

## Fuel Delivery (SC engines)

The twin gerotor fuel pumps are high-performance variable-speed types, with each pump operating in a fuel module located in each fuel tank compartment, refer to Fig. 69. The pumps are secured by screw-on plastic closure rings and have integral top plates for external pipe-work and electrical connectors.

Fuel level is maintained equal in the fuel tank compartments by circulating the fuel through internal cross-over pipes via suction jet-pumps. High pressure fuel from the fuel pumps is directed through the jet-pump's orifice, creating a low pressure area to be formed around the orifice. The fuel is drawn into this low-pressure area and directed into the cross-over pipes to the opposing module.

Fuel is pumped from the fuel pump to the fuel rail via the parallel pressure relief valves and a fuel filter. Each parallel pressure relief valve contains two spring-loaded valves, which operate in opposite directions. The function of the valves is to:

- assist engine starting by retaining a pre-set fuel pressure in the supply pipe and fuel rail;
- limit fuel-rail pressure due to temporary vapor increase in hot conditions;
- limit fuel-rail pressure caused by sudden load changes for example, a fully open to closed throttle transition;
- prevent leakage from the tank in the event that the fuel delivery pipe is severed.

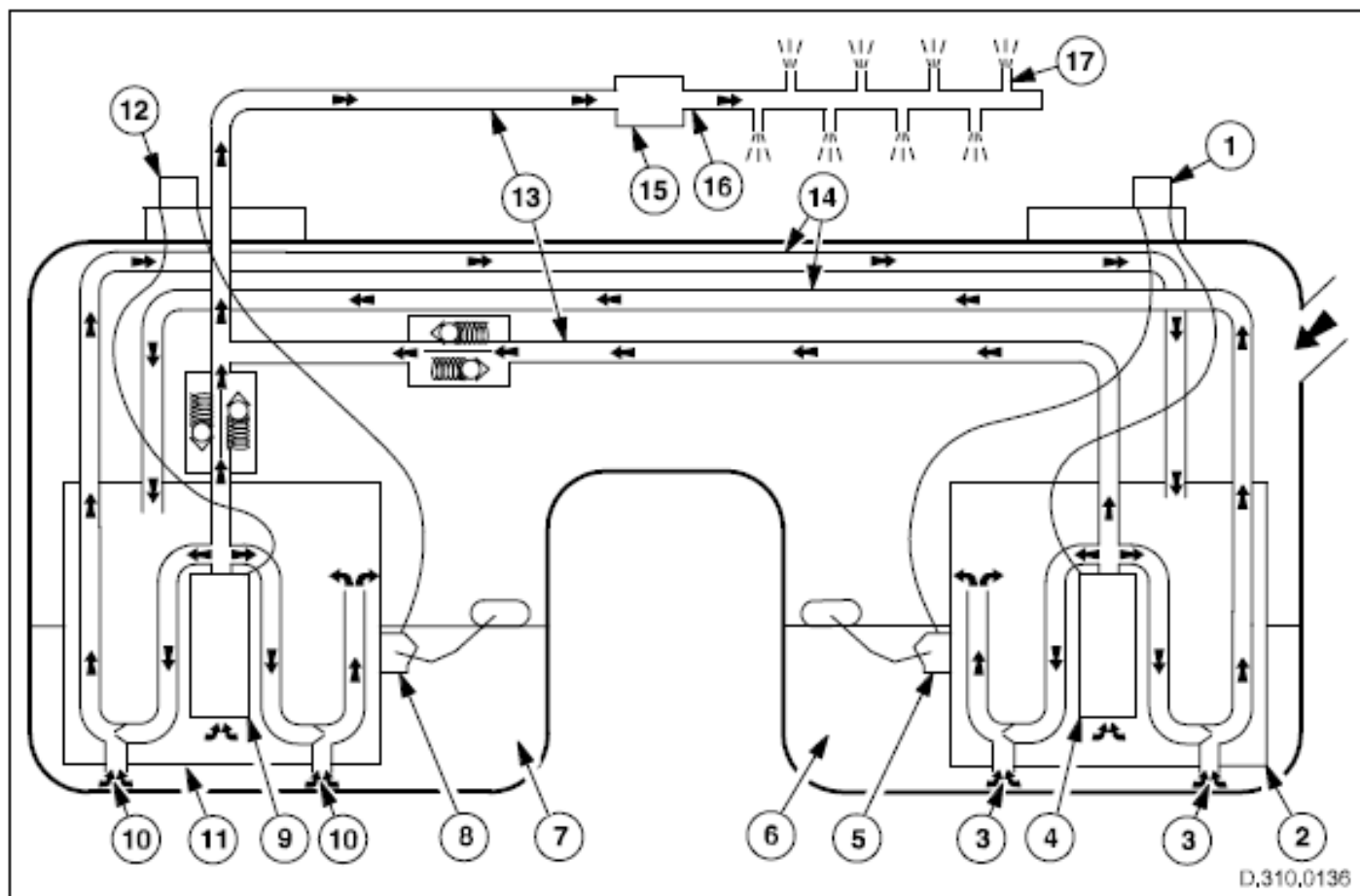


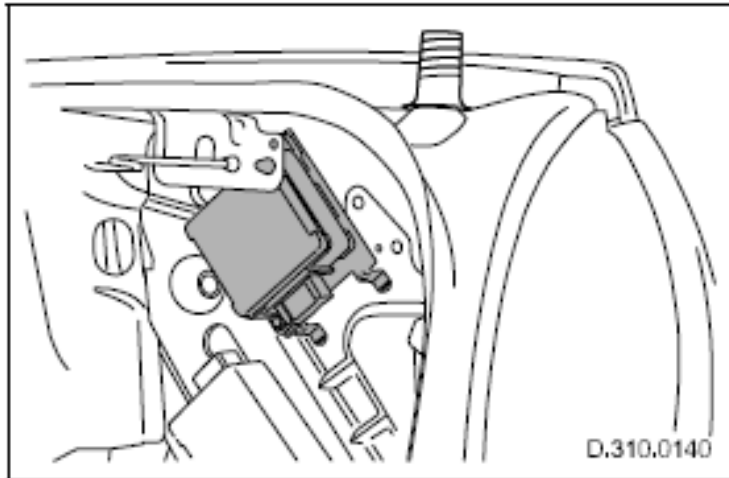
Fig. 69 Schematic of fuel tank internals — SC application

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|--|---|
| 1. Fuel pump and fuel level sensor, electrical connector | 10. Suction jet-pump                                      |
| 2. Fuel pump module                                      | 11. Fuel pump module                                      |
| 3. Suction jet-pump                                      | 12. Fuel pump and fuel level sensor, electrical connector |
| 4. Fuel pump   | 13. Engine fuel-delivery pipe                             |
| 5. Fuel level sensor                                     | 14. Low-pressure cross-over pipe                          |
| 6. Right-hand fuel compartment                           | 15. Fuel filter   |
| 7. Left-hand fuel compartment                            | 16. Fuel rail   |
| 8. Fuel level sensor                                     | 17. Fuel injector   |
| 9. Fuel pump   |   |

## SC Vehicles

The SC fuel system works on the same principal as the N/A system, however to meet the fuel flow-rate requirements of the supercharged engine, the fuel tank incorporates two fuel pumps, which operate simultaneously, refer to **Fig. 69**. The right-hand fuel pump, is controlled by the FP module integrated into the RECM, via signals from the ECM. The left-hand fuel pump is controlled by a secondary FP module also via signals from the ECM.

- The secondary fuel pump module is located in the right-hand side of the luggage compartment.



**Fig. 71** Secondary fuel pump module SC