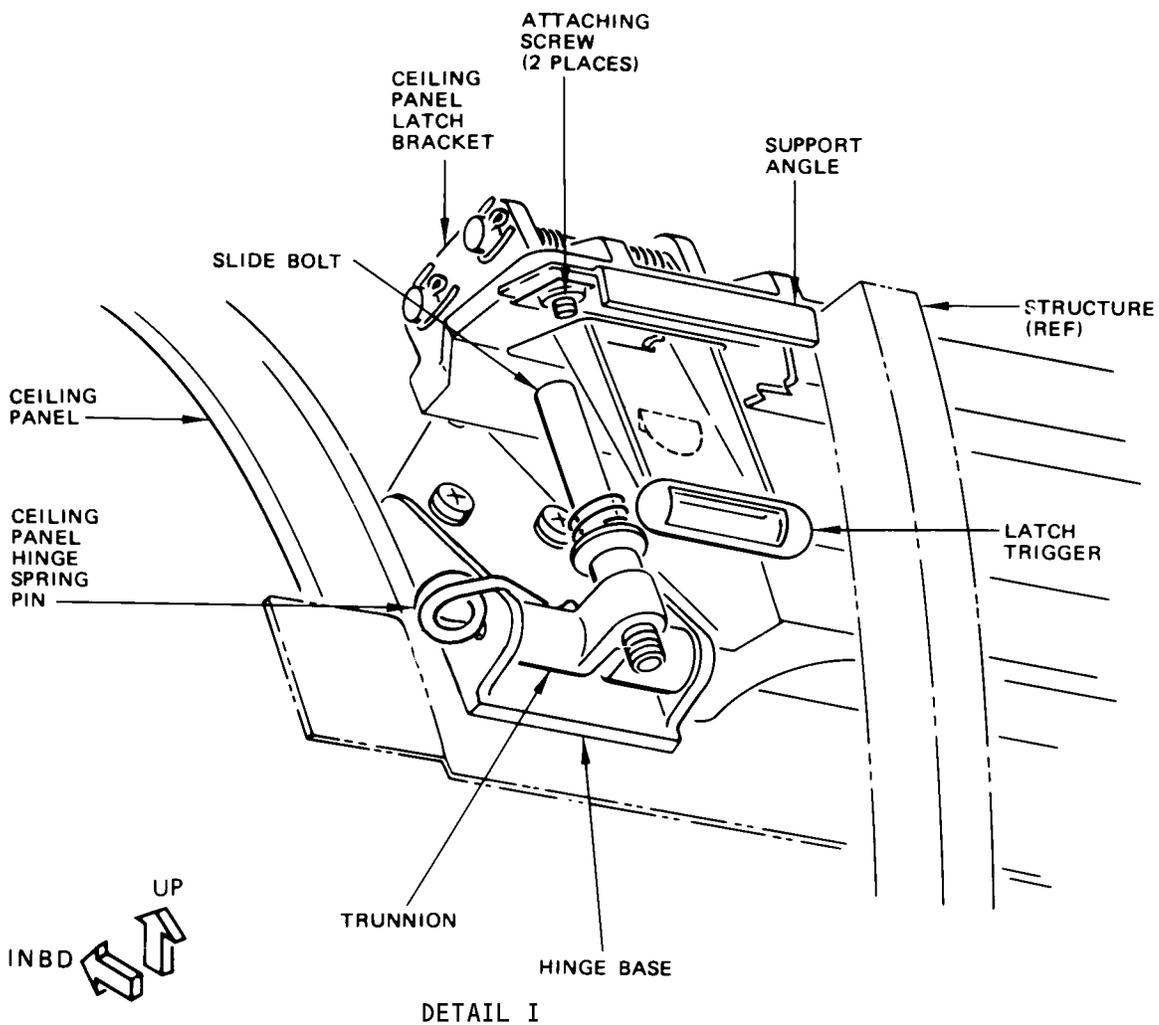
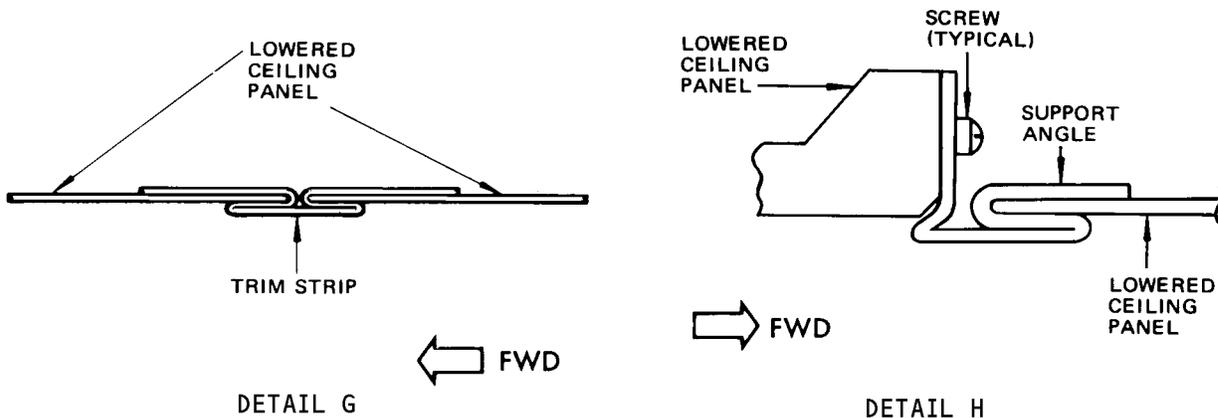
DETAIL F



Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 3)

EFFECTIVITY  
 New Look Interior

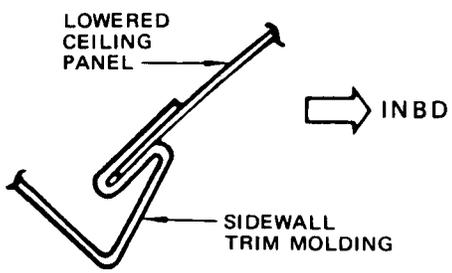
**25-21-351**



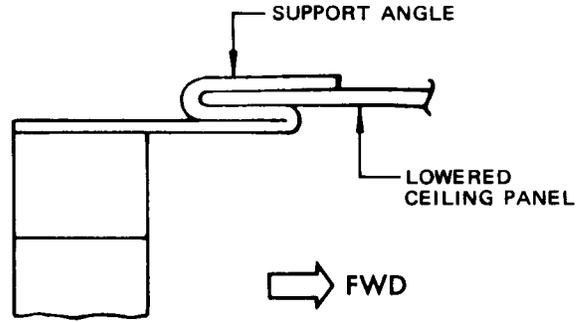
Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 4)

EFFECTIVITY  
 New Look Interior

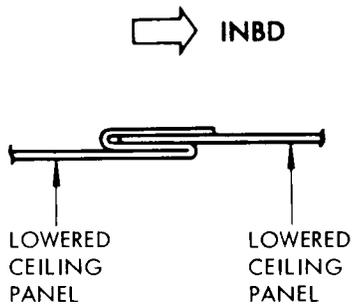
**25-21-351**



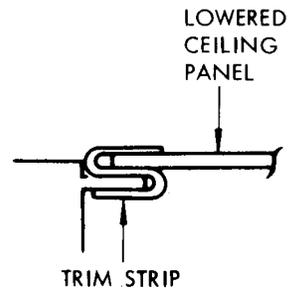
DETAIL J



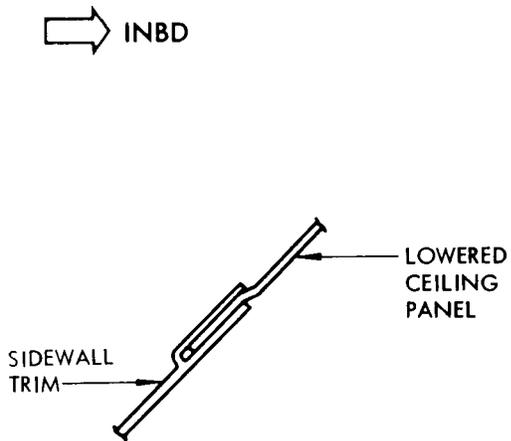
DETAIL K



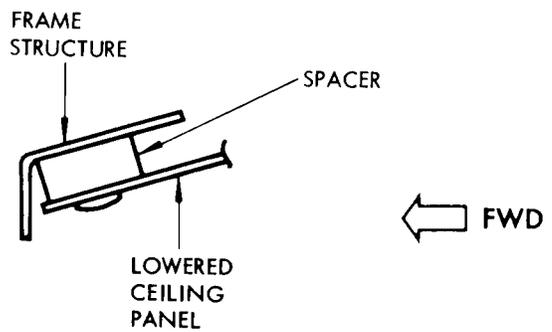
DETAIL L



DETAIL M



DETAIL N

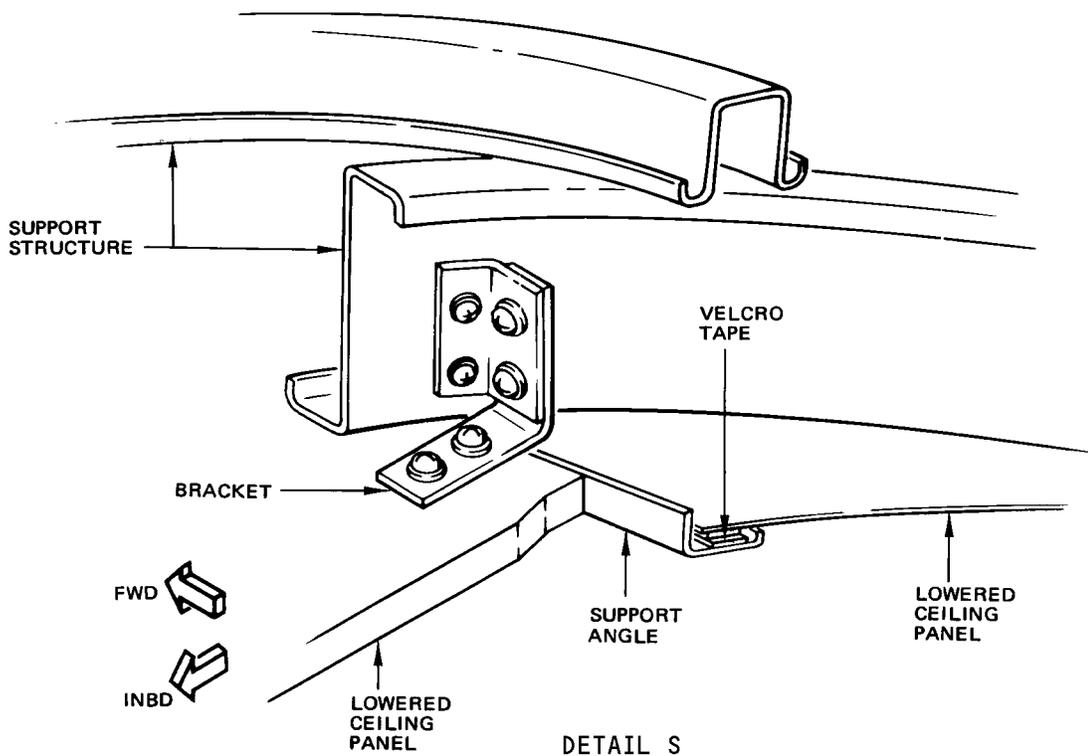
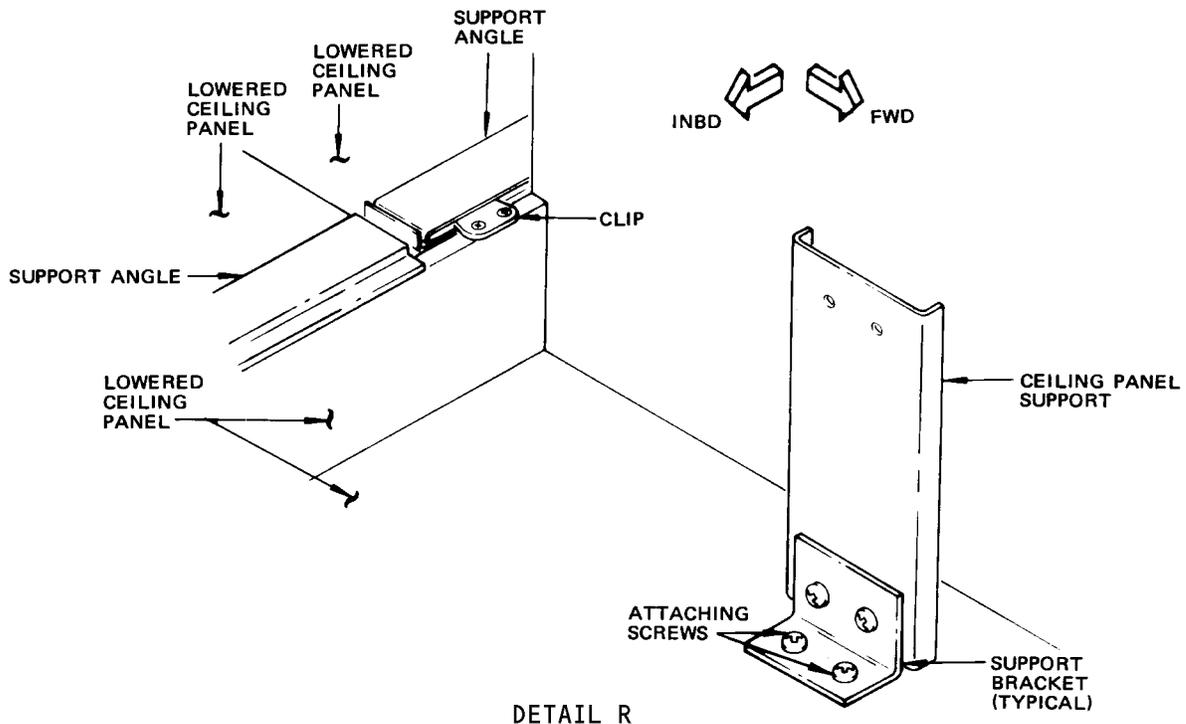


DETAIL P

Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 5)

EFFECTIVITY  
 New Look Interior

**25-21-351**

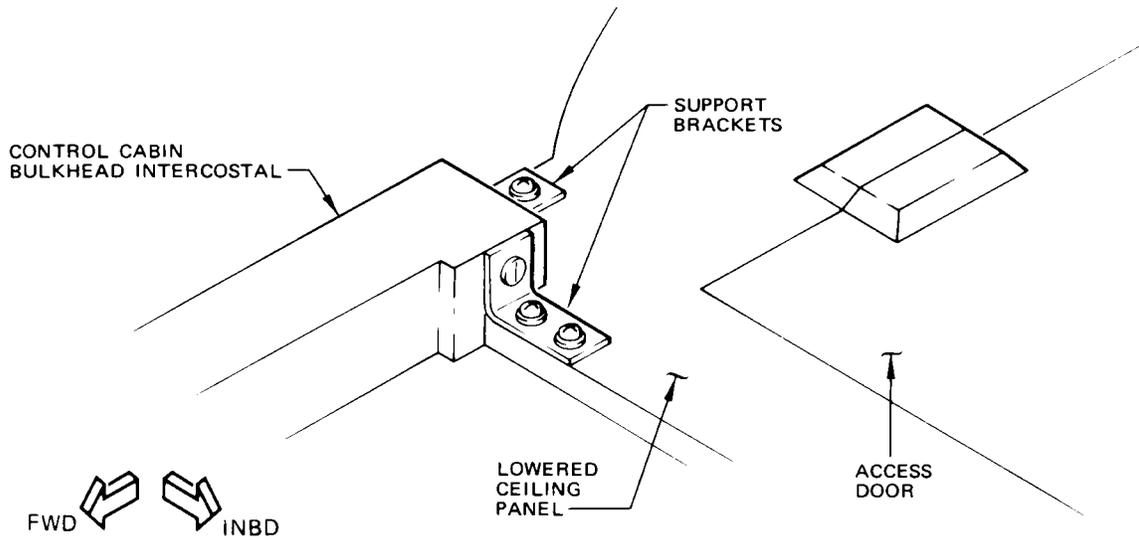


Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 6)

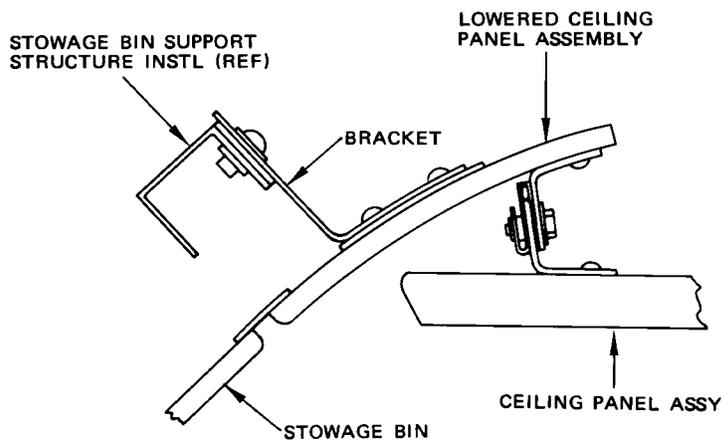
EFFECTIVITY  
 New Look Interior

25-21-351

456224



DETAIL T



DETAIL U

Forward Lowered Ceiling Installation  
 Figure 401 (Sheet 7)

EFFECTIVITY  
 New Look Interior

**25-21-351**

AFT LOWERED CEILING PANELS – REMOVAL/INSTALLATION

1. General

- A. The aft lowered ceiling comprises individual panels as described in this section. The panels are arbitrarily numbered, as shown in Fig. 401, to assist in identification with this section only.
- B. The procedure which follows describes the operations necessary to remove the entire lowered ceiling. If desired, any one lowered ceiling panel can be removed after opening appropriate access panels for access to panel attachments. In some cases adjacent lowered ceiling panels will need to be removed to allow removal of the desired panel.
- C. Depending upon the passenger cabin arrangement, certain items of passenger equipment are installed under the lowered ceiling and will obstruct removal of some lowered ceiling panels.

2. Remove Aft Lowered Ceiling Panels (Fig. 401)

- A. Remove Panel No. 1 or 2
  - (1) Open lowered ceiling panel by releasing the two latches.
  - (2) Detach lowered ceiling panel from hinges.

**NOTE:** All remaining equipment and fasteners in the lowered ceiling are accessible through the access door openings.
- B. Remove Panel No. 9
  - (1) Support panel and remove fasteners attaching panel to support brackets at each corner of panel.
  - (2) Lower and remove panel No. 9.
- C. Remove Panel No. 10
  - (1) Remove plug buttons which conceal fasteners on lower surface of panel No. 10.
  - (2) Remove fasteners at inboard edge of panel No. 10.
  - (3) Hinge panel No. 10 down and detach hinges from support structure.
- D. Remove Panel No. 5 or 6
  - (1) Lower passenger service unit and remove overhead stowage compartment as required to gain access to outboard attachment of panel. (Ref 25-23-311, Maintenance Practices and 25-24-311, Removal/Installation).
  - (2) Disconnect brackets attaching trim strip on panel aft edge to fuselage structure and to sidewall extrusion.
  - (3) Disconnect bracket on outboard edge from overhead support structure.
  - (4) Support panel, remove fasteners at inboard and aft edges, and remove panel.
- E. Remove Lowered Ceiling End Cap
  - (1) Lower curved ceiling panels installed adjacent to lowered ceiling end cap (Ref 25-21-341, Maintenance Practices).
  - (2) Open appropriate circuit breakers and disconnect wire bundle from emergency light and lavatory occupied lights.



## MAINTENANCE MANUAL

- (3) Remove emergency exit light.
  - (4) Remove three screws attaching each top panel to end cap support channel and remove both top panels.
  - (5) Lower passenger service units adjacent to end cap as necessary to gain access to end cap outboard attachments (Ref 25-23-311, Maintenance Practices).
  - (6) Support end cap and remove screws and washers attaching each outboard panel to overhead support structure.
  - (7) Lower and remove end cap.
- F. Remove Panel No. 3
- (1) Remove aft attendant's service unit. Refer to 25-23-71/401.
  - (2) Remove snap-in exit light lens over aft entry door.
  - (3) Remove aft left windscreen (Ref 25-24-133).
  - (4) Remove fasteners at inboard edge.
  - (5) Pull panel inboard and forward to release outboard and aft edges.
- G. Remove Panel No. 4
- (1) Remove snap-in exit light lens over aft galley service door.
  - (2) Loosen hose clamp on exhaust air hose and disconnect hose from aft galley exhaust air inlet.
  - (3) Remove aft right windscreen and attachments which protrude through panel No. 4 (Ref 25-24-143).
  - (4) Remove curtain and curtain track from panel No. 4.
  - (5) Remove fasteners at inboard edge of panel No. 4.
  - (6) Pull panel inboard and forward to release outboard and aft edges.
- H. Remove Panel No. 7
- (1) Remove plug buttons which conceal fasteners on lower surface of panel No. 7 at left, right and forward edges.
  - (2) Remove fasteners attaching panel to support structure and remove panel.
- I. Remove Panel No. 8
- (1) Remove aft galley (Ref 25-31-61, Removal/Installation).
  - (2) Remove fasteners along inboard edge of panel No. 8.
  - (3) Pull panel inboard to release outboard edge.
3. Install Aft Lowered Ceiling Panel (Fig. 401)
- A. Install Panel No. 8
- (1) Insert outboard edge of panel into sidewall trim and push panel outboard.
  - (2) Install fasteners along inboard edge of panel.
  - (3) Install aft galley (Ref 25-31-61, Removal/Installation).
- B. Install Panel No. 7
- (1) Place panel in position, insert fasteners through lower surface of panel and secure to support structure.
  - (2) Install plug buttons in panel No. 7 to conceal fasteners.
- C. Install Ceiling Panel No. 4
- (1) Insert outboard and aft panel edges into interior lining attachments.

EFFECTIVITY  
New Look Interior

25-21-361



## MAINTENANCE MANUAL

- (2) Install fasteners at inboard panel edge.
  - (3) Install windscreen and attachments which protrude through panel No. 4 (Ref 25-24-143).
  - (4) Install snap-in exit light lens over aft galley service door.
  - (5) Connect exhaust air hose to aft galley exhaust air inlet and tighten hose clamp.
  - (6) Install curtain and curtain track on panel No. 4.
- D. Install Panel No. 3
- (1) Insert outboard and aft edges into interior lining trim attachments.
  - (2) Install fasteners at inboard edge.
  - (3) Install aft left windscreen (Ref 25-24-133).
  - (4) Install snap-in exit light lens over aft entry door.
  - (5) Install aft attendant's service unit (Ref 25-23-71).
- E. Install Lowered Ceiling End Cap
- (1) Raise end cap into mounting position and loosely install fasteners to secure it to overhead support structure.
  - (2) Align surface of each end cap outboard panel with adjacent overhead stowage compartment within  $\pm 0.05$  inch and tighten fasteners.
  - (3) If necessary, loosen fasteners securing outboard attaching brackets to end cap panels and slide end cap forward or aft as required to provide a gap of  $0.75 \pm 0.10$  inch between end cap panel and adjacent curved ceiling panel.
  - (4) Tighten fasteners to secure attaching brackets to end cap panels.
  - (5) Place each top panel in position on end cap support channel and push inboard edge into air conditioning ceiling outlet.
  - (6) Install three screws to secure each top panel to support channel.
  - (7) Install emergency exit light.
  - (8) Connect wire bundle to emergency exit light and lavatory occupied lights.
  - (9) Raise curved ceiling panels installed adjacent to lowered ceiling end cap (Ref 25-21-341/201).
  - (10) Raise passenger service units which were lowered for access to attachment (Ref 25-23-311/201).
  - (11) Close emergency exit light and lavatory occupied light circuit breakers opened during removal of lowered ceiling end cap.
- F. Install Panel No. 5 or 6
- (1) Support panel in mounting position and install fasteners at inboard and aft edges.
  - (2) Connect bracket on outboard edge to overhead support structure.
  - (3) Connect brackets attaching trim strip on panel aft edge to fuselage structure and to sidewall extrusion.
  - (4) Raise passenger service unit and install overhead stowage compartment which were lowered or removed to gain access to panel attachments (Ref 25-23-311, Maintenance Practices and 25-24-311, Removal/Installation).

EFFECTIVITY  
New Look Interior

25-21-361

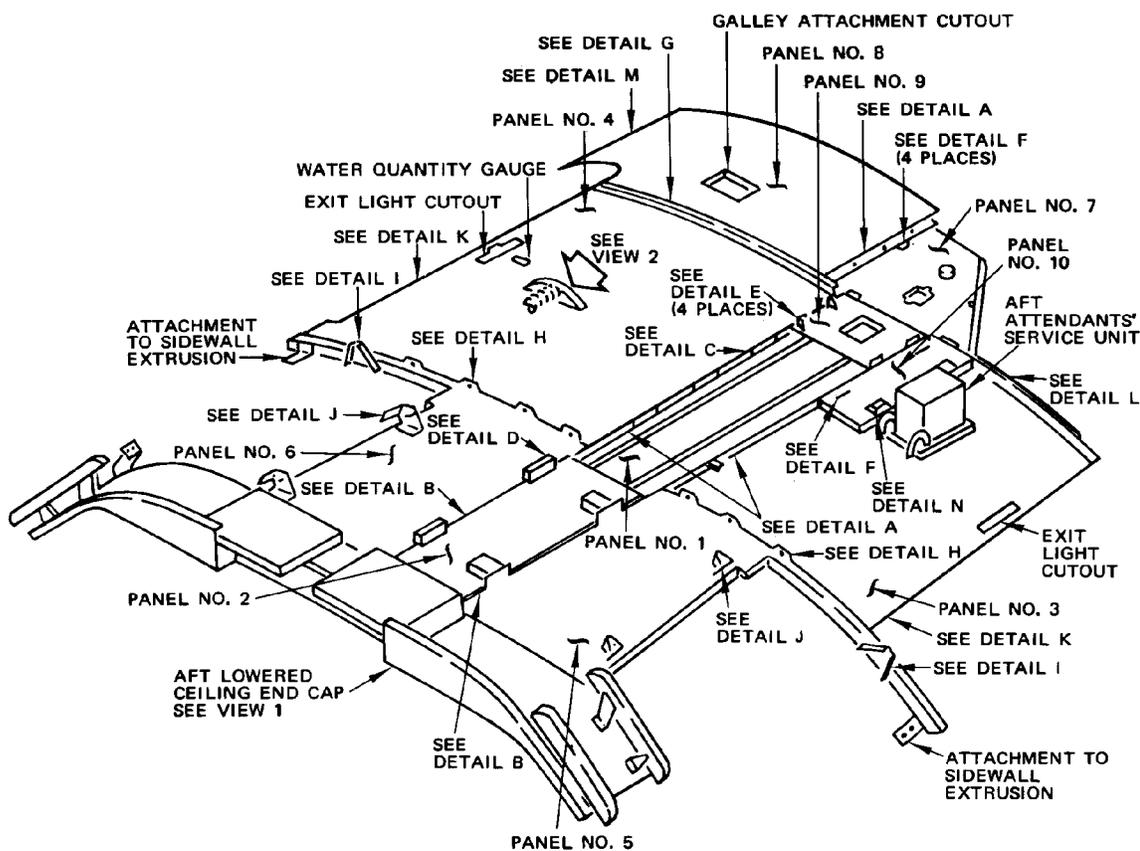
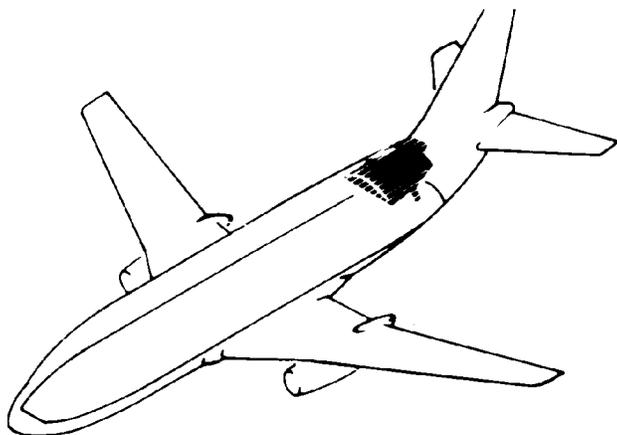


## MAINTENANCE MANUAL

- G. Install Panel No. 10
  - (1) Attach panel No. 10 hinges to support structure and hinge up panel.
  - (2) Install fasteners at inboard edge of panel.
  - (3) Install plug buttons in panel No. 10 to conceal fasteners.
- H. Install Panel No. 9
  - (1) Place panel in position and install fasteners through support brackets at each corner of panel.
- I. Install Panels No. 1 or 2
  - (1) Attach lowered ceiling panel to hinges.
  - (2) Hinge lowered ceiling panel up and secure by engaging the two latches.

EFFECTIVITY  
New Look Interior

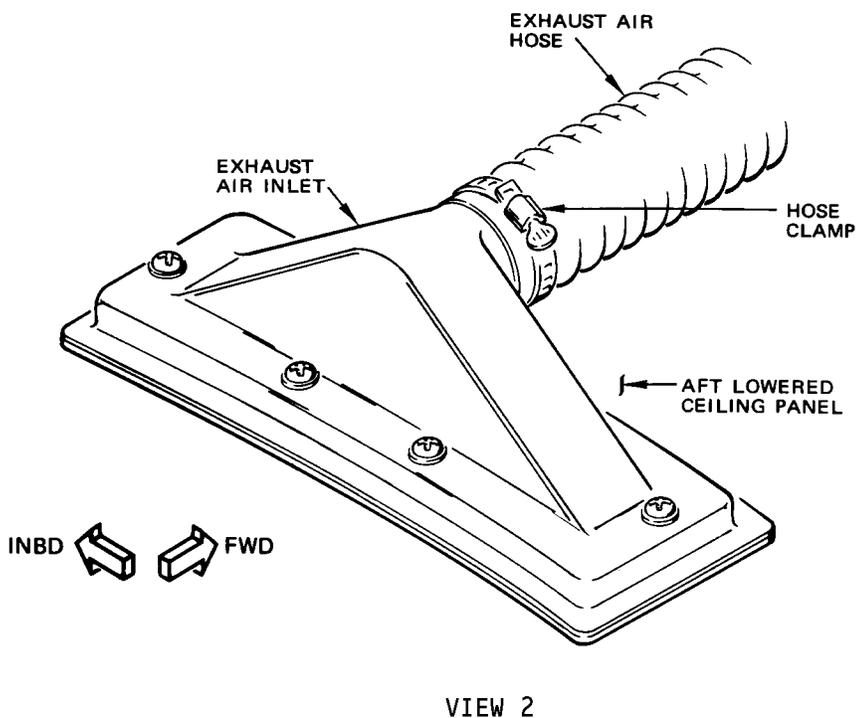
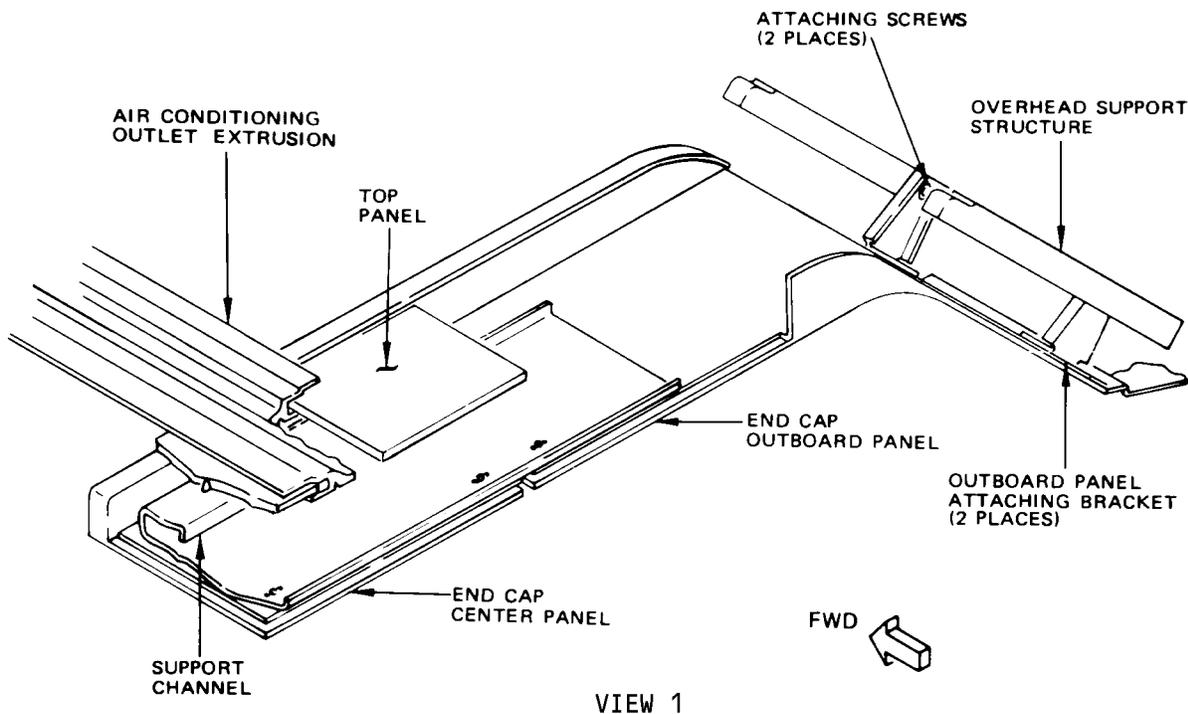
25-21-361



Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 New Look Interior

25-21-361



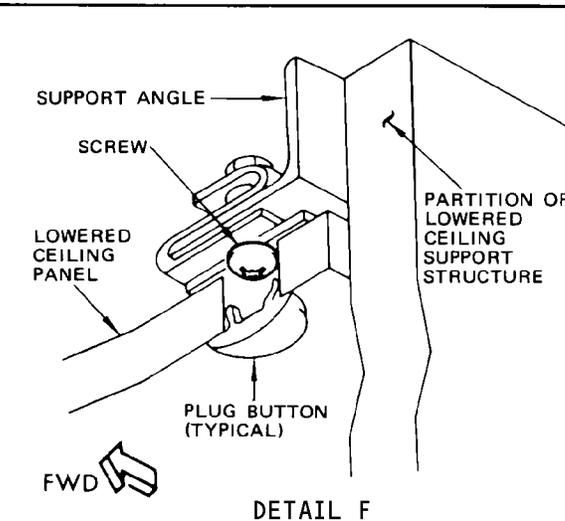
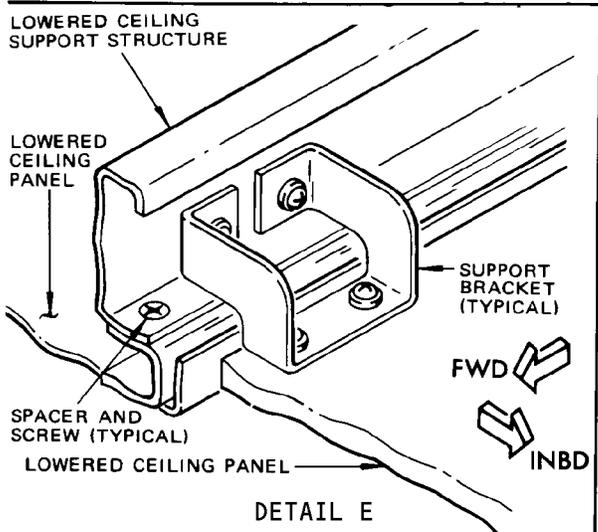
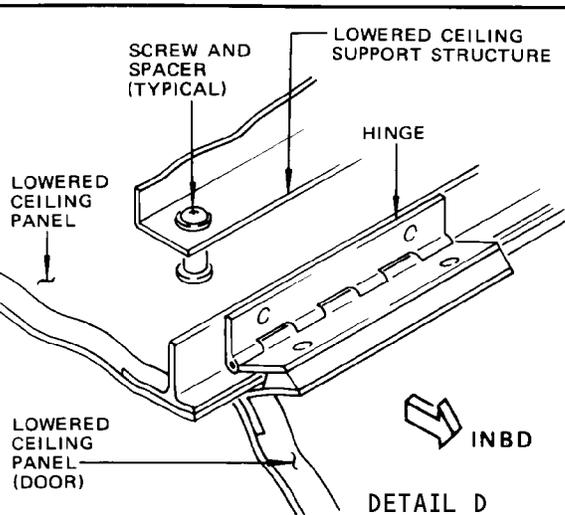
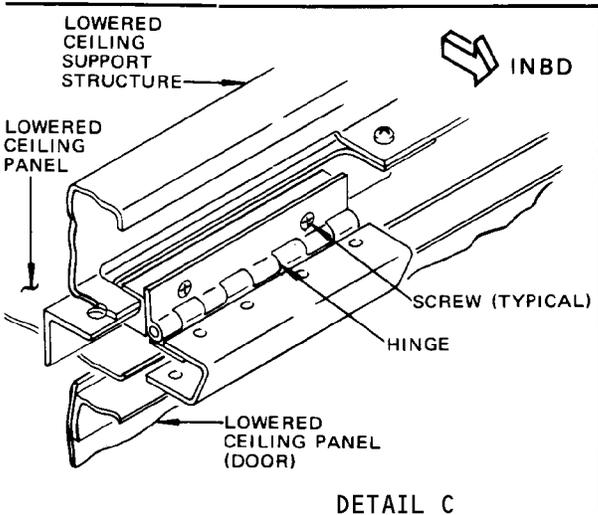
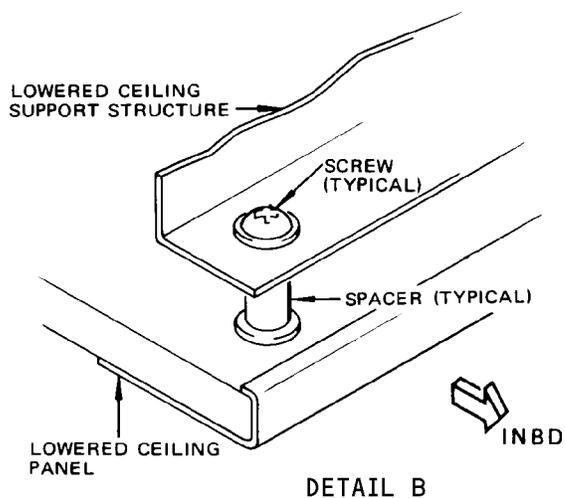
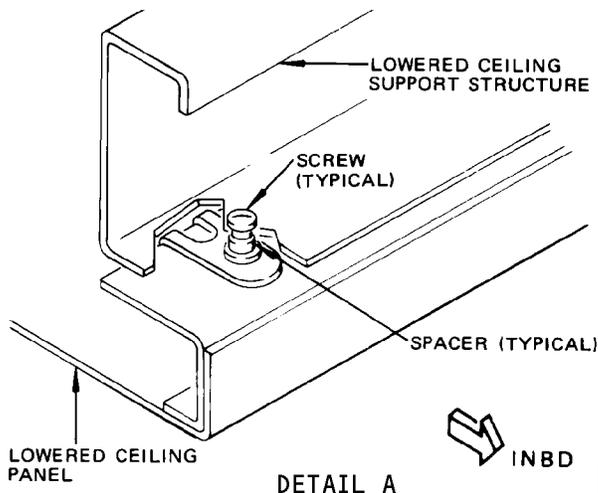
Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 New Look Interior

25-21-361



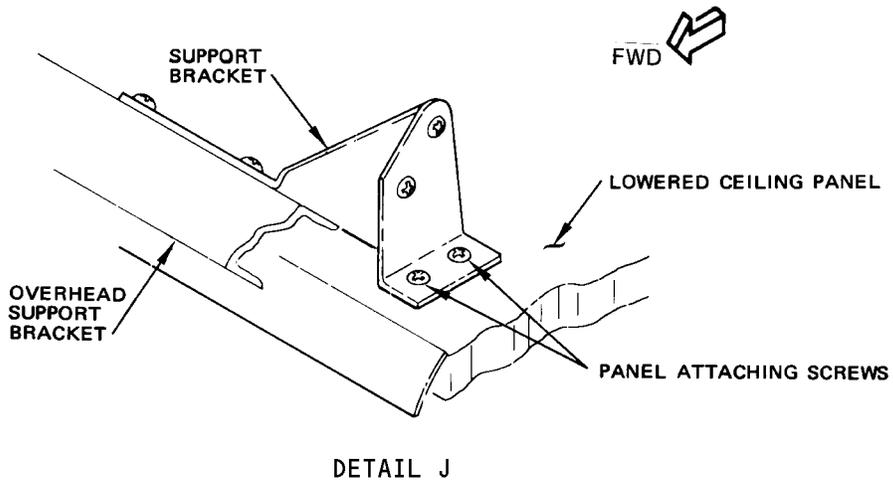
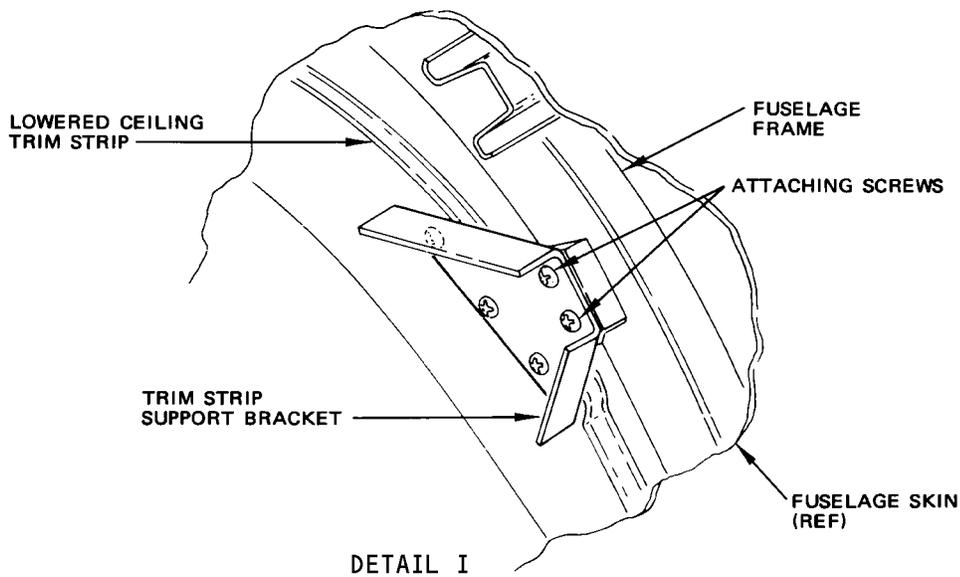
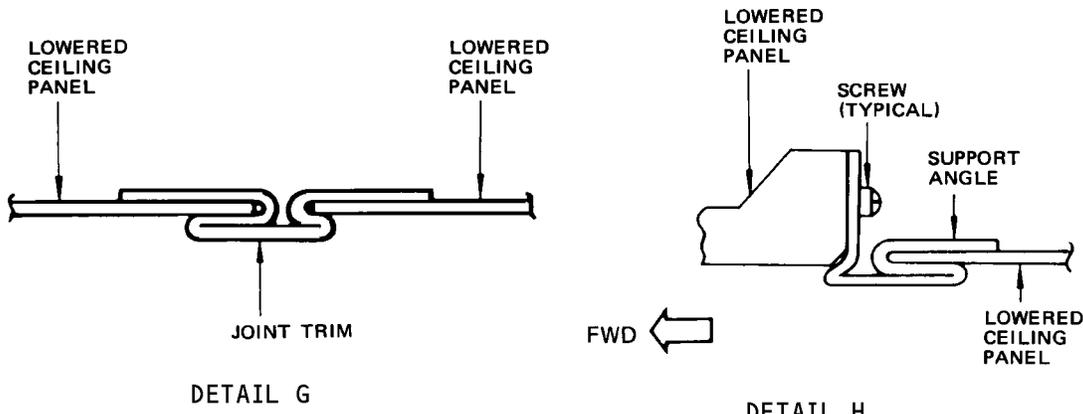
**MAINTENANCE MANUAL**



Aft Lowered Ceiling Installation  
Figure 401 (Sheet 3)

EFFECTIVITY  
New Look Interior

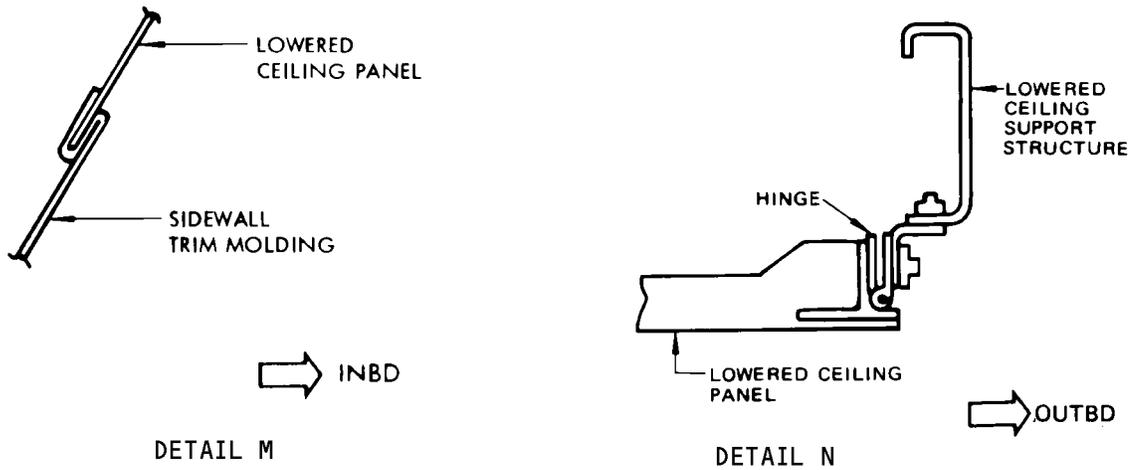
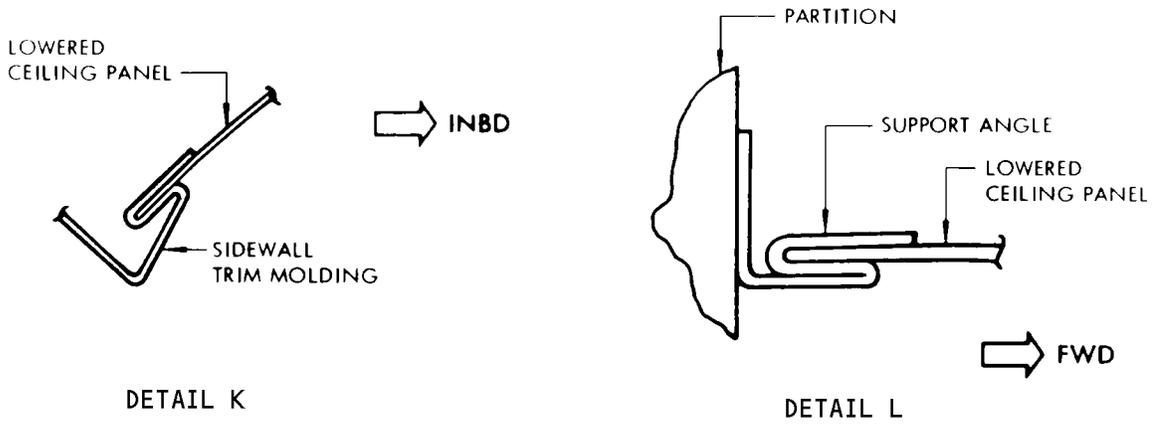
25-21-361



Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 4)

EFFECTIVITY  
 New Look Interior

**25-21-361**



Aft Lowered Ceiling Installation  
 Figure 401 (Sheet 5)

EFFECTIVITY  
 New Look Interior

**25-21-361**

PASSENGER SERVICE UNITS – DESCRIPTION AND OPERATION

1. General

- A. Service units are provided in the airplane to supply air, emergency oxygen, and electrical services for passengers and attendants. The units are located in the passenger cabin over each row of seats, in the lavatories, and at the attendants stations (Fig. 1 and 2).
- B. The units offer the following services as necessary: individual air, emergency oxygen, reading lights, call button, and call light.
- C. Oxygen masks are stored in the units and are released automatically by a pressure sensitive latch or manually by the attendant.

2. Passenger Cabin Service Units (Airplanes without New Look Interior)

- A. The units provide the following services: individual air, emergency oxygen, loudspeaker, reading lights, call button, and call light (See figure 2.)
- B. The units are suspended from two overhead tracks on each hatrack and may be adjusted for different seat arrangements in increments of 1 inch. Each unit is located 4.5 inches forward from the intersecting line of the seat cushion and the seat back.
- C. Three individual air outlets are supplied per unit. Four oxygen masks are supplied in each service unit over a triple seat and three masks in units over double seats. Three reading lights are supplied per unit. One call button and one call light is supplied in each unit.
- D. Air and oxygen outlets and electrical connectors are provided behind the cove lights and hatrack closure panels at intervals of approximately 20 inches throughout the length of the airplane wherever standard coves are used. Flexible lines attached to the units permit an adjustment of 12.5 inches aft and 12.5 inches forward of nominal location.

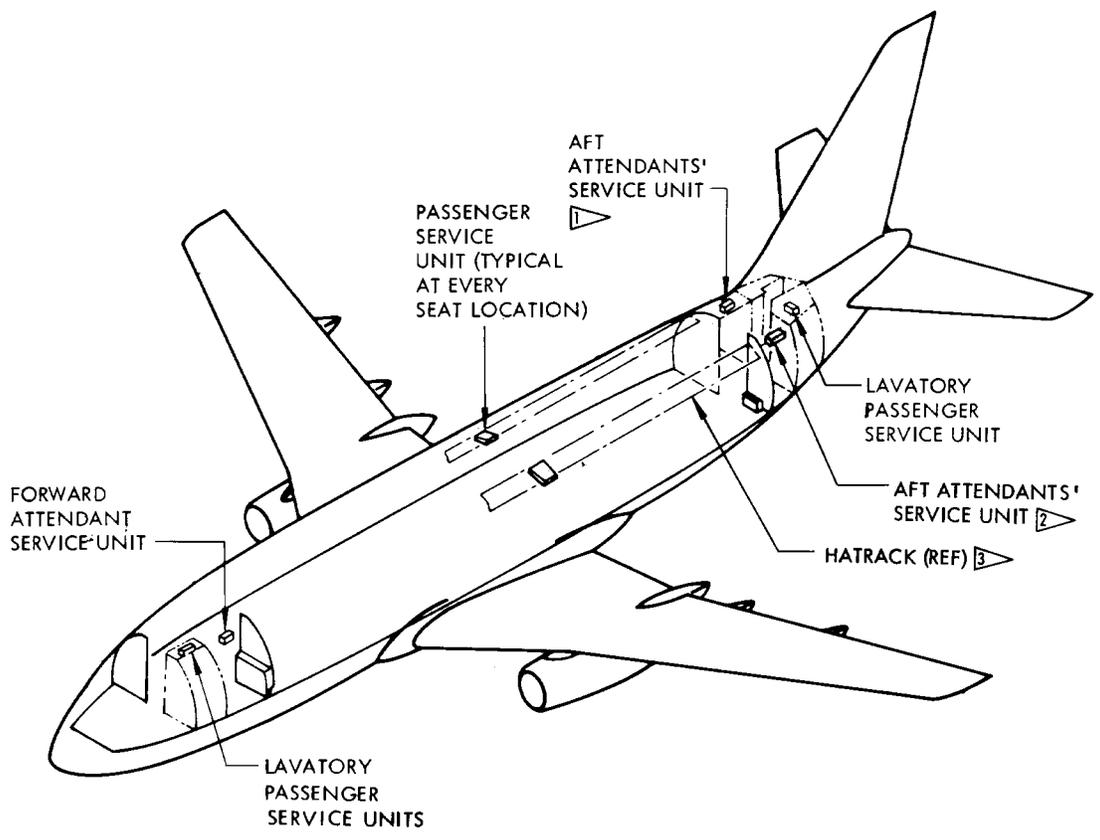
3. Passenger Cabin Service Units (New Look Interior)

- A. The units provide the following services: individual air, emergency oxygen, reading lights, call button, and call light (Fig. 2).
- B. Three individual air outlets are supplied per unit. Three oxygen masks are supplied per unit and provision is made for a fourth. Three reading lights are supplied per unit. One call button and one call light is supplied in each unit.
- C. The one-piece passenger service units are located along constant sections of the fuselage between the air conditioning sidewall outlet and the bottom of the overhead stowage compartments. Each unit is supported at the forward and aft ends by clamps outboard and latches inboard. The latches attach to a support angle inboard while the clamps fasten to the outlet extrusion. The forward outboard clamp is equipped with a plunger which engages holes in the air conditioning outlet extrusion. The holes in the outlet extrusion allow adjustment of the passenger service unit in increments of 1 inch.

EFFECTIVITY

ALL

25-23-0

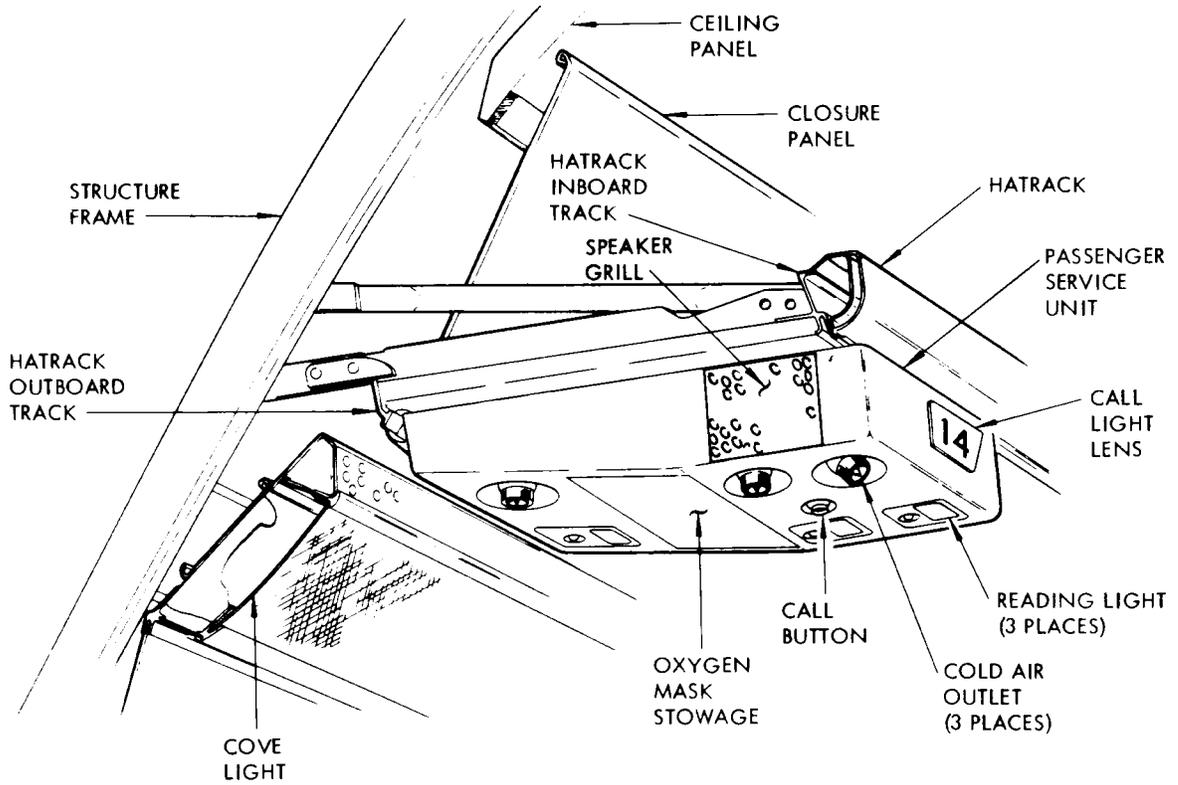


- 1** ▶ *Passenger/Cargo Convertible Airplanes*
- 2** ▶ *Standard Passenger Airplanes*
- 3** ▶ *Airplanes without New Look Interior*

Service Units Location  
 Figure 1

EFFECTIVITY	ALL
-------------	-----

**25-23-0**



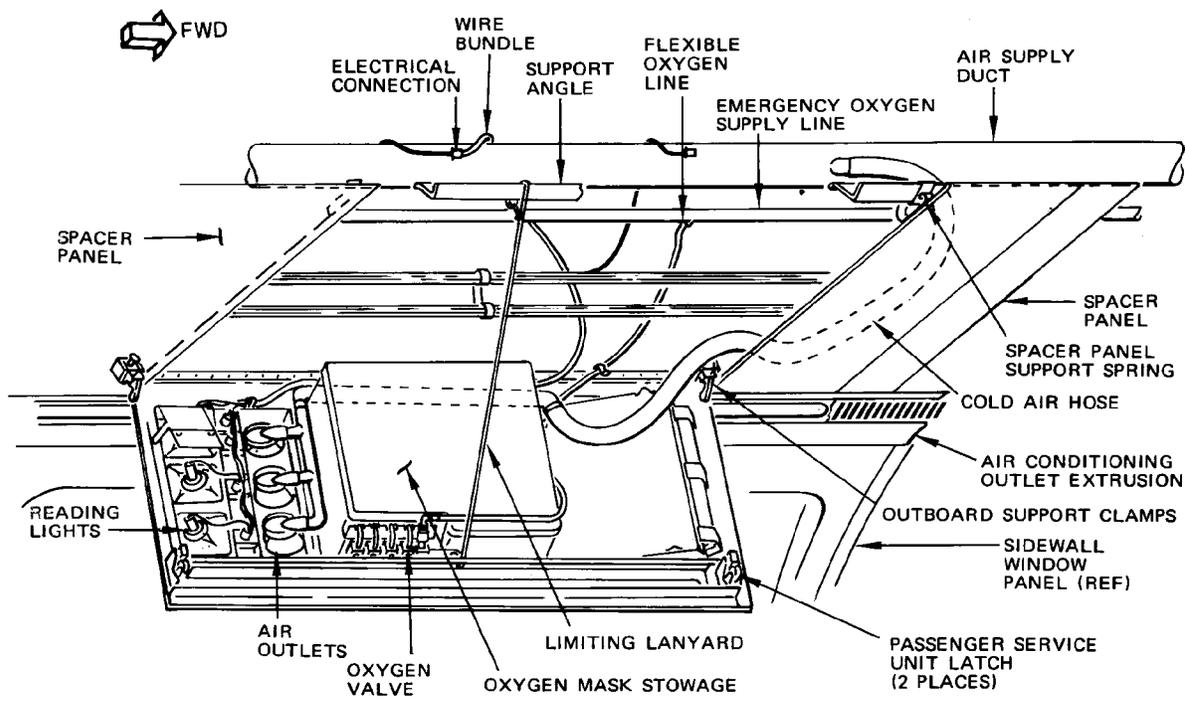
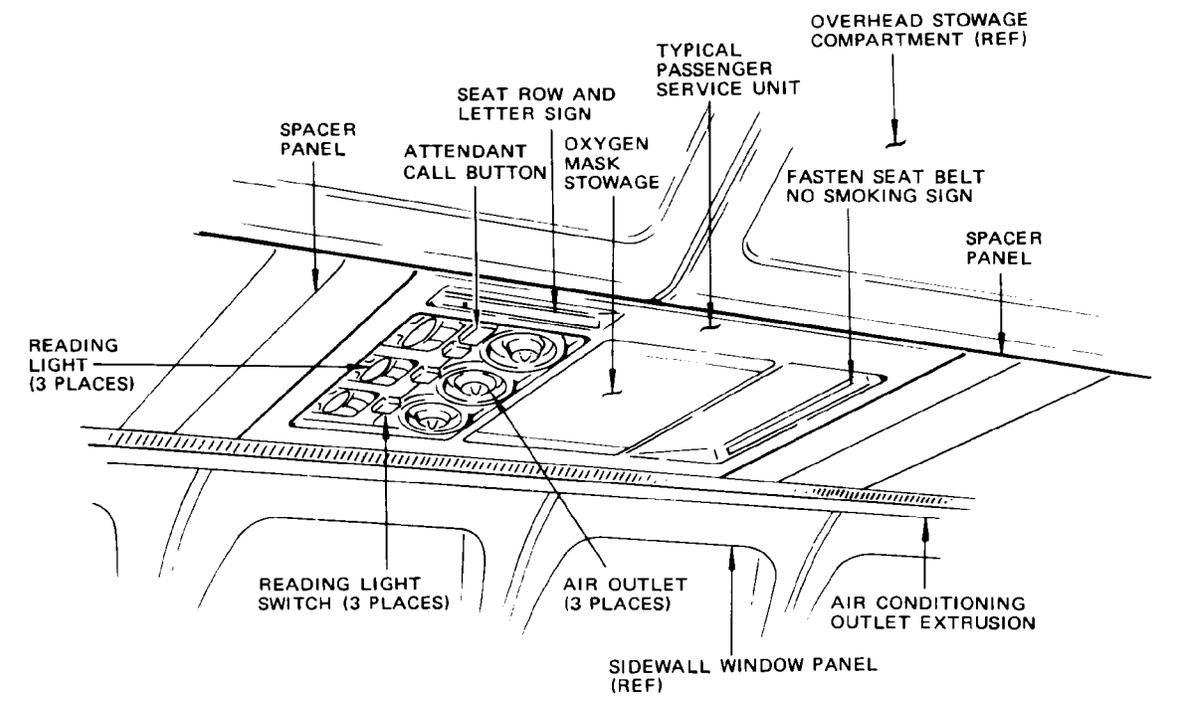
**EFFECTIVITY**

Airplanes without New Look Interior

Passenger Service Unit  
 Figure 2 (Sheet 1)

EFFECTIVITY  
 Airplanes without New Look  
 Interior

**25-23-0**



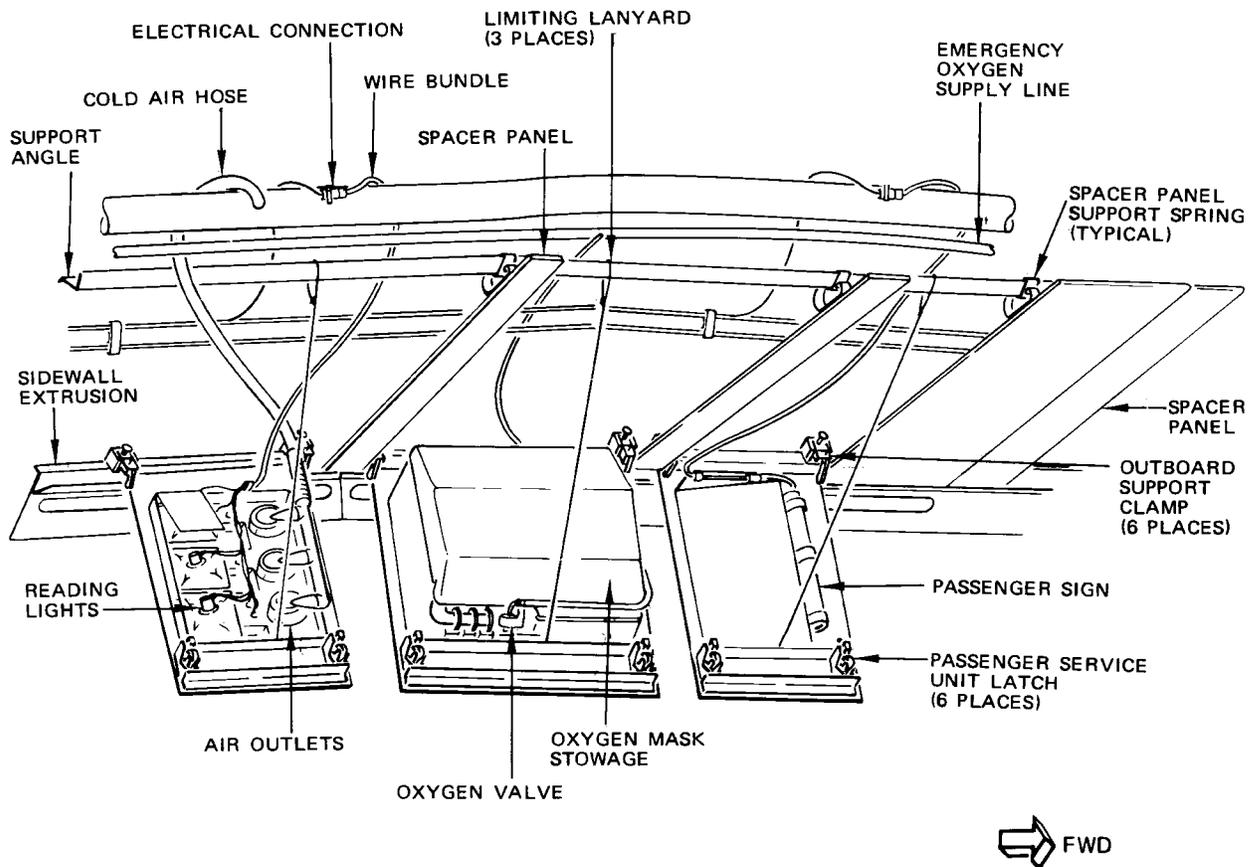
ONE PIECE PASSENGER SERVICE UNIT  
**EFFECTIVITY**  
 NEW LOOK INTERIOR

Passenger Service Unit  
 Figure 2 (Sheet 2)

EFFECTIVITY  
 NEW LOOK INTERIOR

25-23-0

456600



THREE PIECE PASSENGER SERVICE UNIT

EFFECTIVITY

NEW LOOK INTERIOR

Passenger Service Unit  
 Figure 2 (Sheet 3)

EFFECTIVITY  
 NEW LOOK INTERIOR

**25-23-0**



## MAINTENANCE MANUAL

- D. A three-piece passenger service unit is installed when passenger seating arrangement requires location of a service unit at bends of overhead support structure near ends of fuselage constant section. The three-piece unit has the same compartments as the one-piece unit but is made in three pieces with wedge-shaped spacer panels between pieces to conform to fuselage contour.
  - E. Air and oxygen outlets and electrical connectors are provided behind the service units at intervals of 20 inches throughout the length of the airplane. Flexible lines attached to the units permit an adjustment of 10 inches aft and 10 inches forward of nominal location.
  - F. Spacer panels are installed to fill the area between the passenger service units. The spacer panels are equipped with a sliding portion to provide adjustment for various service unit spacing. The spacer panels attach to the clamps (outboard) and support angle (inboard).
4. Lavatory Compartments Service Units
- A. Recessed into the ceiling of each lavatory compartment on Standard Passenger Airplanes, there is one unit containing two oxygen masks and one loudspeaker.
  - B. On Passenger/Cargo Convertible Airplanes, one unit containing two oxygen masks and one loudspeaker is recessed into the ceiling of the aft lavatory compartment while in the forward lavatory compartment one unit containing two oxygen masks is attached to the aft partition.
5. Attendants' Service Units
- A. One attendants' service unit is recessed in the ceiling above each cabin attendants' seat. Each of these units contains two oxygen masks.

EFFECTIVITY

ALL

25-23-0

10

Page 6  
Dec 01/04



## MAINTENANCE MANUAL

### PASSENGER SERVICE UNITS – MAINTENANCE PRACTICES

#### 1. General

- A. The maintenance practices included in this section (201–299 page block) are general maintenance instructions that do not fall within a specific category. Removal/Installation Procedures are provided in the 401–499 page block.
- B. The passenger service units consist of a frame attached to the hatrack and a case containing the service equipment. The case is hinged to the outboard end of the frame and may be lowered to provide access to the service equipment. The whole service unit may be repositioned within a limited range along the hatrack, to conform to seat spacings, without disconnecting its system lines or removing the unit.

#### 2. Passenger Service Unit Lowering and Raising

##### A. General

- (1) The passenger service unit is in a lowered position when its case has been unlatched from the inboard edge of the unit frame and is hanging at the full length of the lanyard.

##### B. Prepare Passenger Service Unit for Lowering

- (1) Open call light lens. (See figure 201.)
  - (a) Depress finger–grip button with forefinger. (See view 1.)
  - (b) Pull upper half of lens slightly inboard and then up to clear stop bar and lower spring.
  - (c) Pull lower half of lens inboard and down to clear upper spring and withdraw lens.

##### C. Lower Passenger Service Unit

- (1) Unlock unit case from unit frame by turning latch screw counterclockwise as far as possible.
- (2) Raise case to release latch.
- (3) Lower unit case to position where lanyard limiting hook may be removed from hole in service unit frame labeled HOOK LANYARD.
- (4) Lower unit case and contents to full length of lanyard.

##### D. Raise Passenger Service Unit

- (1) Raise service unit case until lanyard limiting hook may be engaged in hole in upper frame labeled HOOK LANYARD.
- (2) Raise unit case until latch engages in frame.
- (3) Turn latch screw clockwise as far as possible.

##### E. Restore Passenger Service Unit to Normal Configuration

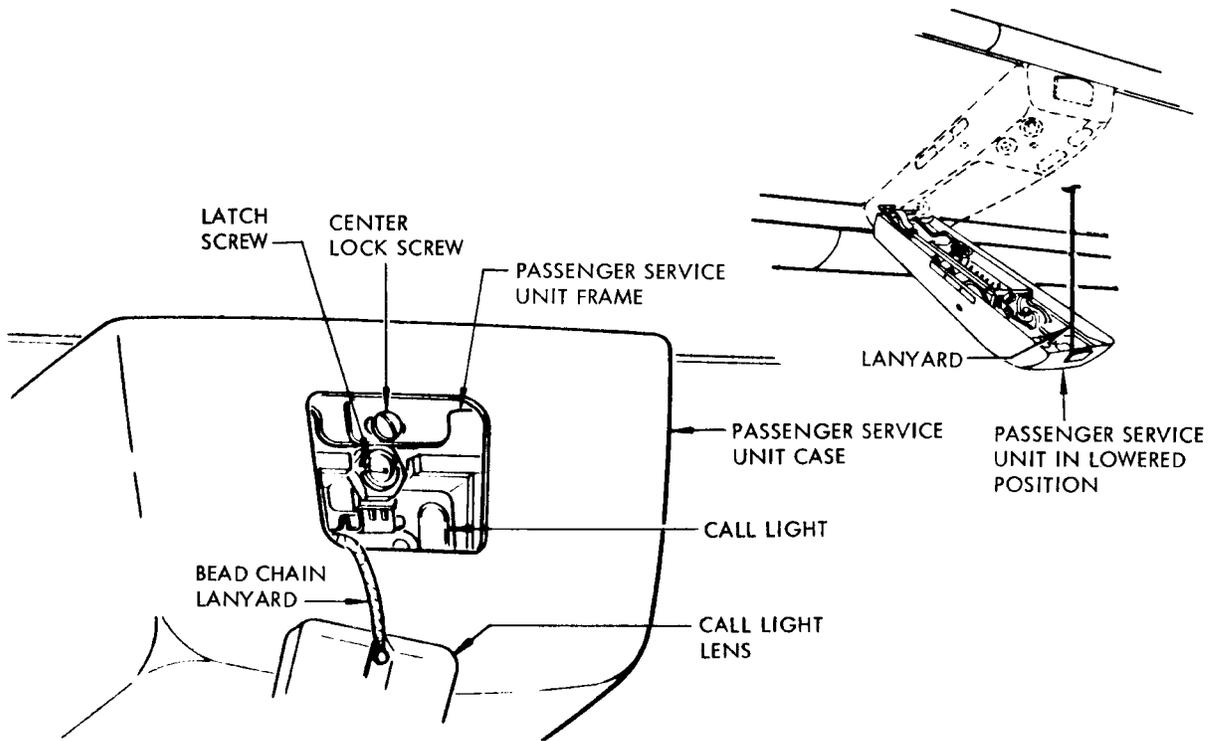
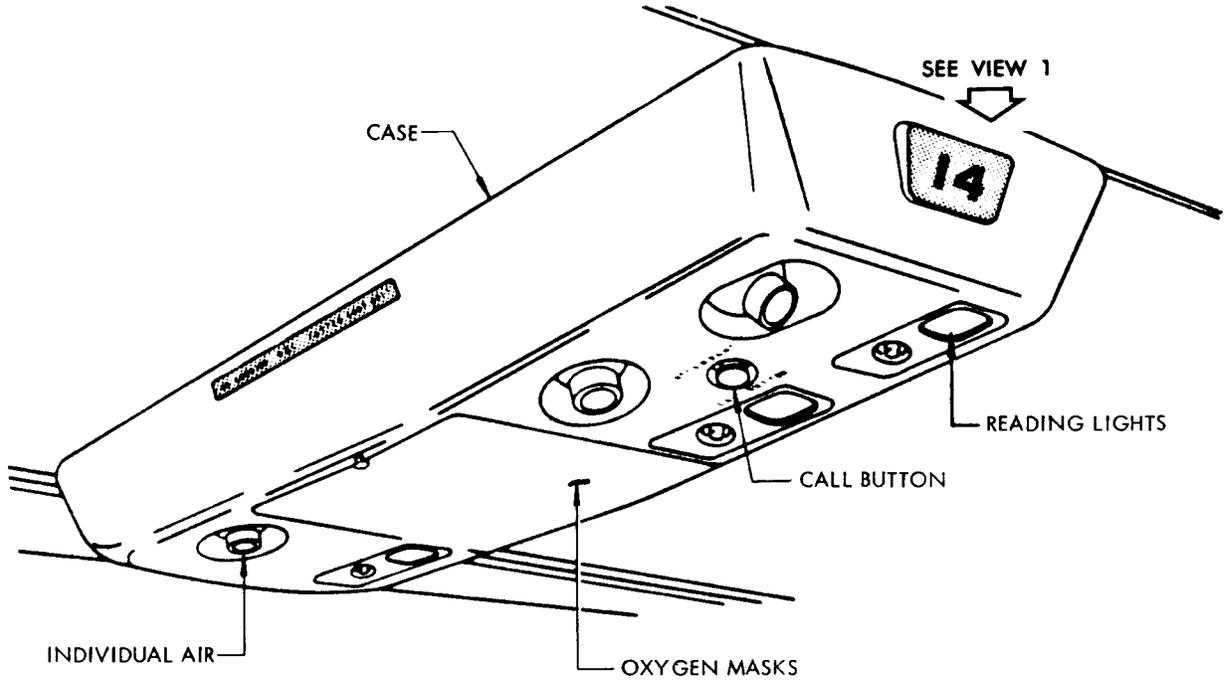
- (1) Install call light lens.
  - (a) Insert upper spring through opening in unit case.
  - (b) Depress finger–grip button with forefinger and pull upper half of number holder inboard until stop bar clears unit case.
  - (c) Slide number holder upward until lower spring clears opening in case.
  - (d) Slide number holder downward until stop bar snaps into opening in shell.

EFFECTIVITY  
Airplanes without New Look  
Interior

25–23–11

03

Page 201  
Dec 01/04



LOCKING DETAIL

Passenger Service Unit Lowering  
 Figure 201 (Sheet 1)

EFFECTIVITY  
 Airplanes without New Look  
 Interior

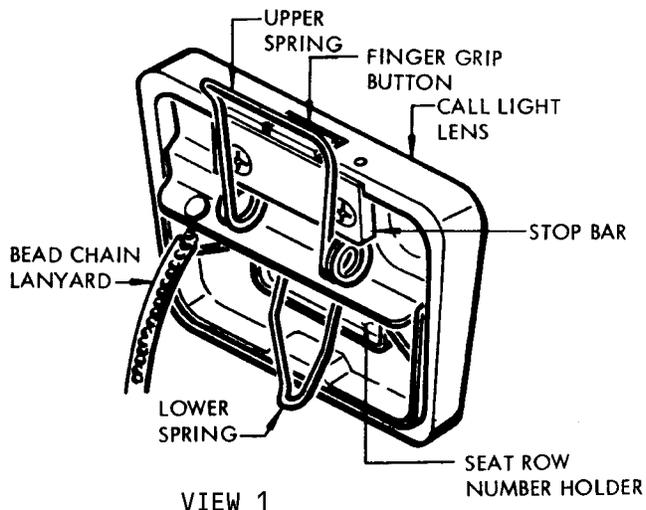
456621

25-23-11

03

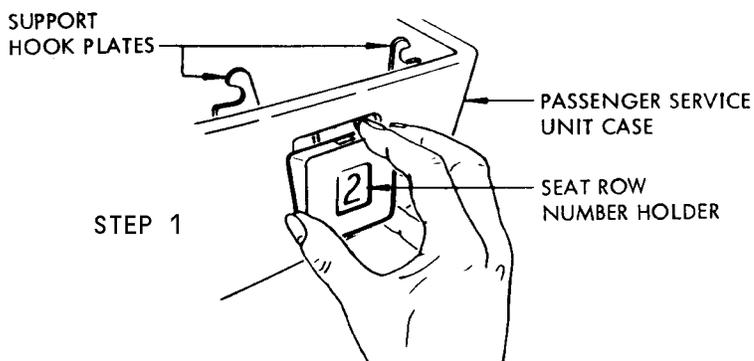
Page 202  
 Dec 01/04

**MAINTENANCE MANUAL**

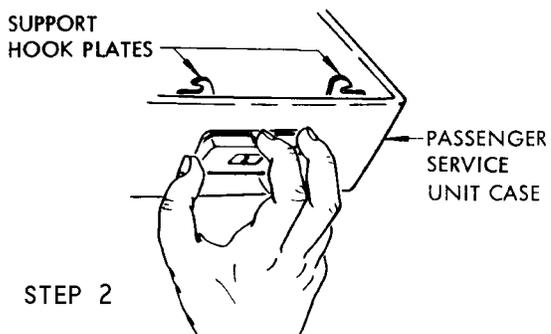


VIEW 1

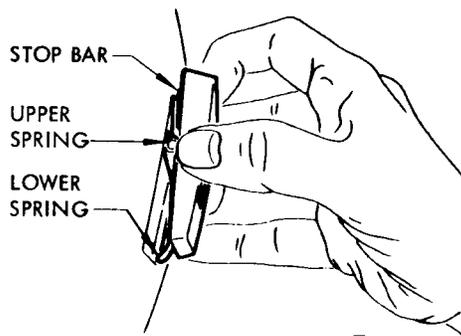
**CALL LIGHT LENS**



STEP 1



STEP 2



STEP 3

**CALL LIGHT LENS INSTALLATION**

Passenger Service Unit Lowering  
Figure 201 (Sheet 2)

EFFECTIVITY  
Airplanes without New Look  
Interior

**25-23-11**

### 3. Passenger Service Unit Repositioning

#### A. General

- (1) Each passenger service unit can be repositioned along the hatracks, in increments of one inch, within a forward and aft range of 25 inches permitted by the range limiting lanyard, without completely removing the units or disconnecting the electrical, air or oxygen system lines.

#### B. Prepare Passenger Service Unit for Repositioning

- (1) Remove upper and lower cove light covers. Refer to 25-21-101, Cove Light Covers.
- (2) Open call light lens as described in paragraph 2.B.(1).

#### C. Reposition Passenger Service Unit

- (1) Turn latch screw counterclockwise as far as possible, raise case to release latch, remove limiting hook from hole in frame labeled HOOK LANYARD, and lower case to full length of lanyard. (See figure 202.)
- (2) Loosen center locking screw.
- (3) Loosen locking screws at attachments to outboard track.
- (4) Squeeze together finger tabs of inboard support hook plates and lower inboard end of frame until hooks just clear inboard track.
- (5) Raise case up to frame. In this position the entire passenger service unit is approximately level and its inboard end is just clearing passenger service unit track.
- (6) In a pushing movement, with pressure applied by palm of hand near outboard track and with other hand resting under unit at inboard end holding that end up, slide unit to desired position.

**NOTE:** It may be necessary to aid movement of lines past frame fittings. This can be done by inserting a screwdriver into loop of flexible oxygen or air hose after the service unit is swung down at point where obstruction occurs, and then carefully directing lines past outboard connections as unit is slowly moved past tight spot.

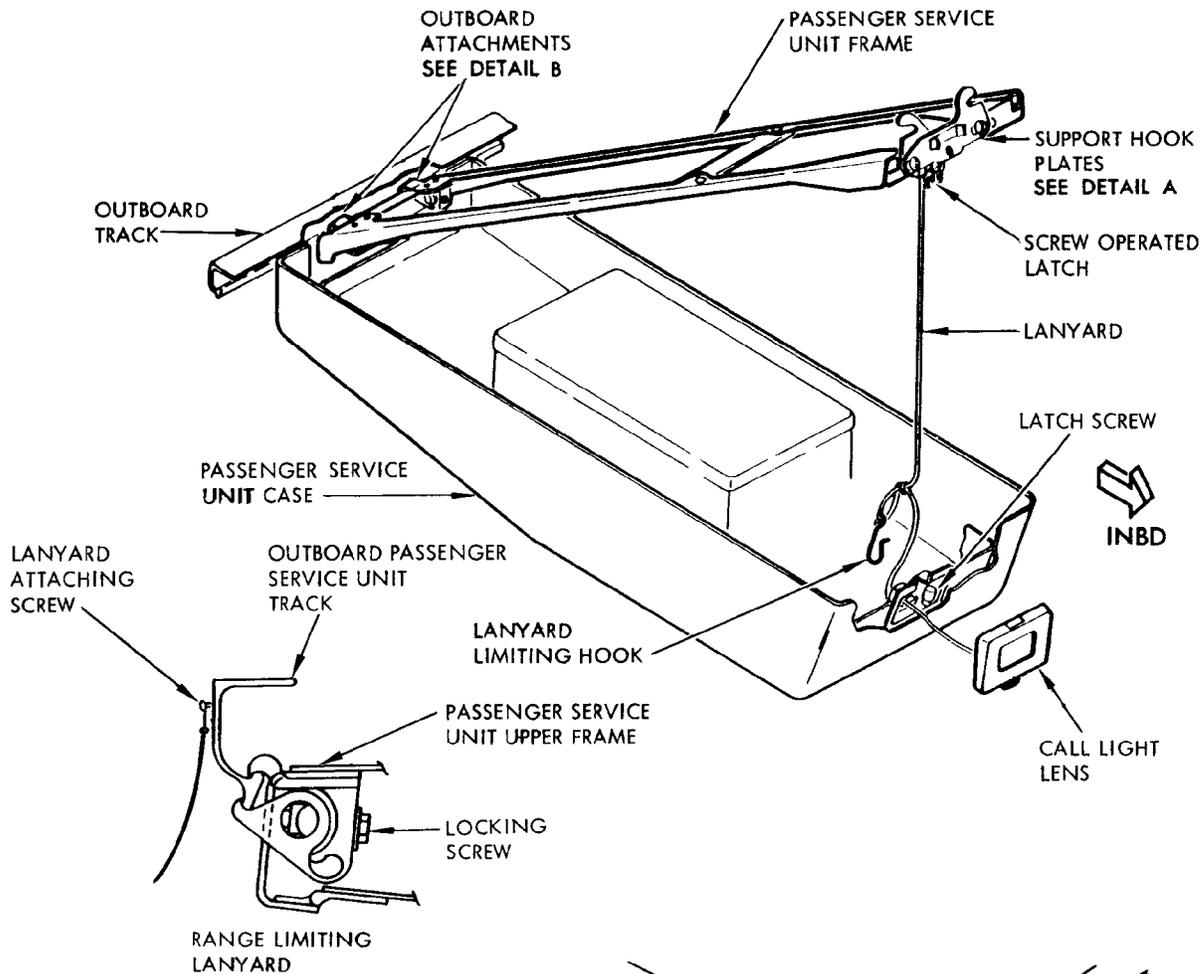
- (7) Squeeze finger tabs of inboard support hooks together and insert into inboard track.

**NOTE:** Slight fore and aft adjustment may be required to put unit into exact position.

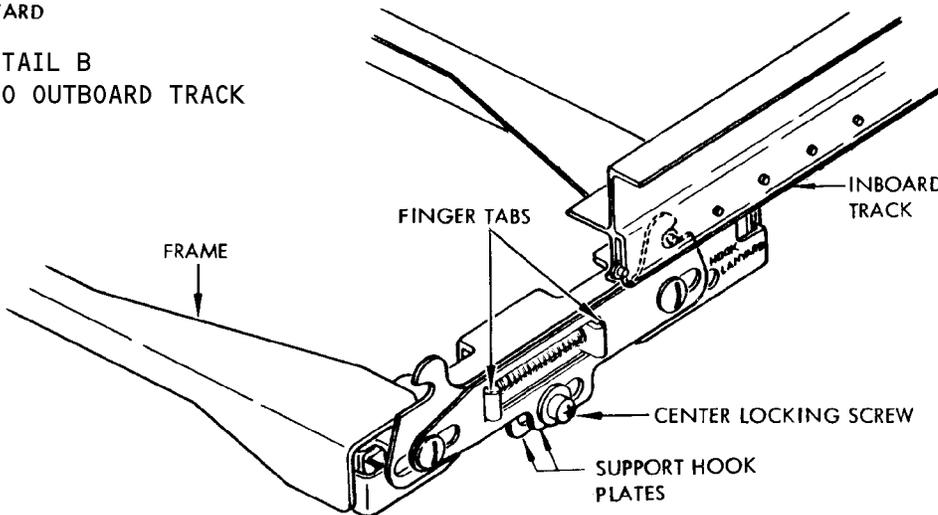
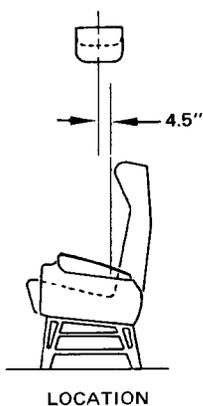
- (8) Spread finger tabs apart with fingers, and center inboard hook plates over flange of inboard upper support bracket. This step will eliminate rattle and facilitate latching of inboard end of unit.
- (9) With unit located exactly as desired and with frame fully raised, tighten center locking nut.



**MAINTENANCE MANUAL**



**DETAIL B  
ATTACHMENT TO OUTBOARD TRACK**



**DETAIL A  
ATTACHMENT TO INBOARD TRACK**

**Passenger Service Unit Repositioning  
Figure 202**

EFFECTIVITY  
Airplanes without New Look  
Interior

**25-23-11**



## MAINTENANCE MANUAL

- (10) Raise inboard end of case to secure limiting hook through hole in upper frame labeled HOOK LANYARD.
- (11) Tighten locking screws at attachments to outboard track.
- (12) Close inboard end of passenger service unit by raising case to frame, depressing spring latch, and releasing case.
- (13) Tighten latch by turning latch screw counterclockwise as far as possible.

**CAUTION:** LANYARD MUST BE CLEAR OF INBOARD LATCHES BEFORE LATCHING OPERATION.

D. Restore Passenger Service Unit to Normal Configuration

- (1) Install call light lens, as described in paragraph 2.E.(1).
- (2) Install cove light upper and lower covers. Refer to 25-21-101, Cove Light Covers.

EFFECTIVITY  
Airplanes without New Look  
Interior

25-23-11

03

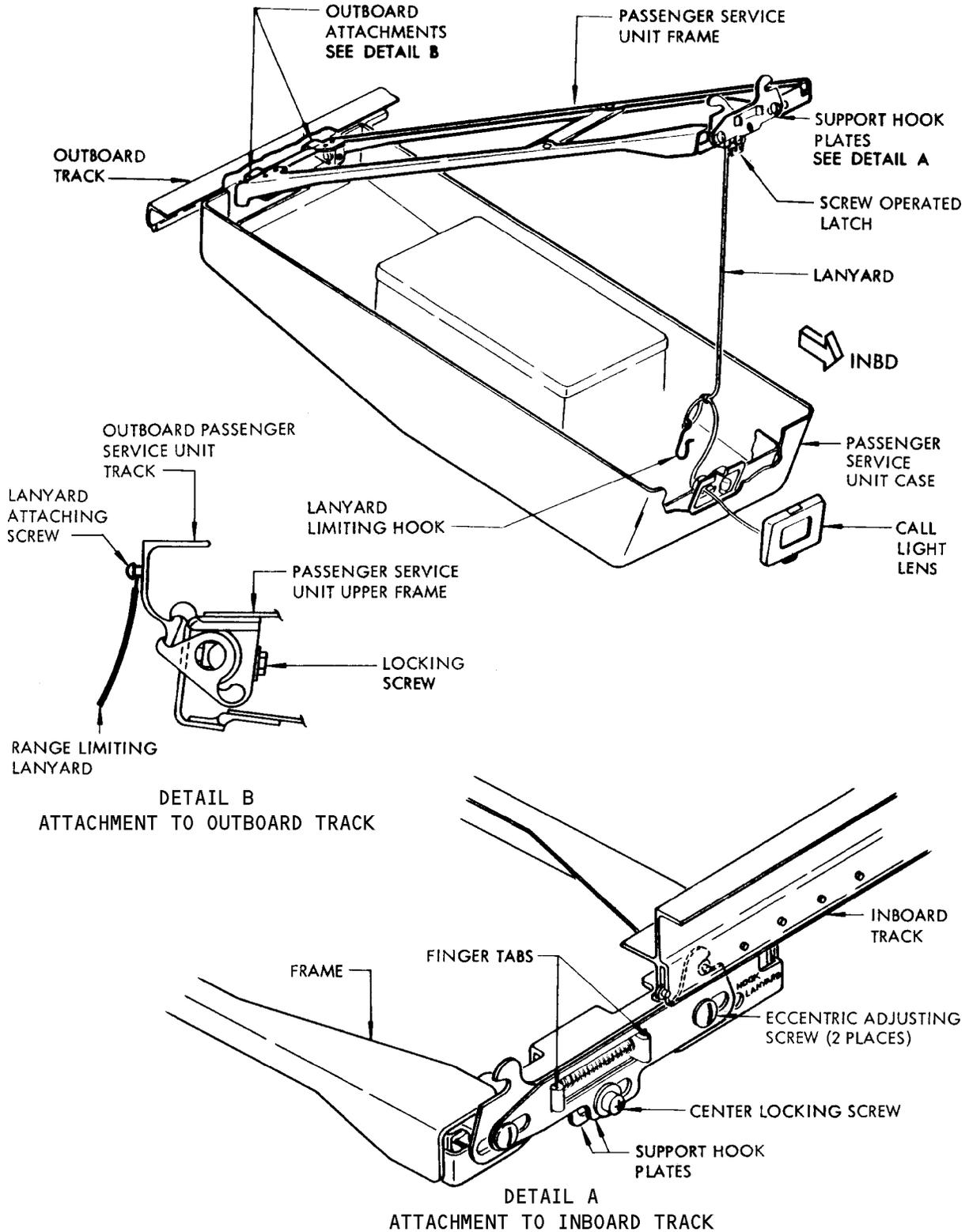
Page 206  
Dec 01/04

PASSENGER SERVICE UNITS – REMOVAL/INSTALLATION

1. General
  - A. The complete passenger service unit, consisting of the frame attached to the hatrack and the case containing the service equipment, may be removed as one assembly from the hatrack attachments.
2. Prepare Passenger Service Unit for Removal
  - A. Remove upper and lower cove light covers. Refer to 25-21-101, Cove Light Covers.
  - B. Disconnect and cap air and electrical connections.
  - C. Disconnect and cap oxygen connection. Tighten oxygen line caps type B with fingers only to a torque of 7 to 10 inch-pounds. Tighten oxygen line caps type A to a torque of 90 to 95 inch-pounds.
  - D. Disconnect adjustment range limiting lanyard from outboard passenger service unit track.
  - E. Open call light lens. Refer to 25-23-11, Passenger Service Units – Maintenance Practices.
  - F. Lower passenger service unit. Refer to 25-23-11, Passenger Service Units – Maintenance Practices.
3. Remove Passenger Service Unit
  - A. Loosen locking screws at outboard track attachments.
  - B. Unscrew center locking screw on inboard attachments and squeeze finger tabs on support hook plates together.
  - C. Lower inboard end of frame with case hanging in lowered position, until frame clears inboard track, and release finger tabs.
  - D. Raise case to meet frame, holding inboard end of frame up near hatrack, and with a slight upward and inboard movement, remove unit from outboard track.
  - E. Fully close passenger service unit by bringing inboard edge of case and frame together until latch on frame engages.
  - F. Install call light lens. Refer to 25-23-11, Passenger Service Units – Maintenance Practices.
  - G. Check low pressure oxygen system for open connections and leakage. Refer to Chapter 35, Passenger Oxygen System.
4. Prepare Passenger Service Unit for Installation
  - A. Open call light lens. Refer to 25-23-11, Passenger Service Unit – Maintenance Practices.
  - B. Unlatch case from frame by turning latch screw counterclockwise as far as possible and raising case up to release latch.
5. Install Passenger Service Unit
  - A. With unit in approximately the correct forward and aft location, and with the inboard end tilted downward at approximately a 10-degree angle to bottom surface of hatrack, engage outboard attachments of passenger service unit frame on outboard passenger service unit track.

EFFECTIVITY  
Airplanes without New Look Interior

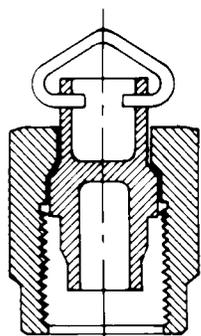
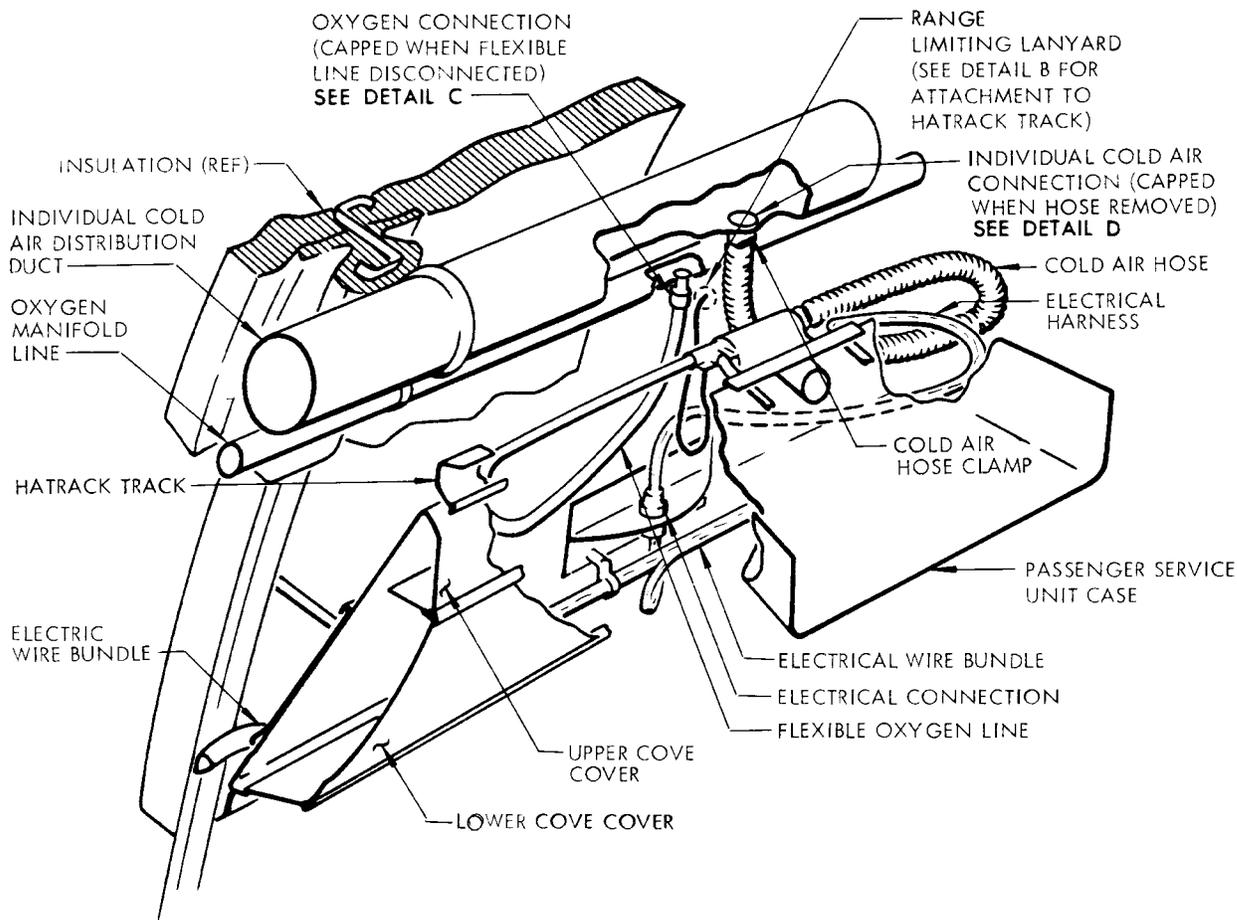
25-23-11



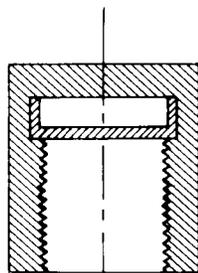
Passenger Service Unit Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 Airplanes without New Look Interior

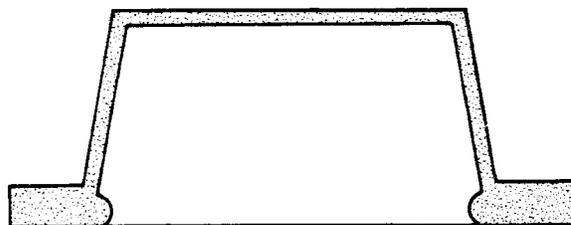
25-23-11



TYPE "A" CAP  
(WITH NO GASKET)



TYPE "B" CAP  
(WITH GASKET)



DETAIL D  
INDIVIDUAL COLD AIR LINE  
SNAP-ON CAP

BOTH TYPES OF LINE CAPS ARE  
INTERCHANGEABLE OXYGEN LINE CAPS

DETAIL C

Passenger Service Unit Installation  
Figure 401 (Sheet 2)

EFFECTIVITY  
Airplanes without New Look Interior

25-23-11

- B. With one hand holding frame, lower case to full length of support lanyard.
- C. Squeeze together finger tabs on support hook plates and insert into inboard passenger service unit track.

**NOTE:** Slight forward and aft adjustment may be required to put unit into exact position.

- D. Adjust support hook eccentric adjusting screws for a maximum 0.03 inch clearance between case and passenger service unit tracks.
- E. Spread finger tabs apart with fingers, and center inboard hook plates over flange of inboard upper support bracket. This step will eliminate rattle and will facilitate latching of inboard end of unit.
- F. With unit located exactly as desired and with inboard end of frame fully raised, tighten center locking nut.
- G. Tighten locking screws on attachments to outboard passenger service unit track.
- H. Index reading lights as required.
- I. Raise passenger service unit case until it latches closed. Refer to 25-23-11, Passenger Service Unit - Lowering and Raising.

**CAUTION:** SUPPORT LANYARD MUST BE CLEAR OF INBOARD LATCHES BEFORE LATCHING OPERATION.

- J. Install call light lens. Refer to 25-23-11, Passenger Service Unit - Maintenance Practices.
- K. Uncap oxygen fitting on main oxygen distribution manifold and connect flexible oxygen hose.

**CAUTION:** FLEXIBLE HOSE MUST FOLD AFT IN ONE NEAT, UNKINKED, UNTWISTED LOOP AND MUST HAVE AN OBVIOUSLY FREE PATH FOR MOVEMENT.

- L. Uncap air outlet on individual cold air duct and connect flexible air duct.

**CAUTION:** DUCT MUST FOLD FORWARD IN ONE NEAT, UNKINKED, UNTWISTED LOOP AND MUST HAVE AN OBVIOUSLY FREE PATH FOR MOVEMENT.

- M. Uncap electrical outlet on sidewall and connect electrical harness.

**CAUTION:** ELECTRICAL HARNESS MUST FOLD AFT IN ONE NEAT, UNKINKED, UNTWISTED LOOP ON TOP OF FLEXIBLE AIR DUCT AND MUST HAVE AN OBVIOUSLY FREE PATH OF MOVEMENT.

- N. Attach adjustment range limiting lanyard to screw provided on outboard edge of hatrack.

**BOEING**  
**737**   
MAINTENANCE MANUAL

6. Restore Passenger Service Unit to Normal Configuration

- A. Check all clamps, oxygen fittings and other components for a distance of 12.5 inches fore and aft of unit for proper positioning so that a minimum of interference to the free passage or folding of looped service lines will result in subsequent relocating operations. An experimental relocating operation to extreme fore and aft limits will facilitate this check.
- B. Check low pressure oxygen system for open connections and leakage. Refer to Chapter 35, Passenger Oxygen System.
- C. Install upper and lower cove light covers. Refer to 25-21-101, Cove Light Cover.

EFFECTIVITY  
Airplanes without New Look Interior

25-23-11

03

Page 405  
Dec 01/04

PASSENGER SERVICE UNITS – CLEANING/PAINTING

1. Passenger Service Units Cleaning

A. General

- (1) It is important to use only the cleaning detergents listed below to clean passenger service units and spacer panels. Use of improper cleaning materials may cause damage (crazing or cracking) to the painted surfaces and plastic materials of the passenger service unit and spacer panels.
- (2) Before using any cleaning material not listed below submit the proposed material to a Polycarbonate Crazing Test (Ref Overhaul Manual, Chapter 20-30-03).

B. Equipment and Materials (Ref 20-30-31)

- (1) Cleaning detergent, any of the following:
  - (a) High Concentrate 40.1 (Mix 1 part cleaner to 32 parts water).
  - (b) Spraywhite E (Mix 1 part cleaner to 10 parts water).
  - (c) Clean Quick (Mix 1 part cleaner to 64 parts water).
  - (d) Orvus W.A. Paste (Mix 1 part cleaner to 30 parts water).
  - (e) Glo Do-All Formula 3B (Mix 1 part cleaner to 30 parts water).
  - (f) Glo Do-All Formula 1B (Mix 1 part cleaner to 20 parts water).
- (2) Clean, dry cloths or absorbent paper toweling
- (3) Plastic spray bottle or sponge

C. Clean Passenger Service Units

- (1) Apply one or detergent solutions listed in par. B by spray or by sponge dampened in solution.

**CAUTION:** SOME SURFACES MAY BE DAMAGED (CRACKED) BEYOND REPAIR BY USING IMPROPER CLEANING MATERIALS.

- (2) Allow detergent solution to remain on surface approximately 2 minutes then wipe with damp cloth.
- (3) Rinse surface with a clean cloth saturated with clean water.
- (4) Wipe dry with clean, dry cloth.

EFFECTIVITY  
Airplanes Without New Look  
Interior

25-23-11

PASSENGER SERVICE UNITS - APPROVED REPAIRS

1. General

- A. This procedure applies to the following approved repairs of passenger service unit shells made from Polysulfone:
- (1) Repair of scraped areas
  - (2) Repair of cuts and gouges that do not penetrate the material
  - (3) Repair of cracked areas
  - (4) Repair of broken-off nondecorative sections

2. Passenger Service Units - Approved Repairs

A. Equipment and Materials

- (1) Pint or quart can with seal tight lid
- (2) Mechanical agitator
- (3) Rotary file (for repair of cracks on decorative side)
- (4) Clean dry cheesecloth
- (5) No. 400 (or finer) sandpaper
- (6) Methylene Chloride
- (7) Magna 8-W-5 Filler Compound
- (8) Magna Hardener 50-C-3
- (9) Naphtha
- (10) Strips of glass cloth, Style No. 120, Volan "A" finish (for repair of cracks and broken-off sections)

B. Repair Passenger Service Unit Shell

- (1) Preparation of Repair Cement
  - (a) Cut or grind the same type and color of plastic to be repaired into approximately 1/8 inch squares.
  - (b) Pour, by weight, four parts of Methylene Chloride and add one part of the cut plastic into a pint or quart can (with seal tight lid) and put on mechanical agitator. Continue agitation until plastic has dissolved (approximately 20 to 30 minutes).
- (2) Preparation of Filler Compound
  - (a) Mix Magna 8-W-5 Filler Compound with Magna Hardener 50-C-3 in accordance with manufacturer's instructions.
- (3) Repair of Scraped Areas
  - (a) Wet sand (cold water) the scraped area with No. 400 (or finer) sandpaper.
  - (b) Rinse the sanded area with cold water to remove sandpaper grit.
  - (c) Wipe dry with cheesecloth.
  - (d) Retexture the repaired surface if required.
- (4) Repair of Cuts or Gouges that do not Penetrate the Material (Nondecorative Side)
  - (a) Clean the cut or gouge with naphtha.
  - (b) Fill the cut or gouge with repair cement so that the height of cement is above the surface of the material. Allow to dry.
  - (c) If the repair cement shrinks below the surface of the material after drying, repeat step (b) above.



## MAINTENANCE MANUAL

- (d) If required, sand the cemented area flush with the material surface using No. 400 (or finer) sandpaper.
- (5) Repair of Cuts or Gouges that do not Penetrate the Material (Decorative Side)
- Follow procedure described in step (4)(a) through (c).
  - Abrade the cemented area until flush with the decorative surface.
  - Wet sand (cold water) the abraded areas with No. 400 (or finer) sandpaper to remove coarse marks.
  - Rinse the sanded areas with cold water and wipe with cheesecloth.
  - If repaired surface is "pitted" or "pock-marked," when viewed through a magnifying glass, use the following procedure to repair the "pitted" areas.
    - Clean the "pitted" areas with naphtha.
    - Apply filler compound. Allow to dry thoroughly.
    - Wet sand (cold water) the repair areas using No. 400 (or finer) sandpaper until the excess filler compound has been removed.
- NOTE:** The repaired areas shall be sanded within 4 to 6 hours; otherwise it will be very difficult to remove the excess filler compound.
- Rinse the sanded areas with cold water and wipe dry with cheesecloth.
  - Retexture the repaired surface, if required.
- (6) Repair of Cracked Areas (Nondecorative Sections)
- Clean the crack and adjacent areas with naphtha.
  - Clamp the cracked sections together.
  - Brush coat the crack and adjacent surfaces (approximately 1/2 inch on either side of the crack) with repair cement.
  - While the cement is still wet, place a 3/4 to 1 inch strip of glass cloth (Style No. 120, Volan "A" finish) over the crack on each side of the cracked section.
  - Brush coat the glass cloth with repair cement. Allow to dry.
- (7) Repair of Cracked Areas (Decorative Sections)
- Clamp the cracked sections together.
  - Cut a "V" groove in the crack on the decorative side using a rotary file. The depth of "V" groove shall be approximately one-half to two-thirds the thickness of the cracked section.
  - Clean the crack and adjacent areas with naphtha.
  - On the nondecorative side, brush coat the crack and approximately 1/2 inch area on both sides of the crack with repair cement.

EFFECTIVITY  
Airplanes without New Look  
Interior

25-23-11

03

Page 802  
Dec 01/04



## MAINTENANCE MANUAL

- (e) While the cement is still wet, place a 3/4 to 1 inch wide strip of glass fabric (Style No. 120, Volan "A" finish) over the cemented crack and brush coat the glass cloth with repair cement. Allow to dry.
  - (f) Fill the "V" groove on the decorative side with repair cement so that the height of the cement is above the decorative surface. Allow to dry.
  - (g) Complete the repair in accordance with steps (4)(c) and (5)(b) through (e)5).
- (8) Repair of Broken-Off Nondecorative Sections
- (a) Clean the faying and adjacent surfaces with naphtha.
  - (b) Brush coat the faying surfaces with repair cement and immediately clamp the broken sections together.
  - (c) Brush coat both sides of the bondline and adjacent surfaces (approximately 1/2 inch on either side of the bondline) with repair cement.
  - (d) While the cement is still wet, place a 3/4 to 1 inch wide strip of glass cloth (Style No. 120, Volan "A" finish) over the bondline on each side of the section.
  - (e) Brush coat the glass cloth with repair cement. Allow to dry.

EFFECTIVITY  
Airplanes without New Look  
Interior

25-23-11

03

Page 803  
Dec 01/04

FORWARD LAVATORY SERVICE UNIT – REMOVAL/INSTALLATION

1. General

- A. One oxygen box, containing two oxygen masks, and an overhead service light are attached to the upper side of the triangular-shaped ceiling panel of the forward lavatory compartment. These facilities comprise the forward lavatory service unit. Removal of the service unit is accomplished by removing the triangular-shaped service unit panel.

2. Remove Forward Lavatory Service Unit

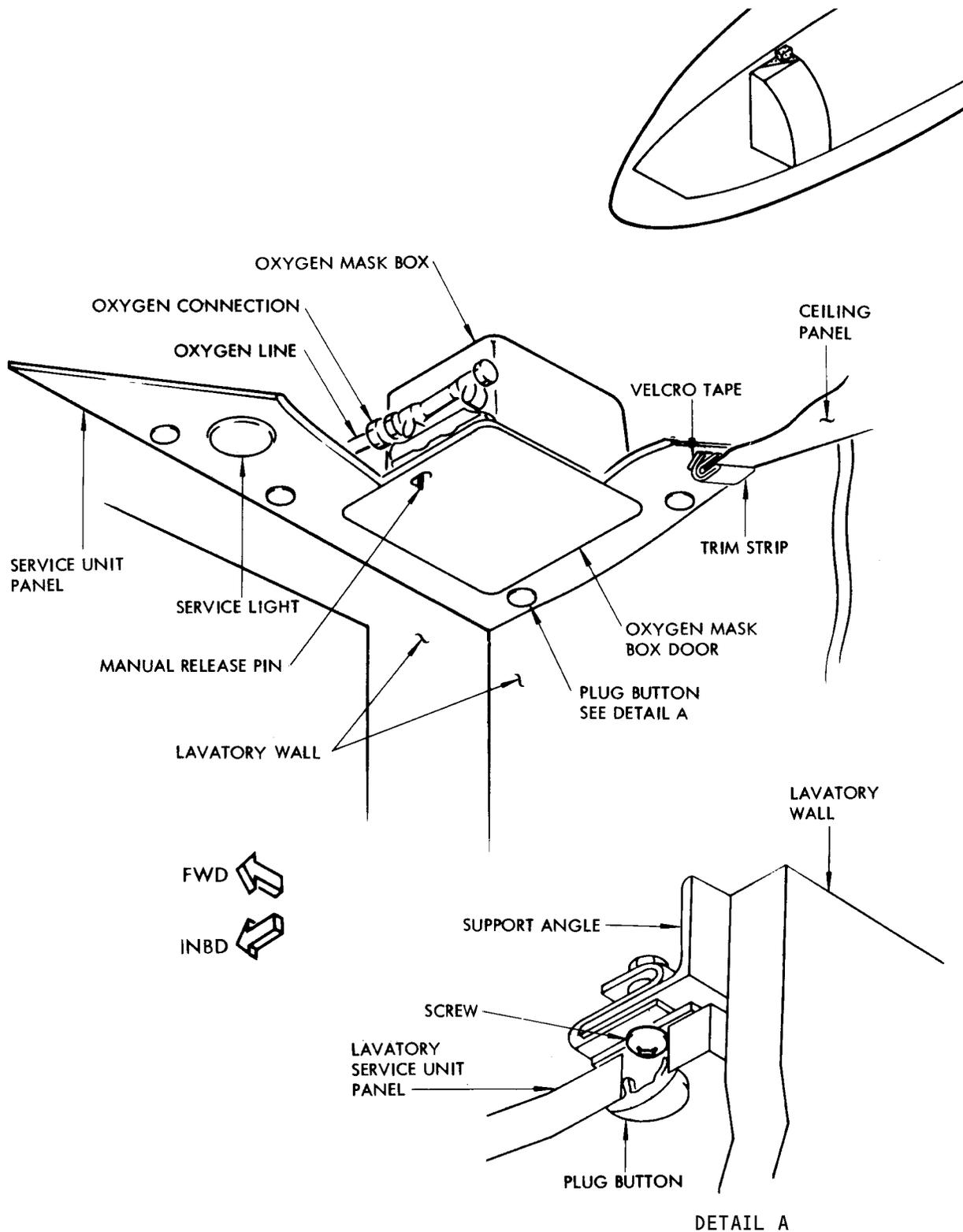
- A. Open lavatory dome light circuit breaker on circuit breaker panel P18-3.
- B. Remove snap-in plug buttons along aft and inboard edges of service unit panel to expose attachment screws (Fig. 401).
- C. Remove attachment screws securing aft and inboard edges of panel.
- D. Push upward on outboard edge of service unit panel and pull down on trim strip to release velcro tape.
- E. Partially lower service unit panel, reach above panel and disconnect oxygen line and electrical leads.
- F. Completely remove service unit panel.

3. Install Forward Lavatory Service Unit

- A. Raise service unit panel and connect oxygen line and electrical leads (Fig. 401).
- B. Insert outboard edge of panel above trim strip and lower outboard edge to trim strip engaging velcro tape.
- C. Install attachment screws along aft and inboard edges of panel.
- D. Install snap-in plug buttons to conceal attachment screws.
- E. Check low pressure oxygen system for open connections and leakage (Ref Chapter 35, Passenger Oxygen System).
- F. Close lavatory dome light circuit breaker on circuit breaker panel P18-3.

EFFECTIVITY  
ALL EXCEPT ATI INTERIOR

25-23-31



Forward Lavatory Service Unit Installation  
 Figure 401

EFFECTIVITY  
 ALL EXCEPT ATI INTERIOR

25-23-31

FORWARD LAVATORY OXYGEN SERVICE UNIT – REMOVAL/INSTALLATION

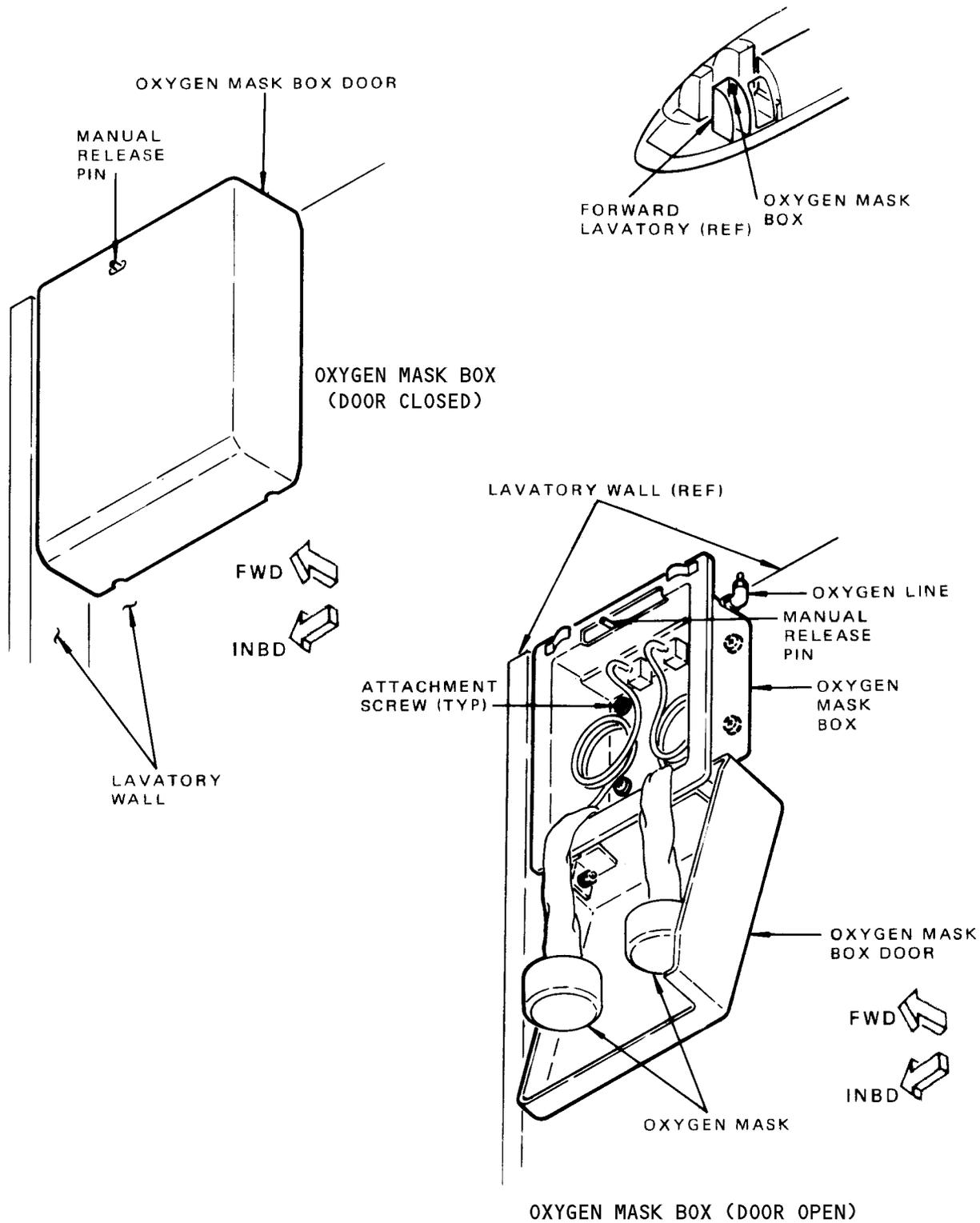
1. Remove Forward Lavatory Service Unit (Fig. 401)
  - A. Operate manual release pin to open service unit door. Oxygen masks will drop from service unit.
  - B. Disconnect oxygen line at service unit. Place dust cap or cover on oxygen line to prevent contamination.
  - C. Remove screws attaching oxygen mask box to lavatory wall and remove service unit.
2. Install Forward Lavatory Service Unit (Fig. 401)
  - A. Place forward lavatory service unit in mounting position with door open.
  - B. Install screws securing oxygen mask box to lavatory wall.
  - C. Place oxygen masks in oxygen mask box and close service unit door.
  - D. Remove dust cap or cover from oxygen line and connect oxygen line at service unit.
  - E. Check low pressure oxygen system for open connections and leakage. Refer to Chapter 35, Passenger Oxygen System.

EFFECTIVITY  
Passenger/Cargo Convertible Airplanes

25-23-32

01

Page 401  
Dec 01/04



Forward Lavatory Service Unit Installation  
 Figure 401

EFFECTIVITY  
 Passenger/Cargo Convertible Airplanes

**25-23-32**

AFT LAVATORY SERVICE UNITS – REMOVAL/INSTALLATION

1. Remove Lavatory Service Unit
  - A. Open passenger address amplifier circuit breaker on P6 circuit breaker panel.
  - B. Operate manual release pin to open service unit door. Oxygen masks will drop from service unit (Fig. 401).
  - C. Remove screws along perimeter of service unit base attaching unit to mounting plate and partially lower service unit through cutout in ceiling panel.
  - D. Reach above service unit through cutout in lavatory ceiling panel and disconnect oxygen hose and electrical leads at unit terminal box.
  - E. Lower service unit clear of ceiling panel.
2. Install Lavatory Service Unit
  - A. Hold service unit up to cutout in lavatory ceiling panel (Fig. 401).
  - B. Reach above service unit through cutout in lavatory ceiling panel and connect oxygen hose and electrical leads at terminal box.
  - C. Completely raise service unit up to mounting plate and install screws along perimeter of service unit base attaching unit to mounting plate.
  - D. Raise oxygen masks into service unit and close service unit door.
  - E. Close passenger address amplifier circuit breaker on P6 circuit breaker panel.
  - F. Check low pressure oxygen system for open connections and leakage (Ref Chapter 35, Passenger Oxygen System).

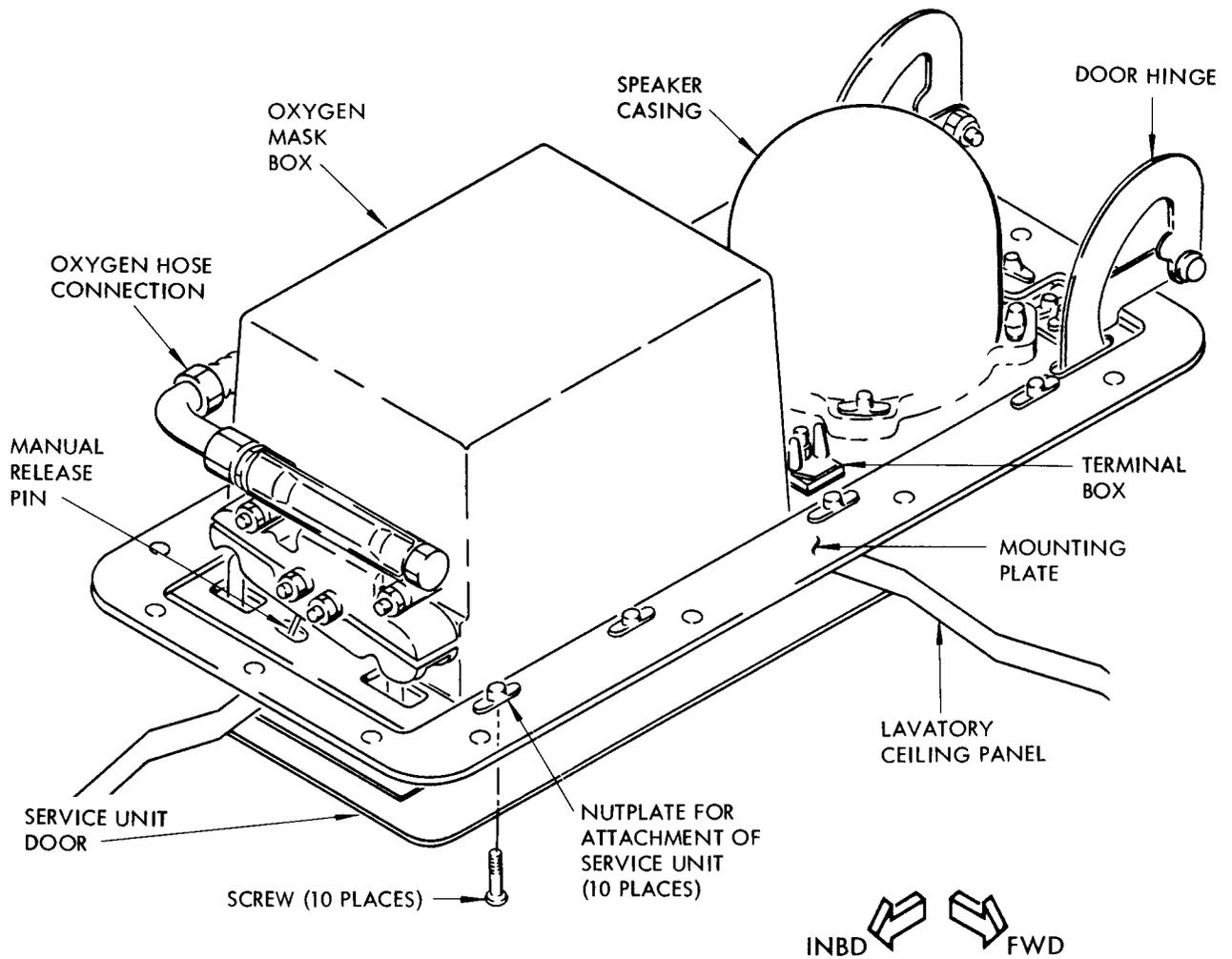
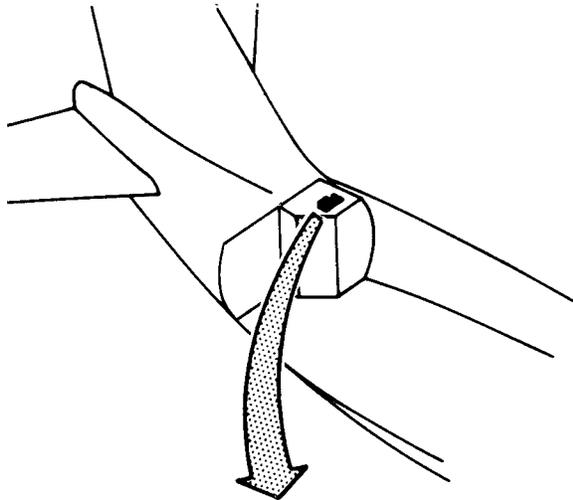
EFFECTIVITY

ALL

25-23-41

02

Page 401  
Dec 01/04



Aft Lavatory Service Unit Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-23-41

FORWARD CABIN ATTENDANTS' SERVICE UNIT – REMOVAL/INSTALLATION

1. General
  - A. The forward attendants' oxygen service unit, a work light, and an exit light are mounted on a service panel over the forward entry door. Removal of the service unit is accomplished by removing the service panel.
2. Remove Forward Cabin Attendants' Service Unit (Fig. 401)
  - A. Open exit and entry light circuit breakers on circuit breaker panel P18.
  - B. Disconnect quick-release fasteners securing service panel in closed position and allow it to swing down to open position where it is held by lanyard.
  - C. Disconnect electrical wiring from entry and exit lights.
  - D. Disconnect oxygen line and place dust cap or cover over line to prevent contamination.
  - E. Support service panel and disconnect lanyard.
  - F. Remove nut, bolt and washers securing hinges to their support brackets and remove service panel. Reinstall attaching hardware in bracket to prevent loss of small parts.
3. Install Forward Cabin Attendants' Service Unit (Fig. 401)
  - A. Place service panel in position and install nut, bolt and washers securing hinges to their support brackets.
  - B. Support service panel and connect lanyard.
  - C. Remove dust cover or cap from oxygen line and connect oxygen line.
  - D. Connect electrical leads to entry and exit lights.
  - E. Raise panel to closed position and secure in place with quick-disconnect fasteners.
  - F. Close circuit breakers. Check exit and entry light for proper operation.
  - G. Check low pressure oxygen system for open connections and leakage (Ref Chapter 35, Passenger Oxygen System).

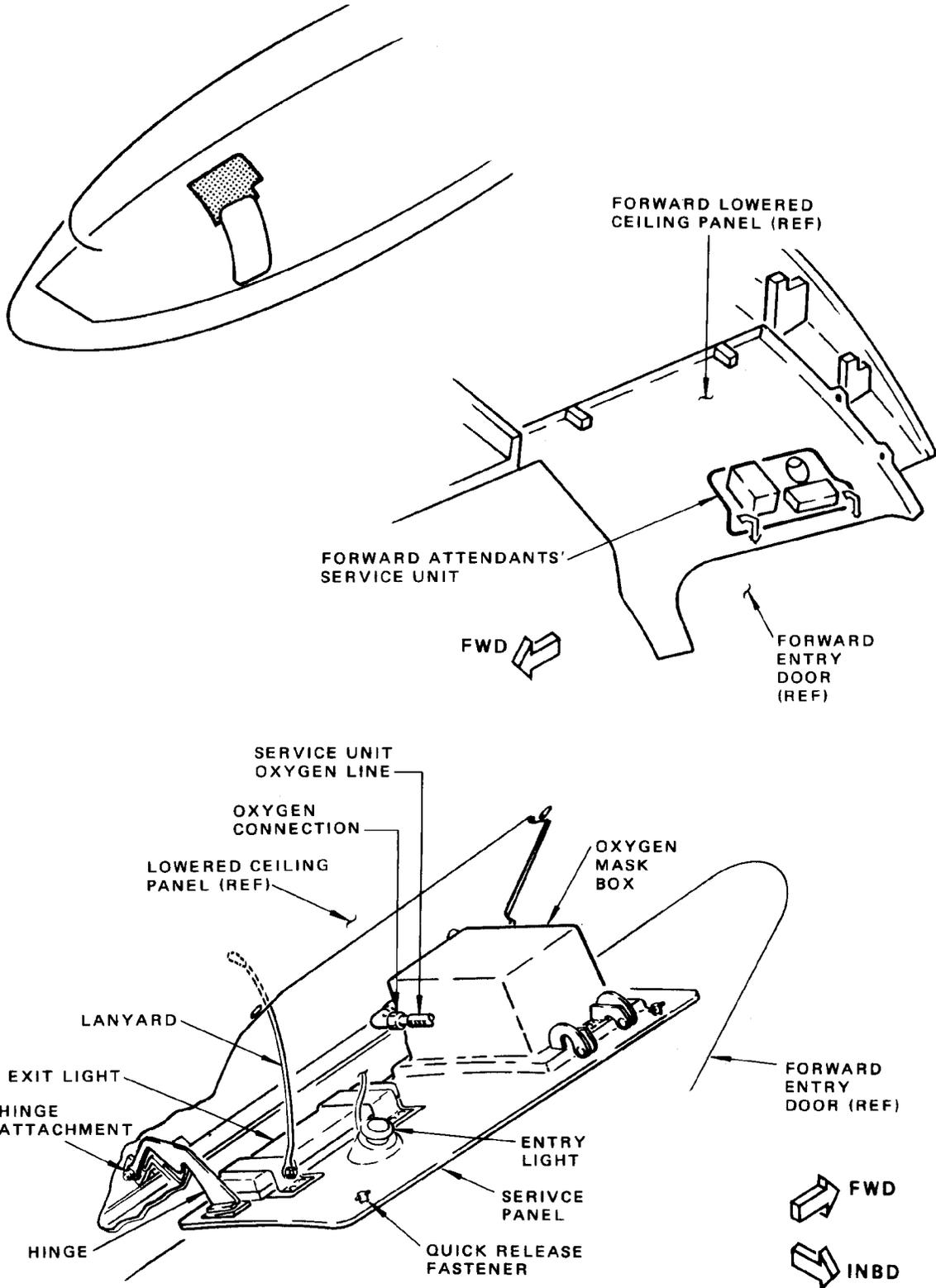
EFFECTIVITY

ALL

25-23-61

01

Page 401  
Dec 01/04



Forward Cabin Attendants' Service Unit Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-23-61

AFT CABIN ATTENDANTS' SERVICE UNITS – REMOVAL/INSTALLATION

1. Remove Aft Attendants' Service Unit (Fig. 401)
  - A. Open aft lowered ceiling access door.
  - B. Disconnect oxygen line to service unit. Place dust cap or cover on oxygen line to prevent contamination.
  - C. Operate manual release pin to open service unit door. Oxygen masks will drop from service unit.
  - D. Remove screws along perimeter of service unit base attaching unit to mounting plate, and lower service unit through cutout in ceiling panel.
2. Install Aft Attendants' Service Unit (Fig. 401)
  - A. Raise aft attendants' service unit through cutout in aft lowered ceiling panel and position unit base against mounting plate.
  - B. Install screws attaching base of service unit to mounting plate.
  - C. Raise oxygen masks into service unit and close service unit door.
  - D. Reach through aft lowered ceiling access door opening, remove dust cap or cover, and connect oxygen line to service unit.
  - E. Close aft lowered ceiling access door.
  - F. Check low pressure oxygen system for open connections and leakage (Ref Chapter 35, Passenger Oxygen System).

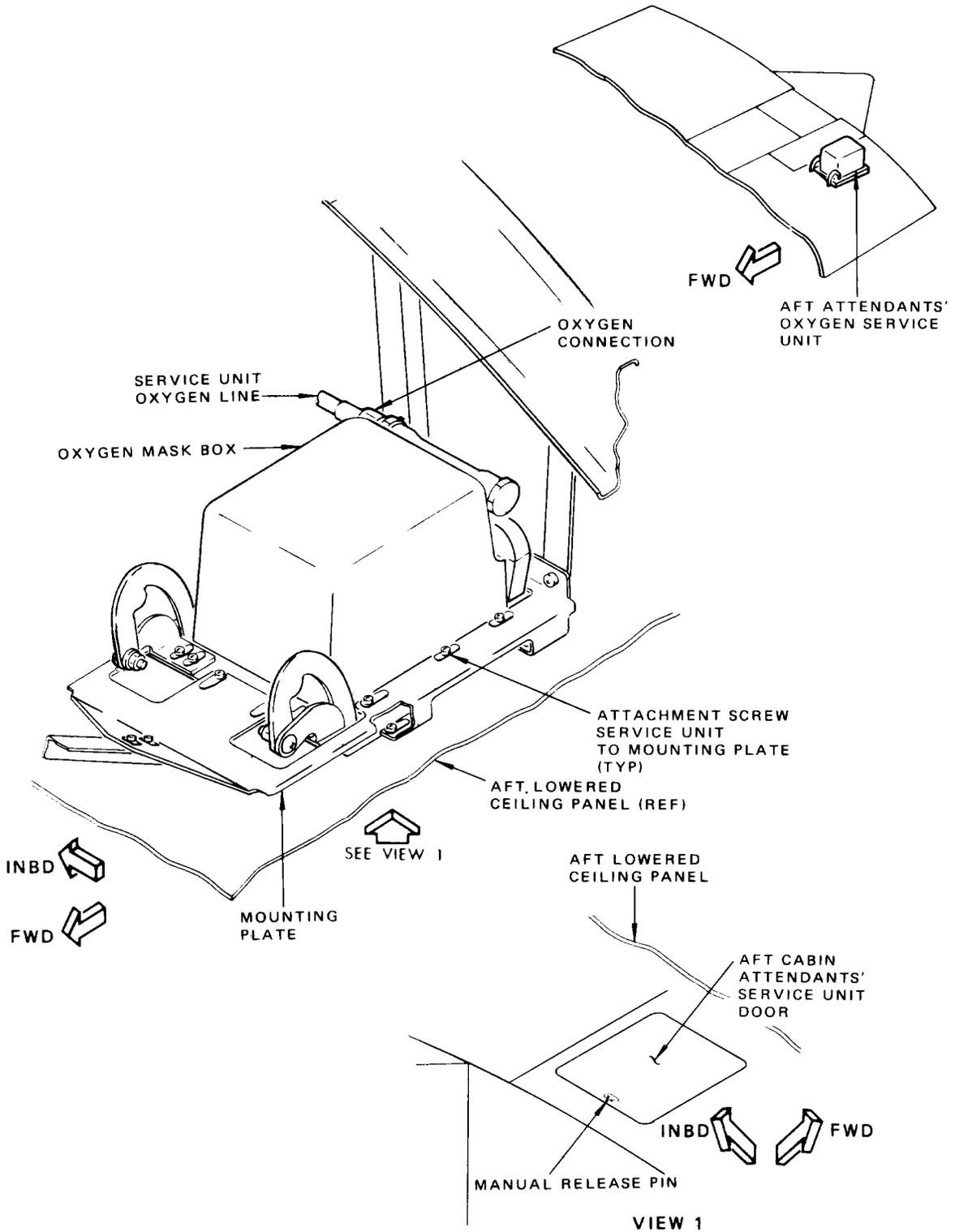
EFFECTIVITY

ALL

25-23-71

04

Page 401  
Dec 01/04

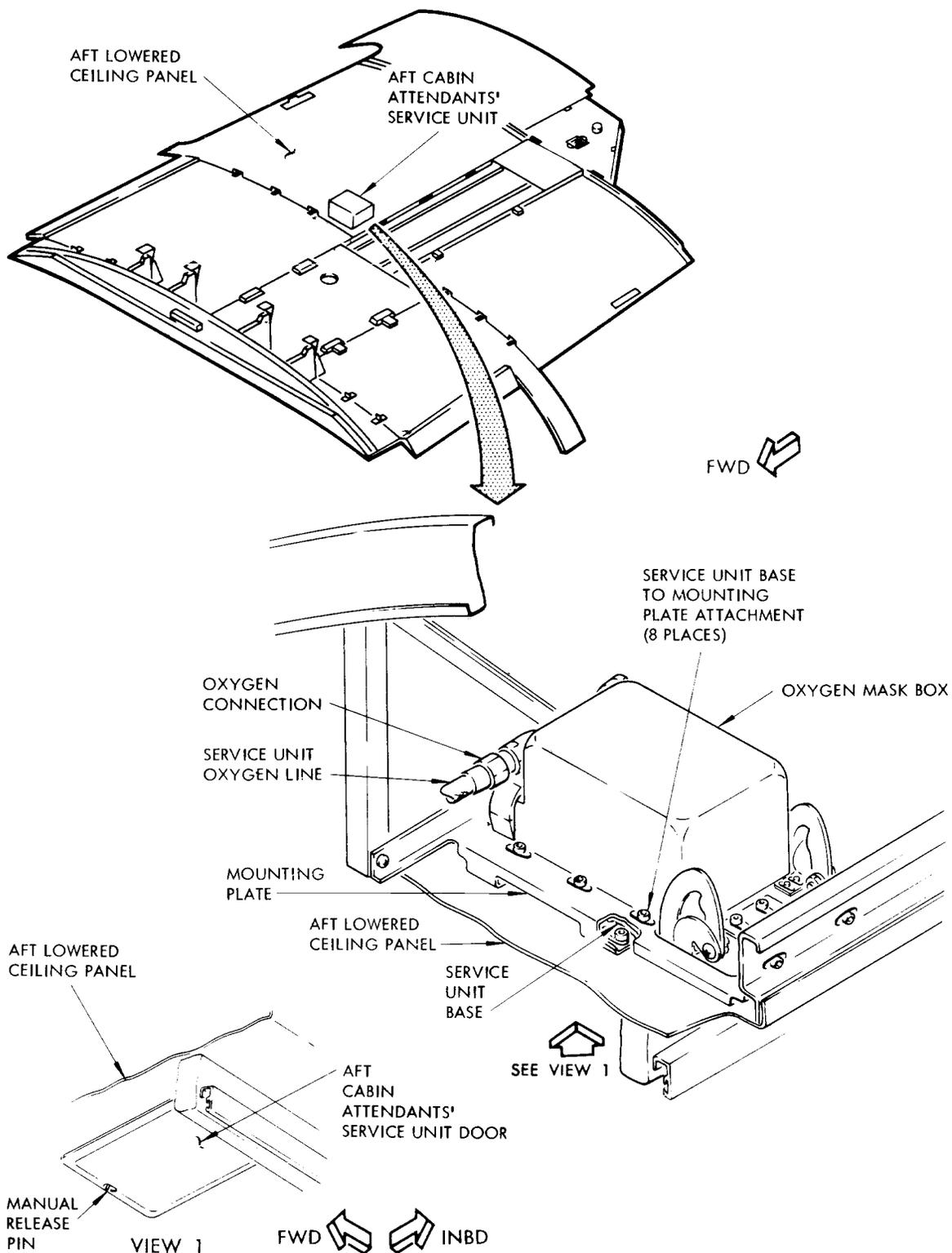


Aft Cabin Attendants Service Unit Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 Standard Passenger  
 Airplanes

456647

25-23-71



Aft Cabin Attendants Service Unit Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

**25-23-71**

PASSENGER SERVICE UNIT – MAINTENANCE PRACTICES

1. General

- A. This section provides instructions to lower and raise (par. 2 and 3), or remove and install (par. 4 and 5) the passenger service unit (PSU).
- B. Lowering the PSU provides access to equipment installed on PSU or in sidewall.
- C. Each section of a three-piece PSU is lowered and raised in the same manner as a one-piece unit.

2. Lower Passenger Service Unit (Fig. 201)

- A. Insert small rod or similar tool into hole near each inboard corner of PSU.

NOTE: Exercise care not to scratch surface of PSU around latch access holes.

- B. Support PSU and push upward with rod to release latch.
- C. Lower PSU until unit is supported by lanyard.
- D. If access behind spacer panel is required; release support spring(s) at inboard panel corners and release hinged latches as in steps A and B preceding and lower panel.

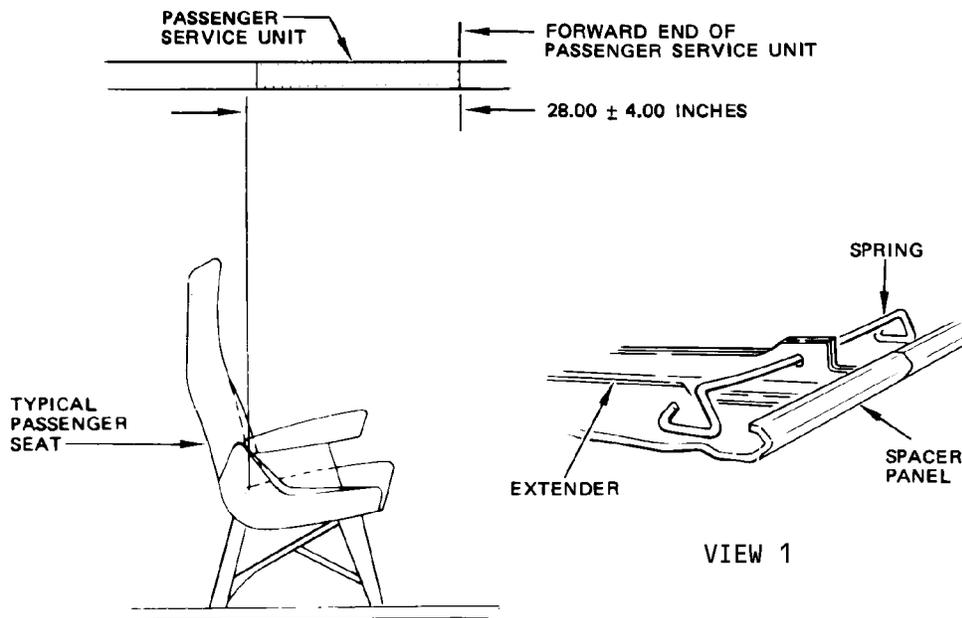
3. Raise Passenger Service Unit (Fig. 201)

- A. Raise panel and snap panel support spring(s) into support angle. Check that hinged latches are securely hooked onto support angle (Detail B).
- B. Push PSU up and outboard as required to ensure that outboard edge of unit rests on top of air outlet extrusion flange. Raise PSU to closed position and check that latches are securely hooked to support angle.

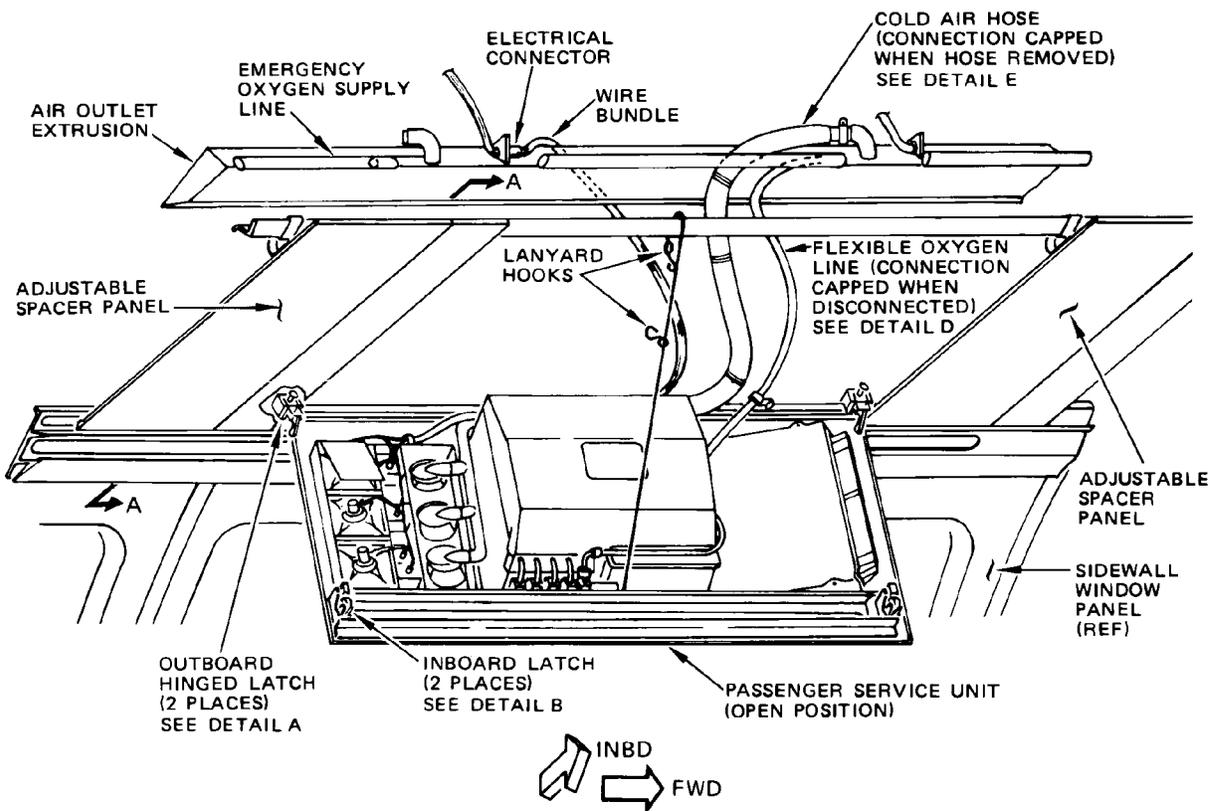
CAUTION: OUTBOARD EDGE OF PSU MUST REST ON TOP OF AIR OUTLET EXTRUSION FLANGE WHEN PSU IS RAISED AND CLOSED. CLOSING PSU WITH OUTBOARD EDGE TRAPPED AGAINST OR BELOW AIR OUTLET EXTRUSION FLANGE MAY DAMAGE PSU OR CAUSE INTERFERENCE WITH ADJACENT COMPONENTS.

4. Remove Passenger Service Unit (Fig. 201)

- A. Open the following circuit breakers on panel P18.
  - (1) RIGHT READING
  - (2) LEFT READING
  - (3) NO SMOKING
  - (4) SEAT BELT
  - (5) PASSENGER AND CREW CALL
- B. Lower PSU until unit is supported by lanyard (Ref. Par. 2).



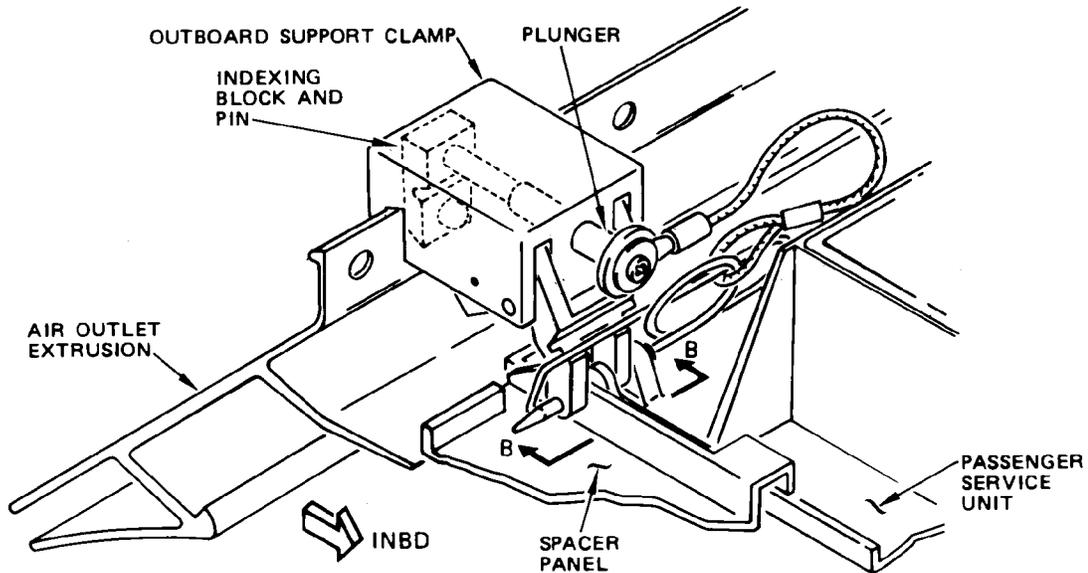
TYPICAL SERVICE UNIT LOCATION



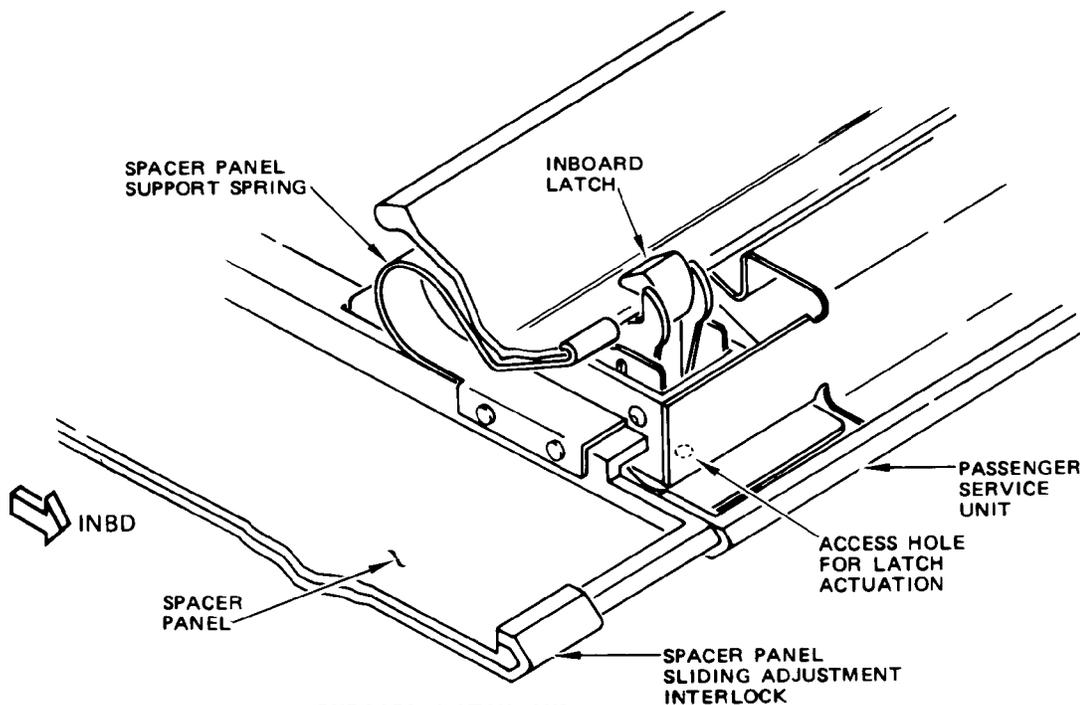
Passenger Service Unit Installation  
 Figure 201 (Sheet 1)

EFFECTIVITY  
 New Look Interior

**25-23-311**



OUTBOARD WINGED LATCH  
 AND SPACER PANEL JOINT  
 DETAIL A

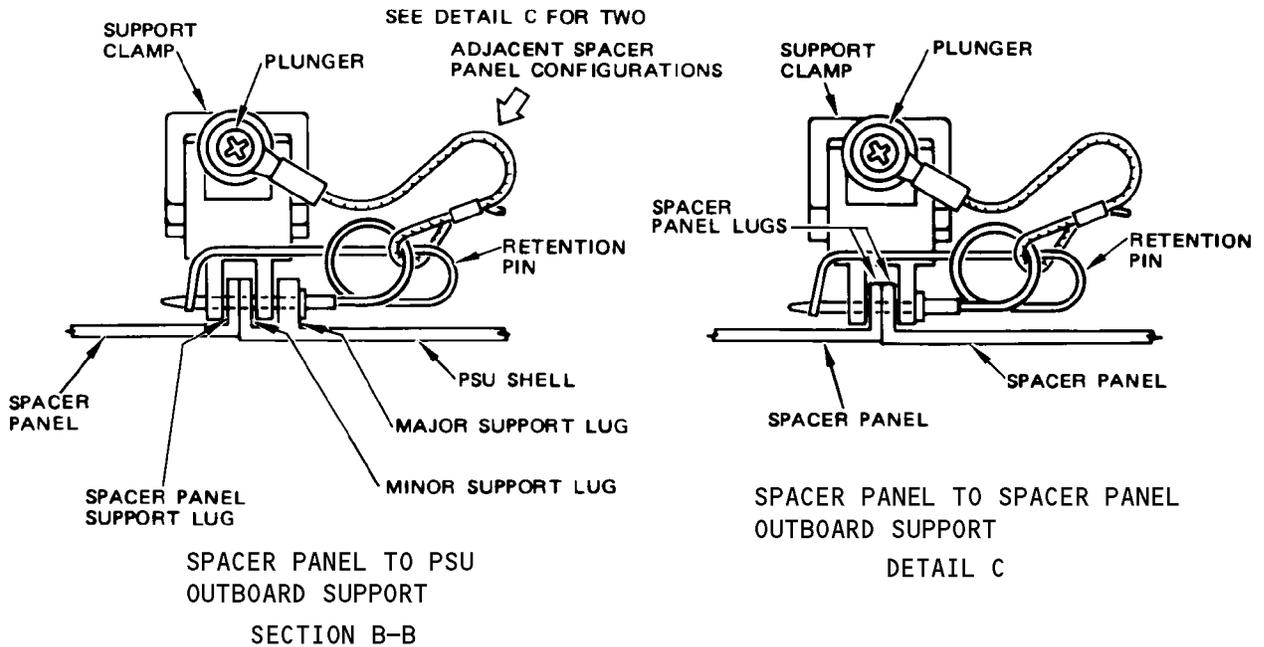
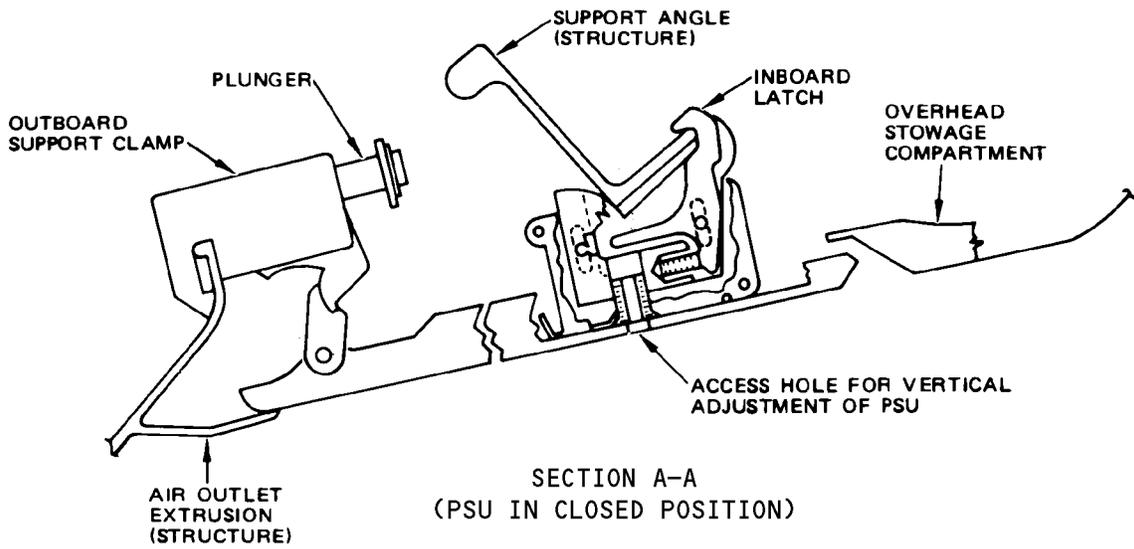


INBOARD LATCH AND  
 SPACER PANEL JOINT  
 DETAIL B

Passenger Service Unit Installation  
 Figure 201 (Sheet 2)

EFFECTIVITY  
 New Look Interior

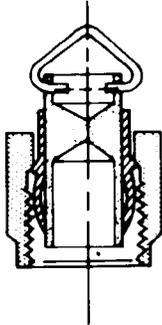
25-23-311



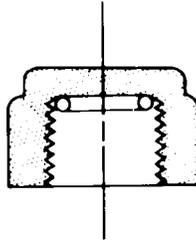
Passenger Service Unit Installation  
 Figure 201 (Sheet 3)

EFFECTIVITY  
 New Look Interior

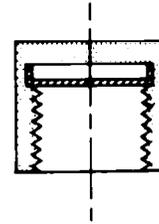
25-23-311



TYPE A METAL CAP  
 (WITH NO GASKET) TORQUE:  
 120-130 POUND-INCHES



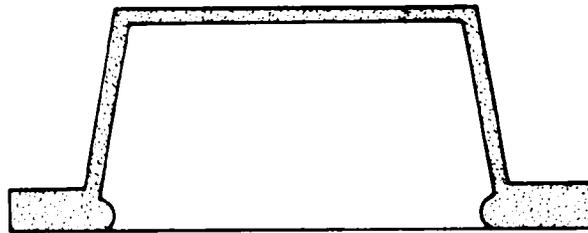
TYPE B PLASTIC CAP  
 TORQUE: 7-10 POUND-INCHES  
 (FINGER-TIGHT)



TYPE C METAL CAP  
 (WITH GASKET) TORQUE:  
 7-10 POUND-INCHES (FINGER-TIGHT)

NOTE: TYPE C IS INSTALLED ON LATER AIRPLANES,  
 ALL TYPES ARE INTERCHANGEABLE.

OXYGEN LINE CAPS  
 DETAIL A



COLD AIR LINE SNAP-ON CAP

DETAIL B

Passenger Service Unit Installation  
 Figure 201 (Sheet 4)

EFFECTIVITY  
 New Look Interior

25-23-311

C. Disconnect and cap air, oxygen, and electrical connections.

**NOTE:** Oxygen line caps type B and C should be tightened with fingers only to a torque of 7 to 10 pound-inches. Oxygen line caps type A should be tightened to a torque of 120 to 130 pound-inches.

D. Remove oxygen line clamp from air conditioning outlet extrusion.

E. Support PSU and unhook lanyard from around support angle.

F. Remove spring pins that secure PSU to outboard support clamps.

**CAUTION:** SUPPORT PSU WHILE REMOVING PINS TO AVOID POSSIBLE DAMAGE TO PINS OR PIN SUPPORT.

G. Remove PSU.

H. Remove adjacent spacer panels.

(1) Lower spacer panel and adjacent PSU's (Ref. Par. 2).

(2) Remove pin and disconnect adjacent spacer panel and PSU outboard support clamp.

I. Depress plunger on each outboard support clamp, disengage clamp from sidewall air outlet and remove clamps.

J. If PSU is not to be reinstalled, check low pressure oxygen system for leakage and open connections (Ref. Chapter 35, Passenger Oxygen System).

5. Install Passenger Service Unit (Fig. 201)

A. Equipment and Materials

(1) Lubricant - MS122 (Ref. 20-36-21)

B. Install clamps to support outboard edge of PSU.

**NOTE:** Clamp at forward end of PSU has button on plunger to engage holes in air outlet. Clamp at aft end of PSU has no locating button.

(1) Depress plunger on clamp and place clamp on sidewall air outlet.

(2) Release plunger to hold clamp to outlet.

C. Locate clamps.

(1) Position forward clamp so that with location button engaged with hole in outlet, forward end of PSU will be located 28.00 ±4.00 inches forward of intersection of seat cushion and seat back.

(2) Position aft clamp as required to support PSU and spacer panel.

D. Install adjacent spacer panels.

(1) If spacer panels do not slide freely when adjusted, pull apart and apply lubricant to interlocking joints.

(2) Support spacer panel and install spring pin at both outboard corners to secure panel to each outboard support clamp.

**CAUTION:** SPACER PANEL LUG MUST BE LOCATED INSIDE FORK ON BOTTOM OF SUPPORT CLAMP TO PREVENT DAMAGE TO PANEL.



## MAINTENANCE MANUAL

- (3) When PSU's are installed for seating with 35 or 36 inch spacing, install spacer panels as follows:
- (a) For 36 inch spacing, install both extender and spring to prevent sagging of panel (View 1).
  - (b) For 35 inch spacing, install spring to prevent sagging of panel.

**NOTE:** Springs should be hand-shaped to produce acceptable appearance of panels. Springs may be installed as required to improve panel appearance when seat spacing is closer than 35 inches.

- (4) Close inboard edge of spacer panel by snapping attached spring to lower pin support.
- E. Support PSU in position and connect PSU and adjacent spacer panels to each outboard support clamp. Insert pin through panel and pin support.

**CAUTION:** SUPPORT PSU WHILE INSTALLING PINS TO AVOID POSSIBLE DAMAGE TO PINS OR PIN SUPPORT.

- F. Hook lanyard around support angle.
- G. Uncap electrical outlet and oxygen fitting in sidewall. Route PSU wire bundle and oxygen line outboard of support structure, wiring, and tubing and make connections.
- H. Attach oxygen line clamp to air conditioning outlet extrusion.

**NOTE:** Clamp must be installed so oxygen line is free to move but does not rub air conditioning outlet extrusion.

- I. Uncap air outlet on sidewall and connect cold air hose.

**NOTE:** Air hose should be connected to outlet that gives least amount of bending in hose.

- J. Adjust PSU location and gap between PSU and overhead stowage compartment as required (Ref Passenger Service Unit - Adjustment/Test).
- K. Adjust reading lights as necessary (Ref Chapter 33, Passenger Cabin Lighting).
- L. Check low-pressure oxygen system for open connections and leakage (Ref Chapter 35, Passenger Oxygen System).

EFFECTIVITY  
New Look Interior

25-23-311

03

Page 207  
Dec 01/04



## MAINTENANCE MANUAL

- M. Push PSU up and outboard as required to ensure that outboard edge of unit rests on top of air outlet extrusion flange. Raise PSU to closed position and check that there is no twisting, binding, or kinking in PSU wire bundle and oxygen line. Cold air hose must not have kinks or excessive bending when PSU is closed. Check that latches are securely hooked on support angle.

**CAUTION:** OUTBOARD EDGE OF PSU MUST REST ON TOP OF AIR OUTLET EXTRUSION FLANGE WHEN PSU IS PAISED AND CLOSED. CLOSING PSU WITH OUTBOARD EDGE TRAPPED AGAINST OR BELOW AIR OUTLET EXTRUSION FLANGE MAY DAMAGE PSU OR CAUSE INTERFERENCE WITH ADJACENT COMPONENTS.

- N. Secure PSU in closed position.
- O. Check oxygen door manual release by pushing up on removed button (inside hole) until it reaches full travel and release. Door should come down.
- P. Close circuit breakers opened in 4.A.

EFFECTIVITY  
New Look Interior

25-23-311

03

Page 208  
Dec 01/04

PASSENGER SERVICE UNIT – ADJUSTMENT/TEST

1. Adjust Service Unit Location (Fig. 501)

- A. Lower PSU and adjacent spacer panels (Ref Maintenance Practices).
- B. Remove oxygen line clamp from air conditioning outlet extrusion.
- C. Disengage index pin on forward outboard support clamp from indexing hole on air conditioning outlet extrusion.
- D. Slide both outboard support clamps and PSU forward of aft to relocate PSU to desired position.
- E. Engage index pin on forward outboard support clamp with index hole in air conditioning duct outlet that will locate PSU forward end 28.00 ±4.00 inches forward of intersecting line of seat cushion and seat back.
- F. Install oxygen line clamp on air conditioning outlet extrusion.

NOTE: Clamp must be installed so that oxygen line is free to move but does not rub on air conditioning outlet extrusion.

- G. Check that there is no twisting, binding, or kinking in PSU wire bundle and oxygen line when unit is in closed position. Check that cold air hose does not have kinks or excessive bending.
- H. If necessary, relocate wire bundle, oxygen line, or cold air hose to new outlet along sidewall (Ref. Maintenance Practices).
- I. Raise adjacent spacer panels; then raise and latch PSU in closed position (Ref. Maintenance Practices).

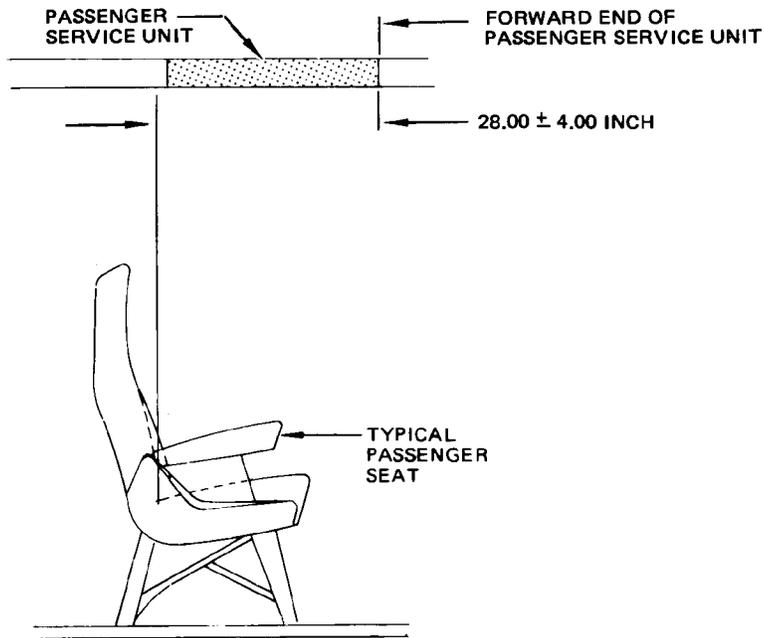
2. Adjust Gap Between Service Unit and Overhead Stowage Compartment

- A. If open, close and latch PSU and adjacent spacer panels (Ref. Maintenance Practices).
- B. Insert 1/8-inch Allen wrench into latch adjustment bolt. Access is provided through access hole in inboard corners of unit and in base of latch.

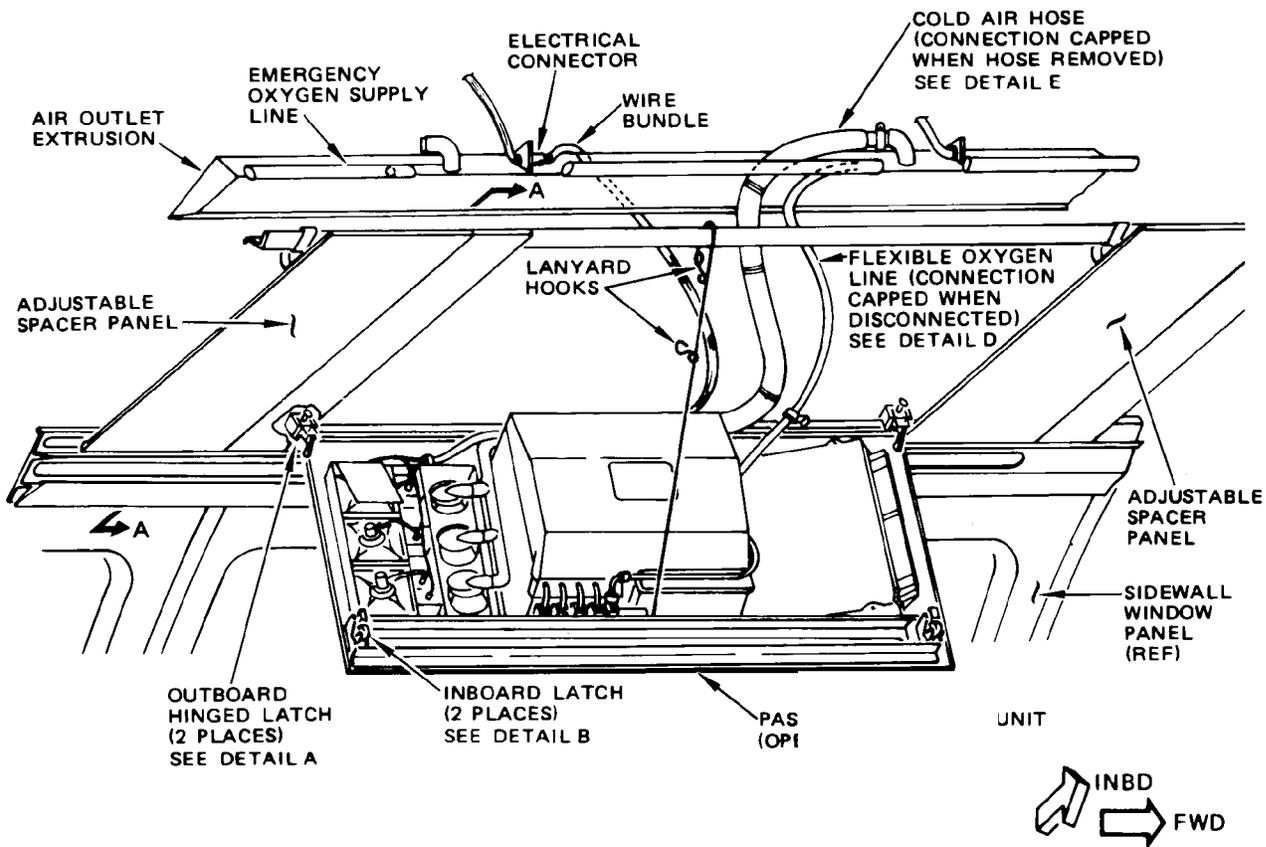
NOTE: Exercise care not to scratch surface of PSU around latch access holes.

- C. Turn bolt to raise or lower unit as necessary to produce alignment required for acceptable appearance. Remove wrench.

**MAINTENANCE MANUAL**



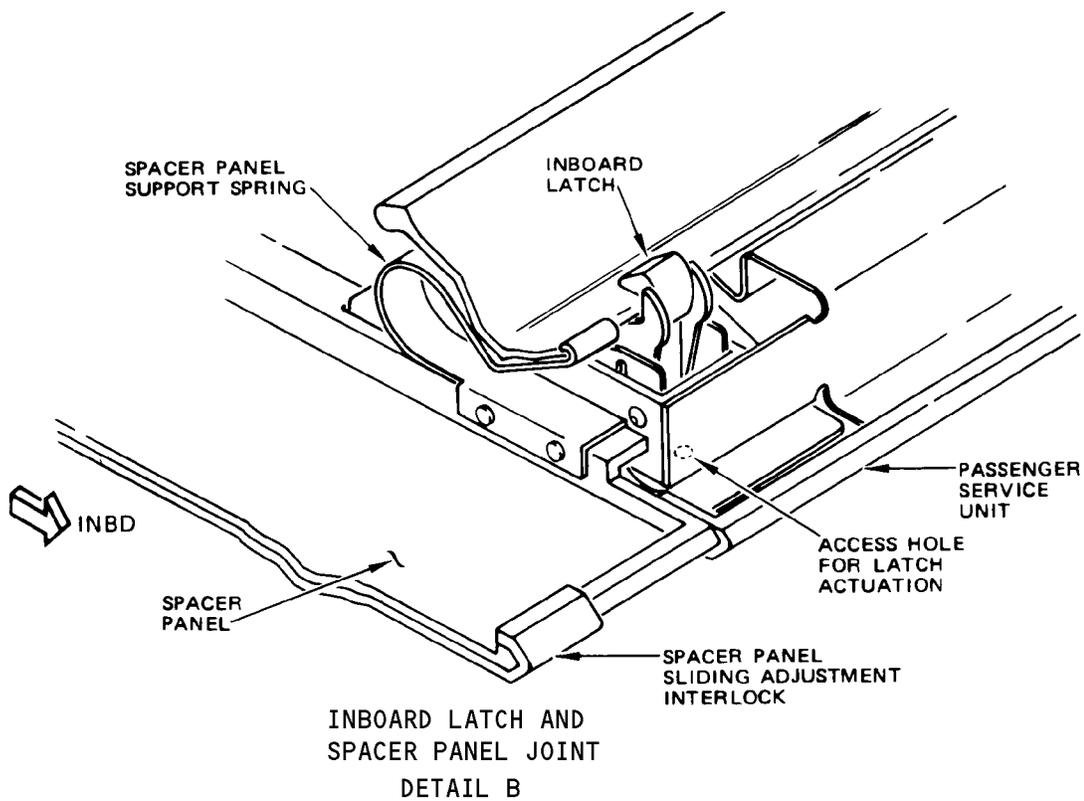
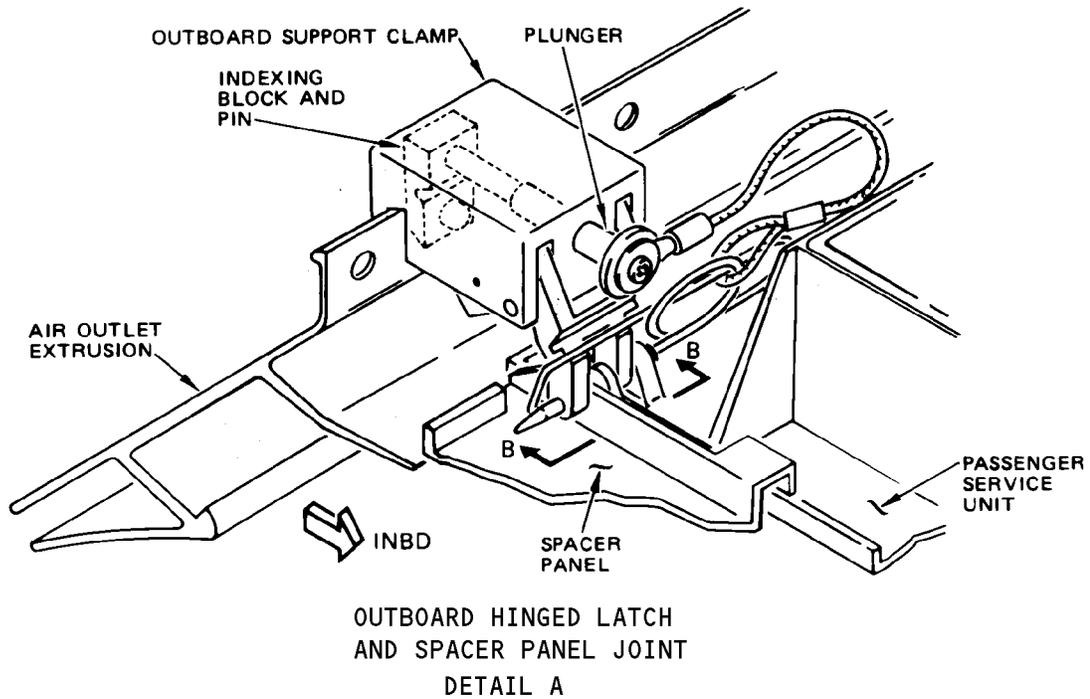
TYPICAL SERVICE UNIT LOCATION



Passenger Service Unit Adjustment  
Figure 501 (Sheet 1)

EFFECTIVITY  
New Look Interior

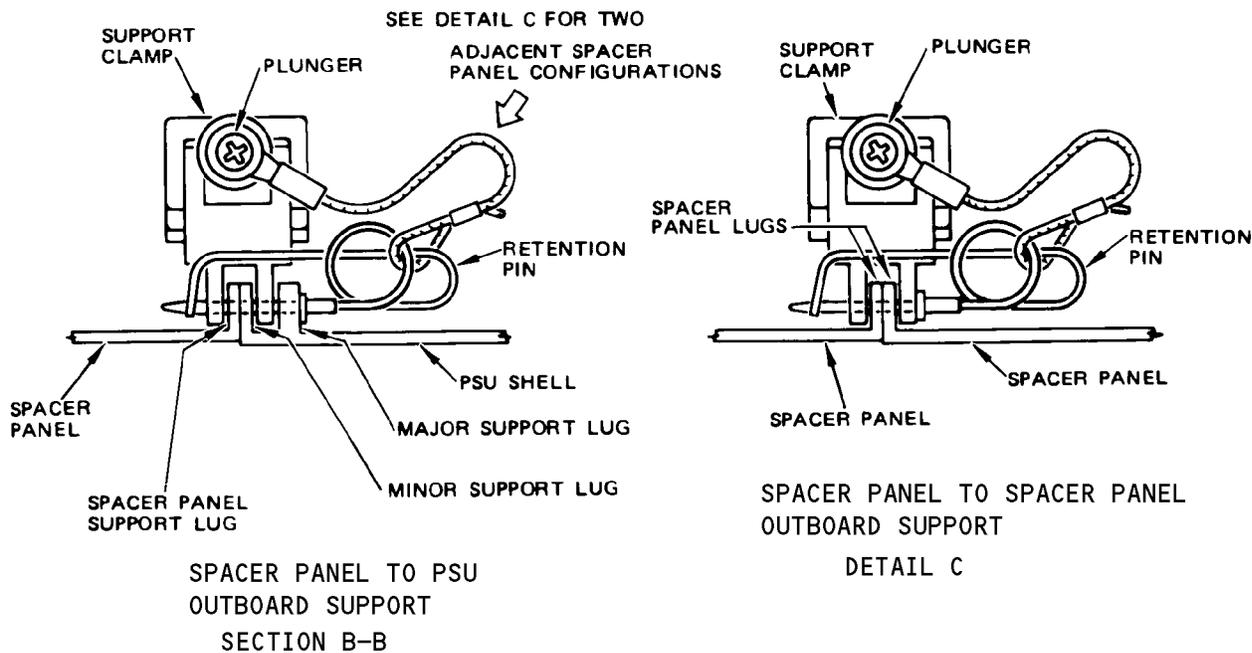
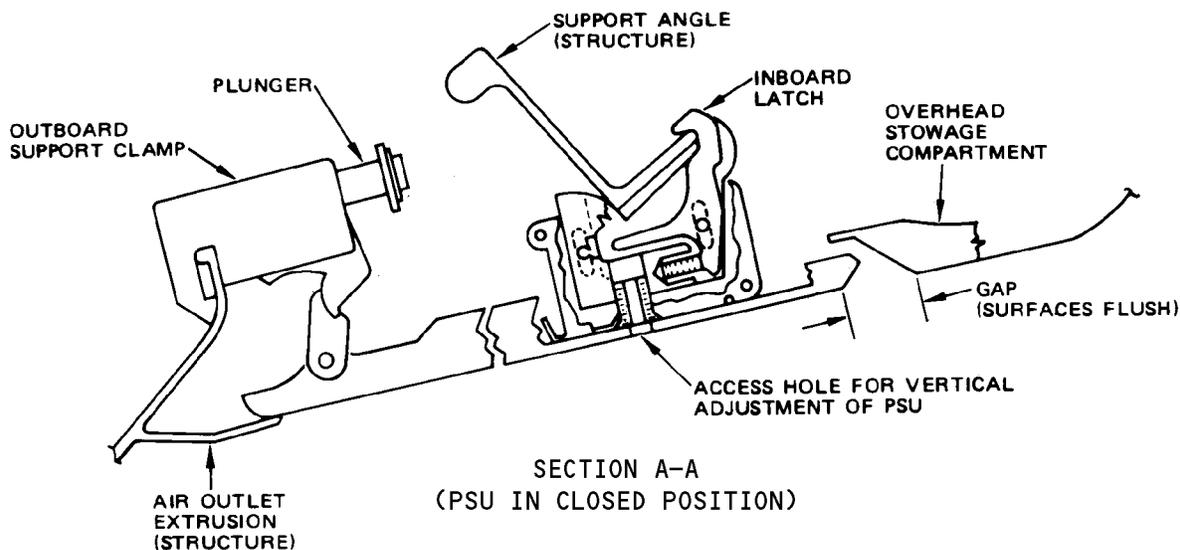
**25-23-311**



Passenger Service Unit Adjustment  
 Figure 501 (Sheet 2)

EFFECTIVITY  
 New Look Interior

25-23-311



Passenger Service Unit Adjustment  
 Figure 501 (Sheet 3)

EFFECTIVITY  
 New Look Interior

25-23-311



## MAINTENANCE MANUAL

### PASSENGER SERVICE UNITS - CLEANING/PAINTING

#### 1. Passenger Service Units Cleaning

##### A. General

- (1) It is important to use only the cleaning detergents listed below to clean passenger service units and spacer panels. Use of improper cleaning materials may cause damage (crazing or cracking) to the painted surfaces and plastic materials of the passenger service unit and spacer panels.
- (2) Before using any cleaning material not listed below submit the proposed material to a Polycarbonate Crazing Test (Ref Overhaul Manual, Chapter 20-30-03).

##### B. Equipment and Materials (Ref 20-30-31)

- (1) Cleaning detergent, any of the following:
  - (a) High Concentrate 40.1 (Mix 1 part cleaner to 32 parts water).
  - (b) Spraywhite E (Mix 1 part cleaner to 10 parts water).
  - (c) Clean Quick (Mix 1 part cleaner to 64 parts water).
  - (d) Orvus W.A. Paste (Mix 1 part cleaner to 30 parts water).
  - (e) Glo Do-All Formula 3B (Mix 1 part cleaner to 30 parts water).
  - (f) Glo Do-All Formula 1B (Mix 1 part cleaner to 20 parts water).
- (2) Clean, dry cloths or absorbent paper toweling
- (3) Plastic spray bottle or sponge

##### C. Clean Passenger Service Units

- (1) Apply one of detergent solutions listed in par. B by spray or by sponge dampened in solution.

**CAUTION:** SOME SURFACES MAY BE DAMAGED (CRACKED) BEYOND REPAIR BY USING IMPROPER CLEANING MATERIALS.

- (2) Allow detergent solution to remain on surface approximately 2 minutes then wipe with damp cloth.
- (3) Rinse surface with a clean cloth saturated with clean water.
- (4) Wipe dry with clean, dry cloth.

EFFECTIVITY  
New Look Interior

25-23-311

02

Page 701  
Dec 01/04



## MAINTENANCE MANUAL

### PASSENGER SERVICE UNITS - APPROVED REPAIRS

#### 1. General

- A. This procedure applies to the following approved repairs of passenger service unit shells made from Polysulfone or Polycarbonate
- (1) Repair of scraped areas
  - (2) Repair of cuts and gouges that do not penetrate the material
  - (3) Repair of cracked areas
  - (4) Repair of broken-off nondecorative sections

#### 2. Passenger Service Units - Approved Repairs

##### A. Equipment and Materials

- (1) Pint or quart can with seal tight lid
- (2) Mechanical agitator
- (3) Rotary file (for repair of cracks on decorative side)
- (4) Clean dry cheesecloth
- (5) No. 400 (or finer) sandpaper
- (6) Methylene chloride
- (7) Magna 8-W-5 - Filler Compound
- (8) Magna Hardener - 50-C-3
- (9) Naphtha
- (10) Strips of glass cloth, Style No. 120, Volan "A" finish (for repair of cracks and broken-off sections)

##### B. Repair Passenger Service Unit Shell

- (1) Preparation of Repair Cement
  - (a) Cut or grind the same type and color of plastic to be repaired in to approximately 1/8-inch squares.
  - (b) Pour, by weight, four parts of Methylene Chloride and add one part of the cut plastic into a pint or quart can (with seal tight lid) and put on mechanical agitator. Continue agitation until plastic has dissolved (approximately 20 to 30 minutes).
- (2) Preparation of Filler Compound
  - (a) Mix Magna 8-W-5 filler compound with Magna hardener 50-C-3 in accordance with manufacturer's instructions.
- (3) Repair of Scraped Areas
  - (a) Wet sand (cold water) the scraped area with No. 400 (or finer) sandpaper.
  - (b) Rinse the sanded area with cold water to remove sandpaper grit.
  - (c) Wipe dry with cheesecloth.
  - (d) Retexture the repaired surface if required.
- (4) Repair of Cuts or Gouges that do not Penetrate the Material (Nondecorative Side)
  - (a) Clean the cut or gouge with naphtha.
  - (b) Fill the cut or gouge with repair cement so that the height of cement is above the surface of the material. Allow to dry.

EFFECTIVITY  
New Look Interior

25-23-311



## MAINTENANCE MANUAL

- (c) If the repair cement shrinks below the surface of the material after drying, repeat step (b) above.
  - (d) If required, sand the cemented area flush with the material surface using No. 400 (or finer) sandpaper.
- (5) Repair of Cuts or Gouges that do not Penetrate the Material (Decorative Side)
- (a) Follow procedure described in steps (4)(a) through (c).
  - (b) Abrade the cemented area until flush with the decorative surface.
  - (c) Wet sand (cold water) the abraded areas with No. 400 (or finer) sandpaper to remove coarse marks.
  - (d) Rinse the sanded areas with cold water and wipe with cheesecloth.
  - (e) If repaired surface is "pitted" or "pock-marked," when viewed through a magnifying glass, use the following procedure to repair the "pitted" areas.
    - 1) Clean the "pitted" areas with naphtha.
    - 2) Apply filler compound. Allow to dry thoroughly.
    - 3) Wet sand (cold water) the repair areas using No. 400 (or finer) sandpaper until the excess filler compound has been removed.
- NOTE: The repaired areas shall be sanded within 4 to 6 hours; otherwise it will be difficult to remove the excess filler compound.
- 4) Rinse the sanded areas with cold water and wipe dry with cheesecloth.
  - 5) Retexture the repaired surface, if required.
- (6) Repair of Cracked Areas (Nondecorative Sections)
- (a) Clean the crack and adjacent areas with Naphtha.
  - (b) Clamp the cracked sections together.
  - (c) Brush coat the crack and adjacent surfaces (approximately 1/2 inch on either side of the crack) with repair cement.
  - (d) While the cement is still wet, place a 3/4- to 1-inch strip of glass cloth (Style No. 120, Volan "A" finish) over the crack on each side of the cracked section.
  - (e) Brush coat the glass cloth with repair cement. Allow to dry.
- (7) Repair of Cracked Areas (Decorative Sections)
- (a) Clamp the cracked sections together.
  - (b) Cut a "V" groove in the crack on the decorative side using a rotary file. The depth of "V" groove shall be approximately one-half to two-thirds the thickness of the cracked section.
  - (c) Clean the crack and adjacent areas with Naphtha.

EFFECTIVITY  
New Look Interior

25-23-311

02

Page 802  
Dec 01/04



## MAINTENANCE MANUAL

- (d) On the nondecorative side, brush coat the crack and approximately 1/2-inch area on both sides of the crack with repair cement
  - (e) While the cement is still wet, place a 3/4- to 1-inch wide strip of glass fabric (Style No. 120, Volan "A" finish) over the cemented crack and brush coat the glass cloth with repair cement. Allow to dry.
  - (f) Fill the "V" groove on the decorative side with repair cement so that the height of the cement is above the decorative surface. Allow to dry.
  - (g) Complete the repair in accordance with steps (4)(c) and (5)(b) through (e)5).
- (8) Repair of Broken-Off Nondecorative Sections
- (a) Clean the faying and adjacent surfaces with Naphtha.
  - (b) Brush coat the faying surfaces with repair cement and immediately clamp the broken sections together.
  - (c) Brush coat both sides of the bondline and adjacent surfaces (approximately 1/2 inch on either side of the bondline) with repair cement.
  - (d) While the cement is still wet, place a 3/4- to 1-inch wide strip of glass cloth (Style No.120, Volan "A" finish) over the bondline on each side of the section.
  - (e) Brush coat the glass cloth with repair cement. Allow to dry.

EFFECTIVITY  
New Look Interior

25-23-311

02

Page 803  
Dec 01/04

PASSENGER CABIN PARTITIONS AND COMPARTMENTS – DESCRIPTION AND OPERATION

1. General

- A. Partitions are provided in the airplane to provide protection from weather at the doorways, and to form closets and compartments as required. Where possible, advantage is taken of the floor tracks and overhead hatracks for attachment purposes.
- B. The outer edges of the partitions and compartments are shaped to the sides of the fuselage and the inner edges are vertical at the aisle. Partitions adjacent to seats are shaped at the bottom to give required foot room (Fig. 1.)
- C. Partitions and compartment panels are made up of a fire resistant honeycomb core with a fiberglass facing and are vinyl covered for decorative purposes.

2. Windscreens

- A. Four windscreens are installed in the cabin to provide protection from weather at the entry and service doorways. The forward windscreens are located just aft of the forward entry and service doors. The aft windscreens are located just forward of the aft entry and service doors.

3. Coat Closet

- A. A coat closet with stowage space above is located at the extreme aft end of the cabin between the aft lavatory and the aft galley. The closet is provided with a hinged door.

4. Stowage Compartment

- A. A magazine stowage compartment is installed on the forward face of each aft windscreen.

5. Cargo/Passenger Dividing Partition (Passenger/Cargo Convertible Airplanes)

- A. This partition is installed in all combined passenger/cargo configuration to form a fume-tight division between the passenger compartment and the cargo compartment. (See figure 1.)
- B. The partition consists of three sections connected together to form a solid wall across the cabin from floor to ceiling and from one sidewall to the other. It is attached to the floor tracks and to the forward ends of the hatracks of the passenger compartment.
- C. The floor track attachments are secured to the lower edge of the partition by fasteners which permit slight vertical movement. These facilitate engagement of the fitting in the floor track and prevent vertical movements of the floor from causing distortion or damage. The partition is equipped with an extension along its lower edge.
- D. The edge of the partition is shaped to conform to the profile of the cabin interior surfaces and is provided with seals to form a fume-tight barrier across the cabin.

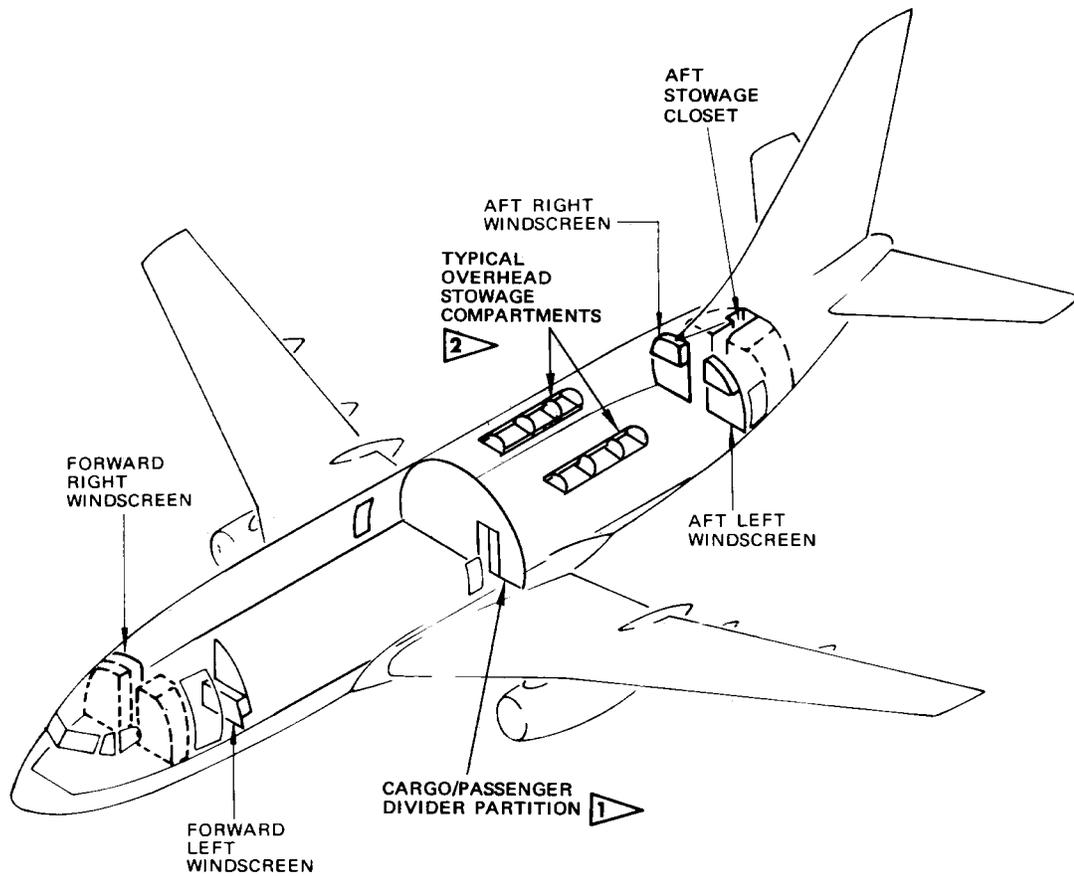
EFFECTIVITY

ALL

25-24-0

20

Page 1  
Dec 01/04

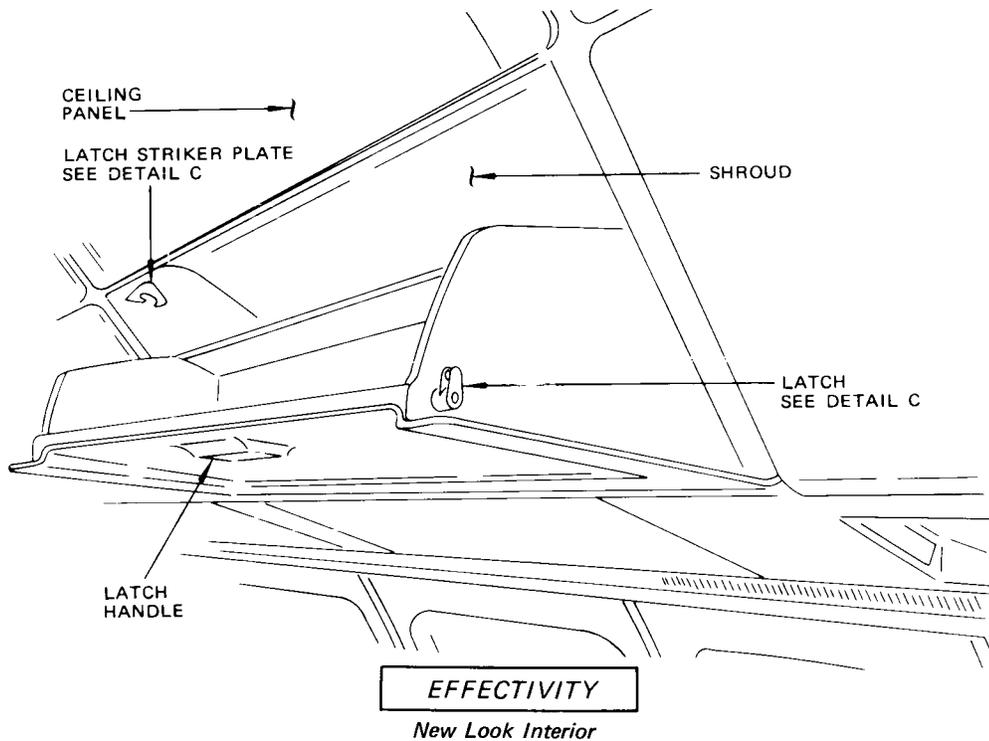
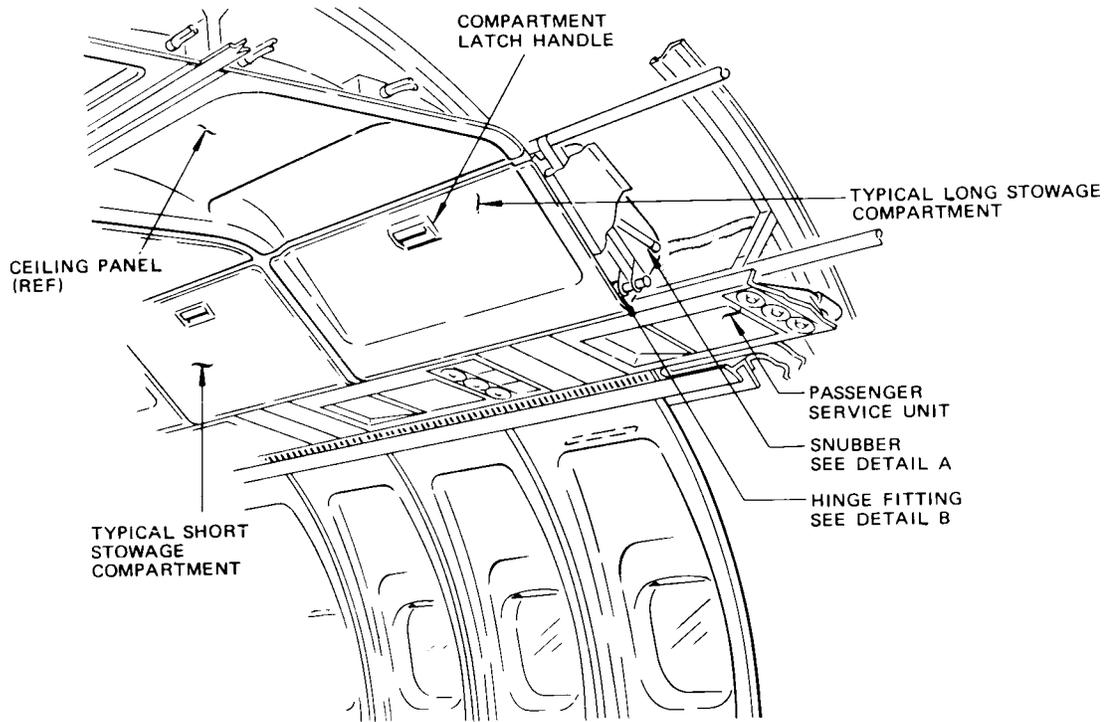


- 1** PASSENGER/CARGO CONVERTIBLE AIRPLANES
- 2** AIRPLANES WITH NEW LOOK INTERIOR

Partitions and Compartments Location  
 Figure 1

EFFECTIVITY	ALL
-------------	-----

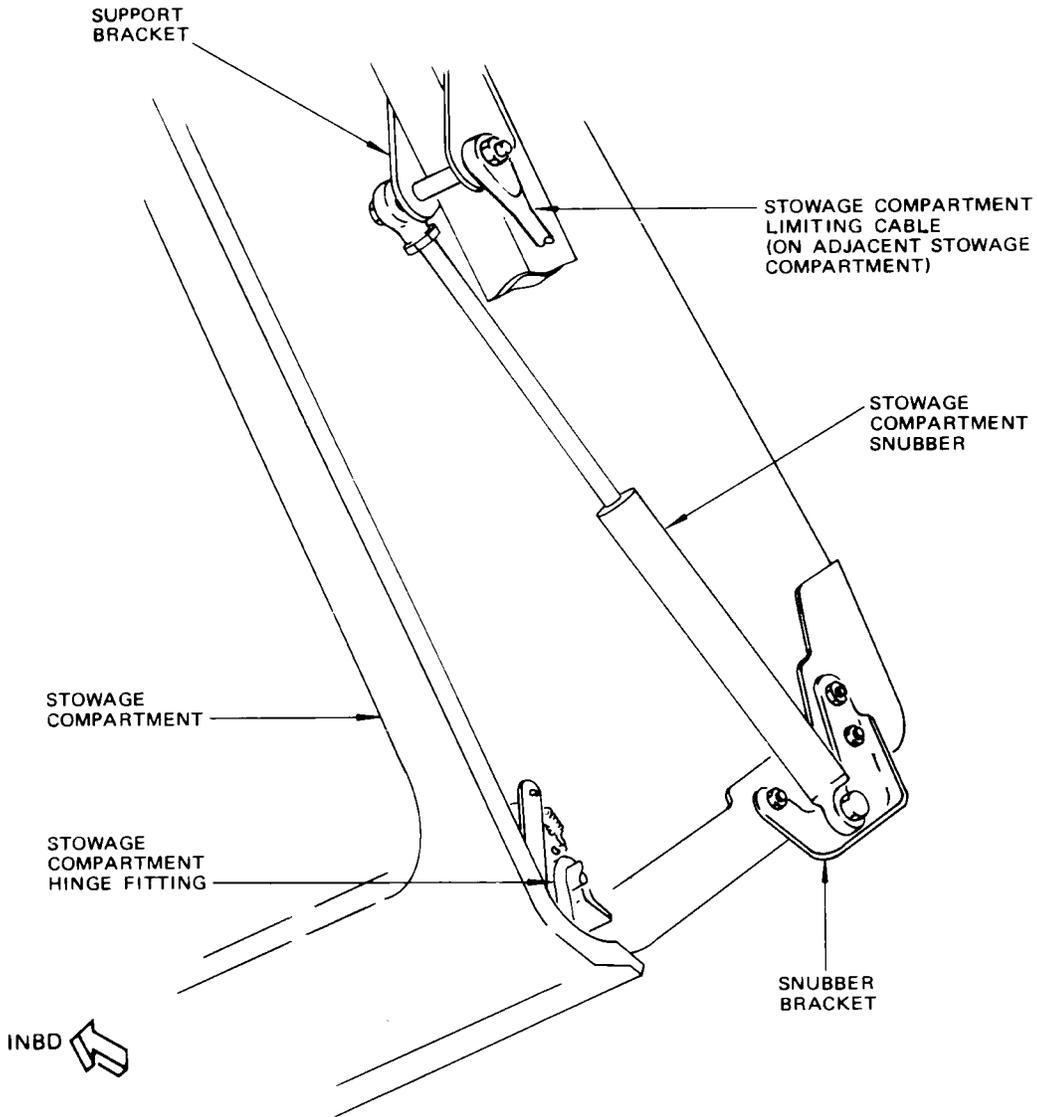
**25-24-0**



Overhead Storage Compartments  
 Figure 2 (Sheet 1)

EFFECTIVITY	ALL
-------------	-----

25-24-0



DETAIL A

EFFECTIVITY

NEW LOOK INTERIOR

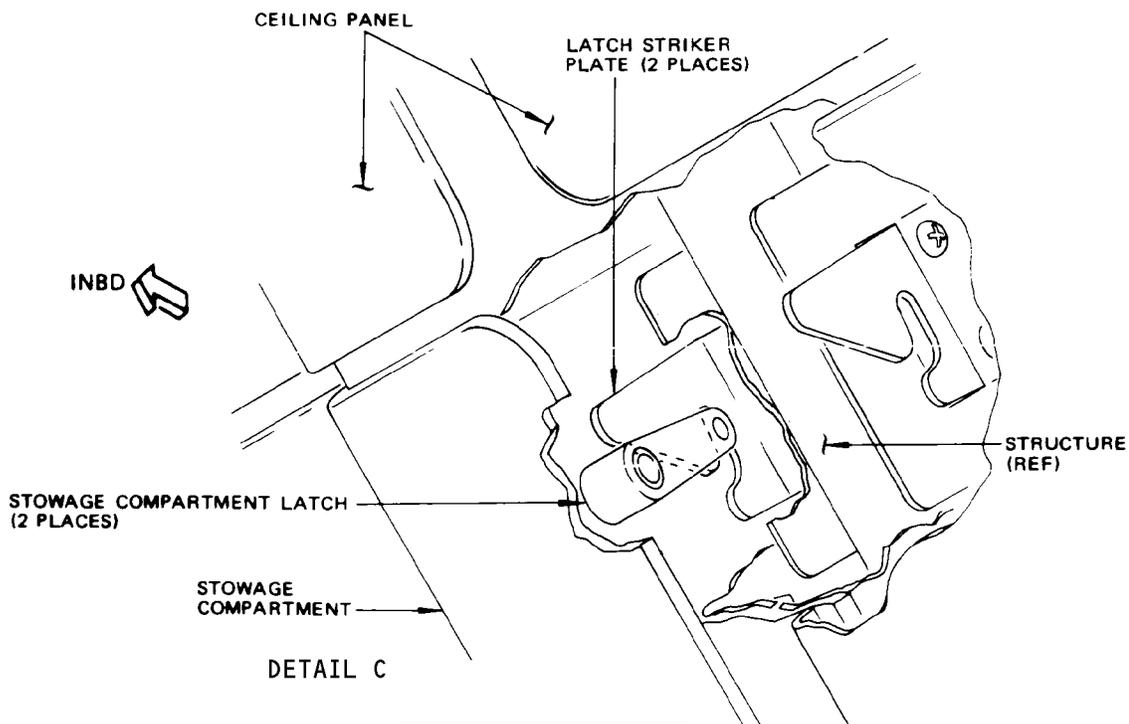
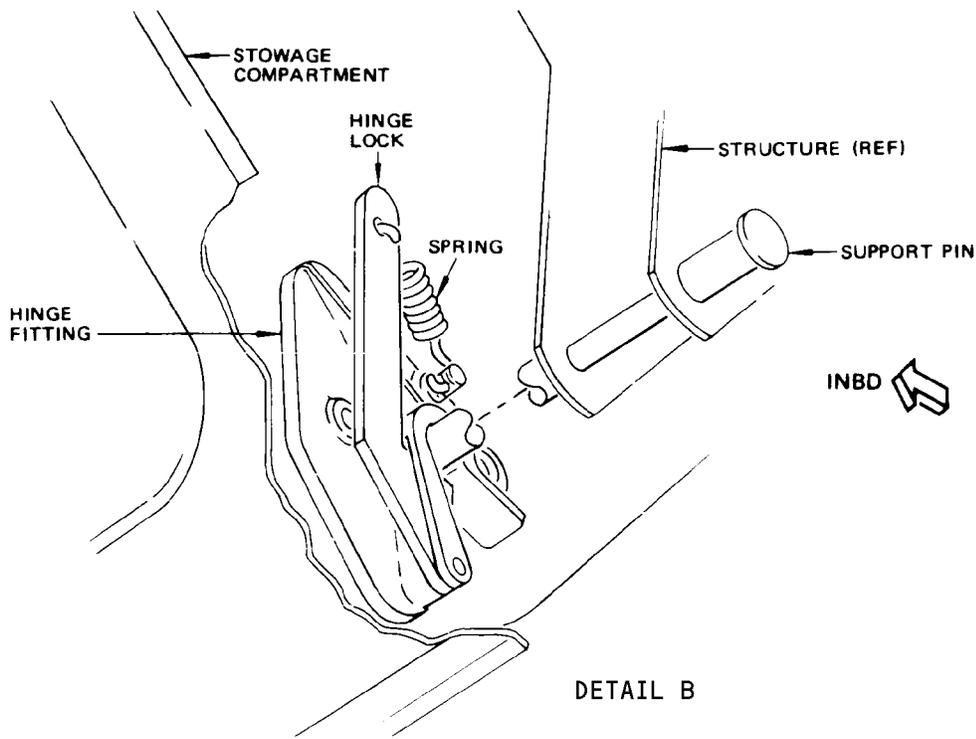
Overhead Stowage Compartment  
 Figure 2 (Sheet 2)

EFFECTIVITY  
 NEW LOOK INTERIOR

25-24-0



**MAINTENANCE MANUAL**



EFFECTIVITY

NEW LOOK INTERIOR

Overhead Stowage Compartment  
Figure 2 (Sheet 3)

EFFECTIVITY  
NEW LOOK INTERIOR

25-24-0



## MAINTENANCE MANUAL

### 6. Overhead Stowage Compartments (Airplanes with New Look Interior)

- A. The overhead stowage compartments are installed over the passenger seats along each side of the cabin between the ceiling panels and the passenger service units. (See figure 1.) The stowage compartments are installed in short (20 and 25 inches) and long (40 inches) sizes to match the length of the curved ceiling panels and the inboard faces of the compartments are shaped to blend with the contours of the curved ceiling panels. (See figure 2.)
- B. The compartments are hinged at the bottom and open inboard to allow articles to be placed inside or removed. A shroud is provided behind the compartment to retain stowed articles in the compartment. The compartment is opened by pulling inboard on a single latch handle installed in the center of the compartment. A snubber is provided to lower the compartment at a controlled rate and to act as a stop in the open position. On the long (40 inches) stowage compartments a limiting cable is installed to provide a stop at the end opposite the snubber.

EFFECTIVITY

ALL

25-24-0

05

Page 6  
Dec 01/04

FORWARD LEFT WINDSCREEN – REMOVAL/INSTALLATION

1. Remove Windscreen (Fig. 401)

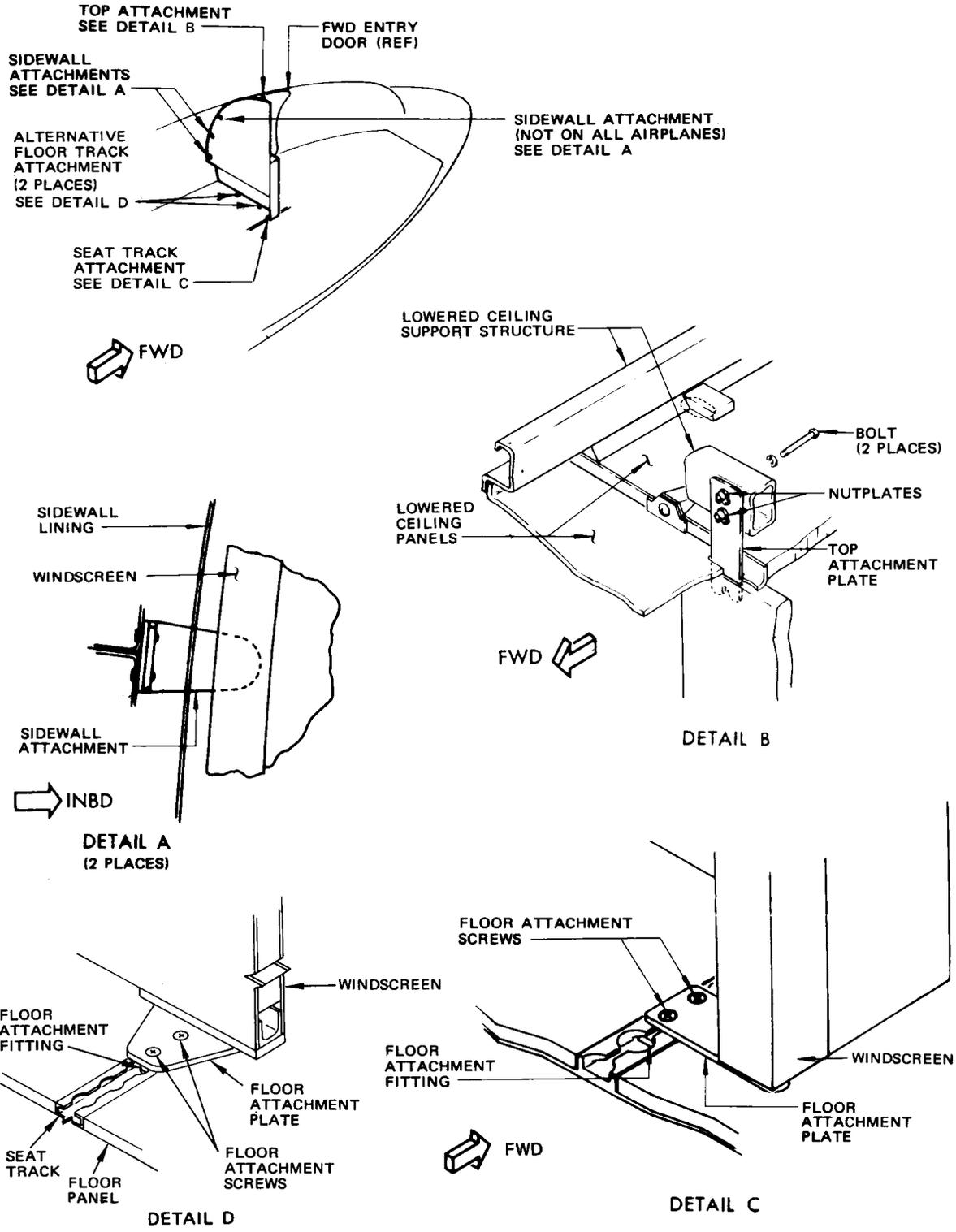
- A. Open the following circuit breakers on panel P6:
  - (1) TAPE REPRODUCER
  - (2) FWD AIRSTAIRS TREAD LIGHTS
  - (3) EXTERNAL POWER
  - (4) PASSENGER ADDRESS AMPLIFIER
- B. Open the following circuit breakers on panel P18:
  - (1) PASSENGER AND CREW CALL
  - (2) ENTRY LIGHTS
  - (3) WORK AND THRESHOLD LIGHTS
  - (4) NO SMOKING
  - (5) SEAT BELT
  - (6) CEILING LIGHTS
  - (7) COVE LIGHTS (Airplanes without New Look Interior)
  - (8) WINDOW LIGHTS (Airplanes with New Look Interior)
- C. Disconnect floor attachment by removing two screws from each attachment.
- D. Open forward lowered ceiling access door to gain access to screws securing top attachment plate.
- E. Remove bolts through top attachment plate and pull plate upward through slot in lowered ceiling panel.
- F. Close forward lowered ceiling access door.
- G. Pull windscreen slightly inboard.
- H. Disconnect electrical wiring to windscreen at the outboard edge of windscreen and remove windscreen.
- I. Remove attachment fitting from seat track.

2. Install Windscreen (Fig. 401)

- A. Insert attachment fitting into seat track.
- B. Place windscreen in position and connect electrical wiring to windscreen.
- C. Push windscreen outboard, guiding sidewall support tees into slots in windscreen frame.
- D. Open forward lowered ceiling access door.
- E. Insert top attachment plate downward through hole in lowered ceiling panel and into slot in windscreen frame.
- F. Secure top attachment plate to lowered ceiling support beam with screws.
- G. Close forward lowered ceiling access door.
- H. Install two screws connecting each floor attachment to seat track fittings.
- I. Close the following circuit breakers on panel P18:
  - (1) PASSENGER AND CREW CALL
  - (2) ENTRY LIGHTS
  - (3) WORK AND THRESHOLD LIGHTS
  - (4) NO SMOKING
  - (5) SEAT BELT
  - (6) CEILING LIGHTS

EFFECTIVITY  
Standard Passenger  
Airplanes

25-24-111



Forward Left Windscreen Installation  
 Figure 401

EFFECTIVITY  
 Standard Passenger  
 Airplanes

25-24-111

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

- (7) COVE LIGHTS (Airplanes without New Look Interior)
  - (8) WINDOW LIGHTS (Airplanes with New Look Interior)
- J. Close the following circuit breakers on panel P6:
- (1) TAPE REPRODUCER
  - (2) FWD AIRSTAIRS TREAD LIGHTS
  - (3) EXTERNAL POWER
  - (4) PASSENGER ADDRESS AMPLIFIER

EFFECTIVITY  
Standard Passenger  
Airplanes

25-24-111



## MAINTENANCE MANUAL

### FORWARD RIGHT WINDSCREEN – REMOVAL/INSTALLATION

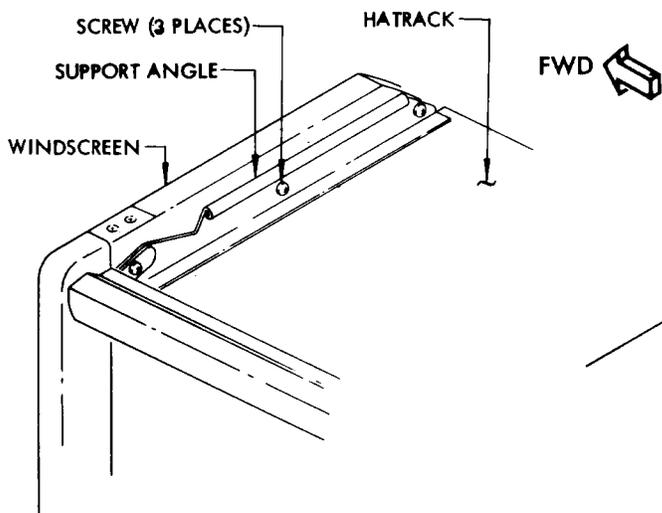
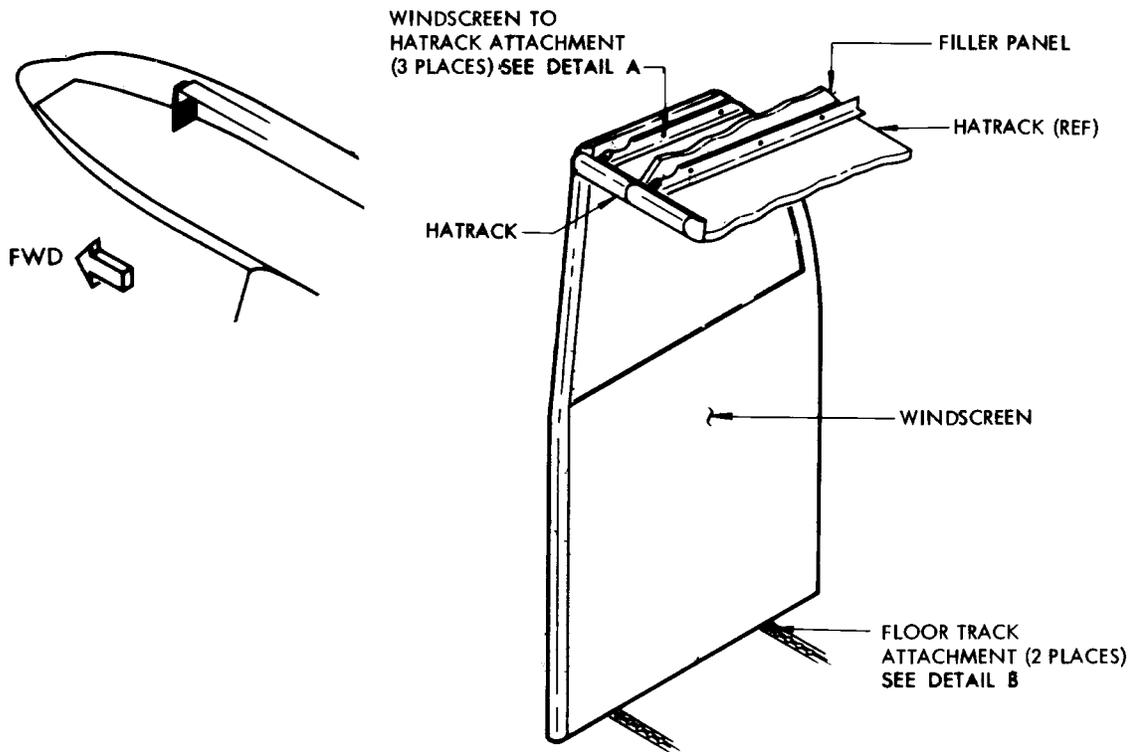
1. Prepare for Removal
  - A. Open NO SMOKING and SEAT BELT circuit breakers on panel P18.
  - B. Remove cove light cover adjacent to windscreen. Refer to 25-21-101, Cove Light Covers – Removal/Installation.
  - C. Disconnect wiring to windscreen.
  - D. Remove galley header from forward side of windscreen. Refer to 25-31-271, Galley Header Assembly – Removal/Installation.
2. Remove Windscreen (See figure 401.)
  - A. Remove screws securing shear plates to windscreen feet in floor tracks and remove shear plates.
  - B. Support the windscreen and remove screws attaching windscreen to forward right hatrack.
  - C. Move windscreen forward and lift windscreen to free windscreen feet from floor track. Remove windscreen.
  - D. If necessary, remove feet from windscreen by removing bolt attaching each foot to windscreen partition.
3. Install Windscreen (See figure 401.)
  - A. If previously removed secure windscreen feet to windscreen partition with bolt.
  - B. Insert windscreen feet in floor tracks and move partition aft to installed position.
  - C. Support windscreen in position and install screws attaching top of windscreen to forward right hatrack.
  - D. Install shear plates in seat tracks and secure to windscreen feet with screws.

EFFECTIVITY  
Standard Passenger Airplanes

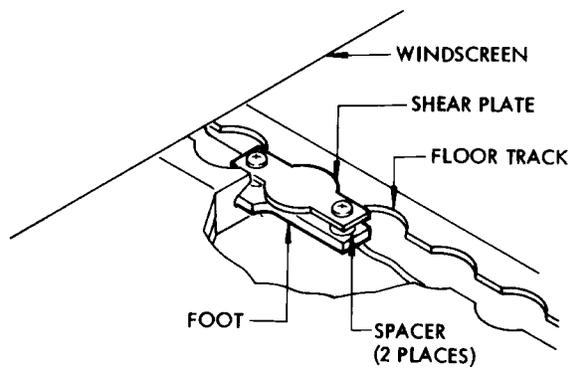
25-24-121

07.101

Page 401  
Aug 01/07



**WINDSCREEN TO HATRACK ATTACHMENT  
 DETAIL A**



**WINDSCREEN TO FLOOR TRACK ATTACHMENT  
 DETAIL B**

Forward Right Windscreen Installation  
 Figure 401

EFFECTIVITY  
 Standard Passenger Airplanes

**25-24-121**

FORWARD RIGHT WINDSCREEN – REMOVAL/INSTALLATION

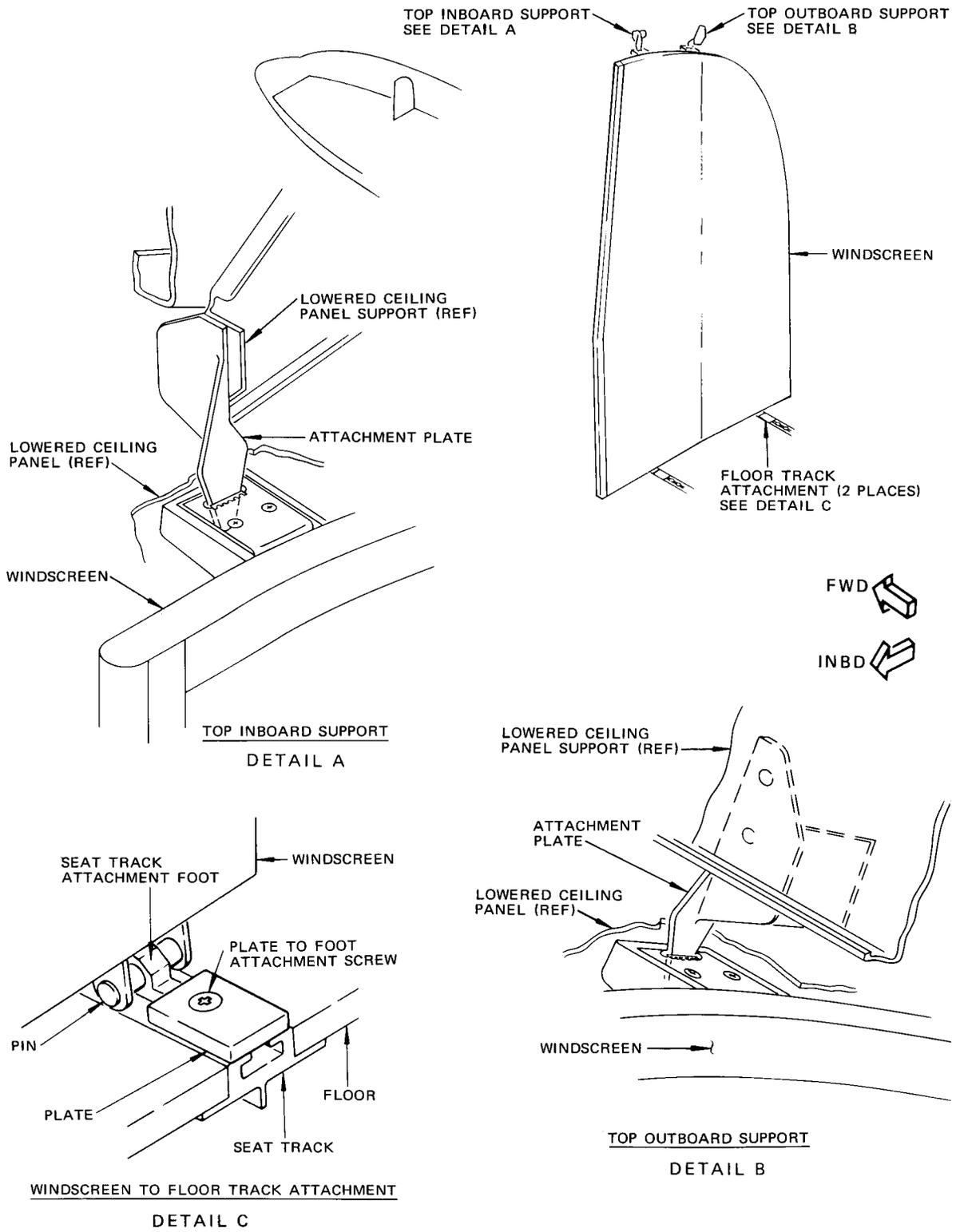
1. Remove Windscreen (See figure 401.)
  - A. Open NO SMOKING and SEAT BELT circuit breakers on panel P18.
  - B. Remove screws securing plates to windscreen feet in floor tracks and remove plates.
  - C. Move windscreen slightly forward and lift windscreen to free windscreen feet from floor tracks.
  - D. Pull windscreen slightly inboard.
  - E. Disconnect wiring to windscreen by pulling electrical bundle from outboard edge of windscreen.
  - F. Remove windscreen by sliding away from cabin sidewall, to disengage attachment plates from top supports on upper edge of partition.
  - G. If necessary, remove feet from windscreen by removing bolt attaching each foot to windscreen partition.
2. Install Windscreen (See figure 401.)
  - A. If previously removed secure windscreen feet to windscreen partition with bolt.
  - B. Slide windscreen slightly outboard, guiding attachment plates into support slots in upper edge of windscreen.
  - C. Connect electrical bundle into outboard edge of windscreen.
  - D. Insert windscreen feet in floor tracks.
  - E. Secure plates to windscreen feet with screws.
  - F. Close NO SMOKING and SEAT BELT circuit breakers on panel P18.

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

25-24-122

03

Page 401  
Dec 01/04



Forward Right Windscreen Installation  
 Figure 401

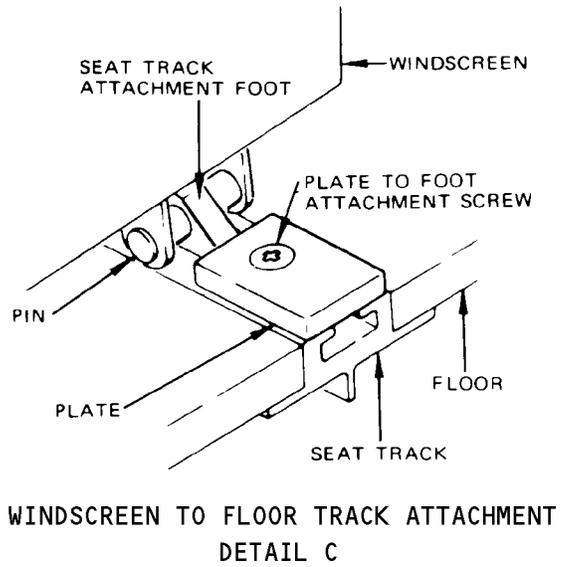
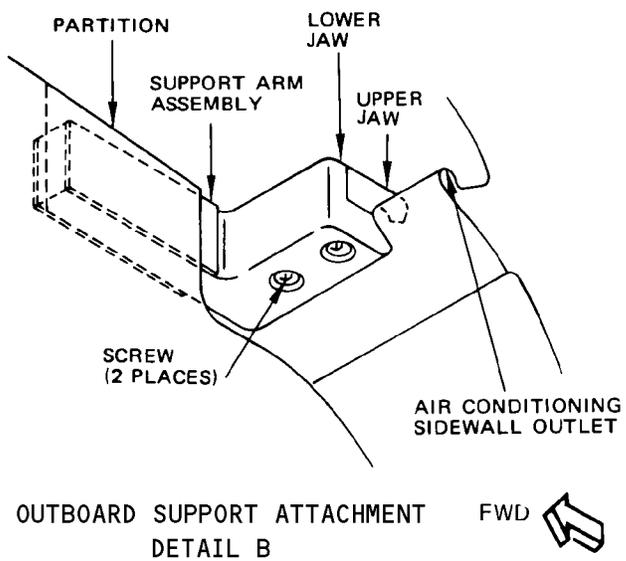
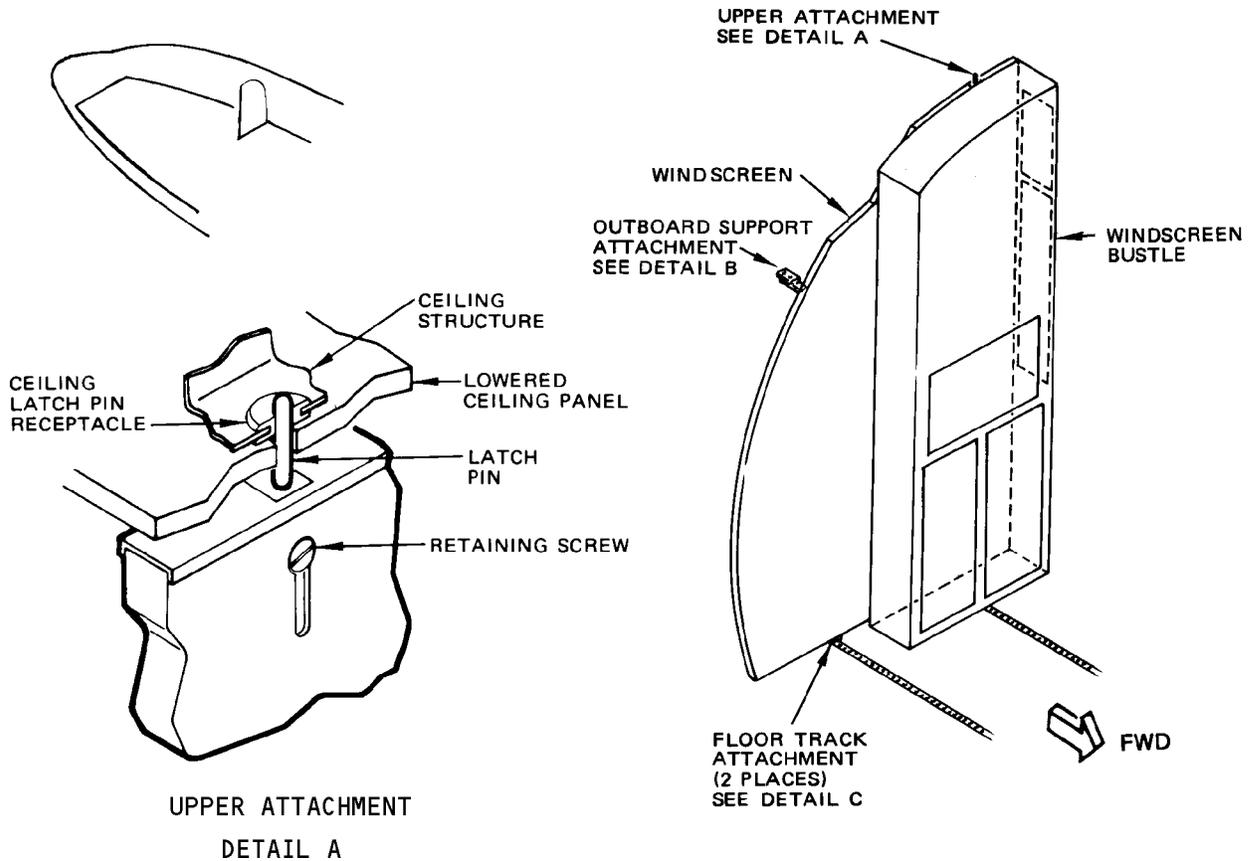
EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

**25-24-122**

456897

FORWARD RIGHT WINDSCREEN – REMOVAL/INSTALLATION

1. Remove Windscreen (Fig. 401)
  - A. Open NO SMOKING and SEAT BELT circuit breakers on panel P18.
  - B. Remove stored articles and emergency equipment from windscreen bustle.
  - C. Remove screws securing plates to windscreen feet in floor tracks and remove plates.
  - D. Loosen screw and allow pin to drop down out of ceiling receptacle.
  - E. Move bottom of windscreen slightly aft and lift each track attachment foot to free windscreen from floor tracks.
  - F. Disconnect wire bundle at outboard edge of windscreen.
  - G. Remove windscreen by sliding inboard until windscreen clears outboard support arm.
  - H. If necessary, remove feet from windscreen by removing pin attaching each foot to windscreen partition.
2. Install Windscreen (Fig. 401)
  - A. If previously removed secure windscreen feet to windscreen partition with pin.
  - B. Slide windscreen outboard over support arm on air conditioning extrusion.
  - C. Swing bottom of windscreen forward and insert each track attachment foot into seat track.
  - D. Secure plates to windscreen feet with screws.
  - E. Insert pin into ceiling receptacle and secure locking screw.
  - F. Install emergency equipment in bustle.
  - G. Connect wire bundle at outboard edge of windscreen.
  - H. Close NO SMOKING and SEAT BELT circuit breakers on panel P18.



Forward Right Windscreen Installation  
 Figure 401

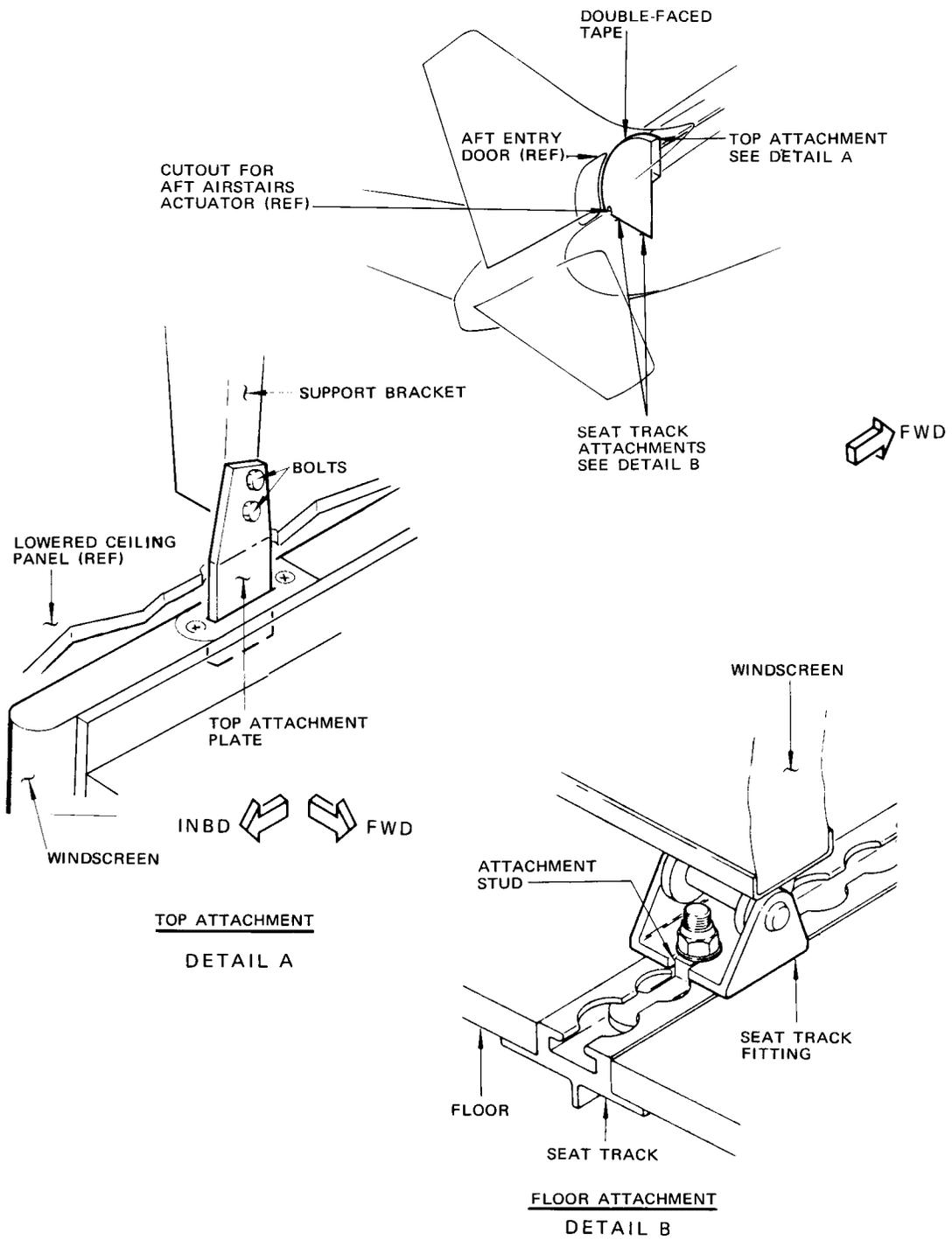
EFFECTIVITY  
 Airplanes with New Look  
 Interior

456905

25-24-123

AFT LEFT WINDSCREEN – REMOVAL/INSTALLATION

1. Remove Windscreen (See figure 401.)
  - A. Disconnect floor track attachments.
  - B. Open aft door in aft lowered ceiling to gain access to bolts securing top attachment plate.
  - C. Remove bolts through top attachment plate and pull plate upward through slot in lowered ceiling panel.
  - D. Remove windscreen by pulling inboard to disengage double-faced tape at outboard edge of lowered ceiling.
  - E. Remove attachment stud from seat track.
2. Install Windscreen (See figure 401.)
  - A. Insert attachment stud into seat track.
  - B. Place windscreen in position and push outboard, engaging double-faced tape at outboard edge of lowered ceiling.
  - C. Open aft door in aft lowered ceiling.
  - D. Insert top attachment plate downward through hole in lowered ceiling panel and into slot in windscreen frame.
  - E. Secure top attachment plate to support bracket with two bolts.
  - F. Connect floor track attachments.
  - G. Close aft door in aft lowered ceiling.



Aft Windscreen Installation  
 Figure 401

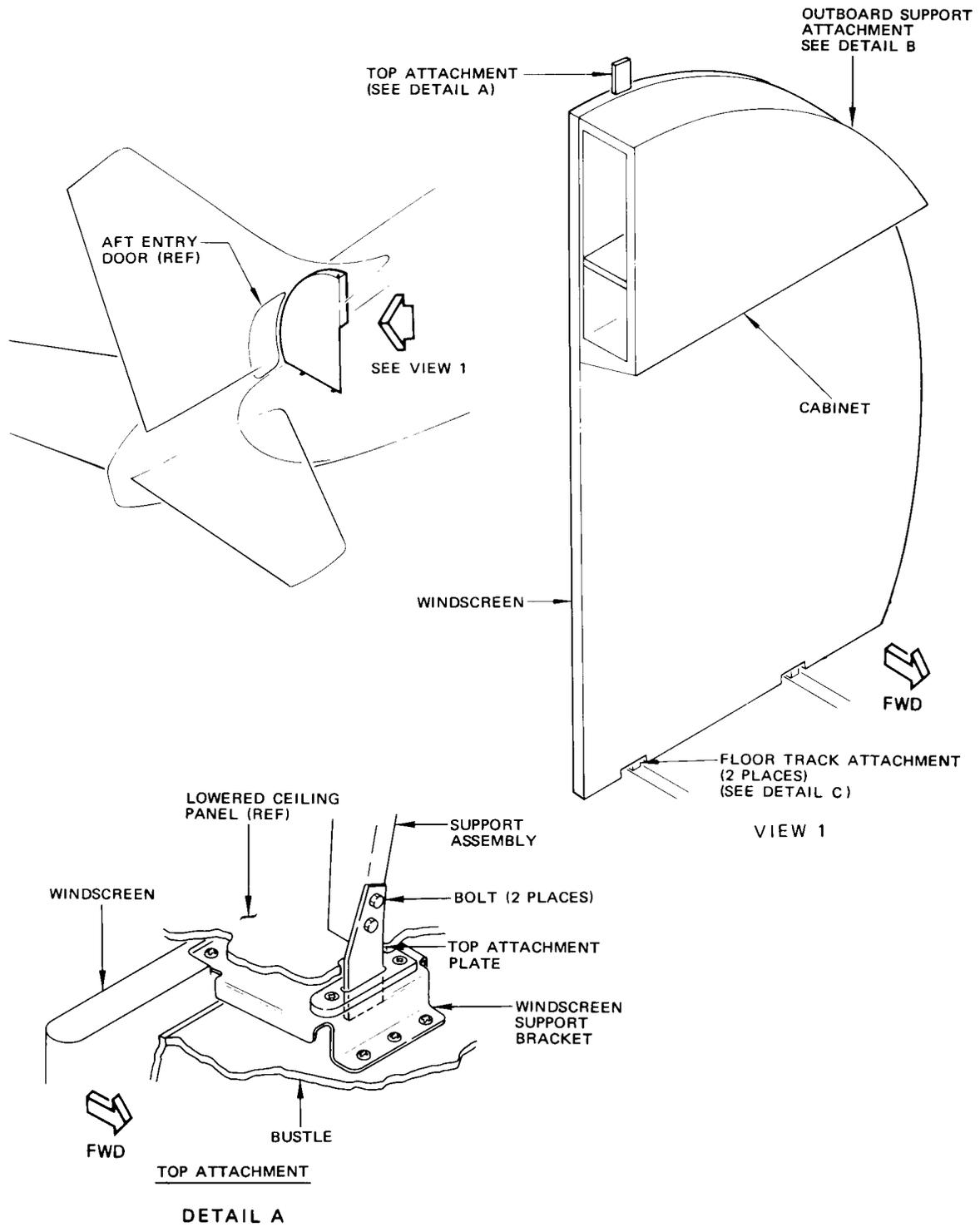
EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

**25-24-132**

456938

AFT LEFT WINDSCREEN – REMOVAL/INSTALLATION

1. Remove Windscreen (Fig. 401)
  - A. Open WORK AND THRESHOLD LIGHT circuit breaker on panel P18.
  - B. Remove screws securing plates to windscreen feet in floor tracks.
  - C. Remove plate from each attachment.
  - D. Open aft lowered ceiling access door to gain access to bolts securing top attachment plate.
  - E. Support the windscreen, remove bolts through top attachment plate and pull plate upward through slot in lowered ceiling panel.
  - F. Close aft lowered ceiling access door.
  - G. Move windscreen aft slightly and lift windscreen to free feet from floor track.
  - H. Disconnect electrical wiring at the outboard edge of windscreen. Slide windscreen inboard and remove.
  - I. If necessary, remove feet from windscreen by removing pin attaching each foot to windscreen partition.
  - J. If required, remove screws from outboard support and remove clamp and support arm. Reinstall screws to prevent loss of parts.
2. Install Windscreen (See figure 401.)
  - A. If previously removed, locate clamp in place on sidewall outlet and install screws clamping support arm in place.
  - B. If previously removed, secure windscreen feet to windscreen partition with pin.
  - C. Move partition outboard to engage sidewall support.
  - D. Insert windscreen feet in floor tracks and move partition to installed position.
  - E. Connect electrical wiring to windscreen.
  - F. Place windscreen in its proper position.
  - G. Open aft lowered ceiling access door.
  - H. Insert top attachment plate downward through hole in lowered ceiling panel and into slot in windscreen support bracket.
  - I. Secure top attachment plate to support bracket with two bolts.
  - J. Close aft lowered ceiling access door.
  - K. Secure plates to windscreen feet with screws.
  - L. Close WORK AND THRESHOLD LIGHT circuit breaker on panel P18.

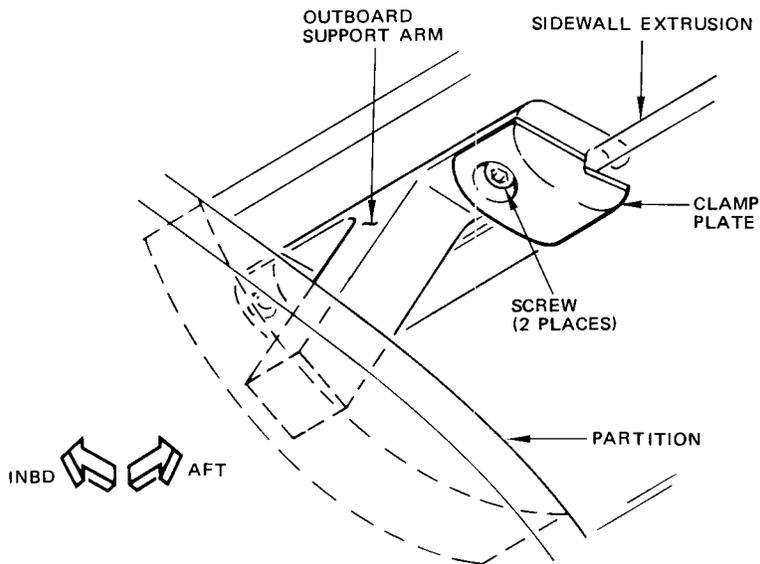


Aft Left Windscreen Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 New Look Interior

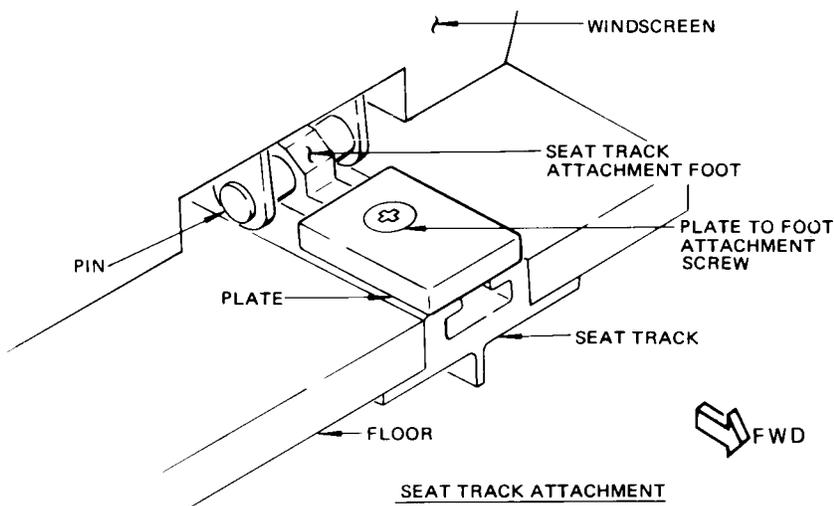
**25-24-133**

456946



OUTBOARD SUPPORT ATTACHMENT

DETAIL B



SEAT TRACK ATTACHMENT

DETAIL C

Aft Left Windscreen Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 New Look Interior

**25-24-133**



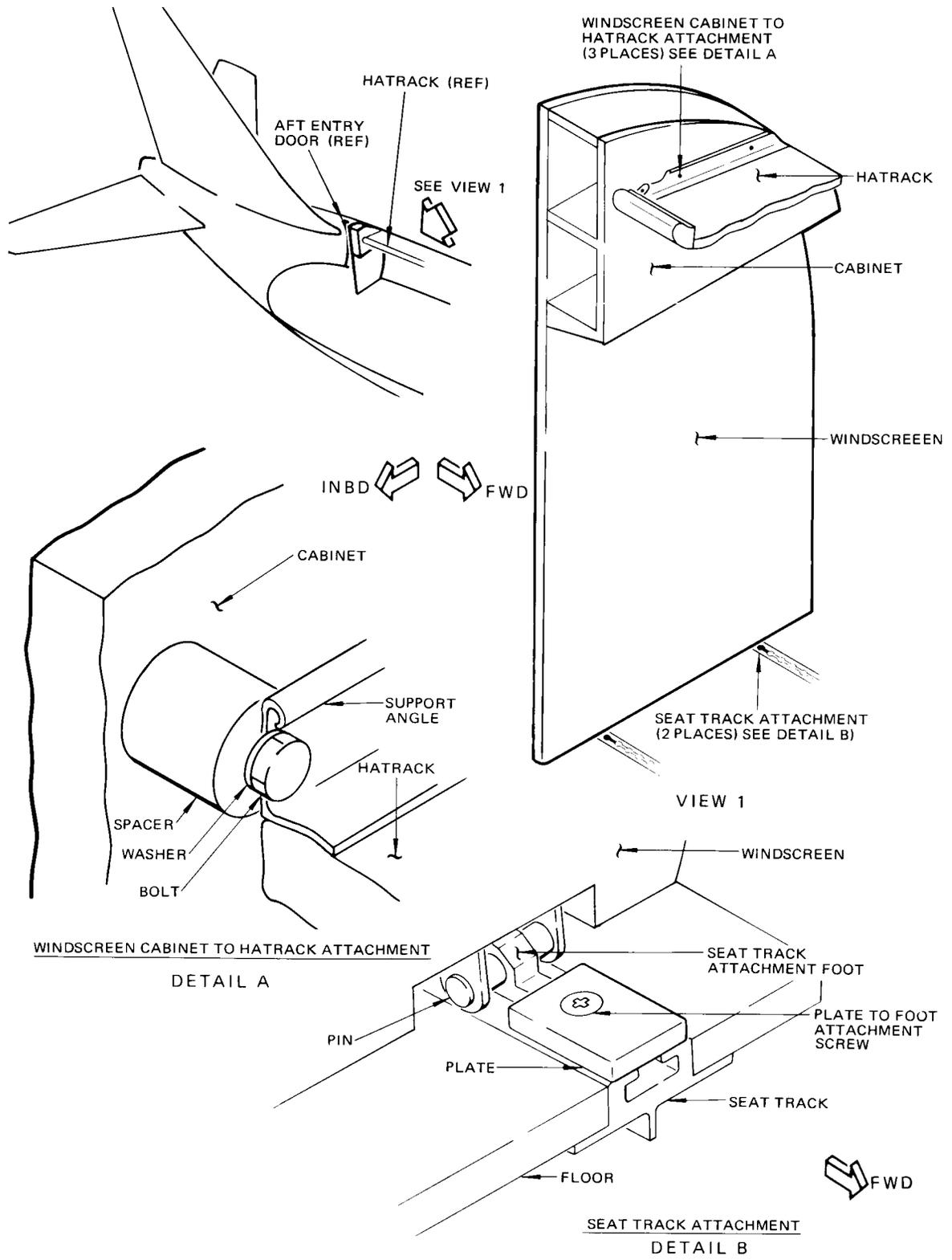
## MAINTENANCE MANUAL

### AFT WINDSCREEN - REMOVAL/INSTALLATION

1. General
  - A. The removal/installation procedures in this section are typical for the aft windscreens. The left and the right windscreens are identical to each other.
2. Remove Windscreen (Fig. 401)
  - A. On windscreen where threshold light is attached, open WORK AND THRESHOLD LIGHT circuit breaker on panel P18.
  - B. Remove screws securing plates to windscreen feet in floor tracks.
  - C. Remove plate from each attachment.
  - D. Support the windscreen and remove bolts, washers, and spacers attaching windscreen cabinet to aft right hatrack.
  - E. Move windscreen aft and lift windscreen to free feet from floor track. Remove windscreen.
  - F. On windscreen provided with threshold light, disconnect electrical wiring at the outboard edge of windscreen and remove windscreen.
  - G. If necessary, remove feet from windscreen by removing pin attaching each foot to windscreen partition.
3. Install Windscreen (Fig. 401)
  - A. If previously removed secure windscreen feet to windscreen partition with pin.
  - B. Insert windscreen feet in floor tracks and move partition forward to installed position.
  - C. On windscreen provided with threshold light, connect electrical wiring to windscreen.
  - D. Support windscreen in position and install bolts, washers, and spacers attaching top of windscreen to aft right hatrack.
  - E. Secure plates to windscreen feet with screws.
  - F. On windscreen provided with threshold light, close WORK AND THRESHOLD LIGHT circuit breaker on panel P18.

EFFECTIVITY  
Standard Passenger Airplanes without New  
Look Interior

25-24-141



Aft Right Windscreen Installation  
 Figure 401

EFFECTIVITY  
 Standard Passenger Airplanes without New  
 Look Interior

**25-24-141**

456968



## MAINTENANCE MANUAL

### AFT RIGHT WINDSCREEN – REMOVAL/INSTALLATION

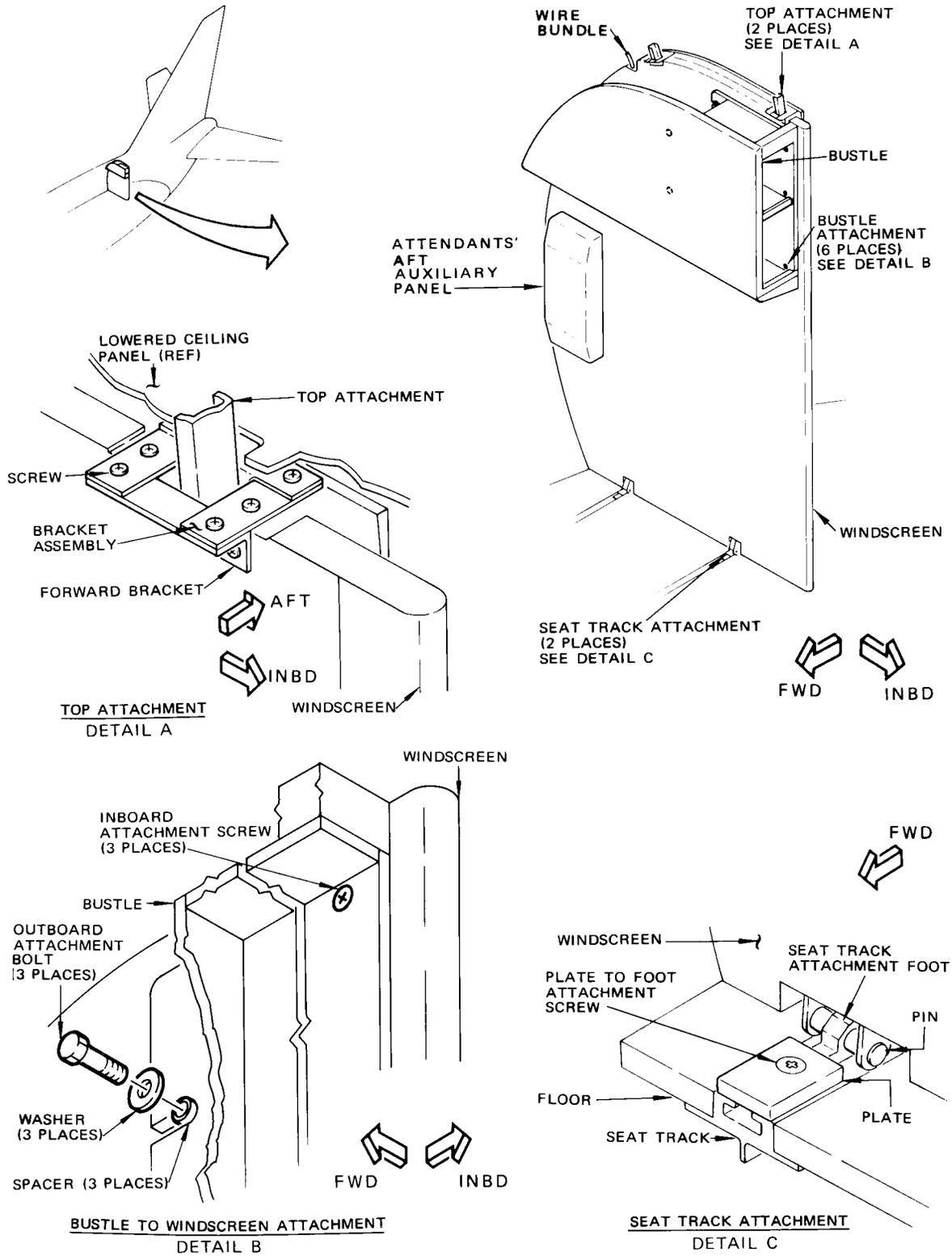
1. Remove Windscreen (Fig. 401)
  - A. Open circuit breakers affecting the attendants' aft auxiliary panel on the following circuit breaker panels: PASS ADDRESS and. AIRSTAIRS on P6; ENTRY and GALLEY lights on P18.
  - B. Remove outboard attachment bolts and washers attaching bustle to windscreen partition.
  - C. Support bustle and remove inboard attachment screws.
  - D. Remove bustle by sliding it inboard.
  - E. Remove forward bracket from each bracket assembly by removing screws attaching each forward bracket to bracket assembly and, windscreen partition.
  - F. Remove screws securing plates to windscreen feet in floor tracks and remove plate from each attachment.
  - G. Move windscreen aft to clear top attachment from bracket assembly and to free feet from floor tracks.
  - H. Disconnect wiring to windscreen by pulling electrical bundle from outboard edge of windscreen and remove windscreen.
  - I. If necessary, remove feet from windscreen by removing pin attaching each foot to windscreen partition.
2. Install Windscreen (Fig. 401)
  - A. If previously removed secure windscreen feet to windscreen partition with pin.
  - B. Place windscreen in position and connect electrical bundle into outboard edge of windscreen.
  - C. Insert windscreen feet in floor tracks and move partition forward to engage top attachment on bracket assembly.
  - D. Secure plates to windscreen feet with screws.
  - E. Position each forward bracket on the forward side of windscreen and install screws attaching each forward bracket to bracket assembly and windscreen.
  - F. Position bustle on forward face of windscreen and slide bustle outboard to engage outboard attachment slots into spacers on windscreen.
  - G. Support bustle and install inboard attachment screws attaching bustle to windscreen.
  - H. Install bustle outboard attachment bolts.
  - I. Close circuit breakers.

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

25-24-142

02

Page 401  
Dec 01/04



Aft Right Windscreen Installation  
 Figure 401

EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

456978

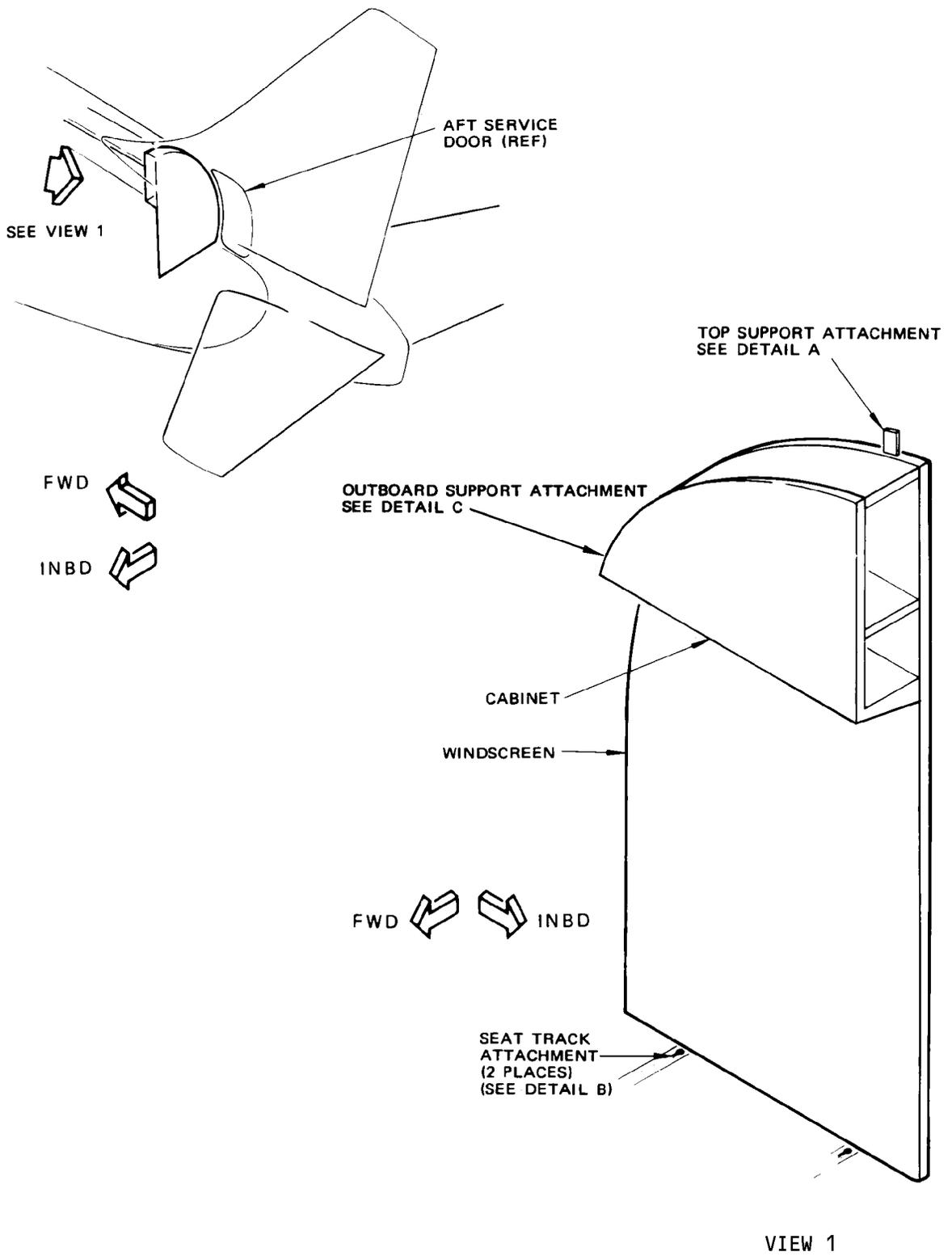
25-24-142

02

Page 402  
 Dec 01/04

AFT RIGHT WINDSCREEN - REMOVAL/INSTALLATION

1. Remove Windscreen (Fig. 401)
  - A. Remove curtain and curtain header from the aft side of windscreen. Refer to 25-31-261, Aft Galley Header Assembly - Removal/Installation.
  - B. Remove screws securing plates to windscreen feet in seat track attachments.
  - C. Remove plate from each seat track attachment.
  - D. Remove top support attachment.
    - (1) Open aft lowered ceiling access door to gain access to bolts securing top attachment plate.
    - (2) Remove bolts through top attachment plate and pull plate upward through slot in lowered ceiling panel.
    - (3) Close aft lowered ceiling access door.
  - E. On all airplanes, move windscreen aft slightly and lift windscreen to free feet from seat tracks. Slide windscreen inboard and remove.
  - F. If necessary, remove feet from windscreen by removing pin attaching each foot to windscreen partition.
  - G. If required, remove screws from outboard support and remove clamp and support arm. Reinstall screws to prevent loss of parts.
2. Install Windscreen (See figure 401.)
  - A. If previously removed, locate clamp in place on sidewall outlet and install screws clamping support arm in place.
  - B. If previously removed secure windscreen feet to windscreen partition with pin.
  - C. Move partition outboard to engage sidewall support.
  - D. Insert windscreen feet in seat tracks and move partition to installed position.
  - E. Install top support attachment.
    - (1) Open aft door in aft lowered ceiling.
    - (2) Insert top attachment plate downward through hole in lowered ceiling panel and into slot in windscreen frame.
    - (3) Secure top attachment plate to lowered ceiling support beam with two bolts.
    - (4) Close aft lowered ceiling access door.
  - F. Install plates and secure plates to windscreen feet with screws.
  - G. Install curtain and curtain header. Refer to 25-31-261, Aft Galley Header Assembly - Removal /Installation.

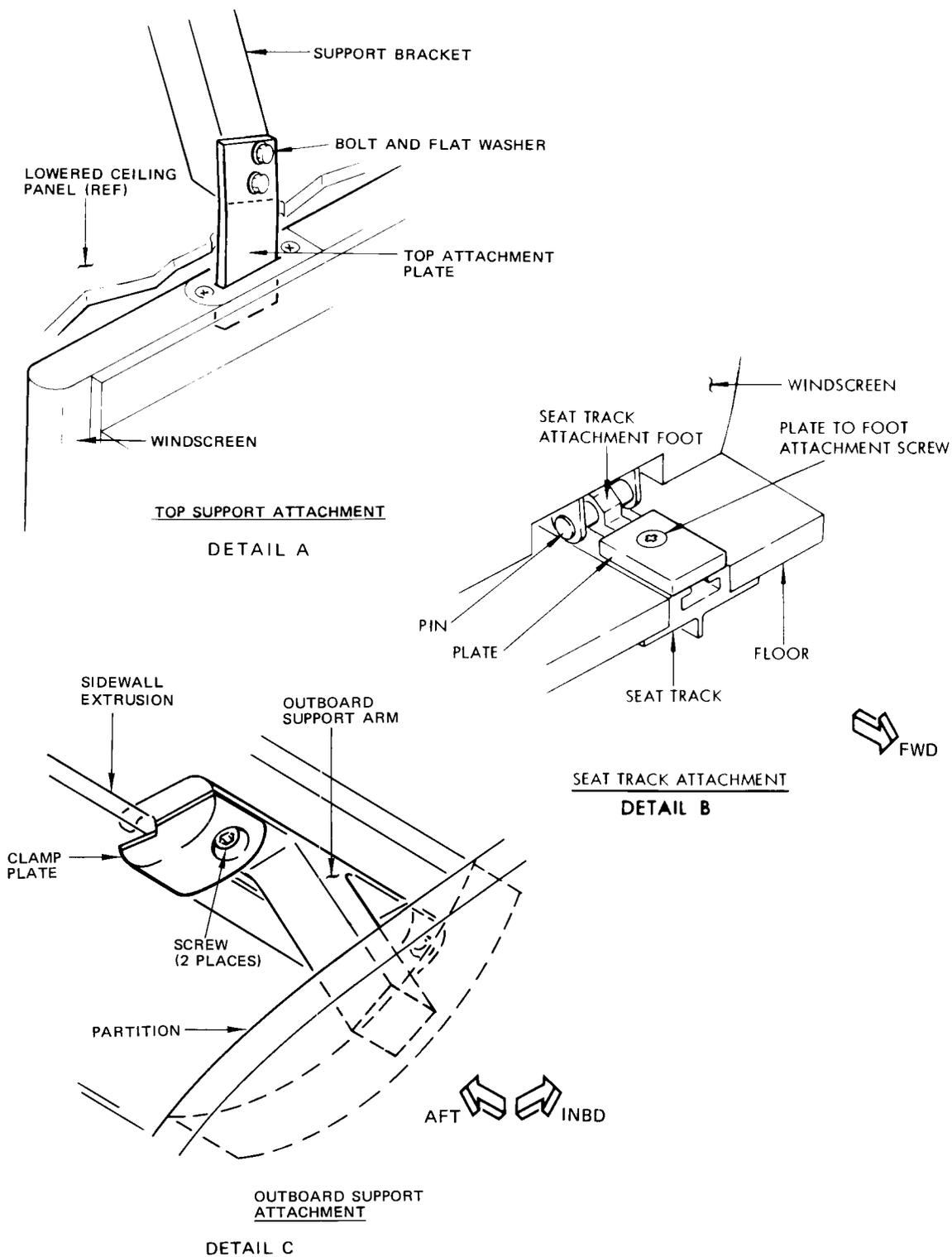


Aft Right Windscreen Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 New Look Interior

25-24-143

456988



Aft Right Windscreen Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 New Look Interior

25-24-143

CARGO/PASSENGER DIVIDING PARTITION – REMOVAL/INSTALLATION

1. General
  - A. This partition is used to divide the cargo from the passenger compartments in any of the combined passenger/cargo configurations. The partition is provided with an extension that is installed along its lower edge.
2. Equipment and Materials
  - A. Allen wrench – 5/16-inch
3. Prepare for Removal
  - A. Open EMERGENCY EXIT LIGHTS, NO SMOKING, and SEAT BELT circuit breakers on panel P18.
  - B. Disconnect wiring on the outboard edge of right partition from receptacle on the sidewall.
  - C. Close all doors in partition.
4. Remove Cargo/Passenger Dividing Partition
  - A. Raise track stud handle on each track attachment to stand vertically and rotate through 90 degrees, parallel to track. Raise attachment fittings so that the shear fittings and track studs are clear of floor tracks.
  - B. Release six dual locks connection center partition section to the left and right outboard partition sections using Allen wrench. Completely retract each latch hook by rotating mechanism with Allen wrench until stop is contacted.
  - C. Support center section and move each outboard section outboard slightly to gain clearance necessary to remove center panel. Remove center section.
  - D. Disconnect each outboard section of partition from hat rack unscrewing two screws on forward face of partitions. These screws are trapped to remain in partition when disconnected.
  - E. Remove outboard sections by lifting each section slightly to clear floor tracks and sliding inboard.
5. Install Cargo/Passenger Dividing Partition (Fig. 401)
  - A. With forward hat racks in cargo position, install outboard partition by sliding into position between the hat racks.

**NOTE:** During installation of the partitions the seals along the forward edges of the hat racks and along the forward edges of the lower closure panels should be deflected downwards and upwards respectively to allow the partitions to contact the hat rack ends properly. When installing partition, ensure that all seals around perimeter are folded forward.

- B. Secure two hat rack mounting screws on forward side of each outboard section by tightening screws into nutplates on hat rack until partition is tight against end of hat rack.

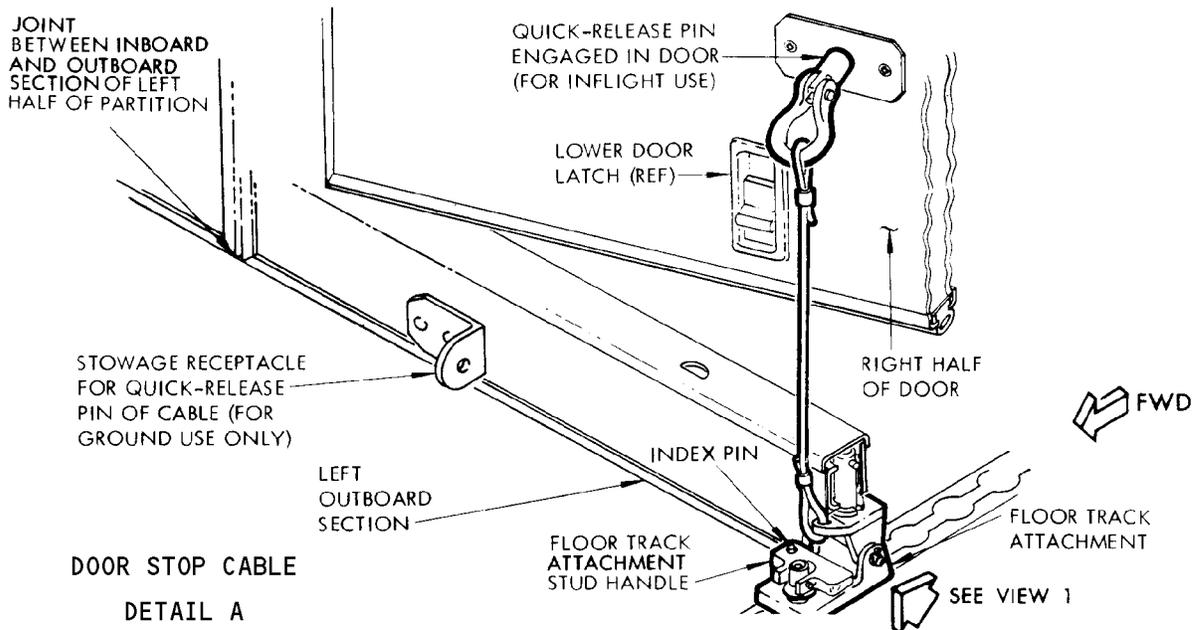
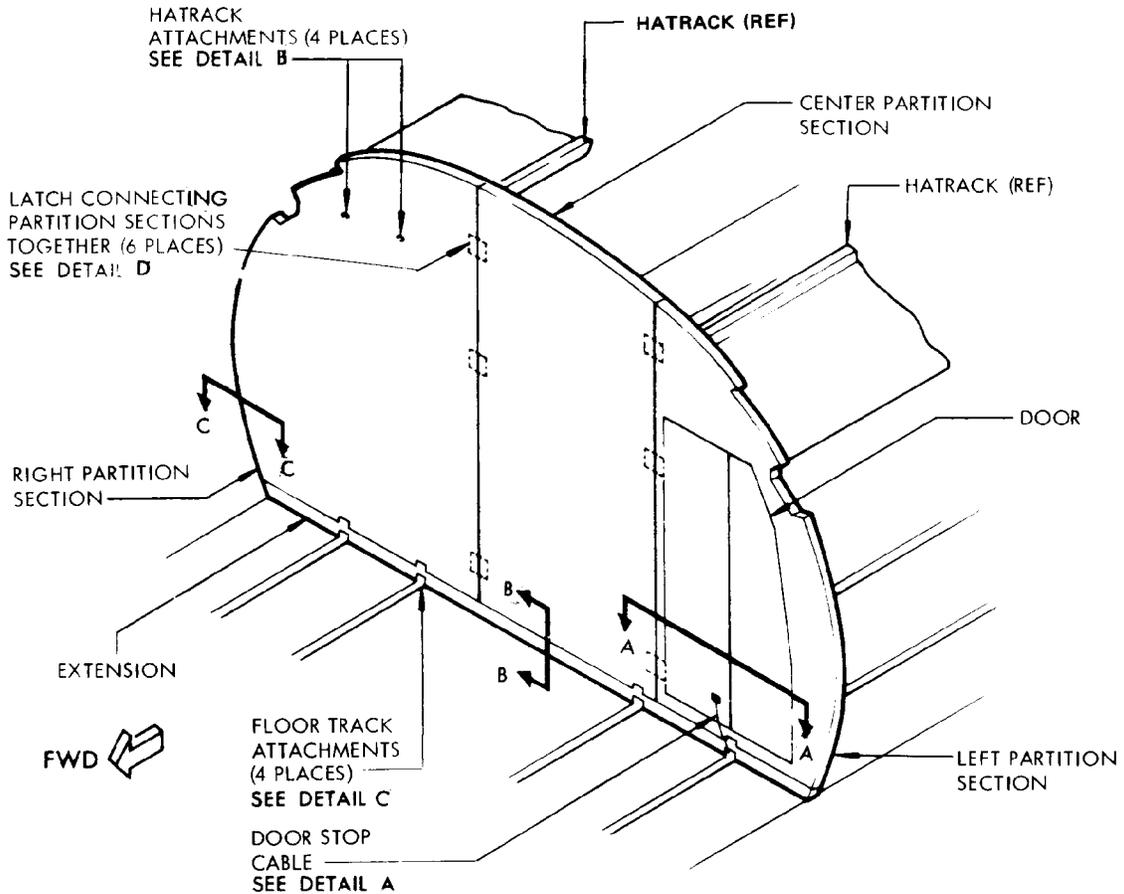
EFFECTIVITY

ALL

25-24-151

01

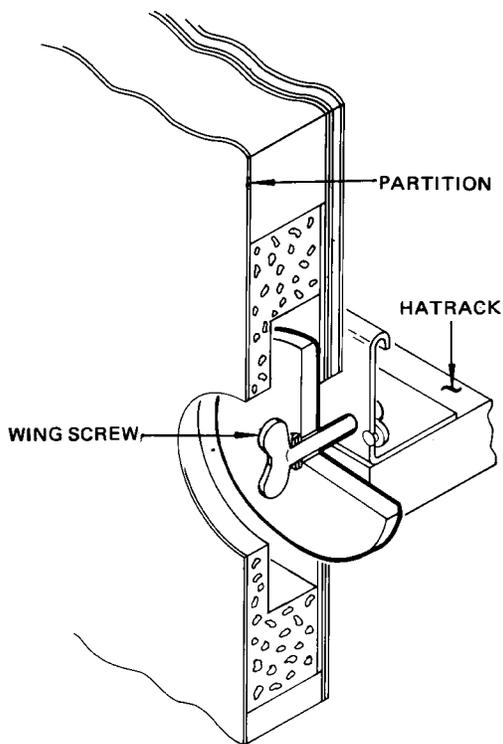
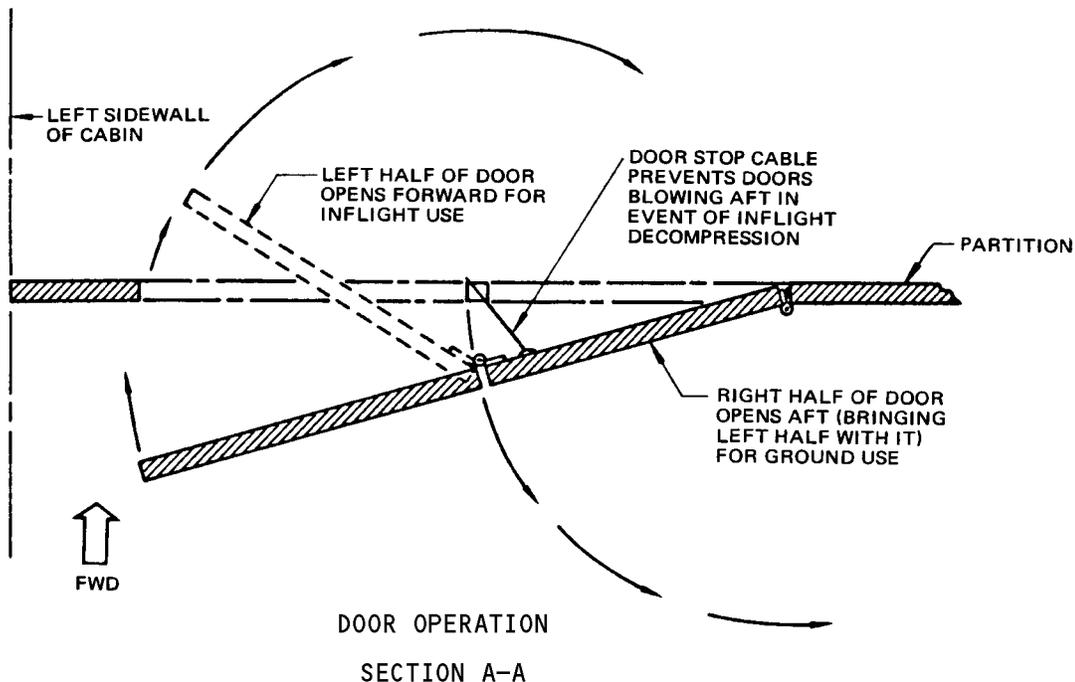
Page 401  
Aug 01/05



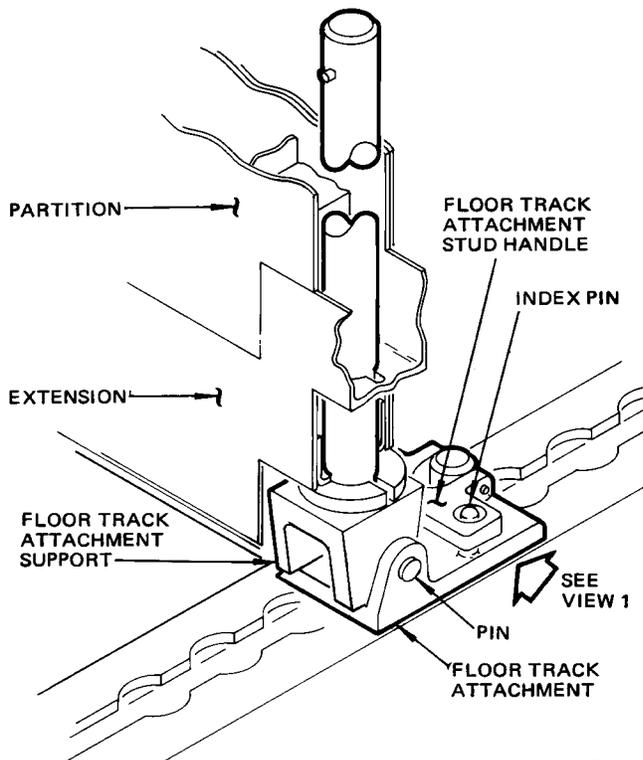
Cargo/Passenger Dividing Partition Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY	
	ALL

25-24-151



TYPICAL HATRACK ATTACHMENT  
 DETAIL B

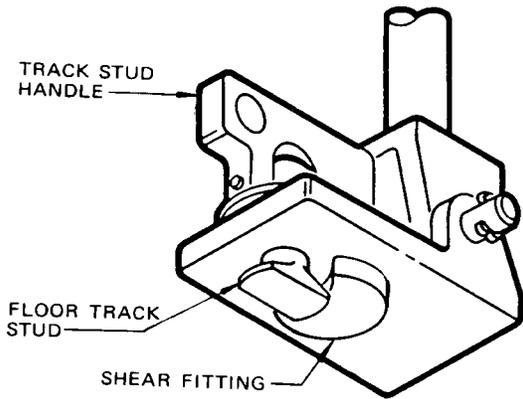


FLOOR TRACK ATTACHMENT  
 DETAIL C

Cargo/Passenger Dividing Partition Installation  
 Figure 401 (Sheet 2)

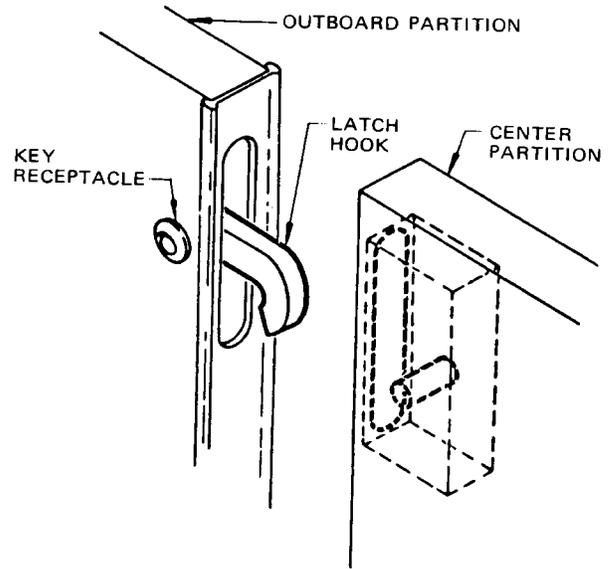
EFFECTIVITY	
	ALL

25-24-151



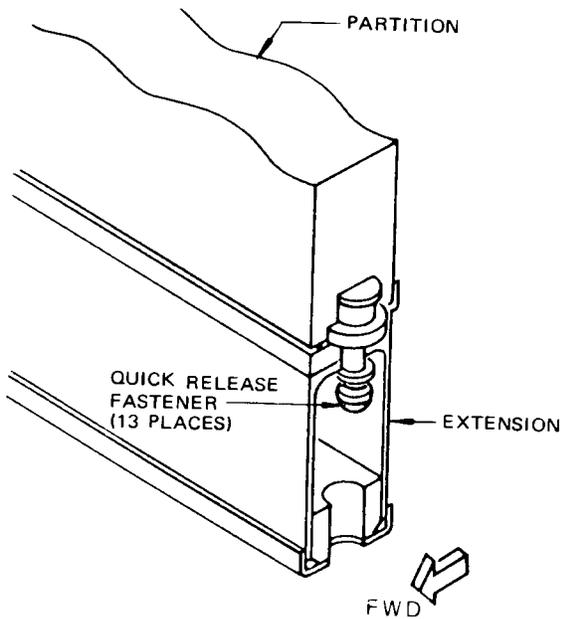
FLOOR TRACK ATTACHMENT

VIEW 1

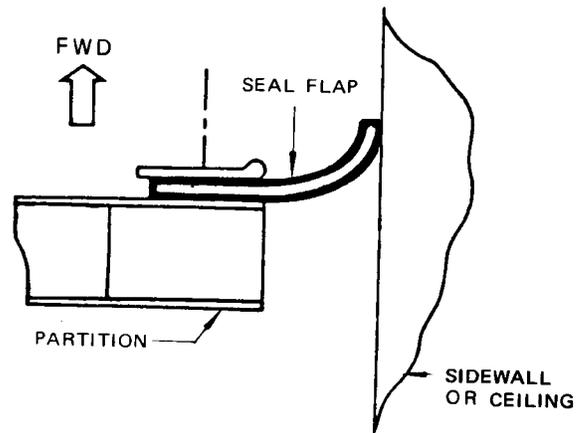


CONNECTING LATCH  
 BETWEEN PARTITION SECTIONS

DETAIL D



SECTION B-B



TYPICAL SEAL SEGMENT

SECTION C-C

Cargo/Passenger Dividing Partition Installation  
 Figure 401 (Sheet 3)

EFFECTIVITY	
	ALL

25-24-151

01

Page 404  
 Aug 01/05

457004



## MAINTENANCE MANUAL

- C. Move outboard sections outboard slightly, place center section in position between them, and locate dowel pins.
- D. Connect the three sections together by tightening six dual locks using Allen wrench. If locks do not pull sections together properly, retract latch hook with Allen wrench until stop is contacted, then rotate wrench in opposite direction to engage and lock latch hook.

**NOTE:** Rubber seals of partition sections must overlap each other. Overlap area of seals must remain in full contact with each other.

- E. Set floor track attachment stud handles to stand vertically and parallel to the floor tracks, and engage all fittings in floor tracks. Lock attachments to track by rotating handles through 90 degrees and folding down to engage index pins.

### 6. Restore Airplane to Normal

- A. Check that doorstop cable is properly installed (Detail A, Fig. 401).

**NOTE:** Both left and right doors may be open while airplane is on the ground (Section A-A, Fig. 401). In this case the quick release pin on the end of the doorstop cable should be engaged in its stowage receptacle on the forward face of the door threshold. In preparation for flight, however, the right door must be closed and latched, so that only the left door (which then opens forward) may be used. In this case the doorstop cable must be connected to the forward side of the closed right door. (The purpose of this cable is to restrain the right door from swinging too far aft in the event of an inflight decompression.)

- B. Connect wiring on the outboard edge of right partition to receptacle on the sidewall.
- C. Close EMERGENCY EXIT LIGHTS, NO SMOKING, and SEAT BELT circuit breakers on panel P18.

EFFECTIVITY

ALL

25-24-151

01

Page 405  
Aug 01/05

OVERHEAD STOWAGE COMPARTMENT – REMOVAL/INSTALLATION

1. Remove Overhead Stowage Compartment

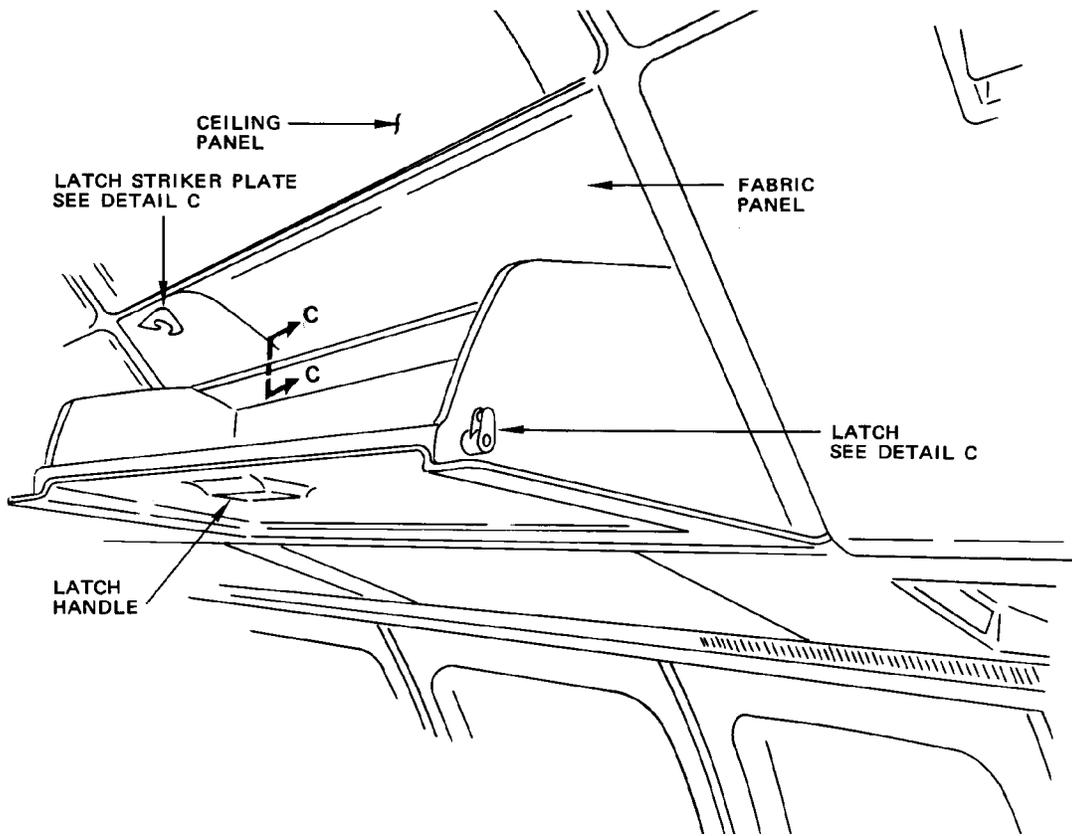
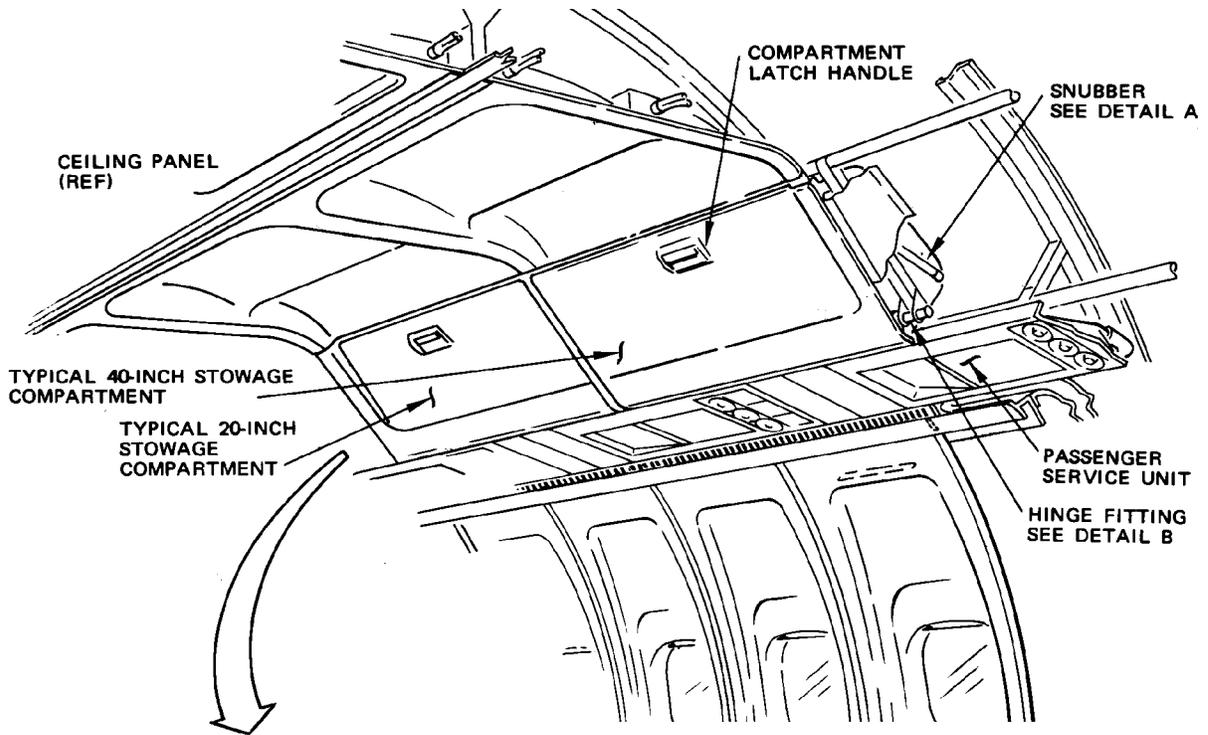
- A. Pull inboard on compartment latch handle and open stowage compartment.
- B. Disconnect fabric portion of shroud from outboard edge of stowage compartment by removing two attaching screws. (See figure 401.)
- C. Open adjacent stowage compartment to gain access to attachments for the snubber.
- D. Support compartment and disconnect snubber from bracket on structure by removing attaching bolt, spacers, washers, and nut.
- E. If removing one of the long (40 inches) stowage compartments, remove screw, spacer, washer and nut attaching limiting cable to stowage compartment.
- F. Support compartment, pull hinge lock inboard at each end of compartment, and move compartment inboard to remove.

2. Install Overhead Stowage Compartment

- A. Pull hinge lock inboard at each end of compartment and move compartment outboard to engage hinge fittings with support pins on structure. (See figure 401.)
- B. Release hinge locks and check that compartment is locked to both support pins.
- C. If installing one of the long (40 inches) stowage compartments, attach limiting cable to compartment with screw, spacer, washer, and nut.
- D. Attach snubber to bracket on structure with attaching bolt, spacers, washers and nut.

NOTE: In some areas this bolt also attaches the limiting cable of the adjacent stowage compartment.

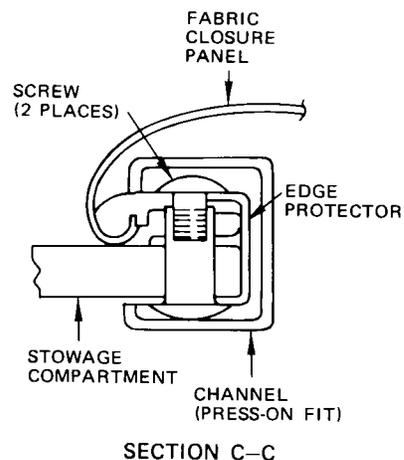
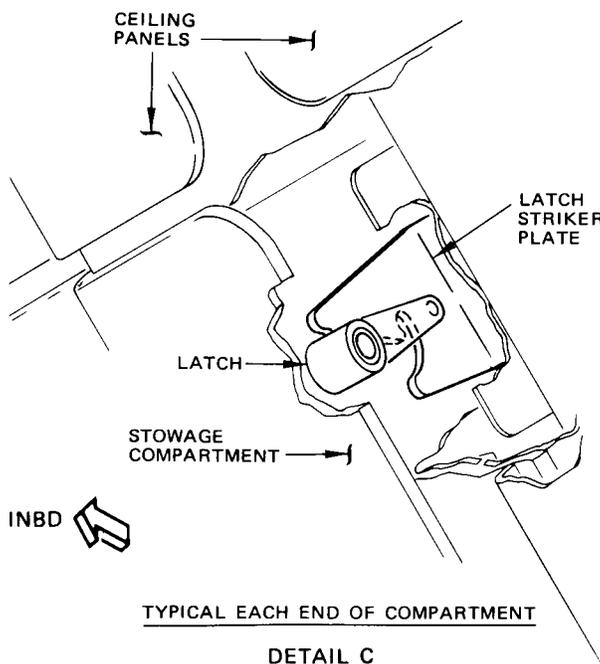
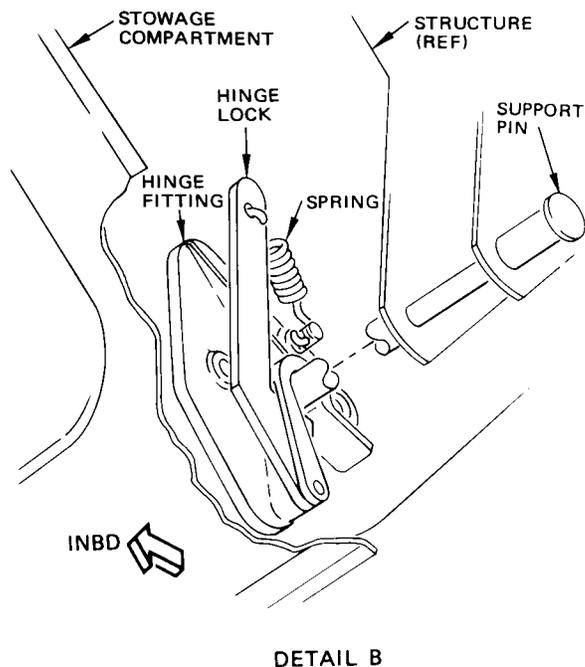
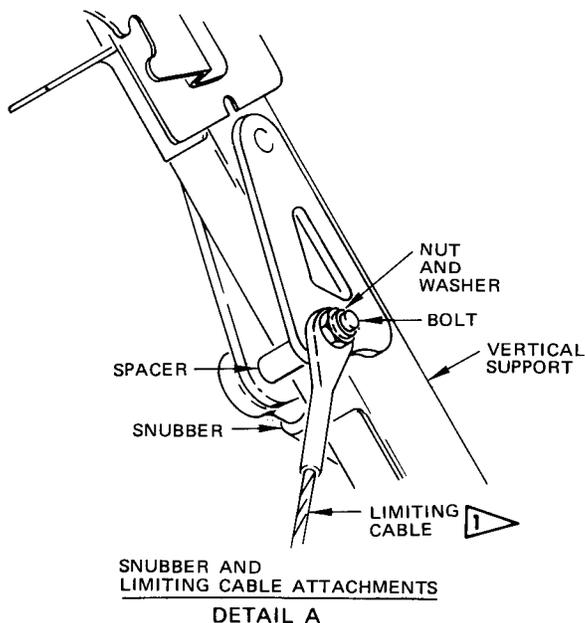
- E. Connect fabric portion of shroud to outboard edge of stowage compartment with two attaching screws.
- F. Close stowage compartment and any adjacent stowage compartment opened for access to attachments.



Overhead Stowage Compartment Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 New Look Interior

**25-24-311**



Overhead Stowage Compartment Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 New Look Interior

**25-24-311**

OVERHEAD STOWAGE COMPARTMENT – ADJUSTMENT/TEST

1. Overhead Stowage Compartment Adjustment

A. General

- (1) The following procedure is applicable for adjustment of the overhead stowage bin latch, if any component of the latch mechanism is replaced or a latch malfunctions.
- (2) Operation of the stowage bin must be checked after installation and adjustment of the striker are checked, to ensure the bin latches engage both strikers simultaneously when the bin is closed (Ref 25-25-311, R/I).

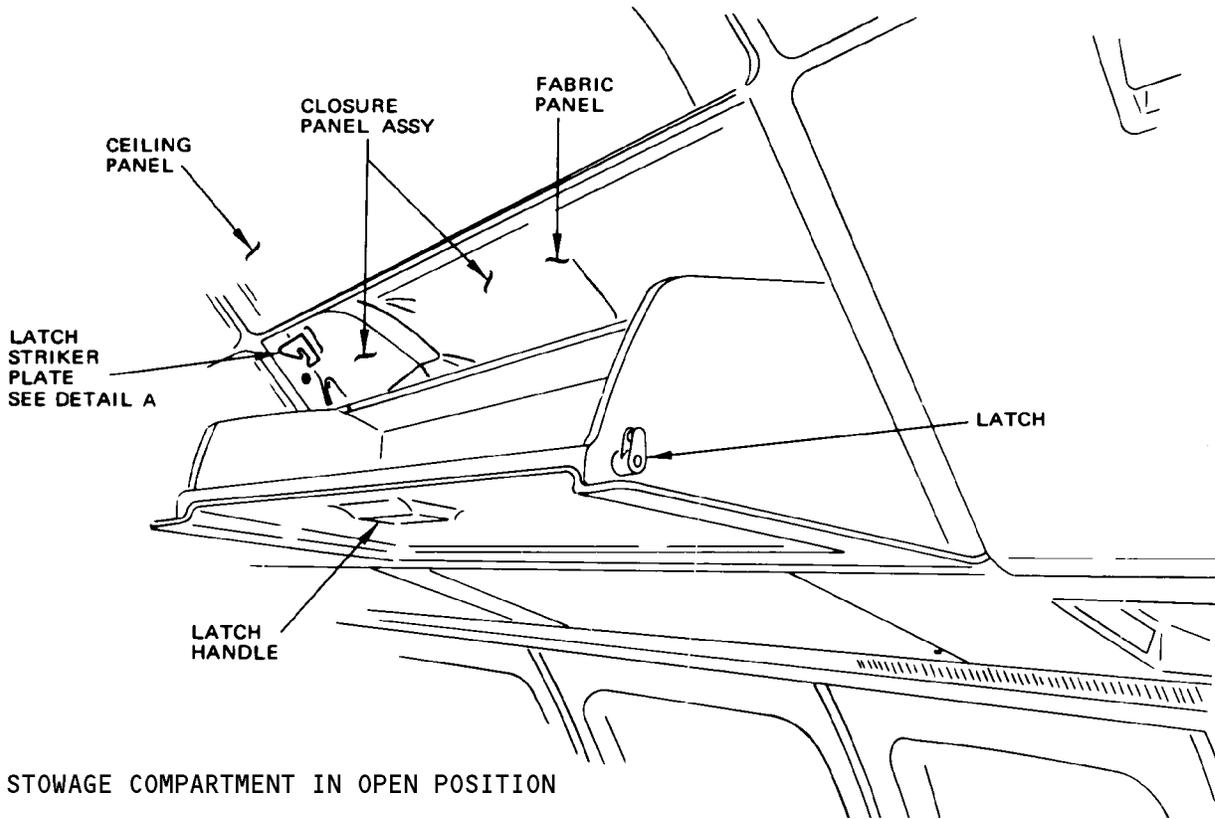
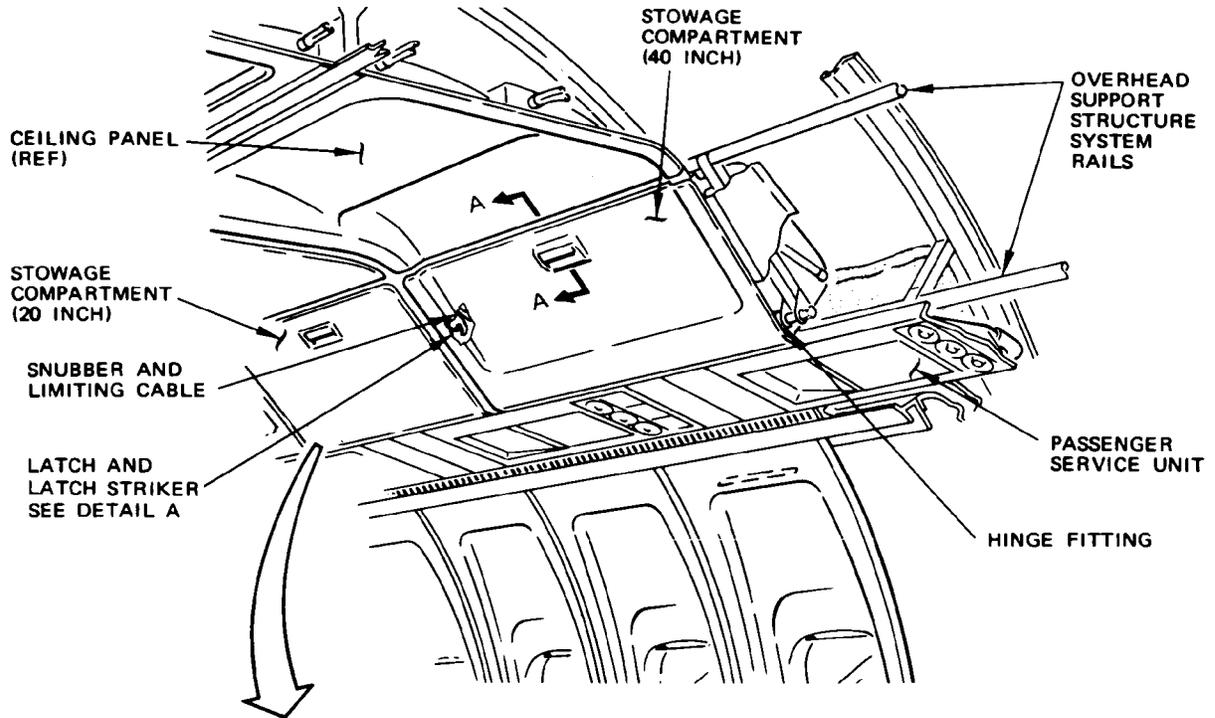
B. Adjust overhead stowage bin latch striker plates.

- (1) Check gap between striker plate and latch at each end of bin, as shown in Fig. 501, or adjust in accordance with following steps.
  - (a) Loosen attaching screws securing striker plate.
  - (b) Locate striker adjustment template on stow bin hinge pin 1, left side. Seat striker template on striker.
  - (c) Torque screws loosened in step (a) to 15 in. lbs.
  - (d) Repeat above steps for right side striker.
  - (e) If pawl fails to snap into latched condition after the above procedure due to interference with closure assy, open door, loosen closure panel fasteners and adjust closure panel position to provide stow bin door clearance. Retorque all fasteners and recheck.

NOTE: Vertical trim seal located between stow bins must not interfere with action of stow bin door.

C. Adjust overhead stowage bin latch handle.

- (1) Check that face of handle is parallel with face of bin, as shown in Fig. 501, or adjust in accordance with following steps:
  - (a) Open stowage bin.
  - (b) Remove latch cover to gain access to latch adjustment setscrew.
  - (c) Adjust setscrew to bring face of handle parallel with face of bin.
  - (d) Install latch cover.
  - (e) Close stowage bin.

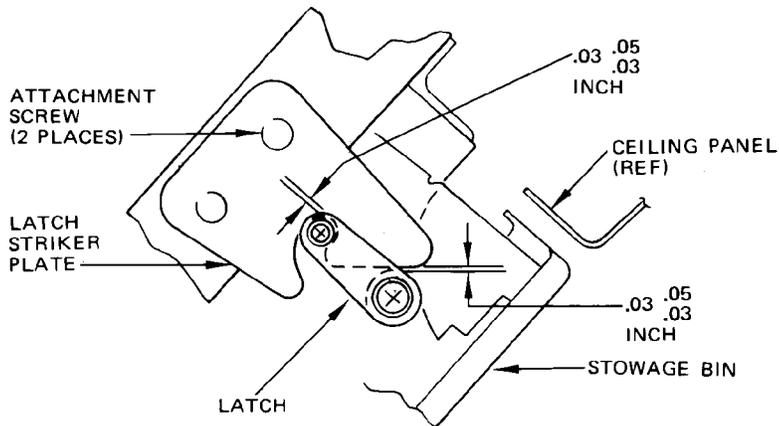


STOWAGE COMPARTMENT IN OPEN POSITION

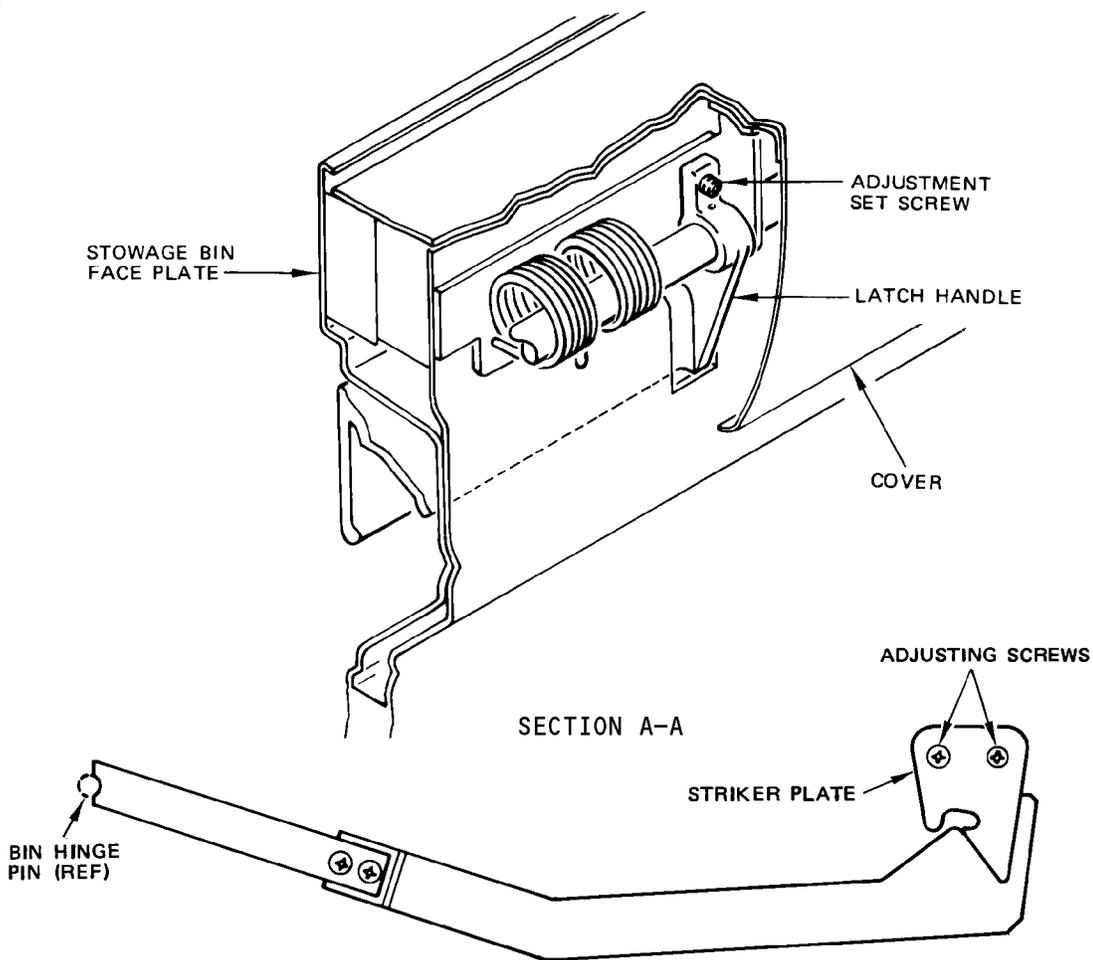
Overhead Stowage Compartment Adjustment  
 Figure 501 (Sheet 1)

EFFECTIVITY  
 New Look Interior

**25-24-311**



LATCH ADJUSTMENT  
 DETAIL A



ADJUSTMENT TOOL F80236

Overhead Stowage Compartment Adjustment  
 Figure 501 (Sheet 2)

EFFECTIVITY  
 New Look Interior

**25-24-311**

PASSENGER CABIN TEMPERATURE SENSOR AIR INLET GRILLE - REMOVAL/INSTALLATION

1. General

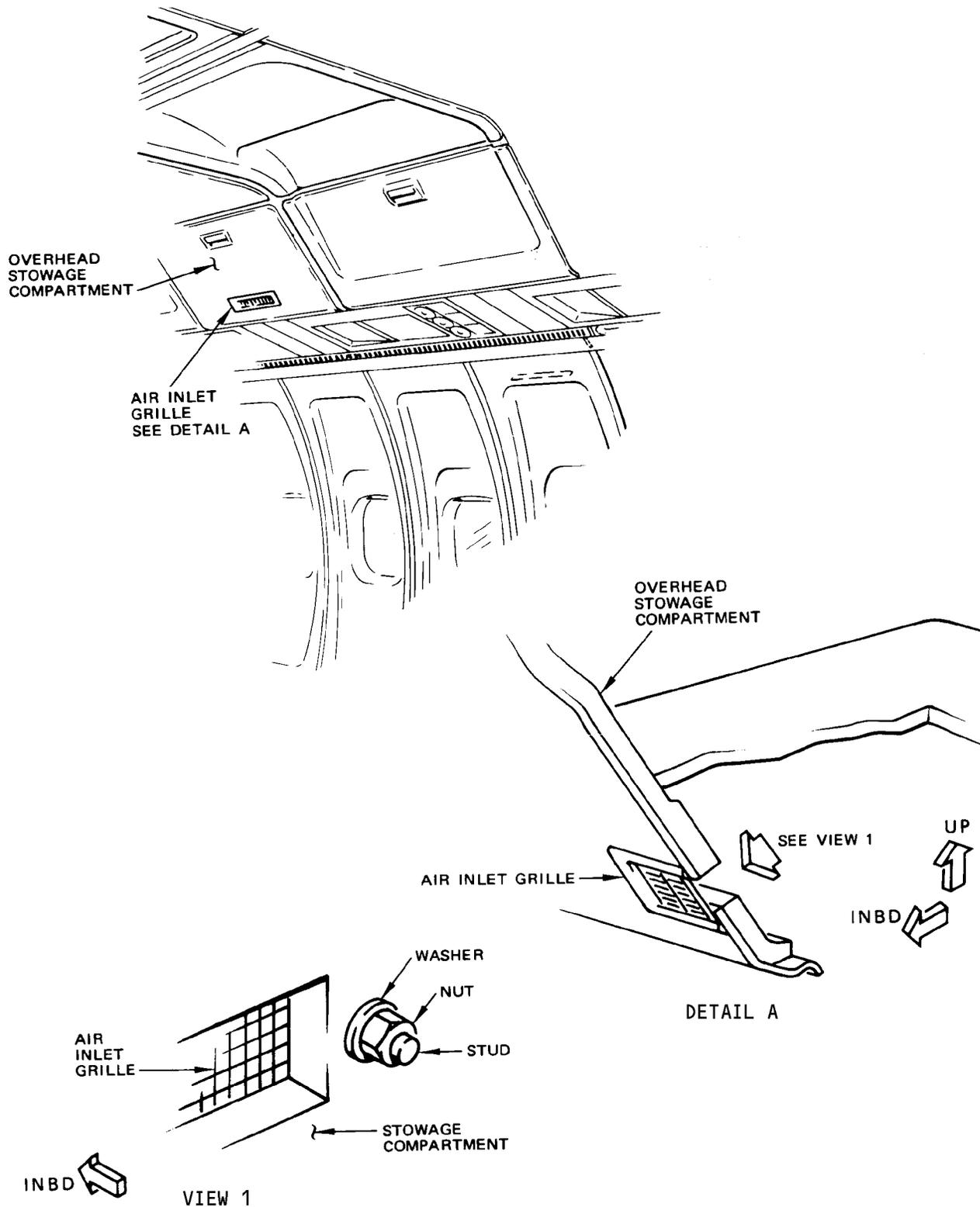
A. Maintaining unobstructed flow of cabin air around the passenger cabin temperature sensor is necessary for optimum operation of the temperature control system. For this reason it is essential to keep the sensor air inlet grille clean. In order to clean the grille, it must be removed from the face of the overhead stowage compartment.

2. Remove Air Inlet Grille

- A. Remove overhead stowage compartment containing air inlet grille to be removed (Ref 25-24-311, Removal/Installation).
- B. Remove nut and washer from each stud behind air inlet grille (Fig. 401).
- C. Push on studs to move air inlet grille away from face of stowage compartment.
- D. Grasp air inlet grille and pull away from stowage compartment.

3. Install Air Inlet Grille

- A. Orient air inlet grille so that louver direction is downward.
- B. Insert mounting studs on air inlet grille into holes in face of stowage compartment.
- C. Press air inlet grille toward face of stowage compartment until flanges are against compartment.
- D. Install nut and washer on each stud behind air inlet grille.
- E. Install overhead stowage compartment (Ref 25-24-311, Removal/Installation).



Passenger Cabin Temperature Sensor Air Inlet Grille Installation  
 Figure 401

EFFECTIVITY  
 New Look Interior

25-24-315

US

AFT CENTERLINE STOWAGE CLOSET – REMOVAL/INSTALLATION

AFT CENTERLINE STOWAGE CLOSET – REMOVAL/INSTALLATION

1. General
  - A. It is necessary to remove the centerline stowage closet by disassembly before the aft lavatory sidewall panel can be removed.
2. Prepare to Remove Stowage Closet
  - A. Remove aft galley (Ref 25-31-71 or -81, Removal/Installation).
3. Remove Stowage Closet (Fig. 401)
  - A. Remove door by removing screws from door hinge.
  - B. Remove foot panel by removing fasteners on inside at each end.
  - C. Remove all shelves and upper panel by removing fasteners from support brackets.
  - D. Loosen fasteners behind closet securing aft panel to lavatory partition.
  - E. Remove fasteners inside and outside closet wall securing wall to floor.
  - F. Remove fasteners securing upper forward corner of wall to ceiling structure.
  - G. Remove wall, and aft panel from airplane.
4. Install Stowage Closet
  - A. Position wall and aft panel and insert aft panel under fasteners located on lavatory partition.
  - B. Install fasteners securing upper forward corner of wall to ceiling structure.
  - C. Install fasteners inside and outside closet wall securing wall to floor.
  - D. Tighten fasteners securing aft wall to lavatory partition.
  - E. Install all shelves and upper panel by installing fasteners in support brackets.
  - F. Install floor panel by installing fasteners on inside at each end.
  - G. Install door by installing screws in hinge.
5. Restore Airplane to Normal
  - A. Install aft galley (Ref 25-31-71 or -81, Removal/Installation).

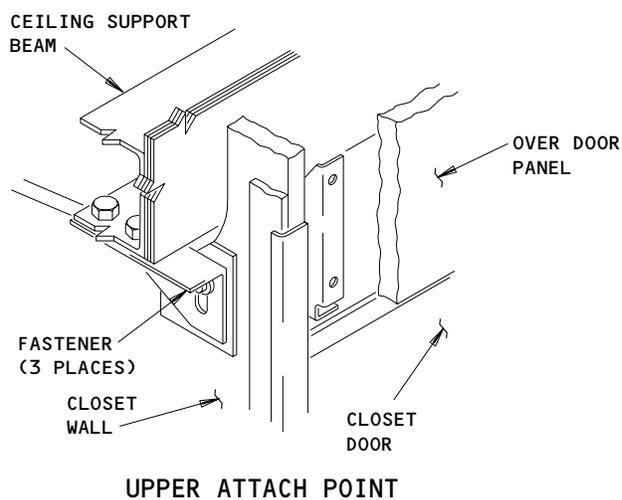
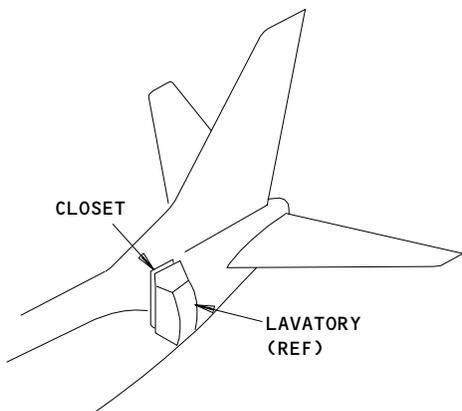
EFFECTIVITY

ALL

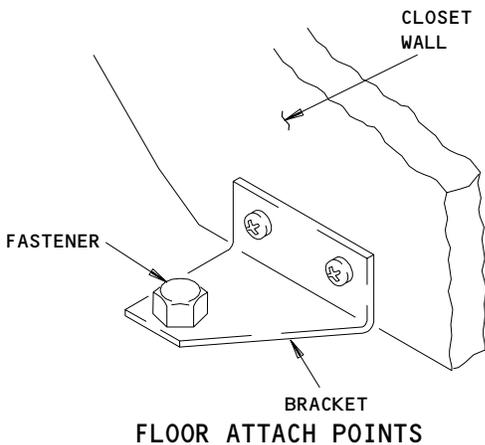
25-24-381

ARG

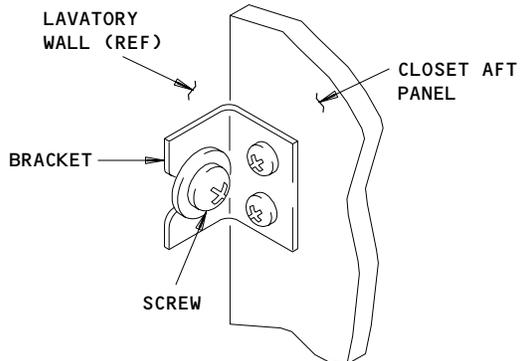
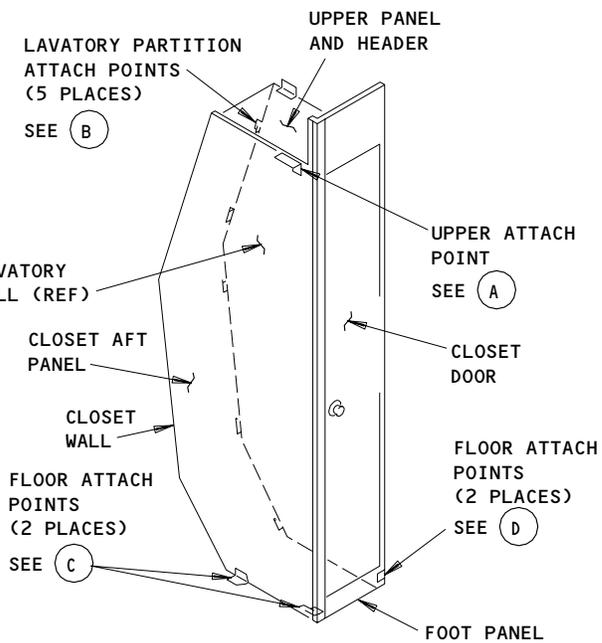
Page 401  
Dec 01/04



(A)

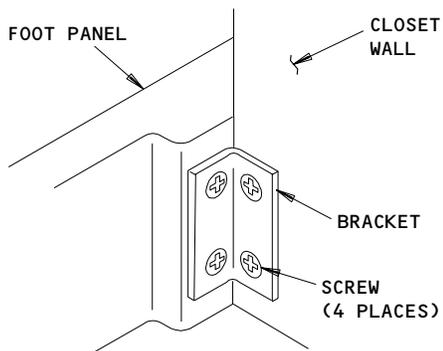


(C)



**LAVATORY PARTITION ATTACHMENT**

(B)



**FOOT PANEL ATTACH POINTS**

(D)

After Centerline Stowage Closet Installation  
 Figure 401

EFFECTIVITY

ALL

**25-24-381**

02

Page 402  
 Dec 01/04

457135

CABIN ATTENDANTS' STATIONS – DESCRIPTION AND OPERATION

1. General

A. An attendants' station is provided near the forward and aft entry doors and, on Passenger/Cargo Convertible Airplanes, in the aft galley area. Each forward and aft station accommodates two persons, and includes a double seat, a service unit and an attendants' panel. The seats are made up of component parts which may be installed or removed independently. Each seat is spring-loaded to move to the folded position when not in use. The seat cushions are readily removable for use as flotation devices. A recess is provided in the seat back cushion for stowing two life vests. Adjacent to the seat at each station is a service unit containing two oxygen masks. For additional information on the service units, refer to 25-23-0.

2. Attendants' Forward Station

A. The attendants' forward station includes the attendants' seat, a service unit and an attendants' panel. The cabin attendants' panel is recessed into the inboard end of the left-hand forward windscreen partition. The service unit is recessed in the ceiling above the attendants' seat. The attendants' seat is made up of parts; a backrest and a seat bottom, and a headrest, if installed. Each of these components is independently attached to the aft partition of the forward lavatory.

3. Attendants' Aft Station

A. The attendants' aft station includes the attendants' seat, a service unit and an attendants' panel. The cabin attendants' panel is recessed into the partition adjacent to the attendants' seat. The service unit is recessed in the ceiling above the attendants' seat. The attendants' seat is made of independently attached parts; a backrest, and a seat bottom, and a headrest, if installed.

4. Attendants' Aft Galley Station

A. The aft galley station consists of a cabin attendants' panel recessed in the ceiling above the galley door.

EFFECTIVITY

ALL

25-25-0

20

Page 1  
Dec 01/04

CABIN ATTENDANTS' SEATS – MAINTENANCE PRACTICES

1. General

- A. The seat bottom has two cushions. These cushions are attached to the seat assembly with velcro tape and are designed to provide flotation for the flight attendants if required. A pull, separating the velcro tape, will free the cushions for emergency use. Two straps of nylon webbing are attached to the underside of the cushions to provide handholds.
- B. When provided, a recess in the seat back cushion may be used for stowing two life vests.

2. Removal/Installation Attendants Seats (Fig. 201)

- A. Remove Attendants' Seat
  - (1) Remove Seat Backrest and Headrest (if installed).
    - (a) Grasp seat backrest and headrest, if installed, firmly and pull loose from velcro tape holding it in place.
  - (2) Remove Seat
    - (a) Remove slide track stops.
    - (b) Remove fasteners and spacers attaching link arms to slide track.
    - (c) Slide seat up and out of slide tracks.
- B. Install Attendants' Seat
  - (1) Install Seat
    - (a) Hold seat in mounting position and insert into slide tracks.
    - (b) Attach link arms to slide track using screws or bolts and spacers.
    - (c) Install nut and cotter pin if required.
    - (d) Install slide track stops.
  - (2) Install Seat Backrest and Headrest (if installed).
    - (a) Hold seat back and headrest, if installed, in mounting position.
    - (b) Engage velcro tape on seat back and headrest with matching velcro tape on partition by placing seat backrest and headrest in position and pressing it firmly against partition.

3. Inspection/Check Attendants Seat (Fig. 201)

- A. Attendant seat check.
  - (1) Equipment and Materials
    - (a) Aerosol Degreaser – D-5625 Freon TF, Zip Aerosol Products (Ref 20-30-31)
    - (b) Lubricant – BMS 3-24 (Ref 20-30-21)
  - (2) Check attendants seat.
    - (a) Check seat link arm attachments bolts for looseness.
      - 1) If bolt is loose, tighten bolt.
      - 2) Check endplay of spacer between link arm and attachment angle.
      - 3) If endplay is in excess of .04 inch, replace attachment bolt and any other worn parts.

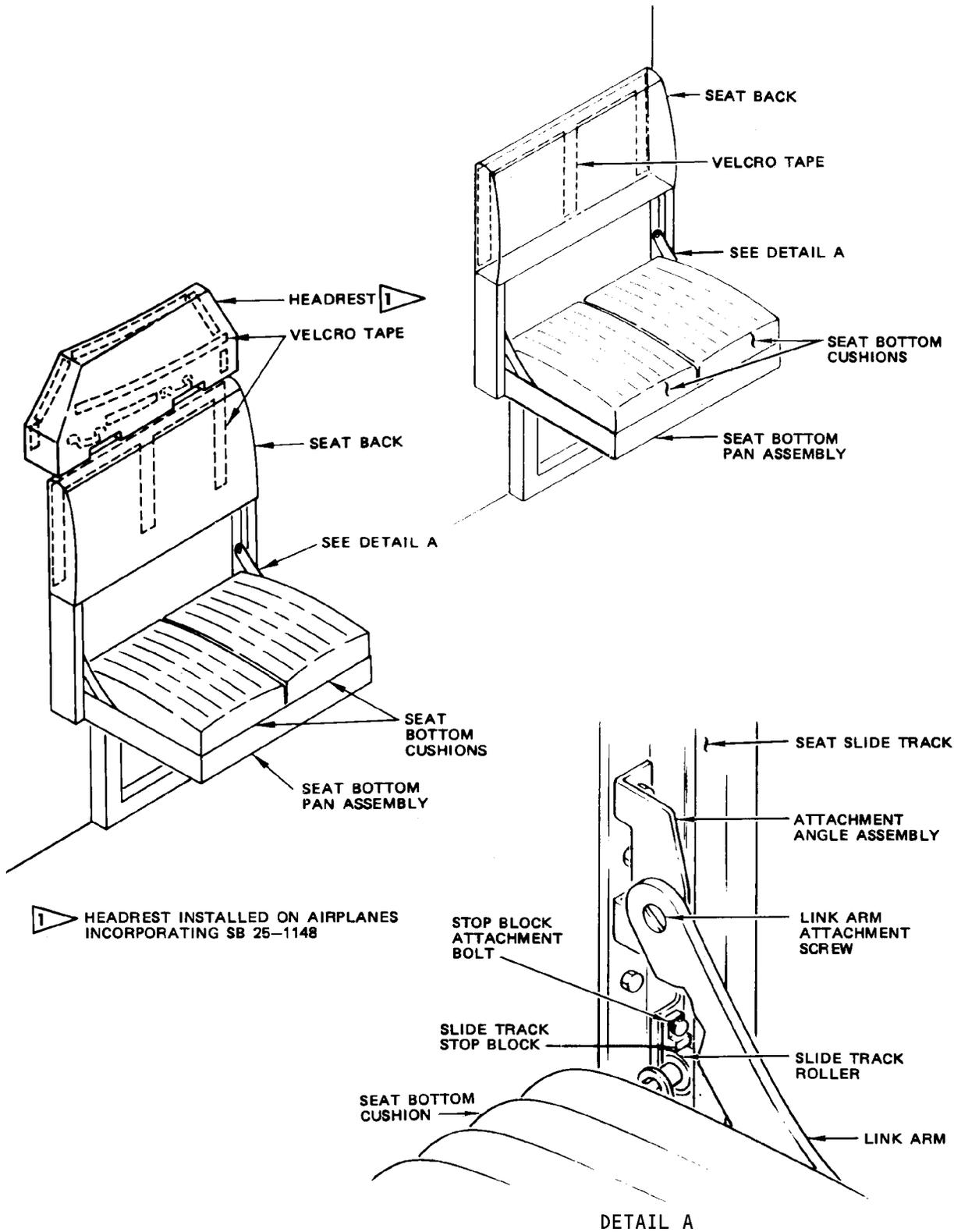
EFFECTIVITY

ALL

25-25-12

08

Page 201  
Dec 01/04



**1** HEADREST INSTALLED ON AIRPLANES INCORPORATING SB 25-1148

Forward and Aft Attendants' Seat Installation  
 Figure 201

EFFECTIVITY	
	ALL

**25-25-12**



## MAINTENANCE MANUAL

- (b) Press seat to full down position and release. Seat should spring back into stowed position without assistance.
  - (c) If seat fails to fully retract without assistance clean and lubricate as follows:
- (3) Clean and lubricate track and roller.
- (a) Clean roller and inside of track by spraying sparingly with aerosol degreaser and wiping thoroughly with clean rag.
  - (b) Lubricate inside of track by wiping with BMS 3-24.

EFFECTIVITY

ALL

25-25-12

04

Page 203  
Dec 01/04



## MAINTENANCE MANUAL

### PASSENGER CABIN FLOOR COVERING – DESCRIPTION AND OPERATION

#### 1. General

- A. The passenger cabin floor covering consists of carpets, entry and service area mats and an entry floor pan.
- B. Carpets cover the cabin floor in the area where passenger seating is provided. Refer to 25-27-100 for further information on the cabin floor carpeting.
- C. Entry and service area mats cover the floor in the forward and aft entry and service areas. On Passenger/Cargo Convertible Airplane a floor pan covers the floor area immediately inboard from the aft entry door. Refer to 25-27-200 for additional information on floor coverings in the service and entry areas.

EFFECTIVITY

ALL

25-27-0

07

Page 1  
Dec 01/04



## MAINTENANCE MANUAL

### CARPETS - DESCRIPTION AND OPERATION

#### 1. General

- A. Several carpets and underlay pads cover the cabin floor between seat tracks in the area where passenger seating is provided. The padding on the underside of the carpets throughout the cabin is specifically for soundproofing the passenger cabin.
- B. On Standard Passenger Airplanes carpet edges and ends are retained by double-backed tape.  
On Passenger/Cargo Convertible Airplanes carpet ends are attached to the floor by velcro tape. Plastic extrusions retain the carpets at ends adjacent to the forward and aft service areas.  
On airplanes with New Look Interior, carpet segments are installed on carpet riser panels along the lower sidewalls.
- C. Where carpets cover servicing and access doors, the carpets are attached to the floor with velcro tape. The carpet ends in these areas are located by markers attached to the carpet ends.
- D. Extruded plastic seat track covers are snapped into seat tracks between the seats.

EFFECTIVITY

ALL

25-27-100

08

Page 1  
Dec 01/04



## MAINTENANCE MANUAL

### CARPETS - REMOVAL/INSTALLATION

#### 1. General

- A. Because the carpets consist of many individual sections, generally similar in method of installation, the procedures which follow describe a typical section of carpet with local differences noted where applicable.
- B. The carpet may be rolled up for stowage, but should be rolled with pile outwards to avoid damage to back of carpet. Where carpet and pad are separate, they may be rolled and stowed together.

#### 2. Remove Carpet (Fig. 401)

- A. Remove track covers as required.
- B. On Standard Passenger Airplanes, peel carpet edges away from double-backed adhesive tape on cabin floor and remove section of carpet. In areas where viewers or access panels are located in the floor, disconnect velcro tape joints attaching edges of section to floor. (Carpet sections covering such areas are identified by press-stud fasteners.)
- C. On Passenger/Cargo Convertible Airplanes, disconnect velcro tape joints at ends of carpet sections and remove carpets.
- D. On airplanes with New Look Interior, remove sidewall carpets.
  - (1) Disconnect quick-release fasteners and remove air return grille (Ref 25-21-315, Sidewall Air Return Grille).
  - (2) Pull carpets free from double-backed tape and remove carpets.

#### 3. Install Carpets (Fig. 401.)

- A. On all Standard Passenger Airplanes, apply double-backed adhesive tape, as required, to cabin floor at both ends and along edges of area to be covered by section being installed, and between carpet and pad on Standard Passenger Airplanes with New Look Interior.

**NOTE:** All double-backed tape must be installed at least 1/2 inch in from carpet edges.

- B. On Passenger/Cargo Convertible Airplanes, attach velcro tape (hooks) to floor as required using double-backed tape. Velcro tape (hooks) on floor must match velcro tape (pile) cemented to ends of carpet sections.

**CAUTION:** DO NOT INSTALL TAPE OVER THROUGH-THE-FLOOR VIEWERS.

- C. Place section of carpet in position. On airplanes without New Look Interior, slide edge of outboard section over air grille.

**NOTE:** Care should be taken to correctly position the sections which have press-stud fasteners to indicate proximity of access and viewing locations through floor.

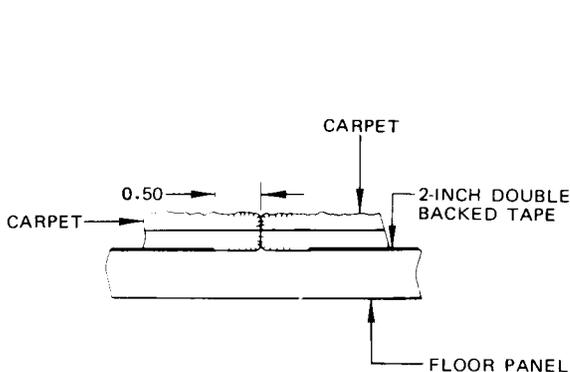
EFFECTIVITY

ALL

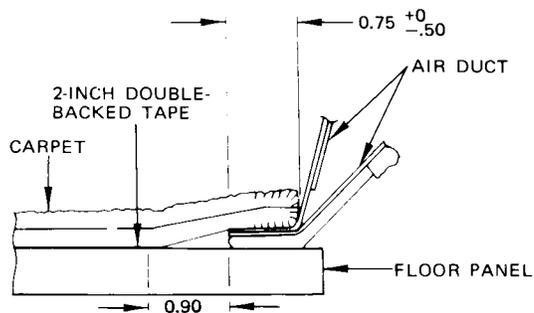
25-27-100

19

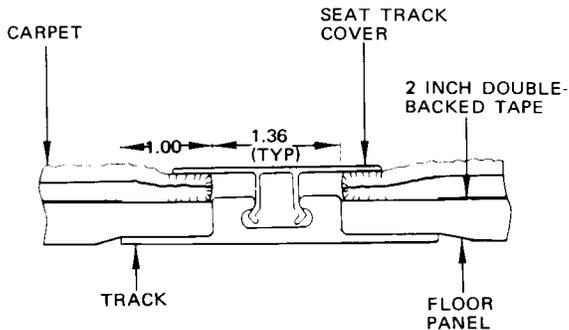
Page 401  
Dec 01/04



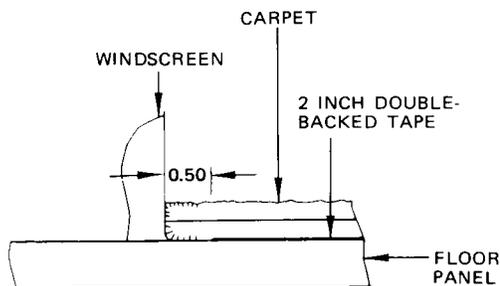
TYPICAL BUTT JOINT



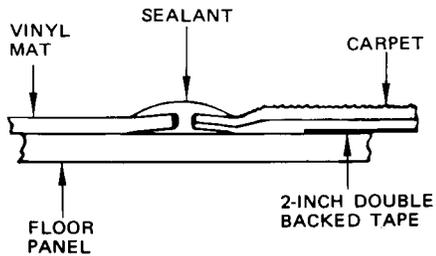
CARPET TO SIDEWALL JOINT



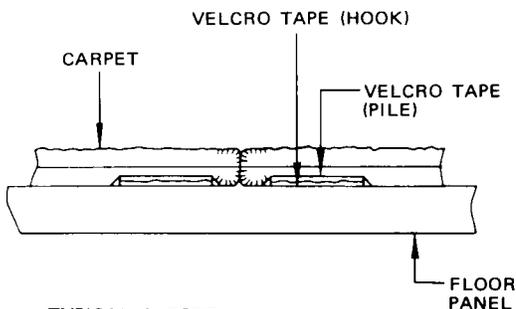
TYPICAL CARPET TO TRACK JOINT



CARPET TO GALLEY OR WINDSCREEN JOINT



MAT TO CARPET



TYPICAL CARPET ATTACHMENT USING VELCRO TAPE

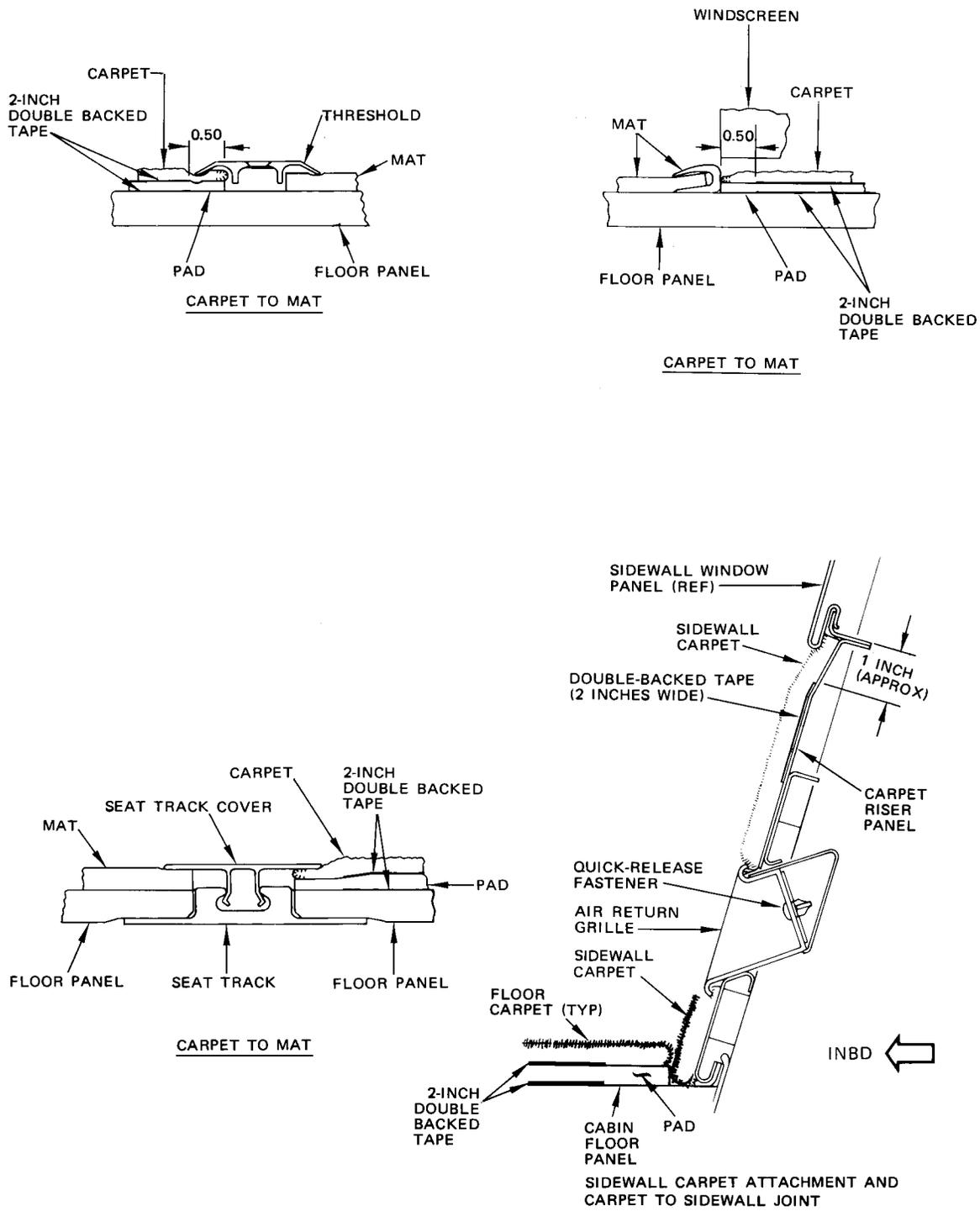
**EFFECTIVITY**

STANDARD PASSENGER AIRPLANES  
 WITHOUT NEW LOOK INTERIOR

Carpet Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY	ALL
-------------	-----

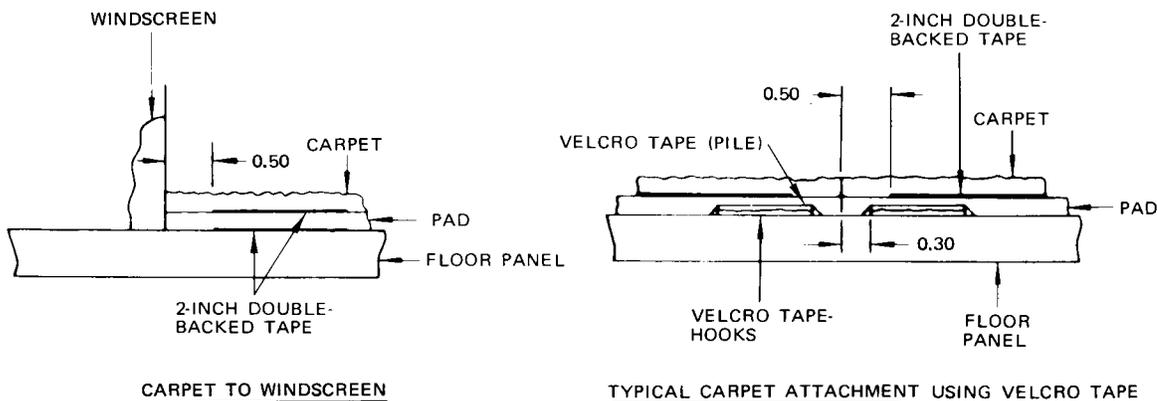
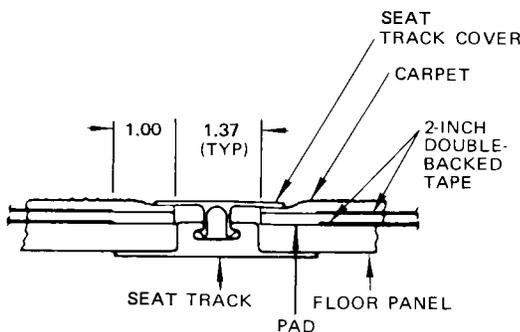
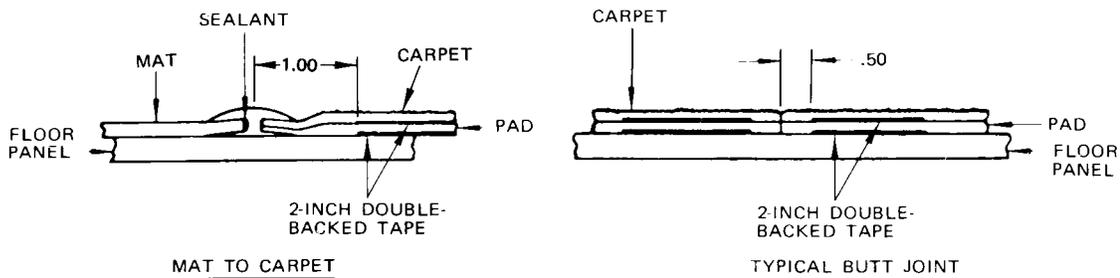
**25-27-100**



Carpet Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 STANDARD PASSENGER  
 AIRPLANES WITH NEW LOOK  
 INTERIOR

25-27-100



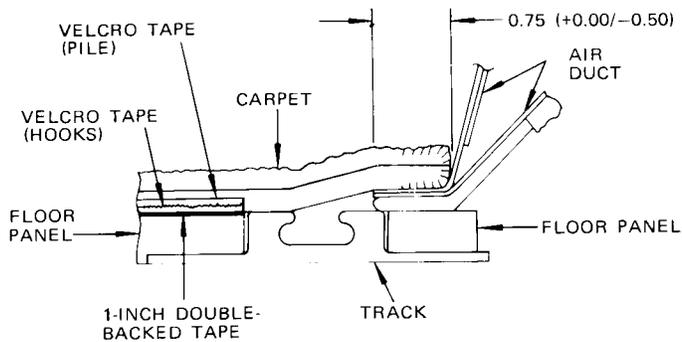
**EFFECTIVITY**

STANDARD PASSENGER AIRPLANES WITH NEW LOOK INTERIOR

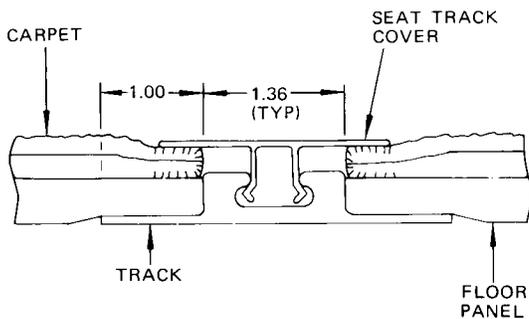
Carpet Installation  
 Figure 401 (Sheet 3)

EFFECTIVITY	ALL
-------------	-----

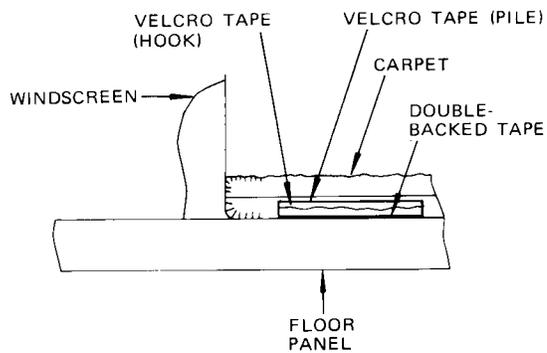
**25-27-100**



CARPET TO SIDEWALL JOINT SHOWING TYPICAL TERMINATION OF ATTACHING TAPE USED AT FORWARD AND AFT ENDS OF CARPET SECTIONS



TYPICAL CARPET TO TRACK JOINT



CARPET TO GALLEY OR WINDSCREEN JOINT

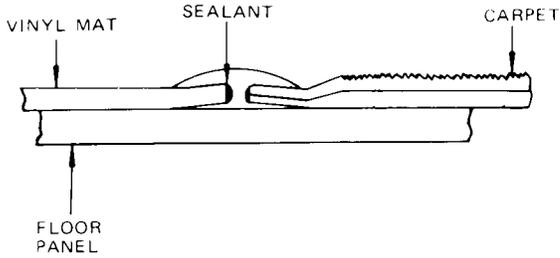
**EFFECTIVITY**

PASSENGER/CARGO CONVERTIBLE AIRPLANES

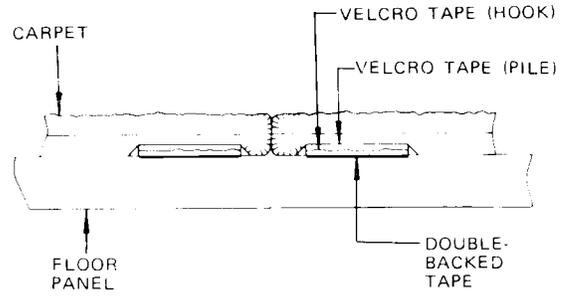
Carpet Installation  
 Figure 401 (Sheet 4)

EFFECTIVITY	ALL
-------------	-----

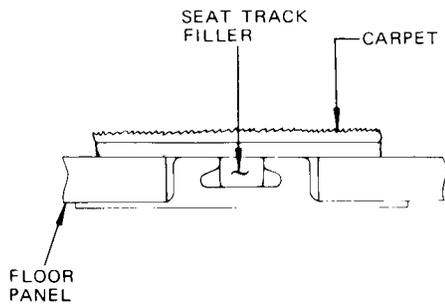
25-27-100



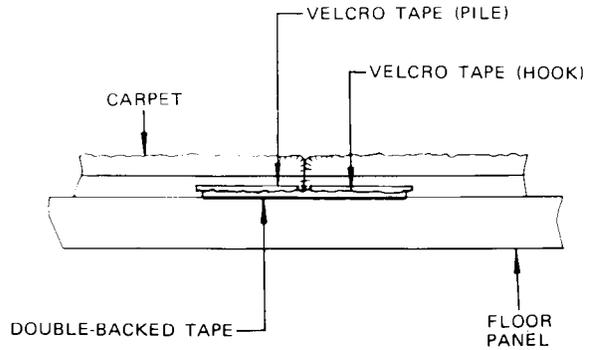
MAT TO CARPET



TYPICAL CARPET ATTACHMENT USING VELCRO TAPE



CARPET OVER  
 CENTER SEAT TRACK



CARPET ATTACHMENT NEAR LANDING GEAR VIEWER

**EFFECTIVITY**

PASSENGER/CARGO  
 CONVERTIBLE AIRPLANES

Carpet Installation  
 Figure 401 (Sheet 5)

EFFECTIVITY	ALL
-------------	-----

25-27-100

**BOEING**  
**737**   
MAINTENANCE MANUAL

- D. On Standard Passenger Airplanes, attach ends and edges of carpet section to adhesive tape on floor and in areas where viewers or access panels are located, attach edges of section to floor by joining velcro tape strips. On Passenger/Cargo Convertible Airplanes, install carpet sections by joining velcro tape strips at ends of sections to those on floor.

**NOTE:** Sections of carpet which adjoin mats should be inserted in the vinyl trim extrusion.

- E. Install seat track covers as required.  
F. On airplanes with New Look Interior, replace double-backed tape on carpet riser panels as required.

**NOTE:** Install 2-inch tape across top of panels and 1-inch tape vertically so that ends and outer edge of tape will be 1 inch from top and bottom of installed carpet segment and 1/4 inch from ends of carpet segment.

Omit vertical strip of 1-inch tape at aft end of carpet segment when installed immediately forward of aft service doors.

- G. Install sidewall carpets on airplanes with New Look Interior.  
(1) Place carpets in position on carpet riser panel, with top edge tucked under sidewall window panels, and press firmly against double-backed tape.  
(2) Place air return grille in position and secure with quick-release fasteners (Ref 25-21-315, Sidewall Air Return Grille).  
(3) Install retainer clips under sidewall retainer strips at aft service doors where carpet segments are installed immediately forward or aft of these doors.

EFFECTIVITY

ALL

25-27-100

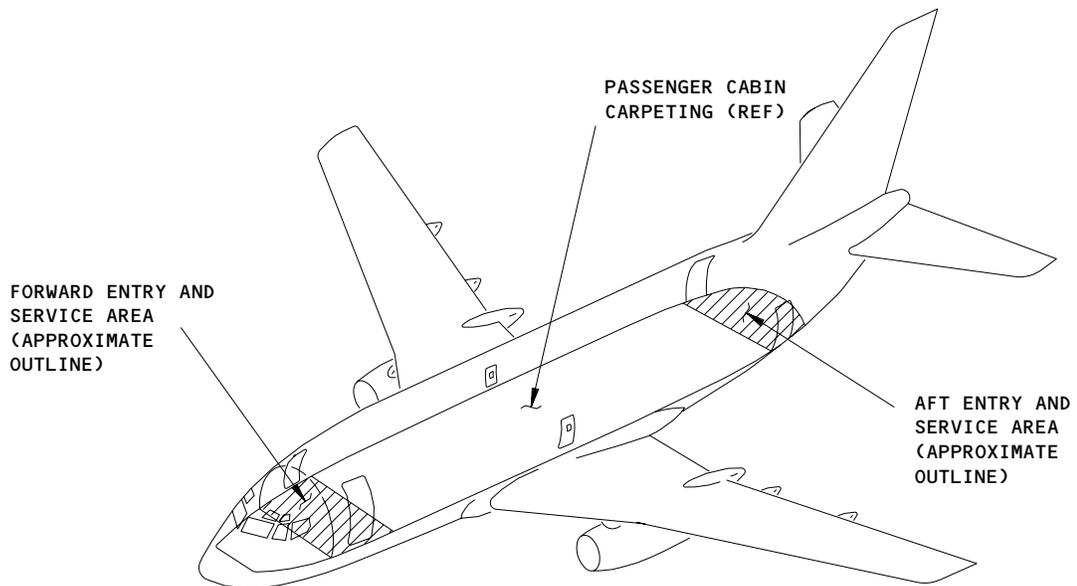
01

Page 407  
Dec 01/04

ENTRY AND SERVICE AREA FLOOR COVERING – DESCRIPTION AND OPERATION

1. General

- A. The floors in the entry and service areas in the forward and aft sections of the passenger cabin are covered with several mats and a floor pan (See figure 1).
- B. Vinyl mats are located in the forward and rear entry and service areas. These mats are bonded to the liquid barrier.
- C. On Passenger/Cargo Convertible Airplanes, an aluminum pan is installed in the aft entry area immediately inboard from the aft entry door. A vinyl mat, secured by double-backed tape, provides a nonskid surface on the upper side of the pan. The pan is secured to the floor by bolts and screws.
- D. Drains located in the entry and galley areas provide drainage overboard from these areas for water and other liquids introduced by weather or spillage.
- E. On Passenger/Cargo Convertible Airplanes, a separate mat is installed in the forward right coat closet and over the cabin floor air grilles. These mats are attached to the floor with double-backed tape, providing quick access to cabin floor air grilles.



Entry and Service Area Floor Covering  
 Figure 1

EFFECTIVITY	
	ALL

**25-27-200**

ENTRY AND SERVICE AREA FLOOR COVERING – REMOVAL/INSTALLATION

1. General

- A. Several individual mats are installed in the entry and service areas. Because the methods of installation and removal are generally similar for these mats, the procedures that follow describe a typical mat with local differences noted where applicable.
- B. The recommended method of corrosion prevention for the entry, galley and lavatory areas uses 18 inch wide Permacel 306 tape applied to the floor as a waterseal. The mat is secured to the waterseal with double-back tape.
- C. If Mylar sheet is used as a waterseal, refer to par. 6.C., optional method for bonding instructions.

**WARNING:** DO NOT GET SOLVENT IN YOUR MOUTH OR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE HAZARDOUS MATERIALS. REFER TO THE PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING PROCEDURES.

2. Equipment and Materials

- A. Materials for tape and mat installation:
  - (1) Solvent, Aliphatic Naphtha – TT-N-95 (Ref 20-30-31)
  - (2) Solvent, General Cleaning of Solvent – Resistant Organic Coatings (Series 82) (Ref AMM/SOPM 20-30-82)
  - (3) Solvent, General Purpose Cleaning, BMS 3-2 (Ref 20-30-31)
  - (4) Sealant, 30-079 Silicone (Ref 20-30-11)
  - (5) Tape, Permacel 306, 10 MIL, 18 inches wide (Ref 20-30-51)
  - (6) Tape, Permacel 306, 10 MIL, 3 inches wide (Ref 20-30-51)
  - (7) Tape, Double-back, 2 inches wide (Ref 20-30-51)
  - (8) Sealant, Pressure, Weather and Fuel Cavity, BMS 5-95, Class B, (Ref 20-30-11)
- B. Equipment and Material for Optional Bonded Mylar Waterseal, or Bonded Mat.
  - (1) Adhesive for Mylar, Pro-Seal 501 (BMS 5-31) (Ref 20-30-11)
  - (2) Adhesive. Foam Sheet, IM 2700 (Ref.20-30-11)
  - (3) Adhesive, Film Sheet, EP45 #X1 (Ref 20-30-11)
  - (4) Cement, Synthetic Rubber, Naphtha Soluble, EC1870, (BMS 5-55) (Ref 20-30-11)
  - (5) Mylar Film Tape, Protex 223-5, 5 MIL, 4 inches wide (Ref 20-30-51)
  - (6) Mylar Sheet, Type A, 5 MIL thick.
  - (7) Roller, Plastic, Metal or Hard Rubber 1-1/2 to 2 inches diameter.

3. Prepare to Remove Entry and Service Area Floor Covering

- A. Where installed, remove escape slide floor brackets (Ref. 25-61-331, or 25-61-332, Escape Slide Floor Brackets – Removal/Installation).
- B. Where installed, remove floor drains.
- C. Loosen or remove thresholds as required to free mats.

EFFECTIVITY

ALL

25-27-211

01

Page 401  
Dec 01/04

4. Remove Entry and Service Area Floor Covering

- A. Remove Entry Area Mat.
- (1) Pull mat free from edge retaining devices; remove sealant as required.
  - (2) Pull mat free from tape securing mat to material. Use care to avoid damage to waterseal.
- B. Remove Waterseal (if entire area is to be replaced).
- (1) Pull strips of Permacel tape from floor (if tape used as waterseal).
  - (2) Remove mylar sheets (if Mylar used as waterseal).
    - (a) Remove sealant from edges.
    - (b) Pull mylar from floor. If necessary, a plastic scraper may be used to assist in removing the mylar sheet.

5. Prepare to Install Entry and Service Area Floor Covering

- A. Prepare Waterseal Surface for Mat (if waterseal has not been removed and replaced).
- (1) Examine waterseal for cuts, tears, abrasion or other signs of deterioration.
  - (2) Repair waterseal if necessary (Ref 53-21-11).
  - (3) Clean waterseal as required with oil-free gauze or cheesecloth moistened with BMS 3-2 cleaner.
  - (4) Clean sealant from edge retaining devices. Do not allow solvent to get on waterseal or undisturbed sealant.
- B. Prepare Floor Panels for Waterseal (if waterseal has been removed).
- (1) Clean floor panels with aliphatic naphtha as follows:
    - (a) Apply naphtha with clean oil-free gauze, or cheesecloth.
    - (b) Rub surface to remove soil. Wipe up naphtha with more clean gauze or cheesecloth before it evaporates to assure clean dry surface free of any solvent.
  - (2) Protect floor tracks against corrosion (Ref. 51-21-91).
  - (3) After cleaning avoid any soiling of floor surface prior to application of waterseal. Protect as required.

6. Install Entry and Service Area Floor Covering

- A. Install Entry Area Mat (assumes non-removal, or prior installation of waterseal).

**NOTE:** On Passenger/Cargo Convertible Airplanes, the small mat covering the smoke chute grill near the forward service door must not be bonded in place. Also, all adhesive must clear barrier net tie-down covers by minimum of 3/4 inch.

- (1) Apply 2-inch wide double-back tape to floor around periphery and approximately every four inches across area to be covered by mat.

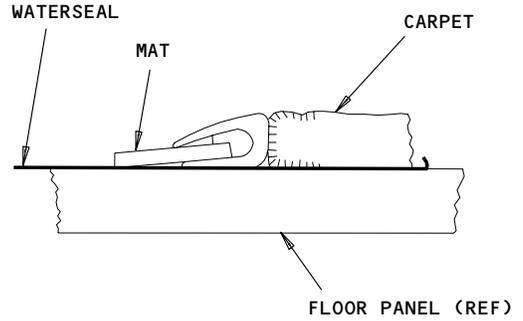
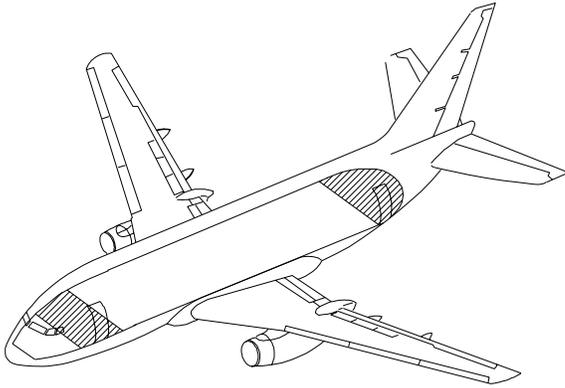
EFFECTIVITY

ALL

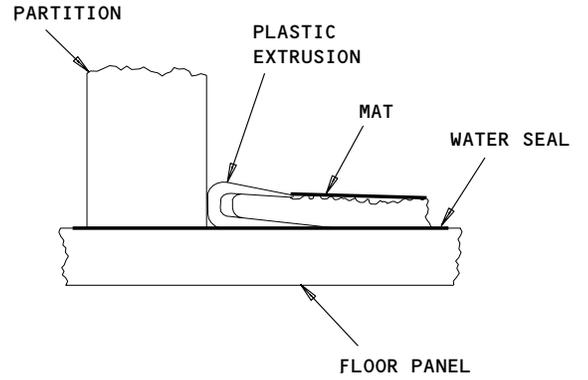
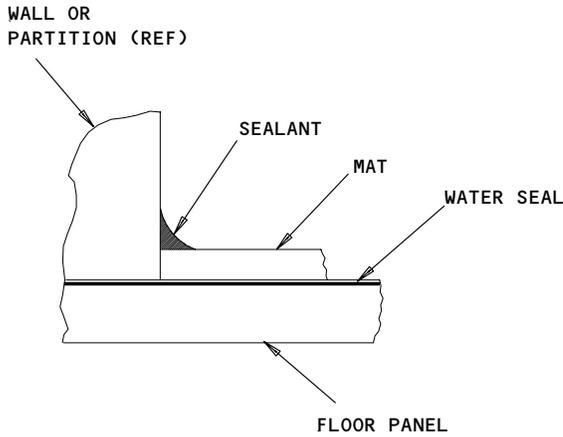
25-27-211

01

Page 402  
Dec 01/04

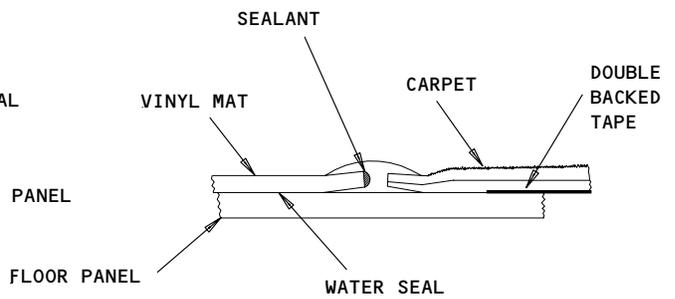
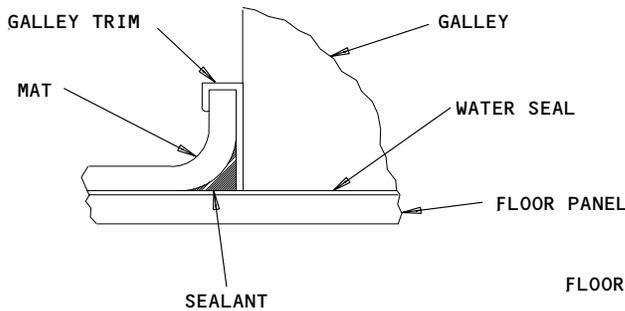


**MAT TO CARPET**



**MAT TO PARTITION (SEALED EDGE)**

**MAT TO PARTITION**



**MAT TO GALLEY**

**MAT TO CARPET JOINT IN AISLE**

Entry and Service Area Mat Installation  
 Figure 401 (Sheet 1)

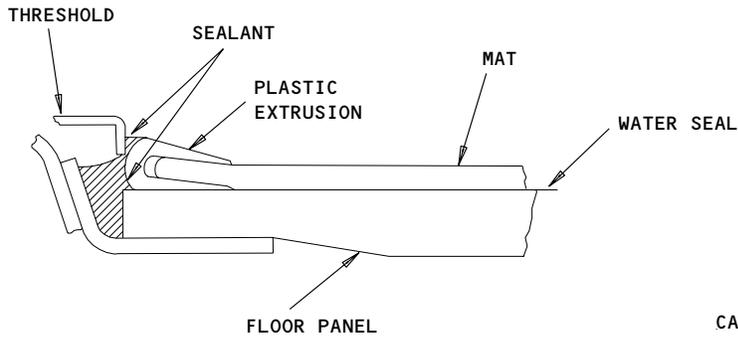
EFFECTIVITY	
	ALL

**25-27-211**

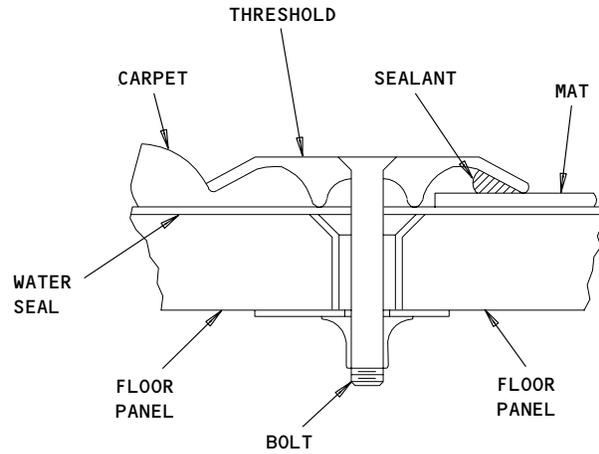
01

Page 403  
 Dec 01/04

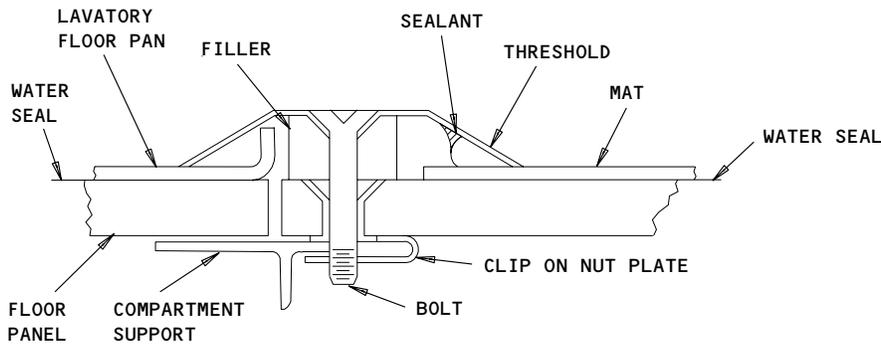
457380



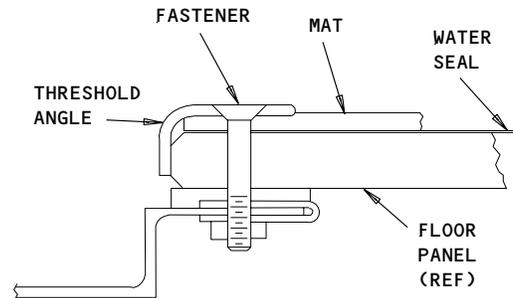
MAT TO ENTRY THRESHOLD



MAT TO CARPET JOINT



LAVATORY THRESHOLD INSTALLATION



CONTROL CABIN THRESHOLD

Entry and Service Area Mat Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY	ALL
-------------	-----

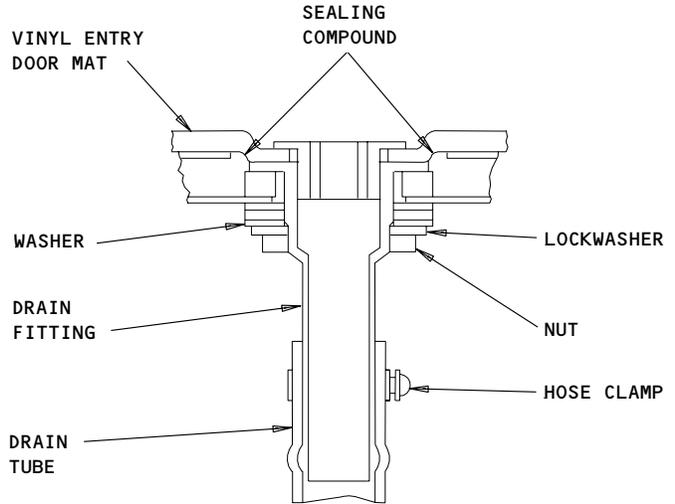
25-27-211

01

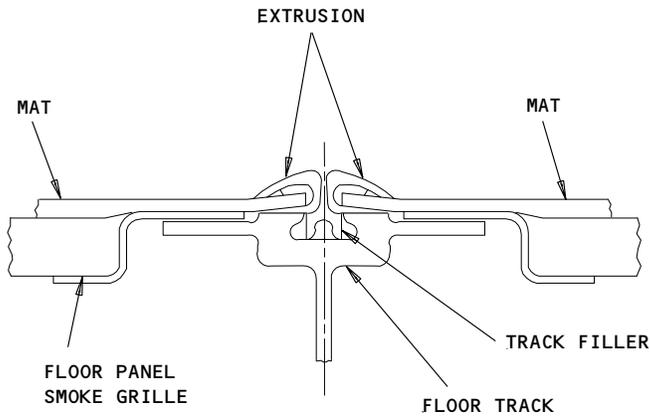
Page 404  
 Dec 01/04



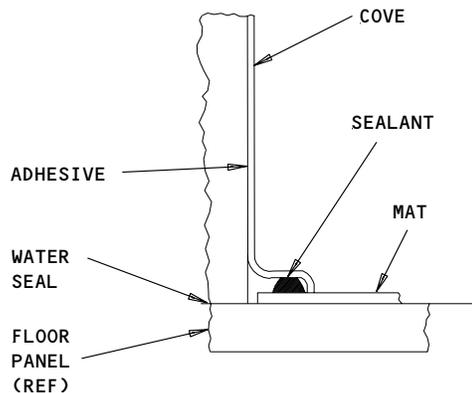
**MAINTENANCE MANUAL**



**DOOR MAT DRAIN**



**SMOKE GRILLE JOINT**



**COVE INSTALLATION (TYP)**



1 PASSENGER/CARGO  
CONVERTIBLE AIRPLANES

2 HATRACK TYPE INTERIOR

**Entry and Service Area Mat Installation  
Figure 401 (Sheet 3)**

EFFECTIVITY	ALL
-------------	-----

**25-27-211**

07

Page 405  
Dec 01/04

457401

- (2) Trim mat to size.

**NOTE:** Direction of manufactured roll should be perpendicular to centerline of airplane unless otherwise specified.

- (3) Inject sealant into edge retaining devices as required.  
(4) Apply mat and press down firmly on tape. Insert edges in edge retaining devices before any inserted sealant starts to harden.  
(5) Where carpets adjoin mats, insert carpets in edge retaining devices.
- B. Install Permacel Tape Waterseal (recommended waterseal method prior to installation of mat).
- (1) Apply 18-inch wide strips of Permacel 306 tape across entire area perpendicular to centerline of airplane. Overlap each strip a minimum of one inch. Press tape down firmly in all areas.  
(2) Edge seal each overlap with 30-079 silicone sealant. Optional method: Cover joint with 3-inch wide Permacel tape.  
(3) Where carpets adjoin mats, insert carpets in edge retaining devices.
- C. Install Bonded Mylar Waterseal (optional waterseal method prior to installation of mat).
- (1) General
- (a) Two methods of bonding waterseal to the floor are described in this procedure.
- 1) Pro-Seal 501 (BMS 5-31) liquid adhesive. In this method the adhesive is spread on the floor area and the mylar waterseal rolled down into the adhesive.  
2) Foam sheet adhesive IM2700. In this method the adhesive sheet is bonded to the underside of the mylar in a prior operation. Exposed side is covered by protective paper.
- (2) Prepare adhesive, liquid or sheet.
- (a) Pro-Seal 501 (BMS 5-31) liquid method.
- 1) Thoroughly mix 100 parts by weight of Pro-Seal 501F with 30 parts by weight of Pro-Seal 501A. Mix for approximately 5 minutes using a spatula or similar tool. Pro-Seal 501F/501A adhesive should not be thinned.
- NOTE:** Work life of prepared Pro-Seal 501F/501A is 15 minutes. The sequence of steps in preparation for bonding should be such that the adhesive can be applied and the mat bonded immediately after preparation of the adhesive.
- (b) Foam sheet adhesive, IM2700 method.
- 1) Hold foam adhesive in correct orientation with mylar.

EFFECTIVITY

ALL

25-27-211

01

Page 406  
Dec 01/04



## MAINTENANCE MANUAL

- 2) Apply tacky side to mylar at one edge and roll down toward other edge. Keep free edge of adhesive away from mylar to achieve smooth contact.
- 3) Press adhesive down firmly with overlapping roller strokes.

**NOTE:** IM2700 laminated mylar sheet can be stored at 40°F to 90°F up to 12 months before use.

- (3) Apply mylar to floor (Pro-Seal Method).
    - (a) Trim mylar strip to size.
    - (b) Spread approximately 50 grams per square foot (1.75 ounces) of adhesive to achieve bondline thickness of 0.010 to 0.030 inch over floor area.
    - (c) Position mylar and sweep or roll out air bubbles and excess adhesive to obtain smooth surface.
    - (d) Overlap mylar a minimum of 4 inches and apply adhesive in overlap. Remove squeeze-out adhesive and clean area with gauze dampened with solvent.
    - (e) Mylar should be undisturbed for 12 hours to prevent dimpling from pressure. Galley or mat may be installed after 24 hours.
  - (4) Apply mylar to floor (IM2700 method).
    - (a) Trim mylar strip to size.
    - (b) Peel protective paper from edge of adhesive sheet previously bonded to mylar.
    - (c) Position mylar along one edge and roll down progressively across floor to prevent air entrapment. Peel off protective paper as required.
    - (d) Press mylar down firmly with overlapping roller strokes.
    - (e) Butt mylar strips and cover joints with four-inch wide mylar film tape.
    - (f) Mylar may be walked on immediately.
- D. Install Bonded Mat (optional mat installation method substitute for double-backed tape).

**NOTE:** On Passenger/Cargo Convertible Airplanes, the small mat covering the smoke chute grill near the forward service door must not be bonded in place. Also, all adhesive must clear barrier net tie-down covers by minimum of 3/4 inch.

- (1) General
  - (a) Two methods of bonding mat to waterseal are described in this procedure.
    - 1) Pro-Seal 501 (BMS 5-31) liquid adhesive. In this method the adhesive is spread on the waterseal area and the mat rolled down into the adhesive.

EFFECTIVITY

ALL

25-27-211

01

Page 407  
Dec 01/04



## MAINTENANCE MANUAL

- 2) EP45 #X1 film sheet adhesive. In this method the adhesive sheet is bonded to the underside of the mat in a prior operation. Exposed side is covered by a protective paper.
- (2) Prepare adhesive, liquid or sheet.
  - (a) Pro-Seal 501 (BMS 5-31) liquid method.
    - 1) Thoroughly mix 100 parts by weight of Pro-Seal 501F with 30 parts by weight of Pro-Seal 501A. Mix for approximately 5 minutes using a spatula or similar tool. Pro-Seal 501F/501A adhesive should not be thinned.

NOTE: Work life of prepared Pro-Seal 501F/501A is 15 minutes. The sequence of steps in preparation for bonding should be such that the adhesive can be applied and the mat bonded immediately after preparation of the adhesive.

- (b) EP45 #X1 film sheet adhesive method.
  - 1) Thoroughly stir BMS 5-55 cement.
  - 2) Brush a primer coat of BMS 5-55 onto side of mat to be bonded to floor and allow to dry for 10 to 20 minutes.
  - 3) Brush a second primer coat of BMS 5-55 onto mat and allow to dry until tack-free. The drying will require a minimum of 60 minutes at room temperature, 65°F minimum.
  - 4) Starting at one edge of mat, apply tacky side of EP45 #X1 film adhesive to side of mat primed with BMS 5-55 cement.
  - 5) Roll adhesive down progressively toward other edge. Keep free edge of adhesive away from mat to achieve smooth contact.
  - 6) Press adhesive down firmly with overlapping roller strokes.

NOTE: EP45 #X1 laminated mat may be stored for 4 weeks at 40 to 90°F before installation.

- (3) Install mat (Pro-Seal 501 liquid method).

NOTE: It is recommended that a crew of two or more men install the mat.

- (a) Trim mat to size.

NOTE: Direction of manufactured roll shall be perpendicular to centerline of airplane unless otherwise specified.

- (b) Inject sealant into edge retaining devices as required.

EFFECTIVITY

ALL

25-27-211

01

Page 408  
Dec 01/04



## MAINTENANCE MANUAL

- (c) Spread approximately 50 grams per square foot (1.75 ounces) of adhesive to achieve bondline thickness of 0.010 to 0.030 inch over waterseal area. (Installation of mat must start immediately after spreading of adhesive).
  - (d) Position mat and sweep or roll out air bubbles and excess adhesive to obtain smooth surface.
  - (e) Remove squeeze-out adhesive and clean area with gauze dampened by solvent.
  - (f) Check all edges not retained by retaining devices to ensure there are no gaps or voids. Weight all exposed edges during curing period as required.
  - (g) Mat should be undisturbed for 12 hours to prevent dimpling from pressure.
- (4) Install mat (EP45 #X1 film adhesive method)
- (a) Peel protective paper from edge of adhesive sheet previously bonded to mat.
  - (b) Position mat along one edge and roll down progressively across floor to prevent air entrapment. Peel off protective paper as required.
  - (c) Press mat down firmly with overlapping roller strokes.
  - (d) Mat may be walked on immediately.
- (5) Where carpets adjoin mats insert carpets in edge retaining device.
- E. Attach Entry Mats
- (1) When replacing entry mats P/No's 30 x 30A or 30 x 24B attach as follows:
- (a) Coat and file pile of flotex/carpet area under mat with tretoband DR 200 and allow to dry.
  - (b) Attach mat to coated area with D/S tape Part No. 567.
  - (c) Change mat when flotex/carpet is changed.

### 7. Restore Airplane to Normal

- A. Install or tighten thresholds as required.
- B. Install retainer plate on edge of mat and drain trough.
- C. Install escape slide floor brackets adjacent to entry and service doors where required (Ref 25-61-332).
- D. Seal joints at corners of edge retaining devices and around edges of mat as required to ensure watertight surface.

**NOTE:** Use only BMS 3-2 general purpose cleaning solvents for final cleaning.

EFFECTIVITY

ALL

25-27-211

01

Page 409  
Dec 01/04

AFT ENTRY AREA FLOOR PAN – REMOVAL/INSTALLATION

1. General

- A. The floor pan assembly, installed immediately inboard of the aft entry door, consists of a formed and reinforced aluminum pan covered by a vinyl mat retained in place by double-backed tape. The concave underside of the pan assembly is filled with urethane foam so that the lower surface of the foam is level with the edge of the flanges and lower surface of the pan assembly. The bottom surface of the pan and urethane foam is fiberglass covered except in milled recess and chamfer areas. Bolts and screws are used to secure the pan assembly to the floor.

2. Equipment and Materials

- A. Adhesive, mylar and nylon – BMS 5-31 (Ref 20-30-11)  
B. Sealant, Pressure and Moisture – BMS 5-19, Class B or BMS 5-79 Class B (Ref 20-30-11).  
C. Solvent, General Purpose Cleaning – BMS 3-2 (Ref 20-30-31).

3. Remove Floor Pan (Fig. 401)

- A. Remove floor drains as required.  
B. Remove bolts and screws attaching floor pan to floor.  
C. Free pan from plastic extrusion between it and adjacent floor mat.  
D. Remove pan.  
E. If required, remove mat from top of pan assembly by pulling mat from double-backed tape.

4. Prepare for Installation of Floor Pan

- A. Examine liquid barrier for cuts, tears, abrasion or other signs of deterioration in pan installation area. Repair liquid barrier if necessary (Ref Chapter 53, Passenger Cabin Floor).  
B. Sweep all dirt and debris from floor pan installation area and clean around perimeter of area with solvent, to remove traces of old sealant.

**NOTE:** Use only BMS 3-2 general purpose cleaning solvent or equivalent for cleaning.

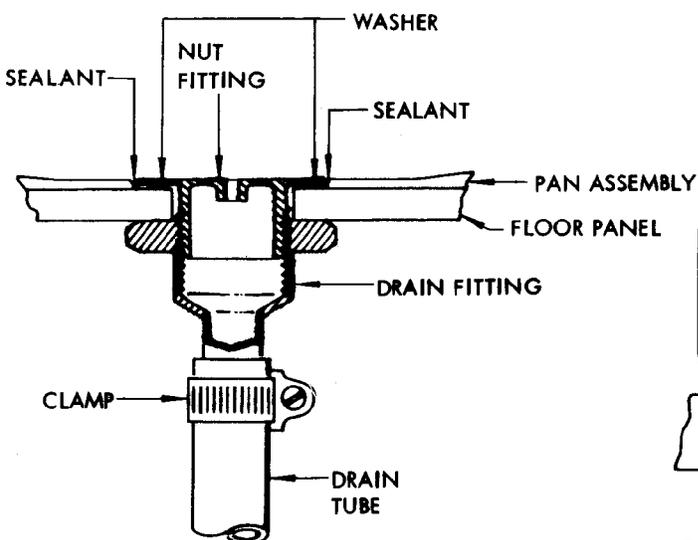
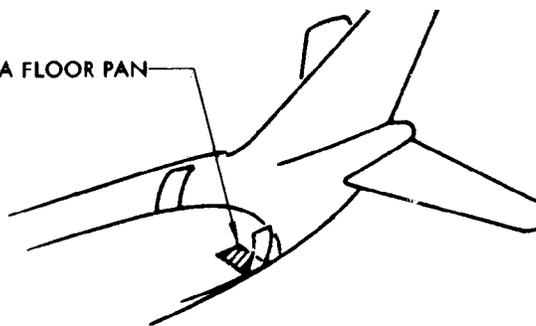
5. Install Floor Pan (Fig. 401).

- A. Install mat on upper surface of pan assembly if previously removed.  
(1) Replace double-backed tape on upper surface of pan as required.  
(2) Place mat in position. Check that mat adheres to double-backed tape.  
B. Place floor pan in installed position.  
C. Insert pan assembly in plastic extrusion between it and adjacent floor covering.  
D. Install bolts and screws securing pan assembly to floor.  
E. Install floor drains as required.  
F. Seal edge of pan assembly.

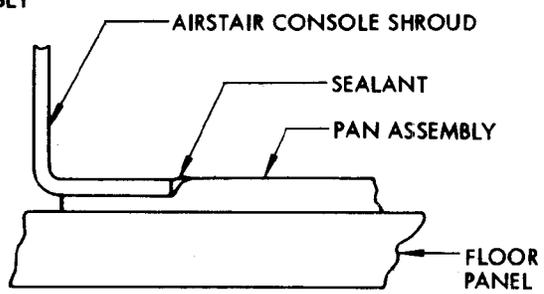
EFFECTIVITY  
Airplanes WITH Aft  
Airstairs

25-27-271

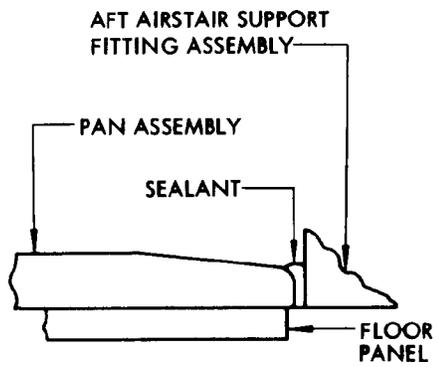
AFT ENTRY AREA FLOOR PAN



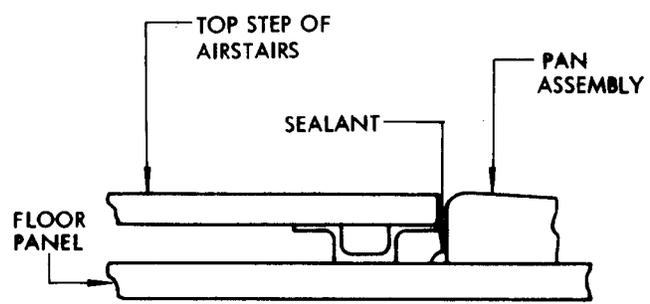
TYPICAL PAN DRAIN INSTALLATION



PAN TO AIRSTAIR CONSOLE SHROUD



PAN TO AFT AIRSTAIR SUPPORT FITTING ASSEMBLY



PAN TO TOP STEP OF AIRSTAIR

Aft Entry Area Floor Pan Installation  
 Figure 401

EFFECTIVITY  
 Airplanes WITH Aft  
 Airstairs

457407

25-27-271

**BOEING**  
**737**   
MAINTENANCE MANUAL

PASSENGER CABIN HATRACKS – DESCRIPTION AND OPERATON

1. General

- A. Hatracks, for inflight stowage of hats, coats, pillows, and other personal equipment, are installed above the seats along both sides of the cabin.
- B. Hatrack sections are made of fiberglass sheet covering, honeycomb core, fiberglass panel, polyurethane foam filler, and vinyl covering. The hatrack is attached to the sidewall on the outboard side and is supported at the inboard edge by the tension ties (Fig. 1).
- C. The hatrack sections are equipped with an inboard and outboard track to provide attachments for the passenger service units.

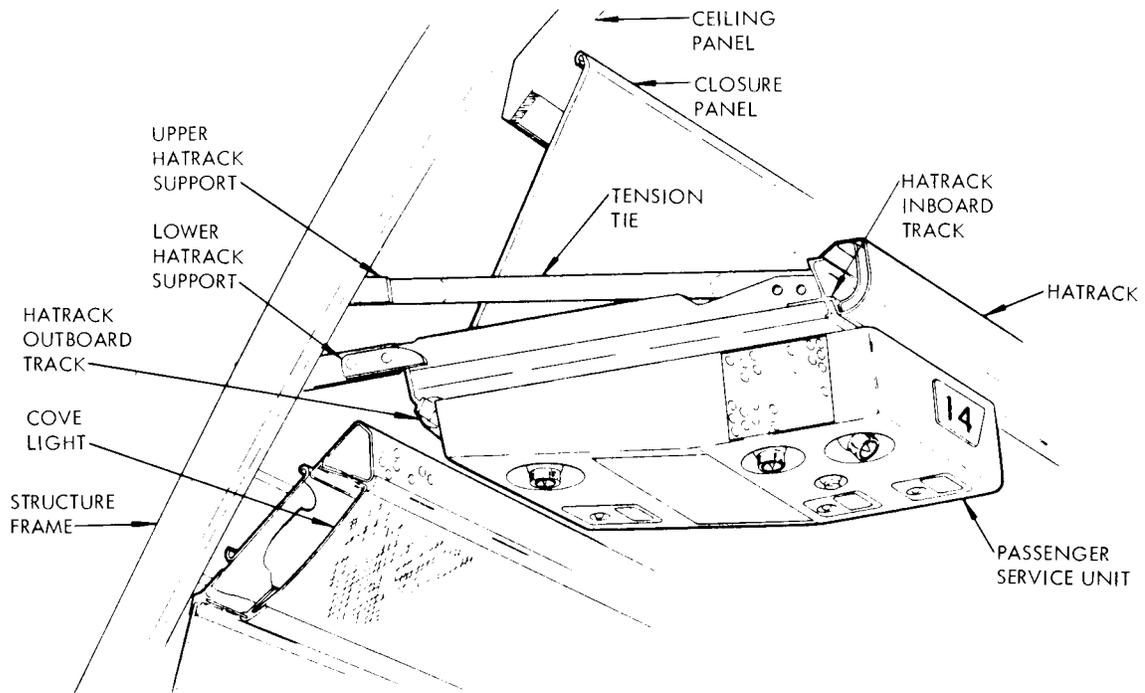
EFFECTIVITY

ALL

25-28-0

01

Page 1  
Dec 01/04



Hatracks  
 Figure 1

EFFECTIVITY  
 Standard Passenger  
 Airplanes without New Look  
 Interior

457420

25-28-0



## MAINTENANCE MANUAL

### HATRACKS - REMOVAL/INSTALLATION

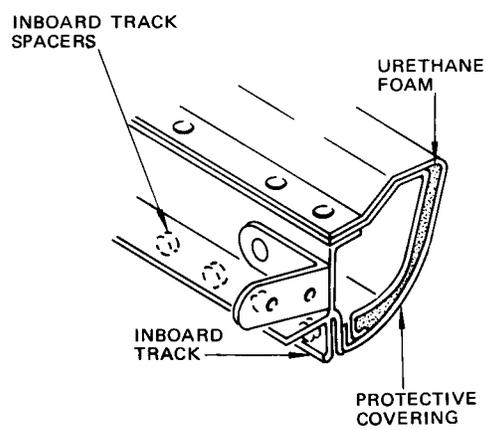
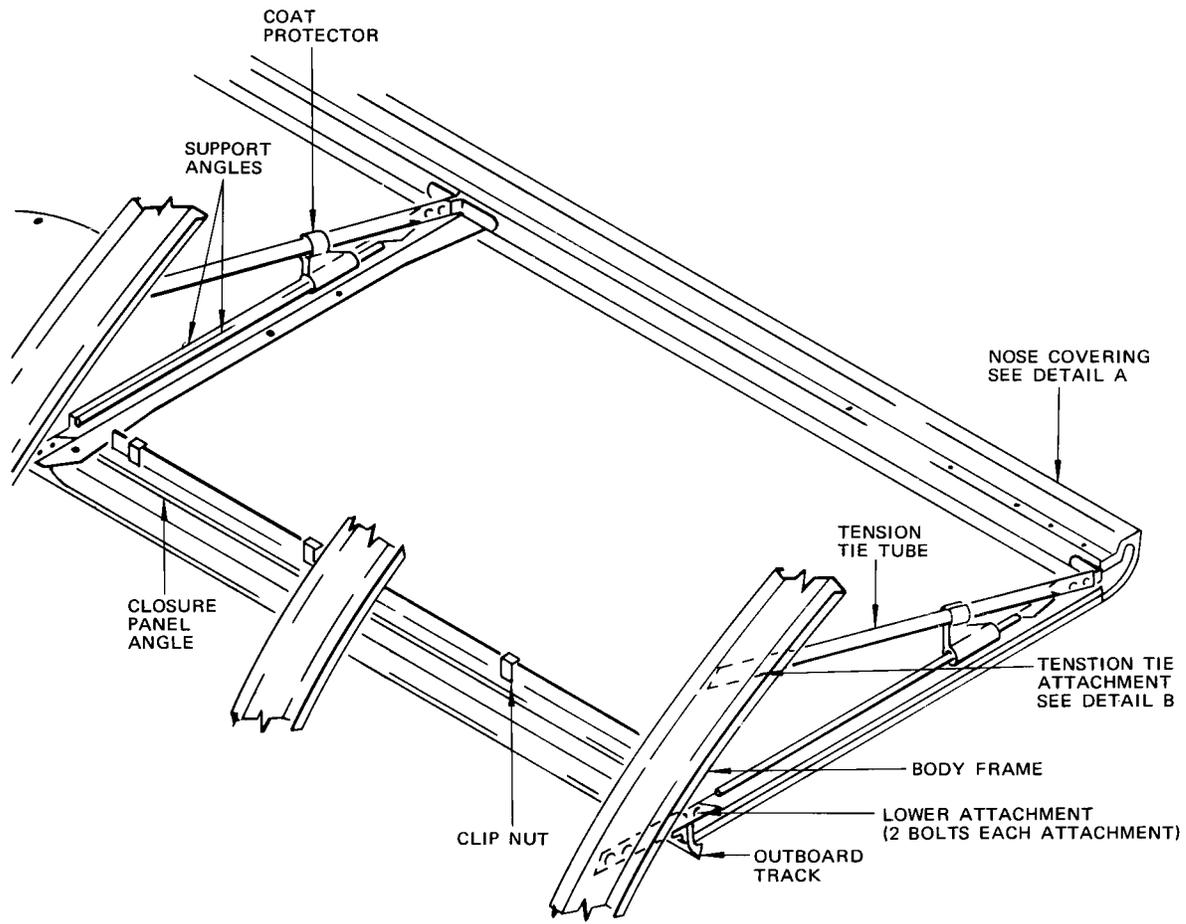
1. Remove Hatrack (See figure 401.)
  - A. Remove passenger service units and partitions as required.
  - B. Remove bolts that attach adjacent hatrack sections at support angles.
  - C. Remove closure panels as required. Refer to 25-28-11, Hatrack Closure Panels.
  - D. Remove two bolts at each lower attachment.
  - E. Remove bolt at outboard end of each tension tie tube.
  - F. Remove hatrack section.
2. Install Hatrack (See figure 401.)
  - A. Locate hatrack in proper position.
  - B. Install two bolts at each lower attachment.
  - C. Install bolt at outboard end of each tension tie tube.
  - D. Adjust tension tie tubes and tighten nut on bolt at inboard end of each tension tie tube to a torque of 250 to 360 inch-pounds.
  - E. Fasten adjacent sections at support angles.
  - F. Install closure panels. Refer to 25-28-1, Hatrack Closure Panels.
  - G. Install passenger service units and partitions where applicable.

EFFECTIVITY  
Standard Passenger  
Airplanes without New Look  
Interior

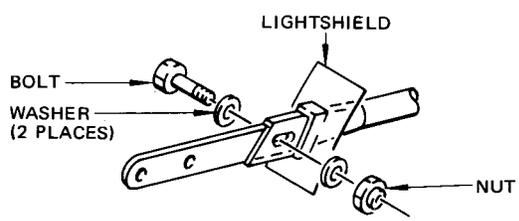
25-28-0

03

Page 401  
Dec 01/04



DETAIL A



DETAIL B

Hatrack Installation  
 Figure 401

457430  
 EFFECTIVITY  
 Standard Passenger  
 Airplanes without New Look  
 Interior

**25-28-0**  
 03 Page 402  
 Dec 01/04

PASSENGER CABIN HATRACKS – DESCRIPTION AND OPERATION

1. General

- A. Hatracks, for inflight stowage of hats, coats, pillows, and other personal equipment, are installed above the seats along both sides of the cabin (Fig. 1).
- B. Hatrack sections are attached to the sidewall on their outboard edges and are supported at their inboard edges by tension ties or folding mechanisms.
- C. The hatracks are of two types: fixed and folding. All sections are equipped with an inboard and outboard track to provide attachments for the passenger service units throughout the cabin.

2. Fixed Hatracks

A. General

- (1) Fixed hatracks are installed at the aft end of the cabin where they will not interfere with cargo handling. These hatracks are attached to the sidewall on the outboard edge and supported at the inboard edge by tension ties. (See figure 2.)

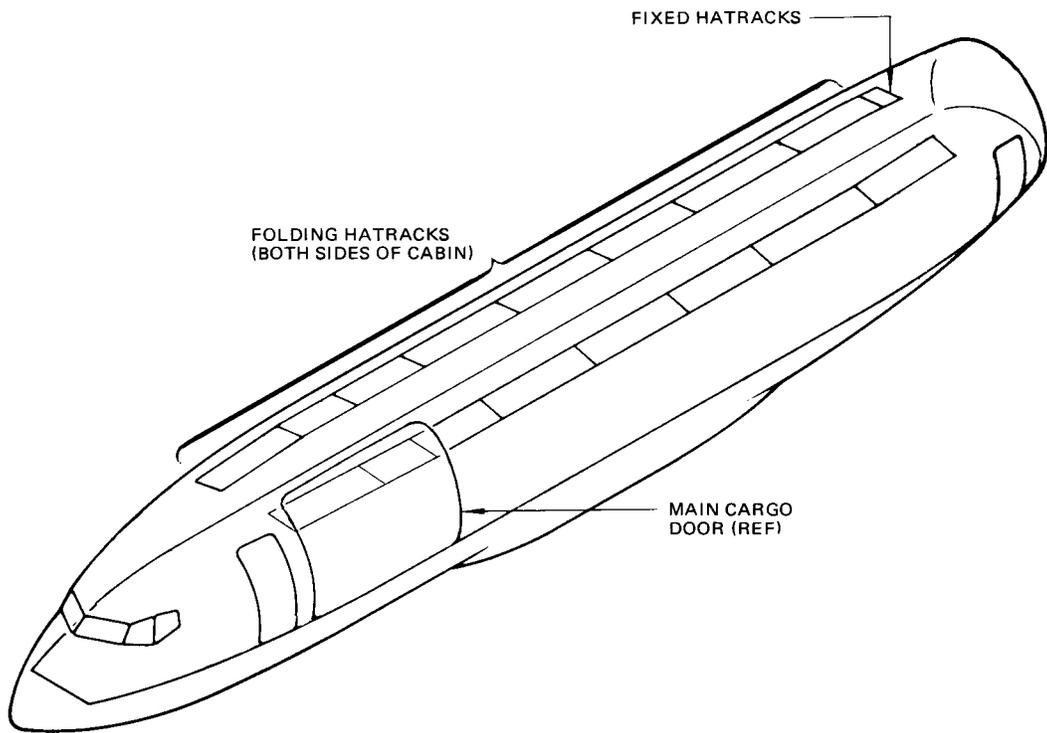
3. Folding Hatracks

A. General

- (1) Folding hatracks are installed in the cabin forward of the fixed hatracks. The folding hatrack sections are hinged at their outboard edges and supported at their inboard edges by folding mechanisms. (See figure 3.)
- (2) On the main cargo door, microswitches are located adjacent to the outboard edge of the hatrack sections. These switches are positioned so that they break the main cargo door operating power circuit continuity unless the hatracks on the door are folded up to the cargo position, thereby preventing any movement of the main cargo door with the hatrack down.
- (3) Hinged support panels for passenger service units are located on the forward hatrack section on each side of the cabin. This allows the passenger service units on these hatracks to be raised slightly, providing extra clearance for cargo handling.

B. Folding Mechanism

- (1) The folding mechanisms are telescopic and lock the hatracks in either of two positions: the normal attitude for passenger use, or raise to an angle parallel with the ceiling for cargo accommodation. When the hatrack is in the "passenger" position, the folding mechanism performs the same function as, and appears similar to, a tension tie. The hatrack folding mechanism is manually operated by a release handle at its inboard end, just above the bullnosed inboard edge of the hatrack. When this handle is pulled inboard the folding mechanism is unlocked allowing the hatrack to be raised or lowered manually.



Passenger Cabin Hatracks  
Figure 1

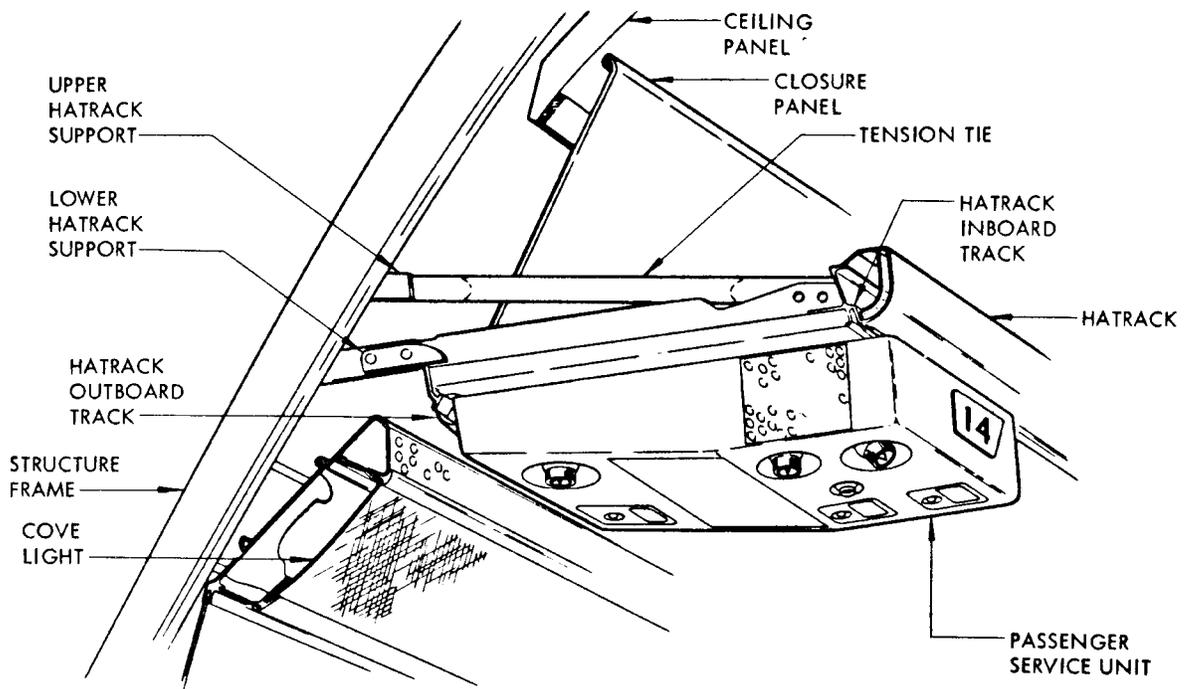
EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

457433

**25-28-01**

08

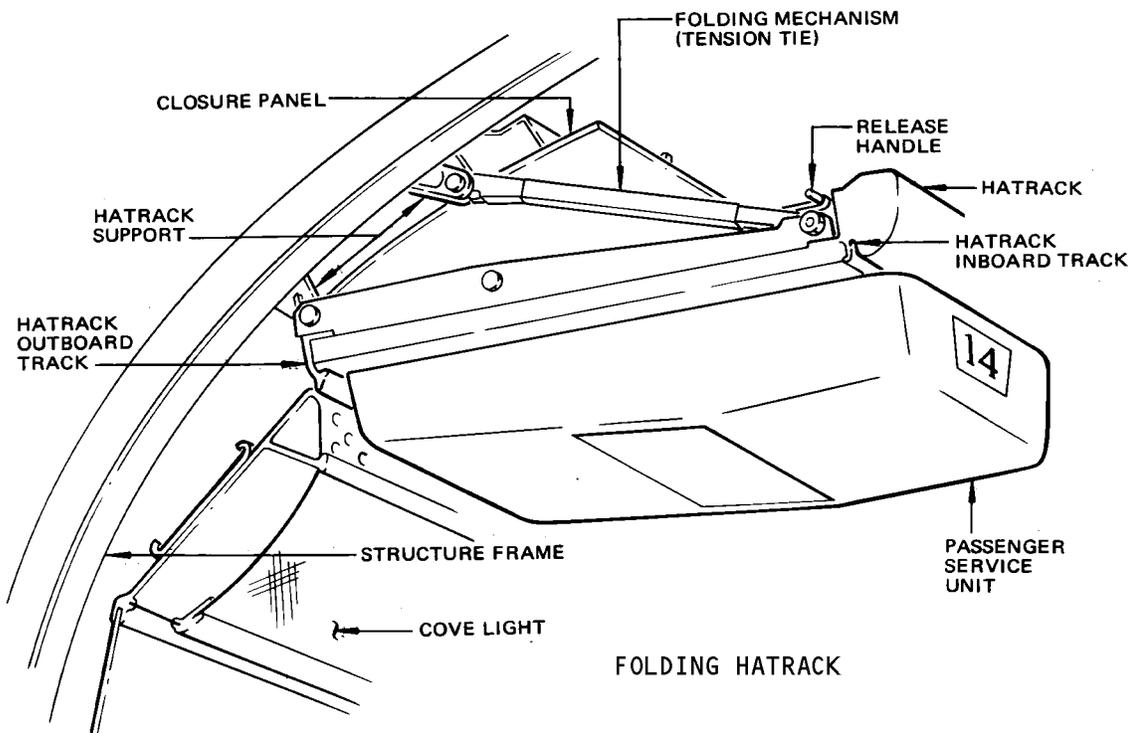
Page 2  
Aug 01/05



Fixed Hatracks  
 Figure 2

EFFECTIVITY  
 PASSENGER/CARGO CONVERTIBLE AIRPLANES  
 WITHOUT NEW LOOK INTERIOR

25-28-01



Folding Hatracks  
 Figure 3

EFFECTIVITY  
 PASSENGER/CARGO CONVERTIBLE AIRPLANES  
 WITHOUT NEW LOOK INTERIOR

457445

25-28-01

HATRACK CLOSURE PANELS – REMOVAL/INSTALLATION

1. General

- A. The closure panels extend between hatrack tension ties. The areas between closure panels are enclosed by closure mullion assemblies which are formed to fit around tension ties. The mullions are held in place by the closure panels and clips at the top of the upper mullion assemblies.

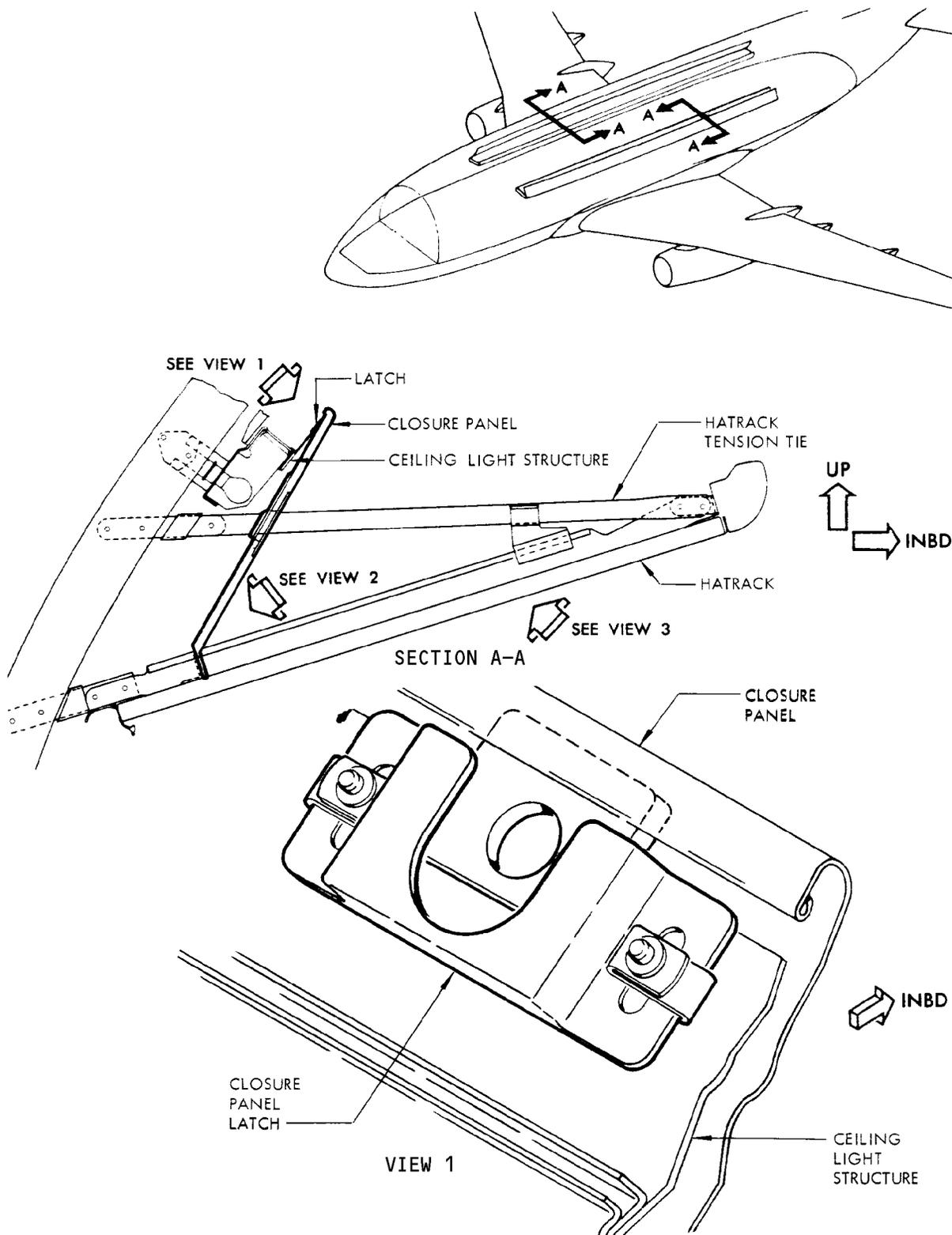
2. Remove Closure Panels

- A. Reach over top of closure panel and retract each closure panel latch to release upper edge of panel. (See figure 401.)
- B. Remove attachment screws along bottom of panel.
- C. Remove closure panel.

NOTE: Following removal of the closure panels, the mullion assemblies may be removed by disengaging the upper mullion clips from the ceiling light structure and sliding the mullions from the installed position.

3. Install Closure Panels

- A. If mullion assemblies have been removed, place them in the installed position (clipping the upper mullions to the ceiling light structure) before proceeding with the closure panel installation.
- B. Place closure panel in mounting position.
- C. Install attachment screws along bottom of panel.
- D. Push top edge of closure panel outboard and actuate spring-loaded latches to lock panel in place.



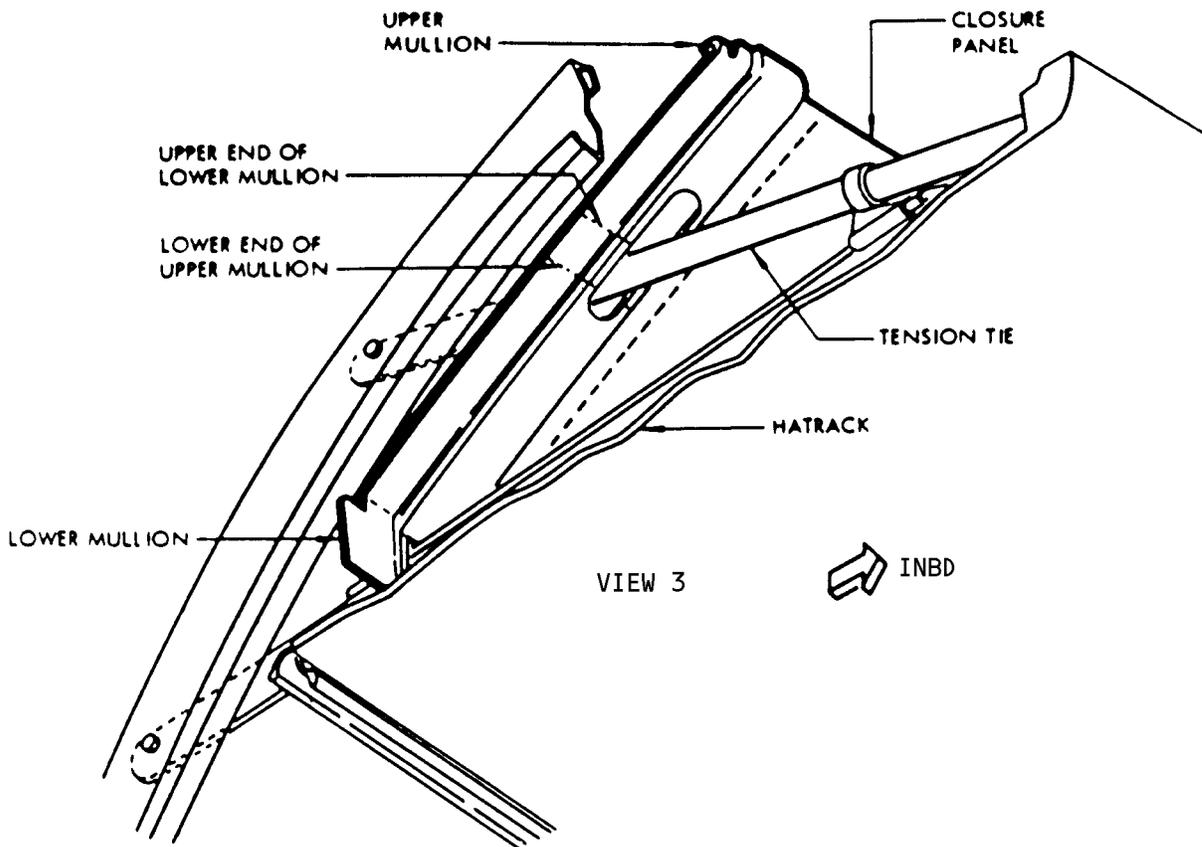
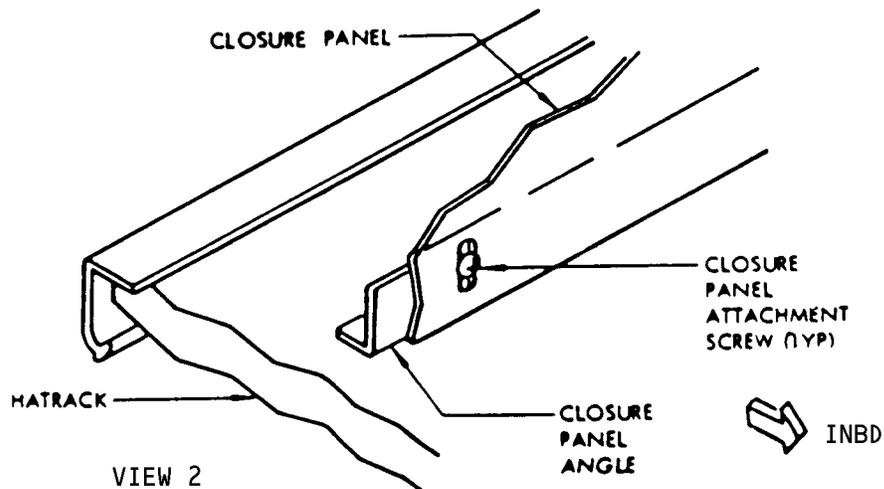
Hatrack Closure Panels Installation  
 Figure 401 (Sheet 1)

457447  
 EFFECTIVITY  
 Standard Passenger  
 Airplanes without New Look  
 Interior

25-28-11

04

Page 402  
 Dec 01/04



Hatrack Closure Panels Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 Standard Passenger  
 Airplanes without New Look  
 Interior

25-28-11

FOLDING HATRACK CLOSURE PANELS – REMOVAL/INSTALLATION

1. General

A. The closure panels extend between hatrack folding mechanisms. The areas between closure panels are enclosed by closure mullion assemblies which are formed to fit around folding mechanisms. The mullions are held in place by the closure panels and clips at the top of the upper mullion assemblies.

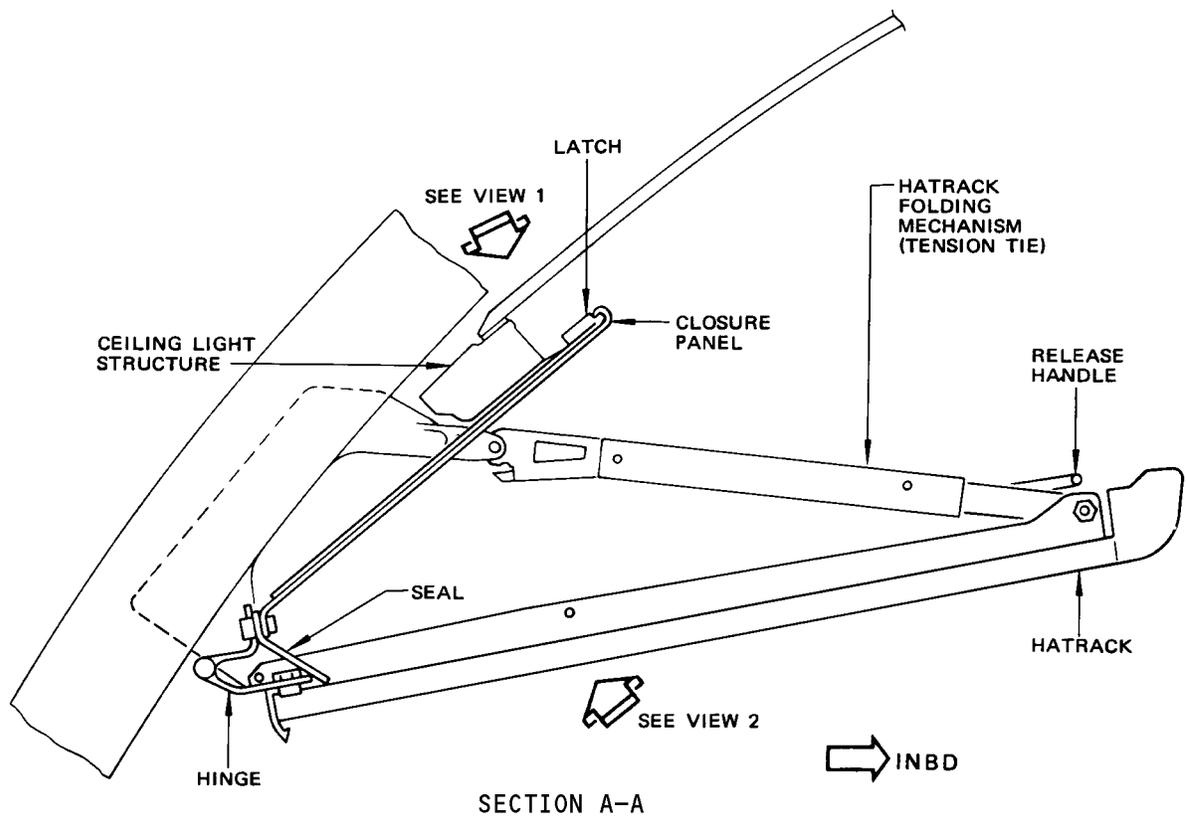
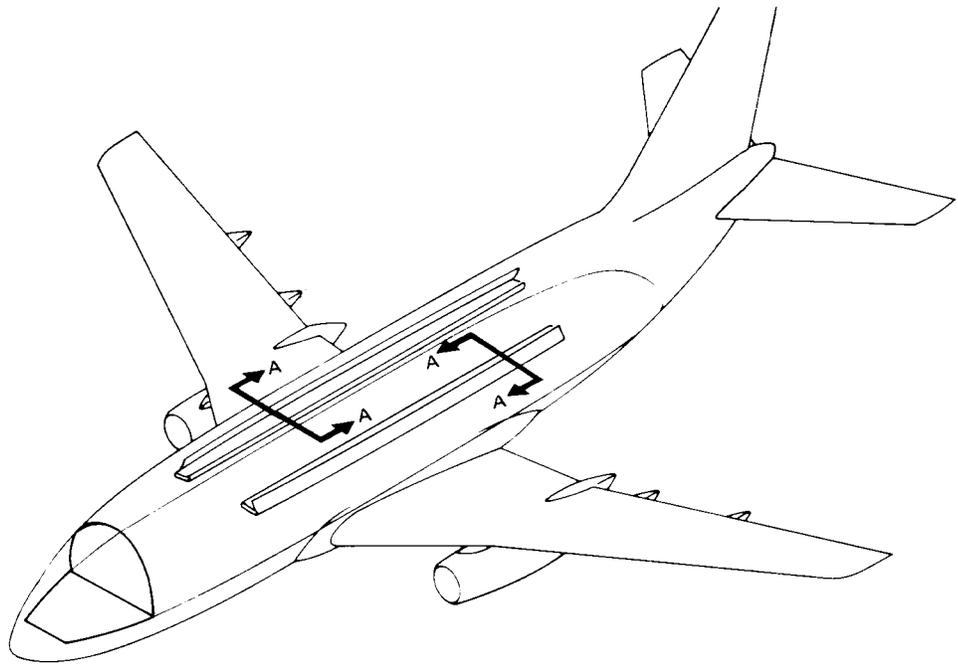
2. Remove Closure Panels

- A. Reach over top of closure panel and retract each closure panel latch to release upper edge of panel (Fig. 401).
- B. Remove screws along bottom of panel attaching panel to mullion assemblies and to hinges on outboard edge of hatrack.
- C. Remove closure panel.

**NOTE:** Following removal of the closure panels, the mullion assemblies may be removed by disengaging the upper mullion clips from the ceiling light structure and sliding the mullions from the installed position.

3. Install Closure Panels

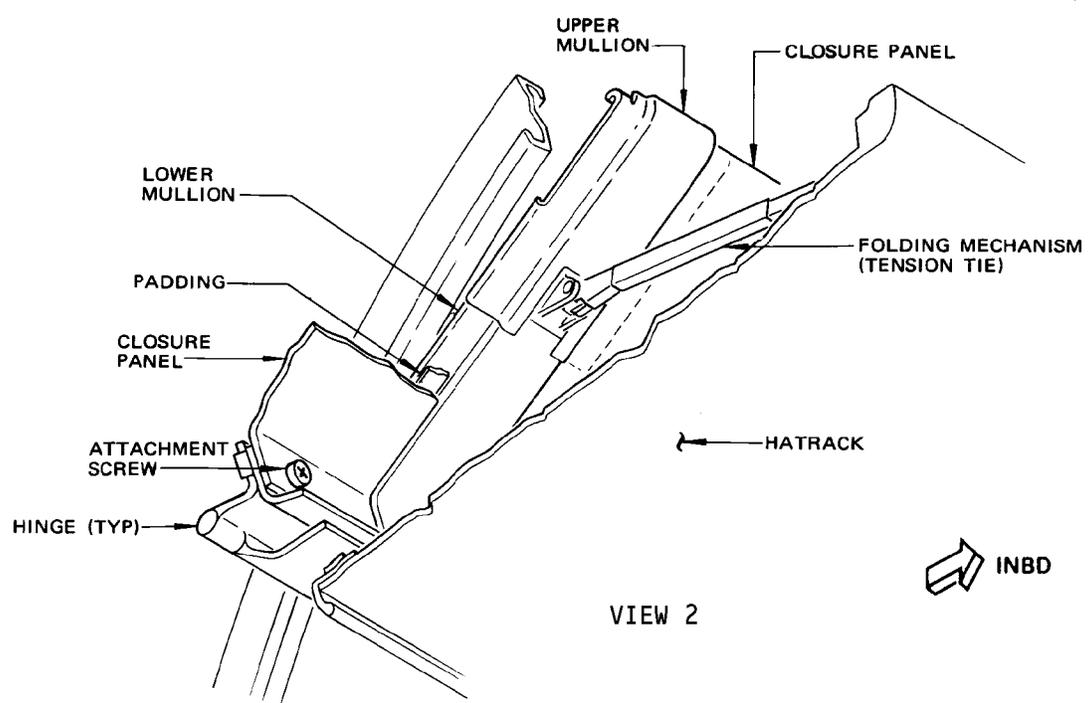
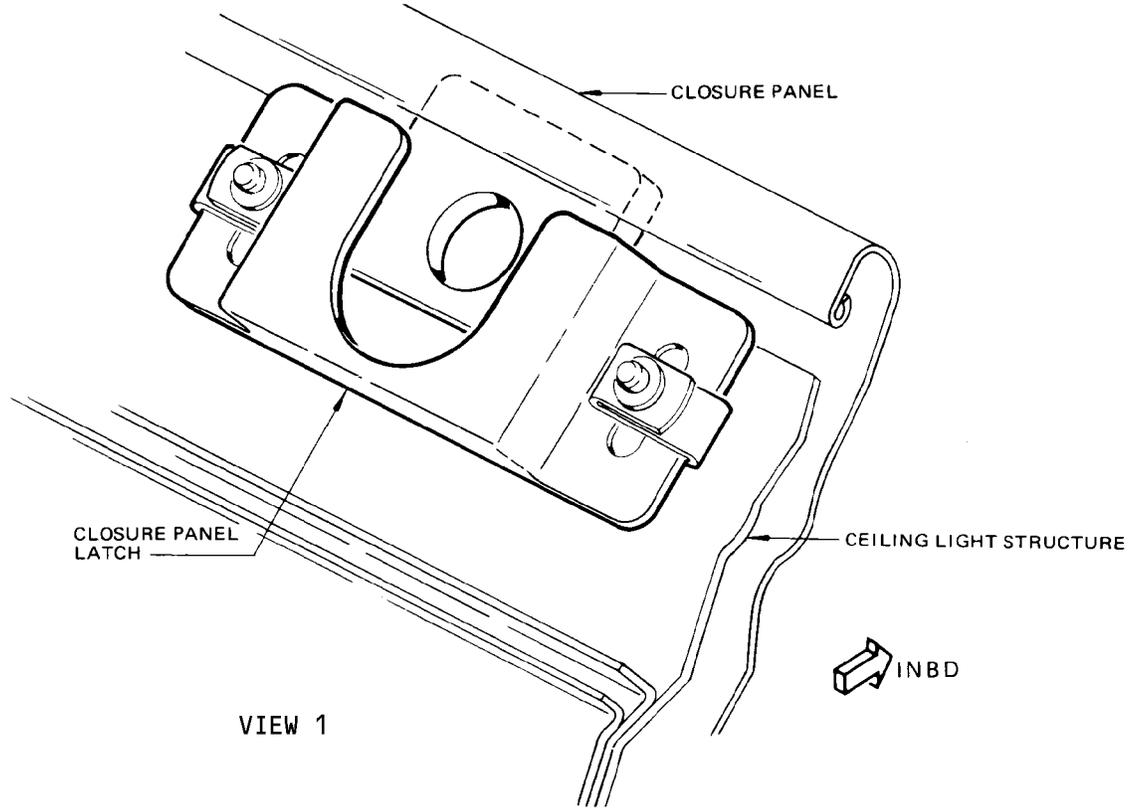
- A. If mullion assemblies have been removed, place them in the installed position (clipping the upper mullions to the ceiling light structure) before proceeding with the closure panel installation.
- B. Place closure panel in mounting position with seal at bottom folded to lay on top outboard edge of hatrack.
- C. Install attachment screws along bottom of panel.
- D. Push top edge of closure panel outboard and actuate spring-loaded latches to lock panel in place.



Folding Hatrack Closure Panel Installation  
 Figure 401 (Sheet 1)

457449 EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes without New Look  
 Interior

**25-28-12**



Folding Hatrack Closure Panel Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes without New Look  
 Interior

25-28-12

457452

PASSENGER CABIN TEMPERATURE SENSOR AIR INLET GRILLE - REMOVAL/INSTALLATION

1. General

- A. Maintaining unobstructed flow of cabin air around the passenger cabin temperature sensor is necessary for optimum operation of the temperature control system. For this reason it is essential to keep the sensor air inlet grille clean.
- B. In order to clean the grille, it must be removed from the hatrack inboard edge (bullnose). To avoid possibility of damaging the grille on removal, a simple tool may be fabricated from either a thin piece of spring steel or heat treated aluminum (Fig. 401).

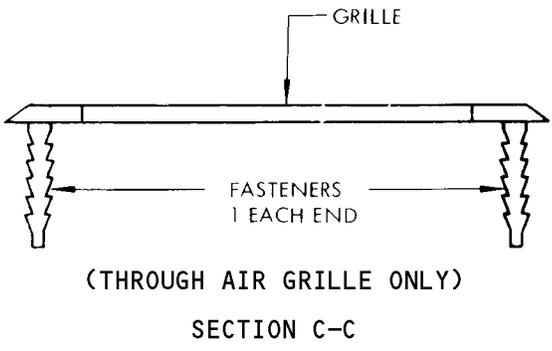
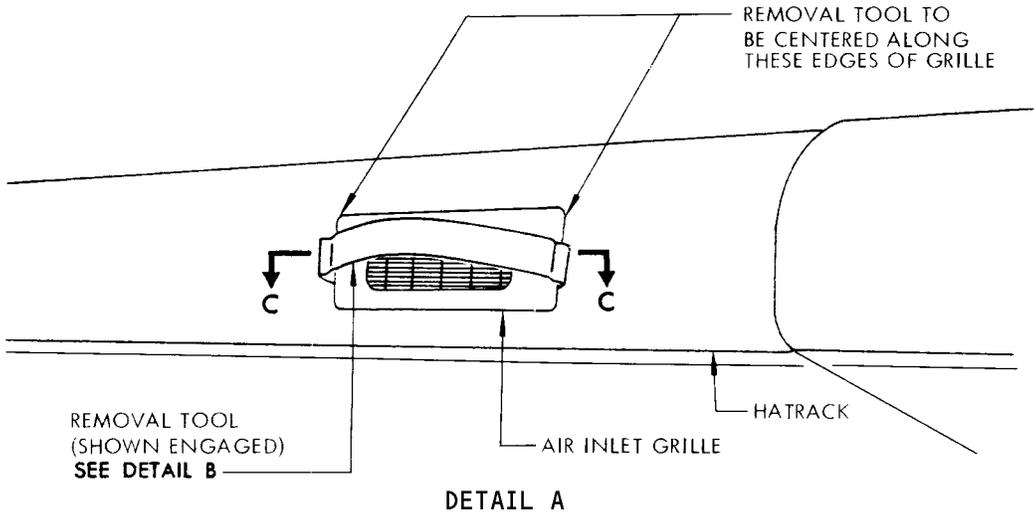
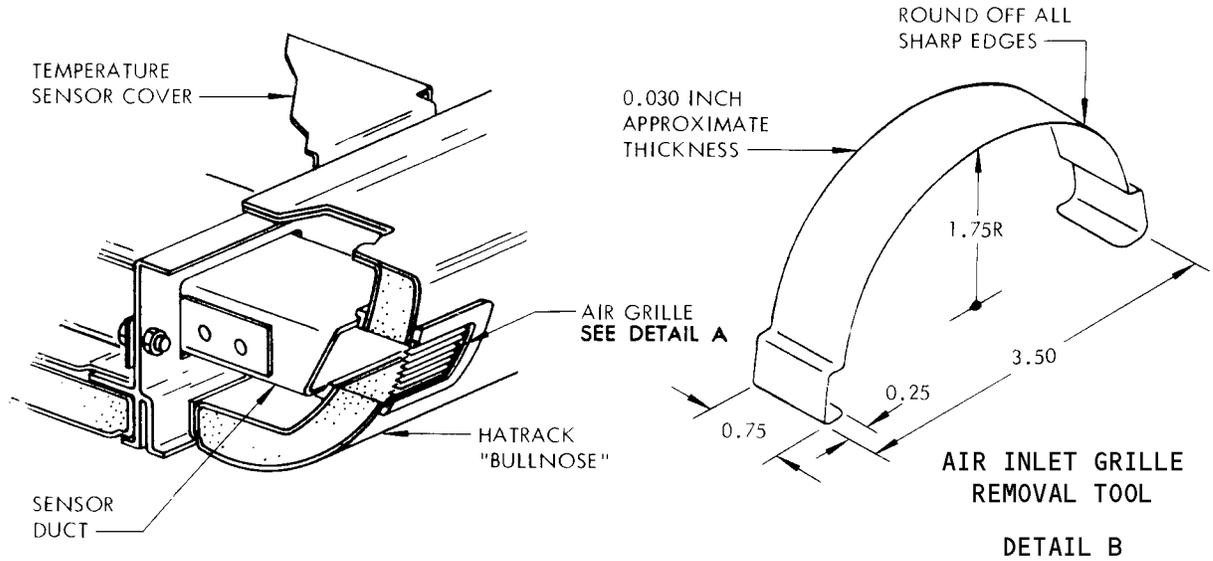
2. Remove Air Inlet Grille

- A. Insert tabs of tool between bullnose and flange of grille. Center tool with respect to the grille vertical edges. Grasp center of tool, and pull straight out away from bullnose. Be careful that force exerted is approximately the same on both ends of the grille.

**CAUTION:** STUDS ON THE GRILLE FIT INTO FASTENERS IN THE BULLNOSE. UNLESS THE FORCE IS EVENLY DISTRIBUTED, THE STUDS MAY BE BROKEN AND DAMAGE THE GRILLE BEYOND REPAIR.

3. Install Air Inlet Grille

- A. Locate grille so that studs are in line with fasteners and press evenly toward bullnose until flanges are flush with bullnose.



Passenger Cabin Temperature  
 Figure 401

EFFECTIVITY  
 Airplanes without New Look  
 Interior

**25-28-21**

457456

FOLDING HATRACKS – MAINTENANCE PRACTICES

1. General

- A. The maintenance practices included in this section (201–299 page block) are general maintenance practices which do not definitely fall within a specific category. Other maintenance instructions, such as Removal/Installation are provided in the applicable page blocks.
- B. To convert the folding hatracks to the cargo position they are manually raised and stowed against the ceiling. (See figure 201.)

2. Convert Hatracks to Cargo Configuration

- A. When converting the airplane to a combined configuration containing both passengers and cargo, on passenger service units of hatrack sections being folded, close all cool air louvers, switch off all reading lights and apply adhesive tape to secure oxygen mask doors closed.

**NOTE:** Application of adhesive tape is recommended though not mandatory. If no tape is applied, and if the pressure latches should operate while the hatrack is raised, the oxygen masks will fall from the passenger service units. This would cause no harm but could waste much time.

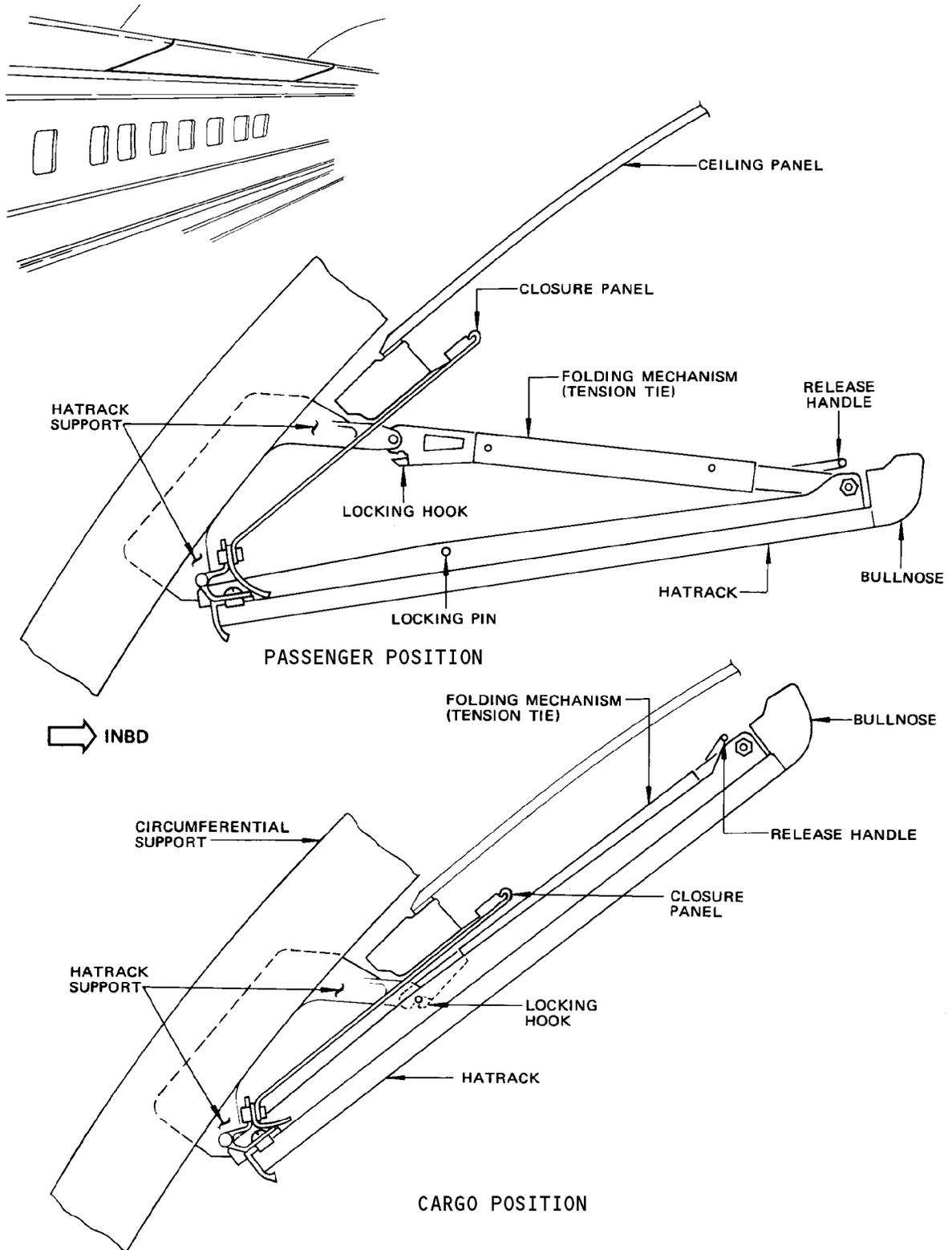
- B. If a passenger service unit is installed across the joint between the hatrack section being raised and an adjacent section, it must be removed or relocated to clear the joint. (Refer to 25–23–11, Passenger Service Units.)
- C. On forward hatrack section on each side of cabin, raise inboard edge of hinged panels supporting passenger service units to "cargo" position to provide extra clearance for cargo handling and storage. (See figure 201.)
  - (1) Release quarter–turn fastener at each end of panel support angle.
  - (2) Raise inboard edge of hinged passenger service unit mounting panel until supporting linkage locks in up or "cargo" position.
- D. Withdraw slide bolts connecting bullnosed inboard edges of hatrack sections to each other and stow slide bolt handle in handle stowage clip. (Bolts are accessible above inboard edges of hatracks.)
- E. Pull release handles on each hatrack inboard to unlock telescoping folding mechanism and raise inboard edge of hatrack until folding mechanism locks hatrack in folded or cargo position.

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

25–28–31

01

Page 201  
Dec 01/04



Hatrack Conversion  
 Figure 201 (Sheet 1)

EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

457457

**25-28-31**

01

Page 202  
 Dec 01/04

**BOEING**  
**737**   
MAINTENANCE MANUAL

3. Convert Hatracks to Passenger Configuration (See figure 401.)

- A. To unlock folding mechanism reach over hatrack inboard edge and pull release handles inboard while exerting slight upward pressure on bullnose. Lower hatrack (handle should be released while lowering hatrack) until folding mechanism locks hatrack in down position.

**NOTE:** Release handle locations are indicated by small arrowhead marks on inboard face of hatrack bullnose.

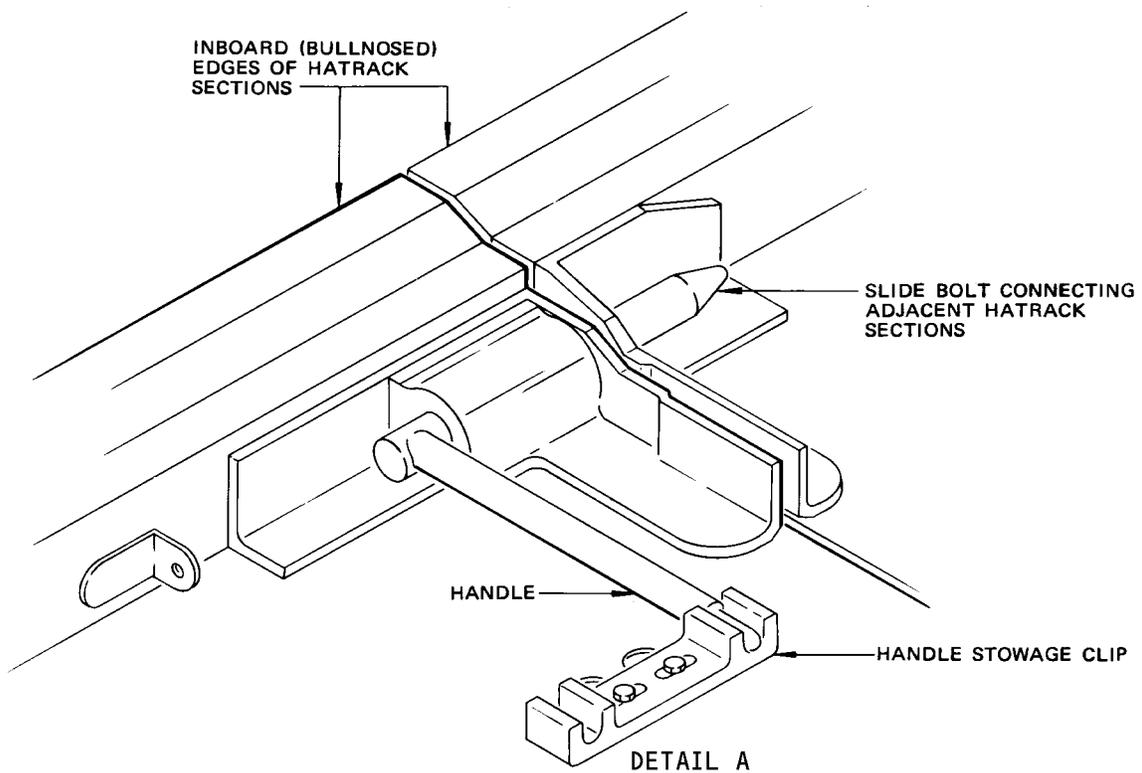
- B. Engage slide bolts connecting bullnosed inboard edges of hatrack sections to each other.
- C. Install or relocate any service units which were removed or relocated to clear joints between hatrack sections. (Refer to 25-23-11, Passenger Service Unit.)
- D. Push outboard on "ear" of panel support linkage to release linkage from its extended position and lower passenger service units on forward hatrack section on each side of cabin to passenger position. Engage quarter-turn fastener at each end panel support angle.
- E. Check that no adhesive tape or other material remains which might prevent passenger service unit oxygen mask doors from opening.

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes

25-28-31

01

Page 203  
Dec 01/04



Hatrack Conversion  
 Figure 201 (Sheet 2)

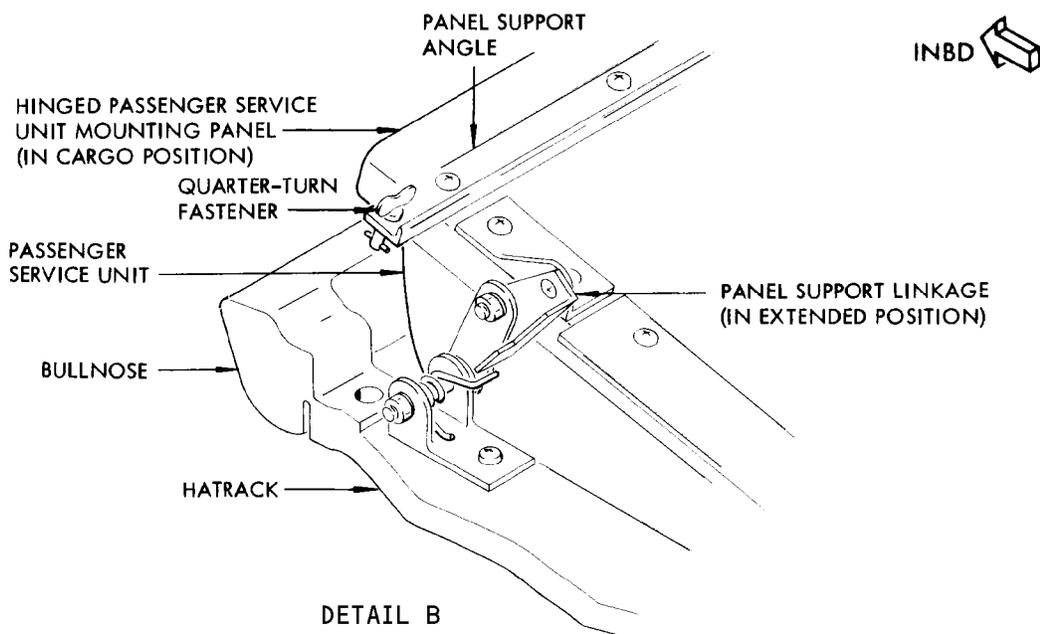
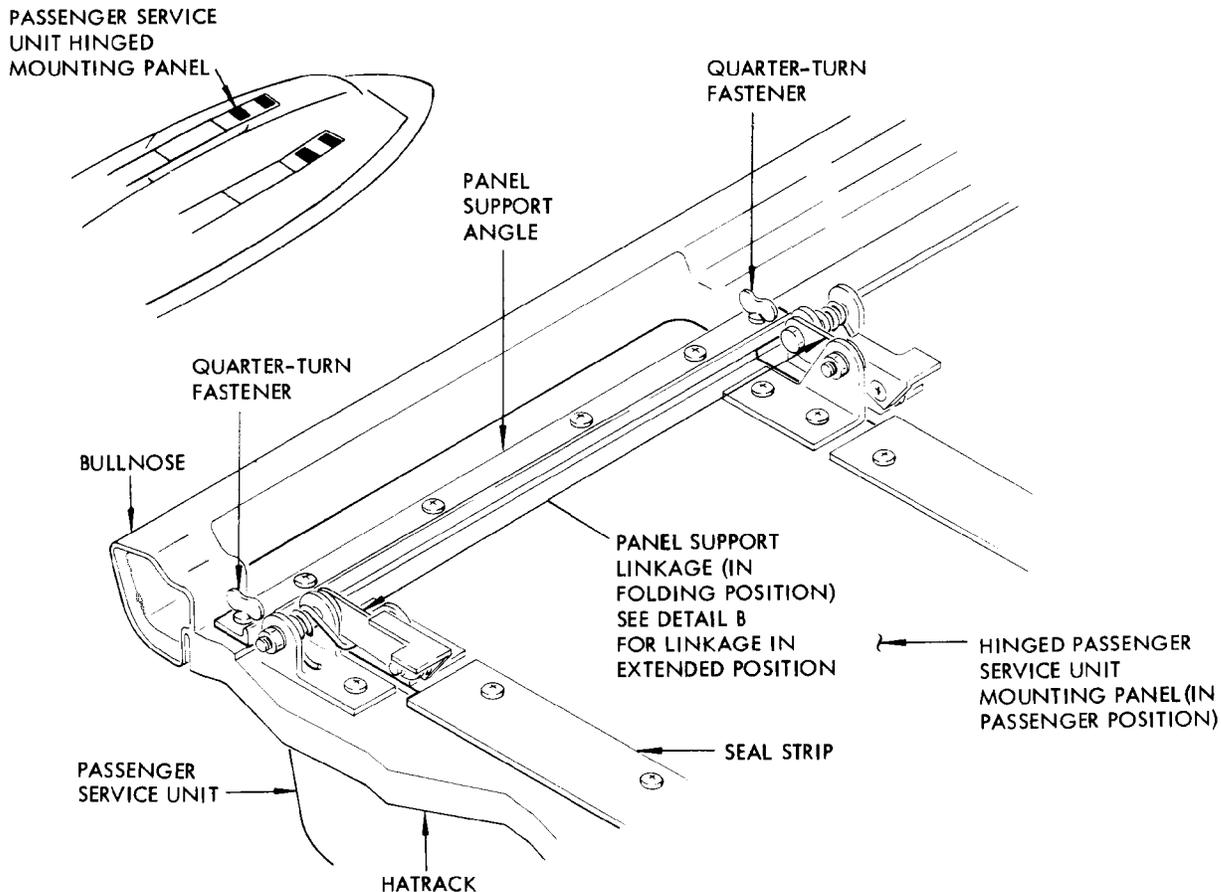
EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

457460

**25-28-31**

01

Page 204  
 Dec 01/04



Hatrack Conversion  
 Figure 201 (Sheet 3)

EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes

**25-28-31**

FOLDING HATRACKS – REMOVAL/INSTALLATION

1. General

- A. The removal of the hatracks is not required to convert the airplane to a cargo configuration, however the following instructions are provided in the event that replacement of a hatrack section should become necessary.
- B. When the hatracks are originally installed the attachments of each section are individually adjusted so that the service unit tracks and connecting slide bolts throughout the whole series are in proper alignment. If adjustments should be required when installing a new hatrack section, refer to 25-28-31, Adjustment/Test (501-599 page block).

2. Prepare to Remove Hatrack

- A. Remove passenger service units as required (Ref 25-23-11, Passenger Service Units).
- B. Remove any emergency equipment installed on upper surface of hatrack and retain for installation on hatrack to be installed.
- C. If installed, disconnect passenger cabin temperature sensor electrical connectors and exhaust tube (Fig. 401).
- D. If installed, release fasteners securing partitions to hatracks. Remove partitions if required.

3. Remove Hatrack

- A. Withdraw slide bolts connecting hatrack sections together.

NOTE: Cargo door hatrack does not have connection to adjacent hatrack sections.

- B. When hatrack closure panels are fastened to hatracks, remove screws fastening closure panels to hinges at outboard edge of hatracks (Ref 25-28-12, Folding Hatrack Closure Panels).
- C. Remove retaining ring from upper support pin.
- D. Support inboard side of hatrack and remove upper support pin from outboard end of folding mechanism and hatrack support.

NOTE: After hatrack removal insert upper support pin in hatrack support and install retaining ring to prevent loss of hardware.

- E. Support hatrack and disconnect hatrack outboard hinge support fittings by removing attachment bolts, nuts, and washers.
- F. Remove hatrack.
- G. If required, remove nut, spacers, and eccentric bolt attaching folding mechanism to hatrack and remove folding mechanism.

4. Install Hatrack

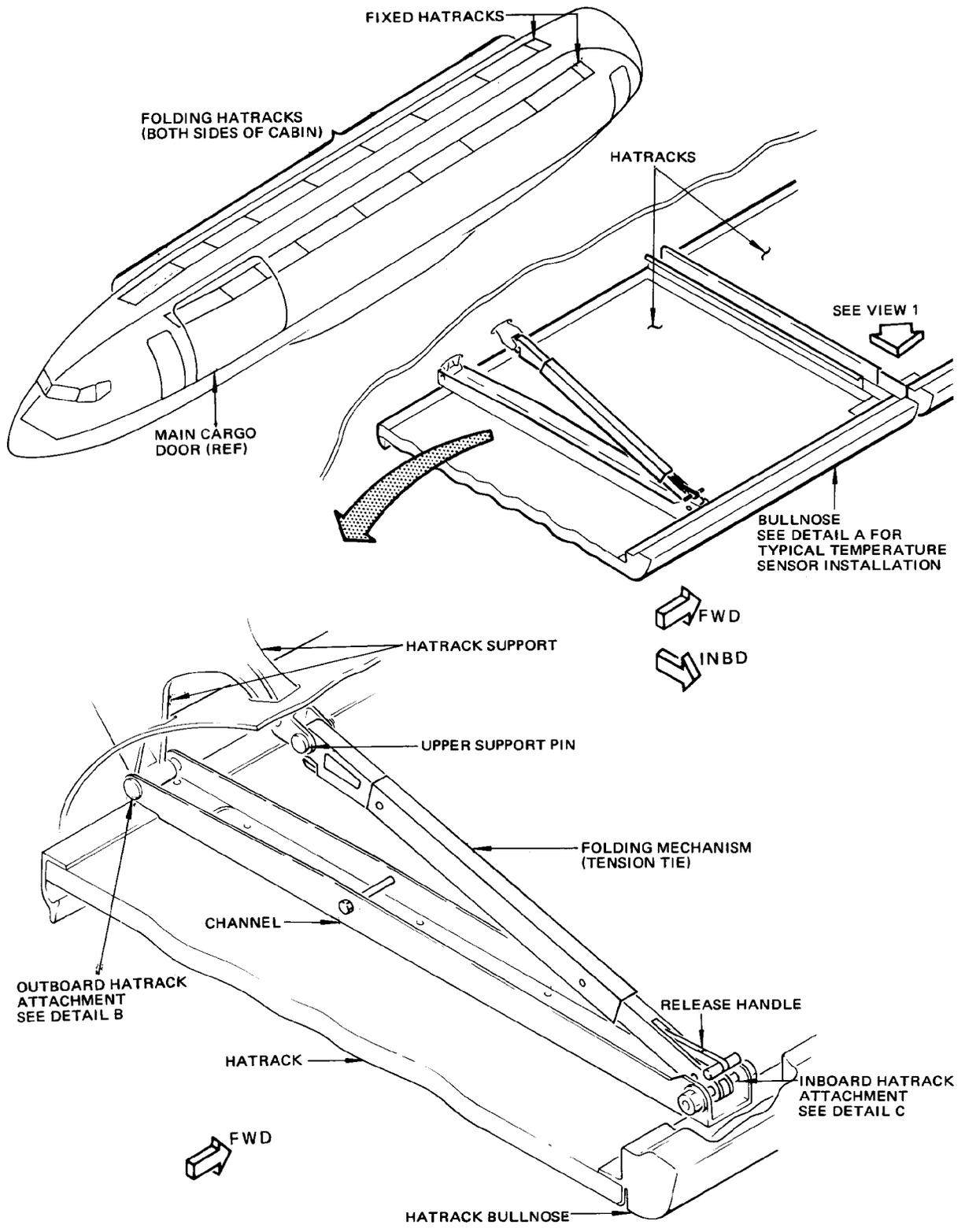
- A. If required, attach folding mechanism to channel at inboard edge of hatrack by installing eccentric bolt, spacers and nut at each attachment point. (See figure 401.)

EFFECTIVITY  
Passenger cargo Convertible  
Airplanes without New Look  
Interior

**25-28-31**

04

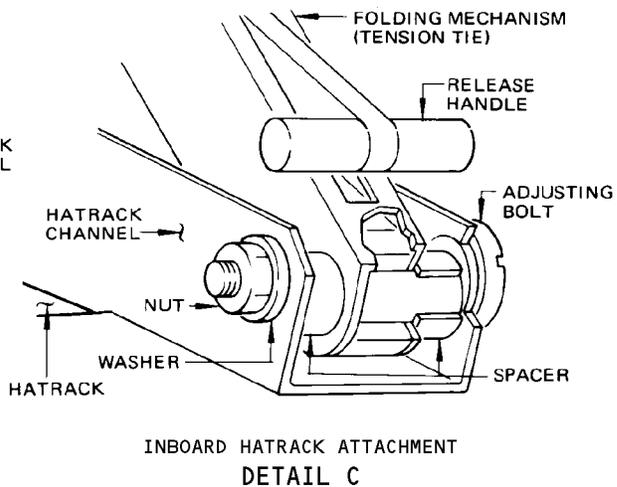
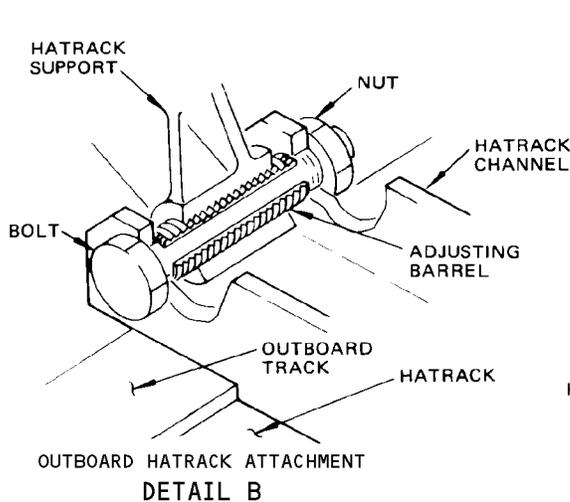
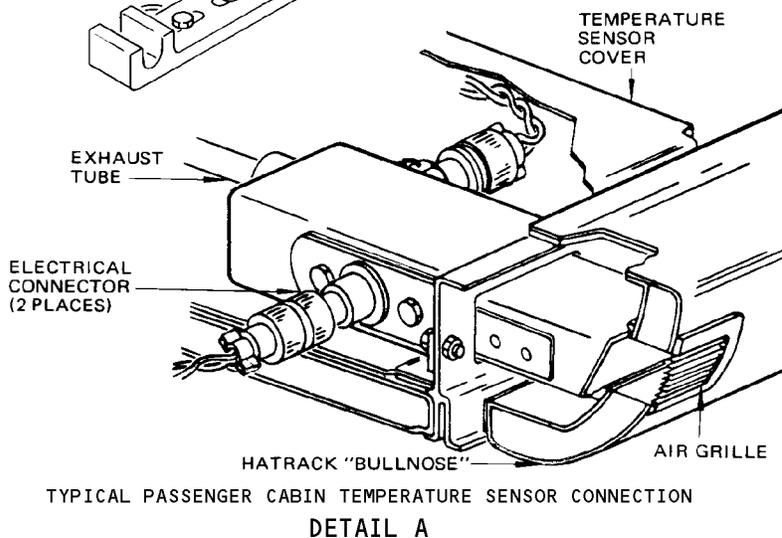
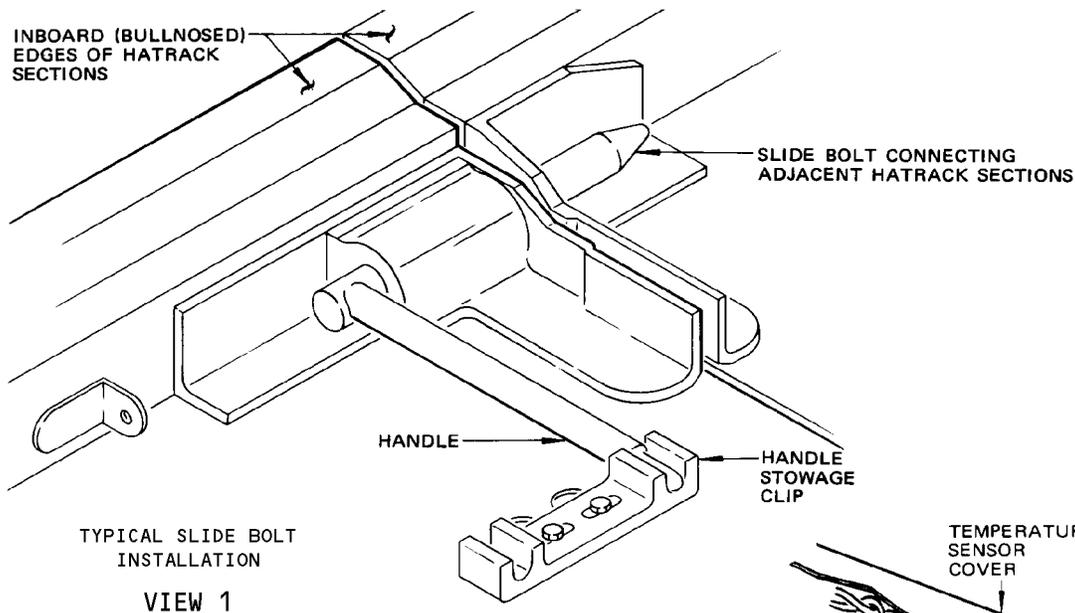
Page 401  
Dec 01/04



Folding Hatrack Installation  
 Figure 401 (Sheet 1)

457468  
 EFFECTIVITY  
 Passenger cargo Convertible  
 Airplanes without New Look  
 Interior

**25-28-31**



Folding Hatrack Installation  
Figure 401 (Sheet 2)

EFFECTIVITY  
 Passenger cargo Convertible  
 Airplanes without New Look  
 Interior

25-28-31



## MAINTENANCE MANUAL

- B. Support hatrack in mounting position and connect hatrack outboard hinge support fittings to hatrack supports, by installing attachment bolts, nuts, and washers.
  - C. Remove upper support pin and retaining ring from hatrack support.
  - D. Connect folding mechanisms to hatrack supports, by installing upper support pins and retaining rings.
  - E. Engage slide bolts connecting hatrack section to adjacent sections.
  - F. Install screws attaching hatrack closure panels to hinges on outboard edge of hatrack. Refer to 25-28-12, Folding Hatrack Closure Panels.
  - G. Check adjustment of hatrack. (Refer to 25-28-31, Folding Hatracks Adjustment/Test.)
5. Restore Airplane to Required Configuration
- A. If any partitions are installed in the area that require attachment to the hatrack, ensure that partition and hatrack mate in the proper manner when the hatrack is in the passenger position.
  - B. Install any emergency equipment that was removed during removal of the hatrack.
  - C. If installed, connect electrical connectors and exhaust tube to passenger cabin temperature sensor.
  - D. Install passenger service units as required. (Refer to 25-23-11, Passenger Service Units.)

EFFECTIVITY  
Passenger cargo Convertible  
Airplanes without New Look  
Interior

25-28-31

05

Page 404  
Dec 01/04

FOLDING HATRACKS – ADJUSTMENT/TEST

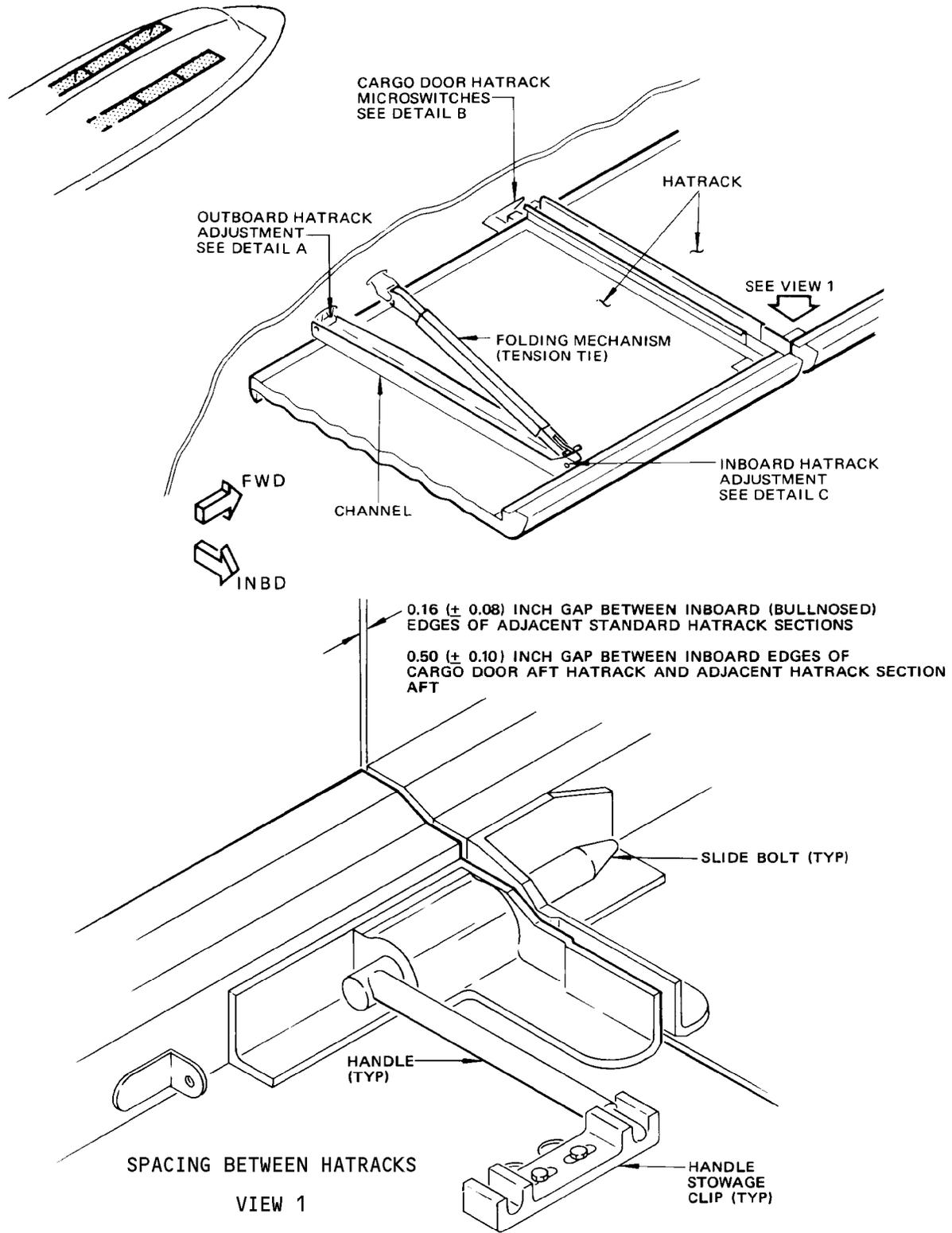
1. Adjust Folding Hatracks

A. General

- (1) The individual sections of the folding hatracks may be adjusted in the following directions:
  - (a) Vertically: by rotating the eccentric adjusting bolt at the inboard hatrack attachment point. (This adjusts height of inboard edge.)
  - (b) Longitudinally (fore and aft): by repositioning the adjusting barrel in relation to the hatrack support at the outboard hatrack attachment point.
- (2) The object of adjustment (a) is to obtain proper alignment between individual hatrack sections.
- (3) The object of adjustment (b) is to obtain a uniform gap between adjacent hatrack sections throughout a series.
- (4) Two switches are mounted on a bracket on the main cargo door between the two hatracks on the door. These switches are positioned and wired to prevent activation of the main cargo door operating circuit when the cargo door hatracks are down in the passenger position and to close the circuit allowing activation of the operating circuit when the hatracks are up in the cargo position.
- (5) If it is found necessary to remove, install or fold any hatrack section to accomplish these adjustments, refer to 25-28-31, Maintenance Practices, (201-299 page block) or Removal/Installation, (401-499 page block).

B. Adjust Hatrack Vertically

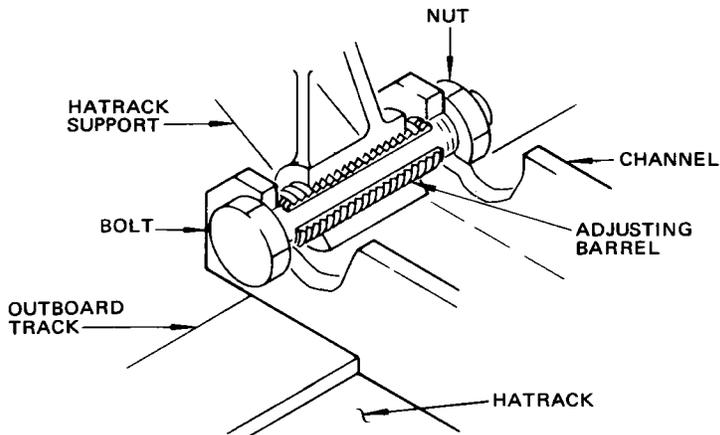
- (1) Loosen nut on eccentric adjustment bolt on each folding mechanism (Fig. 501).
- (2) Rotate eccentric adjusting bolt to adjust height of inboard edge of hatrack bullnose to produce a vertical distance of approximately 69.74 inches between top of bullnose and cabin floor panels. Hatrack tracks should also be in alignment with tracks on adjacent installed sections.
- (3) Hold adjustment bolt in this position until it is locked by retightening nut. Tighten nuts to a torque of 65 to 90 pound-inches.



Folding Hatrack Adjustment  
 Figure 501 (Sheet 1)

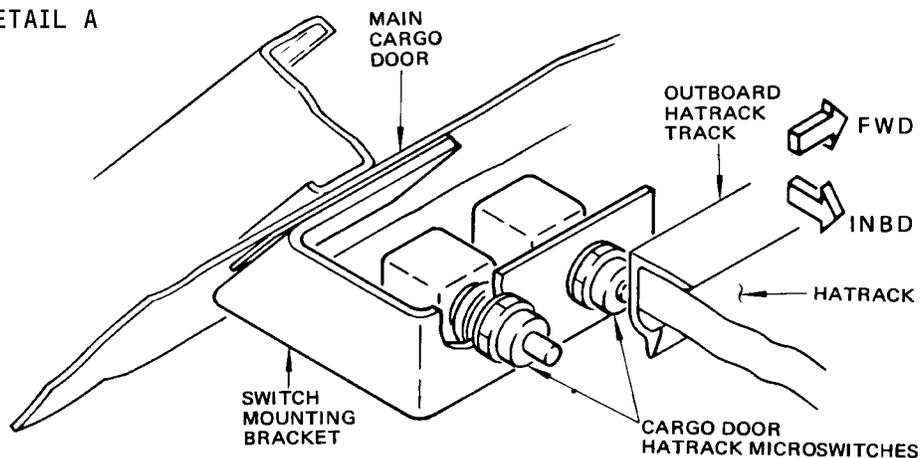
457475  
 EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes without New Look  
 Interior

25-28-31



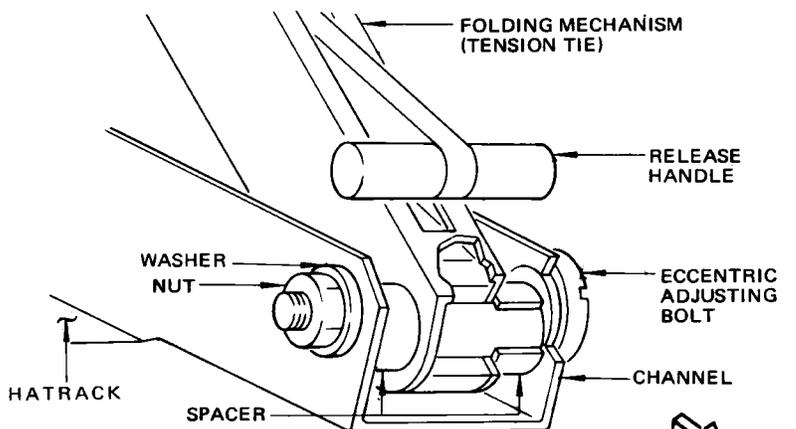
OUTBOARD HATRACK ADJUSTMENT

DETAIL A



CARGO DOOR HATRACK MICROSWITCHES

DETAIL B



INBOARD HATRACK ADJUSTMENT

DETAIL C

Folding Hatrack Adjustment  
 Figure 501 (Sheet 2)

EFFECTIVITY  
 Passenger/Cargo Convertible  
 Airplanes without New Look  
 Interior

**25-28-31**



## MAINTENANCE MANUAL

- C. Adjust Hatrack Longitudinally (fore and aft)
- (1) Move threaded adjusting barrel forward or aft in the hatrack support fitting as necessary to correct the gap between hatrack sections. It may be necessary to remove hatrack in order to perform this adjustment conveniently and without damage to parts.

**NOTE:** The gap between the inboard edges (bullnoses) of adjacent standard hatrack sections should be between 0.08 inch and 0.24 inch. The gap between the inboard edges of the cargo door aft hatrack and the adjacent hatrack section aft should be between 0.40 inch and 0.60 inch.

- D. Adjust Cargo Door Hatrack Microswitches
- (1) Fold hatrack to the passenger position. Refer to 25-28-31, Folding Hatrack - Maintenance Practices.
  - (2) Loosen two adjustment nuts securing microswitch to microswitch support bracket.
  - (3) Adjust nuts and move microswitch until the microswitch plunger is 0.06 inches from being fully depressed.
  - (4) Tighten adjustment nuts.

2. Test Main Cargo Door Hatrack Microswitch

- A. With hatrack up in the cargo position, operate the main cargo door to open and close. Refer to Chapter 52.
- B. Fold hatrack down to the passenger position and check that the main cargo door operating circuit is deactivated.

EFFECTIVITY  
Passenger/Cargo Convertible  
Airplanes without New Look  
Interior

25-28-31

02

Page 504  
Dec 01/04

**BOEING**  
**737**   
MAINTENANCE MANUAL

PASSENGER CABIN MISCELLANEOUS EQUIPMENT – DESCRIPTION AND OPERATION

1. Thermometer
  - A. A thermometer, indicating cabin air temperature, is installed at each end of the passenger cabin.
2. Literature Stowage
  - A. Two magazine racks are installed in the passenger cabin. One magazine rack is installed on the forward face of each of the aft windscreens.
  - B. Sidewall-mounted literature stowage containers are installed adjacent to passenger seats which face partitions or bulkheads.
3. Vacuum Cleaner Receptacle
  - A. Two electrical receptacles are provided in the passenger cabin to provide electrical power (115 volts ac) for operation of a vacuum cleaner. One receptacle is installed on the sidewall just forward of each galley service door.

EFFECTIVITY

ALL

25-29-0

03

Page 1  
Dec 01/04



## MAINTENANCE MANUAL

### GALLEYS - DESCRIPTION AND OPERATION

1. General
  - A. The airplane is equipped with two galleys, one forward and one aft, both on the right side of the main cabin. See figure 1.
2. Forward Galley
  - A. The forward galley is used for the storage of both hot and cold foods, the dispensing of hot beverages, etc., and is provided with electrical power and water connections.
3. Aft Galley
  - A. The aft galley equipped similarly to the forward galley in that it can store hot and cold foods, dispense hot beverages, etc., and is provided with electrical power and water connections. The aft galley stands aft of the aft service door and is connected to the aft right windscreen by a header and curtain track assembly.
4. Electrical Service
  - A. Galley power is 115 volts ac with circuit breakers on the P6 circuit breaker panel. Connections for the electrical power are on the tops of the forward and aft galleys.
5. Water Service
  - A. Water is supplied to the galleys by the pressurized passenger water system. Connections for the galley water supply are on the top of the galley units. The galleys have no drain connections and the waste water is collected in waste tanks within each galley unit. For further information on the galley water supply, refer to Chapter 38, Water and Waste.
6. Floor Covering
  - A. The galley area floor covering is a vinyl mat cemented to the floor.

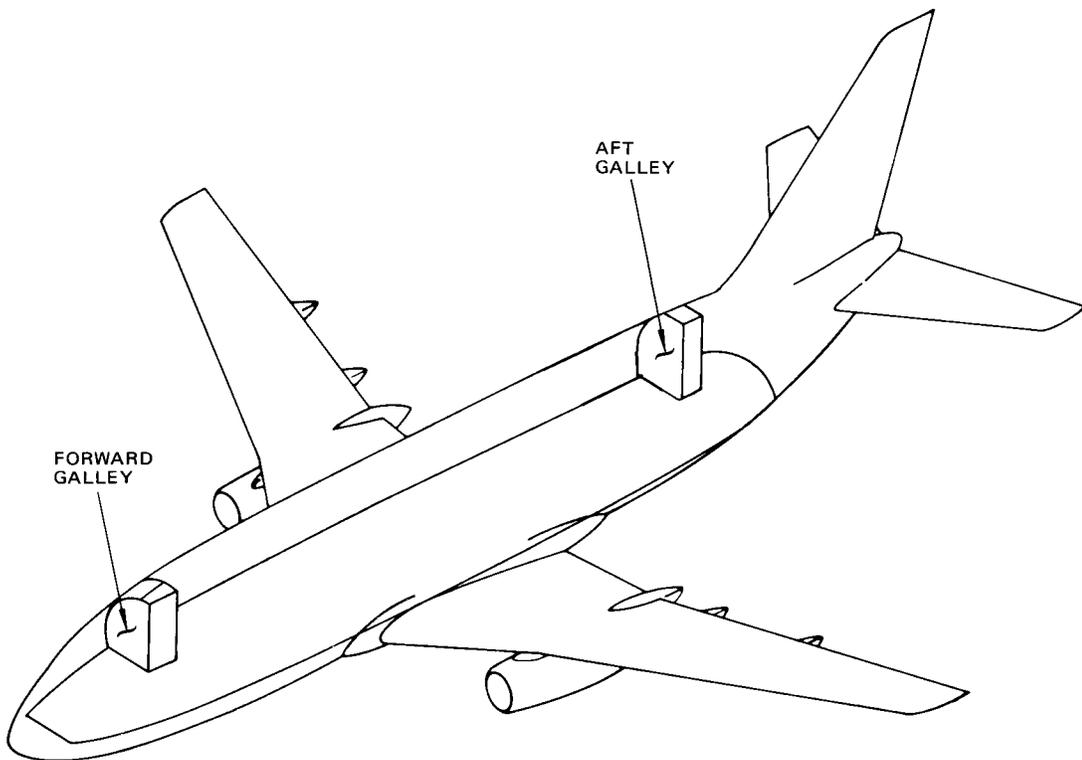
EFFECTIVITY

ALL

25-31-0

20

Page 1  
Dec 01/04



Galley Location  
Figure 1

EFFECTIVITY	
	ALL

457533



## MAINTENANCE MANUAL

### FORWARD GALLEYS - REMOVAL/INSTALLATION

1. General
  - A. The removal/installation procedures which follow provide for removal and installation of the galley complete with its decorative panels. If it becomes necessary to remove or install decorative panels independently because of damage, etc., refer to 25-31-151, Forward Galley Decorative Panel.
  - B. Care should be taken, during installation and removal of the galley, to avoid damaging the plastic liquid barrier which covers the floor panels in the galley area.
2. Equipment, and Materials
  - A. Sealant, Pressure, Environmental and Fuel Cavity, BMS 5-79, Class B-2
  - B. Solvent, General Purpose Cleaning, BMS 3-2
3. Prepare Forward Galley for Removal
  - A. Open the following circuit breakers on panel P18.
    - (1) GALLEY CONTROL
    - (2) NO SMOKING
    - (3) SEAT BELT
    - (4) PASSENGER SIGN CONTROL
  - B. Depressurize passenger water system. Refer to Chapter 38, Passenger Water System.
  - C. Drain water from galley.
4. Remove Forward Galley (Fig. 401)
  - A. Disconnect electrical power and water supply at connections in ceiling above galley. Access is provided through hinged access door in forward lowered ceiling.
  - B. Remove bolts and nuts attaching ends of tie rod assembly to upper galley and attachment fitting in ceiling and remove tie rod assembly. Access is provided through upper galley structure.
  - C. Remove watertight covers from floor track attachment wells.
  - D. Disconnect galley from floor tracks by lifting locking cap from each floor track attachment fitting and rotating handles until they are parallel to each other. Lift the whole floor track attachment fitting clear of the opening in the galley floor.
  - E. Remove galley seal from seal retainer.
  - F. Remove galley unit.

EFFECTIVITY

ALL

25-31-51

15

Page 401  
Dec 01/04



## MAINTENANCE MANUAL

### 5. Install Forward Galley (Fig. 401)

- A. Protect floor tracks against corrosion (Ref 51-21-92) before placing galley unit in position.
- B. Check galley flange for proper trim. Flange profile should approximate cabin interior contour and be approximately 1/2 inch from cabin lining panels.

**NOTE:** If original galley is being reinstalled no trimming of flange should be required. If a replacement galley is being installed, it may be necessary to fit the galley profile to the airplane interior contour as described in the following procedure.

- (1) Move galley inboard.
- (2) Trim galley flange as required.
- (3) Place galley in position.
- C. Place floor track attachments in their locations and loosely engage floor tracks.
- D. Tighten floor track attachments by rotating both handles of each fitting until they are in line with one another. Install locking cap to handles of each fitting and install watertight cover on each attachment.
- E. Install tie rod assembly at top of galley, obtaining access through upper galley structure.
  - (1) Adjust tie rod assembly to correct length, adjusting only end of the assembly without lockwasher and lockwire.

**NOTE:** Threads of end fitting must block inspection hole in body of tie rod.

- (2) Tighten nut at adjusted end of assembly sufficiently to remove slack in threads.
- (3) Install assembly to attachment fittings on top of galley and on overhead structure, using bolt, washers and nut at each end.

**NOTE:** End of tie rod assembly with lockwasher and lockwire must be attached to fitting on top of galley and moisture trap must be near end attached to ceiling structure.

- F. Apply fillet seal completely around base of galley, using BMS 5-79 or equivalent sealant. (Use only BMS 3-2 general purpose cleaning solvent or equivalent for cleaning.)
- G. Install galley seal on seal retainer. Check that seal makes smooth continuous contact with galley.
- H. Connect electrical power and water supply in ceiling above galley. Access is provided through hinged access door in forward lowered ceiling.

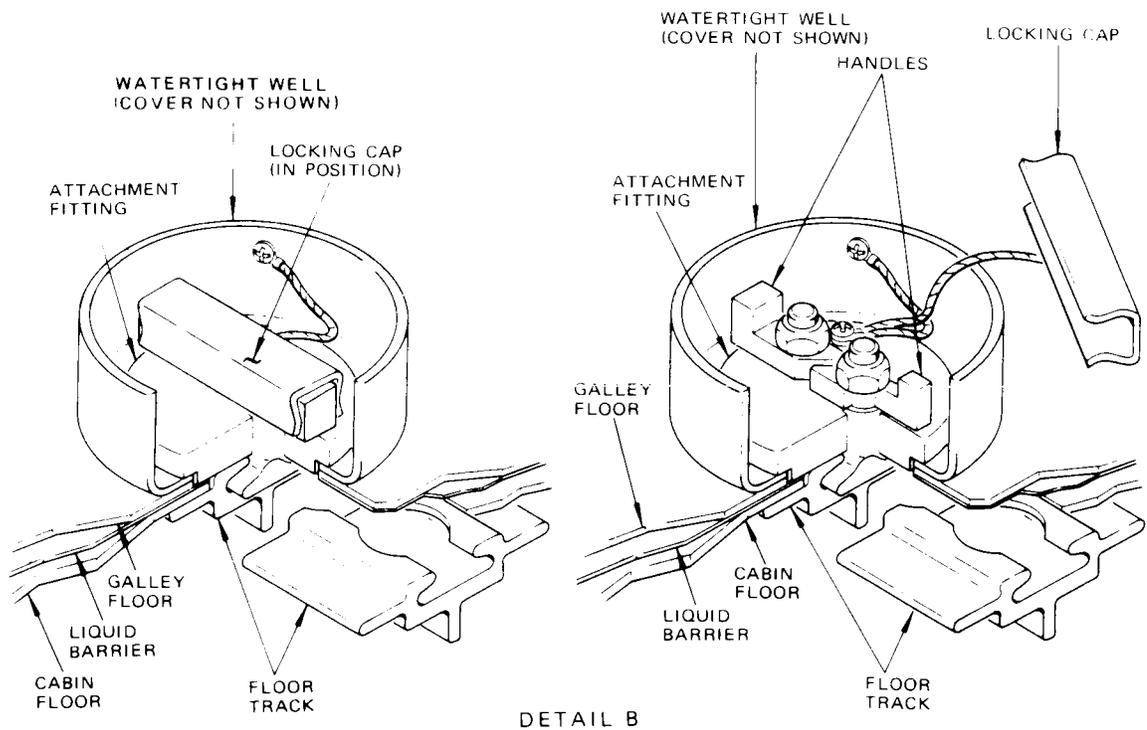
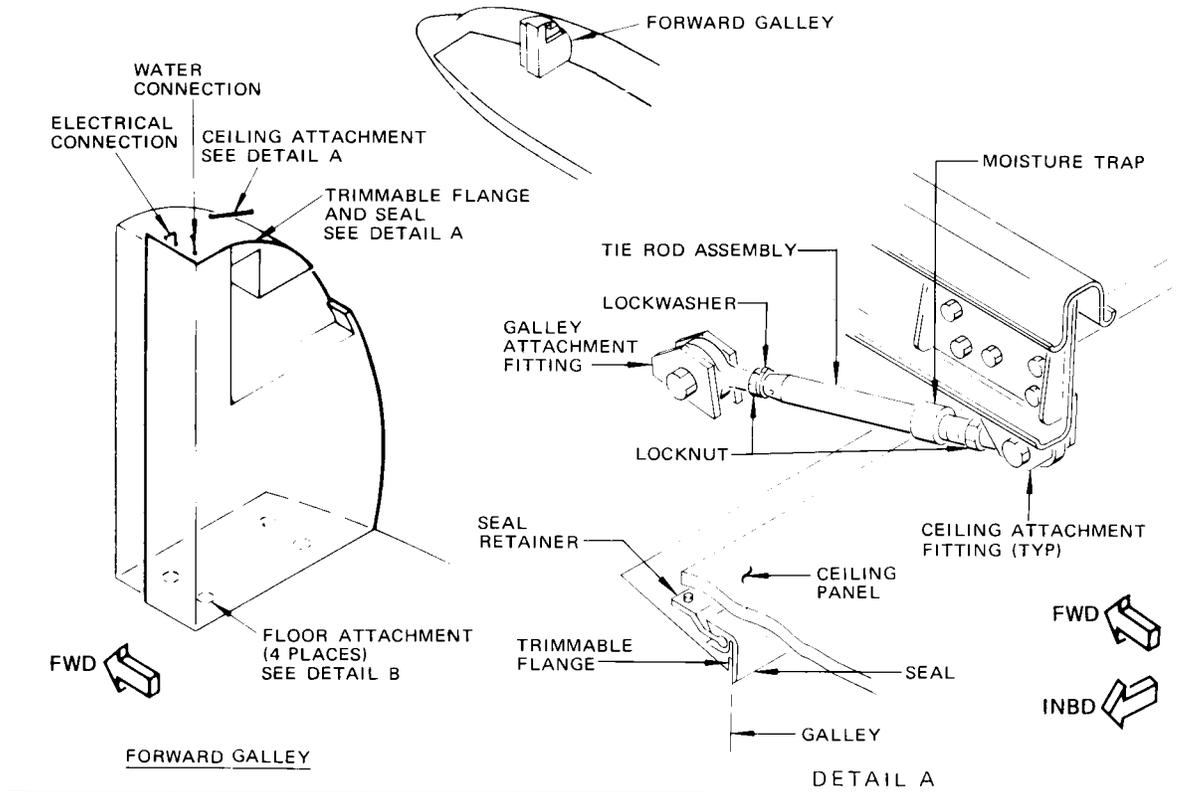
EFFECTIVITY

ALL

25-31-51

15

Page 402  
Dec 01/04



**Aft Galley Installation**  
**Figure 401**

EFFECTIVITY	
	ALL

**25-31-51**



## MAINTENANCE MANUAL

- I. Provide electrical power.
- J. Pressurize passenger water system. Refer to Chapter 38, Passenger Water System.
- K. Check that the following circuit breakers on panel P18 are closed.
  - (1) GALLEY CONTROL
  - (2) NO SMOKING
  - (3) SEAT BELT
  - (4) PASSENGER SIGN CONTROL
- L. Check galley for proper operation of electrical equipment, and check that no water leaks occur at connections.
- M. If no longer needed, remove electrical power from airplane.

EFFECTIVITY

ALL

25-31-51

15

Page 404  
Dec 01/04



## MAINTENANCE MANUAL

### AFT GALLEY - REMOVAL /INSTALLATION

#### 1. General

- A. The removal/installation procedures which follow provide for removal and installation of the galley complete with its decorative panels. If it becomes necessary to remove or install decorative panels independently because of damage, etc., refer to 25-31-161, Aft Galley Decorative Panels.
- B. Care should be taken, during removal and installation of the galley, to avoid damaging the plastic liquid barrier which covers the floor panels in the galley area.

#### 2. Equipment and Materials

- A. Sealant, Pressure, Environmental and Fuel Cavity, BMS 5-79, Class B-2
- B. Solvent, General Purpose Cleaning, BMS 3-2

#### 3. Prepare Aft Galleys for Removal

- A. Open the following circuit breakers on panel P18.
  - (1) GALLEY CONTROL
  - (2) NO SMOKING
  - (3) SEAT BELT
  - (4) PASSENGER SIGN CONTROL
- B. Depressurize passenger water system. Refer to Chapter 38, Passenger Water System.
- C. Drain water from galley.
- D. Remove curtain track and header assembly. Refer to 25-31-271, Galley Header Assembly.

#### 4. Remove Aft Galley (See figure 401.)

- A. Disconnect electrical power and water supply at connections in ceiling above galley. Access is provided through upper galley structure.
- B. Remove bolts and nuts attaching ends of tie rod assembly to upper galley and attachment fitting in ceiling and remove tie rod assembly. Access is provided through upper galley structure.
- C. Remove watertight covers from floor track attachment wells.
- D. Lift locking cap from each floor track attachment fitting and rotate handles until they are parallel to each other. Lift the whole floor track attachment fitting clear of the opening in the galley floor.
- E. Remove galley seal from seal retainer.
- F. Remove galley unit.

EFFECTIVITY

ALL

25-31-61

16

Page 401  
Dec 01/04

5. Install Aft Galley (Fig. 401)

- A. Protect floor tracks against corrosion (Ref 51-21-92) before placing galley unit in position.
- B. Check galley flange for proper trim. Flange profile should approximate cabin interior contour and be approximately 1/2 inch from cabin lining panels.

**NOTE:** If original galley is being reinstalled no trimming of flange should be required. If a replacement galley is being installed, it may be necessary to fit the galley profile to the airplane interior contour as described in the following procedure.

- (1) Move galley inboard.
- (2) Trim galley flange as required.
- (3) Place galley in position.
- C. Place floor track attachments in their-locations and loosely engage floor tracks.
- D. Tighten floor track attachments by rotating both handles of each fitting until they are in line with one another. Install locking cap to handles of each fitting and install watertight cover on each attachment.
- E. Install tie rod assembly at top of galley, obtaining access through upper galley structure.
  - (1) Adjust tie rod assembly to correct length, making certain that threads of end fittings are visible through inspection holes in body of tie rod.

**NOTE:** Adjust tie rod assembly only at end without lockwasher and lockwire.

- (2) Tighten nut at adjusted end of assembly sufficiently to remove slack in threads.
- (3) Install assembly to attachment fittings on top of galley and on overhead structure, using bolt, washers, and nut at each end.

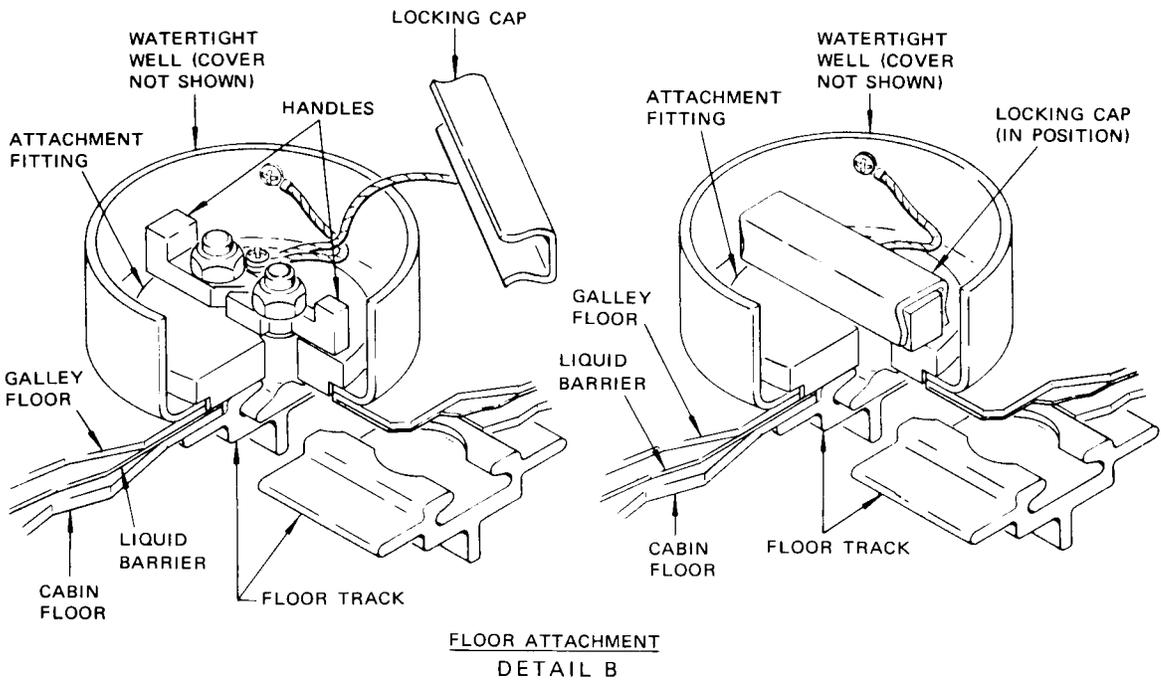
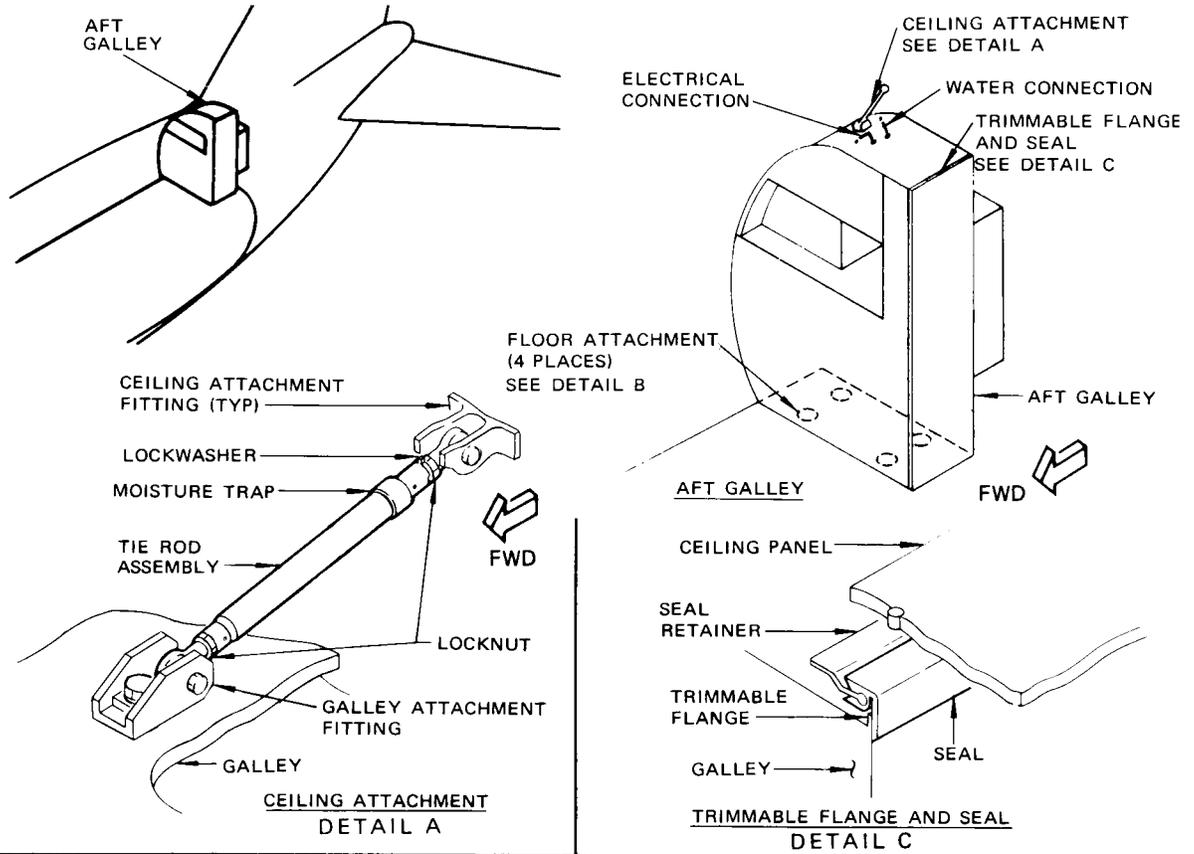
**NOTE:** End of tie rod assembly with lockwasher and lockwire must be attached to fitting in ceiling structure and moisture trap must be near end attached to ceiling structure.

- F. Install galley seal on seal retainer. Check that seal makes smooth continuous contact with galley.
- G. Install curtain track and header assembly. Refer to 25-31-271, Galley Header Assembly.
- H. Apply fillet seal completely around base of galley, using BMS 5-79 or equivalent sealant. (Use only BMS 3-2 general purpose cleaning solvent, or equivalent for cleaning.)

EFFECTIVITY

ALL

25-31-61



Aft Galley Installation  
 Figure 401

EFFECTIVITY

ALL

25-31-61



## MAINTENANCE MANUAL

- I. Connect electrical power and water supply in ceiling above galley. Access is provided through upper galley structure.
- J. Provide electrical power.
- K. Pressurize passenger water system. Refer to Chapter 38, Passenger Water System.
- L. Close the following circuit breakers on panel P18.
  - (1) GALLEY CONTROL
  - (2) NO SMOKING
  - (3) SEAT BELT
  - (4) PASSENGER SIGN CONTROL
- M. Check galley for proper operation of electrical equipment, and check that no water leaks occur at connections.
- N. If no longer needed, remove electrical power from airplane.

EFFECTIVITY

ALL

25-31-61

16

Page 404  
Dec 01/04

**BOEING**  
**737**   
MAINTENANCE MANUAL

FORWARD GALLEY DECORATIVE PANELS – REMOVAL/INSTALLATION

1. Remove Decorative Panel
  - A. Support panel and, from inside galley, remove screws securing panel to galley. (Screws engage threaded inserts embedded in thickness of decorative panels. See figure 401.)
  - B. Remove decorative panel.
2. Install Decorative Panel
  - A. Place decorative panel in position. (See figure 401.)
  - B. Support panel and install screws from inside galley.

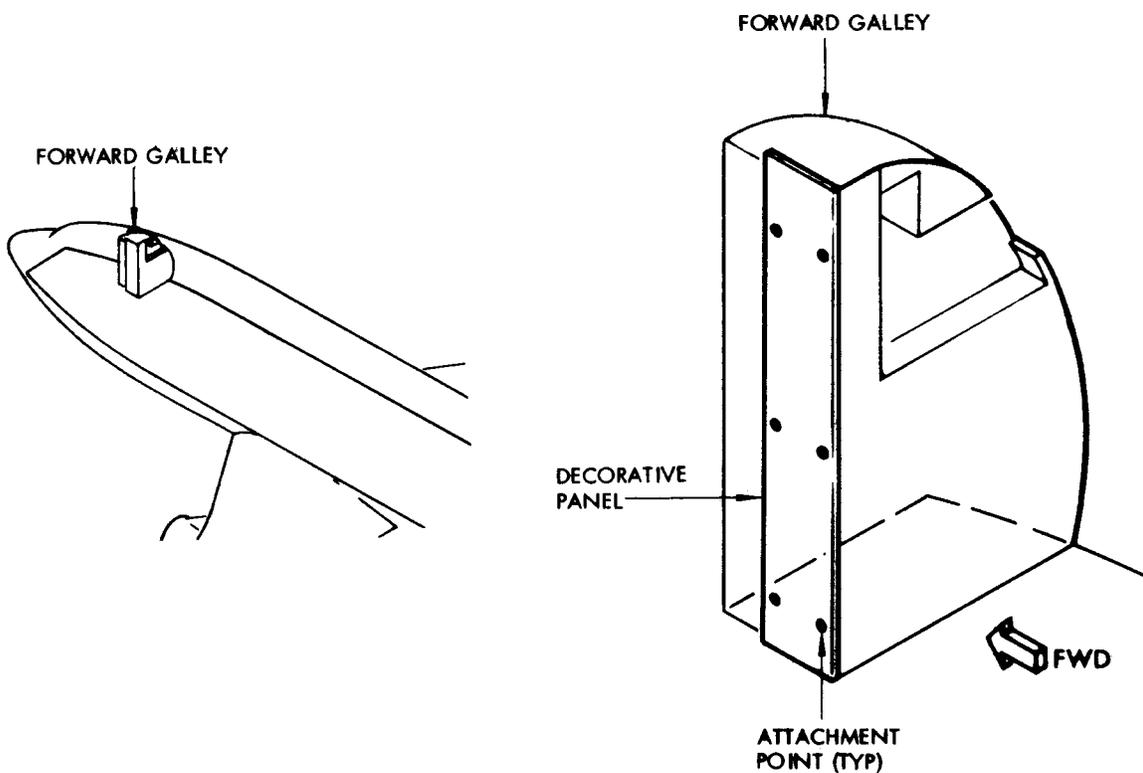
EFFECTIVITY

ALL

25-31-151

03

Page 401  
Dec 01/04



Forward Galley Decorative Panels Installation  
 Figure 401

EFFECTIVITY	ALL
-------------	-----

25-31-151

AFT GALLEY DECORATIVE PANELS – REMOVAL/INSTALLATION

1. Remove Decorative Panels (See figure 401.)
  - A. Depressurize water system. Refer to Chapter 38, Passenger Water System.
  - B. Remove drinking fountain unit.
  - C. Remove galley heater assembly. Refer to 25-31-271, Galley Header Assembly.
  - D. Support panel and, from inside galley, remove screws securing panel to galley. (Screws engage threaded inserts embedded in thickness of decorative panels.)
2. Install Decorative Panels (See figure 401.)
  - A. Support panel in position and install screws from inside galley.
  - B. Install galley header assembly. Refer to 25-31-271, Galley Header Assembly.
  - C. Install drinking fountain unit.
  - D. Pressurize water system. Refer to Chapter 38, Passenger Water System.
  - E. Check for water leaks at connections and for proper function of water fountain.

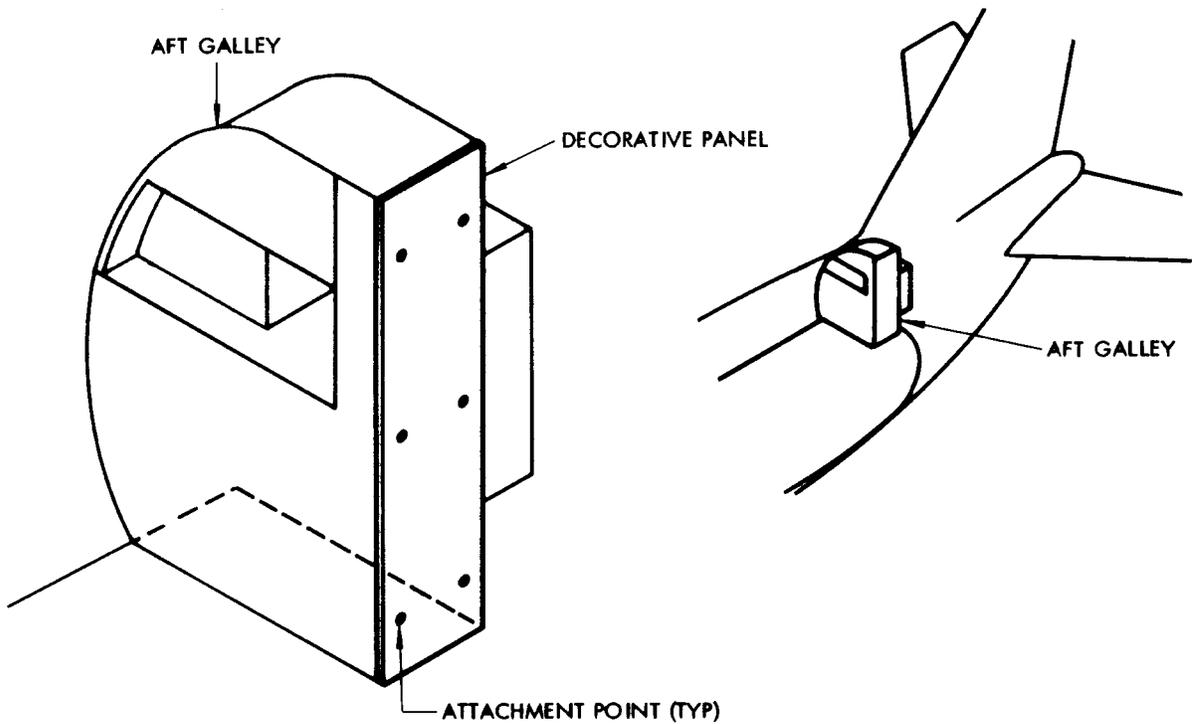
EFFECTIVITY

ALL

25-31-161

04

Page 401  
Dec 01/04



Aft Galley Decorative Panels Installation  
 Figure 401

EFFECTIVITY	ALL
-------------	-----

457987

25-31-161

04

Page 402  
 Dec 01/04



## MAINTENANCE MANUAL

### GALLEY HEADER ASSEMBLY – REMOVAL/INSTALLATION

#### 1. General

- A. The galley header assembly extends from the aft right windscreen to the galley and is attached to brackets in the aft lowered ceiling. The header assembly complete with curtain track and curtain forms the inboard side of the galley work area enclosure. The fluorescent galley light assembly is attached to the header assembly and must be removed before removal of the header assembly.

#### 2. Remove Galley Header Assembly

- A. Open GALLEY LIGHTS circuit breaker on circuit breaker panel P-18.
- B. Remove galley fluorescent light assembly.
  - (1) Remove lightshield attachment screws along inboard edge of underside of galley fluorescent light assembly. Remove lightshield from light assembly.
  - (2) Remove fluorescent light bulbs from light assembly.
  - (3) Disconnect galley light wires at light assembly.
  - (4) Support light assembly and remove screws attaching it to galley header assembly. Remove light assembly.
- C. Support header and remove screws and self-locking nuts securing header assembly to curtain track assembly. Remove header.
- D. Support curtain track and remove screws attaching curtain track to brackets in ceiling structure and remove curtain track complete with curtain. Before removing the curtain, curtain tieback should be unfastened.

#### 3. Install Galley Header Assembly

- A. Support curtain track complete with curtain in position between aft right-hand windscreen and galley and install screws attaching track to brackets in ceiling structure.
- B. Place header in position and install screws and self-locking nuts attaching it to curtain track.
- C. Install galley fluorescent light assembly.
  - (1) Position galley fluorescent light assembly and install screws fastening it to header.
  - (2) Connect galley light wires to terminals on light assembly.
  - (3) Install fluorescent light bulbs in light assembly.
  - (4) Install lightshield in place on light assembly and secure with screws along inboard edge of underside of light assembly.
- D. Close GALLEY LIGHTS circuit breaker on circuit breaker panel P-18 and check galley light for proper illumination.

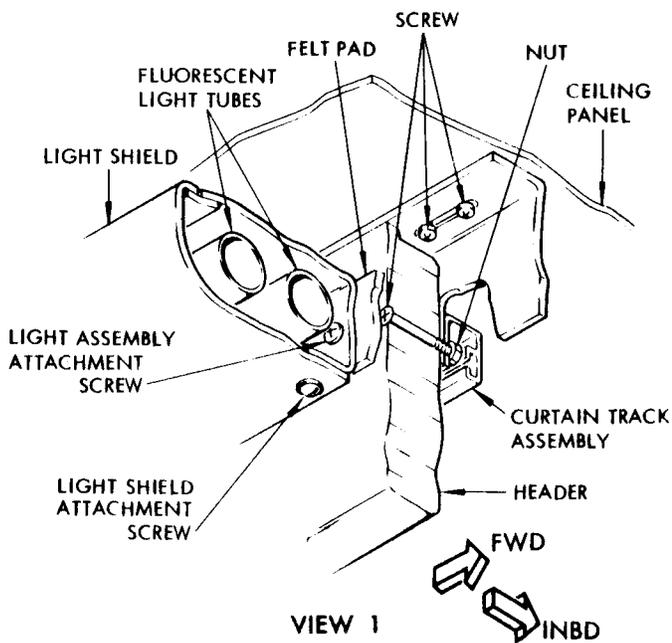
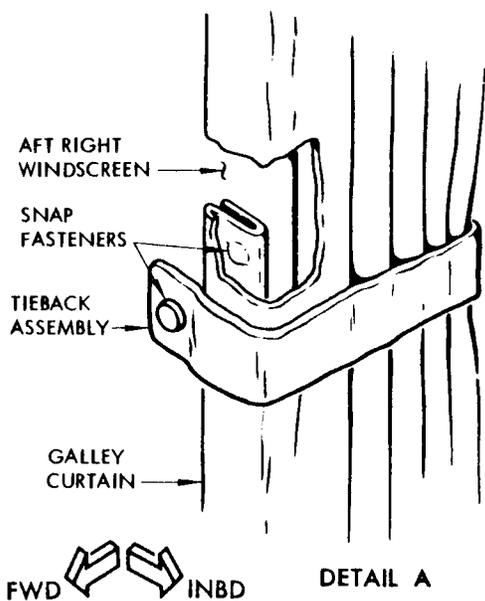
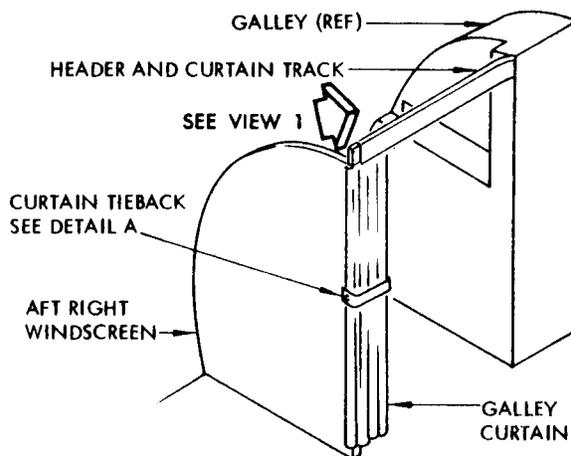
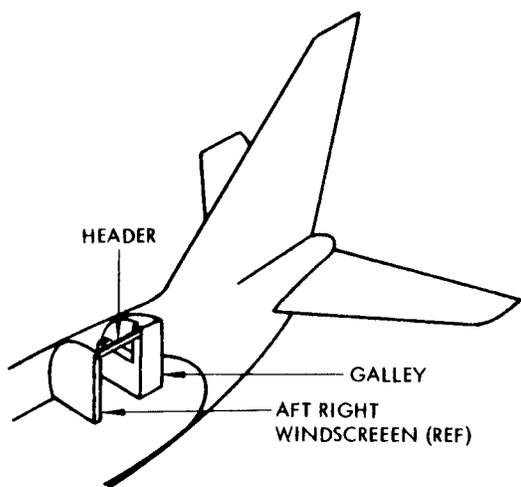
EFFECTIVITY

ALL

25-31-271

04

Page 401  
Dec 01/04



Galley Header Assembly Installation  
 Figure 401

EFFECTIVITY	ALL
-------------	-----

25-31-271

LAVATORIES - DESCRIPTION AND OPERATION

1. General
  - A. Two similarly equipped lavatory compartments are located in the passenger cabin as shown in figure 1.
  - B. Lavatory equipment covered in this section consists of: the dispenser cabinet assembly; the disposal cabinet assembly; the sink cabinet assembly; the lavatory partitions (walls); lavatory door and header; the sidewall and ceiling lining panels; and the floor covering.
  - C. The lavatory toilet units, washbasins and associated equipment and plumbing are covered in Chapter 38, Water and Waste.
2. Dispenser Cabinet (Fig. 2).
  - A. The dispenser cabinet, located above the sink cabinet, houses the lavatory electrical service panel and dispenser compartments for paper towels, cleaning tissues, and paper cups.
3. Disposal Cabinet (Fig. 2).
  - A. The disposal cabinet, located above the toilet, houses the toilet flush switch and toilet timer, and a disposal compartment for sanitary napkins.
4. Sink Cabinet
  - A. The sink cabinet, housing the washbasin and water plumbing, also includes dispenser compartments for toilet seat covers, sanitary napkins, toilet paper, and air sickness bags.
5. Forward Lavatory Partitions
  - A. The forward lavatory partition, as covered in this section, consists of the aft lavatory wall.
6. Aft Lavatory Partitions
  - A. The aft lavatory partitions, as covered in this section, consist of the forward transverse partition and the inboard longitudinal partition.
7. Door and Header
  - A. The lavatory door is hinge-attached to the lavatory partition or adjacent partition to allow outward opening of the door. The door header is attached to each doorway partition.
8. Ceiling Panel
  - A. Each lavatory has a ceiling panel to enclose the overhead lavatory envelope void. A service unit, dome light and passenger address speaker is installed in each ceiling panel.
9. Sidewall Panel
  - A. The lavatory sidewall panel is contoured and shaped to enclose the side and/or aft area of the lavatory.
10. Floor Covering
  - A. The lavatory floor covering consists of a floor pan under the toilet and sink cabinet, and vinyl sheet floor covering.
11. Miscellaneous Equipment
  - A. Each lavatory contains a passenger service unit. For service unit information, refer to 25-23-0, Passenger Service Units - Description and Operation.

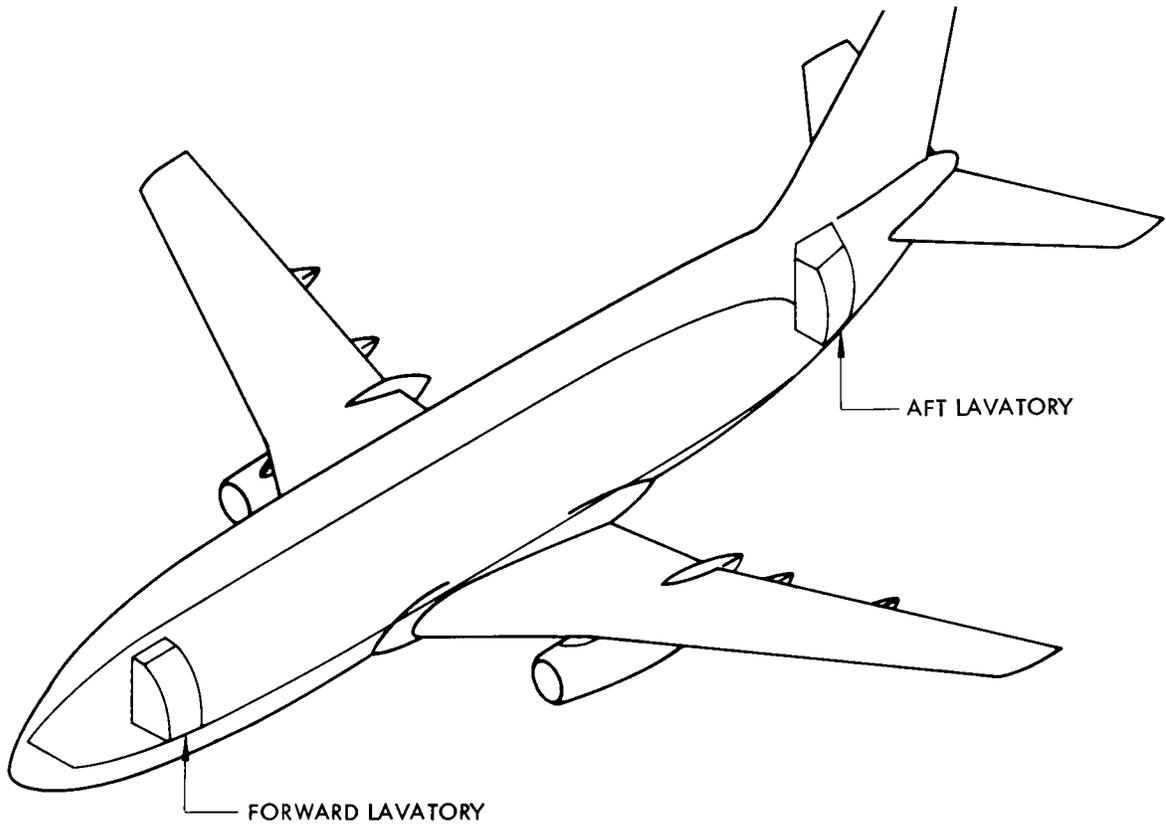
EFFECTIVITY

ALL

25-40-0

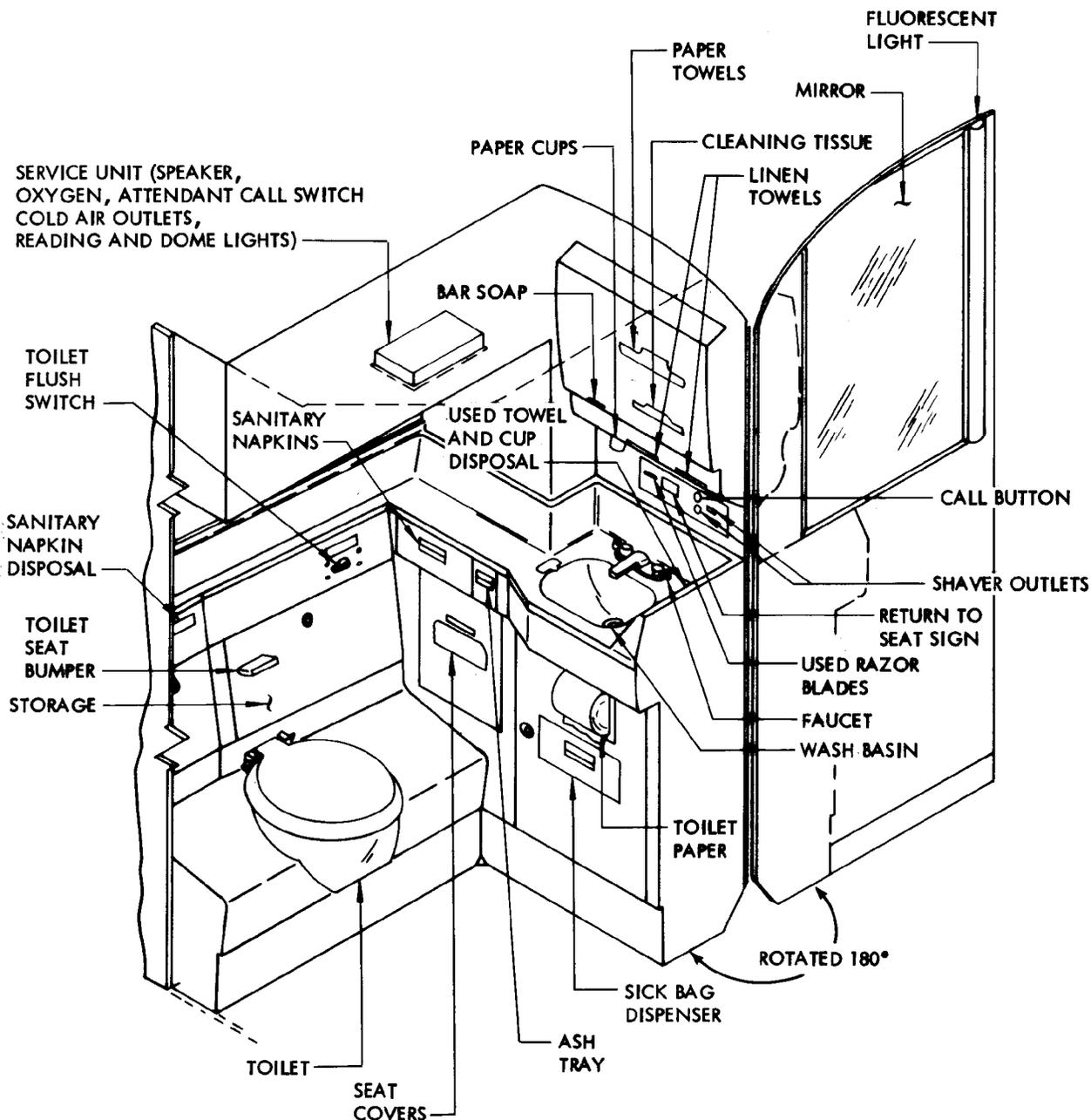
05

Page 1  
Dec 01/04



Lavatory Locations  
Figure 1

EFFECTIVITY	
	ALL



Typical Lavatory Compartment (Aft)  
 Figure 2

EFFECTIVITY	
	ALL

25-40-00

05

Page 3  
 Dec 01/04



## MAINTENANCE MANUAL

- B. A service panel is mounted on each dispenser cabinet. On the service panel is the razor blade disposal, an illuminated RETURN TO SEAT sign, an attendant call switch, and electrical razor outlets.
- C. An electrical junction box is mounted in each lavatory behind the service panel in the dispenser cabinet. A terminal strip in the junction box furnishes the power connection from the airplane electrical system to the razor outlets, attendant call switch, and the RETURN TO SEAT sign. Components housed in the junction box are used for supplying and controlling power to the electrical razor supply.
- D. Other miscellaneous equipment includes the mirror, a coat hook, an assist handle and an ashtray.

EFFECTIVITY

ALL

25-40-0

05

Page 4  
Dec 01/04



## MAINTENANCE MANUAL

### LAVATORIES - INSPECTION/CHECK

#### 1. General

A. The inspection/check procedures in this section are typical for all lavatories installed in the airplane.

#### 2. Lavatory Waste Compartment Inspection

A. Check all lavatory paper and linen waste receptacle enclosure access doors and disposal doors for damage and deformation and for proper operation, fit, sealing and latching.

**NOTE:** Properly fitting doors restrict movement of air into cabinets or receptacles, thereby assisting in the containment of any possible trash fires.

B. Check wiring, terminal boxes, switches and water heaters for evidence of overheat, loose terminals, and corrosion.

EFFECTIVITY

ALL

25-40-0

01

Page 601  
Dec 01/04

LAVATORY SINK CABINET – REMOVAL/INSTALLATION

1. General

- A. The lavatory sink cabinet houses the passenger water system components, which can be removed with the cabinet, but must be drained and disconnected before removal of the cabinet can be accomplished.

CAUTION: HANDLE CABINET WITH CARE TO AVOID DAMAGING CABINET AND/OR LAVATORY TRIM.

2. Equipment and Materials

- A. Sealant – BMS 5-95, Class B (Ref 20-30-11)  
B. Sealant – BMS 5-108, Type 1, Class B-2 (Ref 20-30-11)  
C. Solvent – General Purpose, BMS 3-2 (Ref 20-30-31)

3. Remove Sink Cabinet (Fig. 401)

- A. Drain and disconnect water system connections (Ref Chapter 38, Passenger Water System).  
B. Remove dispenser cabinet above sink cabinet (Ref 25-41-11, Removal/Installation).  
C. On airplanes with aft lavatory overboard air intake grille above dispenser cabinet, remove part of vent tubing going through sink cabinet.  
D. Remove fasteners attaching sink cabinet to the lavatory forward wall and floor.  
E. Lift sink cabinet to clear toilet shroud and remove from lavatory.  
F. If sink cabinet is to be replaced, remove toilet shroud trim and other equipment as required. Place equipment in safe place for installation in replacement cabinet.

4. Install Sink Cabinet (Fig. 401)

- A. Prepare floor for application of sealant and coating. Clean with solvent.  
B. Apply sealant.  
(1) Lightly sand any enamel to be covered by sealant.  
(2) Apply bead of BMS 5-95 sealant to all cracks, small openings, joints and internal corners.  
(3) Coat floor area with BMS 5-108 type 1 class B coating to thickness of 0.020 to 0.030 inch for corrosion protection.  
C. If removed, install toilet shroud trim.  
D. Place sink cabinet in position and install fasteners to secure cabinet to forward lavatory wall and floor.  
E. On airplanes with aft lavatory overboard air intake grille above dispenser cabinet, install part of vent tubing going through sink cabinet.  
F. Install dispenser cabinet above sink cabinet (Ref 25-41-11, Removal/Installation).  
G. Install miscellaneous equipment, removed in step 2.F.

EFFECTIVITY

ALL

25-40-1

02

Page 401  
Dec 01/04

**BOEING**  
**737**   
MAINTENANCE MANUAL

- H. Connect and service water system (Ref Chapter 38, Passenger Water System).
- I. Close sink cabinet disposal compartment door.

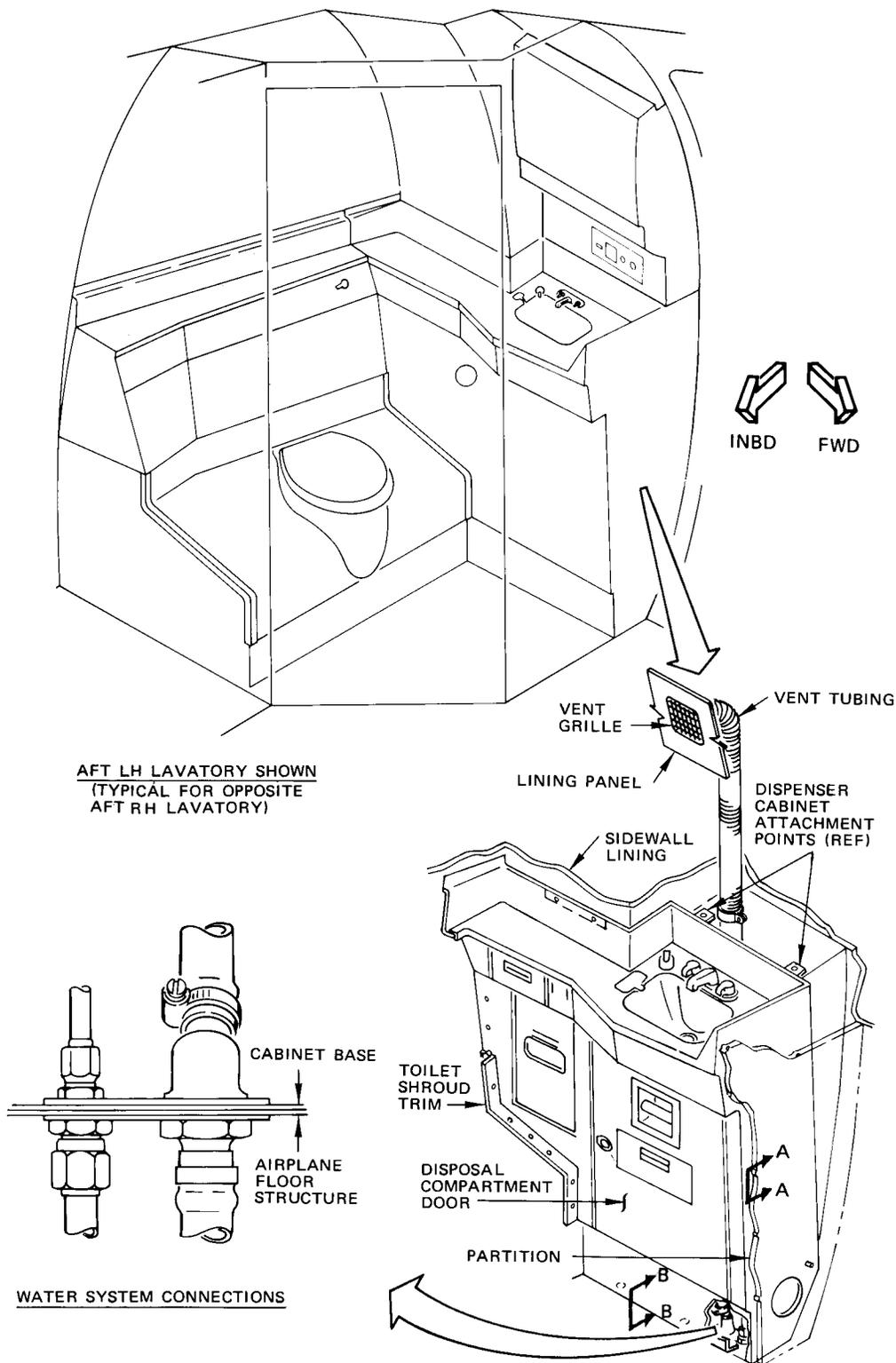
EFFECTIVITY

ALL

**25-40-1**

02

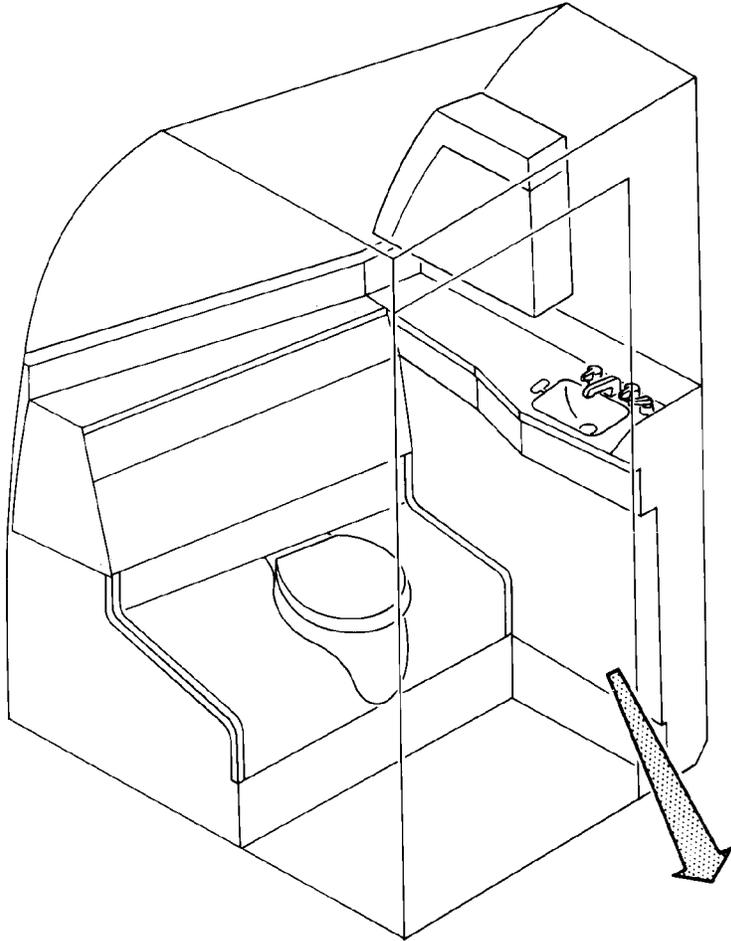
Page 402  
Dec 01/04



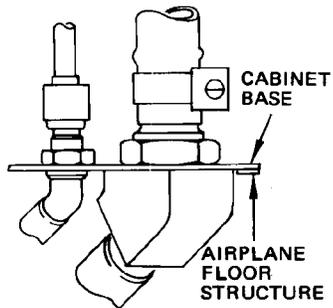
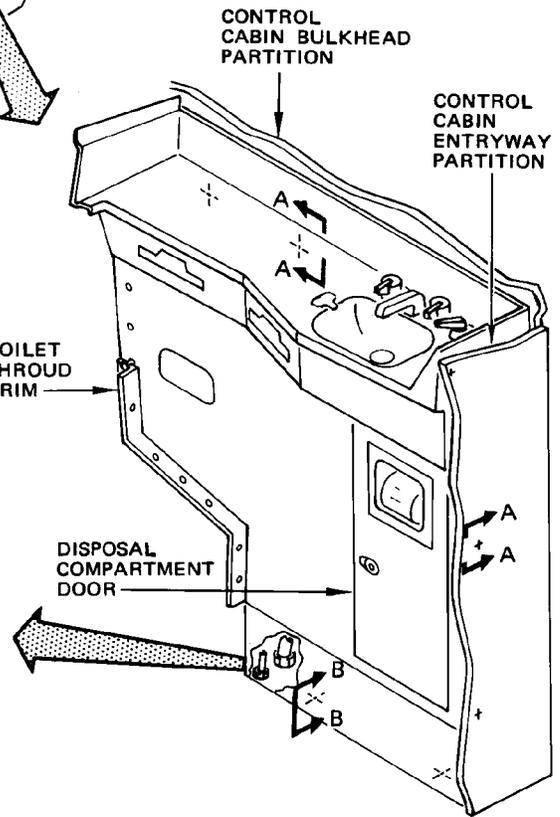
Lavatory Sink Cabinet Installation  
Figure 401 (Sheet 1)

EFFECTIVITY	
	ALL

25-40-1



FORWARD LAVATORY

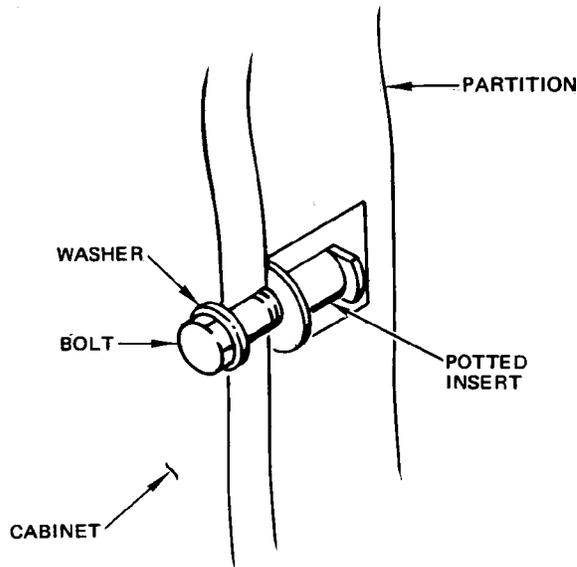


WATER SYSTEM CONNECTIONS

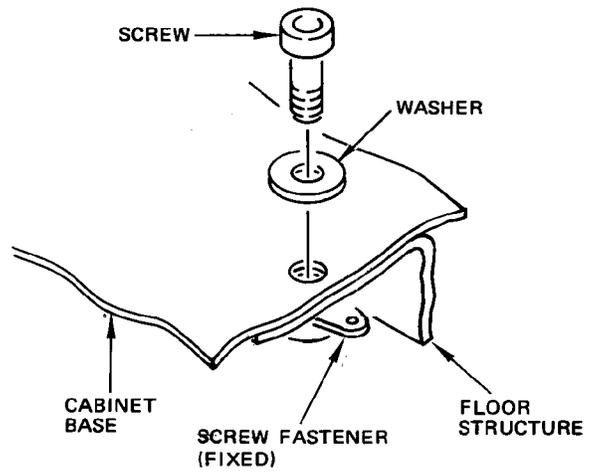
Lavatory Sink Cabinet Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY	ALL
-------------	-----

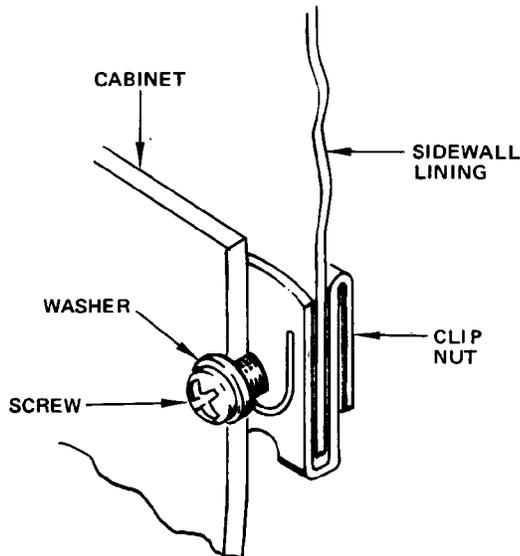
25-40-1



CABINET TO PARTITIONS ATTACHMENT  
(TYPICAL 6 PLACES)  
SECTION A-A



CABINET TO FLOOR ATTACHMENT  
SECTION B-B



CABINET TO SIDEWALL LINING ATTACHMENT  
SECTION C-C

Lavatory Sink Cabinet Installation  
Figure 401 (Sheet 3)

EFFECTIVITY	ALL
-------------	-----

**25-40-1**

01

Page 405  
Dec 01/04

458182

FORWARD LAVATORY PARTITION - REMOVAL/INSTALLATION

1. General

- A. The forward lavatory partition forming the aft wall of the lavatory is a permanent-type installation secured to the ceiling, sidewall, and floor structure.
- B. Varied equipment is attached to the partition, which may remain attached to the partition, if the partition is to be reinstalled. However, all electrical wiring to the partition must be disconnected before removal of the partition is attempted. References to chapters or sections covering the major items attached partition are given in the procedures. For items that are not referenced., refer to their appropriate subject chapter and/or section.

2. Equipment and Materials

- A. Sealant, Moisture - BMS 5-28, Type 7 or equivalent
- B. Solvent, General Purpose Cleaning - BMS 3-2, or equivalent

3. Prepare to Remove Partition

- A. Open LAV MIRROR LIMITS circuit breaker on P18 and P6 circuit breaker panels.
- B. Remove lavatory dispenser cabinet, Refer to 25-41-11, Dispenser Cabinet Assembly - Removal/Installation.
- C. Remove lavatory disposal cabinet, Refer to 25-42-11, Disposal Cabinet Assembly - Removal/Installation.
- D. Remove screw fasteners and toilet shroud and aft trim strip.
- E. Remove lavatory ceiling panel, Refer to 25-40-5, Forward Lavatory Ceiling Panel - Removal/Installation.
- F. Remove lavatory sidewall panel, Refer to 25-40-4, Forward Lavatory Sidewall Panel - Removal/Installation.
- G. Remove lavatory door header (Ref 25-40-3, R/I).
- H. On Passenger/Cargo Convertible Airplanes, remove oxygen service unit (Ref 25-23-32, R/I).
- I. On Passenger/Cargo Convertible Airplanes, remove cargo door control panel.
- J. Remove entry door hinge shrouds.
- K. Remove attendant's seat (Ref 25-25-11, R/I).
- L. Remove ceiling panel immediately aft of partition.
- M. Remove trim and fold back floor covering as necessary to expose partition floor attachments.
- N. Attach wiring connection information tags and disconnect lavatory lights wiring. Secure wiring to allow removal with partition.
- O. If partition is to be replaced, remove miscellaneous equipment attached to partition such as assist handle and/or strap; airstair handrail extension support bracket, and remove wiring.

4. Remove Partition (Fig. 401)

- A. Remove lower inboard screw fasteners, push panel upward and remove panel (Details A and B).

EFFECTIVITY

ALL

25-40-2

01

Page 401  
Dec 01/04



## MAINTENANCE MANUAL

- B. Remove fasteners connecting water dam to partition.
- C. Remove upper inboard partition retaining pin (Detail D).
- D. Remove sealant around head of fasteners securing partition to floor support angles, forward and aft of partition.
- E. Remove attachment screws and bolts securing partition to ceiling; sidewall; and floor structure.
- F. Slide partition inboard until retaining angles clear slots in partition and remove partition.

### 5. Install Partition (Fig. 401)

- A. Slide partition into position to engage retaining angles in slots in outboard edge of partition.
- B. Install screws and bolts to secure partition to floor; sidewall; and ceiling structure.
- C. Install upper inboard partition retaining pin (Detail D).
- D. Install fasteners connecting water dam to partition.
- E. Install decorative panel and install lower inboard screw fasteners (Details A and B).

### 6. Restore Airplane to Normal

- A. Apply sealant around head of bolts securing partition to floor support angles. Use solvent for cleaning as necessary.

**WARNING:** AVOID SEALANT CONTACT WITH SKIN. OPEN FORWARD ENTRY DOOR FOR VENTILATION.

- B. Install floor covering and trim.
- C. Install ceiling panel immediately forward of partition.
- D. Install attendant's seat (Ref 25-25-11, R/I).
- E. Install entry door hinge shrouds.
- F. On Passenger/Cargo Convertible Airplanes, install cargo door control panel.
- G. On Passenger/Cargo Convertible Airplanes, install oxygen service unit (Ref 25-23-32, R/I).
- H. Connect lavatory lights wiring and remove connection information tags.
- I. Install lavatory door header (Ref 25-40-3, R/I).
- J. Install lavatory sidewall panel (Ref 25-40-4, R/I).
- K. Install lavatory ceiling panel (Ref 25-40-5, R/I).
- L. Install toilet shroud and aft trim.
- M. Install lavatory disposal- cabinet. Refer to 25-42-11, Disposal. Cabinet Assembly - Removal/Installation.
- N. Install dispenser cabinet. Refer to 25-41-11, Dispenser Cabinet Assembly - Removal/Installation.

### 7. Install all miscellaneous equipment as required (as removed in step 2.0.).

- A. Provide electrical power.
- B. Close LAV MIRROR LIGHTS circuit breaker on P18 and P6 circuit breaker panels and check mirror light is illuminated.
- C. If no longer required, remove electrical power.

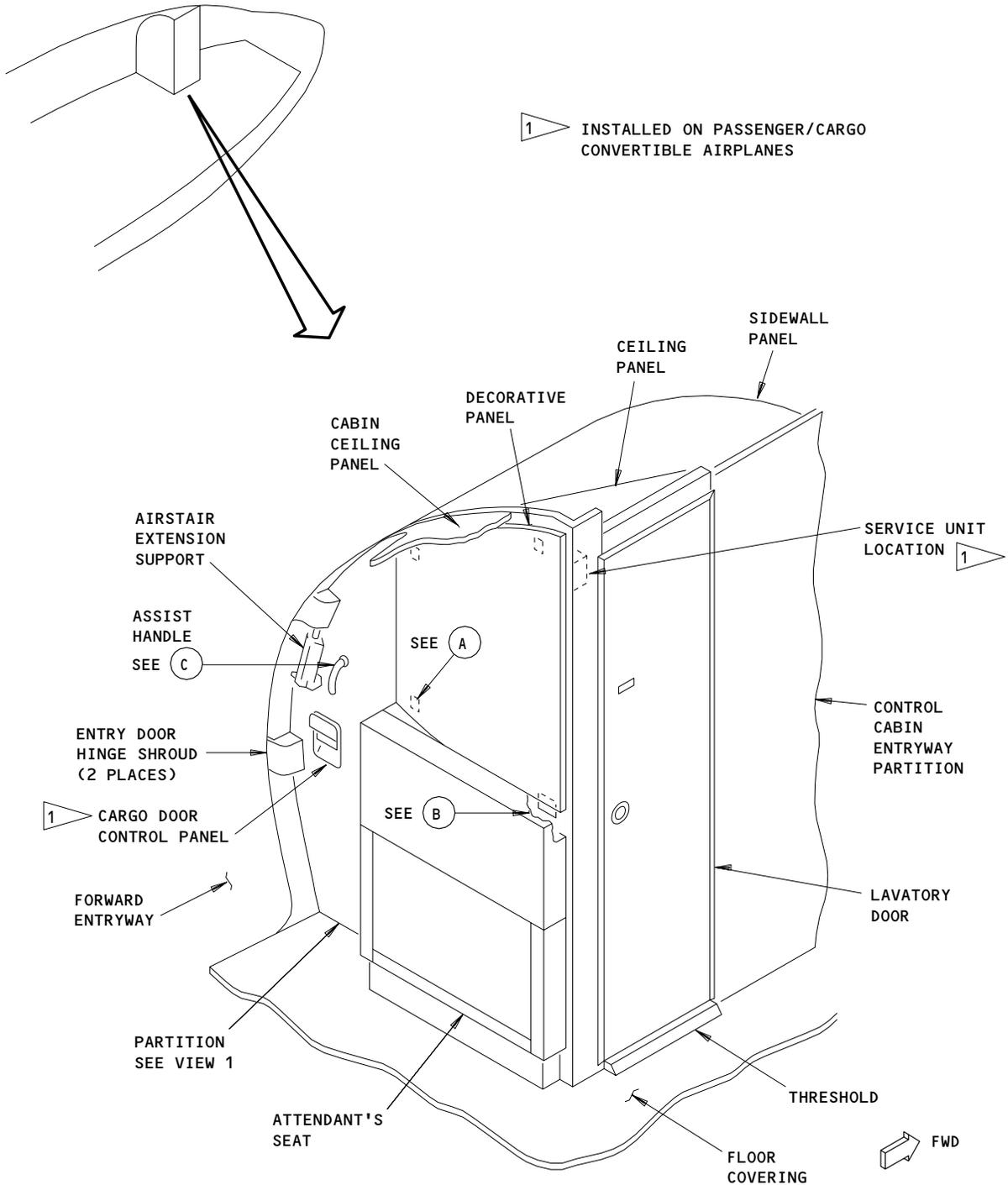
EFFECTIVITY

ALL

25-40-2

01

Page 402  
Dec 01/04



Forward Lavatory Partition Installation  
 Figure 401 (Sheet 1)

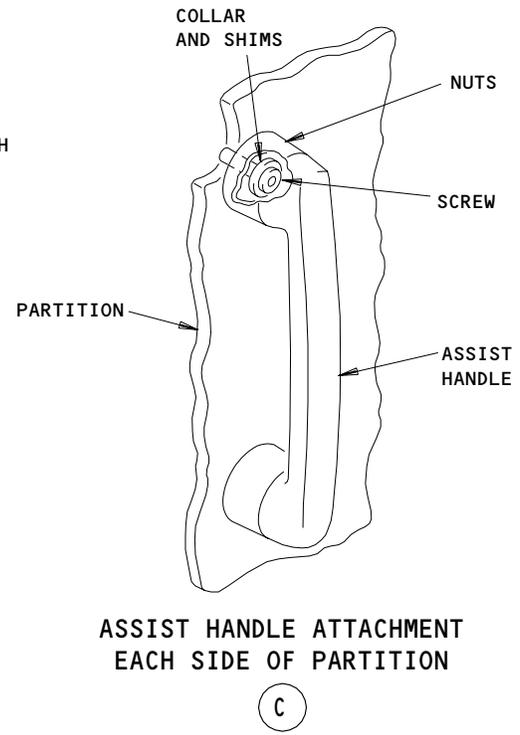
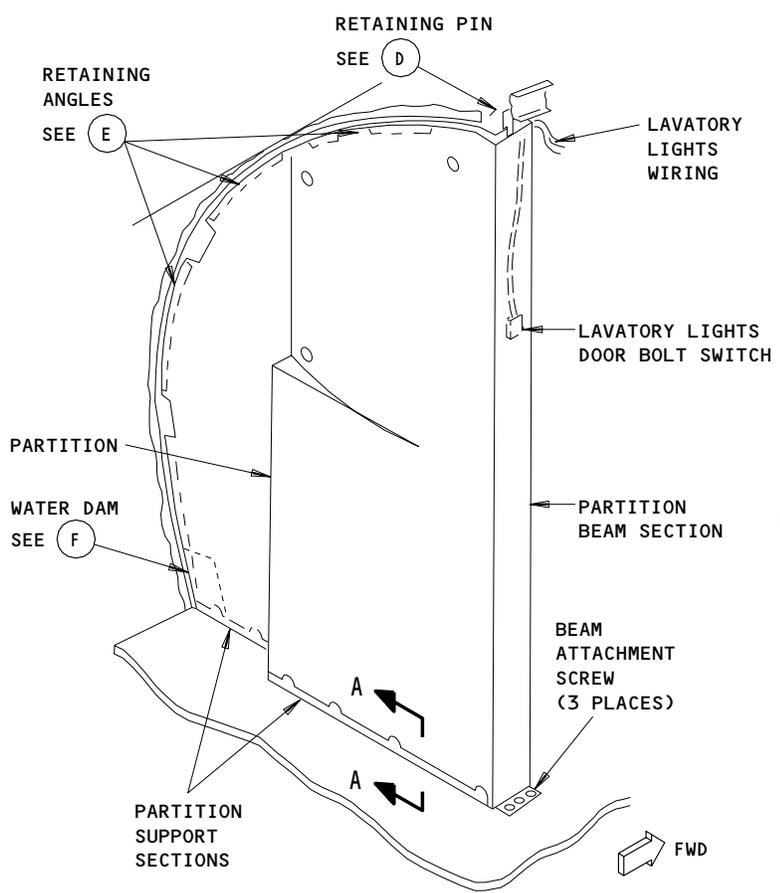
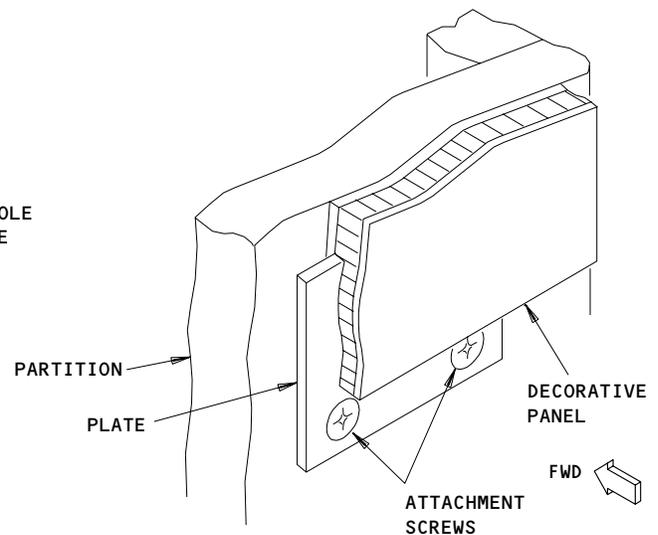
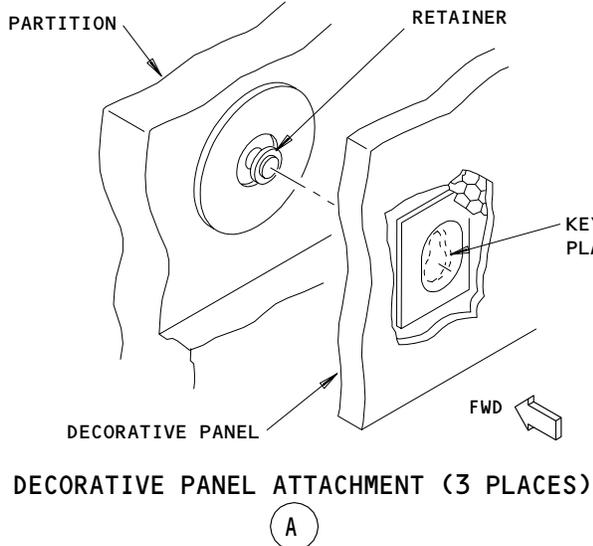
EFFECTIVITY	
	ALL

**25-40-2**

01

Page 403  
 Dec 01/04

458185

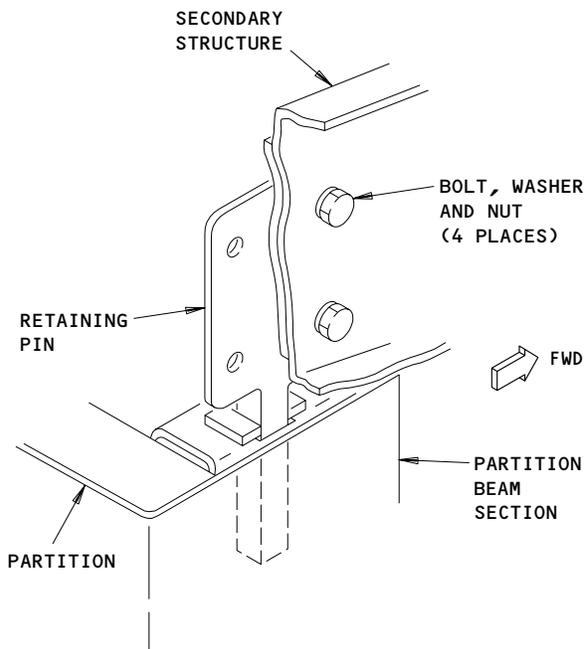


Forward Lavatory Partition Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY	
ALL	

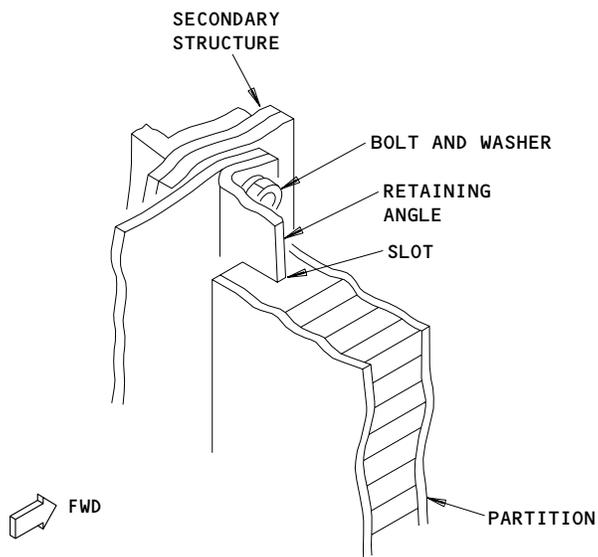
**25-40-2**

458194



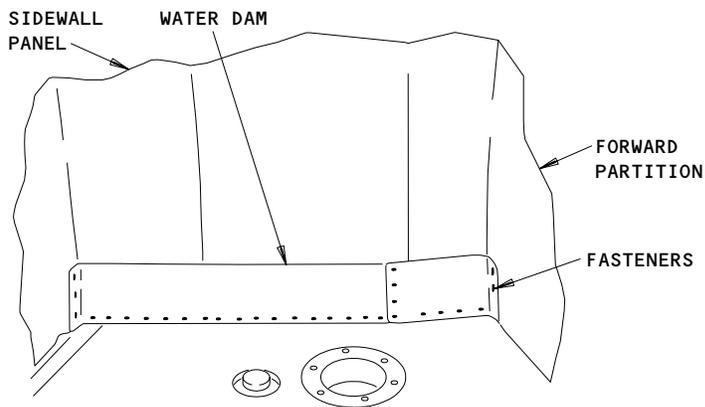
TYPICAL RETAINING PIN ATTACHMENT

(D)



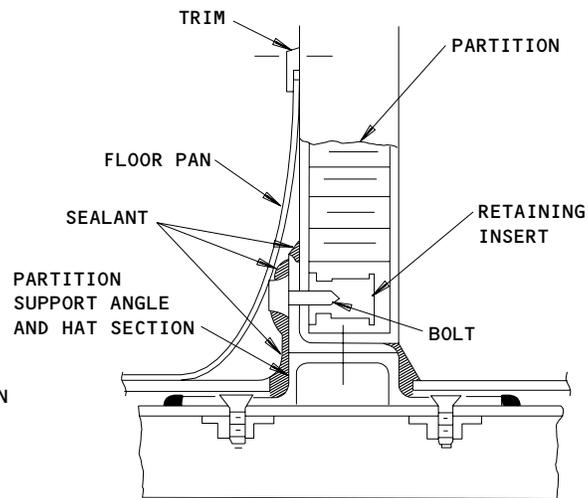
TYPICAL UPPER AND SIDE RETAINMENT

(E)



WATER DAM INSTALLATION

(F)



TYPICAL ATTACHMENT TO FLOOR SUPPORT ANGLES (FORWARD AND AFT OF PARTITION)

A-A

Forward Lavatory Partition Installation  
 Figure 401 (Sheet 3)

EFFECTIVITY	ALL
-------------	-----

**25-40-2**

01

Page 405  
 Dec 01/04

458196

FORWARD LAVATORY DOOR AND HEADER – REMOVAL/INSTALLATION

1. Remove Door and Header (See figure 401.)
  - A. Open door and remove screws attaching door hinge to control cabin entryway partition and remove door.
  - B. Remove lavatory ceiling panel attachment snap-in plug buttons and remove panel fasteners.
  - C. Remove screws attaching header to forward and aft support brackets and remove header.
  - D. If header is to be replaced, remove ceiling panel support brackets and retain for attachment to replacement header.
2. Install Door and Header (See figure 401.)
  - A. Position header and install screws to secure header to forward and aft support brackets. Do not tighten screws.
  - B. Install lavatory ceiling panel fasteners and snap-in plug buttons.
  - C. Tighten header forward and aft attachment screws.
  - D. Position door and install screws to secure hinge to aft edge of control cabin entryway partition.

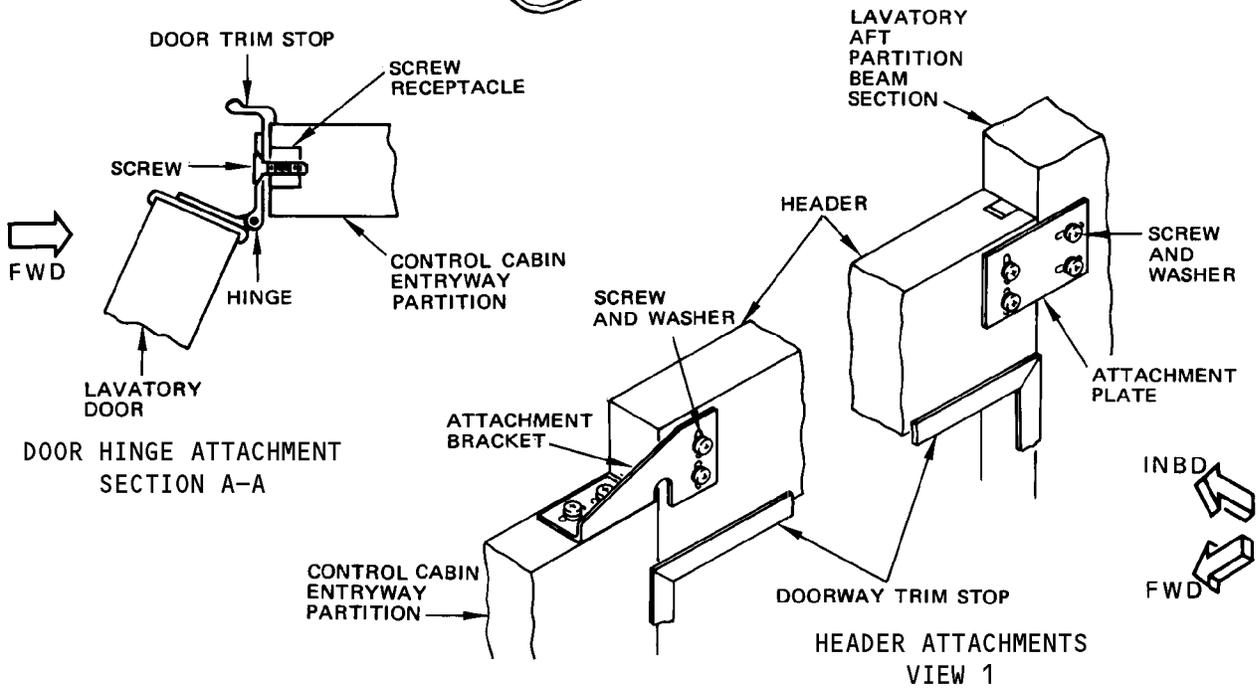
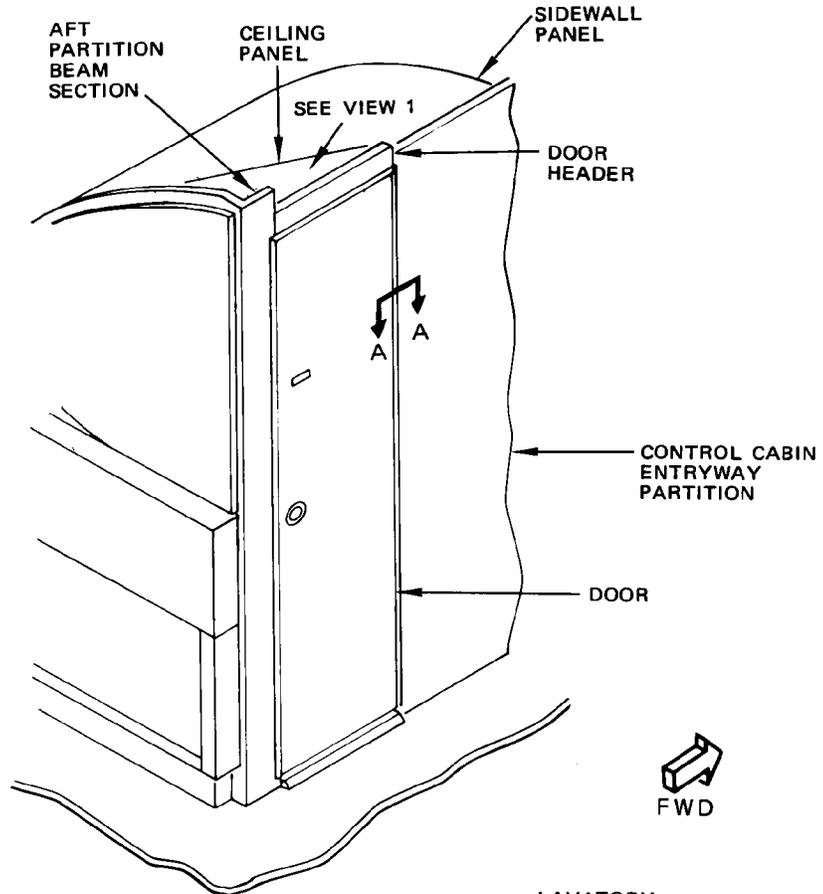
EFFECTIVITY

ALL

25-40-3

01

Page 401  
Dec 01/04



Forward Lavatory Door and Header Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-40-3

FORWARD LAVATORY SIDEWALL PANEL – REMOVAL/INSTALLATION

1. General
  - A. The forward lavatory sidewall panel is contoured and shaped to enclose the outboard area between the top of the disposal cabinet and the outboard edge of the ceiling panel.
  - B. A passenger address speaker and gasper outlet are installed in the sidewall panel and must be removed before the panel is removed.
2. Prepare to Remove Sidewall Panel
  - A. Remove speaker panel attachment screws, disconnect speaker wiring and remove speaker (Ref Chapter 23, Communications).
  - B. Remove gasper air outlet attachment screws, disconnect outlet air supply and remove outlet (Ref Chapter 21, Air Conditioning).
  - C. Remove dispenser cabinet (Ref 25-41-11, R/I).
  - D. Remove disposal cabinet (Ref 25-42-11, R/I).
3. Remove Sidewall Panel (Fig. 402)
  - A. Push dispenser cabinet electrical wiring through grommet to outboard side of panel.
  - B. Remove fasteners connecting water dam to the forward and aft partitions.
  - C. Remove panel fasteners at forward and aft panel edges and remove panel.
  - D. If trim strip removal is required, remove screws attaching trim strip to control cabin entryway partition support brackets and separate velcro tape.
4. Install Sidewall Panel (Fig. 402)
  - A. If removed, install trim strip.
  - B. Position panel to insert in trip strip and align with attachment brackets on forward and aft partitions.
  - C. Thread dispenser cabinet electrical wiring through grommet to inboard side of panel.
  - D. Install fasteners connecting water dam to forward and aft partitions.
  - E. Install panel fasteners at forward and aft panel edges.
5. Restore Airplane to Normal
  - A. Install disposal cabinet (Ref 25-42-11, R/I).
  - B. Install dispenser cabinet (Ref 25-41-11, R/I).
  - C. Install speaker (Ref Chapter 23, Communications).
  - D. Install gasper air outlet (Ref Chapter 21, Air Conditioning).

EFFECTIVITY

ALL

25-40-4

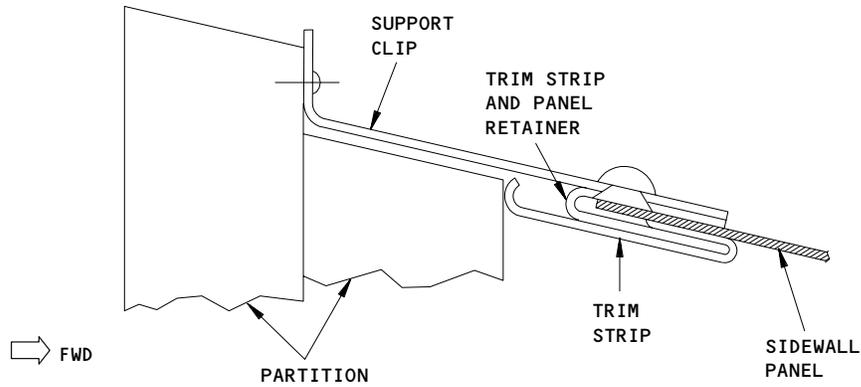
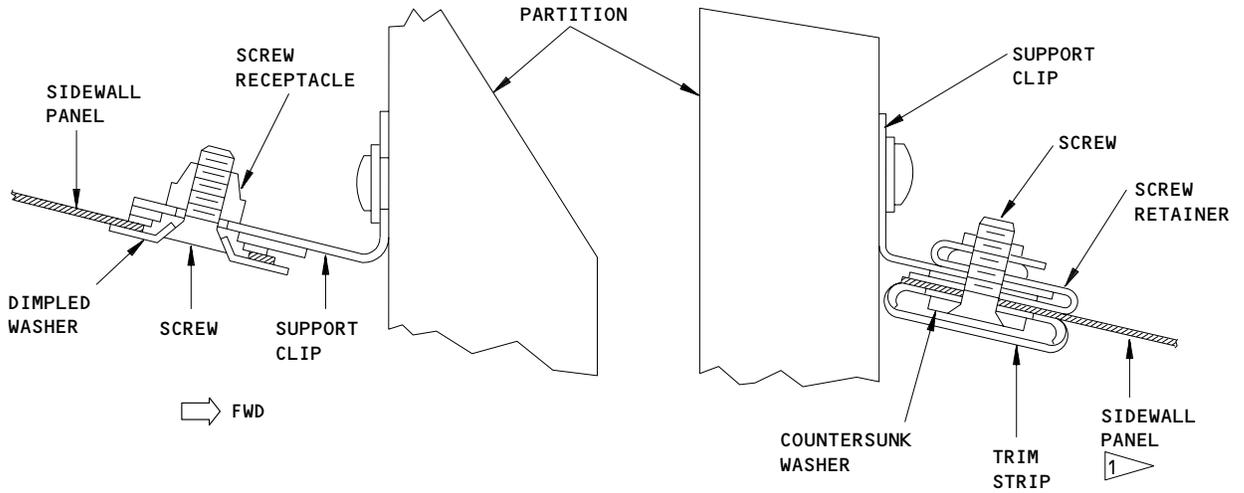
01

Page 401  
Aug 01/05



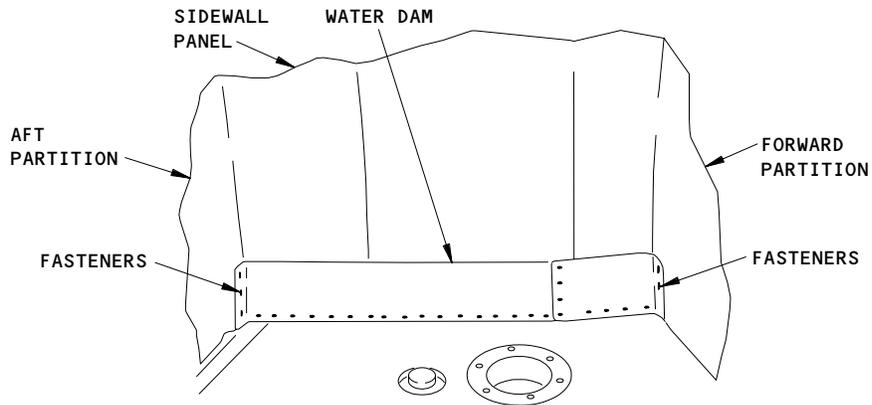


**MAINTENANCE MANUAL**



**TYPICAL PANEL ATTACHMENTS TO PARTITIONS**

(A)



**WATER DAM INSTALLATION**

(B)

1 HOLES ARE PROVIDED IN PANEL FOR ATTACHMENT SCREW

**Forward Lavatory Sidewall Panel Installation  
Figure 402**

EFFECTIVITY — ALL

**25-40-4**

01

Page 403  
Aug 01/06

458207

FORWARD LAVATORY CEILING PANEL – REMOVAL/INSTALLATION

1. General

- A. The triangular shaped forward lavatory ceiling panel is secured to support brackets attached to the lavatory partition (forward wall) and the door header.
- B. On standard passenger airplanes an oxygen mask box is installed in the ceiling panel and must be disconnected before the panel is completely removed. Partially lowering the ceiling panel and disconnecting the service unit oxygen line, precludes opening the service unit and disturbing the oxygen masks.

2. Remove Ceiling Panel (See figure 401.)

- A. Open lavatory dome light circuit breaker on circuit breaker panel P18.
- B. Remove snap-in plug buttons and remove panel attachment screws.
- C. Push up on ceiling panel until panel separates from trim strip, then lower panel until access to electrical wiring and oxygen line can be accomplished.

NOTE: Ceiling panel and trim strip are attached with velcro tape.

- D. Attach connection information tags and disconnect electrical wiring from light.
- E. Disconnect oxygen line from service unit and install caps on oxygen line and unit fitting. Tighten caps (finger-tight) 7 to 10 pound-inches torque.
- F. Remove ceiling panel.
- G. If ceiling panel is to be replaced, remove service unit and dome light and retain in safe place.

3. Install Ceiling Panel (See figure 401.)

- A. If required, install service unit and dome light in ceiling panel.
- B. Position and temporarily secure panel to accomplish the following steps C through H.
- C. Remove caps from oxygen connections and connect oxygen supply line to service unit connector.
- D. Torque oxygen connection and test connection for leaks. Refer to Chapter 35, Passenger Oxygen System.

CAUTION: HOLD OXYGEN INLET FITTING WITH WRENCH WHEN TORQUING LINE FITTING. TORQUE MUST NOT EXCEED 135 POUND-INCHES. EXCESSIVE TORQUE MAY DAMAGE CONNECTION THREADS.

- E. Connect dome light electrical wiring and remove connection information tags.
- F. Provide electrical power.
- G. Close lavatory dome light circuit breaker on panel P18.
- H. Check that lavatory dome light is illuminated.

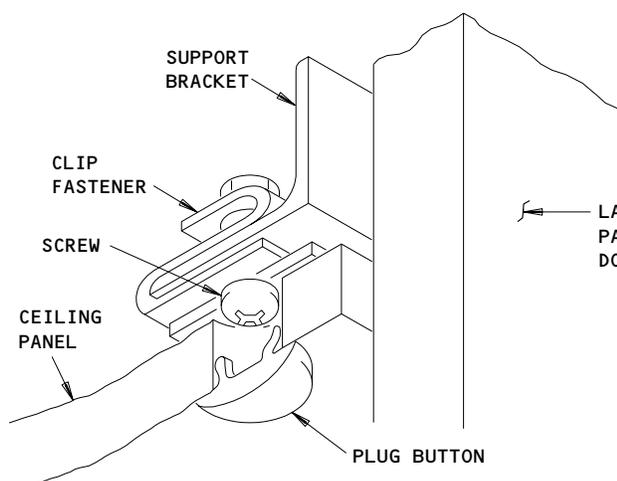
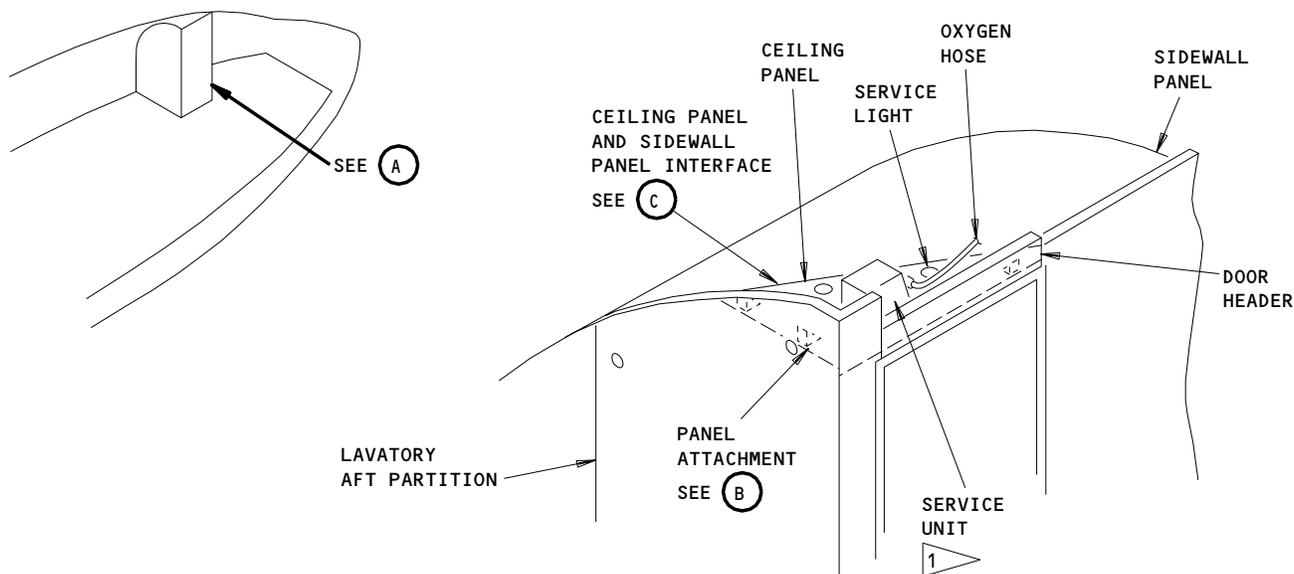
EFFECTIVITY

ALL

25-40-5

01

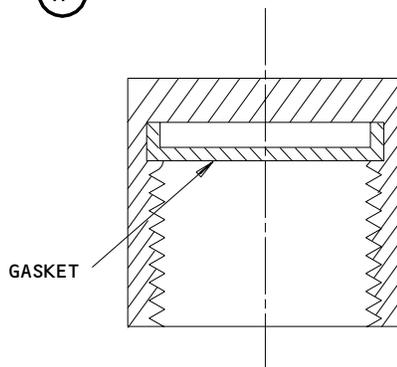
Page 401  
Dec 01/04



**CEILING PANEL ATTACHMENT  
 (4 PLACES)**

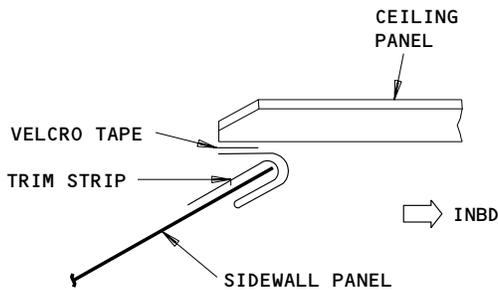
(B)

LAVATORY FWD PARTITION OR DOOR HEADER



**OXYGEN LINE METAL CAP**

TORQUE: 7-10 LBS-INS (FINGER-TIGHT)



**CEILING PANEL AND SIDEWALL INTERFACE**

(C)

1 STANDARD PASSENGER AIRPLANES

**Forward Lavatory Ceiling Panel Installation  
 Figure 401**

EFFECTIVITY	ALL
-------------	-----

**25-40-5**

01

Page 402  
 Dec 01/04

458214

**BOEING**  
**737**   
MAINTENANCE MANUAL

- I. Remove temporary ties, position panel above trim strip, install panel attachment screws and allow panel to contact trim strip.

**NOTE:** Do not allow panel to contact velcro tape on trim strip until attachment screws are installed.

- J. Install snap-in plug buttons.  
K. If no longer required, remove electrical power.

EFFECTIVITY

ALL

25-40-5

01

Page 403  
Dec 01/04

AFT LAVATORY PARTITION – REMOVAL/INSTALLATION

1. General

- A. The aft lavatory partition forming the forward wall of the lavatory is a permanent-type installation secured to the ceiling, sidewall, and floor structure.
- B. On airplanes without aft airstairs an attendant's seat, acoustical panel, mirror and light are attached to the partition, which may remain attached, if the partition is to be reinstalled immediately. However, all electrical wiring to the partition must be disconnected before removal of the partition is attempted. Airplanes with aft airstairs do not have an attendant's seat nor acoustical panel on left partition.
- C. This procedure also applies to the right partition where installed. Exceptions are noted.

2. Equipment and Materials

- A. Sealant – BMS 5-95, Class B (Ref 20-30-11)
- B. Sealant – BMS 5-108, Type 1, Class B-2 (Ref 20-30-11)
- C. Sealant – 30-079 Silicone (Ref 20-30-11)
- D. Solvent – General Purpose, BMS 3-2 (Ref 20-30-31)
- E. Tape – Double-backed, 971 Minnesota Mining and MFG., Permacel P50L (Ref 20-30-51)
- F. Tape – Permacel 306, 10 MIL thick, 18 inches wide (Ref 20-30-51)
- G. Tape – Permacel 306, 10 MIL thick, 3 inches wide (Ref 20-30-51)

3. Prepare to Remove Partition

- A. Open LAV MIRROR LIGHTS circuit breaker on P18 and P6 circuit breaker panels.
- B. On airplanes with aft airstairs open CONT AND TREAD LIGHT and AFT ACTUATOR on P6-4 circuit breaker panel.
- C. Remove attendant's seat if installed (Ref 25-25-21, Aft Cabin Attendant's Seat).
- D. Remove ceiling panels required for access (Ref 25-21-361, Aft Lowered Ceiling Installation).
- E. Remove lavatory ceiling panel (Ref 25-40-9, Aft Lavatory Ceiling Panel).
- F. Remove door and header (Ref 25-40-7, Aft Lavatory Door and Header).

4. Remove Partition (Fig. 401)

- A. Remove light and mirror.
  - (1) Remove cover and light tubes.
  - (2) Remove screws from light base and move base to provide clearance for removal of mirror.
  - (3) Pull mirror free from velcro tape and remove for safekeeping.
- B. Remove floor pan.
  - (1) Remove fasteners in trim strip around entire periphery of floor pan and remove trim strip.
  - (2) Remove fasteners from threshold, remove threshold and sealant.
  - (3) Pull floor pan free from double-backed tape on floor.

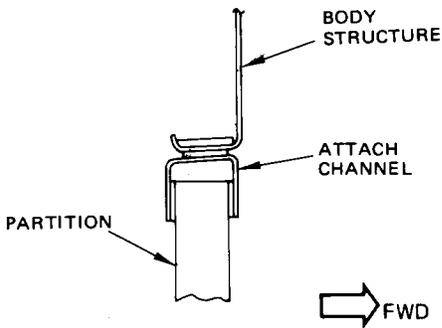
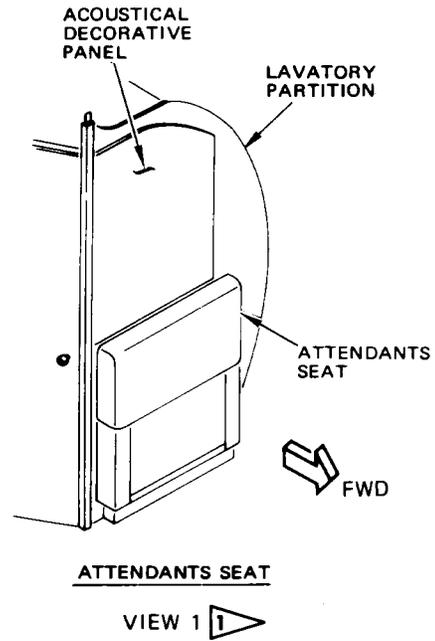
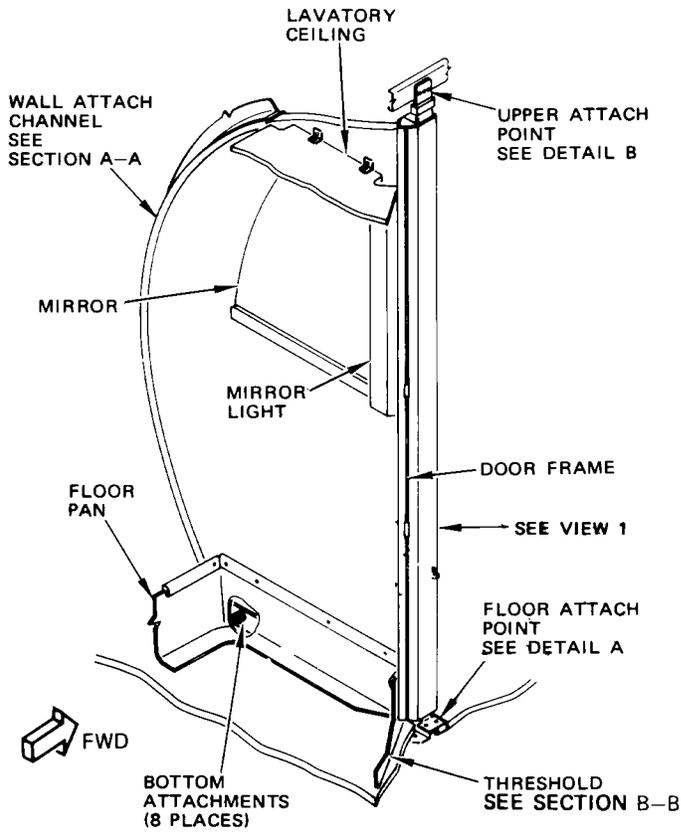
EFFECTIVITY

ALL

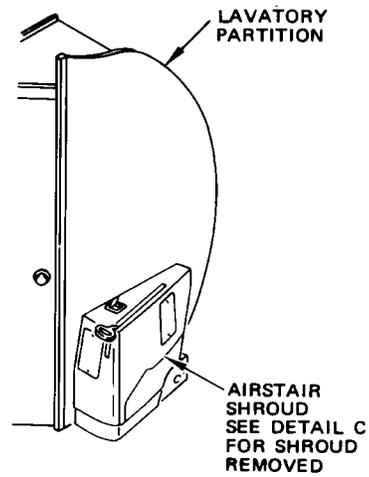
25-40-6

02

Page 401  
Dec 01/04



WALL ATTACH CHANNEL  
 SECTION A-A



AIRSTAIR CONSOLE  
 VIEW 1

 ON SOME AIRPLANES

Aft Lavatory Partitions  
 Figure 401 (Sheet 1)

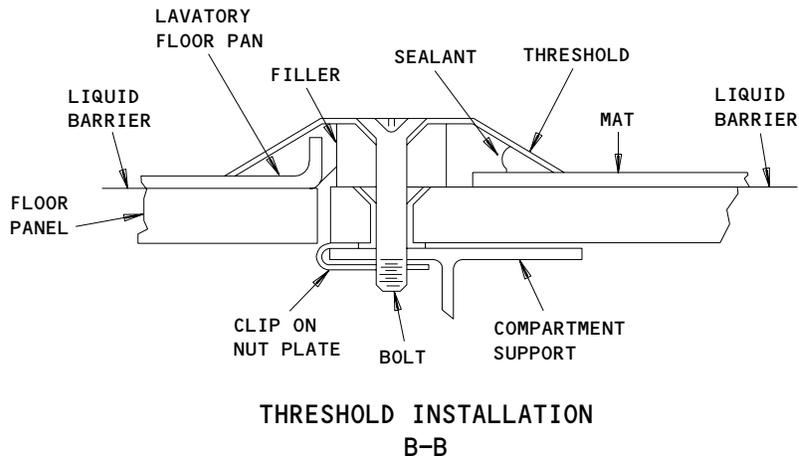
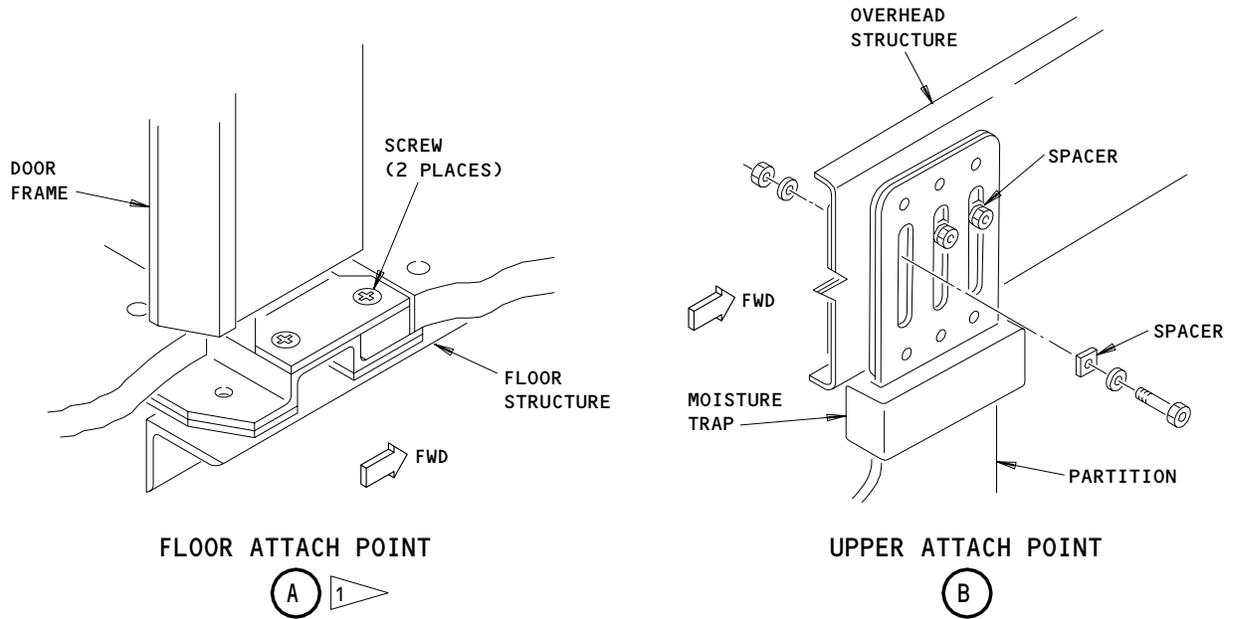
EFFECTIVITY	
	ALL

458225

25-40-6

02

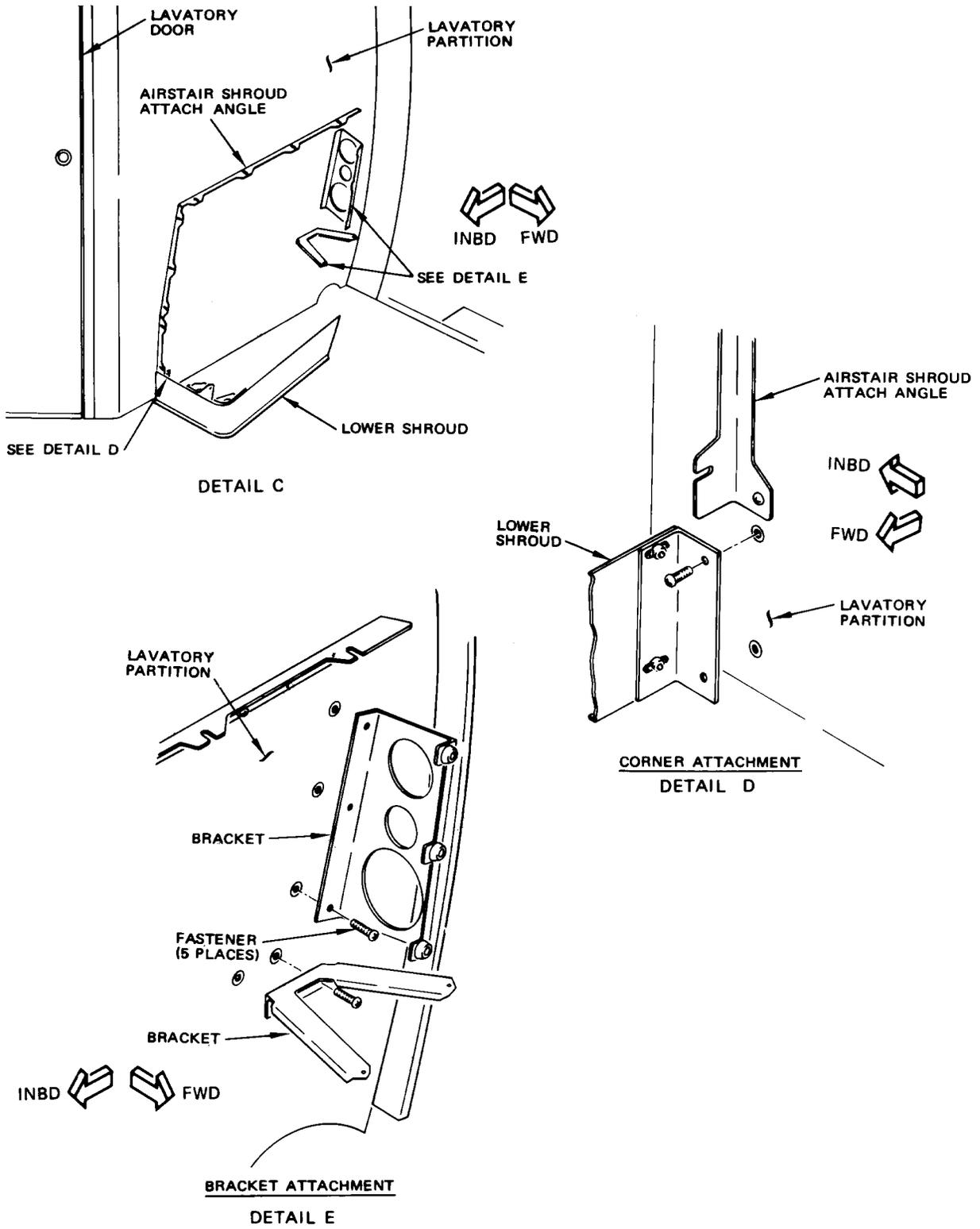
Page 402  
 Dec 01/04



Aft Lavatory Partitions  
 Figure 401 (Sheet 2)

EFFECTIVITY	
	ALL

**25-40-6**



Aft Lavatory Partitions  
 Figure 401 (Sheet 3)

EFFECTIVITY	
	ALL

25-40-6

- C. On airplanes having aft airstairs remove airstair console.
- (1) Remove coverplates from airstair console shroud.
  - (2) Unplug wire bundle from switch box inside upper surface of shroud.
  - (3) Remove nine fasteners inside shroud located along top and inboard end which secure shroud to attach angle.
  - (4) Loosen two quick-release fasteners along bottom of shroud at inboard end.
  - (5) Remove bolts securing handle to mechanism and remove handle.
  - (6) Lift shroud to clear clips along forward side and remove shroud.
  - (7) Unplug wire bundles from relays mounted on partition. Remove relays and mounting angle if required for clearance.
  - (8) Remove wire clamps from partition.
  - (9) Remove three fasteners securing vertically mounted channel to partition above gearbox.
  - (10) Remove two fasteners securing horizontally mounted vee bracket to partition.
  - (11) Remove two fasteners securing short angle to partition inside floor skirt at inboard end of console. Leave skirt in place.
- D. Remove panel.
- (1) Gain entry to disposal container area of sink cabinet.
  - (2) Remove fasteners in forward wall attaching cabinet to partition.
  - (3) Remove fasteners along bottom of partition including two in recess at bottom of sink cabinet.
  - (4) Remove two screws from attach clip on floor at inboard end of partition.
  - (5) Remove three fasteners from upper extension of partition. Package spacers to prevent loss of parts.
  - (6) Pull partition from wall channel and remove.
5. Install Partition
- A. Install panel.
- (1) Position panel and push into wall channel.
  - (2) Temporarily attach upper extension of partition for alignment.
  - (3) Install two screws in attach clip on floor at inboard end of partition.
  - (4) Install fasteners along bottom of partition including two in recess at bottom of sink cabinet.
  - (5) Inside sink cabinet install fasteners in forward wall attaching cabinet to partition.
  - (6) Attach upper extension of partition with spacers in slots.
- B. On airplanes having aft airstairs install airstair console.
- (1) Install two fasteners in short angle inside floor skirt at inboard end of console.
  - (2) Install two fasteners in horizontally mounted vee bracket.
  - (3) Install three fasteners in vertically mounted channel above gearbox.
  - (4) Install all wire clamps on partition.

EFFECTIVITY

ALL

25-40-6

02

Page 405  
Dec 01/04



## MAINTENANCE MANUAL

- (5) Connect wire bundles to relays mounted on partition. Install relays if previously removed.
  - (6) Position shroud and push down into clips along forward side.
  - (7) Insert handle through slot and attach to mechanism.
  - (8) Tighten two quick-release fasteners along bottom of shroud at inboard end.
  - (9) Install 9 fasteners inside shroud located along top and inboard end.
  - (10) Connect wire bundle to switch box inside upper surface of shroud.
  - (11) Install coverplates.
- C. Install floor pan.
- (1) Clean floor and bottom of pan thoroughly with solvent.
  - (2) Apply double-backed tape to floor, do not overlap tape.
  - (3) Install pan and press down on tape.
  - (4) Install trim strips and fasteners around periphery.
  - (5) Install threshold and secure in place.
  - (6) Apply sealant.
    - (a) Lightly sand any enamel to be covered by sealant.
    - (b) Apply bead of BMS 5-95 sealant to all cracks, small openings and internal corners.
    - (c) If desired, coat sealed area with BMS 5-108 type 1 class B coating to thickness of 0.020 to 0.030 inch.
- D. Install light and mirror.
- (1) Position mirror in lower track so light base will secure inboard edge and press velcro into contact.
  - (2) Install screws in light base.
  - (3) Install light tubes and cover.
6. Restore Airplane to Normal
- A. Install door and header (Ref 25-40-7, Aft Lavatory Door and Header).
  - B. Install lavatory ceiling panel (Ref 25-40-9, Aft Lavatory Ceiling Panel).
  - C. Install lowered ceiling panels removed for access (Ref 25-21-361, Aft Lowered Ceiling Installation).
  - D. Install attendant's seat (Ref 25-25-21, Aft Cabin Attendant's Seat).
  - E. Close LAV MIRROR LIGHTS circuit breaker on P18 and P6 circuit breaker.

EFFECTIVITY

ALL

25-40-6

02

Page 406  
Dec 01/04

AFT LAVATORY DOOR AND HEADER – REMOVAL/INSTALLATION

1. General
  - A. Doors to aft lavatories are hinged at the center post and on airplanes having two lavatories face each other in the form of a vee.
  - B. This procedure applies to the door on either a left or right lavatory.
2. Prepare to Remove
  - A. Remove ceiling panel (Ref 25-40-9, Aft Lavatory Ceiling Panel).
3. Remove Door and Header (Fig. 401)
  - A. Open door and remove screws attaching door hinge to control cabin entryway partition and remove door.
  - B. Remove screws attaching splice plates to forward and aft panels and remove header.
  - C. If header is to be replaced, remove ceiling panel support brackets and splice plates and retain for attachment to replacement header.
4. Install Door and Header (Fig. 401)
  - A. Position header and install screws in splice plates to secure header to forward and aft panels. Do not tighten screws.
  - B. Temporarily fit ceiling panel in place to check location of header.
  - C. Tighten header forward and aft attachment screws.
  - D. Position door and install screws to secure hinge to aft edge of control cabin entryway partition.
  - E. Install aft lavatory ceiling panel (Ref 25-40-9).

EFFECTIVITY

ALL

25-40-7

01

Page 401  
Dec 01/04

AFT LAVATORY SIDEWALL PANEL - REMOVAL/INSTALLATION

1. General

- A. The aft lavatory sidewall panel forming the partition between lavatories at the airplane centerline is a permanent-type installation secured to the ceiling, pressure bulkhead, and floor structure.
- B. Removal can be accomplished without removal of the forward wall of the lavatory if desired.

2. Equipment and Materials

- A. Sealant - BMS 5-95, Class B (Ref 20-30-11)
- B. Sealant - BMS 5-108, Type 1, Class B-2 (Ref 20-30-11)
- C. Sealant - 30-079 Silicone (Ref 20-30-11)
- D. Sealant - RTV 174, Type 60 (Ref 20-30-11)
- E. Sealant - BMS 5-32 (Ref 20-30-11)
- F. Solvent - General Purpose, BMS 3-2 (Ref 20-30-31)
- G. Tape - Double-backed, 971 Minnesota Mining and MFG., Permacel P50L (Ref 20-30-51)
- H. Tape - Permacel 306, 10 MIL thick, 18 inches wide (Ref 20-30-51)
- I. Tape - Permacel 306, 10 MIL thick, 3 inches wide (Ref 20-30-51)
- J. Tape - 1 inch wide, Electrovert No. 474 (Ref 20-30-51)
- K. Tape - 3 inches wide, Minnesota Mining and Mfg No. 474 (Ref 20-30-51)

3. Prepare to Remove Sidewall Panel

- A. Open LAV FLUSH MOTOR circuit breaker on P18 panel.
- B. Remove ceiling panels required for access (Ref 25-21-361, Aft Lowered Ceiling Installation).
- C. Remove galley (Ref 25-31, Aft Galley - Removal/Installation).
- D. Remove stowage closet (Ref 25-24-381, Aft Centerline Stowage Closet).
- E. Remove lavatory ceiling panel from lavatory (Ref 25-40-9, Aft Lavatory Ceiling Panel).
- F. Remove doors and headers from lavatory (Ref 25-40-7, Aft Lavatory Door and Header).

4. Remove Sidewall Panel (Fig. 402, 403)

- A. Remove floor pan.
  - (1) Remove fasteners in trim strip around entire periphery of floor pan and remove trim strip.
  - (2) Remove fasteners from threshold and remove threshold.
  - (3) Pull floor pan free from double-backed tape on floor.
  - (4) Remove tape from floor.
- B. Remove toilet shrouds.
  - (1) Remove screws from both ends of upper shroud. Pull inboard end forward and inboard until outboard corner clears spring clip.
  - (2) Disconnect electrical connector to flush timer and remove shroud with timer attached.
  - (3) Remove screws from both ends of lower shroud and remove shroud.
- C. Remove aft wall panel.
  - (1) Snap off trim cover strip at each end of panel.

EFFECTIVITY

ALL

25-40-8

03

Page 401  
Aug 01/05



## MAINTENANCE MANUAL

- (2) Remove fasteners at each end of panel.
  - (3) Pull panel out at bottom and down to free from spring clips at top.
- D. Remove water line.
- (1) Drain water from potable water system (Ref Chapter 38-11-0, Servicing).
  - (2) Remove tape from elbow of water line shroud immediately above partition and remove elbow halves.
  - (3) Disconnect water hose fitting.
  - (4) Gain access around water tank located aft of aft baggage compartment and remove tape from large radius elbow on water line shroud.
  - (5) Slide sleeve on to straight section of shroud and remove elbow halves.
  - (6) Pull water line down through partition and floor opening.
- E. Remove water line shroud and cover.
- (1) Remove fasteners securing shroud cover in corner of lavatory partition.
  - (2) If required remove fastener securing shroud clamp to foot panel.
  - (3) Push shroud downward until shroud is clear of slot in partition, then rotate and withdraw from floor.
- F. Remove panel
- (1) Reach above soffit (curved ceiling) and remove fasteners securing clip angles to sidewall panel at aft corner and at upper corner of soffit. Leave soffit in place.
  - (2) Remove bolts through angle and panel at bottom of sidewall panel.
  - (3) Remove two screws from angle on floor at front edge of panel.
  - (4) Remove two fasteners from upper attach fitting of sidewall panel. Package spacers to prevent loss of parts.
  - (5) Pull sidewall panel forward slightly to free from channels on pressure bulkhead then move bottom to the right until top is lowered enough to clear ceiling support channel.
5. Install Sidewall Panel (Fig. 402)
- A. Install panel.
- (1) Position sidewall panel with bottom of panel far enough to the right to allow top to pass under ceiling support channel, move to upright position and push into channels on pressure bulkhead.
  - (2) Temporarily attach upper attach fitting of panel for alignment.
  - (3) Install two screws in angle on floor at front edge of panel.
  - (4) Install bolts through angle and panel at bottom of sidewall panel.
  - (5) Reach above soffit and install fasteners' securing clip angles to sidewall panel at aft corner and at upper corner of soffit.
  - (6) Secure upper attach fitting of panel, ensure spacers are in slots.
  - (7) If necessary reinstall water dam (Fig. 402) (Ref 51-31-0).
    - (a) Temporarily install silicon rubber water dam at aft end of buttline 0 partition as shown (inboard wall of aft left lavatory). Check dam for fit. Trim lower aft side as necessary for tight fit with pressure bulkhead structure.

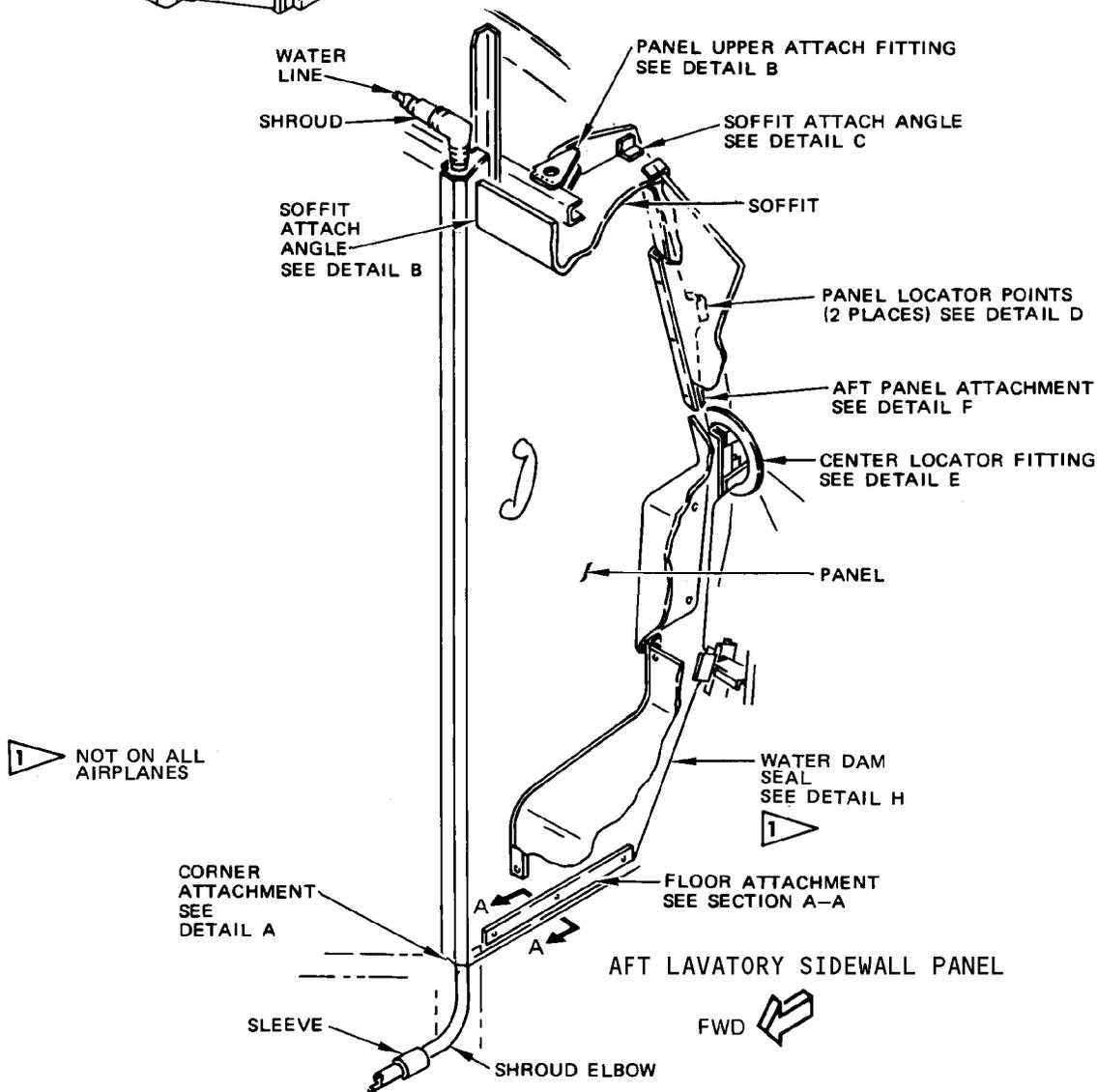
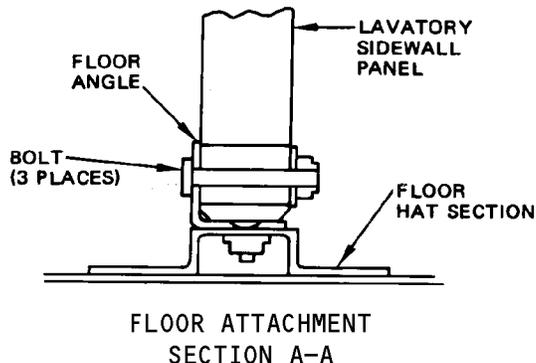
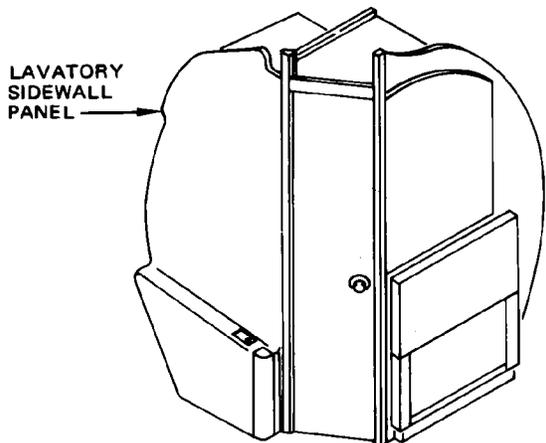
EFFECTIVITY

ALL

25-40-8

03

Page 402  
Aug 01/05

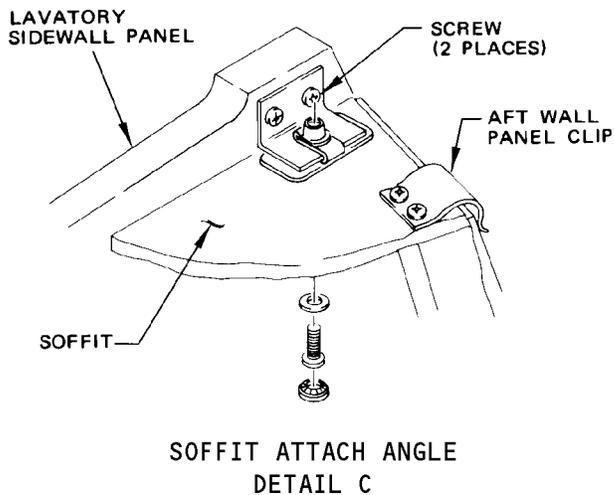
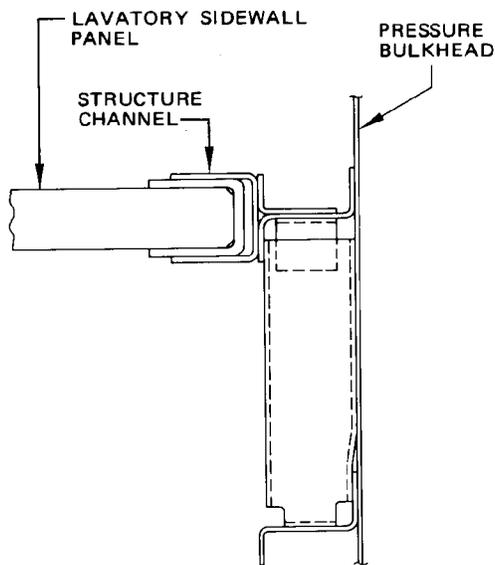
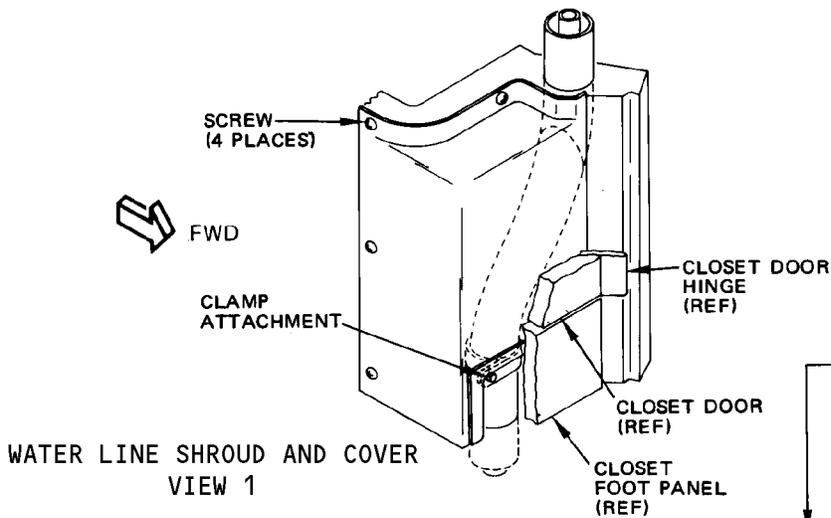
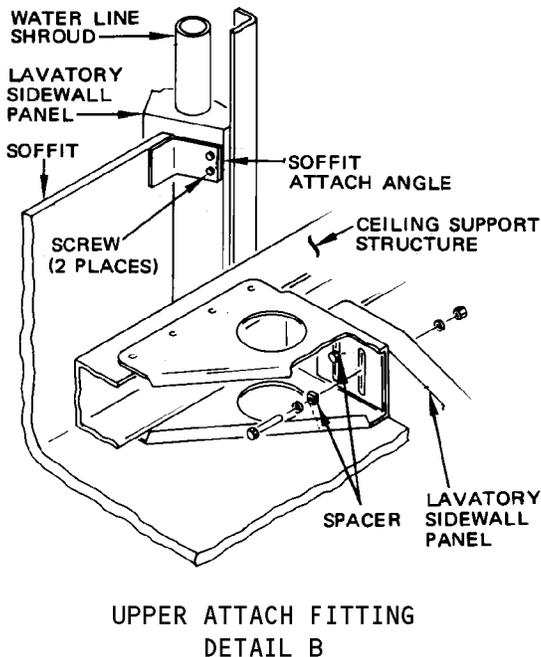
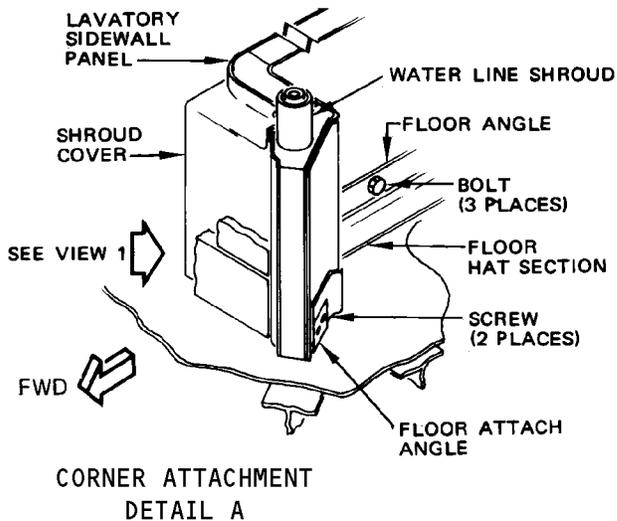


Aft Lavatory Sidewall Panel  
 Figure 401 (Sheet 1)

EFFECTIVITY	
	ALL

25-40-8

**MAINTENANCE MANUAL**

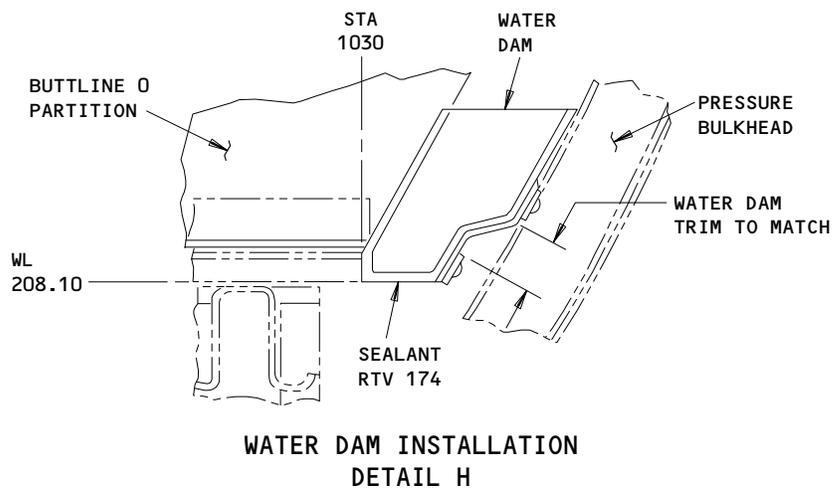
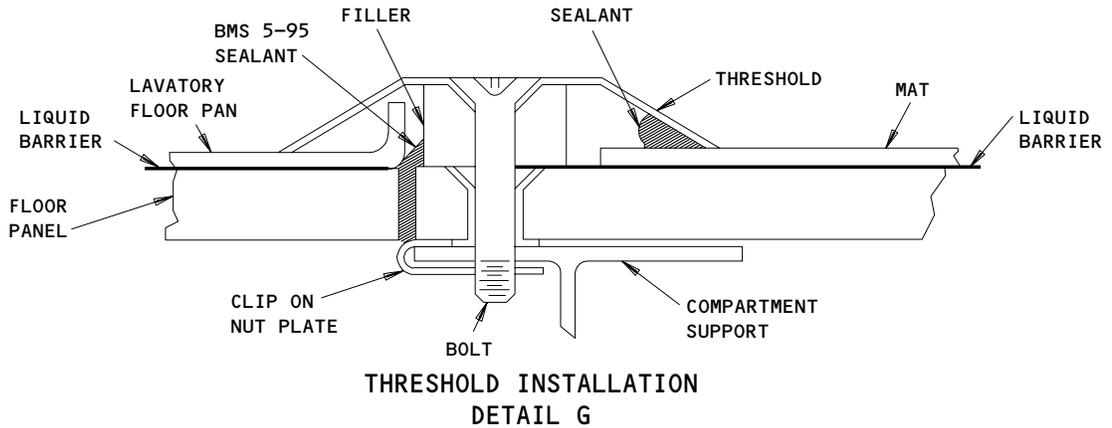
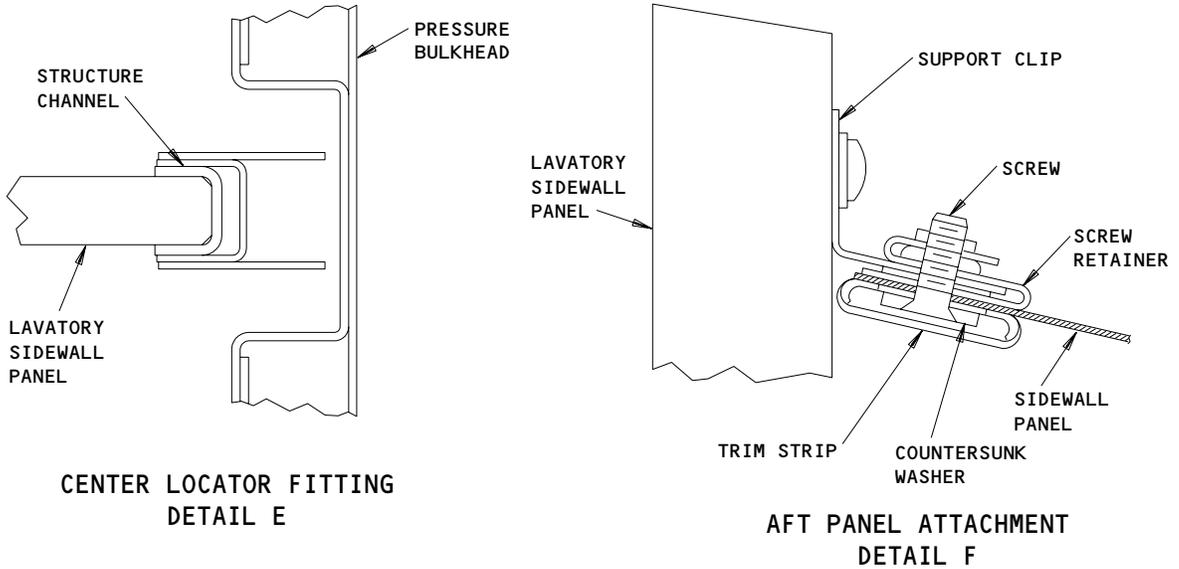


Aft Lavatory Sidewall Panel  
Figure 401 (Sheet 2)

EFFECTIVITY	
	ALL

25-40-8

**MAINTENANCE MANUAL**



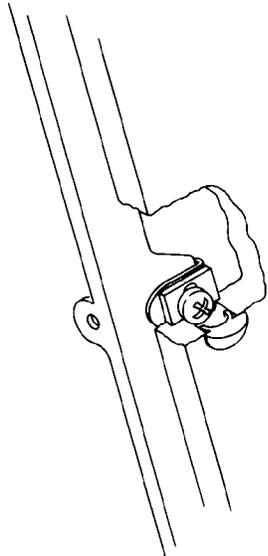
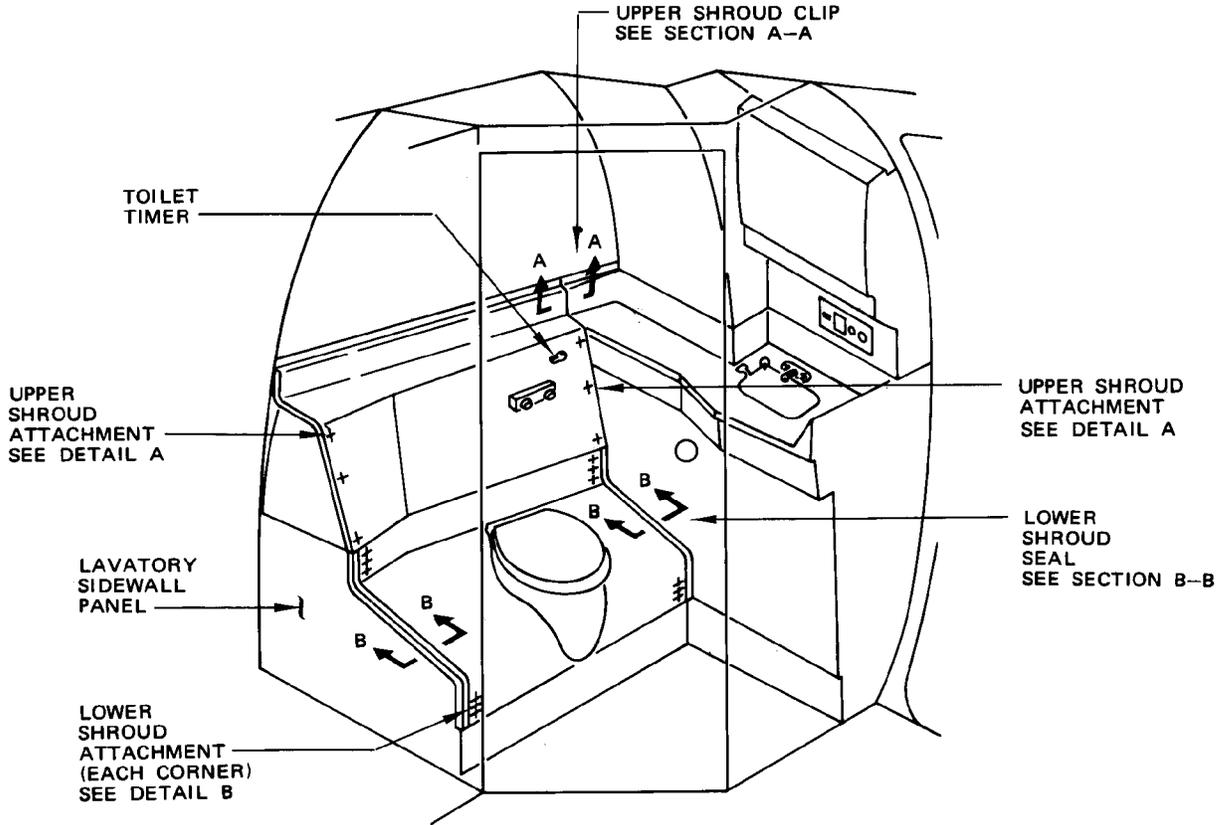
Aft Lavatory Sidewall Panel Installation  
Figure 402

EFFECTIVITY	
ALL	

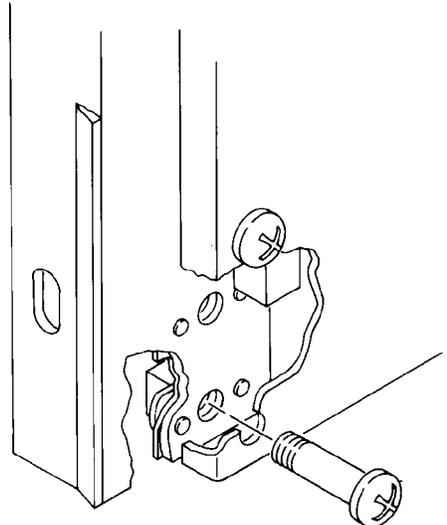
**25-40-8**

01

Page 405  
Dec 01/04



UPPER SHROUD ATTACHMENT  
 DETAIL A

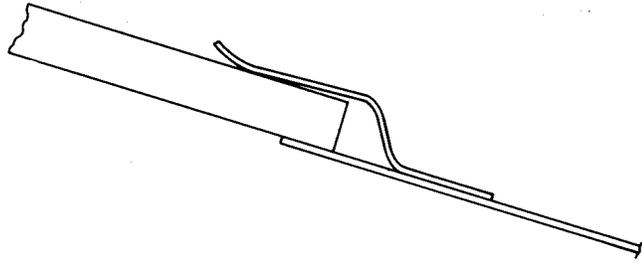


LOWER SHROUD ATTACHMENT  
 DETAIL B

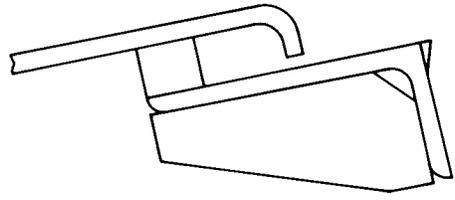
Aft Lavatory Sidewall Panel  
 Figure 403 (Sheet 1)

EFFECTIVITY	
	ALL

**25-40-8**



UPPER SHROUD ATTACHMENT  
SECTION A-A



LOWER SHROUD SEAL  
SECTION B-B

Aft Lavatory Sidewall Panel  
Figure 403 (Sheet 2)

EFFECTIVITY	
	ALL

**25-40-8**

01

Page 407  
Dec 01/04

458275



## MAINTENANCE MANUAL

- (b) Remove dam, coat forward, bottom and aft surfaces of dam with sealant, RTV174, Type 60 (Ref 20-30-11).
  - (c) Coat both sides of dam liberally with sealant, BMS 5-32 (Ref 51-31-0).
- B. Install water line shroud and cover (View 1).
- (1) Push shroud downward through hole in floor until upper end can be rotated into slot in partition, then move up to proper position.
  - (2) If required install fastener securing shroud clamp to foot panel.
  - (3) Install fasteners securing shroud cover in corner of lavatory partition.
- C. Install water line.
- (1) Pull hose up through tube in partition with suitable line.
  - (2) Connect water hose fitting above partition.
  - (3) Pressurize water system (Ref Chapter 38-11-0, Servicing).
  - (4) Ensure that air has been removed from line and check for leaks at fitting.
  - (5) Install shroud elbow with tape. Two wraps of 3-inch wide tape at joints, followed by two wraps of 1-inch wide tape on ends of elbow.
  - (6) Gain access around water tank located aft of aft baggage compartment and install large radius elbow in floor fitting. Secure with sleeve at joint with shroud leading to water tank.
  - (7) Install two wraps of 3-inch wide tape to each end of sleeve, followed by two wraps of 1-inch wide tape over tape joints.
- D. Install aft wall panel.
- (1) Push panel into spring clips at upper edge.
  - (2) Install fasteners at each edge of panel.
  - (3) Snap trim covers in place.
- E. Install toilet shrouds.
- (1) Position lower shroud and install screws in both ends.
  - (2) Place upper shroud near installed position and connect flush timer electrical connectors.
  - (3) Insert outboard corner into spring clip and install screws at both ends of shroud.
- F. Install floor pan.
- (1) Clean floor and bottom of pan thoroughly with solvent.
  - (2) Apply double-backed tape to floor, do not overlap tape.
  - (3) Install pan and press down to tape.
  - (4) Install trim strips and fasteners around periphery.
  - (5) Install threshold and secure in place.
  - (6) Apply sealant.
    - (a) Lightly sand any enamel to be covered by sealant.
    - (b) Apply bead of BMS'5-95 sealant to all cracks, small openings and internal corners.
    - (c) If desired, coat sealed area with BMS 5-108 type 1 class B coating to thickness of 0.002 to 0.003 inch.

EFFECTIVITY

ALL

25-40-8

03

Page 408  
Dec 01/04

**BOEING**  
**737**   
MAINTENANCE MANUAL

6. Restore Airplane to Normal
- A. Install doors and headers (Ref 25-40-7, Aft Lavatory Door and Header).
  - B. Install lavatory ceiling panel (Ref 25-40-9, Aft Lavatory Ceiling Panel).
  - C. Install stowage closet (Ref 25-24-381, Aft Centerline Stowage Closet).
  - D. Install galley (Ref 25-31, Aft Galley - Removal/Installation).
  - E. Install lowered ceiling panels removed for access (Ref 25-21-361, Aft Lowered Ceiling Installation).
  - F. Close LAV FLUSH MOTOR circuit breaker on P18 panel.

EFFECTIVITY

ALL

25-40-8

02

Page 409  
Dec 01/04

AFT LAVATORY CEILING PANEL – REMOVAL/INSTALLATION

1. General

- A. Aft lavatory ceiling panel is secured to support-brackets attached to the lavatory partition (forward wall) soffit, and to the door header.
- B. An oxygen mask box is installed in the ceiling panel and must be disconnected before the panel is completely removed. Partially lowering the ceiling panel and disconnecting the service unit oxygen line, precludes opening the service unit and disturbing the oxygen masks.

2. Remove Ceiling Panel (Fig. 401)

- A. Open lavatory dome light circuit breaker on circuit breaker panel P18.
- B. Remove snap-in plug buttons and remove panel attachment screws.
- C. Lower panel until access to electrical wiring and oxygen line can be accomplished.
- D. Attach connection information tags and disconnect electrical wiring from light.
- E. Disconnect oxygen line from service unit and install caps on oxygen line and unit fitting. Tighten caps finger-tight 7 to 10 pound-inches torque.
- F. Remove ceiling panel.
- G. If ceiling panel is to be replaced, remove service unit and dome light and retain in safe place.

3. Install Ceiling Panel (Fig. 401)

- A. If required., install service unit and dome light in ceiling panel.
- B. Position and temporarily secure panel to accomplish the following steps C thru H.
- C. Remove caps from oxygen connections and connect oxygen supply line to service unit connector.
- D. Torque oxygen connection and test connection for leaks (Ref Chapter 35, Passenger Oxygen System).

**CAUTION:** HOLD OXYGEN INLET FITTING WITH WRENCH WHEN TORQUING LINE FITTING. TORQUE MUST NOT EXCEED 135 POUND-INCHES. EXCESSIVE TORQUE MAY DAMAGE CONNECTION THREADS.

- E. Connect dome light electrical wiring and remove connection information tags.
- F. Provide electrical power.
- G. Close lavatory dome light circuit breaker on panel P18.
- H. Check that lavatory dome light is illuminated.
- I. Remove temporary ties, position panel and install panel-attachment screws.
- J. Install snap-in plug buttons.
- K. If no longer required, remove electrical power.

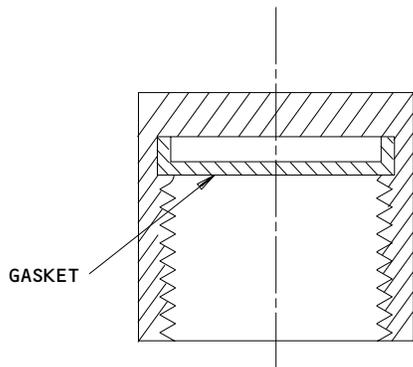
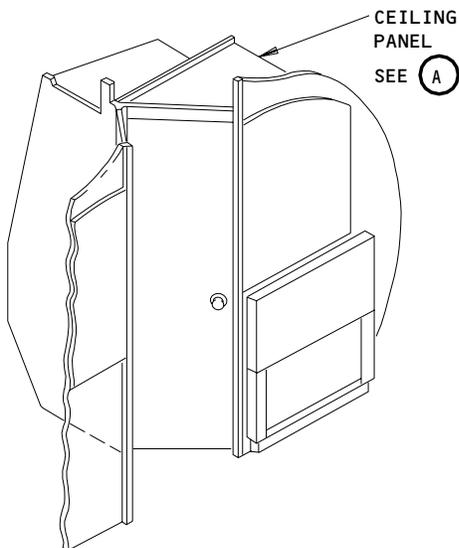
EFFECTIVITY

ALL

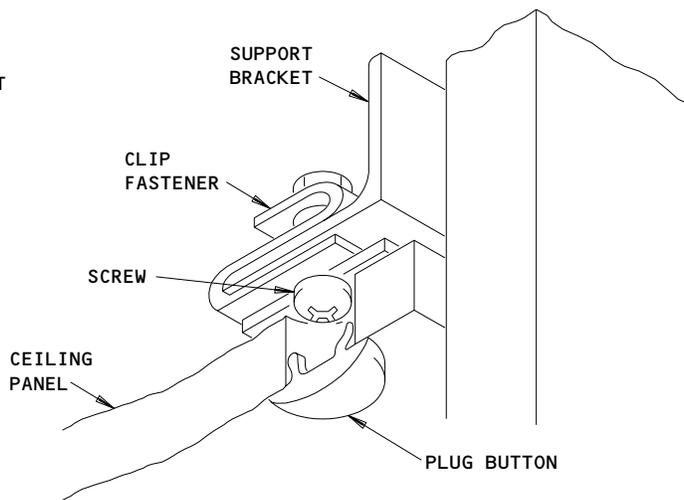
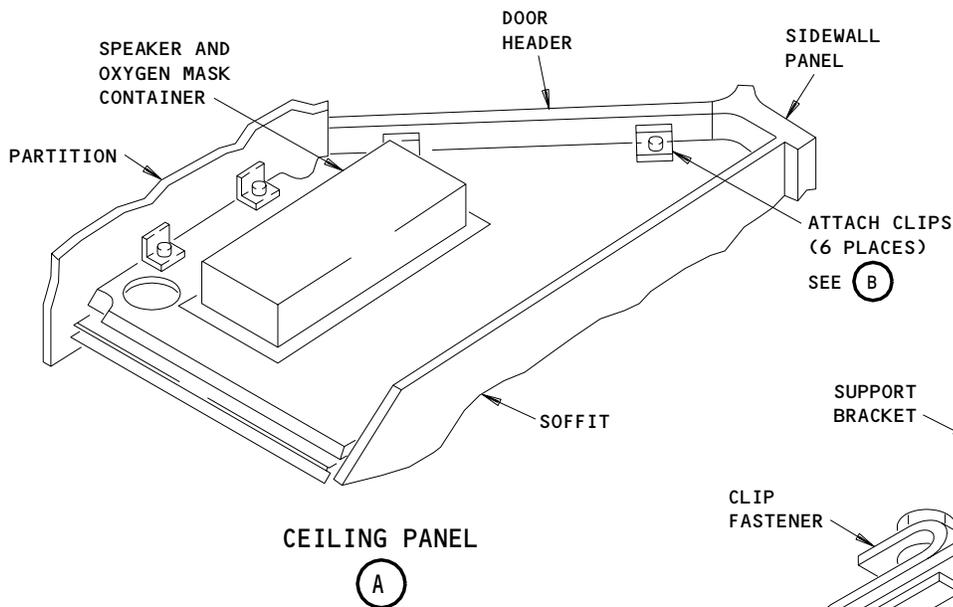
25-40-9

01

Page 401  
Dec 01/04



**OXYGEN LINE METAL CAP**  
 TORQUE: 7-10 LBS-INS (FINGER-TIGHT)



**CEILING PANEL ATTACHMENT**  
 (6 PLACES)

(B)

**Aft Lavatory Ceiling Panel Installation**  
**Figure 401**

EFFECTIVITY	ALL
-------------	-----

**25-40-9**

01

Page 402  
 Dec 01/04

DISPENSER CABINET ASSEMBLY – REMOVAL/INSTALLATION

1. General

- A. A dispenser cabinet assembly is installed in the forward lavatory. (See figure 401.)-
- B. In the aft lavatory, dispensing equipment is installed in the lining panels and in the sink cabinet. Doors or panels in the lining provide access for servicing the dispensing equipment.

2. Remove Dispenser Cabinet Assembly(See figure 401.)

- A. Open cabinet door for access to fasteners.
- B. Disconnect plug from connector on back of electrical panel.
- C. Remove fasteners attaching cabinet and remove cabinet.  
NOTE: Connector plug and wiring feeds through hole in panel on outboard side of cabinet.

3. Install Dispenser Cabinet Assembly (See figure 401.)

- A. Thread electrical plug and wiring through outboard side of cabinet, support cabinet in mounting position and install mounting bolts.
- B. Connect plug to connector on back of electrical panel.
- C. Close cabinet door.

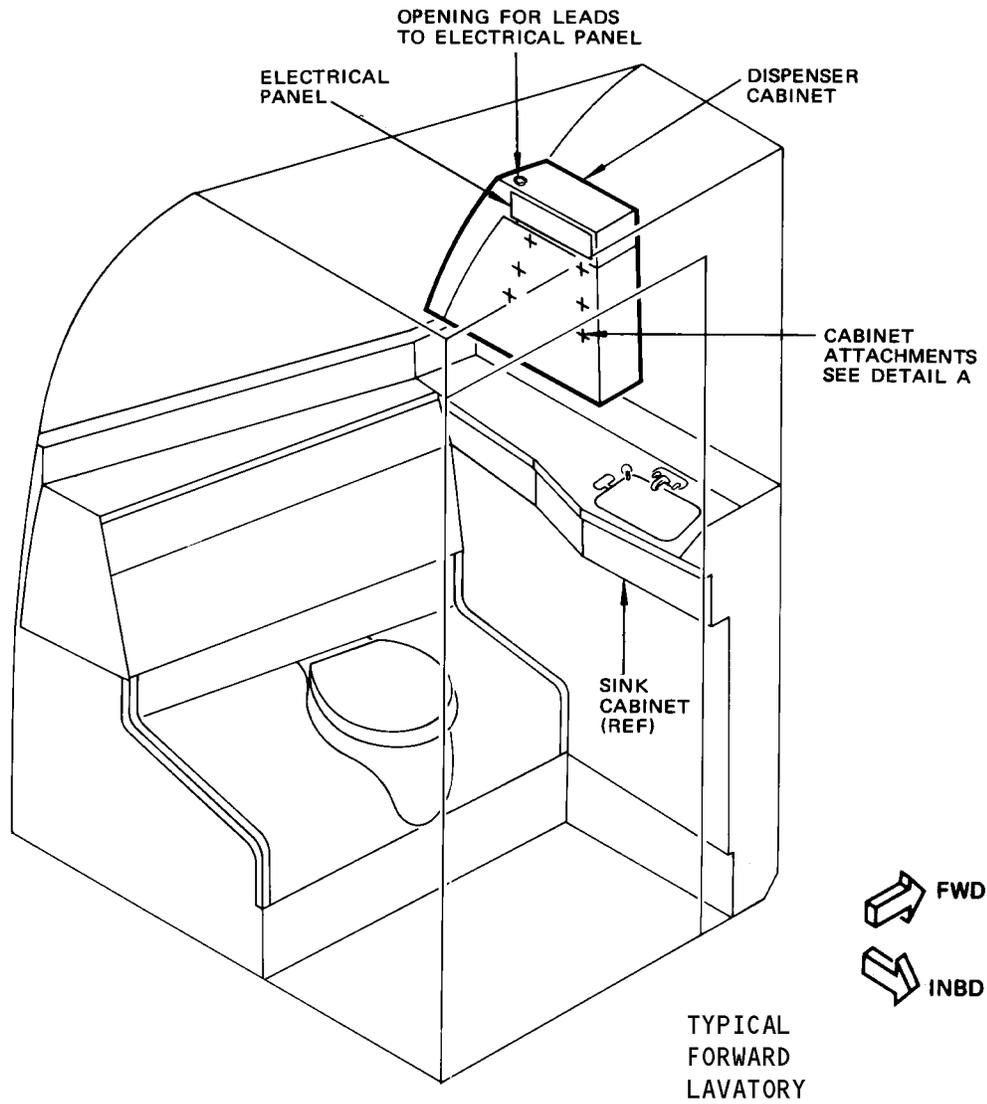
EFFECTIVITY

ALL

25-41-11

06

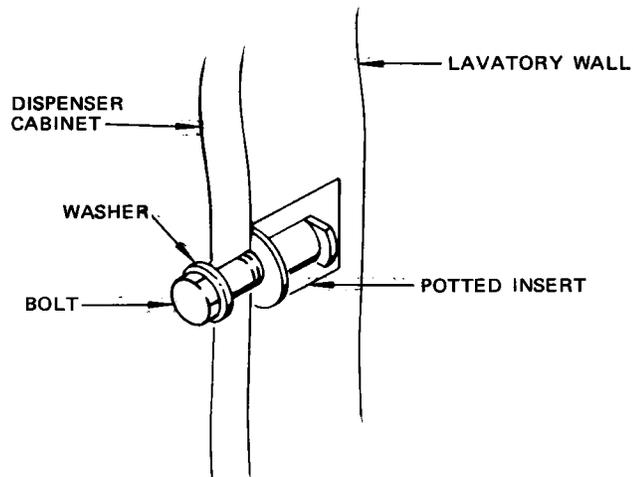
Page 401  
Dec 01/04



Dispenser Cabinet Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY	ALL
-------------	-----

25-41-11



CABINET ATTACHMENT  
DETAIL A

Dispenser Cabinet Installation  
Figure 401 (Sheet 2)

EFFECTIVITY	
	ALL

25-41-11

06

Page 403  
Dec 01/04

458296

DISPOSAL CABINET ASSEMBLY – REMOVAL/INSTALLATION

1. General
  - A. A disposal cabinet assembly is installed in the forward lavatory. (See figure 401.)
  - B. In place of a disposal cabinet, a similarly shaped toilet back shroud panel is installed in the aft lavatory. Provisions for disposal facilities are included in the aft sink closet.
2. Remove Disposal Cabinet Assembly (See figure 401.)
  - A. Open cabinet door and remove removable disposal container for access to fasteners.
  - B. Disengage electrical connectors on toilet timer.
  - C. Remove cabinet mounting bolts.
  - D. Remove cabinet.
3. Install Disposal Cabinet Assembly (See figure 401.)
  - A. Support cabinet in mounting position and install mounting bolts.
  - B. Engage electrical connectors on toilet timer.
  - C. Install disposal container and close cabinet door.

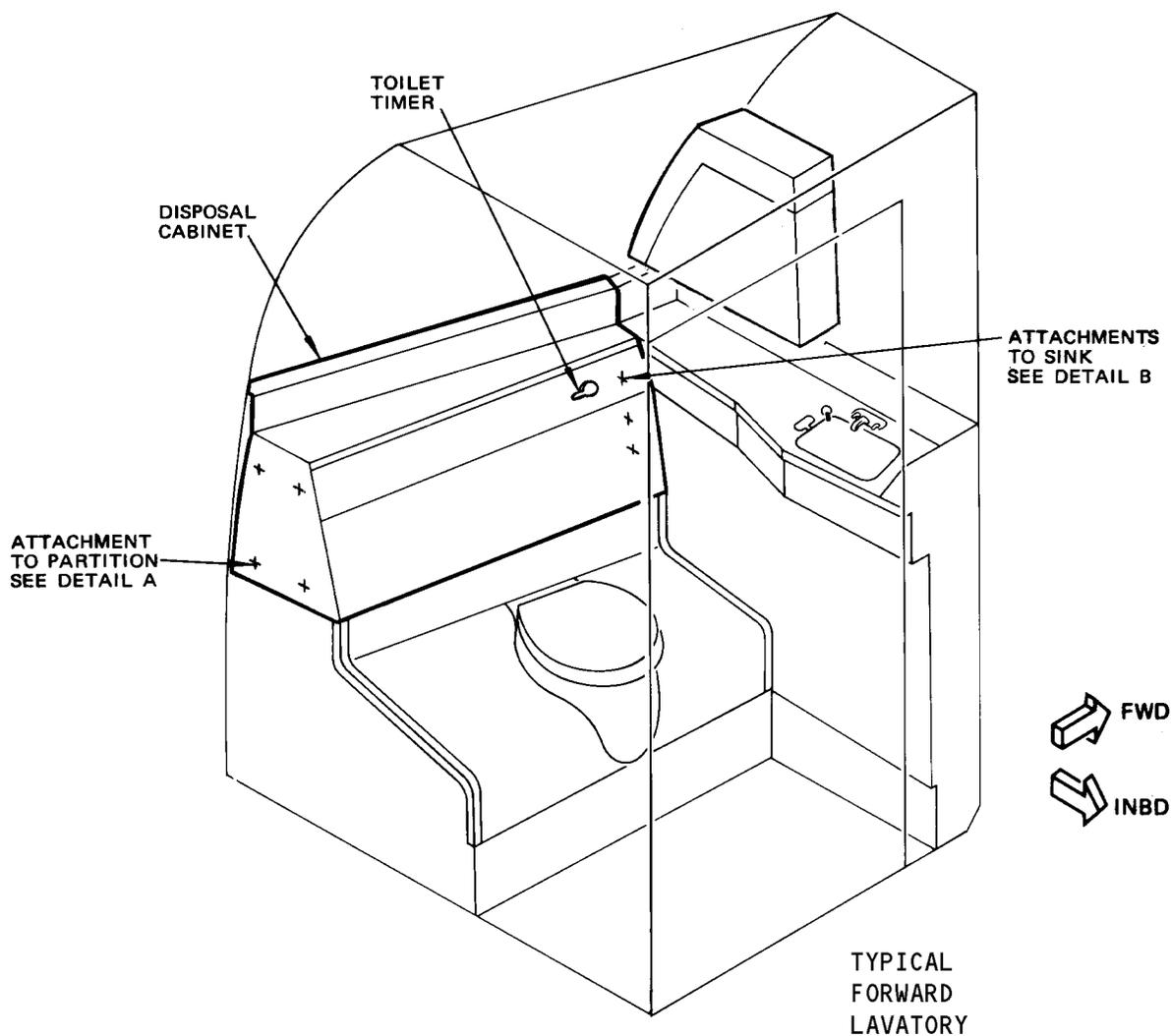
EFFECTIVITY

ALL

25-42-11

03

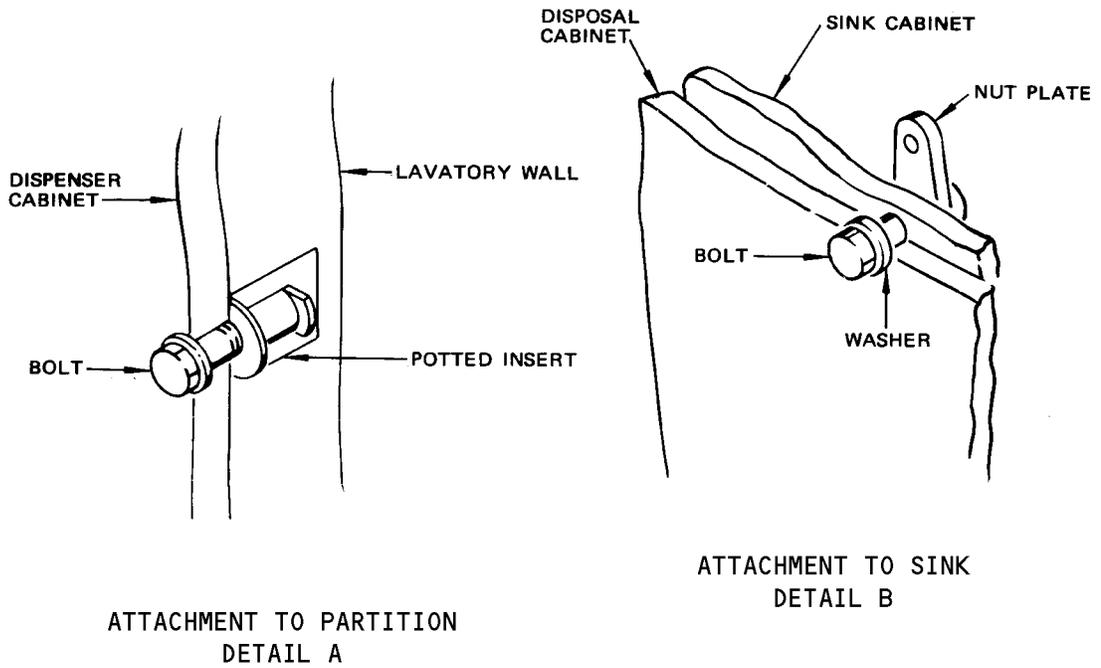
Page 401  
Dec 01/04



Disposal Cabinet Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY	ALL
-------------	-----

25-42-11



Disposal Cabinet Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY	ALL
-------------	-----

25-42-11

ELECTRONIC COMPARTMENT – DESCRIPTION AND OPERATION

1. General

- A. The electronic compartment is in the forward part of the airplane, under the passenger cabin floor, just forward of the forward cargo compartment and aft of the nosewheel well. (See figure 1.)
- B. The compartment may be entered from the ground through a door which is just aft of the nosewheel well. See Chapter 52, Electronic Equipment Compartment External Access Door.
- C. Stanchions and shelves are installed in the compartment to form racks to hold electrical and electronic equipment modules. The stanchions and shelves are hollow to form ducts for the electrical and electronic equipment cooling airflow. See Chapter 21, Equipment Cooling System, for information on equipment cooling.
- D. A moisture shroud is over the forward equipment rack (E1) and over the space between the forward rack and the two aft racks. The shroud is made of sections of formed plastic sheet fastened to a metal framework. The framework is fastened to the rack stanchions and to airplane body structure.
- E. A fiberglass drip pan is below the space that is occupied by the forward airstair when the airstair is retracted. The drip pan protects the equipment racks from moisture that the airstair may bring into the compartment. A drain tube leads from the drip pan to the airplane drainage system.
- F. A receptacle for 115 volt ac 400 cps power is at the forward end of the aft left equipment rack (E2). It is on the rack's inboard face at about the level of Shelf E2-2. Interphone jacks are in the same area.
- G. Insulation blankets line the sidewalls and the bottom of the compartment and the surfaces of the nosewheel well housing that face into the compartment. Most blankets are fastened to structural members by plastic studs and clips. Parts of a few blankets are fastened to structure or to other blankets by velcro tape. A typical blanket has a layer of fiberglass wool, an inboard cover, and an outboard cover. The two covers are stitched or cemented together at the blanket edges. The blanket edges may have a trim strip and fastener tabs. The blankets vary widely in size and shape, each being tailored to fit its surroundings. Foamed plastic panels are on the bottom of the structural members that are just below the passenger cabin floor and that run along both sidewalls from the Station 312 body frame to the compartment aft bulkhead. The panels are cemented to the structural members.

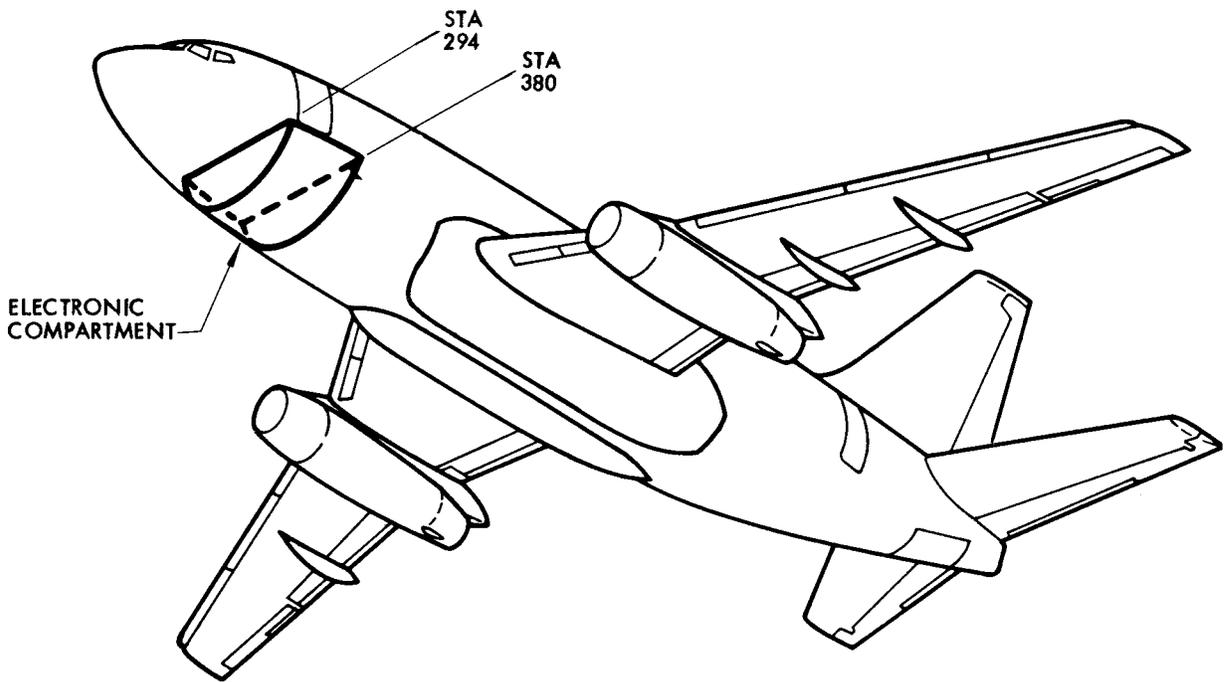
EFFECTIVITY

ALL

25-51-0

04

Page 1  
Dec 01/04



Electronic Compartment  
Figure 1

EFFECTIVITY	
	ALL

458312

01

25-51-0

Page 2  
Dec 01/04

ELECTRONIC COMPARTMENT DRIP PAN AND MOISTURE SHROUD – REMOVAL/INSTALLATION

1. General

- A. This procedure supplies instructions to perform the following tasks:
- (1) For airplanes with an airstair installation:
    - (a) Removal of the electronic compartment drip pan (airstair) and moisture shroud.
    - (b) Installation of the electronic compartment drip pan (airstair) and moisture shroud.

2. Electronic Compartment Drip Pan (Airstair) and Moisture Shroud Removal

A. References

- (1) AMM 20-30-51, Miscellaneous Materials
- (2) AMM 25-51-00, Electronic Compartment
- (3) AMM 51-31-0, Seals and Sealing
- (4) AMM 52-48-41, E/E Compartment Door
- (5) AMM 52-61-0, Forward Airstair

B. Equipment and Materials

- (1) Maintenance Stand
- (2) Adhesive, BAC 5010 Type 60

C. Access

- (1) Location Zones 205 E/E Compartment
- (2) Access Panels 1201 E/E Compartment Door

D. Procedure (Fig. 401)

- (1) Extend the forward airstair for access (AMM 52-61-0).
- (2) Open the E/E compartment door for access (AMM 52-48-41).
- (3) Place the maintenance stand in position at the E/E compartment.
- (4) Remove the airstair drip pan and moisture shroud as follows:
  - (a) Ensure the airstair drain does not contain liquid.
  - (b) Loosen the clamp which attaches the drain tube to the airstair drip pan access panel and disconnect the drain tube.
  - (c) Remove the airstair drip pan access panel.
  - (d) Remove the five screws, seal washers, and nuts which attach the drip pan to the support brackets.
  - (e) Carefully disconnect the forward moisture shroud from the seven stud fasteners at the forward edge of the drip pan.
  - (f) Retract the forward airstair until the forward airstair door starts to close.
  - (g) Remove the airstair drip pan from the electronic compartment through the opening for the forward airstair door.
  - (h) At the nose wheel well bulkhead, remove the 10 screws, washers, and nuts which attach the forward moisture shroud to the support bracket.
  - (i) At the left side of the nose wheel well, carefully disconnect the shroud from the five stud fasteners.
  - (j) At the right side of the nose wheel well, carefully disconnect the shroud from the two stud fasteners.

EFFECTIVITY

ALL

25-51-01

01

Page 401  
Dec 01/04



## MAINTENANCE MANUAL

- (k) Remove the forward moisture shroud from the electronic compartment.

### 3. Electronic Compartment Drip Pan and Moisture Shroud Installation

#### A. References

- (1) AMM 20-30-51, Miscellaneous Materials
- (2) AMM 25-51-00, Electronic Compartment
- (3) AMM 51-31-0, Seals and Sealing
- (4) AMM 52-48-41, E/E Compartment Door
- (5) AMM 52-61-0, Forward Airstair

#### B. Equipment

- (1) Maintenance Stand

#### C. Access

- (1) Location Zones 205 E/E Compartment
- (2) Access Panels 1201 E/E Compartment Door

#### D. Procedure (Fig. 401)

- (1) Install the airstair drip pan and moisture shroud as follows:
  - (a) At the nose wheel well bulkhead, attach the forward moisture shroud to the support bracket with 10 screws, washers, and nuts.
  - (b) At the left side of the nose wheel well, carefully connect the moisture shroud to the five stud fasteners.
  - (c) At the right side of the nose wheel well, carefully connect the moisture shroud to the two stud fasteners.
  - (d) If necessary, retract the forward airstair until the forward airstair door starts to close to give better access.
  - (e) Ensure the access panel is removed from the airstair drip pan before you put it into the airplane.

**CAUTION:** EXTREME CARE MUST BE TAKEN WHEN YOU SLIDE THE AIRSTAIR DRIP PAN INTO THE ELECTRONIC COMPARTMENT OR DAMAGE CAN RESULT TO EQUIPMENT.

- (f) Slide the airstair drip pan into the electronic compartment through the opening for the forward airstair door.
- (g) Extend the airstair for access (AMM 52-61-0).
- (h) Carefully connect the forward moisture shroud to the seven stud fasteners at the forward edge of the drip pan.
- (i) Install the drip pan to the support brackets with five screws, seals washers, and nuts.

EFFECTIVITY

ALL

25-51-01

01

Page 402  
Dec 01/04



## MAINTENANCE MANUAL

- (j) Install the airstair drip pan access panel and torque the fasteners until the gasket seal is approximately 30% to 50% compressed.

**NOTE:** It is recommended to replace the gasket with a new silicone sponge rubber gasket seal to make sure the drip pan does not leak when it contains liquid. Replace by cleaning the gasket contact surface on the access panel, then bonding gasket to the panel using adhesive. After applying adhesive to panel, gasket should be installed immediately onto panel, prior to the point when the adhesive starts to film over. Adhesive must setup for a minimum of two hours before access panel can be reinstalled.

- (k) Connect the drain tube to the airstair drip pan access panel and tighten the drain tube clamp.
- (l) Perform a visual inspection to make sure the drip pan is clean and there is no blockage of the drain tube.

E. Return the Airplane to its Usual Condition

- (1) Remove all tools and equipment from the work area.
- (2) Close the E/E compartment door (AMM 52-48-41).

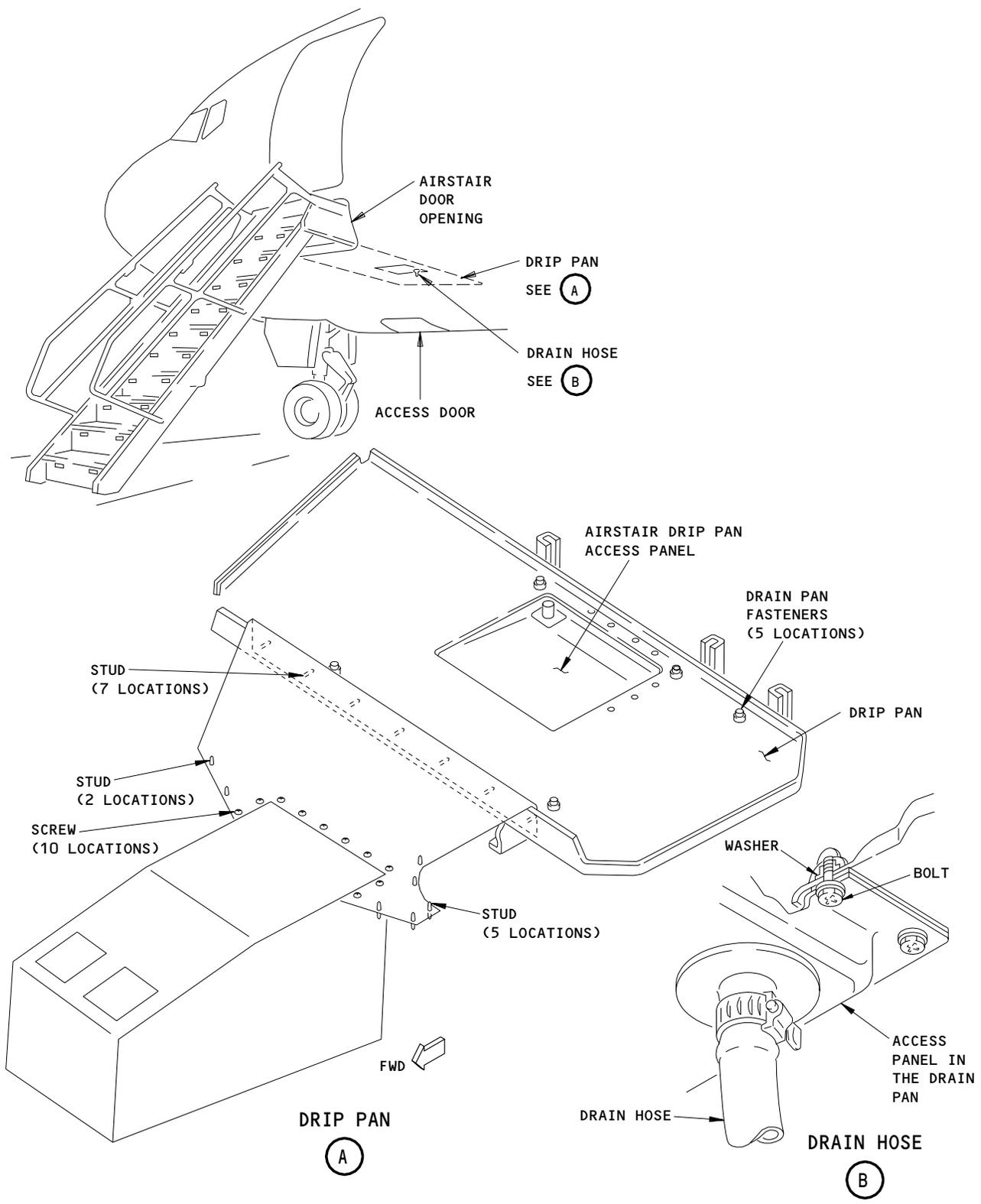
EFFECTIVITY

ALL

25-51-01

01

Page 403  
Dec 01/04



Electronic Equipment Compartment Moisture Shroud and Drip Pan Installation  
 Figure 401

EFFECTIVITY	
	ALL

**25-51-01**

01

Page 404  
 Dec 01/04

ELECTRONIC COMPARTMENT MOISTURE SHROUD AND DRIP PAN - INSPECTION/CHECK

1. General

- A. This procedure supplies the instructions to perform the following tasks:
- (1) For airplanes with an airstair installation:
    - (a) Inspection of the moisture shroud and the forward airstair drip pan which protect the E1 rack in the electronic compartment.
  - (2) Perform the inspection of the moisture shroud and/or drip pan in the electronic compartment when one of these unwanted liquid spills occur.
    - (a) Overservicing of the forward toilet system.
    - (b) Liquid spill in the forward lavatory area.
    - (c) Liquid spill in the forward galley area.
    - (d) Excessive quantity of snow/ice/rain on the forward airstair when retracted to the flight position.
  - (3) The moisture shroud must be free of holes and be correctly installed.

**NOTE:** The surface of the shroud must have a good surface tension and have no areas where liquid could possibly collect.

- (4) All drain tubes must be free from blockages, and the drain pan should be clean and free of debris.

**NOTE:** For airplanes with airstair installation; during extreme cold weather, ice, snow and dirt can be brought aboard on the airstair and cause a blockage to the drain tube.

- (5) The forward toilet system must be correctly installed and there are no leaks in the toilet drain tube or the ground flush tube.

2. Electronic Compartment Moisture Shroud and Drip Pan Inspection

A. General

**WARNING:** MOISTURE CONTAMINATION OF ELECTRICAL OR ELECTRONIC EQUIPMENT CAN CAUSE SERIOUS DAMAGE TO ELECTRICAL SYSTEMS. THIS CAN RESULT IN AN UNWANTED EFFECT TO THE FLIGHT SAFETY OF THE AIRPLANE.

- (1) This inspection procedure is to be accomplished when liquid has been spilled in the forward toilet or forward galley area.

B. References

- (1) AMM 05-51-12, Toilet Overservicing Condition
- (2) AMM 05-51-13, Galley Spill Condition
- (3) AMM 12-17-0, Toilet Servicing
- (4) AMM 20-30-51, Miscellaneous Materials
- (5) AMM 51-31-0, Seals and Sealing

EFFECTIVITY

ALL

25-51-01

01

Page 601  
Dec 01/04



## MAINTENANCE MANUAL

- (6) AMM 52-48-41, E/E Compartment Door
- (7) AMM 52-61-0, Forward Airstair
- C. Equipment and Materials
  - (1) Workstand
  - (2) Adhesive, BAC 5010 Type 60
- D. Consumable Materials
  - (1) G00000 Gloves - Disposable
  - (2) G01915 Glasses - Safety
- E. Access
  - (1) Location Zones 103 Forward Lavatory 104 Forward Galley 105 Forward Entry Door 106 Forward Galley Service Door 205 E/E Compartment
  - (2) Access Panels 1201 E/E Compartment Door
- F. Procedure
  - (1) Extend the forward airstair (AMM 52-61-0).
  - (2) Open the E/E compartment door for access (AMM 52-48-41).
  - (3) Place the workstand in position at the E/E compartment.
  - (4) Perform the inspection of the airstair drain pan and moisture shroud as follows:
    - (a) Use a portable strong light source to fully view the airstair drain pan and moisture shroud installation.
    - (b) Make sure the airstair drain pan does not contain liquid.
    - (c) Loosen the clamp and remove drain tube from the airstair drain pan access panel.
    - (d) Remove the airstair drain pan access panel.
    - (e) Inspect the airstair drain pan for correct installation as follows:
      - 1) Ensure there are no cracks in the fiberglass drain pan.
      - 2) Perform a check to ensure the installation bolts are tight and have sealant protection.
      - 3) Make sure the disconnected drain tube is free from blockage.
      - 4) If you find dirt or moisture in the drain pan, clean the drain pan and remove the contamination.
      - 5) If you find blue water has flowed into the electronics compartment, perform the toilet overservicing condition task (AMM 05-51-12).

EFFECTIVITY

ALL

25-51-01

01

Page 602  
Dec 01/04



## MAINTENANCE MANUAL

(f) Inspect the forward moisture shroud for correct installation as follows:

- 1) Use a portable, strong light source to fully view the moisture shroud installation.

**CAUTION:** CARE MUST BE TAKEN WHEN YOU PUT THE LIGHT BEHIND THE SHROUD FOR THE EXAMINATION. THE MATERIAL CAN EASILY BE DAMAGED BY SHARP OBJECTS AND HOLES IN THE SHROUD CAN RESULT.

- 2) Position the portable light source behind the shroud and look for holes and signs of wear in the material.

**NOTE:** Points where the shroud is held to the structure are primary areas where damage can occur.

- 3) Ensure there are no holes in the shroud or signs of wear.
- 4) If there is damage to the shroud, replace with a new shroud (AMM 25-51-0).
- 5) Ensure the moisture shroud at the nose wheel well bulkhead is installed correctly with the 10 screws.
- 6) Ensure the aft edge of the moisture shroud is correctly installed to the forward drain channel with stud fasteners.
- 7) Ensure the moisture shroud is installed correctly at the right and left sides of the nose wheel well.
- 8) The surface tension of the shroud must be such that it does not contain areas where moisture can collect.
- 9) Ensure the moisture shroud installation screws and clips are sealed correctly (AMM 51-31-0).
- 10) Install the airstair drip pan access panel and torque the fasteners until the gasket seal is approximately 30% to 50% compressed.

**NOTE:** It is recommended to replace the gasket with a new silicone sponge rubber gasket seal to make sure the drip pan does not leak when it contains liquid. Replace by cleaning the gasket contact surface on the access panel, then bonding gasket to the panel using adhesive. After applying adhesive to panel, gasket should be installed immediately onto panel, prior to the point when the adhesive starts to film over. Adhesive must setup for a minimum of two hours before access panel can be reinstalled.

G. Return the aircraft to its usual condition

- (1) Remove all tools and equipment from the work area.

EFFECTIVITY

ALL

25-51-01

01

Page 603  
Dec 01/04

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

(2) Close the E/E compartment door.

EFFECTIVITY

ALL

**25-51-01**

01

Page 604  
Dec 01/04

CARGO COMPARTMENTS - DESCRIPTION AND OPERATION

1. General

- A. Two cargo compartments are under the passenger cabin floor. (See figure 1.) The forward compartment volume is about 370 cubic feet and the aft compartment volume is about 505 cubic feet. The compartments are pressurized and they are class D (smother type) compartments from the standpoint of fire protection.
- B. An inward-opening door is in the right sidewall of each compartment. (Refer to Cargo Compartment Doors, Chapter 52.) Each compartment also has an access panel in its ceiling through which the compartment can be entered from the passenger cabin.
- C. Each compartment is furnished with anchorplates, tiedown tracks, stanchion, and webbing to keep the cargo from shifting when the airplane is in flight. On later airplanes the stanchions are deleted and replaced with tiedown fittings.
- D. The compartment bulkheads, ceilings, and sidewalls are lined with fiberglass, sheet metal panels and shrouds. For a more complete description of the cargo compartment linings refer to 25-52-100, Cargo Compartment Lining and Insulation.
- E. A pressure equalization valve is in the aft bulkhead of each compartment. (Refer to Pressure Equalization Valves, Chapter 21.) The valves let only enough air flow into or out of the compartments to keep the compartment pressures nearly the same as the cabin pressure.
- F. The forward compartment has a blowout panel in the forward bulkhead, one in the ceiling, and one in the aft bulkhead. (Refer to Ceiling Blowout Panels and Bulkhead Blowout Panels, Chapter 21.) The aft compartment ceiling access panel also serves as a blowout panel for the aft compartment. The blowout panels are pushed out of their supports by such pressure differences as might result if the airplane should abruptly lose pressurization. Air can then flow into or out of the compartment at a greater rate than the pressure equalization valves would allow.
- G. A wide-angle viewing lens is in the ceiling of each compartment. (Refer to Viewers and observation Windows, Chapter 56.) Most of the cargo compartment contents can be seen from the passenger cabin by means of the lenses.
- H. Emergency access is provided from the passenger cabin to the cargo compartments as follows:
  - (1) Emergency access to the forward cargo compartment is provided by a removable access door or panel. The words "Remove for Emergency Access to Cargo Compt." are stenciled on the upper surface of the access door.

EFFECTIVITY

ALL

25-52-0

06

Page 1  
Dec 01/04



## MAINTENANCE MANUAL

(2) For emergency access to the aft cargo compartment the cabin floor access panel above the aft cargo compartment is removed. The exposed blowout panel may then be pushed down into the cargo compartment for access. The words, "Push Down for Emergency Access to Cargo Compartment" are stenciled on the upper surface of the blowout panel.

### 2. Anchor Plates

- A. Anchor plates are on the sidewalls of both cargo compartments and on the aft compartment ceiling. See figure 1 for typical anchor plate locations. Each anchor plate has a flat mounting surface on one side and it has a slot and lips to receive a quick-release tiedown fitting on the other side. The anchor plates hold the outboard edges of the webbing when the webbing is in place. (See figure 2.)
- B. Each anchor plate is fastened to the body structure by two screws. The body structure that the anchor plates are fastened to will withstand a load on each anchor plate that is not greater than 800 pounds and that has no lateral component that is greater than 200 pounds. The lateral component is the component that lies parallel to the surface that the plate is fastened to and that also lies in a plane that is at right angles to the airplane's longitudinal axis.

### 3. Tiedown Tracks

- A. A pair of tiedown tracks is in the deck of each cargo compartment. The tracks run fore and aft for the full length of the compartment. The forward compartment tracks are about 32 inches apart and the aft compartment tracks are about 31 inches apart. Each pair of tracks is offset to the left with respect to the airplane's centerline. The upper surfaces of the tracks are nearly flush with the deck panels. The tracks are fastened to the airplane body frames by lockbolts.
- B. The upper surface of each track has stanchion sockets and tiedown holes. Six pairs of tiedown holes and two stanchion sockets are spaced along the length of each forward compartment track. Each aft compartment track has seven pairs of tiedown holes and two stanchion sockets. The two tiedown holes of each pair have their centers one inch apart. A restraining slot is between the two tiedown holes of each pair.
- C. The lower ends of the cargo net stanchions fit in the tiedown holes or the stanchion sockets that are in the upper surface of the track. Quickrelease fasteners can also be held by the restraining slots in the spaces between tiedown holes.
- D. On later airplanes the stanchion sockets are deleted and replaced with tiedown holes and fittings similar to attachments on the sidewall.

### 4. Stanchions (Not installed on later airplanes.)

- A. The forward compartment has four stanchions and the aft compartment has six. The stanchions stand upright when they are in place and they reach between the deck or the sidewall and the ceiling. Figure 1 shows the locations of the installed stanchions.

EFFECTIVITY

ALL

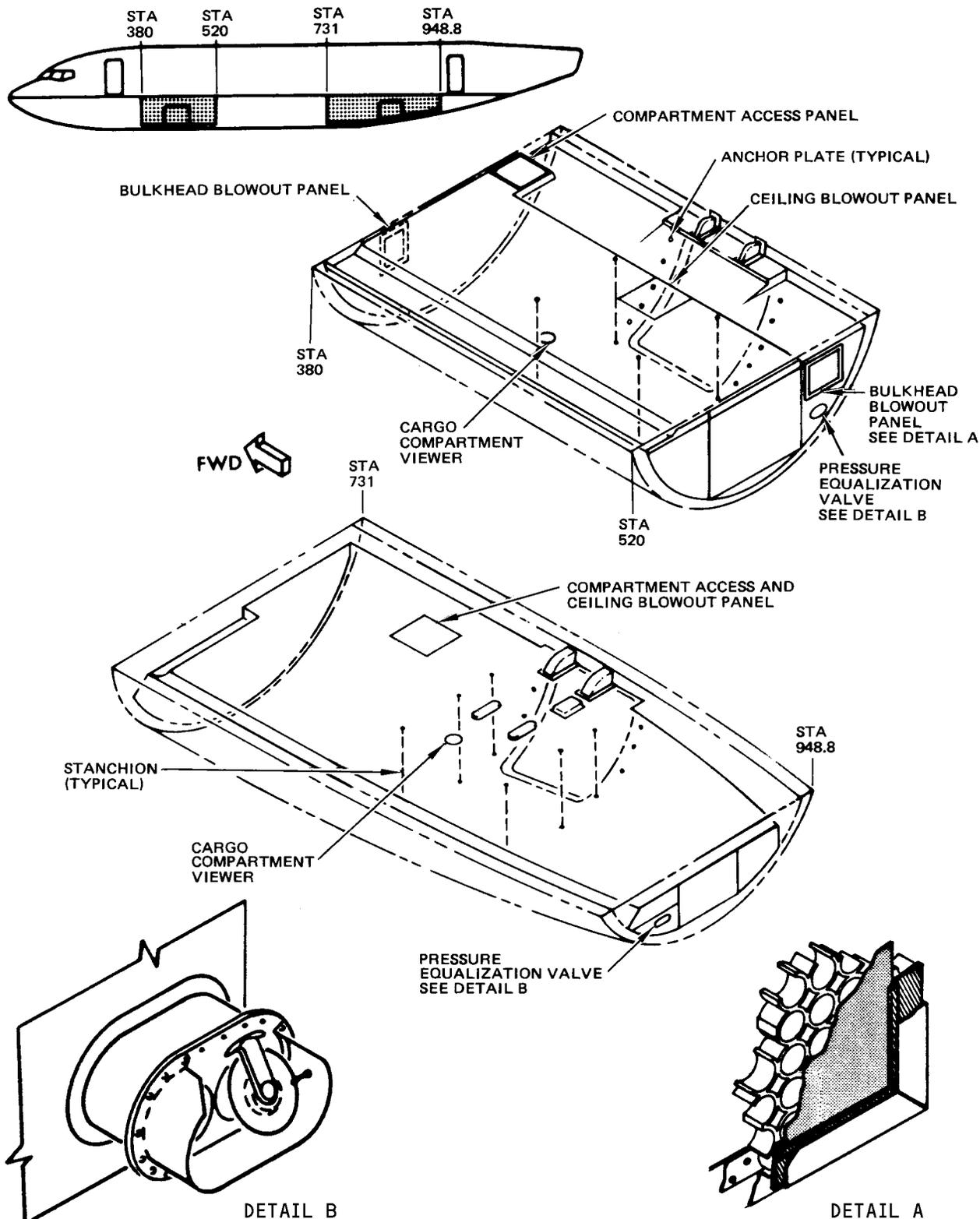
25-52-0

08

Page 2  
Dec 01/04



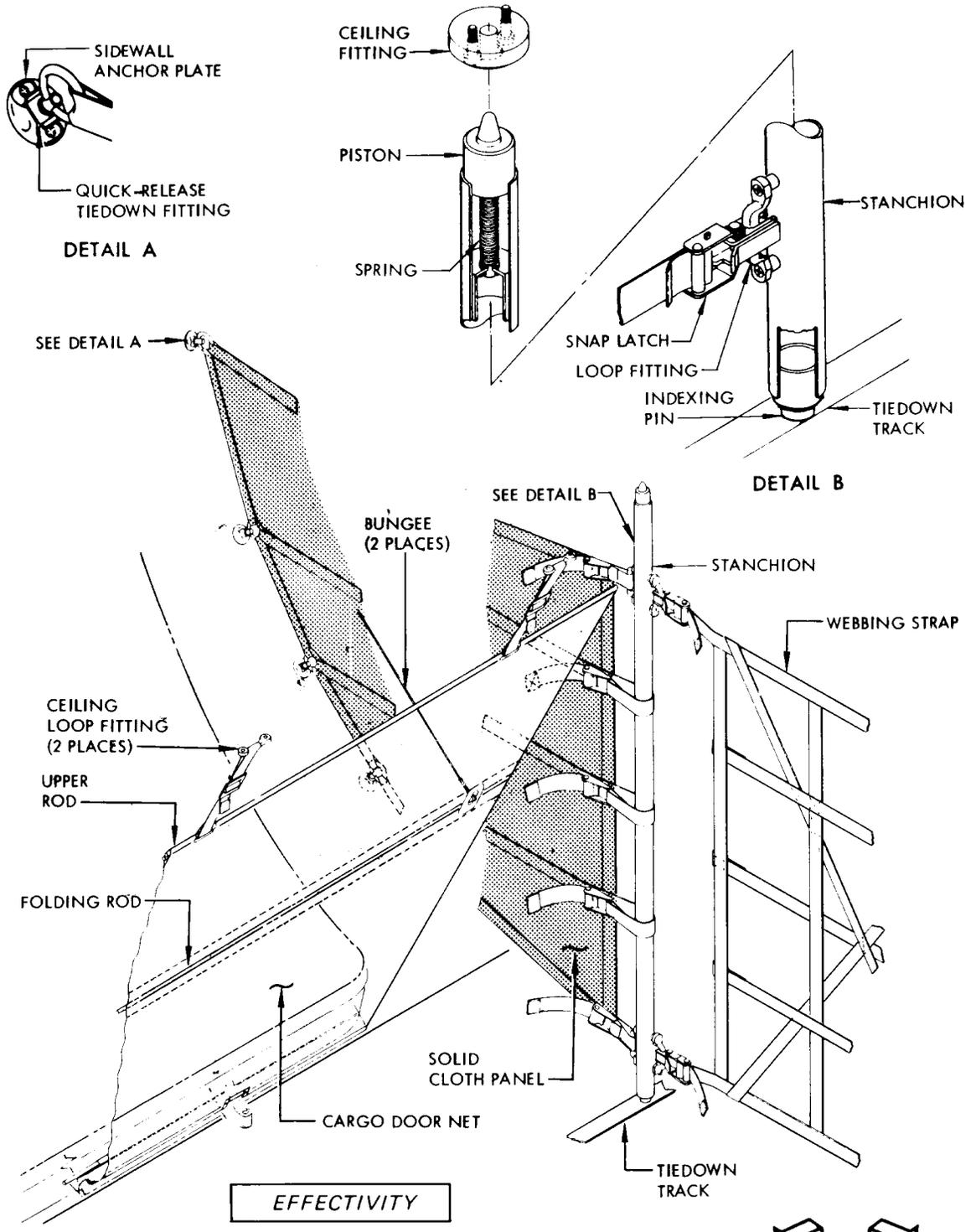
**MAINTENANCE MANUAL**



Cargo Compartments  
Figure 1

EFFECTIVITY	
	ALL

25-52-0



PS N738PS thru N382PS and N983PS thru N987PS  
 NH JA8401 thru JA8403 and JA8405 thru JA8408  
 AR LV-JMW thru LV-JMZ

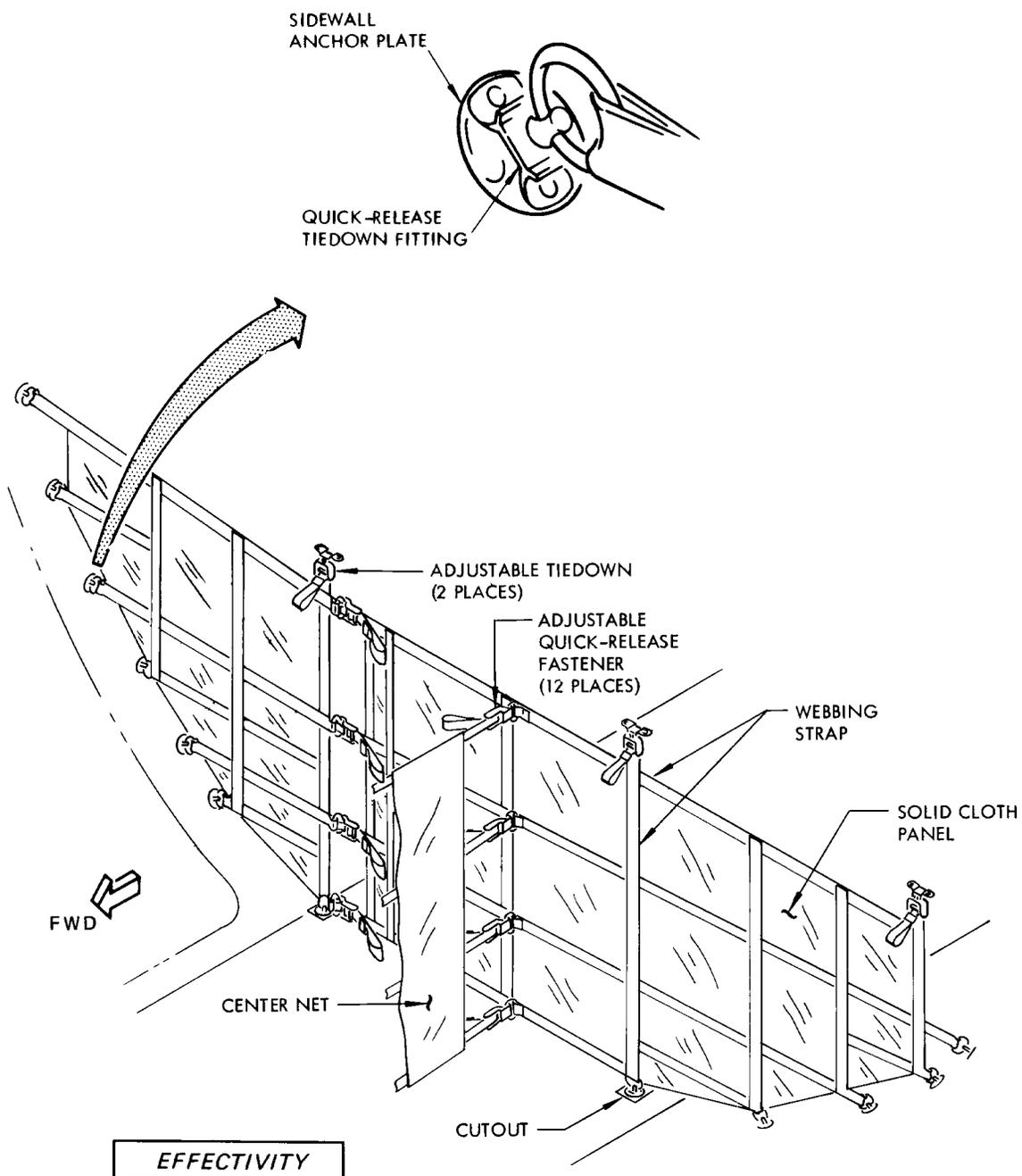
FWD  INBD 

Cargo Compartment Anchor Plates and Webbing  
 Figure 2 (Sheet 1)

EFFECTIVITY	ALL
-------------	-----

25-52-0

458343



**EFFECTIVITY**

All airplanes except  
 PS N378PS thru N382PS and N983PS thru N987PS  
 NH JA8401 thru JA8403 and JA8405 thru JA8408  
 AR LV-JMW thru LV-JMZ

Cargo Compartment Anchor Plates and Webbing  
 Figure 2 (Sheet 2)

EFFECTIVITY  
 All airplanes except

**25-52-0**



## MAINTENANCE MANUAL

- B. An aluminum tube forms the main part of the stanchion. A latch mechanism is at the upper end of the tube. The latch mechanism has a piston which can slide in or out along the axis of the tube. (See figure 2.) A spring pushes the piston toward the extended position. The upper end of the piston is shaped to match a ceiling fitting. The lower end of the stanchion has an indexing pin which fits the tiedown track holes. Loop fittings are fastened to the tube at places that are suitable for attaching the webbing.
  - C. The upper ends of the stanchions are held in place by fittings on the ceiling. The lower ends of the stanchions are held in place by the tiedown tracks or by fittings on the sidewalls.
  - D. Some of the webbing straps are attached to the stanchions when the webbing is in place. A stanchion can be removed by retracting the piston at its upper end.
5. Webbing
- A. Sections of webbing can be suspended between the anchor plates and a stanchion or between two stanchions. On the later airplanes the two sections of webbing are suspended across the cargo compartment and hooked together by means of quick-release fasteners. Each compartment has a door net which reaches from the door sill to the ceiling and is approximately the width of the door or a vertical center net suspended between the net assemblies forward and aft of the cargo doors.
  - B. One-inch-wide fabric straps are sewed together to form the webbing. Solid cloth panels are sewed to the straps in some areas to fill the openings between the straps. Quick-release tiedown fasteners are sewed to the strap ends in some places on the outboard edges of the nets. Other strap ends have snap latches or buckles. (See figure 2.)
  - C. Most of the webbing is held in place by the anchor plates and the stanchions. The door nets are held in place by loop fittings on the ceilings and the right sidewalls.
  - D. The webbing keeps the cargo that is stowed in the compartments from shifting excessively when the airplane is in flight. The webbing can be removed by detaching the quick-release tiedown fasteners from the anchor plates and the snap latches and buckles from the stanchions or by removing the stanchions with the webbing still attached.
6. Lining
- A. Refer to 25-52-100, Cargo Compartment Lining and Insulation.
7. Pressure Equalization Valves
- A. A pressure equalization valve is in the aft bulkhead of each cargo compartment. (See figure 1.) The valve uses two flapper type valves to maintain nearly equal pressure between the cargo compartment and the cavities behind them. Each equalization valve is composed of two flapper type valves. One flapper hinges away from the cargo compartment and the other toward the cargo compartment. The valves open at a pressure difference of about 4 inches of water.

EFFECTIVITY

ALL

25-52-0

07

Page 6  
Dec 01/04

8. Blowout Panels

- A. The forward compartment has a blowout panel in the forward bulkhead and one in the aft bulkhead. The forward compartment bulkhead blowout panels are aluminum alloy sheets and the edges are held in place by rubber moldings. The forward compartment also has a blowout panel in the ceiling. It is a fiberglass sheet. The edges are held by depressor and cap strips.
- B. The aft compartment has a blowout panel in the ceiling. It is a fiberglass sheet. The edges are held by depressor and cap strips.
- C. The blowout panels are pushed out of their supports by, and thus relieve, pressure differences which might otherwise do harm to the airplane structure or the compartment lining.

EFFECTIVITY

ALL

25-52-0

06

Page 7  
Dec 01/04

CARGO AND ACCESSORY COMPARTMENTS - CLEANING/PAINTING

1. General

- A. This procedure provides a high pressure jet and vacuum pickup method for removing dirt, sludge and grease from the lower cargo compartments.

2. Equipment and Materials

- A. Dual Air Vac - Clarke Model TMDGU, Clarke Division Magraw Edison Co., 2800 Estas St., Muskegon, MI 49441
- B. Drum - 30 or 55 Gallon capacity, mounted on casters
- C. Hose Assembly - 6 foot length, 1 1/2-inch ID; with swivel connection to pump - Graco Model 206-266 siphon tube
- D. Hose - 50 foot length, 3/8-inch ID, 2250 psi working pressure with 3/8-inch pipe fittings at each end - Graco Model 207-831
- E. Portable Airless Pump - Graco Bulldog Model 207-463; Hydraclean Pressure with 7 gpm output, 1200 psi working pressure, 10:1 ratio pump on Pneumatic Cart Model 208-156, with Regulator Assembly 206-199; Graco Inc., 60-11th Ave NE, Minneapolis, MN 53440
- F. Alkaline Solvent Emulsion Cleaner (Ref 20-30-31)  
Any of the following:  
(1) Allied-Kelite 28  
(2) Calla 301  
(3) Cee Bee A-410B  
(4) Cee Bee 280  
(5) Dubois C-1102  
(6) GMC 528B  
(7) Hydrex 09  
(8) Metaclean AC  
(9) Oakite 204  
(10) Pacific B-82  
(11) Pennwalt (Delchem) 2271R  
(12) Tee Formula No. 1  
(13) Tee 86-2  
(14) Turco Jet Clean C  
(15) Turco Jet Clean E
- G. Corrosion inhibiting compound - BMS 3-23 (Ref 20-30-21)
- H. Grease proof paper (Ref 20-30-51)
- I. Laminated waterproof paper (Ref 20-30-51)
- J. Masking tape (Ref 20-30-51)
- K. pH testing paper with readings in 0.5 units of pH change: 5 to 10, 6.5 to 10, 6.0 to 8.0 or 8.0 to 9.5 pH range - commercially available
- L. Polyethylene sheet (Ref 20-30-51)
- M. Wipers (Ref 20-30-51)

3. Prepare to Clean

- A. Remove electrical power (Ref 24-22-0, MP).
- B. Statically ground airplane (Ref 20-40-11).

EFFECTIVITY

ALL

25-52-0

01

Page 701  
Dec 01/04



## MAINTENANCE MANUAL

- C. Remove insulation blankets and components (power drive units, actuators, exposed electronic equipment, etc.) which may be damaged by cleaner or water.

**CAUTION:** FABRIC, MECHANICAL AND ELECTRICAL/ELECTRONIC COMPONENTS MUST BE REMOVED TO PRECLUDE DAMAGE.

- D. Mask all areas not to be cleaned, including all lubricated or waxed surfaces and any cargo door latch mechanisms and fittings. Use polyethylene sheet, greaseproof paper or laminated waterproof paper as appropriate. Secure with masking tape as required.

**CAUTION:** CONCENTRATED CLEANERS MAY CAUSE PAINT TO DETERIORATE OR MAY CAUSE CORROSION OF METAL SURFACES IF ENTRAPPED. MANUFACTURER'S RECOMMENDED DILUTIONS MUST BE-USED TO PRECLUDE DAMAGE.

### 4. Clean Cargo Compartment

- A. Vacuum bilge area to remove loose surface soil.  
B. Pressure spray Alkaline Solvent Emulsion cleaner using airless pump with spray valve and non-atomizing nozzle.

**WARNING:** CLEANERS CONTAIN TOXIC INGREDIENTS. WEAR PROTECTIVE GLOVES WHEN USING THEM, AND AVOID CONTACT WITH SKIN OR EYES. PROVIDE ADEQUATE VENTILATION OR USE RESPIRATOR MASKS. CONSULT INDUSTRIAL HYGIENE, FIRE, AND/OR SAFETY ORGANIZATIONS CONCERNING FACILITIES, EQUIPMENT, VENTILATION, AND OTHER REQUIREMENTS FOR SAFE CLEANING OPERATIONS.

**CAUTION:** CLEANERS OTHER THAN THOSE SPECIFIED MAY DAMAGE SURFACES BEYOND REPAIR.

- C. Allow cleaner to soak for 5 minutes.

**NOTE:** Do not allow cleaner to dry on surface.

- D. Pick up loosened soil and cleaner with vacuum cleaner.  
E. Repeat spraying and vacuum pickup until all dirt, sludge and grease is removed.  
F. Using pressure spray, thoroughly rinse area with clean water.  
G. Remove rinse water with vacuum.  
H. Check pH of rinse effluent seeping from trapped areas.  
(1) Daub pH paper around crevices and other entrapment areas.  
(2) Check that pH of effluent from these areas does not exceed 1 pH unit of the incoming rinse water.

EFFECTIVITY

ALL

25-52-0

01

Page 702  
Dec 01/04



## MAINTENANCE MANUAL

(3) If pH exceeds 1 pH unit of incoming rinse water, repeat steps F. and G. until pH is within 1 unit of incoming rise water.

I. Wipe area dry.

J. Apply corrosion inhibiting compound on cleaned area (Ref 51-21-91, CP).

5. Restore Airplane to Normal

A. Remove any masks previously installed.

B. Install any equipment previously removed.

C. Restore electrical power, if required (Ref 24-22-0, MP).

D. Disconnect static ground if no longer required (Ref 20-40-11).

EFFECTIVITY

ALL

25-52-0

01

Page 703  
Dec 01/04

CARGO COMPARTMENT DECK PANELS – REMOVAL/INSTALLATION

1. Equipment and Materials

- A. Tape – Permacel P212HD (preferred), Permacel P621 (optional), Permacel P34 (optional), 3M 367-FR (preferred), 0.50, 0.75, 2, and 3 inches wide (Ref 20-30-51)
- B. Sealant: BMS 5-12, Class B; BMS 5-16; BMS 5-19, Class A or Class B; or BMS 5-37, Class B

2. Remove Typical Cargo Compartment Deck Panel (Fig. 401).

NOTE: Screws should be identified when being removed so each can be reinstalled in the place from which it was taken.

- A. Remove splice plate or splice plates as needed.
  - (1) Remove screws from splice plate.
  - (2) Lift splice plate from place.
- B. Remove outboard cap strip or cap strips as needed.
  - (1) Remove all screws from cap strip.
  - (2) Pull cap strip free of tape.
- C. Remove forward or aft cap strip if needed.
  - (1) Remove screws from cap strip.
  - (2) Lift cap strip from place.
- D. Remove doorway scuff plate if needed.
  - (1) Remove screws from scuff plate.
  - (2) Lift scuff plate from place.
- E. Remove all screws from deck panel.
- F. Pull deck panel free of tape.

CAUTION: CARE SHOULD BE TAKEN NOT TO BEND DECK PANEL.

- G. Lift deck panel from place.

3. Prepare for Installation

- A. Remove old tape from deck support structure, deck panel, cap strips, and splice straps as required.
- B. Remove old sealant and clean sealed areas as described in Seals and Sealing, Chapter 51.
- C. Apply new tape to deck support structure, deck panel, outboard cap strips and splice straps as shown in Sections B-B, D-D, E-E, F-F, G-G, H-H, J-J, K-K, L-L, M-M, N-N, and P-P.

4. Install Typical Cargo Compartment Deck Panel (Fig. 401).

- A. Put deck panel in place.
- B. Install all screws except those that hold cap strips, splice plates, and scuff plates.
- C. Seal gap that is covered by doorway scuff plate as described in Seals and Sealing, Chapter 51, if scuff plate was removed.

EFFECTIVITY

ALL

25-52-51

01

Page 401  
Dec 01/04



## MAINTENANCE MANUAL

- D. Install doorway scuff plate if it was removed.
  - (1) Put scuff plate in place.
  - (2) Install screws that hold scuff plate.
- E. Install forward or aft cap strip if it was removed.
  - (1) Put cap strip in place.
  - (2) Install screws that hold cap strip.
- F. Install outboard cap strip or cap strips as applicable.
  - (1) Put cap strip in place.
  - (2) Install screws that hold cap strip.
- G. Install splice plate or splice plates as applicable.
  - (1) Put splice plate in place.
  - (2) Install screws that hold splice plate.
- H. Seal gaps and holes as described in Seals and Sealing, Chapter 51.

**NOTE:** Gaps around tiedown track bosses and at the end of splice straps and any other gaps or holes that would allow air leakage must be sealed. The compartment must be virtually airtight to meet the requirements of a Class D cargo compartment. Edges of the cap strips and scuff plates need not be sealed.

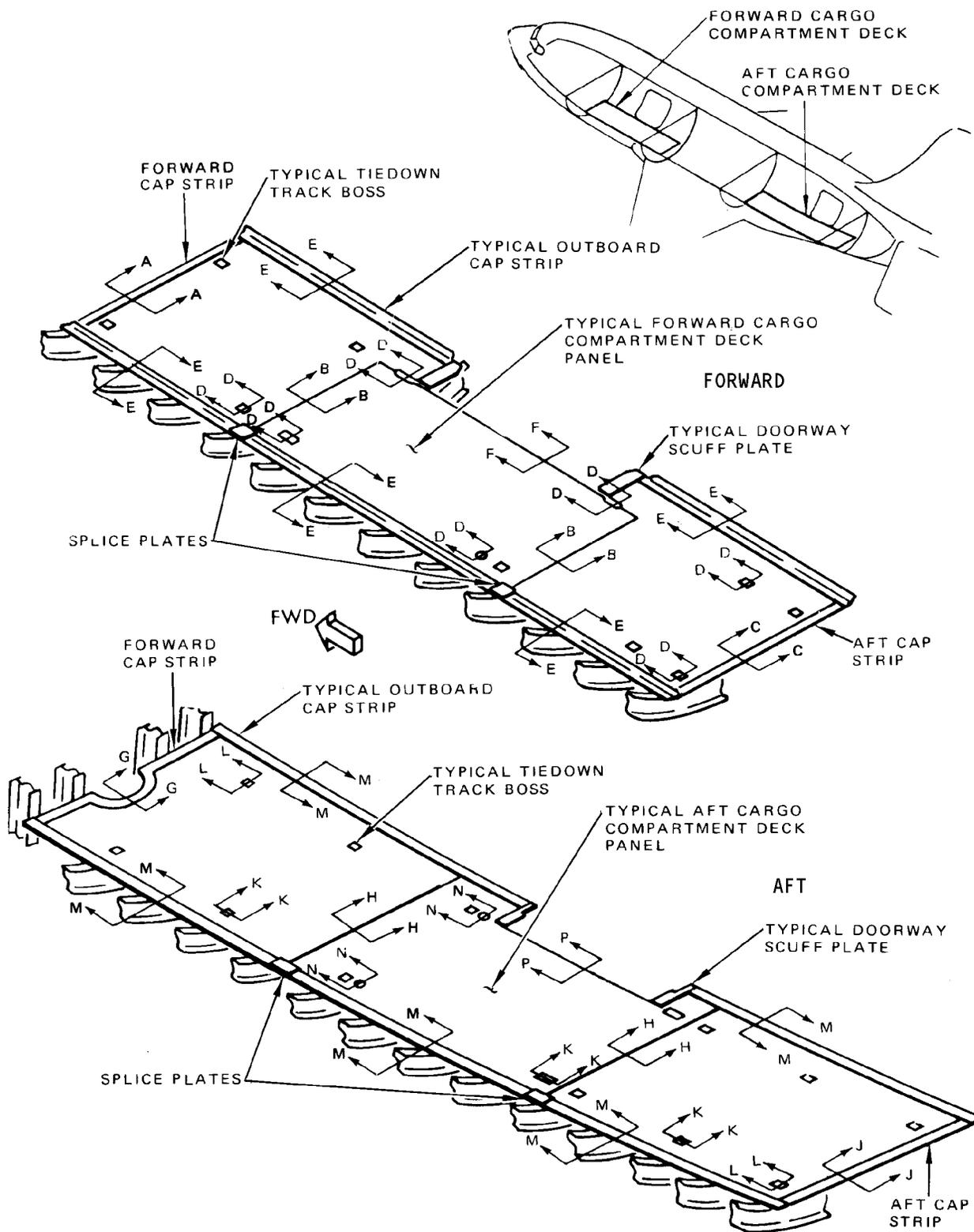
EFFECTIVITY

ALL

25-52-51

01

Page 402  
Dec 01/04



Cargo Compartment Deck Panel Installation  
 Figure 401 (Sheet 1)

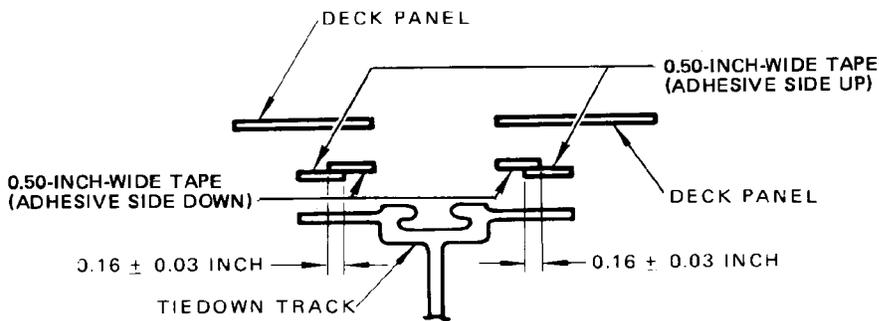
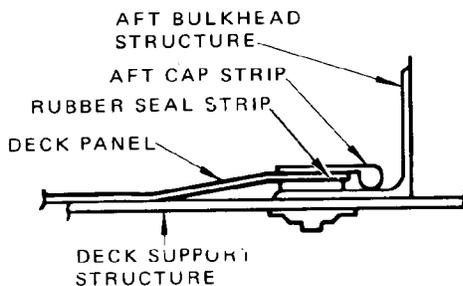
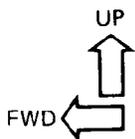
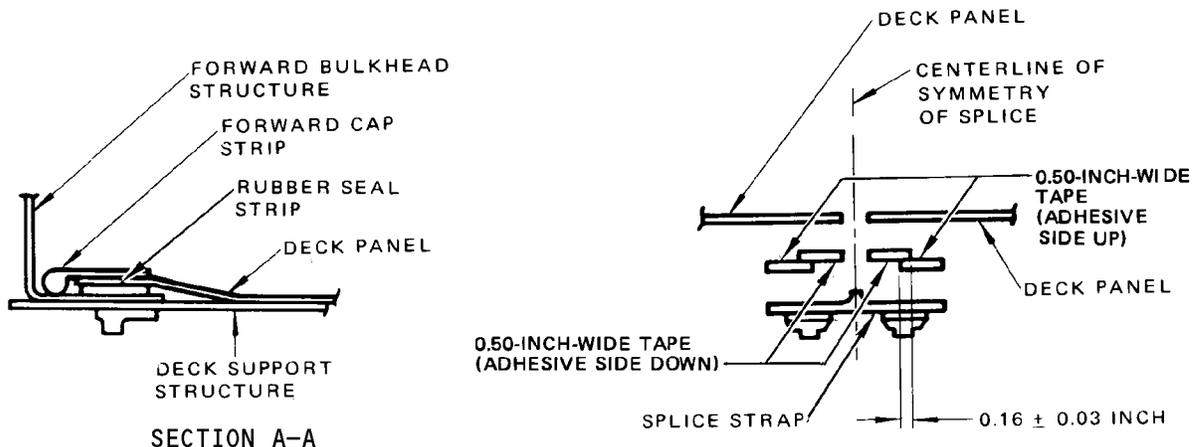
EFFECTIVITY	
	ALL

25-52-51

01

Page 403  
 Dec 01/04

458379



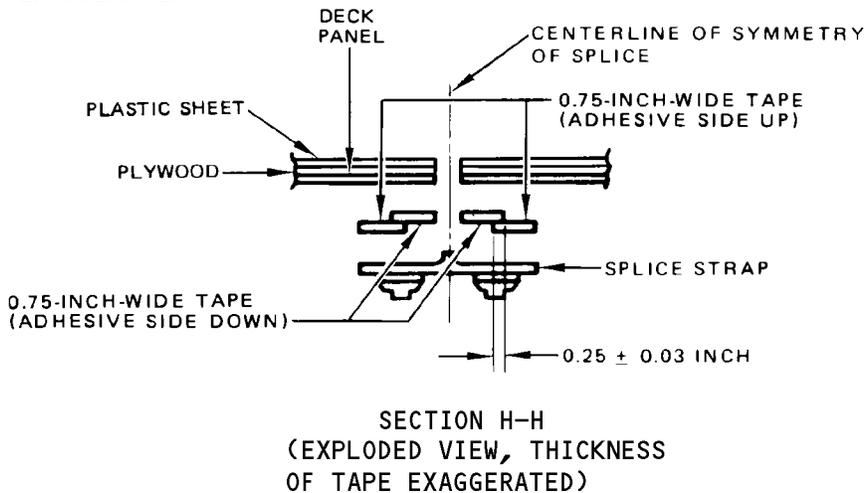
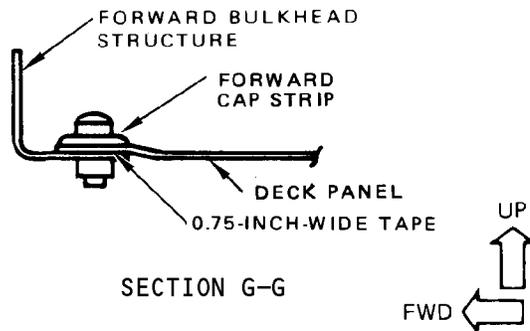
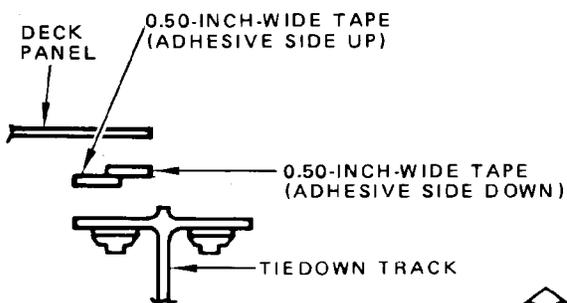
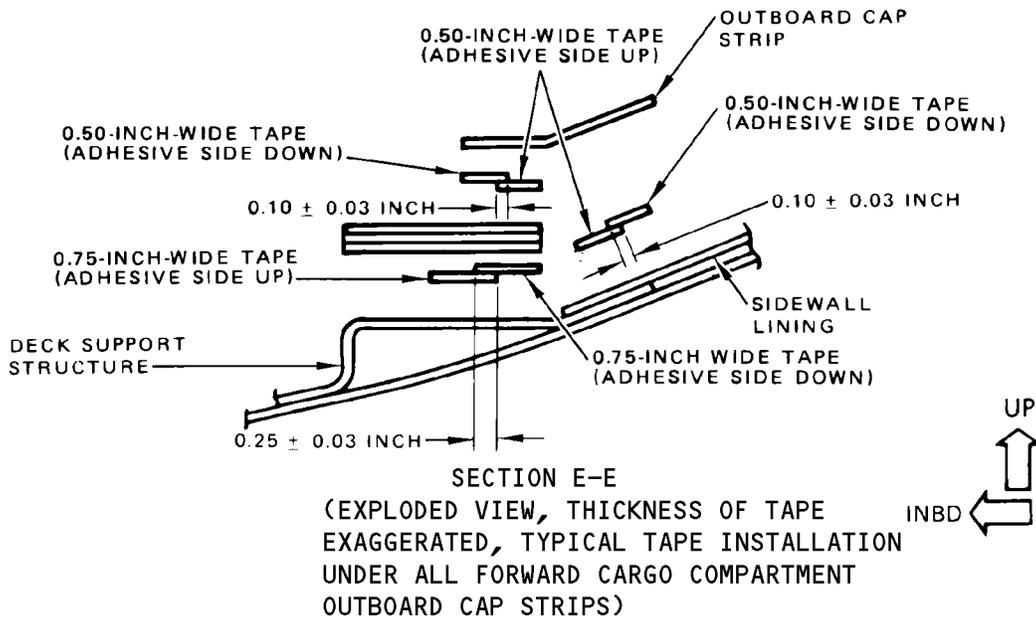
Cargo Compartment Deck Panel Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY	ALL
-------------	-----

25-52-51



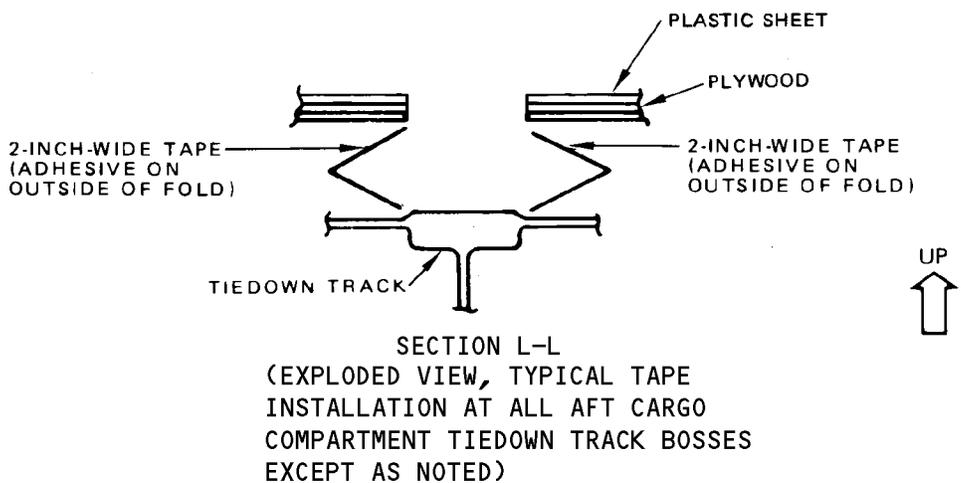
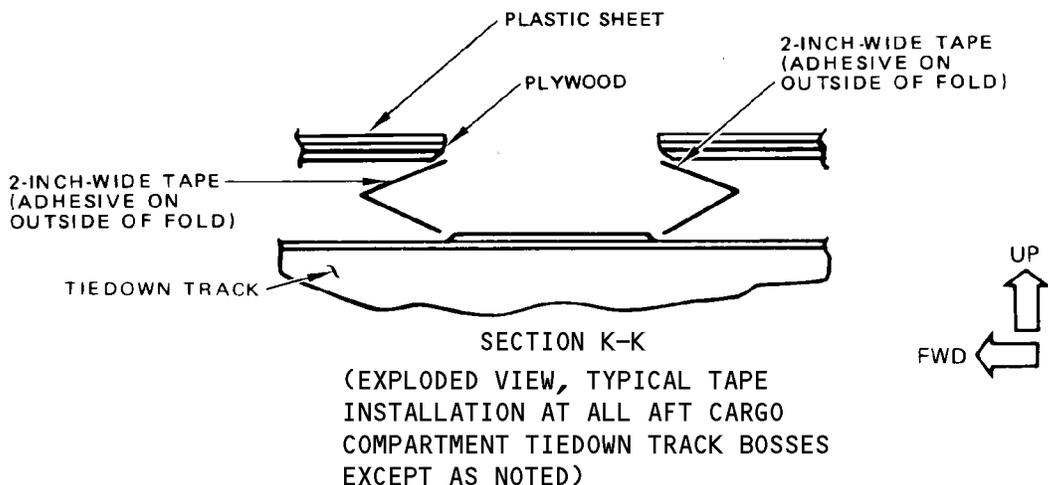
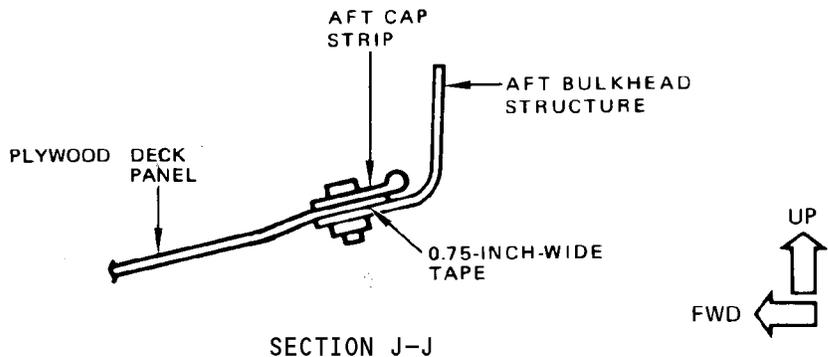
**MAINTENANCE MANUAL**



Cargo Compartment Deck Panel Installation  
Figure 401 (Sheet 3)

EFFECTIVITY	
	ALL

**25-52-51**



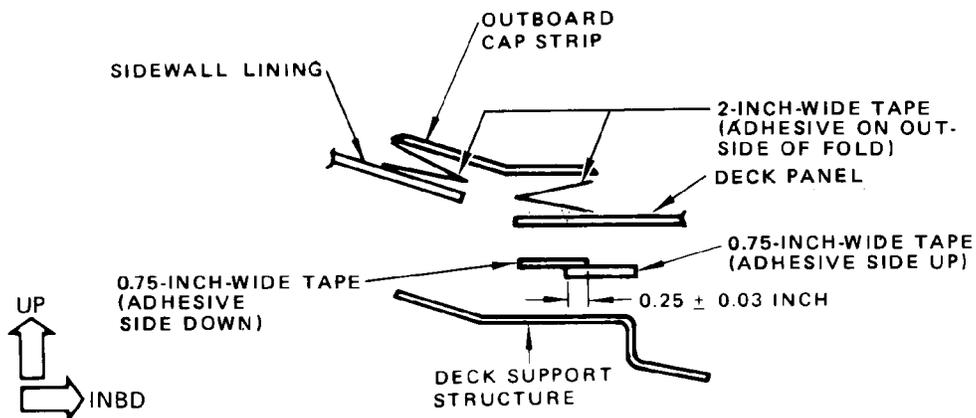
Cargo Compartment Deck Panel Installation  
 Figure 401 (Sheet 4)

EFFECTIVITY	ALL
-------------	-----

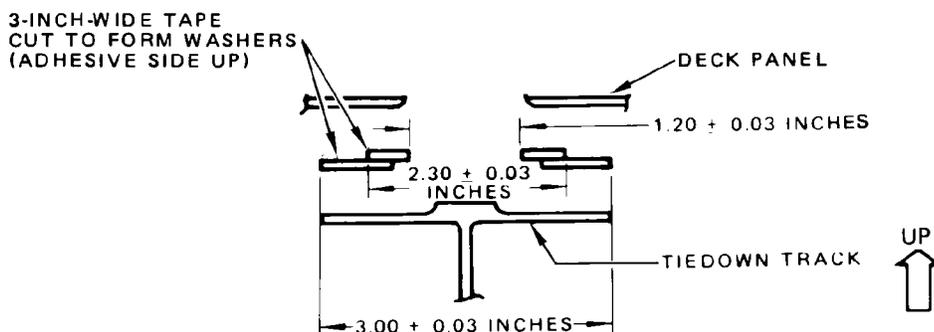
25-52-51



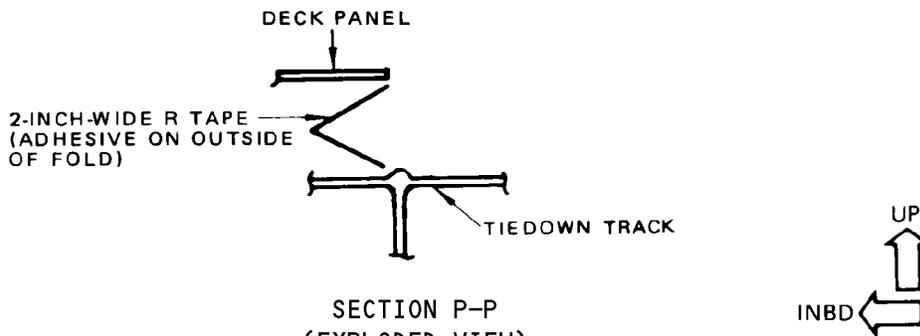
**MAINTENANCE MANUAL**



**SECTION M-M**  
(EXPLODED VIEW, THICKNESS OF TAPE EXAGGERATED)



**SECTION N-N**  
(EXPLODED VIEW, THICKNESS OF TAPE EXAGGERATED)



**SECTION P-P**  
(EXPLODED VIEW)

**Cargo Compartment Deck Panel Installation**  
**Figure 401 (Sheet 5)**

EFFECTIVITY	ALL
-------------	-----

**25-52-51**

CARGO COMPARTMENT LINING AND INSULATION – DESCRIPTION AND OPERATION

1. General

A. The cargo compartment bulkheads, ceilings and sidewalls are lined with fiberglass or aluminum alloy panels and the compartments are furnished with thermal insulation. (See figure 1.)

2. Lining

A. The compartment ceilings and sidewalls are lined with fiberglass panels which are held in place by depressor and cap strips. The caps strips are fastened to the supporting structure by screws. The space between the panel edges and the depressor strips or between the panel edges and the airplane structure is sealed with rubber strips which are cemented to the depressor strips or to the structure. Small cork pads are cemented to the structure where screws pass through panels and cap strips at places that are not at panel edges.

B. The forward cargo compartment forward bulkhead is lined with aluminum alloy panels. Two of the panels are riveted in place and three are held by quarter-turn fasteners which are spaced around the panel edges. A plastic grille covers the blowout panel opening.

C. The aft cargo compartment forward bulkhead is lined with fiberglass panels and formed fiberglass shrouds. Cap strips hold the edges of the panels and shrouds in place. The cap strips are fastened to the structure by screws. The central areas of the panels are fastened to the structure by screws.

D. The aft bulkhead of the aft compartment is lined with aluminum alloy sheet panels, which are held to the structure by quick-release fasteners or screws. On some airplanes the aft bulkhead of the forward compartment is lined with aluminum alloy sheet panels also. On other airplanes the panels that line the forward compartment aft bulkhead are made of fiberglass skins and foamed plastic cores. A plastic or sheet metal grille covers the blowout panel opening in the forward compartment bulkhead.

3. Insulation

A. Insulation blankets are outboard of the sidewall lining and below the compartment deck. Most blankets are fastened to structural members by plastic studs and clips. Larger sidewall blankets are further held in place by nylon lacing, which runs across the inboard surfaces of the blankets and between adjacent body frames. Some parts of certain blankets are also fastened by velcro tape. The blankets above the cargo compartment doorways, and a few of the smallest blankets, are fastened only by velcro tape.

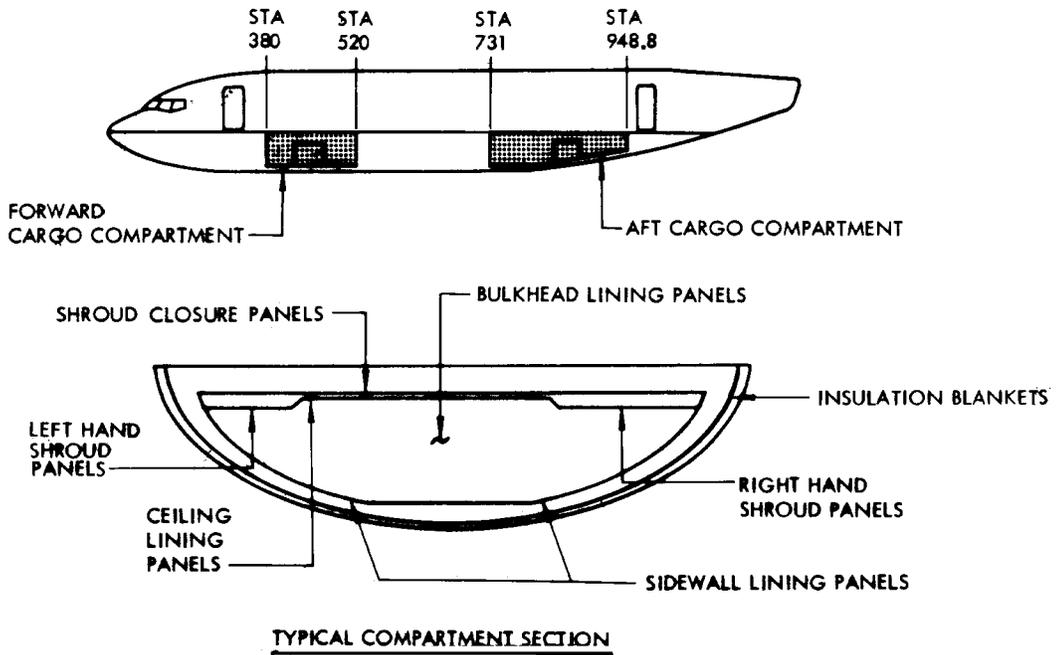
EFFECTIVITY

ALL

25-52-100

02

Page 1  
Dec 01/04



Cargo Compartment Lining and Insulation Location  
 Figure 1

EFFECTIVITY

ALL
-----

25-52-100

**BOEING**  
**737**   
MAINTENANCE MANUAL

- B. A typical blanket has a layer of fiberglass wool, an inboard cover, and an outboard cover. The two covers are stitched or cemented together at the blanket edges, along which there may be a trim strip and fastener tab. The blankets vary widely in size and shape, each being tailored to fit its surroundings. Blankets that cover body frame intercostal webs have holes that match the holes in the intercostal webs. The holes allow air to circulate between the inboard side of the blanket and the sidewall lining.
- C. Foamed plastic panels are on the bottom of the structural members just below the passenger cabin floor and along both sidewalls. The panels are cemented to the structural members. On some airplanes foamed plastic panels also line the inside surfaces of the inner and outer skins of the cargo compartment doors. On other airplanes fiberglass wool insulation blankets line the inner surfaces of the cargo compartment doors. The insulation blankets or panels are fastened to the skin by plastic studs or by cementing.

EFFECTIVITY

ALL

25-52-100

01

Page 3  
Dec 01/04

CARGO COMPARTMENT LINING AND INSULATION - INSPECTION/CHECK

1. General

- A. This procedure gives the instruction to examine the fiberglass liners on the vertical and sloping sidewalls, ceiling, and bulkheads in the cargo compartment. This procedure has one task:
  - (1) The inspection and check of the Compartment Lining.
- B. The function of the lining is to contain the fire extinguishing capabilities in the cargo compartment. It is important that all the fasteners, seams, and punctures to be correctly sealed.

2. Compartment Lining Inspection/Check

A. References

- (1) 25-52-100/801, Cargo Compartment Lining
- (2) 25-52-111/401, Cargo Compartment Ceiling Lining
- (3) 25-52-121/401, Cargo Compartment Sidewall Lining
- (4) 25-52-131/401, Cargo Compartment Bulkhead Lining

B. Procedure

- (1) Do this task: "Permanent Repair" (Ref 25-52-100/801) for the damaged liners that are not more than these damaged limits:
  - (a) A cut up to 36-inches long
  - (b) An "L" shaped tear up to 9-inches long for each side
  - (c) A hole up to 1.5 inches in diameter
  - (d) One damaged fastener
  - (e) A damaged zipper
  - (f) Loose or no tape on and around the seams and fasteners
- (2) Replace the applicable fiberglass liner that is more than the above damaged limits (Ref 25-52-111/401, 25-52-121/401, or 25-52-131/401).

EFFECTIVITY

ALL

25-52-100

01

Page 601  
Dec 01/04

CARGO COMPARTMENT LINING - APPROVED REPAIRS

1. General

- A. The cargo compartment lining must be repaired to keep the compartment class D smother type category.
- B. The repairs that follow are for the fiberglass liners on the vertical and sloping sidewalls, ceiling, and bulkheads in the cargo compartment.
- C. This procedure contains four tasks for the repairs of the cargo compartment liners.
  - (1) The first task gives instructions for the repair of the loose or damaged tape.
  - (2) The second task gives instructions for the permanent repairs to flat liners or slightly curved liners.
  - (3) The third task gives instructions for the repair of molded panels, shrouds, and panels with complex curves.
  - (4) The fourth task gives instructions for the repair of silicone impregnated fiberglass.
- D. There are four permanent repair alternatives for the flat or slightly curved liners.
  - (1) It is necessary to remove the liners from the airplane for these permanent repairs:
    - (a) The use of rivets with a bonded fiberglass patch.
    - (b) The use of screws with a bonded fiberglass patch.
  - (2) It is not necessary to remove the liners for these permanent repairs:
    - (a) The Thermion Repair System which uses a bonded patch.
    - (b) The Akro Fireguard System which uses a bonded patch.
    - (c) The Gillpatch III System which uses an adhesive patch.
- E. If the permanent repairs done to the cargo liners are not one of the above alternatives, you can install mechanical fasteners around the edges of the existing patches. Refer to one of the first two permanent repair procedures for the fastener installation. If you can remove the old patch, such as a temporary repair, you can install a bonded patch over the original damage. Refer to one of the last two permanent repair procedures for the installation of a bonded patch.
- F. Where renewal of fiberglass panels is necessary, the sidewalls may be replaced with .9 mm 5154 (Com-ZR050) aluminum alloy and the ceiling with .7 mm 5154 (Com-ZR036) alloy.

2. Repair the Loose or Damaged Tape

- A. Equipment and Materials
  - (1) Cheesecloth - BMS 15-5 (Ref 20-30-51/201)
  - (2) Solvent - Final Cleaning of Composites Prior to Non-Structural Bonding (Series 91) (Ref AMM/SOPM 20-30-91)
  - (3) Tape (Ref 20-30-51/201)

NOTE: Use one of these tapes:

EFFECTIVITY

ALL

25-52-100

01

Page 801  
Aug 01/05



## MAINTENANCE MANUAL

- (a) Tape - Cargo Pit Sealing, Permacel P-626 or P626SL
- (b) Tape - Glass Cloth, 3M 398FR
- (c) Tape - Flame Retardant Sealing, 3M 367FR
- (d) BMS5-146

### B. Procedure

- (1) Remove and discard all loose or damaged tape.
- (2) Clean the damaged area with a clean cheesecloth that is moist with solvent.
- (3) Dry the area with a clean dry cheesecloth before the solvent dries.
- (4) Clean the area again to fully remove the dirt, oil, paint, and other unwanted materials.

**NOTE:** A clean surface is necessary for a good bond.

- (5) Apply new tape.

**NOTE:** Do not use the old tape again. If you use the tape again, it will not have a satisfactory bond.

### 3. Permanent Repairs to Flat Liners or Slightly Curved Liners

#### A. General

- (1) These repairs contain four alternatives. It is only necessary to use one of the four alternatives.
- (2) Use the applicable consumable materials that are necessary for the repair procedure you use.

#### B. Equipment and Materials

- (1) Cherry Monel rivet gun (commercially available)
- (2) Knife or scissors (commercially available)
- (3) Abrasive paper (80-grit) - commercially available
- (4) Use the materials that follow for the riveted and bonded fiberglass patch repair procedure:
  - (a) Adhesive - Film, BMS 5-91, Type I, II, or III
  - (b) Rivet - Cherry Monel - Blind, P/N CR8M83-6-2, Supplier: Cherry Aerospace Fasteners
  - (c) Tape - 3M 367-FR (3 inches wide)
  - (d) Liner - Glass Fiber - Reinforced Phenolic Laminate, BMS 8-223, Grade B
  - (e) Alcohol - Denatured
- (5) Use the materials that follow for the bonded patch with screws repair procedure:
  - (a) Adhesive - Film, BMS 5-91, Type I, II, or III
  - (b) Tape - 3M 367-FR (3 inches wide)
  - (c) Liner - Glass Fiber - Reinforced Phenolic Laminate, BMS 8-223, Grade B

EFFECTIVITY

ALL

25-52-100

01

Page 802  
Aug 01/06



## MAINTENANCE MANUAL

- (d) Alcohol - Denatured
  - (e) Screws - Steel Sheet Metal, 0.164 inch diameter (U.S. size No. 8) x 3/16 inch long - Commercially available
  - (6) Use the materials that follow for the Thermion Repair System:
    - (a) Epoxy - Master Bond high temperature, EP65HT-1
    - (b) Patch Kits - Thermion Heat Resistant, P/N 9290-1 thru -7, Supplier: Thermion Inc.
    - (c) Alcohol - Denatured
  - (7) Use the materials that follow for the Akro Fireguard System:
    - (a) Kits - quick setting epoxy adhesive, P/N 300-P, 3-2-P, or 306-P; Supplier: Akro Fireguard Protection, Inc.
- C. Procedure - Repair the Cargo Liners with a Riveted and Bonded Fiberglass Patch
- (1) Remove the cargo liner from the airplane (Ref 25-52-111/401, 25-52-121/401, or 25-52-131/401).
  - (2) Make a fiberglass patch with the same thickness as the liner being repaired.
- NOTE:** The patch should make a minimum of a 2-inch overlap on the area that is not damaged. For example, the patch dimension that is necessary for a 1.5-inch diameter hole would be 5.5-inch diameter.
- (3) Rub the back of the patch with abrasive paper.
  - (4) Clean all of the surfaces using denatured alcohol to remove the loose particles.
  - (5) Apply adhesive to the back of the patch.
  - (6) Put the patch over the center of the damaged area.
  - (7) Apply pressure to the patch to make sure there is a good bond.
  - (8) Put tape around the edges of the patch to protect the edges of the patch.
  - (9) Drill 0.20-inch diameter holes through the patch and the liner at approximately 1.5 inches apart and 0.50 inch from the edges of the patch.
- NOTE:** Control the depth of the drill to the thickness of the patch plus the liner.
- (10) Attach the patch permanently with cherry monel blind rivets or equivalent heat resistant fasteners.
  - (11) Install the cargo liner if you removed it to do the repairs (Ref 25-52-111/401, 25-52-121/401, or 25-52-131/401).

EFFECTIVITY

ALL

25-52-100

01

Page 803  
Aug 01/06



## MAINTENANCE MANUAL

- D. Procedure – Repair the Cargo Liners with Screws and a Bonded Patch
- (1) Remove the cargo liner from the airplane (Ref 25-52-111/401, 25-52-121/401, or 25-52-131/401).
  - (2) Make a fiberglass patch with the same thickness as the liner being repaired.

**NOTE:** The patch should make a minimum of a 2-inch overlap on the area that is not damaged. For example, the patch dimension that is necessary for a 1.5-inch diameter hole would be 5.5-inch diameter.

- (3) Rub the back of the patch with abrasive paper.
- (4) Clean all of the surfaces using denatured alcohol to remove the loose particles.
- (5) Apply adhesive to the back of the patch.
- (6) Put the patch over the center of the damaged area.
- (7) Apply pressure to the patch to make sure there is a good bond.
- (8) Attach the patch permanently with screws at approximately 1.25 inches apart and 0.50 inch from the edges of the patch.
- (9) Apply tape on the heads of the screws to keep them installed through the fiberglass liner and patch.
- (10) Install the cargo liner if you removed it to do the repairs (Ref 25-52-111/401, 25-52-121/401, or 25-52-131/401).

- E. Procedure – The Thermion Repair System

- (1) Get the correct Thermion patch kit for the shape of the damage.

**NOTE:** The patch should make a minimum of a 2-inch overlap on the area that is not damaged. For example, the patch dimension that is necessary for a 1.5-inch diameter hole would be 5.5-inch diameter.

- (2) Rub the back of the patch with abrasive paper to remove the gloss being careful not to rub the impregnated scrim area.
- (3) Use the abrasive paper to remove all signs of the tedlar on the area of the liner to be contacted by the patch.

**NOTE:** Tedlar is a protective white layer that is on the liner during the manufacture process.

- (4) Clean all of the surfaces using denatured alcohol to remove the loose particles.
- (5) Apply epoxy to the back of the patch and to the liner.
- (6) Put the patch over the center of the damaged area.
- (7) Apply pressure to the patch to make sure there is a good bond.

EFFECTIVITY

ALL

25-52-100

01

Page 804  
Aug 01/06

- (8) Put tape around the edges of the patch to hold the patch while the adhesive dries for approximately 30 minutes.

NOTE: The tape will also protect the edges of the patch.

F. Procedure – The Akro Fireguard System

- (1) Get the correct Akro Fireguard repair patches for the shape of the damage.

NOTE: The patch should make a minimum of a 2-inch overlap on the area that is not damaged. For example, the patch dimension that is necessary for a 1.5-inch diameter hole would be 5.5-inch diameter.

- (2) Use the Akro installation instructions to attach the patch over the center of the damage.

G. Procedure – Gillpatch III System

- (1) Get the Gillpatch III 6306 system kit, each kit has complete instructions to identify the repairable sizes and apply the patch.
  - (a) The patch must extend 2-inches beyond all sides of a tear or puncture.

NOTE: For example, the patch dimension that is necessary a 1.5-inch diameter hole would be 5.5-inch diameter.

- (2) Use a lint-free clean, dry cloth and a commercially available oil-free cleaner such as isopropyl alcohol or equivalent to remove any oil, grease, dirt or stain from the damaged area to be patched.
- (3) Make sure the area is clean and dry before you apply the patch.
  - (a) Wipe off any film residue that remains on the liner surface.
- (4) If there are any Tedlar surface, note that it is not necessary to remove them, as the patch can be applied directly to Tedlar.
- (5) When you are ready to apply the patch, peel the protective backing from the pressure sensitive adhesive on the back of the patch.

NOTE: Handle the patch very carefully as the adhesive will adhere aggressively to any surface that comes in contact.

EFFECTIVITY

ALL

25-52-100

01

Page 805  
Aug 01/05



## MAINTENANCE MANUAL

- (6) Center the adhesive side of the patch over the damaged area.
- (7) Use you hand to rub with circular even pressure over the entire surface of the patch, which also includes the exposed edges.
- (8) Make sure the patch completely adheres to the cargo liner it covers.
  - (a) The patch must be firmly stuck in place and extends 2 inches.

#### 4. Repairs for Molded Panels, Shrouds, and Panels with Complex Curves

##### A. General

- (1) The task that follows is a repair for molded panels, shrouds, and panels with complex curves.

##### B. Equipment and Materials

- (1) Resin - Fiberglass, BMS 8-201, Type II
- (2) Abrasive paper (200 grit or finer)
- (3) Fiberglass Fabric - BMS 9-3, Type H
- (4) Solvent

NOTE: Use one of these:

- (a) Naphtha, Aliphatic - TT-N-95, Type I or II
- (b) Isopropyl Alcohol

##### C. Procedure - Repair Molded Panels, Shrouds, and Panels with Complex Curves

- (1) Get access behind the panel or remove the panel from the airplane (Ref 25-52-111/401, 25-52-121/401, or 25-52-131/401).
- (2) Lightly rub the damaged area with abrasive paper on the two sides of the panel.
- (3) Clean the damaged area with solvent.
- (4) Do the structural repair on the fiberglass side of the panel (Ref SRM 51-40-9).
- (5) Mix 100 parts by weight of Epocast 50-A resin to 15 parts by weight of Epocast No. 946 hardener (BMS 8-201, Type II).
- (6) Do the steps that follow to the front and the back of the panel:
  - (a) Apply a layer of the mixed adhesive resin to the side of the damaged panel that shows in the cargo compartment.
  - (b) Apply a layer of BMS 9-3, Type H, fiberglass fabric on the layer of adhesive resin.

NOTE: The fiberglass fabric should make a minimum of a 2-inch overlap on the area that is not damaged. For example, the fiberglass fabric dimension that is necessary for a 1.5-inch diameter hole would be 5.5-inch diameter.

- (c) Apply one more layer of the adhesive.
- (7) Allow the adhesive to cure for a minimum of 24 hours at 77 +10°F or a minimum of 1 hour at 150 +10°F.
- (8) Attach permanently with bolts, NAS603-5P or equivalent, washers, AN960JD10L, and nuts, MS21042L3, at a maximum of 2 inches apart and approximately 0.5 inch from the edges of the fiberglass fabric.
- (9) Make sure there is sufficient clearance between the bolts and the adjacent systems behind the panel.
- (10) Grind the ends of the bolts smooth with the nuts to get sufficient clearance.

EFFECTIVITY

ALL

25-52-100

01

Page 806  
Aug 01/05



## MAINTENANCE MANUAL

- (11) Install the panel if you removed it to do the repairs (Ref 25-52-111/401, 25-52-121/401, or 25-52-131/401).
- (12) If sufficient clearance is still not obtained, replace the damaged panel.

### 5. Silicone Impregnated Liner Repairs

#### A. General

- (1) The task that follows is for the repair of silicone impregnated fabric which is used as the cargo door liners.

#### B. Equipment and Materials

- (1) Thread, Fiberglass - P/N GTH-18 (Supplier: Lance Industries)
- (2) Material, Biscote Patch - P/N HT101 (Supplier: Bisco Products Inc.)

#### C. Procedure - Repair the Silicone Impregnated Liner

- (1) Use fiberglass thread to stitch the tear together or stitch a patch of biscote material on the damage.

**NOTE:** There should be approximately seven stitches for each inch and a minimum material overlap of 1 inch.

EFFECTIVITY

ALL

25-52-100

01

Page 807  
Aug 01/05

CARGO COMPARTMENT CEILING LINING – REMOVAL/INSTALLATION

1. General

- A. The cargo compartment ceiling lining is composed of many small panels. When performing maintenance procedures on the cargo compartment ceiling lining, it may be necessary to remove all the ceiling lining panels or possibly only one of the small panels. When removing only one panel, remove the cap strips only around the periphery of the panel to be removed.
- B. Screws securing the lining panels vary in length. Keep sizes separated and mark location to facilitate installation. On some airplanes, velcro tape is used in place of fasteners.
- C. The removal/installation procedures for cargo compartment lining panels are the same for the forward and aft cargo compartments, except as noted in the following procedures.
- D. The cargo compartments are limited pressure sealed compartments. Leakage across the interior surface must be held to minimum. Seal all visible open holes, joggles, and irregular metal surfaces where leakage may occur. All rubber seal joints must be butted to ensure minimum air leakage.

2. Equipment and Materials

- A. Tape – Permacel P212HD (preferred) P621 (optional) 3M 367-FR (preferred), White (Ref 20-30-51)

3. Remove Cargo Compartment Ceiling Lining Panels

- A. Remove miscellaneous equipment, compartment separator, interior light rims, anchorplates, etc., as necessary to remove ceiling lining panels.
- B. Remove cap strips. Use care to avoid bending (Fig. 401).
- C. Support ceiling lining panel and remove remaining screws, or separate velcro tape connections.
- D. Remove ceiling lining panel.

**NOTE:** Check that rubber seal is not pulled loose from structure when panel is removed. Rubber seal is bonded to structure only. Auxiliary heat shroud closure panels located above ceiling lining panels of forward cargo compartment may be removed at this time if access to areas above them is required. Inboard edges of auxiliary heat shroud closure panels are secured with lining fastenings. Remove outboard fasteners of auxiliary heat shroud closure panels to remove these panels.

4. Install Cargo Compartment Ceiling Lining Panels

- A. Check that rubber seals are bonded to structure. Repair if necessary. Rubber seal is bonded to structure only.

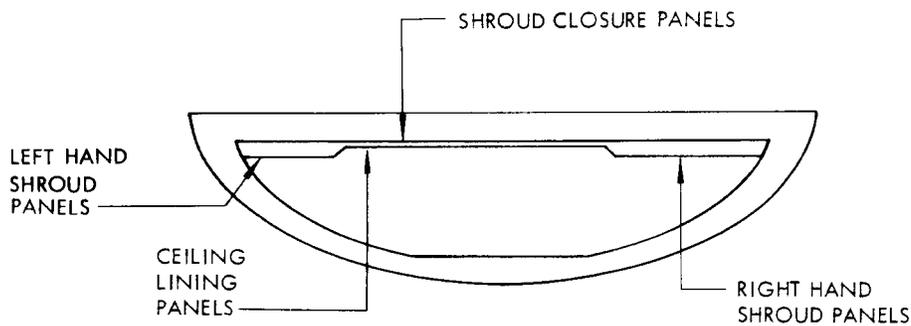
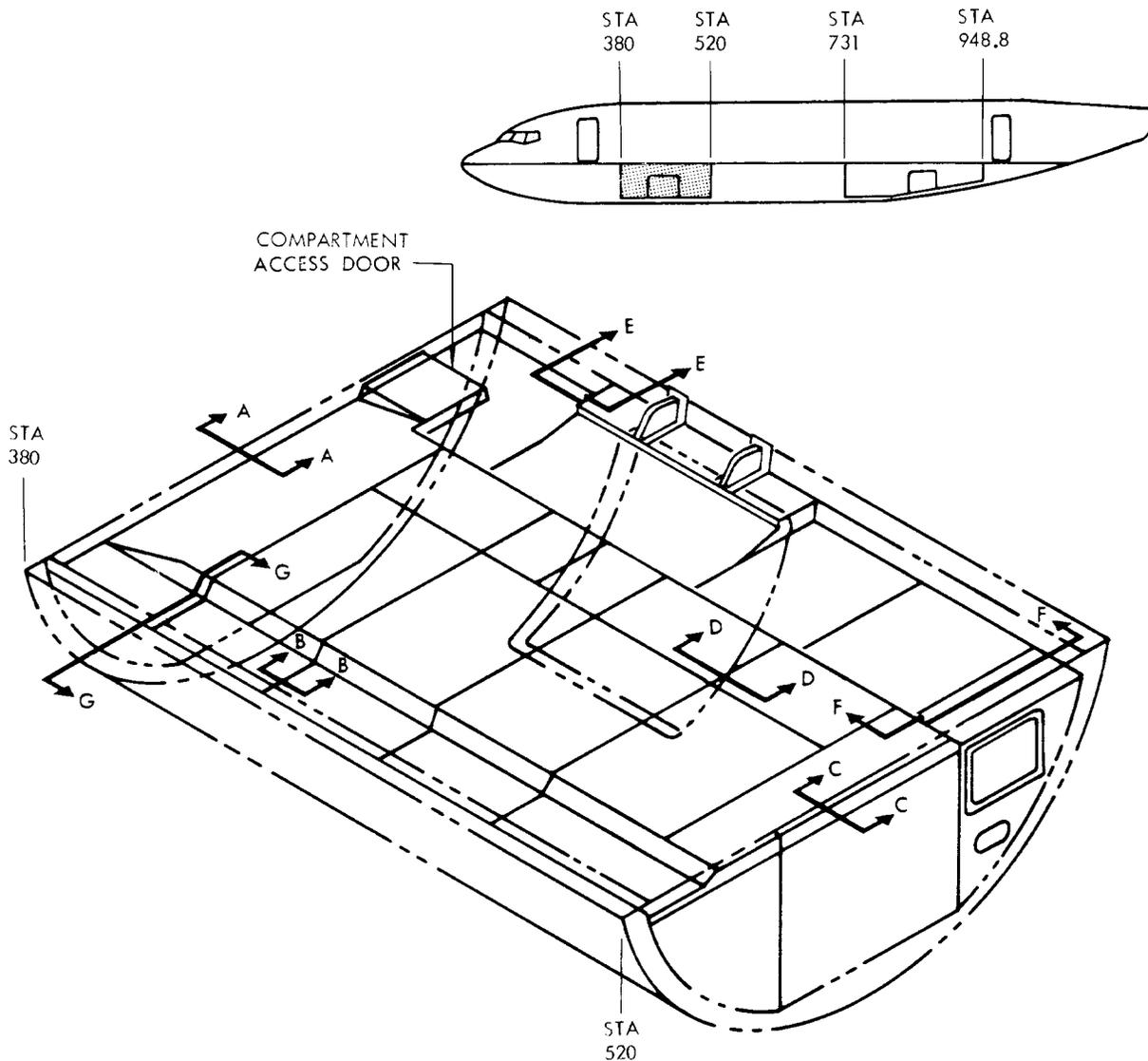
EFFECTIVITY

ALL

25-52-111

02

Page 401  
Dec 01/04

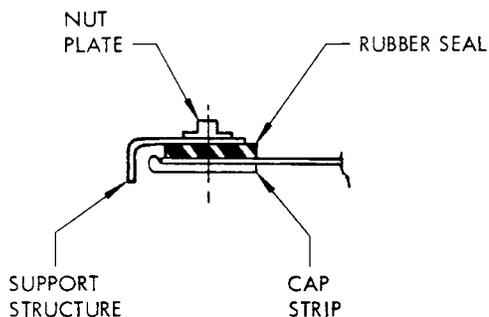


TYPICAL SECTION THROUGH COMPARTMENT  
 LOOKING FORWARD

Cargo Compartment Ceiling Lining Panel Installation  
 Figure 401 (Sheet 1)

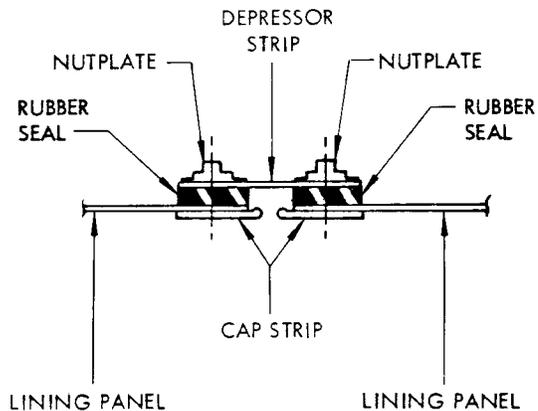
EFFECTIVITY	
	ALL

25-52-111



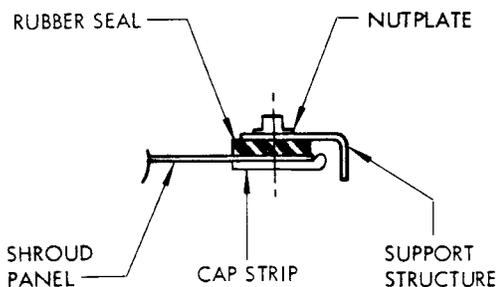
FWD ←

SECTION A-A



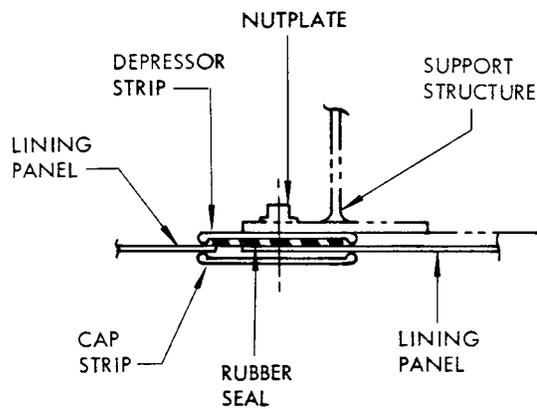
FWD ←

SECTION B-B



FWD ←

SECTION C-C



FWD ←

SECTION D-D

Cargo Compartment Ceiling Lining Panel Installation  
Figure 401 (Sheet 2)

EFFECTIVITY

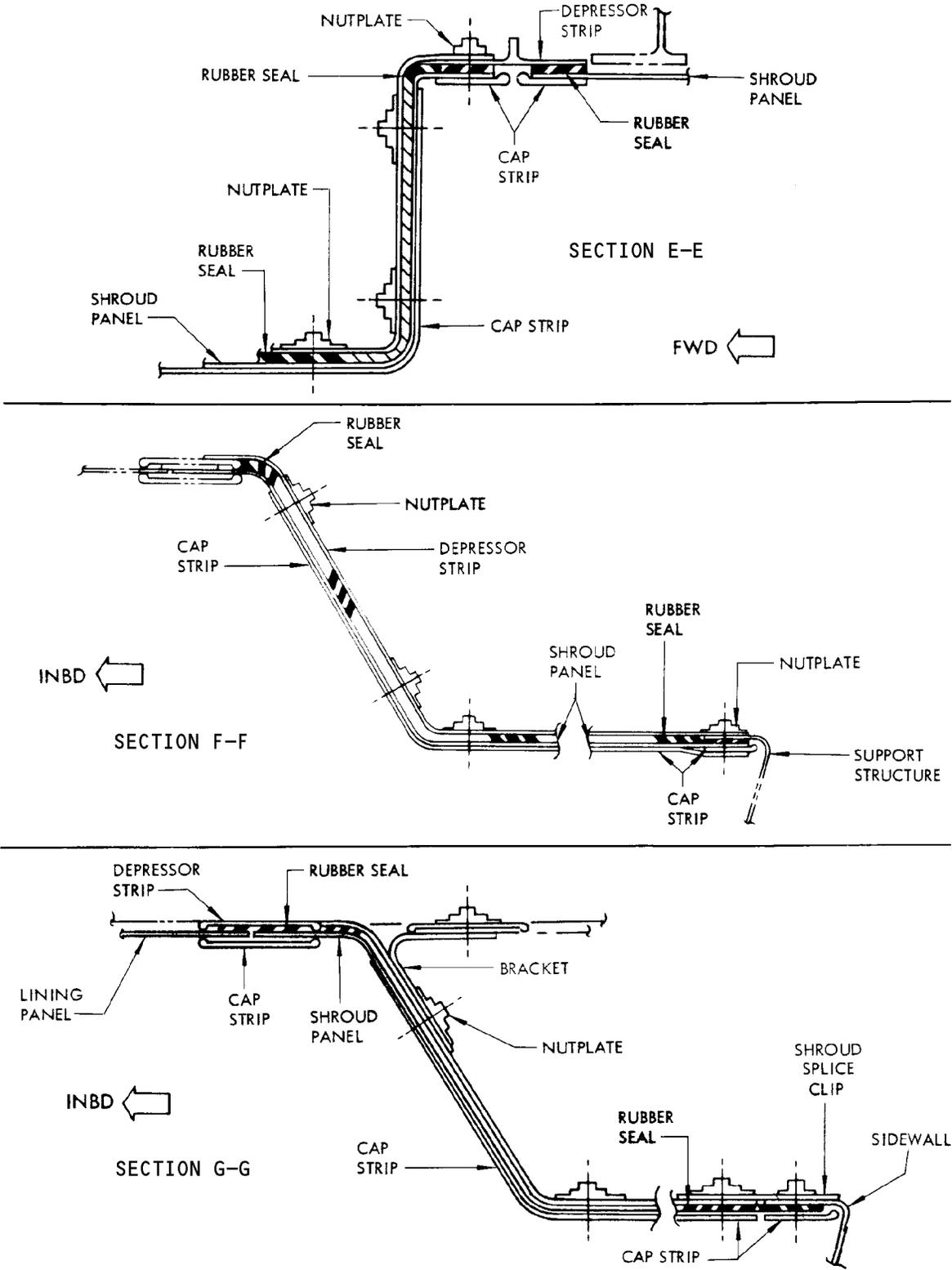
ALL

**25-52-111**

04

Page 403  
Dec 01/04

458421

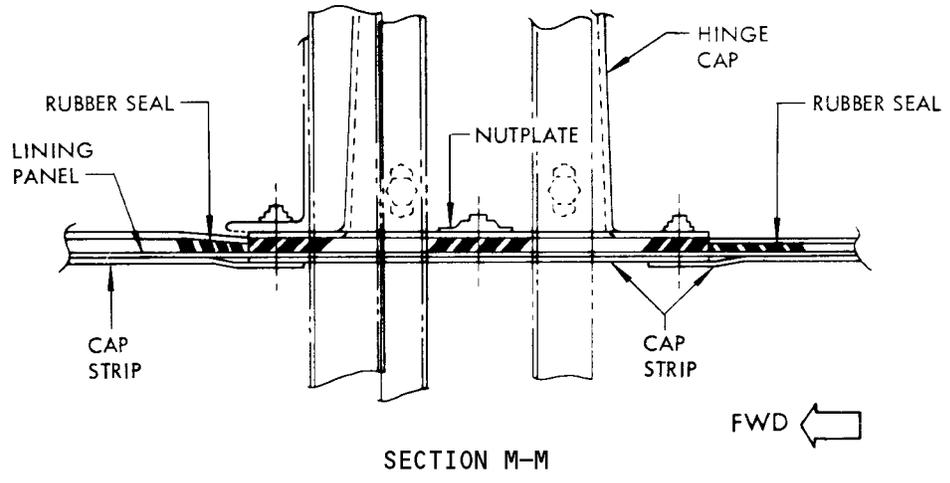
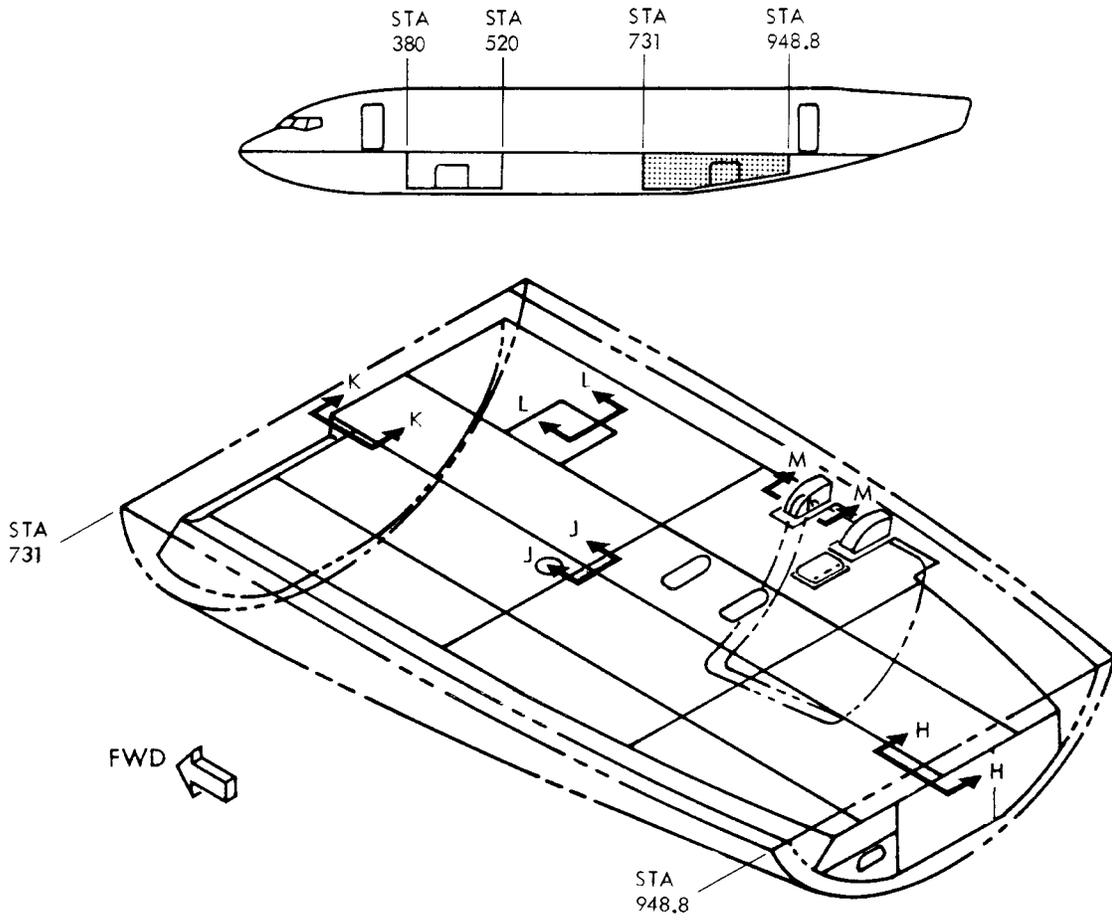


Cargo Compartment Ceiling Lining Panel Installation  
 Figure 401 (Sheet 3)

EFFECTIVITY	
	ALL

25-52-111

458429

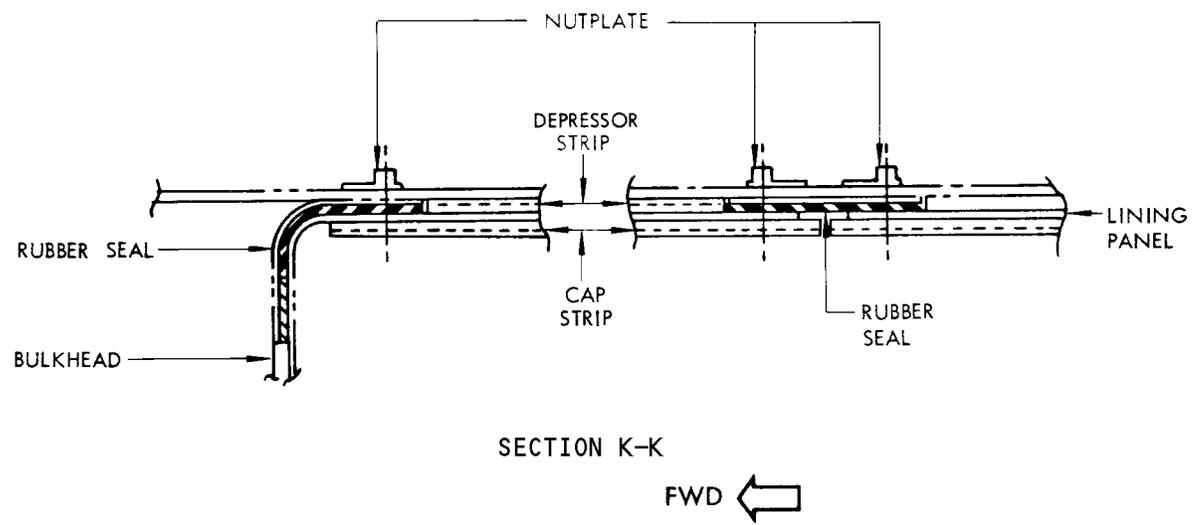
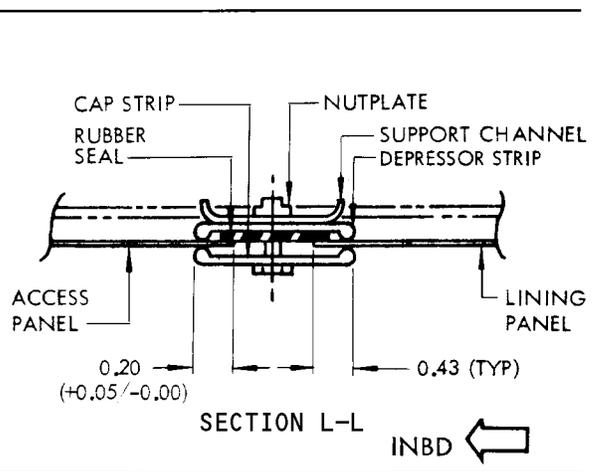
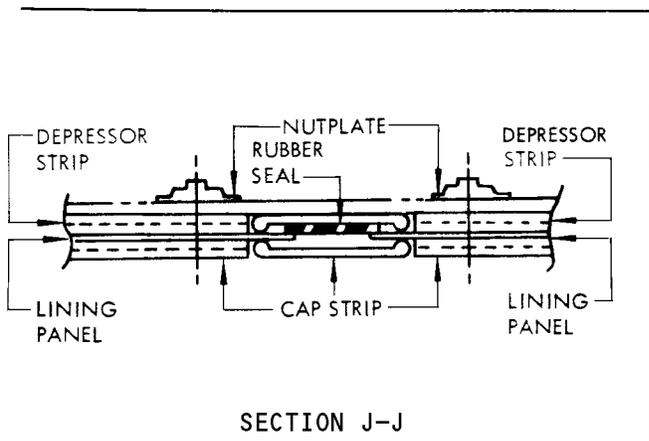
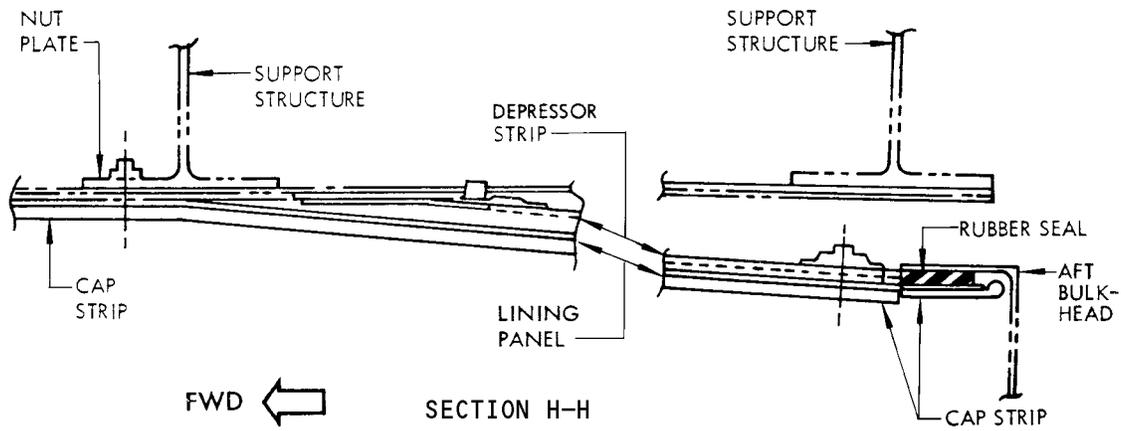


Cargo Compartment Ceiling Lining Panel Installation  
 Figure 401 (Sheet 4)

EFFECTIVITY	
	ALL

25-52-111

458440



Cargo Compartment Ceiling Lining Panel Installation  
 Figure 401 (Sheet 5)

EFFECTIVITY	ALL
-------------	-----

25-52-111

458449

**BOEING**  
**737**   
MAINTENANCE MANUAL

B. Check condition of tape on panels installed with tape. (See figure 401.)

NOTE: If new panel is being installed or tape has been damaged, bind edges of lining panels with tape. Lap tape 0.50 inches wide on each side of panel, lay tape to be flat and free of wrinkles and folds.

C. Locate ceiling lining panel in mounting position and support. (If auxiliary heat shroud panels above the forward cargo compartment have been removed they should be reinstalled at this time.)

NOTE: If a blowout panel was removed with the ceiling panel, do not install blowout panel at this time.

D. Replace cap strips and all screws, but do not tighten.

CAUTION: CARE MUST BE TAKEN TO ENSURE THAT CEILING PANELS DO NOT EXTEND UNDER THE RUBBER SEAL STRIP OR OVERLAP AT SLIP JOINTS.

E. Replace light rims.

F. Remove supports and tighten all screws, starting at the center of panel and working out to the cap strips.

G. Install miscellaneous equipment as applicable.

H. If applicable, install blowout panel in ceiling. Refer to Pressurization Relief Valves, Chapter 21.

EFFECTIVITY

ALL

25-52-111

04

Page 407  
Dec 01/04

CARGO COMPARTMENT SIDEWALL LINING – REMOVAL/INSTALLATION

1. General

- A. The cargo compartment sidewalls are lined with fiberglass panels. When performing maintenance procedures, it may be necessary to remove all the panels or possibly only one. The procedures that are set forth in steps 3 and 4 are for removing and installing a typical panel.
- B. Screws securing the lining panels vary in length. Keep sizes separated and mark location to facilitate installation.
- C. The cargo compartments are limited pressure sealed compartments. Leakage across the interior surface must be held to a minimum. Seal all visible open holes, joggles and irregular metal surfaces where leakage may occur. All rubber seal joints must be butted to ensure minimum air leakage.

2. Equipment and Materials

- A. Tape – Permacel P212HD (preferred) P621 (optional) 3M 367-FR (preferred), White, 3 inches (Ref 20-30-51)

3. Remove Typical Cargo Compartment Sidewall Lining Panel

- A. Remove anchorplates that are on inboard surface of panel if there are such anchorplates.
- B. Remove tape from panel edges that are covered with tape.
- C. Remove cap strip from panel edge if any panel edge is covered by a cap strip.

CAUTION: CAP STRIPS SHOULD BE HANDLED CAREFULLY TO AVOID BENDING THEM.

- D. Remove all screws that hold panel.
- E. Pull panel free of velcro tape.

4. Install Typical Compartment Sidewall Lining Panel (Fig. 401)

- A. Check that rubber seal strips and velcro loop tapes are bonded to structure. Repair if necessary.
- B. Check that velcro hook tapes are bonded to lining panel. Repair if necessary.
- C. Hold panel in installed position and engage velcro tapes.

CAUTION: CARE MUST BE TAKEN TO ENSURE THAT PANEL EDGES DO NOT EXTEND UNDER THE RUBBER SEAL STRIPS AND THAT THEY ARE OVERLAPPED PROPERLY AT THE LINING SPLICES.

- D. Loosely install all screws except those that hold cap strip.
- E. Hold cap strip in place and loosely install cap strip fastening screws if any panel edge is covered by a cap strip.
- F. Tighten all screws.

EFFECTIVITY

ALL

25-52-123

05

Page 401  
Dec 01/04

**BOEING**  
**737**   
MAINTENANCE MANUAL

G. Apply new tape on lining splices and on other panel edges that are not covered by a cap strip.

NOTE: The applied tape should be free of wrinkles and folds.

H. Install anchorplates if anchorplates were removed.

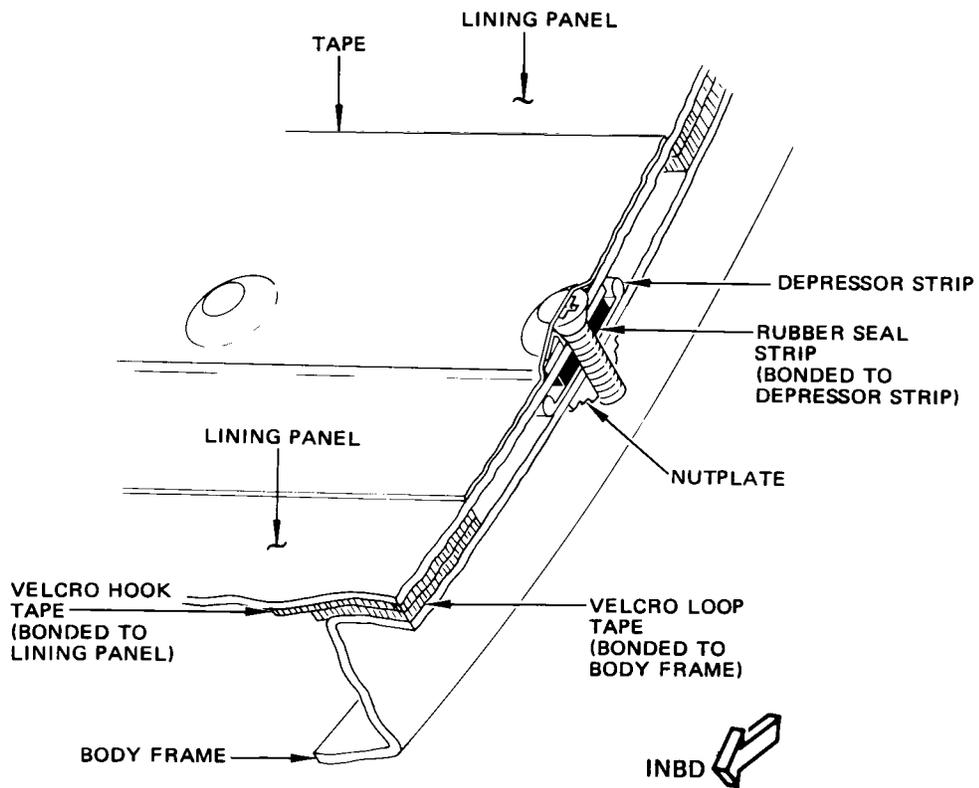
EFFECTIVITY

ALL

25-52-123

04

Page 402  
Dec 01/04



Typical Cargo Compartment Sidewall Lining Splice  
 Figure 401

EFFECTIVITY	ALL
-------------	-----

25-52-123

04

Page 403  
 Dec 01/04

CARGO COMPARTMENT BULKHEAD LINING – REMOVAL/INSTALLATION

1. General

- A. The removal and installation procedures in this section apply only to the forward bulkhead of the aft cargo compartment which is lined with fiberglass panels and formed fiberglass shrouds held in place by cap strips and screws.
- B. The lining of all other cargo compartment bulkheads consists of access panels retained by simple quick-release fasteners or screws.

2. Remove Forward Bulkhead Lining (Aft Cargo Compartment)

- A. Remove cap strips. Use care to avoid bending (Fig. 401).
- B. Support bulkhead or shroud panel and remove remaining screws.
- C. Remove bulkhead lining panel.

NOTE: Check that rubber seal and cork insulation strips are not pulled loose from structure when panel is removed.

3. Install Forward Bulkhead Lining (Aft Cargo Compartment)

- A. Check rubber seals and cork insulation strips are bonded to structure; repair if necessary. (Rubber seals are bonded to structure only.)
- B. Locate lining or shroud in mounting position.
- C. Replace cap strips and screws, but do not tighten. (See figure 401.)

CAUTION: CARE MUST BE TAKEN TO ENSURE THAT THE BULKHEAD LINING PANELS DO NOT EXTEND UNDER THE RUBBER SEAL STRIP.

- D. Tighten all screws starting at the center of the panel and working out to the cap strips.

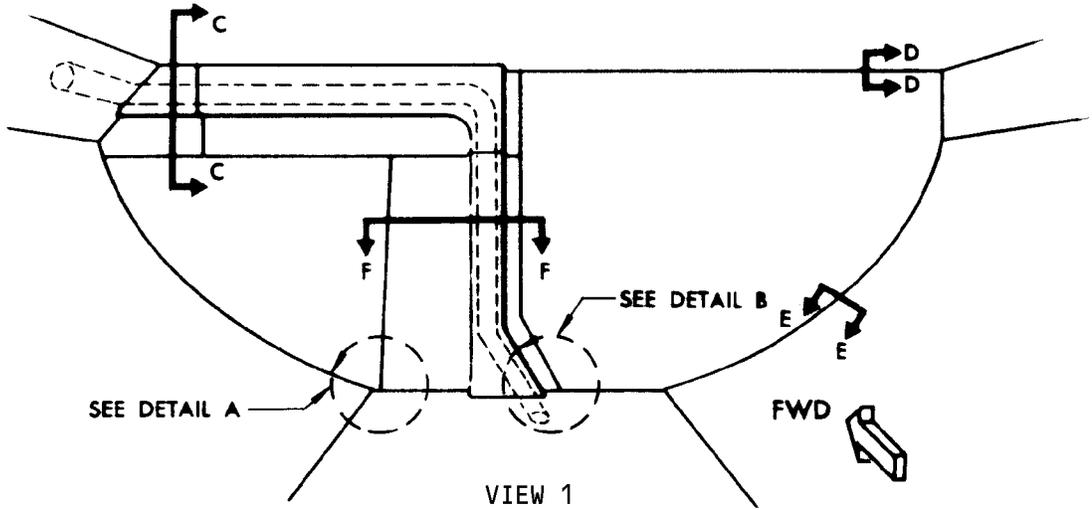
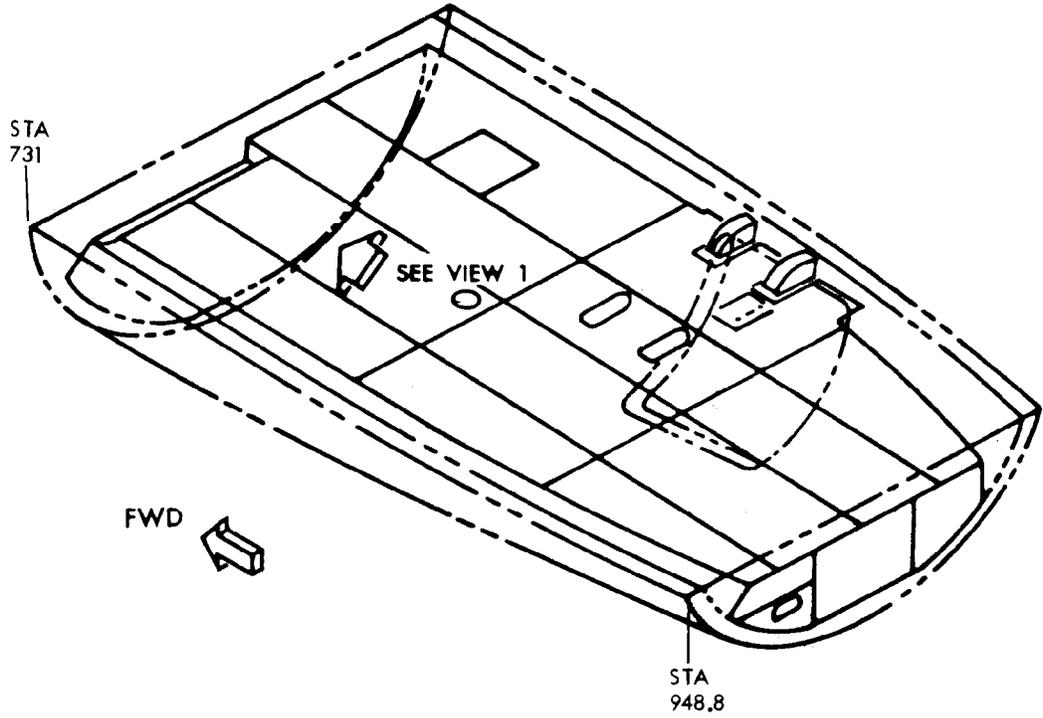
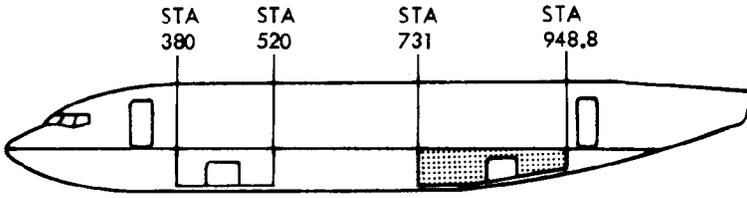
EFFECTIVITY

ALL

25-52-131

01

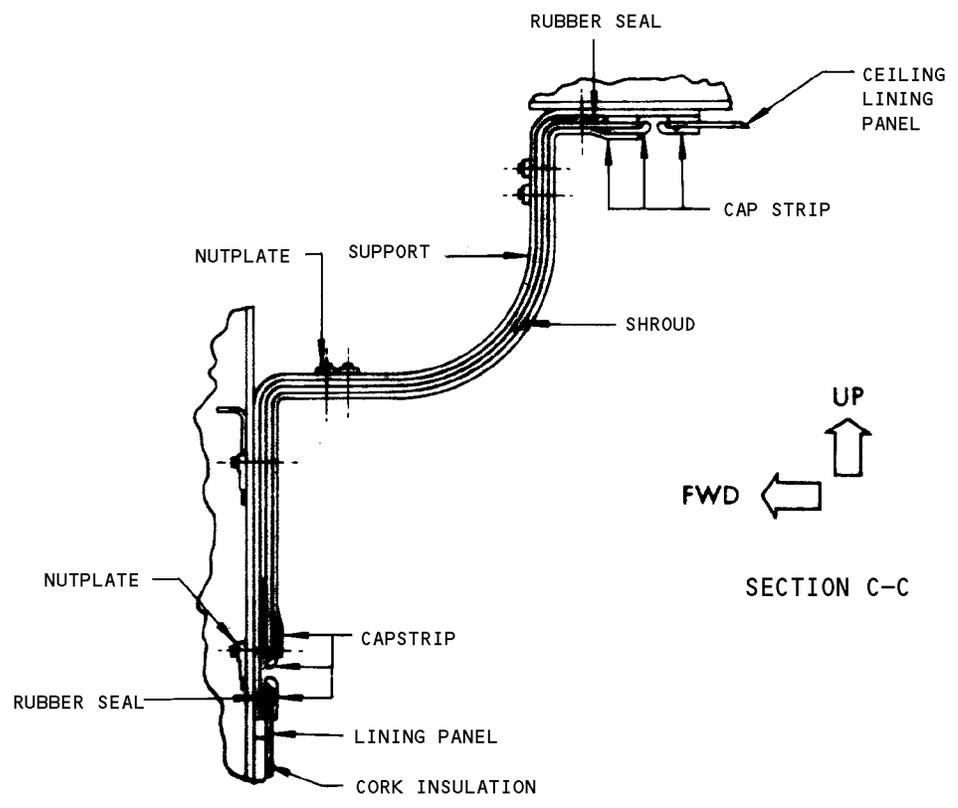
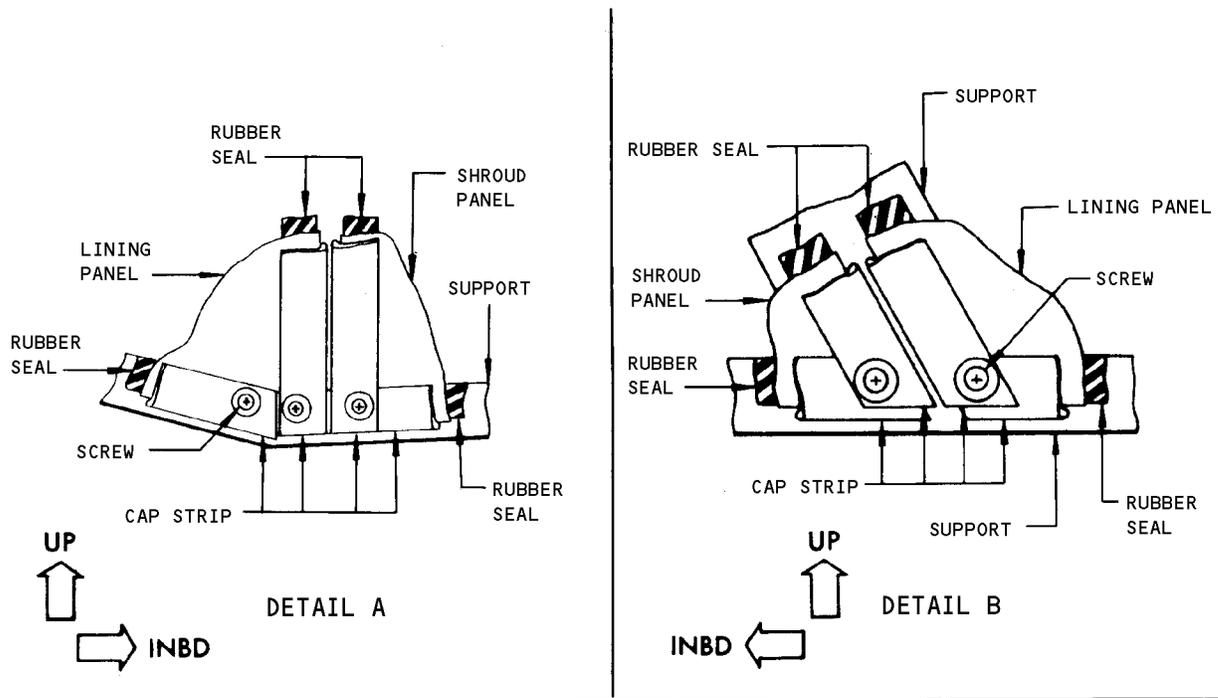
Page 401  
Dec 01/04



Aft Cargo Compartment (Forward Bulkhead) Lining Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY	
ALL	

25-52-131

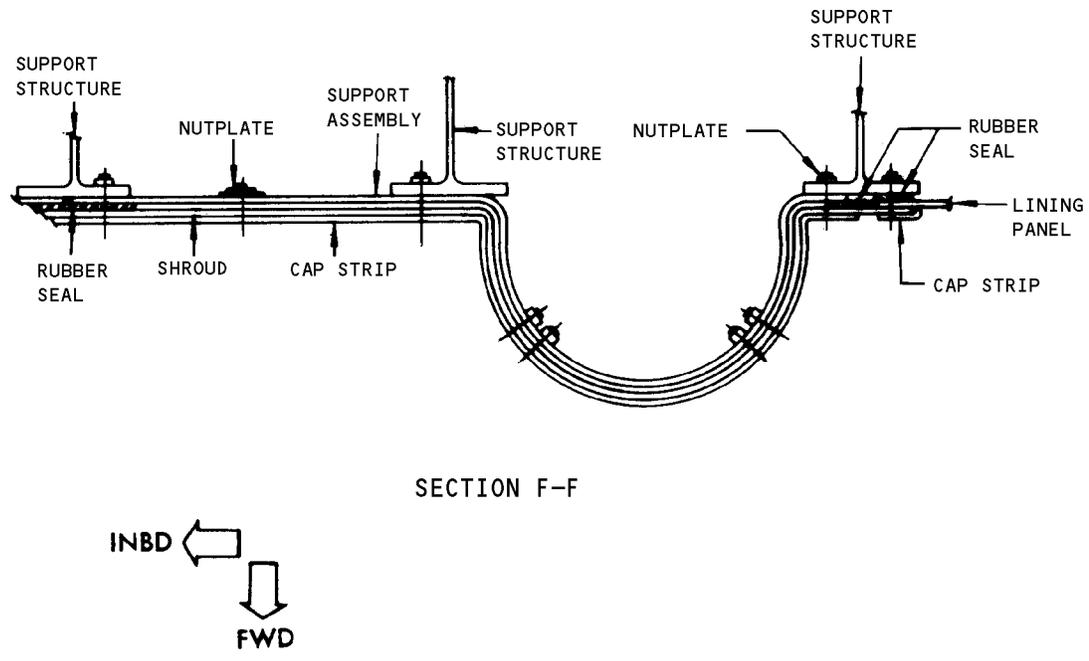
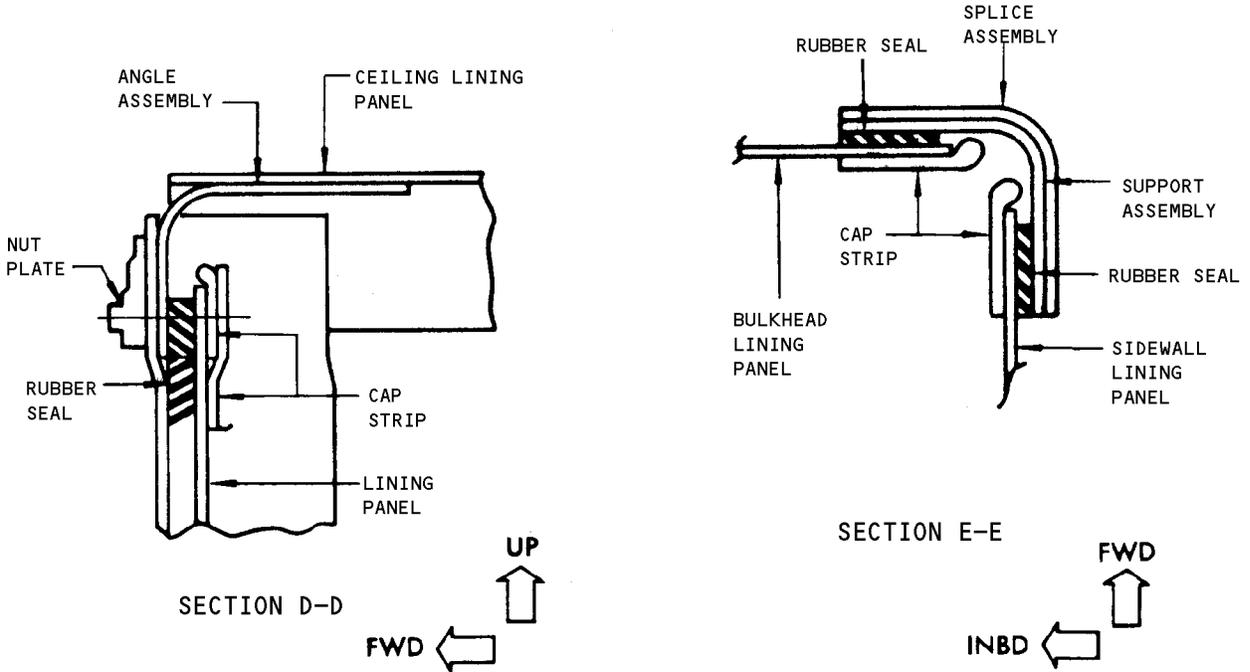


Aft Cargo Compartment (Forward Bulkhead) Lining Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY	
	ALL

25-52-131

458486



Aft Cargo Compartment (Forward Bulkhead) Lining Installation  
 Figure 401 (Sheet 3)

EFFECTIVITY

ALL
-----

25-52-131

458490

CARGO COMPARTMENT INSULATION - REMOVAL/INSTALLATION

1. Remove Typical Insulation Blanket (Fig. 401)

- A. Remove sidewall lining and deck panels as required (Ref Cargo Compartment Sidewall Lining - Removal /Installation).
- B. Remove nylon cord lacing as necessary (view 1).

**NOTE:** At all except underfloor locations (view 2), nylon cord lacing may be omitted at reinstallation provided that notched studs and nuts are replaced with serrated type (detail B).

- C. Remove clips from studs, if applicable.
- D. Remove screws or bolts that secure tubing or equipment to structure through blankets, if applicable.
- E. Unfasten glove fasteners, if applicable.
- F. Pull blanket free from hook/loop tape, where applicable.
- G. Pull blanket from studs, if applicable and remove from airplane.

**NOTE:** Removed blanket should be used as a template if new blanket must be fabricated to replace removed one.

2. Install Typical Insulation Blanket (Fig. 401)

- A. Consumable Materials
  - (1) Tape - Insulation Blanket, BMS 5-149
  - (2) Tape - Advanced Insulation Blanket, BMS5-157
  - (3) Tape - Hook/Loop Fastener, (Polypropylene Hook & Nylon Loop) BMS8-285, Type IV
  - (4) Tape - Hook/Loop Fastener, Flame Propagation Resistant, BMS8-372
- B. Do these steps to check for insulation blanket contamination:

**WARNING:** LET THE CORROSION-INHIBITING COMPOUNDS (CIC) BECOME FULLY DRY. IF CIC GETS ON THE INSULATION BLANKET, THE INSULATION BLANKET WILL BECOME LESS FLAME-RESISTANT. THIS INCREASES THE RISK OF FIRE, WHICH CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (1) To prevent CIC contamination of insulation blankets, let the corrosion-inhibiting compounds fully dry before you install the insulation blankets.
  - (a) Let the corrosion-inhibiting compounds dry longer than the minimum times listed below if you have one of these conditions:
    - 1) Low temperature.

EFFECTIVITY

ALL

25-52-141

01

Page 401  
Aug 01/06



## MAINTENANCE MANUAL

- 2) High humidity.
  - 3) Thick layer of corrosion-inhibiting compounds.
- (b) Ventilate areas, after application of CIC such as BMS 3-23, for a minimum of 1 hour.
- (c) Ventilate areas treated with CIC such as BMS 3-26 or BMS 3-29, for a minimum of 4 hours.

**WARNING:** DO NOT USE DETERGENTS OR SOLVENTS TO CLEAN THE INSULATION BLANKET. IT CAN REMOVE FLAME RETARDANTS AND CAUSE FLAMMABLE RESIDUES ON THE INSULATION BLANKET WHICH INCREASES THE RISK OF FIRE. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

- (2) If there is CIC contamination, oily or waxy substances, or other fluids (which typically changes the color and appearance of the insulation blanket cover), replace the insulation blanket.
  - (3) If there are dust, lint or other loose debris on the insulation blanket, use a vacuum cleaner or a non-metallic soft brush to remove the contamination.
  - (4) Make sure the area is clean before you install the insulation blanket.
- C. Do these steps to install the insulation blanket:
- (1) If you replace an insulation blanket or a capstrip, install an insulation blanket or a capstrip that complies with FAR 25.856.
    - (a) Replace the part of the hook/loop tape that is installed on the airplane structure, where the replacement insulation blanket attaches, with hook and loop tape, as applicable.

**NOTE:** Hook/loop tape (BMS8-372) is FAR 25.856 compliant.

- (2) Install new studs to the structure, if it is necessary.
- (3) Align the holes in the insulation blanket with the studs.
- (4) Put the insulation blanket in its position.
- (5) Install the clips on the studs.
- (6) Install retainers where applicable.
- (7) Fasten glove fasteners, if applicable.

EFFECTIVITY

ALL

25-52-141

01

Page 402  
Aug 01/06



## MAINTENANCE MANUAL

- (8) ALL AIRPLANES PRE SEP 2, 2003 FAR STD; AIRPLANES WITHOUT FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;
- (a) For insulation blanket with BMS8-142 cover material:  
Use tape (BMS5-149 or BMS5-157) or hook/loop tape (BMS8-285 or BMS8-372), where applicable to close butt joints, overlapping joints, gaps between adjacent insulation blankets or panels, and between insulation blanket and the airplane structure.

NOTE: Tape (BMS5-157) and hook/loop tape (BMS8-372) are FAR 25.856 compliant. These items are the preferred alternatives to tape (BMS5-149) and hook/loop tape (BMS8-285), respectively.

- (9) ALL AIRPLANES POST SEP 2, 2003 FAR STD; AIRPLANES WITH FAR 25.856 COMPLIANT THERMAL/ACOUSTIC INSULATION MATERIALS;
- (a) For insulation blanket with BMS8-377 cover material:  
Use tape (BMS5-157) or hook/loop tape (BMS8-372), where applicable to close butt joints, overlapping joints, gaps between adjacent molded insulation panels, and between insulation blanket and the airplane structure.
- (10) For replacement insulation blanket, push on the insulation blanket to remove the air that is inside the insulation blanket through the vent hole(s).
- (a) Peel off the attached release liner on the circle tape and seal the vent hole.
- (11) Make sure the insulation blanket does not cover the openings in the intercostals.

NOTE: Air must be free to circulate between frames.

- (12) Make sure moisture penetration through to the inboard side of the insulation blanket is minimized.
- (a) Lap edges or flaps of insulation blanket over or under adjacent blankets as required.

NOTE: Flaps along edges of insulation blankets must overlap adjacent blankets in a manner which will transfer runoff of condensed moisture to adjacent blanket without trapping moisture or allowing it to leak into cabin area.

- (13) Check that insulation blankets fit tightly around any structure or supporting brackets which protrude through inboard surface of insulation.

### 3. Restore Airplane to Normal

- A. Install screws or bolts to secure tubing or equipment if applicable.
- B. Lace over blanket if applicable (view 1); see NOTE, par. 1.B. above.
- C. Install sidewall lining and deck panels, as applicable (Ref Cargo Compartment Sidewall Lining - Removal /Installation).

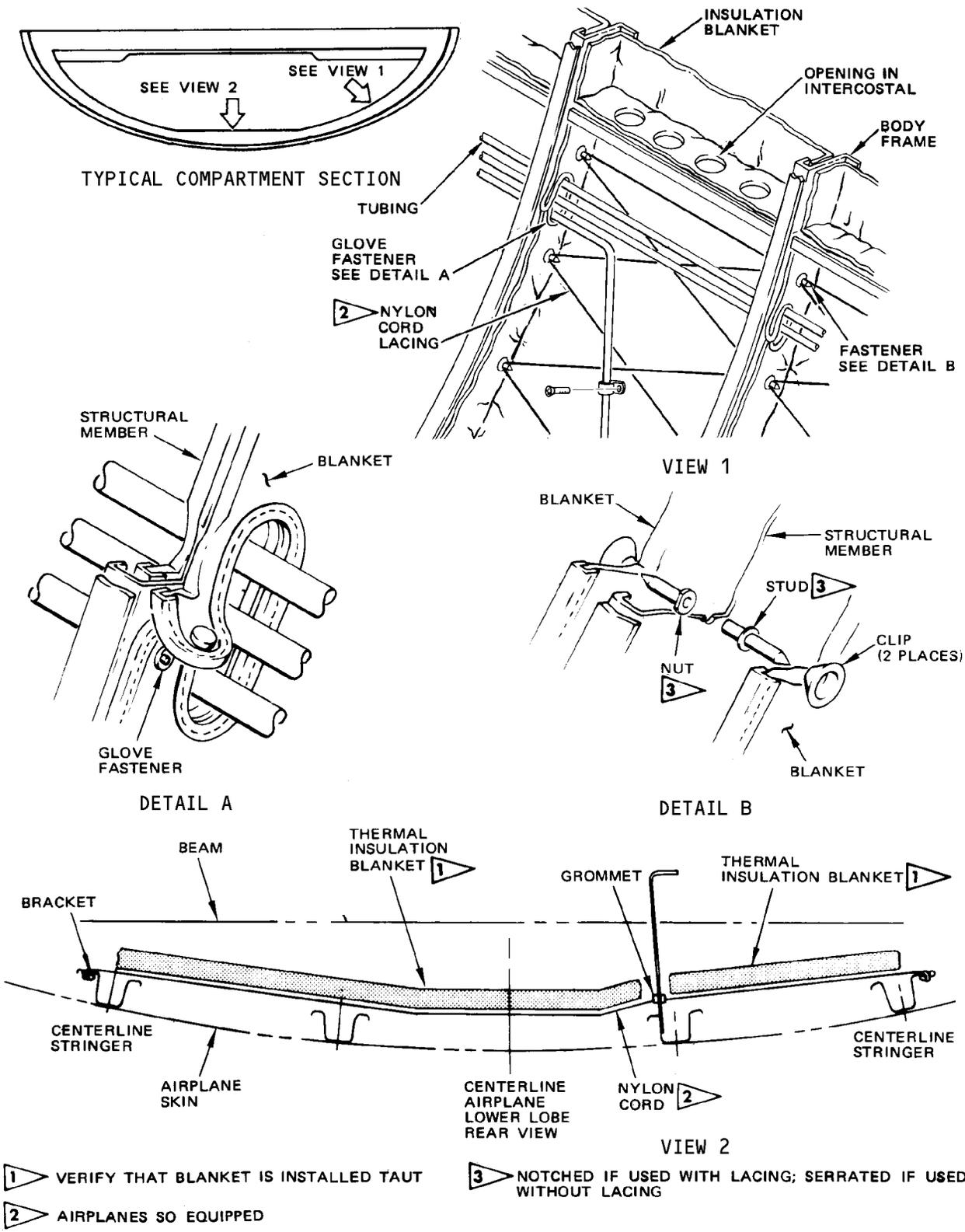
EFFECTIVITY

ALL

25-52-141

01

Page 403  
Aug 01/06



Typical Thermal Insulation Blanket and Support Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-52-141



CARGO COMPARTMENT INSULATION - APPROVED REPAIRS

1. General

- A. For approved repairs information refer to AMM 25-21-339/801, Sidewall Insulation - Approved Repairs.

EFFECTIVITY

ALL

25-52-141

01

Page 801  
Aug 01/06



## MAINTENANCE MANUAL

### MAIN CABIN CARGO EQUIPMENT – DESCRIPTION AND OPERATION

#### 1. General

- A. The cargo equipment consists of all the equipment which must be installed before cargo may be loaded and carried in the main cabin.
- B. This section describes the cargo carrying system on which the cargo is actually moved and carried, and the cargo barrier net installed across the forward end of the main cabin.
- C. Other items of cargo equipment are described, or referred to, in the appropriate portions of 25-09-100, Cabin Accommodation Conversions.

#### 2. Cargo Carrying System

##### A. General

- (1) The cargo carrying system is a kit of equipment which attaches to the cabin floor tracks and supports cargo pallets. It is referred to as a  $\pm 3G$  88 inch x 108 inch system to indicate that each pallet is individually restrained by a lock designed to withstand a forward acceleration of 3G, and that the pallets are 88 inches long by 108 inches wide. The complete system accommodates 7 pallets in positions numbered 1 through 7 from forward to aft. For combined cargo/passenger configurations, the system can be varied to accommodate any number of cargo pallets from 2 through 6. This is accomplished by terminating its aft end at the appropriate position. (See figure 1.)
- (2) The equipment consists primarily of a series of roller trays which are attached to the cabin floor tracks, and on which loaded cargo pallets may be moved aft from the main cargo door. Opposite the main cargo door a series of transfer panels, or ball mats, permit the pallets to be moved both laterally into the cabin and longitudinally towards the roller trays. A series of restraints along the left and right sides of the system prevent the pallets from moving laterally and striking the cabin sidewalls. Retractable pallet locks are installed between each pallet position, and stops are installed at the forward and aft ends of the system. Pallet brakes are installed at two places (in the complete system) to retard any pallet which may be moving too fast along the rollers.

EFFECTIVITY  
LV-JNE

25-56-0

08

Page 1  
Dec 01/04



## MAINTENANCE MANUAL

- (3) All the equipment is provided with manually operated fasteners which attach it to the cabin floor tracks, and no tools are required to install, operate or remove any component. All the equipment is clearly marked by part number and corresponding markings are provided on the floor to ensure proper location of each item. The floor tracks are at BL62.5 (left and right), BL45.5 (left and right), BL24.75 (left and right) and at BL0. For convenience these tracks are referred to in this description by the numbers 1 through 7, from left to right across the whole floor.
  - (4) A threshold assembly is installed, during loading or unloading, to the floor track immediately inboard of the main cargo door, to protect the door sill and support the cargo pallets as they are moved through the door opening. The threshold assembly must be removed whenever the main cargo door is closed.
  - (5) Equipment used to secure cargo to the cargo pallets is not covered in this manual. For information on this equipment, and on load distributions and limitations, refer to the Weight and Balance control and Loading Manual.
- B. Transfer Panels, or Ball Mats
- (1) The transfer panels or ball mats, are installed to the floor tracks opposite the main cargo door. (See figure 2.) Each panel is provided with a series of balls which allow low friction movement of the pallets in any direction across the surface of the ball mat area. For personnel safety, the balls are spring-mounted so that if a man treads on any individual ball it will depress and allow his foot to contact the panel surface.
- C. Roller Trays (See figure 3.)
- (1) The roller tray assemblies are attached to the four center floor tracks (Nos. 3,4,5, and 6) throughout the main cabin, beginning aft of the main cargo door, to enable low friction movement of the cargo pallets to or from the aft end of the cabin. Each roller tray assembly consists of a number of rollers mounted in a channel section. All the roller trays are similar in design and method of attachment to the floor tracks, but vary in length according to the number of rollers installed in each tray.
- D. Lateral Movement Restraint Assemblies
- (1) The cargo pallets are restrained from lateral movement by a series of components along the sides of the system. These components consist of four guide rail assemblies, four retractable side guides, and forty-two side restraint guides.

EFFECTIVITY  
LV-JNE

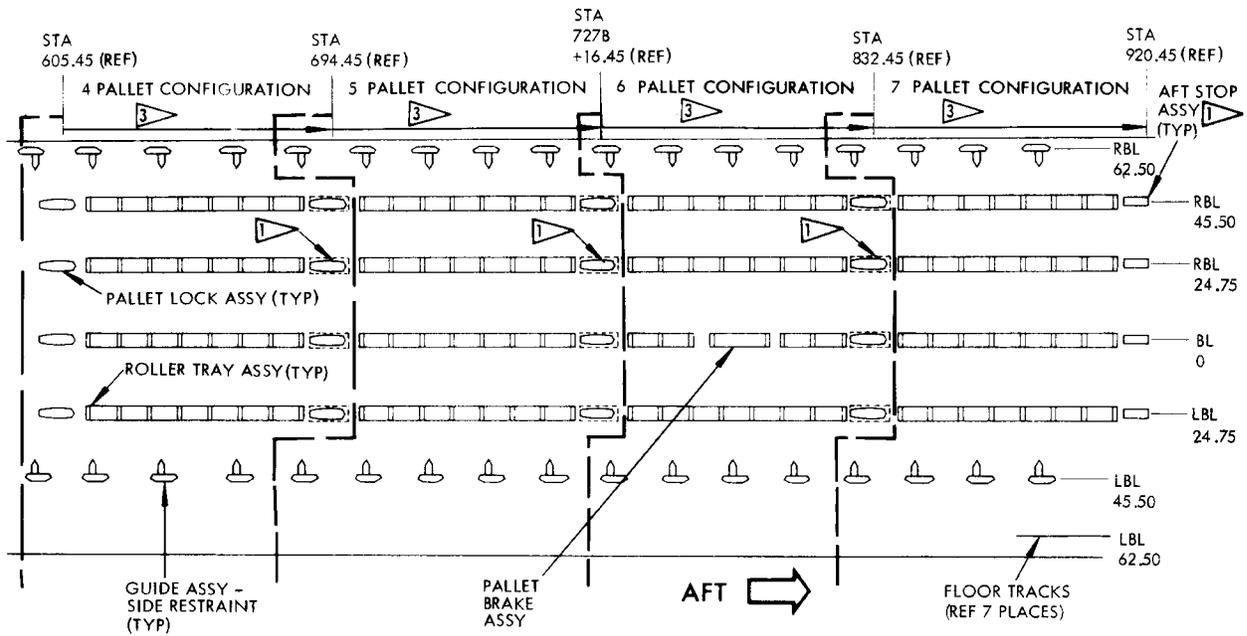
25-56-0

08

Page 2  
Dec 01/04



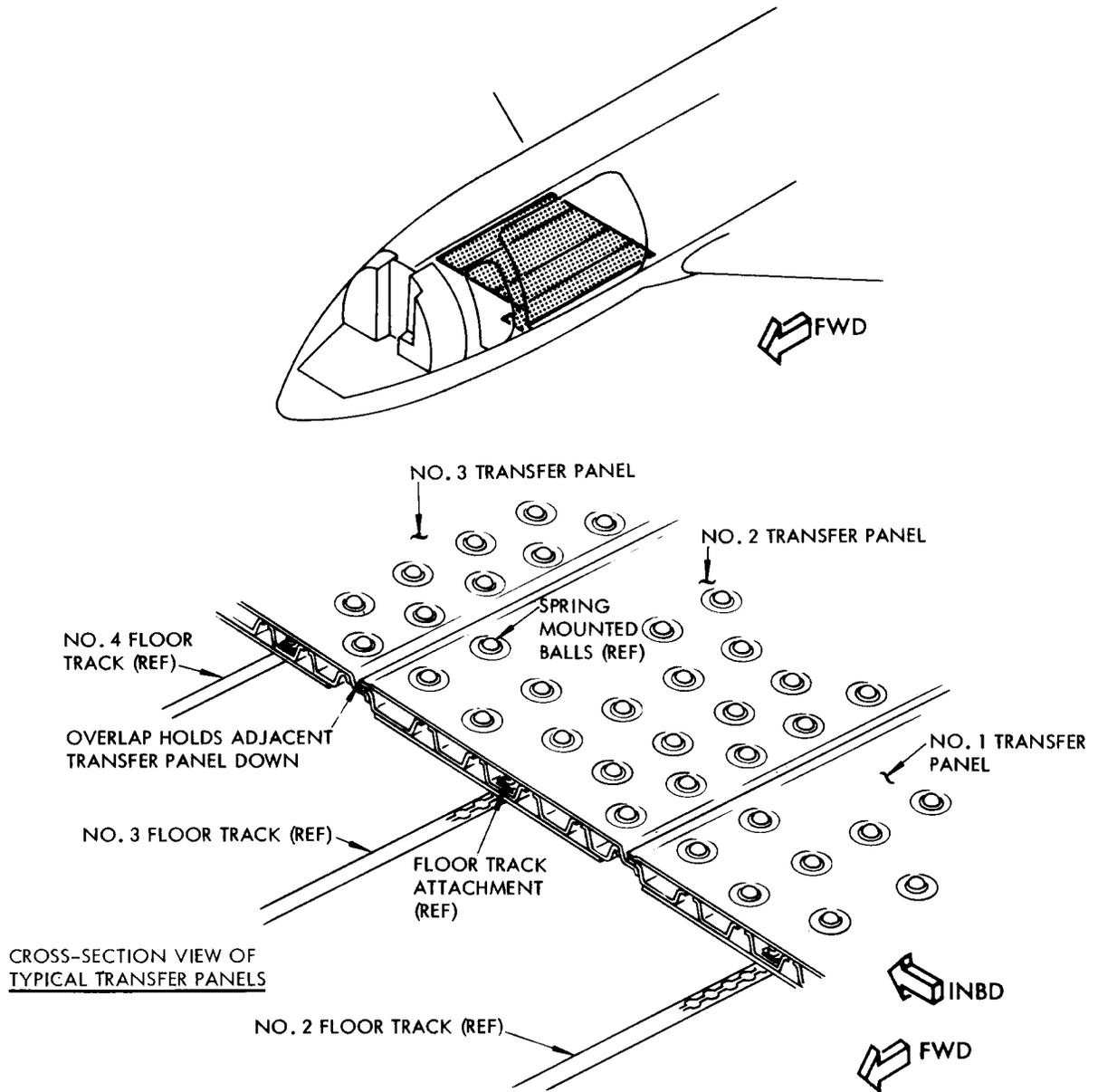
- 1 THE AFT STOP ASSY'S ARE INSTALLED TO COMPLETE THE END OF EACH PALLETIZED CARGO CARRYING CONFIGURATION
- 2 THE THRESHOLD ASSY'S ARE INSTALLED WHEN NO OTHER FACILITIES ARE AVAILABLE TO FACILITATE MOVEMENT OF THE CARGO PALLETS THROUGH THE MAIN CARGO DOOR OPENING WITHOUT POSSIBLE DAMAGE TO THE MAIN CARGO DOOR SILL.
- 3 EACH PALLETIZED CONFIGURATION SYSTEM CONSISTS OF ALL EQUIPMENT SHOWN FORWARD OF EACH OF THE COMBINED PASSENGER/CARGO CONFIGURATION DIVISION LINES. FOR PASSENGER ACCOMMODATION EQUIPMENT INSTALLED AFT OF EACH OF THE COMBINED PASSENGER/CARGO CONFIGURATIONS, REFER TO 25-09-100, CABIN ACCOMMODATION CONVERSIONS



Cargo Carrying System  
 Figure 1 (Sheet 2)

EFFECTIVITY  
 LV-JNE

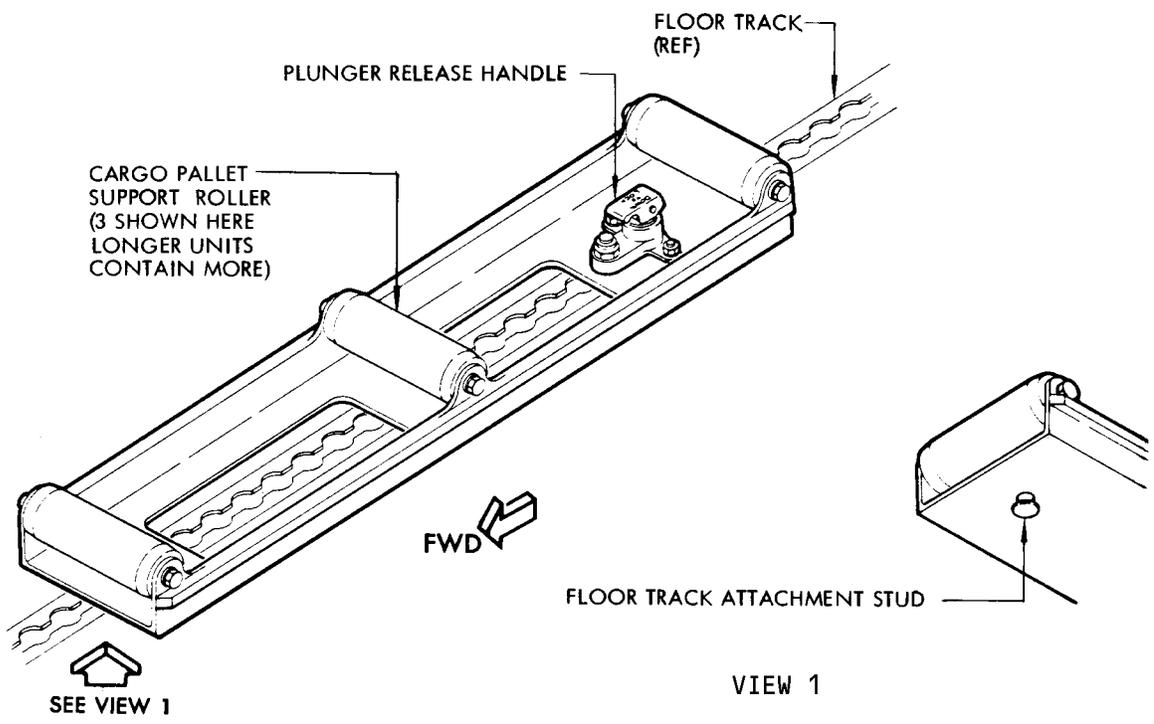
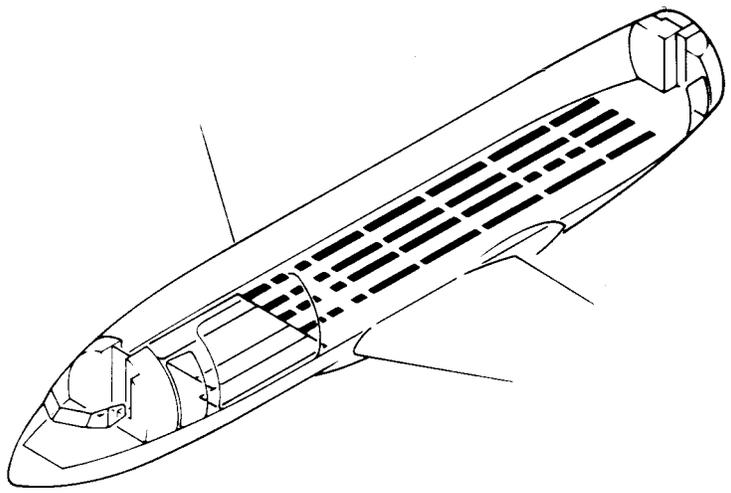
25-56-0



Transfer Panels (Ball Mat)  
 Figure 2

EFFECTIVITY  
 LV-JNE

25-56-0



Typical Roller Tray Assembly  
 Figure 3

EFFECTIVITY  
 LV-JNE

25-56-0

**BOEING**  
**737**   
MAINTENANCE MANUAL

- (2) The guide rail assemblies are installed in the forward main cabin area (No. 1 and No. 2 pallet positions), three on the right-side floor track No. 7, and one on the left-side floor track No. 2 immediately aft of the main cargo door. Each guide rail assembly consists of three side restraint guides attached to a common rail section. (See figure 4.) The side restraint guides of the two forward right-side guide rails have ball rollers. The side restraint guides of the two aft guide rails have cylindrical rollers. Each guide rail assembly is furnished with three vertical restraint lips which can be retracted to accommodate a 9G pallet and which are similar to those on the side restraint guides.
- (3) The retractable side guides are set in voids in the No. 1 transfer panel and attached to floor track No. 2 and keyhole-slotted anchorplates in the cabin floor. (See figure 5.) The guide rails of the retractable side guide assemblies are raised after cargo pallets No. 1 and No. 2 are installed to restrain lateral movement. The retractable guide rail is equipped with a vertical restraint lip. This should be extended when the guide rail is extended for normal use of the 3G system; it should only be retracted to accommodate a 9G pallet, or when the guide rail is itself retracted.
- (4) The side restraint guides (figure 6) are attached to floor tracks Nos. 2 and 7 in the areas of pallets Nos. 3 through 7, and to keyhole-slotted anchorplates installed in the cabin floor at proper intervals inboard of the floor tracks. Each side restraint guide assembly consists of a base section with a cylindrical roller, a short rail section, and a vertical restraint lip plate attached to the rail section. The vertical restraint lip can be installed in two alternative positions: overhanging the inboard face of the siderail (extended) or overhanging the outboard face of the siderail (retracted). A detent pin is inserted in a hole in the siderail to position the restraint lip when extended or retracted.

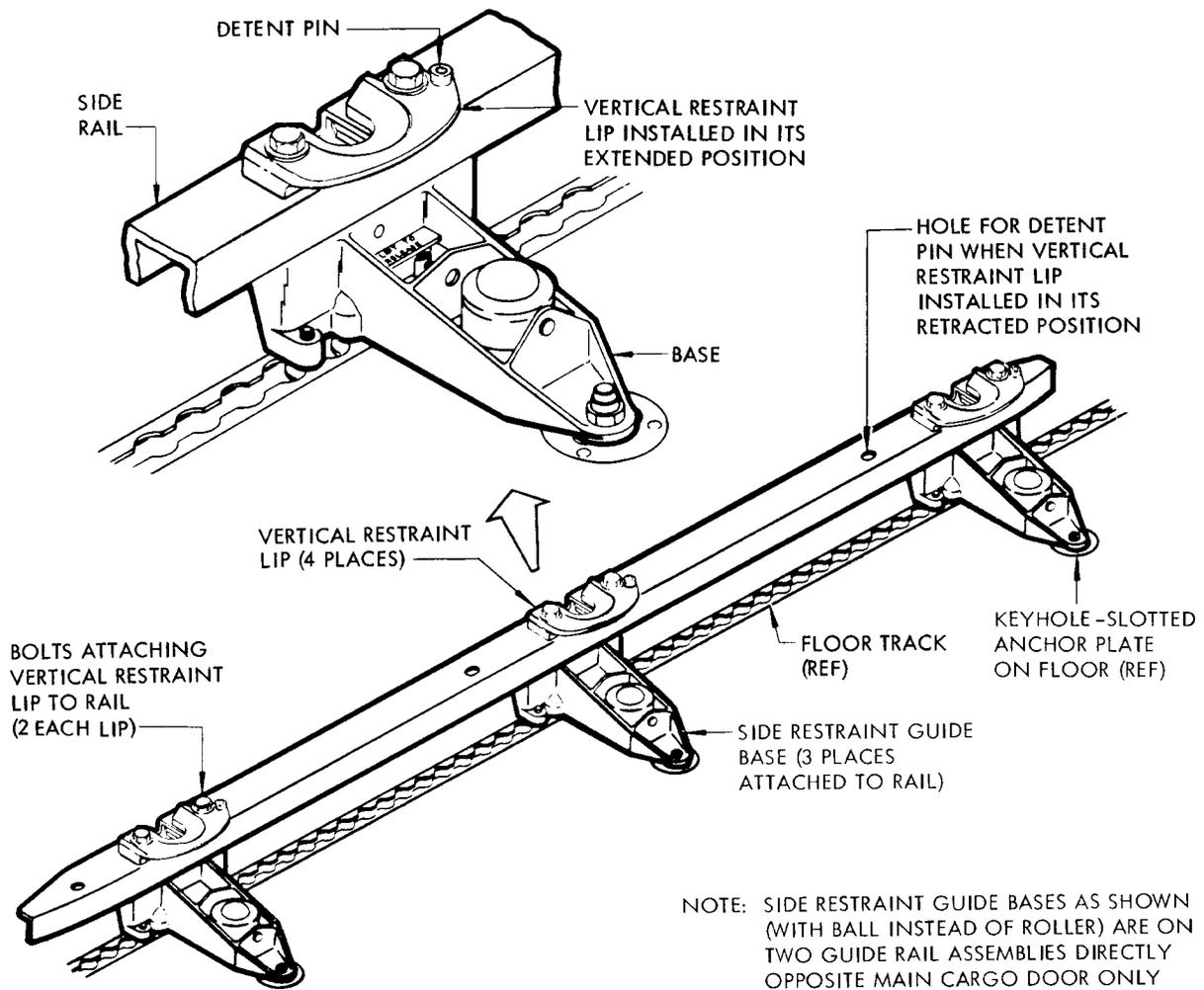
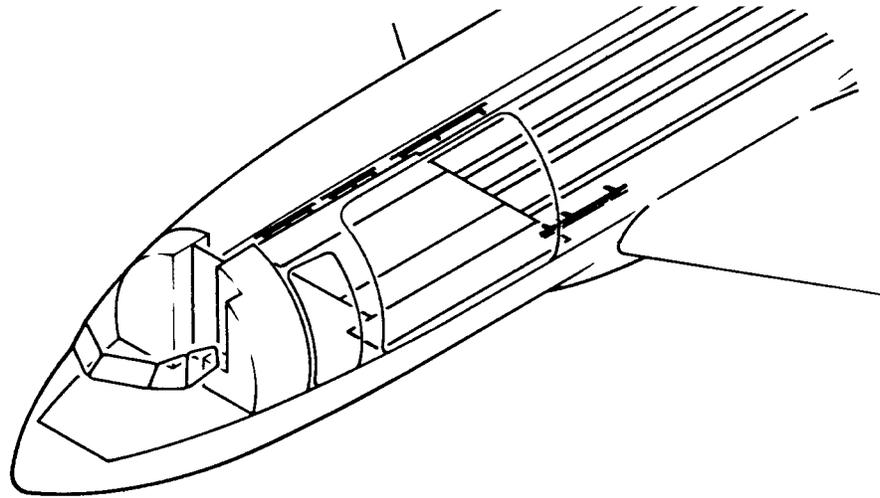
**NOTE:** The vertical restraint lips are normally extended for use with the 3G system, and should only be retracted to accommodate 9G pallets.

EFFECTIVITY  
LV-JNE

25-56-0

08

Page 7  
Dec 01/04

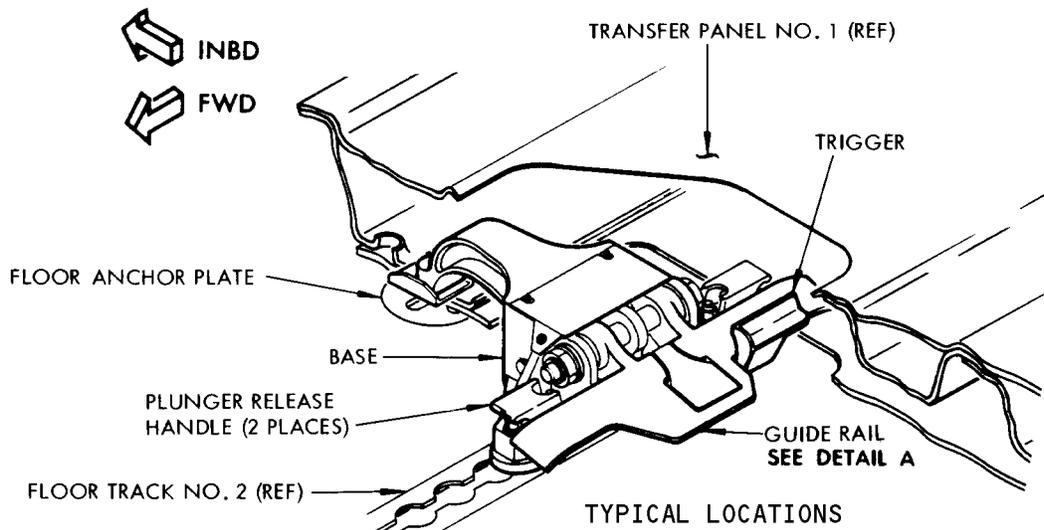
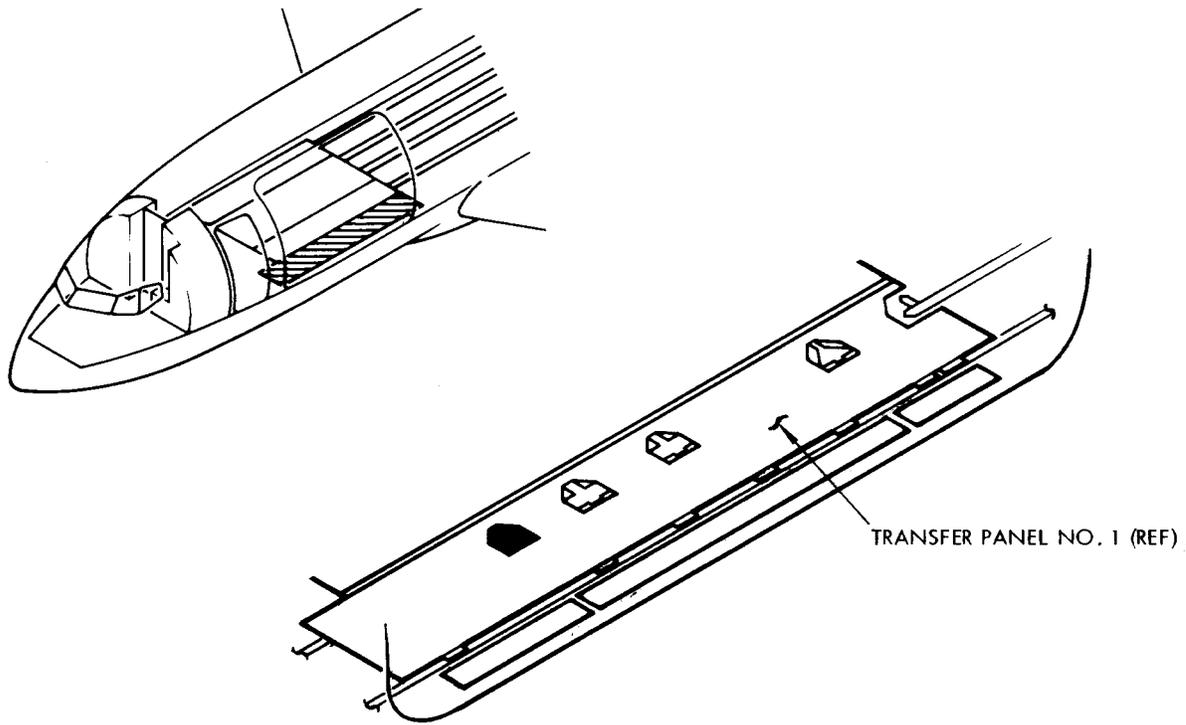


NOTE: SIDE RESTRAINT GUIDE BASES AS SHOWN (WITH BALL INSTEAD OF ROLLER) ARE ON TWO GUIDE RAIL ASSEMBLIES DIRECTLY OPPOSITE MAIN CARGO DOOR ONLY

Guide Rail Assembly  
 Figure 4

EFFECTIVITY  
 LV-JNE

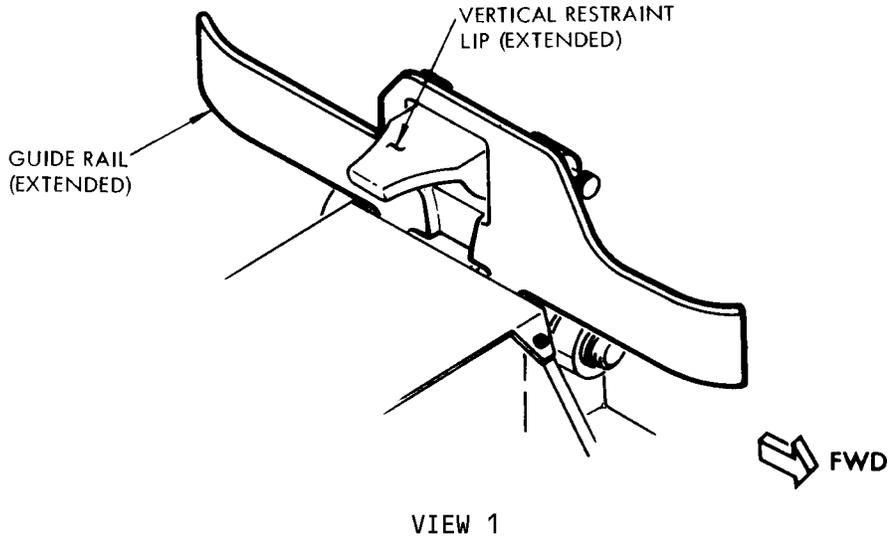
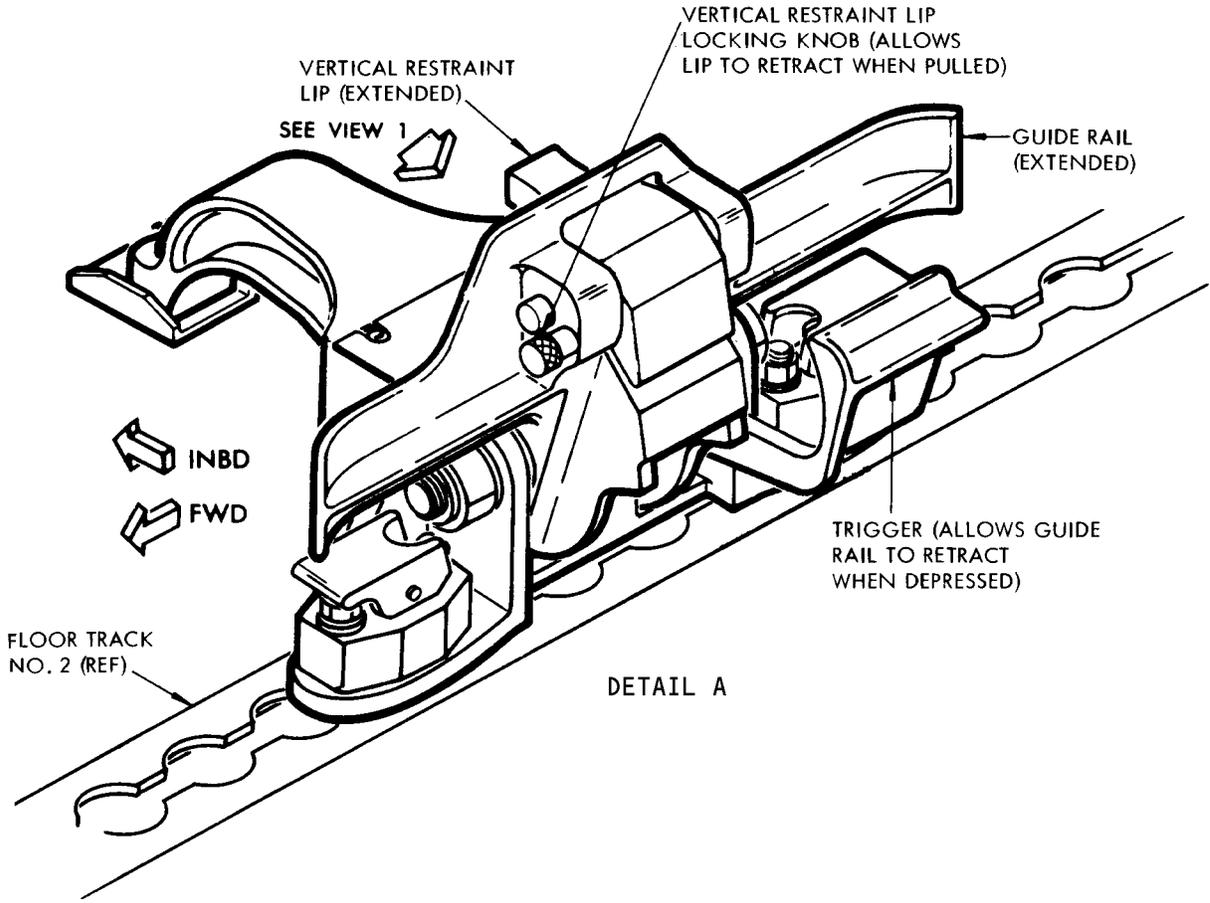
25-56-0



Retractable Side Guide  
 Figure 5 (Sheet 1)

EFFECTIVITY  
 LV-JNE

25-56-0

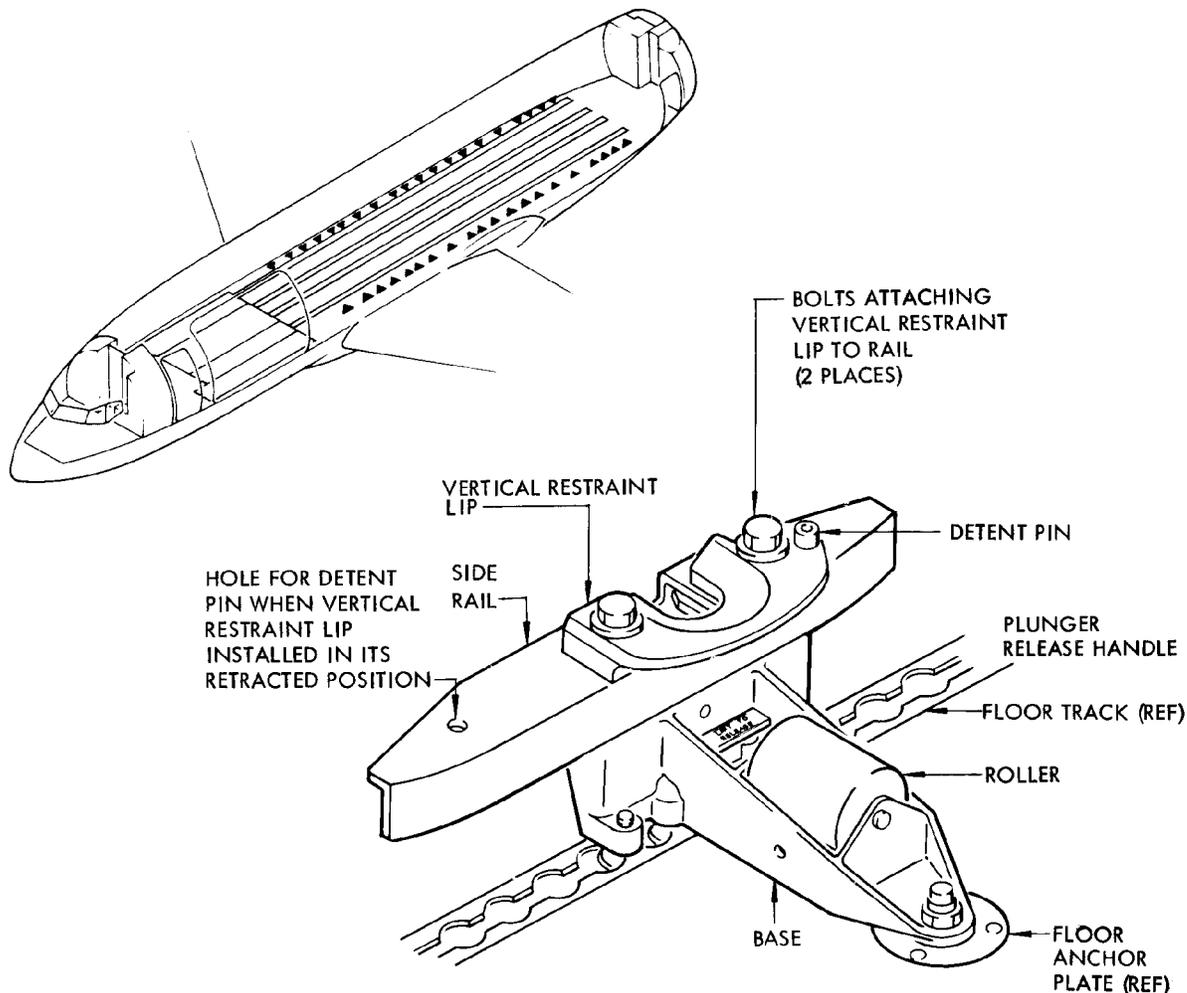


Retractable Side Guide  
 Figure 5 (Sheet 2)

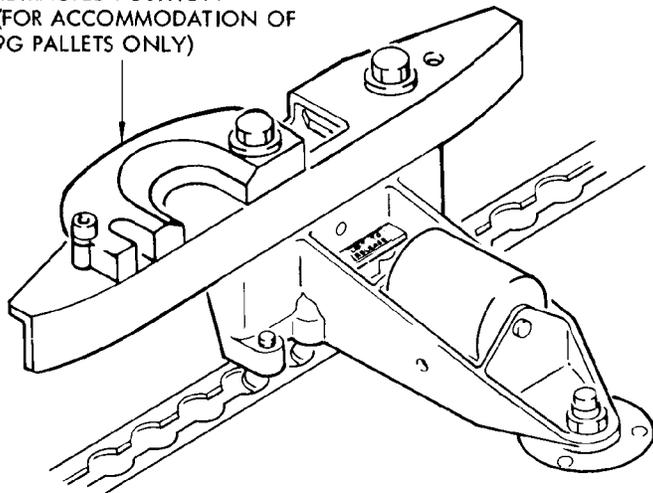
EFFECTIVITY  
 LV-JNE

25-56-0

458554



VERTICAL RESTRAINT LIP ROTATED INTO RETRACTED POSITION (FOR ACCOMMODATION OF 9G PALLETS ONLY)



 INBD

Side Restraint Guides  
 Figure 6

EFFECTIVITY  
 LV-JNE

25-56-0

E. Pallet Locks (See figure 7.)

(1) Pallet locks are attached to floor track Nos. 3, 4, 5, and 6 between pallet positions throughout the system, and at the forward end of the system. There are three types of pallet lock assemblies, but all are similar in design and purpose, which is to lock and restrain the cargo pallets longitudinally in position. Each pallet lock includes a retractable lock mechanism, which can be raised manually to engage the forward and aft edges of the pallets, or retracted to clear the pallets while loading and unloading. The pallet locks installed between pallet positions have lock heads that face in both directions to engage the pallets both forward and aft of the lock. The forward pallet locks have a lock head that faces aft only, and two of these locks also have a guide stop assembly attached. These guide stops prevent cargo pallets overriding the transfer panels when rolled from the aft end towards the cargo door for unloading.

F. Pallet Brakes (See figure 8.)

(1) Two cargo pallet brake assemblies are installed and attached to the center floor track (No. 4), one in the No. 2 pallet position area and the other in the No. 6 pallet position area. These assemblies retard movement of the cargo pallets which may move too fast on the roller trays during loading or unloading of the pallets.

G. Aft Stops (See figure 9.)

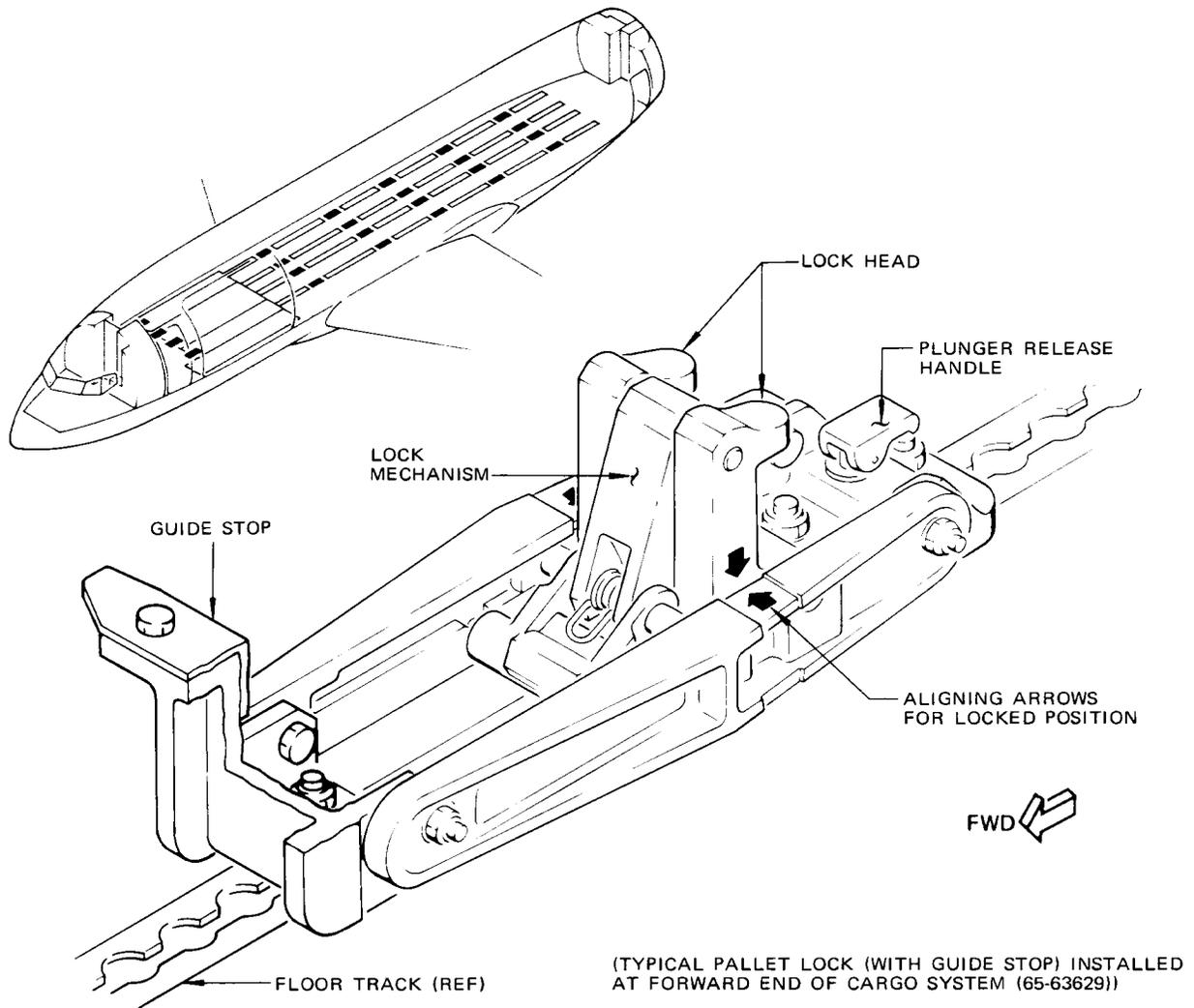
(1) The aft stop assemblies are attached to floor track Nos. 3, 4, 5 and 6 at the aft end of the cargo system in any of the cargo carrying configurations. These assemblies prevent the cargo pallets from overriding the system at the aft end when loaded into the cabin. A vertical restraint lip applies vertical load restraint on the aft end of the aft cargo pallet.

H. Threshold Assembly (See figure 10.)

(1) The main cabin cargo door threshold assembly comprises three sections and is installed along the cargo door sill to provide support and aid movement of the cargo pallets through the door opening, and also to protect the cargo door sill from damage by the pallets. The threshold sections are installed and remain in place only during cargo loading or unloading, or during conversion of the main cabin to aid movement of equipment through the door opening. The threshold assemblies must be removed before the cargo door is closed. The forward and aft threshold sections are equipped with vertical scuff plates to protect the lower section of the door opening side structure and to aid guidance of the cargo pallets through the door opening. Each threshold section is equipped with cylindrical rollers on which the cargo pallets are supported. The center threshold section is also equipped with two retractable spring-loaded pallet roll-out stops. These stops are unlatched during cargo pallet loading to prevent a pallet from inadvertently moving back out of the door opening. During cargo pallet or equipment unloading the pallet roll-out stops are manually latched in the down position so that pallets may be rolled out over them without hindrance.

EFFECTIVITY  
LV-JNE

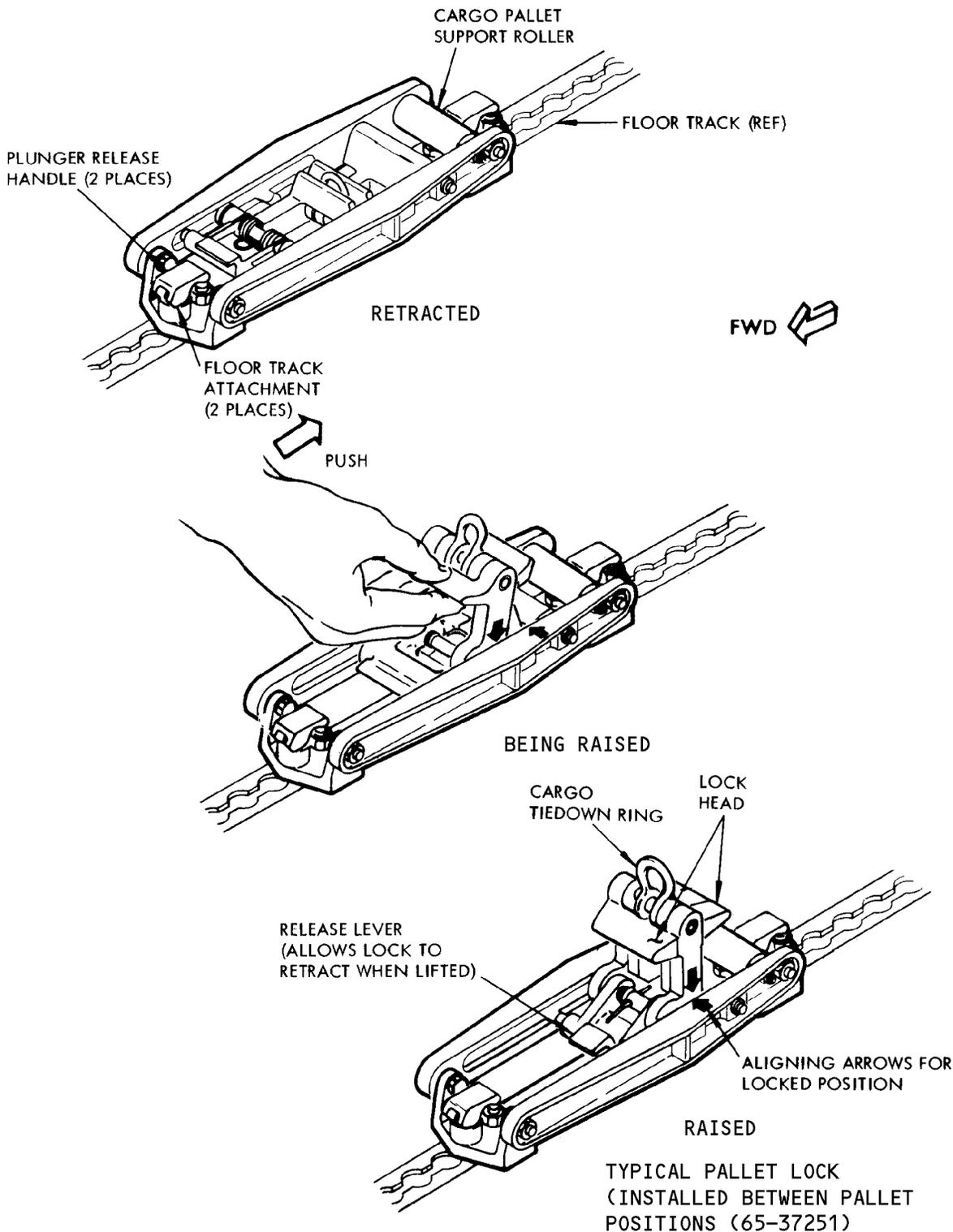
25-56-0



Pallet Locks  
 Figure 7 (Sheet 1)

EFFECTIVITY  
 LV-JNE

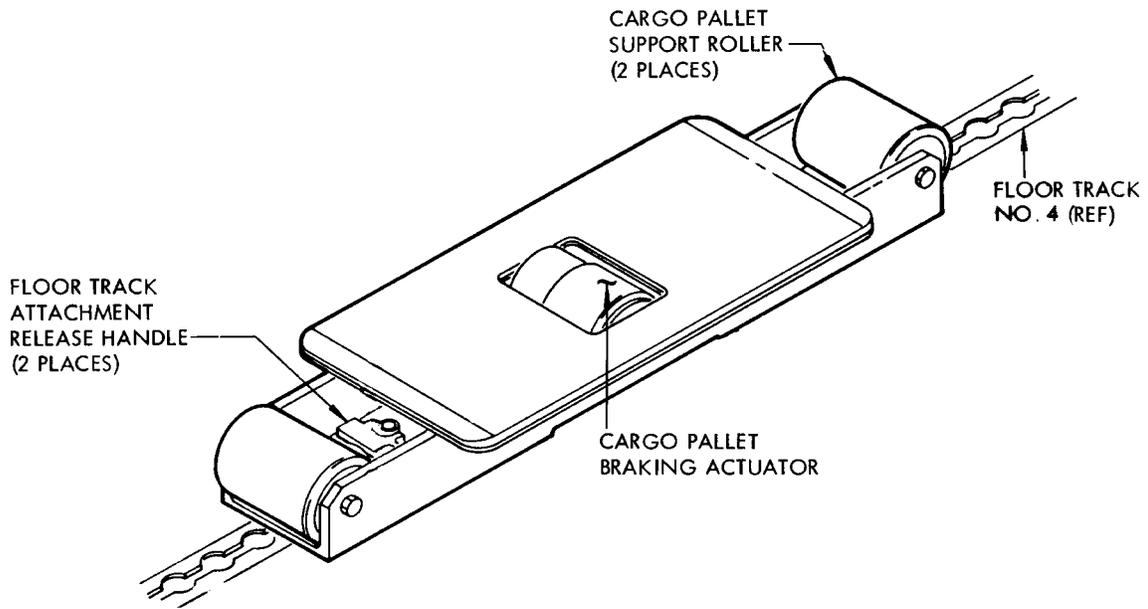
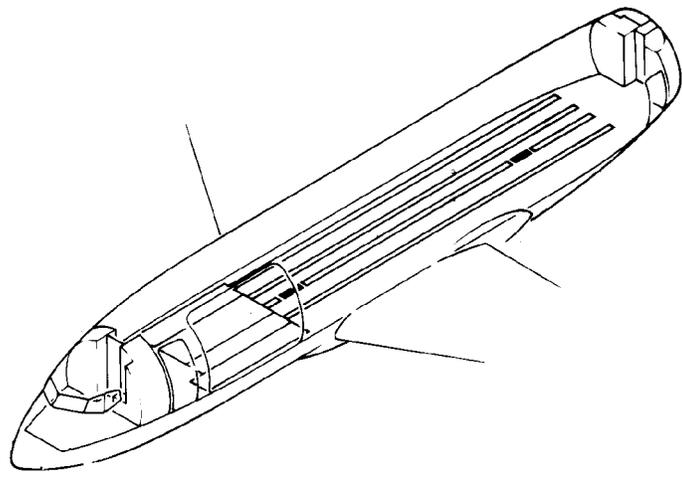
25-56-0



Pallet Locks  
 Figure 7 (Sheet 2)

EFFECTIVITY  
 LV-JNE

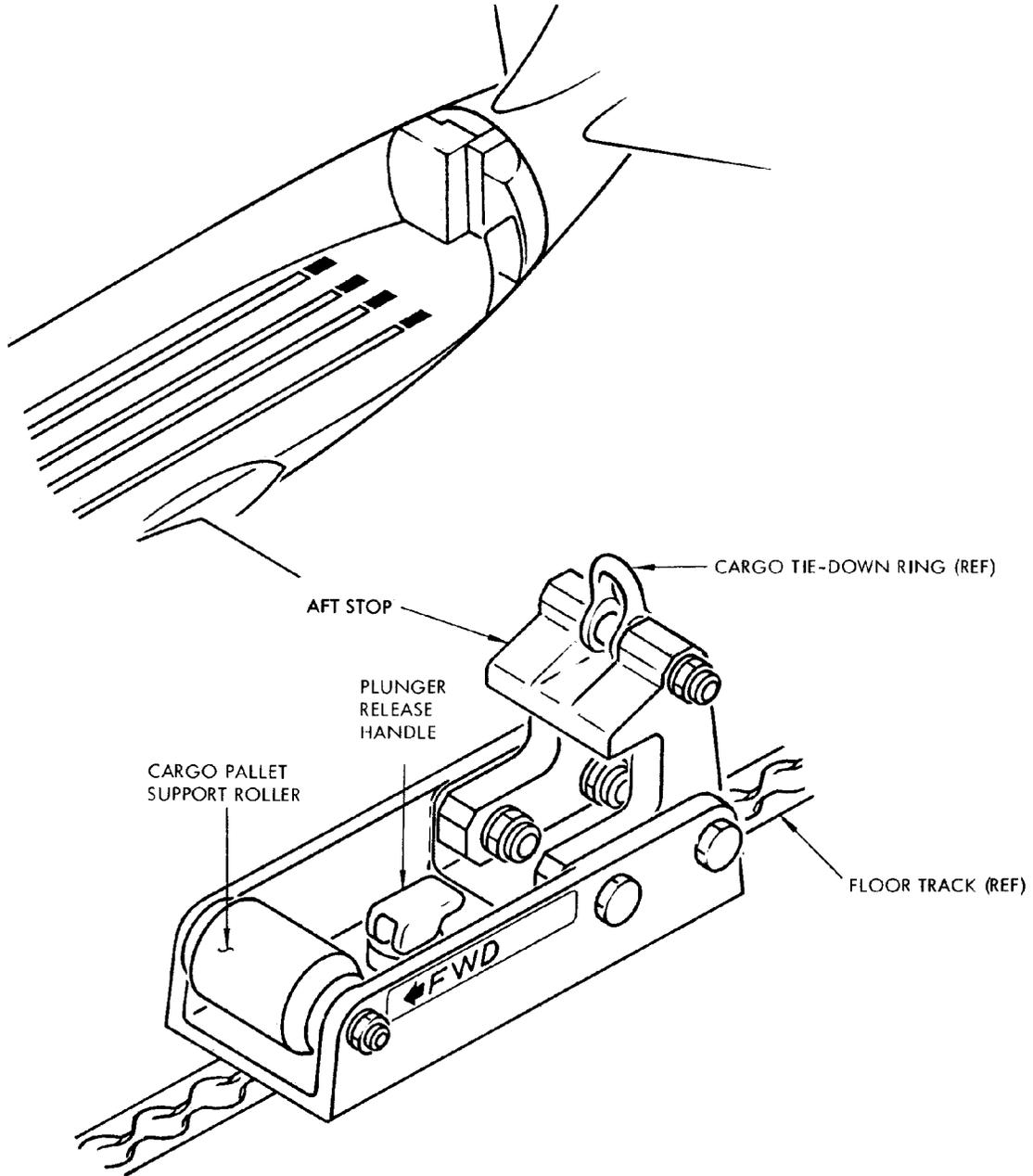
25-56-0



Pallet Brakes  
 Figure 8

EFFECTIVITY  
 LV-JNE

25-56-0



Aft Stops  
 Figure 9

EFFECTIVITY  
 LV-JNE

**25-56-0**

05

Page 16  
 Dec 01/04

458572

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

(2) The threshold sections are secured by hinged connections to attachment fittings which are attached to floor track No. 1. Manually operated locking handles permit the threshold assemblies to be readily detached from their attachment fittings. The attachment fittings may remain installed in the floor track when the cargo door is closed.

3. Cargo Barrier Net (Fig. 11)

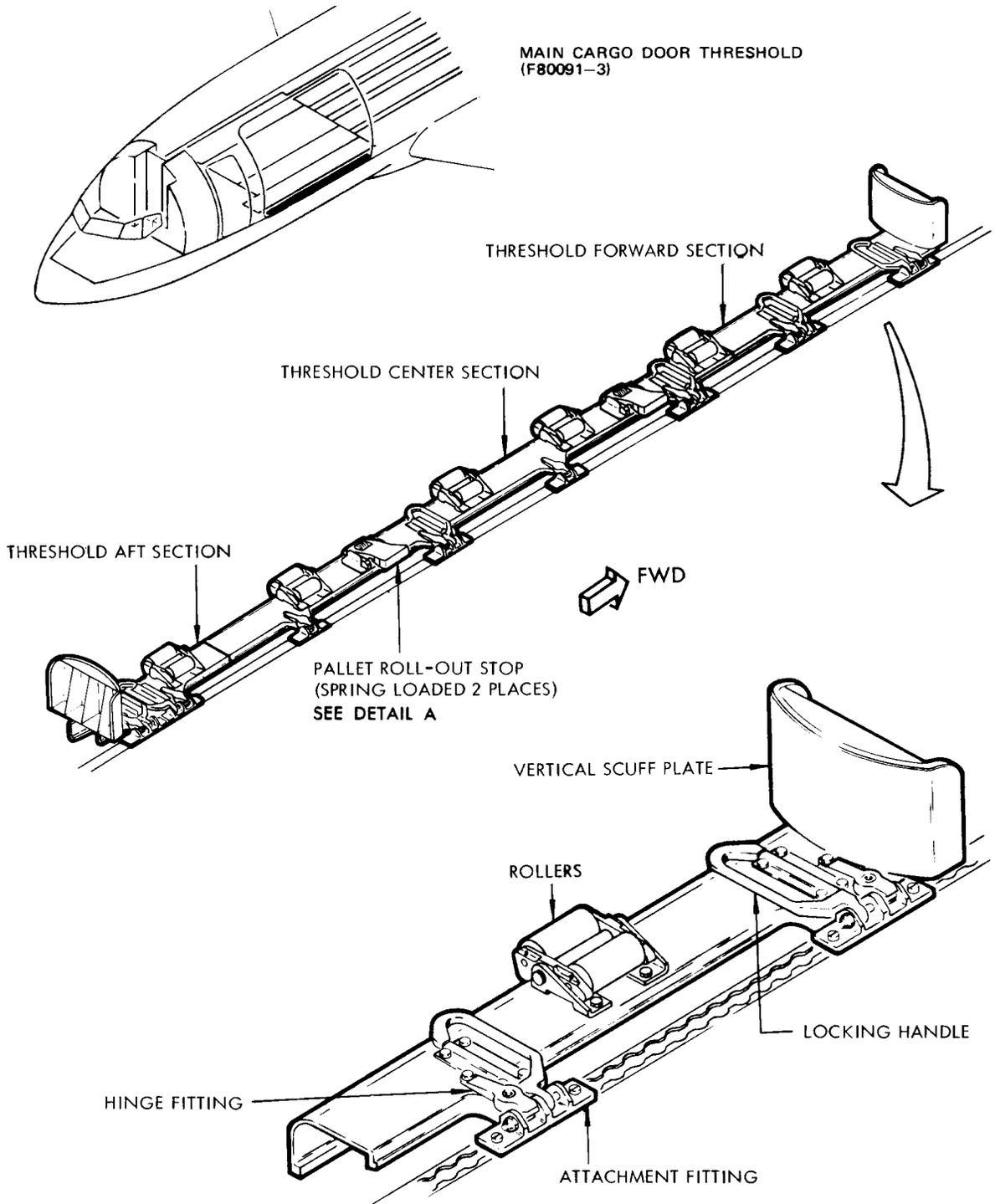
- A. The cargo barrier net is an assembly of radial and circumferential straps installed across the forward end of the main cabin between the forward entry door and the main cargo door and designed to resist impact of the entire cargo load up to a 9G load factor.
- B. The cargo barrier net is secured in position by connecting fittings at the ends of the radial straps, to shackle fittings permanently installed around the upper lobe of the cabin fuselage structure and in the cabin floor structure.

EFFECTIVITY  
LV-JNE

25-56-0

07

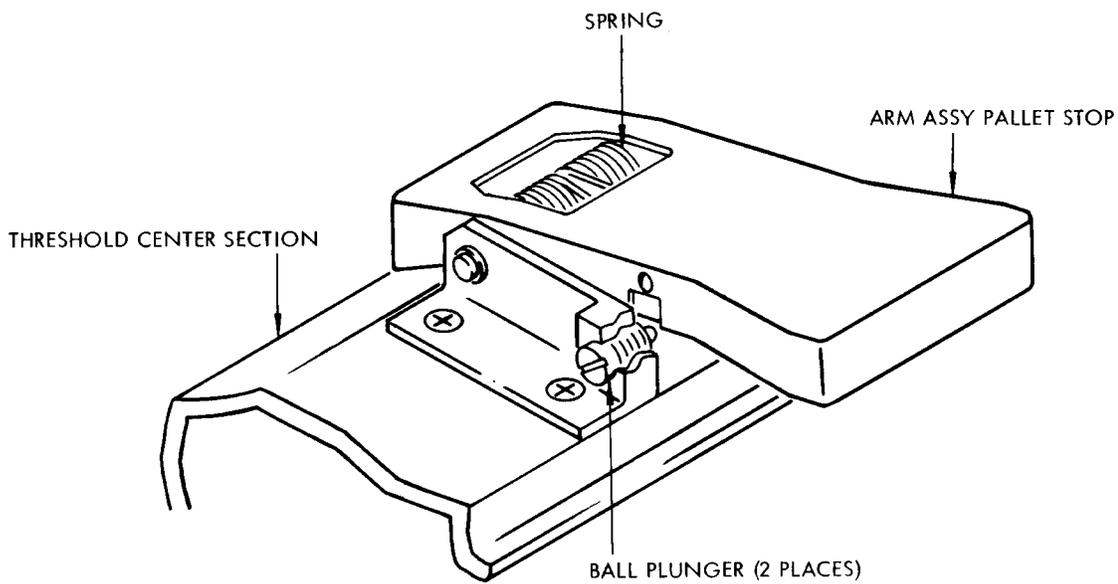
Page 17  
Aug 01/05



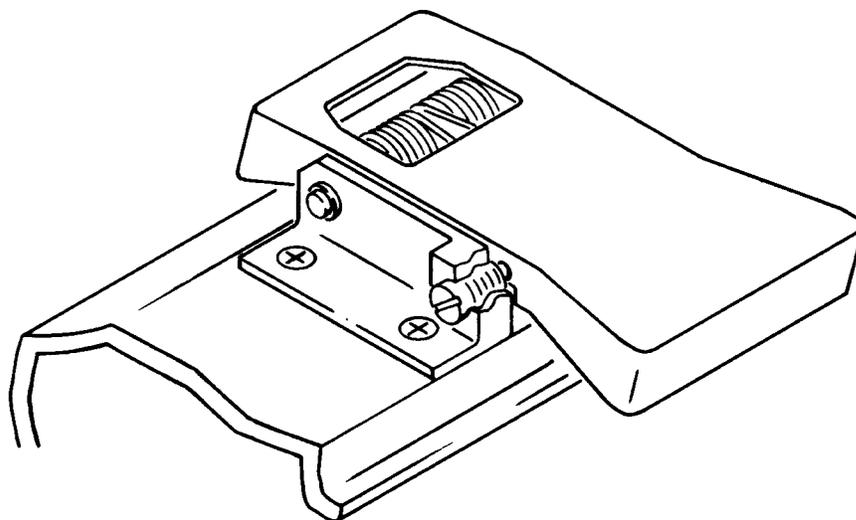
Main Cargo Door Threshold Assemblies  
 Figure 10 (Sheet 1)

EFFECTIVITY  
 LV-JNE

25-56-0



UNLATCHED POSITION  
 (FOR CARGO PALLET LOADING)



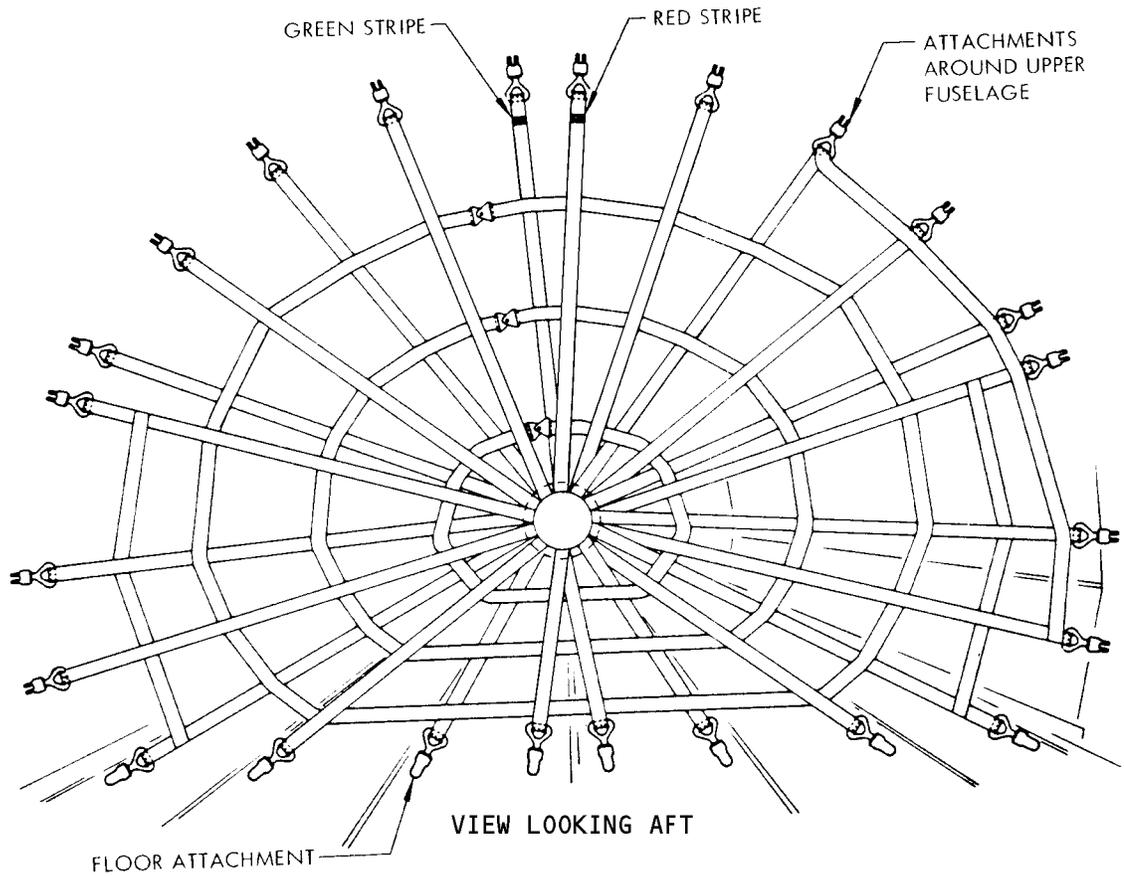
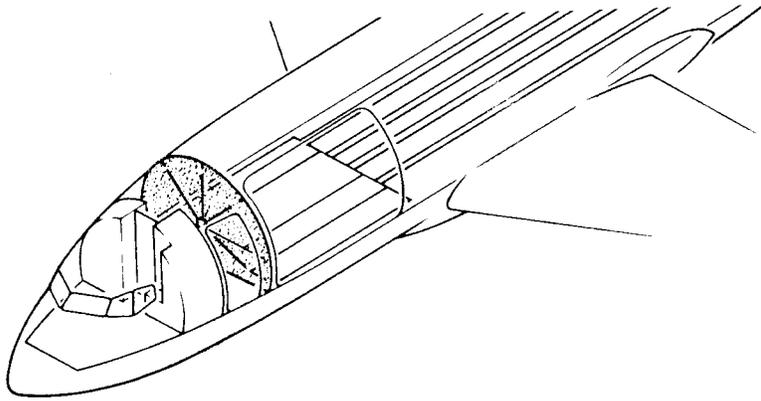
LATCHED POSITION  
 (FOR CARGO PALLET UNLOADING)

PALLET ROLL-OUT STOP  
 DETAIL A

Main Cargo Door Threshold Assemblies  
 Figure 10 (Sheet 2)

EFFECTIVITY  
 LV-JNE

**25-56-0**



Cargo Barrier Net  
 Figure 11

EFFECTIVITY  
 LV-JNE

25-56-0

TRANSFER PANEL - REMOVAL/INSTALLATION

1. General

- A. The four transfer panels overlap each other and must be removed in order, starting with left-side panel No. 1 and working across to remove right-side panel No. 4 last. The panels are installed starting with right-side panel No. 4 and working across to install left-side panel No. 1 last.
- B. Transfer panel No. 1 is vertically secured on the outboard side by four floor track studs engaged in floor track No. 1. The inboard side is vertically restrained when the four retractable side guides are installed.
- C. Transfer panels No. 2, 3, and 4 are vertically restrained by floor track studs interlocked in slots of floor tracks No. 3, 4, 5 and 6 and locked in position in the forward and aft directions by spring-loaded plungers which fit in the circular cutouts in the floor tracks.

2. Removal/Installation Transfer Panel No. 1 (Fig. 401)

- A. Remove Transfer Panel
  - (1) If installed, remove four retractable side guide assemblies (Ref 25-56-41, Removal/Installation).
  - (2) Shift panel aft until floor track studs align with circular cutouts in floor track No. 1, then lift panel clear of floor track and remove.
- B. Install Transfer Panel
  - (1) Place panel in position and align floor track studs with circular cutouts in floor track No. 1.
  - (2) Allow floor track studs to enter floor track cutouts and shift panel forward to proper position.
  - (3) Install four retractable side guide assemblies (Ref 25-56-41, Removal/Installation).

3. Removal/Installation Transfer Panels No. 2, 3 and 4 (Fig. 401)

- A. Remove Transfer Panels
  - (1) Raise spring-loaded plungers at aft end of panel and shift panel aft until the floor track studs align with circular cutouts in the floor racks.
  - (2) Lift panel clear of floor tracks and remove.
- B. Install Transfer Panels
  - (1) Place panel in position and align floor track studs with circular cutouts in floor tracks.
  - (2) Lift spring-loaded plungers; allow floor track studs to enter floor track cutouts, then shift panel forward to proper position.
  - (3) After panel is in proper position, release plungers and ensure they seat properly in floor track circular cutouts.

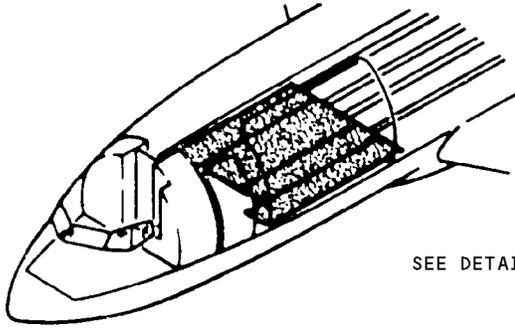
EFFECTIVITY

ALL

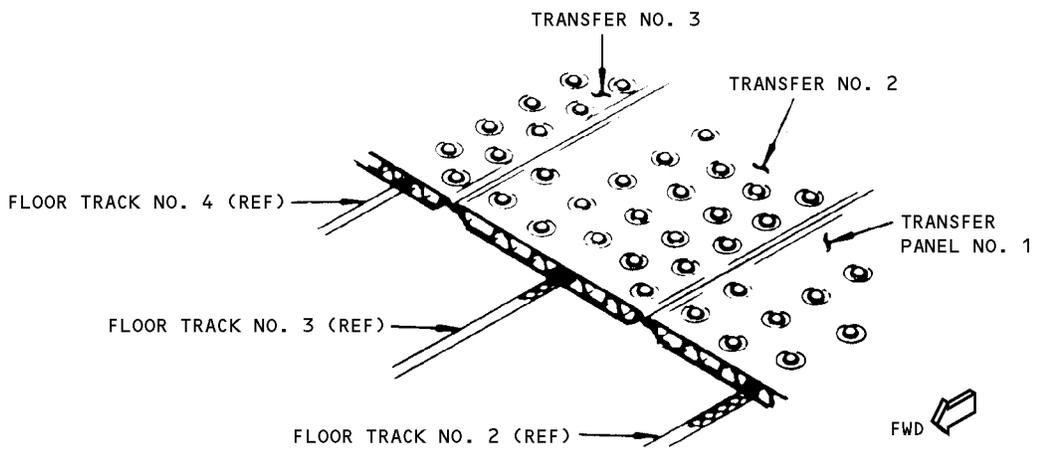
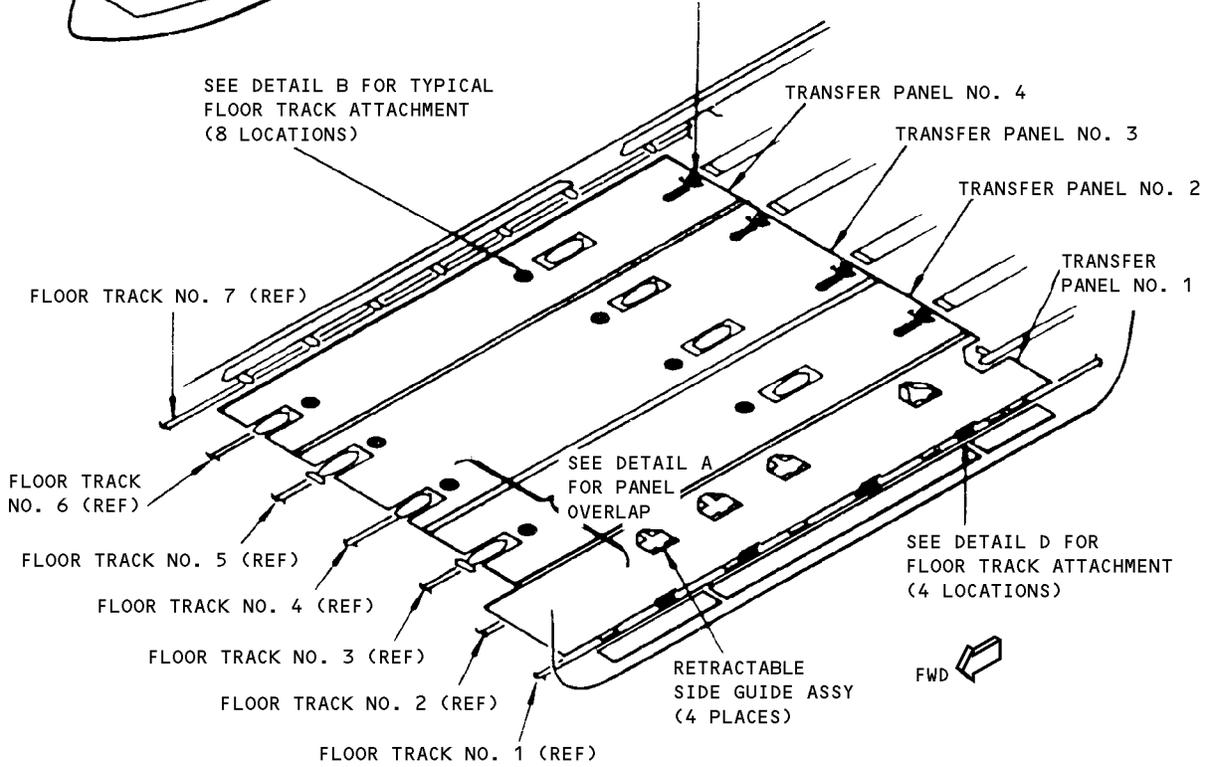
25-56-11

01

Page 401  
Dec 01/04



SEE DETAIL C FOR FLOOR TRACK ATTACHMENT



DETAIL A

Transfer Panels Installation  
 Figure 401 (Sheet 1)

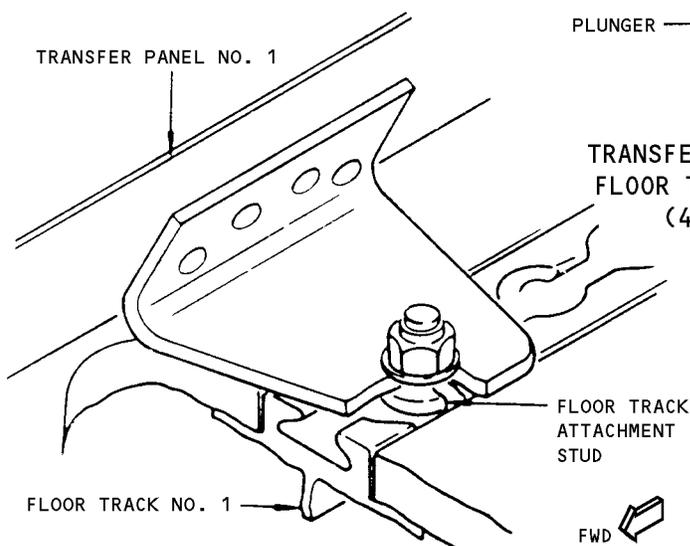
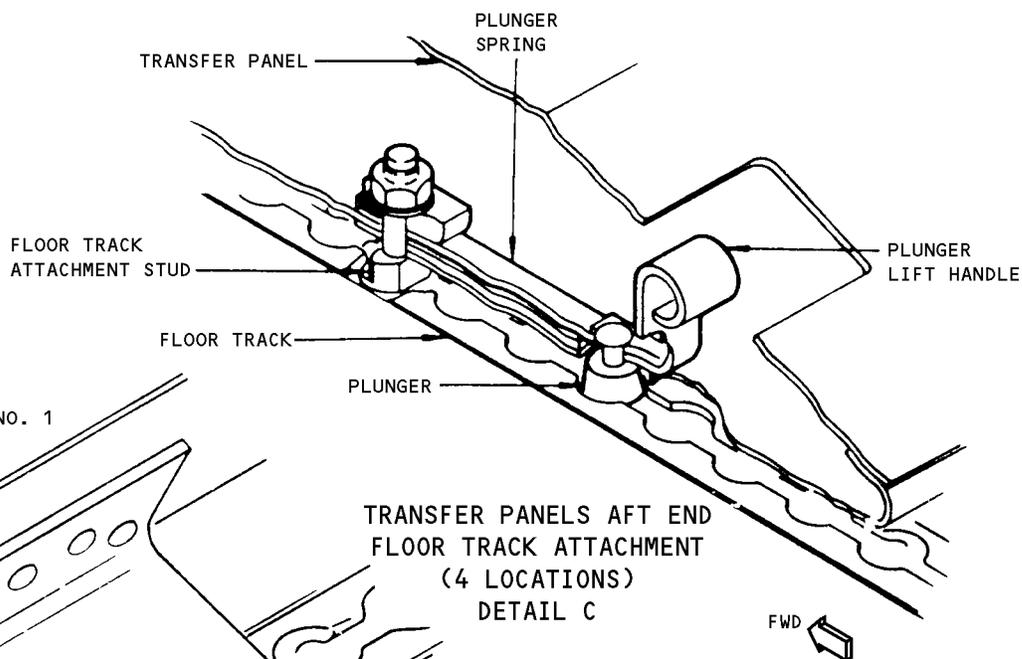
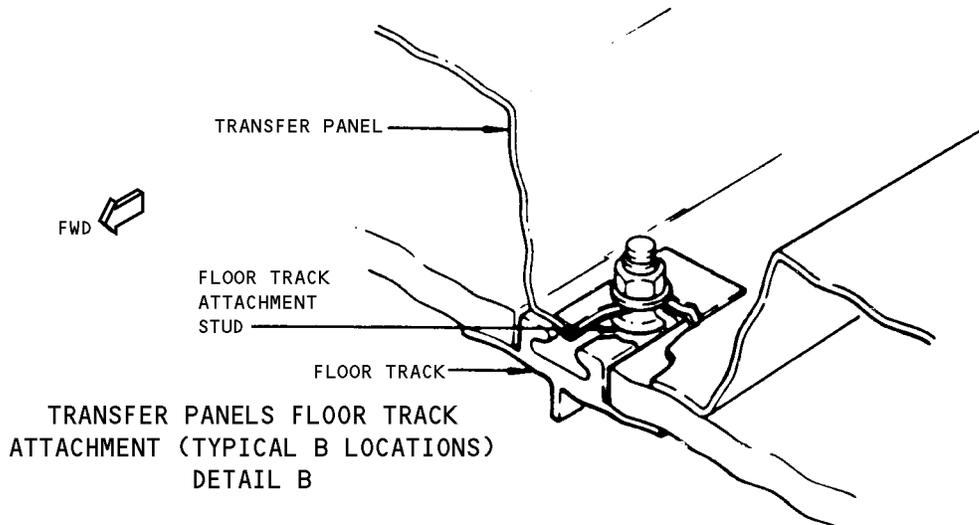
EFFECTIVITY	
	ALL

25-56-11

01

Page 402  
 Dec 01/04

458582



TRANSFER PANEL NO. 1 OUTBOARD FLOOR ATTACHMENT (4 LOCATIONS) DETAIL D

Transfer Panels Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY	
	ALL

25-56-11

01

Page 403  
 Dec 01/04

458584

ROLLER TRAY - REMOVAL/INSTALLATION

1. Remove Roller Tray (See figure 401.)
  - A. Lift plunger release handle to its vertical position and slide tray forward or aft (approximately half inch) until tray will lift clear of floor track.
2. Install Roller Tray (See figure 401.)
  - A. Place roller tray on floor track adjacent to corresponding part numbered decal on cabin floor.
  - B. Lift plunger release handle to its vertical position, slide tray forward or aft until the tray floor track attachment studs enter circular cutouts in the floor track, and align tray with decal for proper location.
  - C. Press plunger release handle down to engage plunger in floor track. Ensure that plunger release handle is in full down position.  
  
NOTE: The plunger release handle is spring-loaded and will tilt up approximately 45 degrees when the plunger is not completely extended into the floor track.
  - D. Check that the roller tray is secured in the floor track by attempting to remove the tray without releasing the plunger.

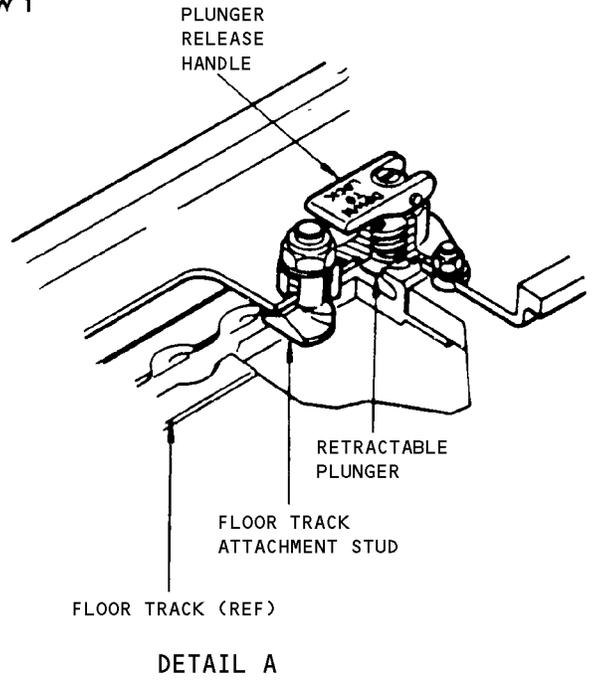
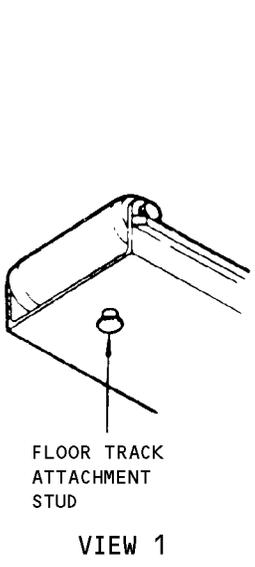
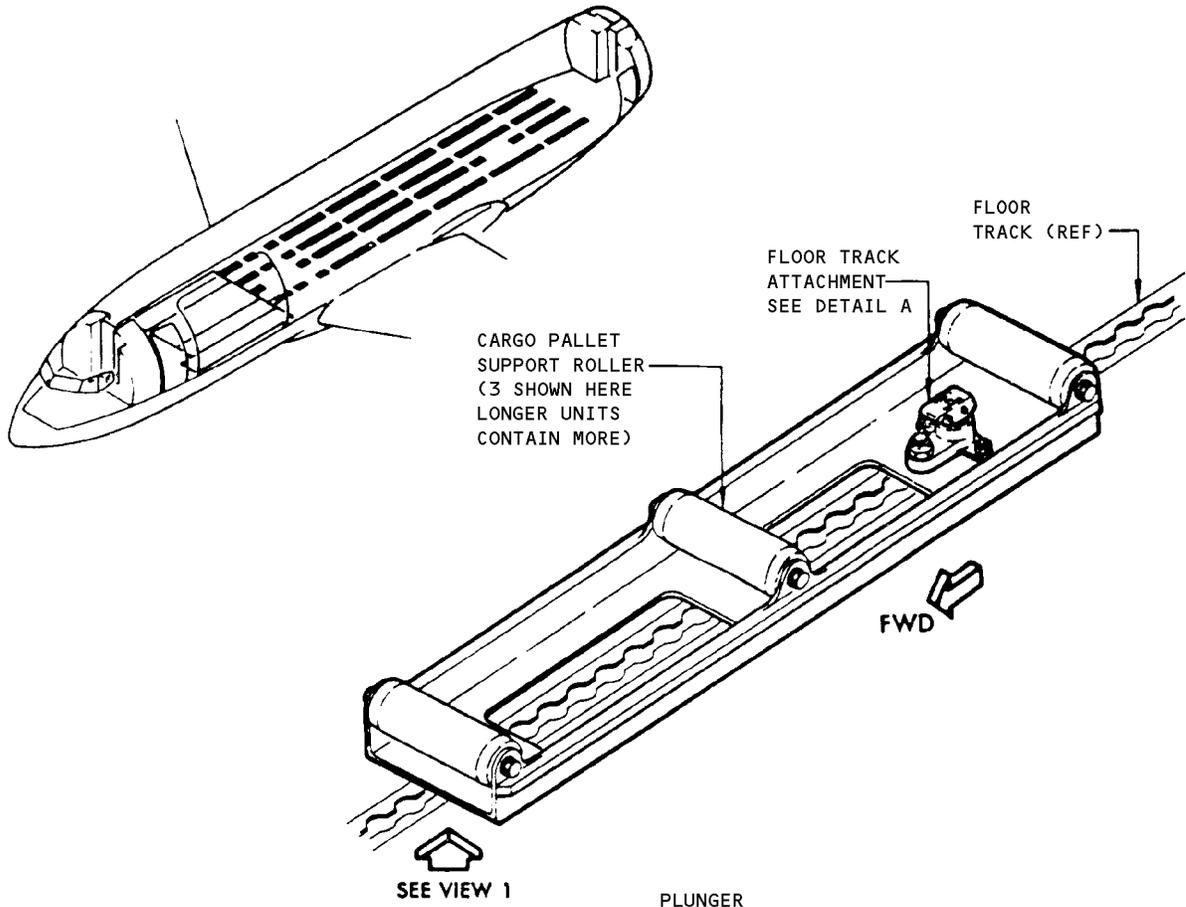
EFFECTIVITY

ALL

25-56-21

01

Page 401  
Dec 01/04



Roller Tray Installation  
 Figure 401

EFFECTIVITY	ALL
-------------	-----

25-56-21

458587

GUIDE RAIL ASSEMBLIES – REMOVAL/INSTALLATION

1. Remove Guide Rail (See figure 401.)
  - A. Lift and hold plunger release handle on each of the three side restraint guide assemblies and slide guide rail assembly aft (approximately half inch).
  - B. Lift guide rail assembly clear of the floor track and floor anchorplates and remove.
2. Install Guide Rail (See figure 401.)
  - A. Place guide rail assembly on floor track adjacent to corresponding part numbered decal on cabin floor.
  - B. Align the single floor anchorplate studs ( on the inboard lower surface of each of the three side restraint guides ) with the circular cutout in the floor anchorplates and allow studs to enter the cutouts.

NOTE: The studs will not enter the cutouts completely until steps C and D are performed.

- C. Align the (four) floor track studs ( on the inboard lower surface of each of the three side restraint guides ) with circular cutouts in the floor track and allow studs to enter the cutouts.
- D. Lift and hold the plunger release handle on each of the three side restraint guides, slide the guide rail forward (approximately half inch) and release hold on plunger release handles.
- E. Check that the inboard floor anchor studs are secure in the floor anchorplates and that the side restraint guides are secured in the floor track, by attempting to lift the guides without releasing the plungers.

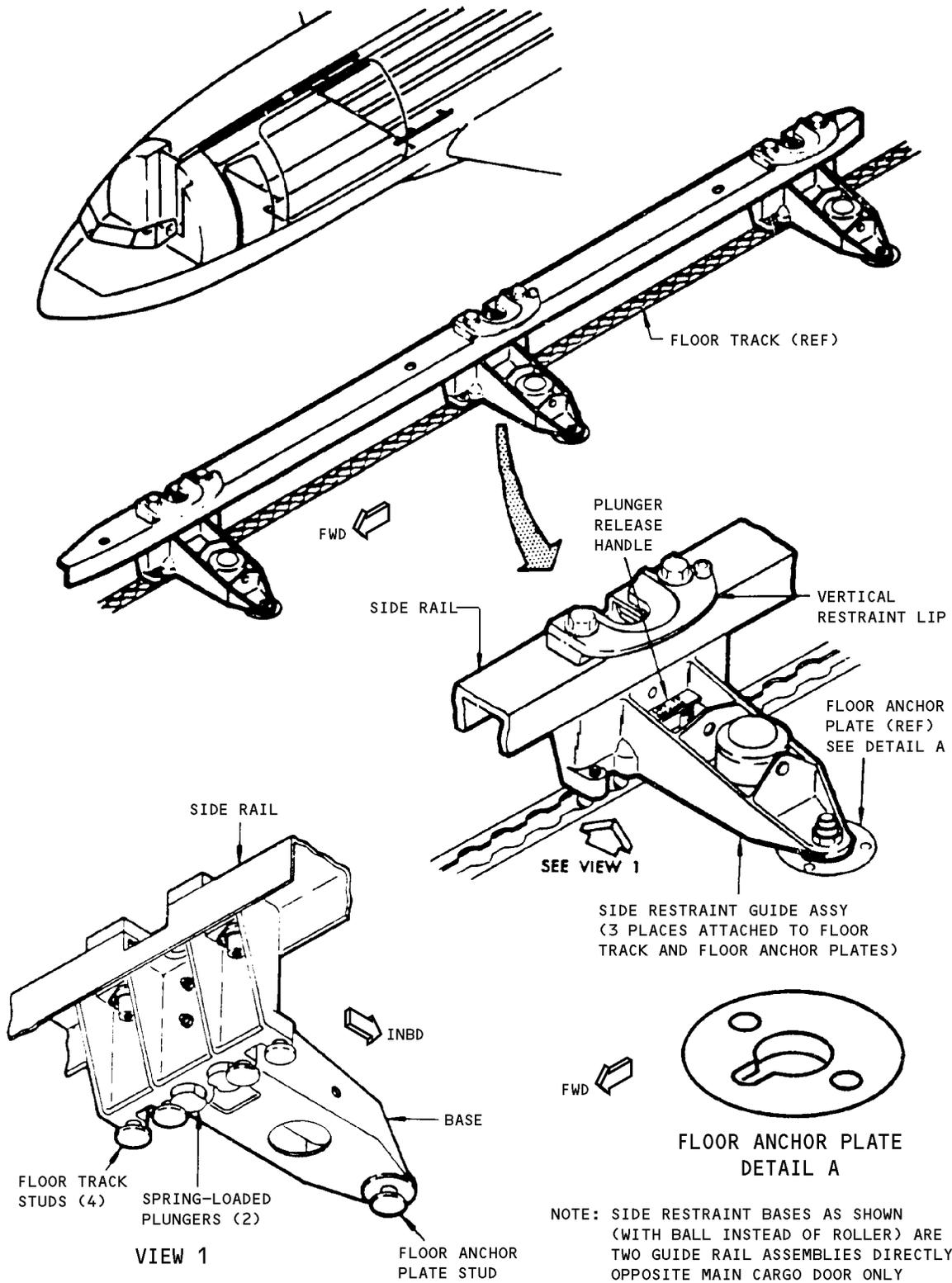
EFFECTIVITY

ALL

25-56-31

01

Page 401  
Dec 01/04



Guide Rail Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-56-31

458589

RETRACTABLE SIDE GUIDE – REMOVAL/INSTALLATION

1. Remove Retractable Side Guide (See figure 401.)
  - A. Lift both plunger release handles to the vertical position and slide guide aft (approximately half inch) until guide will lift clear of floor track, floor anchorplate, and transfer panel void.
2. Install Retractable Side Guide (See figure 401.)
  - A. Place guide on floor track in appropriate void in transfer panel No. 1 in accordance with corresponding part numbered decal on cabin floor.
  - B. Align the single floor anchorplate stud (on the lower inboard surface of guide) with circular cutout in the floor anchorplate, and the (four) floor track studs with circular cutouts in the floor track. Allow studs to enter the cutouts.
  - C. Lift (two) plunger release handles to the vertical position and slide guide forward (approximately half inch).
  - D. Press plunger release handles down to engage plungers in the floor track. Ensure that handles are in their fully down position.

**NOTE:** The plunger release handles are spring-loaded and will tilt up approximately 45 degrees when plunger is not completely extended into the floor track.
  - E. Check that the floor anchorplate stud is secured in the floor anchorplate and that the guide is secured in the floor track by attempting to lift the guide without releasing the plungers.
  - F. Check that the guide rail is in the down position.

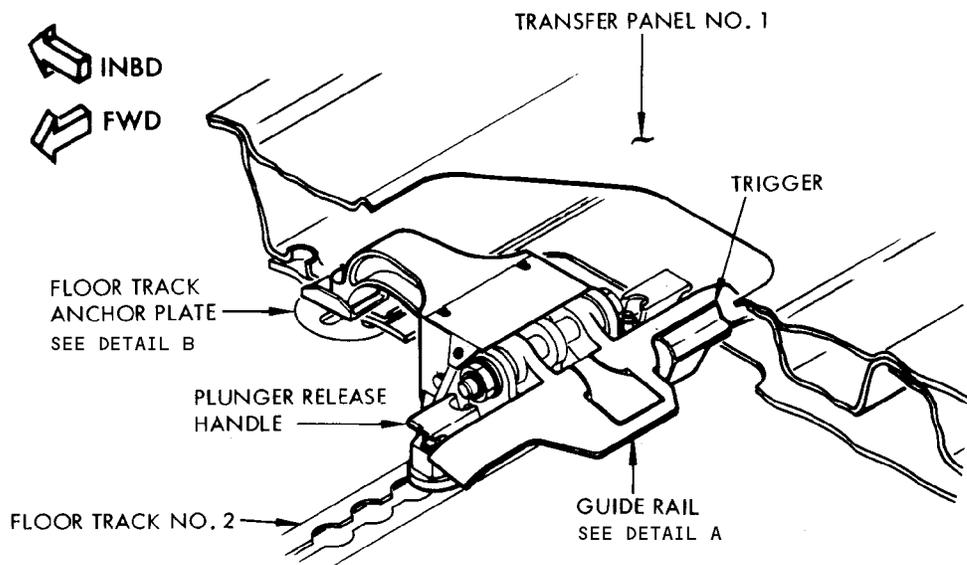
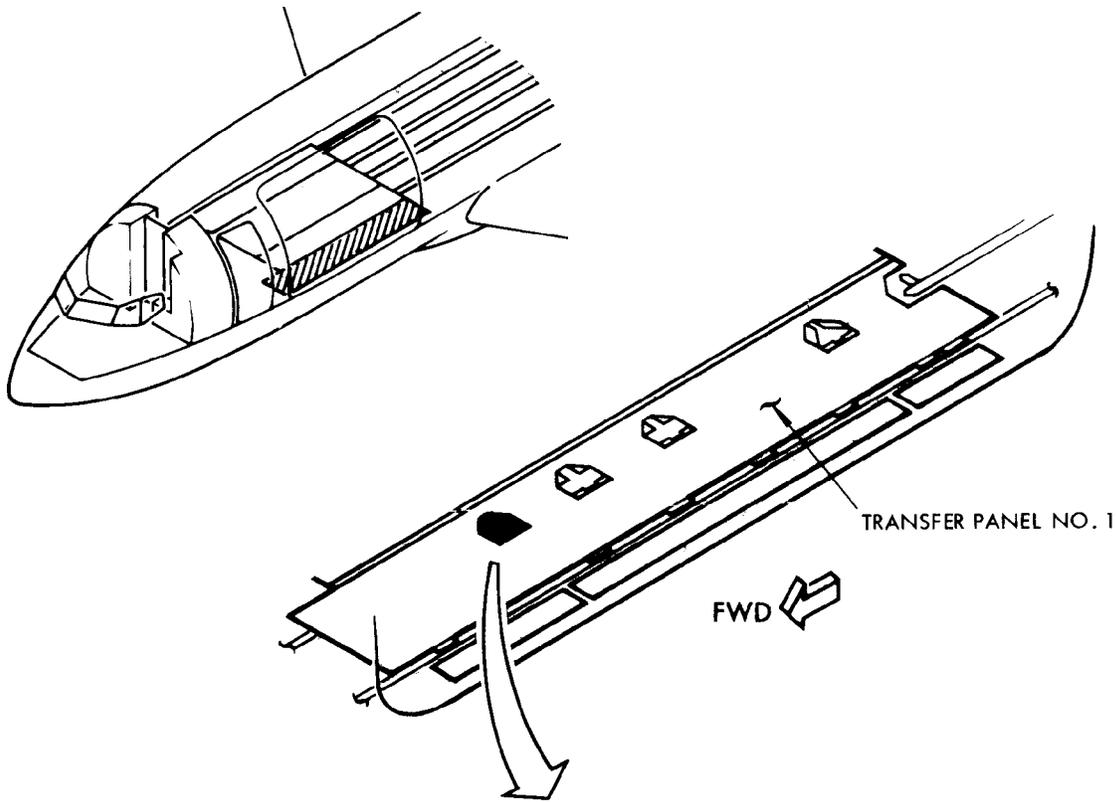
EFFECTIVITY

ALL

25-56-41

01

Page 401  
Dec 01/04



TYPICAL 4 LOCATIONS

Retractable Side Guide  
 Figure 401 (Sheet 1)

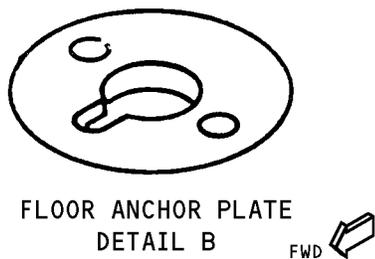
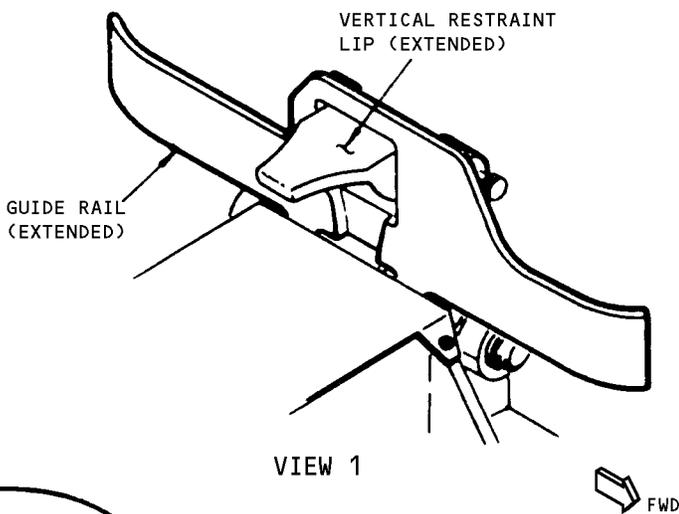
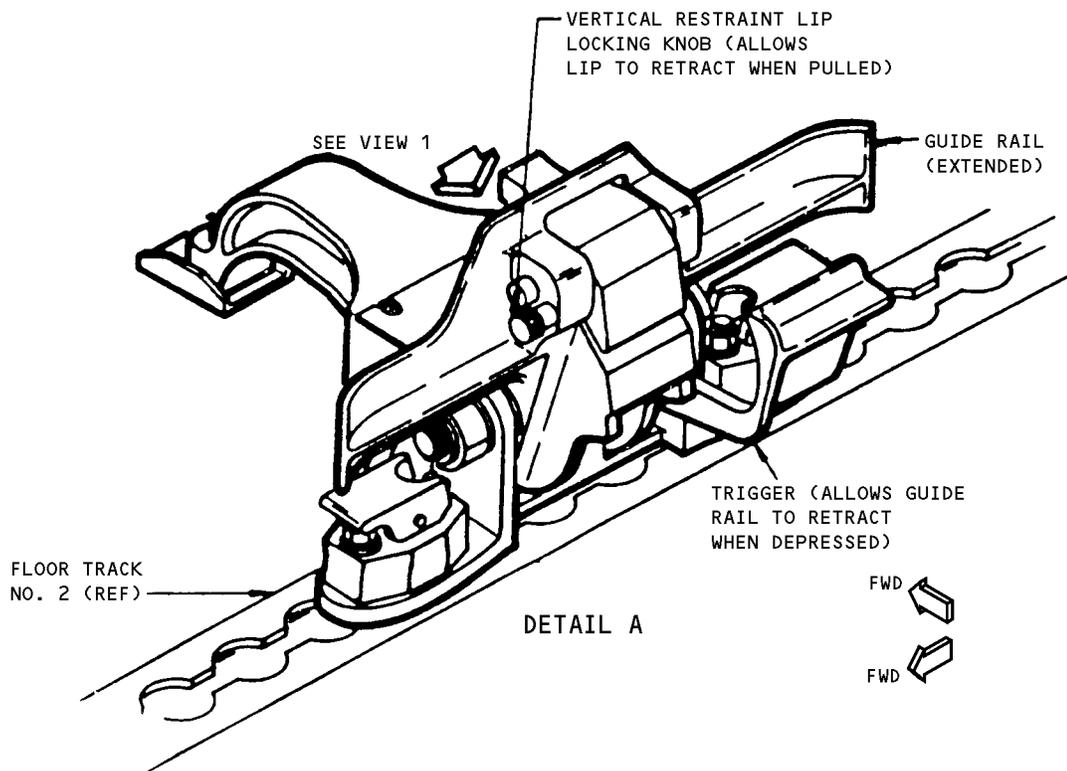
EFFECTIVITY	
	ALL

**25-56-41**

01

Page 402  
 Dec 01/04

458591



Retractable Side Guide  
Figure 401 (Sheet 2)

EFFECTIVITY	
	ALL

25-56-41

SIDE RESTRAINT GUIDES – REMOVAL/INSTALLATION

1. Remove Side Restraint Guide (See figure 401.)
  - A. Lift and hold plunger release handle, slide guide aft (approximately half inch) and lift guide clear of floor track and floor anchorplate.
2. Install Side Restraint Guide (See figure 401.)
  - A. Place side restraint guide on floor track adjacent to corresponding part numbered decal on cabin floor.
  - B. Align the single floor anchorplate stud (on the lower inboard surface of guide) with the circular cutout in the floor anchorplate, and four floor track studs with circular cutouts in the floor track. Allow studs to enter the cutouts.
  - C. Lift and hold the plunger release handle, slide the guide forward approximately one half-inch and release hold on plunger release handle.
  - D. Check that the floor anchorplate stud is secured in the floor anchorplate and that the guide is secured in the floor track, by attempting to lift the guide without releasing the plunger.

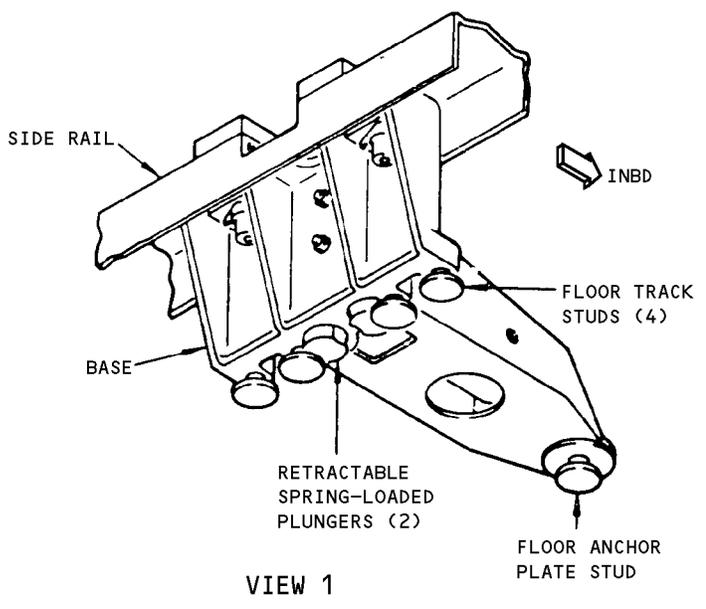
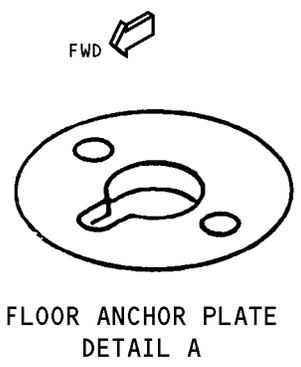
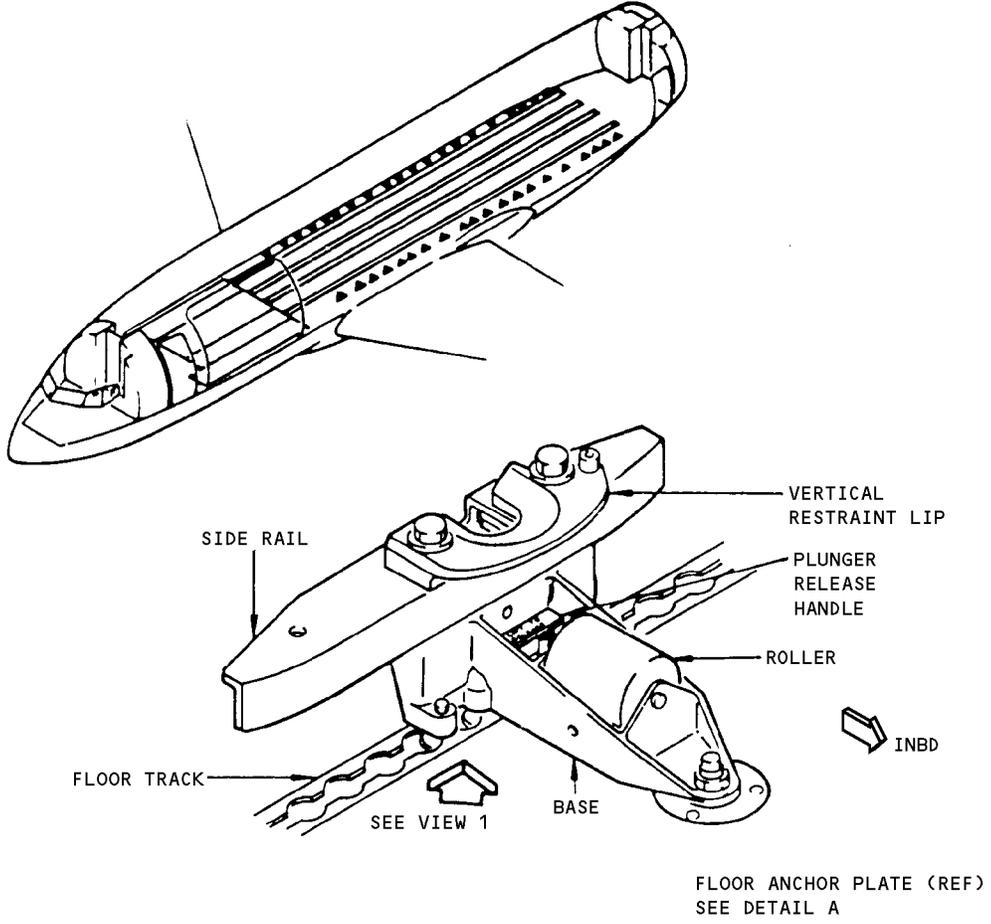
EFFECTIVITY

ALL

25-56-51

01

Page 401  
Dec 01/04



Side Restraint Guides Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-56-51

458598



## MAINTENANCE MANUAL

### PALLET LOCKS - REMOVAL/INSTALLATION

#### 1. General

- A. There are three types of pallet lock assemblies used in the cargo carrying system, but their removal and installation procedures are the same.
- B. The pallet locks may be removed or installed while their lock mechanisms are in the retracted or raised position.

#### 2. Remove Pallet Locks (See figure 401.)

- A. Lift (two) plunger release handles to the vertical position, slide pallet lock aft approximately one half-inch and lift clear of floor track.

#### 3. Install Pallet Locks (See figure 401.)

- A. Place pallet lock on floor track adjacent to corresponding part numbered decal on cabin floor.
- B. Lift both plunger release handles to the vertical position, slide pallet lock forward or aft until the floor track attachment studs enter the circular cutouts in the floor track, and align the pallet lock with decal for proper location.
- C. Press plunger release handles down to engage plunger in floor track. Ensure that the plunger release handles are in the full down position.

**NOTE:** The plunger release handles are spring-loaded and will tilt up approximately 45 degrees when the plunger is not completely extended into the floor track.

- D. Check that the pallet lock is secured in the floor track by attempting to remove the pallet lock without releasing the plungers.

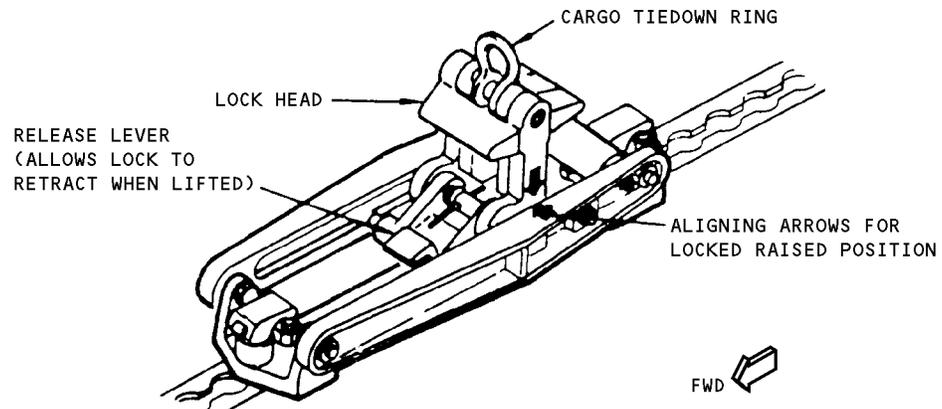
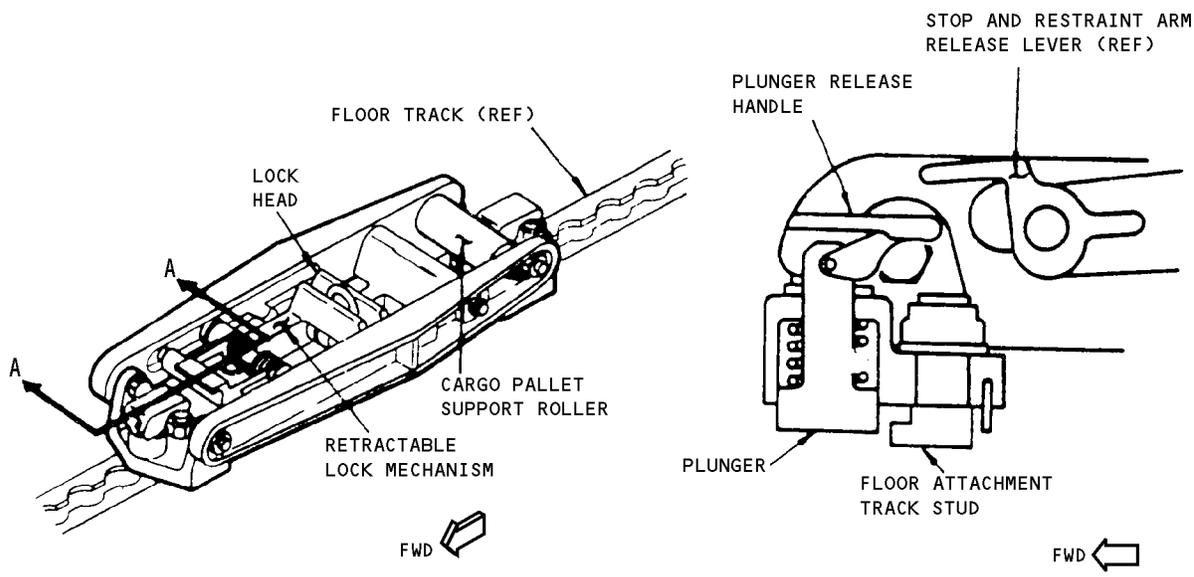
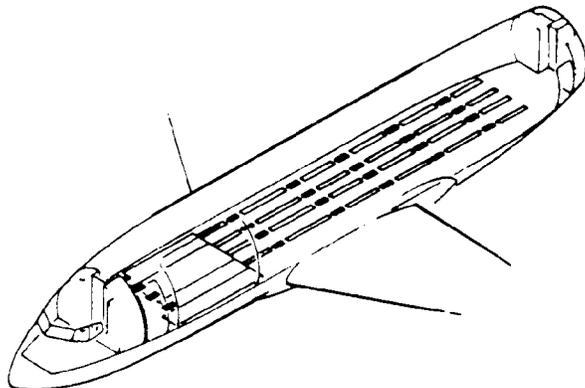
EFFECTIVITY

ALL

25-56-61

01

Page 401  
Dec 01/04



TYPICAL PALLET LOCK INSTALLED BETWEEN  
 PALLET POSITIONS (65-37251)

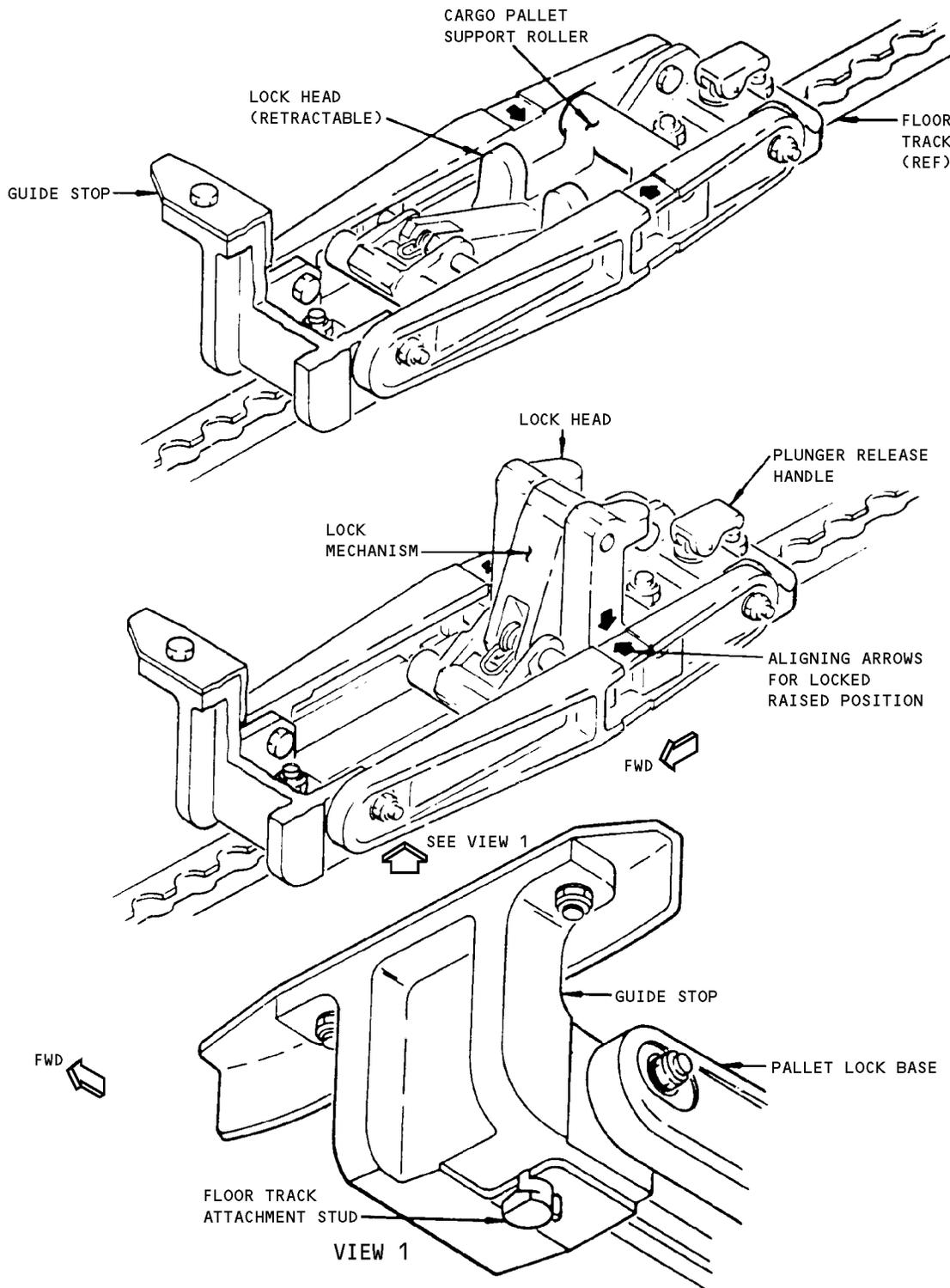
Pallet Locks Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY	
	ALL

25-56-61

458600

**MAINTENANCE MANUAL**



TYPICAL PALLET LOCK (WITH GUIDE STOP) INSTALLED AT FORWARD OF CARGO CARRYING SYSTEM (65-63629)

Pallet Locks Installation  
Figure 401 (Sheet 2)

EFFECTIVITY	
	ALL

25-56-61



## MAINTENANCE MANUAL

### PALLET BRAKES - REMOVAL/INSTALLATION

1. Remove Pallet Brake (See figure 401.)
  - A. Lift both floor track attachment release handles to the vertical position and slide pallet brake forward or aft approximately one half-inch until pallet brake will lift clear of the floor track.
2. Install Pallet Brake (See figure 401.)
  - A. Place pallet brake on floor track adjacent to corresponding part numbered decal on cabin floor.
  - B. Lift both floor track attachment release handles to the vertical position, align the floor track attachment studs with circular cutouts in floor track and allow studs to enter cutouts.
  - C. Slide pallet brake forward or aft approximately one half-inch to align with decal for proper location and press floor track attachment release handles down to the locked position. Ensure that the release handles engage the index pins.
  - D. Check that the pallet brake is secured in the floor track by attempting to remove the brake without releasing the floor track attachments.

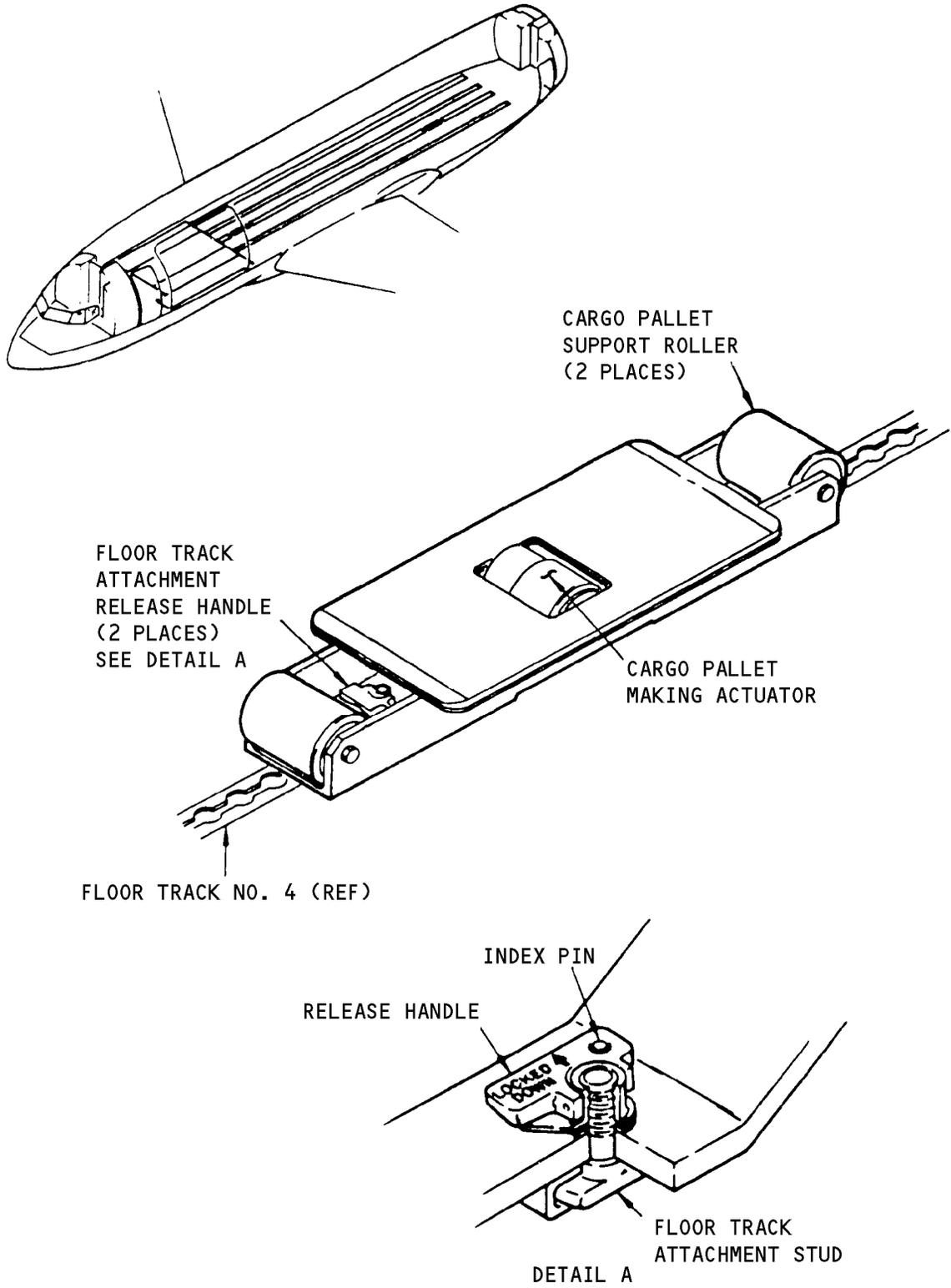
EFFECTIVITY

ALL

25-56-71

01

Page 401  
Dec 01/04



Pallet Brake Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-56-71

458608



## MAINTENANCE MANUAL

### AFT STOPS - REMOVAL/INSTALLATION

#### 1. General

A. The cargo pallet aft stops are attached to floor track Nos. 3, 4, 5, and 6 at the aft end of the cargo system in any of the cargo carrying configurations.

#### 2. Remove Aft Stops (See figure 401.)

A. Lift plunger release handle to its vertical position and slide stop forward approximately one half-inch until stop will lift clear of floor track.

#### 3. Install Aft Stops (See figure 401.)

A. Place stop on floor track adjacent to corresponding part numbered decal on cabin floor, at location dependent on number of cargo pallets to be carried.

B. Lift plunger release handle to its vertical position, slide stop forward or aft until the floor track attachment studs enter circular cutouts in the floor track, and align stop with decal for proper location.

C. Press plunger release handle down to engage plunger in floor track. Ensure that plunger release handle is in full down position.

**NOTE:** The plunger release handle is spring-loaded and will tilt up approximately 45 degrees when the plunger is not completely extended into the floor track.

D. Check that the aft stop is secured in the floor track by attempting to remove the stop without releasing the plunger.

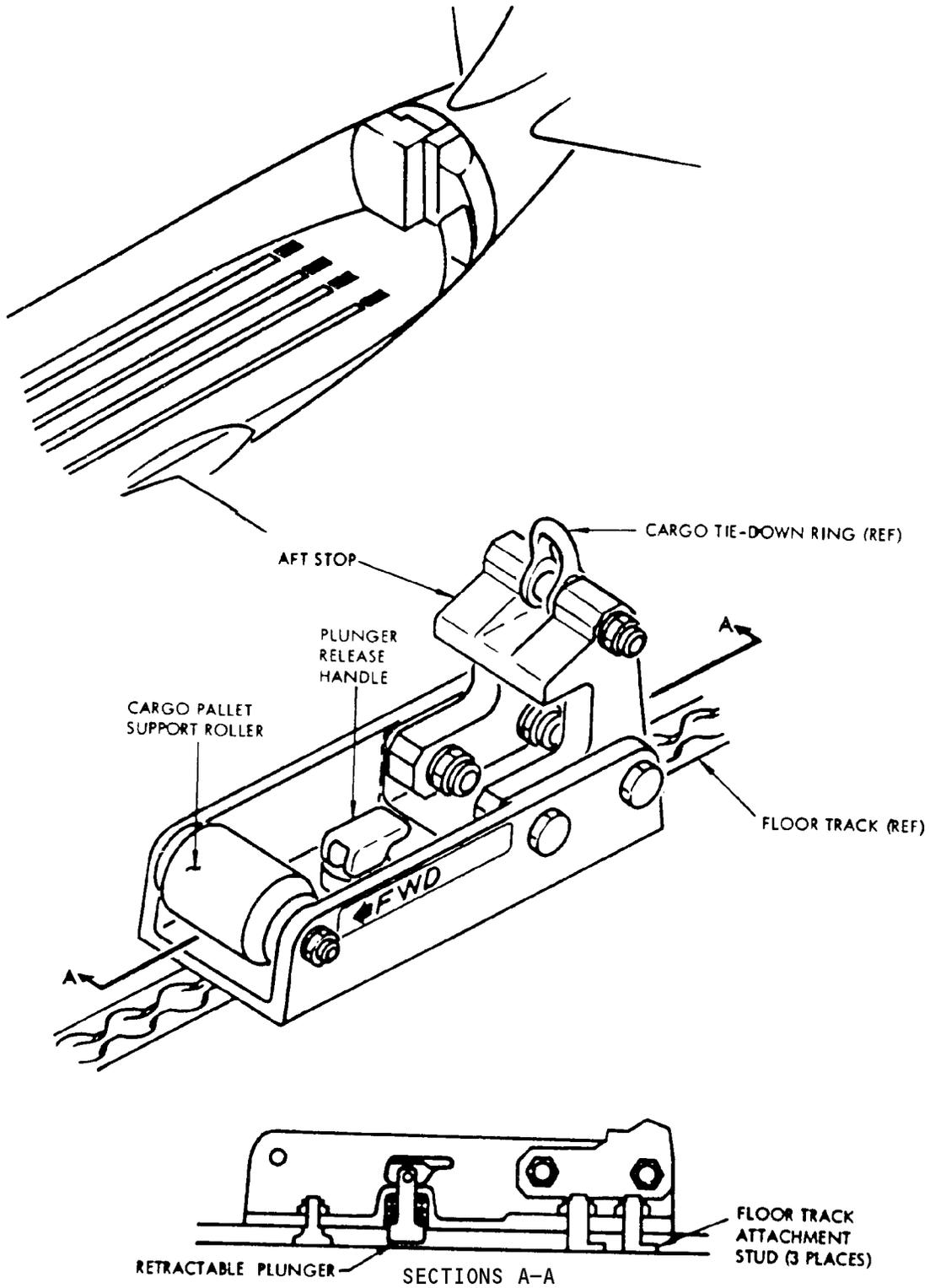
EFFECTIVITY

ALL

25-56-81

01

Page 401  
Dec 01/04



Aft Stops Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-56-81



## MAINTENANCE MANUAL

### THRESHOLD ASSEMBLY – REMOVAL/INSTALLATION

#### 1. General

- A. The three main cargo door threshold assembly sections overlap each other and must be removed in order, the forward section first, then center section, and aft section.
- B. The threshold sections attachment fittings, attached floor track No. 1 must also be removed whenever the threshold sections are removed.

#### 2. Remove Threshold Sections (Fig. 401)

- A. Lift both locking handles to the unlocked position to disengage pins in the attachment fittings.
- B. Grasping the locking handles, pull threshold section outboard until the hinge fittings disengage from pins in the attachment fittings and remove threshold section.
- C. Remove attachment fittings from floor track No. 1.

#### 3. Install Threshold Sections (Fig. 401)

- A. Attach threshold section attachment fittings to floor track No. 1 adjacent to corresponding part numbered decals on cabin floor.
- B. Grasping the threshold section locking handles (in the unlatched position) place section in position to allow the hinge fittings to engage with the pins in the floor track attachment fittings.

**NOTE:** The three threshold sections overlap each other and must be installed in order; the aft section first, followed by the center section and then the forward section.

- C. Press the locking handles down to the latched position to engage pins in the attachment fittings.

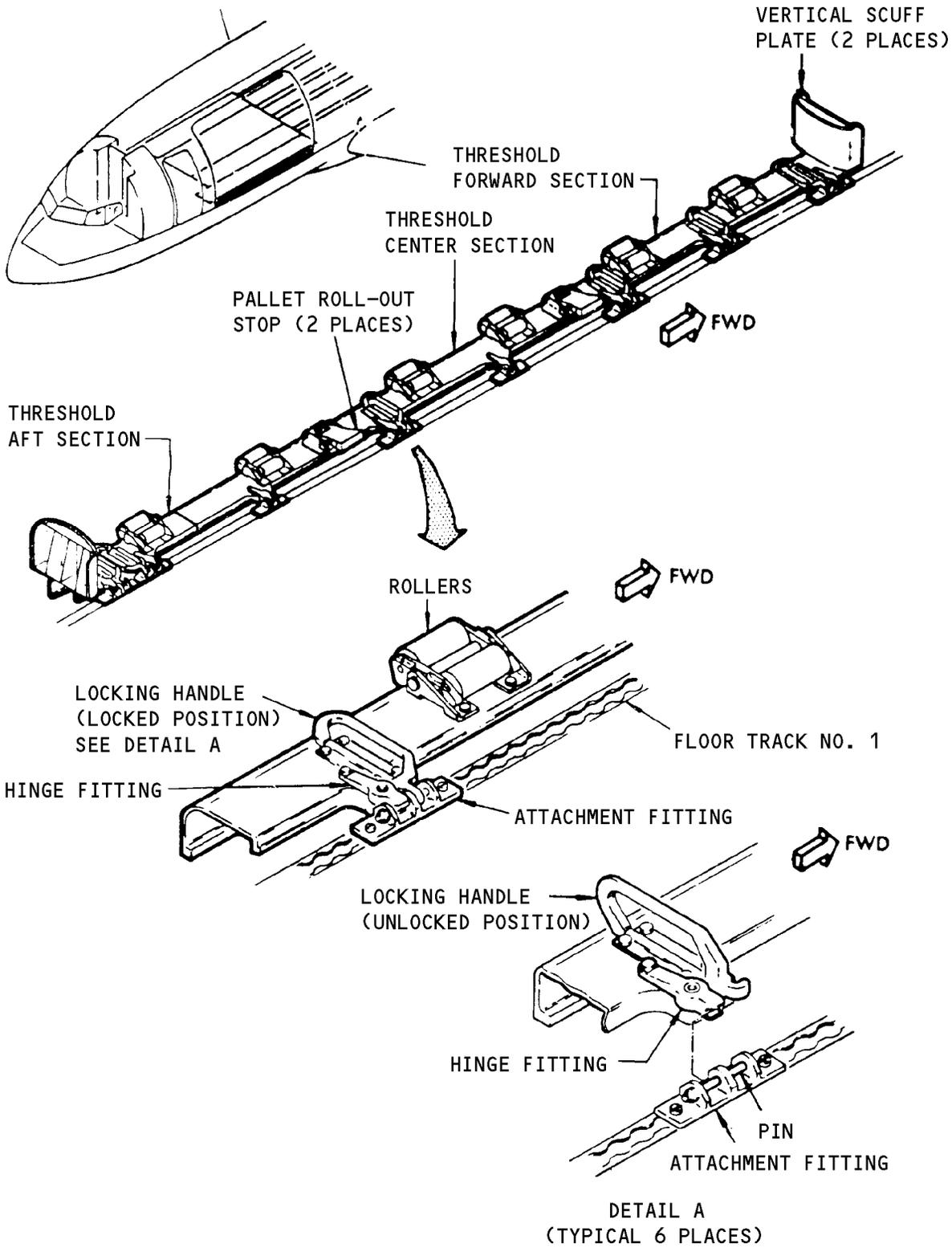
EFFECTIVITY

ALL

25-56-91

01

Page 401  
Dec 01/04



Main Cargo Door Threshold Assemblies Installation  
 Figure 401

EFFECTIVITY	ALL
-------------	-----

25-56-91

458611

THRESHOLD ASSEMBLY – ADJUSTMENT/TEST

1. General

- A. Adjustment/Test of the main cargo door threshold assembly consists of an adjustment to the two pallet roll-out stops mounted on the main cargo door threshold assembly center section.
- B. These stops are raised (unlatched) during cargo pallet loading to provide pallet restraint if a pallet should move back out of the main cargo door opening before it is properly located on the system. The arm of the roll-out stop must be in the latched (down) position during cargo pallet unloading. The following adjustment procedure is made to ensure that the roll-out stop arm is properly restrained by the two ball plungers, when in the latched position.

2. Adjust Roll-Out Stop Arm Ball Plunger (See figure 501.)

- A. Press down and position the roll-out-stop arm in the latched position.
- B. Rotate ball plungers (in or out) equally until a manual force of 7 pounds (+3 or -3) applied upwards on the arm is required to unlatch the stop.

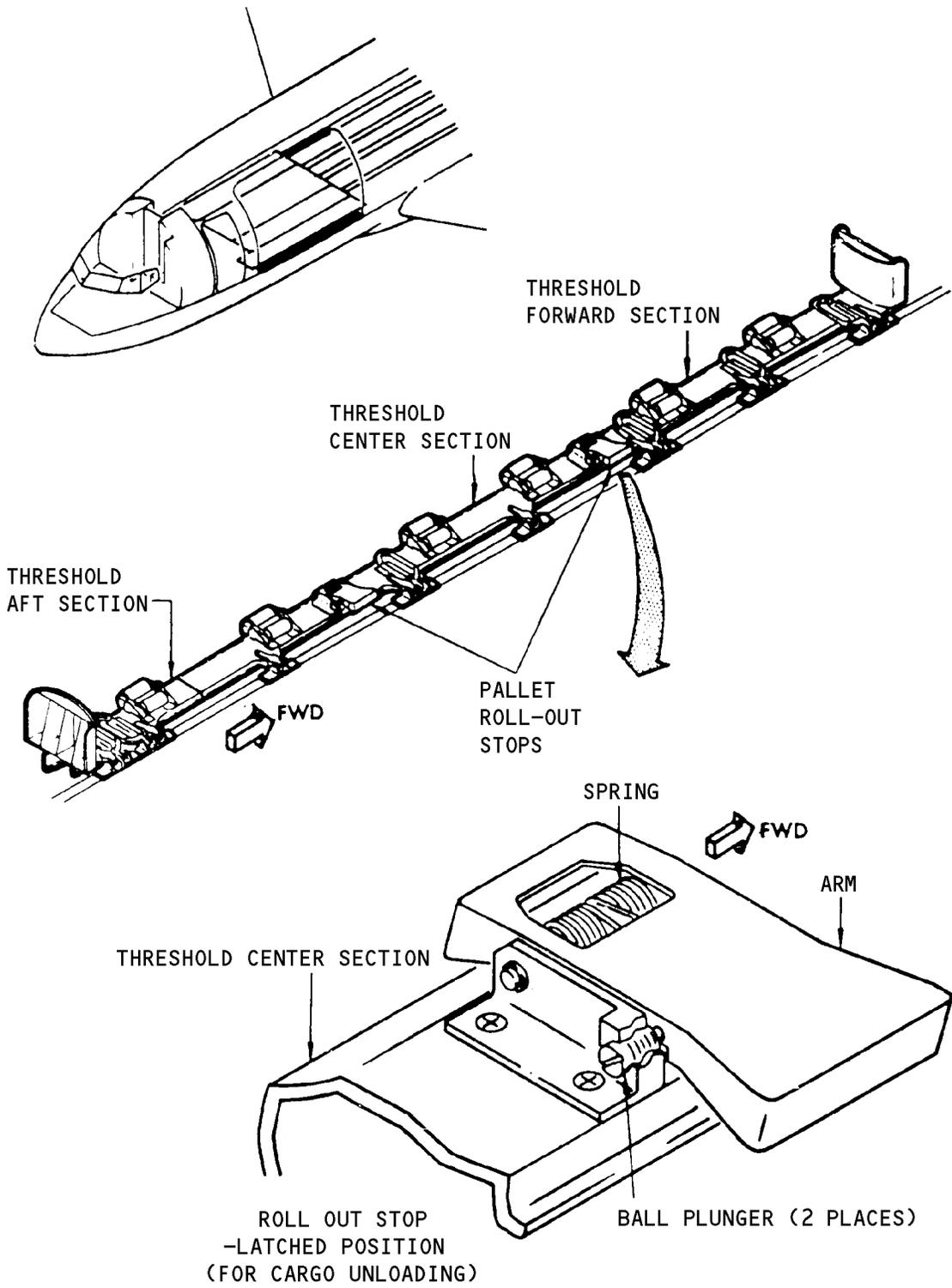
EFFECTIVITY

ALL

25-56-91

01

Page 501  
Dec 01/04



Main Cargo Door Threshold Pallet Lock Adjustment  
 Figure 501

EFFECTIVITY	ALL
-------------	-----

25-56-91

CARGO BARRIER NET – REMOVAL/INSTALLATION

1. Remove Cargo Barrier Net (Fig. 401)
  - A. Push in and rotate fittings at end of net upper radial straps 60 degrees in either direction and allow fittings to disengage from fittings attached to the fuselage structure.
  - B. Disconnect net floor attachment fittings in same manner. Install barrier net floor fitting coverplates.
  - C. Close access doors on the sidewall and ceiling panels to cover fittings.
2. Install Cargo Barrier Net (Fig. 401)
  - A. Open access covers on sidewall and ceiling panels to expose barrier net attachment fittings attached to fuselage structure.
  - B. Connect fittings at end of net upper radial straps by pushing fitting into the fuselage mounted fitting and rotate strap fitting 60 degrees in either direction to lock.  
  

**NOTE:** The two center radial straps must be connected first and matched by corresponding color markings for proper location of all connections.
  - C. Remove barrier net floor fitting coverplates, and stow in personnel net stowage bag.
  - D. Rotate fitting in cabin floor upward out of recess and swing fitting aft to stand fitting upright.
  - E. Connect net floor attachment fittings in same manner as upper fittings.

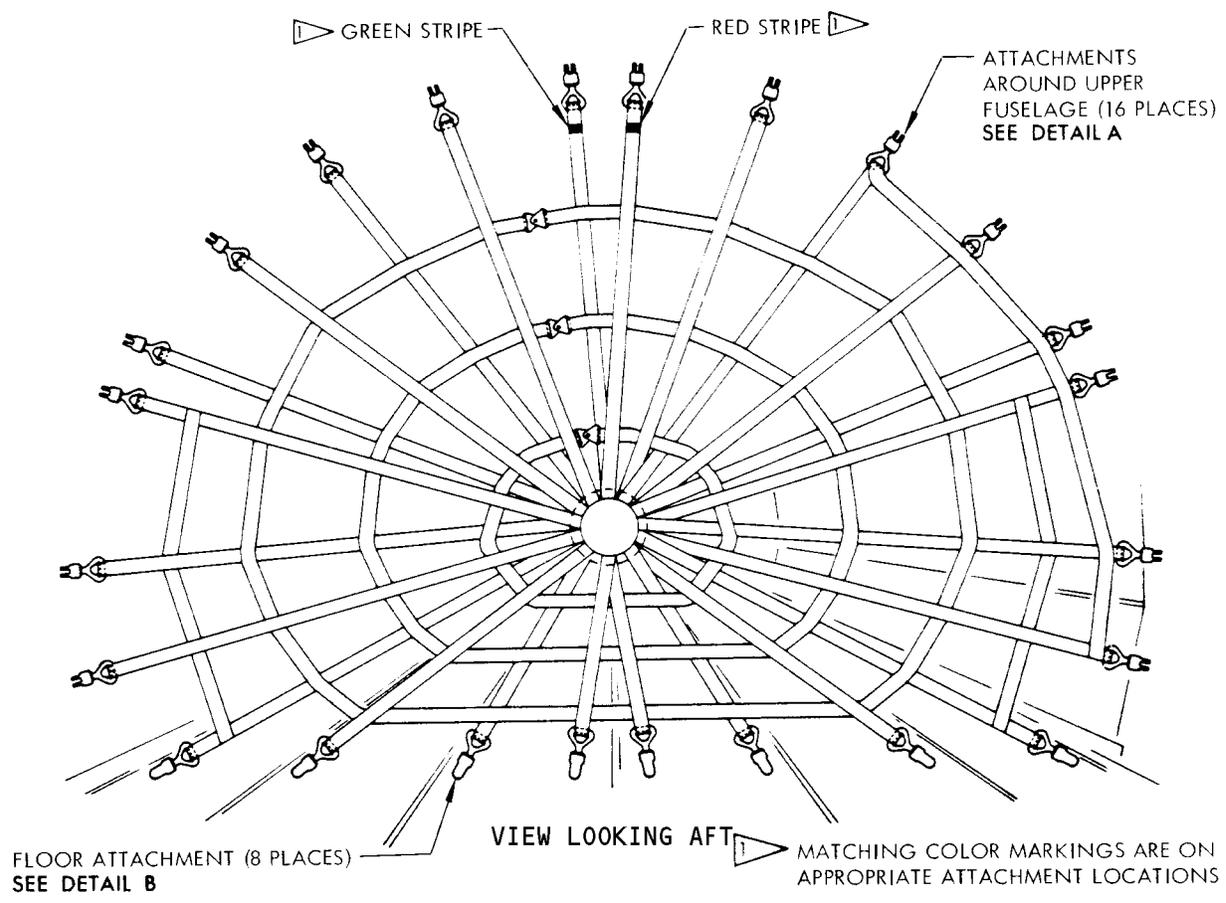
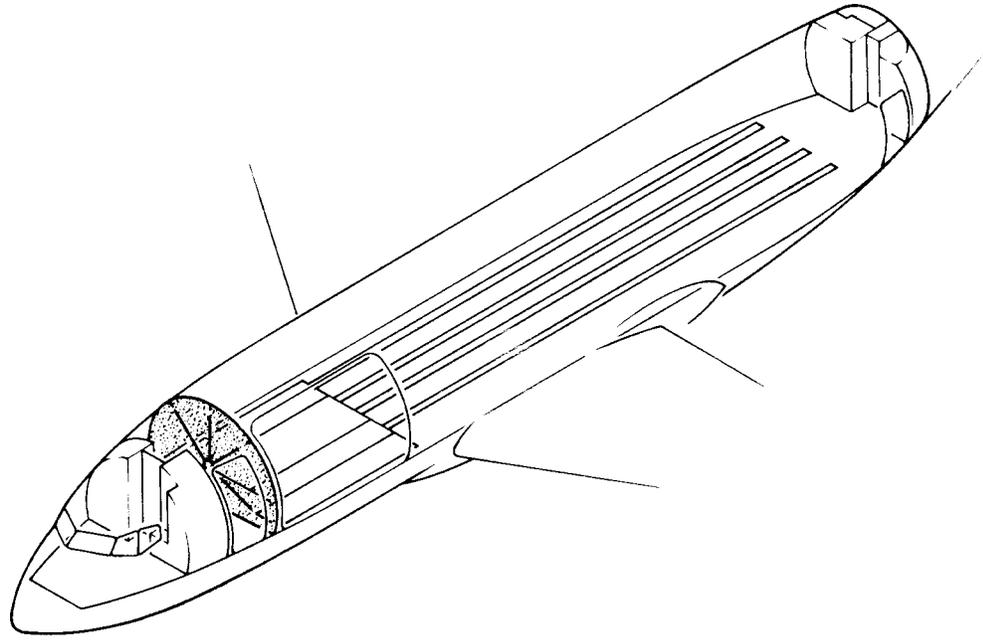
EFFECTIVITY

ALL

25-56-111

01

Page 401  
Dec 01/04

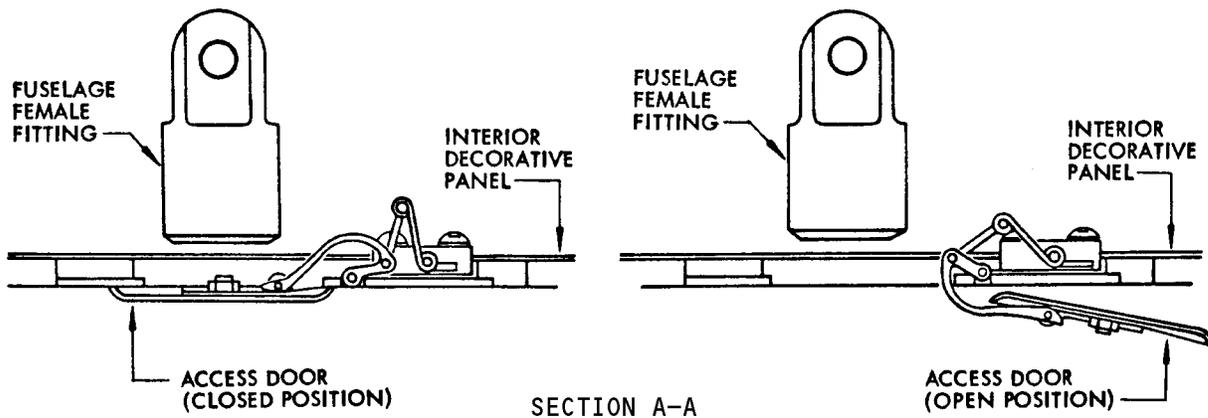
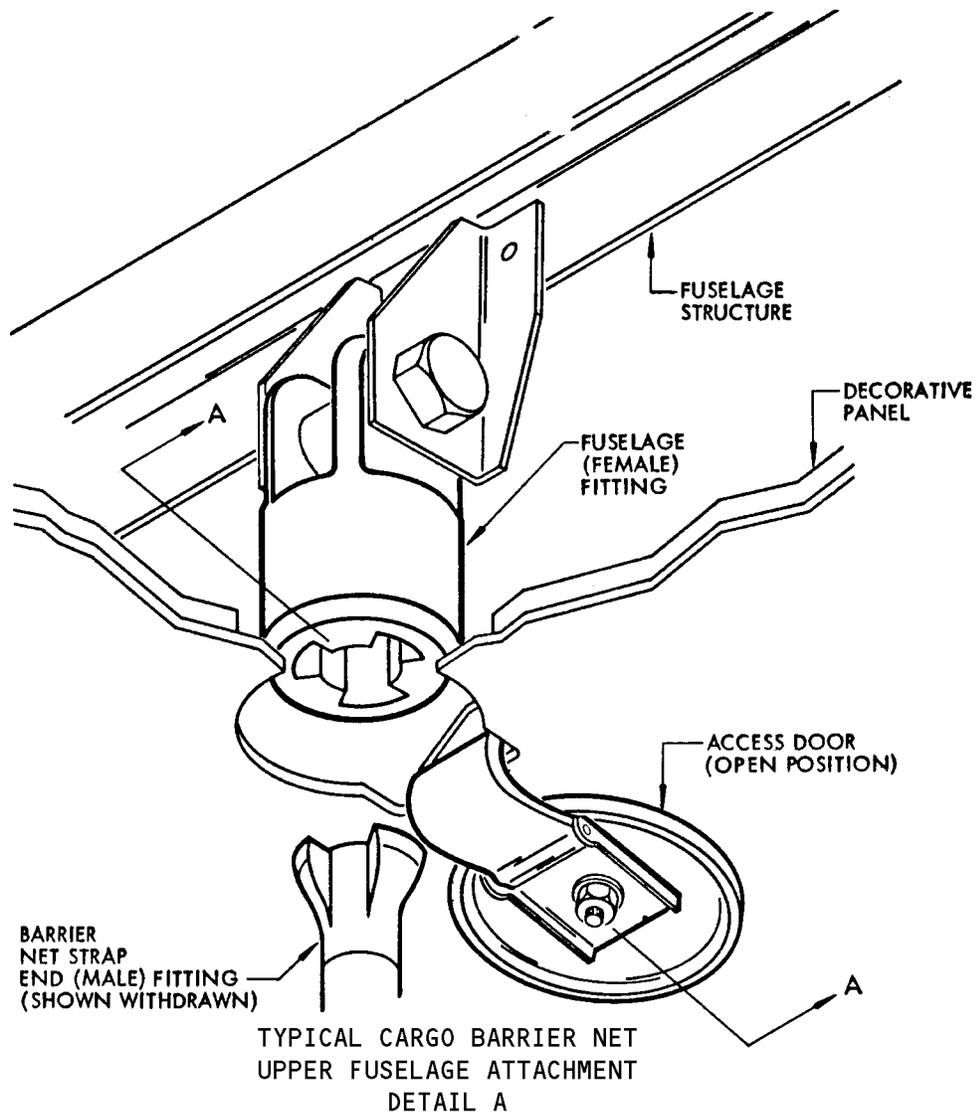


Cargo Barrier Net Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY	ALL
-------------	-----

25-56-111

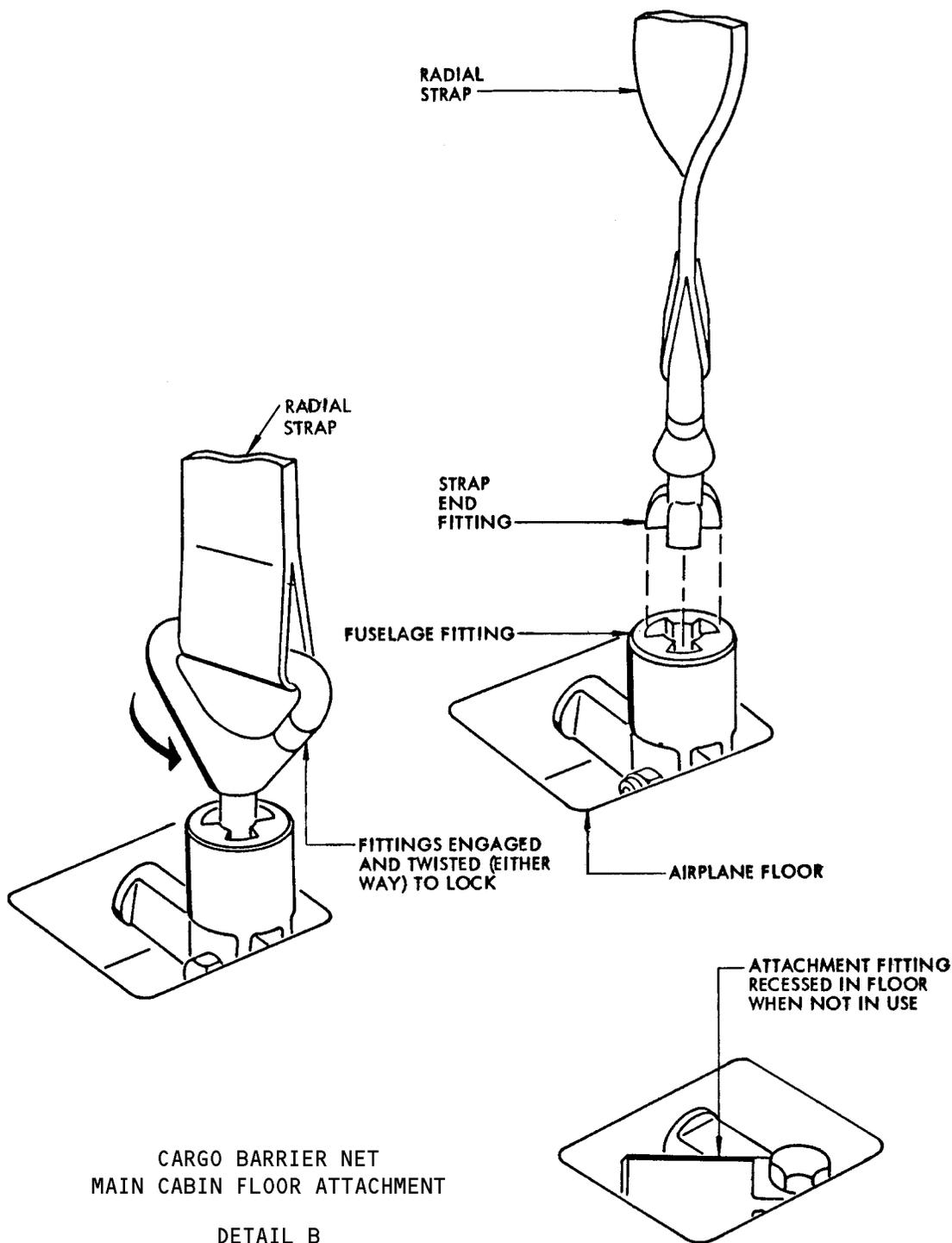
458679



Cargo Barrier Net Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY	
	ALL

25-56-111



Cargo Barrier Net Installation  
 Figure 401 (Sheet 3)

EFFECTIVITY	ALL
-------------	-----

25-56-111

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

EMERGENCY EQUIPMENT - DESCRIPTION AND OPERATION

1. General

- A. Emergency Equipment is covered in several sections, divided as follows:  
25-61-0, Escape Equipment, 25-62-0, Life-Saving Equipment 25-63-0,  
Emergency Signalling Equipment, 25-69-0, Miscellaneous Equipment
- B. For information on portable fire extinguishing equipment, refer to  
Chapter 26, Portable Fire Extinguishers.
- C. For information on portable oxygen equipment, refer to Chapter 35,  
Portable Oxygen Equipment.
- D. On Passenger/Cargo Convertible Airplanes conversion between the various  
passenger and/or cargo configurations has an effect on emergency  
equipment location. Refer to 25-09-100, Cabin Accommodation Conversions.

EFFECTIVITY

ALL

**25-60-0**

03

Page 1  
Dec 01/04

**BOEING**  
**737**   
MAINTENANCE MANUAL

ESCAPE EQUIPMENT - DESCRIPTION AND OPERATION

1. General

- A. The escape equipment consists of two passenger cabin escape strap installations, two control cabin escape strap installations and four escape slide assemblies on Standard Passenger Airplanes, or three escape slide assemblies on Passenger/Cargo Convertible Airplanes.
- B. The passenger cabin escape straps are stowed above each of the two overwing emergency exits. (See figure 1.) Refer to 25-61-100 for further information on the passenger cabin escape straps.
- C. The control cabin escape straps are stowed above each of the captain's and first officer's seats. (See figure 1.) Refer to 25-61-200 for further information on the control cabin escape straps.
- D. An escape slide assembly is mounted on the lower inboard face of the forward and aft entry doors and the forward and aft galley service doors on Standard Passenger Airplanes, and on the forward entry door and the forward and aft galley service doors on Passenger/Cargo Convertible Airplanes. (See figure 1.) Refer to 25-61-300 for further information on the escape slide assemblies.

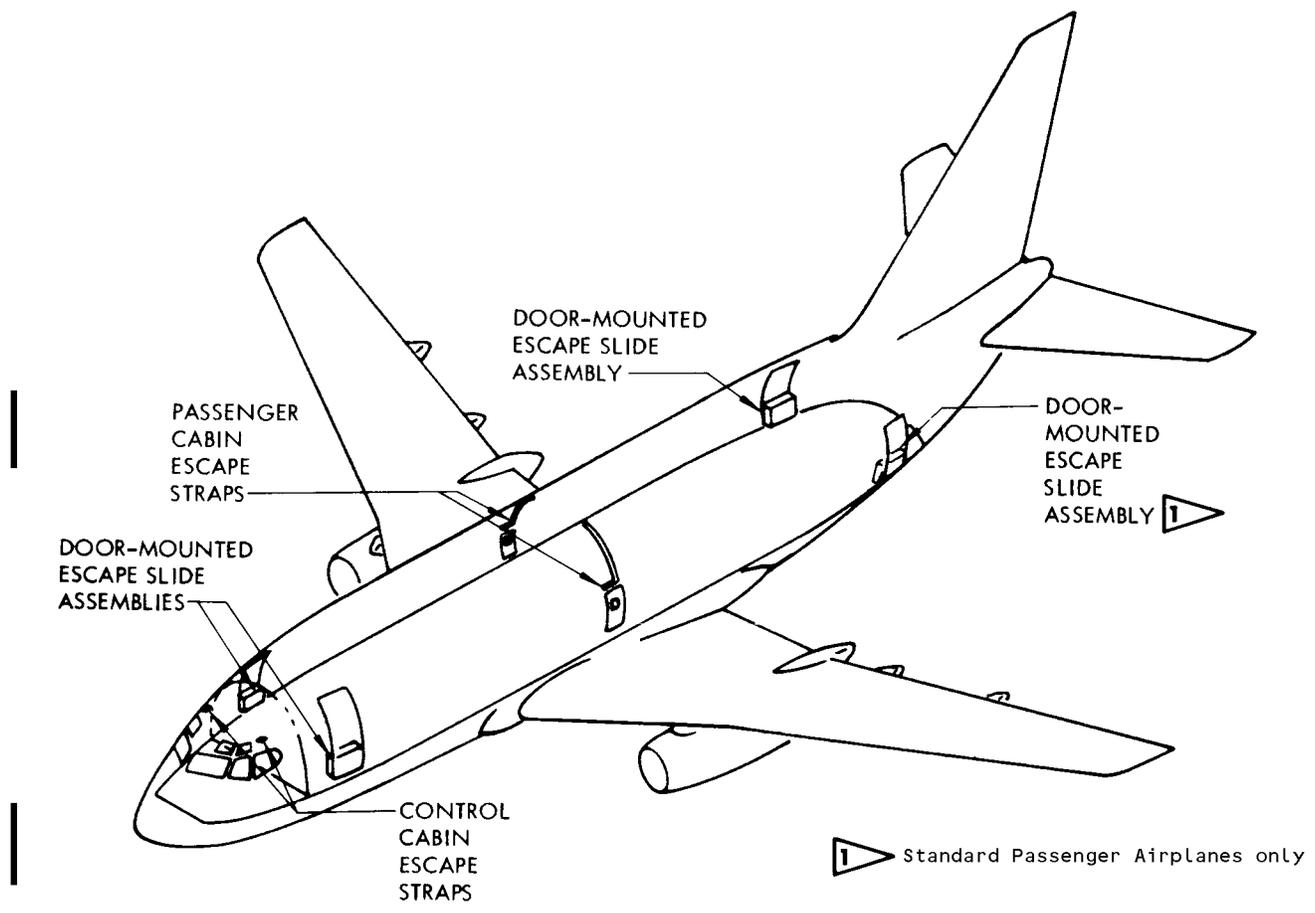
EFFECTIVITY

ALL

25-61-0

04

Page 1  
Dec 01/04



Escape Equipment Location  
 Figure 1

EFFECTIVITY	ALL
-------------	-----

25-61-0

458750

ESCAPE ROPES/STRAPS (PASSENGER CABIN – DESCRIPTION AND OPERATION)

1. General

- A. An escape strap made from webbing assemblies impregnated with neoprene latex solution is attached above each of the two overwing emergency exits (Fig. 1).
- B. Each escape strap is stowed in a curved tubular container which is transversely mounted in the ceiling of the passenger compartment and secured at the lower end to the escape hatch frame. Access to the free ends of the straps is gained by removal of the emergency hatches. A hook assembly is attached to the end of each emergency exit escape strap. When installed in the airplane, the hook is secured by a hook retainer, which is fastened by velcro tape. For emergency use, the hook is attached to a fitting on the wing

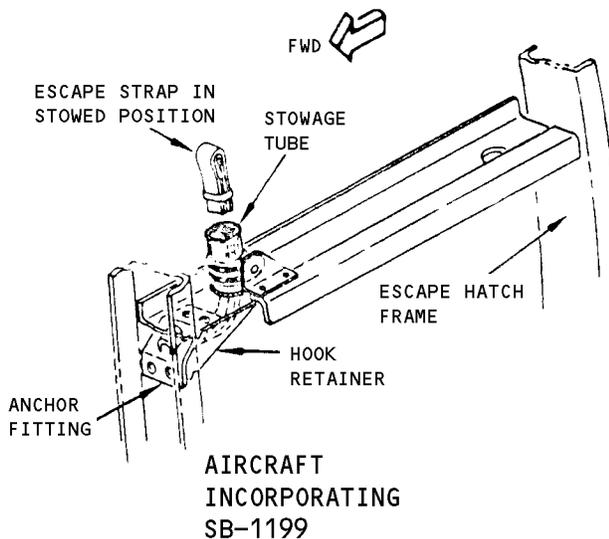
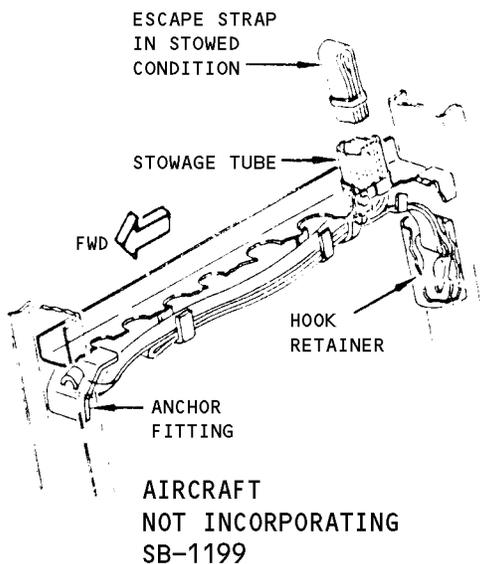
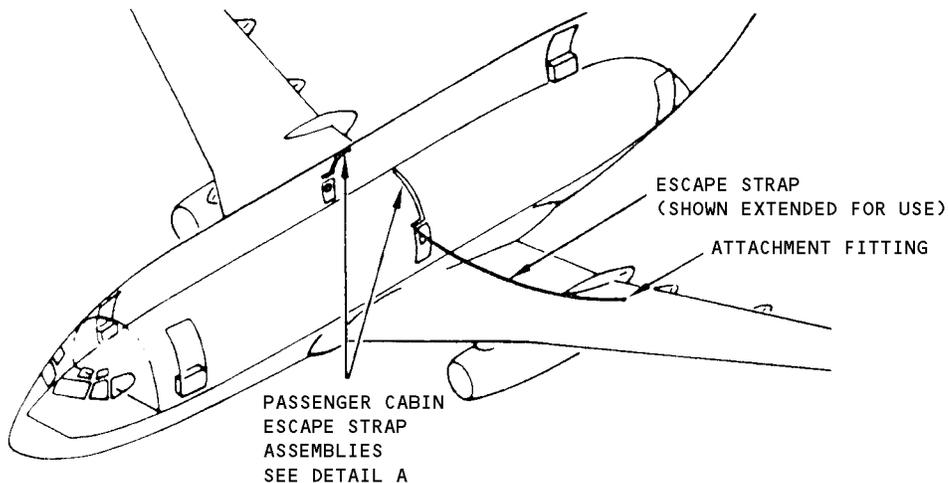
EFFECTIVITY

ALL

25-61-100

06

Page 1  
Dec 01/04



DETAIL A

Passenger Cabin Escape Straps  
 Figure 1

EFFECTIVITY	ALL
-------------	-----

25-61-100

ESCAPE ROPES/STRAPS (PASSENGER CABIN) – REMOVAL/INSTALLATION

1. Equipment and Materials

A. Tape – 0.25 inch aluminum tape, 3M 425 (Ref 20-30-51)

2. Remove Escape Strap Assembly (Fig. 401)

A. Remove emergency hatch (Ref Chapter 52, Emergency Exit Hatches).

B. Remove hook from retainer and withdraw strap from tube.

**NOTE:** (Prior to SB-1199 incorporation) Grasp center loop and pull all four lengths of strap from stowage tube.  
(After SB-1199 incorporation) Grasp center loop and pull all six lengths of strap from stowage tube.

C. Disconnect anchor, remove spacer and strap assembly.

3. Install Escape Strap Assembly (Fig. 401)

A. Locate spacer and bolt anchor in place.

B. On airplanes with anchor fitting on opposite side of escape hatch as hook retainer, fold strap into four lengths and wrap two to four times with aluminum tape in three places as shown in detail B., insert strap into tube.

C. On airplanes with anchor fitting on same side of escape hatch as hook retainer, fold strap into six lengths and wrap two to four times with aluminum tape in three places as shown in detail B, insert strap into tube.

D. Fasten hook in retainer.

E. Replace emergency exit hatch.

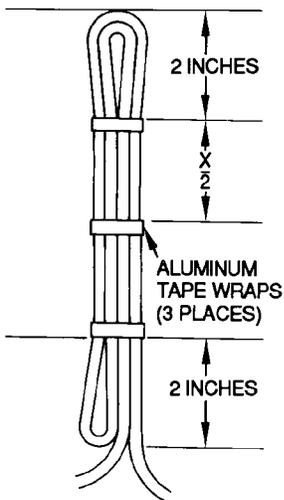
EFFECTIVITY

ALL

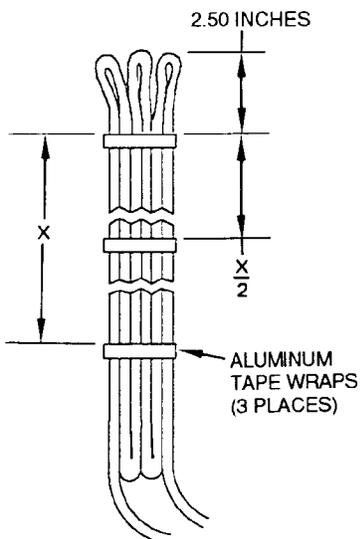
25-61-100

06

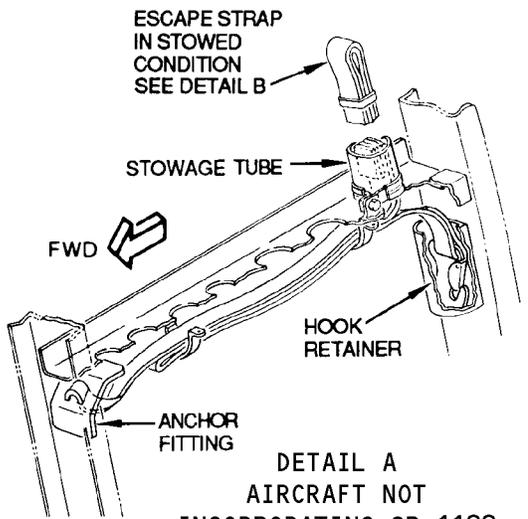
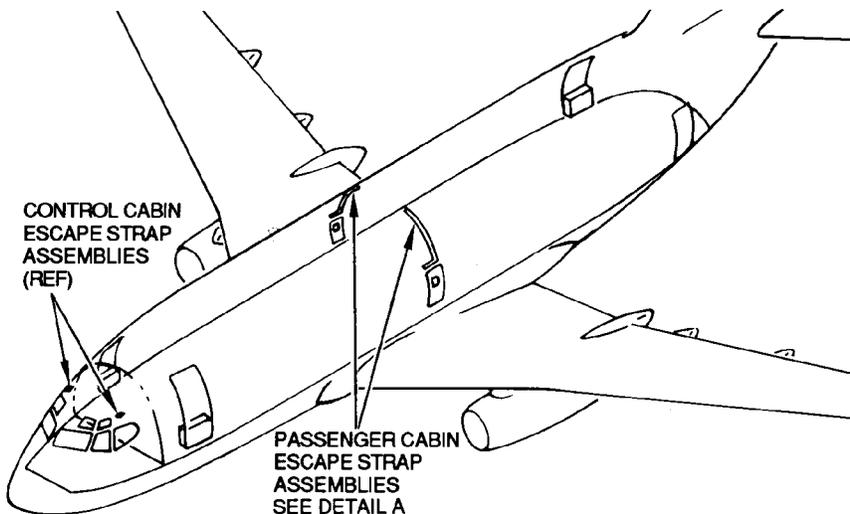
Page 401  
Dec 01/04



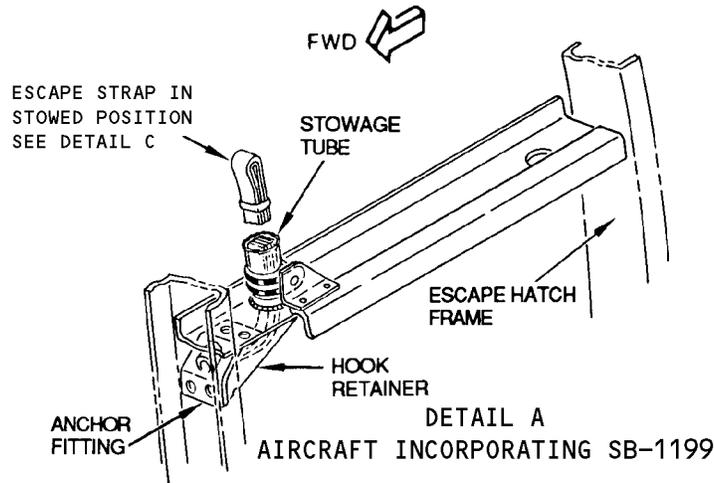
DETAIL B



DETAIL C



DETAIL A  
 AIRCRAFT NOT  
 INCORPORATING SB-1199



DETAIL A  
 AIRCRAFT INCORPORATING SB-1199

Escape Strap Installation  
 Figure 401

EFFECTIVITY	
	ALL

25-61-100

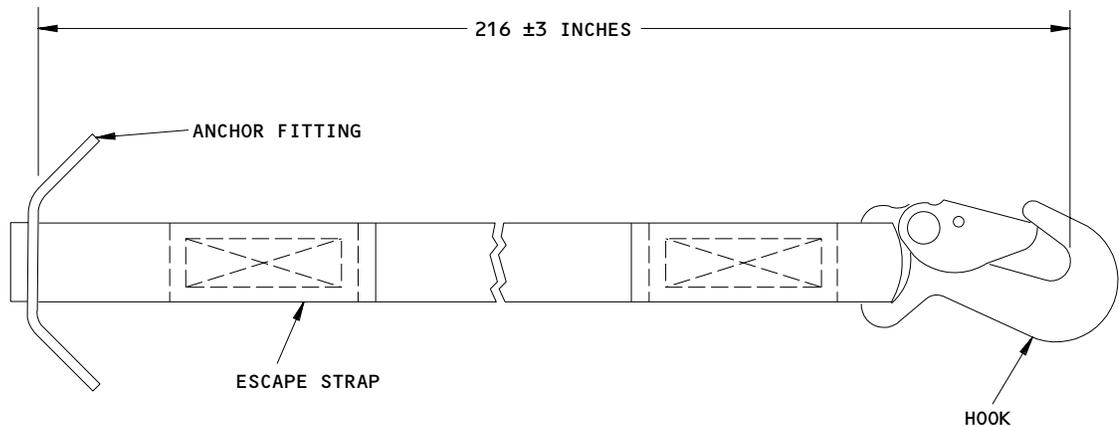
458767

ESCAPE ROPES/STRAPS (PASSENGER CABIN) – INSPECTION/CHECK

1. Escape Strap Assembly Check

A. Check Escape Strap Assembly (Fig. 601).

- (1) Check strap for fraying, wear, moisture and mildew.
- (2) Check security of anchor fitting.
- (3) Check condition and security of hook.
- (4) Check strap is correct length.



Escape Strap Check  
Figure 601

EFFECTIVITY	
	ALL

25-61-100

01

Page 601  
Dec 01/04

458778

**BOEING**  
**737**   
MAINTENANCE MANUAL

ESCAPE ROPES/STRAPS (CONTROL CABIN) – DESCRIPTION AND OPERATION

1. General

- A. An escape strap made from webbing assemblies impregnated with neoprene latex solution is attached above the captain's and the first officer's locations (Fig. 1).
- B. The two escape straps are stowed in separate compartments above the captain's and first officer's seats. The fixed end of the strap is anchored to the overhead structure at these locations. Access to the escape strap is gained by unfastening the retainer, which holds the strap in the compartment.

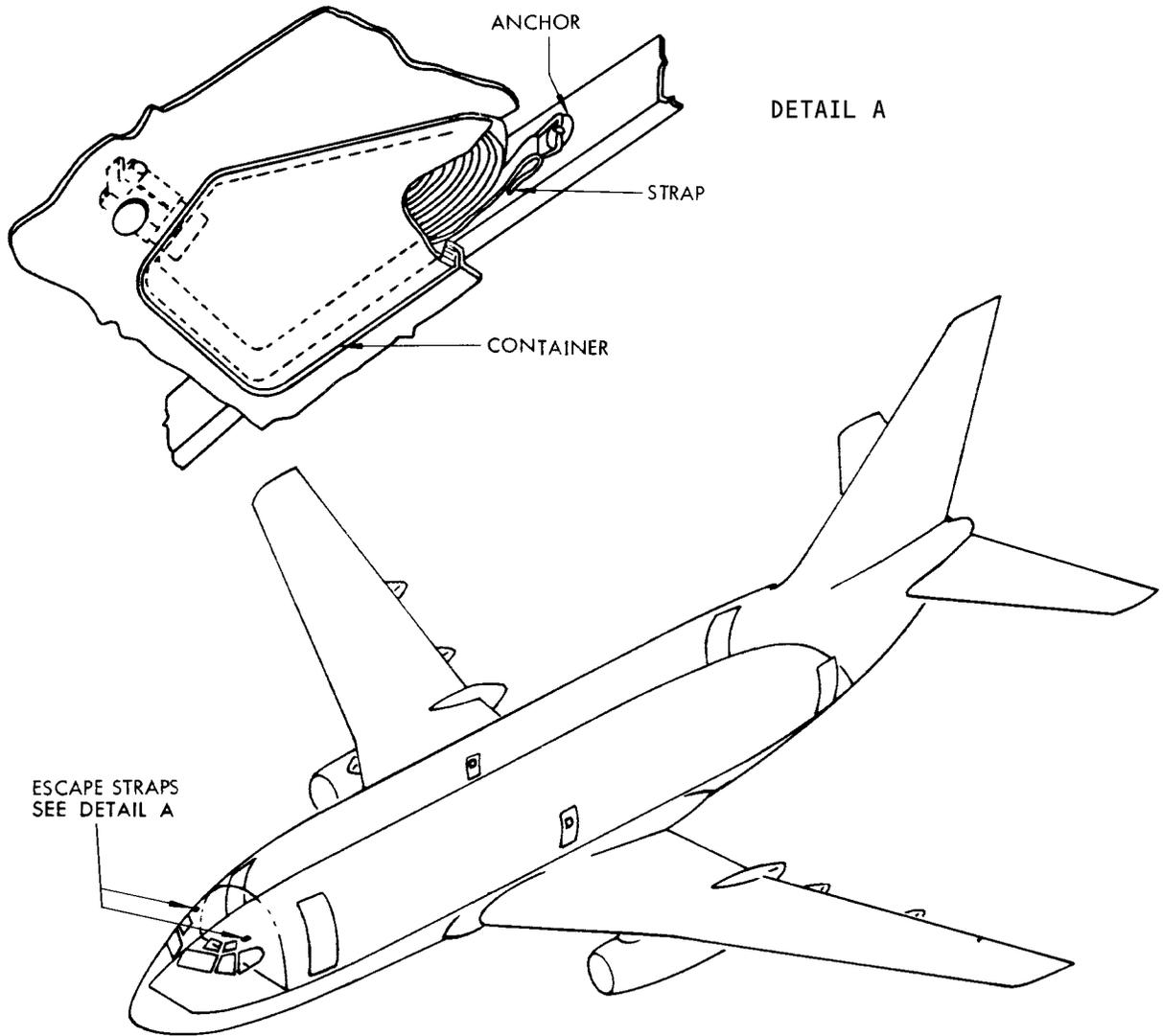
EFFECTIVITY

ALL

25-61-200

01

Page 1  
Dec 01/04



Control Cabin Escape Strap Locations  
 Figure 1

EFFECTIVITY	
	ALL

25-61-200

ESCAPE ROPES/STRAPS (CONTROL CABIN ) – REMOVAL/INSTALLATION

1. Remove Escape Strap Assembly (Fig. 401)
  - A. Unlatch and open cover and remove escape strap.
  - B. Lift anchor fitting against spring, and disengage anchor stud from structure.
  - C. Remove escape strap assembly.
2. Install Escape Strap Assembly (Fig. 401)
  - A. Engage anchor stud in anchor fitting and check that it is secure.
  - B. Roll escape strap into a coil and place in its overhead position.
  - C. Place cover in position to cover and hold escape strap in place while securing cover.

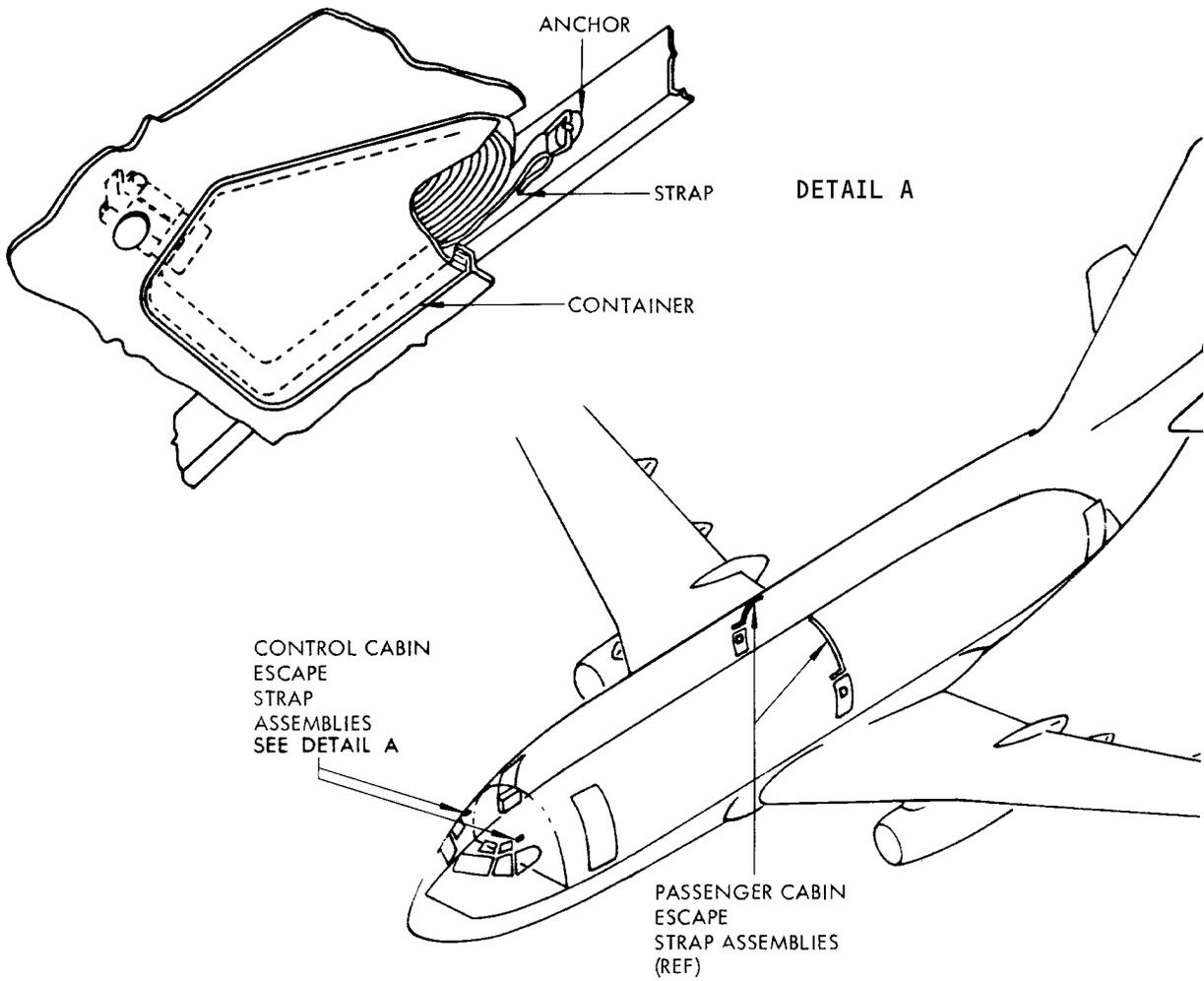
EFFECTIVITY

ALL

25-61-200

01

Page 401  
Dec 01/04



Escape Strap Installation  
 Figure 401

EFFECTIVITY	ALL
-------------	-----

25-61-200

01

Page 402  
 Dec 01/04

458786

**BOEING**  
**737**   
**MAINTENANCE MANUAL**

ESCAPE ROPES/STRAPS (CONTROL CABIN) – INSPECTION/CHECK

1. Escape Strap Assembly Check

A. Check Escape Strap Assembly(See figure 401)

- (1) Check strap for fraying, wear, moisture and mildew.
- (2) Check security of anchor.

EFFECTIVITY

ALL

25-61-200

01

Page 601  
Dec 01/04

ESCAPE SLIDE ASSEMBLY (DOOR-MOUNTED) – DESCRIPTION AND OPERATION

1. General

- A. An escape slide assembly is made up of an escape slide package, an escape slide compartment and two escape slide floor brackets. The escape slide package is in the escape slide compartment and the compartment is fastened to the lower inboard face of an entry or galley service door. The compartment can easily be removed from the door and the escape slide package can easily be removed from the compartment. The two floor brackets are on the floor, at the forward and aft ends of the doorway and just inboard of the doorsill. Each floor bracket is held to the floor structure by two screws.
- B. The escape slide package is made up of an escape slide, an air bottle and a valise. The air bottle holds high-pressure gas for inflating the slide. The valise holds the slide in its folded position when the slide is stowed and it easily opens to free the slide when the slide is being deployed.

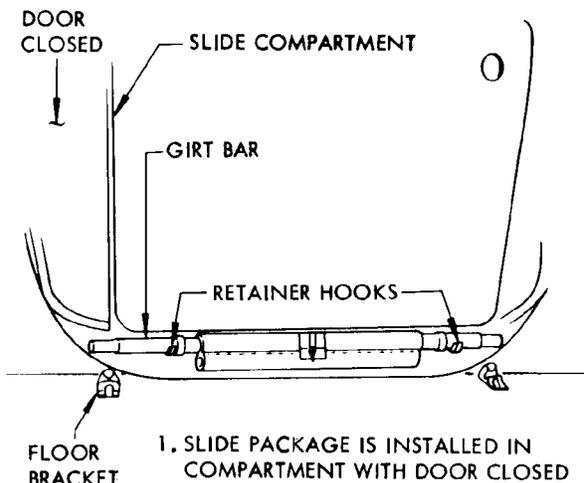
2. Operation

- A. The escape slide girt bar is normally stowed in the retainer hooks that are on the compartment cover. When it is desired to use the slide, the girt bar is taken from the retainer hooks and it is put in the escape slide floor brackets. Opening the door will then pull the escape slide package out of the compartment. The inflation handle, which is held to the slide girt by velcro tape, must be pulled to inflate any one escape slide on Standard Passenger Airplanes, and the forward entry door or the forward galley service door escape slide on Passenger/Cargo Convertible Airplanes. The aft galley service door escape slide on Passenger/Cargo Convertible Airplanes inflates automatically when it falls out of the compartment, but a manual inflation handle is furnished, which can be used if the automatic inflation system should fail. Figure 1 shows the steps for operating the slide.

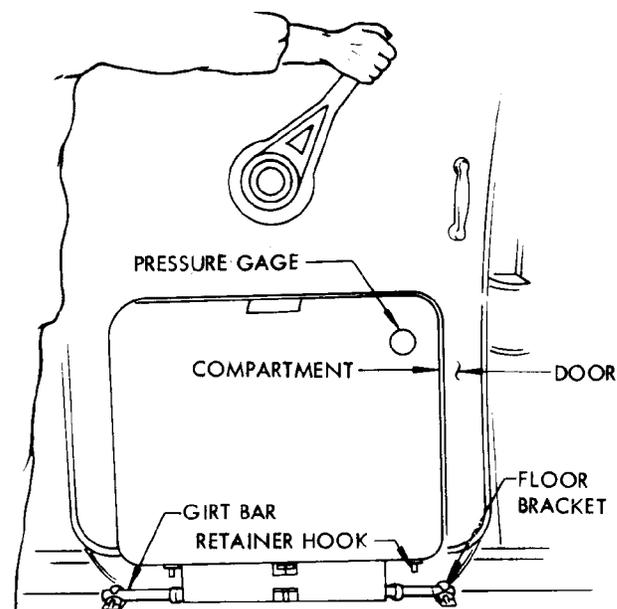
EFFECTIVITY

ALL

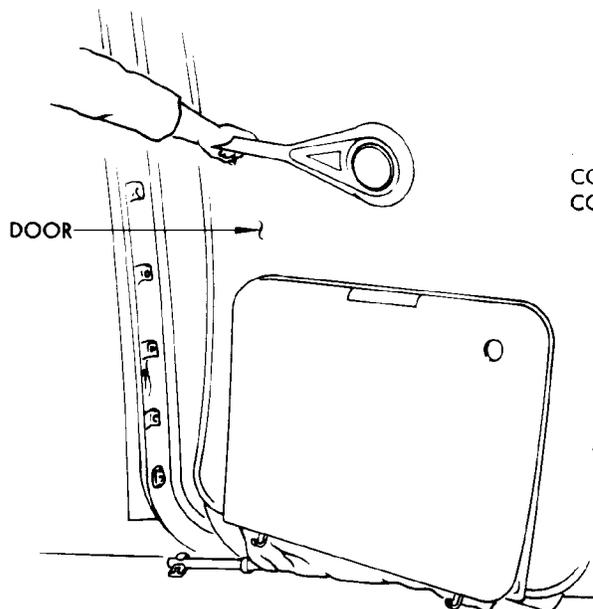
25-61-300



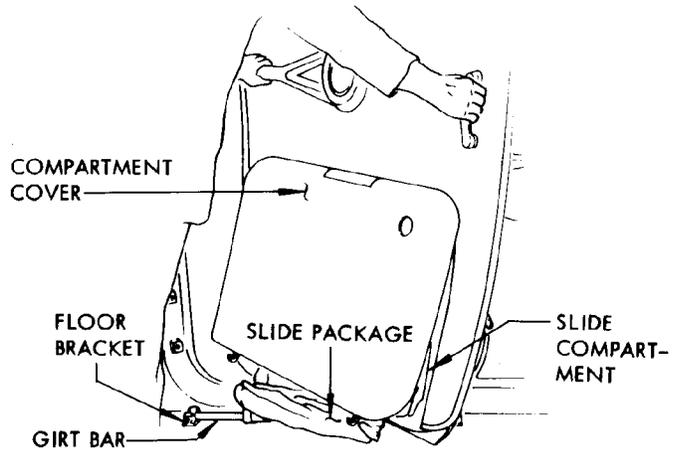
1. SLIDE PACKAGE IS INSTALLED IN COMPARTMENT WITH DOOR CLOSED



2. REMOVE GIRT BAR FROM RETAINER HOOKS ON DOOR AND PLACE IN THE FLOOR BRACKETS.
3. OPEN DOOR IN NORMAL MANNER. DO NOT HESITATE. FOLLOW THRU WITH MOTION.



4. AUTOMATIC DEPLOYMENT OCCURS DURING THE DOOR OPENING.

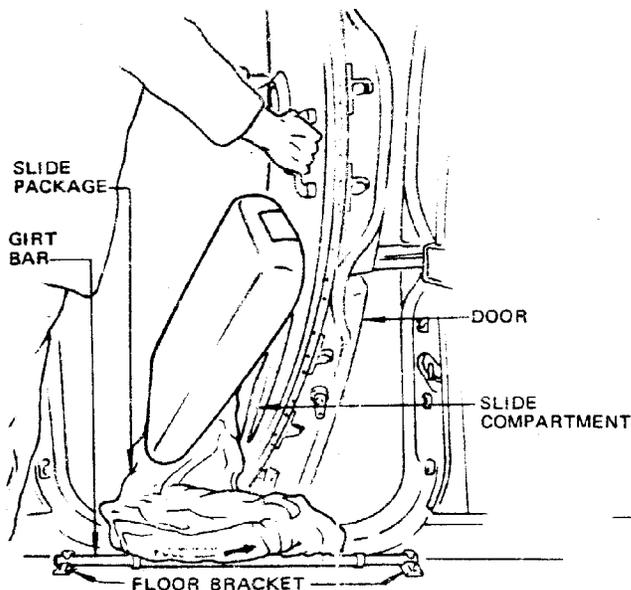


5. WITH FURTHER DOOR OPENING, THE COMPARTMENT COVER IS DISENGAGED AND IS FREE TO OPEN, ALLOWING SLIDE PACKAGE TO BE PULLED FROM COMPARTMENT.

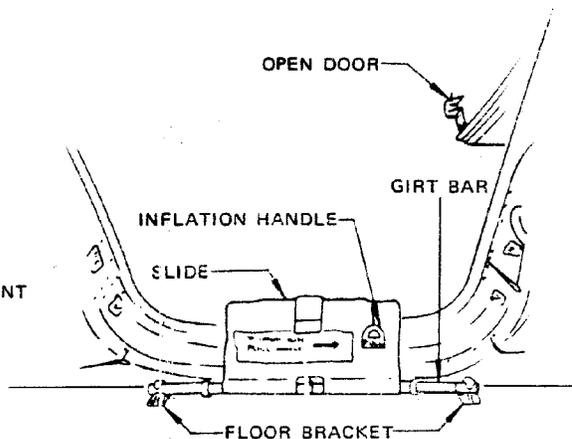
Escape Slide Operation  
 Figure 1 (Sheet 1)

EFFECTIVITY	ALL
-------------	-----

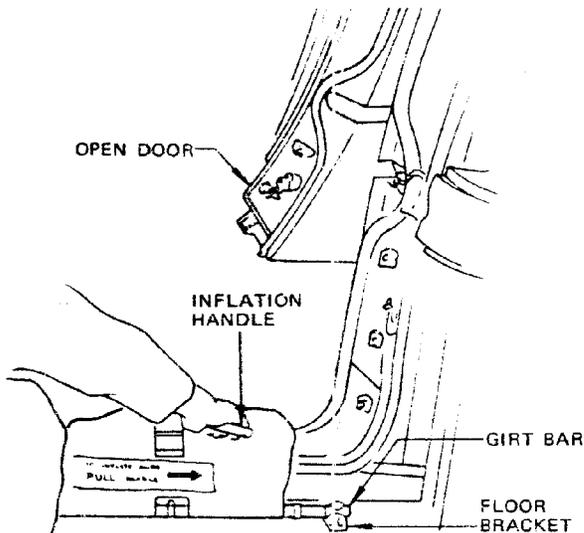
25-61-300



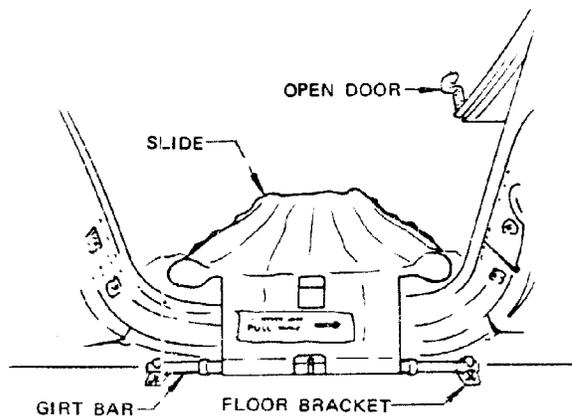
6. WITH FURTHER DOOR OPENING SLIDE PACKAGE IS PULLED DOWN AND OUT OF SLIDE COMPARTMENT.
7. CONTINUE PUSHING DOOR TO FULLY OPEN POSITION.



8. SLIDE IN POSITION READY TO INFLATE. (NOT APPLICABLE TO AFT GALLEY SERVICE DOOR ESCAPE SLIDE ON PASSENGER/CARGO CONVERTIBLE AIRPLANES WHICH INFLATES AUTOMATICALLY.)



9. PULL INFLATION HANDLE SHARPLY TO INFLATE SLIDE. THIS HANDLE WITH ATTACHED CABLE MUST BE PULLED FREE FROM SLIDE. DISCARD THE HANDLE. (NOT APPLICABLE TO AFT GALLEY SERVICE DOOR ESCAPE SLIDE ON PASSENGER/CARGO CONVERTIBLE AIRPLANES WHICH INFLATES AUTOMATICALLY.)



10. SLIDE IS FULLY INFLATED AND READY TO USE IN APPROXIMATELY SIX SECONDS.

Escape Slide Operation  
 Figure 1 (Sheet 2)

EFFECTIVITY	
	ALL

25-61-300

ESCAPE SLIDE ASSEMBLY (DOOR-MOUNTED) – MAINTENANCE PRACTICES

1. General
  - A. The escape slide assembly consists of an escape slide compartment and an escape slide package in the compartment. Escape slide floor brackets are excluded from this procedure (AMM 25-61-332).
  - B. This section provides instructions for removing and installing the escape slide assembly from the door, removing and installing the escape slide package, escape slide package inspection, escape slide package check and escape slide assembly restoration.
2. Remove Escape Slide Assembly From Door (Fig. 202)
  - A. Unlock two quarter-turn fasteners or remove attach screws.
  - B. Rotate top of compartment inboard slightly to clear door.
  - C. Lift compartment to disengage fitting from lower support bracket.
3. Install Escape Slide Assembly To Door (Fig. 202)

**NOTE:** Escape slide compartments for forward doors are not the same as those for aft doors. An aft door compartment can be identified by the following statement stenciled in red letters on its outboard side: FOR USE ON AFT SERVICE AND ENTRY DOORS ONLY. The outboard side of a forward door compartment has no markings.

- A. Set fitting in lower support bracket.
  - B. Rotate top of compartment outboard.
  - C. Align slide and engage quarter-turn fasteners or install attach screws.
4. Remove Escape Slide Package (Fig. 202)

**CAUTION:** ESCAPE SLIDE PACKAGE SHOULD BE HANDLED ONLY ON A CLEAN SURFACE. CARE SHOULD BE TAKEN NOT TO PUNCTURE OR ACCIDENTALLY INFLATE SLIDE.

- A. Remove escape slide assembly from door.
  - B. Lay escape slide assembly on floor or other horizontal surface.
  - C. Remove girt bar from retainers.
  - D. Check girt bar for pitting and/or corrosion.
  - E. Pull latch cable to open compartment latch.
  - F. On slides with spring clamp girt bar attachment, remove latch assembly (if required).
    - (1) Remove nut, screw and spacer (not on all airplanes) that fasten latch cable to spring clamp and remove latch assembly and cable.
    - (2) Remove spring clamp from girt bar.
    - (3) On slide installations without spacer, attach spring clamp to latch cable using screw and nut.
  - G. On slides without spring clamp girt bar attachment, remove latch assembly (if required).
    - (1) Remove screw that attaches cable to latch assembly.

EFFECTIVITY

ALL

25-61-311

04

Page 201  
Aug 01/06

- (2) Remove self-locking straps and remove cable.
- H. On aft slides with cover restraining straps, partially open cover and remove screws that attach straps to backing pan.
- I. Open compartment cover.

**WARNING:** TO PREVENT ACCIDENTAL INFLATION OF SLIDE AND POSSIBLE INJURY TO PERSONNEL, EXTREME CARE MUST BE EXERCISED WHENEVER SLIDE IS NOT INSTALLED IN SLIDE COMPARTMENT.

- J. On airplanes with safety pin provided, remove safety pin from valise pocket and insert into valve regulator housing (Fig. 201).

**WARNING:** TO PREVENT ACCIDENTAL INFLATION OF ESCAPE SLIDE AND POSSIBLE INJURY TO PERSONNEL, SAFETY PIN MUST BE INSTALLED.

- K. Lift escape slide package free of velcro tape that holds it to compartment backing pan.

5. Install Escape Slide Package (Fig. 202)

**CAUTION:** ESCAPE SLIDE PACKAGE SHOULD BE HANDLED ONLY ON A CLEAN SURFACE. CARE SHOULD BE TAKEN NOT TO PUNCTURE OR ACCIDENTALLY INFLATE SLIDE.

- A. Open compartment cover and lay compartment on floor or other horizontal surface.
- B. Check that air bottle pressure gage reading is within allowable limits.
- C. Lay escape slide package in compartment backing pan with girt opening centered around backing pan latch bracket.
- D. On slides with safety pin provided, remove safety pin and stow in valise in pocket under flap.

**CAUTION:** PIN MUST BE REMOVED WHEN ESCAPE SLIDE IS INSTALLED, SO SLIDE WILL BE OPERATIVE IN EMERGENCY.

- E. Make sure slide inflation cable is connected to the air bottle valve regulator.
- F. Inspect and lubricate latch assembly.
  - (1) Make sure there is no corrosion on the latch.
  - (2) Make sure there is no corrosion on the pins in the latch.
  - (3) Make sure the latch operates correctly.
  - (4) Spray the latch and pin with Penetrating oil (A-A-50493).
- G. On slides with spring clamp girt bar attachment, install latch assembly (if not previously installed).
  - (1) Position slide package with girt extended (Fig. 202, Stage I).
  - (2) If spring clamp is attached to latch cable, remove clamp from cable.
  - (3) Install spring clamp over girt bar.

EFFECTIVITY

ALL

25-61-311

03

Page 202  
Aug 01/06



## MAINTENANCE MANUAL

- (4) Check that cable length is as specified.
- (5) Slip latch cable and spacer (not on all airplanes) between ends of spring clamp and install screw and nut so that screwhead is towards handle side of girt.

**WARNING:** MAKE SURE THAT YOU USE A NEW SCREW, A NEW SELF-LOCKING NUT AND TWO NEW WASHERS WHEN YOU INSTALL THE LATCH CABLE TO THE LATCH BLOCK ASSEMBLY. MAKE SURE THAT YOU USE THE CORRECT HARDWARE FOR THE CONNECTION. IF YOU REUSE THE OLD HARDWARE OR THE INCORRECT HARDWARE, YOU COULD CAUSE THE LATCH CABLE TO DISCONNECT FROM THE LATCH BLOCK ASSEMBLY CAUSING THE DOOR-MOUNTED ESCAPE SLIDE TO DEPLOY.

- H. On slides without spring clamp girt bar attachment, install latch assembly (if not previously installed).
  - (1) Position slide package with girt extended (Fig. 202, Stage I).
  - (2) Check that cable length is as specified.
  - (3) Route release cable around girt bar at center of girt window and under lower surface of girt.
  - (4) Position one cable end loop on each side of hole in latch assembly with a washer on outside of each loop. Attach cable to latch assembly with screw and nut.
  - (5) Tie cable segments together at a point approximately 0.5 inch from center of latch assembly screw and at a point approximately 1.5 inches from center of girt bar using self-locking straps.
- I. On aft slides with cover restraining straps, attach each strap to backing pan with screwhead on inner surface of pan and strap, washer, and nut on outer surface of pan.
- J. Close compartment cover.
- K. Lay girt on compartment cover so latch can be seen (Fig. 202, Stage II).
- L. Align compartment latch bracket with cover latch bracket and snap latch assembly into both latch brackets (Fig. 202).
- M. Put girt bar in retainers.
- N. Check that air bottle pressure gage can be seen through inspection window.
- O. Install escape slide assembly on door.

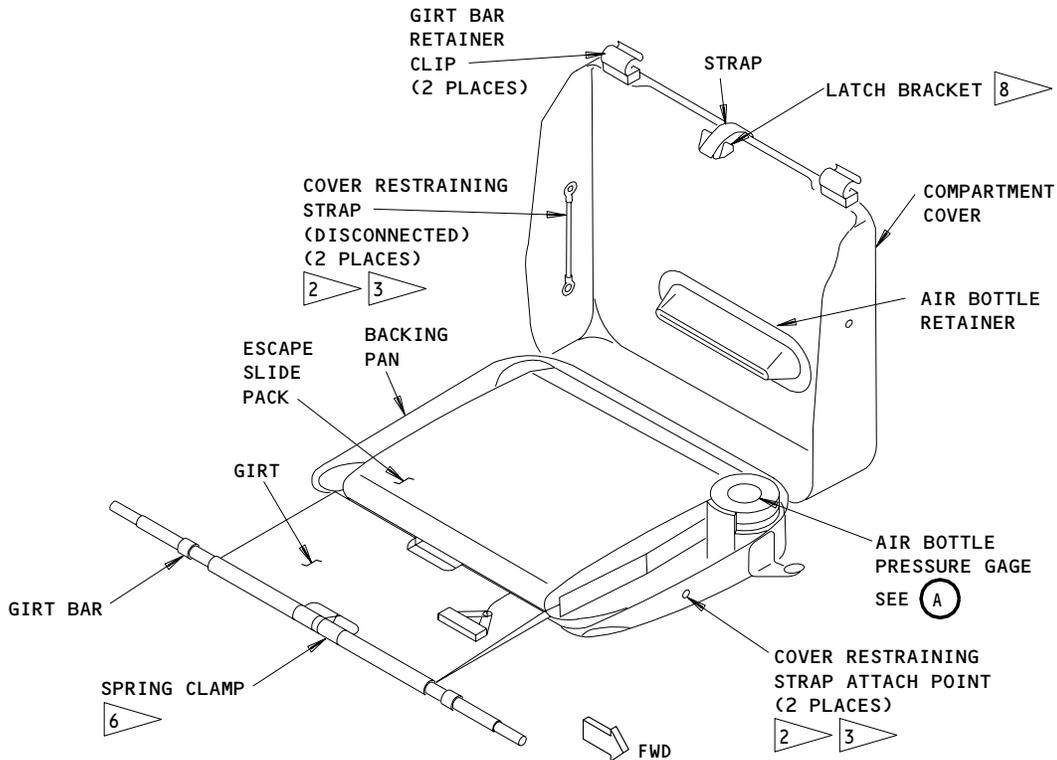
EFFECTIVITY

ALL

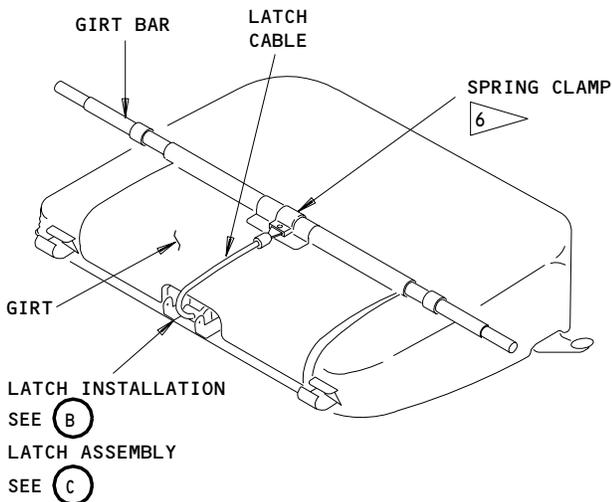
25-61-311

07

Page 203  
Aug 01/06

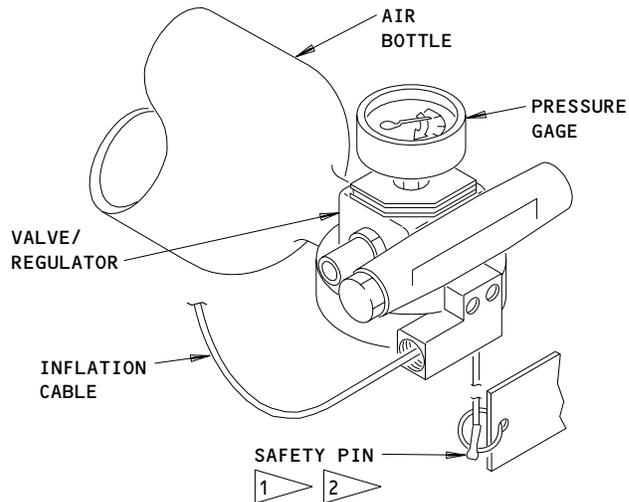


**ESCAPE SLIDE INSTALLED IN BACKING PAN  
STAGE I**



**ESCAPE SLIDE COMPARTMENT  
COVER CLOSED AND LATCHED  
STAGE II**

- 1 ▷ PIN MUST BE REMOVED WHEN ESCAPE SLIDE IS INSTALLED, SO THAT SLIDE WILL BE OPERATIVE IN EMERGENCY
- 2 ▷ NOT ON ALL AIRPLANES
- 3 ▷ AFT DOORS



**SAFETY PIN INSTALLATION**

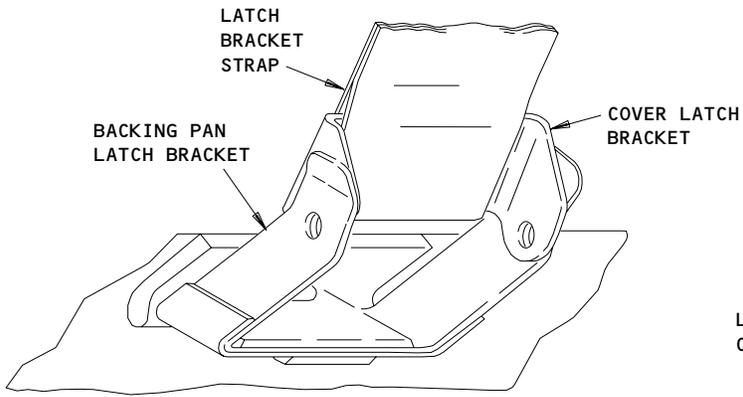
(A)

**Escape Slide Operation  
Figure 201**

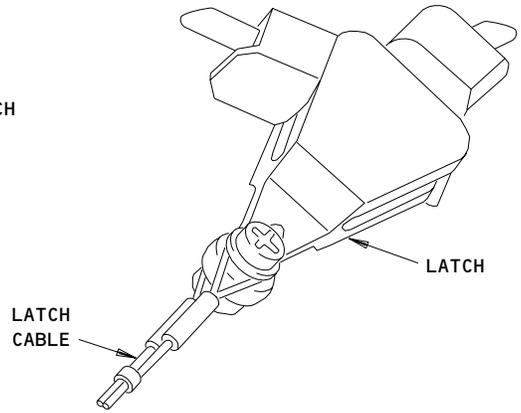
EFFECTIVITY	
	ALL

**25-61-311**

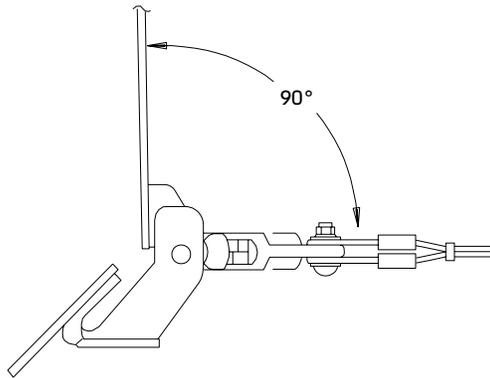
**MAINTENANCE MANUAL**



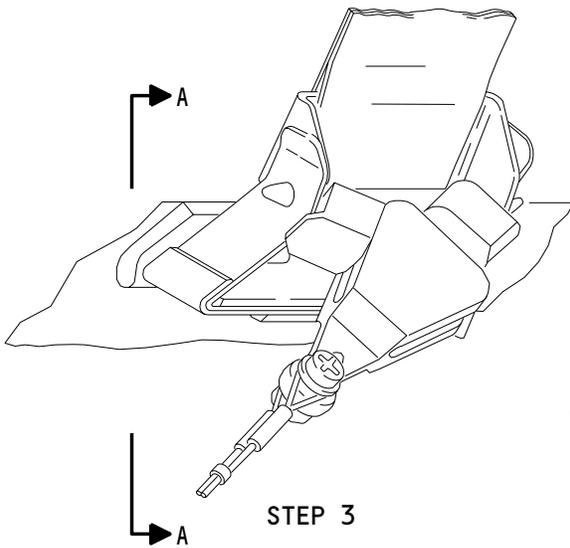
**STEP 1**



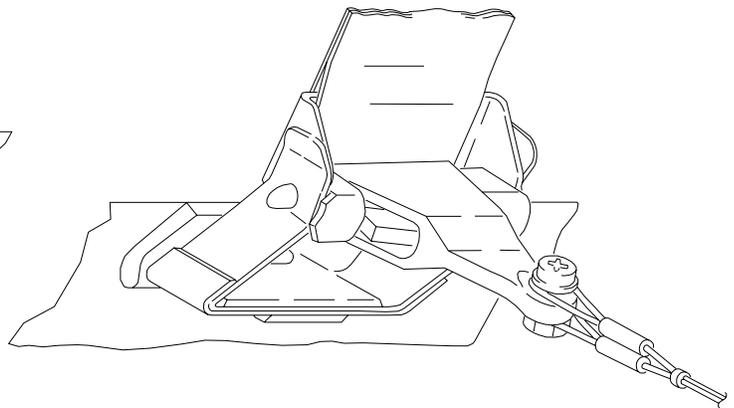
**STEP 2**



**A-A**

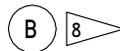


**STEP 3**



**STEP 4**

**LATCH INSTALLATION**



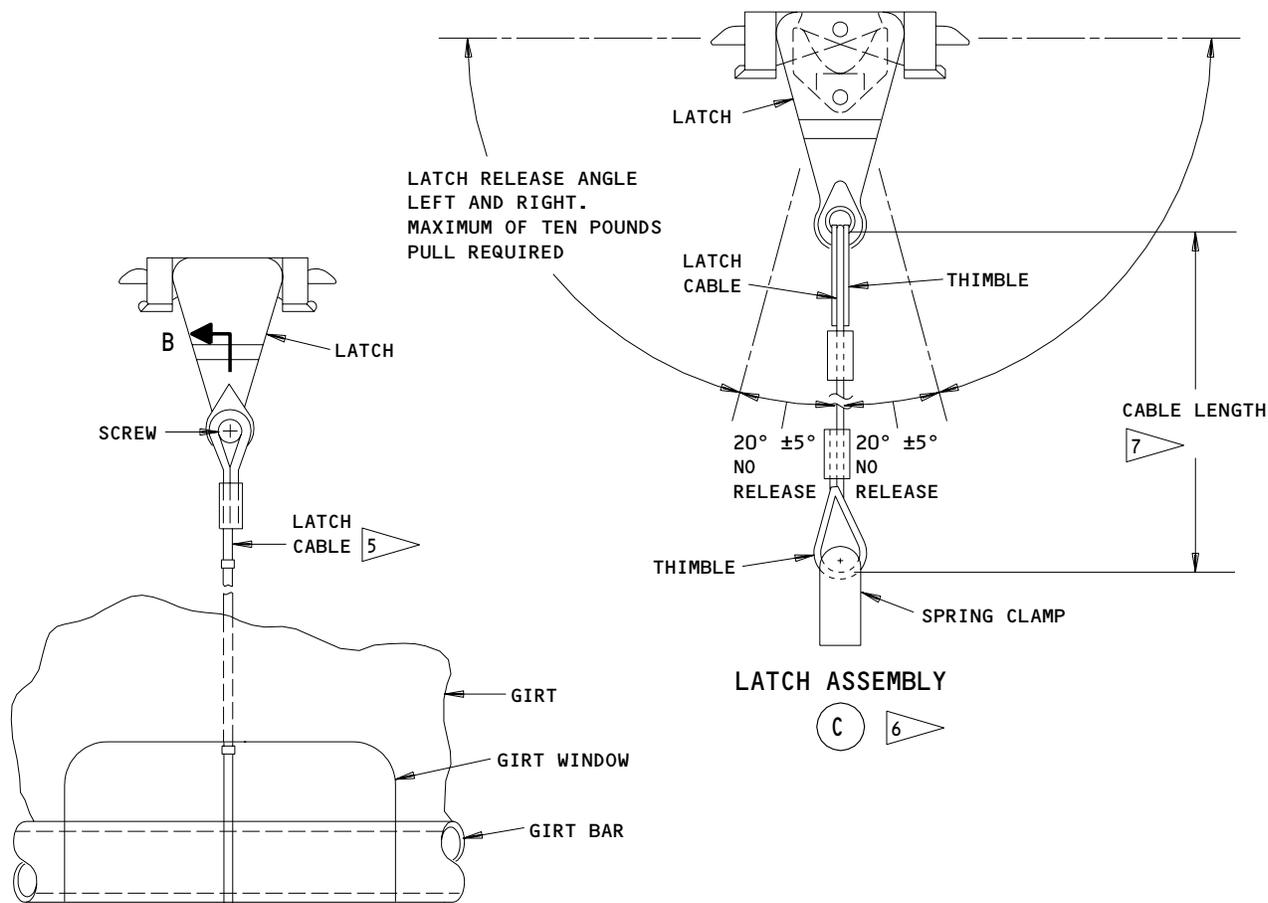
**Escape Slide Installation  
Figure 202 (Sheet 1)**

EFFECTIVITY	ALL
-------------	-----

**25-61-311**

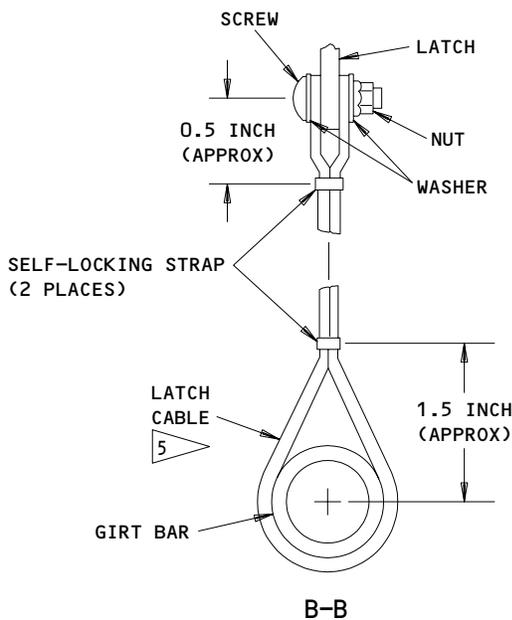


**MAINTENANCE MANUAL**



**LATCH ASSEMBLY**

- 4 AIRPLANES WITHOUT SPRING CLAMP GIRT BAR ATTACHMENT (PREFERRED)
- 5 OVERALL CABLE LENGTH (BEFORE ATTACHMENT TO GIRT BAR)  
AFT DOOR - 12 INCHES (REF)  
FWD DOOR - 14 INCHES (REF)
- 6 AIRPLANES WITH SPRING CLAMP GIRT BAR ATTACHMENT (ALTERNATE)
- 7 CABLE LENGTH:  
AFT DOOR - 3.4 INCHES (REF)  
FWD DOOR - 8.5 INCHES (REF) (PREFERRED)  
FWD DOOR - 4.4 INCHES (REF) (ALTERNATE)
- 8 PREFERRED LATCH BRACKET INSTALLATION SHOWN, ALTERNATE INSTALLATION - BRACKET ATTACHED DIRECTLY TO COVER



**Escape Slide Installation  
Figure 202 (Sheet 2)**

EFFECTIVITY

ALL

**25-61-311**

04

Page 206  
Dec 01/04

6. Escape Slide Package Inspection (Fig. 202)

A. Examine escape slide package.

- (1) Examine escape slide girt for a frayed or worn condition.
- (2) Examine fasteners to ensure slide is securely attached to door.
- (3) Examine girt bar.
  - (a) Remove pins from collars to free girt bar to check pitting or corrosion.

NOTE: Nylon sleeve may be bonded to girt bar. If bond forms a complete fillet at both ends of sleeve, no further check is required. If a bonded sleeve must be removed, cut off sleeve and replace with new sleeve after applying BMS 3-23 (AMM 20-30-21).

- (4) Make sure there is no corrosion on the latch.
- (5) Make sure there is no corrosion on the pins in the latch.
- (6) Make sure the latch operates correctly.
- (7) Spray the latch and pin with Penetrating Oil (A-A-50493)

7. Escape Slide Package Check (Fig. 202)

A. Check Escape Slide Package

- (1) To ensure that the slide is kept ready for emergency use, check the air bottle pressure gage reading frequently.
- (2) On airplanes with direct readout gages, acceptable gage readings at various temperatures are given in Fig. 202.
  - (a) Red markings on gage face helps alert personnel to the need for checking gage reading against the data in Fig. 202.

NOTE: Reference to pressure values in Fig. 202, rather than red markings, is required to determine whether cylinder pressure is acceptable.

- (3) On airplanes with temperature-compensated gages, the gage has a movable green band with a NO-GO dial. Reference pressures are not used.
  - (a) Check that gage needle is within the green band or slightly above or below.

NOTE: If the temperature of the inflation cylinder is not constant for 2 hours, ensure the pressure gage needle is in the green band or not more than one-half green band width to the right or the left of the green band.

EFFECTIVITY

ALL

25-61-311

06

Page 207  
Aug 01/06



## MAINTENANCE MANUAL

- (4) Although the slide will be usable following inflation with the bottle pressure at the "minimum safe level", it is recommended that the pressure should be no less than 3000 psig (at 70°F) for initial installation of the slide on the airplane, and that the bottle be recharged before the pressure drops below the "minimum safe level".

EFFECTIVITY

ALL

25-61-311

06

Page 208  
Aug 01/06

Escape Slide Air Bottle Safe Operating Range Figure 202							
PRESSURE		TEMPERATURE		PRESSURE		TEMPERATURE	
MINIMUM SAFE	RECOMMENDED	°F	°C	MINIMUM SAFE	RECOMMENDED	°F	°C
3410	3730	160	71	2600	2840	50	10
3330	3650	150	66	2530	2760	40	4
3260	3560	140	60	2460	2670	30	-1
3190	3490	130	54	2380	2590	20	-7
3110	3400	120	49	2310	2510	10	-12
3040	3320	110	43	2240	2430	0	-18
2970	3240	100	38	2160	2350	-10	-23
2900	3160	90	32	2090	2260	-20	-29
2820	3080	80	27	2010	2180	-30	-35
2750	3000	70	21	1940	2100	-40	-40
2680	2920	60	16	1860	2010	-50	-46

8. Escape Slide Assembly Restoration

- A. Using hand, partially open aspirator flapper door to partially deflate escape slide until slide is soft, but retains its shape.
- B. Tie each end of a rope around opposite ends of the girt bar -- as close in to the girt material as possible.
- C. Disconnect girt bar from floor fittings.

**NOTE:** To ease in disconnecting girt bar from floor fittings, provide slack in girt.

- D. With two men holding rope attached to girt bar and two men pulling outward on lower end of slide, lower slide to ground.

**CAUTION:** HANDLE INFLATED ESCAPE SLIDE WITH CARE TO AVOID DAMAGE TO ESCAPE SLIDE, AND SLIDE INFLATION COMPONENTS. CLEAR OBSTRUCTIONS AND DEBRIS FROM GROUND BELOW INFLATED ESCAPE SLIDE TO AVOID DAMAGE WHEN SLIDE IS LOWERED TO GROUND.

EFFECTIVITY

ALL

**25-61-311**



## MAINTENANCE MANUAL

- E. Complete slide deflation using slide deflation clamp. Attach clamp to aspirator to hold flapper doors open.
- F. On escape slides with integral lights, install light lanyard to prevent battery discharge.
- G. Place slide in handling container.

EFFECTIVITY

ALL

25-61-311

04

Page 210  
Mar 18/05

ESCAPE SLIDE PACKAGE (DOOR-MOUNTED) – REMOVAL/INSTALLATION

1. General

A. The escape slide package consists of the escape slide, the air bottle and the valise, which holds the slide in its folded position.

2. Remove Escape Slide Package (Fig. 401)

**CAUTION:** ESCAPE SLIDE PACKAGE SHOULD BE HANDLED ONLY ON A CLEAN SURFACE.  
CARE SHOULD BE TAKEN NOT TO PUNCTURE OR ACCIDENTALLY INFLATE SLIDE.

- A. Remove escape slide assembly from door (AMM 25-61-300).
- B. Lay escape slide assembly on floor or other horizontal surface.
- C. Remove girt bar from retainers.
- D. Check girt bar for pitting and/or corrosion (AMM 25-61-311/601).
- E. Pull latch cable to open compartment latch.
- F. On slides with spring clamp girt bar attachment, remove latch assembly.
  - (1) Remove nut, screw and spacer that fasten latch cable to spring clamp.
  - (2) Slide spring clamp over nylon sleeve cemented to slide girt.
  - (3) Reinstall nut, screw and spacer to fasten latch cable to spring clamp.
- G. On slides without spring clamp girt bar attachment, remove latch assembly.
  - (1) Remove screw that attaches cable to latch assembly.
  - (2) Remove self-locking straps and remove cable.
- H. On aft slides with cover restraining strap, partially open cover and remove screw that attaches strap to backing pan.
- I. Open compartment cover.
- J. Remove the escape slide package from the compartment backing pan.

3. Install Escape Slide Package (Fig. 401)

**CAUTION:** ESCAPE SLIDE PACKAGE SHOULD BE HANDLED ONLY ON A CLEAN SURFACE.  
CARE SHOULD BE TAKEN NOT TO PUNCTURE OR ACCIDENTALLY INFLATE SLIDE.

- A. Open compartment cover and lay compartment on floor or other horizontal surface.
- B. Check that air bottle pressure gage reading is within allowable limits (Ref Door-Mounted Inflatable Escape Slide – I/C).
- C. Lay escape slide package in compartment backing pan with girt opening centered around backing pan latch bracket (Stage I).
- D. Using eyedropper or similar applicator, apply BMS 3-23 to girt bar all around nylon sleeves (AMM 20-30-21, Lubricants).

**NOTE:** If nylon sleeve is bonded to girt bar and band forms a complete fillet at both ends of sleeve, BMS 3-23 need not be applied.

EFFECTIVITY

ALL

25-61-311

03

Page 401  
Aug 01/06



## MAINTENANCE MANUAL

- E. Apply solid film lubricant BMS 3-8 (AMM 20-30-21) to latch.
- F. On slides with spring clamp girt bar attachment, install latch assembly.
  - (1) Remove nut, screw and spacer that fasten latch cable to spring clamp.
  - (2) Slide spring clamp over nylon sleeve cemented to slide girt.
  - (3) Check that cable length is as specified in View I.
  - (4) Reinstall nut, screw and spacer to fasten latch cable to spring clamp.

**NOTE:** Assure the latch cable is draped over exterior surface of girt with girt bar stowed in retainer (Fig. 401, Stage II).

- G. On slides without spring clamp girt bar attachment, install latch assembly.
  - (1) Position slide package with girt extended (Fig. 201, Stage I).
  - (2) Check that cable length is as specified in View I.
  - (3) Route release cable around girt bar at center of girt window and under lower surface of girt.
  - (4) Position one cable end loop on each side of hole in latch assembly with a washer on outside of each loop. Attach cable to latch assembly with screw and nut.
  - (5) Tie cable segments together at a point approximately 0.5 inch from center of latch assembly screw and at a point approximately 1.5 inches from center of girt bar using self-locking straps.
- H. On aft slides with cover restraining strap, attach strap to backing pan with screwhead on inner surface of pan and strap, washer, and nut on outer surface of pan.
- I. Close compartment cover.
- J. Lay girt on compartment cover so latch can be seen (Stage II).
- K. Snap latch assembly into cover latch bracket.
- L. Snap backing pan latch bracket over latch pins.
- M. Put girt bar in retainers.
- N. Check that air bottle pressure gage can be seen through inspection window.
- O. Install escape slide assembly on door (AMM 25-61-300).

EFFECTIVITY

ALL

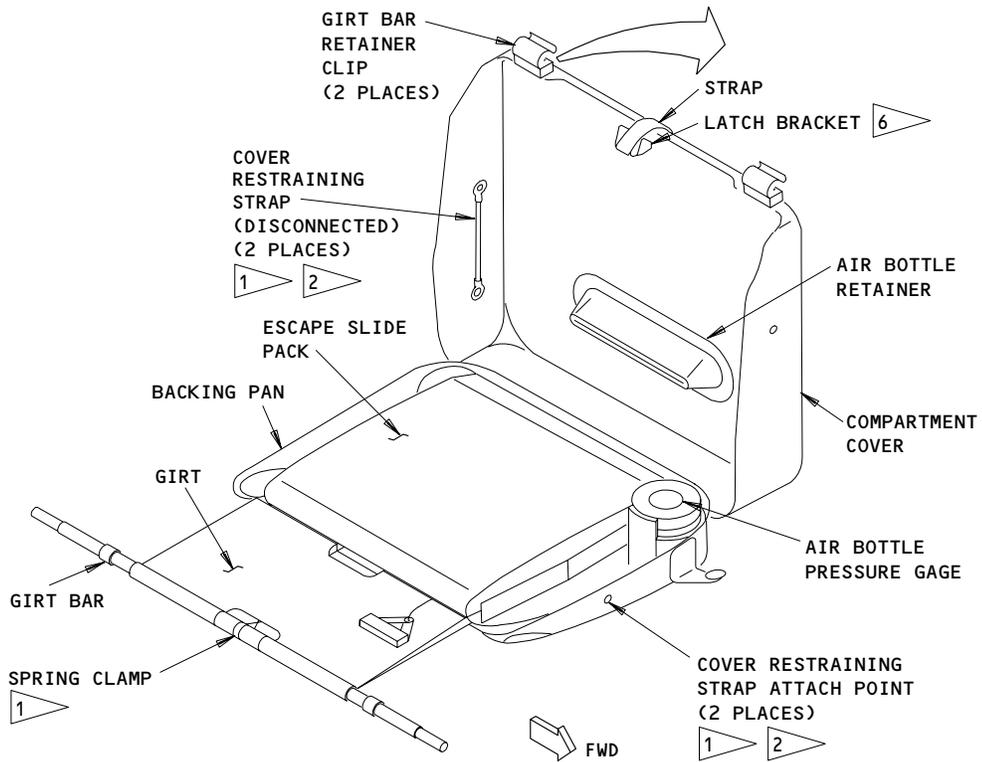
25-61-311

03

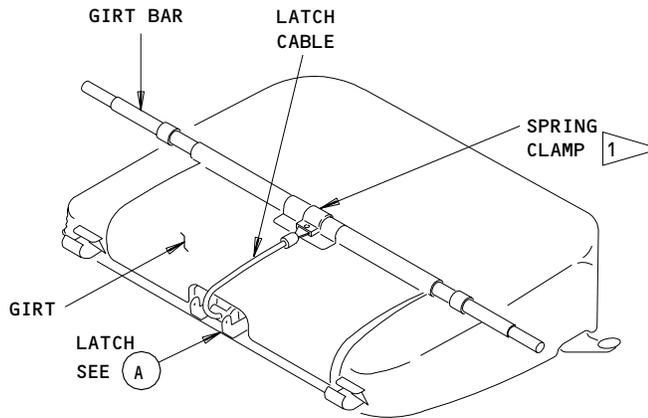
Page 402  
Aug 01/06



**MAINTENANCE MANUAL**



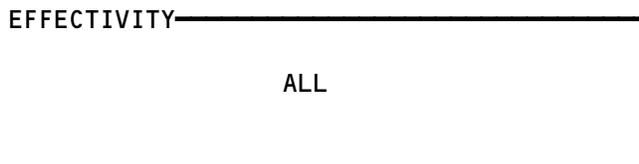
**ESCAPE SLIDE INSTALLED IN BACKING PAN  
STAGE I**



**ESCAPE SLIDE COMPARTMENT  
COVER CLOSED AND LATCHED  
STAGE II**

- 1 NOT ON ALL AIRPLANES
- 2 AFT DOORS

**Escape Slide Installation  
Figure 401**



**25-61-311**

ESCAPE SLIDE PACKAGE (DOOR-MOUNTED) – ADJUSTMENT/TEST

1. General

A. This procedure provides instructions for a system test of the door-mounted escape slide system at each entry or service door.

2. Equipment and Materials

A. Protective Pad – Ensolite – 1 x 48 inches – commercially available

3. Test Door-Mounted Escape slide

A. Install a protective pad to the external airplane skin panel below the door. Tape the pad to airplane skin to prevent ingestion by the slide aspirator.

**CAUTION:** PLACE A PROTECTIVE PAD ON THE FUSELAGE SKIN. THE FUSELAGE SKIN COULD BE DAMAGED BY THE AIR CYLINDER IF THE SYSTEM IS TESTED WITHOUT THE PROTECTIVE PAD IN POSITION.

**NOTE:** We also recommend that you lay carpet on the surface where the slide will fall to protect the slide from abrasions.

B. Close and latch the entry or service door.

**WARNING:** CLEAR ALL PERSONNEL AND EQUIPMENT FROM THE PATH OF DEPLOYING SLIDE INSIDE AND OUTSIDE OF THE ENTRY/SERVICE DOOR. THE SLIDE INFLATES WITH A GREAT FORCE. SERIOUS INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT COULD OCCUR FROM CONTACT WITH THE SLIDE.

C. Make sure the needle on the pressure gage is within the green band.

D. Make sure the girt bar floor bracket fittings are clear of any obstructions.

E. Remove the girt bar from the retainer hooks on slide cover and install the girt bar into the floor bracket fittings.

F. Open the door in a normal manner. DO NOT HESITATE. Continue pushing the door to fully open.

G. Make sure the slide is opened and inflated to usable condition within 10 seconds after the compartment latch assembly is released.

H. Restore airplane to normal.

(1) Do the escape slide/assembly restoration (AMM 25-61-311/201, Restoration).

(2) Remove the protective pad from the airplane skin below door.

EFFECTIVITY

ALL

25-61-311

01

Page 501  
Aug 01/06

ESCAPE SLIDE BATTERY – INSPECTION/CHECK

1. Check Battery Voltage

A. Equipment and Materials

- (1) Test Unit – TU-12 or TU-14, DME Corp., 111 SW 33rd Street, Ft Lauderdale, FL 33315

B. Test battery voltage of lighting system without unpacking slide as follows:

- (1) Remove slide package from door and open package without disconnecting latch cable (Ref R/I).
- (2) Open valise sufficiently to expose switch pin/lanyard and power unit test connector (Fig. 601).
- (3) Check power unit expiration date. Replace if expiration date is sooner than next scheduled maintenance date.
- (4) Check that all electrical connections between lamp harness, power unit, test set, and test adapter are positioned and that switch pin/lanyard is installed in power unit.
- (5) Set load selector knob to B.
- (6) Install four pin test connector from the power unit in test receptacle.
- (7) Move test unit arm switch to ARM position.
- (8) Depress test unit activate switch to activate test unit.
- (9) Depress the Lamp-Test-Button until the ampere reading on ammeter is stabilized. Release the Test Button; the ampere reading must be greater than 0.730 with the TU-12 test unit or greater than 0.770 with the TU-14 test unit.

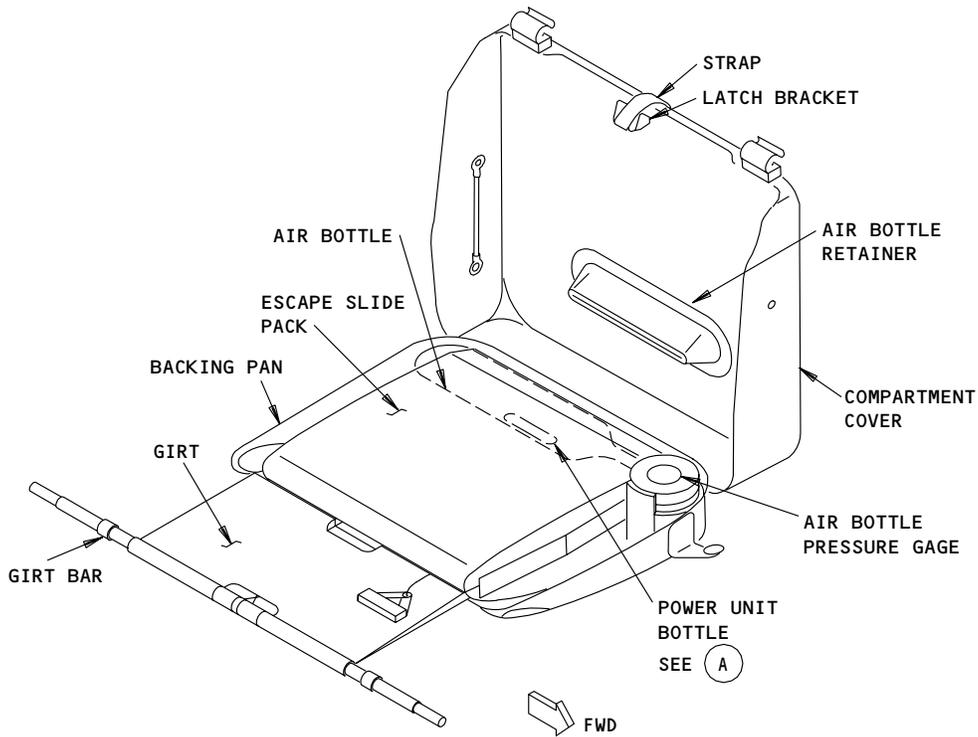
**CAUTION:** CHECK THAT THE SWITCH PIN/LANYARD IS INSTALLED IN POWER UNIT. NOT INSTALLING SWITCH PIN/LANYARD WILL DISCHARGE POWER UNIT.

EFFECTIVITY  
Airplanes with Door-Mounted  
Escape Slide Integral

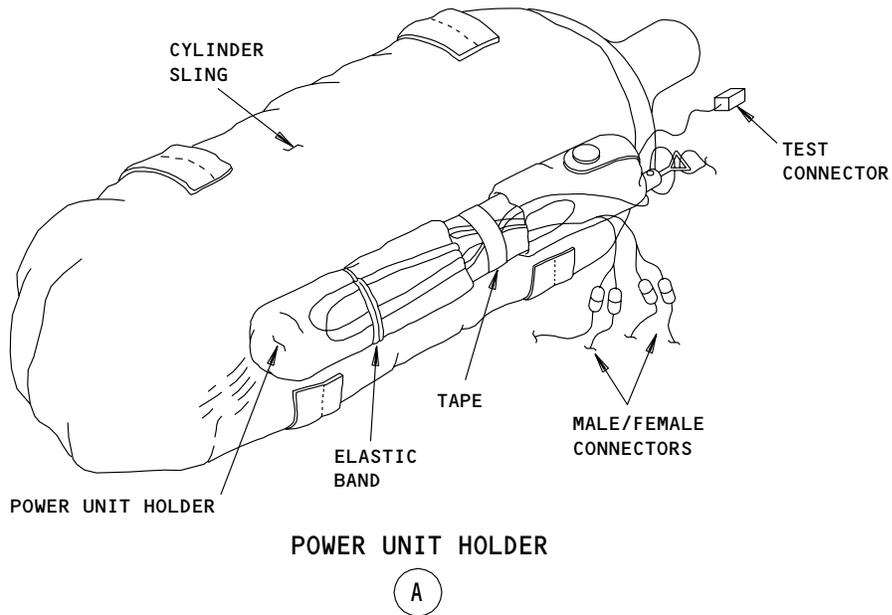
25-61-312

01

Page 601  
Dec 01/04



**ESCAPE SLIDE INSTALLED IN BACKING PAN**



**Escape Slide Installation  
 Figure 601**

**EFFECTIVITY**  
 Airplanes with Door-Mounted  
 Escape Slide Integral

**25-61-312**

458908

ESCAPE SLIDE FLOOR BRACKETS – REMOVAL/INSTALLATION

1. General
  - A. Escape slide floor brackets should be removed and installed only when damage necessitates replacement of the bracket, pawl or pawl spring.
2. Equipment and Materials
  - A. Any one of the following sealants:
    - (1) BMS 5-12, class B
    - (2) BMS 5-18, type II
    - (3) BMS 5-19, class B
    - (4) BMS 5-22
    - (5) BMS 5-37, class B
    - (6) Acid sealant EC-801
  - B. Refer to Chapter 51, Seals and Sealing, for other equipment and materials.
3. Remove Escape Slide Floor Brackets (See figure 401.)
  - A. Loosen two mounting screws and remove bracket.
  - B. Drive pawl roll pin out to remove pawl.
  - C. Unhook pawl spring from pawl and from cotter pin through opening in outboard face of bracket and remove spring.

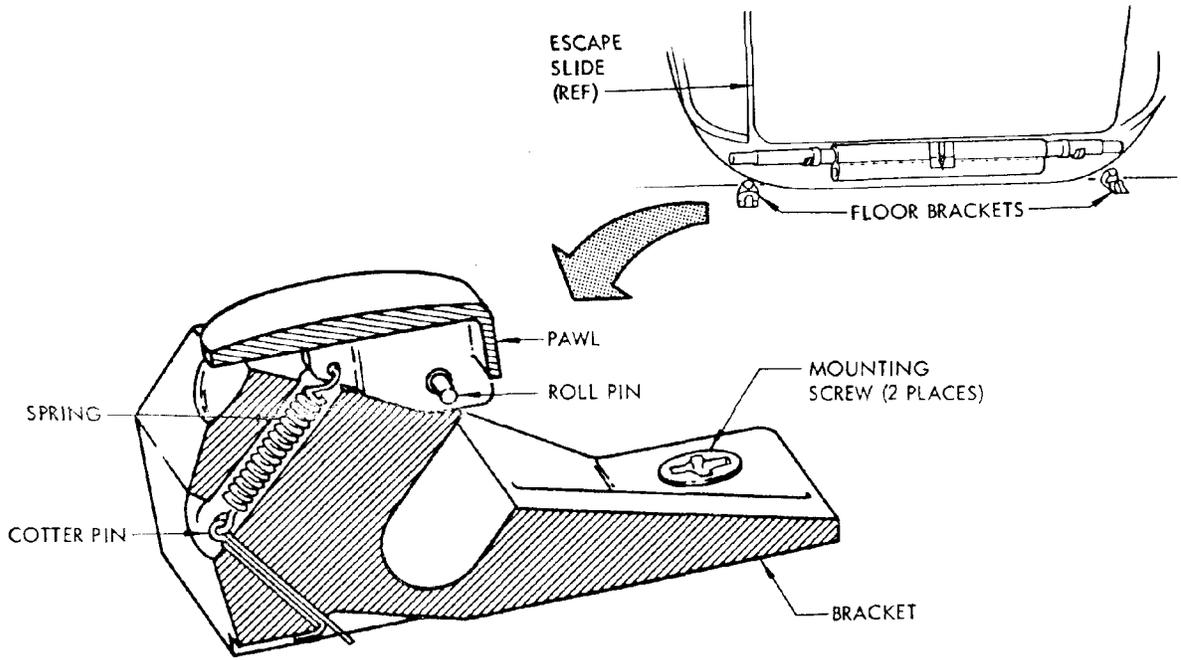
EFFECTIVITY

ALL

25-61-331

10

Page 401  
Dec 01/04

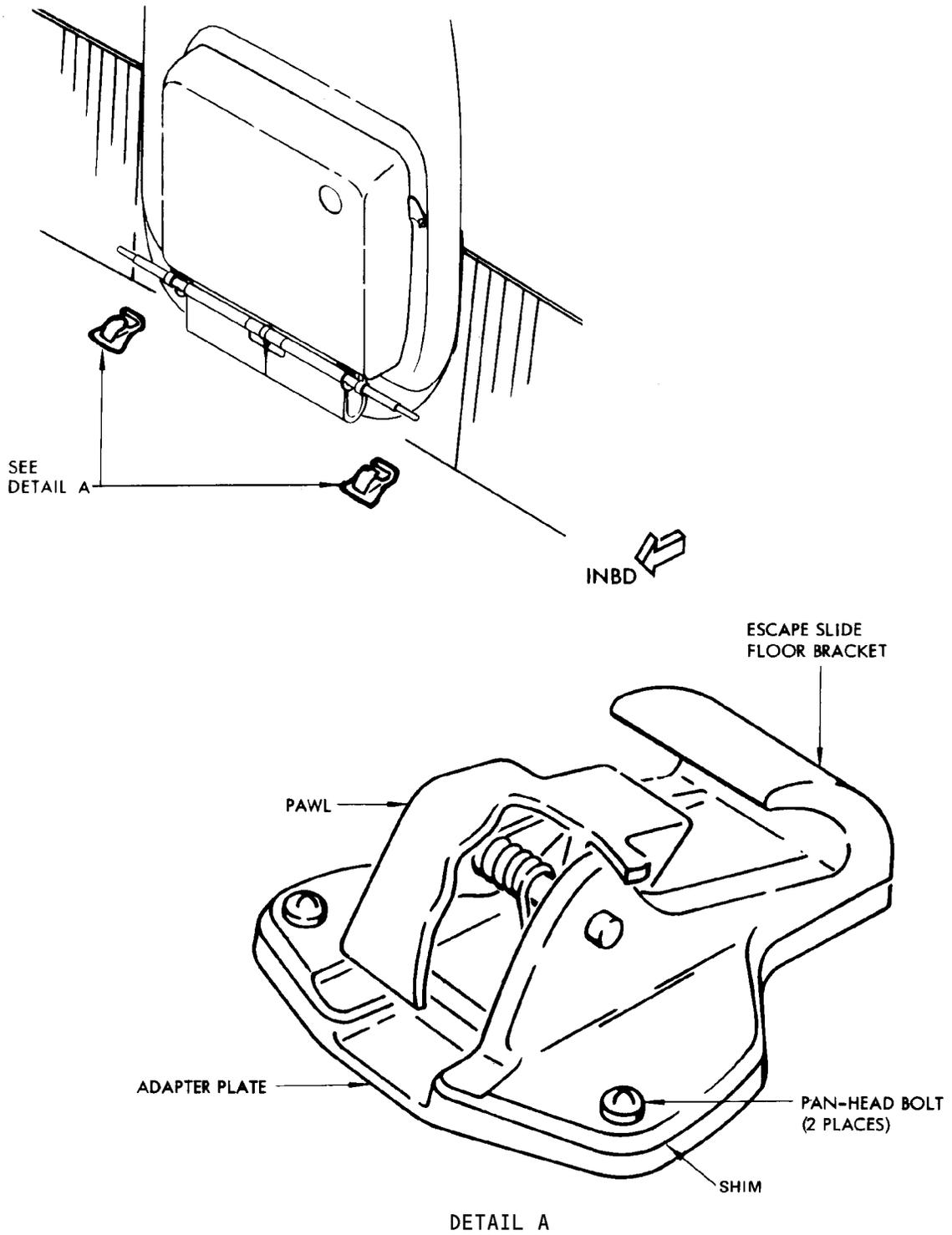


Escape Slide Floor Bracket Installation  
 Figure 401 (Sheet 1)

EFFECTIVITY  
 Airplanes with aluminum  
 floor brackets

458967

25-61-331



Escape Slide Floor Bracket Installation  
 Figure 401 (Sheet 2)

EFFECTIVITY	
	ALL

25-61-331

02

Page 403  
 Dec 01/04

458971

**BOEING**  
**737**   
MAINTENANCE MANUAL

ESCAPE SLIDE FLOOR BRACKETS - INSPECTION/CHECK

1. Escape Slide Floor Brackets Check
  - A. Check escape slide floor brackets (See figure 401.)
    - (1) Check bracket is securely attached to floor.
    - (2) Examine bracket for damage.
    - (3) Check pawl works freely and closes fully.

EFFECTIVITY  
Airplanes with aluminum floor brackets

25-61-331

02

Page 601  
Aug 01/05

ESCAPE SLIDE FLOOR BRACKETS – CLEANING AND PAINTING

1. Escape Slide Floor Brackets Cleaning

A. Equipment and Materials

- (1) Solvent – Methyl Ethyl Ketone or Naphtha

B. Clean Escape Slide Floor Brackets

- (1) Drive pawl roll pin out to release pawl from floor bracket. (See figure 401.)

**CAUTION:** WHEN PAWL ROLL PIN IS REMOVED, PAWL IS STILL ATTACHED TO SPRING. DO NOT ATTEMPT TO REMOVE PAWL OR SPRING WILL BE DAMAGED.

- (2) Push pawl back carefully to protect spring and thoroughly clean dirt out of bracket with some small object such as a toothbrush or pipe cleaner soaked in naphtha, methyl ethyl ketone or similar solvent.

**NOTE:** Replace pawl spring if it is damaged during cleaning. Floor bracket must be removed to gain access to end of spring attached to cotter pin.

EFFECTIVITY  
Airplanes with aluminum floor brackets

25-61-331

ESCAPE SLIDE FLOOR BRACKETS - REMOVAL/INSTALLATION

1. Equipment and Materials

- A. Solvent - BMS 3-2
- B. Sealant - BMS 5-18, Type II; BMS 5-19, Class B; or BMS 5-22
- C. Gauze cleaning cloth
- D. Shim - Mylar sheet (type A per MIL-T-23142) 0.01 thick, 3.50 x 2.50 inches

2. Remove Escape Slide Floor Bracket (See figure 401.)

- A. Remove two panhead bolts and lockwashers.
- B. Remove floor bracket from adapter plate.
- C. Remove two flathead screws that fasten adapter plate to floor.

NOTE: The two flathead screws may not have the same length. Each one should be identified so it can be reinstalled in the place that it was taken from.

- D. Remove adapter plate from floor.

3. Install Escape Slide Floor Bracket (See figure 401.)

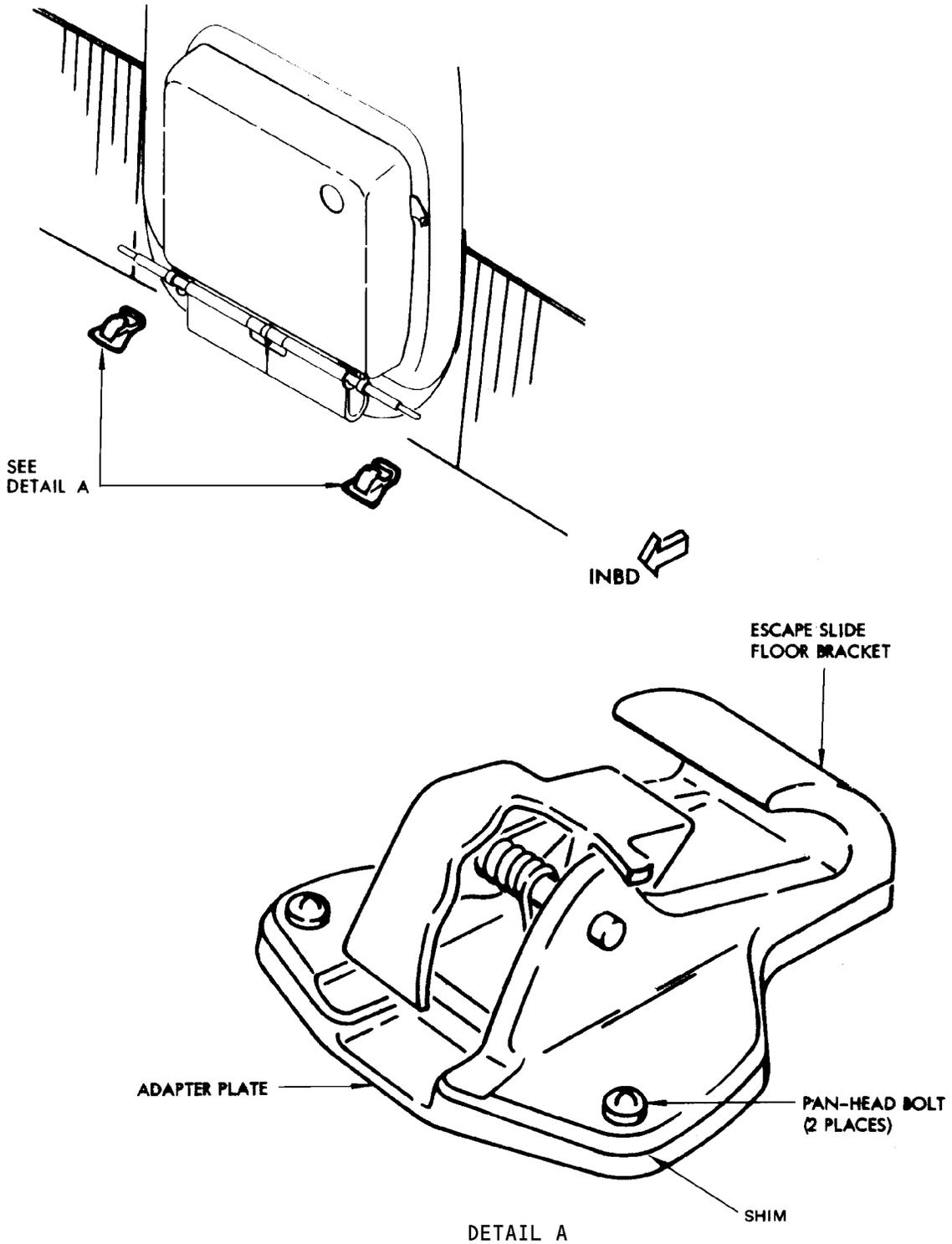
- A. Clean and dry two flathead screws and all adapter plate holes using solvent and clean gauze cloth.
- B. Apply sealant to two flathead screws and all adapter plate holes.
- C. Position adapter plate as shown in figure 401 and install two flathead screws,

NOTE: Replace adapter plate if corroded.

- D. Trim shim stock to shape of floor bracket base, drill two holes through shim to match bracket and install on adapter plate.
- E. Position floor bracket and install two panhead bolts and lockwashers.

EFFECTIVITY  
Airplanes with steel floor brackets

25-61-332



Escape Slide Floor Bracket Installation  
 Figure 401

EFFECTIVITY  
 Airplanes with steel floor brackets

25-61-332

**BOEING**  
**737**   
MAINTENANCE MANUAL

ESCAPE SLIDE FLOOR BRACKETS - INSPECTION/CHECK

1. Escape Slide Floor Brackets Check

- A. Check escape slide floor brackets. (See figure 401.)
- (1) Check bracket is securely attached to floor.
  - (2) Examine bracket for damage.
  - (3) Check pawl works freely and closes fully.

EFFECTIVITY  
Airplanes with steel floor  
brackets

25-61-332

03

Page 601  
Dec 01/04

**BOEING**  
**737**   
MAINTENANCE MANUAL

ESCAPE SLIDE FLOOR BRACKETS – CLEANING AND PRINTING

1. Escape Slide Floor Brackets Cleaning

A. Equipment and Materials

(1) Methyl ethyl ketone, naphtha or similar solvent

B. Clean Escape Slide Floor Brackets (See figure 401.)

(1) Raise inboard lip of pawl and, with some small object such as a toothbrush or pipe cleaner soaked in methyl ethyl ketone, naphtha or similar solvent, clean dirt from part of bracket below pawl.

EFFECTIVITY  
Airplanes with steel floor  
brackets

25-61-332

03

Page 701  
Dec 01/04

LIFESAVING EQUIPMENT – DESCRIPTION AND OPERATION

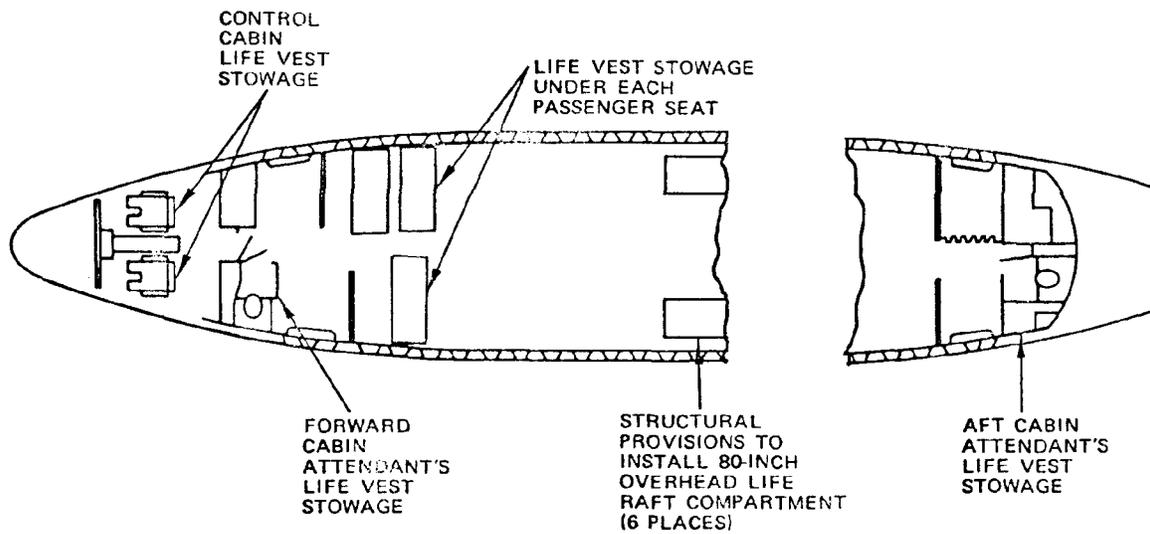
1. General

- A. Lifesaving equipment as covered in this section is comprised of life vest stowage provisions in the control cabin and main cabin (Fig. 1).
- B. Stowage provisions for life vests are provided for the flight crew, two in each of the stowage pockets on the aft side of the captain's and first officer's seat backs.
- C. Two life vests may be stowed under each attendant's seat and one for each passenger under passenger seats.
- D. Additional life vest stowage is provided in various locations in the main cabin, such as on the overhead hatracks or in the overhead stowage compartments and in the aft centerline stowage compartment.
- E. Each life vest is packaged for protection in a polyethylene container.

EFFECTIVITY

ALL

25-62-0



Lifesaving Equipment Location  
 Figure 1

EFFECTIVITY	ALL
-------------	-----

458998

25-62-0



MAINTENANCE MANUAL

EMERGENCY SIGNALING EQUIPMENT- DESCRIPTION AND OPERATION

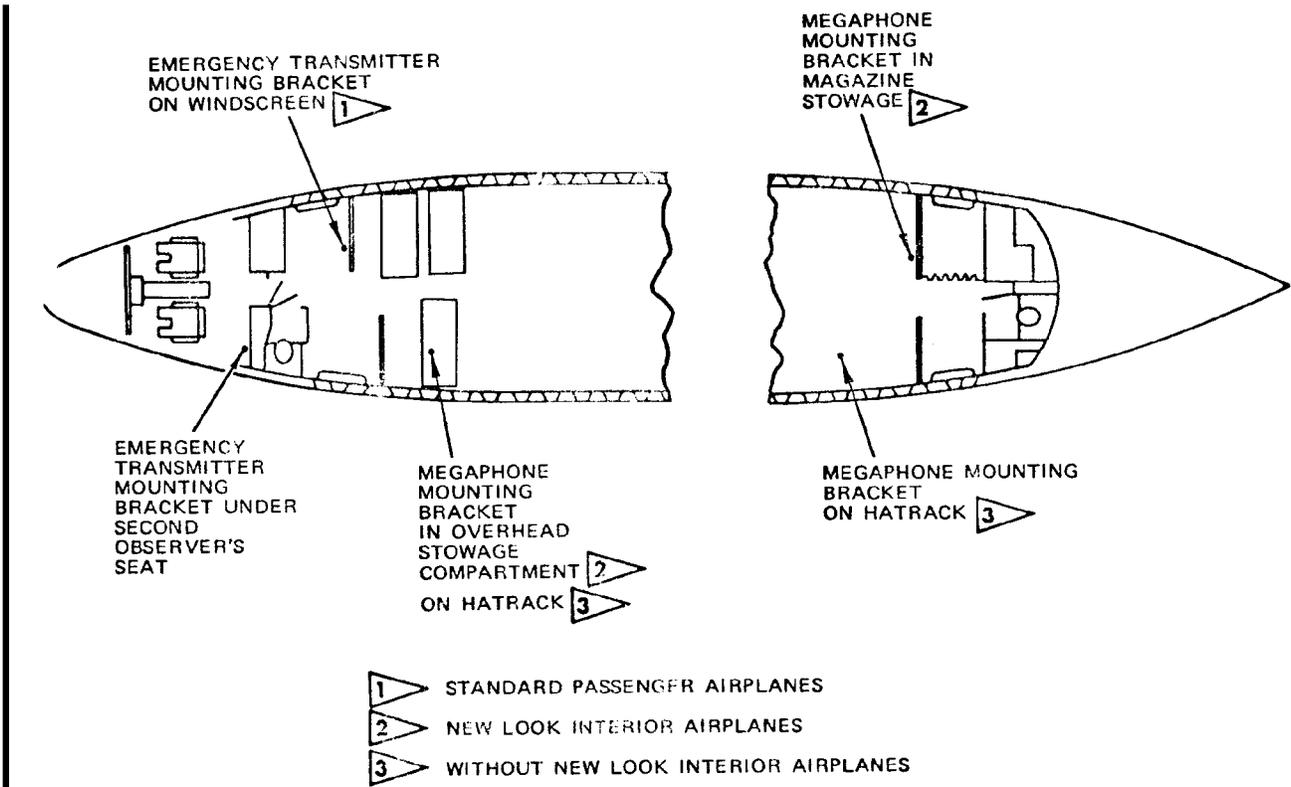
1. General

- A. Emergency signaling equipment as covered in this section comprises mounting provisions for two electronic megaphones and two emergency transmitters as located in Fig. 1.

EFFECTIVITY

ALL
-----

25-63-0



Emergency Signaling Equipment Location  
 Figure 1

EFFECTIVITY	ALL
-------------	-----

459093

25-63-0

**BOEING**  
**737**   
MAINTENANCE MANUAL

PEX MISCELLANEOUS EMERGENCY EQUIPMENT - DESCRIPTION AND OPERATION

1. General

- A. Miscellaneous emergency equipment as covered in this section is comprised of mounting/stowage provisions for first aid kits, smoke goggles, and a crash axe, (Fig. 1.)

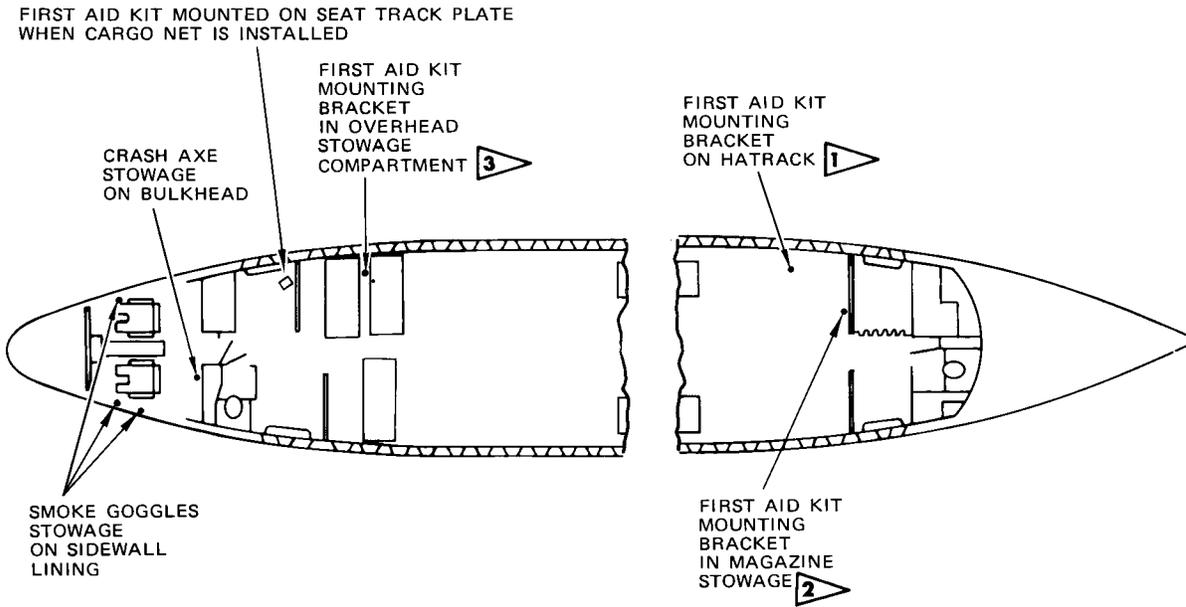
EFFECTIVITY

ALL

25-69-0

ARG

Page 1  
Dec 01/04



NOTE: NEW LOOK INTERIOR AIRPLANES CONFIGURATION SHOWN

-  INSTALLED ON AIRPLANES WITH HATRACK TYPE INTERIOR
-  INSTALLED ON AIRPLANES WITH WIDE-BODY LOOK INTERIOR
-  ALL WIDE-BODY LOOK INTERIOR AIRPLANES EXCEPT LV-LEB

Miscellaneous Emergency Equipment Location  
 Figure 1

EFFECTIVITY	ALL
-------------	-----

459178