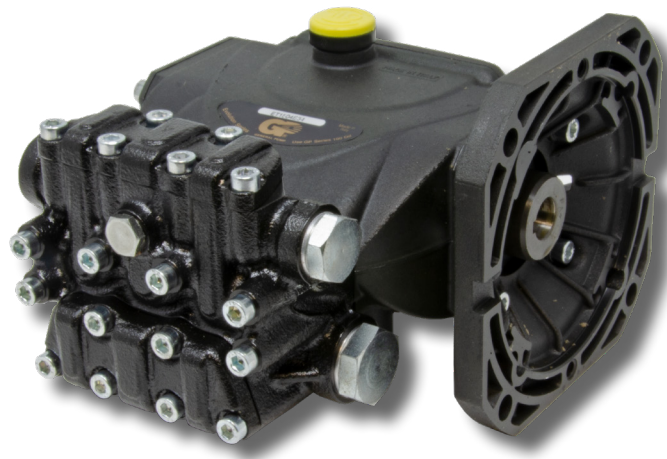


## FEATURES

- “HR” anti-corrosion surface treatment on manifold
- New generation seal package
- Dust protection chamber
- Solid ceramic plungers
- Oversized plunger guide
- Optimized inlet and outlet valves
- Oversized crankcase
- Hollow shaft, flanged for direct couple to electric motors (NEMA56C)



## SPECIFICATIONS

| Pump Model               | ET1509E17          | ET1807E17       | ET1809E17       | ET1504E34      | ET1505E34     | ET1506E34       | ET1507E34       |
|--------------------------|--------------------|-----------------|-----------------|----------------|---------------|-----------------|-----------------|
| Max Volume               | 2.1 GPM            | 2.4 GPM         | 3.2 GPM         | 1.85 GPM       | 2.1 GPM       | 2.9 GPM         | 3.2 GPM         |
| Max Discharge Pressure   | 2,610 PSI          | 2,320 PSI       |                 | 2,610 PSI      |               |                 |                 |
| Horsepower               | 3.7 EBHP           | 3.8 EBHP        | 5.0 EBHP        | 3.6 EBHP       | 3.7 EBHP      | 5.2 EBHP        | 5.6 EBHP        |
| Max Pump Speed           | 1700 RPM           |                 |                 | 3400 RPM       |               |                 |                 |
| Inlet Pressures          | Flooded to 70 PSI  |                 |                 |                |               |                 |                 |
| Plunger Bore (in / mm)   | .591 in./15 mm     | .708/18 mm      |                 | .591 in./15 mm |               |                 |                 |
| Plunger Stroke (in / mm) | .370 in./9.4 mm    | .283 in./7.2 mm | .370 in./9.4 mm | .157 in./4 mm  | .197 in./5 mm | .256 in./6.5 mm | .283 in./7.2 mm |
| Oil Capacity             | 8.5 oz.            |                 |                 |                |               |                 |                 |
| Max Fluid Temperature    | 165° F             |                 |                 |                |               |                 |                 |
| Inlet Port Thread        | 1/2"-14 BSP-F      |                 |                 |                |               |                 |                 |
| Discharge Port Thread    | 3/8"-19 BSP-F      |                 |                 |                |               |                 |                 |
| Shaft Diameter           | 5/8" Hollow        |                 |                 |                |               |                 |                 |
| Weight                   | 11.0 lbs.          |                 |                 |                |               |                 |                 |
| Dimensions - Nominal     | 7.3" x 7.4" x 5.5" |                 |                 |                |               |                 |                 |



# 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.**

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 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**.

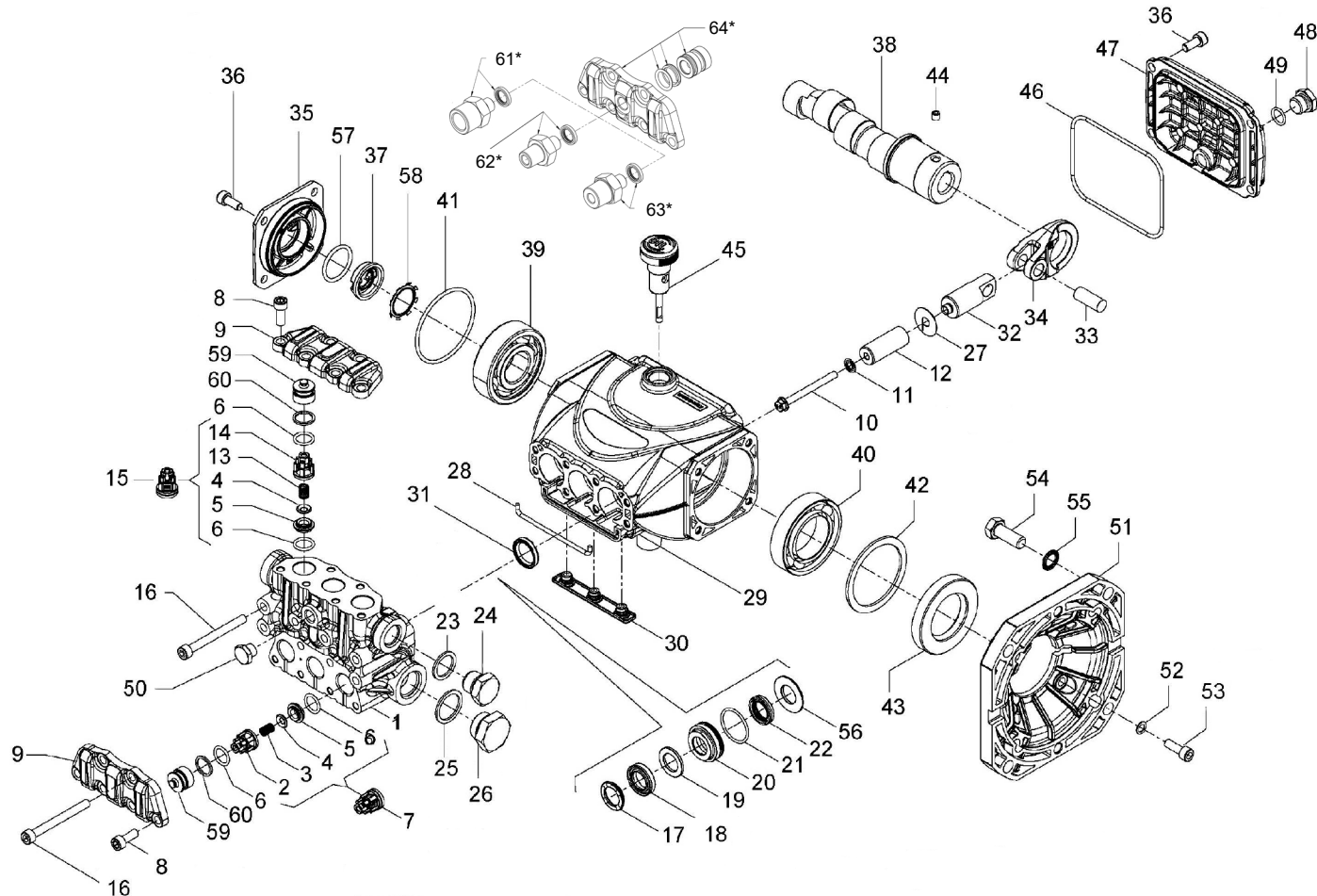
This change is not recommended because the oil has lost its properties, but rather to eliminate the impurities that have gotten into the oil during the running-in phase. If these impurities are not removed, but are allowed to remain in the oil, they *may cause premature wear* to the moving parts and 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 |                  |
|--------------------------|------------------|
| 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.   | 53122115 | Manifold, Ø 15                   | 1   | 22.  | 90260800 | Packing, Ø15x22x5, LP         | 3                                        | 39.  | 91832800 | Bearing Ø15-18                                  | 1                             |   |
|      | 53122215 | Manifold, Ø 18                   | 1   |      | 90265000 | Packing, Ø18x24x5, LP         | 3                                        | 40.  | 91846400 | Bearing Ø15-18                                  | 1                             |   |
| 2.   | 36211951 | Inlet Valve Guide                | 3   |      | 710030   | Packing, Ø15, LP              | 3                                        | 41.  | 90389800 | O-ring, Ø56.82x2.62                             | 1                             |   |
| 3.   | 94732600 | Spring, Ø 6x12                   | 3   |      | 710032   | Packing, Ø18, LP (K229)       | 3                                        | 42.  | 60210189 | Spacer                                          | 1                             |   |
| 4.   | 36211272 | Valve, Spherical                 | 6   | 23.  | 96738000 | Washer, Ø17.5x23x1.5          | 1                                        | 43.  | 90167500 | Stop Ring Ø35x62x10                             | 1                             |   |
| 5.   | 36211366 | Valve Seat                       | 6   | 24.  | 98210050 | Plug, 3/8"x13                 | 1                                        | 44.  | 99179000 | Screw M6x06                                     | 1                             |   |
| 6.   | 90367400 | O-ring, Ø12x2                    | 6   | 25.  | 96751400 | Washer, Ø 21.5x27x1.5         | 1                                        | 45.  | 98210800 | Oil Dipstick G 3/8"x45                          | 1                             |   |
| 7.   | 36722401 | Valve Assembly                   | 3   | 26.  | 98218700 | Plug, 1/2"x10                 | 1                                        | 46.  | 90391700 | O-ring, Ø88.57x2.62                             | 1                             |   |
| 8.   | 99185400 | Screw, M6x16                     | 10  | 27.  | 96699000 | Gasket, Ø 7.5x23x0.5          | 3                                        | 47.  | 53160022 | Rear Cover                                      | 1                             |   |
| 9.   | 53211815 | Valve Cover                      | 2   | 28.  | 53210382 | Gasket, Ø3x85                 | 1                                        | 48.  | 98204250 | Plug, 3/8"x9                                    | 1                             |   |
| 10.  | 99169000 | Plunger Bolt, M5x55              | 3   | 29.  | 53010022 | Crankcase                     | 1                                        | 49.  | 701013   | O-ring, Ø 10.82x1.78                            | 1                             |   |
| 11.  | 96690500 | Washer, Ø 5x11.5x0.4             | 3   | 30.  | 58210451 | Drip Cover                    | 1                                        | 50.  | 98196800 | Plug, 1/8"x8                                    | 1                             |   |
| 12.  | 53040009 | Plunger, Ø 15x38.5               | 3   | 31.  | 90159300 | Oil Seal, Ø 18x24x4           | 3                                        | 51.  | 10034422 | Flange for Electric Motor                       | 1                             |   |
|      | 63040509 | Plunger, Ø 18x38x8.5             | 3   | 32.  | 53050066 | Piston Guide                  | 3                                        | 52.  | 96693800 | Washer Ø6.4x10x0.7                              | 4                             |   |
| 13.  | 94733300 | Spring, Ø 6.2x10.4               | 3   | 33.  | 97733800 | Piston Pin, Ø 10x26.5         | 3                                        | 53.  | 99186700 | Screw M6x18                                     | 4                             |   |
| 14.  | 36211151 | Outlet Valve Cage Guide          | 3   | 34.  | 53030022 | Connecting Rod                | 3                                        | 54.  | 99334500 | Screw 3/8"x16                                   | 4                             |   |
| 15.  | 36719301 | Complete Outlet Valve            | 3   | 35.  | 53150022 | Side Cover Housing            | 1                                        | 55.  | 96710400 | Washer Ø 10.5x16x1                              | 4                             |   |
| 16.  | 99199600 | Screw, M6x70                     | 8   | 36.  | 99183700 | Screw M6x14                   | 8                                        | 56.  | 53210670 | Support Ring, Ø 15                              | 3                             |   |
| 17.  | 63101051 | Head Ring, Ø 15                  | 3   | 37.  | 53210851 | Oil Level Indicator           | 8                                        |      | 53210770 | Support Ring, Ø 18                              | 3                             |   |
|      | 63101151 | Head Ring, Ø 18                  | 3   | 38.  | 60022465 | Crankshaft, Ø 5 (ET1505E34)   | 1                                        | 57.  | 90385900 | O-ring Ø 25.07x2.62                             | 1                             |   |
| 18.  | 90261100 | Packing, Ø15x24x5.4/3.4HP        | 3   |      | 60022765 | Crankshaft, Ø 6.5 (ET1506E34) | 1                                        | 58.  | 90067100 | Stop Ring                                       | 1                             |   |
|      | 90265350 | Packing, Ø18x28x6/3.7HP          | 3   |      |          | 60022265                      | Crankshaft, Ø 4.0 (ET1504E34)            | 1    | 59.      | 36217851                                        | Inlet/Outlet Valve Cap        | 6 |
|      | 710031   | Packing, Ø 15, HP (K312H, K313H) | 3   |      |          | 60022965                      | Crankshaft, Ø 7.2 (ET1807E17, ET1507E34) | 1    | 60.      | 90509300                                        | Stop Ring, Ø 16.4x13.2x1.3    | 6 |
|      | 710033   | Packing, Ø 18, HP (K229)         | 3   |      |          | 60023465                      | Crankshaft, Ø 9.4 (ET1509E17, ET1809E17) | 1    | 61.*     | 101162                                          | Kit, ADTR, 1/4"-F, SS, W/Seal | 1 |
| 19.  | 90508990 | Anti-ext. Ring, Ø15x24x2         | 3   |      |          |                               |                                          | 62.* | 101157   | Kit, ADTR, 1/4"-M, SS, W/Seal                   | 1                             |   |
|      | 90511150 | Anti-ext. Ring, Ø18x28x2         | 3   |      |          |                               |                                          | 63.* | 101158   | Kit, ADTR, 3/8"-K, SS, W/Seal                   | 1                             |   |
| 20.  | 53210170 | Support Ring, Ø 15x24x2          | 3   |      |          |                               |                                          | 64.* | K423     | Kit, Tapped Valve Plate W/ Valve Spacer & Seals | 1                             |   |
|      | 53210270 | Support Ring, Ø 18               | 3   |      |          |                               |                                          |      |          |                                                 |                               |   |
| 21.  | 90360400 | O-ring, Ø25.12x1.78              | 3   |      |          |                               |                                          |      |          |                                                 |                               |   |

\* Optional Parts

\*\* 53150001 Oil Level Indicator Assembled W/O Screws and O-ring

**REPAIR KITS**

| KIT NO.                       | K309                             | K311 | Ø 15               |                                 |                            |                                 | Ø 18               |                            |                                |
|-------------------------------|----------------------------------|------|--------------------|---------------------------------|----------------------------|---------------------------------|--------------------|----------------------------|--------------------------------|
|                               |                                  |      | K312               | K312H <sup>1</sup><br>(Hot Kit) | K313                       | K313H <sup>1</sup><br>(Hot Kit) | K314               | K315                       | K229 <sup>1</sup><br>(Hot Kit) |
| ITEM NO'S INCLUDED IN KIT     | 2, 3, 4, 5, 6, 13, 14, (7), (15) | 31   | 17, 18, 19, 21, 22 | 18, 22                          | 17, 18, 19, 20, 21, 22, 56 | 17, 18, 19, 20, 21, 22, 56      | 17, 18, 19, 21, 22 | 17, 18, 19, 20, 21, 22, 56 | 18, 22                         |
| NUMBER OF ASSY'S IN KIT       | 6                                | 3    | 3                  | 3                               | 1                          | 3                               | 3                  | 1                          | 3                              |
| NO. OF CYLINDERS KIT SERVICES | 3                                | 3    | 3                  | 3                               | 1                          | 3                               | 3                  | 1                          | 3                              |

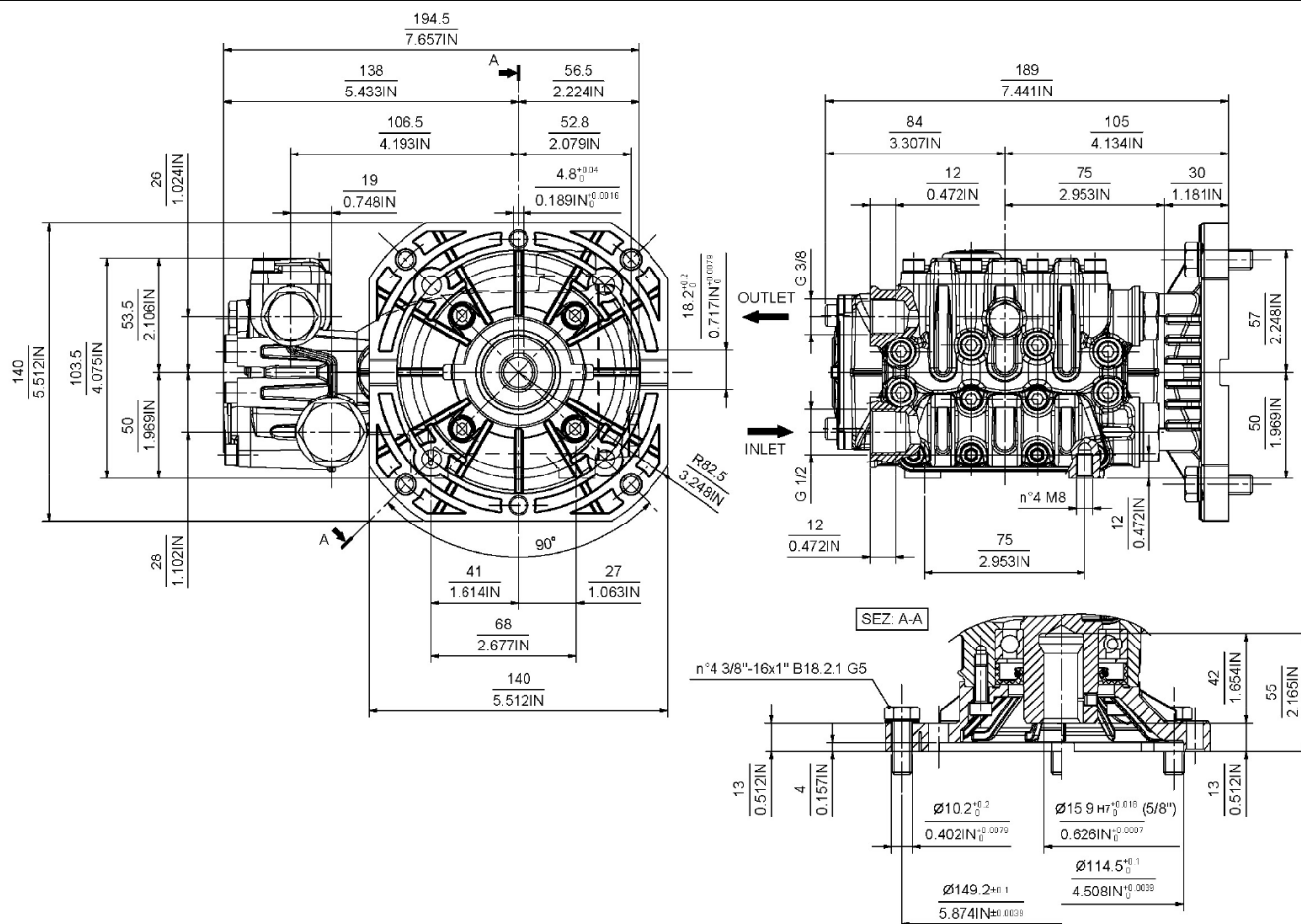
<sup>1</sup> Note: Seal tools included

**TORQUE SPECS\***

| Pos. | Ft.-Lbs. | Nm. |
|------|----------|-----|
| 8    | 8.9      | 12  |
| 10   | 4.4      | 6   |
| 16   | 8.9      | 12  |
| 24** | 30       | 40  |
| 26   | 30       | 40  |
| 36   | 7.4      | 10  |
| 48   | 14.8     | 20  |
| 50** | 9.6      | 13  |
| 53   | 7.3      | 10  |

\*Decrease torque by 20% if threads are lubricated.

\*\*Use Loctite 542 Red

**DIMENSIONS**


**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 known to the state of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)