

TO: ALL HOLDERS OF MAIN LANDING GEAR CENTER DOOR ASSEMBLY OVERHAUL MANUAL,  
 32-16-03

REVISION NO. 5, DATED MAR 1/06

HIGHLIGHTS

DESCRIPTION OF CHANGE	TOPICS AFFECTED												
	D & O	D / A s s y	C l e a n i n g	I n s p / C h k	R e p a i r	A s s y	F / C	T e s t	T / S h o o t i n g	S / T o o l s	S t o r a g e	I P L	L / O v e r h a u l
Changed part number callout for shim (57)												X	

# MAIN LANDING GEAR CENTER DOOR ASSEMBLY

## 32-16-03

BOEING P/N 65-52202-1, -2, -17, -18, -35, -36, -53, -54, -67, -68, -73, -74, -85, -86

AIRLINE P/N

---

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
32-1056		PRR 31503 PRR 31976 PRR 32121-15	Dec 10/71 Dec 10/71 Dec 25/72

## LIST OF EFFECTIVE PAGES

\* Indicates pages revised, added or deleted in latest revision  
 F Indicates foldout pages - print one side only

PAGE	DATE	PAGE	DATE	PAGE	DATE
32-16-03					
T-1	Jul 1/99				
T-2	BLANK				
* LEP-1	Mar 1/06				
LEP-2	BLANK				
T/C-1	Jul 1/99				
T/C-2	BLANK				
1	Jul 1/99				
2	Jul 1/99				
3	Jul 1/99				
4	Jul 1/99				
5	Jul 1/99				
6	Jul 1/99				
7	Jul 1/99				
8	Jul 1/99				
9	Jul 1/99				
10	Jul 1/99				
11	Jul 1/99				
12	Jul 1/99				
* 13	Mar 1/06				
14	BLANK				

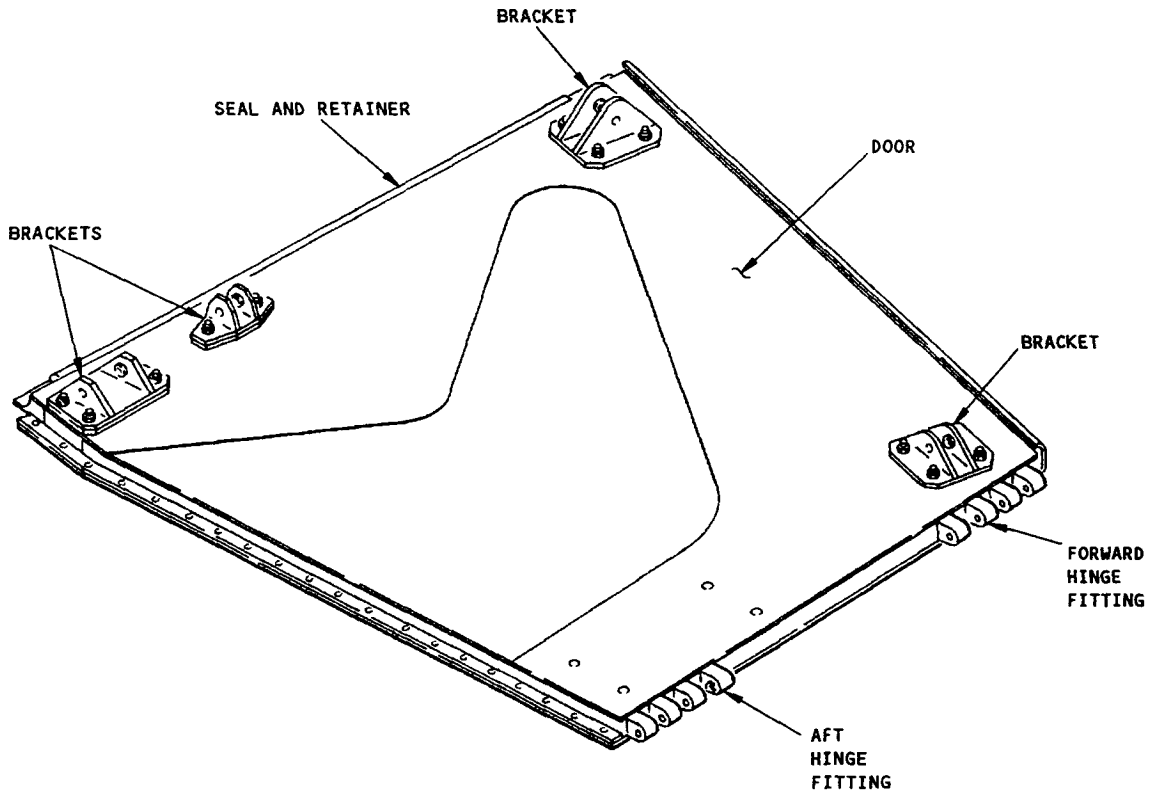
Mar 1/06

 32-16-03  
 Page LEP-1

TABLE OF CONTENTS

<u>Paragraph Title</u>	<u>Page</u>
Description and Operation .....	1
Disassembly.....	2
Cleaning..... * [1]	
Inspection/Check .....	2
Repair.....	3
Assembly.....	4
Fits and Clearances .....	6
Testing (not applicable)	
Trouble Shooting (not applicable)	
Storage Instructions .....	* [1]
Special Tools, Fixtures, and Equipment (not applicable)	
Illustrated Parts List .....	8

- \* [1] Special instructions are not necessary. Use standard practices.
- \* [2] Also refer to the instructions in SOPM 20-30-03.
- \* [3] Also refer to the instructions in SOPM 20-44-02, 20-70-01.

MAIN LANDING GEAR CENTER DOOR ASSEMBLY


Main Landing Gear Center Door Assembly  
 Figure 1

1. DESCRIPTION AND OPERATION

- A. The main landing gear center door assembly has a honeycomb core with aluminum skin. The unit includes brackets, channels, insert blocks, stops, seal angles, rub strip, hinge, a seal and retainer, and attachment hardware.
- B. The center door is connected to the inner door and to the main landing gear shock strut and drag link. The main landing opens and closes as the main landing gear extends and retracts.

## C. Leading Particulars (Approximate)

Height -- 26 inches  
Width -- 25 inches  
Thickness -- 2 inches  
Weight -- 17 pounds

2. DISASSEMBLY

## A. Use standard industry practices and these steps.

**CAUTION:** PLACE DOOR ASSEMBLY ON A NONMARRING SURFACE OR INSTALL IN A SUITABLE HOLDING FIXTURE TO PREVENT DOOR FROM BEING SCRATCHED OR DAMAGED.

## B. Be sure to put the door on a surface or in a fixture for protection of the surfaces.

## C. Disassemble the door only as necessary for cleaning, inspection, repair, and replacement of components.

## D. When you remove shims, measure their thickness and make notes of their thicknesses and locations to help during assembly.

3. INSPECTION/CHECK (Fig. 4)

## A. Examine all parts for defects by standard industry practices. Refer to Fits and Clearances for design dimensions and wear limits. Do the penetrant checks only if the visual check finds possible defects.

## B. Penetrant check per SOPM 20-20-02 -- Brackets (5, 8, 14, 24), Fittings (45, 49, 59, 69).

## C. Examine honeycomb and bonded parts for signs of delamination, internal water, scratches, and contour defects.

(1) Ultrasonically examine for delaminations.

(2) Radiographically examine areas that could contain water to see how much damage there is.

(3) Examine the edges of the panel carefully for cuts and abrasions. Delamination starts very easily from damage to an edge member of honeycomb panel.

## D. Refer to 737-300 Structural Repair Manual, 52-80-02 or 737 Structural Repair Manual, 52-80-01, for damage limits and repair instructions.

**4. REPAIR (Fig. 4)****A. Repair**

- (1) Repair small defects by standard industry practices. Refer to Fits and Clearances for design dimensions and wear limits.
- (2) Hinge fitting (69) (Fig. 2)
  - (a) Machine as required, within repair limits, to remove defects.
  - (b) Shot peen as indicated.
  - (c) Refinish as indicated.

**B. Refinish**

**NOTE:** Refer to SOPM 20-30-02 for stripping of protective finishes. Refer to SOPM 20-41-01 for explanation of F and SRF finish codes.

- (1) Door Assembly Topcoat
  - (a) 65-52202-1, -2, -17, -18, -35, -36, -53, -54, -67, -68 -- Apply BMS 10-60 enamel (SRF-14.9813).
  - (b) 65-52202-73, -74 -- Apply BMS 10-79, Type 2 primer and BMS 10-60 enamel (F-14.9863-707).
  - (c) 65-52202-85, -86 -- Apply BMS 10-79, Type 2 primer and BMS 10-60 enamel (F-14.9863-707, -7067, or -7525) to agree with the airline's color scheme.
- (2) Brackets (5, 8, 14) -- Chemical treat or chromic acid anodize and apply BMS 10-11, Type 1 primer (SRF-2.30) but no primer in holes for bushings. Material: Al alloy.
- (3) Brackets (24) -- Chromic acid anodize and apply BMS 10-11, Type 1 primer (F-18.13) and BMS 10-60 enamel (SRF-14.9813) but no primer or enamel in holes for bushings. Material: Al alloy.
- (4) Retainer (30) -- Chemical treat or chromic acid anodize and apply BMS 10-11, Type 1 primer (SRF-2.30). Material: Al alloy.
- (5) Rub strip (35) -- Chemical treat and apply BMS 10-11, Type 1 primer (F-18.06). Material: Al alloy.
- (6) Angle seal (37) -- Chemical treat or chromic acid anodize and apply BMS 10-11, Type 1 primer (F-18.05). Material: Al alloy.
- (7) Stops (42, 43) -- Chemical treat or chromic acid anodize and apply BMS 10-11, Type 1 primer (SRF-2.30). Material: Al alloy.

- (8) Bonded door assembly (50)
  - (a) 65-52202-15, -16, -19, -20, -37, -38, -51, -52 -- Chemical treat and apply BMS 10-11, Type 1 primer (SRF-2.31). Material: Al alloy.
  - (b) 65-52202-75, -76 -- No finish after the parts were bonded.
  - (c) 65-52202-85, -86 -- Apply BMS 10-79, Type 1 primer (F-19.46).
- (9) Hinge fittings (59, 69) -- Chemical treat or chromic acid anodize and apply BMS 10-11, Type 1 primer (SRF-2.30) but no primer in holes for bushings. Material: Al alloy.
- (10) Hinge fitting (69) -- See Fig. 2.

#### C. Replacement

- (1) Bushings (6, 9, 15, 25, 46, 47, 60, 61, 70, 71) -- Press out the old bushings and install replacement bushings by the shrink fit or press fit method of SOPM 20-50-03.
- (2) Angle seal (37) -- Drill holes for rivets in the replacement seal with the old seal as a guide. Install the replacement angle seal with rivets (36).

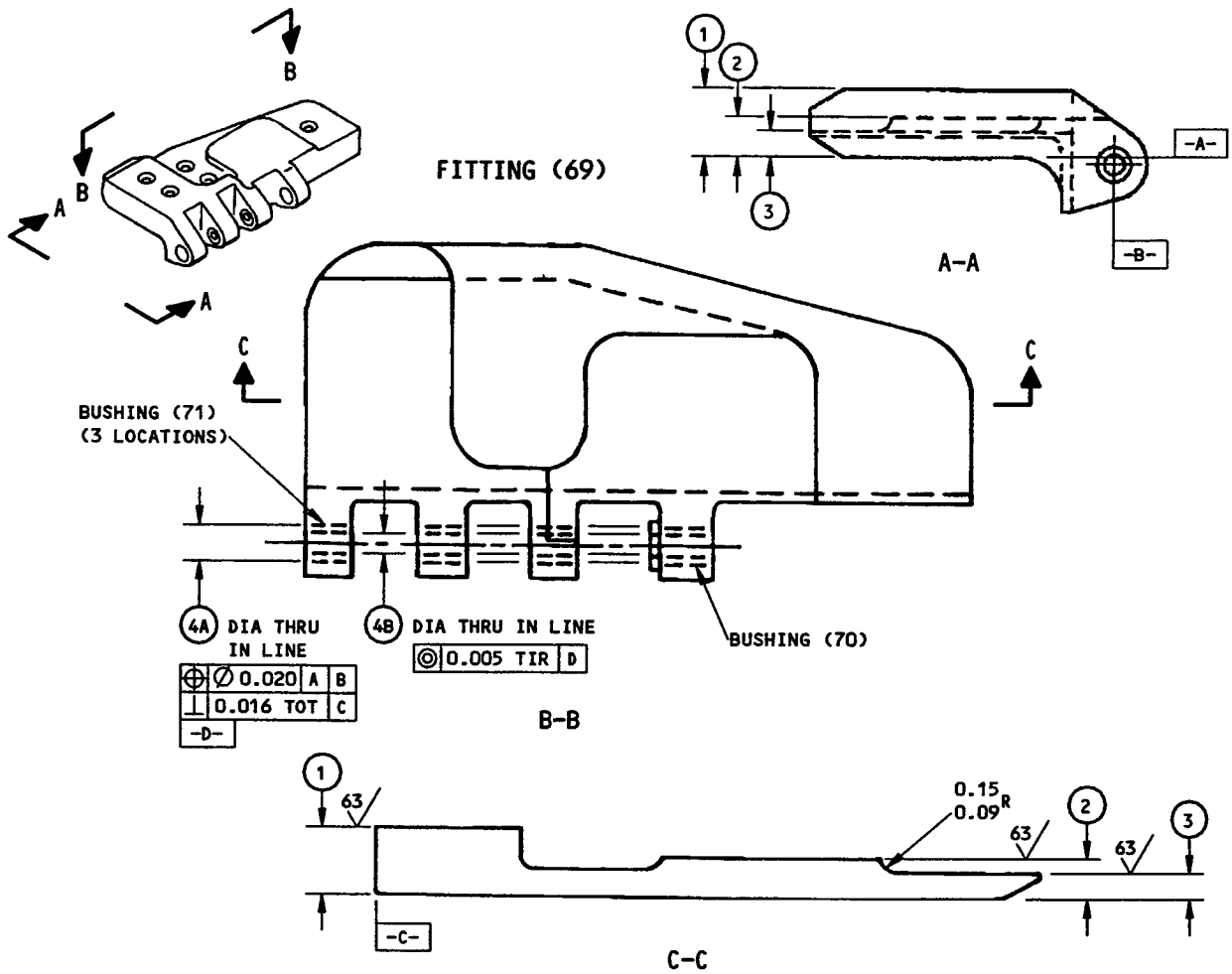
### 5. ASSEMBLY (Fig. 4)

#### A. Materials

**NOTE:** Equivalent substitutes can be used.

- (1) Primer -- BMS 10-11, Type 1 (Ref SOPM 20-60-02)
- B. Bracket assemblies (13, 23) and hinge fitting assemblies (58, 68) are installed with shims which must be adjusted when the door is installed on the airplane. If you replaced the brackets or the hinges, or their shims, or if the door will go on a different airplane, install new shims (16, 27, 57, 67) with their bolts but do not tighten the bolts to final torque. Attach a tag to the assembly with a note to tell the installers that shim adjustment will be necessary. Tighten all other nuts and bolts to standard torque values.
- C. Install brackets (4, 7) with nuts (1), washers (2), and bolts (3).
- D. Install bracket (13) and shim (16) with nuts (10), washers (11), and bolts (12).
- E. Install bracket (23), radius filler (26), and shim (27) with nuts (17, 20), washers (18, 21), and bolts (19, 22).
- F. If applicable, install retainer (29) and seal (33) with bolts (28).
- G. If applicable, install stops (42, 43) and shims (41) with nuts (38), washers (39), and bolts (40). Install shims with wet BMS 10-11, Type 1 primer on mating surface.
- H. If included with the door assembly, install hinge fittings (58, 68) and shims (57, 67) with bolts (56, 64, 65, 66), washers (55, 63) and nuts (54, 62).





4A DIA THRU IN LINE	4B DIA THRU IN LINE
$\varnothing 0.020$ A B	$\textcircled{C} 0.005$ TIR D
$\perp 0.016$ TOT C	
-D-	

	1	2	3	4A	4B
DESIGN DIM	0.63 0.61	0.37 0.35	0.25 0.23	0.3129 0.3123	0.1905 0.1895
REPAIR LIMIT	0.40 1	0.20 1	0.10 1	—	—

**REFINISH**

CHEMICAL TREAT OR CHROMIC ACID ANODIZE AND APPLY BMS 10-11 TYPE 1 PRIMER (SRF-2.30)

1 RESTORATION TO DESIGN DIMENSIONS NOT REQUIRED

**REPAIR**

REF 1

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

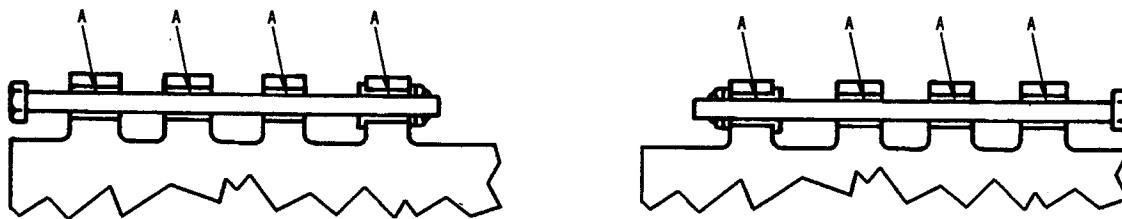
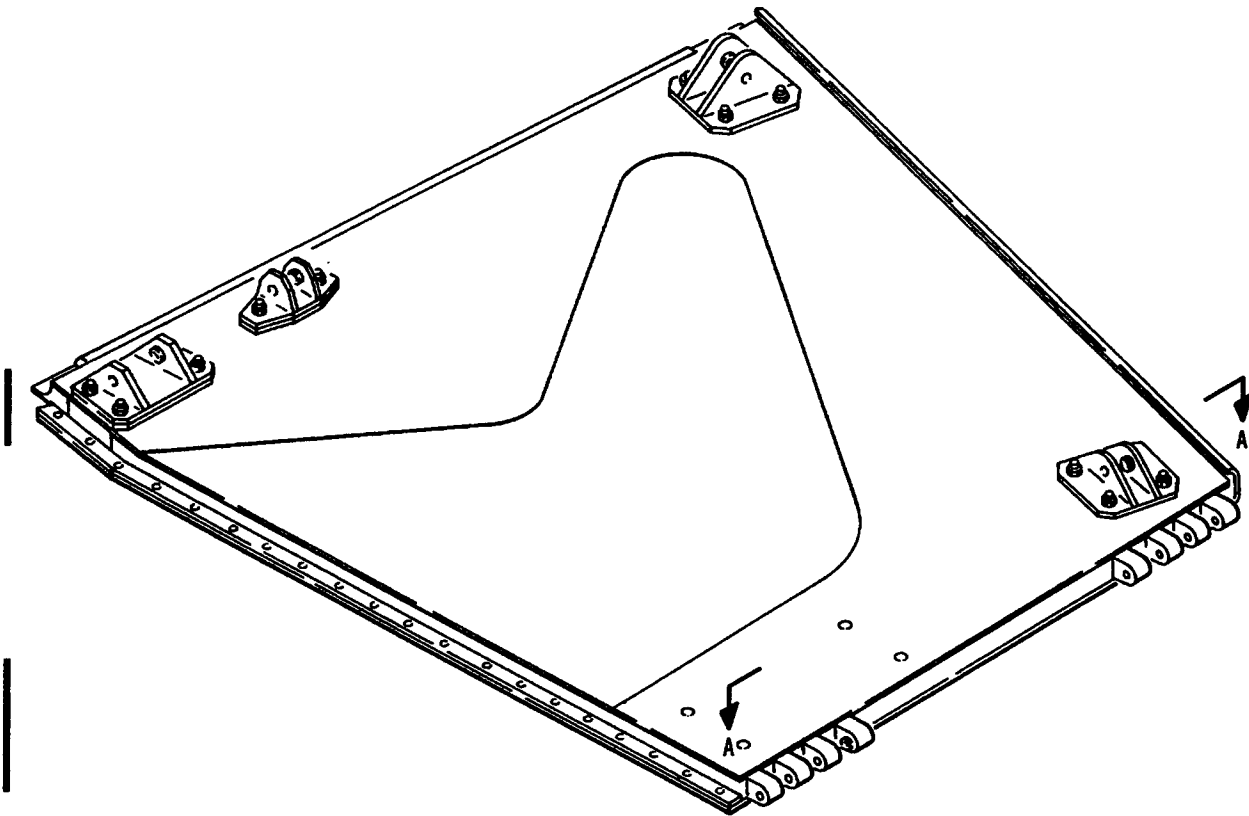
SHOT PEEN (REF SOPM 20-10-03):  
0.023-0.046 SHOT SIZE  
0.014 A2 INTENSITY

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

FITTING ASSEMBLY (68)  
69-54972-1,-2  
Hinge Fitting Repair and Refinish  
Figure 2

6. FITS AND CLEARANCES



A-A

Fits and Clearances  
Figure 3 (Sheet 1)

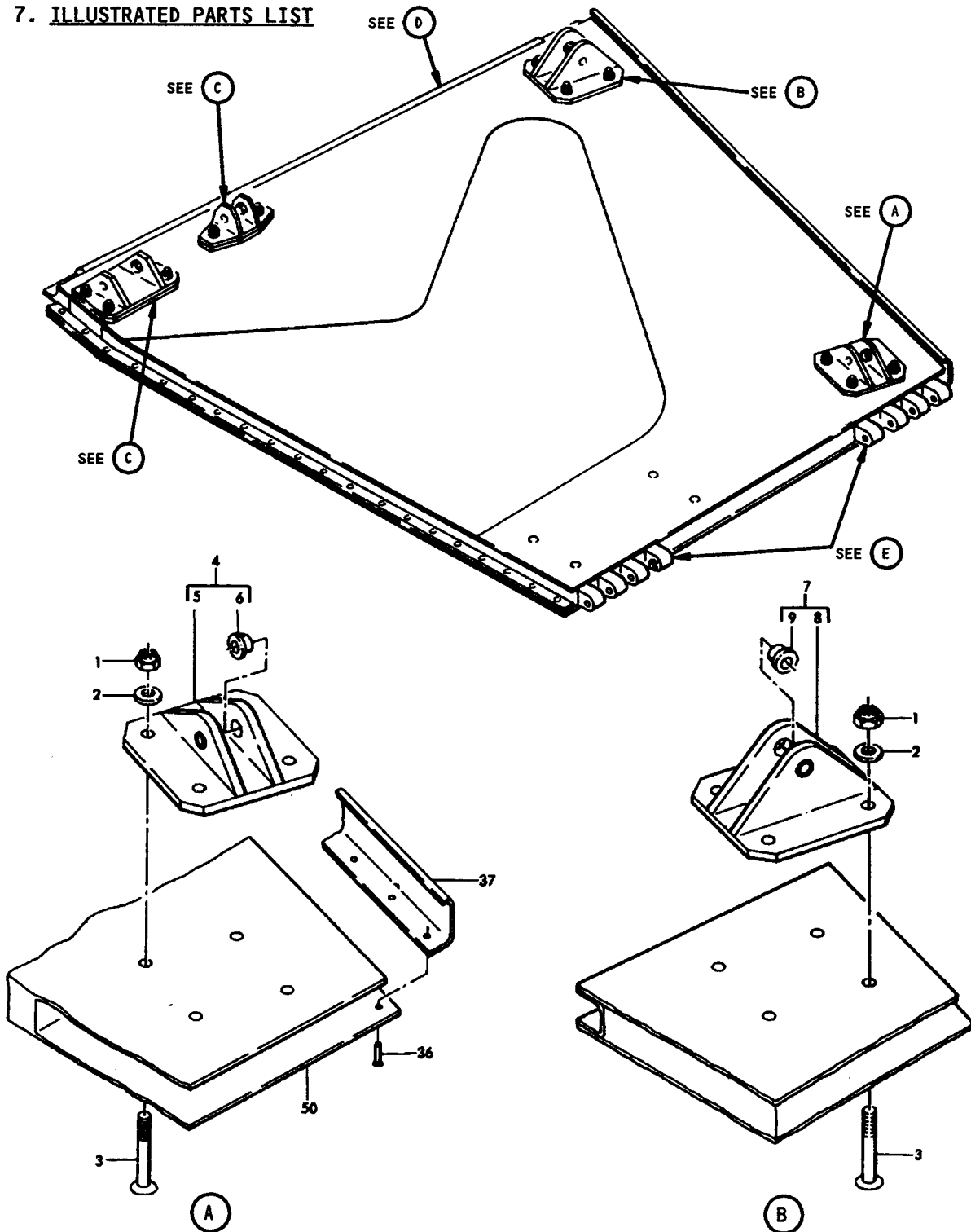
		Design Dimensions				Service Wear Limits		
Ref Letter Fig. 3	Mating Item No. Fig. 4	Dimensions (inches)		Assembly Clearance (inch)		Dimension Limits (inch)		Maximum Allowable Clearance (inch)
		Min	Max	Min	Max	Min	Max	
A	ID * [1]	0.1895	0.1905	0.0000	0.0020			0.0040
	OD * [2]	0.1885	0.1895					

\*[1] Bushings (46, 47, 60, 61, 70, 71)

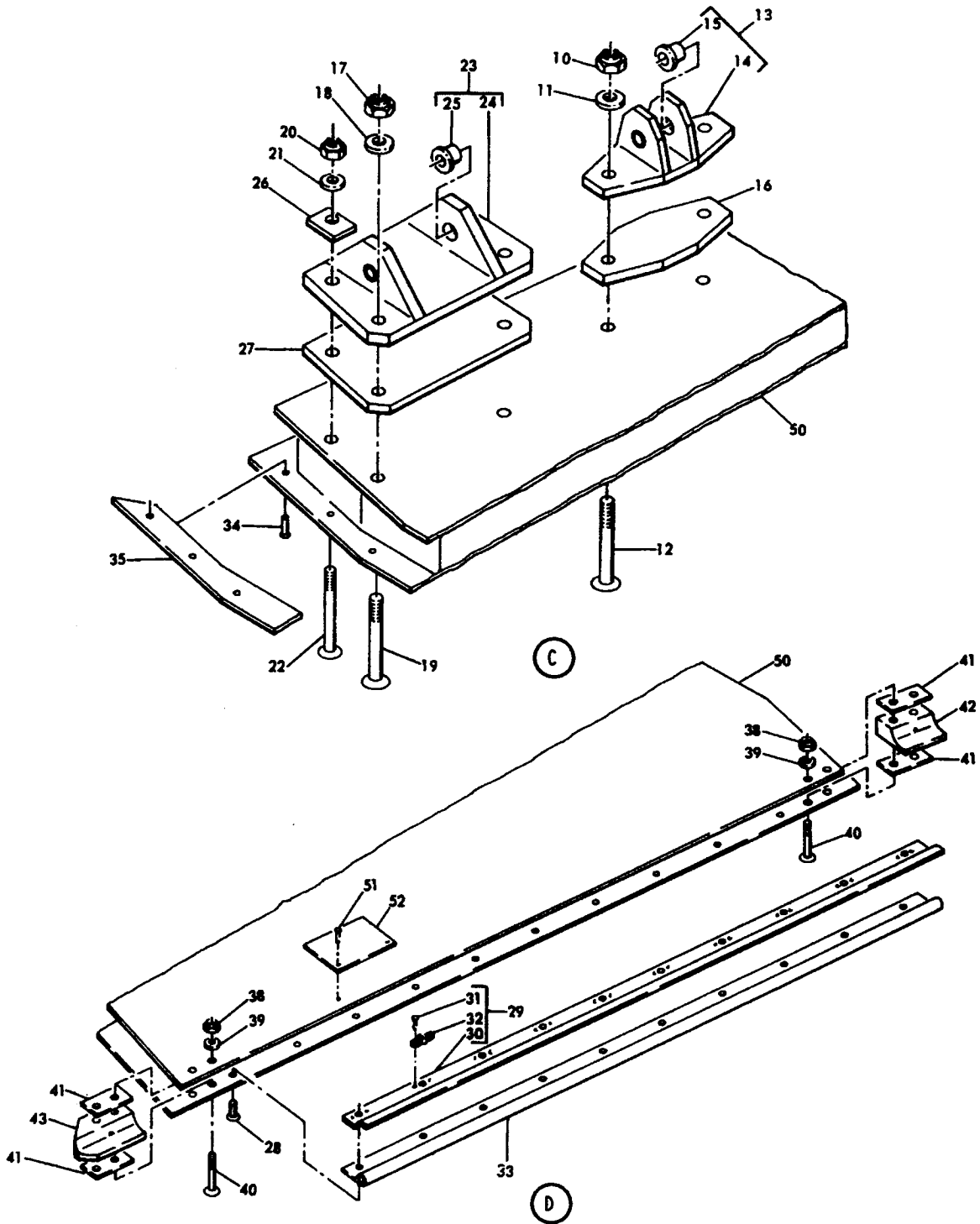
\*[2] Installation bolt BACB30LM3D66 (Ref)

Fits and Clearances  
 Figure 3 (Sheet 2)

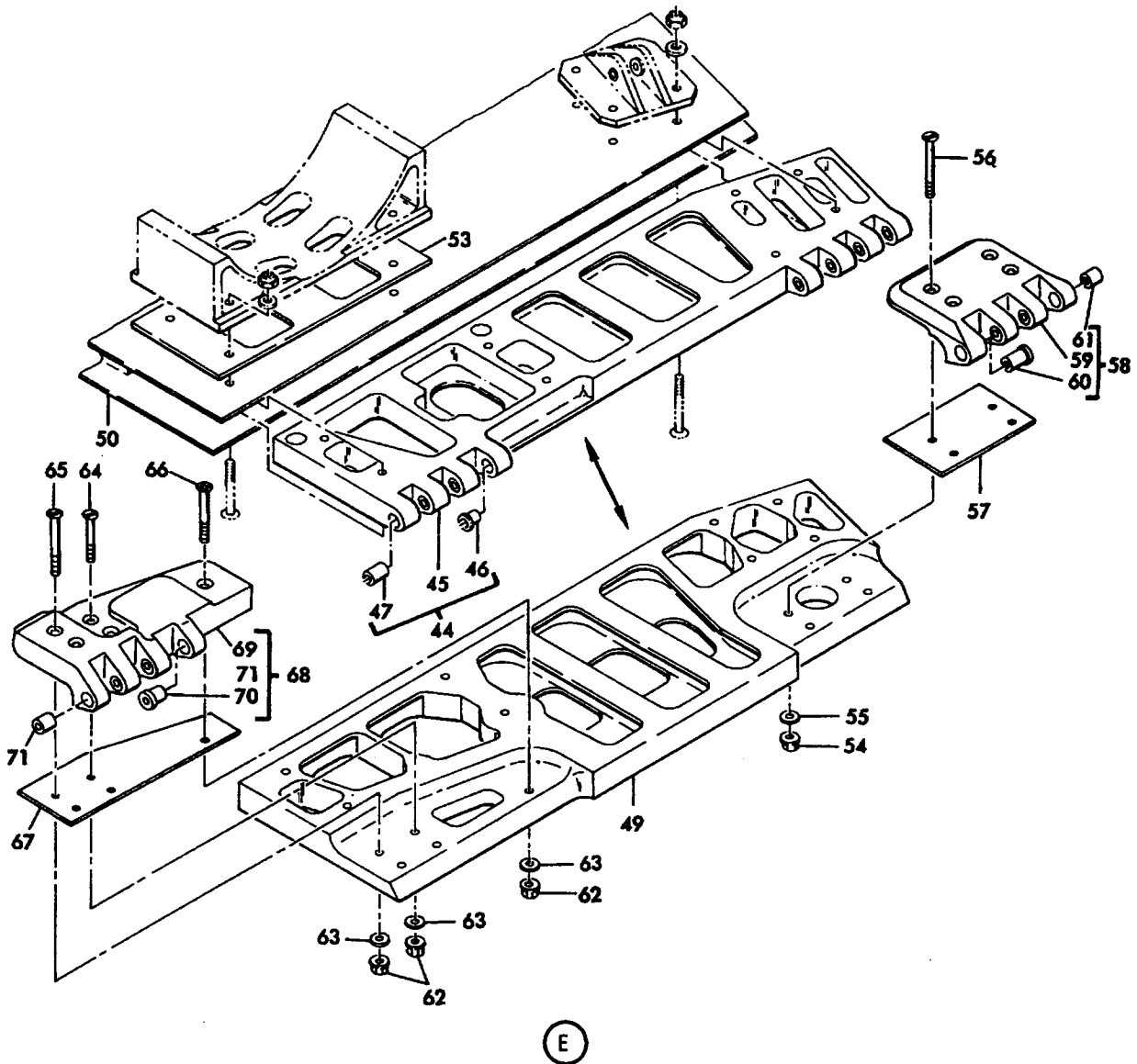
7. ILLUSTRATED PARTS LIST



Main Landing Gear Center Door Assembly  
Figure 4 (Sheet 1)



Main Landing Gear Center Door Assembly  
Figure 4 (Sheet 2)



Main Landing Gear Center Door Assembly  
Figure 4 (Sheet 3)

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
4-	65-52202-1		DOOR ASSY, MAIN LANDING GEAR CENTER							A	RF
	65-52202-2		DOOR ASSY, MAIN LANDING GEAR CENTER							B	RF
	65-52202-17		DOOR ASSY, MAIN LANDING GEAR CENTER							C	RF
	65-52202-18		DOOR ASSY, MAIN LANDING GEAR CENTER							D	RF
	65-52202-35		DOOR ASSY, MAIN LANDING GEAR CENTER							E	RF
	65-52202-36		DOOR ASSY, MAIN LANDING GEAR CENTER							F	RF
	65-52202-53		DOOR ASSY, MAIN LANDING GEAR CENTER							G	RF
	65-52202-54		DOOR ASSY, MAIN LANDING GEAR CENTER							H	RF
	65-52202-67		DOOR ASSY, MAIN LANDING GEAR CENTER (SB 32-1056)							I	RF
	65-52202-68		DOOR ASSY, MAIN LANDING GEAR CENTER (SB 32-1056)							J	RF
	65-52202-73		DOOR ASSY, MAIN LANDING GEAR CENTER							K	RF
	65-52202-74		DOOR ASSY, MAIN LANDING GEAR CENTER							L	RF
	65-52202-85		DOOR ASSY, MAIN LANDING GEAR CENTER							M	RF
	65-52202-86		DOOR ASSY, MAIN LANDING GEAR CENTER							N	RF
1	BACN10JC4C		. NUT (REPLS NAS679C4W)								8
2	AN960C416L		. WASHER								8
3	BACB30LR4-16		. BOLT								8
4	69-42374-1		. BRACKET ASSY								1
5	69-42374-2		. . BRACKET								1
6	BACB28X4B19		. . BUSHING, FLANGED								2
7	69-42372-1		. BRACKET ASSY								1
8	69-42372-3		. . BRACKET								1
9	BACB28X4B14		. . BUSHING, FLANGED								2
10	BACN10JC4C		. NUT (REPLS NAS679C4W)								2
11	AN960C416L		. WASHER								2
12	BACB30LR4-18		. BOLT								2
13	69-42373-1		. BRACKET ASSY								1
14	69-42373-2		. . BRACKET								1
15	69-37867-20		. . BUSHING, FLANGED								2
16	69-44987-4		. SHIM							A-D	1
16	69-44987-4		. SHIM (LIMITED)							EF	1
16	69-44987-12		. SHIM (REPLS 69-44987-4)							A-F	1
16	69-44987-12		. SHIM							G-N	1
17	BACN10JC4C		. NUT (REPLS NAS679C4W)								3
18	AN960C416L		. WASHER								3
19	BACB30LR4-18		. BOLT								3
20	BACN10JC3C		. NUT (REPLS NAS679C3W)								1
21	AN960C10L		. WASHER								1
22	BACB30LR3-18		. BOLT								1
23	69-42377-3		. BRACKET ASSY							ACEGI KM	1
23	69-42377-4		. BRACKET ASSY							BDFHJ LN	1
23	69-42377-11		. BRACKET ASSY (OPT)							ACEGI KM	1
23	69-42377-12		. BRACKET ASSY (OPT)							BDFHJ LN	1

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
4-24	69-42377-5		.	.	BRACKET (USED ON 69-42377-3)						1
24	69-42377-6		.	.	BRACKET (USED ON 69-42377-4)						1
24	69-42377-13		.	.	BRACKET (USED ON 69-42377-11)						1
24	69-42377-14		.	.	BRACKET (USED ON 69-42377-12)						1
25	69-37867-23		.	.	BUSHING						2
26	69-44954-1		.		FILLER, RADIUS						
27	69-44987-7		.		SHIM				A-D		1
27	69-44987-7		.		SHIM (LIMITED)				EF		1
27	69-44987-11		.		SHIM (REPLS 69-44987-7)				A-F		1
27	69-44987-11		.		SHIM				G-N		1
28	BACB30LR3-3		.		BOLT *[1]				A-H		10
29	69-44948-1		.		RETAINER ASSY *[1]				A-H		1
30	69-44948-2		.	.	RETAINER *[1]				A-H		1
31	MS20426D3		.	.	RIVET *[1]				A-H		20
32	BACN10JN3C		.	.	NUTPLATE (REPLS NAS1068C3)*[1]				A-H		10
33	69-44949-1		.		SEAL *[1]				A-H		1
34	MS20426B-5		.		RIVET						20
35	69-44947-3		.		RUB STRIP						1
36	MS20426D-5		.		RIVET						19
37	69-44946-3		.		SEAL, ANGLE				ACEGI		1
37	69-44946-4		.		SEAL, ANGLE				KM		
37	69-44946-4		.		SEAL, ANGLE				BDFHJ		1
37	69-44946-4		.		SEAL, ANGLE				LN		
38	BACN10JC3C		.		NUT (REPLS NAS679C3W) *[1]				A-H		4
39	AN960C10L		.		WASHER *[1]				A-H		4
40	BACB30LR3-14		.		BOLT *[1]				A-H		4
41	BACS40R05D15		.		SHIM, LAMINATED *[1]				A-H		4
42	69-44927-2		.		STOP (PREF) *[1]				A-H		1
42	69-44927-1		.		STOP (OPT) *[1]				A-H		1
43	69-42382-1		.		STOP *[1]				ACE		1
43	69-42382-2		.		STOP *[1]				BDF		1
43	69-42382-3		.		STOP *[1]				ACEG		1
43	69-42382-4		.		STOP *[1]				BDFH		1
44	65-52203-1		.		FITTING ASSY, HINGE				AC		1
44	65-52203-2		.		FITTING ASSY, HINGE				BD		1
45	65-52203-3		.	.	FITTING (USED ON 65-52203-1)						1
45	65-52203-4		.	.	FITTING (USED ON 65-52203-2)						1
46	69-37867-19		.	.	BUSHING, FLANGED						2
47	BACB28U3B41		.	.	BUSHING, PLAIN						6
48	69-44987-9		DELETED								
49	65-68288-1		.		SUPPORT FITTING, HINGE				EGIKM		1
49	65-68288-2		.		SUPPORT FITTING, HINGE				FHJLN		1
50	65-52202-15		.		DOOR ASSY, BONDED				A		1
50	65-52202-16		.		DOOR ASSY, BONDED				B		1
50	65-52202-19		.		DOOR ASSY, BONDED				C		1
50	65-52202-20		.		DOOR ASSY, BONDED				D		1
50	65-52202-37		.		DOOR ASSY, BONDED				E		1



FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
4-50	65-52202-38		.							F	1
50	65-52202-51		.							GI	1
50	65-52202-52		.							HJ	1
50	65-52202-75		.							K	1
50	65-52202-76		.							L	1
50	65-52202-87		.							M	1
50	65-52202-88		.							N	1
51	MS20470B3		.								2
52	MS27253-1		.								1
			INSTALLATION PARTS								
53	69-44987-1									A-D	1
53	69-44987-1									EF	1
53	69-44987-9									A-F	1
53	69-44987-10										1
54	MS21042-4									E-N	4
55	AN960416L									E-N	4
56	NAS584-14									E-N	4
57	BACS40R14W27									E-N	1
58	69-54971-1									EGI KM	1
58	69-54971-2									FHJ LN	1
59	69-54971-3		.								1
59	69-54971-4		.								1
60	69-37867-19		.								1
61	BACB28U3B41		.								3
62	MS21042-4									E-N	5
63	AN960416L									E-N	5
64	NAS584-11									E-N	2
65	NAS584-17									E-N	2
66	BACB30LH4-12									E-N	1
67	65-73718-8									E-N	1
68	69-54972-1									EGI KM	1
68	69-54972-2									FHJ LN	1
69	69-54972-3		.								1
69	69-54972-4		.								1
70	69-37867-19		.								1
71	BACB28U3B41		.								3

\*[1] PRE SB 32-1056