COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

AILERON CONTROL TRANSFER MECHANISM ASSEMBLY

PART NUMBER 65C37030–1, –2, –3, –4

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COMPONENT MAINTENANCE MANUAL

Revision No. 11
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To: All holders of AILERON CONTROL TRANSFER MECHANISM ASSEMBLY 27-16-07.

Attached is the current revision to this COMPONENT MAINTENANCE MANUAL

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Location of Change	Description of Change
	NO HIGHLIGHTS

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COMPONENT MAINTENANCE MANUAL

A = Added, R = Revised, D = Deleted, O = Overflow

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COMPONENT MAINTENANCE MANUAL

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR 35158	DEC 01/95
27-1195			NOV 01/00
27-1209			MAR 01/01

All revisions to this manual will be accompanied by transmittal sheet bearing the revision number. Enter the revision number in numerical order, together with the revision date, the date filed and the initials of the person filing.

Revision		Filed	
Number	Date	Date	Initials

Revision		Filed	
Number	Date	Date	Initials

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Temporary Revision		Inserted		Removed	
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Temporary Revision		Inserted		Removed	
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Temporary Revision		Inserted		Removed	
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INTRODUCTION

1. General

A. The instructions in this manual supply the data necessary to do the maintenance functions together with the test, fault isolation, repair, and replacement of the defective parts.

B. This manual is divided into different parts:

(1) Title Page

(2) Transmittal Letter

(3) Highlights

(4) List of Effective Pages

(5) Table of Contents

(6) Temporary Revision & Service Bulletin Record

(7) Record of Revisions

(8) Record of Temporary Revisions

(9) Introduction

(10) Procedures & IPL Sections

C. Components that can be repaired have a different repair number for each specified repair. To find the repair number location of a component, look in the Repair-General procedure at the beginning of the REPAIR section. The Repair-General procedure also has an explanation of the True Position Dimension symbols used.

D. All dimensions, measures, quantities and weights included are in English units. When metric equivalents are given they will be in the parentheses that follow the English units.

E. The introduction to the Illustrated Parts List (IPL) shows how the IPL data is used.

F. Design changes, optional parts, configuration differences and Service Bulletin modifications may cause different part numbers. These part numbers are identified in the IPL with an alphabetical letter which is added to the end of the basic item number. This new item number is referred to as an alpha-variant. Throughout the manual, IPL basic item number references also apply to alpha-variants unless shown differently.

G. The tool reference numbers found in the individual procedures and in the Special Tools, Fixtures, and Equipment section are used to identify if a tool is a standard tool (STD-XXXX), a commercial tool (COM-XXXX), or a Special Tool (SPL-XXXX). This reference number is also used to distinguish between tools with similar names in the same procedure. These reference numbers are for use in the documentation only. They are not to be used for ordering tools.

AILERON CONTROL TRANSFER MECHANISM ASSEMBLY - DESCRIPTION AND OPERATION

1. Description

A. The aileron control transfer mechanism located at the base of the first officer's control column incorporates a transfer mechanism and a lost motion device. The transfer portion consists basically of a preloaded torsion spring whose ends are held against two similar halves of a spring container. The lost motion device consists of an arm on the bottom portion of the transfer mechanism assembly.

2. Operation

A. Rotation of either the captain's or first officer's control wheel results in rotational movement of the aileron control bus drum. The spoiler control drum is floating and normally rotates only by feedback through the attached cables or, in case of a jammed aileron system, through action of the lost motion device. Control wheel rotational motion is transmitted between the lost motion device and the aileron control bus drum through the preloaded torsion spring.

B. If the aileron cable system becomes jammed, the first officer must exert sufficient rotational force on his control wheel to overcome the spring preload and maintain lateral control through operation of the spoiler control system. The first officer's control wheel will turn through the range of lost motion before movement is picked up by the spoiler control drum through the lost motion device.

C. If the spoiler cable system becomes jammed, the captain must likewise exert sufficient rotational force on his control wheel to overcome the spring preload and maintain lateral control through operation of the aileron control system.

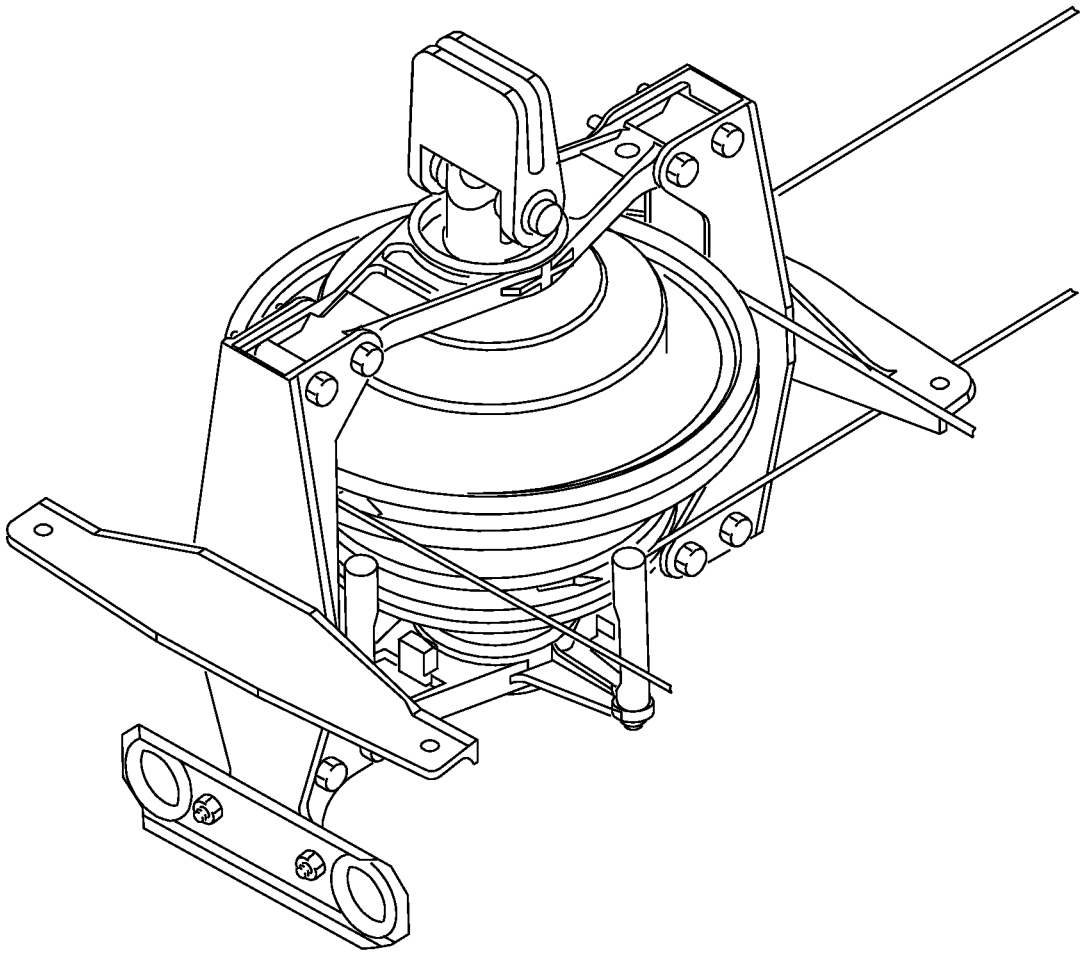
3. Leading Particulars (Approximate)

A. Length – 13 inches

B. Width – 10 inches

C. Height – 12 inches

D. Weight – 14.2 pounds



Aileron Control Transfer Mechanism Assembly
Figure 1

TESTING AND FAULT ISOLATION

1. General

A. This procedure has the data necessary to do a test of the aileron control transfer mechanism assembly after an overhaul or for fault isolation.

B. Refer to the Standard Overhaul Practice Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 1 for item numbers.

2. Test Equipment and Materials

NOTE: Equivalent substitutes may be used.

A. Test bench assembly F80220-1 for holding transfer mechanism assembly rigid with shaft (195) vertical. Mounting holes in forward and aft beams (80, 85) to hold assembly to test rig (TESTING AND FAULT ISOLATION, Figure 101).

B. A 5/15-inch rig pin or bolt 1.250 inches long

C. A 5/16-inch rig pin or bolt 3.375 inches long

D. Two MS21251B5S turnbuckles

E. Spring scale capable of accurate measurement of 0-250 pounds of tension, or torque wrench with range of 0-1000 pound-inches

3. Preparation for Test

A. Securely mount transfer mechanism assembly vertically in test bench assembly.

4. Functional Test (IPL Figure 1)

CAUTION: PERFORM ALL STEPS SLOWLY AND CAREFULLY. RAPID RELEASE OF SPRING LOAD MAY DAMAGE COMPONENTS OF THE ASSEMBLY.

NOTE: If a spring scale is used to apply rotational forces during bus drum torque tests, attach spring scale to one cable and perform all tests requiring rotation in one direction; then attach scale to other cable and repeat tests in opposite direction.

A. Shaft Torque Test

CAUTION: RESTRAIN PIN OR BOLT TO PREVENT DRUM MOVEMENT. DO NOT USE PIN OR BOLT LONGER THAN 3.375 INCHES OR DAMAGE TO PARTS MAY OCCUR.

(1) Insert 5/16-inch diameter by 3.375-inch long pin or bolt through rig pin holes in housings (220, 230) and drum (300).

(2) Apply torque to fork end of shaft (195) and rotate shaft gradually to 75 degrees from starting point in both clockwise and counterclockwise directions.

(3) Check that torque values at spring breakout are 256-400 pound-inches and do not exceed 600 pound-inches at the 75-degree position.

(4) Repeat TESTING AND FAULT ISOLATION, Paragraph 4.A.(2) and TESTING AND FAULT ISOLATION, Paragraph 4.A.(3) six times. During cycling, check that there is no interference or binding.

(5) Following test, check that orientation of fork (40) slot centerline is 89-91 degrees in relation to rig pin hole centerlines in drum (300) and housings (220, 230) aligned within .015 inch as shown in TESTING AND FAULT ISOLATION, Figure 102.

(6) Remove rig pin.

B. Bus Drum Torque, Null Shift, Travel Tests

(1) Restrain shaft (195) from rotating by applying a locking device to either shaft or fork (40).

(2) Thread turnbuckles (MS21251B5S) on cables (145, 150).

(3) Attach spring scale to turnbuckle on cable assembly (150).

NOTE: Omit spring scale if test fixture provides for use of torque wrench as shown in TESTING AND FAULT ISOLATION, Figure 101.

(4) Apply tension to spring scale or bus drum (300). Check that breakout torque is 256-400 pound-inches (64.5-100.5-pound cable tension). Increase force gradually until bus drum (300) rotates 75 degrees from starting position. Check that torque does not exceed 600 pound-inches (150.8-pound cable tension).

(5) Increase force until drum rotates through 130 degrees from starting position and check that torque does not exceed 710 pound-inches (178-pound cable tension). During test, check that there is no interference between end of rig pin or bolt with parts.

(6) Repeat TESTING AND FAULT ISOLATION, Paragraph 4.B.(4) and TESTING AND FAULT ISOLATION, Paragraph 4.B.(5) a minimum of five times.

(7) Rotate bus drum (300) clockwise through total travel to internal stop. Check that total travel from starting position is minimum of 138 degrees.

(8) Return bus drum (300) to neutral position. Note radial location of free drum relative to rib (110).

(9) Repeat TESTING AND FAULT ISOLATION, Paragraph 4.B.(7) except in counterclockwise direction.

(10) Return bus drum to neutral position. Check that null shift from position noted in TESTING AND FAULT ISOLATION, Paragraph 4.B.(8) does not exceed 1 degree, and that free play of bus drum (at neutral position) does not exceed 1 degree.

(11) If spring scale is used, remove scale from cable (150) and install scale on cable (145).

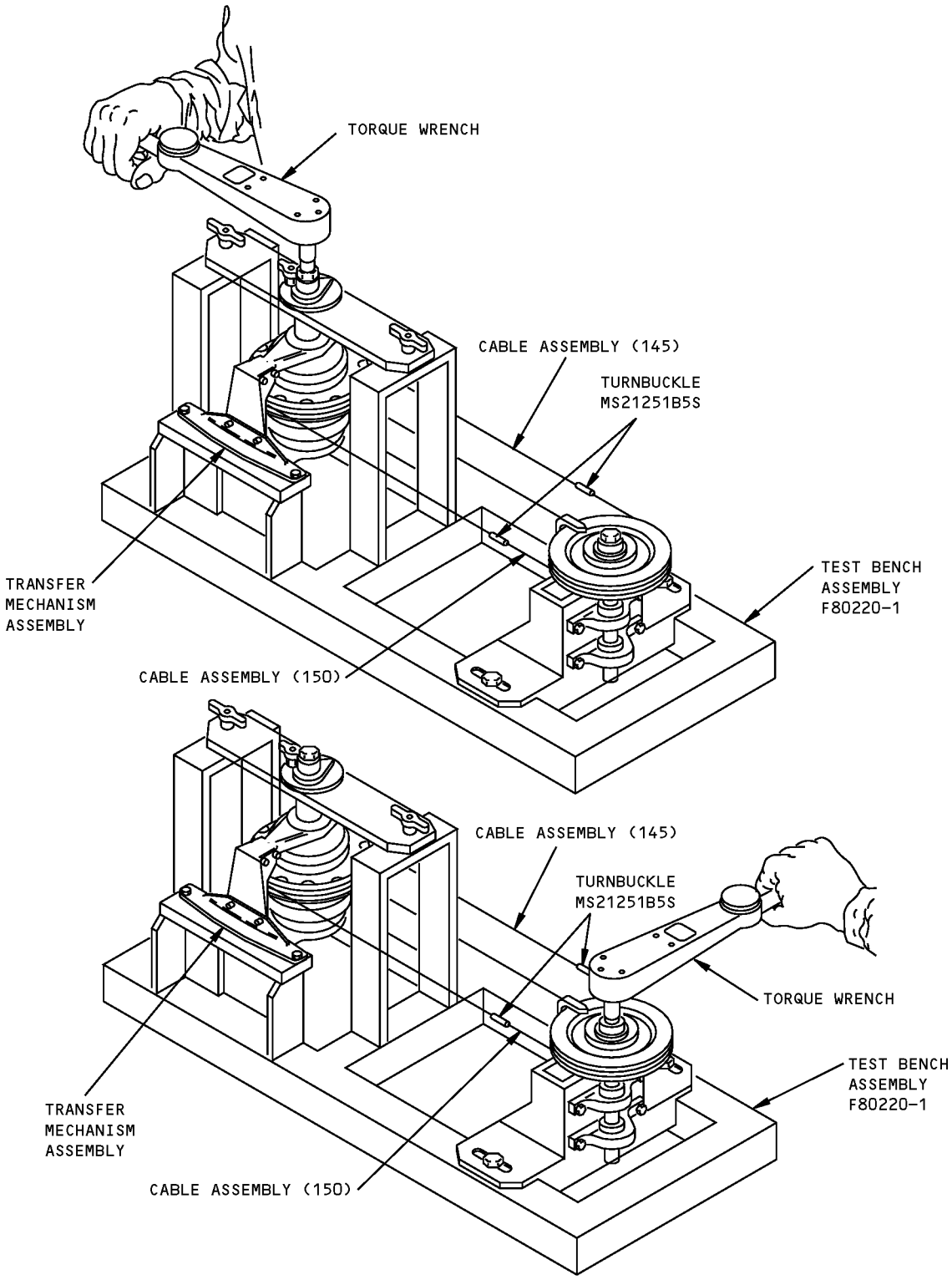
(12) Perform TESTING AND FAULT ISOLATION, Paragraph 4.B.(4) and TESTING AND FAULT ISOLATION, Paragraph 4.B.(5) in counterclockwise direction.

(13) Repeat TESTING AND FAULT ISOLATION, Paragraph 4.B.(12) a minimum of five times.

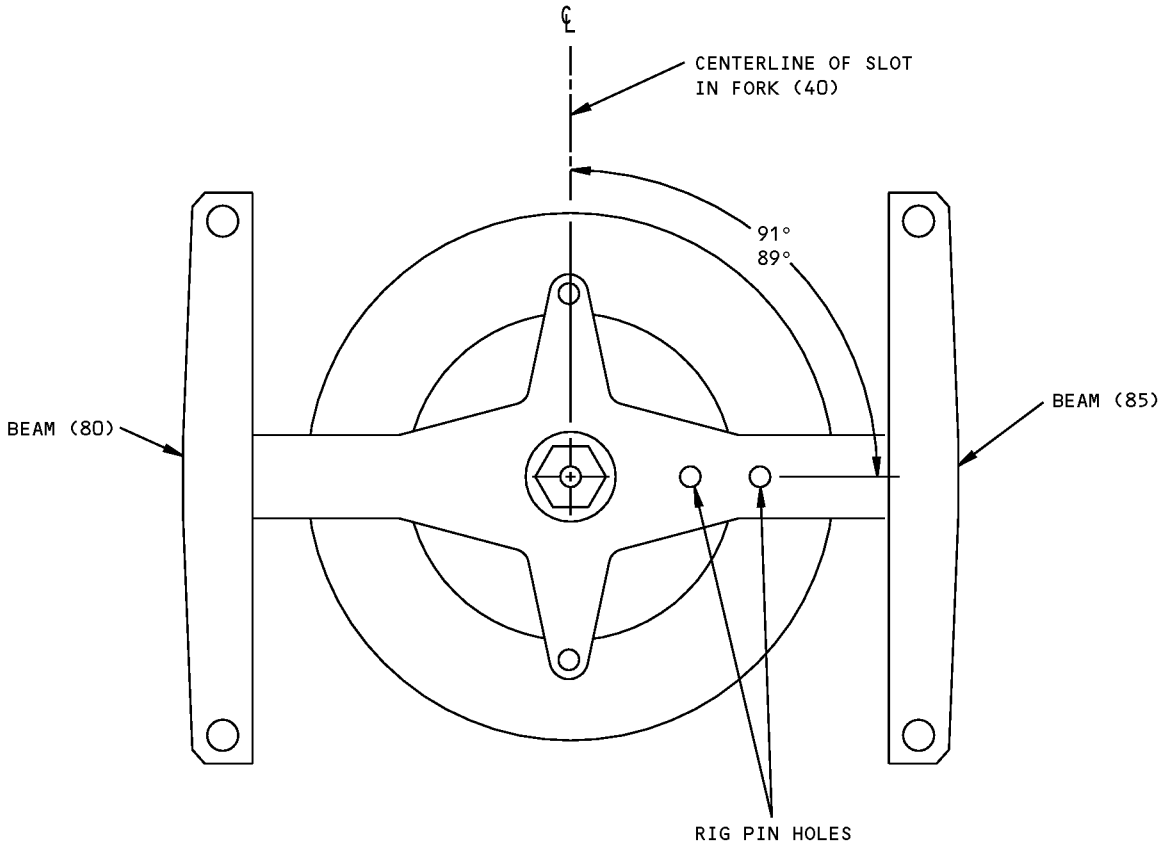
C. Spoiler Drum Free Travel Test

(1) Hold fork (40), rotate spoiler drum (305) in clockwise and counterclockwise directions through 11-13 degree travel range between stops. Check that drum rotates freely with no binding or rubbing.

(2) Remove turnbuckles, rig pins, and remove assembly from fixture.



Transfer Mechanism Functional Test
Figure 101



BOTTOM VIEW

Test Diagram
Figure 102

5. **Trouble Shooting (IPL Figure 1)**

A. Refer to TESTING AND FAULT ISOLATION, Table 101 to do fault isolation with the test results.

Table 101: Trouble Shooting Chart

TROUBLE	PROBABLE CAUSE	CORRECTION
Shaft (195) will not rotate, has erratic movement or requires excessive torqure, TESTING AND FAULT ISOLATION, Paragraph 4.A.(3) and TESTING AND FAULT ISOLATION, Paragraph 4.A.(4).	Incorrect assembly Defective bearings, defective spring nut (170) overtightened	Disassemble and assemble correctly. Replace bear ings. Replace spring. Retighten nut.
Interference as bus drum is rotated counterclockwise TESTING AND FAULT ISOLATION, Paragraph 4.B.(4).	Rig pin inserted too far into spoiler drum (305)	Remove rig pin and reinstall.
Breakout out torque or maximum torque not within specified range, TESTING AND FAULT ISOLATION, Paragraph 4.B.(6) and TESTING AND FAULT ISOLATION, Paragraph 4.B.(13).	Defective spring	Replace spring.
Bus drum (300) movement indicates interference or binding, TESTING AND FAULT ISOLATION, Paragraph 4.B.(6) and TESTING AND FAULT ISOLATION, Paragraph 4.B.(13).	Incorrect assembly Defective bearing nut (170) overtightened	Disassemble and assemble correctly. Replace bearings. Retighten nut.

DISASSEMBLY

1. **General**

   A. See TESTING AND FAULT ISOLATION to establish the condition of the component or most probable cause of its malfunction. This is to determine the extent of disassembly required without completely tearing down and rebuilding the component.

2. **Parts Replacement (IPL Figure 1)**

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

   A. Bearings (25, 35, 225, 235, 255, 275, 285)

   B. Cotter pins (135)

   C. Bolts (140)

3. **Disassembly (IPL Figure 1)**

   A. Remove cotter pins (135), bolts (140), and cable assemblies (145 thru 160).

   B. Remove nut (20), washer (10) and bolt (5).

   C. Remove fork assembly (30), spacers (15), and bushing (190) from shaft (195).

   D. Remove bearing (25) from fork (40).

      NOTE: Do not remove bearing (35) from fork (40) unless replacement is necessary.

   E. Remove nuts (100), washers (95) and bolts (90) and disconnect forward rib (105) and aft rib (110) from bearing housings (220, 230).

   F. Remove nuts (55), washers (50), bolts (45), and cable guide (60) from forward rib (105).

      NOTE: Do not remove grommets (65) unless replacement is necessary.

   G. Remove bearing housing (220) from upper end of shaft (195).

      NOTE: Do not remove bearing (225) from housing (220) unless replacement is necessary.

   H. Remove bolts (175) and collars (180) from upper drum (295).

   I. Remove upper drum (295) from shaft (195).

      NOTE: Do not remove bearing (275) from upper drum (295) unless replacement is necessary.

   WARNING: SPRING (240) IS RETAINED BY RETENTION PLATE (250) AND RETAINER (265). DO NOT REMOVE RETAINER (265) WITHOUT RESTRAINING RETENTION PLATE (250) OR INJURY TO PERSONNEL MAY RESULT.

   J. Remove nut (215), washers (205, 210), bolt (200) and retainer (265) from upper portion of shaft (195).

   K. Remove bearings (255), spacer (260), retention plate (250), spacer (245) and spring (240) from upper portion of shaft.

   L. Remove nut (170) and washer (165) from shaft (195).

   M. Remove bearing housing (230) and remaining washer (165) from shaft (195).

   N. Remove nuts (125), washers (120), screws (115) and three cable guards (130) from housing (230).

      NOTE: Do not remove bearing (235) from housing (230) unless replacement is necessary.

   O. Remove arm (310) from shaft (195).

P. Remove spacers (270, 280, 290), bearings (285), lower drum (300) and spoiler drum assembly (305) from shaft (195).

NOTE: Do not remove bearing (275) or marker (315) from lower drum (300) unless replacement is necessary.

Q. Remove retainer (265), bearings (255), spacer (260), retention plate (250) and spacer (245) from lower portion of shaft.

R. Remove bearings (285) and spacer (290) from spoiler drum assembly (305).

CLEANING

1. Cleaning

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
B00722	Solvent - Stoddard	MIL-PRF-680 Type I or II (Supersedes P-D-680, Type I or II)
G00834	Cloth - Lint-free Cotton	

B. References

Reference	Title
SOPM 20-30-01	CLEANING AND RELUBRICATING BEARINGS
SOPM 20-30-03	GENERAL CLEANING PROCEDURES

C. Procedure

(1) Wash all metal parts except bearings with solvent, B00722, or equivalent.

NOTE: Do not immerse metal parts containing plastic material in solvent.

(2) Use a stiff-bristle brush to remove stubborn accumulations of foreign matter.

(3) Wash non-metal parts in a mild solution of soap and water.

(4) Dry with clean, lint-free cloth, G00834 or clean, moisture-free air.

(5) For further information, refer to SOPM 20-30-03.

(6) Clean all bearings per SOPM 20-30-01.

CHECK

1. General

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

B. Refer to FITS AND CLEARANCES for design dimensions and wear limits.

2. Check

A. References

Reference	Title
SOPM 20-20-01	MAGNETIC PARTICLE INSPECTION
SOPM 20-20-02	PENETRANT METHODS OF INSPECTION

B. Procedure

(1) Magnetic particle check the following parts (Ref IPL Figure 1) per SOPM 20-20-01.

(a) Fork (40)

(2) Penetrant check the following parts (Ref IPL Figure 1) per SOPM 20-20-02.

(a) Ribs (105, 110)

(b) Cable guard (130)

(c) Housings (220, 230)

(d) Retention plate (250) and retainer (265)

(e) Spacers (260, 270, 280, 290)

(f) Drums (295, 300, 305)

(g) Arm (310)

REPAIR

1. Content

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

Table 601:

P/N	NAME	REPAIR
65-55476	BEARING HOUSING	1-1
65C37032	UPPER DRUM	2-1
65C37033	LOWER DRUM	3-1
6-60428	FORK ASSEMBLY	4-1
65C37035	SHAFT ASSEMBLY	5-1
- - - -	MISC PARTS REFINISH	6-1

2. Standard Practices

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

- SOPM 20-10-01 Repair and Refinish of High Strength Steel Parts
- SOPM 20-30-02 Stripping of Protective Finishes
- SOPM 20-41-01 Decoding Table for Boeing Finish Codes
- SOPM 20-50-03 Bearing and Bushing Replacement
- SOPM 20-60-02 Finishing Materials
- SOPM 20-60-03 Lubricants
- SOPM 20-60-04 Miscellaneous Materials

3. Materials

NOTE: Equivalent substitutes may be used.

A. primer, C00259 – BMS 10-11, type 1

B. Enamel coating, C00260 – BMS 10-11, type 2

C. sealant, A00247 – BMS 5-95

D. lubricant, D00113 – Solid Film, BMS 3-8, Class A

4. Dimensioning Symbols

A. Standard True Position Dimensioning Symbols used in the applicable repair procedures are shown in REPAIR-GENERAL, Figure 601.

—	STRAIGHTNESS
▱	FLATNESS
⊥	PERPENDICULARITY (OR SQUARENESS)
//	PARALLELISM
○	ROUNDNESS
⌭	CYLINDRICITY
⌒	PROFILE OF A LINE
⌓	PROFILE OF A SURFACE
◎	CONCENTRICITY
⌯	SYMMETRY
∠	ANGULARITY
↗	RUNOUT
↗↗	TOTAL RUNOUT
⌴	COUNTERBORE OR SPOTFACE
∨	COUNTERSINK
⌖	THEORETICAL EXACT POSITION OF A FEATURE (TRUE POSITION)
Ø	DIAMETER
S Ø	SPHERICAL DIAMETER
R	RADIUS
SR	SPHERICAL RADIUS
()	REFERENCE
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)
Ⓛ	LEAST MATERIAL CONDITION (LMC)
Ⓢ	REGARDLESS OF FEATURE SIZE (RFS)
Ⓟ	PROJECTED TOLERANCE ZONE
FIM	FULL INDICATOR MOVEMENT

EXAMPLES

— | 0.002	STRAIGHT WITHIN 0.002
⊥ | 0.002 | B	PERPENDICULAR TO B WITHIN 0.002
// | 0.002 | A	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
⌒ | 0.006 | A	EACH LINE ELEMENT OF THE SURFACE AT ANY CROSS SECTION MUST LIE BETWEEN TWO PROFILE BOUNDARIES 0.006 INCH APART RELATIVE TO DATUM PLANE A
⌓ | 0.020 | A	SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.02 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE
◎ | Ø 0.0005 | C	CONCENTRIC TO C WITHIN 0.0005 DIAMETER
⌯ | 0.010 | A	SYMMETRICAL WITH A WITHIN 0.010
∠ | 0.005 | A	ANGULAR TOLERANCE 0.005 WITH A
⌖ | Ø 0.002 Ⓢ | B	LOCATED AT TRUE POSITION WITHIN 0.002 DIA RELATIVE TO DATUM B, REGARDLESS OF FEATURE SIZE
⊥ | Ø 0.010 Ⓜ | A 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	THEORETICALLY EXACT DIMENSION IS 2.000

NOTE: DATUM MAY APPEAR AT EITHER SIDE OF TOLERANCE FRAME

0.020 | A
A | 0.020

True Position Dimensioning Symbols
Figure 601

BEARING HOUSING - REPAIR 1-1

65-55476–14, –15

1. General

A. This procedure has the data necessary to refinish the bearing housing (IPL Figure 1, 220, 230).

B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.

C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.

D. Refer to IPL Figure 1 for item numbers.

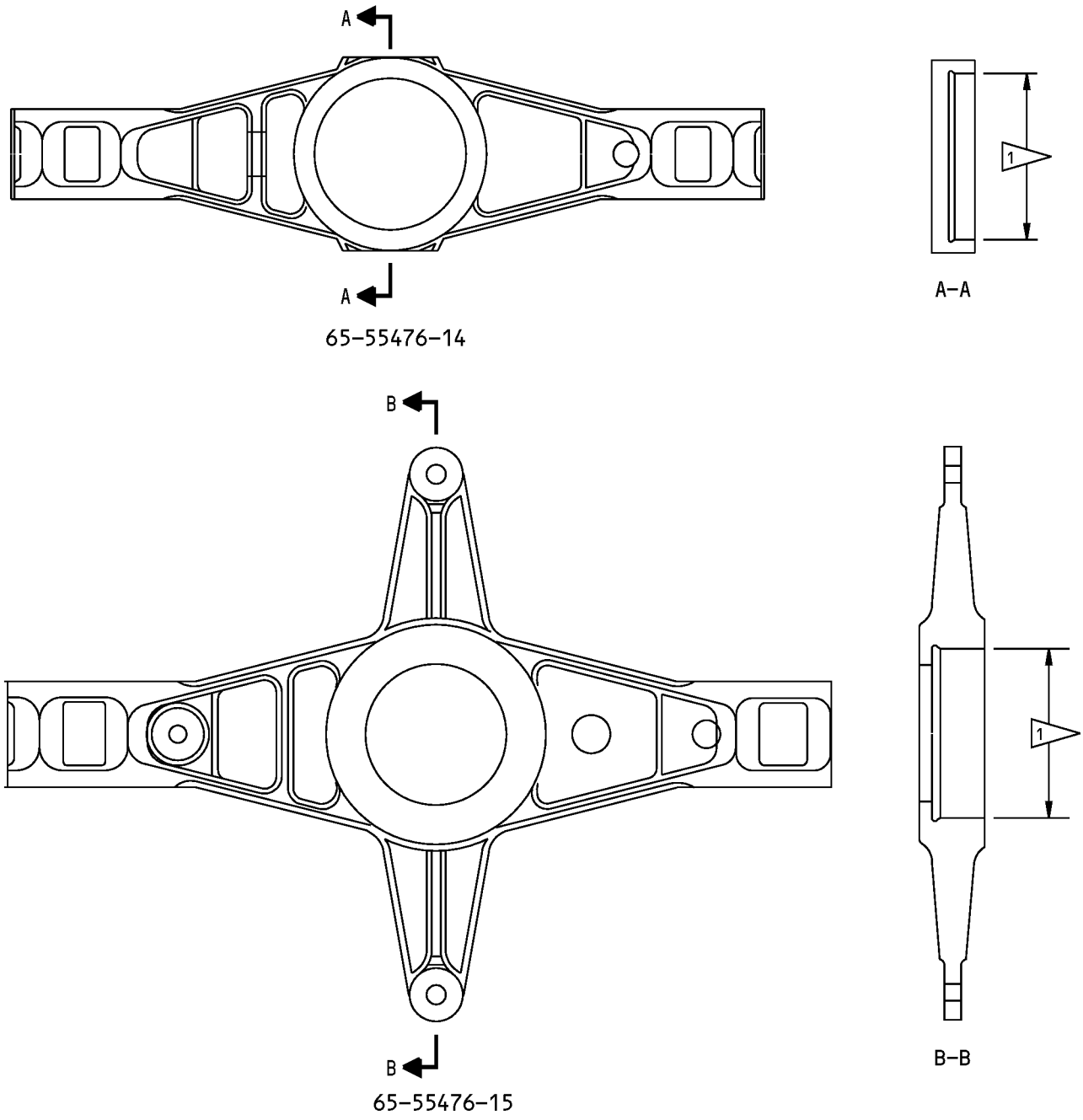
2. Bearing Replacement (IPL Figure 1)

A. Remove bearing (225, 235) from bearing housing (220, 230).

B. Install replacement bearing using sealant, A00247 and roller swage per SOPM 20-50-03.

3. Refinish

A. For the repair of surfaces which is only the replacement of the original finish , refer to REFINISH instructions on REPAIR 1-1, Figure 601.



REFINISH

CHROMIC ACID ANODOZE AND APPLY ONE COAT PRIMER BMS 10–11, TYPE 1, (F–20.02) UNLESS SHOWN DIFFERENTLY

1 NO PRIMER THIS SURFACE

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

65-55476-14,-15 Bearing Housing Repair
Figure 601

UPPER DRUM - REPAIR 2-1

65C37032–1

1. General

A. This procedure has the data necessary to refinish the upper drum (IPL Figure 1, 295).

B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.

C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.

D. Refer to IPL Figure 1 for item numbers.

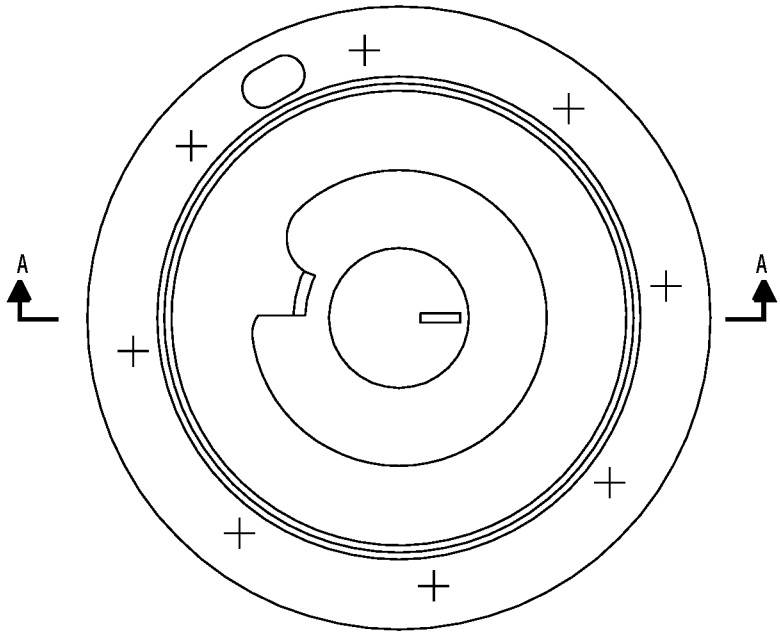
2. Bearing Replacement (IPL Figure 1)

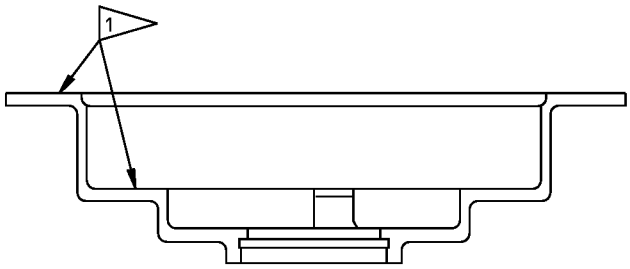
A. Remove bearing (275) from upper drum (295).

B. Install replacement bearing using sealant, A00247 and roller swage per SOPM 20-50-03.

3. Refinish

A. For the repair of surfaces which is only the replacement of the original finish, refer to REFINISH instructions on REPAIR 2-1, Figure 601.





A-A

REFINISH

CHROMIC ACID ANODIZE AND APPLY ONE COAT PRIMER, BMS 10-11, TYPE 1 (F-20.02) UNLESS SHOWN DIFFERENTLY

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

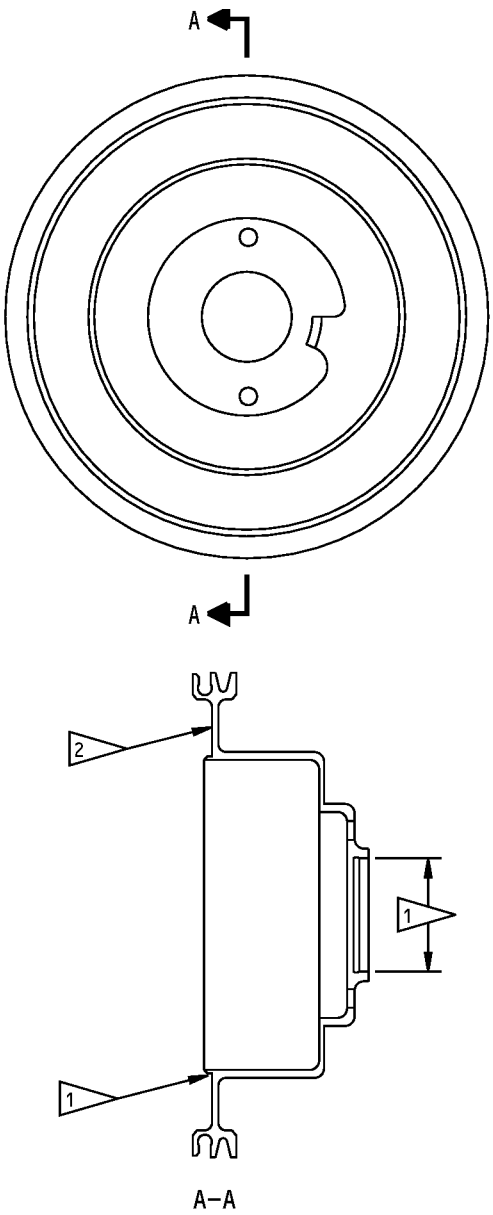
1 OMIT PRIMER THIS SURFACE

65C37032-1 Upper Drum Repair
Figure 601

LOWER DRUM - REPAIR 3-1

65C37033–1

1. **General**
   A. This procedure has the data necessary to refinish the lower drum (IPL Figure 1, 300).
   B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
   C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
   D. Refer to IPL Figure 1 for item numbers.
2. **Bearing Replacement (IPL Figure 1)**
   A. Remove bearing (275) from lower drum (300).
   B. Install replacement bearing using sealant, A00247 and roller swage per SOPM 20-50-03.
3. **Refinish**
   A. For the repair of surfaces which is only the replacement of the original finish, refer to REFINISH instructions on REPAIR 3-1, Figure 601.



REFINISH

CHROMIC ACID ANODIZE AND APPLY ONE COAT PRIMER BMS 10-11, TYPE 1 (F-20.02) UNLESS SHOWN DIFFERENTLY

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

1 OMIT PRIMER THIS SURFACE

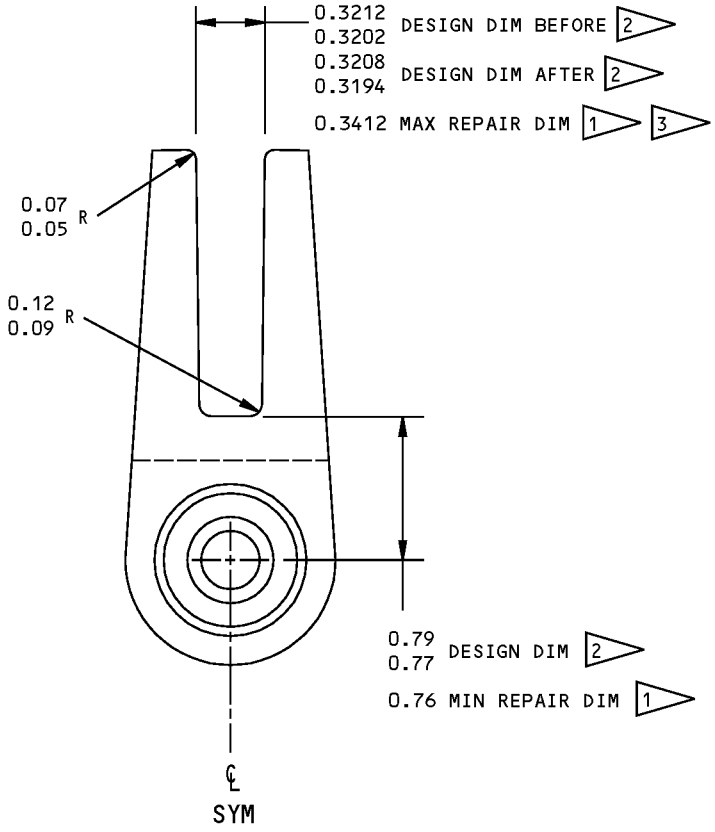
2 OMIT PRIMER TO THE AREA BETWEEN 5.52 DIAMETER LIP AND A 7.21-7.29 DIAMETER CIRCLE CONCENTRIC TO 5.52 DIAMETER LIP.

65C37033-1 Lower Drum Repair
Figure 601

FORK ASSEMBLY - REPAIR 4-1

6-60428–2, –6

1. **General**
   A. This procedure has the data necessary to refinish the fork assembly (IPL Figure 1, 30).
   B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
   C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
   D. Refer to IPL Figure 1 for item numbers.
2. **Bearing Replacement (IPL Figure 1)**
   A. Remove bearing (35) from fork (40).
   B. Install replacement bearing using sealant, A00247 and roller swage per SOPM 20-50-03.
3. **Fork Repair (REPAIR 4-1, Figure 601)**
   A. Machine inside surfaces per SOPM 20-10-01 as required to remove defects. Maintain limits and dimensions shown.
   B. Do a magnetic particle check per SOPM 20-20-01.
   C. Stress relieve at 300-350 deg F for 2 hours; air cool at 65-75 deg F.
   D. Restore machined surfaces to design dimensions by nickel plating (SOPM 20-42-09).
   E. Apply solid film lubricant, D00113 to inside flats.
4. **Fork Refinish**
   A. For the repair of surfaces which is only the replacement of the original finish, refer to REFINISH instructions on REPAIR 4-1, Figure 601.



REFINISH

CADMIUM PLATE (F-15.23) ALL SURFACES, EXCEPT INSIDE FLATS OF FORK AND BEARING SURFACES. APPLY SOLID FILM LUBRICANT TO INSIDE OF FLATS. REFER TO 2. APPLY NO FINISH ON BEARING SURFACES.

REPAIR

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: 4620 OR 9310 CASE HARDENED STEEL (CORE STRENGTH 150-210 KSI)

DIMENSIONS NOTED BY 1 3

ALL DIMENSIONS ARE IN INCHES

1 BUILD UP WITH NICKEL PLATE (REFER TO SOPM 20-42-09)TO FINISH DIMENSIONS SHOWN. OBSERVE 0.06 PLATING RUNOUT.

2 APPLY BMS 3-8, CLASS A, SOLID FILM LUBRICANT 0.0004 THICK (REFER TO SOPM 20-50-08)

3 0.010 MAXIMUM MATERIAL REMOVAL FROM EITHER SURFACE

6-60428-2,-6 Fork Assembly Repair
Figure 601

SHAFT ASSEMBLY - REPAIR 5-1

65C37035–1, –3

1. General

A. This procedure has the data necessary to refinish the shaft assembly (IPL Figure 1, 185).

B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.

C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.

D. Refer to IPL Figure 1 for item numbers.

2. Bushing Replacement (IPL Figure 1)

A. Remove bushing (190) from shaft (195).

B. Install replacement bushing using sealant, A00247 per SOPM 20-50-03.

3. Refinish (IPL Figure 1)

A. Shaft (195) – Chromic acid anodize all surfaces (F-17.19) and apply primer, C00259 (F-20.02) to all interior surfaces. Material: Al Alloy

B. Shaft (195A) – Sulfuric acid anodize all surfaces (F-17.31) and apply primer, C00259 (F-20.02) to all interior surfaces. Material: Al Alloy

MISCELLANEOUS PARTS REFINISH - REPAIR 6-1

1. General

A. This repair gives the data that is necessary to refinish parts not given in the specified repairs.

B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.

C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.

D. Refer to IPL Figure 1 for item numbers.

2. Procedure

A. Repair of parts listed in REPAIR 6-1, Table 601 consists of restoration of the original finish.

Table 601: Refinish Details

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1		
Spacer (15)	Al alloy	Chromic acid anodize (F-17.02) and apply primer, C00259 (F-20.02).
Cable guide (60), cable guard (130)	Al alloy	Colored film or chromic acid anodize and apply primer, C00259 (F-18.05).
Beam (80,85)	Al alloy	Chromic acid anodize and apply primer, C00259 (F- 18.13). apply coating, C50069 (F-21.03).
Forward rib (105), retention plate (250)	Al alloy	Chromic acid anodize (F-17.19) and apply primer, C00259 (F-20.02).
Bolt (200)	A286 cres steel	Cadmium plate (F-15.06).
Spacer (260,270, 280,290)	Al alloy	Chromic acid anodize (F-17.02).
Retainer (265)	Al alloy	Chromic acid anodize (F-17.19).
Spoiler drum (307)	Al alloy	Chromic acid anodize all surfaces (F-17.19) and apply primer, C00259 (F-20.02), except bearing bores.
Spoiler drum (307A)	Al alloy	Sulfuric acid anodize all surfaces (F-17.31) and apply primer, C00259 (F-20.02), except bearing bores.
Arm (310)	Al alloy	Chromic acid anodize all surfaces (F-17.19) and apply primer, C00259 (F-20.02), except splined surfaces.

ASSEMBLY

1. General

A. This procedure has the data necessary to assemble the aileron control transfer mechanism assembly.

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 1 for item numbers.

2. Assembly

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)

B. References

Reference	Title
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-60-03	LUBRICANTS
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. Procedure

NOTE: For lubricants, refer to SOPM 20-60-03. For miscellaneous materials, refer to SOPM 20-60-04.

(1) Assemble parts on shaft (195).

(a) Install bolt (200), washers (205, 210), nut (215), and retainer (265) on upper portion of shaft (195) as shown in ASSEMBLY, Figure 701, View A-A. Torque nut (215) to 12-15 inch-pounds.

(b) Install bearing (255) using sealant, A00247 per SOPM 20-50-03 and spacer (260) in upper retention plate (250) bore adjacent to upper retainer (265). Make sure bearing (255) is in full contact with retention plate (250) shoulder.

(c) Install other bearing (255) using grease, D00015 per SOPM 20-50-03 in opposite bore of retention plate (250).

(d) Invert shaft (195) and install retention plate (250), spacer (245), and spring (240) on upper portion of shaft (195).

(e) Install bearing (255) using grease, D00015 per SOPM 20-50-03 in lower retention plate (250) bore adjacent to spacer (245).

(f) Install other bearing (255) using sealant, A00247 per SOPM 20-50-03 and spacer (260) in opposite bore of lower retention plate (250). Make sure bearing (255) is in full contact with retention plate (250) shoulder.

WARNING: SPRING (240) THAT IS WOUND MUST BE SECURED UNTIL LOWER RETAINER (265) IS INSTALLED OR INJURY TO PERSONNEL MAY RESULT.

(g) Rotate retention plate (250) and spring (240) approximately 200 degrees until retention plate lug engages the shaft tabs.

(h) Install spacer (245) and lower retention plate (250) on lower portion of shaft (195).

(i) Install bolt (200), washers (205, 210), nut (215) and retainer (265) on lower portion of shaft (195) as shown in ASSEMBLY, Figure 701, View B-B. Torque nut (215) to 12-15 inch-pounds.

(j) Install spacer (270) on shaft (195).

(k) Apply fillet seal using grease, D00015 to faying surface of lower drum (300) and upper drum (295) and install drums on shaft (195). Mate upper drum (295) and lower drum (300) together making sure fastener holes are aligned.

(l) Rotate upper drum (295) and lower drum (300) to engage stops on retention plates (250).

(m) Install bolts (175) and collars (180).

(n) Install bearing (285) using grease, D00015 per SOPM 20-50-03 in spoiler drum (305) bore that is adjacent to arm (310).

(o) Install spacer (290), then install other bearing (285) using grease, D00015 per SOPM 20-50-03 in opposite bore of spoiler drum (305).

(p) Install spacer (280) and spoiler drum (305) on shaft (195).

(q) Install screws (115), washers (120), nuts (125) and cable guards (130) in housing (230).

(r) Install arm (310), washers (165), housing (230), and nut (170) on shaft (195). Torque nut (170) to 300-400 inch-pounds.

(s) Install bearing housing (220) on shaft (195).

(t) Install nuts (55), washers (50), bolts (45) and cable guide (60) on forward rib (105).

(u) Fasten forward rib (105) and aft rib (110) to bearing housings (220, 230) using nuts (100), washers (95), and bolts (90).

(v) Install cable assembly (145) in the upper groove of the lower drum (300). Install cable assembly (150) in the lower groove of the lower drum. Install cotter pins (135) per SOPM 20-50-02 to secure the cable assemblies.

(w) Install cable assembly (160A) in the upper groove of the spoiler drum (305). Install cable assembly (155A) in the lower groove of the spoiler drum. Install bolts (140) to secure the cable assemblies.

(x) Apply light even coat of grease, D00015 on cable assemblies (145 thru 160A).

(y) Install fork assembly (30), spacers (15), bearing (25), bolt (5), washer (10), and nut (20) to shaft (195).

1) Install bolt (5) using grease, D00015per SOPM 20-50-03 with head of bolt inboard.

2) Make sure centerline of fork (40) slot is 89-91 degrees in relation to rig pin hole centerlines in drum (300) and housings (220, 230) aligned within .015 inch as shown in TESTING AND FAULT ISOLATION, Figure 102.

3. Functional Test

A. Procedure

(1) Test assembled unit per TESTING AND FAULT ISOLATION.

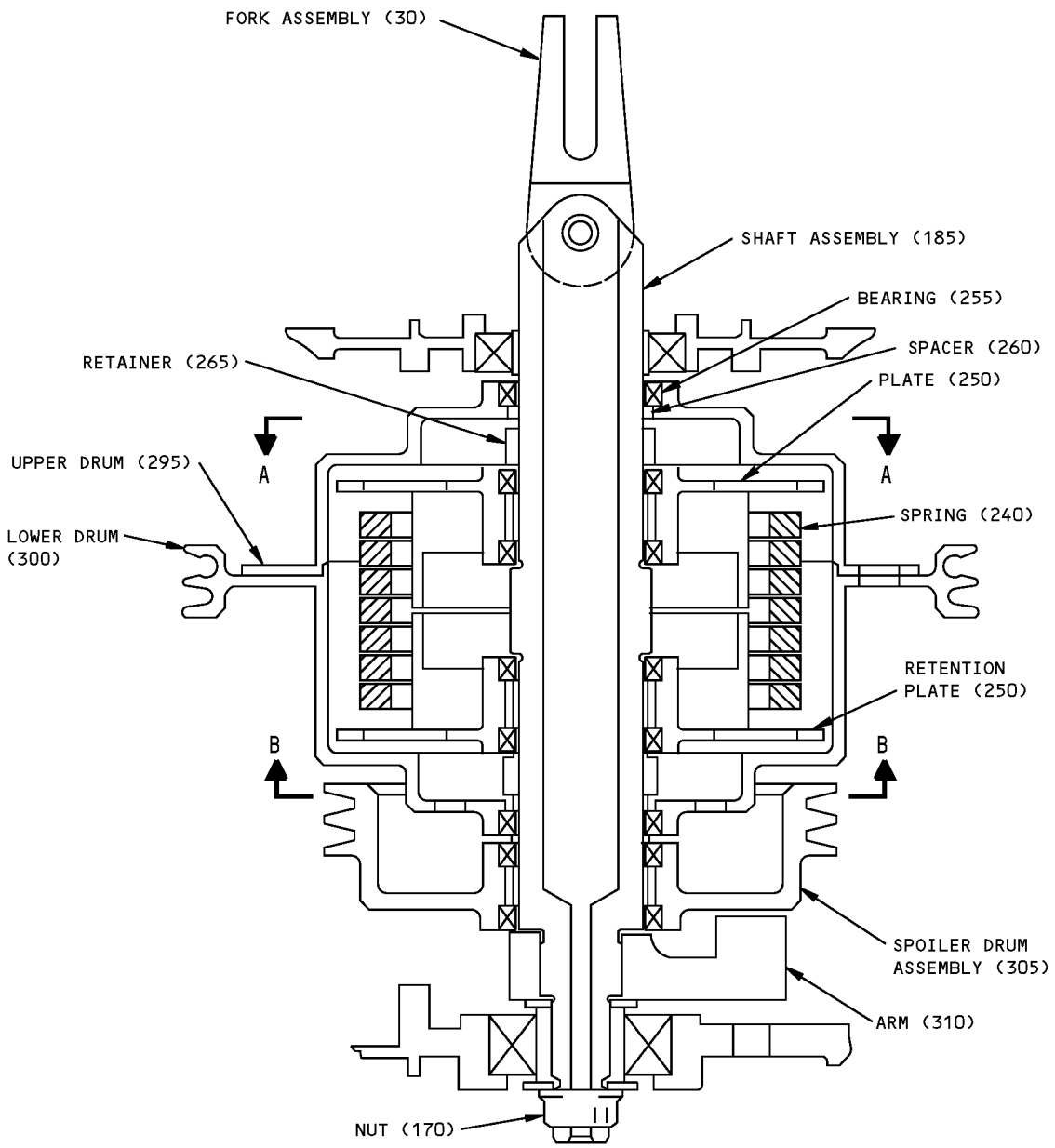
4. Storage

A. References

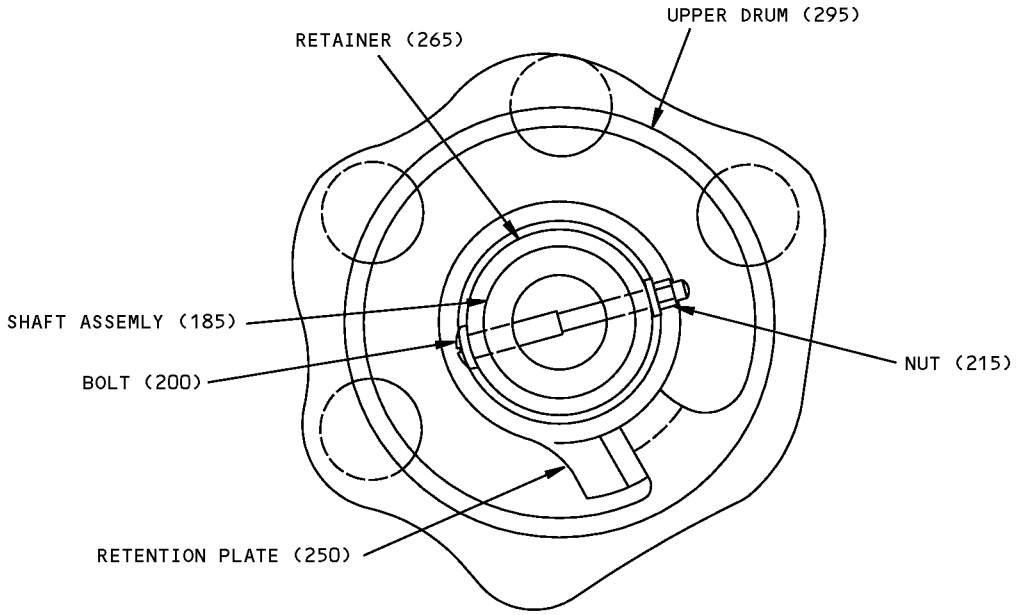
Reference	Title
SOPM 20-44-02	TEMPORARY PROTECTIVE COATINGS

B. Procedure

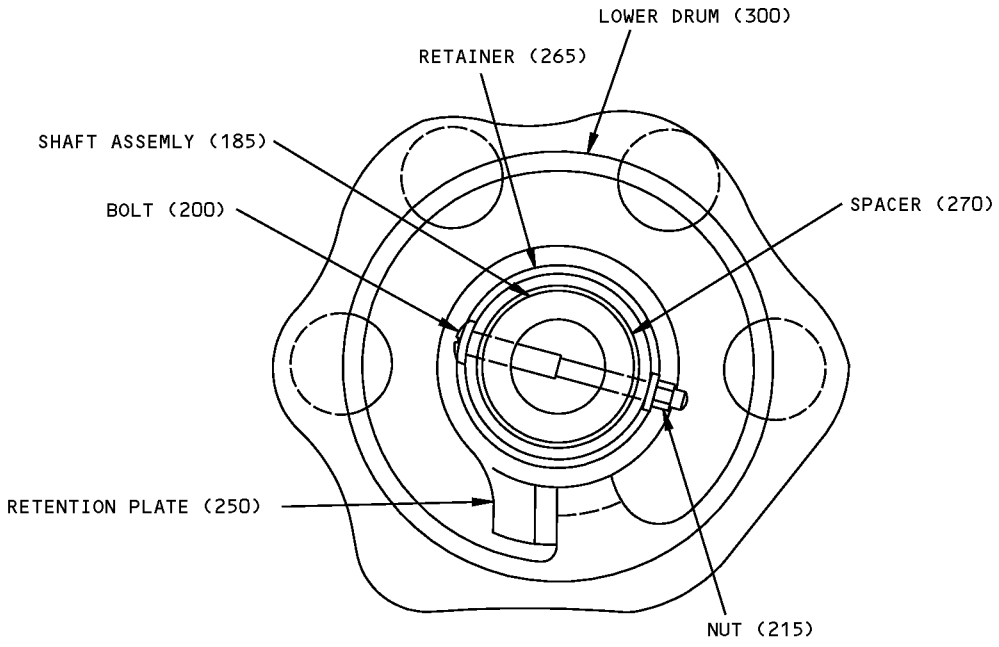
(1) Wrap assembly in vapor barrier paper and seal securely. Tag or mark assembly with test date and store per standard industry practices and information in SOPM 20-44-02.



Assembly Details
Figure 701 (Sheet 1 of 2)



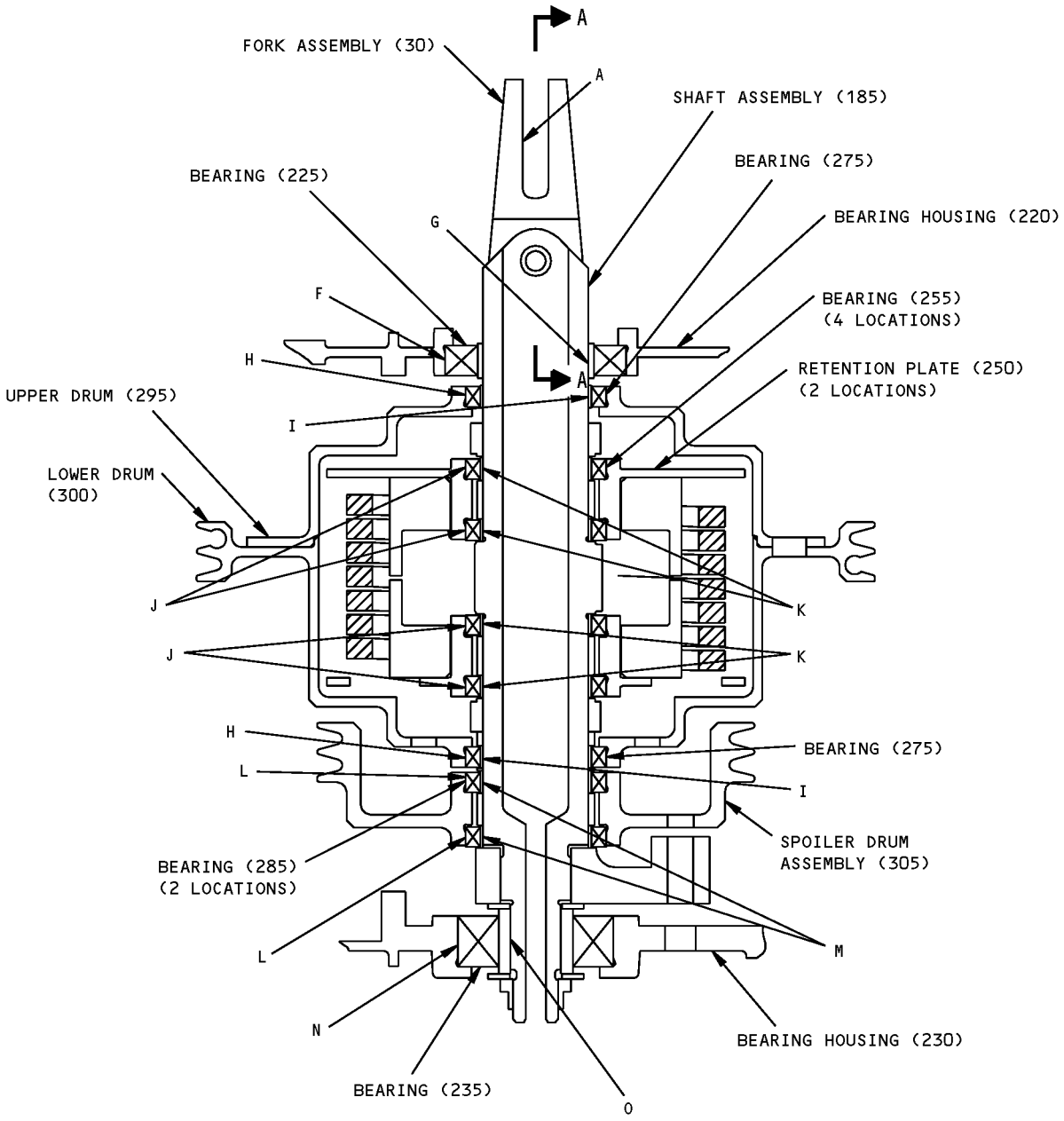
A–A



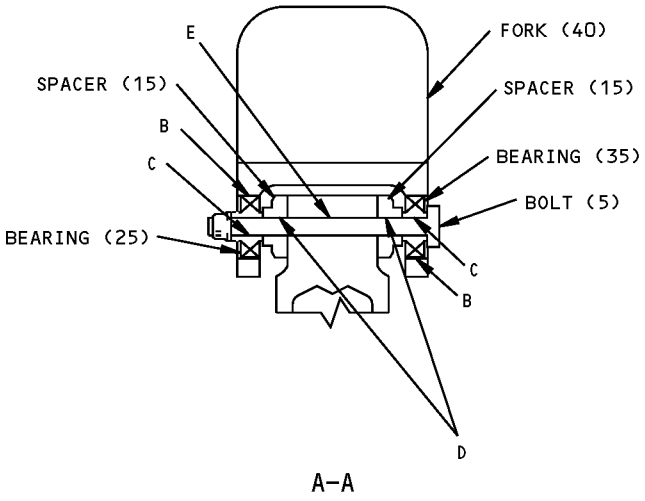
B–B

Assembly Details
Figure 701 (Sheet 2 of 2)

FITS AND CLEARANCES



Fits and Clearances
Figure 801 (Sheet 1 of 4)



ITEM NUMBERS REFER TO IPL FIG. 1

Fits and Clearances
Figure 801 (Sheet 2 of 4)

Ref Letter	Fig. 1 Mating Item No.	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance 3		Dimension		Maximum Clearance
		Min	Max	Min	Max	Min	Max	
A	30 1	0.3194	0.3208	0.0001	0.0024		0.3249	0.0060
	2	0.3184	0.3193			0.3160		
B	ID 40	0.7498	0.7503	-0.0002	0.0008		0.7503	0.0008
	OD 25,35	0.7595	0.7500			0.7495		
C	ID 25,35	0.2495	0.2500	0.0000	0.0015		0.2500	0.0015
	OD 5	0.2485	0.2495			0.2485		
D	ID 15	0.2500	0.2540	0.0005	0.0055		0.2540	0.0055
	OD 5	0.2485	0.2495			0.2485		
E	ID 185	0.2495	0.2505	0.0000	0.0020		0.2505	0.0020
	OD 5	0.2485	0.2495			0.2485		
F	ID 220	2.2500	2.2510	0.0000	0.0020			
	OD 225	2.2490	2.2500					
G	ID 225	1.3120	1.3125	0.0004	0.0019			
	OD 185	1.3106	1.3116					
H	ID 295, 300	1.7505	1.7515	0.0005	0.0025			
	OD 275	1.7490	1.7500					
I	ID 275	1.3118	1.3132	0.0002	0.0026			
	OD 185	1.3106	1.3116					
J	ID 250	1.7505	1.7515	0.0005	0.0020			
	OD 255	1.7495	1.7500					
K	ID 255	1.3120	1.3125	0.0004	0.0019			
	OD 185	1.3106	1.3116					
L	ID 305	1.7500	1.7510	0.0000	0.0015			
	OD 285	1.7495	1.7500					

Fits and Clearances
Figure 801 (Sheet 3 of 4)

Ref Letter	Fig. 1 Mating Item No.	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance [3]		Dimension		Maximum Clearance
		Min	Max	Min	Max	Min	Max	
M	ID 285 OD 185	1.3120 1.3106	1.3125 1.3116	0.0004	0.0019			
N	ID 230 OD 235	1.9373 1.9371	1.9378 1.9375	-0.0002	0.0007			
O	ID 235 OD 185	0.6247 0.6243	0.6250 0.6248	-0.0001	0.0007			

* ALL DIMENSIONS ARE IN INCHES

[1] WIDTH OF SLOT AFTER APPLICATION OF BMS 3-8 SOLID FILM LUBRICANT

[2] THICKNESS OF MATING PART 6-60429 AFTER APPLICATION OF BMS 3-8 SOLID FILM LUBRICANT

[3] NEGATIVE VALUES INDICATE INTERFERENCE FIT

Fits and Clearances
Figure 801 (Sheet 4 of 4)

Ref IPL		Name	Torque*	
Fig. No.	Item No.		Pound-Inches	Pound-Feet
1	170	Nut	300-400	
1	215	Nut	12-15	

* REFER TO SOPM 20-50-01 FOR TORQUE VALUES OF STANDARD FASTENERS.

Torque Table
Figure 802

COMPONENT MAINTENANCE MANUAL

SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

(NOT APPLICABLE)

ILLUSTRATED PARTS LIST

1. Introduction

A. The Illustrated Parts List (IPL) contains an illustration and a list of component parts you can repair or replace. The Illustrated Parts Catalog (IPC) shows how to use the Boeing part number system.

B. This shows how parts are related: The relation of each item to its next higher assembly (NHA) is shown in the NOMENCLATURE column. Use the indenture system that follows:

1 2 3 4 5 6 7

. Assembly

. Attaching parts for assembly

. . Detail parts for assembly

. . Subassembly

. . Attaching parts for subassembly

. . . Detail parts for subassembly

. . . Sub-subassembly

. . . Attaching parts for subassembly

. . . . . Details parts for sub-subassembly

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

C. Each top assembly is given one use code letter (A, B, C, etc.) in the USAGE CODE column. All subsequent component parts in the list can have one or more of the use code letters to show effectivity to top assemblies. A component part without a use code applies to all top assemblies.

D. An alphabetical letter is added after the item number for optional parts, parts changed by a Service Bulletin, configuration differences (except left-handed and right-handed parts), last engineering releases, and parts added between item numbers in a sequence. The alphabetical letter will not be shown on the illustration for equivalent parts of the same part number.

E. Color-coded parts are identified with a single digit alpha following the dash number or with ''SP'' suffix. If the ''SP'' suffix is used, it represents consolidation of all color codes applicable for a given usage which are not separately listed. Orders for color-coded parts should include the registry number of the airplane for which the parts are ordered.

F. If a part number is 15 characters long but will not fit in the part number column, the part number will be displayed with a ''~'' at the end of the line and will be continued on the next line. The ''~'' denotes that the part number continues on the next line.

G. Parts changed by a Service Bulletin are shown by PRE SB XXXX and POST SB XXXX added to the NOMENCLATURE column.

(1) When a new top assembly is added by a Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the top assembly level only. The configuration differences at the detail part level are shown by use code letters.

(2) When the top assembly part number is not changed by the Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the detail level.

H. Interchangeable Parts

Optional (OPT)	The part is optional to and interchangeable with other parts that have the same item number.
Replaces, Replaced by and not interchangeable with (REPLACES, REPLACED BY AND NOT INTCHG/W)	The part replaces and is not interchangeable with the initial part.
Replaces, Replaced by (REPLACES, REPLACED BY)	The part replaces and is interchangeable with, or is an alternative to, the initial part.

VENDOR CODES

Code	Name
04169	WESTERN SKY INDUSTRIES A DIVISION OF ATLAS CORPORATION 1280 SAN LUIS OBISPO STREET HAYWARD, CALIFORNIA 94544-7916 FORMERLY WESTERN SKY IND VB0008
06144	INDUSTRIAL TECTONICS BEARING CORP 18301 SOUTH SANTA FE AVENUE RANCHO DOMINGUEZ, CALIFORNIA 90221 FORMERLY IN COMPTON, CALIFORNIA
06725	AIR INDUSTRIES CORPORATION 12570 KNOTT STREET GARDEN GROVE, CALIFORNIA 92641-3932 FORMERLY AIR INDUSTRIES OF CALIF IN GARDENA, CALIF.
0PTK6	SPS TECHNOLOGIES INC AEROSPACE PRODUCTS DIV 5195 W 4700 SALT LAKE CITY, UTAH 94118 SEE V56878 SPS TECHNOLOGIES INC
11815	CHERRY AEROSPACE FASTENERS DIV OF TEXTRON 1224 EAST WARNER AVENUE PO BOX 2157 SANTA ANA, CALIFORNIA 92707-0157 FORMERLY IN LOS ANGELES, CALIF , FORMERLY CHERRY FASTENERS TOWNSEND DIV OF TEXTRON INC V71087
15653	ALCOA GLOBAL FASTENERS INC DIV KAYNAR PRODUCTS 800 S STATE COLLEGE BLVD FULLERTON, CALIFORNIA 92831-3001 FORMERLY VK6405 MICRODOT AEROSP LTD; FORMERLY KAYNAR TECH FORMERLY FAIRCHILD FASTENERS KAYNAR DIV

Code	Name
17446	HUCK INTL INC AEROSPACE FASTENER DIV 900 WATSON CENTER ROAD CARSON, CALIFORNIA 90745-4201 FORMERLY V32134 REXNORD INC; FORMERLY V97928 HUCK INTL
21335	TIMKEN US CORPORATION DIV FAFNIR 336 MECHANIC STREET LEBANON, NH 03766-0267 FORMERLY FAFNIR BRG AND TEXTRON INC FAFNIR DIV IN NEW BRITAIN, CONNECTICUT ; FORMERLY TORRINGTON CO THE SPECIAL PRODUCTS DIV SUB OF THE INGERSOLL-RAND CO V8D210 FORMERLY TORRINGTON CO FAFNIR BEARING DIV IN TORRINGTON, CT
30163	VALENTEC DAYRON INC 333 MAGUIRE BLVD PO BOX 140394 ORLANDO, FLORIDA 32814-0394
38443	MRC BEARINGS 402 CHANDLER STREET JAMESTOWN, NEW YORK 14701-3802 FORMERLY MARLIN-ROCKWELL CORP DIV TRW AND TRW INC
40920	MPB MINIATURE PRECISION BEARING DIV PRECISION PARK PO BOX 547 KEENE, NEW HAMPSHIRE 03431 FORMERLY MPB CORP AND MINIATURE BRG DIV MPB CORP
43991	FAG BEARING INCORPORATED 118 HAMILTON AVENUE STAMFORD, CONNECTICUT 06904 FORMERLY NORMA-HOFFMAN BEARING CORPORATION FORMERLY NORMA FAG BEARINGS CORPORATION
56878	SPS TECHNOLOGIES INC AEROSPACE AND INDUSTRIAL PRODUCTS DIV 301 HIGHLAND AVE JENKINTOWN, PENNSYLVANIA 19046 FORMERLY STANDARD PRESSED STEEL FORMERLY IN SALT LAKE, UTAH

Code	Name
5M902	ALCOA GLOBAL FASTENERS INC, DIV OF VOI-SHAN PRODUCTS 3000 W LOMITA BLVD TORRANCE, CALIFORNIA 90505-5103 FORMERLY FAIRCHILD INC INC FAIRCHILD AEROSPACE FASTENERS DIV
62554	SIMMONDS MECAERO FASTENERS INC 1734 SEQUOIA AVENUE ORANGE, CALIFORNIA 92668
72962	HARVARD INDUSTRIES INC 3 WERNER WAY SUITE 210 LEBANON, NEW JERSEY 08833 FORMERLY ESNA V7A079 FORMERLY ELASTIC STOP NUT IN UNION, NJ
73197	HI-SHEAR TECHNOLOGY CORP 2600 SKYPARK DRIVE TORRANCE, CALIFORNIA 90509
83086	NEW HAMPSHIRE BALL BEARING, INC HITECH DIVISION 172 JAFFREY ROAD PETERBOROUGH, NEW HAMPSHIRE 03458
92215	FAIRCHILD IND INC FAIRCHILD AEROSPACE FASTENER DIV 3010 W LOMITA BLVD TORRANCE, CALIFORNIA 90505-5102 FORMERLY VOI-SHAN IN CULVER CITY, CALIF
97928	Replaced: [V97928] SEE V17446 HUCK INTL by Code: Name and Address below 17446: HUCK INTL INC AEROSPACE FASTENER DIV 900 WATSON CENTER ROAD CARSON, CALIFORNIA 90745-4201 FORMERLY V32134 REXNORD INC; FORMERLY V97928 HUCK INTL
K8455	RHP BEARINGS PLC RHP AEROSPACE OLDENDS LANE STONEHOUSE GL10 3RM UK

NUMERICAL INDEX

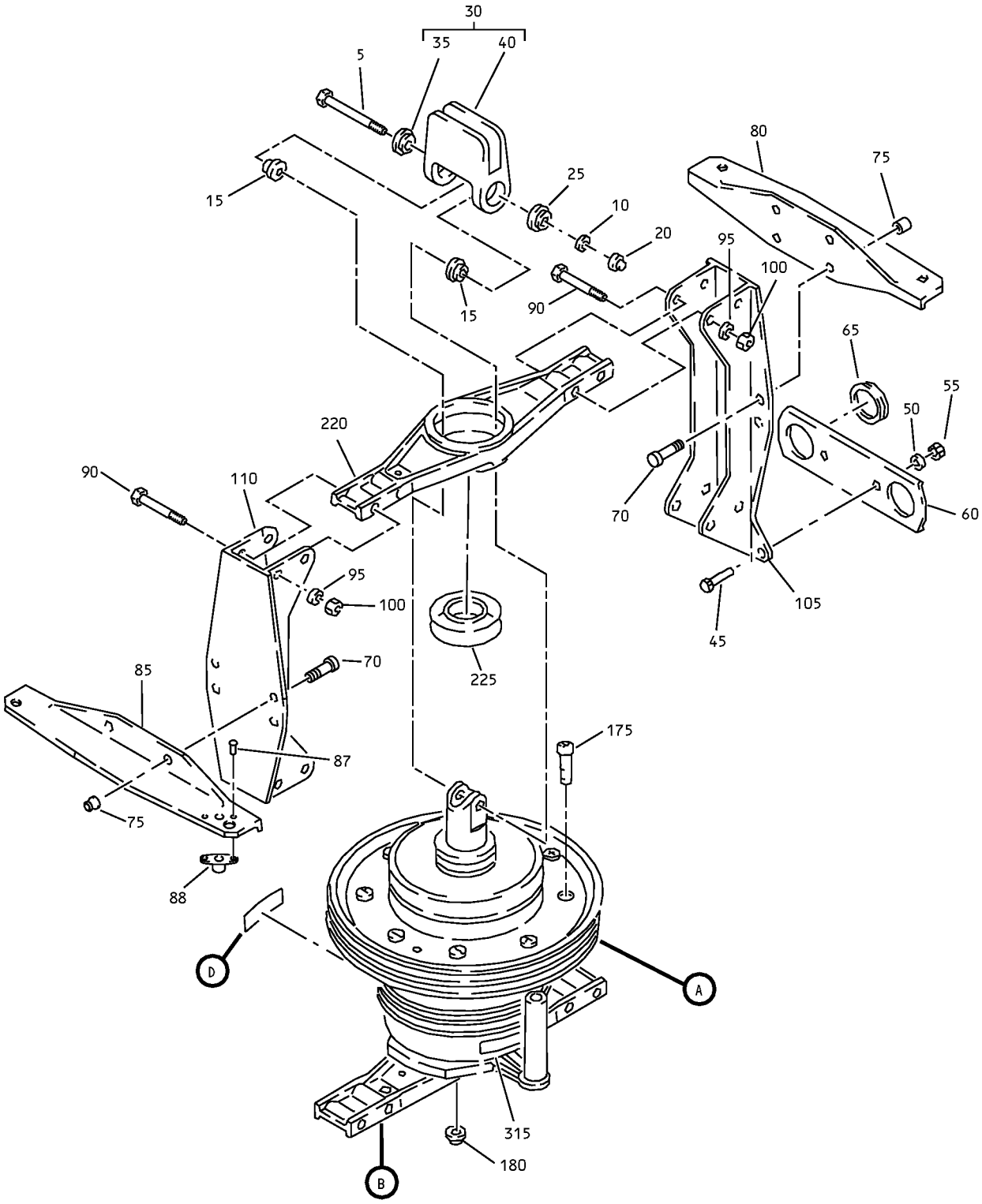
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
102LH9074-9		1	170	1
2LPYT6-4		1	70	8
		1	70	8
6-60428-2		1	30	1
		1	30C	1
6-60428-3		1	40	1
6-60428-6		1	30A	1
		1	30B	1
		1	30D	1
6-60428-7		1	40A	1
65-55476-14		1	220	1
65-55476-15		1	230	1
65C37030-1		1	1A	RF
65C37030-2		1	1B	RF
65C37030-3		1	1C	RF
65C37030-4		1	1D	RF
65C37031-1		1	305	1
65C37031-2		1	307	1
65C37031-3		1	305A	1
65C37031-4		1	307A	1
65C37032-1		1	295	1
65C37033-1		1	300	1
65C37034-1		1	310	1
65C37035-1		1	185	1
65C37035-2		1	195	1
65C37035-3		1	185A	1
65C37035-4		1	195A	1
65C37036-1		1	265	2
65C37037-1		1	240	1
65C37038-1		1	250	2
65C37039-1		1	245	2
65C37039-2		1	270	1
65C37039-3		1	280	1
65C37039-4		1	290	1

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
65C37039-5		1	260	2
66-24952-1		1	15	2
69-40961-2		1	5	1
69-41762-3		1	130	3
69-41771-2		1	80	1
69-41772-2		1	85	1
69-41789-1		1	60	1
69-41858-2		1	105	1
69-41858-3		1	105A	1
69-41859-2		1	110	1
69-78755-1		1	200	2
69235-918CD		1	170	1
ACMB542DDP181LY19		1	255A	4
		1	255C	4
		1	285A	2
		1	285B	2
ACMKP21BSP510LY19		1	225	1
ACMKSP10A3908		1	235	1
B542-2TS		1	275	2
B542DD		1	275	2
B542DDFS101		1	275	2
B542DDFSS428		1	275	2
B542FS101		1	275	2
B542SSG27		1	275	2
BACB10AC10		1	235A	1
BACB10AS21		1	255	4
		1	285	2
BACB10BX4		1	25	1
		1	35	1
BACB10CF21PP		1	275	2
BACB10EX21		1	225A	1
BACB10FP10		1	235	1
BACB10FU21		1	255A	4
		1	255C	4
		1	285A	2

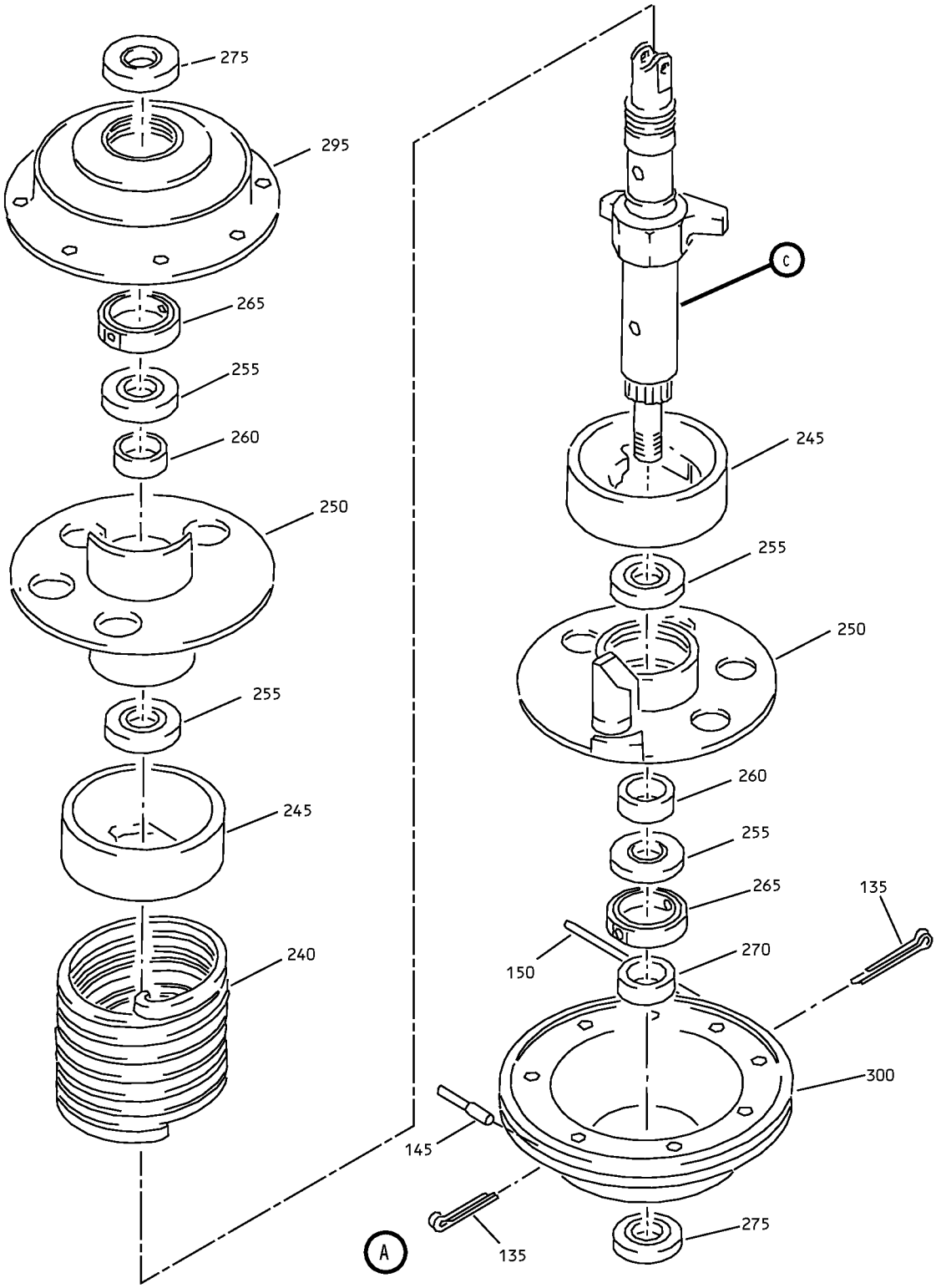
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		1	285B	2
BACB10FV21		1	225	1
BACB30DX6-4		1	70	8
BACB30VT6K4		1	175	8
BACC2A4B00321CG		1	145	1
BACC2A4B00321DG		1	150	1
BACC2C4C00262EG		1	155A	1
BACC2C4C00385FG		1	160A	1
BACC30BL6		1	180	8
BACM10S28M		1	315	2
BACN10JC3CD		1	55	2
		1	125	3
BACN10JC4CD		1	20	1
		1	100	8
BACN10JC9CD		1	170	1
BACN10TL3A6		1	88	1
BACN10YR08CD		1	215	2
BACR15BA4AD		1	87	2
BACW10BP2NDP		1	210	2
BACW10BP3NDP		1	205	2
BMN4122CPD8-9		1	170	1
CS204E		1	25	1
		1	35	1
H51650-9BAC		1	170	1
H52732-08CD		1	215	2
HST10AG6-4		1	175	8
		1	175	8
		1	175	8
		1	175	8
HST79-6		1	180	8
		1	180	8
		1	180	8
HST79CY6		1	180	8
KP4A		1	25	1
		1	35	1

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
KP4A2TS		1	25	1
		1	35	1
KP4AFS428		1	25	1
		1	35	1
KP4AG27		1	25	1
		1	35	1
KP4ALY196		1	25	1
		1	35	1
KP4ASD610		1	25	1
		1	35	1
LLKP4A		1	25	1
		1	35	1
LLMB542		1	255	4
		1	285	2
MB542-2TS		1	255	4
		1	285	2
MB542DD		1	255	4
		1	285	2
MB542DDFS428		1	255	4
		1	285	2
MB542DDG20		1	255	4
		1	285	2
MB542DDLY196		1	255	4
		1	285	2
MB542DDSD610		1	255	4
		1	285	2
MB542TT		1	255	4
		1	285	2
MS21209C0415		1	309	2
MS21209C0415P		1	309A	2
MS24665-132		1	135	2
MT342E		1	255	4
		1	285	2
NAS1080-6		1	75	8
NAS1149D0332J		1	50	2

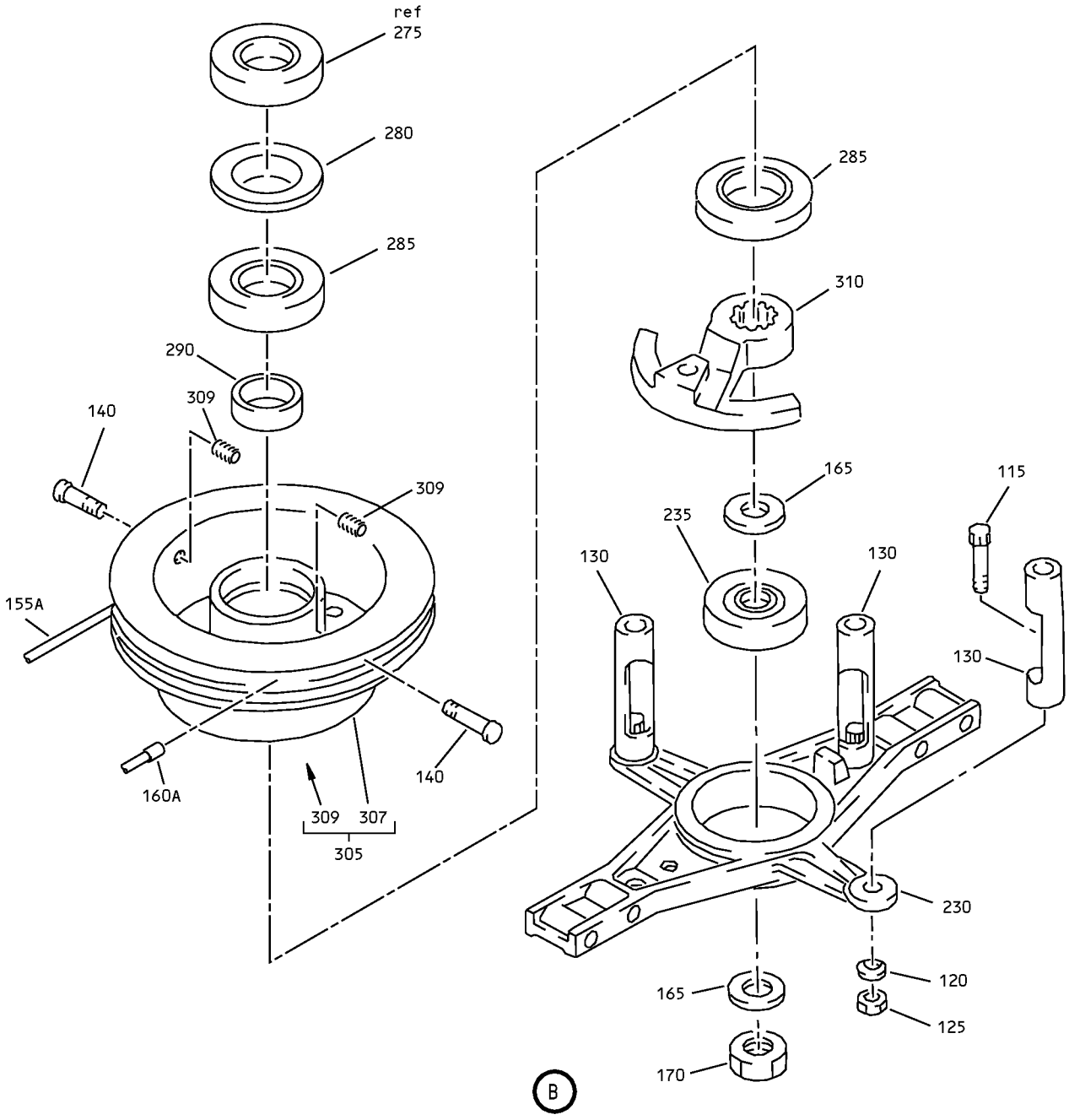
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		1	120	3
NAS1149D0416J		1	10	1
		1	95	8
NAS1149F1063P		1	165	2
NAS1351N3-11		1	115	3
NAS1352N04-4		1	140	2
NAS1352N04-4P		1	140A	2
NAS1368N16A		1	65	2
NAS6603-3		1	45	2
NAS6604-22		1	90	8
NAS75-4-105		1	190	1
PACMB542DDA3908		1	255A	4
		1	255C	4
		1	285A	2
		1	285B	2
PACMKP21BSA3908		1	225	1
PLH508CD		1	215	2
SSMB542DDSD705		1	255A	4
		1	255C	4
		1	285A	2
		1	285B	2
SSMKP21BSSD705		1	225	1
SSMKSP10SD705		1	235	1
T342E		1	275	2
WS1-4A6		1	88	1



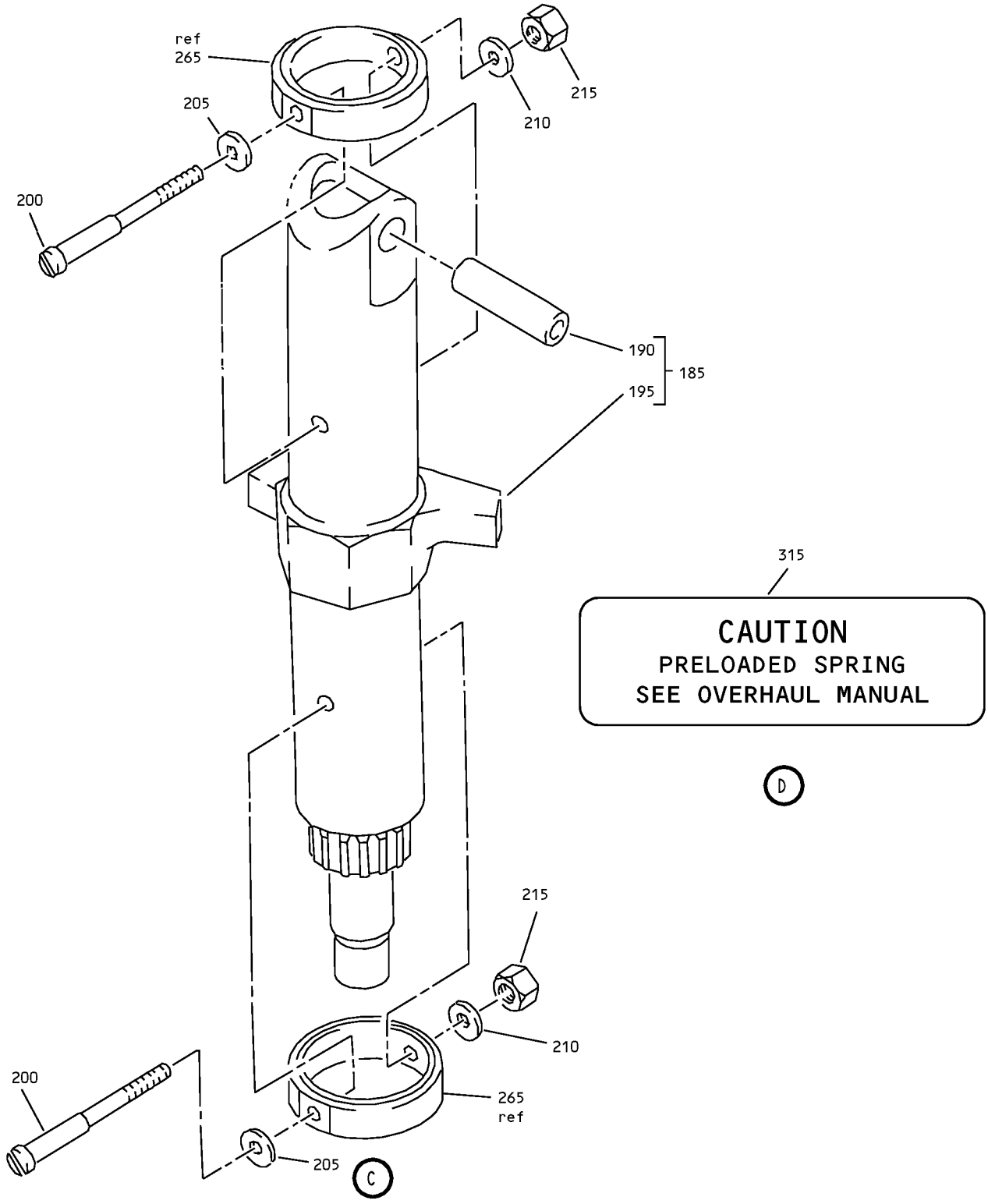
Aileron Control Transfer Mechanism Assembly
IPL Figure 1 (Sheet 1 of 4)



Aileron Control Transfer Mechanism Assembly
IPL Figure 1 (Sheet 2 of 4)



Aileron Control Transfer Mechanism Assembly
IPL Figure 1 (Sheet 3 of 4)



Aileron Control Transfer Mechanism Assembly
IPL Figure 1 (Sheet 4 of 4)

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–1A	65C37030-1		MECH ASSY-TRANSFER AIL. CONT. (PRE SB 737-27-1195)	A	RF
–1B	65C37030-2		MECH ASSY-TRANSFER AIL. CONT. (POST SB 737-27-1195)	B	RF
–1C	65C37030-3		MECH ASSY-TRANSFER AIL. CONT.	C	RF
–1D	65C37030-4		MECH ASSY-TRANSFER AIL. CONT.	D	RF
5	69-40961-2		. BOLT		1
10	NAS1149D0416J		. WASHER		1
15	66-24952-1		. SPACER		2
20	BACN10JC4CD		. NUT		1
25	KP4AFS428		. BEARING (V21335) (SPEC BACB10BX4) (OPT KP4A2TS (V43991)) (OPT LLKP4A (V38443)) (OPT KP4AG27 (V30163)) (OPT KP4A (V38443)) (OPT KP4ALY196 (V40920)) (OPT KP4ASD610 (V83086)) (OPT CS204E (VK8455))		1
30	6-60428-2		. FORK ASSY (OPT ITEM 30A) (PRE SB 737-27-1209)	B, C	1
–30A	6-60428-6		. FORK ASSY (OPT ITEM 30)	B, C	1
–30B	6-60428-6		. FORK ASSY	D	1
–30C	6-60428-2		. FORK ASSY (PRE SB 737-27-1209)	A	1
–30D	6-60428-6		. FORK ASSY (POST SB 737-27-1209)	A-C	1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
35	KP4AFS428		. . BEARING (V21335) (SPEC BACB10BX4) (OPT KP4A2TS (V43991)) (OPT LLKP4A (V38443)) (OPT KP4AG27 (V30163)) (OPT KP4A (V38443)) (OPT KP4ALY196 (V40920)) (OPT KP4ASD610 (V83086)) (OPT CS204E (VK8455))		1
40	6-60428-3		. . FORK (USED ON ITEMS 30,30C)		1
–40A	6-60428-7		. . FORK (USED ON ITEMS 30A,30B,30D)		1
45	NAS6603-3		. BOLT		2
50	NAS1149D0332J		. WASHER		2
55	BACN10JC3CD		. NUT		2
60	69-41789-1		. GUIDE-CABLE		1
65	NAS1368N16A		. GROMMET		2
70	2LPYT6-4		. BOLT (V11815) (SPEC BACB30DX6-4) (OPT 2LPYT6-4 (V17446))		8
75	NAS1080-6		. COLLAR		8
80	69-41771-2		. BEAM-FWD		1
85	69-41772-2		. BEAM-AFT		1
87	BACR15BA4AD		. RIVET (SIZE DETERMINED ON INST)	C, D	2
88	WS1-4A6		. NUTPLATE (V04169) (SPEC BACN10TL3A6)	C, D	1
90	NAS6604-22		. BOLT		8
95	NAS1149D0416J		. WASHER		8
100	BACN10JC4CD		. NUT		8
105	69-41858-2		. RIB-FWD	A-C	1
–105A	69-41858-3		. RIB-FWD	D	1
110	69-41859-2		. RIB-AFT		1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
115	NAS1351N3-11		. BOLT		3
120	NAS1149D0332J		. WASHER		3
125	BACN10JC3CD		. NUT		3
130	69-41762-3		. GUARD-CABLE		3
135	MS24665-132		. PIN-COTTER		2
140	NAS1352N04-4		. BOLT	A, B	2
–140A	NAS1352N04-4P		. SCREW	C, D	2
145	BAC~ C2A4B00321CG		. CABLE ASSY		1
150	BAC~ C2A4B00321DG		. CABLE ASSY		1
155	BACC2A4B00321EG		DELETED		
155A	BACC2C4C00262EG		. CABLE ASSY		1
160	BACC2A4B00321FG		DELETED		
160A	BACC2C4C00385FG		. CABLE ASSY		1
165	NAS1149F1063P		. WASHER		2
170	H51650-9BAC		. NUT (V15653) (SPEC BACN10JC9CD) (OPT 102LH9074-9 (V72962)) (OPT 69235-918CD (V92215)) (OPT BMN4122CPD8-9 (V97928))		1
175	HST10AG6-4		. BOLT (V06725) (SPEC BACB30VT6K4) (OPT HST10AG6-4 (V73197)) (OPT HST10AG6-4 (V56878)) (OPT HST10AG6-4 (V0PTK6))		8
180	HST79CY6		. COLLAR (V73197) (SPEC BACC30BL6) (OPT HST79-6 (V56878)) (OPT HST79-6 (V92215)) (OPT HST79-6 (V5M902))		8

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
185	65C37035-1		. SHAFT ASSY (65C37031-1 DRUM ASSY TOGETHER WITH (QTY 1) 65C37035-1 SHAFT ASSY AND (QTY 2) NAS1352N04-4 BOLTS AND (QTY 4) BACB10AS21 BEARINGS TWO WAY INTERCHANGEABLE WITH (QTY 1) 65C37031-3 DRUM ASSY TOGETHER WITH (QTY 1) 65C37035-3 SHAFT ASSY AND (QTY 2) NAS1352N04-4P SCREWS AND (QTY 1) BACN10TL3A6 SPACER PLATE)	A, B	1
–185A	65C37035-3		. SHAFT ASSY (65C37031-1 DRUM ASSY TOGETHER WITH (QTY 1) 65C37035-1 SHAFT ASSY AND (QTY 2) NAS1352N04-4 BOLTS AND (QTY 4) BACB10AS21 BEARINGS TWO WAY INTERCHANGEABLE WITH (QTY 1) 65C37031-3 DRUM ASSY TOGETHER WITH (QTY 1) 65C37035-3 SHAFT ASSY AND (QTY 2) NAS1352N04-4P SCREWS AND (QTY 1) BACN10TL3A6A SPACER PLATE)	C, D	1
190	NAS75-4-105		. . BUSHING		1
195	65C37035-2		. . SHAFT	A, B	1
–195A	65C37035-4		. . SHAFT	C, D	1
200	69-78755-1		. BOLT		2
205	BACW10BP3NDP		. WASHER		2
210	BACW10BP2NDP		. WASHER		2
215	H52732-08CD		. NUT (V15653) (SPEC BACN10YR08CD) (OPT PLH508CD (V62554))		2
220	65-55476-14		. BEARING-HOUSING		1
225	PACMKP21B˜ SA3908		. BEARING (V21335) (SPEC BACB10FV21) (OPT SSMKP21BSSD705 (V83086)) (OPT ACMKP21BSP510LY19 (V40920)) (OPT ITEM 225A)		1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–225A	BACB10EX21		. BEARING (OPT ITEM 225)		1
230	65-55476-15		. BEARING-HOUSING		1
235	SSMKSP10SD705		. BEARING (V83086) (SPEC BACB10FP10) (OPT ACMKSP10A3908 (V21335)) (OPT ITEM 235A)		1
–235A	BACB10AC10		. BEARING (OPT ITEM 235)		1
240	65C37037-1		. SPRING		1
245	65C37039-1		. SPACER		2
250	65C37038-1		. PLATE-RETENTION		2
255	MB542DDSD610		. BEARING (V83086) (SPEC BACB10AS21) (OPT LLMB542 (V38443)) (OPT MB542-2TS (V43991)) (OPT MB542DDFS428 (V21335)) (OPT MB542TT (V43991)) (OPT MB542DDG20 (V38443)) (OPT MT342E (VK8455)) (OPT MB542DDLY196 (V40920)) (OPT MB542DD (V06144)) (OPT ITEM 255A)	A	4
–255A	PACMB542D˜ DA3908		. BEARING (V21335) (SPEC BACB10FU21) (OPT ACMB542DDP181LY19 (V40920)) (OPT SSMB542DDSD705 (V83086)) (OPT ITEM 255)	A	4
–255B	MB542DDSD610		DELETED		
–255C	PACMB542D˜ DA3908		. BEARING (V21335) (SPEC BACB10FU21) (OPT ACMB542DDP181LY19 (V40920)) (OPT SSMB542DDSD705 (V83086))	B-D	4
260	65C37039-5		. SPACER		2
265	65C37036-1		. RETAINER		2

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
270	65C37039-2		. SPACER		1
275	B542DDFSS428		. BEARING (V21335) (SPEC BACB10CF21PP) (OPT B542-2TS (V43991)) (OPT B542SSG27 (V30163)) (OPT T342E (VK8455)) (OPT B542DDFS101 (V06144)) (OPT B542DD (V38443)) (OPT B542FS101 (V06144))		2
280	65C37039-3		. SPACER		1
285	MB542DDSD610		. BEARING (V83086) (SPEC BACB10AS21) (OPT LLMB542 (V38443)) (OPT MB542-2TS (V43991)) (OPT MB542DDFS428 (V21335)) (OPT MB542TT (V43991)) (OPT MB542DDG20 (V38443)) (OPT MT342E (VK8455)) (OPT MB542DDLY196 (V40920)) (OPT MB542DD (V06144)) (OPT ITEM 285A)	A	2
–285A	PACMB542D˜ DA3908		. BEARING (V21335) (SPEC BACB10FU21) (OPT ACMB542DDP181LY19 (V40920)) (OPT SSMB542DDSD705 (V83086)) (OPT ITEM 285)	A	2
–285B	PACMB542D˜ DA3908		. BEARING (V21335) (SPEC BACB10FU21) (OPT ACMB542DDP181LY19 (V40920)) (OPT SSMB542DDSD705 (V83086))	B-D	2
290	65C37039-4		. SPACER		1
295	65C37032-1		. DRUM-UPR		1
300	65C37033-1		. DRUM-LWR		1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
305	65C37031-1		. DRUM ASSY-SPOILER ((QTY 1) 65C37031-1 DRUM AY TOGETHER WITH (QTY 1) 65C37035-1 SHAFT AY AND (QTY 2) NAS1352N04-49 BOLTS AND (QTY 4) BACB10AS21 BEARINGS TWO WAY INTERCHANGEABLE WITH (QTY 1) 65C37031-3 DRUM AY TOGETHER WITH (QTY 1) 65C37035-3 SHAFT AY AND (QTY 2) NAS1352N04-4P SCREWS AND (QTY 1) BACN10TL3A6 SPACER PLATE)	A, B	1
–305A	65C37031-3		. DRUM ASSY-SPOILER ((QTY 1) 65C37031-1 DRUM AY TOGETHER WITH (QTY 1) 65C37035-1 SHAFT AY AND (QTY 2) NAS1352N04-4 BOLT AND (QTY 4) BACB10AS21 BEARINGS TWO WAY INTERCHANGEABLE WITH (QTY 1) 65C37031-3 DRUM AY TOGETHER WITH (QTY 1) 65C37035-3 SHAFT AY AND (QTY 2) NAS1352N04-4P SCREWS AND (QTY 1) BACN10TL3A6 SPACER PLATE)	C, D	1
307	65C37031-2		. . DRUM-SPOILER	A, B	1
–307A	65C37031-4		. . DRUM-SPOILER	C, D	1
309	MS21209C0415		. . INSERT	A, B	2
–309A	MS21209C0415P		. . INSERT	C, D	2
310	65C37034-1		. ARM		1
315	BACM10S28M		. MARKER-CAUTION PRELOADED SPRING SEE OVERHAUL MANUAL		2

–Item not Illustrated