

**BOEING**   
**COMMERCIAL JET**  
OVERHAUL MANUAL

# CARGO SYSTEM ROLLER TRAY ASSEMBLY

## 25-56-35

BOEING P/N 65-49110-1 thru -19, -23, -25, -26, -33, -35, -36, -45, -46,  
-53, -55, -56  
65-81432-17

### AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
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LIST OF EFFECTIVE PAGES					
* Indicates pages revised, added or deleted in latest revision					
F Indicates foldout pages - print one side only					
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CARGO SYSTEM ROLLER TRAY ASSEMBLY

1. DESCRIPTION AND OPERATION

A. The cargo system roller tray assembly is composed of a channel base having raised mounting supports at intervals along its sides. Roller assemblies are mounted horizontally between these supports. The roller tray assembly is anchored to the floor seat track by attachment studs and restrained horizontally by a shear stud. The length of the assembly, and the number of rollers therein, varies with the dash number of the roller tray. The cargo system roller tray assembly provides a roller support for the cargo pallets, facilitating loading and unloading of cargo.

B. Leading Particulars

Width -- 5 inches  
Length -- varies from 9 to 72 inches  
Height -- 1.3 inch

2. INSPECTION/CHECK (Fig. 4)

A. Check all parts for obvious defects in accordance with standard industry practices.

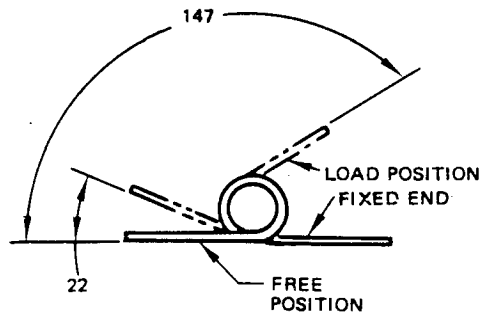
B. Magnetic/Penetrant Check

- (1) Perform magnetic particle examination per 20-20-01 of studs (10 and 29).
- (2) Perform penetrant examination per 20-20-02 of lever (19), and housing (26, 65-51749-1).

C. Spring Check

- (1) Check spring (21) per Fig. 1.
  - (a) Deflect spring to 22 degrees and check that load is 0.011 to 0.013 pound-inch.
  - (b) Deflect spring to 147 degrees and check that load is 0.07 to 0.09 pound-inch.

NOTE: Maximum deflection without permanent set is 180 degrees.



SPRING (21)

NOTE: ALL ANGULAR DIMENSIONS  
ARE IN DEGREES

Spring Check Data  
Figure 1

3. REPAIR (Fig. 4)

A. Materials

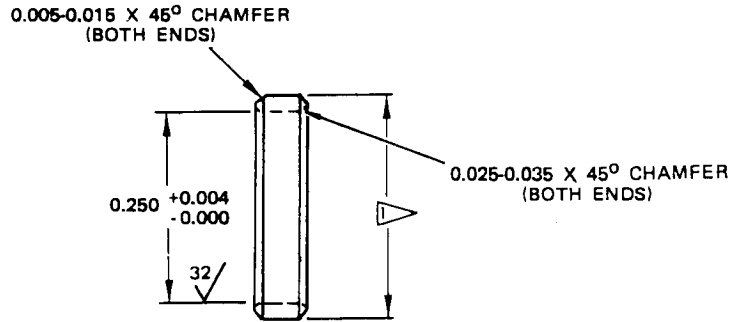
NOTE: Use listed materials or equivalent substitutes.

- (1) Adhesive -- Type 38 (Ref 20-50-12)


B. Rework

- (1) Rework worn 0.250- to 0.254-inch diameter holes in tray (33) for bolts (3) that are elongated by more than 0.014-inch diameter as follows:
  - (a) Drill holes oversize in tray (33), 0.352- to 0.375-inch diameter.
  - (b) Fabricate bushings per Fig. 2 from 7075-T-6511 extruded rod, QQ-A-277-T-6511 temper, with an interference fit of 0.0002 to 0.0004 inch. Install bushings with wet BMS 10-11, type 1 primer per 20-50-03.

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ALL DIMENSIONS IN INCHES

 OD DIMENSION SHALL BE AS REQUIRED TO  
OBTAIN 0.002-0.0004 INCH INTERFERENCE FIT

FINISH: CHROMIC ACID ANODIZE (F-2.20)

Oversize Bushing Manufacture  
Figure 2

C. Refinish

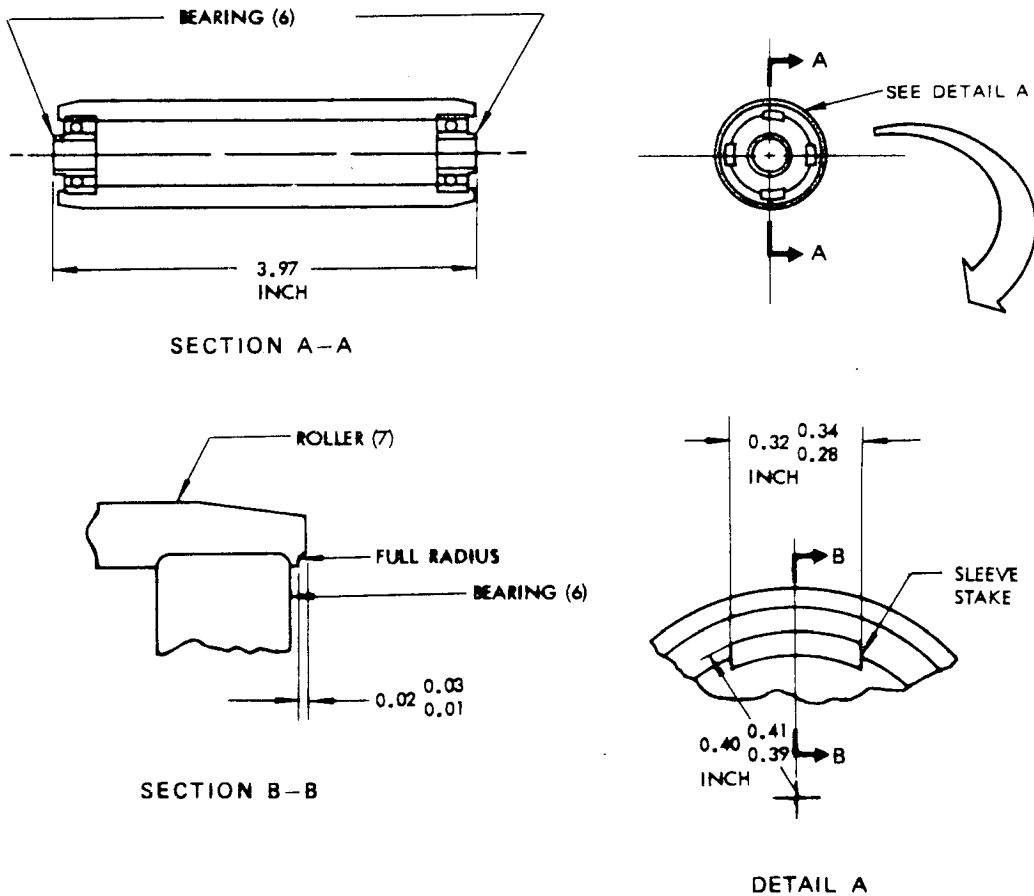
NOTE: Refer to 20-30-02 for stripping of protective finishes and to 20-41-01 for explanation of F and SRF finish codes.

- (1) Fillers (2), rollers (7), lever (19), and stud (22) -- Apply chromic acid anodize (F-2.20) all over. After finish, apply BMS 10-11, type 2, unthinned, BAC702, gloss white enamel to depressed letters of lever (19). Material: Al Alloy.
- (2) Spacers (4) -- Apply no finish.
- (3) Stud (10) 29) -- Apply cadmium plate (F-1.1913) all over. Material: Steel, AMS 4140, 180-200 ksi.
- (4) Handle (20), stud (23), and roller tray (33) -- Apply chromic acid anodize (F-2.26) all over. Material: Al Alloy.
- (5) Spring (21) -- Apply cadmium plate (F-1.1923) all over. Material: Music wire.
- (6) Stud (22) -- Apply chromic acid anodize (F-2.20) all over. Material: Al Alloy.
- (7) Stud (23) -- Apply chromic acid anodize (F-2.26) all over. Material: Al Alloy.

- (8) Housing (26, 65-51749-1) -- Apply chromic acid anodize (F-2.26) all over. Optional: Chromic acid (F-2.20) all over. Material: Al Alloy.
- (9) Stud (29) -- Apply cadmium plate (F-1.1913) all over. Material: Steel, AMS 4140, 160-180 ksi.

D. Replacement

- (1) Replace bearings (6) by pressing new bearing into roller (7) bore per 20-50-03. Overall length of roller assembly (5) shall be per Fig. 3. Sleeve stake bearing in roller (7) per 20-50-03.
- (2) Replace defective markers (31 or 32) as located in Fig. 4 and per 20-50-05.
- (3) Replace shim (34) by bonding per type 38, 20-50-12.

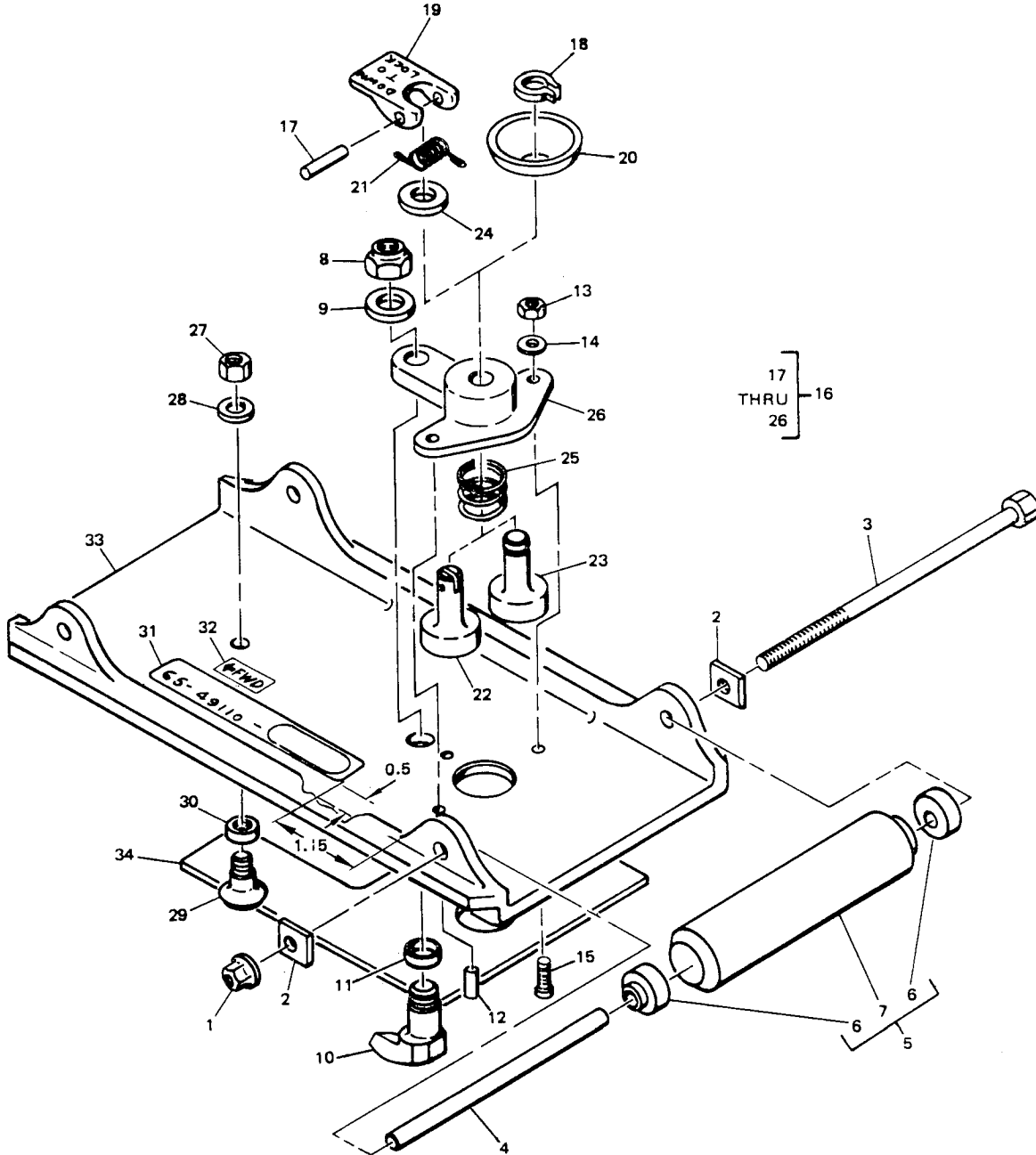


Bearing Replacement Details  
 Figure 3

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4. ILLUSTRATED PARTS LIST



Cargo System Roller Tray Assembly  
 Figure 4



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FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	N O M E N C L A T U R E							USE CODE	QTY PER ASSY
			1	2	3	4	5	6	7		
4-	65-49110-1		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			A	RF
	65-49110-2		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			B	RF
	65-49110-3		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			C	RF
	65-49110-4		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			D	RF
	65-49110-5		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			E	RF
	65-49110-6		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			F	RF
	65-49110-7		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			G	RF
	65-49110-8		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			H	RF
	65-49110-9		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			J	RF
	65-49110-10		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			K	RF
	65-49110-11		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			L	RF
	65-49110-12		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			M	RF
	65-49110-13		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			N	RF
	65-49110-14		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			O	RF
	65-49110-15		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			P	RF
	65-49110-16		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			Q	RF
	65-49110-17		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			R	RF
	65-49110-18		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			S	RF
	65-49110-19		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			T	RF
	65-49110-23		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			U	RF
	65-49110-25		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			V	RF
	65-49110-26		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			W	RF
	65-49110-33		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			X	RF
	65-49110-35		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			Y	RF
	65-49110-36		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			Z	RF
	65-49110-45		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			AA	RF
	65-49110-46		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			BA	RF
	65-49110-53		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			CA	RF
	65-49110-55		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			DA	RF
	65-49110-56		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			EA	RF
	65-81432-17		ROLLER	TRAY	ASSY,	CARGO	SYSTEM			FA	RF
1	MS21042-4		. NUT							*[1]	*[1]
2	66-21893-1		. FILLER, RADIUS							*[1]	*[1]
3	AN4-46A		. BOLT							*[1]	*[1]
4	69-34578-1		. SPACER							*[1]	*[1]
5	69-36905-1		. ROLLER ASSY							*[1]	*[1]
6	594		. . BEARING (V73134)								2
7	69-39604-1		. . ROLLER								1
8	NAS679A6		. NUT								1
9	AN960PD616L		. WASHER								1
10	69-29654-1		. STUD, ATTACHMENT								1
11	NAS43DD6-2		. SPACER								1

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			1	2	3	4	5	6	7		
4-											
12	MS16562-25		.								1
13	NAS679A3W		.								2
14	AN960PD10L		.								2
15	NAS514F1032-8		.								2
16	69-39377-1		.							*[5]	1
16	69-44143-1		.							*[6]	1
17	MS16562-223		.	.						*[5]	1
18	MS16624-1035		.	.						*[6]	1
19	66-23606-1		.	.						*[5]	1
20	69-44144-1		.	.						*[6]	1
21	66-20981-1		.	.						*[5]	1
22	66-23604-1		.	.						*[5]	1
23	69-44145-1		.	.						*[6]	1
24	BACW10AT26		.	.						*[5]	1
25	MS24585C331		.	.							1
26	66-23605-1		.	.						*[5]	1
26	65-51749-1		.	.						*[6]	1
27	NAS679A4W		.								1
28	AN960PD416L		.								1
29	69-29644-1		.								1
30	NAS43DD4-2		.								1
31	BAC27DQC1		.							A	1
31	BACMLON2ENZ		.							B	1
31	BACMLON2EPA		.							C	1
31	BACMLON2EPB		.							D	1
31	BACMLON2EPC		.							E	1
31	BACMLON2EPD		.							F	1
31	BACMLON2EFE		.							G	1
31	BACMLON2EFF		.							H	1
31	BACMLON2EPG		.							J	1
31	BACMLON2EPH		.							K	1
31	BACMLON2EPJ		.							L	1
31	BAC27DQC2		.							M	1
31	BAC27DQC3		.							N	1
31	BAC27DQC4		.							O	1
31	BAC27DQC5		.							P	1
31	BAC27DQC6		.							Q	1
31	BAC27DQC7		.							R	1
31	BAC27DQC31		.							S	1
31	BAC27DQC8		.							T	1

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FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	N O M E N C L A T U R E							USE CODE	QTY PER ASSY	
			1	2	3	4	5	6	7			
4-												
31	BACMLON2EPL									. MARKER, ALUMINUM FOIL	U	1
31	BACMLON2EPN									. MARKER, ALUMINUM FOIL	V	1
31	BACMLON2EPP									. MARKER, ALUMINUM FOIL	WFA	1
31	BACMLON2EPS									. MARKER, ALUMINUM FOIL	X	1
31	BACMLON2EPU									. MARKER, ALUMINUM FOIL	YFA	1
31	BACMLON2EPV									. MARKER, ALUMINUM FOIL	ZFA	1
31	BAC27DQC9									. MARKER, ALUMINUM FOIL	AA	1
31	BAC27DQC10									. MARKER, ALUMINUM FOIL	BA	1
31	BAC27DQC32									. MARKER, ALUMINUM FOIL	CA	1
31	BAC27DQC11									. MARKER, ALUMINUM FOIL	DA	1
31	BAC27DQC12									. MARKER, ALUMINUM FOIL	EA	1
32	BACML0A48BB									. MARKER, ALUMINUM FOIL	*[2]	1
33	65-49113-1									. TRAY, ROLLER	BM	1
33	65-49113-2									. TRAY, ROLLER	CN	1
33	65-49113-3									. TRAY, ROLLER	UXCA	1
33	65-49113-4									. TRAY, ROLLER	DO	1
33	65-49113-5									. TRAY, ROLLER	*[3]	1
33	65-49113-6									. TRAY, ROLLER	*[4]	1
33	65-49113-7									. TRAY, ROLLER	GR	1
33	65-49113-8									. TRAY, ROLLER	HS	1
33	65-49113-9									. TRAY, ROLLER	JT	1
33	65-49113-10									. TRAY, ROLLER	K	1
33	65-49113-11									. TRAY, ROLLER	AL	1
34	BACS4OR15E40									. SHIM	FA	1

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\*[1] SEE TABULAR LIST BELOW FOR EFFECTIVITY AND APPROPRIATE QUANTITIES:

USED ON		QUANTITY																		
		A	L	B	M	C U X	N C A	D	O	E V Y F A	P A A D A	F W Z F A	B A E A Q	G	R	H	S	J	T	K
ITEM NO.	PART NUMBER																			
1	MS21042-4	11		2		3		4		5		6		7		8		9		10
2	66-21893-1	22		4		6		8		10		12		14		16		18		20
3	AN4-46A	11		2		3		4		5		6		7		8		9		10
4	69-34578-1	11		2		3		4		5		6		7		8		9		10
5	69-36905-1	11		2		3		4		5		6		7		8		9		10

\*[2] V, W, Y, Z, AA, BA, DA, EA, FA

\*[3] E, V, Y, P, AA, DA, FA

\*[4] F, W, Z, Q, BA, EA, FA

\*[5] DENOTES USE ON B THRU L, UVWXYZ, FA

\*[6] DENOTES USE ON A, M THRU T, AA THRU EA

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