

6	M6 x 15 mm screw (4 off)
7	M08 x 45 mm screw (4 off)
8	M08 x 30 mm crew (3 off)
9	LH intake manifold
10	Gasket
11	NVH pad
12	M08 x 50 mm screw
13	Bypass valve
14	SC
15	Gasket
16	RH intake manifold
17	M08 x 30 mm crew (3 off)
18	M08 x 50 mm screw
19	NVH pad
20	M6 x 15 mm screw (4 off)
21	M08 x 45 mm screw (4 off)
22	RH charge air cooler
23	M08 x 150 mm screw

SUPERCHARGER

The SC is a Roots blower with high angle helix rotors driven at 2.1 x engine speed by the secondary belt of the accessory drive.

The two rotors of the SC are contained in a housing. The ends of the rotors are supported in bearings in the front cover and the bearing plate. A rear cover seals the bearing plate and incorporates a filler/level plug for lubricant. A pulley transfers power from the accessory drive to the shaft of one of the rotors.

A pneumatic actuator on the front cover is attached to a by-pass valve in the housing. The bypass valve regulates a flow of air from the outlet of the SC back to the inlet side of the rotors, to control the outlet pressure of the SC. Hoses connect the pneumatic actuator to the throttle T-piece of the air ducts, upstream of the electric throttle, and to the front cover, downstream of the electric throttle. A lever connects the actuating rod of the pneumatic actuator to the shaft of the bypass valve. A screw in the front cover limits movement of the lever in the closed direction to allow calibration of the SC output.

The front cover also incorporates:

- The SC air inlet and mounting face for the electric throttle.
- A connector stub for the part load breather.
- A manifold absolute pressure (MAP) sensor.
- A connector stub for a hose from the evaporative emission (EVAP) canister purge valve.