

Hydrostatic Pressure Test Controller

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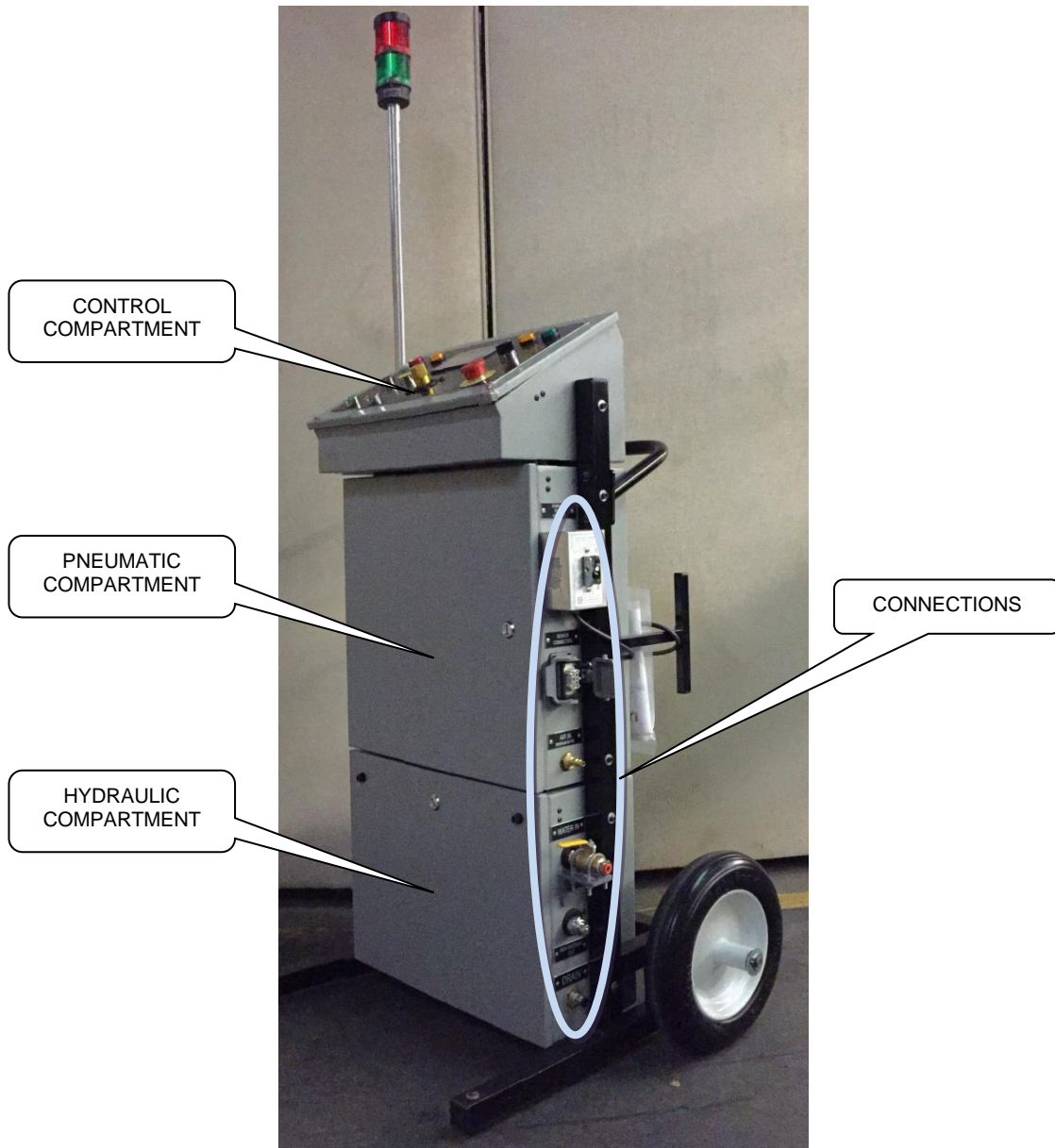
405-440-0010



Main Pressure Test Controller

The Main Pressure Test Controller is critical to the function of the whole pressure test system. This test system is designed in three compartments in vertical orientation. The top compartment is the Electrical control unit, which houses most of the electrical system and the Programmable Logic control (PLC)/Human Machine Interface (HMI) combo unit, the middle compartment consists of pneumatic system, and the lower compartment houses the hydrostatic fluidics, high Pressure pump, valves, etc.

The PLC/HMI combo unit monitors and controls various functions of the tester; the HMI displays various information and status of the tester and the PLC controls various functions of the tester. The control panel is the main operator interface with the machine; switches for input to the tester and indicator lights and the HMI display are the outputs to the operator.

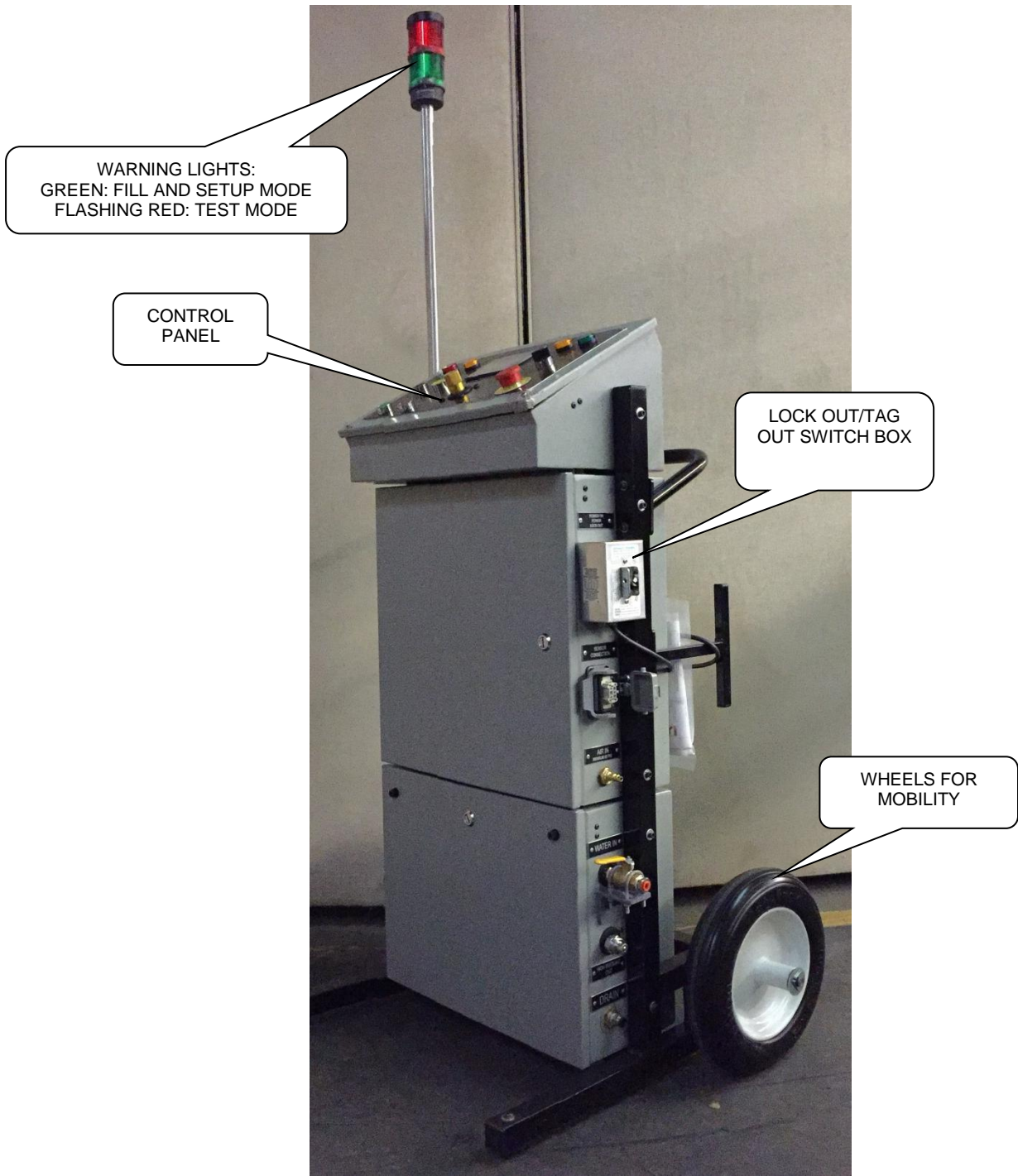


Main Pressure Test Controller - Major Components and Assemblies

The 'Main Pressure Test Controller' consists of the following:

1. Control Panel as input and output of the Tester with switches, indicator lamps, PLC/HMI, etc.
2. Pneumatic circuit to control various functions of the tester
3. Hydraulic fluidic circuit to create pressure test fluid and control the high-pressure test fluid

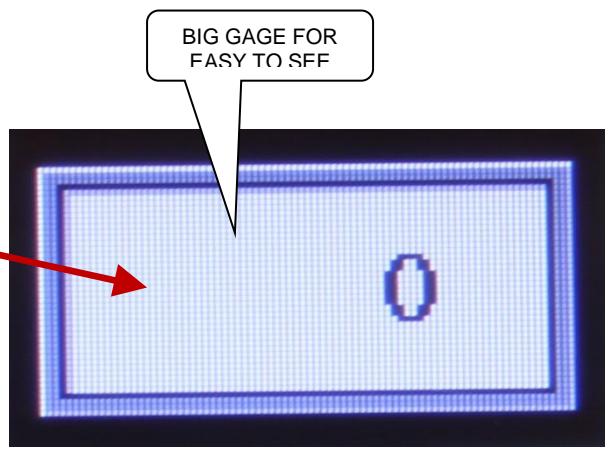
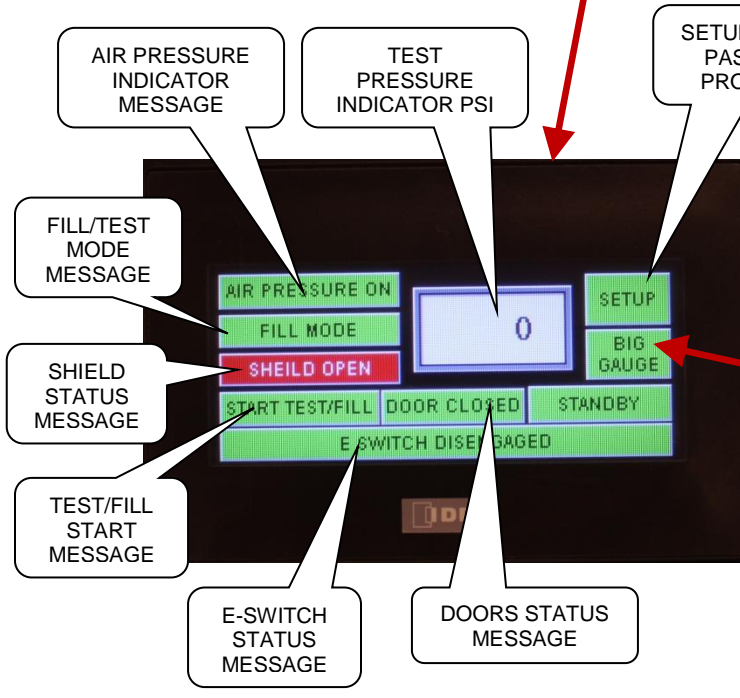
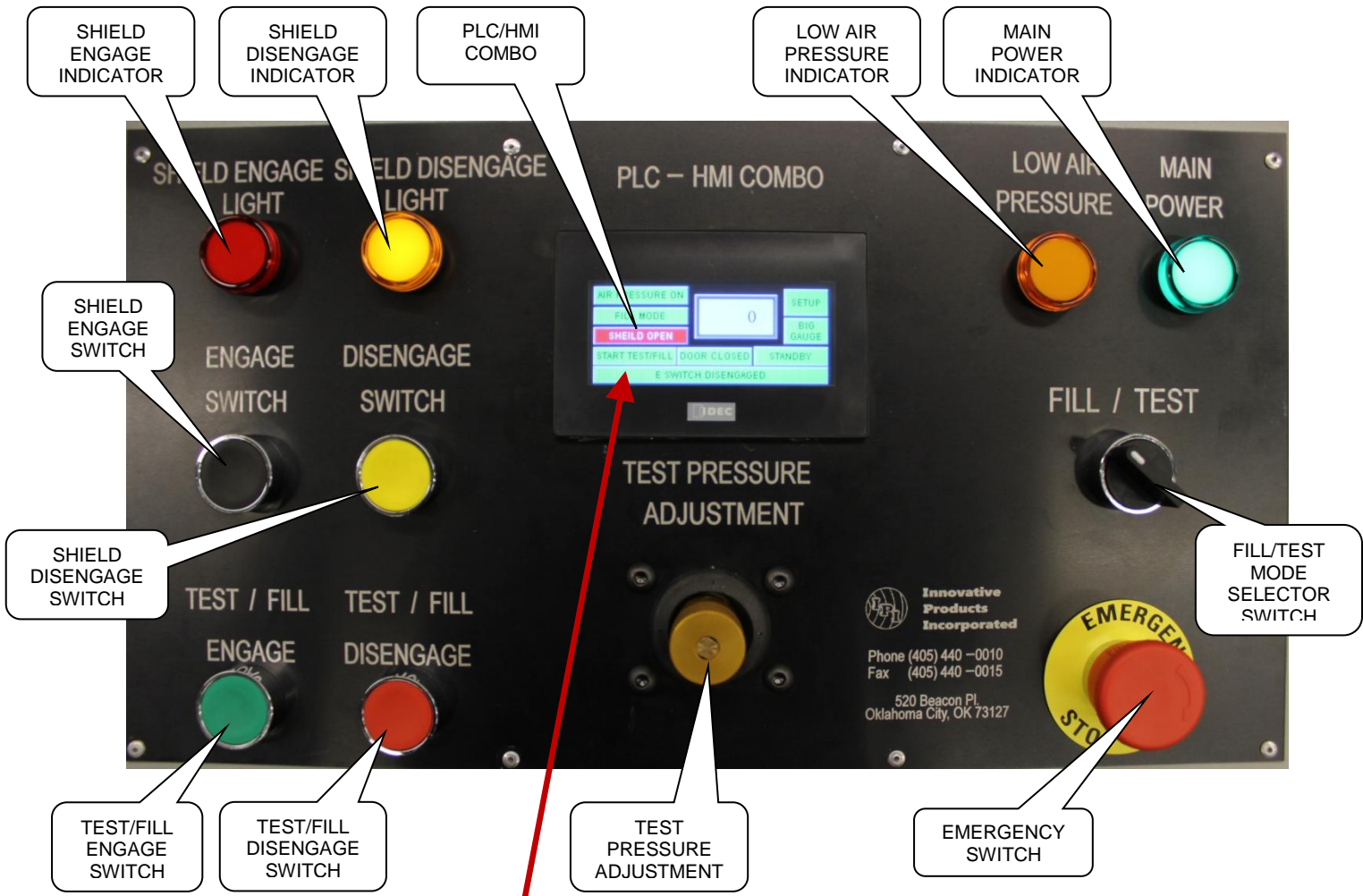
Major components and assemblies are shown below:



Control Panel

The control panel is the main operator interface with switches, indicator lights, PLC/HMI combo, etc.

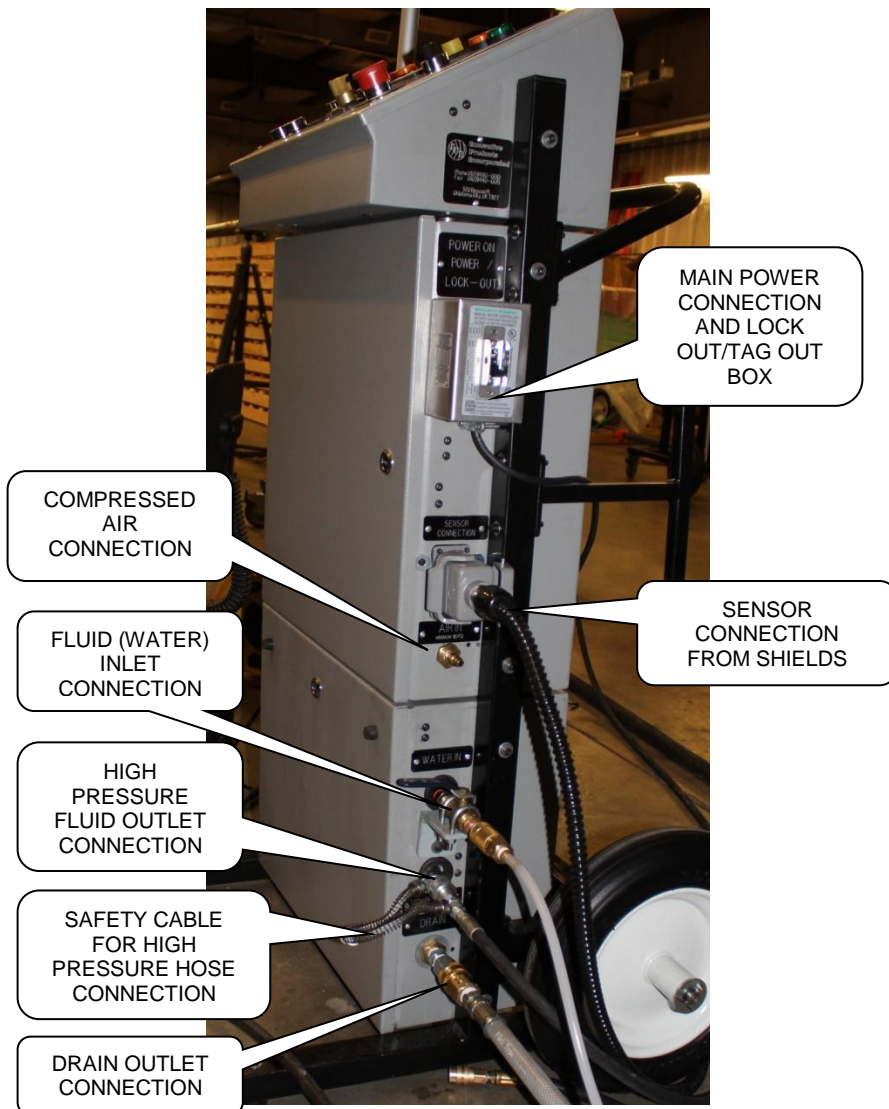
Refer to 'PLC setup' in the service section for more details.



Main Pressure Test Controller – Connections

All electrical, pneumatic and fluidic connections are labeled and mating connectors are not interchangeable. Following are the connections:

1. Electrical connection: 115 VAC 15 amp GFCI plug; Make sure the main switch is off and plug the main line into a standard 115 VAC 15 amp outlet.
2. Sensor connection from the controller to the safety shield
3. Hose connections:
 - a. From the controller fluid inlet (WATER IN) to 'Fluid fast filling and recycling system'
 - b. From the controller fluid outlet (DRAIN) to 'Fluid fast filling and recycling system'
 - c. Compressed air (about 80 psi) connection to the controller
 - d. High pressure hose to the controller through the safety cable



Main Pressure Test Controller – Filling and Priming

1. Connect all the electrical, pneumatic and hydraulic connections as described above.
2. Install the hose adapter to open the ball/check valve at the free end of the high pressure hose
3. Make sure the fluid holding tank has enough fluid to conduct the test
4. Hold or insert the free end of the high pressure hose with the adapter into the holding tank (barrel)
5. Make sure the compressed air is on, all the doors are closed, E-Switch is disengaged, the mode selector switch is on FILL
6. Turn the 'TEST PRESSURE ADJUSTMENT' knob (valve) clockwise until stop (close).
7. Turn on the main switch, the PLC/HMI message window is all green messages.
8. Press TEST/FILL ENGAGE switch to start the high-pressure pump.
9. Slowly turn the 'TEST PRESSURE ADJUSTMENT' knob (valve) counter clockwise to start pumping.
10. Watch the WATER IN tube for the fluid is flowing from the fluid holding tank to the free end of the high-pressure hose.
11. When the fluid is flowing continuously at the end of the high-pressure hose, stop the pump by pressing TEST/FILL ENGAGE switch.
12. Disconnect the adapter from the free end of the high-pressure hose.

Now the Main Pressure Test Controller filled and primed; ready to connect to the tester.