SAE Aerospace
An SAE International Group

AEROSPACE INFORMATION REPORT

SAE AIR4012 REV. C

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Superseding AIR4012B

USAF Aircraft Wheels

RATIONALE

This SAE Aerospace Information Report is intended to provide comprehensive reference and background information pertaining to military aircraft wheel service experience. The document contains extensive technical performance information for a variety of active military aircraft as well was field and depot service experience and lessons learned. This document has been determined to contain basic and stable technology which is not dynamic in nature.

STABILIZED NOTICE

This document has been declared "Stabilized" by SAE Subcommittee A-5A, Wheels, Brakes and Skid Controls and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

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http://www.sae.org/technical/standards/AIR4012C

TABLE OF CONTENTS

1. SCOPE:

This SAE Aerospace Information Report (AIR) documents general technical data associated with many of the wheels used in the Air Force.

1.1 Purpose:

This document is intended to be used as a general reference for the aerospace community.

2. REFERENCES:

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1 SAE Publications:

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org

ARP1493	Wheel and Brake Design and Test Requirements for Military Aircraft
ARP813	Maintainability Recommendations for Aircraft Wheels and Brake Design
AMS 2518	Thread Compound, Anti-seize, Graphite-Petrolatum

2.2 ASTM Publications:

Available from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org

ASTM E 1417	Standard Practice for Liquid Penetrant Examination
ASTM E 1444	Standard Practice for Magnetic Particle Examination

2.3 U.S. Government Publications:

Available from the Document Automation and Production Service (DAPS), Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Tel: 215-697-6257, http://assist.daps.dla.mil/quicksearch

FED-STD-595	Colors Used in Government Procurement
MIL-A-8625	Anodic Coatings for Aluminum and Aluminum Alloys
MIL-I-25135	Inspection Materials, Penetrants
MIL-PRF-680	Degreasing Solvent
MIL-PRF-16173	Corrosion Preventative Compound, Solvent Cutback, Cold Application
MIL-PRF-85285	Coating: Polyurethane, Aircraft and Support Equipment
MIL-PRF-81322	Grease, Aircraft, General Purpose, Wide Temperature Range
MIL-PRF-16173	Corrosion Preventative Compound, Solvent Cutback, Cold Application
MIL-STD-865	Selective (Brush Plating) Electrodeposition
MIL-STD-870	Cadmium Plating, Low Embrittlement, Electrodeposition
MIL-T-5012	Tests; Aircraft and Missile Welding, Operators Qualification
MIL-T-5544	Thread Compound, Anti-seize, Graphite-Petrolatum
MIL-W-5013	Wheel and Brake Assemblies, Aircraft- General Specification For

3. BACKGROUND:

3.1 Elements Common to all USAF Wheels:

Wheels are treated with type II sulfuric acid anodize.

All braked wheels incorporate a thermal fuse to prevent explosive catastrophic failure caused by thermal degradation of the wheel.

Wheels are cold worked or burnished to enhance fatigue life.

Wheels are split for the purpose of tire mounting. Wheels are held together either by tie bolts or by a demountable flange retained with a locking ring. Tie bolts are typically cadmium plated steel with a heat treat range of 160 to 180 ksi. The purpose of these is to connect the wheel to the rotating elements of the brake.

Braked wheels have sheet metal heat shields to help protect wheels from radiated brake heat.

All braked wheels contain rotor drive keys either of a bar or shell key type. The purpose of drive keys is to connect the wheel with rotating elements of the brake.

3.2 Elements Common to Some USAF Wheels:

Most aircraft wheels are made of forged 2014-T6 aluminum. Some wheels have over inflation devices.

4. SPECIFICATIONS:

4.1 A-10 Wheel Specifications:

4.1.1 A-10 Main Wheel:

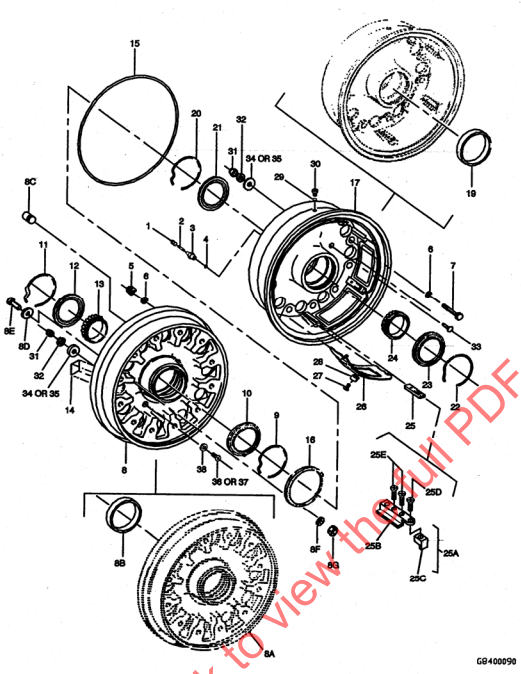

FIGURE 1

Wheel Part Number: 5002371-4 (0B9R9)

Aircraft Maximum Gross Weight: 50,000 lb

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: MIL-W-5013H and LG160S004

Wheel Style: Demountable Flange

Wheel Alloy: 2014-T61

Wheel Rated Load: 22,400 lb

Wheel Yield Load: 48,300 lb

Wheel Ultimate Load: 63,000 lb

Wheel Roll Test Distance

Straight: 1350 miles @ 21,000 lb

Inboard Yaw: 24,800 lb radial 6200 lb side-75 miles

Outboard Yaw: 24,800 lb radial 4000 lb side-75 miles

Wheel Static Unbalance Requirements: 7 in-oz maximum

Wheel Burst Pressure: 651 psi

Thermal Fuse Type: Threaded Slot Head

Thermal Fuse Eutectic Temperature (°F): 350 °F

Tire Type: Bias Tubeless

Tire Size: 36 X 11 22 Ply Rating

Tire Rated Inflation Pressure: 200 psi

Rotor Drive Type/Quantity: Shell Drive Key/6 Each

Rotor Drive Attach Mechanism: Two Staked Screws

Heat Shield Style: Segmented

Heat Shield Materials: Stainless Steel

Heat Shield Anti-Fret Features: Heat Shield Retainer (IB Only)

Grease Dam Type: Removable Seal Without Changing Bearing Cups

Tapered Bearing Seal Type: Retaining Ring Outside Seals

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 12

Tie Bolt Size: 1/2 inch-20 threads/in

Tie Bolt Torque: 65 ft-lb

Tie Bolt Wrenching Element: 12 Point External

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Double Countersink

Inflation Valve: TR 753-03

Over-Inflation Device: No

4.1.2 A-10 Nose Wheel Specifications:

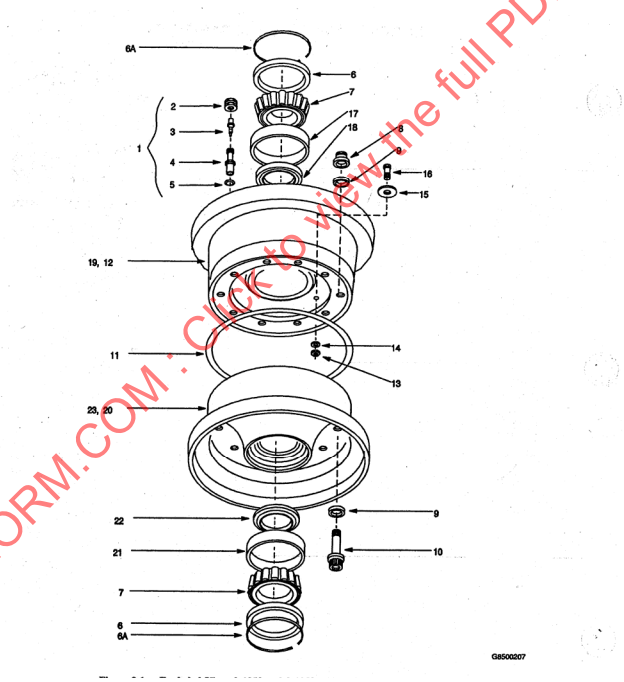

FIGURE 2

Wheel Part Number: 3-1358-1 (97153)

Wheel Quantity per Aircraft: 1

Wheel Procurement Specification: LG1605006

Wheel Style: Split Rim Equal Halves

Wheel Alloy: 2014-T61 Aluminum

Wheel Rated Load: 6500 lb

Wheel Yield Load: 19,550 lb

Wheel Ultimate Load: 29,250 lb

Wheel Roll Test Distance

Straight: 1350 miles @ 6500 lb

Inboard Yaw: 6500 lb radial 1735 lb side-75 miles

Outboard Yaw: 6500 lb radial 1735 lb side-75 miles

Wheel Static Unbalance Requirements: Not Balanced

Wheel Burst Pressure: 490 psi

Tire Type: Bias Tubeless

Tire Size: 24 X 7.7 14 Ply Rating

Tire Rated Inflation Pressure: 135 psi

Grease Dam Type: Cup Retained - Must Remove Cups to Change

Tapered Bearing Seal Type: Retaining Ring Outside Seals

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 10

Tie Bolt Size: 5/16 inch-18 threads/in

Tie Bolt Torque: 170/190 in-lb

Tie Bolt Wrenching Element: 12 Point External

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Double Countersink

Inflation Valve: TR762-03

Over-Inflation Device: Yes

4.2 B-1B Wheel Specifications:

4.2.1 B-1B Main Wheel Specifications:

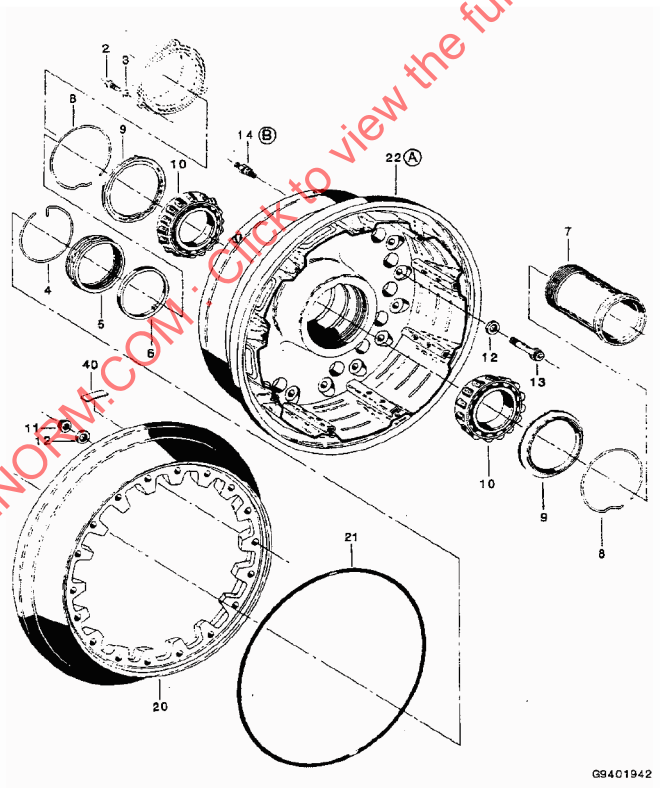

FIGURE 3

Wheel Part Number: 5006648-2 (0B9R9)

Aircraft Maximum Gross Weight: 346,500 lb, Taxi 477,000 lb

Wheel Quantity per Aircraft: 8

Wheel Procurement Specification: MIL-W-5013G and Rockwell Spec L194C2021-3

Wheel Style: Demountable Flange

Wheel Alloy: 2014-T61

Wheel Rated Load: 67,170 lb

Wheel Yield Load: 124,536 lb

Wheel Ultimate Load: 162,438 lb

Wheel Roll Test Distance

Straight: 1253 miles

Inboard Yaw: 6° (14,500 lb)-1.5 miles; 16° 25,600 lb-.5 miles

Outboard Yaw: 6° (14,500 lb)-1.5 miles; 16° 25,600 lb-.5 miles

Wheel Static Unbalance Requirements: 10 in-oz maximum

Wheel Burst Pressure: 910 psi

Thermal Fuse Type: Threaded Slot Head

Thermal Fuse Eutectic Temperature (°F): 350 °F

Tire Type: Bias Tubeless

Tire Size: B46 X 16.0-23.5 30 Ply Rating

Tire Rated Inflation Pressure: 260 psi

Rotor Drive Type/Quantity: Shell Drive Key/9 Each

Rotor Drive Attach Mechanism: Two Staked Screws

Heat Shield Style: Segmented

Heat Shield Materials: Stainless Steel

Heat Shield Anti-Fret Features: None - Heat Shield Rests On Wheel

Grease Dam Type: Removable Seal Without Changing Bearing Cups

Tapered Bearing Seal Type: Wheel Rotating On False Axle

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 18

Tie Bolt Size: 5/8 inch-18 threads/in

Tie Bolt Torque: 2220/2340 in-lb

Tie Bolt Wrenching Element: 12 Point External

Tie Bolt Heat Treat: 220 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Double Countersink

Inflation Valve: 5000104-1 (0B9R9) Integral Inflation/Over-Inflation Valve

Over-Inflation Device: Yes

4.2.2 B-1B Nose Wheel Specifications:

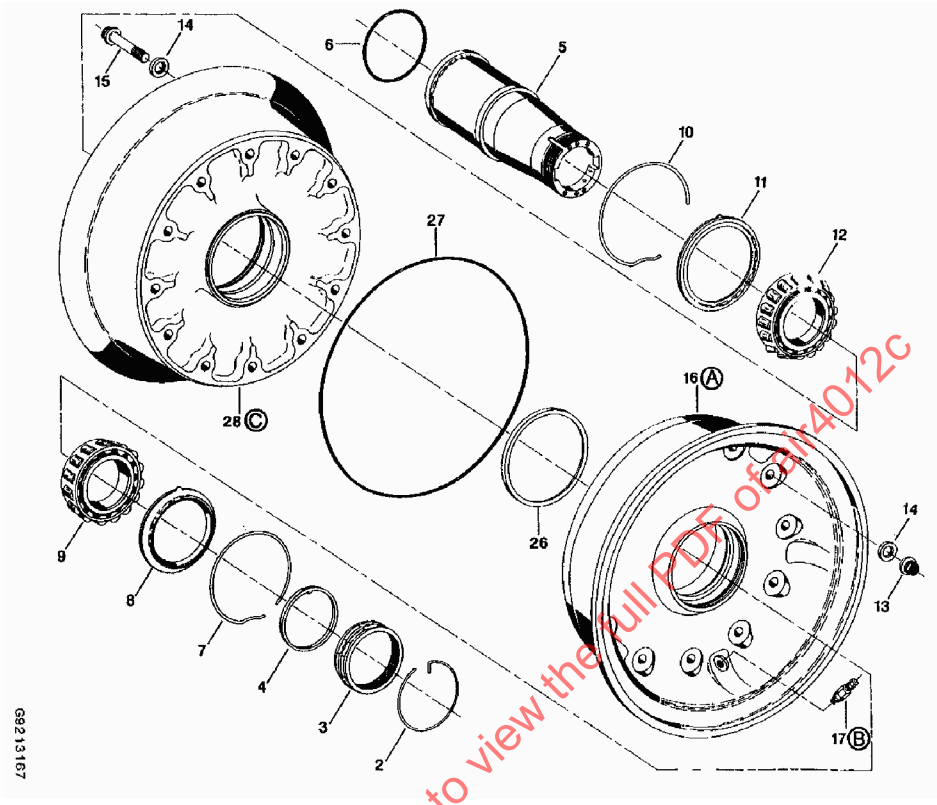

FIGURE 4

Wheel Part Number: 5001579-4 (0B9R9)

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: MIL-W-5013G and Rockwell Spec L194C2004-1A

Wheel Style: Split Rim Equal Halves

Wheel Alloy: 2014-T61Aluminum

Wheel Rated Load: 23,000 lb

Wheel Yield Load: 78,200 lb

Wheel Ultimate Load: 102,000 lb

Wheel Roll Test Distance

Straight: 1410 miles (23,000 lb) + 30 miles (35,000 lb)

Inboard Yaw: 8° (8280 lb side/27,600 lb radial)-31.6 miles

Outboard Yaw: 6° (6900 lb side/23,000 lb radial)-30 miles

Wheel Static Unbalance Requirements: 3.5 in-oz maximum

Wheel Burst Pressure: 825 psi

Tire Type: Bias Tubeless

Tire Size: 35 X 11.5-16 22 Ply Rating

Tire Rated Inflation Pressure: 210 psi

Grease Dam Type: Removable Seal Without Changing Bearing Cups

Tapered Bearing Seal Type: Wheel Rotating On False Axle

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 12

Tie Bolt Size: .5625 inch-18 threads/in

Tie Bolt Torque: 1110/1170 in-lb

Tie Bolt Wrenching Element: 12 Point External

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Double Countersink

Inflation Valve: 5000104-1 (0B9R9) Integral Inflation/Over-Inflation Valve

Over-Inflation Device: Yes

4.3 B-2 Wheel Specifications:

4.3.1 B-2 Main Wheel Specifications:

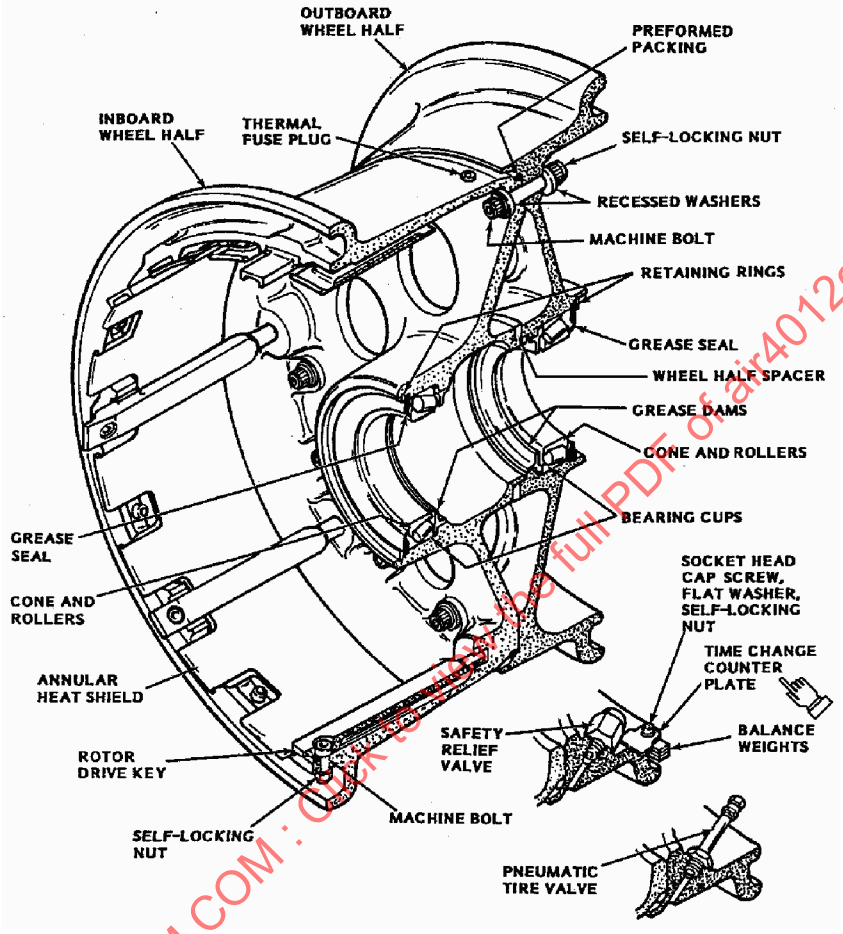

FIGURE 5

Wheel Part Number: 2609391-1

Aircraft Maximum Gross Weight: UNK

Wheel Quantity per Aircraft: 8

Wheel Procurement Specification: DAA3222P506

Wheel Style: Split Rim

Wheel Alloy: 2014-T6 Forged Aluminum Alloy

Wheel Rated Load: 68,300 lb. Design/70,126 lb. Test

Wheel Yield Load: 105,600 lb. Design/107,593 lb. Test

Wheel Ultimate Load: 123,600 lb. Design/126,295 lb. Test

Ambient Temperature Wheel Roll Test Distance

Straight: 1500 miles

Inboard Yaw: 75 miles

Outboard Yaw: 75 miles

Wheel Static Imbalance Requirements: MIL-W-5013 (Balance weights available at .20 and .30 ounces)

Wheel Burst Pressure: 756 psi

Thermal Fuse Type: Threaded w/hex head - Tire side mount

Thermal Fuse Eutectic Temperature (°F): 351 °F

Tire Type: Bias Tubeless

Tire Size: 43 X 16.0-20 28 Ply Rating

Tire Rated Inflation Pressure: 215 psi

Rotor Drive Type: Beam Key

Rotor Drive Attach Mechanism: Through-bolt

Heat Shield Style: Full Circle

Heat Shield Materials: Stainless Steel

Heat Shield Anti-Fret Features: None

Grease Dam Type: Cup retained inside dams

Tapered Bearing Seal Type: Retaining ring outside Seals

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 18

Tie Bolt Size: 9/16

Tie Bolt Wrenching Element: 12 Point

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Type: Single Recess

Inflation Valve: Supplier P/N 2606691

Over-Inflation Device: Yes (375 to 450 psig @ 72 °F)

4.3.2 B-2 Nose Wheel Specifications:

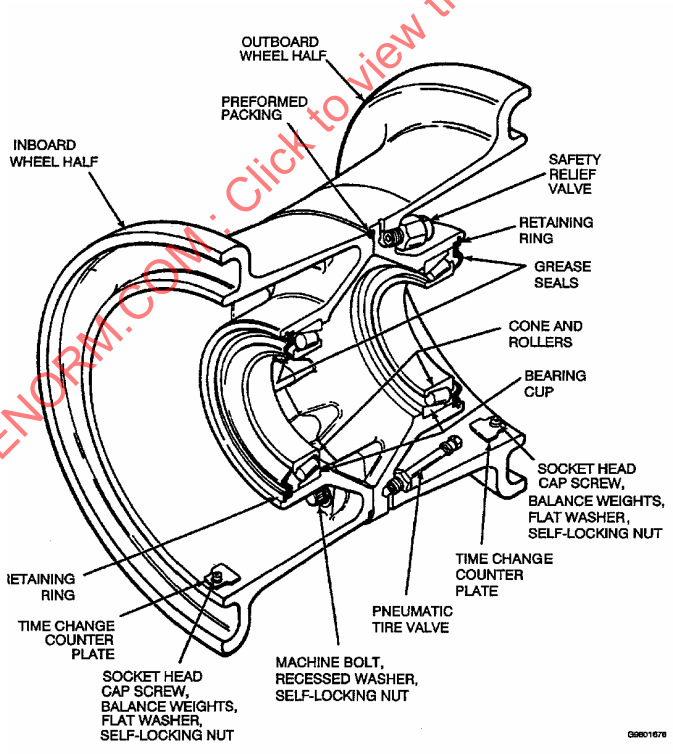

FIGURE 6

Wheel Part Number: 2609485-1

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: DAA3222P506

Wheel Style: Split Rim

Wheel Alloy: 2014 Forged Aluminum Alloy

Wheel Rated Load: 45,600 lb

Wheel Yield Load: 80,500 lb

Wheel Ultimate Load: 84,000 lb

Ambient Temperature Wheel Roll Test Distance

Straight: 750 miles

Inboard Yaw: 37.5 miles

Outboard Yaw: 37.5 miles

Wheel Static Imbalance Requirements: IAW MIL-W-5013 (Balance weights used at .20 and .30 ounces)

Wheel Burst Pressure: 585 psi

Tire Type: Bias Tubeless

Tire Size: 34 X 14.0-12 24 Ply Rating

Tire Rated Inflation Pressure: 155 psi

Grease Dam Type: None

Tapered Bearing Seal Type: Retaining ring outside Seals

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 14

Tie Bolt Size: 7/16

Tie Bolt Torque: 750 in-lb

Tie Bolt Wrenching Element: 12 Point

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Single Recess

Inflation Valve: Supplier P/N 2606691

4.4 B-52 Wheel Specifications:

4.4.1 B-52 Main Wheel Specifications:

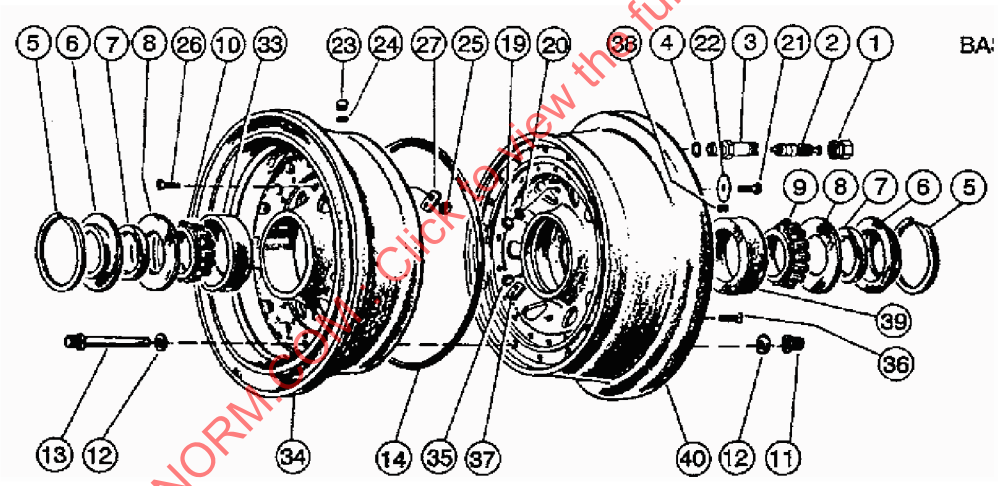

FIGURE 7

Wheel Part Number: 3-1192

Aircraft Maximum Gross Weight: Towing 500,000 lb

Wheel Quantity per Aircraft: 8

Wheel Procurement Specification: MIL-W-5013G and 60J508

Wheel Style: Split Rim Equal Halves

Wheel Alloy: 2014-T61

Wheel Radial Load: 304,000 lb

Wheel Side Load: 107,000 lb

Wheel Combined Load: 323,000 lb applied at 19.39°

Wheel Roll Test Distance

65,000 lb for 720 miles

76,000 lb for 240 miles

84,000 lb applied load at an angle of 8° for 48 mile

Wheel Static Unbalance Requirements: 14 in-oz maximum

Wheel Burst Pressure: 1100 psi

Thermal Fuse Type: Push

Thermal Fuse Eutectic Temperature (°F): 360 °F

Tire Type: Bias Tubeless

Tire Size: 56 X 16 38 Ply Rating

Tire Rated Inflation Pressure: 315 psi

Rotor Drive Type/Qty: Beam Key/9

Rotor Drive Attach Mechanism: Through bolt with nut

Heat Shield Style: Full Circle

Heat Shield Materials: 302 Stainless Steel

Heat Shield Anti-Fret Features: None - Heat Shield Rests On Wheel

Grease Dam Type: Removable Seal Without Changing Bearing Cups

Tapered Bearing Seal Type: Wheel Rotating On Axle

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 27

Tie Bolt Size: 5/8 inch-18 threads/in

Tie Bolt Torque 100-125 ft-lb

Tie Bolt Wrenching Element: 12 Point External

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Double Countersink

Inflation Valve: TR753-03

Over-Inflation Device: No

4.4.2 B-52 Tip Wheel Specifications:

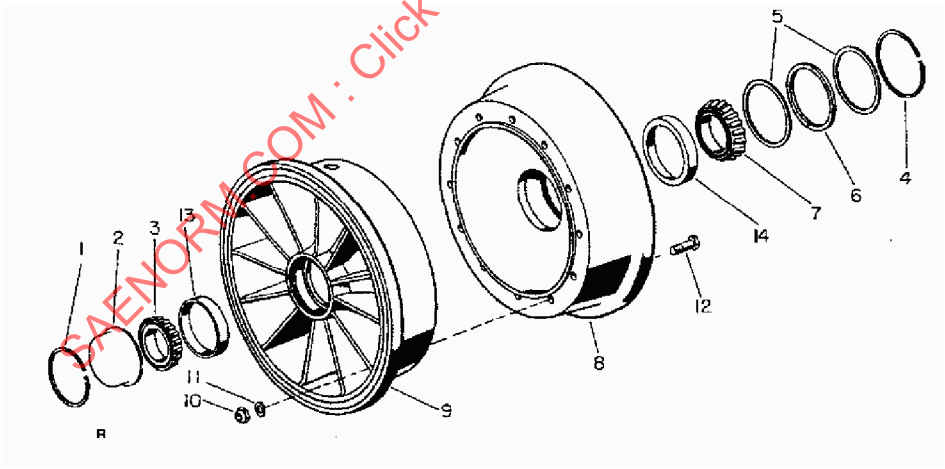

FIGURE 8

Wheel Part Number: 211A764M

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: MIL-W-5013G and 54F755

Wheel Style: Split Rim Equal Halves

Wheel Alloy: Magnesium

Wheel Static Load: 11,000 lb

Wheel Ultimate Side Load: 26,100b lb at 12.1 radius

Wheel Ultimate Load: 74,700 lb

Wheel Roll Test Distance: Per MIL-W-5013

Wheel Static Unbalance Requirements: 7 in-oz maximum

Wheel Burst Pressure: 540 psi

Tire Type: Bias Tubeless

Tire Size: 32 X 8.8 16 Ply Rating

Tire Rated Inflation Pressure: 200 psi

Grease Dam Type: Cup Retained

Tapered Bearing Seal Type: Wheel Rotating On Axle

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 12

Tie Bolt Size: 7/16 inch-20 threads/in

Tie Bolt Torque: 500 in-lb

Tie Bolt Wrenching Element: Hex Head Self-Locking

Tie Bolt Heat Treat: 75 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: Hex Head

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Flat

Inflation Valve: Tire tube valve stem

Over-Inflation Device: No

4.5 C-5 Wheel Specifications:

4.5.1 C-5 Main Wheel Specifications:

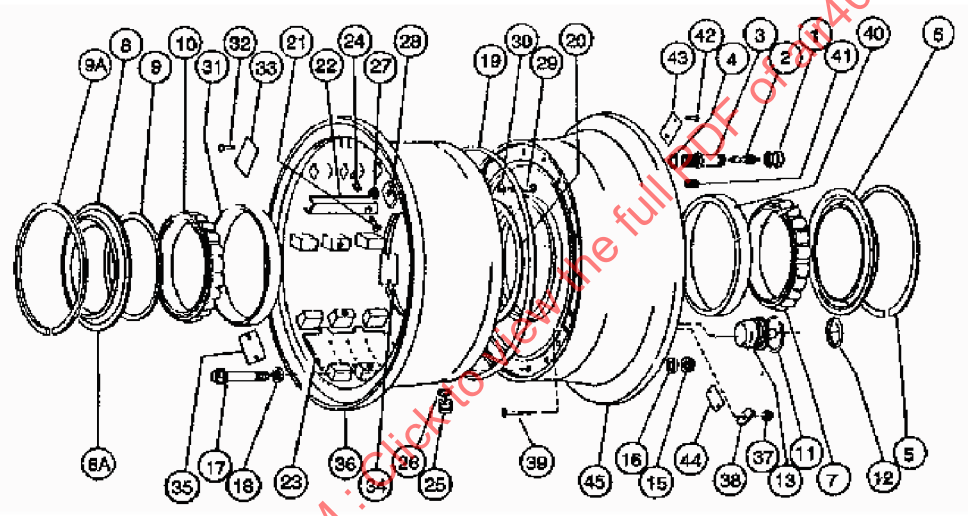

FIGURE 9

Wheel Part Number: 3-1268-4 (-5 not purchased)

Aircraft Maximum Gross Weight: 769,000 lb

Wheel Quantity per Aircraft: 24

Wheel Procurement Specification: 41040 (98897)

Wheel Style: Split Rim

Wheel Alloy: 2014-T6 Aluminum

Wheel Rated Load: 33,300 lb

Wheel Yield Load: 94,311 lb

Wheel Ultimate Load: 123,015 lb

Wheel Roll Test

Straight: 33,300 lb 3600 miles

Inboard Combined: 41,200 lb Radial 6000 lb Side 200 miles

Outboard Combined: 41,200 lb Radial 6000 lb Side 200 miles

Wheel Static Unbalance Requirements: 2 in-oz max (with weights)

Wheel Burst Pressure: 490 psi

Thermal Fuse Type: Push

Thermal Fuse Eutectic Temperature (°F): 375 °F

Tire Type: Bias Tubeless

Tire Size: 49 X 17 26 Ply Rating

Tire Rated Inflation Pressure: 170 psi

Rotor Drive Type/Quantity: Shell Key Insert Cap

Rotor Drive Attach Mechanism: Screw w/Helicoil

Heat Shield Style: Segmented

Heat Shield Materials: 430 CRES

Heat Shield Anti-Fret Features: None

Grease Dam Type: Removable Seal

Tapered Bearing Seal Type: Wheel Rotating

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 18

Tie Bolt Size: 7/16 - 20 threads/inch

Tie Bolt Torque: 800 to 850 in-lb

Tie Bolt Wrenching Element: 12 point

Tie Bolt Heat Treat: 220 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Flat

Inflation Valve: MS27436-1

Over-Inflation Devise: No

4.5.2 C-5 Nose Wheel Specifications:

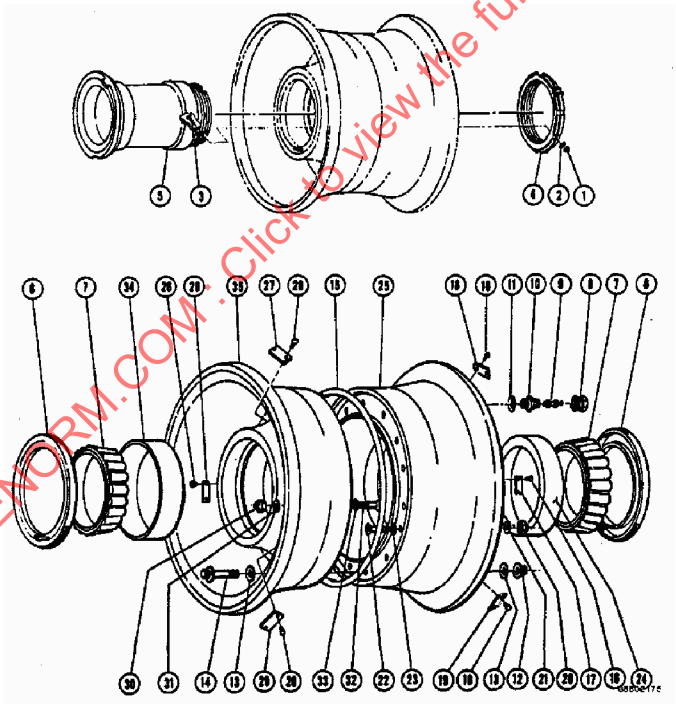

FIGURE 10

Wheel Part Number: 3-1258-2

Wheel Quantity per Aircraft: 4

Wheel Procurement Specification: 41045 (98897)

Wheel Style: Split Rim

Wheel Alloy: 2014-T6 Aluminum

Wheel Rated Load: 25,000 lb

Wheel Yield Load: 117,875 lb

Wheel Ultimate Load: 153,750 lb

Wheel Roll Test Distance

Straight: 3600 miles

Inboard Camber: 200 miles

Outboard Camber: 200 miles

Wheel Static Unbalance Requirements: IAW MIL-W-5013

Wheel Burst Pressure: 490 psi

Tire Type: Bias Tubeless

Tire Size: 49 X 17 26 Ply Rating

Tire Rated Inflation Pressure: 170 psi

Grease Dam Type: Removable Seal

Tapered Bearing Seal Type: Wheel Rotating

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 18

Tie Bolt Size: 7/16 - 20 threads/inch

Tie Bolt Torque: 800 to 850 in-lb

Tie Bolt Wrenching Element: 12 point

Tie Bolt Heat Treat: 220 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Flat

Inflation Valve: MS4436-1

Over-Inflation Devise: None

4.6 C-130 Wheel Specifications:

4.6.1 C-130 Main Wheel Specifications:

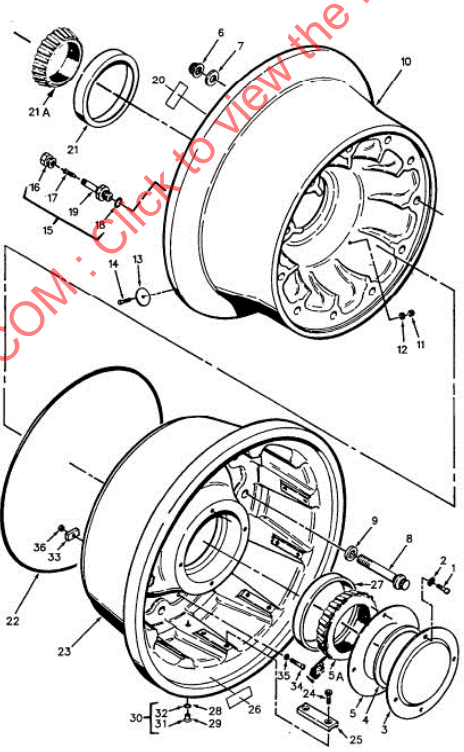

FIGURE 11

Wheel Part Number: 9550616-1LC (73842) 250A200 (23233)

Aircraft Maximum Gross Weight: 135,000 lb

Wheel Quantity per Aircraft: 4

Wheel Procurement Specification: USAF 67J2242

Wheel Style: Split Rim Equal Halves

Wheel Alloy: 2014-T61

Wheel Rated Load: 42,500 lb

Wheel Side Load: 74,400 lb

Wheel Ultimate Load: 211,750 lb

Wheel Roll Test Distance

Straight: 42,500 lbs for 3000 miles

Inboard load angle of 10° with 8300 lb side load for 100 miles

Inboard load angle of 3° with 2100 lb side load for 100 miles

Outboard load angle of 10° with 8300 lb side load for 100 miles

Outboard load angle of 3° with 2100 lb side load for 100 miles

Wheel Static Unbalance Requirements: 10 in-oz maximum

Wheel Burst Pressure: 380 psi

Thermal Fuse Type: Threaded Slot Head

Thermal Fuse Eutectic Temperature (°F): 390 °F

Tire Type: Bias Tubeless

Tire Size: 20.00-20 26 Ply Rating

Tire Rated Inflation Pressure: 125 psi

Rotor Drive Type/Quantity: Shell Drive Key/11

Rotor Drive Attach Mechanism: Two Staked Screws

Heat Shield Style: None

Heat Shield Materials: N/A

Heat Shield Anti-Fret Features: None

Grease Dam Type: Removable Seal Without Changing Bearing Cups

Tapered Bearing Seal Type: Wheel Rotating On Axle

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 11

Tie Bolt Size: 10/16 inch-16 threads/in

Tie Bolt Torque: 135 ft-lb

Tie Bolt Wrenching Element: 12 Point External

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Double Countersink

Inflation Valve: TR718-03

Over-Inflation Device: None

4.6.2 C-130 Nose Wheel Specifications:

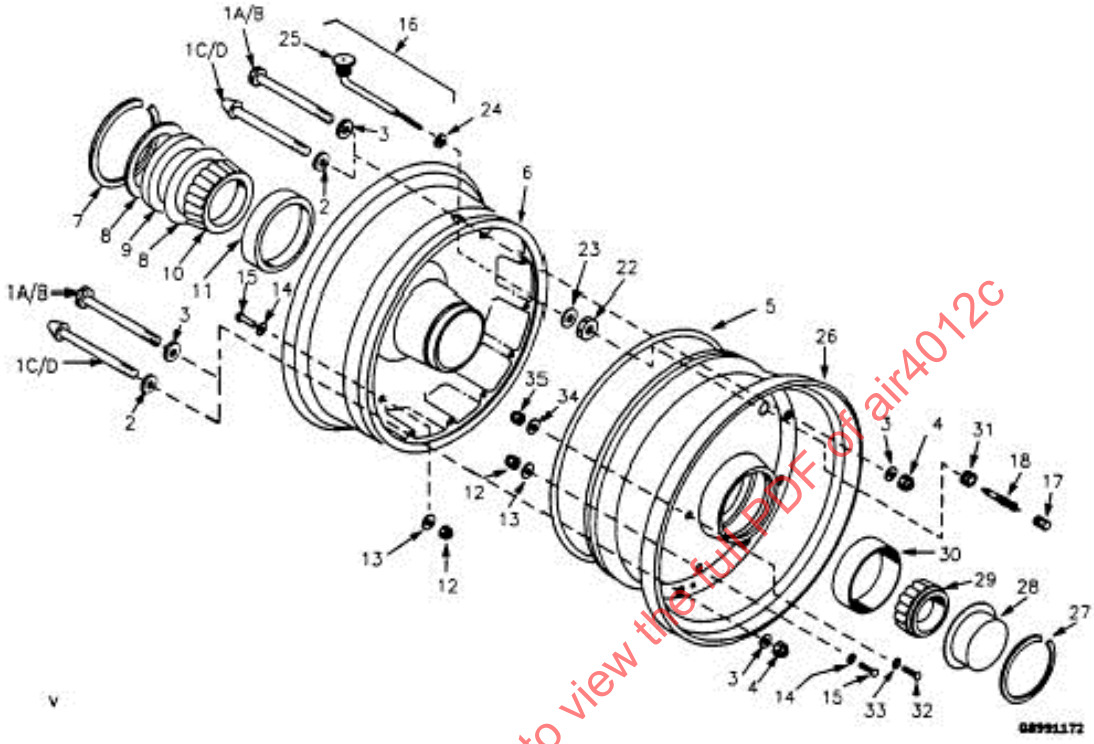

FIGURE 12

Wheel Part Number: 219A967 (23233) 5002744 (73842)

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: USAF 64F1880

Wheel Style: Split Rim Unequal Halves

Wheel Alloy: 2014-T61Aluminum

Wheel Rated Load: 11,000 lb

Wheel Radial Load: 74,700 lb

Wheel Side Load: 26,100 lb applied at 14.1 inches

Wheel Dynamic Load: 15,400 lb

Wheel Roll Test Distance

Straight: 42,500 lbs for 2000 miles

15,500 lb applied load at an angle of 8° with 2000 lb side load for 10 miles

11,500 lb applied load at an angle of 27° with 5000 lb side load for 100 miles

7000 lb applied load at an angle of 10° with 1000 lb side load for 800 miles

5500 lb applied load at an angle of 22° with 2000 lb side load for 100 miles

6000 lb applied load at an angle of 5° with 500 lb side load for 2790 miles

6000 lb applied load at an angle of 5° with 500 lb side load for 200 miles

Wheel Static Unbalance Requirements: 7 in-oz maximum

Wheel Burst Pressure: 300 psi

Tire Type: Bias Tubeless

Tire Size: 12.50 - 16 12 Ply Rating

Tire Rated Inflation Pressure: 75 psi

Grease Dam Type: Removable Seal Without Changing Bearing Cups

Tapered Bearing Seal Type: Wheel Rotating On Axle

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 12 for AN7-45A and 8 for AN8-36A

Tie Bolt Size: 7/16-20 threads/in and 1/2-20 threads/inch

Tie Bolt Torque: AN7-45A = 28/30 ft-lb AN8-36A = 40 ft-lb

Tie Bolt Wrenching Element: Hex Head

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: Hex Head

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Double Countersink

Inflation Valve: 733-03

Over-Inflation Device: No

4.7 KC-135 Wheel Specifications:

4.7.1 KC-135 Main Wheel Specifications:

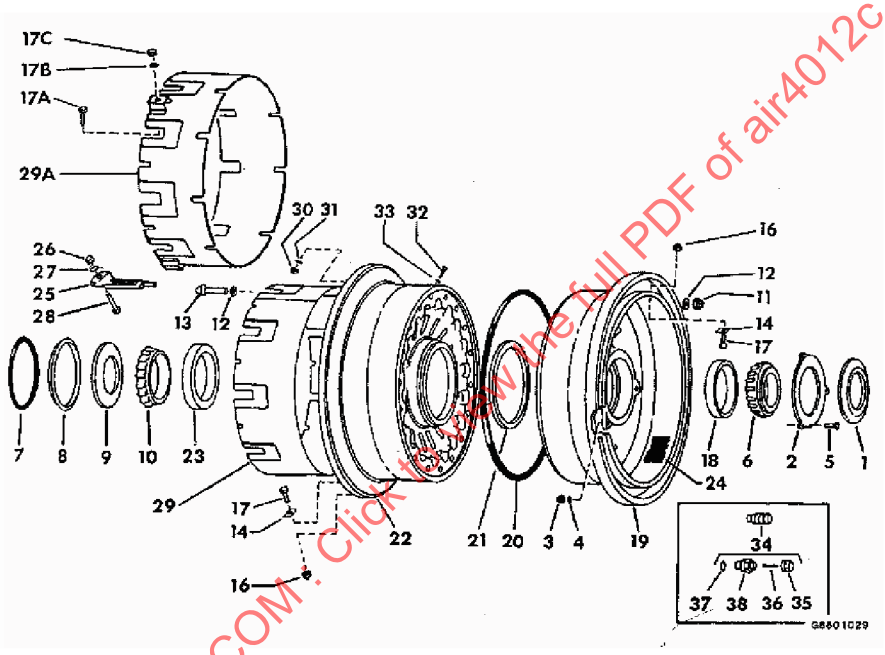

FIGURE 13

Wheel Part Number: 153245-4 and -5

Aircraft Maximum Gross Weight: 322,000 lb

Wheel Quantity per Aircraft: 8

Wheel Procurement Specification: USAF 62D3137

Wheel Style: Split Rim

Wheel Alloy: 2000 series Forged Aluminum

Wheel Rated Load: 39,600 lb

Wheel Yield Load: 135,000 lb

Wheel Ultimate Load: 163,000 lb

Ambient Temperature Wheel Roll Test Distance

Straight: 1254 miles

Inboard Yaw: 722 miles

Outboard Yaw: 102 miles

Wheel Static Imbalance Requirements: 10 in-oz maximum

Wheel Burst Pressure: 595 psi

Thermal Fuse Type: Through bolt with nut retainer

Thermal Fuse Eutectic Temperature (°F): 350 °F

Tire Type: Bias Tubeless

Tire Size: 49 X 17 26 Ply Rating

Tire Rated Inflation Pressure: 170 psi

Rotor Drive Type: Beam Key

Rotor Drive Attach Mechanism: Angled through-bolt

Heat Shield Style: Full Circle

Heat Shield Materials: Stainless Steel

Heat Shield Anti-Fret Features: None

Grease Dam Type: Removable Seal

Tapered Bearing Seal Type: Axle Restrained

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 18

Tie Bolt Size: 9/16 - 18 by 2-33/64 (P/N 154601)

Tie Bolt Wrenching Element: 12 Point

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cad Plate

Tie Bolt Nut Wrenching Element: 12 Point

Tie Bolt Nut Corrosion Protection: Cad Plate

Tie Bolt/Nut Washer Type: Single Countersink, MS20002-C9

Inflation Valve: TR752

Over-Inflation Device: No

4.7.2 KC-135 Nose Wheel Specifications:

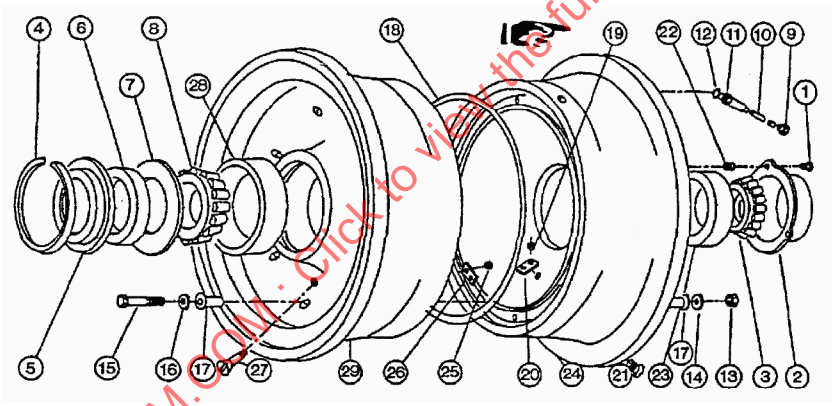

FIGURE 14

Wheel Part Number: P/N 8855427

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: USAF 54F760

Wheel Style: Split Rim

Wheel Alloy: Forged Aluminum and Cast Magnesium

Wheel Rated Load: 15,400 lb

Wheel Yield Load: 60,000 lb

Wheel Ultimate Load: 95,900 lb (Qualified to 87,600 lb)

Ambient Temperature Wheel Roll Test Distance

Straight: (15,400 lb) - 1000 miles

Inboard Yaw: None

Outboard Yaw: None

Wheel Static Imbalance Requirements:

Wheel Burst Pressure: 595 psi

Tire Type: Bias Tubeless

Tire Size: 38 X 11 14 Ply Rating

Tire Rated Inflation Pressure: 130 psi

Grease Dam Type: Removable Seal

Tapered Bearing Seal Type: Wheel Rotating

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 12

Tie Bolt Size: 1/2 - 20 threads per inch

Tie Bolt Torque: 53 to 58 ft-lb Lubtork

Tie Bolt Wrenching Element: 12 Point

Tie Bolt Heat Treat: 180 ksi (MS2125-08928)

Tie Bolt Corrosion Protection: Cad Plate

Tie Bolt Nut Wrenching Element: 12 Point

Tie Bolt Nut Corrosion Protection: Cad Plate

Tie Bolt/Nut Washer Countersink: Single Countersink (MS20002C8)

Inflation Valve: TR725

Over-Inflation Device: No

4.8 F-16 Wheel Specifications:

4.8.1 F-16 (LW) Main Wheel Specifications:

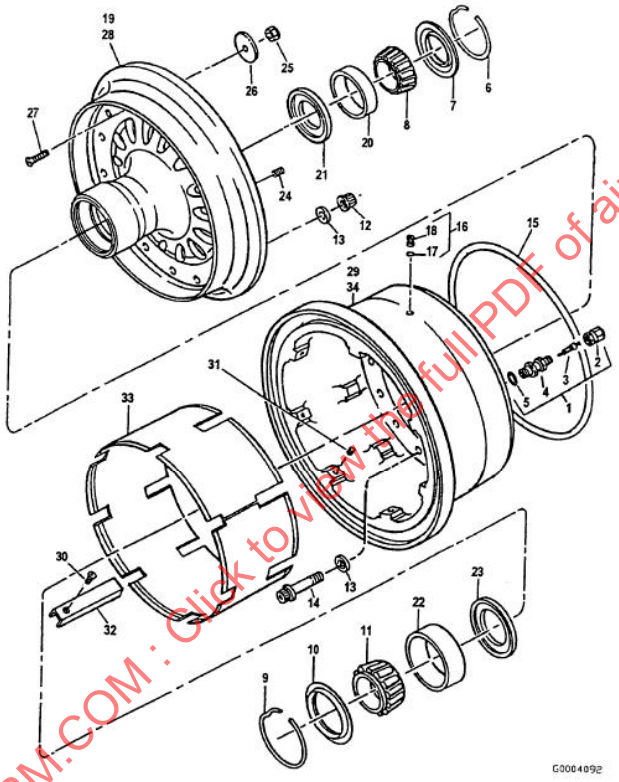

FIGURE 15

Wheel Part Number: 3-1506 (97153)

Aircraft Maximum Gross Weight: 37,500 lb

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: 965529 (98747) - (41,250 lb Aircraft Capability)

Wheel Style: Demountable Flange

Wheel Alloy: 2014-T6 Aluminum

Wheel Rated Load: 16,830 lb

Wheel Yield Load: 38,710 lb

Wheel Ultimate Load: 50,490 lb

Wheel Roll Test Distance

Straight: (18,510 lb) - 2000 miles + (16,830 lb) - 700 miles

Inboard Yaw: (1960 lb Side 13,030 lb Radial) - 150 miles

Outboard Yaw: (3100 lb Side 20,630 lb Radial) - 150 miles

Wheel Static Unbalance Requirements: 10 in-oz maximum (no weights)

Wheel Burst Pressure: 1085 psi

Thermal Fuse Type: Push

Thermal Fuse Eutectic Temperature (°F): 390 °F

Tire Type: Bias and Radial Tubeless

Tire Size: 25.5 X 8.0-14/25.5 X 8.0R14 20 Ply Rating

Tire Rated Inflation Pressure: 310 psi

Rotor Drive Type: Shell Key

Rotor Drive Attach Mechanism: One Machine Screw With Self-Locking Helicoil

Heat Shield Style: Full Circle

Heat Shield Materials: Stainless Steel

Heat Shield Anti-Fret Features: RTV at Wheel/Boss Interface

Grease Dam Type: Cup Retained - Must Remove Cups to Change

Tapered Bearing Seal Type: Wheel Rotating on Axle Spacer

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 14

Tie Bolt Size: 7/16 inch-20 threads/in

Tie Bolt Torque: 672 to 696 in lb

Tie Bolt Wrenching Element: 12 Point External

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Double Countersink

Inflation Valve: TR 752-03 Over-Inflation Device: No

4.8.2 F-16 Nose Wheel Specifications:

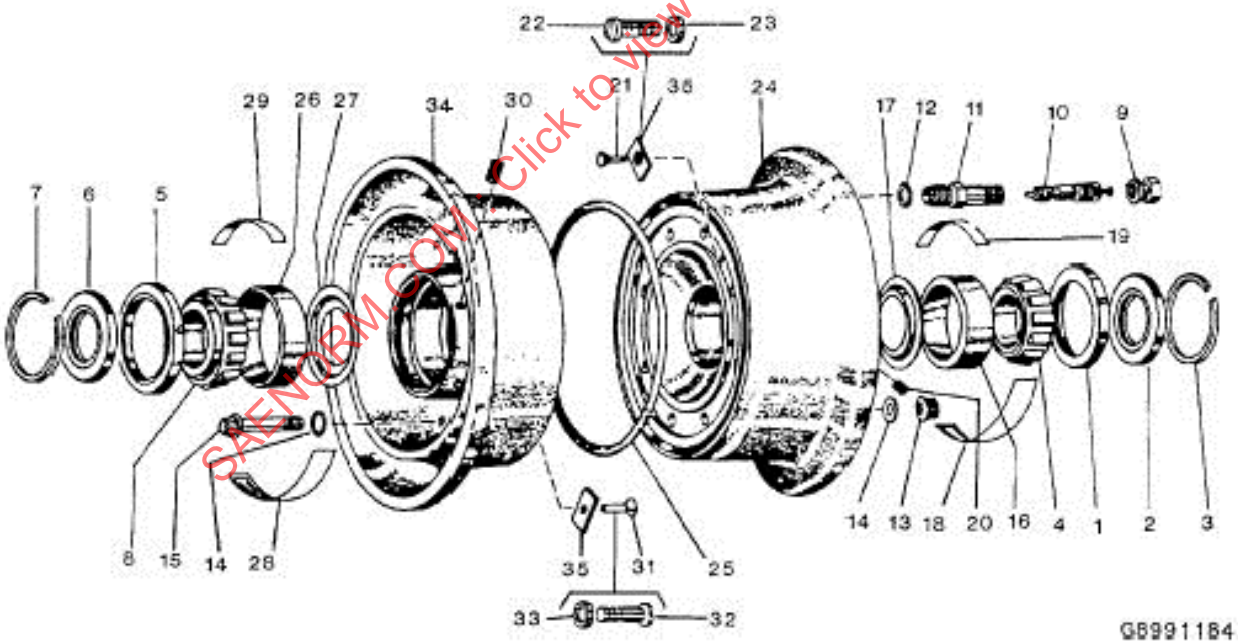

FIGURE 16

Wheel Part Number: 3-1505 (97153) 220A123-2 (23233)

Wheel Quantity per Aircraft: 1

Wheel Procurement Specification: 16VL035

Wheel Style: Split Rim Equal Halves

Wheel Alloy: 2014-T6 Aluminum

Wheel Rated Load: 8600 lb

Wheel Yield Load: 30,668 lb

Wheel Ultimate Load: 40,000 lb

Wheel Roll Test Distance

Straight: (9460 lb) - 1000 miles + (8600 lb) - 350 miles

Inboard Yaw: (2150 lb Side 8600 lb Radial) - 75 miles

Outboard Yaw: (2150 lb Side 8600 lb Radial) - 75 miles

Wheel Static Unbalance Requirements: 2 in-oz maximum

Wheel Burst Pressure: 1225 psi

Tire Type: Bias Tubeless

Tire Size: 18 X 5.7-8 18 Ply Rating

Tire Rated Inflation Pressure: 300 psi

Grease Dam Type: Cup Retained - Must Remove Cups to Change

Tapered Bearing Seal Type: Axle Restrained

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 8 (3-1305), 10 (220A123-2)

Tie Bolt Size: 3/8 inch-24 threads/in (3-1305), 5/16 inch-24 threads/in (220A123-2)

Tie Bolt Torque: 320 to 340 in lb (3-1305), 240-264 in-lb (220A123-2)

Tie Bolt Wrenching Element: 12 Point External

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Single Countersink

Inflation Valve: TR 762-03 (3-1305), MS 27436C1/TR 752-03 (220A123-2)

Over-Inflation Device: No

4.8.3 F-16 (HW) Main Wheel Specifications:

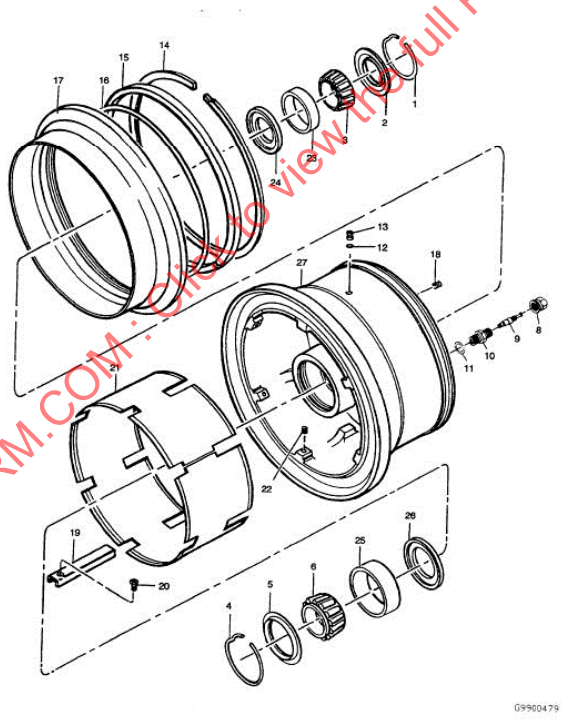

FIGURE 17

Wheel Part Number: 3-1486 (97153)

Aircraft Maximum Gross Weight: 48,000 lb

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: 16ZL030 (81755)

Wheel Style: Demountable Flange

Wheel Alloy: 7049-T73 Aluminum

Wheel Rated Load: 24,500 lb

Wheel Yield Load: 52,771 lb

Wheel Ultimate Load: 68,832 lb

Wheel Roll Test Distance

Straight: (26,950 lb) - 1000 miles + (24,500 lb) - 350 miles

Inboard Yaw: (4184 lb Side 27,892 lb Radial) - 75 miles

Outboard Yaw: (2700 lb Side 17,996 lb Radial) - 75 miles

Wheel Static Unbalance Requirements: 12 in-oz maximum (no weights)

Wheel Burst Pressure: 1260 psi

Thermal Fuse Type: Push

Thermal Fuse Eutectic Temperature (°F): 390 °F

Tire Type: Bias and Radial Tubeless

Tire Size: 27.75 X 8.75-14.5/27.75 X 8.75R14.5 24 Ply Rating

Tire Rated Inflation Pressure: 320 psi

Rotor Drive Type: Shell Key

Rotor Drive Attach Mechanism: One Machine Screw With Self-Locking Helicoil

Heat Shield Style: Full Circle

Heat Shield Materials: Stainless Steel

Heat Shield Anti-Fret Features: RTV at Wheel/Boss Interface Grease Dam Type: Cup Retained - Grease Dam Type: Cup Retained - Must Remove Cups to Change

Tapered Bearing Seal Type: Wheel Rotating on Axle Spacer

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: Lock Ring Retained

Inflation Valve: MS 27436C1/TR 752-03

Over-Inflation Device: No

4.9 F-15 Wheel Specifications:

4.9.1 F-15A-D Model Main Wheel Specifications:

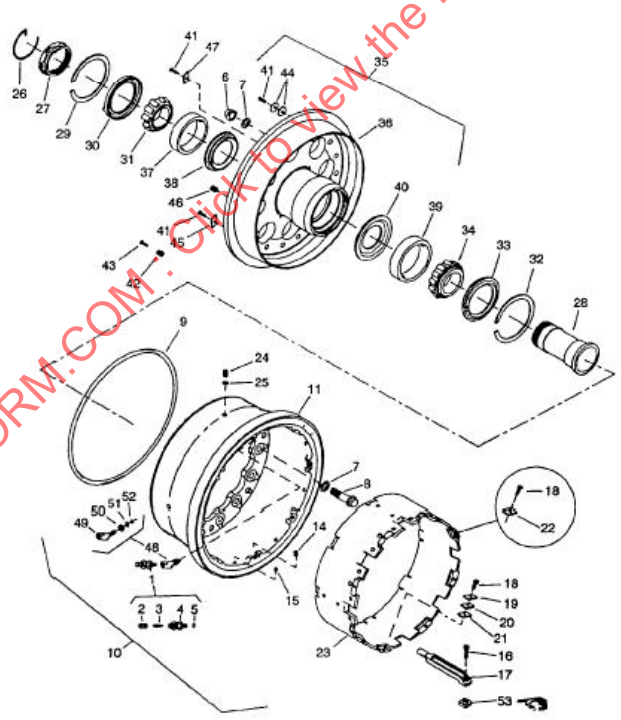

FIGURE 18

Wheel Part Number: 2605691-3 (55284)

Aircraft Maximum Gross Weight: 68,000

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: PS 68-410063 (76301)

Wheel Style: Demountable Flange

Wheel Alloy: 2014-T6

Wheel Rated Load: 30,100 lb

Wheel Yield Load: 75,100 lb

Wheel Ultimate Load: 98,000 lb

Ambient Temperature Wheel Roll Test Distance (does not include 50 mile tests at reduced tie bolt torque or elevated temperature):

Straight: (30,100 lb) - 900 miles/6000 miles roll to failure

Inboard Yaw: (3750 lb side 18,750 lb Radial) - 50 miles

Outboard Yaw: (8130 lb side 40,600 lb Radial) - 50 miles

Wheel Static Imbalance Requirements: 4 in-oz each side - 8 in-oz total maximum

Wheel Burst Pressure: 1190 psi

Thermal Fuse Type: Rush

Thermal Fuse Eutectic Temperature (°F): 390 °F

Tire Type: Bias Tubeless

Tire Size: 34.5 X 9.75-18 26 Ply Rating

Tire Rated Inflation Pressure: 340 psi

Rotor Drive Type: Beam Key

Rotor Drive Attach Mechanism: One Machine Screw With Helicoil + Safety Wire

Heat Shield Style: Full Circle Fastens to Outer Edge of Inboard Half Only

Heat Shield Materials: Stainless Steel

Heat Shield Anti-Fret Features: None

Grease Dam Type: Cup Retained - Must Remove Cups to Change

Tapered Bearing Seal Type: Wheel Rotating On False Axle

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 16

Tie Bolt Size: 9/16 inch-18 threads/in

Tie Bolt Torque: 150 to 160 ft-lb

Tie Bolt Wrenching Element: Spline Drive

Tie Bolt Heat Treat: 220 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: Spline Drive

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Single Countersink

Inflation Valve: MS 27436C1/TR 752-03

Over-Inflation Device: None

4.9.2 F-15 A-D Model Nose Wheel Specifications:

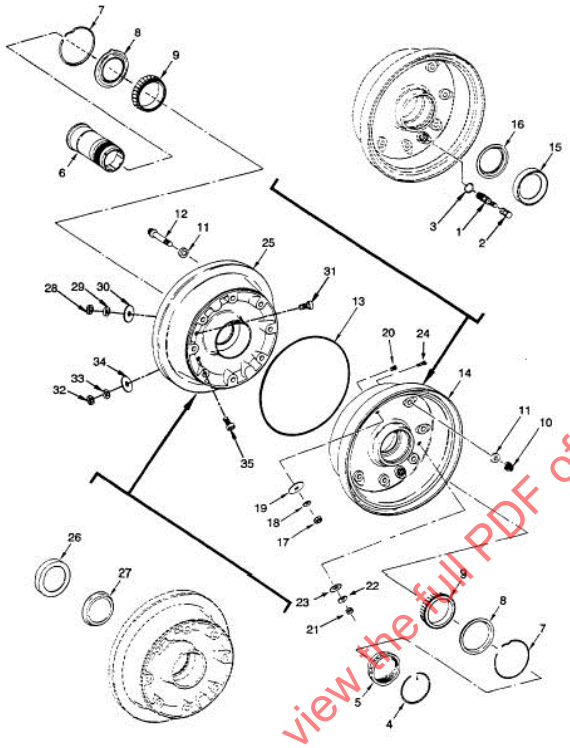

FIGURE 19

Wheel Part Number: 5004375 (0B9R9)

Wheel Quantity per Aircraft: 1

Wheel Procurement Specification: PS 68-450052(76301)

Wheel Style: Split Rim Equal Halves

Wheel Alloy: 2014-T6 Aluminum

Wheel Rated Load: 7900 lb

Wheel Yield Load: 34,500 lb

Wheel Ultimate Load: 45,000 lb

Ambient Temperature Wheel Roll Test Distance (does not include 50 mile tests at reduced tie bolt torque or elevated temperature)

Straight: (10,700 lb) - 1050 miles

Inboard Yaw: (2140 lb) - 50 miles

Outboard Yaw: (2140 lb) - 50 miles

Wheel Static Imbalance Requirements: 2 in-oz maximum

Wheel Burst Pressure: 910 psi

Tire Type: Bias Tubeless

Tire Size: 22 X 6.6-10 18 Ply Rating

Tire Rated Inflation Pressure: 260 psi

Grease Dam Type: Cup Retained - Must Remove Cups to Change

Tapered Bearing Seal Type: Wheel Rotating On False Axle

Anti-seize Compound Type: MIL-T-5544/AMS 2518

Tie Bolt Quantity: 8

Tie Bolt Size: 7/16 inch-20 threads/in

Tie Bolt Torque: 40 ft-lb

Tie Bolt Wrenching Element: 12 Point External

Tie Bolt Heat Treat: 180 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Double Countersink

Inflation Valve: MS 27436C1/TR 752-03

Over-Inflation Device: None

4.9.3 F-15E Model Main Wheel Specifications:

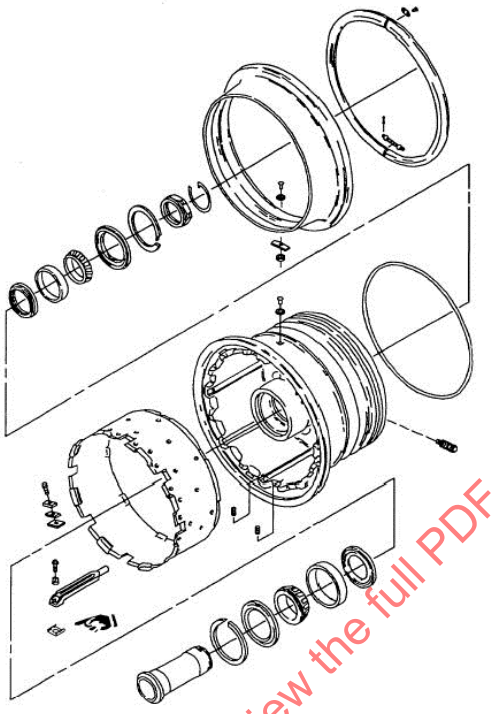

FIGURE 20

Wheel Part Number: 2608741-6 (55284)

Aircraft Maximum Gross Weight: 82,000 lb

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: PS 68-410066 (76301)

Wheel Style: Demountable Flange

Wheel Alloy: 2014-T6

Wheel Rated Load: 35,800 lb

Wheel Yield Load: 97,750 lb

Wheel Ultimate Load: 127,500 lb

Ambient Temperature Wheel Roll Test Distance (does not include 50 mile tests at reduced tie bolt torque or elevated temperature)

Straight: (35,800 lb) - 3000 miles

Inboard Yaw: (5350 lb side 21,450 lb Radial) - 150 miles

Outboard Yaw: (12,500 lb side 50,150 lb Radial) - 150 miles

Wheel Static Imbalance Requirements: 4 in-oz each side - 8 in-oz total maximum

Wheel Burst Pressure: 1068 psi

Thermal Fuse Type: Push

Thermal Fuse Eutectic Temperature (°F): 390 °F

Tire Type: Bias and Radial Tubeless

Tire Size: 36 X 11.0-18/36 X 11.0R18 30 Ply Rating

Tire Rated Inflation Pressure: 305 psi

Rotor Drive Type: Beam Key

Rotor Drive Attach Mechanism: One Machine Screw With Locking Tab

Heat Shield Style: Full Circle, Fastened to Outboard Edge of Inboard Wheel Half.

Heat Shield Materials: Stainless Steel

Heat Shield Anti-Fret Features: None

Grease Dam Type: Cup Retained - Must Remove Cups to Change

Tapered Bearing Seal Type: Wheel Rotating On False Axle

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: Lock Ring Retained

Inflation Valve: MS 27436C1/TR 752-03

Over-Inflation Device: No

4.9.4 F-15E Model Nose Wheel Specifications:

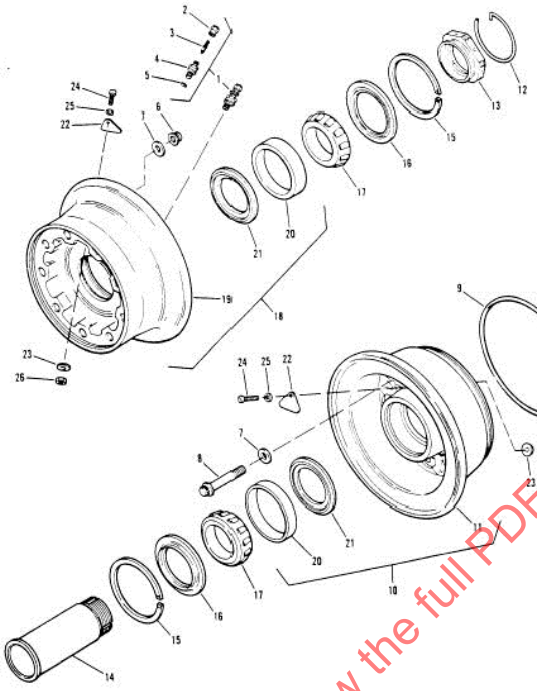

FIGURE 21

Wheel Part Number: 2608745-4 (55284)

Wheel Quantity per Aircraft: 1

Wheel Procurement Specification: PS 68-450069 (76301)

Wheel Style: Split Rim Equal Halves

Wheel Alloy: 7075-T73 Aluminum

Wheel Rated Load: 17,000 lb

Wheel Yield Load: 47,150 lb

Wheel Ultimate Load: 61,500 lb

Ambient Temperature Wheel Roll Test Distance (does not include 50 mile tests at reduced tie bolt torque)

Straight: (12,400 lb) - 2600 miles

Inboard Yaw: (12,400 lb) - 150 miles

Outboard Yaw: (12,400 lb) - 150 miles

Wheel Static Imbalance Requirements: 2 in-oz maximum

Wheel Burst Pressure: 1068 psi

Tire Type: Bias and Radial Tubeless

Tire Size: 22 X 7.75-9/ 22 X 7.75R9 26 Ply Rating

Tire Rated Inflation Pressure: 305 psi

Grease Dam Type: Cup Retained - Must Remove Cups to Change

Tapered Bearing Seal Type: Wheel Rotating On False Axle

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 9 ea

Tie Bolt Size: 7/16 inch-20 threads/in

Tie Bolt Torque: 67 ft-lb

Tie Bolt Wrenching Element: Spline Drive

Tie Bolt Heat Treat: 220 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: Spline Drive

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Double Countersink

Inflation Valve: MS 27436C1/TR 752-03

Over-Inflation Device: No

4.10 T-38 Wheel Specifications:

4.10.1 T-38 Main Wheel Specifications:

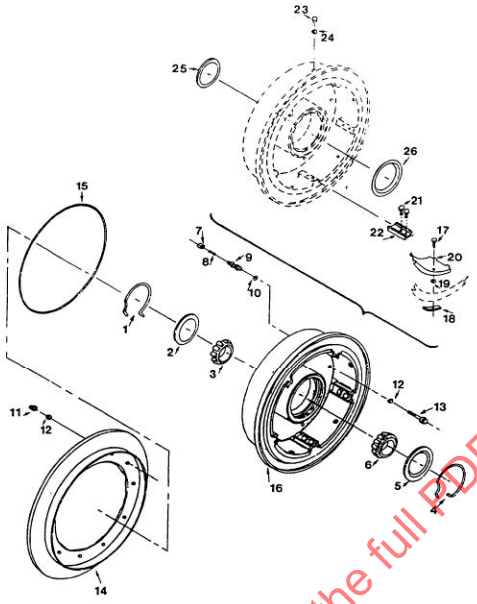

FIGURE 22

Wheel Part Number: 23823-1 (21849)

Aircraft Maximum Gross Weight: 12,900 lb

Wheel Quantity per Aircraft: 2

Wheel Procurement Specification: 56D1171 (98747)

Wheel Style: Demountable Flange

Wheel Alloy: 2014-T6 Aluminum

Wheel Rated Load: 5150 lb

Wheel Yield Load: 31,415 lb

Wheel Ultimate Load: 40,975 lb

Wheel Roll Test Distance (Ambient)

Straight: (5150 lb) - 2000 miles + (5150 lb) - 500 miles (From Brake Stop Testing)

Inboard Camber: (1290 lb Side 5150 lb Radial) - 750 miles

Outboard Camber: (1290 lb Side 5150 lb Radial) - 750 miles

Wheel Static Unbalance Requirements: 3 in-oz maximum

Wheel Burst Pressure: 930 psi

Thermal Fuse Type: Push

Thermal Fuse Eutectic Temperature (°F): 390 °F

Tire Type: Bias and Radial Tubeless

Tire Size: 20 X 4.4/20 X 4.4R12 12 Ply Rating (Bias) 14 Ply Rating (Bias and Radial)

Tire Rated Inflation Pressure: 225 psi (12 PR) and 265 psi (14 PR)

Rotor Drive Type/Quantity: Shell Key/5 Each

Rotor Drive Attach Mechanism: 2 Machine Bolts into Self-Locking Helicoils

Heat Shield Style: Segmented, Attached With 1 Center Screw into Self-Locking Helicoil

Heat Shield Materials: Stainless Steel

Heat Shield Anti-Fret Features: Two Heat Shield Tangs Spring Loaded Against Drive Key

Grease Dam Type: “Dam” is Integral With Wheel

Tapered Bearing Seal Type: Wheel Rotating on Axle Spacer

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 10

Tie Bolt Size: 5/16 inch-24 threads/in

Tie Bolt Torque: 275 to 285 in lb

Tie Bolt Wrenching Element: Spline Drive

Tie Bolt Heat Treat: 220 ksi

Tie Bolt Corrosion Protection: Cadmium

Tie Bolt Nut Wrenching Element: 12 Point External

Tie Bolt Nut Corrosion Protection: Cadmium

Tie Bolt/Nut Washer Countersink: Single Countersink

Inflation Valve: TR 725-03

Over-Inflation Device: No

4.10.2 T-38 Nose Wheel Option #1 Specifications:

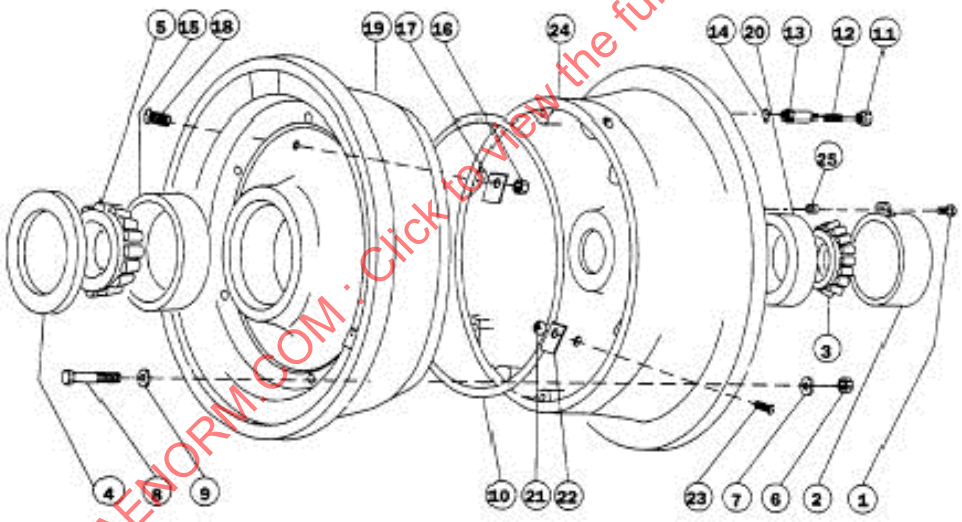

FIGURE 23

Wheel Part Number: 3-933 (97153)

Wheel Quantity per Aircraft: 1

Wheel Procurement Specification: 56D1172 (98747)

Wheel Style: Split Rim Equal Halves

Wheel Alloy: A291C-T4 Magnesium

Wheel Rated Load: 2100 lb

Wheel Yield Load: 16,000 lb

Wheel Ultimate Load: 18,550 lb

Wheel Roll Test Distance

Straight: (2100 lb) - 1000 miles

Inboard Camber: None

Outboard Camber: None

Wheel Static Unbalance Requirements: 2 in-oz maximum

Wheel Burst Pressure: 648 psi

Tire Type: Bias Tubeless

Tire Size: 18 X 4.4 6 Ply Rating

Tire Rated Inflation Pressure: 100 psi

Grease Dam Type: “Dam” is Integral With Wheel

Tapered Bearing Seal Type: Wheel Rotating Metallic Shell Pressed Into Hub (Inboard) and Cap (Outboard)

Anti-seize Compound Type: MIL-T-5544/AMS 2518

Tie Bolt Quantity: 6

Tie Bolt Size: 5/16inch -24 threads/in

Tie Bolt Torque: 100 to 110 in lb

Tie Bolt Wrenching Element: 6 Point External

Tie Bolt Heat Treat: 85 ksi

Tie Bolt Corrosion Protection: None

Tie Bolt Nut Wrenching Element: 6 Point External

Tie Bolt Nut Corrosion Protection: None

Tie Bolt/Nut Washer Countersink: Single Countersink

Inflation Valve: TR 725-03

Over-Inflation Device: No

4.10.3 T-38 Nose Wheel Option #2 Specifications:

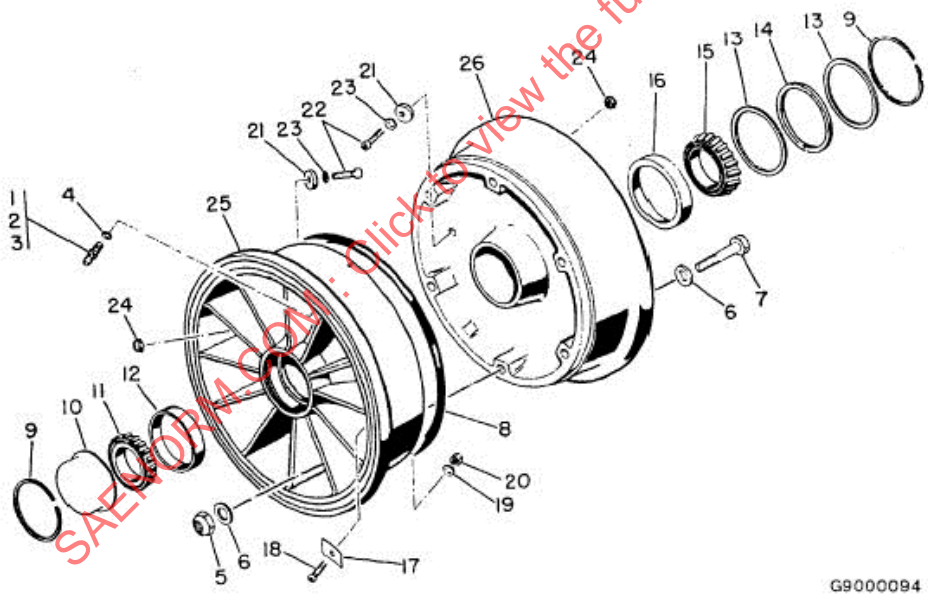

FIGURE 24

Wheel Part Number: 216A434-1 (23233)

Wheel Quantity per Aircraft: 1

Wheel Procurement Specification: 56D1172 (98747)

Wheel Style: Split Rim Equal Halves

Wheel Alloy: A291C-T4 Magnesium

Wheel Rated Load: 2100 lb

Wheel Yield Load: 16,000 lb

Wheel Ultimate Load: 18,550 lb

Wheel Roll Test Distance

Straight: (2100 lb) - 1000 miles

Inboard Camber: None

Outboard Camber: None

Wheel Static Unbalance Requirements: 2 in-oz maximum

Wheel Burst Pressure: 648 psi

Tire Type: Bias Tubeless

Tire Size: 18 X 4.4 6 Ply Rating

Tire Rated Inflation Pressure: 100 psi

Grease Dam Type: “Dam” is Integral With Wheel

Tapered Bearing Seal Type: Wheel Rotating Metallic Shell Pressed Into Hub (Inboard) and Cap (Outboard)

Anti-seize Compound Type: Lubtork per MIL-T-5544/AMS 2518

Tie Bolt Quantity: 6

Tie Bolt Size: 3/8 inch-24 threads/in

Tie Bolt Torque: 190 to 200 in lb

Tie Bolt Wrenching Element: 6 Point

Tie Bolt Heat Treat: 125 ksi

Tie Bolt Corrosion Protection: None

Tie Bolt Nut Wrenching Element: 6 Point External

Tie Bolt Nut Corrosion Protection: None

Tie Bolt/Nut Washer Countersink: No Countersink

Inflation Valve: TR 739-03

Over-Inflation Device: No

5. GENERAL SERVICE EXPERIENCE:

5.1 General Wheel Field Service Experience (T.O. 4W-1-61, 44B1-3):

a. Wheel disassembly requirements for cleaning/inspection at tire change:

Complete disassembly required except for the bearing cups, instruction plate and balance weights.

b. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean metal parts IAW T.O. 4W-1-61. Clean and inspect wheel bearings IAW T.O. 44B1-3.

c. Wheel NDI/inspection requirements at tire change:

IAW T.O. 4W-1-61. Eddy-Current the wheel at tire change. The wheel tie bolts are magnetic particle inspected at every tire change, otherwise all NDI is visual (suspected defects are verified using fluorescent penetrant (per T.O. 33B-1-1).

d. T.O. required new parts at tire change:

Wheel seal components recommended.

e. Wheel time/tire change marking system (direct stamping/RDD counter):

RDD counter IAW T.O. 4W-1-61.

f. T.O. allowances for drive damage/corrosion repair:

Minor blend out damage in non-critical areas.

g. T.O. allowances for paint color:

Polyurethane Topcoat per MIL-PRF-85285 color no. 17925 insignia white FED-STD-595.

h. T.O. allowances for wheel bearing grease:

Wheel bearing grease per MIL-PRF-81322 and SHC 100 IAW T.O. 44B-1-3.

i. T.O. requirements for wheel balancing:

Balance IAW T.O. 4W-1-61 paragraph 1-3

j. Action required following fuse plug release for braked wheels:

If plugs are blown or partially melted, complete conductivity and/or hardness check required IAW T.O. 4W-1-61. If capability does not exist, return wheel to depot. For wheels meeting conductivity and hardness limits, replace all fuse plug and packing materials.

5.2 General Wheel Depot Service Experience (T.O. 4W-1-61, 44B1-3):

a. Are grease seals, retainers, and bearings returned with wheel for overhaul:

No - retained at field level when wheels are returned to depot for overhaul. SMR code PAFZZ.

b. T.O. requirements for disassembly:

T.O. requires complete step-by-step disassembly.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean metal parts IAW T.O. 4W-1-61. Do not immerse heat shields in cleaning solvent.

d. Wheel NDI/inspection requirements:

Fluorescent-Penetrant inspect, Eddy-Current per specific T.O. or Aircraft - 36 T.O.

e. T.O. requirements for heat damage:

Conductivity test on the tube-well outside diameter and hub area. For 2014 alloys the conductivity limitation is a maximum of 42.5% International Annealed Copper Standard (IACS), which is verified with a hardness test and sent to engineering for MRB it reading exceeds limit. For 7050 alloys limit is 40.5 IACS.

f. T.O. allowances for bearing bore damage/corrosion repair:

Oversize bearing bores and install bearing cups with steel repair sleeve installed.

g. T.O. allowances for inflation valve boss damage/corrosion repair:

Spot face of inflation valve boss and thread chase. Oversize valve boss rework as necessary.

h. T.O. allowances for fuse plug boss damage/corrosion repair:

None.

i. T.O. allowances for drive key boss (beam key) damage/corrosion repair:

Bush through holes on either end of beam key as necessary.

j. T.O. allowances for tie bolt bore damage/corrosion repair:

Bush tie bolt holes as necessary. Normally all or none are bushed

k. T.O. required new parts at overhaul:

All seal assemblies, inserts, fuse plugs, tie bolts and nuts, etc., are replaced 100% at depot. All other items are inspected IAW specific T.O.s.

l. Wheel time change/overhaul marking system (direct stamping/tag):

Wheel depot overhaul date is directly marked on both wheel half and de-mountable flange IAW general T.O. 4W-1-61.

m. T.O. allowances for paint color:

Polyurethane Topcoat per MIL-PRF-85285 color no. 17925 insignia white FED-STD-595.

n. T.O. for wheel bearing grease:

Wheel bearing grease per MIL-PRF-81322 and SHC 100 IAW T.O. 44B-1-3.

6. SPECIFIC FIELD SERVICE EXPERIENCE (IN ADDITION TO 5.1.1 AND 5.1.2):

6.1 A-10 Main Wheel Service Experience (T.O. 4W1-4-1053):

a. Wheel tire change interval (landings):

No set interval. Remove tire for cause (wear out, FOD, etc.) varies by specific tire.

b. T.O. requirements for heat damage:

Hardness check required IAW 4W-1-61 except conductivity limitation of 41.5% IACS.

c. T.O. required new parts at tire change:

None.

d. T.O. allowances for wheel bearing grease:

Wheel bearing grease per MIL-PRF-81322 and SHC 100 IAW T.O. 44B-1-3.

e. T.O. requirements for wheel balancing:

Balance IAW T.O. 4W-1-61 paragraph 1-3

f. Action required following fuse plug release:

Replace all fusible plugs if one shows evidence of melting. If plugs are blown or melted, complete conductivity and hardness check required IAW 4W-1-61 except conductivity limitation of 41.5% IACS.

6.2 A-10 Nose Wheel Service Experience (T.O. 4W3-4-433):

a. Wheel tire change interval (landings):

No set interval. Remove tire for cause (wear out, FOD, etc.) varies by specific tire.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Complete disassembly required except for the bearing cups.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean metal parts IAW T.O. 4W-1-61. Clean and inspect wheel bearings IAW T.O. 44B1-3.

d. Wheel NDI/inspection requirements at tire change:

Visual, FPI at each tire change.

e. T.O. required new parts at tire change:

None.

f. Wheel time/tire change marking system (direct stamping/RDD counter):

RDD counter IAW T.O. 4W-1-61.

g. T.O. allowances for paint color:

Polyurethane Topcoat per MIL-PRF-85285 color no. 17925 insignia white FED-STD-595.

h. T.O. allowances for wheel bearing grease:

Repack bearing cones and coat bearing cups IAW 44B-1-3 and lubricate all threads and load bearing surfaces of bearing can, bearing can nut and bearing nut spacer with grease (MIL-PRF-81322 and SHC 100).

i. T.O. requirements for wheel balancing:

Balance IAW T.O. 4W-1-61 paragraph 1-3.

6.3 B-1B Main Wheel Service Experience (T.O. 4W1-7-1382):

a. Wheel tire change interval (landings):

Average removal for wear is approximately 64.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Complete disassembly required except for the bearing cups, instruction plate and balance weights.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean metal parts IAW T.O. 4W-1-61. Clean and inspect wheel bearings IAW T.O. 44B1-3. Do not immerse heat shields in cleaning solvent.

d. Wheel NDI/inspection requirements at tire change:

IAW T.O. 4W-1-61. Eddy-Current the wheel at tire change.

e. T.O. requirements for heat damage:

Hardness check required IAW 4W-1-61 except conductivity limitation of 41.5% IACS.

f. T.O. required new parts at tire change:

Wheel seal components.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

RDD counter IAW T.O. 4W-1-61.

h. T.O. allowances for drive damage/corrosion repair:

Damage to key boss shelf area, blend out damage up to 0.020 inch.

i. T.O. allowances for paint color:

Polyurethane Topcoat per MIL-PRF-85285 color no. 17925 insignia white FED-STD-595.

j. T.O. allowances for wheel bearing grease:

Wheel bearing grease per MIL-PRF-81322 and SHC 100 IAW T.O. 44B-1-3.

k. T.O. requirements for wheel balancing:

Balance IAW T.O. 4W-1-61 paragraph 1-3

l. Action required following fuse plug release:

Replace all fusible plugs if one shows evidence of melting. If plugs are blown or melted, complete conductivity and/or hardness check required IAW 4W-1-61 except conductivity limitation of 41.5% IACS.

6.4 B-1B Nose Wheel Service Experience (T.O. 4S2-84-2):

a. Wheel tire change interval (landings):

Average removal for wear is approximately 104.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Complete disassembly required except for the bearing cups, instruction plate and balance weights.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean metal parts IAW T.O. 4W-1-61. Clean and inspect wheel bearings IAW T.O. 44B1-3.

d. Wheel NDI/inspection requirements at tire change:

Visual, No NDI

e. T.O. required new parts at tire change:

Wheel seal components.

f. Wheel time/tire change marking system (direct stamping/RDD counter):

RDD counter IAW T.O. 4W-1-61.

g. T.O. allowances for paint color:

Polyurethane Topcoat per MIL-PRF-85285 color no. 17925 insignia white FED-STD-595.

h. T.O. allowances for wheel bearing grease:

Repack bearing cones and coat bearing cups IAW 44B-1-3 and lubricate all threads and load bearing surfaces of bearing can, bearing can nut and bearing nut spacer with grease (MIL-PRF-81322 and SHC 100).

i. T.O. requirements for wheel balancing:

Balance IAW T.O. 4W-1-61 paragraph 1-3.

6.5 B-2 Main Wheel Service Experience (T.O. 4W3-4-482):

a. Wheel tire change interval (landings):

This tire has not gone through a life cycle cost (LCC) evaluation index test. Tire remove when 3 cords showing.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Complete disassembly required except for the safety relief valve and pneumatic tire valve unless determined necessary.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

For wheel components clean IAW T.O. 4W-1-61. For bearing and grease sealing cleaning, refer to T.O. 44B1-3. Paint removal if required (for cause only), in accordance with T.O. 4W-1-61.

d. Wheel NDI/inspection requirements at tire change:

At every tire change, perform a detail parts inspection of the flat washers, heat shield, rotor drive keys, tie bolts, rotor drive key machine bolts, recessed washers, cone and roller bearings, bearing cups, socket head cap screws, grease dams, pneumatic tire valve assembly, wheel half spacer, balance weights, time change counter plate, grease seals, retaining rings and fusible plugs. After the detail parts inspection, perform an intensified inspection of the wheel halves, tie bolts, rotor drive key machine bolts, safety relief valve and rotor drive keys using Eddy-Current, Magnetic Particle (per ASTM E 1444) and Fluorescent-Penetrant inspections (per ASTM E 1417 using specification MIL-I-25135, Type I, Sensitivity Level 2 materials).

e. T.O. requirements for heat damage:

Wheels suspected of heat damage (paint discoloration) or wheel experiencing a fuse plug release are to be inspected IAW T.O. 4W-1-61.

f. T.O. required new parts at tire change:

All parts inspected and found acceptable are re-used. Only parts found unacceptable are replaced.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

A time change counter plate is bolted to the inboard and outboard wheel halves with socket head cap screw, balance weights, flat washer, and self-locking nut. This plate is used to record the next wheel assembly overhaul.

h. T.O. allowances for drive damage/corrosion repair:

No repair indicated.

i. T.O. allowances for paint color:

Paint wheel halves, if required, IAW T.O. 4W-1-61. Color is specified as Polyurethane, enamel, MIL-PRF-85285 Gloss White 17925.

j. T.O. allowances for wheel bearing grease:

Wheel bearing grease per MIL-PRF-81322.

k. T.O. requirements for wheel balancing:

Outboard and inboard wheel halves are assembled with 0.20 or 0.30 ounce balance weights as required. Refer to T.O. 4W-1-61.

l. Action required following fuse plug release:

Replace all fusible plugs if one shows evidence of melting. If plugs are blown or melted, complete conductivity and/or hardness check required IAW 4W-1-61 except conductivity limitation of 41.5% IACS.

6.6 B-2 Nose Wheel Service Experience (T.O. 4W1-1-102):

a. Wheel tire change interval (landings):

This tire has not gone through a life cycle cost (LCC) evaluation index test. Tire removed when 2 cords showing.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Complete disassembly required except for the safety relief valve and pneumatic tire valve unless determined necessary.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

If wheel halves are heavy with grime they may be steam cleaned or jet blasted. The bearing cups must be protected. Refer to T.O. 4W-1-61 for wheel cleaning. For bearing and grease sealing cleaning, refer to T.O. 44B1-3. Paint removal IAW T.O. 4W-1-61.

d. Wheel NDI/inspection requirements at tire change:

At every tire change, perform a detail parts inspection of the flat washers, self-locking nuts, tie bolts, recessed washers, cone and roller bearings, bearing cups, socket head cap screws, pneumatic tire valve assembly, balance weights, time change counter plate, grease seals, retaining rings and wheel halves. Inspection type is listed in Table 7-1 and 7-2 (either Visual, Eddy-Current or Magnetic-Particle inspect) of T.O. 4W1-1-102.

e. T.O. required new parts at tire change:

All parts inspected and found acceptable are re-used. Only parts found unacceptable are replaced.

f. Wheel time/tire change marking system (direct stamping/RDD counter):

A time change counter plate is bolted to the inboard and outboard wheel halves with socket head cap screw, balance weights, flat washer, and self-locking nut. This plate is used to record the next wheel assembly NDI inspection.

g. T.O. allowances for paint color:

Paint wheel halves IAW T.O. 4W-1-61. Color is specified as Polyurethane, enamel, MIL-PRF-85285 Gloss White 17925.

h. T.O. allowances for wheel bearing grease:

Wheel bearing grease per MIL-PRF-81322 and SHC 100.

i. T.O. requirements for wheel balancing:

Outboard and inboard wheel halves are assembled with 0.20 or 0.30 ounce balance weights as required and IAW T.O. 4W-1-61. When wheel is disassembled in the field, the balance weight and location of balance weight is recorded and then upon assembly is reassembled with the balance weights at the location that was recorded. If the correct amount and location of the weight cannot be determined then the wheel is sent back to Depot for overhaul.

6.7 B-52 Main Wheel Service Experience (T.O. 4W1-7-1143):

a. Wheel tire change interval (landings):

Tire changed after first tread wears through.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Complete disassembly IAW IPB numbering. All hardware removed. NDI inspection for P/N 1192.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

T.O. 4W1-7-1143 directs cleaning IAW T.O. 4W-1-61.

d. Wheel NDI/inspection requirements at tire change:

P/N 3-1192 requires eddy-current IAW T.O. 1B-52B-36. Otherwise visual.

e. T.O. requirements for heat damage:

Visual inspection IAW general wheel T.O. Eddy-current IAW T.O. 1B-52B-36 on P/N 3-1192.

f. T.O. required new parts at tire change:

Replaced as required. Approximately 1% of keys, bolts, nuts, and washers.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

Time change counter tag IAW T.O. 4W-1-61.

h. T.O. allowances for drive damage/corrosion repair:

None specified for field.

i. T.O. allowances for paint color:

IAW T.O. 4W-1-61.

j. T.O. allowances for wheel bearing grease:

IAW general wheel T.O. 4W-1-61.

k. T.O. requirements for wheel balancing:

Depot level balancing IAW with T.O. 4W-1-61, if required. Field has no balancing capabilities.

l. Action required following fuse plug release:

Visual inspection, send to depot if wheel is suspected of being heat damaged.

6.8 B-52 Tip Wheel Service Experience (T.O. 4W4-2-23):

a. Wheel tire change interval (landings):

Tire changed after first tread is worn through.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Complete disassembly IAW numbering in IPB. Remove bearing cups only when replacement is necessary.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Cleaned IAW T.O. 4W-1-61. Wheel paint stripped IAW T.O. 4W-1-61.

d. Wheel NDI/inspection requirements at tire change:

Visual inspection with a 4 or 5-power magnifying glass. Cracks, corrosion, and porosity with their most probable locations are defined. Casting defects are not cause for condemnation. Eddy-current tested in bead seat radius area. Visually inspect bearing cups for cracks, scoring, discoloration (overheating), distortion, and fit. Visual inspection of bearing cones and rollers for cracks, mars, broken or worn rollers, discoloration (overheating), and free movement.

e. T.O. requirements for heat damage:

Visual inspection of bearing cups, rollers and cones for discoloration.

f. T.O. required new parts at tire change:

None specified. Parts replaced as needed.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

None specified. None employed. Follows 900 hour aircraft schedule.

h. T.O. allowances for drive damage/corrosion repair:

N/A

i. T.O. allowances for paint color:

None specified. Follows wheel T.O. 4W-1-61.

j. T.O. allowances for wheel bearing grease:

MIL-PRF-81322

k. T.O. requirements for wheel balancing:

Field does not have balancing capability; depot performs balancing. 7 in-oz is maximum static unbalance.

6.9 C-5 Main Wheel Service Experience (IAW T.O. 4W1-4-493):

a. Wheel tire change interval (landings):

Tires are replaced based on condition of the tire, replacement occurs when fabric is visible.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Clean in accordance with T.O. 4W-1-61 (general T.O.) Inspection. NDI, Florescent and Magnetic particle inspection. All wheel assemblies should be considered heat damaged when returned to depot because of the carbon brake and will be inspected in accordance with T.O. 4W-1-61.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Wheels may be cleaned using either PD-680, Types 2, 2A, or 3 or using water based cleaners per Air Force Spec DWG 9825019, or steam cleaner with P-C-437.

d. Wheel NDI/inspection requirements at tire change:

Visually inspect (prior cleaning is required paint stripping optional) Eddy current any questionable indications.

e. T.O. requirements for heat damage:

Local inspection, conductivity check, hardness test of suspected areas condemn any parts which fail.

f. T.O. required new parts at tire change:

Replace packing Number 68-649 and Grommets Number MS9068-010 at each overhaul.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

Direct stamping on wheel rim at each overhaul.

h. T.O. allowances for drive damage/corrosion repair:

Drive key shall be removed/replaced if any crack indication using at least a 4 or 5 power magnifying glass, nothing on drive key corrosion.

i. T.O. allowances for paint color:

White per Federal Standard 595, color substitution is allowed as long as paint per MIL-PRF-85285.

j. T.O. for wheel bearing grease:

Lubricate IAW T.O. 44B-1-3 using general grease MIL-PRF-81322.

k. T.O. requirements for wheel balancing:

Generally returned to depot but can balance locally if proper static balance equipment is available.

l. Action required following fuse plug release:

Inspect wheel for strength loss utilizing eddy-current conductivity return damaged wheel to depot overhaul for wheels that stay replace all thermal fuse plugs if one shows signs of melting.

6.10 C-5 Nose Wheel Service Experience (T.O. 4W3-4-413):

a. Wheel tire change interval (landings):

Tire removal for cause (wear out, FOD damage, etc.)

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Clean in accordance with T.O. 4W-1-61 (general T.O.) Inspection. NDI: Florescent Magnetic particle inspection (FMPI), and eddy-current inspection.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean IAW T.O. 4W1-1-61

d. Wheel NDI/inspection requirements at tire change:

Visually inspect (prior cleaning is required, paint stripping is optional) Eddy current any questionable indications.

e. T.O. requirements for heat damage:

Local inspection, conductivity check, hardness test of suspected areas condemn any parts that fail.

f. T.O. required new parts at tire change:

None.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

Mark wheel directly IAW T.O. 4W-1-61

h. T.O. allowances for drive damage/corrosion repair:

N/A.

i. T.O. allowances for paint color:

IAW T.O. 4W-1-61

j. T.O. for wheel bearing grease:

Lubricate IAW T.O. 44B-1-3 using general grease MIL-PRF-81322.

k. T.O. requirements for wheel balancing:

Generally returned to depot but can balance locally if proper static balance equipment is available.

l. Action required following fuse plug release:

Inspect wheel for strength loss utilizing eddy-current conductivity return damaged wheel to depot overhaul for wheels that stay replace all thermal fuse plugs if one shows signs of melting.

6.11 C-130 Main Wheel Service Experience (T.O. 4W1-4-1013):

a. Wheel tire change interval (landings):

Tire removal for cause (wear out, FOD damage, etc.)

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Clean in accordance with T.O. 4W-1-61 (general T.O.) Inspection. NDI: Florescent Magnetic particle inspection (FMPI), and eddy-current inspection.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean IAW T.O. 4W1-1-61

d. Wheel NDI/inspection requirements at tire change:

Visually inspect (prior cleaning is required, paint stripping is optional). Eddy current any questionable indications.

e. T.O. requirements for heat damage:

Local inspection, conductivity check, hardness test of suspected areas condemn any parts which fail.

f. T.O. required new parts at tire change:

Replace fuse plug assembly (216A382-5), O-ring seal (9522828)

g. Wheel time/tire change marking system (direct stamping/RDD counter):

Mark IAW T.O. 4W-1-61

h. T.O. allowances for drive damage/corrosion repair:

Drive key shall be removed/replaced if any crack indication using at least a 4 or 5 power magnifying glass, nothing on drive key corrosion.

i. T.O. allowances for paint color:

White per Federal Standard 595, color substitution is allowed as long as paint per MIL-PRF-85285.

j. T.O. for wheel bearing grease:

Lubricate IAW T.O. 44B-1-3 using general grease MIL-PRF-81322.

k. T.O. requirements for wheel balancing:

Generally returned to depot but can balance locally if proper static balance equipment is available.

l. Action required following fuse plug release:

Inspect wheel for strength loss utilizing eddy-current conductivity-return damaged wheel to depot overhaul if heat damaged.

6.12 C-130 Nose Wheel Service Experience (T.O. 4W3-4-363):

a. Wheel tire change interval (landings):

Tire removal for cause (wear out, FOD damage, etc.)

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Clean in accordance with T.O. 4W-1-61 (general T.O.) Inspection. NDI: Florescent Magnetic particle inspection (FMPI), and eddy-current inspection.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean IAW T.O. 4W1-1-61

d. Wheel NDI/inspection requirements at tire change:

Visually inspect (prior cleaning is required, paint stripping is optional) Eddy current any questionable indications.

e. T.O. requirements for heat damage:

Local inspection, conductivity check, hardness test of suspected areas condemn any parts which fail.

f. T.O. required new parts at tire change:

Replace preformed packing (MS28775-383) and felt retainer (210A701)

g. Wheel time/tire change marking system (direct stamping/RDD counter):

Mark IAW T.O. 4W-1-61

h. T.O. allowances for drive damage/corrosion repair:

N/A.

i. T.O. allowances for paint color:

White per Federal Standard 595, color substitution is allowed as long as paint per MIL-PRF-85285.

j. T.O. for wheel bearing grease:

Lubricate IAW T.O. 44B-1-3 using general grease MIL-PRF-81322.

k. T.O. requirements for wheel balancing:

Generally returned to depot but can balance locally if proper static balance equipment is available.

l. Action required following fuse plug release:

Inspect wheel for strength loss utilizing eddy-current conductivity return damaged wheel to depot overhaul for wheels that stay replace all thermal fuse plugs if one shows signs of melting.

6.13 C/KC-135 Main Wheel Service Experience (T.O. 4W1-7-263):

a. Wheel tire change interval (landings):

Tires are replaced based on condition of the tire, replacement occurs when fabric is visible.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Clean in accordance with T.O. 4W-1-61 (general T.O.) Inspection. NDI: Florescent Magnetic particle inspection (FMPI), and eddy-current inspection.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Wheels may be cleaned using either PD-680, Types 2, 2A, or 3 or using water based cleaners per Air Force Spec DWG 9825019, or steam cleaner with P-C-437.

d. Wheel NDI/inspection requirements at tire change:

Visually inspect (prior cleaning is required paint stripping optional) Eddy current wheel halves, FMPI tie bolts, brake keys, brake key bolts.

e. T.O. requirements for heat damage:

Wheel out-of-round inspection, local inspection, and conductivity check. Shotpeen affected areas.

f. T.O. required new parts at tire change:

None

g. Wheel time/tire change marking system (direct stamping/RDD counter):

RDD counter IAW T.O. 4W-1-61.

h. T.O. allowances for drive damage/corrosion repair:

Corrosion shall not exceed 0.010 in deep and cover more than one half of surface area on drive key bolt hole or wheel-half drive key shank hole. Repair holes by machining oversize and installing repair bushings.

i. T.O. allowances for bearing bore damage/corrosion repair:

Remove minor defects/corrosion per T.O. 4W-1-61. If cleaned up bearing bore dimensions exceed limits, install repair bushing per AF Drawing 63B31152.

j. T.O. allowances for paint color:

Paint per 4W-1-61

k. T.O. for wheel bearing grease:

Lubricate using general grease MIL-PRF-81322.

l. T.O. requirements for wheel balancing:

Static balance wheel halves prior to assembly.

6.14 C/KC-135 Nose Wheel Service Experience (T.O. 4W3-4-473):

a. Wheel tire change interval (landings):

Tires are replaced based on condition of the tire. Replacement occurs when fabric is visible.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Disassembly of wheel halves and any damaged components required. Bearing cups and balance weights not removed except for damage.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean IAW T.O. 4W-1-61.

d. Wheel NDI/inspection requirements at tire change:

Inspect IAW T.O. 1C-135-36 and 4W-1-61. Wheel halves inspected with eddy-current inspection and/or fluorescent penetrant inspection. Inspect bearings per 44B-1-3.

e. T.O. required new parts at tire change:

All parts removed during disassembly must be replaced with new kit parts. Replacement of undamaged parts with kit parts is not required as long as undamaged parts are not removed during disassembly.

f. Wheel time/tire change marking system (direct stamping/RDD counter):

None noted.

g. T.O. allowances for paint color:

None noted.

h. T.O. allowances for wheel bearing grease:

Lubricate bearings per 44B-1-3.

i. T.O. requirements for wheel balancing:

None noted.

6.15 F-16LW Main Wheel Service Experience (T.O. 4W1-7-1432):

a. Wheel tire change interval (landings):

Average removal for wear is approximately 50 Bias, 50 Radial. This data is based upon index testing and represents a more current design for the bias than the radial tires.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Disassemble only to extent to facilitate tire change.

c. Wheel NDI/inspection requirements at tire change:

The wheel tie bolts are magnetic particle inspected at every tire change, otherwise all NDI is visual (suspected defects are verified using fluorescent penetrant per T.O. 33-B-1)

d. T.O. allowances for drive damage/corrosion repair:

Local damage to the drive key lug area is allowed to a maximum depth of 0.010 inch and 1 inch length with not more than 50% of any original lug surface (top and sides).

e. T.O. allowances for paint color:

Paint color is not specified in this T.O. Paint application is to be IAW T.O. 1-1-8.

f. T.O. allowances for wheel bearing grease:

Wheel bearing grease per MIL-PRF-81322 or Mobile Aviation Grease SHC 100 (Preferred).

g. T.O. requirements for wheel balancing:

Wheel balancing on this assembly is not accomplished (balancing controlled my tight balancing requirements on machined halves as manufactured).

h. Action required following fuse plug release:

Wheel assembly is returned to supply in repairable condition for depot overhaul.

6.16 F-16LW/HW Nose Wheel Service Experience (T.O. 4W3-7-1103, and T.O. 4W3-7-1143):

a. Wheel tire change interval (landings):

Average removal for wear is approximately 75.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Disassemble only to extent to facilitate tire change.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

T.O. 4W3-7-1103/ T.O. 4W3-7-1143 directs cleaning IAW General Wheel T.O. 4W-1-61.

d. Wheel NDI/inspection requirements at tire change:

The wheel halves are fluorescent penetrant inspected (interval IAW T.O. 4W-1-61 Table 7-1), otherwise all NDI is visual (suspected defects are verified using fluorescent penetrant per T.O. 33-B-1). Wheels are inspected for date of manufacture, and condemned if they are older than twenty years at tire change.

e. T.O. required new parts at tire change:

No parts are required to be 100% replacement. Components are inspected per Inspection Chart and reused if possible.

f. T.O. allowances for bearing bore damage/corrosion repair:

Bearing bore damage is repaired by machining bore oversize and installing a bearing cup/repair bushing assembly IAW T.O. 4W3-7-1103/T.O. 4W3-7-1143. Reworked areas require anodize per MIL-A-8625.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

Tire change RDD is not allowed. Wheel RDD for next penetrant inspection is directly marked on both wheel halves IAW T.O.

h. T.O. allowances for paint color:

Paint color is not specified in this T.O. Paint application is to be IAW T.O. 4W-1-61 (primer only to tie bolt holes.

i. T.O. allowances for wheel bearing grease:

Wheel bearing grease per MIL-PRF-81322 or Mobile Aviation Grease SHC 100 (Preferred).

j. T.O. requirements for wheel balancing:

Wheel balancing on this assembly is not accomplished (accomplished by replacing the wheel balance weights with same weight that existed if removal is required for any reason).

k. T.O. allowances for inflation valve boss damage/corrosion repair:

The inflation valve boss is allowed to be thread chase for damage. Thread repair if not corrected by chasing requiring thread oversize IAW MS 27436 (requires anodize per MIL-A-8625 after rework).

l. T.O. allowances for tie bolt bore damage/corrosion repair:

Tie bolt holes are not inspected dimensionally on these wheels, however corrosion on bolt boss face is allowed to be machined the depth of an additional washer for repair. This repair requires anodize to the effected surface and the use of two washers.

6.17 F-16HW Main Wheel Service Experience (T.O. 4A4-77-2):

a. Wheel tire change interval (landings):

Average removal for wear is approximately 30-40.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Disassemble only to extent to facilitate tire change. Aqueous cleaning of wheel necessitates removal of heat shield (and drive keys to get to heat shield) because heat shield has heat resistant fabric. This process is detrimental on drive key/wheel interface, and prematurely wears the wheel in this location.

c. Wheel NDI/inspection requirements at tire change:

The wheel lock ring is fluorescent penetrant inspected at every tire change, otherwise all NDI is visual (suspected defects are verified using fluorescent penetrant per T.O. 33-B-1).

d. T.O. allowances for drive damage/corrosion repair:

Local damage to the drive key lug area is allowed to a maximum depth of 0.010 inch and 0.10 inch area with not more than 50% of any original lug surface (top and sides).

e. T.O. requirements for wheel balancing:

Wheel balancing on this assembly is not accomplished (balancing controlled my tight balancing requirements on machined halves as manufactured).

f. Action required following fuse plug release:

Wheel assembly is returned to supply in repairable condition for depot overhaul.

6.18 F-15A-D Main Wheel Service Experience (T.O. 4W1-1-75):

a. Wheel tire change interval (landings):

Average removal for wear is approximately 42.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Disassemble only far enough to change tire (with heat shield, balance weights and drive keys in place).

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

4W1-1-75 says to clean IAW general wheel T.O. 4W-1-61 in MIL-PRF 680 type II or III compliant liquids. Also can be cleaned in heated aqueous parts washers using water based cleaners per Air Force Spec DWG 9825019.

d. Wheel NDI/inspection requirements at tire change:

Visual and eddy current inspection around fuse plug holes.

e. T.O. requirements for heat damage:

Conductivity check if hot brake is removed.

f. T.O. required new parts at tire change:

Wheel O-ring 100%. All other parts as required.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

Time change impression stamp on both wheel halves.

h. T.O. allowances for drive damage/corrosion repair:

Straightness and visual corrosion inspection, zero defects allowed.

i. T.O. allowances for paint color:

Paint wheel halves IAW T.O. 4W-1-61 (white only). Color is specified as Polyurethane, enamel, MIL-PRF-85285 Gloss White 17925 (per FED-STD-595).

j. T.O. for wheel bearing grease:

IAW 4W1-61 and 4W1-1-75 use MIL-PRF-81322. Mobile SHC-100 is allowed on waiver.

k. T.O. requirements for wheel balancing:

IAW 4W1-1-75, install balance weights at previously recorded locations.

l. Action required following fuse plug release:

Conductivity check, same as for hot brake.

6.19 F-15A-D Nose Wheel Service Experience (T.O. 4W3-8-25):

a. Wheel tire change interval (landings):

Average removal for wear is approximately 55.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Disassemble only far enough to change tire.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

T.O. 4W3-8-25 requires cleaning IAW general wheel T.O. 4W-1-61 using MIL-PRF 680 type II or III compliant liquids. Also can be cleaned in heated aqueous parts washers using water based cleaners per Air Force Spec DWG 9825019.

d. Wheel NDI/inspection requirements at tire change:

100% visual and dye penetrant inspection. Tie bolt hole measurement also required.

e. T.O. required new parts at tire change:

Valve stem, tie bolts and wheel seal. Tie bolt washers as required.

f. Wheel time/tire change marking system (direct stamping/RDD counter):

Inspection counter- both halves.

g. T.O. allowances for paint color:

Paint wheel halves IAW T.O. 4W-1-61 (white only). Color is specified as Polyurethane, enamel, MIL-PRF-85285 Gloss White 17925 (per FED-STD-595).

h. T.O. for wheel bearing grease:

IAW T.O. 4W1-61 and T.O. 4W3-8-25 use MIL-PRF-81322. Mobile SHC-100 is allowed on waiver.

i. T.O. requirements for wheel balancing:

T.O. 4W3-8-25, install balance weights at previously recorded locations.

6.20 F-15E Main Wheel Service Experience (T.O. 4W1-6-3):

a. Wheel tire change interval (landings):

Average removal for wear is approximately 59-Radial 47-Bias.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Disassemble only far enough to change tire (with heat shield, balance weights and drive keys in place).

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

T.O. 4W1-1-75 requires cleaning IAW general wheel T.O. 4W-1-61 using MIL-PRF-680 Type II or III compliant liquids. Also can be cleaned in heated aqueous parts washers using water based cleaners per Air Force Spec DWG 9825019.

d. Wheel NDI/inspection requirements at tire change:

Visual and eddy current inspection around fuse plug holes and around tube well at edge of heat shield. Measure tie bolt holes. Inspect bearing cup bore bushing for looseness.

e. T.O. requirements for heat damage:

Conductivity check if hot brake is removed, or if pilot gives hot brake indication.

f. T.O. required new parts at tire change:

Wheel O-rings 100%. All other parts as required.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

Time change impression stamp on both wheel halves. Counter is started/stamped when the wheel is mounted on aircraft.

h. T.O. allowances for drive damage/corrosion repair:

Straightness and visual corrosion inspection. Nick and de-burr allowed. Removal of all corrosion required to limits specified in T.O. 4W1-6-3. If damage in valve hole is less than 30% of one entrance thread or less that 10% of two entrance threads, the threads can be cleaned up by chasing with the correct size tap.

i. T.O. allowances for paint color:

Paint wheel halves IAW T.O. 4W-1-61 (white only). Color is specified as Polyurethane, enamel, MIL-PRF-85285 Gloss White 17925 (per FED-STD-595).

j. T.O. for wheel bearing grease:

IAW T.O. 4W1-61 and T.O. 4W1-6-3 use MIL-PRF-81322. Mobile SHC-100 is allowed on waiver.

k. T.O. requirements for wheel balancing:

T.O. 4W1-6-3, install balance weights at previously recorded locations.

6.21 F-15E Nose Wheel Service Experience (T.O. 4W3-6-103):

a. Wheel tire change interval (landings):

Average removal for wear is approximately 81-radial 43-Bias.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Disassemble only far enough to change tire.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

4W3-8-25 says to clean IAW general wheel T.O. 4W-1-61 in MIL-PRF 680 type II or III compliant liquids. Also can be cleaned in heated aqueous parts washers using water based cleaners per Air Force Spec DWG 9825019.

d. Wheel NDI/inspection requirements at tire change:

100% visual and dye penetrant inspection IAW T.O. 4W-1-61. Tie bolt hole measurement

e. T.O. requirements for heat damage:

N/A

f. T.O. required new parts at tire change:

Valve stem, tie bolts, tie bolt nuts and tie bolt washers as required. Seal assemblies 100%.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

Inspection counter - both halves.

h. T.O. allowances for drive damage/corrosion repair:

Visual corrosion inspection. Nick and de-burr allowed. Removal of all corrosion required, limits are specified in 4W1-6-3. If damage in valve hole is less than 30% of one entrance thread or less that 10% of two entrance threads, the threads can be cleaned up by chasing with the correct size tap.

i. T.O. allowances for paint color:

White only, 4W-1-61 and 4W3-8-25.

j. T.O. for wheel bearing grease:

IAW 4W1-61 and 4W1-1-75 use MIL-PRF-81322. Mobile SHC-100 is allowed as alternate.

k. T.O. requirements for wheel balancing:

4W3-8-25, install balance weights at previously recorded locations.

6.22 T-38 Main Wheel Service Experience (IAW T.O. 4W1-7-463):

a. Wheel tire change interval (landings):

Tire removed on condition.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Disassemble only far enough to change tire.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

IAW T.O. 4W-1-61.

d. Wheel NDI/inspection requirements at tire change:

100% visual and dye penetrant inspection IAW T.O. 4W-1-61.

e. T.O. requirements for heat damage:

Conductivity check if heat damage indications are present or melted fuses.

f. T.O. required new parts at tire change:

Preformed packing.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

IAW T.O. 4W-1-61

h. T.O. allowances for drive damage/corrosion repair:

Cleanup of corrosion up to limits allowed. Condemn part if corrosion/damage exceeds limits.

i. T.O. allowances for paint color:

IAW T.O. 4W-1-61

j. T.O. for wheel bearing grease:

IAW 4W1-61, use MIL-PRF-81322.

k. T.O. requirements for wheel balancing:

IAW T.O. 4W-1-61

6.23 T-38 Nose Wheel Service Experience (IAW T.O. 4W3-7-273):

a. Wheel tire change interval (landings):

Tire removed on condition.

b. Wheel disassembly requirements for cleaning/inspection at tire change:

Disassemble only far enough to change tire.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

IAW T.O. 4W-1-61.

d. Wheel NDI/inspection requirements at tire change:

100% visual and dye penetrant inspection IAW T.O. 4W-1-61.

e. T.O. requirements for heat damage:

N/A.

f. T.O. required new parts at tire change:

None.

g. Wheel time/tire change marking system (direct stamping/RDD counter):

IAW T.O. 4W-1-61

h. T.O. allowances for drive damage/corrosion repair:

Cleanup of corrosion up to 0.020 inch deep allowed. Condemn part if corrosion/damage exceeds limits.

i. T.O. allowances for paint color:

IAW T.O. 4W-1-61

j. T.O. for wheel bearing grease:

IAW 4W1-61, use MIL-PRF-81322.

k. T.O. requirements for wheel balancing:

IAW T.O. 4W-1-61

7. MODEL SPECIFIC DEPOT LEVEL (IAW T.O. 4W1-1-61):

7.1 B-1B Main Wheel Depot Level (IAW T.O. 4W1-7-1394):

a. Are grease seals, retainers, and bearings returned with wheel for overhaul:

No - retained at field level when wheels are returned to depot for overhaul. SMR code PAFZZ.

b. T.O. requirements for disassembly:

T.O. requires complete step-by-step disassembly.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean metal parts IAW T.O. 4W-1-61. Do not immerse heat shields in cleaning solvent.

d. Wheel NDI/inspection requirements:

Fluorescent-Penetrant Inspect, Eddy-Current per T.O. 4W1-7-1394

e. T.O. requirements for heat damage:

Components that are suspected of having heat damage shall be checked for hardness IAW Figure 8-1. Conductivity test on the tubewell outside diameter and hub area. Conductivity limitation of 41.5% IACS or less. Verified with a Rockwell Hardness test of RB65 or greater.

f. T.O. allowances for bearing bore damage/corrosion repair:

IAW drawing and steel bushing per Air Force Drawing No. 9235506.

g. T.O. allowances for inflation valve boss damage/corrosion repair:

None.

h. T.O. allowances for fuse plug boss damage/corrosion repair:

None.

i. T.O. allowances for drive key boss (beam key) damage/corrosion repair:

Not Applicable.

j. T.O. allowances for tie bolt bore damage/corrosion repair:

Figure 8-2, Tie Bolt Hole Rework (Corrosion/Damage). 0.760/0.762 Diameter thru with a 1.438 counter sink to dimension shown. Steel O/S bushing, P/N 975508 installed using MIL-S-81733 or MIL-PRF-16173.

k. T.O. required new parts at overhaul:

All seal assemblies, inserts, fuse plugs, etc., are replaced 100% at depot. All other items are inspected IAW T.O. 4W1-7-1394 inspection Tables 7-1 and 8-1.

l. Wheel time change/overhaul marking system (direct stamping/tag):

Wheel depot overhaul date is directly marked on both wheel half and de-mountable flange IAW general T.O. 4W-1-61.

m. T.O. allowances for paint color:

Polyurethane Topcoat per MIL-PRF-85285 color no. 17925 insignia white FED-STD-595.

n. T.O. for wheel bearing grease:

Wheel bearing grease per MIL-PRF-81322 and SHC 100 IAW T.O. 44B-1-3.

o. Wheel Depot removal schedule and maximum depot overhauls:

There are no limited maintenance instructions for the MLG wheel.

7.2 B-1B Nose Wheel Depot Level (IAW T.O. T.O. 4S2-84-2):

a. Are grease seals, retainers, and bearings returned with wheel for overhaul:

No - retained at field level when wheels are returned to depot for overhaul. SMR code PAFZZ.

b. T.O. requirements for disassembly:

T.O. requires complete step by step disassembly.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

Clean metal parts IAW T.O. 4W-1-61.

d. Wheel NDI/inspection requirements:

Fluorescent-Penetrant inspect per T.O. 4S2-84-2.

e. T.O. allowances for bearing bore damage/corrosion repair:

Bushing per Air Force Drawing No. 9235506-01/03.

f. T.O. allowances for inflation valve boss damage/corrosion repair:

Polish out small imperfections at the inflation valve and solid plug areas.

g. T.O. allowances for tie bolt bore damage/corrosion repair:

None

h. T.O. required new parts at overhaul:

All seal assemblies, inserts, etc., are replaced 100% at depot. All other items are inspected IAW T.O. 4S2-84-2 inspection Tables 7-1 and 8-1.

i. Wheel time change/overhaul marking system (direct stamping/tag):

Wheel depot overhaul date is directly marked on both wheel halves IAW general T.O. 4W-1-61.

j. T.O. allowances for paint color:

Polyurethane Topcoat per MIL-PRF-85285 color no. 17925 insignia white FED-STD-595.

k. T.O. for wheel bearing grease:

Repack bearing cones and coat bearing cups IAW 44B-1-3 and lubricate all threads and load bearing surfaces of bearing can, bearing can nut and bearing nut spacer with grease (MIL-PRF-81322 and SHC 100).

l. Wheel Depot removal schedule and maximum depot overhauls:

There are no limited maintenance instructions for the NLG wheel.

7.3 B-2 Main Wheel Depot Level (IAW T.O. 4W3-4-482):

a. Are grease seals, retainers, and bearings returned with wheel for overhaul:

Yes, they are returned with the wheel for overhaul. SMR code in T.O. 4W3-4-482 lists these items PAFZZ.

b. T.O. requirements for disassembly:

T.O. requires complete step-by-step disassembly.

c. T.O. requirements for cleaning (aqueous/solvent or IAW General T.O.):

T.O. 4W3-4-482 directs cleaning wheel components IAW the General Wheel T.O. 4W-1-61. For cleaning bearing and grease seals the T.O. 4W3-4-482 refers to T.O. 44B-1-3. Paint is to be stripped from wheel halves IAW T.O. 4W-1-61. T.O. 4W3-4-482 states to not strip anodize unless bearing cups have been removed for cause. If required anodize removal is performed IAW T.O. 4W-1-61. And, strip plating from machine bolts per T.O. 1-1-2 if required.

d. Wheel NDI/inspection requirements:

T.O. states to perform an “Intensified” inspection of the wheel halves, tie bolts, rotor drive key machine bolts, safety relief valve and rotor drive keys using Eddy-Current, Magnetic Particle and Fluorescent-Penetrant inspections. If the Eddy-Current Conductivity test shows the wheel half-greater then 41.5% then a hardness test is performed.

e. T.O. requirements for heat damage:

Wheel halves are subjected to conductivity inspection IAW T.O. 4W-1-61 and ASTM E 1444. Wheel with reading in excess of 41.5 International Annealed Copper Standard (IACS) are hardness tested. Hardness test will be performed a four equally space locations in the bead seat area. Three hardness measurements will be taken at each location. The highest reading at each location should not be less than BHN 119 HB/10/500.

f. T.O. allowances for bearing bore damage/corrosion repair:

Bearing bore damage is repaired by machining bore oversize and installing a bearing cup/repair bushing assembly.

g. T.O. allowances for inflation valve boss damage/corrosion repair:

The inflation valve hole is repairable. Thread damage in the valve hole of less than 30% of one entrance thread, or less than 10% of two entrance threads, can be cleaned up by chasing with correct size tap and blend damage area into undamaged thread. Damage that exceeds the 30 and 10 rule should be repaired by machining the hole oversized as shown in Figure 8-5 and then using an oversize inflation valve.

h. T.O. allowances for fuse plug boss damage/corrosion repair:

Fuse plug boss damage is not repaired.

i. T.O. allowances for drive key boss (beam key) damage/corrosion repair:

Drive key boss is repaired by removing damage as shown in Figure 8-3 of T.O. 4W3-4-482 and locally manufacturing a bushing per Figure 8-3. The bushing is then press fit into bored hole below the surface line.

j. T.O. allowances for drive key pilot hole (beam key) damage/corrosion repair:

Drive key pilot hole is repaired by removing damage as shown in Figure 8-4 and 8-4.1 of T.O. 4W3-4-482 and locally manufacturing a bushing per Figure 8-4. The bushing is then press fit into bored hole even with the surface line.

k. T.O. allowances for tie bolt bore damage/corrosion repair:

The tie bolt holes are repaired by removing damage as shown in Figure 8-7 of T.O. 4W3-4-482 and locally manufacturing a bushing per Figure 8-7. The bushing can be either installed flushed or below the surface line.

l. T.O. required new parts at overhaul:

All seal assemblies, inserts, fuse plugs, etc., are replaced 100% at depot. All other items are inspected IAW T.O. 4W3-4-482 inspection Checklist Tables 7-2, 7-3, 8-1 and 8-2 and used if they can be made serviceable (economically based).

m. Wheel time change/overhaul marking system (direct stamping/tag):

On the surface of a spoke on the side away from wheel parting line, ink mark or paint per AS478 the words DEPOT OVERHAUL and the current date (Do not mark the time change counter plate).

n. T.O. allowances for paint color:

Enamel Polyurethane per MIL-PRF-85285, Gloss White 17925. Wheel painting is IAW Diagram in T.O. 4W3-4-482 Figure 8-1 and IAW General Wheel T.O. 4W-1-61 and is to be white (color number 17925) per FED-STD-595.

o. T.O. for wheel bearing grease:

Wheel bearing grease per MIL-PRF-81322.

p. Wheel Depot removal schedule and maximum depot overhauls:

Overhaul the wheel every 36 months. There are no components with critical removal/replacement times.