

# PRESSURE-VACUUM WARNING AND BUILD UP

## APPLICATION

This inspection applies to all vehicles, except those with an unladen weight of less than 3050 kg where the vacuum reservoir is coupled direct to the engine induction manifold. These vehicles do not require a pressured/ vacuum warning device.

Vehicles used from 1 April 1983 can be fitted with either a visual warning device or an audible warning device. If both are fitted only one need work. Vehicles first used before 1 April 1983 must be fitted with a visual warning device. If an audible warning device is also fitted this is considered to be an addition to the mandatory requirement.

A number of vehicles, among them Mercedes 515, 609, 612, 614, 709 and Iveco Daily models were approved without a warning device and should not be failed for a warning device not fitted.

If there is no reservoir in a vacuum system a warning device is not required.

## PROCEDURE AND STANDARDS

Deplete the air or vacuum system by applying the footbrake, when the warning device operates there must be four further assisted brake applications.

**Note:**

If the vehicle has full power hydraulic brakes gauges are not normally fitted and there are no appreciable sounds when the brakes are applied.

Fully deplete the system and run the engine at just below governed speed and note the time for the warning device to show minimum effective working condition.

**Note:**

If gauges are not marked, take 3 bar (45 psi) for air systems and 25 to 30 cm (10 to 12 inches) for vacuum systems as indicating minimum effective working condition.

The time to reach minimum effective working pressure should normally be within 3 minutes for pressure systems and 1 minute for vacuum systems.

## REASONS FOR FAILURE

	Deficiency Category
1. A mandatory visual warning device:	
a. Cannot be seen by the driver in all lighting conditions or heard as applicable.	MAJOR
b. Not fitted or not working correctly.	MAJOR
2.	
a. Not enough pressure or vacuum to give at least <b>four</b> fully assisted brake applications after the warning device has indicated minimum effective working conditions.	MAJOR
b. Not enough pressure or vacuum to give at least <b>two</b> fully assisted brake applications after the warning device has indicated minimum effective working conditions.	DANGEROUS
3. Time to reach minimum effective working pressure is more than 3 minutes for pressure systems and 1 minute for vacuum systems.	MAJOR