

DIAGNOSING FUEL RELATED PROBLEMS

VEHICLE

1997 Chevrolet K1500 4x4 Truck with 5.7 V-8

PROBLEM:

Hard-starting vehicle even when the motor is warmed up.

SOLUTION:

The customer said that it took excessive cranking time to start the vehicle, even after the truck had been running and the motor was warmed up. An initial test run to warm up the truck indicated that the vehicle ran great—plenty of power when accelerating up hills and it idled fine—seemed to be getting plenty of fuel. Back at the shop, after letting the truck sit for about 5 minutes, I duplicated the problem—it took excessive cranking time to start the motor again.

With the vehicle off, I used my OTC Genisys scan tool to check for error codes, but found none. Thinking the problem may still be fuel related, I used the OTC Master Fuel Injection Kit [Model #6550] and GM fuel injection adapter fitting to do further diagnostics. This tool proved to be very handy as the fuel pressure fitting on this truck is at the rear of the engine in a “dark hole.” The OTC injection adapter fitting has a 6” flexible hose that made it easy to access the test port. It also allowed me to get the gauge out in the open making it easier to read—whoever designed this tool knew what they were doing.

The fuel spec was 60-65 psi. With the engine running the pressure went to 63 psi at idle. I used the relief valve on the gauge hose to check fuel volume and found it took less than 30 seconds to fill a container with one pint of fuel, indicating fuel volume was OK. However, when I shut the vehicle off, the fuel pressure fell to zero, indicating the fuel system was leaking down somewhere.

Using OTC Fuel Line Clamps [Model #4506] I pinched off the rubber return hose under the vehicle and watched the fuel pressure climb to 75 psi. Shutting off the vehicle, the pressure again dropped to zero. Next, I restarted the vehicle and clamped off the fuel feed line until the engine died for lack of fuel, but the pressure gauge was holding at 61 psi. This meant the fuel pump

itself was leaking down and not holding pressure at rest. Replacing the fuel pump in the tank solved the problem. The truck now starts right away whether the engine is cold or hot—results: a very happy customer.

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OTC Master Fuel Injection Kit



OTC Fuel Line Clamps

OTC Tools & Equipment

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