**PARTS LIST**

**Ref. No.** | **Description** | **Parts Per Pump** | **Part No.** | **Ref. No.** | **Description** | **Parts Per Pump** | **Part No.**
--- | --- | --- | --- | --- | --- | --- | ---
32 | Pump Base | 1 | 901941 | 181 | V-Belt | 2 | See Table
76 | Grease Fitting | 1 | 317809 | 182 | V-Belt Guard (3) | 1 | See Table
152 | Pump Sheave | 1 | 902405 | 182A | V-Belt Guard Brace | 1 | 804076
152A | Pump QD Hub Assembly | 1 | 902450 | 182B | Speed Nut | 1 | 922407
152B | Lockwasher | 3 (1) | 183 | Motor Base Assembly – Includes: | 1 | See Table
152C | Capscrew | 3 (1) | 183A | Washer | 4 |
152D | Motor Sheave | 1 | See Table | 183B | Nut | 4 |
152E | Motor QD Hub Asy. | 1 | See Table | 184 | Capscrew - Motor Base | 4 | 920957
152F | Lockwasher | 3 (1) | 184A | Capscrew - Pump | 4 | 920956
152G | Capscrew | 3 (1) | 184B | Capscrew - Guard | 4 | 920955

(1) Included with QD Hub Assembly.  (3) Consult Factory for ATEX Compliant (Non-Sparking) Guards.

**V-BELT DATA - 3V TYPE BELTS**

| Pump Speed with 1750 / 1450 RPM Motor | 330 / 275 | 415 / 345 | 510 / 425 | 660 / 545 | 660 / 545 |
| Speed Ratio | 5.37 | 4.23 | 3.43 | 2.66 | 2.66 |
| Motor Frame Size | 184T | 184T | 184T | 184T | 213T |

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Part Name</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>152D</td>
<td>Motor Sheave</td>
<td>902406 902407 902408 902409 902409</td>
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<tr>
<td>152E</td>
<td>Motor QD Hub Asy.</td>
<td>902457 902451 902451 902451 902453</td>
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<tr>
<td>181</td>
<td>V-Belt</td>
<td>902002 902002 902002 902002 902006</td>
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<tr>
<td>182</td>
<td>V-Belt Guard (3)</td>
<td>804060 804060 804060 804060 804061</td>
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<tr>
<td>183</td>
<td>Motor Base Asy.</td>
<td>905082 905082 905082 905082 905083</td>
</tr>
</tbody>
</table>
INSTALLATION AND MAINTENANCE

**WARNING**

Failure to disconnect and lockout electrical power or engine drive before attempting maintenance can cause severe personal injury or death.

**WARNING**

Hazardous machinery can cause serious personal injury.

**WARNING**

Hazardous voltage. Can shock, burn or cause death.

**WARNING**

Do not operate without guard in place.

Operation without guards in place can cause serious personal injury, major property damage, or death.

Failure to disconnect and lockout electrical power before attempting maintenance can cause shock, burns or death.

These units must only be installed in systems which have been designed by those qualified to engineer these systems. The system must be in accordance with all applicable regulations and safety codes.

**ASSEMBLY**

Mount the pump and the motor base to the unit base. Mount the motor on the motor base, but do not draw the motor mounting nuts down tight.

Wipe the cone surface of the pump QD hub and the inside of the pump sheave hub with a clean cloth moistened with a light grade of machine oil. This will allow a more uniform draw and prevent the cone surfaces from "freezing" before being tightened.

With the shaft key in place, align the key seat and slide the QD hub on the shaft, flange end first. Slide the large end of the sheave bore over the taper on the QD hub. Insert the three (3) sheave capscrews through the clearance holes in the sheave, and start them into the tapped holes of the QD hub. Repeat this procedure to assemble the motor QD hub and sheave.

To install the belts, shorten the center distance of the drive by moving the motor towards the pump, until the belts can be put on the sheaves without forcing.

Align the sheaves so that the faces are parallel, then snug up the sheave capscrews.

Measure the span length as shown in Figure 1.

**DEFLECTION FORCE PER BELT**

<table>
<thead>
<tr>
<th>Small Sheave Outside Diameter</th>
<th>Belt Deflection Force Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 - 4.5&quot; (63.5 - 114.3 mm)</td>
<td>3.0 – 4.75 Lb (1.4 - 2.2 Kg)</td>
</tr>
<tr>
<td>4.75 - 7&quot; (120.7 - 177.8 mm)</td>
<td>4.0 – 6.0 Lb (1.8 -2.7 Kg)</td>
</tr>
</tbody>
</table>

Table 1

Adjust the motor base then apply a force at the center of the belt span, so that the belt is deflected 1/64 inch for every inch of span. For example, the deflection of a 20 inch span would be 20/64 or 5/16 inch. The force required should be within the range given in Table 1. A new set of belts should initially be tensioned to the upper limit. Check again to see that the sheaves are parallel and then tighten the sheave capscrews, the motor mounting nuts and the adjusting screw locknut. Assemble the belt guard and belt guard brace to the unit base.

Check the belt tension after 24 - 48 hours run-in. Recheck the tension periodically, and tighten the belts as required. Avoid over-tightening belts, which can shorten bearing and belt life. Belts should be inspected periodically for signs of excessive wear and replaced if necessary.

**DISASSEMBLY**

Remove the belt guard and guard brace. Loosen the adjusting screw locknut on the motor base and the motor mounting nuts. Ease the tension on the belts by moving the motor towards the pump to shorten the center distance of the drive. Remove the belts by sliding them over the sheaves. Do not force the belts over the grooves.

To remove the sheave from the hub, first remove the three sheave capscrews, then screw two of them into the threaded holes in the sheave hub. If the cone grip is hard to break loose, tap the end of the shaft or the QD hub with a lead hammer, while maintaining pressure on the screw.

The QD hub should slide smoothly off the shaft. If it is tight on the shaft, pry it loose with a screwdriver or a small wedge placed in the split part of the flange.