

## SECTION 3

10-5.....	3-18	10-24C.....	3-9	010-05700.....	3-23
10-5B.....	3-18	10-24D.....	3-9	010-05701.....	3-23
10-5C.....	3-18	10-30.....	3-9	10-58D.....	3-13
10-5E.....	3-18	10-30A.....	3-9	10-58E.....	3-13
10-17.....	3-25	10-30B.....	3-9	10-58F.....	3-13
10-19.....	3-7	10-30C.....	3-10	010-06000.....	3-16
10-19A.....	3-7	10-30D.....	3-9	010-06500.....	3-23
10-19B.....	3-7	10-34.....	3-21	010-06600.....	3-15
10-19D.....	3-7	10-35.....	3-21	10-69.....	3-21
10-19F.....	3-7	10-36.....	3-21	10-70.....	3-9
10-19G.....	3-7	10-38.....	3-21	10-70A.....	3-9
10-19H.....	3-7	10-39.....	3-21	10-70B.....	3-9
10-19J.....	3-7	10-45.....	3-21	10-73.....	3-16
10-20.....	3-7	10-46.....	3-13	10-75.....	3-25
10-20A.....	3-7	10-49.....	3-14	10-78.....	3-17
10-21.....	3-19	10-50.....	3-14	10-78A.....	3-17
10-21A.....	3-19	10-51.....	3-13	10-78B.....	3-17
10-22.....	3-7	010-05101.....	3-13	10-86.....	3-25
10-22A.....	3-7	10-52.....	3-13	10-86A.....	3-25
10-22B.....	3-7	10-54.....	3-14	10-88.....	3-14
10-23.....	3-25	10-54A.....	3-14	10-89.....	3-9
10-23A.....	3-25	10-55.....	3-14	10-95.....	3-13
10-23C.....	3-25	10-55A.....	3-14		
10-23F.....	3-25	10-55B.....	3-14		

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**Cleveland**  
Wheels & Brakes



Bore (inch)	Stroke (inch)	Disp. (c.u. inch)	Cleveland P/N	Installed Length (inch)	Type	Port Size	Wt. (lbs)	Comments
.552	1.94	.43	10-30	7.63	Push	1/8-27 N.P.T.	.58	Ports in-line, no fittings, extruded aluminum body. Upgrade to 10-30D per SB7093.
.552	1.96	.46	10-30A	8.41	Push	1/8-27 N.P.T.	.58	Same as 10-30, but uses rod end clevis.
.552	2.00	.43	10-30B	7.50	Push	1/8-27 N.P.T.	.58	Obsolete design, superseded by 10-30D per SB7093.
.552	1.25	.278	10-30C	6.81	Push	1/8-27 N.P.T.	.73	Uses a custom mount with pivot pins on the side of the housing, adjacent to the inlet fitting. Upgrades 10-30. Supersedes 10-30B.
.552	2.00	.43	10-30D	7.528	Push	1/8-27 N.P.T.	.58	
.562	1.25	.31	10-5B	8.37	Push	7/16-20	.65	Without parking valve, ports 180° apart, fitting 45°.
.562	1.25	.31	10-5C	8.37	Push	7/16-20	.65	With parking valve, ports 180° apart, fitting 45° and 90°.
.562	1.25	.278	10-5E	8.37	Push	7/16-20	.65	With parking valve, ports 180° apart, fitting 45°.
.563	1.29	.31	10-5	8.35	Push	Outlet, 7/16-20 Inlet, 1/8-27 N.P.T.	.63	With parking valve, ports 90° apart, fitting 45°.
.563	1.64	.39	10-19	8.35	Push	7/16-20	.58	Ports in-line, fittings 90°, extruded aluminum body. See note 1.
.563	1.64	.39	10-19D	8.35	Push	1/8-27 N.P.T.	.53	Ports in-line, no fittings, extruded aluminum body.
.563	1.64	.39	10-19F	8.35	Push	Outlet, 7/16-20 Inlet, 1/8-27 N.P.T.	.55	Ports in-line, straight fitting, extruded aluminum body. See note 1.
.563	1.64	.39	10-19G	8.01	Push	1/8-27 N.P.T.	.53	Ports in-line, no fittings, extruded aluminum body. See note 1.
.563	1.64	.39	10-19H	8.36	Push	1/8-27 N.P.T.	.58	Ports in-line, fittings 90°, extruded aluminum body. See note 1.
.563	1.64	.39	10-19J	8.33	Push	1/8-27 N.P.T.	.53	Ports in-line, no fittings, extruded aluminum body. See note 1.
.563	1.64	.39	10-20	7.48	Push	1/8-27 N.P.T.	.52	Ports in-line, no fittings, no rod clevis, extruded aluminum body.
.563	1.64	.39	10-20A	7.37	Push	1/8-27 N.P.T.	.52	Ports in-line, no fittings, no rod clevis, extruded aluminum body.
.62	.875	.26	010-05701	8.610	Push	7/16-20	.65	Reservoir - capacity: 3.0 cu. in. Bell P/N 222-380-011-103.
.625	1.09	.306	10-34	7.96	Push	1/8-27 N.P.T.	.59	Reservoir - capacity: 3.41 cu. in., mounting hole: 190 Dia.
.625	1.09	.306	10-35	7.96	Push	1/8-27 N.P.T.	.59	Reservoir - capacity: 3.41 cu.in., mounting hole: .250 Dia.
.6245	1.25	.36	10-38	7.85	Push	1/8-27 N.P.T.	.59	Reservoir - capacity: 3.0 cu.in.
.625	1.20	.36	10-39	7.82	Push	1/8-27 N.P.T.	.60	Reservoir - capacity: 3.0 cu.in
.625	1.20	.36	10-45	7.45	Push	1/8-27 N.P.T.	.52	Reservoir - capacity: 3.0 cu. in., mounting hole: .190 Dia.
.625	1.50	.46	10-46	7.34	Push	1/8-27 N.P.T.	.48	Ports in-line, no fittings.
.625	1.50	.46	10-49	8.30	Push	1/8-27 N.P.T.	.60	Ports in-line, no fittings.

Bore (inch)	Stroke (inch)	Disp. (c.u. inch)	Cleveland P/N	Installed Length (inch)	Type	Port Size	Wt. (lbs)	Comments
.625	1.50	.46	10-50	8.75	Push	1/8-27 N.P.T.	.53	Beech P/N 96-380034-25.
.625	1.50	.46	10-55A	7.90	Push	1/8-27 N.P.T.	.50	Ports in-line, no fittings.
.625	1.50	.46	10-55B	7.68	Push	1/8-27 N.P.T.	.46	Ports in-line, no fittings.
.625	1.50	.46	10-58D	8.28	Push	1/8-27 N.P.T.	.48	Obsolete design, superseded by 10-58E.
.625	1.50	.46	10-58E	8.28	Push	7/16-20	.44	Supersedes 10-58D.
.625	1.50	.46	10-58F	8.28	Push	7/16-20	.46	Upgrade from 10-58E per SB7068.
.625	1.43	.46	10-73	9.80	Push	3/8-24		Piper P/N 82805-3-F.
.625	1.50	.42	10-88	6.83	Push	1/8-27 N.P.T.	.42	Ports in-line, no fittings.
.626	1.62	.47	10-54	7.88	Push	1/8-27 N.P.T.	.45	Ports in-line, no fittings.
.626	1.62	.47	10-55	7.90	Push	1/8-27 N.P.T.	.45	Beech P/N 169-380100-3.
.6265	1.53	.45	10-54A	7.37	Push	1/8-27 N.P.T.	.45	Same as 10-54, except for shorter installed length.
.690	1.384	.516	10-36	7.95	Push	7/16-20	.59	Reservoir - capacity: 3.41 cu. in., mounting hole: .250 & .190 Dia.
.750	1.25	.55	10-70	7.37	Push	7/16-20	.69	Beech P/N 104-384061-1.
.750	1.25	.55	10-70A	7.37	Push	7/16-20	.63	Beech P/N 104-384061-3.
.750	1.38	.60	10-70B	7.50	Push	7/16-20	.85	Ports in-line, no fittings.
.751	1.52	.66	10-24D	8.41	Push	1/8-27 N.P.T.	.53	Same as 10-24C, except body mounts are rotated 90°.
.750	1.50	.66	10-52	7.50	Push	1/8-27 N.P.T.	.50	Ports in-line, no fittings.
.750	1.50	.662	10-89	11.06	Push	1/8-27 N.P.T.		Ports in-line, no fittings.
.750	1.59	.68	10-22B	7.26	Push	Outlet, 7/16-20	.50	Ports 180° apart.
.750	1.75	.77	10-21	12.87	Push	Inlet, 1/8-27 N.P.T.		
.750	1.75	.77	10-21A	12.87	Push	1/8-27 N.P.T.	1.05	Reservoir - capacity: 2.88 cu. in., with parking lever.
.750	1.59	.68	10-22	7.25	Push	1/8-27 N.P.T.	.50	Inlet - 90°, .250 Dia. hole.
.750	1.75	.77	10-22A	7.20	Push	1/8-27 N.P.T.	.50	No fittings.
.751	1.52	.63	10-24C	8.20	Push	1/8-27 N.P.T.	.53	Ports in-line, no fittings, extruded aluminum body.
.801	1.00	.50	010-06500	10.69	Push	7/16-20	.90	Reservoir - capacity: 2.15 cu. in., Bell P/N 214-076-320-101.
.801	1.00	.50	010-06600	10.69	Push	7/16-20	.83	Bell P/N 214-076-327-101.

Bore (inch)	Stroke (inch)	Disp. (cu. inch)	Cleveland P/N	Installed Length (inch)	Type	Port Size	Wt. (lbs)	Comments
.810	1.50	.77	10-78	11.535	Push	7/16-20	.80	90° male ports.
.812	1.50	.74	10-78A	11.535	Push	7/16-20	.80	90° male ports.
.812	1.50	.74	10-78B	11.535	Push	7/16-20	.74	90° male ports.
.864	1.408	.824	10-69	7.88	Push	7/16-20	.59	Reservoir - capacity: 3.41 cu. in.
.875	1.23	.59	10-17	5.25	Pull	7/16-20	.62	Ports in-line, no fittings, extruded aluminum body. See note 2.
.875	1.25	.66	010-06000	8.61	Push	7/16-20	.65	Bell P/N 222-360-012-101.
.925	1.25	.69	10-75	5.25	Pull	7/16-20	.62	Piper P/N 465-705.
.927	1.25	.75	10-23	5.25	Pull	7/16-20	.65	No fittings.
.927	1.22	.67	10-23A	5.21	Pull	7/16-20	.65	Same as 10-23, except with extruded aluminum body.
.927	1.25	.71	10-23C	5.25	Pull	7/16-20	.60	Extruded aluminum body.
.927	1.195	.71	10-23F	6.25	Pull	7/16-20	.81	Equipped with high strength clevis.
1.00	1.35	1.015	10-95	7.50	Push	3/8-24		Ports in-line, no fittings, extruded aluminum body.
1.0025	1.30	.95	010-05101		Push	M10 x 1 (metric)	.32	Flange mount.
1.117	1.06	.94	10-86	5.25	Pull	7/16-20	1.0	Large bore version of 10-23 series.
1.117	1.10	.94	10-86A	6.25	Pull	7/16-20	.90	Equipped with high strength clevis.

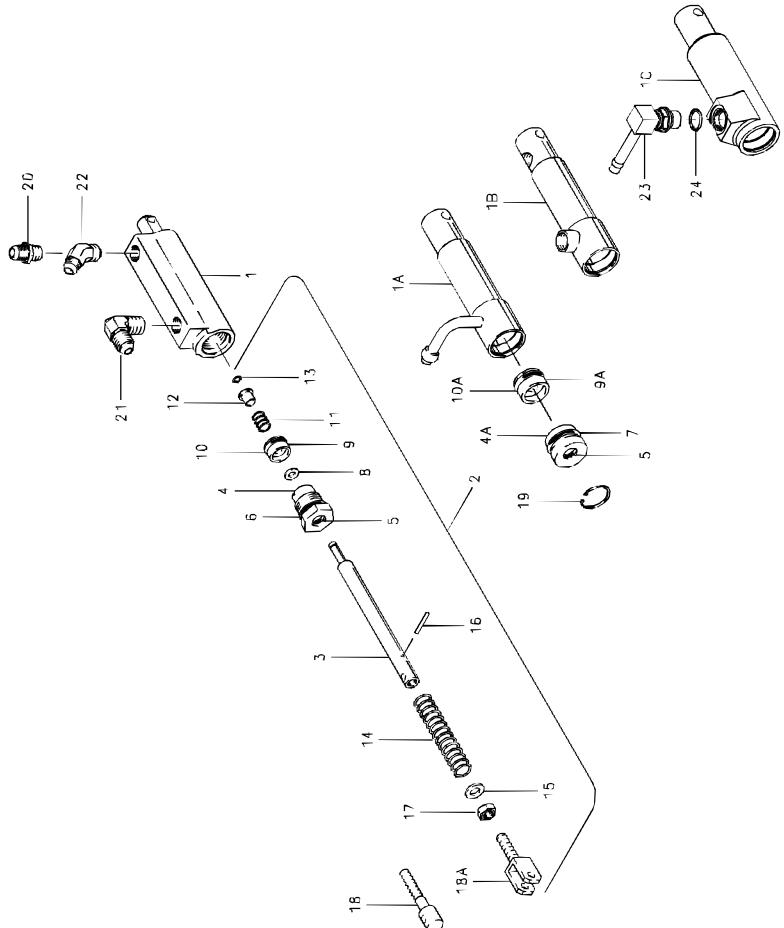
**Notes:**

1. The 10-19 Series master cylinders have been redesigned from a steel body configuration to an extruded aluminum configuration. Listed Design Information is for the extruded aluminum body master cylinder. Design Information for the steel body master cylinder is the same except for the following:  
Stroke = 1.25 inches  
Displacement = .31 cubic inches  
Weight = .50 lbs.

2. The 10-17 master cylinder has been redesigned from a steel body configuration to an extruded aluminum configuration. Listed Design Information is for the extruded aluminum body master cylinder. Design Information for the steel body master cylinder is the same except for the following:  
Stroke = .25 inches  
Displacement = .75 cubic inches  
Weight = .70 lbs.

## **Master Cylinder Push Type**

**10-19, 10-19A, 10-19B, 10-19D, 10-19F, 10-19G, 10-19H, 10,19J, 10-20, 10-20A, 10-22, 10-22A, 10-22B**



**NOTE:** Parts list for reference only. Contact airframe manufacturer to order master cylinders and components listed.

(Continued on next page)

**Cleveland**  
Wheels & Brakes

Darker

10-19, 10-19A, 10-19B, 10-19D, 10-19F, 10-19G, 10-19H, 10-19J, 10-20, 10-20A, 10-22, 10-22A, 10-22B

(Continued from previous page)

FIG.	PART NO.	DESCRIPTION	PER ASSY.														
			10-19	10-19A (1)	10-19B (1)	10-19C	10-19D	10-19E	10-19F	10-19G	10-19H	10-19J	10-20	10-20A	10-22	10-22A	10-22B
2	182-001300	Piston Rod Assembly	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	182-002600	Piston Rod Assembly															
	182-004100	Piston Rod Assembly															
142-005000	Rod-Piston		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
142-006000	Rod-Piston																
142-009000	Rod-Piston																
142-028000	Rod-Piston																
4	141-005000	End Gland	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4A	141-010000	End Gland														1	1
5	101-007300	O-Ring (MS2875-012)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	101-011000	O-Ring (MS28775-113)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	101-012000	O-Ring (MS28775-14)															
8	095-011000	Washer-Seal	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	148-009000	Piston	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9A	148-010000	Piston															
10	101-008000	O-Ring-Piston (MS28775-110)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10A	101-011000	O-Ring-Piston (MS28775-113)															
11	082-008000	Spring-Piston	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	145-015000	Bushing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	155-005000	Snap Ring	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	082-009000	Spring-Return	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	095-102000	Washer (AN960-416L)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	223-001000	Roll-Pin															
17	094-030000	Nut-Check (AN316-4)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	143-004000	Clevis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18A	143-009000	Clevis															
19	155-010000	Snap Ring															
20	104-003000	Tube Fitting (AN816-4D)															
21	104-004000	Tube Fitting (MS20822-4D)	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
22	104-005000	Tube Fitting (MS20823-4D)															
23	104-009000	Fitting															
24	101-204000	O-Ring															

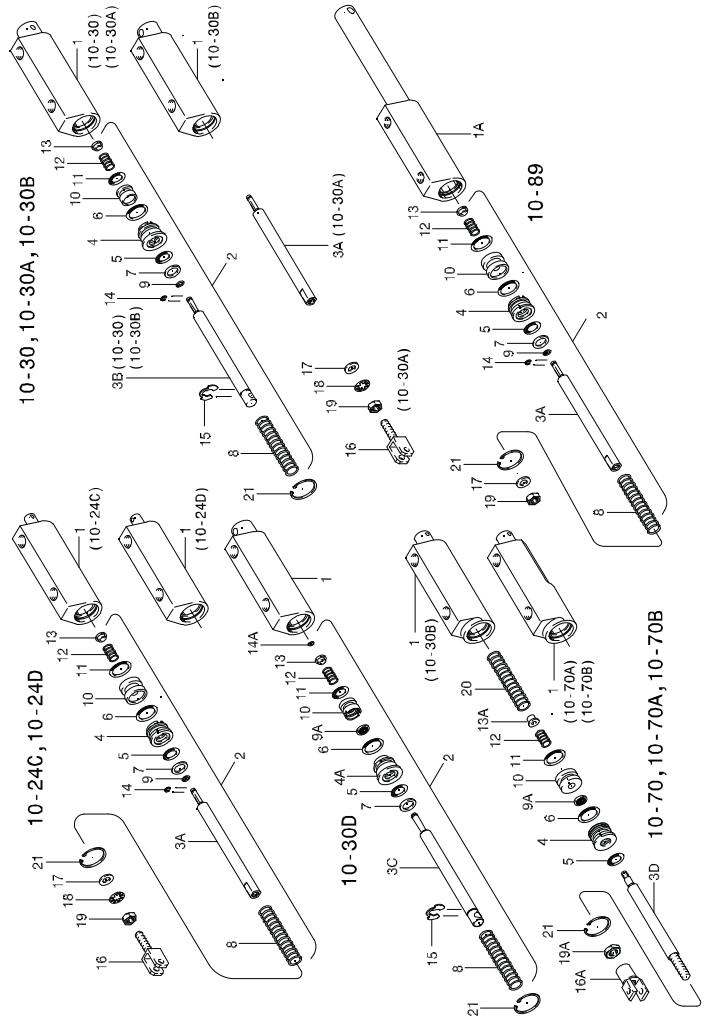
NOTES:

- (1) Inactive Assembly - Spares support only for parts listed.
- (2) Inactive Part - No longer available for spares support.
- (3) Extruded body - formerly used steel body P/N 189-00500 which is no longer available.
- (4) Extruded body - formerly used steel body P/N 189-00501 which is no longer available.

**Cleveland**  
 Wheels & Brakes

**Parker**

**10-24C, 10-24D, 10-30, 10-30A, 10-30B, 10-30D, 10-30, 10-30A, 10-70A, 10-70B, 10-89**



NOTE: Parts list for reference only. Contact the airframe manufacturer to order master cylinders and components listed.

FIG.	PART NO.	DESCRIPTION	PER ASSY.								
			10-24C	10-24D	10-30A	10-30B	10-30D	10-30	10-70A	10-70B	10-70
1	144-03200	Cylinder Body									
	144-03700	Cylinder Body	1								
1	144-03701	Cylinder Body									
	144-06800	Cylinder Body	1								
	144-07300	Cylinder Body									
1A	144-11900	Cylinder Body									
	182-02000	Piston Rod Assembly									
	182-02200	Piston Rod Assembly									
2	182-07500	Piston Rod Assembly									
	(3)	Piston Rod Assembly									
	182-08500	Piston Rod Assembly									
3A	142-03700	Rod-Piston									
3B	(3)	Rod-Piston									

(Continued on next page)

**Cleveland**  
 Wheels & Brakes

**Parker**

## 10-24C, 10-24D, 10-30, 10-30A, 10-30B, 10-30D, 10-70, 10-70A, 10-70B, 10-89

## Illustrated Parts List

(Continued from previous page)

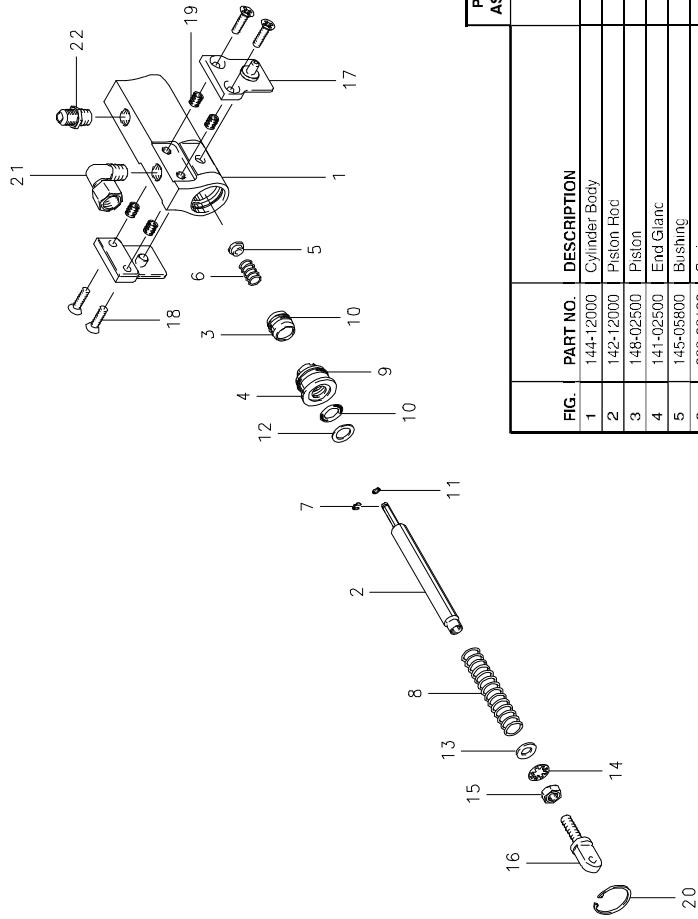
FIG.	PART NO.	DESCRIPTION	PER ASSY.					
			10-24C	10-24D	10-30A	10-30B	10-30D	10-70A
3C	142-13700	Rod-Piston						10-69
3D	142-07900	Rod-Piston						10-70B
	141-01200	End Gland	1	1			1	1
	141-02500	End Gland		1	1	1		
4	141-04400	End Gland				1	1	
	141-04401	End Gland						1
	141-08000	End Gland				1		
5	101-00700	O-Ring (MS28775-012)	1	1			1	1
6	101-01100	O-Ring (MS28775-110)		1	1	1	1	1
7	095-01300	Washer-Wiper		1	1	1	1	1
	082-00900	Spring-Return		1	1	1		
8	082-05200	Spring-Return	1	1				1
	082-14500	Spring-Return			1			
9	101-00100	O-Ring		1	1	1	1	1
9A	095-02600	Washer-Seal			1	1	1	1
	148-02300	Piston		1				1
10	148-02500	Piston		1	1	1		
	148-03800	Piston				1	1	1
	148-09200	Piston				1		
11	101-00800	O-Ring (MS28775-110)		1	1	1		
11	101-01100	O-Ring (MS28775-113)	1	1		1	1	1
12	082-02100	Spring-Piston		1	1	1	1	1
	082-05600	Spring-Piston				1	1	1
13	145-01500	Spring Guide				1		
13	145-05800	Bushing		1	1	1		1
13A	145-06500	Spring Guide				1	1	1
14	155-04800	Snap Ring		1	1	1	1	1
14A	155-00500	Snap Ring				1		
15	155-05000	Snap Ring-Rod		1	1	1		
16	143-00400	Clevis				1	1	1
16A	143-01300	Clevis				1	1	1
17	095-10100	Washer (AN960-616L)	1	1	1			
18	095-15200	Washer (AN960-4-16L)						1
18	095-15360	Washer-Star (MS2533-3-40)		1	1			
19	094-03000	Nut-Check (AN516-4)		1	1			1
19A	094-04300	Nut-Check (AM316-5)				1	1	1
20	082-07400	Spring-Return				1	1	1
21	155-01200	Snap Ring		1	1	1	1	1
	155-04700	Snap Ring				1	1	1
	155-05500	Snap Ring				1	1	1
199-510	Repair Kit (5, 6, 9)		1	1				
199-512	Repair Kit (5, 6, 7, 9, 9A, 12, 14, 14A, 15)		1	1	1	1		
199-521	Repair Kit (5, 6, 9A)				1	1	1	1

## NOTES:

- (1) Inactive Assembly - Spares support only for parts listed.  
 (2) SB7093-1 Service Bulletin Kit upgrades 10-30 and 10-30B to 10-30D configuration per SB7093.  
 (3) Inactive Part - No longer available for spares support.

**Cleveland**  
Wheels & Brakes

**Parker**



NOTES:

(1) Master Cylinder 10-30C is FAA PMA Approved for use on Slingsby Aviation Ltd. Aircraft Models 6/67 GRP series. The master cylinder and all components listed are available for sale thru distribution.

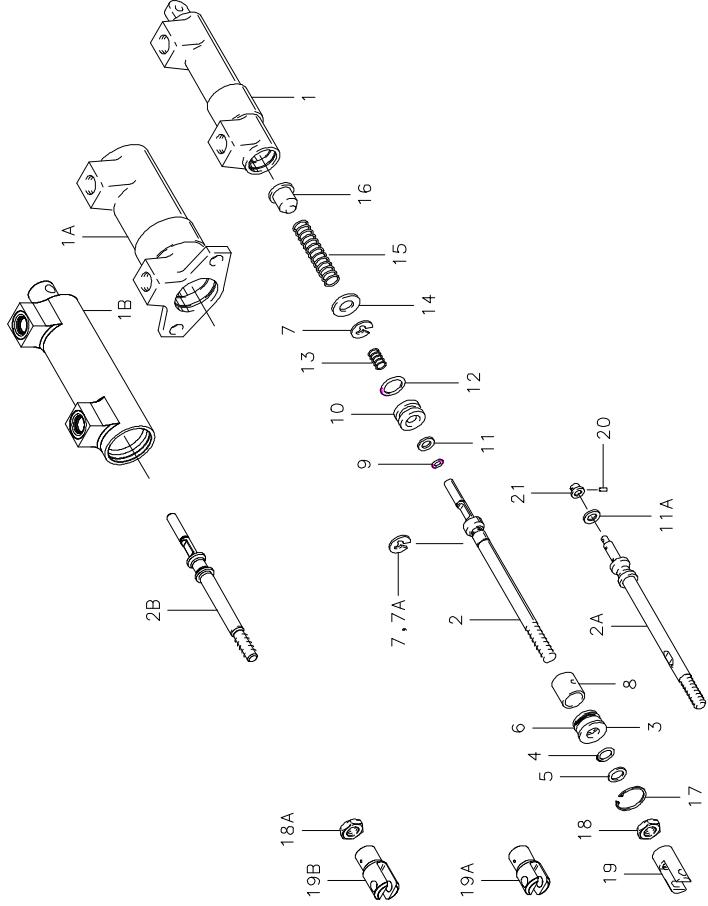
PER ASSY.		10-30C	
FIG.	PART NO.	DESCRIPTION	QTY
1	144-12000	Cylinder Body	1
2	142-12000	Piston Rod	1
3	148-02500	Piston	1
4	141-02500	End Gland	1
5	145-05800	Bushing	1
6	082-02100	Spring	1
7	155-04800	Retaining Ring	1
8	082-13700	Spring	1
9	101-01100	O-Ring (MS28775-113)	1
10	101-00800	O-Ring (MS28775-110)	2
11	101-00100	O-Ring	1
12	095-01300	Washer - Wiper	1
13	095-10100	Washer (AN360-616L)	1
14	095-15600	Washer (Std)(MS28533-3d)	1
15	094-03000	Nut, Jam (AN316-4)	1
16	142-03100	Clevis	1
17	111-0900	Bracket Assembly	2
18	102-17500	Screw (MS24694-S49)	4
19	230-05500	Insert, Locking (MS21209F-1-15L)	4
20	155-04700	Ring, Retaining	1
21	104-09300	Elbow, Male	1
22	104-00300	Tube Fitting (AN816-4D)	1

199-512 Repair Kit (9, 10, 11) 1

This page intentionally left blank

## Master Cylinder **Push Type**

10-46, 10-51, 010-05101, 10-52, 10-58D, 10-58E, 10-58F, 10-95



**NOTE:** Parts list for reference only. Contact the airframe manufacturer to order master cylinders and components listed.

PER ASSY.			
FIG.	PART NO.	DESCRIPTION	10-46
			10-05101 (1)
1	144-04600	Cylinder Body	1
1	144-04601	Cylinder Body	1
	144-C5000	Cylinder Body	1
1A	144-04900	Cylinder Body	1
1B	144-13100	Cylinder Body	1
	111-04700	Piston Rod Assembly	1
2	111-04900	Piston Rod Assembly	1
	111-05400	Piston Rod Assembly	1
	182-033700	Piston Rod Assembly	1
2A	142-18201	Piston Rod	1
2B	142-13200	Piston Rod	1
	141-022600	End Gland	1
3	141-02800	End Gland	1
	141-04000	End Gland	1
	(3)	End Gland	1

(Continued on next page)

**Cleveland**  
Wholesalers & Distributors

Zucker

**10-46, 10-51, 010-05101, 10-52, 10-58D, 10-58E, 10-58F, 10-95**

(Continued from previous page)

FIG.	PART NO.	DESCRIPTION	PER ASSY.					
			10-46	10-51 (1)	10-52	10-58D (2)	10-58E (6)	10-58F
4	101-26800	O-Ring	1	1	1	1	1	1
	101-00600	O-Ring (MS28775-011)						
5	100-20006	Ring, Back Up (MS28775-012)	1		1			1
	101-20200	O-Ring (MS28775-014)	1		1	1	1	1
6	101-27000	O-Ring		1	1			1
	101-50343	O-Ring (MS28775-016)			1			
7	155-05100	Snap Hinc	2	1	1	2	2	1
	155-07200	Snap Hinc		1	1			
8	067-05000	Spacer	1					
	067-05400	Spacer			1			
	067-05500	Spacer		1	1			1
	067-07300	Spacer				1	1	1
9	101-05300	O-Ring (MS28775-008)	1		1			
	101-26700	O-Ring		1	1			1
	148-02800	Piston	1					
	148-00700	Piston			1			
10	148-04500	Piston			1			1
	(3) 148-04900	Piston	1					
	148-026700	O-Ring				1	1	1
11	095-03400	Washer Seal			1			
	095-03401	Washer Seal				1		
11A	101-00900	O-Ring (MS28775-111)	1					
	101-26900	O-Ring		1				1
12	101-01100	O-Ring (MS28775-113)			1			
	(3) 082-05500	O-Ring			1			
13	082-05500	Spring, Piston	1	1	1			1
	082-05501	Spring, Piston				1	1	1
14	095-10200	Washer (AN980-416L)	1					1
	082-06000	Spring, Return	1	1	1			
15	082-06001	Spring, Return				1	1	1
	082-06300	Spring, Return		1	1			1
16	067-07100	Spacer				1	1	1
	155-01200	Snap Hinc			1			
17	155-01300	Snap Ring		1	1			1
	155-05400	Snap Ring		1		1	1	
18	094-04300	Nut, Lock (AN3165)		1	1	1		
	094-03000	Nut					1	
18A	143-01000	Clevis				1		
19	143-01400	Clevis				1		
19A	143-03500	Clevis				1		
20	223-03200	Pin, Bol				1		
21	200-02400	Retainer, Spring					1	

NOTES:

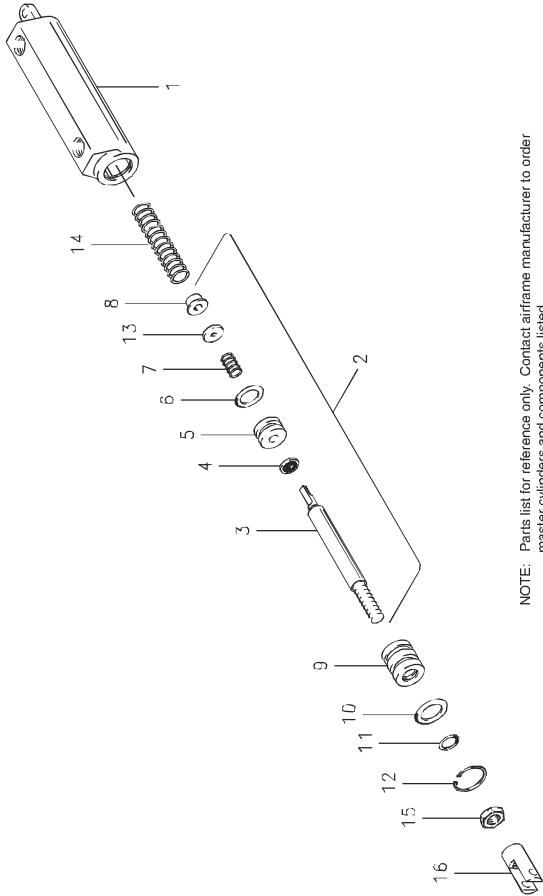
- (1) Inactive assembly - spares support
- (1) only for parts listed.
- (2) 10-58C replaced by 10-58D.
- (3) Inactive part - No longer available for spares support.
- (4) 10-58D superseded by 10-58E.

- (5) The following Cleveland Master Cylinders were formerly manufactured by Gerdes Product Co.
- (6) SB7068-1 Service Bulletin Kit Pads List upgrades master cylinder to 10-58E per Cleveland Service Bulletin SB7068.

**3**

C.W.B.	NUMBER
10-46	A-110-27
10-51	A-110-18
10-52	A-110-12
10-58E	SB7068-1 Service Bulletin Kit Pads

10-49, 10-50, 10-54, 10-54A, 10-55, 10-55A, 10-55B, 10-88



NOTE: Parts list for reference only. Contact airframe manufacturer to order master cylinders and components listed.

NOTES:

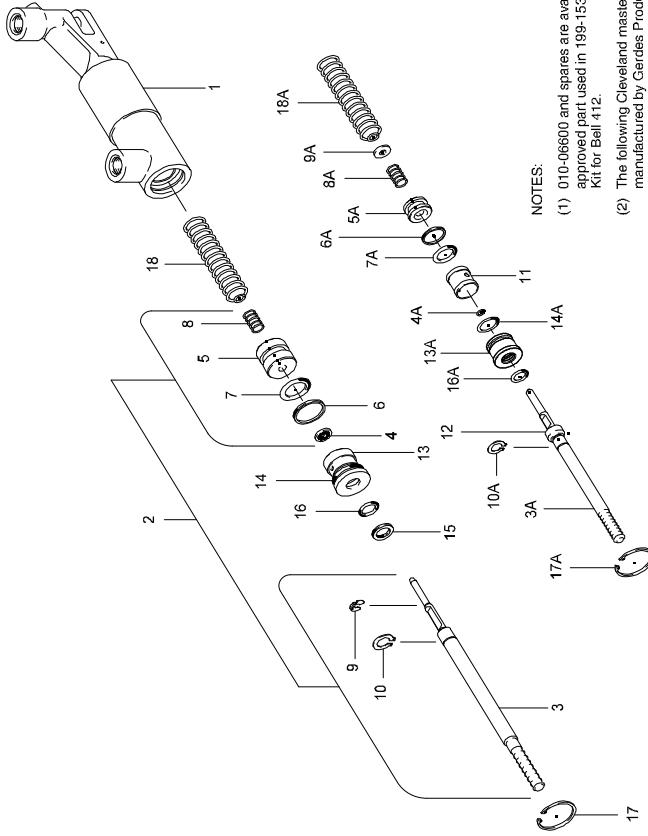
- (1) The following Cleveland master cylinders were formerly manufactured by Cardas Products Co.  
C.I.W.B. GERDES NUMBER A-110-37  
10-49 A-110-39  
10-50 A-110-39  
10-54 A-110-10
- (2) Master Cylinder 10-55B replaces 10-55A. Both are FAA PMA Approved for use on General Avia Aircraft Model F22. The master cylinder and all components listed are available thru distribution.

		PER ASSY.	
FIG.	PART NO.	DESCRIPTION	
1	144-04700	Cylinder Body	1
1	144-04800	Cylinder Body	1
	182-02800	Piston Rod Assembly	1
2	182-02801	Piston Rod Assembly	1
2	182-02802	Piston Rod Assembly	1
	142-05000	Piston Rod	1
3	142-05300	Piston Rod	1
	142-05400	Piston Rod	1
	142-05502	Piston Rod	1
4	095-02600	Slat-O-Seal	1
5	148-03400	Piston	1
6	101-00900	O-Ring (MS28775-111)	1
7	082-05600	Spring	1
8	145-06500	Guide-Spring	1
13	067-15300	Spacer	1
9	141-02700	Gland-End	1
10	101-01000	O-Ring (MS28775-112)	1
11	101-00700	O-Ring (MS28775-012)	1
12	155-05400	Snap Ring	1
14	082-06100	Spring-Return	1
15	094-04300	Nut-Check (AN316-5)	1
16	143-01000	Clevis	1
	143-01200	Clevis	1
	143-01300	Clevis	1

199-516	Repair Kit (4, 6, 10, 11)
	1    1    1    1    1    1

**Cleveland**  
Wheels & Brakes

**Parker**



NOTE: Parts list for reference only. Contact airframe manufacturer to order master cylinders and components listed.

FIG.	PART NO.	DESCRIPTION	PER ASSY:	
			(1) 00990-010	00090-010
1	144-05300	Housing Assembly	1	10
1	189-03400	Body Assembly	1	10A
2	182-03000	Piston Rod Assembly	1	11
3	142-07500	Rod Piston	1	12
3A	142-05900	Shaft	1	13
4	395-02600	Sil-O-Sear	1	13A
4A	101-50349	O-Ring (MS28775-007)	1	14
5	148-01400	Piston	1	14A
5A	148-03900	Piston	1	15
6	100-20012	Back Up Ring (MS28782-12)	1	16
6A	100-10143	Back Up Ring (MS28774-11)	1	16A
7	101-50357	O-Ring (MS28775-114)	1	17
7A	101-00900	O-Ring (MS28775-111)	1	17A
8	082-07100	Spring	1	18
8A	082-05300	Spring	1	18A
9	155-07100	Snap Ring	1	199-532
9A	095-13100	Washer (AN960C10)	1	199-569

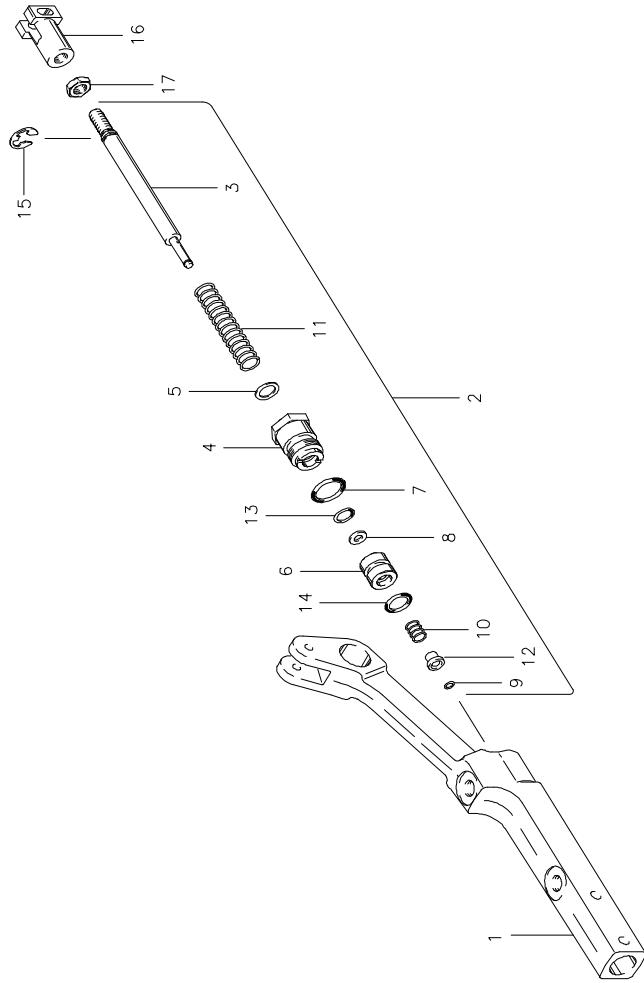
NOTE: Parts list for reference only. Contact airframe manufacturer to order master cylinders and components listed.

FIG.	PART NO.	DESCRIPTION	PER ASSY:	
			(1) 00990-010	00090-010
10	155-06500	Snap Ring	1	1
10A	155-05700	Snap Ring	1	1
11	367-05600	Spacer	1	1
12	139-06200	Thrust Collar	1	1
13	141-03400	End Gland	1	1
13A	141-03200	End Gland	1	1
14	101-50369	O-Ring (MS28775-017)	1	1
14A	101-20200	O-Ring (MS28775-011)	1	1
15	100-20008	Backup Ring (MS28782-8)	1	1
16	101-00800	C-Hing (MS28775-110)	1	1
16A	101-50341	C-Hing (MS28775-011)	1	1
17	155-06700	Snap Ring	1	1
17A	155-05400	Snap Ring	1	1
18	382-06900	Spring-Return	1	1
18A	382-06400	Spring-Return	1	1

NOTES:  
(1) 010-06000 and spares are available thru distribution, PMA approved part used in 199-15301 Wheeled Landing Gear Kit for Bell 412.

(2) The following Cleveland master cylinders were formerly manufactured by Gerdes Product Co.

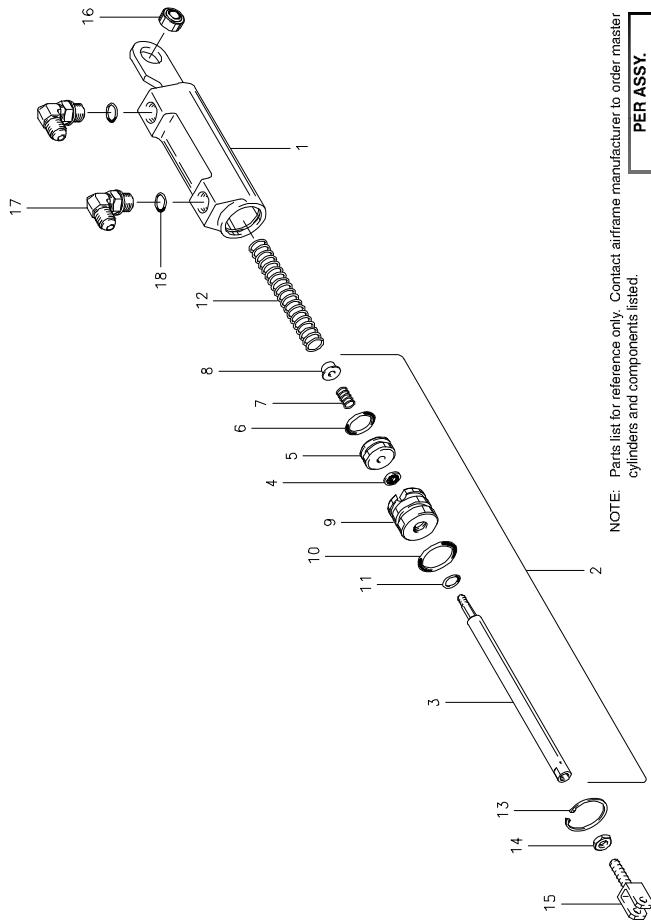
C.W.B.  
GERDES  
NUMBER  
010-06000  
A-2160-1



NOTE: Parts list for reference only. Contact airframe manufacturer to order master cylinders and components listed.

FIG.	PART NO.	DESCRIPTION	PER ASSY.
			10-73
1	144-08860	Cylinder Body	1
2	182-04300	Piston Rod Assembly	1
3	142-09100	Piston Rod	1
4	141-05200	Packing Gland	1
5	095-04000	Washer	1
6	148-05300	Piston	1
7	101-01200	O-Ring (MS28775-114)	1
8	095-01100	Washer-Sea	1
9	155-00500	Snap Ring	1
10	082-00860	Spring	1
11	082-00900	Spring	1
12	145-01500	Bushing	1
13	101-00700	O-Ring (MS28775-012)	1
14	101-00900	O-Ring (MS28775-011)	1
15	155-09000	Retainer Ring	1
16	142-02000	C-nut	1
17	094-04300	Nut (AN316-5)	1

1995-548 | Repair Kit (7, 8, 13, 14) | 1



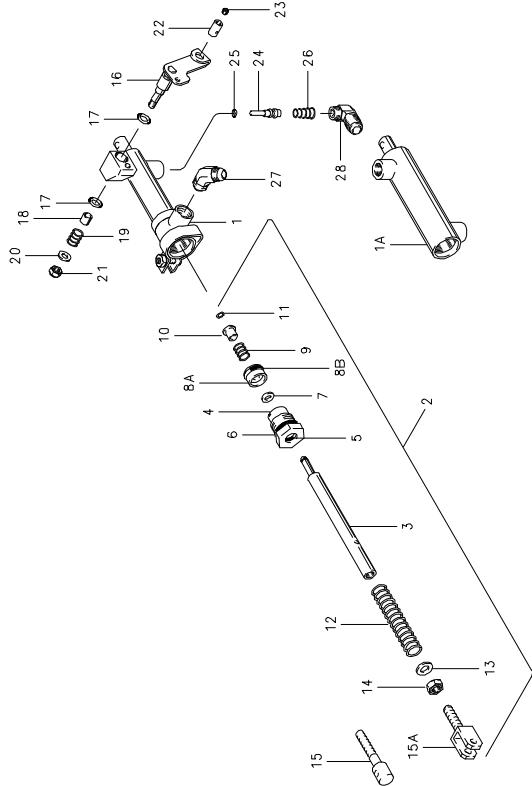
NOTE: Parts list for reference only. Contact airframe manufacturer to order master cylinders and components listed.

**PER ASSY.**

FIG.	PART NO.	DESCRIPTION	10-78	10-78A	10-78B
1	183-04100	Cylinder Body	-	-	-
2	182-04800	Piston Rod Assembly	-	-	-
3	142-10400	Piston Rod	-	-	-
4	095-02800	Shak-O Seal	-	-	-
5	148-04100	Piston	-	-	-
6	101-01200	O-Ring (MS28775-114)	-	-	-
7	082-05600	Spring-Piston	-	-	-
8	145-06500	Spring Guide	-	-	-
9	141-03000	End Gland	-	-	-
10	101-50117	O-Ring (MS28775-117)	-	-	-
11	101-00700	O-Ring (MS28775-012)	-	-	-
12	082-06100	Return Spring	-	-	-
13	155-05500	Retaining Ring	-	-	-
14	094-03000	Nut Jam (AN316-4)	-	-	-
15	142-02200	Clevis	-	-	-
16	214-82600	Spherical Bearing	-	-	-
17	104-03100	Fitting	2	2	1
18	101-20400	Fitting	2	2	1
	198-555	Repair Kit (4, 6, 10, 11, 18)	1		

198-555      Repair Kit (4, 6, 10, 11, 18)      1

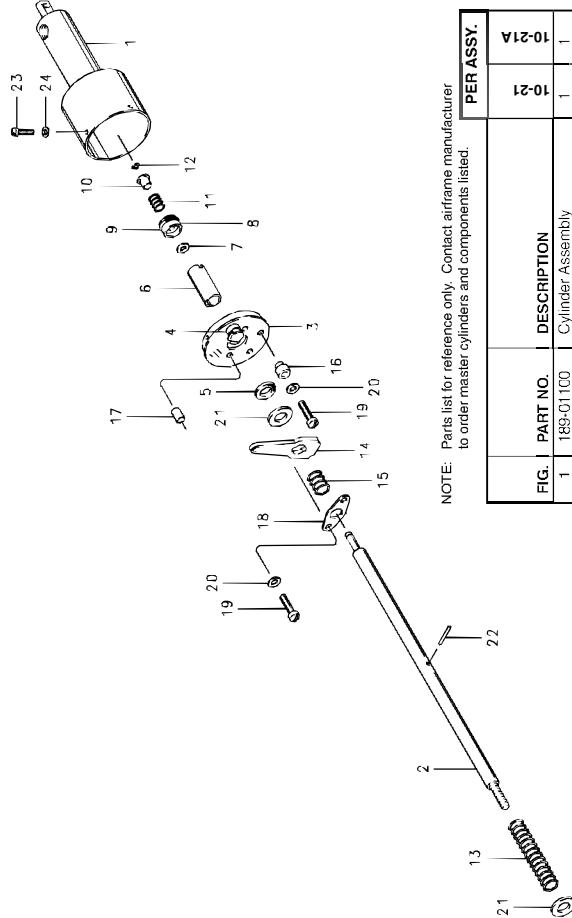
**10-5, 10-5B, 10-5C, 10-5E**



**NOTE:** Parts list for reference only. Contact airframe manufacturer to order master cylinders and components listed.

FIG.	PART NO.	DESCRIPTION	PER ASSY.				
			10-5	10-5B (1)	10-5C	10-5E	PER ASSY:
1	189-00100	Hydraulic Cylinder Assembly	1	1	1	1	10-5B (1)
1A	189-01200	Hydraulic Cylinder Assembly		1	1	1	10-5C
1A	189-02300	Hydraulic Cylinder Assembly		1	1	1	10-5E
2	182-00310	Piston Rod Assembly	1	1			10-5
3	182-02610	Piston Rod Assembly		1	1		10-5B (1)
3	142-00500	Rod	1	1	1	1	10-5C
4	141-00500	Gland-Eric	1	1	1	1	10-5E
5	101-00700	O-Ring-Gland (MS28775-012)	1	1	1	1	10-5B (1)
6	101-01100	C-Ring-Gland (MS28775-113)	1	1	1	1	10-5C
7	095-01100	Washer-Seal	1	1	1	1	10-5E
8A	148-00910	Piston	1	1	1	1	10-5B (1)
8B	101-00810	O-Ring (MS28775-110)	1	1	1	1	10-5C
9	082-00800	Spring	1	1	1	1	10-5E
10	145-01500	Bushing	1	1	1	1	10-5B (1)
11	155-00500	Hinged Snap	1	1	1	1	10-5C
12	082-00900	Spring-Return	1	1	1	1	10-5E
13	095-10200	Washer (AN960-416L)	1	1	1	1	10-5B (1)
14	094-00310	Nut-Jam (AN516-41)	1	1	1	1	10-5C
15	113-01010	Clevis	1	1			10-5E
15A	143-00910	Clevis		1	1	1	10-5B (1)

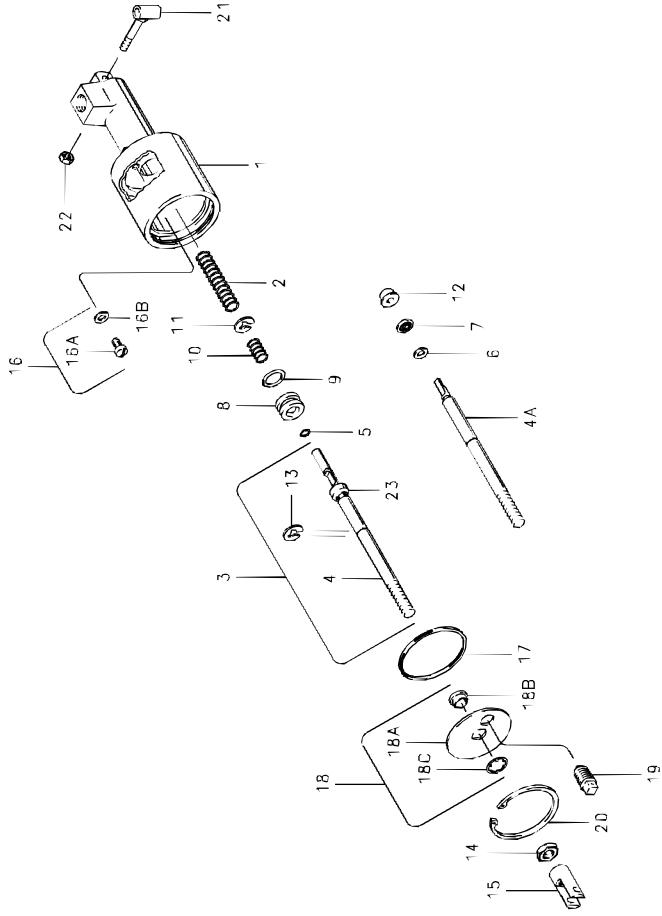
- NOTES:  
(1) 10-5B does not include Parking Brake.



NOTE: Parts list for reference only. Contact airframe manufacturer to order master cylinders and components listed.

FIG.	PART NO.	DESCRIPTION	PER ASSY.
1	189-01100	Cylinder Assembly	1
	182-00900	Piston Rod Assembly	1
	182-01900	Piston Rod Assembly	1
2	142-03600	Piston Rod	1
	218-00100	Piston Rod	1
3	141-01100	End Gland	1
	141-01101	End Gland	1
4	213-00100	Fitting (Gls 502 'G')	1
5	154-01500	Field-Rod	1
6	067-01300	Spacer-Piston	1
7	095-01100	Washer	1
8	148-01000	Piston	1
9	101-01100	O-Ring (MS28775-1-13)	1
10	145-01500	Bushing	1
11	082-00800	Spring	1
12	155-00500	Ring-Snap	1
13	082-00900	Spring	1
14	149-00100	Lever-Parking	1
15	082-01800	Spring	1
16	067-01200	Spacer	2
17	145-02300	Bushing	2
18	229-00100	Plate-Spring Retainer	1
19	102-05700	Screw-Fil Hd (AN150-10-10)	4
20	095-15400	Washer-Lock (AN936-A10)	4
21	095-10600	Washer (AN960-616)	1
22	223-00100	Rollpin	1
23	102-05200	Screw-Fil Hd (AN500-6-4)	3
24	085-16000	Washer-Lock (MS3536-4-1)	3

199-506	Repair Kit (5, 7, 9)	1	1
---------	----------------------	---	---



**10-34, 10-35, 10-36, 10-38, 10-39, 10-45, 10-69**

NOTE: Parts list for reference only. Contact the airframe manufacturer to order master cylinders and components listed.

FIG.	PART NO.	DESCRIPTION	PER ASSY.			
			10-34 (2)	10-35 (2)	10-36 (2)	10-38 (2)
	144-C3800	Cylinder Body	1	1	1	1
1	144-C5900	Cylinder Body		1		
	144-L04000	Cylinder Body			1	
	144-L04200	Cylinder Body				1
	144-L67000	Cylinder Body				1
2	082-05400	Spring-Return	1	1	1	1
	082-05700	Spring-Return		1		1
3	182-05000	Piston Rod Assembly			1	1
4	142-04000	Piston-Roc		1		
4A	142-04300	Piston-Roc			1	
	142-08900	Piston-Roc			1	
5	101-00300	O-Ring (MS28775-008)	1	1	1	1
6	105-12800	Washer		1		1
7	105-02600	Slat-Q-sea		1		1
	148-02800	Piston	1	1	1	1
8	148-02900	Piston		1		
	148-04700	Piston			1	
	101-00900	O-Ring, Piston (MS28775-111)	1	1	1	1
9	101-01300	O-Hing, Piston (MS28775-115)			1	
	101-017000	O-Ring, Piston (MS28775-112)		1		
10	082-05500	Spring-Piston	1	1	1	1
	082-05500	Spring-Piston		1		
11	155-05100	Snap Ring	1	1	1	1
12	145-06500	Spring Guide		1		1
13	155-07200	Snap Ring		1	1	1
14	094-04300	Nut-Check (AN316-5)		1	1	1
15	143-01000	Clevis-Roc	1	1	1	1
	143-01100	Clevis-Roc			1	
16	111-04300	Screw & Washer Assembly		1		
16A	102-02200	Screw	1	1	1	1
16B	095-10300	Washer	1	1	1	1
17	101-60001	O-Hing, Reservoir	1	1	1	1
18	111-04600	Cover Assembly		1	1	1
18A	147-00700	Cover, Plate	1	1		
18B	145-06400	Bushing-Bronze		1		
18C	155-06900	Retaining Ring		1		
19	140-01900	Filter Plug	1	1	1	1
	155-05300	Strap Ring	1	1	1	1
20	110-05200	Adapter-Clevis		1		
21	094-12300	Nut-Lock (AN1065-1031)		1		
22	139-06200	Thrust Collar	1	1	1	1
23						
	199-513	Repair Kit (5, 9, 17)	1	1	1	1
	199-514	Repair Kit (6, 7, 9, 16A, 16B, 17)		1		
	199-577	Repair Kit (7, 9, 17)			1	

**3**

NOTES:

(1) 10-69 and spares are available thru distribution. PMA approved details of 199-115 kit for Cassina 441.

(2) The following Cleveland master cylinders were formerly manufactured by Gerdes Products Co.

C.W.B.

GERDES

NUMBER

10-34

A-049-3

10-35

A-049-4

10-36

A-049-6

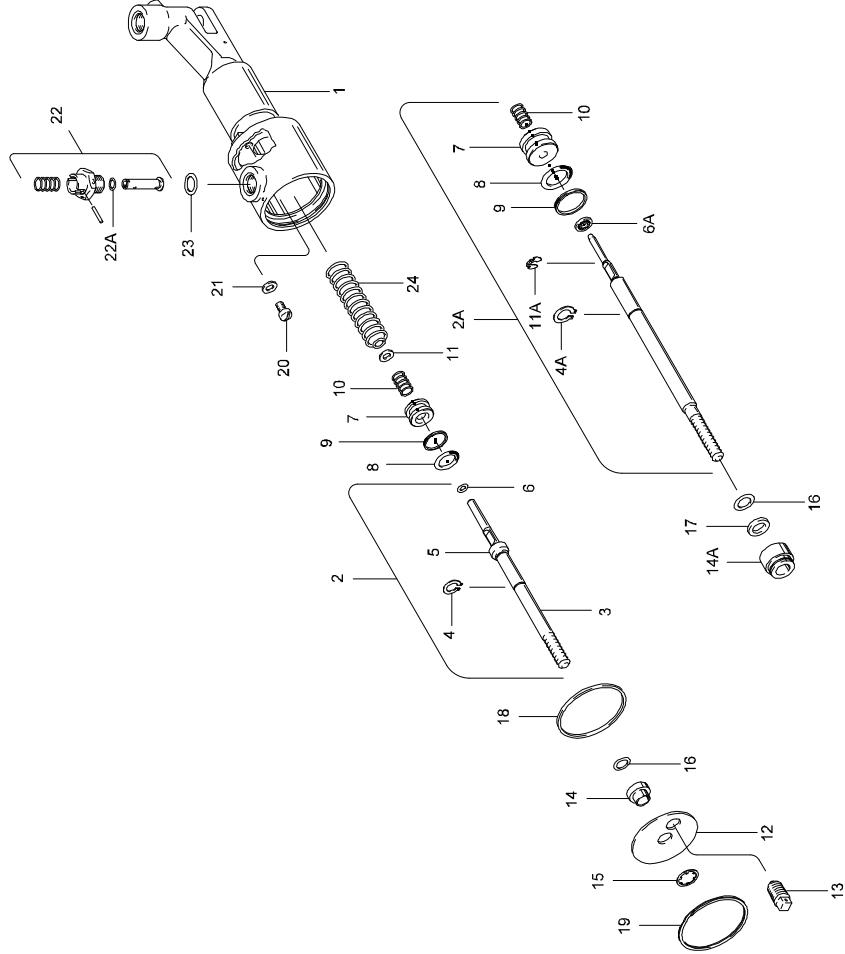
A-049-8

A-049-9

10-39

A-049-35

10-45



**010-05700, 010-05701, 010-06500**

NOTE: Parts list for reference only. Contact the airframe manufacturer to order master cylinders and components listed.

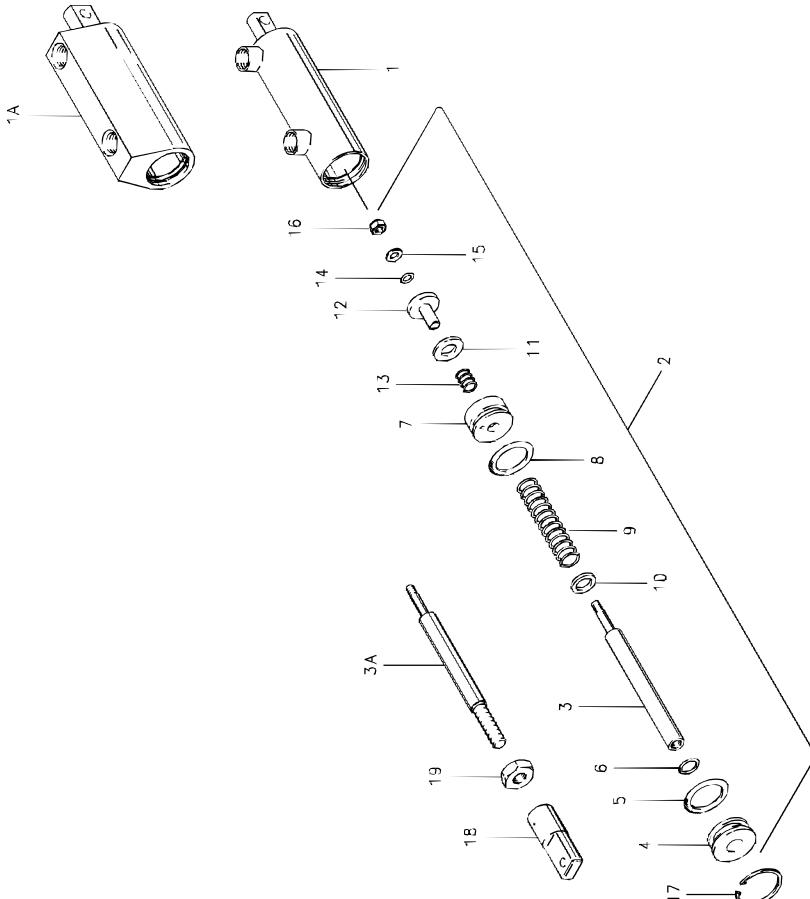
FIG.	PART NO.	DESCRIPTION	PER ASSY.
			(2)
1	189-C5600	Hydraulic Cylinder Assembly	1
	189-C5600	Hydraulic Cylinder Assembly	1
2	182-05300	Piston Rod Assembly	1
2A	182-02700	Piston Rod Assembly	1
3	142-05800	Piston Rod	1
4	142-07600	Piston Rod	1
4A	155-05600	Snap Ring	1
4A	155-06500	Snap Ring	1
5	139-06200	Thrust Collar	1
6	101-50349	O-Ring (MS28775-007)	1
6A	095-02600	Star-O-Seal	1
	148-03901	Piston	1
7	148-04200	Piston	1
	148-03900	Piston	1
8	101-05000	O-Ring (MS28775-111)	1
	101-01200	O-Ring (MS28775-114)	1
9	100-10143	Back Up Ring (MS28774-111)	1
	100-20012	Back Up Ring (MS28732-12)	1
10	082-05500	Spring	1
	082-07100	Spring	1
11	095-13100	Washer	1
11A	155-07100	Retaining Ring	1
12	147-00700	Cover Plate	1
	147-00300	Cover Plate	1
13	140-02000	Plug-Ventied	1
	141-03101	Gland	1
14	(3)	Gland	1
14A	145-07100	Bushing	1
15	155-05900	Retaining Ring	1
	155-07300	Retaining Ring	1
16	101-50341	O-Hing (MS28775-011)	1
	101-00800	O-Ring (MS28775-110)	1
17	100-20008	Back Up Ring (MS28732-8)	1
18	101-60001	O-Ring	1
	155-05200	Retaining Ring	1
19	155-06300	Retaining Ring	1
	102-20200	Button Head Screw	1
20	095-13100	Washer (AN960-C-10)	1
	095-10300	Washer (AN960-10)	1
22	111-04500	Reservoir Valve Assembly	1
	101-00300	O-Ring (MS28775-008)	1
23	101-20800	O-Ring (MS28778-4)	1
	082-06400	Return Spring	1
24	082-06300	Return Spring	1
	199-531	Repair Kit (6, 8, 9, 16, 17, 18, 22A)	1
	189-568	Repair Kit (6, 8, 9, 15, 16, 18, 19, 22A, 23)	1

**3**

- NOTES:
- (1) Inactive assembly - spares support only for parts listed.
  - (2) 010-06500 and spares are available thru distribution: PMA approved part used in 199-15301 Wheeled Landing Gear Kit for Bell 412.
  - (3) Inactive part - no longer available for spares support.
  - (4) The following Cleveland master cylinders were formerly manufactured by Garde's Product Co.

C.W.B. GARDÉS  
NUMBER  
010-05700  
A-1880-1

10-17, 10-23, 10-23A, 10-23C, 10-23F, 10-75, 10-86, 10-86A



NOTE: Parts list for reference only. Contact airframe manufacturer to order master cylinders and components listed.

FIG.	PART NO.	DESCRIPTION	PER ASSY.							
			10-17	10-23	10-23A	10-23C	10-23F	10-75	10-86	10-86A
1	189-02500	Cylinder Body		1	1	1	1	1		
	144-03600	Cylinder Body			1	1	1			
1A	144-09400	Cylinder Body				1				
	144-11300	Cylinder Body					1			
	144-12300	Cylinder Body (1)	1							

(Continued on next page)

NOTES:  
 (1) Extruded body - formerly used steel body PN 189-01000 which is no longer available.

**Cleveland**  
 Wheels & Brakes

**Parker**

**10-17, 10-23, 10-23A, 10-23C, 10-23F, 10-75, 10-86, 10-86A**

(Continued from previous page)

**PER ASSY:**

FIG.	PART NO.	DESCRIPTION	10-17	10-23	10-23A	10-23C	10-23F	10-75	10-86	10-86A	10-86A
	182-00800	Piston Rod Assembly	1								
	182-02400	Piston Rod Assembly		1	1	1					
2	182-02402	Piston Rod Assembly						1			
	182-04600	Piston Rod Assembly							1		
	182-07300	Piston Rod Assembly								1	
	182-07301	Piston Rod Assembly									1
3	142-00700	Piston	1	1	1	1					1
	142-06900	Rod-Piston							1		
3A	142-00702	Rod-Piston						1			1
	141-00800	End Gland	1	1	1	1					
4	141-06601	End Gland						1			
	141-07600	End Gland							1		1
	101-01400	O-Ring (MS28775-16)	1	1	1	1					
5	101-50117	O-Ring (MS28775-117)						1			
	101-50119	O-Ring (MS28775-19)							1		1
	101-00700	O-Ring (MS28775-02)	1	1	1	1					
6	101-50110	O-Ring (MS28775-10)						1			
	148-00800	Piston	1								
7	148-02600	Piston	1	1	1	1					
	148-06900	Piston						1			
	101-01300	O-Ring (MS28775-15)	1								
	101-01400	O-Ring (MS28775-16)		1	1	1					
8	101-50116	O-Ring (MS28775-16)						1			
	101-27200	O-Ring (MS28775-22)							1		1
9	082-01900	Spring-Return	1	1	1	1					
	082-12400	Spring-Return									
10	095-10600	Washer (AN960-616)	1	1	1	1					
11	095-25100	Washer Seal	1	1	1	1					
12	146-00500	Valve	1	1	1	1					1
13	082-01000	Spring	1	1	1	1					1
14	101-00300	O-Ring (MS28775-008)	1	1	1	1					1
15	095-10300	Washer (AN960-10)	1	1	1	1					1
16	094-10200	Nut (AN364-1032)	1	1	1	1					1
	094-14000	Nut									
	155-01100	Ring Snap	1	1	1	1					
17	155-01600	Ring Snap						1			
	155-12500	Ring Snap							1		1
18	143-03200	Clevis							1		1
19	094-04300	Nut							1		1

**3**

**Cleveland**  
 Wheels & Brakes

**Parker**

