

 **BOEING**  
COMPONENT  
MAINTENANCE MANUAL

TO: ALL HOLDERS OF DRAG STRUT DOOR ASSEMBLY COMPONENT MAINTENANCE MANUAL  
32-12-53

REVISION NO. 1 DATED SEP 01/94

HIGHLIGHTS

All data formerly in manual 32-12-51 is included in this manual 32-12-53.

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 the revision number and date on the Record of Revision sheet.

CHAPTER/SECTION  
AND PAGE NO.

DESCRIPTION OF CHANGE

TITLE PAGE

Added SP suffixes to the title page to agree with the parts list.

1

401

Added clarification to details.

501

REPAIR-GEN

601-602

REPAIR 1-1

601

REPAIR 2-1

601-604

REPAIR 3-1

601

701

801-802

1009

REPAIR-GEN

Added figure of True Position Dimensioning symbols.

602-603

1011-1020

**32-12-53**

HIGHLIGHTS

01.1

Page 1

Sep 01/94

 **BOEING**  
COMPONENT  
MAINTENANCE MANUAL

CHAPTER/SECTION  
AND PAGE NO.

DESCRIPTION OF CHANGE

701

Changed the sealant used around the edges of the fittings.

701

Added the resistance callout for the electrical bond.

1003,1005-1007

Added door subassemblies which include items 10 thru 300, but not items 305 thru 350A (IPL Fig. 1).

**32-12-53**

HIGHLIGHTS

01.1

Page 2

Sep 01/94

## DRAG STRUT DOOR ASSEMBLY

PART NUMBER 113T8101-1SP,-2SP,-13,-14

COMPONENT MAINTENANCE MANUAL  
WITH  
ILLUSTRATED PARTS LIST

**32-12-53**

TITLE PAGE

Page 1

Sep 01/94

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



TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR B10450 MC B1111-001	OCT 10/83 OCT 10/83

**32-12-53**

TR & SB RECORD

01

Page 1

Oct 01/87


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PAGE	DATE	CODE	PAGE	DATE	CODE
32-12-53					
TITLE PAGE			REPAIR-GENERAL		
*1	SEP 01/94	01.1	*601	SEP 01/94	01.1
2	BLANK		*602	SEP 01/94	01.1
REVISION RECORD			*603	SEP 01/94	01.1
1	OCT 01/87	01	*604	BLANK	
2	BLANK		REPAIR 1-1		
TR & SB RECORD			*601	SEP 01/94	01.1
1	OCT 01/87	01	602	BLANK	
2	BLANK		REPAIR 2-1		
LIST OF EFFECTIVE PAGES			*601	SEP 01/94	01.1
*1	SEP 01/94	01	602	BLANK	
THRU LAST PAGE			ASSEMBLY		
CONTENTS			*701	SEP 01/94	01.1
1	OCT 01/87	01	702	BLANK	
2	BLANK		FITS AND CLEARANCES		
INTRODUCTION			*801	SEP 01/94	01.1
1	OCT 01/87	01	*802	SEP 01/94	01.1
2	BLANK		ILLUSTRATED PARTS LIST		
DESCRIPTION & OPERATION			1001	OCT 01/87	01
1	OCT 01/87	01	1002	OCT 01/87	01
2	BLANK		*1003	SEP 01/94	01.1
DISASSEMBLY			*1004	SEP 01/94	01.1
301	OCT 01/87	01	*1005	SEP 01/94	01.1
302	BLANK		*1006	SEP 01/94	01.1
CLEANING			*1007	SEP 01/94	01.1
*401	SEP 01/94	01.1	1008	BLANK	
402	BLANK		*1009	SEP 01/94	01.1
CHECK			*1010	SEP 01/94	01.1
*501	SEP 01/94	01.1	*1011	SEP 01/94	01.1
502	BLANK		*1012	SEP 01/94	01.1
			*1013	SEP 01/94	01.1
			*1014	SEP 01/94	01.1

\* = REVISED, ADDED OR DELETED

32-12-53

EFFECTIVE PAGES

CONTINUED Page 1

01 Sep 01/94

PAGE	DATE	CODE	PAGE	DATE	CODE
ILLUSTRATED PARTS LIST		CONT.			
*1015	SEP 01/94	01.1			
*1016	SEP 01/94	01.1			
*1017	SEP 01/94	01.1			
*1018	SEP 01/94	01.1			
*1019	SEP 01/94	01.1			
*1020	SEP 01/94	01.1			

\* = REVISED, ADDED OR DELETED

**32-12-53**

EFFECTIVE PAGES  
 LAST PAGE Page 2  
 01 Sep 01/94

TABLE OF CONTENTS

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

32-12-53

CONTENTS

01

Page 1

Oct 01/87





## 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. An asterisked flagnote \*[ ] in place of the page number indicates that no special instructions are provided since the function can be performed using standard industry practices.

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

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

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

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

Verification:

Assembly

**32-12-53**

INTRODUCTION

01

Page 1

Oct 01/87



DRAG STRUT DOOR ASSEMBLY

DESCRIPTION AND OPERATION

1. Description

A. The drag strut door assembly consists of a aluminum panel, two hinges and an attach fitting assembly. The drag strut door assembly attaches to the underside of wing structure and to the drag strut.

2. Operation

A. The drag strut door assembly opens and closes as the landing gear is lowered and raised.

3. Leading Particulars (Approximate)

Length -- 15 inches  
Width -- 17 inches  
Height -- 5 inches  
Weight -- 14 pounds

32-12-53

DESCRIPTION & OPERATION

01

Page 1

Oct 01/87



DISASSEMBLY

1. Use standard industry practices for disassembly of this component.

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.

**32-12-53**

DISASSEMBLY

01

Page 301

Oct 01/87



CLEANING

1. Clean all parts with standard industry practices and the data in 20-30-03.

**32-12-53**

CLEANING  
Page 401  
Sep 01/94

01.1



CHECK

1. Examine all parts for obvious defects in accordance with standard industry practices. Refer to Fits and Clearances for design dimensions and wear limits.
2. Penetrant check per 20-20-02 -- Fitting (50, 55, IPL, Fig. 1).
3. Examine honeycomb and bonded parts for signs of delamination, water inside, scratches, and contour defects.
  - A. Examine for delamination ultrasonically.
  - B. Radiographically examine areas that could contain water.
  - C. Examine edges of panel carefully for cuts and abrasions. Delamination starts very easily from damage to an edge member.
  - D. Refer to 767 Structural Repair Manual, 52-80-02, for allowable damage data.

32-12-53

CHECK

01.1

Page 501

Sep 01/94

REPAIR – GENERAL1. Content

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

<u>P/N</u>	<u>NAME</u>	<u>REPAIR</u>
113T8111	HINGE ASSEMBLY	1-1
113T8119	HINGE ASSEMBLY	1-1
113T8112	FITTING ASSEMBLY	2-1
- -	MISCELLANEOUS PARTS REFINISH	3-1

2. Standard Practices

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

20-11-03	Repair of Electrical Terminations and Electrical Bonding Areas
20-30-01	Cleaning and Relubricating Antifriction Bearings
20-41-01	Decoding Table for Boeing Finish Codes
20-41-02	Application of Chemical and Solvent Resistant Finishes
20-41-05	Application of Corrosion Inhibiting Compounds
20-43-01	Chromic Acid Anodizing
20-50-03	Bearing Installation and Retention
20-50-13	Application of Weather, Fuel, Oil, Solvent and Heat Resistant Protective Coatings
20-60-02	Finishing Materials
20-60-03	Lubricants
20-60-04	Miscellaneous Materials

3. Materials

- NOTE: Equivalent substitutes can be used.

- A. Primer -- BMS 5-89 (Ref 20-60-02)

32-12-53

REPAIR-GENERAL

01.1

Page 601

Sep 01/94

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

| C. Primer -- BMS 10-79, type 2 (Ref 20-50-13)

D. Enamel -- BMS 10-11, type 2 (Ref 20-50-13)

E. Grease -- MIL-G-23827 (Ref 20-60-04)

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

| 4. Dimensioning Symbols

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

**32-12-53**

REPAIR-GENERAL

01.1

Page 602

Sep 01/94

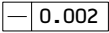
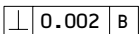
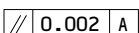
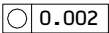
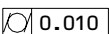
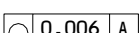
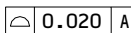
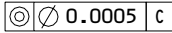
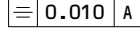
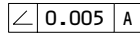
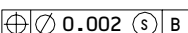
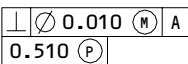


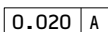
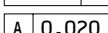
# BOEING

## COMPONENT MAINTENANCE MANUAL

- STRAIGHTNESS
- ▭ FLATNESS
- ⊥ PERPENDICULARITY (OR SQUARENESS)
- // PARALLELISM
- ROUNDNESS
- ⊘ CYLINDRICITY
- ⌒ PROFILE OF A LINE
- △ PROFILE OF A SURFACE
- ◎ CONCENTRICITY
- ≡ SYMMETRY
- ∠ ANGULARITY
- ↗ RUNOUT
- ↗ TOTAL RUNOUT
- ⊏ COUNTERBORE OR SPOTFACE
- ∇ COUNTERSINK

- ⊕ THEORETICAL EXACT POSITION OF A FEATURE (TRUE POSITION)
- ∅ DIAMETER
- S ∅ SPHERICAL DIAMETER
- R RADIUS
- SR SPHERICAL RADIUS
- ( ) REFERENCE
- BASIC (BSC) OR DIM A THEORETICALLY EXACT DIMENSION USED TO DESCRIBE SIZE, SHAPE OR LOCATION OF A FEATURE FROM WHICH PERMISSIBLE VARIATIONS ARE ESTABLISHED BY TOLERANCES ON OTHER DIMENSIONS OR NOTES.
- A- DATUM
- Ⓜ MAXIMUM MATERIAL CONDITION (MMC)
- Ⓛ LEAST MATERIAL CONDITION (LMC)
- Ⓢ REGARDLESS OF FEATURE SIZE (RFS)
- Ⓟ PROJECTED TOLERANCE ZONE
- FIM FULL INDICATOR MOVEMENT

### EXAMPLES

<p> STRAIGHT WITHIN 0.002</p> <p> PERPENDICULAR TO B WITHIN 0.002</p> <p> PARALLEL TO A WITHIN 0.002</p> <p> ROUND WITHIN 0.002</p> <p> CYLINDRICAL SURFACE MUST LIE BETWEEN TWO CONCENTRIC CYLINDERS, ONE OF WHICH HAS A RADIUS 0.010 INCH GREATER THAN THE OTHER</p> <p> EACH LINE ELEMENT OF THE SURFACE AT ANY CROSS SECTION MUST LIE BETWEEN TWO PROFILE BOUNDARIES 0.006 INCH APART RELATIVE TO DATUM PLANE A</p> <p> SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.02 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE</p>	<p> CONCENTRIC TO C WITHIN 0.0005 DIAMETER</p> <p> SYMMETRICAL WITH A WITHIN 0.010</p> <p> ANGULAR TOLERANCE 0.005 WITH A</p> <p> LOCATED AT TRUE POSITION WITHIN 0.002 DIA RELATIVE TO DATUM B, REGARDLESS OF FEATURE SIZE</p> <p> AXIS IS TOTALLY WITHIN A CYLINDER OF 0.010-INCH DIAMETER, PERPENDICULAR TO, AND EXTENDING 0.510-INCH ABOVE, DATUM A, MAXIMUM MATERIAL CONDITION</p> <p> THEORETICALLY EXACT DIMENSION IS 2.000</p> <p style="text-align: center;">OR</p> <p> BSC</p> <p> 0.020 A</p> <p> A 0.020</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**NOTE:** DATUM MAY APPEAR AT EITHER SIDE OF TOLERANCE FRAME

True Position Dimensioning Symbols  
Figure 601

32-12-53

REPAIR-GENERAL

01.1

Page 603

Sep 01/94



HINGE ASSEMBLY - REPAIR 1-1

113T8111-1, -2  
113T8119-1, -2, -7

1. Bearing Replacement (45, IPL Fig. 1)

A. Remove the old bearing.

B. Install a replacement bearing with MIL-G-23827 grease and roller swage it per 20-50-03.

2. RefinishA. Hinge (50, 55) -- Chromic acid anodize, and apply BMS 10-11, type 1 primer (F-18.13) all over except bearing and lube fitting holes.  
Material: Al alloy.

B. Repair option: Chemical treat bare metal surfaces per 20-43-03. Then apply one coat of BMS 10-79, Type 3 primer (F-19.47) and BMS 10-11 Type 2 white gloss enamel (F-21.03).

**32-12-53**

REPAIR 1-1

01.1

Page 601

Sep 01/94

FITTING ASSEMBLY – REPAIR 2-1

113T8112-1

NOTE: Refer to REPAIR-GENERAL for a list of applicable standard practices. Refer to IPL Fig. 1 for item numbers. For repair which is only replacement of the original finish, refer to Refinish instructions, Fig. 601.

1. Bushing Replacement

- A. Remove the bushings.
- B. If you find damage or corrosion in the lug hole, refer to par. 2 for repair instructions.
- C. Install replacement bushings per 20-50-03 with BMS 5-95 sealant. Fillet seal bushing flanges with BMS 5-95 sealant.

2. Lug Holes (Fig. 601)

- A. Machine within repair limits, as required to remove defects.
- B. Shot peen bore(s), if required, per 20-10-03 and Fig. 601.
- C. Make oversize bushings per Fig. 602, 603.
- D. Install the bushings per par. 1.

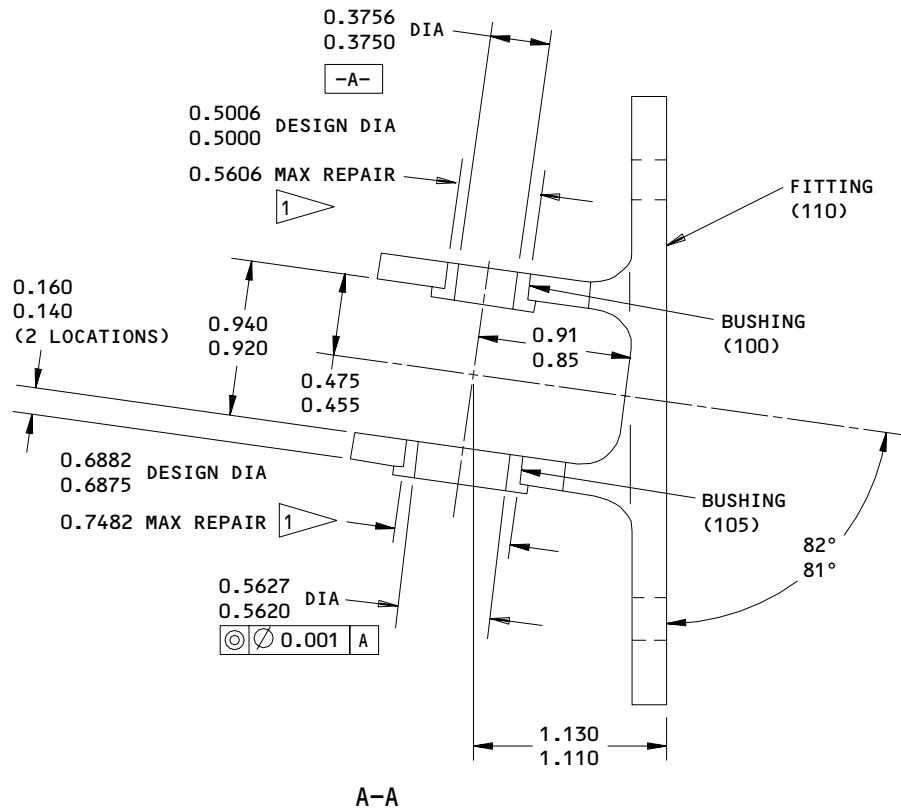
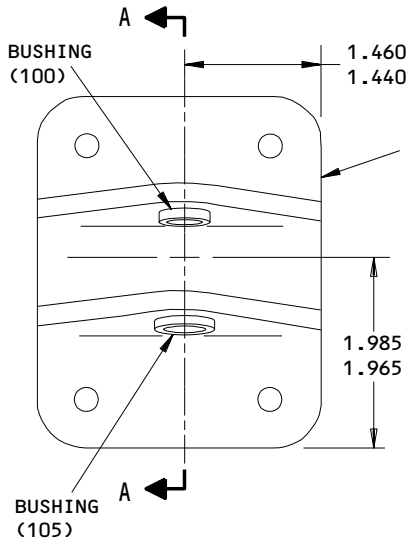
**32-12-53**

REPAIR 2-1

01.1

Page 601

Sep 01/94



**REFINISH**

CHROMIC ACID ANODIZE AND APPLY PRIMER BMS 10-11, TYPE 1 (F-18.13) BUT NO PRIMER IN HOLES FOR BUSHINGS.

**REPAIR**

REF 1  
 125 ALL MACHINED SURFACES  
 SHOT PEEN: 0.023-0.055 SHOT SIZE  
 0.010 A INTENSITY  
 MATERIAL: AL ALLOY  
 ITEM NUMBERS REFER TO IPL FIG. 1  
 ALL DIMENSIONS ARE IN INCHES

1 LIMIT FOR INSTALLATION OF OVERSIZE BUSHINGS.

113T8112-1  
 Fitting Repair and Refinish  
 Figure 601

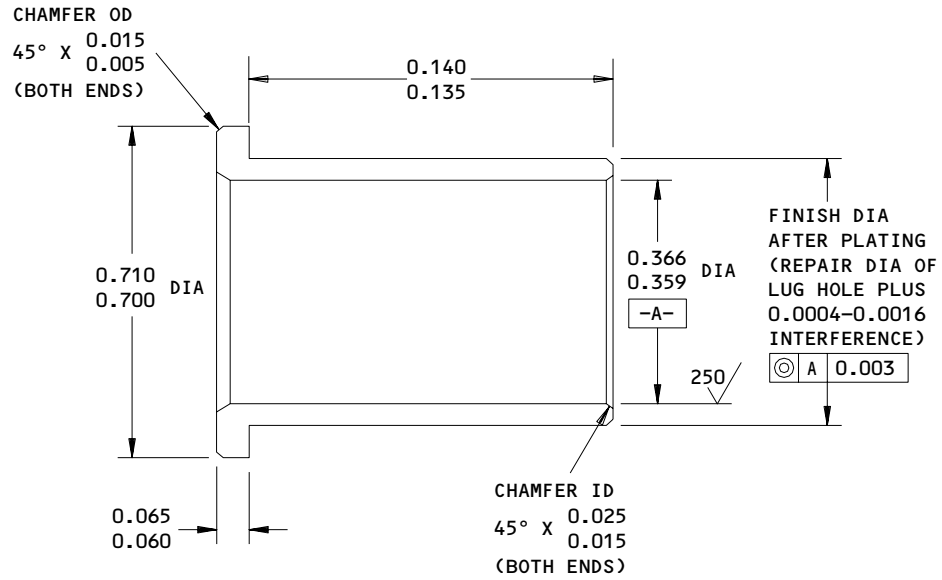
**32-12-53**

REPAIR 2-1

Page 602

Sep 01/94

01.1



63/ ALL MACHINED SURFACES UNLESS SHOWN  
 DIFFERENTLY

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

FINISH: CADMIUM PLATE (F-15.06)  
 (OPTIONAL IN BORE)

ALL DIMENSIONS ARE IN INCHES

DIMENSIONS APPLY AFTER PLATING

REPLACES BUSHING (100, IPL FIG. 1) BACB28AP06P014

Oversize Bushing Details  
 Figure 602

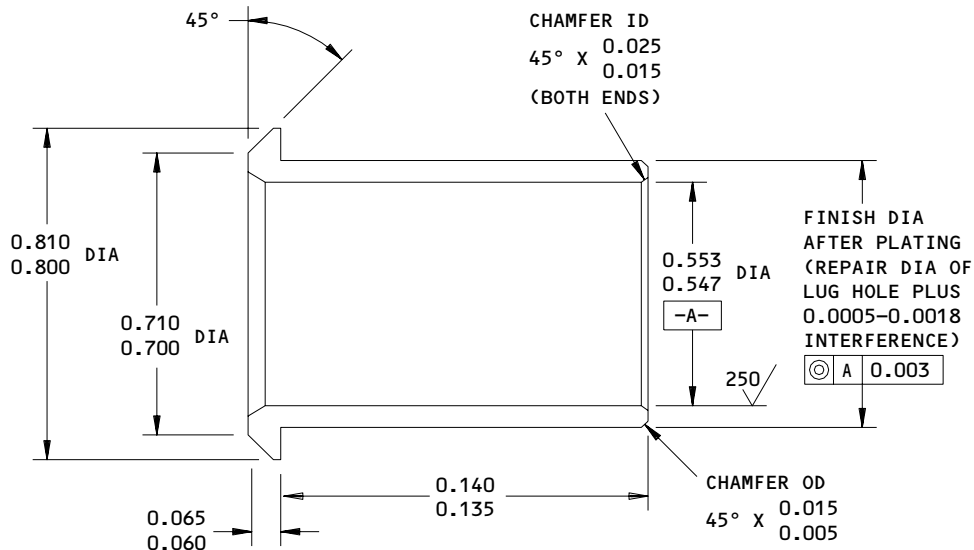
**32-12-53**

REPAIR 2-1

01.1

Page 603

Sep 01/94



63/ ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

MATERIAL: AL-NI-BRZ PER AMS 4640

FINISH: CADMIUM PLATE (F-15.06)  
 (OPTIONAL IN BORE)

ALL DIMENSIONS ARE IN INCHES

DIMENSIONS APPLY AFTER PLATING

REPLACES BUSHING (105, IPL FIG. 1) BACB28AM09B014

Oversize Bushing Details  
 Figure 603

**32-12-53**

REPAIR 2-1

01.1

Page 604

Sep 01/94

MISCELLANEOUS PARTS - REPAIR 3-1

1. Repair of the parts listed in Fig. 601 is only replacement of the original finish. Refer to REPAIR-GEN for a list of applicable standard practices.

IPL FIG. & ITEM	MATERIAL	FINISH
Door assembly (1, 5)	Al alloy	Apply BMS 10-79, type 2 primer (F-19.46) all over but not on seals, bearings or bushings. Apply enamel BMS 10-11, type 2 white gloss (F-21.03) all over the interior but not on seals, bearings or bushings. Refinish exterior surface and edges with the operators standard color scheme.
Seal retainers (130,135,140,145, 150), edge protectors (195, 200,205,210,215, 220,225,230,235, 240), doublers (260,265), inner skin (280,285), outer skin (290, 295)	Al alloy	On outside surfaces, chemical treat (F17.10), apply BMS 10-79, Type 3 primer (F-19.47), and BMS 10-11 Type 2 white gloss enamel (F-21.03).

Refinish Details  
 Figure 601

**32-12-53**

REPAIR 3-1

01.1

Page 601

Sep 01/94

ASSEMBLY1. Materials

| NOTE: Equivalent substitutes can be used.

- A. Sealant -- BMS 5-95 (Ref 20-60-04)
- | B. Sealant -- BMS 5-142 (Ref 20-60-04)
- | C. Lockwire -- MS20995NC40 (Ref 20-50-02)

2. Assembly (IPL, Fig. 1)

- | A. Use standard industry practices and these special procedures.
- | B. Lockwire, seal (165, 170) to seal retainer (135, 145) per 20-50-02.
- C. Install seal retainers (130, 135, 145) with 0.10- to 0.15-inch gap between retainers.

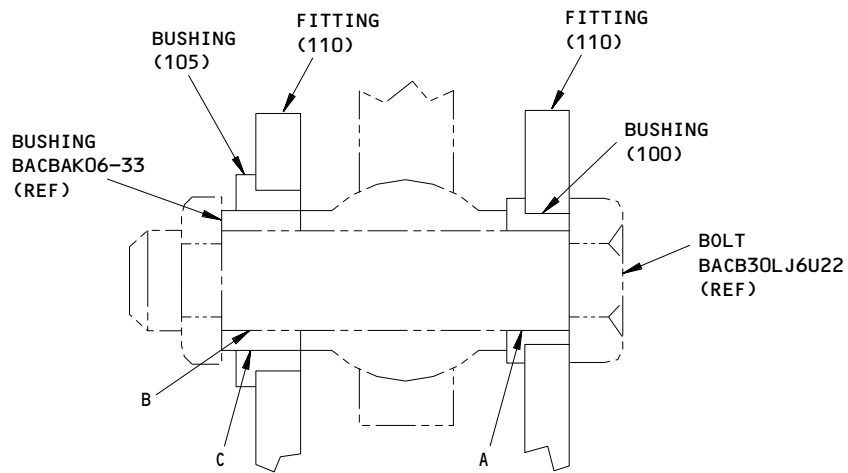
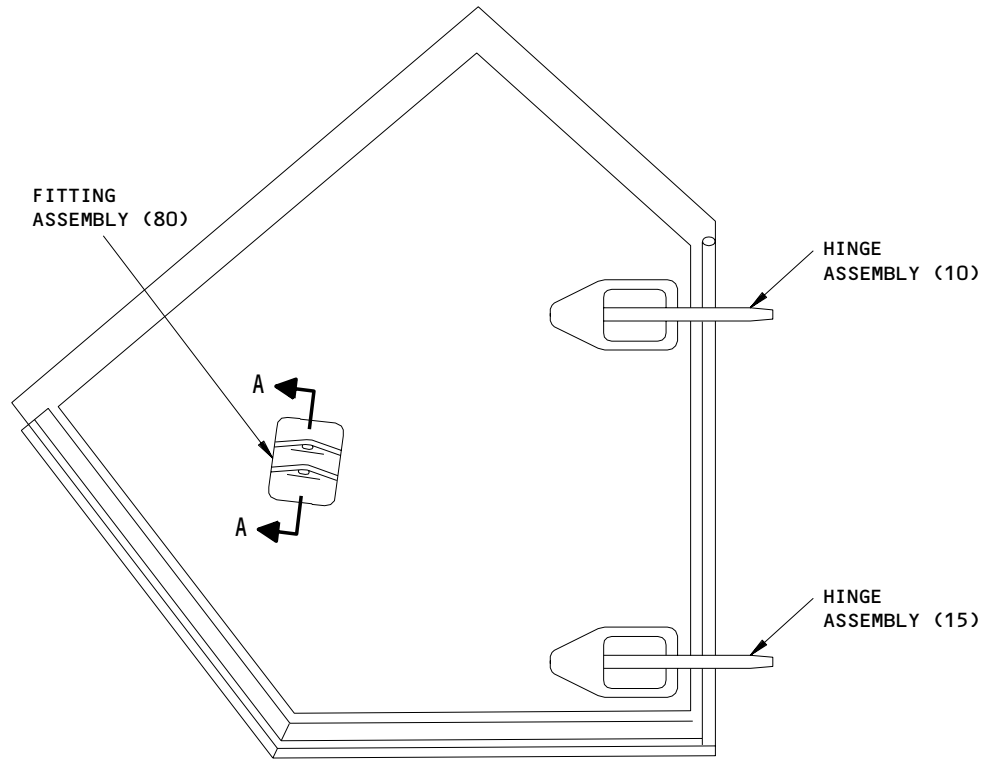
CAUTION: DO NOT PAINT FAYING SURFACES BETWEEN SHIMS (30) AND BONDED DOOR ASSEMBLY (175, 180).

- | D. Remove laminations as necessary to make the shims (30) smooth with bonded door assembly (175, 180). (These shims are used to adjust the lower surface of the door with the adjacent fixed structure).
- | E. Install hinge assembly (15), jumper assembly (60) and door assembly (175) to provide electrical bond (maximum 0.010 ohm) per 20-11-03.
- F. Install fasteners (20, 85) with wet BMS 5-95 sealant.
- | G. Fillet seal around the flanges of hinge assembly (10, 15) and fitting assembly (80) with BMS 5-142 sealant, after adjustment.

**32-12-53**ASSEMBLY  
Page 701  
Sep 01/94

01.1

**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL  
FITS AND CLEARANCES



(ROTATED APPROXIMATELY 81° CLOCKWISE)  
 A-A





ITEM NUMBERS REFER TO IPL FIG. 1

Fits and Clearances  
 Figure 801 (Sheet 1)

**32-12-53**

FITS AND CLEARANCES  
 01.1 Page 801  
 Sep 01/94



Ref Letter Fig.801	Mating Item No. IPL Fig.1	Design Dimension				Service Wear Limit		
		Dimension		Assembly Clearance		Dimension		Maximum Clearance
		Min	Max	Min	Max	Min	Max	
A	ID 100	0.3750	0.3756	0.0005	0.0016	0.3701	0.3800	0.0055
	OD 	0.3740	0.3745					
B	ID 	0.3750	0.3755	0.0005	0.0015	0.3700	0.3800	0.0055
	OD 	0.3740	0.3745					
C	ID 105	0.5620	0.5627	0.0005	0.0017	0.5577	0.5665	0.0050
	OD 	0.5610	0.5615					

 BOLT, BACB30LJ6U22 (REF)

 BUSHING, BACB28AK06-033 (REF)

ALL DIMENSIONS ARE IN INCHES

 Fits and Clearances  
 Figure 801 (Sheet 2)

**32-12-53**

 FITS AND CLEARANCES  
 01.1 Page 802  
 Sep 01/94



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.

**32-12-53**

ILLUSTRATED PARTS LIST

01 Page 1001

Oct 01/87

## 7. Boeing Proprietary Color Coded Parts

Color coded parts are identified with an alpha "SP" suffix. The entry represents consolidation of all color codes applicable for a given usage. Orders for color coded parts should include the registry number of the airplane for which the parts are ordered.

# 32-12-53

ILLUSTRATED PARTS LIST  
01 Page 1002  
Oct 01/87


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL
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 AEROSPACE PRODUCTS DIV FAIRCHILD IND DIV  
 13001 EAST TEMPLE AVENUE PO BOX 730  
 CITY OF INDUSTRY, CALIFORNIA 91746-1417

08524 DEUTSCH FASTENER CORP SEE CODE V97928

09455 BFM TRANSPORT DYNAMICS CORP  
 3131 WEST SEGERSTROM AVENUE PO BOX 1953  
 SANTA ANA, CALIFORNIA 92702-1953

15653 MICRODOT INC AEROSPACE FASTENING SYS KAYNAR MFG DIV  
 800 SOUTH STATE COLLEGE BLVD PO BOX 3001  
 FULLERTON, CALIFORNIA 92634-3001

15860 NEW HAMPSHIRE BALL BEARINGS, INCORPORATED ASTRO DIVISION  
 155 LEXINGTON AVENUE  
 LACONIA, NEW HAMPSHIRE 03246-2937

27624 PB FASTENERS DIV OF BRILES PAUL R  
 1700 WEST 132ND STREET  
 GARDENA, CALIFORNIA 90249

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

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

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

73134 IMO INDUSTRIES INC HEIM BEARINGS DIV  
 60 ROUND HILL ROAD PO BOX 430  
 FAIRFIELD, CONNECTICUT 06430

32-12-53

 ILLUSTRATED PARTS LIST  
 01.1 Page 1003  
 Sep 01/94

VENDORS

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

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

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

97613 SARGENT TECHNOLOGIES  
1851 SOUTH PANTANO ROAD  
TUCSON, ARIZONA 85710

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

**32-12-53**

ILLUSTRATED PARTS LIST  
01.1 Page 1004  
Sep 01/94


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
AG5V28C		1	45	2
AN3DD3A		1	245	10
AN315D3R		1	255A	10
AN960PD10L		1	250	10
ASBEP05VC		1	45	2
BACB10EP05GC		1	45	2
BACB28AM09B014A		1	105	1
BACB28AP06P014		1	100	1
BACB30NN3K3		1	115	8
		1	305	14
BACB30NN4K28		1	85	4
BACB30NN4K29		1	20	8
BACJ40AB20-8		1	60	1
BACN10YR3CD		1	75A	1
		1	125A	8
		1	315A	14
BACN10YR4CD		1	35A	8
		1	95A	4
BACR15BA4D		1	185	20
BACR15BB4D		1	190	20
BACS40R023D027F		1	30A	2
H52732-3CD		1	75A	1
		1	125A	8
		1	315A	14
H52732-4CD		1	35A	8
		1	95A	4
KSB5-52-58		1	45	2
MS15001-1		1	40	2
MS27253F3		1	300	1
NAS1149D0316J		1	120A	8
		1	310A	14
NAS1149D0416J		1	25A	8
		1	90A	4
NAS1149F0332P		1	70A	1
NAS623-3-5		1	65	1
PLH53CD		1	75A	1
		1	125A	8
		1	315A	14
PLH54CD		1	35A	8
		1	95A	4
03-525-05E003C		1	45	2
113T8101-1SP		1	1	RF
113T8101-10		1	160	1

32-12-53

ILLUSTRATED PARTS LIST

01.1

Page 1005

Sep 01/94

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
113T8101-11		1	340	1
113T8101-12		1	350	1
113T8101-13		1	1A	RF
113T8101-14		1	5A	RF
113T8101-15		1	345	1
113T8101-16		1	350A	1
113T8101-17		1	7	1
113T8101-18		1	8	1
113T8101-2SP		1	5	RF
113T8101-3		1	130	1
113T8101-5		1	320	1
113T8101-6		1	325	1
113T8101-7		1	330	1
113T8101-8		1	335	1
113T8101-9		1	155	1
113T8102-1		1	175	1
113T8102-10		1	200	1
113T8102-11		1	205	1
113T8102-12		1	210	1
113T8102-13		1	215	1
113T8102-14		1	220	1
113T8102-15		1	225	1
113T8102-16		1	230	1
113T8102-17		1	235	1
113T8102-18		1	240	1
113T8102-19		1	290	1
113T8102-2		1	180	1
113T8102-20		1	295	1
113T8102-21		1	280	1
113T8102-22		1	285	1
113T8102-23		1	260	1
113T8102-24		1	265	2
113T8102-9		1	195	1
113T8111-1		1	10	1
113T8111-2		1	15	1
113T8111-3		1	50	1
113T8111-4		1	55	1
113T8112-1		1	80	1
113T8112-2		1	110	1
113T8113-1		1	275	1
113T8114-1		1	270	2
113T8119-1		1	10A	1
113T8119-10		1	55C	1
113T8119-11		1	50D	1
		1	55D	1

# 32-12-53

 ILLUSTRATED PARTS LIST  
 01.1 Page 1006  
 Sep 01/94

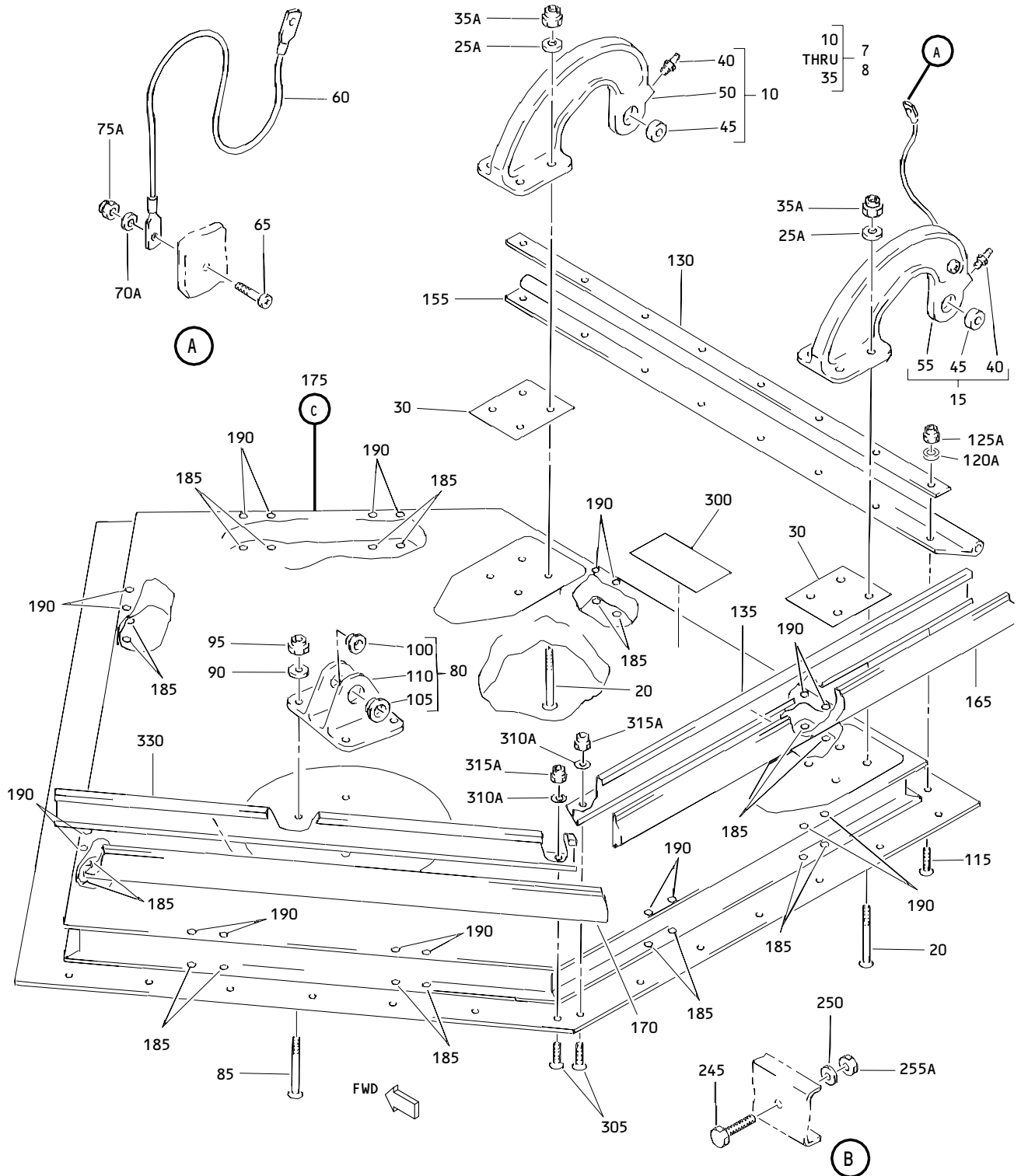

**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
113T8119-2		1	15A	1
113T8119-3		1	50A	1
113T8119-4		1	55A	1
113T8119-6		1	50B	1
		1	55B	1
113T8119-7		1	10B	1
		1	15B	1
113T8119-9		1	50C	1
940CW20-8		1	60	1

# 32-12-53

ILLUSTRATED PARTS LIST  
 01.1 Page 1007  
 Sep 01/94

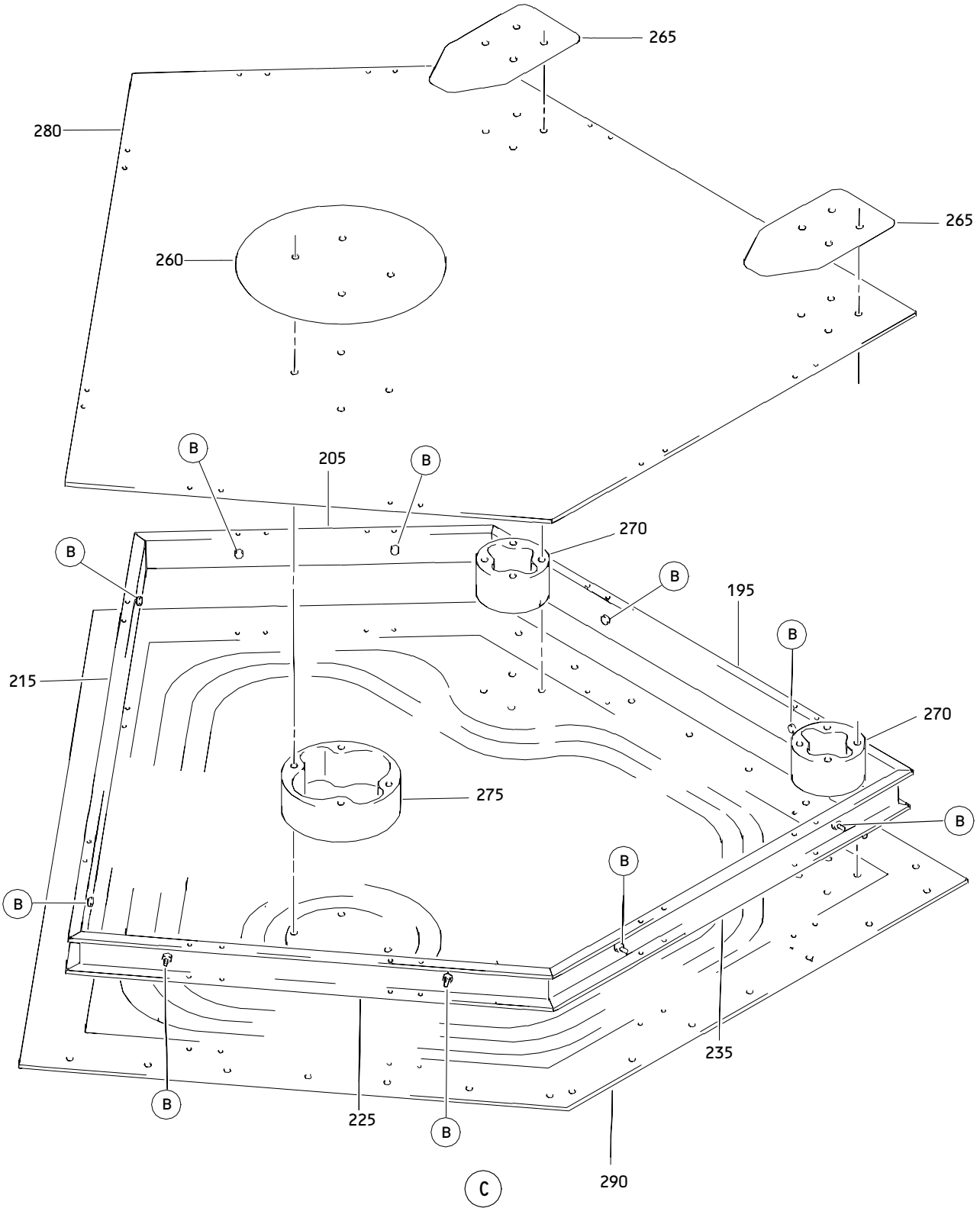




Drag Strut Door Assembly  
 Figure 1 (Sheet 1)

**32-12-53**

ILLUSTRATED PARTS LIST  
 01.1 Page 1009  
 Sep 01/94



**Drag Strut Door Assembly  
 Figure 1 (Sheet 2)**

**32-12-53**

ILLUSTRATED PARTS LIST  
 01.1 Page 1010  
 Sep 01/94


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01- -1	113T8101-1SP		DOOR ASSY-DRAG STRUT DOOR (LH)	A	RF
-1A	113T8101-13		DOOR ASSY-DRAG STRUT DOOR (VARIABLE) (LH)	C	RF
-1B	113T8101-3SP		DELETED		
-5	113T8101-2SP		DOOR ASSY-DRAG STRUT DOOR (RH)	B	RF
-5A	113T8101-14		DOOR ASSY-DRAG STRUT DOOR (VARIABLE) (RH)	D	RF
-5B	113T8101-4SP		DELETED		
-7	113T8101-17		.DOOR SUB ASSY	A,C	1
-7A	113T8101-25		DELETED		
-8	113T8101-18		.DOOR SUB ASSY	B,D	1
-8A	113T8101-26		DELETED		
10	113T8111-1		..HINGE ASSY- (REPLD BY ITEMS 10A 10B)	A-D	1
-10A	113T8119-1		..HINGE ASSY- (REPLS ITEM 10) (OPT ITEM 10B)	A-D	1
-10B	113T8119-7		..HINGE ASSY- (REPLS ITEM 10) (OPT ITEM 10A)	A-D	1
-10C	113T8119-13		DELETED		
15	113T8111-2		..HINGE ASSY- (REPLD BY ITEMS 15A, 15B)	A-D	1
-15A	113T8119-2		..HINGE ASSY- (REPLS ITEM 15) (OPT ITEM 15B)	A-D	1
-15B	113T8119-7		..HINGE ASSY- (REPLS ITEM 15) (OPT ITEM 15A)	A-D	1
-15C	113T8119-13		DELETED		

32-12-53

 ILLUSTRATED PARTS LIST  
 01.1 Page 1011  
 Sep 01/94

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
20	BACB30NN4K29		ATTACHING PARTS ..BOLT- (V06710) (SPEC BACB30NN4K29) (OPT BACB30NN4K29 (V06725)) (OPT BACB30NN4K29 (V06950)) (OPT BACB30NN4K29 (V08524)) (OPT BACB30NN4K29 (V27624)) (OPT BACB30NN4K29 (V56878)) (OPT BACB30NN4K29 (V73197)) (OPT BACB30NN4K29 (V80539)) (OPT BACB30NN4K29 (V92215)) (OPT BACB30NN4K29 (V93907)) (OPT BACB30NN4K29 (V97928))	A-D	8
-20A	BACB30NN4K30		DELETED		
25	AN960PD416L		DELETED		
R 25A	NAS1149D0416J		..WASHER		8
30	BACS40R23D27F		DELETED		
R 30A	BACS40R023D027F		..SHIM		2
35	H10-4BAC		DELETED		

# 32-12-53

 ILLUSTRATED PARTS LIST  
 01.1 Page 1012  
 Sep 01/94


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
R 01-35A	H52732-4CD		..NUT- (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554)) -----*		8
40	MS15001-1		...FITTING		1
45	AG5V28C		...BEARING- (V15860) (SPEC BACB10EP05GC) (OPT ASBEP05VC (V50294)) (OPT KSB5-52-58 (V97613)) (OPT LHBO5EPGC (V73134)) (OPT 03-525-05E003C (V09455))		1
50	113T8111-3		...HINGE- (USED ON ITEM 10)	A-D	1
-50A	113T8119-3		...HINGE- (OPT ITEM 50C) (USED ON ITEM 10A)	A-D	1
-50B	113T8119-6		...HINGE- (OPT ITEM 50D) (USED ON ITEM 10B)	A-D	1
-50C	113T8119-9		...HINGE- (OPT ITEM 50A) (USED ON ITEM 10A)	A-D	1
-50D	113T8119-11		...HINGE- (OPT ITEM 50B) (USED ON ITEM 10B)	A-D	1
-50E	113T8119-15		DELETED		
-50F	113T8119-12		DELETED		

32-12-53

 ILLUSTRATED PARTS LIST  
 01.1 Page 1013  
 Sep 01/94

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-55	113T8111-4		...HINGE- (USED ON ITEM 15)	A-D	1
-55A	113T8119-4		...HINGE- (OPT ITEM 55C) (USED ON ITEM 15A)	A-D	1
-55B	113T8119-6		...HINGE- (OPT ITEM 55D) (USED ON ITEM 15B)	A-D	1
-55C	113T8119-10		...HINGE- (OPT ITEM 55A) (USED ON ITEM 15A)	A-D	1
-55D	113T8119-11		...HINGE- (OPT ITEM 55B) (USED ON ITEM 15B)	A-D	1
-55E	113T8119-15		DELETED		
-55F	113T8119-12		DELETED		
60	940CW20-8		..JUMPER ASSY- (V91812) (SPEC BACJ40AB20-8) ATTACHING PARTS		1
65	NAS623-3-5		..SCREW		1
70	AN960-10L		DELETED		
R 70A	NAS1149F0332P		..WASHER		1
75	H10-3BAC		DELETED		
R 75A	H52732-3CD		..NUT- (V15653) (SPEC BACN10YR3CD) (OPT PLH53CD (V62554)) -----*		1

# 32-12-53

 ILLUSTRATED PARTS LIST  
 01.1 Page 1014  
 Sep 01/94

**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-80	113T8112-1		..FITTING ASSY-ATTACH ATTACHING PARTS		1
85	BACB30NN4K28		..BOLT- (V06710) (SPEC BACB30NN4K28) (OPT BACB30NN4K28 (V06725)) (OPT BACB30NN4K28 (V06950)) (OPT BACB30NN4K28 (V08524)) (OPT BACB30NN4K28 (V27624)) (OPT BACB30NN4K28 (V56878)) (OPT BACB30NN4K28 (V73197)) (OPT BACB30NN4K28 (V80539)) (OPT BACB30NN4K28 (V92215)) (OPT BACB30NN4K28 (V93907)) (OPT BACB30NN4K28 (V97928))		4
R 90	AN960PD416L		DELETED		
R 90A	NAS1149D0416J		..WASHER		4
R 95	H10-4BAC		DELETED		
R 95A	H52732-4CD		..NUT- (V15653) (SPEC BACN10YR4CD) (OPT PLH54CD (V62554)) -----*		4

**32-12-53**

ILLUSTRATED PARTS LIST  
 01.1 Page 1015  
 Sep 01/94

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
100	BACB28AP06P014		...BUSHING		1
105	BACB28AM09B014A		...BUSHING		1
110	113T8112-2		...FITTING		1
115	BACB30NN3K3		..BOLT- (V06710) (SPEC BACB30NN3K3) (OPT BACB30NN3K3 (V06725)) (OPT BACB30NN3K3 (V06950)) (OPT BACB30NN3K3 (V08524)) (OPT BACB30NN3K3 (V27624)) (OPT BACB30NN3K3 (V56878)) (OPT BACB30NN3K3 (V73197)) (OPT BACB30NN3K3 (V80539)) (OPT BACB30NN3K3 (V92215)) (OPT BACB30NN3K3 (V93907)) (OPT BACB30NN3K3 (V97928))		8
-115A	BACB30VF3K3		DELETED		
120	AN960PD10L		DELETED		
R 120A	NAS1149D0316J		..WASHER		8
125	H10-3BAC		DELETED		
R 125A	H52732-3CD		..NUT- (V15653) (SPEC BACN10YR3CD) (OPT PLH53CD (V62554))		8
130	113T8101-3		..RETAINER-SEAL (MFD FROM EXTR AL 2024T3511 F18.13 BAC1512-330 21.5 IN) QQS200/3)		1
135	113T8101-5		DELETED		
-140	113T8101-6		DELETED		
145	113T8101-7		DELETED		
-150	113T8101-8		DELETED		
155	113T8101-9		..SEAL	A,C	1

# 32-12-53

ILLUSTRATED PARTS LIST

01.1

Page 1016

Sep 01/94




**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-160	113T8101-10		..SEAL	B,D	1
165	113T8101-11		DELETED		
170	113T8101-12		DELETED		
-171	113T8101-15		DELETED		
-173	113T8101-16		DELETED		
175	113T8102-1		..BOND ASSY-DOOR	A,C	1
-180	113T8102-2		..BOND ASSY-DOOR	B,D	1
			ATTACHING PARTS		
185	BACR15BA4D		..RIVET-		20
			(SIZE DETERMINE ON INST)		
190	BACR15BB4D		..RIVET-		20
			(SIZE DETERMINE ON INST)		
			-----*		
195	113T8102-9		...PROTECTOR-EDGE	A,C	1
-200	113T8102-10		...PROTECTOR-EDGE	B,D	1
205	113T8102-11		...PROTECTOR-EDGE	A,C	1
-210	113T8102-12		...PROTECTOR-EDGE	B,D	1
215	113T8102-13		...PROTECTOR-EDGE	A,C	1
-220	113T8102-14		...PROTECTOR-EDGE	B,D	1
225	113T8102-15		...PROTECTOR-EDGE	A,C	1
-230	113T8102-16		...PROTECTOR-EDGE	B,D	1
235	113T8102-17		...PROTECTOR-EDGE	A,C	1
-240	113T8102-18		...PROTECTOR-EDGE	B,D	1
			ATTACHING PARTS		
245	AN3DD3A		...BOLT		10
250	AN960PD10L		...WASHER		10
255A	AN315D3R		...NUT		10
			-----*		
260	113T8102-23		...DOUBLER		1
265	113T8102-24		...DOUBLER		2

32-12-53

 ILLUSTRATED PARTS LIST  
 01.1 Page 1017  
 Sep 01/94

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
270	113T8114-1		...FITTING		2
275	113T8113-1		...FITTING		1
280	113T8102-21		...SKIN-INNER	A,C	1
-285	113T8102-22		...SKIN-INNER	B,D	1
290	113T8102-19		...SKIN-OUTER	A,C	1
-295	113T8102-20		...SKIN-OUTER	B,D	1
300	MS27253F3		..PLATE		1
305	BACB30NN3K3		.BOLT-		14
			(V06710)		
			(SPEC BACB30NN3K3)		
			(OPT BACB30NN3K3		
			(V06725))		
			(OPT BACB30NN3K3		
			(V06950))		
			(OPT BACB30NN3K3		
			(V08524))		
			(OPT BACB30NN3K3		
			(V56878))		
			(OPT BACB30NN3K3		
			(V73197))		
			(OPT BACB30NN3K3		
			(V80539))		
			(OPT BACB30NN3K3		
			(V92215))		
			(OPT BACB30NN3K3		
			(V93907))		
			(OPT BACB30NN3K3		
			(V97928))		

# 32-12-53

ILLUSTRATED PARTS LIST

01.1

Page 1018

Sep 01/94


**BOEING**  
 COMPONENT  
 MAINTENANCE MANUAL

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-305A	BACB30NN3K3		DELETED		
-305B	BACB30VF3K3		DELETED		
310	AN960PD10L		DELETED		
R 310A	NAS1149D0316J		.WASHER		14
315	H10-3BAC		DELETED		
R 315A	H52732-3CD		.NUT- (V15653) (SPEC BACN10YR3CD) (OPT PLH53CD (V62554))		14
320	113T8101-5		.RETAINER-SEAL (MFD FROM EXTR AL 2024T3511 F18.13 BAC1510-1074 19.0 1N QQS200/3)	A,C	1
-325	113T8101-6		.RETAINER-SEAL (MFD FROM EXTR AL 2024T3511 F18.13 BAC1510-1074 19.0 IN QQS200/3)	B,D	1
330	113T8101-7		.RETAINER-SEAL	A,C	1
-335	113T8101-8		.RETAINER-SEAL (MFD FROM EXTR AL 2024T3511 F18.13 BAC1510-1074 18.0 IN QQS200/3)	B,D	1
340	113T8101-11		.SEAL- (MFD FROM EXTR RUBBER 10-60754-418 20.0 IN)	A,C	1
-345	113T8101-15		.SEAL- (MFD FROM EXTR RUBBER 10-60754-418 20.0IN)	B,D	1

32-12-53

 ILLUSTRATED PARTS LIST  
 01.1 Page 1019  
 Sep 01/94

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE	EFF CODE	QTY PER ASSY
			1234567		
01-350	113T8101-12		.SEAL- (MFD FROM EXTR RUBBER 10-60754-418 20.0 IN)	A,C	1
-350A	113T8101-16		.SEAL- (MFD FROM EXTR RUBBER 10-60754-418 20.0 IN)	B,D	1

# 32-12-53

 ILLUSTRATED PARTS LIST  
 01.1 Page 1020  
 Sep 01/94