STRAIGHTENING VANE is recommended when there is less than ten (10) pipe diameters of straight pipe (no fittings or obstructions) directly upstream from the meter location. Meters with straightening vanes require at least five (5) pipe diameters of straight pipe upstream of the meter. The cross type straightening vane should be installed in the following manner:

1. ALIGN the saddle cutout template on the pipe over the cutout location with the template center line parallel to the pipe centerline.

2. CENTER PUNCH 11 3/4" from the center of the Saddle cutout on the center line of the pipe. Drill a 17/32" dia. hole in the pipe at center punch location. Remove all burrs, slag, and rough edges from the inside and outside of the pipe so there are no sharp edges.

3. INSTALL 1/2" brass washer on the 1" long x 1/2" dia. stainless steel mounting bolt. Thread stainless washer with rubber gasket onto vane mounting bolt with gasket away from bolt head.

4. INSERT mounting bolt through 17/32" hole approx. 1/8" into the inside of the pipe. Reach inside the pipe and thread stainless steel washer with rubber gasket partially onto mounting bolt (gasket toward inside of pipe).

5. INSERT vane through saddle cutout with arrow on vane pointing in direction of flow. Align the vane nut with the mounting bolt in pipe and thread into the vane nut. Tighten the vane mounting bolt with a torque wrench to approximately 30 foot pounds. If a drip appears, additional tightening is allowable.

NOTE: THE VANES MAY NEED TO BE BENT SO THEY WILL COME IN CONTACT WITH THE INSIDE OF THE PIPE. THIS CONTACT IS REQUIRED TO STABILIZE THE STRAIGHTENING VANE ASSEMBLY.