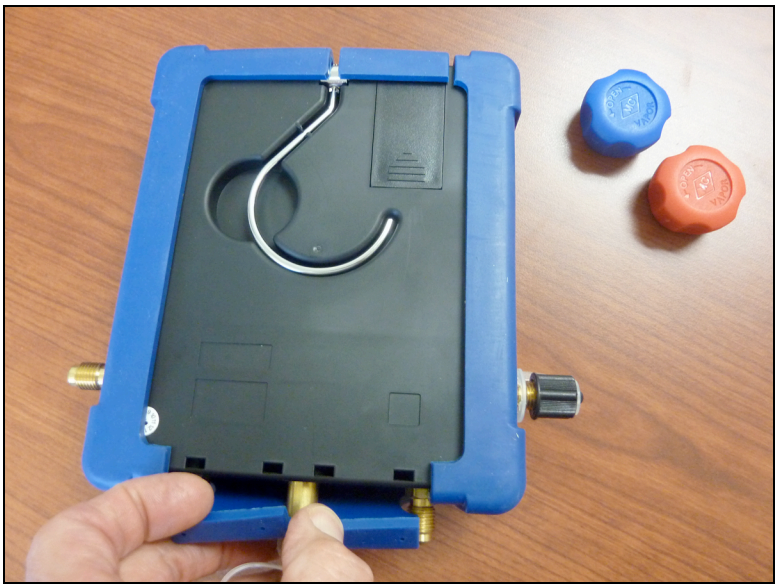
HOW TO REPLACE A PRESSURE SENSOR ON A 2-WAY DIGITAL MANIFOLD IN THE FIELD

STEP #1

Remove both knobs using a large flat screwdriver. Rest the screwdriver on the rubber cover to prevent damage to the cover or case as shown in the photograph below.

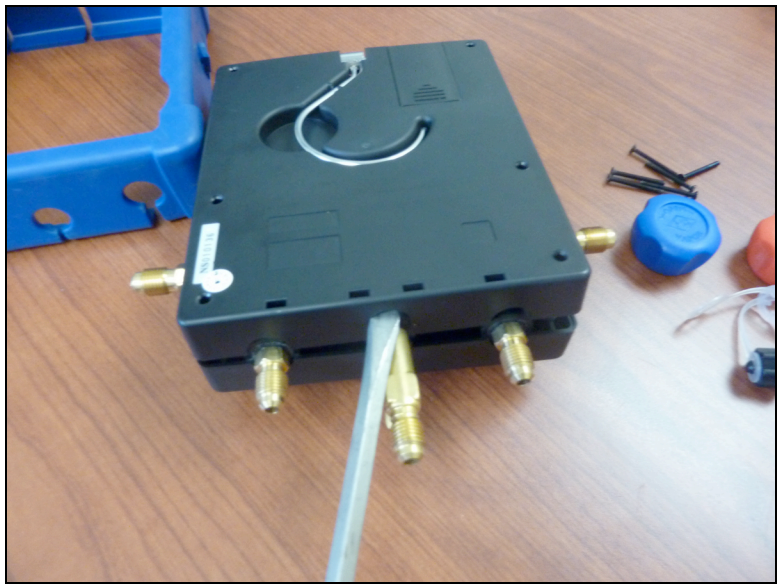
STEP #2

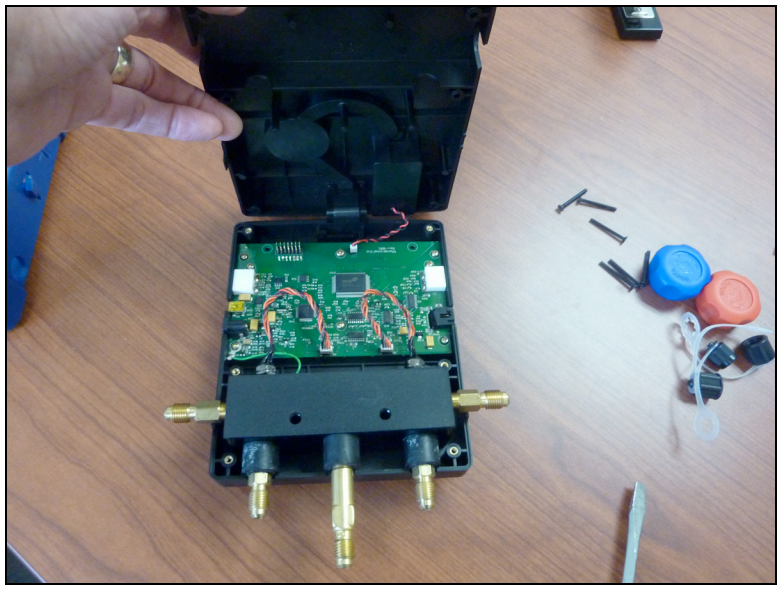
Remove all plastic caps from the ports to facilitate the removal of the flexible blue rubber cover. Start the removal on the rear of the unit, by prying OFF the cover, where the rectangular slots are located (see photograph below). Continue removing the cover from all sides until the cover is completely separated from the housing.



STEP #3

Remove all Phillips head screws from the rear of the housing. While the rear of the unit is facing up and the input ports are nearest to you, use a flat screwdriver and gently separate the two halves of the housing. Be careful in lifting the back cover (top) away from the bottom cover since a wire will still be secured between the two halves. If you lift the back cover from a 6:00 to 12:00 position, you can lay both cover sections down without disconnecting the battery connection from the main PCB.



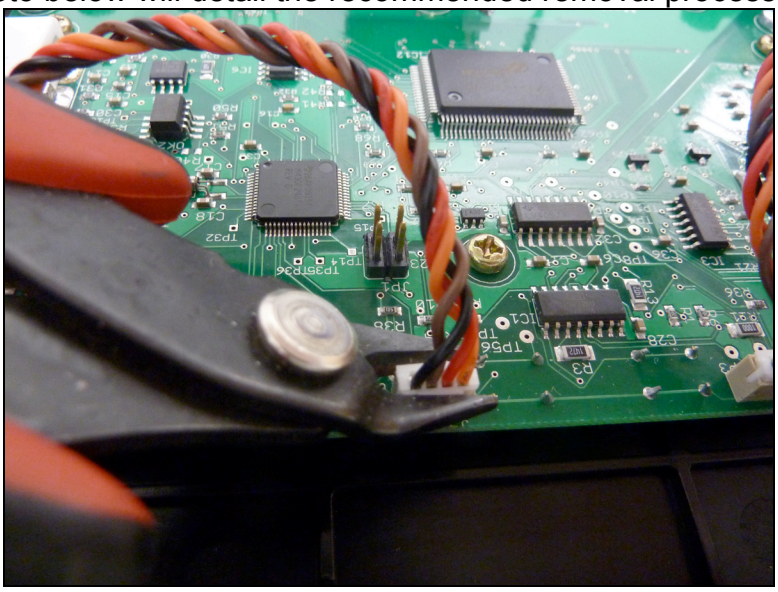


STEP #4

Since the unit is lying on its face, the LOW-pressure sensor will be on the right side of the manifold block and the HIGH-pressure sensor will be on the left side.

STEP #5

Remove both pressure sensor connectors WITH EXTREME CARE. The recommended tool is a miniature side cutter. If used improperly or with excessive force, this tool can sever the cable, therefore, be very careful. Carefully place the jaws of the side-cutter between the plug and the socket interface, gently apply a minimal amount of force and carefully rock the side cutters in a lateral motion until the plug lifts out of the PCB socket. Repeat this process and remove the other pressure sensor. TAG THE SENSOR THAT IS TO BE REMOVED at this time. The photo below will detail the recommended removal process.



STEP #6

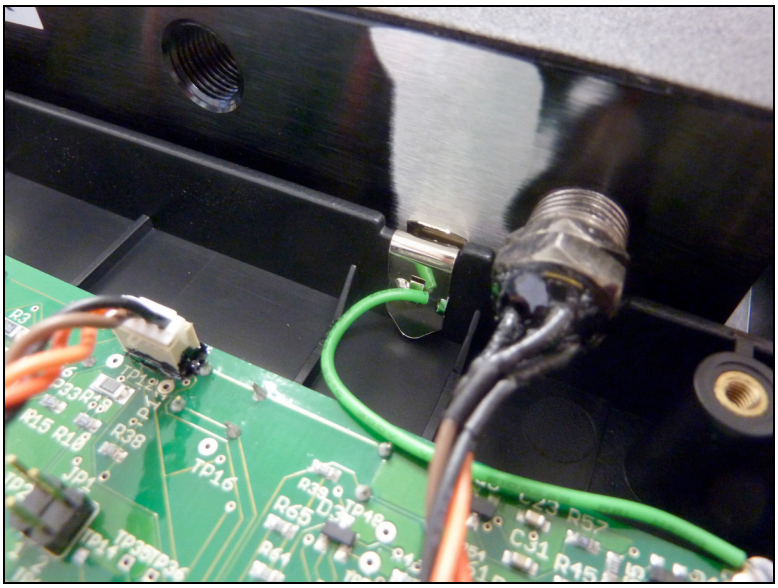
Having marked the pressure sensor that is to be removed and replaced, NOW proceed to remove the manifold block out of the housing cavity.

Secure the block in a vice; proceed to remove the marked sensor using a 7/16-inch wrench.

Apply blue Lock-Tite around the threads of the new sensor and re-install in the manifold block, applying sufficient force until tight (approximately 10 inch-lbs). Be careful not to cross-thread the new sensor in the process. Clean off excess Lock-Tite.

STEP #7

Return the manifold block back to its position in the case, making certain that the grounding clip is sitting in its notched position in the case and making contact with the block. It may be advantageous to raise the cover slightly to make the re-insertion process of the manifold block back into the case less difficult (due to the interference of the knob shafts).



STEP #8
Reconnect each pressure sensor to its respective connector on the PCB. The black wire should be on the left side in each connector, when the manifold block is facing you. It is recommended that additional (slight) pressure be exerted on each side of the connector to ascertain that the connectors are inserted all the way.

STEP #9
Carefully join both front and back covers together, making certain that the hinge lock cover (between front & back covers) is properly positioned before securing the covers with the screws. Check to make certain that the unit turns ON before tightening the screws. Tighten all screws that were removed in step # 3, until all surfaces around the perimeter of the case are touching firmly. If the unit does NOT turn ON, open the case and verify that the battery connector is not damaged and the connection with the battery is verified.

STEP #10
IT MAY BE ADVANTAGEOUS TO BEGIN THE INSTALLATION OF THE COVER FROM THE REAR OF THE UNIT, STARTING WITH THE SIDE WHERE THE PORTS ARE LOCATED. Work the cover around the ports, followed by the bottom corners and finally pull the other sides over their corners. Insert the four (4) rubber “feet” back into the rectangular holes in the backside of the case.

STEP #11
You are now ready to re-calibrate the manifold with the newly installed pressure sensor. Follow the instructions entitled “PRESSURE SENSOR RE-CALIBRATION INSTRUCTIONS”.