

Triples Plunger Pump, Solid Shaft, 1750 RPM

FEATURES

- Nickel-plated cast manifold manufactured like heavy-duty pump line
- New generation seal package
- New dust protection chamber
- Solid ceramic plungers
- New oversized plunger guide
- New optimized inlet and outlet valves
- New oil seal
- New oversized crankcase



SPECIFICATIONS

Pump Model	ET1509S17	ET1807S17	ET1511S17	ET1512S17	ET1809S17	ET1810S17	ET1811S17
Maximum Volume	2.1 GPM	2.4 GPM	2.6 GPM	2.9 GPM	3.2 GPM	3.4 GPM	3.7 GPM
Maximum Discharge Pressure	2,610 PSI	2,320 PSI	2,610 PSI		2,320 PSI		
Horsepower	3.7 EBHP	3.7 EBHP	4.7 EBHP	5.1 EBHP	5.0 EBHP	5.4 EBHP	5.98 EBHP
Maximum Pump Speed	1750 RPM						
Maximum Inlet Pressure	125 PSI						
Max. Inlet Vacuum	3 ft. water (2.6 Hg)						
Plunger Bore (in / mm)	.591 in./15 mm	.708 in./18 mm	.590 in./15 mm	.590 in./15 mm	.708 in./18 mm	.708 in./18 mm	.708 in./18 mm
Plunger Stroke (in / mm)	.370 in./9.4 mm	.283 in./7.2 mm	.452 in./11.5 mm	.472 in./12 mm	.370 in./9.4 mm	.393 in./10 mm	.433 in./11 mm
Oil Capacity	8.5 oz.						
Maximum Fluid Temperature	165° F						
Inlet Port Thread	1/2"-14 BSP-F						
Discharge Port Thread	3/8"-19 BSP-F						
Shaft Diameter	.945 in./24 mm						
Weight	11.0 lbs.						
Dimensions - Nominal	8" x 7.4" x 4.7"						

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

Maximum temperature of the water through the pump is 165°F (73°C).

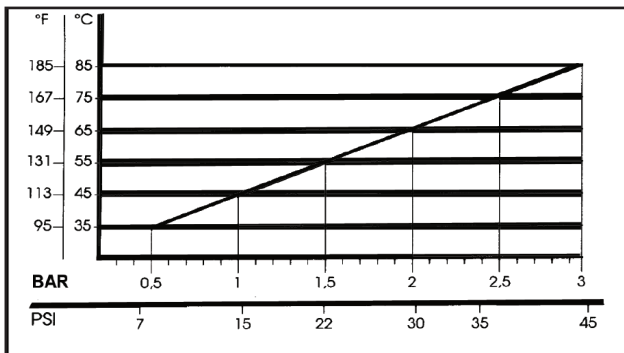
In order to obtain maximum performance in terms of duration of seals and valves, it is necessary to respect a few simple rules, as follows:

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 165°F (73°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 the 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**.

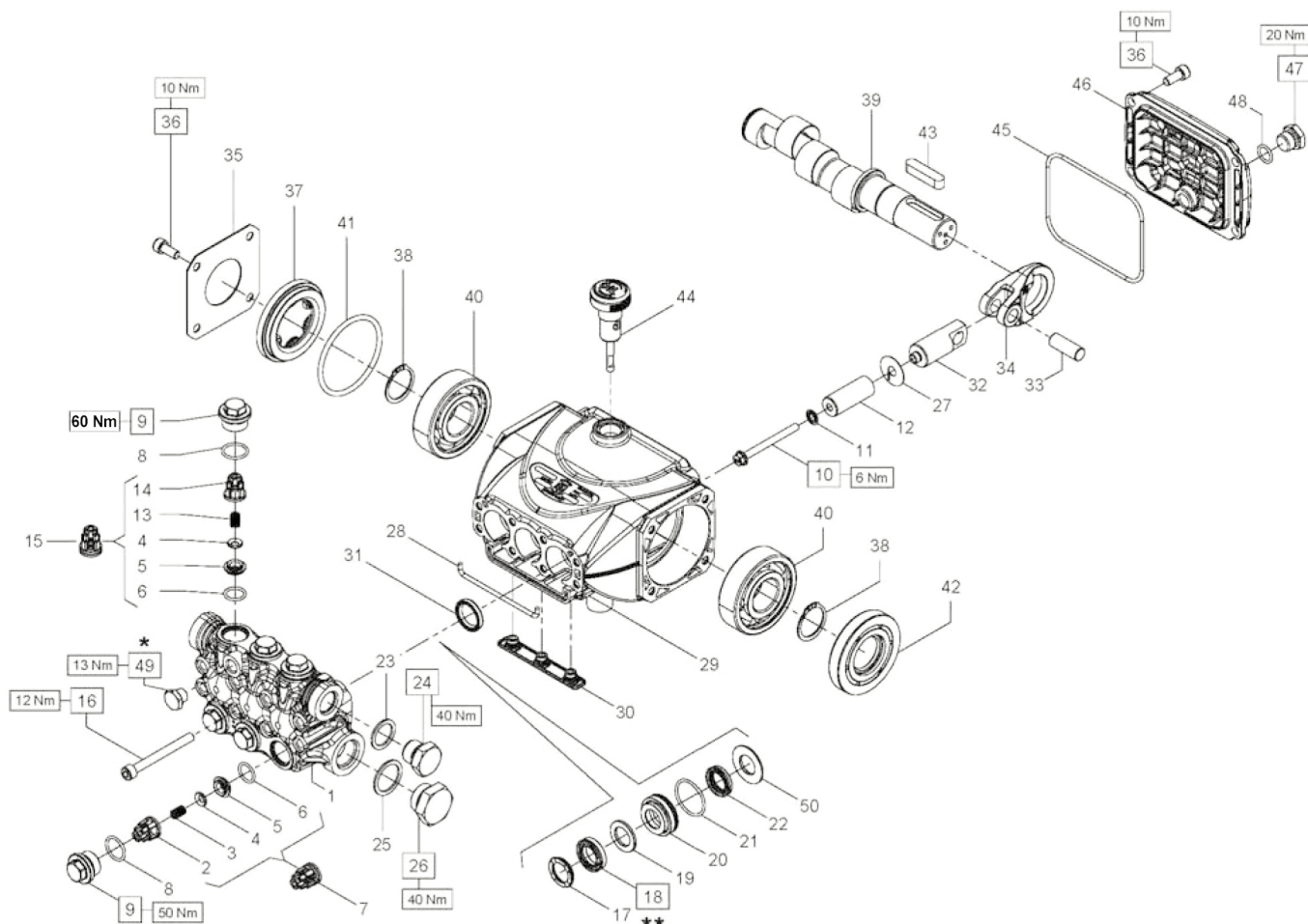
This change is not recommended because the oil has lost its properties, but rather to eliminate the impurities that have gotten into the oil during the running-in phase. If these impurities are not removed, but are allowed to remain in the oil, they *may cause premature wear* to the moving parts and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

CHART OF COMPATIBLE OILS SAE15W40	
General Pump	Series 100
BP	VISCO 2000
CASTROL	CWX
MOBIL	SUPER
SHELL	HELIX SUPER
TOTAL	QUARTZ 4000-5000



PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1.	53120015	Manifold, Ø 15	1	19.	90508990	Anti-ext. Ring, Ø 15	3	39.	60021235	Crankshaft, 10 mm (ET1509S17, ET1809S17)	1
	53120115	Manifold, Ø 18	1	20.	53210170	Support Ring, Ø 15	3		60020765	Crankshaft, 7.2mm (ET1807S17)	1
2.	36211951	Inlet Valve Guide	3	21.	53210270	Support Ring, Ø 18	3		60021735	Crankshaft, 11.5 mm (ET1511S17)	1
3.	94732600	Spring, Ø 6x12	3	22.	90260800	Packing, Ø 15, LP	3		53020135	Crankshaft, 12 mm (ET1512S17)	1
4.	36211272	Valve, Spherical	6	23.	93738000	Washer, Ø17.5x23x1.5	1		60028335	Crankshaft, 10 mm (ET1810S17)	1
5.	36211366	Valve Seat	6	24.	98210050	Plug, 3/8"x13	1		60028435	Crankshaft, 11 mm (ET1811S17)	1
6.	701014	O-ring, Ø12.42x1	6	25.	96751400	Washer, Ø	1	40.	918328000	Bearing, Premium	2
7.	36722401	Valve Assembly	3	26.	98218700	Plug, 1/2" BSPx10	1	41.	90409700	O-ring, Ø 55.56x3.53	1
8.	701016	O-ring, Ø15.6x1.78	6	27.	96699000	Gasket, Ø 7.5x23x0.5	3	42.	90164100	Oil Seal, Ø 25x62x10	1
9.	98213750	Valve Cap, M18x1.5x10	6	28.	53210382	Gasket, Ø3x85	1	43.	91489200	Key	1
10.	99169000	Plunger Bolt, M5x55	3	29.	53010022	Crankcase	1	44.	98210800	Oil Dipstick	1
11.	96690500	Washer, Ø 5x11.5x0.4	3	30.	58210451	Drip Cover	1	45.	30391700	O-ring, Ø 88.57X2.62	1
12.	53040009	Plunger, Ø 15x42	3	31.	90159300	Oil Seal, Ø 18x24x4.4	3	46.	58160022	Rear Cover	1
13.	63040509	Plunger, Ø 18x42	3	32.	53050066	Piston Guide	3	47.	98204250	Plug, 1/4"x9	1
14.	36211151	Outlet Valve Cage Guide	3	33.	97733800	Piston Pin, Ø 10x26.5	3	48.	701013	O-ring, Ø 10.82x1.78	1
15.	36719301	Complete Outlet Valve	3	34.	53030022	Connecting Rod	3	49.	98196800	Plug, 1/8"x8	1
16.	99199000	Screw, M6x60	8	35.	50150074	Crankcase Side Cover	1	50.	53210670	Support Ring, Ø15	3
17.	63101051	Head Ring, Ø 15	3	36.	99183700	Screw, M6x14	12		53210770	Support Ring, Ø18	3
	63101151	Head Ring, Ø 18	3	37.	44211801	Sight Glass	1				
18.	90261100	Packing, Ø 15, HP	3	38.	90063500	Ring, Seeger Ø25	2				
	90265350	Packing, Ø 18, HP	3								

REPAIR KITS

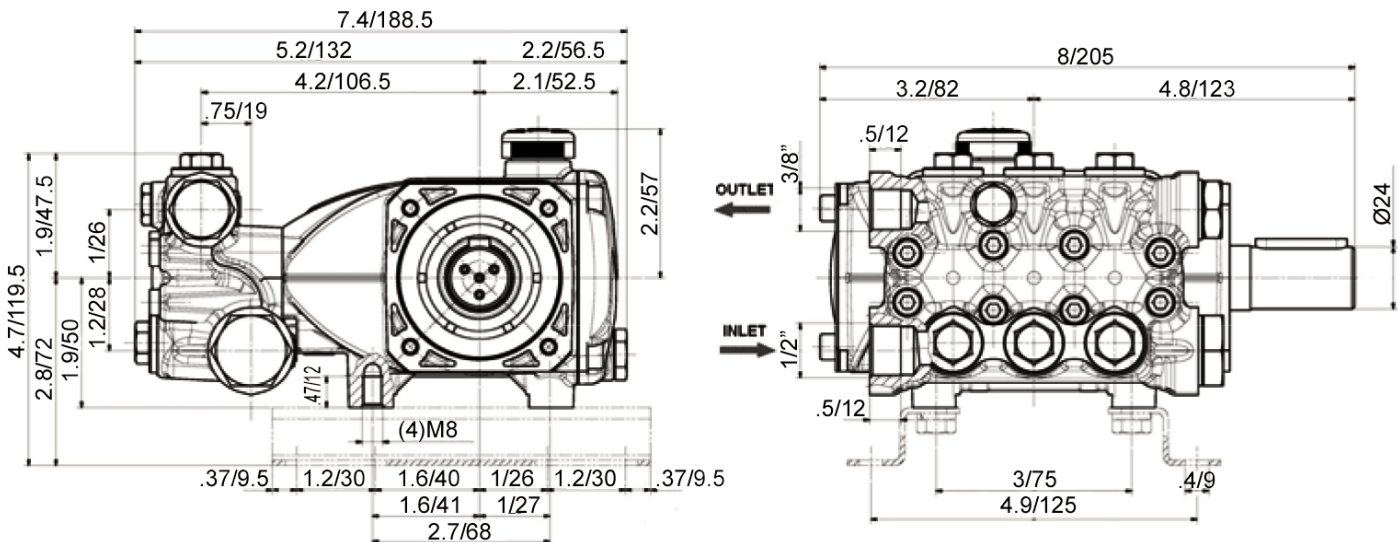
KIT NO.	K309	K310	K311	Ø 15		Ø 18	
				312	K313	K314	K315
ITEM NO'S INCLUDED IN KIT	2, 3, 4, 5, 6, 13, 14, (7), (15)	8, 9,	31	17, 18, 19, 21, 22	17, 19, 19, 20, 21, 22, 50	17, 18, 19, 21, 22	17, 19, 19, 20, 21, 22, 50
NUMBER OF ASSY'S IN KIT	6	6	3	3	1	3	1
NO. OF CYLINDERS KIT SERVICES	3	3	3	3	1	3	1

TORQUE SPECS*

Position	Ft.-Lbs.	Nm.
9	44.3	60
10	4.4	6
16	8.9	12
24	30	40
26	30	40
36	7.4	10
47	14.8	20
49	9.6	13

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

DIMENSIONS



Ref 300969 Rev.A
04-15

