



COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

NOSE LANDING GEAR WHEEL AND TIRE INSTALLATION COMPONENTS

PART NUMBER

**277A6000-31, -401, -402, -403, -404, -405, -406, -801,
-802, -803, -804, -805**

BOEING PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET

Copyright © 1995 The Boeing Company
Unpublished Work - All Rights Reserved

Boeing claims copyright in each page of this document only to the extent that the page contains copyrightable subject matter. Boeing also claims copyright in this document as a compilation and/or collective work.

This document includes proprietary information owned by The Boeing Company and/or one or more third parties. Treatment of the document and the information it contains is governed by contract with Boeing. For more information, contact The Boeing Company, P.O. Box 3707, Seattle, Washington 98124.

Boeing, the Boeing signature, the Boeing symbol, 707, 717, 727, 737, 747, 757, 767, 777, 787, Dreamliner, BBJ, DC-8, DC-9, DC-10, KC-10, KDC-10, MD-10, MD-11, MD-80, MD-88, MD-90, P-8A, Poseidon and the Boeing livery are all trademarks owned by The Boeing Company; and no trademark license is granted in connection with this document unless provided in writing by Boeing.

PUBLISHED BY BOEING COMMERCIAL AIRPLANES GROUP, SEATTLE, WASHINGTON, USA
A DIVISION OF THE BOEING COMPANY
PAGE DATE: Jul 01/2009

32-21-17

Page 1
Jul 01/2009



COMPONENT MAINTENANCE MANUAL

Revision No. 12
Jul 01/2009

To: All holders of NOSE LANDING GEAR WHEEL AND TIRE INSTALLATION COMPONENTS 32-21-17.

Attached is the current revision to this COMPONENT MAINTENANCE MANUAL

The COMPONENT MAINTENANCE MANUAL is furnished either as a printed manual, on microfilm, or digital products, or any combination of the three. This revision replaces all previous microfilm cartridges or digital products. All microfilm and digital products are reissued with all obsolete data deleted and all updated pages added.

For printed manuals, changes are indicated on the List of Effective Pages (LEP). The pages which are revised will be identified on the LEP by an R (Revised), A (Added), O (Overflow, i.e. changes to the document structure and/or page layout), or D (Deleted). Each page in the LEP is identified by Chapter-Section-Subject number, page number and page date.

Pages replaced or made obsolete by this revision should be removed and destroyed.

ATTENTION

IF YOU RECEIVE PRINTED REVISIONS, PLEASE VERIFY THAT YOU HAVE RECEIVED AND FILED THE PREVIOUS REVISION. BOEING MUST BE NOTIFIED WITHIN 30 DAYS IF YOU HAVE NOT RECEIVED THE PREVIOUS REVISION. REQUESTS FOR REVISIONS OTHER THAN THE PREVIOUS REVISION WILL REQUIRE A COMPLETE MANUAL REPRINT SUBJECT TO REPRINT CHARGES SHOWN IN THE DATA AND SERVICES CATALOG.

32-21-17
TRANSMITTAL LETTER
Page 1
Jul 01/2009



COMPONENT MAINTENANCE MANUAL

Location of Change

Description of Change

NO HIGHLIGHTS

32-21-17

HIGHLIGHTS

Page 1

Jul 01/2009



COMPONENT MAINTENANCE MANUAL

Subject/Page	Date	Subject/Page	Date	Subject/Page	Date
TITLE PAGE		32-21-17 CLEANING (cont)			
O 1	Jul 01/2009	402	BLANK		
2	BLANK	32-21-17 CHECK			
32-21-17 TRANSMITTAL LETTER		501	Nov 01/2006		
O 1	Jul 01/2009	502	BLANK		
2	BLANK	32-21-17 REPAIR - GENERAL			
32-21-17 HIGHLIGHTS		601	Mar 01/2006		
O 1	Jul 01/2009	602	Mar 01/2006		
2	BLANK	32-21-17 REPAIR 1-1			
32-21-17 EFFECTIVE PAGES		601	Mar 01/2009		
1	Jul 01/2009	602	Mar 01/2009		
2	BLANK	603	Mar 01/2009		
32-21-17 CONTENTS		604	Jul 01/2007		
1	Mar 01/2006	32-21-17 ASSEMBLY			
2	BLANK	701	Nov 01/2007		
32-21-17 TR AND SB RECORD		702	Mar 01/2006		
1	Mar 01/2006	703	Mar 01/2006		
2	BLANK	704	BLANK		
32-21-17 REVISION RECORD		32-21-17 FITS AND CLEARANCES			
1	Mar 01/2006	801	Mar 01/2006		
2	Mar 01/2006	802	BLANK		
32-21-17 RECORD OF TEMPORARY REVISIONS		32-21-17 SPECIAL TOOLS, FIXTURES, AND EQUIPMENT			
1	Mar 01/2006	901	Mar 01/2006		
2	Mar 01/2006	902	BLANK		
32-21-17 INTRODUCTION		32-21-17 ILLUSTRATED PARTS LIST			
1	Mar 01/2009	1001	Nov 01/2008		
2	BLANK	1002	Nov 01/2006		
32-21-17 DESCRIPTION AND OPERATION		1003	Nov 01/2006		
1	Nov 01/2006	1004	Nov 01/2006		
2	Nov 01/2006	1005	Nov 01/2006		
32-21-17 TESTING AND FAULT ISOLATION		1006	Nov 01/2006		
101	Mar 01/2006	1007	Nov 01/2006		
102	BLANK	1008	Nov 01/2006		
32-21-17 DISASSEMBLY		1009	Nov 01/2006		
301	Nov 01/2006	1010	Nov 01/2006		
302	BLANK	1011	Nov 01/2006		
32-21-17 CLEANING		1012	Nov 01/2006		
401	Nov 01/2006	1013	Nov 01/2006		
		1014	Nov 01/2006		

A = Added, R = Revised, D = Deleted, O = Overflow

32-21-17

EFFECTIVE PAGES

Page 1

Jul 01/2009

**COMPONENT MAINTENANCE MANUAL****TABLE OF CONTENTS**

<u>Paragraph Title</u>		<u>Page</u>
NOSE LANDING GEAR WHEEL INSTALLATION COMPONENTS - DESCRIPTION AND OPERATION		1
TESTING AND FAULT ISOLATION	(Not Applicable)	
DISASSEMBLY		301
CLEANING		401
CHECK		501
REPAIR		601
ASSEMBLY		701
FITS AND CLEARANCES		801
SPECIAL TOOLS, FIXTURES, AND EQUIPMENT	(Not Applicable)	
ILLUSTRATED PARTS LIST		1001

32-21-17

CONTENTS

Page 1

Mar 01/2006



COMPONENT MAINTENANCE MANUAL

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR 35385-8	NOV 01/98
		MC 3240MP3289	MAR 01/98
		MC 3240MP3295	MAR 01/98
		MC 3245MP3053	MAR 01/98
		MC 3245MP3057	MAR 01/98
		MC 3245MP3070F	MAR 01/98
		MC 3245MP3070G	MAR 01/98
		MC 3245MP3080G	MAR 01/98
		MC 3245MP3085G	MAR 01/98
		MC 3245MP3134G	MAR 01/01

32-21-17

TR AND SB RECORD

Page 1

Mar 01/2006



COMPONENT MAINTENANCE MANUAL

Revision		Filed		Revision		Filed	
Number	Date	Date	Initials	Number	Date	Date	Initials



COMPONENT MAINTENANCE MANUAL

All temporary revisions to this manual will be accompanied by a cover sheet bearing the temporary revision number. Enter the temporary revision number in numerical order, together with the temporary revision date, the date the temporary revision is inserted and the initials of the person filing. When the temporary revision is incorporated or cancelled, and the pages are removed, enter the date the pages are removed and the initials of the person who removed the temporary revision.

Temporary Revision		Inserted		Removed	
Number	Date	Date	Initials	Date	Initials

Temporary Revision		Inserted		Removed	
Date	Initials	Number	Date	Date	Initials



COMPONENT MAINTENANCE MANUAL

Temporary Revision		Inserted		Removed	
Number	Date	Date	Initials	Date	Initials

Temporary Revision		Inserted		Removed	
Date	Initials	Number	Date	Date	Initials

32-21-17

RECORD OF TEMPORARY REVISION

Page 2

Mar 01/2006



COMPONENT MAINTENANCE MANUAL

INTRODUCTION

1. General

- A. The instructions in this manual supply the data necessary to do the maintenance functions together with the test, fault isolation, repair, and replacement of the defective parts.
- B. This manual is divided into different parts:
 - (1) Title Page
 - (2) Transmittal Letter
 - (3) Highlights
 - (4) List of Effective Pages
 - (5) Table of Contents
 - (6) Temporary Revision & Service Bulletin Record
 - (7) Record of Revisions
 - (8) Record of Temporary Revisions
 - (9) Introduction
 - (10) Procedures & IPL Sections
- C. Components that can be repaired have a different repair number for each specified repair. To find the repair number location of a component, look in the Repair-General procedure at the beginning of the REPAIR section. The Repair-General procedure also has an explanation of the True Position Dimension symbols used.
- D. All dimensions, measures, quantities and weights included are in English units. When metric equivalents are given they will be in the parentheses that follow the English units.
- E. The introduction to the Illustrated Parts List (IPL) shows how the IPL data is used.
- F. Design changes, optional parts, configuration differences and Service Bulletin modifications may cause different part numbers. These part numbers are identified in the IPL with an alphabetical letter which is added to the end of the basic item number. This new item number is referred to as an alpha-variant. Throughout the manual, IPL basic item number references also apply to alpha-variants unless shown differently.
- G. The tool reference numbers found in the individual procedures and in the Special Tools, Fixtures, and Equipment section are used to identify if a tool is a standard tool (STD-XXXX), a commercial tool (COM-XXXX), or a Special Tool (SPL-XXXX). This reference number is also used to distinguish between tools with similar names in the same procedure. These reference numbers are for use in the documentation only. They are not to be used for ordering tools.

32-21-17

INTRODUCTION

Page 1

Mar 01/2009



COMPONENT MAINTENANCE MANUAL

NOSE LANDING GEAR WHEEL INSTALLATION COMPONENTS - DESCRIPTION AND OPERATION

1. Description

- A. The nose landing gear wheel installation components includes two wheel and tire assemblies and axle installation components. The wheel assemblies are made by Allied Signal or BF Goodrich. The component maintenance and repair procedures for the wheel assemblies are covered by the vendor component maintenance manuals.

2. Operation

- A. The wheel and tire assemblies and axle installation components hold up the airplane nose landing gear during taxi, takeoff, and landing.

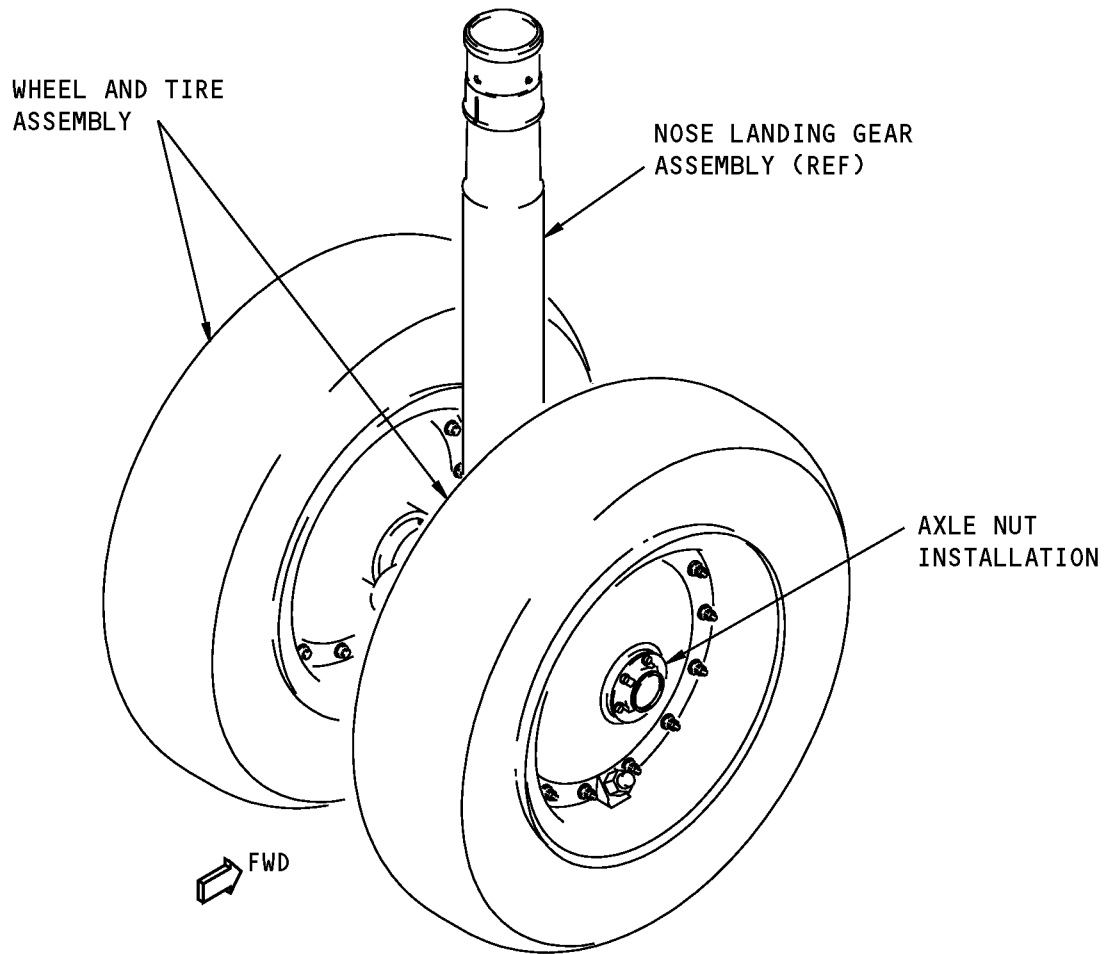
32-21-17

DESCRIPTION AND OPERATION

Page 1

Nov 01/2006

COMPONENT MAINTENANCE MANUAL



Wheel and Tire Installation
Figure 1

32-21-17

DESCRIPTION AND OPERATION

Page 2

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

TESTING AND FAULT ISOLATION

(NOT APPLICABLE)

32-21-17

TESTING AND FAULT ISOLATION

Page 101

Mar 01/2006



COMPONENT MAINTENANCE MANUAL

DISASSEMBLY

1. General

- A. This procedure tells how to disassemble the nose landing gear wheel installation components.
- B. Disassemble this component only sufficiently to isolate the defects, do the necessary repairs, and put the component back to a serviceable condition.
- C. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
- D. Refer to IPL Figure 1 and IPL Figure 2 for item numbers.

2. Disassembly

A. References

Reference	Title
HONEYWELL INTL INC 32-40-10	Nose Wheel Assembly
B. F. GOODRICH AEROSPACE 32-40-51	Nose Landing Gear Wheel Assembly
737 AMM 32-45-21-401	Aircraft Maintenance Manual

B. Procedure

NOTE: For nose landing gear wheel and tire removal, refer to 737 AMM 32-45-21-401. For nose wheel assembly (Allied Signal), refer to HONEYWELL INTL INC 32-40-10. For nose landing gear wheel assembly (BF Goodrich), refer to B. F. GOODRICH AEROSPACE 32-40-51

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

32-21-17

DISASSEMBLY

Page 301

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

CLEANING

1. General

- A. This procedure tells how to clean the nose landing gear wheel installation components.
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
- C. Refer to IPL Figure 1 and IPL Figure 2 for item numbers.

2. Cleaning

A. References

Reference	Title
SOPM 20-30-03	GENERAL CLEANING PROCEDURES

B. Procedure

- (1) Clean all Boeing parts by standard industry procedures and the instructions in SOPM 20-30-03. Clean vendor parts by the applicable vendor's instructions.

32-21-17

CLEANING

Page 401

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

CHECK

1. General

- A. This procedure tells how 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 the SOPM subjects identified in this procedure.
- D. Refer to IPL Figure 2 for item numbers.

2. Check

A. References

Reference	Title
SOPM 20-20-01	MAGNETIC PARTICLE INSPECTION

B. Procedure

- (1) Use standard industry procedures to do a visual check of all the parts for defects.
- (2) Do a magnetic particle check (SOPM 20-20-01) of these parts:
 - (a) Nut (25)
 - (b) Bearing washer (15)
 - (c) Spacer (20)

32-21-17

CHECK
Page 501
Nov 01/2006



COMPONENT MAINTENANCE MANUAL

REPAIR

1. General

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

Table 601:

PART NUMBER	NAME	REPAIR
—	REFINISH OF OTHER PARTS	1-1

2. Dimensioning Symbols

- A. Standard True Position Dimensioning Symbols used in the applicable repair procedures are shown in REPAIR-GENERAL, Figure 601.

32-21-17

REPAIR - GENERAL

Page 601

Mar 01/2006



COMPONENT MAINTENANCE MANUAL

—	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
≡	SYMMETRY		NOTES.
∠	ANGULARITY	-A-	DATUM
↗	RUNOUT	Ⓜ	MAXIMUM MATERIAL CONDITION (MMC)
↗↗	TOTAL RUNOUT	Ⓛ	LEAST MATERIAL CONDITION (LMC)
⊔	COUNTERBORE OR SPOTFACE	Ⓢ	REGARDLESS OF FEATURE SIZE (RFS)
∇	COUNTERSINK	Ⓟ	PROJECTED TOLERANCE ZONE
⊕	THEORETICAL EXACT POSITION OF A FEATURE (TRUE POSITION)	FIM	FULL INDICATOR MOVEMENT

EXAMPLES

$\boxed{\text{—}} \boxed{0.002}$	STRAIGHT WITHIN 0.002	$\boxed{\text{◎}} \boxed{\text{∅}} \boxed{0.0005} \boxed{\text{C}}$	CONCENTRIC TO DATUM C WITHIN 0.0005 DIAMETER
$\boxed{\text{⊥}} \boxed{0.002} \boxed{\text{B}}$	PERPENDICULAR TO DATUM B WITHIN 0.002	$\boxed{\text{≡}} \boxed{0.010} \boxed{\text{A}}$	SYMMETRICAL WITH DATUM A WITHIN 0.010
$\boxed{\text{//}} \boxed{0.002} \boxed{\text{A}}$	PARALLEL TO DATUM A WITHIN 0.002	$\boxed{\text{∠}} \boxed{0.005} \boxed{\text{A}}$	ANGULAR TOLERANCE 0.005 WITH DATUM A
$\boxed{\text{○}} \boxed{0.002}$	ROUND WITHIN 0.002	$\boxed{\text{⊕}} \boxed{\text{∅}} \boxed{0.002} \boxed{\text{Ⓢ}} \boxed{\text{B}}$	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	$\boxed{\text{⊥}} \boxed{\text{∅}} \boxed{0.010} \boxed{\text{Ⓜ}} \boxed{\text{A}}$	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
$\boxed{\text{⌒}} \boxed{0.006} \boxed{\text{A}}$	EACH LINE ELEMENT OF THE SURFACE AT ANY CROSS SECTION MUST LIE BETWEEN TWO PROFILE BOUNDARIES 0.006 INCH APART RELATIVE TO DATUM A	$\boxed{0.510} \boxed{\text{Ⓟ}}$	THEORETICALLY EXACT DIMENSION IS 2.000
$\boxed{\text{⌓}} \boxed{0.020} \boxed{\text{A}}$	SURFACES MUST LIE WITHIN PARALLEL BOUNDARIES 0.020 INCH APART AND EQUALLY DISPOSED ABOUT TRUE PROFILE		OR 2.000 BSC

True Position Dimensioning Symbols
Figure 601

32-21-17

REPAIR - GENERAL

Page 602

Mar 01/2006



COMPONENT MAINTENANCE MANUAL

REFINISH OF OTHER PARTS - REPAIR 1-1

1. General

- A. Use this procedure to refinish the parts which are not in the other repairs.
- B. Refer to the Standard Overhaul Practice Manual (SOPM) for the SOPM subjects identified in this procedure.
- C. Refer to IPL Figure 2 for item numbers.

2. Refinish of Other Parts

- A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
D00113	Lubricant - Liquid Dispersed Solid Film Lubricant	BMS3-8, BAC 5811, TYPE VIII

- B. References

Reference	Title
SOPM 20-30-02	STRIPPING OF PROTECTIVE FINISHES
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES
SOPM 20-50-08	APPLICATION OF BONDED SOLID FILM LUBRICANTS

- C. Procedure

NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01.

- (1) Repair of the parts in REPAIR 1-1, Table 601 is only replacement of the original finish.

Table 601: Refinish Details

IPL FIG. & ITEM	MATERIAL	FINISH
IPL Fig. 2		
Washer (15)	15-5PH CRES, 180-200 ksi	Passivate (F-17.25). Apply thin dense chrome plate to the end face as shown in REPAIR 1-1, Figure 602.
Spacer (20)	15-5PH CRES, 180-200 ksi	Passivate (F-17.25).
Nut (25)	15-5PH CRES, 180-200 ksi	Passivate (F-17.25). Apply lubricant, D00113 (F-19.10) to threads (SOPM 20-50-08) as shown in REPAIR 1-1, Figure 601.

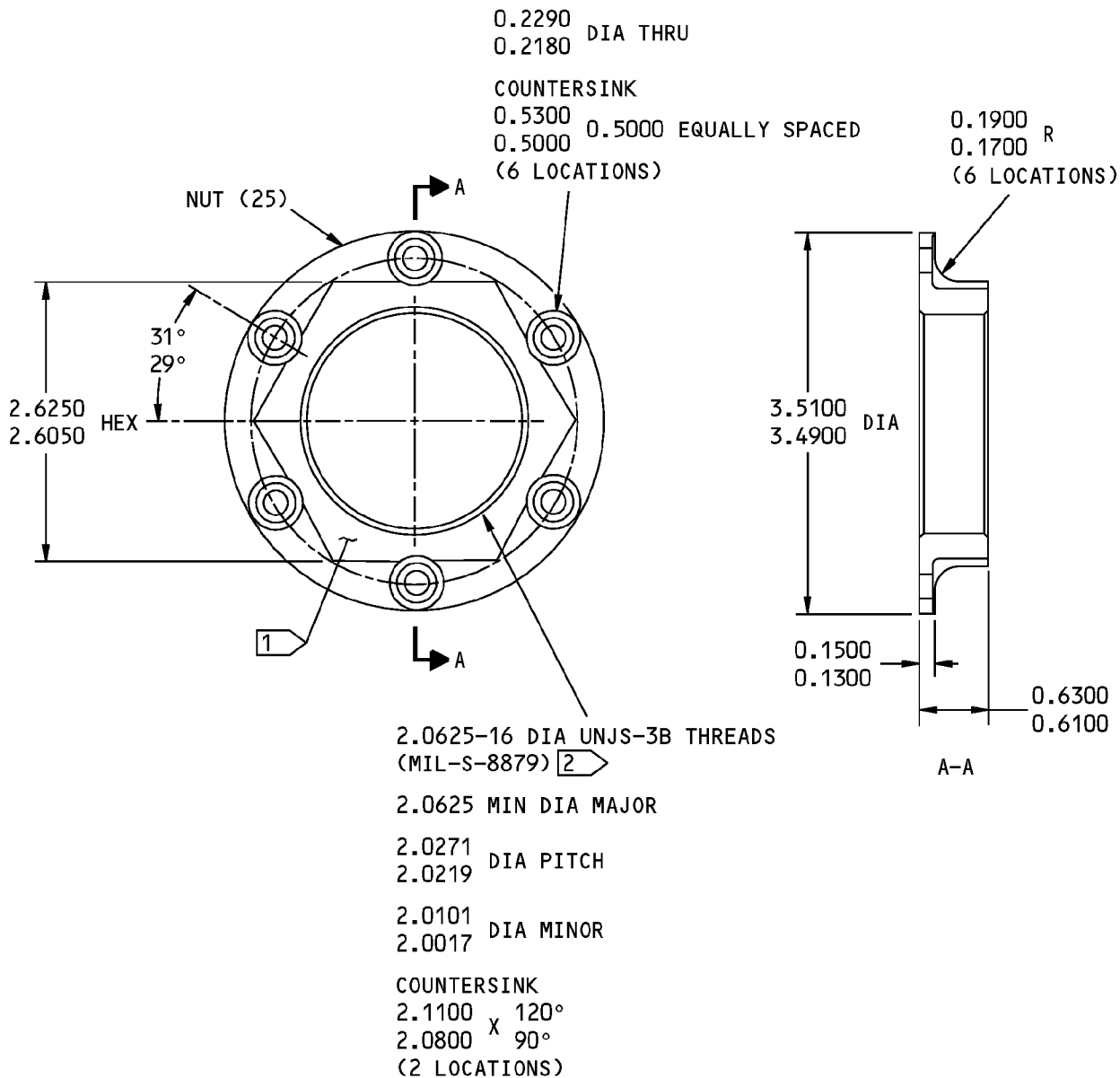
32-21-17

REPAIR 1-1

Page 601

Mar 01/2009

COMPONENT MAINTENANCE MANUAL



1 THE PART NUMBER AND SERIAL NUMBER ARE FOUND HERE

2 APPLY BMS 3-8 SOLID FILM LUBRICANT (F-19.10)

125/ ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 2

ALL DIMENSIONS ARE IN INCHES

162A1350-1 Nut Repair
Figure 601

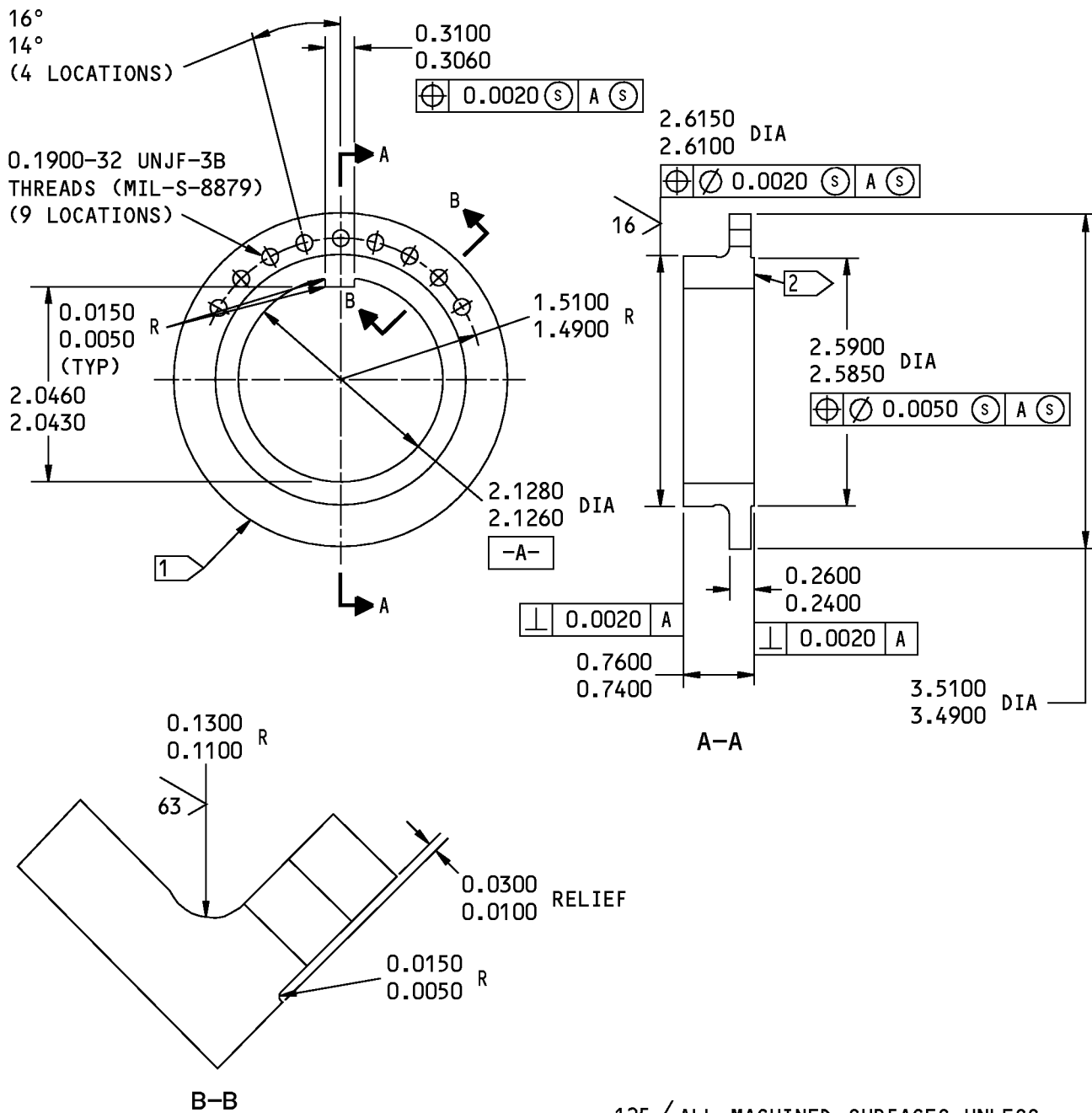
32-21-17

REPAIR 1-1

Page 602

Mar 01/2009

COMPONENT MAINTENANCE MANUAL



- 1 PART NUMBER AND SERIAL NUMBER
- 2 THIN DENSE CHROME PLATE (F-15.43, WHICH REPLACES F-14.892)

125 ✓ ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 2

ALL DIMENSIONS ARE IN INCHES

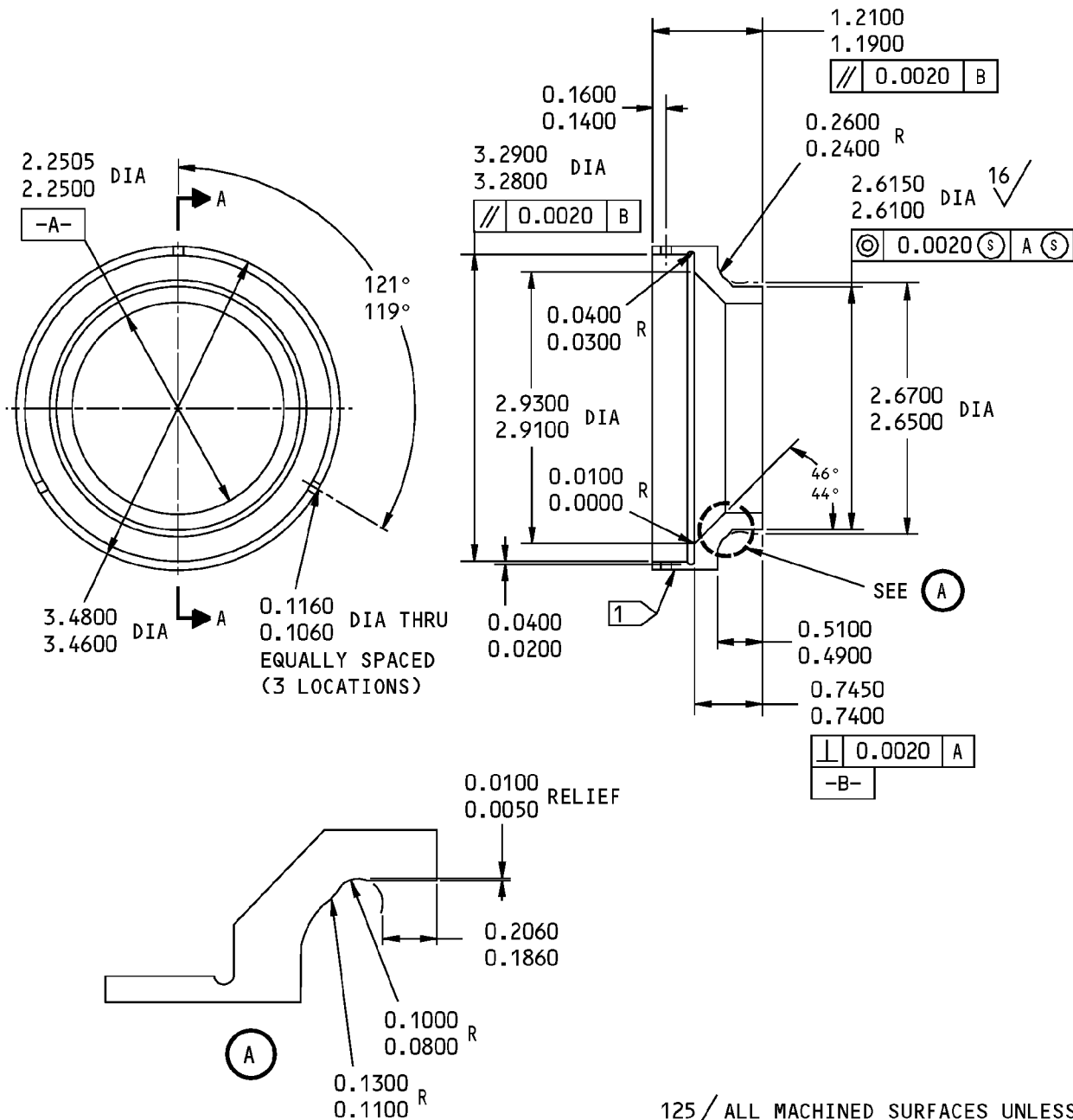
H04970 S0004998142_V2

162A1351-1 Washer Repair
Figure 602

32-21-17

REPAIR 1-1
Page 603
Mar 01/2009

COMPONENT MAINTENANCE MANUAL



1 THE PART NUMBER AND SERIAL NUMBER ARE FOUND HERE

125/ ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK ALL SHARP EDGES

ITEM NUMBERS REFER TO IPL FIG. 2

ALL DIMENSIONS ARE IN INCHES

162A1352-1 Spacer Repair
Figure 603

32-21-17



COMPONENT MAINTENANCE MANUAL

ASSEMBLY

1. General

- A. This procedure tells how to assemble the nose landing gear wheel installation components.
- B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
- C. Refer to IPL Figure 1 and IPL Figure 2 for item numbers.

2. Assembly

- A. Consumable Materials

NOTE: Equivalent substitutes may be used.

Reference	Description	Specification
D00233	Grease - Aircraft, General Purpose, Wide Temperature - Mobil 28	MIL-PRF-81322
D00378	Grease - Aircraft, General Purpose, Wide Temperature - Aeroshell 22	MIL-PRF-81322
G01912	Lockwire - Monel (0.032 In. Dia.)	NASM20995N~ C32 (QQ-N-281)

- B. References

Reference	Title
SOPM 20-50-01	BOLT AND NUT INSTALLATION
SOPM 20-50-02	INSTALLATION OF SAFETYING DEVICES
SOPM 20-60-03	LUBRICANTS
SOPM 20-60-04	MISCELLANEOUS MATERIALS

- C. Procedure (ASSEMBLY, Figure 701)

NOTE: For bolt and nut installation, refer to SOPM 20-50-01. For lubricants, refer to SOPM 20-60-03. For miscellaneous materials, refer to SOPM 20-60-04.

- (1) Use standard industry procedures and these steps.
- (2) For wheel and tire assembly (IPL Figure 1, 15B, 15D, 15H), replace the old valve assembly (30) with a new valve assembly (30). Tighten valve assembly (30) to 150-200 in-lbs and install lockwire, G01912 by the double twist method (SOPM 20-50-02).
- (3) Apply a thin layer of Aeroshell 22 grease, D00378 or Mobil 28 grease, D00233 to the mating surfaces of the spacer (IPL Figure 2, 20), the inside diameter of the wheel bearings, and the mating surfaces of the axle as identified by flagnote 1 in ASSEMBLY, Figure 701.
- (4) Install the spacers (20) and the cotter pins (5) on the nose landing gear axle as shown in ASSEMBLY, Figure 701.
- (5) Install the wheel and tire assembly (IPL Figure 1, 20) onto the nose landing gear axle.
- (6) Apply a thin layer of Aeroshell 22 grease, D00378 or Mobil 28 grease, D00233 to the mating surfaces of the bearing washers (IPL Figure 2, 15), the axle nuts (25), and axle nut threads, as identified by flagnote 2 in ASSEMBLY, Figure 701.
- (7) Install the bearing washers (15) and the axle nuts (25) on the nose landing gear axle.

32-21-17

ASSEMBLY

Page 701

Nov 01/2007



COMPONENT MAINTENANCE MANUAL

- (a) Turn the wheel. As the wheel turns, tighten the axle nuts (25) to 80-100 ft-lbs.
 - (b) Stop the wheel. Loosen the axle nut (25) to 5-15 ft-lbs.
 - (c) Turn the wheel. As the wheel turns, tighten the axle nuts (25) to 30 ft-lbs.
 - (d) Continue to tighten the axle nut (25) until two threaded holes align with the bearing washer (15).
- (8) Install the cap screws (10) onto the axle nut (25) and the bearing washer (15). Do not tighten the cap screws (10) to more than 60 ft-lbs.
 - (9) Lockwire the capscrews (10) with lockwire, G01912 by the double-twist procedure (SOPM 20-50-02).

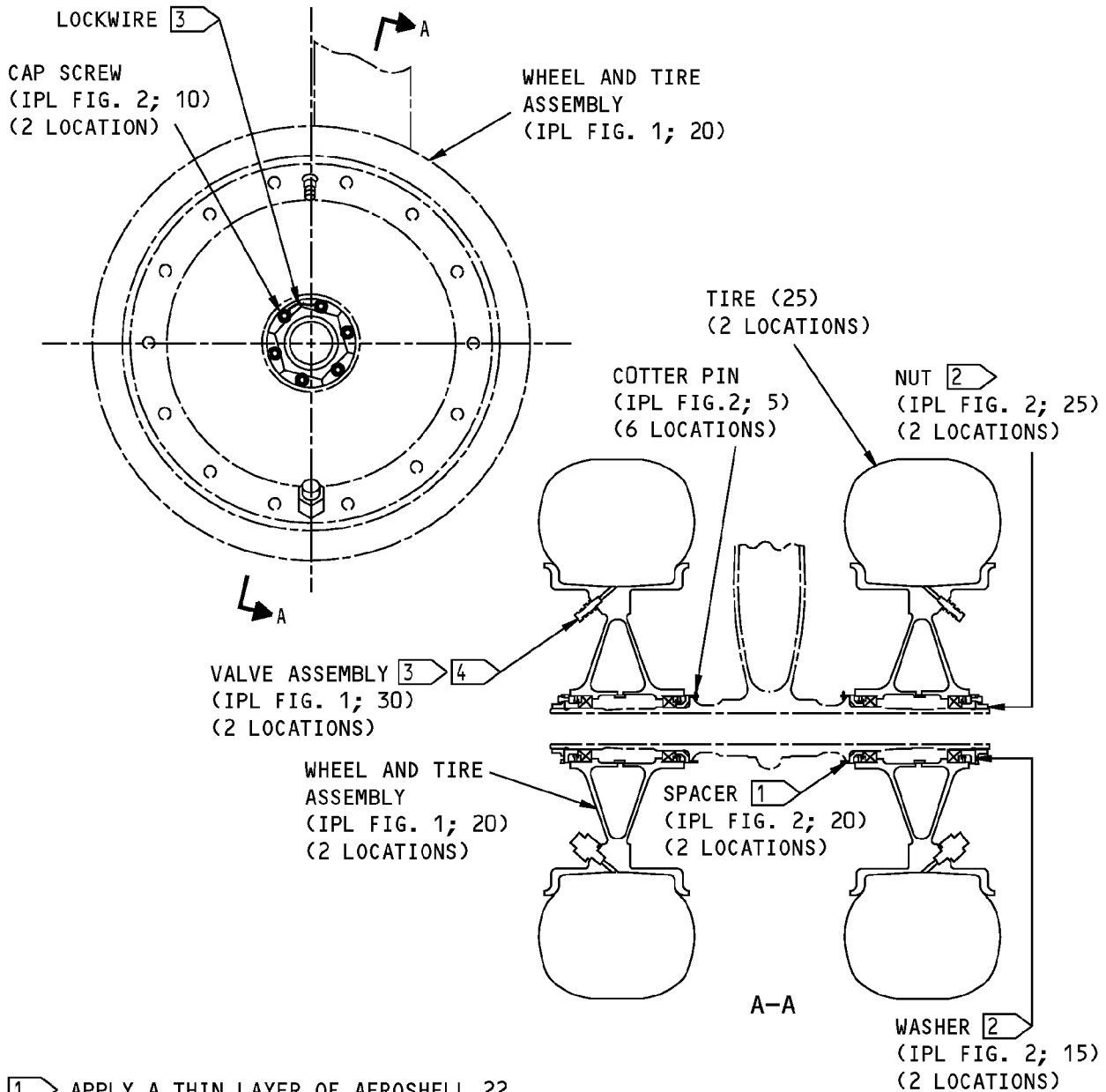
32-21-17

ASSEMBLY

Page 702

Mar 01/2006

COMPONENT MAINTENANCE MANUAL



1 APPLY A THIN LAYER OF AEROSHELL 22 OR MOBIL 28 GREASE TO THE MATING SURFACES OF THE SPACER, THE INNER DIAMETER OF THE WHEEL BEARINGS, AND THE AXLE MATING SURFACES

2 APPLY A THIN LAYER OF AEROSHELL 22 OR MOBIL 28 GREASE TO THE MATING SURFACES OF THE BEARING SPACERS, THE AXLE NUT AND AXLE NUT THREADS

3 INSTALL MS20995N32 LOCKWIRE HERE (SOPM 20-50-02)

4 TIGHTEN TO 150-200 POUND-INCHES

Nose Landing Gear Installation Components Assembly
Figure 701

32-21-17

ASSEMBLY

Page 703

Mar 01/2006



COMPONENT MAINTENANCE MANUAL

FITS AND CLEARANCES

REF IPL		NAME	TORQUE*	
FIG. NO.	ITEM NO.		POUND-INCHES	POUND-FEET
1	30	Fill Valve	150-200	
2	25	Nut		80-100
2	10	Capscrew		50-60

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

Torque Table
Figure 801

32-21-17
FITS AND CLEARANCES
Page 801
Mar 01/2006



COMPONENT MAINTENANCE MANUAL

SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

(NOT APPLICABLE)

32-21-17

SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

Page 901

Mar 01/2006



COMPONENT MAINTENANCE MANUAL

ILLUSTRATED PARTS LIST

1. Introduction

- A. The Illustrated Parts List (IPL) contains an illustration and a list of component parts you can repair or replace. The Illustrated Parts Catalog (IPC) shows how to use the Boeing part number system.
- B. This shows how parts are related: The relation of each item to its next higher assembly (NHA) is shown in the NOMENCLATURE column. Use the indenture system that follows:

1	2	3	4	5	6	7
.	Assembly					
.	Attaching parts for assembly					
.	.	Detail parts for assembly				
.	.	Subassembly				
.	.	Attaching parts for subassembly				
.	.	.	Detail parts for subassembly			
.	.	.	Sub-subassembly			
.	.	.	Attaching parts for subassembly			
.	.	.	.	Details parts for sub-subassembly		
						Detail Installation Parts (Included only if installation parts may be sent to the shop as part of assembly)

- C. Each top assembly is given one use code letter (A, B, C, etc.) in the USAGE CODE column. All subsequent component parts in the list can have one or more of the use code letters to show effectivity to top assemblies. A component part without a use code applies to all top assemblies.
- D. An alphabetical letter is added after the item number for optional parts, parts changed by a Service Bulletin, configuration differences (except left-handed and right-handed parts), last engineering releases, and parts added between item numbers in a sequence. The alphabetical letter will not be shown on the illustration for equivalent parts of the same part number.
- E. Color-coded parts are identified with a single digit alpha following the dash number or with "SP" suffix. If the "SP" suffix is used, it represents consolidation of all color codes applicable for a given usage which are not separately listed. Orders for color-coded parts should include the registry number of the airplane for which the parts are ordered.
- F. If a part number is 15 characters long but will not fit in the part number column, the part number will be displayed with a "~" at the end of the line and will be continued on the next line. The "~" denotes that the part number continues on the next line.
- G. Parts changed by a Service Bulletin are shown by PRE SB XXXX and POST SB XXXX added to the NOMENCLATURE column.
- (1) When a new top assembly is added by a Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the top assembly level only. The configuration differences at the detail part level are shown by use code letters.
- (2) When the top assembly part number is not changed by the Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the detail level.
- H. Interchangeable Parts

32-21-17

ILLUSTRATED PARTS LIST

Page 1001

Nov 01/2008



COMPONENT MAINTENANCE MANUAL

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

VENDOR CODES

Code	Name
0A1K8	MICHELIN AIRCRAFT TIRE CORP ONE PARKWAY SOUTH P. O. BOX 19001 GREENVILLE, SOUTH CAROLINA 29615-9001 FORMERLY IN AKRON, OH; IN CHARLOTTE, NC
55284	HONEYWELL INTL INC DBA AIRCRAFT LANDING SYSTEMS/ALS/ 3520 WESTMOOR ST SOUTH BEND, INDIANA 46628-1373 FORMERLY ALLIED-SIGNAL BENDIX WHEELS & BRAKES DIV
73842	GOODYEAR TIRE & RUBBER COMPANY 1144 EAST MARKET STREET AKRON, OHIO 44316-3011
83187	GOODRICH BF CO THE AEROSPACE & DEFENSE DIV AIRCRAFT TIRES 250 NORTH CLEVELAND-MASSILLION ROAD PO BOX 5501 AKRON, OHIO 44318-0501 FORMERLY GOODRICH BF TIRE COMPANY OBSOLETE CODE AND ADDRESS FOR HISTORY ONLY
91816	CIRCLE SEAL CONTROLS INC A WATTS INDUSTRIES INC CO 2301 WARDLOW CIRCLE PO BOX 3300 CORONA, CALIFORNIA 91718 FORMERLY BRUNSWICK CORP CIRCLE SEAL DIV BRUNSWICK VALVE FORMERLY CIRCLE SEAL DIV BRUNSWICK VALVE & CONTROL V27409; FORMERLY ZEVCO INC V62701
97153	GOODRICH BF ENGINEERED PRODUCTS GROUP PO BOX 340 WACO STREET TROY, OHIO 45373-3835

32-21-17

ILLUSTRATED PARTS LIST

Page 1002

Nov 01/2006

**COMPONENT MAINTENANCE MANUAL**

Code	Name
K1037	DUNLOP LTD AVIATION DIV HOLBROOK LANE COVENTRY CV6 4AA, ENGLAND
S4233	BRIDGESTONE TIRE CO LTD 1 KYOBASHI 1-CHROME CHUO-KU, TOKYO 104 JAPAN
S4605	

32-21-17

ILLUSTRATED PARTS LIST

Page 1003

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

NUMERICAL INDEX

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		1		AR
		1		AR
		1		AR
029-616-0		1	25E	1
		1	25F	1
		1	25H	1
		1	25J	1
		1	25L	1
		1	25M	1
		1	25N	1
039-688-0		1	25N	1
039-688-1		1	25E	1
		1	25F	1
		1	25H	1
		1	25J	1
		1	25L	1
		1	25M	1
10-44		1	30	1
10-61063-22		1	20	1
10-62237-10		1	20B	1
10-62237-9		1	20C	1
162A1350-1		2	25	2
162A1351-1		2	15	2
162A1352-1		2	20	2
2607825-1		1	20	1
2607825-2		1	20C	1
275K22-1		1	25E	1
		1	25F	1
		1	25H	1
		1	25J	1
		1	25L	1
		1	25M	1
		1	25N	1
277A6000-31		1	10	RF

32-21-17

ILLUSTRATED PARTS LIST

Page 1004

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		2	1	RF
277A6000-401		1	1A	RF
277A6000-402		1	1B	RF
277A6000-403		1	1C	RF
277A6000-404		1	1D	RF
277A6000-405		1	1E	RF
277A6000-406		1	1F	RF
277A6000-450		1	15	2
277A6000-451		1	15A	2
277A6000-452		1	15B	2
277A6000-453		1	15C	2
277A6000-454		1	15D	2
277A6000-455		1	15E	2
277A6000-801		1	5	RF
277A6000-802		1	5A	RF
277A6000-803		1	5B	RF
277A6000-804		1	5C	RF
277A6000-805REVA		1	5D	RF
277A6000-850		1	15F	2
277A6000-851		1	15G	2
277A6000-852		1	15H	2
277A6000-853		1	15J	2
277A6000-854		1	15K	2
3-1559		1	20B	1
60B10055-4		1	30	1
65-58256-255		1	25E	1
		1	25H	1
		1	25J	1
		1	25L	1
		1	25M	1
		1	25N	1
65-58256-279		1	25E	1
65-58256-318		1	25F	1
APS01207		1	25E	1
		1	25F	1

32-21-17

ILLUSTRATED PARTS LIST

Page 1005

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
		1	25H	1
		1	25J	1
		1	25L	1
		1	25M	1
		1	25N	1
BACP18BC03A04P		2	5	6
DR25821T		1	25E	1
		1	25F	1
		1	25H	1
		1	25J	1
		1	25L	1
		1	25M	1
		1	25N	1
MODREF288978		1	5D	RF
M12801		1	25G	1
M12801IND02		1	25G	1
M15501		1	25P	1
NAS1351N3H6P		2	10	4
S0130		1	25E	1
		1	25F	1
		1	25H	1
		1	25J	1
		1	25L	1
		1	25M	1
		1	25N	1
S277A015-392		1	25E	1
		1	25F	1
		1	25H	1
		1	25J	1
		1	25L	1
		1	25M	1
		1	25N	1
S294W502-1824		1	25G	1

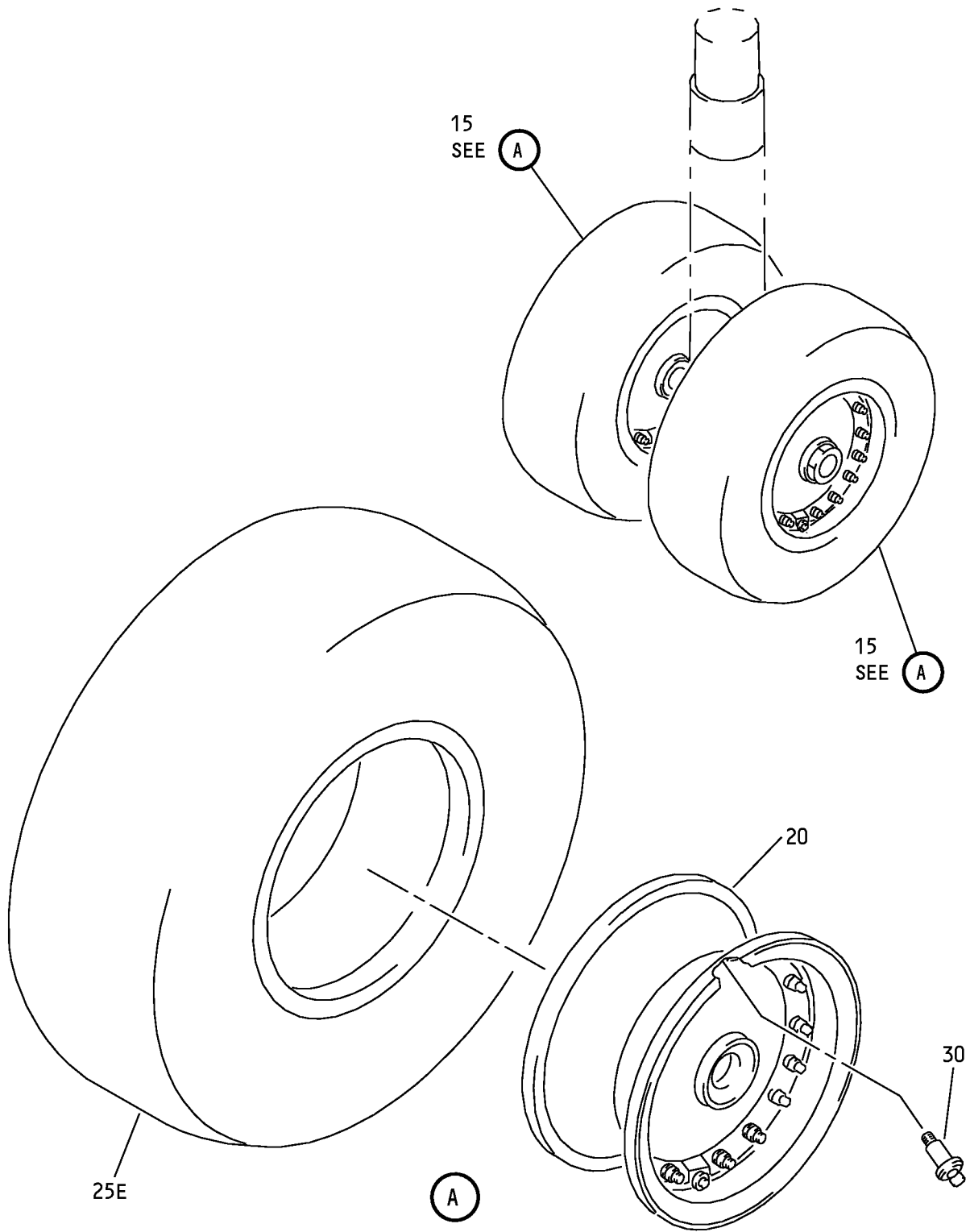
32-21-17

ILLUSTRATED PARTS LIST

Page 1006

Nov 01/2006

COMPONENT MAINTENANCE MANUAL



Nose Gear Wheels, Brakes Equipment Installation
IPL Figure 1

32-21-17

ILLUSTRATED PARTS LIST

Page 1007

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-			WHEEL INSTALLATION COMPONENTS NOSE LANDING GEAR								
-1A	277A6000-401		WHEEL AND TIRE INSTL							A	RF
-1B	277A6000-402		WHEEL AND TIRE INSTL							B	RF
-1C	277A6000-403		WHEEL AND TIRE INSTL							C	RF
-1D	277A6000-404		WHEEL AND TIRE INSTL							D	RF
-1E	277A6000-405		WHEEL AND TIRE INSTL							E	RF
-1F	277A6000-406		WHEEL AND TIRE INSTL							F	RF
-5	277A6000-801		WHEEL AND TIRE INSTL							G	RF
-5A	277A6000-802		WHEEL AND TIRE INSTL							H	RF
-5B	277A6000-803		WHEEL AND TIRE INSTL							J	RF
-5C	277A6000-804		WHEEL AND TIRE INSTL							L	RF
-5D	MODREF288978		WHEEL AND TIRE INSTL (277A6000-805REVA)							M	RF
-10	277A6000-31		AXLE NUT INSTL (FOR DETAILS SEE FIG. 2)							K	RF
15	277A6000-450		. WHEEL AND TIRE ASSY-10-61063-22 WHLS/ 27X7.75-15, 12PR GY TIRES.							A	2
-15A	277A6000-451		. WHEEL AND TIRE ASSY-10-62237-9 WHLS/ 27X7.75-15, 12PR							B	2
-15B	277A6000-452		. WHEEL AND TIRE ASSY-10-62237-9 WHLS/ 27X7.75-15, 12PR TIRES WITH 60B10055-4 FILL VALVE/GAUGE.							C	2
-15C	277A6000-453		. WHEEL AND TIRE ASSY-10-62237-9 WHLS/ 27X7.75-15, 12PR							D	2
-15D	277A6000-454		. WHEEL AND TIRE ASSY-10-62237-9 WHLS/ 27X7.75-15 R15, 12PR RADIAL TIRE WITH 60B10055-4 FILL VALVE/ GUAGE							E	2
-15E	277A6000-455		. WHEEL AND TIRE ASSY-10-62237-9 WHLS/ 27X7.75-15 12PR GY TIRE							F	2
-15F	277A6000-850		. WHEEL AND TIRE ASSY-10-62237-10 WHLS/ 27X7.75-15 12PR							G	2

-Item not Illustrated

32-21-17

ILLUSTRATED PARTS LIST

Page 1008

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY	
			1	2	3	4	5	6	7			
1-												
-15G	277A6000-851		.	W	H	E	E	L	A	10-62237-10	H	2
				W	H	L	S/	27X7.75-15	12PR	225 MPH		
										RADIAL TIRES		
-15H	277A6000-852		.	W	H	E	E	L	A	10-62237-10	J	2
				W	H	L	S/	27X7.75-15	12PR	TIRES WITH		
										60B10055-4 FILL VALVE/GAUGE		
-15J	277A6000-853		.	W	H	E	E	L	A	10-62237-10	L	2
				W	H	L	/	27X7.75R15/12/PR/225MPH				
										RADIAL TIRE WITH 60B10055-4 FILL VALVE/ GAUGE		
-15K	277A6000-854		.	W	H	E	E	L	A	ASSY-GOODRICH	M	2
										WHL, 235 MPH TIRE		
20	2607825-1		.	W	H	E	E	L	A	ASSY-BENDIX	A	1
										(V55284)		
										(3-1559 MAY REPLACE 2607825-1		
										SUBJECT TO CUSTOMER		
										PREFERENCE, DUE TO DIFFERENT		
										SUPPLIERS FOR SOUTHWEST		
										737-700 ONLY) (2607825-2 MAY		
										REPLACE 2607825-1 EXCEPT FOR		
										SOUTH-WEST 737-700 WHERE		
										2607825-2 IS I/W 2607825-1 WITH		
										THE USE OF BIAS-PLY TIRES AND		
										A/C FLIGHT MANUAL		
										RESTRICTIONS ONLY)		
										(SPEC 10-61063-22)		
-20A	10-62237-9									DELETED		
-20B	3-1559		.	W	H	E	E	L	A	ASSY-BFG	G-J, L, M	1
										(V97153)		
										(3-1559 MAY REPLACE 2607825-1		
										OR AHA1290 SUBJECT TO		
										CUSTOMER PREFERENCE, DUE TO		
										DIFFERENT SUPPLIERS) (3-1559		
										I/W 2607825-2 SUBJECT TO		
										CUSTOMER PREFERENCE, DUE TO		
										DIFFERENT SUPPLIERS)		
										(SPEC 10-62237-10)		

-Item not Illustrated

32-21-17

ILLUSTRATED PARTS LIST

Page 1009

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY	
			1	2	3	4	5	6	7			
1- -20C	2607825-2		.	.	WHEEL ASSY-BENDIX (V55284) (2607825-2 MAY REPLACE 2607825-1 EXCEPT FOR SOUTH-WEST 737-700 WHERE 2607825-2 IS I/W 2607825-1 WITH THE USE OF BIAS-PLY TIRES AND A/C FLIGHT MANUAL RESTRICTION ONLY) (3-1559 I/W 2607825-2 SUBJECT TO CUSTOMER PREFERENCE, DUE TO DIFFERENT SUPPLIERS) (SPEC 10-62237-9)						B-F	1
25	65-58256-279				DELETED							
25A	S277A015-392				DELETED							
25B	65-58256-255				DELETED							
-25C	M12801				DELETED							
-25D	APS01207				DELETED							
25E	275K22-1		.	.	TIRE-GOODYEAR 27X7.075-15, 12PR, 225 MPH (V73842) (SPEC 65-58256-279) (SPEC 65-58256-255) (SPEC S277A015-392) (OPT 029-616-0 (V0A1K8)) (OPT DR25821T (V83187)) (OPT APS01207 (VS4233)) (OPT 039-688-1 (V0A1K8)) (OPT S0130 (VS4605))					A, F	1	
-25F	S0130		.	.	TIRE (VS4605) (SPEC 65-58256-318) (SPEC S277A015-392) (OPT 029-616-0 (V0A1K8)) (OPT 039-688-1 (V0A1K8)) (OPT 275K22-1 (V73842)) (OPT APS01207 (VS4233)) (OPT DR25821T (V83187))						B, C, G, J	1
-25G	M12801IND02		.	.	TIRE-27X7.75R15, 12PR, 225 MPH (V0A1K8) (SPEC S294W502-1824) (OPT M12801 (V0A1K8))						D, E, H, L	1

-Item not Illustrated

32-21-17

ILLUSTRATED PARTS LIST

Page 1010

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY	
			1	2	3	4	5	6	7			
1- -25H	029-616-0		.	.	TIRE (V0A1K8) (SPEC S277A015-392) (SPEC 65-58256-255) (OPT 039-688-1 (V0A1K8)) (OPT 275K22-1 (V73842)) (OPT APS01207 (VS4233)) (OPT DR25821T (VK1037)) (OPT S0130 (VS4605))						B, C, G, J	1
-25J	039-688-1		.	.	TIRE (V0A1K8) (SPEC 65-58256-255) (SPEC S277A015-392) (OPT 029-616-0 (V0A1K8)) (OPT 275K22-1 (V73842)) (OPT APS01207 (VS4233)) (OPT DR25821T (VK1037)) (OPT S0130 (VS4605))						B, C, G, J	1
-25K	65-58256-255				DELETED							
-25L	APS01207		.	.	TIRE (VS4233) (SPEC S277A015-392) (SPEC 65-58256-255) (OPT DR25821T (V83187)) (OPT 039-688-1 (V0A1K8)) (OPT 275K22-1 (V73842)) (OPT 029-616-0 (V0A1K8)) (OPT S0130 (VS4605))						B, C, G, J	1
-25M	DR25821T		.	.	TIRE (VK1037) (SPEC S277A015-392) (SPEC 65-58256-255) (OPT 029-616-0 (V0A1K8)) (OPT 275K22-1 (V73842)) (OPT APS01207 (VS4233)) (OPT 039-688-1 (V0A1K8)) (OPT S0130 (VS4605))						B, C, G, J	1

-Item not Illustrated

32-21-17

ILLUSTRATED PARTS LIST

Page 1011

Nov 01/2006

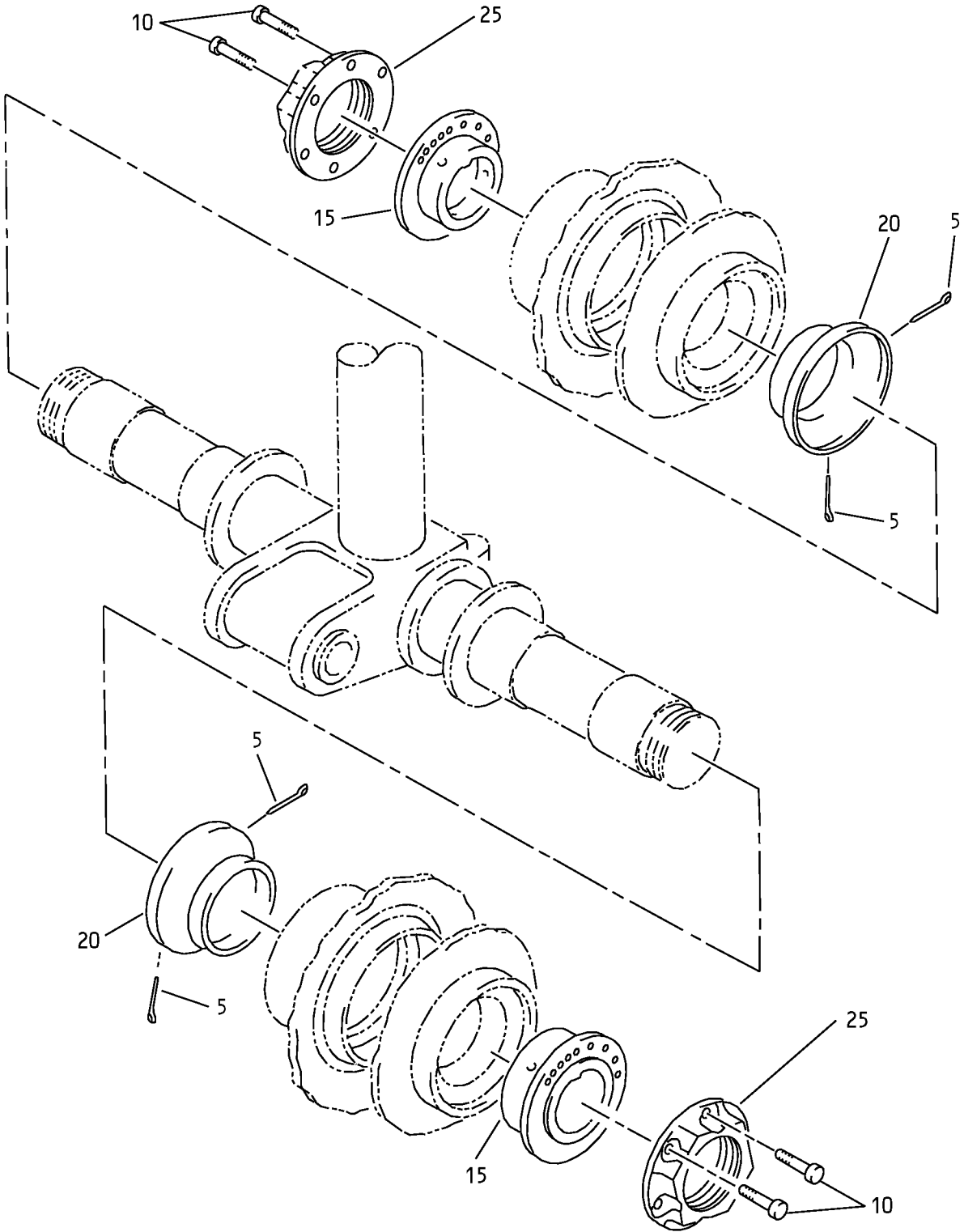


COMPONENT MAINTENANCE MANUAL

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY	
			1	2	3	4	5	6	7			
1- -25N	039-688-0		.	.	TIRE (V0A1K8) (SPEC 65-58256-255) (SPEC S277A015-392) (OPT 029-616-0 (V0A1K8)) (OPT 275K22-1 (V73842)) (OPT APS01207 (VS4233)) (OPT DR25821T (VK1037)) (OPT S0130 (VS4605))						B, C, G, J	1
-25P	M15501		.	.	TIRE-27X7.75R15, 12PR, 235MPH (V0A1K8)						M	1
30	10-44		.	.	VALVE ASSY (V91816) (SPEC 60B10055-4)						C, E, H, J, L	1

-Item not Illustrated

COMPONENT MAINTENANCE MANUAL



Nose Gear Wheels, Brakes Equipment Installation
IPL Figure 2

32-21-17

ILLUSTRATED PARTS LIST

Page 1013

Nov 01/2006



COMPONENT MAINTENANCE MANUAL

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE							USAGE CODE	UNITS PER ASSY
			1	2	3	4	5	6	7		
2-											
-1	277A6000-31									K	RF
5	BACP18BC03A04P									K	6
10	NAS1351N3H6P									K	4
15	162A1351-1									K	2
20	162A1352-1									K	2
25	162A1350-1									K	2

-Item not Illustrated

32-21-17

ILLUSTRATED PARTS LIST

Page 1014

Nov 01/2006