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## DIESEL FUEL FILTER LEAK TESTING

### Market driver:

Heavy, over the road trucks require filtration and conditioning of their diesel fuel supply to insure optimal performance and efficiency. The test part is a large multichannel diesel fuel filter casting that incorporates coolant lines.

### Test requirement:

Each channel in the machined casting must be sealed and tested independently. Conduct three independent leak tests on separate channels, with a leak test specification of 2.5 scc/m @ 87 psig.



### CTS Solution:

The test system is designed utilizing both pneumatic and hydraulic cylinders to accommodate sealing multiple ports, in 25 different seal locations. The sealing is accomplished with a combination of flat face seals on flat machine surfaces, bullet nose seals on the chamfer of threaded ports, and expanding ID seals on machined ID surfaces to simulate real world o-ring seals.

The leak test is conducted utilizing a single test Sentinel I-24 pressure decay leak test instrument that is interfaced with a PLC control system. The PLC communicates with and controls the instrument and calls upon the three different test parameters utilized during the three independent channel leak tests.

