

# TCU Static Mixer Installation

Use the following procedures to install static mixers into the heat exchange assembly.

The installation will require the disassembly of both the bottom and top of the heat exchanger. Follow instructions in the order they are given.



**CAUTION:** Ensure all pressure has been relieved from the system before completing these procedures.

## Prepare Bottom of Heat Exchanger

See Figure 1. These steps refer to the bottom part of the heat exchanger. If the assembly has an RTD, this would be the non-RTD side.

1. Loosen bolts in a hex pattern to evenly remove bolts, washers, and nuts.
2. Lift the head off the heat exchanger body.

**NOTE:** Note the position of the alignment pin for proper reassembly.

3. Pull the old O-ring out of the O-ring groove and replace with new O-ring.
4. Install the mesh disk into the cone of the head.
5. Noting the alignment pin, reinstall the head using the bolts, washers, and nuts. Tighten bolts using a hex pattern. (Torque value: 200 ft-lb.)

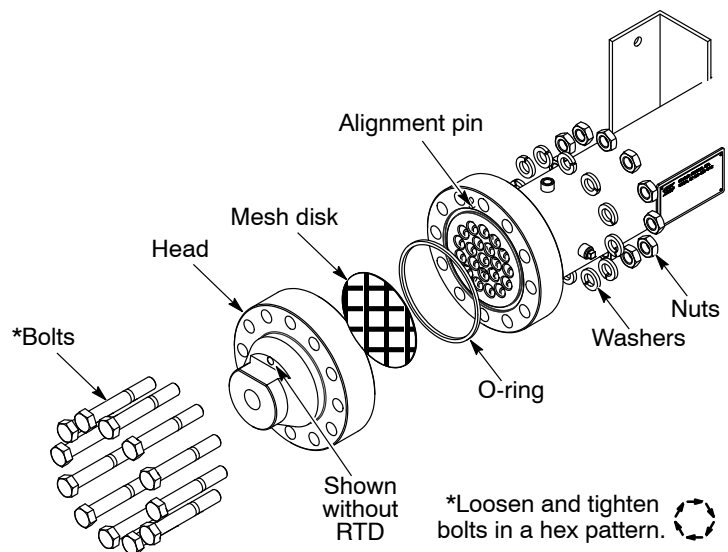


Figure 1 Bottom of Heat Exchanger

## Disassemble Top of Heat Exchanger

See Figure 2. These steps refer to the top part of the heat exchanger. If the assembly has an RTD, this would be the RTD side.

1. Loosen the bolts in a hex pattern to evenly remove bolts, washers, and nuts.

**NOTE:** Removal of the RTD is optional.

**NOTE:** Do not bend the RTD.

2. Lift the head off the heat exchanger body.

**NOTE:** Note the position of the alignment pin for proper reassembly.

3. Pull the old O-ring out of the O-ring groove.

4. Clear any obstructions from the heat exchanger tubes.

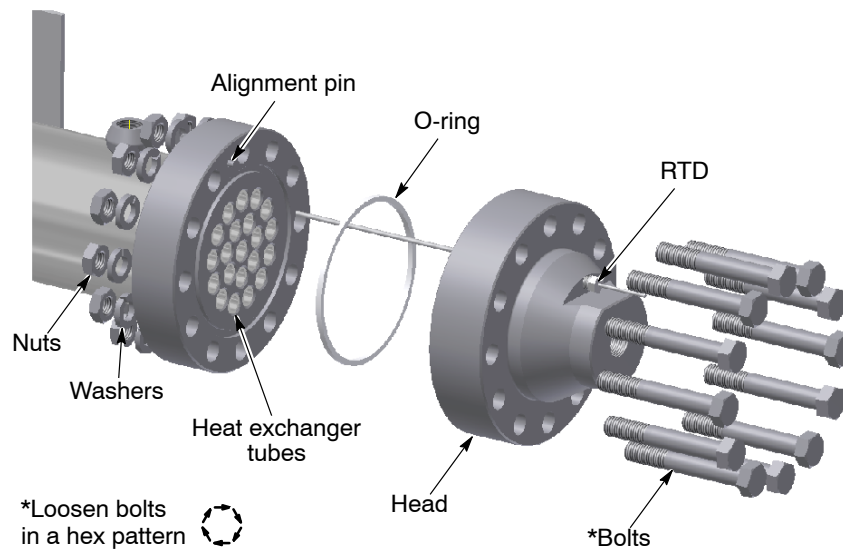


Figure 2 Heat Exchanger Disassembly

## Static Mixer Installation

1. See Figure 3. Link the static mixer together using the notched ends to create a long enough mixer to fill the length of the heat exchange tube.

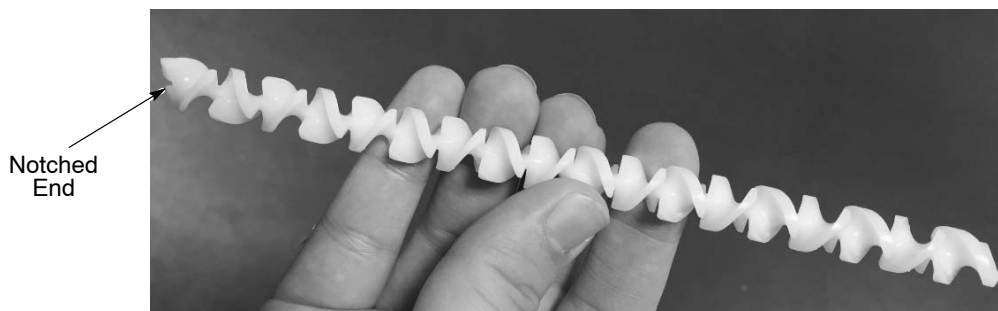


Figure 3 Static Mixer

2. Place the linked mixers in the tube.
3. Break off excessive mixer length by slightly pulling the mixer out of the tube and bending the mixer until it breaks. The mixer length should not extend past the tube opening, as shown in Figure 4.



Figure 4 Static Mixers in Tubes

4. For 12 in. RTD Only:
  - a. Identify the tube for the RTD probe.
  - b. Pull the mixer out of the tube to the length of the RTD probe.
  - c. Break off the mixer to the length of the RTD probe (approximately two sets of mixers) and discard broken piece of the mixer.
  - d. Allow the other half of the mixer to slide back down into the tube.

## Reassemble Top of Heat Exchanger

See Figure 5.

1. Install the new O-ring in the O-ring groove.
2. Center the mesh disk in the cone to reassemble.

**NOTE:** RTD Only: See Figure 6. Arrange mesh disk so the RTD probe can pass through into its respective tube. Ensure the mesh disk is still centered in the cone.

3. Noting the alignment pin, reinstall the head using the bolts, washers, and nuts. Tighten the bolts using a hex pattern. (Torque value: 200 ft-lb.)
4. RTD Only: If the RTD was removed, install using a proper pipe sealing material.

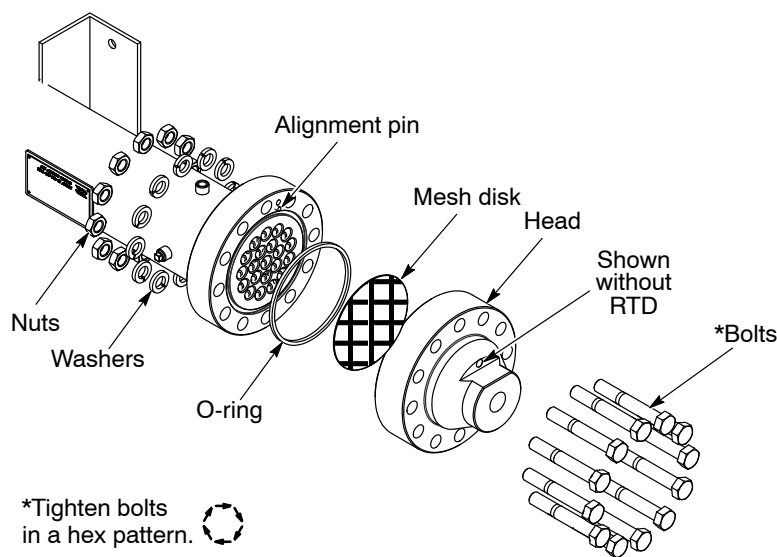


Figure 5 Top of Heat Exchanger

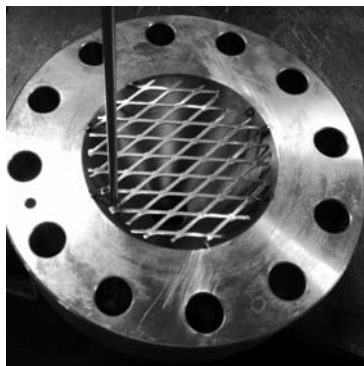


Figure 6 RTD through Centered Mesh Disk

## Parts

Part	Description	Note
1611020	KIT, TCU, static mixer, 6 ft	
1611021	KIT, TCU, static mixer, 7 ft	
1611022	KIT, TCU, static mixer, 8 ft	

Issued 05/17

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