Fuel Flow

The variable speed fuel pump is contained in a fuel reservoir in the RH module assembly. Fuel is pumped from the reservoir through an external cross-over pipe to the LH compartment where it flows via a T junction to the parallel pressure relief valve and then out to the engine fuel rail. The reservoir is maintained by fuel supplied by jet pumps in the LH and RH compartments. Pressurised fuel from the variable speed pump is forced through the small jet nozzles (diameter 0.5mm) creating a suction which draws fuel up from the tank. From the LH tank, this fuel is pumped through an external cross-over pipe and then into the reservoir. In the RH tank, the jet pump is located in the base of the reservoir.

The parallel pressure relief valve assembly contains two spring loaded valves which operate in opposite directions, a fuel rail feed valve which opens at approximately 2 psi during normal operation and a second valve which opens at approximately 45-70 psi to relieve excessive rail pressure.

The main functions of the valves are:

- To help engine starting by retaining fuel in the supply lines and rail.
- To limit rail pressure due to temporary vapour increase during hot soak conditions (temperature and thus pressure drop after approximately 20 minutes).
- To limit rail pressure caused by sudden load changes such as a full to closed throttle transition.
- To prevent siphoning from the tank in the event of the fuel line being severed with the pump inactive.

Each side of the tank has an independently

FUEL FLOW