

## BTS Installation and Maintenance Instructions

### **Installation**

Remove the drum pump and motor from its packaging and inspect for shipping damage. Remove the quality tag from the top of the pump and spin the pump coupling to verify there is no binding. Remove the black rubber coupling insert (item 1) from the attached plastic bag, and install it onto the pump coupling. Adjust the coupling so that the empty slots in the insert are at 3 and 9 o'clock with the pump discharge at 12 o'clock. Remove the 2 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 (on electric motors), or the air supply line (on 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. Attach discharge hose and install into the container.

### Maintenance Disassembly

1. Loosen the setscrew and remove the coupling half (item 2) from the end of the pump shaft.
2. Carefully holding the intake tube (so as not to crush the tube), use a 3/8" punch and hammer to drive the bottom of the pump shaft (item 10) up through the intake tube (item 7) until the bearing assembly (item 3) is completely exposed.
3. Use a 1/8" punch to remove the roll pin that holds the bearing assembly (item 3) onto the pump shaft, and remove the bearing assembly.
4. Remove the setscrew (item 13) from the bottom of the intake tube and remove the bottom bearing (item 12).
5. Now drive the shaft assembly back down through the intake tube and remove it from the bottom. Remove and discard the seal assembly (item 4) from the top of the pump head.

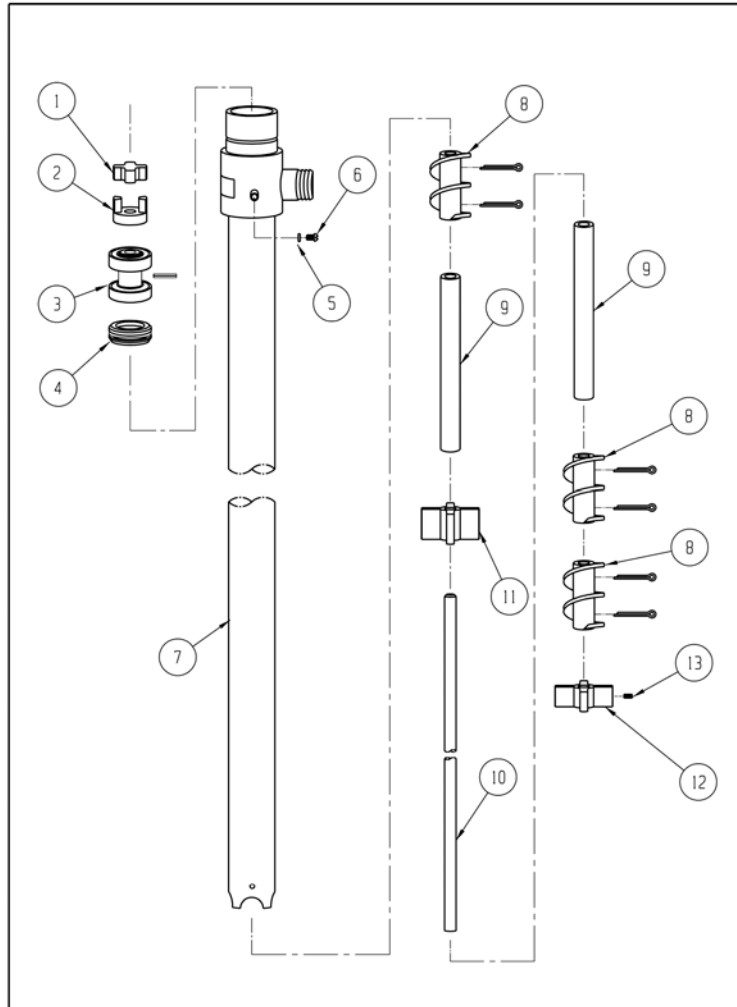
### Inspection

1. Inspect the bottom bearing for damage or wear (if ID is .400 or larger) and replace as needed.
2. Visually inspect the compressors (item 8) for damage or wear and replace as needed.
3. Visually inspect the pump shaft for wear in the bottom bearing area and in the seal assembly area. Replace as needed.
4. Inspect the bearing assembly for rust, corrosion, or tightness and replace as needed.

### Reassembly

## Reassembly

1. Insert the shaft assembly up through the bottom of the intake tube (item 7) until the end of the shaft sticks out above the top of the pump head.
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. Carefully press on the shaft end to slide the bearing assembly into the pump head. Use a block of wood and a mallet if needed to drive the assembly into the pump head. Be careful not to mushroom the shaft head or the coupling half will not go on.
6. Install the coupling half (item 2) on the end of the shaft and tighten the setscrew into the dimple on the shaft. Make sure the setscrew bottoms out in the dimple.
7. Reinstall the bottom bearing (item 12), and tighten the setscrew that holds it in place.
8. Spin the pump coupling to insure there is no binding.



Item	Description	Part Number
1	Coupling Insert	J100096
2	Half Coupling	J100351
3*	Bearing Assembly w/Roll Pin	A101672
4*	Seal Assembly	A100284
5	#8 Brass Lock Washer	J100823
6	#8-32 x 1/4 Pan HD Brass M/S	J100822
7	BTS 40 Intake Tube Assembly	A100091-1
8*	Compressor w/SSTL Pin	A100092
9	Spacer Set	A100106
10	BTS 40 Main Shaft	M100083-1
11*	Center Bearing	M100073
12*	Bottom Bearing	M100084
13	#8-32 x 3/8 SSTL Set Screw	J100072

\* Recommended Spare Parts