

 **BOEING**  
COMPONENT  
MAINTENANCE MANUAL

TO: ALL HOLDERS OF WING RAKED TIP ASSEMBLY COMPONENT MAINTENANCE MANUAL  
57-28-02.

REVISION NO. 1 DATED NOV 01/02

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

TITLE PAGE

Added new top assemblies -15 through -22, created because of new decals.

1

TR & SB RECORD

1

REPAIR 1-1

604

REPAIR 2-1

601

1002-1016,1019-1020,

1023,1027,1029-1031,

1033-1034,1038,

1040-1070

501

Clarified non-destructive testing requirements.

REPAIR 1-1

602-603

REPAIR 2-2

603

Updated REPAIR 1-1 and 2-2 refinish details.

REPAIR 1-1

602

REPAIR 2-2

603

Edited without technical change.

**57-28-02**

HIGHLIGHTS

01.1

Page 1

Nov 01/02

## WING RAKED TIP ASSEMBLY

PART NUMBERS 119T1075-1,-2,-15 THRU -22

COMPONENT MAINTENANCE MANUAL  
WITH  
ILLUSTRATED PARTS LIST

**57-28-02**

TITLE PAGE

Page 1

Nov 01/02

01.1



REVISION RECORD

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

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

**57-28-02**

REVISION RECORD

01

Page 1

Nov 01/99



TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR B13282	NOV 01/02

**57-28-02**

TR & SB RECORD

01.1

Page 1

Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PAGE	DATE	CODE	PAGE	DATE	CODE
57-28-02			REPAIR-GENERAL		
			601	NOV 01/99	01
			602	NOV 01/99	01
TITLE PAGE			REPAIR 1-1		
*1	NOV 01/02	01.1	601	NOV 01/99	01
2	BLANK		*602	NOV 01/02	01.1
REVISION RECORD			*603	NOV 01/02	01.1
1	NOV 01/99	01	*604	NOV 01/02	01.1
2	BLANK		REPAIR 2-1		
TR & SB RECORD			*601	NOV 01/02	01.1
*1	NOV 01/02	01.1	602	NOV 01/99	01
2	BLANK		603	NOV 01/99	01
LIST OF EFFECTIVE PAGES			604	NOV 01/99	01
*1	NOV 01/02	01	605	NOV 01/99	01
THRU LAST PAGE			606	BLANK	
CONTENTS			REPAIR 2-2		
1	NOV 01/99	01	601	NOV 01/99	01
2	BLANK		602	NOV 01/99	01
INTRODUCTION			*603	NOV 01/02	01.1
1	NOV 01/99	01	604	NOV 01/99	01
2	BLANK		605	NOV 01/99	01
DESCRIPTION & OPERATION			606	BLANK	
1	NOV 01/99	01	ASSEMBLY		
2	NOV 01/99	01	701	NOV 01/99	01
DISASSEMBLY			702	BLANK	
301	NOV 01/99	01	FITS AND CLEARANCES		
302	BLANK		801	NOV 01/99	01
CLEANING			802	BLANK	
401	NOV 01/99	01	ILLUSTRATED PARTS LIST		
402	BLANK		1001	NOV 01/99	01
CHECK			*1002	NOV 01/02	01.1
*501	NOV 01/02	01.1	*1003	NOV 01/02	01.1
502	NOV 01/99	01	*1004	NOV 01/02	01.1
			*1005	NOV 01/02	01.1
			*1006	NOV 01/02	01.1
			*1007	NOV 01/02	01.1
			*1008	NOV 01/02	01.1

\* = REVISED, ADDED OR DELETED

**57-28-02**
 EFFECTIVE PAGES  
 CONTINUED Page 1  
 01 Nov 01/02

PAGE	DATE	CODE	PAGE	DATE	CODE
ILLUSTRATED PARTS LIST		CONT.	ILLUSTRATED PARTS LIST		CONT.
*1009	NOV 01/02	01.1	*1051	NOV 01/02	01.1
*1010	NOV 01/02	01.1	*1052	NOV 01/02	01.1
*1011	NOV 01/02	01.1	*1053	NOV 01/02	01.1
*1012	NOV 01/02	01.1	*1054	NOV 01/02	01.1
*1013	NOV 01/02	01.1	*1055	NOV 01/02	01.1
*1014	NOV 01/02	01.1	*1056	NOV 01/02	01.1
*1015	NOV 01/02	01.1	*1057	NOV 01/02	01.1
*1016	NOV 01/02	01.1	*1058	NOV 01/02	01.1
*1017	BLANK		*1059	NOV 01/02	01.1
*1018	NOV 01/02	01.1	*1060	NOV 01/02	01.1
*1019	NOV 01/02	01.1	*1061	NOV 01/02	01.1
*1020	NOV 01/02	01.1	*1062	NOV 01/02	01.1
*1021	NOV 01/02	01.1	*1063	NOV 01/02	01.1
*1022	NOV 01/02	01.1	*1064	NOV 01/02	01.1
*1023	NOV 01/02	01.1	*1065	NOV 01/02	01.1
*1024	NOV 01/02	01.1	*1066	NOV 01/02	01.1
*1025	NOV 01/02	01.1	*1067	NOV 01/02	01.1
*1026	NOV 01/02	01.1	*1068	NOV 01/02	01.1
*1027	NOV 01/02	01.1	*1069	NOV 01/02	01.1
*1028	NOV 01/02	01.1	*1070	NOV 01/02	01.1
*1029	NOV 01/02	01.1			
*1030	NOV 01/02	01.1			
*1031	NOV 01/02	01.1			
*1032	NOV 01/02	01.1			
*1033	NOV 01/02	01.1			
*1034	NOV 01/02	01.1			
*1035	NOV 01/02	01.1			
*1036	NOV 01/02	01.1			
*1037	NOV 01/02	01.1			
*1038	NOV 01/02	01.1			
*1039	NOV 01/02	01.1			
*1040	NOV 01/02	01.1			
*1041	NOV 01/02	01.1			
*1042	NOV 01/02	01.1			
*1043	NOV 01/02	01.1			
*1044	NOV 01/02	01.1			
*1045	NOV 01/02	01.1			
*1046	NOV 01/02	01.1			
*1047	NOV 01/02	01.1			
*1048	NOV 01/02	01.1			
*1049	NOV 01/02	01.1			
*1050	NOV 01/02	01.1			

\* = REVISED, ADDED OR DELETED

**57-28-02**EFFECTIVE PAGES  
LAST PAGE Page 2  
01 Nov 01/02



TABLE OF CONTENTS

<u>Paragraph Title</u>	<u>Page</u>
Description and Operation . . . . .	1
Testing and Fault Isolation . . . . .*[1]	
Disassembly . . . . .	301
Cleaning. . . . .	401
Check . . . . .	501
Repair. . . . .	601
Assembly. . . . .	701
Fits and Clearances . . . . .	801
Special Tools . . . . .*[1]	
Illustrated Parts List. . . . .	1001
*[1] Not Applicable.	

**57-28-02**

01

CONTENTS  
Page 1  
Nov 01/99



## INTRODUCTION

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

This manual is divided into separate sections:

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

Refer to the Table of Contents for the page location of applicable sections.

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

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

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

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

Verification:

**57-28-02**

INTRODUCTION

01

Page 1

Nov 01/99





WING RAKED TIP ASSEMBLY

DESCRIPTION AND OPERATION

1. Description

- A. The wing raked tip assembly has a structure which is covered by the upper and lower skin assemblies. The structure is made of advanced composites. The upper and lower skin assemblies have non-metallic honeycomb cores which are sandwiched between layers of advanced composites.
- B. The leading edge of the wing raked tip assembly is covered by a clad aluminum skin.
- C. The outboard side of the wing raked tip assembly has a tip assembly which is made of aluminum alloy.
- D. The inboard side of the wing raked tip assembly has rib assemblies which help the wing raked tip assembly to the wing. The rib assemblies are made of aluminum alloy.

2. Operation

- A. The wing raked tip assemblies are aerodynamic devices which increase the aerodynamic drag and increase the performance of the wings.

3. Leading Particulars (Approximate)

- A. Length -- 139 inches
- B. Width -- 71 inches
- C. Height -- 9 inches
- D. Weight -- 149 pounds

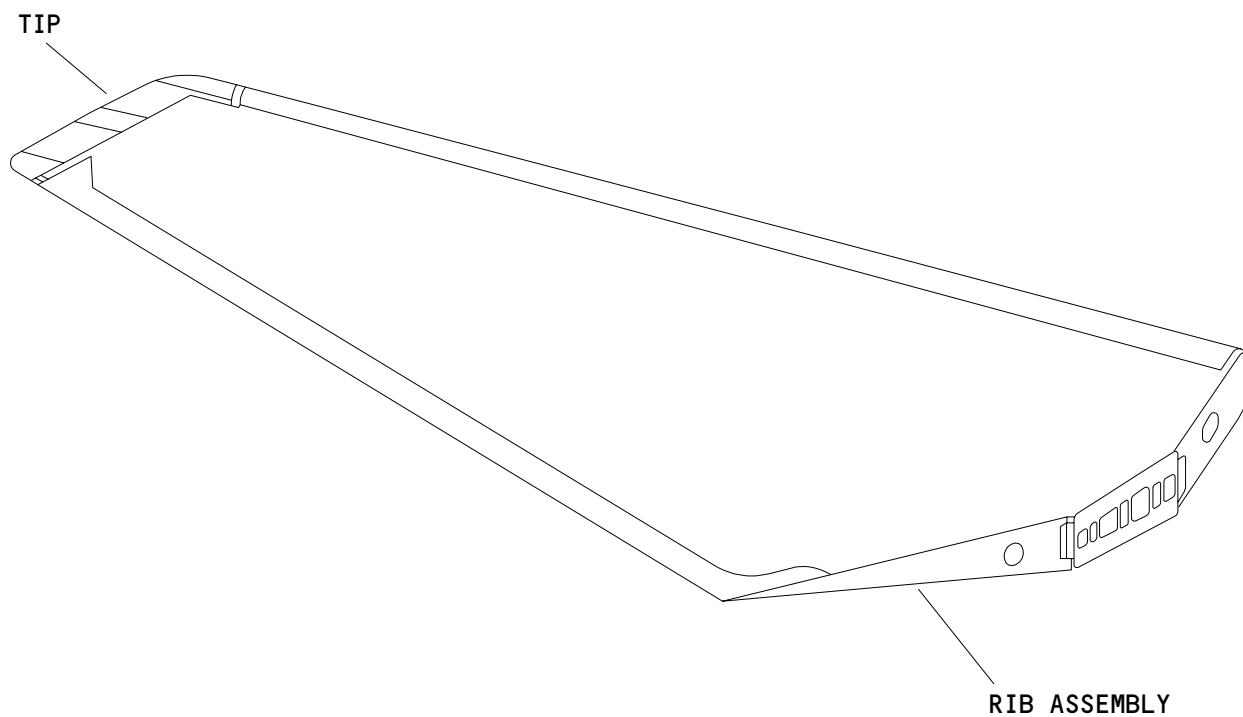
57-28-02

DESCRIPTION & OPERATION

01

Page 1

Nov 01/99



Wing Raked Tip Assembly  
Figure 1

**57-28-02**

DESCRIPTION & OPERATION

01

Page 2

Nov 01/99



## DISASSEMBLY

### 1. General

- A. This procedure has the data necessary to disassemble the wing raked tip assembly (1A, 5).
- B. Disassemble this component sufficiently to isolate the defects, do the necessary repairs, and put the component back to a serviceable condition.

### 2. Disassembly

#### A. Procedure

- (1) Use standard industry procedures to disassemble this component.

**57-28-02**

DISASSEMBLY

01

Page 301

Nov 01/99



## CLEANING

### 1. General

- A. This procedure has the data necessary to clean the wing raked tip assembly (1A, 5).
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for details of the SOPM chapters identified in this procedure.

### 2. Cleaning

#### A. References

- (1) SOPM 20-30-03, General Cleaning Procedures

#### B. Procedure

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

**57-28-02**

01  
CLEANING  
Page 401  
Nov 01/99

CHECK1. General

- A. This procedure has the data necessary to find defects in the material of the specified parts.
- B. Refer to FITS AND CLEARANCES for the design dimension and wear limits.
- C. Refer to the Standard Overhaul Practices Manual (SOPM) for details of the SOPM chapters identified in this procedure.
- D. Refer to IPL Fig. 1 for item numbers.

2. Check

## A. References

- (1) SOPM 20-20-02, Penetrant Methods of Inspection

## B. Procedure

- (1) Do a visual check for any obvious damage on all visible parts according to standard industry practices. Do the penetrant check if cracks or damage are seen or if you think there are cracks or damage.
  - (a) Do a penetrant check (SOPM 20-20-02) of these parts:
    - 1) Rib (190, 195, 540, 545)
- (2) Do a check of the honeycomb structure:
  - (a) Do a check of the honeycomb and the bonded parts for delamination, internal water, scratches, and contour damage.
    - 1) If you see delamination or contour damage, do an ultrasonic check or a tap test to find all of the damage.

NOTE: For the tap test use a solid metal disk and refer to the 767 Nondestructive Test Manual, Part 1, 51-05-01.

- 2) Examine areas that you think contain water radiographically or by thermography as shown in the 767 Nondestructive Test Manual, Part 9, 51-00-01.

**57-28-02**

CHECK

01.1

Page 501

Nov 01/02

- (b) Refer to the applicable 767 Structural Repair Manual section for allowable damage and repair data.

**57-28-02**

CHECK  
Page 502  
Nov 01/99



REPAIR – GENERAL

1. General

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

<u>PART NUMBER</u>	<u>NAME</u>	<u>REPAIR</u>
---	REFINISH OF OTHER PARTS	1-1
119T1703	RIB ASSEMBLY	2-1, 2-2

2. Dimensioning Symbols

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

**57-28-02**

REPAIR-GENERAL

01

Page 601

Nov 01/99

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

**EXAMPLES**

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

True Position Dimensioning Symbols  
Figure 601

**57-28-02**

REPAIR-GENERAL

01 Page 602

Nov 01/99





REFINISH OF OTHER PARTS – REPAIR 1-1

1. General

- A. This procedure has the data necessary to refinish the parts which are not given in the specified repairs.
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for details of the SOPM chapters identified in this procedure.
- C. Refer to IPL Fig. 1 for item numbers.

2. Refinish of Other Parts

A. General

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

B. Consumable Materials

NOTE: Equivalent material can be used.

- (1) C00032 Enamel -- BMS10-60 (SOPM 20-60-02)
- (2) C00175 Primer -- BMS10-79, Type 3 (SOPM 20-60-02)

C. References

- (1) SOPM 20-30-02, Stripping of Protective Finishes
- (2) SOPM 20-30-03, General Cleaning Procedures
- (3) SOPM 20-41-01, Decoding Table for Boeing Finish Codes
- (4) SOPM 20-60-02, Finishing Materials

D. Procedure

**57-28-02**

REPAIR 1-1

01

Page 601

Nov 01/99

IPL FIG. & ITEM	MATERIAL	FINISH
<u>IPL Fig. 1</u>  Tip assembly (1A,5)  Seal retainer (135, 140,145,150,155, 160,365)  Seal retainer (345, 350)  Rib (385,390)	   Aluminum alloy   Aluminum alloy  Aluminum alloy	  Apply BMS 10-60 enamel (F-19.39-707) to all exterior surfaces of composite skin panels, conductive strips, and tip casting. Do not overspray or apply the BMS 10-60 enamel to the exterior surfaces of leading edge skin, static discharger bases, inboard root rib, trailing edge bulb seals and seal retainer, leading edge bulb seals and seal retainers.  Boric acid-sulfuric acid anodize or chromic acid anodize (F-17.31). Apply BMS 10-79, Type 3 primer (F-19.47). Apply BMS 10-60 enamel (SRF-14.9813).  Chromic acid anodize (F-17.04). Apply BMS 10-11, Type 1 primer (F-20.02).  Boric acid-sulfuric acid anodize or chromic acid anodize (F-17.31). Apply BMS 10-79, Type 3 primer (F-19.47). Apply BMS 10-60 enamel (SRF-14.9813).

Refinish Details  
Table 601 (Sheet 1)

**57-28-02**

REPAIR 1-1

01.1

Page 602

Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

IPL FIG. & ITEM	MATERIAL	FINISH
IPL Fig. 1 (Cont) Rib (540,545)	Aluminum alloy	Boric acid-sulfuric acid anodize or chromic acid anodize (F-17.31). Apply BMS 10-79, Type 3 primer (F-19.47). Apply BMS 10-60 enamel (SRF-14.9813) all over except in holes.
Tip (660,665)	Aluminum alloy	Boric acid-sulfuric acid anodize or chromic acid anodize (F-17.31). Apply BMS 10-79, Type 3 primer (F-19.47). Apply BMS 10-60 enamel (F-19.39-707). Obey flagnotes 1, 2, 3, and 4 in Fig. 601.
Conductive strip (670,675)	Aluminum alloy	Boric acid-sulfuric acid anodize or chromic acid anodize (F-17.31). Apply BMS 10-79, Type 3 primer (F-19.47).
Skin (695,700)	Aluminum alloy	On exterior surfaces: Chemical treat (F-14.05). On interior surfaces and edges: Chemical treat (F-14.05). Apply BMS 10-79, Type 3 primer (F-19.47). Apply BMS 10-60 enamel (SRF-14.9813).

Refinish Details  
 Table 601 (Sheet 2)

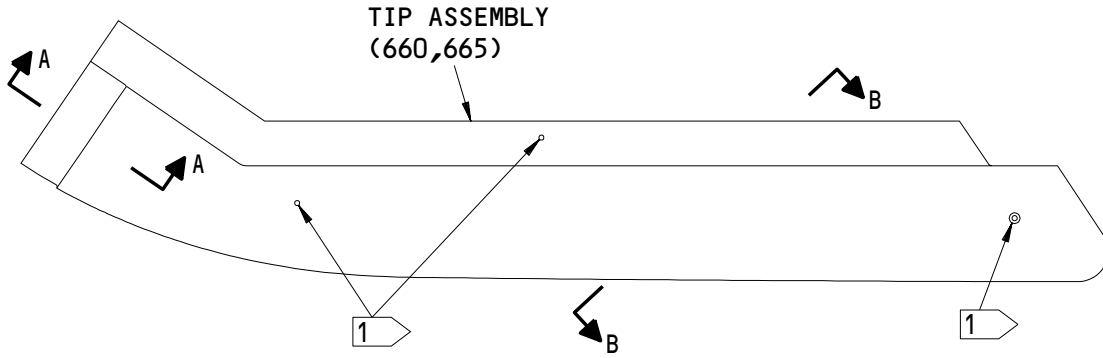
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REPAIR 1-1

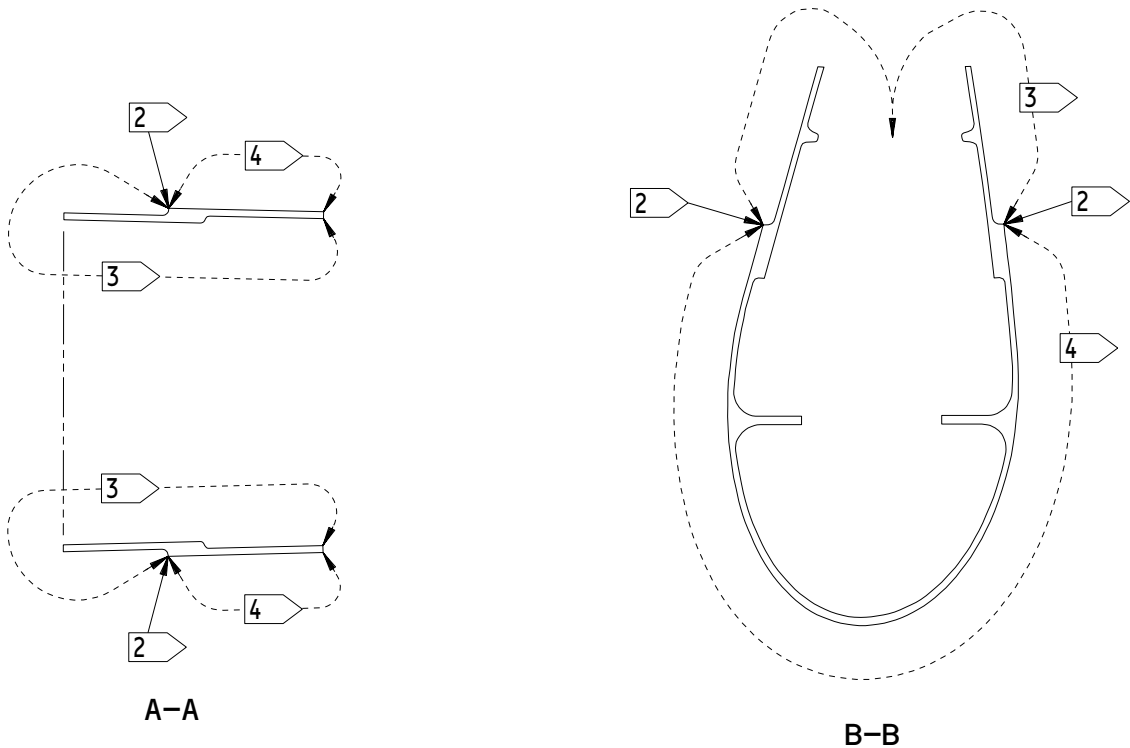
01.1

Page 603

Nov 01/02



119T1801-1,-5 SHOWN  
 119T1801-2,-6 OPPOSITE



- 1 NO F-19.39-707 IN HOLES
- 2 OVERSPRAY OF F-19.39-707 IS PERMITTED
- 3 APPLY THESE FINISHES IN THIS SEQUENCE; F-17.31, F-19.47, F-19.39-707

- 4 APPLY THESE FINISHES IN THIS SEQUENCE; F-17.31, F-19.47. DO NOT APPLY F-19.39-707

ITEM NUMBER REFERS TO IPL FIG. 1

119T1801-1,-2,-5,-6  
 Tip Refinish  
 Figure 601

**57-28-02**

REPAIR 1-1

Page 604

Nov 01/02

01.1

**BOEING**  
COMPONENT  
MAINTENANCE MANUALRIB ASSEMBLY – REPAIR 2-1

119T1703-5, -6

1. General

- A. This procedure has the data necessary to replace the bushing (185) of the rib assembly (175, 180).
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for details of the SOPM chapters identified in this procedure.
- C. Refer to the REPAIR – GENERAL (57-28-02/601, REPAIR – GENERAL) for the Standard True Position Dimensioning Symbols shown in the repair.
- D. Refer to IPL Fig. 1 for item numbers.

2. Bushing Replacement

## A. Consumable Materials

NOTE: Equivalent material can be used.

- (1) A00247 Sealant -- BMS 5-95 (SOPM 20-60-04)

## B. References

- (1) SOPM 20-41-01, Decoding Table for Boeing Finish Codes
- (2) SOPM 20-50-03, Bearing and Bushing Replacement
- (3) SOPM 20-50-19, General Sealing
- (4) SOPM 20-60-04, Miscellaneous Materials

## C. Procedure

NOTE: Removal of the rib assembly (175, 180) from the rib assembly (105, 110) is neither necessary nor recommended for this repair.

- (1) Remove the bolts (115), washers (120) then remove the seal retainers (135, 140, 145, 150, 155, 160) and the seal (165, 170).
- (2) Drill out the rivet in the K-hole on the rib assembly. Use a drill bit with a diameter smaller than the hole size. See Fig. 601 for location of the K-hole.

**57-28-02**

REPAIR 2-1

01.1

Page 601

Nov 01/02

- (3) Make two metal plates:
  - (a) Make two rigid metal plates with similar size and shape as the rib assembly (175, 180).
  - (b) Make an access hole, on each metal plate, approximately the same size as on the rib assembly (175, 180).
  - (c) Mark the locations of two holes on the metal plates to match the holes for bolts (115) on the rib assembly (175, 180). Also mark the location of the K-hole. See Fig. 601 for locations.
  - (d) Drill three holes on the metal plates at the locations you just marked.
- (4) Install the two metal plates on the rib assembly (175, 180):
  - (a) Install two bolts (115) and washers (120) to hold the metal plates on the rib assembly (175, 180).

NOTE: Use enough washers between the rib assembly and the metal plates to prevent the metal plates from pressing on the bushing. Also, use longer bolts if necessary.
  - (b) Install an interference fit fastener such as a 1/64th oversize hi-lok at the K-hole location to hold the metal plates to the rib assembly (175, 180).

NOTE: Use enough washers between the rib assembly and the metal plates to prevent the metal plates from pressing on the bushing.
- (5) Use the inside diameter of the existing bushing (185) and a drill guide to backdrill a pilot hole on the metal plates.

NOTE: Use the access hole to backdrill from the outboard side.
- (6) Remove the bolts (115), washers (120), and the hi-lok fastener to remove the metal plates from the rib assembly (175, 180).
- (7) Label one metal plate as "TEMPLATE 1". This metal plate is used to locate the center of the new bushing.
- (8) Label the other metal plate as "TEMPLATE 2". This metal plate is used to locate the center of the bushing hole on the rib assembly (175, 180) if oversize repair is required.

**57-28-02**

REPAIR 2-1

01 Page 602

Nov 01/99

**BOEING**  
COMPONENT  
MAINTENANCE MANUAL

- (9) Prepare the TEMPLATE 1 and make DRILL GUIDE 1 for the repair:
- (a) Make a drill guide with an inside diameter equal to the inside diameter of the bushing (185) specified in Fig. 601.
  - (b) Label this drill guide as "DRILL GUIDE 1". This drill guide is used with TEMPLATE 1 to ream the the inside diameter of the new bushing to the design diameter.
  - (c) Use the pilot hole on the TEMPLATE 1 to drill a hole equal to the outside diameter of DRILL GUIDE 1. The DRILL GUIDE 1 must be able to fit tightly in this hole on TEMPLATE 1.
- (10) Remove the damaged bushing (185) from the rib assembly (175, 180).
- (11) If you find corrosion or damage in the bushing hole on the rib (190, 195), see REPAIR 2-2 for repair instruction.
- (12) Wet install a new bushing (185) on the rib assembly (175, 180) with BMS 5-95 sealant per SOPM 20-50-03.
- (13) Install TEMPLATE 1 on the rib assembly (175, 180):
- (a) Install two bolts (115) and washers (120) to hold TEMPLATE 1 on the rib assembly (175, 180).  
  
NOTE: Use enough washers between the rib assembly and TEMPLATE 1 to prevent TEMPLATE 1 from pressing on the bushing. Also, use longer bolts if necessary.
  - (b) Install an interference fit fastener such as a 1//64th oversize hi-lok at the K-hole location to hold TEMPLATE 1 to the rib assembly (175, 180).  
  
NOTE: Use enough washers between the rib assembly and TEMPLATE 1 to prevent TEMPLATE 1 from pressing on the bushing.
- (14) Use the hole on the TEMPLATE 1 and DRILL GUIDE 1 to ream the inside diameter of the new bushing to 0.3795-0.3825 inch.
- (15) Remove the bolts (115), washers (120), and the hi-lok fastener to remove TEMPLATE 1 from the rib assembly (175, 180).
- (16) Break all sharp edges

**57-28-02**

REPAIR 2-1

01

Page 603

Nov 01/99

- (17) Fillet seal the bushing flange with BMS 5-95 sealant per SOPM 20-50-19.
- (18) Fill the K-hole:
- (a) Install a 1/32 oversize rivet in the K-hole.
- OPTIONAL: Use a 1/64 oversize hi-lok. Make sure the collar is on the outboard side of the rib assembly.
- (19) Discard the metal plates when you finish the repair. Do not re-use the metal plates for future repair. The metal plates are to be used for one time only and only with this rib assembly (175, 180).

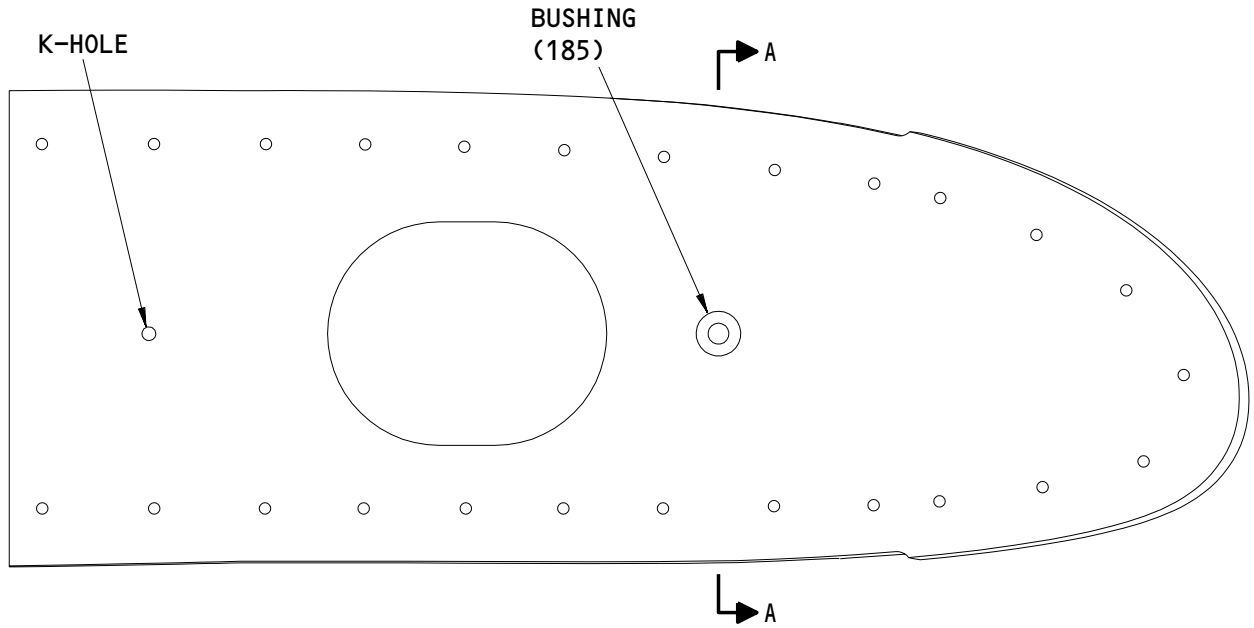
**57-28-02**

REPAIR 2-1

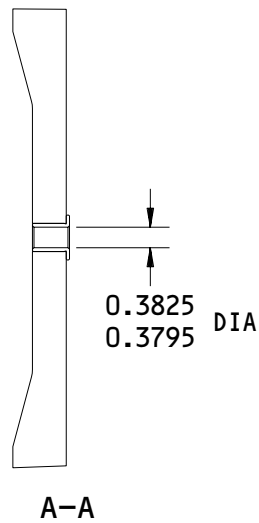
01 Page 604

Nov 01/99





119T1703-5 SHOWN  
119T1703-6 OPPOSITE



125 ✓ ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

119T1703-5,-6  
Rib Assembly Repair  
Figure 601

**57-28-02**

REPAIR 2-1

01

Page 605

Nov 01/99

**BOEING**  
COMPONENT  
MAINTENANCE MANUALRIB - REPAIR 2-2

119T1703-3, -4

1. General

- A. This procedure has the data necessary to refinish the rib (190, 195).
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for details of the SOPM chapters identified in this procedure.
- C. Refer to the REPAIR - GENERAL (57-28-02/601, REPAIR - GENERAL) for the Standard True Position Dimensioning Symbols shown in the repair.
- D. Refer to IPL Fig. 1 for item numbers.
- E. General repair details:
  - (1) Material: Aluminum alloy

2. Rib Repair

## A. References

- (1) SOPM 20-20-02, Penetrant Methods of Inspection
- (2) SOPM 20-30-02, Stripping of Protective Finishes
- (3) SOPM 20-30-03, General Cleaning Procedures
- (4) SOPM 20-41-01, Decoding Table For Boeing Finish Codes

## B. Procedure

**NOTE:** You need two metal plates to use as templates for this repair.  
See REPAIR 2-1 for instruction on making the templates.

- (1) Prepare the TEMPLATE 2 and make DRILL GUIDE 2 for the repair:
  - (a) Make a drill guide with an inside diameter equal to the repair limit specified in Fig. 601.
  - (b) Label this drill guide as "DRILL GUIDE 2". This drill guide is used with TEMPLATE 2 to locate the center of the oversize hole on the rib assembly (175, 180).

**57-28-02**

REPAIR 2-2

01

Page 601

Nov 01/99

- (c) Use the pilot hole on the TEMPLATE 2 to drill a hole equal to the outside diameter of DRILL GUIDE 2. The DRILL GUIDE 2 must be able to fit tightly in this hole on TEMPLATE 2.
- (2) Install TEMPLATE 2 on the rib (190, 195):
  - (a) Install two bolts (115) and washers (120) to hold TEMPLATE 2 on the rib (190, 195).
  - (b) Install an interference fit fastener such as a 1/64th oversize hi-lok at the K-hole location to hold TEMPLATE 2 to the rib (190, 195).
- (3) Use the hole on TEMPLATE 2 and DRILL GUIDE 2 to machine the worn or damaged hole for the bushing (185), as necessary, to remove defects, cracks, and/or corrosion to the repair limit shown in Fig. 601.
- (4) Remove the bolts (115), washers (120), and the hi-lok fastener to remove TEMPLATE 2 from the rib (190, 195).
- (5) Break all the sharp edges.
- (6) Do a penetrant check as shown in SOPM 20-20-02.
- (7) Make the oversize bushing:
  - (a) Make the oversize bushing for bushing (185) as shown in Fig. 602 and in the following instructions:
  - (b) Bushing material:
    - 1) 15-5PH CRES or 17-4PH CRES.  
Heat treat 180-200 ksi.
  - (c) Break all the sharp edges as shown in Fig. 602.
  - (d) Do a penetrant check as shown in SOPM 20-20-02.
  - (e) Apply cadmium or zinc-nickel plate to the oversize bushing (185).
  - (f) Be sure the interference between the bushing outside diameter and the oversize hole inside diameter is as shown in Fig. 602.
- (8) Install the oversize bushing on the rib (190, 195) as shown in REPAIR 2-1.

**57-28-02**

REPAIR 2-2

01 Page 602

Nov 01/99

### 3. Rib Refinish

#### A. Consumable Materials

NOTE: Equivalent material can be used.

- (1) C00032 Enamel -- BMS10-60 (SOPM 20-60-02)
- (2) C00175 Primer -- BMS10-79, Type 3 (SOPM 20-60-02)

#### B. References

- (1) SOPM 20-30-02, Stripping of Protective Finishes
- (2) SOPM 20-41-01, Decoding Table For Boeing Finish Codes
- (3) SOPM 20-60-02, Finishing Materials

#### C. Procedure (Fig. 601)

- (1) Boric acid-sulfuric acid anodize or chromic acid anodize (F-17.31).
- (2) Apply BMS 10-79, Type 3 primer (F-19.47).
- (3) Apply BMS 10-60 enamel (SRF-14.9813) all over except in bushing hole.

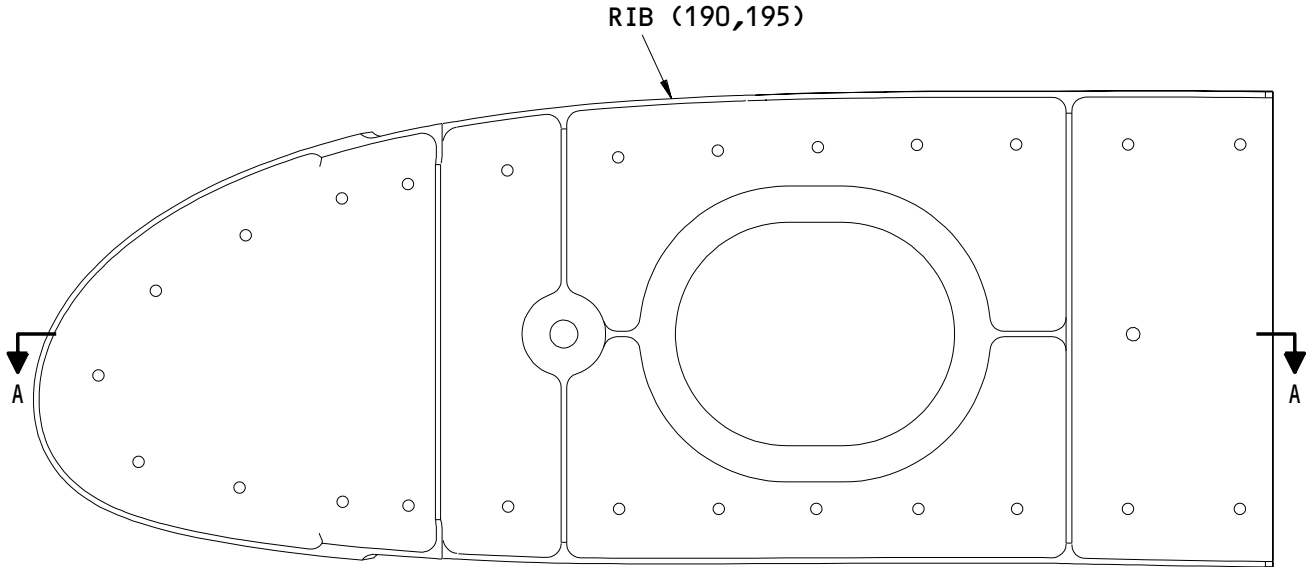
**57-28-02**

REPAIR 2-2

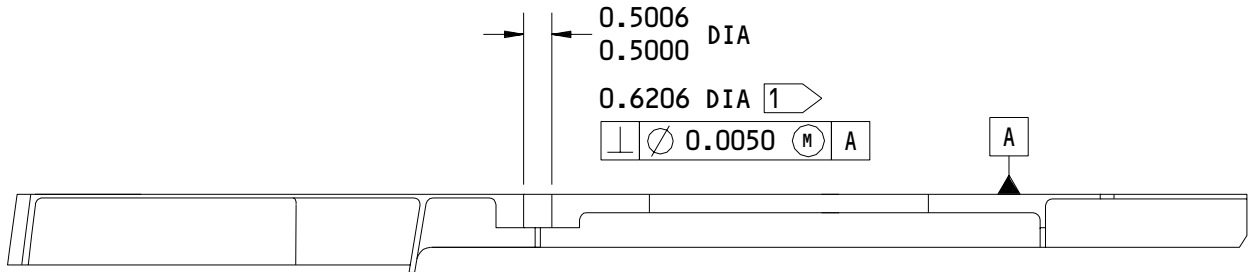
01.1

Page 603

Nov 01/02



119T1703-3 SHOWN  
 119T1703-4 OPPOSITE



A-A

125/ ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 1

ALL DIMENSIONS ARE IN INCHES

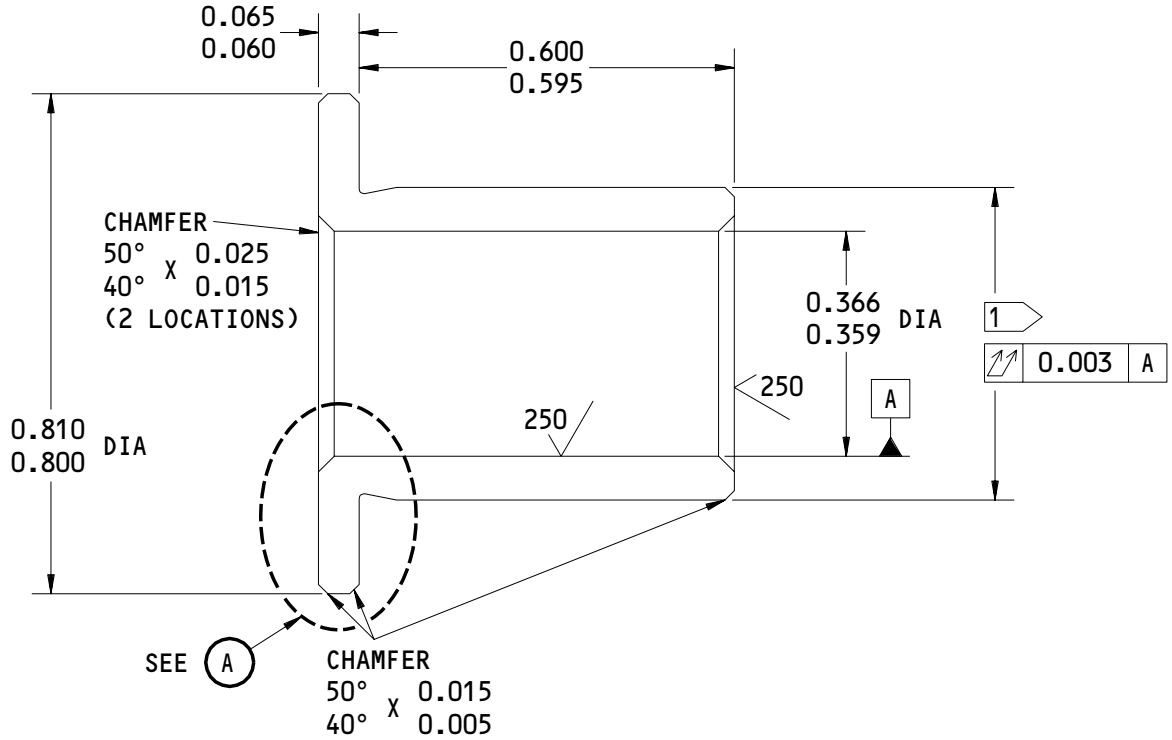
1 REPAIR LIMIT

119T1703-3,-4  
 Rib Repair  
 Figure 601

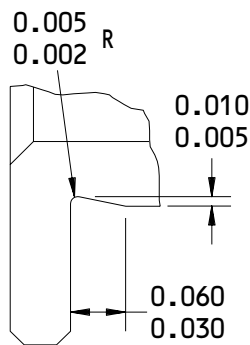
**57-28-02**

REPAIR 2-2  
 Page 604  
 Nov 01/99

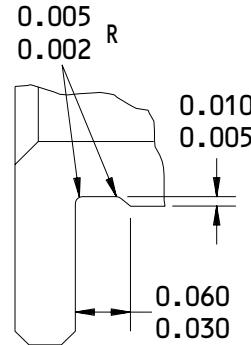
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**OVERSIZE REPLACEMENT FOR BUSHING (185)**



**TYPE 1**



**TYPE 2**



1 AFTER PLATING, THE OUTSIDE DIAMETER OF THE BUSHING IS EQUAL TO THE INSIDE DIAMETER OF THE LUG HOLE PLUS THE INTERFERENCE OF 0.0050-0.0090

63 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 2

ALL DIMENSIONS ARE IN INCHES

Oversize Bushing Details  
 Figure 602

**57-28-02**

REPAIR 2-2

Page 605

Nov 01/99

01



ASSEMBLY

1. General

- A. This procedure has the data necessary to assemble the wing raked tip assembly (1A, 5).

2. Assembly

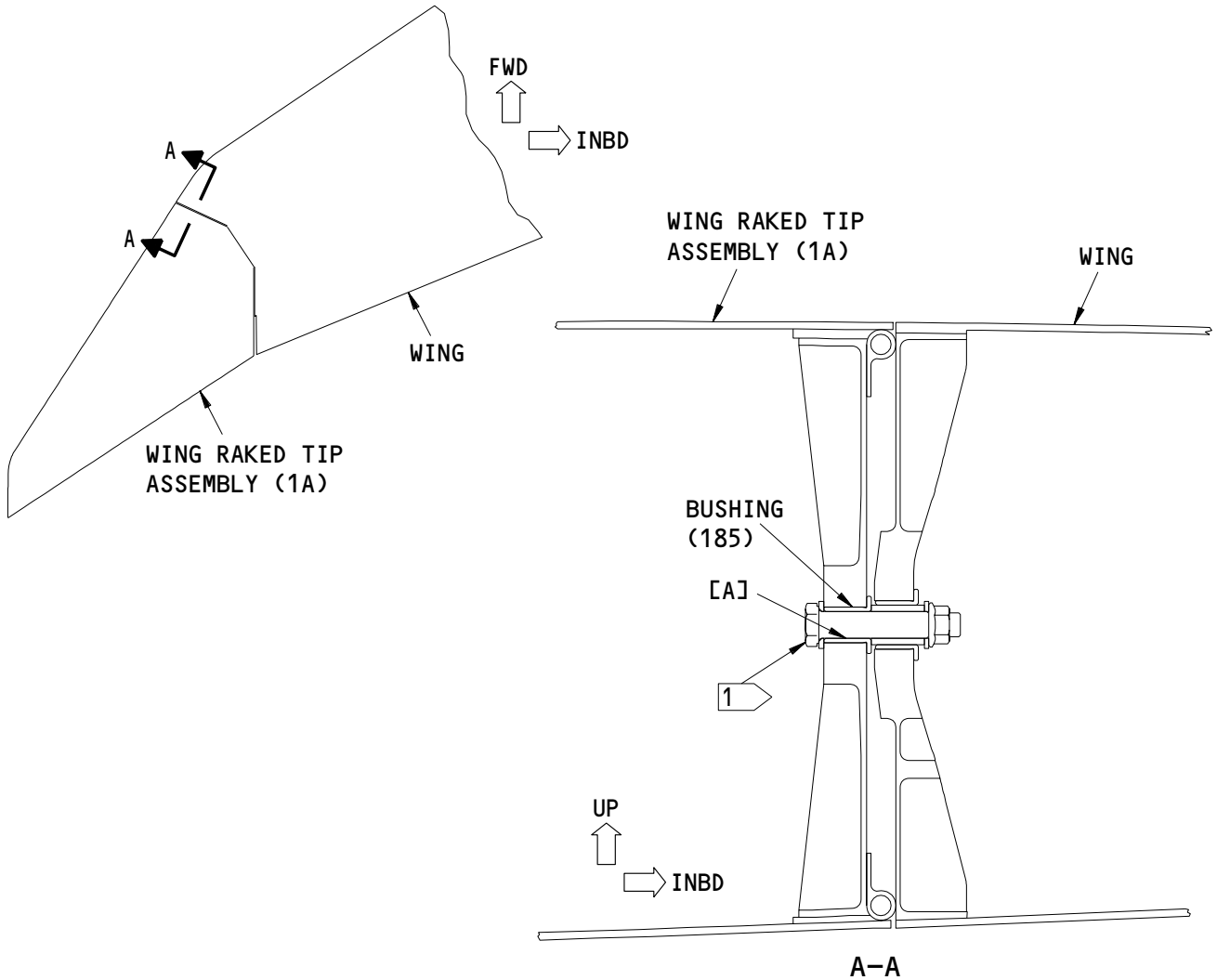
A. Procedure

- (1) Use standard industry procedures to assemble this component.

**57-28-02**

01 ASSEMBLY  
Page 701  
Nov 01/99

FITS AND CLEARANCES



REF LETTER	REF IPL		DESIGN DIMENSION*				SERVICE WEAR LIMIT*	
	FIG. 1, MATING ITEM NO.		DIMENSION		ASSEMBLY CLEARANCE		DIMENSION	
			MIN	MAX	MIN	MAX	MIN	MAX
[A]	ID	185	0.3795	0.3825		0.0090		0.3835
	OD	1	0.3735	0.3745	0.0050		0.3825	0.0180

\* ALL DIMENSIONS ARE IN INCHES

1 INSTALLATION BOLT P/N BACB30NR6K24

ITEM NUMBERS REFER TO IPL FIG. 1

Fits and Clearances  
 Figure 801

**57-28-02**

FITS AND CLEARANCES  
 01 Page 801  
 Nov 01/99





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.

**57-28-02**

ILLUSTRATED PARTS LIST

01

Page 1001

Nov 01/99

VENDORS

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

06725 AIR INDUSTRIES CORPORATION  
12570 KNOTT STREET  
GARDEN GROVE, CALIFORNIA 92641-3932  
FORMERLY AIR INDUSTRIES OF CALIF IN GARDENA, CALIF.

1GK47 R AND B ELECTRONICS INC  
2374 NW DALLAS STREET  
GRAND PRAIRIE, TEXAS 75050

11815 CHERRY AEROSPACE FASTENERS DIV OF TEXTRON  
1224 EAST WARNER AVENUE PO BOX 2157  
SANTA ANA, CALIFORNIA 92707-0157  
FORMERLY IN LOS ANGELES, CALIF , FORMERLY CHERRY FASTENERS  
TOWNSEND DIV OF TEXTRON INC V71087

15653 FAIRCHILD FASTENERS KAYNAR PRODUCTS DIV  
800 S STATE COLLEGE BLVD  
FULLERTON, CALIFORNIA 92831-3001  
FORMERLY VK6405 MICRODOT AEROSP LTD; FORMERLY KAYNAR TECH  
KAYNAR DIV

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

5M902 FAIRCHILD IND INC FAIRCHILD AEROSPACE FASTENER DIV  
3016 W LOMITA BLVD  
TORRANCE, CALIFORNIA 90505-5103  
FMLY IN REDONDO BEACH, CALIF

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

53551 ALLFAST FASTENING SYSTEMS INC  
15200 EAST DON JULIAN ROAD PO BOX 3166  
CITY OF INDUSTRY, CALIFORNIA 91745-1001  
FORMERLY V0736B  
FORMERLY ALLFAST INC V5K545

**57-28-02**

ILLUSTRATED PARTS LIST  
01.1 Page 1002  
Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL
VENDORS

55635 DAYTON-GRANGER INC  
 3299 SW 9TH AVENUE PO BOX 350550  
 FT LAUDERDALE, FLORIDA 33335  
 FORMERLY DAYTON INTL; FORMERLY V1056B

56878 SPS TECHNOLOGIES INC AEROSPACE AND INDUSTRIAL PRODUCTS DIV  
 HIGHLAND AVENUE  
 JENKINTOWN, PENNSYLVANIA 19046  
 FORMERLY STANDARD PRESSED STEEL

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

62554 SIMMONDS MECAERO FASTENERS INC  
 1734 SEQUOIA AVENUE  
 ORANGE, CALIFORNIA 92668

72962 HARVARD INDUSTRIES INC  
 3 WERNER WAY SUITE 210  
 LEBANON, NEW JERSEY 08833  
 FORMERLY AMERACE CORP ESNA DIV  
 FORMERLY ELASTIC STOP NUT IN UNION, NJ

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  
 FORMERLY NUTT-SHEL DIV OF SPC WESTERN CO V80539  
 AND STANDARD PRESSED STEEL WESTERN DIV V17279

91812 JANCO CORPORATION  
 3111 WINONA AVENUE,PO BOX 3038  
 BURBANK, CALIFORNIA 91504-2543

92215 FAIRCHILD IND INC FAIRCHILD AEROSPACE FASTENER DIV  
 3010 W LOMITA BLVD  
 TORRANCE, CALIFORNIA 90505-5102  
 FORMERLY VOI-SHAN IN CULVER CITY, CALIF

97393 SHUR-LOK CORPORATION  
 2541 WHITE ROAD PO BOX 19584  
 IRVINE, CALIFORNIA 92713  
 FORMERLY SHUR LOK CORP VB0060  
 FORMERLY IN SANTA ANA, CALIFORNIA 92714

**57-28-02**
 ILLUSTRATED PARTS LIST  
 01.1 Page 1003  
 Nov 01/02

VENDORS

97928 HUCK INTL INC  
3969 PARAMOUNT BLVD  
LAKEWOOD, CALIFORNIA 90712-4193

98524 MONOGRAM INDUSTRIES INC AEROSPACE FASTENERS DIV  
3423 SOUTH GARFIELD AVENUE PO BOX 6847  
LOS ANGELES, CALIFORNIA 90022-0547  
FORMERLY NATIONAL SCREW & MFG CO V76689; ADJUSTABLE BUSHING  
CORP, HOLLYWOOD, CA V15291; MONOGRAM/GVI IND INC, SUN  
VALLEY, CA V29464

99321 SHAW AERO DEVICES, INCORPORATED  
PO BOX 80  
WAINSCOTT, NEW YORK 11975  
FORMERLY IN EAST HAMPTON, NEW YORK

**57-28-02**

ILLUSTRATED PARTS LIST  
01.1 Page 1004  
Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
AF3552P5-3B		1	575	20
AF5141-3C		1	75	50
		1	290	60
		1	620	60
BACB28AX06C060		1	185	1
BACB30AB6S		1	11N	4
BACB30LH3-3		1	250	4
		1	610	6
BACB30LH6-3		1	245	4
BACB30NN4K10		1	760	2
BACB30NN4K7		1	765	4
BACB30NN4K8		1	750	9
BACB30NN4K9		1	755	5
BACB30NN7K12		1	475	8
BACB30NN7K13		1	465	8
BACB30NN7K9		1	470	12
BACB30NN8K12		1	460	4
BACB30NN8K13		1	455	4
BACB30NT3K3		1	355	20
BACB30NT3K4		1	115	25
BACB30NZ6K3		1	235	9
		1	236D	9
		1	585	9
		1	586D	9
BACB30NZ6K4		1	230	2
		1	231D	2
BACB30NZ6K5		1	10	4
		1	11D	4
		1	225	4
		1	226D	4
BACB30NZ6K6		1	15	3
		1	16D	3
		1	220	3
		1	221D	3
BACB30NZ6K7		1	20	3
		1	21D	3
		1	215	5
		1	216D	5
BACB30NZ6K8		1	25	6
BACB30VF3K2		1	340	9
		1	600	5
BACB30VF3K3		1	35	10
		1	680	208
BACB30VF3K5		1	40	2

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1005

Nov 01/02

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BACB30VT6K3		1	630	4
BACB30VT6K4		1	310	6
BACB30VT6K5		1	95	7
		1	525	22
BACB30WP7K12R		1	475A	8
BACB30WP7K13R		1	465A	8
BACB30WP7K9R		1	470A	12
BACB30WP8K12R		1	460A	4
BACB30WP8K13R		1	455A	4
BACB30XB6HK3		1	237D	9
		1	587D	9
BACB30XB6HK4		1	232D	2
BACB30XB6HK5		1	12D	4
		1	227D	4
BACB30XB6HK6		1	17D	3
		1	222D	3
BACB30XB6HK7		1	22D	3
		1	217D	5
BACB30XD3K3		1	255	10
		1	605	17
		1	725	52
BACB30XD3K4		1	260	1
		1	740A	30
BACB30XD3K5		1	50	2
		1	265	4
		1	730	12
BACB30XD3K6		1	55	1
		1	270	1
		1	715	15
BACB30XD3K7		1	60	2
		1	275	4
		1	720	3
BACB30XD3K8		1	65	3
BACB30XD4K4		1	705	2
BACB30XD4K6		1	70	2
		1	280	2
		1	710	2
BACB30XD6K5		1	45	1
BACC30AB6C		1	30	10
		1	32	6
		1	240	23
		1	590	9

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1006  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BACC30AB6S		1	16N	3
		1	21N	3
		1	216N	5
		1	221N	3
BACC30AB6S		1	226N	4
		1	231N	2
		1	236N	9
		1	586N	9
BACC30BL6		1	100	7
		1	315	6
		1	530	12
BACC30BN6L		1	12N	4
		1	17N	3
		1	22N	3
		1	217N	5
		1	222N	3
		1	227N	4
		1	232N	2
		1	237N	9
BACC30BS6S		1	587N	9
		1	535	10
		1	635	4
BACJ40E20-20		1	523L	1
BACN10JB4CM		1	795	20
BACN10JR3CFD		1	80	22
		1	130	25
		1	300	24
		1	380	29
		1	625	30
BACN10JR3CFM		1	690	208
		1	785	63
BACN10JR4CFM		1	780	2
BACN10JR6CFD		1	85	1
		1	295	4
BACN10JR6CFM		1	790	49
BACN10KE4ACD		1	90	2
		1	305	2
BACN10KE4ACM		1	775	2
BACN10YR4CD		1	522L	1
BACN11X6CD		1	430	10
BACN11X7CD		1	425	4
BACN11X8CD		1	435	4
BACR10AJ7CD		1	520	14
BACR10AJ8CD		1	515	4

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1007

Nov 01/02

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BACR15BA3AD		1	125	50
		1	375	58
BACR15DR3A		1	685	416
		1	770	272
BACR15DR3AC		1	75	50
		1	290	60
		1	620	60
BACR15DR4AC		1	510	36
BACR15FP5MP3R		1	575	20
BACR15GA6-11		1	595	1
BACR15GA6-6		1	667	101
BACS12GU4K15		1	521	1
BACS40V009C055		1	210	1
BACS40V010B119		1	205	2
BACS40V010B266		1	410	1
BACS40V010B271		1	400	1
BACS40V010C038		1	395	1
BACS40V010C040		1	200	2
		1	405	1
BACS40V037B094		1	570	1
BACS40V050B094		1	565	1
BACW10BP7DP		1	495	28
BACW10BP8DP		1	490	8
BACW10EC4S		1	521L	1
BACW10UC10P		1	285	8
		1	615	6
BRFR220C4-1M		1	775	2
BRFR220C4-10		1	90	2
		1	305	2
BRF200C3D		1	80	22
		1	130	25
		1	300	24
		1	380	29
		1	625	30

# 57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1008  
 Nov 01/02




**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
BRF200C3M		1	690	208
		1	785	63
BRF200C4M		1	780	2
BRF200C6D		1	85	1
		1	295	4
BRF200C6M		1	790	49
BRF210C4M		1	795	20
BRF270C4M		1	795	20
BRR25007CD		1	520	14
BRR25008CD		1	515	4
CR3552P5-3		1	575	20
F5001-3BAC		1	690	208
		1	785	63
F5001-4BAC		1	780	2
F5001-6BAC		1	790	49
F51747-4-1CD		1	90	2
		1	305	2
F51747-4-1DL		1	775	2
F52483-7CD		1	520	14
F52483-8CD		1	515	4
HL523AZ6-3		1	235	9
		1	236D	9
		1	585	9
		1	586D	9
HL523AZ6-4		1	230	2
		1	231D	2
HL523AZ6-5		1	10	4
		1	11D	4
		1	225	4
		1	226D	4
HL523AZ6-6		1	15	3
		1	16D	3
		1	220	3
		1	221D	3

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1009

Nov 01/02

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ		
HL523AZ6-7		1	20	3		
		1	21D	3		
		1	215	5		
		1	216D	5		
HL523AZ6-8 HL97DU6		1	25	6		
		1	16N	3		
		1	21N	3		
		1	216N	5		
		1	221N	3		
		1	226N	4		
		1	231N	2		
		1	236N	9		
		1	586N	9		
		HL97KG6		1	30	10
				1	32	6
1	240			23		
1	590			9		
HL97PB6		1	30	10		
		1	32	6		
HL97PB6		1	240	23		
		1	590	9		
		1	630	4		
HST10AG6-3 HST10AG6-4 HST10AG6-5		1	310	6		
		1	95	7		
HST1094DU6		1	525	22		
		1	535	10		
		1	635	4		
HST79-6		1	100	7		
		1	315	6		
		1	530	12		
		1	100	7		
HST79CY6		1	315	6		
		1	530	12		
		1	522L	1		
H52732-4CD K51602-3BAC		1	80	22		
		1	130	25		
		1	300	24		
		1	380	29		
		1	625	30		

# 57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1010  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
K51602-6BAC		1	85	1
		1	295	4
L804-6K3		1	235	9
L804-6K3		1	236D	9
		1	585	9
		1	586D	9
L804-6K4		1	230	2
		1	231D	2
L804-6K5		1	10	4
		1	11D	4
		1	225	4
		1	226D	4
L804-6K6		1	15	3
		1	16D	3
		1	220	3
		1	221D	3
L804-6K7		1	20	3
		1	21D	3
		1	215	5
		1	216D	5
L804-6K8		1	25	6
MS35650-3255T		1	523	1
NAS1149D0316J		1	360	20
NAS1149D0332J		1	120	25
NAS1149D0416H		1	522	3
NAS1399D3		1	125A	50
		1	375B	58
NAS1399MW4A3		1	650	4
NAS1805-7L		1	505	28
NAS1805-8L		1	500	8
NAS8703-2		1	602	2
NAS8703-3		1	37	2
NS103190SE048		1	775	2
NS103203SE02		1	690	208
		1	785	63
NS103203SE048		1	780	2
NS103203SE064		1	790	49
NS202476-02		1	80	22
		1	130	25
		1	300	24
		1	380	29
		1	625	30

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1011

Nov 01/02

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
NS202476-064		1	85	1
		1	295	4
NS202493-048-1		1	90	2
		1	305	2
NS202742S7F2		1	520	14
NS202742S8F2		1	515	4
PLH54CD		1	522L	1
RBEJ40E20-20		1	523L	1
RET740046		1	655C	1
SLFCMV6		1	12N	4
		1	17N	3
		1	22N	3
		1	217N	5
		1	222N	3
		1	227N	4
		1	232N	2
		1	237N	9
		1	587N	9
SLR4169C6EASP1		1	445	10
SLR4169C7EASP1		1	440	4
SLR4169C8EASP1		1	450	4
T8092C1032		1	690	208
		1	785	63
T8092C1032CD		1	80	22
		1	130	25
		1	300	24
		1	380	29
		1	625	30
T8092C428		1	780	2
T8092C624		1	790	49
T8092C624CD		1	85	1
		1	295	4
VN152D1-02		1	690	208
VN152D1-02		1	785	63
VN152D1-048		1	780	2
VN152D1-064		1	790	49
102A9212-4		1	90	2
		1	305	2
102F9201-3		1	80	22
		1	130	25
		1	300	24
		1	380	29
		1	625	30

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1012  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
102F9201-6		1	85	1
		1	295	4
104F9212-4		1	775	2
109F171-4		1	795	20
109F9201-3		1	690	208
		1	785	63
109F9201-4		1	780	2
109F9201-6		1	790	49
119T0007-10		1	335	1
119T0007-11		1	345	1
119T0007-12		1	330	1
119T0007-9		1	350	1
119T1075-1		1	1A	RF
119T1075-10		1	17	3
		1	222	3
119T1075-11		1	21	3
		1	216	5
119T1075-12		1	22	3
		1	217	5
119T1075-15		1	1B	RF
119T1075-16		1	5A	RF
119T1075-17		1	1C	RF
119T1075-18		1	5B	RF
119T1075-19		1	1D	RF
119T1075-2		1	5	RF
119T1075-20		1	5C	RF
119T1075-21		1	1E	RF
119T1075-22		1	5D	RF
119T1075-3		1	236	9
		1	586	9
119T1075-4		1	237	9
		1	587	9

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1013  
 Nov 01/02

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
119T1075-5		1	231	2
119T1075-6		1	232	2
119T1075-7		1	11	4
119T1075-7		1	226	4
119T1075-8		1	12	4
		1	227	4
119T1075-9		1	16	3
		1	221	3
119T1500-3		1	540	1
119T1500-4		1	545	1
119T1600-1		1	320	1
119T1600-10		1	325A	1
119T1600-11		1	385A	1
119T1600-12		1	390A	1
119T1600-13		1	370A	2
119T1600-14		1	365A	2
119T1600-2		1	325	1
119T1600-5		1	385	1
119T1600-6		1	390	1
119T1600-7		1	370	2
119T1600-8		1	365	2
119T1600-9		1	320A	1
119T1700-1		1	695	1
119T1700-2		1	700	1
119T1701-1		1	165	1
119T1701-2		1	170	1
119T1703-1		1	105	1
119T1703-10		1	140	1
119T1703-11		1	155	1
119T1703-12		1	160	1
119T1703-2		1	110	1

**57-28-02**

 ILLUSTRATED PARTS LIST  
 01.1 Page 1014  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
119T1703-3		1	190	1
119T1703-4		1	195	1
119T1703-5		1	175	1
119T1703-6		1	180	1
119T1703-7		1	145	1
119T1703-8		1	150	1
119T1703-9		1	135	1
119T1801-1		1	660	1
119T1801-2		1	665	1
119T1801-3		1	640	1
119T1801-4		1	645	1
119T1801-5		1	660A	1
119T1801-6		1	665A	1
119T1801-7		1	640A	1
119T1801-8		1	645A	1
119T1805-1		1	800	1
119T1805-10		1	815A	1
119T1805-11		1	820A	1
119T1805-12		1	825A	1
119T1805-13		1	800B	1
119T1805-14		1	805B	1
119T1805-15		1	810B	1
119T1805-16		1	815B	1
119T1805-17		1	820B	1
119T1805-18		1	825B	1
119T1805-2		1	805	1
119T1805-3		1	810	1
119T1805-4		1	815	1
119T1805-5		1	820	1
119T1805-6		1	825	1
119T1805-7		1	800A	1
119T1805-8		1	805A	1
119T1805-9		1	810A	1
119T1910-1		1	415	1
119T1910-2		1	420	1
119T1930-1		1	670	1
119T1930-2		1	675	1
119T1930-3		1	670A	1
119T1950-1		1	550	1
119T1950-2		1	560	1

57-28-02

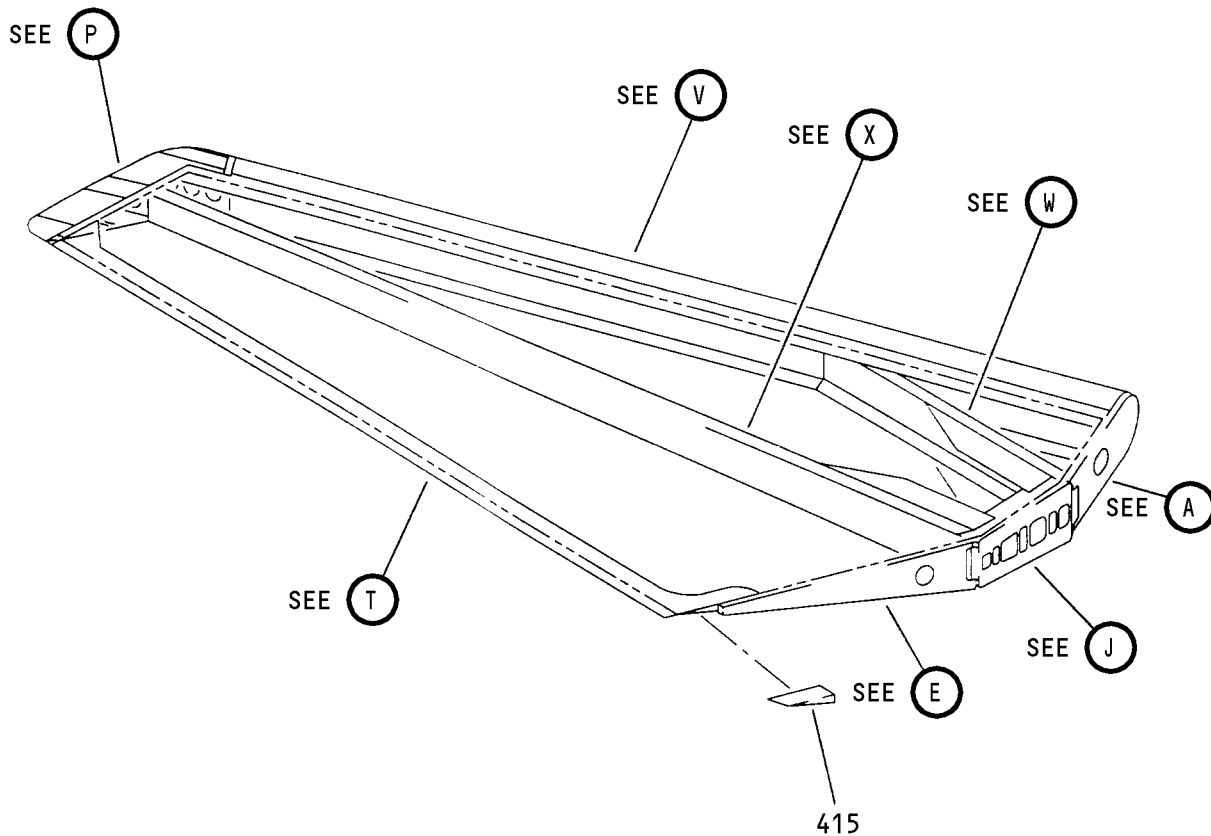
 ILLUSTRATED PARTS LIST  
 01.1 Page 1015  
 Nov 01/02

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
119T1950-3		1	555	1
119T1950-4		1	562	1
119T1950-5		1	550A	1
		1	555A	1
119T1950-6		1	560A	1
		1	562A	1
16291		1	655B	1
16335		1	580	5
43700E048		1	795	20
72-457		1	580A	5
740E20-20		1	523L	1

# 57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1016  
 Nov 01/02

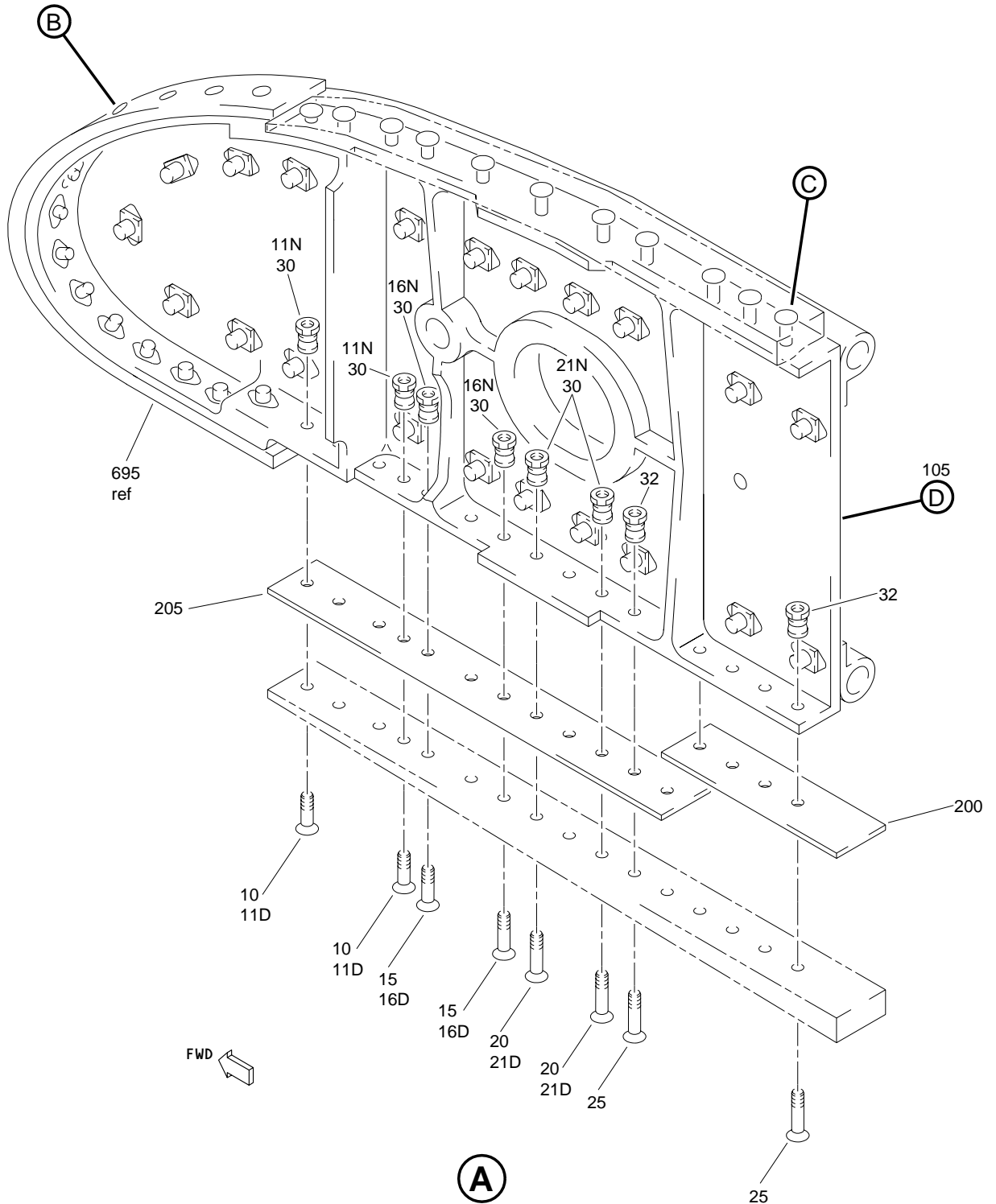




Wing Raked Tip Assembly  
Figure 1 (Sheet 1)

**57-28-02**

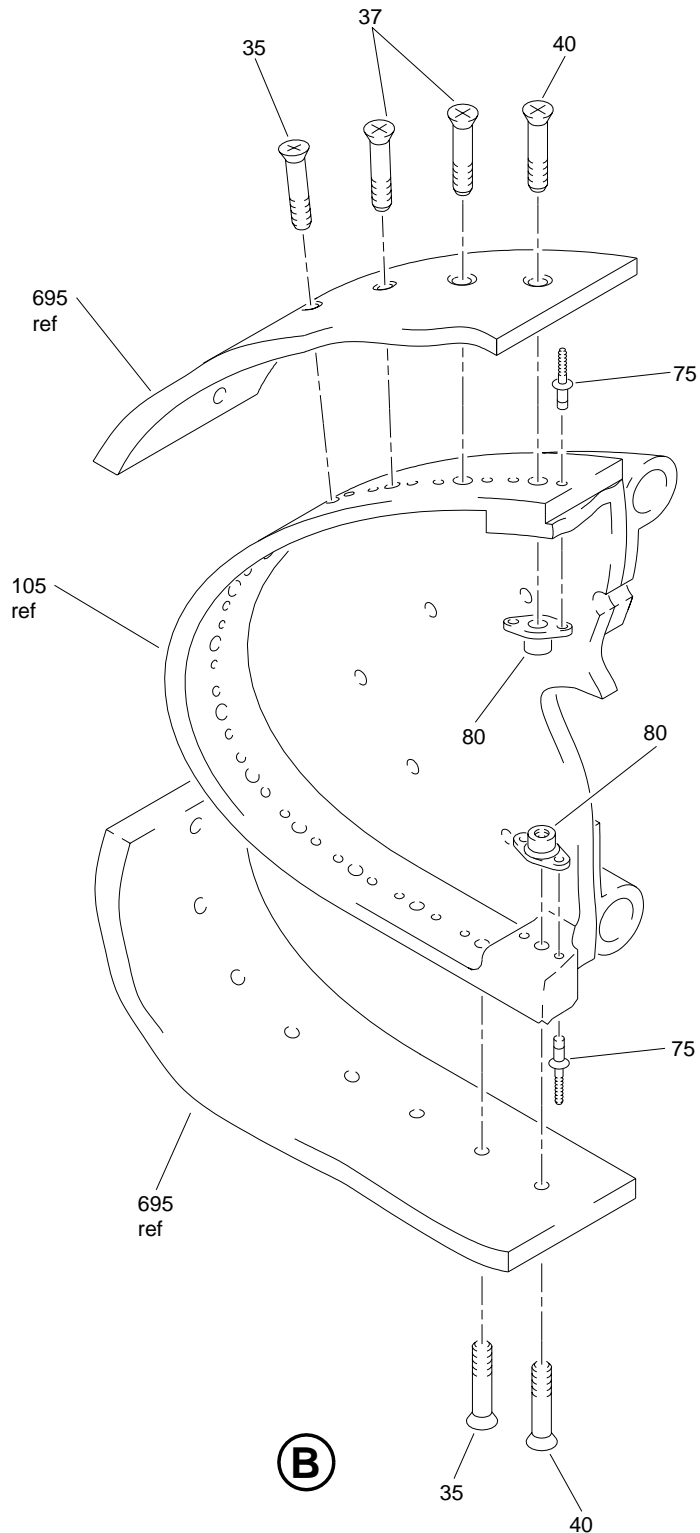
ILLUSTRATED PARTS LIST  
01.1 Page 1018  
Nov 01/02



Wing Raked Tip Assembly  
Figure 1 (Sheet 2)

**57-28-02**

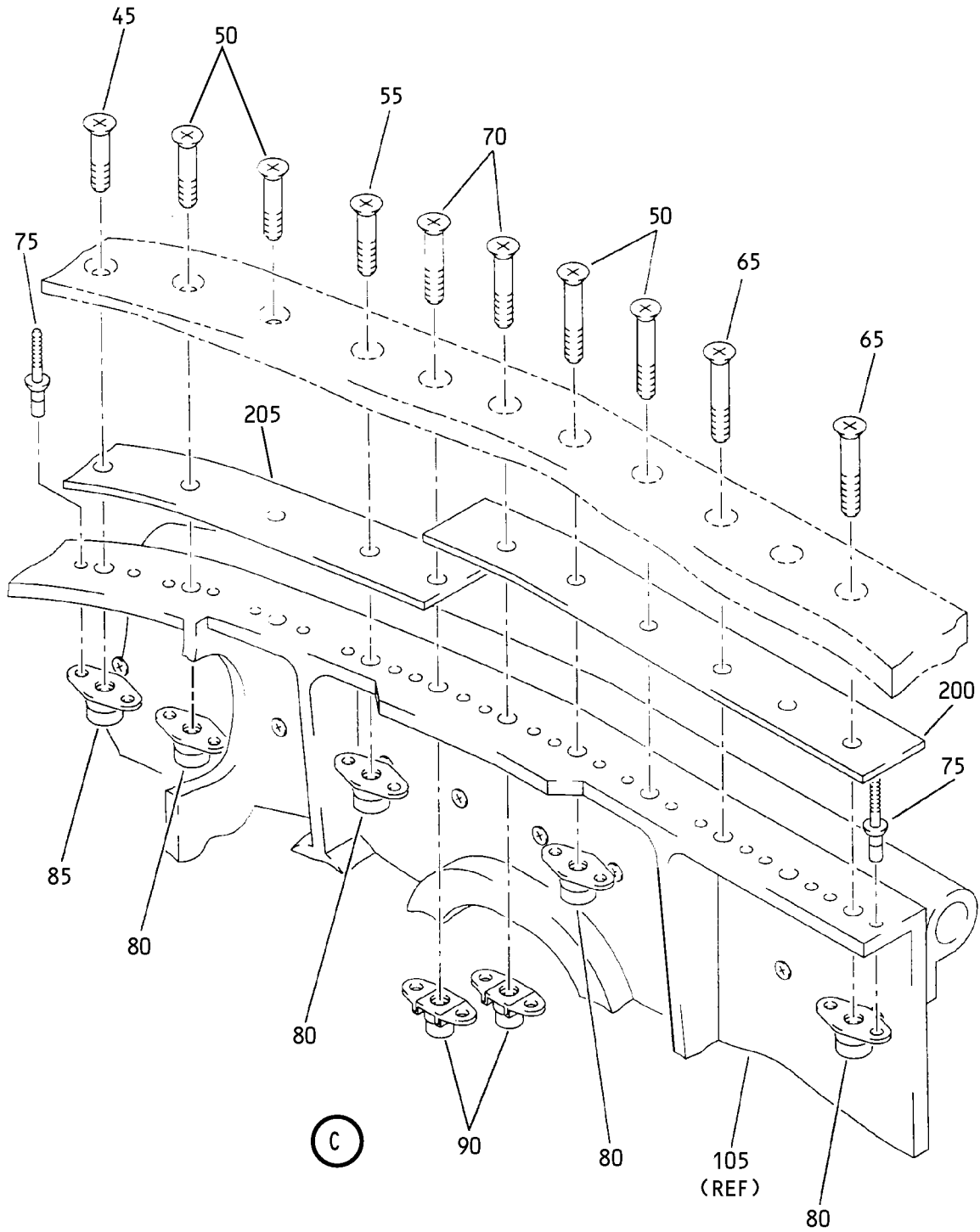
ILLUSTRATED PARTS LIST  
01.1 Page 1019  
Nov 01/02



Wing Raked Tip Assembly  
Figure 1 (Sheet 3)

**57-28-02**

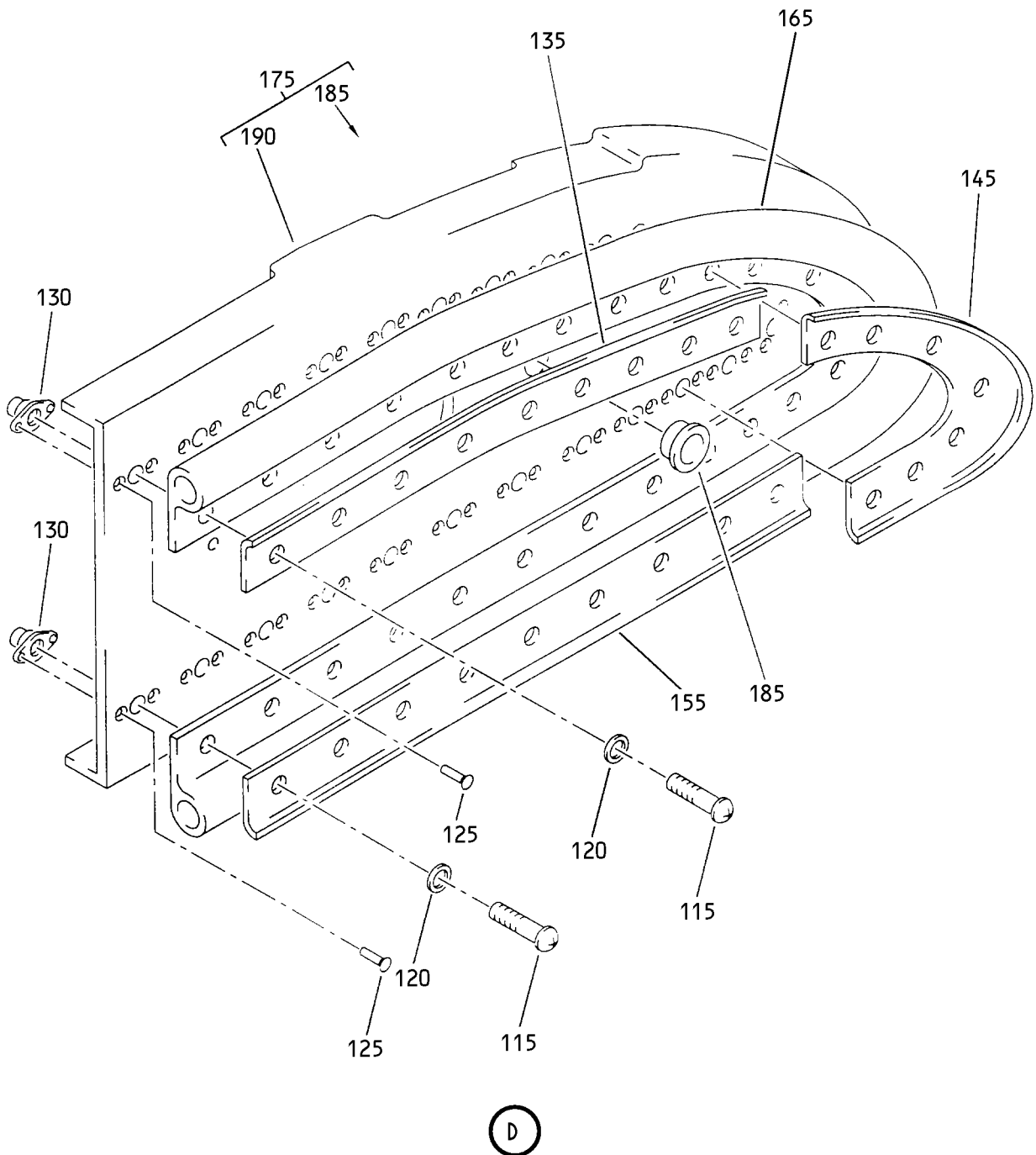
ILLUSTRATED PARTS LIST  
01.1 Page 1020  
Nov 01/02



Wing Raked Tip Assembly  
Figure 1 (Sheet 4)

**57-28-02**

ILLUSTRATED PARTS LIST  
01.1 Page 1021  
Nov 01/02

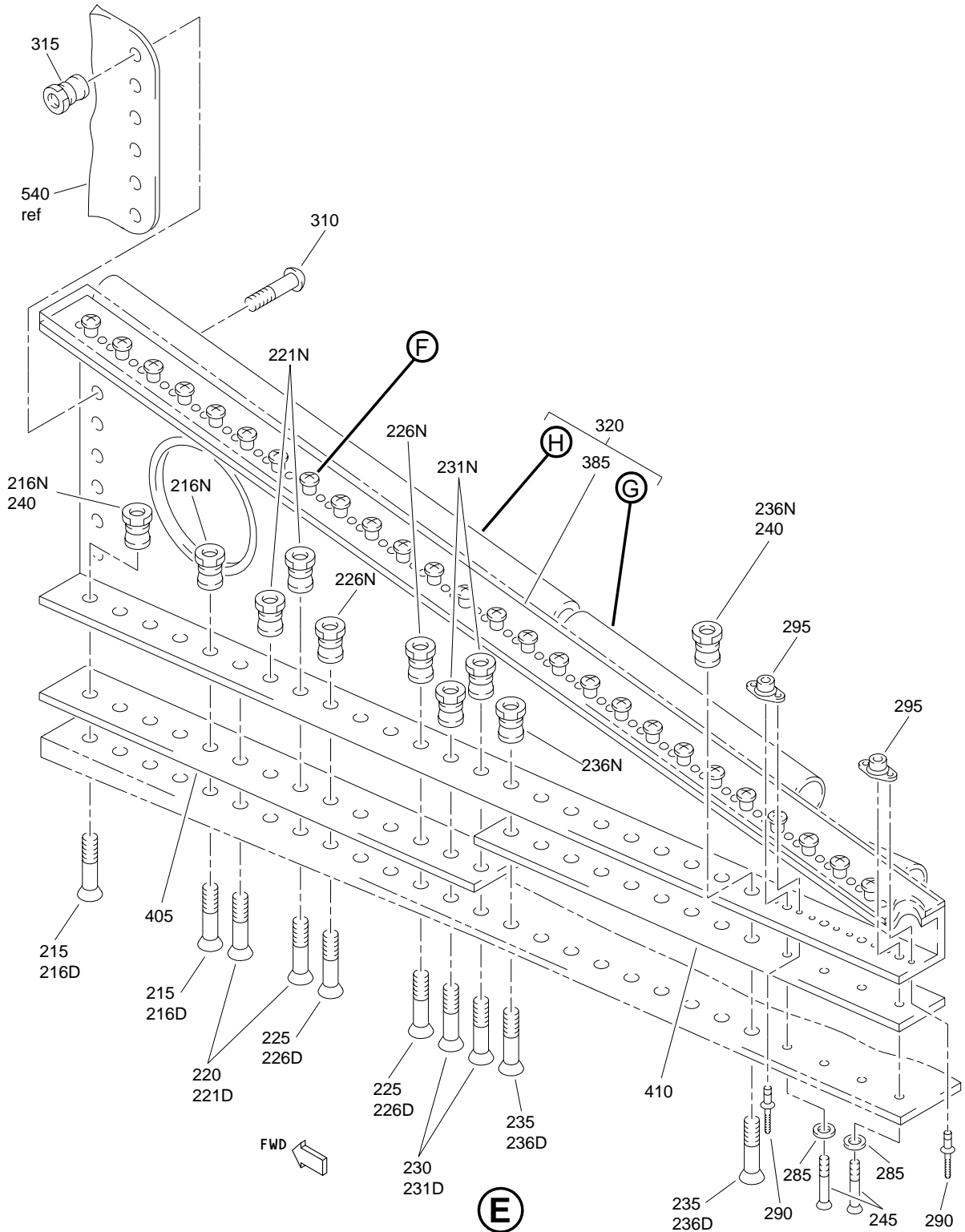


Wing Raked Tip Assembly  
 Figure 1 (Sheet 5)

**57-28-02**

ILLUSTRATED PARTS LIST  
 01.1 Page 1022  
 Nov 01/02

K31469

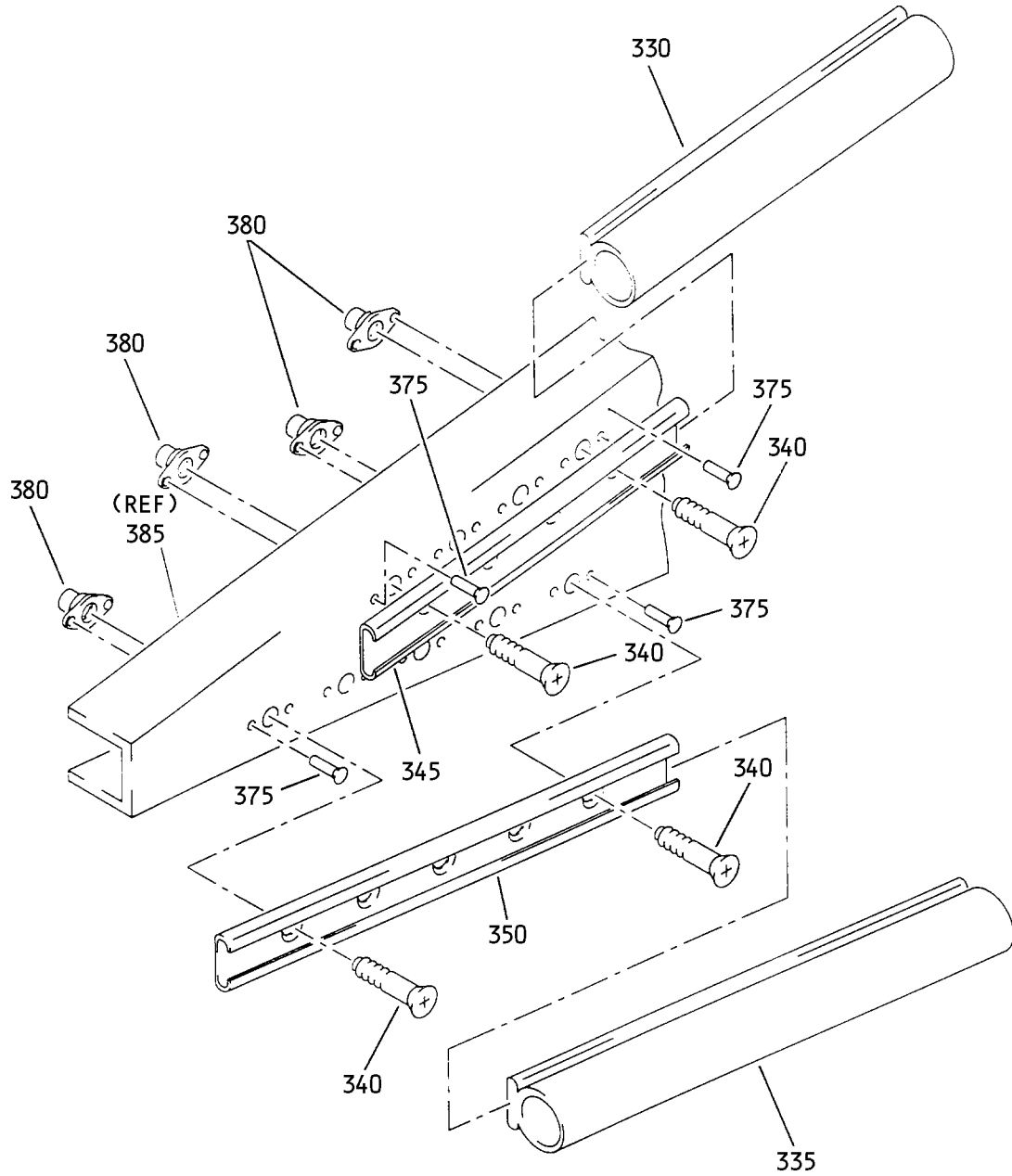


Wing Raked Tip Assembly  
 Figure 1 (Sheet 6)

**57-28-02**

ILLUSTRATED PARTS LIST  
 01.1 Page 1023  
 Nov 01/02





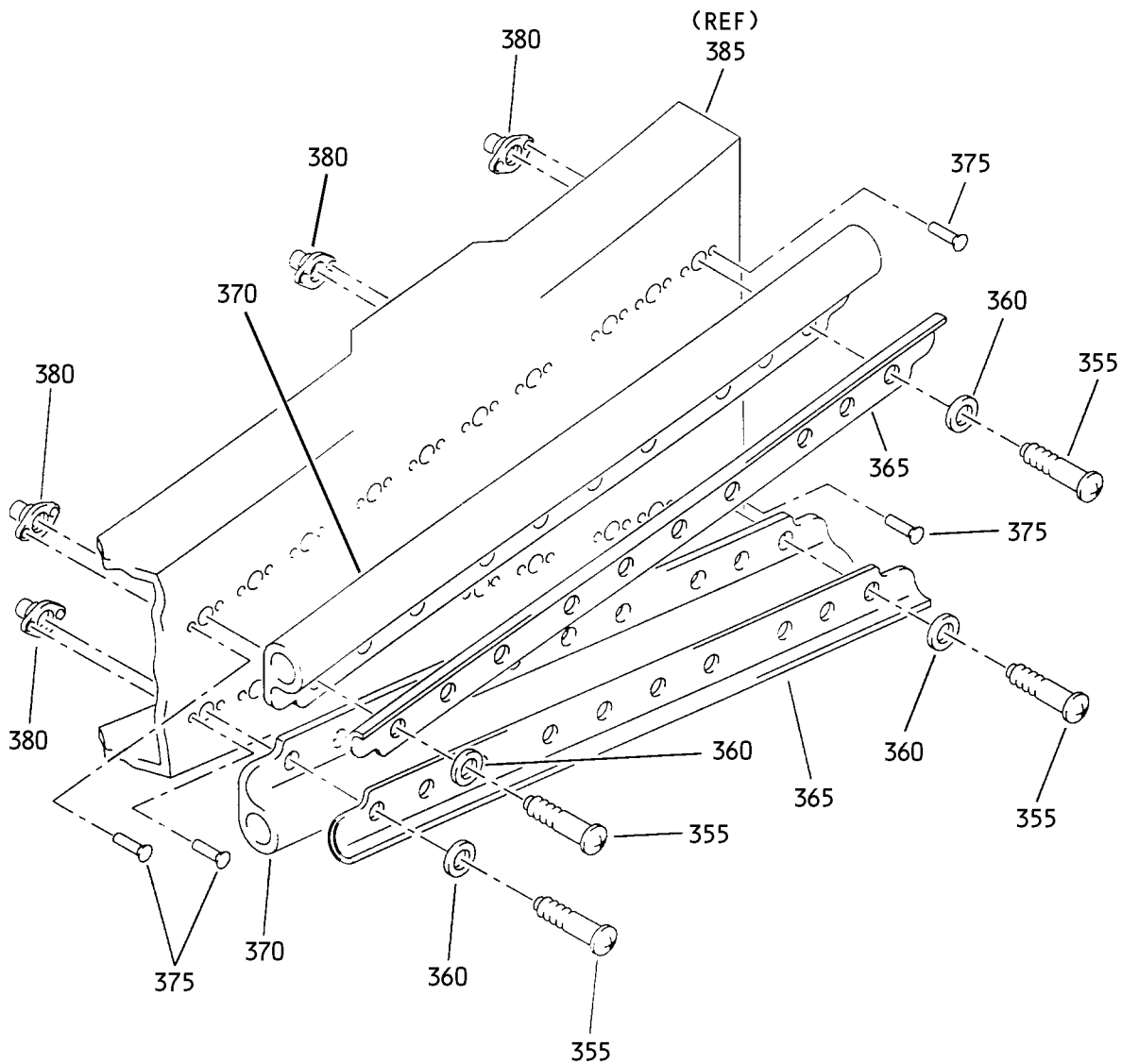
G

Wing Raked Tip Assembly  
Figure 1 (Sheet 8)

**57-28-02**

ILLUSTRATED PARTS LIST  
01.1 Page 1025  
Nov 01/02



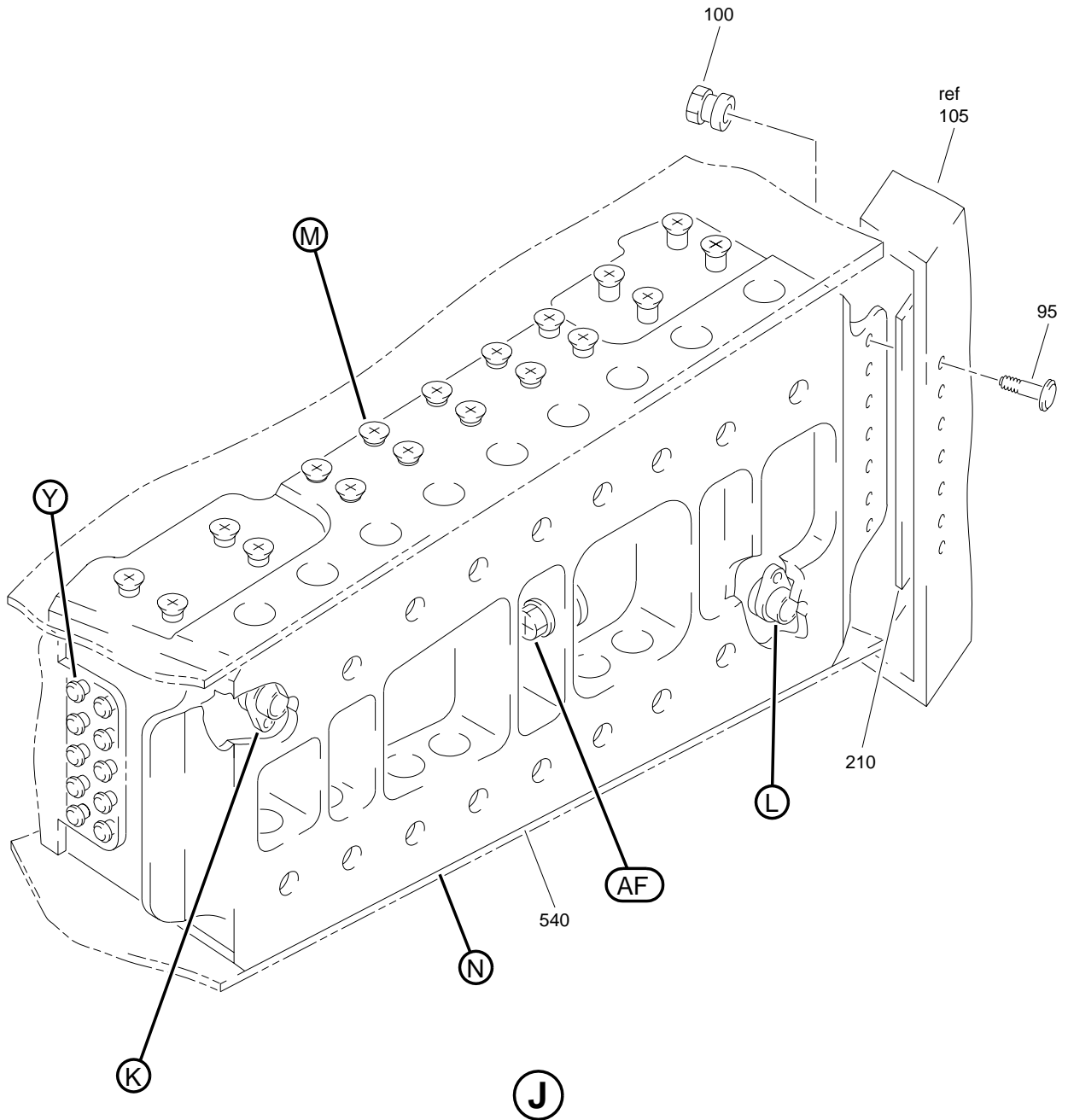


(H)

Wing Raked Tip Assembly  
Figure 1 (Sheet 9)

**57-28-02**

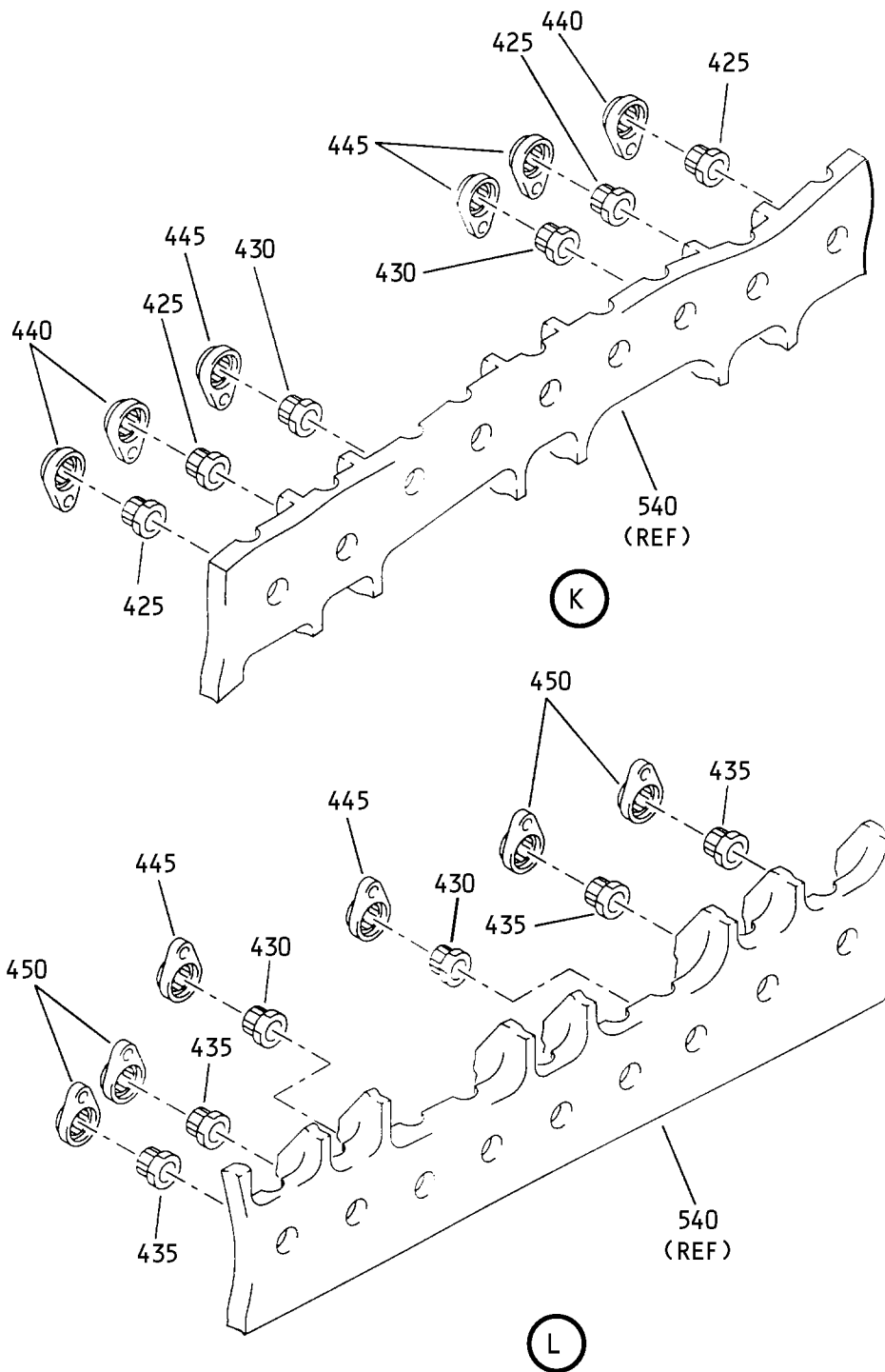
ILLUSTRATED PARTS LIST  
01.1 Page 1026  
Nov 01/02



Wing Raked Tip Assembly  
Figure 1 (Sheet 10)

**57-28-02**

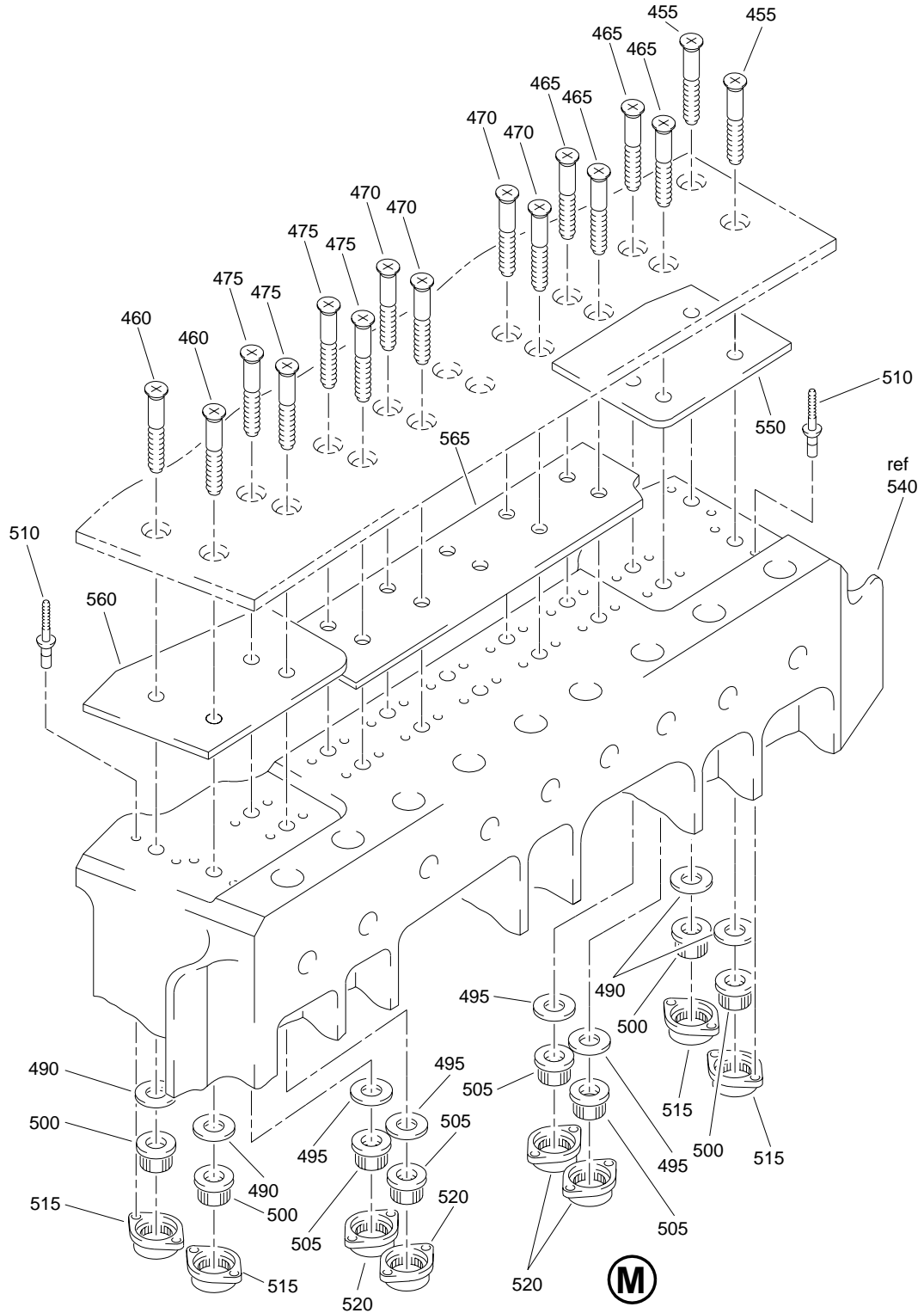
ILLUSTRATED PARTS LIST  
01.1 Page 1027  
Nov 01/02



Wing Raked Tip Assembly  
Figure 1 (Sheet 11)

**57-28-02**

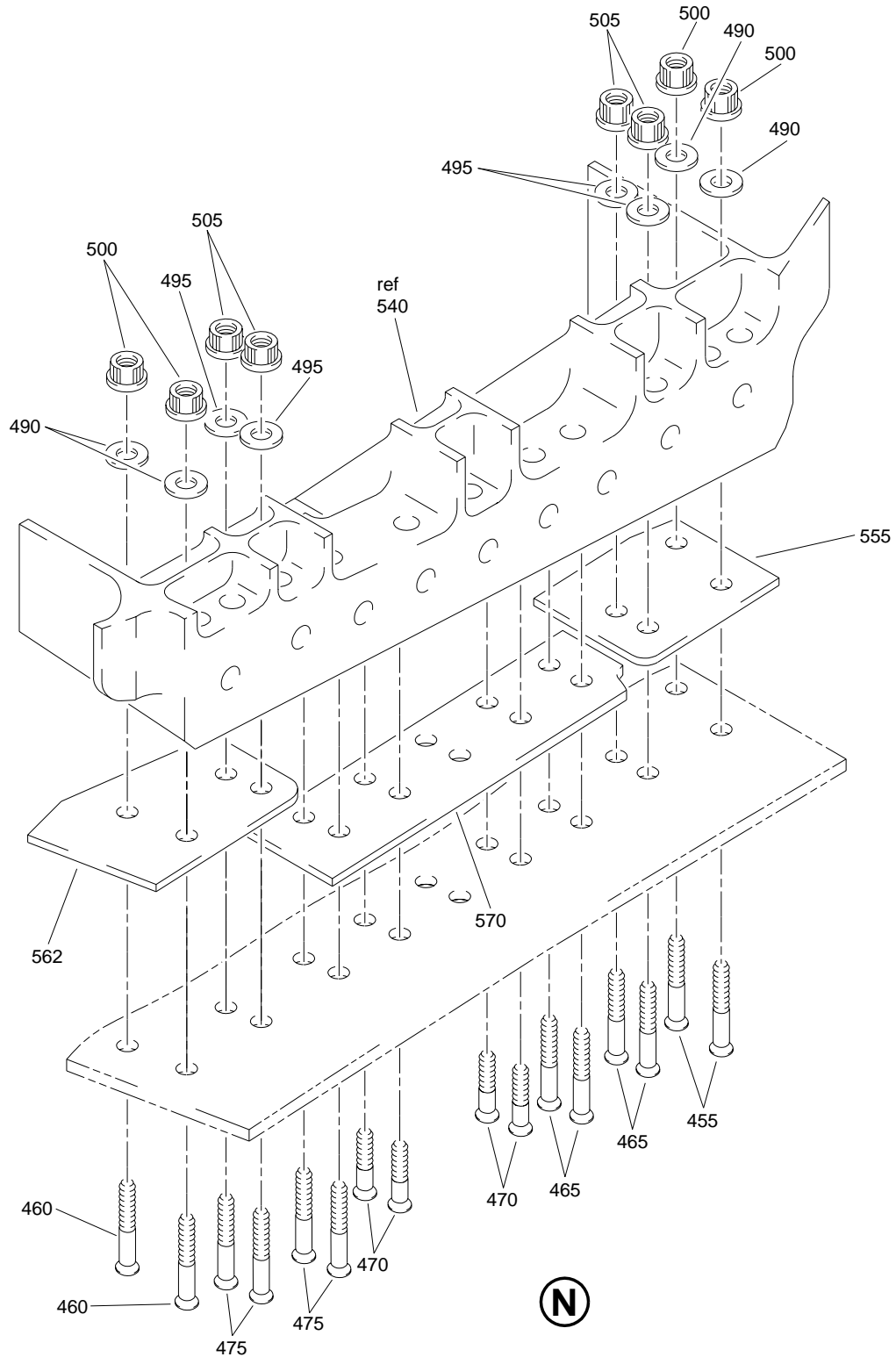
ILLUSTRATED PARTS LIST  
01.1 Page 1028  
Nov 01/02



Wing Raked Tip Assembly  
 Figure 1 (Sheet 12)

**57-28-02**

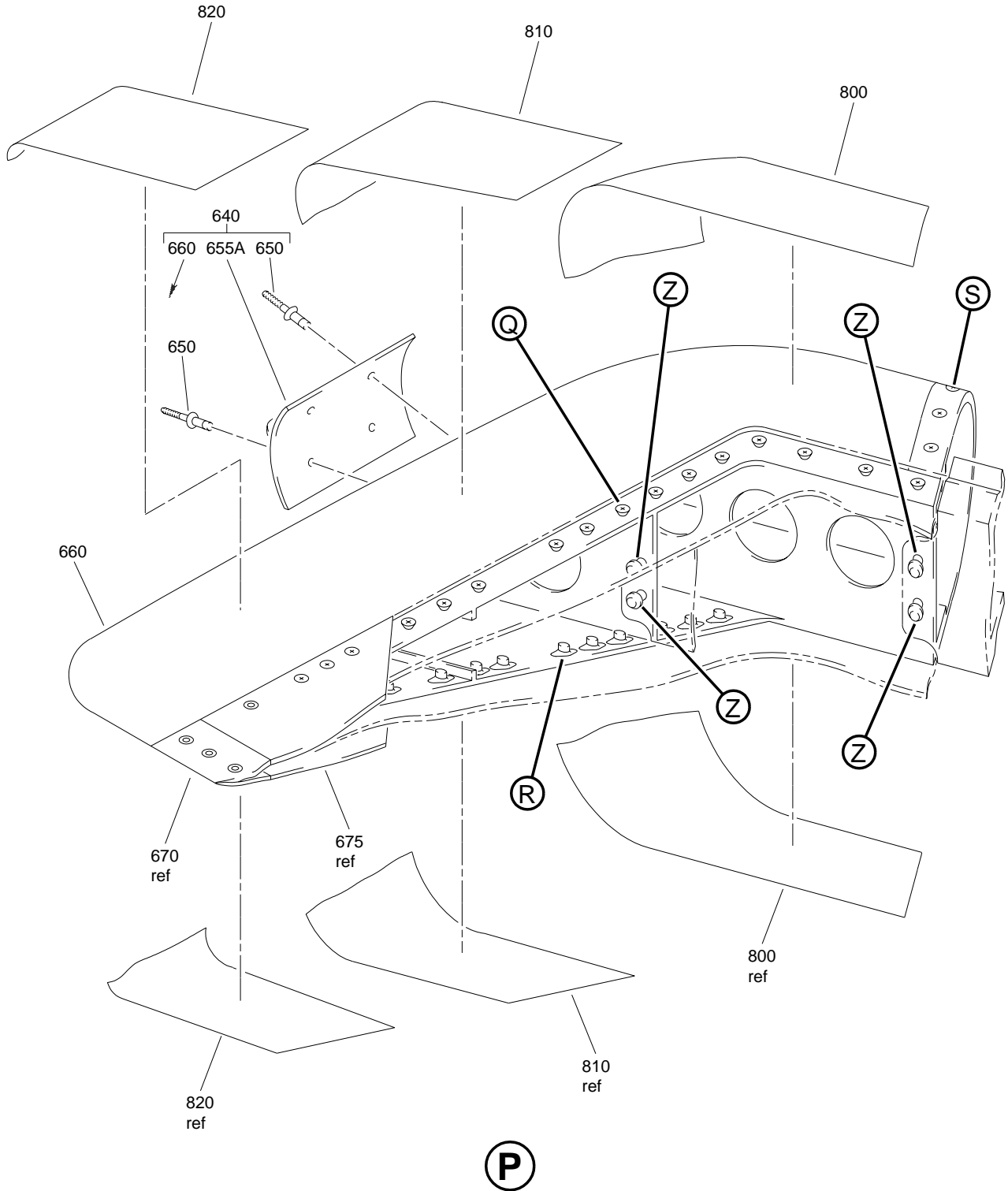
ILLUSTRATED PARTS LIST  
 01.1 Page 1029  
 Nov 01/02



Wing Raked Tip Assembly  
Figure 1 (Sheet 13)

**57-28-02**

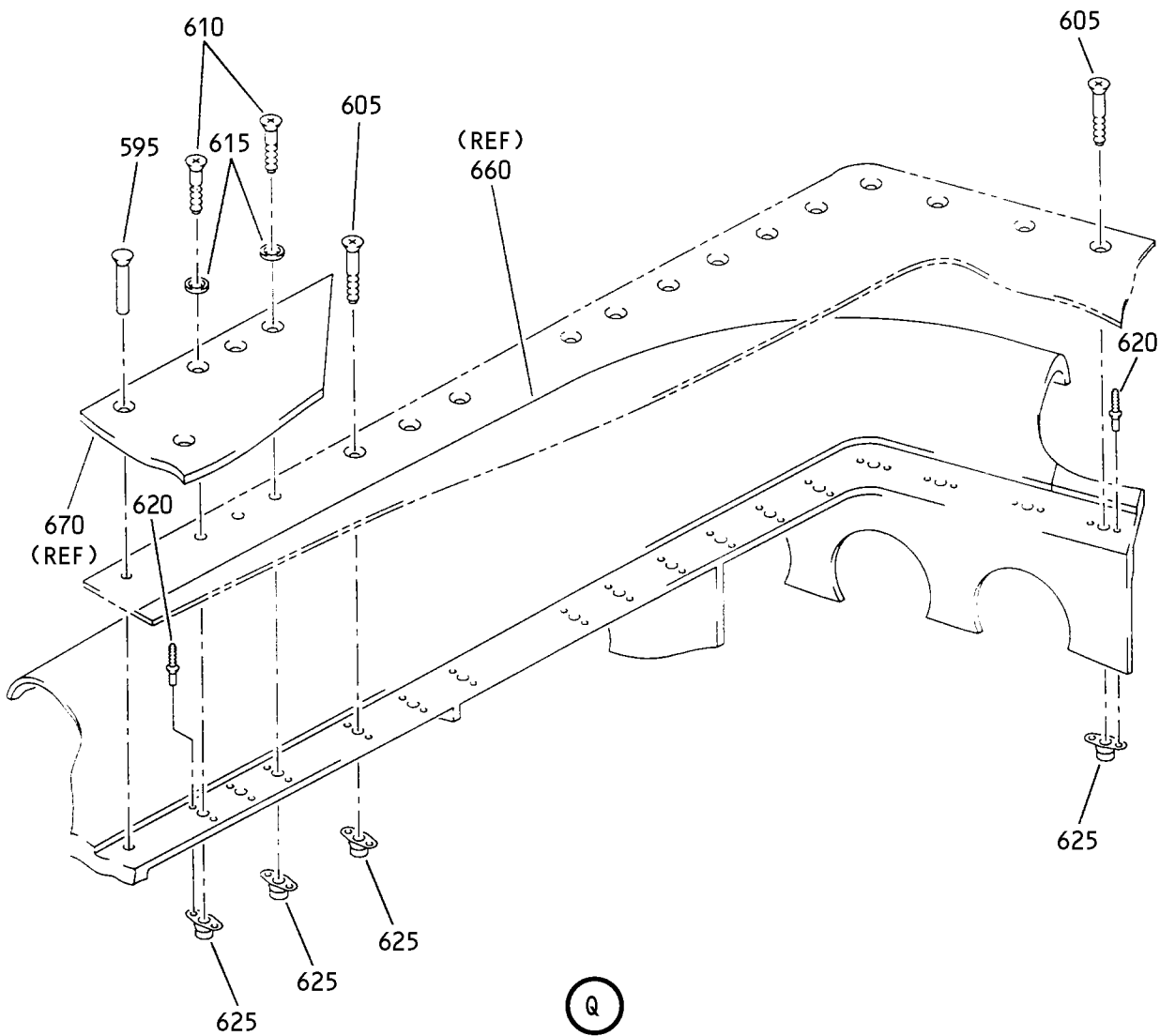
ILLUSTRATED PARTS LIST  
01.1 Page 1030  
Nov 01/02



Wing Raked Tip Assembly  
Figure 1 (Sheet 14)

**57-28-02**

ILLUSTRATED PARTS LIST  
01.1 Page 1031  
Nov 01/02

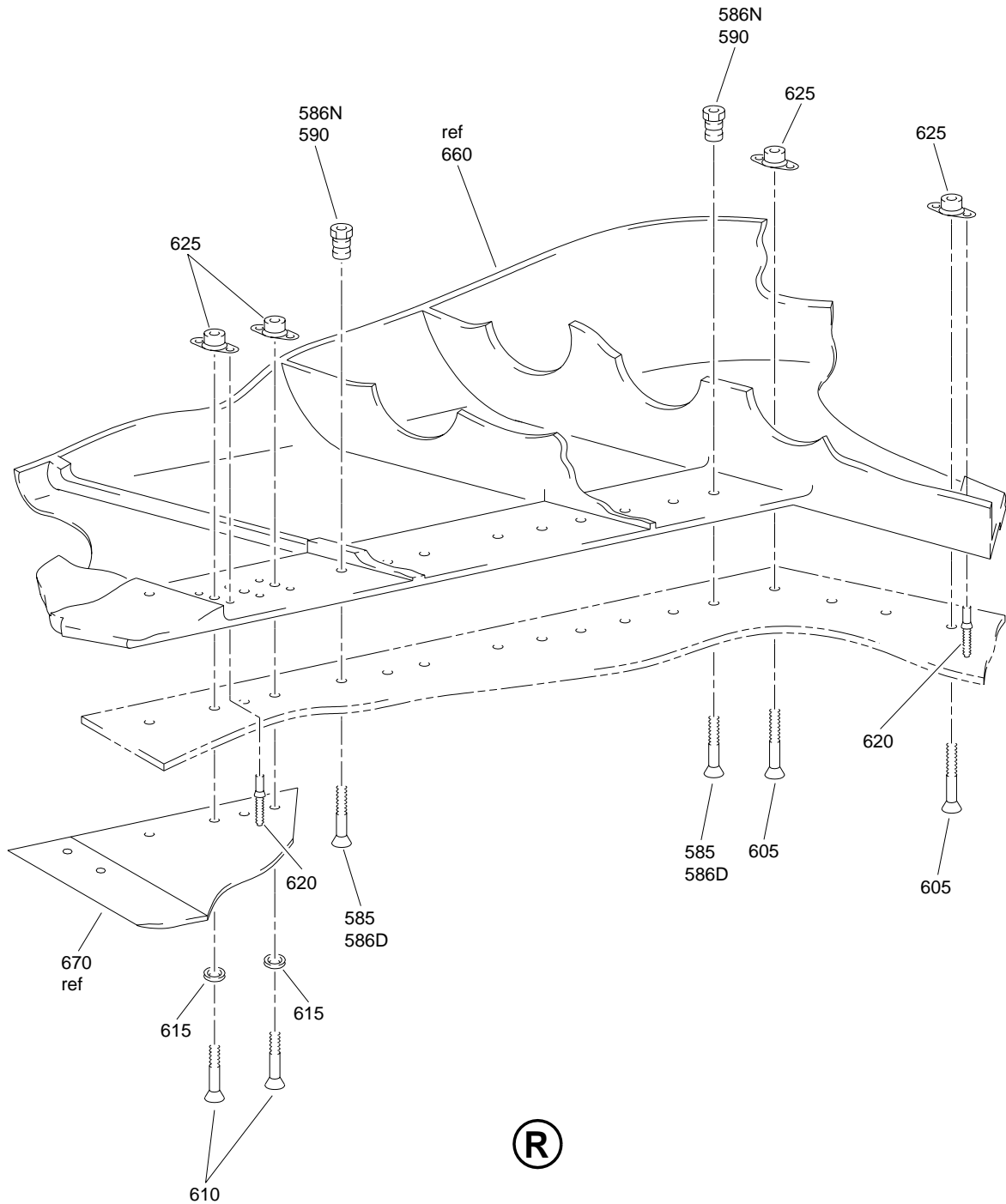


Q

Wing Raked Tip Assembly  
Figure 1 (Sheet 15)

**57-28-02**

ILLUSTRATED PARTS LIST  
01.1 Page 1032  
Nov 01/02

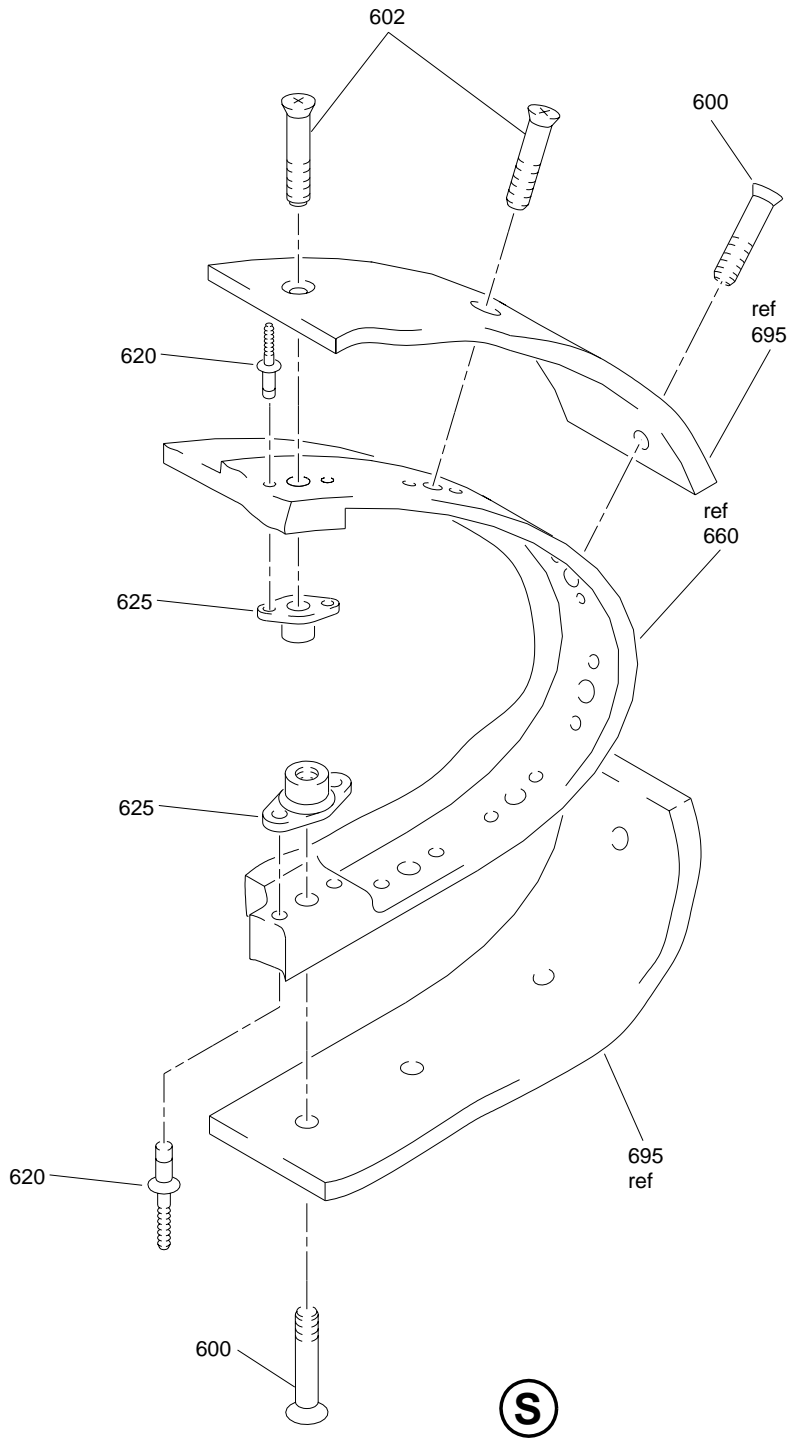


Wing Raked Tip Assembly  
Figure 1 (Sheet 16)

**57-28-02**

ILLUSTRATED PARTS LIST  
01.1 Page 1033  
Nov 01/02

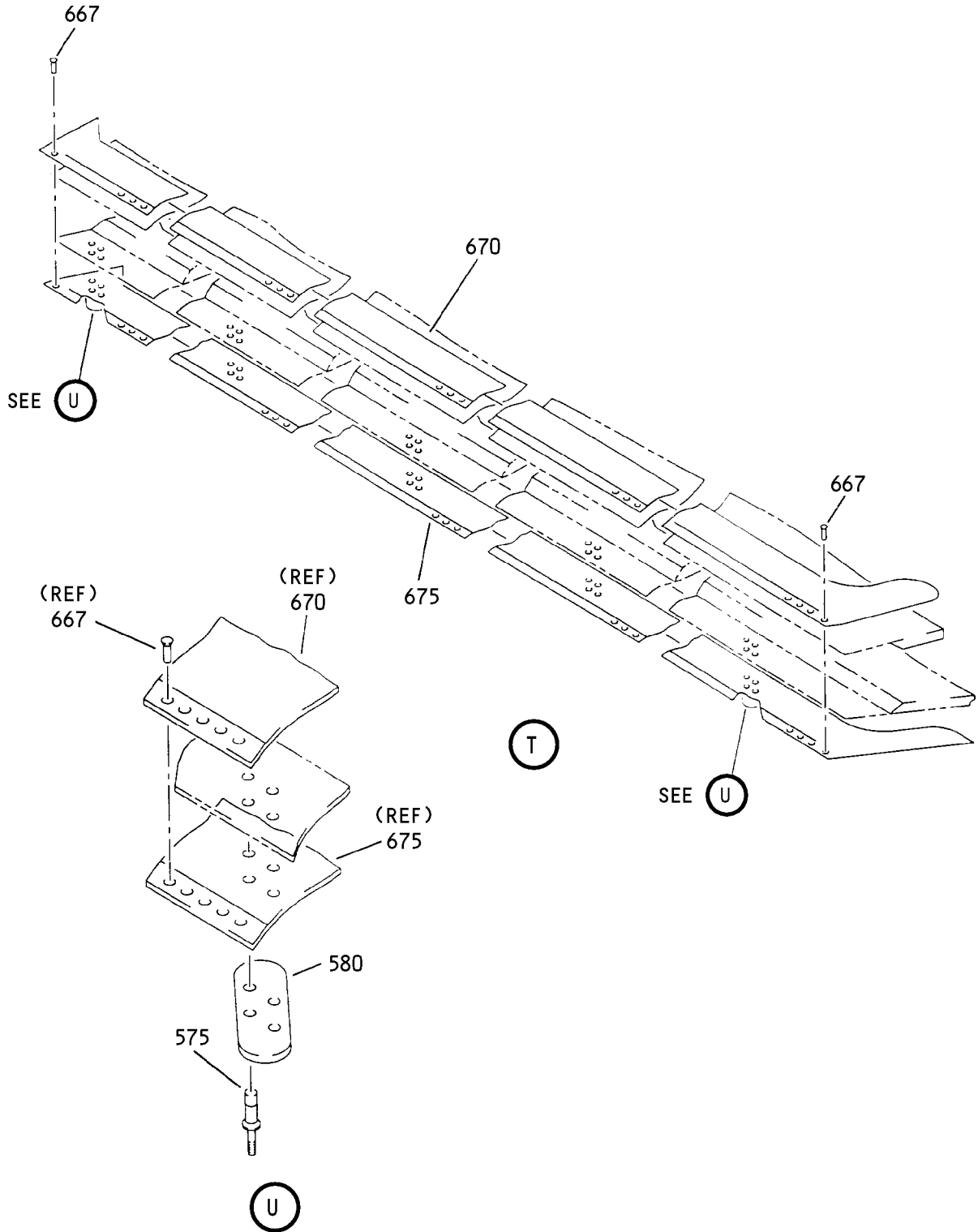




Wing Raked Tip Assembly  
Figure 1 (Sheet 17)

**57-28-02**

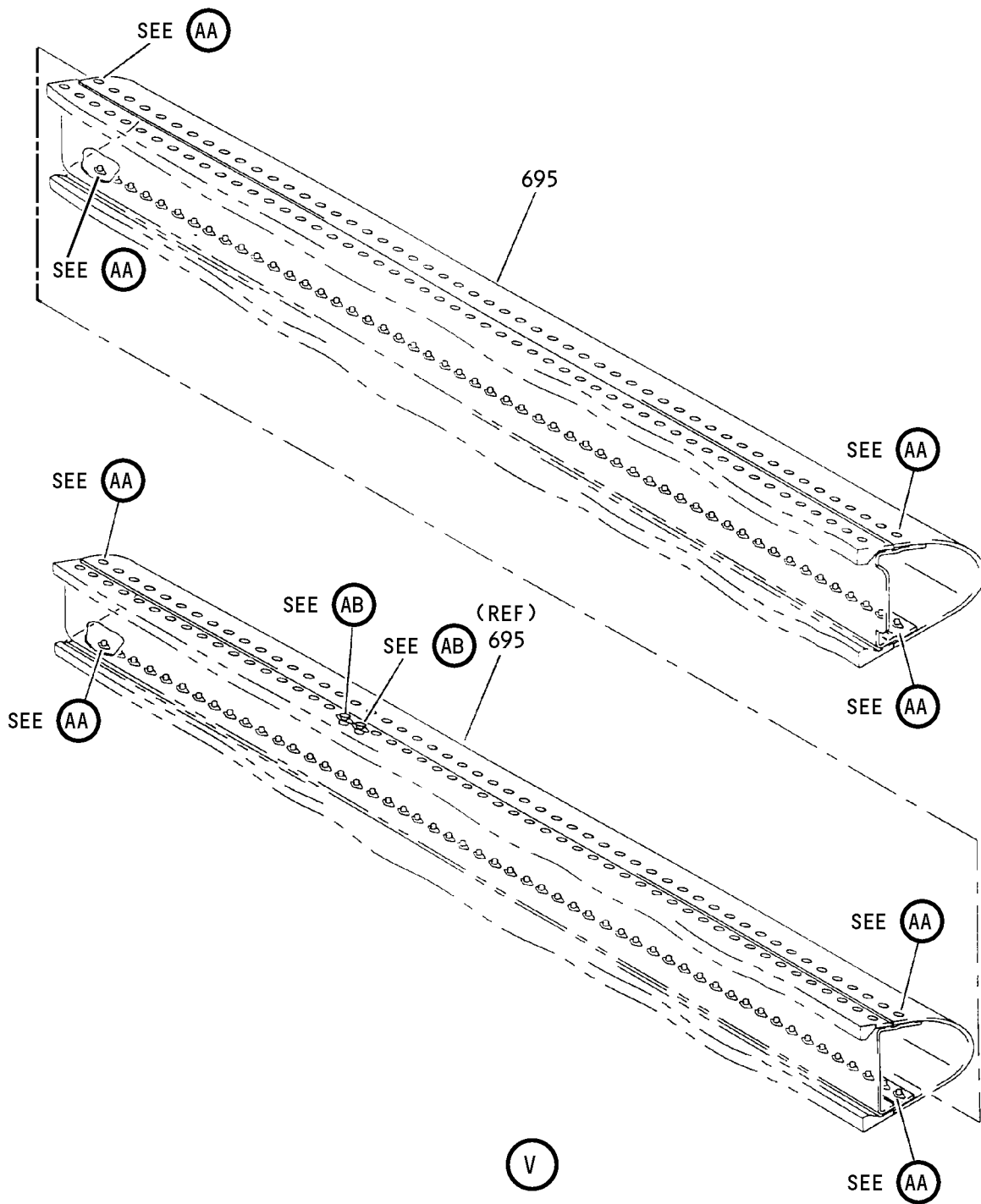
ILLUSTRATED PARTS LIST  
01.1 Page 1034  
Nov 01/02



Wing Raked Tip Assembly  
Figure 1 (Sheet 18)

**57-28-02**

ILLUSTRATED PARTS LIST  
01.1 Page 1035  
Nov 01/02

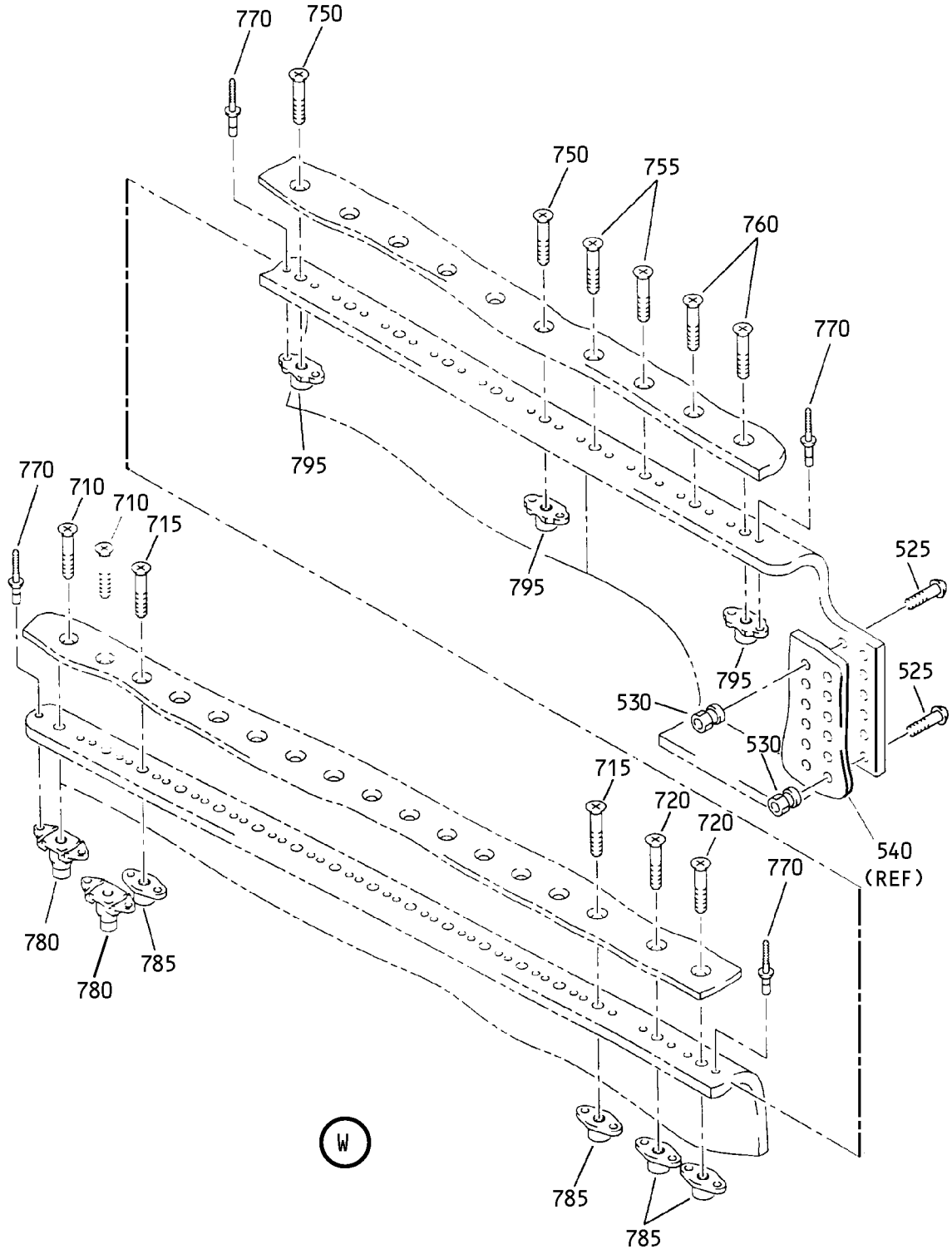


Wing Raked Tip Assembly  
Figure 1 (Sheet 19)

**57-28-02**

ILLUSTRATED PARTS LIST  
01.1 Page 1036  
Nov 01/02

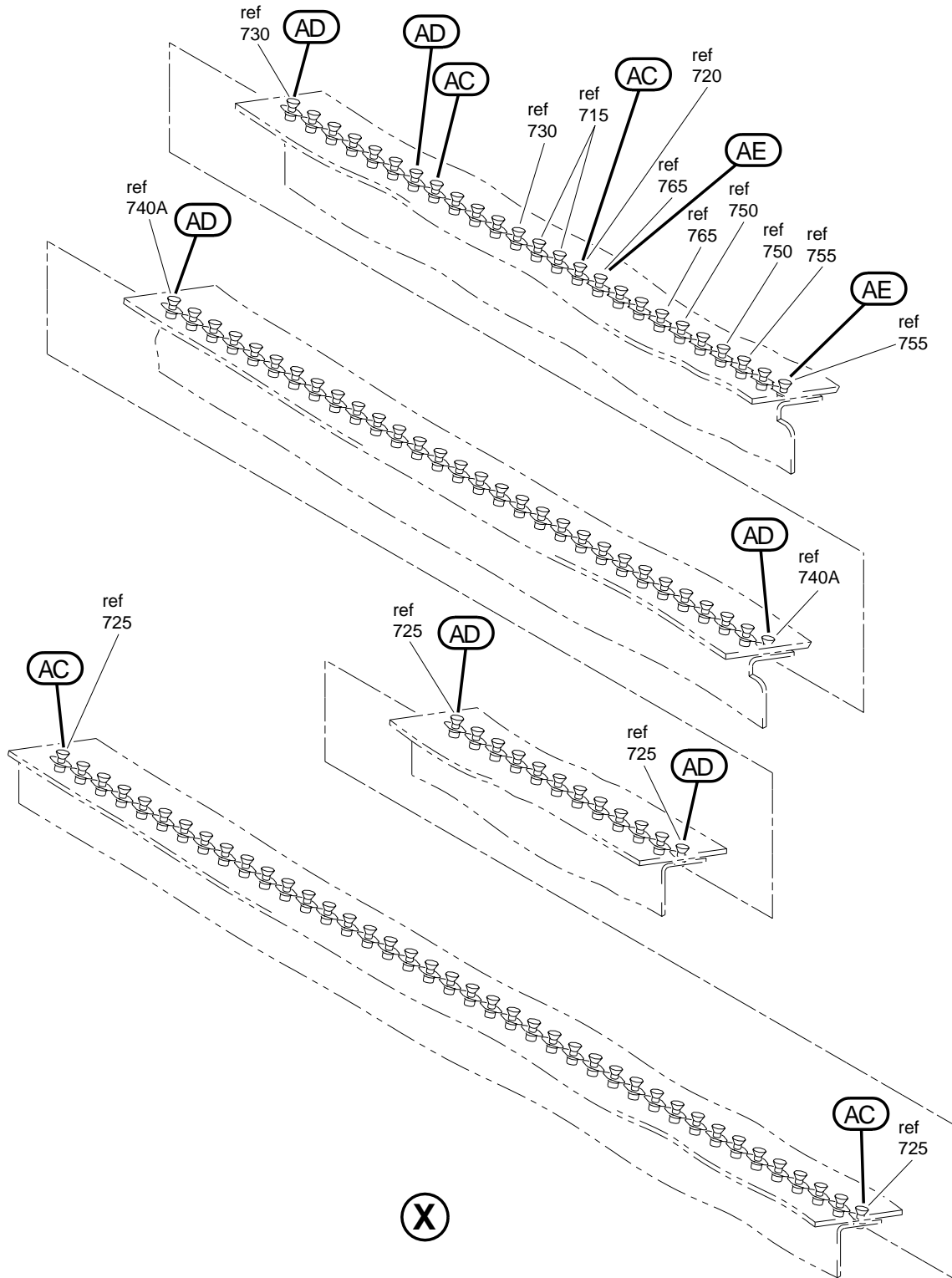
K32087



Wing Raked Tip Assembly  
Figure 1 (Sheet 20)

**57-28-02**

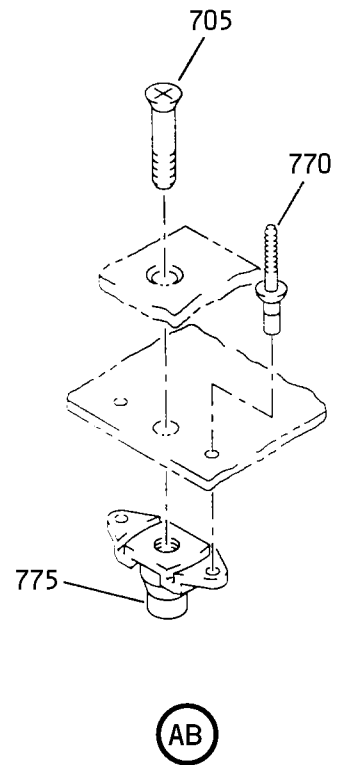
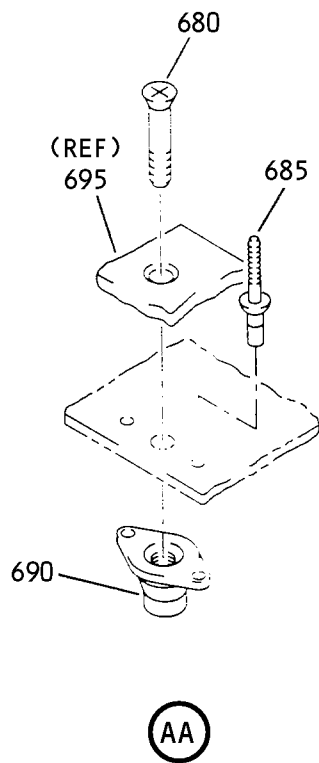
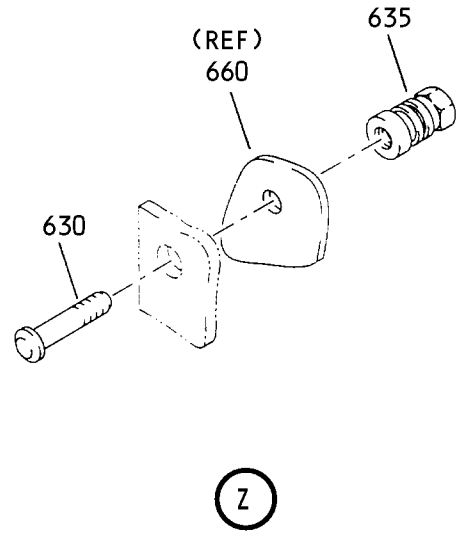
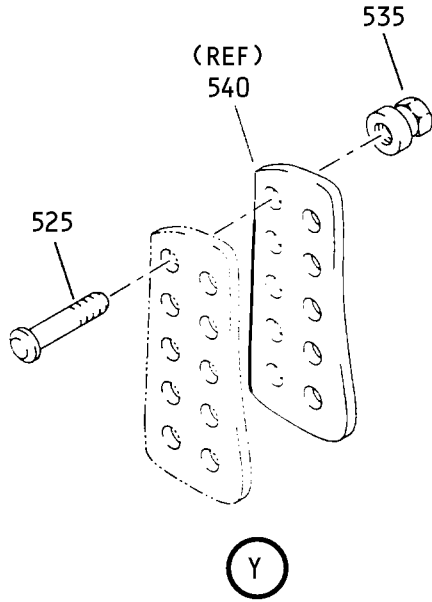
ILLUSTRATED PARTS LIST  
01.1 Page 1037  
Nov 01/02



Wing Raked Tip Assembly  
 Figure 1 (Sheet 21)

**57-28-02**

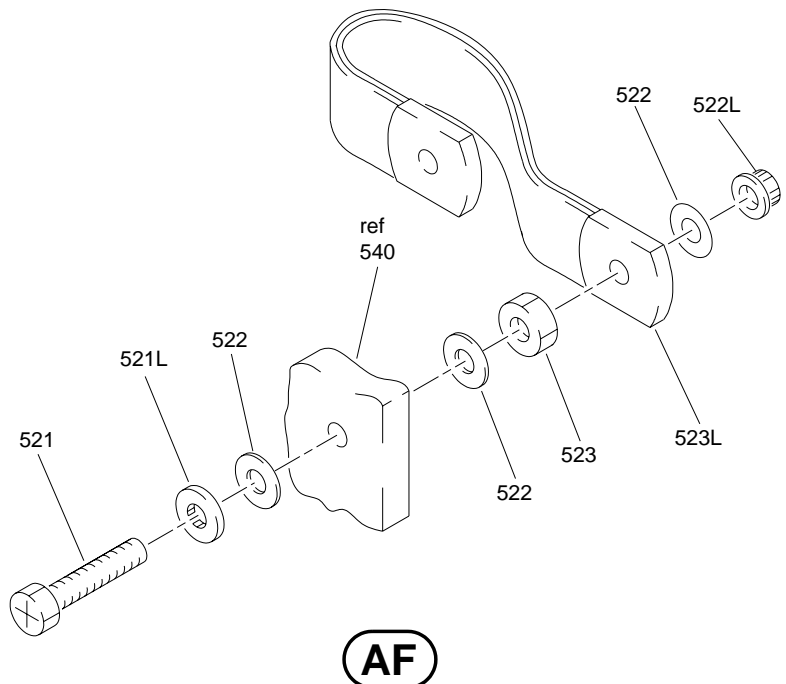
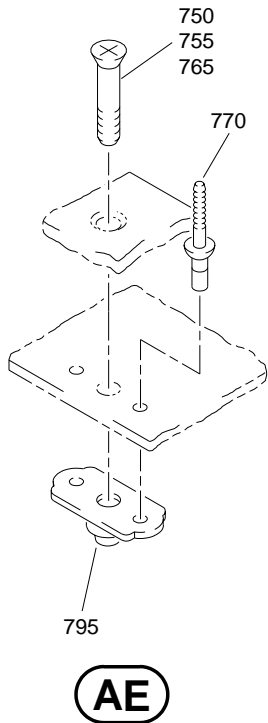
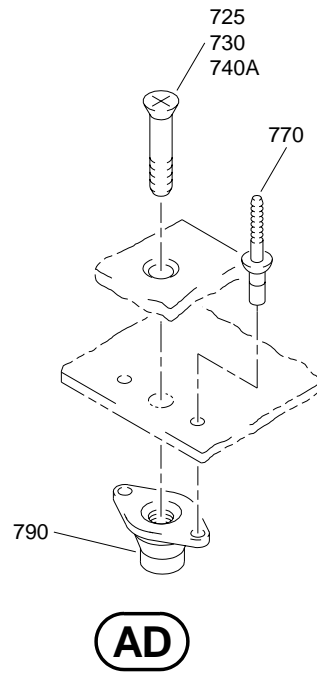
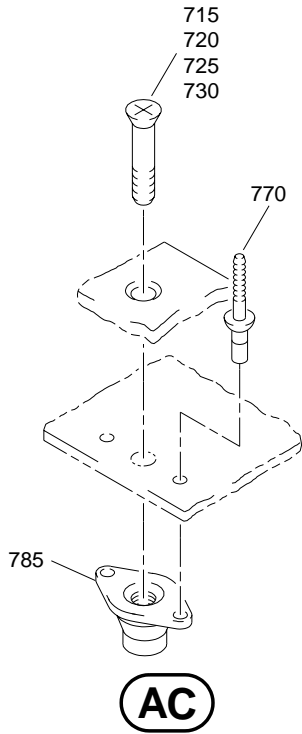
ILLUSTRATED PARTS LIST  
 01.1 Page 1038  
 Nov 01/02



Wing Raked Tip Assembly  
 Figure 1 (Sheet 22)

**57-28-02**

ILLUSTRATED PARTS LIST  
 01.1 Page 1039  
 Nov 01/02



Wing Raked Tip Assembly  
 Figure 1 (Sheet 23)

**57-28-02**

ILLUSTRATED PARTS LIST  
 01.1 Page 1040  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R -1A	119T1075-1		TIP ASSY-RAKED WING	A	RF
R -1B	119T1075-15		TIP ASSY-RAKED WING	C	RF
R -1C	119T1075-17		TIP ASSY-RAKED WING	D	RF
R -1D	119T1075-19		TIP ASSY-RAKED WING	G	RF
R -1E	119T1075-21		TIP ASSY-RAKED WING	J	RF
-5	119T1075-2		TIP ASSY-RAKED WING	B	RF
R -5A	119T1075-16		TIP ASSY-RAKED WING	E	RF
R -5B	119T1075-18		TIP ASSY-RAKED WING	F	RF
R -5C	119T1075-20		TIP ASSY-RAKED WING	H	RF
R -5D	119T1075-22		TIP ASSY-RAKED WING	K	RF
10	HL523AZ6-5		.BOLT- (V56878) (SPEC BACB30NZ6K5) (OPT L804-6K5 (V06725)) (OPT HL523AZ6-5 (V73197)) (OPT HL523AZ6-5 (V92215)) (OPT HL523AZ6-5 (V97928)) (OPT HL523AZ6-5 (V06725)) (OPT HL523AZ6-5 (V60516)) (OPT HL523AZ6-5 (VOPTK6))	C-H	4
R -11	119T1075-7		.KIT ASSY-SUBSTITUTION (OPT ITEM 12)	A,B	4

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1041

Nov 01/02



FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-11D	HL523AZ6-5		..BOLT- (V56878) (SPEC BACB30NZ6K5) (OPT L804-6K5 (V06725)) (OPT HL523AZ6-5 (V73197)) (OPT HL523AZ6-5 (V92215)) (OPT HL523AZ6-5 (V97928)) (OPT HL523AZ6-5 (V06725)) (OPT HL523AZ6-5 (V60516)) (OPT HL523AZ6-5 (VOPTK6))	A,B	1
R 11N	BACB30AB6S		..NUT	A,B	1
R -12	119T1075-8		.KIT ASSY-SUBSTITUTION (OPT ITEM 11)	A,B	4
R -12D	BACB30XB6HK5		..BOLT	A,B	1
R -12N	SLFCMV6		..COLLAR- (V98524) (SPEC BACC30BN6L) (OPT SLFCMV6 (V92215)) (OPT SLFCMV6 (V17446))	A,B	1
15	HL523AZ6-6		.BOLT- (V56878) (SPEC BACB30NZ6K6) (OPT L804-6K6 (V06725)) (OPT HL523AZ6-6 (V92215)) (OPT HL523AZ6-6 (V73197)) (OPT HL523AZ6-6 (V97928)) (OPT HL523AZ6-6 (VOPTK6)) (OPT HL523AZ6-6 (V06725)) (OPT HL523AZ6-6 (V60516))	C-K	3

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1042  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01- -16	119T1075-9		.KIT ASSY-SUBSTITUTION (OPT ITEM 17)	A,B	3
R 16D	HL523AZ6-6		..BOLT- (V56878) (SPEC BACB30NZ6K6) (OPT L804-6K6 (V06725)) (OPT HL523AZ6-6 (V92215)) (OPT HL523AZ6-6 (V73197)) (OPT HL523AZ6-6 (V97928)) (OPT HL523AZ6-6 (V0PTK6)) (OPT HL523AZ6-6 (V06725)) (OPT HL523AZ6-6 (V60516))	A,B	1
R 16N	HL97DU6		..COLLAR- (V73197) (SPEC BACC30AB6S) (OPT HL97DU6 (V56878)) (OPT HL97DU6 (V5M902))	A,B	1
R -17	119T1075-10		.KIT ASSY-SUBSTITUTION (OPT ITEM 16)	A,B	3
R -17D	BACB30XB6HK6		..BOLT	A,B	1
R -17N	SLFCMV6		..COLLAR- (V98524) (SPEC BACC30BN6L) (OPT SLFCMV6 (V92215)) (OPT SLFCMV6 (V17446))	A,B	1

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1043

Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-20	HL523AZ6-7		.BOLT- (V73197) (SPEC BACB30NZ6K7) (OPT L804-6K7 (V06725)) (OPT HL523AZ6-7 (V56878)) (OPT HL523AZ6-7 (V92215)) (OPT HL523AZ6-7 (V97928)) (OPT HL523AZ6-7 (V0PTK6)) (OPT HL523AZ6-7 (V60516)) (OPT HL523AZ6-7 (V06725))	C-K	3
R -21	119T1075-11		.KIT ASSY-SUBSTITUTION (OPT ITEM 22)	A,B	3
R 21D	HL523AZ6-7		..BOLT- (V73197) (SPEC BACB30NZ6K7) (OPT L804-6K7 (V06725)) (OPT HL523AZ6-7 (V56878)) (OPT HL523AZ6-7 (V92215)) (OPT HL523AZ6-7 (V97928)) (OPT HL523AZ6-7 (V0PTK6)) (OPT HL523AZ6-7 (V60516)) (OPT HL523AZ6-7 (V06725))	A,B	1
R 21N	HL97DU6		..COLLAR- (V73197) (SPEC BACC30AB6S) (OPT HL97DU6 (V56878)) (OPT HL97DU6 (V5M902))	A,B	1
R -22	119T1075-12		.KIT ASSY-SUBSTITUTION (OPT ITEM 21)	A,B	3

# 57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1044

Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-					
R -22D	BACB30XB6HK7		..BOLT	A,B	1
R -22N	SLFCMV6		..COLLAR- (V98524) (SPEC BACC30BN6L) (OPT SLFCMV6 (V92215)) (OPT SLFCMV6 (V17446))	A,B	1
25	HL523AZ6-8		.BOLT- (V73197) (SPEC BACB30NZ6K8) (OPT L804-6K8 (V06725)) (OPT HL523AZ6-8 (V56878)) (OPT HL523AZ6-8 (V92215)) (OPT HL523AZ6-8 (V97928)) (OPT HL523AZ6-8 (V0PTK6)) (OPT HL523AZ6-8 (V60516)) (OPT HL523AZ6-8 (V06725))		6
R 30	HL97KG6		.COLLAR- (V5M902) (SPEC BACC30AB6C) (OPT HL97PB6 (V5M902)) (OPT HL97PB6 (V56878)) (OPT HL97KG6 (V73197)) (OPT HL97KG6 (V56878)) (OPT HL97PB6 (V73197))	C-K	10

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1045

Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-32	HL97KG6		.COLLAR- (V5M902) (SPEC BACC30AB6C) (OPT HL97PB6 (V5M902)) (OPT HL97PB6 (V56878)) (OPT HL97KG6 (V73197)) (OPT HL97KG6 (V56878)) (OPT HL97PB6 (V73197))		6
R 35	BACB30VF3K3		.BOLT		10
R 37	NAS8703-3		.BOLT		2
40	BACB30VF3K5		.BOLT		2
45	BACB30XD6K5		.BOLT		1
50	BACB30XD3K5		.BOLT		2
55	BACB30XD3K6		.BOLT		1
60	BACB30XD3K7		.BOLT		2
65	BACB30XD3K8		.BOLT		3
70	BACB30XD4K6		.BOLT		2
75	AF5141-3C		.RIVET- (V53551) (SPEC BACR15DR3AC) (SIZE DETERMINE ON INST)		50
80	BRF200C3D		.NUTPLATE- (V52828) (SPEC BACN10JR3CFD) (OPT K51602-3BAC (V15653)) (OPT NS202476-02 (V80539)) (OPT 102F9201-3 (V72962)) (OPT T8092C1032CD (V11815))		22

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1046  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-85	K51602-6BAC		.NUTPLATE- (V15653) (SPEC BACN10JR6CFD) (OPT NS202476-064 (V80539)) (OPT 102F9201-6 (V72962)) (OPT T8092C624CD (V11815)) (OPT BRFR200C6D (V52828))		1
90	NS202493-048-1		.NUTPLATE- (V80539) (SPEC BACN10KE4ACD) (OPT 102A9212-4 (V72962)) (OPT F51747-4-1CD (V15653)) (OPT BRFR220C4-10 (V52828))		2
95	HST10AG6-5		.BOLT- (VOPTK6) (SPEC BACB30VT6K5) (OPT HST10AG6-5 (V06725)) (OPT HST10AG6-5 (V56878)) (OPT HST10AG6-5 (V73197))		7

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1047  
 Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-100	HST79CY6		.COLLAR- (V73197) (SPEC BACC30BL6) (OPT HST79-6 (V92215)) (OPT HST79CY6 (V56878)) (OPT HST79CY6 (V5M902))		7
105	119T1703-1		.RIB ASSY-LE	A,C,D ,G,J	1
-110	119T1703-2		.RIB ASSY-LE	B,E,F ,H,K	1
115	BACB30NT3K4		..BOLT		25
120	NAS1149D0332J		..WASHER		25
125	BACR15BA3AD		..RIVET- (SIZE DETERMINE ON INST) (OPT ITEM 125A)		50
R -125A	NAS1399D3		..RIVET- (SIZE DETERMINE ON INST) (OPT ITEM 125)		50
130	BRF200C3D		..NUTPLATE- (V52828) (SPEC BACN10JR3CFD) (OPT K51602-3BAC (V15653)) (OPT NS202476-02 (V80539)) (OPT 102F9201-3 (V72962)) (OPT T8092C1032CD (V11815))		25
135	119T1703-9		..RETAINER-SEAL	A,C,D ,G,J	1
-140	119T1703-10		..RETAINER-SEAL	B,E,F ,H,K	1
145	119T1703-7		..RETAINER-SEAL	A,C,D ,G,J	1

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1048  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01- -150	119T1703-8		..RETAINER-SEAL	B,E,F ,H,K	1
155	119T1703-11		..RETAINER-SEAL	A,C,D ,G,J	1
-160	119T1703-12		..RETAINER-SEAL	B,E,F ,H,K	1
165	119T1701-1		..SEAL	A,C,D ,G,J	1
-170	119T1701-2		..SEAL	B,E,F ,H,K	1
175	119T1703-5		..RIB ASSY	A,C,D ,G,J	1
-180	119T1703-6		..RIB ASSY	B,E,F ,H,K	1
185	BACB28AX06C060		...BUSHING		1
190	119T1703-3		...RIB	A,C,D ,G,J	1
-195	119T1703-4		...RIB	B,E,F ,H,K	1
200	BACS40V010C040		.SHIM		2
205	BACS40V010B119		.SHIM		2
210	BACS40V009C055		.SHIM		1
215	HL523AZ6-7		.BOLT- (V73197) (SPEC BACB30NZ6K7) (OPT L804-6K7 (V06725)) (OPT HL523AZ6-7 (V56878)) (OPT HL523AZ6-7 (V92215)) (OPT HL523AZ6-7 (V97928)) (OPT HL523AZ6-7 (V0PTK6)) (OPT HL523AZ6-7 (V60516)) (OPT HL523AZ6-7 (V06725))	C-K	5

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1049

Nov 01/02



FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01- -216	119T1075-11		.KIT ASSY-SUBSTITUTION (OPT ITEM 217)	A,B	5
R 216D	HL523AZ6-7		..BOLT- (V73197) (SPEC BACB30NZ6K7) (OPT L804-6K7 (V06725)) (OPT HL523AZ6-7 (V56878)) (OPT HL523AZ6-7 (V92215)) (OPT HL523AZ6-7 (V97928)) (OPT HL523AZ6-7 (V0PTK6)) (OPT HL523AZ6-7 (V60516)) (OPT HL523AZ6-7 (V06725))	A,B	1
R 216N	HL97DU6		..COLLAR- (V73197) (SPEC BACC30AB6S) (OPT HL97DU6 (V56878)) (OPT HL97DU6 (V5M902))	A,B	1
R -217	119T1075-12		.KIT ASSY-SUBSTITUTION (OPT ITEM 216)	A,B	5
R -217D	BACB30XB6HK7		..BOLT	A,B	1
R -217N	SLFCMV6		..COLLAR- (V98524) (SPEC BACC30BN6L) (OPT SLFCMV6 (V92215)) (OPT SLFCMV6 (V17446))	A,B	1

# 57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1050

Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-220	HL523AZ6-6		.BOLT- (V56878) (SPEC BACB30NZ6K6) (OPT L804-6K6 (V06725)) (OPT HL523AZ6-6 (V92215)) (OPT HL523AZ6-6 (V73197)) (OPT HL523AZ6-6 (V97928)) (OPT HL523AZ6-6 (V0PTK6)) (OPT HL523AZ6-6 (V06725)) (OPT HL523AZ6-6 (V60516))	C-K	3
R -221	119T1075-9		.KIT ASSY-SUBSTITUTION (OPT ITEM 222)	A,B	3
R 221D	HL523AZ6-6		..BOLT- (V56878) (SPEC BACB30NZ6K6) (OPT L804-6K6 (V06725)) (OPT HL523AZ6-6 (V92215)) (OPT HL523AZ6-6 (V73197)) (OPT HL523AZ6-6 (V97928)) (OPT HL523AZ6-6 (V0PTK6)) (OPT HL523AZ6-6 (V06725)) (OPT HL523AZ6-6 (V60516))	A,B	1
R 221N	HL97DU6		..COLLAR- (V73197) (SPEC BACC30AB6S) (OPT HL97DU6 (V56878)) (OPT HL97DU6 (V5M902))	A,B	1

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1051  
 Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01- -222	119T1075-10		.KIT ASSY-SUBSTITUTION (OPT ITEM 221)	A,B	3
R -222D	BACB30XB6HK6		..BOLT	A,B	1
R -222N	SLFCMV6		..COLLAR- (V98524) (SPEC BACC30BN6L) (OPT SLFCMV6 (V92215)) (OPT SLFCMV6 (V17446))	A,B	1
225	HL523AZ6-5		.BOLT- (V56878) (SPEC BACB30NZ6K5) (OPT L804-6K5 (V06725)) (OPT HL523AZ6-5 (V73197)) (OPT HL523AZ6-5 (V92215)) (OPT HL523AZ6-5 (V97928)) (OPT HL523AZ6-5 (V06725)) (OPT HL523AZ6-5 (V60516)) (OPT HL523AZ6-5 (V0PTK6))	C-K	4
R -226	119T1075-7		.KIT ASSY-SUBSTITUTION (OPT ITEM 227)	A,B	4

# 57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1052  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-226D	HL523AZ6-5		..BOLT- (V56878) (SPEC BACB30NZ6K5) (OPT L804-6K5 (V06725)) (OPT HL523AZ6-5 (V73197)) (OPT HL523AZ6-5 (V92215)) (OPT HL523AZ6-5 (V97928)) (OPT HL523AZ6-5 (V06725)) (OPT HL523AZ6-5 (V60516)) (OPT HL523AZ6-5 (V0PTK6))	A,B	1
R 226N	HL97DU6		..COLLAR- (V73197) (SPEC BACC30AB6S) (OPT HL97DU6 (V56878)) (OPT HL97DU6 (V5M902))	A,B	1
R -227	119T1075-8		.KIT ASSY-SUBSTITUTION (OPT ITEM 226)	A,B	4
R -227D	BACB30XB6HK5		..BOLT	A,B	1
R -227N	SLFCMV6		..COLLAR- (V98524) (SPEC BACC30BN6L) (OPT SLFCMV6 (V92215)) (OPT SLFCMV6 (V17446))	A,B	1

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1053  
 Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-230	HL523AZ6-4		.BOLT- (V56878) (SPEC BACB30NZ6K4) (OPT L804-6K4 (V06725)) (OPT HL523AZ6-4 (V06725)) (OPT HL523AZ6-4 (V92215)) (OPT HL523AZ6-4 (V0PTK6)) (OPT HL523AZ6-4 (V60516)) (OPT HL523AZ6-4 (V73197)) (OPT HL523AZ6-4 (V97928))	C-K	2
R -231	119T1075-5		.KIT ASSY-SUBSTITUTION (OPT ITEM 232)	A,B	2
R 231D	HL523AZ6-4		..BOLT- (V56878) (SPEC BACB30NZ6K4) (OPT L804-6K4 (V06725)) (OPT HL523AZ6-4 (V06725)) (OPT HL523AZ6-4 (V92215)) (OPT HL523AZ6-4 (V0PTK6)) (OPT HL523AZ6-4 (V60516)) (OPT HL523AZ6-4 (V73197)) (OPT HL523AZ6-4 (V97928))	A,B	1
R 231N	HL97DU6		..COLLAR- (V73197) (SPEC BACC30AB6S) (OPT HL97DU6 (V56878)) (OPT HL97DU6 (V5M902))	A,B	1

# 57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1054  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01- -232	119T1075-6		.KIT ASSY-SUBSTITUTION (OPT ITEM 231)	A,B	2
R -232D	BACB30XB6HK4		..BOLT	A,B	1
R -232N	SLFCMV6		..COLLAR- (V98524) (SPEC BACC30BN6L) (OPT SLFCMV6 (V92215)) (OPT SLFCMV6 (V17446))	A,B	1
235	HL523AZ6-3		.BOLT- (V73197) (SPEC BACB30NZ6K3) (OPT L804-6K3 (V06725)) (OPT HL523AZ6-3 (V56878)) (OPT HL523AZ6-3 (V92215)) (OPT HL523AZ6-3 (V97928)) (OPT HL523AZ6-3 (V0PTK6)) (OPT HL523AZ6-3 (V60516)) (OPT HL523AZ6-3 (V06725))	C-K	9

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1055

Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01- -236	119T1075-3		.KIT ASSY-SUBSTITUTION (OPT ITEM 237)	A,B	9
R 236D	HL523AZ6-3		..BOLT- (V73197) (SPEC BACB30NZ6K3) (OPT L804-6K3 (V06725)) (OPT HL523AZ6-3 (V56878)) (OPT HL523AZ6-3 (V92215)) (OPT HL523AZ6-3 (V97928)) (OPT HL523AZ6-3 (V0PTK6)) (OPT HL523AZ6-3 (V60516)) (OPT HL523AZ6-3 (V06725))	A,B	1
R 236N	HL97DU6		..COLLAR- (V73197) (SPEC BACC30AB6S) (OPT HL97DU6 (V56878)) (OPT HL97DU6 (V5M902))	A,B	1
R -237	119T1075-4		.KIT ASSY-SUBSTITUTION (OPT ITEM 236)	A,B	9
R -237D	BACB30XB6HK3		..BOLT	A,B	1
R -237N	SLFCMV6		..COLLAR- (V98524) (SPEC BACC30BN6L) (OPT SLFCMV6 (V92215)) (OPT SLFCMV6 (V17446))	A,B	1

# 57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1056

Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-240	HL97KG6		.COLLAR- (V5M902) (SPEC BACC30AB6C) (OPT HL97PB6 (V5M902)) (OPT HL97PB6 (V56878)) (OPT HL97KG6 (V73197)) (OPT HL97KG6 (V56878)) (OPT HL97PB6 (V73197))	C-K	23
245	BACB30LH6-3		.BOLT		4
250	BACB30LH3-3		.BOLT		4
255	BACB30XD3K3		.BOLT		10
260	BACB30XD3K4		.BOLT		1
265	BACB30XD3K5		.BOLT		4
270	BACB30XD3K6		.BOLT		1
275	BACB30XD3K7		.BOLT		4
280	BACB30XD4K6		.BOLT		2
285	BACW10UC10P		.WASHER		8
290	AF5141-3C		.RIVET- (V53551) (SPEC BACR15DR3AC) (SIZE DETERMINE ON INST)		60
295	K51602-6BAC		.NUTPLATE- (V15653) (SPEC BACN10JR6CFD) (OPT NS202476-064 (V80539)) (OPT 102F9201-6 (V72962)) (OPT T8092C624CD (V11815)) (OPT BRF200C6D (V52828))		4

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1057

Nov 01/02



FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-300	BRF200C3D		.NUTPLATE- (V52828) (SPEC BACN10JR3CFD) (OPT K51602-3BAC (V15653)) (OPT NS202476-02 (V80539)) (OPT 102F9201-3 (V72962)) (OPT T8092C1032CD (V11815))		24
305	NS202493-048-1		.NUTPLATE- (V80539) (SPEC BACN10KE4ACD) (OPT 102A9212-4 (V72962)) (OPT F51747-4-1CD (V15653)) (OPT BRFR220C4-10 (V52828))		2
310	HST10AG6-4		.BOLT- (V06725) (SPEC BACB30VT6K4) (OPT HST10AG6-4 (V73197)) (OPT HST10AG6-4 (V56878)) (OPT HST10AG6-4 (VOPTK6))		6
315	HST79CY6		.COLLAR- (V73197) (SPEC BACC30BL6) (OPT HST79-6 (V92215)) (OPT HST79CY6 (V56878)) (OPT HST79CY6 (V5M902))		6

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1058

Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R 320	119T1600-1		.RIB ASSY-TE	A,C	1
R -320A	119T1600-9		.RIB ASSY-TE	D,G,J	1
-325	119T1600-2		.RIB ASSY-TE	B,E	1
R -325A	119T1600-10		.RIB ASSY-TE	F,H,K	1
330	119T0007-12		..SEAL- (MFD FROM EXTRUSION RUBBER F25.01 10-60754-177 X 8.40 IN)		1
335	119T0007-10		..SEAL- (MFD FROM EXTRUSION RUBBER F25.01 10-60754-177 X 12.40 IN)		1
340	BACB30VF3K2		..BOLT		9
345	119T0007-11		..RETAINER-SEAL		1
350	119T0007-9		..RETAINER-SEAL		1
355	BACB30NT3K3		..BOLT		20
360	NAS1149D0316J		..WASHER		20
365	119T1600-8		..RETAINER-SEAL	A-C,E	2
R -365A	119T1600-14		..RETAINER-SEAL	D,F-K	2
370	119T1600-7		..SEAL	A-C,E	2
R -370A	119T1600-13		..SEAL	D,F-K	2
375	BACR15BA3AD		..RIVET- (SIZE DETERMINE ON INST)	A-C,E	58
R -375A	BACR15BA3AD		..RIVET- (SIZE DETERMINE ON INST) (OPT ITEM 375B)	D,F-K	58
R -375B	NAS1399D3		..RIVET- (SIZE DETERMINE ON INST) (OPT ITEM 375A)	D,F-K	58

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1059

Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-380	BRF200C3D		. .NUTPLATE- (V52828) (SPEC BACN10JR3CFD) (OPT K51602-3BAC (V15653)) (OPT NS202476-02 (V80539)) (OPT 102F9201-3 (V72962)) (OPT T8092C1032CD (V11815))		29
R 385	119T1600-5		. .RIB	A,C	1
-385A	119T1600-11		. .RIB	D,G,J	1
-390	119T1600-6		. .RIB	B,E	1
R -390A	119T1600-12		. .RIB	F,H,K	1
395	BACS40V010C038		. SHIM		1
400	BACS40V010B271		. SHIM		1
405	BACS40V010C040		. SHIM		1
410	BACS40V010B266		. SHIM		1
415	119T1910-1		. WEDGE	A,C,D ,G,J	1
-420	119T1910-2		. WEDGE	B,E,F ,H,K	1
425	BACN11X7CD		. NUT		4
430	BACN11X6CD		. NUT		10
435	BACN11X8CD		. NUT		4
440	SLR4169C7EASP1		. RETAINER-NUT (V97393)		4
445	SLR4169C6EASP1		. RETAINER-NUT (V97393)		10
450	SLR4169C8EASP1		. RETAINER-NUT (V97393)		4

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1060  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-455	BACB30NN8K13		.BOLT- (OPT ITEM 455A)		4
-455A	BACB30WP8K13R		.BOLT- (OPT ITEM 455)		4
460	BACB30NN8K12		.BOLT- (OPT ITEM 460A)		4
-460A	BACB30WP8K12R		.BOLT- (OPT ITEM 460)		4
465	BACB30NN7K13		.BOLT- (OPT ITEM 465A)		8
-465A	BACB30WP7K13R		.BOLT- (OPT ITEM 465)		8
470	BACB30NN7K9		.BOLT- (OPT ITEM 470A)		12
-470A	BACB30WP7K9R		.BOLT- (OPT ITEM 470)		12
475	BACB30NN7K12		.BOLT- (OPT ITEM 475A)		8
-475A	BACB30WP7K12R		.BOLT- (OPT ITEM 475)		8
480	BACW10BP8L		DELETED		
485	BACW10BP7L		DELETED		
R 490	BACW10BP8DP		.WASHER		8
R 495	BACW10BP7DP		.WASHER		28
500	NAS1805-8L		.NUT		8
505	NAS1805-7L		.NUT		28
510	BACR15DR4AC		.RIVET- (SIZE DETERMINE ON INST)		36
515	F52483-8CD		.RETAINER- (V15653) (SPEC BACR10AJ8CD) (OPT NS202742S8F2 (V80539)) (OPT BRR25008CD (V52828))		4
520	F52483-7CD		.RETAINER- (V15653) (SPEC BACR10AJ7CD) (OPT NS202742S7F2 (V80539)) (OPT BRR25007CD (V52828))		14

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1061

Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
R 521	BACS12GU4K15		.SCREW		1
R 521L	BACW10EC4S		.WASHER		1
R 522	NAS1149D0416H		.WASHER		3
R 522L	H52732-4CD		.NUT- (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554))		1
R 523	MS35650-3255T		.NUT		1
R 523L	740E20-20		.JUMPER- (V91812) (SPEC BACJ40E20-20) (OPT RBEJ40E20-20 (V1GK47))		1
525	HST10AG6-5		.BOLT- (VOPTK6) (SPEC BACB30VT6K5) (OPT HST10AG6-5 (V06725)) (OPT HST10AG6-5 (V56878)) (OPT HST10AG6-5 (V73197))		22
530	HST79CY6		.COLLAR- (V73197) (SPEC BACC30BL6) (OPT HST79-6 (V92215)) (OPT HST79CY6 (V56878)) (OPT HST79CY6 (V5M902))		12

**57-28-02**

 ILLUSTRATED PARTS LIST  
 01.1 Page 1062  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-535	HST1094DU6		.COLLAR- (V73197) (SPEC BACC30BS6S)		10
540	119T1500-3		.RIB	A,C,D ,G,J	1
-545	119T1500-4		.RIB	B,E,F ,H,K	1
550	119T1950-1		.SHIM	A,B	AR
R -550A	119T1950-5		.SHIM	C-K	AR
555	119T1950-3		.SHIM	A,B	AR
R -555A	119T1950-5		.SHIM	C-K	AR
560	119T1950-2		.SHIM	A,B	AR
R -560A	119T1950-6		.SHIM	C-K	AR
562	119T1950-4		.SHIM	A,B	AR
R -562A	119T1950-6		.SHIM	C-K	AR
565	BACS40V050B094		.SHIM		AR
570	BACS40V037B094		.SHIM		AR
575	AF3552P5-3B		.RIVET- (V53551) (SPEC BACR15FP5MP3R) (OPT CR3552P5-3 (V11815))		20
580	16335		.BASE-DISCHARGER (V55635) (OPT ITEM 580A)		5
-580A	72-457		.BASE-DISCHARGER (V99321) (OPT ITEM 580)		5
585	HL523AZ6-3		.BOLT- (V73197) (SPEC BACB30NZ6K3) (OPT L804-6K3 (V06725)) (OPT HL523AZ6-3 (V56878)) (OPT HL523AZ6-3 (V92215)) (OPT HL523AZ6-3 (V97928)) (OPT HL523AZ6-3 (V0PTK6)) (OPT HL523AZ6-3 (V60516)) (OPT HL523AZ6-3 (V06725))	C-K	9

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1063  
 Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-586	119T1075-3		.KIT ASSY-SUBSTITUTION (OPT ITEM 587)	A,B	9
R 586D	HL523AZ6-3		..BOLT- (V73197) (SPEC BACB30NZ6K3) (OPT L804-6K3 (V06725)) (OPT HL523AZ6-3 (V56878)) (OPT HL523AZ6-3 (V92215)) (OPT HL523AZ6-3 (V97928)) (OPT HL523AZ6-3 (V0PTK6)) (OPT HL523AZ6-3 (V60516)) (OPT HL523AZ6-3 (V06725))	A,B	1
R 586N	HL97DU6		..COLLAR- (V73197) (SPEC BACC30AB6S) (OPT HL97DU6 (V56878)) (OPT HL97DU6 (V5M902))	A,B	1
R -587	119T1075-4		.KIT ASSY-SUBSTITUTION (OPT ITEM 586)	A,B	9
R -587D	BACB30XB6HK3		..BOLT	A,B	1
R -587N	SLFCMV6		..COLLAR- (V98524) (SPEC BACC30BN6L) (OPT SLFCMV6 (V92215)) (OPT SLFCMV6 (V17446))	A,B	1

# 57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1064

Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-590	HL97KG6		.COLLAR- (V5M902) (SPEC BACC30AB6C) (OPT HL97PB6 (V5M902)) (OPT HL97PB6 (V56878)) (OPT HL97KG6 (V73197)) (OPT HL97KG6 (V56878)) (OPT HL97PB6 (V73197))	C-K	9
R	595	BACR15GA6-11	.RIVET		1
R	600	BACB30VF3K2	.BOLT		5
	602	NAS8703-2	.BOLT		2
	605	BACB30XD3K3	.BOLT		17
	610	BACB30LH3-3	.BOLT		6
	615	BACW10UC10P	.WASHER		6
	620	AF5141-3C	.RIVET- (V53551) (SPEC BACR15DR3AC) (SIZE DETERMINE ON INST)		60
	625	BRF200C3D	.NUTPLATE- (V52828) (SPEC BACN10JR3CFD) (OPT K51602-3BAC (V15653)) (OPT NS202476-02 (V80539)) (OPT 102F9201-3 (V72962)) (OPT T8092C1032CD (V11815))		30

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1065

Nov 01/02



FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-630	HST10AG6-3		.BOLT- (VOPTK6) (SPEC BACB30VT6K3) (OPT HST10AG6-3 (V06725)) (OPT HST10AG6-3 (V56878)) (OPT HST10AG6-3 (V73197))		4
635	HST1094DU6		.COLLAR- (V73197) (SPEC BACC30BS6S)		4
640	119T1801-3		.TIP ASSY	A,C	1
R -640A	119T1801-7		.TIP ASSY- (OPT ITEM 640B)	D,G,J	1
R -640B	119T1801-3		.TIP ASSY- (OPT ITEM 640A)	D,G,J	1
-645	119T1801-4		.TIP ASSY	B,E	1
R -645A	119T1801-8		.TIP ASSY- (OPT ITEM 645B)	F,H,K	1
R -645B	119T1801-4		.TIP ASSY- (OPT ITEM 645A)	F,H,K	1
650	NAS1399MW4A3		..RIVET		4
655	611R15A		DELETED		
R 655A	16297		..RETAINER- (V55635) (OPT ITEM 655B) (USED ON ITEMS 640, 640B 645, 645B)		1
R -655B	16291		..BASE-STATIC DISCHARGER (V55635) (OPT ITEM 655A) (USED ON ITEMS 640, 640B 645, 645B)		1
R -655C	RET740046		..RETAINER- (V55635) (OPT ITEM 655D) (USED ON ITEMS 640A, 645A)	D,F-K	1
R -655D	16291		..BASE-STATIC DISCHARGER (V55635) (OPT ITEM 655C) (USED ON ITEMS 640A, 645A)	D,F-K	1

**57-28-02**

ILLUSTRATED PARTS LIST

01.1

Page 1066

Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-660	119T1801-1		..TIP- (USED ON ITEMS 640, 640B)	A,C,D ,G,J	1
R -660A	119T1801-5		..TIP- (USED ON ITEM 640A)	D,G,J	1
-665	119T1801-2		..TIP- (USED ON ITEMS 645, 645B)	B,E,F ,H,K	1
R -665A	119T1801-6		..TIP- (USED ON ITEM 645A)	F,H,K	1
R 667	BACR15GA6-6		.RIVET		101
670	119T1930-1		.STRIP-CONDUCTIVE	A-H	1
R -670A	119T1930-3		.STRIP-CONDUCTIVE	J,K	1
675	119T1930-2		.STRIP-CONDUCTIVE	A-H	1
R -675A	119T1930-2		.STRIP-CONDUCTIVE	J,K	1
680	BACB30VF3K3		.BOLT		208
685	BACR15DR3A		.RIVET- (SIZE DETERMINE ON INST)		416
690	BRF200C3M		.NUTPLATE- (V52828) (SPEC BACN10JR3CFM) (OPT F5001-3BAC (V15653)) (OPT NS103203SE02 (V80539)) (OPT VN152D1-02 (V92215)) (OPT 109F9201-3 (V72962)) (OPT T8092C1032 (V11815))		208

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1067  
 Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-695	119T1700-1		.SKIN	A,C,D	1
-700	119T1700-2		.SKIN	G,J B,E,F H,K	1
705	BACB30XD4K4		.BOLT		2
710	BACB30XD4K6		.BOLT		2
715	BACB30XD3K6		.BOLT		15
720	BACB30XD3K7		.BOLT		3
R 725	BACB30XD3K3		.BOLT		52
R 730	BACB30XD3K5		.BOLT		12
735	BACB30XD6K3		DELETED		
740	BACB30XD6K4		DELETED		
R 740A	BACB30XD3K4		.BOLT		30
745	BACB30XD6K5		DELETED		
750	BACB30NN4K8		.BOLT		9
755	BACB30NN4K9		.BOLT		5
760	BACB30NN4K10		.BOLT		2
765	BACB30NN4K7		.BOLT		4
770	BACR15DR3A		.RIVET- (SIZE DETERMINE ON INST)		272
775	F51747-4-1DL		.NUTPLATE- (V15653) (SPEC BACN10KE4ACM) (OPT 104F9212-4 (V72962)) (OPT BRFR220C4-1M (V52828)) (OPT NS103190SE048 (V80539))		2

57-28-02

 ILLUSTRATED PARTS LIST  
 01.1 Page 1068  
 Nov 01/02


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-780	BRF200C4M		.NUTPLATE- (V52828) (SPEC BACN10JR4CFM) (OPT F5001-4BAC (V15653)) (OPT NS103203SE048 (V80539)) (OPT VN152D1-048 (V92215)) (OPT 109F9201-4 (V72962)) (OPT T8092C428 (V11815))		2
785	BRF200C3M		.NUTPLATE- (V52828) (SPEC BACN10JR3CFM) (OPT F5001-3BAC (V15653)) (OPT NS103203SE02 (V80539)) (OPT VN152D1-02 (V92215)) (OPT 109F9201-3 (V72962)) (OPT T8092C1032 (V11815))		63
790	F5001-6BAC		.NUTPLATE- (V15653) (SPEC BACN10JR6CFM) (OPT NS103203SE064 (V80539)) (OPT VN152D1-064 (V92215)) (OPT 109F9201-6 (V72962)) (OPT T8092C624 (V11815)) (OPT BRF200C6M (V52828))		49

57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1069

Nov 01/02

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-795	109F171-4		.NUTPLATE- (V72962) (SPEC BACN10JB4CM) (OPT 43700E048 (V80539)) (OPT BRF210C4M (V52828)) (OPT BRF270C4M (V52828))		20
	800	119T1805-1	.DECAL	A,C	1
R	-800A	119T1805-7	.DECAL	D	1
R	-800B	119T1805-13	.DECAL	G,J	1
	-805	119T1805-2	.DECAL	B,E	1
R	-805A	119T1805-8	.DECAL	F	1
R	-805B	119T1805-14	.DECAL	H,K	1
	810	119T1805-3	.DECAL	A,C	1
R	-810A	119T1805-9	.DECAL	D	1
R	-810B	119T1805-15	.DECAL	G,J	1
	-815	119T1805-4	.DECAL	B,E	1
R	-815A	119T1805-10	.DECAL	F	1
R	-815B	119T1805-16	.DECAL	H,K	1
	820	119T1805-5	.DECAL	A,C	1
R	-820A	119T1805-11	.DECAL	D	1
R	-820B	119T1805-17	.DECAL	G,J	1
	-825	119T1805-6	.DECAL	B,E	1
R	-825A	119T1805-12	.DECAL	F	1
R	-825B	119T1805-18	.DECAL	H,K	1

- Item Not Illustrated

# 57-28-02

ILLUSTRATED PARTS LIST

01.1

Page 1070

Nov 01/02