

## TMS Installation and Maintenance Instructions

### **Installation**

Remove the mixer and motor from the packaging and inspect for shipping damage. Remove the quality tag from the top of the mixer and spin the shaft coupling to verify there is no binding. Manually spin the motor coupling also to verify there is no binding. Remove the black rubber coupling insert (item 1) from the attached plastic bag, and install it onto the mixer coupling. Adjust the mixer coupling so that the empty slots in the insert are at 3 and 9 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 mixer until it seats all the way down with the couplings connecting and install the 2 mounting bolts with nuts.

### Maintenance disassembly –

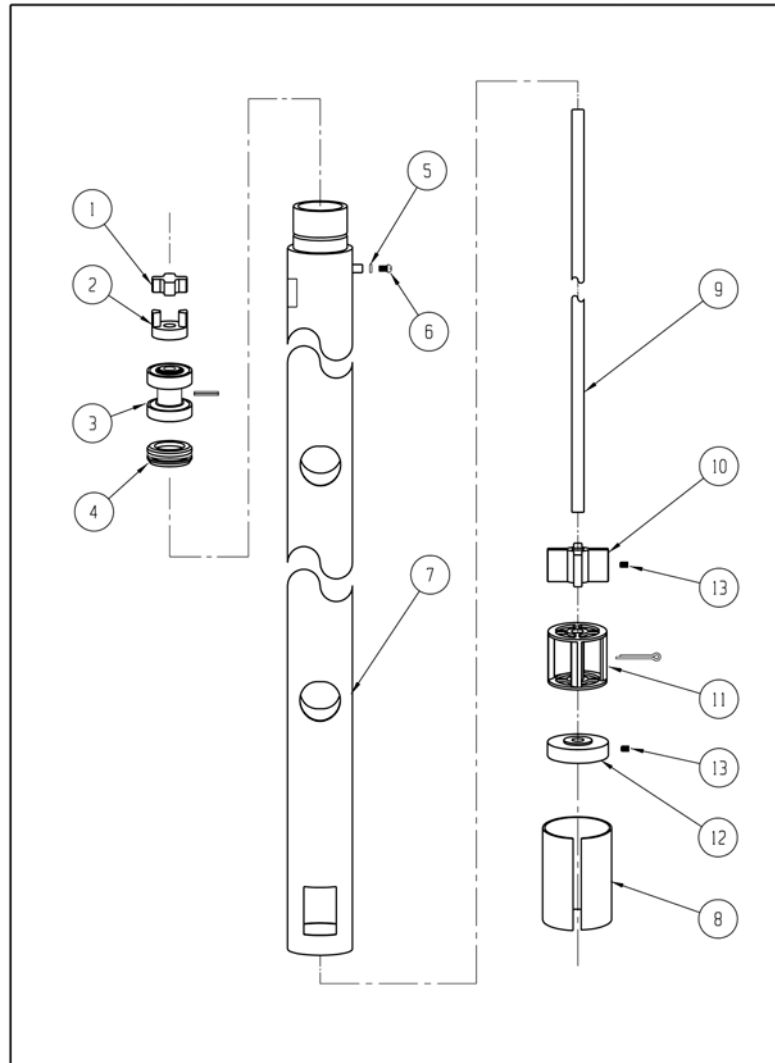
1. Loosen the setscrew and remove the coupling half (item 2) from the top of the mixer shaft.
2. Gently hold the mixer tube (item 7) so as not to crush it, and use a 3/8" punch and hammer to drive the mixer shaft up from the bottom until the bearing assembly (item 3) is exposed.
3. Use a 1/8" punch to remove the roll pin and slide the bearing assembly off the top of the shaft.
4. Remove the bottom bearing setscrew (item 13) and remove the bottom bearing (item 12).
5. Slide the shaft assembly down through the mixer tube and remove it out the bottom.
6. Remove the center bearing (item 10) setscrew and remove the center bearing.
7. Remove and discard the seal assembly (item 4). Never re-use the seal assembly.

### Inspection

1. Measure the inside diameter of the shaft hole on the bottom bearing (item 12) and the center bearing (item 10). If it is more than .425 it should be replaced.
2. Visually inspect the turbine assembly (item 11) for wear and replace if needed.
3. Inspect the shaft for wear in the center and bottom bearing areas, and inspect the shaft condition in the seal (item 4) area.
4. Inspect the bearing assembly for rust, corrosion, or tightness and replace if needed.

## Reassembly

1. Insert the center bearing (item 10) up through the bottom of the tube and match up the setscrew hole in the tube and the center bearing. Install the setscrew.
2. Insert the shaft assembly up through the bottom, and through the center bearing until the shaft sticks out above the mixer tube top.
3. 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.
4. 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.
5. 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.
6. Line up the bearing assembly with the top of the pump head and press the bearing in. Use a block of wood and a mallet if needed.
7. Insert the bottom bearing (item 12) into the bottom of the tube and install the setscrew (item 13) to hold it in place.
8. Install the coupling half and tighten the setscrew into the dimple in the shaft. Spin the shaft coupling half to verify there is no binding.



<b>Item</b>	<b>Description</b>	<b>Part Number</b>
1	Coupling Insert	J100014
2	Half Coupling	J100013
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	TMS 40 Tube Mixer Assembly	A101192-1
8	Sleeve	M100070
9	TMS 40 Shaft	M100970-1
10*	Center Bearing	M100073
11	Turbine Assembly w/SS Pin	A100070
12*	Bottom Bearing	M100071
13	#8-32 x 3/8 SSTL Set Screw	J100072

\* Recommended Spare Parts