FAA-PMA

AIRCRAFT WHEEL & BRAKE DIVISION
PARKER HANNIFIN CORPORATION
AVON, OHIO

PARTS LIST

199-126 CONVERSION KIT

HAWKER BEECHCRAFT AIRCRAFT
* MODELS AS NOTED

PART NUMBER	DRAWING REVISION	DESCRIPTION	QUANTITY
40-204	Rev.J dated 12-10-1997	Nose Wheel Assembly	1
		Publication Package (P/N PP199-126)	
IM199-126	Rev. J dated 01-25-2016	Installation Manual	
50-91	Rev. J dated 07-25-2011	Installation Drawing	
SA757GL	dated 02-25-2011	Supplemental Type Certificate for 200 series	
SA1061GL	dated 09-11-1986	Supplemental Type Certificate for 99 & 100 series	
SA1077GL	amend date 07-29-2010	Supplemental Type Certificate for 90 series	
SA1242GL	dated 09-30-1987	Supplemental Type Certificate for F90	
SA380CH	amend date 10-06-2011	Supplemental Type Certificate for 300 series	
ANAC 2013S02-15	dated 02-26-2013	Brazil STC Validation for Beech Models 200, 200T, B200, B200T, B200GT, B200CGT	
LBA 0616/2021	dated 06-21-1995	German STC Validation of STC SA1077GL for Beech Models 65, 65-80, 65-90, 65-A90, B90, C90, E90	
EASA STC 10048423	dated 03-10-2014	EASA STC Validation of STC SA757GL for Beech 200 series	

NOTES:
1. This kit will convert one aircraft to Cleveland Nose Wheel.

* Applicability as follows:

STC SA757GL	Beech Models 200, 200C, 200CT, 200T, B200, B200T, B200CT, B200GT, B200CGT
STC SA1061GL	Beech Models 99, A99, A99A, B99, C99, 100, A100, B100
STC SA1077GL	Beech Models 65, A65, 70, 65-80, 65-A80, 65-B80, 65-88, 65-90, 65-A90, B90, C90, C90A, C90GT, C90GTi, E90, H90
STC SA1242GL	Beech Model F90
STC SA380CH.....	Beech Model 300, B300, B300C

199-126
Rev. NC 04-30-1984 (C/N 273-98)
Rev. P 03-20-2014 (ECO-003535)
Rev R 02-22-2016 (ECO-0062997)

DO NOT SCALE

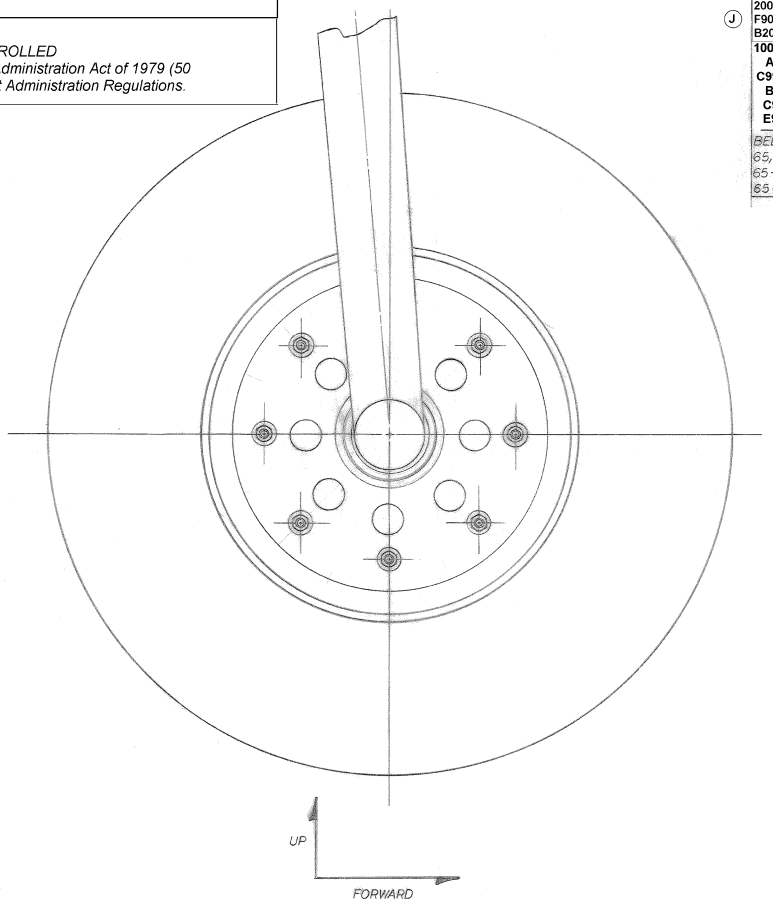
50-91 J

CHANGE NOTICE	LETTER	DESCRIPTION OF CHANGE	CHG BY	DATE	CHK'D BY
293-98	A	HUBCAP REPLACED BY SEAL	BB	4-30-98	
294-98	B	REVISED TO ADD NEW PART NUMBERS	BB	9-28-98	
295-98	C	11.2 WAS 9.65 LBS PAGE 1	BB	9-29-98	
0312-01	D	MODEL 300 ADDED TO APPLICABILITY	PK	6-6-01	
0379-51	E	MODEL 90 REVISED TO ADD C90A, C90GT, & C90GTi	BB	6-14-2006	GL
0383-52	F	DELETE MODEL A90, REPLACE WITH 65-90, 65-A90	BB	2-3-2009	GL
0387-26	G	ADD MODEL C90GTi	BB	12-4-2009	GL
0387-68	H	ADD MODELS B200GT, B200CGT	PH	01-21-2010	BB
0393-79	J	ADD MODELS B300, B300C	PH	07-25-2011	PK

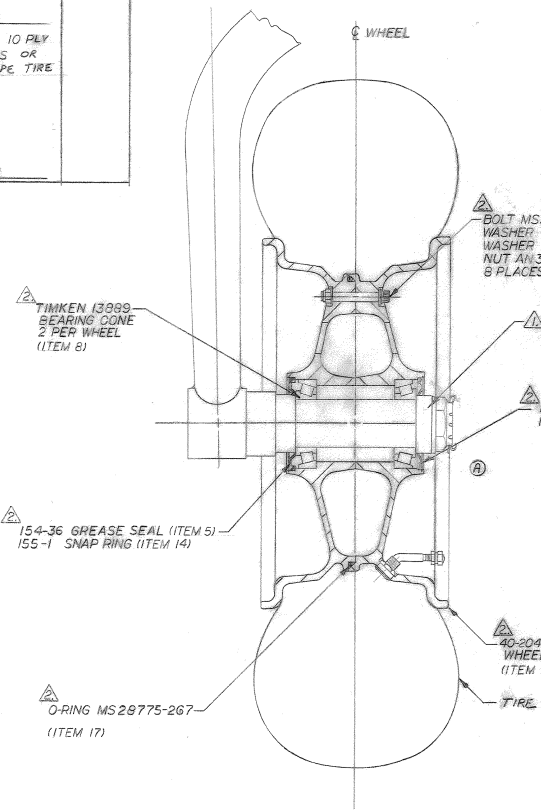
APPLICABILITY OF AIRCRAFT INSTALLATION
CLEVELAND KIT 199-12G

MODEL	TIRE SIZE	INFLATION PRESSURE
(H) (J) **BEECH KING AIR B200, B200C, B200CT, B200T, 200, 200C, 200CT, 200T, F90, 300, B300, B300C, B200GT, B200CGT** **100, A100, B100, 99, A99, A99A, B99, C99, 65-90, 65-A90, B90, C90, C90A, C90GT, C90GTi, E90, H90** BEECH QUEEN AIR 65, A65, 70, 65-80, 65-A80, 65-B80, 65-88	22X6.75-10, 8 PLY TUBELESS TIRE — 6.50-10, 10 PLY TUBELESS OR TUBE-TYPE TIRE	PER AIRCRAFT MANUAL

VIEW A



VIEW B



WEIGHT AND BALANCE DATA
OLD INSTALLATION
WHEEL _____ LBS.
NEW INSTALLATION
WHEEL _____ 11.2 LBS. ©

WEIGH THE OLD INSTALLATION AND SUBTRACT OLD INSTALLATION WEIGHT FROM NEW INSTALLATION WEIGHT TO DETERMINE WEIGHT INCREASE CREATED BY 199-12G KIT INSTALLATION. MULTIPLY WEIGHT INCREASE BY MOMENT (APPLICABLE TO AIRCRAFT) AND REVISE WEIGHT AND BALANCE INFORMATION IN AIRCRAFT LOG BOOK. ©

NOTES

1. EXISTING HARDWARE TO BE RETAINED AND REUSED FOR THIS INSTALLATION.
2. THESE PARTS ARE SUPPLIED AS PART OF KIT 199-12G.
3. READ INSTALLATION MANUAL BEFORE INSTALLING.

QTY	QTY	ITEM	PART NO.	DESCRIPTION	MATERIAL & SPEC.	HEAT TREAT & SPEC.	FINISH & SPEC.	WGT.
			50-91					11.2 LBS

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 N 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
TOLERANCES FOR XXX ± .010
TOLERANCE FOR XX ± .030
TOLERANCE FOR ANGULAR DIMS. ± 1/2°
TOLERANCE FOR FRACTIONAL DIMS. ± 1/32
BREAK SHARP EDGES .010 UNLESS NOTED. REMOVE ALL BURRS BEFORE PLATING. DRILL PER INSP. PROCEDURE NO. 114.

DRAWN BY PK 1-88
CHECKED BY
SCALE 1/2 Scale
NAME INSTALLATION DRAWING
50-91

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

K&E CLEVELAND No. 10-9388

050-09100

CLEVELAND WHEELS & BRAKES
IM199-126
INSTALLATION MANUAL
FOR
NOSE WHEEL CONVERSION KIT
199-126
FOR
BEECH MODELS
65, 90, 99, 100, 200, AND 300

Cleveland
Wheels & Brakes

Parker
Aerospace

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

Parker Aerospace

CLEVELAND WHEELS & BRAKES

INSTALLATION MANUAL

WITH

ILLUSTRATED PARTS LIST

FOR

NOSE WHEEL ASSEMBLY

CONVERSION KIT

199-126

FOR

BEECH MODELS:
65, 90, 99, 100, 200 AND 300

Aircraft Wheel & Brake
Parker Hannifin Corporation
1160 Center Road U.S.A.
Avon, Ohio 44011

June, 1994

INSTALLATION INSTRUCTIONS
Cleveland Nose Wheel Assembly Conversion Kit 199-126

TABLE OF CONTENTS

LIST OF REVISIONS

REVISION	DATE	PAGE	DESCRIPTION	APVD
N/C	01/19/84	---	Initial Production Release	
A	04-30-84	1	5.1 - Delete Hubcap Call-out	BB
		2	6.3 - Add grease seal & Snap ring	04/30/94
		3	6.13 - Add grease seal & snap ring - Add spacer Deleted paragraph 6.15	
		4	11.1.1 - Delete hubcap Item #13 - Tang was keyed - Add spacer - Add “and Item #7”.	
		8	11.6.7 - Delete “and outer hubcap Item #13.”	
		9	Item 5 - Quantity 2 was 1 Delete “Item #13, 158-3, 158-00300, hubcap, Quantity 1”.	
		10	Grease seal Item #5 was hubcap Item #13.	
B	03-18-85	1	5.1 - Tubeless / tube-type was tubeless type only	BB 03/18/85
		3	7. - 11.2 was 9.65	
		9	13.1 - TR716-03 was TR762-03 - 160-01200 was 160-00700	
		10	Pictorial revision to show new valve stem, Item 16	
C	06-20-94	Title Page	Beech Model: 300 - Added-	BB 6/20/94
		1	Beech 300 -Added-	
		6	one coat of Sherwin-Williams specification E61 G 510 primer followed by one coat of Sherwin-Williams specification F63 W 66. (Contact Sherwin-Williams at (216-) 271-6766 for detailed paint information).	

LIST OF REVISIONS (cont'd)

REVISION	DATE	PAGE	DESCRIPTION	APVD
			-Was-	
			two coats of Zinc-Chromate primer specification MIL-L-8585, and one coat of white lacquer.	
			of primer -was- Zinc Chromate primer	
		9	Old P/N column -Removed-	
D	04-14-2008 (0379-51)	1	Section 3.1, Model Applicability – Delete: "90" Add: C90A, C90GT, H90	BB 4/14/08
E	02-03-2009 (0383-52)	1	Section 3.1, Model Applicability – Add: "65-90" Delete: "A90", Replaced by "65-A90"	BB 2/3/09
F	12-04-2009 (0387-26)	1	Section 3.1, Model Applicability – Add: "C90GTi"	BB 12/4/09
G	01-21-2010 (0387-68)	1	Section 3.1, Model Applicability – Add: "B200GT, B200CGT"	BB 1/21/10
		2	Section 6.2, change grease to Mobil Aviation Grease SHC100	
		3	Section 6.13, change grease to Mobil Aviation Grease SHC100	
		7	Section 11.15.1, change grease to Mobil Aviation Grease SHC100	
H	07-25-2011 (0393-79)	1	Section 3.1, Model Applicability – Add: "B300, B300C"	PH 7/25/11
J	01-25-2016 (0062997)	1	Section 5, Description – "…22 x 6.75-10…" -was- "…22 x 7.75-10…"	PH 1/25/16

Notes

INSTALLATION INSTRUCTIONS
Cleveland Nose Wheel Assembly Conversion Kit 199-126

1. INTRODUCTION.

1.1 This manual is published for the guidance of personnel responsible for the installation of Cleveland Nose Wheel Conversion Kit 199-126.

1.2 Each kit contains all materials and instructions needed to replace existing equipment over to a Cleveland wheel. Kit 199-126 applies to complete retrofit of the aircraft to Cleveland nose wheel.

2. TSO NOTICE.

2.1 The wheel assembly used in this conversion kit carries a "TSO" marking which identifies it having been fully laboratory tested and qualified to meet the applicable Federal Aviation Agency (FAA) specifications and requirements.

2.2 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.

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

3. APPLICABILITY.

3.1 "KIT 199-126":

MAKE	MODELS
Beech	300, B300, B300C
Beech	200, 200C, 200CT, 200T, B200
Beech	B200C, B200CT, B200T, B200GT, B200CGT
Beech	100, A100, B100
Beech	99, A99, A99A, B99, C99
Beech	65-90, 65-A90, B90, C90, C90A, C90GT, C90GTi, E90, F90, H90
Beech	70, 65, A65, 65-80, 65-A80
Beech	65-B80, 65-88

4. ORDER INFORMATION.

4.1 To order spare parts, contact the nearest Parker Hannifin, Aircraft Wheel & Brake distributor in your area.

5 DESCRIPTION.

5.1 The wheel is forged aluminum and conforms to all Tire and Rim Association Standards for a 22 x 6.75-10 and a 6.50-10 divided type wheel. The wheel is a tubeless/tube-type and incorporates an O-ring seal. Rubber lip seals on both wheel halves protect the bearings. It is composed of the following parts listed on page 9.

6. INSTALLATION.

6.1 Jack aircraft in accordance with Beech Service Manual and remove the old wheel and retain the original axle nut, washer and spacer.

6.2 The wheel assembly Item #1 is shipped from the factory completely assembled. The bearings are packed with Mobil Aviation Grease SHC-100 and may be installed as received.

- NOTE -

EXTENDED STORAGE OF LUBRICATED BEARINGS MAY REQUIRE RELUBRICATION.

6.3 Remove snap rings Item #14, grease seals Item #5 and bearing cones Item #8 from the wheel assembly Item #1 and place on a clean surface to avoid contamination.

6.4 Remove nuts Item #12, washers Item #11, washers Item #10 and tie bolts Item #9 to separate wheel halves.

6.5 Position inner wheel half Item #3 on a flat surface with register side up.

6.6 Place O-ring Item #17 on register portion of wheel half.

-CAUTION-

SEAL SHOULD NOT BE TWISTED, BUT FULLY ALIGNED IN GROOVE.

6.7 Place serviceable tire over inner wheel half item #3 and then place outer wheel half Item #7 in tire, making sure to properly align inner and outer registers. Slide tie bolts Item #9 and washers Item #10 thru wheel assembly.

-CAUTION-

COUNTER-SUNK SIDE OF WASHER ITEM #10 SHOULD BE TOWARD THE BOLT HEAD.

6.8 Install washers Item #11, and nuts Item #12 on tie bolts Item #9 and torque to 300 in-lbs. When all nuts have been torqued, retorque a second time to make sure that the required value has been achieved. Sometimes O-Ring compression will give false initial readings.

6.9 Inflate tire to proper pressure in a safety cage.

6.10 Reinstall bearing cone Item #8 into inner wheel half Item #3 and install inner grease seal Item #5 using a snap ring Item #14.

6.11 Check for burrs or rough threads on axle nut.

6.12 Mount wheel and tire assembly on axle.

6.13 Apply a thin coat of bearing grease Mobil Aviation Grease SHC-100 on axle nut threads. Install outer bearing cone Item #8 and grease seal Item #5 and snap ring Item #14, and apply a layer of bearing grease on threads of the axle. Install original spacer, washer and axle nut.

6.14 Tighten axle nut to 150 to 200 in-lbs of torque while rotating the wheel. Back off the axle nut to zero torque then retorque to 40 in-lbs while rotating the tire. If holes do not align with axle nut, continue tightening to first locking hole and secure by prescribed methods.

-NOTE-

AXLE NUT TORQUE TO BE 40 IN-LB MINIMUM OF TORQUE.

7. WEIGHT AND BALANCE COMPUTATIONS:

Weight: 11.2 lbs.

Complete Form 337 and make appropriate log book entries.

8.0 FLIGHT MANUAL INSERTS: (located in front cover pocket)

8.1 Attach label "Item installed in airplane" in flight manual as close to the original item nose wheel assembly. Enter the correct arm and moment in block provided. Zero items out for the original nose wheel assembly which was removed.

9.0 WARRANTY REGISTRATIONS.

9.1 Completely fill out enclosed warranty card and return promptly. Postage is prepaid.

Jan. 1984,
Rev. A 4-30-84
Rev. B 3-18-85
Rev. G 01-21-10

10. MAINTENANCE

10.1 Inspect wheel half flanges for cracks and corrosion.

10.2 Check for loose bolts and nuts and retighten or replace if necessary.

-NOTE-

No repair or replacement is recommended while equipment is on aircraft.

11. OVERHAUL

11.1 Dismounting

11.1.1 Deflate tire. Remove valve stem to assure complete deflation. Remove axle nut, tang washer, spacer and bearing cone Item #8. Remove wheel and tire assembly from axle as a unit. Remove snap rings Item #14, grease seals Item #5 and bearing cones Item #8 from both wheel halves Item #3, and Item #7.

11.1.2 Break tire beads away from wheel flange with a bead breaker or pneumatic tire dismounter.

-CAUTION-

DO NOT USE TIRE IRONS. THEY MAY DAMAGE THE WHEEL FLANGES OR TIRE BEADS AND PREVENT PROPER AIR RETENTION.

-NOTE-

A soap solution around the bead seat will usually help in breaking the bead

11.1.3 Remove eight (8) nuts Item #12, washers Item #11, washers Item #10, and bolts Item #9 from the wheel assembly.

11.1.4 Separate the wheel halves and remove the tire

-NOTE-

Bearing cups Item #4 are shrunk fit into the wheel halves and should not be removed unless replacement is necessary. If a bearing cup Item #4 is to be replaced, heat the wheel half to 149 degrees C (300 degrees F) maximum for 20 minutes before trying to remove the cup. Support the wheel hub while removing the bearing cup as shown in Figure #1.

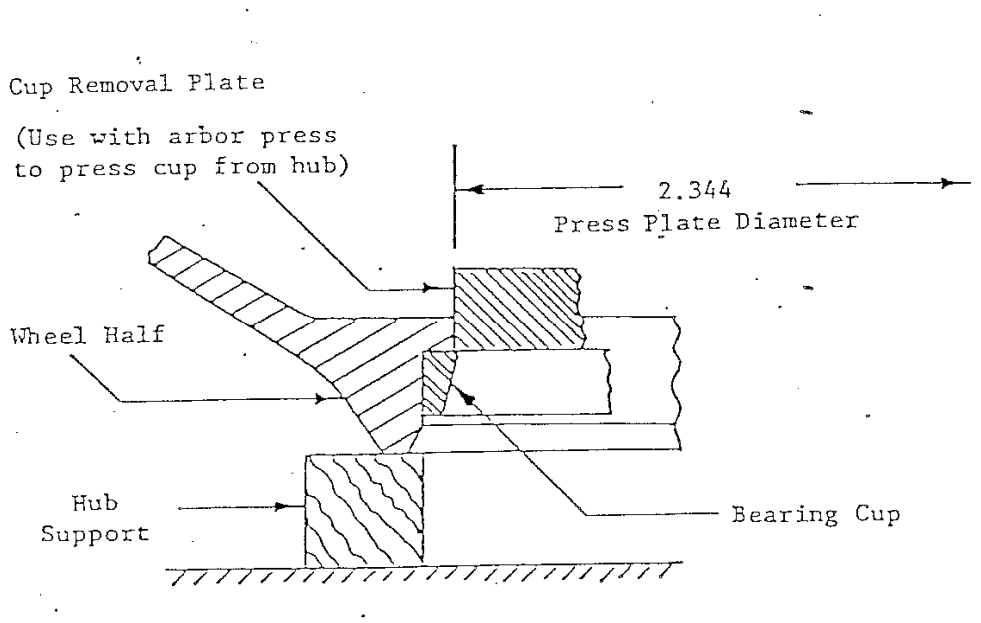


Figure 1
Supporting Wheel Hub

11.2 Cleaning

11.2.1 Clean all metal parts in a suitable solvent and dry with a lint free cloth.

11.2.2 Wipe bearing grease seal clean with dry cloth. Do not use cleaning solvents on rubber components used in this wheel assembly.

11.2.3 Wash bearing cones in uncontaminated cleaning solution, rotate the bearing cones by hand while submerged in the solution. Repack bearings with grease immediately after inspection to prevent corrosion and place in a clean, closed container.

-CAUTION-

DO NOT SPIN DRY BEARINGS OR HANDLE BEARINGS WITH BARE HANDS.

11.2.4 Parts requiring fluorescent inspection are to be completely stripped using acetone or equivalent. Air dry parts after stripping is completed.

11.3 Inspection

-NOTE-

Inspect bolts Item #9 and wheel halves Item #3 and Item #7 after the fifth tire change, and then after the third subsequent tire change, for a total of twenty tire changes, and then at each and every tire change thereafter.

11.3.1 Magnaflux bolts Item #9 for cracks and breaks.

11.3.2 With dye penetrant inspect wheel halves Item #3 and Item #7 for cracks and breaks. Note in particular the bead seat, tubewell, and webbed junction areas.

11.3.3 Visually inspect all metal parts for pitting, corrosion, cracks, breaks, uneven wear, and other surface defects.

11.4 Repair and Replacement

11.4.1 Repair scratches, nicks, corrosion, and other surface blemishes on wheel halves Item #3 and Item #7 by sanding with emery cloth, removing as little material as possible. Polish repaired surfaces with 400 grit emery cloth. Swab exposed aluminum areas with Iridite 14 or Alodine 1200 per MIL-C-5541.

11.4.2 Paint repaired areas with one coat of Sherwin-Williams specification E61 G 510 primer followed by one coat of Sherwin-Williams specification F63 W 66, topcoat. (Contact Sherwin-Williams at (216) 271-6766 for detailed paint information).

-CAUTION-

NEVER PAINT WORKING SURFACES OF BEARING CUPS.

-NOTE-

Use only one coat of primer and no finish coat on O-ring grooves and mating surfaces of wheel halves.

11.4.3 Replace all parts worn or damaged beyond limits of repair.

11.4.4 Replace O-rings Item #17 at each overhaul.

11.4.5 Clean reworked areas with solvent and/or emery cloth.

11.4.6 Surface treat bare aluminum with Alodine 1200 or Iridite 14.

11.4.7 Paint reworked areas with a minimum of two coats of zinc-chromate primer (MIL-P-8585).

11.4.8 To replace bearing cups, proceed as follows:

11.4.8.1 Heat wheel halves to 149^{o} C (300^{o} F.) maximum and cool cups to -18^{o} C. (0^{o} F).

11.4.8.2 Support wheel hub and paint the ID of the hub with zinc chromate primer. Then press cup into wheel half as in Figure 2.

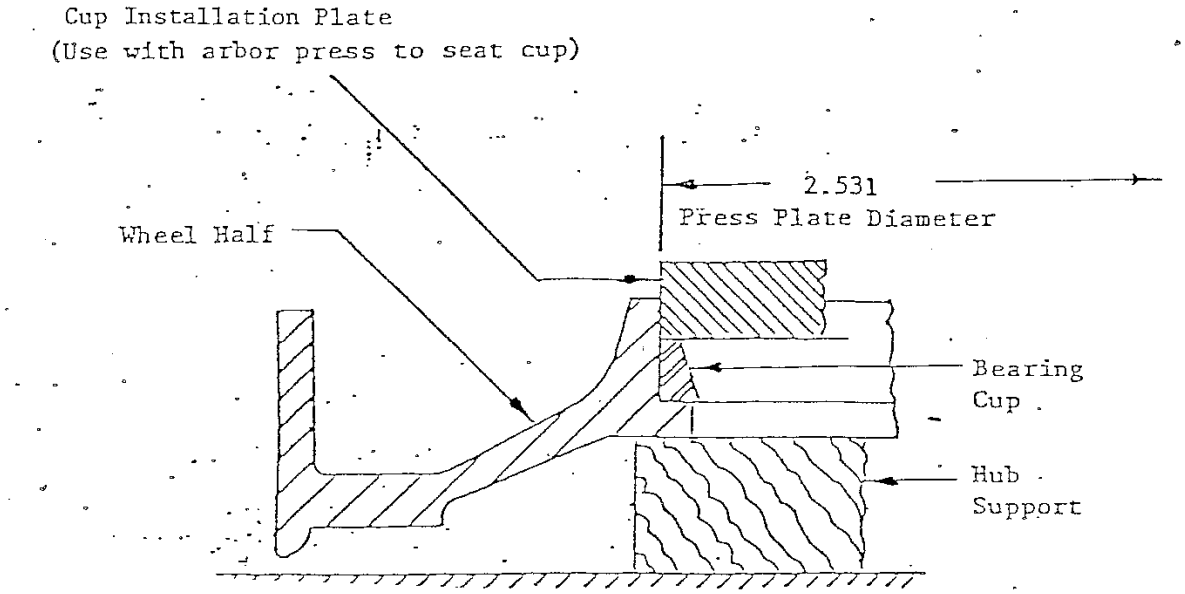


Figure 2, Supporting Wheel Hub

-NOTE-

The wet zinc chromate primer lubricates the parts to be pressed together and acts as protection against galvanic corrosion between the parts.

11.5 Lubrication

11.5.1 Pack Mobil Aviation Grease SHC-100 into bearing cones and smear grease on ends of rollers. Do not over lubricate. Spread a thin coat of grease on the surface of the bearing cups.

11.5.2 Lubricate threads of bolts and nuts and face of washers with thread compound.

11.5.3 Apply a thin layer of bearing grease to grease seal Item #5 before installing in wheel.

11.6 Reassembly

11.6.1 Prior to wheel assembling, coat O-Ring Item #17 liberally with Dow Corning Molykote 55M, or equivalent.

11.6.2 Position inner wheel half Item #3 on a flat surface with register side up.

11.6.3 Place O-Ring Item #17 on register portion of inner wheel half.

-CAUTION-

Seal should not be twisted, but fully aligned in groove.

11.6.4 Place a serviceable tire over inner wheel half Item #3 and then place outer wheel half Item #7 in tire, making sure to properly align inner and outer wheel registers. Slide tie bolts Item #9 and washers Item #10 through wheel assembly.

-CAUTION-

Counter-sunk side of washer Item #10 should be toward the bolt head.

11.6.5 Install washers Item #11 and nuts Item #12 on tie bolts Item #9 and torque to 300 in-lbs. When all nuts have been torqued, retorque a second time to insure that the required value has been achieved. Sometimes O-Ring compression will give a false initial reading

11.6.6 Inflate tire to proper pressure in a safety cage.

11.6.7 Reinstall bearing cones Item #8 into cups Item #4 and install inner grease seals Item #5 using snap rings Item #14.

12. TESTING

12.1 Wheel Testing

12.1.1 The wheel shall be required to hold the normal inflation pressure for 24 hours, with not more than four percent loss in pressure after tire growth has stabilized.

13. PARTS LIST

13.1 Wheel Parts List

PARKER HANNIFIN CORPORATION

AIRCRAFT WHEEL AND BRAKE DIVISION

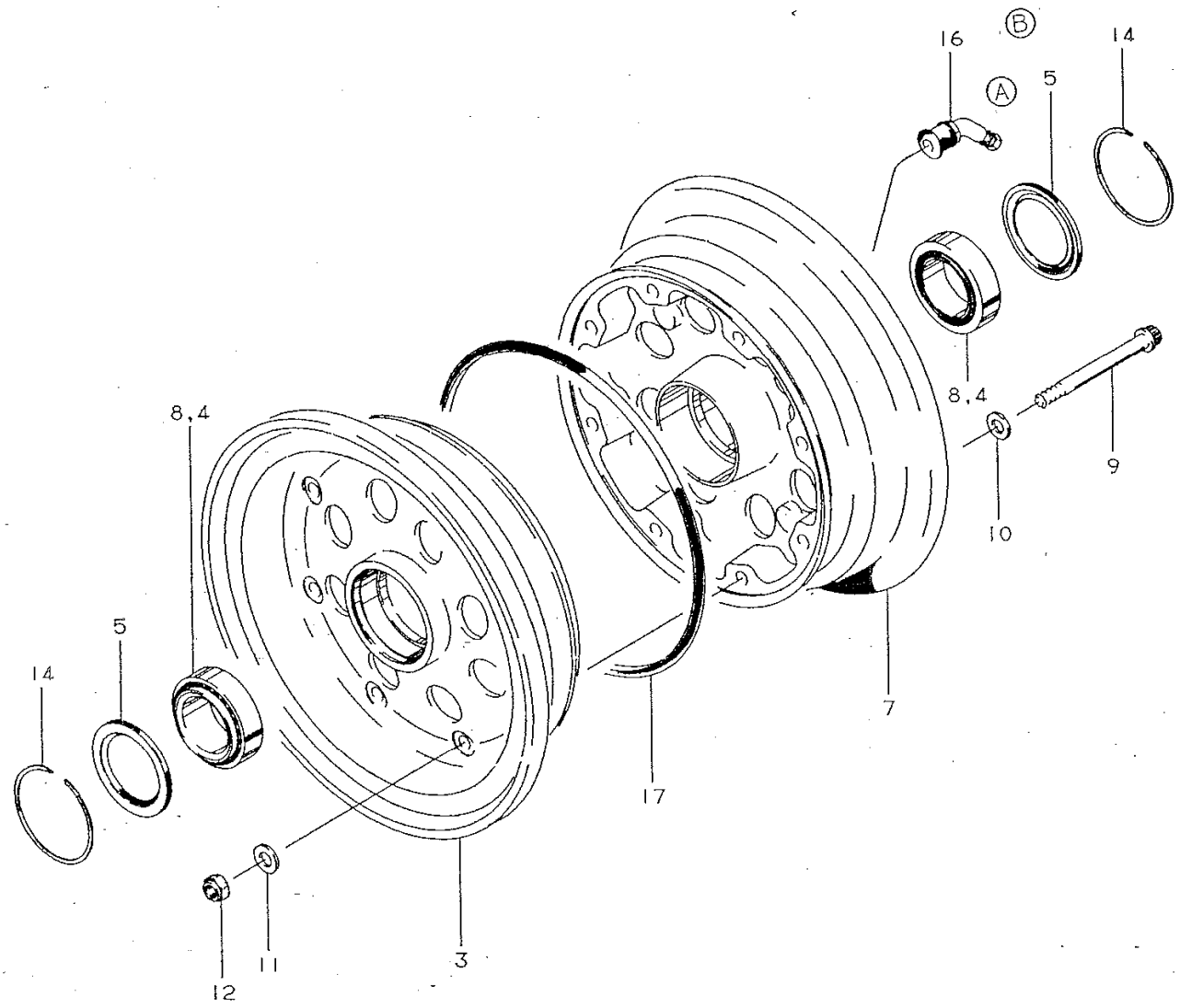
AVON, OHIO

PARTS LIST

40-204 WHEEL ASSEMBLY 6.50-10 TYPE III

ITEM	PART NO.	DESCRIPTION	QUANTITY	
1	40-204	Wheel Assembly	1	
2	161-12500	Inner Wheel Half Assembly	1	
3	151-12000	Inner Wheel Half	1	
4	214-00100	Cup - Bearing	1	
5	154-03600	Grease Seal	2	A
6	162-11500	Outer Wheel Half Assembly	1	
7	152-11900	Outer Wheel Half	1	
4	214-00100	Cup - Bearing, 13836	1	
8	214-00200	Cone - Bearing, 13889	2	
9	103-31200	Bolt, MS21250H06034	8	
10	095-03100	Washer, MS20002C6	8	
11	095-10600	Washer, AN960-616	8	
12	094-91500	Nut, AN365-624	8	
14	155-00100	Snap Ring	2	
15	166-09400	Nameplate	1	
16	160-01200	Inflation Valve Assembly, TR716-03	1	
17	101-25800	O-Ring (N304-75), MS28775-267	1	

Jan. 1984,
Rev. A 4-30-84
Rev. B 3-18-85
Rev. C 6-17-94



040-20400 Nose Wheel Assembly

Jan. 1984,
Rev. A 4-30-84
Rev. B 3-18-85

13.2 Kit Parts List

PARKER HANNIFIN CORPORATION

AIRCRAFT WHEEL & BRAKE DIVISION

AVON, OHIO

PARTS LIST

199-126 CONVERSION KIT

BEECH SUPER KING AIR

ITEM	OLD P/N	CODE NO.	DESCRIPTION	QUANTITY
1	40-204	040-20400	Nose Wheel Assembly*	1
--			Installation Booklet	1
		50-91	Drawing	1
			Warranty Registration Card	1
			STC	1

This kit will convert one aircraft to Cleveland Nose Wheel

* For Subassembly and Parts Identification: See 40-204 Parts List

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

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

CERTIFICADO SUPLEMENTAR DE TIPO

(Supplemental Type Certificate)

NÚMERO (Number) **2013S02-15**

Este certificado, emitido com base na Lei nº 7565 "Código Brasileiro de Aeronáutica", de 19 de dezembro de 1986,
(This certificate, issued in the basis of the Law No. 7565 "Código Brasileiro de Aeronáutica", dated 19 December 1986,

é conferido ao (à): (is granted to:)
Parker Hannifin Corporation
Aircraft Wheel & Brake Division
1160 Center Road
Avon, Ohio 44011
USA

por ter a modificação ao projeto de tipo do produto abaixo citado, observadas as limitações e condições
(for having the change to the type design of the product mentioned below, with the limitations and conditions therefor as)

especificadas, satisfeito aos requisitos de aeronavegabilidade aplicáveis.
(specified hereon, met the applicable airworthiness requirements.)

Produto Original - Número do Certificado de Tipo: (Original Product – Type Certificate No:) A24CE (FAA)

Fabricante: (Manufacturer:) Hawker Beechcraft Corporation.

Modelo(s): (Model(s):) 200, 200T, B200, B200T, B200GT and B200CGT.

DESCRIÇÃO DA MODIFICAÇÃO AO PROJETO DE TIPO:
(Description of Type Design Change:)

Replace existing Main Wheel and Brakes by installing Parker Hannifin Conversion Kit 199-125, Rev. T, dated 12 Apr. 2011, per Installation Manual, Rev. L, dated 21 Jan. 2010, and installation Drawing 50-90, Rev. K, dated 21 Jan. 2010 or later revisions; and/or replace existing Nose Wheel by installing Parker Hannifin Conversion Kit 199-126, Rev. M, dated 31 July 2011, per Installation Manual, Rev. H, dated 25 July 2011, and installation Drawing 50-91, Rev. J, dated 25 July 2011 or later revisions.

This CST validates in Brazil the STC # SA757GL, issued by FAA (USA).

LIMITAÇÕES E CONDIÇÕES:
(Limitations and Conditions:)

See continuation sheet for applicable data.

DATAS:
(Dates of:)

Do Requerimento: (Application:) 06 Dec. 2012 **Da emissão**: (Issuance:) 26 Feb. 2013 **Da reemissão**: (Reissuance:) **Da emenda**: (Amendment:)

HÉLIO TARQUINIO JÚNIOR
Gerente-Geral, Certificação de Produto Aeronáutico
(General Manager, Aeronautical Product Certification)

DINO ISHIKURA
Superintendente de Aeronavegabilidade
(Airworthiness Superintendent)

Folha de Continuação ao
(Continuation Sheet to)

CERTIFICADO SUPLEMENTAR DE TIPO

(Supplemental Type Certificate)

NÚMERO **2013S02-15**
(Number)

LIMITAÇÕES E CONDIÇÕES:
(Limitations and Conditions:)

I. The approval of this type design change should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and any of those other previously approved modifications, including changes in Type Design, will introduce no adverse effect upon the airworthiness of that aircraft.

II. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

III. These modifications are approved for individual or joint installation on specified models equipped with landing gear that support 10 inches high floatation equipment.

IV. A copy of this Certificate shall be maintained as part of the permanent records of the modified aircraft.

----------END----------

European Aviation Safety Agency

SUPPLEMENTAL TYPE CERTIFICATE

10048423

This Supplemental Type Certificate is issued by EASA, acting in accordance with Regulation (EC) No. 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation and in accordance with Commission Regulation (EU) No. 748/2012 to

PARKER HANNIFIN CORPORATION
AIRCRAFT WHEEL & BRAKE DIVISION

1160 CENTER ROAD
AVON OH 44011
USA

and certifies that the change in the type design for the product listed below with the limitations and conditions specified meets the applicable Type Certification Basis and environmental protection requirements when operated within the conditions and limitations specified below:

Original Type Certificate Number : 1. FAA A24CE
Original Type Certificate Number : 2. EASA.IM.A.277
Type Certificate Holder : BEECHCRAFT CORPORATION
Type Design - Model : 1. 200, 200C, 200CT, 200T
Type Design - Model : 2. B200, B200C, B200CT,
Type Design - Model : 2. B200T, B200GT, B200CGT.
Original STC Number : FAA SA757GL

Description of Design Change:
Replacement of Main Wheels & Brakes and/or Nose Wheel.

EASA Certification Basis:
The Certification Basis (CB) for the original product remains applicable to this certificate/ approval. The requirements for environmental protection and the associated certified noise and/ or emissions levels of the original product are unchanged and remain applicable to this certificate/ approval.

See Continuation Sheet(s)

For the European Aviation Safety Agency,

Date of issue: 10 March 2014

European Aviation Safety Agency
Michael Düsing
Project Certification Manager

Note:
The following numbers are listed on the certificate:
EASA current Project Number: 0010027435-001

Associated Technical Documentation:
nstallation of Main Wheel and Brakes in accordance with Parker Hannifin Conversion kit 199-125 Rev R, dated September 07, 2010, per Installation Manual, Rev L, dated January 21, 2010, and Installation Drawing 50-90, Rev K, dated January 21, 2010, and/or:-

Installation of Nose Wheel in accordance with Parker Hannifin Conversion kit 199-126 Rev L, dated September 07, 2010, per Installation Manual, Rev G, dated January 21, 2010, and Installation Drawing 50-91, Rev H, dated January 21, 2010.

or later revisions of the above listed documents approved by EASA in accordance with EASA ED Decision 2004/04/CF (or subsequent revisions of this decision) and/ or the Technical Implementation Procedures of EU/ USA Bilateral Agreement.

Limitations/Conditions:
These modifications are approved for individual or joint installation on specified models that are equipped with landing gear that support 10 inch High Floatation equipment.

Prior to installation of this design change it must be determined that the interrelationship between this design change and any other previously installed design change and/ or repair will introduce no adverse effect upon the airworthiness of the product.

- end -

Note:
The following numbers are listed on the certificate:
EASA current Project Number: 0010027435-001

Luftfahrt-Bundesamt
I312/13/95-2021

Braunschweig, 21.6.1995

Mitteilung über die Ergänzung der Musterzulassung Nr. 0616/2021

STC-Inhaber:	Aircraft Wheel and Brake Division Parker Hannifin Corporation
Änderung:	Einrüstung Parker Hannifin Nose Wheel Conversion Kit 199-126
Muster/Baureihe:	Beech 65, 65-80, 65-A80, 65-88, 65-90, 65-A90, B90, C90 u. E90

Geräte-Kennblatt Nr.: 2021

Die Musterzulassung des/der o.a. Musters/Baureihe wird durch folgende Angaben ergänzt:

Die Verwendung des Parker Hannifin Nose Wheel Conversion Kit 199-126 in Beech 65, 65-80, 65-A80, 65-88, 65-90, 65-A90, B90, C90 und E90 entsprechend dem FAA Supplemental Type Certificate **SA1077GL** ist zugelassen.

So umgerüstete Flugzeuge sind zu betreiben nach den Installation Instructions und Installation Drawing 50-91, FAA-anerkannt am 18.03.1985 oder jede spätere FAA-anerkannte Fassung.

Unterlagen sind zu beziehen bei:

1) **Atlas Air Service GmbH**
Postfach 15 64
27766 Ganderkesee

oder

2) **Parker Hannifin Corporation**
Aircraft Wheel & Brake
1160 Center Road
P.O. Box 158
Avon, Ohio 44011
USA

Diese Mitteilung gilt in Verbindung mit dem Flugzeug-Kennblatt Nr. 2021, der jeweils gültigen Ausgabe.

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 SA1061GL

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

certifies that the change in the type design for the following product with the limitations and conditions thereof as specified hereon meets the airworthiness requirements of Part 23 *of the* Federal Aviation *Regulations.* (See Type Certificate A14CE for Complete Certification Basis).

Original Product — Type Certificate Number A14CE
Make Beech
Model 99, A99, A99A, B99, C99, 100, A100, B100

Description of Type Design Change

Replace existing Nose Wheel with Cleveland Nose Wheel P/N 40-204 by installing Parker Hannifin Conversion Kit 199-126, Revision B per Installation Instructions, and Installation Drawing 50-91, Revision C, dated March 18, 1985, or later FAA-approved revision.

Limitations and Conditions

The compatibility of these modifications 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 January 23, 1984

Date of issuance September 11, 1986

Date reissued

Date amended

By direction of the Administrator

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

United States of America
Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA1077GL

This certificate issued to Parker Hannifin Corporation
Aircraft Wheels and Brakes Division
1160 Center Road
Avon, OH 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.*

Original Product - Type Certificate Number: 3A20
Make: Hawker Beechcraft
Model: 65 (L-23F), A65, 65-80, 65-A80, 65-B80, 65-88, 65-90, 65-A90, 70, B90, C90, C90A, C90GT, E90, H90 (T-44A), C90GTi

Description of Type Design Change: Replace existing nose wheel with Cleveland Nose Wheel P/N 40-204 by installing Parker Hannifin Conversion Kit 199-126, Revision K, dated December 4, 2009, or later FAA approved revision.

Limitations and Conditions:

1. Compatibility of this design change with previously approved modifications must be determined by the installer.
2. A copy of this Certificate must be maintained as part of the permanent records for the modified aircraft.
3. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

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: January 23, 1984

Date of issuance: October 23, 1986

Date reissued: March 20, 2008

Date amended: March 12, 2008, February 4, 2009
July 29, 2010

By direction of the Administrator

(*Signature*)

Steven L. Lardinois
Manager, Systems & Flight Test 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.

United States of America

Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA1242GL

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

certifies that the change in the type design for the following product with the limitations and conditions thereof as specified hereon meets the airworthiness requirements of Part 23 *of the* Federal Aviation *Regulations.* (See Type Certificate Data Sheet A31CE for complete certification basis).

Original Product — Type Certificate Number A31CE
Make Beech
Model F90

Description of Type Design Change:
Replace existing nose wheel with Cleveland Nose Wheel P/N 40-204 by installing Parker Hannifin Conversion Kit 199-126, Revision B per Installation Instructions and Installation Drawing 50-91, Revision C, dated March 18, 1985, or later FAA-approved revision.

Limitations and Conditions: This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the interrelationship between this change and any of those other previously approved modifications will introduce no adverse effect upon the airworthiness of that 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: January 23, 1984

Date of issuance: September 30, 1987

Date reissued:

Date amended:

By direction of the Administrator

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

United States of America

Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA380CH

This certificate, issued to Aircraft Wheel and Brake Division
Parker Hannifin Corp.
1160 Center Road
Avon, OH 44011

certifies that the change in the type design for the following product with the limitations and conditions thereof as specified hereon meets the airworthiness requirements of Part 23 *of the* Federal Aviation *Regulations:* (See Type Certificate Data Sheet A24CE for complete certification basis.)

Original Product — Type Certificate Number A24CE

Make Beech

Model 300

Description of Type Design Change

Installation of Cleveland Nose Wheel P/N 40-204 in accordance with Parker Hannifin Conversion Kit Parts List 199-126, Rev. D, dated May 3, 1995, or later FAA approved revision.

Limitations and Conditions

Compatibility of this design change with 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 July 25, 1994 *Date reissued*

Date of issuance July 10, 1995 *Date amended*

By direction of the Administrator

Mary Ellen A. Schutt *(Signature)*
Acting Manager, Airframe & Administrative 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)

United States of America

Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA757GL

This certificate issued to

Parker Hannifin Corporation
Aircraft Wheel & Brake Division
1160 Center Road
Avon, OH 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 23 *of the* Federal Aviation *Regulations.*
See Type Certificate Data Sheet No. A24CE for complete certification basis.

Original Product—Type Certificate Number: A24CE

Make: Hawker Beechcraft Corporation

Model: 200, 200C, 200CT, 200T, B200, B200C, B200CT, B200T, B200GT, B200CGT

Description of Type Design Change:
Replace existing Main Wheel and Brakes by installing Parker Hannifin Conversion Kit 199-125, revision R, dated September 07, 2010 per Installation Manual, revision L, dated January 21, 2010, and Installation Drawing 50-90, revision K, dated January 21, 2010, or later FAA-approved revisions; and/or replace existing Nose Wheel by installing Parker Hannifin Conversion Kit 199-126, revision L, dated September 07, 2010, per Installation Manual, revision G, dated January 21, 2010, and Installation Drawing 50-91, revision H, dated January 21, 2010, or later FAA-approved revisions.

Limitations and Conditions:

1) These modifications are approved for individual or joint installation on specified models equipped with landing gear that support 10 inch high floatation equipment.
2) The installer must determine whether this design change is compatible with previously approved modifications.
3) If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

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: January 19, 1984

Date of issuance: May 1, 1984

Date reissued: February 25, 2011

Date amended: January 27, 2011

By direction of the Administrator

Steven L. Lardinois

(*Signature*)

Steven L. Lardinois
Manager, Systems and Flight Test 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.