AIRCRAFT WHEEL & BRAKE DIVISION
PARKER HANNIFIN CORPORATION
AVON, OHIO

PARTS LIST

199-62 CHROME CONVERSION KIT
CODE NO: 199-06203

Conversion Kit for Cessna Aircraft
Models 180, 185, 206

PART NUMBER	CODE	DESCRIPTION	QUANTITY
40-75D CHROME	040-07504-3	Wheel Assembly, with Chrome Brake disc	2
30-52N	030-05213	Brake Assembly	2

Publication Package (P/N PP199-62)

IM199-62	Installation Manual	1
20-128	Wheel & Brake Assembly Drawing	1
50-36	Installation Drawing	1
SA63GL	Supplemental Type Certificate	1
PRM13A	Non Asbestos Lining Conditioning Procedure	1
-------	Pilot Operating Manual Inserts	1
------	Product Registration Card	1

Notes:

1. This kit will convert one aircraft to Cleveland Wheels & Brakes.
2. 199-62 CHROME is identical to 199-62 except included wheels are equipped with chrome plated discs.
3. For use with MIL-H-5606 Brake Fluid.
4. This parts list is for internal use only.

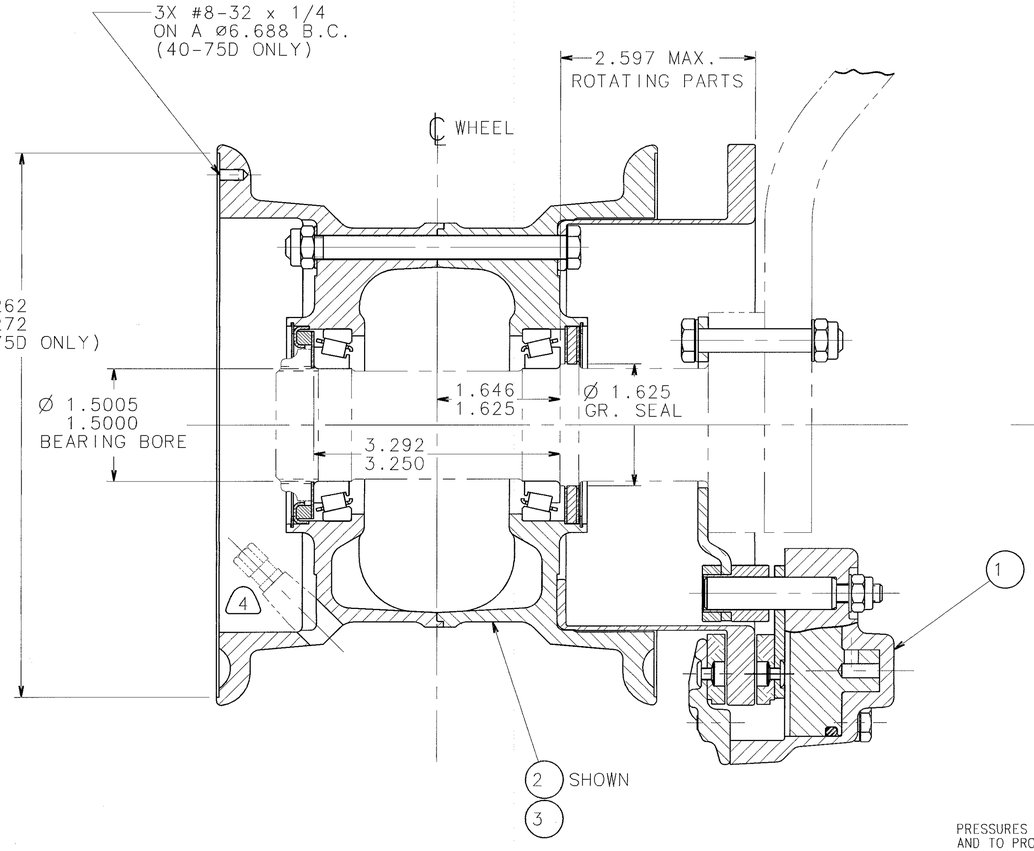
88

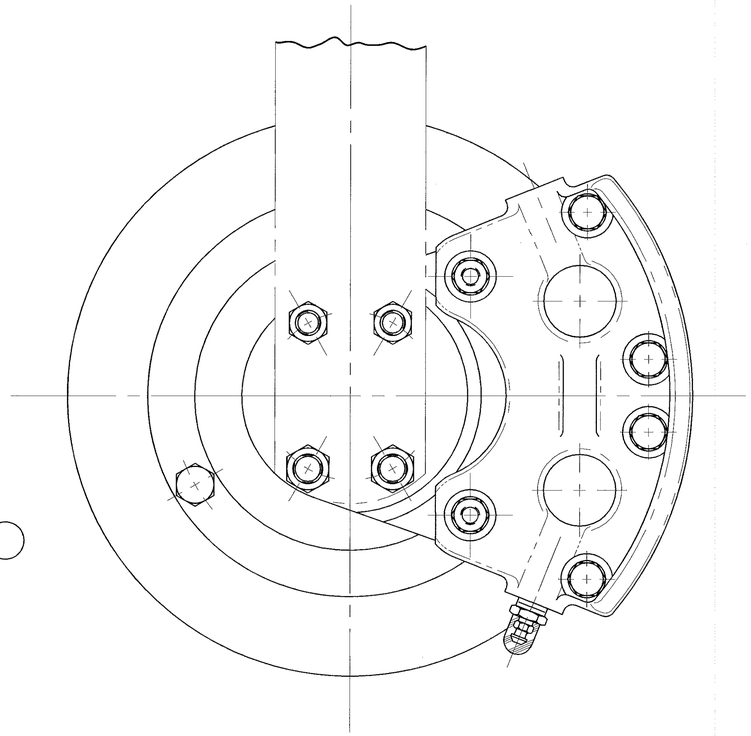
199-62 CHROME
NC 03-09-1984 (273-63)
REV.A 12-23-1987 (287-22)
REV.B 02-26-1998 (0323-15)
REV.C 06-12-2001 (0346-54)

DWG. NO. 20-128 | SHEET 1/1 | REV. F

REVISIONS

CHANGE NOTICE	REV	DESCRIPTION OF CHANGE	CHG BY	CHK BY	DATE	APPROVED
0323-15	F	REDRAWN ON CAD: SEE C/N	PMH	BB	9802-26	R Hamm





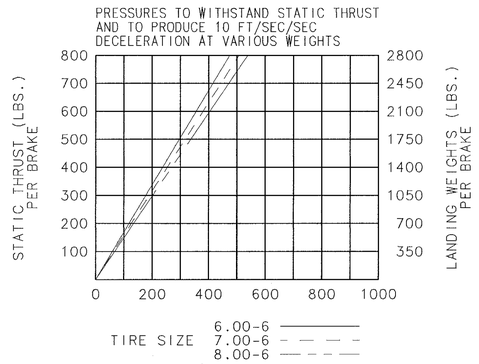
NOTES:

1. WHEEL RATING PER FAA-TSO-C26a
   STATIC LOAD = 2500 LBS.
   LIMIT LOAD = 8975 LBS.

2. BRAKE KINETIC ENERGY CAPACITY:
   395,000 FT-LBS, 100 STOPS FROM 72 M.P.H.
   AT 10 FT/SEC/SEC DECELERATION WITHOUT
   DISC OR LINING CHANGE

3. BRAKE FLUID DISPLACEMENT:
   MAXIMUM: NEW TO FULLY WORN LINING: 1.78 CU. IN.
   NORMAL CLEARANCE TO 400 P.S.I.: .23 CU. IN.

(4) TR-20 VALVE SHOWN IN PHANTOM



(F)

WEIGHTS (LBS.): USING 40-75D

WHEEL ASSEMBLY	7.25
BRAKE ASSEMBLY	3.02
TOTAL	10.27

(F)

WEIGHTS (LBS.): USING 40-75T

WHEEL ASSEMBLY	8.41
BRAKE ASSEMBLY	3.02
TOTAL	11.43

QTY	ITEM NO.	CAGE CODE	PART NO.	DESCRIPTION	MATERIAL/SPECIFICATION	WGT.(LB)
1	3	33269	40-75T	WHEEL ASSEMBLY	.	NOTED
1	2	33269	40-75D	WHEEL ASSEMBLY (SHOWN)	.	NOTED
1	1	33269	30-52N	BRAKE ASSEMBLY	.	NOTED

PARTS LIST

QTY	FINAL ASSY	QTY	NEXT ASSY
.	.	.	.

APPLICATION (NOT MAINTAINED)

DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994 UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS APPLY AFTER HEAT TREATING, PLATING, AND BEFORE PAINTING.

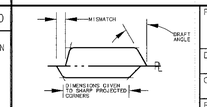
DO NOT SCALE DRAWING
THIS PLOT IS COMPLETELY DEFINED BY THE COMPUTER DATASET, WHICH IS THE SOLE AUTHORITY FOR THE INFORMATION PROVIDED. DIMENSIONALLY STABLE COPIES MUST BE OBTAINED FROM THE DATASET. ALL REVISIONS TO THIS PLOT MUST BE BY DATASET REVISION ONLY - NO REVISIONS MAY BE MADE BY HAND.

GENERAL NOTES: UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES
TOLERANCES
2 PLACE (.XX): ±.03
3 PLACE (.XXX): ±.010
ANGULAR DIMS. ±0.5°
REMOVE ALL BURRS
BREAK CORNERS .005-.010
INTERNAL RADII .005-.010
GENERAL MACHINED SURFACES 125 PER ANSI B46.1
THIRD ANGLE PROJECTION

RAW MATERIAL:
.

. A CONTRACT ALTERED ITEM EXISTS FOR THIS PART NUMBER



STRESS	DATE
.	.
MFG ENGRG	.
.	.
QUAL ASSUR	.
.	.

PROGRAM/CONTRACT NO. .

DRAWN J.W.	DATE 72-01-03
CHECKED .	.
ENGINEER .	.
DESIGN APPROVAL .	.
PROJ APPROVAL .	.
RELEASE DATE: .	

CLEVELAND WHEELS & BRAKES
Aircraft Wheel And Brake Division
Parker Hannifin Corporation
Avon, Ohio 44011
Parker Aerospace

DWG. TITLE
WHEEL AND BRAKE ASSEMBLY

SIZE	CAGE CODE	DWG. NO.	REV.
D	33269	20-128	F

SCALE: 1:1 | UNIT WGT.: NOTED | SHEET: 1 OF 1

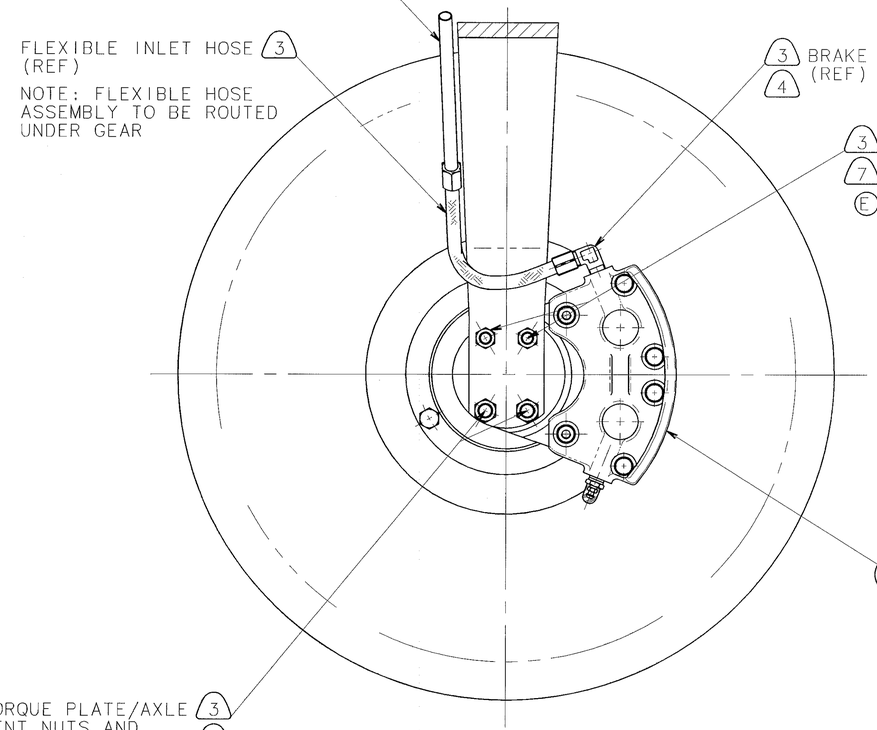
PD-D-GENL-PC-00

DWG. NO. 50-36 | SHEET 1/1 | REV. E

REVISIONS						
CHANGE NOTICE	REV	DESCRIPTION OF CHANGE	CHG BY	CHK BY	DATE	APPROVED
9323-19	E	REDRAWN ON CAD; SEE C/N	PMH	BB	98-02-26	R. Hoste

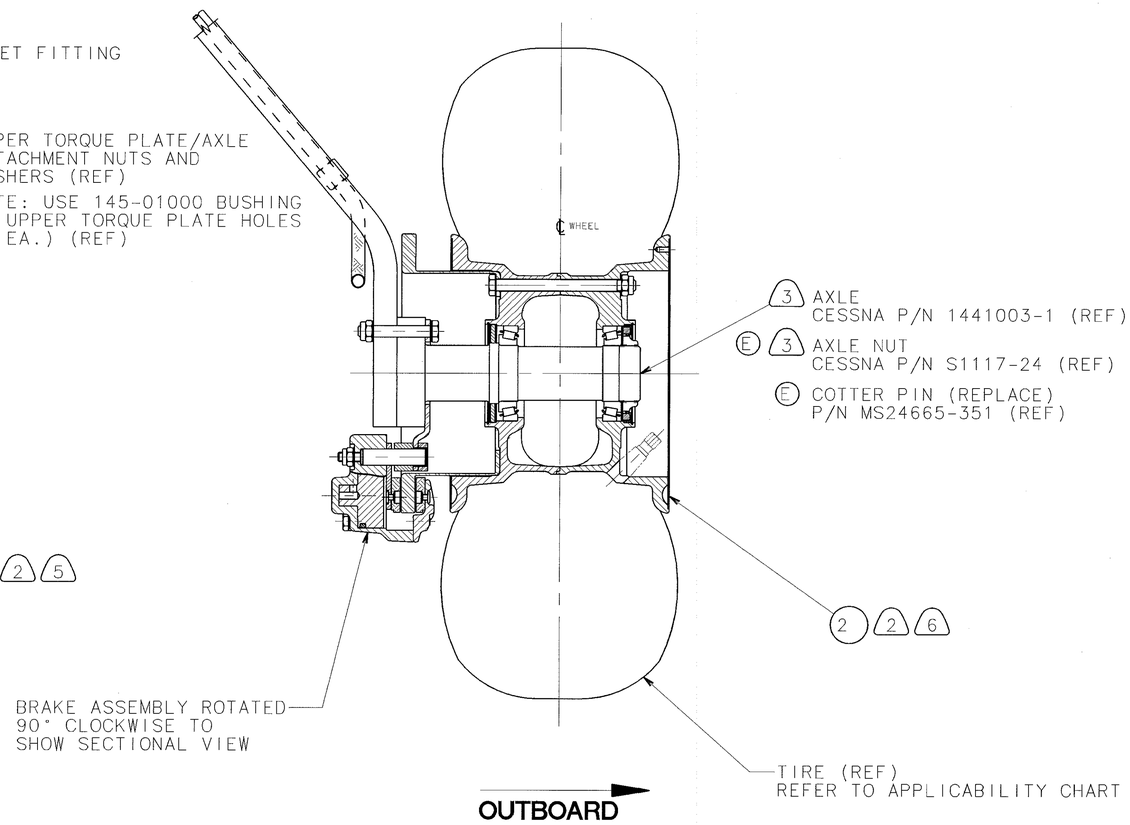
FLEXIBLE INLET HOSE INSTALLATION FOR AIRCRAFT WITH EXISTING RIGID HYDRAULIC INLET LINE:

1. CUT OFF EXISTING -3 OR -4 RIGID HYDRAULIC LINE AT 9 IN. ABOVE BRAKE INLET.
2. FLARE END TO ACCOMMATE MS20819 SLEEVE AND AN818 NUT (-3 OR -4).
3. INSTALL A 12 IN. LONG FLEXIBLE BRAKE INLET HOSE: STRATOFLEX P/N 111417-4S-0120 (OR EQUIV.), USING CONNECTOR AN815-4D (FOR -4 LINE) OR AN919-2D REDUCER (FOR -3 LINE).
4. REFER TO NOTE (4) AND CONNECT TO BRAKE USING MS20822-4; 90° FITTING, OR MS20823-4; 45° FITTING.
5. ALL ABOVE WORK TO BE DONE IN ACCORDANCE WITH STANDARD MAINTENANCE PROCEDURES PER FAA AC43.13-1A CHAPTER 10.



LEFT HAND GEAR

AFT



OUTBOARD

NOTES: (E)

1. REFER TO IM199-62 INSTALLATION MANUAL FOR DETAILED INSTALLATION INSTRUCTIONS

(2) PARTS SUPPLIED IN KIT 199-62 OR 199-62 CHROME

(3) EXISTING HARDWARE TO BE RETAINED AND REUSED

(4) FOR BRAKE LINE ATTACHMENT:
USE 45° INLET FITTING ON AIRCRAFT WITH WHEEL FAIRINGS
USE 90° INLET FITTING ON AIRCRAFT WITHOUT WHEEL FAIRINGS

(5) FOR PARTS IDENTIFICATION, SEE IM199-62; FIG. 2: 30-52N IPL

(6) FOR PARTS IDENTIFICATION, SEE IM199-62; FIG. 1: 40-75D IPL

(7) USE WITH AN5-23 BOLTS AND TORQUE TO 100-140 IN-LB.

(8) USE WITH AN6-23 BOLTS AND TORQUE TO 160-190 IN-LB.

(E) APPLICABILITY OF AIRCRAFT INSTALLATION CLEVELAND KIT 199-62 OR 199-62 CHROME

MODEL	TIRE SIZE	PLY	TYPE	PRESSURE
CESSNA MODELS: SERIES 180 SERIES 185 SERIES 206	8.00-6 TYPE III	6 PLY	TUBETYPE	PER CESSNA MAINTENANCE MANUAL

QTY	ITEM NO.	CAGE CODE	PART NO.	DESCRIPTION	MATERIAL/SPECIFICATION	WGT.(LB)
1	2	33269	40-75D	WHEEL ASSEMBLY 6.00-6 TYPE III	.	.
1	1	33269	30-52N	BRAKE ASSEMBLY	.	.

PARTS LIST

QTY	FINAL ASSY	QTY	NEXT ASSY
.	.	.	.

APPLICATION (NOT MAINTAINED)

DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994 UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS APPLY AFTER HEAT TREATING, PLATING, AND BEFORE PAINTING.

DO NOT SCALE DRAWING

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. A CONTRACT ALTERED ITEM EXISTS FOR THIS PART NUMBER

GENERAL NOTES: UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES

THIRD ANGLE PROJECTION

TOLERANCES
2 PLACE (.XX): ±.03
3 PLACE (.XXX): ±.010
ANGULAR DIMS. ±0.5°
REMOVE ALL BURRS
BREAK CORNERS .005-.010
INTERNAL RADII .005-.010
GENERAL MACHINED SURFACES 125 PER ANSI B46.1

RAW MATERIAL: .

STRESS	DATE
.	.
MFG ENGRG	.
.	.
QUAL ASSUR	.
.	.

PROGRAM/CONTRACT NO. .

DRAWN J.B.	DATE 74-05-02
CHECKED .	.
ENGINEER .	.
DESIGN APPROVAL .	.
PROJ APPROVAL .	.
RELEASE DATE: .	

CLEVELAND WHEELS & BRAKES
Aircraft Wheel And Brake Division
Parker Hannifin Corporation
Avon, Ohio 44011
Parker Aerospace

DWG. TITLE
INSTALLATION, WHEEL & BRAKE

SIZE	CAGE CODE	DWG. NO.	REV.
D	33269	50-36	E

SCALE: .50:1 | UNIT WGT.: | SHEET: 1 OF 1

PD-D-GENL-PC-00

CLEVELAND WHEELS & BRAKES
IM199-62
INSTALLATION MANUAL
FOR
CONVERSION KIT
199-62
FOR
CESSNA
SERIES 180, 185, 206

Cleveland
Wheels & Brakes

Parker Aerospace

PARKER HANNIFIN CORPORATION - AIRCRAFT WHEEL & BRAKE
1160 Center Road - Avon, Ohio 44011 - Customer Service 1-800-Braking

STOP!

PLEASE TAKE A FEW MOMENTS TO COMPLETE AND RETURN THE ATTACHED REGISTRATION CARD. IT IS IMPORTANT THAT ALL INFORMATION IS LEGIBLY PRINTED. THIS DATA WILL ASSIST PARKER HANNIFIN, AIRCRAFT WHEEL & BRAKE IN THE EVENT THAT NOTIFICATION TO END USERS OF SPECIFIC AIRWORTHINESS DOCUMENTS IS NECESSARY.

TABLE OF CONTENTS

LIST OF REVISIONS

REVISION	DATE	PAGE	DESCRIPTION	APVD
NC	02-26-1998		Production Release Installation Instructions Cleveland Wheels & Brakes Conversion Kit 199-62	***BB*** (DCN 0323-15)
A	06-12-2001	7 9	Add "40-75DGOLD" @ Item 1 Add "464-13601" @ Item 17 Add Note (4)	***BB*** (DCN 0346-54)

1.0 INTRODUCTION

The information herein addresses the installation of a Cleveland Conversion Kit . It is published for the guidance of qualified maintenance personnel responsible for the installation of a Cleveland Conversion Kit , manufactured by Parker Hannifin Corporation, Aircraft Wheel and Brake.

1.1 PURPOSE

This manual provides the necessary procedures to accomplish the installation of a Cleveland Conversion Kit. For information regarding service limits, maintenance and component overhaul, consult the Cleveland Wheels and Brakes Component Maintenance Manual, and the Technician's Service Guide (PRM 64), both published by Parker Hannifin, Aircraft Wheel and Brake. The manual and guide should be passed on to the owner or retained by the maintenance facility for future reference.

1.2 KIT EQUIPMENT

Each kit contains all materials needed to replace existing equipment with Cleveland Wheels and Brakes. Kit 199-62 will completely retrofit one aircraft to Cleveland equipment. Refer to Kit Parts List.

2.0 TSO NOTICE

The wheels and brakes used in this conversion kit carry a "TSO" marking which identifies them as having been fully laboratory tested and qualified to meet the applicable Federal Aviation Agency (FAA) specifications and requirements.

After final certification, substitution of critical parts or changes of processes or materials are not permitted without requalification of the assemblies and resubmittal of the test data to the FAA for approval.

FAA regulations subject both Parker Hannifin, Aircraft Wheel and Brake and the user to constant surveillance to assure that uncompromising Quality Assurance materials and processing controls are maintained in order to provide replacement parts that are the same as the parts originally certified in the assembly.

3.0 APPLICABILITY

3.1 KIT 199-62

The equipment supplied under Kit No. 199-62 is applicable to the following aircraft.

TABLE I, APPLICABILITY

MAKE	MODELS
Cessna	180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K
Cessna	185, 185A, 185B, 185C, 185D, 185E, A185E, A185F
Cessna	206, P206, U206, U206F, U206G, TU206E, TU206F, TU206G

4.0 SAFETY

Always follow proper safety precautions when handling or servicing any aircraft braking system or component(s) of such systems.

CAUTIONS and **WARNINGS** are noted throughout this manual, where applicable. Follow them when servicing aircraft wheel and brake equipment.

5.0 PRODUCT REGISTRATION

The product registration card is located at the front of this manual. The card is our way of tracking the conversion kits and your guarantee of receiving any future airworthiness information applicable to Conversion Kit No. 199-62. Please fill out the registration card completely and return promptly. Postage is prepaid.

6.0 ORDER INFORMATION

To order spare parts, contact the nearest Parker Hannifin, Aircraft Wheel and Brake distributor in your area, or contact Aircraft Wheel and Brake at the following address or numbers:

Parker Hannifin Corporation
Aircraft Wheel and Brake
Attn: Customer Service Dept.
1160 Center Road
Avon, Ohio 44011

Telephone: (440) 937-6211
1-800-272-5464

Fax: (440) 937-5409

NOTE: To order the Wheel and Brake Assemblies Component Maintenance Manual, contact Aircraft Wheel and Brake.

7.0 EQUIPMENT DESCRIPTION

7.1 BRAKE ASSEMBLY

The brake is a single caliper, 2 piston external disc design, with organic lining. It is suitable for use with brake fluid conforming to MIL-H-5606.

The cylinder contains the brake fluid which operates the pistons and pressure plate. Back plates are secured to the cylinder with bolts and washers on the opposite side of the brake disc. The back plates and pressure plate each hold brake linings. Two anchor bolts, attached to the cylinder with nuts and washers, slide or float in torque plate bushings. The torque plate is mounted to the landing gear axle. The caliper (cylinder assembly) is the assembly which includes the cylinder, pistons, back and pressure plates, linings and other related components.

7.2 WHEEL ASSEMBLY

The wheel is cast magnesium and conforms to all tire and rim association standards for a 6.00-6 divided type wheel. It is a tube-type design only.

The wheel incorporates inboard and outboard halves which are fastened together with bolts, washers, and nuts. The brake disc is attached to the wheel by the bolts. The wheel rotates on two tapered roller bearings, which seat in bearing cups in the wheel half hubs. Felt grease seals provide protection and lubricant retention for the bearing.

8.0 KIT INSTALLATION

WARNING: INSURE AIRCRAFT IS SECURE AND STABLE BEFORE BEGINNING ANY WORK. WORKING UNDER AN IMPROPERLY STABILIZED AIRCRAFT COULD CAUSE INJURY OR DEATH.

8.1 REMOVE EXISTING EQUIPMENT

a. Properly raise the aircraft off the ground following the airframe manufacturer's instructions. Fully deflate tire.

b. Remove and retain axle nut.

c. Remove existing main landing gear wheels.

d. Disconnect lower hydraulic line (existing flexible inlet hose or rigid inlet line) at brake inlet fitting and cap line.

e. Remove and retain inlet fitting from existing brake assemblies.

f. Remove existing brake assemblies from axle.

8.2 INSTALL CLEVELAND EQUIPMENT

a. Install Torque Plate on axle using hardware specified. Use 145-01000 bushing (2 ea.) on upper torque plate/axle hole locations. Refer to 50-36 Installation Drawing.

b. Check tire inflation pressure. Carefully inflate if not to specified level.

C Check to be sure wheel bearings are installed and lubricated, and grease seals are installed.

d. Carefully slide wheel/tire assembly onto axle making sure inboard bearing is seated.

8.2 INSTALL CLEVELAND EQUIPMENT (Cont'd)

e. Install axle nut. Axle nut torquing procedures vary considerably. The following procedure is based on the best available service information. Torque axle nut using value specified in aircraft manual or the following:

1. Rotate the wheel/tire while tightening axle nut to 150-200 in-lbs. (16.9 to 22.6 Nm) to seat the bearing.
2. Back off axle nut to zero torque.
3. Tighten axle nut 30-40 in-lbs. (3.4 to 4.5 Nm) while rotating wheel/tire.
4. Rotate axle nut (clockwise or counterclockwise) to nearest axle slot and cotter pin hole, and insert cotter pin. Bend ends of cotter pin around axle nut.

NOTE: Wheel must rotate freely without perceptible play.

f. Remove Backplate Assembies from Brake Assembly. Install Brake Assembly on Torque Plate. Re-assemble Backplate Assemblies and "Dry" torque bolts to 85-95 in-lbs.

g. Install existing brake inlet fittings to Cleveland Brake Assemblies.

h. Re-connect lower hydraulic inlet hose at the brake inlet fitting.

NOTE: If existing brakes were equipped with a rigid inlet line, convert to a flexible inlet hose. See 50-36 Installation Drawing for flexible inlet hose installation.

8.3 BLEED BRAKES

Check brake system reservoir fluid level and bleed brakes per airframe manufacturer's maintenance manual.

NOTE: Wheels should rotate freely. There should be no evidence of binding or excessive Brake drag.

CAUTION: CHECK FOR POSSIBLE INTERFERENCE PECULIAR TO INDIVIDUAL AIRCRAFT.

8.4 BRAKE LINING CONDITIONING

When new linings are installed, it is important to condition them properly to obtain the service life designed into them. Condition linings per attached product reference memo PRM 13A.

9.0 WEIGHT AND BALANCE COMPUTATIONS

Weigh existing wheels and brakes. Subtract from new weights to derive weight increase created by the kit installation. Multiply weight increase by applicable aircraft moment and revise weight and balance information in log book.

9.1 WEIGHT AND BALANCE DATA

New installed (per gear leg)

Wheel assy..... 7.25 lbs.
Brake assy ..... 3.02 lbs.
Total..... 10.27 lbs.

Complete form 337 and make appropriate log book entries.

10.0 PILOT OPERATING INSERTS

Inserts are located in front with conversion kit documentation.

Attach label in pilot operating manual as close as possible to the original section labeled Main Wheel Assembly. Enter the correct arm and moment in blocks provided. Zero items out for the original main wheel and brake assemblies that have been removed.

Inserts are reprinted below for reference:

x	Two dual piston, single disc Brake Assemblies, Cleveland P/N 30-52N	3.02 ea.
x	Two 6.00-6 Type III Wheel Assemblies, Cleveland P/N 40-75D	7.25 ea.

Cleveland Brake Assembly P/N 30-52N is a single caliper, single fixed disc design, using two pistons per caliper which respond to fluid pressure from the master cylinders for brake application.

11.0 WHEEL ASSEMBLY IPL

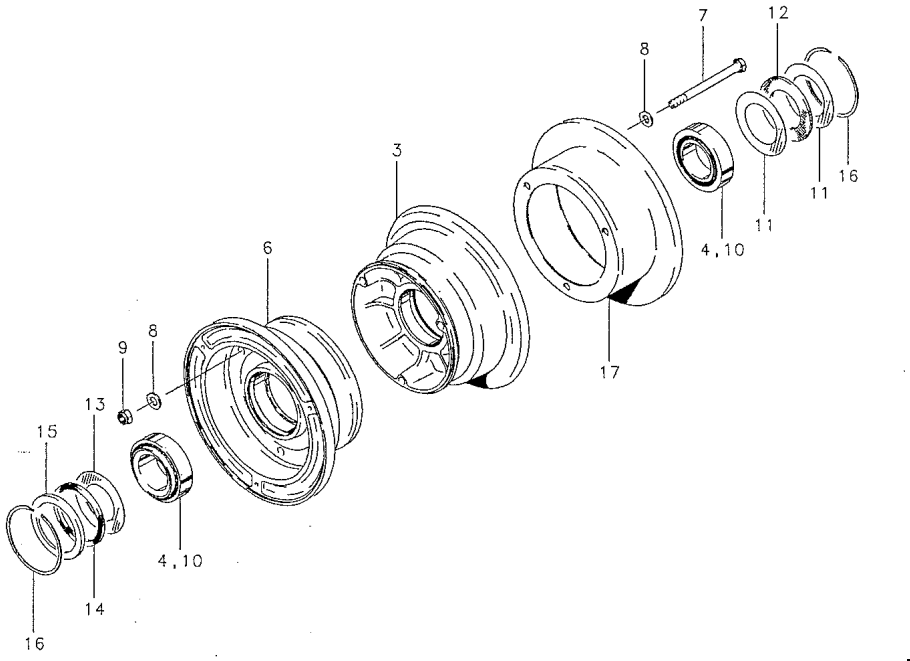

FIG.	PART NUMBER	DESCRIPTION	QTY.
	40-75D	Wheel Assembly	
	40-75DCHROME	Wheel Assembly	
1	40-75DGOLD	Wheel Assembly	1
2	161-03000	Inner Wheel Half Assembly	1
3	151-02600	Inner Wheel Half	1
4	214-00100	Cup-Bearing	1
5	162-02700	Outer Wheel Half Assembly	1
6	152-02400	Outer Wheel Half	1
4	214-00100	Cup-Bearing	1
7	103-20400	Bolt AN5-35A	3
8	095-10700	Washer AN960-516L	3
9	094-10400	Nut MS21044-N5	3
10	214-00200	Cone-Bearing	2
11	153-00400	Ring-Grease Seal	2
12	154-00300	Felt-Grease Seal	1
13	153-00300	Ring-Grease Seal	1
14	154-01300	Felt-Grease Seal	1
15	153-01500	Ring-Grease Seal	1
16	155-00100	Snap Ring	2
	164-03601	Brake Disc (1)	
	164-13601	Brake Disc, Chrome (2)	
17	464-13601	Brake Disc, Performance Gold	1
18	166-02100	Nameplate (3)	1
19	166-04500	Nameplate (3)	1

NOTES:
(1) Supersedes 164-03600 Per PRM61
(2) Supersedes 164-13600 Per PRM61
(3) Not Illustrated

FIGURE 1
ILLUSTRATED PARTS LIST (IPL) FOR 40-75D WHEEL ASSEMBLY

12.0 BRAKE ASSEMBLY IPL

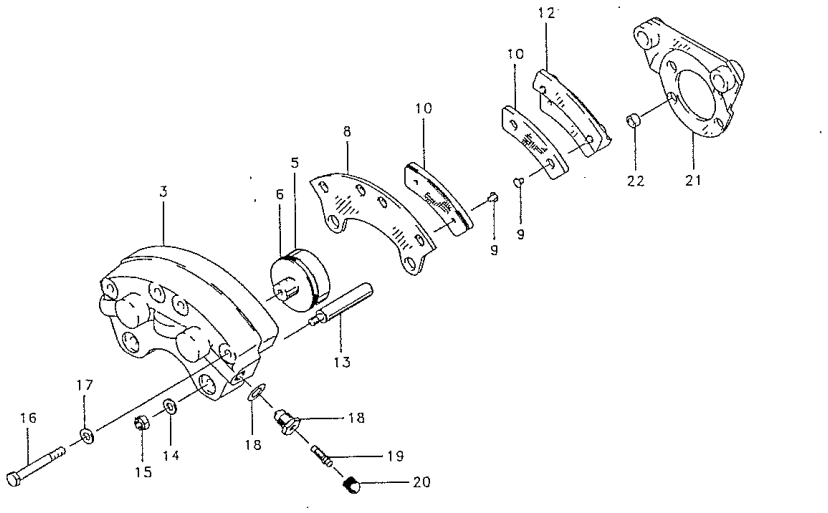

FIG.	PART NUMBER	DESCRIPTION	QTY.
1	30-52N	Brake Assembly	1
2	091-02100	Cylinder Assembly	1
3	061-01800	Cylinder	1
4	092-01600	Piston Assembly	2
5	062-01500	Piston	2
6	101-02700	O-Ring MS28775-222	2
7	073-01000	Pressure Plate Assembly	1
8	063-01100	Pressure Plate	1
9	105-00200	Rivet	4
10	066-10500	Lining	2
11	074-01000	Back Plate Assembly	2
12	064-01500	Back Plate	2
9	105-00200	Rivet	4
10	066-10500	Lining	2
13	069-00400	Anchor Bolt	2
14	095-10200	Washer AN960-416L	2
15	094-10300	Nut MS21044-N4	2
16	103-11800	Bolt ABP4-21AM	4
17	095-10400	Washer AN960-416	4
18	081-00100	Seat-Bleeder	1
19	079-00300	Screw -Bleeder	1
20	183-00100	Cap-Bleeder	1
21	075-05401	Torque Plate Assembly	1
22	145-01000	Bushing	2
23	166-20100	Nameplate (1)	1

NOTES:
(1) Not Illustrated

FIGURE 2
ILLUSTRATED PARTS LIST (IPL) FOR 30-52N BRAKE ASSEMBLY

13.0 KIT PARTS LIST

199-62 KIT (3)

SEE NOTE	PART NUMBER	DESCRIPTION	QUANTITY
(1)	40-75D	Wheel Assembly	2
(2)	30-52N	Brake Assembly	2
	IM199-62	Installation Manual for Conversion Kit 199-62	1
	50-36	Installation Drawing	1
	20-128	Wheel and Brake Assy Drawing	1
	SA63GL	Supplemental Type Certificate (180, 185, 206 Series)	1
	PRM13A	Conditioning Procedure for Non Asbestos Organic Brake Lining	1
	-------	Pilot Operating Manual Inserts	1
	-------	Product Registration Card	1

(1) For Subassembly and Parts identification: See Fig 1; 40-75D IPL
(2) For Subassembly and Parts identification: See Fig 2; 30-52N IPL
(3) 199-62CHROME is identical except for chrome brake disc: see Fig. 1; 40-75D IPL
(4) 199-62GOLD is identical except for Performance Gold Brake Disc: see Fig. 1; 40-75D IPL

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

CONDITIONING PROCEDURE FOR
NON ASBESTOS ORGANIC BRAKE LINING

The brake lining material used in this brake assembly is a non asbestos organic composition. This material must be properly conditioned in order to provide maximum performance and service life.

Conditioning may be accomplished as follows:

1. Taxi aircraft for 1500 feet with engine at 1700 rpm applying brake pedal force as needed to develop a 5 - 10 mph taxi speed.

2. Allow brakes to cool for 10 - 15 minutes.

3. Apply brakes and check to see if a high throttle static run up may be held with normal pedal force. If so, conditioning is completed.

4. If static run up cannot be held, repeat steps 1 through 3 as needed to successfully hold.

This conditioning procedure will generate sufficient heat to create a thin layer of glazed material at the lining friction surface. Normal brake usage should generate enough heat to maintain the glaze throughout the life of the lining.

Light brake usage can cause the glaze to wear off, resulting in reduced brake performance. In such cases, the lining may be conditioned again following the instructions set forth in this PRM.

Cleveland
Wheels & Brakes

Parker Hannifin Corporation
Aircraft Wheel & Brake
1160 Center Road, P.O. Box 158
Avon, Ohio 44011 USA
1-800-BRAKING (272-5464)
216-937-1272 ● FAX 216-937-5409

PRODUCT REFERENCE MEMO

CONVERSION KIT / CHROME DISC DATA SHEET

The designation "CHROME" after the part number of the following Wheel and Brake Conversion Kits means that they contain wheels equipped with Cleveland Chrome Brake Discs. Wheels with chrome brake discs are FAA-TSO approved under the original model number.

STANDARD KIT	CHROME DISC KIT	*WHEEL ASSEMBLY	CHROME DISC
199-46	**199-46 CHROME**	**40-97A**	**164-12601**
199-48	**199-48 CHROME**	**40-113C**	**164-14300**
199-49	**199-49 CHROME**	**40-83**	**164-12504**
199-60	**199-60 CHROME**	**40-75B**	**164-11501**
199-60A	**199-60A CHROME**	**40-75B**	**164-11501**
199-62	**199-62 CHROME**	**40-75D**	**164-13601**
199-62A	**199-62A CHROME**	**40-75T**	**164-18300**
199-71	**199-71 CHROME**	**40-60**	**164-16700**
199-71A	**199-71A CHROME**	**40-60A**	**164-16700**
199-79	**199-79 CHROME**	**40-97D**	**164-12601**
199-84	**199-84 CHROME**	**40-113**	**164-14000**
199-84A	**199-84A CHROME**	**40-113**	**164-14000**
199-87	**199-87 CHROME**	**40-97D**	**164-12601**
199-102	**199-102 CHROME**	**40-78B**	**164-11700**
199-103	**199-103 CHROME**	**40-78A**	**164-11700**
199-104	**199-104 CHROME**	**40-59A**	**164-17500**
199-105	**199-105 CHROME**	**40-113X**	**164-14000**
199-124	**199-124 CHROME**	**40-113C**	**164-14300**

* To order a Wheel Assembly equipped with a Cleveland Chrome Brake Disc, specify the Wheel Model Number followed by "CHROME".

EXAMPLE: 40-97A CHROME

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

United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number SA63GL

This certificate, issued to Aircraft Wheel and 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 * *of the* * *Regulations.* *

Original Product—Type Certificate Number *
Make *
Model *

*See attached FAA Approved Model List (AML) No. SA63GL for list of approved airplane models and applicable airworthiness regulations.

Description of Type Design Change

Installation of Cleveland Main Wheels and Brakes in accordance with Parker Hannifin Corporation Conversion Kit Parts Lists 199-62, Revision C, dated April 21, 1994, and P/N 199-62A, Revision A, dated April 21, 1994, or later FAA approved revisions.

Limitations and Conditions 1. This kit is eligible only on Cessna axle P/N's 9541124 and 1441003-1. 2. This installation is not eligible for use on aircraft equipped with the optional crosswind (castering) landing gear. 3. Compatibility of this design change with previously approved modifications must be determined by the installer. 4. A copy of this certificate and FAA Approved Model List (AML) No. SA63GL amended January 5, 1995, or later FAA approved revision must be maintained as part of the permanent records for the modified aircraft.

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 5/22/74

Date of issuance 8/6/74

Date reissued 10/28/80

Date amended 10/25/74, 4/1/81, 1/5/95

By direction of the Administrator

Thomas J. Richter, Manager
(Signature)
Systems & Equipment Branch
Chicago Aircraft Certification Office
(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)

FAA APPROVED MODEL LIST (AML) NO. SA63GL
PARKER HANNIFIN CORPORATION
INSTALLING CLEVELAND MAIN WHEELS AND BRAKES

ISSUE DATE: August 6, 1974

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	ORIGINAL TYPE CERTIFICATE NUMBER	CERTIFICATION BASIS FOR ALTERATION	INSTALLATION INSTRUCTIONS		AFM SUPPLEMENT NUMBER/DATE	AML AMENDMENT DATE
					NUMBER	REVISION NO. & DATE		
1	Cessna	180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K	5A6	CAR 3 and Amendments listed in TCDS No. 5A6	Conversion Kit Parts List No. 199-62 or 199-62A	C, 4-21-94 A, 4-21-94	N/A	
2	Cessna	185, 185A, 185B, 185C, 185D, 185E, A185E, A185F	3A24	CAR 3 and Amendments listed in TCDS No. 3A24	Conversion Kit Parts List No. 199-62 or 199-62A	C, 4-21-94 A, 4-21-94	N/A	
3	Cessna	206, P206, U206, U206F, U206G, TU206E, TU206F, TU206G	A4CE	CAR 3 and Amendments listed in TCDS No. A4CE	Conversion Kit Parts List No. 199-62 or 199-62A	C, 4-21-94 A, 4-21-94	N/A	

FAA Approved: Thomas J. Richter
Thomas J. Richter, Manager
Systems & Equipment Branch
Chicago Aircraft Certification Office

Amended: 1/5/95