



MAIN LANDING GEAR ALTERNATE
EXTENDED QUADRANT ASSEMBLY
PART NUMBER 257T3102-1

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

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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

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TR & SB RECORD

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			602	BLANK	
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TR & SB RECORD			ILLUSTRATED PARTS LIST		
1	OCT 01/87	01	1001	OCT 01/87	01
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Repair	601
Assembly*[1]	
Fits and Clearances (not applicable)	
Special Tools (not applicable)	
Illustrated Parts List	1001
*[1] Special instructions not required. Use standard industry practices.	

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INTRODUCTION

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

This manual is divided into separate sections:

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

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

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

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

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

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

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MAIN LANDING GEAR ALTERNATE EXTEND QUADRANT ASSEMBLY

DESCRIPTION AND OPERATION

1. Description

A. The main landing gear alternate extend quadrant assembly consists of aluminum quadrants, channels and brackets. The quadrants are supported by roller bearings.

2. Operation

A. The quadrant assembly connects the main landing gear alternate extend control levers to the cable loops. In case of hydraulic failure, the levers can be pulled, rotating the quadrants which pull the cable loops, resulting in the main landing gear being released and deployed to the down position by gravity.

3. Leading Particulars (approximate)

A. Length -- 11 inches

B. Width -- 12 inches

C. Height -- 15 inches

D. Weight -- (TBD)

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DESCRIPTION & OPERATION

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DISASSEMBLY

NOTE: Do not remove bearings or rivets unless repair or replacement makes it necessary.

1. Disassemble using standard industry practices.

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DISASSEMBLY

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CLEANING

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

CAUTION: BEARINGS (80, 90) HAVE SEALS. CLEAN ONLY PER MANUFACTURER'S INSTRUCTIONS.

2. Clean bearings (80, 90) per manufacturer's instructions.

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CHECK

1. Check all parts for obvious defects in accordance with standard industry practices.
2. Penetrant check quadrant (95) per 20-20-02.

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CHECK

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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>
257T3113	QUADRANT ASSY	1-1
- - -	MISCELLANEOUS PARTS REFINISH	2-1

2. Standard Practices

- A. For details of individual repairs, refer to the following standard practices, as applicable:

20-30-02 Stripping of Protective Finishes
 20-41-01 Decoding Table for Boeing Finish Codes
 20-43-01 Chromic Acid Anodizing
 20-50-03 Bearing Installation and Retention

3. Materials

NOTE: Equivalent substitutes may be used.

- A. Enamel -- BMS 10-11, type 2, white gloss (Ref 20-60-02)
 B. Primer -- BMS 10-11, type 1 (Ref 20-60-02)
 C. Grease -- MIL-G-23827 (Ref 20-60-03)

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QUADRANT ASSY - REPAIR 1-1

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NOTE: Refer to REPAIR-GEN for list of applicable standard practices. For repair of surfaces which may only require stripping and restoration of original finish, refer to Refinish instructions, Fig. 601. Spacer (15) and bearing (80) are not part of this assembly, however they are included in this repair to facilitate maintenance.

1. Bearing Replacement (Fig. 601, IPL Fig. 1)
 - A. Remove bearings and spacer.
 - B. Install replacement bearing (90) and roller swage per 20-50-03, except use wet primer in place of MIL-G-23827 grease.
 - C. Install spacer (15).
 - D. Install bearing (80) per 20-50-03 using grease.

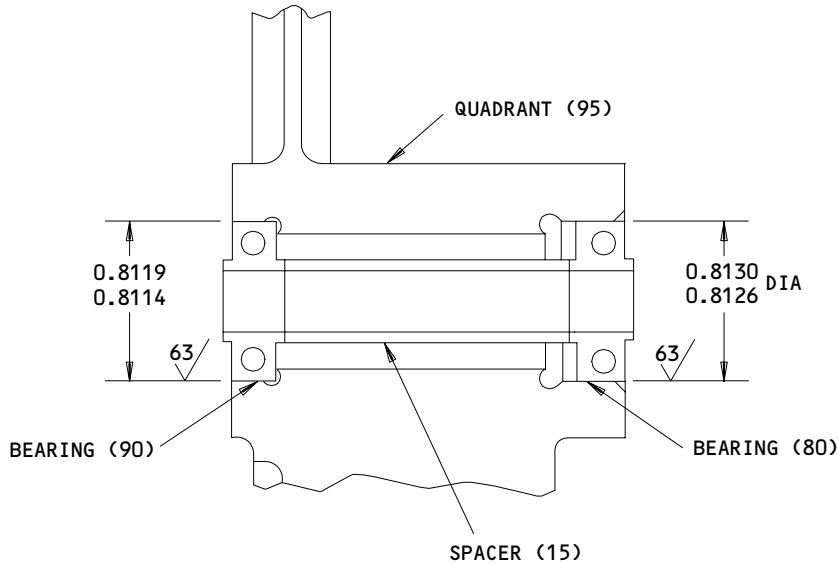
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REFINISH

QUADRANT (95) ONLY -- ANODIZE (F-17.05)
AND APPLY ONE COAT BMS 10-11, TYPE 1,
PRIMER (F-20.02), FOLLOWED BY BMS 10-11,
TYPE 2, WHITE GLOSS ENAMEL (F-21.03)
ALL OVER, EXCEPT IN BORES. CHROMIC
ACID ANODIZE (F-17.04) OR CHEMICAL
TREAT (F-17.07) BORES.

MATERIAL: AL ALLOY

ALL DIMENSIONS ARE IN INCHES

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Bearing Replacement
Figure 601

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MISC PARTS REFINISH - REPAIR 2-1

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

IPL FIG. & ITEM	MATERIAL	FINISH
<u>Fig. 1</u>		
Channel (25,33,42,50,60)	Al alloy	Chemical treat surface, or chromic acid anodize, and apply one coat BMS 10-11, type 1 primer (F-18.03), followed by BMS 10-11, type 2 white gloss enamel (F-21.03).
Bracket (70)	Al alloy	Chemical treat surface, and apply one coat BMS 10-11, type 1 primer (F-18.06), followed by BMS 10-11, type 2 white gloss enamel (F-21.03).
Radius Filler (43)	Al alloy	Chemical treat surface, and apply one coat BMS 10-11, type 1 primer (F-18.06).

Refinish Details
 Figure 601

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REPAIR 2-1

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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.

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ILLUSTRATED PARTS LIST

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VENDORS

11815 TOWNSEND DIV OF TEXTRON INC CHERRY FASTENER UNIT
BOX 2157 1224 EAST WARNER AVENUE
SANTA ANA, CALIFORNIA 92707

15653 KAYNAR MFG COMPANY INC KAYLOCK DIV
PO BOX 3001 800 SOUTH STATE COLLEGE BLVD
FULLERTON, CALIFORNIA 92634

17446 HUCK MFG CO LOS ANGELES DIV
900 WATSON CENTER ROAD
CARSON, CALIFORNIA 90745

21335 TEXTRON INC FAFNIR BEARING DIVISION
37 BOOTH STREET
NEW BRITAIN, CONNECTICUT 06050

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

43991 FAG BEARING INCORPORATED
HAMILTON AVENUE
STAMFORD, CONNECTICUT 06904

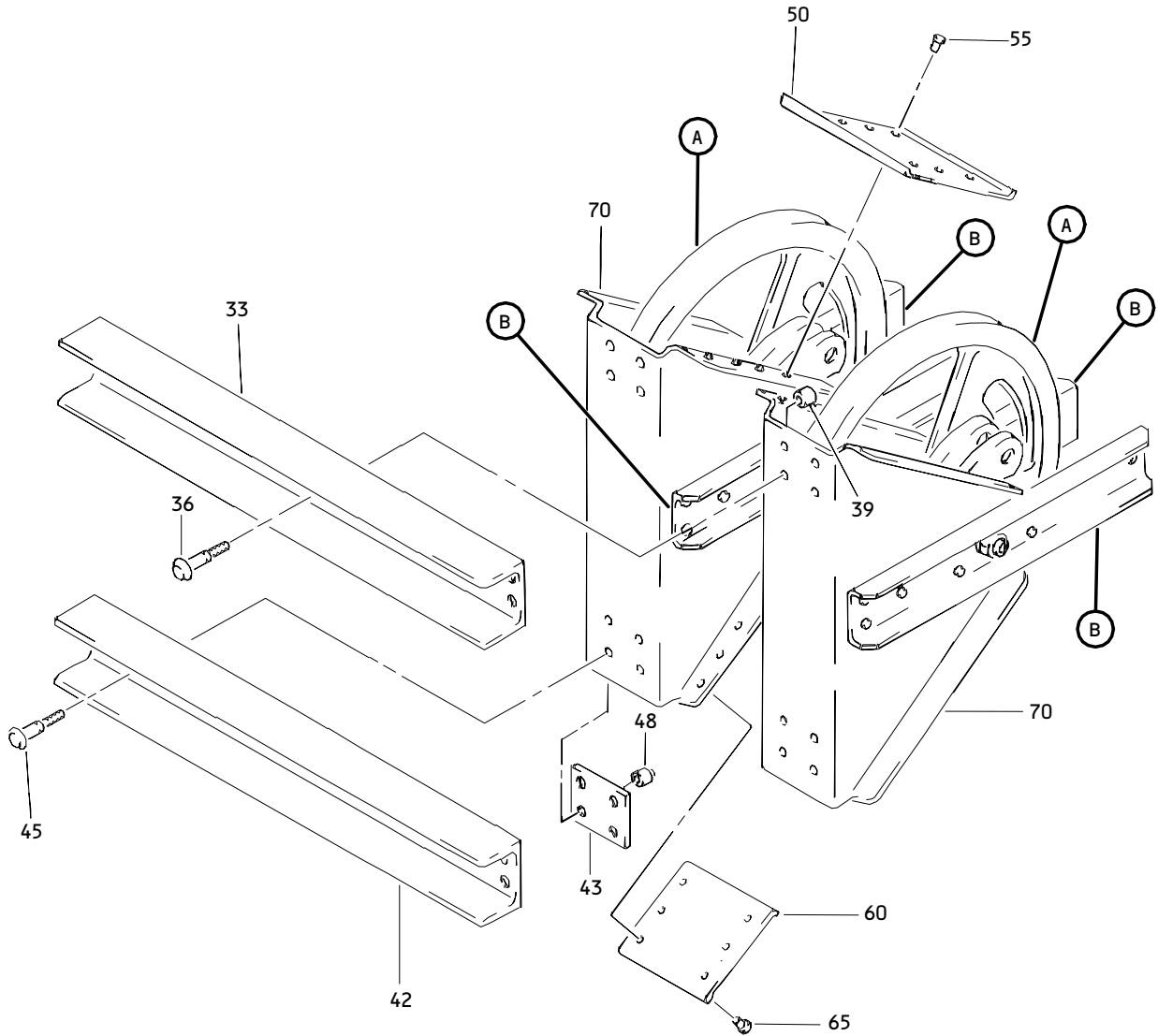
52828 REPUBLIC FASTENER MFG CORP
1300 RANCHO CONEJO BLVD
NEWBURY PARK, CALIFORNIA 91320

72962 ESNA DIV OF AMERACE CORP
2330 VAUXHALL ROAD
UNION, NEW JERSEY 07083

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

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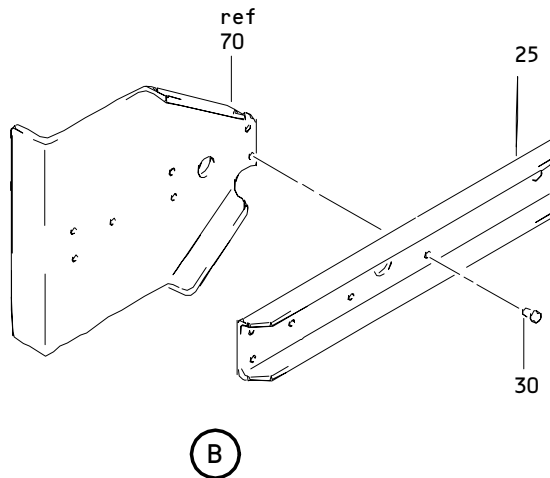
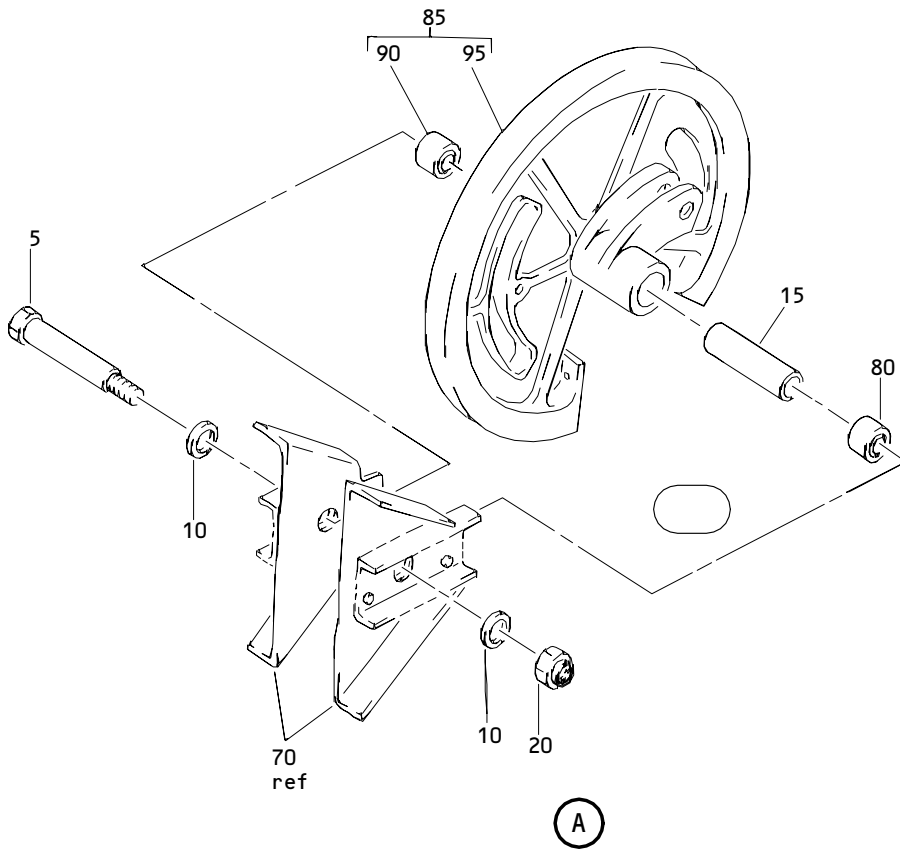
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Alternate Extend Main Landing Gear Quadrant Assembly
Figure 1 (Sheet 1)

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Alternate Extend Main Landing Gear Quadrant Assembly
 Figure 1 (Sheet 2)

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01- -1	257T3102-1		QUADRANT ASSY-ALTERNATE EXTEND MLG		RF
5	NAS6605-38		.BOLT		2
10	AN960-516L		.WASHER		4
15	NAS43DD5-98		.SPACER		2
20	BRH10A5		.NUT- (V52828) (SPEC BACN10JC5) (OPT H10-5BAC (V15653)) (OPT RMLH9075-5W (V72962)) (OPT T6S524J (V11815)) (OPT 96-054 (V80539))		2
25	257T3102-2		.CHANNEL ATTACHING PARTS		4
30	BACR15BA4AD		.RIVET -----*-----		28
33	257T3102-5		.CHANNEL ATTACHING PARTS		1
36	2LPYE5-3		.BOLT- (V11815) (SPEC BACB30GP5-3) (OPT 2LPYE5-3 (V17446))		8
39	NAS1080D05		.COLLAR -----*-----		8
42	257T3102-5		.CHANNEL ATTACHING PARTS		1
43	50-3361-8116		.FILLER-RADIUS		2
45	2LPYE5-4		.BOLT- (V11815) (SPEC BACB30GP5-4) (OPT 2LPYE5-4 (V17446))		8

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FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-48	NAS1080D05		.COLLAR -----*		8
50	257T3102-4		.CHANNEL ATTACHING PARTS		1
55	BACR15BB4AD		.RIVET -----*		8
60	257T3102-3		.CHANNEL ATTACHING PARTS		1
65	BACR15BB4AD		.RIVET -----*		6
70	257T3114-1		.BRACKET		2
80	KP5A		.BEARING- (V38443) (SPEC BACB10BX5) (OPT KP5AFS428 (V21335)) (OPT KP5A2TS (V43991)) (OPT LLKP5A (V38443))		2
85	257T3113-1		.QUADRANT ASSY		2
90	KP5A		..BEARING- (V38443) (SPEC BACB10BX5) (FOR OPTIONAL PARTS REFER TO ITEM 80)		1
95	257T3113-2		..QUADRANT-MACH		1

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