TO: ALL HOLDERS OF ELEVATOR SLAVE LINKAGE LOST MOTION ASSEMBLY COMPONENT MAINTENANCE MANUAL 27-31-55

REVISION NO. 8 DATED JUL 01/01

HIGHLIGHTS

Pages which have been added or revised are outlined below together with the highlights of the revision. Remove and insert the affected pages as listed and enter Revision No. and date to the Record of Revision Sheet.

CHAPTER/SECTION AND PAGE NO.	DESCRIPTION OF CHANGE
701-702	Revised break out force and clarify its location of application.
1005-1007	Added numerical index to IPL section.

ELEVATOR SLAVE LINKAGE LOST MOTION ASSEMBLY

PART NUMBER 251T2400-5 THRU -8

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

REVISION RECORD

- Retain this record in front of manual. On receipt of revision, insert revised pages in the manual, and enter revision number, date inserted and initial.

REVISION NUMBER	REVISION DATE	DATE FILED	BY	REVISION NUMBER	REVISION DATE	DATE FILED	BY

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
27-32		PRR B10435 PRR B11139	Jan 10/82 Jul 10/84 Jan 10/85

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TABLE OF CONTENTS

INTRODUCTION

The instructions in this manual provide the information necessary to perform maintenance functions ranging from simple checks and replacement to complete shop-type repair.

This manual is divided into separate sections:

1. Title Page
2. Record of Revisions
3. Temporary Revision & Service Bulletin Record
4. List of Effective Pages
5. Table of Contents
6. Introduction
7. Procedures & IPL Sections

Refer to the Table of Contents for the page location of applicable sections. An asterisked flagnote *[ ] in place of the page number indicates that no special instructions are provided since the function can be performed using standard industry practices.

The beginning of the REPAIR section includes a list of the separate repairs, a list of applicable standard Boeing practices, and an explanation of the True Position Dimensioning symbols used.

An explanation of the use of the Illustrated Parts List is provided in the Introduction to that section.

All weights and measurements used in the manual are in English units, unless otherwise stated. When metric equivalents are given they will be in parentheses following the English units.

Design changes, optional parts, configuration differences and Service Bulletin modifications create alternate part numbers. These are identified in the Illustrated Parts List (IPL) by adding an alphabetical character to the basic item number. The resulting item number is called an alpha-variant. Throughout the manual, IPL basic item number references also apply to alpha-variants unless otherwise indicated.

Verification:

Disassembly	Feb 17/83
Assembly	Feb 17/83

ELEVATOR LOST MOTION ASSEMBLY

DESCRIPTION AND OPERATION

1. The elevator lost motion assembly consists of an input arm, pivot crank, cam follower and clapper arm assemblies. Two clapper arms are connected by one tension spring. Two other springs connect cam follower and input arm assemblies. The lost motion assembly receives cable-transmitted input from the cockpit through linkage rods and removes cable slack to ensure cable retention on the drums.

2. Leading Particulars (Approximate)

   Length -- 10 inches
   Width -- 9 inches
   Height -- 7 inches
   Weight -- To be provided

DISASSEMBLY

NOTE: Disassemble this component only necessary to complete fault isolation, determine serviceability of parts, perform required repairs and restore unit to seviceable condition.

1. Parts Replacement (IPL Fig. 1)

   NOTE: The following parts are recommended for replacement. Unless otherwise specified, actual replacement may be based on in-service experience.

   A. Collars (40, 267)

2. Disassembly (IPL Fig. 1)

   A. Loosen and remove nut (30) securing eyebolt (20) which attaches spring (5A). Remove washers (25), eyebolt (20) and spring (5A). Separate spring (5A) from eyebolt (20).

      NOTE: Note number of washers (25) under eyebolt (20) to facilitate assembly.

   B. Loosen and remove nut (30) securing eyebolt (20) which attaches spring (15A). Remove washers (25), eyebolt (20) and spring (15A). Separate spring (15A) from eyebolt (20).

      NOTE: Note number of washers (25) under eyebolt (20) to facilitate assembly.

   C. Remove bolt (135), washer (140), nut (145) and plug (150).

   D. Slide lever assembly (185) and bushing (175) off spindle (155). Remove bearing (180) and spacer (160) from lever assembly (185).

   CAUTION: CLAPPER ARM ASSEMBLIES (205B) WILL ROTATE TOWARD EACH OTHER DUE TO SPRING (10) FORCE. USE CARE TO AVOID INJURY TO PERSONNEL.

   E. Slide clapper arm assemblies (205B) down spindle (155) until they clear clapper stop (255) on input arm assembly (240B) to release spring (10) force. Remove spring (10) from clapper arm assemblies (205B).

   F. Remove clapper arm assemblies (205B) and bushing (175) from spindle (155). Remove bearings (180) and bushings (175) from clapper arm assemblies (205B).

   G. Slide input arm assembly (240B) with attaching cam follower assembly (115B) until cam follower (70A) disengages cam (265A) and remove spring (5A).

H. Remove input arm assembly (240B) with attaching cam follower assembly (115B) and bushing (175) from spindle (155). Remove bearing (180) and spacer (165) from input arm assembly (240B).

I. Remove bolt (85), washer (90), bushing (105), nut (95) and separate cam follower assembly (115B) from input arm assembly (240B). Remove bearing (110), spacer (100), nut (80), washer (75), cam follower (70A) from cam follower assembly (115B).

J. Remove hub assembly (270) from spindle (155). Remove bearing (180) and spacer (170) from hub assembly (270).

K. Remove bolt (35), collar (40) and separate pivot crank assembly (55) from hub assembly (270). Remove bearing (50) and spacer (45A) from pivot crank assembly (55).

L. Remove bolts (266), collars (267) and cam (265A) from hub assembly (270).

CLEANING

1. Clean all parts except bearings (50, 60, 110, 120, 180, 190, 210, IPL Fig. 1) using standard industry practices per 20-30-03.

2. Clean teflon sealed bearings (50, 60, 110, 120, 180, 190, 210) according to manufacturer's instruction.

CHECK

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

2. Magnetic particle check per 20-20-01:

   A. Springs (5A, 10, 15A, IPL Fig. 1)

   B. Plug (150)

   C. Spindle (155)

   D. Clapper stops (230, 255)

   E. Cam (265A)

3. Penetrant check per 20-20-02:

   A. Pivot crank (65)

   B. Cam follower (130)

   C. Lever (200)

   D. Input arms (235B, 260)

   E. Hub (280)

4. Check springs (5A, 10, 15A) for load limits per Fig. 501.

Item No. Fig. 1	Test Length (Inches)	Allowable Load Limit (Pounds)
5A	3.60 5.15	22.50-27.50 87.5 -106.5
10	4.41 8.30	10.80-13.20 35.80-43.80
15A	2.15 2.50	5.2-6.2 8.3-10.3

Tension Spring Check
Figure 501

REPAIR - GENERAL

1. Content

   A. Repair, refinish and replacement procedures are included in separate repair sections as follows:

P/N	NAME	REPAIR
251T2415	INPUT ARM	1-1
251T2416	LEVER	2-1
251T2417	PIVOT CRANK	3-1
251T2420	LEVER HUB	4-1
251T2422	CAM FOLLOWER	5-1
251T2426	CLAPPER ARM	6-1
- - -	MISC PARTS REFINISH	7-1

2. Standard Practices

   A. Refer to the following standard practices as applicable, for details of procedures in individual repairs.

   20-30-02 Stripping of Protective Finishes
   20-30-03 General Cleaning Procedures
   20-41-01 Decoding Table for Boeing Finish Codes
   20-42-05 Bright Cadmium Plating
   20-43-01 Chromic Acid Anodizing
   20-50-03 Bushing Installation and Retention

3. Materials

   NOTE: Equivalent substitutes may be used.

   A. Primer -- BMS 10-11, Type 1 (Ref 20-60-02)

   B. Sealant -- BMS 5-95 (Ref 20-60-04)

4. Dimensioning Symbols

A. Standard True Position Dimensioning Symbols used in applicable repair procedures are shown in Fig. 601.

—	STRAIGHTNESS
▱	FLATNESS
⊥	PERPENDICULARITY (OR SQUARENESS)
//	PARALLELISM
○	ROUNDNESS
⌭	CYLINDRICITY
⌒	PROFILE OF A LINE
⌓	PROFILE OF A SURFACE
◎	CONCENTRICITY
⌯	SYMMETRY
∠	ANGULARITY
↗	RUNOUT
⌖	THEORETICAL EXACT POSITION OF A FEATURE (TRUE POSITION)
∅	DIAMETER
BASIC (BSC) OR [DIM]	A THEORETICALLY EXACT DIMENSION USED TO DESCRIBE SIZE, SHAPE OR LOCATION OF A FEATURE FROM WHICH PERMISSIBLE VARIATIONS ARE ESTABLISHED BY TOLERANCES ON OTHER DIMENSIONS OR NOTES.
[-A-]	DATUM
Ⓜ	MAXIMUM MATERIAL CONDITION (MMC)
Ⓢ	REGARDLESS OF FEATURE SIZE (RFS)
Ⓟ	PROJECTED TOLERANCE ZONE

EXAMPLES

— | 0.002	STRAIGHT WITHIN 0.002
⊥ | B | 0.002	PERPENDICULAR TO B WITHIN 0.002
// | A | 0.002	PARALLEL TO A WITHIN 0.002
○ | 0.002	ROUND WITHIN 0.002
⌭ | 0.010	CYLINDRICAL SURFACE MUST LIE BETWEEN TWO CONCENTRIC CYLINDERS, ONE OF WHICH HAS A RADIUS 0.010 INCH GREATER THAN THE OTHER
⌒ | A | 0.006	EACH LINE ELEMENT OF THE SURFACE AT ANY CROSS SECTION MUST LIE BETWEEN TWO PROFILE BOUNDARIES 0.006 INCH APART IN RELATION TO DATUM PLANE A
⌓ | A | 0.020	SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.02 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE
◎ | C | ∅ 0.0005	CONCENTRIC TO C WITHIN 0.0005 DIAMETER (FULL INDICATOR MOVEMENT)
⌯ | A | 0.010	SYMMETRICAL WITH A WITHIN 0.010
∠ | A | 0.005	ANGULAR TOLERANCE 0.005 WITH A
⌖ | B | ∅ 0.002 Ⓢ	LOCATED AT TRUE POSITION WITHIN 0.002 DIA IN RELATION TO DATUM B, REGARDLESS OF FEATURE SIZE
⊥ | A | ∅ 0.010 Ⓜ 0.510 Ⓟ	AXIS IS TOTALLY WITHIN A CYLINDER OF 0.010-INCH DIAMETER, PERPENDICULAR TO, AND EXTENDING 0.510-INCH ABOVE, DATUM A, MAXIMUM MATERIAL CONDITION
[2.000] OR 2.000 BSC	EXACT DIMENSION IS 2.000

True Position Dimensioning Symbols
Figure 601

13686

INPUT ARM ASSEMBLY - REPAIR 1-1

251T2415-6, -7

NOTE: Refer to REPAIR-GEN for list of applicable standard practices. For repair of input arm (260, IPL Fig. 1) surfaces which may only require stripping and restoration of original finish, refer to Refinish instructions, Fig. 601.

1. Bearing Replacement (Fig. 601)

   A. Remove bearing (245, IPL Fig. 1) from input arm (260).

   B. Install new bearing with MIL-G-23827 grease per 20-50-03.

   C. Roller swage per 20-50-03.

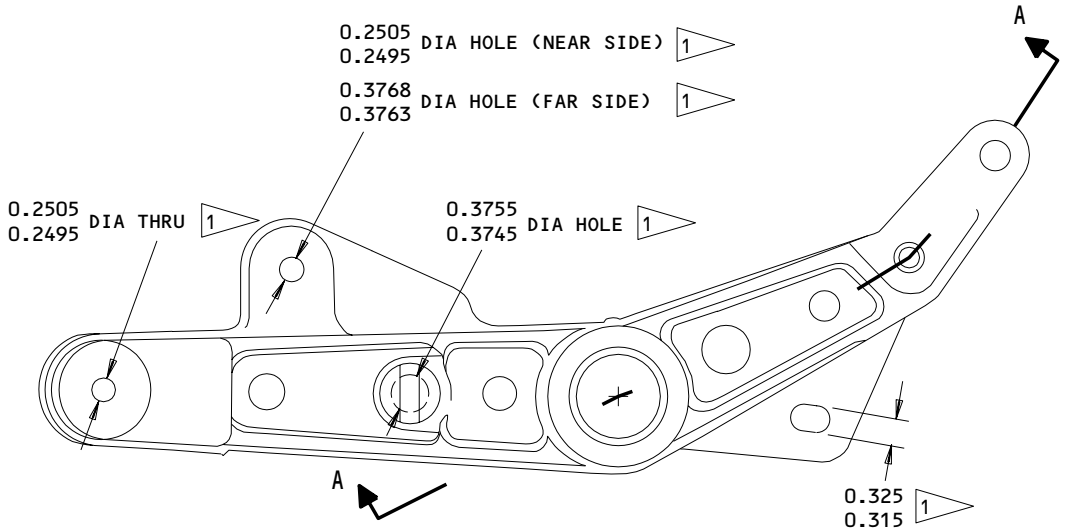
2. Bushing Replacement (Fig. 601)

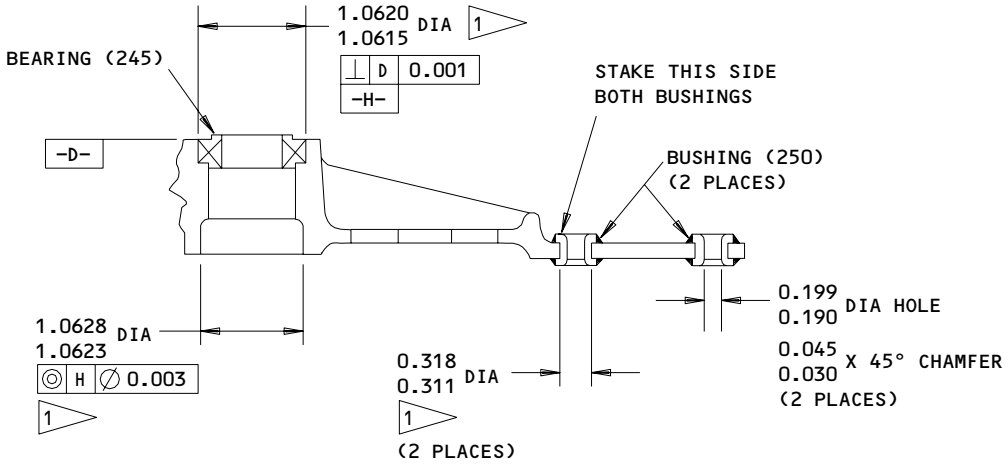
   A. Remove bushings (250, IPL Fig. 1) from input arm (260).

   B. Install new bushing with BMS 5-95 wet sealant and stake per 20-50-03.

   C. Machine bushings to dimension shown.

   D. Fillet seal bushing flanges and staked end with BMS 5-95 wet sealant.





A-A

REFINISH

ARM (260) -- CHROMIC ACID ANODIZE (F-17.04) ALL OVER. APPLY 2 COATS OF PRIMER (F-20.03), EXCEPT OMIT PRIMER SURFACES INDICATED BY 1

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

251T2415-6,-7
Input Arm Assy Parts Replacement and Arm Refinish Details
Figure 601

13687

LEVER ASSEMBLY - REPAIR 2-1

251T2416-1, -5

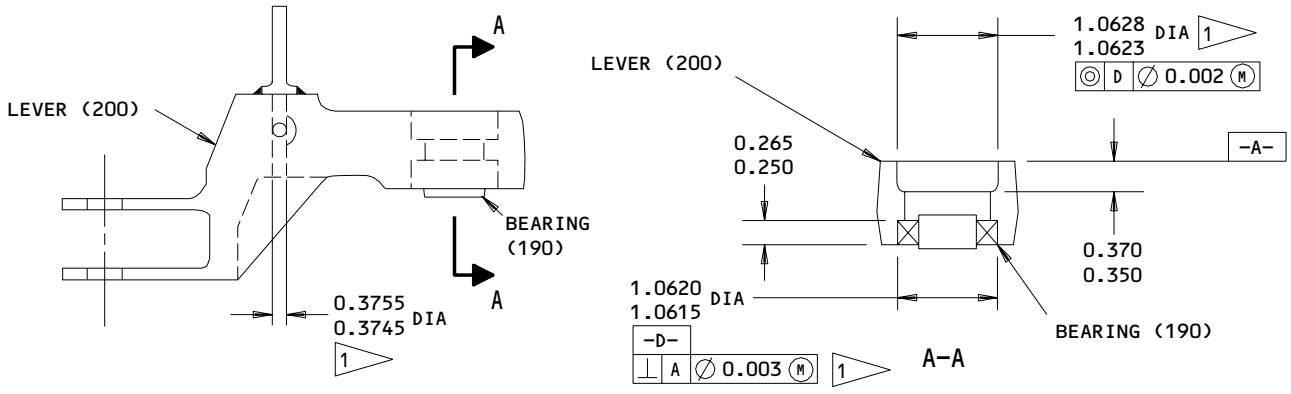
NOTE: Refer to REPAIR-GEN for list of applicable standard practices. For repair of lever (200, IPL Fig. 1) surfaces which may only require stripping and restoration of original finish, refer to Refinish instructions, Fig. 601.

1. Bearing Replacement (Fig. 601)

   A. Remove bearing (190, IPL Fig. 1) from lever (200).

   B. Install new bearing with wet MIL-G-23827 grease per 20-50-03.

   C. Roller swage per 20-50-03.



REFINISH

LEVER (200) -- CHROMIC ACID ANODIZE (F-17.04).
APPLY TWO COATS BMS 10-11, TYPE 1 PRIMER (F-20.03),
EXCEPT AS NOTED IN 1 .

1 OMIT PRIMER (F-20.03) THIS SURFACE.

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

Lever Assy - Bearing Replacement and Refinish Details
Figure 601

13689

PIVOT CRANK ASSEMBLY - REPAIR 3-1

251T2417-1, -2

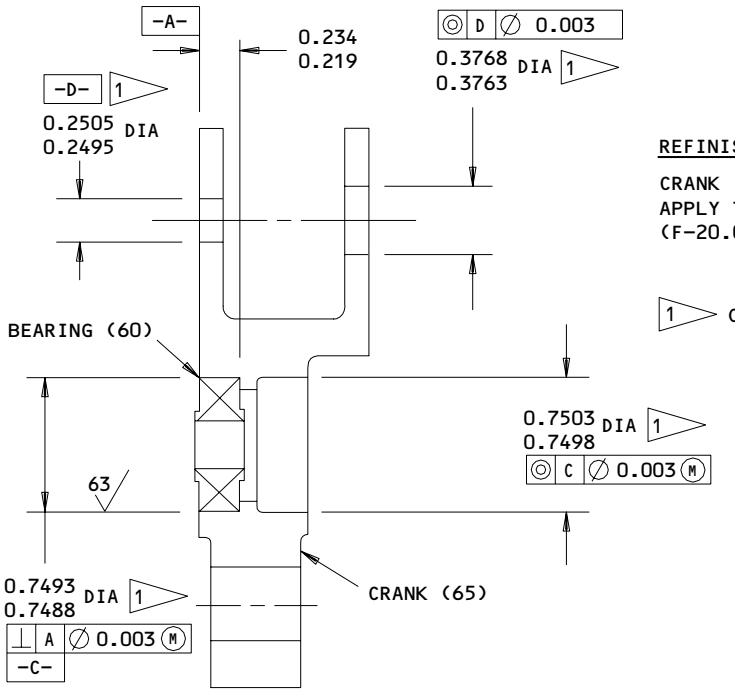
NOTE: Refer to REPAIR-GEN for list of applicable standard practices. For repair of pivot crank (65, IPL Fig. 1) surfaces which may only require stripping and restoration of original finish, refer to Refinish instructions, Fig. 601.

1. Bearing Replacement (Fig. 601)

   A. Remove bearing (60, IPL Fig. 1) from pivot crank (65).

   B. Install new bearing with MIL-G-23827 grease per 20-50-03.

   C. Roller swage per 20-50-03.



REFINISH

CRANK (65) -- CHROMIC ACID ANODIZE (F-17.04). APPLY TWO COATS BMS 10-11, TYPE 1 PRIMER (F-20.03), EXCEPT AS NOTED IN 1.

1 OMIT PRIMER (F-20.03) THIS SURFACE.

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

Pivot Crank Assy - Bearing Replacement
Figure 601

13694

LEVER HUB ASSEMBLY - REPAIR 4-1

251T2420-1, -2, -7, -8, -11 thru -14

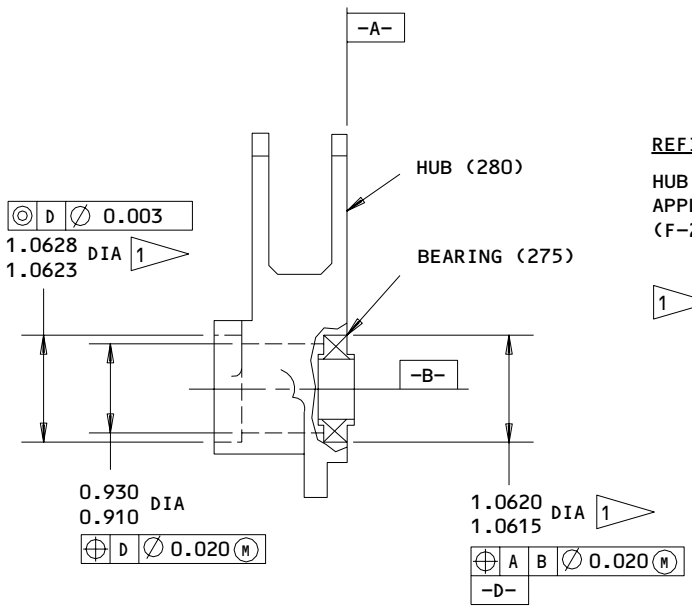
NOTE: Refer to REPAIR-GEN for list of applicable standard practices. For repair of hub (280, IPL Fig. 1) surfaces which may only require stripping and restoration of original finish, refer to Refinish instructions, Fig. 601.

1. Bearing Replacement (Fig. 601)

   A. Remove bearing (275, IPL Fig. 1) from hub (280).

   B. Install new bearing with MIL-G-23827 grease per 20-50-03.

   C. Roller swage per 20-50-03.



REFINISH

HUB (280) -- CHROMIC ACID ANODIZE (F-17.04). APPLY TWO COATS BMS 10-11, TYPE 1 PRIMER (F-20.03), EXCEPT AS NOTED IN 1.

1 OMIT PRIMER (F-20.03) THIS SURFACE.

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

Lever Hub Assy - Replacement
Figure 601

13696

CAM FOLLOWER ASSEMBLY - REPAIR 5-1

251T2422-6, -7

NOTE: Refer to REPAIR-GEN for list of applicable standard practices. For repair of cam follower (130, IPL Fig. 1) surfaces which may only require stripping and restoration of original finish, refer to Refinish instructions, Fig. 601.

1. Bushing Replacement (Fig. 601)

   A. Remove bushings (125, IPL Fig. 1) from cam follower (130).

   B. Install new bushing with BMS 5-95 wet sealant and stake per 20-50-03.

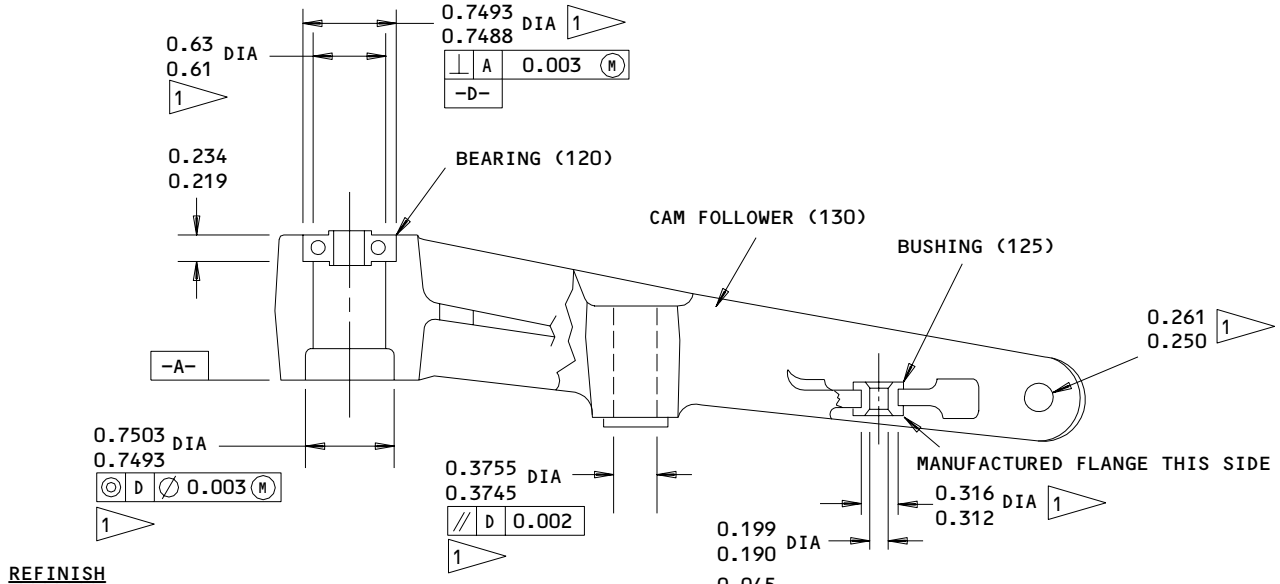
   C. Fillet seal bushing flanges with BMS 5-95 sealant.

2. Bearing Replacement (Fig. 601)

   A. Remove bearing (120, IPL Fig. 1) from cam follower (130).

   B. Install new bearing with MIL-G-23827 grease per 20-50-03.

   C. Roller swage per 20-50-03.



REFINISH

CAM FOLLOWER (130) -- CHROMIC ACID ANODIZE (F-17.04). APPLY TWO COATS BMS 10-11, TYPE 1 PRIMER (F-20.03), EXCEPT AS NOTED IN 1.

1 OMIT PRIMER (F-20.03) THIS SURFACE.

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

Cam Follower Assy - Bearing and Bushing Replacement
Figure 601

13707

CLAPPER ARM ASSEMBLY - REPAIR 6-1

251T2426-6, -8

NOTE: Refer to REPAIR-GEN for list of applicable standard practices. For repair of input arm (235B, IPL Fig. 1) surfaces which may only require stripping and restoration of original finish, refer to Refinish instructions, Fig. 601.

1. Bearing Replacement (Fig. 601)

   A. Remove bearing (210, IPL Fig. 1) from input arm (235B).

   B. Install new bearing with MIL-G-23827 grease per 20-50-03.

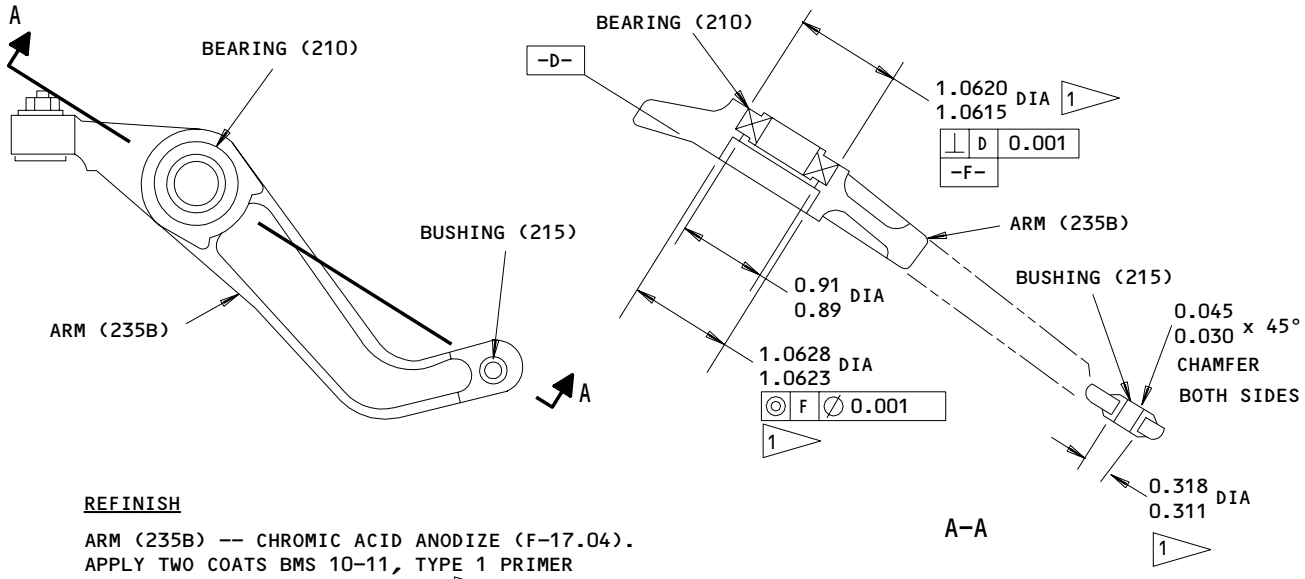
   C. Roller swage per 20-50-03.

2. Bushing Replacement (Fig. 601)

   A. Remove bushing (215, IPL Fig. 1) from input arm (235B).

   B. Install new bushing with BMS 5-95 wet sealant and stake per 20-50-03.

   C. Fillet seal bushing flanges and staked ends with BMS 5-95 wet sealant.



REFINISH

ARM (235B) -- CHROMIC ACID ANODIZE (F-17.04). APPLY TWO COATS BMS 10-11, TYPE 1 PRIMER (F-20.03), EXCEPT AS NOTED IN 1. MATERIAL: AL ALLOY

1 OMIT PRIMER (F-20.03) THIS SURFACE.

ALL DIMENSIONS ARE IN INCHES

Clapper Arm Assy - Bearing and Bushing Replacement
Figure 601

MISCELLANEOUS PARTS REFINISH - REPAIR 7-1

1. Repair of parts listed in Fig. 601 consists of restoration of the original finish.

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1		
Springs (5A,10)	9254 Steel wire	Apply two coats BMS 10-11, type 1 primer (F-20.03).
Spring (15A)	17-7PH CRES wire	Passivate (F-17.09).
Plug (150), spindle (155)	4340 Steel, 150-170 ksi	Cadmium plate 0.0002-0.0004 inch thick (F-15.02).
Stops (195,230, 255)	15-5PH Steel, 150-170 ksi	Cadmium plate (F-15.06).
Cam (265A)	15-5PH CRES, 180-200 ksi	Cadmium plate and apply one coat primer, BMS 10-11, type 1 (F-16.01) except omit primer on cam surface.

Refinish Details
Figure 601

ASSEMBLY

1. Materials and Equipment

NOTE: Equivalent substitutes may be used.

A. Grease -- MIL-G-23827 (Ref 20-60-03)

B. Support Fixture -- A27086-1

2. Assembly (IPL Fig. 1)

A. Preassemble parts as follows:

NOTE: Install bearings per 20-50-03.

(1) Install spacer (160) and bearing (180) in lever assembly (185).

(2) Install bushings (175) and bearings (180) in clapper arm assembly (205B).

(3) Install spacer (165) and bearing (180) in arm assembly (240B).

(4) Install spacer (170) and bearing (180) in hub assembly (270).

(5) Install spacer (45A) and bearing (50) in pivot crank assembly (55).

(6) Install spacer (100) and bearing (110) in cam follower assembly (115). Install cam follower (70A) and secure with washer (75) and nut (80).

B. Position cam (265A) and hub assembly (270) and secure with bolt (266) and collars (267).

C. Position pivot crank assembly (55) on hub assembly (270) and secure with bolt (35) and collar (40).

D. Install cam follower assembly (115B) on arm assembly (240B) and secure with bolt (85), bushing (105), washer (90) and nut (95). Install inner spring (5A) on cam follower assembly (115B) and arm assembly (240B).

E. Install spring (15A) on cam (265A) and eyebolt (20) then install eyebolt, washers (25) and nut (30) on crank assembly (55).

F. Install hub assembly (270) on spindle (155).

G. Install bushing (175) and arm assembly (205B) on spindle (155). Apply force against spring (5A) and push arm assembly (205B) up the spindle until cam follower (70A) rests on cam (265A).

H. Install bushing (175) and clapper arm assemblies (205B) on spindle (155) then attach spring (10) to clapper arm assemblies. Apply force to clapper arm assemblies (205B) against spring (10) and slide clapper arm assemblies up the spindle until clapper stop (230) on each clapper arm assemblies rests against stop (255) on arm assembly (240B).

I. Install bushing (175) and crank assembly (185) on spindle (155) with stop (195) on crank assembly rests between stops (230) on clapper arm assemblies (205B).

J. Apply grease to shank of bolt (135) and install plug (150), bolt (135), washer (140) and nut (145). Install six AN960XC416 under nut to adjust grip length of bolt (135).

NOTE: Bolt (135), washer (140) and nut (145) will be removed and reinstalled during installation of unit on the airplane.

K. Attach spring (5A) to arm (240B) and eyebolt (20) then install eyebolt, washers (25) and nut (30) on cam follower assembly (115B).

L. Adjust springs (5A, 15A) tension.

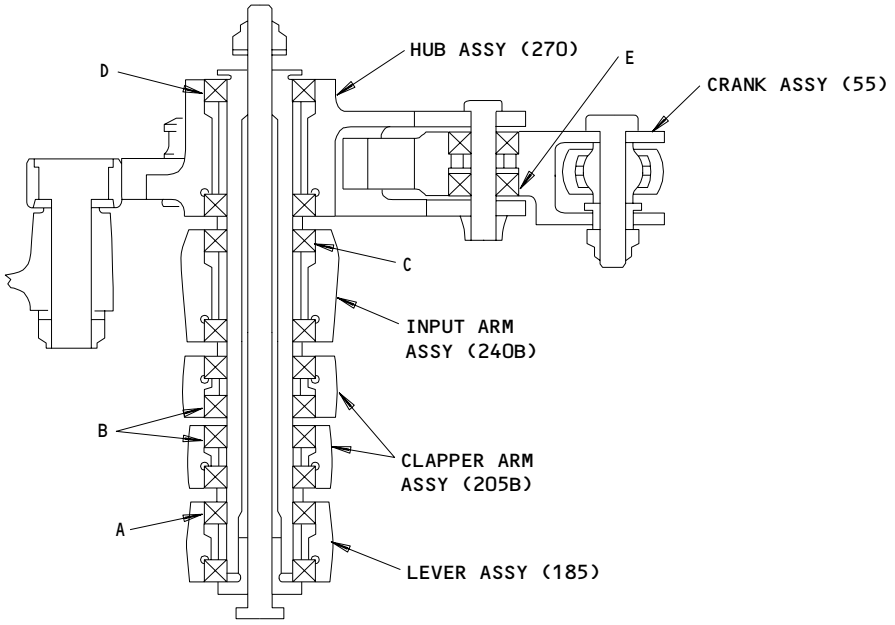
(1) Install unit in fixture A27086-2.

(2) Apply force to pivot crank assembly (55) in the direction perpendicular to pivot crank assembly. Adjust spring (15A) tension by adding or subtracting washers (25) until a force of 5.0-5.5 lbs is required to align rig pin holes and permit easy installation of jig pin CL-30-JP.

(3) Adjust outer spring (5A) tension by adding or subtracting washers (25) to obtain a breakout force of 30.0-38.0 lbs. The breakout force is applied perpendicular to arm assembly (240B) at the centerline of the 0.250 inch clevis holes opposite spring (5A). To determine breakout, insert 0.001 shim stock between the cam and the roller on the side opposite to the direction of roller motion. Breakout occurs when the shim can be removed with light finger pressure. At the completion of breakout force adjustment, a minimum of one washer needs to be installed between the eyebolt (20) and the arm assembly (240B) and a minimum of one washer needs to be installed under the nut (30). Make sure the shim stock is removed from the assembly after breakout force adjustment is complete.

3. Use standard industry practices to store this component.

FITS AND CLEARANCES



Ref Letter Fig.801	Mating Item No. IPL Fig.	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance *[1]		Dimension		Maximum Clearance
		Min	Max	Min	Max	Min	Max	
A	ID 185 OD 180	1.0623 1.0620	1.0628 1.0625	-0.0002	0.0008	1.0615	1.0633	0.0013
B	ID 205B OD 180	1.0623 1.0620	1.0628 1.0625	-0.0002	0.0008	1.0615	1.0633	0.0013
C	ID 240B OD 180	1.0623 1.0620	1.0628 1.0625	-0.0002	0.0008	1.0615	1.0633	0.0013
D	ID 270 OD 180	1.0623 1.0620	1.0628 1.0625	-0.0002	0.0008	1.0615	1.0633	0.0013
E	ID 55 OD 50	0.7498 0.7495	0.7503 0.7500	-0.0002	0.0008	0.7490	0.7508	0.0013
	ID 115B OD 110	0.7498 0.7495	0.7503 0.7500	-0.0002	0.0008	0.7490	0.7508	0.0013

*[1] NEGATIVE VALUES DENOTE INTERFERENCE FIT
ALL DIMENSIONS ARE IN INCHES

Fits and Clearances
Figure 801

SPECIAL TOOLS, FIXTURES AND EQUIPMENT

NOTE: Equivalent substitutes may be used.

1. Support Fixture -- A27086-1.

ILLUSTRATED PARTS LIST

1. This section lists and illustrates replaceable or repairable component parts. The Illustrated Parts Catalog contains a complete explanation of the Boeing part numbering system.

2. Indentures show parts relationships as follows:

    Assembly
      Detail Parts for Assembly
      Subassembly
      Attaching Parts for Subassembly
        Detail Parts for Subassembly

    Detail Installation Parts (Included only if installation parts may be returned to shop as part of assembly)

3. One use code letter (A, B, C, etc.) is assigned in the EFF CODE column for each variation of top assembly. All listed parts are used on all top assemblies except when limitations are shown by use code letter opposite individual part entries.

4. Letter suffixes (alpha-variants) are added to item numbers for optional parts, Service Bulletin modification parts, configuration differences (except left- and right-hand parts), product improvement parts, and parts added between two sequential item numbers. The alpha-variant is not shown on illustrations when appearance and location of all variants of the part is the same.

5. Service Bulletin modifications are shown by the notations PRE SB XXXX and POST SB XXXX.

    A. When a new top assembly part number is assigned by Service Bulletin, the notations appear at the top assembly level only. The configuration differences at detail part level are then shown by use code letter.

    B. When the top assembly part number is not changed by the Service Bulletin, the notations appear at the detail part level.

6. Parts Interchangeability

Optional (OPT)	The parts are optional to and interchangeable with other parts having the same item number.
Supersedes, Superseded By (SUPSDS, SUPSD BY)	The part supersedes and is not interchangeable with the original part.
Replaces, Replaced By (REPLS, REPLD BY)	The part replaces and is interchangeable with, or is an alternate to, the original part.

VENDORS

06710 VALLEY-TODECO INCORPORATED
12975 BRADLEY AVENUE
SYLMAR,CALIFORNIA 91342

06725 AIR INDUSTRIES CORPORATION
12570 KNOTT STREET
GARDEN GROVE, CALIFORNIA 92641

06950 VSI CORP SCREWCORP DIV
13001 EAST TEMPLE AVENUE
CITY OF INDUSTRY, CALIFORNIA 91746

08524 DEUTSCH FASTENER CORPORATION
PO BOX 92925 7001 WEST IMPERIAL HIGHWAY
LOS ANGELES, CALIFORNIA 90045

11815 TOWNSEND DIV OF TEXTRON INC CHERRY FASTENER UNIT
BOX 2157 1224 EAST WARNER AVENUE
SANTA ANA, CALIFORNIA 92707

15653 KAYNAR MFG COMPANY INC KAYLOCK DIV
PO BOX 3001 800 SOUTH STATE COLLEGE BLVD
FULLERTON, CALIFORNIA 92634

17943 FEDERAL MANUFACTURING CORPORATION
6910 FARMDALE AVENUE
NORTH HOLLYWOOD, CALIFORNIA 91605

21335 TEXTRON INC FAFNIR BEARING DIVISION
37 BOOTH STREET
NEW BRITAIN, CONNECTICUT 06050

23294 AVALON MACHINE PRODUCTS INC
15337 ALLEN STREET
PARAMOUNT, CALIFORNIA 90723

27624 P.B. FASTENER DIV OF PAUL R BRILES INC
1700 WEST 132ND STREET
GARDENA, CALIFORNIA 90249

29666 HUCK MANUFACTURING COMPANY
2500 BELLEVUE AVENUE
DETROIT, MICHIGAN 48207

VENDORS

38443 TRW INC BEARING DIV
402 CHANDLER STREET
JAMESTOWN, NEW YORK 14701

43991 FAG BEARING INCORPORATED
HAMILTON AVENUE
STAMFORD, CONNECTICUT 06904

52828 REPUBLIC FASTENER MFG CORP
1300 RANCHO CONEJO BLVD
NEWBURY PARK, CALIFORNIA 91320

56878 SPS TECHNOLOGIES INC
HIGHLAND AVENUE
JENKINTOWN, PENNSYLVANIA 19046

60380 TORRINGTON CO BEARINGS DIV SUBSIDIARY OF INGERSOLL-RAND CORP
59 FIELD STREET
TORRINGTON, CONNECTICUT 06790

70265 ALL POWER MANUFACTURING COMPANY
13141 MOLETTE STREET
SANTE FE SPRINGS, CALIFORNIA 90670

71087 BOOTS ACFT NUT DIV TOWNSEND CO SEE TEXTRON INC CHERRY
FASTENER TOWNSEND DIV V11815

72962 ESNA DIV OF AMERACE CORP
2330 VAUXHALL ROAD
UNION, NEW JERSEY 07083

73197 HISHEAR CORPORATION
2600 SKYPARK DRIVE
TORRANCE, CALIFORNIA 90509

80539 SPS TECHNOLOGIES INC AEROSPACE PRODUCTS DIV
2701 SOUTH HARBOR BOULEVARD
SANTA ANA, CALIFORNIA 92702

92215 VOI-SHAN DIV OF VSI CORP
8463 HIGUERA STREET
CULVER CITY, CALIFORNIA 90230

VENDORS

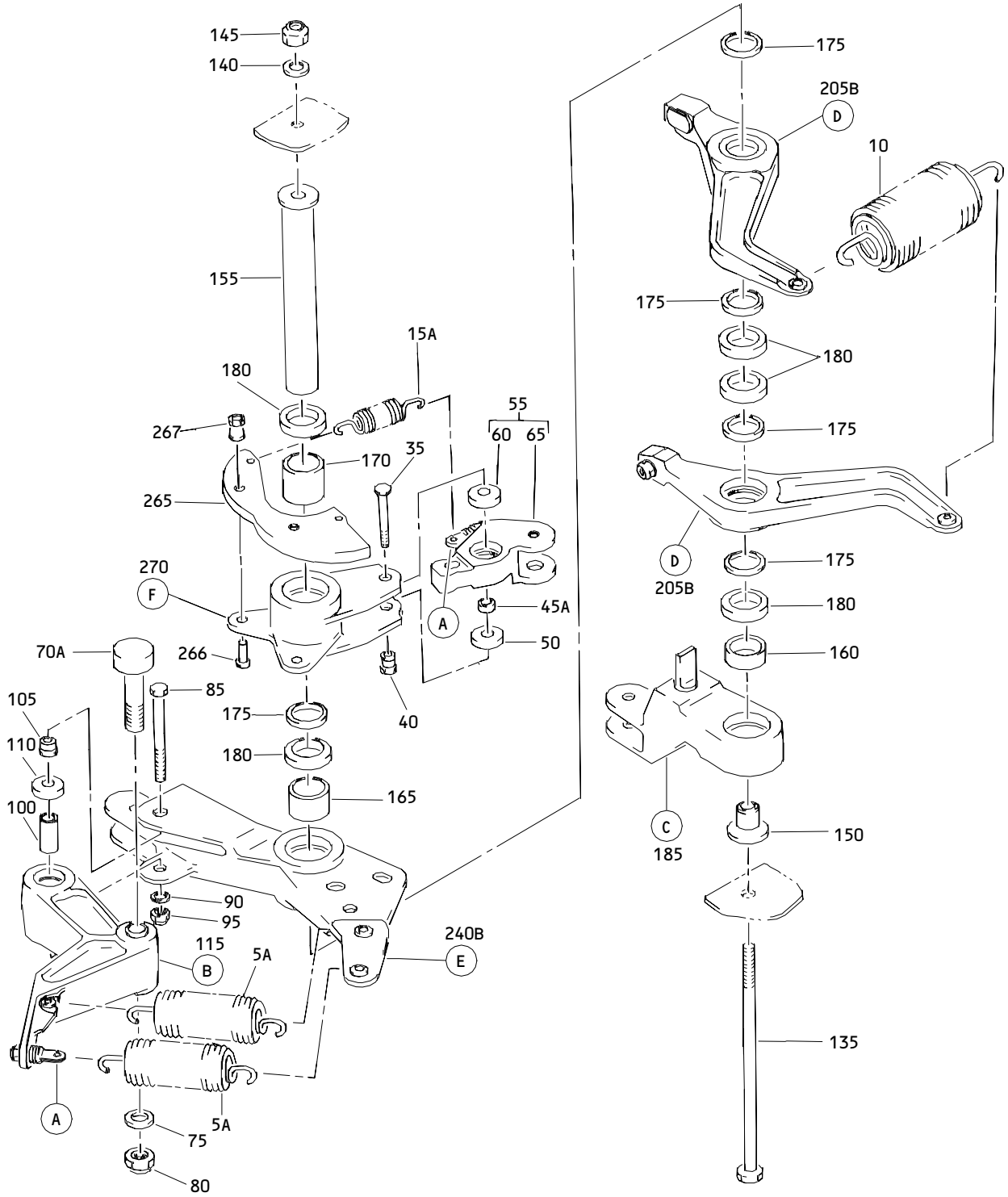
94892 MASTER MACHINE PRODUCTS CORPORATION
2069 RANDOLPH STREET
HUNTINGTON PARK, CALIFORNIA 90255

97928 LITTON FASTENING SYSTEMS DIV OF LITTON SYSTEMS INC
3969 PARAMONT BOULEVARD
LAKEWOOD, CALIFORNIA 90712

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
AN43BC6A		1	20	2
AN960PD10L		1	225	1
AN960PD416		1	90	1
		1	140	1
AN960PD616		1	75	1
AN960XC416L		1	25	8
BACB10AF6T16HS		1	70A	1
BACB10AS10		1	180	5
		1	210	1
		1	275	1
BACB10BX4		1	50	1
		1	60	1
		1	110	1
BACB28B3-285P		1	125	1
		1	215	1
		1	250	2
BACB30DX8-16		1	35	1
BACB30MY8K6		1	266	2
BACB30NF4-28		1	85	1
BACB30NF4-86		1	135	1
BACC30M8		1	267	2
BACN10JC3		1	220	1
BACN10JC4		1	30	2
		1	95	1
		1	145	1
BACN10JC6		1	80	1
BRH10-3		1	220	1
BRH10-4		1	30	2
		1	95	1
		1	145	1
BRH10-6		1	80	1
B30MY8K6		1	266	2
HL10VAZ8-6		1	266	2
HL79-8		1	267	2
HRS4CTKR16		1	70	
HRS4CTR6		1	70A	1
H10-3BAC		1	220	1
H10-4BAC		1	30	2
H10-6BAC		1	80	1
KP4A		1	50	1
		1	60	1
		1	110	1
		1	120	1
KP4AFS428		1	50	1
KP4A2TS		1	50	1
LLKP4A		1	50	1
LLMB538		1	180	5

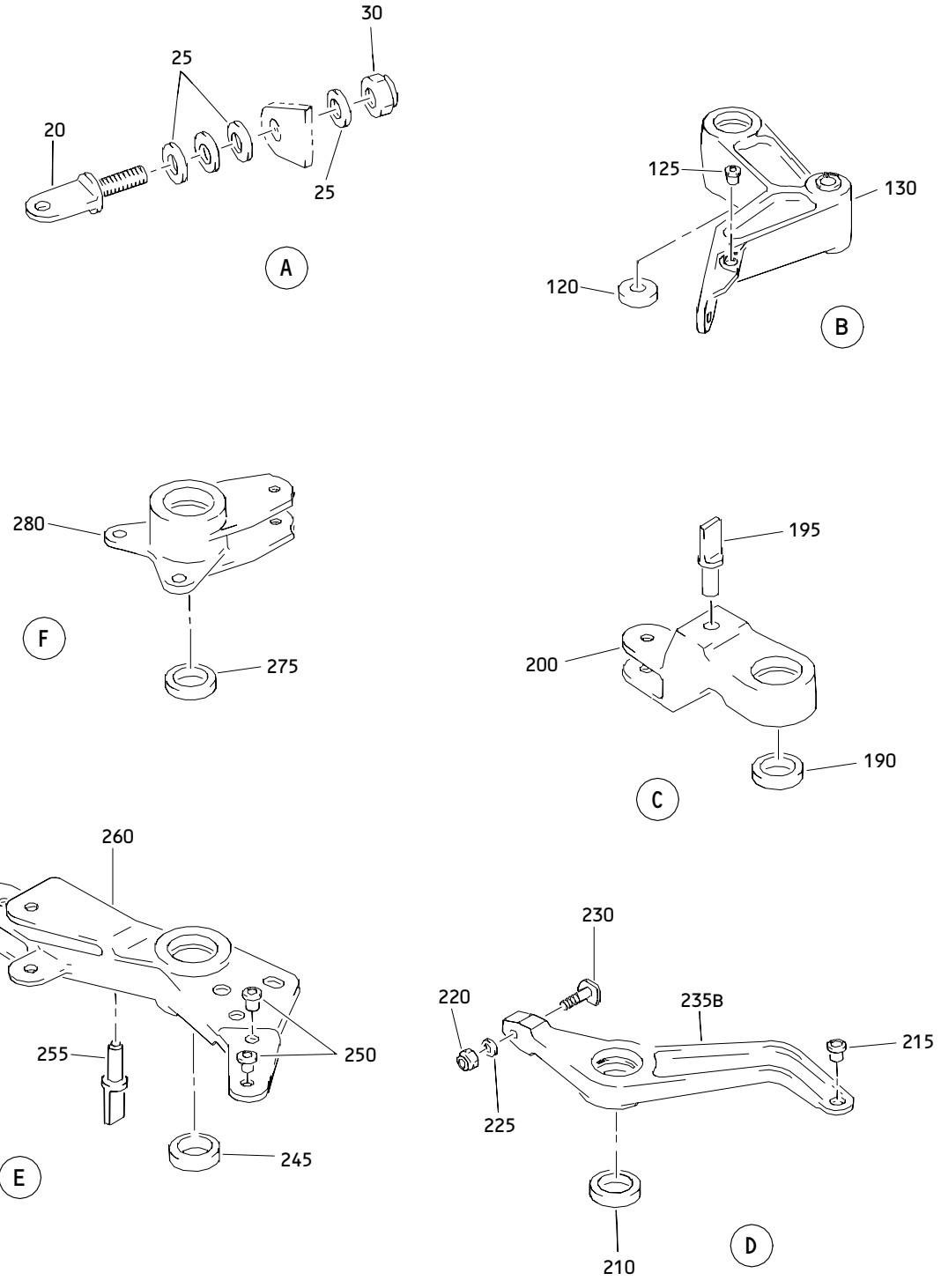
PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
L8008K6		1	266	2
MB538-2TS		1	180	5
MB538DD		1	180	5
		1	190	1
		1	210	1
		1	245	1
		1	275	1
MB538DDFS428		1	180	5
MB538TT		1	180	5
NAS1080-8		1	40	1
NAS43DD10-18		1	160	1
NAS43DD10-37		1	165	1
NAS43DD10-52		1	170	1
NAS43DD4-49		1	100	1
NAS43DD4-8		1	45	
NAS43HT4-8		1	45A	1
NAS75-10-003		1	175	5
NAS77-4-20		1	105	1
NS202101-02		1	220	1
NS202101-048		1	30	2
RMLH9075-3W		1	220	1
RMLH9075-4W		1	30	2
RMLH9075-6		1	80	1
T6S1032J		1	220	1
T6S428J		1	30	2
VN303A02		1	220	1
VN303A048		1	30	2
2LPYT8-16		1	35	1
251T2400-3		1	1	
251T2400-4		1	1A	
251T2400-5		1	1B	RF
251T2400-6		1	1C	RF
251T2400-7		1	1D	RF
251T2400-8		1	1E	RF
251T2415-1		1	240	
251T2415-2		1	260	1
251T2415-4		1	240A	
251T2415-5		1	260A	1
251T2415-6		1	240B	1
251T2415-7		1	240C	1
251T2416-1		1	185	1
251T2416-2		1	200	1
251T2416-4		1	200A	1
251T2416-5		1	185A	1
251T2417-1		1	55	1
251T2417-2		1	55A	1
251T2417-3		1	65	1

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
251T2417-4		1	65A	1
251T2420-1		1	270	1
251T2420-11		1	270D	1
251T2420-12		1	270F	1
251T2420-13		1	270E	1
251T2420-14		1	270G	1
251T2420-2		1	270B	1
251T2420-3		1	280	1
251T2420-4		1	280B	1
251T2420-7		1	270A	1
251T2420-8		1	270C	1
251T2420-9		1	280A	1
251T2421-1		1	195	1
		1	255	1
251T2422-1		1	115	
251T2422-2		1	130	1
251T2422-4		1	115A	
251T2422-5		1	130A	1
251T2422-6		1	115B	1
251T2422-7		1	115C	1
251T2423-5		1	265	
251T2424-1		1	5	
251T2425-1		1	15	
251T2426-1		1	205	
251T2426-2		1	235	
251T2426-4		1	205A	
251T2426-5		1	235A	
251T2426-6		1	205B	2
251T2426-7		1	235B	1
251T2426-8		1	205C	2
251T2426-9		1	235C	1
251T2427-1		1	10	1
251T2428-1		1	155	1
251T2429-1		1	150	1
251T2432-1		1	230	1
251T2439-1		1	5A	2
251T2440-1		1	15A	1
251T2441-1		1	265A	1
66014-8		1	267	2
96-02		1	220	1
96-048		1	30	2
96-064		1	80	1



Elevator Slave Linkage Lost Motion Assembly
Figure 1 (Sheet 1)

T55339



Elevator Slave Linkage Lost Motion Assembly
Figure 1 (Sheet 2)

T55340

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-1	251T2400-3		DELETED		
-1A	251T2400-4		DELETED		
-1B	251T2400-5		MOTION ASSY-ELEV SLAVE LINKAGE LOST (PRE SB 27-32)	A	RF
-1C	251T2400-6		MOTION ASSY-ELEV SLAVE LINKAGE LOST (PRE SB 27-32)	B	RF
-1D	251T2400-7		MOTION ASSY-ELEV SLAVE LINKAGE LOST (POST SB 27-32)	C	RF
-1E	251T2400-8		MOTION ASSY-ELEV SLAVE LINKAGE LOST (POST SB 27-32)	D	RF
5	251T2424-1		DELETED		
5A	251T2439-1		.SPRING		2
10	251T2427-1		.SPRING		1
15	251T2425-1		DELETED		
15A	251T2440-1		.SPRING		1
20	AN43BC6A		.EYEBOLT		2
25	AN960XC416L		.WASHER		8
30	BRH10-4		.NUT- (V52828) (SPEC BACN10JC4) (OPT H10-4BAC (V15653)) (OPT NS202101-048 (V80539)) (OPT RMLH9075-4W (V72962)) (OPT T6S428J (V71087)) (OPT VN303A048 (V92215)) (OPT 96-048 (V80539))		2

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
35	2LPYT8-16		.BOLT- (V11815) (SPEC BACB30DX8-16) (OPT 2LPYT8-16 (V29666))		1
40	NAS1080-8		.COLLAR		1
45	NAS43DD4-8		DELETED		
45A	NAS43HT4-8		.SPACER		1
50	KP4A		.BEARING- (V38443) (SPEC BACB10BX4) (OPT KP4AFS428 (V21335)) (OPT KP4A2TS (V43991)) (OPT LLKP4A (V38443))		1
55	251T2417-1		.CRANK ASSY-PIVOT	AC	1
-55A	251T2417-2		.CRANK ASSY-PIVOT	BD	1
60	KP4A		..BEARING- (V38443) (SPEC BACB10BX4) (SEE ITEM 50 FOR OPT PARTS)		1
65	251T2417-3		..CRANK-PIVOT	AC	1
-65A	251T2417-4		..CRANK-PIVOT	BD	1
70	HRS4CTKR16		DELETED		
70A	HRS4CTR6		.FOLLOWER-CAM (V60380) (SPEC BACB10AF6T16HS) (OPT HRS4CTR6 (V90563))		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
75	AN960PD616		.WASHER		1
80	BRH10-6		.NUT-		1
			(V52828)		
			(SPEC BACN10JC6)		
			(OPT H10-6BAC		
			(V15653))		
			(OPT RMLH9075-6		
			(V72962))		
			(OPT 96-064		
			(V80539))		
85	BACB30NF4-28		.BOLT-		1
			(V06710)		
			(SPEC BACB30NF4-28)		
			(V06725)		
			(V06950)		
			(V08524)		
			(V17943)		
			(V27624)		
			(V58678)		
			(V80539)		
			(V92215)		
			(V97928)		
90	AN960PD416		.WASHER		1
95	BRH10-4		.NUT-		1
			(V52828)		
			(SPEC BACN10JC4)		
			(SEE ITEM 30		
			FOR OPT PARTS)		
100	NAS43DD4-49		.SPACER		1
105	NAS77-4-20		.BUSHING		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
110	KP4A		.BEARING- (V38443) (SPEC BACB10BX4) (SEE ITEM 50 FOR OPT PARTS)		1
115	251T2422-1		DELETED		
-115A	251T2422-4		DELETED		
115B	251T2422-6		.FOLLOWER ASSY-CAM (OPT ITEM 115C)		1
-115C	251T2422-7		.FOLLOWER ASSY-CAM (OPT ITEM 115B)		1
120	KP4A		..BEARING- (V38443) (SEE ITEM 50 FOR OPT PARTS)		1
125	BACB28B3-285P		..BUSHING-FLANGED (V23294) (SPEC BACB28B3-285P) (V70265) (V94892)		1
130	251T2422-2		..FOLLOWER-CAM (USED ON ITEM 115B)		1
-130A	251T2422-5		..FOLLOWER-CAM (USED ON ITEM 115C)		1
135	BACB30NF4-86		.BOLT- (V06710) (SPEC BACB30NF4-86) (V06725) (V06950) (V08524) (V17943) (V27624) (V58678) (V80539) (V92215) (V97928)		1
140	AN960PD416		.WASHER		1
145	BRH10-4		.NUT- (V52828) (SPEC BACN10JC4) (SEE ITEM 30 FOR OPT PARTS)		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
150	251T2429-1		.PLUG		1
155	251T2428-1		.SPINDLE		1
160	NAS43DD10-18		.SPACER		1
165	NAS43DD10-37		.SPACER		1
170	NAS43DD10-52		.SPACER		1
175	NAS75-10-003		.BUSHING		5
180	MB538DD		.BEARING- (V38443) (SPEC BACB10AS10) (OPT LLMB538 (V38443)) (OPT MB538-2TS (V43991)) (OPT MB538DDFS428 (V21335)) (OPT MB538TT (V43991))		5
185	251T2416-1		.LEVER ASSY- (OPT ITEM 185A)		1
-185A	251T2416-5		.LEVER ASSY- (OPT ITEM 185)		1
190	MB538DD		..BEARING- (V38443) (SEE ITEM 180 FOR OPT PARTS)		1
195	251T2421-1		..STOP-CLAPPER		1
200	251T2416-2		..LEVER- (USED ON ITEM 185)		1
-200A	251T2416-4		..LEVER- (USED ON ITEM 185A)		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
205	251T2426-1		DELETED		
-205A	251T2426-4		DELETED		
205B	251T2426-6		.ARM ASSY-CLAPPER (OPT ITEM 205C)		2
-205C	251T2426-8		.ARM ASSY-CLAPPER (OPT ITEM 205B)		2
210	MB538DD		..BEARING- (V38443) (SPEC BACB10AS10) (SEE ITEM 180 FOR OPT PARTS)		1
215	BACB28B3-285P		..BUSHING- (V23294) (SPEC BACB28B3-285P) (V70265) (V94892)		1
220	BRH10-3		..NUT- (V52828) (SPEC BACN10JC3) (OPT H10-3BAC (V15653)) (OPT NS202101-02 (V80539)) (OPT RMLH9075-3W (V72962)) (OPT T6S1032J (V71087)) (OPT VN303A02 (V92215)) (OPT 96-02 (V80539))		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
225	AN960PD10L		..WASHER		1
230	251T2432-1		..STOP-CLAPPER		1
235	251T2426-2		DELETED		
-235A	251T2426-5		DELETED		
235B	251T2426-7		..ARM-INPUT (USED ON ITEM 205B)		1
-235C	251T2426-9		..ARM-INPUT (USED ON ITEM 205C)		1
240	251T2415-1		DELETED		
-240A	251T2415-4		DELETED		
240B	251T2415-6		.ARM ASSY-INPUT (OPT ITEM 240C)		1
-240C	251T2415-7		.ARM ASSY-INPUT (OPT ITEM 240B)		1
245	MB538DD		..BEARING- (V38443) (SEE ITEM 180 FOR OPT PARTS)		1
250	BACB28B3-285P		..BUSHING- (V23294) (SPEC BACB28B3-285P) (V70265) (V94892)		2
255	251T2421-1		..STOP-CLAPPER		1
260	251T2415-2		..ARM-INPUT (USED ON ITEM 240B)		1
-260A	251T2415-5		..ARM-INPUT (USED ON ITEM 240C)		1
265	251T2423-5		DELETED		
265A	251T2441-1		.CAM ATTACHING PARTS		1
266	HL10VAZ8-6		.BOLT- (V56878) (SPEC BACB30MY8K6) (OPT B30MY8K6 (V97928)) (OPT HL10VAZ8-6 (V73197)) (OPT HL10VAZ8-6 (V92215)) (OPT HL10VAZ8-6 (V97928)) (OPT L8008K6 (V06725))		2

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
267	HL79-8		.COLLAR- (V56878) (SPEC BACC30M8) (OPT HL79-8 (V73197)) (OPT HL79-8 (V92215)) (OPT 66014-8 (V56878)) -------*-------		2
270	251T2420-1		.HUB ASSY-LEVER (OPT ITEM 270A)	A	1
-270A	251T2420-7		.HUB ASSY-LEVER (OPT ITEM 270)	A	1
-270B	251T2420-2		.HUB ASSY-LEVER (OPT ITEM 270C)	B	1
-270C	251T2420-8		.HUB ASSY-LEVER (OPT ITEM 270B)	B	1
-270D	251T2420-11		.HUB ASSY-LEVER (OPT ITEM 270E)	C	1
-270E	251T2420-13		.HUB ASSY-LEVER (OPT ITEM 270D)	C	1
-270F	251T2420-12		.HUB ASSY-LEVER (OPT ITEM 270G)	D	1
-270G	251T2420-14		.HUB ASSY-LEVER (OPT ITEM 270F)	D	1
275	MB538DD		..BEARING- (V38443) (SPEC BACB10AS10) (SEE ITEM 180 FOR OPT PARTS)		1
280	251T2420-3		..HUB-LEVER ARM (USED ON ITEM 270)		1
-280A	251T2420-9		..HUB-LEVER ARM (USED ON ITEM 270A)		1
-280B	251T2420-4		..HUB-LEVER ARM (USED ON ITEM 270B)		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-280C	251T2420-10		..HUB-LEVER ARM (USED ON ITEM 270C)		1
-280D	251T2420-15		..HUB-LEVER ARM (USED ON ITEM 270D)		1
-280E	251T2420-16		..HUB-LEVER ARM (USED ON ITEM 270E)		1
-280F	251T2420-17		..HUB-LEVER ARM (USED ON ITEM 270F)		1
-280G	251T2420-18		..HUB-LEVER ARM (USED ON ITEM 270G)		1