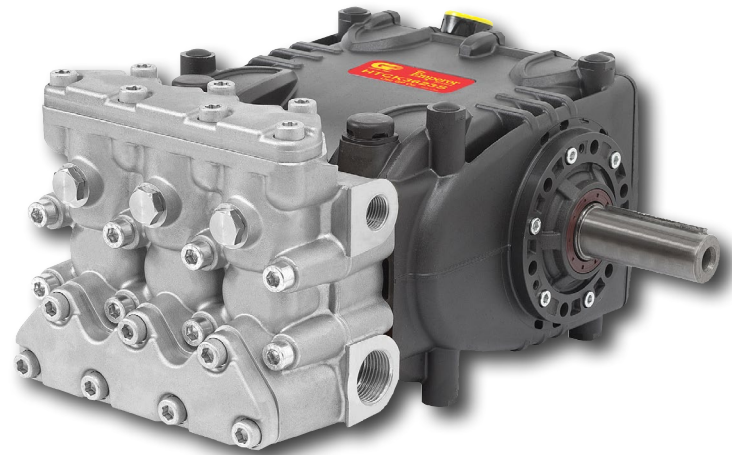


FEATURES

- Features patented “high tech” packings:
 - dynamic low-pressure seal retainer
 - superior low-pressure seal
 - innovative intermediate ring
 - superior high-pressure seal
- Ceramic plungers
- Patent-pending inlet/outlet valve cage
- Nickel-plated forged brass manifold with an exclusive lifetime warranty
- Heavy-duty tapered roller bearings
- Specifically designed to handle rigorous duty cycles, high temperatures and chemicals
- Ideal for use in car wash and other high pressure cleaning applications



SPECIFICATIONS

Pump Model	HTCK3623S		
Maximum Volume	18.0 GPM	21.0 GPM	25.0 GPM
Maximum Pressure	1500 PSI		1,300 PSI
Maximum RPM	1000 RPM	1150 RPM	1350 RPM
Horsepower	18.5 HP	22.0 HP	22.3 HP
Maximum Inlet Pressure	125 PSI		
Minimum Inlet Pressure	3 ft. water (2.6 in. Hg)		
Maximum Fluid Temperature	185°F		
Bore (in / mm)	1.4 in./36mm		
Stroke (in / mm)	.9 in./ 23 mm		
Oil Capacity	64.2 oz. - Use GP 220 Series Oil		
Inlet Port Thread	1" NPT-F		
Discharge Port Thread	1/2" NPT-F		
Shaft Diameter	1.181 in./30 mm		
Weight	79.6 lbs.		
Dimensions - Nominal	15.3" x 13.4" x 7.7"		

EMPEROR

EMPEROR

Instructions and Recommendations for the Installation of *HT Series Pumps*

The high-temperature pumps of the HT series have been designed for use in applications where the water must be pre-heated, such as in carwash, food and pharmaceutical industries.

Maximum temperature of the water through the pump is 185°F (85°C).

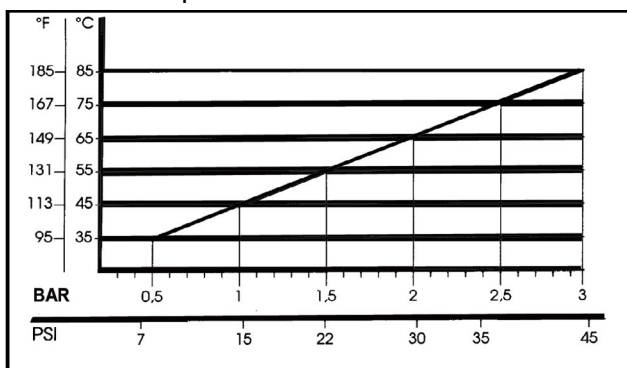
In order to obtain maximum performance in terms of duration of seals and valves, it is necessary to respect a few simple rules, as follows:

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

The higher the inlet pressure, the longer the life of the wet end of the pump.

When working at 185°F (85°C), the minimum feed pressure - measured directly in the inlet port of the pump when it is working - is 45 psi (3 bar).

The minimum feed pressure according to the different temperatures are:



Naturally, if the application allows for feeding the pump with 45 psi (3 bar) even at low temperatures (for example: 115°F/45°C the life of the wet end of the pump will be even longer.

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 16 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 suction 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**.

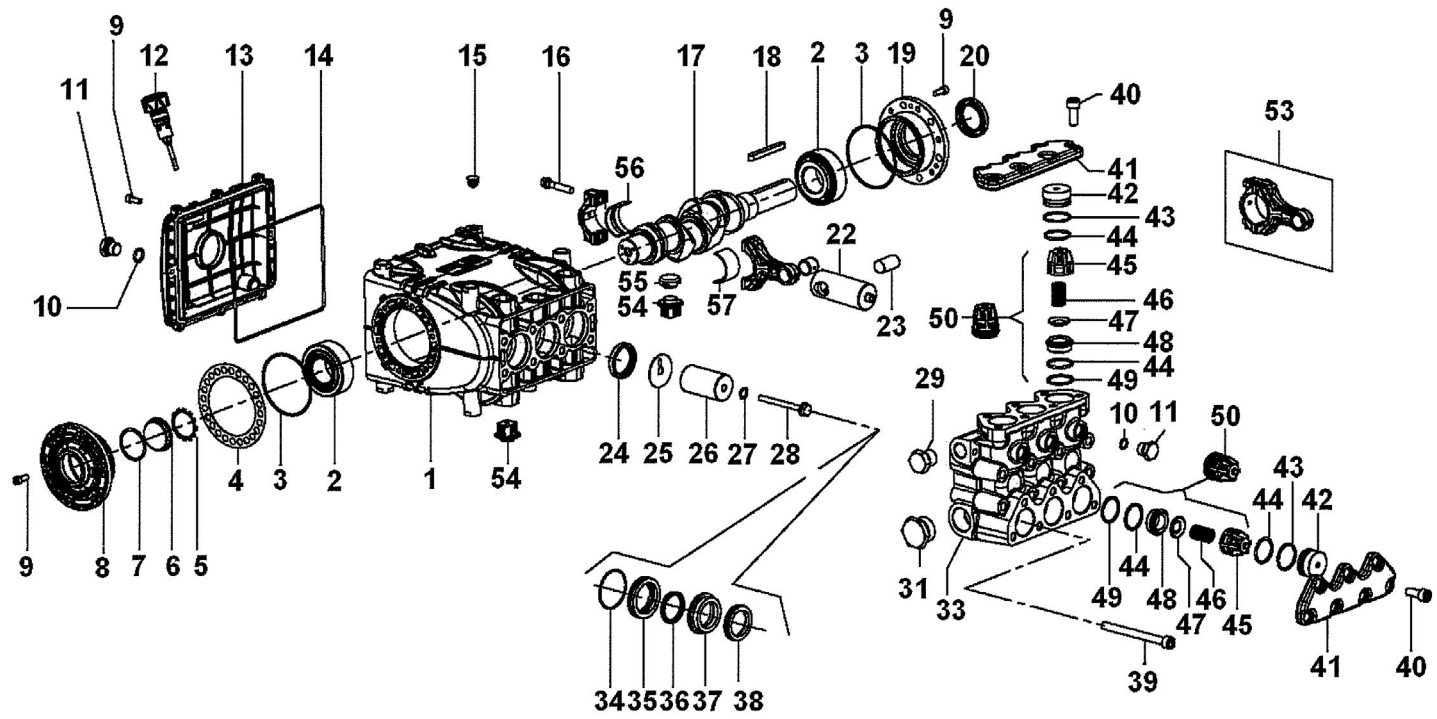
This change is not recommended because the oil has lost its properties, but rather to eliminate the impurities that have gotten into the oil during the running-in phase. If these impurities are not removed, but are allowed to remain in the oil, they may cause premature wear to the moving parts and the 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:

BRAND	TYPE
BP	ENERGOL HLP 220
MOBIL	DTE OIL BB
TOTAL	CORTIS 220



PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1.	70010022	Crankcase	1	22.	70050015	Plunger Guide	6	43.	90518000	Anti-extrusion Ring	6
2.	91847700	Bearing, Tapered Roller	2	23.	97742000	Wrist Pin	3	44.	90386500	O-ring	12
3.	90391500	O-ring	2	24.	90167700	Plunger Rod Oil Seal	3	45.	36204751	Valve Guide	6
4.	70220081	Shim, 0.1 mm	1	25.	96709900	Flinger Washer	3	46.	94745000	Valve Spring	6
	70220381	Shim, 0.25 mm	1	26.	70040509	Plunger, 36 mm	3	47.	36201076	Valve Poppet	6
5.	90075600	Retainer	1	27.	90367100	O-ring	3	48.	36204866	Valve Seat	6
6.	70211801	Oil Level Indicator	1	28.	70224111	Plunger Bolt	3	49.	90517800	Anti-extrusion Ring	6
7.	90387700	O-ring	1	29.	638294	Plug, 1/2" NPT, SS, OPTIONAL	1	50.	36714301	Valve Assy., Complete	6
8.	70150122	Side Cover, Sight Glass	1	31.	638297	Plug, 1" NPT, SS, OPTIONAL	1	53.	70030501	Connecting Rod Assy.	3
9.	99185400	Screw, M6 x 16	20	33.	70122441	Manifold, Nickel-plated, 36 mm, NPT	1	54.	70222551	Plug, Crankcase	6
10.	90383300	O-ring	4	34.	F90362600	O-ring	3	55.	71225951	Plug, Cover, Crankcase	3
11.	98209900	Plug, 3/8"G Nickel-plated	4	35.	70080570	Seal Retainer, 36 mm	3	56.	90922300	Babbitt, Back	3
12.	98211500	Oil Dipstick	1	36.	90240000	L.P Seal, 36 mm	3		90922400	Babbitt, Back, +0.25	3
13.	70160022	Crankcase Cover, Rear	1	37.	70216570	Intermediate Ring, 36 mm	3		90922500	Babbitt, Back, +0.50	3
14.	90394400	O-ring	1	38.	90241000	H.P. Seal, 36 mm	3	57.	90922000	Babbitt, Front	3
15.	98200500	Rubber Plug	7	39.	99381600	Screw, M10 x 110	8		90922100	Babbitt, Front, +0.25	3
16.	99312300	Screw	6	40.	99367100	Screw, M10 x 25	14		90922200	Babbitt, Front, +0.50	3
17.	70020035	Crankshaft	1	41.	70222341	Valve Cover	2				
18.	91490000	Key	1	42.	70211670	Plug	6				
19.	70150022	Crankcase Cover, Open	1								
20.	90166800	Crankshaft Oil Seal	1								

HT125RCK Rail Kit

REPAIR KITS

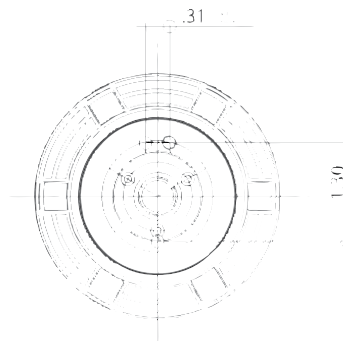
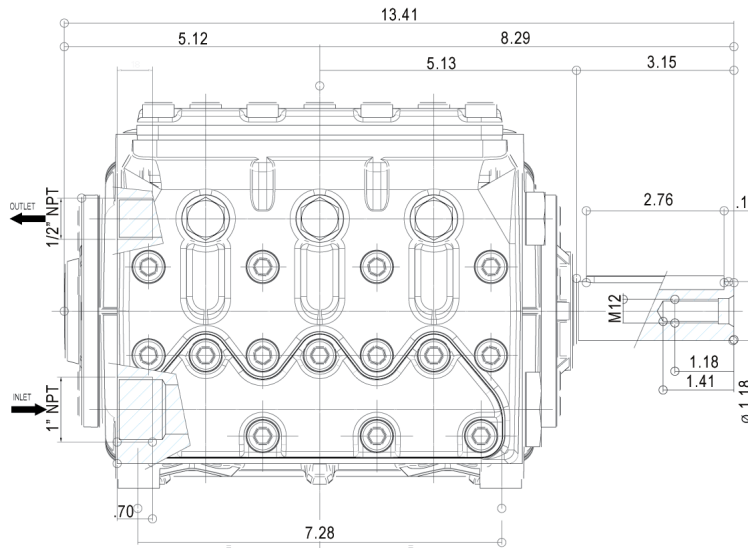
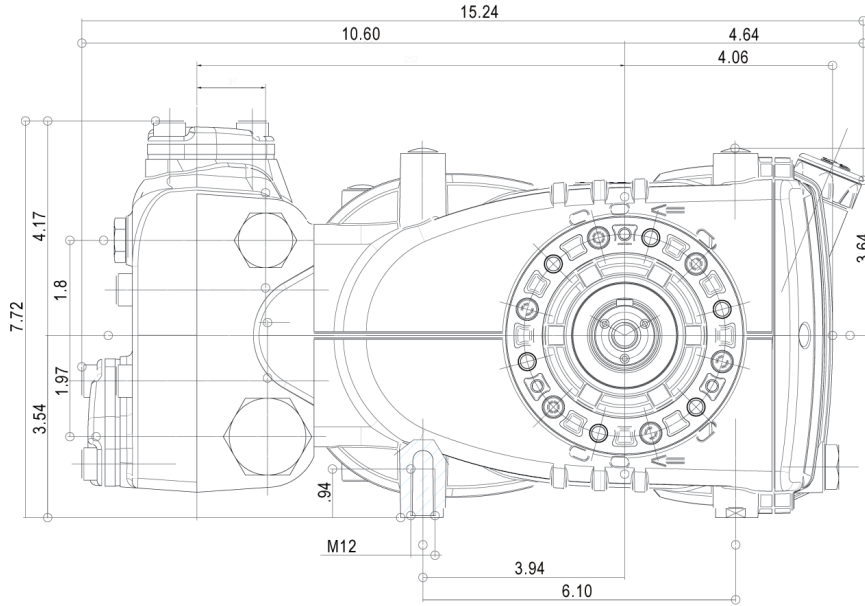
KIT NO.	K2030	K212	K2032
ITEM NO'S INCLUDED IN KIT	44, 45, 46, 47, 48, 49 (50)	36, 38	34, 35, 36, 37, 38
NUMBER OF ASSY'S IN KIT	6	3	1
NO. OF CYLINDERS KIT SERVICES	3	3	1

TORQUE SPECS*

Position	Ft.-Lbs.	Nm.
9	7.4	10
11	29.5	40
16	22.0	30
28**	14.7	20
29	88.5	120
31	73.7	100
39	29.5	40
40	59.0	80

*Decrease torque by 20% if threads are lubricated.
**Use Loctite 542.

DIMENSIONS



Ref 300609 Rev. G
03-17