

MITSUBISHI DIESEL INJECTOR REMOVAL & FITTING GUIDE

**For Mitsubishi Pajero, Shogun, Delica,
L200 2.5TD 4D56 and 2.8TD 4M40 engines**

These instructions provide a general guide to removing and fitting complete diesel injector assemblies.

Always use the correct torque specifications for your particular engine. The specifications for the 4D56 and 4M40 are shown below.

TOOLS AND PARTS REQUIRED

Deep 22mm injector socket

17mm spanner for the high-pressure fuel pipe unions

Suitable torque wrench

Clean lint-free cloths

New injector sealing washers and leak-off washers

Clean plastic bags or suitable clean containers for removed fuel-system components

IMPORTANT – CLEANLINESS

Cleanliness is extremely important when working on a diesel injection system.

Thoroughly clean around the injectors, injection pipes and leak-off pipe before disconnecting anything.

Do not allow dirt, carbon or other debris to enter the injector openings, injection pipes or fuel system.

REMOVAL

- 1.** Disconnect the battery or batteries.

2. Remove the intercooler or any other components necessary to obtain clear access to the injectors.
3. Thoroughly clean the area around the injectors, high-pressure fuel pipes and leak-off pipe before disconnecting anything.
4. Carefully disconnect the high-pressure injection pipes from the injectors and injection pump. Support the mating components where necessary and do not allow them to turn with the union nuts.
5. Remove any brackets securing the injection pipes. Keep the removed pipes somewhere clean and protect the open ends from dirt.
6. Carefully remove the leak-off pipe or rail. Do not allow it to twist while loosening the fittings, as the pipe and connections can be damaged.
7. Using a deep 22mm injector socket, carefully unscrew each complete injector assembly from the cylinder head.
8. Check each injector recess carefully and remove all the old sealing washers. Some washers may remain in the cylinder head when the injector is removed.

INSTALLATION

1. Carefully clean the injector installation areas and sealing surfaces. Do not allow dirt or carbon debris to enter the engine.
2. Fit new injector sealing washers. Do not reuse the old sealing washers.
3. Carefully position each injector and start the thread by hand. This helps prevent cross-threading or damage to the cylinder head.
4. Tighten each complete injector assembly to the correct torque specification for the engine. See the specifications below.
5. Refit the leak-off pipe or rail using new sealing washers. Tighten the fittings to the correct specification for the engine.

6. Refit the high-pressure injection pipes. Start the union nuts by hand before tightening them to avoid cross-threading.
7. Tighten the injection-pipe unions to the correct specification.
8. Refit the injection-pipe brackets and any other components removed to gain access.
9. Refit the intercooler where applicable and reconnect the battery or batteries.

FINAL CHECKS

Start the engine and allow it to idle.

Carefully check around each injector, the high-pressure fuel pipe connections and the leak-off system for any signs of diesel leakage.

Check around the injector seats for signs of combustion leakage.

If a leak is found, stop the engine and investigate the cause. Do not attempt to cure a leak simply by excessively tightening the connection.

TORQUE SPECIFICATIONS

4D56 2.5TD – MECHANICAL INJECTION

Complete injector/nozzle assembly:
54 Nm (40 ft.lb)

Fuel return/leak-off pipe nut:
27 Nm (20 ft.lb)

Injector retaining nut:
37 Nm (27 ft.lb)

4M40 2.8TD

Complete injector/nozzle assembly:
55 Nm (40 ft.lb)

Leak-off pipe nut:
30 Nm (22 ft.lb)

Fuel injection pipe union:
23 Nm (17 ft.lb)

Injector retaining nut:
40 Nm (29 ft.lb)

IMPORTANT NOTE

The injector retaining-nut specification refers to the retaining nut used within the injector assembly. It is NOT the tightening torque for installing the complete injector into the cylinder head.

The complete injector installation torque is:

4D56 2.5TD: 54 Nm (40 ft.lb)

4M40 2.8TD: 55 Nm (40 ft.lb)

These instructions are intended for the conventional mechanical/electronic rotary-pump 4D56 and 4M40 applications covered by our injector listings. They are not intended for later common-rail 4D56 engines.

If you are unsure about any part of the procedure, consult the appropriate Mitsubishi workshop manual or have the work carried out by a competent diesel injection specialist.