



## Product Conversion Kit Directory

Cleveland Wheels & Brakes

Directory AWBPCKD0001-6/USA

**Cleveland**  
Wheels & Brakes

Tech Support  
1-800-BRAKING  
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## Revision Highlights

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### Issue 6, dated January 10, 2016

Page	Description of Change
6	Beechcraft, 199-110: (add) ANAC STC 2015S11-17 for listed models.

**Introduction**

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**- STOP -**

**SOME CONVERSION KITS SUPPORT NUMEROUS MODELS OF AIRCRAFT TOGETHER WITH THE VARIOUS MOUNTING AND ROUTING CONFIGURATIONS OF EQUIPMENT BEING REPLACED. THEREFORE, SOME KITS WILL NOT INCLUDE THE HARDWARE NEEDED TO COMPLETE THE INSTALLATION. THIS HARDWARE MUST BE PURCHASED SEPARATELY.**

**Note!**

Unless otherwise noted, listed Wheels and Brakes are FAA TSO C26 Approved.

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.

Prior to installing kits, please verify that the wheel and brake assembly numbers as listed match the model numbers as indicated on the nameplates.

For quick reference, disc and lining part numbers are listed in the directory. Manufacturers and aircraft are listed alphabetically with models listed numerically. Actions affecting a particular kit will be noted below each applicability data table.

Refer to the Cleveland Wheels & Brakes Product Catalog, AWBPC0001, for a complete parts breakdown of the specific part assembly. The Product Catalog parts breakdown will also contain additional information such as superseding equipment, applicable upgrades and other pertinent information.

**For technical assistance, contact the  
TECHNICAL SERVICES HOTLINE:  
clevelandwbhelp@parker.com  
Fax: 440-937-5409  
1-800-BRAKING (272-5464)**



**Applicability Data**

Model/ Name	Kit Number	Tire Size	Main Wheel Assembly	Standard Disc	Chrome Disc	Brake Assembly	Lining	Type
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**Aero Commander**

Lark 100-180	199-188	6.00-6	40-86A	164-02000	164-12000	30-56F	066-10500	O
		Installation per FAA STC SA1635GL.						

**Ayres**

S-2R (Thrush)	199-68A	29 x 11.00-10	40-133	N/A	164-05806	30-98A	066-10800	O
		Replaces surplus 27" W & B. Installation per FAA STC SA162GL. Use Automotive Brake Fluid only. Kit also includes hydraulic hoses and mounting hardware.						

**Beechcraft**

A-23,19, 19A, M19A, B19 (S/N MB-1 thru MB-521), 23, A23, A23A, B23, C23 (S/N M-2 thru M1361), A23-24, A24 (S/N MA-1 thru MA-268), A24R (S/N MC-2 thru MC-97)	199-124 (1)	6.00-6	40-113C	164-04300	164-14300	30-75B	066-10500	O
		Installation per FAA STC SA718GL. Kit also includes axle spacers and washers, and mounting hardware.						
35, A35, B35, C35, D35, E35, F35, G35, 35R, 35-33, 35-A33, 35-B33, 35-C33, 35-C33A, E33A, F33, F33A, F33C, G33, H35, J35, K35, M35, N35, P35, S35, V35, V35A, V35B, A36	199-49 (1)	6.00-6 7.00-6	40-83	164-02504	164-12504	30-54	066-10500	O
		Installation per FAA STC SA119GL. Kit also includes axle spacers, mounting hardware, hydraulic hoses, and bulkhead fittings.						
35, A35, B35, C35, D35, E35, F35, G35, 35R, H35, J35, K35, M35, N35, P35, S35, 45(TY-34), A45 (T-34A, B-45), D45 (T-34B)	199-50	6.50-8	40-98	164-02706	N/A	30-66	066-04400	M
		Installation per FAA STC SA199GL. (Also applicable to Beech Baron-Twin Engine). Kit also includes axle spacers, mounting hardware, hydraulic hoses, and bulkhead fittings.						

(1) Also available with chrome plated brake discs. To order, specify kit number followed by "CHROME".

**Cessna**

120, 140 (S/N 8004 thru 13399), 120, 140, 140A (S/N 13400 & up), 170, 170A, 170B, 172, 172A thru 172E, 175, 175A, 175B, 175C, P172D, 180, 180A thru 180F, 182, 182A thru 182G.	199-46 (1)	6.00-6	40-97A	164-02601	164-12601	30-63A	066-10500	O
		Converts Goodyear to Cleveland; Cannot be used with crosswind landing gear. Installation per FAA STC SA13GL.						
180, 180A thru 180H, 180J, 180K, 185, 185A thru 185E, A185E, A185F, 206, P206, U206, U206F, U206G, TU206E, TU206F, TU206G	199-62 (1)	8.00-6	40-75D	164-03601	164-13601	30-52N	066-10500	O
	The 199-62 kit is not a replacement for McCauley. The 199-62 kit may not work with wheel pants due to the wider offset of brake disc.							
180, 180A thru 180F, 180H, 180J, 185, 185A, 185B, A185E, A185F, 206E, 206F, TU206E, TU206F, 210, 210A, 210B, 210C, 210K, 210L, 210M, T210C, T210K, T210L, T210M	199-60 (1)	6.00-6 15 x 6.00-6	40-75B	164-01501	164-11501	30-52	066-10500	O
		This kit is to be used only with Cessna Axles P/N 0541124 and 1441003-1. Not for use on aircraft equipped with crosswind landing gear. Installation per FAA STC SA52GL and SA62GL.						
P210N (S/N P21000001 thru P21000150)	199-60A (1)	6.00-6	40-75B	164-01501	164-11501	30-52U	066-10500	O
		Installation per FAA STC SA52GL.						
190, 195, 195A, 195B	199-61	6.50-10	40-40C	164-00806	N/A	30-28C	066-03300	M
		This kit is not for use on aircraft equipped with crosswind landing gear. Installation per FAA STC SA54GL. Kit also includes hydraulic hoses.						

(1) Also available with chrome plated brake discs. To order, specify kit number followed by "CHROME".

**Cleveland**

Wheels & Brakes



## Applicability Data

Model/ Name	Kit Number	Tire Size	Main Wheel Assembly	Standard Disc	Chrome Disc	Brake Assembly	Lining	Type
<b>deHavilland</b>								
Chipmunk DHC-1-21, -22, -22A DHC-1B-2-S3, -S5	199-79 (1)	6.00-6	40-97D	164-02601	164-12601	30-63P	066-10500	O
		Installation per FAA STC SA748S0, SA1011S0. Kit also includes axle spacers and mounting hardware.						
Beaver DHC-2 Mk.I, Mk II, Mk. III	199-95	8.50-10	40-134	164-06306	N/A	30-99	066-06600	M
		Installation per FAA STC SA1402GL or Canadian STA SA90-1. Kit also includes brake inlet fitting and mounting hardware.						
(1) Also available with chrome plated brake discs. To order, specify kit number followed by "CHROME".								
<b>Ercoupe</b>								
E, G, 415-C, 415-D & 415-CD (S/N 813 & up) ERCO FORNEY F-1, F-1A	199-69	6.00-6	40-41	164-00300	N/A	30-30	066-10500	O
		Installation per FAA STC SA120GL, SA127GL.						
<b>Globe Swift</b>								
GC1A, GC1B	199-48 (1)	6.00-6	40-113C	164-04300	164-14300	30-79B	066-10500	O
		Installation per FAA STC SA2GL. Kit also includes axle spacers.						
(1) Also available with chrome plated brake discs. To order, specify kit number followed by "CHROME".								
<b>Navion</b>								
A, B, D, E, F, G, H	199-52	7.00-8 (main) 6.00-6 (nose)	40-98D (main) 40-76B (nose)	164-02701	N/A	30-66B	066-11000	O
		Main and Nose wheel. Installation per FAA STC SA36GL. Kit also includes NLG and MLG axle spacers, dust shield and hardware, and hydraulic hoses.						
A, B, D, E, F, G, H	199-52A	7.00-8	40-98D	164-02701	N/A	30-66B	066-11000	O
		Mains only. Installation per FAA STC SA46GL. Kit also includes axle spacers, dust shield and hardware, and hydraulic hoses.						
<b>Pilatus</b>								
PC-12, PC-12/45, PC-12/47, PC-12/47E	199-241	8.50-10	40-424 (1)	159-07400 (rotor disc)	N/A	30-244 (1)	109-04000 (wear pad)	----
		Installation per FAA STC SA01376CH, EASA STC 10027890, and ANAC STC 2011S03-19. (1) Internal wheel & brake design.						
<b>Piper</b>								
PA22-125, PA22-135, PA22-150, PA22-160	199-276		40-28	164-00500	N/A	30-18	066-10600	O
		This kit available only from Univair Aircraft Corporation. Installation per Univair STC SA91AL.						

**Cleveland**

Wheels &amp; Brakes



**Applicability Data**

Model/Name	Kit Number	Tire Size	Main Wheel Assembly	Standard Disc	Chrome Disc	Brake Assembly	Lining	Type
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**Stinson**

108 Series	199-87 (1)	7.00-6	40-97D	164-02601	164-12601	30-63Q	066-10500	O
		This kit available only from Univair Aircraft Corporation. Installation per Univair TC approval. Kit also includes mounting hardware and hydraulic hoses.						

(1) Also available with chrome plated brake disc. To order, specify kit number, followed by "CHROME".

**Univair Aircraft Corporation**

Refer to the Univair Aircraft Aircraft Corporation Master Eligibility List.	199-231		40-84	164-01900	N/A	30-41B	066-10600	O
		This wheel and brake kit has been pre-packaged for Univair Aircraft Corporation by Parker Hannifin, Aircraft Wheel and Brake. Aircraft eligibility is the sole responsibility of Univair Aircraft Corporation. Parker Hannifin, Aircraft Wheel and Brake assumes no responsibility for the application of this equipment.						

Applicability Data

Model/ Name	Kit Number	Tire Size	Main Wheel Assembly	Standard Disc	Chrome Disc	Brake Assembly	Lining	Type
<b>Beechcraft</b> D18C, D18S, E18S, E18S-9700, G18S, H18, C45G, TC-45G, RC-45J, C-45H, TC-45H, TC-45J, JRB-6, 3N, 3NM, 3TM	199-127	8.50-10 8 or 10 ply	40-170	164-20900	N/A	30-144B	066-09000	M
		Applicable to Tricycle landing gear with 10" main wheel & brake. Installation per FAA STC SA788GL. Kit also includes mounting hardware and aluminum fillers for gear door modification.						
	199-129	5.00-5	40-168 (tail)	----	----	----	----	----
	Converts Tail Wheel to 5.00-5 Type III. Installation per FAA STC SA829GL. Kit also includes axle spacer.							
	199-141	11.00-12	040-21101	164-22400	N/A	30-170	066-10000	M
	Applicable to aircraft equipped with 12" main wheel & brake. Installation per FAA STC SA1222GL. Kit also includes mounting hardware, axle spacers, hydraulic hoses, and shuttle valve relocation hardware.							
D55, D55A, E55, E55A, 95, B95, B95A, D95A, E95, 95-55, 95-A55, 95-B55, 95-B55A, 95-B55B, 95-C55, 95-C55A	199-50	6.50-8	40-98	164-02706	N/A	30-66	066-04400	M
	Uses 2 piston brake. Installation per FAA STC SA19GL. (Also applicable to Beech Bonanza - Single Engine). Kit also includes axle spacers, mounting hardware, hydraulic hoses, and bulkhead fittings.							
D55, D55A, E55, E55A, 58, 58A, 95, B95, B95A, D95A, E95, 95-55, 95A-55, 95-B55, 95-B55A, 95-B55B, 95-C55, 95-C55A	199-138	6.50-8 19.5 x 6.75-8	40-128D	164-06106	N/A	30-93C	066-09700	M
	Uses 3 piston brake. Installation per FAA STC SA912GL. Kit also includes mounting hardware and hydraulic fittings.							
50, B50, C50, D50, D50A, D50B, D50C, D50E, E50, F50, G50, H50, J50	199-88	8.50-10	40-134A	164-06306	N/A	30-99	066-06600	M
	Applicable only to models modified per Excalibur STC SA75SW. Installation per FAA STC SA390GL. Kit also includes mounting hardware and hydraulic fittings.							
58P, 58TC, 60, A60, B60	199-73	6.50-8 19.5 x 6.75-8	40-128	164-06106	N/A	30-93	066-04400	M
	Installation per FAA STC SA178GL, SA179GL. Kit also includes axle spacers, hydraulic hoses, and hydraulic fittings.							
65, A65, 70, 65-80, 65-A80, 65-B80, 65-88	199-123	8.50-10	40-170B	164-22900	N/A	30-144A	066-09000	M
	Installation per FAA STC SA673GL. Kit also includes mounting hardware, bearing washer, brackets and fillers for wheel well modification, and hubcaps.							
65-90, 65-A90, 65-A90-1 (JU-21A), 65-A90-4 (RU-21E, RU-21H), B90, C90, C90A, C90GT, C90GTi, E90, H90 (T-44A),	199-90	8.50-10	40-170A	164-20900	N/A	30-144	066-09000	M
	STC applicability: FAA STC SA619GL (all models). Brazilian STC 9210-04 (all models). EASA STC 10039144 (all models). Australian STC F88/865 (models: 90, A90, B90, C90, E90). Kit also includes mounting hardware, bearing washer, brackets and fillers for wheel well modification, and hubcaps.							
F90, 99, 99A, A99A, B99, C99, 100, A100, B100, 200, 200C, 200CT, 200T, A200, A200C, A200CT, B200, B200C, B200CT, B200T, B200GT, B200CGT	199-110	18 x 5.5	40-289	164-21000	N/A	30-146	066-09100 066-09200	M
	For aircraft equipped with standard landing gear. STC applicability: FAA STC SA646GL, SA650GL, SA890GL (all models). EASA STC 10043296 (models: 200, 200C, 200CT, 200T, A200, A200C, A200CT, B200, B200C, B200CT, B200T, B200GT, B200CGT). ANAC STC 2013S08-15 (models: 200, 200T, A200, B200, B200T, B200GT, B200CGT). ANAC STC 2015S11-17 (F90). Kit also includes hydraulic hoses.							
	199-168	----	----	----	----	----	----	----
Hot Air Manifold Kit for aircraft equipped with brake deice. Installation only in conjunction with Kit 199-110.								





Applicability Data

Model/Name	Kit Number	Tire Size	Main Wheel Assembly	Standard Disc	Chrome Disc	Brake Assembly	Lining	Type
Beechcraft (continued) F90, 99, 99A, A99A, B99, C99, 100, A100, B100, 200, 200C, 200CT, 200T, B200, B200C, B200T, B200CT, B200GT, B200CGT	199-125	6.50-10 22 x 6.75-10	40-203	159-01200	N/A	30-162 (1)	109-00200 (wear pad)	M
	For aircraft equipped with High Flotation Landing Gear. STC applicability: FAA STC SA757GL, SA1509GL, SA1510GL (all models). Australian STC F88/514 (model 200). Brazilian STC 2013-S02-15 (models: 200, 200T, B200, B200T, B200GT, B200CGT). Brazilian STC 2014-S04-27 (model F90). EASA STC 10048423 (models: 200, 200C, 200CT, 200T, B200, B200C, B200CT, B200T, B200GT, B200CGT). Kit also includes mounting hardware, axle spacer, swivel kit replacement O-rings, and brake de-ice bracket. (1) Internal wheel & brake design.							
65, A65, 65-80, 65-A80, 65-B80, 65-88, 65-90, 65-A90, 70, B90, C90, C90A, C90GT, C90GTi, E90, F90, H90 (T-44A), 99, A99, A99A, B99, C99, 100, A100, B100, 200, 200C, 200CT, 200T, B200, B200C, B200T, B200CT, B200GT, B200CGT, 300, B300, B300C	199-126	6.50-10 22 x 6.75-10	40-204 (nose)	----	----	----	----	----
	Nose wheel conversion kit. STC applicability: FAA STC SA757GL, SA1061GL, SA1077GL, SA1242GL, SA380CH (all models). Australian STC F88/514 (model 200). Brazilian STC 2013-S02-15 (models: 200, 200T, B200, B200T, B200GT, B200CGT). Brazilian STC 2014-S08-01 (models: 65, A65, 65-80, 65-A80, 65-B80, 65-88, 65-90, 95-A90, 70, B90, C90, C90A, C90GT, C90GTi, E90). EASA STC 10048423 (models: 200, 200C, 200CT, 200T, B200, B200C, B200CT, B200T, B200GT, B200CGT). EASA STC 10053243 (models: 65, A65, 65-80, 65-A80, 65-B80, 65-88, 65-90, 65-A90, 70, B90, C90, E90, H90, C90A, C90GT, C90GTi).							
1900C, 1900D	199-184	6.50-10 22 x 6.75-10	40-273A (1)	159-04000 (rotor disc)	N/A	30-204 (1)	109-00201 (wear pad)	----
	Installation per FAA STC SA1789GL. Inactive, superseded by 199-220 Kit. (1) Internal wheel & brake design.							
	199-220	6.50-10 22 x 6.75-10	40-273A (1)	159-05900 (rotor disc)	N/A	30-204A (1)	109-00201 (wear pad)	----
	Installation per FAA STC SA1789GL. Kit also includes mounting hardware, swivel kit replacement O-rings, brake de-ice manifold kit 199-213. (1) Internal wheel & brake design.							
1900D	199-256	6.50-8 19.5 x 6.75-8	40-450 (nose)	----	----	----	----	----
	Nose wheel conversion kit. Installation per FAA STC SA02204CH.							
1900D	199-213	----	----	----	----	----	----	----
	Brake De-ice manifold kit. Installation only in conjunction with kit 199-220 or 199-220A. For aircraft equipped with Beech de-ice manifold P/N 114- 810088-5. 2 Kits required per aircraft.							
1900D	199-220A	6.50-10 22 x 6.75-10	40-273B (1)	159-05900 (rotor disc)	N/A	30-204A (1)	109-00201 (wear pad)	----
	For aircraft equipped with anti-skid. Installation per FAA STC SA1789GL. Kit also includes mounting hardware, swivel kit replacement O-rings, axle nut hardware, and brake de-ice manifold kit 199-213. (1) Internal wheel & brake design.							
1900C	199-212	----	----	----	----	----	----	----
	Brake De-ice manifold support kit. Installation only in conjunction with kit 199-220. For aircraft with Beech de-ice manifold P/N 101-810071-1. 2 kits required per aircraft.							



## Applicability Data

Model/ Name	Kit Number	Tire Size	Main Wheel Assembly	Standard Disc	Chrome Disc	Brake Assembly	Lining	Type
310, 310A thru 310H, E310H, 310I, 310J, 310J-1, E310J, 310K, 310L, 310N, 310P, T310P, 310Q, T310Q, 310R, T310R, 320, 320-1, 320A, 320B, 320C, 320D, 320E, 320F	199-64	6.50-10	40-40B	164-01406	N/A	30-28D	066-03300	M
		Installation per FAA STC SA110GL, SA111GL.						
340, 340A, 401, 401A, 401B, 402, 402A, 402B, 411, 411A, 414	199-72	6.50-10	----	164-06406	N/A	30-100	066-06600	M
		Upgrades existing Cleveland wheel & brake 40-40A/30-28B to heavy duty 40-135/30-100. Installation per FAA STC SA167GL, SA281GL. Kit also includes axle spacers and hydraulic fittings.						
340, 340A, 401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, 421C	199-76	6.50-10	40-135A	164-20306	N/A	30-100	066-06600	M
		Installation per FAA STC SA197GL, SA664GL. Kit also includes axle spacers and hydraulic fittings.						
404	199-78	22 x 7.75-10	40-132	164-09100	N/A	30-97	066-06400	M
		Installation per FAA STC SA781GL. Kit also includes mating hardware.						
441	199-115	22 x 7.75-10	40-169	164-20700	N/A	30-143	066-07300	M
		Installation per FAA STC SA644GL. Kit also includes master cylinder assemblies and axle mounting hardware.						
500, 501, 550, 551, S550	199-137	18 x 4.4	40-212 (nose)	----	----	----	----	----
		Nose Wheel conversion kit. Installation per FAA STC SA882GL, SA883GL.						
500, 501, 550, 551	199-164	22 x 8.0-10	40-239 (1)	159-03500 (rotor disc)	N/A	30-189A (1)	109-00100 (wear pad)	----
		For aircraft with power assist brakes only. Installation per FAA STC SA1297GL, SA1298GL. Kit also includes hydraulic expander fittings. (1) Internal wheel & brake design.						
S550	199-177	22 x 8.0-10	40-202 (1)	159-03500 (rotor disc)	N/A	30-161A (1)	109-00100 (wear pad)	----
		Installation per FAA STC SA1441GL. Kit also includes axle spacers, washers and hydraulic hoses. (1) Internal wheel & brake design.						

## deHavilland

Twin Otter DHC-6-1, -100, -200, -300	199-92	11.00-12	040-21101	164-22400	N/A	30-170	066-10000	M
		Installation per FAA STC SA1065GL. Kit also includes axle spacer, mounting hardware, and hydraulic inlet hose.						

## Embraer

EMB-110 P1, EMB-110 P2	199-128	6.50-8	40-193 (nose)	----	----	----	----	----
		Nose Wheel conversion kit. Installation per FAA STC SA814GL.						

Cleveland

Wheels &amp; Brakes



## Applicability Data

Model/ Name	Kit Number	Tire Size	Main Wheel Assembly	Standard Disc	Chrome Disc	Brake Assembly	Lining	Type
<b>Grumman</b>								
G21, G21A	199-65	32 x 8.8	40-127	N/A	159-00700	30-91	066-11300	O
		Installation per FAA STC SA99GL.						
Widgeon G44, G44A, Scan Type 30	199-4	7.50-10	40-46	N/A	159-00300	30-31	066-11700 066-11900 066-11800	O
		Installation per FAA STC SA121EA.						
Mallard G-73 and Turbo Conversions	199-113	32 x 8.8, 9.50-16	40-174	N/A	159-00900	30-148	066-11300	O
		Installation per FAA STC SA651GL. Kit also includes mounting hardware.						

## Learjet

24, 24A, 24B, 24B-A, 24C, 24D, 24D-A, 24E, 24F, 24F-A, 25, 25A, 25B, 25C, 25D, 25F, 35, 35A, 36, 36A, 55	199-175	18 x 4.4	40-212 (nose)	----	----	----	----	----
		Nose Wheel Conversion Kit. Installation per FAA STC SA1459GL.						

## Mitsubishi

MU-2B, MU-2B-10, -15, -20, -25, -26, -26A, -30, -35, -36, -36A, -40, -60	199-101	8.50-10	40-148	164-07200	N/A	30-131	066-09000	M
		Installation per FAA STC SA648GL, SA652GL or Canadian STA SA90-118. Kit also includes mounting hardware and hydraulic hoses and hardware.						
MU-2B-20, -25, -26, -26A, -35, -36, -36A, -40, -60	199-121	----	----	----	----	----	----	----
		Upgrades existing 40-87 Nose Wheel to 40-87F. Provides improved bearing seals. Installation per STC SA684GL, SA685GL. Kit also includes axle spacers.						

## Piper

Aztec Series	199-63 (1)	7.00-6	----	164-05700	N/A	30-96	066-06200	M
		Upgrades existing Cleveland wheels and brakes to 40-131/30-96. Installation per ESB 7000-4.						
PA-31T, PA-31T1	199-89 (1)	6.50-10	40-106	164-03906	N/A	30-106	066-06800	M
		Installation per Piper service kit #764-039. Kit also includes mounting hardware.						
PA-31-310, PA-31-325, PA-31-350	199-66 (1)	6.50-10	----	164-07906	N/A	30-95A	066-06600	M
		Upgrades aircraft from standard Cleveland 3-piston 40-102/30-68 series to 4-piston 40-130/30-95A. Installation per service kit #761-064.						
PA-31P (425 HP), PA-31-350	199-83	6.50-10	40-141	164-07700	N/A	30-123	066-06800	M
		For aircraft with 1 5/8" axle. Installation per FAA STC SA284GL, SA295GL.						
PA-31, PA-31-300, PA-31-325, PA-31-350	199-100	6.50-10	40-162	164-07700	N/A	30-138	066-06800	M
		For aircraft with 1 1/2" axle. Installation per FAA STC SA563GL.						
PA-31T2	199-111 (2)	6.50-10	40-167	164-20600	N/A	30-142	066-07300	M
		Installation per FAA STC SA599GL. Kit also includes mounting hardware, hydraulic hoses and fittings, aluminum hydraulic tubing, and fittings.						
PA-42, PA-42-720	199-112	6.50-10	40-166	164-07400	N/A	30-141	066-07300	M
		Installation per FAA STC SA600GL. Kit also includes mounting hardware and hydraulic fittings. <b>NOTE:</b> Use only with original equipment tires - Goodrich (Piper P/N 551 652) or McCreary (Piper P/N 551 604).						

(1) Order from airframe manufacturer only.

(2) SB7034-1 Service Bulletin Kit, for replacement of landing gear emergency extension air line. STC approved per SB7034.

# Cleveland

Wheels & Brakes



## Applicability Data

Model/ Name	Kit Number	Tire Size	Main Wheel Assembly	Standard Disc	Chrome Disc	Brake Assembly	Lining	Type
<b>Schafer Aircraft Modifications Inc.</b>								
Piper Model PA-31-350 modified by Schafer STC SA4678SW. (1)	199-119	6.50-10	40-195	164-21900	N/A	30-158	066-06800	M
		Installation per FAA STC SA721GL. Kit also includes hydraulic hoses and fittings.						
(1) Design sold to EMBRAER - to become EMB 820, N-821.								
<b>Shorts Brothers Ltd.</b>								
SD3-30, SD3-60, SD3 Sherpa, SD3-60 Sherpa	199-139	9.00-6	40-210 (nose)	----	----	----	----	----
		Nose Wheel Conversion Kit. Installation per FAA STC SA910GL or Canadian STASA91-111.						
<b>Swearingen Aircraft</b>								
Merlin SA26-T, -AT	199-150	8.50-10	40-170	164-20900	N/A	30-144A	066-09000	M
		Installation per FAA STC SA1009GL. Kit also includes mounting hardware, axle washer, and hubcap.						
<b>Twin Commander Aircraft Corp. (1)</b>								
500, 500A, 500B, 500S, 500U	199-122	8.50-10	40-198	164-22000	N/A	30-159B	066-09000	M
		STC applicability: FAA STC SA706GL (models: 500, 500A, 500B, 500S, 500U). Brazilian STC 2012S08-20 (models: 500, 500B, 500S, 500U). Kit also includes mounting hardware.						
	199-122A	8.50-10	40-198	164-22000	N/A	30-159C	066-09000	M
		For aircraft using Skydrol brake fluid. STC applicability: FAA STC SA706GL (models: 500, 500A, 500B, 500S, 500U). Brazilian STC 2012S08-20 (models: 500, 500B, 500S, 500U). Kit also includes mounting hardware.						
560F, 680F, 680FL, 680FL(P), 680T, 680V, 680W, 681, 685, 690, 690A, 690B, 690C, 690D, 695, 695A, 695B	199-80	8.50-10	40-107A	164-07200	N/A	30-107E	066-09000	M
		For aircraft using MIL-H-5606 brake fluid. STC applicability: FAA SA497GL (all models). ANAC STC 2013S06-14 (models: 560F, 680F, 680V, 680FL, 680W, 681, 690, 690A, 690B, 690C, 690D, 695, 695A). Kit also includes mounting hardware.						
	199-80A	8.50-10	40-107A	164-07200	N/A	30-107D	066-09000	M
		For aircraft using Skydrol brake fluid. STC applicability: FAA STC SA497GL (all models). ANAC STC 2013S06-14 (models: 560F, 680F, 680V, 680FL, 680W, 681, 690, 690A, 690B, 690C, 690D, 695, 695A). Kit also includes mounting hardware.						
500, 500A, 500B, 500S, 500U, 560A, 560E	199-174	6.00-6	40-140 (nose)	----	----	----	----	----
		Nose Wheel conversion kit. Installation per FAA STC SA1457GL.						
560F, 680, 680E, 680FL, 680FL(P), 680F, 680V, 680W, 681, 685, 690, 680W, 681, 685, 690, 690A, 690B, 690C, 690D, 695, 695A, 695B, 720	199-174	6.00-6	40-140 (nose)	----	----	----	----	----
		Nose Wheel conversion kit. Installation per FAA STC SA1458GL.						
(1) Formerly Gulfstream Aerospace.								

## Cleveland

Wheels &amp; Brakes



**Applicability Data**

Aircraft Make and Model	Kit Number	Main Wheel Assembly	Main Brake Assembly	Nose Wheel Assembly	Master Cylinder Assembly	Parking Brake Valve
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**Aircraft Designs**

Stallion	199-60	40-75B	30-52	----	----	----
	----	----	----	40-87	10-19J	199-505 Seal Kit

**American Homebuilts**

John Doe STOL	199-104C	40-59A	30-59A	----	----	----
	Kit also includes dust shields.					
	199-105C	40-113X	30-75X	----	----	----
	Kit also includes dust shields.					

**Aviation Maintenance Limited (1)**

Stearman 75	199-167	40-256	30-195	----	10-30A	199-512 Seal Kit	----
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(1) Formerly Redline Aviation.

**D and J Harmon**

Harmon Rocket	199-152	40-151	30-133	----	----	----
	Kit also includes dust shields.					

**D.F.L. Holdings**

Tango	199-152	40-151	30-133	----	----	----	
	Kit also includes dust shields.						
	----	----	----	40-77	10-19	199-505 Seal Kit	----
					10-35	199-513 Seal Kit	

**Dean Wilson**

Whitney Boomerang	199-102	40-78B	30-9	----	----	----		
	Kit also includes dust shields.							
	----	----	----	40-77	10-55B	199-516 Seal Kit	60-5	199-527 Seal Kit
				40-77G				

**Epic**

LT	----	40-434 (1)	30-191 (1)	----	----	----
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(1) Internal wheel & brake design.

If your make & model aircraft is not on the applicability chart, please contact the Cleveland Technical Hotline at (800) 272-5464 for help.

Most of the kits are available with chrome brake discs.

For a 5-inch dust shield order 157-00900. For a 6-inch dust shield order a 157-00800.

**WARNING!** The user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

**Cleveland**

Wheels & Brakes



## Applicability Data

Aircraft Make and Model	Kit Number	Main Wheel Assembly	Main Brake Assembly	Nose Wheel Assembly	Master Cylinder Assembly	Parking Brake Valve
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**Explorer Aeronautique**

Private Explorer Standard	199-62	40-75D	30-52N	----	----	----
	----	----	----	----	10-22A	199-507 Seal Kit
Private Explorer Float Equipped	----	40-101	30-67B	----	----	----

**Express Aircraft**

CT, S90, Express 2000 / 2000RG	199-60	40-75B	30-52	----	----	----
	----	----	----	----	10-20	199-505 Seal Kit

**Four Winds Aircraft**

192 / 210 / 250T	199-60	40-75B	30-52	----	----	----	
	----	----	----	40-77G	10-19J	199-505 Seal Kit	----

**Hensley Aircraft**

F-19 Wolf Aerobatic	199-46	40-97A	30-63A	----	----	----
		Kit also includes torque plate bushings.				
F-19 Wolf Utility	199-62	40-75D	30-52N	----	----	----

**Lancair**

Evolution	----	40-469	30-280	40-77H	----	----	
Lancair IV Standard	199-208	40-96E	30-61E	40-77	10-19J	199-505 Seal Kit	----
Lancair IV High Energy	199-224	40-406	30-233	40-77	10-19J	199-505 Seal Kit	----
Lancair IV High Energy Upgrade	199-224A	----	091-21200	----	----	----	
Legacy FG / RG	199-152	40-151	30-133	----	----	----	
		Kit also includes dust shields.					
	----	----	----	----	10-88	----	----
Legacy 2000	199-152	40-151	30-133	----	----	----	
		Kit also includes dust shields.					
	----	----	----	40-77	10-88	----	----
					10-19J	199-505 Seal Kit	

**Murphy Manufacturing**

Rebel, SR2500 Super Rebel, Maverick Renegade Spirit, Elite	199-71	40-60	30-60A	----	----	----
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If your make & model aircraft is not on the applicability chart, please contact the Cleveland Technical Hotline at (800) 272-5464 for help.

Most of the kits are available with chrome brake discs.

For a 5-inch dust shield order 157-00900. For a 6-inch dust shield order a 157-00800.

**WARNING!** The user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

# Cleveland

Wheels & Brakes



**Applicability Data**

Aircraft Make and Model	Kit Number	Main Wheel Assembly	Main Brake Assembly	Nose Wheel Assembly	Master Cylinder Assembly	Parking Brake Valve
<b>New Glasair</b> <b>Contact New Glassair for applicability</b>						
GlaStar, Glasair Super II FT, Glasair III and Super III						
<b>Pacific Aerosystems</b>						
Sky Aero	199-102	40-78B	30-9	----	----	----
		Kit also includes dust shields.				
F300	199-60A	40-75B	30-52U	----	----	----
<b>Performance Aircraft</b>						
Legend	----	40-96E	30-61E	40-77	----	----
<b>Pitts</b>						
S1-C, S1-S (Pitts Special)	199-102	40-78B	30-9	----	----	----
		Kit also includes dust shields.				
	199-103	40-78J	30-9C	----	----	----
		Kit also includes dust shields.				
	----	----	----	----	10-20	199-505 Seal Kit
<b>Rans</b>						
S-7C	199-104	40-59A	30-59A	----	----	----
		Kit also includes dust shields.				
	----	----	----	----	10-54	199-516 Seal Kit
	199-204	40-281	30-214	----	----	----
S-16	199-102	40-78B	30-9	----	----	----
		Kit also includes dust shields.				
<b>SkyStar Aircraft</b>						
Kit Fox	199-215	40-281	30-224	----	----	----
	----	----	----	----	10-88	----
Pulsar	199-102	40-78B	30-9	----	----	----
		Kit also includes dust shields.				
	----	----	----	----	10-20	199-505 Seal Kit

If your make & model aircraft is not on the applicability chart, please contact the Cleveland Technical Hotline at (800) 272-5464 for help.

Most of the kits are available with chrome brake discs.

For a 5-inch dust shield order 157-00900. For a 6-inch dust shield order a 157-00800.

**WARNING!** The user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.



## Applicability Data

Aircraft Make and Model	Kit Number	Main Wheel Assembly	Main Brake Assembly	Nose Wheel Assembly	Master Cylinder Assembly	Parking Brake Valve	
<b>Steen Aero Lab</b>							
Skybolt	199-104	40-59A	30-59A	----	----	----	
		Kit also includes dust shields.					
	----	----	----	----	10-19	199-505 Seal Kit	----
					10-19H	199-505 Seal Kit	
	199-105	40-113X	30-75X	----	----	----	----
----	----	----	----	10-19	199-505 Seal Kit	----	
				10-19H	199-505 Seal Kit		
<b>Stop Starduster</b>							
V-Star SA-900, Starlet SA-500, Starduster Too SA-300, Acroduster Too SA-750, SA100 Starduster One, SA101 Super Starduster, SA-500 Starlet, SA-900 V-Star, SA101 Super Starduster	199-103	40-78J	30-9C	----	----	----	
		Kit also includes dust shields.					
	----	----	----	----	10-20	199-505 Seal Kit	----
					199-104	40-59A	
	----	----	----	----	10-21	199-506 Seal Kit	----
<b>Ultravia Aero Int'l</b>							
Pelican PL912/914	199-102	40-78B	30-9	----	----	----	
		Kit also includes dust shields.					
	----	----	----	40-77C	10-20	199-505 Seal Kit	----
<b>Vans Aircraft</b>							
RV-3 thru RV-9	199-102	40-78B	30-9	----	----	----	
		Kit also includes dust shields.					
	----	----	----	40-77C	10-30	199-512 Seal Kit	----
RV-10	199-104	40-59A	30-59A	----	----	----	
		Kit also includes dust shields.					
	----	----	----	40-77C	10-30	199-512 Seal Kit	----
<b>Velocity Aircraft</b>							
SE / XL	199-60	40-75B	30-52	----	----	----	

If your make & model aircraft is not on the applicability chart, please contact the Cleveland Technical Hotline at (800) 272-5464 for help.

Most of the kits are available with chrome brake discs.

For a 5-inch dust shield order 157-00900. For a 6-inch dust shield order a 157-00800.

**WARNING!** The user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

# Cleveland

Wheels & Brakes





Applicability Data

Aircraft Make and Model	Kit Number	Main Wheel Assembly	Main Brake Assembly	Nose Wheel Assembly	Master Cylinder Assembly	Parking Brake Valve	
<b>Wag-Aero</b>							
Sport Trainer, Observer, Acro Trainer, Acro Sport I & II, Wag-a-bond Classic, Super Sport, Wag-a-bond Traveler, Sportsman 2+2, Wag-a-bond	199-102	40-78B	30-9	----	----	----	
		Kit also includes dust shields.					
	199-103	40-78J	30-9C	----	----	----	
		Kit also includes dust shields.					
	199-104	40-59A	30-59A	----	----	----	
		Kit also includes dust shields.					
199-105	40-113X	30-75X	----	----	----		
	Kit also includes dust shields.						
7ECA, 7GCAA, 7GCBC, 7KCAB	----	----	----	----	10-34	199-513 Seal Kit	----
					10-55	199-516 Seal Kit	
1ACA, 7EAC, 7GCAA, 7GCBC, 7KCAB, 8KCAB, 8GCBC, 7AC, 7EC, 7FC, 7GC, 7GCA, 7HC, 7GCB & 7GCB A	----	----	----	----	10-5	199-502 Seal Kit	----
Exclusive to Wag Aero (Safe Air) who holds the STC	199-211	----	----	----	----	----	----

**Zenair**

6.00 x 6: CH200, 250, 300 (Tri-Z), Zipper, Cricket MC-15, Stol CH-701	199-102	40-78B	30-9	----	----	----	
		Kit also includes dust shields.					
	----	40-59A	----	40-77C	10-35	199-513 Seal Kit	60-5
5.00 x 5: CH-100 (Mono-Z), CH-150, 180, Zodiac CH-600	----	----	----	----	10-54	199-516 Seal Kit	----
					10-19	199-505 Seal Kit	

If your make & model aircraft is not on the applicability chart, please contact the Cleveland Technical Hotline at (800) 272-5464 for help.

Most of the kits are available with chrome brake discs.

For a 5-inch dust shield order 157-00900. For a 6-inch dust shield order a 157-00800.

**WARNING!** The user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.



## Applicability Data

Description	Order Code Number	Tire Size	Wheel Assy	Standard Disc	Chrome Disc	Brake Assy	Lining	Type	Comments
<b>Kit Built/Experimental and General Usage</b>									
Heavy Duty Upgrade Kit	199-09300 (4) P/N 199-93	5.00-5	40-230	164-09900	N/A	30-181A	066-10600	O	Magnesium wheel Aluminum brake (3)
Kit Built/Experimental Standard Energy Brake	199-10200 (2) P/N 199-102	5.00-5	40-78B (4)	164-01700	164-11700	30-9 (4)	066-10600	O	Magnesium wheel/brake (3)
Kit Built/Experimental CHROME Standard Energy Brake	199-10203 (1)(2) P/N 199-102	5.00-5	40-78B CHROME	164-01700	164-11700	30-9	066-10600	O	Magnesium wheel/brake (3)
Kit Built/Experimental 1-1/4" Axle	199-10300 (2) P/N 199-103	5.00-5	40-78J	164-01700	164-11700	30-9C	066-10600	O	Aluminum wheel/brake (3)
Kit Built/Experimental CHROME 1-1/4" Axle	199-10303 (1)(2) P/N 199-103	5.00-5	40-78A CHROME	164-01700	164-11700	30-9C	066-10600	O	Aluminum wheel/brake (3)
Kit Built/Experimental 1-1/2" Axle	199-10400 (2) P/N 199-104	6.00-6	40-59A	164-07500	164-17500	30-59A	066-11200	O	Magnesium wheel/brake (3)
Kit Built/Experimental CHROME 1-1/2" Axle	199-10403 (1)(2) P/N 199-104	6.00-6	40-59A CHROME	164-07500	164-17500	30-59A	066-11200	O	Magnesium wheel/brake (3)
Kit Built/Experimental 1-1/2" Axle	199-10500 (2) P/N 199-105	6.00-6	40-113X	164-04000	164-14000	30-75X	066-10500	O	Aluminum wheel/brake (3)
Kit Built/Experimental CHROME 1-1/2" Axle	199-10503 (1)(2) P/N 199-105	6.00-6	40-113X CHROME	164-04000	164-14000	30-75X	066-10500	O	Aluminum wheel/brake (3)
Kit Built/Experimental High Energy Brake	199-15200 (2) P/N 199-152	5.00-5	40-151	164-08500	N/A	30-133	066-10500	O	Magnesium wheel/brake (3)
Kit Built/Experimental High Energy Brake	199-15201 (2) P/N 199-152A	5.00-5	40-151A	164-08500	N/A	30-133	066-10500	O	Aluminum wheel/brake (3)
Kit Built/Experimental Increased Energy Brake	199-15600 (2) P/N 199-156	5.00-5	40-230	164-09900	N/A	30-181A	066-10600	O	Magnesium wheel/brake (3)
General Usage	199-08400 (6)	6.00-6	40-113	164-04000	164-14000	30-75	066-10500	O	Aluminum wheel/brake (3)
General Usage	199-08401 (6)	6.00-6	40-113	164-04000	164-14000	30-75A	066-10500	O	Aluminum wheel/brake (3)
General Usage	199-08403 (1)(6)	6.00-6	40-113	164-04000	164-14000	30-75	066-10500	O	Aluminum wheel/brake (3)
General Usage	199-08413 (1)(6)	6.00-6	40-113	164-04000	164-14000	30-75A	066-10500	O	Aluminum wheel/brake (3)
Kit Built/Experimental	199-19700 (2)(6)	5.00-5	40-151	164-08500	N/A	30-164	066-06200	M	Magnesium wheel/brake (3)
Kit Built/Experimental 1-1/4" Axle	199-20400 (2)(6)	6.00-6	40-281	164-23400	N/A	30-214	066-10500	O	Magnesium wheel/brake (3)
Kit Built/Experimental	199-22300 (2)(6)	6.00-6	40-281	164-23400	N/A	30-214B	066-10500	O	Magnesium wheel/brake (3)
Kit Built/Experimental 1-1/2" Axle	199-25301 (5)(7)	6.00-6	40-75B	164-01501	164-11501	30-52	066-10500	O	Aluminum wheel/brake (3)
General Usage	199-26500 (6)	14.5 x 5.5-6	40-412	N/A	N/A	30-242	159-07100	M	Aluminum wheel/brake (3)

(1) Wheels are equipped with chrome plated brake discs.

(2) For detail design/rating information, refer to Cleveland drawing 50-76, general arrangement - Wheels & Brakes, 5" & 6".

(3) Wheels and Brakes are FAA TSO C26 Approved. **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.

(4) 199-93 Wheel & Brake Upgrade Kit converts wheel and brake to Heavy Duty.

(5) The Cleveland Wheels & Brakes as listed are FAA TSO C26 approved, quantity are furnished in pairs for replacement of existing equipment or initial installation on an experimental non FAA Type Certificated Aircraft. This ship set of parts also includes a spare set of brake linings, rivets and a Rebate Coupon (for when both linings and discs need to be replaced). See AWBCMM0001 Component Maintenance Manual for guidance of when and how to replace worn linings and discs.

(6) Be advised that the Order Code Number is used to identify a 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 order code number for installation purposes, as it is not an FAA recognized part number.

(7) Be advised that the Order Code Number is used to identify a grouping of a pre-packaged ship set of TSO Approved wheels and brakes along with TSO Approved spare parts 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 order code number for installation purposes, as it is not an FAA recognized part number.

**Cleveland**  
Wheels & Brakes







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Avon, Ohio



Parker Aerospace Headquarters  
Irvine, California



Parker Hannifin Corporation Headquarters  
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**Cleveland**  
Wheels & Brakes

