

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

Form Approved  
Budget Bureau No. 04-R060.1

**MAJOR REPAIR AND ALTERATION**  
(Airframe, Powerplant, Propeller, or Appliance)

FOR FAA USE ONLY  
OFFICE IDENTIFICATION  
SW-FSDO-65

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE Cessna	MODEL T-40
	SERIAL NO. 3105	NATIONALITY AND REGISTRATION MARK N69072
2. OWNER	NAME (As shown on registration certificate) James Kramer	ADDRESS (As shown on registration certificate) 11275 Wingfoot Drive Boynton Beach, FL 33437

3. FOR FAA USE ONLY

THIS ALTERATION OF AIRCRAFT OR AIRCRAFT COMPONENTS WITH APPLICABLE AIRCRAFT-RELATED REQUIREMENTS IS APPROVED ONLY FOR THE ABOVE DESCRIBED AIRCRAFT SUBJECT TO CONTINUITY INSPECTION BY A PERSON AUTHORIZED BY FAR 43.9  
11-8-88 [Signature]  
DATE FAA INSPECTOR

4. UNIT IDENTIFICATION				5. TYPE	
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	***** (As described in item 1 above) *****				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS Sam J. Macre 609 North 18th. Street Blytheville, Ar. 72315	<input checked="" type="checkbox"/> U.S. CERTIFICATED MECHANIC	C. CERTIFICATE NO. 1082139
	<input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC	
	<input type="checkbox"/> CERTIFICATED REPAIR STATION	
	<input type="checkbox"/> MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

DATE 11-04-88	SIGNATURE OF AUTHORIZED INDIVIDUAL [Signature]
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7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is  APPROVED  REJECTED

BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	/ INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE	REPAIR STATION		
DATE OF APPROVAL OR REJECTION 11-13-88	CERTIFICATE OR DESIGNATION NO. 1082139	SIGNATURE OF AUTHORIZED INDIVIDUAL [Signature]		

## NOTICE

*Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.*

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

- Removed ineffective and troublesome original Hayes expanded tube brakes and wheels and installed Cleveland Kit # 199-88 consisting of all parts shown in attachment #1.

Installation was made in accordance with Cleveland Drawing #50-59 and Installation Instructions 1 through 14 contained on the Drawing, attachment # 2. Drawing #20-148 attachment # 3 was used for reference only.

Kit # 199-88 was designed for aircraft in the 5,500 to 7,000 pound gross weight class. The aircraft described in Item 1 of this form weighs 5700 pounds gross weight.

No modifications of the axle or Torque mounts was necessary.

Matching Part #1024C New Master Cylinder was installed.

Operational Taxi and High Speed check's completed and found to be more than satisfactory.

\*END\*

OS	MGR				(AS)
01	APS				A1
02	RECEIVED NOV 0 8 88 FAA SW-FSDO-11 (LIT)				A2
03				A3	
04				A4	
05				A5	
06				A6	
07				A7	
				AST	
	1	2	3		

☐ ADDITIONAL SHEETS ARE ATTACHED

AIRCRAFT WHEEL & BRAKE DIVISION

PARKER HANNIFIN CORPORATION

AVON, OHIO

Piston O Ring  
PARTS LIST

164-63-63A

.465

MS 28075-132

JOHN BRIDGES

\*199-88 CONVERSION KIT

BEECH MODEL 50 - TWIN BONANZA AIRCRAFT  
CONVERTED BY EXCALIBUR AVIATION, SPECIFIC MODELS "EXCALIBUR"  
AND "EXCALIBUR 800"

CESSNA 441-500 REGISTRATION N69272  
SER. NO. 3103 MOD. 411772

ATTACHMENT

PART NUMBER	DESCRIPTION	QUANTITY
30-99	Brake Assembly	2
40-134A	Wheel Assembly	2
104-00200	Fitting (AN815-4D)	2
101-00700	O-Ring (AN6227-7)	2
103-2130	Bolt (AN4-7A)	24
095-10500	Washer (AN960-816)	24
094-10400	Nut (AN365-524)	24
50-59	Installation Drawing	1
SA390GL	Supplemental Type Certificate	1
	Brake Lining Conditioning Procedure	1

THIS KIT WILL CONVERT ONE AIRCRAFT TO CLEVELAND WHEELS AND BRAKES.

NOTE: USE MIL-H-5606 BRAKE FLUID (RED OIL).

\*THIS KIT APPLIES ONLY TO BEECH MODEL 50 AIRCRAFT CONVERTED BY EXCALIBUR AVIATION TO THE FOLLOWING SPECIFIC MODELS: "EXCALIBUR" AND "EXCALIBUR 800."

## Master Cylinder Design Information

Assy. No.	Bore	Stroke	Cu. In. Disp.	Type	Port Size	Wgt Lbs.	Comments
10-67	.625	2.000	.61	Push	7/16-20	.66	Ports in-line, outlet 45° fitting, inlet straight fitting
10-45	.687	1.200	.36	Push	1/8-27 N.P.T.F.	.52	Reservoir Cap. = 3.0 cu. in mtg. hole dia. .190
10-42	.687	1.440	.53	Push	7/16-20	.60	Reservoir Cap. = 3.0 cu. in mtg. hole dia. .250 & .190
10-36	.687	1.440	.53	Push	7/16-20	.60	Reservoir Cap. = 3.0 cu. in. mtg. hole dias. .250 & 1.90
10-71	.687	1.440	.53	Push	7/16-20	.60	Same as 10-36
10-70	.750	1.250	.55	Push	7/16-20	.69	Ports in-line, no fittings
10-70A	.750	1.250	.55	Push	7/16-20	.63	Same as -70 except body
10-52	.750	1.500	.66	Push	1/8-27 N.P.T.F.		Ports in-line, no fittings
10-21	.750	1.750	.77	Push	1/8-27 N.P.T.F.	1.00	Reservoir - Cap. = 2.88 cu. in. with parking lever
10-21A	.750	1.750	.77	Push	1/8-27 N.P.T.F.	.90	Reservoir - Cap = 2.88 cu. in. without parking lever.
10-22	.750	1.750	.77	Push	Outlet 1/8-27 N.P.T.F.	.50	Inlet 90° - 1/4 dia. tube
10-22A	.750	1.750	.77	Push	1/8-27 N.P.T.F.	.50	No fittings
10-24C	.750	1.850	.81	Push	1/8-27 N.P.T.F.	.50	Ports in-line, no fittings extruded alum. body
10-24	.750	2.000	.88	Push	1/8-27 N.P.T.F.	.47	Ports in-line, no fittings interchangeable with -24C
10-17	.875	1.250	.75	Pull	7/16-20	.70	Ports in-line, no fittings
10-69	.875	1.440	.86	Push	7/16-20	.60	Reservoir Cap = 2.88 cu. in.
10-23	.927	1.250	.75	Pull	7/16-20	.65	No fittings, interchangeable with -23A
10-23A	.927	1.250	.71	Pull	7/16-20	.60	Same as -23, except body is extruded alum.
10-51A	1.00	1.350	1.04	Push	M10X1 (metric)	.53	Flange mounting

new # 10-24C Master Cylinder  
 Modified to 199-88  
 Brake + wheel  
 Jim Kramer  
 561-736-1317

July 1, 1985

**Cleveland Wheels & Brakes**  
 Avon, Ohio 44011

**Parker**  
 General Aviation

III-13

United States of America  
 Department of Transportation — Federal Aviation Administration  
**Supplemental Type Certificate**

*Number* SA390GL

*This certificate, issued to*

Parker Hannifin Corporation  
 Aircraft Wheel & Brake Division  
 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 Type Certificate Data Sheet 5A4 for complete certification basis.*

*Original Product — Type Certificate Number:* 5A4  
*Make:* Beech  
*Model:* 50, B50, C50, D50, D50A, D50B, D50C, D50E, E50, F50, G50, H50, and J50..

*Description of Type Design Change:*

Install Aircraft Wheel and Brake Conversion Kit P/N 199-88, no rev. dated January 8, 1980, in accordance with Cleveland Wheels and Brakes Installation Drawing 50-59, no rev., dated December 21, 1979, or later FAA approved revisions of Kit 199-88 and installation drawing 50-59.

*Limitations and Conditions:*

This STC applies only to the above models which have been modified by STC SA75SW. 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:* January 9, 1980

*Date received:*

*Date of issuance:* June 18, 1980

*Date amended:* March 25, 1985



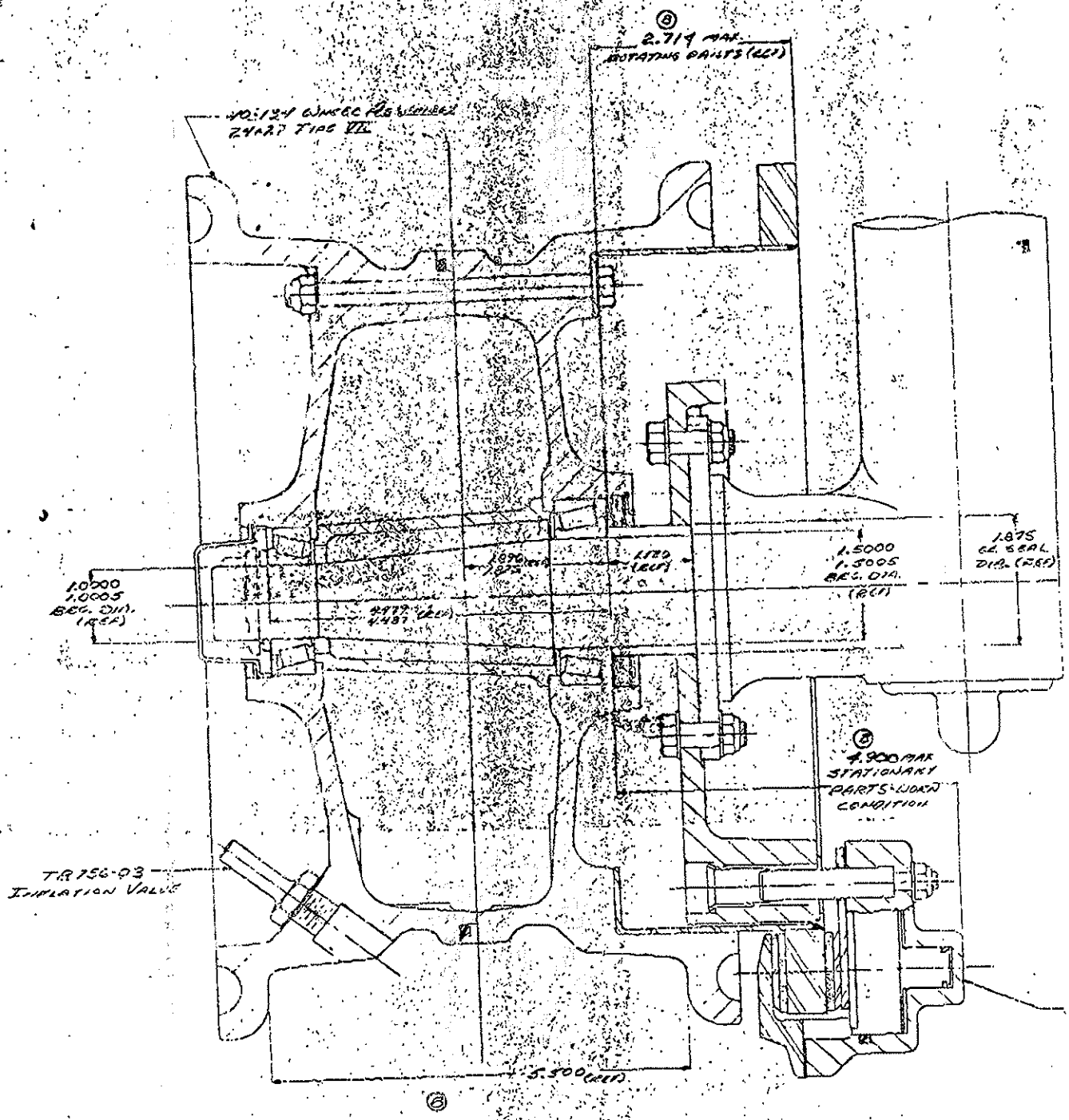
*By the Administrator*

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

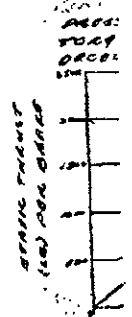
(Title)

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 or assigned with 14 CFR 21.67



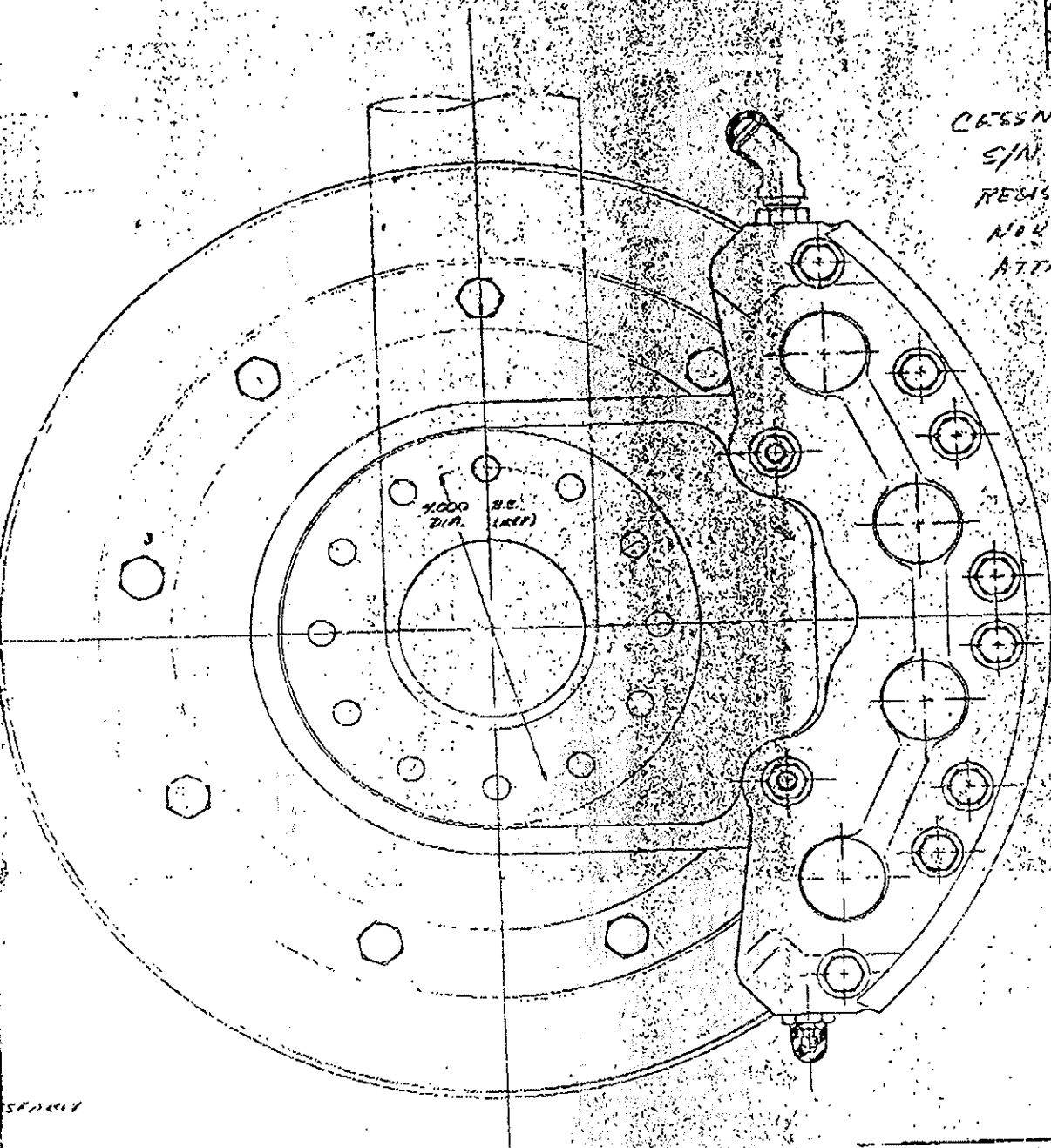
- NOTES:
1. WHEEL RATINGS:
    - STATIC LOAD --- 3800 LB
    - COMBINED LOAD (LIMIT 5108) --- 15,057 LB
    - SIDE LOAD --- 5592 LB
  2. BRAKE KINETIC ENERGY CAPACITY:
    - NORMAL --- 875,000 FT-LB. (3500 LB @ 2'E), 100 STOPS FROM 75.038 KTS @ 10 FT/S<sup>2</sup> DECELERATION
    - 1270 --- 1,800,000 FT-LB. (3500 LB @ 2'E), 1 STOP FROM 107.6 KTS @ 6 FT/S<sup>2</sup> DECELERATION
  3. BRAKE DISPLACEMENT:
    - NORMAL CLEARANCE TO 315 PSI --- .35 IN
    - MAX. CLEARANCE TO FULLY WORN --- 2.17 IN



20-148

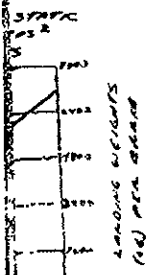
DATE	BY	DESCRIPTION OF CHANGE
1/15/87	A	REVISIONS TO DRAWING
1/20/87	B	STATIONARY TESTS

CESSNA T-50  
 S/N 3105  
 REG. N 69072  
 NOV. 4, 1978  
 ATTACHMENT # 3

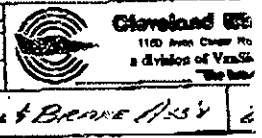


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REFERENCE PRINT ONLY  
 PARKER HANNIFIN CORP.  
 ENG MAY 07 1987 DEPT.  
 AVON, OHIO  
 DO NOT USE FOR PRODUCTION



CITY	ITEM	DATE	DESCRIPTION	MATERIAL & SPEC.	HEAT TREAT & SPEC.	FINISH
AVON	1000 S.C. D.P. (REF)					
AVON	1000 S.C. D.P. (REF)					



REV	DESCRIPTION OF CHANGE
1	CHG 6-C

REFERENCE  
PRINT ONLY  
PARKER HANNIFIN CORP.

ENG MAY 07 1987

AVON, OHIO  
DO NOT USE  
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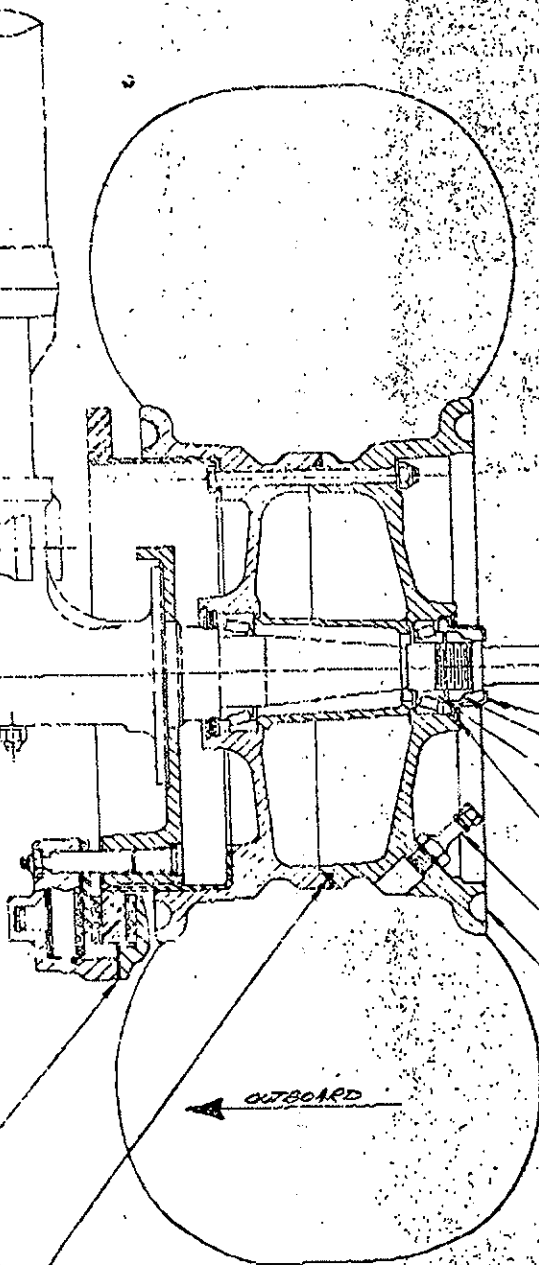
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MODEL: 750 CESSNA  
S/N: 3105  
172BIS  
NOV 4 1987

ATTACHMENT # 2

INSTRUCTIONS

1. REMOVE OLD BRAKE ONLY TO RECALIBRATE AND ENCLOSED 500 CONVERSIONS OF THE CONVERSION TOOL CONTAINING TILES USE THE TOOLLESS OF TOOL TYPE 650-10 TYPE III, 6 or 8
2. PARTS LIST AND LABELS AND WRITE FOR MANUAL, LABEL AND LABELS FOR TUBES VALVE AND LABEL, 5010 TO 7000 FOR THE VALVE LABEL AND LABEL 5010
3. JET UP AIRCRAFT FOR MANUAL REMOVE AND DISCARD EXISTING AIR LINE LABELS RETAIN 4100 AND 4100 WASHER
4. DISCONNECT AIRLINE HOSE FROM BRAKE INLET FITTING AND LABEL
5. REMOVE AND DISCARD EXISTING BOLTS AND NUTS
6. INSTALL TUBES PARTS 28-113, POSITION AS SHOWN. TORQUE MAINLINE BOLTS 130-100 IN LBS.
7. REMOVE OLD AIR LINE 139-58 HUBCAP ASSEMBLY AND 0100 CONVERSION LABEL FROM 139-58 HUBCAP ASSEMBLY AND STORE ON CLEAN SURFACE
8. INSTALL NEW AIR LINE ASSEMBLY ON ALL EXISTING BRACKETS. COIL THE AIR LINE INTO THE WHEEL AS SHOWN. TORQUE THE AIR LINE NUTS TO 20-25 IN LBS. THEN BACK OFF TO 20-25 IN LBS. TO 20-25 IN LBS. WHEN COMPLETE UNTIL A SLOT OF AIR LINE IS VISIBLE. INSTALL AN 580-5-5 CONVERSION METAL WHEEL AS SHOWN WITH 5100 RING
9. LOCATE 2 TO 3 SLITS IN 3039 BRAKE ASSEMBLY AND REMOVE OLD BRAKE SLIDER NEW BRAKE AT 7/16 2 HOUR HOLES AS SHOWN
10. REMOVE AIR LINE FROM 28-113 OVER ALL 9 THE BOLTS. REMOVE THE 28-113 FROM THE BRAKE SLIDER AND PLACE AS SHOWN. TORQUE EACH NUTS WITH BOLTS AND BOLTS TO 20-25 IN LBS.
11. CHECK AIRLINE HOSE TO 1 DISCARD EXISTING AS SHOWN. REMOVE HOSE LEVEL. USE 5010 SYSTEM
12. CHECK AND RELEASE BRAKE PEDALS. SEVERAL TIMES WITH WHEELS BY HAND. CHECKING FOR BRAKE PEDALS. IF SLIGHTLY STIFF OR HARD TO MOVE, CHECK FOR EXCESS BRAKE OIL. EXCESS OIL CAN BE REMOVED BY WIPING OFF EXCESS OIL. EXCESS OIL CAN BE CAUSED BY AN IMPROPERLY SEATED WHEEL
13. REMOVE AIRCRAFT FROM JACKS AND CONDITION WHEELS FOR ENCLOSED INSTRUCTION SHEET
14. WEIGHT AND BALANCE:
  - 139-58 HUBCAP ASSEMBLY WEIGHS 12.6 LBS.
  - 3039 BRAKE ASSEMBLY WEIGHS 6.36 LBS. (1)
 WITH ORIGINAL WHEELS AND BRAKE AND REVISE WEIGHT AND BALANCE DATA IN THE LOG BOOK



- 139-58 HUBCAP ASSEMBLY
- 1130-15 AIR LINE (Retain Existing Parts)
- 0100 BRAKE OIL
- 155-8 AIR LINE (Ret.)
- 110-9 TUBES VALVE (Ret.)
- 40-574 WHEEL ASSEMBLY

FOR USE WITH MIL-H-5606 BRAKE FLUID

QTY	ITEM	PART NO.	DESCRIPTION	MATERIAL & SPEC.	HEAT TREAT & SPEC.	FINISH
1	139-58 HUBCAP ASSEMBLY	139-58	HUBCAP ASSEMBLY	ALUMINUM		
1	3039 BRAKE ASSEMBLY	3039	BRAKE ASSEMBLY	STEEL		
1	1130-15 AIR LINE	1130-15	AIR LINE	STEEL		
1	0100 BRAKE OIL	0100	BRAKE OIL	MINERAL OIL		
1	155-8 AIR LINE	155-8	AIR LINE	STEEL		
1	110-9 TUBES VALVE	110-9	TUBES VALVE	STEEL		
1	40-574 WHEEL ASSEMBLY	40-574	WHEEL ASSEMBLY	STEEL		

