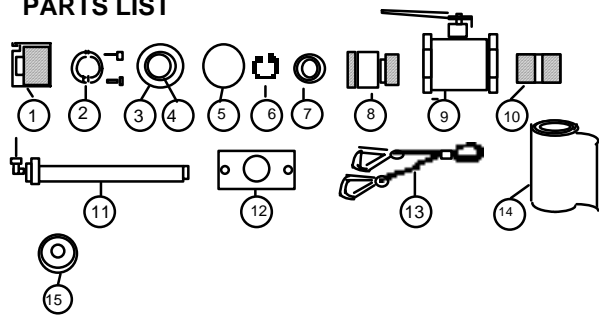


## Vantage 4000 HS3 SENSOR INSTALLATION

### PARTS LIST



ITEM	DESCRIPTION	QTY
1.	RETAINER BRZ	2
2.	SPLIT COLLAR	2
3.	BRASS COLLAR	2
4.	O-RING 1.287 X 2.7	2
5.	O-RING 2.112 X 2.318	2
6.	2" RETAINING RING	2
7.	BEARING SEAL	2
8.	BRASS TAIL PIECE	2
9.	BRZ BALL VALVE	2
10.	1-1/2" NIPPLE	2
11.	SENSOR W/100' CABLE	2
12.	SAFETY PLATE	4
13.	SAFETY CABLE	4
14.	TEMPLATE	1
15.	TEFLON TAPE	1

### TEMPLATE INSTALLATION

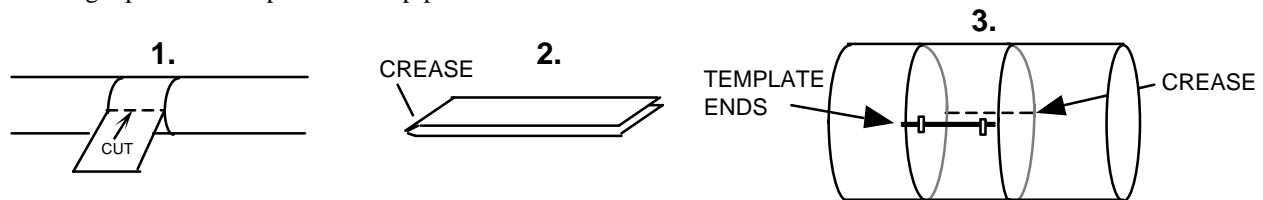
Using tape, attach one end of the template to the pipe and wrap the rest of the template around the pipe.

Pull the template straight and mark the point of overlap on the template. Cut off the excess.

Remove template from pipe. Fold template.

Wrap the template around the pipe so that the crease is on one side of the pipe and the two ends of the template meet on the other side of the pipe.

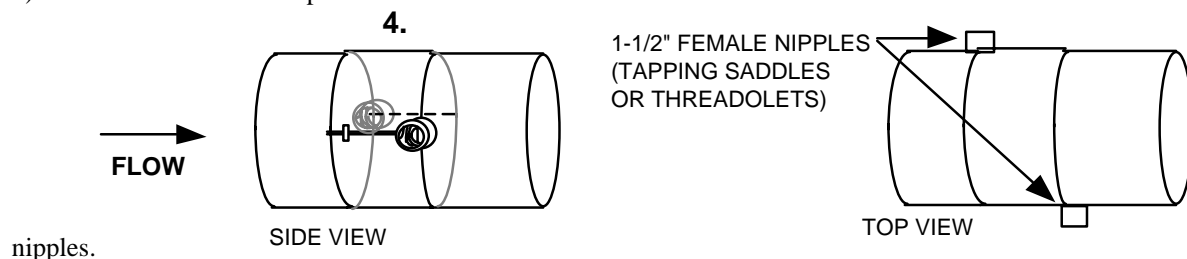
Try to line up the crease and ends with the horizontal center of the pipe. Tape the ends of the template together with masking tape to hold in place on the pipe.



Use a center punch and a hammer. Punch a mark where the template ends meet and the right edge of the template.

Repeat step on the other side of the pipe where the crease in the template and the right edge of the template meet (Fig.

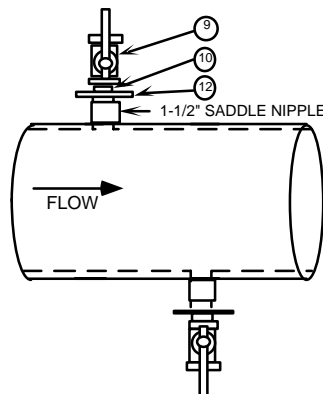
4). The center punch marks will become the center line for the 1-1/2"



nipples.

### TAPPING PROCEDURE

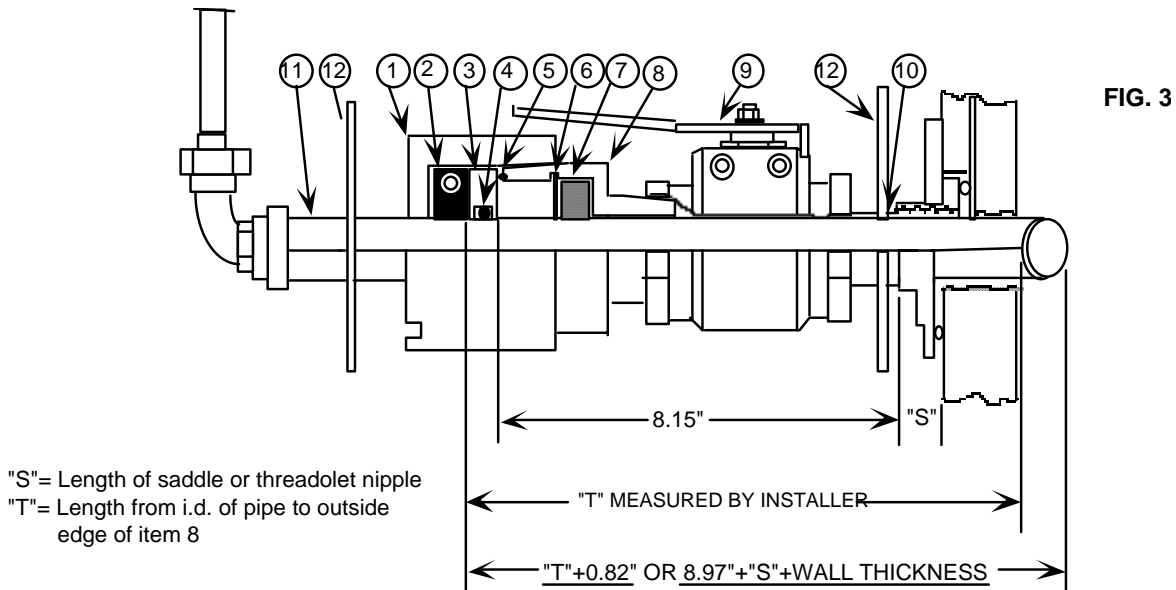
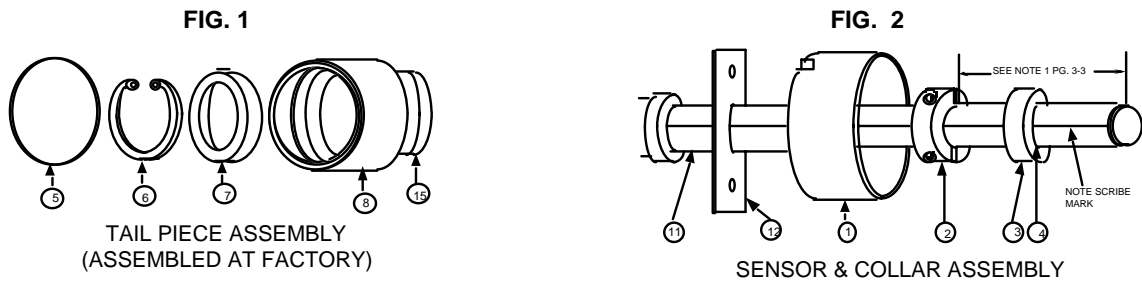
1. Install template and nipples per 3-1.
2. Use Teflon tape, wrap the end of male nipple (10) and screw into female nipple of tapping saddle.
3. Slide safety plate (12) over outer end of nipple.
4. Screw ball valve (9) onto nipple. Adjust valve to the "open" position.



5. Connect tapping machine into end of ball valve, 1-1/2".
6. Use 1.38" minimum tapping bit and tap through pipe wall.
7. Back the tapping bit out past the valve assembly and move the valve handle to the "off" position.

## Vantage 4000 HS3 SENSOR INSTALLATION

### PREPARATION TO INSTALL SENSORS:



**NOTE 1: USE ABOVE FORMULAS TO DETERMINE THE PLACEMENT OF ITEM 2, ONCE COLLAR IS PLACED AT CORRECT DIMENSION TIGHTEN BOTH SOCKET HEAD SCREWS.**

1. Screw tail piece assembly (Fig. 1, 5, 6, 7 and 8) into ball valve (9).
2. Slide 12 and 1 onto sensor (11); use Fig. 2.
3. Position collar (2) onto sensor and use above formula to calculate correct dimension. Please note that the collar should already be installed by the factory on new orders, the collar dimension will have to be changed only if pipe dimensions are other than given.
4. Slide brass collar and O-ring assembly (3 & 4) onto end of sensor and butt up against the split collar (2).

**NOTE: USE SOAPY WATER, PETROLEUM JELLY OR SOME TYPE OF LUBRICANT TO SLIDE BRASS COLLAR AND O-RING ONTO SENSOR.**

5. Note scribe mark running near the end of the sensor. This scribe mark, when the sensor is installed, should be facing toward the opposite sensor (Fig. 4).
6. Place tip of sensor through bearing seal (7) and carefully push until the sensor stops at the ball valve. Fasten safety cable clip (long length) to opposite safety plate.
7. Turn valve handle to the "on" position and insert the sensor until the brass collar (3) seats on the O-ring on the tail piece (5 & 8).
8. Tighten retainer (1) onto the tail piece (8) using a 1/16" square screw driver shaft in the notch on the end of the retainer.
9. Fasten short length of safety cable to opposite safety plate.

# Vantage 4000 HS3 SENSOR INSTALLATION

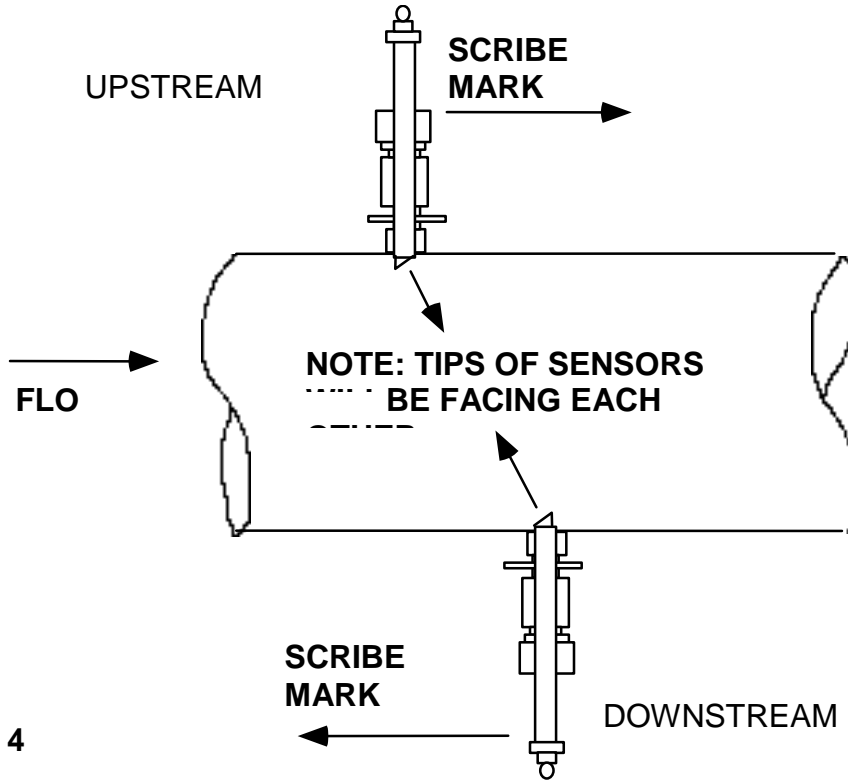


FIG. 4

