



**SyncroFlo, Inc.**

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**Special Instructions  
For Replacing &  
Recharging A HydroCumulator®**

- STEP 1 FIRST, DETERMINE IF THE HYDROCUMULATOR HAS CORRECT PRECHARGE BY ISOLATING IT FROM THE SYSTEM. CLOSE ALL VALVES CONNECTED TO THE HYDROCUMULATOR AND OPEN THE 3/4" HOSE BIB TO RELIEVE THE WATER SIDE PRESSURE.
- STEP 2 AFTER BLEEDING OFF WATER SIDE PRESSURE, CHECK PRECHARGE PRESSURE. IF PRECHARGE PRESSURE IS CORRECT, CLOSE 3/4" DRAIN VALVE AND RETURN HYDROCUMULATOR TO SERVICE.
- STEP 3 IF PRECHARGE PRESSURE IS LOW, RECHARGE TO PROPER SETTING AND THEN CLOSE 3/4" DRAIN CONNECTION AND RETURN TO SERVICE.
- STEP 4 IF HYDROCUMULATOR PRESSURE GAUGE DROPS TO ZERO, DEPRESS AIR FILL VALVE FITTING TO CHECK FOR WATER OR AIR PRESSURE. IF NEITHER IS PRESENT, REMOVE AIR FILL VALVE CONNECTION.
- STEP 5 IF PRECHARGE PRESSURE HAS BEEN LOST COMPLETELY, ALLOW HYDROCUMULATOR TO DRAIN AND THEN RE-INSTALL AIR FILL VALVE CONNECTION AND ATTEMPT TO PRECHARGE HYDROCUMULATOR. IF AIR COMES OUT OF THE WATER SIDE OPENING, DIAPHRAGM HAS RUPTURED. IF HYDROCUMULATOR CAN BE PRECHARGED BACK TO DESIGN PRESSURE, RECHARGE AND CHECK FOR LEAKS BEFORE RETURNING TO SERVICE.
- STEP 6 IF HYDROCUMULATOR LOSES AIR REGULARLY, CHECK ALL EXTERNAL OPENINGS FOR LEAKS.
- STEP 7 AFTER DETERMINING THE HYDROCUMULATOR CAN NOT BE RECHARGED, MAKE SURE THAT ALL WATER HAS BEEN REMOVED FROM TANK. REMOVE THE AIR FILL VALVE FITTING IF NOT ALREADY OUT. BREAK THE FLANGED CONNECTION AT BOTTOM OF TANK TO RELIEVE ANY WATER THAT MAY BE OUTSIDE THE DIAPHRAGM. LOOSEN THIS CONNECTION.....DO NOT REMOVE COMPLETELY.
- STEP 8 ONCE ALL WATER HAS BEEN REMOVED FROM THE HYDROCUMULATOR, UNBOLT TANKS AND BREAK PIPE UNION CONNECTION. LAY TANK ON ITS' SIDE, ALLOWING APPROXIMATELY FIVE FEET ACCESS TO BOTTOM CONNECTION. UNBOLT FLANGE ASSEMBLY AND PULL STRAIGHT BACK.
- STEP 9 CARE SHOULD BE TAKEN DURING REMOVAL OF DISTRIBUTION TUBE SO AS NOT TO DAMAGE IT.
- STEP 10 INSPECT TUBE ASSEMBLY FOR ANY DAMAGE. TUBE SHOULD NOT HAVE ANY OPENINGS OTHER THAN THE THIN SLOTS. THE TIP SHOULD BE ROUGHED AND PERMANENTLY ATTACHED. RETAPE NECK OF TUBE IF NEEDED.
- STEP 11 IF ANY DAMAGE IS NOTED ON THE DISTRIBUTION TUBE, CONTACT FACTORY FOR TUBE REPLACEMENT. DO NOT CONTINUE REPAIR WITH DAMAGED TUBE AS FAILURE TO BAG WILL RESULT.
- STEP 12 REMOVE DIAPHRAGM ASSEMBLY AND INSPECT FOR RIPS AND TEARS. A REPORT MUST BE SENT TO THE FACTORY. IF WARRANTY FAILURE, BAG MUST BE RETURNED FOR CREDIT.
- STEP 13 CLEAN INSIDE OF HYDROCUMULATOR WITH WATER HOSE TO REMOVE ANY DIRT OR SEDIMENT THAT MAY STILL BE PRESENT.
- STEP 14 RE-ASSEMBLE BY INSERTING TUBE IN BAG AND FOLD BAG IN HALF AND THEN ROLL UNIFORMLY AROUND TUBE SO IT CAN BE SLID THROUGH TANK OPENING.
- STEP 15 USING AN AIR COMPRESSOR, INSERT AIR IN FLANGE OPENING TO UNRAVEL BAG INSIDE TANK. ONCE BAG IS UNRAVELED, LINE UP BAG WITH FLANGES AND INSERT BOLTS, MAKING SURE GASKETS ARE ON BOTH SIDES OF THE BAG.
- STEP 16 BOLT FLANGE ASSEMBLY TO TANK MATING FLANGE. TIGHTEN BOLTS UNIFORMLY TO COMPRESS GASKETS AND PROVIDE A TIGHT SEAL.
- STEP 17 STAND UP TANK AND BOLT TO SKID. REINFLATE THE BAG THROUGH THE WATER SIDE OPENING TO ALLOW IT TO EXPAND TO THE FULL INSIDE AREA OF THE RECEIVER. WHEN HYDROCUMULATOR BAG APPEARS AT THE AIR FILL FITTING OPENING, STOP AND ALLOW BAG TO SETTLE DOWN OVER TUBE. RE-INSTALL AIR FILL VALVE AND PRECHARGE TO REQUIRED PRESSURE.
- STEP 18 RECONNECT WATER SIDE PIPING AND CLOSE 3/4" DRAIN VALVE.
- STEP 19 CHECK ALL EXTERNAL OPENINGS FOR LEAKS USING TROUBLE BUBBLE OR LIQUID SOAP. CORRECT ANY LEAKS.
- STEP 20 SLOWLY OPEN HYDROCUMULATOR SHUTOFF VALVE AND RETURN TANK TO OPERATION.
- STEP 21 REFER TO IOM INSTRUCTIONS FOR SWITCH SETTINGS AND DESCRIPTION OF OPERATION.
- STEP 22 HYDROCUMULATOR SHOULD BE CHECKED 24 HOURS LATER TO ENSURE PRECHARGE HAS NOT DROPPED. CORRECT AS NEEDED.

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