

 **BOEING**
COMPONENT
MAINTENANCE MANUAL

TO: ALL HOLDERS OF INBOARD LEADING EDGE SLAT DRIVE CONTROL UNIT ASSEMBLY
COMPONENT MAINTENANCE MANUAL 27-81-05

REVISION NO. 12 DATED JUL 01/03

HIGHLIGHTS

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

CHAPTER/SECTION

AND PAGE NO.

DESCRIPTION OF CHANGE

ALL PAGES

Added top assembly 256T5660-1 per PRR B13251.

TITLE PAGE

Amended front matter item numbers to match IPL.

1

TR & SB RECORD

1

302-303

501

701-704

1019-1023,1025

301-303

Amended refinish codes for repair 7-1 Fig. 601.

REPAIR 2-1

605

REPAIR 7-1

602

703,705

303

Revise parts list to match CG parts list.

REPAIR 2-1

601

1018-1019,1025

REPAIR 4-1

Added sheet 2 to repair 4-1 Fig. 601 to reflect new refinish requirements.

602-603

1016

27-81-05

HIGHLIGHTS

01.1

Page 1

Jul 01/03

 **BOEING**
COMPONENT
MAINTENANCE MANUAL

CHAPTER/SECTION
AND PAGE NO.
REPAIR 9-1
601-602
701,705-708
1011-1014

DESCRIPTION OF CHANGE
Edited without technical change.

27-81-05

HIGHLIGHTS

01.1

Page 2

Jul 01/03



INBOARD LEADING EDGE SLAT DRIVE CONTROL UNIT ASSEMBLY

PART NUMBERS 256T2660-3,-4,-5
256T5660-1

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

27-81-05

TITLE PAGE

Page 1

Jul 01/03

01.1

REVISION RECORD

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

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

256T2660
256T5660

 **BOEING**
COMPONENT
MAINTENANCE MANUAL

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR B10298 PRR B10614 PRR B10751 PRR B11488 PRR B13251	OCT 10/81 JUL 10/82 JUL 10/83 JUL 10/87 JUL 01/03

27-81-05

TR & SB RECORD

01.1

Page 1

Jul 01/03

PAGE	DATE	CODE	PAGE	DATE	CODE
27-81-05			CHECK		
			*501	JUL 01/03	01.1
			*502	JUL 01/03	01.1
TITLE PAGE			REPAIR-GENERAL		
*1	JUL 01/03	01.1	*601	JUL 01/03	01.1
2	BLANK		*602	JUL 01/03	01.1
REVISION RECORD			*603	JUL 01/03	01.1
*1	JUL 01/03	01.1	604	BLANK	
2	BLANK		REPAIR 1-1		
TR & SB RECORD			*601	JUL 01/03	01.1
*1	JUL 01/03	01.1	602	BLANK	
2	BLANK		REPAIR 2-1		
LIST OF EFFECTIVE PAGES			*601	JUL 01/03	01.1
*1	JUL 01/03	01	*602	JUL 01/03	01.1
THRU LAST PAGE			*603	JUL 01/03	01.1
CONTENTS			*604	JUL 01/03	01.1
*1	JUL 01/03	01.1	*605	JUL 01/03	01.1
2	BLANK		606	BLANK	
INTRODUCTION			REPAIR 3-1		
*1	JUL 01/03	01.1	*601	JUL 01/03	01.1
2	BLANK		*602	JUL 01/03	01.1
DESCRIPTION & OPERATION			*603	JUL 01/03	01.1
*1	JUL 01/03	01.1	604	BLANK	
2	BLANK		REPAIR 4-1		
DISASSEMBLY			*601	JUL 01/03	01.1
*301	JUL 01/03	01.1	*602	JUL 01/03	01.1
*302	JUL 01/03	01.1	*603	JUL 01/03	01.1
*303	JUL 01/03	01.1	*604	BLANK	
304	BLANK		REPAIR 5-1		
CLEANING			*601	JUL 01/03	01.1
*401	JUL 01/03	01.1	*602	JUL 01/03	01.1
402	BLANK		REPAIR 6-1		
			*601	JUL 01/03	01.1
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27-81-05

EFFECTIVE PAGES
CONTINUED Page 1
01 Jul 01/03

PAGE	DATE	CODE	PAGE	DATE	CODE
REPAIR 7-1			ILLUSTRATED PARTS LIST		
*601	JUL 01/03	01.1	*1001	JUL 01/03	01.1
*602	JUL 01/03	01.1	*1002	JUL 01/03	01.1
REPAIR 8-1			*1003	JUL 01/03	01.1
*601	JUL 01/03	01.1	*1004	JUL 01/03	01.1
*602	JUL 01/03	01.1	*1005	JUL 01/03	01.1
REPAIR 9-1			*1006	JUL 01/03	01.1
*601	JUL 01/03	01.1	*1007	JUL 01/03	01.1
*602	JUL 01/03	01.1	*1008	JUL 01/03	01.1
REPAIR 10-1			*1009	JUL 01/03	01.1
*601	JUL 01/03	01.1	*1010	BLANK	
*602	JUL 01/03	01.1	*1011	JUL 01/03	01.1
REPAIR 11-1			*1012	JUL 01/03	01.1
*601	JUL 01/03	01.1	*1013	JUL 01/03	01.1
*602	JUL 01/03	01.1	*1014	JUL 01/03	01.1
ASSEMBLY			*1015	JUL 01/03	01.1
*701	JUL 01/03	01.1	*1016	JUL 01/03	01.1
*702	JUL 01/03	01.1	*1017	JUL 01/03	01.1
*703	JUL 01/03	01.1	*1018	JUL 01/03	01.1
*704	JUL 01/03	01.1	*1019	JUL 01/03	01.1
*705	JUL 01/03	01.1	*1020	JUL 01/03	01.1
*706	JUL 01/03	01.1	*1021	JUL 01/03	01.1
*707	JUL 01/03	01.1	*1022	JUL 01/03	01.1
*708	JUL 01/03	01.1	*1023	JUL 01/03	01.1
*709	JUL 01/03	01.1	*1024	JUL 01/03	01.1
710	BLANK		*1025	JUL 01/03	01.1
FITS AND CLEARANCES			*1026	BLANK	
*801	JUL 01/03	01.1			
*802	JUL 01/03	01.1			
*803	JUL 01/03	01.1			
*804	JUL 01/03	01.1			
SPECIAL TOOLS					
*901	JUL 01/03	01.1			
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* = REVISED, ADDED OR DELETED

27-81-05

EFFECTIVE PAGES
 LAST PAGE Page 2
 01 Jul 01/03

TABLE OF CONTENTS

<u>Paragraph Title</u>	<u>Page</u>
Description and Operation.	1
Testing and Trouble Shooting (Not Applicable)	
Disassembly.	301
Cleaning	401
Check.	501
Repair	601
Assembly	701
Fits and Clearances.	801
Special Tools.	901
Illustrated Parts List	1001

27-81-05

CONTENTS
Page 1
Jul 01/03

01.1

INTRODUCTION

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

This manual is divided into separate sections:

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

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

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

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

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

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

Verification:

Disassembly	Mar 3/83
Assembly	Mar 3/83

27-81-05

INTRODUCTION

01.1

Page 1

Jul 01/03

INBOARD LEADING EDGE SLAT DRIVE CONTROL UNIT ASSEMBLY

DESCRIPTION AND OPERATION

1. The inboard leading edge slat drive control unit assembly consists of an input cam, a follow-up cam and a summing lever housed in an aluminum alloy housing and cover. A quill shaft connects to the follow-up cam and to a sensor assembly which in turn connects to two transformers.
2. Input signals from the pilot rotate the input cam which positions the valve input shaft to apply hydraulic pressure to the slat drive motor. As the slat reaches the selected position, the rotation of the follow-up cam changes the position of the valve input shaft stopping hydraulic fluid flow. The quill shaft transmits signals from the gearbox to the follow-up cam and to the sensor.

3. Leading Particulars (Approximate)

Width -- 9 inches
Depth -- 11 inches
Height -- 12 inches
Weight -- 20 pounds

27-81-05

DESCRIPTION & OPERATION

01.1

Page 1

Jul 01/03

DISASSEMBLY

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

1. Parts Replacement

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

A. Gasket (65)

B. Lockwire

2. Disassembly (IPL Fig. 1)

CAUTION: USE EXTREME CARE WHEN REMOVING THE COVER ASSEMBLY (35), OR THE WIRES ON THE TRANSFORMERS (80, 82) CAN TWIST, BIND, OR BREAK.

A. Remove screws (40), washers (45) and carefully pull cover assembly (35) away from housing cover assembly (85).

B. Remove lockwire, bolts (75), clamps (70A) and remove transformers (80, 82) from sensor assembly (110).

C. Remove screws (30) and remove transformers (80, 82) from cover assembly (35).

NOTE: Do not remove nutplates (50) or markers (430, 435A) from cover (60) unless repair or replacement is necessary.

D. Remove lockwire, bolts (115), washers (120) and remove sensor assembly (110) and shaft (395). Pull shaft (395) straight out of sensor assembly (110). Remove packing (400) from shaft (395).

E. Disassemble sensor assembly (110).

(1) Remove bolts (125), washers (130) and nuts (135). Separate bearing support ring (145) from sensor support plate (140) and remove gears (160) and spline shaft assembly (165).

(2) Remove pin (170) and separate spline shaft (180) from input pinion gear (175).

27-81-05

DISASSEMBLY

01.1

Page 301

Jul 01/03

- (3) Remove bearings (150, 155) from bearing support ring (145) and sensor support plate (140).
- F. Remove bolts (5), washers (10) and nuts (15) and remove pilot input arm (20) and valve input arm (25).
- G. Stand unit on housing assembly (205A, 205B) with follow-up cam (290A, 292) shaft facing down and remove bolts (90), washers (95) and carefully remove cover assembly (85) by pulling straight away from housing assembly (205A, 205B).
- H. Remove bearings (280, 405) from cover assembly (85).
- I. Remove pilot input shaft (420) with attached parts from housing assembly (205A). Separate washer (410) and sector gear (415) from shaft (420).
- J. Remove bolts (225B), washers (230), spacers (235A), nuts (240) and spring (245) from shaft (270) and housing assembly (205A).
- K. Remove shaft (270) and attached parts from housing assembly (205A, 205B).
- L. Remove bolt (250), bushing (260), nut (265) and separate summing lever (365) from shaft (270).
- M. Remove nuts (340), washers (345) and cam followers (360) from summing lever (365). Remove bearings (285, 350, 355) and bushing (255) from summing lever.
- N. Remove nut (370) and washer (375) on cover assembly (85) and remove input cam assembly (315) from cover assembly (85). Remove bearings (390) and spacer (380) from cover assembly.

NOTE: Do not remove inserts (100) from cover (105) unless repair or replacement is necessary.

Do not disassemble input cam assembly (315) unless repair or replacement is necessary.

27-81-05

DISASSEMBLY

01.1

Page 302

Jul 01/03

0. Remove nut (370), washer (375) from housing assembly (205A) and remove cam assembly (290A, 292) from housing assembly (205A). Remove bearings (275, 390, 405) and spacer (385) from housing assembly.

NOTE: Do not disassemble housing assembly (205A, 205B) unless necessary for repair or replacement.

Do not disassemble cam assembly (290A, 292) unless repair or replacement is necessary.

Do not remove marker (425) from housing assembly (205A, 205B) unless replacement is necessary.

P. Remove drain cover (200) by removing parts (185, 190).

27-81-05

DISASSEMBLY

01.1

Page 303

Jul 01/03

CLEANING

1. Clean all parts except bearings using standard industry practices and information contained in 20-30-03.
2. Clean teflon sealed bearings per manufacturer's instructions.

27-81-05

01.1
CLEANING
Page 401
Jul 01/03

CHECK

1. Check all parts for obvious defects in accordance with standard industry practices. Refer to FITS AND CLEARANCES for design dimensions and wear limits.
2. Penetrant check per 20-20-02 the following listed parts:
 - A. Support plate (140, IPL Fig. 1)
 - B. Spline shaft (180)
 - C. Input pinion gear (175)
 - D. Gear (160)
 - E. Support ring (145)
 - F. Pilot input arm (20)
 - G. Shaft (395)
 - H. Housing (222A)
 - I. Housing cover (105)
 - J. Input sector gear (415)
 - K. Valve input arm (25)
 - L. Shafts (310, 335)
 - M. Boss (214)
3. Magnetic particle check per 20-20-01 the following listed parts:
 - A. Cams (305A, 307, 330)
 - B. Pilot input shaft (420)
 - C. Cam follower (360)
 - D. Summing lever (365)

27-81-05

CHECK

01.1

Page 501

Jul 01/03

4. Check spring (245):

A. Extend spring to 5.16 inches. Check that load is 7.01–8.57 pounds.

B. Extend spring to 6.60 inches. Check that load is 12.37–15.11 pounds.

27-81-05

CHECK
01.1 Page 502
Jul 01/03

REPAIR – GENERAL

1. Content

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

<u>P/N</u>	<u>NAME</u>	<u>REPAIR</u>
256T2684	SHAFT, SPLINE	1-1
256T3161-13,-15	HOUSING	2-1
256T3163-3	COVER, HOUSING	3-1
256T3187	SHAFT	4-1
256T3173	FOLLOWER, CAM	5-1
65B81978	COVER	6-1
256T2681	RING, SUPPORT	7-1
256T2682	PLATE, SUPPORT	8-1
- -	MISC PARTS REFINISH	9-1
256T2686	GEAR, INPUT PINION	10-1
256T2687	GEAR, OUTPUT	11-1

2. Standard Practices

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

- 20-10-04 Grinding of Chrome Plated Parts
- 20-11-03 Repair of Electrical Terminations and Electrical Bonding Areas
- 20-30-02 Stripping of Protective Finishes
- 20-30-03 General Cleaning Procedures
- 20-41-01 Decoding Table for Boeing Finish Codes
- 20-41-02 Application of Chemical and Solvent Resistant Finishes
- 20-42-03 Hard Chrome Plating
- 20-42-05 Bright Cadmium Plating
- 20-43-01 Chromic Acid Anodizing
- 20-43-03 Chemical Conversion Coatings for Aluminum
- 20-50-03 Bearing and Bushing Replacement
- 20-60-02 Finishing Materials
- 20-60-04 Miscellaneous Materials

27-81-05

REPAIR-GENERAL

01.1

Page 601

Jul 01/03

3. Materials

NOTE: Equivalent substitutes may be used.

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

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

4. Dimensioning Symbols

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

27-81-05

REPAIR-GENERAL

01.1

Page 602

Jul 01/03

BOEING
COMPONENT
MAINTENANCE MANUAL

- 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 WHICH PERMISSIBLE VARIATIONS ARE ESTABLISHED BY TOLERANCES ON OTHER DIMENSIONS OR NOTES.
- A- DATUM
- Ⓜ MAXIMUM MATERIAL CONDITION (MMC)
- Ⓛ LEAST MATERIAL CONDITION (LMC)
- Ⓢ REGARDLESS OF FEATURE SIZE (RFS)
- Ⓟ PROJECTED TOLERANCE ZONE
- FIM FULL INDICATOR MOVEMENT

EXAMPLES

<p>⊖ 0.002 STRAIGHT WITHIN 0.002</p> <p>⊥ 0.002 B PERPENDICULAR TO B WITHIN 0.002</p> <p>// 0.002 A PARALLEL TO A WITHIN 0.002</p> <p>○ 0.002 ROUND WITHIN 0.002</p> <p>⊙ 0.010 CYLINDRICAL SURFACE MUST LIE BETWEEN TWO CONCENTRIC CYLINDERS, ONE OF WHICH HAS A RADIUS 0.010 INCH GREATER THAN THE OTHER</p> <p>⌒ 0.006 A EACH LINE ELEMENT OF THE SURFACE AT ANY CROSS SECTION MUST LIE BETWEEN TWO PROFILE BOUNDARIES 0.006 INCH APART RELATIVE TO DATUM PLANE A</p> <p>△ 0.020 A SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.02 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE</p>	<p>◎ ∅ 0.0005 C CONCENTRIC TO C WITHIN 0.0005 DIAMETER</p> <p>≡ 0.010 A SYMMETRICAL WITH A WITHIN 0.010</p> <p>∠ 0.005 A ANGULAR TOLERANCE 0.005 WITH A</p> <p>⊕ ∅ 0.002 Ⓢ B LOCATED AT TRUE POSITION WITHIN 0.002 DIA RELATIVE TO DATUM B, REGARDLESS OF FEATURE SIZE</p> <p>⊥ ∅ 0.010 Ⓜ A 0.510 Ⓟ AXIS IS TOTALLY WITHIN A CYLINDER OF 0.010-INCH DIAMETER, PERPENDICULAR TO, AND EXTENDING 0.510-INCH ABOVE, DATUM A, MAXIMUM MATERIAL CONDITION</p> <p>2.000 THEORETICALLY EXACT DIMENSION IS 2.000 OR 2.000 BSC</p> <p>0.020 A A 0.020</p>
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NOTE: DATUM MAY APPEAR AT EITHER SIDE OF TOLERANCE FRAME

True Position Dimensioning Symbols
Figure 601

27-81-05

REPAIR-GENERAL

01.1

Page 603

Jul 01/03

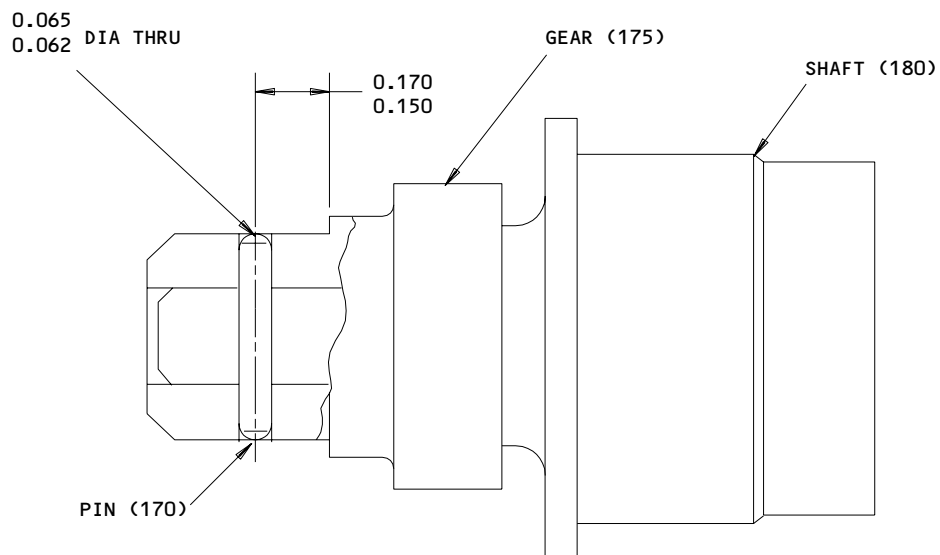
SPLINE SHAFT ASSEMBLY – REPAIR 1-1

256T2684-2, -3

NOTE: Refer to REPAIR-GEN for list of applicable standard practices.

1. Parts Replacement (Fig. 601)

- A. Assemble gear (175, IPL Fig. 1) on shaft (180).
- B. Drill 0.062–0.065-inch diameter hole through gear (175) and shaft (180), maintain dimension shown. Remove gear (175) from shaft (180).
- C. Assemble gear (175), shaft (180) and spring pin (170) using wet primer.



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

Parts Replacement
Figure 601

3826

27-81-05

REPAIR 1-1

01.1

Page 601

Jul 01/03

HOUSING ASSEMBLY – REPAIR 2-1

256T3161-13,-15

NOTE: Refer to REPAIR-GEN for list of applicable standard practices. For repair of housing (222A, IPL Fig. 1) surfaces which may only require stripping and restoration of original finish, refer to Refinish instructions, Fig. 601.

1. Bushing (215) Replacement (Fig. 601)

- A. Remove bushing.
- B. Prepare housing and bushing surfaces for electrical bonding per 20-11-03.
- C. Install new bushing by shrink-fit method per 20-50-03. Do not apply finish to hole in housing. Do not install bushing with grease.
- D. Make sure that the electrical resistance across the bond is not more than 0.0005 ohm.
- E. Machine bushings to dimensions shown.
- F. Fillet seal bushing flange and end with sealant.

2. Bushing (218) Replacement (Fig. 601)

- A. Remove bushing.
- B. Install new bushing by shrink-fit method with sealant per 20-50-03.
- C. Machine bushing to dimensions shown.

3. Boss Replacement (256T3161-15 only)

- A. Remove bolts (219) and collars (219A). Remove boss (221).
- B. Install new boss (221) with sealant on faying surfaces, then install bolts (219) and collars (219A).
- C. Machine the rig pin hole in the boss as shown in Fig. 601.
- D. Chemical treat (F-17.10) the machined hole.

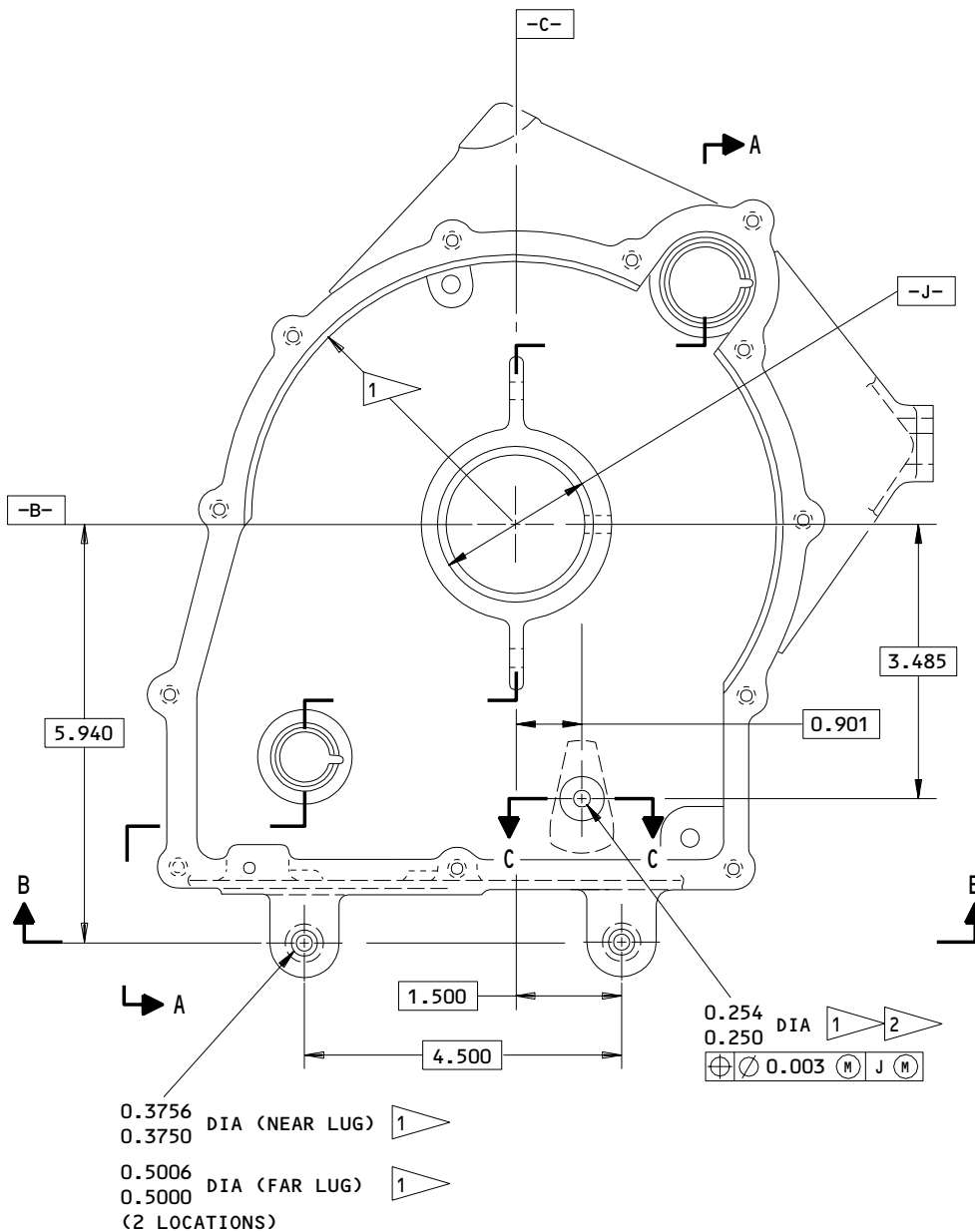
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REPAIR 2-1

01.1

Page 601

Jul 01/03



ALL DIMENSIONS ARE IN INCHES

256T3161-13,-15
 Housing Assembly - Bushing Replacement and Refinish
 Figure 601 (Sheet 1)

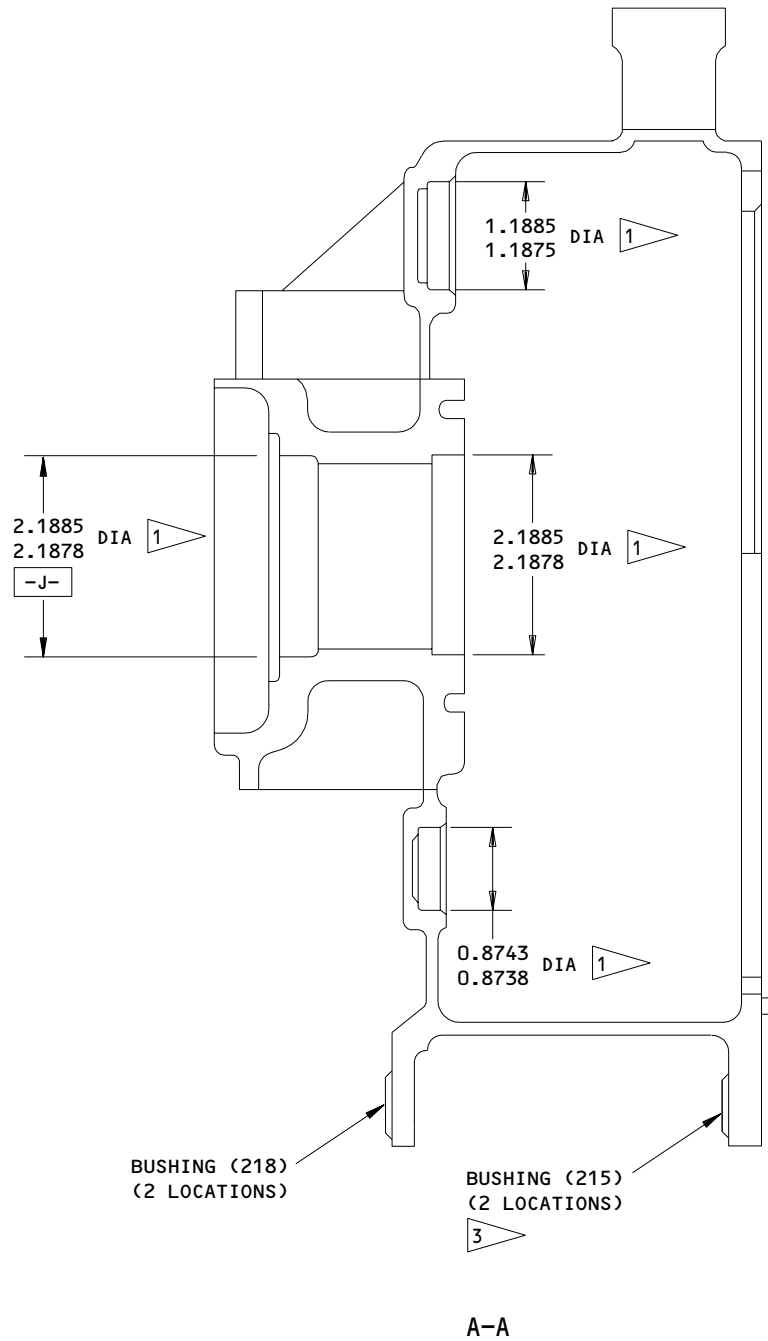
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REPAIR 2-1

Page 602

Jul 01/03

01.1



256T3161-13,-15
Housing Assembly - Bushing Replacement and Refinish
Figure 601 (Sheet 2)

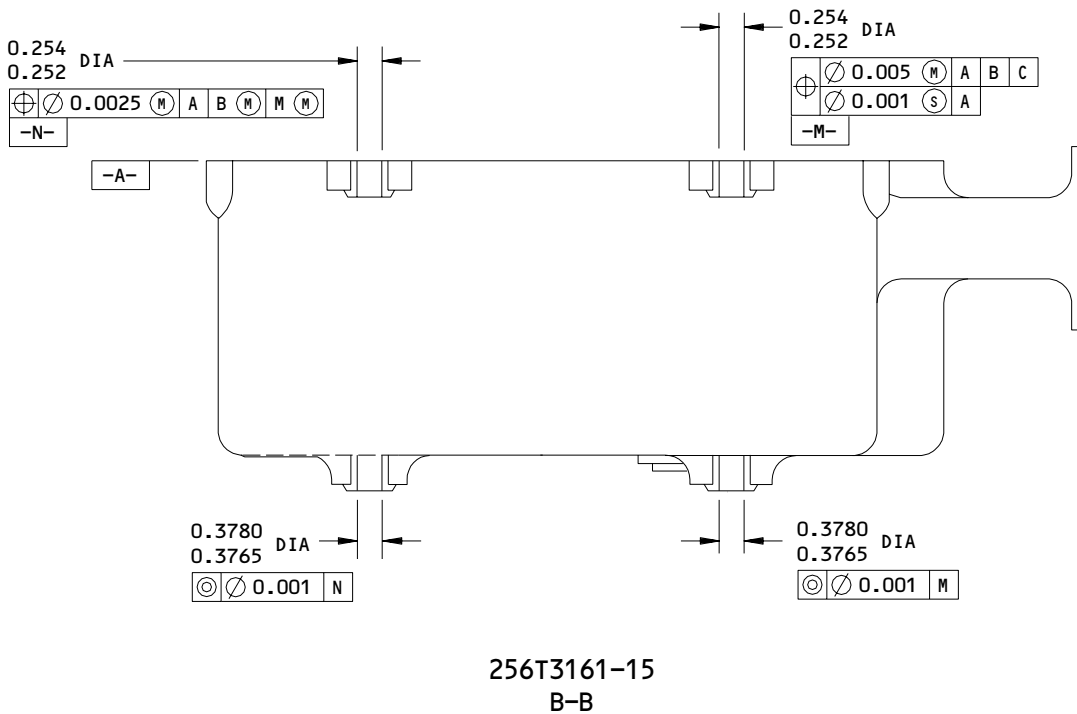
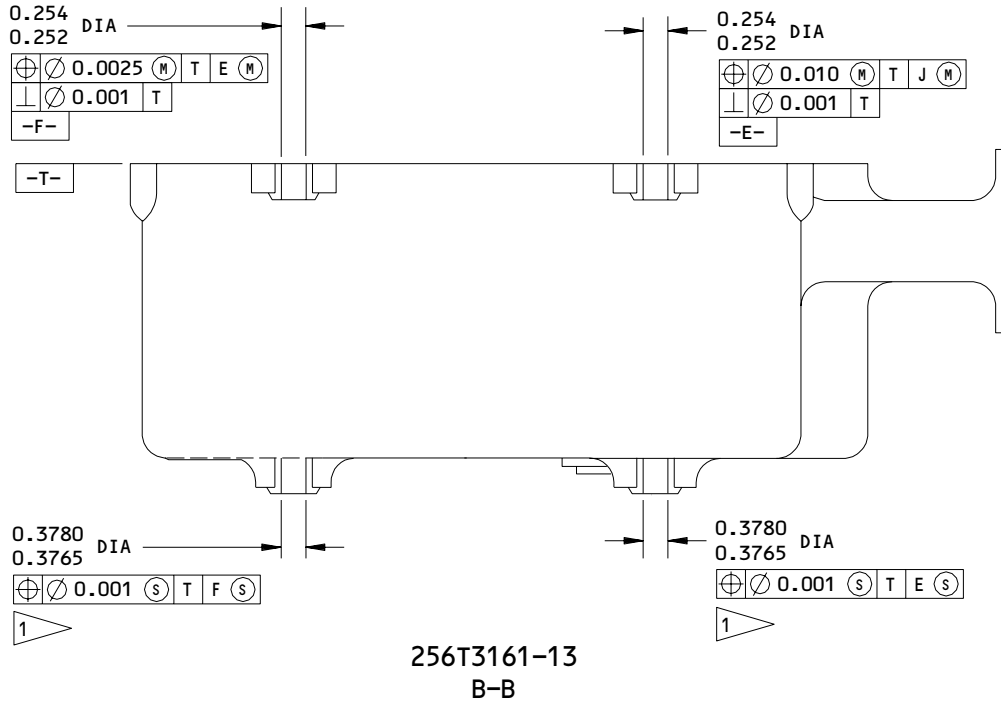
27-81-05

REPAIR 2-1

01.1

Page 603

Jul 01/03

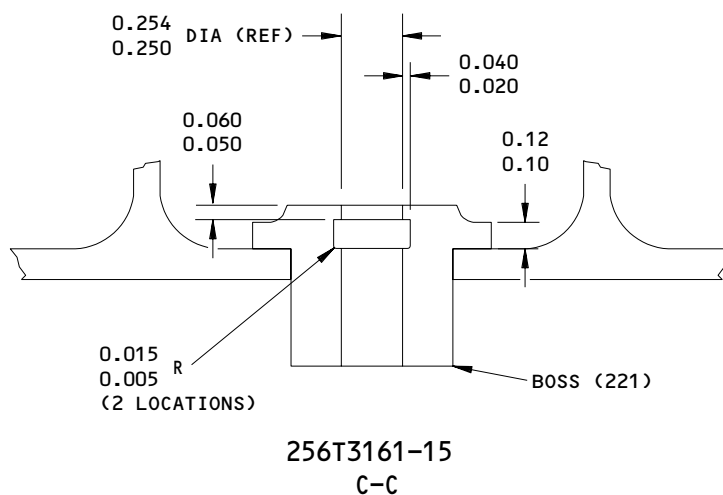


256T3161-13,-15
 Housing Assembly - Bushing Replacement and Refinish
 Figure 601 (Sheet 3)

27-81-05

REPAIR 2-1
 Page 604
 Jul 01/03

01.1



REFINISH

HOUSING (222A,222B) -- ANODIZE (F-17.05) AND
APPLY BMS 10-11, TYPE 1 PRIMER (F-20.02)
ALL OVER UNLESS SHOWN DIFFERENTLY

MATERIAL: ALUMINUM ALLOY
ITEM NUMBERS REFER TO IPL FIG. 1
ALL DIMENSIONS ARE IN INCHES

- 1 NO PRIMER ON THIS SURFACE
- 2 HOLE IN HOUSING (222A) OR IN BOSS (221)
- 3 ELECTRICAL BONDING ON THESE BUSHINGS ONLY

256T3161-13,-15
Housing Assembly - Bushing Replacement and Refinish
Figure 601 (Sheet 4)

27-81-05

REPAIR 2-1
Page 605
Jul 01/03

01.1

256T2660
256T5660



HOUSING COVER ASSEMBLY- REPAIR 3-1

256T3163-3

1. Plating Repair

NOTE: Repair consists of restoration of original finish. Refer to Refinish instructions, Fig. 601 and to REPAIR-GEN for list of applicable standard practices.

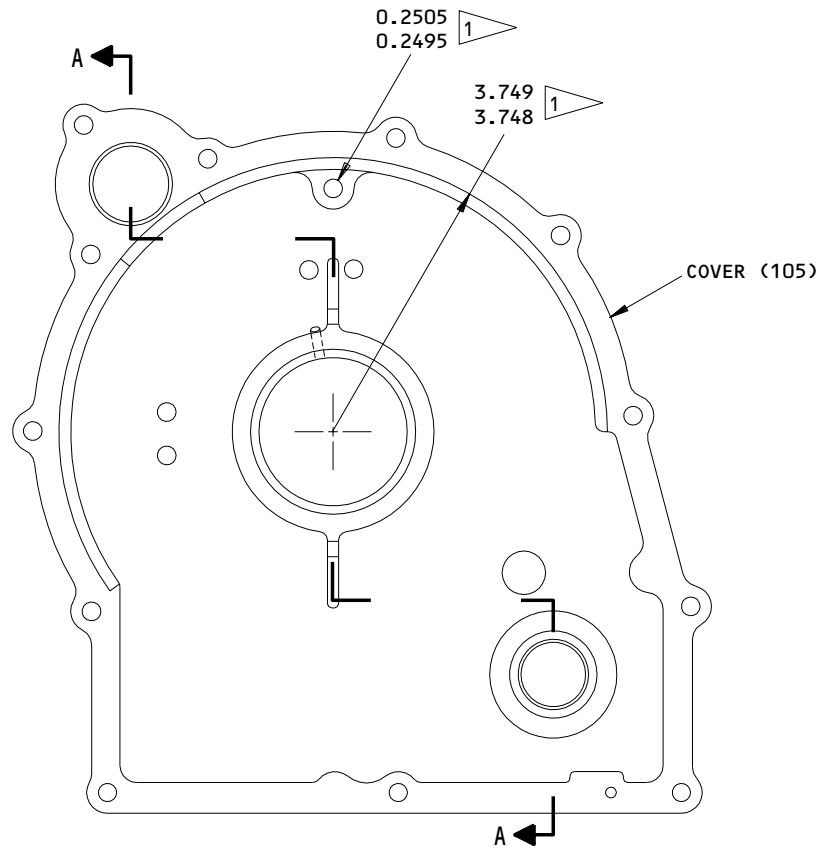
27-81-05

REPAIR 3-1

01.1

Page 601

Jul 01/03

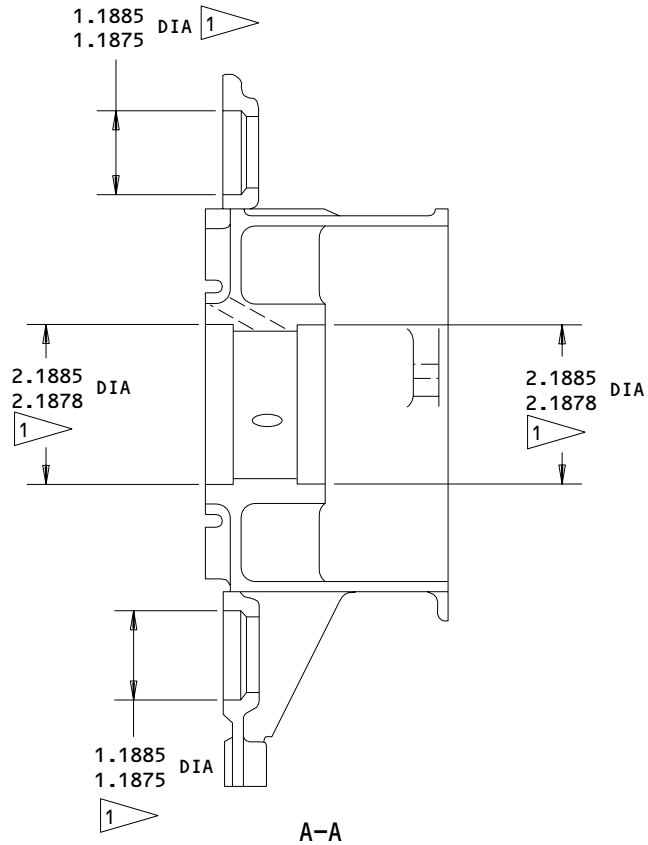


256T3163-3
Housing Cover Assembly - Refinish
Figure 601 (Sheet 1)

27-81-05

REPAIR 3-1
Page 602
Jul 01/03

01.1



REFINISH

COVER (105) -- ANODIZE (F-17.05) AND APPLY
BMS 10-11, TYPE 1 PRIMER (F-20.02) ALL OVER,
UNLESS SHOWN DIFFERENTLY

MATERIAL: ALUMINUM ALLOY
ITEM NUMBERS REFER TO IPL FIG. 1
ALL DIMENSIONS ARE IN INCHES

 NO PRIMER THIS SURFACE

256T3163-3
Housing Cover Assembly - Refinish
Figure 601 (Sheet 2)

27-81-05

REPAIR 3-1
Page 603
Jul 01/03

01.1

256T2660
256T5660



SHAFT - REPAIR 4-1

256T3187-1
256T3189-1

1. Plating Repair

NOTE: Repair consists of restoration of original finish. Refer to Refinish instructions, Fig. 601 and to REPAIR-GEN for list of applicable standard practices.

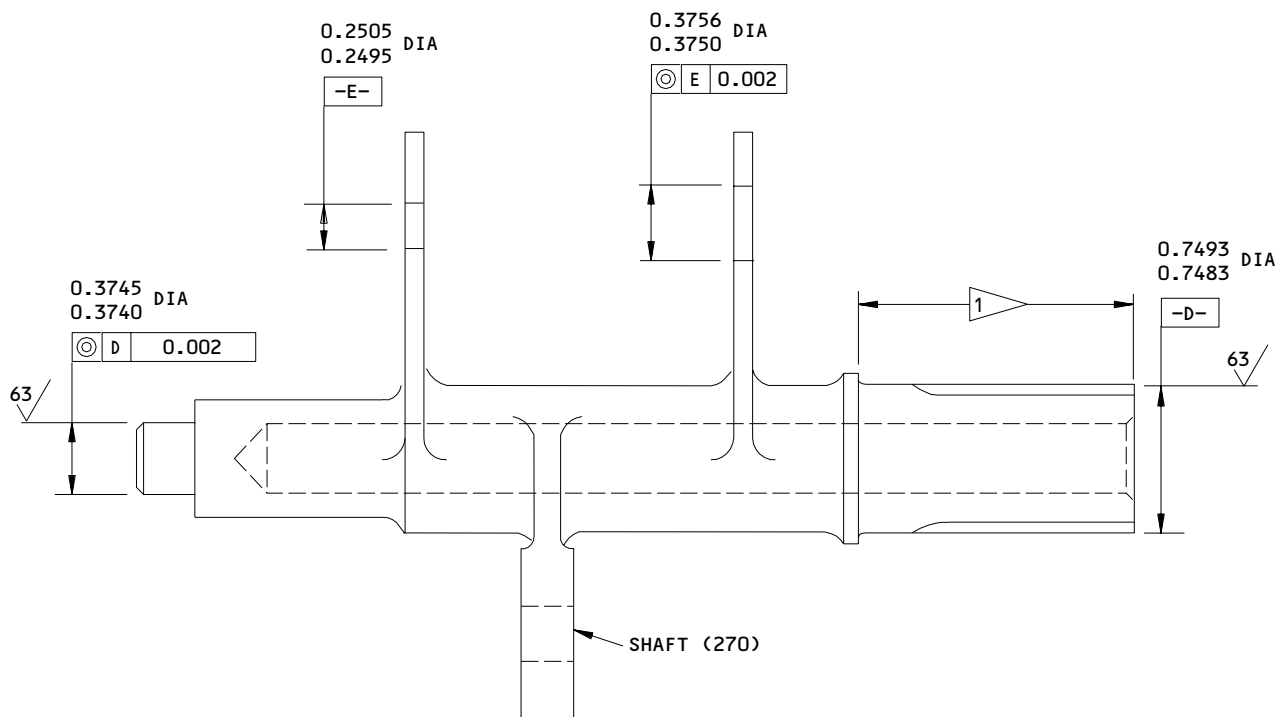
27-81-05

REPAIR 4-1

01.1


Page 601

Jul 01/03



256T3187-1 SHOWN

REFINISH

PASSIVATE (F-17.09) ALL OVER AND CADMIUM
 PLATE (F-15.25) AREA INDICATED BY 

MATERIAL: 15-5PH CRES, 180-200 KSI

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

256T3187-1
 256T3189-1
 Shaft Refinish
 Figure 601 (Sheet 1)

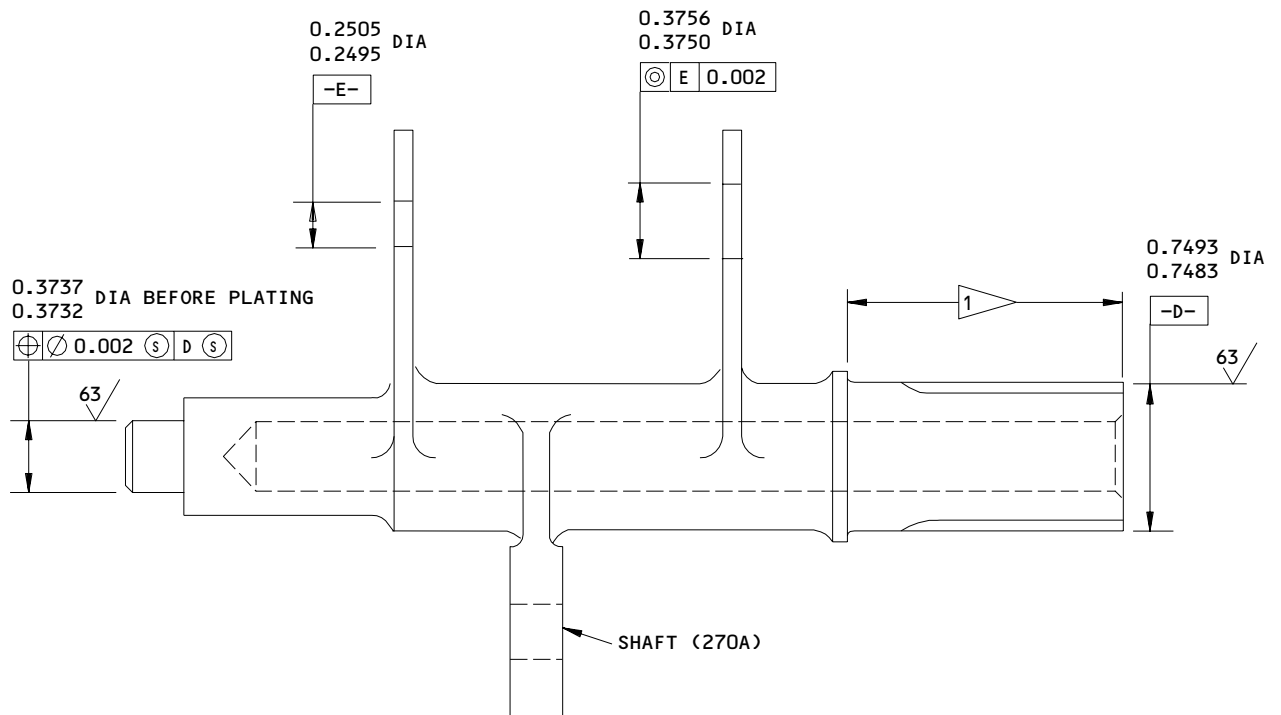
27-81-05

REPAIR 4-1

Page 602

Jul 01/03

01.1



256T3189-1 SHOWN

REFINISH

PASSIVATE (F-17.25) ALL OVER AND CADMIUM PLATE (F-15.02) ALL OVER EXCEPT IN HOLES. THROW-IN ALLOWED IN CENTER BORE.

MATERIAL: 17-5PH CRES, 180 KSI MINIMUM

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

256T3187-1
256T3189-1
Shaft Refinish
Figure 601 (Sheet 2)

27-81-05

REPAIR 4-1

01.1

Page 603

Jul 01/03

256T2660
256T5660



CAM FOLLOWER – REPAIR 5-1

256T3173-1

1. Plating Repair

NOTE: Repair consists of restoration of original finish. Refer to Refinish instructions, Fig. 601 and to REPAIR-GEN for list of applicable standard practices.

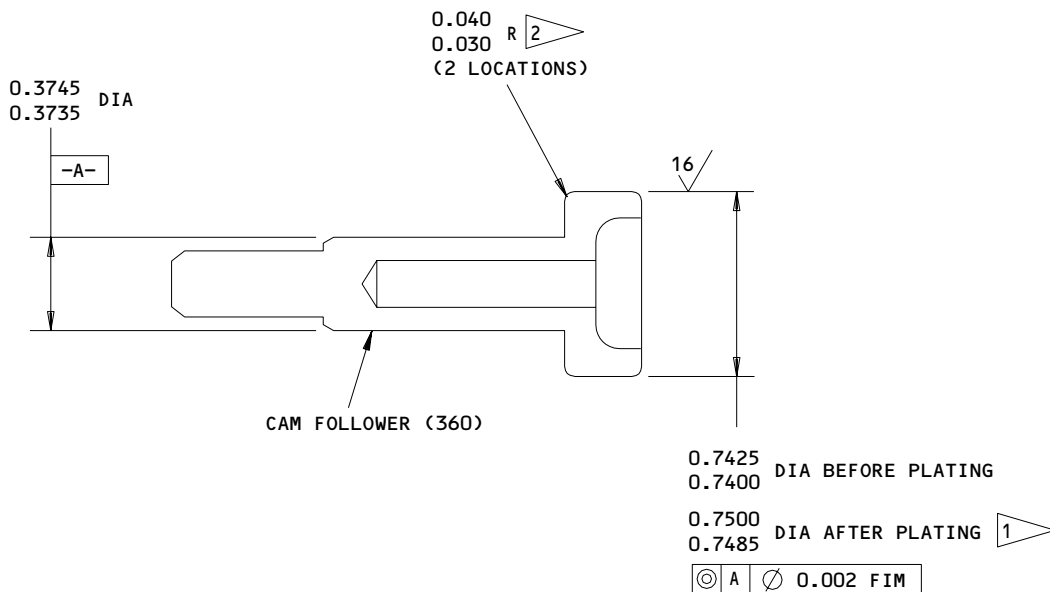
27-81-05

REPAIR 5-1

01.1

Page 601

Jul 01/03



REFINISH

PASSIVATE (F-17.09) BUT NOT ON PLATED SURFACES

MATERIAL: 15-5PH CRES, 150-170 KSI

- 1 CHROME PLATE (F-15.03). SINGLE PLATE THICKNESS 0.003 MINIMUM AFTER GRINDING
- 2 CHROME PLATE TO RUNOUT AROUND EDGE RADIUS

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

256T3173-1
 Cam Follower Refinish
 Figure 601

27-81-05

REPAIR 5-1
 Page 602
 Jul 01/03

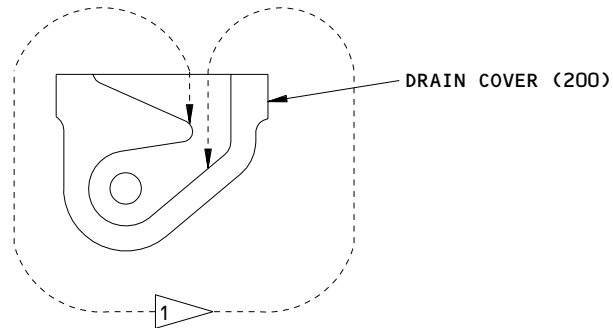
01.1

DRAIN COVER – REPAIR 6-1

65B81978-1, -4

1. Plating Repair

NOTE: Repair consists of restoration of original finish. Refer to Refinish instructions. Fig. 601 and to REPAIR-GEN for list of applicable standard practices.



REFINISH

CHROMIC ACID ANODIZE (F-17.02) ALL OVER AND
APPLY BMS 10-11, TYPE 1 PRIMER (F-20.02)
AS SHOWN

MATERIAL: ALUMINUM ALLOY
ITEM NUMBERS REFER TO IPL FIG. 1

1 > APPLY PRIMER TO THESE SURFACES ONLY

Drain Cover Refinish
Figure 601

256T2660
256T5660



SUPPORT RING – REPAIR 7-1

256T2681-1, -2

1. Plating Repair

NOTE: Repair consists of stripping and restoration of original finish. Refer to Refinish instruction in Fig. 601 and to REPAIR-GEN for List of applicable standard practices.

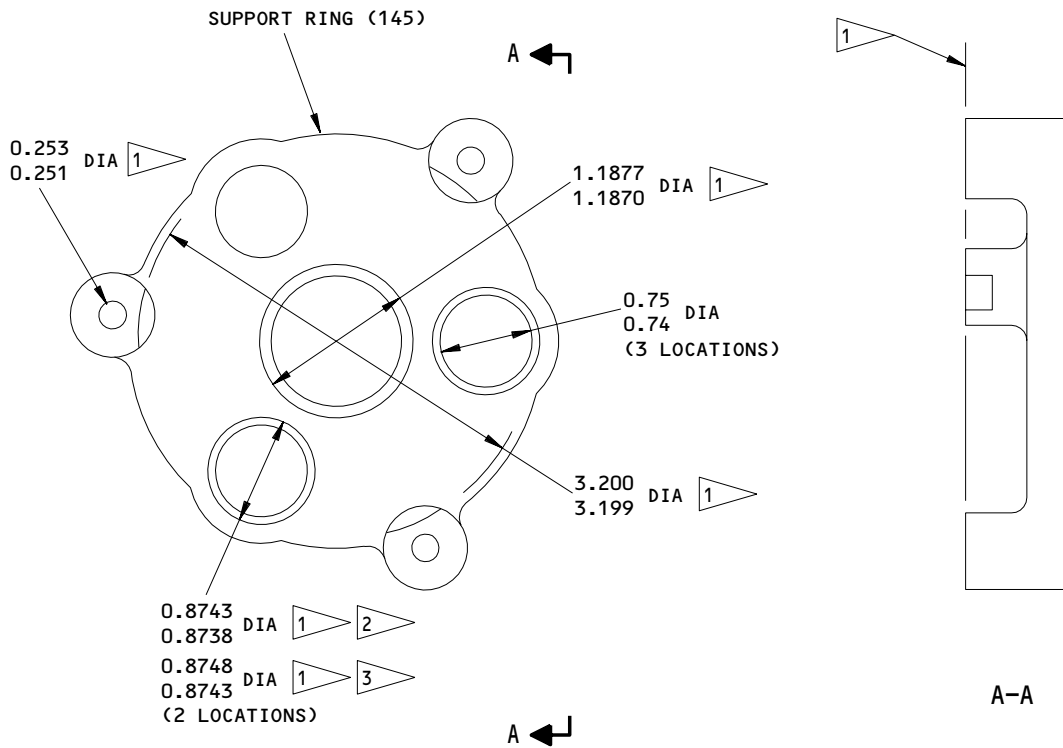
27-81-05

REPAIR 7-1

01.1

Page 601

Jul 01/03



REFINISH

CHROMIC ACID ANODIZE (F-17.04) AND APPLY BMS 10-11, TYPE 1 PRIMER (F-20.02) ALL OVER, UNLESS SHOWN DIFFERENTLY.

- 1 NO PRIMER THIS SURFACE
- 2 FOR 256T2681-1
- 3 FOR 256T2681-2

MATERIAL: ALUMINUM ALLOY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

256T2681-1,-2
 Support Ring Refinish
 Figure 601

27-81-05

REPAIR 7-1

Page 602

Jul 01/03

01.1

256T2660
256T5660



SUPPORT PLATE – REPAIR 8-1

256T2682-3, -5

1. Plating Repair

NOTE: Repair consists of stripping and restoration of original finish. Refer to Refinish instruction in Fig. 601 and to REPAIR-GEN for List of applicable standard practices.

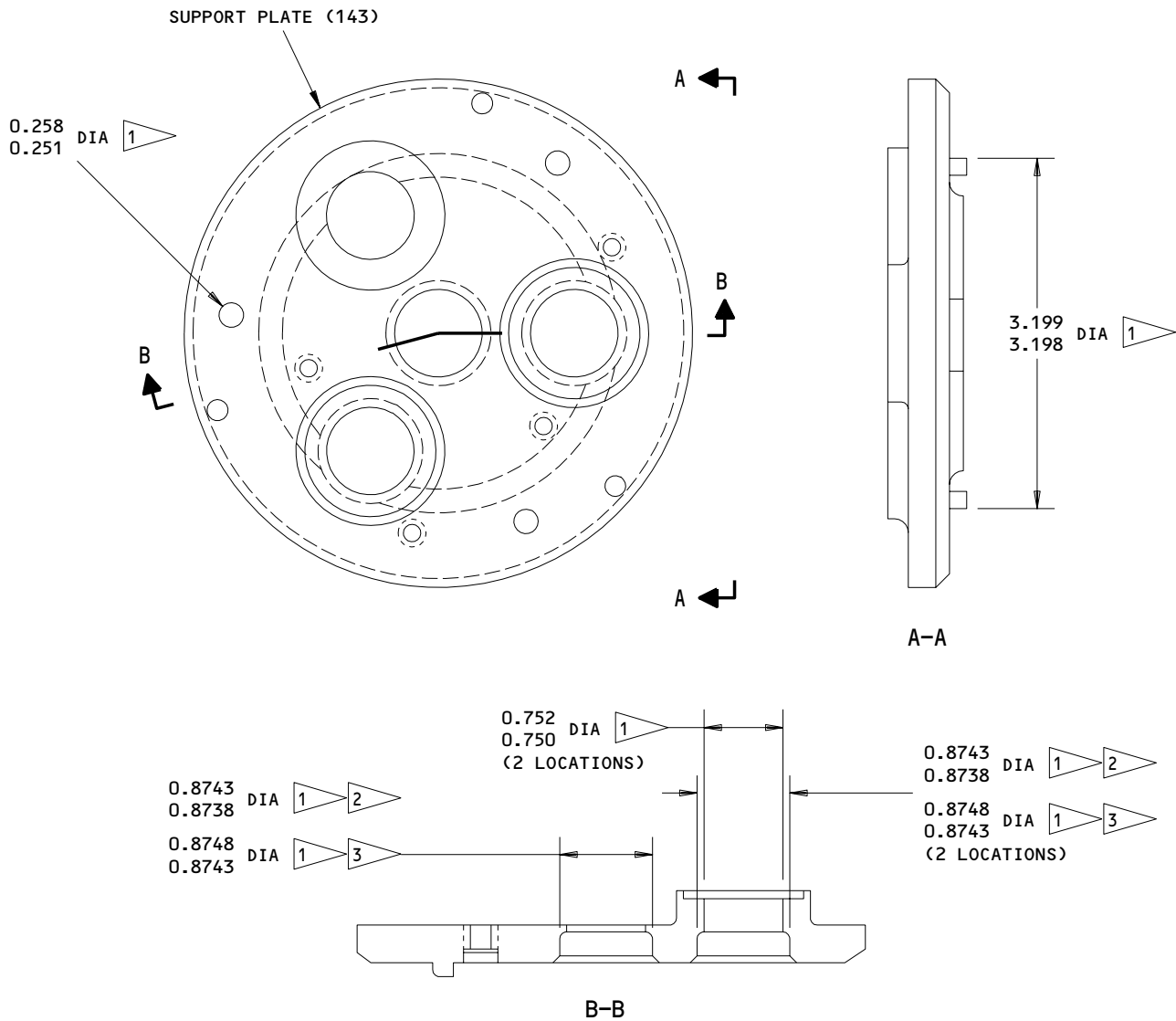
27-81-05

REPAIR 8-1

01.1

Page 601

Jul 01/03



REFINISH

CHROMIC ACID ANODIZE AND APPLY BMS 10-11, TYPE 1 PRIMER (F-18.13) ALL OVER, UNLESS SHOWN DIFFERENTLY

MATERIAL: ALUMINUM ALLOY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

- 1 NO PRIMER THIS SURFACE
- 2 FOR 256T2682-3
- 3 FOR 256T2682-5

256T2682-3,-5
 Support Plate Refinish
 Figure 601

27-81-05

REPAIR 8-1

Page 602

Jul 01/03

01.1

MISCELLANEOUS PARTS - REPAIR 9-1

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

IPL FIG. & ITEM	MATERIAL	FINISH
<u>Fig. 1</u>		
Arm (20, 25)	Al alloy	Chromic acid anodize and apply 1 coat of BMS 10-11, Type 1 primer (F-18.13) all over except omit primer on spline.
Cover (60)	Al alloy	Chemical treat surfaces and apply 1 coat of BMS 10-11, Type 1 (F-18.06) plus apply 1 coat of BMS 10-11, Type 1 primer (F-20.02) all over.
Shaft (180)	Al alloy	Chromic acid anodize and apply 1 coat of BMS 10-11, Type 1 primer (F-18.13) all over, except omit primer on splines, gear teeth and bearing faying surfaces.
Gear (160)		See Repair 11-1.
Gear (160A,175A)	Nylon	No finish.
Shaft (310,335)	Al alloy	Chromic acid anodize (F-17.04).
Cam (305A,330)	15-5PH CRES, 180-200 ksi	Cadmium plate (F-15.06) in 1.4370-1.4375 diameter bore and passivate (F-17.09) all other areas.
Summing lever (365)	15-5PH CRES, 280-200 ksi	Passivate (F-17.09).
Shaft (395)	Al alloy	Chromic acid anodize (F-17.02).

Refinish Details
Figure 601 (Sheet 1)

27-81-05

REPAIR 9-1

01.1

Page 601

Jul 01/03

IPL FIG. & ITEM	MATERIAL	FINISH
Gear (415)	Al alloy	Chromic acid anodize and apply 1 coat of BMS 10-11, Type 1 primer (F-18.13) except omit primer on gear and spline.
Input shaft (420)	15-5PH CRES, 150-170 ksi	Passivate (F-17.09) all over and cadmium plate (F-15.02) on all exterior surfaces.
Boss (214)	Al alloy	Chromic acid anodize and apply 1 coat of primer, BMS 10-11, Type 1 (F-18.13) all over.
Cam (307)	15-5PH CRES, 180-200 ksi	Passivate (F-17.25), then cadmium plate (F-15.06) all over except on cam surface.

Refinish Details
 Figure 601 (Sheet 2)

27-81-05

REPAIR 9-1

01.1

Page 602

Jul 01/03

256T2660
256T5660



INPUT PINION GEAR – REPAIR 10-1

256T2686-2

1. Plating Repair

NOTE: Repair consists of stripping and restoration of original finish. Refer to Refinish Instruction in Fig. 601 and to REPAIR-GEN for List of applicable standard practices.

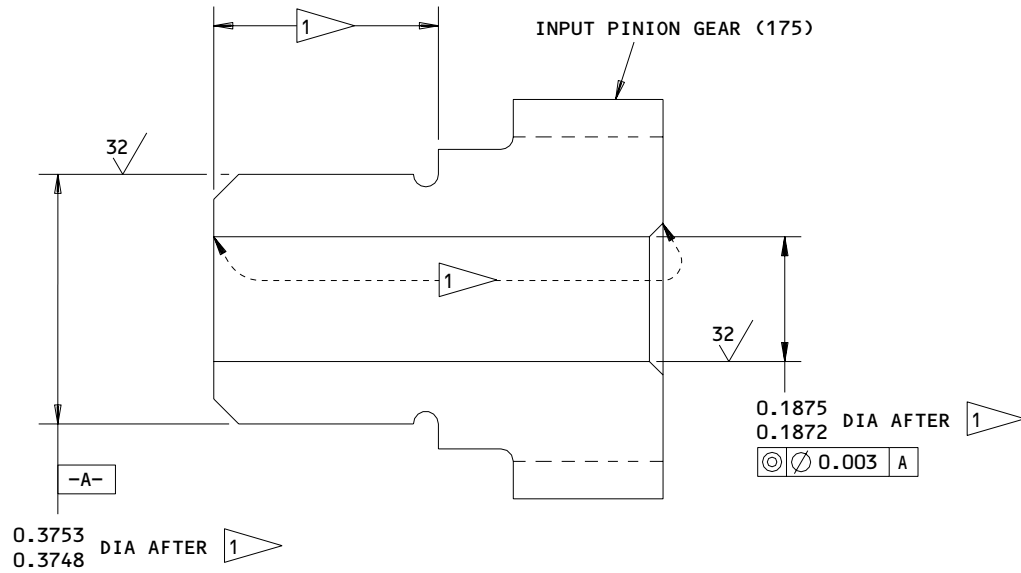
27-81-05

REPAIR 10-1

01.1

Page 601

Jul 01/03



REFINISH

HARD ANODIZE (F-17.06) UNLESS SHOWN DIFFERENTLY

1 CHROMIC ACID ANODIZE (F-17.04) THIS SURFACE. 0.02 RUNOUT IS PERMITTED

MATERIAL: ALUMINUM ALLOY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

256T2686-2
 Input Pinion Gear Refinish
 Figure 601

27-81-05

REPAIR 10-1

Page 602

Jul 01/03

01.1

256T2660
256T5660



OUTPUT GEAR – REPAIR 11-1

256T2687-3

1. Plating Repair

NOTE: Repair consists of stripping and restoration of original finish. Refer to Refinish Instruction in Fig. 601 and to REPAIR-GEN for List of applicable standard practices.

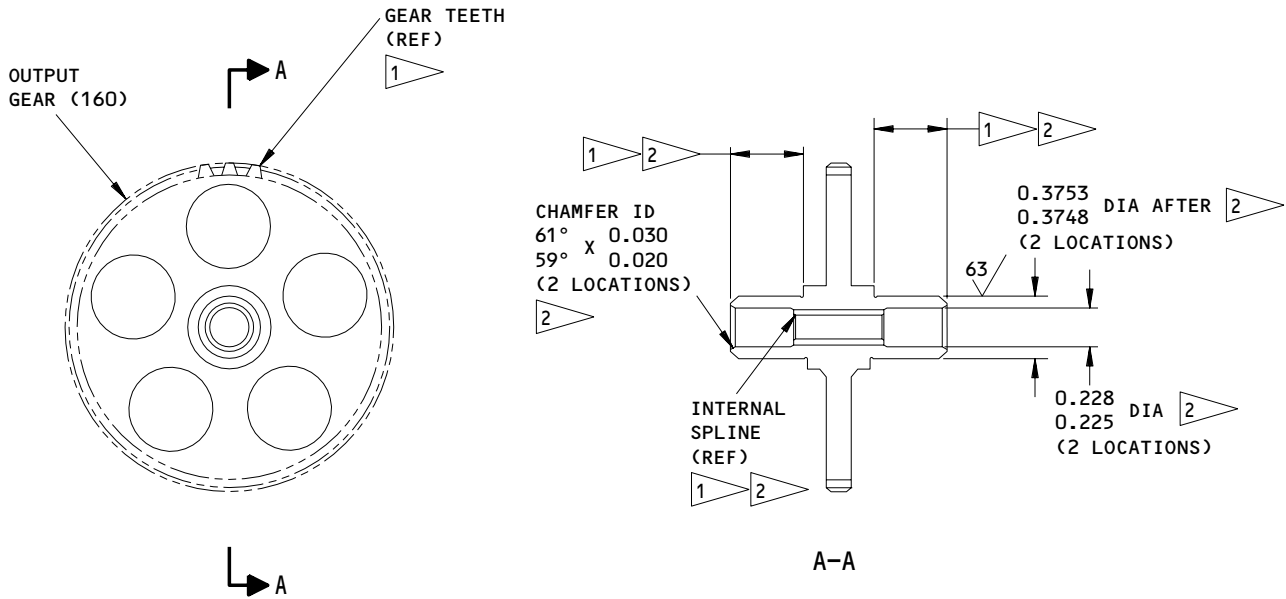
27-81-05

REPAIR 11-1

01.1

Page 601

Jul 01/03



REFINISH

HARD ANODIZE (F-17.06) AND APPLY BMS 10-11, TYPE 1 PRIMER (F-20.02), UNLESS SHOWN DIFFERENTLY

- 1 DO NOT APPLY PRIMER THIS AREA
- 2 CHROMIC ACID ANODIZE (F-17.04) THIS SURFACE. 0.02 RUNOUT IS PERMITTED

MATERIAL: ALUMINUM ALLOY

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

256T2687-3
 Output Gear Refinish
 Figure 601

27-81-05

REPAIR 11-1

Page 602

Jul 01/03

01.1

ASSEMBLY

1. Materials

NOTE: Equivalent substitutes can be used.

- | A. Adhesive -- Type 70 (SOPM 20-50-12)
- | B. Adhesive -- Type 89 (SOPM 20-50-12)
- | C. Corrosion Preventive Compound -- MIL-C-11796 (SOPM 20-60-02)
- | D. Sealant -- BMS 5-26 (SOPM 20-60-04)
- | E. Sealant -- BMS 5-95 (SOPM 20-60-04)
- | F. Grease -- MIL-G-23827 (SOPM 20-60-03)
- | G. Primer -- BMS 10-11, type 1 (SOPM 20-60-02)
- | H. Lockwire -- MS20995C32

2. Equipment

NOTE: Equivalent substitutes can be used.

- A. Rigging Pins -- 0.250 inch diameter
- B. Jig Assembly -- A27060-2

| 3. Assembly (IPL Fig. 1)

A. Assemble the sensor assembly (110).

- | (1) Install the bearings (150, 155) on the support plate assembly (140) and bearing support ring (145) with BMS 5-95 sealant. Refer to SOPM 20-50-03.
- | (2) Install the spline shaft assembly (165) and gears (160) on the bearing support ring (145).
- | (3) Install the support plate assembly (140) on the bearing support ring (145) with the bolts (125), washers (130), and nuts (135).

| B. Assemble the follow-up cam assembly (290A, 292).

- | (1) Apply BMS 5-26 sealant to the faying surfaces of the cam (305A) and the shaft (310), then install the cam on the shaft.
- | (2) Attach the cam (305A, 307) to the shaft (310) with the bolts (295) and collars (300). Install the fasteners with BMS 5-26 sealant.

27-81-05

ASSEMBLY
Page 701
Jul 01/03

01.1

- (3) Fillet seal the contact area between the cam (305A, 307) and the flange of the shaft (310) with BMS 5-26 sealant. As an alternative, squeeze-out of the sealant is satisfactory. A fillet seal or squeeze-out on the other side of the cam is not permitted.

C. Assemble the input cam assembly (315).

- (1) Apply BMS 5-26 sealant to the faying surfaces of the cam (330) and the shaft (335), then install the cam on the shaft.
- (2) Attach the cam (330) to the shaft (335) with the bolt (320) and collar (325). Install the fasteners with BMS 5-26 sealant.
- (3) Fillet seal the contact area between the cam (330) and the shaft (335) with BMS 5-26 sealant, but only on the side of the cam with the shaft flange.

D. Assemble the summing lever (365) and shaft (270).

- (1) Install the bearings (350, 355) in the summing lever (365) with grease.
- (2) Install the cam followers (360) in the summing lever with the washers (345) and nuts (340). Make sure that the cam followers can turn freely.
- (3) Apply a thin layer of grease to the bearings (285), then install the bearings and spacer (255) in the summing lever (365). Use the bolt (250) to keep the spacer aligned between the bearings.
- (4) Carefully remove the bolt (250) from the summing lever (365). Make sure that the spacer does not move.

CAUTION: INSTALL THE BOLT (250) WITH THE BOLTHEAD IN THE DIRECTION SHOWN IN FIG. 701, OR INTERFERENCE CAN OCCUR.

- (5) Apply grease to the shank of the bolt (250), then attach the summing lever to the shaft (270) with the bolt, bushing (260), and nut (265).

NOTE: Make sure that the summing lever is in the correct position when it is attached to the shaft, or the cam followers will not fit in the cam slots. Refer to Fig. 701.

E. Install parts in cover assembly (85).

- (1) Apply a thin layer of grease to the bearings (280, 390, 405) and install the bearings and spacer (380) in the cover assembly (85).

27-81-05

ASSEMBLY
Page 702
Jul 01/03

01.1

- (2) Apply a thin layer of grease to the shaft of the input cam assembly (315) and install input cam assembly on cover assembly (85). Put the rigging pin through the hole in the cover assembly to hold the cam (330) in place.
- (3) Apply a thin layer of grease to the threads of the nut (370) and install the washer (375) and nut (370) on the cam assembly (315). Tighten the nut to a maximum of 5 pound-inches more than the self-locking torque of the nut.
- (4) Remove the rigging pin and make sure that the cam assembly (315) does not bind when turned through two complete turns in each direction. Install the rigging pin so that the cam assembly will not turn. Temporarily tape the rigging pin to the cover assembly (85).

F. Install parts in the housing assembly (205A).

- (1) Install the drain cover (200) with the bolts (185) and washers (190).
- (2) Apply a thin layer of grease to the bearings (275, 390, 405) and install the bearings and spacer (385) in the housing assembly (205A).
- (3) Install the follow-up cam assembly (290A, 292) on the housing assembly (205A). Put the rigging pin through the hole in the housing assembly to hold the cam (305A, 307) in place.
- (4) Apply a thin layer of grease to the threads of the nut (370), then install the washer (375) and nut on the cam assembly (290A, 292). Tighten the nut to a maximum of 5 pound-inches more than the self-locking torque of the nut.
- (5) Remove the rigging pin and make sure that the cam assembly A (290A, 292) does not bind when turned through two complete turns in each direction. Install the rigging pin so that the cam assembly will not turn. Temporarily tape the rigging pin to the housing assembly (205A).
- (6) Apply a thin layer of corrosion preventive compound to the bolts (225B).
- (7) Install the spring (245) on the housing assembly (205A) and shaft (270) with the bolts (225B), washers (230), spacers (235A), and nuts (240).
- (8) Install the shaft (270) with the summing lever (365) into the bearing (275) in the housing assembly (205A). Make sure that the cam follower (360) is seated in the slot of the follow-up cam (305A, 307).

27-81-05

ASSEMBLY
Page 703
Jul 01/03

01.1

- (9) If the cam follower (360) on the summing lever (365) cannot be seated in the slot of the cam (305A, 307), the summing lever (365) is installed backward on the shaft (270). Remove the parts and install the summing lever (365) correctly on the shaft (270).
- (10) Apply corrosion preventive compound to the splines of the input shaft (420) and the gear (415). Apply a thin layer of grease to the gear and install the gear and washer (410) on the shaft.
- (11) Install the shaft (420) into the bearing (405) in the housing assembly (205A).
- G. Install the cover assembly (85) on the housing assembly (205A).
- (1) Temporarily install the pilot input arm (20) on the shaft (420).
- (2) Use jig assembly A27060-2 and turn the pilot input arm (20) until the arm is in the position indicated in Fig. 701. Remove the jig assembly and pilot input arm. Use care not to turn the shaft while you remove pilot input arm.
- NOTE:** This will set the position of the sector gear (415) to mate with the gear teeth on the cam shaft (335).
- (3) Install the cover assembly (85) on the housing assembly (205A).
- NOTE:** Use the valve input arm (15) to turn the shaft (270) a small amount to help seat the cam follower (360) in the input cam (330) slot.
- (4) Install the pilot input arm (20) on the input shaft (420). Install the bolt (5) through the bolt hole in the input arm.. Do a check of the position of the pilot input arm (20) with jig assembly A27060-2.
- (5) If the pilot input arm (20) position is not correct, do step (2) and (3) again. Remove the bolt (5), pilot input arm (20), and the jig assembly A27060-2.
- (6) Attach the cover assembly (85) to the housing assembly (205A) with the bolts (90) and washers (95). Install the bolts with corrosion preventive compound.
- H. Apply corrosion preventive compound to the bolt (5). Install the pilot input arm (20) on the shaft (420) with the bolt (5), washer (10), and nut (15). Install the bolt (5) in the direction shown.
- I. Apply corrosion preventive compound to the bolt (5). Install the valve input arm (25) on the shaft (270) with the bolt (5), washer (10), and nut (15). Install the bolt (5) in the direction shown.

27-81-05

ASSEMBLY
Page 704
Jul 01/03

01.1

- J. Do a check of the assembly.
- (1) Remove the rigging pin on the cover assembly (85). Keep the rigging pin on the housing assembly (205A).
 - (2) Turn the pilot input arm (20) 60 degrees clockwise (as you look at the cover assembly (85)), then back to the initial position. Make sure that the arm can turn freely in the two directions without binding.

NOTE: Apply a force against the spring force while the arm goes back to its original position.
 - (3) Install the rigging pin on the cover assembly (85) and remove the rigging pin on the housing assembly (205A).
 - (4) Turn the follow-up cam shaft (310) 280 degrees counterclockwise (as you look at the cover assembly (85)), then back to the initial position. Make sure that the shaft can turn freely in the two directions without binding.
- K. Install the packing (400) on the quill shaft (395), then install the quill shaft through the cover assembly (85).
- L. Install the sensor assembly (110) on the cover assembly (85) with the bolts (115) and washers (120). Install the bolts with corrosion preventive compound. Lockwire the bolts (115) to the sensor assembly (110), or to the bolts (125). Use the double-twist method. Refer to SOPM 20-50-02.
- M. Bond the gasket (65) to the cover assembly (85) with type 70 or type 89 adhesive. Refer to 20-50-12,
- N. Install the splined ends of the RVDTs (80, 82) on the sensor assembly (110) with the clamps (70A) and bolts (75). Tighten the bolts to 10-30 pounds-inches.

NOTE: Install the RVDT so that the black index mark on the splined shaft aligns with the black index mark on the body to help with RVDT adjustment. Lockwire will be installed on the bolts (75) after RVDT adjustment (Ref CMM 27-81-41 TESTING/TROUBLE SHOOTING).
- O. Attach the connectors of the RVDTs (80, 82) to the cover assembly (35) with screws (30). Fillet seal around the connectors and nutplates (50) with BMS 5-26 sealant.
- P. Apply adhesive to the gasket (65) on the cover assembly (85). Install the cover assembly (35) on the cover assembly (85) with the screws (40) and washers (45). Install the screws with corrosion preventive compound.

27-81-05

ASSEMBLY
Page 705
Jul 01/03

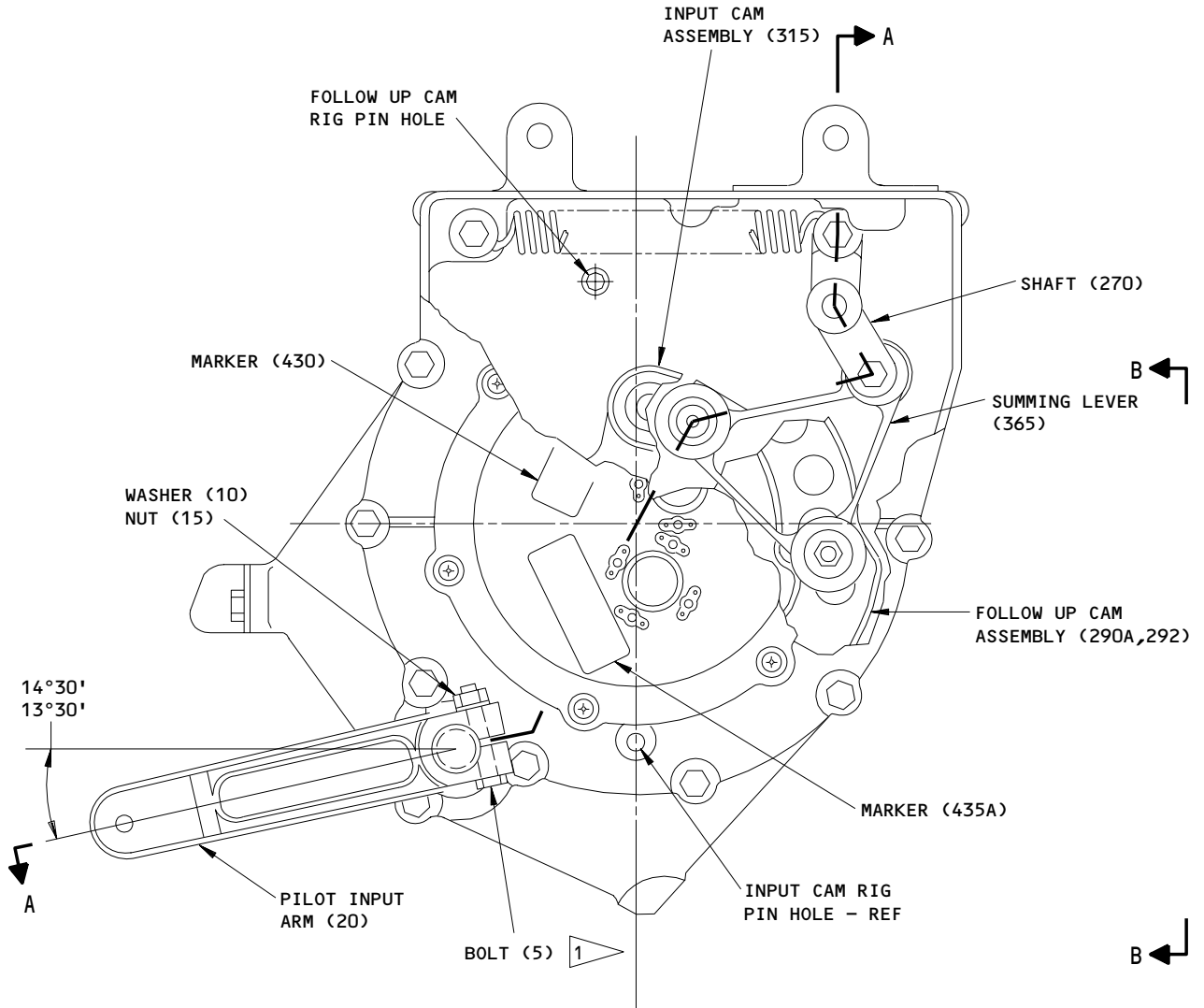
01.1

- Q. Turn the quill shaft (395) 200 degrees clockwise (as you look at the housing assembly (205A)), then back to the initial position. Make sure that the quill shaft can turn freely in the two directions without binding.
 - R. Fillet seal the seam between the cover assembly (85) and the housing assembly (205A) with BMS 5-26 sealant.
 - S. If the marker (425) was removed, write the serial number and part number on the new marker with an electric pencil, or with an engraver with a spherical nose, to 0.015 max depth. Bond the marker (425) to the housing assembly (205A) with type 70 or type 89 adhesive. Refer to SOPM 20-50-12.
4. Store this unit using standard industry procedures and the information in SOPM 20-44-02.

27-81-05

ASSEMBLY
Page 706
Jul 01/03

01.1

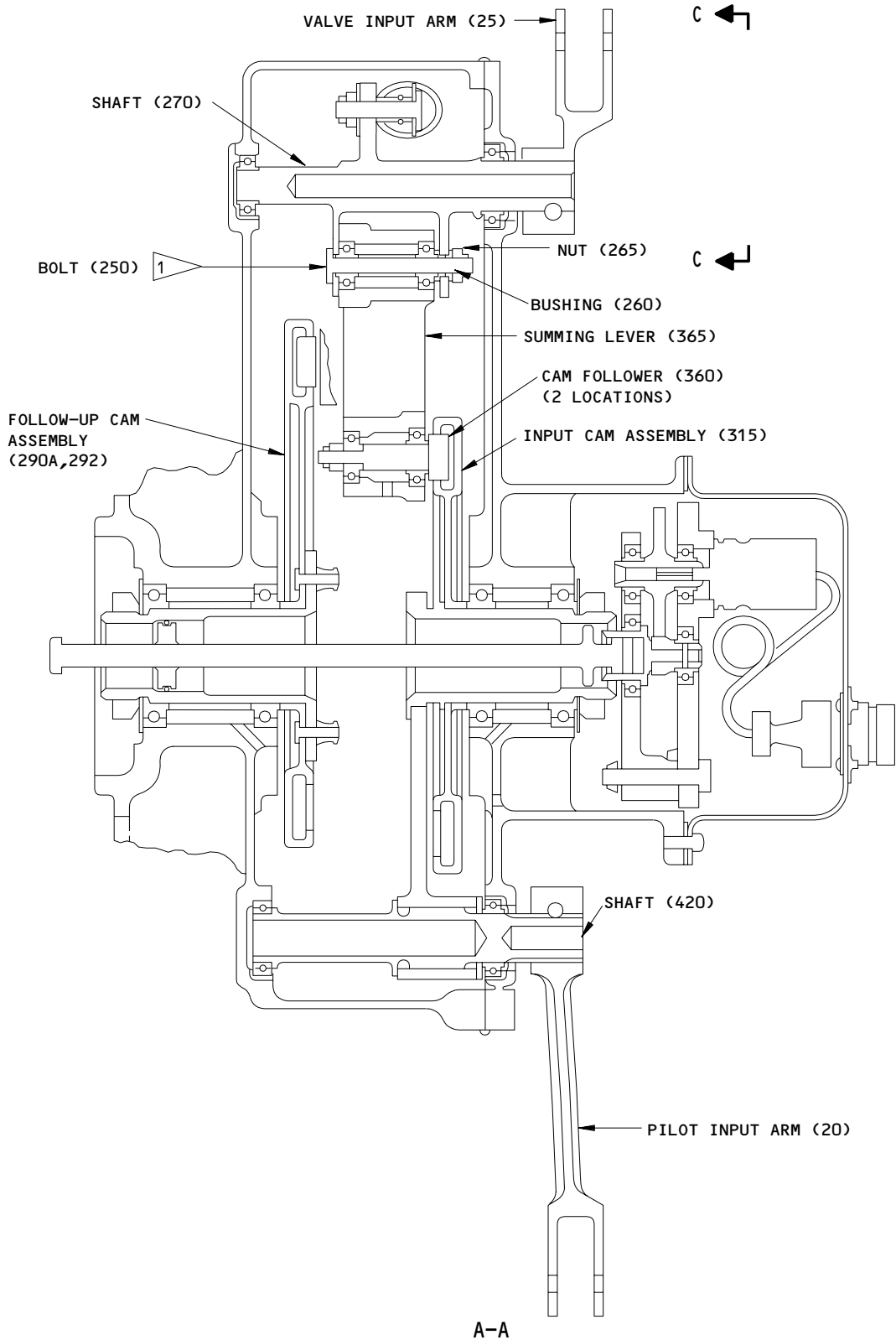


Assembly Details
Figure 701 (Sheet 1)

27-81-05

ASSEMBLY
Page 707
Jul 01/03

01.1

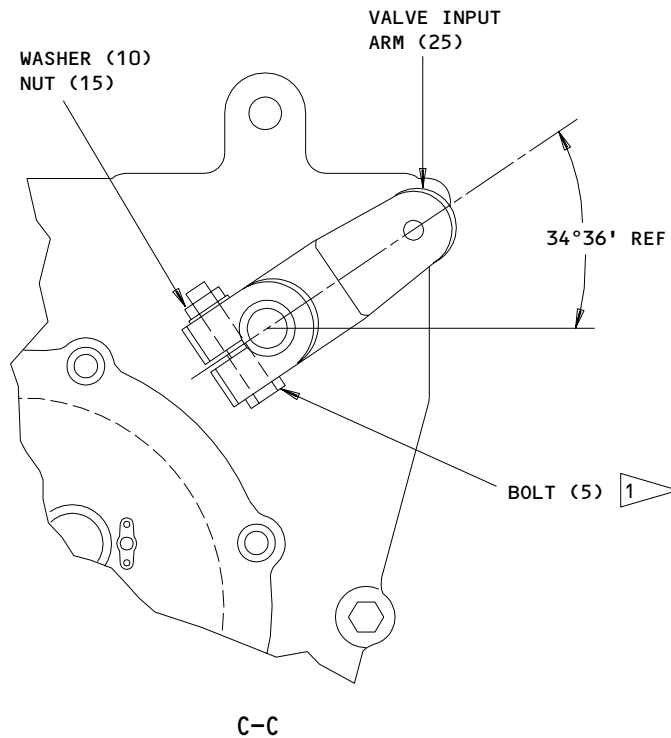
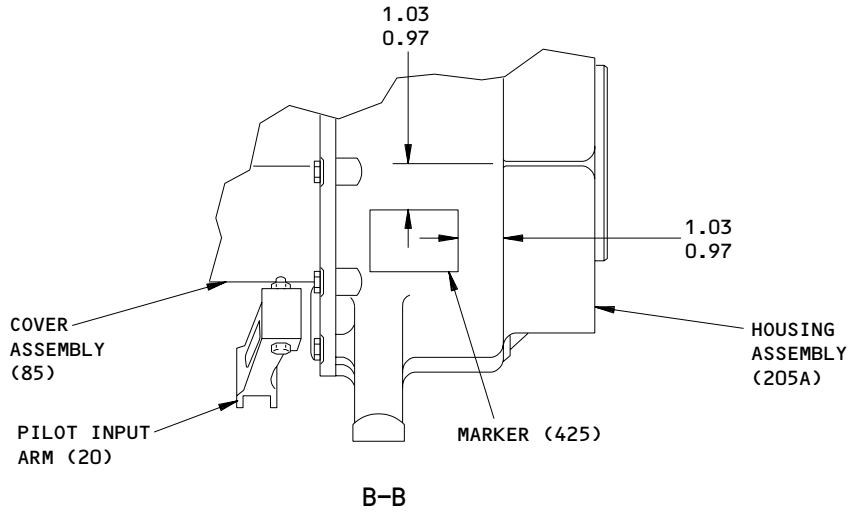


A-A
Assembly Details
Figure 701 (Sheet 2)

27-81-05

ASSEMBLY
Page 708
Jul 01/03

01.1



1 INSTALL BOLT WITH BOLTHEAD DIRECTION AS SHOWN

ITEM NUMBERS REFER TO IPL FIG. 1

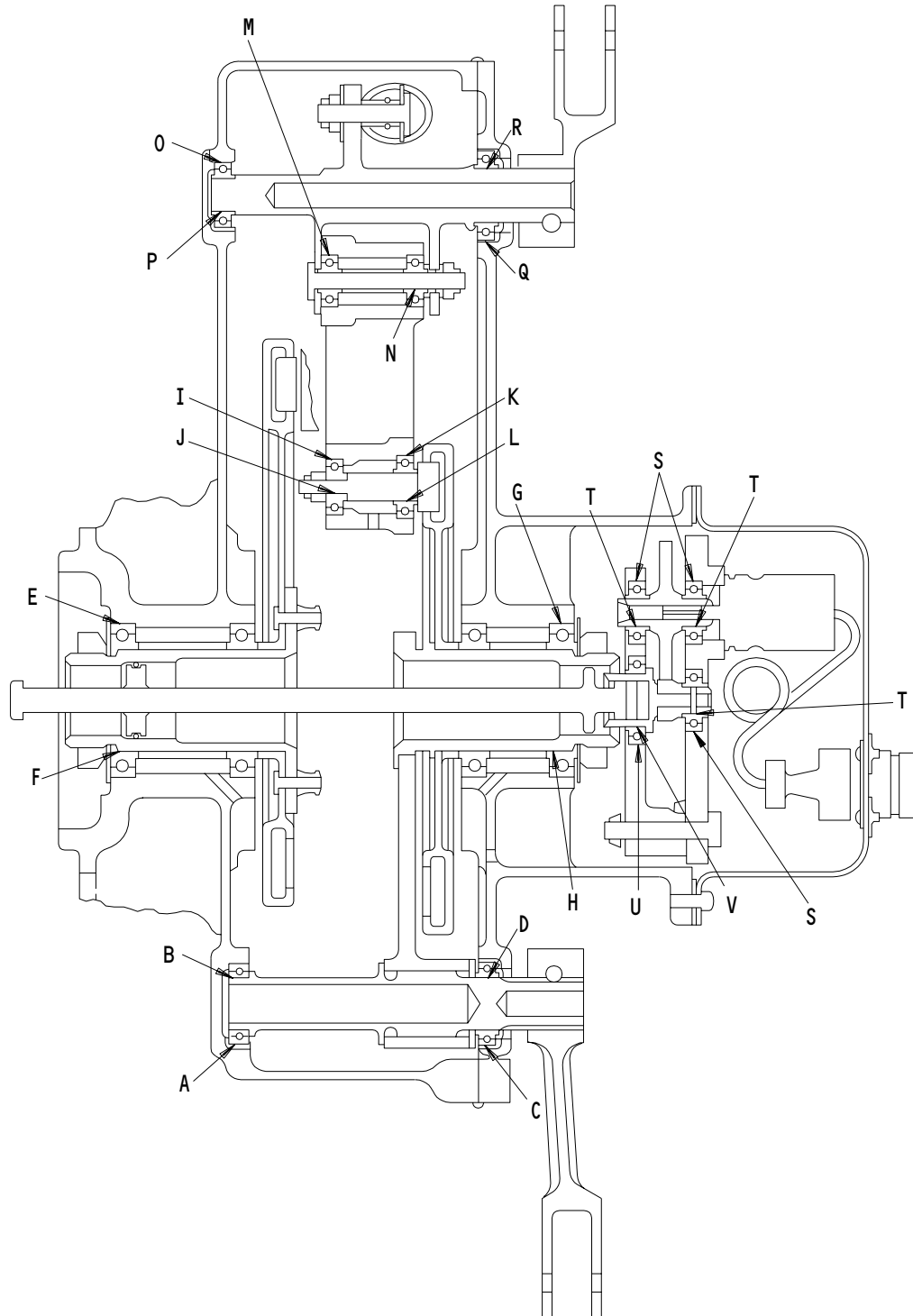
Assembly Details
Figure 701 (Sheet 3)

27-81-05

ASSEMBLY
Page 709
Jul 01/03

01.1



FITS AND CLEARANCES



Fits and Clearances
Figure 801 (Sheet 1)

27-81-05

FITS AND CLEARANCES
01.1 Page 801
Jul 01/03

Ref Letter Fig.801	Mating Item No. IPL Fig.1	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance		Dimension		Maximum Clearance
		Min	Max	Min	Max	Min	Max	
A	ID 205A	1.1875	1.1885	0.0000	0.0020			
	OD 405	1.1865	1.1875					
B	ID 405	0.7493	0.7507	0.0000	0.0024			
	OD 420	0.7483	0.7493					
C	ID 85	1.1875	1.1885	0.0000	0.0020			
	OD 405	1.1865	1.1875					
D	ID 405	0.7493	0.7507	0.0000	0.0024			
	OD 420	0.7483	0.7493					
E	ID 205A	2.1875	2.1885	0.0000	0.0020			
	OD 390	2.1865	2.1875					
F	ID 390	1.4370	1.4380	0.0000	0.0015			
	OD 310	1.4365	1.4370					
G	ID 85	2.1878	2.1885	0.0000	0.0020			
	OD 390	2.1865	2.1875					
H	ID 390	1.4370	1.4380	0.0000	0.0015			
	OD 335	1.4365	1.4370					
I	ID 365	0.7490	0.7495	-0.0010 	0.0000			
	OD 350	0.7495	0.7500					
J	ID 350	0.2495	0.2500	0.0000	0.0015			
	OD 360	0.2485	0.2495					
K	ID 365	0.8740	0.8745	-0.0010 	0.0000			
	OD 355	0.8745	0.8750					

 INTERFERENCE FIT








ALL DIMENSIONS ARE IN INCHES


 Fits and Clearances
 Figure 801 (Sheet 2)

27-81-05

 FITS AND CLEARANCES
 01.1 Page 802
 Jul 01/03

 **BOEING**
COMPONENT
MAINTENANCE MANUAL


Ref Letter Fig.801	Mating Item No. IPL Fig.1	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance		Dimension		Maximum Clearance
		Min	Max	Min	Max	Min	Max	
L	ID 355	0.3745	0.3750	0.0000	0.0015			
	OD 360	0.3735	0.3745					
M	ID 365	0.7490	0.7495	-0.0010 	0.0000			
	OD 285	0.7495	0.7500					
N	ID 285	0.2495	0.2500	0.0000	0.0015			
	OD 250	0.2485	0.2495					
O	ID 205A	0.8738	0.8743	-0.0012 	-0.0002 			
	OD 275	0.8745	0.8750					
P	ID 275	0.3745	0.3750	0.0000	0.0010			
	OD 270	0.3740	0.3745					
Q	ID 85	1.1875	1.1885	0.0000	0.0020			
	OD 280	1.1865	1.1875					
R	ID 280	0.7493	0.7507	0.0000	0.0024			
	OD 270	0.7483	0.7493					
S	ID 140,145	0.8738	0.8743	-0.0012 	-0.0003 			
	OD 150	0.8746	0.8750					
S	ID 140A 145A	0.8743	0.8748	-0.0007 	0.0002			
	OD 150	0.8746	0.8750					
T	ID 150	0.3747	0.3750	-0.0006 	0.0002			
	OD 160,175	0.3748	0.3753					
U	ID 145	1.1875	1.1885	0.0000	0.0020			
	OD 155	1.1865	1.1875					
V	ID 155	0.7493	0.7507	0.0000	0.0024			
	OD 180	0.7483	0.7493					

 INTERFERENCE FIT
ALL DIMENSIONS ARE IN INCHES

Fits and Clearances
Figure 801 (Sheet 3)

27-81-05

FITS AND CLEARANCES
01.1 Page 803
Jul 01/03

FOR TORQUE VALUE OF STANDARD FASTENERS, REFER TO 20-50-01			
ITEM NO. IPL FIG. 1	NAME	TORQUE	
		POUND-INCHES	POUND-FEET
370	NUT	5 MAXIMUM 	
75	BOLT	10-30	

 ABOVE SELF-LOCKING TORQUE OF NUT

Torque Table
 Figure 802

27-81-05

FITS AND CLEARANCES
 01.1 Page 804
 Jul 01/03

SPECIAL TOOLS, FIXTURES AND EQUIPMENT

NOTE: Equivalent substitutes may be used.

1. Jig Assembly -- A27060-2 (Included in Jig Equipment A27060-11)
2. Rigging Pin -- 0.250 inch diameter (2 required)

27-81-05

SPECIAL TOOLS

01.1

Page 901

Jul 01/03

ILLUSTRATED PARTS LIST

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

2. Indentures show parts relationships as follows:

Assembly

Detail Parts for Assembly

Subassembly

Attaching Parts for Subassembly

Detail Parts for Subassembly

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

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

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

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

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

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

6. Parts Interchangeability

Optional
(OPT)

The parts are optional to and interchangeable with other parts having the same item number.

Supersedes, Superseded By
(SUPSDS, SUPSD BY)

The part supersedes and is not interchangeable with the original part.

Replaces, Replaced By
(REPLS, REPLD BY)

The part replaces and is interchangeable with, or is an alternate to, the original part.

27-81-05

VENDORS

K8455 RHP BEARINGS PLC RHP AEROSPACE
OLDENDS LANE
STONEHOUSE GL10 3RM UK

OPTK6 SPS TECHNOLOGIES INC AEROSPACE PRODUCTS DIV
5195 W 4700 SPO BOX 18459
KEARNS, UTAH 84118

06144 INDUSTRIAL TECTONICS BEARING CORP
18301 SOUTH SANTA FE AVENUE
RANCO DOMINQUEZ, CALIFORNIA 90221

06725 AIR INDUSTRIES CORPORATION
12570 KNOTT STREET
GARDEN GROVE, CALIFORNIA 92641-3932

08524 DEUTSCH FASTENER CORP SEE CODE V97928

11815 CHERRY AEROSPACE FASTENERS DIV OF TEXTRON
1224 EAST WARNER AVENUE PO BOX 2157
SANTA ANA, CALIFORNIA 92707-0157

15653 KAYNAR TECHNOLOGY KAYNAR DIV
800 SOUTH STATE COLLEGE BLVD PO BOX 3001
FULLERTON, CALIFORNIA 92634-3001

17446 HUCK MFG CO GOV CONTRACTS LOS ANGELES DIV SUB OF FED-MOGUL
900 WATSON CENTER ROAD
CARSON, CALIFORNIA 90745

19710 MPC PRODUCTS CORP
7426 NORTH LINDER AVENUE
SKOKIE, ILLINOIS 60077-3219

21335 TORRINGTON CO FAFNIR BEARING DIV
59 FIELD STREET
TORRINGTON, CONNECTICUT 06790-4942

30163 VALENTEC DAYRON INC
333 MAGUIRE BLVD PO BOX 140394
ORLANDO, FLORIDA 32814-0394

38443 MRC BEARINGS
402 CHANDLER STREET
JAMESTOWN, NEW YORK 14701-3802

27-81-05

ILLUSTRATED PARTS LIST
01.1 Page 1002
Jul 01/03

VENDORS

40920 MPB MINIATURE PRECISION BEARING DIV
PRECISION PARK PO BOX 547
KEENE, NEW HAMPSHIRE 03431

43991 FAG BEARING INCORPORATED
118 HAMILTON AVENUE
STAMFORD, CONNECTICUT 06904

52828 REPUBLIC FASTENER MFG CORP
1300 RANCHO CONEJO BLVD
NEWBURY PARK, CALIFORNIA 91320-1405

56878 SPS TECHNOLOGIES INC AEROSPACE AND INDUSTRIAL PRODUCTS DIV
HIGHLAND AVENUE
JENKINTOWN, PENNSYLVANIA 19046

57771 STIMPSON EDWIN B. COMPANY INC
900 SYLVAN AVENUE
BAYPORT, NEW YORK 11705-1012

60516 WEST COAST AEROSPACE INC
812 MIRAFLORES STREET
SAN PEDRO, CALIFORNIA 90731-1439

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

73197 HI-SHEAR TECHNOLOGY CORP
2600 SKYPARK DRIVE
TORRANCE, CALIFORNIA 90509

80539 SPS TECHNOLOGIES INC AEROSPACE PRODUCTS DIV
2701 SOUTH HARBOR BOULEVARD PO BOX 1259
SANTA ANA, CALIFORNIA 92702-1259

83086 NEW HAMPSHIRE BALL BEARINGS, INCORPORATED
ROUTE 202
PETERBOROUGH, NEW HAMPSHIRE 03458

27-81-05

ILLUSTRATED PARTS LIST
01.1 Page 1003
Jul 01/03

VENDORS

92215 FAIRCHILD IND INC FAIRCHILD AEROSPACE FASTENER DIV
3010 W LOMITA BLVD
TORRANCE, CALIFORNIA 90505-5102

97393 SHUR-LOK CORPORATION
2541 WHITE ROAD PO BOX 19584
IRVINE, CALIFORNIA 92713

97928 DEUTSCH FASTENER CORP
3969 PARAMONT BOULEVARD
LAKEWOOD, CALIFORNIA 90712-4193

27-81-05

ILLUSTRATED PARTS LIST
01.1 Page 1004
Jul 01/03

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
AN960-10		1	190	2
AN960-10L		1	45	6
AN960-416		1	130	3
AN960D10		1	95	12
		1	120	3
AN960D416L		1	10	2
BACB10AP6		1	150	5
BACB10BW23		1	390	4
BACB10BX04		1	285A	2
		1	355A	2
BACB10BX4		1	285	2
		1	350	2
BACB10BX06		1	275A	1
		1	350A	2
BACB10BX6		1	275	1
		1	355	2
BACB10CF12PP		1	155	1
		1	280	1
		1	405	2
BACB28AK04-025		1	260	1
BACB28AK04-089		1	255	1
BACB28AP04P032		1	215	2
BACB28W6B022		1	218	2
BACB30GP5-3		1	219	3
BACB30MY6K4		1	295	2
		1	320	1
BACC30M6		1	300	2
		1	325	1
BACN10JC4		1	15	2
		1	135	3
		1	240	2
		1	265	1
		1	340	2
BACN10JC4CD		1	265A	2
		1	340A	2
BACN10JP04A		1	50	8
BACN10J4CD		1	240A	2
BACN10RF22		1	370	2
BACP20B65		1	213	1
BACR15BA3AD		1	55	16
BACW10P11AL		1	230	4
BACW10P149AL		1	410	1
BACW10P231D		1	345	2
BAC27ECT58		1	425A	1
BAC27TCT0002		1	425	1
BAC27TCT0278		1	430	1

27-81-05

ILLUSTRATED PARTS LIST
01.1 Page 1005
Jul 01/03

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BAC27TCT0282		1	435	1
BAC27TCT0283		1	435A	1
BRM200A04L		1	50	8
B539-2TS		1	155	1
		1	280	1
		1	405	2
B539DD		1	155	1
B539DD		1	280	1
		1	405	2
B539DDFS101		1	155	1
		1	280	1
		1	405	2
B539DDFS428		1	155	1
		1	280	1
		1	405	2
B539FS101		1	155	1
		1	280	1
		1	405	2
B539SSG27		1	155	1
		1	280	1
		1	405	2
CS204E		1	285	2
		1	350	2
CS206E		1	275	1
		1	355	2
D2587PB		1	213	1
HL10VAZ6-4		1	295	2
		1	320	1
HL79-6		1	300	2
		1	325	1
KP23B		1	390	4
KP4A		1	285	2
		1	350	2
KP4AFS428		1	285	2
		1	350	2
KP4AG27		1	285	2
		1	350	2
KP4ALY196		1	285	2
		1	350	2
KP4ASD610		1	285	2
		1	350	2
KP4A2TS		1	285	2
		1	350	2
KP6A		1	275	1
		1	355	2

27-81-05

 ILLUSTRATED PARTS LIST
 01.1 Page 1006
 Jul 01/03

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
KP6AFS428		1	275	1
		1	355	2
KP6AG27		1	275	1
		1	355	2
KP6A2TS		1	275	1
		1	355	2
KP6BLY196		1	275	1
		1	355	2
KP6BSD610		1	275	1
		1	355	2
LLKP23B		1	390	4
LLKP4A		1	285	2
		1	350	2
LLKP6A		1	275	1
		1	355	2
LLMKP6A		1	150	5
L8006K4		1	295	2
		1	320	1
MCS26E		1	150	5
MK1000-04BAC		1	50	8
MS16562-191		1	170	1
MS21209F1-10		1	220K	2
MS21209F1-13		1	142A	4
MS21209F1-15		1	100	12
		1	142	4
		1	220	12
		1	220J	2
NAS1080D05		1	219A	3
NAS1611-118A		1	400A	1
NAS1611-118		1	400	1
NAS600-5		1	30	8
NAS603-8		1	40	6
NAS607-3-4P		1	210	1
NAS6603-3		1	185	2
NAS6603H5		1	75	4
		1	115	3
NAS6604-11		1	225B	2
NAS6604-18		1	5	2
NAS6604-29		1	250	1
NAS6604H18		1	125	3
NAS6703-3		1	90	12
NS103197-40		1	50	8
R19A		1	80	2
		1	82A	2
R21A		1	82	2

27-81-05

ILLUSTRATED PARTS LIST
01.1 Page 1007
Jul 01/03

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
SL2822-22		1	370	2
S256T002-1		1	80	2
		1	82A	2
S256T002-3		1	82	2
T339E		1	155	1
		1	280	1
		1	405	2
T8076S440		1	50	8
2LPYE5-3		1	219	3
256T2636-1		1	305B	1
256T2636-2		1	305C	1
256T2660-3		1	1A	RF
256T2660-4		1	1B	RF
256T2660-5		1	1C	RF
256T2660-7		1	81A	2
256T2660-8		1	81	2
256T2662-1		1	330	1
256T2664-2		1	305A	1
256T2665-1		1	20	1
256T2665-3		1	20A	1
256T2667-1		1	221	1
256T2668-1		1	330A	1
256T2680-2		1	110	1
256T2680-3		1	110A	1
256T2680-4		1	110B	1
256T2681-1		1	145	1
256T2681-2		1	145A	1
256T2682-1		1	140	1
256T2682-3		1	143	1
256T2682-4		1	140A	1
256T2682-5		1	143A	1
256T2683-3		1	35	1
256T2683-4		1	60	1
256T2684-2		1	165	1
256T2684-3		1	165A	1
256T2685-1		1	180	1
256T2686-2		1	175	1
256T2686-3		1	175A	1
256T2687-3		1	160	2
256T2687-4		1	160A	2
256T2688-2		1	70A	4
256T2689-2		1	65	1
256T3103-1		1	395	1
256T3161-13		1	205A	1
256T3161-14		1	222A	1
256T3161-15		1	205B	1

27-81-05

 ILLUSTRATED PARTS LIST
 01.1 Page 1008
 Jul 01/03

256T2660
256T5660

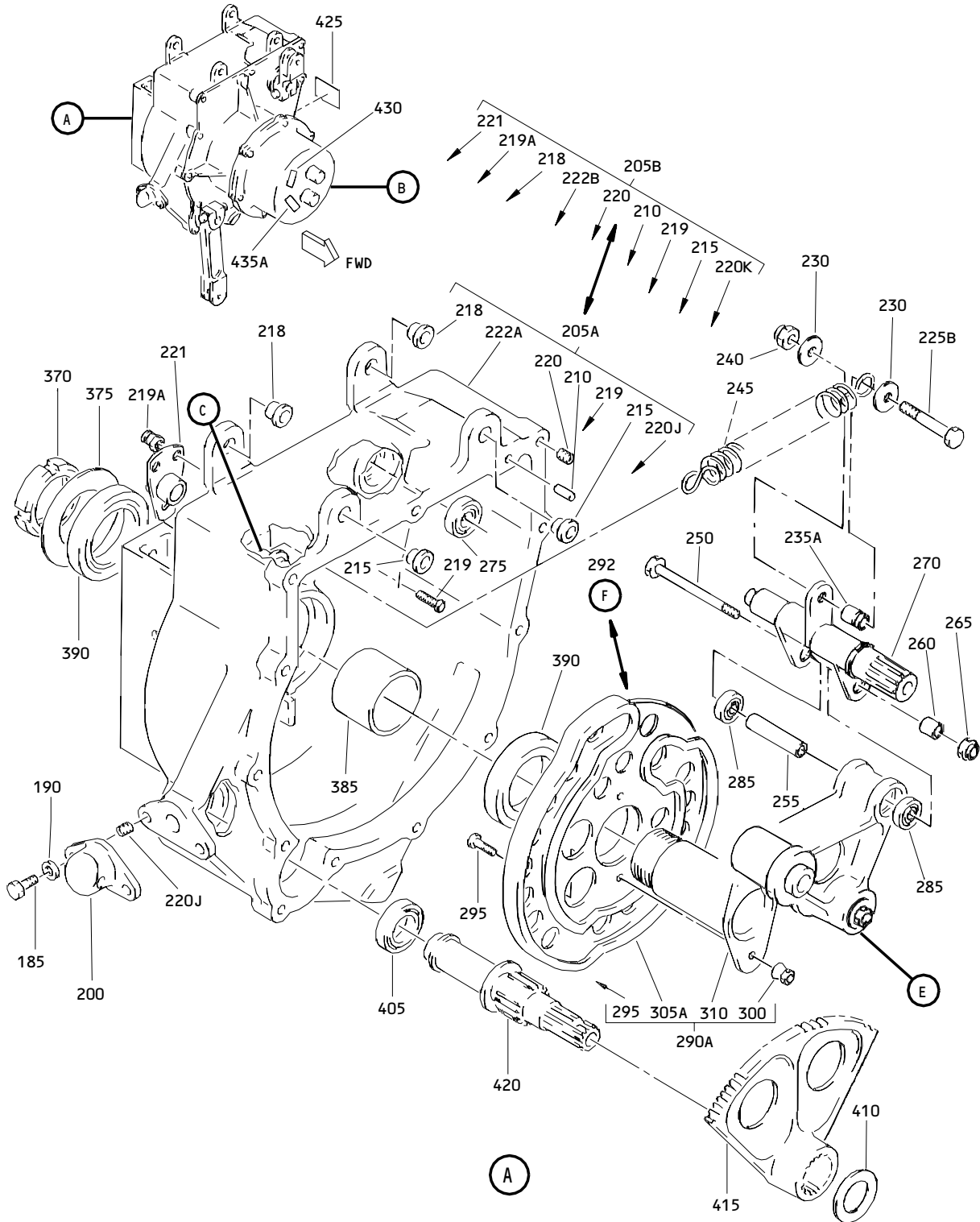


BOEING
COMPONENT
MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
256T3161-16		1	222B	1
256T3163-3		1	85	1
256T3163-4		1	105	1
256T3165-1		1	315	1
256T3165-3		1	315A	1
256T3167-1		1	335	1
256T3168-2		1	420	1
256T3169-1		1	415	1
256T3169-3		1	415A	1
256T3173-1		1	360	2
256T3177-1		1	25	1
256T3177-3		1	25A	1
256T3178-1		1	245	1
256T3179-1		1	380	1
256T3179-2		1	385	1
256T3180-1		1	375	2
256T3181-4		1	290A	1
256T3181-8		1	290B	1
256T3183-2		1	310	1
256T3184-2		1	235A	2
256T3187-1		1	270	1
256T3188-1		1	365	1
256T3189-1		1	270A	1
256T3190-1		1	365A	1
256T5660-1		1	292	1
256T5662-1		1	307	1
65B81978-1		1	200	1
65B81978-4		1	200A	1
66014-6		1	300	2
		1	325	1
82631-2212		1	370	2

27-81-05

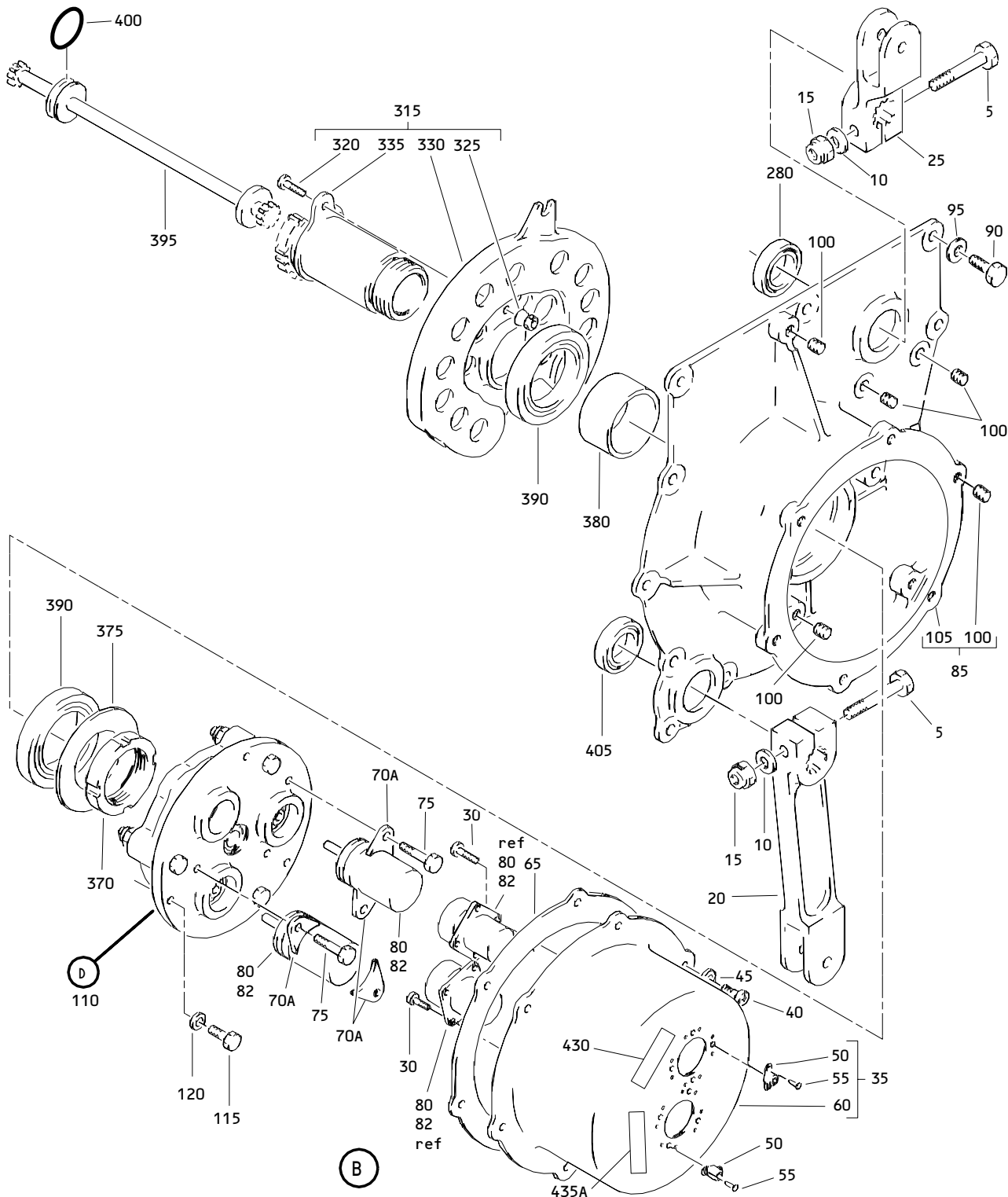
ILLUSTRATED PARTS LIST
01.1 Page 1009
Jul 01/03



Inboard Leading Edge Slat Drive Control Unit Assembly
Figure 1 (Sheet 1)

27-81-05

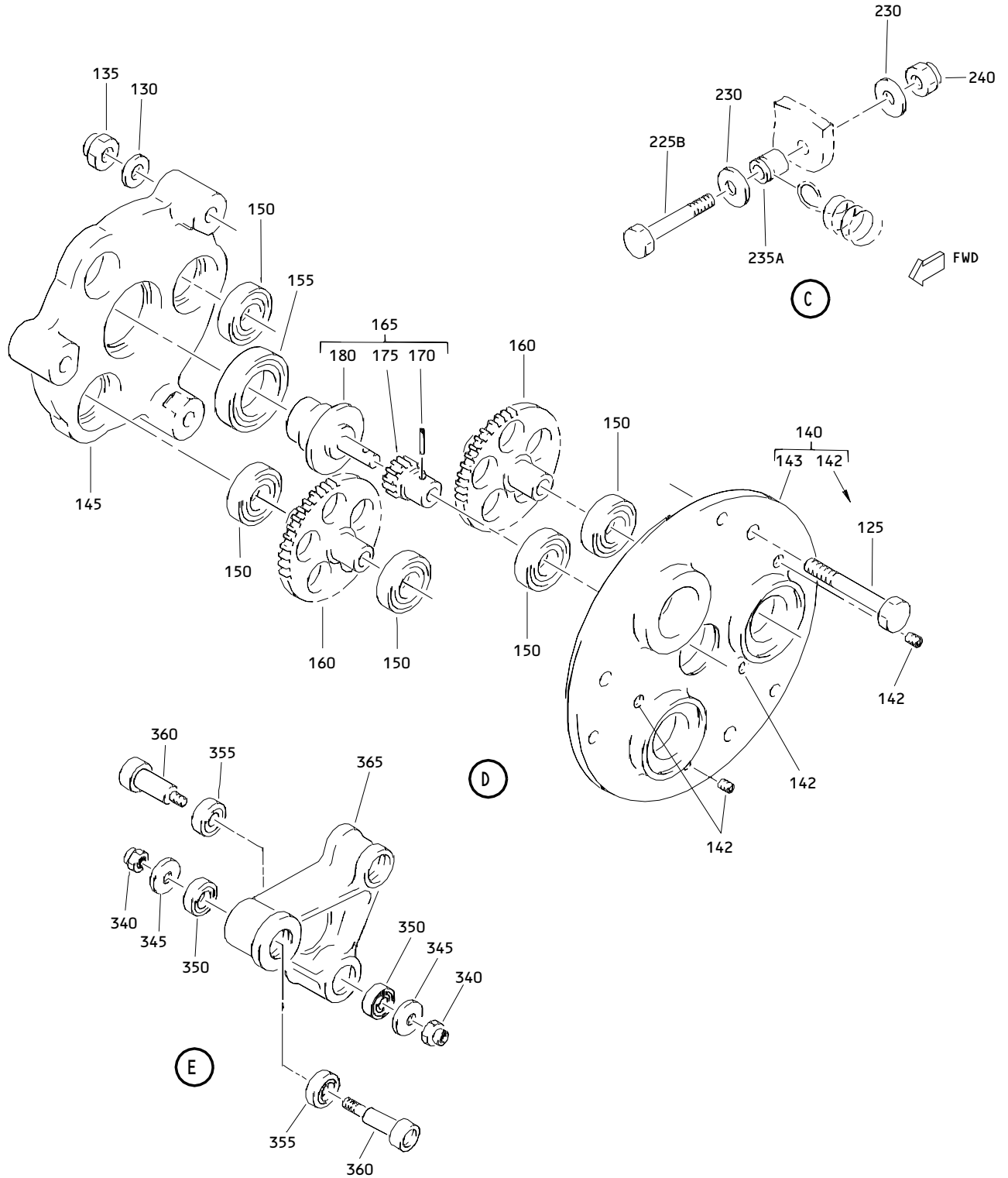
ILLUSTRATED PARTS LIST
01.1 Page 1011
Jul 01/03



Inboard Leading Edge Slat Drive Control Unit Assembly
 Figure 1 (Sheet 2)

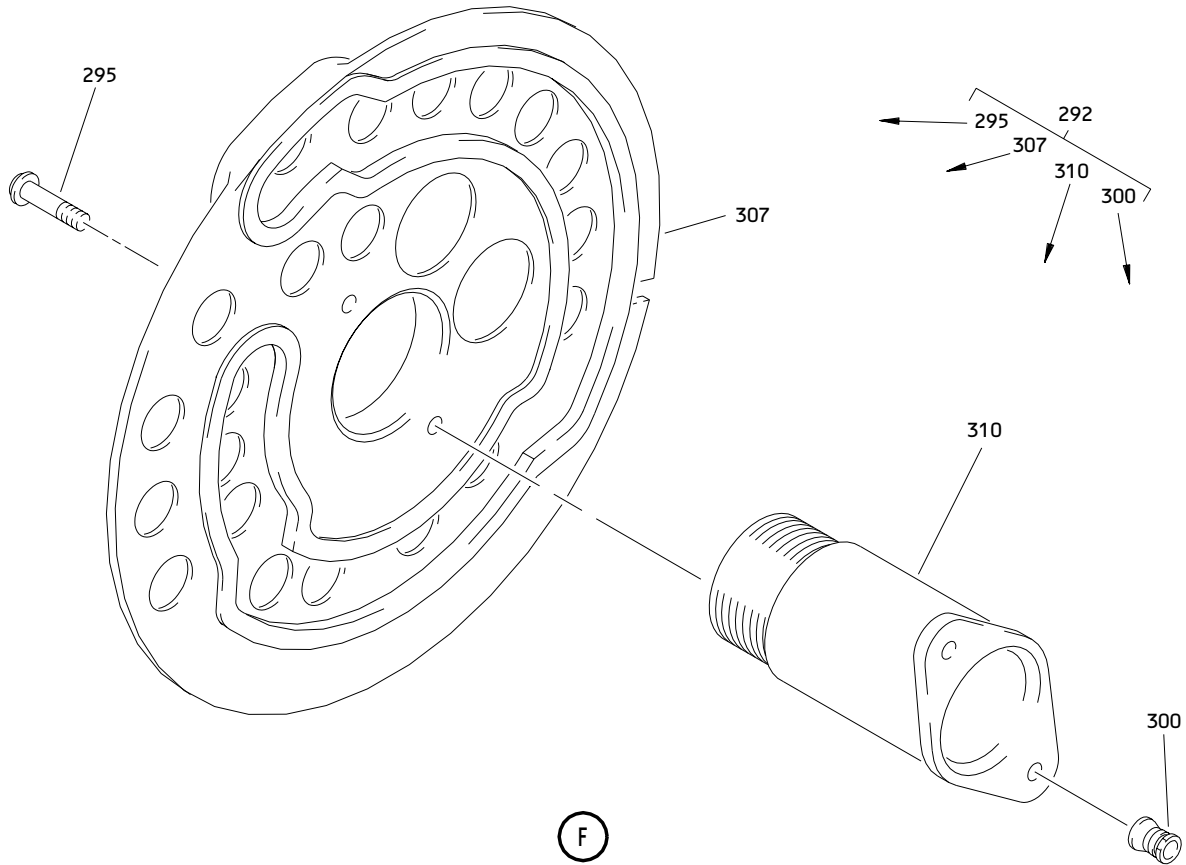
27-81-05

ILLUSTRATED PARTS LIST
 01.1 Page 1012
 Jul 01/03



Inboard Leading Edge Slat Drive Control Unit Assembly
Figure 1 (Sheet 3)

27-81-05



Inboard Leading Edge Slat Drive Control Unit Assembly
Figure 1 (Sheet 4)

27-81-05

ILLUSTRATED PARTS LIST
01.1 Page 1014
Jul 01/03

BOEING
COMPONENT
MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-			DELETED		
R -1	256T2660-2		DELETED		
R -1A	256T2660-3		UNIT ASSY-INBD LE SLAT DRIVE CONT	A	RF
R -1B	256T2660-4		UNIT ASSY-INBD LE SLAT DRIVE CONT	B	RF
R -1C	256T2660-5		UNIT ASSY-INBD LE SLAT DRIVE CONT	C	RF
1D	256T2660-6		DELETED		
R 5	NAS6604-18		.BOLT		2
R 10	AN960D416L		.WASHER		2
-10A	256T3177-3		DELETED		
R 15	BACN10JC4		.NUT		2
R 20	256T2665-1		.ARM-INPUT (OPT ITEM 20A)		1
R -20A	256T2665-3		.ARM-INPUT (OPT ITEM 20)		1
R 25	256T3177-1		.ARM-VALVE INPUT (OPT ITEM 25A)		1
R -25A	256T3177-3		.ARM-VALVE INPUT (OPT ITEM 25)		1
R 30	NAS600-5		.SCREW		8
R 35	256T2683-3		.COVER ASSY-POSITION SENSOR ATTACHING PARTS		1
R 40	NAS603-8		.SCREW		6
R 45	AN960-10L		.WASHER		6
R 50	BRM200A04L		-----*----- .NUTPLATE- (V52828) (SPEC BACN10JP04A) (OPT MK1000-04BAC (V15653)) (OPT NS103197-40 (V80539)) (OPT T8076S440 (V71087)) (OPT T8076S440 (V11815)) (OPT VN202A1-40L (V92215))		8

27-81-05

ILLUSTRATED PARTS LIST
01.1 Page 1015
Jul 01/03

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-55	BACR15BA3AD		..RIVET- (SIZE DETERMINE ON INST)		16
R 60	256T2683-4		..COVER		1
R 65	256T2689-2		.GASKET		1
R 70	256T2688-1		DELETED		
R 70A	256T2688-2		.CLAMP		4
R 75	NAS6603H5		.BOLT		4
R 80	R19A		.TRANSFORMER-ROTARY VAR DIFF (V19710) (SPEC S256T002-1)	A,C	1
R -80A	R21A		.TRANSFORMER-ROTARY VAR DIFF (V19710) (SPEC S256T002-3)	A,C	1
R 80B	S256T002-6		DELETED		
R -81	256T2660-8		.KIT ASSY-SUBSTITUTE (OPT ITEM 81A)	B	2
R -81A	256T2660-7		.KIT ASSY-SUBSTITUTE (OPT ITEM 81)	B	2
R -82	R21A		..TRANSFORMER-ROTARY VAR DIFF (V19710) (SPEC S256T002-3) (USED ON ITEM 81)		1
R -82A	R19A		..TRANSFORMER-ROTARY VAR DIFF (V19710) (SPEC S256T002-1) (USED ON ITEM 81A)		1
R 85	256T3163-3		.COVER ASSY-HSG ATTACHING PARTS		1
R 90	NAS6703-3		.BOLT		12
R 95	AN960D10		.WASHER		12
R 100	MS21209F1-15		-----*----- ..INSERT		12
R 105	256T3163-4		..COVER		1
R 110	256T2680-2		.SENSOR ASSY	A	1
R -110A	256T2680-3		.SENSOR ASSY	B	1
R -110B	256T2680-4		.SENSOR ASSY	C	1

27-81-05

 ILLUSTRATED PARTS LIST
 01.1 Page 1016
 Jul 01/03

BOEING
COMPONENT
MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-110C	256T2680-5		DELETED ATTACHING PARTS		
R 115	NAS6603H5		.BOLT		3
R 120	AN960D10		.WASHER		3
			-----*-----		
R 125	NAS6604H18		..BOLT		3
R 130	AN960-416		..WASHER		3
R 135	BACN10JC4		..NUT		3
R 140	256T2682-1		..PLATE ASSY-PWR DRIVE UNIT POSITION SENSOR SPRT	A	1
R -140A	256T2682-4		..PLATE ASSY-PWR DRIVE UNIT POSITION SENSOR SPRT	B,C	1
R 140B	256T2682-6		DELETED		
R 142	MS21209F1-15		...INSERT	A	4
R -142A	MS21209F1-13		...INSERT	B,C	4
R 143	256T2682-3		...PLATE	A	1
R -143A	256T2682-5		...PLATE	B,C	1
R 143B	256T2682-7		DELETED		
R 145	256T2681-1		..RING-BRG SPRT	A	1
R -145A	256T2681-2		..RING-BRG SPRT	B,C	1
R 145B	256T2681-3		DELETED		
R 150	MKP6A		..BEARING- (V38443) (SPEC BACB10AP6) (OPT LLMKP6A (V38443)) (OPT MKP6AFS428 (V21335)) (OPT MKP6ATT (V43991)) (OPT MKP6A2TS (V43991)) (OPT MKP6E6531 (V21335)) (OPT MKP6AG20 (V38443)) (OPT MKP6ALY196 (V40920)) (OPT MKP6A (V38443)) (OPT MCS26E (VK8455))		5

27-81-05

ILLUSTRATED PARTS LIST
01.1 Page 1017
Jul 01/03

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-155	B539FS101		..BEARING- (V06144) (SPEC BACB10CF12PP) (OPT B539DDFS101 (V06144)) (OPT T339E (VK8455)) (OPT B539SSG27 (V30163)) (OPT B539DDFS428 (V21335)) (OPT B539DD (V38443)) (OPT B539-2TS (V43991))		1
R 160	256T2687-3		..GEAR, OUTPUT	A,B	2
R -160A	256T2687-4		..GEAR, OUTPUT	C	2
R 160B	256T2687-5		DELETED		
R 165	256T2684-2		..SHAFT ASSY-SPLINE	A,B	1
R -165A	256T2684-3		..SHAFT ASSY-SPLINE	C	1
R 170	MS16562-191		...PIN-SPR		1
R 175	256T2686-2		...GEAR-INPUT PINION	A,B	1
R -175A	256T2686-3		...GEAR-INPUT PINION	C	1
R 180	256T2685-1		...SHAFT		1
R 185	NAS6603-3		.BOLT		2
R 190	AN960-10		.WASHER		2
R 195	BRH10-3		DELETED		
R 200	65B81978-1		.COVER-DRAIN (OPT ITEM 200A)		1
R -200A	65B81978-4		.COVER-DRAIN (OPT ITEM 200)		1
R 205	256T3161-9		DELETED		
R 205A	256T3161-13		.HOUSING ASSY- (OPT ITEM 205B)		1
R -205B	256T3161-15		.HOUSING ASSY- (OPT ITEM 205A)		1
R 210	NAS607-3-4P		..PIN-DOWEL		1
R -213	D2587PB		..PLUG BUTTON-*(1) (V57771) (SPEC BACP20B65) (USED ON ITEM 205B)		1

27-81-05

 ILLUSTRATED PARTS LIST
 01.1 Page 1018
 Jul 01/03

BOEING
COMPONENT
MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R 215	BACB28AP04P032		..BUSHING		2
R 218	BACB28W6B022		..BUSHING		2
R 219	2LPYE5-3		..BOLT- (V11815) (SPEC BACB30GP5-3) (OPT 2LPYE5-3 (V17446)) (USED ON ITEM 205B)		3
R 219A	NAS1080D05		..COLLAR- (USED ON ITEM 205B)		3
R 220	MS21209F1-15		..INSERT		12
R 220A	MS21209F1-10		DELETED		
R -220J	MS21209F1-15		..INSERT (USED ON ITEM 205A)		2
R 220K	MS21209F1-10		..INSERT (USED ON ITEM 205B)		2
R 221	256T2667-1		..BOSS-RIG PIN (USED ON ITEM 205B)		1
R 222	256T3161-10		DELETED		
R 222A	256T3161-14		..HOUSING- (USED ON ITEM 205A)		1
R -222B	256T3161-16		..HOUSING- (USED ON ITEM 205B)		1
R 225	NAS6704-15		DELETED		
R 225A	NAS6603-11		DELETED		
R 225B	NAS6604-11		.BOLT		2
R 230	BACW10P11AL		.WASHER		4
R 235	256T3184-1		DELETED		
R 235A	256T3184-2		.SPACER-SPR		2
R 240	BACN10JC4		.NUT	A-C	2
R -240A	BACN10J4CD		.NUT	D	2
R 245	256T3178-1		.SPRING		1
R -245A	256T3178-1		DELETED		
R -245B	256T3178-4		DELETED		

27-81-05

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R 250	NAS6604-29		.BOLT		1
R 255	BACB28AK04-089		.BUSHING		1
R 260	BACB28AK04-025		.BUSHING		1
R 265	BACN10JC4		.NUT	A-C	1
-265A	BACN10JC4CD		.NUT	D	2
R 270	256T3187-1		.SHAFT-		1
			(OPT ITEM 270A)		
R -270A	256T3189-1		.SHAFT-		1
			(OPT ITEM 270)		
R 275	KP6AFS428		.BEARING-	A-C	1
			(V21335)		
			(SPEC BACB10BX6)		
			(OPT KP6A2TS		
			(V43991))		
			(OPT LLKP6A		
			(V38443))		
			(OPT KP6AG27		
			(V30163))		
			(OPT KP6A		
			(V38443))		
			(OPT KP6BLY196		
			(V40920))		
			(OPT KP6BSD610		
			(V83086))		
			(OPT CS206E		
			(VK8455))		
-275A	BACB10BX06		.BEARING	D	1
R 280	B539FS101		.BEARING-		1
			(V06144)		
			(SPEC BACB10CF12PP)		
			(OPT B539DDFS101		
			(V06144))		
			(OPT T339E		
			(VK8455))		
			(OPT B539SSG27		
			(V30163))		
			(OPT B539DDFS428		
			(V21335))		
			(OPT B539DD		
			(V38443))		
			(OPT B539-2TS		
			(V43991))		

27-81-05

BOEING
COMPONENT
MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-285	KP4AFS428		.BEARING- (V21335) (SPEC BACB10BX4) (OPT KP4A2TS (V43991)) (OPT LLKP4A (V38443)) (OPT KP4AG27 (V30163)) (OPT KP4A (V38443)) (OPT KP4ALY196 (V40920)) (OPT KP4ASD610 (V83086)) (OPT CS204E (VK8455))	A-C	2
-285A	BACB10BX04		.BEARING	D	2
290	256T3181-1		DELETED		
R 290A	256T3181-4		.CAM ASSY-FOLLOWUP	A-C	1
R 290B	256T3181-8		DELETED		
292	256T5660-1		.CAM ASSY-FOLLOWUP	D	1
R 295	HL10VAZ6-4		..BOLT- (V60516) (SPEC BACB30MY6K4) (OPT HL10VAZ6-4 (VOPTK6)) (OPT HL10VAZ6-4 (V92215)) (OPT HL10VAZ6-4 (V97928)) (OPT L8006K4 (V06725)) (OPT HL10VAZ6-4 (V08524))		2

27-81-05

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-300	HL79-6		..COLLAR- (V56878) (SPEC BACC30M6) (OPT HL79-6 (V73197)) (OPT HL79-6 (V92215)) (OPT 66014-6 (V56878))		2
R 305	256T2664-1		DELETED		
R 305A	256T2664-2		..CAM- (OPT ITEM 305B)		1
R -305B	256T2636-1		..CAM- (OPT ITEM 305A)		1
R 305C	256T2636-2		DELETED		
R 307	256T5662-1		..CAM	D	1
R 310	256T3183-2		..SHAFT		1
R 315	256T3165-1		.CAM ASSY-INPUT	A	1
R -315A	256T3165-3		.CAM ASSY-INPUT	B,C	1
R 320	HL10VAZ6-4		..BOLT- (V60516) (SPEC BACB30MY6K4) (OPT HL10VAZ6-4 (VOPTK6)) (OPT HL10VAZ6-4 (V92215)) (OPT HL10VAZ6-4 (V97928)) (OPT L8006K4 (V06725)) (OPT HL10VAZ6-4 (V08524))		1
R 325	HL79-6		..COLLAR- (V56878) (SPEC BACC30M6) (OPT HL79-6 (V73197)) (OPT HL79-6 (V92215)) (OPT 66014-6 (V56878))		1

27-81-05

 ILLUSTRATED PARTS LIST
 01.1 Page 1022
 Jul 01/03

256T2660
256T5660

BOEING
COMPONENT
MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R 330	256T2662-1		..CAM	A	1
R -330A	256T2668-1		..CAM	B,C	1
R 335	256T3167-1		..SHAFT		1
R 340	BACN10JC4		.NUT	A-C	2
R -340A	BACN10JC4CD		.NUT	D	1
R 345	BACW10P231D		.WASHER		2
R 350	KP4AFS428		.BEARING- (V21335) (SPEC BACB10BX4) (OPT KP4A2TS (V43991)) (OPT LLKP4A (V38443)) (OPT KP4AG27 (V30163)) (OPT KP4A (V38443)) (OPT KP4ALY196 (V40920)) (OPT KP4ASD610 (V83086)) (OPT CS204E (VK8455))	A-C	2
R -350A	BACB10BX06		.BEARING	D	2
R 355	KP6AFS428		.BEARING (V21335) (SPEC BACB10BX6) (OPT KP6A2TS (V43991)) (OPT LLKP6A (V38443)) (OPT KP6AG27 (V30163)) (OPT KP6A (V38443)) (OPT KP6BLY196 (V40920)) (OPT KP6BSD610 (V83086)) (OPT CS206E (VK8455))	A-C	2
R -355A	BACB10BX04		.BEARING	D	2

27-81-05

ILLUSTRATED PARTS LIST
01.1 Page 1023
Jul 01/03

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R 360	256T3173-1		. FOLLOWER-CAM		2
R 365	256T3188-1		. LEVER-SUMMING (OPT ITEM 365A)		1
R -365A	256T3190-1		. LEVER-SUMMING (OPT ITEM 365)		1
R 370	SL2822-22		. NUT- (V97393) (SPEC BACN10RF22) (OPT 82631-2212 (V56878))		2
R 375	256T3180-1		. WASHER		2
R 380	256T3179-1		. SPACER-BRG (MFD FROM TUBING AL 2024-T3 WW-T-700/3 F-18.13 1.625 IN X .058 WALL X 1.1 IN LG)		1
R 385	256T3179-2		. SPACER-BRG (MFD FROM TUBING AL 2024-T3 WW-T-700/3 F-18.13 1.625 IN X .058 WALL X 1.5 IN. LG)		1
R 390	KP23B		. BEARING- (V38443) (SPEC BACB10BW23) (OPT KP23B2TS (V43991)) (OPT LLKP23B (V38443)) (OPT KP23BG27 (V30163)) (OPT KP23BFS428 (V21335)) (OPT KP23BLY196 (V40920)) (OPT KP23BSD610 (V83086))		4

27-81-05

 ILLUSTRATED PARTS LIST
 01.1 Page 1024
 Jul 01/03

BOEING
COMPONENT
MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-395	256T3103-1		.SHAFT-QUILL SENSOR		1
R 400	NAS1611-118		.PACKING	A-C	1
R -400A	NAS1611-118A		.PACKING	D	1
R 405	B539FS101		.BEARING- (V06144) (SPEC BACB10CF12PP) (OPT B539DDFS101 (V06144)) (OPT T339E (VK8455)) (OPT B539SSG27 (V30163)) (OPT B539DDFS428 (V21335)) (OPT B539DD (V38443)) (OPT B539-2TS (V43991))		2
R 410	BACW10P149AL		.WASHER		1
R 415	256T3169-1		.GEAR-INPUT SECTOR (OPT ITEM 415A)		1
R -415A	256T3169-3		.GEAR-INPUT SECTOR (OPT ITEM 415)		1
R 420	256T3168-2		.SHAFT-INPUT		1
R 425	BAC27TCT0002		.MARKER (OPT ITEM 425A)		1
R -425A	BAC27ECT58		.MARKER (OPT ITEM 425)		1
R 430	BAC27TCT0278		.MARKER-M483 XMTR NO. 1-PDU POSITION, INBD SLATS		1
R 435	BAC27TCT0282		DELETED		
R 435A	BAC27TCT0283		.MARKER-M549 XMTR NO. 2-PDU POSITION, OUTBD SLATS		1

- Item Not Illustrated

*[1] REQUIRED ONLY WHEN 256T3161-15 IS MADE FROM 256T3161-9 OR -10.

27-81-05

ILLUSTRATED PARTS LIST
01.1 Page 1025
Jul 01/03