

SECTION 2 ENGINES

- 2.1 The Engine Assembly
- 2.2 Ancillary Components
- 2.3 Exhaust
- 2.4 Field of View

**i. 2.1 THE ENGINE ASSEMBLY**

- 2.1.1 The maximum cubic capacity for engines is 460 cubic inches (7.6 litres).
- 2.1.2 Exposed engines must not have dangerous or sharp projections that would be likely to cause injury or restrict the field of view of the driver.
- 2.1.3 Engines, gearboxes and differentials must have adequate and suitable mountings. In the event of failure of any engine mount, the engine must be capable of being retained so that it cannot interfere with the operation of brakes, steering or suspension.
- 2.1.4 The use of turbocharged or supercharged engines may require certification.
- 2.1.5 The maximum boost for turbocharged and supercharged engines is 9 psi (63kPa).

**ii. 2.2 ANCILLARY COMPONENTS**

- 2.2.1 Engine fans must be shrouded to prevent injury from accidental contact if a bonnet top is not permanently fitted (see Section 9.2).
- 2.2.2 Alternator fans with radial cooling fins must be shrouded to prevent injury from accidental contact if a bonnet is not permanently fitted (see Section 9.2).
- 2.2.3 Toothed belt pulley drives must be shrouded if a bonnet is not permanently fitted (see Section 9.2).
- 2.2.4 Throttle linkages and cables must operate without binding or affecting throttle operation when the engine moves on its mounts. Double return springs should be used.
- 2.2.5 Fuel lines must be of appropriate material, be mounted clear of areas of excessive heat and be adequately secured every 300mm, and accommodate movement of the engine on its mountings if necessary. All fuel line joints, including those on any return pipes, must be appropriate for the fuel line pressure and the pipe material at each joint.
- 2.2.6 Engines manufactured after 1972 must be fitted with a positive crankcase ventilation valve (PCV valve) and must not vent fumes to the atmosphere.
- 2.2.7 Wiring in the engine compartment must be well away from exhaust system parts and be clear of rotating components. All wiring must be insulated and secured every 600mm or less. Wiring to the engine must accommodate movement of the engine on its mountings during use if necessary.
- 2.2.8 Engine numbers must be permanently stamped or etched, accessible and readable. All engines must be stamped with an identification number. If the engine has no number, a new number must be obtained from the registering authority.

**iii. 2.3 EXHAUST**

- 2.3.1 Exhaust systems must be secure and mounted in a manner that allows movement of the drive train components without the likelihood of any exhaust system part other than mountings touching the drive train, chassis, or body parts.
- 2.3.2 Exhaust systems should avoid the area around the brake master cylinder wherever possible. If avoidance is not possible, it must not interfere with the braking function and a suitable shield must be fitted to prevent heat transfer to this area. Care should be taken to ensure heat from the exhaust does not damage wiring, fuel lines, fuel tank, insulation and other flammable materials
- 2.3.3 Turbochargers must have adequate heat shielding.
- 2.3.4 Catalytic convertors must be fitted with all original (or equivalent) heat shields fitted to each canister including those fitted over the canister and below it, along with appropriate flame proof materials insulating the exterior of the Street Rod floor above each canister
- 2.3.5 Exhaust system noise must not exceed 96 dB(A) with the Street Rod stationary and measured in accordance with *National Stationery Noise Test Procedures for In-Service Motor Vehicles*, which can be accessed at <http://www.ntc.gov.au/filemedia/Reports/NatStatExhNoiseTestProcApril2000.pdf>.

- 2.3.6 Exhaust systems must be free of leaks.
- 2.3.7 All Street Rods must have the outlet of the exhaust positioned rearward of the last passenger opening door or window.
- 2.3.8 Commercial Street Rods may position the exit of the exhaust in front of the rear wheels, or with a closed cab pickup, behind the cab.
- 2.3.9 The exhaust system must not have sharp edges or protrusions.
- 2.3.10 If side pipes are fitted, they must have adequate heat shielding at driver/passenger entry/exit points. They must exit towards the rear of the passenger compartment, and face rearwards and slightly downwards.
- 2.3.11 Street Rods may be fitted with a side-exited exhaust to the rear of the passenger compartment. The exhaust outlet must face rearwards and slightly downwards.

**iv. 2.4 FIELD OF VIEW**

At the completion of all work, including the installation of the engine, bonnet and bonnet scoops, the driver's field of view must comply with the field of view requirements specified in Section 10.2.