



COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

CONTROL STAND UPPER MECHANISM ASSEMBLY

**PART NUMBER
65C25503-1, -11, -2, -3**

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COMPONENT MAINTENANCE MANUAL

Revision No. 21
Jul 01/2009

To: All holders of CONTROL STAND UPPER MECHANISM ASSEMBLY 27-09-45.

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.

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Location of Change

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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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CONTROL STAND UPPER MECHANISM ASSEMBLY - DESCRIPTION AND OPERATION

1. Description

A. The control stand upper mechanism assembly consists of a frame which contains and supports the start levers, thrust levers, stabilizer trim controls, flap lever, and speed brake lever, together with associated drums, bearings, shafts, linkages, covers, seals, stops, detents, cams, toggles, switches, and indicators.

2. Operation

A. Components

- (1) The stabilizer trim wheel may be turned manually to correct general "nose up" or "nose down" flight tendencies. An indicator is provided to show horizontal stabilizer position either in manual or automatic operation.
- (2) The flap lever may be operated to control flap position throughout the full operating range from up to down.
- (3) The speed brake lever may be operated to place spoilers, and speed brakes in either up or down position.
- (4) Each thrust lever is used as a throttle for its respective engine. A thrust reverser lever is included as an adjunct to each lever. The thrust lever and thrust reverser lever interlock to permit reverse in forward idle position only. Stowed and position indicating detents are provided for reverse thrust levers. An integral mechanism is provided to allow use of reverse thrust levers to lift the speed brake lever out of stow detent. Reverse thrust lever operated switches are provided to control reverse position.
- (5) Each start lever is used to actuate start switches for its respective engine.

3. Leading Particulars (approximately)

- A. Length – 20.5 inches
- B. Width – 11 inches
- C. Height – 24 inches
- D. Weight – 35.5 pounds

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DESCRIPTION AND OPERATION

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TESTING AND FAULT ISOLATION

1. General

A. This procedure has the data necessary to do a test and fault isolation.

2. Procedure

A. Tools/Equipment

NOTE: Equivalent substitutes may be used.

Reference	Description
STD-3946	Voltmeter - Simpson, Model 260

B. Continuity Test (TESTING AND FAULT ISOLATION, Figure 101)

NOTE: For VOM Multimeter, refer to model 260 simpson voltmeter, STD-3946

- (1) Check switch continuity in both open and closed positions.
- (2) Apply 5v to pin 7 of receptacle D5148J and ground pin 8.
- (3) Verify stabilizer trim position lights, flap position light, and speed brake position light illuminate.

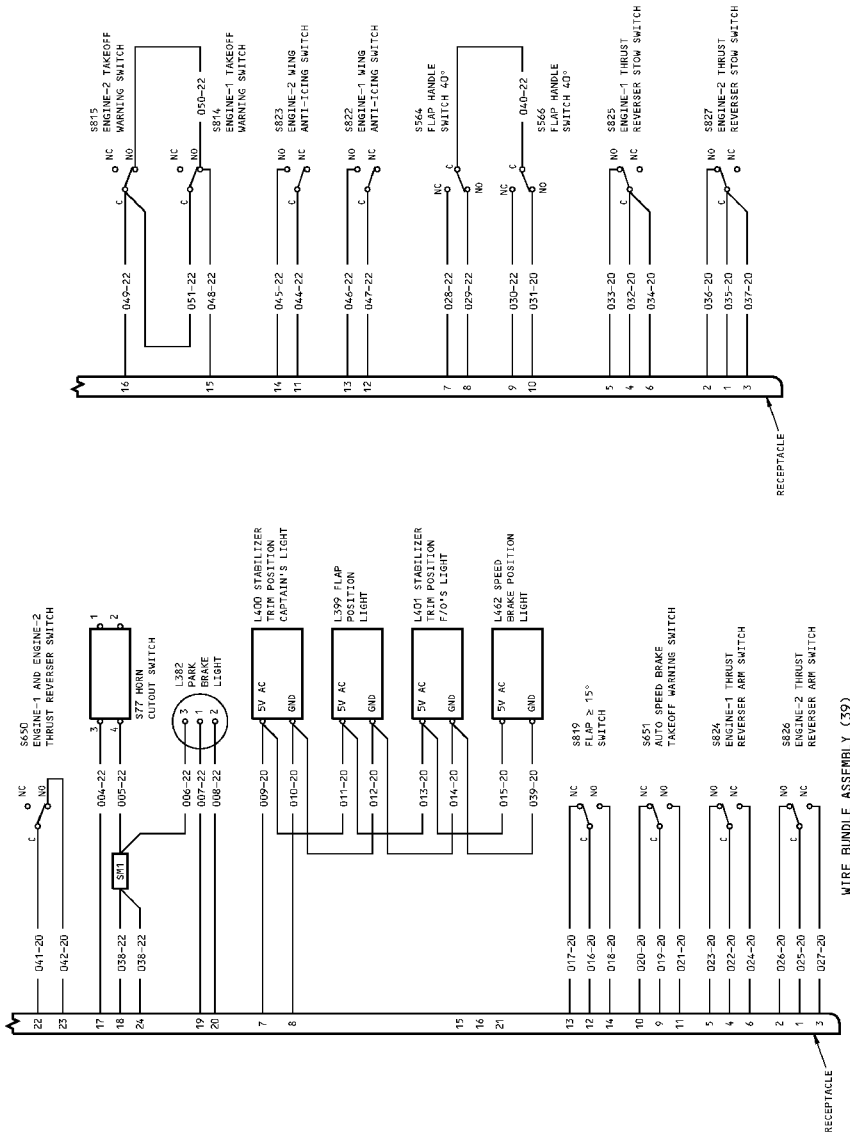
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Upper Control Stand Wiring Schematic
Figure 101

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TESTING AND FAULT ISOLATION

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DISASSEMBLY

1. General

- A. 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.
- B. Secure or remove parts that have been loosened or packaged within the assembly.
- C. Identify all parts and assemblies, including washers, shims, and spacers, in order to return them to the original position and combination.
- D. Refer to IPL Figure 1 for item numbers, unless shown differently.

2. Disassembly

A. References

Reference	Title
CMM 27-09-46	CONTROL STAND MECHANISM ASSEMBLY

B. Procedure

- (1) Remove stabilizer trim wheel assemblies (IPL Figure 1).
 - (a) Remove the right nut (2) and the right stabilizer trim wheel assembly (3). Discard the nut.
 - (b) Pull the left stabilizer trim wheel assembly (3) and the tie rod (6) out of the control stand. Remove the left nut (2) and the left stabilizer trim wheel assembly (3) from the tie rod (6). Discard the nut.
- (2) Position No. 1 thrust handle (9A) in idle thrust and No. 2 thrust handle (12A) in forward thrust positions. Position No. 1 engine start lever (15A) in start position and No. 2 engine start lever (18A) in cutoff position.
- (3) Initial disassembly of frame (IPL Figure 3): Remove bolts (5, 30A) and door assemblies (3, 25) from frame.

NOTE: Do not remove rivets (10, 35) or nutplates (15A, 40) from doors (20, 45) unless repair or replacement is necessary.

- (4) Disconnect wire bundle (39) (IPL Figure 1) connections from lightplate studs, horn cutout switch, flap position switches, stabilizer trim warning light, parking brake light, speed brake down and locked switch, thrust lever switches, and engine start switches. Remove screws (21) and lightplates (24 thru 33A).
- (5) Disassemble seals and covers (IPL Figure 3).

- (a) Remove bolts (50, 55, 65), stops (60, 70), bumper (75), screws (80, 100, 120, 140). Seal retainers (85, 105, 125, 145), seals (90, 110, 130, 150), and spacer strips (95, 115, 135).
- (b) Remove bolts (155, 165, 170), shim (160), angle gap cover (175), and cover (180A).
- (c) Remove bolts (190, 195) and right cover assembly (185).

NOTE: Do not remove rivets (200), nutplates (205, 210), bolts (220) or flap detent (225) from cover (185) unless repair or replacement is necessary.

- (d) Remove bolts (705) and start detents (700) from center cover (180A).

NOTE: Do not remove rivets (200), nutplates (205, 210), bolts (220) or flap detent (225) from cover (185) unless repair or replacement is necessary.

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- (e) Remove switch assembly from right cover (IPL Figure 1). Remove nutplates (58), screws (63, 66), switches (69), and switch actuators (72, 75).

NOTE: Do not remove bracket (78) from right cover. Nuts (57) and washers (60) are optional to nutplates (58).

- (6) Disconnect mechanical linkage as follows (IPL Figure 1).

- (a) Remove cotter pins (90), washers (96) and pins (99) separate stabilizer trim indicator links (111, 132) from crank (153). Remove nut (102), washer (105), bolt (108) and link assembly (111) .

NOTE: Do not remove bearings (114) from link (117) unless repair or replacement is necessary.

- (b) Remove chain assembly (156) if it was not removed when control stand was removed from airplane.

- (c) Cut safety wire and remove flap control cable (159) from flap handle assembly (258A).

- (d) Remove nuts (162), washers (165, 168) and bolts (171). Separate start lever linkage (15A, 18A) from start drums (174).

- (e) Remove cotter pins (198), washers (201) and pins (204). Separate switch levers (207, 210) from control cables (213, 216).

- (f) Cut safety wire and remove thrust lever cable assemblies (219).

- (7) Disassemble stabilizer wheel shaft and associated components:

CAUTION: TAP LIGHTLY TO AVOID DAMAGE.

- (a) Grasp left side of stabilizer wheel shaft (222), pull to remove it and parts mounted on it. Tap lightly with a plastic faced hammer if necessary to start shaft.

NOTE: One stabilizer wheel (3) may be slipped onto left end of stabilizer wheel shaft and temporarily secured with tie rod (6) and nut (2) to provide a handhold.

- (b) Remove the stabilizer wheel shaft (222), bearings (225, 226), and spacers (228, 231). The sprocket (234) will be loose but will stay in place until the right frame assembly and shaft components are removed.

CAUTION: SECURE SPROCKET (234) TO PREVENT DAMAGE WHEN FRAME ASSEMBLY AND SHAFT COMPONENTS ARE REMOVED.

- (8) Remove right frame assembly (230) (IPL Figure 3).

- (a) Remove bolts (235, 240, 245) and right frame assembly (230) with shaft components attached. Leave stiffener angle (250) riveted to frame.

NOTE: Do not remove rivets (255, 260) and nutplates (265, 270) nut spacer plate (275) bearing plate (280), lockwire clip (285A) or doubler (290) from frame (295) unless repair or replacement is necessary.

- (b) Remove sprocket (234) (IPL Figure 1).

- (9) Remove shaft components from right frame assembly (IPL Figure 1).

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- (a) Remove nut (237) and key (240) from shaft (243). Remove right frame assembly. Remove shim (246), right stabilizer trim indicator assembly (144), spacers (249, 252), bearing (255) and flap handle (258A) from shaft (243).

NOTE: Do not remove bearings (147) from indicator (150) unless repair or replacement is necessary.

Do not remove bearing (286) from flap handle assembly (258A) unless repair or replacement is necessary.

- (b) Disassemble flap handle assembly (258A). Remove pins (261, 264), stop (267), spring (270), knob (276), and handle (273A) from lever (279). Remove bolts (81), washers (84), and cam (87) from drum (285A).

NOTE: Do not remove rivets (282) to separate lever (279) and drum (285A) or inserts (288) unless repair or replacement is necessary.

- (10) Disassemble left shaft components.

- (a) Remove left side nut (237) and key (240). Using a suitable dowel, push shaft (291) to the right through bolthead assembly (230, IPL Figure 3) until thrust handle assemblies (9A, 12A) are free of shaft (291).

NOTE: A suitable dowel may be of hardwood, aluminum or steel approximately 12 inches long and 1.35 to 1.50 inches in diameter.

- (b) Alternately withdraw dowel and shaft (291); as they become free remove shim (294), thrust handle assemblies (9A, 12A), spacers (297), bearings (300), start system lever assemblies (15A, 18A), spacers (303), shims (306), collar (301), spacer (309), speed brake handle assembly (312), spacer (357), bearing (356), stab trim indicator assembly (120) and shim (246).

NOTE: Refer to OHM 76-18-05 and 76-14-11 for maintenance of thrust handle assemblies (9A, 12A) and start lever assemblies (15A, 18A).

Note thickness, location and number of shim(s) (294, 306) to ensure proper spacing of parts when reassembling. Do not remove bearings (123), rivet (126), washer (129), link assembly (132), or bearings (135) from link (138) unless repair or replacement is necessary.

- (11) Disassemble speed brake handle assembly (312).

- (a) Remove installation parts (901 thru 933) from the speed brake handle assembly if they are installed.

NOTE: Refer to CMM 27-09-46 for overhaul procedures for the rod assembly (901) and the idler link assembly (923).

- (b) Remove pin (315), stop (318), and spring (321) from handle assembly (324). Separate handle assembly (324) from lever assembly (342).

- (c) Remove screws (333) and switch actuator (336A) from handle assembly (324).

- (d) Remove bolts (351), and knob (354) from handle assembly (324).

NOTE: Do not remove bearing (345) from lever (348) unless repair or replacement is necessary.

- (12) Remove stabilizer trim crank (153).

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- (a) Remove nut (360), washer (363) and screw (366). Separate stabilizer trim jack assembly (369) from trim crank (153). Remove bolts (445, 475 IPL Figure 3), spacer (495) and bracket (450) from frame. Separate stabilizer trim jack assembly (369) from frame. Refer to 27-41-02 for disassembly of jack assembly (369).
 - (b) Remove nut (420), bolt (423), washers (426, 429), spacer (432), bearings (435) and stabilizer trim crank (153) (IPL Figure 1).
- (13) Disassemble engine start drum shaft components.
- (a) Cut safety wire and remove engine start cable assemblies (438).
 - (b) Remove cotter pin (441), nut (444), washers (447), shaft (450), shims (453), spacers (456 thru 465), switch brackets (468, 480) and engine start drums (174).
 - (c) Remove bolts (483), washers (486), switch actuators (489, 492), switches (495, 498), shield (501), and fillers (504) from switch bracket assemblies (468, 480).

NOTE: Do not remove rivets (471) and nutplates (474) from bracket (477) unless repair or replacement is necessary.
 - (d) Remove bolts (177), washers (180) and cams (183) from drum (186).

NOTE: Do not remove bearings (189, 192) or inserts (195) from drum (174) unless repair or replacement is necessary.
- (14) Disassemble thrust lever switch assemblies.
- (a) Remove screws (507), switch (510) and switch actuator (513). Remove screws (516), washers (519) and switch bracket assembly (522A).

NOTE: Do not remove rivets (525) and nutplates (528) from switch bracket (531) unless repair or replacement is necessary.
 - (b) Remove adjusting bolt (534), spring (540), nuts (543), washers (546), bolts (549, 552) bearing (555), bushings (558 thru 567) and cam follower and lifting arm assembly (537).
 - (c) Remove nut (570), washer (573), stop (576), adjustment rod (579), bushings (582, 588), washers (585), lifting arm (597) and cam follower assembly (600).

NOTE: Do not remove insert (591) from bushing (594) unless repair or replacement is necessary. Do not remove rivet (603), bearings (606), washers (609, 612) from cam follower (615) unless repair or replacement is necessary.
 - (d) Disconnect springs (111, IPL Figure 4) from frame (36). Remove adjusting bolts (618) or screws (626), springs (625), nut (627), washer (630, 631), bolt (633), bushings (636) or (637, 638), cam follower assemblies (621, 622, 624) and/or crank assemblies (623).

NOTE: Do not disassemble cam follower assemblies (621, 622, 624) unless repair or replacement of bushings (651, IPL Figure 1; 144, IPL Figure 4), bearings (644, IPL Figure 1; 129, IPL Figure 4) or springs (111, IPL Figure 4) is necessary.
 - (e) On 65C25503-1, -2, -3 assemblies only (IPL Figure 1): Remove screws (681), washers (684) and switch bracket assemblies (678, 679). Remove nuts (687), washers (690), screws (693, 696), actuators (699) and switches (702) from bracket assemblies (705).

NOTE: Do not remove rivets (708) and nutplates (711, 717) from brackets (714, 720) unless repair or replacement is necessary.

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- (f) On 65C25503-11 assembly only (IPL Figure 4): Remove screws (39), shield (36), plate (57, 60) and switches (30) from bracket assemblies (63, 66) and crank assemblies (69, 72). Loosen nuts (42) and remove screws (33).

NOTE: Do not disassemble bracket assemblies (63, 66) or crank assemblies (69, 72) unless necessary for repair or replacement.

- (15) Remove nuts (768), bolts (771), clamps (774), and wire bundle (39). Remove nuts (780), washers (783), screws (786, 789), clamps (792), spacers (795), and control cables (213, 216).
- (16) Remove bolts (801) and parking brake lever assembly (798A). Remove pin (804) and separate parking brake lever (807A) and hinge assembly (810).

NOTE: Do not remove rivets (813) and nutplates (816) from hinge (819) unless repair or replacement is necessary.

- (17) Remove cotter pin (822), washer (825), pin (828), spacer (831) and switch levers (207, 210).
- (18) Remove screws (834), cover (837), nuts (840), washers (843) and switch (846).
- (19) Remove nut (849), washer (852), bolt (855) and cable guard (858).
- (20) Remove facenut (861), switch (864) and pushbutton (867).

- (21) Complete disassembly of upper mechanism frame assembly (IPL Figure 3) as follows:

NOTE: Do not remove bushing (455) from bracket (450) or bushing (460) from channel splice (470) unless repair or replacement is necessary.

Do not remove bearing (495), rivets (500, 510), bearing plate (505), nutplates (515, 520, 525), spacer plate (530) from bearing support (535). Do not remove bearings (545, 550) or spacer plate (555) from bearing housing (560).

Do not remove rivets (745) or nutplates (750 thru 758) on front of main frame assembly unless repair or replacement is necessary.

- (a) Remove channel splice assembly (300).

NOTE: Do not remove rivets (305), rub strips (310) or nutplates (320 thru 330) from channel splice assembly (300) unless repair or replacement is necessary.

- (22) Stabilizer trim wheel (3) disassembly (IPL Figure 2).

- (a) Remove nuts (3), washers (5), bolts (10). Latch plates (15, 20) and handle assemblies from wheel (30).
- (b) Remove pin (25) from spindle (70).
- (c) Slightly depress latch release (55) and hold, remove rivet (35), bushing (45) and handle latch (40). Release latch release (55). Remove latch release (55) and spring (50) from handle (75).
- (d) Remove retainer ring (60), washers (65) and handle (75) from spindle (70).

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DISASSEMBLY

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CLEANING

1. General

- A. This procedure has the data necessary to clean the control stand upper mechanism assembly.
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
- C. Refer to IPL Figure 1, IPL Figure 2, IPL Figure 3 and IPL Figure 4 for item numbers.

2. Cleaning procedures

- A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
D00015	Grease - Aircraft Bearing (Use BMS 3-24 until existing stocks are depleted, BMS 3-33 supersedes BMS 3-24)	BMS3-24 (Superseded by BMS 3-33)

- B. References

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

- C. Procedures

- (1) Clean all parts except cables using standard industry practices and information contained in SOPM 20-30-03 and SOPM 20-30-01.
- (2) Clean cables with a dry cloth throughout their length. Immediately coat the entire length, except clad areas, with a minimum quantity of grease, D00015 sufficient only to produce a continuous visible ribbon of grease in the cable grooves.

NOTE: Do not apply any solvent for cleaning purposes. Do not thin grease by heating or diluting with solvent.

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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 the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
- C. Refer to IPL Figure 1, IPL Figure 2, IPL Figure 3 and IPL Figure 4 for item numbers.

2. Check

A. References

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

B. Procedure

- (1) Check all parts for obvious defects in accordance with standard industry practices.
- (2) Magnetic particle check the following parts per SOPM 20-20-01: (IPL Figure 1) sprocket (234), shaft (243), nut (375), screw (417), cam follower (615), cam follower (654); (IPL Figure 2) latch plate (15, 20).
- (3) Penetrant check the following parts per SOPM 20-20-02:(IPL Figure 1) drum (186), handle (273), lever (348); (IPL Figure 2) wheel (30); (IPL Figure 4) brackets (99, 102), cranks (105, 108), cam followers (147, 150).
- (4) Spring Check

Table 501:

IPL FIGURE NO.	ITEM NO.	APPROXIMATE FREE LENGTH (INCHES)	TEST LENGTH (INCHES)	ALLOWABLE LOAD LIMITS (POUNDS)
1	321	1.10	0.72	1.0 to 2.0
			0.47	2.0 to 3.0
			1.16	3.10 to 3.90
1	270	2.00	0.75	4.70 to 5.70
			0.75	1.03 to 1.27
2	50	1.30	0.40	1.66 to 2.02

- (5) Check cables (159, 219, 438, IPL Figure 1) as follows:
- (6) Examine for breaking, "popping" of core, damaging kinks and excessive wear.
- (7) Proof-load check control cables (159, 219, 438) at 400 to 425 pounds. Re-examine for breaks.

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CHECK
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COMPONENT MAINTENANCE MANUAL

REPAIR

1. Content

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

Table 601:

P/N	NAME	REPAIR
65-24722	STABILIZER TRIM WHEEL	1-1
65C18275	SPINDLE	2-1
69-21291	SPINDLE	3-1
69-21292	LATCH RELEASE	4-1
69-21293	HANDLE LATCH PLATE	5-1
69-70170	HANDLE LATCH PLATE	6-1
50-11343	STABILIZER TRIM INDICATOR	7-1
6-63610	LINK ASSEMBLY	8-1
65-45136	ENGINE START DRUM ASSEMBLY	9-1
65-32189	FLAP HANDLE	10-1
65-1970	SPEED BRAKE HANDLE	11-1
65-21898	SPEED BRAKE LEVER	12-1
69-1936	PARKING BRAKE LEVER	13-1
69-70178	STABILIZER CUTOUT LEVER	14-1
65C25406	LIFTING ARM	15-1
65C25456	CAM FOLLOWER	16-1
65C25405	CAM FOLLOWER	17-1
65-1926	FLAP DRUM	18-1
—	MISC PARTS REFINISH	19-1
65C32075	CAM FOLLOWER	20-1
65C32044	CRANK	21-1
65C32048	BRACKET	21-1

2. Standard Practices

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

- SOPM 20-30-02 Stripping of Protective Finishes
- SOPM 20-30-03 General Cleaning Procedure
- SOPM 20-41-01 Decoding Table for Boeing Finish Codes
- SOPM 20-41-02 Application of Chemical and Solvent Resistant Finishes
- SOPM 20-43-01 Chromic Acid Anodizing
- SOPM 20-50-03 Bearing and Bushing Replacement

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REPAIR - GENERAL

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- SOPM 20-50-05 Application of Aluminum Foil and Ohter Markers
- SOPM 20-50-07 Lubrication
- SOPM 20-50-08 Application of Bonded Solid Film Lubricants
- SOPM 20-50-12 Application of Adhesives

3. Materials

NOTE: Equivalent substitutes may be used.

- A. plastic, G50404 Urea formaldehyde thermosetting plastic, Barber Webb Co., Los Angeles, CA
- B. Ethyl Cellucose, Paroxylin Products Inc., Chicago, IL
- C. coating, C5006110-12, MIL-NC-A77, Polymer Corp., Reading, PA
- D. PA-1 white nylon baking enamel BA-G85-1, Sun Chemical Corp., Nutley, NJ
- E. enamel, C50057 Dull white camouflage enamel per MIL-E-5556 or SRF 14.903-700, Jarve Paint, Seattle, WA
- F. lacquer, C50071 Sherwin Williams Hi speed flat black lacquer
- G. solid film lubricant, D50080 MIL-PRF-46010, Type 1 (Replaces BMS 3-3, Type 1)
- H. lubricant, D00113 BMS 3-8, Type III, Class A
 - I. primer, C00259 BMS 10-11, Type I
- J. TT-L-20 lacquer color No. 37038, Federal Standard 595
- K. Black lacquer MIL-P-6805 color No. 3725 per TT-C-595
- L. MIL-E-5556 enamel color ANG19 insignia red
- M. coating, C00033 BMS 10-60, Type I gloss enamel color 101 red
- N. coating, C00260 BMS 10-11, Type 2 epoxy enamel semigloss color 712
- O. primer, B50082 MIL-P-8585 zinc chromate primer
- P. Sherwin Williams hi-speed dark gray flat lacquer 1-1-1-703
- Q. grease, D00013 MIL-PRF-23827 grease

4. 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
- ▭ 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) 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.
- DIM
- A- DATUM
- Ⓜ MAXIMUM MATERIAL CONDITION (MMC)
- Ⓛ LEAST MATERIAL CONDITION (LMC)
- Ⓢ REGARDLESS OF FEATURE SIZE (RFS)
- Ⓟ PROJECTED TOLERANCE ZONE
- FIM FULL INDICATOR MOVEMENT

EXAMPLES

— 0.002

STRAIGHT WITHIN 0.002

◎ ∅ 0.0005 C

CONCENTRIC TO C WITHIN 0.0005 DIAMETER

⊥ 0.002 B

PERPENDICULAR TO B WITHIN 0.002

≡ 0.010 A

SYMMETRICAL WITH A WITHIN 0.010

// 0.002 A

PARALLEL TO A WITHIN 0.002

∠ 0.005 A

ANGULAR TOLERANCE 0.005 WITH A

○ 0.002

ROUND WITHIN 0.002

⊕ ∅ 0.002 Ⓢ B

LOCATED AT TRUE POSITION WITHIN 0.002 DIA RELATIVE TO DATUM B, REGARDLESS OF FEATURE SIZE

⊘ 0.010

CYLINDRICAL SURFACE MUST LIE BETWEEN TWO CONCENTRIC CYLINDERS, ONE OF WHICH HAS A RADIUS 0.010 INCH GREATER THAN THE OTHER

⊥ ∅ 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

⤿ 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

2.000

THEORETICALLY EXACT DIMENSION IS 2.000

△ 0.020 A

SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.02 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE

OR
2.000
BSC

NOTE: DATUM MAY APPEAR AT EITHER SIDE OF TOLERANCE FRAME

0.020 A
A 0.020

True Position Dimensioning Symbols
Figure 601

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REPAIR - GENERAL

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COMPONENT MAINTENANCE MANUAL

STABILIZER TRIM WHEEL - REPAIR 1-1

65-24722-1

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the stabilizer trim wheel (75).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 2 for item numbers.

2. Procedure

- A. Refinish
 - (1) For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 1-1, Figure 601.

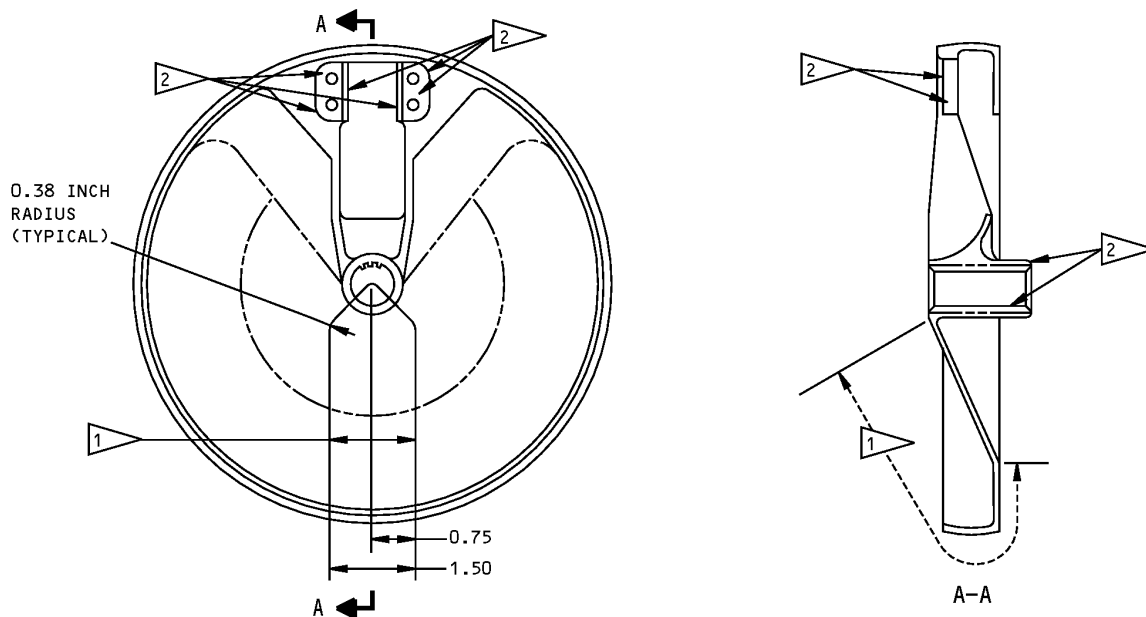
27-09-45

REPAIR 1-1

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REFINISH

COAT ALL SURFACE 0.01 MIN - 0.03 MAX EXCEPT THOSE NOTED **2** WITH NON-SPECULAR BLACK MODIFIED UREA FORMALDEHYDE THERMOSETTING PLASTIC PER SPEC P-30, BARBER WEBB CO., LOS ANGELES, CALIF. OPTIONAL COATING, NON-SPECULAR BLACK ETHYL CELLULOSE, PYROXYLIN PRODUCTS INC., CHICAGO ILL. APPLY COATING BY PISANKO METHOD, SPECIALIZED COATING INC., CHICAGO, ILL. OR GUARIAN ELECTRIC MFG CO., CHICAGO, ILL. OPTIONAL COATING BY FLUIDIZE BED PROCESS, WITH 10-12 MIL-NC-A77, POLYMER CORP., READING, PA. AIR BLAST SURFACE WITH 0.80 MESH ALUM OXIDE SUFFICIENT TO DULL SURFACE

MATERIAL: AZ91C MAGNESIUM ALLOY

ALL DIMENSIONS IN INCHES

1 COAT 0.01 MIN - 0.03 MAX WITH WHITE MODIFIED UREA FORMALDEHYDE THERMOSETTING PLASTIC. OPTIONAL (USE WITH NCA77) PA-1 WHITE NYLON BARING ENAMEL, BA-G85-1 SUN CHEMICAL CORP., NUTLEY, N.J. OPTIONAL, DULL WHITE CAMOUFLAGE ENAMEL PER MIL-E-5556 OR SRF-14.903-700 (JARVIE PAINT, SEATTLE, WA)

2 NO COATING ON THIS SURFACE

Stabilizer Trim Wheel Repair
Figure 601

27-09-45

REPAIR 1-1

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COMPONENT MAINTENANCE MANUAL

SPINDLE - REPAIR 2-1

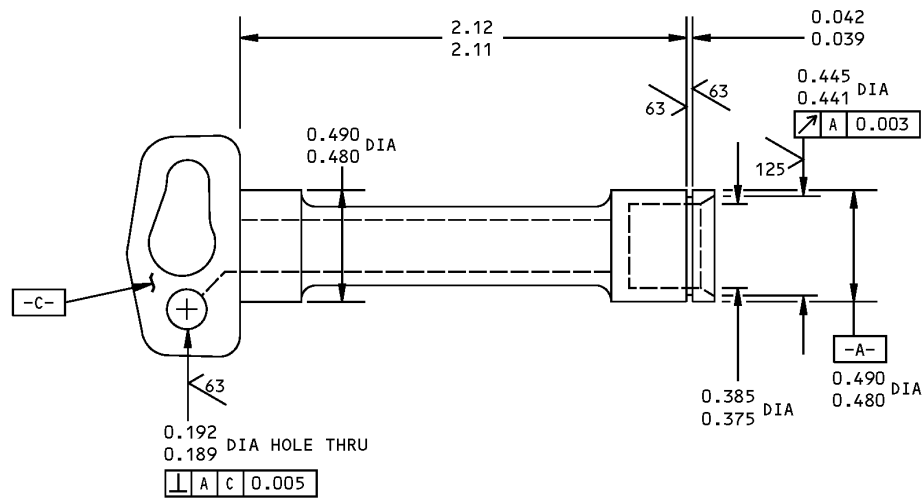
65C18275-1

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the spindle (IPL Figure 2, 70).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 2 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 2-1, Figure 601.



REFINISH

PASSIVATE (F-17.09) PER 20-30-03. APPLY SOLID FILM LUBRICANT PER 20-50-08 (BMS 3-8 CLASS A)

MATERIAL: AISI 630 (17-4PH) CASTING
HT TR 150-170 KSI

ALL DIMENSIONS ARE IN INCHES

Spindle - Refinish
Figure 601

27-09-45

REPAIR 2-1

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SPINDLE - REPAIR 3-1

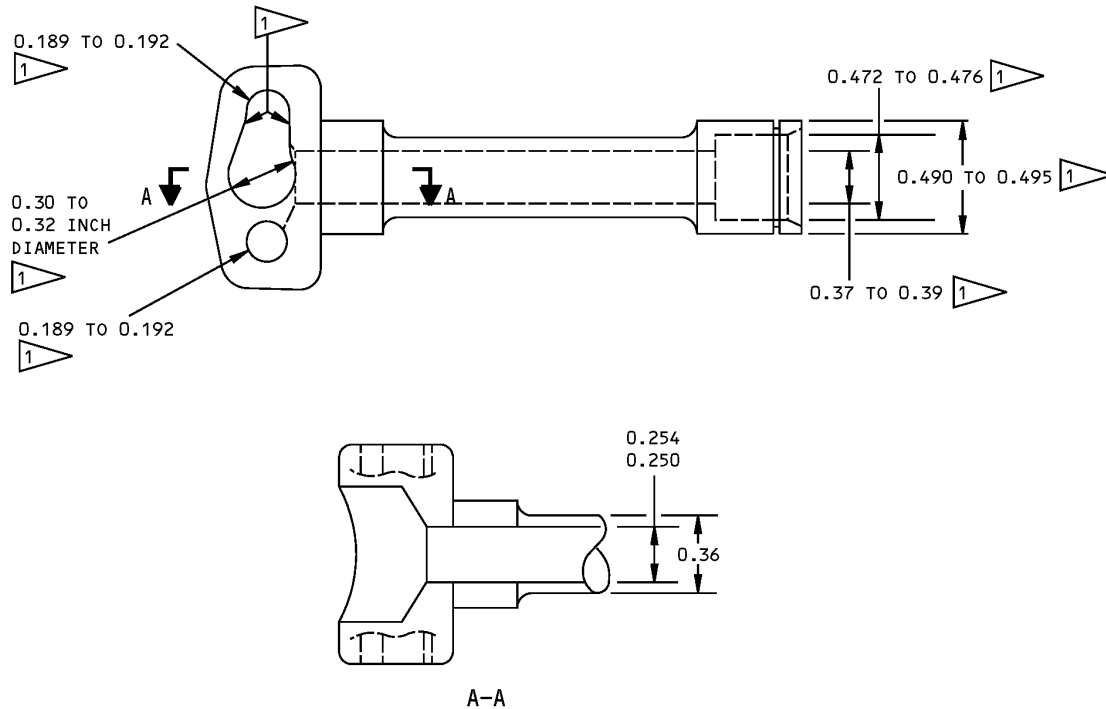
69-21291-1

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the spindle (IPL Figure 2, 70A).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 2 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 3-1, Figure 601.



REFINISH

CADMIUM PLATE (F-16.04), BAKE 3 HRS MINIMUM AT 350° TO 400°F, APPLY ONE COAT OF BMS 10-11, TYPE 1, PRIMER PER 20-41-02 EXCEPT SURFACES NOTED BY 1

MATERIAL: 4340 STL BAR HT TR 150-170 KSI

ALL DIMENSIONS IN INCHES

1 DO NOT PLATE OR PRIME. LUBRICATE PER BMS 3-3 TYPE 1

69-21291-1

Spindle - Refinish
Figure 601

27-09-45

REPAIR 3-1

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COMPONENT MAINTENANCE MANUAL

LATCH RELEASE - REPAIR 4-1

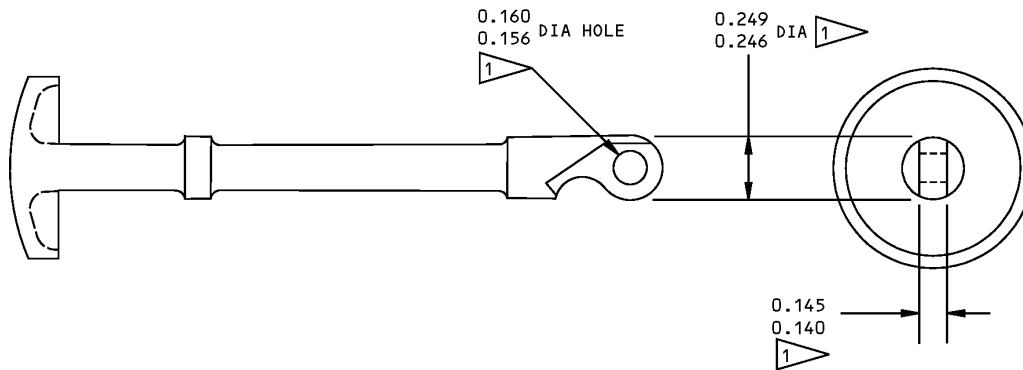
69-21292-1

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the latch release (IPL Figure 2, 55).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 2 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 4-1, Figure 601.



REFINISH

CHEMICAL NICKEL PLATE (F-1.912) BAKE PER
BMS 10-41, CLASS I

MATERIAL: 4340 STL HT TR 150-170 KSI

ALL DIMENSIONS IN INCHES

 DIMENSIONS AFTER PLATING

Latch Release - Refinish
Figure 601

27-09-45

REPAIR 4-1

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COMPONENT MAINTENANCE MANUAL

HANDLE LATCH PLATE - REPAIR 5-1

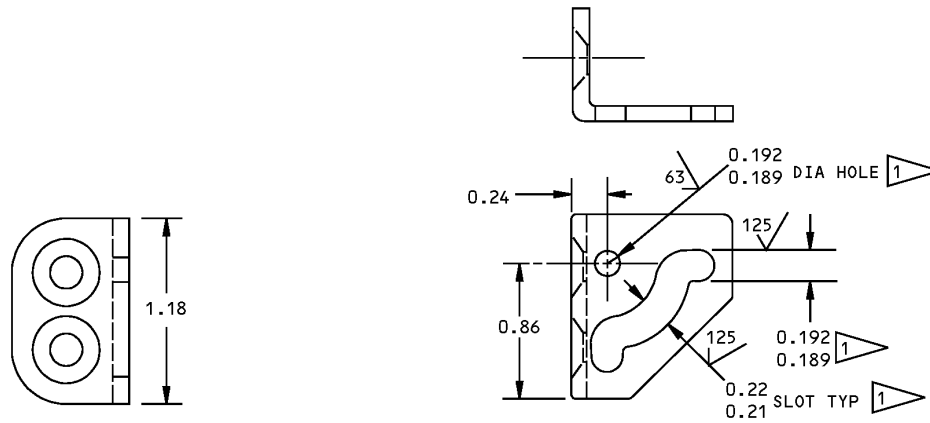
69-21293-1, -2

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the handle latch plate (IPL Figure 2, 15A, 20A).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 2 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 5-1, Figure 601.



REFINISH

CHEMICAL NICKEL PLATE (F-1.912) BAKE PER BMS 10-41, CLASS I, ALL SURFACES. APPLY TWO COATES OF SHERWIN-WILLIAMS HI-SPEED FLAT BLACK LACQUER (1-1-1-706) EXCEPT SURFACES 1

MATERIAL: 4340 STL HT TR 150-170 KSI

ALL DIMENSIONS IN INCHES

1 OMIT BLACK LACQUER. LUBRICATE PER BMS 3-3 TYPE 1

Handle Latch Plate - Refinish
Figure 601

27-09-45

REPAIR 5-1

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HANDLE LATCH PLATE - REPAIR 6-1

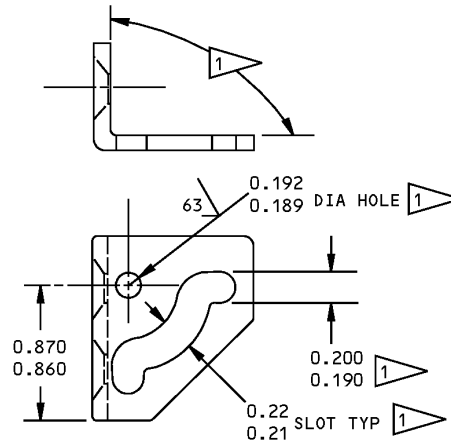
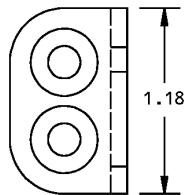
69-70170-1, -2

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the handle latch plate (IPL Figure 2, 15, 20).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 2 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 6-1, Figure 601.



REFINISH

PASSIVATE (F-17.09) PER 20-30-03. APPLY TWO COATES OF SHERWIN-WILLIAMS HI-SPEED FLAT BLACK LACQUER (1-1-1-706) EXCEPT SURFACES 1

MATERIAL: AISI 630 (17-4PH) HT TR 150-170 KSI

ALL DIMENSIONS IN INCHES

1 OMIT BLACK LACQUER. APPLY SOLID FILM LUBRICANT PER 20-50-08 TYPE VIII (BMS 3-8 CLASS A) SLOT AND HOLE ONLY

Handle Latch Plate - Refinish
Figure 601

27-09-45

REPAIR 6-1

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STABILIZER TRIM INDICATOR - REPAIR 7-1

50-11343-7, -8

1. General

- A. This procedure has the data necessary for repair and refinish of the stabilizer trim indicator (IPL Figure 1, 120, 144).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Bearing Replacement (REPAIR 7-1, Figure 601)

- A. Remove Bearing (123, 147).
- B. Install new bearing (123, 147) with grease, D00013 and roller swage both sides of indicator (141, 150) 0.003 to 0.005 deep (for lightweight bearings) per SOPM 20-50-03. For optional roller swage see REPAIR 7-1, Figure 601.

3. Refinish of indicator (141, 150)

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 7-1, Figure 601

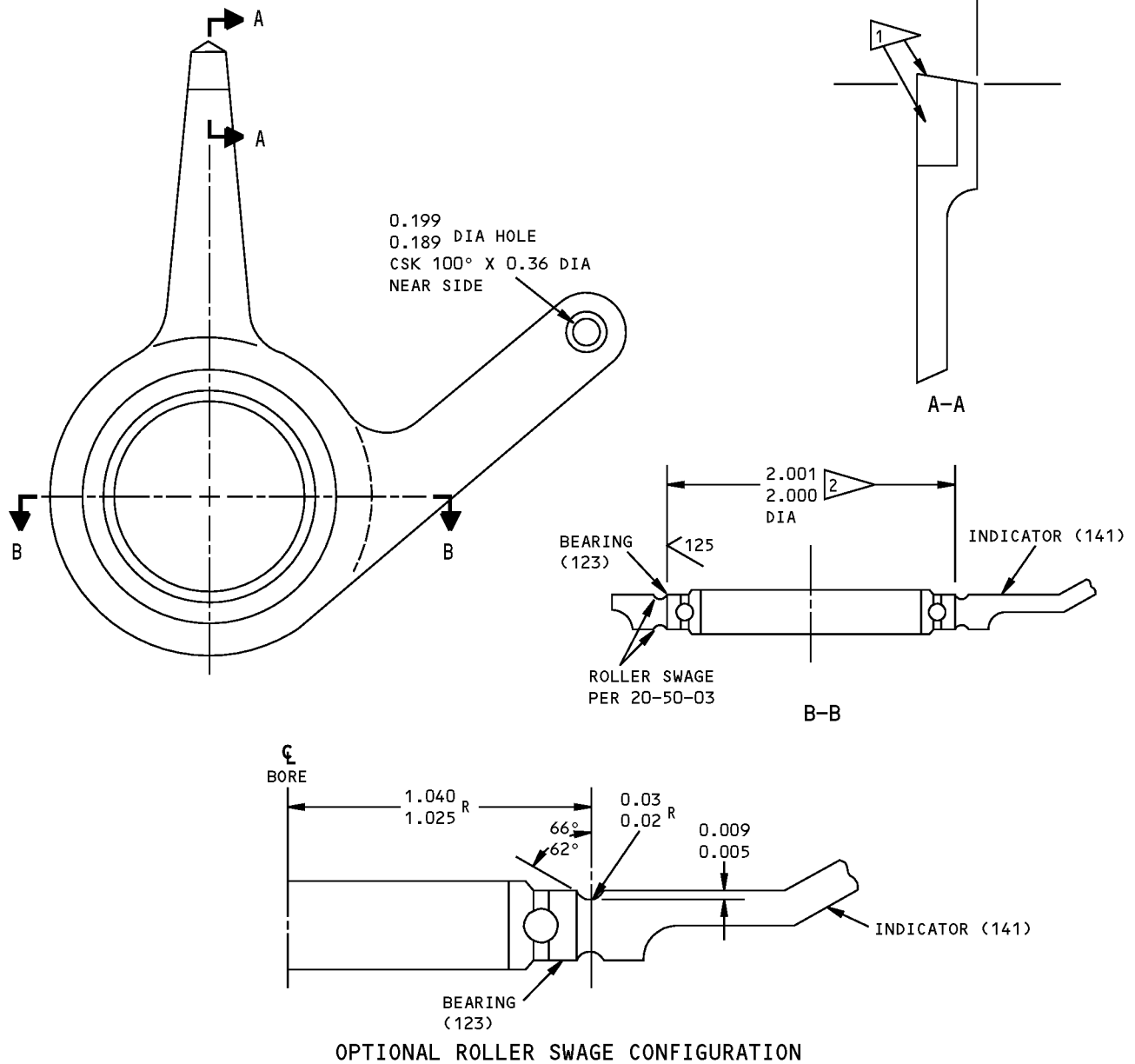
27-09-45

REPAIR 7-1

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REFINISH

CHROMIC ACID ANODIZE PER 20-43-01. APPLY ONE COAT BMS 10-11, TYPE 1, PRIMER PER 20-41-02. OVERCOAT WITH TWO COATS OF TT-L-20 LACQUER COLOR NO. 37038

- 1 WHITE LACQUER COLOR NO. 37875 OVER OVERCOAT
- 2 OMIT PAINT

MATERIAL: AL ALLOY

ALL DIMENSIONS IN INCHES

50-11343-7 SHOWN 50-11343-8 OPPOSITE Stabilizer Trim Indicator Assembly - Repair Figure 601

27-09-45

REPAIR 7-1
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COMPONENT MAINTENANCE MANUAL

LINK ASSEMBLY - REPAIR 8-1

6-63610-3000

1. General

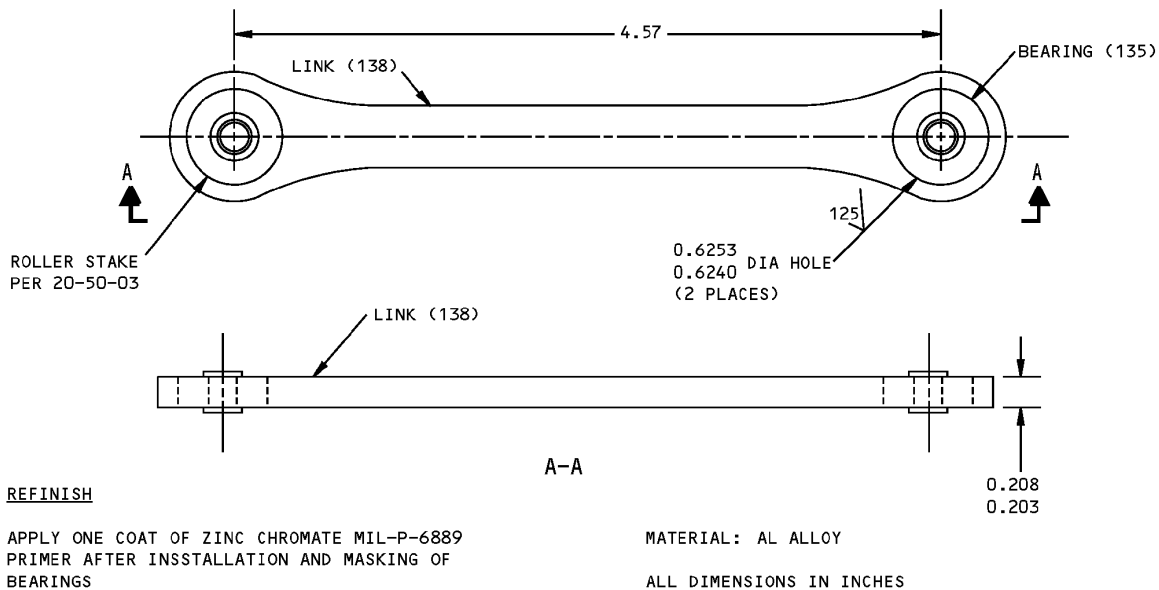
- A. This procedure has the data necessary for repair and refinish of the link assembly (IPL Figure 1, 111, 132).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Plating Repair (REPAIR 8-1, Figure 601)

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 8-1, Figure 601.

3. Bearing Replacement (REPAIR 8-1, Figure 601)

- A. Remove bearings (135).
- B. Install new bearing (135) with grease, D00013 and roller stake both sides link (138) per SOPM 20-50-03.



Link Assembly Repair
Figure 601

27-09-45

REPAIR 8-1

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COMPONENT MAINTENANCE MANUAL

ENGINE START DRUM ASSEMBLY - REPAIR 9-1

65-45136-4

1. General

- A. This procedure has the data necessary for repair and refinish of the engine start drum assembly (IPL Figure 1, 174).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Plating Repair of Drum (186) (REPAIR 9-1, Figure 601)

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 9-1, Figure 601.

3. Bearing Replacement (REPAIR 9-1, Figure 601)

- A. Remove bearings (189, 192).
- B. Install new bearing (192), roller swage both sides drum (186) per SOPM 20-50-03.
- C. Install new bearing (189), roller swage one side drum (186) per SOPM 20-50-03.

4. Helicoil Replacement

- A. Remove helicoil inserts (195).
- B. Install new helicoil inserts (195) with wet primer, C00259.

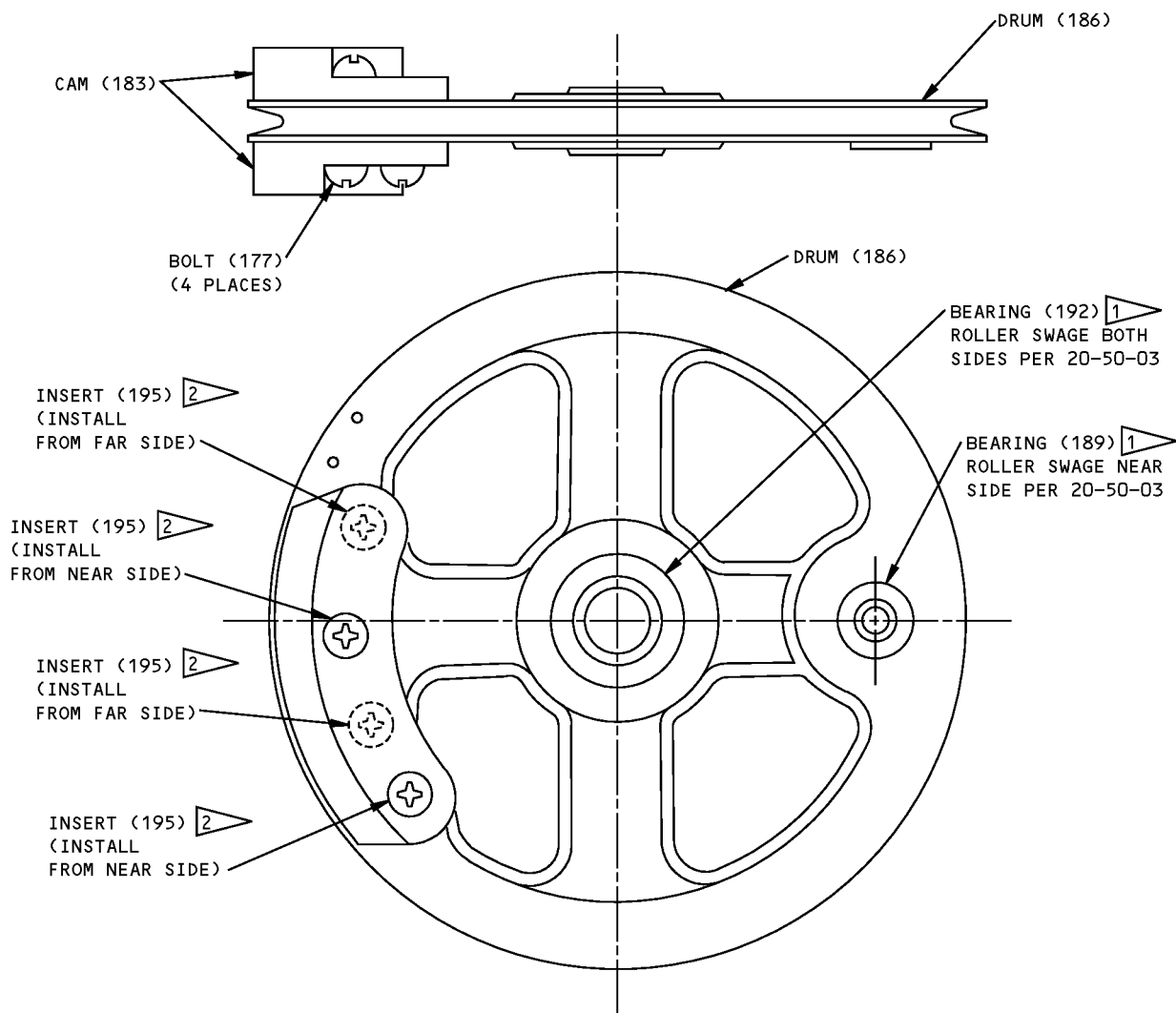
27-09-45

REPAIR 9-1

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COMPONENT MAINTENANCE MANUAL



REFINISH

SULFURIC ACID ANODIZE AND APPLY ONE COAT BMS 10-11, TYPE 1 PRIMER PER 20-41-02 EXCEPT AS NOTED

MATERIAL: AL ALLOY

- 1 NO PRIMER THIS SURFACE
- 2 ASSEMBLE WITH WET PRIMER (SRF-12.46)

65-45136-4 Engine Start Drum Assembly - Repair
Figure 601

27-09-45

REPAIR 9-1
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FLAP HANDLE - REPAIR 10-1

65-32189-7, -9

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the flap handle (IPL Figure 1 , 273A, 273B).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 10-1, Figure 601.

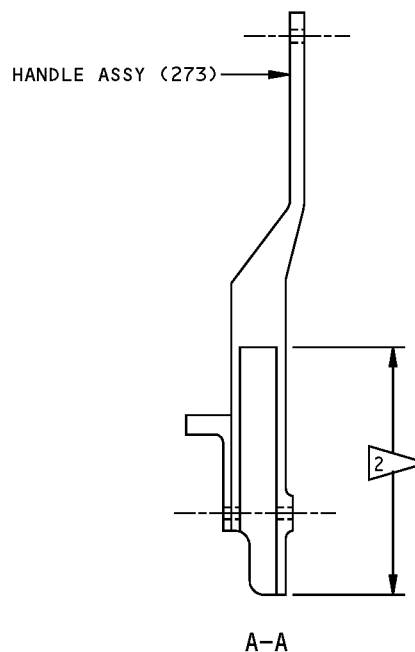
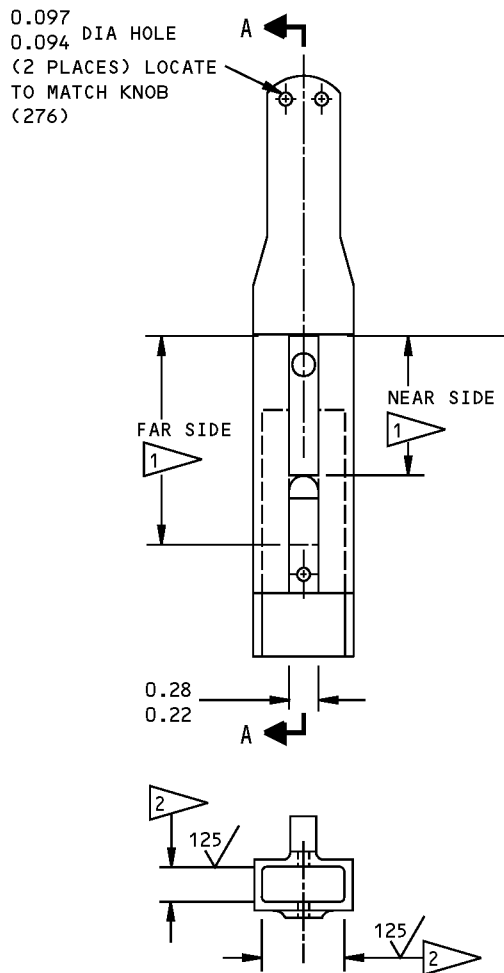
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REPAIR 10-1

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COMPONENT MAINTENANCE MANUAL



REFINISH

CHROMIUM PLATE, MATTE FINISH (F-14.111)
EXTERIOR SURFACES ONLY.

MATERIAL: 17-4PH CRES
OPTIONAL: 4340 STL, 180-200 KSI

- 1 ABRASIVE CLEAN AND APPLY ONE COAT
BMS 10-11, TYPE I, PRIMER (F-20.02)
PLUS ONE COAT BMS 10-11, TYPE II
WHITE GLOSS ENAMEL (F-21.03)
- 2 SOLID DRY FILM LUBE BMS 3-3 TYPE 1
INTERIOR SURFACE

ALL DIMENSIONS IN INCHES

65-32189-7,-9 Flap Handle - Repair
Figure 601

27-09-45

REPAIR 10-1
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COMPONENT MAINTENANCE MANUAL

SPEED BRAKE HANDLE - REPAIR 11-1

65-1970-10, -13

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the speed brake handle (IPL Figure 1 , 324, 324A).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 11-1, Figure 601.

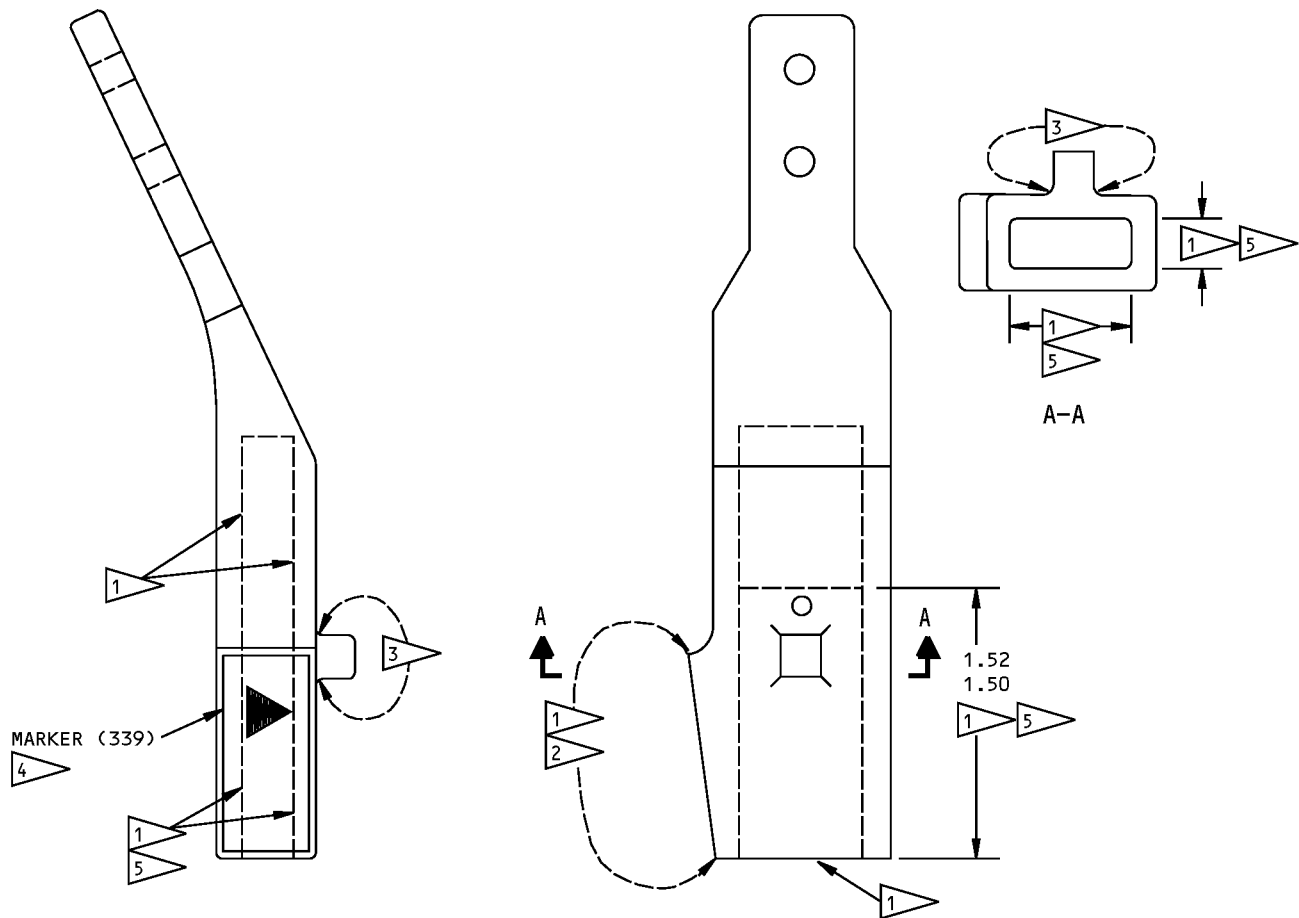
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REPAIR 11-1


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

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COMPONENT MAINTENANCE MANUAL



REFINISH


CHROMIUM PLATE, MATTE FINISH (NONREFLECTIVE) (F-14.111) EXCEPT , (UNDERPLATE OF NICKEL IS ALLOWED). FINISH SHALL MATCH COLOR CHIP BAC9250 FOR COLOR AND APPEARANCE

-  DO NOT CHROMIUM PLATE
-  APPLY ONE COAT BMS 10-11, TYPE 1, PRIMER (F-20.02) AND ONE COAT BMS 10-11, TYPE 2, WHITE GLOSS ENAMEL (F-21.03)

 65-1970-10: LIQUID SALT BATH NITRIDE FOR MAXIMUM ALLOWED TIME THIS AREA ONLY

65-1970-13: HARD CHROME PLATE PER 20-42-03. MINIMUM PLATING THICKNESS 0.005 INCH

 APPLY MARKER PER 20-50-05

 APPLY DRY LUBE PER 20-50-08 TYPE 8 THIS AREA ONLY NO OVERSPRAY ALLOWED

MATERIAL: 17-4PH CRES, 150-170 KSI

ALL DIMENSIONS IN INCHES

65-1970-10,-13 Speed Brake Handle - Repair
Figure 601

27-09-45

REPAIR 11-1

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COMPONENT MAINTENANCE MANUAL

SPEED BRAKE LEVER ASSEMBLY - REPAIR 12-1

65-21898-12

1. General

- A. This procedure has the data necessary for repair and refinish of the speed brake lever assembly (IPL Figure 1, 342).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Plating Repair of lever (348)

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 12-1, Figure 601.

3. Bearing Replacement (REPAIR 12-1, Figure 601)

- A. Remove Bearing (345)
- B. Coat bearing seat with grease, D00013 per SOPM 20-50-07 prior to bearing installation.
- C. Install Bearing (345)

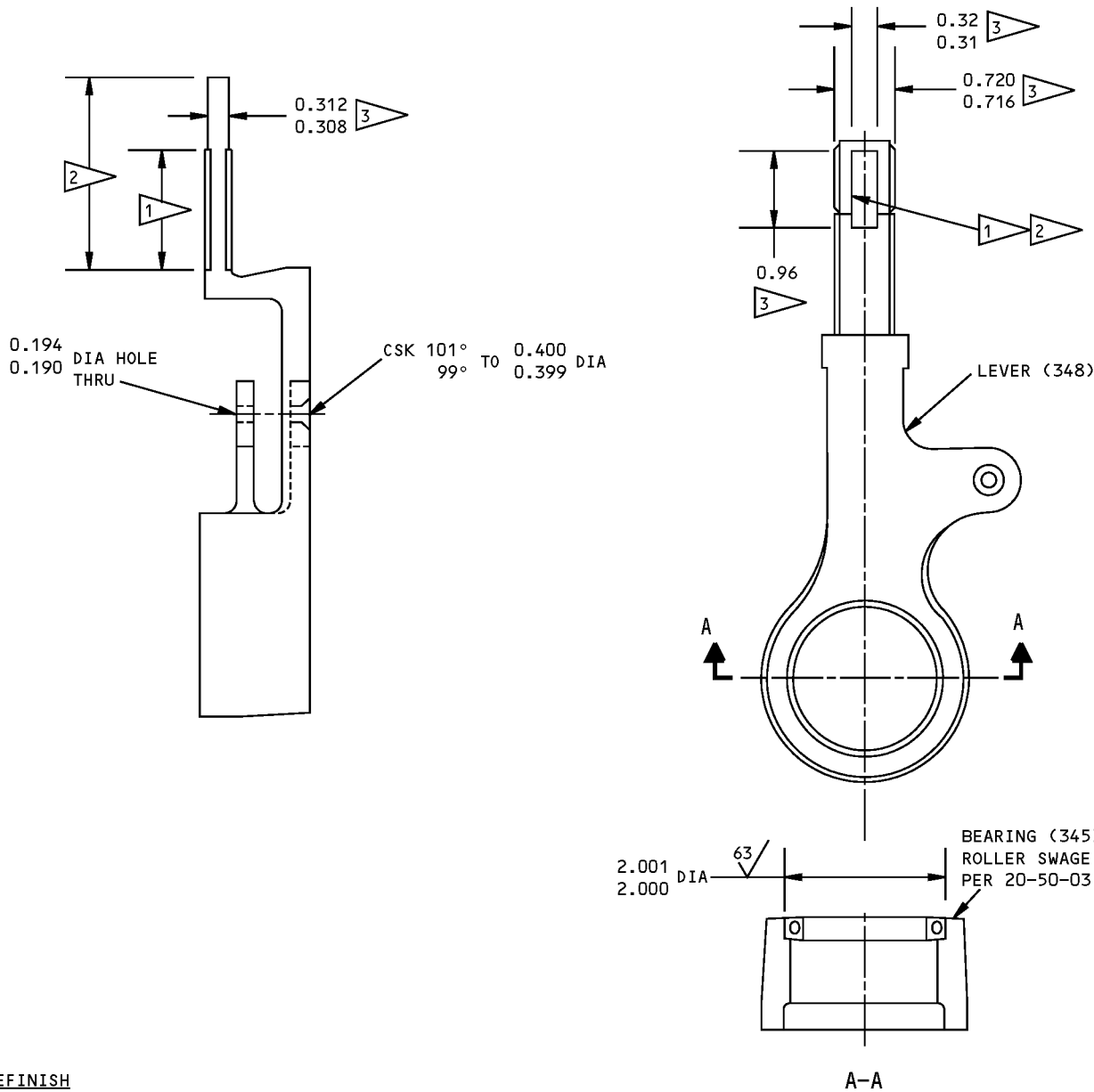
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REPAIR 12-1

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COMPONENT MAINTENANCE MANUAL



REFINISH

CHROMIC ACID ANODIZE PER 20-43-01 EXCEPT AS NOTED BY 1

- 1 SULFURIC ACID HARD ANODIZE, CLASS I, GRADE 2 (0.002-0.003 THICK) ALL SURFACES THIS AREA
- 2 APPLY BMS 3-8, CLASS A, PER 20-50-08, METHOD 3
- 3 INCLUDES 0.002-0.003 SINGLE COATING THICKNESS

MATERIAL: AL ALLOY

ALL DIMENSIONS IN INCHES

65-21898-12 Speed Brake Lever Assembly - Repair
Figure 601

27-09-45

REPAIR 12-1
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COMPONENT MAINTENANCE MANUAL

PARKING BRAKE LEVER - REPAIR 13-1

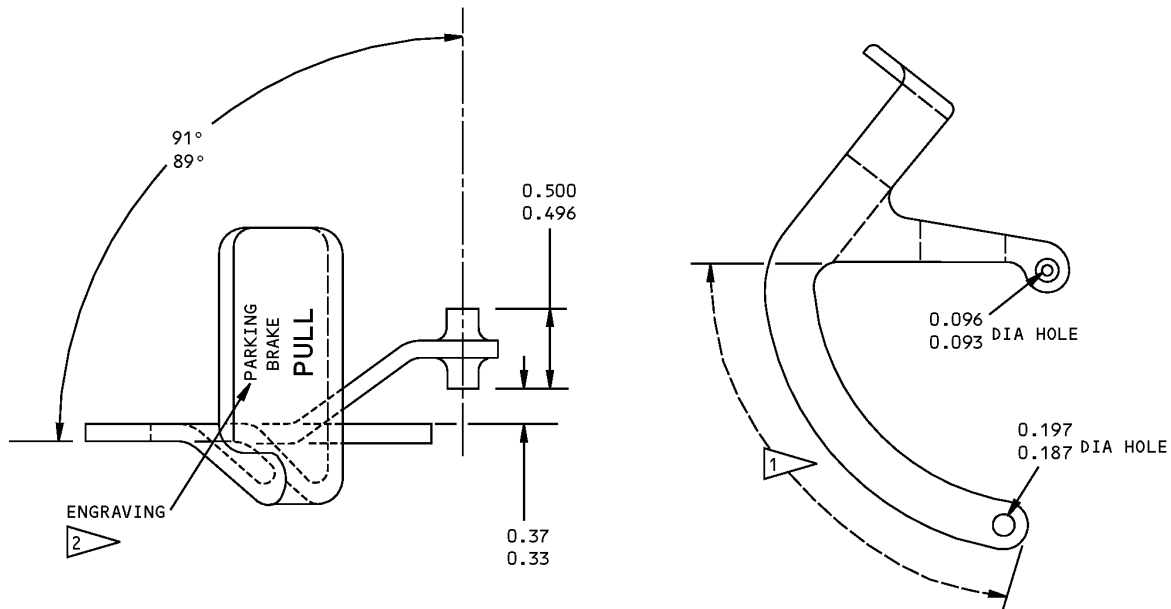
69-1936-8

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the parking brake lever (IPL Figure 1 , 807).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 13-1, Figure 601.



REFINISH

CHROMIUM PLATE, MATTE FINISH (F-14.111)
EXCEPT AREA NOTED 1

MATERIAL: 17-7PH CRES, 180-200 PSI

ALL DIMENSIONS ARE IN INCHES

1 APPLY TWO COATS MIL-P-6805 LACQUER OR ONE COAT MIL-E-5556 ENAMEL, COLOR AN 619, INSIGNIA RED PER ANA BULLETIN 157. OPTIONAL ONE COAT BMS 10-60, TYPE 1 GLOSS ENAMEL COLOR 101 RED

2 FILL ENGRAVING WITH BLACK LACQUER MIL-P-6805 COLOR NO. 3725 PER TT-C-595

69-1936-8 Parking Brake Lever - Repair
Figure 601

27-09-45

REPAIR 13-1

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COMPONENT MAINTENANCE MANUAL

STABILIZER CUTOUT LEVER - REPAIR 14-1

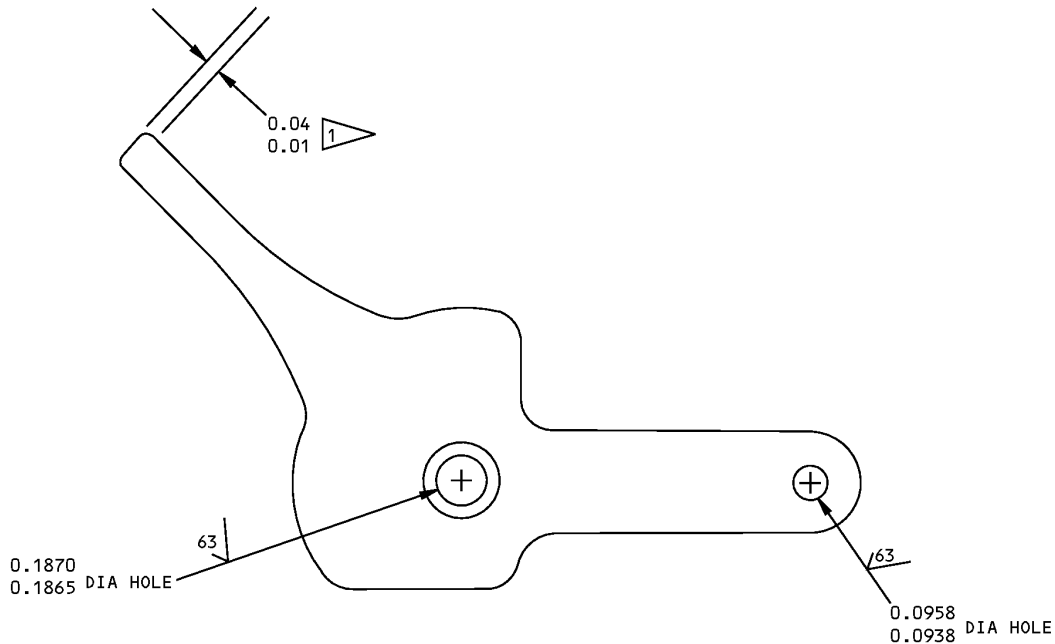
69-70178-1, -2

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the stabilizer cutout lever (IPL Figure 1, 207, 210).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 14-1, Figure 601.



REFINISH

PREPARE SURFACE AND PASSIVATE ACCORDING TO 20-30-03 METHOD 2

MATERIAL: AISI 630 STL HT TR 150-170 PSI

ALL DIMENSIONS ARE IN INCHES

1 APPLY ONE COAT BMS 10-11, TYPE 2, EPOXY ENAMEL, SEMIGLOSS COLOR 712 PER 20-41-02

Stabilizer Cutout Lever - Repair
Figure 601

27-09-45

REPAIR 14-1

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COMPONENT MAINTENANCE MANUAL

LIFTING ARM - REPAIR 15-1

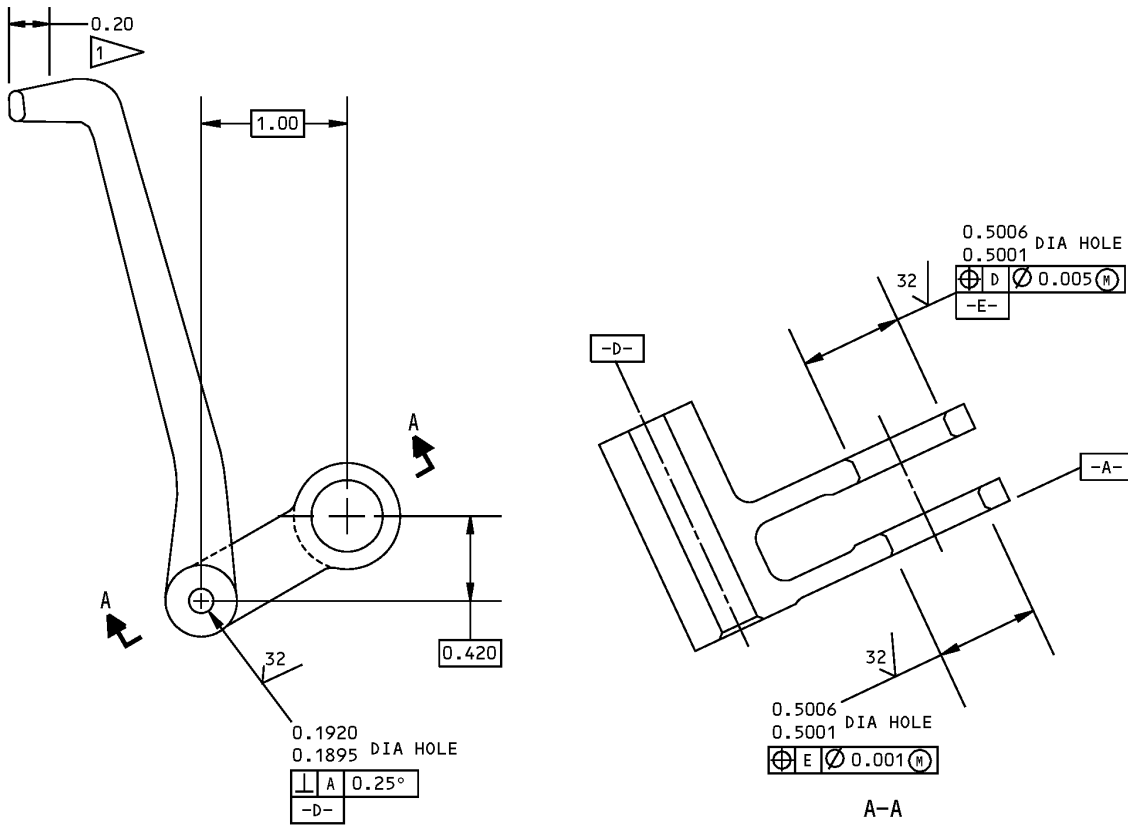
65C25406-1

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the lifting arm (IPL Figure 1 , 597).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 15-1, Figure 601.



REFINISH

PREPARE SURFACE AND PASSIVATE

MATERIAL: AISI 630 STL 180-200 KSI

- 1 APPLY BMS 3-8, CLASS A PER 20-50-08. OVERSPRAY PERMITTED

ALL DIMENSIONS ARE IN INCHES

Lifting Arm - Repair
Figure 601

27-09-45

REPAIR 15-1
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COMPONENT MAINTENANCE MANUAL

CAM FOLLOWER ASSY - REPAIR 16-1

65C25456-11, -12, -21, -22

1. General

- A. This procedure has the data necessary for repair and refinish of the cam follower assembly (IPL Figure 1, 621,621A,622,622A).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Bushing Replacement (REPAIR 16-1, Figure 601)

- A. Remove bushings (651)
- B. Install new bushings per SOPM 20-50-03.
- C. Machine bushings to design diameter shown.

3. Bearing Replacement (REPAIR 16-1, Figure 601)

- A. Remove nuts (639), washers (642), and bearings (644) from cam followers (654, 655).
- B. Install new bearings with washers (642), and nuts (639) as shown.

NOTE: If grease fitting protrudes beyond bearing, remove fitting and replace with 66-13328-3 plug.

4. Refinish of lever (654,655)

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 16-1, Figure 601.

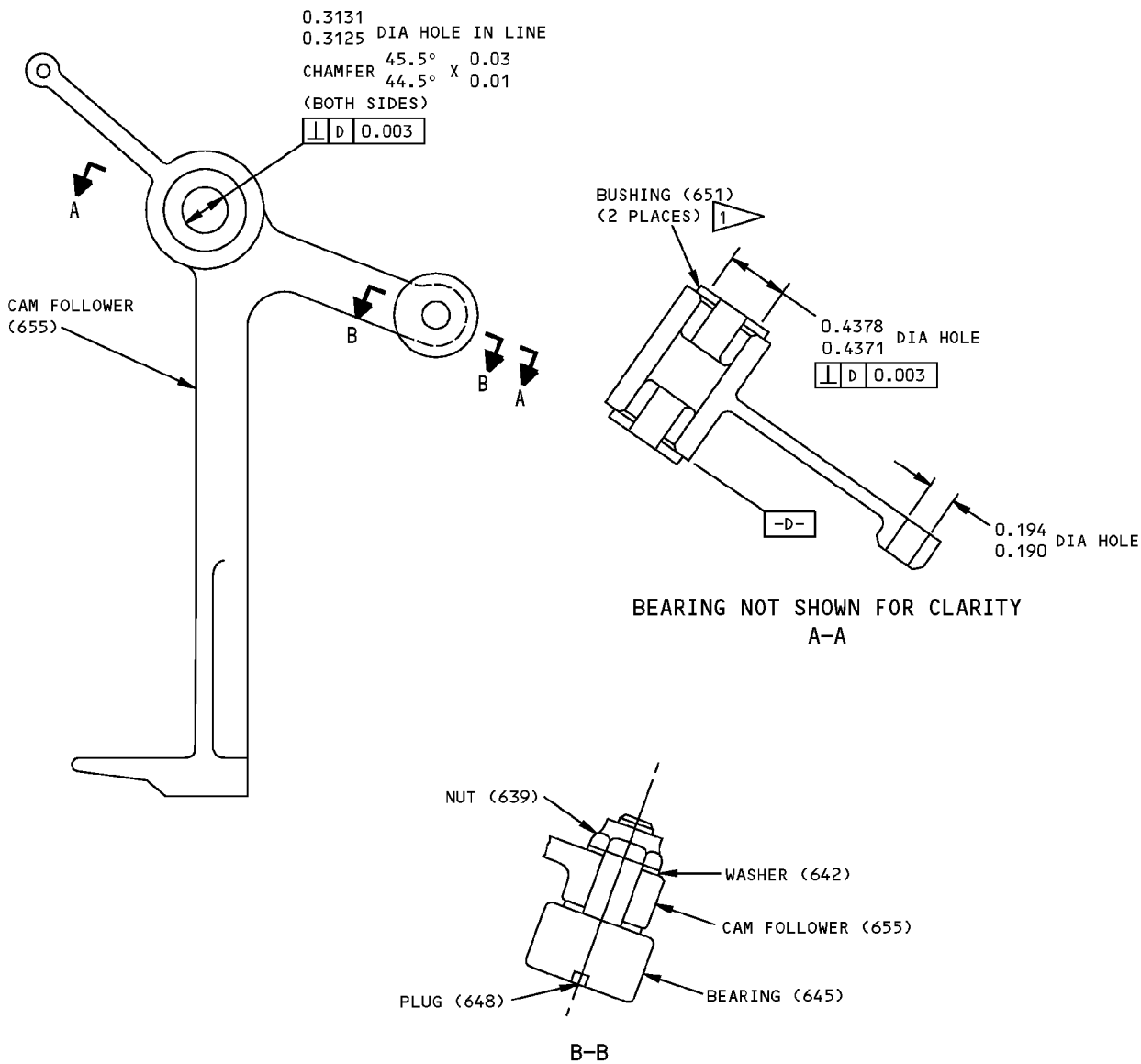
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REPAIR 16-1

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COMPONENT MAINTENANCE MANUAL



REFINISH

PASSIVATE (F-17.09)

MATERIAL: 17-4PH OR 15-5PH CRES
180-200 KSI

1 INSTALL PER 20-50-03

ITEM NUMBERS REFER TO IPL FIG. 1

65C25456-11,-12,-21,-22 Cam Follower Assembly - Repair
Figure 601

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REPAIR 16-1
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COMPONENT MAINTENANCE MANUAL

CAM FOLLOWER ASSEMBLY - REPAIR 17-1

65C25405-1

1. General

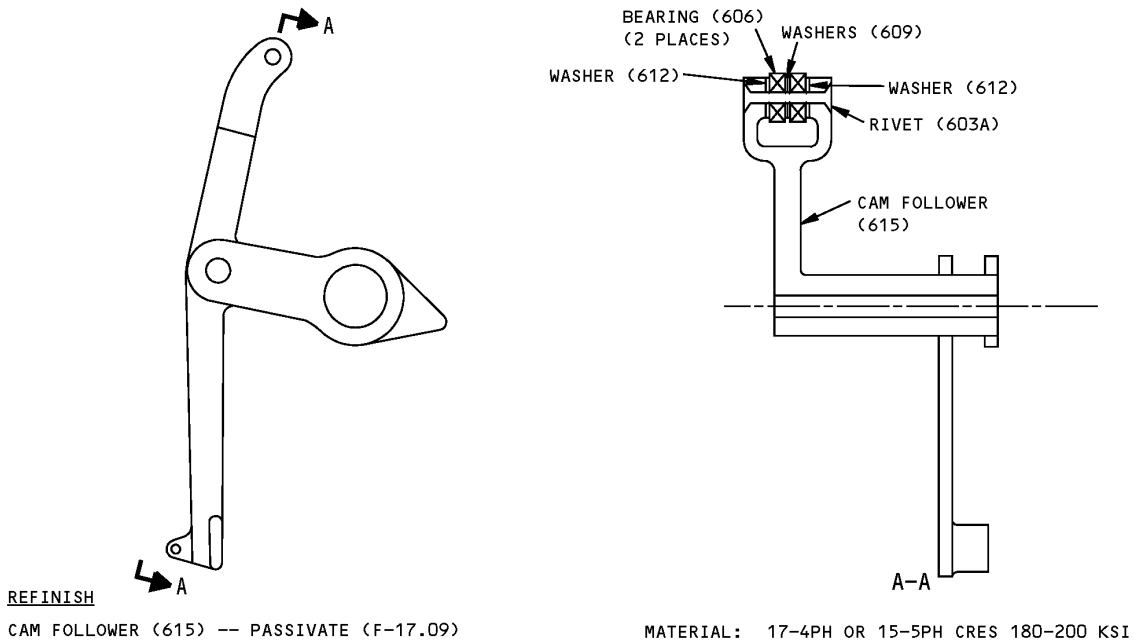
- A. This procedure has the data necessary for repair and refinish of the cam follower assembly (IPL Figure 1, 600).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Plating Repair (REPAIR 17-1, Figure 601)

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 17-1, Figure 601.

3. Bearing Replacement (REPAIR 17-1, Figure 601)

- A. Remove bearings (606).
- B. Install new bearing with washers (609, 612) and rivet (603A) as shown.



Cam Follower Assembly - Repair
Figure 601

27-09-45

REPAIR 17-1

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COMPONENT MAINTENANCE MANUAL

FLAP DRUM ASSEMBLY - REPAIR 18-1

65-1926-12

1. General

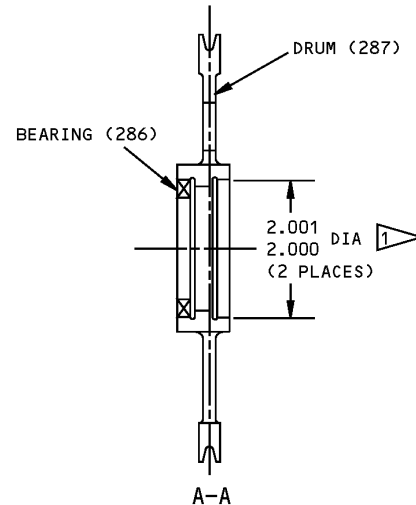
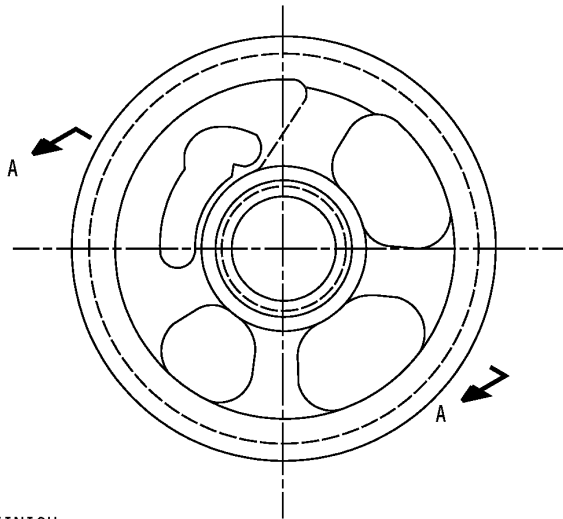
- A. This procedure has the data necessary for repair and refinish of the flap drum assembly (IPL Figure 1, 285A).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 1 for item numbers.

2. Plating Repair (REPAIR 18-1, Figure 601)

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 18-1, Figure 601.

3. Bearing Replacement (REPAIR 18-1, Figure 601)

- A. Remove bearing (286).
- B. Install new bearing and roller swage per SOPM 20-50-03.



REFINISH

DRUM (287) -- CHEMICAL TREAT OR CHROMIC ACID ANODIZE AND APPLY ONE COAT BMS 10-11, TYPE 1 PRIMER (F-18.05) EXCEPT AS NOTED.

NO PRIMER THIS SURFACE

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

Flap Drum Assy - Repair
Figure 601

27-09-45

REPAIR 18-1

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COMPONENT MAINTENANCE MANUAL

MISCELLANEOOUS PARTS REFINISH - REPAIR 19-1

1. General

- A. This repair gives the data that is necessary to refinish parts not given in the specified repairs.
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to IPL Figure 1 and IPL Figure 3 for item numbers, as applicable.

2. Procedure

- A. Repair of parts listed in REPAIR 19-1, Table 601 consists of restoration of the original finish.

Table 601: Refinish Details

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1		
Tie Rod (6)	4130 Steel 150-170 ksi	Cadmium plate (F-1.1913).
Shaft (222)	4130 Steel or 8630 Steel 125-145 ksi	Cadmium plate (0.0002-0.0003 thick and apply primer, C00259 (F-1.61).
Spacer (228A)	15-5 Stainless stl H1150 condition	Cadmium plate (F-15.06).
Spacer (229)	4130 Steel 125-145 ksi or 15-5 Stainless stl H1150 condition	Cadmium plate (F-15.06).
Sprocket (234)	4340 Steel 125-145 ksi	Cadmium plate (F-15.02) and apply primer, C00259 (F-20.02). Do not apply primer on internal spline or on gear teeth outside of 5.00 in. dia.
Sprocket (234A)	4340 Steel 125-145 ksi	Cadmium plate 0.0002-0.0003 thick and apply primer, C00259 (SRF-1.30). Do not apply primer on internal spline or on gear teeth outside of 5.00 in. dia.
Shaft (243, 243A)	4130 Steel or 8630 Steel 125-145 ksi	Cadmium plate 0.0002-0.0003 thick (F-1.20).
Shaft (291)	4130 Steel or 8630 Steel 125-145 ksi	Cadmium plate (0.0002-0.0003 thick) and apply primer, C00259 (SRF-1.611). Do not apply primer on 1.3125-1.3135 in. ID at the threaded end of the shaft.
Nut (237)	4340 Steel 125-145 ksi	Cadmium plate and apply primer, C00259 (SRF-1.30). Apply two layers of lacquer, color 36251 dull gray, per MIL-L-6505, except on the threads.
Key (240)	4130 Steel Normalized	Cadmium plate 0.0002-0.0003 thick (F-1.20).
Spacer (249,252, 297)	Al Alloy	Chromic acid anodize (F-17.04).
Lever (279)	8630 Steel or 4130 Steel 150-170 ksi	Cadmium plate 0.0002 to 0.0004 thick per SOPM 20-42-05. Apply solid film lubricant, D00113 (F-19.10).
Spacer (309)	Al Alloy	Chromic acid anodize (F-17.04).
Pin (204)	4130 Steel Normalized	Cadmium plate 0.0003-0.0005 thick (F-1.20).

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REPAIR 19-1
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Table 601: Refinish Details (Continued)

IPL FIG. & ITEM	MATERIAL	FINISH
Shaft (450)	4340 Steel or 4140 Steel 125-145 ksi	Cadmium plate 0.0002-0.0003 thick and apply primer, C00259(F-1.61).
Bushing (582,594)	4340 Steel 125-145 ksi	Chrome plate (F-15.03) the O.D. only. 0.4995-0.5000 dia. after plating. Cadmium plate (F-15.06) the end faces. Chrome plate throw-in permitted in the un-threaded hole, and cadmium plate throw-in permitted on the chamfer on bushing (582) only. Chrome plate chip-off within 0.02 of the hole is permitted.
Adjustment Rod (579)	4140 Steel 125-145 ksi	Cadmium plate (F-15.06).
Cam Follower (615)	15-5PH CRES or 17-4PH CRES 180-200 ksi	Passivate (F-17.09).
Fig. 3		
Flap Detent (225)	15-5PH CRES or 17-4PH CRES 150-170 ksi	Chrome plate (F-14.111), but do not plate the back and underside, which cannot be seen after installation. Chrome plate optional on the contact surface at the two gates. Passivate (F-17.25) the unplated surfaces.
Indicator Plate (610)	17-4PH CRES 150-170 ksi	Chrome plate (F-14.111), but not on the outer radius contact surface (outer edge, chamfer, and raised face). Wet or dry abrasive blast the contact surface per SOPM 20-30-03, then apply dry lube per SOPM 20-50-08, type 8. Overspray is not permitted.
Start Lever Dentent (700)	17-7PH CRES 150-170 ksi	Apply primer, C00259 (F-20.02) and apply Sherwin-Williams lacquer (F-14.907). Do not apply primer or paint on the top edge or in the detents.

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REPAIR 19-1
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CAM FOLLOWER ASSEMBLY - REPAIR 20-1

65C32075-1, -2

1. General

- A. This procedure has the data necessary for repair and refinish of the cam follower assembly (IPL Figure 4, 20,25).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 4 for item numbers.

2. Plating Repair cam followers (138, 141) (REPAIR 20-1, Figure 601)

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 20-1, Figure 601

3. Bushing Replacement (REPAIR 20-1, Figure 601)

- A. Remove bushings (144)
- B. Install new bushings per SOPM 20-50-03.
- C. Machine bushings to design diameter shown.

4. Bearing Replacement (REPAIR 20-1, Figure 601)

- A. Remove nuts (114), washers (117), and bearings (129) from cam followers (138, 141).
- B. Install new bearings with washers (117), and nuts (114) as shown.

NOTE: If grease fitting protrudes beyond bearing, remove fitting and replace with 66-13328-3 plug.

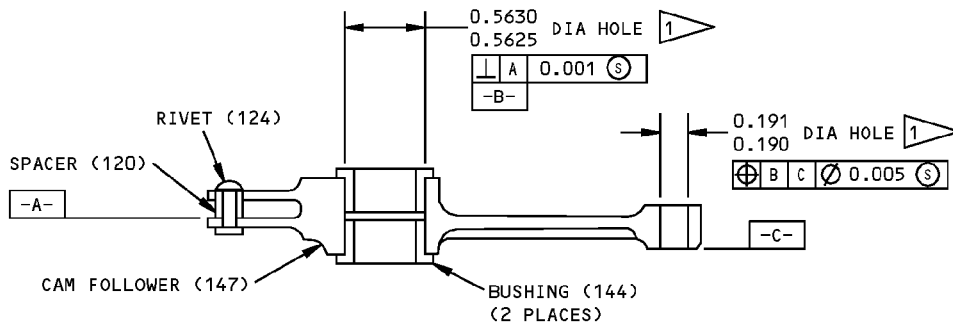
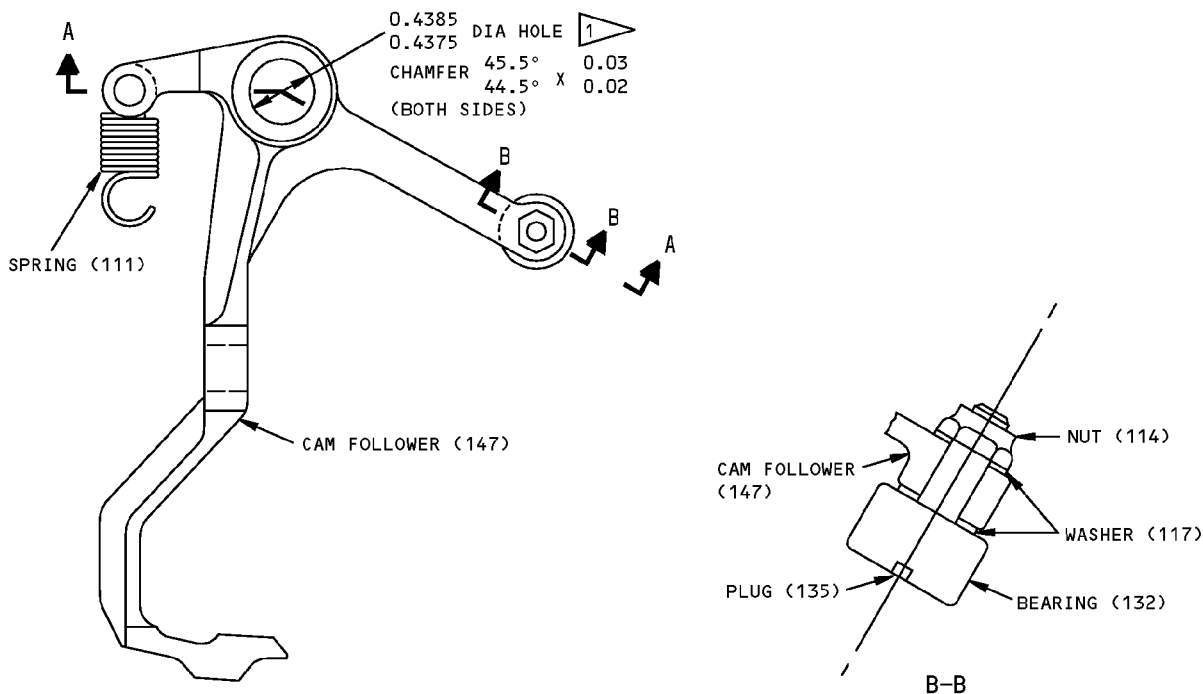
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REPAIR 20-1

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COMPONENT MAINTENANCE MANUAL



BEARING NOT SHOWN FOR CLARITY
A-A

REFINISH

FOLLOWER ASSY (138,141) -- CHEMICAL TREAT AND APPLY 1 COAT BMS 10-11, TYPE 1 PRIMER (F-18.06) ON ALL MACHINED SURFACES EXCEPT AS NOTED BY

MATERIAL: AL ALLOY
ALL DIMENSIONS ARE IN INCHES
ITEM NUMBERS REFER TO IPL FIG. 4

OMIT PRIMER THIS SURFACE

65C32075-1,-2

Cam Follower Assembly - Repair
Figure 601

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REPAIR 20-1
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COMPONENT MAINTENANCE MANUAL

CRANK/BRACKET - REPAIR 21-1

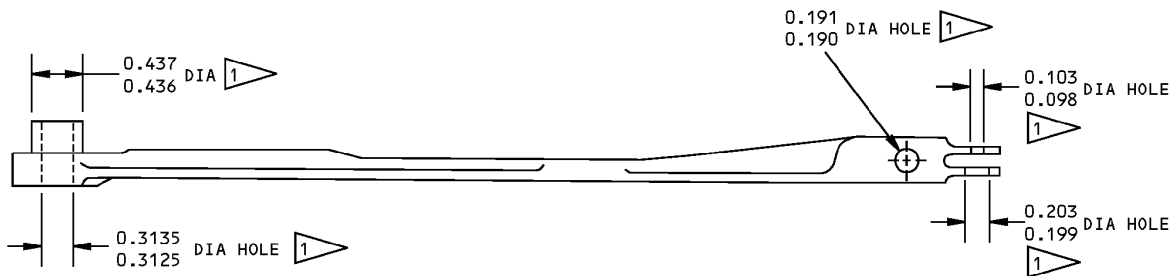
65C32044-3, -4, 65C32048-3, -4

1. General

- A. This procedure has the data necessary for stripping and restoration of the original finish of the crank (IPL Figure 4 , 99,102,105,108).
- B. Refer to REPAIR-GENERAL, Paragraph 2. for the Standard Overhaul Practices Manual (SOPM) subjects identified in this procedure.
- C. Refer to REPAIR-GENERAL, Paragraph 3. for the description of the consumable codes identified in this procedure.
- D. Refer to IPL Figure 4 for item numbers.

2. Plating Repair

- A. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction, REPAIR 21-1, Figure 601.



CRANK 65C32044-3 SHOWN, CRANK 65C32044-4
AND BRACKETS 65C32048-3,-4 SIMILAR

REFINISH

CRANK (105,108), BRACKET (99,102) -- CHROMIC ACID ANODIZE AND APPLY 1 COAT BMS 10-11, TYPE 1 PRIMER (F-18.13) ALL OVER, EXCEPT OMIT PRIMER IN HELICAL INSERT HOLES AND AS NOTED BY 1.

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

ITEM NUMBERS REFER TO IPL FIG. 4

1 OMIT PRIMER THIS SURFACE

65C32044-3,-4 65C32048-3,-4 Crank/Bracket Assembly - Repair
Figure 601

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REPAIR 21-1

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ASSEMBLY

1. General

- A. This procedure contains the data necessary to assemble the Control Stand Upper Mechanism Assembly.
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
- C. Refer to IPL Figure 1 for item numbers, unless otherwise identified.

2. Procedure

- A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
G01048	Lockwire - Corrosion Resistant Steel (0.032 In. Dia.)	NASM20995~ C32

- B. References

Reference	Title
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-50-03	BEARING AND BUSHING REPLACEMENT

- C. Assembly (IPL Figure 1)

- (1) Position start control cables (438), thrust control cables (219), and flap control cables (159) with ball cable - terminal in drum recess, so that the "A" end (right hand thread) of each passes over the drum and aft and the "B" end passes from the ball cable - terminal under the drum and aft (ASSEMBLY, Figure 701).
 - (a) Thrust control cables (219) – Pass each end of a short piece of lockwire, G01048 from the top through each hole provided so that a continuous piece of wire crosses the cable and the ends protrude through the inside circumference of the cable drum. Make three to six twists to fasten. Adjust and clip the twisted ends to avoid interference.
 - (b) Flap control cables (159) – Pass each end of a short piece of lockwire, G01048 from one side through each of the pair of in-line holes to the other side. Secure by three to six turns, double-twist method and clip.

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ASSEMBLY

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CAUTION: USE CARE TO AVOID KINKING AND DAMAGING CABLE DURING ASSEMBLY. AFTER ASSEMBLY COIL INTO LOOPS OF 14-INCH MINIMUM DIAMETER. SECURE WITH PRESSURE SENSITIVE TAPE.

- (c) Start control cables (438) – Install cotter pins MS24665-134 from one side through each of the pair of in-line holes to the other side. Install cotter pins per SOPM 20-50-02.

NOTE: Chain assembly (156) cannot be assembled prior to airplane installation. Upon completion of overhaul, include properly packaged chain assembly with control stand upper mechanism assembly for later installation.

- (2) Install miscellaneous switches and levers.

- (a) Install horn cutout pushbutton (867), switch (864), and facenut (861) on frame assembly.
- (b) Install cable guard (858), bolt (855), washer (852) and nut (849).
- (c) Install speed brake takeoff warning switch (846) with screws (834), cover (837), washers (843) and nuts (840).
- (d) Install stabilizer cutout switch levers (207, 210) with pin (828), spacer (831), washer (825) and cotter pin (822) per SOPM 20-50-02.
- (e) Install parking brake lever (807A) and hinge assembly (810) with pin (804) per SOPM 20-50-02. Install parking brake lever assembly (798A) on frame with bolts (801).
- (f) Install stabilizer cutout switch control cables (213, 216) with clamps (792), spacers (795), screws (786, 789), washers (783), and nuts (780). Use clamps (774), bolts (771) and nuts (768) to install wire bundle (39).

- (3) Install thrust lever switch assemblies.

- (a) On 65C25503-1, -2, -3 assemblies only (IPL Figure 1): Assemble engine-1 and engine-2 takeoff warning and anti-icing switches (702), thrust reverser switches (703, 704), and actuators (699) in bracket assemblies (705) with screws (693, 696), washers (690) and nuts (687). Install switch bracket assemblies (678, 679) with screws (681) and washers (684).
- (b) On 65C25503-11 assembly only (IPL Figure 4): Attach nuts (42) and screws (33) onto bracket assemblies (63, 66) and crank assemblies (69, 72). Assemble switches (30), shields (36), plates (57, 60) and screws (39) with bracket assemblies (63, 66) and crank assemblies (69, 72).
- (c) On 65C25503-11 assembly only (IPL Figure 4): If springs (111) have been replaced, assemble with spacers (120) onto cam follower assemblies (20, 25) and secure with rivets (124).
- (d) Install adjusting bolts (618), cam follower assemblies (621, 622, 624) and/or crank assemblies (623) with bushings (636) or (637, 638), bolt (633), washer (630, 631), and nut (627). Install springs (625). Attach springs (111, IPL Figure 4) to frame assembly (36) and install screws (626).

NOTE: Spring (625) hooks may be opened as required to install. Do not bend hooks closed after installation. The gap between the hook end and the end coil shall be no greater than half the inside coil diameter. No visible scratches are allowed on springs before or after installation.

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- (e) Assemble cam follower and lifting arm assembly (537). Install bushings (582, 588) with grease, D00013 per SOPM 20-50-03 in cam follower (600) and lifting arm (597). Install stop (576) with grease, D00013 per SOPM 20-50-03. Install adjustment rod (579), stop (576), washer (573) and nut (570).
- (f) Install adjusting bolt (534), cam follower and lifting arm assembly (537) with bushings (558 thru 567), bearing (555), bolts (549, 552), washers (546, 569) and nuts (543). Adjust washers (569), as required, to maintain a minimum roller contact of 25 percent between bearings (606) and thrust lever (9, 12) cam. Install bolts (549, 552) with grease, D00013 per SOPM 20-50-03. Torque nuts 25-45 lb-in. Install spring (540).

NOTE: Spring (540) hooks may be opened as required to install. Do not bend hooks closed after installation. The gap between the hook end and the end coil shall be no greater than half the inside coil diameter. No visible scratches are allowed on springs before or after installation.
- (g) Install switch bracket assembly (522A) with screws (516) and washers (519). Install engine-1 and engine-2 thrust reverser switch (510) and switch actuator (513) with screws (507).
- (4) Install engine start drum shaft components.
 - (a) Assemble cams (183) on drum (186) with bolts (177) and washers (180).
 - (b) Assemble switches (495, 498), switch actuators (489, 492), shield (501), fillers (504A) in switch bracket assemblies (468, 480) with bolts (483) and washers (486).
 - (c) Install shaft (450), spacers (456 thru 465), shims (453), switch bracket assembly (468, 480) and engine start drums (174) with washer (447), nut (444) and cotter pin (441) installed per SOPM 20-50-02.
- (5) Install stabilizer trim crank (153) and jack assembly (369).
 - (a) Install bolt (423), washers (426, 429), bearings (435), spacer (432), stabilizer trim crank (153) and nut (420).
 - (b) Install jack assembly (369) onto trim crank (153) with screw (366), washer (363) and nut (360). Install stabilizer trim jack assembly trunnion in frame and install bracket (450) (IPL Figure 3) over trunnion with bolts (445).
 - (c) Install bolt (475) with spacer (485) into bracket (450).
- (6) Assemble speed brake handle (312) (IPL Figure 1).
 - (a) Assemble knob (354) and handle (330) with bolts (351).
 - (b) Assemble handle assembly (324) and lever assembly (342) by installing spring (321), stop (318) and pin (315).
 - (c) Install switch actuator (336A) on front of speed brake handle with screws (333).
- (7) Install left shaft components (ASSEMBLY, Figure 702).

NOTE: Return all shims and spacers to positions noted during disassembly to maintain necessary clearance and alignment.

 - (a) Push suitable dowel part way through left-side frame structure. Thread left-side shaft components onto dowel as follows: shim (306), stabilizer trim indicator assembly (120), shim (306), bearing (351) per SOPM 20-50-03, spacer (357), speed brake handle assembly (312), shim (306) spacer (303) and collar (301).

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- (b) Insert shaft (291) part way through bulkhead assembly and thread spacer (309), shim (306), spacer (303) and collar (301) onto shaft end.
- (c) Alternately thread onto shaft (291) and dowel, one each of paired parts as follows: start system lever assemblies (15A, 18A), bearings (300) per SOPM 20-50-03, spacer (297), thrust handle assembly (9A, 12A). Install shim (294) between thrust handle assemblies.

NOTE: Shim (294) between bearings of thrust handles (9A, 12A) provides clearance between thrust handles and cover (180A, IPL Figure 3). Care must be exerted when installing shims as they can cause thrust handles to bind on cover.
- (d) Push shaft (291) through parts threaded onto dowel, displacing dowel. Check protrusion of shaft (291) from outer (bearing plate) face of frame structure. Shaft should extend 0.18 to 0.31 inch. Install key (240) to mate shaft with frame structure; install left-side nut (237).
- (e) Check that cam follower assemblies (622, 621) contact 50 percent or more of the thrust handle cam (9A, 12A) (ASSEMBLY, Figure 705).
- (f) Tighten left-side nut (237) 200-300 lb-in. Safety wire nut (237) to lockwire clip with lockwire, G01048, or equivalent (ASSEMBLY, Figure 701).
- (g) Check clearance between frame structure and speed brake handle (324). Clearance must be maintained between inboard edge of handle (324) and outboard face of indicator plate (610, IPL Figure 3) over complete lever travel as shown in ASSEMBLY, Figure 703.

NOTE: If clearance specified above has not been obtained. Use shims (306, IPL Figure 1), as required to obtain proper clearance.

Adjust switch (845) to actuate when speed brake handle assembly (324) is in full down detent.
- (h) Adjust washers (569), as required, to ensure that lifting arm (597) maintains a minimum contact of 0.10 inch with speed brake handle (324).
- (8) Assemble flap handle assembly (258A).
 - (a) Assemble cam (87) on drum (285A) with bolts (81) and washers (84).
 - (b) Assemble knob (276) and handle (273), with pins (264).
 - (c) Assemble handle (273A) and lever (279) with spring (270), stop (267) and pin (261).
- (9) Install right shaft components. (ASSEMBLY, Figure 704)
 - (a) Assemble onto shaft (243), flap handle (258A), spacer (252), bearing (255) per SOPM 20-50-03, spacer (249), stabilizer trim indicator assembly (144) and shim (246).
 - (b) Position shaft (243) with assembled components in frame assembly (230, IPL Figure 3). Install key (240) to mate shaft with frame assembly. Install nut (237) and tighten to 200-300 pound-inches torque. Safety wire nut (237) to lockwire clip with lockwire, G01048, or equivalent (ASSEMBLY, Figure 701).
 - (c) Place sprocket (234), adjacent bearing (225), and spacers (228, 231) onto stabilizer wheel shaft (222). Push the long end of stabilizer wheel shaft with spacer (231) into shaft (291). Push right-side frame assembly with attached shaft (243) and associated components into place seating shaft (222) over bearing (225) adjacent to sprocket. Install right bearing (225).
 - (d) Fasten right-side frame assembly (230, IPL Figure 3) in place with bolts (235, 240, 245).
- (10) Install and connect linkages (IPL Figure 1).

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- (a) Position forks of start system levers (15A, 18A) over start drums (174) and install bolts (171), washers (165, 168) and nut (162).
 - (b) Connect stabilizer trim crank (153) to stabilizer trim indicator links (132, 111) with pins (99), washers (96), and cotter pins (90) per SOPM 20-50-02.
 - (c) Connect switch levers (207, 210) to control cables (213, 216) with pins (204), washers (201), and cotter pins (198).
 - (d) Assemble switch assembly (54) on right cover with screws (63, 66), switches (68, 69), switch actuators (72, 75) and nutplates (58). Nuts (57) and washers (60) optional to nutplates (58).
- (11) Install seals and covers (IPL Figure 3).
- (a) Install start detents (700) with bolts (705) on center cover (180A).
 - (b) Install right cover assembly (185) with bolts (190, 195).
 - (c) Install angle gap cover (175) and cover (180A) with shim (160) and bolts (155, 165, 170).
 - (d) Install spacer strips (95, 115, 135), seals (90, 110, 130, 150), seal retainers (85, 105, 125, 145) with screws (80, 100, 120, 140). Install stops (60, 70) and bumper (75) with bolts (50, 55, 65).
- (12) Install lightplates (24 through 33) with screws (21) (IPL Figure 1). Connect wire bundle (39) to lightplate studs, horn cutout switch, flap position switches, stabilizer trim warning light, parking brake light, speed brake down and locked switch, thrust lever switches, and engine start switches.
- (a) Adjust speed brake lightplate (24) to align centerline down mark with arrow indicator on aft face of speed brake handle (312).
 - (b) Adjust stabilizer trim lightplates (30, 33) to align indicator pointer with No. 3 unit mark, within the width of the indicator mark on both lightplates.
- (13) Install door assemblies (3, 25) with bolts (5, 30) (IPL Figure 3).
- (14) Assemble stabilizer trim wheels (3).
- (a) Assemble stabilizer trim wheels (IPL Figure 2).
 - (b) Position handle (75) and washer (65) on spindle (70) and install retainer ring (60).
 - (c) Position handle latch (40) in spindle (70). Position spring (50) on latch release (55); install bushing (45) and insert latch release (55) into spindle (70). Align latch release (55) and handle latch (40); install rivet (35) to pass through ears of handle latch (40) and engage bushing (45) in latch release (55).
 - (d) Position latch plates (15, 20) on wheel (30) and install bolts (10). Position handle component between latch plates and install pin (25).
- (15) Install the stabilizer trim wheel assemblies (3, IPL Figure 1; ASSEMBLY, Figure 704) on the stabilizer wheel shaft (222) so that the handles are at an angle of 75-105 degrees to each other. Insert the tie rod (6) and install new nuts (2). Torque the nuts to 60-70 pound-inches. A minimum of two threads of the tie rod must show past the nylon locking element of the nuts.
- (16) Test switches and lights per TESTING AND FAULT ISOLATION.

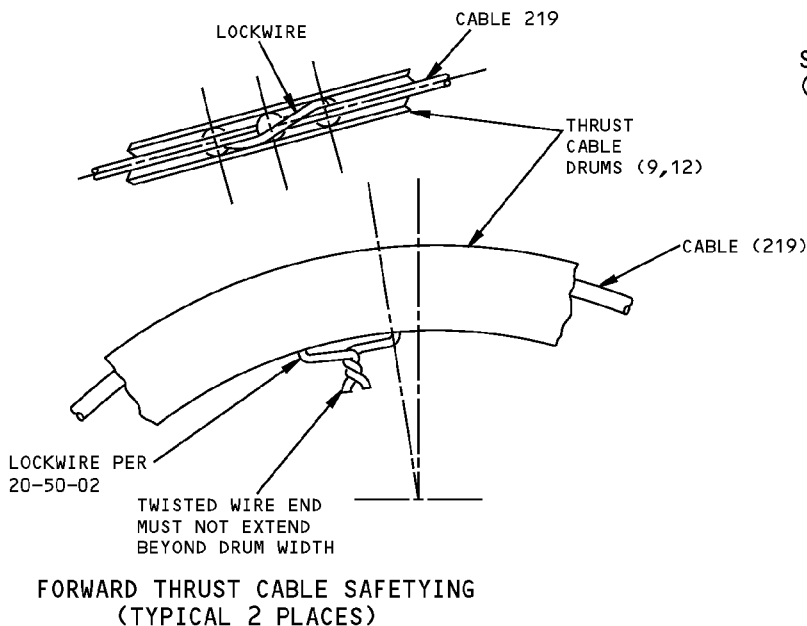
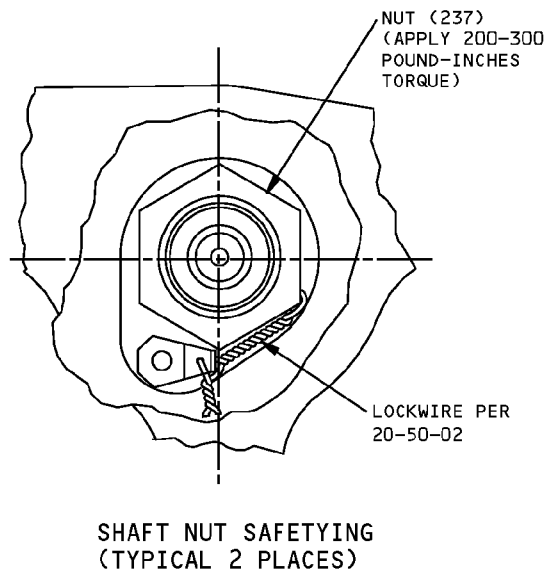
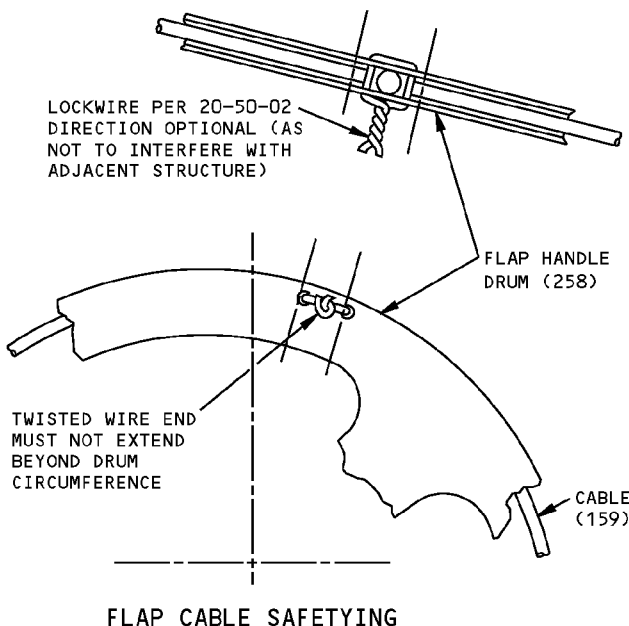
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REF: IPL FIGURE 1

Safetying
Figure 701

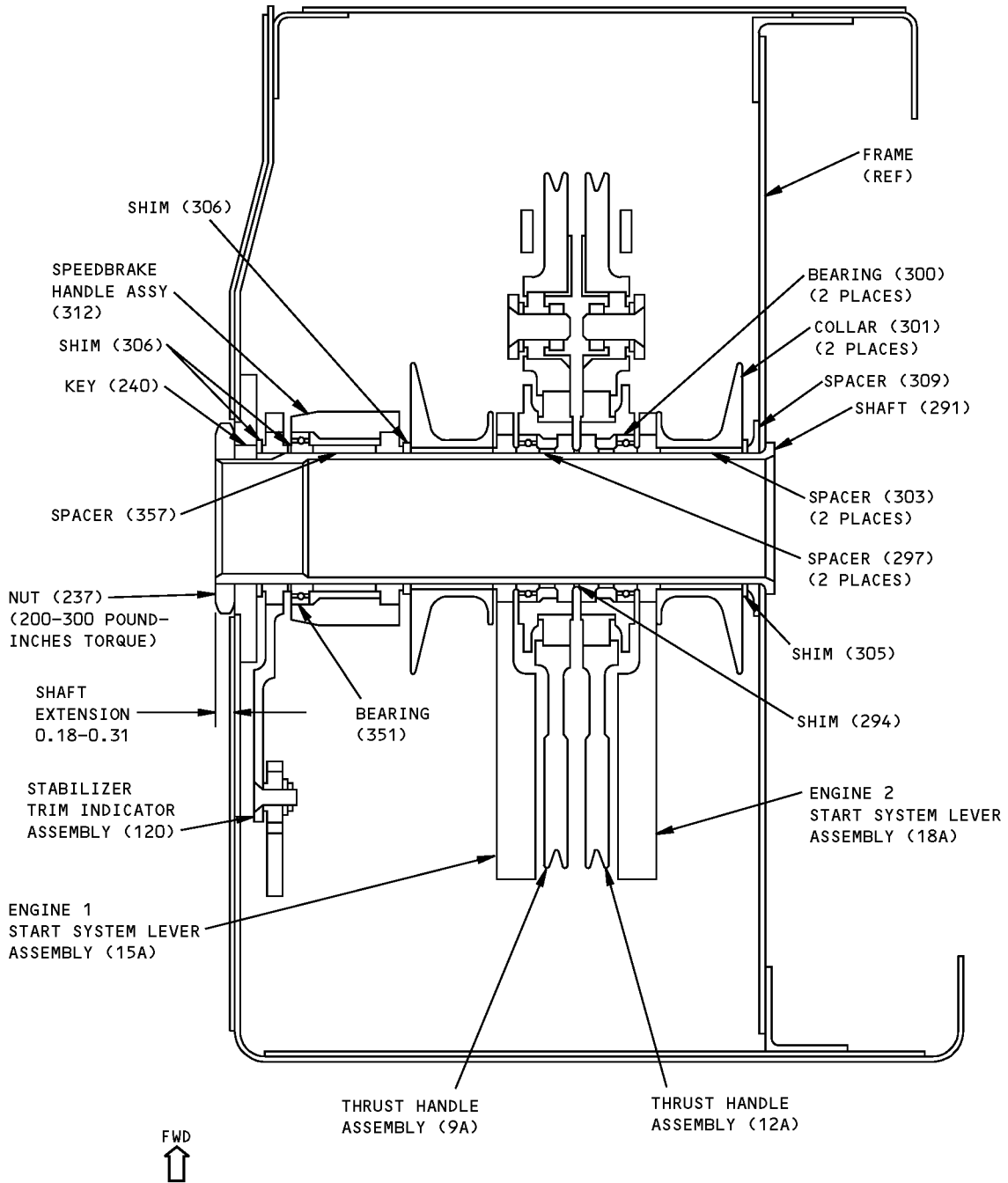
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Left Shaft Assembly
Figure 702

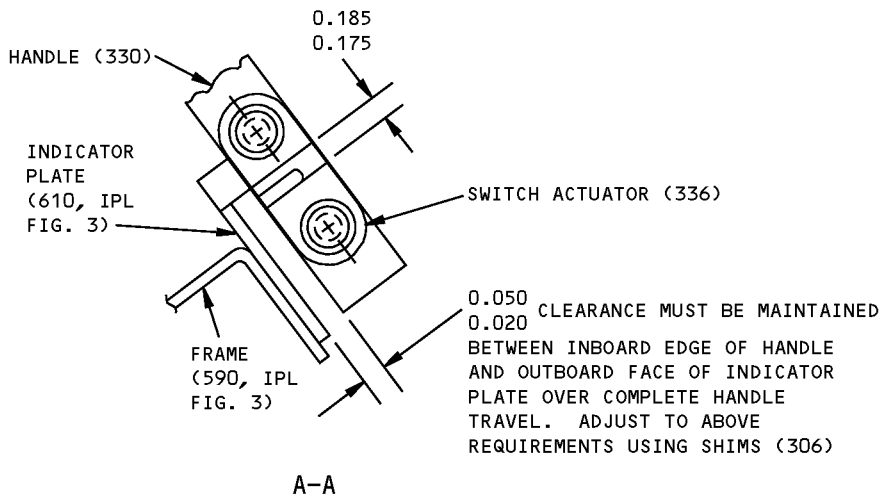
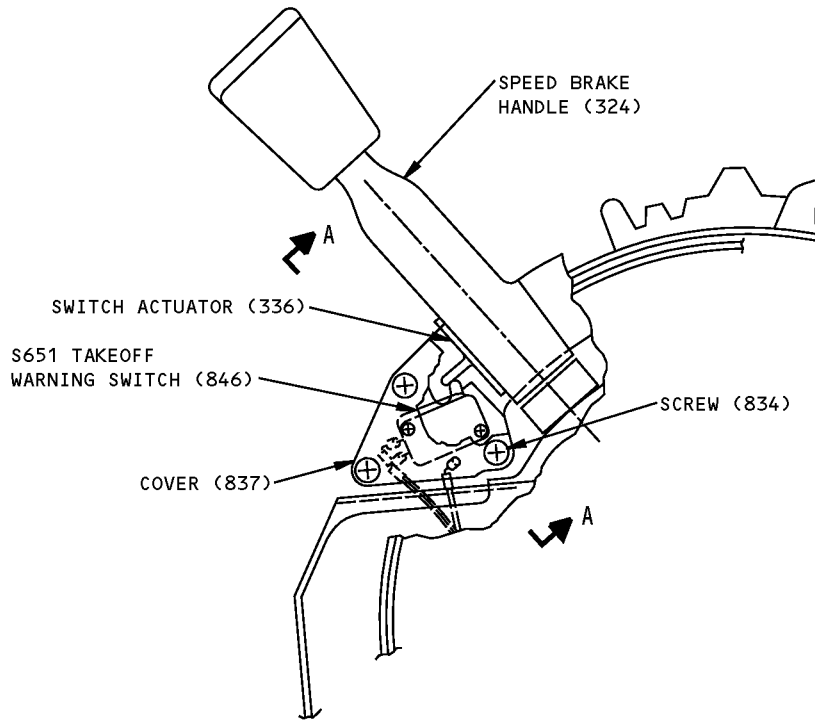
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ITEM NO. REFER TO IPL FIG. 1 EXCEPT AS NOTED

Speed Brake Lever Adjustment
Figure 703

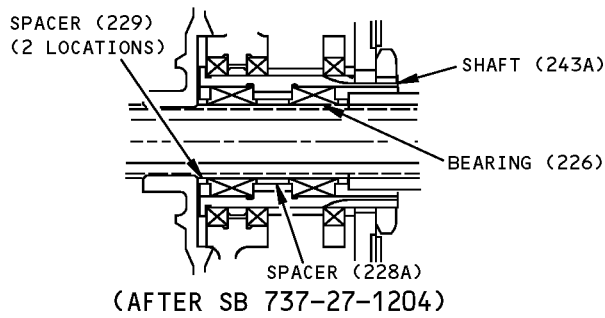
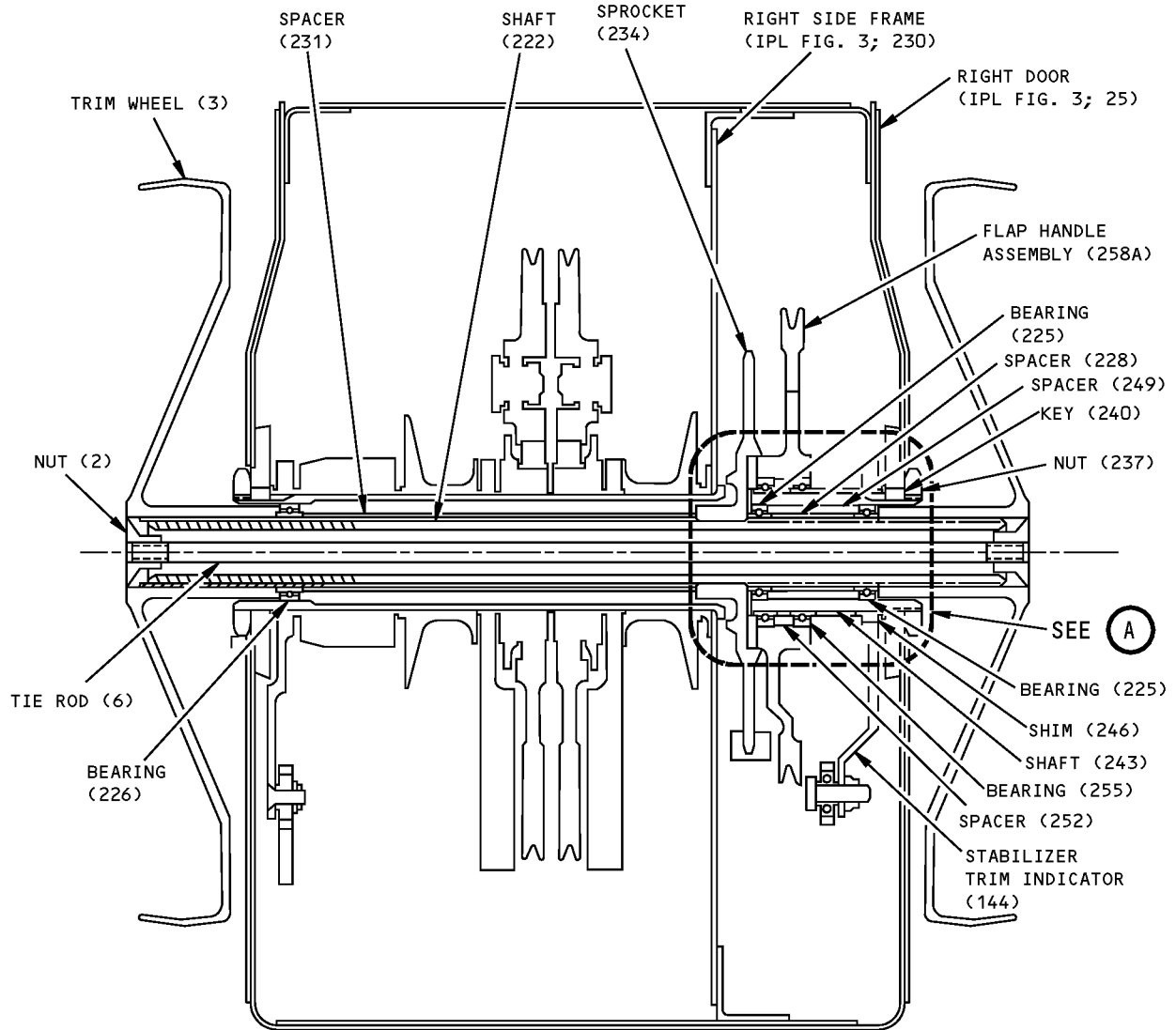
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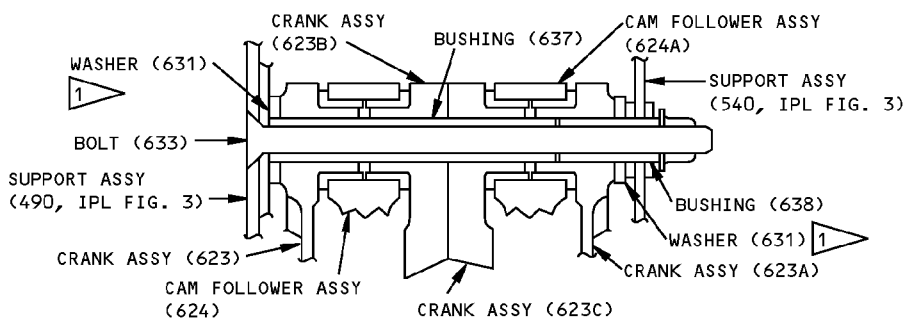
(A)

Right Shaft and Trim Wheel Assembly
Figure 704

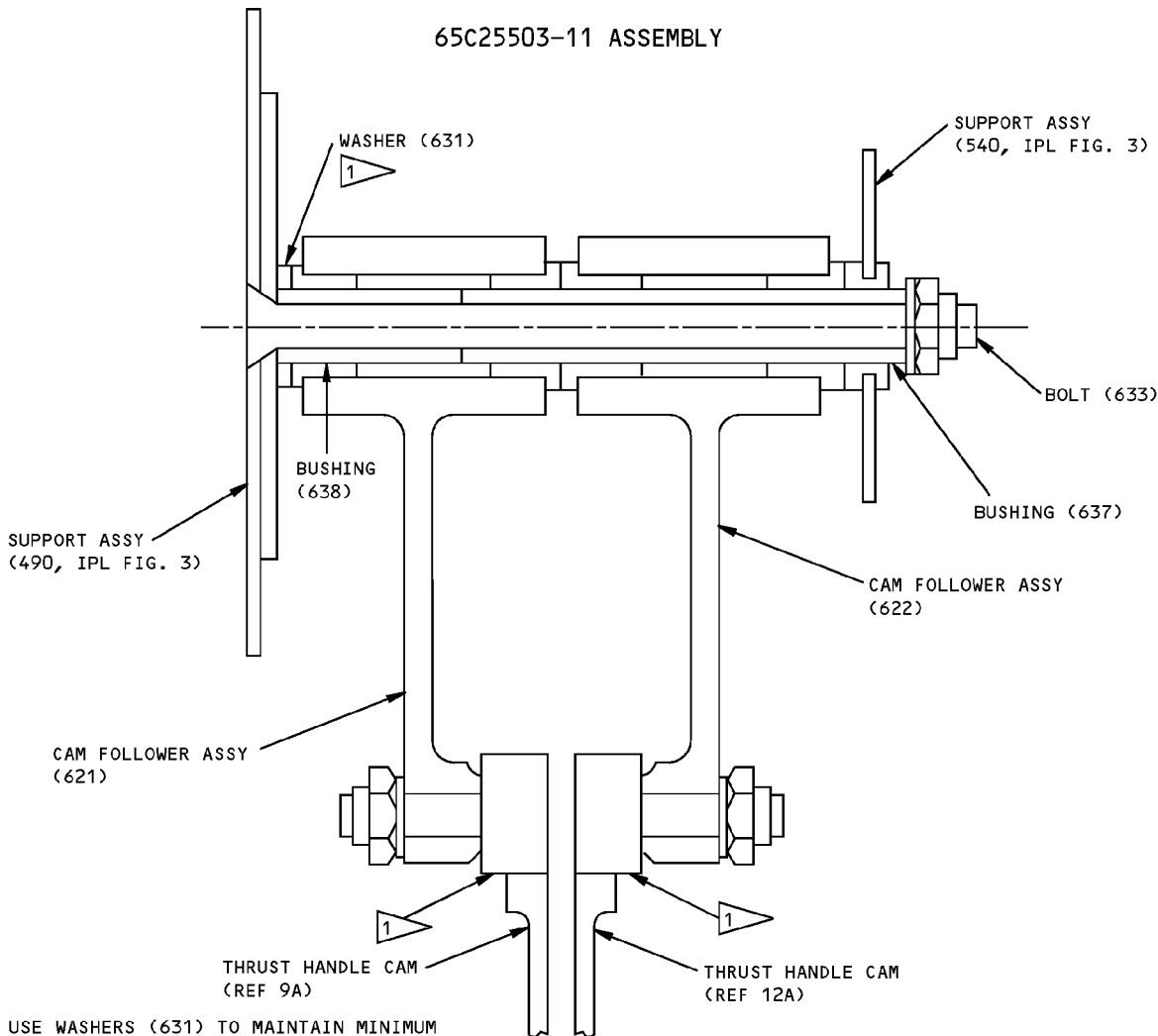
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65C25503-11 ASSEMBLY



1 USE WASHERS (631) TO MAINTAIN MINIMUM CAM FOLLOWER TO CAM CONTACT OF 50% AND A MAXIMUM GAP OF 0.015 BETWEEN BUSHING OF CAM FOLLOWER ASSY (621) OR CRANK ASSY (623) AND SUPPORT ASSY (490, IPL FIG. 3).

ITEM NUMBERS REFER TO IPL FIG. 1

65C25503-1,-2,-3 ASSEMBLIES Cam Follower Assembly
Figure 705


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FITS AND CLEARANCES

REF IPL		NAME	TORQUE*	
FIG. NO.	ITEM NO.		POUND-INCHES	POUND-FEET
1	2	NUT	30-35 	
1	543	NUT	25-45	
1	237	NUT	200-300	

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

 BEYOND RUN-ON TORQUE

Torque Table
Figure 801



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SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

(NOT APPLICABLE)

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SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

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

VENDOR CODES

Code	Name
91929	HONEYWELL INC MICRO SWITCH DIV 11 WEST SPRING STREET FREEPORT, ILLINOIS 61032 FORMERLY MICRO SWITCH A DIV OF HONEYWELL FORMERLY V74059 AND V40228

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NUMERICAL INDEX

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
10-61800-194		1	24	1
10-61800-222		1	27	1
10-61800-501		1	33A	1
10-61800-502		1	30A	1
10-61800-527		1	33B	1
10-61800-528		1	30B	1
2D64		1	864	1
3-86451		1	305A	1
		1	306A	2
3-86451-1		1	294	1
3-87052		2	50	1
3-87075		1	240	2
3-94317		1	246	2
		1	305	1
		1	306	2
50-11343-3		1	141	1
50-11343-4		1	150	1
50-11343-7		1	120	1
50-11343-8		1	144	1
50-5560-11		1	156	1
580-714-001		1	213	1
580-714-002		1	216	1
6-63288		3	280	1
		3	640	1
6-63610-3000		1	111	1
		1	132	1
6-63610-3001		1	117	1
		1	138	1
6-63629-2000		1	234A	1
6-63931-1		1	369	1
6-65852-2000		1	297	2
6-65852-2001		1	252	1
6-65852-3		1	303	2
6-65852-4		1	357	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
6-74642		3	285	1
		3	650	1
61-30008-501		1	39	1
63-1406		1	321	1
63-1471-1		1	858	1
63-1472		1	453	2
65-1795-10		3	335	1
65-1926-12		1	285A	1
65-1926-13		1	287	1
65-1936-11		3	182	1
65-1936-27		3	184	1
65-1936-31		3	180A	1
65-1953-3		1	279	1
65-1970-10		1	324	1
65-1970-13		1	324A	1
65-20870-1		1	153	1
65-21898-12		1	342	1
65-21898-13		1	348	1
65-23761-19		1	15A	1
65-23761-20		1	18A	1
65-2377-28		3	150	1
65-2377-38		3	85	1
65-2377-39		3	105	1
65-2377-41		3	145	1
65-2377-42		3	125	1
65-24721-1		1	3A	2
		2	1A	RF
65-24721-3		1	3	2
		2	1	RF
65-24721-6		1	3B	2
		2	1B	RF
65-24722-1		2	30	1
65-24724-11		3	440	1
65-24724-16		3	430A	1
65-24724-4		3	435	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
65-24726-4		3	655	1
65-24728-3		3	290	1
65-32189-7		1	273A	1
65-32189-9		1	273B	1
65-45127-20		1	36	1
		3	1	RF
65-45127-22		1	36A	1
		3	1A	RF
65-45127-33		1	36B	1
		3	1B	RF
65-45127-4		3	75	1
65-45128-10		3	620	1
65-45128-13		3	600	1
65-45128-20		3	590	1
65-45128-21		3	595	1
65-45136-2		1	186	1
65-45136-4		1	174	2
65-51549-10		3	225B	1
65-51549-8		3	225	1
65-54212-5		3	295	1
65-54212-6		3	230	1
65-54212-7		3	250	1
65-56822-7		1	504A	2
65-70885-1		3	3	1
65-70885-2		3	20	1
65-70888-3		3	43	1
65-70888-4		3	25	1
65-70888-5		3	45	1
65-77470-6		1	54	1
65-87109-14		3	380	1
65-87109-15		3	425	1
65C10042-1		1	837	1
65C10043-10		3	613	1
65C10043-3		3	611	1
65C10043-8		3	610	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
65C14183-33		1	276	1
65C14183-36		1	354	1
65C18257-305		1	9A	1
65C18257-306		1	12A	1
65C18257-307		1	9B	1
65C18257-308		1	12B	1
65C18275-1		2	70	1
65C25404-1		1	537	1
65C25405-1		1	600	1
65C25405-2		1	615	1
65C25405-4		1	615A	1
65C25406-1		1	597	1
65C25456-11		1	621	1
65C25456-12		1	622	1
65C25456-13		1	654	1
65C25456-14		1	655	1
65C25456-21		1	621A	1
65C25456-22		1	622A	1
65C25456-23		1	654A	1
65C25456-24		1	655A	1
65C25456-9		1	644A	1
65C25503-1		1	1	RF
65C25503-10		1	312	1
65C25503-11		1	1C	RF
65C25503-2		1	1A	RF
65C25503-3		1	1B	RF
65C31505-2		1	243A	1
65C32044-1		4	69	1
65C32044-2		4	72	1
65C32044-3		4	105	1
65C32044-4		4	108	1
65C32048-1		4	63	1
65C32048-2		4	66	1
65C32048-5		4	99	1
65C32048-6		4	102	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
65C32053-1		1	623	1
		4	1	RF
65C32053-2		1	623A	1
		4	5	RF
65C32054-1		3	850	1
65C32054-2		3	865	1
65C32057-1		1	623B	1
		4	10	RF
65C32057-2		1	623C	1
		4	15	RF
65C32075-1		1	624	1
		4	20	RF
65C32075-2		1	624A	1
		4	25	RF
65C32075-3		4	129A	1
65C32075-5		4	138	1
65C32075-6		4	141	1
65C32075-7		4	147	1
65C32075-8		4	150	1
66-11005		3	570	1
66-11005-1		3	572	1
66-11092		1	204	2
66-12625-1		3	450	1
66-1314-1		1	309	1
66-13328-3		1	648	1
		4	135	AR
66-14147-1		1	6	1
66-14222-1		1	318	1
66-14222-2		1	267	1
66-14972-1		3	470	1
66-1501		1	276A	1
66-16367-1		2	25	1
66-16510-4		3	300	1
66-16510-5		3	312	1
66-16510-6		3	310	2

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
66-1882		1	450	1
66-1884-1		1	810	1
66-1884-2		1	819	1
66-1884-5		1	798A	1
66-1905		1	222	1
66-21426-1		1	270	1
66-22199-1		1	249	1
66-23284-1		3	60	1
66-23285-1		3	70	1
66-25899-1		3	670	1
66-2605		1	423	1
69-15907-1		1	923	1
		1	923B	1
69-15907-2		1	927	1
69-15907-4		1	923A	1
69-15907-5		1	927A	1
69-1936-7		1	807	1
69-1958-2		3	355	1
69-1958-3		3	360	1
69-1958-4		3	340	1
69-1977		1	291	1
69-1977-1		1	243	1
69-20380-21		3	185	1
69-20380-22		3	216	1
69-21291-1		2	70A	1
69-21292-1		2	55	1
69-21293-1		2	15A	1
69-21293-2		2	20A	1
69-21295-1		2	75	1
69-21571-1		2	40A	1
69-25367-9		1	258A	1
69-26858-3		3	700	2
69-33918-1		3	90	1
69-33918-4		3	110	1
69-33918-6		3	130	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
69-36619-1		3	175	1
69-36620-1		3	720	1
69-36620-2		3	740	1
69-38297-3		3	780	1
69-40908-1		1	183	2
69-56971-1		3	115	1
69-56971-2		3	95	1
69-56971-5		3	135	1
69-64402-1		1	901	1
69-64402-2		1	909	1
69-66945-1		1	903	2
69-67096-1		1	336A	1
69-67598-1		1	78	2
69-70169-1		2	40	1
69-70170-1		2	15	1
69-70170-2		2	20	1
69-70178-1		1	207	1
69-70178-2		1	210	1
69-72922-1		3	226	1
69-73200-1		1	582	1
69-73201-1		1	234	1
69-73218-1		1	585	2
69-73219-1		1	579	1
69-73221-1		1	588	1
69-73221-2		1	594	1
69-73222-2		1	468	1
69-73222-3		1	480	1
69-73222-4		1	477	1
69-73231-1		1	720	1
69-73231-2		1	714	1
69-73232-1		1	678	1
69-73232-2		1	679	1
69-73232-3		1	705	1
69-73232-4		1	706	1
69-73237-1		1	87	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
69-73237-2		1	87A	1
69-73238-1		3	490	1
69-73238-2		3	535	1
69-73238-3		3	490A	1
69-73239-1		3	540	1
69-73239-2		3	560	1
69-73239-3		3	540A	1
69-73280-1		1	576	1
69-73341-1		1	501	1
69-73443-1		3	815	1
69-73443-2		3	800	1
69-73444-2		1	531	1
69-73444-3		1	522A	1
69-73464-1		3	505	1
69-73465-1		3	580	1
69-73466-1		3	665	1
69-73742-2		1	301	2
69-74668-1		3	75A	1
69-74669-1		3	70A	1
69-74670-1		3	700A	2
69-74693-2		1	603A	1
69-76211-1		2	75A	1
69-76350-5		1	229	2
69-76350-9		1	228A	1
69-76357-2		1	243B	1
69-76381-1		1	58	2
69-76381-2		1	59B	1
69-76708-1		4	33	1
69-76709-1		4	111	1
69-76729-1		4	57	1
69-76729-2		4	60	1
69-76741-1		4	36	1
69-77085-1		1	219A	2
69-77085-2		1	438A	2
69-77085-3		1	159A	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
6A49		1	867	1
6C2		1	861	1
9-50172-2		1	237	2
9-50858-6		2	45	1
9-50858-7		2	65	1
ABR3M1004		1	903B	2
AD5721R		1	492	4
ADD3721R		1	489A	2
AN256-10		3	520	1
		3	577	2
		3	840	2
AN320-8		1	444	1
AN960C3L		1	201	2
AN960D10L		3	390	6
AN960KD10		1	96	2
		1	105	1
		1	165	2
		1	429	1
		1	569	AR
		1	852	1
AN960KD10L		1	168	2
		1	363	1
		1	426	2
		1	519	2
		1	546	4
		1	569A	AR
		1	630	1
		1	684	2
		1	783	2
		1	825	1
		1	913	1
AN960KD10LL		1	569B	AR
AN960KD416		1	931	1
AN960KD4L		1	690	1
AN960KD516		1	631A	AR

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
AN960KD516L		1	631	AR
AN960KD6		1	486	2
AN960KD816		1	447	1
AN960PD04		1	60	8
AN960PD10		1	84	2
AN960PD10L		1	180	4
AN960PD4		3	630	2
B5540WZZFS428		1	225A	2
BAC27DCT0412		4	51	1
BAC27DCT0413		4	54	1
BAC27DCT0414		4	45	1
BAC27DCT0415		4	48	1
BACA12D2		1	489	2
BACB10A120		1	925	1
BACB10AC3L		1	114	2
		1	135	2
BACB10AF3F4H3		4	132	1
BACB10AF3F4HS		1	644	1
		1	645	1
BACB10AP3		1	555	2
		3	495	1
		3	545	1
BACB10AS25		1	123	1
		1	147	1
		1	255	1
		1	286	1
		1	300	2
		1	345	1
		1	356	1
BACB10AT2MM		1	606	2
BACB10BX3		1	435	2
BACB10CF14P		1	225	2
		1	226	1
BACB10CG4A		1	925A	1
BACB10DE3-04		1	903A	2

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
BACB10FK3F4HS		4	129	1
BACB10FY04A		1	925B	1
BACB10JR3F		3	750	10
BACB28AK03-014		1	558A	1
BACB28AK03-020		1	558	1
BACB28AK03-049		1	561A	1
BACB28AK03-055		1	561	1
BACB28AK03-072		1	638	1
BACB28AK03-104		1	567A	1
BACB28AK03-110		1	567	1
BACB28AK03-114		1	564A	1
BACB28AK03-120		1	564	1
BACB28AK03-189		1	637	1
BACB28AK03-261		1	636	1
BACB28B4-185		3	455	1
BACB28B4-198		3	460	1
BACB28B5-205		3	550	1
BACB28W5B025		1	651	2
BACB28W7B024		4	144	2
BACB30FL3-1		3	5	9
BACB30FL3-2		3	245	3
BACB30FL3-6		2	10	4
BACB30LU04-12		4	39	2
BACB30LU04-4		3	625	2
BACB30LU2-00		1	801	2
BACB30LU2-2		3	220	4
BACB30LU2-3		3	235	2
BACB30LU3-1		1	351	2
		3	30	9
		3	50	1
		3	565	1
		3	705	4
BACB30LU3-14		1	789	1
		1	911	1
BACB30LU3-2		3	170	2

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		3	240	5
		3	395	2
BACB30LU3-25		3	475	1
BACB30LU3-3		3	55	2
		3	155	2
		3	156	1
		3	165	2
		3	190	2
		3	195	2
BACB30LU3-4		3	65	3
BACB30LU3-43		1	633	1
BACB30LU3-44		1	855	1
BACB30LU3-9		1	171	2
BACB30LU3-94		3	370	1
BACB30NE3-13		1	917	1
BACB30NE3-3		3	400	2
BACB30NE3H4		1	81	2
BACB30NF4-16		1	929	1
BACC10DK2		3	410	2
BACC10DK4		1	792	4
BACC10DK8		1	774	2
BACC13ACE1130T2246		1	219	2
BACC13ACF2208T4203		1	438	2
BACC13ACF399T817		1	159	1
BACF33D205-025		3	575	1
BACG20ZB070		3	617	2
BACM10L00-1BJV		1	355	1
BACN10AM5A08		1	816	2
BACN10AM5C3		3	571	1
BACN10JC04		1	57	4
		1	687	1
		3	635	2
BACN10JC3		1	570	1
		1	639	1
		3	385	6

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
BACN10JN06		3	690	6
BACN10JN08		3	515	1
		3	755	2
BACN10JP04B		1	59	2
		1	528	2
		1	711	3
BACN10JP08A		3	525	1
BACN10JP3A		3	67	3
		3	710	4
BACN10JP3B		1	717	2
BACN10JP3D		4	84	1
BACN10JR08F		3	217	4
BACN10JR3F		3	157	4
		3	325	7
		3	472	2
		3	480	1
		3	680	7
		3	758	2
BACN10KA3BS		3	790	2
BACN10KAB3S		3	363	2
		3	764	1
BACN10KB3		3	465	2
		3	830	3
BACN10KB3F		3	158	1
		3	330	5
		3	471	5
BACN10KB4F		3	825	1
BACN10KBO6		1	474	4
BACN10KF3		3	320	2
BACN10RB4		1	2	2
BACN10TL3-3		3	275	1
BACN10TL3A3		4	93	1
BACP20BA		3	415	2
BACR15AZ6-8		1	282	2
BACR15BA3		3	695	12

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
BACR15BA3AD9		4	78	1
BACR15BA3D		1	59A	4
		1	525	4
		1	708	10
		1	813	4
		3	159	10
		3	200	12
		3	218	8
		3	255B	18
		3	315	28
		3	364	4
		3	467	4
		3	473	14
		3	482	2
		3	527	6
		3	527A	4
		3	573	2
		3	685	14
		3	715	8
		3	745	24
		3	759	4
		3	763	2
		3	795	4
		3	835	8
		4	96	1
BACR15BA3D3		1	471	8
BACR15BA4D		3	615	4
BACR15BA5D		3	442	4
		3	605	9
		3	645	6
		3	660	2
		3	667	3
		3	717	3
		3	725	4
BACR15BA6D10		1	126	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
BACR15BB3AD9		4	81	1
BACR15BB3D		3	510	2
		3	557	2
		3	578	4
		3	805	2
		3	820	2
		3	845	4
		3	863	2
		3	870	3
		4	90	1
		4	124	1
BACR15BB5D		3	585	6
		3	785	8
		3	810	4
BACR15DR3		3	260	2
BACR15DR3AC		1	525A	4
		1	813A	4
		3	255A	18
		3	715A	8
BACR15DR3AC3		1	471A	8
BACS12BF04B18		1	696	3
BACS12BP08A3		1	333	2
BACS12BP08C3		1	333A	2
BACS12CA3-8		1	366	1
BACS12CB04-19		1	66	2
BACS12N10-9		3	345	2
BACS18R59B		3	530	1
		3	555	1
BACS40R07E20F		3	160B	AR
BACS40R07E24F		3	160A	AR
BACS40R07E30F		3	160	AR
BACW10Q3		1	129	1
BACW10T10L		2	5	4
BCREF0505		1	219	2
BCREF0633		1	159	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
BCREF7665		1	438	2
BZ2R55156T		1	498	4
JV5		1	72	1
		1	513	1
JV82		1	75	1
		1	699	2
MK1000-832		1	816	2
MS16624-1046		2	60	1
MS20201KP3A		1	189	1
MS20201KP8A		1	192	1
MS20253-2-82		1	804	1
MS20392-2C17		1	99	2
MS20392-2C43		1	828	1
MS20426A3		3	305	4
MS20426D3		3	255	18
		3	571A	2
		3	735	6
MS20426D3-3		3	10	4
		3	35	4
MS20426D5		3	183	2
		3	293	2
		3	726	1
MS20427M3		3	500	2
MS20470A5		3	350	3
MS21042L04		1	162	2
		1	543	2
		1	840	2
MS21042L3		1	102	1
		1	360	1
		1	420	1
		1	627	1
		1	768	2
		1	780	2
		1	849	1
		1	915	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		1	921	1
		3	365	1
		4	114	1
MS21042L4		1	933	1
MS21208F1-10		1	288	2
MS21209C0410		4	75	2
MS21209C0610		3	612	3
MS21209C1-20		1	591	1
MS21209F1-10		3	860	2
MS21209F1-15		1	195	4
MS24586-524		1	540	1
MS24586-559		1	625	2
MS24665-132		1	90	2
		1	822	1
MS24665-285		1	441	1
MS24665-5		1	198	2
MS25008-1		1	495A	2
MS25011-2		1	495	2
MS25253-1		1	68	1
		1	69	2
		1	702	1
		1	702A	1
		1	703	1
		1	704	1
MS25253-2		1	510	1
NAS1068A04L		3	15	2
		3	40	2
		3	205	2
NAS1068A06L		3	210	4
NAS1197-10L		1	919	2
NAS1801-04-18		1	693	1
NAS428-3-6		1	534	1
NAS428K3-7		1	534A	1
		1	618	2
NAS42DD3-14		4	87	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		4	120	1
NAS42DD3-20		3	855	2
NAS42DD6-370		3	375	1
NAS42DD6-7		3	405	2
NAS43DD14-347		1	231	1
NAS43DD14-70		1	228	1
NAS43DD3-12		1	793	2
NAS43DD3-17		1	795	2
NAS43DD3-21		1	831	1
NAS43DD3-478		1	432	1
NAS43DD3-95		3	485	1
NAS43DD8-115		1	465	1
NAS43DD8-36		1	459	2
NAS43DD8-43		1	456	1
NAS43DD8-72		1	462	1
NAS508M3-3		2	35	1
NAS509-3		4	42	1
NAS509-4		1	907	2
NAS51-50		2	60B	1
NAS513-4		1	905	2
NAS514P440-12		3	675	1
NAS514P632-14		1	834	3
NAS514P632-4		3	140	3
NAS514P632-5		3	80	4
		3	100	4
		3	120	4
NAS528A6		1	283	2
NAS561C3-9		1	315	1
NAS561P3-16		1	264	2
NAS561P3-8		1	261	1
NAS600-10P		1	507	2
NAS600-11		1	63	2
NAS601-54		1	483	4
NAS603-18P		1	626	2
NAS620-10L		1	573	1

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PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
NAS620-4L		1	843	2
NAS620-5		1	609	2
NAS620-5L		1	612	2
NAS620A10L		4	117	2
NAS620C10L		1	642	2
NAS623-2-2		1	516	2
NAS623-3-13		1	681	2
NAS623-3-14		1	786	1
NAS623-3-2		3	445	2
NAS623-3-3		1	177	4
		3	762	1
NAS623-3-6		3	420	2
NAS6603-39		1	549	1
NAS6603-7		1	108	1
NAS6603-8		1	771	2
NAS6603-80		1	552	1
NAS670-50		2	60A	1
NAS679A3W		2	3	4
NAS686-A3		3	265	6
		3	730	3
NAS687-A3		3	270	3
REP3MS4-16FS428		1	903C	2
SFSW4C9DL01BK		1	21	8
V3L2228		1	846	1
		4	30	2

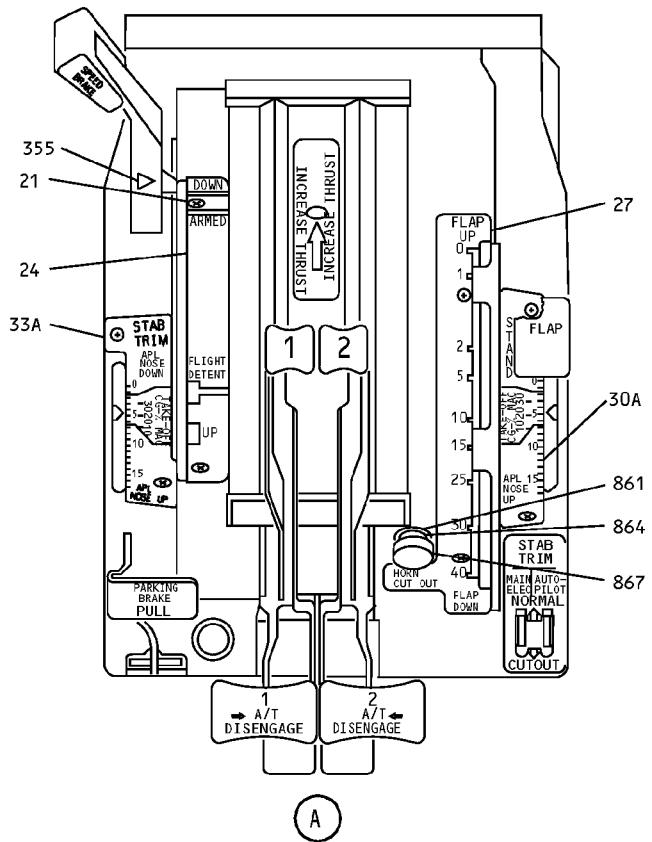
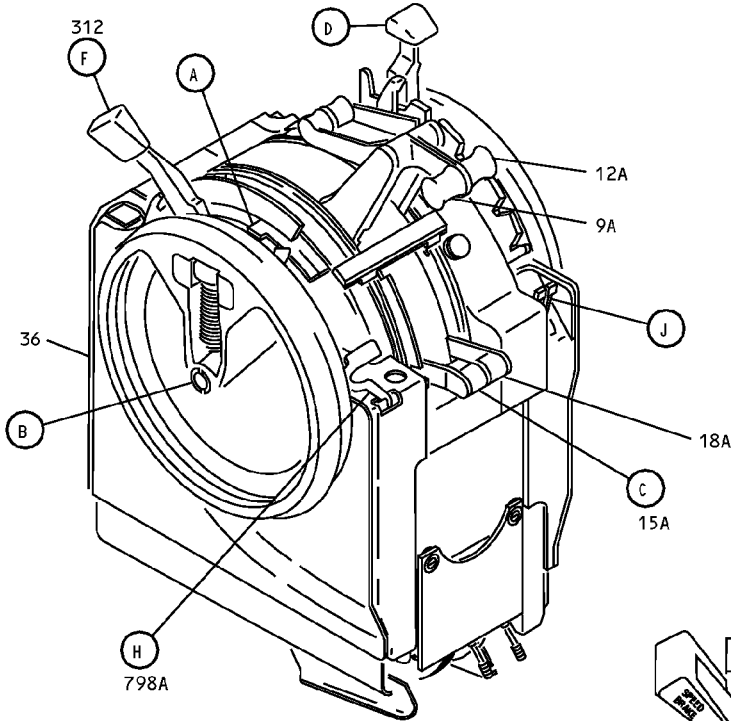
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Control Stand Upper Mechanism Assembly
IPL Figure 1 (Sheet 1 of 14)

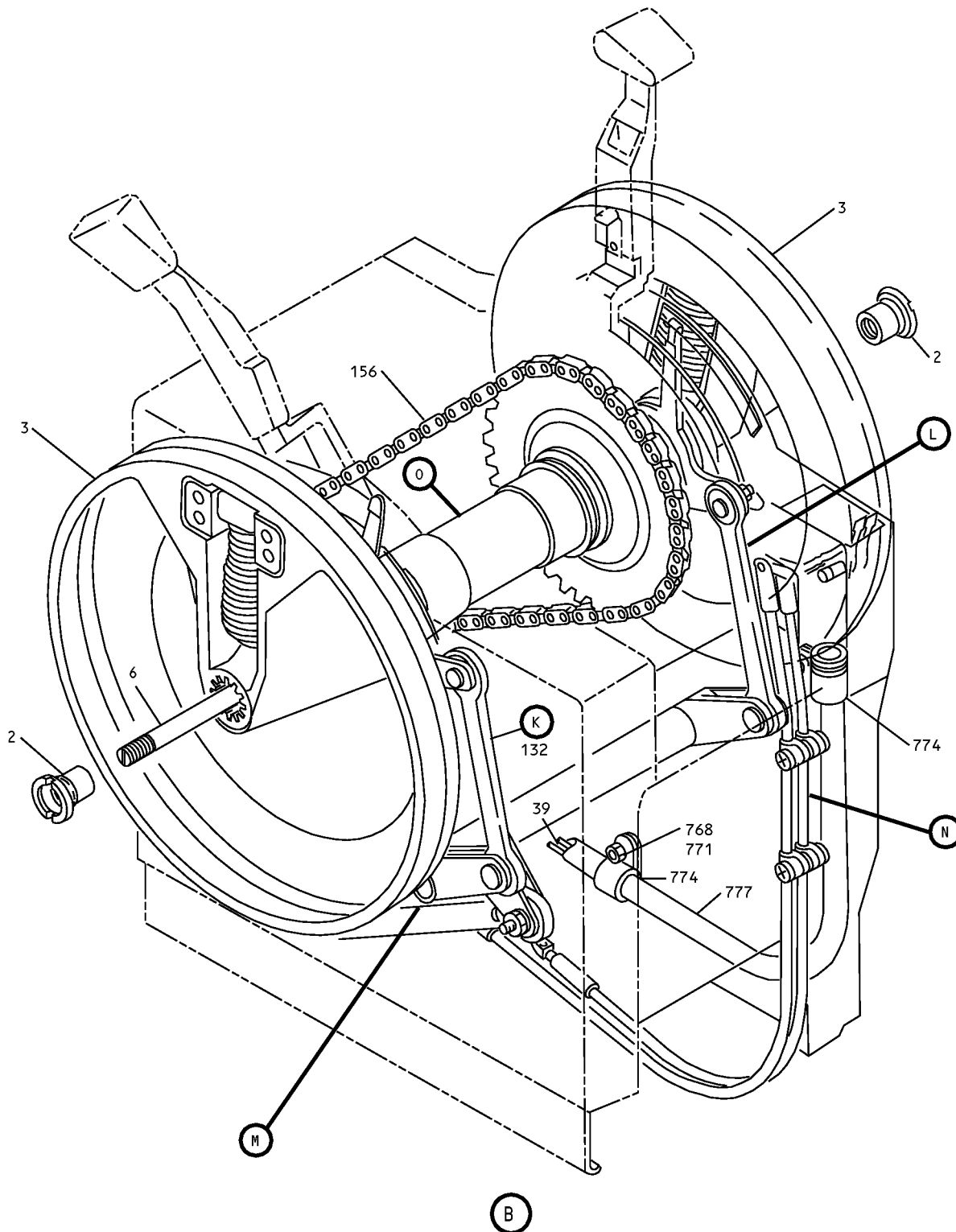
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IPL Figure 1 (Sheet 2 of 14)

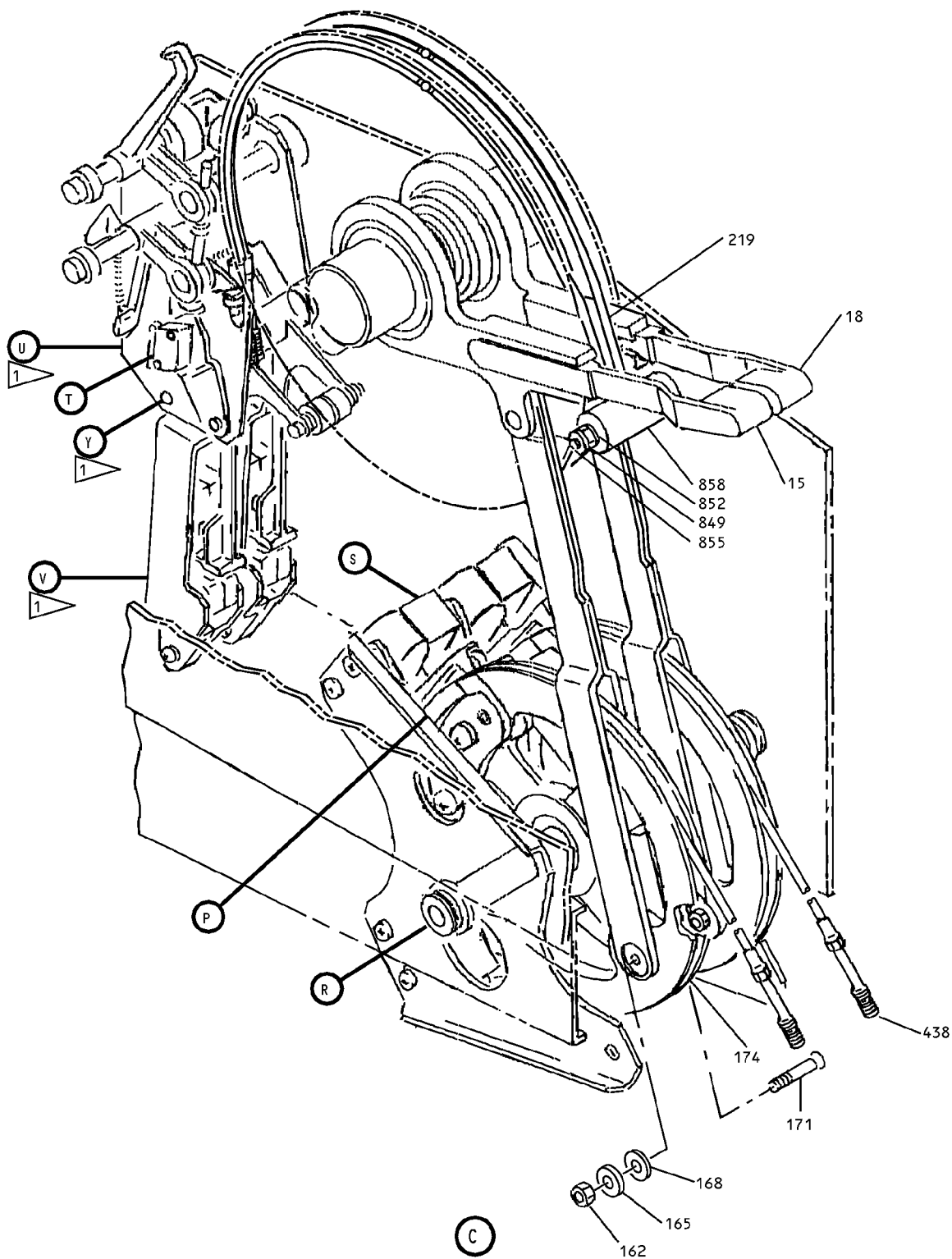
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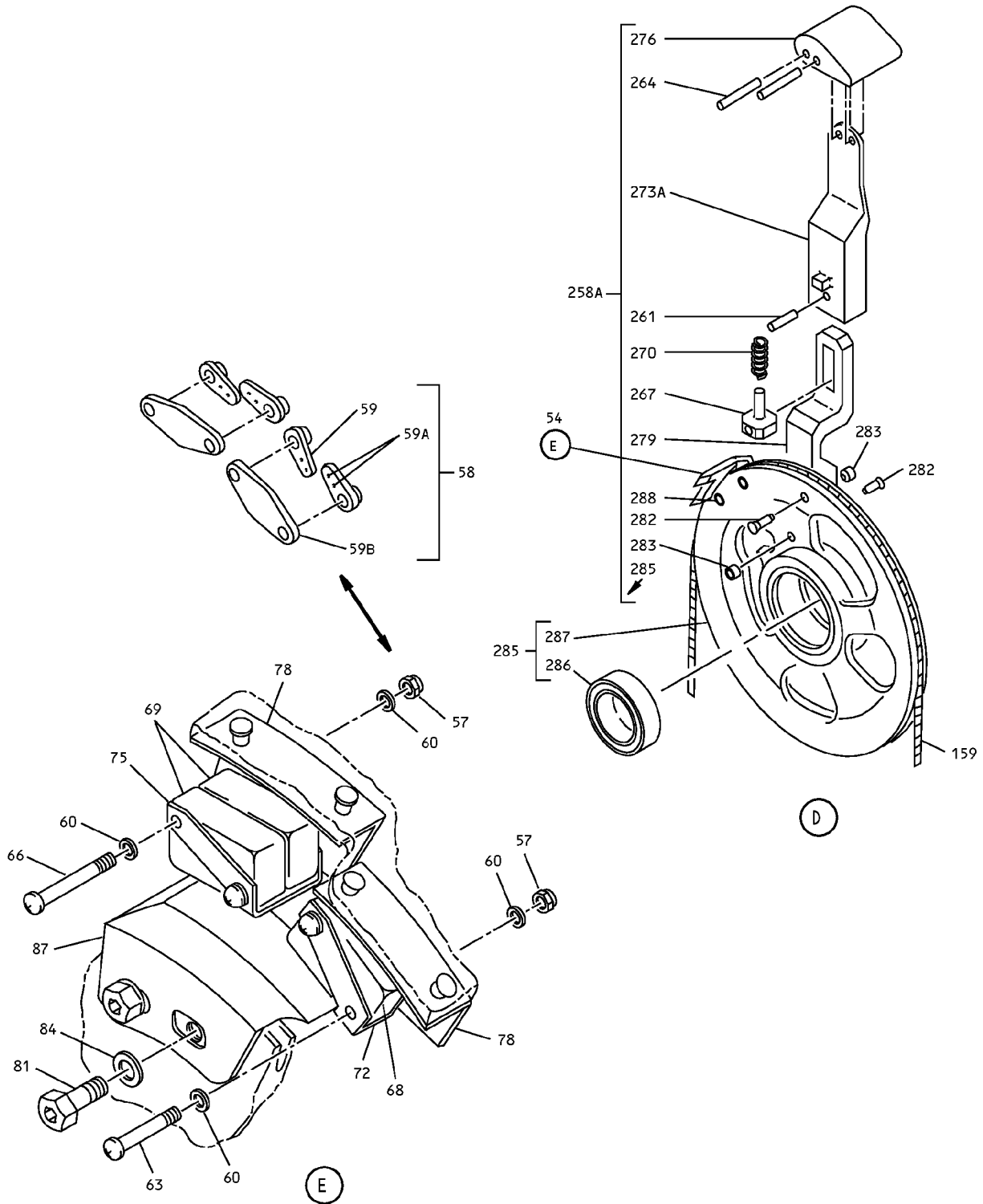
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IPL Figure 1 (Sheet 4 of 14)

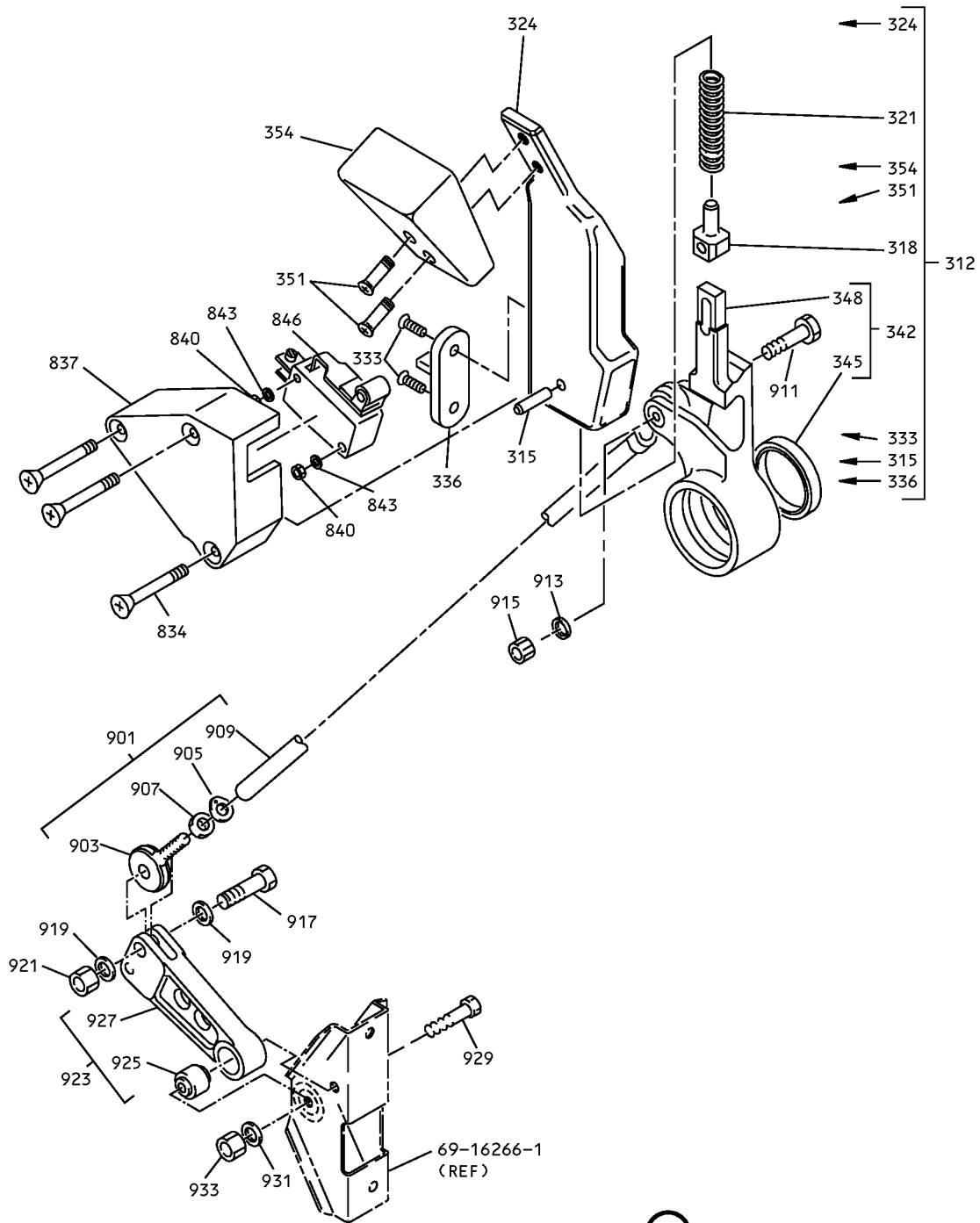
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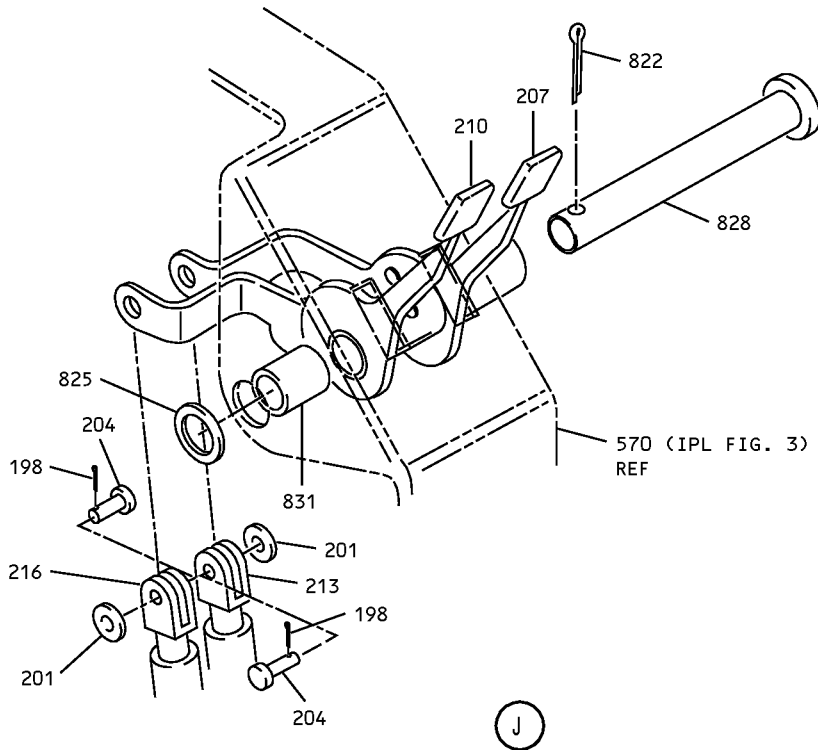
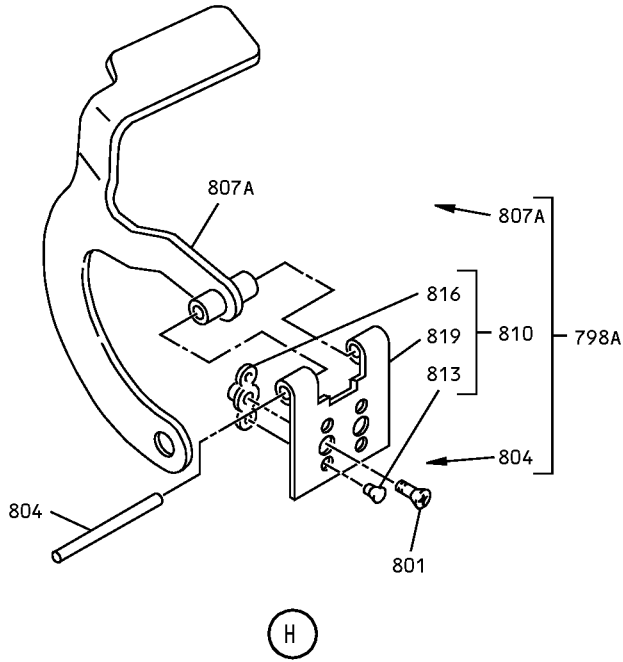


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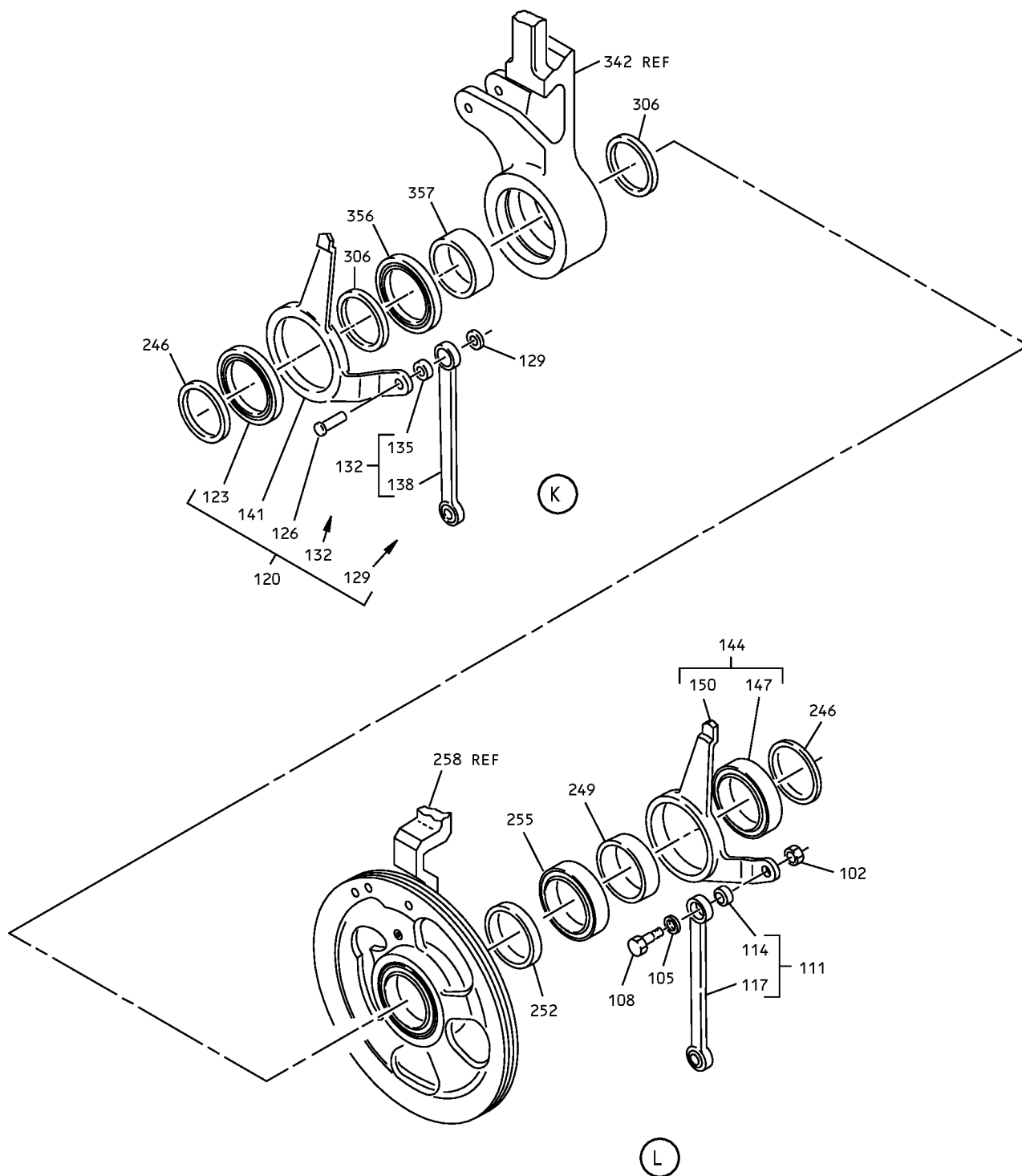
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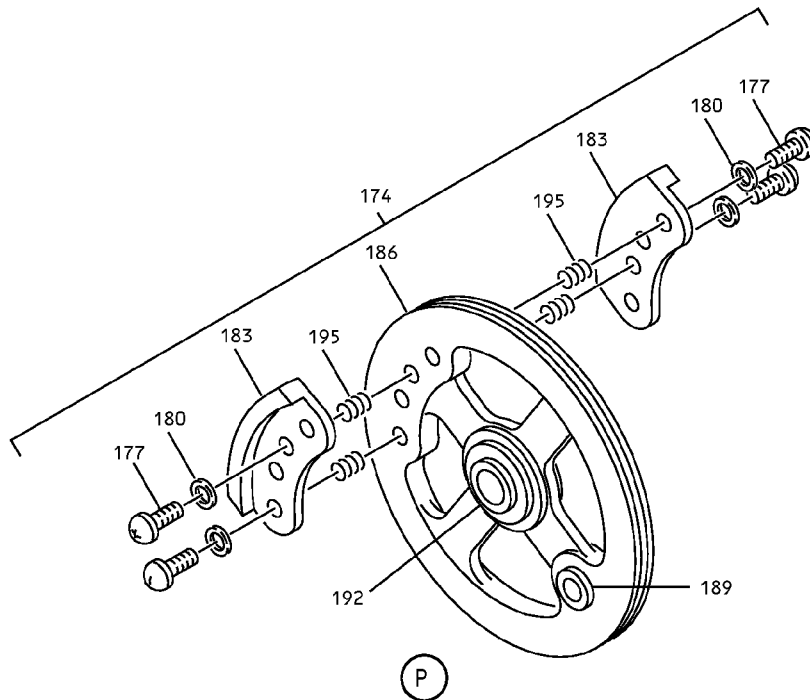
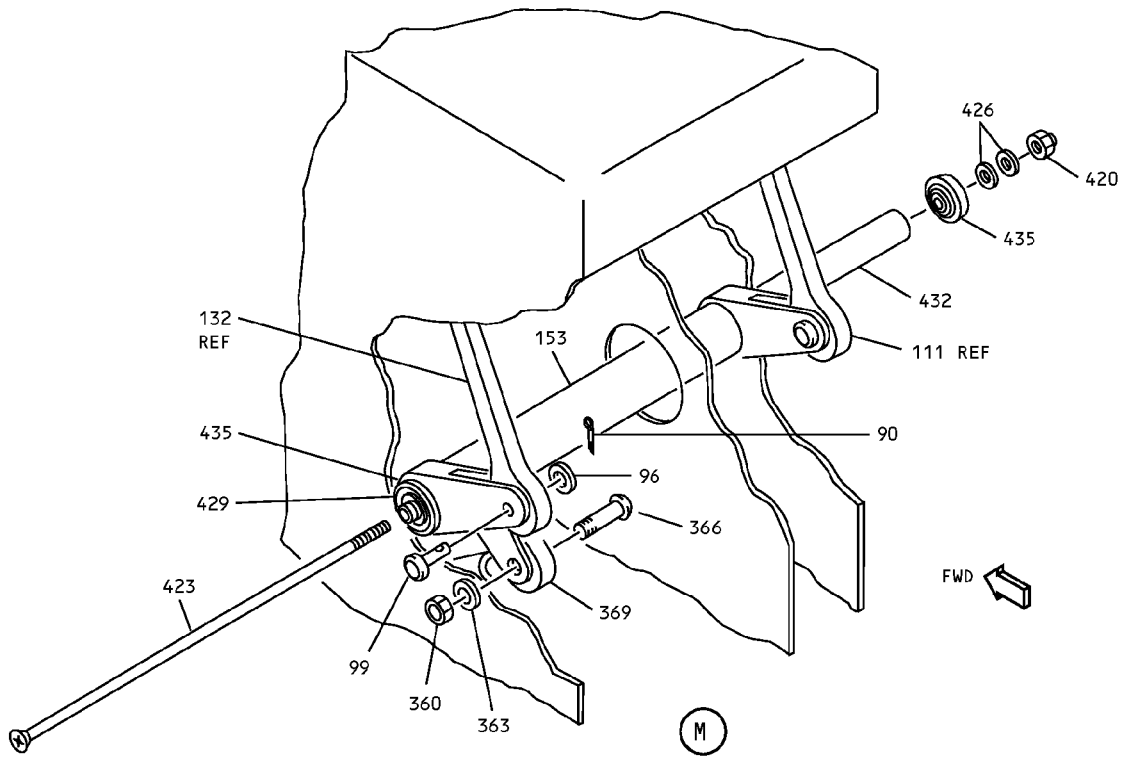
Control Stand Upper Mechanism Assembly
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Control Stand Upper Mechanism Assembly
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IPL Figure 1 (Sheet 8 of 14)

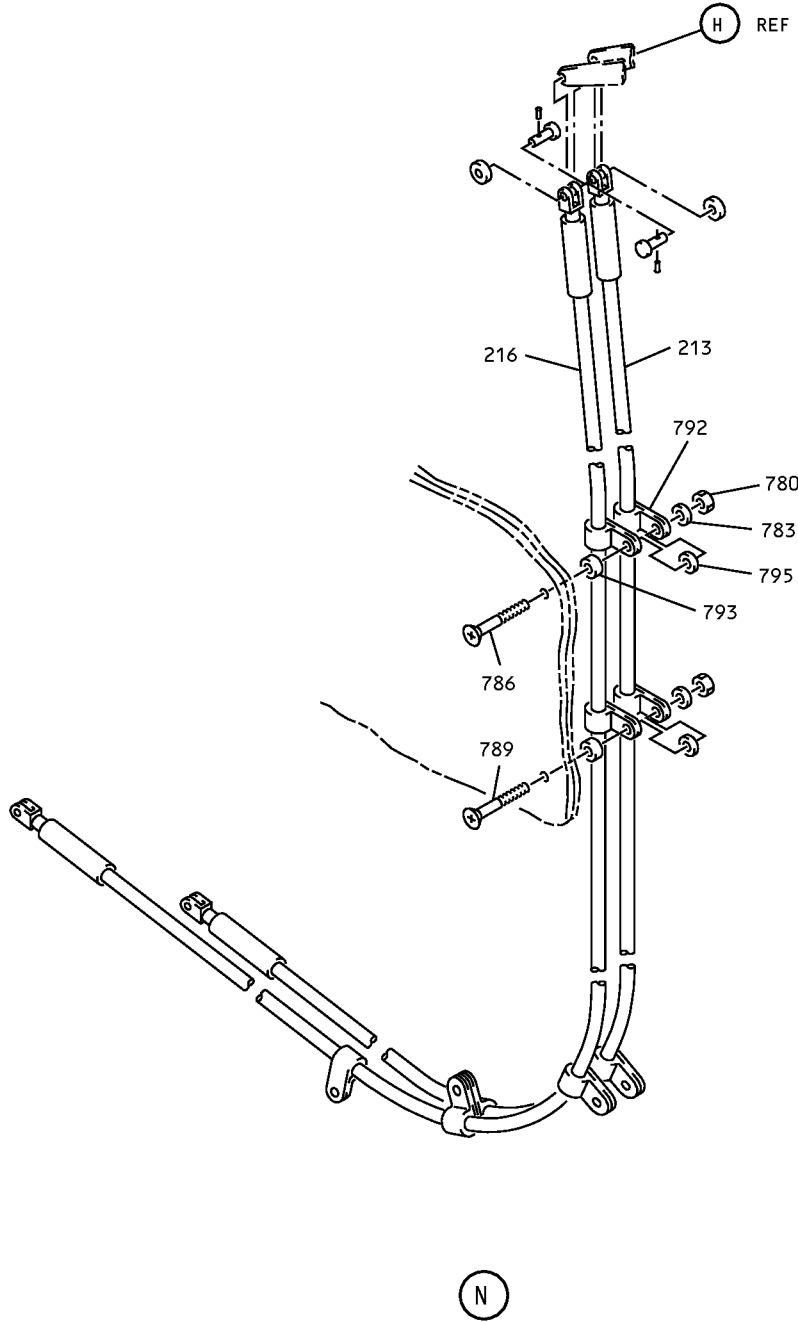
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IPL Figure 1 (Sheet 9 of 14)

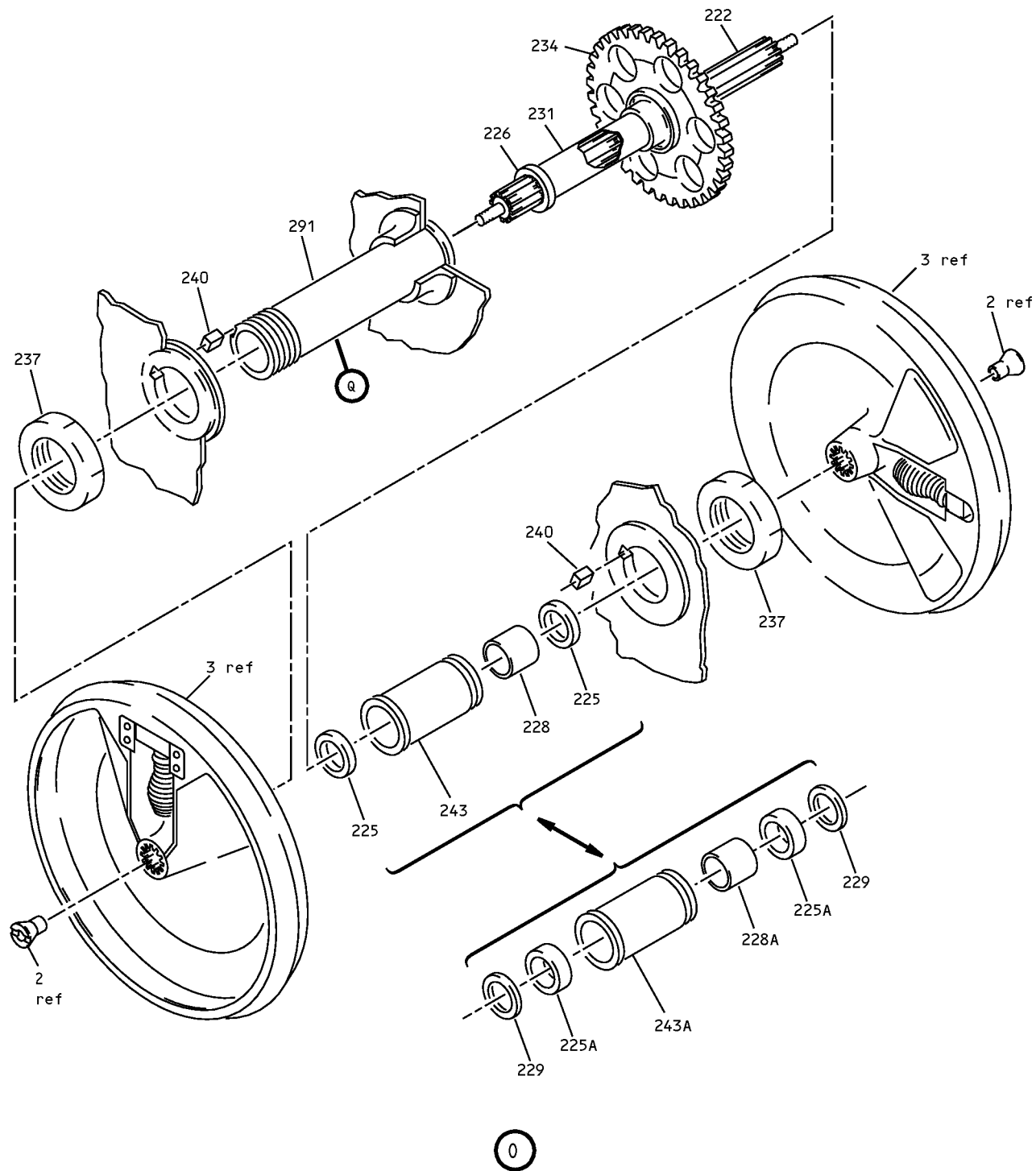
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IPL Figure 1 (Sheet 10 of 14)

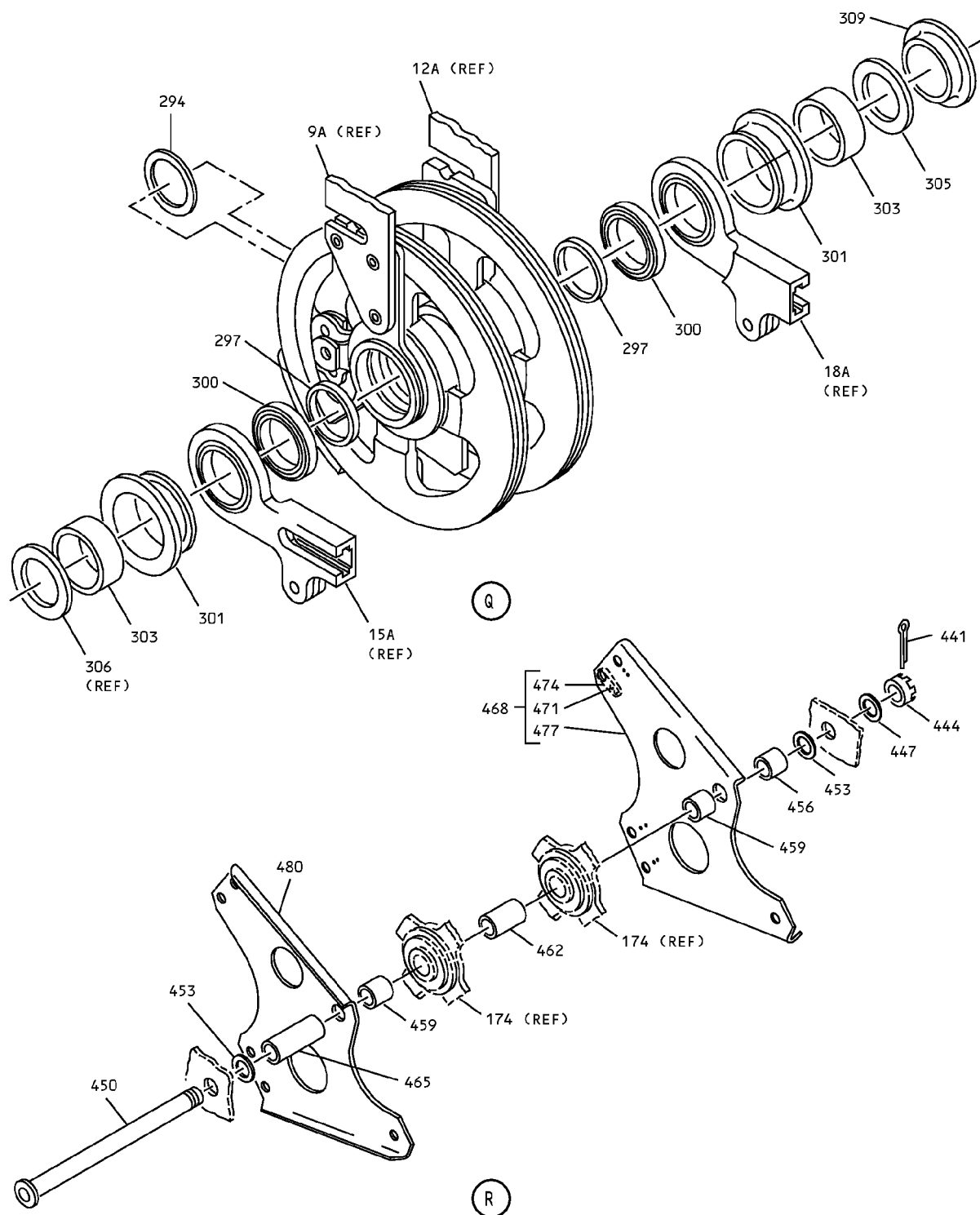
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IPL Figure 1 (Sheet 11 of 14)

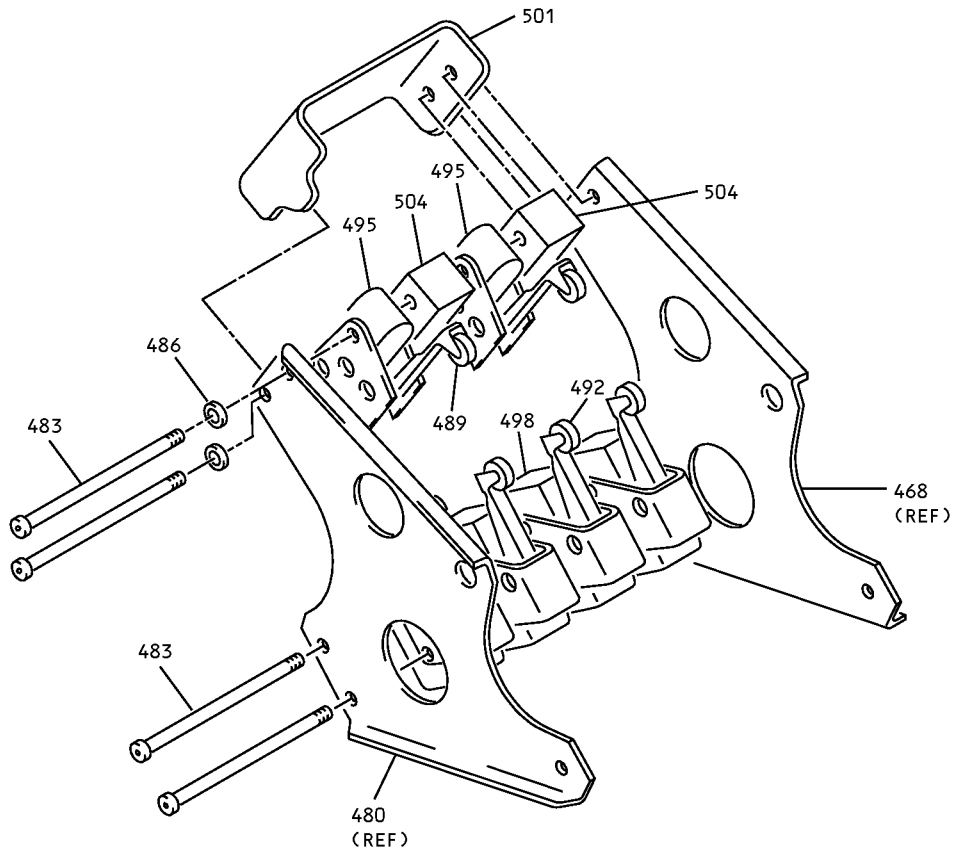
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IPL Figure 1 (Sheet 12 of 14)

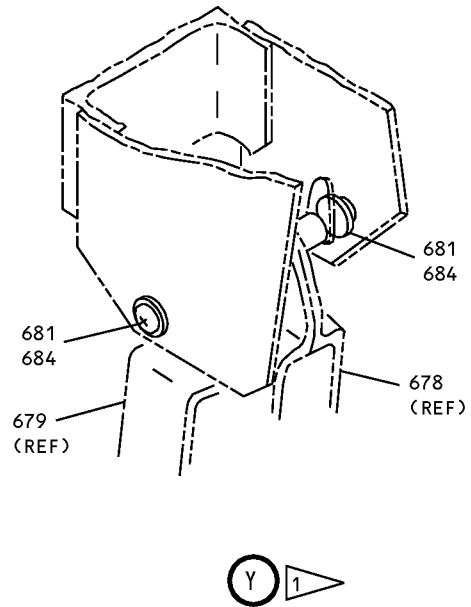
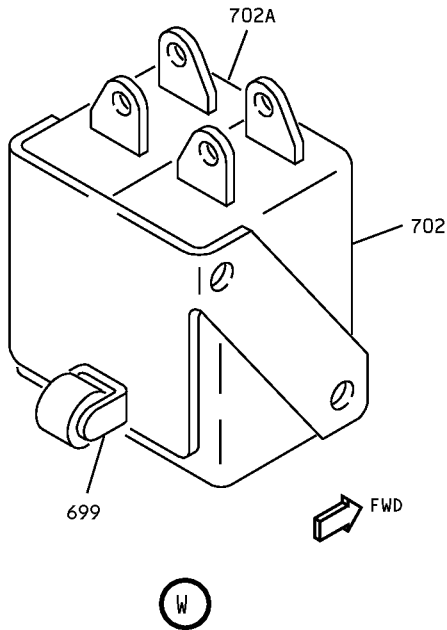
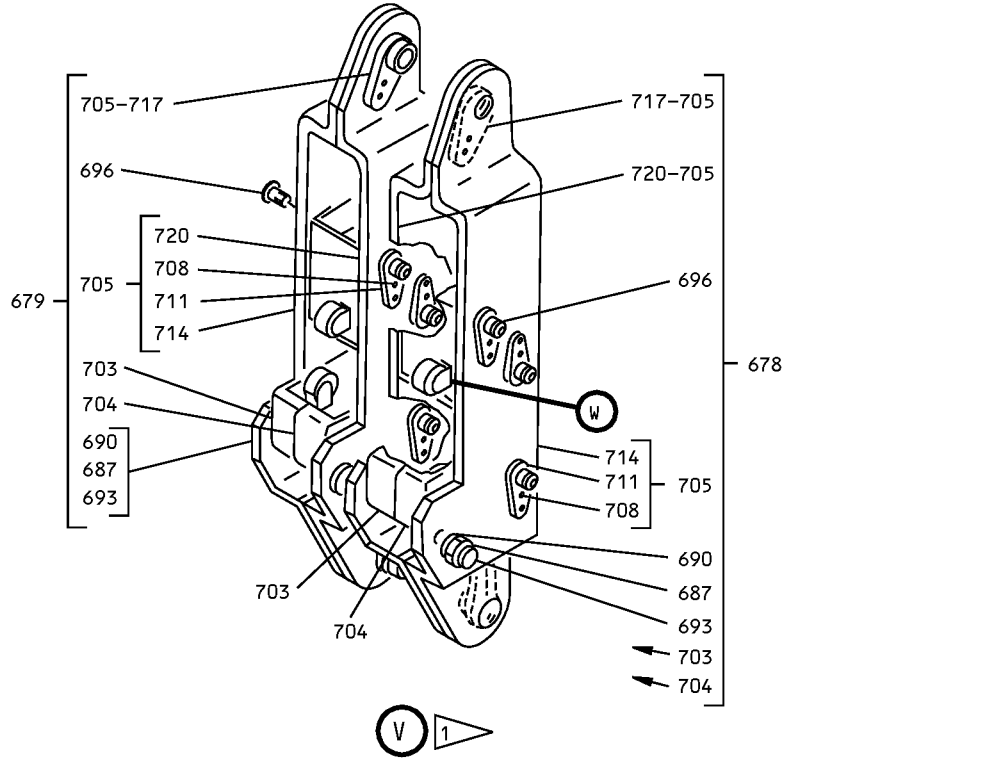
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NOTE

1 BREAKDOWN OF ASSYS 65C25503-1,-2,-3 AS SHOWN.
SEE FIG. 4 FOR BREAKDOWN OF ASSY 65C25503-11

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
-1	65C25503-1									A	RF
-1A	65C25503-2									B	RF
-1B	65C25503-3									C	RF
-1C	65C25503-11									D	RF
2	BACN10RB4										2
-3	65-24721-3										2
-3A	65-24721-1										2
3B	65-24721-6										
6	66-14147-1										1
9	65C18257-301										
9A	65C18257-305									A, B	1
9B	65C18257-307									C, D	1
12	65C18257-302										
12A	65C18257-306									A, B	1
12B	65C18257-308									C, D	1
15	65-23761-17										
15A	65-23761-19										1
18	65-23761-18										
18A	65-23761-20										1
21	SFSW4C9DL01BK										8

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
24	10-61800-194										1
27	10-61800-222										1
30	10-61800-460										
30A	10-61800-502									A	1
30B	10-61800-528									B, C, D	1
33	10-61800-461										
33A	10-61800-501									A	1
33B	10-61800-527									B, C, D	1
36	65-45127-20									A	1
-36A	65-45127-22									B, C	1
-36B	65-45127-33									D	1
39	61-30008-501										1
42	BACB30LU3-1										
45	69-26858-3										
48	BACR15BA3D										
51	BACN10JP3A										
54	65-77470-6										1
57	BACN10JC04										4
58	69-76381-1										2
59	BACN10JP04B										2
59A	BACR15BA3D										4
59B	69-76381-2										1
60	AN960PD04										8
63	NAS600-11										2
66	BACS12CB04-19										2

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
68	MS25253-1		.	.							1
69	MS25253-1		.	.							2
72	JV5		.	.							1
75	JV82		.	.							1
78	69-67598-1		.	.							2
81	BACB30NE3H4		.	.							2
84	AN960PD10		.	.							2
87	69-73237-1		.	.							1
											(OPT ITEM 87A)
-87A	69-73237-2		.	.							1
											(OPT ITEM 87)
90	MS24665-132		.								2
96	AN960KD10		.								2
99	MS20392-2C17		.								2
102	MS21042L3		.								1
105	AN960KD10		.								1
108	NAS6603-7		.								1
111	6-63610-3000		.								1
114	BACB10AC3L		.	.							2
117	6-63610-3001		.	.							1
120	50-11343-7		.								1
123	BACB10AS25		.	.							1
126	BACR15BA6D10		.	.							1
129	BACW10Q3		.	.							1
132	6-63610-3000		.	.							1
135	BACB10AC3L		.	.	.						2
138	6-63610-3001		.	.	.						1
141	50-11343-3		.	.							1
144	50-11343-8		.								1
147	BACB10AS25		.	.							1
150	50-11343-4		.	.							1
153	65-20870-1		.								1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
156	50-5560-11		.								1
159	BCREF0633		.								1
-159A	69-77085-3		.							C, D	1
162	MS21042L04		.								2
165	AN960KD10		.								2
168	AN960KD10L		.								2
171	BACB30LU3-9		.								2
174	65-45136-4		.								2
177	NAS623-3-3		.	.							4
180	AN960PD10L		.	.							4
183	69-40908-1		.	.							2
186	65-45136-2		.	.							1
189	MS20201KP3A		.	.							1
192	MS20201KP8A		.	.							1
195	MS21209F1-15		.	.							4
198	MS24665-5		.								2
201	AN960C3L		.								2
204	66-11092		.								2
207	69-70178-1		.								1
210	69-70178-2		.								1
213	580-714-001		.								1
216	580-714-002		.								1
219	BCREF0505		.								2
-219A	69-77085-1		.							C, D	2
222	66-1905		.								1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
225	BACB10CF14P		.								2
225A	B5540WZZFS428		.								2
226	BACB10CF14P		.								1
228	NAS43DD14-70		.								1
228A	69-76350-9		.								1
229	69-76350-5		.								2
231	NAS43DD14-347		.								1
234	69-73201-1		.								1
234A	6-63629-2000		.								1
237	9-50172-2		.								2
240	3-87075		.								2
243	69-1977-1		.								1
243A	65C31505-2		.								1
-243B	69-76357-2		.								1
246	3-94317		.								2
249	66-22199-1		.								1
252	6-65852-2001		.								1
255	BACB10AS25		.								1
258	69-25367-5										
258A	69-25367-9		.								1
261	NAS561P3-8		.	.							1
264	NAS561P3-16		.	.							2
267	66-14222-2		.	.							1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY	
			1	2	3	4	5	6	7			
1-												
270	66-21426-1											1
273	65-32189-1											
273A	65-32189-7											1
273B	65-32189-9											1
274	65-32189-8											
275	63-1326											
275A	MS20427F4											
276	65C14183-33											1
-276A	66-1501											1
279	65-1953-3											1
282	BACR15AZ6-8											2
283	NAS528A6											2
285	65-1926-11											
285A	65-1926-12											1
286	BACB10AS25											1
287	65-1926-13											1
288	MS21208F1-10											2
291	69-1977											1
294	3-86451-1											1
297	6-65852-2000											2
300	BACB10AS25											2
301	69-73742-2											2
303	6-65852-3											2
305	3-94317											1
305A	3-86451											1
306	3-94317											2

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
-306A	3-86451		.	SHIM							2
				(OPT ITEM 306)							
309	66-1314-1		.	SPACER							1
312	65C25503-10		.	SPEED BRAKE HANDLE ASSY							1
315	NAS561C3-9		..	PIN							1
318	66-14222-1		..	STOP							1
321	63-1406		..	SPRING							1
324	65-1970-10		..	SPEED BRAKE HANDLE							1
				(OPT ITEM 324A)							
-324A	65-1970-13		..	SPEED BRAKE HANDLE							1
				(OPT ITEM 324)							
327	69-73303-1			DELETED							
330	65-1970-12			DELETED							
330A	65-1970-8			DELETED							
333	BACS12BP08A3		..	SCREW							2
				(OPT ITEM 333A)							
-333A	BACS12BP08C3		..	SCREW							2
				(OPT ITEM 333)							
336	69-67096			DELETED							
336A	69-67096-1		..	SWITCH ACTUATOR							1
339	BACM10L00-18JV			DELETED							
342	65-21898-12		..	LEVER ASSEMBLY							1
345	BACB10AS25		...	BEARING							1
348	65-21898-13		...	LEVER							1
351	BACB30LU3-1		..	BOLT							2
354	65C14183-36		..	KNOB							1
355	BACM10L00-1BJV		..	MARKER							1
356	BACB10AS25		.	BEARING							1
357	6-65852-4		.	SPACER							1
360	MS21042L3		.	NUT							1
363	AN960KD10L		.	WASHER							1
366	BACS12CA3-8		.	SCREW							1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
369	6-63931-1		.	JACK ASSY (REFER TO OHM 27-44-02)							1
420	MS21042L3		.	NUT							1
423	66-2605		.	BOLT							1
426	AN960KD10L		.	WASHER							2
429	AN960KD10		.	WASHER							1
432	NAS43DD3-478		.	SPACER							1
435	BACB10BX3		.	BEARING							2
438	BCREF7665		.	CABLE ASSY-ENGINE START (SPEC BACC13ACF2208T4203) (OPT ITEM 438A)							2
-438A	69-77085-2		.	CABLE ASSY-ENGINE START (OPT ITEM 438) (PREFERED)					C, D		2
441	MS24665-285		.	COTTER PIN							1
444	AN320-8		.	NUT							1
447	AN960KD816		.	WASHER							1
450	66-1882		.	SHAFT							1
453	63-1472		.	SHIM							2
456	NAS43DD8-43		.	SPACER							1
459	NAS43DD8-36		.	SPACER							2
462	NAS43DD8-72		.	SPACER							1
465	NAS43DD8-115		.	SPACER							1
468	69-73222-2		.	SWITCH BRACKET ASSY							1
471	BACR15BA3D3		. .	RIVET (OPT ITEM 471A)							8
-471A	BACR15DR3AC3		. .	RIVET (OPT ITEM 471)							8
474	BACN10KBO6		. .	NUTPLATE							4
477	69-73222-4		. .	BRACKET							1
480	69-73222-3		.	SWITCH BRACKET							1
483	NAS601-54		.	BOLT							4
486	AN960KD6		.	WASHER							2

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
489	BACA12D2		.								2
-489A	ADD3721R		.								2
492	AD5721R		.								4
495	MS25011-2		.								2
-495A	MS25008-1		.								2
498	BZ2R55156T		.								4
501	69-73341-1		.								1
504	65-56822-5										
504A	65-56822-7		.								2
507	NAS600-10P		.								2
510	MS25253-2		.								1
513	JV5		.								1
516	NAS623-2-2		.								2
519	AN960KD10L		.								2
522	69-73444-1										
522A	69-73444-3		.								1
525	BACR15BA3D		.	.							4
-525A	BACR15DR3AC		.	.							4
528	BACN10JP04B		.	.							2
531	69-73444-2		.	.							1
534	NAS428-3-6		.								1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
534A	NAS428K3-7		.								1
537	65C25404-1		.								1
540	MS24586-524		.								1
543	MS21042L04		.								2
546	AN960KD10L		.								4
549	NAS6603-39		.								1
552	NAS6603-80		.								1
555	BACB10AP3		.								2
-558	BACB28AK03-020		.								1
558A	BACB28AK03-014		.								1
-561	BACB28AK03-055		.								1
561A	BACB28AK03-049		.								1
-564	BACB28AK03-120		.								1
564A	BACB28AK03-114		.								1
-567	BACB28AK03-110		.								1
567A	BACB28AK03-104		.								1
569	AN960KD10		.								AR

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE	USAGE CODE	UNITS PER ASSY
1-					
-622A	65C25456-22		. CAM FOLLOWER ASSY (OPT ITEM 622)	A, B, C	1
-623	65C32053-1		. CRANK ASSY (FOR DETAILS SEE FIG. 4)	D	1
-623A	65C32053-2		. CRANK ASSY (FOR DETAILS SEE FIG. 4)	D	1
-623B	65C32057-1		. CRANK ASSY (FOR DETAILS SEE FIG. 4)	D	1
-623C	65C32057-2		. CRANK ASSY (FOR DETAILS SEE FIG. 4)	D	1
-624	65C32075-1		. CAM FOLLOWER ASSY (FOR DETAILS SEE FIG. 4)	D	1
-624A	65C32075-2		. CAM FOLLOWER ASSY (FOR DETAILS SEE FIG. 4)	D	1
			ATTACHING PARTS		
625	MS24586-559		. SPRING	A, B, C	2
626	NAS603-18P		. SCREW (ILLUSTRATED IN IPL FIG. 4)	D	2
627	MS21042L3		. NUT		1
630	AN960KD10L		. WASHER		1
631	AN960KD516L		. WASHER (OPT ITEM 631A)		AR
631A	AN960KD516		. WASHER (OPT ITEM 631)		AR
633	BACB30LU3-43		. BOLT		1
-636	BACB28AK03-261		. BUSHING	A, B	1
637	BACB28AK03-189		. BUSHING	C, D	1
638	BACB28AK03-072		. BUSHING	C, D	1
			----- * -----		
639	BACN10JC3		. . NUT		1
642	NAS620C10L		. . WASHER		2
-644	BACB10AF3F4HS		. . BEARING (OPT ITEM 644A)		1
644A	65C25456-9		. . BEARING ASSY (OPT ITEM 644)		1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
645	BACB10AF3F4HS							. . . BEARING			1
648	66-13328-3							. . . PLUG			1
651	BACB28W5B025							. . BUSHING			2
654	65C25456-13							. . CAM FOLLOWER (USED ON ITEM 621)			1
-654A	65C25456-23							. . CAM FOLLOWER (USED ON ITEM 621A)			1
655	65C25456-14							. . CAM FOLLOWER (USED ON ITEM 622)			1
-655A	65C25456-24							. . CAM FOLLOWER (USED ON ITEM 622A)			1
657	65C25456-12							DELETED			
657A	65C25456-22							DELETED			
660	BACN10JC3							DELETED			
663	NAS620C10L							DELETED			
665	65C25456-9							DELETED			
666	BACB10AF3F4HS							DELETED			
669	66-13328-3							DELETED			
672	BACB28W5B025							DELETED			
675	65C25456-14							DELETED			
675A	65C25456-24							DELETED			
678	69-73232-1							. SWITCH BRACKET ASSY	A, B, C		1
679	69-73232-2							. SWITCH BRACKET ASSY	A, B, C		1
								ATTACHING PARTS			
681	NAS623-3-13							. SCREW	A, B, C		2
684	AN960KD10L							. WASHER	A, B, C		2
								-----*			
687	BACN10JC04							. . NUT			1
690	AN960KD4L							. . WASHER			1
693	NAS1801-04-18							. . SCREW			1
696	BACS12BF04B18							. . SCREW			3
699	JV82							. . ACTUATOR			2
702	MS25253-1							. . SWITCH-ANTI-ICING			1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
702A	MS25253-1								. . SWITCH-TAKEOFF WARNING		1
703	MS25253-1								. . SWITCH-THRUST REVERSER ARM		1
704	MS25253-1								. . SWITCH-THRUST REVERSER STOW		1
705	69-73232-3								. . BRACKET ASSY (USED ON ITEM 678)		1
706	69-73232-4								. . BRACKET ASSY (USED ON ITEM 679)		1
708	BACR15BA3D								. . . RIVET		10
711	BACN10JP04B								. . . NUTPLATE		3
714	69-73231-2								. . . BRACKET		1
717	BACN10JP3B								. . . NUTPLATE		2
720	69-73231-1								. . . BRACKET		1
723	69-73232-2								DELETED		
726	NAS623-3-13								DELETED		
729	AN960KD10L								DELETED		
732	BACN10JC04								DELETED		
735	AN960KD4L								DELETED		
738	NAS1801-04-18								DELETED		
741	BACS12BF04B18								DELETED		
744	JV82								DELETED		
747	MS25253-1								DELETED		
747A	MS25253-1								DELETED		
748	MS25253-1								DELETED		
749	MS25253-1								DELETED		
750	69-73232-4								DELETED		
753	69-73231-1								DELETED		
756	BACR15BA3D								DELETED		
759	BACN10JP3B								DELETED		
762	BACN10JP04B								DELETED		
765	69-73231-2								DELETED		
768	MS21042L3								. NUT		2
771	NAS6603-8								. BOLT		2

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
774	BACC10DK8								. CLAMP		2
777	69-62211-1								DELETED		
780	MS21042L3								. NUT		2
783	AN960KD10L								. WASHER		2
786	NAS623-3-14								. SCREW		1
789	BACB30LU3-14								. SCREW		1
792	BACC10DK4								. CLAMPS		4
793	NAS43DD3-12								. SPACER		2
795	NAS43DD3-17								. SPACERS		2
798	66-1884								DELETED		
798A	66-1884-5								. PARKING BRAKE LEVER ASSY		1
									ATTACHING PARTS		
801	BACB30LU2-00								. BOLT		2
									-----*-----		
804	MS20253-2-82								. . PIN, HINGE		1
807	69-1936-7								. . PARKING BRAKE LEVER		1
810	66-1884-1								. . HINGE ASSY		1
813	BACR15BA3D								. . . RIVET (OPT ITEM 813A)		4
-813A	BACR15DR3AC								. . . RIVET (OPT ITEM 813)		4
816	MK1000-832								. . . NUTPLATE (SPEC BACN10AM5A08)		2
819	66-1884-2								. . . HINGE		1
822	MS24665-132								. COTTER PIN		1
825	AN960KD10L								. WASHER		1
828	MS20392-2C43								. PIN		1
831	NAS43DD3-21								. SPACER		1
834	NAS514P632-14								. SCREW		3
837	65C10042-1								. COVER		1
840	MS21042L04								. NUT		2
843	NAS620-4L								. WASHER		2

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-											
-923A	69-15907-4										1
-923B	69-15907-1										1
925	BACB10A120										1
-925A	BACB10CG4A										1
-925B	BACB10FY04A										1
927	69-15907-2										1
-927A	69-15907-5										1
929	BACB30NF4-16										1
931	AN960KD416										1
933	MS21042L4										1

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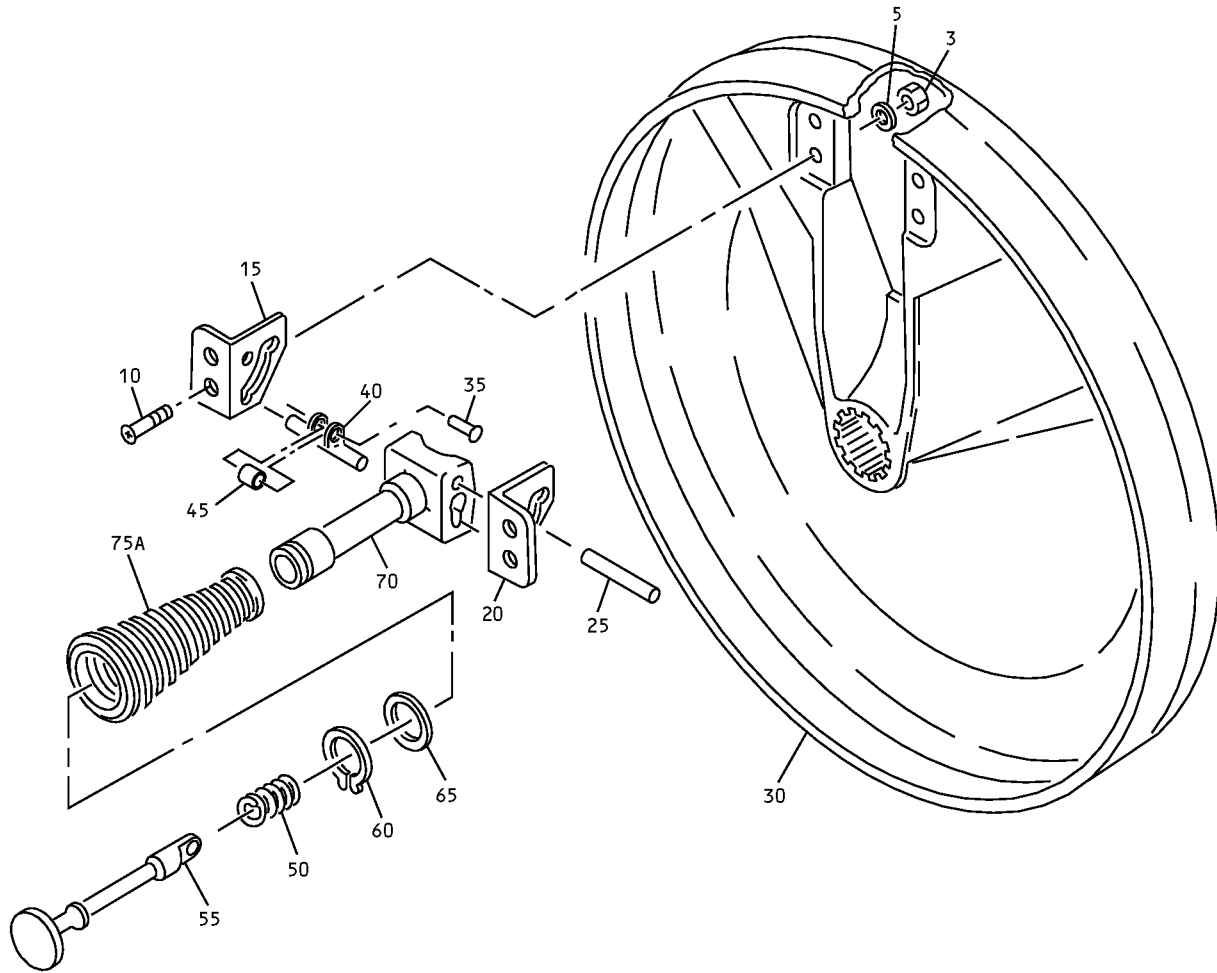
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Wheel Assembly
IPL Figure 2

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
2-											
-1	65-24721-3									A	RF
-1A	65-24721-1									B	RF
-1B	65-24721-6									C	RF
3	NAS679A3W										4
5	BACW10T10L										4
10	BACB30FL3-6										4
15	69-70170-1									A, C	1
-15A	69-21293-1									B	1
20	69-70170-2									A, C	1
-20A	69-21293-2									B	1
25	66-16367-1										1
30	65-24722-1										1
35	NAS508M3-3										1
40	69-70169-1									A, C	1
-40A	69-21571-1									B	1
45	9-50858-6										1
50	3-87052										1
55	69-21292-1										1
60	MS16624-1046									A, C	1
-60A	NAS670-50									B	1
-60B	NAS51-50									B	1
65	9-50858-7										1
70	65C18275-1									A, C	1
-70A	69-21291-1									B	1
75	69-21295-1									A, B	1
75A	69-76211-1										1

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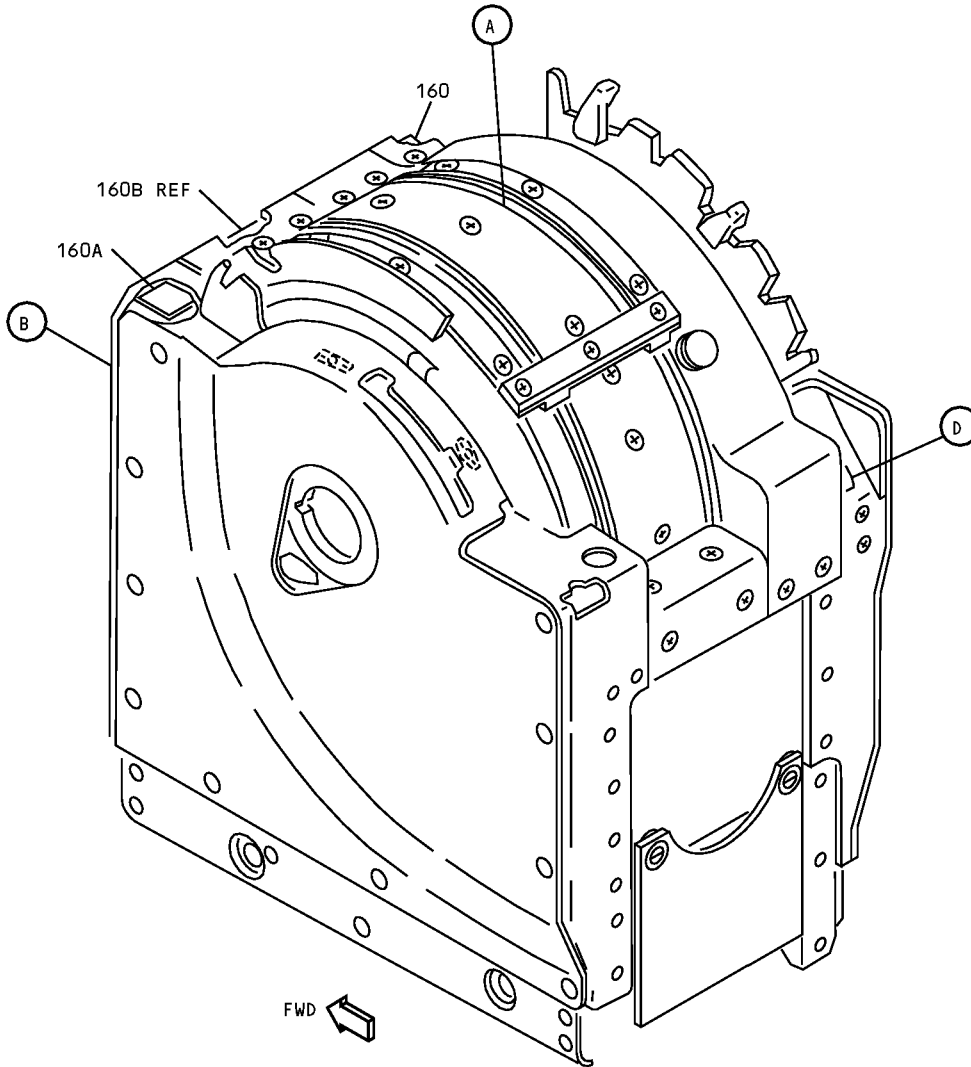
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Upper Mechanism Frame Assembly
IPL Figure 3 (Sheet 1 of 5)

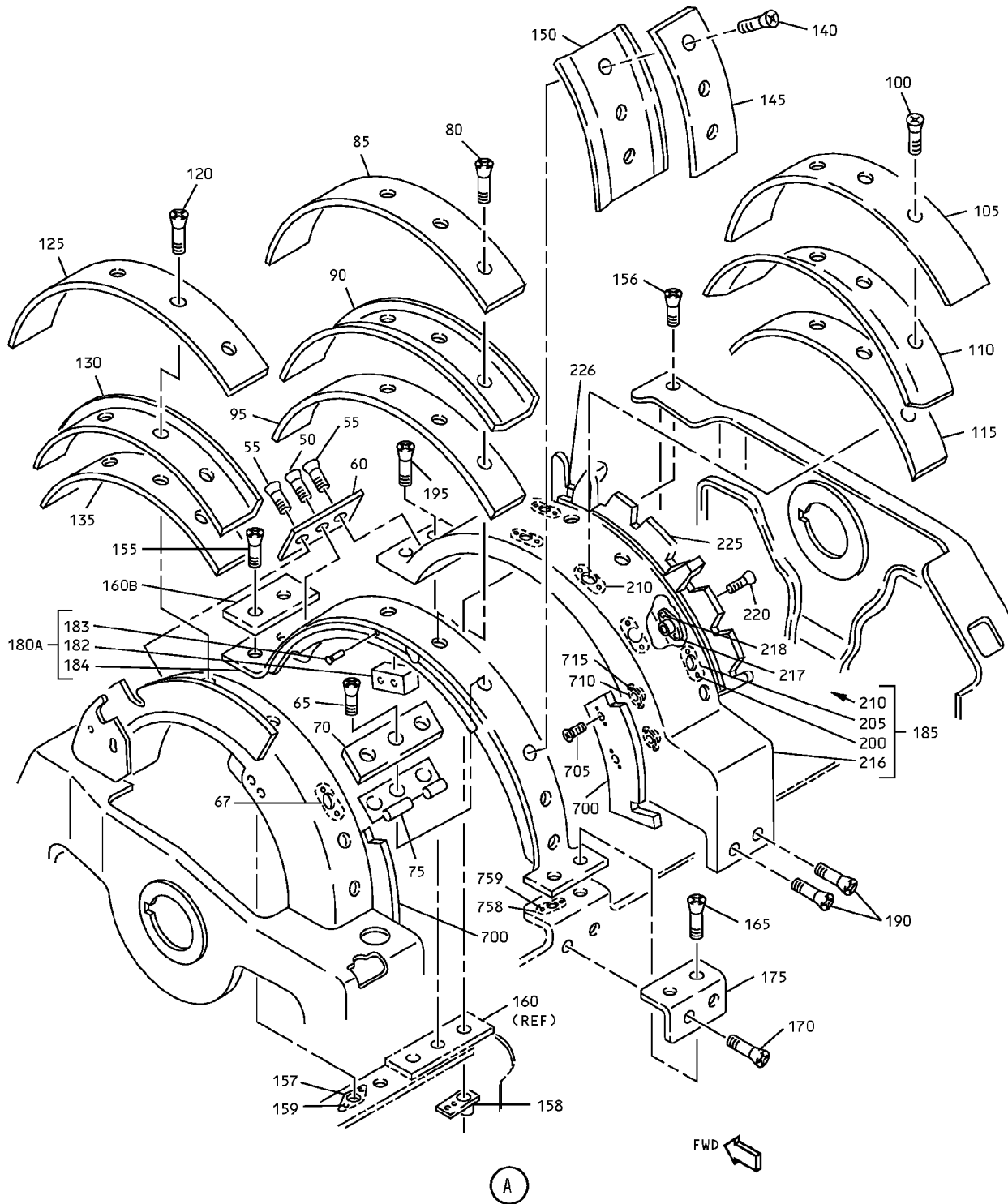
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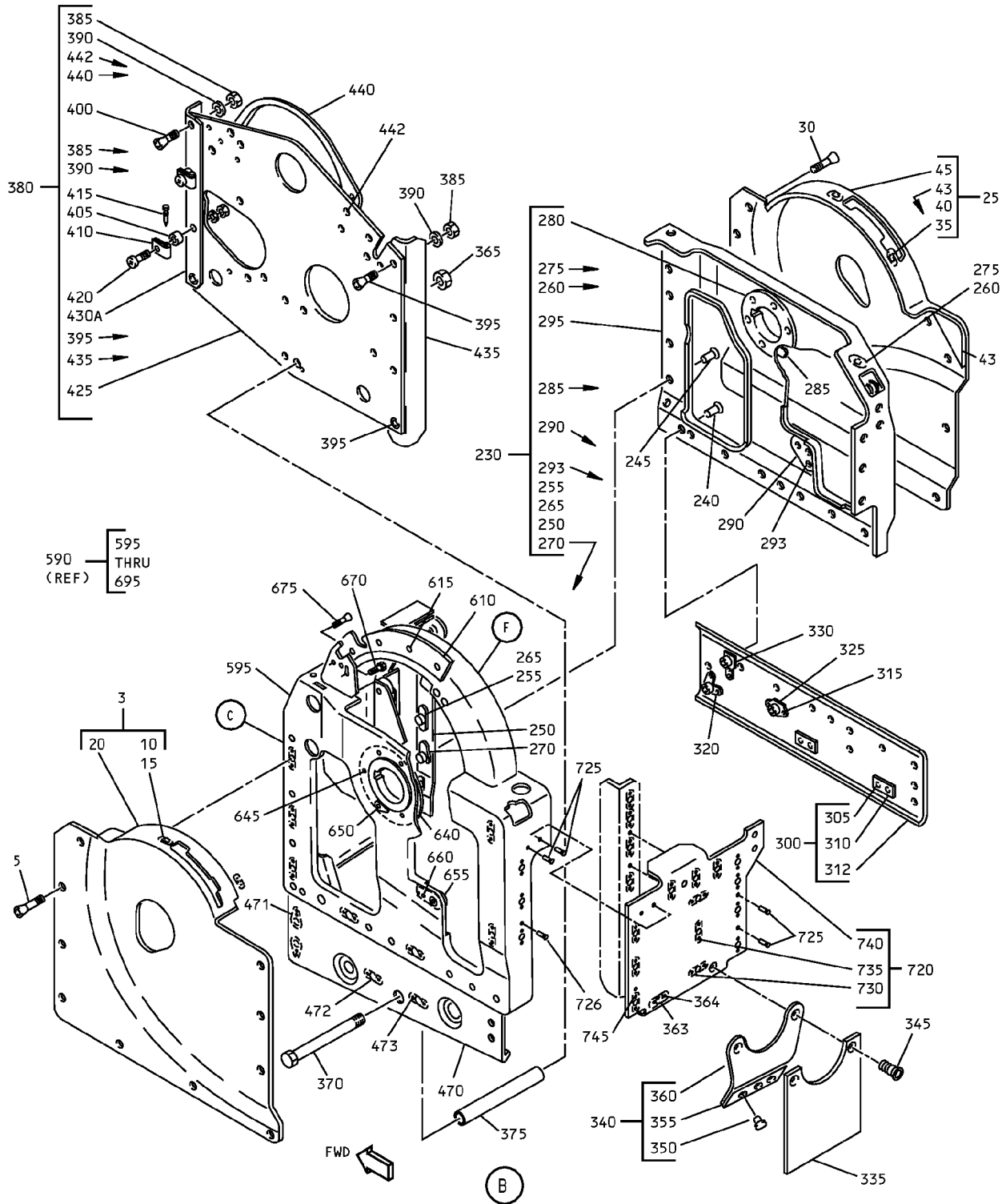
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Upper Mechanism Frame Assembly
IPL Figure 3 (Sheet 2 of 5)

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Upper Mechanism Frame Assembly
IPL Figure 3 (Sheet 3 of 5)

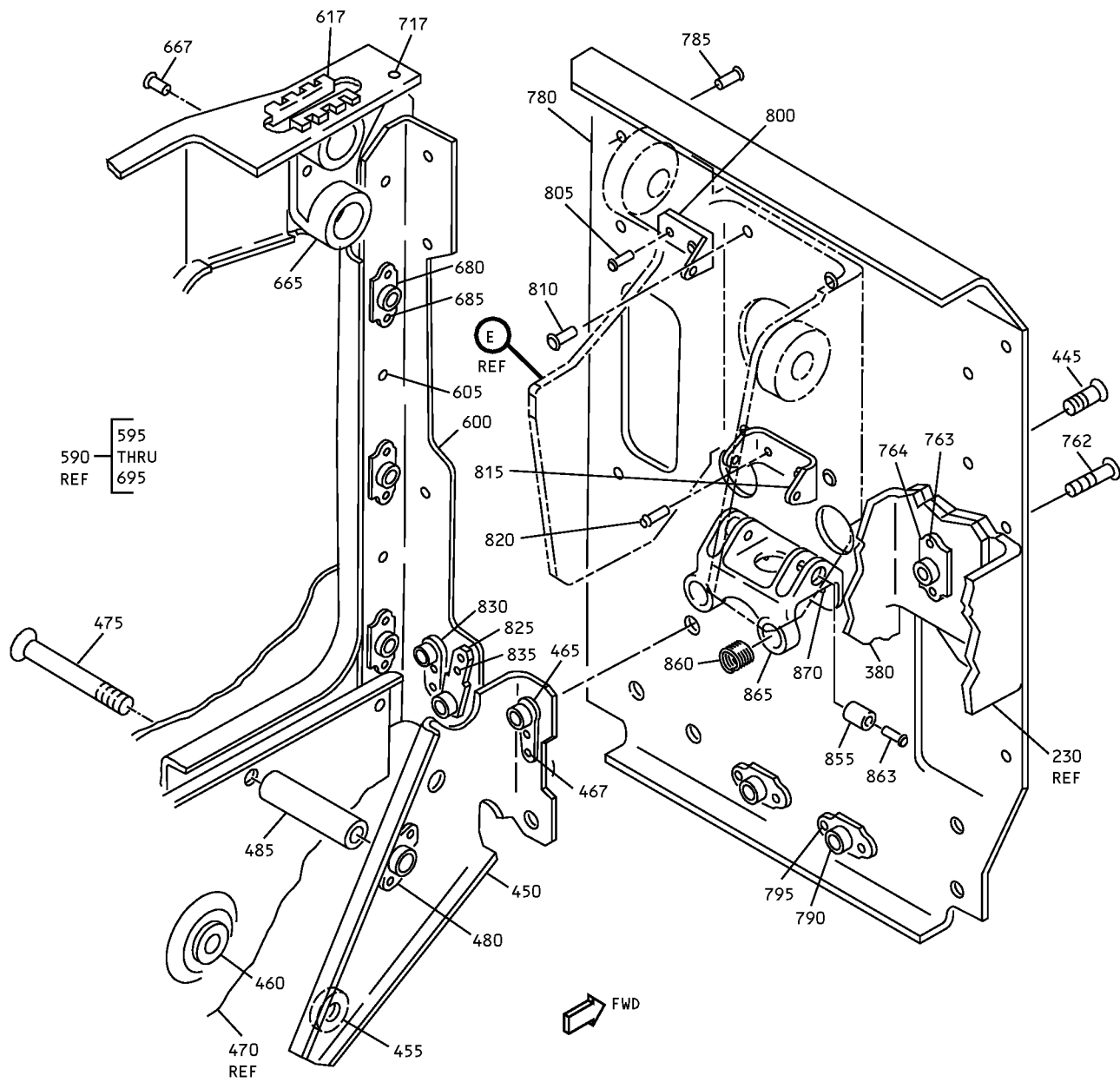
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Upper Mechanism Frame Assembly
IPL Figure 3 (Sheet 4 of 5)

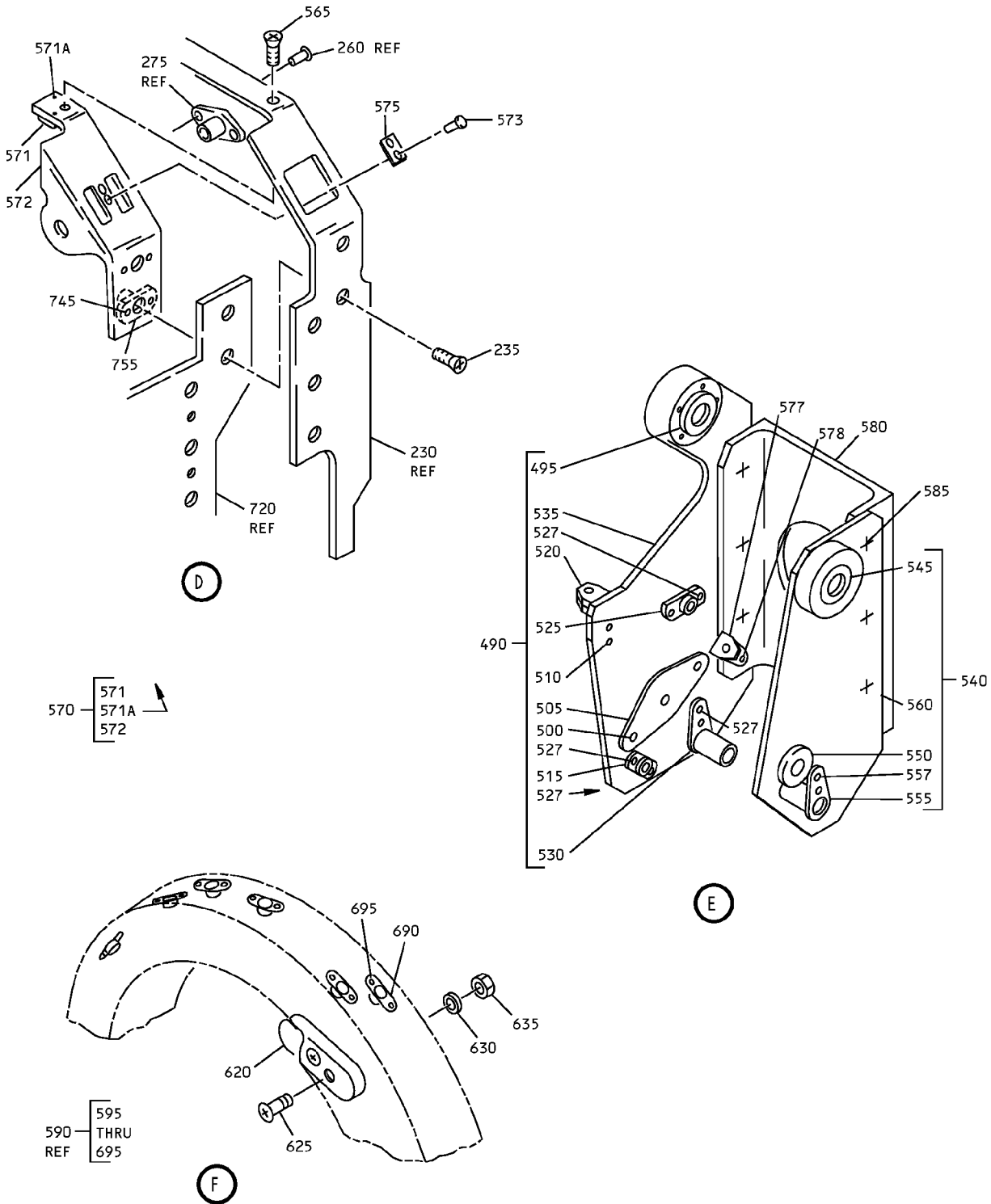
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Upper Mechanism Frame Assembly
IPL Figure 3 (Sheet 5 of 5)

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
3-											
-1	65-45127-20									A	RF
-1A	65-45127-22									BC	RF
-1B	65-45127-33									D	RF
3	65-70885-1										1
5	BACB30FL3-1										9
10	MS20426D3-3										4
15	NAS1068A04L										2
20	65-70885-2										1
25	65-70888-4										1
30	BACB30LU3-1										9
35	MS20426D3-3										4
40	NAS1068A04L										2
43	65-70888-3										1
45	65-70888-5										1
50	BACB30LU3-1										1
55	BACB30LU3-3										2
60	66-23284-1										1
65	BACB30LU3-4										3
67	BACN10JP3A										3
70	66-23285-1									A	1
-70A	69-74669-1									BCD	1
75	65-45127-4									A	1
-75A	69-74668-1									BCD	1
80	NAS514P632-5										4
85	65-2377-38										1
90	69-33918-1										1
95	69-56971-2										1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
3-											
100	NAS514P632-5		.								4
105	65-2377-39		.								1
110	69-33918-4		.								1
115	69-56971-1		.								1
120	NAS514P632-5		.								4
125	65-2377-42		.								1
130	69-33918-6		.								1
135	69-56971-5		.								1
140	NAS514P632-4		.								3
145	65-2377-41		.								1
150	65-2377-28		.								1
155	BACB30LU3-3		.								2
156	BACB30LU3-3		.								1
157	BACN10JR3F		.								4
158	BACN10KB3F		.								1
159	BACR15BA3D		.								10
160	BACS40R07E30F		.								AR
160A	BACS40R07E24F		.								AR
160B	BACS40R07E20F		.								AR
165	BACB30LU3-3		.								2
170	BACB30LU3-2		.								2
175	69-36619-1		.								1
180	65-1936-26										DELETED
180A	65-1936-31		.								1
182	65-1936-11		.	.							1
183	MS20426D5		.	.							2
184	65-1936-27		.	.							1
185	69-20380-21		.								1
											ATTACHING PARTS
190	BACB30LU3-3		.								2

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
3-											
195	BACB30LU3-3								. BOLT		2
									-----*-----		
200	BACR15BA3D								. . RIVET		12
205	NAS1068A04L								. . NUTPLATE		2
210	NAS1068A06L								. . NUTPLATE		4
215	BACN10JR08F								DELETED		
216	69-20380-22								. . COVER		1
217	BACN10JR08F								. NUTPLATE		4
218	BACR15BA3D								. RIVET		8
220	BACB30LU2-2								. BOLT		4
225	65-51549-8								. FLAP DETENT (OPT ITEM 225B)		1
-225A	65-51549-7								DELETED		
-225B	65-51549-10								. FLAP DETENT (OPT ITEM 225)		1
226	69-72922-1								. SHIM		1
230	65-54212-6								. FRAME ASSEMBLY-RIGHT SIDE		1
									ATTACHING PARTS		
235	BACB30LU2-3								. BOLT		2
240	BACB30LU3-2								. BOLT		5
									-----*-----		
245	BACB30FL3-2								. . BOLT		3
250	65-54212-7								. . STIFFENER ANGLE		1
255	MS20426D3								. . RIVET (OPT ITEM 255A, 255B)		18
-255A	BACR15DR3AC								. . RIVET (OPT ITEM 255)		18
-255B	BACR15BA3D								. . RIVET (OPT ITEM 255)		18
260	BACR15DR3								. . RIVET		2
265	NAS686-A3								. . NUTPLATE		6
270	NAS687-A3								. . NUTPLATE		3
275	BACN10TL3-3								. . NUT SPACER PLATE		1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
3-											
280	6-63288										1
285	6-74642										1
290	65-24728-3										1
293	MS20426D5										2
295	65-54212-5										1
300	66-16510-4										1
305	MS20426A3										4
310	66-16510-6										2
312	66-16510-5										1
315	BACR15BA3D										28
320	BACN10KF3										2
325	BACN10JR3F										7
330	BACN10KB3F										5
335	65-1795-10										1
340	69-1958-4										1
345	BACS12N10-9										2
350	MS20470A5										3
355	69-1958-2										1
360	69-1958-3										1
363	BACN10KAB3S										2
364	BACR15BA3D										4
365	MS21042L3										1
370	BACB30LU3-94										1
375	NAS42DD6-370										1
380	65-87109-14										1
385	BACN10JC3										6
390	AN960D10L										6
395	BACB30LU3-2										2
400	BACB30NE3-3										2

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
3-											
405	NAS42DD6-7		.	.							2
410	BACC10DK2		.	.							2
415	BACP20BA		.	.							2
420	NAS623-3-6		.	.							2
425	65-87109-15		.	.							1
430	65-24724-3										
430A	65-24724-16		.	.							1
435	65-24724-4		.	.							1
440	65-24724-11		.	.							1
442	BACR15BA5D		.	.							4
445	NAS623-3-2		.								2
450	66-12625-1		.								1
455	BACB28B4-185		.								1
460	BACB28B4-198		.								1
465	BACN10KB3		.								2
467	BACR15BA3D		.								4
470	66-14972-1		.								1
471	BACN10KB3F		.								5
472	BACN10JR3F		.								2
473	BACR15BA3D		.								14
475	BACB30LU3-25		.								1
480	BACN10JR3F		.								1
482	BACR15BA3D		.								2
485	NAS43DD3-95		.								1
490	69-73238-1		.						ABC		1
-490A	69-73238-3		.						D		1
495	BACB10AP3		.	.							1
500	MS20427M3		.	.							2
505	69-73464-1		.	.							1
510	BACR15BB3D		.	.							2
515	BACN10JN08		.	.							1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
3-											
520	AN256-10										1
525	BACN10JP08A										1
527	BACR15BA3D								ABC		6
-527A	BACR15BA3D								D		4
530	BACS18R59B								ABC		1
535	69-73238-2										1
540	69-73239-1								ABC		1
-540A	69-73239-3								D		1
545	BACB10AP3										1
550	BACB28B5-205										1
555	BACS18R59B								ABC		1
557	BACR15BB3D								ABC		2
560	69-73239-2										1
565	BACB30LU3-1										1
570	66-11005										1
571	BACN10AM5C3										1
571A	MS20426D3										2
572	66-11005-1										1
573	BACR15BA3D										2
575	BACF33D205-025										1
577	AN256-10								ABC		2
578	BACR15BB3D								ABC		4
580	69-73465-1										1
585	BACR15BB5D										6
590	65-45128-20										1
595	65-45128-21										1
600	65-45128-13										1
605	BACR15BA5D										9
610	65C10043-8										1
-611	65C10043-3										1
-612	MS21209C0610										3

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY	
			1	2	3	4	5	6	7			
3-												
-613	65C10043-10											1
615	BACR15BA4D											4
617	BACG20ZB070											2
620	65-45128-10											1
625	BACB30LU04-4											2
630	AN960PD4											2
635	BACN10JC04											2
640	6-63288											1
645	BACR15BA5D											6
650	6-74642											1
655	65-24726-4											1
660	BACR15BA5D											2
665	69-73466-1											1
667	BACR15BA5D											3
670	66-25899-1											1
675	NAS514P440-12											1
680	BACN10JR3F											7
685	BACR15BA3D											14
690	BACN10JN06											6
695	BACR15BA3											12
700	69-26858-3									A		2
-700A	69-74670-1									BCD		2
705	BACB30LU3-1											4
710	BACN10JP3A											4
715	BACR15BA3D											8
												(OPT ITEM 715A)
715A	BACR15DR3AC											8
												(OPT ITEM 715)
717	BACR15BA5D											3
720	69-36620-1											1
												ATTACHING PARTS
725	BACR15BA5D											4

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
3-											
726	MS20426D5								. RIVET		1
									-----*		
730	NAS686-A3								. . NUTPLATE		3
735	MS20426D3								. . RIVET		6
740	69-36620-2								. . END PLATE		1
745	BACR15BA3D								. RIVET		24
750	BACB10JR3F								. NUTPLATE		10
755	BACN10JN08								. NUTPLATE		2
758	BACN10JR3F								. NUTPLATE		2
759	BACR15BA3D								. RIVET		4
760	BACB30LU3-2								DELETED		
762	NAS623-3-3								. SCREW		1
763	BACR15BA3D								. RIVET		2
764	BACN10KAB3S								. NUTPLATE		1
765	BACB30FL3-2								DELETED		
770	BACB30FL3-3								DELETED		
775	BACB30LU2-3								DELETED		
780	69-38297-3								. END PLATE-FWD		1
785	BACR15BB5D								. RIVET		8
790	BACN10KA3BS								. NUTPLATE		2
795	BACR15BA3D								. RIVET		4
800	69-73443-2								. SPRING RETAINER		1
805	BACR15BB3D								. RIVET		2
810	BACR15BB5D								. RIVET		4
815	69-73443-1								. SPRING RETAINER	ABC	1
820	BACR15BB3D								. RIVET	ABC	2
825	BACN10KB4F								. NUTPLATE		1
830	BACN10KB3								. NUTPLATE		3
835	BACR15BA3D								. RIVET		8
840	AN256-10								. NUTPLATE	ABC	2
845	BACR15BB3D								. RIVET	ABC	4

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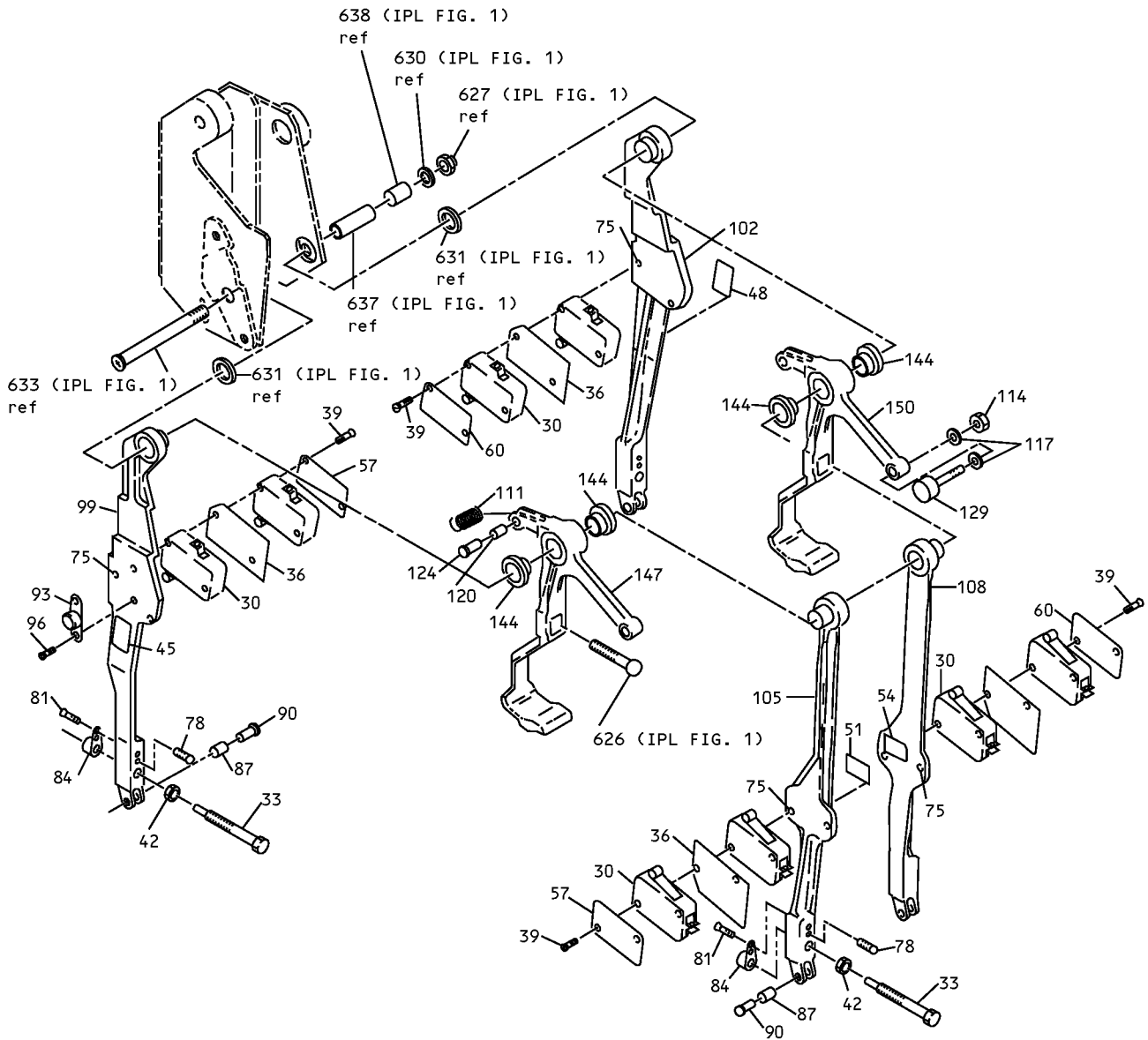
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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
3-											
850	65C32054-1		.							D	1
855	NAS42DD3-20		.	.							2
860	MS21209F1-10		.	.							2
863	BACR15BB3D		.	.							2
865	65C32054-2		.	.							1
870	BACR15BB3D		.								3

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Crank and Cam Follower Assemblies
IPL Figure 4

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
4-											
-1	65C32053-1									A	RF
-5	65C32053-2									B	RF
-10	65C32057-1									C	RF
-15	65C32057-2									D	RF
-20	65C32075-1									E	RF
-25	65C32075-2									F	RF
30	V3L2228									A-D	2
33	69-76708-1									A-D	1
36	69-76741-1									A-D	1
39	BACB30LU04-12									A-D	2
42	NAS509-3									A-D	1
45	BAC27DCT0414									A	1
48	BAC27DCT0415									B	1
51	BAC27DCT0412									C	1
54	BAC27DCT0413									D	1
57	69-76729-1									A, C	1
60	69-76729-2									B, D	1
63	65C32048-1									A	1
66	65C32048-2									B	1
69	65C32044-1									C	1
72	65C32044-2									D	1
75	MS21209C0410										2
78	BACR15BA3AD9										1
81	BACR15BB3AD9										1
84	BACN10JP3D										1
87	NAS42DD3-14										1
90	BACR15BB3D										1
93	BACN10TL3A3									AB	1
96	BACR15BA3D									AB	1
99	65C32048-5									A	1

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FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
4-											
102	65C32048-6		.	.	BRACKET					B	1
105	65C32044-3		.	.	CRANK					C	1
108	65C32044-4		.	.	CRANK					D	1
111	69-76709-1		.		SPRING					EF	1
114	MS21042L3		.		NUT					EF	1
117	NAS620A10L		.		WASHER					EF	2
120	NAS42DD3-14		.		SPACER					EF	1
124	BACR15BB3D		.		RIVET					EF	1
129	BACB10FK3F4HS		.		BEARING (OPT ITEM 129A)					EF	1
-129A	65C32075-3		.		BEARING ASSY (OPT ITEM 129)					EF	1
132	BACB10AF3F4H3		.	.	BEARING						1
135	66-13328-3		.	.	PLUG						AR
138	65C32075-5		.		FOLLOWER ASSY					E	1
141	65C32075-6		.		FOLLOWER ASSY					F	1
144	BACB28W7B024		.	.	BUSHING						2
147	65C32075-7		.	.	CAM FOLLOWER					E	1
150	65C32075-8		.	.	CAM FOLLOWER					F	1

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