

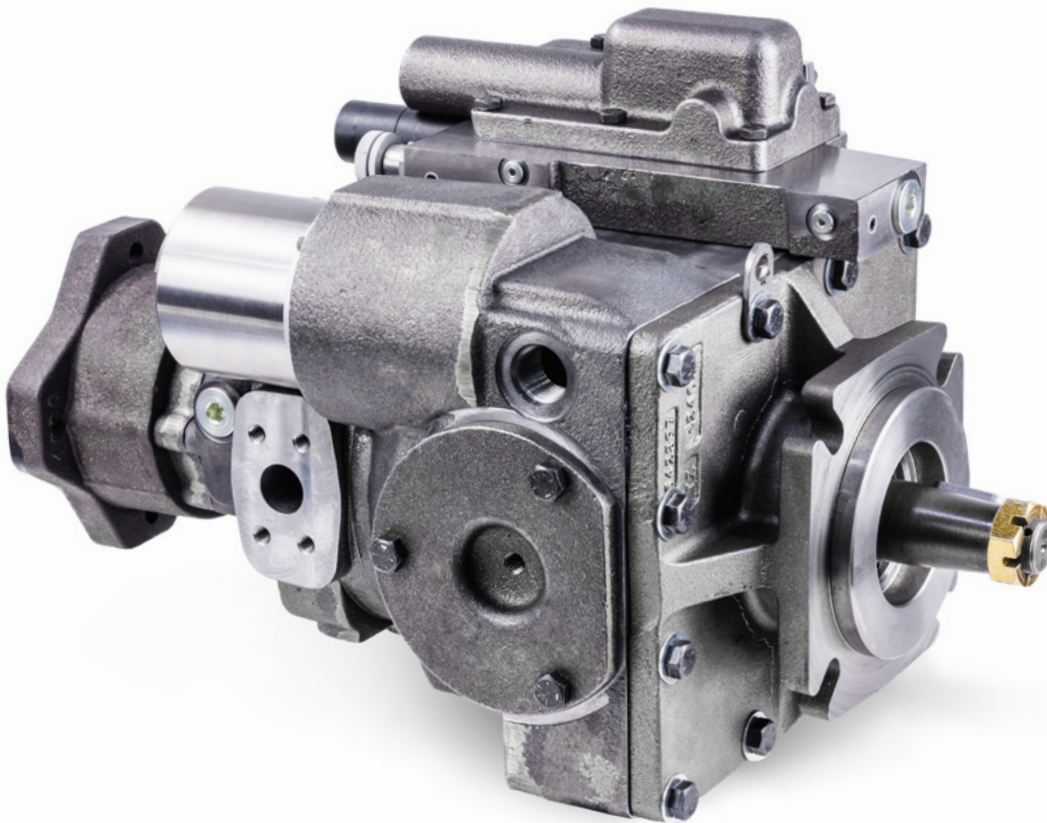


PANAGON
systems

HYDRAULIC PUMP MANUFACTURING

HYDROSTATIC 54 MODELS **BUILT BY US**

SERIES 54



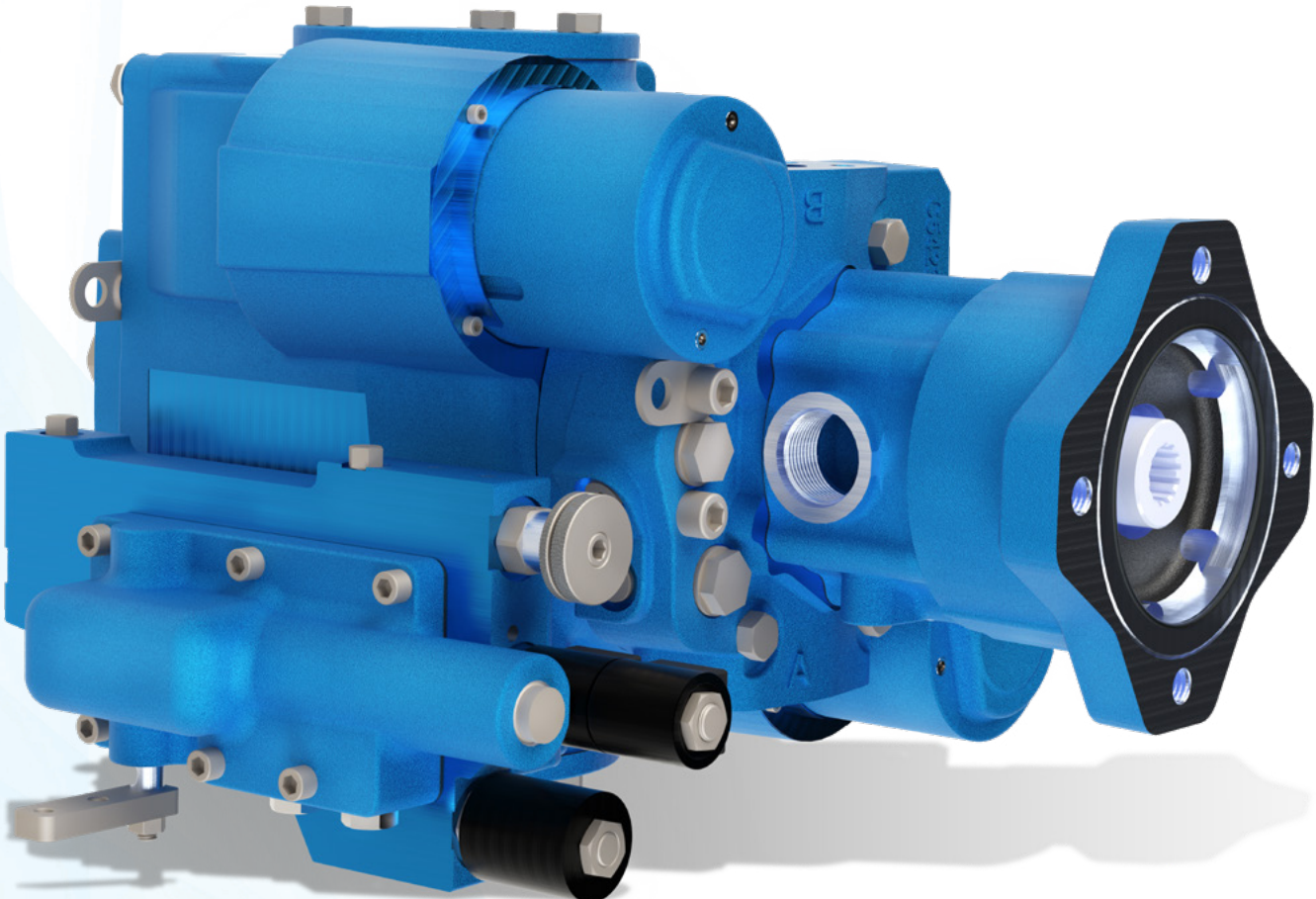
PARTS INFORMATION GUIDE

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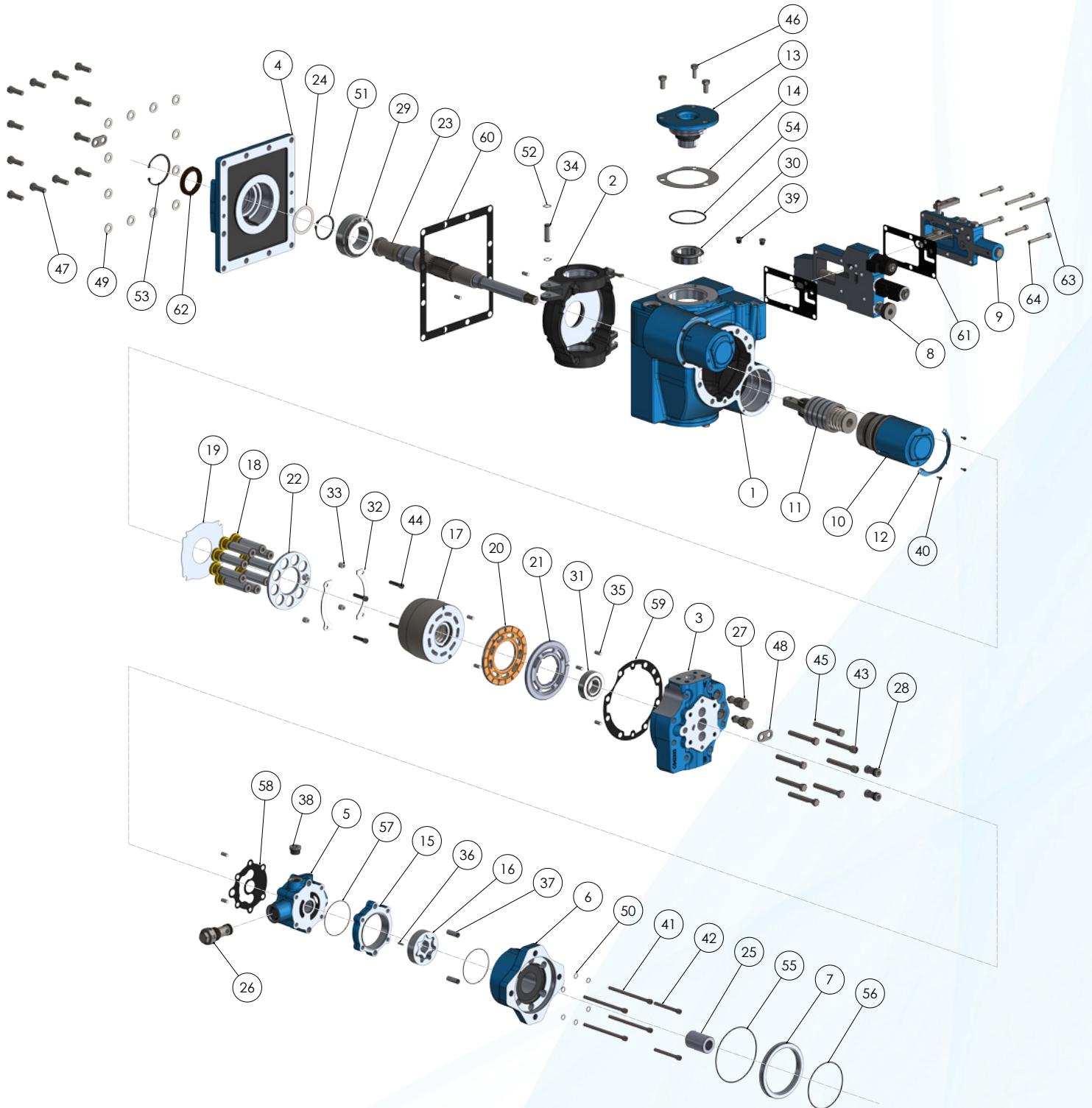


Founded nearly 35 years ago, Panagon Systems has remained a trusted company producing hydraulic parts on demand for a number of shops, manufacturers and industries. The company, located in Macomb, Michigan, is a hydraulic piston pumps and parts manufacturer, providing a vast variety of current and obsolete components. With a variety of CNC machines, Panagon produces finished product from raw materials. Which are then assembled, tested, painted and shipped from our facility. Panagon Systems attempts to fill the void OEM's create by manufacturing the phased out, expensive, unavailable pumps, motors and transmissions.

Model 54 2
Parts Identification 3
Parts Lists 4
Identification of Model Code 6



Model 54



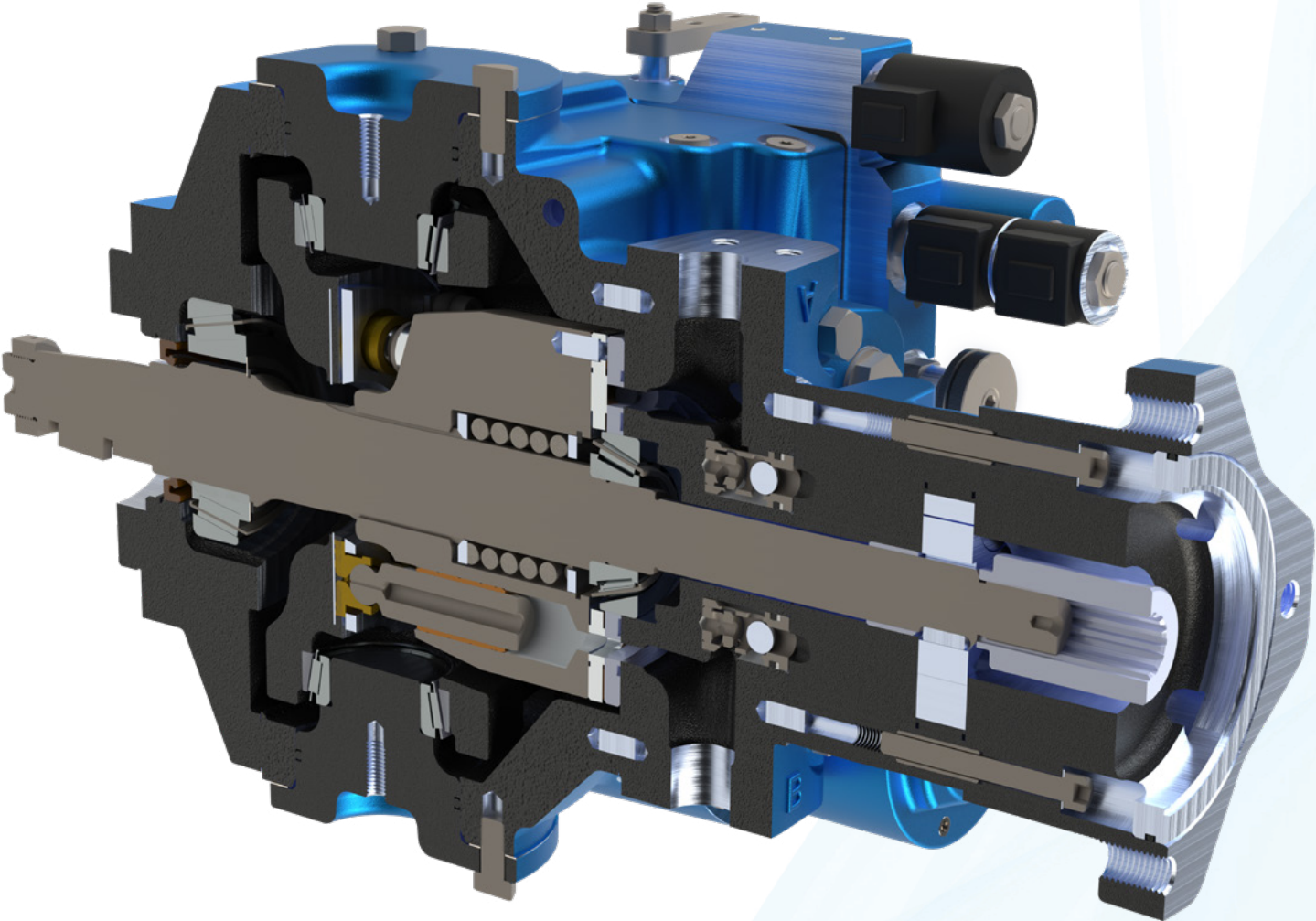
Model 54

ITEM	PART NUMBER		QTY	NOTE	DESCRIPTION
	Panagon	OEM			
1	PS-5818894	103805	1		Housing
2	PS-5819010	104463-3	1		Yoke
3	PS-5818944	101415	1		Valve Block
4	PS-5819026	103803-1	1		Mounting Flange
5	PS-5819768	990548-000	1		Charge Pump
6	PS-5819692	995423-000	1		B-Pilot Adapter
7	PS-5819621	107018-000	1		B-Pilot Adapter Spacer
8	PS-5819605	113675-001	1		RE Control Body Subasm
9	PS-5819606	110470-052	1		Manual Control Valve Subasm
10	PS-5818838	990038-1	2		Servo Sleeve w/ O-Rings
11	PS-5818896	102638	2		Servo Piston Subasm
12	PS-5818904	95844	2		Servo Sleeve Retainer
13	PS-5819751	23591-1	2		Trunion Cover
14	PS-5818891	990013	1		Shim Pack - Trunion
15	PS-5819577	101017-000	1		Gerotor Spacer Body
16	PS-5819578	22258-005	1		Gerotor Subasm
17	PS-5819083	990414	1		Cylinder Barrel Subasm
18	PS-5818866	101077	9		Piston and Shoe Subasm
19	PS-5818859	103809-000	1		Thrust Plate
20	PS-5818880	103852	1		Bearing Plate
21	PS-5818968	105103	1		Control Plate
22	PS-5818870	103853-000	1		Shoe Plate
23	PS-5819636	PS-5819636	1		Drive Shaft
24	PS-5818911	990019-000	1		Shim Pack - Shaft
25	PS-5819810	PS-5819810	1		Shaft Coupler
26	PS-5819769	103072-028	1		Relief Valve Subasm
27	PS-5819782	30346418	2		Relief Valve Subasm
28	PS-5818912	101187	2		Check Valve Subasm
29	PS-5818854	990387	1		Bearing Kit
30	PS-5818887	990024	2		Bearing Kit
31	PS-5818909	990016	1		Bearing Kit
32	PS-5818873	990417-000-2	2		Lift Limiter Plate
33	PS-5819011	990417-000-1	4		Lift Limiter Bushing
34	PS-5818898	95654	2		Pin(s)
35	PS-5818850	98202-000	7		Pin(s)
36	PS-5819576	101311-000	1		Pin(s)
37	PS-5819579	98011-000	2		Pin(s)
38	PS-5816322	115046-010	1		O-Ring Plug
39	PS-2254	343740	2		O-Ring Plug
40	PS-5818905	95890-038	6	B	Socket Head Cap Screw
41	PS-5819581	95912-475	4	B	Socket Head Cap Screw
42	PS-5819580	95912-275	2	B	Socket Head Cap Screw
43	PS-5820165	PS-5820165	2	B	Socket Head Cap Screw
44	PS-5819013	990417-3	4	B	Socket Head Cap Screw

ITEM	PART NUMBER		QTY	NOTE	DESCRIPTION
	Panagon	OEM			
45	PS-5818916	103091-300	6	B	Hex Head Bolt
46	PS-5818883	95864-088	6	B	Hex Head Bolt
47	PS-5818843	95864-125	12	B	Hex Head Bolt
48	PS-5818845	96559-000	2	B	Lifting Strap
49	PS-5820158	PS-5820158	12	B	Washer
50	PS-5819530	103223-000	6	B	Washer
51	PS-5819546	103222-200	1		Retaining Ring
52	PS-5818897	95820-056	4		Retaining Ring
53	PS-5819534	101680-250	1		Retaining Ring
54	PS-135834	8761-234	2	A	O-Ring
55	PS-135449	104166-158	1	A	O-Ring
56	PS-135428	-155 VT	1	A	O-Ring
57	PS-134987	-041 VT	2	A	O-Ring
58	PS-5819564	101179-000	1	A	Gasket
59	PS-5818907	103042	1	A	Gasket
60	PS-5818852	8826	1	A	Gasket
61	PS-5819607	110213-000	2	A	Gasket
62	PS-5811490	108395-000	1	A	Shaft Seal
63	PS-5819608	95862-300	2	B	Socket Head Cap Screw
64	PS-5819609	95862-225	4	B	Socket Head Cap Screw

A Included in PS-5820198 Seal Kit

B Included in PS-5820186 Bolt Kit



Model 54

A C A 5 4 2 3 0 2 L 1 A C C R E A A A 2 C N A A 1 0 D A 1 5 0 0 B
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15,16 17 18 19 20 21 22 23 24 25 26 27 28 29,30 31 32 33

1 2 3 **Pump Series**

ACA – Hydrostatic - Heavy
 Duty Variable Pump

L – 379 bar (5500 psi)
 M – 414 bar (6000 psi)
 N – 448 bar (6500 psi)

4 5 **Displacement**

54 – 89.13 cm³/r (5.439 in³/r)

15,16 **Remote Electric**

RE – Remote electric with

6 **Type**

2 – Variable Displacement Pump

17, 18, 19 **Control Supply Orifice**

P (pos. 17)
 Upper Servo (S1 pos. 18)
 Lower Servo (S2 pos. 19)
 0 – None
 A – 0.71 (.028) Diameter
 B – 0.91 (.036) Diameter
 C – 1.12 (.044) Diameter
 D – 1.32 (.052) Diameter
 E – 1.45 (.057) Diameter
 F – 1.65 (.065) Diameter
 G – 1.85 (.073) Diameter
 H – 2.39 (.094) Diameter
 J – 2.59 (.102) Diameter

7 **Design Type**

3 – Series 1 (Model 54)

8,9 **Input Shaft**

40 – 38 (1.50) Diameter
 tapered with 9.5 (.3750)
 x 25.4 (1.00) square key
 (Model 54)

10 **Input Rotation**

L – Counterclockwise (Lefthand)
 R – Clockwise (Righthand)

20 **Pressure Override**

0 – None
 2 – Internal Pressure Override
 5 – Internal Pressure Override
 Externally Adjustable

11 **Valve Plate**

0 – Standard (V-groove)
 1 – Propel

21 **Pressure Setting for Pressure Override**

0 – None
 1 – 196 bar (2850 lbf/in²)
 D – 138 bar (2000 psi)
 E – 172 bar (2500 psi)
 F – 207 bar (3000 psi)
 G – 241 bar (3500 psi)
 H – 276 bar (4000 psi)
 J – 310 bar (4500 psi)
 K – 345 bar (5000 psi)
 L – 379 bar (5500 psi)
 M – 414 bar (6000 psi)
 P – 362 bar (5250 lbf/in²)

12 **Main Ports**

A – 25.4 (1.00) - Code 61 per
 SAE J518
 B – 25.4 (1.00) - Code 62 per
 SAE J518
 D – (1.00) - Code 61 per SAE
 J518 with port A and B gage ports
 E – (1.00) - Code 62 per SAE
 J518 with port A and B gage ports

22 **Control Special Features**

0 – No control special features
 3 – Manual control lever with
 attachment holes located
 66;7 (2.625) and 82;6

13,14 **Power Limiter Valve Setting**

Port A (position 13 and
 Port B (position 14)
 0 – None
 C – 103 bar (1500 lbf/in²)
 D – 138 bar (2000 lbf/in²)
 E – 172 bar (2500 lbf/in²)
 F – 207 bar (3000 psi)
 G – 241 bar (3500 psi)
 H – 276 bar (4000 psi)
 J – 310 bar (4500 psi)
 K – 345 bar (5000 psi)

Model 54

- (3.25) and 98;4 (3.875)
from control shaft mounting hole
- 6 – Control special features severe duty coils with boots for electronic proportional control with weather-pack connector
 - 7 – Severe duty coils with boots for electronic proportional control
 - 8 – Manual control lever with attachment hole located 98;4 (3.875) from control shaft mounting hole
 - A – No manual control lever
 - B – Hardened Standard Manual Control lever mounted parallel to the pump drive shaft towards the mounting flange
 - D – Hardened standard manual control lever
 - E – Manual control lever with attachment hole 71;9 (2.83) from control shaft mounting hole. lever mounted parallel to pump drive shaft towards the mounting flange
 - H – Manual control lever with ball stud mounted 50;8 (2.00) from control shaft mounting hole. lever mounted parallel to pump drive shaft towards mounting flange
 - K – Manual control lever with 10;4 (0.41) diameter attachment hole 50;8 (2.00) from control shaft mounting hole
 - M – Manual control lever with ball stud mounted 76;2 (3.00) from control shaft mounting hole. Lever mounted parallel to pump drive shaft towards mounting flange.
 - N – Manual control lever with external torsion spring mechanism for neutral return

- S – Manual control lever with two 1/4-28 UNF attachment holes located at 85;7 (3.375) and 98;4 (3.875) from control shaft mounting hole. Lever mounted parallel to pump drive shaft towards mounting flange.
- W – Manual control lever mounted 1 to 2 spline teeth from vertical with external torsion spring mechanism for neutral return
- Y – Manual control lever with two 1/4-28 UNF attachment holes located at 85;7 (3.375) and 98;4 (3.875) from control shaft mounting hole

23 Charge Pump

- 0 – Charge pump included
- 2 – Charge pump with integral pressure filter mounted on the -A- port side
- 3 – Charge pump with short element integral pressure filter mounted on the -A- port side and external discharge port for 7/8-14 UNF-2B SAE O-ring fitting with steel hex plug
- A – Charge pump with remote pressure filter ports on the -A- port side
- B – Charge pump with integral pressure filter mounted on the -B- port side
- C – Charge pump with J.Deere integral pressure filter mounted on the -B- port side. diagnostic fitting included
- D – Charge pump with external discharge port for 7/8-14 UNF SAE O-ring fitting. With steel hex plug

Model 54

- E – No charge pump
- F – Charge pump with external discharge port with 90 degree. 7/8-14UNF. 37 degree flare tube fitting
- G – Charge pump with integral pressure filter and diagnostic fitting mounted on the -B- port side plus inlet gage port with hex plug
- H – Charge pump with remote pressure filter ports on -A- port side and inlet gage port on -B- port side
- J – Charge pump with integral pressure filter and diagnostic fitting; mounted on the -B- port side and external discharge port with 90 degree; 7/8-14 UNF; 37 degree flare; tube fitting
- K – Charge pump with remote pressure filter ports on the -B- port side and external discharge port with 90 degree; 7/8-14 UNF; 37 degree flare; tube fitting
- L – Charge pump with integral pressure filter and diagnostic fitting; mounted on the -B- port side and external discharge port with straight; 7/8-14 UNF; 37 degree flare; tube fitting
- M – Charge pump with remote pressure filter ports on the -B- port side and external discharge port with straight 7/8-14 UNF SAE O-ring to 3/4-16 UNF; 37 degree flare; tube fitting
- P – Charge pump with remote pressure filter ports on the -B- port side and external discharge port with straight 7/8-14 UNF; 37 degree flare; tube fitting
- R – No charge pump; with remote pressure filter ports on the -B- port side and external discharge port with 90 degree; 7/8-14 UNF; 37 degree flare; tube fitting
- S – Charge pump with integral pressure filter and diagnostic fitting; mounted on the -B- port side and external discharge port for 7/8-14 UNF-2B SAE O-ring fitting; with steel hex plug
- T – Charge pump with external discharge port with straight 7/8-14 UNF; 37 degree flare; tube fitting
- U – Charge pump with integral pressure filter; mounted on the -B- port side and external discharge port for 7/8-14 UNF-2B SAE O-ring fitting; with steel hex plug
- W – Charge pump with integral pressure filter mounted on the -A- port side and external discharge port for 7/8-14 UNF-2B SAE O-ring fitting with steel hex plug
- Y – Charge pump with remote pressure filter ports on the -B- port side and external discharge port for 7/8-14 UNF-2B SAE O-ring fitting with steel hex plug
- Z – Charge pump with remote pressure filter ports on the -B- port side

24 Auxiliary Mounting

- 0 – No auxiliary mounting
- 1 – SAE B-pad, no shaft seal and M12x 1.75-6H Thd
- A – SAE A-pad. With shaft seal (dry)

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- B – SAE B-pad. With shaft seal (dry)
 - C – SAE A-pad. No shaft seal (wet)
 - E – SAE C-pad. (Typically front pump of tandem) no shaft seal. Includes 14 tooth 12/24 pitch spline coupling. Charge pressure inlet port with 7/8-14 UNF. 37 degree flare. Tube fitting (straight for Model 54)
 - F – SAE B-pad; no shaft seal
 - G – SAE C-pad; (typically front pump of tandem) no shaft seal; Includes 21 tooth 16/32 pitch spline coupling; Charge pressure inlet port with 7/8-14 UNF; 37 degree flare; Tube fitting (straight for Model 54)
 - H – SAE C-pad; (typically front pump of tandem) no shaft seal; Includes 23 tooth 16/32 pitch spline coupling; Charge pressure inlet port with 7/8-14 UNF; 37 degree flare; Tube fitting (straight for Model 54)
 - L – SAE C-pad; (typically front pump of tandem) no shaft seal; Includes 14 tooth 12/24 pitch spline coupling; With 7/8-14 SAE O-ring port for charge pressure inlet (no fitting provided)(Model 54)
 - N – SAE C-pad; (Typically front pump of tandem) no shaft seal; Includes 14 tooth 12/24 pitch spline coupling; Charge pressure inlet port with 45 deg 7/8-14 UNF; 37 Degree flare; Tube fitting (For Model 54 Only)
 - P – SAE C-pad; (Front of tandem) No shaft seal; includes 14 tooth 12/24 Pitch spline coupling;
 - Chg press inlet port with 7/8-14 UNF; 37 deg flare; Tube fitting (45 deg for Model 54);Chg press gage port 7/8-14 UNF-2A capped
 - R – SAE A-padWith 11 tooth 16/32 pitch internal spline; No shaft seal (wet)
 - U – SAE C-pad; (Typically front pump of tandem) no shaft seal; Includes 14 tooth 12/24 pitch spline coupling; Charge pressure inlet port on pump centerline with 7/8-14UNF; 37 Deg flare; Tube fitting (straight for Model 54)
- 25 Charge Pump Displacement**
- 0 – No Charge Pump
 - 1 – 13.9 cm³/r (0.85 in³/r)
 - 2 – 17.4 cm³/r (1.06 in³/r)
 - 3 – 21.0 cm³/r (1.28 in³/r)
 - 4 – 27.9 cm³/r (1.70 in³/r)
 - 5 – 34.7 cm³/r (2.12 in³/r)
- 26 2nd Displacement of Dual Element**
- 0 – No Dual Element
- 27 Charge Pressure Rel Valve Setting**
- 0 – None
 - D – 15 bar (220 psi) - Standard
 - E – 16 bar (240 lbf/in²)
 - F – 18 bar (260 lbf/in²)
 - G – 19 bar (280 psi)
 - H – 21 bar (300 lbf/in²)
 - J – 22 bar (320 lbf/in²)
 - K – 23 bar (340 psi)
 - L – 24 bar (350 lbf/in²)
 - M – 26 bar (380 lbf/in²)
 - N – 28 bar (410 lbf/in²)
- 28 Charge Pump Special Features**
- 0 – No charge pump special features
 - A – Steel core charge pump gasket
 - B – Steel core charge pump gasket and 90 degree inlet fitting; 1 5/8-12 UN threaded end for 37 degree flare tubing ((1.25) OD tubing; (1.25) ID hose)

Model 54

- J – Steel core charge pump gasket; needle bearing
- M – Charge inlet manifold with charge relief valve
- N – Steel core charge pump gasket and charge inlet manifold with charge relief valve
- P – Charge inlet manifold with external discharge port for 7/8-14 unf sae o-ring port and steel hex plug in inlet port

29,30 Special Pump Assembly Features

- 00 – No special features
- 05 – Bottom servo piston with 0.0 degree stop
- 11 – Both servo sleeves have 1/2-20 UNF-2B thread and steel hex bolts
- 12 – Bottom servo sleeve has 7/8-14UNF SAE O-ring port with hex steel plug
- 13 – Model 76 shaft seal and grade 8 bolts in mounting flange to pump housing
- 14 – Special thick section end cover gasket
- 15 – Rear pump unit for tandem pump assembly (no shaft seal)
- 32 – Both servo sleeves have 7/8-14 UNF SAE O-Ring ports and steel hex plugs
- 39 – Bottom servo piston with externally adjustable stop
- 40 – Both servo pistons with externally adjustable stops
- 53 – Model 76 shaft seal
- 58 – 1350 Series end yoke assembled to drive shaft (Pos 8,9 must be Code 40)
- 59 – 1310 Series end yoke assembled to drive shaft (Pos 8,9 must be Code 40)
- 67 – Metal case drain plug in both ports

- 79 – Rear pump unit for tandem pump assembly (no shaft seal), both servo pistons with externally adjustable stops
- 82 – Rear pump unit for tandem assembly (no shaft seal), top servo piston with externally adjustable stop
- 83 – Externally adjustable displacement stops set at 3.32 in³/rev (54.4cc/ rev)

31 Paint and Packaging

- 0 – Painted primer blue (standard)
- A – Painted finish black

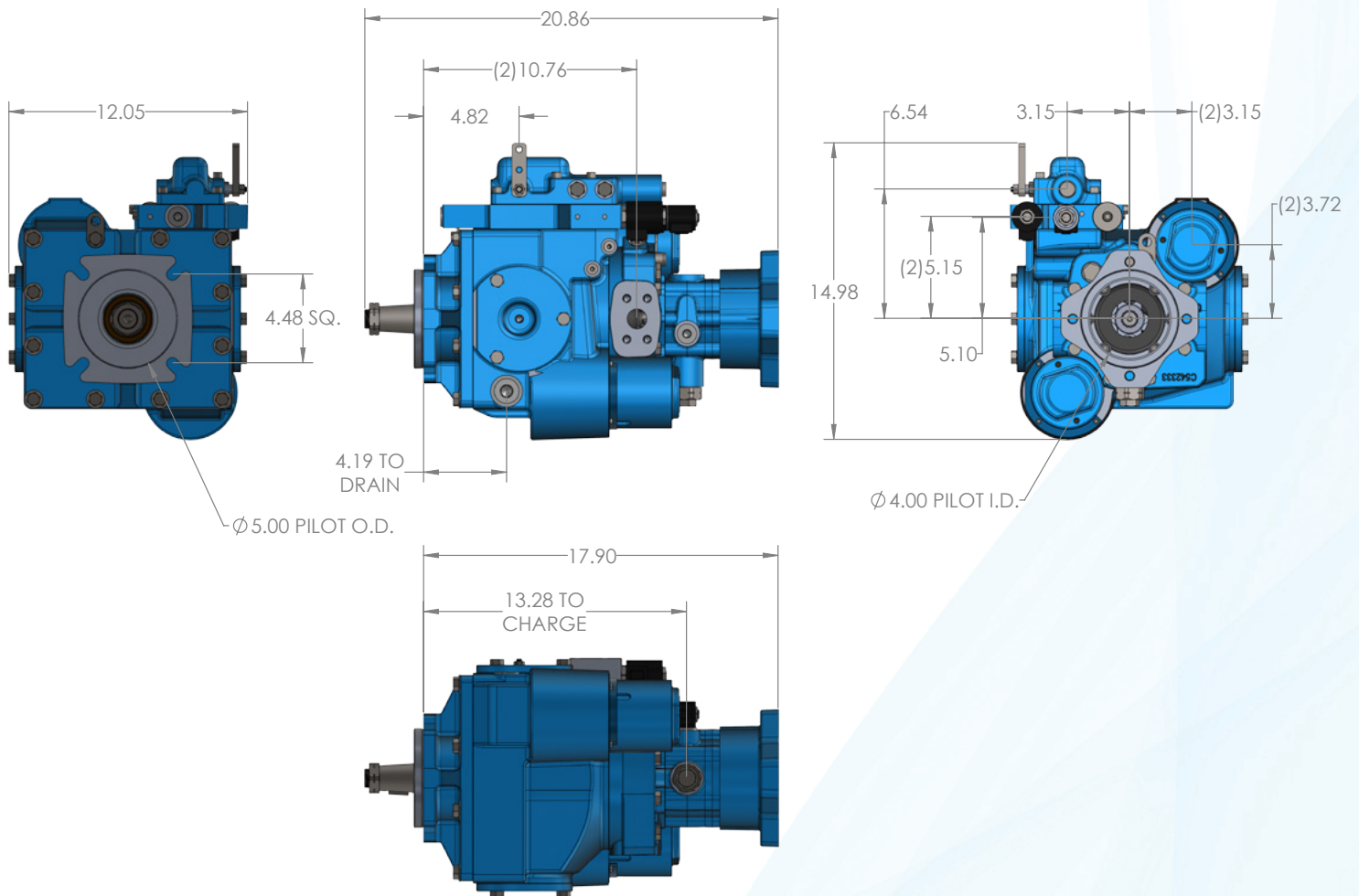
32 Identification on Unit

- 0 – Standard

33 Design Code

- A – A
- B – B

Model 54





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