MOT TESTING SCHEME

Requirements for Authorisation

CLASS VII 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 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 2007

Requirements for Class VII Testing

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Premises, Test Bay and Equipment Layout

The test bay and layout dimensions in this part are **minimum** requirements measured from the inside of walls and doors, as appropriate.

Premises, test bays and equipment layouts will be considered suitable if they meet the following:

1. Premises with:

   a) a test bay and observation area housed in a weatherproof building (not mandatory for roller brake sets);

   b) equipment laid out so that testing can be performed effectively;

   c) an unobstructed safe and easy access via a metalled road from the site entrance to the building entrance, such that vehicles can enter and leave the site in a forward direction;

   d) at least two off-road parking bays, or more if necessary, clearly marked as being for MOT test vehicles;

   The parking bays should be on hard standing each being not less than 7.0m by 3.0m marked by lines on the ground. If the average throughput is high (say over 20 tests per day) additional bays may be required at staff discretion. There must be a notice which clearly reserves the bays for MOT vehicles.

   e) a "Diesels Tested" sign.

2. A test bay with:

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

   b) vehicle entrances and exits at least 3.2m high and 3.5m wide (except where the doorway is located within the 7.0m approach area of a Plate Brake Tester where the width should be at least 3.6m);

   c) a width of at least 4.2m (minor intrusions such as wall piers may encroach on this dimension provided vehicle testing is not impeded);

   d) headroom of at least 3.5m (except over a lift);

   e) headroom over a lift of at least 4.8m measured from the platform surfaces when fully lowered. The headroom should extend rearwards 6.0m starting from 0.5m beyond the non drive on of the lift and at least 1.5m on each side of the lift longitudinal centre line. The width dimension may be gradually reduced to 1.2m on each side of the lift longitudinal centre line at a height of 4.8m;

   f) adequate general illumination.

Premises, Test Bay and Equipment Layout *(cont...)*

3. Equipment laid out:

a) with a clearance of at least 1.0m fore and 1.5m aft of a lift or pit to any entrance/exit door or wall.;

b) without walls or partitions between adjacent test bays;

c) with at least 4.2m between the centre lines of test equipment in adjacent bays.

d) with at least 0.5m clearance around all parts of the lift, including control boxes.

WARNING: Adequate passageway clearance must be provided around testing facilities in all test bays. Applicants are advised to ensure that this clearance is achieved, especially in small test bays with some types of **standard** specification test equipment (e.g. lifts with motors on a column).

Underside Inspection

The designated means of inspecting the underside of vehicles will be considered suitable if either a lift or a pit meeting the following is provided:

1. A wheel supporting platform lift (not centre post type) or a scissor lift with:

   a) platforms at least 4.8m long and each at least 630mm wide. Any upstands or guard rails must not be more than 25mm high;

   b) platform surfaces capable of being raised at least 1.4m from the floor;

   c) at least 0.8m, but not more than 1.3m between the inner edges of the platforms, and at least 2.1m between the outer edges. These dimensions may be met by means of adjustable platforms;

   d) a safe working load (SWL) of at least 3500kg; the SWL to be certified and clearly marked on the lift;

   e) jacking equipment having a minimum SWL of 2600kg, capable of simultaneously raising both front or both rear wheels of any vehicle, using the recommended test procedures and jacking points;

   f) adjustable heavy duty captive bearing based turning plates, that permit the steered wheels of any vehicle when the lift is raised, to be turned freely from lock to lock. 'Captive' means that tools are required to remove any part of the turning plates. The distance between turning plate centres should be easily adjustable between limits of 1.2m and 1.8m. In all cases they should be free to rotate and move easily both laterally and longitudinally. When installed there must be a minimum distance of 4.2m from the centre of the turning plates to the drive on end of lift platforms. Fixed parts of turning plates must be at least 760mm apart. They should normally be not more than 25mm high and safe to drive on and off;

   g) if an ATL or OPTL, combined steering and wheel play detectors. When installed there must be a minimum distance of 4.2 from the centre of the turning plates to the drive on end of lift platforms

   h) at least two portable chocks and a chocks notice;

   i) If recessed confirmation that clearance provisions are as laid down in BS 7980:2003 Code of Practice for vehicle lifts. (This applies to new installations only, for existing installations, confirmation that the lift met the BSI 161AU or Garage Equipment Association standard at the time of installation);

   j) confirmation, in writing by a suitably qualified person that the lift complies with all current safety standards (e.g. protection against pinching and shearing and roll off safety devices);

   k) No wheel free equipment except for ATL or OPTL installations. No walkways;

   l) if a scissor lift is used, there must be clear access between the platforms, i.e. scissors must be located underneath the platforms rather than between them;

Underside Inspection *(Cont…)*

m) if the lift is to the designated standing area for headlamp testing, the platforms must rest on fixed stops when lowered. Turning plates must be level to within ±6mm if they are not longitudinally adjustable by at least 800mm;

n) adequate general illumination.

Note: Shaker plates are optional providing they do not encroach on the minimum dimension between platform inner edges;

2. A pit with:

a) an uninterrupted working length of at least 7.0m;

b) a width of at least 0.8m and not more than 1.2m, over the working length;

c) a depth of at least 1.4m and not more than 1.8m, over the working length. Staging may be used to meet this requirement;

d) the capacity to accommodate vehicles weighing at least 3500kg;

e) sealing, which prevents the ingress of water or a means that automatically prevents its accumulation;

f) adjustable heavy duty captive bearing based turning plates positioned to accommodate vehicles with a 4.2m wheelbase. Jacking equipment as required for a lift (see paragraph 1 above). The location of turning plates must be that the tester has adequate space to observe lock to lock from the front of the vehicle;

g) if an ATL or OPTL, combined steering and wheel play detectors positioned to accommodate vehicles with a 4,2m wheelbase and so that the tester has adequate space to observe steering and suspension free play from the front of the vehicle,

h) adequate access for personnel which does not intrude on the working dimensions; access steps may encroach on the required dimension (part E1,3.a) to the wall, door or RBT provided there is a minimum 'gangway' floor width of not less than 600mm;

i) adequate general illumination;

j) no upstands/guard rails more than 25mm high.

Headlamp Aim Testing

A headlamp aim testing facility will be considered suitable if the following is provided:

1. A rail mounted headlamp tester either:

   a) on 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)".

2. A headlamp tester installation with:

   a) a designated vehicle standing area which is certified as flat and level to within ± 6mm in any 3.0m and is either:

      (i) a clearly marked area of floor 6.0m long by 3.0m wide, which may straddle a pit or roller brake tester;

      (ii) the lift platforms, which are recommended to be at least 6.0m long. The 6.0m headlamp standing area may, however, be a combination of the lift platforms and an area to the rear of the lift, provided:

         (x) the lift, when in the lowered position, rests on positive steel stops;

         (y) where automatic chocks operate by contact with the floor, they operate by contacting with a steel plate fitted to prevent wear on the floor surface;

         (z) the 6.0m area, consisting of the lift platforms, automatic chocks and floor to the rear of the lift, is certified as being level to ±6mm in any 3m.

      (iii) the plates of a plate brake tester (surface mounted or flush fitting) which are certified as level to ±6mm in any 3.0m. If surface mounted, the area in which the plates are mounted must, where necessary, be raised to the height of the plates over an area extending to at least 6.0m overall length, certified as being level to ±6mm in any 3.0m. (In these circumstances, the prescribed clear areas preceding and following the plate tester shall be measured from the ends of the testing area);

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

      The certificate for '2a' and '2b' above must show height measurement from a level plane at all intersecting points on a 500mm (max) square grid covering the standing area and at points 300mm (max) apart on the rails.

Headlamp Aim Testing *(Cont…)*

It must be signed by a competent person, such as a surveyor, manufacture's representative or agent and include date, status, address of firm and VTS address. A copy must be provided to VOSA for placing on the garage file. If the Roller Brake Tester encroaches on the standing area then the standing area levels must include the cover plates and meet the ±6mm requirements.

c) equipment correctly aligned to the standing area and positioned to take account of the vertical and horizontal location of headlamps tested;

d) 1.0m (0.5m for 2005 specification equipment) clearance at the rear of the tester optical head. Floor mounted equipment such as brake testers must not be installed in this area;

e) the height of the optical head must be adjustable so that the centre of the headlamp tester lens can be set to heights between at least 550mm and 1150mm (500 and 1200 for 2005 specification equipment) above the standing area;

f) the floor must be durably and clearly marked with a datum line (or lines) at the recommended headlamp tester to headlamp lens distance (or zone) limits;

g) any other test equipment within the standing area arranged so that it does not interfere with the proper testing of headlamps. For example, steering and suspension play detectors which do not comply with the +/- 6 mm level. It is acceptable for vehicles undergoing a headlamp aim inspection to straddle such equipment providing the vehicle remains within the manufacturers stipulated focal distance of the headlamp aim tester;

h) where the installation encroaches on either the designated approach to or run-off area from a plate brake tester, the rails must extend laterally by sufficient a distance to allow the optical head to be moved completely outside of the areas.

i) Additionally, in all installations, it is recommended that the rails are sunk into the ground to avoid any excess wear and tear on them, particularly where vehicles are driven over them.

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.

Brake Testing

Brake testing equipment will be considered suitable if the following are provided:

1. A calibrated decelerometer on VOSA's latest List of Acceptable Equipment

2. Either a calibrated roller brake tester (installed as per A, below) or a calibrated plate brake tester (installed as per B, below):

   a) on 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. A vehicle weighing facility either incorporated into the plate brake tester or a separate floor mounted facility. If the separate facility is not flush fitting, it must be located in a substantially level area not within the specified approach to or the run-off area from the plate brake tester.

   A. A roller brake tester must be installed so that:

   a) it is centrally located in an unobstructed area at least 14.0m long and at least 3.5m wide. The 14.0m by 3.5m area is a working space. At least 7m to the front and rear of the RBT centre line should be substantially level (which in good building practice is within +;12mm of a level plane). If an ATL weighing facility is installed in the level area it must meet the above criteria for level;

   b) for 'in-line' layouts, any aperture in the roller brake tester floor plate is at least 1.5m from the inspection pit or lift platform;

      Note: Part of the standing area can be outside the building, providing the RBT centre line is at least 1.5m inside the building.

   c) vehicles are substantially level while being tested (a gradient of not more than 5%);

   d) the console is positioned so that it can easily be read by the tester performing the test on the vehicle.

   e) when a cross-pit RBT is installed for MOT use, the length of pit taken up by the RBT shall be **in addition** to the minimum working length of pit specified for the under vehicle inspection.
      To meet this requirement, a distance of 1.5 metres will be added to the minimum pit length required. The extra 1.5m shall be measured to the first aperture in the top surface of the RBT bed plate.
      There must also be an interlock that prevents operation of the RBT when a person in the pit is in the vicinity of the RBT.

      Note: 1. Part of the standing area can be outside the building, providing the RBT centre line is at least 1.5m inside the building.

Brake Testing *(Cont…)*

B. A plate brake tester must be installed so that:

a) there must be a minimum of 2.0m between the outer edges of the high friction working surfaces of each pair of plates (2.2m if Plate Brake Tester is surface mounted);

b) a clear area of 7.0m shall be provided in advance of the plate brake tester. This area must be substantially level, i.e. any gradient must not exceed 5% (50mm in 1m). The 7.0m may be totally enclosed within the building, totally outside the building, or partly inside and outside, and must be kept free from substances which may effect traction of the vehicle, such as oil, high-gloss paint, etc;

c) where it is perceived that there may be a safety risk to people walking around inside the test bay, barriers and/or warning signs may be required to be erected along the approach area and/or the run-off area for the duration of the test;

d) the plates are centrally located in a substantially level test area which (including approach and run-off area) is at least 3.6m wide;

e) doorways positioned within the 7.0m approach area must be at least 3.6m wide;

f) the installation height of the plates must not exceed 50mm above the surrounding floor;

g) where the plate surface is not flush with the surrounding floor, lead on and off ramps shall provide a gradient of not more than 25%;

h) surface mounted equipment must be located at least 1.5m from any doorway. This condition does not apply to flush fitted plate brake testers (lead on/off ramps can be positioned within the 1.5m area);

i) a vehicle can be permitted to reverse out of the building during the brake test, providing the doorway does not open onto any footpath or roadway to which the public have access. Where the vehicle is permitted to reverse from the building, barriers must be installed to stop anyone walking into the path of the vehicle as it reverses through the doorway. The barriers, either permanent or capable of being suitably positioned at times when the plate brake tester is in use, must extend outwards from the building by a minimum of 3.0m and have a minimum height of 1.0m;

j) a clear run off distance of 4.0m shall be provided after the plate brake tester measuring plate (this measurement does not include any part of the lift platforms);

k) in the case of a 'drive-through' layout where the plate brake tester is fitted **after** the lift or pit there shall be a clear distance of 7.0m between them. Lead-off ramps from floor mounted lifts shall not encroach on this area;

l) the console is positioned so that it can easily be read by the tester performing the test on the vehicle.

Brake Testing *(Cont…)*

4. Roller/plate brake tester user/operator instructions.

5. Suitable data on ABS warning systems is available.

6. A means of determining brake efficiency and imbalance from the roller/plate brake tester readings.

7. Suitable arrangements for re-calibration of the decelerometer, and either the roller brake or the plate brake tester (whichever is installed).

8. Any non MOT equipment, if positioned in the test area, must not interfere with conducting tests safely and in accordance with relevant Inspection Manual.

Emissions Testing

Testing stations in this Class may opt to test only diesel engine vehicles,

A Vehicle Testing Station found to have tested a vehicle of a fuel type or age without written confirmation from VOSA that it may do so can result in the loss of authorisation to test as the result of that single offence.

SPARK IGNITION ENGINE EMISSIONS

All Class VII only testing stations wishing to test spark ignition engined vehicles must have an analyser which meets the requirements of 1 or 2 below.

Testing stations wishing to test only vehicles first used before 1 August 1994 may have an analyser which meets the requirements of 1 below.

There are no current plans for Class VII testing stations to have to upgrade to 1996 EGAs in the foreseeable future.

1. Exhaust gas analysis equipment will be considered suitable for testing pre-1 August 1994 vehicles, if the following is provided:

    a) a calibrated exhaust gas analyser on VOSA's latest List of Acceptable Equipment for testing pre-1 August 1992 vehicles:

    b) gas analyser user/operator instructions;

    c) suitable arrangements for re-calibration.

2. Exhaust gas analysis equipment will be considered suitable for all spark ignition engined vehicles if the following is provided:

    a) a calibrated "1996 specification" exhaust gas analyser on VOSA's latest List of Acceptable Equipment;

    b) gas analyser user/operator instructions;

    c) suitable arrangements for re-calibration

DIESEL ENGINE EMISSIONS

All testing stations wishing to test diesel-engined vehicles must have diesel smoke test equipment which meets the following requirements;

Diesel smoke test equipment will be considered suitable if the following is provided:

a) a calibrated diesel smoke meter on VOSA's latest List of Acceptable Equipment;

b) an oil temperature measuring device on VOSA's latest List of Acceptable Equipment;

c) smoke meter user/operator instructions;

d) suitable arrangements for re-calibration..