COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

STABILIZER TRIM FWD MECHANISM ASSEMBLY

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To: All holders of STABILIZER TRIM FWD MECHANISM ASSEMBLY 27-44-03.

Attached is the current revision to this COMPONENT MAINTENANCE MANUAL

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27-44-03 ASSEMBLY	Changed the data in the Consumable Materials list.

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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.

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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.

STABILIZER TRIM MECHANISM ASSEMBLY - DESCRIPTION AND OPERATION

1. Description

A. The stabilizer trim mechanism assembly is made of a cable drum installed in a housing assembly. A sprocket and pinion in the housing assembly engage a bevel gear to turn the cable drum. A skewed roller brake assembly is installed on the housing assembly.

B. Two adjustable support link assemblies and two turnbuckles attach to the gear housing to hold the assembly in the airplane installation.

2. Operation

A. The stabilizer trim mechanism assembly is connected by a cable to the stabilizer trim actuator assembly in the aft fuselage. During normal operation, the stabilizer is driven by an electric motor, and the trim mechanism assembly is back-driven by the cable. The trim mechanism assembly drives the manual trim wheels and the trim position indicators on the control stand. The brake assembly prevents rollback of the mechanism after small trim inputs are made.

B. If there is an electrical malfunction, the flight crew can give manual trim commands through the manual trim wheels. The trim mechanism assembly then drives the cable and the trim actuator assembly to move the stabilizer.

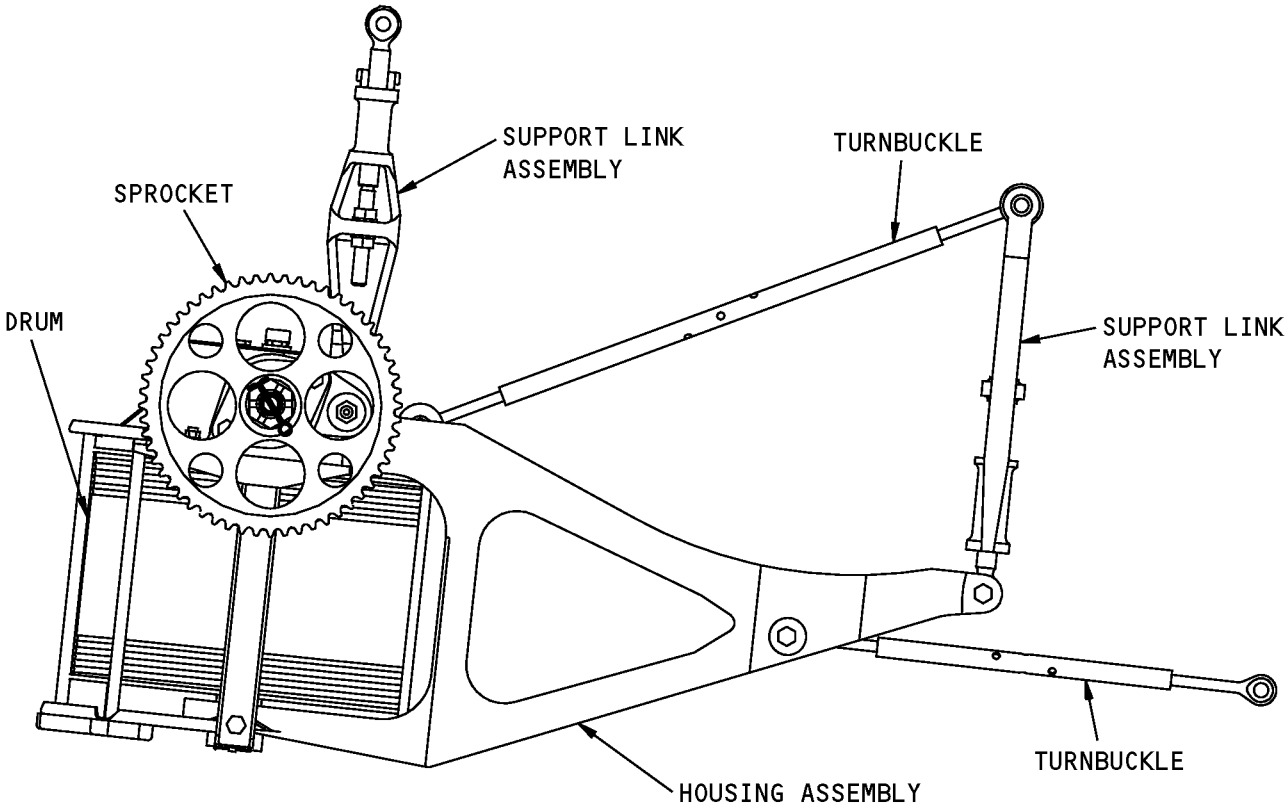
3. Leading Particulars (Approximate)

A. Length – 25 inches

B. Width – 12 inches

C. Height – 20 inches

D. Weight – 18.4 pounds



Stabilizer Trim Mechanism Assembly
Figure 1

TESTING AND FAULT ISOLATION

1. General

A. This procedure has the data necessary to do a test of the stabilizer trim mechanism assembly (1B) after an overhaul or for fault isolation.

B. Refer to IPL Figure 1 for item numbers.

2. Test Procedures

A. Tools/Equipment

NOTE: Equivalent substitutes may be used.

Reference	Description
SPL-4426	Test Equipment, Autothrottle, Gearbox, Brake (50Hz) (Part #: J22004-67, Supplier: 81205)
SPL-4427	Test Equipment, Autothrottle, Gearbox, Brake (60Hz) (Part #: J22004-68, Supplier: 81205)
SPL-8838	Spline Shaft A (J22004-13 included in J22004-67 and -J22004-68)

B. General

(1) Use standard industry procedures to examine the stabilizer trim mechanism assembly (1B).

C. Do a test of the gears and bearings.

(1) Turn the sprocket (295) a minimum of 11 full turns in each direction. Make sure that the sprocket and drum (500) turn freely with no indication of binding.

NOTE: Eleven full turns of the sprocket will give two full turns of the drum.

D. Do a check of the gear tooth contact pattern.

(1) Remove the brake assembly (560). Refer to DISASSEMBLY.

(2) Do a visual check for correct gear tooth contact between the pinion (330) and the bevel gear (445). Make sure that the contact pattern in the grease on the gear teeth is constant and centered.

E. Do the acceptance test of the brake assembly (560).

(1) Install the brake assembly (560) in the J22004 test equipment Brake Test Equipment, SPL-4426 or Brake Test Equipment, SPL-4427.

(2) Use the spline shaft, SPL-8838 to turn the rotor (610). Turn the rotor continuously in one direction at 2-3 rpm, until the torque indication becomes stable. Do not turn the rotor for more than 5 minutes.

(3) Read the torque indication for 30 seconds. Make sure that the running torque is 83-97 pound-inches.

(4) Do steps TESTING AND FAULT ISOLATION, Paragraph 2.E.(2) and TESTING AND FAULT ISOLATION, Paragraph 2.E.(3) in the opposite direction.

F. Do a backlash test of the assembly.

(1) Put the stabilizer trim mechanism assembly (1B) in an applicable holding fixture.

(2) Put a clamp on the drum (500) to prevent movement.

(3) Attach a dial indicator to the housing assembly (520A). Put the dial indicator arm on one of the teeth of the sprocket (295). Align the arm approximately with the direction of travel of the sprocket teeth.

(4) Apply a torque to the sprocket (295), first in one direction, then in the other direction. Make a record of the total travel at the 6.688 inch sprocket pitch diameter, as measured with the dial indicator. This measurement is the total backlash of the assembly, from the input to the output.

(5) Make sure that the total backlash is 0.010-0.030 inch.

3. Fault Correction

A. Procedures

(1) If the sprocket (295) or drum (500) does not turn freely, replace the bearing(s) (310, 325, 435, 470) as follows:

(a) Fully disassemble the stabilizer trim mechanism assembly (1B) (DISASSEMBLY).

(b) Replace the defective bearing(s) (310, 325, 435, 470).

(c) Assemble the stabilizer trim mechanism assembly (1B) (ASSEMBLY).

(d) Do the backlash test on the assembly.

(2) If the gear tooth contact pattern is not correct, replace the pinion (330) and/or the bevel gear (445) as follows:

(a) Fully disassemble the stabilizer trim mechanism assembly (1B) (DISASSEMBLY).

(b) Replace the defective pinion (330) and/or bevel gear (445) if it is necessary.

(c) Assemble the stabilizer trim mechanism assembly (1B) (ASSEMBLY).

(d) Do the backlash test on the assembly.

(3) If the running torque is not correct, adjust the shim (585) thickness.

(a) Disassemble the brake assembly (560) (DISASSEMBLY).

(b) Increase the shim (585) thickness to increase the running torque. Decrease the shim thickness to decrease the running torque.

NOTE: A change of 0.005 inch in shim thickness will change the torque by approximately 3 pound-inches.

(c) Assemble the brake assembly (560) (ASSEMBLY).

(d) Do the acceptance test (TESTING AND FAULT ISOLATION, Paragraph 2.E.) again.

(4) If the backlash is not 0.010-0.030 inch, do the subsequent steps:

(a) Fully disassemble the stabilizer trim mechanism assembly (1B) (DISASSEMBLY).

(b) Adjust the thickness of the shim (480) to correct the backlash.

(c) Assemble the stabilizer trim mechanism assembly (1B) (ASSEMBLY).

(d) Do the backlash test (TESTING AND FAULT ISOLATION, Paragraph 2.F.) on the assembly again.

DISASSEMBLY

1. General

A. This procedure has the data necessary to disassemble the stabilizer trim mechanism assembly (1B).

B. Disassemble this component sufficiently to isolate the defects, do the necessary repairs, and put the component back to a serviceable condition.

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

D. Refer to IPL Figure 1 for item numbers.

2. Disassembly

A. References

Reference	Title
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT

B. Parts Replacement

NOTE: The parts which follow are recommended for replacement. Unless a procedure tells you to replace a part, replacement is optional.

(1) Cotter pins (125, 245A, 280A, 420, 515)

C. Procedure

(1) Use standard industry procedures and the steps shown below to disassemble this component.

(2) Remove the support link assembly (50).

(a) Remove the nut (25), bolt (5A), washers (10A, 20A), bushing (15) (SOPM 20-50-03), and the support link assembly (50) from the housing assembly (520A).

(b) Remove the nuts (70A), washers (75A), and eyebolt (45) from the support link assembly.

NOTE: Do not remove the bushings (55, 60) from the support link assembly unless repair or replacement is necessary.

(3) Remove the eyebolts (80A, 90A) and turnbuckles (83, 85A).

(a) Remove the nut (40), bolt (30), washers (35A, 36), eyebolts (80A, 90A), and turnbuckle (83) from the bracket (535) on the housing assembly (520A).

(b) Remove the nut (105), bolt (95), washers (100), bushing (102) (SOPM 20-50-03), eyebolts (80A, 90A), and turnbuckle (85A) from the housing assembly (520A).

(c) Disassemble the eyebolts (80A, 90A) and turnbuckles (83, 85A).

(4) Remove the support link assembly (140).

(a) Remove the cotter pins (125), nuts (137), washers (135), stud (130), and the support link assembly (140) from the housing assembly (520A).

(b) Remove the nuts (165A), washers (160A), and eyebolts (155) from the support link assembly (140).

NOTE: Do not remove the bushings (145A) from the support link assembly unless repair or replacement is necessary.

(5) Remove the brake assembly (560).

(a) Remove the bolts (390) and washers (395), then remove the brake assembly (560) from the housing assembly (520A).

(b) Install the brake assembly (560) in the TBD assembly jig, and apply the clamp to hold the cover (580) against the housing assembly (615).

(c) Remove the bolts (565, 570) and washers (575), then slowly release the assembly jig clamp from the cover (580).

(d) Remove the parts (585 thru 610) from the housing assembly (615). Make a record of the sequence and position of the parts as they are removed.

NOTE: Do not remove the bearing (620) or the inserts (625) from the housing assembly unless repair or replacement is necessary.

(e) Measure and record the thickness of the shim (585) to help during assembly.

(6) Remove the sprocket (295) and the pinion (330).

(a) Remove the bolts (300), then remove the sprocket (295), pinion (330), and attached parts from the housing assembly (520A).

(b) Remove the cotter pin (280A), nut (285), and washer (290), then remove the pinion (330) and the plate (305) from the sprocket (295).

(c) Remove the bearings (310, 325) (SOPM 20-50-03), shim (320), and spacer (315) from the pinion (330).

NOTE: Measure and record the thickness of the shim (320) to help during assembly.

(7) Remove the bracket assembly (260).

(a) Remove the nuts (180), washers (177), bolts (170), and spacers (175).

(b) Remove the bolt (205) which attaches the bracket (215) to the housing assembly (520A).

(c) Remove the cotter pins (245A, 515) and washers (250, 510), then remove the pins (255A, 505) from the housing assembly.

(d) Remove the nut (240), bolt (230), and filler (235), then remove the bracket assembly (260) from the housing assembly.

NOTE: Do not remove the block (270) or the bracket (215) from the bracket assembly (260) unless repair or replacement is necessary.

(8) Remove the bevel gear (445).

(a) Remove the nuts (460), washers (455), and screws (450) which attach the plate (465) to the housing assembly (520A).

(b) Remove the cotter pin (420A), nut (425), and washer (430).

(c) Remove the bevel gear (445) with the plate (465), bearing (470) (SOPM 20-50-03), spacer (485), and shims (480, 490, 495) from the housing assembly. Remove the attached parts from the shaft of the bevel gear.

NOTE: Measure and record the thickness of the shims (480, 490, 495) to help during assembly.

(d) Remove the pin (475), then remove the shaft (415A) from the bevel gear.

(e) Remove the spacer (440) and the bearing (435) from the housing assembly (SOPM 20-50-03).

(9) Remove the drum (500) from the housing assembly (520A).

(10) Remove the guard assembly (185).

(a) Remove the nuts (225), bolts (220A), and spacers (172) to remove the guard assembly (185) from the housing assembly (520A).

NOTE: Do not disassemble the guard assembly (185) unless repair or replacement is necessary.

(11) Remove the cable guard assembly (355).

(a) Remove the nuts (350), washers (340), shim (345), and cable guard assembly (355) from the housing assembly (520A). Measure and record the thickness of the shim (345) to help during assembly.

NOTE: Do not disassemble the cable guard assembly (185) or the housing assembly (520A) unless repair or replacement is necessary.

CLEANING

1. General

A. This procedure has the data necessary to clean the stabilizer trim mechanism assembly (1B).

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. Cleaning

A. References

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

B. Procedure

(1) Clean the bearings (310, 325, 435, 470) as specified in SOPM 20-30-01.

(2) Use standard industry procedures and refer to SOPM 20-30-03 to clean other parts.

CHECK

1. General

A. This procedure has the data necessary to find defects in the material of the specified parts.

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

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

D. Refer to IPL Figure 1 for item numbers.

2. Check

A. References

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

B. Procedure

(1) Use standard industry procedures to do a visual check of all the parts for defects. Do the penetrant or magnetic particle check if the visual check shows possible damage or if you suspect possible damage on the parts listed below:

(2) Do a magnetic particle check (SOPM 20-20-01) of these parts:

(a) Eyebolt (45, 80A, 90A, 155)

(b) Stud (130)

(c) Sprocket (295)

(d) Pinion (330)

(e) Shaft (415A)

(f) Bevel gear (445)

(g) Rotor (610)

(3) Do a penetrant check (SOPM 20-20-02) of these parts:

(a) Link (65, 150)

(b) Drum (500)

(c) Housing (555A)

REPAIR

1. General

A. Instructions for repair, refinish, and replacement of the specified subassembly parts are included in each REPAIR when applicable:

Table 601:

PART NUMBER	NAME	REPAIR
—	REFINISH OF OTHER PARTS	1-1
251A4116	SUPPORT LINK ASSEMBLY	2-1
5-97275	SUPPORT LINK ASSEMBLY	3-1
251A4118	HOUSING ASSEMBLY	4-1
251A4119	ROTOR	5-1
251A4121	COVER	6-1

2. 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)
∅	DIAMETER
S ∅	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 THIS FEATURE 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 DATUM B WITHIN 0.002
// | 0.002 | A	PARALLEL TO DATUM 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 A
⌓ | 0.020 | A	SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.020 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE
◎ | ∅ 0.0005 | C	CONCENTRIC TO DATUM C WITHIN 0.0005 DIAMETER
= | 0.010 | A	SYMMETRICAL WITH DATUM A WITHIN 0.010
∠ | 0.005 | A	ANGULAR TOLERANCE 0.005 WITH DATUM A
⌖ | ∅ 0.002 Ⓢ | B	LOCATED AT TRUE POSITION WITHIN 0.002 DIA RELATIVE TO DATUM B, REGARDLESS OF FEATURE SIZE
⊥ | ∅ 0.010 Ⓜ | A 0.510 Ⓟ	AXIS IS TOTALLY WITHIN A CYLINDER OF 0.010 INCH DIAMETER, PERPENDICULAR TO DATUM A, AND EXTENDING 0.510 INCH ABOVE DATUM A, MAXIMUM MATERIAL CONDITION
[2.000] OR 2.000 BSC	THEORETICALLY EXACT DIMENSION IS 2.000

True Position Dimensioning Symbols
Figure 601

REFINISH OF OTHER PARTS - REPAIR 1-1

1. General

A. This procedure has the data necessary to refinish the parts which are not given in the specified repairs.

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. Refinish of Other Parts

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I
D00113	Lubricant - Liquid Dispersed Solid Film Lubricant	BMS3-8, BAC 5811, TYPE VIII

B. References

Reference	Title
SOPM 20-20-01	MAGNETIC PARTICLE INSPECTION
SOPM 20-30-02	STRIPPING OF PROTECTIVE FINISHES
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES
SOPM 20-60-02	FINISHING MATERIALS

C. General

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

D. Procedure

NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01. For finishing materials, refer to SOPM 20-60-02.

(1) Instructions for the repair of the parts listed in REPAIR 1-1, Table 601 are for repair of the initial finish.

Table 601: Refinish Details

IPL FIG. & ITEM	MATERIAL	FINISH
IPL Fig. 1		
Eyebolt (45,155)	4340 Steel, 125-145 ksi	Cadmium plate (F-1.20 or F-15.06), single plating thickness 0-0003-0.0005.
Eyebolt (80A,90A)	15-5PH CRES, 150-170 ksi	Cadmium plate (F-15.06) all surfaces of the bolt attach end. Let the plating run out in +/- 0.10 of the start of the change from the 0.28 shaft diameter. Passivate (F-17.25) all other surfaces.

Table 601: Refinish Details (Continued)

IPL FIG. & ITEM	MATERIAL	FINISH
Turnbuckle (83, 85A)	15-5PH CRES, 150-170 ksi	Passivate (F-17.25). Apply solid film lubricant, D00113 (F-19.10) to the threads.
Stud (130), pin (475)	8630 or 4130 Steel, 125-145 ksi	Cadmium plate (F-1.20), single plating thickness 0.0003-0.0005.
Bracket (195,275), filler (235)	Aluminum alloy	Chemical treat or anodize, and apply primer, C00259 (SRF-2.30).
Bracket (275A)	Aluminum alloy	Chromic acid anodize (F-17.04) or apply chemical conversion coating (F-17.07). Apply primer, C00259 (F-20.02).
Sprocket (295)	4340 or 4140 Steel, 125-145 ksi	Cadmium plate (F-15.06), but do not plate the spline. Do a magnetic particle check after plating (SOPM 20-20-01).
Plate (305,465), spacer (315,440, 485), bracket (365), guard (370)	Aluminum alloy	Chemical treat or anodize, and apply primer, C00259 (F-18.05).
Spacer-pinion (315A), Spacer-drum (440A, 485A)	Aluminum alloy	Chromic acid anodize F-17.04) or apply chemical conversion coating (F-17.07). Apply primer, C00259 (F-20.02) except do not apply to the ends.
Pinion (330)	4340 Steel, 180-200 ksi	Cadmium plate (F-15.06) the external surfaces only, single plating thickness 0.0003-0.0005. Do not plate the gear teeth, but plating runout is permitted on the teeth. Do a magnetic particle check after plating (SOPM 20-20-01). Apply primer, C00259 (F-20.03) on the internal surfaces only.
Shaft (415A)	CRES 180-200 ksi	Cadmium plate (F-15.06).
Bevel gear (445)	4340 or 8630 Steel, 150-180 ksi	Cadmium plate (F-15.02), but do not plate the gear teeth. Apply primer, C00259 (F-20.03) on the internal surfaces only. Do a magnetic particle check after plating (SOPM 20-20-01).
Shim (480,480A 490,495)	Aluminum alloy	Chemical treat all surfaces (F-17.07).
Shim (480B,480C,480D,480E)	301 Cres Sheet	Passivate (F-17.25)
Drum (500)	Aluminum alloy	Anodize (F-17.05) and apply primer, C00259 (F-20.02), but do not apply primer on the spline or in the cable grooves.
Housing (555A)	Aluminum alloy	Anodize (F-17.05) and apply primer, C00259 (F-20.02). Do not apply primer n the fastener holes, on the threads of the inserts, or on the bearing bores. Primer is optional on the spotface areas.

SUPPORT LINK ASSEMBLY - REPAIR 2-1

251A4116–1

1. General

A. This procedure has the data necessary to repair and refinish the support link assembly (140).

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.

D. General repair details:

(1) Material: Magnesium alloy

2. Bushing (145A) Replacement

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

B. References

Reference	Title
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. Procedure

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

(1) Remove the bushings (145A) from the link (150).

(2) Install the new bushings (145A). Use the shrink-fit procedure (SOPM 20-50-03) with sealant, A00247.

3. Refinish

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00032	Coating - Exterior Protective Enamel, General Use	BMS10-60, Type I
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

Reference	Title
SOPM 20-30-02	STRIPPING OF PROTECTIVE FINISHES
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

Reference	Title
SOPM 20-50-10	APPLICATION OF STENCILS, INSIGNIA, SILK SCREEN, PART NUMBERING AND IDENTIFICATION MARKINGS
SOPM 20-60-02	FINISHING MATERIALS

C. Procedure

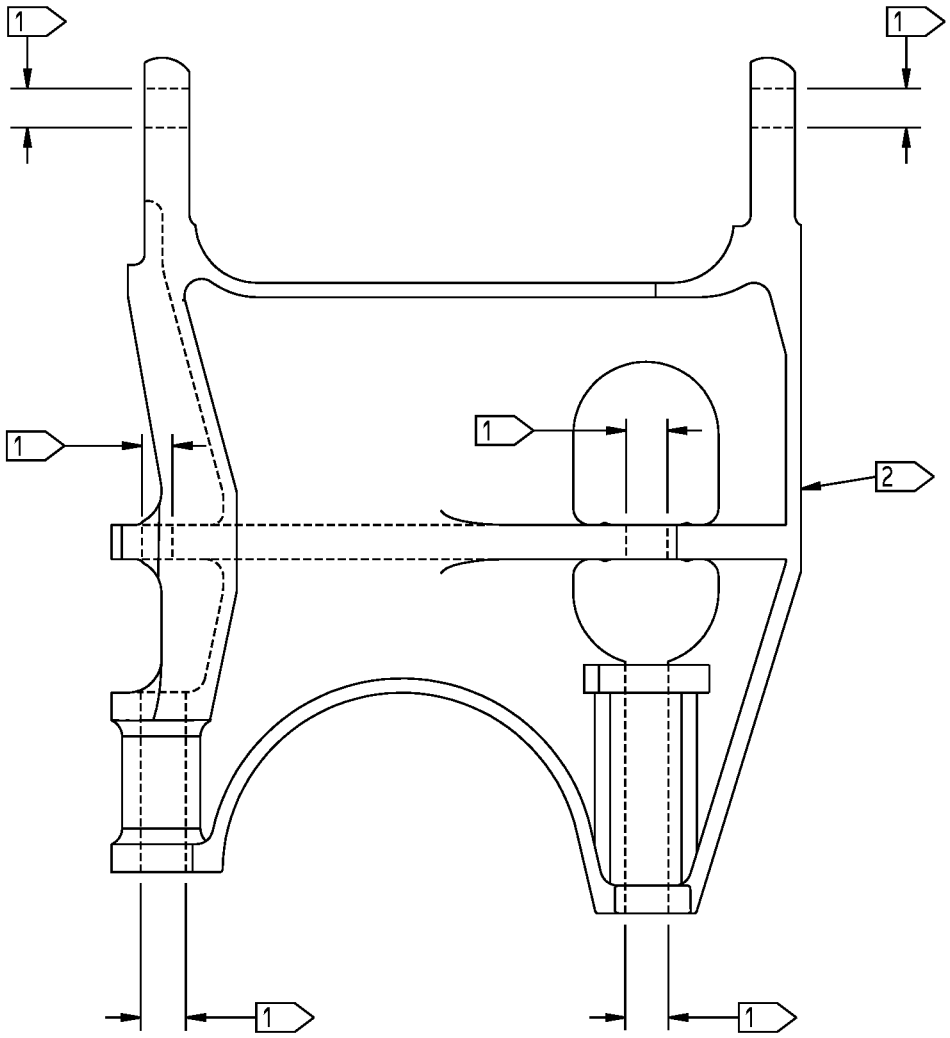
NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01. For finishing materials, refer to SOPM 20-60-02.

(1) Refinish the link (150).

(a) Dow 17 anodize (F-17.12) and apply primer, C00259 (F-20.03), but apply primer, C00259 (F-20.02) in the eyebolt holes and in the bushing holes, as shown in REPAIR 2-1, Figure 601.

(b) Apply two layers of enamel coating, C00032 (SRF-14.9813), but do not apply enamel in the eyebolt holes or in the bushing holes.

(2) Put the letter "M" with a rubber stamp in the location shown in REPAIR 2-1, Figure 601 (SOPM 20-50-10).



1 APPLY ONLY ONE LAYER OF PRIMER TO HOLE. DO NOT APPLY ENAMEL TO HOLE.

2 PUT THE LETTER "M" ON THIS SURFACE WITH A RUBBER STAMP.

ITEM NUMBERS REFER TO IPL FIG. 1

251A4116-2 Support Link Refinish Details
Figure 601

SUPPORT LINK ASSEMBLY - REPAIR 3-1

5-97275–5

1. General

A. This procedure has the data necessary to repair and refinish the support link assembly (50).

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.

D. General repair details:

(1) Material: Magnesium alloy

2. Bushing (55, 60) Replacement

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

B. References

Reference	Title
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. Procedure

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

(1) Remove the bushings (55, 60) from the link (65).

(2) Install the new bushings (55, 60). Use the shrink-fit procedure (SOPM 20-50-03) with sealant, A00247.

3. Refinish

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00032	Coating - Exterior Protective Enamel, General Use	BMS10-60, Type I
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

Reference	Title
SOPM 20-30-02	STRIPPING OF PROTECTIVE FINISHES
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

Reference	Title
SOPM 20-50-10	APPLICATION OF STENCILS, INSIGNIA, SILK SCREEN, PART NUMBERING AND IDENTIFICATION MARKINGS
SOPM 20-60-02	FINISHING MATERIALS

C. Procedure

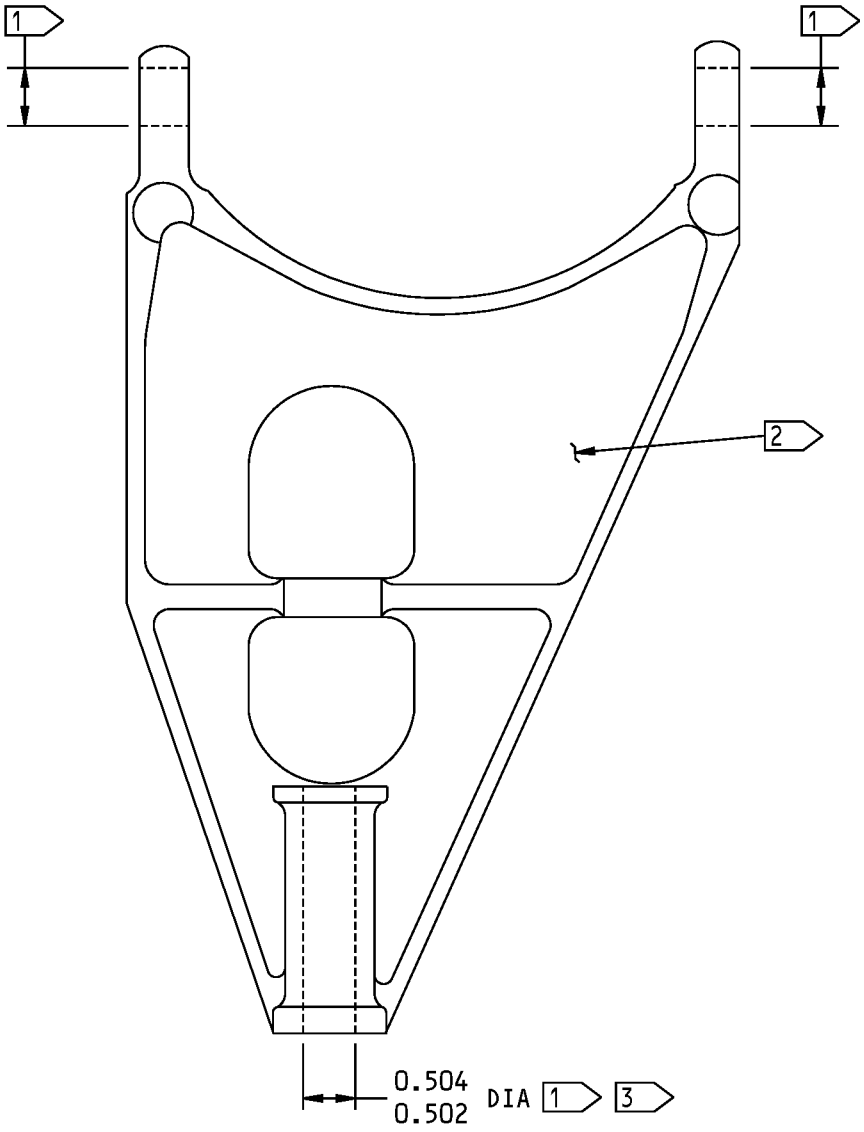
NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01. For finishing materials, refer to SOPM 20-60-02.

(1) Refinish the link (65).

(a) Dow 17 anodize (F-17.12) and apply primer, C00259 (F-20.03), but apply primer, C00259 (F-20.02) in the eyebolt hole and in the bushing holes, as shown in REPAIR 3-1, Figure 601.

(b) Apply two layers of enamel coating, C00032 (SRF-14.9813), but do not apply enamel in the eyebolt holes or in the bushing holes.

(2) Put the letter "M" with a rubber stamp in the location shown in REPAIR 3-1, Figure 601 (SOPM 20-50-10).



1 APPLY ONLY ONE LAYER OF PRIMER TO HOLE. DO NOT APPLY ENAMEL TO HOLE.

2 PUT THE LETTER "M" ON THIS SURFACE WITH A RUBBER STAMP.

3 THIS DIMENSION MUST BE MET AFTER APPLICATION OF PRIMER.

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

5-27975-6 Support Link Refinish Details
Figure 601

HOUSING ASSEMBLY - REPAIR 4-1

251A4118–1

1. General

A. This procedure has the data necessary to repair the housing assembly (615).

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. Bearing (620) Replacement

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00247	Sealant - Pressure And Environmental - Chromate Type	BMS 5-95

B. References

Reference	Title
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-60-04	MISCELLANEOUS MATERIALS

C. Procedure

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

(1) Remove the bearing (620) from the housing (630).

(2) Install the new bearing (620) with sealant, A00247 (SOPM 20-50-03).

(3) Roller swage the housing (630) over the bearing (620) (SOPM 20-50-03).

HOUSING - REPAIR 4-2

251A4118–2

1. General

A. This procedure has the data necessary to refinish the housing (630).

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.

D. General repair details:

(1) Material: Aluminum alloy

2. Housing (630) Refinish

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

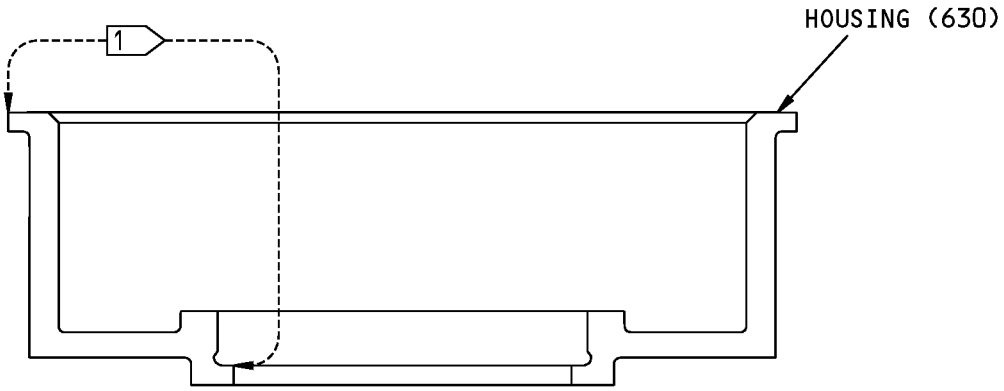
Reference	Title
SOPM 20-30-02	STRIPPING OF PROTECTIVE FINISHES
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES
SOPM 20-60-02	FINISHING MATERIALS

C. Procedure

NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01. For finishing materials, refer to SOPM 20-60-02.

(1) Anodize (F-17.31).

(2) Apply primer, C00259 (F-20.03), but do not apply primer to the surfaces shown in REPAIR 4-2, Figure 601.



1 NO PRIMER ON THESE SURFACES.

ITEM NUMBERS REFER TO IPL FIG. 1

251A4118-2 Housing Refinish
Figure 601

ROTOR - REPAIR 5-1

251A4119–1

1. General

A. This procedure has the data necessary to refinish the rotor (610).

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.

D. General repair details:

(1) Materials: 9310 Steel, 150-190 ksi (core strength), Ra 80 minimum (case hardness)

2. Refinish

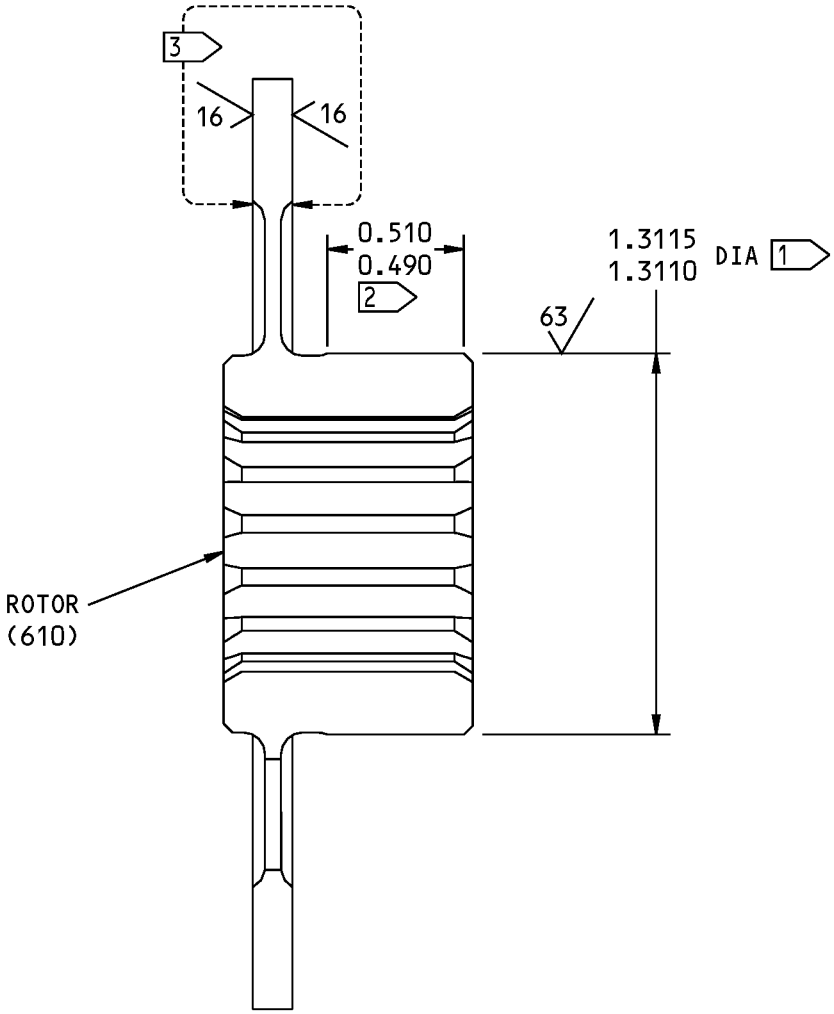
A. References

Reference	Title
SOPM 20-30-02	STRIPPING OF PROTECTIVE FINISHES
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

B. Procedure

NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01.

(1) Cadmium plate (F-15.41), but do not plate the area shown in REPAIR 5-1, Figure 601.



1 DIMENSIONS APPLY AFTER PLATING.

2 1.3110–1.31155 DIMETER AND 63 MICROINCHES SURFACE FINISH APPLY TO THIS AREA ONLY.

3 NO PLATING IN THIS AREA.

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

251A4119-1 Rotor Refinish
Figure 601

COVER - REPAIR 6-1

251A4121–1

1. General

A. This procedure has the data necessary to refinish the cover (580).

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.

D. General repair details:

(1) Material: Aluminum alloy

2. Refinish

A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
C00259	Primer - Chemical And Solvent Resistant Finish, Epoxy Resin	BMS10-11, Type I

B. References

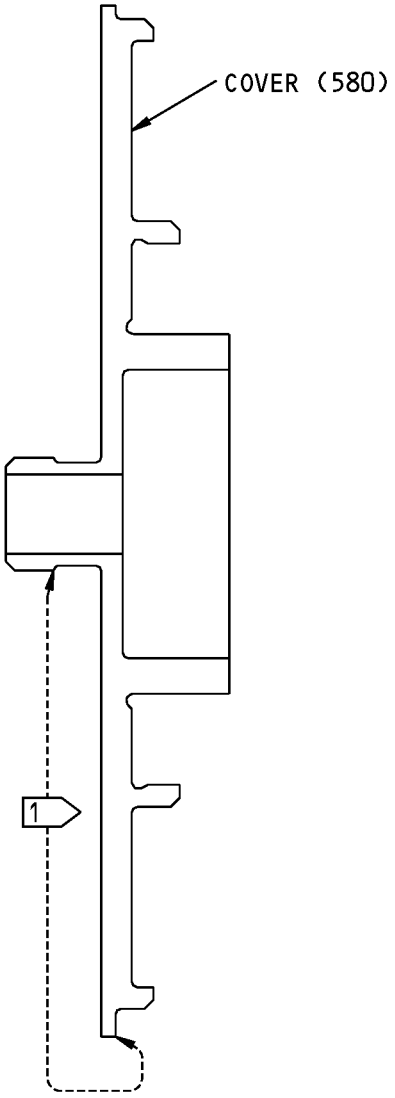
Reference	Title
SOPM 20-30-02	STRIPPING OF PROTECTIVE FINISHES
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES
SOPM 20-60-02	FINISHING MATERIALS

C. Procedure

NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01. For finishing materials, refer to SOPM 20-60-02.

(1) Anodize (F-17.35).

(2) Apply primer, C00259 (F-20.03) to the outer surfaces, as shown in REPAIR 6-1, Figure 601.



1 APPLY PRIMER ON THESE SURFACES ONLY. ITEM NUMBERS REFER TO IPL FIG. 1

251A4121-1 Cover Refinish
Figure 601

ASSEMBLY

1. General

A. This procedure has the data necessary to assemble the stabilizer trim mechanism assembly (1B).

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. Tools/Equipment

NOTE: Equivalent substitutes may be used.

Reference	Description
SPL-4426	Test Equipment, Autothrottle, Gearbox, Brake (50Hz) (Part #: J22004-67, Supplier: 81205)
SPL-4427	Test Equipment, Autothrottle, Gearbox, Brake (60Hz) (Part #: J22004-68, Supplier: 81205)
SPL-8838	Spline Shaft A (J22004-13 included in J22004-67 and -J22004-68)

B. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
A00134	Adhesive - Synthetic Rubber, Buna-N, 1 Part, Fuel Resistant	BMS 5-14
A00155	Adhesive - Cyanoacrylate For Non-Structural Bonding Of Metals	BMS5-36, Type I
C00174	Compound - Corrosion Preventive, Solvent Cutback, Cold Application	MIL-PRF-16173 (Supersedes MIL-C-16173)
C00528	Compound - Corrosion Preventive, Petroleum Hot Application (Soft Film)	MIL-C-11796, Class III
C00913	Compound - Corrosion Inhibiting Material, Nondrying Resin Mix	BMS 3-27
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
G01048	Lockwire - Corrosion Resistant Steel (0.032 In. Dia.)	NASM20995˜ C32
G01912	Lockwire - Monel (0.032 In. Dia.)	NASM20995N˜ C32 (QQ-N-281)
G02436	Lockwire - Monel (0.040 In. Dia.)	NASM20995N˜ C40

C. References

Reference	Title
SOPM 20-30-03	GENERAL CLEANING PROCEDURES
SOPM 20-50-01	BOLT AND NUT INSTALLATION
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT
SOPM 20-50-07	LUBRICATION
SOPM 20-50-12	APPLICATION OF ADHESIVES
SOPM 20-60-02	FINISHING MATERIALS
SOPM 20-60-03	LUBRICANTS
SOPM 20-60-04	MISCELLANEOUS MATERIALS

D. Procedure

NOTE: For bolt and nut installation, refer to SOPM 20-50-01. For lubrication, refer to SOPM 20-50-07. For finishing materials, refer to SOPM 20-60-02. For lubricants, refer to SOPM 20-60-03. For miscellaneous materials, refer to SOPM 20-60-04.

(1) Apply a thin layer of grease, D00013 to all splines, plain bearings, and turnbuckle threads as the parts are assembled.

(2) Install the guard assembly (185) on the housing assembly (520A) with the bolts (220A), spacers (172), and nuts (225).

(3) Install the pins (505) on the housing assembly (520A) with the washers (510) and cotter pins (515). Refer to SOPM 20-50-02.

(4) Install the cable guard assembly (355) and the shim (345) on the housing assembly (520A) with the bolts (335), washers (340), and nuts (350).

NOTE: Use a shim of the same thickness as the shim removed during disassembly. The shim thickness will be adjusted after the drum and bevel gear are installed.

(5) Assemble the sprocket (295) and other parts on the pinion (330).

WARNING: BMS 3-27 CORROSION INHIBITING COMPOUND CONTAINS SOLVENTS, CHROMATES, AND A SMALL AMOUNT OF BOUND ASBESTOS. CONSULT THE APPLICABLE SAFETY STANDARDS FOR APPROVED HANDLING PROCEDURES.

CAUTION: BMS 3-27 COMPOUND IS USED ONLY IN STATIC JOINTS WHERE GREASE CANNOT BE APPLIED. BMS 3-27 COMPOUND IN DYNAMIC JOINTS WILL NOT LET THEM MOVE FREELY.

(a) Install the bearing (325), shim (320), spacer (315), bearing (310), plate (305), sprocket (295), washer (290), and nut (285) on the pinion (330). Refer to SOPM 20-50-03, but use corrosion inhibiting compound, C00913 for the bearing installations.

NOTE: Use a shim of the same thickness as the shim removed during disassembly. The shim thickness can be adjusted after the pinion is installed in the housing assembly (520A).

(b) Tighten the nut (285) sufficiently to remove any play in the installed parts.

(c) Install the assembled parts in the housing assembly (520A). Install the bolts (300) to hold the parts in position.

(d) Measure the distance from the inside face of the bearing (325) to the centerline of the hole for the bevel gear (445), as shown in ASSEMBLY, Figure 701.

(e) Remove the pinion (330) and attached parts from the housing assembly (520A).

(f) If the distance measured in ASSEMBLY, Paragraph 2.D.(5)(d) is not 2.685-2.695 inches, adjust the thickness of the shim (320) as necessary.

NOTE: To increase the measured dimension, remove the laminations from the shim (320). To decrease the measured dimension, remove the laminations from a new shim of full design thickness.

(g) Tighten the nut (285) to 500-700 pound-inches, and install the cotter pin (280A) (SOPM 20-50-02). Do not install the pinion (330) in the housing assembly (520) at this time.

(6) Install the drum (500) and the bevel gear (445).

(a) Fill the inner space of the shaft (415A) with grease, D00013, then install the shaft in the bevel gear (445). Install the pin (475) to hold the shaft in position.

WARNING: BMS 3-27 CORROSION INHIBITING COMPOUND CONTAINS SOLVENTS, CHROMATES, AND A SMALL AMOUNT OF BOUND ASBESTOS. CONSULT THE APPLICABLE SAFETY STANDARDS FOR APPROVED HANDLING PROCEDURES.

CAUTION: BMS 3-27 COMPOUND IS USED ONLY IN STATIC JOINTS WHERE GREASE CANNOT BE APPLIED. BMS 3-27 COMPOUND IN DYNAMIC JOINTS WILL NOT LET THEM MOVE FREELY.

(b) Install the plate (465) and bearing (470) on the bevel gear (445). Refer to SOPM 20-50-03, but use corrosion inhibiting compound, C00913 for the bearing installation.

(c) Put the drum (500) in position in the housing assembly (520A). Install the bevel gear (445), spacer (485), and shims (480, 490, 495) through the housing assembly and the drum. Install the screws (450), washers (455), and nuts (460) to hold the bearing (470) and attached parts in the housing.

(d) Install the spacer (440), bearing (435), washer (430), and nut (425) on the bevel gear (445). Tighten the nut sufficiently to remove any play in the installed parts.

(e) Install the pinion (330), sprocket (295), and other attached parts in the housing assembly (520A). Install the bolts (300) to hold the plate (305).

(f) Do a check of the backlash between the pinion (330) and the bevel gear (445). Refer to TESTING AND FAULT ISOLATION.

(g) If the backlash measured in ASSEMBLY, Paragraph 2.D.(6)(f) is not correct, adjust the thickness of the shim (480) as necessary. Refer to ASSEMBLY, Figure 701.

NOTE: To increase the backlash, remove the laminations from the shim (480). To decrease the backlash, remove the laminations from a new shim of full design thickness.

(h) Do a check of the clearance between the drum (500) and the heads of the two upper bolts (335) which attach the cable guard assembly (355). If more claearance is necessary, increase the thickness of the shims (490, 495). Refer to ASSEMBLY, Figure 701.

NOTE: The shim (490) is used with the shim (495) as necessary to obtain sufficient clearance.

(i) Remove the pinion (330) and attached parts, the bevel gear (445) and attached parts, and the drum (500) from the housing assembly (520A).

(j) Apply compound, C00174 to all mating surfaces of the drum (500).

WARNING: BMS 3-27 CORROSION INHIBITING COMPOUND CONTAINS SOLVENTS, CHROMATES, AND A SMALL AMOUNT OF BOUND ASBESTOS. CONSULT THE APPLICABLE SAFETY STANDARDS FOR APPROVED HANDLING PROCEDURES.

CAUTION: BMS 3-27 COMPOUND IS USED ONLY IN STATIC JOINTS WHERE GREASE CANNOT BE APPLIED. BMS 3-27 COMPOUND IN DYNAMIC JOINTS WILL NOT LET THEM MOVE FREELY.

(k) Apply corrosion inhibiting compound, C00913 to the mating surfaces of the bearings (470, 435), then install the drum (500), bevel gear (445), and the related parts in the housing assembly (520A). Tighten the nut (425) to 500-700 pound-inches, and install the cotter pin (420) (SOPM 20-50-02).

WARNING: BMS 3-27 CORROSION INHIBITING COMPOUND CONTAINS SOLVENTS, CHROMATES, AND A SMALL AMOUNT OF BOUND ASBESTOS. CONSULT THE APPLICABLE SAFETY STANDARDS FOR APPROVED HANDLING PROCEDURES.

CAUTION: BMS 3-27 COMPOUND IS USED ONLY IN STATIC JOINTS WHERE GREASE CANNOT BE APPLIED. BMS 3-27 COMPOUND IN DYNAMIC JOINTS WILL NOT LET THEM MOVE FREELY.

(l) Apply corrosion inhibiting compound, C00913 to the OD of the bearings (310, 325), and install the pinion (330), sprocket (295), and other attached parts in the housing assembly (520A).

(m) Hold a 0.135-inch diameter check pin in the cable grooves of the drum (500). Make sure that the clearance between the check pin and the cable guard assembly (355) is 0.010-030 inch.

(n) If the clearance is not correct, adjust the thickness of the shim (345) as necessary.

NOTE: If necessary, you can bond two shims together to increase the thickness. Use BMS 5-14 adhesive, A00134 or BMS 5-36 adhesive, A00155 to bond the shims. Refer to SOPM 20-50-12.

(7) Install the bracket assembly (260).

(a) Attach the bracket assembly (260) loosely to the housing assembly (520A) with the bolt (205), bolt (230), filler (235), and nut (240).

(b) Install the pin (255A) with the washers (250) and cotter pins (245A). Refer to SOPM 20-50-02.

(c) Install the spacers (175) with the bolts (170), washers (177), and nuts (180).

(d) Hold a 0.135-inch diameter check pin in the cable grooves of the drum (500). Adjust the position of the bracket assembly (260), and the spacers (175) to get a 0.010-0.030-inch clearance between the check pin and each of the spacers. Tighten the bolt (205) and the nuts (180, 240) to hold the parts in position.

(8) Assemble the brake assembly (560).

CAUTION: ASSEMBLE THE BRAKE ASSEMBLY IN A CLEAN AREA. MAKE SURE THAT NO UNWANTED MATERIAL ENTERS THE SKEWED ROLLER ASSEMBLIES (600), OR THE PART MAY NOT OPERATE CORRECTLY.

(a) Apply a thick layer of grease, D00013 to the skewed roller assemblies (600), stator (595), disc (605), and rotor (610).

CAUTION: INSTALL THE TWO SKEWED ROLLER ASSEMBLIES (600) SO THAT THE ROLLERS IN EACH ASSEMBLY TURN IN OPPOSITE DIRECTIONS, OR THE UNIT MAY NOT OPERATE CORRECTLY.

(b) Install the shim (585), springs (590), and the lubricated parts (595 thru 610) in the housing assembly (615),

NOTE: Install the parts in the same sequence and position as they were in before disassembly, or the run-in procedure ASSEMBLY, Paragraph 2.D.(9) must be completed.

(c) Put the cover (580) over the installed parts in the housing assembly (615).

(d) Install the brake assembly parts in an applicable holding fixture. Tighten the clamp on the holding fixture to compress the springs (590), until the cover (580) touches the housing assembly (615).

(e) Install the bolts (565, 570) and washers (575) to hold the cover (580) to the housing assembly (615).

(f) Remove the brake assembly (560) from the holding fixture.

(9) Do the run-in procedure on the brake assembly (560).

NOTE: This procedure is not necessary if the same parts that were removed during disassembly are installed, in the same sequence and position, in the housing assembly (615).

(a) Install the brake assembly (560) in an applicable holding fixture.

(b) Put the spline shaft, SPL-8838 in the rotor (610), and measure the torque in each direction. Make sure that the torque is 35-50 pound-inches.

(c) If the torque is low, disassemble the brake assembly (DISASSEMBLY), and increase the shim thickness. If the torque is high, decrease the shim thickness.

NOTE: A change of 0.005 inch in shim thickness will cause the torque to change by approximately 3 pound-inches.

(d) Assemble the brake assembly (560) ASSEMBLYand do a check of the torque again.

(e) Put the brake assembly (560) in the J22004 Brake Test Equipment, SPL-4426 or Brake Test Equipment, SPL-4427.

CAUTION: MAKE SURE THAT THE TEMPERATURE OF THE HOUSING ASSEMBLY DOES NOT GO ABOVE 200 DEG F, OR THE UNIT MAY BE DAMAGED. IF NECESSARY, USE A FAN TO KEEP THE TEMPERATURE BELOW 200 DEG F.

(f) Install the spline shaft, SPL-8838 in the rotor (610). Turn the rotor at 50-100 rpm continuously for 15 minutes in one direction, then for 15 minutes in the opposite direction.

(g) Do ASSEMBLY, Paragraph 2.D.(9)(f) two more times, for a total of three full cycles.

(h) Disassemble the brake assembly (DISASSEMBLY). Make a record of the sequence and position of the parts to help during assembly.

(i) Clean and remove the grease from all of the parts of the brake assembly (560) (SOPM 20-30-03).

CAUTION: ASSEMBLE THE PARTS OF THE BRAKE ASSEMBLY IN THE SAME SEQUENCE AND POSITION AS WAS INSTALLED DURING THE RUN-IN PROCEDURE, OR THE RUN-IN MAY NOT BE GOOD.

(j) Lubricate the parts with grease, D00013 again and assemble the brake assembly (560), but adjust the shim thickness to get 83-97 pound-inches of torque. Refer to ASSEMBLY, Paragraph 2.D.(8).

NOTE: A change of 0.005 inch in shim thickness will cause the torque to change by approximately 3 pound-inches.

(k) Adjust the shim thickness to get 83-97 pound-inches of torque.

NOTE: A change of 0.005 inch in shim thickness will cause the torque to change by approximately 3 pound-inches.

(l) Do the acceptance test procedure on the brake assembly (560) (TESTING AND FAULT ISOLATION).

(m) Install the brake assembly (560) on the housing assembly (520A) with the bolts (390) and washers (395).

(n) Install the support link assembly (140).

WARNING: BMS 3-27 CORROSION INHIBITING COMPOUND CONTAINS SOLVENTS, CHROMATES, AND A SMALL AMOUNT OF BOUND ASBESTOS. CONSULT THE APPLICABLE SAFETY STANDARDS FOR APPROVED HANDLING PROCEDURES.

CAUTION: BMS 3-27 COMPOUND IS USED ONLY IN STATIC JOINTS WHERE GREASE CANNOT BE APPLIED. BMS 3-27 COMPOUND IN DYNAMIC JOINTS WILL NOT LET THEM MOVE FREELY.

1) Apply corrosion inhibiting compound, C00913 to the faying surfaces of the eyebolts (155), then install them in the support link assembly (140) with the washers (160A) and nuts (165A). Adjust the position of the eyebolts to get the 10.214-10.274 inch dimension shown in ASSEMBLY, Figure 702, then tighten the nuts (165A).

2) Remove the unwanted corrosion inhibiting compound, C00913 from the eyebolts (155) and the support link assembly (140).

3) Apply MIL-C-11796 compound, C00528 on the stud (130), then install the support link assembly (140) on the housing (520A) with the stud, washers (135), and nuts (137). Tighten the nuts to not more than 10 pound-inches, and install the cotter pins (125). Refer to SOPM 20-50-02.

(10) Install the turnbuckles (83, 85A) with the eyebolts (80A, 90A).

CAUTION: EACH OF THE TURNBUCKLES (83, 85A) HAS THREADS OF OPPOSITE DIRECTION AT THE ENDS. MAKE SURE THAT THE CORRECT EYEBOLT (80A, 90A) IS INSTALLED IN EACH END, OR THE PARTS CAN BE DAMAGED AND FAIL TO OPERATE.

(a) Install the eyebolts (80A, 90A) in the turnbuckles (83, 85A).

NOTE: Eyebolts (80A) have right-hand threads and eyebolts (90A) have left-hand threads.

(b) Install the turnbuckle (83) and eyebolts (80A, 90A) on the housing assembly (520A) with parts (30 thru 40).

(c) Apply MIL-C-11796 compound, C00528 to all surfaces of the bolt (95). Install the turnbuckle (85A) and eyebolts (80A, 90A) on the housing assembly (520A) with parts (95 thru 105).

(11) Install the support link assembly (50).

WARNING: BMS 3-27 CORROSION INHIBITING COMPOUND CONTAINS SOLVENTS, CHROMATES, AND A SMALL AMOUNT OF BOUND ASBESTOS. CONSULT THE APPLICABLE SAFETY STANDARDS FOR APPROVED HANDLING PROCEDURES.

CAUTION: BMS 3-27 COMPOUND IS USED ONLY IN STATIC JOINTS WHERE GREASE CANNOT BE APPLIED. BMS 3-27 COMPOUND IN DYNAMIC JOINTS WILL NOT LET THEM MOVE FREELY.

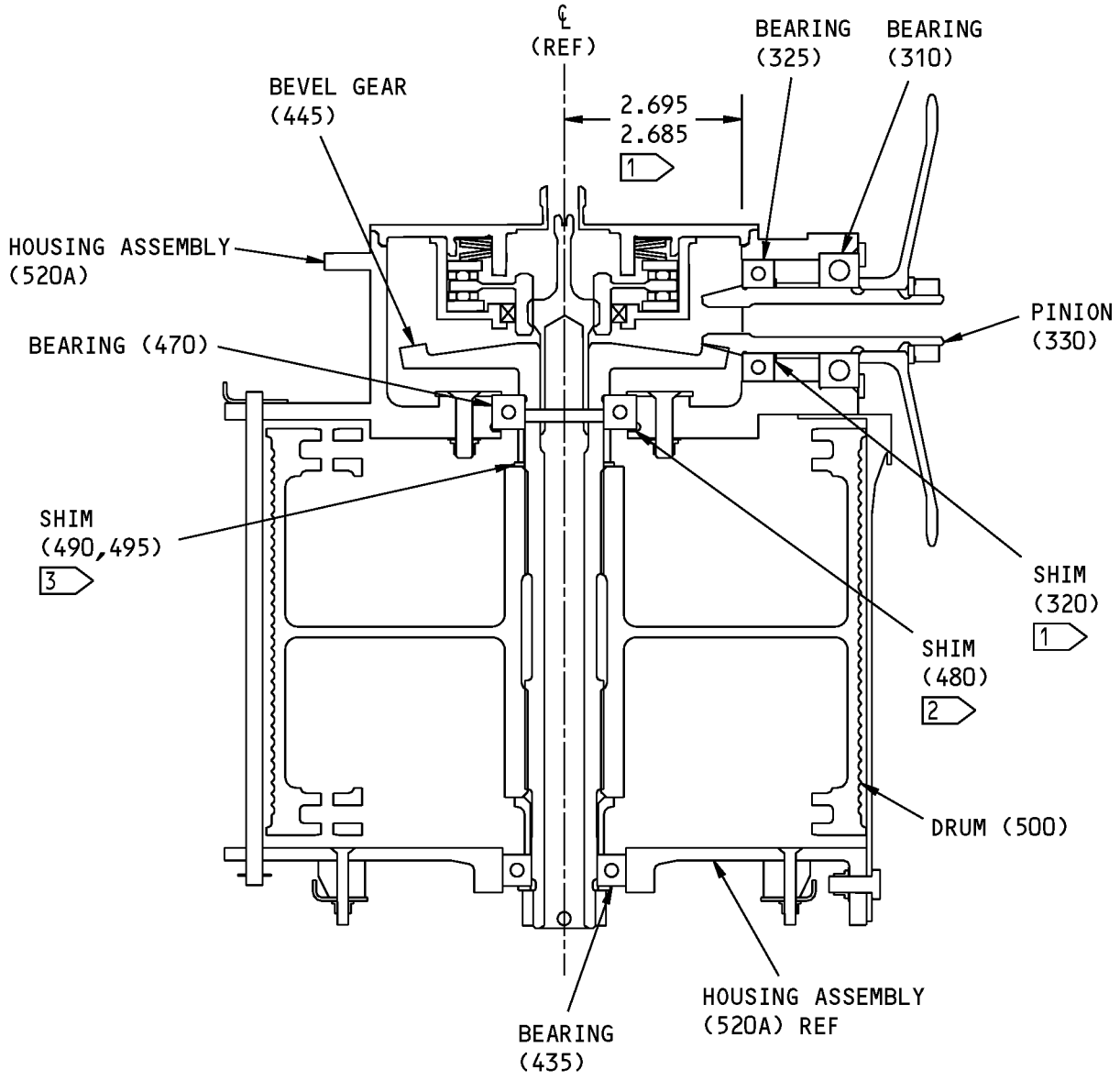
(a) Apply corrosion inhibiting compound, C00913 to the faying surface of the eyebolt (45), then install the eyebolt in the support link assembly (50) with the washers (75A) and nuts (70A). Adjust the position of the eyebolt to get the 10.199-10.259 inch dimension shown in ASSEMBLY, Figure 702, then tighten the nuts (70A).

(b) Remove the unwanted corrosion inhibiting compound, C00913 from the eyebolt (45) and the support link assembly (50).

(c) Apply MIL-C-11796 compound, C00528 on the bolt (5A), then install the support link assembly (50) on the housing (520A) with parts (5A thru 25).

(12) Install the lockwire, G01912as shown in ASSEMBLY, Figure 703. Use the double-twist procedure (SOPM 20-50-02).

NOTE: lockwire, G01048 and lockwire, G02436 are optional to the lockwire, G01912.



1 ADJUST THE SHIM (320) THICKNESS TO GET THE SPECIFIED DIMENSION.

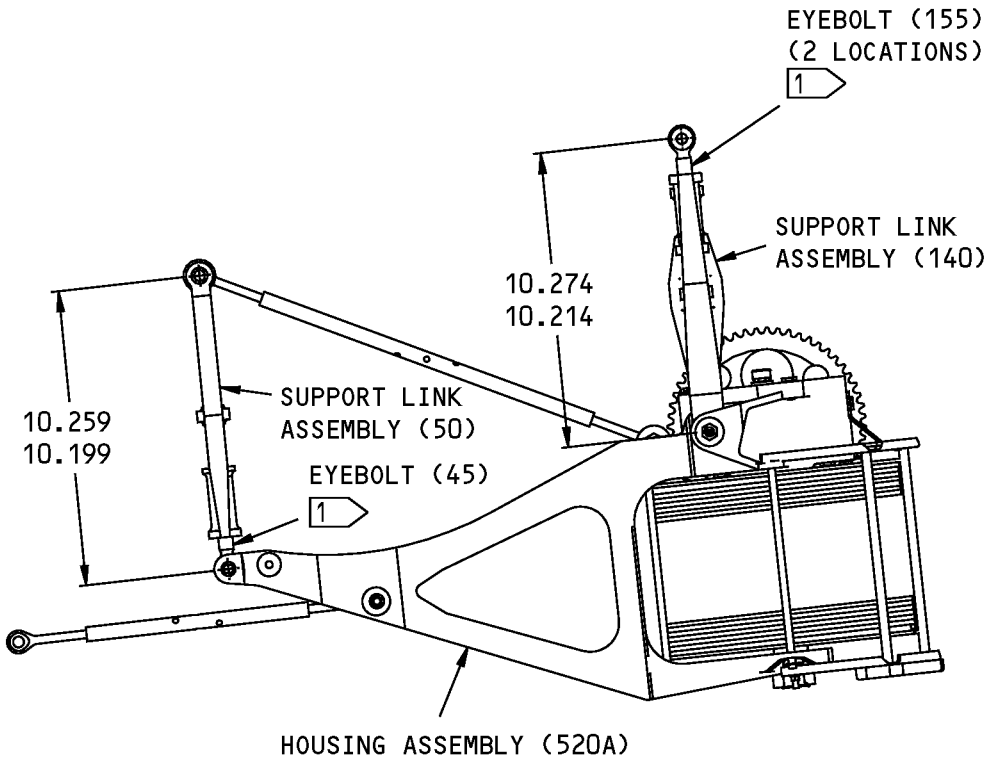
2 ADJUST THE SHIM (480) THICKNESS TO GET THE CORRECT BACKLASH.

3 ADJUST THE SHIM (490,495) THICKNESSES TO GET CLEARANCE BETWEEN THE DRUM AND THE BOLT (335) HEADS.

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Shim Installation Details
Figure 701

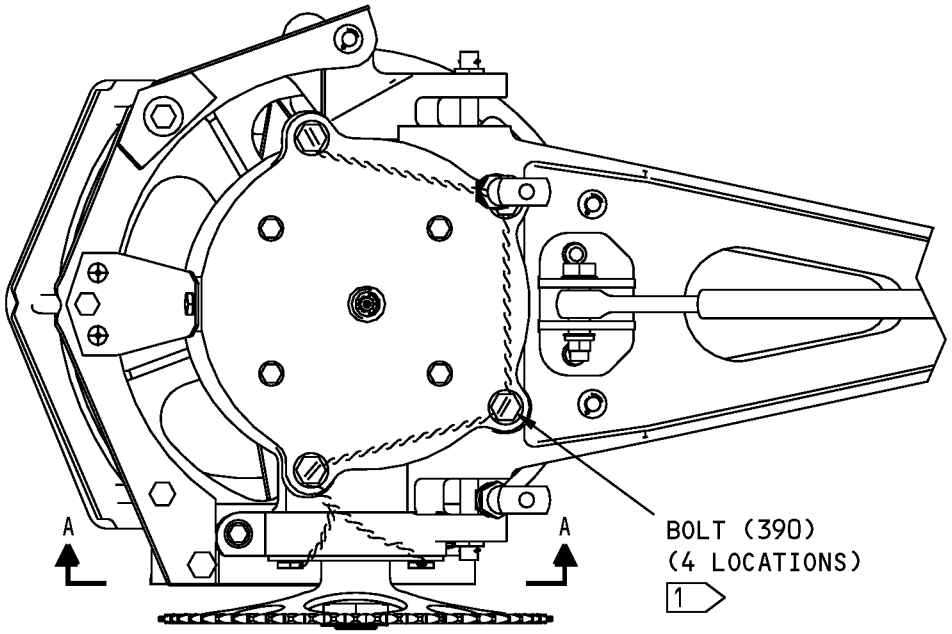


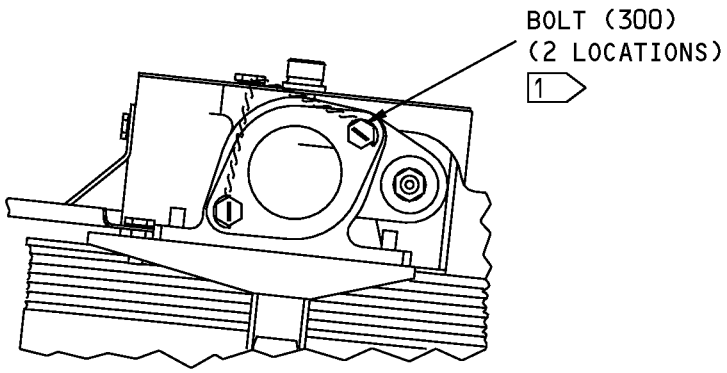
1 INSTALL WITH BMS 3-27 COMPOUND. ADJUST EYEBOLT TO GET THE SPECIFIED DIMENSION.

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

Eyebolt Installation Details
Figure 702





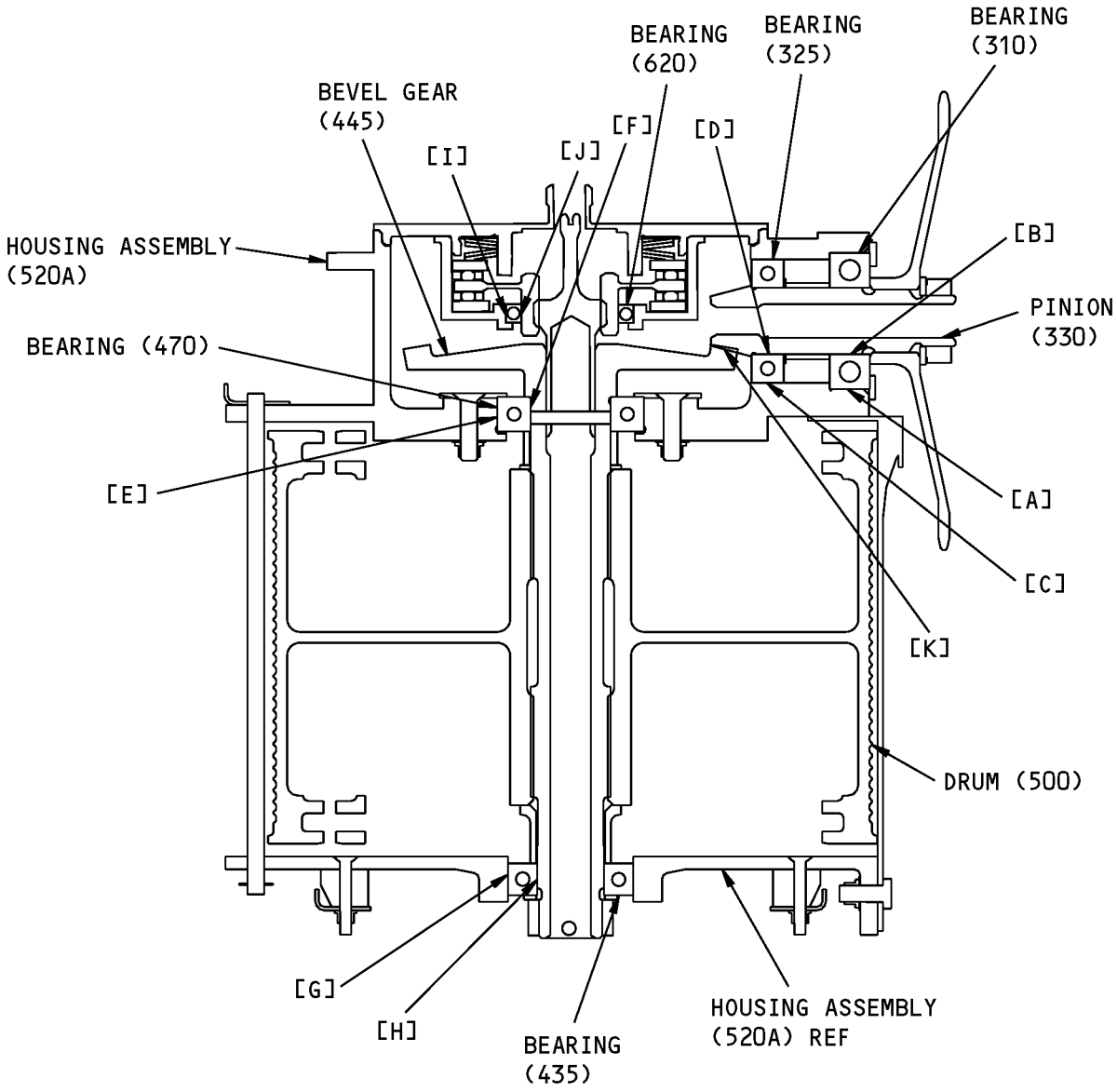
A–A

NOTE: REFER TO SOPM 20-50-02 FOR
LOCKWIRE INSTALLATION DETAILS.

1 INSTALL MS20995NC32 LOCKWIRE.
USE THE DOUBLE TWIST METHOD.

ITEM NUMBERS REFER TO IPL FIG. 1

Lockwire Diagram
Figure 703



Fits and Clearances
Figure 801 (Sheet 1 of 2)

REF LETTER	REF IPL FIG. 1, MATING ITEM NO.	DESIGN DIMENSION* DIMENSION MIN	DESIGN DIMENSION* DIMENSION MAX	DESIGN DIMENSION* ASSEMBLY CLEARANCE [1] MIN	DESIGN DIMENSION* ASSEMBLY CLEARANCE [1] MAX	SERVICE WEAR LIMIT* DIMENSION MIN	SERVICE WEAR LIMIT* DIMENSION MAX	SERVICE WEAR LIMIT* MAXIMUM CLEARANCE
[A]	ID 520A OD 310	2.0472 2.0467	2.0479 2.0472	0.0000	0.0012			
[B]	ID 310 OD 330	0.9839 0.9841	0.9843 0.9847	-0.0008	0.0002			
[C]	ID 520A OD 325	1.8504 1.8499	1.8510 1.8504	0.0000	0.0011			
[D]	ID 325 OD 330	0.9839 0.9841	0.9843 0.9847	-0.0008	0.0002			
[E]	ID 520A OD 470	2.1654 2.1649	2.1661 2.1654	0.0000	0.0012			
[F]	ID 470 OD 445	1.1807 1.1808	1.1811 1.1814	-0.0007	0.0003			
[G]	ID 520A OD 435	1.8504 1.8499	1.8510 1.8504	0.0000	0.0011			
[H]	ID 435 OD 445	0.9839 0.9833	0.9843 0.9839	0.0000	0.0010			
[I]	ID 630 OD 620	1.7500 1.7495	1.7510 1.7500	0.0000	0.0015			
[J]	ID 620 OD 610	1.3120 1.3110	1.3125 1.3155	0.0005	0.0015			
[K]	330 445			0.010 [2]	0.030 [2]			

* ALL DIMENSIONS ARE IN INCHES

[1] NEGATIVE VALUES ARE FOR INTERFEREVCE FIT

[2] BACKLASH MEASURED AT 6.688 INCH PITCH DIAMETER OF SPROCKET (295)

Fits and Clearances
Figure 801 (Sheet 2 of 2)

REF IPL		NAME	TORQUE*	
FIG. NO.	ITEM NO.		POUND-INCHES	POUND-FEET
1	137	Nut	10 MAX	
1	285	Nut	500-700	
1	425	Nut	500-700	

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

Torque Table
Figure 802

SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

1. General

A. This section lists the special tools, fixtures, and equipment necessary for maintenance.

NOTE: Equivalent substitutes may be used.

Special Tools

Reference	Description	Part Number	Supplier
SPL-4426	Test Equipment, Autothrottle, Gearbox, Brake (50Hz)	J22004-67	81205
SPL-4427	Test Equipment, Autothrottle, Gearbox, Brake (60Hz)	J22004-68	81205
SPL-8838	Spline Shaft A (J22004-13 included in J22004-67 and -J22004-68)		

Tool Supplier Information

CAGE Code	Supplier Name	Supplier Address
81205	THE BOEING COMPANY	17930 INTERNATIONAL BLVD. SOUTH SEATAC, WA 98188-4321 Telephone: 206-662-6650 Facsimile: 206-662-7145

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
06725	AIR INDUSTRIES CORPORATION 12570 KNOTT STREET GARDEN GROVE, CALIFORNIA 92641-3932 FORMERLY AIR INDUSTRIES OF CALIF IN GARDENA, CALIF.
08524	Replaced: [V08524] DEUTSCH FASTENER CORP SEE CODE V97928 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 Referenced in FORMERLY line below [17419] DEUTSCH COMPANY THE WELLS FARGO BANK BLDG 2444 WILSHIRE BLVD #600 SANTA MONICA, CALIFORNIA 90403 FORMERLY DEUTSCH FASTENER CORP V08524 FORMERLY IN LOS ANGELES
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
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

Code	Name
21760	SCHATZ BEARING CORP 10 FAIRVIEW AVENUE PO BOX 1191 POUGHKEEPSIE, NEW YORK 12601-1312 FORMERLY FEDERAL BRG CO AND SCHATZ MFG CO V53268 FORMERLY SCHATZ MFG CO
29337	HOOVER GROUP INC BALL AND ROLLER DIV 2220 PENDLEY ROAD PO BOX 899 CUMMING, GEORGIA 30130-8671 FORMERLY IN ERWIN, INDIANA, HOOVER UNIVERSAL CO
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
62554	SIMMONDS MECAERO FASTENERS INC 1734 SEQUOIA AVENUE ORANGE, CALIFORNIA 92668
73197	HI-SHEAR TECHNOLOGY CORP 2600 SKYPARK DRIVE TORRANCE, CALIFORNIA 90509

Code	Name
78118	SPLIT BALL BEARING DIV OF MPB CORP HIGHWAY 4 LEBANON, NEW HAMPSHIRE 03766-7301
82402	ROLLS-ROYCE GEAR SYSTEMS INC 6125 SILVER CREEK DR PO BOX 680910 PARK CITY, UTAH 84068 FORMERLY LUCAS WESTERN; FORMERLY GEAR SYSTEMS
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

NUMERICAL INDEX

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
1205LLT1C1-01		1	310	1
205NPPFS428		1	310	1
205TT		1	310	1
251A4115-3		1	1B	RF
251A4115-4		1	520A	1
251A4115-5		1	1C	RF
251A4116-1		1	140	1
251A4116-2		1	150	1
251A4117-1		1	560	1
251A4118-1		1	615	1
251A4118-2		1	630	1
251A4119-1		1	610	1
251A4120-1		1	535	1
251A4121-1		1	580	1
251A4124-1		1	415A	1
251A4151-1		1	83	1
253T7530-1		1	585	AR
253T7530-2		1	585A	AR
253T7530-3		1	585B	AR
253T7530-4		1	585C	AR
253T7536-2		1	595	1
254N1161-1		1	590	4
254N1166-1		1	605	1
30-1446		1	440	1
30-1446-1		1	440A	1
30-1447		1	485	1
30-1447-1		1	485A	1
30-1517		1	315	1
30-1517-1		1	315A	1
30-1587		1	475	1
5-97275-5		1	50	1
5-97275-6		1	65	1
50-3361-53		1	235	1
6-84532		1	90A	2

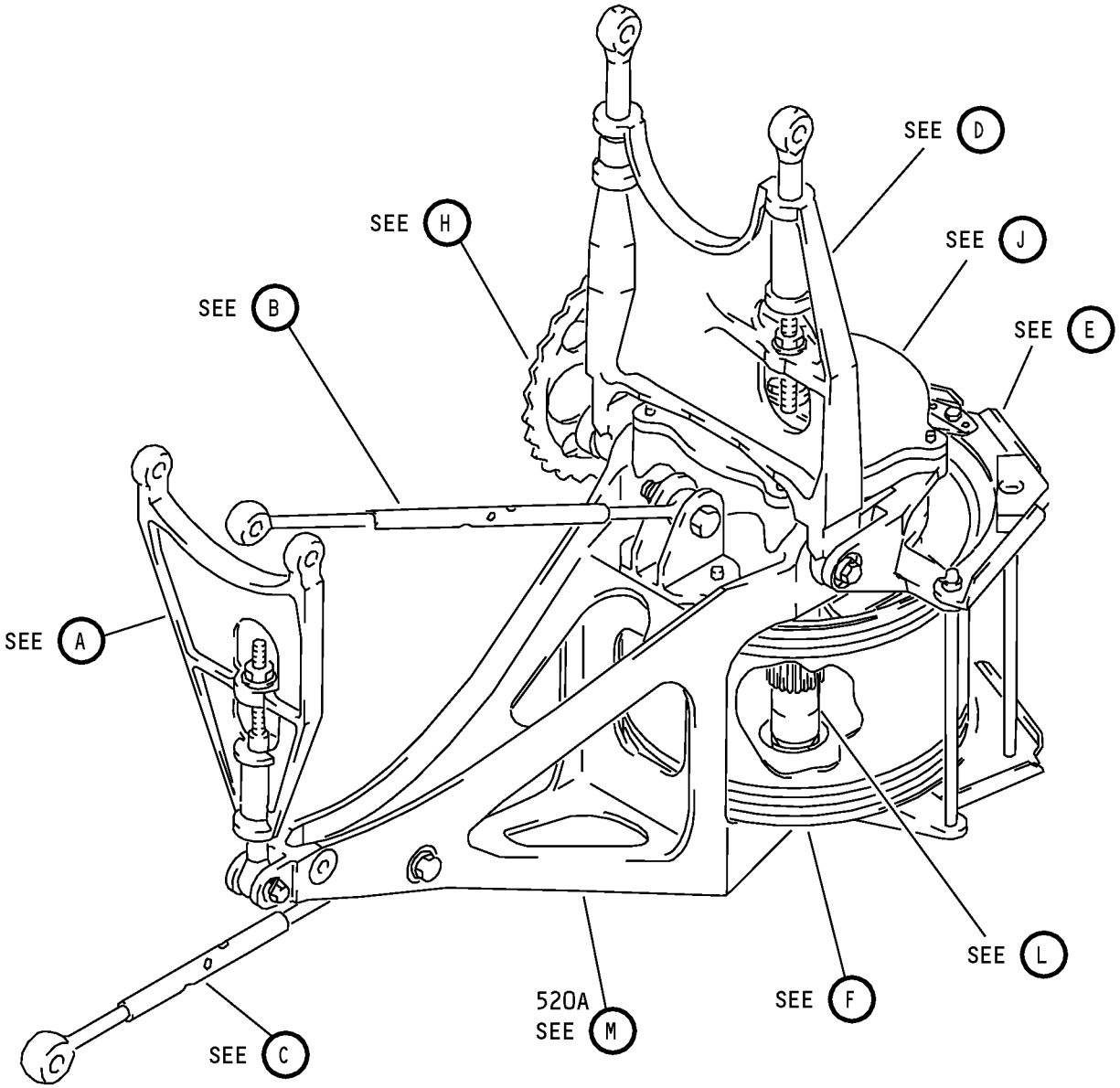
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
6-84532-1		1	80A	2
6-84540		1	85A	1
6-84580		1	45	1
		1	155	2
6-84589		1	130	2
6-84597-2		1	370	1
60-1450		1	465	1
60-1450-1		1	305	1
6005TT		1	325	1
		1	435	1
6006TT		1	470	1
65-20686-12		1	540A	1
65-20686-13		1	555A	1
65-20790-4		1	500	1
66-14588-1		1	172	2
66-14594-1		1	355	1
66-14597-1		1	365	1
69-15325-1		1	275	1
69-15325-4		1	195	1
69-15325-5		1	260	1
69-15325-6		1	260A	1
69-15325-7		1	275A	1
69-52827-1		1	200	1
69-52828-1		1	185	1
69-55079-1		1	270	1
69-70417-1		1	330	1
69-70418-1		1	445	1
69-70419-1		1	295	1
69-70420-1		1	215	1
9-61297-10		1	480A	1
9-61297-11		1	495	1
9-61297-20		1	480	1
9-61297-21		1	320	1
9-61297-4		1	490	1
90650		1	600	2

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
9105LLT1C1-01		1	325	1
		1	435	1
9105NPPFS428		1	325	1
		1	435	1
9106LLT1C1-01		1	470	1
9106NPPFS428		1	470	1
99205		1	310	1
993L05		1	325	1
		1	435	1
993L06		1	470	1
BACB10AZ25PP		1	310	1
BACB10BA25PP		1	325	1
		1	435	1
BACB10BA30PP		1	470	1
BACB10GP21		1	620	1
BACB30LU3-13		1	220	2
BACB30NF4-21		1	95	1
BACB30NF4-4		1	230	1
		1	335	3
BACB30NF4H18		1	5A	1
BACB30NM3HK3		1	565	1
BACB30NM3K3		1	570	3
BACB30NX8K7		1	525	2
BACB30PW6-16		1	30	1
BACC30X		1	530	2
BACN10JD105		1	137	2
BACN10JD112		1	285	1
BACN10YR3CD		1	180	3
		1	225	2
BACN10YR4CD		1	25	1
		1	105	1
		1	240	1
		1	350	3
		1	460	2
BACN10YR5CD		1	40	1

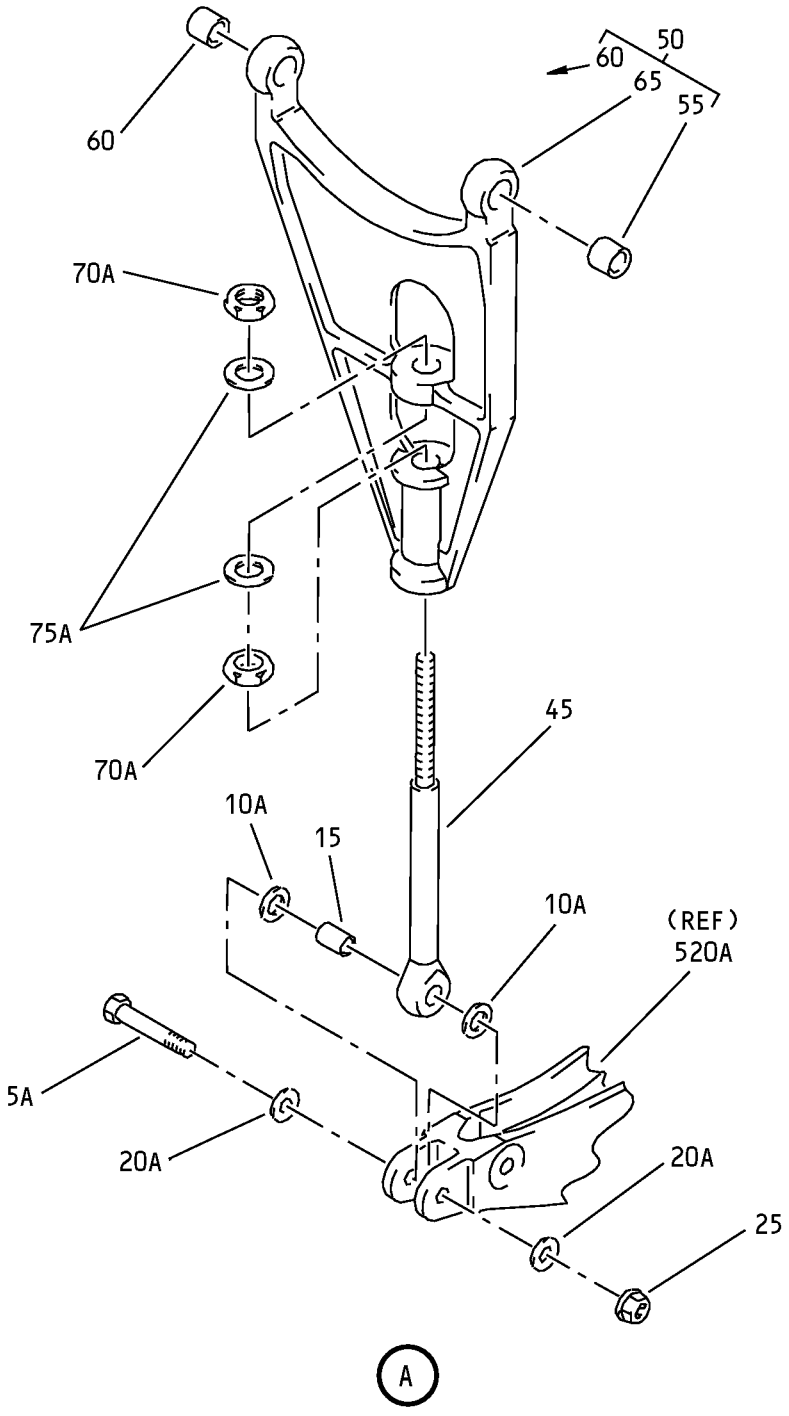
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
BACP18BC02C04P		1	125	2
		1	245A	2
		1	515	4
BACP18BC04C10P		1	280A	1
BACP18BC04C12P		1	420	1
BACP18C4-725		1	505	2
BACP18C4-740		1	255A	1
BACR15BB5AD3		1	210	2
BACS40R010B011F		1	345	1
BACW10P283AZ		1	430	1
C105RRP0ZZ		1	325	1
		1	435	1
C105RRP1P28LY196		1	325	1
		1	435	1
C106RRP0ZZ		1	470	1
C106RRPP1P28LY196		1	470	1
H52732-3CD		1	180	3
		1	225	2
H52732-4CD		1	25	1
		1	105	1
		1	240	1
		1	350	3
		1	460	2
H52732-5CD		1	40	1
HL12VAZ8-7		1	525	2
		1	525	2
		1	525	2
		1	525	2
		1	525	2
L802-8K7		1	525	2
LL105KS		1	325	1
		1	435	1
LL106KS		1	470	1
LL106KSG20		1	470	1
MS20426A5-12		1	190	4

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
MS20426D5		1	360	2
MS20470A		1	265	2
MS21025-15		1	425	1
MS21208F4-10		1	545	6
MS21209F1-10		1	550	1
MS21209F1-15P		1	625	4
NAS1149D0316H		1	177	3
NAS1149D0316J		1	575	4
NAS1149D0416H		1	100	2
		1	250	2
		1	340	3
		1	395	4
		1	455	2
		1	510	4
NAS1149D0463H		1	20A	2
NAS1149D0516H		1	135	2
NAS1149D0532J		1	35A	1
NAS1149D0632J		1	36	1
NAS1149D0663H		1	10A	2
		1	75A	2
		1	160A	4
NAS1149D1290H		1	290	1
NAS43DD3-472FC		1	175	3
NAS509-6		1	70A	2
		1	165A	4
NAS514P428-16		1	450	2
NAS6603-1		1	205	1
NAS6603-119		1	170	3
NAS6603H3		1	565A	1
NAS6604H2		1	300A	2
		1	390A	4
NAS6604H3		1	300	2
		1	390	4
NAS75-4-020		1	15	1
NAS75-4-024		1	102	1

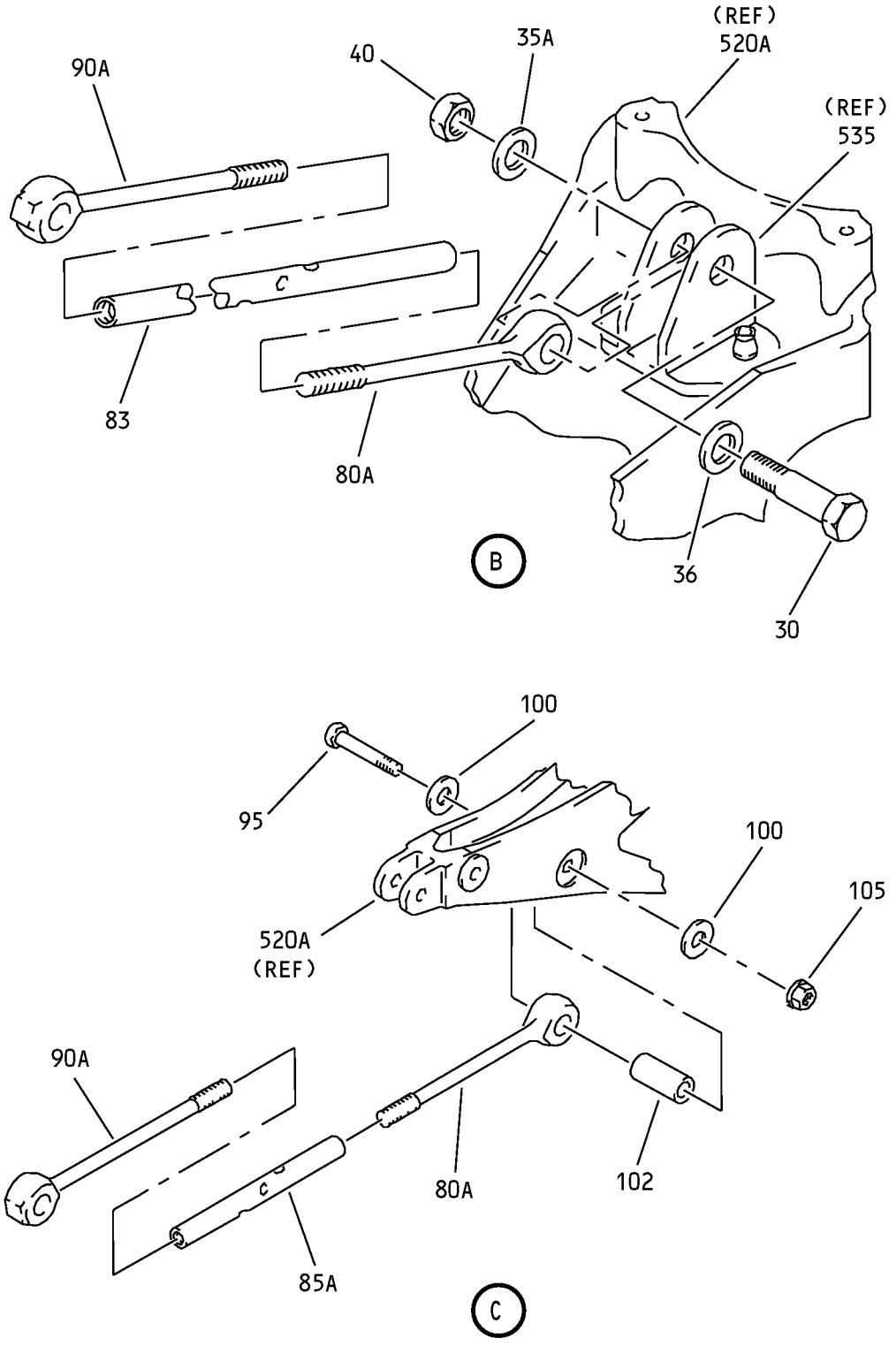
PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
NAS75-5-016		1	145A	2
NAS75-7-012		1	60	1
NAS75-7-016		1	55	1
PKTLL105P1		1	325	1
		1	435	1
PKTLL106P1		1	470	1
PLH53CD		1	180	3
		1	225	2
PLH54CD		1	25	1
		1	105	1
		1	240	1
		1	350	3
		1	460	2
PLH55CD		1	40	1



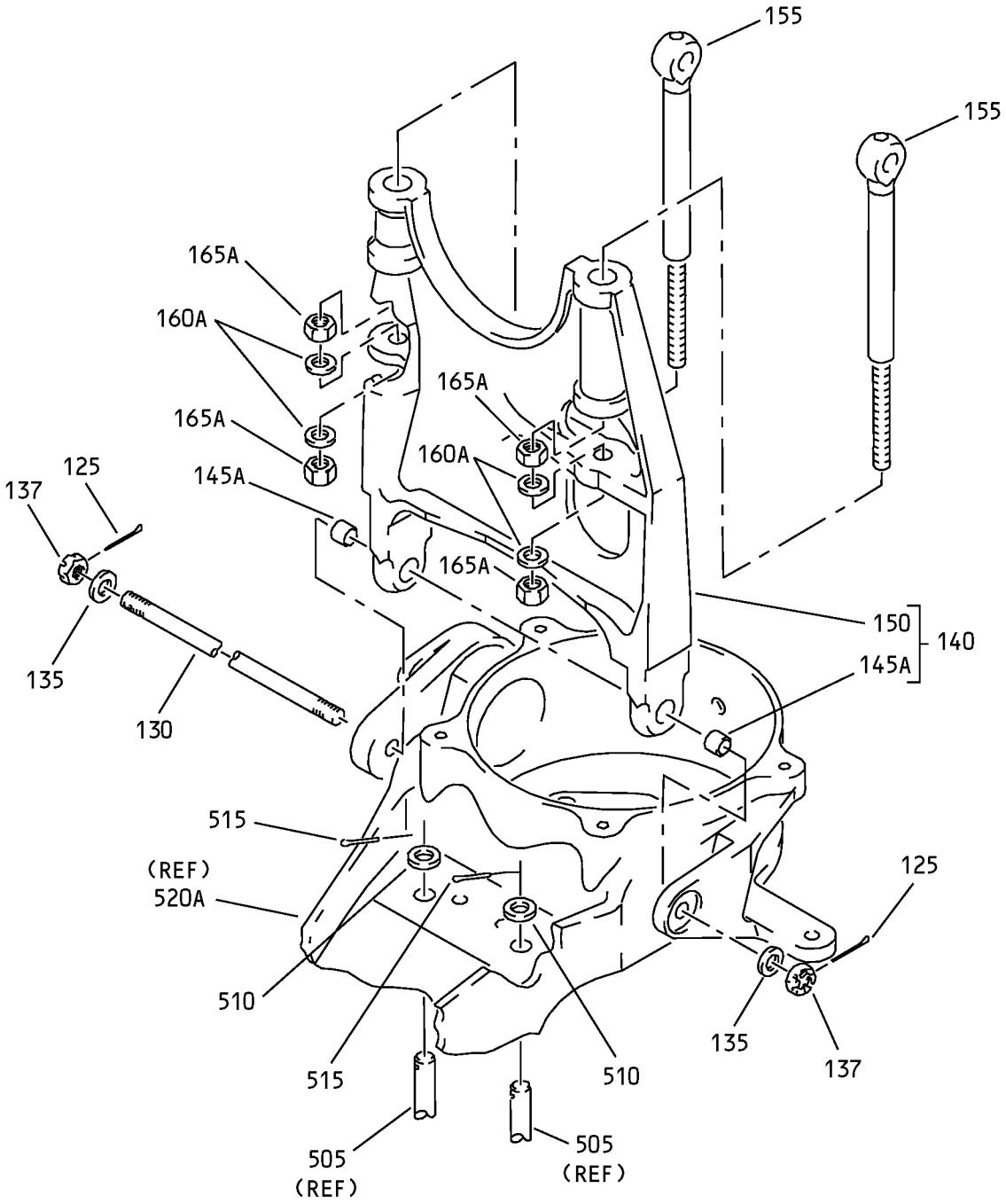
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 1 of 14)



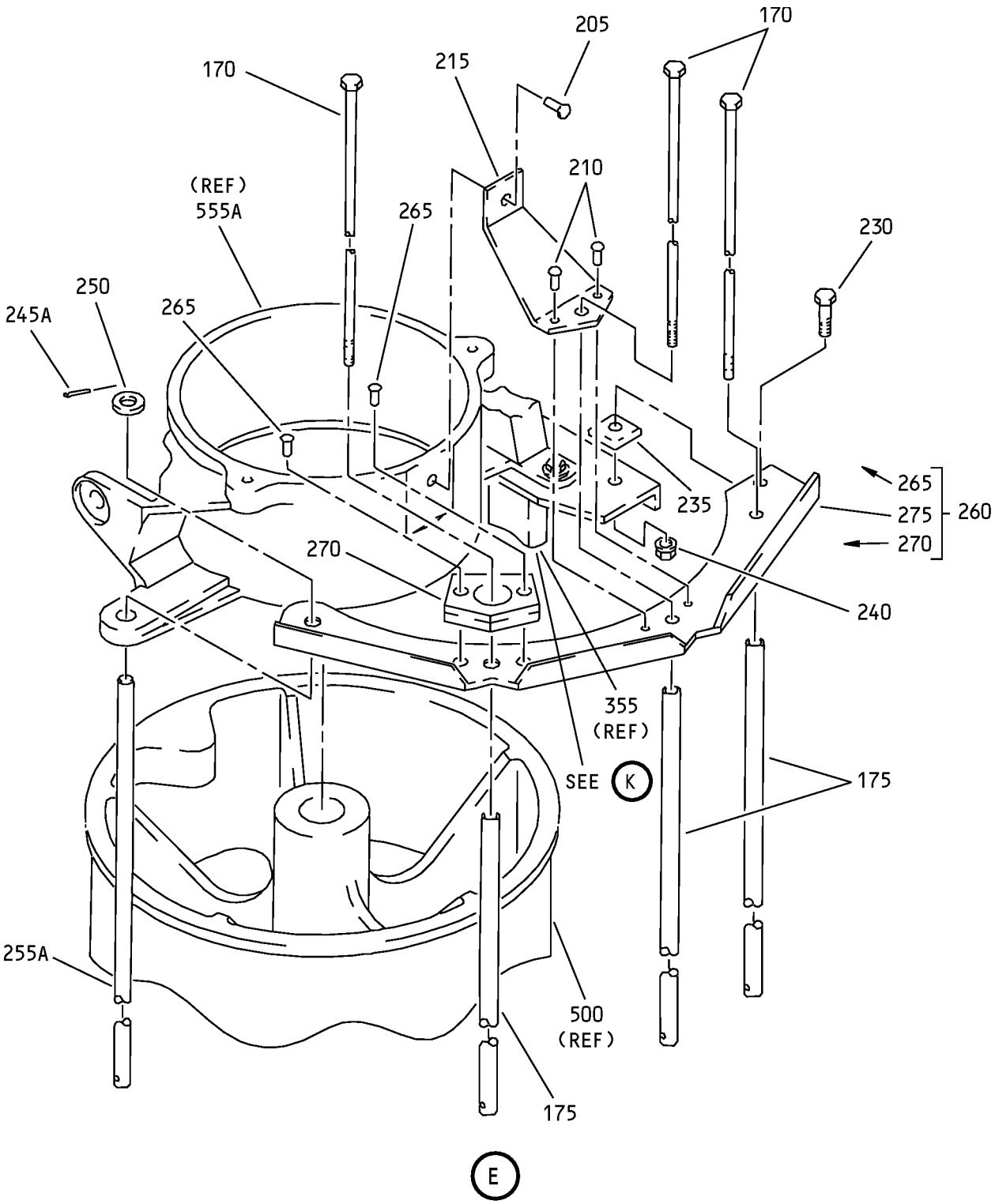
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 2 of 14)



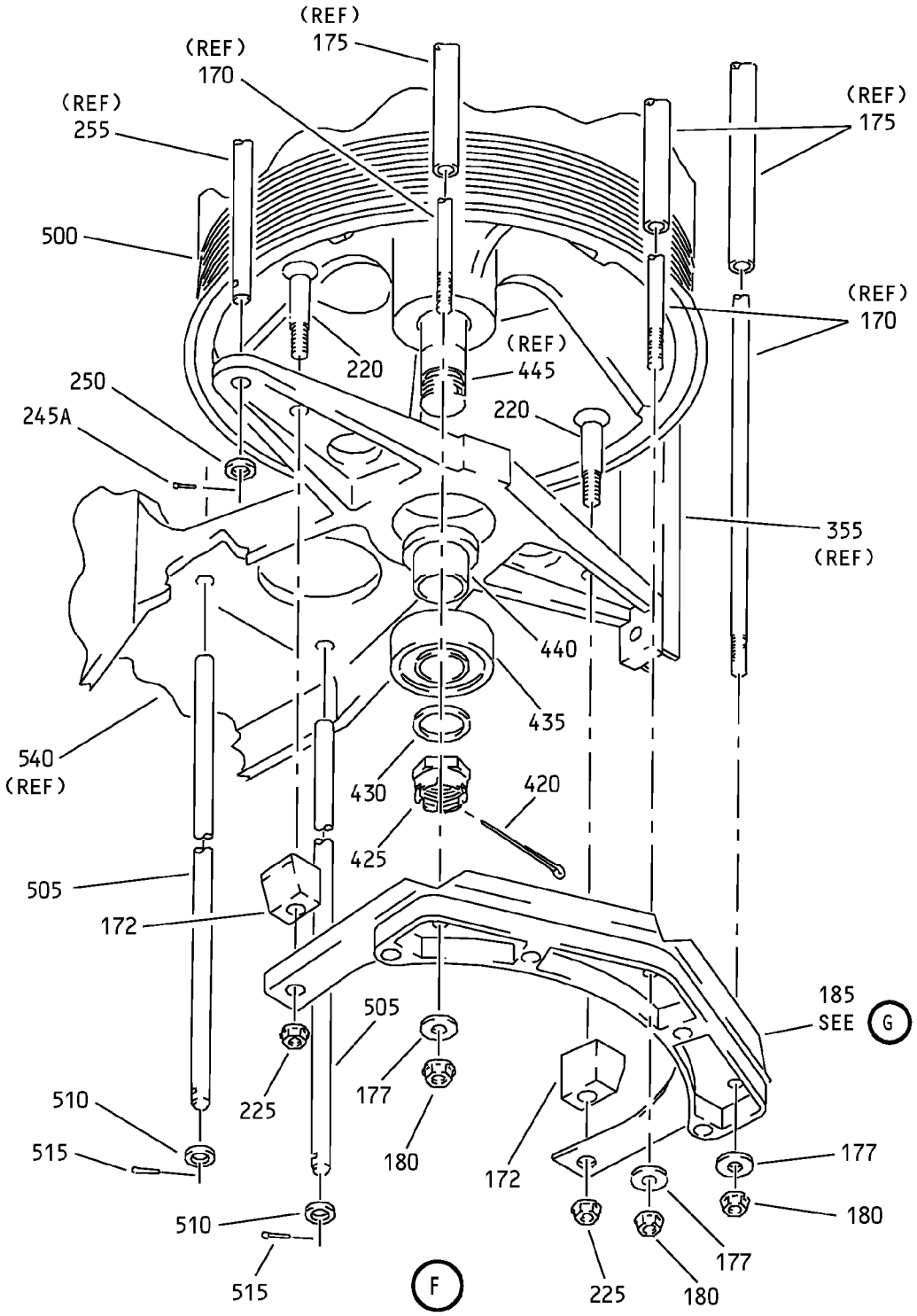
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 3 of 14)



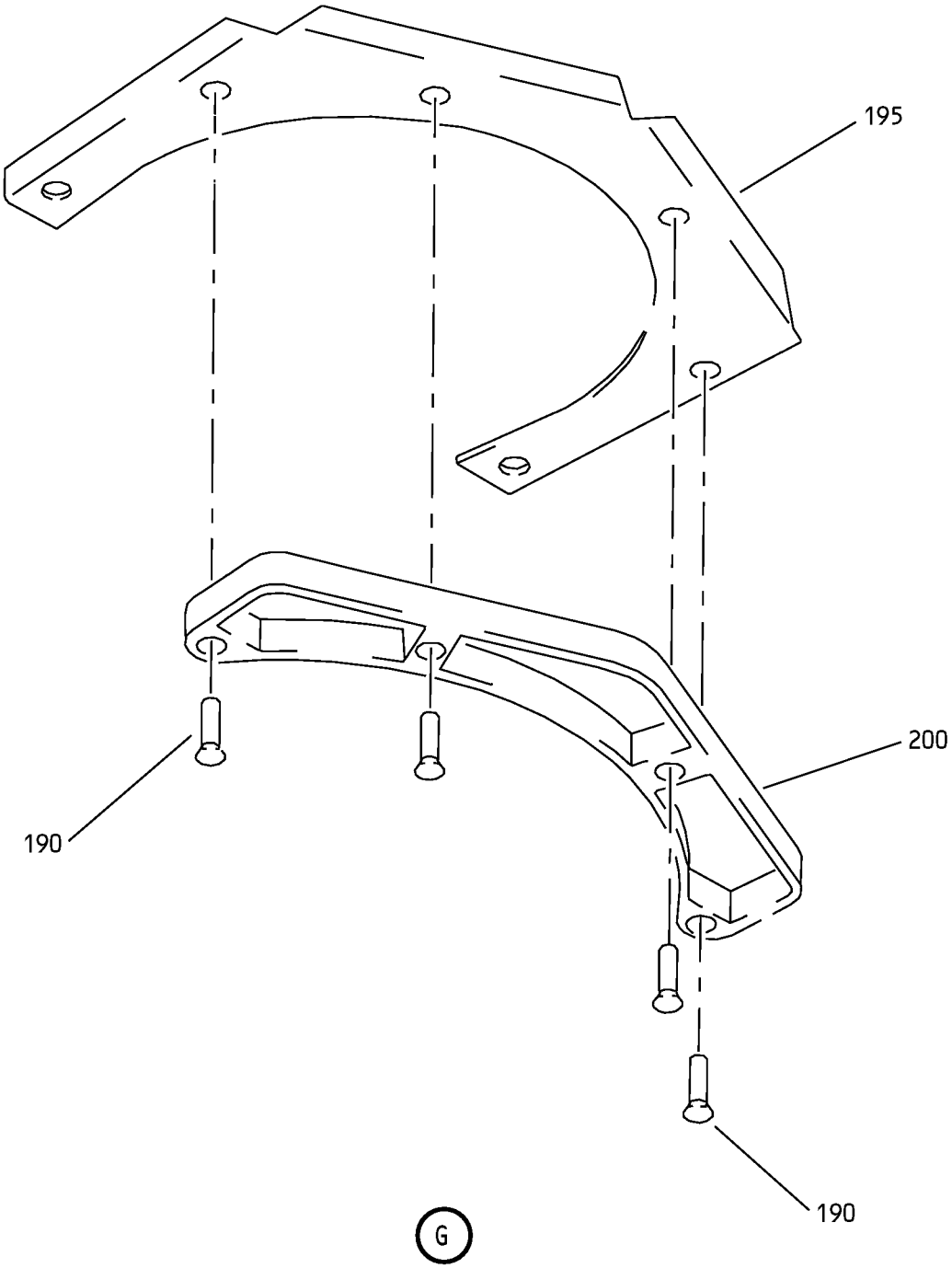
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 4 of 14)



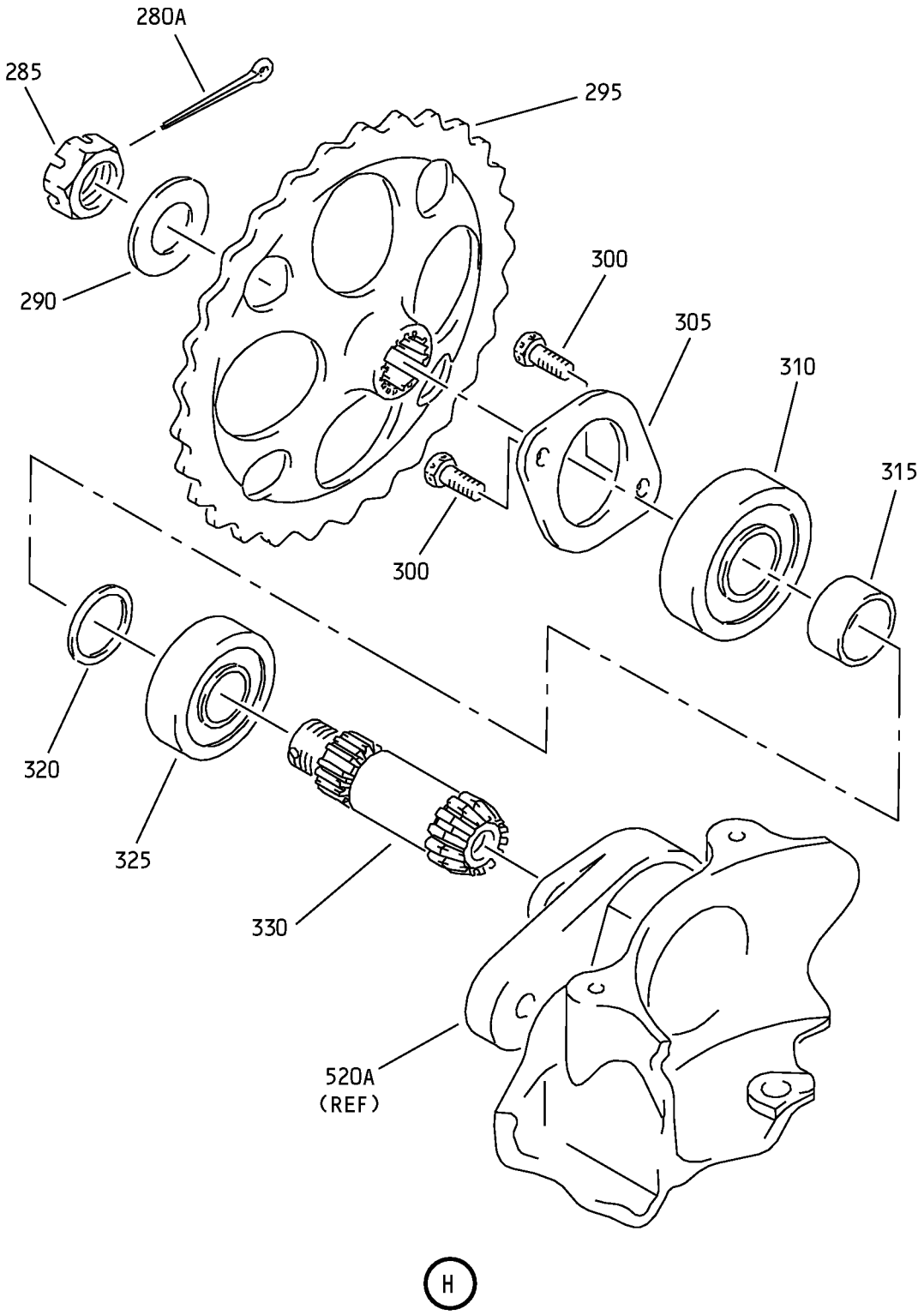
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 5 of 14)



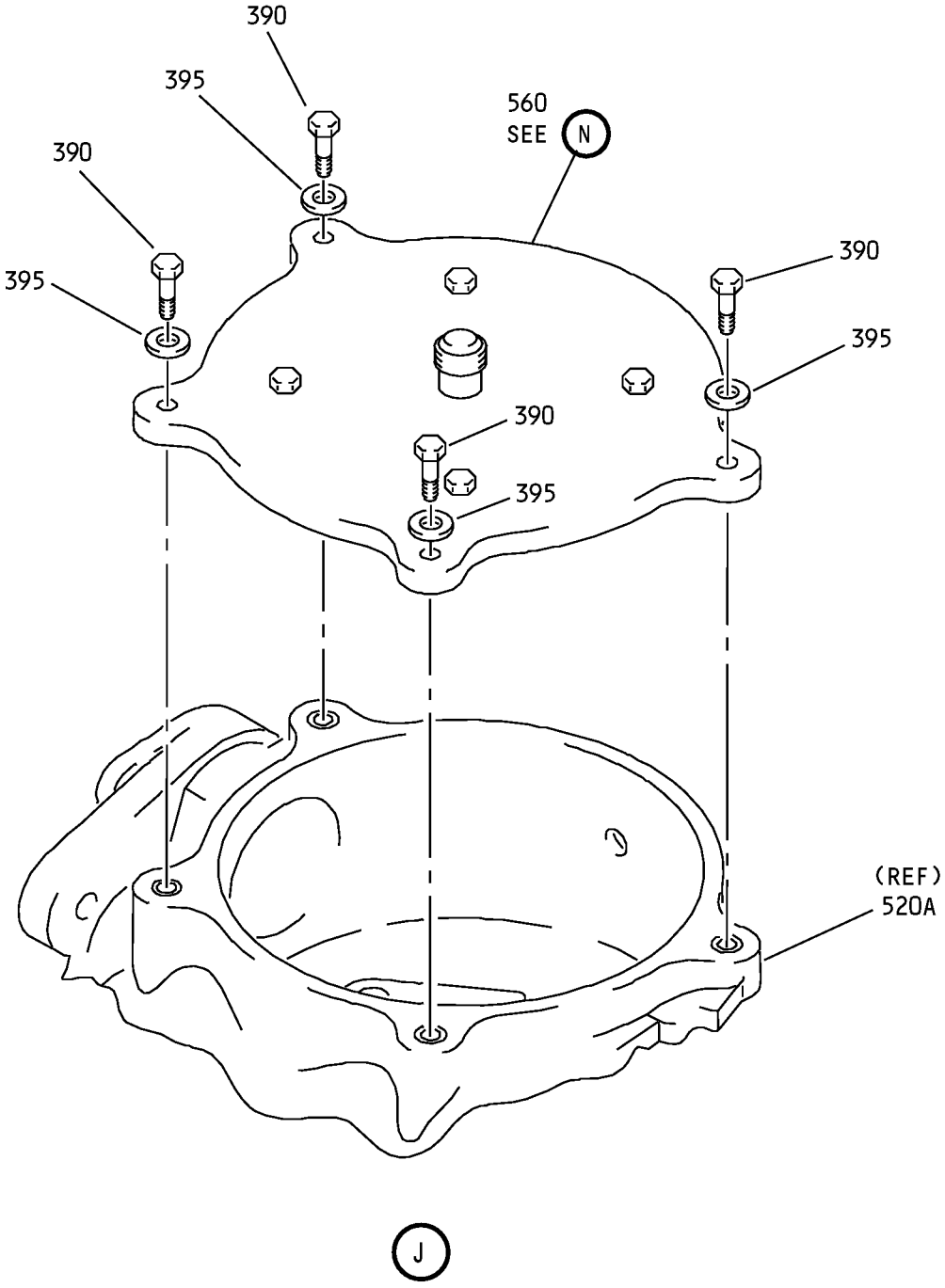
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 6 of 14)



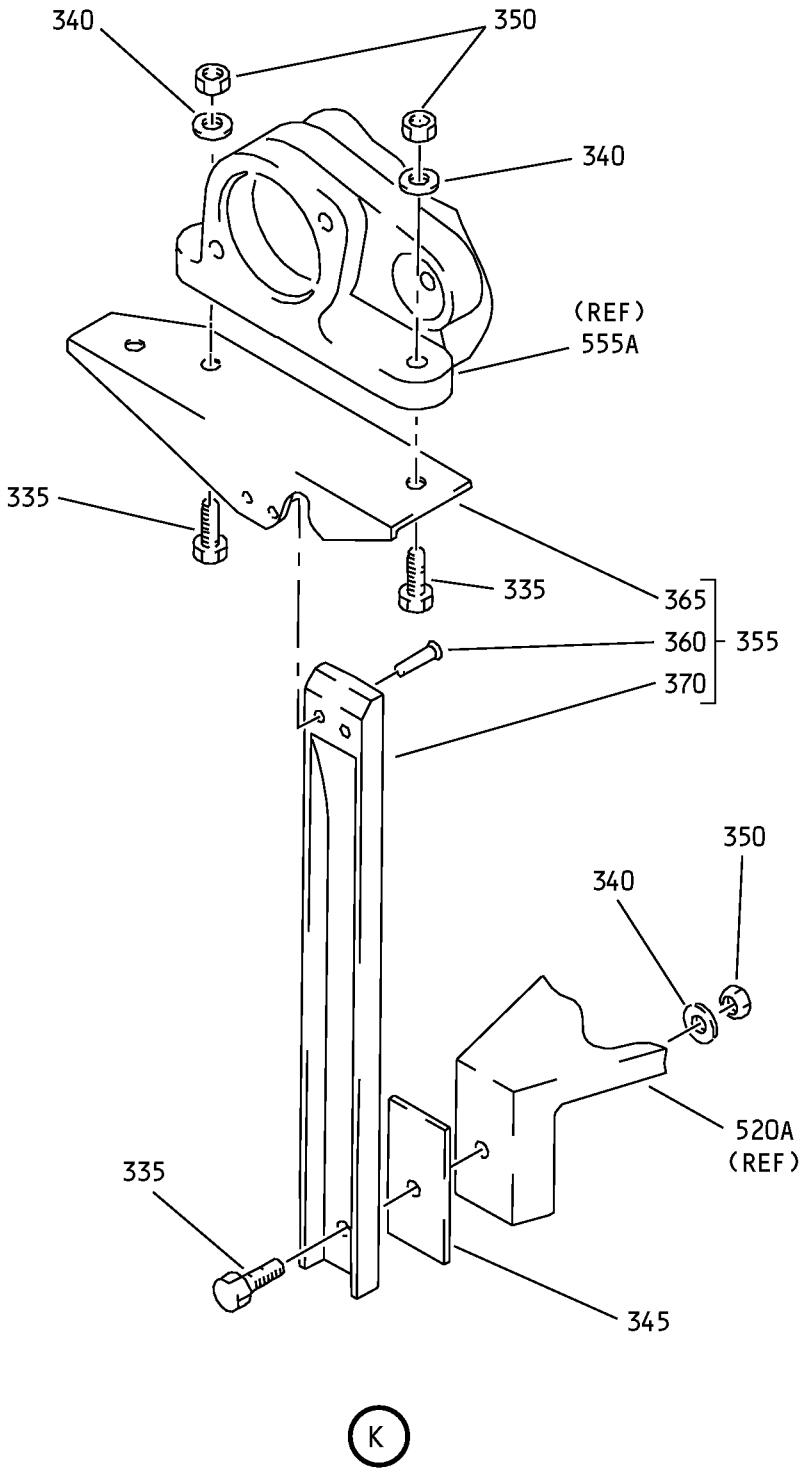
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 7 of 14)



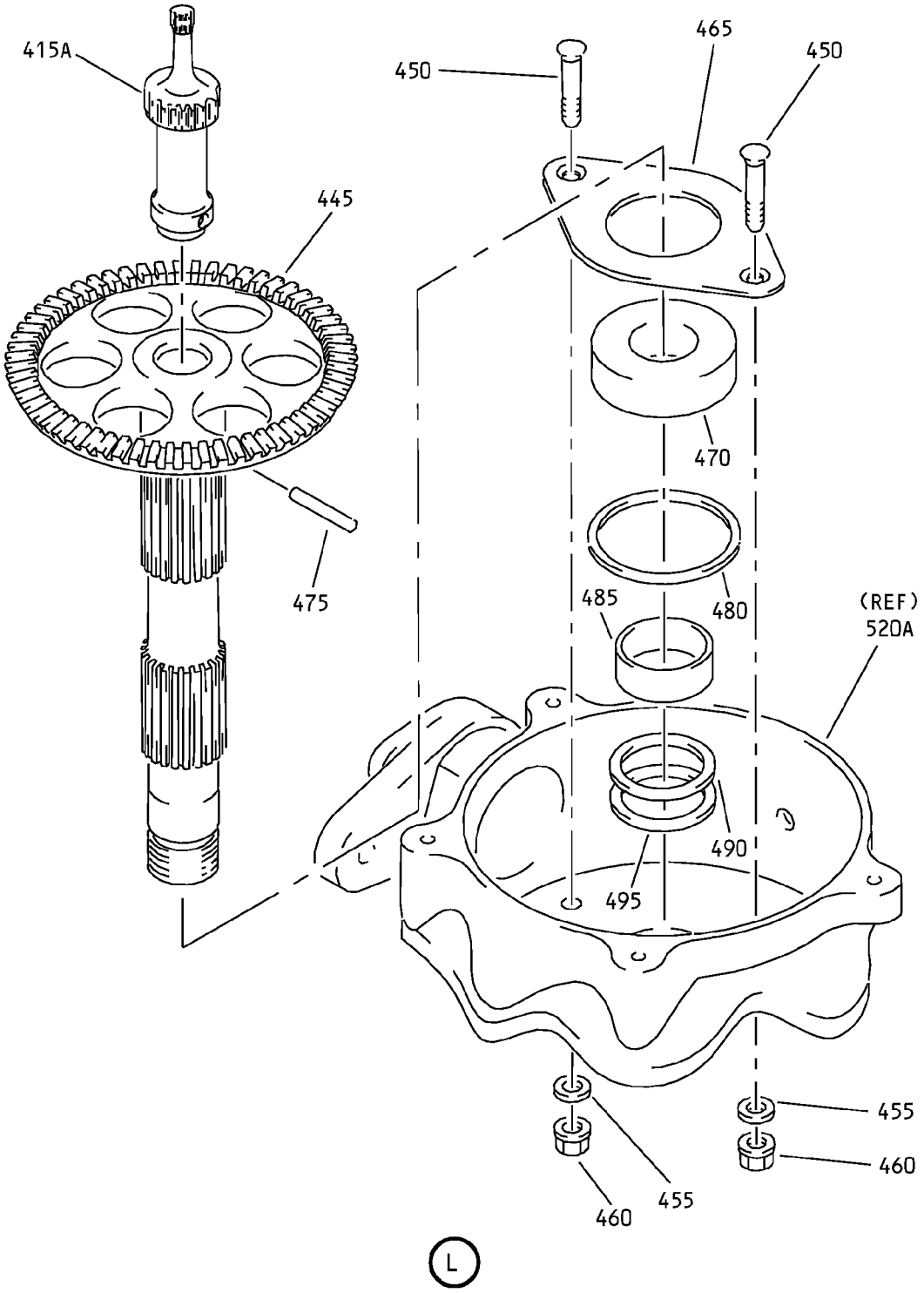
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 8 of 14)



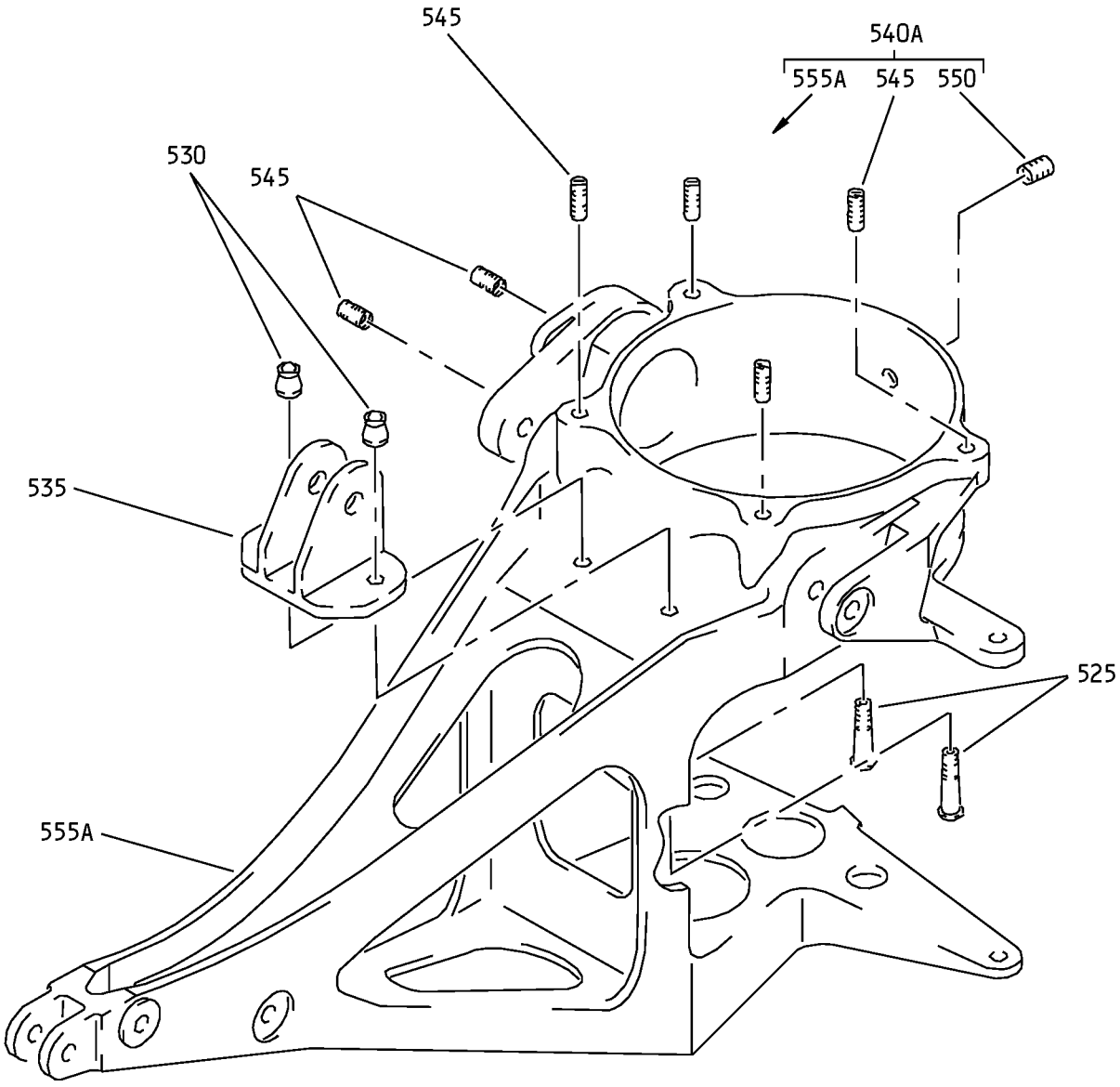
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 9 of 14)



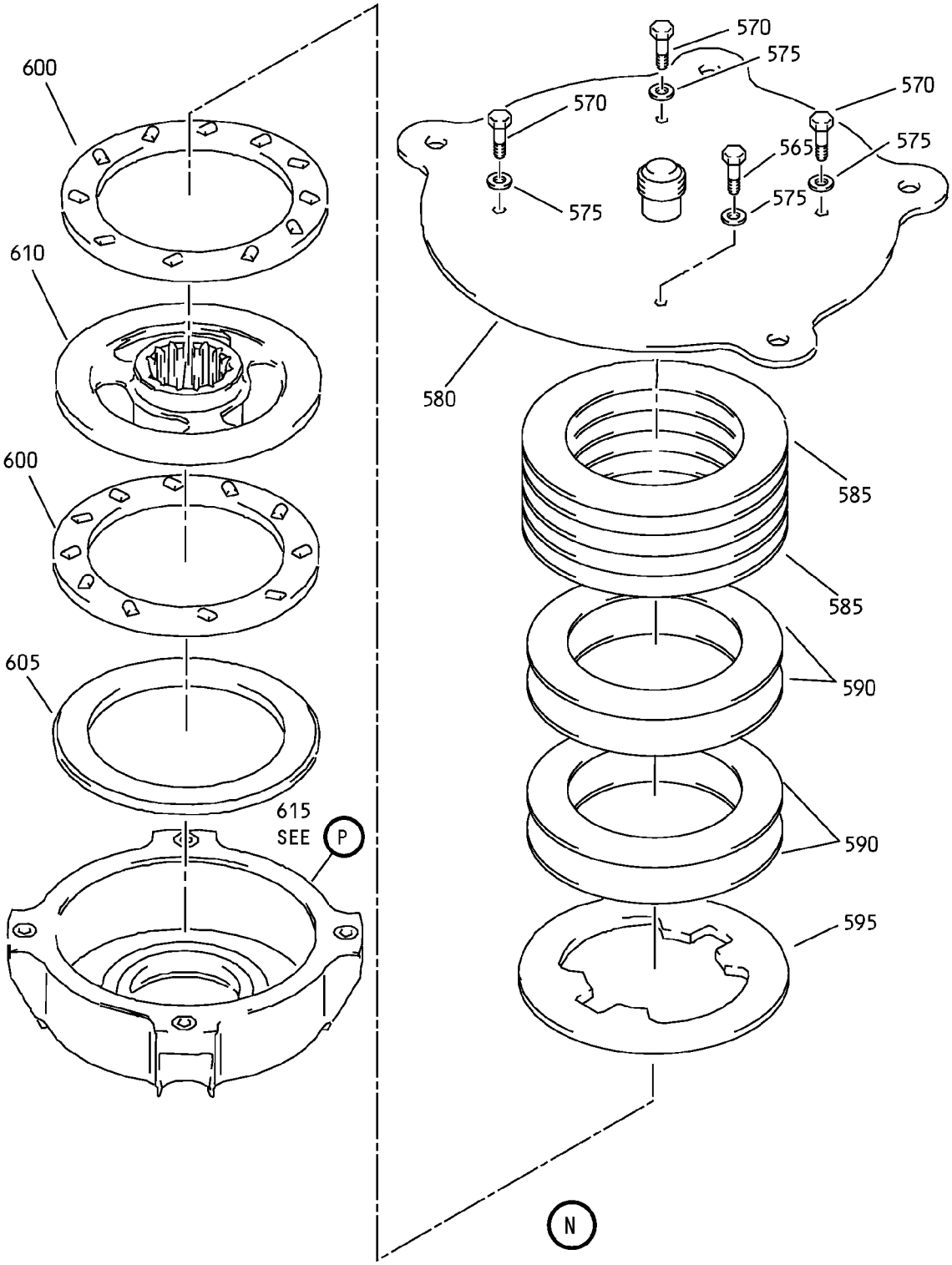
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 10 of 14)



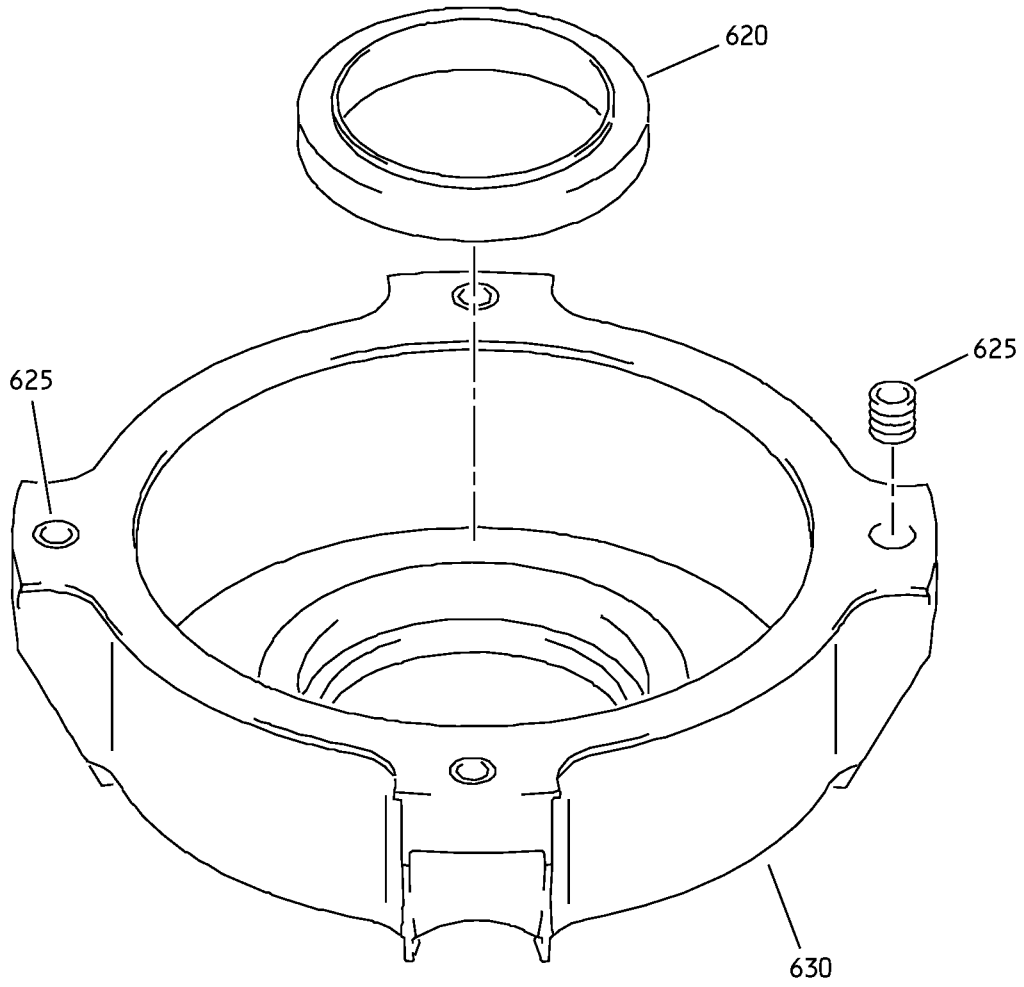
Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 11 of 14)



Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 12 of 14)



Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 13 of 14)



Stabilizer Trim Mechanism Assembly
IPL Figure 1 (Sheet 14 of 14)

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–1A	251A4115-1		DELETED		
–1B	251A4115-3		MECHANISM ASSY-STAB. TRIM	A	RF
–1C	251A4115-5		MECHANISM ASSY-STAB. TRIM	B	RF
5	BACB30NF4-18		DELETED		
5A	BACB30NF4H18		. BOLT		1
10	NAS1149D0616H		DELETED		
10A	NAS1149D0663H		. WASHER		2
15	NAS75-4-020		. BUSHING		1
20	NAS1149D0416H		DELETED		
20A	NAS1149D0463H		. WASHER		2
25	H52732-4CD		. NUT (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))		1
30	BACB30PW6-16		. BOLT		1
35	NAS1149D053J		DELETED		
35A	NAS1149D0532J		. WASHER		1
36	NAS1149D0632J		. WASHER		1
40	H52732-5CD		. NUT (V15653) (SPEC BACN10YR5CD) (OPT PLH55CD (V62554))		1
45	6-84580		. EYEBOLT		1
50	5-97275-5		. LINK ASSY-SUPT		1
55	NAS75-7-016		. . BUSHING		1
60	NAS75-7-012		. . BUSHING		1
65	5-97275-6		. . LINK		1
70	NAS1423-6		DELETED		
70A	NAS509-6		. NUT		2
75	NAS1149D0616H		DELETED		
75A	NAS1149D0663H		. WASHER		2
80	251A4152-2		DELETED		
80A	6-84532-1		. EYEBOLT		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–					
83	251A4151-1		. TURNBUCKLE		1
85A	6-84540		. TURNBUCKLE		1
90	251A4152-1		DELETED		
90A	6-84532		. EYEBOLT		2
95	BACB30NF4-21		. BOLT		1
100	NAS1149D0416H		. WASHER		2
102	NAS75-4-024		. BUSHING		1
105	H52732-4CD		. NUT (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))		1
110	251A4152-1		DELETED		
115	251A4151-2		DELETED		
120	251A4152-2		DELETED		
125	BACP18BC02C04P		. PIN-COTTER		2
130	6-84589		. STUD		2
135	NAS1149D0516H		. WASHER		2
137	BACN10JD105		. NUT		2
140	251A4116-1		. LINK ASSY-SUPT		1
145	NAS75-7-016		DELETED		
145A	NAS75-5-016		. . BUSHING		2
150	251A4116-2		. . LINK		1
155	6-84580		. EYEBOLT		2
160	NAS1149D0616H		DELETED		
160A	NAS1149D0663H		. WASHER		4
165	NAS1423-6		DELETED		
165A	NAS509-6		. NUT		4
170	NAS6603-119		. BOLT		3
172	66-14588-1		. SPACER		2
175	NAS43DD3-472FC		. SPACER		3
177	NAS1149D0316H		. WASHER		3

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
180	H52732-3CD		. NUT (V15653) (SPEC BACN10YR3CD) (OPT PLH53CD (V62554))		3
185	69-52828-1		. GUARD ASSY		1
190	MS20426A5-12		. . RIVET		4
195	69-15325-4		. . BRACKET		1
200	69-52827-1		. . GUARD		1
205	NAS6603-1		. BOLT		1
210	BACR15BB5AD3		. RIVET		2
215	69-70420-1		. BRACKET		1
220	BACB30LU3-13		. BOLT		2
225	H52732-3CD		. NUT (V15653) (SPEC BACN10YR3CD) (OPT PLH53CD (V62554))		2
230	BACB30NF4-4		. BOLT		1
235	50-3361-53		. FILLER		1
240	H52732-4CD		. NUT (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))		1
245	BACP10BC02C04P		DELETED		
245A	BACP18BC02C04P		. PIN-COTTER		2
250	NAS1149D0416H		. WASHER		2
255	BACP10C4-740		DELETED		
255A	BACP18C4-740		. PIN		1
260	69-15325-5		. BRACKET ASSY	A	1
–260A	69-15325-6		. BRACKET ASSY	B	1
265	MS20470A		. . RIVET (SIZE DETERMINED ON INST)		2
270	69-55079-1		. . BLOCK		1
275	69-15325-1		. . BRACKET	A	1
–275A	69-15325-7		. . BRACKET	B	1
280	BACP10BC04C10P		DELETED		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–					
280A	BACP18BC04C10P		. PIN-COTTER		1
285	BACN10JD112		. NUT		1
290	NAS1149D1290H		. WASHER		1
295	69-70419-1		. SPROCKET		1
300	NAS6604H3		. BOLT	A	2
–300A	NAS6604H2		. BOLT	B	2
305	60-1450-1		. PLATE		1
310	1205LLT1C1-01		. BEARING (V21760) (SPEC BACB10AZ25PP) (OPT 205NPPFS428 (V21335)) (OPT 205TT (V43991)) (OPT 99205 (V29337))		1
315	30-1517		. SPACER	A	1
–315A	30-1517-1		. SPACER-PINION,FWD	B	1
320	9-61297-21		. SHIM		1
325	9105NPPFS428		. BEARING (V21335) (SPEC BACB10BA25PP) (OPT LL105KS (V38443)) (OPT 6005TT (V43991)) (OPT 9105LLT1C1-01 (V21760)) (OPT 993L05 (V29337)) (OPT PKTLL105P1 (V78118)) (OPT C105RRP0ZZ (V40920)) (OPT C105RRP1P28LY196 (V40920))		1
330	69-70417-1		. PINION		1
335	BACB30NF4-4		. BOLT		3
340	NAS1149D0416H		. WASHER		3
345	BACS40R010B011F		. SHIM		1
350	H52732-4CD		. NUT (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))		3
355	66-14594-1		. GUARD ASSY-CABLE		1
360	MS20426D5		. . RIVET		2
365	66-14597-1		. . BRACKET		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–					
370	6-84597-2		. . GUARD		1
375	NAS6604-3		DELETED		
380	NAS6604H3		DELETED		
385	6-83852		DELETED		
390	NAS6604H3		. BOLT	A	4
–390A	NAS6604H2		. BOLT	B	4
395	NAS1149D0416H		. WASHER		4
400	9-66008-2		DELETED		
402	BACR15BA3D		DELETED		
405	NAS680A4		DELETED		
410	9-66008-3		DELETED		
415	69-40895-1		DELETED		
415A	251A4124-1		. SHAFT		1
420	BACP18BC04C12P		. PIN-COTTER		1
425	MS21025-15		. NUT		1
430	BACW10P283AZ		. WASHER		1
435	9105NPPFS428		. BEARING (V21335) (SPEC BACB10BA25PP) (OPT LL105KS (V38443)) (OPT 6005TT (V43991)) (OPT 9105LLT1C1-01 (V21760)) (OPT 993L05 (V29337)) (OPT PKTLL105P1 (V78118)) (OPT C105RRP0ZZ (V40920)) (OPT C105RRP1P28LY196 (V40920))		1
440	30-1446		. SPACER	A	1
–440A	30-1446-1		. SPACER	B	1
445	69-70418-1		. GEAR-BEVEL		1
450	NAS514P428-16		. SCREW		2
455	NAS1149D0416H		. WASHER		2
460	H52732-4CD		. NUT (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))		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–					
465	60-1450		. PLATE		1
470	LL106KSG20		. BEARING (V38443) (SPEC BACB10BA30PP) (OPT LL106KS (V38443)) (OPT 6006TT (V43991)) (OPT 9106LLT1C1-01 (V21760)) (OPT 9106NPPFS428 (V21335)) (OPT 993L06 (V29337)) (OPT PKTLL106P1 (V78118)) (OPT C106RRP0ZZ (V40920)) (OPT C106RRPP1P28LY196 (V40920))		1
475	30-1587		. PIN		1
480	9-61297-20		. SHIM (OPT ITEM 480A)		1
–480A	9-61297-10		. SHIM (OPT ITEM 480)		1
485	30-1447		. SPACER	A	1
–485A	30-1447-1		. SPACER	B	1
490	9-61297-4		. SHIM		1
495	9-61297-11		. SHIM		1
500	65-20790-4		. DRUM		1
505	BACP18C4-725		. PIN		2
510	NAS1149D0416H		. WASHER		4
515	BACP18BC02C04P		. PIN-COTTER		4
520	251A4115-2		DELETED		
520A	251A4115-4		. HOUSING ASSY		1
525	HL12VAZ8-7		. . BOLT (V56878) (SPEC BACB30NX8K7) (OPT HL12VAZ8-7 (V73197)) (OPT HL12VAZ8-7 (V92215)) (OPT HL12VAZ8-7 (V97928)) (OPT L802-8K7 (V06725)) (OPT HL12VAZ8-7 (V08524))		2
530	BACC30X		. . COLLAR		2
535	251A4120-1		. . BRACKET		1
540	65-20686-7		DELETED		

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
540A	65-20686-12		. . HOUSING ASSY		1
545	MS21208F4-10		. . . INSERT		6
550	MS21209F1-10		. . . INSERT		1
555	65-20686-8		DELETED		
555A	65-20686-13		. . . HOUSING		1
560	251A4117-1		. BRAKE ASSY		1
565	BACB30NM3HK3		. . BOLT (OPT ITEM 565A)		1
–565A	NAS6603H3		. . BOLT (OPT ITEM 565)		1
570	BACB30NM3K3		. . BOLT		3
575	NAS1149D0316J		. . WASHER		4
580	251A4121-1		. . COVER		1
585	253T7530-1		. . SHIM		AR
–585A	253T7530-2		. . SHIM		AR
–585B	253T7530-3		. . SHIM		AR
–585C	253T7530-4		. . SHIM		AR
590	254N1161-1		. . SPRING		4
595	253T7536-2		. . STATOR		1
600	90650		. . ROLLER ASSY-SKEWED (V82402)		2
605	254N1166-1		. . DISC		1
610	251A4119-1		. . ROTOR		1
615	251A4118-1		. . HOUSING ASSY		1
620	BACB10GP21		. . . BEARING		1
625	MS21209F1-15P		. . . INSERT		4
630	251A4118-2		. . . HOUSING		1

–Item not Illustrated