



Aircraft Wheel & Brake  
Parker Hannifin Corporation  
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Avon, Ohio 44011

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## PARTS LIST

### \* WHEEL & BRAKE SHIP SET

ORDER CODE: 199-07100

FOR GENERAL USAGE

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
30-60A	Main Brake Assembly (FAA Approved per TSO C26b)	2
40-60	Main Wheel Assembly (FAA Approved per TSO C26b)	2
<u>Publication Package (P/N PP199-07100) Consists of the following</u>		
199-07100 P/L	Parts List for Order Code: 199-07100 (This Document)	1
20-119	Wheel & Brake Drawing	1
30-60A	Brake Drawing	1
40-60	Wheel Drawing	1
50-43	Installation Drawing	1
IM199-71	Installation Manual	1
----	40-60/30-60 TSO Documentation Package	1
PRM13A	Conditioning Procedure for Non-Asbestos Organic Brake Lining	1

\* This Wheel & Brake Ship Set can be used to convert one Piper Cub to use Cleveland Wheels and Brakes. Installation approval must be obtained by the end user via FAA Form 337. Pertinent drawings for this installation, plus TSO Documentation for the 40-60/30-60 Series Main Wheel & Brake are included as aids for the installation approval process.

### NOTES:

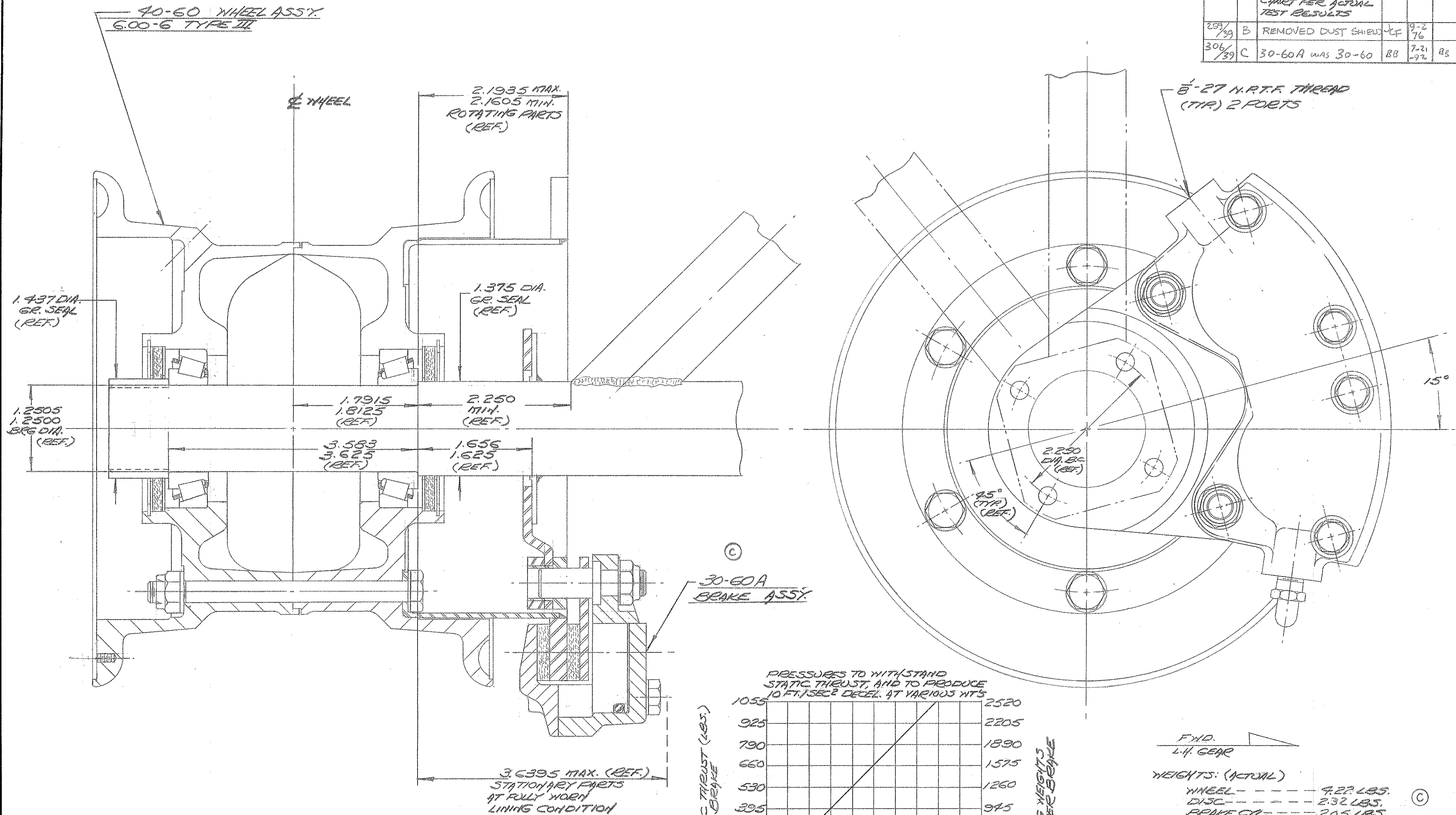
1. The Cleveland Wheels & Brakes as listed are FAA TSO-C26b approved, quantities are furnished in pairs for replacement of existing equipment on FAA Type Certificated Aircraft (Original Equipment TC Approved or per TC holder Service Bulletin) or initial installation on an experimental non FAA Type Certificated Aircraft.
2. **Note! For a product to be TSO qualified, it has to have successfully demonstrated its ability to meet minimum performance standards in accordance with FAA recognized rating methods. The TSO approval of a product does not constitute installation approval or applicability on an FAA Type Certificated Aircraft.** It is the responsibility of those installing these products to determine that the aircraft installation and its wheel and brake performance requirements are compatible for the TSO ratings of the wheel and brake. TSO approved products must have separate approval for installation in a FAA type certificated aircraft. TSO Approved Products may be installed only if performed under Title 14 CFR Part 43 or the applicable airworthiness requirements.
3. Be advised that number "199-07100" is an Order Code Number only, to identify the grouping of a pre-packaged ship set of TSO Approved wheels and brakes for customer ordering and shipping convenience. At time of installation of parts contained within, the installer is to refer only to the Part Number of each listed wheel and brake assembly to indicate what parts have been installed on the aircraft. Do not refer to the 199-07100 order code number for installation purposes, as it is not an FAA recognized part number.
4. "Removed"

Order Code Number 199-07100 P/L  
NC 08-19-1976  
Rev. A 12-23-1987 (287-22)  
Rev. B 07-21-1992 (0306-39)  
Rev. C 08-08-2006 (0370-77)  
Rev. D 09-05-2012 (0013616)  
Rev. E 10-24-2018 (0096931)

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DO NOT SCALE

20-119						C
CHANGE NOTICE	LET-TER	DESCRIPTION OF CHANGE	CHG. BY	DATE	CHK'D. BY	
259/15	A	ADDED DUST SHIELD REVISED THRUST CHART PER ACTUAL TEST RESULTS	W	6-9 76		
289/39	B	REMOVED DUST SHIELD	CF	9-2 76		
306/39	C	30-60A WAS 30-60	BB	7-21 76	BB	



- NOTES:
1. WHEEL RATINGS PER FAA-TSO-C266  
STATIC RADIAL LOAD = 1850 LBS.  
LIMIT RADIAL LOAD = 7500 LBS.  
LIMIT AXIAL LOAD = 2900 LBS.  
COMBINED LIMIT, RADIAL AND AXIAL LOAD = 7980 LBS.
  2. BRAKE KINETIC ENERGY CAPACITY:  
220,000 FT LBS., 100 STOPS FROM 55.36 KTS.  
AT 10 FT/SEC<sup>2</sup> DECELERATION WITHOUT  
DISC OR LINING CHANGE
  3. BRAKE FLUID DISPLACEMENT:  
MAX. CLEARANCE TO 350 P.S.I. = .19 IN<sup>3</sup>  
MAX., NEW FULLY WORN = 1.03 IN<sup>3</sup>

QTY	QTY	ITEM	PART NO.	DESCRIPTION	MATERIAL & SPEC.	HEAT TREAT & SPEC.	FINISH & SPEC.	WGT.
NEXT ASSEMBLY	QTY	FINAL ASSEMBLY	QTY	PATTERN, CASTING OR BLANK NO.	DRAWN BY 6-15-76 Jm	CHECKED BY	SCALE	
THIS DESIGN IS THE PRO- PERTY OF CLEVELAND WHEELS & BRAKES AND IS NOT TO BE COPIED, DUPLICATED, OR USED AS THE BASIS FOR MANUFACTURE OR SALE OF EQUIPMENT WITHOUT WRITTEN PERMISSION.				ZYGLO PER MIL-I-6866 STAMP M ON PART	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.			
				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				
				NAME WHEEL & BRAKE ASSY		20-119		

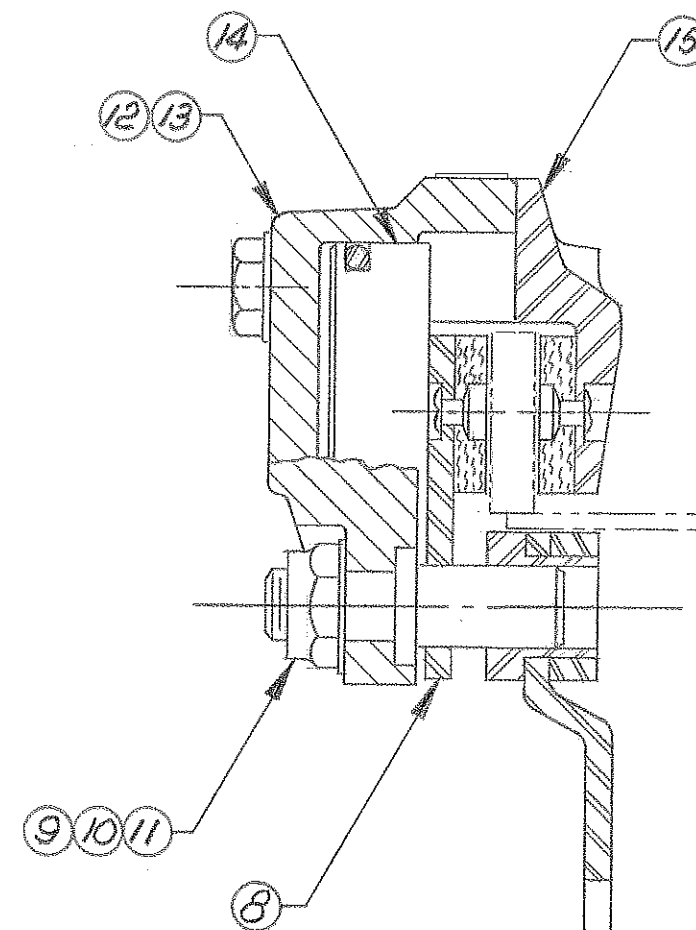
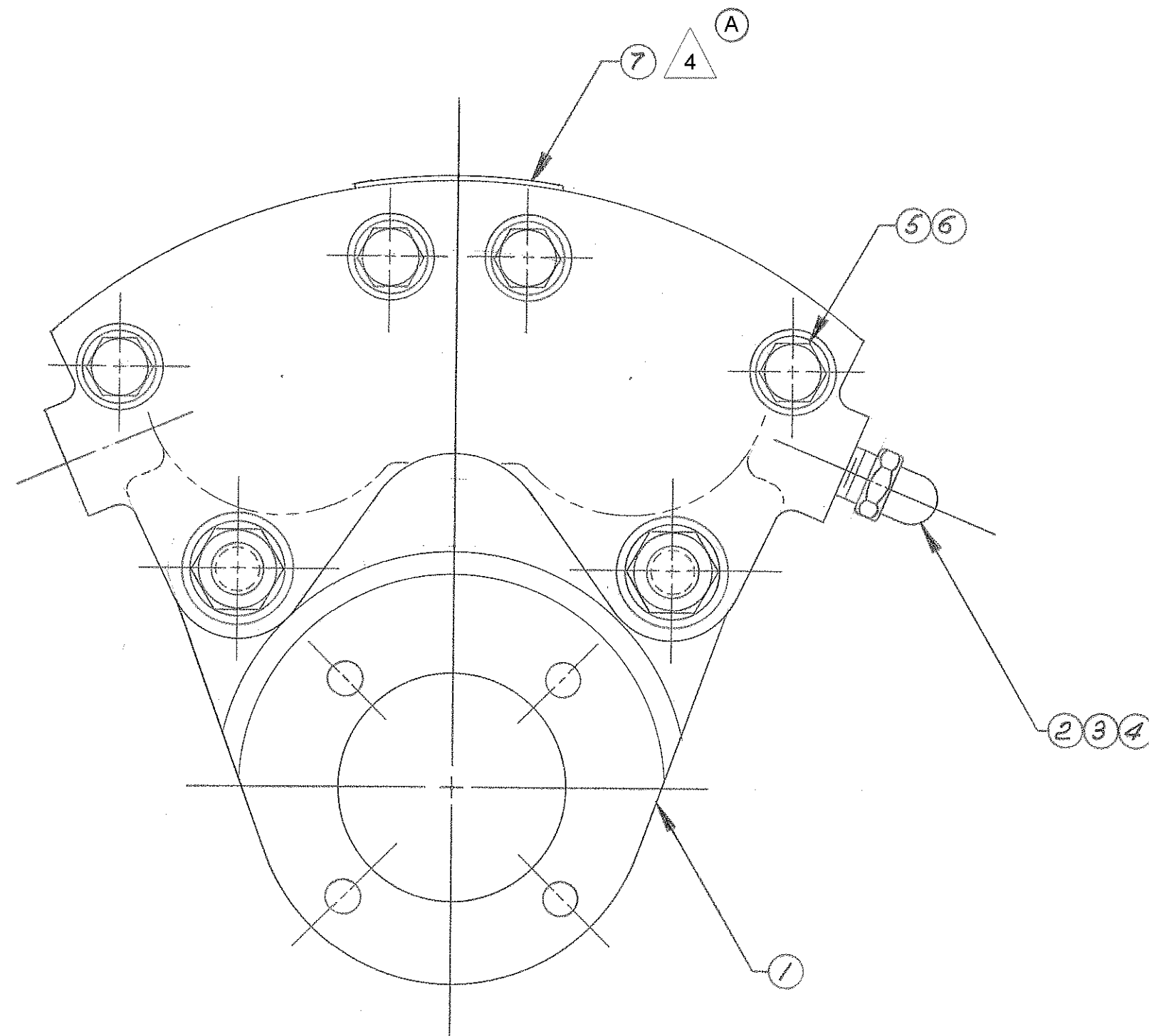
020-11900

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(030-06001)		30-60A		A	
CHANGE NOTICE	LET-TER	DESCRIPTION OF CHANGE	CHG. BY	DATE	CHK'D BY
0389-47	A	SEE C/N	GL	06-01-2010	DB ML




(REF.)  
BRAKE DISC ASSY  
164-06700 USED WITH  
30-60A BRAKE ASSY

BRAKE CAPACITY:  
KINETIC ENERGY CAPACITY: 220,000 FT-LBS.  
MAXIMUM STRUCTURAL TORQUE: 1388 FT-LBS.  
USED WITH WHEEL NO.: 40-60A  
TIRE SIZE: 6.00-6, 7.00-6, 8.00-6

NOTES:

1. BRAKE ASSY TO BE TESTED PER INSPECTION PROCEDURE #106
2. CYLINDER ASSY (091-08901) INCLUDES ALL PARTS EXCEPT TORQUE PLATE ASSY (075-12500)
3. BRAKE QUALIFIED PER FAA-TSO-C266

- (A) 4. NAMEPLATE (ITEM 7) TO BE COMPLETED WITH THE FOLLOWING INFORMATION:
- A. PART NO.: 30-60A
  - B. TORQUE PROCESS: TORQUE
  - C. TORQUE VALUE: 65-75 (IN-LBS)
  - D. QUALIFICATION BASIS: FAA TSO C266
  - E. MFG. DATE: MO/YR (E.G. MAY 2010 IS 05/10)

	2	15	074-02700	BACK PLATE ASSEMBLY	(A)	1	8	073-04100	PRESSURE PLATE ASSEMBLY		
	2	14	092-00700	PISTON ASSEMBLY		1	7	166-31000	NAME PLATE		
2	1	13	091-08901	CYLINDER ASSEMBLY		4	6	095-10200	WASHER		
	1	12	061-06701	CYLINDER		4	5	103-12100	BOLT		
	2	11	095-10100	WASHER		1	4	183-00100	CAP		
	2	10	094-10100	NUT		1	3	079-00300	SCREW		
	2	9	063-00200	ANCHOR BOLT		1	2	081-00100	SEAT		
						1	1	075-12500	TORQUE PLATE ASSEMBLY		
			X	30-60A	BRAKE ASS'Y					275	
QTY	QTY	ITEM	PART NO.	DESCRIPTION		MATERIAL & SPEC.		HEAT TREAT & SPEC.		FINISH & SPEC.	WGT.
NEXT ASSEMBLY			QTY	FINAL ASSEMBLY	QTY	PATTERN, CASTING OR BLANK NO.	DRAWN BY P.H. 8/1/85		 <b>Cleveland Wheels &amp; Brakes</b> 1160 Avon Center Road, Avon, Ohio 44011 a division of VanSickle Industries, Inc. "the brake people"		
20-119A			1	20-119A	1		CHECKED BY				
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				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		BREAK SHARP EDGES .010 UNLESS NOTED. REMOVE ALL BURRS BEFORE PLAYING. DRILL PER INSP. PROCEDURE NO. 114.					









# Cleveland

Wheels & Brakes

Parker Hannifin Corporation

**Aircraft Wheel & Brake**

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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.