



providing world-class leak test and assembly verification solutions

DIRECT INJECTION GAS FUEL RAIL LEAK TESTING

Market driver:

Diesel engines deliver higher performance, needed for larger trucks and SUV's. Diesel fuel delivery systems are being developed for operating pressures of more than 30,000 psig in order to obtain maximum fuel efficiency.

Test requirement:

The pump cavity requires a stringent leak test to prevent fuel or vapor leaks. Also there is less stringent internal leak check to verify the oil and fuel shaft seals about a weep hole.



CTS Solution:

CTS designed a unique test stand that combined a standard Sentinel I-24 pressure decay leak test instrument with a highly sensitive helium detection system to perform sequential tests of the high pressure pump. The helium mass spectrometer test checks for external leaks of 10^{-5} SCCS while the Sentinel I-24 checks the weep hole area that vents both the oil and fuel shaft seals.

