

Aircraft Wheel & Brake
Parker Hannifin Corporation
1160 Center Road
Avon, Ohio 44011

FAA-PMA

PARTS LIST
199-111 CONVERSION KIT
PIPER AIRCRAFT CORP. MODEL PA-31T2
CHEYENNE II XL, ALL SERIAL NUMBERS

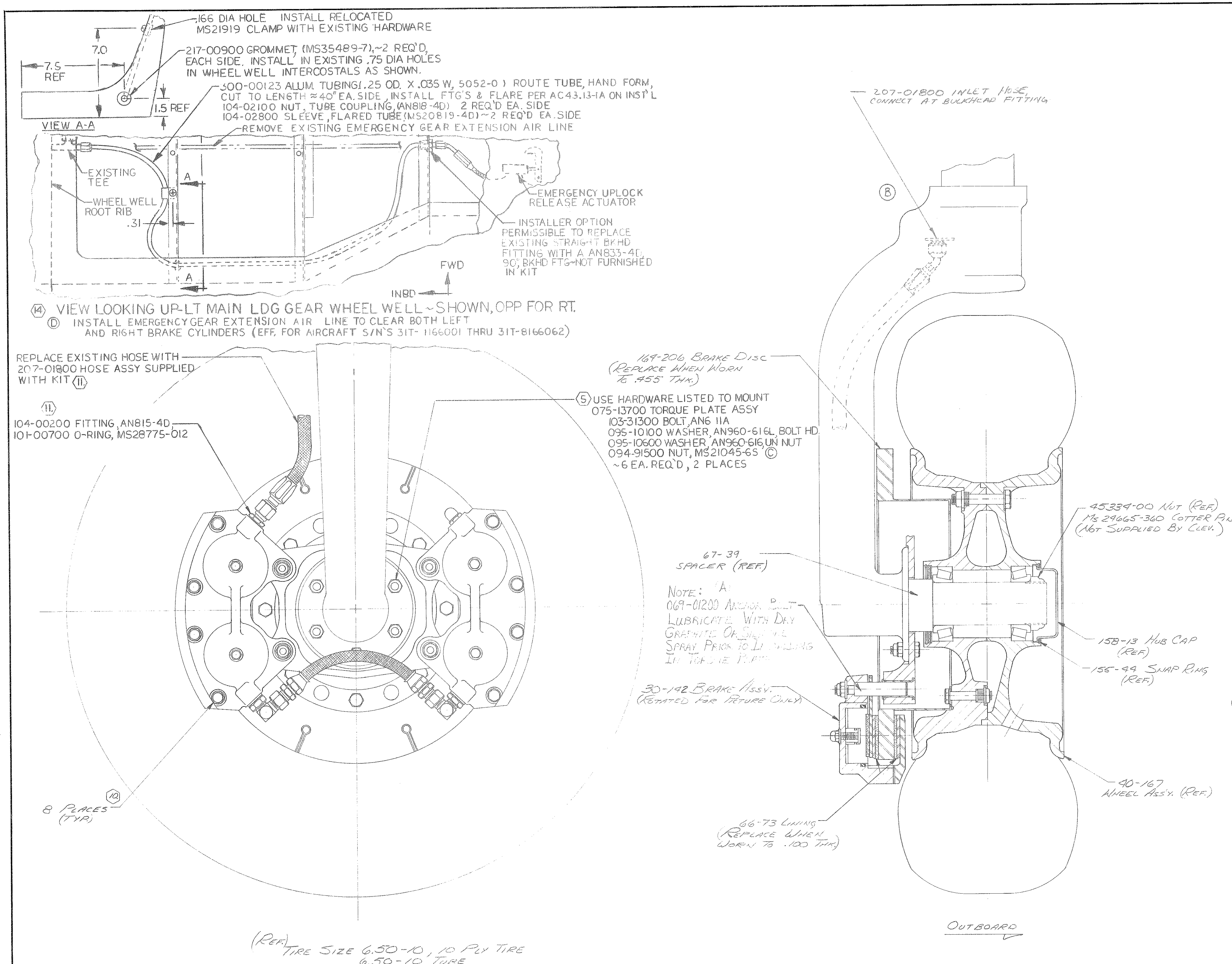
PART NUMBER	DRAWING REVISION	DESCRIPTION	QUANTITY
30-142	Rev. C dated 04-28-1997	Brake Assembly	2
40-167	Rev. C dated 07-27-1982	Wheel Assembly	2
094-91500	----------	Nut (MS21045-6S)	12
095-10100	----------	Washer (AN960-616L)	12
095-10600	----------	Washer (AN960-616)	12
101-00700	Rev. A dated 04-18-2008	O-Ring (MS28775-012)	2
103-31300	----------	Bolt (AN6-11A)	12
104-00200	----------	Tube Fitting (AN815-4D)	2
104-02100	----------	Nut, Tube Coupling (AN818-4D)	4
104-02800	----------	Sleeve, Flared Tube (MS20819-4D)	4
207-01800	Rev. H dated 02-20-2019	Hose Assembly	2
217-00900	----------	Grommet (MS35489-7)	4
300-00123	----------	AL Tubing, 5052-O, .25 O.D. x .035 W (Furnish in two 40" lengths)	80"

Publication Package (P/N PP199-11100)

199-111		Kit Parts List (This Document)
50-82	Rev. E dated 04-28-1997	Installation Drawing
MM40-167/30-142	----------	Maintenance Manual for 40-167 / 30-142
SA599GL	Amend date 05-04-1982	Supplemental Type Certificate
-------		Product Registration Card

NOTES:
1. This kit will convert one aircraft to Cleveland Wheels and Brakes.
2. The 30-142 brake assembly is designed for use with MIL-H-5606 hydraulic fluid.

199-111
Rev. A 01-16-1990 (C/N 299-3)
Rev. B 02-01-1994 (DCN 0310-32)
Rev. C 11-14-2008 (DCN 0382-52)
Rev. D 08-26-2013 (ECO-0025555)
Rev. E 09-30-2019 (ECO-0107535)



INSTALLATION INSTRUCTIONS

1. PROPERLY JACK UP AIRCRAFT.
2. REMOVE EXISTING M.L.G. WHEELS.
3. DISCONNECT EXISTING HYDRAULIC LINES FROM BRAKE ASSY'S.
4. REMOVE EXISTING BRAKE ASSY'S.
5. (5) INSTALL CLEVELAND TORQUE PLATE ASSY. 75-137 USING ATTACHMENT HARDWARE 6 EA. AN6-11A BOLTS, AN365-624 NUTS, AN 960-616 NUT WASHERS AND AN 960-616L BOLT WASHERS. TORQUE NUTS PER. AIRCRAFT SERVICE SPECS.
6. REMOVE SNAP RING, HUB CAP AND OUTBOARD BEARING FROM WHEEL ASS'Y. 40-167
7. INSTALL 40-167 WHEEL ASSY. ON AXLE. INSTALL MS501347 BEARING AND 45334-00 AXLE NUT. WHILE ROTATING WHEEL, TIGHTEN AXLE NUT TO 40 IN.-LBS., THEN BACK OFF TO 0. THEN WHILE ROTATING WHEEL, TIGHTEN AXLE NUT TO 20 IN.-LBS. IF SLOT IN NUT, AND HOLE IN AXLE DO NOT ALIGN AT THIS POINT, ROTATE NUT (TIGHTENING OR LOOSENING) UNTIL NEAREST POSSIBLE ALIGNMENT IS REACHED AND INSERT MS 24665-360 COTTER PIN. INSTALL HUB CAP AND SNAP RING.
8. LOOSEN 8 TIE BOLTS ON NEW BRAKE ASS'Y. AND REMOVE 4 BACK PLATE ASSYS.
9. SLIDE NEW BRAKE ASSY. INTO TORQUE PLATE.
10. (10) MAKING SURE THAT THE INSULATOR SHIMS ON THE CYLINDERS ARE IN POSITION ON THE TIE BOLTS, PLACE THE BACK PLATE ASSYS. BETWEEN THE BRAKE DISC AND WHEEL FLANGE. ALIGN BACK PLATES WITH TIE BOLTS AND TIGHTEN. TORQUE TIE BOLTS TO 145-155 IN.-LBS. (E1) LOCKWIRE TIE BOLTS PER AC43.13-1A
11. (11) INSTALL AN815-4D FITTINGS, AND REPLACE EXISTING FLEXIBLE INLET HOSES WITH 207-18 HOSE ASSY SUPPLIED WITH KIT.
12. CHECK RESERVOIR LEVEL AND BLEED SYSTEM.
13. DEPRESS AND RELEASE PEDALS SEVERAL TIMES ROTATE WHEELS BY HAND CHECKING FOR DRAG. A SLIGHT AMOUNT OF DRAG IS NOT DETRIMENTAL TO THE SYSTEM. A SEVERELY BOUND UNIT SHOULD BE INVESTIGATED AND CORRECTED. EXCESSIVE DRAG CAN BE CAUSED BY IMPROPERLY SEATED LINING.
14. (D) (14) REFER TO AIRCRAFT MAINTENANCE MANUAL AND DISABLE EMERGENCY GEAR EXTENSION SYSTEM TO PRECLUDE INADVERTENT OPERATION. REMOVE EXISTING EMERGENCY EXTENSION PNEUMATIC LINE & INSTALL NEW LINE AS SHOWN IN VIEW, UPPER LEFT. PERFORM A SLOW, PROGRESSIVE LANDING GEAR RETRACTION, STOPPING TO OBSERVE CLEARANCE TO ALL AIRCRAFT STRUCTURE AND WHEEL AND BRAKE COMPONENTS. RE-ENABLE EMERGENCY EXTENSION SYSTEM AND PERFORM A FUNCTIONAL CHECK OF THE EMERGENCY SYSTEM PER AIRCRAFT MAINTENANCE MANUAL.
15. CHECK TIRE INFLATION. REMOVE AIRCRAFT FROM JACKS AND CONDITION LINING PER ENCLOSED INSTRUCTION SHEET.
16. WEIGHT AND BALANCE INFORMATION.
    - 30-142 BRAKE ASSY ---- 13.7 LBS.
    - 40-167 WHEEL ASSY ---- 22.7 LBS.
    - TOTAL WEIGHT - GEAR --- 36.4 LBS.

    WEIGH EXISTING WHEELS AND BRAKES, SUBTRACT FROM NEW WEIGHTS TO DERIVE WEIGHT INCREASE CREATED BY 199-111 KIT INSTALLATION. MULTIPLY WEIGHT INCREASE BY MOMENT (APPLICABLE AIRCRAFT) AND REVISE WEIGHTS AND BALANCE INFORMATION IN LOG BOOK.

50-82 — E

CHANGE NOTICE	LETTER	DESCRIPTION OF CHANGE	CHG. BY	DATE	CHK'D. BY
269/75		NEW RELEASE	TEP	4-6-82	
269/88	A	ADDED NOTE TO LUBRICATE ANCHOR BOLT	[illegible]	4-22-82	
275/51	B	ADDED HOSE VIEW & [illegible] TO CROSS-SECTIONAL	BB	1-14-85	
299/03	C	NUT MS21045-6S WAS: AN365-624	GR	1-16-90	BG
0310/32	D	ADDED VIEW & INSTL FOR EMER GEAR LINE	RA	2/1/[illegible]	BB
0325/02	E	SEE LIN	GL	[illegible]	BR

QTY	QTY	ITEM	PART NO.	DESCRIPTION	MATERIAL & SPEC.	HEAT TREAT & SPEC.	FINISH & SPEC.	WGT.
			50-82	INSTALLATION				

NEXT ASSEMBLY	QTY	FINAL ASSEMBLY	QTY	PATTERN, CASTING OR BLANK NO.

THIS DESIGN IS THE PROPERTY OF PARKER HANNIFIN CORP. AIRCRAFT WHEEL AND BRAKE DIVISION AND IS NOT TO BE COPIED, DUPLICATED, OR USED AS THE BASIS FOR MANUFACTURE OR SALE OF EQUIPMENT WITHOUT OUR WRITTEN PERMISSION.

ZYGLO PER MIL-I-6866 STAMP M ON PART
MAGNAFLUX PER MIL-I-6868 STAMP P ON PART
√ MACHINED SURFACES PER MIL STD 10 UNLESS OTHERWISE NOTED
UNLESS NOTED ALL THREADS PER MIL-S-7742

WORK TO DIMENSIONS – DO NOT SCALE
TOLERANCE FOR .XXX ± .010
TOLERANCE FOR .XX ± .030
TOLERANCE FOR ANGULAR DIMS. ± 1/2°
TOLERANCE FOR FRACTIONAL DIMS. ± .030
BREAK SHARP EDGES .010 UNLESS NOTED. REMOVE ALL BURRS BEFORE PLATING. DRILL PER INSP. PROCEDURE NO. 114.

DRAWN BY R. Scherry 1-19-82
CHECKED BY
SCALE 1/2 : 1

Cleveland Wheels & Brakes
Aircraft Wheel and Brake Division
Parker Hannifin Corporation
1160 Center Road
Avon, Ohio 44011

NAME: INSTALLATION DRAWING AND INSTRUCTIONS
50-82

050-08200

Cleveland
Wheels & Brakes

Parker Hannifin Corporation
Aircraft Wheel & Brake
1160 Center Road
Avon, Ohio 44011 USA
1-800-BRAKING (272-5464)
216-937-1272 ● FAX 216-937-5409

PRODUCT REFERENCE MEMO

METALLIC BRAKE LINING CONDITIONING PROCEDURE

The brake lining material used in this brake assembly is an iron based metallic composition. This material must be properly conditioned (glazed) in order to provide optimum service life.

Dynamometer tests have shown that at low braking energies, unglazed linings experience greater wear and the brake discs can become severely scored.

Conditioning may be accomplished as follows:

1. Perform two (2) consecutive full stop braking applications from 30 to 35 kts. Do not allow the brake discs to cool substantially between stops.

2. On aircraft with tail wheels, exercise caution during stopping to prevent tail lifting. Due to the efficiency of these brakes, extremely hard braking could result in lifting the tail from the ground.

This conditioning procedure will wear off high spots and generate sufficient heat to glaze the linings. Once the linings are glazed, the braking system will provide many hours of maintenance free service.

Visual inspection of the brake disc will indicate the lining condition. A smooth surface, without grooves, indicates the linings are properly glazed. If the disc is rough (grooved), the linings must be reglazed. The conditioning procedure should be performed whenever the rough disc condition is evident.

Light use, such as in taxiing, will cause the glaze to be worn rapidly.

Use caution in performing this procedure, as higher speeds with successive stops could cause the brakes to overheat resulting in warped discs and/or pressure plates.

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PRODUCT REFERENCE MEMO

AVAILABILITY OF GENERAL MAINTENANCE INFORMATION AND TORQUING PROCEDURES

EFFECTIVITY: All Parker Hannifin (Cleveland Wheels & Brakes) External Disc Design wheel & brake assemblies.

APPLICABILITY: Aircraft converted per STC approved kits to use Cleveland External Disc Design wheel & brake assemblies.

REASON: This PRM is issued to inform Wheel & Brake Conversion Kit users and installers that information regarding general maintenance and proper bolt / nut torquing procedures is available. This information is contained in the Cleveland Wheels & Brakes Component Maintenance Manual (CMM) and in the Cleveland Technicians Service Guide, PRM64. Most Cleveland Conversion Kits were designed prior to creation of the CMM. Parker Hannifin is in process of upgrading kit paperwork to include a requirement to use the CMM and PRM64 as wheel & brake service information. This PRM serves the same purpose for kits whose paperwork has not yet been upgraded.

DESCRIPTION: The Cleveland Wheels & Brakes Component Maintenance Manual and PRM64, Technician's Service Guide shall be used as service information when performing general maintenance on Cleveland External Disc Design wheels & brakes. Particular attention should be paid to instructions regarding wheel bolt torquing procedures.

NOTE: Refer to the CMM or PRM64 to determine the required torque procedure (Dry or Lubtork). While using the required torque procedure, observe the torque required to turn the nut (free running torque). This value must be added to the value stated on the casting or nameplate (or in the CMM or PRM64) to obtain a true torque value. Proper torque is imperative to prevent premature bolt or mating component failure.

COMPLIANCE: Highly Recommended.

APPROVAL: The engineering contents of this Product Reference Memo are FAA DER approved.

WEIGHT & BALANCE: Not applicable.

PUBLICATIONS: Cleveland Wheels & Brakes Component Maintenance Manual and PRM64 are available from:

Customer Support
Parker Hannifin Corporation
Aircraft Wheel & Brake
1160 Center Road
Avon, Ohio

Phone: 1-800- BRAKING (272-5464)
FAX: 216-937-5409

United States of America

Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA599GL

This certificate, issued to Aircraft Wheel & Brake Division
Parker Hannifin Corporation
1160 Center Road
Avon, Ohio 44011

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 3 *of the* Civil Air *Regulations:* See Aircraft Type Certificate Data Sheet A8EA for complete certification basis.

Original Product — Type Certificate Number A8EA
Make Piper
Model PA-31T2

Description of Type Design Change

Installation of Cleveland Wheel & Brake Conversion Kit No. 199-111 in accordance with Installation Drawing 50-82, rev. A, dated April 22, 1982 or later FAA approved revisions.

Limitations and Conditions

Compatibility of this modification with other previously approved modifications must be determined by the installer.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application February 22, 1982 *Date reissued*

Date of issuance March 31, 1982 *Date amended* May 4, 1982

By direction of the Administrator

W. F. Horn *(Signature)*
Chief, Chicago Aircraft Certification Office
ACE-115C Central Region
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47

FAA Form 8110-2 (10-68)

MAINTENANCE INSTRUCTIONS

FOR THE

40-167/30-142 WHEEL & BRAKE ASSEMBLIES

USED ON THE

PIPER CHEYENNE II XL

MAY 1, 1981

1. MAIN WHEEL

1.1 Disassembly of Wheel Halves (see Sec. 2.2 for Brake Disc)

1.1.1 Properly jack up aircraft and fully deflate tires.

1.1.2 Remove bolts and washers from brake assembly to remove back plates.

1.1.3 Remove wheel from axle.

1.1.4 Double check to make sure tire is fully deflated and break tire bead from wheel flange. Use a mallet or nonmetallic instrument (DO NOT USE TIRE IRONS).

1.1.5 Remove eight tie-bolts and washers from outboard wheel half (side opposite brake disc) to separate wheel halves.

1.1.6 If the O-ring is to be reused, mark position to reinstall as closely as possible.

1.1.7 Remove snap ring grease seal felts, washers and/or hubcap from inner and outer wheel halves.

2. MAIN WHEEL

2.1 Cleaning, Inspection, and Repainting of Wheel Halves (see Sec. 2.2 for Brake Disc)

2.1.1 Degrease all metallic parts and dry thoroughly.

2.1.2 Visually inspect bearing cups and cones for damage or wear, but do not remove the cups from the wheel half unless replacement is necessary.

2.1.3 If a bearing cup is to be replaced, the wheel half must be heated either in boiling water for 30 minutes, or in an oven not to exceed 149°C (300°F) before attempting to remove or install a cup. If the cup does not drop out, tap the cup evenly from the axle bore, using a fiber drift pin, or a suitable arbor press.

2.1.4 Inspect bearing cones for grease contamination and/or solidification at every periodic inspection. Repack wheel bearings with Mobilgrease 77, Mobilux EP2, or equivalent. (NEVER EXCEED 500 WHEEL MILES BETWEEN REPACKING INTERVALS.)

2.1 Cleaning, etc. - continued

2.1.5 Inspect wheel halves for cracks or damage. If casting is cracked, or shows excessive corrosion, it should be replaced. Small nicks or gouges in the castings should be blended out and polished with sandpaper (400 grit). Inspect O-ring seating areas for nicks or distortion. Nicks may be lightly blended with fine grit sandpaper. Badly distorted sections in this area will hamper O-ring sealing characteristics, and is cause for wheel half replacement. Areas from which the protective coating has been removed, or that show slight corrosion, should be thoroughly cleaned and repainted with one coat of zinc chromate primer, and one coat of aluminum (color) polyurethane.

NOTE! NEVER PAINT WORKING SURFACES OF THE BEARING CUPS.

2.1.6 Inspect snap rings and grease seals for distortion. Replace grease seal felts if badly worn or contaminated. Lightly saturate new or reused grease seal felts with SAE 10 oil before installation (DO NOT SOAK).

2.1.7 Inspect wheel bolts for cracks and corrosion. Cracked bolts are to be replaced with a new bolt of corresponding part number.

2.2 Maintenance and/or Replacement of Brake Disc

2.2.1 Properly jack up aircraft.

2.2.2 Remove bolts (four per caliper) and washers that retain back plates to cylinder.

2.2.3 Remove wheel from axle.

2.2.4 Remove bolts (eight) and washers that retain brake disc to inner wheel half.

NOTE! IT IS NOT NECESSARY TO DEFLATE THE TIRE IN ORDER TO REPLACE THE BRAKE DISC.

2.2.5 Remove brake disc and inspect for cracks, corrosion, excessive wear, scoring, or warpage. Rust may be removed by hand wire brushing and finishing with a medium grit sandpaper or emery. Brake disc wear limits are specified in Section 7.

2.2 Maintenance, etc. - continued

2.2.6 Inspect inner wheel half surfaces in proximity of brake disc cavity for cracks, corrosion, or damage. If casting is cracked or shows excessive corrosion, it should be replaced.

WARNING: DEFLATE TIRE BEFORE SEPARATING WHEEL HALVES.

Small nicks or gouges in the casting should be blended out and polished with sandpaper (400 grit). Areas from which the protective coating has been removed, or that show light corrosion, should be thoroughly cleaned and repainted with one coat of zinc chromate primer, and one coat of aluminum polyurethane paint.

2.2.7 Inspect brake disc attachment bolts for cracks, corrosion, and thread damage. Replace, if necessary.

2.2.8 To reassemble, mount brake disc in place, install washers and bolts, and torque to 150 in lbs.

3. REASSEMBLY

3.1 Main Wheel

3.1.1 Place inner wheel half with attached brake disc on a flat surface, with register portion of the wheel half up. Place O-ring on register portion of wheel half.

NOTE! IF REUSING EXISTING O-RING, INSTALL AS CLOSE AS POSSIBLE TO ORIGINAL POSITION.

Place tire over inner wheel half, and then place outer wheel half in tire, making sure to properly align male and female registers. Install bolts and washers and torque to 300 in lbs. When all bolts have been torqued, torque a second time to make sure that the required value has been achieved; sometimes O-ring compression will give false initial readings. Inflate tire to desired pressure.

4. BRAKE

4.1 Disassembly (NOTE! IT IS NOT NECESSARY TO REMOVE THE WHEEL FROM THE AIRCRAFT TO DISASSEMBLE AND SERVICE BRAKE.)

4.1.1 Remove and cap hydraulic line.

4.1 Disassembly - continued

4.1.2 Remove the cylinder tie-bolts and remove back plate assembly(s).

4.1.3 Remove the brake cylinder(s) assembly from the torque plate (the torque plate will remain mounted to the axle).

4.1.4 Remove the pressure plate assembly, inlet fitting, and bleeder fitting.

4.1.5 The pistons may be removed by applying a slight amount of air pressure to the inlet or outlet ports of the cylinder.

4.1.6 Remove the O-rings from cylinder.

4.1.7 If necessary, the anchor bolts may be removed by using a holding fixture and arbor press. If possible, place the anchor bolts into the holding fixture so that the anchor bolt is piloted while being removed.

CAUTION: CYLINDER MUST BE SQUARE WITH ARBOR IN STEPS "A" AND "B" SO THAT THE ANCHOR BOLTS DO NOT COCK.

5. BRAKE

5.1 Cleaning and Inspection

5.1.1 Clean all metal parts in alcohol or suitable solvent.

5.1.2 Clean O-rings in denatured alcohol and dry thoroughly.

5.1.3 Inspect O-rings for cuts, nicks, distortion or excessive wear. If necessary, replace with O-rings of corresponding part numbers.

5.1.4 Inspect brake cylinder(s) for cracks, especially in the lug area around the anchor bolts. Cracks in this area necessitate cylinder replacement.

5.1.5 Small nicks and light corrosion may be blended and removed with emery or sandpaper. Any area from which the protective coating is removed, should be thoroughly cleaned, and repainted with one coat of zinc chromate primer, and one coat of aluminum (color) polyurethane.

5.1.6 Inspect the fitting ports and piston bores for contamination. Light scratches or nicks in the piston bores, pilot bores, or on the chamfered surfaces within these bores may be polished out with 600 grit emery.

NOTE! NICKS AND BURRS IN THE PILOT BORE AREA CAN PREVENT THE PISTONS FROM PROPERLY RETRACTING, RESULTING IN BRAKE DRAG.

5.1.7 Thoroughly clean out any residue upon completion of step 5.1.6. Any external surfaces around the piston bores from which the protective coating has been removed, should be cleaned, and painted with one coat of zinc chromate primer and one coat of aluminum (color) polyurethane.

NOTE! DO NOT PAINT INTERNAL SURFACES OF PISTON BORES.

5.1.8 Inspect pistons for nicks or burrs. Remove nicks or burrs by polishing with 600 grit emery. Thoroughly clean before reinstallation.

5.1.9 Inspect brake lining for edge chipping and surface deterioration. See Section 7 for wear limits.

5.1 Cleaning and Inspection - continued

5.2.0 Lining replacement can be accomplished by prying the old segments off of the carrier with a screwdriver. To install new pads, apply a light film of glue to the backing material of the pad, and snap the new pad onto the carrier pins. The glue will retain the pads in the correct position when reassembling the brake.

NOTE! IF LININGS ARE CHANGED, BUT THE PISTONS ARE NOT REMOVED FROM THE CYLINDER, CLEAN THE EXPOSED SURFACES OF THE PISTONS BEFORE DISPLACING THE PISTONS BACK INTO THE CYLINDER.

5.2.1 Inspect pressure plate and back plates for cracks or warpage. Replace if cracked or severely deformed. Inspect pins for looseness. If loose, tighten with rivet set and anvil, P/N 199-1A and 199-1B or replace back plate and pressure plate assembly.

NOTE! SLIGHTLY WARPED PRESSURE PLATES WITH RELIEF SLOTS CAN BE FIXTURED IN A VISE AND STRAIGHTENED WHEN LAID ON A FLAT SURFACE; FLATNESS SHOULD BE WITHIN .015 TO .020 T.I.R. WARPED PRESSURE PLATES CAN CAUSE BRAKE DRAG.

5.2.2 Inspect anchor bolt holes in torque plate for internal corrosion or contamination. If present, clean with emery and apply a light coat of dry lube.

NOTE! FOR BEST SERVICE LIFE, THE CYLINDERS MUST SLIDE FREELY IN THE TORQUE PLATE.

Check the anchor bolt hole and mounting bolt hole areas for elongation or cracks. Badly elongated or cracked parts should be replaced with new parts of corresponding part number. Minor corrosion on the torque plates may be removed with 600 grit emery.

NOTE! SURFACES FROM WHICH THE PROTECTIVE COATING IS REMOVED SHOULD BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER, AND ONE COAT OF ALUMINUM (COLOR) POLYURETHANE.

5.2.3 Inspect bolts for cracks, thread damage or corrosion, and replace if necessary.

6. BRAKE

6.1 Reassembly

6.1.1 If removed, press anchor bolts (ref. sketch) into brake and install washers and nuts. Torque nuts to 90 in lbs.

6.1.2 Install inlet and bleeder fittings.

6.1.3 For piston installation, lubricate the piston, O-ring, and piston bore with a small amount of MIL-H-5606 hydraulic fluid. Place piston in bore and rotate to seat drag ring and insure that piston and seal are in proper alignment. Tap the piston with a wooden or plastic mallet while alternately rotating. If considerable effort is required, remove piston and inspect bore and pilot bore area for damage. If the bore is damaged, check the corresponding area of the piston for damage. Repair, if necessary, and repeat the above procedure.

6.1.4 Install pressure plate assembly by aligning anchor bolt holes with anchor bolts and slide onto cylinder. The pressure plate must float freely on the anchor bolts.

6.1.5 Install brake assembly to torque plate by aligning anchor bolts with torque plate holes, and sliding brake assembly onto torque plate (it must slide freely).

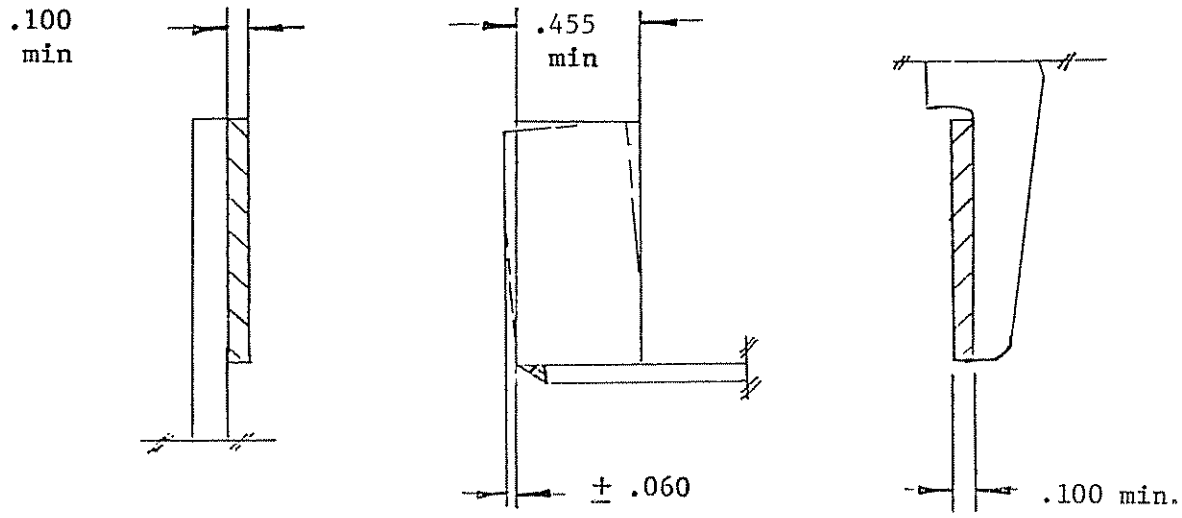
6.1.6 Install washers, cylinder tie-bolts, and insulator shim. Install back plate assemblies between brake disc and wheel flange, and align with tie-bolts. Torque bolts to 150 in lbs.

6.1.7 Reconnect hydraulic lines and bleed system. Check pedal for proper feel and travel.

7. WEAR LIMITS

7.1 Maximum wear limits for brake linings and discs are shown in the following sketch. Disc warpage should not exceed .060 inch.

7.1 Sketch - continued



Pressure Plate

Back Plate

Parker Hannifin Corporation
Aerospace/Aircraft Wheel & Brake
1160 Center Road
Avon, OH 44011

Date: _ _/_ _/20_ _

Subject: Letter of Authorization for Installation of STC'd Conversion Kits

To whom it may concern:

Parker Hannifin Corporation, Aircraft Wheel & Brake Division, hereby states that the following item(s):

KIT NUMBER: 199-_____

FAA APPROVAL: 1) STC # _____

NO OTHER APPROVALS NECESSARY

AUTHORIZATION TO INSTALL: With the sale of this STC KIT, OWNER of the Supplemental Type Certificate agrees to permit the buyer or buyer's agent or agency to use the certificate to alter the product under the terms and conditions of this STC.

A/C MAKE: _____

A/C MODEL_____

TAIL # _____

Regards,

Technical Support Team
Technical Hotline (800) 272-5464
Clevelandwbhelp@parker.com
Web-site: www.clevelandwheelandbrake.com
Manufacturer of Cleveland Wheels & Brakes