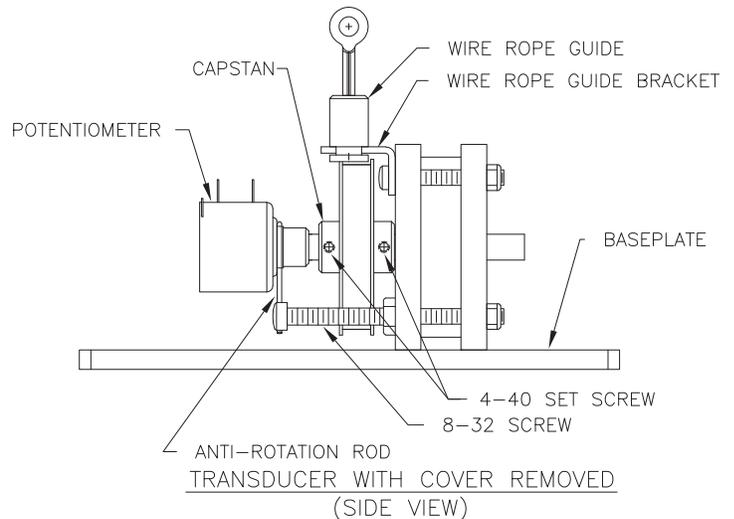


The wire rope in UniMeasure draw wire position and velocity transducers should be replaced at the first sign of fraying. If the wire rope is run until breakage occurs, serious damage to the potentiometer is possible.

Replacement Procedure

1. Remove the cover from the transducer by removing the two 6-32 button head cap screws on the top surface of the cover.
2. On models with measurement ranges up to and including 5" disregard this paragraph. Otherwise proceed. Remove the potentiometer from the transducer by loosening the 4-40 set screw in the capstan hub which fastens the potentiometer to the capstan. Remove the potentiometer with anti-rotation rod by sliding out of the capstan hub.
3. Fasten the baseplate of the transducer to a rigid surface by bolting to a fixture or lightly clamping in a vise.
4. If the wire rope of the transducer is not broken, extend it fully. Insert an external hex wrench into the 4-40 set screw that holds the capstan to the shaft of the transducer but do not rotate the set screw. Use the external hex wrench as a stop to keep the capstan from rewinding. If the wire rope is broken, remove the broken wire rope and carefully wind the capstan counterclockwise (when viewed from the capstan end) until the internal spring is wound tight. Then unwind the spring by rotating the capstan two to three turns clockwise. Hold from unwinding further with the external hex wrench as above.
5. Remove the wire rope from the capstan by sliding it out of the slot in the capstan flange. Remove the wire rope guide with wire rope from the transducer by sliding it out of the wire rope guide bracket.
6. Place the wire rope guide of the new wire rope assembly into the wire rope guide bracket at approximately the same position as the old wire rope guide. **Note:** It is imperative that the new wire rope be handled with care to avoid severe bends as permanent damage to the wire rope can occur which will affect both accuracy of the transducer and wire rope life.
7. Attach the wire rope to the slot in the capstan.
8. Firmly grasp the rubber bumper on the wire rope and pull the wire rope taught. Remove the hex wrench from the set screw of the capstan and allow the wire rope to slowly retract onto the capstan of the transducer. **Note:** With longer wire ropes it is advantageous for one person to grasp and tighten



the wire rope while a second person removes the hex wrench to avoid

9a. Transducers with ranges up to and including 5"

Cut away the silicone material which holds the potentiometer cover in place. With a pair of snap ring pliers carefully rotate the wiper of the potentiometer until the contact of the wiper is at the beginning of the conductive strip on the body of the potentiometer. Axial wiper position should be $.045" \pm .01"$ from the potentiometer body. Carefully re-assemble the cover over the potentiometer and hold in place with silicone material. Let the silicone set before proceeding.

9b. Transducers with ranges greater than 5".

While viewing the potentiometer from the shaft end, rotate the shaft of the potentiometer counterclockwise to its stop. With the wire rope completely retracted onto the drum of the transducer, carefully insert the shaft of the potentiometer into the capstan with the anti-rotation rod rotated about 15° clockwise (as viewed from left side in drawing above) from the head of the 8-32 screw into which it fits. Now rotate the potentiometer counterclockwise until the anti-rotation rod moves past the slot in the screw by approximately one diameter of the anti-rotation rod. Then rotate the potentiometer clockwise until the anti-rotation rod is aligned with the slot in the screw. Push the potentiometer toward the capstan until the anti-rotation rod reaches the bottom of the slot in the screw head. Torque the 4-40 set screw which holds the potentiometer shaft to 5 lb-in.

10. Place the cover onto the transducer and move the wire rope guide as necessary to center the cover over the baseplate. Replace the 6-32 button head cap screws and tighten to 8 lb-in.