g-meter brake tester

Quick Start Guide

SWITCHING ON

Press and release the large yellow button. The display will show [--] while the instrument does a self-check and recovers its settings from memory. Any error conditions will cause E1, E2 or E3 to flash on the display, consult the factory if this happens. The ***g-meter*** stores the results of the last brake test. Except when armed for a new test, the last test result is always shown on the display. It will be erased if the battery or settings are changed. Brake test results can be displayed on the LED as either peak or mean deceleration and in units of either % g or metres/sec/sec (g=9.81metres/sec/sec). A % g reading is shown with no decimal point, metres/sec/sec with a decimal point. Use the ***g-meterPC*** program to setup the instrument as required.

BRAKE TESTING

For a statutory MOT test, the brake test procedure detailed in the latest version of the relevant MOT Inspection Manual must be followed. For your convenience, this is reproduced overleaf

Position the ***g-meter*** in a convenient location in the vehicle with the direction of travel arrow pointing roughly in the forward direction. The instrument must be placed as parallel as possible to the road surface, and located so that it cannot move under hard braking. The instrument is self-aligning, providing its **direction of travel arrow** roughly coincides with the actual direction of travel (within say ±60 degrees) no significant error will be introduced.

Press and hold the button to arm for a new test. The previous results will be over-written only if the new test is completed. When [oo] appears on the display release the button; after a sort pause, the instrument will determine its tilt within the vehicle and complete its arming. The display indicates [go] when it is ready to proceed. Do not move-off or disturb the instrument until [go] is displayed. To cancel the test, press the button again and the previous results will be retained.

The vehicle can now be accelerated to speed and the brake test carried out. The ***g-meter*** will automatically sense the beginning and end of the deceleration and afterwards retain the results in its memory. During acceleration the display will indicate [Ac], and when stopping [St].

Do not use for statutory testing if either the low battery [Lo], or calibration due [cd] warning is flashing

SWITCHING OFF

The ***g-meter*** will automatically switch itself off if the button is not pressed for more than 4 minutes. The instrument **will not** switch off while it is armed ready for a brake test. Double-Click the button to switch-off manually.

For more information, refer to the "*g-meter operating instructions*" document on the Turnkey website

The following instructions are reproduced from the MOT Inspection Manual, issue date: Mar 1992. When in doubt always refer to the latest edition of this manual.

Information - Roads used for decelerometer brake testing

The requirement for a steady road speed during a brake test by decelerometer means that the vehicle must always be driven on a road which

- Has a good surface
- Is suitable for brake tests when wet or dry
- Has a minimum of traffic

A particular public road should not be used for tests so much that it would cause complaints from residents.

Testing transmission handbrakes

When using a decelerometer to test a transmission handbrake, keep the ratchet disengaged for as long as the brake is applied. Take the efficiency reading without the occurrence of transmission snatch or judder.

Vehicles which just pass

With some vehicles the required brake efficiency is just obtained or just exceeded, but the tester knows that a higher performance figure is normally obtained for the type of vehicle.

Although the vehicle has passed the brake performance test, the tester should advise the vehicle presenter that the braking system appears to need adjustment.

Method of Inspection - Decelerometer Test

If the vehicle is of a type which cannot be tested on a roller brake tester,

- Set up the decelerometer in the vehicle in accordance with the equipment manufacturer's instructions
- Drive the vehicle on a level road at a steady speed of approximately 20 mph (32 kph) and note the brake efficiency recorded when applying only
  a. the service brake
  b. the parking brake
  c. while the vehicle is decelerating under the action of the service brake, note if the steering wheel tends to pull or the vehicle tends to swerve.

Reasons for Rejection

a. the service brake efficiency recorded on the decelerometer does not meet the requirements specified in the Brake Efficiency Table

b. the parking brake efficiency recorded on the decelerometer does not meet the requirements specified in the Brake Efficiency Table

c. when the service brake is applied
   - there is severe grab or judder, or
   - there is severe pull one way on the steering wheel, and/or
   - the vehicle swerves appreciably

VOSA approved for testing all vehicle classes

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