St.Helens Council

HACKNEY AND PRIVATE HIRE INSPECTION MANUAL

APPROVED BY LICENSING AND ENVIRONMENTAL PROTECTION COMMITTEE 28 MAY 2008
(modified following decision of L&EPC 27/6/12 regarding use of space savers)
(modified following decision of L&EPC 22/5/13 regarding use of forward facing CCTV)
(modified following decision of L&EPC 15/10/14 regarding seating arrangements)

TO BE USED FOR ALL HACKNEY AND PRIVATE HIRE VEHICLES SUBMITTED FOR TESTING ON OR AFTER 4 AUGUST 2008

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PREFACE

As the term implies, hackney cabs and private hire vehicles are vehicles used for hire and reward purposes and as such are subject to much higher annual mileages and more arduous driving than normal private vehicles. Therefore, in the interests of passenger and other road users safety a more stringent maintenance and testing regime is required.

The purpose of the Hackney and Private Hire Test is to confirm vehicles meet these more stringent standards. Vehicles must be submitted fully prepared for the test. It is not intended that the test be used in lieu of a regular preventative maintenance programme. If in the opinion of the Examiner the vehicle has not been fully prepared, the test will be terminated and a further full test (fee payable) will be required when the vehicle has been fully prepared.

It is an offence under the road traffic regulations to use an unroadworthy vehicle on the public highway.

Proprietors failing to maintain their vehicles in a safe and roadworthy condition at all times may have their license suspended, or revoked by the Licensing and Environmental Protection Committee.

This manual provides a working guide for those who maintain and prepare vehicles for inspection prior to being issued with a Hackney Carriage or Private Hire Proprietors Licence. Although detailed in it's content the manual is not exhaustive. However, it will give the proprietor an insight into the scope of the examination the vehicle will be subject to before it can be issued with a license. The manual must be read in conjunction with the MOT Inspection Manual, a copy of which can be obtained at HMSO Books, ISBN 011 551702 2.

However, in assessing the mechanical condition it is more likely any item which would ordinarily pass an MOT test but would carry an advisory note would fail the Hackney and Private Hire Test for the reasons stated above.

GENERAL INFORMATION

1. ONLY VEHICLES COMPLYING WITH THE FOLLOWING CONDITIONS WILL GENERALLY BE CONSIDERED FOR LICENSING AS PRIVATRE HIRE VEHICLES: -

   a) Cars fitted with at least four doors and four wheels.

   b) Right-hand drive vehicles only: (WITH THE EXCEPTION OF STRETCH LIMOUSINES).

   c) Vehicles with adequate space for luggage within the car.

   d) Vehicles capable of carrying at least four and not more than eight passengers in addition to the driver.

      The seating capacity of a vehicle shall be determined as follows: -

      The rear seating of the vehicle, where the vehicle is fitted with bench seats, one person should be counted for each complete length of 16” (40.64cm) measured in a straight line lengthways along the front of the seat .

   e) Access from doors to seats (and visa-versa) must be direct without the need for passengers to climb over seats or part of seats.

      All passengers must have easy access to an exit from the vehicle.

      Where access to doors requires moving, tipping or folding the seat in front, then providing this is a straightforward and quick operation in line with manufacturers recommendations the vehicle may still be considered for licensing.

   f) All vehicles must comply with the Council’s “Test Guidelines” and schedules regarding advertising.

   g) With the exception of Stretch Limousines no vehicle will be accepted with blacked out windows, as passengers being carried in the vehicle must be visible from the outside. In certain circumstances tinted windows will be acceptable. Please consult the Licensing Unit for further advice.

   h) Before a licence can be issued vehicles must be inspected/tested to make sure that they are mechanically fit, safe and comfortable’.

2. ONLY VEHICLES COMPLYING WITH THE PUBLIC CARRAIGE OFFICE STANDARD WILL BE ACCEPTED AS A HACKNEY UNLESS THE MAKE/MODEL OF VEHICLE HAS BEEN SEPARATELY APPROVED BY THE COUNCIL.
ALL SUCH VEHICLES MUST PROVIDE FOR ACCESS AND SECURED CARRIAGE OF PASSENGERS IN WHEELCHAIRS.

3. A test will not be carried out unless the License fee/Examination fee has already been paid

4. Vehicles must be presented for testing in a clean, prepared condition with the underbody and engine compartment also cleaned. Steam cleaning must be carried out to the underbody prior to each test. However, it is not mandatory to steam clean the engine bay, but this must be cleaned to allow thorough examination.

5. If, in the opinion of the Examiner, the vehicle has not been properly prepared, the test will not be started or if this only becomes apparent once the inspection has commenced the test will be terminated. You will then be required to present the vehicle for a further full test and pay the full test fee **when the vehicle has been properly prepared**. The purpose of the test is to confirm the vehicle is in a fit and roadworthy condition. It is not intended to inform you what repairs are necessary.

6. DESCRIPTIVE ADVERTSING ON PRIVATE HIRE VEHICLES

As approved by Licensing and Environmental Protection Committee 19 March 2008

- *With immediate effect any vehicle not currently licensed for private hire (with the exception of limousines) shall be required to fit permanent door signs to the nearside and offside front doors of the vehicle within 7 days of a new licence being issued.*

- *All existing proprietors who haven't already done so shall fit permanent door signs to their vehicle no later than the first test that the vehicles undergoes after 1 September 2008. Licences will not be renewed unless this condition is complied with.*

- *Signs will be displayed on both the nearside and offside front doors of all Private Hire Vehicles (top panel only) and if damaged or defaced must be immediately replaced.*

- *Such signs will carry the words PRIVATE HIRE ONLY and the Operator's name and telephone number (website addresses can also be included). The 'name' and telephone number is that where all bookings are to be made.*

- *PRIVATE HIRE OPERATORS CANNOT ACCEPT BOOKINGS DIRECT TO A MOBILE TELEPHONE NUMBER AND SUCH NUMBERS CANNOT BE ADVERTISED ON DOOR SIGNS OR OTHER ADVERTISING MATERIAL.*

- *The signs are to be displayed in the format specified below in letters not more than 4 inches (10.16cm) in height and not less than 2 inches (5.08cm) in height*.

- *No colour is specified but the signs must contrast with the colour of the vehicle bodywork on which they are displayed.*

  PRIVATE HIRE ONLY
  BROWN'S CARS
  01744 123456

- *The words '**CAB**', '**TAXIS**' or '**HACKNEY**' must not be included in any part of the sign.*

- *The words **PRIVATE HIRE ONLY** shall always be at the top of the sign.*

- *All signage shall contrast with the existing bodywork. If in the opinion of the Licensing Officer such signage is not clearly visible you will be advised to change the colour of the lettering . If no agreement can be reached the matter will be referred to the Licensing and Environmental Protection Committee for determination.*

- **Advertising on Minibuses/People Carriers –** In addition to the above the Council has agreed to modify its requirements for descriptive advertising on Private Hire Vehicles to allow proprietors of **Minibuses/People Carriers** only to add further signs showing the trading name and telephone number on the bonnet, sides and rear of the vehicle in letters no more than 10 inches (26.5 cm) in height, e.g. **BROWN'S CARS TEL: 01234 56789**

- Proprietors must present the vehicle for inspection at the Licensing Unit and obtain specific authorisation before fitting new signs.

- Existing signs on the front doors (nearside and offside) must still be displayed in accordance with the Council specification

7. DESCRIPTIVE ADVERTISING ON HACKNEY CARRIAGE VEHICLES (OPTIONAL)

Signs will be displayed on both the nearside and offside front doors only of Hackney Carriages and if damaged or defaced must be immediately replaced.

Such signs will carry the name and telephone number (if applicable) of the Proprietor or Company operating the vehicle.

No specification is given for the size of lettering or colour used but the signs must **not** be less than 2 inches in height and must contrast with the colour of the vehicle bodywork on which they are displayed.

No other signs, notices, advertisements etc. are to be displayed on or in any part of the vehicle or windows.

8. COMMERCIAL ADVERTISING ON HACKNEY CARRIAGE VEHICLES

Providing the proprietor first obtains approval from the Licensing Unit commercial advertising will be allowed on your hackney carriage vehicle.

Excluded advertising - Advertisements to be used must not be offensive or objectionable and approval will not be given to any of the following:-

Tobacco companies or tobacco products
Alcohol or drug-related items
Political messages
Betting and gaming
Nudity

Advertising for other hackney/private hire businesses or other commercial vehicles is also excluded.

Submission of applications

Applications shall be submitted to the Licensing Officer on a prescribed application form together with evidence of the advertising

to be used (either photographs or actual signage).

In determining applications, the Licensing Officer will have regard for the Council's policy regarding 'excluded advertising' and, if proposed advertising is deemed to be unsuitable or unacceptable, refuse the application.

In the event of refusal, the applicant shall have the right of appeal to the Licensing & Environmental Protection Committee.

No commercial advertising shall be displayed on a licensed Hackney Carriage without the **prior consent** of the Local Authority.

Fitting and displaying of commercial advertising

Commercial advertising shall only be permitted on the side livery of vehicle, that is the front/rear wings and front and rear doors. If the advertising is a body wrap and changes a significant part of the colour of the bodywork replacement identification plates will be required. A charge will be incurred for this.

All paintwork shall be in a sound condition prior to fitting signs. If it is necessary to respray/paint the vehicle prior to fitting of signs, the proprietor shall ensure that the vehicle colour is maintained in a consistent form.

If advertising on the vehicle is withdrawn, the vehicle must be restored to its original colour.

All advertising will subsequently be checked during the six monthly test examination and during any roadside inspections. If, in the opinion of the vehicle examiners of Licensing enforcement staff, the advertising has become detached, defaced or in need of repair or is found to be concealing damage to the bodywork then the proprietor will, by the issue of a 'Vehicle Defect Notice' be required to carry out necessary remedial works.

9. **COMMERCIAL ADVERTISING ON PRIVATE HIRE VEHICLES**
Limited commercial advertising is now permitted on Private Hire Vehicles as detailed below.

Excluded advertising

Advertisements to be used must not be offensive or objectionable and approval will not be given to any of the following:-

Tobacco companies or tobacco products;

Alcohol or drug-related items;
Political messages;
Betting and gaming;
Nudity.

Advertising for other hackney/private hire businesses or other commercial vehicles is also excluded.

Submission of applications

Applications shall be submitted to the Licensing Officer on the prescribed application form together with evidence of the advertising to be used (either photographs or actual signage).

In determining applications, the Licensing Officer will have regard for the Council's policy regarding 'excluded advertising' and if proposed advertising is deemed to be unsuitable or unacceptable, refuse the application.

In the event of refusal, the applicant shall have the right of appeal to the Licensing & Environmental Protection Committee.

No commercial advertising shall be displayed on a licensed Private Hire Vehicle without the prior consent of the Local Authority.

Fitting and display of commercial advertising

Commercial advertising shall only be permitted on the rear side doors only of saloon cars or the rear side panels only of mini – buses or people carriers. (exact location to be agreed with the Licensing Unit).

The maximum size of the advertising panel shall be not more than 22 inches (width) x 18 inches (height).

All paintwork shall be in a sound condition prior to fitting signs. If it is necessary to respray/paint the vehicle prior to fitting of signs, the proprietor shall ensure that the vehicle colour is maintained in a consistent form.

If advertising on the vehicle is withdrawn, the vehicle must be restored to its original colour. All advertising will subsequently be checked during the six monthly test examination and during any roadside inspections. If, in the opinion of the vehicle examiners or Licensing enforcement staff, the advertising has become detached, defaced or in need of repair or is found concealing damage to the bodywork then the proprietor will, by the issue of a 'Vehicle Defect Notice' be required to carry out necessary remedial works.

Approved Commercial signs on Private Hire Vehicles must be permanently painted or stuck to a continuous flat surface. Magnetic signs will not be permitted.

10. **ALL VEHICLES**

Signs on both Hackney Carriage and Private Hire Vehicles must be correctly affixed to a continuous flat surface and must be of such a form as not be become easily soiled or detached.

11. **MINIBUSES AND MULTI-PURPOSE VEHICLES AND MULTI-PURPOSE VEHICLES**

Any person wishing to licence a minibus or people carrier for Private Hire and Reward will be required to present the vehicle at The Licensing Unit for a preliminary inspection before a test appointment is arranged.

Before a licence can be issued vehicles must be inspected/tested to make sure that they are mechanically fit, safe and comfortable.

The purpose of this examination will be to assess the vehicle's suitability for use as a Private Hire Vehicle.

All vehicles will be expected to fulfil the following criteria:

Seating for 8 passengers maximum in addition to the driver.

If the vehicle has been designed or constructed for the carriage of more than 8 passengers, additional seats must be removed and any mountings permanently covered by welding or riveting to prevent the reinstallation of these seats in future and to eliminate any trip hazards.

Adequate luggage space must be available **inside** the vehicle. The use of roof racks is permitted but proprietors will not be allowed to use trailers for the carriage of luggage.

All passengers must have unobstructed access to exits from the vehicle. Where access to exits requires moving, tipping or folding the seat in front, then providing this is a straightforward and quick operation in line with manufacturers recommendations the vehicle may still be considered for licensing.

The vehicle must have two access/egress points for passengers – this does not include separate access to any passenger seats

in the front compartment or the driver's door.

Only right hand drive vehicles will be permitted.

Only front or rear facing seats will be permitted.

Carriage of wheelchair bound passengers will only be permitted if the vehicle is fitted with securing bolts/straps etc. which lock the wheelchair in a front or rear facing position.

The Council must be satisfied that ramps or a hydraulic lift is suitable for the loading/unloading of occupied wheelchairs.

12. USE OF CCTV EQUIPMENT IN HACKNEY/PRIVATE HIRE VEHICLES

The Council recognises that some proprietors may wish to install CCTV security cameras in their vehicles for the benefit of both the driver and passengers. Such equipment may be used but signs advising of the use must be displayed on the vehicle and clearly visable to passengers, the equipment installed must be BSI approved and it must be a sealed/secure system to ensure that recordings can only be accessed and viewed by authorised persons i.e. the Police, Council Licensing Officer or equipment supplier.

13. USE OF FORWARD FACING CCTV CAMERAS IN HACKNEY CARRIAGE AND PRIVATE HIRE VEHICLES

The Council recognises that some proprietors may wish to install forward facing CCTV cameras in their vehicle(s) to protect against motor insurance fraud.

The use of Smart Witness equipment already installed in Hackney Carriage/Private Hire Vehicles be authorised subject to the fitting of a notice informing customers of the installation of the equipment.

Such Cameras may be acceptable if:

- They are forward facing only;
- They are fixed to prevent them from facing inside the vehicle;
- They do not record audio/sounds;
- The data recorded is encrypted and/or made tamperproof; and
- Notification is displayed within the vehicle advising customers of the installation of the equipment.

The Licensing and Land Chargers Manager has delegated the authority to accept the use of forward facing cameras in Hackney Carriage/Private Hire Vehicles, subject to the Council's Standard Conditions.
Should any equipment be considered unacceptable by the Licensing and Land Charges Manager, the proprietor of the vehicle shall have the right of appeal to the Council's Licensing and Environmental Protection Committee.

14. DRIVER PROTECTION SHIELDS IN PRIVATE HIRE VEHICLES

The Council has approved the use of protective driver shields in private hire vehicles but you must first make an application (free of charge) using a form available from the Licensing Unit. The following criteria will apply:-

Guidance and model conditions

- **Applications will only be considered for screens that fit across the rear of the driver seat or provide a 'wrap around' facility for the driver i.e. a screen between the driver and front seat passenger**.
- **All installations must conform to European Regulations (ECE Regulations 17 Annex 6).**
- **A certificate of conformity must be provided.**
- **The installation may be subject to a Safety Check at the Test Examination Centre at the proprietors own expense.**
- **The Council reserve the right to withdraw approval at any time.**
- **Applications will be dealt with by the Licensing Officer. If the application is refused the applicant will have the right of appeal to the Licensing Committee.**
- **Any approved installation will relate only to the vehicle identified in this application.**
- **Transfer of the installation is another vehicle will not be permitted.**
- **The installation shall not be removed or modified without the prior consent of the Council.**

If you have a query about the result of your vehicle test examination or wish to appeal against the decision you must do this before the vehicle is removed from the test centre. Licensing staff cannot mediate in any matter which is part of the MOT standard examination.

List of Inspection items

1 Not Allocated. 2 Not Allocated. 3 Seat Belts. 4 Not Allocated. 5 Smoke Emission. 6 Road Wheels and Hubs. 7 Size and Type of Tyres. 8 Condition of Tyres. 9 Bumper Bars. 10 Spare Wheel/Carrier. 11 Not Allocated. 12 Not Allocated. 13 Not Allocated. 14 Wings and Wheel Arches. 15 Not allocated. 16 Doors and Emergency Exits. 17 Not allocated 18 Not allocated 19 Not Allocated. 20 Exterior of Body. 21 Interior of Body, including seats, trim, carpeting, partitions heating/ventilation System and luggage compartment. 22 Mirrors. 23 View to front. 24 Windscreen, Windows, Glass or other Transparent Material. 25 Windscreen Wipers/washers. 26 Speedometer. 27 Audible Warning (Horn). 28 Driving Controls. 29 Tachograph (Where Applicable).	30 Play at Steering Wheel. 31 Steering Wheel. 32 Steering Column. 33 Speed Limiter (Where Applicable). 34 Pressure/Vacuum Warning. 35 Build Up of Pressure/Vacuum. 36 Hand Lever Operating Mechanical Brakes. 37 Service Brake Pedal. 38 Service Brake Operation. 39 Hand Operated Brake Control Valves. 40 Not Allocated. 41 Condition of Chassis. 42 Electrical Wiring and Equipment. 43 Engine and Transmission Mountings. 44 Oil and Waste Leaks. 45 Fuel Tanks and System. 46 Exhaust and Waste System. 47 Not Allocated. 48 Suspension Pins and Bushes. 49 Suspension Spring Units and Linkages. 50 Attachment of Spring Units. 51 Shock Absorbers. 52 Not Allocated 53 Axles, Stub Axles and Wheel Bearings. 54 Steering Linkage. 55 Steering Gear. 56 Power Steering. 57 Transmission. 58 Not allocated 59 Mechanical Brake Components.

List of Inspection items continued

60 Brake Actuators. 61 Brake Systems and Components. 62 Rear Markings 63 Front Position Front End Outline Marker Lamps. 64 Rear Position, Rear End Outline Marker, Rear Fog and Rear Registration Lamps. 65 Reflectors. 66 Direction Indicators and Hazard Warning Lamps. 67 Aim of Headlamps 68 Headlamps. 69 Stop Lamps. 70 Additional lamps/Equipment. 71 Service Brake Performance. 72 Secondary Brake Performance. 73 Parking Brake Performance	

HACKNEY AND PRIVATE HIRE PROPRIETOR COMPLIANCE SCORE

The aim of the Hackney and Private Hire Proprietor Licensing System is to promote passenger and road safety through the proper use of passenger carrying vehicles and to ensure fair competition amongst proprietors. Therefore it follows that a licenced proprietor should accept that compliance checks will be carried out.

The proprietor Compliance Score (PCS) has been developed in line with VOSA Enforcement Guidelines and has been designed to assist Licensing Officers in deciding which proprietors are most likely to be non-compliant.

The score is obtained by allocating points based on the severity of each defect found at a) 6 monthly examination, b) roadside check and c) safety inspection. These encounters are known as 'events'. The scoring mechanism calculates the average number of points per event.

The scores will be shown as R (red), A (amber) or G (green) and as a numeric number 0 to 5. Proprietors who have a red or amber score are more likely to be targeted than those with a green score.

Note: The scoring system is still to be finalised and will be subject to approval by the Council's Licensing and Environmental Protection Committee.

3 SEAT BELTS

Method of Inspection	Reason for Rejection
A Statutory fitment	
1 Check that each seat that requires a seat belt is fitted with one.	1 A seat belt missing or of the wrong type.
B Condition of ALL seat belts fitted	
1 Pull each seat belt webbing against its anchorage to see that it is properly secured to the vehicle structure. Note: For seats with integral seat belts, it might not be possible to examine the fixing of the seat belt to the seat.	1 a) A seat belt not securely fixed to the seat or to the structure of the vehicle. For example, a fixing bolt not secure b) For seats with seat belts attached to them; any insecure attachment of the seat to the vehicle structure c) For seats with seat belts attached to them; a cracked or damaged Seat frame.
2 Examine the condition of all seat belt webbing for cuts or obvious signs of deterioration. Pay particular attention to webbing around anchorages, buckles and loops.	2 a) A cut which causes the fibers to separate b) fluffing or fraying sufficient to obstruct correct operation of the belt or which has clearly weakened the webbing c) Stitching badly frayed, not secure, incomplete or repaired.
3 Examine the condition of the attachment fitting and adjusting fitting on each belt.	3 An attachment fitting or adjustment fitting of a seat belt fractured or badly deteriorated. **Note:** damage or deterioration of the plastic covering of a component is not a reason for rejection unless it affects the operation of the belt.

Seat Belts continued

Method of Inspection	Reason for Rejection
4 Examine the flexible buckle stalks for A) Signs of corrosion or weakness. Pull the sheaths aside, if this can be done without damage. B) 'Waggle' flexible buckle stalks and listen for a clicking noise indicating broken stands of cable.	4 a) Corrosion or deterioration of a flexible stalk likely to lead to failure under load. b) Broken strands of a flexible stalk cable.
5 Fasten each belt locking mechanism and try to pull the locked sections apart. On retracting seat belts, check that with the mechanism fastened and the seat unoccupied, excess webbing is wound into the retracting unit. Note: Some types of retracting belt might need manual help before they retract. Operate the release mechanism while pulling on the belt to check that the mechanism releases when required.	5 a) The locking mechanism of a seat belt does not secure or release the belt as intended b) A retracting mechanism does not retract the webbing sufficiently to remove **all** the slack from the belt with the locking mechanism fastened and the seat **unoccupied**. **Note 1:** In doubtful cases, this should be checked with the seat base set in its rearmost position. **Note 2:** The vehicle presenter should be advised of and given the opportunity to remove any temporarily fitted device likely to cause failures under this reason for rejection before notification of refusal is issued.
6 As far as is practicable without dismantling, check the condition of the vehicle structure around the seat belt anchorage points (ie within the 'prescribed area' see Appendix C). The floor-mounted anchorage points might need to be inspected from underneath the vehicle.	6 Deliberate modification which significantly reduces the original strength, excessive corrosion, severe distortion, a fracture or an inadequate repair of a load bearing member or its supporting structure or supporting panelling within 30cm of a seat belt anchorage. **Note:** With a seat belt attached to a seat frame this reason for rejection will apply to **ALL** seat mounting points.

Vehicles Exempt from Seat Belt Installation Checks

Notes		
Ford Transits with type approved seat belt installations can be identified as follows: • 12 and 15 seat (including the driver) Transits manufactured after 1 October 1991 where the fourth character of the VIN Number is "E2. • 17 seat (including the driver) Transits where there is a six figure code **EJA*CL or EJJ*CL** marked in the top right hand of the manufacture's plate (in the type code box). In the code the fourth digit marked * can be any character. **LDV 400 series models with type approved seat belt installations can be identified as follows:** • Chassis number from 933478 onwards and the seventh character of the VIN number is "S". **LDV 400 series models with type approved seat belt installations can be identified as follows:** • Chassis number from 933478 onwards and the seventh character of the VIN number is "S" or "V". **LDV Pilot and Convoy models with type approved seat belt installations can be identified as follows:** Chassis number from 000001 onwards and the seventh character if the VIN number is "S" or "X".	**Land Rover Defender 110 Station Wagon with type approved seat belt installations can be identified as follows:** • Manufactured 1990 - from chassis number 455758 • Manufactured 1991 onwards - all chassis numbers. Information on other makes will be circulated when it becomes available.	**Important notes:** 1 To be exempt from the check, vehicles must have been fitted with the seat belt installation by the vehicle manufacturer when new. If you are aware that a vehicle with a chassis number shown above has had any seats/seat belts fitted by any other installer, eg, where it has been adapted to carry wheelchairs and has removable seats on tracking, it will not be exempt and will require an installation check. 2 Although for the purpose of private hire a maximum of eight seats shall remain installed for passengers, the position of seats shall be agreed with the licensing unit.

4. Exhaust Emissions - Spark Ignition – General

This inspection applies to all spark ignition engined vehicles with four or more wheels in Classes IV and VII.

Contained within this section are flowcharts. Carefully use these flowcharts to accurately establish which type of emission test is applicable to the vehicle being tested.

Vehicles fitted with modified engines: If an engine has been modified in any way, it still has to meet the exhaust emission requirements according to the age of the vehicle.

Personal Imports: The vehicle will be tested according to its age from first use. The only exemption to this is if the vehicle owner can present to the tester at time of test a letter from the vehicle manufacturer stating that the particular engine as originally installed could not meet the equivalent British emission standards. If this is the case, then test to the next lower emission standard.

eg, A 1995 car first used in Africa has a letter from the engine manufacturer stating that the particular engine (engine number to be stated) cannot meet Catalyst emission limits, then use the pre cat limits of CO 3.5%, HC 1200ppm.

Vehicles fitted with a different engine:

Test according to which is older, engine or vehicle. eg, A 1995 car fitted with a 1991 engine (of whatever make), test to 1991 standards for emission purposes. **Note:** The onus if on the vehicle presenter to prove engine age.

The following notes should be used in conjunction with the flowcharts on the following pages.

1 Two stroke engines do not require an emissions test unless they re subject to the catalyst test.

2 <= less than or equal to

3 **Advice on establishing whether the design gross weight of a large car exceeds 2500kg**

- i) It may be shown on the manufacturers VIN plate (example shown in Section 3.9)
- ii) It may be listed only in Section 2 of the current emissions data book
- iii) Refer to any readily available data, eg, handbook or data book
- iv) If still unsure, assume it to be over 2500kg DGW.

4) Vehicles, which have been the subject of specialist conversions, are to be treated, for emissions purposes as if they gad not been converted, eg, a motor caravan or ambulance converted from a goods vehicle is still to be treated as **not being** a **"passenger car"** or a **"passenger car"** with seats added is still to be treated as **being** a **"passenger car"**.

A vehicle original built with 6 or more seats, in addition to the driver, which has had seats removed is still to be treated as **not being** a **"passenger car"**.

5) The full title of the Department of Transport Emissions book is "In-Service Exhaust Emission Standards for Road Vehicles". The latest edition must be used.

5. Exhaust Emissions - Spark Ignition - General - Continued

Method of Inspection	Reason for Rejection
A All Vehicles	**A All vehicles**
1 Raise the engine speed to around 2500 rpm or half the maximum engine speed if this is lower. Hold this speed steady for 20 seconds to ensure that the inlet and exhaust system is properly purged. Allow the engine to return to idle and the emissions to stabilise.	1 The engine
a) Assess the engine idle speed	a) Is idling at a speed clearly above its normal idling speed.
b) Assess the smoke emitted from the tailpipe at idle	b) Emits dense blue or clearly visible black smoke for a continuous period of 5 seconds at idle
c) Rapidly increase the engine speed to around 2500rpm or half maximum engine speed if this is lower and assess the smoke emitted from the tailpipe. Allow the engine to return to idle.	c) Emits excessive dense blue or clearly visible black smoke during acceleration which would obscure the view of other road users.
Note: It is the responsibility of the presenter to inform the test station if he thinks the emission test will damage the vehicle.	Note: Older vehicles, particularly pre-1960, may emit unavoidable smoke due to their design. Such smoke is **not** a reason for rejection.
• Keep your vehicle well maintained. • Have the camshaft drive belt changed at the recommended intervals. • Ensure the oil and water levels are filled to the correct level. • Do not tamper with governor settings, seals etc.	The tester must refuse to test your vehicle if he thinks that the smoke test will damage your engine.

5 Exhaust Emissions - Spark Ignition - non CAT Test

Method of Inspection	Reason for Rejection
BVehicles first used on or after 1 August 1975	**BVehicles first used on or after 1 August 1975**
1 Check that the analyser probe can be inserted into the tailpipe.	1 The emissions cannot be measured because a tailpipe accessory is fitted which prevents insertion of the analyser probe.
2 Use a suitable exhaust gas analyser to determine the proportions of carbon monoxide (CO) and hydrocarbons (HC) in the exhaust gas over a period of at least 5 seconds at idle. **Note:** Any residual hydrocarbons (ie, those indicated by the analyser when it is sampling only clean air) should be deducted from the HC reading obtained from the vehicles. **Note:** If a vehicle meets the CO requirement at its normal idling speed but fails the HC check, re-check the HC level at a high idle speed of 2000rpm. If the HC reading is then 1200 ppm or less, the vehicle will meet both the CO and HC requirements. • the CO requirement must be met with the engine running at its normal (low) idling speed. • do not use a cold start/cold running mechanism to achieve a high idle speed. Instead, apply light pressure to the throttle pedal. HC not applicable to Compressed Natural Gas (CNG) fuelled vehicles.	2 The exhaust gas contains a) A carbon monoxide content exceeding the limit for a continuous period of 5 seconds. b) A hydrocarbon content exceeding the limit for a continuous period of 5 seconds.

5 Exhaust Emissions - Spark Ignition - BET Test

Method of Inspection	Reason for Rejection
1 a) A suitable exhaust gas analyser will be needed to perform this inspection. Check that the analyser probe can be inserted into the tailpipe. b) Ensure that the analyzer's daily leak check has been performed.	1 The emissions cannot be measured because a tailpipe accessory is fitted which prevents insertion of the analyser probe.
2 **From 1 August 1992 onwards Basic Emission Test (BET)** a) Carry out the test using the flowchart b) Ensure that the engine is hot by checking, for example, temperature gauge, cooling fan cut-in or hot coolant hoses. If the engine is not at normal temperature raise the engine speed to between 2000 and 3000rpm and maintain this speed until normal temperature has been reached c) Attach engine speed measuring device. It is permissible for the purposes of this check to use the vehicle tachometer d) Ensure the engine is idling normally e) Perform a HC hang-up check and ensure that HC<20ppm before continuing. Insert the analyser sample probe f) **Fast idle test:** Raise the engine speed to a fast idle between 2500 and 3000rpm and hold steady. Note the readings for CO, HC and lambda, and record the results. g) **Idle test:** Allow the engine to idle. Note the CO reading and record the result. h) Remove analyser sample probe.	2 If the vehicle does not meet the BET limits go to CAT1 button. **Note:** There is no Reason for Rejection for vehicles that do not meet the BET limits.

5 Exhaust Emissions - Spark Ignition - CAT Test

Method of Inspection	Reason for Rejection
1 A suitable exhaust gas analyser will be needed to perform this inspection. Check that the analyser probe can be inserted into the tailpipe.	1 The emissions cannot be measured because a tailpipe accessory is fitted which prevents insertion of the analyser probe.
2 a) Ensure that the analyser's daily leak check has been performed b) Identify the vehicle specific test limits using the flow charts c) Connect the engine speed measuring device and insert the engine oil temperature measuring probe into the dipstick hole **Note:** Engine speed and engine oil temperature must be measured whenever possible. If engine speed cannot be measured then the vehicle tachometer should be used if fitted. Otherwise, a subjective estimate should be made. If engine oil temperature cannot be measured, see note in paragraph (d) below. d) **Engine preconditioning:** check the engine oil temperature. If it is below the minimum vehicle specific requirement, raise the engine speed to between 2000rpm and 3000 rpm and maintain this speed until the minimum engine oil temperature has been reached. Remove temperature measuring probe and replace dipstick. **Note:** Where, in exceptional circumstances, the engine oil temperature cannot be measured (eg, in the case of a dry sump engine), check one of the following: temperature gauge showed warm engine, cooling fan had cut in or coolant pipes were hot.	2 a) The engine idle speed is clearly above the vehicle specific limit. **Note:** If the engine speed is clearly above the vehicle specific limit and this can be easily adjusted, a tester may perform the adjustment and complete the test - the adjustment is not, however, part of the MOT test. b) In the 2nd fast idle test, one or more of the following exceeds the vehicle specific or default limits continuously for the last 5 seconds of the 30 second countdown: • Carbon monoxide (CO) • Hydrocarbons (HC) • Lambda (λ) c) In the idle test, the following gas exceeds the vehicle specific or default limit continuously for the last 5 seconds of the 30 second countdown • Carbon monoxide (CO)..

5 Exhaust Emissions - Spark Ignition -CAT Test continued

Method of Inspection	
e) Perform a HC hang-up check and ensure that CH<20ppm before continuing. Insert the analyser sample probe	
f) **1st Fast Idle Test:** Raise the engine speed to the vehicle specific fast idle speed and maintain for 30 seconds. If the engine speed drifts outside the fast idle speed range, begin the 30-second countdown again. During the last 5 seconds note the readings for CO, HC and lambda, and record the results.	
g) If the vehicle has passed the first fast idle test, then go to paragraph (j), otherwise go to paragraph (h).	
h) **Additional engine preconditioning:** Run the engine between 2000-3000rpm for 3 minutes or until all the emissions are within limits. If the engine speed goes outside the fast idle range, then freeze the countdown until the engine speed is within range once again.	
i) **2nd Fast Idle Test:** Repeat the procedure as laid down in paragraph (f), then go to paragraph (j).	
j) **Catalyst stabilisation:** Raise the engine speed to the vehicle specific fast idle speed and maintain for 30 seconds. If the engine speed drifts outside the fast idle speed range then begin the 30 second countdown again.	
k) **Idle test:** Allow the engine to idle during a 30 second countdown. During the last 5 seconds, not the CO reading and record the result.	
i) Remove analyser sample probe and engine speed measuring device.	

5 Exhaust Emissions - Compression Ignition

Method of Inspection	Reason for Rejection
A Vehicles first used before 1 August 1979 Where possible check that: • there is sufficient oil in the engine • the oil pressure is not too low • there is no abnormal engine noise • the governor has not been tampered with • the engine is at normal operating temperature **(see information column)** raise the engine speed to around 2500 rpm, or half the maximum engine speed if this is lower hold this speed steady for 30 seconds to ensure that the inlet and exhaust system is fully purged allow the engine to return to idle and the emissions to stabilise. 1 Assess the smoke emitted from the tailpipe 2 Rapidly increase the engine speed to around 2500rpm or half the maximum engine speed if this is lower and assess the smoke emitted from the tailpipe during acceleration	**A Vehicles first used before 1 August 1979** 1 The exhaust emits dense blue or clearly visible black smoke for a period of 5 seconds at idle. 2 The exhaust emits dense blue or clearly visible black smoke during acceleration which would obscure the view of other road users **Note:** The criterion is **density** and not **volume** of smoke. The description 'dense smoke' includes smoke or vapour which largely obscures vision. Older vehicles, particularly pre-1960 sometimes emit unavoidable smoke due to their design. Such smoke is **not** a Reason for Rejection.

5 Exhaust Emissions - Compression Ignition continued

Method of Inspection	Reason for Rejection
B Vehicles first used on or after 1 August 1979 Where possible check that: • there is sufficient oil in the engine • the oil pressure is not too low • the camshaft belt is in a satisfactory condition • there is no abnormal engine noise • the governor has not been tampered with • the engine is at normal operating temperature **(see information column, Page 1)** If appropriate, remove oil temperature probe. Raise the engine speed to around 2500rpm, or half the maximum engine speed if this is lower, and hold for 30 seconds to fully purge the inlet and exhaust system. Raise engine speed slowly to maximum to check the operation of the governor. Once the engine speed has stabilised or if it becomes clear that the governor is not working, release the pedal, return to idle and stop the engine. Prompt the meter to carry out a zero check.	**B Vehicles first used on or after 1 August 1979**

Method of Inspection	Reason for Rejection
Check that the smoke meter probe can be inserted into the tailpipe.	
1 Insert the probe fully and securely, in line with the gas flow. Restart the engine. Fast Pass Following the meter prompts, depress the accelerator pedal quickly and continuously but not violently, to reach full fuel position **in less than 1 second.** Hold it there until a release prompt is given, then immediately release the pedal. Allow the engine, and any turbocharger fitted, to return to idle speed. At the end of the 1st acceleration read the smoke level displayed on the meter. If it is at or below **1.50m^{-1}** the vehicle has passed this part of the test and a pass result will be displayed on the meter. Go to Method of Inspection 3.	1 The emissions cannot be measured because a tailpipe accessory is fitted or a deliberate modification has been made which prevents insertion of the smoke meter probe. **Note:** there is no Reason for Rejection for vehicles that do not meet the **fast pass** criteria.
2 If the 1st acceleration smoke level is greater than **1.50m^{-1}** carry out two further accelerations following the meter prompts. At the end of the 3rd acceleration, read the mean smoke level displayed on the meter. If it is at or below the appropriate limit, the vehicle has passed this part of the test. Go to Method of Inspection 3. If the mean smoke level is too high, carry out further accelerations up to a maximum of 6 in total.	2 After 6 free accelerations, the mean of the last 3 smoke levels is: a) For a non-turbocharged engine, more than 2.50m^{-1} b) For turbocharged engines more than 3.00m^{-1}.

5 Exhaust Emissions - Compression Ignition continued

Method of Inspection	Reason for Rejection
After each acceleration, check the mean reading. This part of the test is complete when either: • the mean of any 3 consecutive smoke readings is at or below the appropriate limit, or • six accelerations have been performed	
3 Assess whether the smoke emitted from the exhaust, regardless of measure density, is likely to obscure the vision of other road users.	3 Exhaust emits excessive smoke or vapour of any colour to an extent likely to obscure the vision of other road users. **Note:** The criterion is **density** and not **volume** of smoke. The description 'dense smoke' includes smoke or vapour which largely obscures vision.

6 Roadwheels

Method of Inspection	Reason for Rejection
1 Check all road wheels (including spare) for	1
a) Cracks, damage and distortion, particularly the rim	a) A wheel badly damaged, distorted or cracked, or with a badly distorted bead rim, a wheel which has a spoke(s) missing, cracked or excessively • Loose • Bent, or • Corroded
b) Security	b) A wheel insecure
c) Presence and tightness of wheel fixing nuts, studs, bolts etc. **Note:** Removal of wheel trims/hub caps by the presenter is required prior to the test to facilitate checking of wheel nuts, failure to do so will result in the test being terminated.	c) Loose or missing wheel nut(s), stud(s) or bolt(s)

7 Tyres

Method of Inspection	Reason for Rejection
A Type of Structure On all the tyres (including spare wheel) fitted, check the	
1 Nominal size and aspect ratio. **Note:** It cannot be assumed that there is a difference in the nominal sizes of tyres because either twin wheel is not in contact with the ground. **Note**: A Class III or IV vehicle tyre which appears to be of inadequate size, ply or speed rating for the vehicle or its use is not a reason for rejection. However, the vehicle presenter should be informed.	1 a) One tyre is of a different nominal size or aspect ratio to any other on the same axle. b) Special lightweight or space saving wheels and tyres fitted as road wheels. **Note: Tyres** with aspect ratios of 80% and 82% are almost identical in size and can be safely mixed in any configuration on a vehicle. Where this is done, Reason for Rejection 1 **does not** apply. In all other cases of mixed aspect ratios on the same axle, rejection is justified.
2 Tyre combination, ie, radial and cross-ply tyres **Note**: The vehicle must carry a spare wheel (with non rotational arrows) which is compatible with and suitable for replacement of any of the four road wheels. **Space Saver wheels** are permitted proved they are part of the original manufacturers specification. If a space saver is not available or the vehicle only carries a 'puncture repair kit' the vehicle must carry a full size spare wheel (with non rotational arrows) which is compatible with and suitable for replacement of any of the four road wheels.	2 a) One tyre is of a different type of structure from another tyre on the same axle. **Note:** 1) The carrying of one spare wheel/tyre cannot be accepted since it can only be used in limited circumstances. 2) Where rotational tyres are fitted to a vehicle, the spare wheel must be a non-rotational type tyre. 3) The carrying of a 'space saver' spare wheel is strictly prohibited

Where the full size spare wheel cannot be carried in the existing wheel well of the vehicle it may be carried in the boot provided it is secured and covered to prevent contamination of any luggage carried. Space Savers will only be permitted to be used for the completion of the existing journey provided the journey can be completed within the limits specified by the manufacturer (e.g. distance, speed limit etc). The vehicle licence will be null and void if the vehicle is subsequently provided for hire or used for hire with a space saver tyre fitted.	

7 Tyres continued

Method of Inspection	Reason for Rejection
BLoad index and Speed Rating (Applicable to Class VII only) 1 a) Check for a load index (or ply rating and tyre size) marked on at least one sidewall of each tyre. (See tables at the end of this section for the identification of tyre load index, play rating and tyre size). **Note:** A tyre not marked with a load index or ply rating is assumed to have the lowest 'load capacity' if its size.	1 a) A tyre not marked with its size on at least one sidewall. (See tables at the end of this section)

b) Check the load index is adequate for the maximum laden weight of the axle.	b) A tyre has a load index (or ply rating and tyre size) that is inadequate for the permitted maximum laden weight of the axle to which it is fitted. (See tables at the end of this section for the determination of tyre load capacity)
2 Check for a speed rating letter marked on the sidewall of each tyre.	2 A tyre marked with one of the following speed rating letters: A, B, C, D, E, F,G, J or K. **Note:** Some tyres are not marked with a 'speed rating' and the absence of such a mark **is not** a Reason for Rejection.

Tyre Size, Ply Rating and Load Index Tables

How to use this table:

1 Locate the line entry corresponding to the size and ply rating or load index marked on the tyre sidewall;
2 Read off the maximum axle load (kg) for these tyres in 'SINGLE' or 'TWIN' formation, as appropriate.
3 These tables show the maximum axle load for tyres in single and dual (twin) formation. If a tyre has only one load index marked, then that index refers to use in single formation. Such tyres can be used in dual formation by applying the following formula:

Max load in dual formation = Max load shown for single

Nominal Tyre Size	Ply Rating	Load index	Maximum Axle Load (kg)	
			Single Tyres	Twin Tyres
145-13C	6	83/81	970	1840
145-13C	8	88/86	1120	2120
560-13B	6	-	1020	1940
590-13C	6	-	1070	2090
640-13C	6	-	1280	2240
640-13C	8	-	1430	2750
670-13	-	94/93	1340	2600
670-13C	6	-	1380	2650
670-13	-	99/98	1550	3000
670-13C	8	-	1580	3050
155-14C	6	-	1070	2040
175-14	-	96/94	1420	2680
175-14C	6	-	1430	2680
17514C	8	99/98	1550	3000
185-14	RADIAL	-	1200	2300
185-14	REINFORCED RAD	-	1340	2560
185-14	REINFORCED 4 PLY	94	1340	2560
185-14C	6	99/97	1550	2920
185-14C	8	102/100	1700	3200
195-14	-	102/100	1700	3200
195-14C	6	-	1700	3210
195-14C	8	106/104	1900	3600
205-14	-	105/103	1850	3500
205-14C	6	-	1850	3510
205-14C	8	109/107	2060	3900
215-14C	8	112/110	2240	4240

590-14C	6	-	1170	2240
600-14C	8	92/90	1260	2400
640-14C	6	-	1330	2550
650-14	4	-	970	1860
650-14C	6	93/91	1300	2460
650-14C	8	-	1500	2840
670-14C	6	-	1430	2750
670-14	-	101/99	1650	3100
670-14C	8	-	1680	3160

Nominal Tyre Size	Ply Rating	Load Index	Maximum Axle Load (Kg)	
			Single tyre	Twin Tyres
700-14C	4	-	1070	2050
700-14	-	94/93	1340	2600
700-14C	6	-	1380	2650
750-14	4	-	1200	2300
750-14	-	98/96	1500	2840
750-14C	6	-	1530	2950
750-14	-	102/101	1700	3300
750-14C	8	-	1730	3360
175/75-14	-	98/998	1550	3000
185/75-14	-	102/100	1700	3200
195/75-14	-	106/104	1900	3600
205/75-14	-	109/107	2060	3900
215/75-14	-	112/110	2240	4240
145-15C	8	91/89	1230	2320
185-15C	8	103/102	1750	3400
590/15C	6	-	1220	2340
640-15C	6	-	1380	2650
670-15	-	98/96	1500	2840
670-15C	6	-	1530	2900
670-15	-	103/102	1750	3400
67015C	8	-	1780	3460
670-15	12	108/107	2000	3900
700-15C	6	-	1750	3400
700-15C	-	103/102	1750	3400
700-15C	8	-	1940	3760
700-15	12	-	2440	4580
750-15C	6	-	1830	3560
750-15C	8	-	2060	3970
750-15	10	-	2340	4370
750-15	12	-	2750	5340
255/75-15	1	118/116	2640	5000
175-16C	6	98/96	1500	2840
175-16C	8	101/99	1650	3100

Nominal Tyre Size	Ply Rating	Load Index	Maximum Axle Load (Kg)	
			Single tyre	Twin Tyres
185-16C	8	104/102	1800	3400
195-16C	8	107/105	1950	3700
205-16	-	106/104	1900	3600
205-16C	6	-	1900	3610
205-16C	8	110/108	2120	4000
215-16C	6	110/108	2120	4000
215-16C	8	113/111	2300	4360
600-16	-	95/92	1380	2520
600-16	6	-	1380	2550
600-16	8	-	1530	2920
600-16	-	103/101	1750	3300
600-16	10 & RADIAL	-	1830	3300
650-16	-	98/97	1500	2920
650-16	6	-	1530	2920
650-16	-	104/102	1800	3400
650-16	8	-	1830	3460
650-16	-	108/107	2000	3900
650-16	10 & RADIAL	-	2040	3900
700-16	-	102/100	1700	3200
700-16	6	-	1730	3260
700-16	-	108/106	2000	3800
700-16	8	-	2040	3870
700-16	-	113/112	2300	4480
700-16	10	-	2340	4480
700-16	-	117/116	2570	5000
700-16	12 & RADIAL	-	2650	5000
750-16	-	108/106	2000	3800
750-16	6	-	2040	3870
750-16	-	112/110	2240	4240
750-16	8 & RADIAL	-	2240	4270
750-16	10	-	2500	4720
750-16	-	116/114	2500	4720
750-16	12 & RADIAL	-	2900	5600
750-16	-	121/120	2900	5600
825-16	8	-	2650	4880
825-16	10	-	2850	5440
900-16	6	-	2340	4370
900-16	-	114/111	2360	4360
900-16	8	-	2720	5140
900-16	-	119/117	2720	5140
900-16	10	-	3050	5600
175/75-16	-	101/99	1650	3100
185/75-16	-	105/102	1800	3400
195/75-16	-	104/102	1800	3400
195/75-16	-	107/105	1950	3700
205/75-16	-	110/108	2120	4000
215/75-16	-	113/111	2300	4360
225/75-16	-	116/114	2500	4720
225/75-16	-	118/116	2640	5000

The tyre load table below shows the maximum axle load for tyre in single and dual (twin) formation that may not be listed in the Size-Load table of this Annex.

Load Index	Single Kg	Dual Kg
70	670	1340
71	690	1380
72	710	1420
73	730	1460
74	750	1500
75	775	1548
76	800	1600
77	824	1648
78	850	1700
79	874	1748
80	900	1800
81	924	1848
82	950	1900
83	974	1948
84	1000	2000
85	1030	2060
86	1060	2120
87	1090	2180
88	1120	2240
89	1160	2320
90	1200	2400
91	1230	2460
92	1250	2520
93	1300	2600
94	1340	2680
95	1380	2760
96	1420	2840
97	1460	2920
98	1500	3000
99	1550	3100
100	1600	3200
101	1650	3300
102	1700	3400
103	1750	3500
104	1800	3600
105	1850	3700
106	1900	3800

107	1950	3900
108	2000	4000
109	2060	4120
110	2120	4240
111	2180	4360
112	2240	4480
113	2300	4600
114	2360	4720
115	2430	4860
116	2500	5000
117	2570	5140
118	2640	5280
119	2720	5440

8 Tyres

Method of Inspection	Reason for Rejection
C Condition of Tyres	
1 Examine each tyre for	1
a) Cuts	a) A tyre has a cut the length of which is at least 25mm or 10% of section width, whichever is great, deep enough to reach the ply or cords
b) Lumps, bulges, tears, exposure of the ply or cord, or tread separation **Note:** On radial ply tyres, care should be taken to distinguish between normal undulations in the carcass, resulting from manufacturing, and lumps or bulges caused by structural deterioration.	b) A tyre has • A lump, bulge or tear caused by separation or partial failure of its structure. This includes any lifting of the tread rubber. • any of its ply or cord exposed
c) Recut tread	c) A re-cut tyre fitted to a vehicle not permitted to be so equipped
d) Incorrect seating in the wheel rim	d) A tyre incorrectly seated on the wheel rim
e) Valve condition and alignment	e) A seriously damaged or misaligned valve stem which could cause sudden deflation of the tyre
f) Correct fitting.	f) A tyre not fitted in compliance with the manufacturers sidewall instruction, eg, an asymmetric with a sidewall marked ‘outer’ fitted with the marking to the inner side of the wheel.

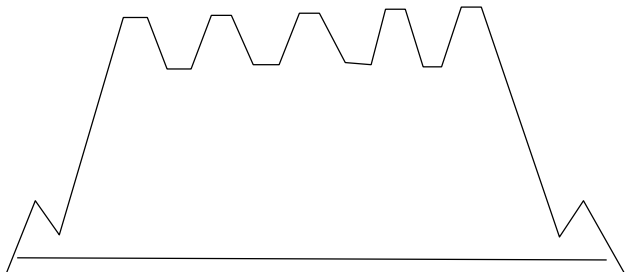
8 Tyres Continued

Method of Inspection	Reason for Rejection
g) Under-inflation Note: Under-inflation of a tyre is not in itself a reason for rejection. However, • A brake test might be inadvisable, because of possible damage, or • A headlight test might be affected, if the under-inflation is affecting alignment.	
2 Check tyre for fouling a part of the vehicle.	2 Atyre fouling a part of the vehicle. Note: This does not apply to vehicles designed to permit tyre contact with the chassis or frame, eg, steering lock stop function.
3 Check tyres on twin wheels for wall contact.	3 Tyre on twin wheels making wall contact due to under-inflation or incorrect fitment. Note: Some tyre, eg, radial ply tyres, with flexible sidewalls may touch under load. Wall contact in these circumstances **is not** a reason for rejection.

Tyres continued

Method of Inspection	Reason for Rejection
DTread Pattern, Breadth and Depth of Tread **1.6mm tread depth** 1 Check the tread pattern over the complete circumference of the tyre. Check also that the tread depth meets the requirements using, as necessary, depth gauge accepted for MOT testing.	1 The grooves of the tread pattern are not at lease 1.6mm throughout a continuous band comprising • The central three-quarters of the breadth of tread, and • Round the entire outer circumference of the tyre. **Note:** Each side of the central band of the tyre can be devoid of tread (ie, 'bald') and still meet the pass standard. See diagram below.

Breadth of Tread
Centre ¾ of tyre



Less than 1.6mm Tread Depth

9 Bumper Bars

Method of Inspection	Reason for Rejection
1 Examine the bumper bars and check: • They are secure to their mountings. • The mountings are secure to the vehicle. • There is no evidence of damage.	1. a) A loose bumper bar or mounting, or b) A mounting bracket fractured, or c) Mounting bolts so worn or elongated that the bumper bar is likely to detach partailly or completely from the vehicle when in use. **Note:** A bumper bar secured by wire or other temporary means is regarded as insecure and must be rejected. d) Bumper bars which have jagged edges, cracks, splits or projections which may cause injury to persons near the vehicle. e) Are weakened as a result of poor repairs. f) Paint miss match or fading which is significantly different to that of the rest of the paintwork.

10 Spare Wheel, Carrier, Jack and Wheelbrace.

Method of Inspection	Reason for Rejection
Spare wheel and carrier	**Spare wheel and carrier**
1 Check that any bootlid or tailgate is or can be secured in the closed position	1 A bootlid or tailgate which cannot be secured in the closed position
2 Check that any spare wheel and/or carrier is securely attached to the vehicle.	2 A spare wheel or carrier insecure.
Note: Space Saver wheels are permitted proved they are part of the original manufacturers specification *If a space saver is not available or the vehicle only carries a 'puncture repair kit' the vehicle must carry a full size spare wheel (with non rotational arrows) which is compatible with and suitable for replacement of any of the four road wheels.* *Where the full size spare wheel cannot be carried in the existing wheel well of the vehicle it may be carried in the boot provided it is secured and covered to prevent contamination of any luggage carried.* *Space Savers will only be permitted to be used for the completion of the existing journey provided the journey can be completed within the limits specified by the manufacturer (eg distance, speed limit etc).* *The vehicle licence will be null and void if the vehicle is subsequently provided for hire or used for hire with a space saver tyre fitted'.*	
Jack and Wheel brace	**Jack and Wheel brace**

1	Check to ensure a jack and wheel brace is fitted and they are in good working order**.**	1	A missing or faulty/worn jack or wheel brace

16 Doors/Emergency Exits

Method of Inspection	Reason for Rejection
1 Examine the condition of all doors and emergency exits. Check that each latches securely in the closed position and they can be opened from both inside and outside the vehicle. Check door locks, striker plates, handles and hinges for security, wear and missing and damaged trim/cover plates. 2 Check markings describing the presence and method of opening emergency exit(s) are readily visible on or adjacent to the exit and are legible.	1 a) A door or emergency exit does not latch securely in the closed position. b) A door cannot be opened from both the inside and outside the vehicle from the relevant contol in each case. c) Missing, loose or worn handle, lock or striker plate. d) Missing, loose or damaged trim/cover plate. 2 a) Markings describing the presence and method of opening an emergency exit missing, illegible or incorrect.

20 Exterior of Body

Method of Inspection	Reason For Rejection
Body Condition (Exterior) 1 Examine the body thoroughly for security, corrosion, damage, poor repair/paint match or sharp edges which are likely to cause injury.	**Body Condition (Exterior)** 1 a) An insecure or missing body panel, trim, step or accessory. b) Heavy scuffing, abrasions or deformation to front and rear bumper. c) More than 8 stone chips visable on a bonnet/grill which has not penetrated to the metal or more than 4 stone chips which have penetrated to the metal and is untreated. e) More than 8 stone chips on any panel including door edges, provided the base coat has not been penetrated. f) More than 4 stone chips on any panel where the finish coat has been penetrated and is untreated. g) A single dent of more than 80mm, or more than 3 dents of not more than 20mm in any one panel, h) More than 4 scratches each of not more than 50mm in length or a single scratch of more than 100 mm in any one panel where the finish coat has been penetrated and is untreated. I) Any sharp edge whatsoever which may cause injury. k) Dull, faded paintwork which has lost its gloss finish or paint miss match to a panel(s) to such an extent that it detracts from the overall appearance of the vehicle. k) Evidence of poor repairs and or paint finish to a repaired panel(s) including runs and over spray to adjoining panels/trim which detracts from the overall appearance of the vehicle.

	i) Obvious signs of rust/corrosion of any size particularly that which is covered by advertising signs.

21 Interior of Body

Method of Inspection	Reasons For Rejection
Body Condition (Interior)	
1	
a) Examine thoroughly the interior for dirty, damaged, missing and worn trim, seats, carpets, mats, headlining, boot area and inclusion of prescribed items. Remove mats to inspect carpets underneath for cleanliness and wear. Check for unpleasant odors.	a) i) dirty, soiled, stained worn or insecure carpets and mats. ii) Insecure seat(s). iii) Seat cushion(s) stained, torn, holed or worn, a seat which does not provide adequate support at base or backrest. iv) Has an unpleasant odour.
b) Examine interior lights, motion door locks and warning lights.	b) i) an inoperative interior light (all lights must illuminate if they are part of the manufactures standard equipment) ii) Missing or defective motion switch/lock or warning lamp not illuminated
c) Examine heating, demisting and air condition systems for correct operation, including passenger compartment controls where fitted(includes electric front and rear screen demisters)	c) A system(s) which does not function correctly or any part is missing including vents, controls and switches.
d) Examine all windows ensuring they allow lowering and rising easily.	d) An opening window which is inoperative or difficult to open and or close, mechanism broken/missing.
e) Examine interior door locks, grab handles/rails safety covers	e) i) missing, defective or loose door locks, child locks, protective covers grab handles and rails

f) Examine grills/partitions for security and condition **Note:** A vehicle presented in a dirty, untidy condition will not be tested	ii) Grab handles/rails, which are ridgidised to aid the blind and partially sighted, and which are worn to excess. f) A grill/partition which is insecure or has sharp edges which may cause injury to passengers or driver.

21 Interior of Body Cont'd

Method of Inspection	Reason for Rejection
Body Condition (Interior) Cont	
g) Examine electrical wiring for condition, security, including intercom systems.	g) Frayed, chaffing wiring, non-shielded terminals and cables so routed that they cause a trip hazard, cables that can be easily disconnected. Intercom system defective, warning light inoperative and signs illegible/missing
h) Limousines - carefully examine glasses, decanters etc which must be made from unbreakable glass.	h) Decanters, glasses etc which are not to the prescribed standard
i) Examine the boot for access, contents, cleanliness, and water ingress. **Note:** Where a doughnut tank is fitted in the boot for LPG, the spare wheel if still carried in the boot must be properly secured. Alternatively a spare wheel cage installed to manufacturers and British Standards may be fitted to the underside of the Vehicle.	i) Unable to open, close and or lock boot lid, failure of boot lid support mechanism, defective seals/evidence of water ingress, dirty boot and or carpets, loose items stored in boot, i.e spare wheel, tools and equipment etc.

21 Additional Equipment

Method of Inspection	Reason For Rejection
1 Wheelchair Facilities (Taxis)	**1**
a) Where applicable check condition and operation of wheelchair restraint, disabled person's seat belt.	a) A wheelchair restraint or seat belt missing, defective, or worn.
b) Check that appropriate, approved ramps are fitted and are securely installed in the boot of the vehicle, examine for damage, deformity, sharp edges etc. and provision of anti-slip covering.	b) Ramps missing, incorrectly stored, damaged/deformed, anti-slip covering in poor condition or missing.
2 First Aid Kit	**2)**
a) Check for the presence of and contents of a first aid box. **Note 1 :** The first aid kit shall contain a selection of sterile unmedicated dressings, bandages,sealed plasters, safety pins and at least one pair of protective surgical gloves. **Note 2:** The contents must be within the use by date. Once any seal has been broken, the item must be replaced. No ointment, creams, disinfectant etc, tablets or other medication shall be carried in the first aid kit. The first aid kit shall bear the internationally recognized symbol and shall be kept inside the vehicle in a readily accessible position and shall be clearly marked.	a) A first aid kit or any prescribed item therein missing, any seal broken, any use by date which has expired, the presence of prohibited item. b) A first aid kit not marked with the prescribed marking or it's position within the vehicle not clearly marked.

21 Additional equipment Cont'd

Method of Inspection	Reason For Rejection
3 Fire Extinguisher a) Check the fire extinguisher for presence, it's position, the expiry date and seal. Note: 1.The fire extinguisher must be kept in an accessible position inside the vehicle, not in the boot. The extinguisher may be carried in a fastened glove compartment provided there is a clear sign on the dashboard, stating the location. Note 2: Any vehicle licensed to carry 6 or more passengers shall carry two fire extinguishers – one in the fron of the vehicle and one in the rear of the vehicle.	a) A fire extinguisher missing, out of date, broken or missing seal, not fitted in an accessible position or its position not clearly marked.

22 Mirrors

Method of Inspection	Reason for Rejection
The number and position of all obligatory mirrors must be checked:	Note: A defective additional external mirror is not a reason for rejection.
1 For vehicles first used before1 April 1983.	1 A vehicle does not have at least: a) One external rear view mirror on the offside and one interior mirror, unless the interior mirror would give the driver no view to the rear, in which case Reason for Rejection 1(b)Applies. b) One exterior mirror on the offside and one exterior mirror on the nearside.
2 For vehicles first used after 1 April 1983.	2 Vehicle does not have at least: one main exterior mirror on the offside, and one main exterior mirror on the nearside.
3 Check the condition of each mirror reflecting surface and whether a person sitting in the drivers seat can see clearly to the rear	3 A mirror reflecting surface ▪ deteriorated or broken, or ▪ in such a position that a person sitting in the driver's seat cannot see clearly to the rear.

23 View to the Front

Method of Inspection	Reason for Rejection
1 Sit in the drivers seat and check that there is reasonable view of the road ahead, bearing in mind the original design of the vehicle. **Note:** Equipment or objects not originally fitted to the vehicle as part of the original design, must not obstruct the designed forward view of the driver. In particular, objects such as (but not limited to) pennants, cab decorations and external stone guards/visors should not interrupt the view through the swept area by the windscreen wipers.	1 The position or size of any object restricts the driver's view of the road ahead, bearing in mind the original design of the vehicle.

24 Windows, Glass or Other Transparent Material

Method of Inspection	Reason for Rejection
1 Visually check the condition of all windscreens, internal screens,partitions, side, rear, roof and door windows for cracks, surface damage and discoloration.	1 A crack, surface damage or discoloration in glass or other transparent material which: • Impairs the driver's front, side, or rear view of the road, or • Presents a danger to any person on the vehicle.
2 a) Check presence and security of all windscreens, side, roof, or rear windows, or internal screens or partitions. b) Check for evidence of obvious leaks from all windscreens and side, rear, roof or door windows.	2 a) A windscreen, or any other outside window missing, or any windscreen, window, internal screen or partition insecure. b) Any external window or windscreen is obviously leaking.
3 Check for presence, security and condition of guard rails or barriers at windows, internal screens or partitions	3 A guard rail or barrier at a window, internal screen or partition missing, insecure or damaged.
4 For all vehicles first used before 1 January 1959. As far as is practicable, check that glass fitted to windscreens and outside windows facing to the front is safety glass, except glass fitted to the upper deck of a double deck bus.	4 The windscreen and/or any outside window facing to the front of a vehicle obviously not made from safety glass fitted to a vehicle first used before 1 January 1959.
5 For all vehicles used on or after 1 January 1959, as far as is practicable, check that glass used for windscreens and all outside windows is safety glass, or safety glazing. Note: Marking is not required for safety glass used on vehicles first used before 1 June 1978.	5 Glass used for a windscreen or an outside window is obviously not safety glass.

24 Windows, Glass or other Transparent Material cont'd

Method of Inspection	Reason for Rejection
6 Form vehicles first used on or after 1 June 1978, check that: a) Windscreens and other windows wholly or partly on either side of the drivers seat are made from safety glass displaying an acceptable mark. 7 Only tinted glass as per manufacturers original specification will be permitted. All vehicles with tinted glass will, before acceptance for testing, be assessed by licensing staff to establish if it is acceptable for use. Only tinted glass which allows the passengers inside to be visible from the outside of the vehicle will be acceptable.	6 For all vehicles first used on or after 1 June 1978, a) The windscreens and/or other windows wholly or partly on either side of the drivers seat are not made from safety glass displaying an acceptable mark.

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25 Windscreen Wipers and Washers

Method of Inspection	Reason for Rejection
1 a) Check for presence of wiper and washer switch. b) Turn on windscreen wipers and washers and check if: • Wipers move over an area of windscreen glass sufficient to give the driver an adequate view of the road in front and forward of nearside and offside, and • Continue to operate automatically.	1 a) A wiper switch and /or washer switch missing. b) Wiper blades will not • Move over an area of windscreen sufficient to give the driver an adequate area through which to look, or • Do not continue to operate automatically
2. Check wiper blades for •Presence •Security •Effectiveness	2 Wiper blade: • Missing • Insecure • So deteriorated that it does not clear the windscreen effectively.
3 Check that windscreen washer(s) function satisfactorily.	3 Windscreen washers: • Do not work satisfactorily, or • Volume of water is not enough to clean the windscreen in conjunction with the wipers.
4 For all air operated wipers examine: • The condition of any visible piping • The function of the operating mechanism, and • The function of necessary valves to protect the braking system	4 a) Pipes inadequately clipped or supported b) Incorrect function of the wipers or leaking components c) Incorrect operation of protection valves Note: If any windscreen wiper is not operational the vehicle licence will be suspended.

26 Speedometer

Method of Inspection	Reason for Rejection
This inspection does not apply when a tachograph is fitted in place of a speedometer.	
1 Check that a speedometer is fitted.	1 Speedometer not fitted.
2 Check the condition of the speedometer.	2 Speedometer not complete or clearly inoperative, or dial glass broken or missing.
3 Check that the speedometer can be illuminated.	3 The speedometer cannot be illuminated.
	Note: If the speedometer is inoperative the vehicle licence will be suspended.

27 Audible Warning (Horn)

Method of Inspection	Reason for Rejection
1 Operate the horn control and note the volume and character of the sound emitted.	1 a) The horn control missing, insecure or not readily accessible to the driver**. Note:** Inform the driver if the horn is insecure. b) The horn does not function c) The sound emitted by the horn is not loud enough to be heard by another road user. d) A gong, bell, siren or two or more tone horn fitted **Note:** When operated, a two or more tone horn automatically produces a sound which alternates at regular intervals between fixed notes,. e) For a vehicle first used on or after 1 August 1973, a sound emitted by the horn is: • not a constant note • not continuous or uniform • harsh or grating.

28 Driving Controls

Method of Inspection	Reason for Rejection
1 While sitting in the driver's seat, by operating the driving controls, where appropriate, check that they are: a) Functionally complete. b) Not cracked, fractured or corroded. c) Not obstructed or impeded in their travel. d) Positioned so that they can be satisfactorily operated without impairing proper control of the vehicle. e) Secure.	1 A driving control a) Functionally incomplete. b) Cracked, fractured of corroded. c) Obstructed or impeded in its travel. d) Positioned so it cannot be operated without impairing proper control of the vehicle. e) Insecure.
2 Check that drivers area is free from rubbish or other items liable to interfere with proper control of the vehicle.	2 Presence of rubbish or other items likely to interfere with proper control of the vehicle.
3 Check anti-slip provision on clutch pad.	3 Anti-slip provision on clutch pedal pad missing, loose or worn smooth.
4 Check that a means of stopping the engine is provided and functioning.	4 A means of stopping the engine not provided or inoperative.

30 Play at Steering wheel

Method of Inspection	Reason for Rejection
Note: Power Steering Systems. Vehicles with power steering systems must be inspected with the engine running.	
1 With the road wheels on the ground pointing straight ahead, lightly turn the steering wheel left and right as far as possible without turning the road wheel. Check the amount of free play at the circumference of the steering wheel. **Note:** Play due to wear or maladjustment must not be confused with apparent play due to the construction of the mechanism, such as caused by the deflection or flexible joints or spring compression in external power steering systems. **Note:** The steering wheel free play limit is a general rule for standard diameter steering wheels (380 mm). Lower or higher limits should be set with larger or smaller diameter steering wheels.	1 A point on the rim of the steering wheel moves without the road wheels moving, for more than a) 75 mm for non rack and pinion b) 13 mm for rack and pinion steering. **Note:** Movement up to 1/5 of the diameter of the steering wheel, e.g. 76 mm on a 380 mm diameter wheel may be accepted except on rack and pinion steering. On rack and pinion steering, 1/30 of the steering wheel diameter, e.g 13 mm on a 380 mm diameter wheel.

31 Steering Wheel

Method of Inspection	Reason for Rejection
1 With both hands rock the steering wheel from side to side at right angles to steering column and apply slight downward and upward pressure to the steering wheel rim (in line with column). Note:	1
a) Movement between steering column and steering wheel.	a) Movement between steering column shaft and steering wheel
b) Fractures in steering wheel hub.	b) Steering wheel hub fractured.
c) Fractures in steering wheel rim.	c) Steering wheel rim fractured.
d) Steering wheel spokes loose or fractured.	d) A steering wheel spoke loose or fractured.
e) Jagged edges on steering wheel rim.	e) Jagged edges on steering wheel rim likely to injure the driver.
2 If possible, check retaining device on steering wheel is fitted.	2 A steering wheel hub retaining device not fitted.

32 Steering Column

Method of Inspection	Reason for Rejection
1 Try to lift the steering in line with the steering column and note the movement at centre of steering wheel.	1 Excessive movement of centre of steering wheel in line with steering column (end float). **Note:** Certain types of steering column might show some movement not due to excessive wear, eg those fitted with universal joints or flexible couplings
2 Push steering wheel away and then pull it towards you. Note any side play.	2 Excessive side play indicating worn top bearings or insecure top mounting bracket.
3 While steering wheel is rotated, check for deterioration in any flexible coupling or universal joint of steering column.	3 A flexible coupling or universal joint deteriorated, worn or insecure.
4 Where practical, check any clamp bolts for presence and security of locking devices. (these may be located in the engine compartment or under chassis).	4 A coupling clamp bolt or locking device loose or missing.

36 Hand Lever Operating Mechanical Brakes

Method of Inspection	Reason for Rejection
1 Check that the vehicle has a parking brake designed to prevent • at least two wheel from turning or • with a three-wheeled vehicle, at least one wheel from turning.	1 The vehicle does not have a parking brake designed to prevent • at least two wheels from turning • with a three wheeled vehicle, at least one wheel from turning.
2 Check the method of operation.	2 For vehicles first used on or after 1 January 1968 the parking brake is not capable of being maintained in operation by direct mechanical action only.
3 Examine the condition of the brake lever and its location.	3 The brake lever is defective or so located that it cannot be operated satisfactorily.

4 With the brake lever in the "off" position a) Check the amount of side play in the lever pivot by moving the lever from side to side. **Note:** Some vehicles have sideways movement of the parking brake lever when new. Movement is a reason for rejection only when • the pawl is moved clear of the ratchet, and • the brake does not hold in the 'on' position b) Check the security of the lever and pawl mechanism pivots, their associated mounting and the presence and effectiveness of retaining and locking devices. **Note:** Items not possible to check fully from the drivers seat should be checked from beneath the vehicle**.** Opening the bonnet to inspect fully the parking brake mechanism might also be necessary.	4 a) Side play in the brake lever pivot to the extent that the pawl may inadvertently disengage. b) The lever or pawl mechanism pivots and their associated mountings are insecure or a locking or retaining device is insecure or missing.

36 Hand Lever Operating Mechanical Brakes cont'd

Method of Inspection	Reason for Rejection
5 Without operating the pawl mechanism, apply the parking brake slowly and check the effective operation of the pawl mechanism by listening for definite and regular clicks as the pawl moves over the ratchet teeth.	5 The pawl spring is not pushing the pawl positively into the ratchet teeth or the ratchet has broken, or excessively worn teeth.
6 When the brake is fully applied a) Knock the top and each side of the lever and check that the lever stays in the 'on' position	6 a) When knocked, the lever is not held in the 'on' position

b) Check that the lever is not at the end of its working travel and that there is no fouling of adjacent parts	b) When the brake is fully applied there is no possibility of further travel of the lever because the lever is • at the end of its working travel on the ratchet, or • fouling adjacent parts of the vehicle
c) Check that the lever is not impeded in its travel	c) The lever is impeded in its travel.
7 Check the vehicle structure around the mounting of the parking brake and associated mountings for fractures, cracks, corrosion and distortion. **Note:** It may be necessary to check the parking brake lever mounting 'prescribed area' from the vehicle underside when it cannot be checked from the inside.	7 Deliberate modification which significantly reduces the original strength, excessive corrosion, severe distortion, a fracture or an inadequate repair of a load bearing member or its supporting structure or supporting panelling within 30 cm of the parking brake mechanism or any associated mounting(s), that is, within a 'prescribed area'.

37 Service Brake Pedal

Method of Inspection	Reason for Rejection
A All types of braking systems	
1 Check a) The condition of the brake pedal and brake actuating linkage (eg, to remote master cylinders)	1 a) The pedal or actuating linkage fractured, excessively corroded, functionally incomplete or fouling parts of the vehicle/chassis.
b) The anti-slip face on the pedal pad	b) The anti-slip provision on the brake pedal pad is missing, incomplete, loose or worn smooth.
c) The security of the pedal pad to the pedal and the pedal to operating lever	c) A pedal pad or operating lever not secured to the pedal.
d) The condition of the pedal bearing or pivot	d) Excessive side movement of the pedal at right angles to its normal movement indicating a badly worn pedal bearing or pivot.
e) For chaffed rods or levers	e) A brake rod or lever reduced in thickness by more than 1/3rd
f) For frayed or knotted cables	f) A brake cable • knotted, or • with wires broken so that the cable is weakened significantly
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37 Service Brake Pedal cont'd

Method of Inspection	Reason for Rejection
g) For any corroded or damaged rod, lever or linkage. Wear in eyes of relay levers, clevis joints, stationary pins or pivots.	g) Weakening of any part due to excessive wear or damage
h) For abnormal movement of levers, indicating maladjustment or excessive wear.	h) Abnormal movement of levers indicating maladjustment or excessive wear.
2 Examine the vehicle structure near actuating linkage and mounting points for excessive corrosion, distortion and fracture.	2 Deliberate modification which significantly reduces the original strength, excessive corrosion, severe distortion, a fracture or an inadequate repair of a load bearing member, its supporting structure or supporting panelling within 30 cm of an actuating linkage mounting point, that is, within a 'prescribed area' see Appendix C.
3 On vehicles first used on or after 1 January 1968, check that a brake is applied to all wheels (this may need to be substantiated during the brake test).	3 On vehicles first used on or after 1 January 1968 a brake is not applied to all the wheels.
4 Depress the pedal and check for fouling on parts of the vehicle.	4 The pedal is fouling parts of the vehicle so that free movement of the pedal is obstructed.
5 Depress the pedal fully and check the position of the pad relative to the floor.	5 When the pedal is fully depressed, there is not enough reserve pedal movement. **Note:** This does not apply to power operated braking systems, providing the foot valve is fully open before the pedal is fully depressed.

38 Service Brake Operation

Method of Inspection	
B Hydraulic Systems (including Servo Assisted)	
1 Fully depress the pedal twice, first slowly and then rapidly each time to a point where sustained pressure can be held. Check for creep and sponginess.	1 a) The pedal tends to creep down while the pedal is held under pressure b) Sponginess indicating air in the hydraulic system.
2 If a vacuum servo is fitted, then with the engine off, totally deplete the stored vacuum by repeatedly applying the service brake. Fully apply the brake and hold at a constant pressure. Note whether the pedal can be felt to travel further when the engine is started.	2 No dip can be felt when the engine is started, indicating vacuum assistance is not working satisfactorily.
C Diesel engined vehicles with high servo boost	
1 Check the brake fluid level in the reservoir then pump the brake pedal several times and check that the fluid level in the reservoir is unchanged.	1 After several application of the brake pedal the fluid level in the reservoir has decreased.
2 With the vacuum depleted ensure the pedal is not spongy or does not creep.	2 With the vacuum depleted the pedal is spongy or creeps.
3 With servo assistance fully depress the pedal.	3 With servo assistance the pedal creeps down and touches the floor.

38 Service Brake Operation cont'd

Method of Inspection	Reason for Rejection
D Full power hydraulic braking systems	
1 Check that a warning device is fitted.	1 No warning device fitted.
2 Check whether a warning device fitted is audible or visible to the driver.	2 a) A warning device not visible (or audible) to the driver b) A visual warning device not readily visible to the driver in darkness.
3 With the engine switched off, repeatedly apply the service brake until the warning device operates. Check that at least two further applications of the brakes are available. In case of doubt the availability of two further applications can be established when testing the brakes on a Roller Brake Tester. **Note:** Hydraulic braking systems operate quietly. It is normally necessary to use a roller brake tester to verify that the brakes are applied.	3 a) A warning device not working correctly b) Insufficient reserve pressure to give at least two further applications of the brakes after the warning device has operated.

38 Service Brake Operation cont'd

Method of Inspection	Reason for Rejection
E Air and vacuum systems (including 'over hydraulic')	
1 Check that a visual warning device or, as an alternative for vehicles first used on or after 1 April 1983, an audible warning device is	1
a) Fitted	a) A mandatory warning device not fitted
b) Working correctly.	b) A mandatory warning device not working correctly.
2 Check that any visual warning device is	2 A visual warning device
a) Visible from the driving seat	a) Not visible from the driver's seat
b) Illuminated, or otherwise visible from the driver's seat in darkness.	b) Not illuminated, or its function not visible from the driver's seat in darkness.
3 For systems fitted with a pressure or vacuum gauge, with the reservoir at a maximum pressure or vacuum, note the reading on the gauge and then fully depress the pedal. Keep the pedal depressed and watch the gauge reading. **Note:** All vehicles must also be checked for pressure or vacuum leaks during the under-vehicle inspection of the brake system.	3 The gauge reading drops whilst the pedal is kept depressed, indicating a leak in the brake system.
4 Check that the operation of any air or vacuum powered system (eg, wipers, etc) does not adversely affect the operation of the braking system.	4 The repeated operation of any ancillary air or vacuum system completely depletes the stored air or vacuum for the braking system.

38 Service Brake Operation cont'd

Method of Inspection	Reason for Rejection
5 By applying the service brake repeatedly, gradually empty the braking system, and	5
a) If a gauge is fitted, note that • the reading on the gauge falls steadily each time the brake pedal is depressed, and • when the gauge needle has reached the "warning mark", there is still enough pressure or vacuum in the system to allow the brake to be applied at least twice more with pressure or vacuum assistance.	a) Insufficient pressure or vacuum to give assistance to brakes for at least two or more applications after the gauge has reached the warning mark.
Note: **Pressure gauge** If the pressure gauge has no warning mark, use 45 psi (3.1 Kg/sq cm or 3 bar) as a reference. **Vacuum gauge** If the vacuum gauge has no warning mark, use 10" to 12" (25 to 30 cm) as a reference.	
b) If a warning light or other device is fitted, check that, after the warning has operated there is still enough pressure or vacuum in the system to allow the brake to be applied at least twice more with pressure or vacuum assistance.	b) Insufficient pressure or vacuum to give assistance to brakes for at least two or more applications after the warning light or other device has operated.

38 Service Brake Operation cont'd

Method of Inspection	Reason for Rejection
6 Completely empty the reservoir by repeatedly pressing the service brake pedal. Start the engine and, if diesel run it at just below the governed speed or 2000 rpm if petrol. Note the time it takes for the warning device to stop operating.	6 The time between starting the engine and • the warning device ceasing to operate, or • the gauge showing a safe reading indicates that build-up of pressure/vacuum is low; For example • more than 3 minutes for pressure systems • 1 minute for vacuum systems.
7 If the vehicle is fitted with an anti-lock braking system, check that	7 the warning lamp
a) A warning lamp is fitted	a) Is missing
b) The lamp illuminates	b) does not illuminate
c) the lamp follows the correct sequence of operation	c) does not follow the correct sequence of operation
d) does not indicate a fault	d) indicates an ABS fault.
Note: The sequence varies with the type of system. Refer to VSI, manufacturer's or other reliable date, eg, purpose produced charts, books, etc.	

39 Hand Operated Brake Control Valves

Method of Inspection	Reason for Rejection
1 Examine the control for	1
a) Fracture, damage or excessive corrosion	a) Deliberate modification which significantly reduces the original strength, excessive corrosion, damage, fracture or an inadequate repair of the control
b) Security of operating valve spindle	b) An insecure operating valve spindle
c) Amount of travel	c) The control cannot be moved over its full travel
d) Loose connections or leaks	d) A loose connection or a leak in the system
e) Wear in gate and/or lever locating mechanism	e) A gate and/or locating mechanism so worn that the lever is not safely retained in the 'on' or 'off' position
f) Damping of the lever gate on valves controlling lock actuators	f) Insufficient or no damping of the lever gate valves controlling lock actuators.
2 Check the valve unit for	2
a) Security of its mounting	a) An insecure valve unit
b) Location	b) The lever located so that it cannot be operated satisfactory from the normal driving position
c) Correct functioning	c) A valve malfunctioning

41 Vehicle Structure (Chassis), Body Security and Condition

Method of Inspection	Reason for Rejection
Vehicle Structure	**Vehicle Structure**
1 With the vehicle over a pit or on a raised hoist, check the vehicle structure for any fracture, damage or corrosion, not within the prescribed areas, which is likely to affect prejudicially the correct functioning of the braking system or the steering gear.	1 Any deliberate modification, excessive corrosion, damage, fracture or inadequate repair not within a prescribed area which adversely affects braking or steering by severely reducing the strength or continuity of a main load bearing structural member.
Body Security	**Body Security**
2 Examine the following items for presence, security, fracture, distortion, excessive wear or damage	2
a) All fixings (eg brackets) securing the body and its supporting members to the chassis.	a) Excessive displacement of the body relative to the chassis which might lead to loss of control of the vehicle when driven
b) All fixings (eg brackets) securing the body to a sub-frame or supporting members, and all securing bolts, rivets or welds for all the above fixings.	b) Insecurity of the body or its supporting members to the chassis so that it is clear that there would be a danger to other road users.
3 Check the condition of the body and chassis in the vicinity of the mounting points.	3 Any deliberate modification, excessive corrosion, damage, cracks or inadequate repair of a load bearing body or chassis member which seriously affects its strength within 30 cm of the body mountings
Body Condition	**Body Condition**
4 Examine the body work for corrosion or damage resulting in sharp edges which are likely to cause injury.	4 A sharp edge or projection, caused by corrosion or damage, which renders the vehicle dangerous to other road users,

	including pedestrians.

42 Electrical Wiring and Equipment

Method of Inspection	Reason for Rejection
This examination is limited to that part of the electrical system which can be readily seen without dismantling any part of the vehicle.	
1 Check all electrical wiring for:	1 Wiring
a) Condition	a) Not adequately insulated
b) Security	b) Not adequately secured
c) Position	c) Positioned so that it is chafing or clipped to a fuel line or likely to be damaged by heat so that insulation will become ineffective
d) Signs of overheating	d) With evidence of overheating
e) Heavy oil contamination	e) Heavily contaminated with oil
2	2.
a) Battery and carrier for security	a) A battery and /or carrier not secure and likely to become displaced
b) Battery for leaks	b) Battery leaking
3 Check	3
all switches controlling all obligatory lights	insecurity or malfunction of a switch controlling an obligatory light

43 Engine and Transmission Mountings

Method of Inspection	Reason for Rejection
1 Examine condition of: • mountings • subframes And their security to chassis and check for • fractures • looseness • Deterioration	1 Any mounting or subframe • loose • fractured • deteriorated •

44 Oil and Water Leaks

Method of Inspection	Reason for Rejection
1 Check vehicle for oil and water leaks from any assembly or component to the ground, and/or which could be deposited on surrounding bodywork or onto the exhaust system. **Note:** if necessary the engine can be run at idle speed to confirm the existence of an oil leak.	1. • An oil leak from any assembly which deposits oil on the ground at a rate of a 75mm diameter pool in 5 minutes, or • A number of leaks which collectively would deposit oil at the same rate b) Leaks which, when the vehicle is moving, could be deposited upon the surrounding bodywork, exhaust and brake system so that it would • Contaminate areas, and • Cause a health, safety or fire risk

45 Fuel Tanks and Systems

Method of Inspection	Reason for Rejection
1 Examine fuel tank(s) for security and leaks	1 Fuel tank insecure or leaking
2 Check that fuel tank filler caps are: • Present • Of the correct type • Secure and seated properly to ensure correct function of sealing	2 A filler cap missing or unsuitable or in such condition that it would not prevent fuel leaking or spilling **Note:** temporary/emergency fuel caps are not permitted.
3 Check system for leaks	3 Any part of a system leaking fuel
4 Examine pipes to see they are securely clipped to prevent damage by chafing and cracking, and /or not in a position where they will be fouled by moving parts	4 Damaged, chafed, insecure pipes, or pipes so positioned that there is a danger of them fouling moving parts
5 Check for presence, accessibility, condition, marking and operation of a fuel emergency cut-off device	5 A fuel cut-off device missing, inaccessible, defective, or its location and method of operation not clearly marked
6 Where applicable check for presence, accessibility, condition, marking and operation of fuel cut-off devices fitted to heater systems	6 An emergency fuel cut-off device missing, inaccessible, defective or its location and method of operation not clearly marked
7 Check that no fuel pipe runs immediately adjacent to or in direct contact with electrical wiring or the exhaust system	7 A fuel pipe immediately to or in direct contact with electrical wiring or exhaust system

46 Exhaust Sytems

Method of Inspection	Reason for Rejection
1 Examine the condition of the exhaust pipes, silencers, and mountings check for:	1 An exhaust system
a) Security	a) Insecure
b) Leaks	b) Leaking or positioned so that fumes are likely to enter the drivers or passengers .
c) Condition	c) So corroded that it is likely to fail prematurely
2 Check for presence of silencer and assess it's effectiveness in reducing, as far as is reasonable, noise caused by the exhaust.	2 An exhaust silencer missing, or in such a condition it is not reducing exhaust noise as far as is reasonable.
3 Check that exhaust systems do not foul and are not likely to be a fire or fume hazard. **Note:** exhaust outlets should be positioned at the rear or offside of the vehicle.	3 An exhaust system fouling or likely to cause a fire or fume hazard.
4 Where applicable, check for presence, security and adequacy of grease shields to hot exhausts.	4 A heat shield missing, insecure or inadequate

48 Suspension Pins and Bushes

Method of Inspection	Reason for Rejection
A All Suspension Types	
1 Check • that there is enough clearance of the axle or suspension with the bump stop or chassis, and • whether any suspension unit is so weak that it does not hold the body far enough away from the road wheels.	1 • inadequate clearance of the axle or suspension with the bump stop or chassis, or • a suspension unit so weak that the body or other part of the vehicle fouls a road wheel or would do so if the vehicle was laden**.** **Note:** A missing bump stop rubber is not a reason for rejection.
2 Examine the vehicle structure around any sub-frame, spring or suspension component mounting for • excessive corrosion (ie, with the 'prescribed area'**.** • distortion • fractures **Note:** It is usually necessary to open the bonnet to inspect front suspension components. It may be necessary to inspect the inside of a luggage compartment or boot to effectively check prescribed areas and testable items that otherwise would not be seen.	2 Deliberate modification which significantly reduces the original strength, excessive corrosion, severe distortion, a fracture or an inadequate repair of a load bearing member or its supporting structure or supporting panelling within 30 cm of any sub-frame, spring or a suspension component mounting, that is, within a 'prescribed area'**,**

48 Suspension Pins and Bushes cont'd

Method of Inspection	Reason for Rejection
3 Check the security and the amount of play at the spring anchor bracket pin/bush and both pins/bushes of the spring shackle.	3 Excessive wear in a pin and/or bush for example more than • 2 mm for a 12 mm diameter pin • 3 mm for a 25 mm diameter pin • 10% of the pin diameter for pins over 25 diameter • deterioration of a rubber bush resulting in excessive movement
4 Check that a) anchor/shackle pins are correctly positioned and secure b) Retaining and any locking devices are present and secure	4 a) A shackle, anchor or linkage pin missing, fracture, not correctly positioned or excessively loose in its bracket b) A shackle, anchor or linkage pin retaining or locking device missing or insecurely fitted
5 Check the side play at spring eyes. **Note:** For normal leaf suspension, side play at the spring eye should not exceed 6 mm.	5 Excessive side play at spring eye
6 Check that the spring anchor and shackle brackets are a) Secure and free from signs of movement **Note:** Attachment of suspension units, eg, anchor brackets may be by bolts, nuts, rivets, welding, etc **Note**: When modified spring anchor or shackle brackets are fitted, there may be more holes in the bracket than holes in the chassis. This is not a reason for rejection.	6 An anchor or shackle bracket a) Loose to chassis

48 Suspension Pins and Bushes cont'd

Method of Inspection	Reason for Rejection
6 cont'd	
b) Free from cracks or fractures	b) Cracked or fractured
c) Complete with all nuts, bolts and rivets	c) With a nut, bolt or rivet missing
d) Free from excessive damage or corrosion. **Note:** Damage includes damage by weld, eg, weld blow holes or cuts which seriously weaken the component	d) Damaged or corroded so that it is seriously weakened
7 Check the security of spring and saddle to the axle.	7 a) Evidence that a spring saddle is fractured or moving relative to the spring b) A nut or bolt securing the spring to the axle not secure or missing

49 Suspension Spring Units and Linkages

Method of Inspection	Reason for Rejection
General	
1 Check if any suspension unit is so weak that it is not holding the body far enough away from the road wheels	1 A suspension unit so weak that the body or other parts of the vehicle are fouling the road wheels or is likely to do so if the vehicle is laden.
Leaf Springs	**Leaf Springs**
2 Examine each leaf spring assembly, check	2
a) The condition of spring leaves	a) A cracked or fractured leaf, or one which has been repaired by welding or is permanently distorted due to damage or so deteriorated that it is seriously weakened.
b) The condition of spring eyes	b) A defective spring eye
c) The lateral location of spring leaves (particularly leaf splay)	c) The leaves of a multi-leaf spring splayed to such an extent that the action of the spring is impaired or will foul other parts of the vehicle
d) Leaves for longitudinal displacement	d) A spring leaf longitudinally displaced
e) The correct location of the springs to the axle for symmetry	e) A spring so fitted that the axle is misaligned

49 Suspension Spring Units and Linkages cont'd

Method of Inspection	Reason for Rejection
Coil Springs 3 Check each spring for: a) Completeness and general condition b) Cracks or fractures c) Correct location at each end d) Wear and/or corrosion e) Welding repairs	3 A coil spring: a) Incomplete b) Cracked or fractured c) Not correctly located d) Worn or corroded so that it's cross sectional area is so reduced that it is weakened e) Repaired by welding

49 Suspension - General cont'd

Method of Inspection	Reason for Rejection
D Fluid/Gas/Air Suspension	
1 Check suspension units and accumulators for a) Displacement b) Damage or serious deterioration c) Fouling by moving parts	1 A suspension unit or accumulator a) Displaced or totally deflated b) Damaged or deteriorated so that it is likely to fail c) Fouled by moving parts likely to cause damage or restrict travel.
2 Check for any leak in the system.	2 A leak in the system.
3 Check suspension unit's supply pipes or interconnecting pipes for damage or corrosion.	3 A suspension unit supply pipe or interconnecting pipe damaged or corroded so that it is seriously weakened.
4 Check the security of a) Leveling valves b) Fluid/gas/air supply pipes and interconnecting pipes.	4 a) An insecure or defective leveling valve b) An insecure, chafed, leaking or corroded supply pipe or interconnecting pipe.
5 At each corner of the vehicle, where practicable, push down (or pull down from underneath), and note the amount of suspension movement.	5 No suspension movement **Note:** Large vehicle suspensions can be difficult to move. Ensure there is a defect before rejection.

49 Suspension - General cont'd

Method of Inspection	Reason for Rejection
E Torsion Bars	
1 Examine the bars for	1 A torsion bar
a) Cracks and fractures	a) Cracked or fractured
b) Excessive corrosion and pitting	b) Deteriorated by corrosion or pitting so that its cross sectional area is reduced and seriously weakened.
c) Welding or excessive heat.	c) Repaired or excessive play at an end fixing.
2 Check the end fixings for	2 An end fixing
a) Security	a) Insecure
b) Excessive free play	b) Has excessive free play
3 Examine the adjustment assemblies for security.	3 Adjustment assembly inadequately locked.
4 Check that the attachments of bars are	4 A torsion bar attachment bracket
a) Secure to frame and suspension	a) Loose
b) Free from cracks or fractures	b) Cracked or fractured
c) Free from excessive damage or corrosion.	c) Weakened by damage or corrosion

49 Suspension - General Cont'd

Method of Inspection	Reason for Rejection
F Bonded Suspension Units	
1 Check that the attachments of units are	1 A bonded unit attachment
a) Secure	a) Loose
b) Free from cracks and fractures	b) Cracked or fractured
c) Free from excessive damage or corrosion	c) Weakened by damage or corrosion
2 Examine the bonding of the flexible element to its associated metal fixing.	2 Failure of the bonding between flexible element and the metal so that part of the unit is likely to become displaced.
3 Check the general condition of the unit for damage and deterioration of the flexible element.	3 The unit is so damaged or deteriorated that it is no longer capable of carrying out its proper function.

50 Suspension - Attachment of Spring Units, Linkages and Sub-Frames

Method of Inspection	Reason for Rejection
G Suspension Arms and Linkages, Sub-Frames, etc 1 Check the following members for cracks, fractures, distortion, corrosion, wear and insecurity a) Suspension arms (wishbone, etc) b) Trailing arms c) Radius arms d) Tie bars/rods e) Panhard rods f) Torque/reaction arms g) Anti-roll bars and linkages h) McPherson strut casings i) sub-frames **Note:** Some vehicles use comparatively thin gauge steel pressings for some highly stressed suspension components. Many of these parts have hollow 'box sections' or upfacing areas where road dirt impregnated with salt or other chemicals collects and causes serious but often very local corrosion. Special attention should be paid to these components.	1 A member • cracked, fractured or insecure • severely distorted • seriously weakened by corrosion or wear • which is adjustable and is loose in its adjustment threads, or its locking device insecure or missing • inadequately repaired • seriously weakened as a result of deliberate modification

50 Suspension - Attachment of Spring Units, Linkages and Sub-Frames Cont'd

Method of Inspection	Reason for Rejection
2 Check that an anti-roll bar is fitted to an axle on which it is standard.	2 An anti-roll bar not fitted to an axle on which is standard
3 Check the security and the amount of play at pins/bushes/mountings and ball joints locating a) Upper and lower suspension arms/wishbones b) Trailing arms c) Radius arms d) Tie-bars/rods e) Panhard rods f) Torque/reaction arms g) Anti-roll bars and linkages h) Sub-frames	3 • excessive play in a pin/bush or pin/bearing for example more than - 2 mm for a 12 mm diameter pin - 3 mm for a 25 mm diameter pin - 10% of the diameter for pin over 25 mm diameter • excessive play in ball joint • deterioration of a rubber, synthetic bush or mounting resulting in excessive movement • deterioration of the bonding of a rubber bush/mounting resulting in excessive movement **Note:** Some rubber/synthetic bushes are designed to provide comparatively high degree of compliance. They are therefore likely to show some movement. Such components should normally only be rejected when serious deterioration of the bonding or flexible material is evident.

50 Suspension - Attachment of Spring Units, Linkages and Sub-Frames Cont'd

Method of Inspection	Reason for Rejection
4 Check that	4 A suspension link locating pin
a) Linkage pins are correctly positioned and secure	a) Incorrectly positioned or insecure
b) Retaining and any locking devices are fitted and secure	b) Retaining or locking device missing or not properly locked
5 Check the following suspension attachment brackets and mountings for security, cracks, fractures, excessive damage or corrosion and tightness of nuts, bolts, etc.	5 A suspension attachment linkage bracket or mounting • insecure • cracked or fractured • damaged, corroded or worn to such an extent that its strength is seriously reduced • nut, bolt or rivet missing or weld cracked • inadequately repaired • seriously weakened as a result of deliberate modification
a) Upper and lower suspension arms/wishbones	
b) Trailing arms	
c) Radius arms	
d) Tie-bars/rods	
e) Panhard rods	
f) Torque/reaction arms	
g) Anti-roll bars and linkages	
h) Sub-frames	

50 Suspension - Attachment of Spring Units, Linkages and Sub-Frames Cont'd

Method of Inspection	Reason for Rejection
6 On vehicles which have a drive shaft which forms part of the suspension, check	6
a) The shaft for distortion, damage and serious corrosion	a) Distorted, damaged or excessively corroded drive shaft
b) The universal joint bearings for excessive play	b) Excessive play in a universal joint bearing
c) The flanges and bolts for presence and security	c) • an incorrectly seated universal joint flange • a loose, missing or inadequately locked flange bolt

51 Shock Absorbers

Method of Inspection	Reason for Rejection
1 Check for the presence of shock absorbers where these are a standard item.	1 a) No shock absorbers fitted to a vehicle on which they are known to be fitted as standard b) A shock absorber missing.
2 Examine each shock absorber for damage, corrosion and security of attachment. **Note**: For shock absorbers incorporated in MacPherson struts, inspect in conjunction with items under sub-section 2.5.	2 a) External damage or corrosion to the casing of a shock absorber so that the unit does not function. b) An insecure or detached shock absorber.
3 Examine each shock absorber for fluid leaks. **Note:** Ensure that any fluid near the unit is from the shock absorber and not from another source. Slight seepage causing a thin fluid mist on a shock absorber is not a reason for rejection.	3 A fluid leakage serious enough to indicate that the fluid seal of a shock absorber has failed.
4 Examine the condition of any linkages, pivots or rubber bushes.	4 An excessively worn shock absorber linkage, pivot or bush.
5 At each corner of the vehicle, where practicable, push down (or pull down from beneath) and not the rebound of the body to determine if each shock absorber is producing a damping effect on the suspension.	5 A shock absorber, which has negligible damping effect.

53 Axles, Stub Axles, Wheel Bearings and Drive Shafts

Method of Inspection	Reason for Rejection
A Suspension Joints and Wheel Bearing (wheels jacked)	
1 Jack up the front of the vehicle so that the front wheels are clear of the ground. **Note:** Observe relative vertical movement between components during jacking up. Carry out the following examinations by placing a suitable bar under each wheel in turn and levering upwards.	1 Excessive movement
a) Check for excessive vertical movement between sub axles and axle beams.	a) Between a stub axle and an axle beam **Note:** Some vehicles (especially with ball thrust races) are designed to have a small amount of vertical movement.
b) Check for vertical movement between swivel and housing and movement in wishbone bearings. **Note:** It is important that where applicable, suspensions are jacked so that the suspension spring force is removed from the ball joints, ie, suspension arms must be clear of their stops. Failure to do this can result in defective joints being overlooked.	b) Between a swivel joint and its housing.

53 Axles, Stub Axles, Wheel Bearings and Drive Shafts cont'd

Method of Inspection	Reason for Rejection
	C) • at a suspension, ball joint, tie bar joint, wishbone bearing, pin or bush • at a MacPherson strut upper attachment. **Note:** Some MacPherson strut top bushes are designed to have lateral play when the suspension is hanging free. Rejection is only justified when play is due to wear and/or maladjustment, etc.
2 With the steered wheels clear of the ground, rotate each wheel in turn and listen for any sounding indicating roughness in the bearing.	2 Roughness, in a front wheel bearing
3 Rock each wheel by hand or, where appropriate, with a bar in the wheel. (This inspection may alternatively be carried out at Class VII testing stations using wheel oscillating equipment where available, in the "side-to-side" mode.) If ATL approved; this inspection is carried out on wheel play detectors in side to side mode.	3
Check a) The amount of movement between the stub axle and the axle beam, or	a) • King pin loose in axle beam or its pin retaining device loose/missing • excessive play in king pin and/or bush such that it is likely to adversely affect the steering of the vehicle.

53 Axles, Stub Axles, Wheel Bearings and Drive Shafts cont'd

Method of Inspection	Reasons for Rejection
b) The movement in the swivel joints, and the security of their attachment to the stub axle and suspension arms **Note:** Suspension ball joints can have free play lift as a feature of their design, and rejection is only justified when the lift exceeds the manufacturer's limit.	b) • excessive play in swivel joint • excessive play in any suspension swivel pin or suspension ball joint • a swivel joint insecure in a suspension arm or in a stub axle
c) The movement of the wheel relative to the stub axle, and note the amount of play in the wheel bearings. Repeat Methods of Inspection a, b and c above using the assistant to rock the wheel by hand or where appropriate with a bar in the wheel while the tester examines the relevant items.	c) Excessive play in a front wheel bearing
4 Check the presence and effectiveness of front suspension retaining and locking devices. **Note:** It is not always possible to determine the 'effectiveness' of some types of locking device by normal test methods, eg, self-locking nuts. Only the presence of these devices is a test requirement.	4 A front suspension retaining or locking device missing or ineffective.
5 Check axle beam and stub axles for cracks, damage and distortion.	5 Cracked or distorted axle beam or stub axle.

53. Axles, Stub Axles, Wheel Bearings and Drive Shafts cont'd

Method of Inspection	Reason for Rejection
B Suspension joints (wheels on turning plates or on wheel play detectors if ATL approved) Where applicable lower the front wheels to that they • bear the weight of the vehicle, • are resting on turn plates which enable the wheels to be turned freely lock to lock or • if ATL approved resting on wheel play detectors Inspect as follows:	
1 **Grasp the top** of each front wheel and rock it vigorously in and out to check for play. This method of inspection is to be repeated using the assistant to rock the top of the wheel in and out while the tester examines the relevant items. If ATL approved this inspection is carried out on wheel play detectors in side-to-side mode.	1
a) In the upper and lower suspension ball joints and wishbone bearing	a) • excessive play in suspension ball joint • ball joint securing nut loose or not locked • excessive play in a pin or bush in an inner wishbone bearing pin or bush (cross check with sub-section 2.4G MOI 3)

53 Axles, Stub Axles, Wheel Bearings and Drive Shafts cont'd

Method of Inspection	Reason for Rejection
b) • at MacPherson strut sliding bushes and glands • at MacPherson strut upper support bearings.	b) • excessive play in a MacPherson strut, sliding bush or gland • excessive movement in a MacPherson strut upper support bearing assembly • roughness or stiffness in a MacPherson strut upper support bearing (cross check with sub-section 2.2D MOI 1e)
2 Grasp each front wheel **at 3 o'clock and 9 o'clock**, and shake vigorously to determine the condition of the outer ball joints and track control arm inner bushes. If ATL approved this inspection is carried out on wheel play detectors in side-to-side mode.	2 a) Excessive play in an outer ball joint b) Excessive play in a track control arm inner bush
3 Examine the condition of the bonding between the metal and flexible material in the MacPherson strut upper support bearing, if visible. Repeat method of inspection 2 and 3 above using the assistant to shake the wheel vigorously at 3 o'clock and 9 o'clock while the tester examines the relevant items.	3 a) Serious deterioration of the bonding between metal and flexible material of an upper support bearing b) A loose or insecurely locked unit in the upper support bearing assembly.

53 Axles, Stub Axles, Wheel Bearings and Drive Shafts cont'd

Method of Inspection	Reason for Rejection
C Front Wheel Drive Shafts and Couplings Inspect as follows while the front wheels are jacked up	
1 With the vehicle in neutral gear, rotate the wheels when they are on each lock in turn, and check visually the gaiters of the outer constant velocity joints while the pleats are expanded.	1 a) An outer constant velocity joint gaiter missing, split or insecurely mounted to its housing b) A drive shaft constant velocity joint excessively worn or insecure c) A drive shaft coupling excessively worn or insecure d) A drive shaft flexible rubber or fabric coupling unit severely cracked or breaking up e) A drive shaft flexible rubber or fabric coupling softened by oil contamination, insecure or fouling any other part of the vehicle.
2 Check a) The font wheel drive shafts for straightness and damage b) Drive shaft couplings' condition and security.	2 a) A drive shaft bent or damaged b) An insecure or fractured fastener securing a drive shaft coupling bearing.

54 Steering Linkage

Method of Inspection	Reason for Rejection
D Lock to Lock Check	
1 With the front steered wheels resting on turning plates, ask the assistant to turn the wheels from lock to lock using the steering wheel. It is important that this inspection is carried out • with the suspension substantially in the normal running position • on vehicles **not** fitted with a beam axle with the steered wheels resting on turning plates that move freely Check for	1
a) Fouling, particularly brake hoses	a) A component of the steering mechanism, road wheels or tyres fouling any part of the vehicle
b) Brake hoses or brake pipes stretched or twisted	b) A brake pipe or brake hose stretched, twisted or damaged
c) Security and correct adjustment of lock stops if fitted **Note:** Some vehicles have lock stops comprising soft metal pads on the body for the front tyres to rub against. These are acceptable if they are properly maintained so that they do not damage the tyres.	c) • an incorrectly adjusted lock stop • a loose, damaged or insecurely locked lock stop
d) Condition and security of steering rack gaiters **Note:** Expand steering rack gaiters for proper examination	d) An insecure, split or missing steering gaiter

e) Tightness or roughness in the steering mechanism	e) Excessive tightness or roughness in the steering mechanism

54 Steering Linkage

Method of Inspection	Reason for Rejection
e) Fluid leakage from a steering damper seal or gland	e) Fluid leakage from a steering damper seal or gland to such an extent that it is clear that the seal or gland has failed
f) The presence and security of retaining and locking devices **Note:** Some locking devices are not obvious. In such cases, the vehicle presenter should be informed of any evidence of disturbance or insecurity.	f) A retaining or locking device missing or insecure
g) excessive corrosion, severe distortion or a fracture in the chassis or integral body attachment area of a main steering component, eg, steering box or rack, idler arm mounting, etc	g) Deliberate modification which significantly reduces the original strength, excessive corrosion, severe distortion, a fracture or an inadequate repair of a load bearing member of its supporting structure or supporting panelling within 30cm of a steering component mounting, that is, within a 'prescribed area'.

55 Steering System - Play Under Load

Method of Inspection	Reason for Rejection
B Play Under Load	
1 With the front wheels on the ground ask the assistant to rock the steering wheel in both directions firmly against resistance, examine the complete steering mechanism. If ATL approved; the wheel play detectors should be used in rotational mode for this inspection.	1
Check for	
a) Insecurity of any components	a) Insecurity of any part fixed to the vehicle structure, eg, steering box, rack housing or intermediate drop arm pivot housing
b) Relative movement between sector shaft and drop arm	b) Relative movement between sector shaft and drop arm
c) Loose ball pin shanks	c) A loose ball pin shaft
d) Loose track rod end or drag link ends	d) A loose track rod or drag link end
e) Weak or broken socket springs	e) A weak or broken socket spring
f) Excessive play in ball joints **Note:** Play must not be regarded as excessive unless it is clear that replacement, repair or adjustment of the component is necessary.	f) Excessive play in a ball joint

55 Steering System - Play Under Load cont'd

Method of Inspection	Reason for Rejection
g) Excessive play in pivot points Note: Play must note be regarded as excessive unless it is clear that replacement, repair or adjustment of the component is necessary	g) Excessive play in a pivot point (eg, an intermediate drop arm)
h) Relative movement between the steering arm and its fixings	h) Relative movement between a steering arm and its fixings
i) The condition and security of rear wheel steering components, including front to rear connecting shafts	i) • a rear wheel steering component insecure • excessive play in a rear wheel steering mechanism connection or ball joint • hydraulic fluid leaking from a rear wheel steering system.
j) If the rear wheel steering is inoperative, check • the position of the rear wheels, and • whether it affects the front wheel steering	j) Inoperative rear wheel steering where, • the rear wheels are not held substantially in the straight ahead position, or • the front wheel steering is adversely affected

55 Steering System - Static Inspection

Method of Inspection	Reason for Rejection
C Static Inspection	
1 With the road wheels on the ground and the steering wheel and system stationary, check for	1
a) Wear in the neck of ball pins	a) Sharp or deep grooves in the neck of a ball pin
b) Track rod or drag link ends misaligned	b) Track rod or drag link ends seriously misaligned
c) Components fracture, cracked, damaged, excessively corroded or deformed **Note:** This inspection also applies to rear wheel steering systems including front to rear connecting shafts	c) A component fractured, cracked, damaged, excessively corroded or deformed so that it is unserviceable.
d) Repairs, especially by welding, or evidence that excessive heat has been applied, to steering components or structural members **Note:** This inspection also applies to rear wheel steering systems including front and rear connecting shafts	d) Structural repair by welding to a steering linkage component, or signs of excessive hear having been applied **Note:** Reasons for Rejection c and d also apply to rear wheel steering. An inoperative rear wheel steering systems is not a reason for rejection if the rear wheels are held substantially in a straight ahead position the front wheel steering is not adversely affected

56 Power Steering

Method of Inspection	Reason for Rejection
1 With the front road wheels on the ground, vehicle in neutral gear and the parking brake applied, run the engine and rock the steering wheel in both directions, Check	1
a) By feel at the steering wheel, that the system is operating	a) Power steering malfunctioning or inoperative
b) For leaks in the system **Note:** Make sure the fluid has leaked from the power steering system and not from another source.	b) A leak in the system showing that a component, joint or seal has failed
c) That pipes are free from damage and are not chafing on other parts of the vehicle.	c) A fluid pipe excessively damaged or fouling other parts of the vehicle.
2 Where practicable, check the security of the power steering pump and the condition of its drive system.	2 Pump insecure or its drive system missing or defective.

57 Transmission

Method of Inspection	Reason for Rejection
1. Examine transmission, check for: a) Missing or loose flange bolts b) Cracked or insecure flanges c) Wear in shaft and/or wheel bearings d) Security of bearing housings e) Cracks or fractures in bearing housings f) Wear in universal joints g) Deterioration of flexible couplings h) Distorted, damaged shafts i) Deterioration of bearing housing flexible mountings j) Clearance between transmission shafts and adjacent Components	1. a) A loose or missing flange bolt(s) b) A flange cracked, or loose on the transmission shaft c) Excessive wear in shaft bearing d) A bearing housing insecure to its fixing e) A cracked or fractured bearing housing f) Excessive wear in a universal joint g) Deterioration of a transmission shaft flexible coupling h) A damaged, cracked or bent shaft i) Deterioration of a flexible mounting of a bearing housing j) Evidence of fouling between any transmission shaft and an adjacent component

57 Transmission cont'd

Method of Inspection	Reason for Rejection
2 Front Wheel Drive Check the drive shaft inner and outer universal joint couplingsand constant velocity joints for:	2
a) Wear and security	a) Drive shaft constant velocity or universal joint coupling worn or insecure
b) Damage to flexible rubber or fabric universal joints	b) A flexible rubber or fabric universal coupling unit damaged by severe cracking or breaking up
c) Security and oil contamination of flexible rubber or fabric universal joints	c) A flexible rubber or fabric universal coupling unit excessively softened by oil contamination or insecure
d) Condition, presence and security of constant velocity joint Gaiters	d) A drive shaft constant velocity joint gaiter split, missing or insecurely mounted
3 Wheel Bearings	3
a) Rotate each wheel and check for excessive roughness in wheel bearings	a) Excessive roughness in a wheel bearing
b) Rotate each wheel in turn and rock each wheel by hand or when appropriate with a bar in the wheel, and check the movement of the wheel relative to the axle to assess the amount of free play in the wheel bearing	b) Excessive play in a wheel bearing

59 Mechanical Brake Components

Method of Inspection	Reason for Rejection
1 Check the mechanical brake components for a) Chafed rods or levers b) Frayed or knotted cables c) Free rotation of clevis joints between cables and levers (this includes cable linkages between brake pedals and remote mounted servos) d) A corroded or damaged rod, lever or linkage. Wear in eyes of relay levers, clevis joints, stationary pins or pivots. e) Abnormal movement of levers, indicating maladjustment or excessive wear f) Security and excessive wear of brake linings/pads g) Contamination of brake discs and drums by leaking brake fluid, oil or grease. h) The condition and security of brake drums and discs	1 a) A brake rod or lever reduced in thickness by more than 1/3rd b) A brake cable • Knotted or, • With wires broken so that the cable is weakened. c) Seizure of clevis joint pivoted which causes strain or wear to cables to an extend likely to lead to premature failure of the cable. d) Weakening of any part due to excessive wear, damage or corrosion e) Abnormal movement of levers, indicating maladjustment or wear f) A brake lining or pad insecure or less than 1.5 mm thick at any point g) A brake disc or drum contaminated by brake fluid, oil or grease h) A brake disc or drum insecure, cracked or scored, pitted or worn

59 Mechanical Brake Components cont'd

Method of Inspection	Reason for Rejection
i) Presence and security of brake back plates, wheel cylinders and calipers	i) A brake back plate, wheel cylinder or caliper securing device loose, missing or deteriorated
j) Restriction of free movement	j) Restricted free movement of brake components
k) Presence and security of locking devices. **Note:** On some vehicles, locking devices may not be obvious. However, if there is evidence of disturbance or change, inform the vehicle presenter.	k) A locking device missing or insecure.

60 Braking Systems and Components cont'd

Method of Inspection	Reason for Rejection
7 Air Brake Actuators Check each brake cylinder/actuator for security, damage, corrosion and operation. Check that all retaining and locking devices are secure. Check the travel of operating pistons/diaphragm and mechanisms.	7 An actuator cracked, damaged, insecure, inoperative or corroded actuator. An actuator retaining or locking device insecure. Excessive travel of the operating mechanism indicating need for adjustment.

61 Braking System and Components

Method of Inspection	Reason for Rejection
1 Leaks Check for leaks in any part of the braking system with and without the brakes being applied.	1 A leak in any part of a braking system.
2 Brake Pipes and Flexible Hoses Check that rigid brake pipes are securely held and not free to vibrate. Check all accessible rigid brake pipes for a) Fouling by a moving part b) Kinks c) Chafing, corrosion and damage **Note:** To assess correctly the condition of corroded metal pipes, surface dirt might have to be removed. This might require light scraping with the Corrosion Assessment Tool 'spade end'. Care must be taken not to damage any protective coating. d) Repairs	2 A rigid brake pipe inadequately clipped or otherwise supported. A rigid brake pipe a) Fouled by moving parts b) Kinked c) Chafed, corroded or damaged **Note:** Repairs to the pressure lines of hydraulic brake systems are unacceptable unless suitable connectors are used. Compression joints of a types using separate ferrules are not suitable. d) Inadequately repaired or with unsuitable joint fittings. **Note:** Repairs to the pressure lines of hydraulic brake systems are unacceptable unless suitable connectors are used. Compression joints of a type using separate ferrules

	are not suitable.

61 Braking System and Components cont'd

	Method of Inspection		Reason for Rejection
	Examine flexible hoses for signs of weakness under pressure with footbrake fully applied.		A flexible hose bulging under pressure.
	Examine all flexible hoses for		A flexible hose
	a) Room to move as necessary without fouling any part of vehicle b) Kinks c) Stretching or twisting d) Chafing or deterioration **Note:** A hose should be rejected for cracking or chafing only if that is severe enough to expose the reinforcement. e) Condition of ferrules f) Exposure to excessive heat.		a) Has insufficient room to move, resulting in fouling on any part b) Kinked c) Stretched or twisted d) Chafed, damaged or deteriorated e) Brake hose ferrules corroded f) Exposed to excessive heat
3	Hydraulic Master Cylinders and Reservoirs	3	
1	Where practicable, check hydraulic master cylinders, remote linkages and reservoirs for	1	A master cylinder or reservoir
	a) Security of mounting b) Excessive corrosion c) Damage		a) Insecurely mounted b) Severely corroded c) Damaged

61 Braking Systems and Components cont'd

	Method of Inspection		Reason for Rejection
3	Hydraulic Master Cylinders and Reservoirs cont'd	3	Cont'd
	d) Presence of reservoir cap		d) With a reservoir cap missing
	e) Fluid level **Note:** This check is confined to transparent reservoirs or where an indicator is fitted. Reservoir caps should not be removed.		e) Below the minimum level indication when this is shown
	f) Leaks.		f) Leaking hydraulic fluid
4	Servos	4	
	Check servos for		A servo
	a) Presence b) Security of mounting c) Excessive corrosion d) Damage e) Vacuum pipe deteriorated, kinked, split, collapsed, excessively chafed f) Leaks		a) Missing when fitted as standard b) Insecurely mounted excessively weakened by corrosion d) Damaged to the extent that its function is impaired. e) Vacuum pipe deteriorated, kinked, split, collapsed, chafed f) Leaking.
	Where an adjustment indicating rod is provided, check if brake adjustment is necessary.		Adjustment indicating rod shows brake adjustment is necessary.

61 Braking Systems and Components cont'd

	Method of Inspection	Reason for Rejection
4	Servos cont'd Examine the condition of chassis or body structure and panelling around the master cylinder or combined master cylinder/servo mounting.	4 Deliberate modification which significantly reduces the original strength, excessive corrosion, severe distortion, a fracture or an inadequate repair of a load bearing member or its supporting structure or supporting panelling within 30cm of the master cylinder/servo mounting, that is, within a 'prescribed area', see Appendix C.
5	Reservoirs (Air/Vacuum) (including accumulators, pressure and vacuum vessels). Examine reservoirs for a) Security of mounting b) Structural damage c) Excessive corrosion. Check reservoir mountings and securing straps a) Are free from cracks, fractures and excessive corrosion. b) Do not chafe the reservoir or other fittings. Check that the reservoir capacity is not unduly reduced by	5 A reservoir a) Insecurely mounted b) Structurally damaged (eg angled dents) c) Excessively corroded. Reservoir mountings and securing straps a) Cracked, fractured or excessively corroded. b) Chafing reservoir or other fittings. A significant reduction in reservoir capacity as a result of

deformation.	deformation.

61 Braking Systems and Components cont'd

	Method of Inspection		Reason for Rejection
6	Valves Examine all valves for a) Security of mounting b) Damage and corrosion. Check for excessive discharge of oil from a pedal exhaust valve, unloader valve and/or governor valve, quick-release valve, etc. Check the condition of the load sensing valve and, where appropriate, its operating linkage. Check that a load sensing valve is present and connected, if it is a standard item.	6	A valve a) Insecurely mounted b) Damaged or weakened by corrosion Excessive discharge of oil from a valve. Load sensing valve with seized or defective linkage or obviously incorrectly adjusted. Evidence that a load-sending valve has been removed or disconnected from a vehicle where it is known to have been fitted as standard.
7	Pumps and Compressors Check the security of the vacuum pump or air compressor. Check the condition of the vacuum pump or air compressor drive system.	7	A vacuum pump or air compressor insecure. Drive belts excessively loose, excessively deteriorated, missing or drive system missing or defective.

63 Front Position Lamps and Front End Outline Marker Lamps

Method of Inspection	Reason for Rejection
With the front and rear obligatory lamps (side lights) switched on, check:	An obligatory lamp missing.
That two front position lamps, and if applicable, two front end outline marker lights are fitted, check for condition and security.	A switch missing, faulty, insecure or not able to be operated from the normal driving position.
The presence, condition, security and operation of the switch.	A front position lamp that shows a light other than red to the rear
That all lamps are illuminated and emit the correct colour light.	A front position lamp:
Do not flicker when tapped lightly by hand.	1 incomplete, inoperative, not in good working order or not clean (ie damaged, deteriorated lens or not visible from a reasonable distance)
Are not adversely effected by the operation of any other lamp	2 insecure, obscured or does not face to the front or rear as appropriate
Are not obviously out of position.	3 Flickers when tapped lightly by hand.

64 Rear Position, Rear End Outline Marker Lamps, Registration Plate Lamps and Rear Fog Lamps

Method of Inspection	Reason for Rejection
With the rear obligatory lamps (side lights) switched on, check: That two front, two rear and registration lamps are fitted, check for condition and security. The presence, condition, security and operation of the switch. That all lamps are illuminated and emit the correct colour light. Do not flicker when tapped lightly by hand. Are not adversely effected by the operation of any other lamp Are not obviously out of position.	An obligatory lamp missing. A switch missing, faulty, insecure or not able to be operated from the normal driving position. A rear position lamp that shows a light other than red to the rear A rear position lamp: 1 incomplete, inoperative, not in good working order or not clean (ie damaged, deteriorated lens or not visible from a reasonable distance) 2 insecure, obscured or does not face to the front or rear as appropriate 3 Flickers when tapped lightly by hand

Multiple Registration Plate Lamps

Where more than one registration plate lamp or bulb is fitted any one inoperative lamp or bulb is Reason for Rejection

64 Rear Position, Rear End Outline Marker Lamps, Registration Plate Lamps and Rear Fog Lamps cont'd

Method of Inspection	Reason for Rejection
Rear Fog Lamps With dipped headlights and the ignition switched on, operate the rear fog lamp switch and check that a rear fog lamp: is fitted to the centre or offside of the vehicle is working and does not flicker when tapped lightly by hand that the drivers tell-tale works properly check the presence, condition, security and operation of the switch	A mandatory rear fog lamp: is missing, does not emit a steady red light or emits a light other than red is incomplete, not in good working order or not visible from a reasonable distance is insecure, obscured or not facing to the rear flickers when tapped lightly by hand tell-tale does not work is adversely effected by the operation of any other lamp A rear fog lamp switch: missing, faulty, insecure, or not able to be reached from the normal driving position.

Notes:

1 On some vehicles the front fog lamps need to be switched on before the rear fog lamp(s) will work.

2 A rear fog lamp is permitted to operate independently of headlamp, position lamps or ignition system.

65 Rear Reflectors

Method of Inspection	Reason for Rejection
1 Where applicable each vehicle is to be fitted with two rear reflectors, one on each side fitted symmetrically. Check that the required amount of reflectors are fitted.	1 There are less than the required number of reflectors facing to the rear or where there is two they are not symmetrical.
2 Check that the reflectors are:	2 A reflector
a) Facing the rear	a) Not facing the rear
b) The correct colour	b) Not red in colour
c) In good working order and in clean condition	c) Not in good working order or not clean, ie, so damaged or deteriorated that it's function is impaired
d) Not obscured (**note:** at least 50% of the reflective surface must be visible from the rear)	d) Obscured
e) Securely fitted	e) Insecure
f) Not obviously incorrectly positioned	f) Obviously incorrectly positioned

Notes:

Approval Marks - The inspection does not include a check that reflectors have the appropriate approval mark.

Reflective Tape - Reflective tape is not acceptable as a substitute for a rear reflector.

66 Direction Indicators and Hazard Warning Lamps

Method of Inspection	Reason for Rejection
Flashing Type	
1 Operate the left and right direction indicators in turn and check:	1 A direction indicator
a) That all lamps are present and secure	a) Missing or insecure
b) That all lamps are complete, in good working order and clean	b) Incomplete, not in good working order or not clean, ie, so damaged or deteriorated that it's function is impaired. **Note:** An effective proprietary repair must be assessed on it's merits considering security, colour, light output and durability.
c) The flashing rate **Note:** It may be necessary to run the engine when checking the flashing rate	c) Does not flash 60 to 80 times a minute
d) That every direction indicator emits an amber light, except vehicles first used before 1 September 1965 where both front indicators may be white and both rear indicators red	d) Does not show light of the appropriate colour
e) That their operation is separate from, and not adversely affected by, the operation of any other lamp.	e) Adversely affected by the operation of another lamp, eg, dual function lamps on foreign vehicles
2 Check the selector switch for presence, security, condition and operation.	2 A missing, insecure or faulty selector switch.
3 Check the drivers 'tell-tale' warning device for presence and operation. **Note:** a 'tell-tale' may be audible or visual.	3 The driver's 'tell-tale' missing or inoperative.

66 Direction Indicators and Hazard Warning Lamps cont'd

Method of Inspection	Reason for Rejection
4 Check that the hazard warning device is present, secure and operates using only one switch with the ignition switched both on and off. While it operates, check that all the direction indicators flash simultaneously and the 'tell-tale' is working correctly.	4 A hazard warning device: a) Does not cause all the direction indicators to flash in phase with the ignition both on and off b) 'tell-tale' not working correctly c) A switch missing, insecure or faulty d) Operated by more than one switch.
Semaphore Type	
1 Operate the direction indictors and check: a) The operation of each indicator b) That every indicator emits an amber light **Note:** A semaphore arm must illuminate when in operation, it may flash but is not required to do so. c) Selector switch presence, security, condition and operation.	1 A semaphore arm: a) Does not extend or retract smoothly b) Does not show an amber light to the front and rear c) A selector switch missing, insecure or faulty.
2 Check the correct operation of the 'tell-tale'. **Note:** A 'tell-tale' may be audible or visual.	2T he 'tell-tale' is missing or not working properly.

Note: Vehicles first used before 1 April 1986 A hazard warning device is not required by Regulation, but if one is fitted it must be tested. The hazard warning lamp 'tell-tale' may be a separate light or the same as the indicator 'tell-tale'. However, it must be a flashing light.

67 Aim of Headlamps

Method of Inspection	Reason for Rejection
Check headlamp aim on main or dipped beams as necessary and with the headlamp aim equipment aligned with the longitudinal axis of the vehicle, align the centre of the collecting lens with the centre of light intensity and note the vertical and horizontal degrees of aim.	A headlamp fails to meet the aiming requirements.

68 Headlamps

Method of Inspection	Reason for Rejection
1 Check that the vehicle is fitted with obligatory headlamps, as follows: a) A matched pair of 'CE' approval marked main beam headlamps and a matched pair of dipped beam headlamps are fitted.	1 A missing obligatory headlamp or non-approved headlamp is fitted. **Note:** Class 3 vehicles may not require two headlamps (matched pair).
2 Check the presence, condition, security and operation of the switch.	2 A missing, faulty or insecure switch
3 Switch on each main beam headlamp and check that: a) All main beams are switched off by one switch (dip switch) which leaves a matched pair of dipped beam headlamps switched on, or b) The main beam deflectors are deflected by a drivers control, to make them dipped beams.	3 a) A headlamp does not operate immediately when selected on dipped or on main beam. b) Operation of the dip switch does not: extinguish all main beam lamps and leave on at least one pair of dipped-beam headlamps, or, deflect the main beam to make them dipped beams.

Notes:
Headlamps are not required on vehicles first used before 1 January 1931, but they may have one or more optional main or dipped beam lamps.

A 'matched pair' is a pair of lamps which both emit light of substantially the same colour and intensity, and are both the same size and shape, so that they are symmetrical to one another.

Pre 1931 vehicles. For vehicles that are fitted with one or two optional laps - where one is fitted it must dip. Where two are fitted, either both must dip or one must dip and the other must switch off.

68 Headlamps cont'd

Method of Inspection	Reason for Rejection
4 Check that each obligatory headlamp	A obligatory main or dipped beam headlamp:
a) Is in good working order. **Note:** Any adverse effects due to headlamp lens damage or deterioration can also be assessed on checking headlamp rim	a) Not in good working order and in a clean condition, is damaged or deteriorated to such an extent that: the light output is well below that required to illuminate the road ahead, or the beam image is adversely effected
b) Is secure	b) Insecure
c) Does not flicker when tapped lightly by hand	c) Flickers
d) If intended to be one of a matched pair • emits light of substantially the same colour as it's counterpart • is the same size • is correctly positioned	d) The headlamps provided to form a matched pair • do not emit light of the same colour • are not the same size • are obviously not correctly positioned
e) Is of the correct colour either white or yellow.	e) Does not emit light that is either white or yellow.

Notes:

a) In a four headlamp system the outer pair of headlamps need not emit the same colour light as the inner pair.
b) The measurement of the precise position of headlamps is not part of the inspection, but check visually that the lamps are at about:
- the same height, and

- the same distance inboard from the side of the vehicle.

69 Obligatory Stop Lamps

Method of Inspection	Reason for Rejection
1 Check that the correct number of stop lamps are fitted.	1 An obligatory stop lamp missing
2 Check that each stop lamp	2 A stop lamp
a) Operates when the service brake is applied	a) Does not operate when the service brake is applied
b) Is complete in good working order and in clean condition	b) Is incomplete, not in good working order or in a clean condition, is so damaged or deteriorated that it's function is impaired. **Note:** An effective repair must be assessed on its merits considering security, colour, light output and durability.
c) Emits a steady red light.	c) Emits other than a steady red light when the service brake is applied, or remains on when all the brakes are released.
d) Is securely fixed.	d) Insecure
e) Faces the rear.	e) Does not face the rear

Notes:

- Vehicles first used before 1936 are not required to be fitted with a stop lamp.

- Vehicles first used before 1 January 1971 must be fitted with one stop lamp either on or to the offside of the vehicle centre line. If such a vehicle is fitted with two lamps it should be treated as a post 1 January vehicle.
- Vehicles first used on or after 1 January 1971 must be fitted with at least two stop lamps

69 Stop Lamps cont'd - High Level Stop Lamps

Method of Inspection	Reason for Rejection
Check the high level stop lamp:	
1 Is not obscured, and is not obviously incorrectly positioned. **Note:** At least 10% of the lamp must be visible from the rear. The precise position of stop lamps is not part of the inspection, but, where two lamps are fitted, check visually that each lamp is located at about: • the same height, and • the same distance inboard from the side of the vehicle.	1 Obscured or obviously incorrectly positioned.
2 Is not adversely effected by the operation of any other lamp	2 Is adversely effected by the operation of any other lamp.

Notes:

High Level Stop Lamps

These are lamps usually fitted in the rear window or boot spoiler of a vehicle and may consist of a number of light sources.
The lamp is one unit, so as long as at least one of the light sources illuminates when the brake pedal is pressed the lamp is deemed to be working.

Dual Function Lamps

On vehicles first used before September 1965, it is acceptable for a direction indicator lamp to be incorporated with a stop lamp.

70 Additional Lamps/Equipment

Method of Inspection	Reason for Rejection
1 Reversing Lamps With the ignition switched on, check: a) The reversing lamps emit a diffused white light when reverse gear is selected. b) The lamps extinguish when neutral gear is selected c) The lamps are in good working order, are secure and carry an approval mark d) The lamps do not flicker when lightly tapped by hand.	1 A reversing lamp: a) That fails to operate or does not emit a white diffused light b) Fails to extinguish when neutral or forward gear is selected c) Are not in good working order, are insecure or unapproved d) Lamps flicker when tapped lightly by hand.
2 Front Fog/Driving Lamps Check that: a) A single front fog lamp emitting a white or yellow diffused light illuminates only when dipped beam is selected b) A pair of matched fog lamps both emitting a white or yellow diffused light should illuminate together c) A pair of matched, long range driving lamps, both emitting a white diffused light should illuminate together.	2 Lamps that: a) Lamps inoperative or operate other than in dipped beam mode b) Lamps operate incorrectly c) Lamps operate incorrectly

71 Brake Performance

Method of Inspection	
A Roller Brake Test **Preparation** 1 Examine the tyres of the vehicle to ensure that they are not obviously under-inflated. 2 Determine whether the vehicle has a split (dual) braking system. **Note:** To determine whether the vehicle has a split (dual) braking system, check the number of pipes **from** a hydraulic master cylinder or air foot valve. Split (dual systems normally have at least two pipes. Some hydraulic systems have two master cylinders. 3 Select the direction of rotation of the roller brake tester so that the vehicle wheels rotate forward. **Positioning the vehicle** Position the front wheels of the vehicle in the rollers of the brake tester and then run both sets of rollers together to align the vehicle. **Note:** In some cases, it may be necessary to chock the wheels not under test.	

71 Brake Performance cont'd

Method of Inspection	Reason for Rejection
Testing the front wheels 1 With one set of rollers revolving at a time, (see information column if ATL approved) gradually depress the service brake until maximum effort is achieved, or until the wheel locks and slips on the rollers. Record the reading at which the maximum braking effort is achieved and whether "locking-up" occurs. Release the service brake. 2 Start both sets of rollers and note whether a significant brake effort is recorded from any wheel without a brake being applied. Gradually depress the service brake and watch how the braking effort for each wheel increases. From the previous tests you will know the value at which wheel slip occurs. Aim to stop just short of this. However if wheel slip is caused unintentionally, start the test again. Gradually release the service brake and observe how the braking effort at each wheel reduces. Stop the rollers. **Note:** The out-of-balance in braking effort between wheels on either side of the vehicle.	1 a) Little or no braking effort is recorded from the brake on any wheel, indicating clearly that the brake is not functioning correctly b) See Reason for Rejection 8. 2 a) Undue braking effort recorded on a road wheel, even though the brake is not applied, indicating that a brake is binding. b) Evidence of excessive brake grabbing or judder as the brake is applied. c) The braking efforts at the road wheels do not **increase** at about the same rate when the service brake is applied gradually. d) The braking efforts at the road wheels do not reduce at about the same rate when the service brake is released gradually. c) The out-of-balance of the brakes on the steered road wheels is greater than 25% at anytime (see Method of Calculating

	brakes Out-of Balance in Section 3.8). **Note:** Disregard any service brake imbalance when the brake effort from **each** front wheel is less than 40kg.

71 Brake Performance cont'd

Method of Inspection	Reason for Rejection
Testing the front wheels	
3 If the vehicle has a parking brake (handbrake), which operates on the front wheels, repeat the process outlined in 1 above using this brake and keeping the "hold-on" button or trigger in the disengaged position the whole time. **Testing the rear wheels** Release the brakes and drive the vehicle forward until the rear wheels are in the rollers. Run them together as for the front wheels to align the vehicle.	3 a) The braking effort recorded from the parking brake on any wheel does not reach the prescribed standard, indicating clearly that the brake is not functioning correctly. b) See Reason for Rejection 9.
4 With one set of rollers revolving at a time (see information column if ATL approved) gradually depress the service brake until maximum effort is achieved or until the wheel locks and slips on the rollers. Record the Maximum braking efforts and whether 'lockup' occurs. Release the service brake.	4 a) The braking effort is recorded from the parking brake on any wheel does not meet with the prescribed standard, indicating clearly that the brake is not functioning correctly. b) See Reason for Rejection 8.

71 Brake Performance cont'd

Method of Inspection	Reason for Rejection
5 Start both sets of rollers and note whether significant brake effort is recorded from any wheel without a brake being applied. Gradually depress the service brake and watch how the braking effort for each wheel increases. For the previous tests you will know the value at which wheel slip occurs. Aim to stop just short of this. However, if wheel slip is caused unintentionally, start the test again.	5 a) Excessive effort recorded on a road wheel, even though the brake is not applied indicating that a brake is binding. b) Evidence of excessive brake grabbing or judder as the brake is applied. c) The braking efforts at the road wheels do not **increase** at about the same rate when the service brake is applied gradually.
6 Gradually release the service brake and watch how the braking effort at each wheel reduces. Stop the rollers.	6 The braking efforts at the road wheels do not **reduce** at about the same rate when the service brake is released gradually.
7 If the vehicle has a parking brake (handbrake) which operates on the rear wheels, repeat the process as outlined in 3 above using this brake and keeping the "hold-on" button or trigger in the disengaged position the whole time. **Note:** For testing transmission (prop-shaft) handbrakes, see Method of Inspection 10.	7 a) Little or no braking effort is recorded from the parking brake on any wheel, indicating clearly that the brake is not functioning correctly. b) See Reason for Rejection 9.

71 Brake Performance cont'd

Method of Inspection	Reason for Rejection
8 Record the appropriate results of the service brake test via the VTS Device, which will calculate the results. Where the VTS Device is unserviceable see the Introduction section paragraph 3.	8 The calculated service brake efficiency is too low (see Brake Efficiency Table in Section 3.10). **Note:** The service brake percentage efficiency is considered satisfactory providing wheel lock occurs on **more than half** of the wheels braked by the service brake. **Note: Class VII vehicles only** When testing service brake performance on unladen vehicles • Premature wheel lock can occur, and • Less than the required brake effort is achieved The required brake effort might not be achieved due to the action of load sending/pressure reducing equipment in the service brake system. In either of these cases, the service brake percentage efficiency is considered satisfactory if (i) More than half the wheels lock, or (ii) Both front wheels lock and at least 100kg (220lb) is achieved by each rear wheel, or (iii) For three axle vehicles; both front wheels lock and at least 50kg (110lb) is achieved by each rear wheel.

71 Brake Performance cont'd

Method of Inspection	Reason for Rejection
9 Record the appropriate results of the parking brake test via the VTS Device, which will calculate the results. Where the VTS Device is unserviceable see the Introduction section paragraph 3.	9 the calculated parking brake efficiency is too low (see Brake Efficiency Table in Section 3.10). **Note:** The parking brake percentage efficiency is considered satisfactory providing wheel lock occurs on **more than half** of the wheels braked by the parking brake.
Testing Transmission (prop shaft) Handbrakes	
10 Carry out the following procedure: Place the wheels to be tested in the rollers. Run both sets of rollers together to align the vehicle. Chock the other wheels of the vehicle fore and aft. Run both sets of rollers together. Keep the handbrake ratchet disengaged for as long as the brake is applied. Apply the brake slowly and progressively without causing transmission snatch. Record the appropriate results of the brake test via the VTS Device, which will calculate the results. Where the VTS Device is unserviceable see the Introduction section paragraph	10 The transmission brake 'parking' efficiency is too low (see Brake Efficiency Table in Section 3.10) **Note:** To avoid possible damage, the parking brake efficiency requirement must be calculated using the appropriate vehicle weight before the brake is tested. Testing of the brake must cease as soon as the minimum efficiency requirement is reached when progressively applying the brake.

3.	

71 Brake Performance cont'd

	Method of Inspection		Reason for Rejection
B	**Decelerometer Test**		
1	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 20mph (32kph) and note the brake efficiency recorded when applying only	1	
	a) The service brake		a) The service brake efficiency recorded on the decelerometer does not meet the requirements specified in the Brake Efficiency Table in Section 3.10
	b) The parking brake		b) The parking brake efficiency recorded on the decelerometer does not meet the requirements specified in the Brake Efficiency Table in Section 3.10.
	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. Record the appropriate results of the brake test via the VT Device. Where the VTS Device is unserviceable see the Introduction section paragraph 3.		c) When the service brake is applied • There is a severe grab or judder, or • There is a severe pull one way on the steering wheel, and/or • The vehicle swerves appreciably.

71 Brake Performance cont'd

Method of Inspection	
C Plate Brake Test **Preparation** 1 Determine whether the vehicle has a single or dual (split) braking system. **Note:** To determine whether the vehicle has a dual (split) braking system, check the number of pipes **from** the hydraulic master cylinder or air foot valve. Dual (split) systems normally have at least two pipes. Some hydraulic systems have two master cylinders. 2 **Class IV vehicles:** Obtain the vehicle test weight. Class VII vehicles: Establish the vehicle actual presented weight. Brake efficiency on class VII vehicles will be calculated using either • the actual DGW where the present weight is 2000kg or over (the DGW is obtained from the Department of Transport plate or the manufacturer's plate fitted to the vehicle - see notes 1 and 2 in Section 3.9). or • enter the appropriate data to conduct the test.	

71 Brake Performance cont'd

Method of Inspection	Reason for Rejection
Testing the vehicle	
1 Drive the vehicle forwards at a steady speed of about 4mph up to the plate tester. Just before the wheels are on the plate high friction surfaces, apply a light constant pressure to the brake pedal. Do not stop on the tester. Note the way in which the brake efforts fluctuate.	1 Excessive fluctuation of brake effort with a constant brake pedal effort indicating brake judder.
2 At the same steady speed of 4mph, again drive the vehicle forwards onto the plate brake tester. As soon as the wheels are on the plate high friction braking surfaces, apply the service brake progressively until maximum effort is achieved. Note • The way in which the brake efforts increase • The maximum values achieved. Record the appropriate results of the brake test via the VTS Device, which will calculate the results. Where the VTS Device is unserviceable see introduction section paragraph 3.	2 a) A significant brake effort recorded on a road wheel, when the brake is not applied, indicating that a brake is binding b) The braking efforts at both road wheels on an axle do not increase at about the same rate when the service brake is applied c) The our-of-balance of the brakes on the steered road wheels is greater than 25% at any time **Note:** Disregard any imbalance when the brake effort from each front wheel is less than 40kg force d) The service brake efficiency is too low (see Brake Efficiency Table requirements in Sections 3.8 and 3.10).
3 Repeat 2 above using the parking brake.	3 a) Little or no effort is recorded from the parking brake on any wheel, indicating clearly that the brake is not functioning correctly. b) The parking brake efficiency is too low (see Brake Efficiency Travel requirements in Sections 3.8 and 3.10).
4 Repeat 1, 2 and 3 above a second time to confirm any Reason for Rejection.	

71. Method of Calculating Brake Performance

1 Brake efficiency

The brake efficiency will be calculated by the VTS Device using the following methods.
Total up the braking effort recorded from all the wheels of the vehicle when the service brake is applied (having taken into account wheel lock where appropriate).
Total up the braking effort recorded from the appropriate wheels when the parking brake is applied.
Calculate the service brake and parking brake percentage efficiencies by following the procedure detailed below according to the class of vehicle tested.

Class III and IV	**Class VII Vehicles**
Determine the brake testing weight for the vehicle, eg, from the VTS Device. The weight includes an element of 140kg for the driver, fuel, tools, etc. Calculate the service brake percentage efficiency by dividing the total brake effort achieved when the service brake is applied by the vehicle weight and then multiply the result by 100, ie, **Total brake effort** **_____ x 100 = % efficiency** **Vehicle Weight** Calculate the parking brake percentage efficiency by dividing the total brake effort achieved when the parking brake is applied by the vehicle weight and then multiplying the result by 100 as above.	Obtain the vehicle Design gross Weight (DWG) from the Department of transport plate (commonly call 'Ministry' plate) fitted to the vehicle. If a ministry plate is not fitted to the vehicle then obtain the DGW from the manufacturer's plate fitted to the vehicle (see 1 and 2, section 3.9) or from the VTS Device. Calculate the service brake percentage efficiency by dividing the total brake effort achieved when the service brake is applied by the vehicle DGW and then multiply the result by 100, ie, **Total brake effort** **_____ x 100 = % efficiency** **DGW** Calculate the parking brake percentage efficiency by dividing the total brake effort achieved when the parking brake is applied by the vehicle DGW and then multiply the result by 100, as above. **Note: Plate Brake Test Only** Vehicles with a presented weight of 2000kg or more must be tested to the above criteria. On vehicles with a presented weight of less than 2000kgm, the brake efficiency must be calculated using a nominal DGW figure of 2600kg, ie, **Total brake effort** **_____ x 100 = % efficiency** **2600**

Alternatively, if ATL approved the computer controlled brake tester will automatically calculate the efficiency and any out of balance.

2 Brake Out-of-Balance

The out of balance of the braking effort on the front steered wheels when the service brake is applied is obtained by comparing the brake efforts at each front wheel when they are tested simultaneously (see sub-section 3.7 A2). Carry out the following calculation to determine the percentage imbalance:

$$\frac{\text{(Higher brake effort - Lower brake effort)}}{\text{Higher brake effort}} \times 100 = \text{imbalance}$$

71 Examples of Latest Type Ministry and Manufacturer's Plates

1 'Ministry' and Manufacturer's plates are usually located inside the vehicle cab and on the nearside.

2 On the 'Ministry'and manufacturer's plates there is a provision to show vehicle 'DESIGN WEIGHTS' also 'WEIGHTS NOT TO BE EXCEEDED IN GT BRITAIN' (GB WEIGHTS). In cases where there is not a DESIGN GROSS Weight shown on a plate then the GROSS GB Weight is used for brake percentage efficiency calculations. Some vehicles first used before 1968 may not be fitted with a 'Ministry' plate displaying gross weight. The brake percentage efficiency of such vehicles must be determined by Decelerometer Test - see sub-section 3.7 B1.

Note:

If the presented vehicle is fitted with a 'Ministry plate, then the information displayed on that plate relating to axle, gross vehicle and gross train weight will always override the information displayed on the manufacturer's plate. The registration number and chassis number on the 'Ministry' plate must be cross checked to ensure the plate relates to that vehicle.

71 Brake Efficiency Table

CLASS OF VEHICLE	MINIMUM BRAKE EFFICIENCIES REQUIRED		
	SERVICE BRAKE	PARKING BRAKE	
		Vehicle with a single line braking system	Vehicle with a split (dual) braking system
Vehicles with 4 or more wheels having a service brake (foot-brake) operating on at least 4 wheels and a parking (handbrake) operating at least 2 wheels.	50%	25%	16%
Vehicles with 3 wheels with a service brake operating on ALL wheels and a parking brake operating on at least one wheel which were first used: I) Before 1 January 1968 II) On or after 1 January 1968	 40% 50%	 25% 25%	 16% 16%
Vehicles first used before 1 January 1968 which do NOT have one means of control operating on at least 4 wheels (or 3 for three wheeled vehicle and which have one brake system with two means of control or two brake systems with separate means of control.	30% from first means of control	25% from second means of control	

NOTE 16% parking brake efficiency equates to a vehicle holding on a gradient of 1 in 6.25

The bumper has excessive abrasions and scratches which detract from the appearance of the vehicle The vehicle is not in an acceptable condition.

The paint work must be of a uniform colour and retain it's original gloss finish. Paint mismatch or fading is unacceptable.

Excessive scratches or abrasions are unacceptable.

Any scratch of more than 100mm in length is a reason for failure.

Excessive corrosion at sill.
A failure item.


29/01/2008

Excessive corrosion at base ~~of C post and sill. A failure~~ item

Excessive corrosion at base of A post and sill .significantly weakening the body structure. A Failure item and removal of plates.

Excessive corrosion and holes in rear inner wing allowing ingress of water to boot. Failure item

Excessive corrosion and holes in rear inner wing allowing ingress of water to boot.
Failure item


29/01/2008