# MOT TESTING SCHEME

## Requirements for Authorisation

# CLASS I AND II VEHICLES
# INSTALLATION AND EQUIPMENT
# REQUIREMENTS
# YEAR 2004

The Vehicle and Operator Services Agency, on behalf of the Secretary of State appoints Authorised Examiners and Designated Councils to carry out inspections known generally as MOT tests. This document sets out the application procedure and requirements that must be met.

**IMPORTANT:** THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE REQUIREMENTS FOR AUTHORISATION FOR A VEHICLE TEST STATION (ALL CLASSES)

**WARNING:** Applicants are advised not to proceed with alterations to buildings or purchase of equipment, etc, before receiving written approval in principle from the Vehicle and Operator Services Agency.

Issue Date April 2008

# Requirements for Class I & II Testing

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# Premises and Test Bay

Premises, test bays and equipment will be considered suitable if they meet the requirements laid out in "Requirements for Authorisation for Vehicle Testing Station (All Classes)".

1. **PREMISES:**

   a) test bay and observation area housed in a weatherproof building;

   b) adequate parking space clearly marked and identified as being reserved for MOT test vehicles. The parking spaces should be on a reasonably level hardstanding and at least 2.3m wide by 1.8m long and able to accommodate one large combination. If average throughput is high (over 20 tests per day) additional space may be required at the VOSA's discretion.

2. **A TEST BAY:**

   a) a substantially level area of adequate size (i.e. approx 3.5m x 3.7m x 2.1m high) to allow the proper inspection of any machine The inspection area must allow sufficient room to inspect a combination without hindrance and must not slope so that a machine may roll;

   b) a clearly identified public waiting room or area from which the whole test can be directly observed, except for road testing.

   **Note:** If an existing premises cannot meet the waiting room or viewing area requirements a signed statement of the arrangements for those presenting vehicles to view the test must be provided for the VTS file held by the VOSA and a notice displayed to inform the public of the arrangements.

   c) clear unobstructed access from the entrance of the building;

   d) vehicle entrances and exits at least 2.3m wide and 2.0m high;

   e) a bay headroom of at least 2.1m;

   f) sufficient space for vehicles to be easily manoeuvred onto the test equipment;

   g) adequate general illumination. There must be sufficient artificial lighting to enable testing to be carried out without difficulty.

# General Inspection Area Equipment

1. Inspection area equipment will be considered suitable if the following are provided:

   a) wheel alignment checking apparatus comprising two straight bars of at least 2.0m long or two strong cords of at least 2.5m long;

   b) a positively located turning plate which allows the steering to be turned freely from lock to lock, having regard to the arc through which a typical motorcycle wheel turns. 'Positively located' means that the turning plate assembly must be prevented from moving by bolts, dowels recess etc. (not mandatory);

   c) a raised wheel supporting stand or bench with a supporting surface at least 600mm above the floor. If a raised stand is provided, ensure that there is adequate space for the inspection of combinations, headlamp testing etc. (not mandatory).

# Headlamp Aim Testing

A headlamp aim testing facility will be considered suitable if a rail mounted headlamp tester or aiming screen meet the following:

1. **RAIL MOUNTED HEADLAMP TESTER**

1.1 A totally rail mounted headlamp tester either;

a) on the VOSAs latest List of Acceptable Equipment; or

b) accepted by the Agency for use under the arrangements detailed in "Requirements for Authorisation for Vehicle Testing Station (All Classes)".

1.2 A headlamp tester installation with:

a) a designated clearly marked vehicle standing area at least 2.5m long, 2.0m wide, certified as flat and level to within ±6mm. The certificate must show height measurements from a level plane at all intersecting points on a 300mm (max) square grid covering the standing area and at points 300mm apart on the rails, which must be within the limits stated. It must be signed by a competent person i.e. a surveyor, manufacturer's representative or agent and include date, status, address of firm and VTS address. A copy must be provided to the VOSA for placing on the garage file;

b) rails certified as being flat and level to within ±2mm and parallel to the forward edge of the standing area. The rails must be straight and the headlamp tester must not have excessive rock;

c) equipment positioned to take account of the vertical and horizontal location of headlamps tested and the standing area. The centre of the headlamp tester should be adjustable between 550mm and 1150mm (500 and 1200 for 2005 specification equipment) above the standing area plane, for previously accepted older types of headlamp tester with limited vertical movement, as close to these limits as possible;

d) 1.0m (0.5m for 2005 specification equipment) clearance at the rear of the tester optical head;

e) a clamp that can hold any motorcycle with the front wheel vertical and at right angles to the tester rails(not mandatory) A clamp must allow motorcycles to be located so that the headlamp lens is correctly positioned in relation to the headlamp tester;

f) the floor must be durably and clearly marked with a line or lines at the recommended headlamp tester to headlamp lens distance or zone limits. A centre line on the standing area at right angles to the datum line is required.

1.3 Suitable arrangements for checking the alignment of the equipment with the standing area. Arrangements for checking alignment may consists of evidence provided either by a competent outside agency or by the VTS using the manufacturer's acceptable equipment. Provision must be made for checks to be carried out at no more than 6 monthly intervals and for records to be kept. It is acceptable if an alignment check is within the 6th calendar month in which the alignment was last checked.

# Headlamp Aim Testing (Cont…)

2. **AIMING SCREEN**

As an alternative to a rail mounted headlamp beam tester, a suitable aiming screen for use at a distance of 3.81m or one for use at 2.0m can be used.
(For the design criteria contact MOT Scheme Management, Unit 8 Woodlands Court, Ash Ridge Road, Almondsbury Business Park, Bristol BS32 4LB).

2.1 The criteria to meet when using an aiming screen is:

a) the screen mounted vertically and its lower edge level with the standing area plane;

b) the screen capable of being moved vertically from the base at ground level to centre at 1150mm high;

c) a designated clearly marked motorcycle standing area at least 2.5m long, 2.0m wide, flat and certified level to within ± 6mm. The certificate must show height measurements from a level plane at all intersecting points on a 300mm (max) square grid covering the standing area and at points 300mm apart directly in front of the screen, which must be within the limits stated. It must be signed by a competent person i.e. a surveyor, manufacturer's representative or agent and include date, status, address of firm and VTS address. A copy must be retained on the VTS file held by the VOSA;

d) a headlamp datum line marked on the standing area, 450mm behind the edge of the standing area that is nearest the screen. The base of the screen must be 2.0m or 3.81m from the datum line depending on the screen focal length. A centre line on the standing area at right angles to the datum line is required;

e) an area, directly in front of the screen on which the height gauge stands, level within ±6mm of the motorcycle standing area plane;

f) an acceptable headlamp height gauge. The headlamp height gauge shall be able to transpose the height of a headlamp lens centre above the standing area to the screen eg a portable stand which has a moveable pointer that can be locked at any height position from 550mm to 1150mm.

# Brake Testing

A brake testing facility will be considered suitable if a roller brake tester or plate brake tester is provided.

1 A calibrated decelerometer that is on the VOSA's latest List of Acceptable Equipment as approved for Class I & II testing (optional).

2 A calibrated roller brake tester or a calibrated plate brake that is;

a) on the VOSA's latest List of Acceptable Equipment. Or

b) accepted by VOSA for use under the arrangements detailed in "Requirements for Authorisation for Vehicle Testing Station (All Classes)".

**3. ROLLER BRAKE TESTER (RBT)**

3.1 A calibrated slow speed motor bicycle roller brake tester either:

a) on the VOSA's latest List of Acceptable Equipment; or

b) accepted by VOSA under the arrangements detailed in "Requirements for Authorisation for Vehicle Testing Station (All Classes)".

**Note:** The Salter type brake meter (pull-along brake tester) is not acceptable for new or re-authorisations.

3.2 A roller brake tester installation with either:

a) (i) in the case of a uni-directional RBT, the tester centrally positioned in an area of substantially level floor at least 5.0m long and 3.0m wide. There must be sufficient clear space on each side of the RBT longitudinal centre line to allow for combinations (i.e. at least 1.5m);

Or:

(ii) in the case of a dual directional RBT, the tester situated in an area of substantially level floor at least 5.0m long and 2.0m wide (minimum). The RBT being situated midway, ± 0.5m, longitudinally; and with clear space on one side of at least 1.5m;

Or:

(iii) in the case of a dual directional RBT, the tester situated in an area of substantially level floor at least 3.5m long and 3.0m wide, and on the centre line so that there is clear space both sides of at least 1.5m; and clear space 2.5m forward and 1.0m rearward of the RBT.

**Note:** 'Substantially level' in the three alternatives above means to normal good building practice i.e. within about ±12mm of a level plane.

And in either case:

b) When the RBT is in line with any entrance or exit the floor plate must be at least 1.2m from them measured from the inside surface of the walls or doors.

3.3 RBT user/operator instructions.

3.4 Suitable weighing equipment. The weighing equipment must be accurate to 5% and capable of weighing all testable machines. This may be achieved by a summation of wheel loadings. Heavy duty 'bathroom type' scales or similar apparatus is acceptable if vehicles are reasonably level when weighed. Wheel weighing equipment must have a capacity of at least 125 kg for Class I testing and at least 250 kg for Class II testing. Total weight equipment must have a capacity of at least 250 kg for Class I testing and at least 500 kg for Class II testing.

Any other means of weighing must be assessed on its merits: a weight chart is not acceptable. Calibration certificates are not mandatory but VOSA staff are asked where possible to assess weighing equipment accuracy using known weights if available on the premises. (e.g. Motorcycle with declared weight, own body weight etc).

3.5 A means of determining brake efficiency from the roller brake tester readings.

## 4 PLATE BRAKE TESTER (PBT)

4.1 A calibrated plate brake tester either:

a) on the VOSA's latest List of Acceptable Equipment; or

b) accepted by the VOSA under the arrangements detailed in "Requirements for Authorisation for Vehicle Testing Station (All Classes)".

4.2 A PBT installed so that:

a) It is centrally located in a substantially level area, at least 3m wide. For existing testing stations, this may be reduced to 1.5m if a previously accepted means of testing combinations is retained;

b) there is an unobstructed area of substantially level floor at least 4m long in front of the measuring plate and a similar area at least 2m long behind it. The width of each area must not be less than that in (a) above and all of these areas must lie within the test bay;

c) the measuring plate high friction surface to be flush with the floor.

**Additional Requirements**

4.3 PBT use/operator instructions.

4.4 Suitable weighing equipment. This can be incorporated within the PBT or separate. See paragraph 1.4 for the requirement for separate weighing requirements.

4.5 A means of determining brake efficiency from the PBT readings.

# Brake Testing *(cont…)*

**General**

Suitable arrangements for re-calibration of the decelerometer and either the roller brake or the plate brake tester (whichever is installed). Arrangements for checking calibration may consist of evidence provided either by a competent outside agency or by the VTS using the manufacturer's acceptable equipment. Provision must be made for checks to be carried out at not more than 6 monthly intervals and for records to be kept. It is acceptable if re-calibration is within the 6th calendar month in which the calibration was last checked.