

Road or Roller Testing

01-06

Road or Roller Testing

Road or roller testing may be carried out for the following reasons:

- As part of regular or scheduled maintenance procedures to check that all vehicle systems function correctly and perform satisfactorily.
- As part of a fault finding procedure to ascertain or confirm a fault. Reference should be made to the relevant Vehicle System Test Manual for the fault diagnosis procedures.
- After repairs have been completed to prove the effectiveness of the repair, and to check that the function and performance of the vehicle is satisfactory.

This section follows a road or roller test procedure from pre-test checks, through engine starting and stopping, pre-driving checks, on-test checks to final checks on completion of the test procedure.

Unless complete vehicle performance is being checked, the full road test procedure need not be carried out. Instead, those sections particularly relevant to the system/s being checked can be extracted.

Pre-Test Checks

It is suggested that pre-test checks, and functional tests of those systems/circuits which affect the safe and legal operations of the vehicle, such as brakes, lights and steering, should always be carried out before the road or roller test.

- Engine oil level
- Engine coolant level
- Tyres, for correct pressure, compatible types and tread patterns, and wear within limits.
- There is sufficient fuel in the tank to complete the test.
- All around the engine, transmission and under the vehicle for oil, coolant, hydraulic and fuel leaks. Make a note of any apparent leaks and wipe off the surrounding areas to make it easier to identify the extent of the leak on completion of the test.



WARNING: If the brake system hydraulic fluid level is low or a hydraulic leak is found, do not attempt to road test the vehicle until the reason for the low level is found or the leak is rectified.

Starting the Engine

Pre-starting checks:

With the ignition switched off, check:

- The handbrake is applied.
- The gear lever is in neutral.
- All instrument gauges (except fuel gauge) read zero.


With the ignition switched on, check:

- Ignition controlled warning lights come on.
- Engine temperature gauge registers a reading compatible with the engine temperature.
- Fuel gauge registers a reading appropriate to the fuel level in the tank.
- The operation of the handbrake warning light and fluid level warning indicator light.

NOTE: On initial drive away from cold and within the first 1,5 km (1 mile), do not depress accelerator beyond half travel until the vehicle has attained a minimum speed of 25 km/h (15 miles/h). Never operate at high engine speed or full throttle whilst the engine is cold.

On Road or Roller Test Check:

- Clutch pedal operation is not stiff or heavy.
- Initial gear engagement is smooth and there is no evidence of clutch drag.
- Handbrake control operates smoothly and the handbrake releases quickly and completely.
- Clutch takes up the drive smoothly, without slip or judder.

 **CAUTION:** If road testing, check the brake operation while still travelling at low speed before continuing with the test. If the brakes pull to one side, or appear to be otherwise faulty, do not continue with the road test until the fault has been found and rectified.

- Gear changing is smooth, and there are no abnormal noises or vibrations from the transmission.
- The engine power output is satisfactory, acceleration is smooth and pedal operation not stiff or heavy, and engine speed returns to idle correctly.
- There is no excessive or abnormally coloured smoke from the engine under normal driving, heavy load or overrun conditions.
- Steering operation, including power steering where fitted, is smooth, accurate, not excessively heavy or with excessive free play or vibration. Does not pull to one side and self centres smoothly after cornering.
- Speedometer, oil pressure warning lamp, coolant temperature gauge and tachometer (where fitted) register the correct readings or operate correctly.
- Switches and controls operate smoothly and positively, warning or indicator lights operate correctly and the direction indicator control self cancels when the steering is returned to the straight ahead position.
- Heating and ventilation systems work correctly and effectively.
- Brake operation and efficiency.

Brake Testing


Avoid brake testing on busy roads where it can cause inconvenience or danger to other road users.

NOTE: Brake testing which includes heavy brake applications should not be carried out with new brake pads/discs or linings/drums until the components have bedded-in. New brake friction components will not reach full efficiency until the bedding-in process is complete.

Test the brakes at several speeds within the normal operating range using both light and heavy pedal pressure. Note any tendency to snatch, pull or drag, and any undue delay in application or release.

Allow the vehicle to coast and note any tendency to pull to one side, or evidence that the brakes are binding.

After stopping the vehicle (not immediately after a period of heavy braking), carefully check the brake temperature. A disc or drum which feels hot, or appreciably hotter than the others, indicates that the brake is binding.

 **WARNING:** Avoid breathing the smoke or fumes from hot brakes, this may be hazardous to health, see Section 01-01.

After Completion of the Test, Check for:

- Oil, coolant, hydraulic, air and fuel leaks.
- Abnormal temperature of any moving components or assemblies, e.g. wheel hubs, transmission, axle etc., which might indicate overtightness or lack of lubrication.