

A	-	110 Variant
B	-	90 Variant
1	-	Fuel cooler
2	-	Fuel filter
3	-	Fuel tank

## OVERVIEW

The fuel delivery system comprises fuel filler pipe and hose, fuel tank, (including sender assembly and breather system), fuel filter, fuel cooler, priming valve and connecting fuel lines.

The fuel system supplies fuel to the engine via a lift pump which is integral to the engine mounted injector pump. The fuel system is a depression system with the inlet pressure at the transfer pump being -30 to -20 kPa.

Return flow from the engine is returned to the filter. To prevent filter waxing at low temperatures a thermostatic diverter routes the warmed return flow back through the filter to the engine. At higher temperatures the return flow is diverted back to the tank.

## FUEL FILLER AND CAP

The fuel filler is located in the right hand rear quarter panel, behind an access flap. The flap is opened electrically using a switch on the fascia which operates a release solenoid.

The filler is closed by a threaded plastic cap which screws into the filler neck. The cap has a ratchet mechanism to prevent over tightening and seals against the filler neck to prevent the escape of fuel vapor. The filler cap has a valve which relieves fuel pressure to atmosphere at approximately 0.12 to 0.13 bar (1.8 to 2.0 lbf.in<sup>2</sup>) and opens in the opposite direction at approximately 0.04 bar (0.7 lbf.in<sup>2</sup>) vacuum.

A High Density Polyethylene (HDPE) molded filler tube connects the filler to the tank via a flexible hose.

## FUEL TANK

The fuel tank is located at the rear underside of the vehicle between the chassis longitudinals.

The cradle is attached to the chassis with six screws. When the cradle is attached to the chassis, the tank is positively secured via foam pads which bear against the central chassis cross beam. A protective cover is fitted to the front right hand corner of the tank and provides additional protection.

The fuel tank is manufactured from HDPE. The tank is a sealed unit with the only internal access being via the pump module flange aperture on the top of the tank.

A reflective metallic covering is attached to the tank with two scrivenets to shield the tank from heat generated by the exhaust system.

### Fuel Tank Capacities

Variant	Fuel Tank Capacity
90	56 liters (13.2 gallons)
110	70 liters (16.2 gallons)

## FUEL TANK BREATHER SYSTEM

The filler tube incorporates a tank vent which allows air and fuel vapor displaced from the tank when filling to vent to atmosphere via the filler neck.

A breather spout within the tank controls the tank 'full' height. When fuel covers the spout it prevents fuel vapor and air from escaping from the tank. This causes the fuel to 'back-up' in the filler tube and shuts off the filler gun. The position of the spout ensures that when the filler gun shuts off, a vapor space of approximately 10% of the tanks total capacity remains. The vapor space ensures that the Roll over Valve (ROV) is always above the fuel level and vapor can escape and allow the tank to breathe.

The ROV is welded on the top surface of the tank. The ROV is connected to the atmospheric vent pipe. The ROV allows fuel vapor to pass through it during normal vehicle operation. In the event of the vehicle being overturned the valve shuts off, sealing the tank and preventing fuel from spilling from the atmospheric vent pipe.

The atmospheric vent pipe includes a two-way valve which allows for over-pressure relief one way and allows for air to enter the tank as the system operates in depression.

## FUEL LEVEL SENSOR

The fuel gauge sender unit is located inside the tank. The sender module is accessed and assembled by an aperture in the top of the tank. The module flange is locked in place and sealed by a steel locking ring.

The fuel sender assembly comprises a top cover flange which locates the electrical connector for the sender and two steel fuel pipe couplings.

The flange is sealed by a rubber seal positioned between the flange and the locking ring housing.