DVSA RBT (Class VII) Equipment Approval check sheet

Product: Click or tap here to enter text.

Brand / supplier: Click or tap here to enter text.

Date: Click or tap to enter a date.

Inspector: Click or tap here to enter text.

Location of inspection: Click or tap here to enter text.

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Area to be checked | Status | Notes / Observations/ Evidence supplied |
|  | Hardware |  |  |
| 2.1 | **Roller set chassis** |  |  |
| a | 1. a means of preventing either roller set operating unless a wheel is correctly located in it | Choose an item. | Click or tap here to enter text. |
| b | 1. The ability to be driven independently or simultaneously by the use of suitable controls (for manual operation only) | Choose an item. | Click or tap here to enter text. |
| c | 1. A means of manually stopping either or both roller sets | Choose an item. | Click or tap here to enter text. |
| d | 1. An automatic means of stopping either roller set individually when the tyre to roller slip reaches a pre-set limit in the range 20 to 30%. (to ensure that the slip value remains constant throughout the full range of brake force, and if variations occur in the power supply, the means of stopping the roller set shall include actual measurement of the speed of the sensing roller and the speed of the motor/drive roller train) | Choose an item. | Click or tap here to enter text. |
| e | 1. The capability of accepting an axle load of 3000 kg. | Choose an item. | Click or tap here to enter text. |
| f | 1. A clear, durable marking showing the normal forward ‘drive-on’ direction of the RBT. | Choose an item. | Click or tap here to enter text. |
| g | 1. No part protruding more than 75 mm above the floor surface | Choose an item. | Click or tap here to enter text. |
| h | 1. If a cross-pit RBT is offered for approval, a suitable protection device shall be installed to prevent the rollers from being started when a person is in the pit within reaching distance of the RBT. | Choose an item. | Click or tap here to enter text. |
| 1.11 | 1. If cross pit configuration, system to prevent rollers starting if person in pit? | Choose an item. | Click or tap here to enter text. |
|  |  |  |  |
| 2.1.1 | **Rollers** |  |  |
| a | A surface that is durable and not likely to cause undue tyre damage | Choose an item. | Click or tap here to enter text. |
| b | A roller to tyre co-efficient of friction of not less than 0.6 in wet conditions | Choose an item. | Click or tap here to enter text. |
| c.i | 1. Min roller diameter of 180mm? | Choose an item. | Click or tap here to enter text. |
| c.ii | Min Roller length of 1000mm? | Choose an item. | Click or tap here to enter text. |
| c.iii | Not greater than 500 mm between roller centres | Choose an item. | Click or tap here to enter text. |
| C.iv | Not greater than 880 mm between inner ends of the high friction surfaces of the left and right rollers | Choose an item. | Click or tap here to enter text. |
| C.v | Not less than 2600mm between outer ends of the high friction surfaces of the left and right rollers | Choose an item. | Click or tap here to enter text. |
| d | * 1. When running a constant surface speed in the range 2 to 5.5 km/h | Choose an item. | Click or tap here to enter text. |
| d.i | * 1. Roller remains in speed range across whole all brake forces? | Choose an item. | Click or tap here to enter text. |
| 2.2 | 1. **Brake force display** |  |  |
| a | Indicate in units of kilogram force (kgf) | Choose an item. | Click or tap here to enter text. |
| b | Indicate the brake force individually for each wheel on an axle. | Choose an item. | Click or tap here to enter text. |
| c | be sufficiently sensitive to show the variations in brake force caused by excessive drum ovality or disc runout. | Choose an item. | Click or tap here to enter text. |
| d | 1. If a VDU is used, include an additional digital display of brake force which shall be of a size that is readable from the vehicle driving position. | Choose an item. | Click or tap here to enter text. |
| E | 1. Have maximum brake force values not less than 1250 kgf. | Choose an item. | Click or tap here to enter text. |
| f.i | 1. Graduation of not more than 10Kgf from 0-240kgf? | Choose an item. | Click or tap here to enter text. |
| f.ii | 1. Graduation of not more than 20Kgf from 240kgf? | Choose an item. | Click or tap here to enter text. |
| g | Indicate individually for each roller set when a wheel lock occurs | Choose an item. | Click or tap here to enter text. |
| h | Retain the maximum brake force values until either the indication is manually reset or the rollers are re-started. | Choose an item. | Click or tap here to enter text. |
| **2.3** | 1. **User controls** |  |  |
| a | 1. Manually operated *Note 1: AUTOMATIC operation of a RBT is NOT permitted for MOT testing, except in the case of an ATL* | Choose an item. | Click or tap here to enter text. |
| b | Suitably identified in English or with acceptable symbols | Choose an item. | Click or tap here to enter text. |
| c | 1. Capable of starting the roller sets independently or simultaneously | Choose an item. | Click or tap here to enter text. |
| d | 1. Capable of performing a satisfactory test on a 4WD vehicle | Choose an item. | Click or tap here to enter text. |
| e | 1. Capable of stopping the roller sets | Choose an item. | Click or tap here to enter text. |
| f | 1. Capable of being operated from the vehicle driving seat by remote control. If the remote control unit is not hard-wired | Choose an item. | Click or tap here to enter text. |
| g | 1. Suitable secondary operating controls shall be available on the console, or equivalent | Choose an item. | Click or tap here to enter text. |
| h | 1. The unit shall be resistant to spurious signals from other sources | Choose an item. | Click or tap here to enter text. |
| i | 1. A system shall be in place to ensure that each unit is dedicated to operate only one RBT when two or more are used in close proximity | Choose an item. | Click or tap here to enter text. |
| j | 1. Provision of safe storage shall be provided for the remote control unit when not in use | Choose an item. | Click or tap here to enter text. |
| k.i | 1. A visual indication for the user on the display console showing when each roller set is in operation | Choose an item. | Click or tap here to enter text. |
| k.ii | 1. If the RBT has a bi-directional facility, whether the roller sets are operating in ‘forward’ or ‘reverse’ direction. | Choose an item. | Click or tap here to enter text. |
| l | * 1. A durable notice in a prominent position stating “RBT shall NOT be used in automatic mode for MOT Testing” Unless the RBT is equipped with an automatic test routine option (ATL). | Choose an item. | Click or tap here to enter text. |
| m | * 1. A durable notice in a prominent position stating “RBT suitable for testing 4WD vehicles” | Choose an item. | Click or tap here to enter text. |
| **2.4** | **Brake efficiency and imbalance** |  |  |
| a.i | 1. Brake efficiency, calculated from the total brake force and expressed as a percentage of the vehicle weight. | Choose an item. | Click or tap here to enter text. |
| a.ii | Imbalance of brake force between the left and right wheels on an axle, expressed as a percentage of the higher brake force. | Choose an item. | Click or tap here to enter text. |
| b | * 1. If the RBT is equipped with a means of automatically calculating brake efficiency, the algorithm used shall be in accordance with that defined in the latest version of the relevant MOT Inspection Manual. | Choose an item. | Click or tap here to enter text. |
| c | * 1. If the RBT is equipped with a device for indicating maximum brake imbalance it shall be inhibited when either left and right brake forces are 40 kgf or less, |  |  |
| 2.5 | 1. **Connection to MTS** |  |  |
| a | * 1. Connects to MTS simply and can select vehicle to test? | Choose an item. | Click or tap here to enter text. |
| b | Test results are set back to MTS at the end of the test? | Choose an item. | Click or tap here to enter text. |
| c | Test results are accurate on MTS when checked against unit / printout. | Choose an item. | Click or tap here to enter text. |
| d | Data fields / tag names match specification (case sensitive) | Choose an item. | Click or tap here to enter text. |
| e | All mandatory fields are being returned to MTS | Choose an item. | Click or tap here to enter text. |
| f | Unit can be used if no MTS connection present? | Choose an item. | Click or tap here to enter text. |
| g | Json file sent to MTS is not editable manually. | Choose an item. | Click or tap here to enter text. |
| **3** | **Calibration** |  |  |
| a | A means of calibrating the brake force shall be available and the RBT display shall be capable of showing negative numbers close to zero. | Choose an item. | Click or tap here to enter text. |
| b | A means of calibrating an ATL weighing facility shall also be available. | Choose an item. | Click or tap here to enter text. |
| c | The applicant shall provide an assurance that a system is in place to ensure all its calibration devices used for the subject RBT calibration are checked and certified by an accredited organisation on a regular basis. | Choose an item. | Click or tap here to enter text. |
| **3.1** | **Brake force measurements** |  |  |
| a | 1. Be capable of checking brake force accuracy at the following values;   0, 100, 200, 400 600/800 and 1200/1250kgf. | Choose an item. | Click or tap here to enter text. |
| b | Have a method and operational accuracy that is traceable to a national physical standard | Choose an item. | Click or tap here to enter text. |
| c | Be certified by a UKAS accredited laboratory or an equivalent European laboratory, that the whole calibration device is traceable to a national physical standard | Choose an item. | Click or tap here to enter text. |
| d | 1. *All* component parts of the calibration device, including any weights, shall be individually marked with an identity number to enable all parts to be kept together as a set. The certificate shall relate to the set and each calibration device produced shall require its own certificate. | Choose an item. | Click or tap here to enter text. |
| e | 1. With the RBT in ‘calibration mode’ and with NO vehicle in the rollers, the rollers shall be rotated, and the brake force displayed shall not exceed 3% of the maximum measuring range. | Choose an item. | Click or tap here to enter text. |
| 3.1.1 | Accuracy |  |  |
| a.i | RBT brake force reading shall be +/- 3 kgf of the true value from zero up to and including 100 kgf. | Choose an item. | Click or tap here to enter text. |
| a.ii | RBT brake force reading shall be +/- 3 per cent of the true value for all readings above 100 kgf. | Choose an item. | Click or tap here to enter text. |
| a.iii | Calibration device shall be: +/- 0.3 kgf of the true value from zero up to and including 100 kgf. | Choose an item. | Click or tap here to enter text. |
| a.iv | Calibration device shall be : +/- 0.3 per cent of the true value for all readings above 100 kgf. | Choose an item. | Click or tap here to enter text. |
| a.v | ATL weighing facility shall be: +/- 3% between 200kg and 3000kg imposed weight. | Choose an item. | Click or tap here to enter text. |
| **4** | **Instruction manuals** |  |  |
| a | Be written in English | Choose an item. | Click or tap here to enter text. |
| b | Explain how to operate the RBT, including the function of each control, and how to interpret the results | Choose an item. | Click or tap here to enter text. |
| c | 1. Detail how to use the RBT to carry out a brake performance test and make reference to the need to follow the brake test procedure detailed in the latest version of the relevant MOT Inspection Manual when carrying out a statutory MOT test | Choose an item. | Click or tap here to enter text. |
| d | 1. Supply a calibration manual suitable to carry out the calibration of the system. | Choose an item. | Click or tap here to enter text. |
| **5** | 1. **Identification** |  |  |
| a | Permanent durable identification label showing | Choose an item. | Click or tap here to enter text. |
| a.i | Make | Choose an item. | Click or tap here to enter text. |
| a.ii | Model | Choose an item. | Click or tap here to enter text. |
| a.iii | Serial number | Choose an item. | Click or tap here to enter text. |
| a.iv | EIN number (when issued following approval) | Choose an item. | Click or tap here to enter text. |
| a.v | CE or UKCA marking | Choose an item. | Click or tap here to enter text. |
| 6 | **Software (ATL only) see flowchart** |  |  |
| a | Can type of vehicle / brake system be selected | Choose an item. | Click or tap here to enter text. |
| b | Prompt tester to start test | Choose an item. | Click or tap here to enter text. |
| c | Roller start to allow for centralising vehicle in rollers | Choose an item. | Click or tap here to enter text. |
| d | Prompt the tester on what to do to perform / the required test. | Choose an item. | Click or tap here to enter text. |
| e | Repeat test if | Choose an item. | Click or tap here to enter text. |
| e.i | Wheel locks during test (other than max brake force test) | Choose an item. | Click or tap here to enter text. |
| e.ii | Vehicle lifts out of rollers | Choose an item. | Click or tap here to enter text. |
| f | Allow for selection (pass / fail) for manual assessment items | Choose an item. | Click or tap here to enter text. |
| g | Display / print results | Choose an item. | Click or tap here to enter text. |
| g.i | Indicate if a wheel has locked or manual stop |  |  |
| h | Use correct calculations for: | Choose an item. | Click or tap here to enter text. |
| h.i | Brake efficiency | Choose an item. | Click or tap here to enter text. |
| h.ii | Ovality / imbalance | Choose an item. | Click or tap here to enter text. |
| i | Stores results for min 52 weeks | Choose an item. | Click or tap here to enter text. |
| J | Class VII only FWA allowance used | Choose an item. | Click or tap here to enter text. |
| **7** | **Drawings / information supplied** |  |  |
| a | Full dimensioned drawings of | Choose an item. | Click or tap here to enter text. |
| a.i | Rollers | Choose an item. | Click or tap here to enter text. |
| a.ii | Chassis | Choose an item. | Click or tap here to enter text. |
| b | Detailed specification on how system works | Choose an item. | Click or tap here to enter text. |
| c | Potos of chassis and display console. | Choose an item. | Click or tap here to enter text. |
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Inspector additional comments : Click or tap here to enter text.