

Bench Tests

At GCL Diesel we take pride in our state of the art test facility. In our test room, all repaired units are tested and calibrated on factory designed and built test benches to ensure they meet manufacturer specifications.

With an ever-increasing number of auxiliary devices and electronic components found on today's generation of injection pumps, precise analysis and calibrating is essential. GCL is constantly investing in new equipment and technology to ensure that we are current with the latest testing and diagnostic devices.

Bosch EPS 815 Test Bench KMA Measuring System

This is the world's first PC based, Vector feedback loop calibration stand for diesel injection pumps. The most important power characteristic in pump calibration is torque at low speeds, since this is where the demand is when testing larger pumps with higher peak pressures.

This Bosch test bench provides more torque and horsepower than any previous generation of Bosch bench. While Bosch has used this method in their production facilities worldwide, until now the control technology has been too expensive for field use. New PC based control technology means that the system has become more affordable for use in the field, resulting in a higher level of precision and quality control for the customer. Types of equipment tested on this bench would include the Dodge / Cummins ISB 24-Valve Fuel Injection Pump (VP44) and the new high-pressure common rail pumps found in vehicles such as the 6.6L GM Duramax.

Hartridge AVM2PC

The AVM2PC is an advanced PC-based diesel fuel pump test stand used to test and simulate on engine running conditions of in-line, rotary, common rail pumps, and electronic unit injectors (EUI), electronic unit pumps (EUP), and Common Rail Injectors.

Dieselogic ITU-101

The Dieselogic ITV-101 is an easy to use and economical benctop unit for the cleaning and testing of all types of Common Rail and conventional diesel injectors.

Using a specially engineered cleaning fluid, injectors are first put through a heated ultrasonic bath for optimum cleaning of all kinds of deposits, varnishes, and gums built up on the injectors and other parts of the engine. The injector is then mounted in the applicable bracket and tested for spray pattern using ultra intensity LED lighting that aids the visibility of the atomization and spray pattern. Volumetric test tubes then measure the injected and returned (back-leakage) fluid quantity of the injector. A special nozzle adapter is used to precisely measure the sprayed quantity.

See the Dieselogic in action in the video below! <https://www.youtube.com/watch?v=g6q8d22RhGc>

Hartridge HH705 EUI Poptest

The HH705 EUI Poptest provides a means for GCL to carry out functionality testing of new, repaired, and remanufactured EUI's, checking for leaks, spray pattern, spring rate, solenoid operation, and nozzle opening pressure (NOP). This test master is also used for testing all makes of mechanical injectors.

Merlin S425A

The Merlin S425A is a superior bench mounted air operated tester for effortless testing of 2 stage and conventional diesel injection nozzles. All tests are carried out by a precise adjustment of air and fuel valves. Nozzle opening pressures are digitally displayed and stored in memory for future use. An analogue gauge is not required as the S425A uses a digital injector opening pressure/back leakage time monitor for optimum accuracy and consistency of test results. It is designed to carry out all standard test procedures i.e. nozzle opening pressure, chatter test (atomization), spray pattern, seat leakage, and back leakage. A record of test results is stored in the computer and printed for the customer.

H.I. 2000 HEUI Injector Test Stand

The H.I. 2000 HEUI Injector Test Stand, introduced in the spring of 2000, was developed to meet the industry demand for testing of 7.3 Powerstroke, Navistar 444e, DT466e, and DT530e injectors. This test stand is capable of testing 1 to 4 injectors, and will flush each injector taken from the engine for testing. Advanced features include a selectable stroke counter, digital temperature monitoring, upper and lower poppet valve seat testing, adjustable RPM, pulse width, and control pressure.

ASNU

ASNU will test all makes of gasoline injectors. If you need to know if your injectors are functioning properly, we can test them for you!