



# **COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST**

## **RUDDER PEDAL STEERING ASSEMBLY**

**PART NUMBER  
275A5104-1, -2**

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## COMPONENT MAINTENANCE MANUAL

Revision No. 10  
Jul 01/2009

To: All holders of RUDDER PEDAL STEERING ASSEMBLY 32-51-33.

Attached is the current revision to this COMPONENT MAINTENANCE MANUAL

The COMPONENT MAINTENANCE MANUAL is furnished either as a printed manual, on microfilm, or digital products, or any combination of the three. This revision replaces all previous microfilm cartridges or digital products. All microfilm and digital products are reissued with all obsolete data deleted and all updated pages added.

For printed manuals, changes are indicated on the List of Effective Pages (LEP). The pages which are revised will be identified on the LEP by an R (Revised), A (Added), O (Overflow, i.e. changes to the document structure and/or page layout), or D (Deleted). Each page in the LEP is identified by Chapter-Section-Subject number, page number and page date.

Pages replaced or made obsolete by this revision should be removed and destroyed.

### ATTENTION

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TRANSMITTAL LETTER

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**COMPONENT MAINTENANCE MANUAL****Location of Change**

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FRONTMATTER

REPAIR 1-1

ILLUSTRATED PARTS LIST

**Description of Change**

Changed the part number information on the title page.

Added clarifications and updated callouts.

Changed the data in the Consumable Materials list.

Added the Vendor Codes list.

Changed the data in the NUMERICAL INDEX list.

Added clarifications.

Added clarifications and updated callouts.

Added new Illustrated Parts List.

Added rudder pedal steering assembly 275A5104-2 with changed screws for easier installation.

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HIGHLIGHTS

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## COMPONENT MAINTENANCE MANUAL

| Subject/Page                           | Date        | Subject/Page                                    | Date        | Subject/Page                           | Date        |
|--|-------------|---|-------------|--|-------------|
| TITLE PAGE                             |             | 32-51-33 CLEANING (cont)                        |             | 32-51-33 ILLUSTRATED PARTS LIST (cont) |             |
| R 1                                    | Jul 01/2009 | 402   | BLANK       | O 1004                                 | Jul 01/2009 |
| 2                                      | BLANK       | 32-51-33 CHECK                                  |             | R 1005                                 | Jul 01/2009 |
| 32-51-33 TRANSMITTAL LETTER            |             | 501   | Mar 01/2006 | R 1006                                 | Jul 01/2009 |
| O 1                                    | Jul 01/2009 | 502   | BLANK       | R 1007                                 | Jul 01/2009 |
| 2                                      | BLANK       | 32-51-33 REPAIR - GENERAL                       |             | R 1008                                 | Jul 01/2009 |
| 32-51-33 HIGHLIGHTS                    |             | 601   | Mar 01/2006 | O 1009                                 | Jul 01/2009 |
| O 1                                    | Jul 01/2009 | 602   | Mar 01/2006 | R 1010                                 | Jul 01/2009 |
| 2                                      | BLANK       | 32-51-33 REPAIR 1-1                             |             | O 1011                                 | Jul 01/2009 |
| 32-51-33 EFFECTIVE PAGES               |             | R 601   | Jul 01/2009 | O 1012                                 | Jul 01/2009 |
| 1                                      | Jul 01/2009 | R 602   | Jul 01/2009 | O 1013                                 | Jul 01/2009 |
| 2                                      | BLANK       | O 603   | Jul 01/2009 | R 1014                                 | Jul 01/2009 |
| 32-51-33 CONTENTS                      |             | R 604   | Jul 01/2009 | A 1015                                 | Jul 01/2009 |
| 1                                      | Mar 01/2006 | 32-51-33 REPAIR 2-1                             |             | A 1016                                 | Jul 01/2009 |
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| 32-51-33 TR AND SB RECORD              |             | 602   | Mar 01/2006 | A 1018                                 | Jul 01/2009 |
| 1                                      | Mar 01/2006 | 32-51-33 REPAIR 3-1                             |             | A 1019                                 | Jul 01/2009 |
| 2                                      | BLANK       | 601   | Jul 01/2008 | A 1020                                 | BLANK       |
| 32-51-33 REVISION RECORD               |             | 602   | Mar 01/2006 |  |             |
| 1                                      | Mar 01/2006 | 32-51-33 REPAIR 4-1                             |             |  |             |
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| 32-51-33 RECORD OF TEMPORARY REVISIONS |             | 602   | Mar 01/2006 |  |             |
| 1                                      | Mar 01/2006 | 32-51-33 ASSEMBLY                               |             |  |             |
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| 32-51-33 DISASSEMBLY                   |             | 901   | Mar 01/2006 |  |             |
| 301                                    | Mar 01/2006 | 902   | BLANK       |  |             |
| 302                                    | BLANK       | 32-51-33 ILLUSTRATED PARTS LIST                 |             |  |             |
| 32-51-33 CLEANING                      |             | 1001  | Nov 01/2008 |  |             |
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|  |             | R 1003  | Jul 01/2009 |  |             |

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

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EFFECTIVE PAGES

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## COMPONENT MAINTENANCE MANUAL

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| DISASSEMBLY  | (Not Applicable) |             |
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## COMPONENT MAINTENANCE MANUAL

### 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.

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INTRODUCTION

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## COMPONENT MAINTENANCE MANUAL

### RUDDER PEDAL STEERING ASSEMBLY - DESCRIPTION AND OPERATION

#### 1. Description

- A. The rudder pedal steering assembly consists of a steering crank, clutch arm, cable drum, an eccentric mounted in a clutch crank and a quadrant. These parts are made of aluminum alloys.

#### 2. Operation

- A. The rudder pedal steering assembly connects the rudder pedals to the nose wheel steering and operates when the nose gear is compressed by the airplane weight. This compression movement of the nose gear is transmitted by linkage and cables to move the eccentric and reposition the clutch crank to prevent stops on the clutch crank from touching the clutch arm. Instead, the clutch arm touches the stops on the steering crank and allows any movement of the rudder pedals to be transmitted from the steering arm to the quadrant. This quadrant connects to the nose wheel steering cables and is free to move with the cables whenever nose wheel steering is used, or to drive the cables when positioned by the rudder pedal system.
- B. When the nose gear shock strut is not compressed, the action of the eccentric moves the stops on the clutch crank into contact with the clutch arm. This prevents any movement of the rudder pedals from reaching the clutch arm and moving the quadrant.

#### 3. Leading Particulars (Approximate)

- A. Length – 17 in.
- B. Width – 10.5 in.
- C. Height – 6.5 in.
- D. Weight – 5.6 lbs

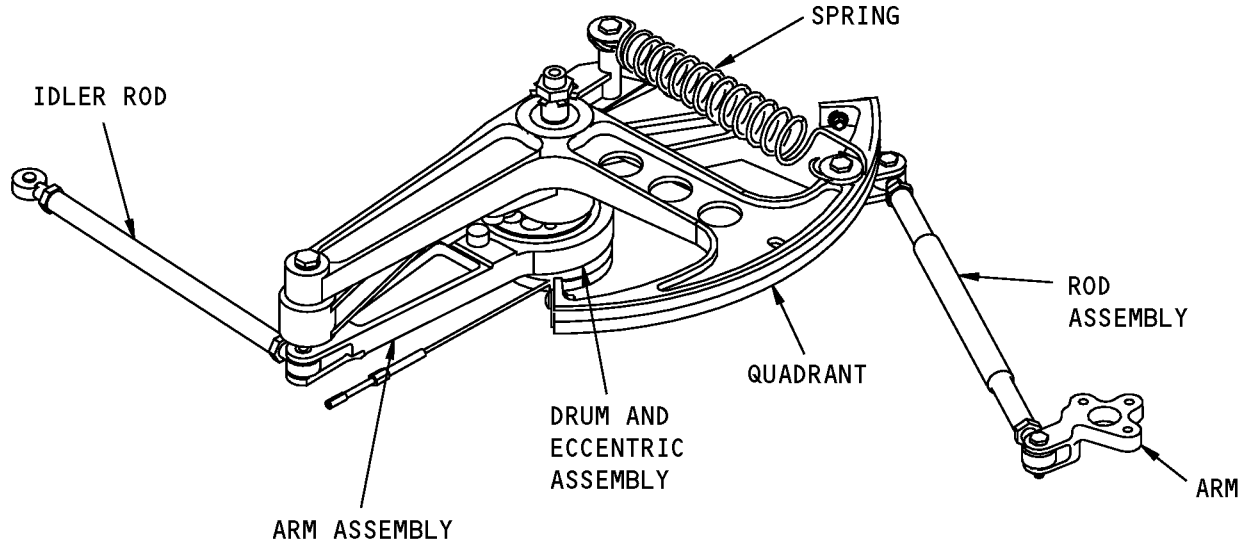
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DESCRIPTION AND OPERATION

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Rudder Pedal Steering Assembly  
Figure 1

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DESCRIPTION AND OPERATION

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**COMPONENT MAINTENANCE MANUAL**

**TESTING AND FAULT ISOLATION**

**(NOT APPLICABLE)**

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TESTING AND FAULT ISOLATION

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DISASSEMBLY

**(NOT APPLICABLE)**

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DISASSEMBLY

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## COMPONENT MAINTENANCE MANUAL

### CLEANING

#### 1. General

- A. This procedure has the data necessary to clean the rudder pedal steering 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. 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 (30, 130, 150, 175, 235, 240, 280, 345, 360, 370) as specified in SOPM 20-30-01.
- (2) Clean the other parts by standard industry procedures and the instructions in SOPM 20-30-03.

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CLEANING

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## COMPONENT MAINTENANCE MANUAL

### 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 dimension 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 20-20-02 | 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 penetrant check (SOPM 20-20-02) of these parts:
  - (a) Arm (20)
  - (b) Steering Crank (250)
  - (c) Quadrant (186)
- (3) Do a check of the spring as shown below. The spring must come back to the free length with no permanent deformation.

**Table 501:**

| IPL No. Fig. 1 | Approximate Free Length (Inches) (Reference only) | Test Length (Inches) | Allowable Load Limits (Pounds) |
|----------------|---|----------------------|--------------------------------|
| 115            | 3.47  | 10.00                | 20.43 - 22.57                  |
|                |   | 7.50                 | 13.30 - 14.70                  |

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## COMPONENT MAINTENANCE MANUAL

### REPAIR

#### 1. General

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

**Table 601:**

| <b>PART NUMBER</b> | <b>NAME</b>                 | <b>REPAIR</b> |
|--------------------|-----------------------------|---------------|
| —                  | REFINISH OF OTHER PARTS     | 1-1           |
| 275A5103           | DRUM AND ECCENTRIC ASSEMBLY | 2-1           |
| 65-25843           | QUADRANT ASSEMBLY           | 3-1           |
| 69-20495           | STEERING ROD ASSEMBLY       | 4-1           |

#### 2. Dimensioning Symbols

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

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REPAIR - GENERAL

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|    |   |       |   |
|----|---|-------|---|
| —  | STRAIGHTNESS  | ∅     | DIAMETER  |
| ▭  | FLATNESS  | S ∅   | SPHERICAL DIAMETER  |
| ⊥  | PERPENDICULARITY (OR SQUARENESS)                        | R     | RADIUS  |
| // | PARALLELISM   | SR    | SPHERICAL RADIUS  |
| ○  | ROUNDNESS   | ( )   | REFERENCE   |
| ⊘  | CYLINDRICITY  | BASIC | A THEORETICALLY EXACT DIMENSION USED                            |
| ⌒  | PROFILE OF A LINE                                       | (BSC) | TO DESCRIBE SIZE, SHAPE OR LOCATION OF                          |
| ⌓  | PROFILE OF A SURFACE                                    | OR    | A FEATURE. FROM THIS FEATURE PERMISSIBLE                        |
| ◎  | CONCENTRICITY   | DIM   | VARIATIONS ARE ESTABLISHED BY TOLERANCES ON OTHER DIMENSIONS OR |
| ≡  | SYMMETRY  |       | NOTES.  |
| ∠  | ANGULARITY  | -A-   | DATUM   |
| ↗  | RUNOUT  | Ⓜ     | MAXIMUM MATERIAL CONDITION (MMC)                                |
| ↗↗ | TOTAL RUNOUT  | Ⓛ     | LEAST MATERIAL CONDITION (LMC)                                  |
| ⊔  | COUNTERBORE OR SPOTFACE                                 | Ⓢ     | REGARDLESS OF FEATURE SIZE (RFS)                                |
| ∇  | COUNTERSINK   | Ⓟ     | PROJECTED TOLERANCE ZONE  |
| ⊕  | THEORETICAL EXACT POSITION OF A FEATURE (TRUE POSITION) | FIM   | FULL INDICATOR MOVEMENT   |

### EXAMPLES

|  |  |   |  |
|--|--|---|--|
| $\boxed{\text{—}} \boxed{0.002}$                   | STRAIGHT WITHIN 0.002  | $\boxed{\text{◎}} \boxed{\text{∅}} \boxed{0.0005} \boxed{\text{C}}$                 | CONCENTRIC TO DATUM C WITHIN 0.0005 DIAMETER   |
| $\boxed{\text{⊥}} \boxed{0.002} \boxed{\text{B}}$  | PERPENDICULAR TO DATUM B WITHIN 0.002  | $\boxed{\text{≡}} \boxed{0.010} \boxed{\text{A}}$                                   | SYMMETRICAL WITH DATUM A WITHIN 0.010  |
| $\boxed{\text{//}} \boxed{0.002} \boxed{\text{A}}$ | PARALLEL TO DATUM A WITHIN 0.002   | $\boxed{\text{∠}} \boxed{0.005} \boxed{\text{A}}$                                   | ANGULAR TOLERANCE 0.005 WITH DATUM A   |
| $\boxed{\text{○}} \boxed{0.002}$                   | ROUND WITHIN 0.002   | $\boxed{\text{⊕}} \boxed{\text{∅}} \boxed{0.002} \boxed{\text{Ⓢ}} \boxed{\text{B}}$ | LOCATED AT TRUE POSITION WITHIN 0.002 DIA RELATIVE TO DATUM B, REGARDLESS OF FEATURE SIZE  |
| $\boxed{\text{⊘}} \boxed{0.010}$                   | CYLINDRICAL SURFACE MUST LIE BETWEEN TWO CONCENTRIC CYLINDERS, ONE OF WHICH HAS A RADIUS 0.010 INCH GREATER THAN THE OTHER         | $\boxed{\text{⊥}} \boxed{\text{∅}} \boxed{0.010} \boxed{\text{Ⓜ}} \boxed{\text{A}}$ | 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 |
| $\boxed{\text{⌒}} \boxed{0.006} \boxed{\text{A}}$  | EACH LINE ELEMENT OF THE SURFACE AT ANY CROSS SECTION MUST LIE BETWEEN TWO PROFILE BOUNDARIES 0.006 INCH APART RELATIVE TO DATUM A | $\boxed{0.510} \boxed{\text{Ⓟ}}$  | THEORETICALLY EXACT DIMENSION IS 2.000   |
| $\boxed{\text{⌓}} \boxed{0.020} \boxed{\text{A}}$  | SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.020 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE                              |   | OR<br>2.000<br>BSC   |

True Position Dimensioning Symbols  
Figure 601

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REPAIR - GENERAL

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**COMPONENT MAINTENANCE MANUAL**

**REFINISH OF OTHER PARTS - REPAIR 1-1**

**1. General**

- A. Use this procedure to refinish the parts which are not in the other repairs.
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Figure 601 for the True Position Dimensioning Symbols used in the repair figures.
- D. 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  |
|-----------|--|--|
| B50080    | Compound - Corrosion Preventive, Solvent Cutback, Cold-Application (Grade 2 - Soft Film) | MIL-PRF-16173, Grade 2 (Supersedes MIL-C-16173, Grade 2) |
| 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) Instructions for the repair of the parts in REPAIR 1-1, Table 601 is only replacement of the original finish.
- (2) Refer to REPAIR 1-1, Table 601 for refinish details.

**Table 601:** Refinish Details

| IPL FIG. & ITEM | MATERIAL | FINISH  |
|-----------------|----------|---|
| IPL Fig. 1      |          |   |
| Arm (20)        | Al alloy | Boric acid-sulfuric acid anodize (F-17.31) and apply primer, C00259 (F-20.03) unless noted by flagnote 1 in REPAIR 1-1, Figure 601. |

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REPAIR 1-1  
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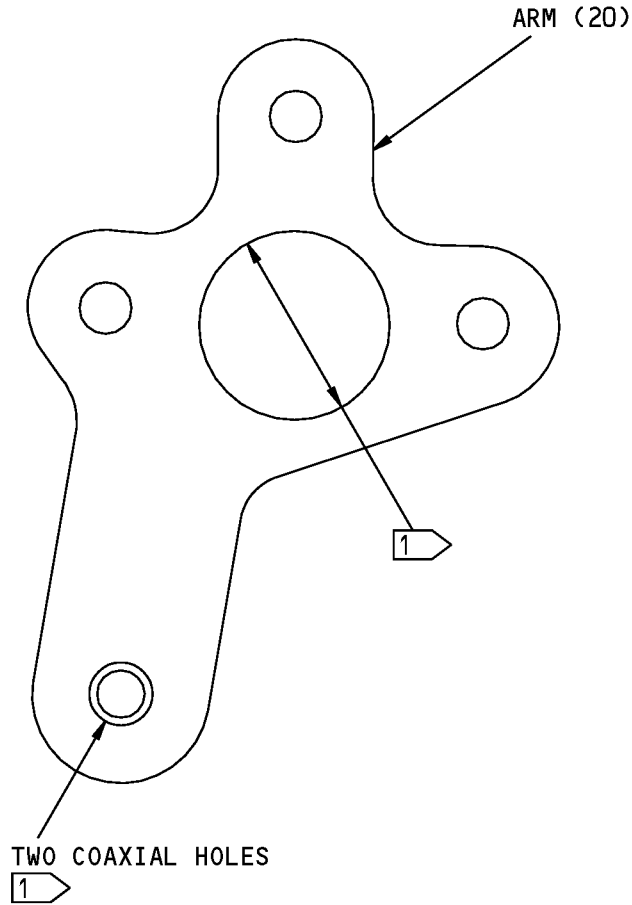
**Table 601: Refinish Details (Continued)**


| IPL FIG. & ITEM                              | MATERIAL                         | FINISH   |
|--|----------------------------------|--|
| Tubes (50, 60)                               | Al alloy                         | Chemical treat or chromic acid anodize and apply primer, C00259 (SRF-2.901).   |
| Plugs (55, 65)                               | Plastic                          | No finish (F-25.01).   |
| Spring (115)                                 | Music wire, ASTM A228            | Cadmium plate and apply primer, C00259 (F-16.03).  |
| Bolt (120)                                   | 4340 steel, no heat treat        | Cadmium plate (F-15.02).   |
| Spacers (135, 170, 180, 210, 255, 300, 355A) | 4340 or 4330M steel, 200-220 ksi | Cadmium plate (F-1.1913).  |
| Quadrant (186)                               | Mg alloy                         | Dow 17 anodize and apply primer, C00259 (F-3.30) but not in grooves.   |
| Plate (195)                                  | 4130 steel, no heat treat        | Cadmium plate (F-1.1913).  |
| Plugs (245, 340)                             | Monel                            | No finish (F-25.01).   |
| Crank (250)                                  | Al alloy                         | Chemical treat or chromic acid anodize and apply primer, C00259 (SRF-2.30), but no primer on surfaces shown by flagnote 1 in REPAIR 1-1, Figure 602. |
| Shaft (275)                                  | 4340 steel, 200-220 ksi          | Cadmium plate (F-15.02) but not on threads. Apply corrosion inhibiting compound, B50080 (F-19.05) on threads and interior surfaces.                  |
| Plate (305)                                  | Al alloy                         | Chemical treat or chromic acid anodize and apply primer, C00259 (F-18.05).   |
| Shim (310)                                   | Al alloy                         | No finish (F-25.01).   |
| Eccentric (375)                              | Al alloy                         | Chemical treat or chromic acid anodize and apply primer, C00259 (SRF-2.30), but no finish on 2.3105-2.3115-inch outside diameter.                    |

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 DO NOT APPLY PRIMER OR PAINT ON THIS SURFACE.

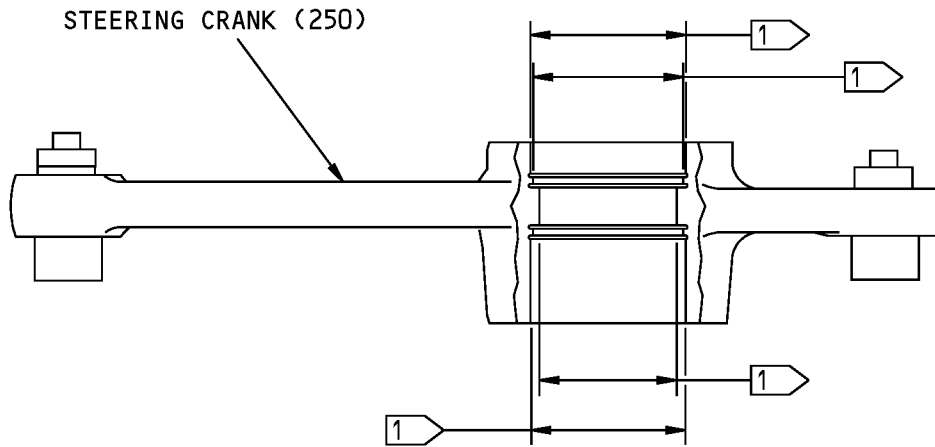
ITEM NUMBERS REFER TO IPL FIG. 1

275A5105-1 Arm Refinish  
Figure 601

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REPAIR 1-1  
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 DO NOT APPLY PRIMER ON THIS SURFACE.

ITEM NUMBERS REFER TO IPL FIG. 1

I

65-25820-10, -13 Steering Crank Refinish  
Figure 602

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REPAIR 1-1

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## COMPONENT MAINTENANCE MANUAL

### DRUM AND ECCENTRIC ASSEMBLY - REPAIR 2-1

275A5103-1

#### 1. General

- A. This procedure has the data necessary to repair the drum and eccentric assembly (260).
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Figure 601 for the True Position Dimensioning Symbols shown in the repair.
- D. Refer to IPL Figure 1 for item numbers.

#### 2. Repair Procedures

- 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. Bearing Replacement (REPAIR 2-1, Figure 601)

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

- (1) Remove the bearing (360) from the drum and eccentric assembly (SOPM 20-50-03).
- (2) Install a replacement bearing (360) in the drum and eccentric assembly with sealant, A00247 per SOPM 20-50-03.

- D. Assembly (REPAIR 2-1, Figure 601)

- (1) Use standard industry procedures and REPAIR 2-1, Paragraph 2.D.(2).
- (2) Use the shim noted by flagnote 1 if necessary. Remove 0.003-inch laminations to get a 0.002-0.030 inch gap between the plate and eccentric assembly.

# 32-51-33

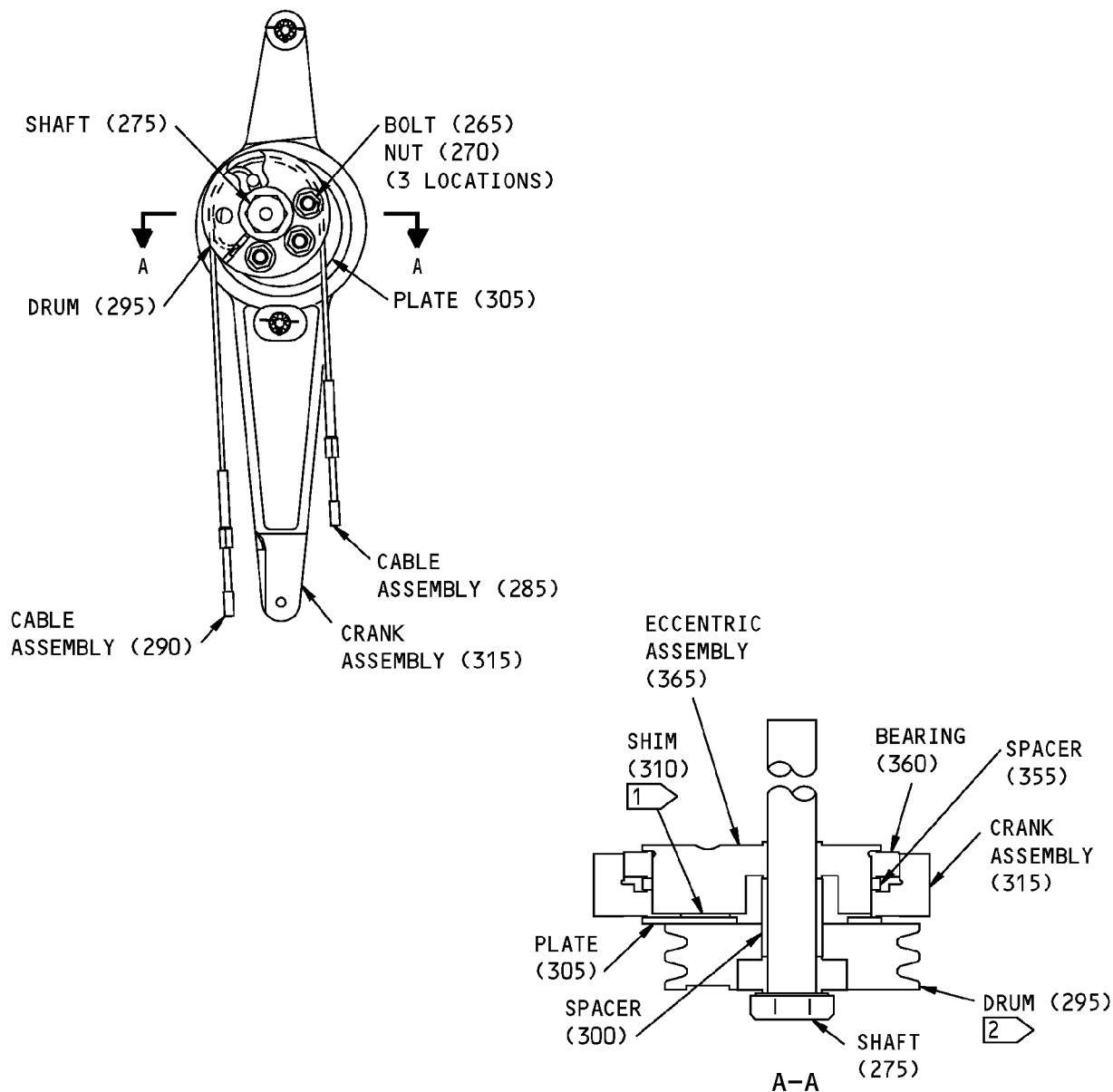
REPAIR 2-1

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COMPONENT MAINTENANCE MANUAL



- 1 USE IF AND AS REQUIRED. REMOVE 0.003 INCH LAMINATIONS TO MAINTAIN A 0.002-0.030 GAP BETWEEN THE PLATE AND THE ECCENTRIC ASSEMBLY
- 2 INSTALL THE BEARING WITH BMS 5-95 SEALANT PER SOPM 20-50-03

ITEM NUMBERS REFER TO IPL FIG. 1  
ALL DIMENSIONS ARE IN INCHES

275A5103-1 Drum and Eccentric Assembly Repair  
Figure 601

**32-51-33**

REPAIR 2-1  
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## COMPONENT MAINTENANCE MANUAL

### QUADRANT ASSEMBLY - REPAIR 3-1

65-25843-1

#### 1. General

- A. This procedure has the data necessary to repair the quadrant assembly.
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Figure 601 for the True Position Dimensioning Symbols shown in the repair.
- D. Refer to IPL Figure 1 for item numbers.

#### 2. Repair Procedures

- 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 20-30-02 | STRIPPING OF PROTECTIVE FINISHES |
| SOPM 20-50-03 | BEARING AND BUSHING REPLACEMENT  |
| SOPM 20-60-04 | MISCELLANEOUS MATERIALS          |

- C. Bearing Replacement

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

- (1) Remove the bearing (187) from the quadrant assembly (SOPM 20-50-03).
- (2) Install a replacement bearing by the roller-swage method of SOPM 20-50-03 using sealant, A00247.

- D. Bushing Replacement

**NOTE:** For stripping of protective finishes, refer to SOPM 20-30-02. For miscellaneous materials, refer to SOPM 20-60-04.

- (1) Remove the bushing (188) from the quadrant assembly (SOPM 20-50-03).
- (2) Install a replacement bushing by the press-fit method of SOPM 20-50-03 using sealant, A00247.
- (3) Make a check of the bore dimension and machine if necessary to design dimensions and finish.

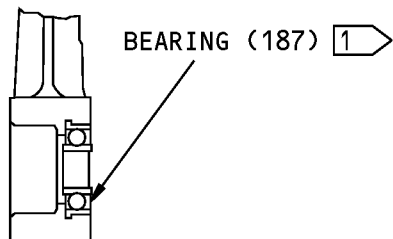
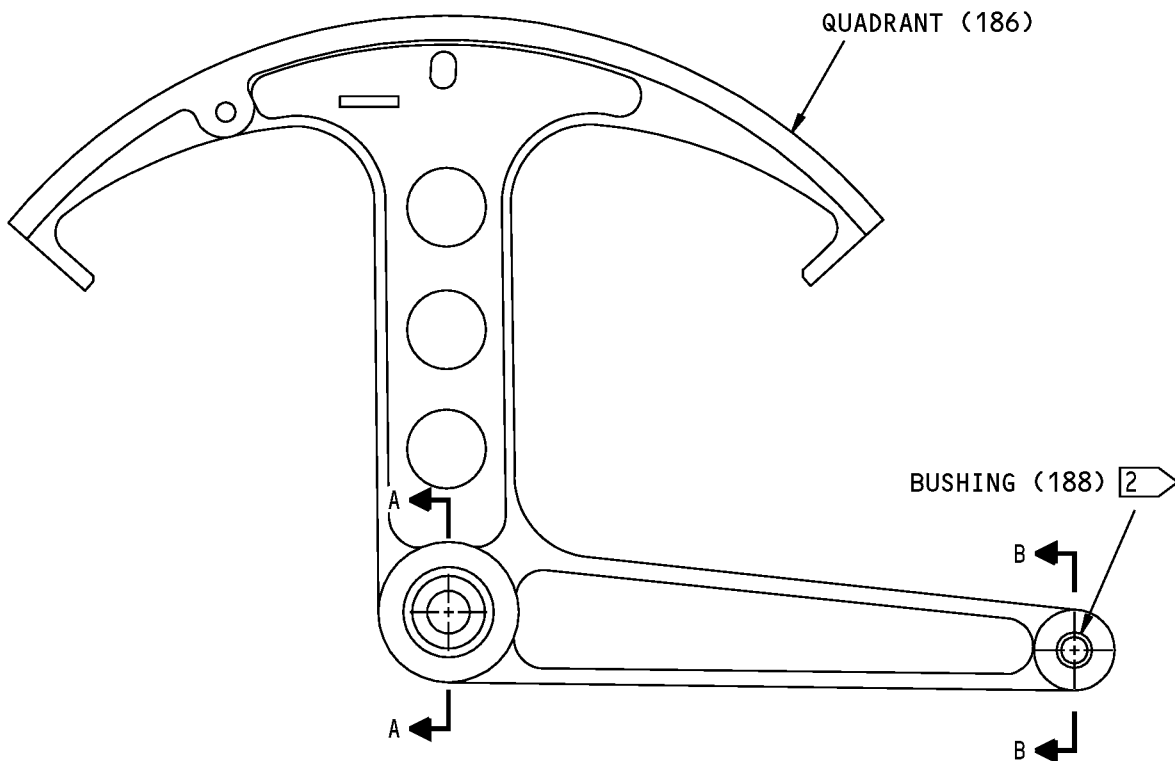
# 32-51-33

REPAIR 3-1

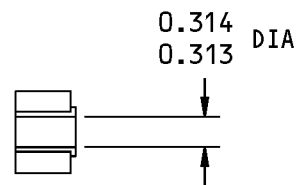
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COMPONENT MAINTENANCE MANUAL



A-A



B-B

1 ROLLER SWAGE THE BEARING PER SOPM 20-50-03

2 USE PRESS FIT METHOD TO INSTALL THE BUSHING

ITEM NUMBERS REFER TO IPL FIG. 1  
ALL DIMENSIONS ARE IN INCHES

65-25843-1 Quadrant Assembly Repair  
Figure 601

**32-51-33**

REPAIR 3-1  
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## COMPONENT MAINTENANCE MANUAL

### STEERING ROD ASSEMBLY - REPAIR 4-1

69-20495-1

#### 1. General

- A. This procedure has the data necessary to repair the steering rod assembly.
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Figure 601 for the True Position Dimensioning Symbols shown in the repair.
- D. Refer to IPL Figure 1 for item numbers.

#### 2. Parts Replacement

##### A. References

| Reference     | Title  |
|---------------|--|
| SOPM 20-50-05 | APPLICATION OF ALUMINUM FOIL AND OTHER MARKERS |

##### B. Procedure

- (1) Remove bad bearings (30) from the steering rod assembly (25).
- (2) Use standard industry procedures to install replacement bearings (30) on the tubes (50).
- (3) Assemble the tubes (50, 60, 50) and plugs (55, 65) together with rivets (40, 45). Do not use a different rivet material.
- (4) Install a replacement marker (70), if necessary per SOPM 20-50-05.
- (5) Obey all other flagnotes in REPAIR 4-1, Figure 601.

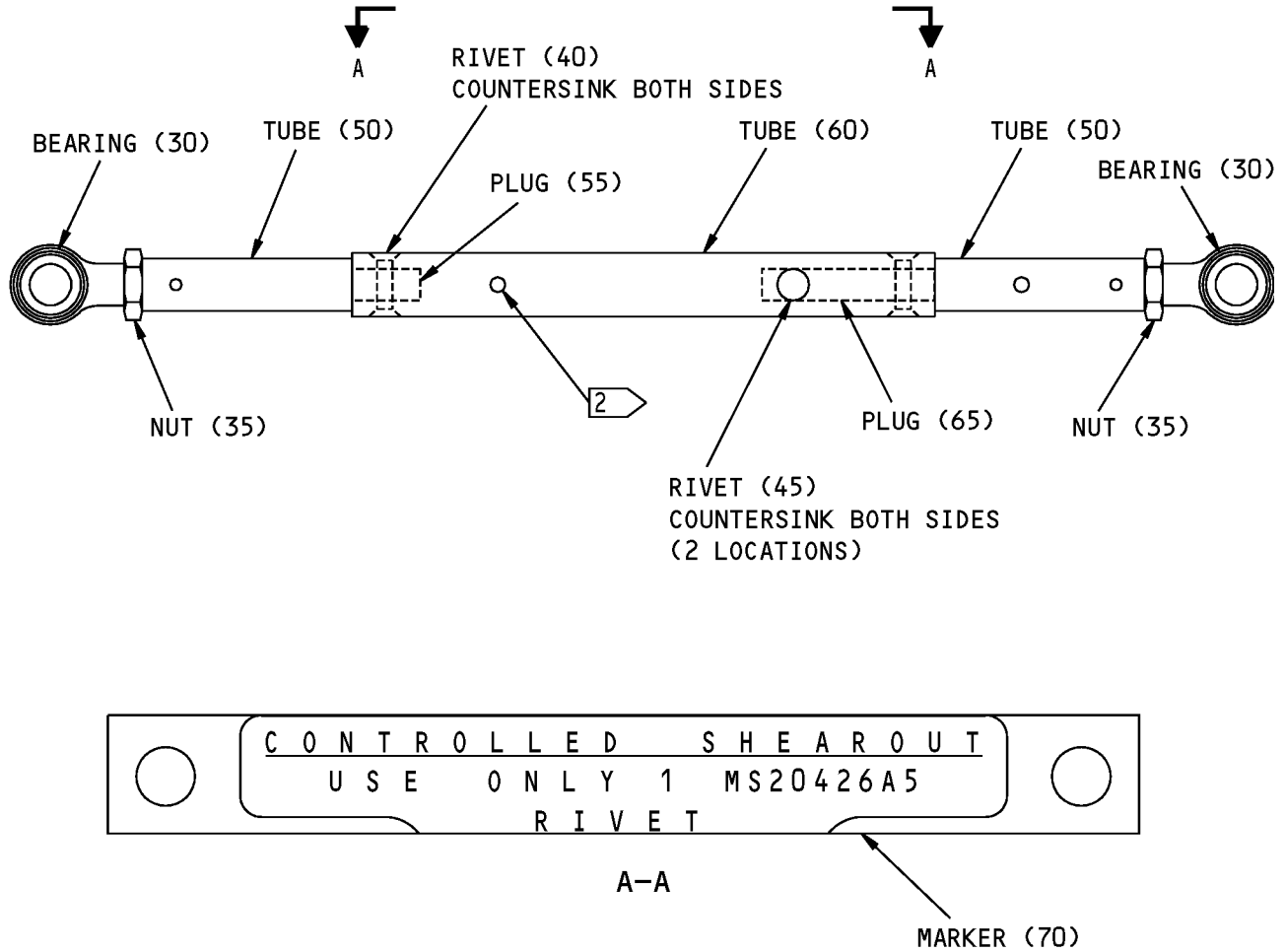
# 32-51-33

REPAIR 4-1

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- 1 THIS IS A CONTROLLED SHEAROUT RIVET. DO NOT SUBSTITUTE THE MATERIAL. ITEM NUMBERS REFER TO IPL FIG. 1
- 2 KEEP THIS INSPECTION HOLE OPEN.
- 3 INSTALL THE MARKER PER SOPM 20-50-05.
- 4 APPLY CLEAR SKYDROL RESISTANT EDGE SEAL PER D6-5005.

69-20495-1 Steering Rod Assembly Repair  
Figure 601

**32-51-33**

REPAIR 4-1  
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## COMPONENT MAINTENANCE MANUAL

### ASSEMBLY

#### 1. General

- A. This procedure has the data necessary to assemble the rudder pedal steering 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      |

- B. References

| Reference     | Title                                  |
|---------------|--|
| SOPM 20-41-01 | DECODING TABLE FOR BOEING FINISH CODES |
| SOPM 20-50-01 | BOLT AND NUT INSTALLATION              |
| SOPM 20-50-03 | BEARING AND BUSHING REPLACEMENT        |
| SOPM 20-60-04 | MISCELLANEOUS MATERIALS                |

- C. Procedure

**NOTE:** For decoding table for Boeing finish codes, refer to SOPM 20-41-01. For bolt and nut installation, refer to SOPM 20-50-01. For miscellaneous materials, refer to SOPM 20-60-04.

- (1) Use standard industry procedures and ASSEMBLY, Paragraph 2.C.(2).
- (2) Obey the flagnotes in ASSEMBLY, Figure 701 use sealant, A00247 where required (SOPM 20-50-03).

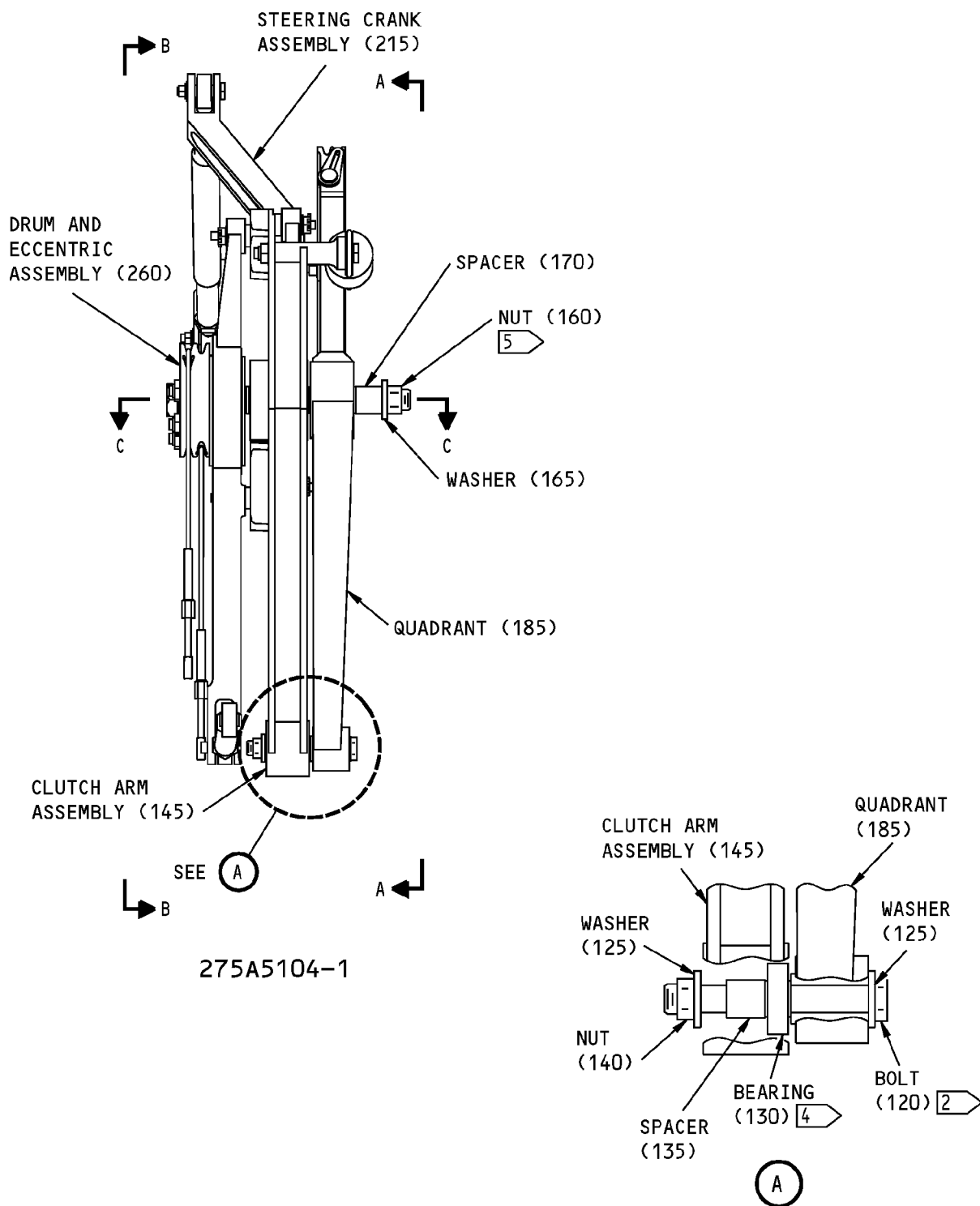
# 32-51-33

ASSEMBLY

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### COMPONENT MAINTENANCE MANUAL

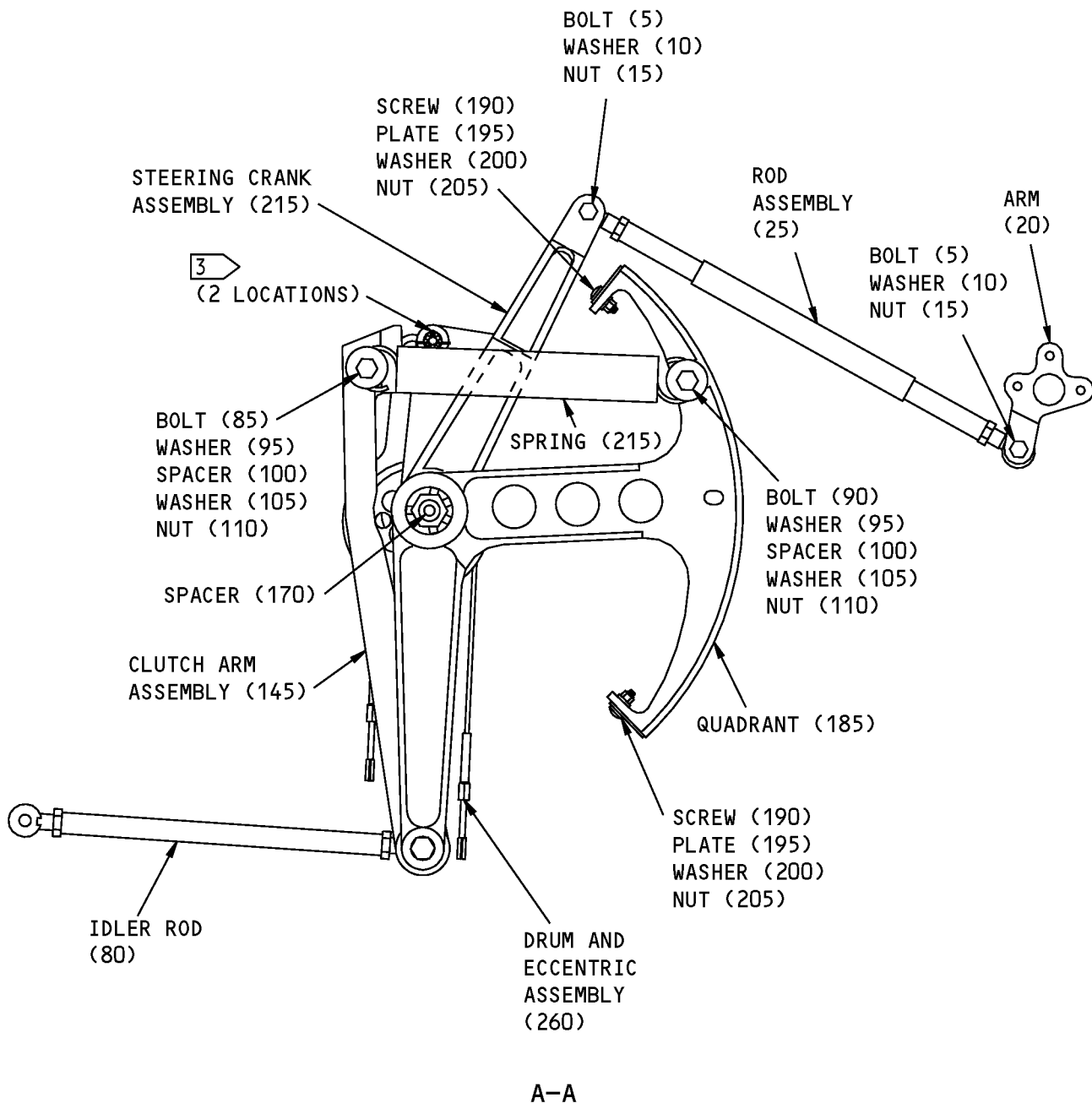


Rudder Pedal Steering Assembly  
Figure 701 (Sheet 1 of 4)

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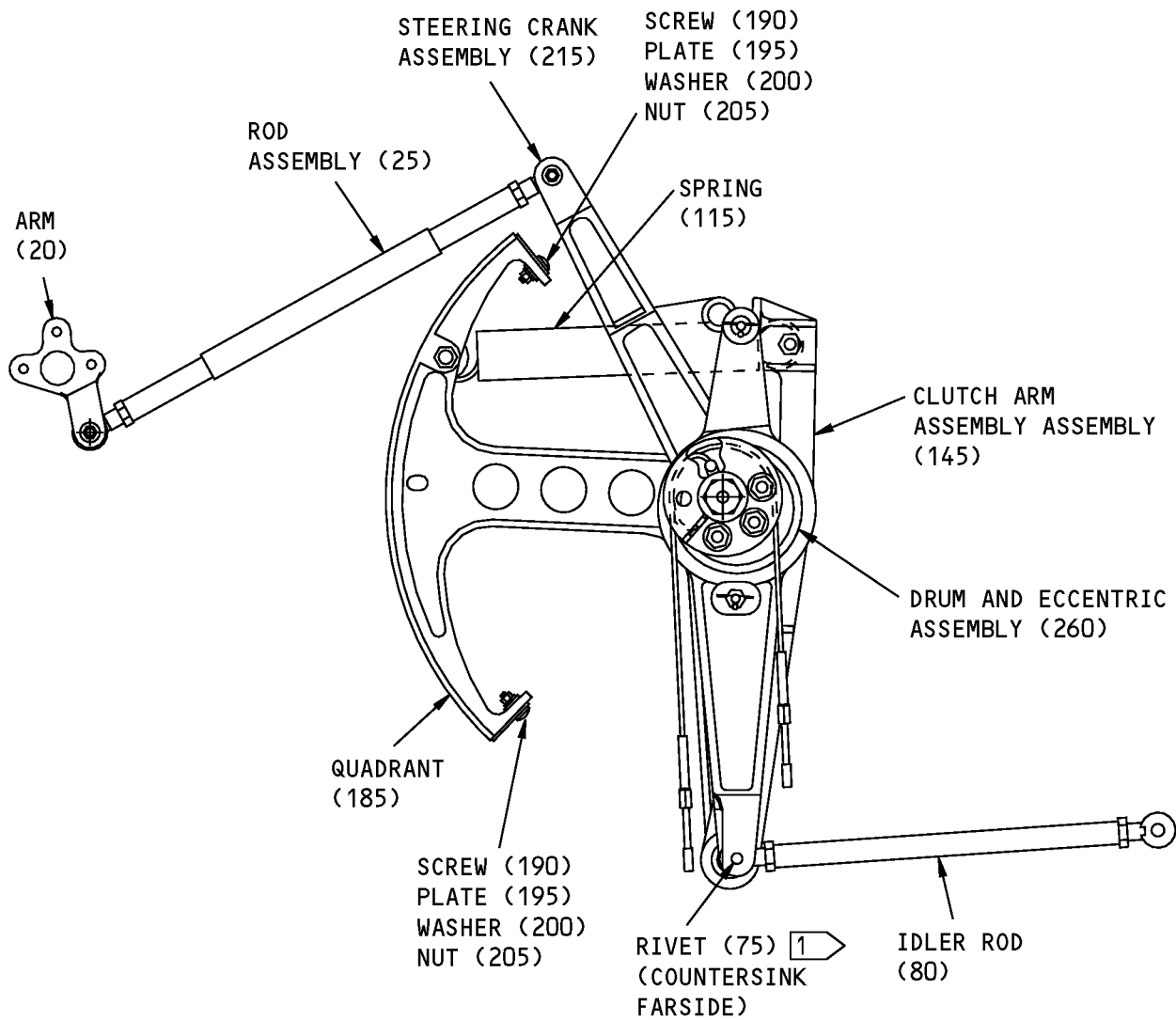
Rudder Pedal Steering Assembly  
 Figure 701 (Sheet 2 of 4)

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ASSEMBLY  
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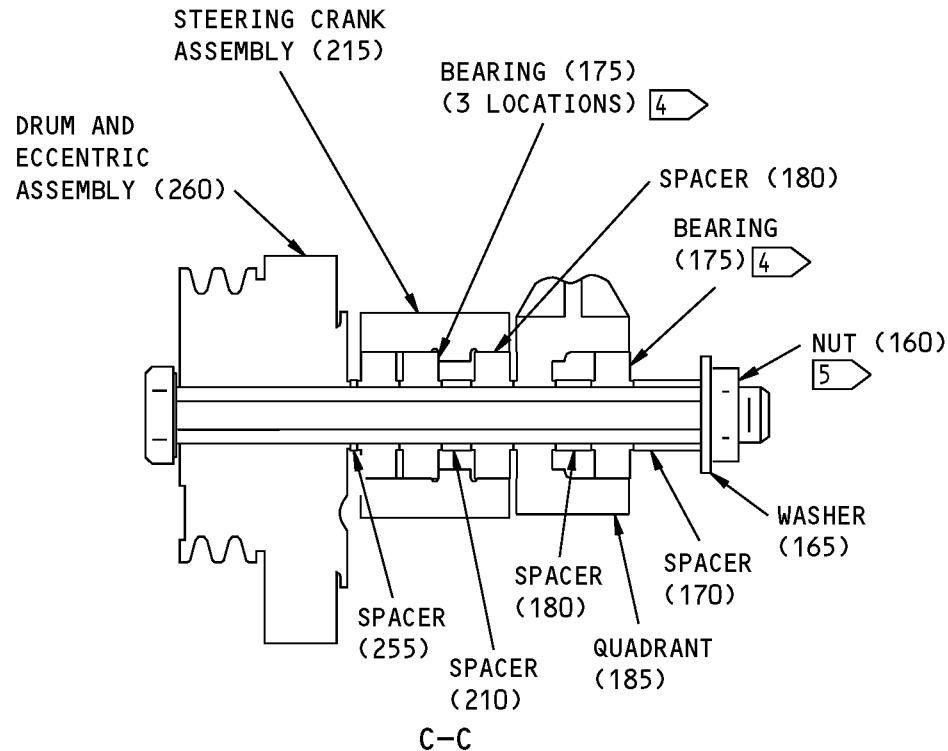
B-B

Rudder Pedal Steering Assembly  
Figure 701 (Sheet 3 of 4)

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ASSEMBLY  
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## COMPONENT MAINTENANCE MANUAL



1 APPLY BMS 5-95 SEALANT (F-19.48) IN THE HOLE BEFORE YOU INSTALL THE RIVET

2 TIGHTEN TO 100-140 INCH-LBS

3 THESE WASHERS (225) CAN BE INSTALLED UNDER THE BEARING FOR BETTER CAM ENGAGEMENT, BUT AT LEAST ONE WASHER MUST BE UNDER THE NUT

4 INSTALL THE BEARING WITH BMS 5-95 SEALANT PER SOPM 20-50-03

5 TIGHTEN TO 100-125 INCH-LBS ABOVE THE RUNNING TORQUE

ITEM NUMBERS REFER TO IPL FIG. 1  
ALL DIMENSIONS ARE IN INCHES

Rudder Pedal Steering Assembly  
Figure 701 (Sheet 4 of 4)

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ASSEMBLY  
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**COMPONENT MAINTENANCE MANUAL**

**FITS AND CLEARANCES**

**(NOT APPLICABLE)**

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FITS AND CLEARANCES

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**COMPONENT MAINTENANCE MANUAL**

**SPECIAL TOOLS, FIXTURES, AND EQUIPMENT**

**(NOT APPLICABLE)**

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SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

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## COMPONENT MAINTENANCE MANUAL

### 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

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## COMPONENT MAINTENANCE MANUAL

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

### VENDOR CODES

| <b>Code</b> | <b>Name</b>  |
|-------------|--|
| 06144       | INDUSTRIAL TECTONICS BEARING CORP<br>18301 SOUTH SANTA FE AVENUE<br>RANCHO DOMINGUEZ, CALIFORNIA 90221<br>FORMERLY IN COMPTON, CALIFORNIA  |
| 11815       | CHERRY AEROSPACE FASTENERS DIV OF TEXTRON<br>1224 EAST WARNER AVENUE PO BOX 2157<br>SANTA ANA, CALIFORNIA 92707-0157<br>FORMERLY IN LOS ANGELES, CALIF , FORMERLY CHERRY FASTENERS<br>TOWNSEND DIV OF TEXTRON INC V71087   |
| 15653       | ALCOA GLOBAL FASTENERS INC DIV KAYNAR PRODUCTS<br>800 S STATE COLLEGE BLVD<br>FULLERTON, CALIFORNIA 92831-3001<br>FORMERLY VK6405 MICRODOT AEROSP LTD; FORMERLY KAYNAR<br>TECH<br>FORMERLY FAIRCHILD FASTENERS KAYNAR DIV  |
| 21335       | TIMKEN US CORPORATION DIV FAFNIR<br>336 MECHANIC STREET<br>LEBANON, NH 03766-0267<br>FORMERLY FAFNIR BRG AND TEXTRON INC FAFNIR DIV IN<br>NEW BRITAIN, CONNECTICUT ; FORMERLY TORRINGTON CO THE<br>SPECIAL PRODUCTS DIV SUB OF THE INGERSOLL-RAND CO V8D210<br>FORMERLY TORRINGTON CO FAFNIR BEARING DIV IN TORRINGTON, CT |
| 21760       | SCHATZ BEARING CORP<br>10 FAIRVIEW AVENUE PO BOX 1191<br>POUGHKEEPSIE, NEW YORK 12601-1312<br>FORMERLY FEDERAL BRG CO AND SCHATZ MFG CO V53268<br>FORMERLY SCHATZ MFG CO   |

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## COMPONENT MAINTENANCE MANUAL

| Code  | Name  |
|-------|---|
| 30163 | VALENTEC DAYRON INC<br>333 MAGUIRE BLVD PO BOX 140394<br>ORLANDO, FLORIDA 32814-0394  |
| 38443 | MRC BEARINGS<br>402 CHANDLER STREET<br>JAMESTOWN, NEW YORK 14701-3802<br>FORMERLY MARLIN-ROCKWELL CORP DIV TRW AND TRW INC  |
| 40920 | MPB MINIATURE PRECISION BEARING DIV<br>PRECISION PARK PO BOX 547<br>KEENE, NEW HAMPSHIRE 03431<br>FORMERLY MPB CORP AND MINIATURE BRG DIV MPB CORP  |
| 43991 | FAG BEARING INCORPORATED<br>118 HAMILTON AVENUE<br>STAMFORD, CONNECTICUT 06904<br>FORMERLY NORMA-HOFFMAN BEARING CORPORATION<br>FORMERLY NORMA FAG BEARINGS CORPORATION   |
| 52828 | REPUBLIC FASTENER MFG CORP<br>1300 RANCHO CONEJO BLVD<br>NEWBURY PARK, CALIFORNIA 91320-1405<br>FORMERLY IN SYLMAR, CALIFORNIA  |
| 62554 | SIMMONDS MECAERO FASTENERS INC<br>1734 SEQUOIA AVENUE<br>ORANGE, CALIFORNIA 92668   |
| 72962 | HARVARD INDUSTRIES INC<br>3 WERNER WAY SUITE 210<br>LEBANON, NEW JERSEY 08833<br>FORMERLY ESNA V7A079<br>FORMERLY ELASTIC STOP NUT IN UNION, NJ   |
| 80539 | SPS TECHNOLOGIES INC DIV AERPSOACE - SANTA ANA<br>2701 SOUTH HARBOR BOULEVARD<br>SANTA ANA, CALIFORNIA 92704-5803<br>FORMERLY NUTT-SHEL DIV OF SPC WESTERN CO V80539<br>AND STANDARD PRESSED STEEL WESTERN DIV V17279 |

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**COMPONENT MAINTENANCE MANUAL**

| <b>Code</b> | <b>Name</b>  |
|-------------|--|
| 83086       | NEW HAMPSHIRE BALL BEARING, INC HITECH DIVISION<br>172 JAFFREY ROAD<br>PETERBOROUGH, NEW HAMPSHIRE 03458 |
| F0224       | SIMMONDS SA<br>FAIRCHILD FASTENERS ST COSME<br>ST COSME EN VAIRAIS F-72580, FRANCE                       |
| K8455       | RHP BEARINGS PLC RHP AEROSPACE<br>OLDENDS LANE<br>STONEHOUSE GL10 3RM UK                                 |

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## COMPONENT MAINTENANCE MANUAL

### NUMERICAL INDEX

| PART NUMBER  | AIRLINE PART NUMBER | FIGURE | ITEM | UNITS PER ASSEMBLY |
|--------------|---------------------|--------|------|--------------------|
| 102LH9075-4W |                     | 1      | 110  | 2                  |
|              |                     | 1      | 270  | 3                  |
| 102LH9075-5W |                     | 1      | 140  | 1                  |
| 275A5103-1   |                     | 1      | 260  | 1                  |
| 275A5104-1   |                     | 1      | 1A   | RF                 |
| 275A5104-2   |                     | 1      | 1B   | RF                 |
| 275A5105-1   |                     | 1      | 20   | 1                  |
| 65-25820-10  |                     | 1      | 250  | 1                  |
| 65-25820-11  |                     | 1      | 215  | 1                  |
| 65-25820-13  |                     | 1      | 250A | 1                  |
| 65-25843-1   |                     | 1      | 185  | 1                  |
| 65-25843-2   |                     | 1      | 186  | 1                  |
| 65-25844-8   |                     | 1      | 315  | 1                  |
| 65-25844-9   |                     | 1      | 350  | 1                  |
| 65-25861-6   |                     | 1      | 145  | 1                  |
| 65-25861-7   |                     | 1      | 155  | 1                  |
| 66-1354-2    |                     | 1      | 245  | AR                 |
|              |                     | 1      | 340  | AR                 |
| 66-15669-1   |                     | 1      | 275  | 1                  |
| 66-15707-1   |                     | 1      | 195  | 2                  |
| 66-15736-1   |                     | 1      | 170  | 1                  |
| 66-15736-2   |                     | 1      | 180  | 1                  |
| 66-15736-3   |                     | 1      | 210  | 1                  |
| 66-15736-4   |                     | 1      | 300  | 1                  |
| 66-15736-5   |                     | 1      | 255  | 1                  |
| 66-15736-6   |                     | 1      | 355A | 1                  |
| 66-15736-7   |                     | 1      | 135  | 1                  |
| 66-25793-1   |                     | 1      | 120  | 1                  |
| 69-20285-2   |                     | 1      | 295  | 1                  |
| 69-20309-1   |                     | 1      | 365  | 1                  |
| 69-20309-2   |                     | 1      | 375  | 1                  |
| 69-20427-1   |                     | 1      | 305  | 1                  |
| 69-20495-1   |                     | 1      | 25   | 1                  |
| 69-20495-2   |                     | 1      | 50   | 2                  |

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| PART NUMBER  | AIRLINE PART NUMBER | FIGURE | ITEM | UNITS PER ASSEMBLY |
|--------------|---------------------|--------|------|--------------------|
| 69-20495-3   |                     | 1      | 60   | 1                  |
| 69-20495-4   |                     | 1      | 55   | 1                  |
| 69-20495-5   |                     | 1      | 65   | 1                  |
| 69-20539-2   |                     | 1      | 115  | 1                  |
| 69-58176-1   |                     | 1      | 310  | AR                 |
| AN201KP5A    |                     | 1      | 150  | 1                  |
| AN201KP8A    |                     | 1      | 187  | 1                  |
|              |                     | 1      | 370  | 1                  |
| AN316-6R     |                     | 1      | 35   | 2                  |
| AN316-8R     |                     | 1      | 160  | 1                  |
| AN320-3      |                     | 1      | 230  | 2                  |
|              |                     | 1      | 330  | 2                  |
| AN380-2-2    |                     | 1      | 220  | 2                  |
|              |                     | 1      | 320  | 2                  |
| AN960D10L    |                     | 1      | 225  | 6                  |
| AN960PD10L   |                     | 1      | 325  | 2                  |
| B546-2TS     |                     | 1      | 360  | 1                  |
| B546DD       |                     | 1      | 345  | 1                  |
|              |                     | 1      | 345  | 1                  |
|              |                     | 1      | 360  | 1                  |
| B546DDFS101  |                     | 1      | 360  | 1                  |
| B546DDFS428  |                     | 1      | 360  | 1                  |
| B546DDNJC    |                     | 1      | 360  | 1                  |
| B546DDP      |                     | 1      | 360  | 1                  |
| B546FS101    |                     | 1      | 360  | 1                  |
| B546ZZ       |                     | 1      | 345  | 1                  |
| BACB10A32DD  |                     | 1      | 345  | 1                  |
| BACB10A435   |                     | 1      | 30   | 2                  |
| BACB10AF3F5H |                     | 1      | 240  | 1                  |
| BACB10AF3F7H |                     | 1      | 235  | 1                  |
|              |                     | 1      | 335  | 2                  |
| BACB10BX5    |                     | 1      | 130  | 1                  |
| BACB10BX8    |                     | 1      | 175  | 4                  |
|              |                     | 1      | 280  | 1                  |
| BACB10CF37PP |                     | 1      | 360  | 1                  |

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| PART NUMBER     | AIRLINE PART NUMBER | FIGURE | ITEM | UNITS PER ASSEMBLY |
|-----------------|---------------------|--------|------|--------------------|
| BACB30LU4-21    |                     | 1      | 265  | 3                  |
| BACB30NF4-13    |                     | 1      | 90   | 1                  |
| BACB30NF4-30    |                     | 1      | 85   | 1                  |
| BACB30NM3K10    |                     | 1      | 5    | 2                  |
| BACC2A3A00097CH |                     | 1      | 290  | 1                  |
| BACC2A3A00110DH |                     | 1      | 285  | 1                  |
| BACM10L1CWM     |                     | 1      | 70   | 1                  |
| BACN10JC4CD     |                     | 1      | 110  | 2                  |
|                 |                     | 1      | 270  | 3                  |
| BACN10JC5CD     |                     | 1      | 140  | 1                  |
| BACN10YR3CD     |                     | 1      | 15   | 2                  |
|                 |                     | 1      | 205  | 2                  |
| BACR15BA6D      |                     | 1      | 75   | 1                  |
| BACR24N4B95     |                     | 1      | 80   | 1                  |
| BACS12GU3K9     |                     | 1      | 190A | 2                  |
| BACW10P128A     |                     | 1      | 95   | 4                  |
| BRH10C4D        |                     | 1      | 110  | 2                  |
|                 |                     | 1      | 270  | 3                  |
| BRH10C5D        |                     | 1      | 140  | 1                  |
| CS205E          |                     | 1      | 130  | 1                  |
| CS208E          |                     | 1      | 175  | 4                  |
|                 |                     | 1      | 280  | 1                  |
| H51650-4BAC     |                     | 1      | 110  | 2                  |
|                 |                     | 1      | 270  | 3                  |
| H51650-5BAC     |                     | 1      | 140  | 1                  |
| KP5A            |                     | 1      | 130  | 1                  |
|                 |                     | 1      | 130  | 1                  |
| KP5A2TS         |                     | 1      | 130  | 1                  |
| KP5AFS428       |                     | 1      | 130  | 1                  |
| KP5AG27         |                     | 1      | 130  | 1                  |
| KP5ALY196       |                     | 1      | 130  | 1                  |
| KP5ANJC         |                     | 1      | 130  | 1                  |
| KP5ASD610       |                     | 1      | 130  | 1                  |
| KP8A            |                     | 1      | 175  | 4                  |
|                 |                     | 1      | 175  | 4                  |

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## COMPONENT MAINTENANCE MANUAL

| PART NUMBER   | AIRLINE PART NUMBER | FIGURE | ITEM | UNITS PER ASSEMBLY |
|---------------|---------------------|--------|------|--------------------|
|               |                     | 1      | 280  | 1                  |
|               |                     | 1      | 280  | 1                  |
| KP8A2TS       |                     | 1      | 175  | 4                  |
|               |                     | 1      | 280  | 1                  |
| KP8AFS428     |                     | 1      | 175  | 4                  |
|               |                     | 1      | 175  | 4                  |
|               |                     | 1      | 280  | 1                  |
|               |                     | 1      | 280  | 1                  |
| KP8AG27       |                     | 1      | 175  | 4                  |
|               |                     | 1      | 280  | 1                  |
| KP8ANJC       |                     | 1      | 175  | 4                  |
|               |                     | 1      | 280  | 1                  |
| KP8BSD610     |                     | 1      | 175  | 4                  |
|               |                     | 1      | 280  | 1                  |
| LLKP5A        |                     | 1      | 130  | 1                  |
| LLKP8A        |                     | 1      | 175  | 4                  |
|               |                     | 1      | 280  | 1                  |
| MS20426A5     |                     | 1      | 40   | 1                  |
| MS20426B5     |                     | 1      | 45   | 2                  |
| MS27111-5     |                     | 1      | 165  | 1                  |
| NAS1149C0532R |                     | 1      | 125  | 2                  |
| NAS1149D0316J |                     | 1      | 10   | 2                  |
| NAS1149D0363J |                     | 1      | 200  | 2                  |
| NAS1149D0416J |                     | 1      | 105  | 2                  |
| NAS43DD4-7FC  |                     | 1      | 100  | 2                  |
| NAS538-5P78   |                     | 1      | 188  | 1                  |
| NAS623-3-4    |                     | 1      | 190  | 2                  |
| NS202486-048  |                     | 1      | 110  | 2                  |
|               |                     | 1      | 270  | 3                  |
| PLH53CD       |                     | 1      | 15   | 2                  |
|               |                     | 1      | 15   | 2                  |
|               |                     | 1      | 205  | 2                  |
|               |                     | 1      | 205  | 2                  |
| REP3M6-2N1    |                     | 1      | 30   | 2                  |
| REP3M62NFS210 |                     | 1      | 30   | 2                  |

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| PART NUMBER | AIRLINE PART NUMBER | FIGURE | ITEM | UNITS PER ASSEMBLY |
|-------------|---------------------|--------|------|--------------------|
| T346E       |                     | 1      | 360  | 1                  |
| T6C428JCD   |                     | 1      | 110  | 2                  |
|             |                     | 1      | 270  | 3                  |
| T6C524JCD   |                     | 1      | 140  | 1                  |

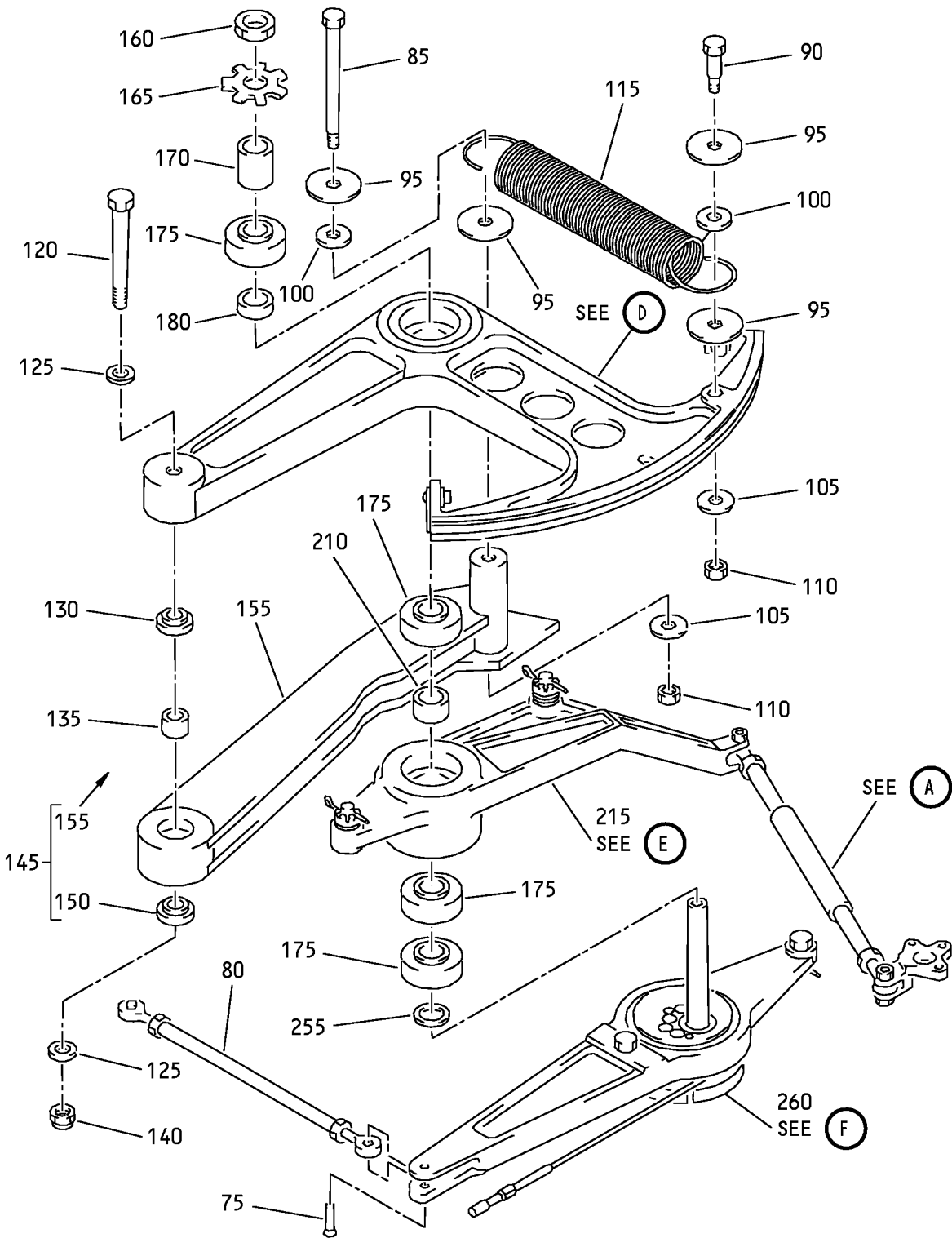
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G59245 S0004999608\_V2

Rudder Pedal Steering Assembly  
IPL Figure 1 (Sheet 1 of 5)

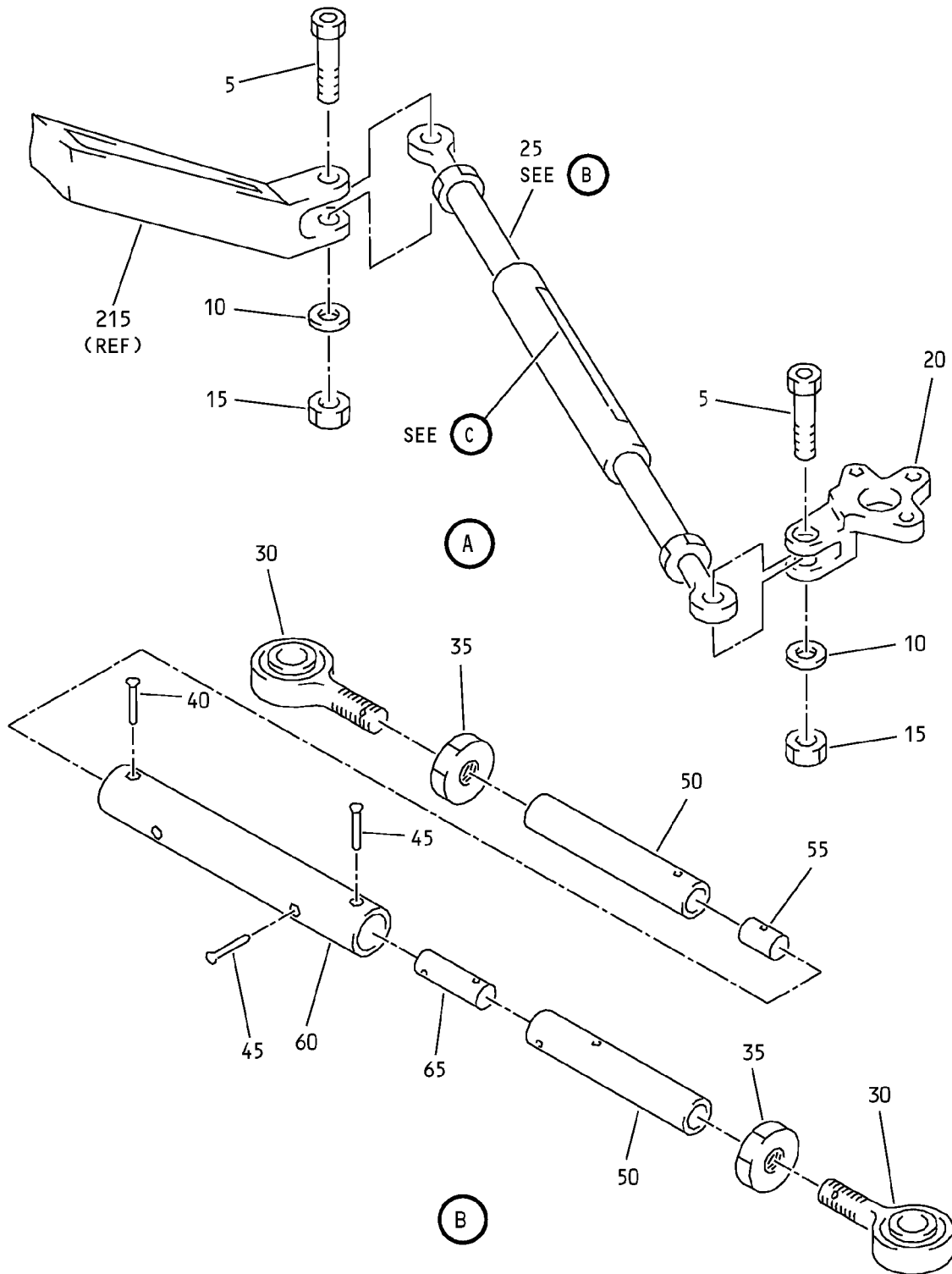
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Rudder Pedal Steering Assembly  
IPL Figure 1 (Sheet 2 of 5)

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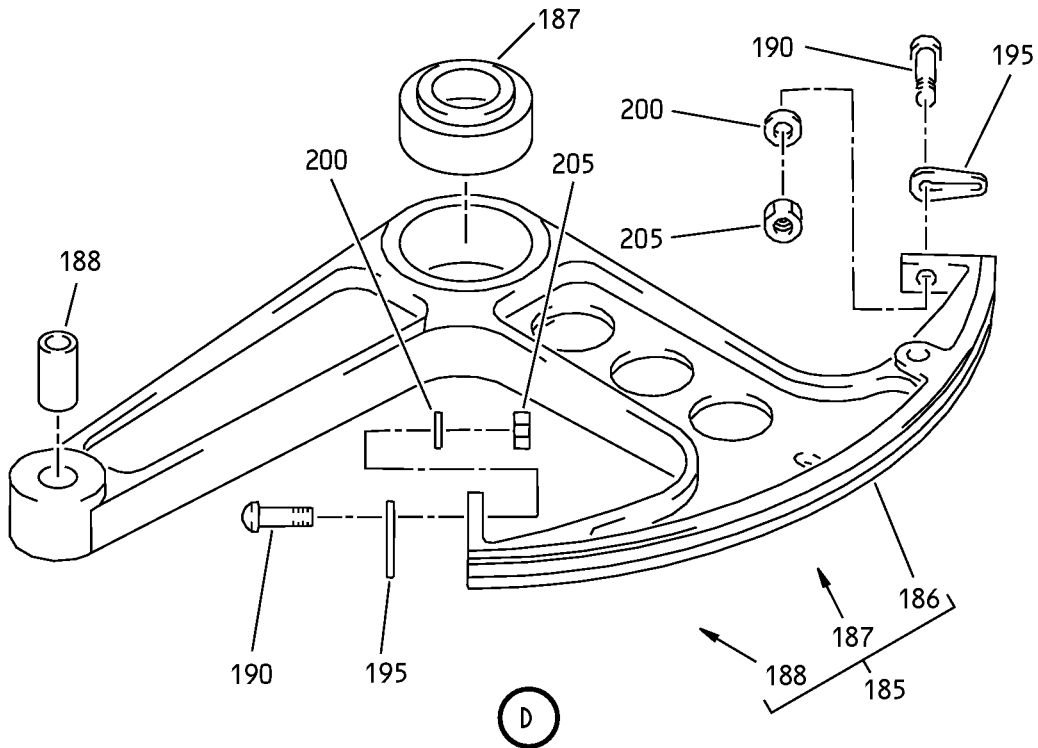
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**C**

CONTROLLED SHEAROUT  
USE ONLY 1 MS20426A5  
RIVET

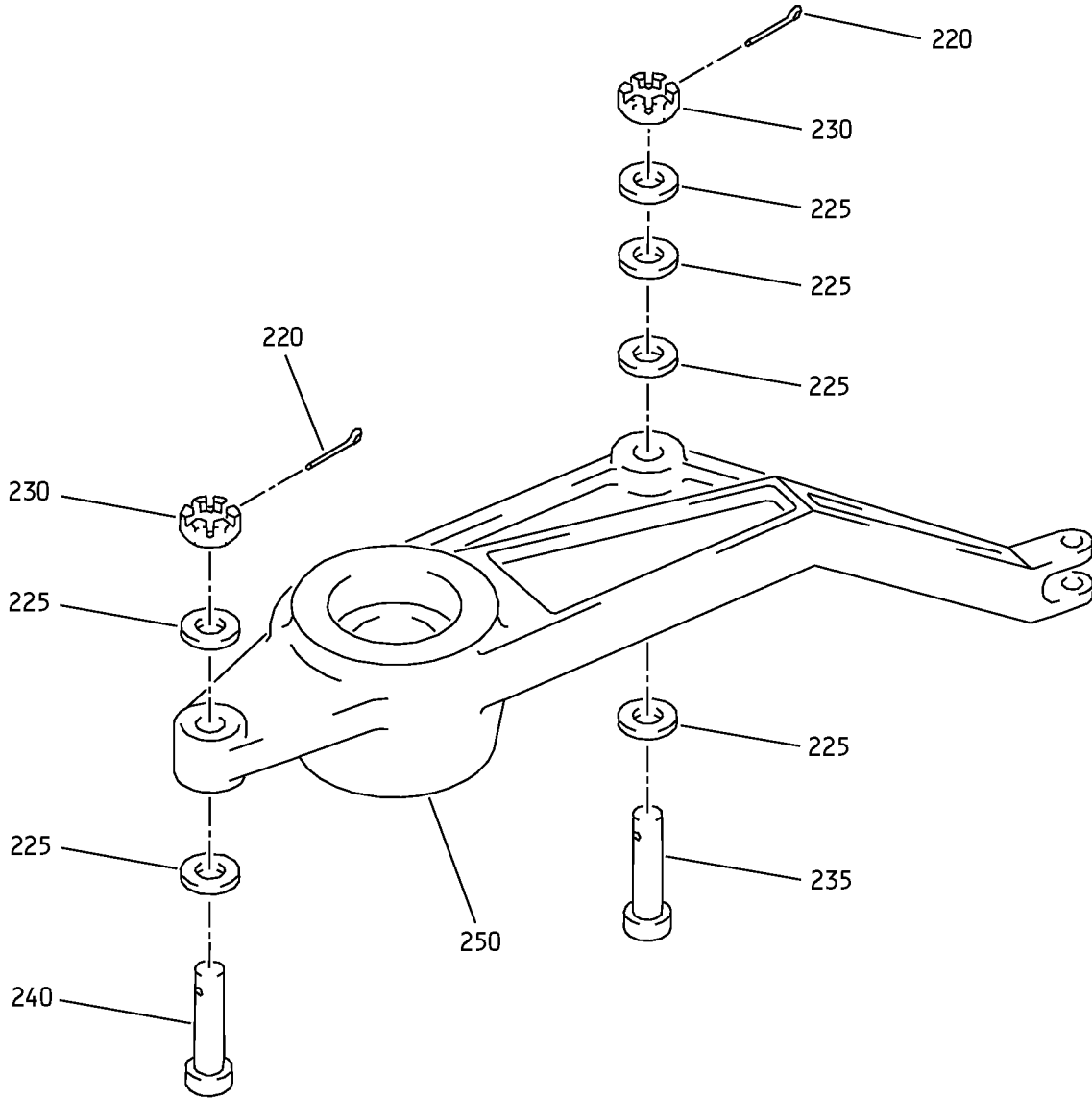
**C**



Rudder Pedal Steering Assembly  
IPL Figure 1 (Sheet 3 of 5)



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E

Rudder Pedal Steering Assembly  
IPL Figure 1 (Sheet 4 of 5)

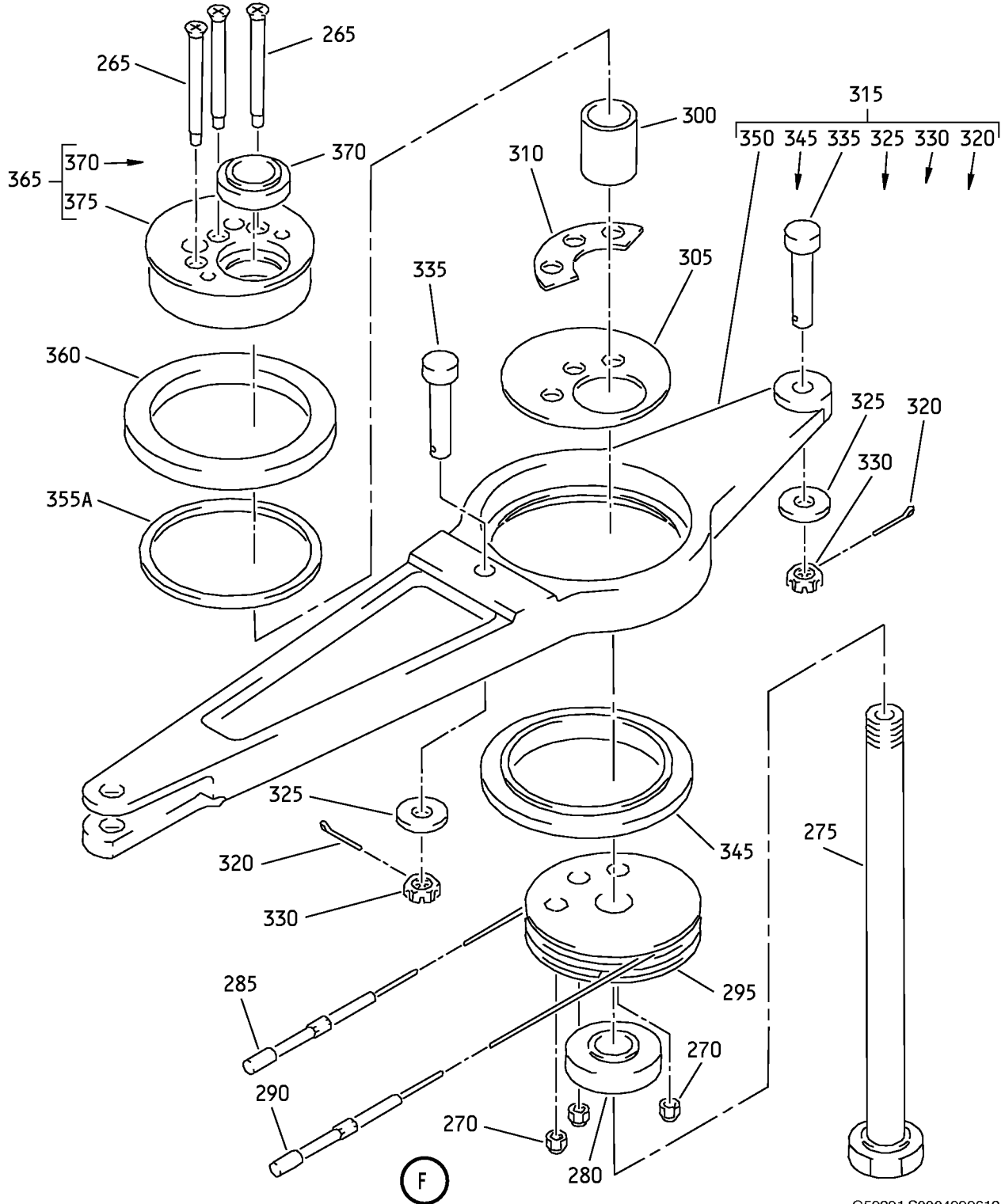
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G59291 S0004999612\_V2

Rudder Pedal Steering Assembly  
IPL Figure 1 (Sheet 5 of 5)

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## COMPONENT MAINTENANCE MANUAL

| FIG/<br>ITEM | PART NUMBER   | AIRLINE<br>PART<br>NUMBER | NOMENCLATURE |   |   |   |   |   |   | USAGE<br>CODE | UNITS<br>PER<br>ASSY |
|--------------|---------------|---------------------------|--------------|---|---|---|---|---|---|---------------|----------------------|
|              |               |                           | 1            | 2 | 3 | 4 | 5 | 6 | 7 |               |                      |
| 1-           |               |                           |              |   |   |   |   |   |   |               |                      |
| -1A          | 275A5104-1    |                           |              |   |   |   |   |   |   | A             | RF                   |
| -1B          | 275A5104-2    |                           |              |   |   |   |   |   |   | B             | RF                   |
| 5            | BACB30NM3K10  |                           |              |   |   |   |   |   |   |               | 2                    |
| 10           | NAS1149D0316J |                           |              |   |   |   |   |   |   |               | 2                    |
| 15           | PLH53CD       |                           |              |   |   |   |   |   |   |               | 2                    |
|              |               |                           |              |   |   |   |   |   |   |               |                      |
|              |               |                           |              |   |   |   |   |   |   |               |                      |
| 20           | 275A5105-1    |                           |              |   |   |   |   |   |   |               | 1                    |
| 25           | 69-20495-1    |                           |              |   |   |   |   |   |   |               | 1                    |
| 30           | REP3M62NFS210 |                           |              |   |   |   |   |   |   |               | 2                    |
|              |               |                           |              |   |   |   |   |   |   |               |                      |
|              |               |                           |              |   |   |   |   |   |   |               |                      |
| 35           | AN316-6R      |                           |              |   |   |   |   |   |   |               | 2                    |
| 40           | MS20426A5     |                           |              |   |   |   |   |   |   |               | 1                    |
|              |               |                           |              |   |   |   |   |   |   |               |                      |
| 45           | MS20426B5     |                           |              |   |   |   |   |   |   |               | 2                    |
|              |               |                           |              |   |   |   |   |   |   |               |                      |
|              |               |                           |              |   |   |   |   |   |   |               |                      |
| 50           | 69-20495-2    |                           |              |   |   |   |   |   |   |               | 2                    |
| 55           | 69-20495-4    |                           |              |   |   |   |   |   |   |               | 1                    |
| 60           | 69-20495-3    |                           |              |   |   |   |   |   |   |               | 1                    |
| 65           | 69-20495-5    |                           |              |   |   |   |   |   |   |               | 1                    |
| 70           | BACM10L1CWM   |                           |              |   |   |   |   |   |   |               | 1                    |
| 75           | BACR15BA6D    |                           |              |   |   |   |   |   |   |               | 1                    |
|              |               |                           |              |   |   |   |   |   |   |               |                      |
| 80           | BACR24N4B95   |                           |              |   |   |   |   |   |   |               | 1                    |
| 85           | BACB30NF4-30  |                           |              |   |   |   |   |   |   |               | 1                    |
| 90           | BACB30NF4-13  |                           |              |   |   |   |   |   |   |               | 1                    |
| 95           | BACW10P128A   |                           |              |   |   |   |   |   |   |               | 4                    |
| 100          | NAS43DD4-7FC  |                           |              |   |   |   |   |   |   |               | 2                    |
| 105          | NAS1149D0416J |                           |              |   |   |   |   |   |   |               | 2                    |

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## COMPONENT MAINTENANCE MANUAL

| FIG/<br>ITEM | PART NUMBER   | AIRLINE<br>PART<br>NUMBER | NOMENCLATURE |                             |   |   |   |   |   | USAGE<br>CODE | UNITS<br>PER<br>ASSY |
|--------------|---------------|---------------------------|--------------|-----------------------------|---|---|---|---|---|---------------|----------------------|
|              |               |                           | 1            | 2                           | 3 | 4 | 5 | 6 | 7 |               |                      |
| 1-           |               |                           |              |                             |   |   |   |   |   |               |                      |
| 110          | BRH10C4D      |                           | .            | NUT                         |   |   |   |   |   |               | 2                    |
|              |               |                           |              | (V52828)                    |   |   |   |   |   |               |                      |
|              |               |                           |              | (SPEC BACN10JC4CD)          |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT T6C428JCD (V11815))    |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT NS202486-048 (V80539)) |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT 102LH9075-4W (V72962)) |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT H51650-4BAC (V15653))  |   |   |   |   |   |               |                      |
| 115          | 69-20539-2    |                           | .            | SPRING                      |   |   |   |   |   |               | 1                    |
| 120          | 66-25793-1    |                           | .            | BOLT                        |   |   |   |   |   |               | 1                    |
| 125          | NAS1149C0532R |                           | .            | WASHER                      |   |   |   |   |   |               | 2                    |
| 130          | KP5ANJC       |                           | .            | BEARING                     |   |   |   |   |   |               | 1                    |
|              |               |                           |              | (V06144)                    |   |   |   |   |   |               |                      |
|              |               |                           |              | (SPEC BACB10BX5)            |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP5AFS428 (V21335))    |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP5A2TS (V43991))      |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT LLKP5A (V38443))       |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP5AG27 (V30163))      |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP5A (V38443))         |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP5ALY196 (V40920))    |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP5ASD610 (V83086))    |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT CS205E (VK8455))       |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP5A (V21760))         |   |   |   |   |   |               |                      |
| 135          | 66-15736-7    |                           | .            | SPACER                      |   |   |   |   |   |               | 1                    |
| 140          | BRH10C5D      |                           | .            | NUT                         |   |   |   |   |   |               | 1                    |
|              |               |                           |              | (V52828)                    |   |   |   |   |   |               |                      |
|              |               |                           |              | (SPEC BACN10JC5CD)          |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT T6C524JCD (V11815))    |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT 102LH9075-5W (V72962)) |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT H51650-5BAC (V15653))  |   |   |   |   |   |               |                      |
| 145          | 65-25861-6    |                           | .            | ARM ASSY                    |   |   |   |   |   |               | 1                    |
| 150          | AN201KP5A     |                           | . .          | BEARING                     |   |   |   |   |   |               | 1                    |
| 155          | 65-25861-7    |                           | . .          | ARM                         |   |   |   |   |   |               | 1                    |
| 160          | AN316-8R      |                           | .            | NUT                         |   |   |   |   |   |               | 1                    |
| 165          | MS27111-5     |                           | .            | WASHER                      |   |   |   |   |   |               | 1                    |
| 170          | 66-15736-1    |                           | .            | SPACER                      |   |   |   |   |   |               | 1                    |

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| FIG/<br>ITEM | PART NUMBER   | AIRLINE<br>PART<br>NUMBER | NOMENCLATURE |                            |   |   |   |   |   | USAGE<br>CODE | UNITS<br>PER<br>ASSY |
|--------------|---------------|---------------------------|--------------|----------------------------|---|---|---|---|---|---------------|----------------------|
|              |               |                           | 1            | 2                          | 3 | 4 | 5 | 6 | 7 |               |                      |
| 1-           |               |                           |              |                            |   |   |   |   |   |               |                      |
| 175          | KP8AFS428     |                           | .            | BEARING                    |   |   |   |   |   |               | 4                    |
|              |               |                           |              | (V06144)                   |   |   |   |   |   |               |                      |
|              |               |                           |              | (SPEC BACB10BX8)           |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP8AFS428 (V21335))   |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP8A2TS (V43991))     |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT LLKP8A (V38443))      |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP8AG27 (V30163))     |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP8A (V38443))        |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP8BSD610 (V83086))   |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT CS208E (VK8455))      |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP8A (V21760))        |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT KP8ANJC (V06144))     |   |   |   |   |   |               |                      |
| 180          | 66-15736-2    |                           | .            | SPACER                     |   |   |   |   |   |               | 1                    |
| 185          | 65-25843-1    |                           | .            | QUADRANT ASSY-RUDDER PEDAL |   |   |   |   |   |               | 1                    |
|              |               |                           |              | STEERING                   |   |   |   |   |   |               |                      |
| 186          | 65-25843-2    |                           | . .          | QUADRANT                   |   |   |   |   |   |               | 1                    |
| 187          | AN201KP8A     |                           | . .          | BEARING                    |   |   |   |   |   |               | 1                    |
| 188          | NAS538-5P78   |                           | . .          | BUSHING                    |   |   |   |   |   |               | 1                    |
| 190          | NAS623-3-4    |                           | .            | SCREW                      |   |   |   |   | A |               | 2                    |
| -190A        | BACS12GU3K9   |                           | .            | SCREW                      |   |   |   |   | B |               | 2                    |
| 195          | 66-15707-1    |                           | .            | PLATE-CABLE END            |   |   |   |   |   |               | 2                    |
| 200          | NAS1149D0363J |                           | .            | WASHER                     |   |   |   |   |   |               | 2                    |
| 205          | PLH53CD       |                           | .            | NUT                        |   |   |   |   |   |               | 2                    |
|              |               |                           |              | (VF0224)                   |   |   |   |   |   |               |                      |
|              |               |                           |              | (SPEC BACN10YR3CD)         |   |   |   |   |   |               |                      |
|              |               |                           |              | (OPT PLH53CD (V62554))     |   |   |   |   |   |               |                      |
| 210          | 66-15736-3    |                           | .            | SPACER                     |   |   |   |   |   |               | 1                    |
| 215          | 65-25820-11   |                           | .            | CRANK ASSY                 |   |   |   |   |   |               | 1                    |
| 220          | AN380-2-2     |                           | . .          | PIN                        |   |   |   |   |   |               | 2                    |
| 225          | AN960D10L     |                           | . .          | WASHER                     |   |   |   |   |   |               | 6                    |
| 230          | AN320-3       |                           | . .          | NUT                        |   |   |   |   |   |               | 2                    |
| 235          | BACB10AF3F7H  |                           | . .          | BEARING                    |   |   |   |   |   |               | 1                    |
| 240          | BACB10AF3F5H  |                           | . .          | BEARING                    |   |   |   |   |   |               | 1                    |
| -245         | 66-1354-2     |                           | . .          | PLUG                       |   |   |   |   |   |               | AR                   |
| 250          | 65-25820-10   |                           | . .          | CRANK                      |   |   |   |   |   |               | 1                    |
|              |               |                           |              | (OPT ITEM 250A)            |   |   |   |   |   |               |                      |

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| FIG/<br>ITEM | PART NUMBER     | AIRLINE<br>PART<br>NUMBER | NOMENCLATURE |   |   |   |   |   |   | USAGE<br>CODE | UNITS<br>PER<br>ASSY |    |
|--------------|-----------------|---------------------------|--------------|---|---|---|---|---|---|---------------|----------------------|----|
|              |                 |                           | 1            | 2 | 3 | 4 | 5 | 6 | 7 |               |                      |    |
| 1-           |                 |                           |              |   |   |   |   |   |   |               |                      |    |
| -250A        | 65-25820-13     |                           |              |   |   |   |   |   |   |               |                      | 1  |
|              |                 |                           |              |   |   |   |   |   |   |               |                      |    |
| 255          | 66-15736-5      |                           |              |   |   |   |   |   |   |               |                      | 1  |
| 260          | 275A5103-1      |                           |              |   |   |   |   |   |   |               |                      | 1  |
| 265          | BACB30LU4-21    |                           |              |   |   |   |   |   |   |               |                      | 3  |
| 270          | BRH10C4D        |                           |              |   |   |   |   |   |   |               |                      | 3  |
|              |                 |                           |              |   |   |   |   |   |   |               |                      |    |
|              |                 |                           |              |   |   |   |   |   |   |               |                      |    |
| 275          | 66-15669-1      |                           |              |   |   |   |   |   |   |               |                      | 1  |
| 280          | KP8AFS428       |                           |              |   |   |   |   |   |   |               |                      | 1  |
|              |                 |                           |              |   |   |   |   |   |   |               |                      |    |
|              |                 |                           |              |   |   |   |   |   |   |               |                      |    |
| 285          | BACC2A3A00110DH |                           |              |   |   |   |   |   |   |               |                      | 1  |
| 290          | BACC2A3A00097CH |                           |              |   |   |   |   |   |   |               |                      | 1  |
| 295          | 69-20285-2      |                           |              |   |   |   |   |   |   |               |                      | 1  |
| 300          | 66-15736-4      |                           |              |   |   |   |   |   |   |               |                      | 1  |
| 305          | 69-20427-1      |                           |              |   |   |   |   |   |   |               |                      | 1  |
| 310          | 69-58176-1      |                           |              |   |   |   |   |   |   |               |                      | AR |
| 315          | 65-25844-8      |                           |              |   |   |   |   |   |   |               |                      | 1  |
| 320          | AN380-2-2       |                           |              |   |   |   |   |   |   |               |                      | 2  |
| 325          | AN960PD10L      |                           |              |   |   |   |   |   |   |               |                      | 2  |
| 330          | AN320-3         |                           |              |   |   |   |   |   |   |               |                      | 2  |
| 335          | BACB10AF3F7H    |                           |              |   |   |   |   |   |   |               |                      | 2  |
| -340         | 66-1354-2       |                           |              |   |   |   |   |   |   |               |                      | AR |

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| FIG/<br>ITEM | PART NUMBER | AIRLINE<br>PART<br>NUMBER | NOMENCLATURE |   |   |   |   |   |   | USAGE<br>CODE | UNITS<br>PER<br>ASSY |
|--------------|-------------|---------------------------|--------------|---|---|---|---|---|---|---------------|----------------------|
|              |             |                           | 1            | 2 | 3 | 4 | 5 | 6 | 7 |               |                      |
| 1-           |             |                           |              |   |   |   |   |   |   |               |                      |
| 345          | B546DD      |                           |              |   |   |   |   |   |   |               | 1                    |
|              |             |                           |              |   |   |   |   |   |   |               |                      |
| 350          | 65-25844-9  |                           |              |   |   |   |   |   |   |               | 1                    |
| -355         | 66-15836-6  |                           |              |   |   |   |   |   |   |               |                      |
| 355A         | 66-15736-6  |                           |              |   |   |   |   |   |   |               | 1                    |
| 360          | B546DDNJC   |                           |              |   |   |   |   |   |   |               | 1                    |
|              |             |                           |              |   |   |   |   |   |   |               |                      |
| 365          | 69-20309-1  |                           |              |   |   |   |   |   |   |               | 1                    |
| 370          | AN201KP8A   |                           |              |   |   |   |   |   |   |               | 1                    |
| 375          | 69-20309-2  |                           |              |   |   |   |   |   |   |               | 1                    |

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