



## TTS / TTC / STTS Installation and Maintenance Instructions

### Installation:

Remove the drum pump and motor from the packaging and inspect for shipping damage. Spin the pump coupling the mating motor coupling to verify there is no binding. Adjust the drum pump coupling so that the empty slots in the insert are at 3 and 9 o'clock with the drum pump discharge at 12 o'clock. Remove the two mounting bolts from the motor / motor mount and adjust the motor coupling so that the coupling prongs are at 3 and 9 o'clock with the handle (electric motors), or the air supply line (air motors) at 6 o'clock. Install the motor onto the drum pump until it seats all the way down with the couplings connecting and install the 2 mounting bolts with nuts.

### Disassembly for cleaning STTS:

This model is designed to come apart easily to aid it cleaning. Remove the union nut (item 5), and grabbing the bearing housing pull the shaft assemble from the intake tube (item 10). The shaft assembly and intake tube internals can now be cleaned and flushed. Always inspect the union nut gasket (item 7) for cuts or damage. Reverse the process to reassemble this model.

### Maintenance disassembly:

1. Loosen the setscrew and remove the half coupling (item 2) from the end of the pump shaft.
2. Carefully hold the intake tube (the bearing housing on the STTS model after the cleaning disassembly step) so as not to crush the tube, use a 3/8" punch and hammer to drive the bottom of the shaft toward the top. This will drive the bearing assembly up out of the TTS/TTC head or STTS bearing housing.
3. When the bearing is completely out, use a pair of needle nose pliers and carefully straighten the four slightly bent "feet" at the bottom of the intake tube on the TTS model. This will allow you to use the pliers to remove the bottom bearing (item 13).
4. Then use a 1/8" punch to drive out the roll pin that holds the bearing onto the top of the pump shaft. Remove the bearing from the pump shaft, and remove shaft assemble down through the bottom of the intake tube. On STTS models, pull the shaft assembly down out of the bearing housing.
5. Remove the seal assembly from the pump head on the TTS/TTC or the bearing housing on the STTS and discard it.

### Inspection:

1. Inspect the shaft locating hole in the center of the bottom bearing (item 13 on the TTS/TTC and 16 on the STTS). If the inside diameter is .400 or larger than replace it.
2. Visually check the all the compressors (item 9 on TTS/TTC and item 12 on STTS) for damage. If they need replaced you must remove the cotter pin first.
3. Visually inspect the center bearings (item 12 on TTS/TTC or item 15 on STTS), the spacers (item 10 on TTS/TTC or item 13 on STTS), and the impellers (item 8 on TTS/TTC or item 11 on STTS). Replace as needed.
4. Never reuse the seal assembly (item 4). Always install a new seal during reassembly.
5. Inspect the bearing assembly (item 3), and replace if needed.
6. Inspect the pump shaft for wear in the seal area, the center bearing area, and the bottom bearing area. Replace if needed.

### Reassembly:

1. With the center bearings, compressors, spacers, and impellers in place on the shaft, insert the shaft up through the bottom of the TTS/TTC intake tube (up through the bottom of the bearing housing on the STTS).
2. Warm up the seal assembly (item 4) prior to installation by using a heat lamp or socking them in hot water. This will aid in the ease of proper seal installation. Make sure there are no metal burrs on the pump shaft in the bearing hole location or the coupling half setscrew location that could “cut” the seal during installation.
3. Lubricate the end of the shaft with Vaseline to aid in the seal installation. Carefully install the seal down over the shaft with the two “slots” facing up toward the bearing assembly. The raised lip in the center of the seal (that faces the bottom of the pump) must go on straight and not buckle on one side.
4. After the seal is on the shaft correctly, install the bearing assembly (item 3) onto the shaft. Use the bearing assembly to push the seal further down the shaft until the hole in the center of the bearing assembly matches up to the hole in the shaft. Install the roll pin through the bearing assembly and shaft.
5. Turn pump intake tube (bearing housing on the STTS) upside down and press on the shaft end to slide the bearing assembly into the pump head (bearing housing on the STTS). Use a block of wood and a mallet if needed to drive the assembly into the pump head.
6. Install the coupling (item 2) on the end of the shaft and tighten the set screw into the dimple on the shaft.
7. On STTS models insert the shaft assembly into the intake tube from the top, making sure to install the union nut gasket (item 7) and tighten the union nut (item 5).
8. Reinstall the bottom bearing (item 13 on TTS/TTC and item 16 on STTS), and gently bend the four “feet” in slightly to keep the bottom bearing in place on the TTS and STTS models.
9. Spin the pump coupling to insure there is no binding.