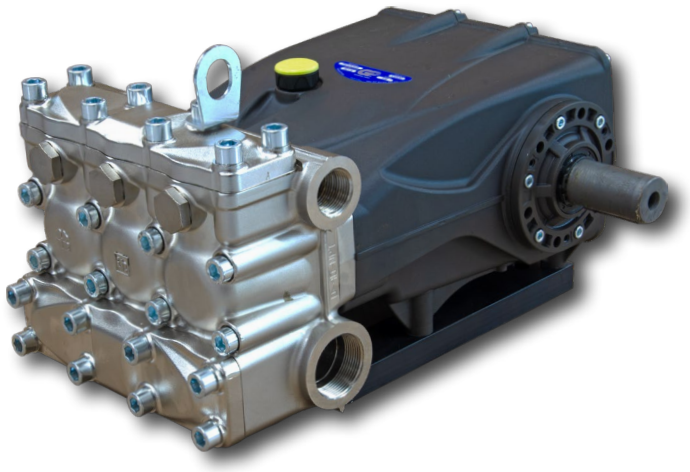
GENERAL PUMP *A member of the Interpump Group*

PHTCK3535S

FEATURES

- Direct replacement for CAT 3535
- Solid Ceramic plungers
- High volumetric efficiency suction/delivery valve
- Nickel-plated forged brass manifold
- Heavy-duty tapered roller bearings
- Low/High pressure packing design with integrated cooling system
- Ideal for use in car wash and other high pressure cleaning applications



SPECIFICATIONS

Pump Model	PHTCK3535S
Max Volume	36.0 GPM
Max Pressure	1300 PSI
Max RPM	800 RPM
Horsepower	32 HP
Inlet Pressures	Flooded to 70 PSI
Max Fluid Temperature	140º F
Bore (in / mm)	1.57 in. / 40mm
Stroke (in / mm)	1.38 in. / 45mm
Oil Capacity	87.9 oz. - Use GP 220 Series Oil
Inlet Port Thread	1 1/2" NPT-F
Discharge Port Thread	1" NPT-F
Shaft Diameter	1.38 in. / 35mm
Weight	134 lbs.
Dimensions - Nominal	17.4” x 17.05” x 9.2”

TRIPLEX

Instructions and Recommendations for the Installation

Maximum temperature of the water through the pump is 140ºF (60ºC).

In order to obtain maximum performance in terms of duration of seals and valves, it is necessary to respect a few simple rules, as follows:

1) **In order to avoid damage caused by cavitation, the pump must be pressure fed.**

Note: Contact General Pump's technical sales department for guidance when operating the pump outside of the related inlet specs.

2) **The plumbing which feeds the pump must be of a diameter at least equal to the inlet port.** Also, follow the suggestions below:

   a) Make the plumbing as short and straight as possible, preferably in an upward direction to facilitate the expulsion of eventual air bubbles naturally if compatible with the requirements of the system.

   b) It is always useful to put a filter at the inlet with capacity of 4 to 5 times flow of the pump, for example for a 4 GPM (15 l/min) pump, put a filter from 160 to 20 GPM (60-75 l/min) The mesh size suitable for this application is 0.016" (.4 mm).

   c) It is extremely important to put a pressure switch on the inlet port of the pump, and in any case downstream from the filter, so that it can stop the pump should the feed pressure drop by 20% due to the filter clogging or failure of the feed pump, etc.

3) **Change of oil**

We recommend the ***first oil change after the first 50 hours***, with the ***pump stopped*** and the ***oil still warm***.

This change is not recommended because the oil has lost its properties, but rather to eliminate the impurities that have gotten into the oil during the running-in phase. If these impurities are not removed, but are allowed to remain in the oil, they *may cause premature wear* to the moving parts and the oil seals. **After this initial change, the oil can then be changed every three months or 300 hours of operation thereafter.**

Please note: If the pump works in conditions with high humidity and with sharp temperature changes, it is possible that condensation will appear inside the crankcase, which mixing with the oil can change its properties. This is easy to see because the oil changes to a white, milky color.

If the pump does not have excessive water leaking from the packings, and the oil becomes milky, the oil has to be changed more frequently. The percentage of water in the oil must not exceed 20%.

Use oil per the following chart:

CHART OF COMPATIBLE OILS	
GENERAL PUMP	SERIES 220
BP	ENERGOL HLP 220
CASTROL	Hyspin VG220, Magna 220
MOBIL	DTE OIL BB
SHELL	TELLUS C 220
TOTAL	CORTIS 220

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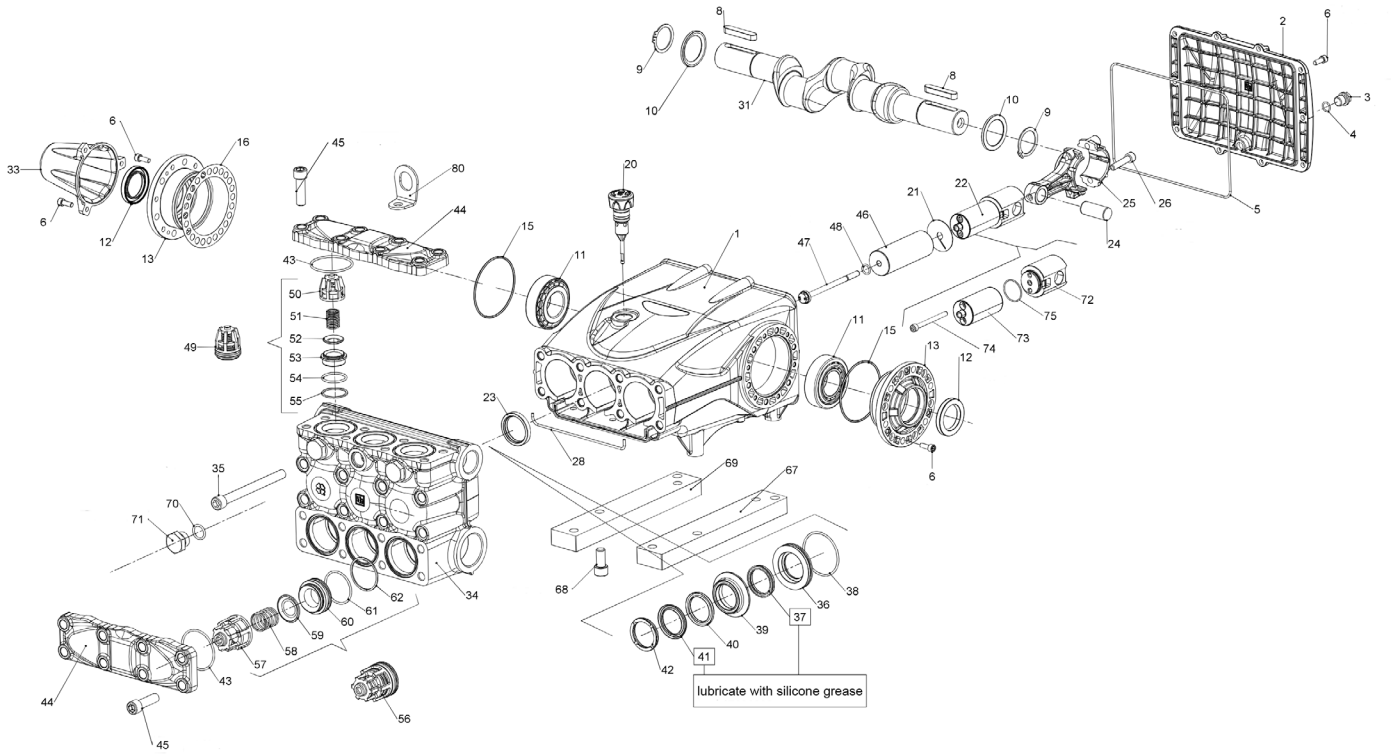


PARTS LIST

No.	Part No.	Description	Qty
1	68010022	Crankcase	1
2	68160022	Cover	1
3	98204250	Plug, G1/4" x 9	1
4	90358500	O-Ring, Ø10.82 x 1.78	1
5	90394800	O-Ring, Ø209.22 x 2.62	1
6	99185400	Screw, M6 x 16	25
8	91497800	Keyway, 10 x 8 x 55	2
9	90069500	Circlip	2
10	68210554	Spacer	2
11	91847300	Bearing	2
12	90167200	Oil seal, 35 x 52 x 7	2
13	70150022	Cover, PTO	2
15	90391500	O-ring, Ø80.6 x 2.62	2
16	70220081	Shim, 0.1 mm	1
	70220381	Shim, 0.25 mm	1
20	98211500	Dipstick, Ø21.5 x 70	1
21	96709900	Washer, 10 x 45 x 1	3
22	68605201	Piston Guide Assy	3
23	90167600	Oil seal, 36 x 47 x 7	3
24	97742500	Pin, Ø18 x 45	3
25	68030001	Conrod, Complete	3
26	99309900	Screw, M8 x 35	6

No.	Part No.	Description	Qty
28	68210782	Gasket, Ø3 x 190	1
31	68020235	Crankshaft	1
33	68210851	Protection Cover	1
34	68120841	Manifold, NPT	1
35	99446600	Screw, M12 x 130	8
36	68080170	Retainer, Ø40	3
37	90282800	Plunger seal, 40 x 48 x 5.5, LP	3
38	90390000	O-Ring, Ø58.42 x 2.62	3
39	68210170	Intermediate ring, Ø40	3
40	90283800	Restop, 40 x 55 x 8/4.5	3
41	90283200	Plunger seal, 40 x 55 x 7.5/4.5	3
42	71100351	Head ring, Ø40	3
43	90389300	O-Ring, Ø53.64 x 2.62	6
44	68211041	Cover	2
45	99430500	Screw, M12 x 40	16
46	71040509	Plunger, Ø40 x 95	3
47	71219566	Piston Screw	3
48	90367100	O-Ring, Ø11 x 2	3
49	36720601	Outlet valve	3
50	36200951	Guide	3
51	94745000	Spring, 16 x 27.5	3
52	36201076	Ball Valve	3

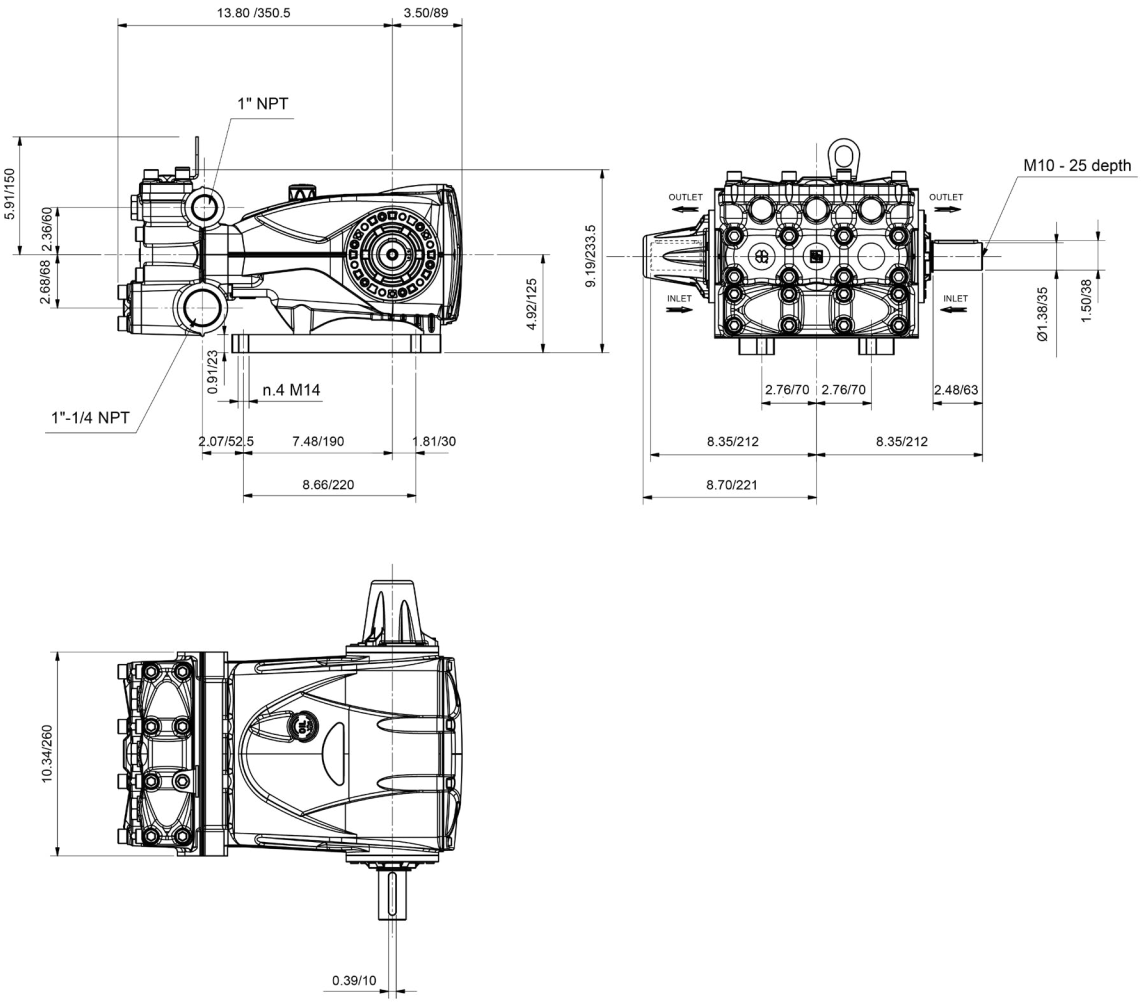
No.	Part No.	Description	Qty
53	36204866	Valve Seat	3
54	90386500	O-Ring, Ø29.82 x 2.62	3
55	90517800	Back-up Ring, 31. x 35.5 x 1.5	3
56	36702701	Inlet valve	3
57	36218451	Valve Guide	3
58	94754100	Spring, 16 x 27.5	3
59	36211576	Ball Valve	3
60	36211666	Seat	3
61	90388000	O-Ring, Ø42.52 x 2.62	3
62	90523300	Back-up Ring, 43.5 x 48 x 1.5	3
67	68200061	Rail, Right	1
68	99426800	Screw, M12 x 25	4
69	68200161	Rail, Left	1
70	90384100	O-Ring, Ø17.12 x 2.62	3
71	98218300	Plug, G1/2 x 13	3
72	64050115	Plunger Guide	3
73	68050156	Plunger Guide Stem	3
74	99199400	Screw, M6 x 65	6
75	90352800	O-Ring, Ø29 x 1.5	3
80	71223074	Hook	1

TORQUE SPECS*

Position	Ft.-Lbs.	Nm.
3	14.7	20
10	7.4	10
26	14.7	20
35	59.0	80
45	59.0	80
47	14.7	20
68	59.0	80
71	29.5	40
74	7.4	10

*Decrease torque by 20% if threads are lubricated.

DIMENSIONS (in./mm)



WARNING: High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices properly could result in personal injury or damage to pump or property. GP does not assume any liability or responsibility for the operation of the user's high pressure system.

WARNING: This product can expose you to chemicals including lead, which is know to the state of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

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