

Specialist Components – Technical Information

SC D400 Engine Management System – SPI throttle body



Fitting Process

- Disconnect the Battery.
- Remove Bonnet to allow easier access to the engine bay for fitment.
- Remove Airbox from existing SPi inlet manifold. Careful of vacuum
- connections underneath. You will need to remove the air temperature

sensor for reuse with the kit also (green plug)

- Drain Engine coolant (necessary as there is Coolant in the Inlet manifold)

- Remove the throttle cable, water heater pipes from Inlet manifold, fuel hoses (be careful of any residual pressure in the lines! Also note which was the top and bottom fuel line – Bottom should be the Feed line and Top Line the return.)

- Disconnect the full and part load breathers from the engine.
- Undo Servo take off banjo bolt from the Inlet Manifold.

-Carefully remove Inlet Manifold and Throttle Body assembly. There are the connections and pipes on the underside that require removal.

www.specialist-components.co.uk Unit 6 Oaks Farm, Besthorpe Road, Carleton Rode, Norfolk, NR16 1NF - Cut the end off of the Servo take off for the banjo bolt, leaving the hose as long as possible. See picture.

- Join together the 2 coolant water heated pipes that feed the Inlet manifold

heater with the large 90-degree joiner piece supplied.

- Fit the Y piece part load breather to the pipework behind the rocker cover.

This may need some trimming to suit. (see picture)



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- Before fitting the Inlet manifold assembly, it is necessary to drill a few holes. A step drill is the best method of doing this.

- Drill one 10mm hole down low in the Backplate for the Air Inlet Temperature sensor (m10 fine nut for securing this is provided) and a 16mm hole for the full load breather grommet and associated 90-degree adapter. (see pic) Careful of not placing too close to the edge of the backplate.

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The new throttle body and inlet manifold assembly can now be fitted to the engine using the original fixings.



- Next, connect up the supplied wiring adapters for the injectors, TPC and coolant temp sensor, as below.

- Now you need to plug in the adapter parts for the wiring loom. These are:

Injector Adapter Harness



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- Fit Part load breather adapter and Servo take- off adapter into Inlet manifold. This requires some sealant on the threads before fitting to ensure it is airtight. Try to tighten it so the side lines up to provide an easy path for the part load breather adapter piping.

- Use the connector pipe to join the plastic servo pipe into the top of the adapter. Careful when tightening.

- Now fit the throttle cable, ensure that the cable abutment is fitted to the throttle body first. (as shown). Put the outer cable (black piece) into the bulkhead adapter and the aluminium abutment you have put into the throttle body. Then you can feed the inner cable into the outer cable, being very careful not to damage this part as it may affect the operation of the kit.

- The next part of the installation is the fuel system, first of all you need to change the fuel pump module in the fuel tank in the boot. This is very simple to do, use the Haynes manual if you encounter any problems.

- Back in the engine bay, the standard fuel lines are marked up as an orange pipe which is the feed line from the fuel tank and a green line which is the return line to the tank. See the photo below for the plumbing layout.

The original feed line secures onto the fuel rail for the throttle body, also the original return line easily attaches to the bottom of the fuel pressure regulator, then you merely need to bridge the remaining piece from the other end of the fuel rail to the side of the fuel pressure regulator. Be sure to use a high pressure fuel injection hose capable of at least 3.5 bar or 50psi and appropriate hose clips. Around 40cm or 16" of 8mm fuel hose is enough for this. The standard SPi fuel pump will need to be upgraded to a MPi pump attain the correct pressure. See picture below.

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- Now we need to fit the new thermostat housing. Prior to fitting this to the engine it is best to fit the Coolant Temperature Sensor (supplied) to the housing.
- Make sure to fit the sealing washer when screwing the sensor into the thermostat housing.
- Fit this to the engine with the new gasket for this to ensure proper sealing.
- Reconnect the pipe to the radiator and plug the coolant temp sensor and extension into the wiring loom.
- Refill coolant.
- Remove old Rover MEMs ecu, disconnect the electrical connector and vacuum pipes that are attached as these are no longer required for use with the Delta 400 ECU. The Delta 400 ECU will sit in a suitable position on the existing Rover Bracket with the Plug and Play adapter loom, mark this position and drill this off the car.
- Attach the Delta 400 ECU to this bracket and refit to the car along with the plug and play loom.
- Reconnect the Battery
- This is the installation complete. The next part is to check the system for any fuel leaks. Once this has been done, please refer to the Downloads section of our website for the idle setup and the sensor setup.