

AEROSPACE INFORMATION REPORT

SAE AIR4012

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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 as 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

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TABLE OF CONTENTS

1.	SCOPE	4
1.1	Purpose.....	4
2.	REFERENCES.....	4
3.	BACKGROUND	5
4.	SPECIFICATIONS	7
4.1	A-10 Wheel Specifications	7
4.2	B-1B Wheel Specifications.....	11
4.3	B-2 Wheel Specifications	16
4.4	B-52 Wheel Specifications	20
4.5	C-5 Wheel Specifications	24
4.6	C-130 Wheel Specifications	28
4.7	KC-135 Wheel Specifications.....	33
4.8	F-16 Wheel Specifications	37
4.9	F-15 Wheel Specifications	43
4.10	T-38 Wheel Specifications	52

5.	GENERAL SERVICE EXPERIENCE	58
5.1	General Wheel Field Service Experience (T.O. 4W1-61, 44B1-3).....	58
5.2	General Wheel Depot Service Experience (T.O. 4W1-61, 44B1-3).....	59
6.	SPECIFIC FIELD SERVICE EXPERIENCE (IN ADDITION TO 5.1.1 AND 5.1.2).....	61
6.1	A-10 Main Wheel Service Experience (T.O. 4W1-4-1053)	61
6.2	A-10 Nose Wheel Service Experience (T.O. 4W3-4-433).....	61
6.3	B-1B Main Wheel Service Experience (T.O. 4W1-7-1382)	62
6.4	B-1B Nose Wheel Service Experience (T.O. 4S2-84-2)	63
6.5	B-2 Main Wheel Service Experience (T.O. 4W3-4-482)	64
6.6	B-2 Nose Wheel Service Experience (T.O. 4W1-1-102).....	66
6.7	B-52 Main Wheel Service Experience (T.O. 4W1-7-1143)	67
6.8	B-52 Tip Wheel Service Experience (T.O. 4W4-2-23)	69
6.9	C-5 Main Wheel Service Experience (IAW T.O. 4W1-4-493)	70
6.10	C-5 Nose Wheel Service Experience (T.O. 4W3-4-413).....	71
6.11	C-130 Main Wheel Service Experience (T.O. 4W1-4-1013)	72
6.12	C-130 Nose Wheel Service Experience (T.O. 4W3-4-363).....	74
6.13	C/KC-135 Main Wheel Service Experience (T.O. 4W1-7-263)	75
6.14	C/KC-135 Nose Wheel Service Experience (T.O. 4W3-4-473).....	76
6.15	F-16LW Main Wheel Service Experience (T.O. 4W1-7-1432)	77
6.16	F-16LW/HW Nose Wheel Service Experience (T.O. 4W3-7-1103, and T.O. 4W3-7-1143)	78
6.17	F-16HW Main Wheel Service Experience (T.O. 4A4-77-2).....	80
6.18	F-15A-D Main Wheel Service Experience (T.O. 4W1-1-75)	80
6.19	F-15A-D Nose Wheel Service Experience (T.O. 4W3-8-25)	82
6.20	F-15E Main Wheel Service Experience (T.O. 4W1-6-3)	83
6.21	F-15E Nose Wheel Service Experience (T.O. 4W3-6-103).....	84
6.22	T-38 Main Wheel Service Experience (IAW T.O. 4W1-7-463).....	85
6.23	T-38 Nose Wheel Service Experience (IAW T.O. 4W3-7-273)	86
7.	MODEL SPECIFIC DEPOT LEVEL (IAW T.O. 4W1-1-61)	87
7.1	B-1B Main Wheel Depot Level (IAW T.O. 4W1-7-1394)	87
7.2	B-1B Nose Wheel Depot Level (IAW T.O. T.O. 4S2-84-2)	89
7.3	B-2 Main Wheel Depot Level (IAW T.O. 4W3-4-482)	90
7.4	B-2 Nose Wheel Depot Level (IAW T.O. 4W1-1-102).....	93
7.5	B-52 Main Wheel Depot Level (IAW T.O. 4W1-7-1143)	94
7.6	B-52 Tip Wheel Depot Level (IAW T.O. 4W4-2-23)	96
7.7	C-5 Main Wheel Depot Level (IAW T.O. 4W1-4-493)	96
7.8	C-5 Nose Wheel Depot Level (IAW T.O. 4W3-4-413).....	98
7.9	C-130 Main Wheel Depot Level (IAW T.O. 4W1-4-1013)	99
7.10	C-130 Nose Wheel Depot Level (IAW T.O. 4W3-4-363).....	101
7.11	C/KC-135 Main Wheel Depot Level (IAW T.O. 4W1-7-263)	102
7.12	C/KC-135 Nose Wheel Depot Level (IAW T.O. 4W3-4-473).....	104
7.13	F-16LW Main Wheel Depot Level (T.O. 4W1-7-1433)	105

7.14	F-16LW/HW Nose Wheel Depot Level.....	107
7.15	F-16HW Main Wheel Depot Level (IAW T.O. 4A4-77-3).....	107
7.16	F15A-D Main Wheel Depot Level (IAW T.O. 4W1-1-73).....	109
7.17	F-15A-D Nose Wheel Depot Level (IAW T.O. 4W3-8-23).....	110
7.18	F-15E Main Wheel Depot Level (IAW T.O. 4W1-6-3)	111
7.19	F-15E Nose Wheel Depot Level (IAW T.O. 4W3-6-103).....	113
7.20	T-38 Main Wheel Depot Level.....	114
7.21	T-38 Nose Wheel Depot Level	114
8.	SUMMARY - LESSONS LEARNED.....	114
9.	NOTES.....	116

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:

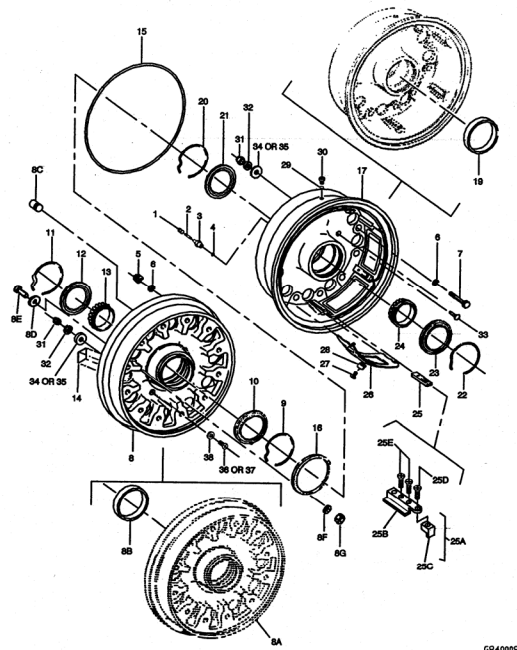


FIGURE 1

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:

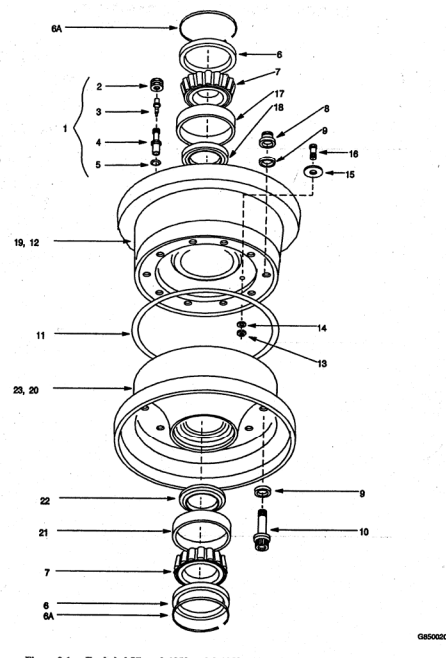


FIGURE 2

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:

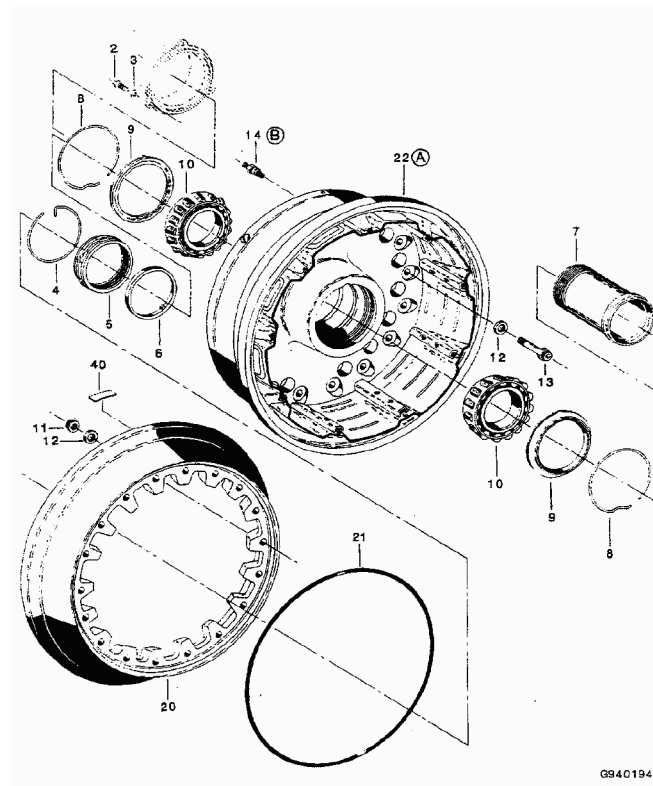


FIGURE 3

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:

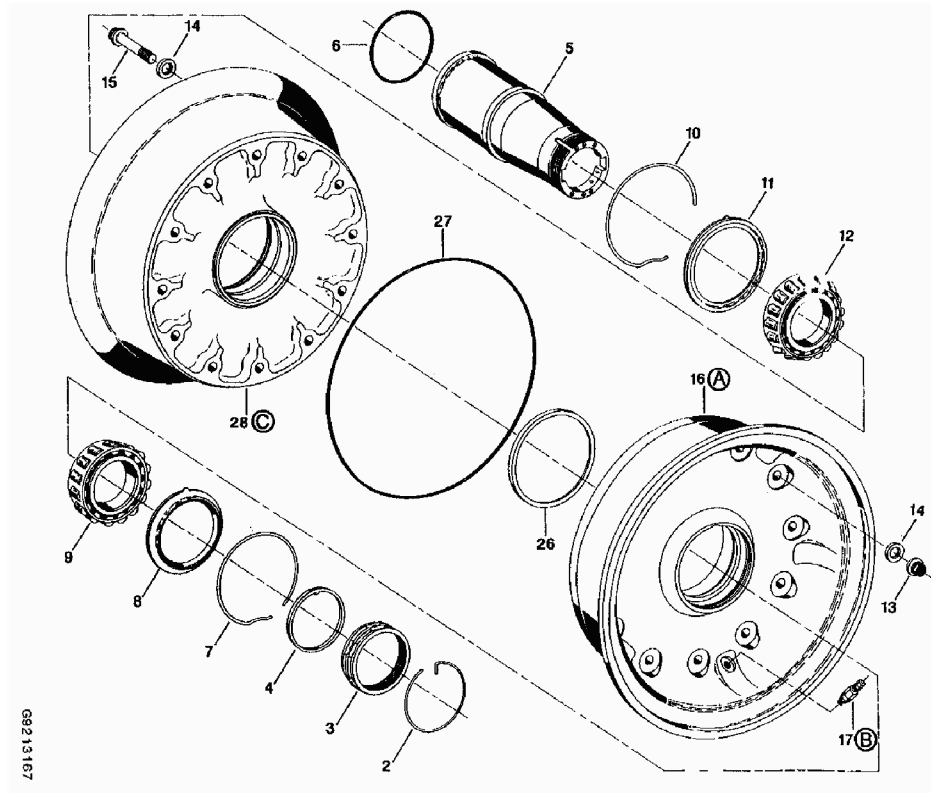


FIGURE 4

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:

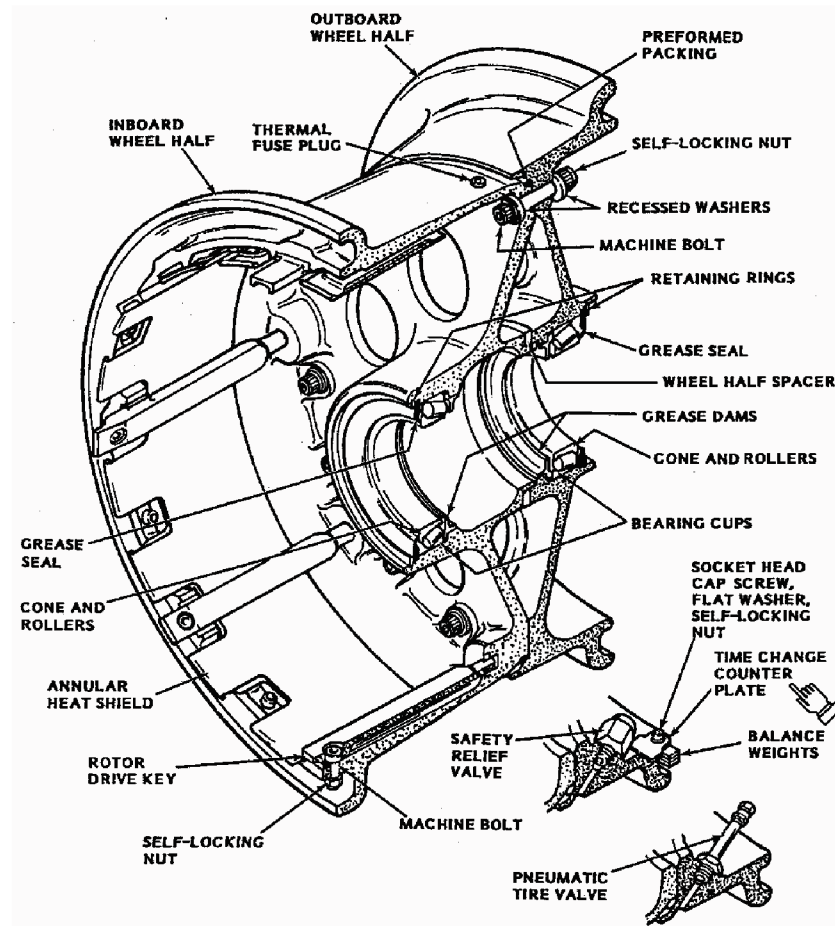


FIGURE 5

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:

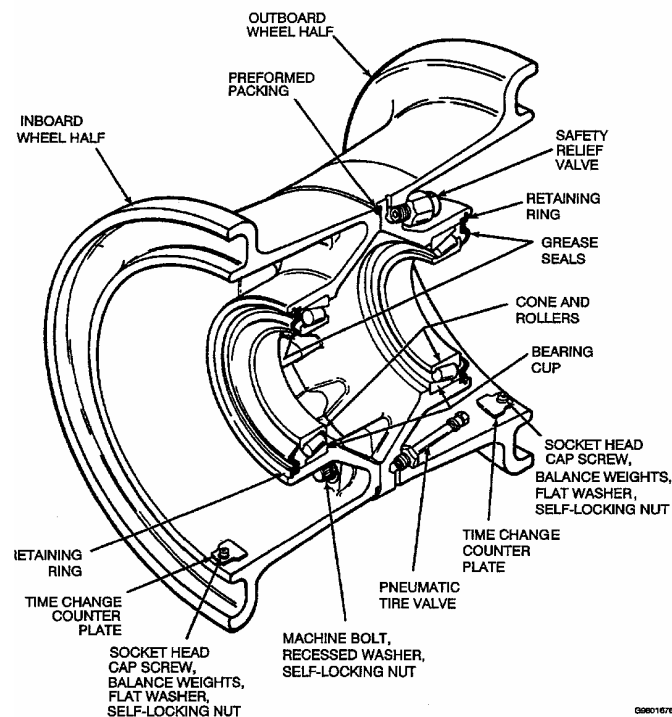


FIGURE 6

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:

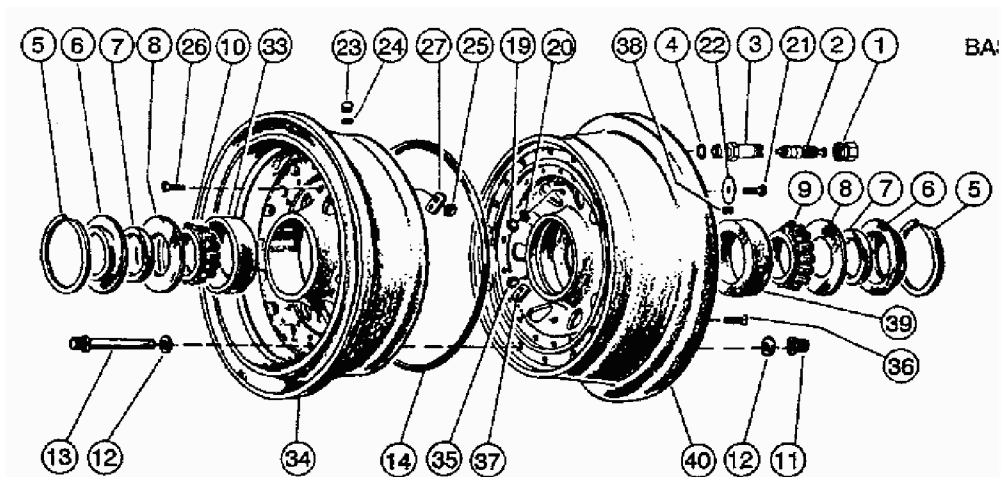


FIGURE 7

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:

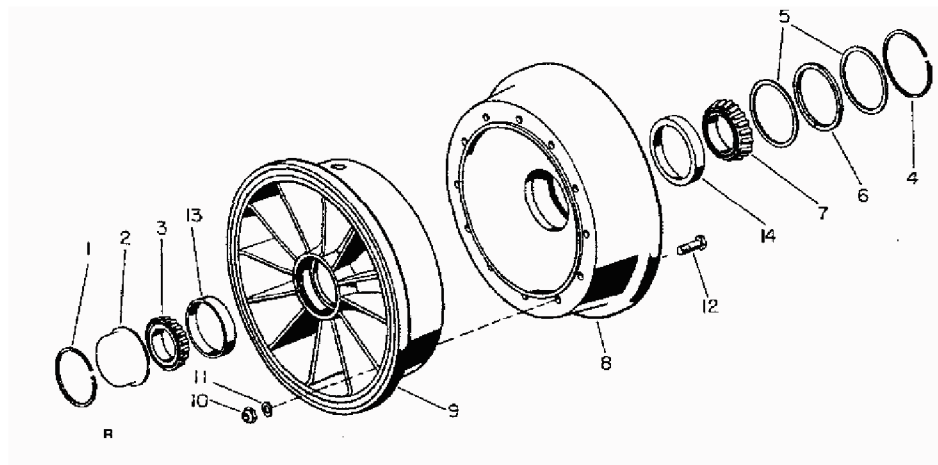


FIGURE 8

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:

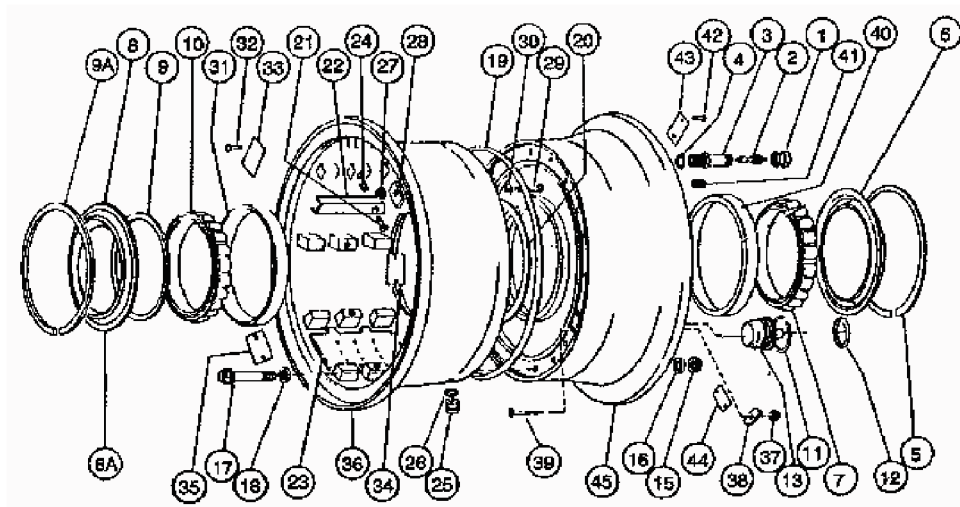


FIGURE 9

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 Device: No

4.5.2 C-5 Nose Wheel Specifications:

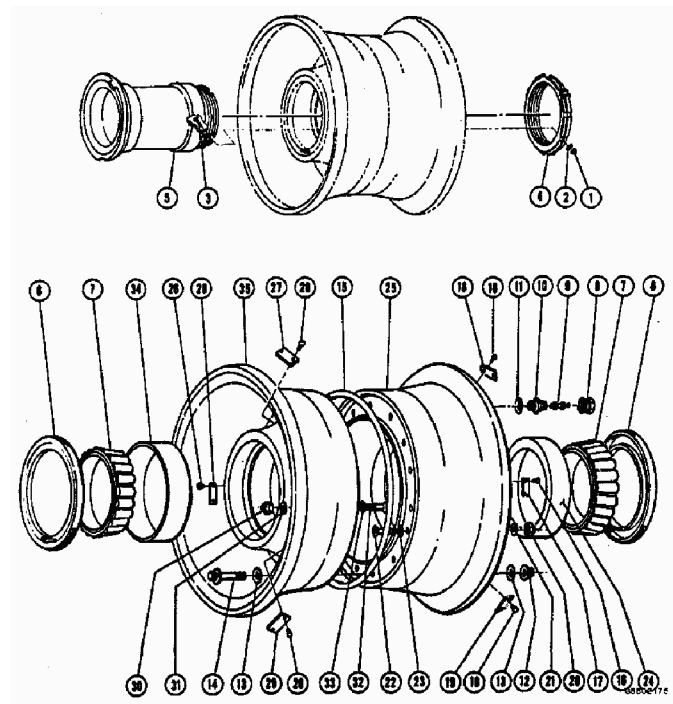


FIGURE 10

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 Device: None

4.6 C-130 Wheel Specifications:

4.6.1 C-130 Main Wheel Specifications:

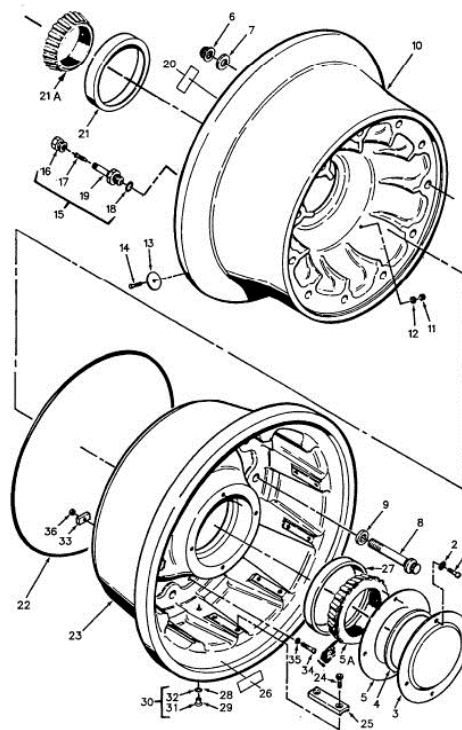


FIGURE 11

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:

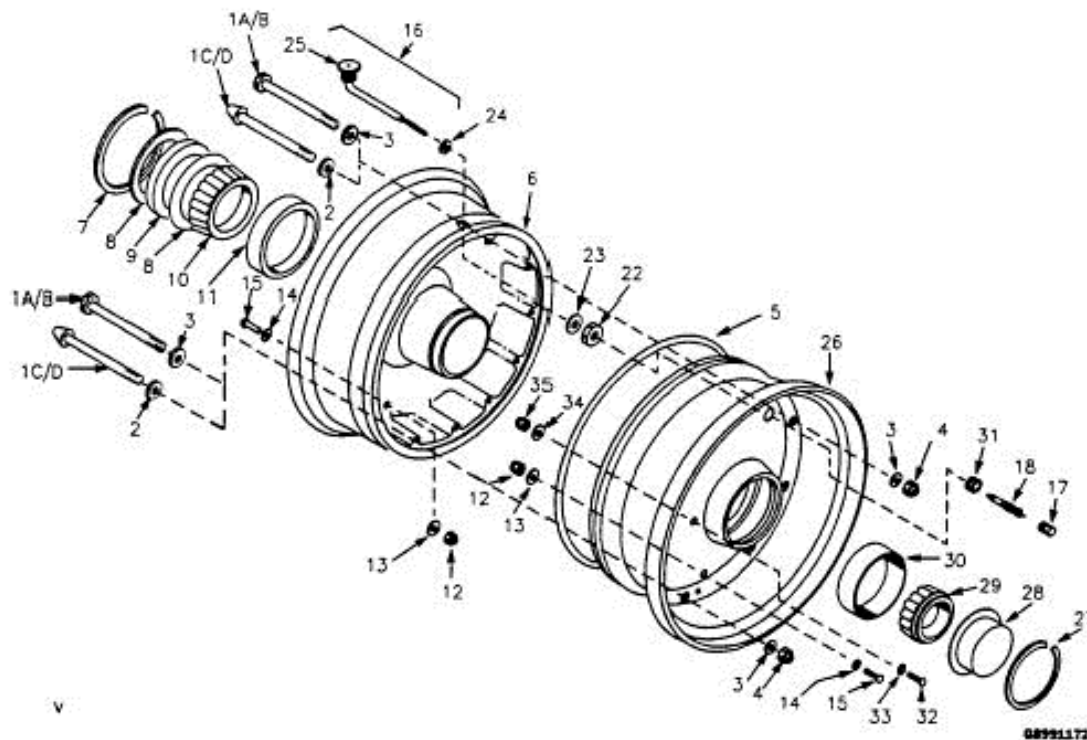


FIGURE 12

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:

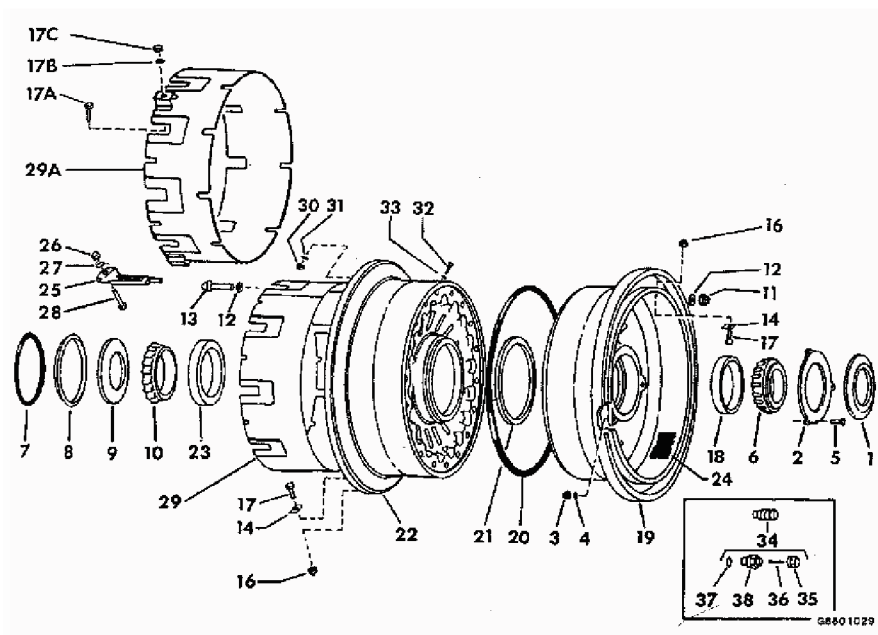


FIGURE 13

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:

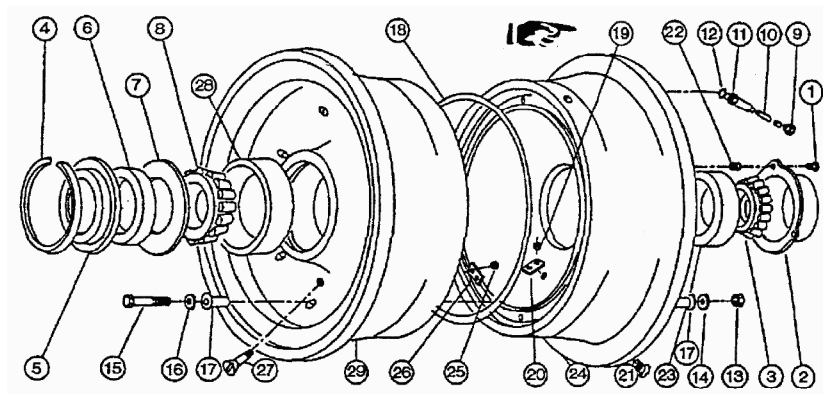


FIGURE 14

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