TO: ALL HOLDERS OF ENTRY AND SERVICE DOOR COUNTERBALANCE ASSEMBLY COMPONENT MAINTENANCE MANUAL 52-11-62

REVISION NO. 11 DATED JUL 01/99

HIGHLIGHTS

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

CHAPTER/SECTION AND PAGE NO.	DESCRIPTION OF CHANGE
1025	Changed Item 410 from P/N BACB30M8 to BACC30M5.

ENTRY AND SERVICE DOOR COUNTERBALANCE ASSEMBLY

PART NUMBER 258T1190-3,-4,-5,-7,-8

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

REVISION RECORD

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

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

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR B11043	OCT 10/84
		PRR B11260-1	JAN 10/86
		5211MP6003	JUL 01/88
		PRR B11840	JAN 01/89
		PRR B12080	JAN 01/91
52A0053			APR 01/93

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2	BLANK	
REVISION RECORD		
1	OCT 10/84	01
2	BLANK	
TR & SB RECORD		
1	APR 01/93	01.1
2	BLANK	
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801	OCT 10/84	01
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1001	OCT 10/84	01
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TABLE OF CONTENTS

INTRODUCTION

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

This manual is divided into separate sections:

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

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

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

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

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

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

ENTRY AND SERVICE DOOR COUNTERBALANCE ASSEMBLY

DESCRIPTION AND OPERATION

1. Description and Operation

A. The overhead passenger door counterbalance assembly is used to counter the weight of the door for easy door actuation. The counterbalance consists of a torque shaft assembly, a gearbox assembly, cable drum assembly, and two composite torsion springs. Prior to installation of the counterbalance assembly the torsion springs are preloaded by turning the gearbox assembly handwheel. The door is connected, via cable, to the counterbalance cable drum after installation of the counterbalance assembly.

B. Energy stored in the torsion springs is used to operate the door. A small electric motor (not installed on all doors) is connected to the counterbalance cable drum and is used to raise and lower the door with the aid of the torsion springs.

2. Leading Particulars (approximate)

Length -- 26 inches
Height -- 18 inches
Width -- 14 inches
Weight -- 71 pounds

TESTING AND TROUBLE SHOOTING

1. Equipment

   A. Handscale -- 0-50 pounds

2. Functional Test (IPL Fig. 1)

   A. Mount counterbalance assembly on a workbench or restrain counterbalance assembly to resist a 30 to 40 pound force applied to the rim of the handwheel.

   WARNING: INJURY COULD RESULT TO PERSONNEL WORKING ON COUNTERBALANCE ASSEMBLY IF PAWL ON GEARBOX ASSEMBLY (90A) IS NOT ENGAGED.

   CAUTION: DO NOT ROTATE HANDWHEEL WITH COUNTERBALANCE LOCK INSTALLED. EXCESSIVE ROTATION AND/OR FORCE APPLIED TO HANDWHEEL. COULD CAUSE DAMAGE TO COUNTERBALANCE ASSEMBLY.

   B. Remove lock A52003-1.

      (1) Grasp handwheel and slowly apply force ccw to release load on lock A52003-1. Remove lock A52003-1.

      WARNING: DO NOT RELEASE HANDWHEEL WITH PAWL DISENGAGED, OTHERWISE SPRINGS WILL UNWIND RAPIDLY AND DAMAGE TO UNIT OR INJURY TO PERSONNEL MAY RESULT. PAWL ON GEARBOX ASSEMBLY (90A) MUST BE ENGAGED DURING THIS TEST.

      (2) Make sure pawl is engaged into ratchet on gearbox assembly (90A). Slowly allow handwheel to rotate cw until pawl is engaged into ratchet, and handwheel does not rotate.

   C. Prior to performing this test the handwheel revolution counter must be indicating 60 turns. Otherwise obtain the reading as follows:

      (1) If the indication is less than 60, wind hand wheel ccw until indication of 60 is reached.

(2) If the indication is greater than 60, grasp handwheel and gradually apply force ccw until load on pawl is removed. Disengage pawl and slowly rotate handwheel cw until the revolution counter indicates 60. Engage pawl and slowly allow handwheel to rotate cw until pawl is engaged into ratchet.

D. Using appropriate means, attach handscale to rim of handwheel (not a spoke) as shown in Fig. 101. Attachment must resist a 40 pound load. The radial distance (R), from the attachment point to the handwheel center, as shown in Fig. 101, should equal 5.0 inches. If radial distance does not equal 5.0 inches, record distance (R).

E. Slowly apply ccw tangential load to handwheel by pulling handscale. During load application, the line of force must remain perpendicular to a line from the handwheel center to the handscale attachment point (Fig. 101). Continue increasing load on handwheel until pawl is no longer in contact with notched area of ratchet. Record force reading (F) on handscale.

F. Slowly allow handwheel to rotate cw until pawl is engaged into notched area of ratchet.

G. Using recorded force reading from handscale, verify that the force on the handwheel (for R = 5.0 inches) is 29 ±2 pounds (counterbalance assembly 258T1190-3, -7), or 37 ±2 pounds (counterbalance assemblies 258T1190-4, -5, -8).

If (R) does not equal 5.0 inches, multiply force times radial distance to calculate torque (FXR = T). Verify that the calculated torque is 185 ±10 pound-inches (counterbalance assemblies 258T1190-4, -5, -8), 145 ±10 pound-inches (counterbalance assembly 258T1190-3, -7).

H. Remove handscale.

I. Install lock A52003-1.

(1) Grasp handwheel and rotate ccw until hole in cable drum and frame assembly line up.

(2) Install lock A52003-1.

(3) Slowly rotate handwheel cw until lock A52003-1 takes torque load.

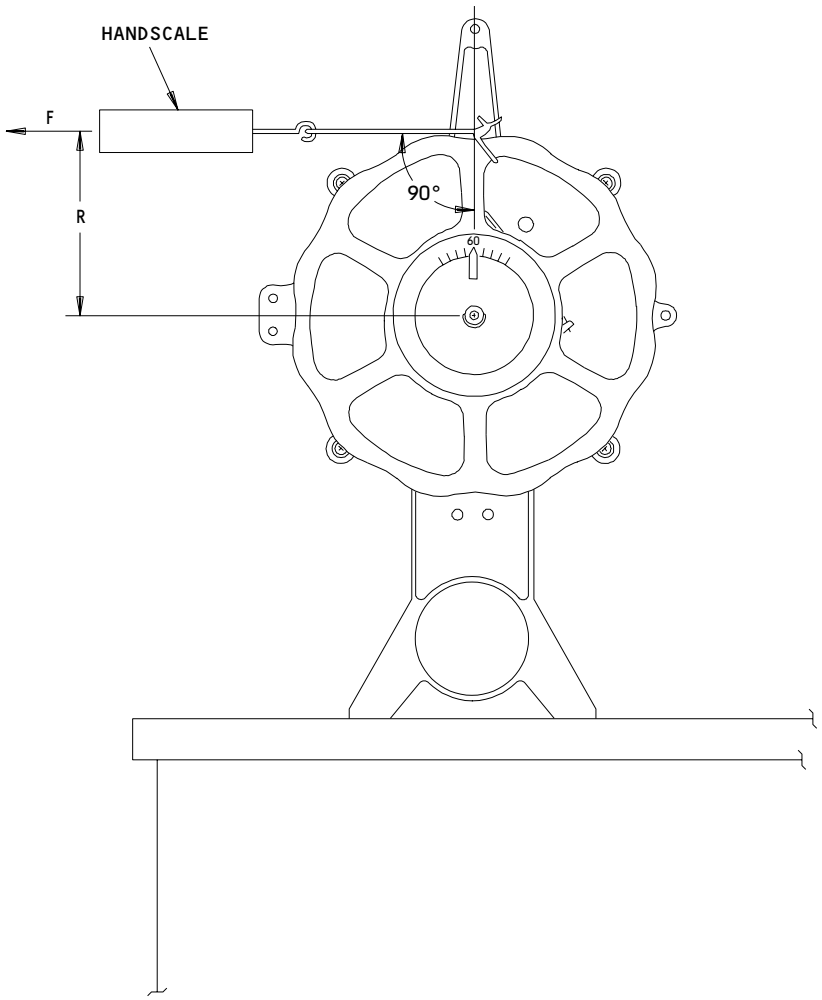
J. If unit fails the functional test:

(1) Check unit for proper assembly.

(2) Disassemble unit and check for damage and wear. Replace parts as necessary.

(3) Check gearbox assembly (90A) per CMM 52-11-71, if necessary.

(4) Assemble unit and perform functional test.



Spring Torque Test
Figure 101

687339

DISASSEMBLY

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

1. Equipment

   NOTE: Equivalent substitutes may be used.

   A. Counterbalance Lock -- A52003-1

2. Parts Replacement (IPL Fig. 1)

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

   A. Nuts (30A, 65A, 85A, 150A, 160A, 195A, 295A, 345A, 375A)

3. Disassembly (IPL Fig. 1)

   A. Release spring load.

      WARNING: SPRINGS IN THIS UNIT EXERT A LARGE LOAD. DO NOT ATTEMPT TO DISASSEMBLE UNTIL LOAD HAS BEEN RELEASED, OR INJURY TO PERSONNEL MAY OCCUR.

      (1) Check revolution counter on handwheel of gearbox assembly (90A) for load level of springs. A reading of approximately 60 indicates fully wound springs.

      (2) Secure counterbalance assembly.

      (3) Apply force to the handwheel of gearbox assembly (90A) in the counterclockwise direction enough to relieve spring force on the lock A52003-1. Remove lock A52003-1.

WARNING: DISENGAGING PAWL WILL TRANSFER THE SPRING FORCE TO THE HANDWHEEL IN THE CLOCKWISE DIRECTION. WITH FULLY WOUND SPRINGS, THE FORCE ON THE HANDWHEEL IS APPROXIMATELY 35 POUNDS. DO NOT RELEASE HANDWHEEL OTHERWISE SPRINGS WILL UNWIND RAPIDLY AND DAMAGE TO UNIT OR INJURY TO PERSONNEL MAY RESULT.

(4) Apply force to the handwheel in the counterclockwise direction enough to relieve spring force on pawl. Release pawl. Do not release handwheel.

(5) Slowly rotate handwheel clockwise to release spring force until no spring force is felt on handwheel and revolution counter reads zero.

B. Remove gearbox assembly (90A) and support assembly (115).

(1) Remove bolts (95), washers (100) and retainers (105, 110).

(2) Remove bolts (20, 22), washers (25), nuts (30A) and retainers (35, 40).

(3) Remove bolt (45), washer (55), spacer (60), nut (65A) and retainer (70).

(4) Remove bolts (5, 75), washers (10, 80), nuts (85A) and remove gearbox assembly (90A) with attached support assembly (115).

(5) Remove bolts (20, 50), washers (25, 55) and nuts (30, 65A) and separate support assembly (115) from gearbox assembly (90A).

NOTE: Refer to CMM 52-11-71 for overhaul procedures of gearbox assembly (90A).

Do not disassemble support assembly (115) unless necessary for repair or replacement.

C. Remove bolt (5), washer (10) and tube (15).

D. Remove bolts (185), washers (190), nut (195A) and tube (200) from frame assembly (210).

E. Remove bolts (140), washers (145), nuts (150A) and fitting (155) from tube (200).

NOTE: Do not remove marker (485A) unless necessary for repair or replacement.

F. Restrain torque shaft assembly (435) and remove nut (205) and frame assembly (210) from torque shaft assembly.

G. Remove screws (225), washers (230), retainer (235) and bearing (240) from frame assembly (210).

H. Remove nut (160A), washers (165) and cable guard assembly (170) from frame assembly (210).

I. Remove bolts (250), washers (255) and separate drum assembly (245) from torque shaft assembly (435).

NOTE: Do not remove bearing (260) unless necessary for repair or replacement.

J. Remove bolts (310), washers (315), retainers (320, 325) and spring (355B).

K. Remove bolts (280A, 285A, 330A), washers (290, 335), spacer (340), nut (295A, 345A), retainers (300, 305, 350) and spring (360B).

L. Remove bolts (365A), washers (370), nuts (375A) and separate guard assembly (380) and torque shaft assembly (435).

NOTE: Do not disassemble guard assembly or torque shaft assembly unless necessary for repair or replacement.

CLEANING

1. Clean all parts except bearings using standard industry practices (Ref 20-30-03).

2. Clean teflon sealed bearings (240, IPL Fig. 1) per manufacturer's instructions.

CHECK

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

2. Penetrant check per 20-20-02 -- supports (137, 420), fitting (155, 470), tube (200), frame (220), drum (275).

REPAIR - GENERAL

1. Content

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

P/N	NAME	REPAIR
258T1143	DRUM	1-1
258T1170	GUARD, SPRING	2-1
258T1172	SHAFT, TORQUE	3-1
258T1173	CARRIER, SPRING	4-1
- - -	MISC PARTS REFINISH	5-1

2. Standard Practices

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

   20-30-02 Stripping of Protective Finishes
   20-30-03 General Cleaning Procedures
   20-41-01 Decoding Table for Boeing Finish Codes
   20-41-02 Application of Chemical and Solvent Resistant Finishes
   20-43-01 Chromic Acid Anodizing
   20-44-01 Application of Abrasion Resistant Finishes

3. Materials

   NOTE: Equivalent substitutes may be used.

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

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

   C. Enamel -- BMS 10-11, type 2, color gray (BAC707) (Ref 20-60-02)

D. Teflon-filled Coating -- BMS 10-86, type 1, color gray (Ref 20-60-02)

E. Static Conditioner -- Dexter 28-C-1 (Ref 20-60-02)

F. Surfacer -- Dexter 8-W-5 (Ref 20-60-02)

G. Nylon Coating -- Type 49 (Ref 20-60-02)

4. Dimensioning Symbols

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

—	STRAIGHTNESS
▱	FLATNESS
⊥	PERPENDICULARITY (OR SQUARENESS)
//	PARALLELISM
○	ROUNDNESS
⌭	CYLINDRICITY
⌒	PROFILE OF A LINE
⌓	PROFILE OF A SURFACE
◎	CONCENTRICITY
⌯	SYMMETRY
∠	ANGULARITY
↗	RUNOUT
⌖	THEORETICAL EXACT POSITION OF A FEATURE (TRUE POSITION)
∅	DIAMETER
BASIC (BSC) OR [DIM]	A THEORETICALLY EXACT DIMENSION USED TO DESCRIBE SIZE, SHAPE OR LOCATION OF A FEATURE FROM WHICH PERMISSIBLE VARIATIONS ARE ESTABLISHED BY TOLERANCES ON OTHER DIMENSIONS OR NOTES.
[-A-]	DATUM
Ⓜ	MAXIMUM MATERIAL CONDITION (MMC)
Ⓢ	REGARDLESS OF FEATURE SIZE (RFS)
Ⓟ	PROJECTED TOLERANCE ZONE

EXAMPLES

[— | 0.002]	STRAIGHT WITHIN 0.002
[⊥ | B | 0.002]	PERPENDICULAR TO B WITHIN 0.002
[// | A | 0.002]	PARALLEL TO A WITHIN 0.002
[○ | 0.002]	ROUND WITHIN 0.002
[⌭ | 0.010]	CYLINDRICAL SURFACE MUST LIE BETWEEN TWO CONCENTRIC CYLINDERS, ONE OF WHICH HAS A RADIUS 0.010 INCH GREATER THAN THE OTHER
[⌒ | A | 0.006]	EACH LINE ELEMENT OF THE SURFACE AT ANY CROSS SECTION MUST LIE BETWEEN TWO PROFILE BOUNDARIES 0.006 INCH APART IN RELATION TO DATUM PLANE A
[⌓ | A | 0.020]	SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.02 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE
[◎ | C | ∅ 0.0005]	CONCENTRIC TO C WITHIN 0.0005 DIAMETER (FULL INDICATOR MOVEMENT)
[⌯ | A | 0.010]	SYMMETRICAL WITH A WITHIN 0.010
[∠ | A | 0.005]	ANGULAR TOLERANCE 0.005 WITH A
[⌖ | B | ∅ 0.002 Ⓢ]	LOCATED AT TRUE POSITION WITHIN 0.002 DIA IN RELATION TO DATUM B, REGARDLESS OF FEATURE SIZE
[⊥ | A | ∅ 0.010 Ⓜ] [0.510 Ⓟ]	AXIS IS TOTALLY WITHIN A CYLINDER OF 0.010-INCH DIAMETER, PERPENDICULAR TO, AND EXTENDING 0.510-INCH ABOVE, DATUM A, MAXIMUM MATERIAL CONDITION
[2.000] OR 2.000 BSC	EXACT DIMENSION IS 2.000

True Position Dimensioning Symbols
Figure 601

143684

DRUM ASSEMBLY - REPAIR 1-1

258T1143-4

NOTE: Refer to REPAIR-GEN for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to REFINISH instruction.

1. Bearing Replacement (IPL Fig. 1)

   A. Remove bearing (260).

   B. Install bearing per 20-50-03 using wet primer. Press bearing flush to 0.010 inch below surface of boss in shallow side of drum interior.

2. Refinish

   A. Drum (275) -- Anodize (F-17.05) all over and apply 1 coat of primer (F-20.02) all over except in bore for bearing. Material: Al alloy.

SPRING GUARD ASSEMBLY - REPAIR 2-1

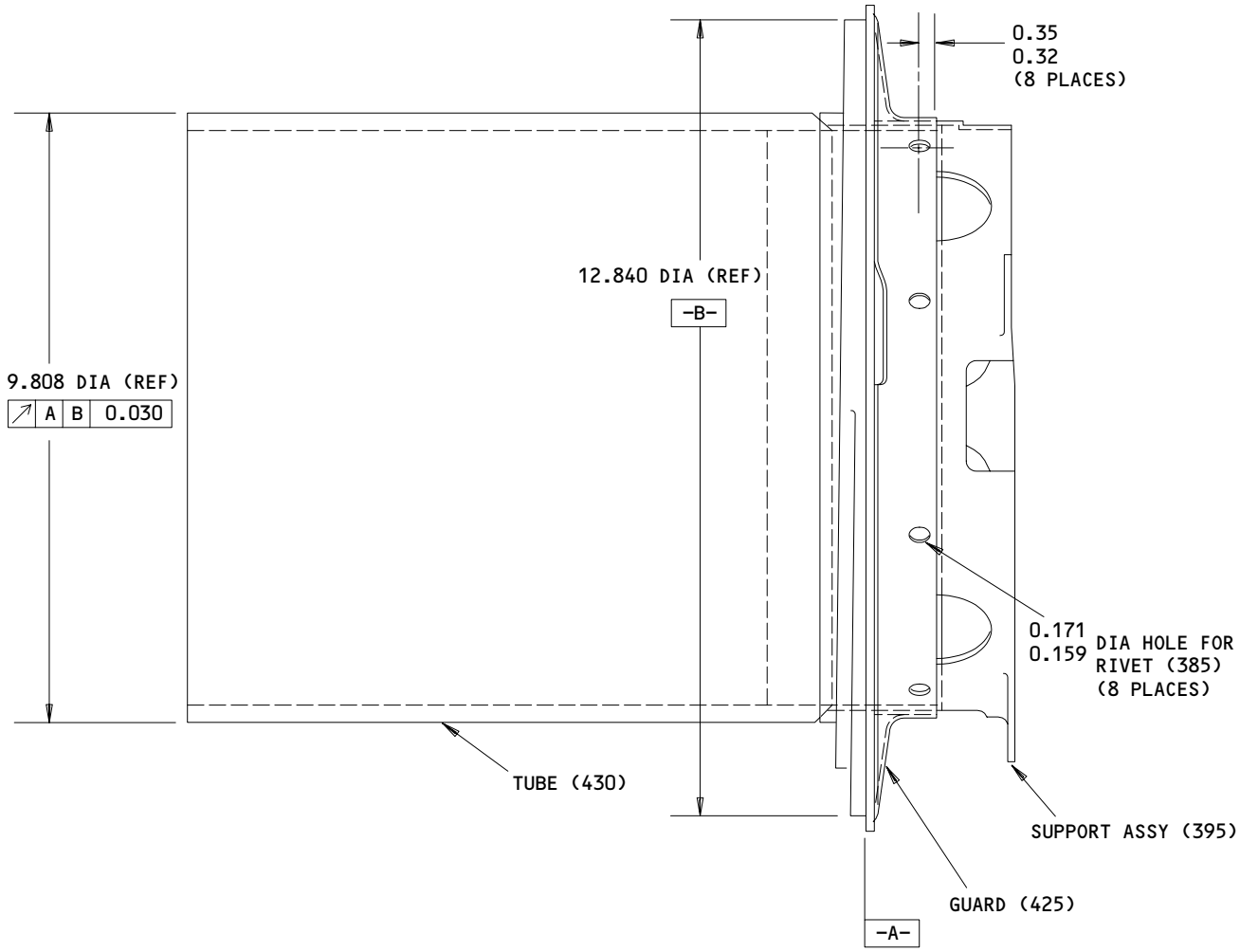
258T1170-1

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

1. Parts Replacement (Fig. 601)

   A. Remove rivets and damaged parts.

   B. Assemble replacement parts, maintain geometric position shown and secure with rivets.



ALL DIMENSIONS ARE IN INCHES

ITEM NUMBERS REFER TO IPL FIG. 1

Parts Replacement
Figure 601

TORQUE SHAFT ASSEMBLY - REPAIR 3-1

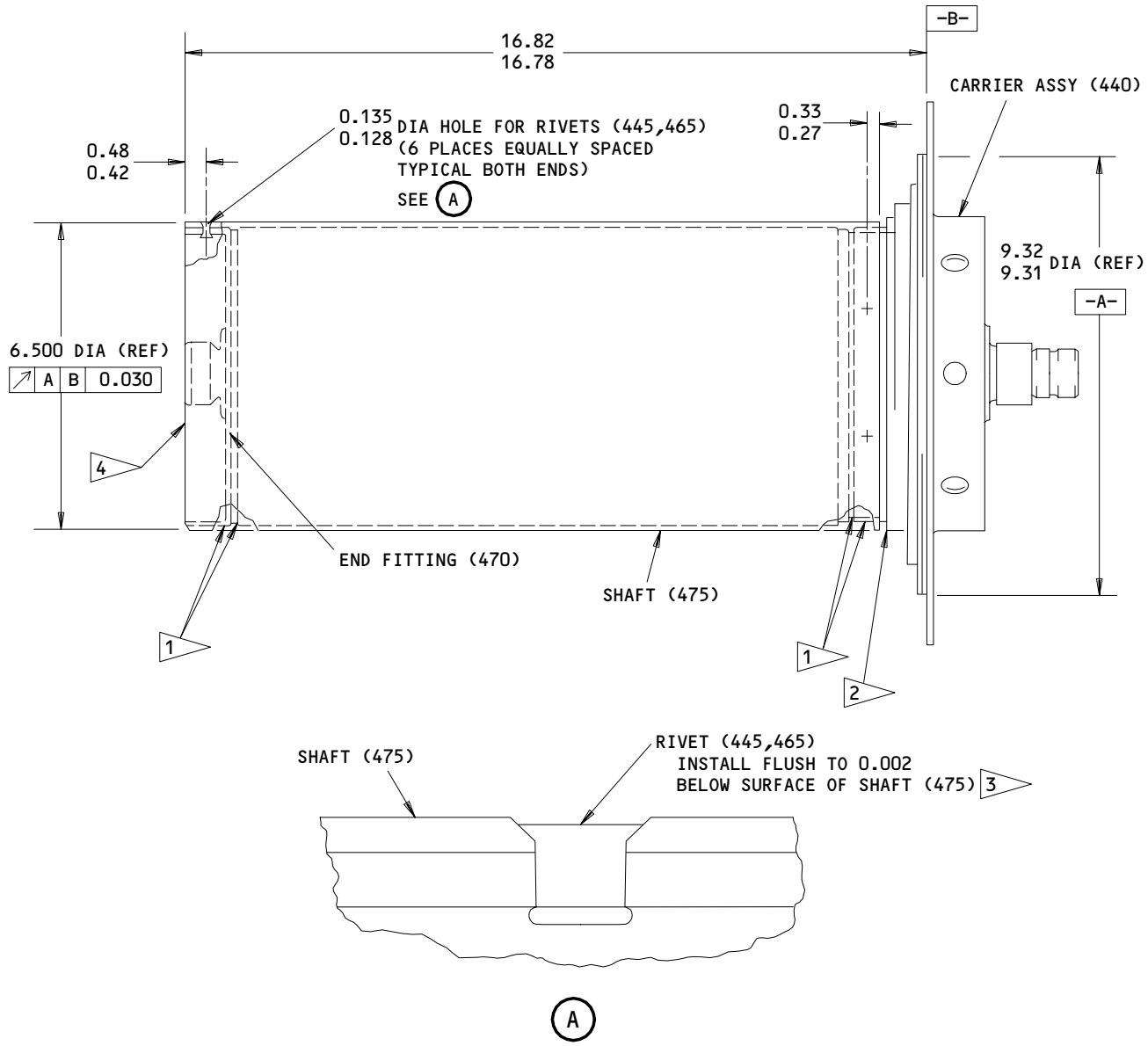
258T1172-1

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

1. Parts Replacement (Fig. 601)

A. Remove rivets (445, 465) and damaged parts.

B. Assemble replacement parts, maintain geometric position shown and secure with rivets.



1 APPLY SEALANT BMS 5-95 TO FAYING SURFACES

2 SEAL VOID WITH SEALANT BMS 5-95 FLUSH WITH SURFACE

3 TOUCH UP RIVET HEAD WITH 1 COAT OF PRIMER (F-20.02) AND ENAMEL (F-21.02)

4 SURFACES OF END FITTING (470) AND SHAFT (475) TO BE FLUSH WITHIN 0.01

ALL DIMENSIONS ARE IN INCHES

ITEM NUMBERS REFER TO IPL FIG. 1

Parts Replacement
Figure 601

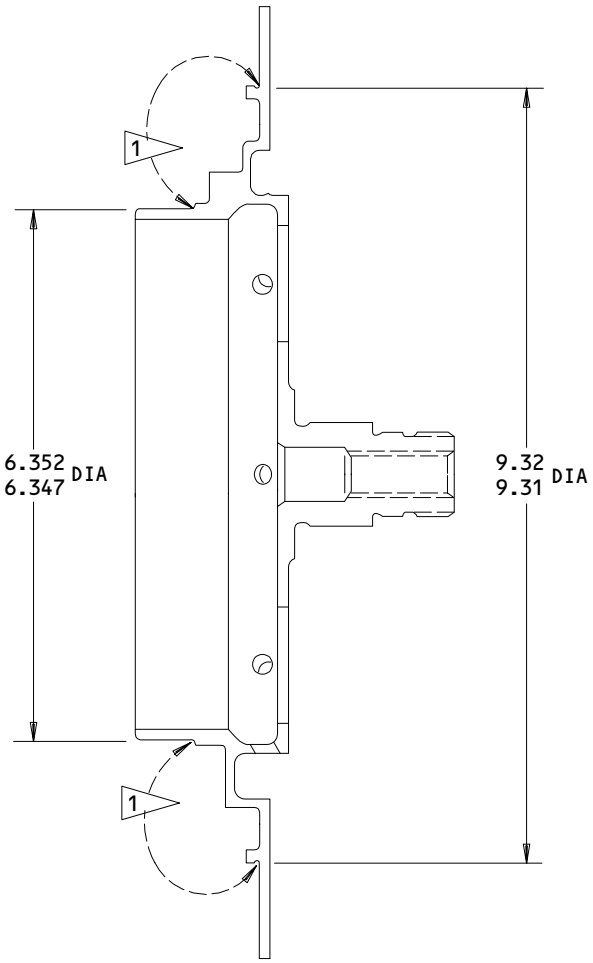
143830

SPRING CARRIER - REPAIR 4-1

258T1173-1

1. Plating Repair

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



REFINISH

ANODIZE (F-17.05) AND APPLY 1 COAT OF PRIMER (F-20.02) ALL OVER EXCEPT OMIT PRIMER ON THREADS

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

1 APPLY 1 COAT OF ENAMEL (F-21.02) TO THIS SURFACE

Carrier Refinish
Figure 601

143831

MISCELLANEOUS PARTS REFINISH - REPAIR 5-1

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

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1		
Tube (15)	Al alloy	Chemical treat (colored film) and apply 1 coat of primer (F-18.07) all over. Apply BMS 3-23 (F-19.26) on all interior surfaces.
Retainers (35,70, 105,110,135,300, 320,325,350,415)	Al alloy	Chromic acid anodize and apply 1 coat primer (F-18.13) all over. Apply one coat of enamel, BMS 10-11, type 2 color BAC707 gray (F-21.02) all over.
Retainers (40,235, 305)	Al alloy	Chemical treat (colored film) and apply 1 coat of primer (F-18.06) all over.
Support (137,420)	Al alloy	Anodize (F-17.05) and apply 1 coat of primer (F-20.02) then apply 1 coat of enamel, BMS 10-11, type 2 color BAC707 gray (F-21.02) all over.
Fitting (155)	Al alloy	Anodize F-17.05) all over. Apply 1 coat of primer (F-20.02) all over except omit primer in 3-inch ID.
Guard (180)	Al alloy	Chromic acid anodize (F-17.04) all over. Apply 1 coat of primer (F-20.02) all over except in 0.25-inch ID.
Tube (200)	Al alloy	Chromic acid anodize (F-17.04) and apply 1 coat of primer (F-20.02) all over.

Refinish Details
Figure 601 (Sheet 1)

IPL FIG. & ITEM	MATERIAL	FINISH
Fig. 1 (Cont.)		
Frame (220)	Al alloy	Anodize (F-17.05) all over. Apply 1 coat of primer (F-20.02) all over except in bore for bearing.
Tube (430)	Nomex honeycomb	Prepare surface and apply static conditioner and surfacer (F-14.672) and apply 1 coat of primer (F-20.02) all over. Apply coating BMS 10-86, type 1, color gray (SRF-14.9625) on exterior surface only.
Carrier (460)	Al alloy	Anodize (F-17.05) and apply 1 coat of primer (F-20.02) all over.
Fitting (470)	Al alloy	Chromic acid anodize and apply 1 coat of primer (F-18.13) all over except omit primer on splines.
Shaft (475)	Titanium	Coat OD with thermoclad duralon nylon coating per 20-44-01 type 49. Do not coat ID.

Refinish Details
Figure 601 (Sheet 2)

ASSEMBLY

1. Material and Equipment

NOTE: Equivalent substitutes may be used.

A. Counterbalance lock -- A52003-1

B. Grease -- BMS 3-24 (Ref 20-60-03)

C. Grease -- MIL-G-23827 (Ref 20-60-03)

2. Assembly (IPL Fig. 1)

NOTE: Refer to CMM 52-11-71 for assembly procedures of gearbox assembly (90A).

A. Predrill fastener holes in gearbox assembly (90A), fitting (155), frame assembly (210) and tube (200).

NOTE: Perform this procedure only when gearbox assembly, fitting, frame assembly, or tube is replaced.

(1) Install fitting (155) on tube (200) and insert tube (200) thru gearbox assembly (90A). Position gearbox assembly and fitting as shown in Fig. 701 with end of tube flush with gearbox assembly. Hold gearbox assembly, fitting and tube in fixed position.

(2) Install tube (15) and secure to gearbox assembly (90A) with bolt (5) and washer (10). Slide frame assembly (210) on tube (200) until it comes in contact with tube (15). Adjust frame assembly as required to obtain dimension shown in Fig. 701 and secure frame assembly to tube (15) with bolt (5) and washer (10). Hold frame assembly in fixed position.

(3) Drill 0.250-0.254 inch diameter holes 5 places thru gearbox assembly (90A) and tube (200) and 6 places each thru fitting (155), frame assembly (210) and tube (200). Remove bolts (5), washers (10), tube (15), frame assembly (210). Break sharp edges of hole 0.008R.

B. Assemble gearbox assembly (90A), fitting (155) and tube (200) and secure with bolts (75, 140), washers (80, 145) and nuts (85A, 150A). Electrically bond fitting to tube per 20-11-03 at fastener location shown.

C. Install markers (485A) on tube (200) at location shown, if required, per 20-50-05.

D. Install nameplate (490) on tube (200).

(1) Steel stamp the assembly dash number, the serial number, the inner spring serial number and the outer spring serial number on the nameplate if necessary.

(2) Use straps (478) to attach the nameplate to the tube as shown in Fig. 702.

E. Install support assembly (115) on gearbox assembly (90A) and secure with bolts (20, 50), washers (25, 55) and nuts (30A, 65A).

F. Install bearing (240) on frame assembly (210) with BMS 3-24 grease per 20-50-03. Install retainer (235) and secure with screws (225) and washers (230). Install guard assemblies (170), washers (165) and nuts (160A) on frame assembly.

G. Install drum assembly (245) on torque shaft assembly (435) and secure with bolts (250) and washers (255).

H. Install spring (360B) on torque shaft assembly (435) with end of spring seated in the notch of torque shaft assembly and secure with retainer (300). Secure retainer with bolts (285A), washers (290) and nuts (295A).

I. Install spring guard assembly (380) over torque shaft assembly (435) and secure with bolts (365A), washers (370) and nuts (375A).

J. Position retainers (300, 305, 350) on spring guard assembly (380) and secure with bolts (280A, 285A, 330A), washers (290, 335), spacer (340) and nuts (295A, 345A) to retain spring (360B).

K. Install spring (355B) over spring guard assembly (380) with end of spring seated in the notch in spring guard assembly. Install retainer (320, 325) and secure with bolts (310), washers (315).

L. Install torque shaft assembly (435) with attached parts on frame assembly (210) and install nut (205). Restrain torque shaft assembly and tighten nut to 500-700 pound-inches. If nut running torque exceeds 500-700 pound-inches, tighten nut 200-400 pound-inches above nut running torque. Apply MIL-G-23827 grease to internal splines of torque shaft assembly (435).

M. Rotate handwheel on gearbox assembly (90A) until pointer reads "0". Slide frame assembly (210) with attached parts on tube until torque shaft assembly (435) mates with gearbox assembly.

N. Attach spring (360B) to gearbox assembly (90A) with retainers (35, 40, 70) and secure retainers with bolts (20, 22, 45), washers (25, 55) spacer (60) and nuts (30A, 65A).

O. Attach spring (355B) to support assembly (115) with retainers (105, 110) and secure retainers with bolts (95) and washers (100).

P. Install tube (15) and secure with bolts (5), washers (10). Secure frame assembly (210) to tube (200) with bolts (185), washers (190) and nuts (195A). Electrically bond frame assembly to tube at fastener location shown.

Q. Wind up counterbalance.

(1) Check that both inner and outer springs (355B, 360B) are retained at four clip locations (70, 135, 350, 415).

WARNING: SPRINGS (355B, 360B) ARE HEAVILY LOADED. SHAFT ASSEMBLY (435) AND FRAME ASSEMBLY MUST BE SECURED IN A FIXED POSITION AND PAWL IN GEARBOX ASSEMBLY (90A) MUST BE ENGAGED TO PREVENT INJURY TO PERSONNEL DURING HANDLING.

(2) With pawl engaged, start rotating handwheel on gearbox assembly (90A). During first three revolutions, check that outer spring (355B) is not hung up on top of retainers (135, 415).

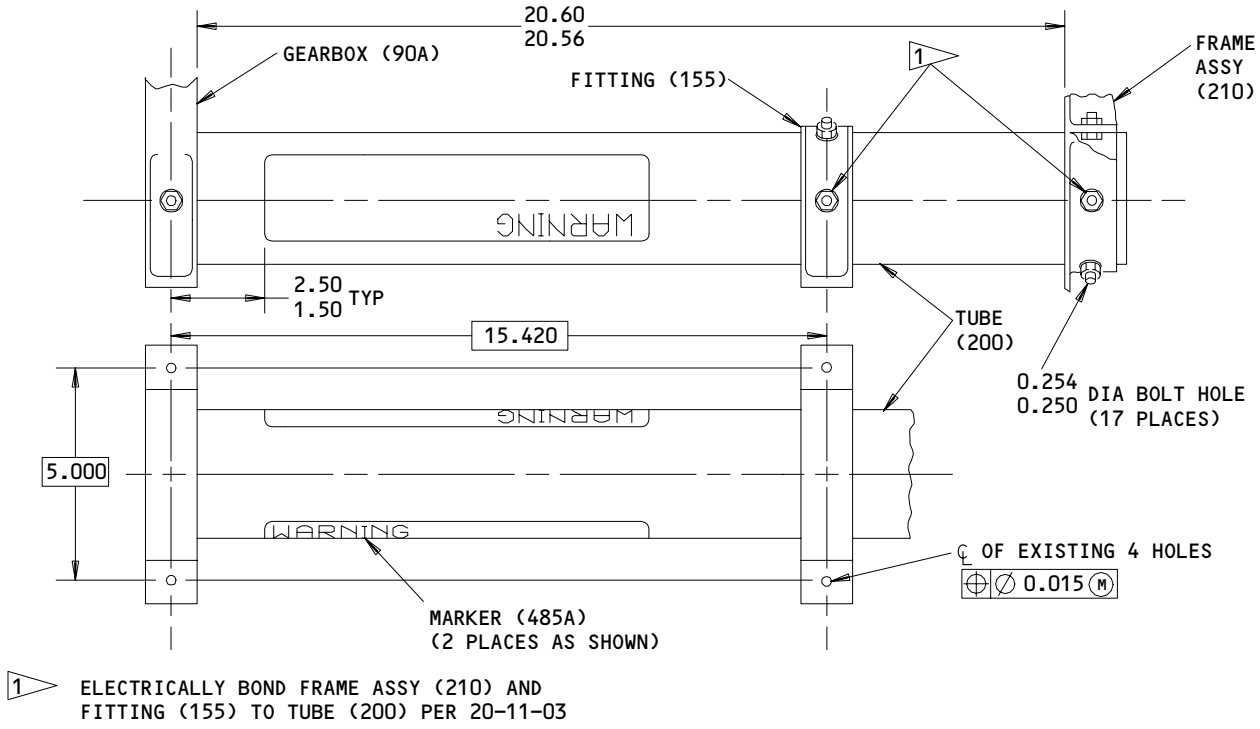
(3) Rotate handwheel on gearbox assembly (90A) until the pointer reads "11". Check that both springs (355B, 360B) are seating in groove of retainers (70, 135, 350, 415).

(4) With pawl on gearbox assembly (90A) in engaged position, rotate handwheel until pointer reads 59-60 and install lock A52003-1 through rig pin in frame assembly (210) and drum assembly (245).

R. Test unit per TESTING AND TROUBLE SHOOTING. If unit fails functional test, check unit for proper assembly.

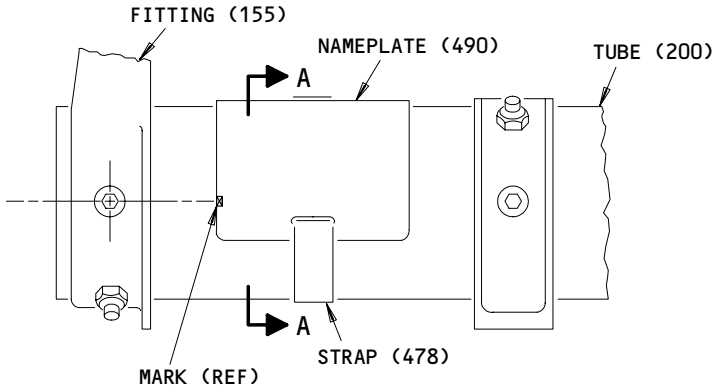
WARNING: SPRINGS (355B, 360B) ARE HEAVILY LOADED AFTER UNIT IS WOUND. MAKE SURE PAWL IN GEARBOX ASSEMBLY (90A) IS ENGAGED TO PREVENT SERIOUS INJURY TO PERSONNEL.

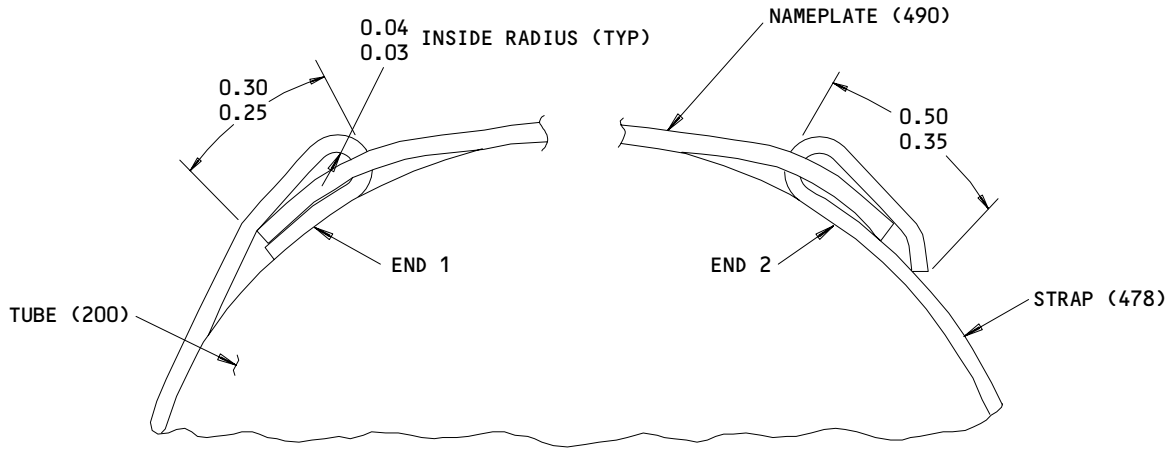
S. Secure lock A52003-1 with lockwire or tape so it will not come loose during shipment.



Installation of Support Tube
Figure 701

144779





A-A

NOTE: STRAP MAY BE USED ONLY ONCE. DO NOT RE-USE EXISTING STRAP WHEN INSTALLING NEW NAMEPLATE OR WHEN REINSTALLING EXISTING NAMEPLATE. STRAP AND NAMEPLATE SHALL BE SNUG ON MOUNTING SURFACE.

1. FORM NAMEPLATE TO A RADIUS SLIGHTLY SMALLER THAN BARREL RADIUS.
2 DEFORM CORNERS OF NAMEPLATE SLIGHTLY TOWARDS MOUNTING SURFACE.
3. FORM BEND ON STRAP END 1, INSERT THRU HOLE IN NAMEPLATE AND FORM STRAP END TO COMPLY WITH DRAWING.
4. HOLD NAMEPLATE ON BARREL AND FEED STRAP THRU HOLE.
5. SLIGHTLY BEND STRAP END 2 WHILE APPLYING SUFFICIENT PULLING FORCE TO OBTAIN PRETENSION OF NAMEPLATE AND STRAP.
6. ALIGN THE MARK ON THE NAMEPLATE WITH THE CENTERLINE OF THE BOLT WITHIN -0.10/+0.10 INCHES.
7. CUT STRAP END 2 TO CONFORM TO DIMENSION SHOWN.
8. WHILE MAINTAINING THE PRETENSION, USE SUITABLE TOOL TO MAKE FINAL BEND OF STRAP END 2 AND TO OBTAIN ADDITIONAL TENSION. USE CARE NOT TO TEAR NAMEPLATE HOLE BY OVERTENSION.
9. BEND STRAP END 2 DOWN OVER EDGE OF NAMEPLATE AND TAP WITH SUITABLE SOFT NOSED HAMMER.

ALL DIMENSIONS ARE IN INCHES

BAC27TCT0417 NAMEPLATE
69B80300-9 STRAP

Nameplate Installation
Figure 702

3. Storage

WARNING: SPRINGS (355B, 360B) ARE HEAVILY LOADED AFTER ASSEMBLY. LOCK A52003-1 MUST BE INSTALLED AND PAWL IN GEARBOX ASSEMBLY (90A) MUST BE ENGAGED TO PREVENT INJURY TO PERSONNEL DURING HANDLING.

A. Tape or lockwire lock A52003-1 in place and check that pawl in gearbox assembly (90A) is engaged to ensure personnel safety during handling.

B. Use standard industry practices to store this component.

FITS AND CLEARANCES

1. Tighten nut (205) to 500-700 lb-in. If nut running torque exceeds 500-700 lb-in., tighten nut 200-400 lb-in. above nut running torque.

SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

NOTE: Equivalent substitutes may be used.

1. Counterbalance Lock -- A52003-1

2. Handscale -- 0-50 pounds

ILLUSTRATED PARTS LIST

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

2. Indentures show parts relationships as follows:

    Assembly
      Detail Parts for Assembly
      Subassembly
      Attaching Parts for Subassembly
        Detail Parts for Subassembly

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

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

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

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

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

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

6. Parts Interchangeability

Optional (OPT)	The parts are optional to and interchangeable with other parts having the same item number.
Supersedes, Superseded By (SUPSDS, SUPSD BY)	The part supersedes and is not interchangeable with the original part.
Replaces, Replaced By (REPLS, REPLD BY)	The part replaces and is interchangeable with, or is an alternate to, the original part.

VENDORS

06710 LAMSON AND SESSIONS CO THE VALLEY-TODECO
12975 BRADLEY AVENUE
SYLMAR, CALIFORNIA 91342-3830

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

06950 SCREWCORP VSI CORP AEROSPACE PRODUCTS DIV FAIRCHILD IND INC
13001 EAST TEMPLE AVE. PO BOX 730
CITY OF INDUSTRY, CALIFORNIA 91746-1417

08524 DEUTSCH FASTENER CORP SEE CODE V97928

10396 HERCULES INC AEROSPACE DIV BACCHUS WORKS
PO BOX 98
MAGNA, UTAH 84044

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

15653 KAYNAR MICRODOT AEROSPACE FASTENING SYSTEM
800 SOUTH COLLEGE BLVD PO BOX 3001
FULLERTON, CALIFORNIA 92634-3001

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

27624 PAUL R BRILES INC P.B. FASTENER DIV
1700 WEST 132ND STREET PO BOX 1157
GARDENA, CALIFORNIA 90249-2008

38443 TRW INC BEARING DIV
402 CHANDLER STREET
JAMESTOWN, NEW YORK 14701-3802

43991 FAG BEARING INCORPORATED
118 HAMILTON AVENUE
STAMFORD, CONNECTICUT 06904

50294 NEW HAMPSHIRE BALL BEARINGS INC
9730 INDEPENDENCE AVENUE PO BOX 2515
CHATSWORTH, CALIFORNIA 91311-4323

VENDORS

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

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

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

72962 ELASTIC STOP NUT A DIV OF HARTFORD INDUSTRIES INC
2330 VAUXHALL ROAD
UNION, NEW JERSEY 07083-5038

73134 HEIM DIV INCOM INTERNATIONAL INC
60 ROUND HILL ROAD PO BOX 430
FAIRFIELD, CONNECTICUT 06430-5114

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

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

92215 VOI-SHAN DIV OF VSI CORP SUB OF FAIRCHILD INDUSTRIAL INC
8463 HIGUERA STREET
CULVER CITY, CALIFORNIA 90230

93907 TEXTRON INC CAMCAR DIV
600 18TH AVENUE
ROCKFORD, ILLINOIS 61101

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

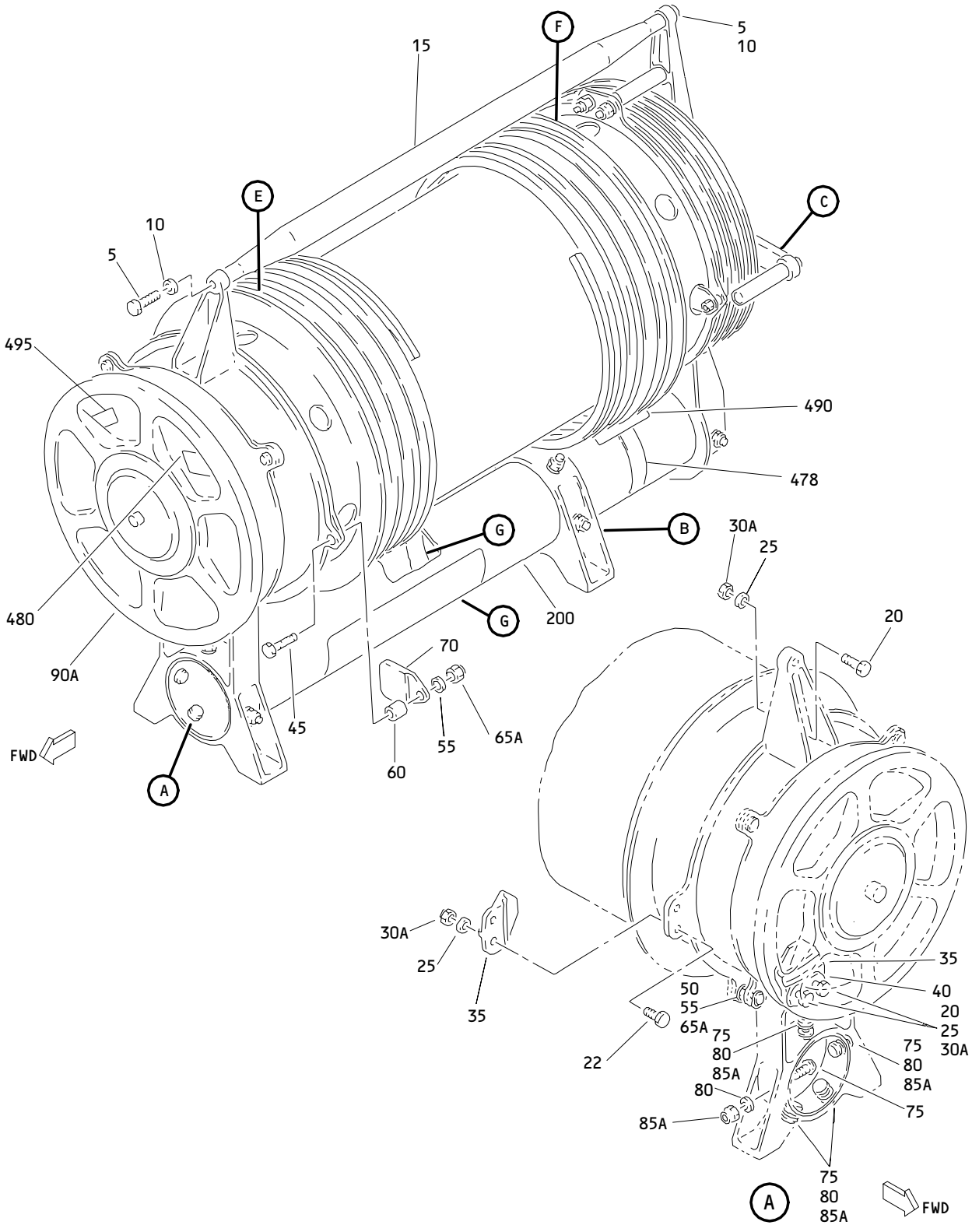
97928 DEUTSCH FASTENER CORP
3969 PARAMONT BOULEVARD
LAKEWOOD, CALIFORNIA 90712-4193

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
AJ20C103		1	260B	1
AN960PD10L		1	230	2
AN960PD416L		1	25	5
		1	55	2
		1	80	5
		1	100	4
		1	145	6
		1	165	4
		1	190	6
		1	255	2
		1	290	4
		1	315	4
		1	335	1
		1	370	2
AN960PD516L		1	10	2
AN960PD8		1	390	8
BACB10AW16		1	240	1
BACB30FN5A4NU		1	405	2
BACB30FN5A6NU		1	125A	2
BACB30MB8-11		1	175	4
BACB30M8		1	410	2
BACB30NR4K10		1	250	2
BACB30NR4K15		1	45	1
BACB30NR4K3		1	95	4
		1	310	4
BACB30NR4K4		1	22	2
BACB30NR4K5		1	50	1
BACB30NR4K6		1	20	3
BACB30NR8K13		1	330A	1
BACB30NW8K3		1	285A	2
		1	365A	2
BACB30NW8K5		1	280A	2
BACB30VT8K3		1	75	5
		1	140	6
		1	185	6
BACC30M5		1	130A	2
BACN10JP3A		1	270	2
BACN10JP4A		1	455	6
BACN10RF16		1	205	1
BACR15BA3AD		1	450	12
BACR15BA3D13		1	267	2
BACR15BA3D7		1	265A	2
BACR15BA4AD		1	445	6
		1	465	6
BACR15BB5AD		1	385	8
BACS18K25-28W		1	60	1
		1	340	1

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BAC27TCT0257		1	495	1
BAC27TCT0308		1	480	1
BAC27TCT0331		1	485A	2
BAC27TCT0417		1	490	1
BJ40TC48A16		1	260	1
BJ40TC48A16Z		1	260A	1
BRM200A3		1	270	2
BRM200A4		1	455	6
BR9080-16		1	205	1
B30NW8K3		1	285A	2
		1	365A	2
B30NW8K5		1	280A	2
HL11VAZ8-3		1	285A	2
		1	365A	2
HL11VAZ8-5		1	280A	2
HL11V3		1	285A	2
		1	365A	2
HL11V5		1	280A	2
HL20PB8-11		1	175	4
HL41PY5-4		1	405	2
HL70-5		1	130A	2
HST10AG8-3		1	75	5
		1	140	6
		1	185	6
HST10AZ8-3		1	75	5
		1	140	6
		1	185	6
HST10A68-3		1	75	5
		1	140	6
		1	185	6
HST108K3		1	75	5
		1	140	6
		1	185	6
LLMKP16BS		1	240	1
L803-8K3		1	285A	2
		1	365A	2
L803-8K5		1	280A	2
MKP16BSE9273		1	240	1
MK1000-3BAC		1	270	2
MK1000-4BAC		1	455	6

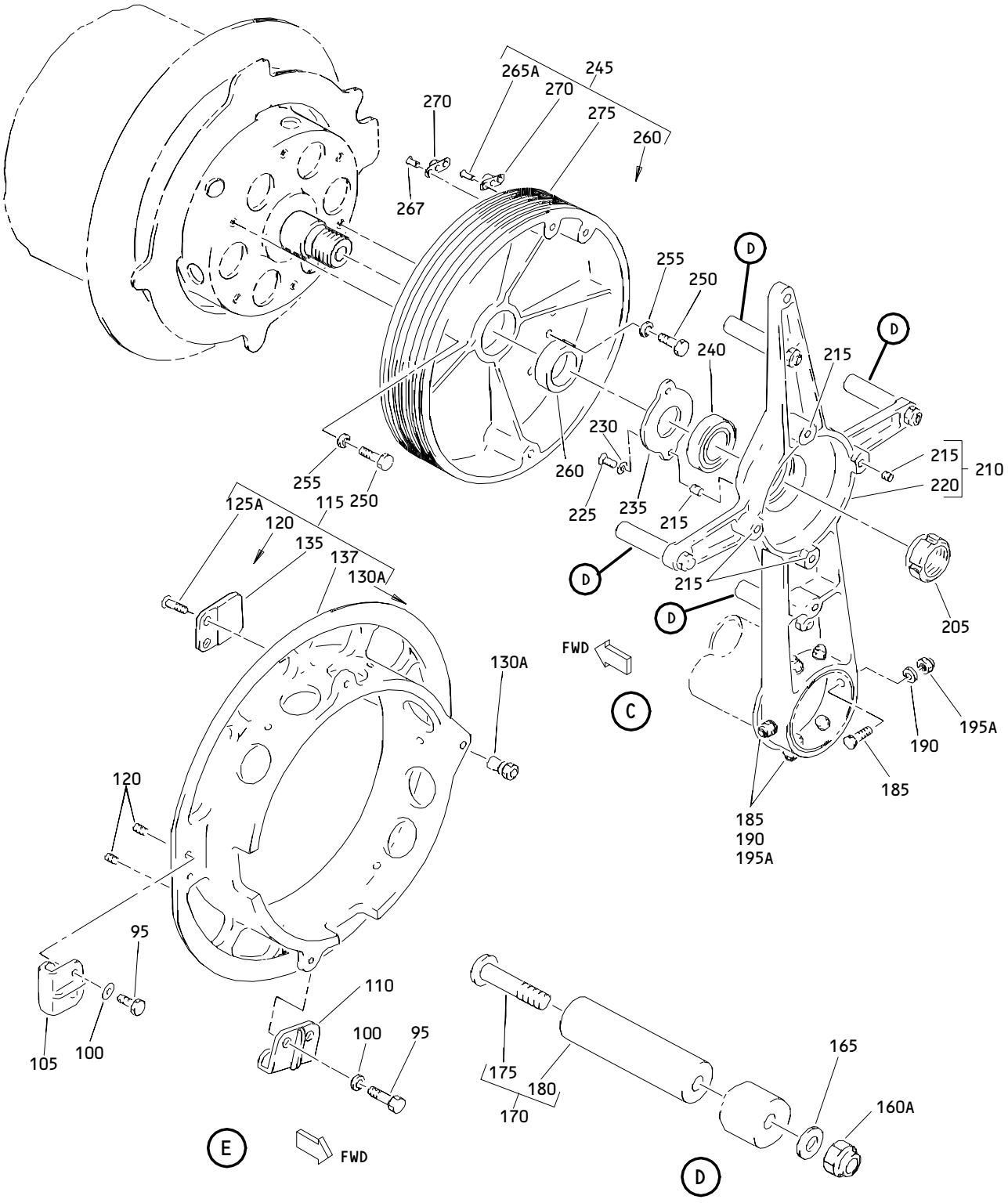
PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
MS21042L4		1	30A	5
		1	65A	2
		1	85A	5
		1	150A	6
		1	160A	4
		1	195A	6
		1	295A	4
		1	345A	1
		1	375A	2
MS21209F1-20P		1	215	6
MS21209F4-15		1	400	4
MS21209F4-15P		1	120	4
NAS623-3-1		1	225	2
NAS6605P7		1	5	2
NS103197-02		1	270	2
NS103197-048		1	455	6
PBE20C16BA		1	260C	1
RMA9201M3		1	270	2
RMA9201M4		1	455	6
SL2822-16		1	205	1
S258T160-1		1	360B	1
S258T160-2		1	355B	1
S258T160-3		1	360C	1
S258T160-4		1	355C	1
S258T160-5		1	360E	1
S258T160-6		1	355E	1
S258T160-7		1	360F	1
S258T160-8		1	355G	1
T8076S1032		1	270	2
T8076S428		1	455	6
VL108K3		1	75	5
		1	140	6
		1	185	6
VN202A1-02		1	270	2
VN202A1-048		1	455	6
251T0101-303		1	15	1
258T1110-4		1	90A	1
258T1123-3		1	235	1
258T1123-5		1	40	1
		1	305	1
258T1142-1		1	210	1
258T1142-2		1	220	1
258T1143-4		1	245	1

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
258T1143-5		1	275	1
258T1144-3		1	155	1
258T1145-3		1	105	1
		1	325	1
258T1145-5		1	110	1
		1	320	1
258T1146-3		1	35	2
		1	300	2
258T1151-2		1	200	1
258T1155-7		1	115	1
		1	395	1
258T1155-9		1	137	1
		1	420	1
258T1162-1		1	170	4
258T1162-2		1	180	4
258T1164-3		1	425	1
258T1170-1		1	380	1
258T1171-1		1	430	1
258T1172-1		1	435	1
258T1173-1		1	440	1
258T1173-2		1	460	1
258T1174-1		1	470	1
258T1175-1		1	70	1
		1	350	1
258T1176-1		1	475	1
258T1177-1		1	135	1
		1	415	1
258T1190-3		1	1B	RF
258T1193-3		1	360D	1
69B80300-9		1	478	1
		1	355D	1
		1	355F	1



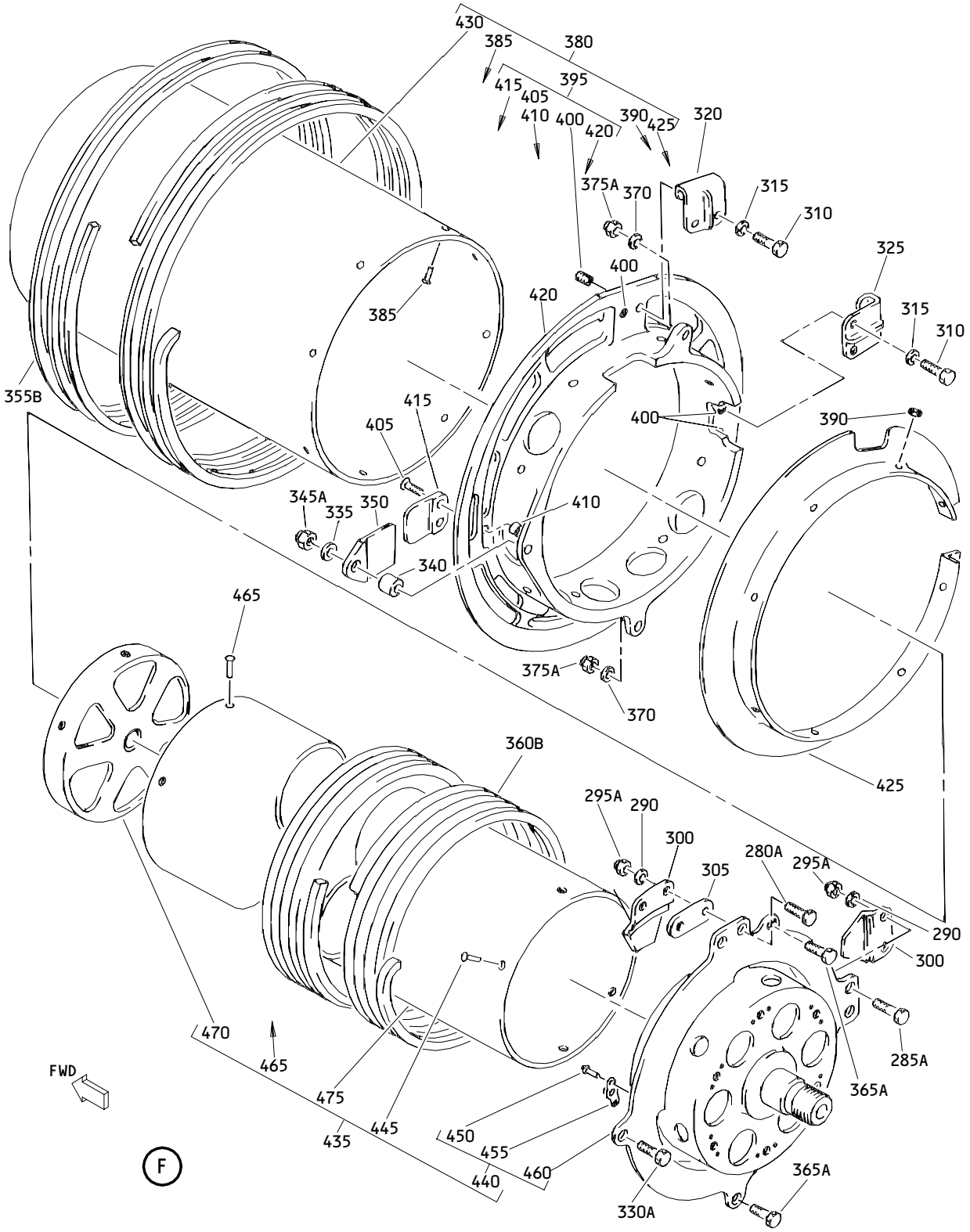
Entry and Service Door Counterbalance Assembly
Figure 1 (Sheet 1)

T93541



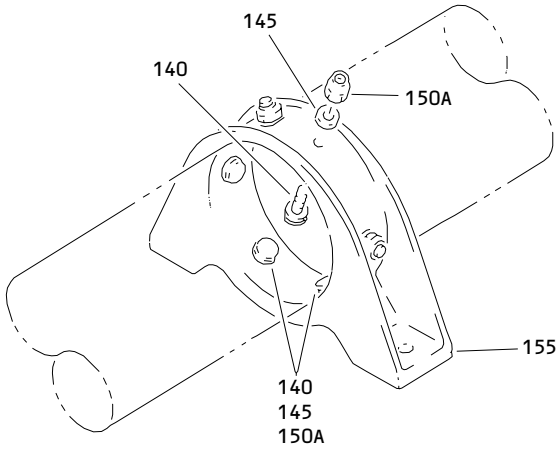
Entry and Service Door Counterbalance Assembly
Figure 1 (Sheet 2)

T93544



Entry and Service Door Counter Balance Assembly
Figure 1 (Sheet 3)

T93543



B

485A

WARNING: CONTAINS HEAVILY WOUND SPRINGS. UNWIND SPRINGS BEFORE DISASSEMBLY.	SEE MAINTENANCE MANUAL SECTION 52-11-16 FOR REMOVAL/INSTALLATION. SEE COMPONENT MAINTENANCE MANUAL SECTION 52-11-62 OR DWG 285T1190 FOR PROCEDURE TO UNWIND SPRINGS.

G

Entry and Service Door Counterbalance Assembly
Figure 1 (Sheet 4)

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	-1B	258T1190-3		COUNTERBALANCE ASSY-ENTRY AND SVCE DOOR	A	RF
	-1C	258T1190-4		COUNTERBALANCE ASSY-ENTRY AND SVCE DOOR (PRE SB 52A0053) (POST SB 52A0053)*[1]	B	RF
R	-1D	258T1190-5		COUNTERBALANCE ASSY-ENTRY AND SVCE DOOR	C	RF
R	-1E	258T1190-7		COUNTERBALANCE ASSY-ENTRY AND SVCE DOOR	D	RF
R	-1F	258T1190-8		COUNTERBALANCE ASSY-ENTRY AND SVCE DOOR (POST SB 52A0053)	E	RF
	5	NAS6605P7		.BOLT		2
	10	AN960PD516L		.WASHER		2
	15	251T0101-303		.TUBE		1
	20	BACB30NR4K6		.BOLT- (V06710) (SPEC BACB30NR4K6) (OPT BACB30NR4K6 (V06725)) (OPT BACB30NR4K6 (V06950)) (OPT BACB30NR4K6 (V08524)) (OPT BACB30NR4K6 (V27624)) (OPT BACB30NR4K6 (V56878)) (OPT BACB30NR4K6 (V73197)) (OPT BACB30NR4K6 (V80539)) (OPT BACB30NR4K6 (V92215)) (OPT BACB30NR4K6 (V93907)) (OPT BACB30NR4K6 (V97928))		3
	22	BACB30NR4K4		.BOLT		2
	25	AN960PD416L		.WASHER		5
	30	H10-4BAC		DELETED		
	30A	MS21042L4		.NUT		5
	35	258T1146-3		.RETAINER		2
	40	258T1123-5		.RETAINER		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-45	BACB30NR4K15		.BOLT- (V06710) (SPEC BACB30NR4K15) (OPT BACB30NR4K15 (V06725)) (OPT BACB30NR4K15 (V06950)) (OPT BACB30NR4K15 (V08524)) (OPT BACB30NR4K15 (V27624)) (OPT BACB30NR4K15 (V56878)) (OPT BACB30NR4K15 (V73197)) (OPT BACB30NR4K15 (V80539)) (OPT BACB30NR4K15 (V92215)) (OPT BACB30NR4K15 (V93907)) (OPT BACB30NR4K15 (V97928))		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-50	BACB30NR4K5		.BOLT- (V06710) (SPEC BACB30NR4K5) (OPT BACB30NR4K5 (V06725)) (OPT BACB30NR4K5 (V06950)) (OPT BACB30NR4K5 (V08524)) (OPT BACB30NR4K5 (V27624)) (OPT BACB30NR4K5 (V56878)) (OPT BACB30NR4K5 (V73197)) (OPT BACB30NR4K5 (V80539)) (OPT BACB30NR4K5 (V92215)) (OPT BACB30NR4K5 (V93907)) (OPT BACB30NR4K5 (V97928))		1
55	AN960PD416L		.WASHER		2
60	BACS18K25-28W		.SPACER		1
65	H10-4BAC		DELETED		
65A	MS21042L4		.NUT		2
70	258T1175-1		.RETAINER		1
75	HST10AZ8-3		.BOLT- (V73197) (SPEC BACB30VT8K3) (OPT HST10AG8-3 (V06725)) (OPT HST10A68-3 (V73197)) (OPT HST108K3 (V56878)) (OPT VL108K3 (V92215)) (OPT VL108K3 (V97928))		5

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
80	AN960PD416L		.WASHER		5
85	H10-4BAC		DELETED		
85A	MS21042L4		.NUT		5
90	258T1110-2		DELETED		
90A	258T1110-4		.GEARBOX ASSY- (REF CMM 52-11-71)		1
95	BACB30NR4K3		.BOLT- (V06710) (SPEC BACB30NR4K3) (OPT BACB30NR4K3 (V06725)) (OPT BACB30NR4K3 (V06950)) (OPT BACB30NR4K3 (V08524)) (OPT BACB30NR4K3 (V27624)) (OPT BACB30NR4K3 (V56878)) (OPT BACB30NR4K3 (V73197)) (OPT BACB30NR4K3 (V80539)) (OPT BACB30NR4K3 (V92215)) (OPT BACB30NR4K3 (V93907)) (OPT BACB30NR4K3 (V97928))		4

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
100	AN960PD416L		.WASHER		4
105	258T1145-3		.RETAINER		1
110	258T1145-5		.RETAINER		1
115	258T1155-7		.SUPPORT ASSY		1
120	MS21209F4-15P		..INSERT		4
125	HL41PY5-4		DELETED		
125A	BACB30FN5A6NU		..BOLT		2
130	HL79-8		DELETED		
130A	HL70-5		..COLLAR- (V56878) (SPEC BACC30M5) (OPT HL70-5 (V73197)) (OPT HL70-5 (V92215)) (OPT 66014-5 (V56878))		2
135	258T1177-1		..RETAINER		1
137	258T1155-9		..SUPPORT		1
140	HST10AZ8-3		.BOLT- (V73197) (SPEC BACB30VT8K3) (OPT HST10AG8-3 (V06725)) (OPT HST10A68-3 (V73197)) (OPT HST108K3 (V56878)) (OPT VL108K3 (V92215)) (OPT VL108K3 (V97928))		6
145	AN960PD416L		.WASHER		6
150	H10-4BAC		DELETED		
150A	MS21042L4		.NUT		6
155	258T1144-3		.FITTING		1
160	H10-4BAC		DELETED		

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
160A	MS21042L4		.NUT		4
165	AN960PD416L		.WASHER		4
170	258T1162-1		.GUARD ASSY-CABLE		4
175	HL20PB8-11		..BOLT-		1
			(V56878)		
			(SPEC BACB30MB8-11)		
			(OPT HL20PB8-11		
			(V73197))		
			(OPT HL20PB8-11		
			(V92215))		
			(OPT HL20PB8-11		
			(V97928))		
			(OPT 69307-8-11		
			(V56878))		
			(OPT HL20PB8-11		
			(V80539))		
			(OPT L8068-11		
			(V06725))		
			(OPT WC128-11		
			(V60516))		
			(OPT HL20PB8-11		
			(V60516))		
			(OPT HL20PB8-11		
			(V08524))		
180	258T1162-2		..GUARD		1
185	HST10AZ8-3		.BOLT-		6
			(V73197)		
			(SPEC BACB30VT8K3)		
			(OPT HST10AG8-3		
			(V06725))		
			(OPT HST10A68-3		
			(V73197))		
			(OPT HST108K3		
			(V56878))		
			(OPT VL108K3		
			(V92215))		
			(OPT VL108K3		
			(V97928))		
190	AN960PD416L		.WASHER		6
195	H10-4BAC		DELETED		
195A	MS21042L4		.NUT		6
197	69B80300-9		DELETED		
200	258T1151-2		.TUBE		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
205	SL2822-16		.NUT-		1
			(V97393)		
			(SPEC BACN10RF16)		
			(OPT BR9080-16		
			(V72962))		
			(OPT 82631-1612		
			(V56878))		
210	258T1142-1		.FRAME ASSY		1
215	MS21209F1-20P		..INSERT		6
220	258T1142-2		..FRAME		1
225	NAS623-3-1		.SCREW		2
230	AN960PD10L		.WASHER		2
235	258T1123-3		.RETAINER		1
240	MKP16BSFS428		.BEARING-		1
			(V21335)		
			(SPEC BACB10AW16)		
			(OPT MKP16BSE9273		
			(V21335))		
			(OPT MKP16BSTT		
			(V43991))		
			(OPT MKP16BS2TS		
			(V43991))		
			(OPT LLMKP16BS		
			(V38443))		
			(OPT LLMKP16BSG20		
			(V38443))		
			(OPT MKP16BSG20		
			(V38443))		

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	245	258T1143-4		.DRUM ASSY		1
				ATTACHING PARTS		
	250	BACB30NR4K10		.BOLT- (V06710) (SPEC BACB30NR4K10) (OPT BACB30NR4K10 (V06725)) (OPT BACB30NR4K10 (V06950)) (OPT BACB30NR4K10 (V08524)) (OPT BACB30NR4K10 (V27624)) (OPT BACB30NR4K10 (V56878)) (OPT BACB30NR4K10 (V73197)) (OPT BACB30NR4K10 (V80539)) (OPT BACB30NR4K10 (V92215)) (OPT BACB30NR4K10 (V93907)) (OPT BACB30NR4K10 (V97928))		2
	255	AN960PD416L		.WASHER		2
				-------*-------		
	260	BJ40TC48A16		..BEARING- (V21335) (OPT ITEMS 260A, 260B, 260C)		1
	-260A	BJ40TC48A16Z		..BEARING- (V21335) (OPT ITEMS 260, 260B, 260C)		1
	-260B	AJ20C103		..BUSHING- (V50294) (OPT ITEMS 260, 260A, 260C)		1
R	-260C	PBE20C16BA		..BUSHING- (V73134) (OPT ITEMS 260, 260A, 260B)		1

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	265	BACR15BA3D6		DELETED		
R	265A	BACR15BA3D7		..RIVET		2
R	267	BACR15BA3D13		..RIVET		2
	270	BRM200A3		..NUTPLATE-		2
				(V52828)		
				(SPEC BACN10JP3A)		
				(OPT MK1000-3BAC (V15653))		
				(OPT NS103197-02 (V80539))		
				(OPT RMA9201M3 (V72962))		
				(OPT T8076S1032 (V11815))		
				(OPT VN202A1-02 (V92215))		
	275	258T1143-5		..DRUM		1
	280	BACB30NR4K5		DELETED		
R	280A	HL11VAZ8-5		.BOLT-		2
				(V56878)		
				(SPEC BACB30NW8K5)		
				(OPT B30NW8K5 (V97928))		
				(OPT HL11VAZ8-5 (V73197))		
				(OPT HL11VAZ8-5 (V92215))		
				(OPT HL11VAZ8-5 (V97928))		
				(OPT L803-8K5 (V06725))		
				(OPT HL11VAZ8-5 (V08524))		
				(OPT HL11V5 (V06725))		

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	285	BACB30NR4K3		DELETED		
R	285A	HL11VAZ8-3		.BOLT-		2
				(V56878)		
				(SPEC BACB30NW8K3)		
				(OPT B30NW8K3		
				(V97928))		
				(OPT HL11VAZ8-3		
				(V73197))		
				(OPT HL11VAZ8-3		
				(V92215))		
				(OPT HL11VAZ8-3		
				(V97928))		
				(OPT L803-8K3		
				(V06725))		
				(OPT HL11VAZ8-3		
				(V08524))		
				(OPT HL11V3		
				(V06725))		
	290	AN960PD416L		.WASHER		4
	295	H10-4BAC		DELETED		
	295A	MS21042L4		.NUT		4
	300	258T1146-3		.RETAINER		2
	305	258T1123-5		.RETAINER		1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-310	BACB30NR4K3		.BOLT- (V06710) (SPEC BACB30NR4K3) (OPT BACB30NR4K3 (V06725)) (OPT BACB30NR4K3 (V06950)) (OPT BACB30NR4K3 (V08524)) (OPT BACB30NR4K3 (V27624)) (OPT BACB30NR4K3 (V56878)) (OPT BACB30NR4K3 (V73197)) (OPT BACB30NR4K3 (V80539)) (OPT BACB30NR4K3 (V92215)) (OPT BACB30NR4K3 (V93907)) (OPT BACB30NR4K3 (V97928))		4
315	AN960PD416L		.WASHER		4
320	258T1145-5		.RETAINER		1
325	258T1145-3		.RETAINER		1
330	BACB30NR4K13		DELETED		
330A	BACB30NR8K13		.BOLT		1
335	AN960PD416L		.WASHER		1
340	BACS18K25-28W		.SPACER		1
345	H10-4BAC		DELETED		
345A	MS21042L4		.NUT		1
350	258T1175-1		.RETAINER		1

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	355	S258T160-2		DELETED		
	-355A	S258T160-4		DELETED		
	355B	70284-019		.SPRING- (V10396) (SPEC S258T160-2)	A	1
	-355C	70286-019		.SPRING- (V10396) (SPEC S258T160-4)	B,C	1
R	-355D	70284-019		.SPRING- (V10396) (SPEC S258T160-2) (OPT ITEM 355E)	D	1
R	-355E	S258T160-6		.SPRING- (OPT ITEM 355D)	D	1
R	-355F	70286-019		.SPRING- (V10396) (SPEC S258T160-4) (OPT ITEM 355G)	E	1
R	-355G	S258T160-8		.SPRING- (OPT ITEM 355F)	E	1
	360	S258T160-1		DELETED		
	-360A	S258T160-3		DELETED		
	360B	70283-019		.SPRING- (V10396) (SPEC S258T160-1)	A	1
	-360C	70285-019		.SPRING- (V10396) (SPEC S258T160-3)	B	1
R	-360D	258T1193-3		.SPRING	C	1
R	-360E	S258T160-5		.SPRING	D	1
R	-360F	S258T160-7		.SPRING	E	1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
365	BACB30NR4K3		DELETED		
365A	HL11VAZ8-3		.BOLT- (V56878) (SPEC BACB30NW8K3) (OPT B30NW8K3 (V97928)) (OPT HL11VAZ8-3 (V73197)) (OPT HL11VAZ8-3 (V92215)) (OPT HL11VAZ8-3 (V97928)) (OPT L803-8K3 (V06725)) (OPT HL11VAZ8-3 (V08524)) (OPT HL11V3 (V06725))		2
370	AN960PD416L		.WASHER		2
375	H10-4BAC		DELETED		
375A	MS21042L4		.NUT		2
380	258T1170-1		.GUARD ASSY-SPR		1
385	BACR15BB5AD		..RIVET- (SIZE DETERMINE ON INST)		8
390	AN960PD8		..WASHER		8
395	258T1155-7		..SUPPORT ASSY		1
400	MS21209F4-15		...INSERT		4
405	HL41PY5-4		...BOLT- (V56878) (SPEC BACB30FN5A4NU) (OPT HL41PY5-4 (V73197)) (OPT HL41PY5-4 (V92215)) (OPT WC375-4 (V60516)) (OPT HL41PY5-4 (V08524))		2
410	BACC30M5		...COLLAR		2
415	258T1177-1		...RETAINER		1
420	258T1155-9		...SUPPORT		1
425	258T1164-3		..GUARD		1
430	258T1171-1		..TUBE		1

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
	435	258T1172-1		.SHAFT ASSY-TORQUE		1
	440	258T1173-1		..CARRIER ASSY-SPR ATTACHING PARTS		1
	445	BACR15BA4AD		..RIVET- (SIZE DETERMINE ON INST) -------*-------		6
	450	BACR15BA3AD		...RIVET- (SIZE DETERMINE ON INST)		12
	455	BRM200A4		...NUTPLATE- (V52828) (SPEC BACN10JP4A) (OPT MK1000-4BAC (V15653)) (OPT NS103197-048 (V80539)) (OPT RMA9201M4 (V72962)) (OPT T8076S428 (V11815)) (OPT VN202A1-048 (V92215))		6
	460	258T1173-2		...CARRIER		1
	465	BACR15BA4AD		..RIVET- (SIZE DETERMINE ON INST)		6
	470	258T1174-1		..FITTING-END		1
	475	258T1176-1		..SHAFT		1
R	478	69B80300-9		.STRAP- (USED WITH ITEM 490)		1
	480	BAC27TCT0308		.MARKER-ALUMINUM FOIL-WITH PAWL ENGAGED DOOR WILL NOT OPERATE		1
	485	BAC27TCT0327		DELETED		
	485A	BAC27TCT0331		.MARKER		2

	FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
	01-					
R	490	BAC27TCT0417		.NAMEPLATE- (USED WITH ITEM 478)		1
R	495	BAC27TCT0257		.MARKER-ALUMINUM FOIL	D,E	1

*[1] Post service bulletin unit has had the inner spring S258T160-3 replaced with a spring having a serial number greater than 3-1199.