

SRZ-20 Helical Flow Meter Maintenance Guide

Disassembly Procedure - Refer to the attached drawing.

<u>Never pry any housing components apart with a chisel or screwdriver. There are</u> <u>delicate carbide shafts inside this unit - to avoid damaging these parts lay the unit</u> <u>horizontally on a flat table or bench and follow the procedures below.</u>

First remove the sensor (13) by releasing the locknut and removing the sensor from the flowmeter housing. Next relax the six hex head bolts (2) with a 6mm Allen hex key. Remove four of the six bolts but keep two opposing bolts engaged by a few threads. With the flowmeter laying on its side on a table, hold the upper housing at the bolt end (7) and gently tap on the two bolts alternately with a hammer until the housing parts (6) & (5,7) separate. Remove the last two bolts and ease the two flowmeter sections fully apart. **NOTE: Carefully slide the upper housing (6)** <u>straight off until it is completely clear of the gears (8) so as not to break the gear shafts</u>. With the housing separated, remove the helical gears (8) and the sleeve bearing (11) by lifting the gears straight out of the housing. Check that the ball bearings (9) do not fall out. Avoid separating inlet housing part (7) from center body (5).

Reassembly Procedure - Refer to the drawing

Check the condition of the o-rings (3), replace them if any deterioration is noticed. Check that the o-rings (3) are fitted snugly in the o-ring grooves. Next set housing part (6) down on a table with the with the locating pins (4) pointing up. Insert the larger helical gear (8a) into the opening with the tooth gear end going first. Place the sleeve bearing (11) into the other opening and set it flush with the housing. If necessary, lift the larger gear (8a) slightly to get sleeve bearing (11) into its opening. Insert the longer shaft end of the smaller helical gear (8b) into the sleeve bearing (11) making sure the two helical gears mesh with each other and that the top of the gears are level with each other. Turning the gears will help. Next, lay the housings (6 & 5, 7) sideways on a table, match the holes in housing (5) with the gears and **carefully** slide the housing (5,7) over the helical gears. **Make sure to slide the housing on straight without any twisting to avoid stress on the shafts.** Insert two opposing bolts (2) and alternately tighten each down until the two housing parts (5 & 6) are together. Insert and tighten down the remaining four bolts with the 6 mm allen hex key. If the parts are reassembled correctly, a snug hand tight torque will provide a sufficient seal. Reassembly should not require use of a vise.

FOOTNOTE: The use of thread seal tape or pipe dope on the fluid fittings should be avoided as pieces may enter the meter. It is not recommended that the meter be operated or flushed with water. Should this occur, residual water should be removed with alcohol and the internals oiled. If the device is to remain inoperative for any extended period it is recommended that the internals be oiled.

