RSA

NATIONAL CAR TEST (NCT) MANUAL 2018

Passenger Vehicles (Up to 8 Passengers)

Údarás Um Shábháilteacht Ar Bhóithre
Road Safety Authority

Contents

Road Safety Authority

National Car Test (NCT) Manual

VERSION 4.0 (JULY 2018)

Application:
M1

(passenger vehicles up to 8 passengers)

These guidelines (also referred to as the "Manual") are issued by the Road Safety Authority under the Road Traffic (National Car Test) Regulations 2017 (No. 415 of 2017), referred to herein as the "NCT regulations". This Manual lays down the test method and pass/fail criteria to be adopted for the compulsory road-worthiness test of M1 vehicles.

The purpose of this Manual is to serve as a reference for those who carry out road-worthiness tests on vehicles with accommodation for up to eight passengers, including taxi and hackney cabs. Vehicle owners may also find the Manual useful in that it details the inspections to which a vehicle will be subjected and the reasons why it may not be considered roadworthy.

This Manual sets out the testing methods to be employed by those involved in national car testing. It also provides guidance to NCT test operators and testers in relation to the reasons why a vehicle may fail a road-worthiness test and the categorisation of defects.

The Manual replaces the "National Car Test (NCT) Manual 2014" in its entirety.

REVISIONS

This manual may be revised and updated from time to time. A current version is always available on the Road Safety Authority website, www.rsa.ie. If printing all or part of the Manual, the website must always be checked to ensure any printed copy remains current.

Version	Date	Section Number Updated	Description
1.0	Jan 2012	Numerous	Updated for Directive 2010/48 (EU)
2.0	Apr 2012	Introduction & 30	Vehicle presenter ID, include test on HID lights
3.0	June 2014	Numerous	Updates to SI, modifications report added, odometer reading req.
4.0	July 2018	All	Updated for Directive 2014/45 (EU)

INTRODUCTION

1. DEFINITIONS

"NCT" means National Car Test.

"Tester" means a person employed under the NCT regime for the purpose of carrying out tests.

"NCT Issuing Authority" means a person authorised by the Road Safety Authority to conduct NCT tests and to issue test certificates.

"NCT Test Centre" means a premises authorised by the Road Safety Authority, at which NCT may be carried out. The term Test means;

- an initial NCT test;
- a periodic NCT test;
- an initial or periodic re-test;

An **initial NCT test** is the first roadworthiness test of a vehicle and this test is due, in the majority of cases, from the fourth anniversary of the first registration of the vehicle or as otherwise specified in the NCT regulations.

A **periodic test** is a subsequent roadworthiness test following its initial test. Periodic tests are required to be carried out at a frequency as specified in the NCT regulations.

A **voluntary test** means a test carried out more than 90 days before a test due date.

A **re-test** means a test carried out on a vehicle, subsequent to the refusal of a test certificate in respect of that vehicle, where-

(a). the application for the retest is made not more than 21 days after the day on which the test certificate was first refused, and

(b). the test is carried out on a day which is not more than 30 days after the day on which a test certificate in respect of the vehicle was first refused.

In carrying out a re-test on a vehicle, only those items which gave rise to the refusal of the Test certificate are to be tested. The items which failed must be re-tested as per the method of testing in the relevant section of the Manual.

If during a retest the tester notices any other obvious defects, then the owner shall be notified and these additional items tested. Where a reason for failure is issued with respect to these additional test items, then this will be recorded on the test report.

The term **"owner"** in the context of applying for a test is taken to include the:

- the person by whom the vehicle is normally kept and
- in relation to a vehicle which is the subject of a hire- purchase agreement or lease, the person in possession of the vehicle under the agreement or lease.

"Test report" means the report issued by an issuing authority containing the result of the test in accordance with NCT Regulations.

"Method of Testing" details the ways in which the test of items on a vehicle are to be carried out and the equipment to be used. When carrying out each test, particular attention should be paid to the information given in the "Notes" since this gives guidance on the conduct and scope of the test.

"Reasons for Failure" gives direction on the type of defects which will result in the vehicle failing. A vehicle should only be assessed against the items and reasons for failure listed in this Manual and/or instructions issued by the Authority.

The methods of testing described in this Manual are intended to be carried out by trained and competent persons, working with appropriate supervision in suitable premises with safe equipment and tools.

An **"Advisory Notice"** is used to inform the customer of an item that should be rectified but does not prevent the vehicle from achieving a minimum standard of roadworthiness. This will be included on the Test Report.

"Design Gross Vehicle Weight (DGVW)" This is the weight of a vehicle including the maximum load it can carry in accordance with the manufacturer`s design specifications. It is also known as the Maximum Authorised Mass (MAM).

"Individual design axle weight" means the mass corresponding to the maximum permissible static vertical load transmitted to the ground by the wheels of the axle, on the basis of the construction features of the axle and of the vehicle and their design performances.

"Manufacturer's plate" means a plate or label, affixed by the manufacturer on a vehicle that provides the main technical characteristics which are necessary for the identification of the vehicle and provides the competent authorities with the relevant information concerning the technically permissible maximum laden masses;

"First registered" means the date on which a vehicle was first registered, irrespective of country of registration, or where only the year of first registration is known, that year, in combination with the day and month of first registration in the State and "first registered" is to be read accordingly.

"Insecure"

The term **"insecure"** is used throughout this Manual to describe a defective condition. The term should be taken by testers to mean the following:

(a). that a component on the vehicle has relative movement either at its fixing or in relation to an associated component where there should be none or

(b). that a component is not safely or completely attached either at its fixing or to an associated component.

"Worn"

A component will be considered worn where the wear is to such an extent that it is either;

(a). likely to fail, or

(b). clearly not functioning effectively as designed, or

(c). visibly worn beyond manufacturers known permitted limits, or

(d). likely to affect the operation or condition of another safety related component.

2. SCOPE

This Manual applies to the following categories of vehicles;

Category M1: Vehicles designed and constructed for the carriage of passengers and comprising of no more than eight seats in addition to the driver's seat.

3. MAKING A REQUEST FOR A NCT TEST BOOKING

A request for a NCT test booking must be made to the National Car Testing Service (NCTS) booking telephone line / in writing by post / email / fax or on line. Full details of how to make a request for a test booking can be found at www.ncts.ie.

4. PRESENTATION OF ID

A person who presents a vehicle to be tested must produce required identification i.e. a driving licence or public services card. Where the required identification is not produced at the time of the test, the test may be carried out and a test report issued. However, a Test Certificate will not be issued until such time as the required identification is produced at NCTS.

5. TEST REPORTS AND TEST CERTIFICATE

Before a vehicle, that has been tested, leaves the Test Centre, a statement of result must be issued for that vehicle giving details of any failed items. Where the tester is satisfied that the vehicle has passed all the required test items specified in this Manual, then a Test certificate is issued (apart from point 4 above) and or in the case of minor only defects. Where a Test certificate is not issued, the reasons for refusal will be provided to the owner in the test report.

6. DEFICIENCY CATEGORISATION

Deficiencies found during the test shall be categorised in accordance with Directive 2014/45/EU into one of the following groups:

Minor defects (MiD); having no significant effect on the safety of the vehicle or impact on the environment and other minor non-compliances. If only minor defects are identified, the vehicle will be deemed passed "Pending Re-Check". The Test Certificate will not issue until the vehicle is re-presented for a visual inspection with the deficiencies rectified.

Major defects (MaD); defects that may prejudice the safety of the vehicle, have an impact on the environment, put other road users at risk or other more significant non-compliances.

Dangerous defects (DD); defects constituting a direct and immediate risk to road safety or having an impact on the environment such that the vehicle should not be used on the road under any circumstances.

On completion of a test and where a vehicle is failed because of a Dangerous Defect, the tester should proceed as follows: The customer must be informed:

- Of the existence, extent and nature of the defect.
- That the owner and/or driver of a mechanically propelled vehicle, who drives a mechanically propelled vehicle in a public place while there is a defect affecting the vehicle which he knows of or could have discovered by the exercise of ordinary care and which is such that the vehicle is, when in motion, a danger to the public shall be guilty of an offence.
- That in the opinion of NCTS the vehicle is dangerous.
- That the customer must make arrangements to have the vehicle removed from the test centre.

A sticker stating "Failed Dangerous" should be attached to the vehicle.

The driver of the vehicle must be advised not to drive the vehicle if it has dangerous defects and be advised to have it towed away or otherwise carried away.

If the customer states that she/he is going to drive the vehicle:

• Advise that An Garda Síochána will be informed.

If the customer drives the vehicle off the premises the incident must be reported to An Garda Síochána immediately.

7. REASONS TO REFUSE TO CARRY OUT A NCT TEST

A NCT tester may refuse to carry out a test if in his or her opinion:

(a). any part of the vehicle or any of its equipment is

i. in such a dirty or dangerous condition as to make it unreasonably difficult to carry out the test, or

ii. a load on the vehicle or other items are not adequately secured that it would be safe or practicable to carry out the test.

iii. The test should be abandoned where a vehicle is presented in such a condition that the tester considers it unsafe to continue because it becomes

apparent during the test that certain items cannot be satisfactorily inspected (e.g. dirty).

iv. where the vehicle's engine does not comply with the preliminary check requirements(1) under Test Item 2.

v. where a Registration Book/Licence Certificate is not produced and the vehicle identification number does not correspond with the National Car Testing Service (N.C.T.S.) vehicle file.

vi. where the Registration Book/Licence Certificate is produced and the vehicle identification number on the vehicle does not correspond with either the Registration Book/Licence Certificate or the N.C.T.S. vehicle file.

(b). fee payable in respect of NCT test has not been paid.

8. CIRCUMSTANCES IN WHICH TO REFUSE TO ISSUE A TEST CERTIFICATE

The circumstances in which the NCTS will refuse to issue a test certificate are as follows:

- Where the person who presents the vehicle to be tested fails to produce the required identification.

The owner and the Driver and Vehicle Computer Services Division must be notified where there are any discrepancies between the vehicle documentation or N.C.T.S. vehicle file and the vehicle in the Make, Model, Body type, EU Vehicle Category, VRT Vehicle Category, Motor Taxation Class or number of seats.

9. ODOMETER

The tester must record the odometer reading at the time of the test where an odometer is fitted. When the test report is being presented to the owner or the presenter of the vehicle, the tester shall point out the odometer reading. The owner or the presenter of the vehicle must verify that the odometer reading is correct, and if not shall immediately advise the Tester. The verification on the odometer reading must be completed before the vehicle departs from the NCT test centre as there will be no opportunity to change the reading at a later stage.

10. GENERAL

The purpose of this Manual is to serve as a reference and guide for testers for those who carry out roadworthiness tests.

While testers are not expected to memorise all of the content in this Manual, they should familiarise themselves with the method of testing and the reasons for failure to ensure testing is carried out to a consistently high standard utilising best practice.

The test is essentially a maintenance and condition check and shall be carried out using techniques and equipment currently available without the use of tools to dismantle or remove any part of the vehicle. A detailed assessment of a vehicle's design and construction is not part of the test. However, where the method of testing prescribed is a visual inspection and where this visual inspection is not sufficient to determine the condition of a component, the component should be further examined using one of the following methods:

a. by using tools such as a mirror, tapping hammer, corrosion assessment tool or wire brush.

b. by exerting force, with or without the aid of tools.

The above shall only apply where there is a clear doubt regarding the condition of a component. Panels (designed for easy removal) covering a component may be removed where it is possible to remove such panels without damaging the paintwork (e.g. attached with hand fasteners). Panels attached by means of pop rivets or other permanent fasteners should not be removed. It should also be noted that the test can only confirm the roadworthiness condition of the vehicle at the time of the test. It is not a prediction of future vehicle roadworthiness and should not be regarded as a warranty.

Since it is not practicable to lay down limits of wear and tolerance for all types of components of different models of vehicle, or to define acceptable amounts of damage deterioration and effectiveness; testers are expected to use their experience and judgment in making an assessment of the condition of components. The main criteria to be used when making a defect assessment are; has the component reached the stage where it is obviously likely to affect adversely the roadworthiness of the vehicle (dangerous) or where the condition of the component has clearly reached the stage at which replacement, repair or adjustment is necessary (major). Where the vehicle manufacturer has provided wear tolerances these should be adhered to.

A tester must not under any circumstances issue a test certificate for a vehicle that is not tested in accordance with this Manual or that a Test certificate is conditional upon repairs or adjustments to the vehicle being made subsequent to the test. A tester shall conduct a thorough inspection of all of the test items strictly in accordance with this Manual.

The Methods of Testing detailed in this Manual are designed to comply with normal workshop practice. The Road Safety Authority cannot accept responsibility for any injury to any person or any damage to any property arising from the conduct of any test described in this Manual. Nothing in this Manual may be construed as diminishing in any way the obligations on employers from health and safety regulatory acts in relation to the occupational health and safety at work of their employees.

It is the responsibility of the person presenting the vehicle for test to prove exemption from any requirement listed in this Manual.

NOTES:

The Vehicle Identification Number on the vehicle must correspond with the information on the Vehicle Registration File/Book/Licence Certificate. Where difficulty is encountered in locating the Vehicle Identification Number it is the responsibility of the presenter to establish the location of this information on the vehicle.

Requirements(1) in regard to Modifications are outlined under test item 62 in the Manual.

Tyres should be inflated to the required pressure before a test is started otherwise test results may be misleading.

Where the brakes cannot be tested on a roller brake tester, due to the design of the vehicle, a road test must be carried out using a decelerometer to evaluate brake efficiency.

Methods of Testing and Reasons for Failure

REGISTRATION PLATES

Method of Testing

1. Check the registration plates for security, location, format, legibility, visibility and correct colour.

NOTES

Owners of vehicles first registered prior to 31 December 1990, have the option of converting their registration plates to the new format.

1. Vehicles first registered on or after 1 January 1991

For vehicles registered on or after 1 January 1991, letters and numbers must be black set against a white background of reflex reflective material. The flag of the European Communities, the Nationality Symbol, IRL, and the Irish language name of the City/County of registration to be shown. No other marks may appear on the plate. Any additional tabs, etc. outside the dimensions shown for the registration plate are not considered part of the plate.

2. Vehicles first registered on or after 1 January 1987

For vehicles registered on or after 1 January 1987, letters and numbers must be black set against a white background of reflex reflective material and minimum dimensions should be as shown in the sketches on page 12.

3. Vehicles first registered prior to 1 January 1987

(a) Reflex Reflecting Registration Plates

Front registration plates should have black numbers and letters on a white background. Rear registration plates should have black numbers and letters on a red or white background.

(b) Non-Reflex Reflecting Registration Plates

Front and rear registration plates should have white, silver or light grey numbers and letters on a black background.

(c) Back Lit Registration Numbers and Letters

Where registration numbers and letters are back lit the letters and figures must, when illuminated during lighting-up hours appear white in the front identification mark and either white or red in the rear identification mark. At all other times they should appear white on a black background.

(d) Dimensions for letters and numbers should be as shown in the sketch on page 12.

4. Where the indented space provided for the number plate is not sufficient to accommodate a standard size number plate, the registration plate and registration letters and numbers maybe reduced in size relative to the space provided for the number plate.

ITEM	REASONS FOR FAILURE	SEVERITY
Registration Number Plate	(a). One or both plates missing, so insecure that they are likely to fall off.	MaD
	(b). Numbers or letters missing or illegible or incorrect size (see page 12).	MaD
	(c). Numbers, letter or background of incorrect colour (see notes above).	MaD
	(d). Marks, other than those prescribed, on the plate within the boundary shown in the diagram.	MaD
	(e). Not in accordance with vehicle documents or records.	MaD
	(f). Number plate obstructed, faded, dirty, delaminated, deteriorated or obscured so that it is likely to be misread or is not easily legible.	MaD

CHASSIS NUMBER (VIN)

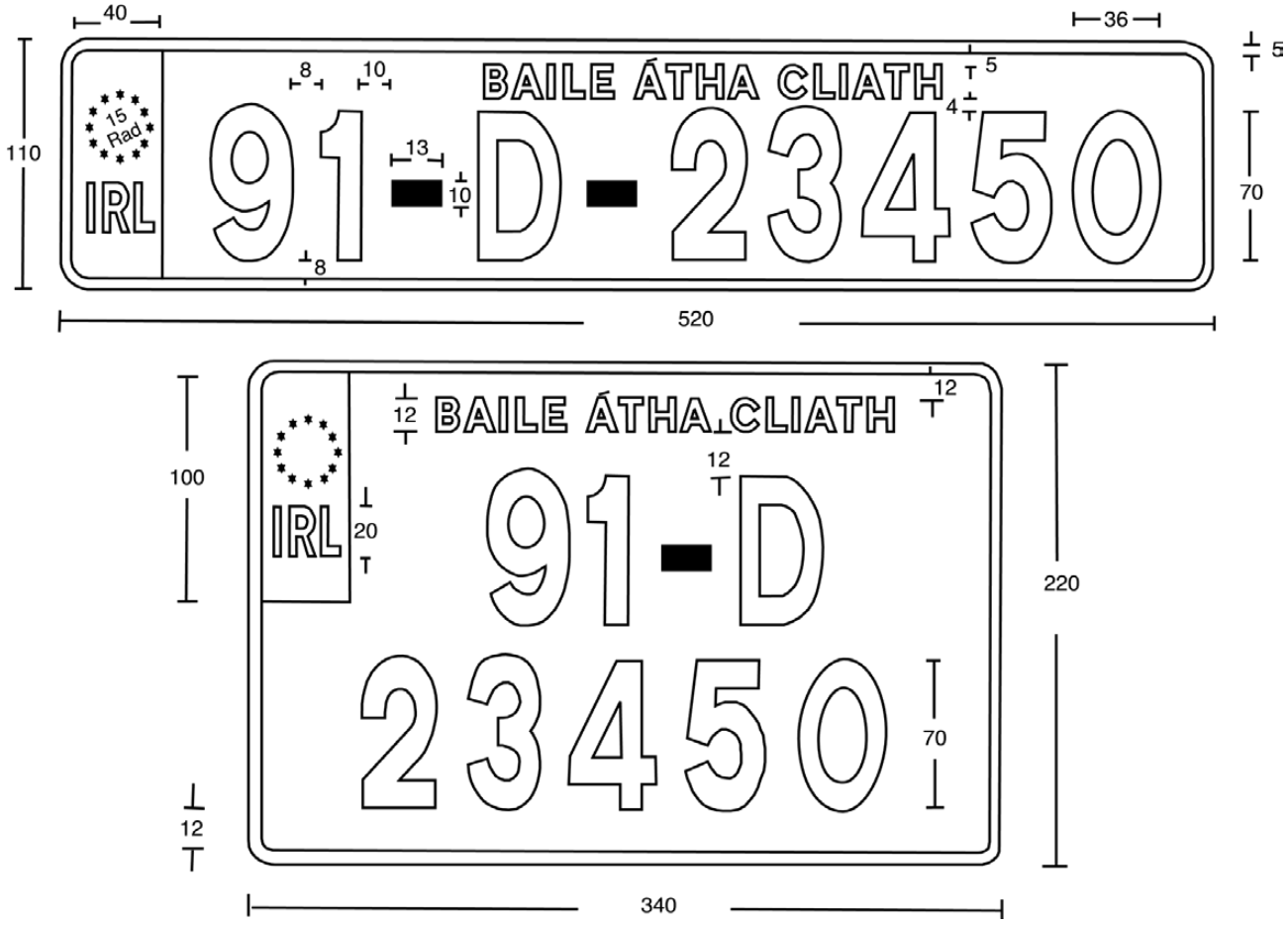
2. Check that the VIN is indelibly marked on the chassis and fully corresponds to the number on the vehicle registration documents. If not this is a reason for failure, except in the case where at a minimum the last six digits of the VIN on the vehicle documents and the VIN indelibly marked on the chassis of the vehicle matches an Advisory Pass shall apply.

ITEM	REASONS FOR FAILURE	SEVERITY
Vehicle identification / chassis /serial number	(a). Missing or not legible on chassis/frame.	MaD
	(b). Incomplete, illegible, obviously falsified, or does not match the vehicle documents.	MaD
	(c). Illegible vehicle documents or clerical inaccuracies.	MiD

Advisory Pass applies where the Vehicle Identification Number (VIN) on the vehicle registration certificate does not exactly match the VIN chassis / serial indelibly marked on the vehicle chassis (but the last six digits of the number VIN on the vehicle registration certificate and marked on the chassis match).

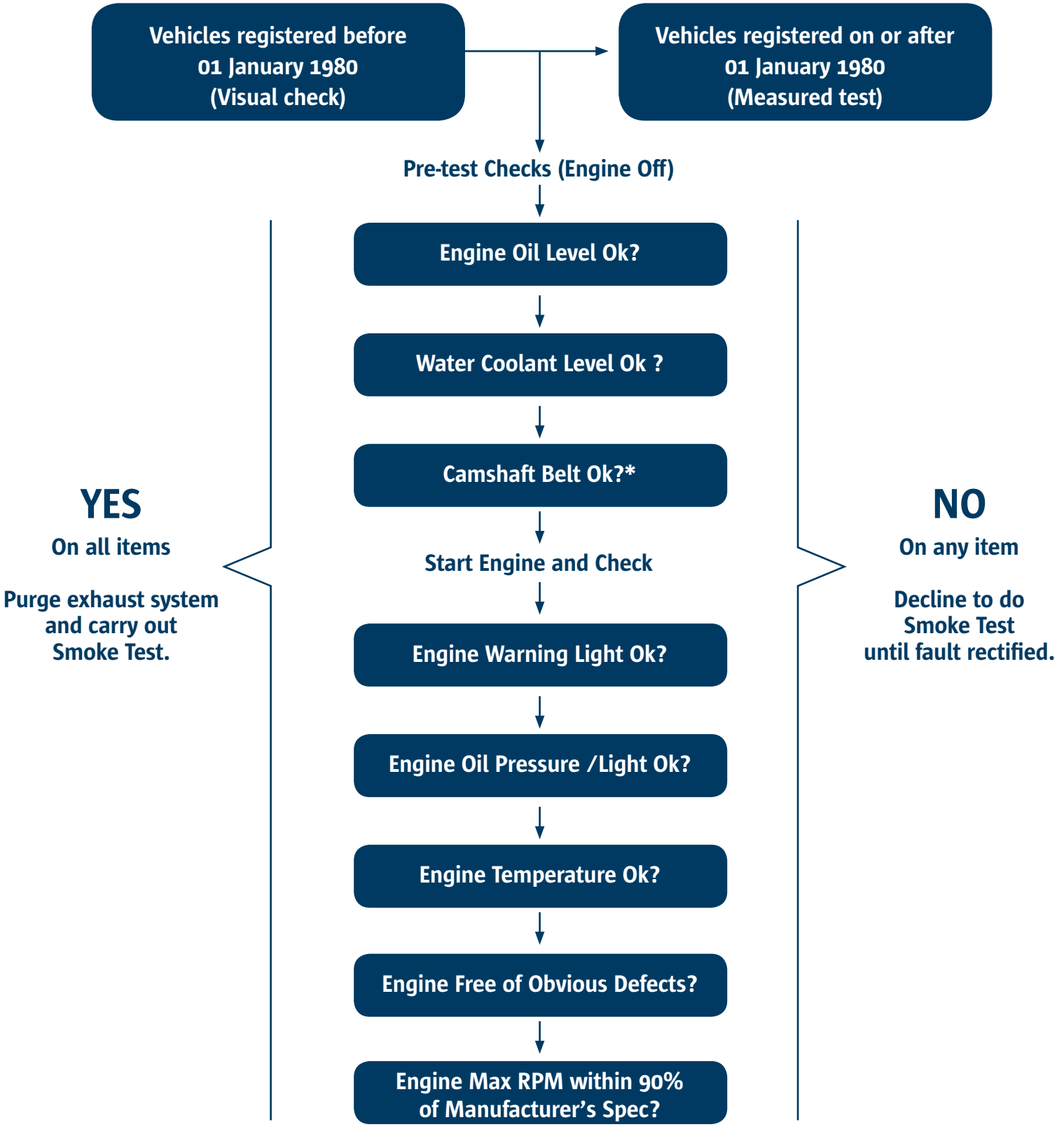
DIMENSIONS FOR NUMBER PLATES

All dimensions in millimeters



EXHAUST SMOKE (DIESEL)

Preliminary Check before carrying Out Diesel Engine Smoke Test



NOTES

1 Check with the vehicle owner /presenter that the camshaft belt has been changed at the manufacturer's specified interval. Removing the camshaft belt cover is not part of the roadworthiness test.

EXHAUST SMOKE (DIESEL)

Method of Testing

(A metered smoke test does not apply to vehicles first registered before 1st January 1980)

NOTES

(Vehicles first registered on or after 1st January 1980)

1. All diesel engine tests must be performed according to EU Directives. Where an automatic transmission is fitted, the manufacturer's guidelines should be consulted.
2. No smoke test should be carried out without having done the pre-test check detailed on page 13.
3. It is absolutely essential that the engine is at normal operating temperature before carrying out a smoke test. Testers should ensure that engines are not warmed up by being left idling or at half throttle. They should be warmed up by normal driving.
4. Engines left idling for any length of time will show a high smoke opacity reading.
5. When carrying out this test the throttle must not be "blipped".
6. Exhaust emissions tests should not be performed on a vehicle where the oil level is well over the dipstick "Full" mark.
7. Where the oil level is below the minimum level, the exhaust emission test should not be performed if it is necessary to purge the engine.
8. Where a diesel engine is at the correct operating temperature and has been correctly purged and the first three readings are at or above 9.99, the exhaust emissions test may be aborted.
9. Where a vehicle is producing black smoke to such an extent that the smoke meter might be damaged, the vehicle should be failed without carrying out the normal smoke test (see Test for vehicles first registered prior to 1980.)
11. Vehicles may be tested without preconditioning, although for safety reasons checks should be made that the engine is warm and in a satisfactory mechanical condition.
12. Engine shall be fully warm, for instance the engine oil temperature measured by a probe in the oil level dipstick tube to be at least 80 °C, or normal operating temperature if lower, or the engine block temperature measured by the level of infrared radiation to be at least an equivalent temperature. If, owing to the vehicle configuration, this requirement is impractical, the establishment of the engine's normal operating temperature may be made by other means, for example by the operation of the engine cooling fan.
13. Exhaust system shall be purged by at least three free acceleration cycles or by an equivalent method.
14. Engine and any turbocharger fitted, be at idle before the start of each free acceleration cycle. For heavy-duty diesels, this means waiting for at least 10 seconds after the release of the throttle.
15. To initiate each free acceleration cycle, the throttle pedal must be fully depressed quickly and continuously (in less than one second) but not violently, so as to obtain maximum delivery from the injection pump.
16. During each free acceleration cycle, the engine shall reach cut off speed or, for vehicles with automatic transmissions, the speed specified by the manufacturer or, if this data is not available, then two thirds of the cut-off speed, before the throttle is released. This could be checked, for instance, by monitoring engine speed or by allowing a sufficient time to elapse between initial throttle depression and release.
17. Vehicles shall only be failed if the arithmetic means of at least the last three free acceleration cycles are in excess of the limit value. This may be calculated by ignoring any measurement that departs significantly from the measured mean, or the result of any other statistical calculation that takes account of the scattering of the measurements.
18. To avoid unnecessary testing, vehicles may be deemed to have failed which have measured values significantly in excess of the limit values after fewer than three free acceleration cycles or after the purging cycles. Equally to avoid unnecessary testing, may be deemed to pass vehicles which have measured values significantly below the limits after fewer than three free acceleration cycles or after the purging cycles.

Vehicles first registered on or after 1st January 1980

1. Check visually that the emission control system is complete and properly connected and that there are no leaks in the exhaust system.
2. With the engine at normal operating temperature, raise the engine speed slowly to 2,500 rpm or half the engine manufacturer's recommended governed speed whichever is less and hold for 20 seconds in order to purge the exhaust system. If the engine emits any unusual noises the test should be abandoned. Slowly raise the engine speed to its maximum rpm and note if the governor operates within the vehicle manufacturer's recommended rpm setting. If not the test should be discontinued.
   Do not hold the engine at maximum rpm for any length of time.
3. Connect the diesel smoke meter to the vehicle following the smoke meter manufacturer's instructions. Depress the accelerator pedal firmly from the idling position to the maximum fuel delivery position following the prompts of the smoke meter. The smoke meter is programmed to ignore the first reading. The operation is repeated and if the reading on this occasion is less than 60% of the acceptable limit the test is ended. If the reading is not less than 60% of the acceptable limit, the operation is repeated. If the average of this and the previous reading is within the acceptable limit the test is ended. If the average readings are not within the limits the operation is repeated up to a maximum of three more times taking the average of the last two readings after which the test is ended.

Vehicles first registered before 1st January 1980

4. For these vehicles, the exhaust emission should be assessed while driving the vehicle in the test area or test lane. Under no circumstances should the engine rpm be taken above that required to drive the vehicle through the various tests.

ITEM	REASONS FOR FAILURE	SEVERITY
Preliminary Check	(a). Engine oil level too high or too low, coolant level too low. (b). Obvious Engine defects.	MaD MaD
Exhaust Smoke **(Vehicles first registered on or after 1st January 1980 up to 1st July 2008)**	(c). Where the average smoke meter reading is not in accordance with the manufacturer's standard for exhaust smoke emissions or is higher than 2.5m-1 in the case of naturally aspirated diesel engines and 3.0m-1 in the case of turbocharged or supercharged diesel engines.	MaD
Vehicles first registered after 1st July 2008	(d). Where the average smoke meter reading is not in accordance with the manufacturer's standard for exhaust smoke emissions or is higher than 1.5m-1.	MaD
Vehicles first registered after 1st September 2015**	(e). The average smoke meter reading is higher than 0.7m-1* for vehicles fitted with Euro 6 engine.	MaD
Exhaust Smoke (Vehicles first registered before 1st January 1980)	(f). The exhaust emission is coloured black haze or darker.	MaD
Emission Control System	(g). The emission control emission system fitted by the manufacturer is absent, incomplete, incorrectly assembled or obviously defective. (h). Leaks which would affect emission measurements	MaD MaD
Idle Speed, Max speed **Where a vehicle's engine speed is limited when the vehicle is stationary, the smoke test may be carried out at the restricted rpm.**	(i). Engine idle speed incorrect (e.g. ± 100 rpm of manufacturer's stated speed). (j). The maximum attainable engine speed is less than 90% of the maximum speed specified by the manufacturer of the vehicle.	MaD MaD

NOTE:

If the fuel pump seal is missing and the maximum rpm achievable is less than 90% of the manufacturer's stated maximum rpm, it should be considered that the fuel pump has been adjusted to pass the test and the vehicle should be failed on this test.

Where a vehicle has passed the emissions test and the exhaust system is later found to be leaking, the exhaust readings should be overridden.

The 'date of first registration' will be used to provide the test standard. If the station manager has information to prove that the car was built to a less stringent standard (such as indicated by the 'year of manufacture'), he may pass the car if it would have passed the less stringent standard.

If the engine has been changed, apply the standards to which the car was originally built, not the year of manufacture of the engine.

*Type-approved in accordance with the Regulation (EC) No 715/2007, Table 2, Annex I (Euro 6). Type approved in accordance with Regulation (EC) No 595/2009 (Euro VI).

** Individual vehicles already built and dispatched from, the manufacturer before 1st June 2015 could be sold until 1st September 2016 (if the manufacturer received a derogation). It is recommended you contact the vehicle manufacturer to check if you are unsure.

EXHAUST CO/HC/LAMBDA

(This item does not apply to vehicles first registered before 1st January 1980)

Method of Testing

1. Check visually in the case of 4 stroke spark ignition engines (petrol or gas) that the emission control system is complete and properly connected and that there are no leaks in the exhaust system.

Pre Jan 1994 Registrations

2. With the engine at normal operating temperature connect the CO/HC meter as per manufacturer's instructions. Raise the engine speed to approximately 2,500 rpm and hold for 20 seconds. Allow the engine to return to idle and the emissions readings to stabilise. Note the carbon monoxide and hydrocarbon content of the exhaust gases at normal idle speed.

Post Jan 1994 Registrations

3. For vehicles first registered on or after 1st January 1994 raise the engine speed to 2,500 rpm or to a speed specified by the vehicle manufacturer and hold for a minimum of 30 seconds. Check the HC, CO and Lambda values. If the exhaust emissions are not within the specified limits with the vehicle engine at normal operating temperature raise the engine speed to 2,500 rpm or to a speed specified by the vehicle manufacturer and hold or 3 minutes and note HC, CO and Lambda values .Allow the vehicle engine to return to normal idle speed and the exhaust reading to stabilise and note the CO reading.
4. Measurement using an exhaust gas analyser in accordance with the requirements[1] or reading of OBD in accordance with the manufacturer's recommendations and other requirements[1].
5. Measurements not applicable for two stroke engines.

NOTES

1. When checking exhaust emissions, the vehicle must be conditioned in accordance with the vehicle manufacturer's recommendations.
2. Hybrid vehicles should be viewed as an electric vehicle and will not require an exhaust emissions test.
3. For the following Rover vehicles: a) Mini 1300 carburettor and open loop three-way catalyst, b) Metro Rover 100 1100 carburettor and open loop three-way catalyst, first registered on or before 31 December 1994, the exhaust emission limit for CO is 3.5% and for HC is 1200 ppm. Where a vehicle meets the CO limit but fails the HC limit, the inspector must perform a further HC test at 2000 rpm. If the vehicle meets the HC limit at 2000 rpm, it is considered to have met the requirements[1].
4. For Suzuki Cultas, the maximum allowable CO value is 4.5% and the maximum allowable HC value is 1200 ppm.
5. Where it can be established that the vehicle manufacturer's recommendations on exhaust emissions are higher than those listed in the reasons for failure then the manufacturer's figure should be the criteria used when deciding whether or not the vehicle passes.
6. For vehicles tested operating on L.P.G. the hydrocarbon reading must be divided by the propane/hexane equivalent factor (PEF) which is marked on the hydrocarbon test equipment.
7. Where vehicles are fitted with twin exhaust systems the higher of the two should be taken.
8. A HC test is not required on vehicles operating on CNG.
9. For kit cars built before 1st January 2000, use the pre-1994 emissions standards.
   - Where a kit car is presented for a test, with a date of first registration from 1st Jan 2000 onwards a declaration is required from an automotive Engineer/Assessor stating the make, year of manufacture of the engine, and the exhaust emission values stated by the engine manufacturer.
   - The 'date of first registration' will be used to provide the test standard. If the test centre manager has information to prove that the car was built to a less stringent standard (such as indicated by the 'year of manufacture'), he may pass the car if it would have passed the less stringent standard.
   - If the engine has been changed, apply the standards to which the car was originally built, not the year of manufacture of the engine.
   - The HC (hydrocarbon) will only be checked at high idle on cars equipped with catalytic converters.
   - Imported and used vehicles first registered after 1994 that are not fitted with a catalytic converter should be tested against pre-1994 values.

10. This test should not be carried out where:
    (a) the oil warning light remains on with the engine running.
    (b) the oil level is below the manufacturer's minimum level.
    (c) the oil level is above the manufacturer's maximum level.

11 This test does not apply to two-stroke or rotary piston (Wankel) engines.

12. Measurement using an exhaust gas analyser in accordance with the requirements[1] or reading of OBD. Tailpipe testing shall be the default method of exhaust emission assessment. On the basis of an assessment of equivalence, and by taking into account the relevant type-approval legislation, the use of OBD in accordance with the manufacturer's recommendations and other requirements[1] is acceptable. For vehicles as of emission classes Euro 6 and Euro VI[5]

13. Measurement using an exhaust gas analyser in accordance with the requirements[1] or reading of OBD in accordance with the manufacturer's recommendations and other requirements[1].

14. Measurements not applicable for two stroke engines.

ITEM	REASONS FOR FAILURE	SEVERITY
Engine Exhaust System Preliminary Check	(a). Leaking.	MaD
	(b). Engine oil level too high or too low, coolant level too low or the oil warning light remains on with the engine running.	MaD
Emission Control System	(c). The emission control system fitted by the manufacturer is absent, modified or obviously defective	MaD
	(d). Emission control system leaking, incomplete, incorrectly assembled or obviously unsafely repaired or modified.	MaD
	(e). The emission control system is leaking, incomplete or incorrectly assembled, which would affect emission measurements.	MaD
Idle Speed	(f). Obviously outside vehicle manufacturer's recommendations (± 100 rpm or ±10% of manufacturer's stated speed whichever is greater)	MaD
Carbon Monoxide Emission	(g). Carbon monoxide emission is not in accordance with the vehicle manufacturer's standard or for vehicles firstregisteredbefore1stofOctober 1986,thecarbon monoxide content is more than 4.5% at idling speed.	MaD
	(h). For vehicles first registered on or after 1st of October 1986, up to 31st December 1993, the carbon monoxide content at idling speed is more than 3.5%.	MaD
	(i). For vehicles first registered on or after 1st of January 1994, the carbonmonoxide content atidlingspeed is morethan0.5%.	MaD
	(j). For vehicles first registered on or after 1st of January 1994, the carbon monoxide content at 2,500 rpm or at a speed specified bythe vehiclemanufacturer is more than 0.3%.	MaD
	(k). For vehicles first registered on or after 1st of July 2002 the carbon monoxide at idling speed is more than 0.3%.	MaD
	(l). For vehicles first registered on or after 1st of July 2002 the carbon monoxide content is more than 0.2% by volume at either an engine speed of 2500 rpm or at a speed specified by the vehicle manufacturer.	MaD
Hydrocarbon (H.C.)	(m).Hydrocarbon emission is not in accordance with the vehicle manufacturer's standard or for vehicles first registered before 1st October, 1986, the hydrocarbon content at idling speed is more than 1,000 ppm.	MaD
	(n). For vehicles first registered on or after 1st of October 1986, up to 31st December 1993, the hydrocarbon content at idling speed is more than 750 ppm.	MaD
	(o). For vehicles first registered on or after 1st of January 1994, the hydrocarbon content at 2,500 rpm or at a speed specified by the vehicle manufacturer is more than 200 ppm.	MaD
Lambda	(p). For vehicles first registered on or after 1st of January 1994, the lambda value at 2,500 rpm or at the speed specified by the vehicle manufacturer is not 1 ±.03 or within the vehicle manufacturer's recommendation.	MaD

Exhaust Emissions	(q). Excessive exhaust smoke likely to affect other road users	MaD
	(r). OBD read-out indicating significant malfunction	MaD
	Note: For kit cars built before 1st January 2000, use the pre-1994 emissions standards. Where a kit car is presented for a test, a declaration is required from an automotive Engineer/ Assessor stating the make, year of manufacture of the engine, and the exhaust emission values stated by the engine manufacturer. The 'date of first registration' will be used to provide the test standard. If the test centre manager has information to prove that the car was built to a less stringent standard (such as indicated by the 'year of manufacture'), he may pass the car if it would have passed the less stringent standard. If the engine has been changed, apply the standards to which the car was originally built, not the year of manufacture of the engine. For cars fuelled by CNG (Compressed Natural Gas) do not apply a HC standard. This will prevent false failures from excessive methane emissions. The HC (hydrocarbon) will only be checked at high idle on cars equipped with catalytic converters. Imported and used vehicles first registered after 1994 that are not fitted with a catalytic converter should be tested against pre-1994 values.	

SERVICE BRAKE PEDAL

Method of Testing

SEE NOTE (1) BELOW

1. Check the anti-slip provisions on the pedal pad.
2. Examine the condition of the pedal.
3. Check the fixing of the pedal pad to the pedal and the fixing of the pedal to the operating lever.
4. Move the pedal from side to side and examine the condition of the pedal pivot bearing/bush.
5. Depress the pedal to check for fouling on parts of the vehicle or restricted movement.

NOTES

1. Before carrying out this inspection, chock the road wheels.
2. Brake pedals should not be rejected for not having a pedal rubber if they were not designed to have one.

ITEM	REASONS FOR FAILURE	SEVERITY
Service Brake Pedal Anti-Slip Provision	(a). Missing, loose or worn to the extent that it is no longer effective.	MaD
Service Brake Pedal Mounting	(b). Insecure, badly corroded or worn to the extent that the pedal can be moved from side to side. (c). Excessive wear in brake pedal mounting bush.	MaD MaD
Service Brake Pedal Travel	(d). Pedal travel is excessive, obstructed or insufficient reserve travel.	MaD
Service Brake Pedal Pivot	(e). Pivot too tight so its functionality is affected.	MaD
Service Brake Pedal Pivot	(f). Excessive wear or play in mounting/bush.	MaD

SERVICE BRAKE OPERATION

(Inspection inside the Vehicle)

Method of Testing

1. For hydraulic systems, fully depress the pedal and keep it depressed under a steady pressure. Note whether the pedal tends to creep down.
2. For hydraulic systems release the handbrake, depress the pedal and note the extent of travel of the brake pedal and whether there is sponginess.
3. On some vehicles the action of the brakes is assisted by vacuum from the engine. In such cases deplete the vacuum by applying the service brake a number of times with the engine switched off. Fully apply the service brake, start the engine and note whether the pedal can be felt to dip.
4. If the vehicle is fitted with a brake anti-lock system, check the warning lamp (reason for failure for this check is in section 60 malfunction indicators).

ITEM	REASONS FOR FAILURE	SEVERITY
Service Brake Operation	(a). In hydraulic systems, pedal tends to creep down, or is felt to be spongy when held depressed.	MaD
	(b). Travel in the brake pedal indicates air in the brake system or brakes are in need of adjustment.	MaD
	(c). In systems assisted by vacuum from the engine, with the pedal depressed and the engine started, no dip is felt in brake pedal.	MaD
	(d). Brake control not releasing correctly.	MaD

MECHANICAL BRAKE HAND LEVER

(where fitted)

Method of Testing

SEE NOTES BELOW

1. Examine the condition of the brake lever and its position.
2. With the brake lever in the "off" position:
   (a) note the amount of side play in the lever pivot by moving the lever from side to side.
   (b) check the condition of the ratchet and pawl mechanism pivots.
   (c) check the safety guard.
3. Apply the brake lever 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.
4. When the brake is fully applied:
   (a) knock the top and each side of the lever by hand and check that the lever is held in the 'on' position.
   (b) check that the lever is not at the end of its permitted travel and that there is no fouling of adjacent parts.
5. Visually inspect the electronic parking brake controls while the braking system is operated.

NOTES

1. Before carrying out this inspection, chock the road wheels.
2. In some cases it is not possible to check these items completely from inside the vehicle, but only to obtain an indication of their condition. If a defect is suspected which cannot be verified from inside the vehicle the inspection must be continued from a position underneath the vehicle.

ITEM	REASONS FOR FAILURE	SEVERITY
Lever/Lever Mounting	(a). Missing, fractured, badly worn, corroded, insecure or mounting unsatisfactory.	MaD
	(b). Travel is excessive or movement is obstructed.	MaD
	(c). Wear at lever pivot or in ratchet mechanism.	MiD
	(d). Excessive wear at lever pivot or in ratchet mechanism.	MaD
Ratchet and Pawl Mechanism (where fitted) Electronic parking brake	(e). Missing, insecure, damaged or sticking, not holding correctly.	MaD
	(f). Knocking the top or sides of the lever releases the brake.	MaD
	(g). Electronic park brake activator missing, damaged or inoperative.	MaD

SEATS

Method of Testing

1. Examine all seats and seat mountings for security and condition.
2. Note any movement of the seat relative to the vehicle body and the condition of the seat back and seat cushion.

ITEM	REASONS FOR FAILURE	SEVERITY
Seats	(a). Seats in defective condition or insecure (secondary parts)	MiD
	(b). Seats in defective condition or insecure (main parts)	MaD
	(c). Seats not fitted in accordance with requirements[1].	MiD
	(d). Permitted number of seats exceeded; positioning not in compliance with approval.	MaD
Driver's Seat	(e). Loose on runners or insecurely mounted that the stability is affected.	DD
	(f). Collapsed or framework damaged.	MaD
	(g). Driver's seat so damaged that driver's support is impaired or interior foam is protruding beyond the seat trim.	MaD
	(h). Driver's seat adjustment mechanism not functioning correctly.	MaD
	(i). Seat backrest not fixable.	DD

NOTES

1. Seats include child seats or child restraint systems.
2. A seat should fail when it is so loose that detachment from the runners or sliding backwards or forwards is likely. The driver's seat should be failed where the seat support foam cannot be contained, e.g. keeps falling out. This does not mean the seat fails if the upholstery is torn or worn. A seat cover is an acceptable means of containing the foam.

HORN

Method of Testing

1. Check the security of the horn and horn control.
2. Operate the horn control and note that the horn sounds correctly.

ITEM	REASONS FOR FAILURE	SEVERITY
Horn	(a). Control insecure or horn insecurely mounted.	MaD
	(b). Not working correctly.	MiD
	(c). Not working at all or is not fitted.	MaD
	(d). Not in accordance with the requirments[1].	MiD
	(e). Emitted sound likely to be confused with official sirens.	MaD

WINDSCREEN WIPERS AND WASHERS

Method of Testing

1. Switch on the windscreen wipers and washers and check for operation and security and that the wipers move at an appropriate speed over an arc of the windscreen glass which is sufficient to give the driver an adequate view.
2. Check the wiper control.
3. Examine the condition of the wiper arms and blades. Check that the springs are not weak or broken.
4. Check wiper linkage for wear.
5. Check that the windscreen washer(s) function satisfactorily.
6. Check demisting system for operation.
7. Check the system directs air to the windscreen.

NOTES

1. Washers will be considered as being fitted if there is any part of a washer system fitted.
2. This test only applies to front windscreens.
3. Intermittent wiper speed is not a reason for failure if not operating.
4. The above methods of testing only apply to the demisting system for the front windscreen.
5. Where no washer is fitted or there is no fluid in the washer reservoir, check the function of the wipers and visually for defects on the blade that would fail effectiveness (reason b).
6. Wiper blades that automatically park in a position that obscures the view through the windscreen may be considered a reason for failure.

ITEM	REASONS FOR FAILURE	SEVERITY
Wiper Arms and Blades	(a). A wiper arm or blade is missing, worn or defective.	MaD
	(b). Wiper arms and blades are operating such that the wiped area is less than sufficient to give the driver an adequate view.	MaD
Speed of Wipers	(c). Wipers are not operating at normal speed.	MiD
Wiper Control	(d). Wiper control is not working, defective, insecurely mounted or missing.	MaD
Wiper Linkage	(e). Wiper linkage is broken, excessively worn or insecure.	MaD
Washers (if fitted)	(f). Washers not operating adequately (lack of washing fluid but pump operating or water-jet misaligned).	MiD
	(g). Washers not working or leaking.	MaD
Demisting system	(h). Demisting/ventilation system (fan) inoperative.	MiD
	(i). Demisting/ventilation system not directing towards windscreen.	MiD

GLASS

Method of Testing

1. Check the condition and security of the windscreen and all side and rear windows.
2. Check that where the windscreen is made of glass it is marked as safety glass.
3. Check that there is an adequate view from the driving seat and that it is not interfered with by objects or stickers.
4. Check that in the case of vehicles first registered on or after 1st January 1986 the windscreen is made of laminated safety glass and marked as shown on the attached Schedule I overleaf or to an equivalent standard as shown in Fig. 1 below.
5. Where windscreens, side or rear windows are fitted with glazing material other than safety glass the vehicle owner shall provide a certificate from the manufacturer or installer stating that the glazing material is not likely, if fractured, to produce fragments capable of causing severe cuts. In the case of rally cars, this may take the form of a note from the Technical Commissioner of the RIAC in the vehicle log book.
6. Check that the driver's window operating mechanism is functioning properly.
7. If an inspector deems that the windscreen or front side windows are excessively tinted, the level of light transmission of the window should be tested using light meter capable of measuring the amount of light transmitted through the windscreen and the side windows alongside the driver to an accuracy of ± 3% and suitable for reliable use in an inspection centre environment.

ITEM	REASONS FOR FAILURE
Australia:	AS/NZS 2080 AS/NZS 2080T
Canada:	CMVSS 205 (C2)
India:	IS2553 (Part 2) 1992
Japan:	11-4-21 (window glass) JISR 3211
South Africa:	SABS 1191 / SABS 1193
UK:	BS AU I78 / BS 857-2 / BS 5282
USA:	FMVSS 205 (U)
Germany:	A three-period sine wave followed by the letter D. This is an older German type approval for automotive glazing. (See image below).  Glazing marked Birkholz, Seitz, Roxite, Para Press or Bonoplex. Glazing marked PMMA (polymethylmethylacrylate) or PC (polycarbonate).

GLASS CONT...

ITEM	REASONS FOR FAILURE	SEVERITY
Field of vision	(a). Obstruction, objects or stickers within driver's field of view that materially affects drivers view in front or to the sides (outside cleaning area of windscreen wipers).	MiD
	(b). Obstruction, objects or stickers within driver's field of view that materially affects drivers view in front or to the sides inside the cleaning area of windscreen wipers affected or outer mirrors not visible.	MaD
Condition of glass	(c). Windscreen is missing.	MaD
	(d). Visibility through inside cleaning area of windscreen wipers heavily affected.	DD
	(e). Windscreen is damaged or discoloured beyond acceptable limits (outside cleaning area of windscreen wipers).	MiD
	(f). Windscreen is damaged or discoloured beyond acceptable limits inside cleaning area of windscreen wipers affected or outer mirrors not visible.	MaD
	(g). In vehicles first registered after 1 July 1964 windscreen, side or rear glass is not marked as automotive safety glass.	MaD
	(h). In vehicles registered on or after 1 January 1986 windscreen is not marked as laminated or marked to an equivalent certified standard[3] (see notes).	MaD
	(i). Windscreen or windows insecure.	MaD
	(j). Opening mechanism of driver's window not operating.	MiD
	(k). Non-glass side, rear windows and roof glazing made of material that, if fractured is likely to produce fragments capable of causing severe cuts to a person.	MaD
	(l). Side or rear window so damaged that it obstructs the driver's view.	MaD
	(m).Glass in windscreen and front side windows has a light transmission level of less than 65%.	MaD

NOTES

1. Windscreen repairs are acceptable provided they meet BS Codes of Practice BS AU242 and BS AU25 1
2. A vehicle presented with an emergency windscreen fitted, the vehicle should fail under Condition of glass (1).
3. Light scratching which does not obscure the driver's view should be ignored. However, an area of concentrated scratching such as caused by the prolonged use of a defective wiper blade which obscures vision should be considered a reason for failure.
4. A sun visor fitted to the driver's side, which cannot be stowed in the 'off screen' position and which drops down obstructing the view of the road through the swept area of the windscreen may be considered a reason for failure.

GLASS CONT...

COUNTRY IN WHICH MARK ISSUES	APPROVED STANDARD MARKS
Any country which has subscribed to the Agreement of the United Nations Economic Commission for Europe concerning the adopting of uniform conditions of approval and reciprocal recognition of approval for motor vehicle equipment and parts. Done at Geneva on 20th March, 1958.	II E4* 43R** * This number varies and relates to the country which issued the approval. ** In association with the standard mark a serial number assigned by the issuing country is shown in this position. **NOTE** The absence of II or III above or beside the approved standard mark indicates that the glass is not laminated.
United Kingdom	**B.S. 857-2** or **B.S. 5282** or **B.S.AU 178** See also note below **NOTE** The B.S. must be accompanied by the word laminated or the letter L, WL or WLT. The absence of these will indicate that the glass is not laminated.

GLASS CONT...

EXAMPLES OF EEC COMPONENT TYPE-APPROVAL MARKS FOR WINDSCREEN

Ordinary laminated glass windscreen

Ordinary laminated glass coated

Treated laminated glass windscreen

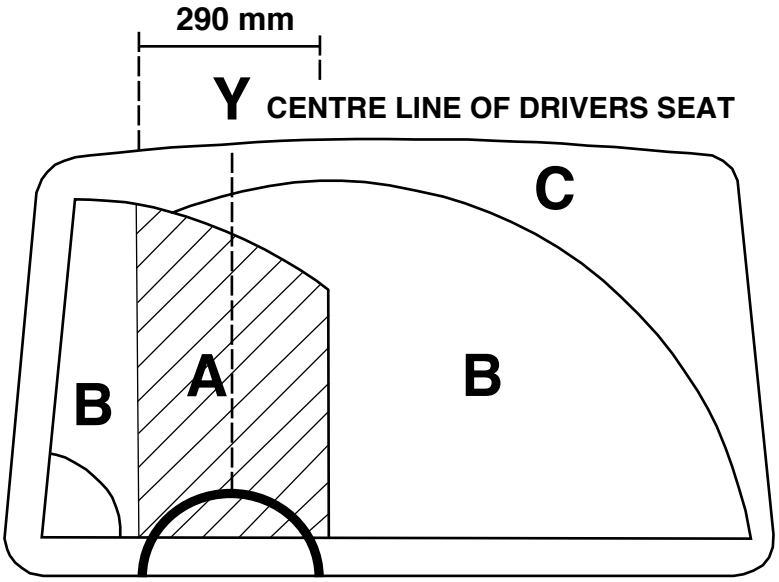
Glass-plastic windscreen

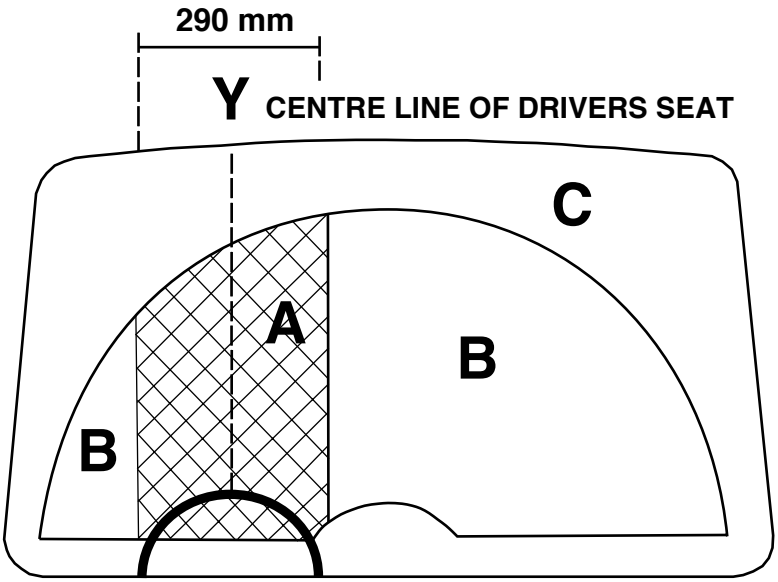
* This number varies and relates to the country which issued the approval.

** In association with the standard mark a serial number assigned by the issuing country is shown in this position.

GLASS

ACCEPTABLE LIMITS





ZONE A Damage that can be contained within a 10mm diameter circle (maximum of two defects provided they are more than 100mm apart).

ZONE B Damage that can be contained within a 20mm diameter circle or hairline cracks up to 30mm long (maximum of two defects provided they are more than 100mm apart).

ZONE C Damage that can be contained within a 40mm diameter circle (maximum of three defects provided they are more than 100mm apart).

NOTES

1 The vehicle should be failed where damage is beyond the above limits.

2 Damaged windscreens may be repaired provided the repairs meet the requirements[1] of Codes of Practice BS AU242 and BSAU251.

3 Light scratching which does not obscure the driver's view should be ignored.

REAR VIEW MIRROR(S)

Method of Testing

1. Check the condition of mirrors fitted to the vehicle as standard equipment to see that the reflecting surface is not deteriorated or broken so as to impair the driver's view.
2. Examine the security and condition of each mirror mounting bracket.

NOTES

1 Estate and hatchback cars are required to be fitted with an exterior rear view mirror on each side of the vehicle.

2. All other vehicles should be fitted with an internal rear view mirror.
3. Where a vehicle does not have two exterior mirrors, there must be clear evidence on the day that the vehicle was originally fitted with two exterior mirrors or it cannot be failed on this point. If there is any doubt, the benefit of the doubt must be given to the vehicle owner.
4. A vehicle must not be failed on mirrors fitted in addition to the legally required mirrors.

ITEM	REASONS FOR FAILURE	SEVERITY
Rear View Mirrors or devices	(a). Interior rear view mirror, or where fitted as original equipment by the manufacturer, an external rear view mirror is missing.	MaD
	(b). Reflecting surface of interior mirror, or where fitted as original equipment by the manufacturer, external rear view mirror is deteriorated or is broken so as to impair driver's view.	MaD
	(c). Mirror or device missing or not fitted according to the requirements[1] (at least two rear-view devices available).	MaD
	(d). Fewer than two rear-view devices available.	MaD
	(e). Mirror/device or mounting of any mirror is loose.	MiD
	(f). Mirror or device inoperative, heavily damaged, loose or insecure.	MaD
	(g). Interior rear view mirror, or where fitted as original equipment by the manufacturer, external rear view mirror is not adjustable.	MiD
	(h). Necessary field of vision not covered.	MaD
Estate or Hatchback	(i). Estate or hatch back vehicle not fitted with an exterior mirror on each side of the vehicle, except in the case of vehicles not fitted with these mirrors by the manufacturer.	MaD

SPEEDOMETER

Method of Testing

1. Check that a speedometer is fitted, working and can be easily seen from the driving seat.
2. Check that the speedometer can be illuminated.

NOTES

1 The speedometer functions check is limited to the movement of the vehicle within the test area.

ITEM	REASONS FOR FAILURE	SEVERITY
Speedometer	(a). Not in accordance with the requirments1.	MiD
	(b). Speedometer missing.	MaD
	(c). Speedometer is not working correctly.	MiD
	(d). Speedometer is not working at all.	MaD
	(e). Speedometer cannot be seen from driver's seat.	MaD
Lighting of Speedometer	(f). Illumination of speedometer not working or defective.	MaD

SAFETY BELTS

(This item does not apply to vehicles first registered before the 1st of June 1971)

Method of Testing

1. For vehicles first registered on or after the 1st of June 1971,check that a lap and diagonal type safety belt is provided for the driver and front outer passenger seat.
2. For vehicles first registered on or after the 1st of January 1992, check that all outer forward facing seats are provided with a lap and diagonal type safety belt and all other forward facing seats are provided with a lap and diagonal or lap type safety belt.
3. Pull each safety belt webbing against its anchorage and see that it is properly secured to the vehicle structure.
4. Examine the condition of all safety belt webbing for cuts or obvious signs of deterioration. In the case of the retractable type safety belt ensure that the belt is fully extended during this examination.
5. With the seat unoccupied, fasten the safety belt buckle and check that the adjustment mechanism functions properly. In the case of retractable belts ensure that all the slack is removed and by pulling the belt quickly check that the locking mechanism operates. Attempt to separate the fastened belt at the buckle and check that the belt can be released when required.
6. Examine the condition of the attachment and adjustment fittings on each belt for distortion or fracture.
7. As far as is practicable without dismantling, check the condition of the vehicle structure in the vicinity of the safety belt anchorage points. The condition of floor mounted anchorage points may best be inspected from underneath the vehicle.

Load Limiter

8. Visually inspect any safety belt load limiter for deployment. Check that the seatbelt malfunction indicator does not indicate a fault in the load limiter.

Pre-tensioners

9. Check for any obvious defect of seatbelt pre-tensioners.
10. Check that the seatbelt malfunction indicator does not indicate a fault in a seatbelt pre-tensioner.

Airbags

11. Visually check for the presence and suitability of airbags and ensure that no airbag is obviously inoperative.
12. Check that the airbag(s) malfunction indicator does not indicate a fault in the system.

SRS systems

13. Check that the SRS malfunction indicator does not indicate a fault in the system (Reasons for failure in section 60).

NOTES

1. Where a vehicle is fitted with seat belts which can only be checked for operation by a road test, it will not be necessary to check the operation of the rear seatbelts. Both front seat belts must be checked for operation; however, the visuals should make clear to the owner that the rear seat belts have not been checked for operation.
2. Some seatbelt systems use load limiters to minimise belt-inflicted injury. The basic idea of a load limiter is to release a little more excess belt webbing when a great deal of force is applied to the belt. The simplest load limiter is a fold sewn into the belt webbing. The stitches holding the fold in place are designed to break when a certain amount of force is applied to the belt. When the stitches come apart, the webbing unfolds, allowing the belt to extend a little bit more.
3. The SRS malfunction indicator lamp (MIL) may display a symbol similar to that shown below, or one depicting a person wearing a seat belt. The SRS (MIL) may indicate that there is a fault in the seatbelt load limiter, pre-tensioners or airbags.
4. A passenger airbag that has been switched off is not a reason for failure.
5. A safety belt that cannot be extended fully should fail.

ITEM	REASONS FOR FAILURE	SEVERITY
Safety Belts	(a). For vehicles registered between 1 June 1971 and 31 December 1991 (inclusive of those dates), a lap and diagonal type safety belt is not provided for the driver and outer front seat.	MaD
	(b). For vehicles registered on or after the 1 January 1992, a lap and diagonal type belt is not provided for all outer forward facing seats or a lap type safety belt is not provided for all other forward facing seats.	MaD
Safety Belts (including belts of Child Restraint Systems)	(c).	
	(a) Any belt, including any for a child seat attached to the vehicle is damaged.	MaD
	(b) Any cut, sign of over-stretching, badly frayed or obviously unsafely repaired or modified.	MaD
	(d). Safety-belt not in accordance with the requirements[1].	MaD
	(e). Safety-belt/buckle, including any for a child seat attached to the vehicle, is not operating properly or is damaged.	MaD
	(f). Safety-belt retractor, including any for a child seat attached to the vehicle, is not operating properly or is damaged.	MaD
Safety Belt and Child Restraint System Anchorage	(g). Any load bearing member of the vehicle structure or panelling within 30 cm of a safety belt anchorage point is cracked, corroded or is in otherwise weakened that stability is affected. This applies to the seat mounting if the belt is anchored to the seat.	DD
	(h). Any belt mounting is loose or unsatisfactory, for example incorrect bolts fitted.	MaD
	(i). Any belt mounting is obviously unsafely repaired or modified.	MaD
Safety belt load limiter	(j). Load limiter obviously missing or not suitable with the vehicle.	MaD
	(k). System indicates failure via the electronic vehicle interface	DD
Safety belt pre-tensioners	(l). Pre-tensioner obviously missing or not suitable with the vehicle.	MaD
	(m).System indicates failure via the electronic vehicle interface.	DD
Airbag(s)	(n). Airbags obviously missing or not suitable with the vehicle.	MaD
	(o). System indicates failure via the electronic vehicle interface.	DD
	(p). Airbag obviously non-operative.	MaD
SRS systems	(q). System indicates failure via the electronic vehicle interface.	DD

STEERING WHEEL PLAY

Method of Testing

1. With the road-wheels in the straight-ahead position, lightly turn the steering wheel to the left and right as far as possible and note the amount of free play before the road-wheels move. (If power steering is fitted the engine should be running).
2. Attempt to lift the steering wheel in line with the steering column and note any movement at the centre of the steering wheel or the steering column.
3. Push steering wheel away and pull it towards your body,and note the movement of the steering column and its security of mounting.
4. Examine the universal joints/flexible couplings for wear, security or deterioration.
5. Examine steering lock where fitted.
6. Check the presence and security of retaining and locking devices.
7. Examine if there has been any obviously unsafe repair or modification carried out to the steering wheel/column/ shaft or to the universal joining/clamp.

NOTES

1. Where a steering mechanism is fitted with flexible couplings care must be taken to distinguish between play due to wear, and apparent play due to the construction of the mechanism.
2. An unsafe repair or modification carried out to any of the steering wheel/column/shaft or to the universal joint/clamp may require a modifications report to be presented as per Item 62 of this Manual.

ITEM	REASONS FOR FAILURE	SEVERITY
Steering Box	(a). Excessive rotational play (20°).	MaD
	(b). Free play in steering is so excessive that safe steering is affected.	DD
Rack and Pinion	(c). Excessive rotational play (5°).	MaD
	(d). Free play in steering is so excessive that safe steering is affected	DD
Steering Wheel/ Column/Shaft	(e). Excessive movement of centre of steering wheel up or down.	MaD
	(f). Excessive movement of top of column radially from axis of column.	MaD
	(g). Steering wheel/column attachment is defective.	MaD
	(h). Steering wheel/column attachment is so defective that there is a very serious risk of detachment.	DD
	(i). Relative movement between steering wheel and column indicating looseness.	MaD
	(j). Excessive movement in the steering wheel that there is a very serious risk of becoming detached.	DD
	(k). Fracture or looseness of steering wheel hub, rim or spokes or absence of retaining devices.	MaD
	(l). Fracture or looseness of steering wheel hub, rim or spokes or absence of retaining devices that there is a very serious risk of becoming detached.	DD
	(m).Any bush / bearings, mounting brackets of steering wheel / column / or shaft is missing, worn, damaged or insecure.	MaD
	(n). Unsafe repair or modification[2].	DD
	(o). Steering wheel/column/shaft has excessive end float, is insecure or broken.	MaD
	(p). Shear pin in telescopic column broken.	MaD
Universal Joint/ Clamp	(q). Any universal joint / clamp/ flexible coupling damaged, worn, insecure or badly deteriorated.	MaD
	(r). Any universal joint / clamp/ flexible coupling damaged, worn, insecure or badly deteriorated that failure is imminent.	DD

DOOR/LOCKS/ANTI-THEFT DEVICES

Method of Testing

Examine the general condition of all doors.

1. Open each door and check the security of catches, hinges and receivers.
2. Close the door and, without using the handle, note whether the door primary and secondary catches hold the door closed.
3. By opening and closing each door note whether the door pillars are sound (see section 35 for reasons for failure).
4. If the vehicle is fitted with sliding doors examine the condition of the runners and tracks and actuating mechanism.
5. Check that the steering lock is not fouling the steering mechanism when the ignition is switched on.

NOTES

1. Where a vehicle is not fitted with a steering lock, an ignition key or an immobiliser to prevent vehicle movement, then the doors must be capable of being locked.
2. It is acceptable for a steering lock to be missing or inoperative provided the vehicle has an engine immobiliser, or a permanently installed immobilisation device which acts on either the steering, brakes or the transmission.

ITEM	REASONS FOR FAILURE	SEVERITY
Doors/ Sliding Doors	(a). A door missing or is likely to open inadvertently.	DD
	(b). Door cannot be shut or opened normally	MaD
	(c). Door, hinges, catches or pillar deteriorated/missing/ not functioning or loose.	MaD
Sliding Doors	(d). A sliding door likely to open inadvertently or one that will not remain closed.	MaD
	(e). Runners, tracks, or actuating mechanism so defective that the door does not open or close properly.	MaD
	(f). Safety devices not working or defective.	MaD
Steering Lock (where originally fitted)	(g). Device not functioning to prevent vehicle being driven.	MaD
	(h). Steering lock, where fitted as original equipment by manufacturer, has excessive wear or is subject to jamming of the lock/barrel/key mechanism.	DD

ADAPTATIONS FOR DISABLED DRIVERS (WHERE FITTED)

Method of Testing

Check all adaptations for disabled drivers to ensure that they operate freely, are secure, free from excessive wear and not likely to fail.

ITEM	REASONS FOR FAILURE	SEVERITY
Adaptations for Disabled Drivers	(a). (i) Worn, insecure, sticking, fouling or likely to fail.	MaD
	(ii) Servo or electrical devices defective.	MaD
	(iii) Wiring insecure, insulation damaged, likely to short circuit or fail.	MaD
	(b). Any control necessary for the safe operation of the vehicle not functioning correctly.	MaD
	(c). Any control necessary for the operation of the vehicle not functioning correctly such that safe operation is affected.	DD

FRONT WHEEL SIDE SLIP

Method of Testing

Drive the R/H front wheel slowly and straight over the side slip plate without moving the steering wheel or applying the brakes and note the reading.

NOTES
1. When explaining defects to vehicle owners or garages, side slip may be referred to as steering geometry.

ITEM	REASONS FOR FAILURE	SEVERITY
Side Slip	(a). Front wheel alignment is more than ± 14m/km.	MaD

REAR WHEEL SIDE SLIP

Method of Testing

Drive the R/H rear wheel slowly and straight over the side slip plate without moving the steering wheel or applying the brakes and note the reading.

ITEM	REASONS FOR FAILURE	SEVERITY
Side Slip	(a). Rear wheel alignment is more than ± 18m/km.	MaD

FRONT AXLE SUSPENSION PERFORMANCE

Method of Testing

Drive the front wheels of the vehicle into the suspension performance tester and operate as per manufacturer's instructions.

ITEM	REASONS FOR FAILURE	SEVERITY
Front Suspension Performance	(a). More than 30% imbalance between L/H and R/H suspension.	MaD

REAR AXLE SUSPENSION PERFORMANCE

Method of Testing

Drive the rear wheels of the vehicle into the suspension performance tester and operate as per manufacturer's instructions.

ITEM	REASONS FOR FAILURE	SEVERITY
Rear Suspension Performance	(a). More than 30% imbalance between L/H and R/H suspension.	MaD

SERVICE BRAKE EFFICIENCY

Method of Testing

Roller Brake Test

If the Vehicle is of a type which can be tested on the roller brake tester (RBT) proceed as follows.

1. Position the vehicle so that the wheels of each axle can in turn be placed on the brake test machine rollers.
2. Drive the vehicle onto the roller brake tester and following the prompts of the RBT programme apply the service brake.

NOTES

1. Tyres must be correctly inflated and the gear selector should be in the neutral position.
2. If the tester has any doubt regarding the service brake configuration then a Decelerometer test must be conducted.
3. The testing of vehicles fitted with ice studded tyres will damage the brake tester roller friction surface. It is advisable to ensure before the roller brake test that the tyres are not damaged and are free from stones embedded in the tread.
4. Vehicles having automatic transmission must not be tested with the gear selector in the "P" park position.
5. Occasions will arise when the required brake efficiency is just obtained or just exceeded without lock occurring but the tester knows that a higher efficiency figure is normally obtainable for the type of vehicle being tested. In such cases although the vehicle has passed the brake efficiency test, the tester should advise the owner that the braking system appears to be in need of adjustment or repair.
6. For vehicles with servo assisted or power braking systems, the engine must be running (idling) when the service brake is tested.
7. In some cases it may be necessary to check the road-wheels of the vehicle during a roller brake test.
8. Care should be taken to ensure that tyres are free from mud, stones, oil, or water and that brake tester rollers are in good condition to ensure that premature wheel slip does not occur.
9. Where a vehicle cannot be tested on a roller brake tester because of additional spoilers fitted, they must be removed by the owner/presenter before the test. A decelerometer test will not suffice in this situation.
10. In the case of a vehicle which attains the braking effort specified in Roadworthiness Directive for vehicles tested at their Design Gross Vehicle Weight but does not attain the braking effort specified in the Road Traffic (National Car Test) Regulations when tested at the test[ed] weight but complies with every other requirement of the service brake efficiency test, if the applicant for the test supplies proof that the vehicle has braking type approval to European Economic Community Directive 71/320/EEC and proof of the Design Gross Vehicle Weight of the vehicle to the Road Safety Authority then the Road Safety Authority will consider whether the vehicle should be retested.

Decelerometer Test

If the vehicle is of a type that cannot be tested on the roller brake tester it should be subject to a decelerometer test as follows:

1. With the vehicle on a reasonably level road place the decelerometer on the floor of the vehicle and following the manufacturer's instructions set it in the zero position.
2. Have the vehicle driven at a speed of approximately 48km/h(30mph). Have the service brake applied firmly and note the reading on the decelerometer.

ITEM	REASONS FOR FAILURE	SEVERITY
Service Brake	(a). The braking effort	
	a) for vehicles first registered before 28 July 2010 is less than 55% of the test weight of the vehicle.	MaD
	b) for vehicles first registered on or after 28 July 2010 is less than 58% of the test weight of the vehicle.	MaD
	(b). Brake effort on any wheel is less than 25kgf.	MaD
	(c). The brake effort achieved for the vehicle is less than 50% of minimum required.	DD
	(d). No brake effort on one or more wheels.	DD

SERVICE BRAKE IMBALANCE

Method of Testing

1. Normally this test and the service brake efficiency test will be carried out concurrently and the same general precautions apply (see 'Method of Testing' and 'Notes' for service brake efficiency).
2. **Roller Brake Test**
   With the roller brake tester driving the wheels of each axle in turn, apply the service brake slowly and note the braking effort indicated from the brake on each road-wheel.
3. Check that the brake can be applied progressively and when released does not show any abnormal lag.
4. **Road Test (if carried out)**
   Where a road test is carried out, this should be done in traffic-free circumstances at a speed of 48km/h(30mph). Note whether the vehicle pulls to one side when the brakes are applied and if there is any evidence of brake drum/disc ovality.

ITEM	REASONS FOR FAILURE	SEVERITY
Wheels on Same Axle	(a). More than 30% difference in braking effort (i.e. the braking effort on one side should not be less than 70% of the braking effort on the other side).	MaD
	(b). Braking effort from any wheel is less than 50% of the maximum effort recorded from the other wheel on the same axle in the case of steered axles.	DD
	(c). No gradual variation in brake effort (grabbing).	MaD
	(d). The brake shows abnormal lag when released.	MaD
	(e). Brake cannot be operated progressively.	MaD
Individual Wheel	(f). Brake effort fluctuates by more than 30%.	MaD
Road Test (where carried out)	(g). Obvious pull to one side when brakes are applied.	MaD
	(h). Perceptible ovality.	MaD
	NOTE: Imbalance should not be considered where L/H and R/H brake efforts are at or below 40kgf.	

PARKING BRAKE EFFICIENCY

Method of Testing

Roller Brake Test

1. Normally this test will follow the service brake test and the same general precautions apply (see 'Method of Testing' and 'Notes' for Service Brake efficiency).
2. With the roller brake tester driving each road-wheel, apply the parking brake slowly until each road-wheel is just at the point of slip relative to the rollers, or until sufficient braking is achieved – whichever occurs first. Note the braking effort indicated from the brake of each road-wheel, and calculate the total braking available. Calculate the braking efficiency as a percentage of the vehicle test weight.
3. If the parking brake is a transmission brake, all wheels on the axle that are braked by the transmission brake must be driven by the roller brake tester at the same time.

Decelerometer Test

4. If the vehicle is of a type which cannot be tested on the roller brake tester, it should be subject to a decelerometer test as follows:
   - With the vehicle on a reasonably level road, place the decelerometer on the floor of the vehicle. Follow the manufacturer's instructions and set it in the zero position.
   - Drive the vehicle at a speed of approximately 32km/h (20mph). Apply the parking brake and note the reading on the decelerometer.

NOTES

1. If the tester has any doubt regarding the parking brake configuration then a Decelerometer test must be conducted.

ITEM	REASONS FOR FAILURE	SEVERITY
Vehicles first registered before the 1st July 1964 with a single line brake system	(a). Braking effort less than 20% of the test weight of the vehicle.	MaD
Vehicles first registered on or after 1st July 1964 with a single line braking system	(b). Braking effort less than 27.5% of the test weight of the vehicle.	MaD
Vehicles with a dual line braking system	(c). Braking effort less than 16% of the test weight of the vehicle. (d). The brake effort achieved for the vehicle is less than 50% of minimum required.	MaD DD

PARKING BRAKE IMBALANCE

Method of Testing

1. Normally this test and the parking brake efficiency test will be carried out concurrently and the same general precautions apply (this test is not relevant to transmission type parking brakes).

Roller Brake Test

2. With the roller brake machine driving all the wheels of each axle in turn, apply the parking brake and note the braking effort indicated from the roller brake tester of each road-wheel.

ITEM	REASONS FOR FAILURE	SEVERITY
Wheels on Same Axle	(a). More than 50% difference is present in brake effort between wheels on the same axle.	MaD
	(b). Brake inoperative on one side or in the case of testing on the road the vehicle deviates excessively from a straight line.	MaD

TOWING BRACKET/COUPLING

Method of Testing

NOTES

1. This inspection applies only where a vehicle is fitted with equipment for towing trailers.
2. An unsafe repair or modification carried out to the coupling may require a modifications report to be presented as per section 62 of this Manual.
3. Reason for failure (g) may only be selected when the wear is verified using a measuring gauge.

Drawing Coupling

1. Examine the drawing vehicle coupling ball and pin. Note the condition of these components and ensure that they are free from excessive wear, distortion and/or fracture.
2. Check the body of the coupling for wear, distortion or cracks.
3. Examine the cross/chassis member to which the coupling is mounted, paying particular attention to security and cracks.
4. Check that the coupling assembly is securely attached to the vehicle.
5. Check that locking or safety devices are in position and working correctly.
6. Examine if there has been any obviously unsafe repair or modification carried out to the coupling.

ITEM	REASONS FOR FAILURE	SEVERITY
Vehicle Drawing Pin/Ball	(a). Fastening bolts or securing devices are loose or missing.	MaD
	(b). Any attachment loose with a very serious risk of falling off.	DD
	(c). Any safety device/lock or blocking devices is missing or not operating correctly.	MaD
	(d). Any coupling indicator not working.	MaD
	(e). Cracks are present in the main parts of the coupling.	MaD
	(f). Ball or pin is worn, deformed or damaged.	MaD
	(g). Ball or pin is worn, deformed or damaged is excessively worn (e.g. 3mm wear or more on 50mm ball).	DD
	(h). Registration plate not readable (when not in use).	MaD
	(i). Coupling too weak.	MaD
	(j). Any obviously unsafe repair or modification.[2]	MaD

STOP LAMPS

Method of Testing

With the ignition and rear lights switched on, apply the service brake and check the stop lights for visibility, colour, intensity and security.

Advisory Pass applies where there is a defective light source (multiple light source or in the case of LED up to 50% not functioning).

NOTES

1. For the third (high) brake lamp, Reason for Failure (e) does not apply.
2. Additional stop lamps (other than those fitted by the vehicle manufacturer) are not part of the test.
3. Moisture / condensation in a lamp is not a reason for failure unless it obscures the illuminating surface of the lamp.

ITEM	REASONS FOR FAILURE	SEVERITY
Stop Lamps	(a). Any lamp is missing or not clearly visible.	MaD
	(b). A stop lamp is not working or defective but at least one is still functioning.	MaD
	(c). All stop lamps or light sources not functioning.	DD
	(d). Any lamp is not brighter than tail lights.	MaD
	(e). All lamps are not of same dimensions and brightness.	MaD
	(f). Any lamp is not red in colour.	MaD
	(g). Any lamp is insecurely mounted.	MiD
	(h). Any lamp so insecurely mounted that there is a very serious risk of it falling off.	MaD
	(i). Slightly defective lens (no influence on emitted light).	MiD
	(j). Lens broken, missing or badly cracked.	MaD
	(k). White light showing to the rear.	MaD
	(l). Contains water / moisture.	MiD
	(m). Defective light source, (single light source or in the case of LED less than 50% functioning.)	MaD
	(n). Delay in operation of stop lamps.	MaD
	(o). Function of control device/switch impaired or defective or missing.	MaD
	(p). System indicates failure via the electronic vehicle interface.	MaD
	(q). Emergency brake light functions fail to operate, or do not operate correctly.	MaD

REAR LAMPS

Method of Testing

1. Check that two lamps are fitted securely, symmetrically and are clearly visible to the rear of the vehicle.
2. Check that, when in use, each rear lamp provides a red light which is clearly visible.
3. Check the condition of the lens.
4. Check for presence and security of the switch.

Advisory Pass applies where there is a defective light source (multiple light source or in the case of LED up to 50% not functioning).

ITEM	REASONS FOR FAILURE	SEVERITY
Rear Lamps	(a). Not working or defective light source.	MaD
	(b). Single light sources; in the case of LED less than 50% functioning.	MaD
	(c). Missing or not clearly visible.	MaD
	(d). A lamp showing a colour other than red or light intensity heavily reduced.	MaD
	(e). Lens is missing, broken or badly cracked.	MaD
	(f). Not of the same dimensions and brightness.	MaD
	(g). Lamp insecurely mounted.	MiD
	(h). Lamp so insecurely mounted that there is a serious risk of it falling off.	MaD
	(i). Not fitted symmetrically.	MaD
	(j). Contains water / moisture.	MiD
	(k). Switch does not operate correctly.	MaD
	(l). Lamps can be switched off when headlamps are on.	MaD
	(m).Function of control device/switch impaired or defective.	MaD
	(n). Switch insecurely mounted or missing.	MaD
	(o). Products on lens or light source which reduce light, brightness or change emitted colour.	MiD
	Note: Moisture / condensation in a lamp is not a reason for failure unless it obscures the illuminating surface of the lamp.	

INDICATORS/TELL TALES

Method of Testing

1. Check the presence, security and operation of the selector switch by operating the left and right direction indicators and hazard warning lamps in turn.
2. Check that the indicator lamps (repeaters) and tell tales are function correctly.

Advisory Pass applies where there is a defective light source (multiple light source or in the case of LED up to 50% not functioning).

NOTES

1. Moisture / condensation in a lamp is not a reason for failure unless it obscures the illuminating surface of the lamp.
2. The presence and operation of 'four way flashers' or hazard warning flashers is part of the test (where fitted).
3. Where "repeater" indicators are fitted as standard equipment, these must be working.
4. For vehicles registered before July 1964 front indicators may be white or amber in colour.
5. For vehicles registered before July 1964 rear indicators may be red or amber in colour.
6. An indicator lamp may not be amber in colour, this is not a reason for failure provided the emitted light is amber in colour.
7. An indicator switch that does not self-cancel is not a reason for failure.

ITEM	REASONS FOR FAILURE	SEVERITY
Indicators	(a). Any indicator lamp missing, not fitted symmetrically or not clearly visible.	MaD
	(b). Any indicator lamp is not working or faulty.	MaD
	(c). Any indicator is not flashing constantly between 60 and 120 flashes per minute (flashing type).	MiD
	(d). Any indicator lamp is insecurely mounted.	MiD
	(e). Any indicator lamp so insecurely mounted that there is a very serious risk of falling off.	MaD
	(f). Lens broken, missing or badly cracked.	MaD
	(g). Slightly defective lens (no influence on emitted light).	MiD
	(h). Heavily defective lens (emitted light affected).	MaD
	(i). Contains water / moisture.	MaD
	(j). Defective light source, (single light source or in the case of LED less than 50% functioning.).	MaD
	(k). Brightness or marking not in accordance with the requirements[1].	MaD
	(l). An indicator lamp is not amber in colour, in the case of a vehicle first registered after 30 June 1964.	MaD
	Pre-July 1964	
	(m).Where only one indicator is fitted per side:	
	(a) It is not amber in colour.	MaD
	(b) In the case of a semaphore type, it does not extend six inches beyond the outline of the vehicle.	MaD
Switch	(n). Indicator switch is faulty.	MaD
	(o). Indicator switch not working or missing.	MaD
Tell Tale (lights or audible indicator)	(p). Tell-tale is missing.	MiD
	(q). Indicator tell-tale is not working or faulty.	MaD

SIDE LAMPS (FRONT POSITION LAMPS)

Method of Testing

Side Lamps

1. Check that there are two position lamps (side lamps) showing a white light fitted to the front of the vehicle, one on each si de of the centre line of the vehicle and clearly visible at a reasonable distance when illuminated.
2. Check for defective light sources, security of mounting, damage to any lens and for the presence of water/ moisture.
3. Check the presence, security and operation of the switch.

Advisory Pass applies where there is a defective light source (multiple light source or in the case of LED up to 50% not functioning).

NOTES

1. When a side lamp is incorporated in a yellow headlamp, effectively producing a yellow side lamp, this is acceptable. In this case, the lamps on both sides of the vehicle must be the same colour.
2. In order to distinguish between a Daytime Running Light (DRL) and another type of light e.g. a fog light, the markings on the light, where visible, should be examined. An "E" mark followed by the letters "RL" signifies that the light fitted is a type approved DRL.
3. A fog light may have the letters "B" or "F3" for example.
4. Moisture / condensation in a lamp is not a reason for failure unless it obscures the illuminating surface of the lamp.

ITEM	REASONS FOR FAILURE	SEVERITY
Side Lamps	(a). A lamp is missing or not clearly visible.	MaD
	(b). Lens is missing, broken or badly cracked.	MaD
	(c). Not working or defective light source.	MaD
	(d). Not white in colour.	MaD
	(e). Lamps are not fitted symmetrically.	MaD
	(f). Lamps not of the same dimensions and intensity.	MaD
	(g). A lamp is insecurely mounted.	MiD
	(h). A lamp is so insecurely mounted that there is a very serious risk of falling off.	MaD
	(i). Lamps can be switched off when the headlamps are on.	MaD
	(j). Function of control device/switch impaired or defective.	MaD
	(k). Switch insecurely mounted or missing.	MaD
	(l). A lamp showing a colour other than white or light intensity heavily reduced.	MaD
	(m).Products on lens or light source which reduce light, brightness or change emitted colour.	MiD
	(n). Contains water / moisture.	MiD
	(o). For Lights other than Daytime Running Lights - Switch does not operate correctly.	MaD

HEADLAMP CONDITION

Method of Testing

1. With the headlamps switched to main or dipped beams, check that each headlamp shows a light of the same colour (white or yellow) of such intensity as to sufficiently illuminate the road in front of the vehicle.
2. Check the condition and colour of the headlamp glass, reflectors and that there are no products on the lens or light source that reduce light brightness or change the emitted colour.
3. Check the operation and security of the headlamp, dip switch and the headlamp main beam warning light.
4. Check that the light source and lamp are compatible with each other.
5. Check for the presence of water / moisture in the headlamp(s)
6. Where HID (High Intensity Discharge) bulbs are fitted switch on the headlights and check that cleaning devices (where required) such as head lamp wipers or high pressure water jets are present and work. Check where possible that the head lamp levelling device is working.

Advisory Pass applies where there is a defective light source (multiple light source or in the case of LED up to 50% not functioning).

NOTES

1. Moisture / condensation in a lamp is not a reason for failure unless it obscures the illuminating surface of the lamp.
2. Headlamps should consist of either two or four lamps, or one lamp in the case of an electric vehicle incapable of exceeding 40km/h (24mph).
3. Headlamps are not required to be e-marked.
4. For the second method of testing above (Glass, Bulb and Reflecting Material), 'glass' refers to the headlamp lens or outer cover even if the material is not glass e.g. polycarbonate.
5. Where a dipped beam is so far out of focus that it cannot be picked up by the headlamp tester, then it should be failed.
6. HID headlamps must be installed as a complete type-approved system. The system will include automatic cleaning. HID headlamps can be recognised by:

   a) the light having a bluish tinge,

   b) the light taking a few seconds to reach full intensity,

   c) the headlamp having an igniter module/inverter behind the headlamp,

   d) the headlamp having "DC" (for HID dipped beam), "DR" (for HID main beam), or "DCR" (if both are HID) marked on the lens. This marking should be visible from the exterior of the vehicle but in some cases the markings may be hidden under the bonnet and this may need opening to obtain a clear view.

ITEM	REASONS FOR FAILURE	SEVERITY
Main or Dipped Beams	(a). Dipped beams are not working simultaneously.	MaD
	(b). Main beams are not working simultaneously.	MaD
	(c). Main or dipped beams not working.	MaD
Glass, Bulb and Reflecting Material	(d). Light intensity is not acceptable.	MaD
	(e). Glass is badly cracked or missing.	MaD
	(f). Reflecting material is damaged/discoloured.	MaD
	(g). Maximum permitted light brightness to the front exceeded (where measured).	MaD

ITEM	REASONS FOR FAILURE	SEVERITY
Head Lamps	(h). A headlamp is missing.	MaD
	(i). A headlamp is insecurely mounted.	MaD
	(j). A headlamp contains water /moisture.	MiD
	(k). Defective light source, (single light source or in the case of LED less than 50% functioning.)	MaD
Dip or Headlamp Switch	(l). The dip or headlamp switch is insecurely mounted or missing.	MaD
	(m). The dip or headlamp switch is defective.	MaD
	(n). Switch does not operate in accordance with the requirements[1].	MiD
	(o). Function of control device/switch impaired or defective.	MaD
	(p). System indicates failure via the electronic vehicle interface	MaD
Dipped Beam	(q). Headlamps dipping to the right.	MaD
	(r). System indicates failure via the electronic vehicle interface.	MaD
Colour	(s). All lamps not either white or yellow.	MaD
	(t). Lamp, emitted colour, position, brightness or marking not in accordance requirements[1].	MaD
	(u). Products on lens or light source which obviously reduce light brightness or change emitted colour.	MaD
Main Beam Warning Light	(v). Tell-tale not operating for main beam headlamp.	MaD
Headlamp and Bulb	(w). Light source and lamp not compatible (HID bulb fitted in a non-HID headlamp).	MaD
HID Lamps/Cleaning devices	(x). Where a levelling device is mandatory, the levelling device is not operating or manual headlamp levelling device cannot be operated from driver's seat.	MaD
	(y). Where a headlamp cleaning device is mandatory the cleaning device is not present.	MaD
	(z). Where a headlamp cleaning device is mandatory, the headlamp cleaning device is not operating correctly.	MaD
	(aa). System indicates failure via the electronic vehicle interface.	MaD
	(ab). In the case of gas- discharging lamps (HID), the headlamp cleaning device is not operating correctly.	MaD

HEADLAMP AIM

Method of Testing

Align the headlamp beam-setter in front of each headlamp in turn, and with the headlamp emitting the dipped beam or the main beam as appropriate (see Notes below), determine the % gradient of the highest intensity of the beam relative to the plane on which the vehicle is standing.

NOTES

1. Headlamps fall into three categories as follows:
   - i European Type Headlamp – checked on dip beam (see figure 1 for method of test).
   - ii British-American Type Headlamp – checked on dip beam (see figure 2 for method of test).
   - iii British-American Type Headlamp – checked on main beam (see figure 3 for method of test).
2. Tyre pressures should be checked and corrected if necessary before the headlamp aim is checked. The vehicle and the beam-setter should be located on the special headlamp aim checking area within the test premises.
3. Any headlamp range adjuster must be in the basic setting.
4. If a vehicle is presented with left hand drive headlamps and beam masks, the masks must be installed to ensure they effectively block any light projection above the 0% horizontal reference line. This would then show a pattern similar to a mirror image of Fig. 2 and can be checked as on that guide.
5. On vehicles fitted with hydropneumatic suspension, the engine must be idling during this test.
6. The vehicle should be tested without a person in the driver's seat. If the reading is 0.2% to the limit (between -0.4% and -0.2%), the test should be carried out with an occupant in the seat. This reading will be stored in the test results.

ITEM	REASONS FOR FAILURE	SEVERITY
European Type Headlamp (checked on dip beam)	(a). For headlamps whose centre is not more than 850mm above the ground, the horizontal cut-off line does not lie between the -0.5% and -2% horizontal lines.	MaD
	(b). For headlamps whose centre is more than 850mm from the ground, the horizontal cut-off line does not lie between the -1.25% and -2.75% horizontal lines.	MaD
	(c). The junction of the 15° cut-off and horizontal cut-off line does not lie between the 0% and 2% vertical lines.	MaD
British-American Type Headlamp (checked on dip beam)	(d). The upper edge of the hot spot does not lie between the 0% and -2.75% horizontal lines.	MaD
	(e). The right hand edge of the hot spot does not lie between the 0% and 2% vertical lines.	MaD
British-American Type Headlamp (checked on main beam)	(f). For headlamps whose centre is not more than 850mm above the ground, the hot spot centre does not lie between the 0% and -2% horizontal lines.	MaD
	(g). For headlamps whose centre is more than 850mm above the ground, the hot spot centre does not lie between the 0% and -2.75% horizontal lines.	MaD
	(h). The centre of the hot spot does not lie between the 0% and 2% vertical lines.	MaD

HEADLAMP AIM

European Type Headlamp – checked on dipped beam.

The lens may be circular, rectangular or trapezoidal in shape. It will usually have a segment shaped pattern moulded into the glass. It may be marked with a '2' and an arrow, or a 'C' above either an 'E' or 'e'. On dipped beam, it will produce a pattern similar to the figure below.

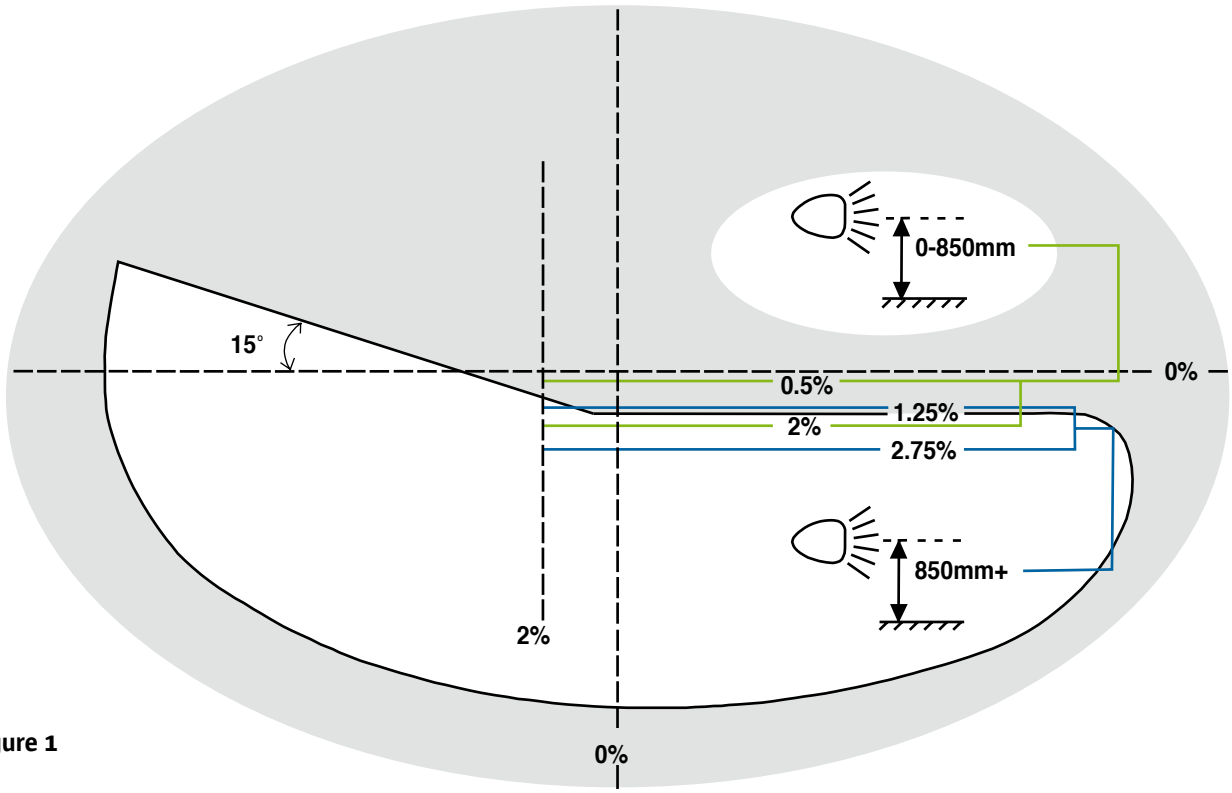


Figure 1

Check on dipped beam and determine that:

1. The junction of the 15° cut-off and horizontal cut-off lines lie between the 0% and 2% vertical lines.
2. The position of the horizontal cut-off line must lie between:
   (i) the0.5% and2.0% boundary lines–shown on the screen in Green– for head lamps whose centre is not more than 850mm above the ground;.
   (ii) the 1.25% and 2.75% boundary lines – shown on the screen in Blue – for headlamps whose centre is more than 850mm above the ground.

HEADLAMP AIM

British-American Type Headlamp – checked on dipped beam.

The lens is usually circular and of a sealed beam construction. It may be marked with an 'E' or a '2' and may also have an arrow. On dipped beam, it will produce a pattern similar to the figure below.

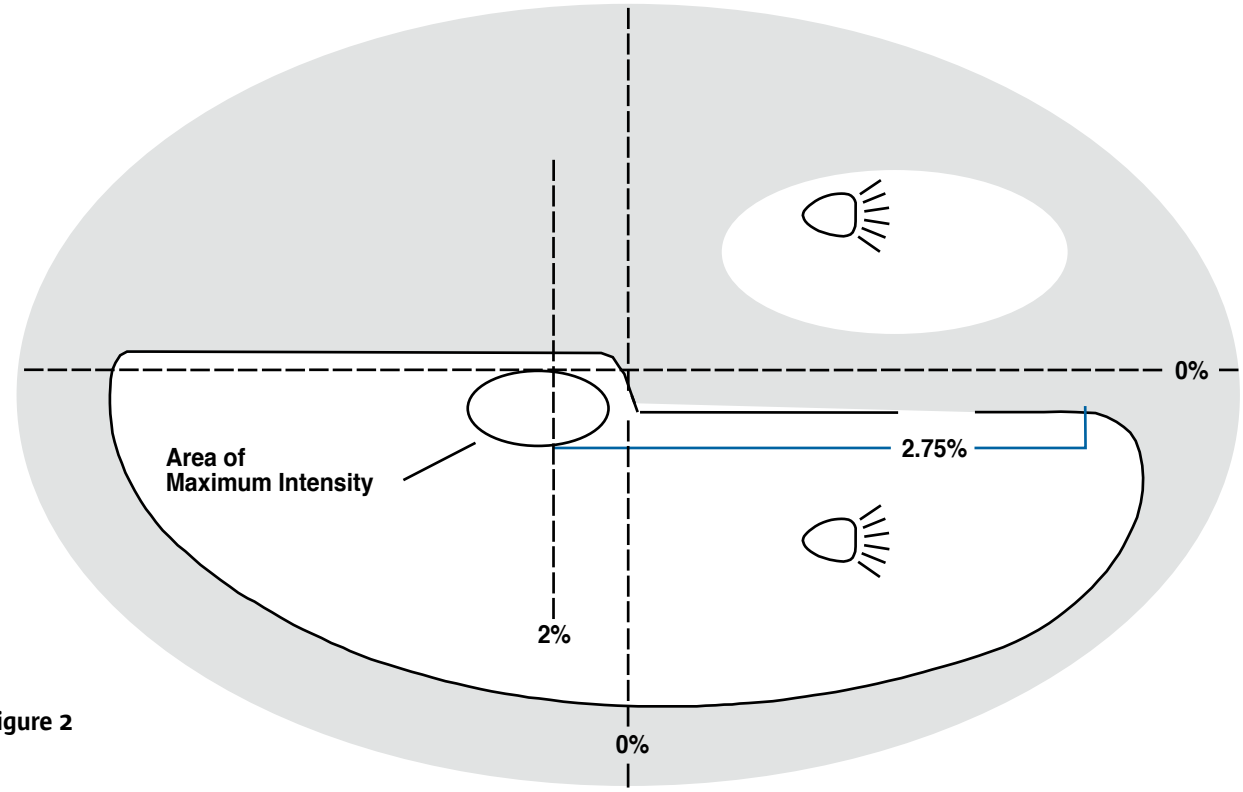


Figure 2

Check on the dipped beam and determine that:

1. the upper edge of the hot spot lies between the 0% and 2.75% horizontal lines shown on the screen.
2. the right hand edge of the hot spot lies between the 0% and 2% vertical lines.

HEADLAMP AIM

British-American Type Headlamp –checked on main beam.

The lens of this type of headlamp is circular and likely to be of the sealed beam construction. It may be marked with a '1' and an arrow. It will not have a 'C' above either an 'E' or 'e'. The dipped beam pattern will not match either of the figures shown on the previous pages but the main beam will be similar to the figure below.

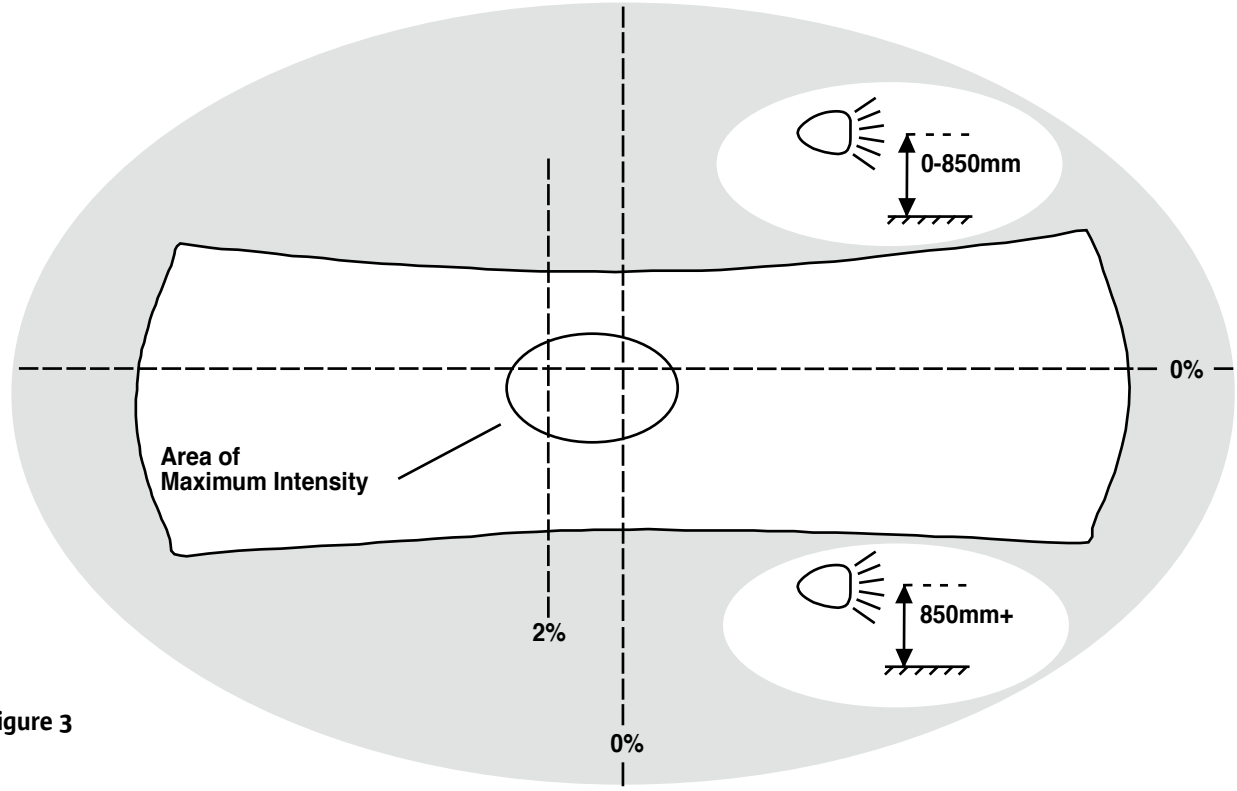


Figure 3

Check on main beam and determine that:

1. the centre of the hot spot lies between the 0% and 2% vertical lines.
2. for headlamps whose centre is not more than 850mm above the ground, the hotspot centre lies between the 0%and 2% horizontal lines.
3. for headlamps whose centre is more than 850mm above the ground, the hotspot centre lies between the 0% and 2.75% horizontal lines.

AUXILIARY LAMP CONDITION AND POSITION

Method of Testing

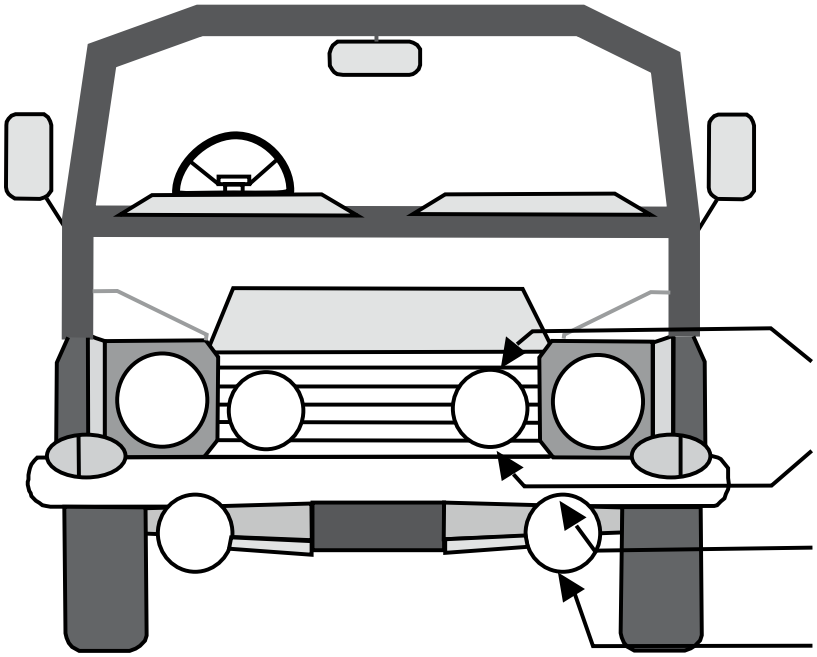
1. Check that each auxiliary lamp/ front fog lamp fitted is securely and correctly fixed to the vehicle.
2. Check that the switching mechanism is functioning correctly and that any auxiliary lamps set in the headlamp main beam position are extinguished when the headlamp dipped beams are brought into operation.
3. Check the condition of the lamps and the emitted light colour.
4. Check for the presence of water / moisture in the lamps.

NOTES

1. Where both auxiliary lamps are found to be inoperative, this should not be considered a reason for failure.
2. Where only one fog lamp is working reason for failure (i) applies.
3. A broken glass on an auxiliary lamp or fog lamp is not a reason for failure unless the crack or break is large enough to insert a sheet of paper as used in the test.
4. Moisture / condensation in a lamp is not a reason for failure unless it obscures the illuminating surface of the lamp.

ITEM	REASONS FOR FAILURE	SEVERITY
Front Fog Lamp (including auxiliary or long distance driving lamp)	(a). Incorrectly positioned.	MaD
	(b). Insecurely mounted.	MiD
	(c). An auxiliary lamp is so insecurely mounted that there is a very serious risk of falling off or dazzling oncoming traffic.	MaD
	(d). Switch defective or does not operate lamp independently of side lights.	MaD
	(e). Not showing white or yellow light.	MaD
	(f). Slightly defective lens (no influence on emitted light)	MiD
	(g). Heavily defective lens (emitted light effected).	MaD
	(h). Lamp contains water/moisture.	MiD
	(i). Defective light source, (single light source or in the case of LED less than 50% functioning.)	MaD
	(j). Intensity or marking not in accordance with the requirements[1]	MaD
	(k). System does not operate in accordance with the requirements[1].	MaD

AUXILIARY LAMP CONDITION AND POSITION



HEIGHT

Auxiliary Headlamp:
(Long range driving lamp)

Maximum height: 1220mm

Minimum height: 500mm

Fog Lamp:
Maximum height: 800mm

Minimum height: 250mm

AUXILIARY LAMP AIM

Method of Testing

Align the headlamp beamsetter in front of each lamp in turn, and determine the direction of the highest intensity of the beam relative to the plane on which the vehicle is standing.

NOTES

1. The agreed procedure if there are auxiliary and fog lamps installed: Auxiliary light – carry out in the high beam position.
2. Where a vehicle is fitted with an auxiliary lamp and a fog lamp the requirement is to check both lamps.

ITEM	REASONS FOR FAILURE	SEVERITY
Fog Lamp	(a). The upper edge of the beam is above the 2% horizontal line.	MaD
Auxiliary Lamp (spot or long range lamp)	(b). The hot spot centre does not lie below the 0% horizontal line.	MaD
	(c). The centre of the hot spot does not lie between the 0% and 2% vertical lines.	MaD

REFLECTORS

Method of Testing

Rear Reflectors (required on all vehicles)

1. Check that two red reflectors are fitted symmetrically to the rear of the vehicle.
2. Check that each reflector is secure, complete and operates in an effective manner.

Side Reflectors (if fitted)

3. Side reflectors, if fitted, must be amber in colour; however, the rearmost side retro-reflector can be red if it is grouped or has part of the light emitting surface in common with the rear position lamp, the rear end-outline marker lamp, the rear fog lamp, the stop-lamp or the red rearmost side-marker lamp.

ITEM	REASONS FOR FAILURE	SEVERITY
Rear Reflectors	(a). One or both rear reflectors are missing or ineffective.	MaD
	(b). A rear reflector is not red in colour.	MaD
	(c). Reflecting equipment defective or damaged.	MiD
	(d). A rear reflector is seriously damaged that reflecting is affected.	MaD
	(e). Rear reflectors are not matching in size and appearance.	MiD
	(f). A rear reflector is insecurely mounted.	MiD
	(g). A rear reflector is so insecurely mounted that it is likely to fall off.	MaD
	(h). Rear reflectors are not fitted symmetrically.	MiD
Side Reflectors (if fitted)	(i). A side reflector is not amber in colour.	MaD

BODYWORK

Method of Testing

1. Examine primary structural components (including floor pan) for cracks, security, damage or rust. Check where repairs have been carried out that there is an engineer's report stating that the original strength and safety of the vehicle has not been compromised and that any welding or brazing has been carried out using good engineering practice. Check from both front and rear that the body is sitting squarely. Examine all secondary structural components for security, rust or jagged edges. Check that bumpers, guards and body panels are secure and not likely to injure pedestrians or other road users.
2. Check that fumes are unlikely to enter the vehicle e.g. torn gear lever boots.
3. Check that the bonnet and boot lid catches are operating properly. In the case of front opening bonnets,ensure that the safety catch is fitted and operating properly.
4. Examine if there has been any obviously unsafe repair or modification carried out to the body work.

BODYWORK

NOTES

1. **Corrosion**

   The effect of corrosion on the safety of the vehicle depends on its extent and the location where it has occurred. A small amount of corrosion (other than surface rust) on an important part of the vehicle structure can make a vehicle unsafe where it destroys the continuity of the load bearing structure. On the other hand, heavy corrosion of unimportant sections may have no effect on the vehicle safety.

2. **Detecting Rust in Vehicles**

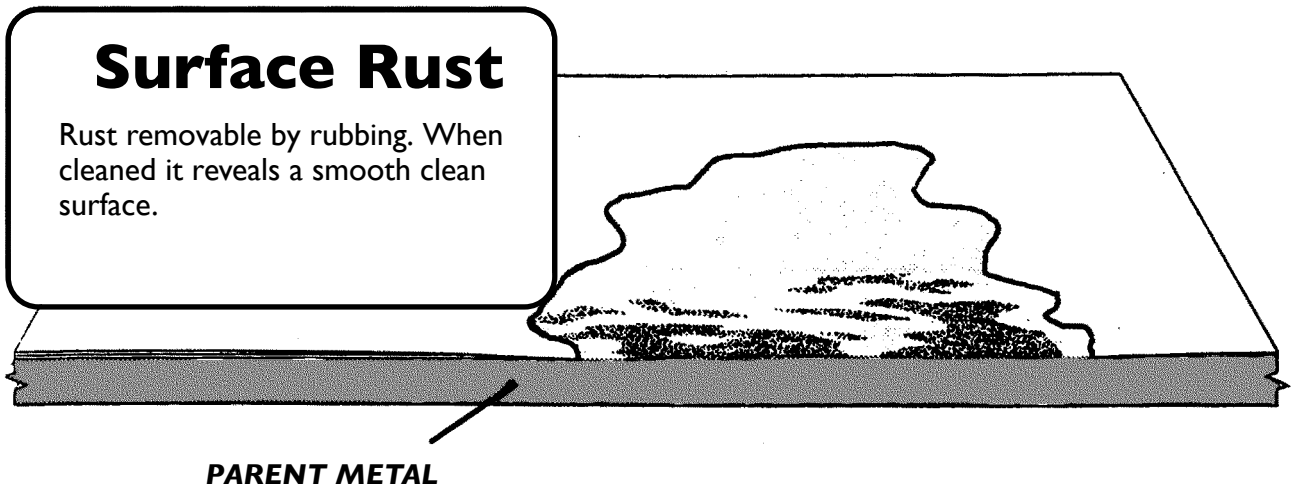
   Since advanced rust is almost always associated with an eruption of oxidised metal and pitting or bubbling of paint, a visual inspection is usually adequate to determine its presence. However, this method may not be adequate in all cases. In underbody areas prone to rust, such as steering and suspension mounting points and major structural components which include chassis, floor, structural sills and sub frames, the presence of rust should be checked using thumb pressure or by tapping with a Corrosion Assessment Tool. Care should be taken to avoid damage to panels or paint work not rust affected in any way. When checking for advanced rust, particular attention should be paid to seam welds and spot welds. These frequently corrode through from the interior and can result in the eventual detachment of panels. Any panel which is made insecure by such corrosion must be repaired even if it is an area of the component where rust holes are not an immediate danger.

3. **Classification of Rust**

   The extent of corrosion can range from light surface rust to the total breakdown of parent metal. In general, the formation of rust and resultant loss of metal occurs in areas which retain moisture, because of a build-up of road dirt and mud etc. The extent of corrosion is classified in three stages.

   Stage 1 – Surface Rust

   Light, powdery corrosion on the surface of a section of metal is termed surface rust. Surface rust can occur on or behind any body panel, particularly if the protective coating is scratched or damaged.



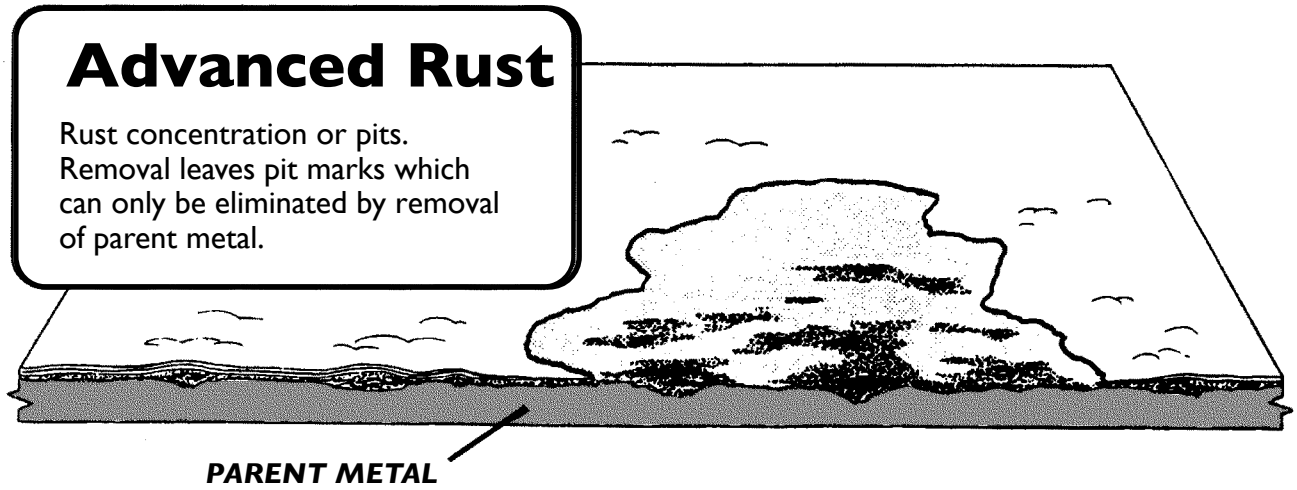
BODYWORK

NOTES

Stage 2 – Advanced Rust

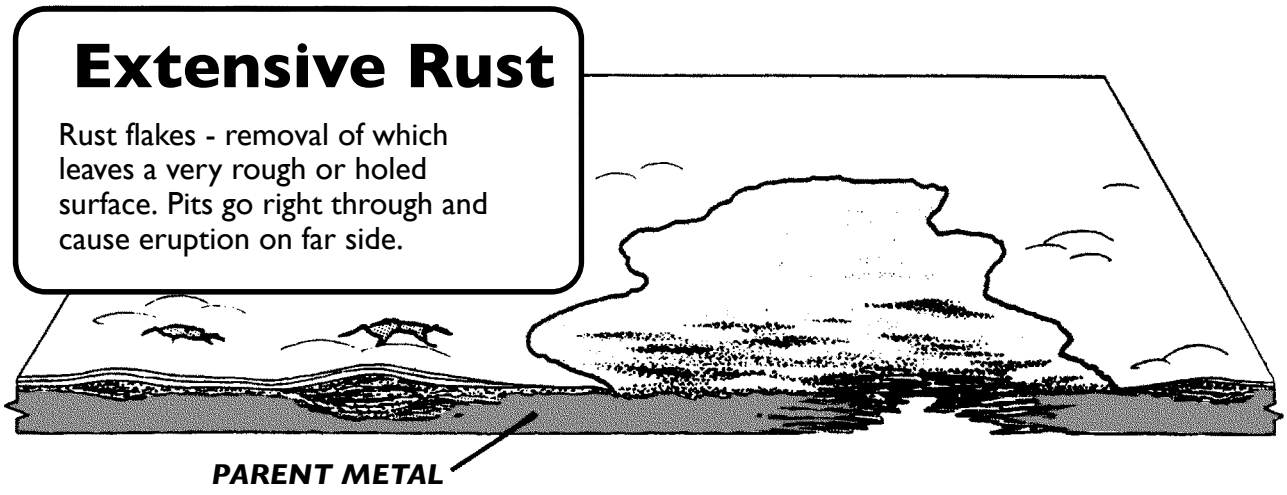
Surface rust, if left unattended, will develop into an advanced form of corrosion which can usually be seen as an eruption of oxidised metal, either on bare metal or under paint. This eruption occurs because the rust reaction involves an increase in volume which causes pitting or bubbling of paint.

An example of a section affected by advanced rust is illustrated below.



STAGE 3 – EXTENSIVE RUST

The final stage of the corrosion process is the formation of a heavy encrustation of oxidised metal which completely replaces the parent metal. This results in a hole or series of holes in the body panel or structural member of the vehicle when the rust is removed. This category of rust can usually only be rectified by replacement of the affected body panels and parts. The illustration below shows a section affected by extensive rust.



BODYWORK

NOTES

4. Vehicle Structures

Vehicle structural components can be categorised according to their importance to safety.

Primary Structure

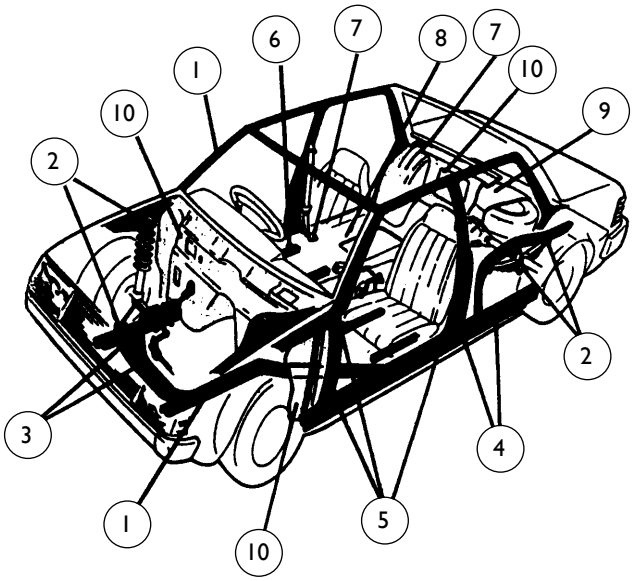
Primary structure includes any structure or component which, if it collapsed, would make the vehicle uncontrollable or would considerably reduce occupant safety in the event of an accident. Only surface rust is acceptable in primary structure components. Any part of a load bearing member or load bearing panelling should be considered a reason for failure if it is weakened by corrosion to the extent that:

- By finger and thumb pressure it does not feel rigid, or
- It crumbles to leave a hole, or
- When evaluated using correct methods and using Corrosion Assessment Tool, the metal crumbles or disintegrates.

Typical Primary Structure Components

The weakening of any of these components can lead either to a crash or make the outcome of a crash much worse.

Primary Body Structure



1. Main structural members such as subframes and chassis rails.
2. Suspension mountings and parts.
3. Steering component mounting points.
4. Door sills and pillars.
5. Door hinges and latch mounting points.
6. Seat anchorage points.
7. Seat belt anchorage points.
8. All floor panels.
9. Boot floor.
10. Bulkheads.

Secondary Structure

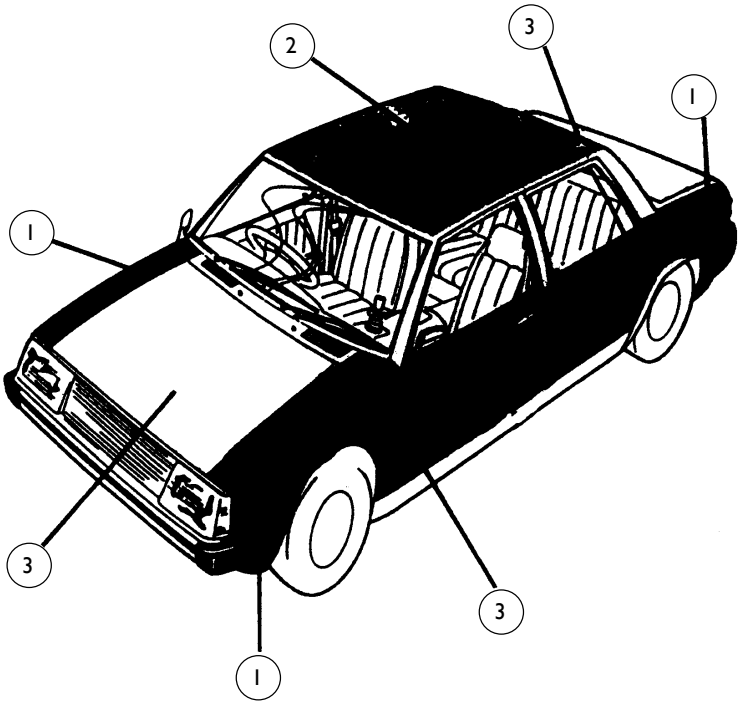
The second category includes any structure or component which, if it collapsed, would not immediately affect a vehicle's controllability. Normally, surface rust or advanced rust in these structures or components would not make the vehicle unsafe. Extensive rust in these components is usually either hazardous to people in or near the vehicle because of its sharp edges or because exhaust fumes may escape into the vehicle. In such cases, this type of rust would make the vehicle unsafe.

Typical Secondary Components

Extensive rust in these components can be hazardous to vehicle occupants and other road users.

BODYWORK

Secondary Body Structure



1. Wings or bumpers.
2. Roof.
3. Bootlid, bonnet and doors (areas within 100 mm of mounting and locking points are primary structures and must be free of advanced or extensive rust).

5. **How to determine if a vehicle is safe**

TYPE OF CORROSION	CATEGORY OF STRUCTURE	
	Primary	Secondary
Surface Rust	Acceptable	Acceptable
Advanced Rust	Not Acceptable	Acceptable *
Extensive Rust	Not Acceptable	Not Acceptable **

* Areas within 100 mm of hinges and locks (e.g. bootlid, bonnet and doors), are considered primary structures and must be free of advanced and extensive rust.

** Extensive rust is not acceptable in secondary components, if it renders the component hazardous to persons in or near the vehicle eg. sharp edges, loose panels, or in the case of exhaust fumes, leakage of exhaust gases into the passenger compartment.

BODYWORK

NOTES

6. **Repairs**
   Repairs made to primary structure components solely by using body filling compounds are not acceptable. Repairs should be made by completely welding in new metal of the same gauge as that of the manufactured component. However, plastic filler or fibreglass can be used to cosmetically smooth a non-structural component.

   Extensive rust in structural members can only be repaired by replacing the affected member or by completely removing all rusted material and reinforcing it so that the original strength of the affected structural member is re-established.

7. **An unsafe repair or modification**
   An unsafe repair or modification carried out to the body structure may require a modifications report to be presented as per Item 62 of this Manual.

8. Any superficial damage which does not affect the strength of the component, and is not likely to injure other road users should not be regarded as a defect

9. A missing or damaged mud flap is not a reason for failure.

10. The judgement to be made is whether or not the manufacturer's original strength has been maintained Where a manufacturer has used brazing in some area of the manufacturing process, repairs using a similar process and to a similar standard of workmanship is acceptable. Using brazing to repair chassis members is not acceptable.

11. The bodywork check includes an examination of the boot. Where this cannot be opened or contains items which would make the examination difficult, the bodywork check is considered to have not been completed and the vehicle cannot be passed.

12. Glued structural components are not acceptable unless they are consistent with the manufacturer's design and to a similar standard.

BODYWORK

ITEM	REASONS FOR FAILURE	SEVERITY
Bodywork	(a). A loose or damaged panel or part likely to cause injury.	MaD
	(b). A loose or damaged panel or part that it is likely to fall off	DD
	(c). Primary structural components broken, cracked, insecure, damaged or rusted to an advanced stage.	MaD
	(d). Secondary structural components missing, insecure, rusted or damaged to such an extent as to leave sharp edges.	MaD
	(e). Body not sitting squarely due to distortion.	MaD
	(f). Bonnet or boot catches (a) Defective.	MaD
	(b) Bonnet catch defective and safety catch missing.	DD
	(g). Primary structural components broken, cracked, insecure, damaged or rusted that stability is impaired.	DD
	(h). Bodywork so deteriorated or damaged that engine or exhaust fumes are entering the cab. Danger to health of persons on board.	DD
	(i). A bumper/bull bar is loose/damaged or likely to cause injury when grazed or contacted.	MaD
	(j). A bumper/bull bar is so insecurely mounted that it is likely to fall off.	DD
	(k). A body strip is insecure.	MaD
	(l). Device obviously not in compliance with the requirements[1]	MaD
	(m).Advanced corrosion or other equivalent damage is present.	MaD
	(n). Extensive corrosion that there is insufficient strength of parts.	DD
	(o). Floor insecure or badly deteriorated.	MaD
	(p). Floor insecure or badly deteriorated that the stability of driver's seat is affected.	DD
	(q). Insufficient clearance to rotating or moving parts and road.	DD
	(r). Body insecure.	MaD
	(s). Body so insecure that stability is affected.	DD
	(t). Body obviously not located squarely on chassis.	MaD
Repairs/Alterations	(u). Any obvious unsafe repair or modification. For example; Primary structural components repaired in such a manner that the original strength of the component has not been maintained (e.g. use of fillers to repair structural component.)	MaD

TYRE CONDITION

Method of Testing

1. Check whether the tyre tread appears to have been recut.
2. Check visually that the tyre is correctly seated on the wheel rim.
3. Examine the tyre for:
   (a) any cut or break in the fabric.
   (b) any lump or bulge.
   (c) any exposure of the ply or cord structure.
4. Examine the valve stem for distortion or chafing.

NOTES

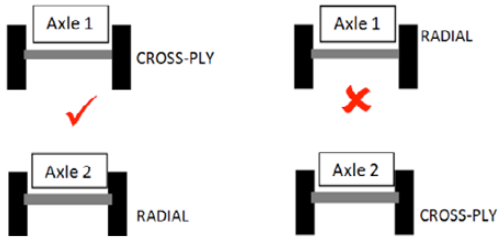
1. Any tyre or wheel examination must be performed with the vehicle raised on the lift to ensure that all parts of the wheel and tyre can be examined thoroughly.
2. Examination is confined to tyres fitted to the road wheels. If, however, any defect on a tyre carried on a spare wheel is seen, the driver should be advised.
3. Tyres designed for recutting or regrooving will normally be marked as regroovable.
4. The evidence of any tyre wear or damage in the full lock and full suspension bounce conditions should be noted when making the ratings above (see also Reasons for Failure No. 29 steering linkage).

ITEM	REASONS FOR FAILURE	SEVERITY
Tyre Structure	(a). Evidence of recutting of tread pattern where tyre is not suitable for recutting.	MaD
	(b). Tyre is regrooved so that cord protection layer is affected.	DD
	(c). Incorrectly seated on wheel rim.	MaD
	(d). Any serious damage to the tyre or a cut in tyre that is longer than 25mm or 10% of section width (whichever is shorter)	MaD
	(e). A tyre is damaged that the cord is visible or damaged.	DD
	(f). Rupture in or exposure of ply or cord structure, tread lifting, lump or bulge caused by separation of rubber from cords or weakness in cord structure, or tread distorted or damaged.	DD
	(g). Tyre rubbing against other components (flexible anti-spray devices).	MiD
	(h). Tyre rubbing against other components (safe driving not impaired).	MaD
	(i). Tyre(s) obviously underinflated.	MiD
Valve	(j). Obvious damage or distortion of the valve stem is present.	MaD
	(k). Valve stem chafing against valve hole.	MaD
Repairs	(l). Repair plug fitted in the sidewall	MaD

TYRE SPECIFICATION

Method of Testing

1. Check that tyres on the same axle are of the same size, aspect ratio (Note 3 on next page) and type (i.e. cross-ply, radial-ply, run-flat, winter or summer).
2. Check that the speed rating of each tyre is suitable for the maximum legal speed limit for the vehicle.
3. Check that each tyre fitted on the vehicle has an E-mark or e-mark.
4. Check that the structure of the tyres fitted to an individual axle are the same, with the exception being where cross-ply tyres are fitted to the front and radial at the rear. Cross-ply tyres may not be fitted to the rear with radial tyres to the front.
5. Check each tyre to ensure that the tyre load index rating is not less than 50% of the design axle weight.
6. For vehicles first registered on or after 1 January 2015 which are fitted with a tyre pressure monitoring system (TPMS), check that:
   a. the system is not obviously inoperative



#	MARKING	EXPLANATION
1	205	Tyre width in millimetres
2	55	Height-to-width ratio in percent. In this example, 55% of 205mm. Also called the aspect ratio.
3	R	Radial construction
4	16	Inner rim diameter of the tyre in inches
5	91	Service description: Load Index. Denotes the maximum approved load capacity per individual tyre
6	V	Service description: Speed symbol. Indicates the maximum speed for the tyre at full load. In this case 241 kph (150 mph).
7	0204	Production date code (i.e. second week in 2004)
8	E4	Type approval mark (ECE) designating country where issued ("E-mark"). There may be a small "e" instead of or in addition to the "E" mark. The "e-mark" denotes EU type approval. Either is acceptable.
9	214336	Type approval number (ECE).
10	Outside	Asymmetric tyre marking. Where present indicates location of tyre on vehicle
Not Shown	Arrow	Where present indicates direction of rotation.

NOTES

1. E-mark is to UNECE type approval specification. e-mark is to European Directive type approval. Either is acceptable.

TYRE SPECIFICATION

ITEM	REASONS FOR FAILURE	SEVERITY
Tyre Fitment	(a). Tyres fitted to the same axle are not of the same size, aspect ratio or type '(i.e. cross-ply, radial-ply, runflat, winter or summer)" . See note 3 below.	MaD
	(b). Radial ply tyres are fitted to the front wheels but not to the rear wheels.	MaD
	(c). Speed rating of tyres cannot be determined on inspection or is insufficient for maximum legal speed limit.	MaD
	(d). Space saving tyre fitted on an axle.	MaD
	(e). Tyre protrudes beyond bodywork or touches other fixed vehicle parts impairing safe driving.	DD
	(f). Tyre is not fit for purpose, e.g. marked "For Trailer Use Only" or similar.	MaD
	(g). Insufficient load capacity (tyre load rating less than 50% of design axle weight).	MaD
Direction and Location	(h). Any tyre fitted in the incorrect direction (directional tyres) or wrong side out (asymmetrical tyres).	MaD
Tyre type approval	(i). An E-mark or e-mark is not visible on the tyre	MaD

Advisory Pass applies where the date of manufacture is obvious on the tyre, a tyre older than six years.

Advisory Pass applies where the tyre pressure monitoring system (TPMS) is malfunctioning on a vehicle first registered before 1 January 2015.

NOTES

1. Any tyre or wheel examination must be performed with the vehicle raised on the lift to ensure that all parts of the wheel and tyre can be examined thoroughly.
2. Unless marked otherwise, "standard" car tyres have a nominal aspect ratio of 82%. Some tyres have an aspect ratio of 80%. These have "/80" included in their size marking e.g. 165/80 R1 3.
3. 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 Failure (1) does not apply.

TYRE TREAD

Method of Testing

Check with a tyre tread depth gauge, that the central three-quarters of the tread pattern has a depth of at least 1.6 millimetres around the full circumference of the tyre.

NOTES

1. Any tyre or wheel examination must be performed with the vehicle raised on the lift to ensure that all parts of the wheel and tyre can be examined thoroughly.
2. Where the pattern is interrupted by tread wear indicators but has at least 1.6mm overall tread depth, the tyre concerned should not be failed for inadequate tread-depth.
3. The tread pattern means the combination of plain surfaces and groves extending across the breadth of the tread but excludes any tread wear indicators or features which are designed to wear out substantially before the rest of the pattern under normal conditions of use.

ITEM	REASONS FOR FAILURE	SEVERITY
Depth of Tread	(a). Depth of less than 1 .6mm in the central three- quarters of the tread pattern.	DD

Advisory pass applies where; a tyre has a tread depth of less than 3mm but more than 1.6mm.

WHEELS

Method of Testing

1. Make an inspection of each part of the road wheel, paying particular attention to whether there is:
   (a) any fracture of flanges.
   (b) any welding breaking away.
   (c) any wheel badly distorted.
   (d) any stud hole badly worn.
   (e) any wheel stud missing.
   (f) any wheel nut missing.
   (g) any wheel nut loose.
   (h) any wheel spokes missing or loose.
2. Check that the correct type of wheel and wheel nut is fitted.

NOTES

1. Any tyre or wheel examination must be performed with the vehicle raised on the lift to ensure that all parts of the wheel and tyre can be examined thoroughly.
2. Where an owner refuses to allow the wheel covers of the vehicle to be removed, the vehicle should be refused a certificate on the basis that the wheel nuts have not been inspected.

ITEM	REASONS FOR FAILURE	SEVERITY
Wheels	(a). Any crack, fractures or defective welds present in a wheel.	DD
	(b). Wheel badly distorted (more than 13mm (½") askew or buckled) or worn.	MaD
	(c). Wheel so badly distorted that secure fixing to hub is affected or the secure fixing of the tyre is affected.	DD
	(d). Incorrectly fitted- wheel size, technical design, compatibility or type not in accordance with the requirement's and affecting road safety.	MaD
	(e). Damaged, so that tyre damage or seal damage is possible.	MaD
	(f). Different sizes fitted on the same axle.	MaD
	(g). Any spoke or wheel component is in such a condition that there is a danger of failure.	MaD
	(h). Wheel embellishers or wheel covers not removed.	MaD
Stud Holes	(i). Elongated, or damaged	MaD
Studs or Nuts	(j). Damaged or threads stripped or crossed.	MaD
	(k). Any stud or nut missing or loose.	MaD
	(l). Any stud or nut in such a condition that there is an obvious danger that the wheel will come loose.	DD
	(m).Nuts incorrectly fitted.	MaD
	(n). Incorrect nuts fitted.	MaD

SPARE WHEEL AND CARRIER (EXTERNAL CARRIER ONLY)

Method of Testing

1. Examine the spare wheel carrier, if fitted, for security of attachment to vehicle.
2. Examine the mounting points and the structure of the carrier to see that they are free from fractures.
3. If there is a spare wheel in the carrier, check that this is securely held in the carrier.

NOTES

1. Defects in a spare wheel tyre should not be considered a reason for failure.
2. Where a spare wheel (other than a space saver wheel) is supplied by a vehicle manufacturer for a particular make and model, then it should be accepted as suitable provided it is not speed restricted to less than 120 km/h (75 mph).

ITEM	REASONS FOR FAILURE	SEVERITY
Spare Wheel Carrier (if fitted)	(a). Carrier not in proper condition. (b). Cracked or insecurely mounted. (c). Spare wheel or carrier is so insecurely mounted that there is a very serious risk of it falling off.	MiD MaD DD
Spare Wheel (where present)	(d). Insecurely held.	MaD

BRAKE FLUID

Method of Testing

1. Examine the brake fluid reservoir for fluid level, leaks and condition of fluid.
2. Check the brake fluid level warning light/device.

NOTES

1. If the brake fluid cannot be easily seen without removing the reservoir cap, then the cap must be removed for inspection.
2. Where the Brake fluid warning light/device is illuminated, defective or not functioning the reasons for failure are covered in section 60.

ITEM	REASONS FOR FAILURE	SEVERITY
Reservoir	(a). Less than 1/2 full or below manufacturers “minimum” level.	MiD
	(b). Brake fluid significantly below MIN mark.	MaD
	(c). No brake fluid visible.	DD
	(d). Leaking or cap missing.	MaD
	(e). Brake fluid contaminated or sedimented.	MaD
	(f). Brake fluid is excessively contaminated that there is imminent risk of failure.	DD

CHASSIS/UNDERBODY

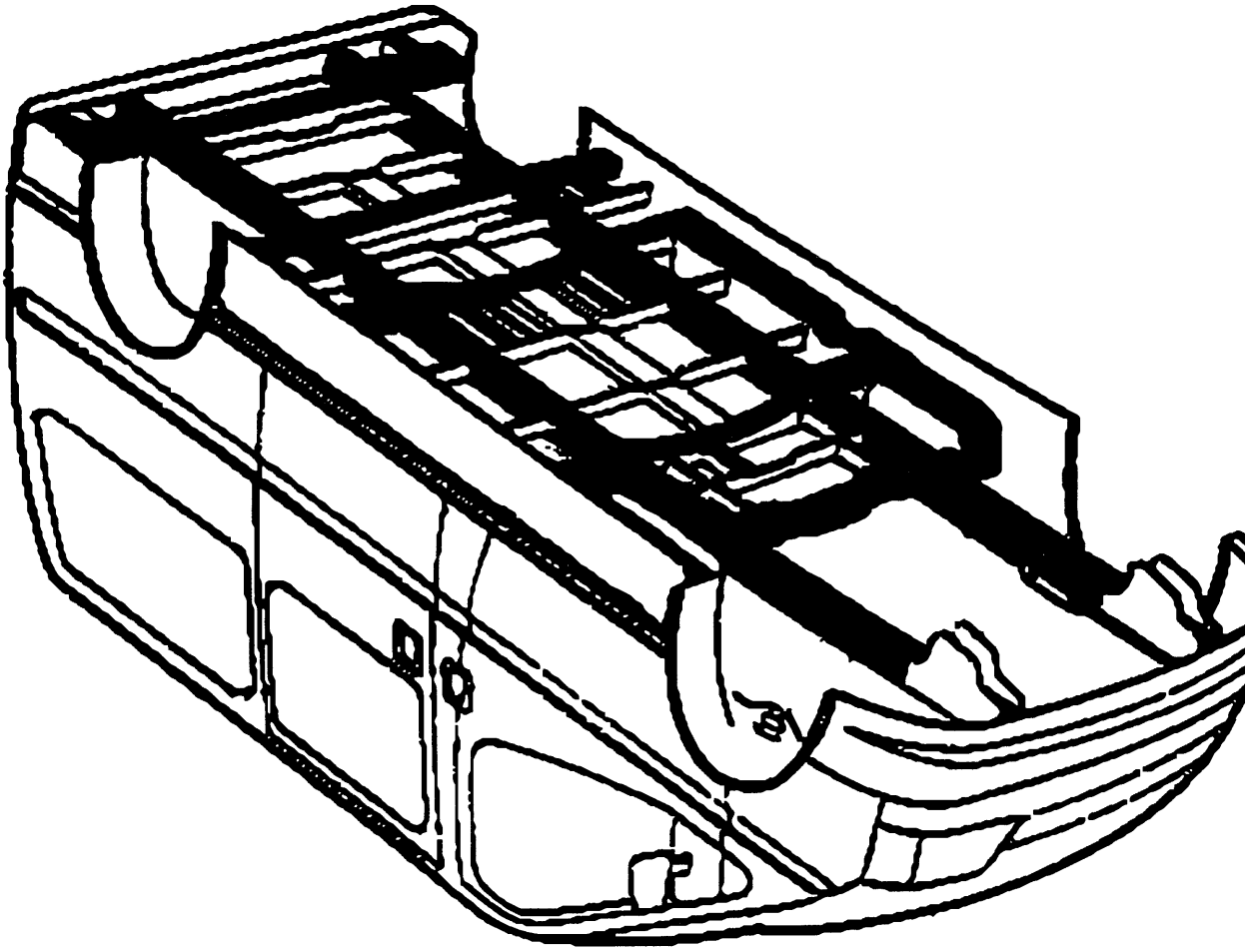
Method of Testing

1. Examine main chassis/sub-frame/underbody members for deformation and/or fractures and/or advanced corrosion.
2. Examine cross members for deformation and/or fractures and/or advanced corrosion.
3. Examine the welding and/or securing bolts/rivets for soundness and security.
4. Examine frame/cross member junctions for indications of movement.
5. Examine if there has been any obviously unsafe repair or modification carried out to the chassis or underbody.

NOTES

1. The extent of this inspection is limited to that part of the chassis/sub-frame or underbody which can readily be seen without dismantling any part of the vehicle.
2. Pay particular attention to a chassis or underbody which is encrusted with dirt. There may be cracks or fractures in high stress areas obscured by this dirt.
3. Pay particular attention to areas around spring and running gear mountings.
4. Page 75 indicates the main chassis members of typical vehicle construction.
5. Where misalignment is suspected it may be necessary to confirm that the frame/chassis is within the manufacturer's tolerances.
6. Some cars (e.g. rally) maybe fitted with additional non-standard underbody protection. If this covering inhibits proper inspection more than the manufacturer's area of cover, it is the responsibility of the owner/presenter to make components accessible for inspection, otherwise the vehicle will fail due to the lack of accessibility.
7. An unsafe repair or modification carried out to the chassis or underbody may require a modifications report to be presented as per Item 62 of this Manual.
8. While the NCTS manual does not specify a continuous weld, a judgement must be made as to whether the repair maintains the manufacturer's original strength.

ITEM	REASONS FOR FAILURE	SEVERITY
Chassis/Sub-frame/ Underbody	(a). Slight fracture or deformation of any side or cross-member.	MaD
	(b). Serious fracture or deformation of any side or cross-member.	DD
	(c). Chassis members are cracked, insecure or pronounced misalignment.	MaD
	(d). Welds breaking away.	MaD
	(e). Insecurity of strengthening plates or fastenings including rivets or bolts.	MaD
	(f). Majority of fastenings loose; insufficient strength of parts.	DD
	(g). The chassis/underbody is considerably weakened by holes.	MaD
	(h). Advanced corrosion on cross or longitudinal members in such condition that the integrity of the body is affected.	MaD
	(i). Extensive corrosion on cross or longitudinal members in such condition that the integrity of the body is seriously affected.	DD
	(j). Primary structural components broken, cracked, insecure, damaged or rusted that failure is imminent.	DD
	(k). Insecure or missing fixing of body to chassis or cross- members.	MaD
	(l). Insecure or missing fixing of body to chassis or cross- members to such an extent that detachment is likely.	DD
	(m).Repairs or modifications obviously not in line with manufacturer's recommendations.	MaD



Main Chassis Members are shown in black.

STEERING LINKAGE

Method of Testing

1. With the road wheels on the ground and the steering wheel rotated clockwise and anti-clockwise against the road resistance, examine the steering mechanism from the point where it is secured to the chassis to the point where the steering arms are secured to their fixings. For vehicles fitted with power steering, it may be necessary to have the engine running.
   During this inspection check for:
   (a) excessive wear at joints.
   (b) fracture of or damage to components.
   (c) insecure components.
2. With steered wheels off the ground (using the vehicle manufacturer's recommended jacking points):
   (a) check for fouling of wheels, tyres and components of the steering linkage with any part of the vehicle by rotating the steering wheel through its full working range and also by examining likely fouling points for abrasion.
   (b) while the steering wheel is being rotated, also check the steering column shaft and steering box/rack for stiffness or worn or damaged bearings.
   (c) note the amount of movement between the axle beam and the stub axle whilst each wheel in turn is rocked. Alternatively a wheel play detector device may be used.
   (d) note the amount of upward movement of the stub axle, whilst each wheel in turn is lifted with a bar placed underneath it.
   (e) examine visible parts of the stub axle for condition and security.
   (f) where possible, examine the king pin retaining device.
3. For Integral Power Steering;
   Check by the feel on the steering wheel that the power steering is operating by rocking the steering wheel with the engine running and the road wheels on the ground.

4. Examine if there has been any obviously unsafe repair or modification carried out to any steering components.

Advisory Pass applies to a slight weep from the steering (rack or box).

NOTES

1. All steered axles are to be examined.
2. If power steering is optional on the vehicle type concerned, and is fitted to the particular vehicle but has been disconnected in such a way that it can have no adverse effect on the manual steering, this should not be regarded as a defect.
3. Welding of steering parts other than by a manufacturer is not acceptable.
4. An unsafe repair or modification carried out to steering components may require a modifications report to be presented as per Item 62 of this Manual.
5. Certain vehicles have a built-in play in the steering rack mounting bushes and this should be taken into consideration.

STEERING LINKAGE

ITEM	REASONS FOR FAILURE	SEVERITY
Rack and Pinion Type Steering	(a). Roughness or stiffness in operation of gears or bearings/bushings.	MaD
	(b). Continuous oil leak is present from steering box/rack/ or steering damper.	DD
	(c). Bushes/bearings excessively worn.	MaD
	(d). Excessive end float in pinion.	MaD
	(e). Obvious oil leak (formation of drops).	MaD
	(f). A linkage is damaged or insecure.	MaD
	(g). Steering rack gaiter, insecure, split or missing.	MaD
Steering Box	(h). Roughness or stiffness in operation of gears or bearings/bushings.	MaD
	(i). Sector shaft twisted or splines worn or damaged	MaD
	(j). Sector shaft twisted or splines so worn or damaged that functionality is affected	DD
	(k). Excessive wear or movement in sector shaft	MaD
	(l). Excessive wear or movement in sector shaft that functionality is affected	DD
	(m). Continuous oil leak is present from steering box/rack/ or steering damper	DD
	(n). Excessive end float is present in pinion.	MaD
Drop Arm/Drag Link	(o). Damaged or insecure.	MaD
	(p). Relative movement between components which should be fixed.	MaD
	(q). Excessive movement or components are likely to become detached.	DD
Drag Link and Track Rod Ends	(r). Excessive wear at joints.	MaD
	(s). A drag link or the track rod ends are obviously worn or insecure (inner and outer).	MaD
	(t). Misalignment of components (e.g. track rod or drag link)	MaD
	(u). Joints excessively worn and likely to become detached	DD
	(v). Rubber gaiter split damaged, missing or displaced on any drag link or track rod end.	MaD
Idler Assembly	(w). Idler assembly mounting is obviously loose, or axial or radial play is present in the assembly.	MaD
Track Rod/Steering Arm	(x). Obviously deformed, loose or cracked.	MaD
Kingpin/Bushes/Bearings	(y). Excessive wear in the swivel pin and/or bushes (3mm play (1/8”) at wheel rim on 14” wheel, others pro-rata).	MaD
	(z). A component is so insecure/worn that directional stability is impaired.	DD
	(aa). Excessive lift between stub axle and axle beam.	MaD
	(ab). Excessive lift between stub axle and axle beam that directional stability is impaired.	DD
	(ac). Stub axle pin loose in axle.	MaD
	(ad). Stub axle pin so loose in axle that directional stability is impaired.	DD
Stub Axle	(ae). Fractured, damaged or bent	DD
Retaining or Locking Devices e.g. Split Pin, Nut, Rivet or Weld	(af). Absent, insecure, worn or broken.	MaD

ITEM	REASONS FOR FAILURE	SEVERITY
Steering Housing	(ag). Steering gear casing not properly attached.	MaD
	(ah). Steering attachments dangerously loose or relative movement to chassis/bodywork visible.	DD
	(ai). Elongated fixing holes in chassis.	MaD
	(aj). A mounting bolt for steering housing is missing, loose or fractured.	MaD
	(ak). Steering attachments seriously affected.	DD
	(al). Steering gear casing/housing is fractured or worn.	MaD
	(am). Steering gear casing/housing is fractured/damaged or worn that directional stability is impaired/functionality affected	DD
Components	(an). Any steering component has been repaired by welding (other than by the manufacturer).	MaD
	(ao). Fractures or deformation of any component.	MaD
	(ap). Fractures or deformation of any component that function is affected.	DD
Steering Box, Rack or Steering Idler Box	(aq). Moving steering linkage fouling a fixed part of the chassis	MaD
	(ar). Cracks or corrosion around attachment points for steering box, rack or idler box.	MaD
	(as). Axial or radial play is present in the linkage, splines are worn or a shaft is twisted.	MaD
Power Steering Function/ Electronic power steering	(at). Power assistance not available consistently smooth over full lock to lock range.	MaD
	(au). Power assistance is not operating, is disconnected or is missing where power steering is a standard fitment by the manufacturer on all vehicles of the type (make and model) of vehicle being tested.	MaD
	(av). Any power steering component not working fractured or insecure.	MaD
	(aw). Any power steering component not working fractured or insecure that steering is affected.	DD
	(ax). Inconsistency between the angle of the steering wheel and the angle of the wheels.	MaD
	(ay). The angle of the steering wheel in relation to the road wheels is so misaligned that the steering is affected.	DD
Power Steering Fluid Pipes/ Leaks	(az). Power steering fluid below minimum level.	MaD
	(ba). Fluid pipes fouling other components.	MaD
	(bb). Fluid pipes/hoses damaged excessively corroded.	MaD
	(bc). Fluid pipes/hoses so damaged excessively corroded that steering is affected.	DD
	(bd). Leaks present in power steering system.	MaD
Power Steering Pump	(be). Worn, noisy, leaking or drive defective.	MaD
Steering (including road wheels and tyres)	(bf). Steering stops not operating or missing.	MaD
	(bg). Overlocking or underlocking or fouling any other component on the vehicle.	MaD
All Steering Components	(bh). Any obviously unsafe repair or modification.[2]	MaD
	(bi). Any steering modification[2] affecting steering function.	DD
	(bj). Steering system damaged, insecure or excessively worn	DD

WHEEL BEARINGS

Method of Testing

APPLIES TO ALL ROAD WHEELS

Raise the axle(s) of the wheels being examined so that they are clear of the ground.

1. Note the movement of the wheel relative to the axle or stub axle in order to assess the play in the wheel bearings, whilst each wheel in turn is rocked.
2. Spin each wheel rapidly and listen for any roughness or harshness in the bearings.
3. The vehicle should be failed if a distinctive rumble or growl is heard that indicates the bearing is worn or damaged.
4. Check that the hub is not worn or damaged and that the hub spigot makes sufficient contact with the wheel rim.

ITEM	REASONS FOR FAILURE	SEVERITY
Wheel Bearings or Hub	(a). Excessive play in a wheel bearing.	MaD
	(b). Excessive play in a wheel bearing that directional stability is impaired.	DD
	(c). Wheel bearing too tight or jammed.	MaD
	(d). Wheel bearing is so tight that there is a danger of overheating or seizing.	DD
	(e). Bearings are worn or damaged.	MaD
	(f). Hub worn or damaged.	MaD
	(g). Hub worn or damaged in such a way that secure fixing of wheels/ hub is affected.	DD

FRONT SPRINGS

Method of Testing

Leaf Springs

1. Examine each spring for its general condition and in particular for fractures in the leaves, especially in the vicinity of the anchor eye of the main leaf.
2. Note whether any spring is so weak that it is not holding the body sufficiently far away from the wheels.
3. Examine condition of spring eyes/bushes.
4. Check that no spring clamps are missing.
5. Check that the springs on each axle are symmetrically located.
6. Check that there is no movement of spring leaves denoting a fractured centre bolt.
7. Check that the attachments of the shackle/anchor brackets to the chassis are secure, looking for signs of movement of rivets or bolts, and elongated holes.
8. Examine the bolts and/or nuts securing the spring to the axle for tightness, and examine the spring and axle for evidence that these have been moving relative to each other.

Coil Springs

9. Examine each spring for its general condition and in particular that it is not broken, fractured or cut.
10. Note whether any spring is so weak that it is not holding the body sufficiently far away from the wheels.
11. Examine the attachment of the coil springs for security.

Torsion Bars

12. Check torsion bars for fracture or damage.
13. Examine the attachment of the torsion bars.

Spring Pins and Bushes

14. Examine the amount of play due to wear at spring anchor brackets and pins of the spring shackles.
15. Examine the condition and security of any slipper brackets.
16. Check that the anchor/shackle pins are fully in place, that they are secure and that locking devices are in position and secure.
17. Examine the spring mountings for excessive side play.

Air and Fluid Suspension

18. Check for leaks and the condition of the supply lines and suspension bellows.
19. Check the condition of levelling valve linkages.
20. Examine the attachment of the suspension bellows for security.
21. Examine the attachments for security to frame and axle.

Bonded Suspension Units

22. Examine the bonding of the flexible element to its associated metal fixings.
23. Examine the condition of the flexible element by applying pressure.
24. Examine the attachments for security to frame and axle.

Spring (coil/leaf)/Torsion Bar

25. Examine if there has been any obviously unsafe repair or modification carried out

NOTES

1. A bush and/or pin would be considered excessivelyworn if wear exceeded 2mm (3/32”) for 13mm (1/2”) diameter pins, others pro rata.
2. Caution should be exercised in the case of springs and suspensions with rubber/compliant mountings where the amount of free movement in new components might well exceed the above limit. In such cases the manufacturer’s tolerances should be sought. Observation of the vehicle attitude when stationary can often reveal the effect of exhausted or broken springs, e.g. vehicle “sitting down” at front.
3. An unsafe repair or modification carried out to the spring (coil/leaf)/torsion bar may require a modifications report to be presented as per Item 62 of this Manual.

FRONT SPRINGS

ITEM	REASONS FOR FAILURE	SEVERITY
Spring (coil/leaf)/Torsion Bar	(a). A damaged, cracked, fractured, worn or exhausted spring component.	MaD
	(b). Main spring (leaf or coil), or additional leafs very seriously affected.	DD
	(c). Any spring leaf broken, repaired by welding	MaD
	(d). Spring missing.	DD
	(e). Spring (coil/leaf) or torsion bar fitted incorrectly.	MaD
	(f). Spring clamps missing.	MaD
	(g). U-bolts loose or missing.	MaD
	(h). A coil spring or torsion bar broken or cut.	MaD
	(i). Insufficient clearance to other vehicle parts; spring system inoperative	DD
	(j). Any obviously unsafe repair or modification.[2]	MaD
Spring Mounting or Torsion Bar Mounting	(k). Obviously loose/broken.	MaD
	(l). Cracked or damaged.	MaD
	(m). Relative movement visible, fixings very seriously loose.	DD
Spring Eye Bolt/ Shackle Pins	(n). Locking device missing or insecurely fitted.	MaD
	(o). Worn, incorrectly positioned, incorrect type or missing.	MaD
	(p). Obviously loose in the bush.	MaD
Spring or Shackle Bushes or Slipper Pads	(q). Missing, worn, cracked or perished	MaD
Spring Centre Bolt	(r). Missing, damaged or broken.	MaD
Bump Stop	(s). Removed, damaged or ineffective.	MaD
Air, Hydrolastic, Hydrogas, Suspension	(t). Audible Leak(s) is present in the system.	MaD
	(u). Linkage to levelling valve defective.	MaD
	(v). Valves insecure or defective.	MaD
	(w). Suspension bellows giving inadequate movement (risk of wheel fouling).	DD
	(x). Air bellows damaged or deteriorated to such an extent that it is likely to fail.	MaD
	(y). Pipe damaged to such an extent that it is likely to fail.	MaD
	(z). System inoperable, vehicle sitting on bump stops.	DD
	(aa). Any component damaged, modified or deteriorated in a way that would adversely affect functioning of the system.	MaD
	(ab). Any component damaged, modified or deteriorated in a way that functioning of the system is seriously affected.	DD
Bonded Suspension Units	(ac). Failure of rubber/metal attachment has occurred.	MaD
	(ad). Deterioration of suspension medium has occurred(soft and sticky).	MaD

FRONT SUSPENSION

Method of Testing

1. With the vehicle on the lift , jack up the vehicle using the vehicle manufacturer's recommended jacking points for checking the front suspension. Where this is not available, see 2, and below.
2. For suspension of the type shown in figure 1, jack up the front suspension so that the road-wheels are clear of the ground and the suspension is as near as possible to normal running height. Whilst each wheel is held at the top and bottom and rocked, examine for movement in the top and bottom ball joints and movement in the wishbone bushes.
3. For suspensions of the type shown in figure and 3, jack up the front suspension so that the road wheels are clear of the ground and shake each road-wheel vigorously to determine the condition of the outer suspension ball joints and movement in the control arms.
4. For suspension of the type shown in figure 4, jack up the front suspension so that the road-wheels are clear of the ground. Shake each wheel vigorously and examine each suspension strut for wear at the strut sliding bush and gland as well as for movement at the strut upper support bearing and:
   (a) check for damage or excessive corrosion of the strut casing, wear in the rod and the condition of the bonding between the metal and flexible material in the strut upper support bearing.
   (b) whilst each front wheel is shaken vigorously (grasping at the o'clock and o'clock positions), check the condition of the outer ball joints and track control arm inner bushes for movement indicating the degree of wear.
5. For all suspension types, examine:
   (a) the condition of wishbones and their inner bearings, ball joints, swivel joints, track control arms, anti-roll bars, radius rods and their mounting bushes or washers.
   (b) examine axle beams, leading arms and swinging arms for damage or distortion.
   (c) examine the condition of the chassis frame and body shell structure in the vicinity of suspension mounting points and suspension sub-frame mounting points for fractures, excessive corrosion or distortion.
6. Examine if there has been any obviously unsafe repair or modification carried out to the front suspension (including axles).

NOTES

1. An unsafe repair or modification carried out to the front suspension (including axles) may require a Modifications report to be presented as per Item 62 of this Manual.
2. The defects below may be present in both rigid axle and independent suspension systems.

ITEM	REASONS FOR FAILURE	SEVERITY
Axle Beam	(a). Obviously out of line.	MaD
	(b). Axle fractured or deformed.	DD
	(c). Axle fixing to vehicle insecure.	MaD
	(d). Axle stability impaired, functionality affected: Extensive movement relative to its fixtures.	DD
	(e). Unsafe modification[2] that stability is impaired, functionality affected, insufficient clearance to other vehicle parts or to the ground.	DD
	(f). Attachment of component to chassis or axle is insecure or worn.	MaD
	(g). Attachment of component so insecure that directional stability of the vehicle is impaired.	DD
	(h). A component or mounting is cracked, corroded, damaged or deformed	MaD
Anti-roll Bar, Torque Arm/Rod, Radius Rod/ Link	(i). A component is missing or broken.	MaD
	(j). A mounting is loose or worn.	MaD
	(k). A component is cracked, damaged or deformed.	MaD

ITEM	REASONS FOR FAILURE	SEVERITY
Bushes, Ball Joints, and Sliding Bushes or Swivel Joints	(l). Excessive wear in swivel pin and/or bushes or at suspension joints or a component is insecure or worn. (m). A component is so excessively worn or loose that directional stability of the vehicle is impaired.	MaD DD
Suspension Mounting Area	(n). Deformed or corroded to such an extent that the security or alignment of the suspension component is affected.	DD
Retaining or Locking Devices e.g. Split Pin, Nut, Rivet or Weld.	(o). Absent, insecure, worn or broken.	MaD
Dust Covers	(p). Dust cover/gaiter split, damaged/displaced, missing or severely deteriorated.	MaD
Suspension System	(q). Geometry obviously incorrect. (r). Obviously unsafe repair or modification[2] to the suspension system.	MaD MaD

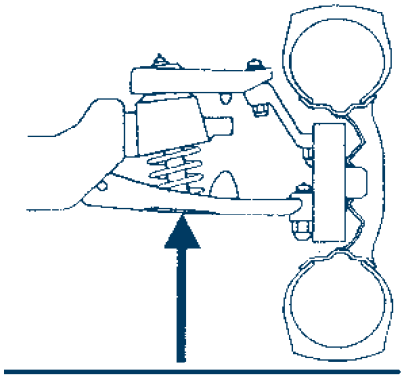


Figure 1

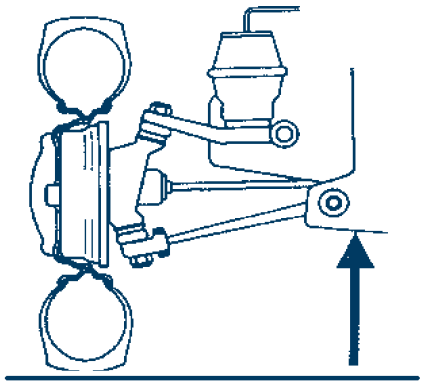


Figure 2

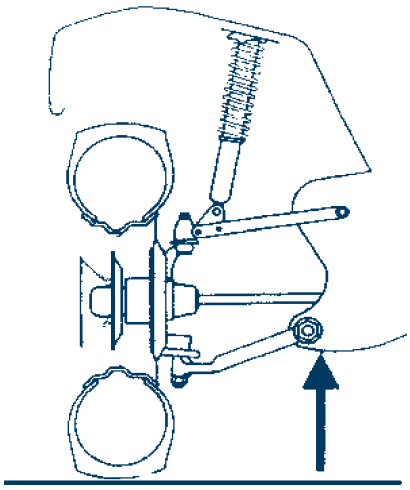


Figure 3

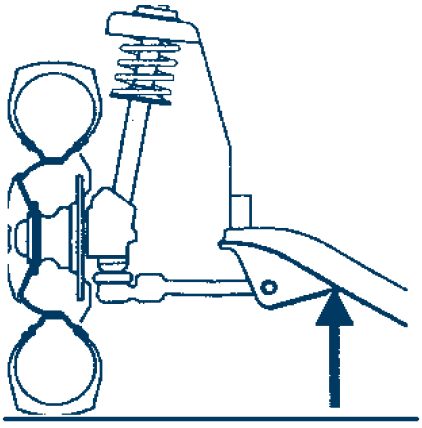


Figure 4

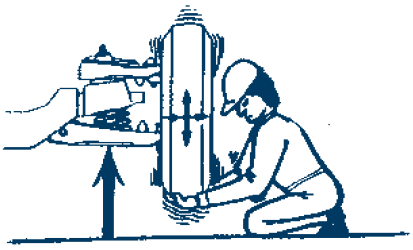


Figure 5

BRAKE LINES/HOSES

Method of Testing

Brake Pipes

1. Examine all accessible brake pipes to ensure that they are in serviceable condition, free from chafing and external corrosion and damage.
2. Check that rigid pipes are securely held by clips or other means, and that rigid pipes and flexible hoses are not positioned in such a manner as to be fouled by moving parts.
3. Check all brake hoses on steered axles when the steering is placed on either full lock ensure that there is adequate length of hose / sufficient clearance of other vehicle components.
4. Examine all flexible hoses to ensure they are not constrained in tight bends, that they have adequate room to move as necessary without fouling any other parts of the vehicle, and that they are not chafed or other wise damaged or perished.
5. Check whether there are any leaks in the system by having the brake applied while examining the system (in the case of vehicles fitted with a vacuum servo or power operated brake, the engine must be idling during this test) (2).
6. Examine flexible pipes for signs of weakness under pressure with the foot brake fully applied.
7. Examine brake pipes for repairs or unsuitable fitting.

NOTES

1. When retesting a vehicle which required the repair or replacement of any hydraulic brake pipe/hose, the items which failed must be re-tested as per method of testing above, under pressure on a raised lift, and a full brake test must be conducted.
2. Provided the vacuum is maintained in the servo, the engine may be stopped.
3. Couplings in brake pipes are acceptable provided they have been fitted to a high standard of workmanship.
4. A missing brake hose clip is not necessarily a reason for failure provided the brake hose remains adequately supported.
5. A flexible brake hose should be considered a reason for failure when the reinforcement material / cord is exposed under examination.

ITEM	REASONS FOR FAILURE	SEVERITY
Brake Pipes, Flexible Hoses	(a). Perished, kinked, damaged or rusted to the extent that the pipe is pitted.	MaD
	(b). Hoses perished, kinked, twisted, too short or excessively damaged or chafed.	MaD
	(c). Unsatisfactorily mounted (or misplaced) possibility of failing.	MaD
	(d). Leaks are present in pipes/hoses or connections.	DD
	(e). Fouling moving parts.	MaD
	(f). Hose bulging under pressure.	MaD
	(g). Inadequate repairs have been carried out or unsuitable fittings are present.	MaD
	(h). Imminent risk of failure or fracture.	DD

SHOCK ABSORBER CONDITION

Method of Testing

1. Check each shock absorber for fluid leak(s).
2. Examine the anchorage of each shock absorber to see that it is correctly connected to the vehicle and in good condition.
3. Examine the condition of any pivots.

NOTES:

1. A slight oil film on the piston rod of a shock absorber is not a reason for failure. Whereas an oil film that runs down the shock absorber indicates a leak and is a reason for failure.
2. Damage or corrosion to the outer sleeve of a shock absorber is not a reason for failure unless detachment is imminent. Surface corrosion on a shock absorber casing is not a reason for failure.
3. Some MacPherson strut top bushes are designed to have lateral play when the suspension is hanging free. Failure is only justified when play is due to wear and/or maladjustment, etc.

ITEM	REASONS FOR FAILURE	SEVERITY
Shock Absorber(s)	(a). Shock absorber loose.	MaD
	(b). Mounting bracket or bushes missing, loose, worn or damaged.	MaD
	(c). Missing or damaged showing signs of obvious leakage or malfunction.	MaD

ELECTRICAL SYSTEM

Method of Testing

1. Check that the ignition switch can be switched off.
2. Check that the ignition key can be removed.
3. Check for wiring that could interfere with the driver's control of the vehicle.
4. Check electrical wiring to the extent possible without dismantling for condition, security and position. Check (where practical) that the wiring used in after-market fitments appears suitable.
5. Visually check all visible electrical wiring, connections and components for condition, security and position.
6. Check for damage to insulation or deterioration to the extent that bare wiring or connectors are exposed (in the case of fully electric or Hybrid Electric vehicles care should be taken as per note below).
7. Check the positioning of wires and connections so that they are unlikely to be chafed or damaged by heat or fouled by moving parts. Check the battery for security and leaks.

NOTES:

1. A number of fatal fires in cars have been attributed to faulty wiring. Testers are asked to be particularly diligent when examining wiring that could result in a vehicle fire.
2. When checking the condition and security of the wiring, care needs to be taken when inspecting the high voltage systems of fully electric or Hybrid Electric vehicles. These high voltage wires are colour coded orange.
3. Additional care should be taken when testing electric and hybrid vehicles as there may be high voltage present at any one of several points around the vehicle, including storage capacitors and batteries.
4. On hybrid vehicles, the engine may start without warning when electrical equipment is operated or if the battery voltage drops.
5. This inspection requires a check on all visible wiring for condition, position and security. The test is generally limited to those parts which can be seen without dismantling and is based on the assumption that panels will only be removed where it is not possible to inspect safety critical items.

ITEM	REASONS FOR FAILURE	SEVERITY
Ignition Switch	(a). Ignition switch missing.	MaD
	(b). Ignition cannot be switched off.	MaD
	(c). Ignition key cannot be removed.	MaD
Wiring, Cables and Connections	(d). Wiring liable to interfere with the driver's control of the vehicle.	MaD
	(e). Risk of fire including risk associated with:	
	(i) Dislocated or insecure electrical wiring.	MaD
	(ii) Fixings loose, touching sharp edges, connectors likely to be disconnected.	MaD
	(iii) Wiring likely to touch hot parts, rotating parts or the ground, connectors disconnected (relevant parts for braking, steering).	DD
	(iv) After-market items other than taxi roof signs, anti- theft systems and light failure indicators not wired through the ignition switch or a fuse.	MaD
	(f). Use of unsuitable wiring/electrical connections, e.g. household wiring/bell wiring etc.	MaD
	(g). Wiring/insulation deteriorated.	MaD
	(h). Wiring extremely deteriorated (relevant parts for braking, steering).	DD
Battery	(i). Battery mounting is unsatisfactory.	MiD
	(j). Battery insecure or not properly attached.	MaD
	(k). Risk of short-circuiting with other components.	MaD
	(l). Leakages of hazardous substances from battery are evident.	MaD
	(m).Switch (if required) defective.	MaD
	(n). Fuses (if required) defective.	MaD
	(o). Inappropriate (if required) ventilation.	MaD

FUEL SYSTEM

Method of Testing

1. Examine the fuel tanks to see that they are suitable, free from advanced rust and are firmly held and secure on their mountings. In the case of Liquid Petroleum Gas/Compressed Natural Gas, check that the fuel tank is not damaged.
2. Examine fuel tank straps or supports and mounting brackets to see that they are secure and free from fracture and that none is missing.
3. Examine the mounting bracket bolts to chassis/body to see that they are secure.
4. Where the LPG/CNG fuel tank is fitted inside the vehicle, check that the tank safety valve and filler valve are either piped separately to the outside of the vehicle or contained in a gas tight sub-compartment which is vented to the outside of the vehicle.
5. Check that any ducting used for venting sub-compartments or tank valves is not damaged or blocked.
6. Check that no fuel tank is fitted to the roof of the vehicle.
7. Where LPG/CNG is fitted, check that the manual hand valve on the tank can be closed off. Or where a solenoid is fitted in place of or as an extra protection for the manual valve, check that it can be heard to open and close when the ignition key is switched on and off with the LPG/CNG switch in the 'on' position.
8. In CNG systems, a second manual valve will normally be found near the filler valve which is usually in the engine compartment. This should also be checked.
9. Check that a fuel tank cap is present and of the correct type. Check that the fuel cap seal is present and is not damaged.
10. Check that there are no leaks at all from the system in the case of petrol. In the case of diesel, check that there are no leaks such that fuel is dripping on to the ground. In the case of LPG/CNG, check if a pressure leak (hissing noise) can be heard.
11. Examine fuel pipes to see that they are securely clipped to prevent damage by vibration, chafing or cracking.
12. Check that pipelines/hoses are not damaged or deteriorated (e.g. kinked or flattened) and are not in a position to be fouled by moving parts or the road surface.
13. Check that all components of the fuel system are securely mounted.
14. While seated in the driving position, check that the throttle control is:
    (a) functionally complete.
    (b) not cracked, fractured or excessively worn or corroded.
    (c) not obstructed or impeded in its travel.
15. Check that the excess fuel device on diesel-engine vehicles cannot be readily operated from within the cab if it is of a type which, with the engine running, will cause an increase in smoke.
16. Check that the engine stop control is working satisfactorily on diesel engine vehicles. Where LPG/CNG is fitted, check that the engine fuel supply solenoids (usually in engine compartment for each fuel used) can be heard to open and close when each fuel system is selected on the dash switch.
17. Check that the air filter is present and securely fitted.

NOTES

1. The extent of this inspection is limited to those parts which can be seen and which are readily accessible without dismantling.
2. All fuel tanks on the vehicle are included in the inspection.
3. If a vehicle is presented with a Nitrous Oxide (NO_2) injection system fitted, it should be failed under Reason for Failure (d) below.
4. If a fuel tank is seen to be holed, or the filler neck is seen to split it should be considered to be leaking even though a leak may not be evident because the defect is above the fuel line.

FUEL SYSTEM

Method of Testing

ITEM	REASONS FOR FAILURE	SEVERITY
Fuel Tank, Fuel Filter Systems and Fuel Lines	(a). A component is incorrectly or loosely mounted or damaged.	MaD
	(b). Advanced rust is present in fuel tank.	MaD
	(c). Leaks in system are evident.	MaD
	(d). Unsuitable fuel tank has been fitted.	MaD
	(e). LPG/CNG/LNG tank fitted inside vehicle without being in a sub-compartmented or without having valves piped to the outside.	MaD
	(f). LPG/CNG/LNG venting or ducting pipes damaged or blocked.	MaD
	(g). Sub-compartment obviously not gas tight where valves are not piped to the outside.	MaD
	(h). Fuel tank fitted to roof of vehicle.	MaD
	(i). A manual or solenoid valves not operating.	MaD
	(j). Possibility of fuel lines being crushed, chafed, ruptured or subject to excessive vibration.	MaD
	(k). No fuel cap or fuel cap seal damaged or missing.	MaD
	(l). Fuel cut off (if required) not operating correctly.	MaD
	(m).Fire risk due to:	
	(i) Leaking fuel.	DD
	(ii) Fuel tank or exhaust not properly shielded	DD
	(iii) Engine compartment condition	DD
	(iv) Insecure tank or pipes	DD
Throttle Control	(n). Sticking, binding or excessively worn.	MaD
	(o). A link pins, retaining devices or safety devices missing.	MaD
	(p). Mounting bracket or panel is cracked or fractured.	MaD
Excess Fuel Device	(q). Gives off excessive smoke if operated from within the cab after the engine has been started.	MaD
Engine Stop Control (on diesel engine vehicles)	(r). Not working or missing	MaD
Air Filter Assembly	(s). Air filter assembly insecure, missing or incomplete.	MaD

BRAKE WHEEL UNITS

Method of Testing

Examine each brake operating wheel unit for security, leaks, corrosion or damage. By applying the brakes check each brake operating unit for leaks and, where possible, operation. Check that all appropriate items e.g. fixing nuts, bolts and split pins are secure and locked.

1. Visually inspect each brake wheel unit / callipers for security, leaks, corrosion or damage. By applying the brakes check each brake operating unit for leaks and, where possible, operation. Check that all appropriate items e.g. fixing nuts, bolts and split pins are secure and locked.
2. Check Brake actuators (including spring brakes / callipers / hydraulic cylinders) for fluid discharge, dust cover presence and condition (only applicable to hydraulic brake actuators).
3. Check each brake cylinder/actuator are of the same size (where fitted to the same axle). Check for travel of operating pistons/diaphragms and mechanisms.
4. Check if there has been any obvious repair or modification carried out to any of the components of the brake system. An unsafe repair or modification carried out to any of the mechanical components of the brake system, may require a modifications report to be presented as per the template in this Manual.

NOTES

1. The vehicle wheels should be chocked during this test and the parking brake should be released.

Advisory Pass applies where a dust cover is damaged on a brake actuator.

ITEM	REASONS FOR FAILURE	SEVERITY
Hydraulic Brake Unit/actuator	(a). An actuator is damaged, cracked, insecure, inadequately mounted or in need of adjustment.	MaD
	(b). An actuator is damaged, cracked, insecure, inadequately mounted or in need of adjustment that braking performance is affected.	DD
	(c). Actuator leaking.	MaD
	(d). Actuator leaking that braking performance is affected.	DD
	(e). Sluggish in operation or seized.	MaD
	(f). Actuator excessively corroded.	MaD
	(g). Different sized actuators fitted to the same axle.	MaD
	(h). Insufficient or excessive travel of operating piston or diaphragm mechanism.	MaD
	(i). Braking performance affected (lack of reserve movement).	DD
	(j). Dust cover missing or excessively damaged.	MaD
	(k). Any obviously unsafe repair or modification.[2]	MaD

MECHANICAL BRAKE COMPONENTS

Method of Testing

Examine the mechanical components of the brakes which can be seen without dismantling. Look particularly for:

1. Badly chafed rods or levers.
2. Frayed or seized cables.
3. Badly damaged, corroded, seized or incorrectly fitted rods, levers or linkages.
4. Wear in rod or cable ends.
5. Wear in eyes of relay levers.
6. Wear in clevis pins, bolts, stationary pins, pivots.
7. Absence of locking devices on clevis pins.
8. Excessively worn, contaminated, incorrectly adjusted brake linings or pads.
9. Fractured, damaged, insecure, misaligned brake drums or discs.
10. Any obstruction to free movement in the system.
11. Any abnormal movement of levers, rods or cables indicating maladjustment.
12. Security of brake back plates or discs (including transmission brakes).
13. Examine if there has been any obviously unsafe repair or modification carried out to any of the mechanical components of the brake system.

Advisory Pass applies where the brake pads/linings are close to the minimum wear mark.

NOTES

1. In the absence of wear indicators or manufacturer's recommendations regarding brake lining or disc pad wear, a figure of 1.5mm (1/16") should be taken as a minimum thickness for bonded linings/pads and 0.4mm (1/64") above the head of the attaching rivet as a minimum thickness of riveted linings.
2. Where no facility is provided for inspection of brake shoes/pads, item (8) above will not apply.
3. The wheels shall be checked and the parking brake released while this test is being carried out.
4. An unsafe repair or modification carried out to any of the mechanical components of the brake system may require a modifications report to be presented as per Item 62 of this Manual.
5. When retesting a vehicle which required the repair or replacement of any brake drum or disc, the items which failed must be re-tested as per method of testing above, on a raised lift, and a full brake test must be conducted.
6. In the absence of a manufacturer's tolerance insufficient contact means less than three quarters of the central pad surface with the disc.
7. In the absence of a manufacturer's tolerance for excessive brake disc wear is 3mm or greater (27mm thick disc)

ITEM	REASONS FOR FAILURE	SEVERITY
Brake Rods/Levers/ Cables/ Linkages/ Pivots	(a). A brake rod / lever / cable / linkage / pivot is missing damaged, cracked, corroded, knotted, seized, obstructed or worn.	MaD
	(b). A brake rod / lever / cable / linkage / pivot is missing damaged, cracked, corroded, knotted, seized, obstructed or worn that braking performance is affected.	DD
	(c). Cable, rod or joint insecure.	MaD
	(d). Cable guide defective.	MaD
	(e). Abnormal movement of the levers/linkage indicating maladjustment or excessive wear.	MaD
	(f). A brake rod / lever / cable / linkage / pivot is incorrectly fitted.	MaD

ITEM	REASONS FOR FAILURE	SEVERITY
Brackets, Mounting Bolts, Split Pins or Other Retaining Devices	(g). A bracket, mounting bolt, split pin or other retaining device is missing, loose or worn.	MaD
Brake Linings and Pads	(h). Lining or pad excessively worn (minimum mark reached). (see note (1).	MaD
	(i). Lining or pad excessively worn (minimum mark not visible).	DD
	(j). Brake lining or pad contaminated (oil, grease etc.).	MaD
	(k). Lining or pad contaminated that braking performance is affected	DD
	(l). Lining or pad missing or wrongly mounted.	DD
	(m).Linings or Pads incorrectly adjusted.	MaD
Brake Drums/Discs/ Backplates /Dirt Shield	(n). Drum or disc worn or insufficient contact between brake pad and brake disc.	MaD
	(o). Drum or disc excessively worn, excessively scored, cracked, insecure or so fractured that failure is imminent.	DD
	(p). A brake drum / disc is contaminated (oil, grease, etc.)	MaD
	(q). A brake drum / disc is contaminated that braking performance is affected.	DD
	(r). Drum, disc or back plate missing.	DD
	(s). Dirt shield/dust cover loose damaged or insecure	MaD
	(t). Back plate insecure.	MaD
	(u). Insufficient contact between brake pad and brake disc.	MaD
Actuating levers, Slack adjusters and indicators	(v). Adjuster damaged, seized or having abnormal movement, excessive wear or incorrect adjustment.	MaD
	(w). Adjuster defective.	MaD
	(x). Incorrectly installed or replaced.	MaD
Free Movement of Brake Rod/ Levers/ Cables etc.	(y). Restriction to free movement of the braking system.	MaD
Complete Braking System	(z). Any obviously unsafe repair or modification[2] to any component.	MaD
	(aa). Unsafe modification[2] to any component that braking performance is affected.	DD
	(ab). Other system devices damaged externally or braking system excessively corroded in a way that adversely affects the braking system.	MaD
	(ac). Other system devices damaged that braking performance is affected.	DD
	(ad). Slight leakage of air or anti- freeze.	MiD
	(ae). Excessive leakage of air that system functionality is affected.	MaD
	(af). Any component insecure or inadequately mounted.	MaD
	NOTE: It is inevitable that due to changes in design, or other reasons, from time to time defects may be found which are not described in any of the reasons for failure in the other sections of this Manual. Therefore this item is to be used in cases only where a particular braking related component is not checked under another section of this Manual.	

BRAKE MASTER CYLINDER/SERVO/VALVES/CONNECTIONS

Method of Testing

Master Cylinder and Reservoirs

1. Examine for security.
1. Check for leaks.

Servos

1. Examine servo for security of mounting.

Valves

1. Examine all valves for security of mounting.
2. With brakes applied, check for leaks.
3. Check that load sensing/brake proportioning valves are not damaged, leaking or inoperative and are correctly adjusted.

NOTES

1. Visual inspection. Check for completeness and full connection of linkage, leaks, and if possible, correct movement. (Brakes are applied with vehicle on lift.)
2. An unsafe repair or modification carried out to the Brake Master Cylinder / Servo / Valves / Connections may require a modifications report to be presented as per Item 62 of this Manual.

ITEM	REASONS FOR FAILURE	SEVERITY
Master Cylinder/ Reservoirs	(a). Master cylinder/reservoirs defective but brake performance not impaired.	MaD
	(b). It is non-operative, brake performance impaired.	DD
	(c). Brake master cylinder/reservoirs are insecurely mounted or mounting panel is cracked but brake performance not impaired.	MaD
	(d). Master cylinder insecure and brake performance impaired.	DD
Servo	(e). Servo is insecure or defective, damaged or badly corroded, leaking, brake performance not impaired.	MaD
	(f). Servo is non-operative, brake performance impaired.	DD
Valves	(g). Valve damaged or excessive air leak.	MaD
	(h). Valve damaged or excessive air leak that its functionality is affected.	DD
	(i). Excessive oil discharge from compressor.	MiD
	(j). Valve insecure or inadequately mounted.	MaD
	(k). Hydraulic fluid discharge or leak.	MaD
	(l). Excessive hydraulic fluid discharge or leak(s) that its functionality is affected.	DD
Load Sensing and Brake Proportioning Valves	(m).Defective linkage.	MaD
	(n). Valve seized or inoperative (ABS functioning)	MaD
	(o). Valve seized or inoperative.	DD
	(p). Valve missing or bypassed (if required).	DD
	(q). Data plate missing (where originally fitted) or data illegible or not in accordance with requirements[1].	MiD
	(r). A valve insecurely mounted, leaking or defective.	MaD
	(s). The load sensing or brake proportioning valves are damaged, inoperative, obviously incorrectly adjusted or a linkage is sticking.	MaD
Brake Master Cylinder / Servo / Valves / Connections	(t). Any obviously unsafe repair or modification[2].	MaD

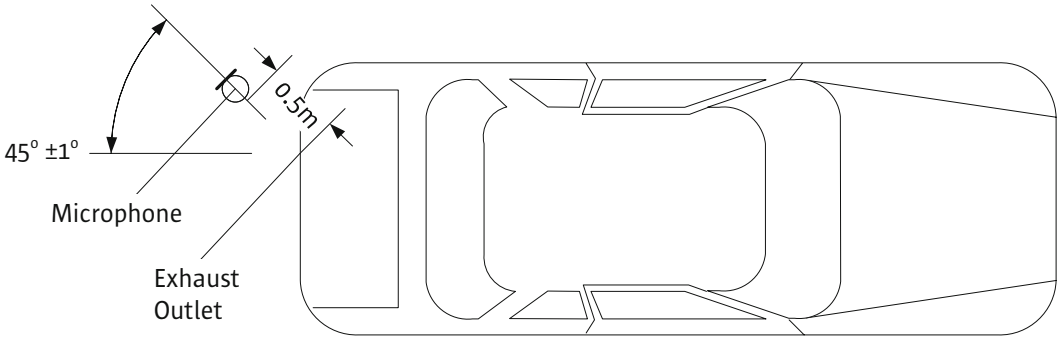
EXHAUST SYSTEM/NOISE

Method of Testing

1. Examine the condition of the exhaust pipe and silencer for security and leaks.
2. Assess the effectiveness of the silencer in reducing, as far as is reasonable, the noise caused by the exhaust from the engine.
3. Examine if there has been any obviously unsafe repair or modification carried out to the exhaust system
4. See note below. If testing is required, the following procedure must be followed:

NOTES

1. If the NCT vehicle inspector deems that the level of noise caused by the vehicle exhaust is excessive, the specific level of noise is to be measured. The vehicle must be moved to the sound test area.
   The vehicle will be required to have a level of noise less than 99dB(A) in order to pass the test.
2. An unsafe repair or modification carried out to the exhaust system may require a modifications report to be presented as per Item 62 of this Manual.



ITEM	REASONS FOR FAILURE	SEVERITY
Exhaust Pipe	(a). Insecurely mounted.	MaD
Silencer	(b). Any exhaust component is damaged, incorrectly fitted missing or not functioning.	MaD
	(c). Insecurely mounted.	MaD
	(d). Leaks present in exhaust system.	MaD
Exhaust Assembly	(e). Vehicle exhaust noise has reached or exceeded a specified level of 99dB(A).	MaD
	(f). Any part of the noise suppression system (including silencer and exhaust pipe) is loose, damaged, incorrectly fitted, missing or obviously modified[2] in a way that would adversely affect the noise levels.	MaD
	(g). Any exhaust component is so insecurely mounted that it is liable to fall off.	DD
	(h). A risk of fire is present because of leaks or broken components in exhaust assembly.	MaD
	(i). Fumes entering passenger cab or passenger compartment.	MaD
	(j). Excessive fumes entering cab or passenger compartment danger to health of persons on board.	DD
	(k). Any obviously unsafe repair or modification.[2]	MaD

REAR SUSPENSION

Method of Testing

1. With the vehicle on the lift, raise the rear of the vehicle so that the suspension hangs freely using the vehicle manufacturer's recommended jacking points for checking rear suspension.
2. Examine axle beams, trailing arms, swinging arms, and their mounting bushes/bearings/shafts/ball joints for wear damage and distortion.
3. Check for damage or excessive corrosion of any suspension strut mounting, wear in the shaft and the condition of the bonding between the metal and flexible material in the strut support bearing.
4. For all suspension types examine the condition of wishbones, ball joints, track control arms, anti-roll bars, transverse rods, radius rods and their mounting bushes, bearings, shafts, washers or retaining devices.
5. Examine the condition of the chassis frame and body shell structure in the vicinity of suspension mounting points and suspension subframe mounting points for fractures, excessive corrosion and distortion.
6. Examine if there has been any obviously unsafe repair or modification carried out to the rear suspension (including axles).

NOTES

1. An unsafe repair or modification carried out to the rear suspension (including axles) may require a modifications report to be presented as per Item 62 of this Manual.

ITEM	REASONS FOR FAILURE	SEVERITY
Axle Beam	(a). Obviously out of line.	MaD
Wishbones, Swinging arm, Track Control Arm, Suspension Strut	(b). Axle fractured or deformed.	DD
	(c). Axle fixing to vehicle, mounting bushes, bearing or bearing carrier, shafts, ball joints, obviously loose, worn or insecure.	DD
	(d). Axle stability impaired, functionality affected.	DD
	(e). Extensive movement relative to its fixtures.	MaD
	(f). Unsafe modification[2] that stability is impaired, functionality affected, insufficient clearance to other vehicle parts or to the ground.	DD
	(g). Attachment of component to chassis or axle is insecure or worn.	MaD
	(h). Attachment of component so insecure that directional stability of the vehicle is impaired.	DD
	(i). A component or mounting is cracked, corroded, damaged or deformed.	MaD
Anti-roll Bar, Torque Arm/Rod, Radius Rod/Link	(j). A component is missing or broken.	MaD
	(k). A mounting is loose or worn.	MaD
	(l). A component is cracked, damaged or deformed.	MaD
Bushes, Ball Joints, and Sliding Bushes or Swivel Joints	(m).Excessive wear in swivel pin and/or bushes or at suspension joints or a component is insecure or worn.	MaD
	(n). A component is so excessively worn or loose that directional stability of the vehicle is impaired.	DD
Suspension Mounting Area	(o). Deformed or corroded to such an extent that the security or alignment of the suspension component is affected.	DD
Retaining or Locking Devices e.g. Split Pin, Nut, Rivet or Weld.	(p). Absent, insecure, worn or broken.	MaD
Dust Covers	(q). Dust cover/gaiter split, damaged/displaced, missing or severely deteriorated.	MaD
Suspension System	(r). Geometry obviously incorrect.	MaD
	(s). Obviously unsafe repair or modification[2] to the suspension system.	MaD

REAR SPRINGS

Method of Testing

Leaf Springs

1. Examine each spring for its general condition and in particular for fractures in the leaves, especially in the vicinity of the anchor eye of the main leaf.
2. Note whether any spring is so weak that it is not holding the body sufficiently far away from the wheels.
3. Examine condition of spring eyes and bushes.
4. Check that no spring clamps are missing.
5. Check that the springs on each axle are symmetrically located.
6. Check that there is no movement of spring leaves denoting a fractured centre bolt.
7. Check that the attachments of the shackle/anchor brackets to the chassis are secure, looking for signs of movement of rivets or bolts, and elongated holes.
8. Examine the bolts and/or nuts securing the spring to the axle for tightness, and examine the spring and axle for evidence that these have been moving relative to each other.

Coil Springs

9. Examine each spring for its general condition and in particular for fractures.
10. Note whether any spring is so weak that it is not holding the body sufficiently far away from the wheels.
11. Examine the attachment of the coil springs for security.

Torsion Bar

12. Check torsion bars/bushes for fracture or damage.
13. Examine the attachment of torsion bars.

Spring Pins and Bushes

14. Examine the amount of play due to wear at spring anchor brackets and pins of the spring shackles.
15. Examine the condition and security of any slipper brackets.
16. Check that anchor/shackle pins are fully in place, that they are secure and that locking devices are in position and secure.
17. Examine the spring mountings for excessive side play.

Air and Fluid Suspension

18. Check for leaks and the condition of the supply lines and suspension bellows.
19. Check the condition of levelling valve linkages.
20. Examine the attachment of the suspension bellows for security.
21. Examine the attachments for security to frame and axle.

Bonded Suspension Units

22. Examine the bonding of the flexible element to its associated metal fixings.
23. Examine the condition of the flexible element by applying pressure.
24. Examine the attachments for security to frame and axle.

Spring (coil/leaf)/Torsion Bar

25. Examine if there has been any obviously unsafe repair or modification carried out.

REAR SPRINGS

NOTES

1. A bush and/or pin would be considered excessively worn if play exceeded 2mm (3/32") for 13mm (1/2") diameter pins, others pro rata.
2. Caution should be exercised in the case of springs and suspensions with rubber/compliant mountings where the amount of free movement in new components might well exceed the above limits.

In such cases, the manufacturer's tolerance should be sought. Observation of the vehicle attitude when stationary can often reveal the effect of exhausted or broken springs, e.g. vehicle "sitting down" at rear.

3. An unsafe repair or modification carried out to the spring (coil/leaf)/ torsion bar may require a modifications report to be presented as per Item 62 of this Manual.

ITEM	REASONS FOR FAILURE	SEVERITY
Spring (coil/leaf)/ Torsion Bar	(a). A damaged, cracked, fractured, worn or exhausted spring component.	MaD
	(b). Main spring (leaf or coil), or additional leafs very seriously affected.	DD
	(c). Any spring leaf broken, repaired by welding	MaD
	(d). Spring missing.	DD
	(e). Spring (coil/leaf) or torsion bar fitted incorrectly.	MaD
	(f). Spring clamps missing.	MaD
	(g). U-bolts loose or missing.	MaD
	(h). A coil spring or torsion bar broken/cut.	MaD
	(i). Insufficient clearance to other vehicle parts; spring system inoperative	DD
	(j). Any obviously unsafe repair or modification.(2)	MaD
Spring Mounting or Torsion Bar Mounting	(k). Obviously loose/broken.	MaD
	(l). Cracked or damaged.	MaD
	(m). Relative movement visible, fixings very seriously loose.	DD
Spring Eye Bolt/ Shackle Pins	(n). Locking device missing or insecurely fitted.	MaD
	(o). Worn, incorrectly positioned, incorrect type or missing.	MaD
	(p). Obviously loose in the bush.	MaD
Spring or Shackle Bushes or Slipper Pads	(q). Missing, worn, cracked or perished	MaD
Spring Centre Bolt	(r). Missing, damaged or broken	MaD
Bump Stop	(s). Removed, damaged or ineffective	MaD
Air, Hydrolastic, Hydrogas, Suspension	(t). Audible Leak(s) is present in the system.	MaD
	(u). Linkage to levelling valve defective.	MaD
	(v). Valves insecure or defective.	MaD
	(w). Suspension bellows giving inadequate movement (risk of wheel fouling).	DD
	(x). Air bellows damaged or deteriorated to such an extent that it is likely to fail.	MaD
	(y). Pipe damaged to such an extent that it is likely to fail.	MaD
	(z). System inoperable, vehicle sitting on bump stops.	DD
	(aa). Any component damaged, modified or deteriorated in a way that would adversely affect functioning of the system.	MaD
	(ab). Any component damaged, modified or deteriorated in a way that functioning of the system is seriously affected.	DD
Bonded Suspension Units	(ac). Failure of rubber/metal attachment has occurred.	MaD
	(ad). Deterioration of suspension medium has occurred (soft and sticky).	MaD

TRANSMISSION & DRIVE TRAIN

Method of Testing

Examine the transmission, paying particular attention to the condition of:

1. Clutch pedal anti-slip device.
2. Drive shafts (both propeller shafts and half shafts).
3. Drive shaft flanges, universal joints bolts/nuts.
4. Drive shaft bearings and the security and condition of the bearing housing.
5. Engine/gearbox mountings.
6. Oil leaks.

Examine if there has been any obviously unsafe repair or modification carried out to the engine or drive train

NOTES

1. When carrying out this inspection, it is important that the vehicle is in neutral gear and that, if a transmission brake is fitted, it is released. Wheels should be chocked.
2. An unsafe repair or modification carried out to the engine/drive train may require a modifications report to be presented as per Item 62 of this Manual.
3. Excessive leak is any oil/fluid leak from any assembly which can deposit oil 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.
4. A CV grease boot not secured to prevent the incursion of water or dirt should fail under Reason for Failure (15) below.
5. It is not always possible to determine the presence and effectiveness of certain types of locking devices e.g. locking fluid or “nyloc” nuts if used instead of split pins on a castellated nut. If the CV joint is secure the absence of a locking device should not be a reason for failure, owner should be advised. Clutch pedals that are not equipped with a pedal rubber should not be considered a reason for failure if they were not designed to have one.

ITEM	REASONS FOR FAILURE	SEVERITY
Clutch Pedal anti-slip provision	(a). Missing, loose or worn to the extent that it is no longer effective.	MaD
	(b). Clutch slips or drags so that driving is impaired.	MaD
	(c). Gear shift linkage including gear lever worn or loose that driving is impaired.	MaD
Propeller Shaft or Half Shaft Bearing/ Bearing Housing/ Housing	(d). Any drive line component liable to lock up or break away.	MaD
	(e). Askew, damaged, or worn.	MaD
	(f). Is askew, damaged or worn that there is a very serious risk of loosening or becoming detached.	DD
Mounting	(g). Bearing housing fractured or insecure.	MaD
	(h). Bearing housing fractured or insecure that there is a very serious risk of loosening or cracking.	DD

ITEM	REASONS FOR FAILURE	SEVERITY
Propeller Shaft/Half Shaft Couplings (e.g. Universal Joints, Constant Velocity Joints or Flexible Couplings)	(i). Excessive wear at universal joints/couplings or transmission chains/belts.	MaD
	(j). Universal joint(s) coupling so excessively worn that there is a serious risk of loosening or becoming detached.	DD
	(k). Securing Bolts, nuts or studs loose/missing.	MaD
	(l). Securing bolts, nuts or studs so loose or missing that detachment is likely.	DD
	(m).A propeller shaft or half shaft is damaged or bent.	MaD
	(n). Lock tabs missing.	MaD
	(o). A universal joint coupling grease boot(s) is missing, torn or insecure.	MaD
Lubrication & other fluid leaks	(p). Excessive oil leak in engine, gearbox or axle	MaD
	(q). Any excessive fluid leak, other than water, likely to harm the environment or to pose a safety risk to other road user.	MaD
Engine Mounting or Gearbox Mountings	(r). Insecure, deteriorated or broken.	MaD
	(s). Mountings loose, worn or damaged.	MaD
	(t). Mountings so deteriorated, damaged or loose that detachment is likely.	DD
Dust Covers	(u). Dust cover is missing or severely deteriorated.	MaD
Engine or Drive Train	(v). Any obviously unsafe repair or modification.[2]	MaD

REAR FOG LAMP(S)

Method of Testing

1. If the vehicle is fitted with a Rear Fog Lamp, check that when in use, it provides a red light which is clearly visible.
2. Check that the fog lamp is securely mounted.
3. If fitted, check operation of fog lamp indicator.

Advisory Pass applies where there is a defective light source (multiple light source or in the case of LED up to 50% not functioning).

NOTES

1. Where a vehicle is originally fitted with only one fog lamp (to the centre or offside of the vehicle) this is acceptable i.e. it should not be failed for not having two rear fog lamps.

ITEM	REASONS FOR FAILURE	SEVERITY
Rear Fog Lamp	(a). Rear fog lamp switch is not working or defective.	MaD
	(b). Rear fog lamp missing or not clearly visible.	MaD
	(c). Rear fog lamp not red in colour.	MaD
	(d). Rear fog lamp lens broken, missing or badly cracked.	MaD
	(e). Fog lamp not securely attached.	MiD
	(f). Fog lamp so insecurely mounted that there is a very serious risk of falling off.	MaD
	(g). Rear fog lamp contains water/moisture.	MiD
	(h). Slightly defective lens (no influence on emitted light).	MiD
	(i). Heavily defective lens (emitted light affected).	MaD
	(j). Defective light source (single light source or in the case of LED less than 50% functioning).	MaD
	(k). Tell-tale not operating for rear fog lamp.	MaD

REVERSE LAMP(S)

Method of Testing

Where a reverse lamp is fitted, check to ensure that when in use, it provides a white light which is clearly visible.

ITEM	REASONS FOR FAILURE	SEVERITY
Reverse Lamp	(a). Not working or faulty.	MaD
	(a). Missing or not clearly visible.	MaD
	(b). Not white in colour when operational.	MaD
	(c). Lens broken, missing or badly cracked.	MaD
	(d). Defective light source/lens or lamp insecurely mounted.	MiD
	(e). Lamp so insecurely mounted that there is a very serious risk of falling off.	MaD
	(f). Reversing lamp can be switched on with gear not in reverse position.	MaD
	(g). Reversing lamp remains illuminated after reverse gear has been disengaged.	MaD
	(h). Lamp position or marking not in accordance with the with requirements[1].	MaD

MALFUNCTION INDICATORS

Method of Testing

Ensure the malfunction indicators for Supplemental Restraint Systems (SRS), Airbags, Electronic Stability Control (ESC), Anti-Lock Braking System (ABS), Electronic Braking System (EBS), Parking Brake, Tyre Pressure Monitoring System (TPMS), Electronic Power Steering (EPS) or brake fluid warning light are in working order.

NOTES

- The check procedure on Anti-Lock Brake Systems will vary according to the type of system fitted. The manufacturer's handbook should be consulted for the correct check procedure

* TPMS warning lamps generally illuminate and go off again when the ignition is switched on. In cases where one or more tyre pressures are low, the lamp will remain illuminated indicating a problem. In the event of a system malfunction, the lamp will flash a number of times and then remain on. Vehicles must only be rejected if it is clear that the lamp indicates a system malfunction.

** The SRS (MIL) may indicate that there is a fault in the seatbelt load limiter, pre-tensioners or airbags.

ITEM	REASONS FOR FAILURE	SEVERITY
Electronic Stability Control (ESC)	(a). Malfunction indicator light not working, not going through the correct sequence or indicates any kind of failure of the system.	MaD
	(b). System indicates failure via the electronic vehicle interface	MaD
	(c). Wheel speed sensors missing or damaged.	MaD
	(d). Wiring damaged.	MaD
	(e). Other components missing or damaged.	MaD
	(f). Switch damaged or not functioning correctly.	MaD
Electronic Parking Brake	(g). Malfunction indicator light not working, not going through the correct sequence or indicates any kind of failure of the system.	MaD
Electronic Power Steering	(h). Malfunction indicator light not working, not going through the correct sequence or indicates any kind of failure of the system.	MaD
	(i). System indicates failure via the electronic vehicle interface	MaD
Tyre pressure monitoring systems (TPMS)*	(j). In a vehicle first registered on or after 1 January 2015, tyre pressure monitoring system (TPMS) malfunctioning or obviously inoperative.	
Antilock brake system (ABS)	(k). Malfunction indicator light not working, not going through the correct sequence or indicates any kind of failure of the system.	MaD
	(l). System indicates failure via the electronic vehicle interface.	MaD
	(m).Wheel speed sensors missing or damaged.	MaD
	(n). Wiring damaged.	MaD
	(o). Other components missing, disabled or damaged.	MaD
Electronic braking system (EBS)	(p). Malfunction indicator light not working or not following the correct sequence.	MaD
	(q). System indicates failure via the electronic vehicle interface.	MaD
	(r). Wheel speed sensors missing or damaged.	MaD
	(s). Wiring damaged.	MaD
	(t). Other components missing, disabled or damaged.	MaD
****Supplemental Restraint System (SRS)**	(u). Malfunction indicator light not working, not going through the correct sequence or indicates any kind of failure of the system.	MaD
Brake fluid warning lamp	(v). Brake fluid warning light illuminated or defective	MiD
	(w). Incorrect functioning of brake fluid level warning device	MiD

REGISTRATION PLATE LAMPS

Method of Testing

1. Check that the registration number plate lamp(s) shows a white light and is operating effectively. Check trailer electrical sockets (where fitted) for; security, damage or deteriorated insulation.
2. Check the outputs from socket using appropriate equipment (only applies to brake, indicator and rear position lights).

Advisory Pass applies where there is a defective light source (multiple light source or in the case of LED up to 50% not functioning).

NOTE:

1. Some electrical sockets are 'hidden' behind an access panel in the bumper or bodywork. Unless requiring the use of tools or specialist equipment, these panels must be removed to facilitate the inspection of the socket.
2. A trailer electrical socket with a defective or missing cover flap that incorporates a lug and spring to hold the plug in place is not a reason for failure.
3. Reason for failure (k) may only selected when the outputs were checked using appropriate equipment (Light board or trailer socket tester).

ITEM	REASONS FOR FAILURE	SEVERITY
Registration Plate Lamp	(a). Lamp is not fitted/missing or is not securely attached.	MaD
	(b). Lamp so insecurely mounted that there is a serious risk of it falling off.	MaD
	(c). Lamp is not white in colour when operational.	MaD
	(d). Lens broken, missing or badly cracked.	MiD
	(e). Lamp showing direct (not reflected) white light to the rear.	MaD
	(f). Defective light source, (single light source or in the case of LED less than 50% functioning).	MaD
Trailer Light Socket outputs	(g). Socket or components not securely attached.	MiD
	(h). Socket/components so insecurely mounted that it is likely to fall off.	MaD
	(i). Damaged or deteriorated insulation.	MiD
	(j). Damaged or deteriorated insulation that it's likely to cause a short-circuit fault.	MaD
	(k). Trailer or towing vehicle electrical connections not functioning correctly. (Incorrect or no outputs from socket).	MaD

MODIFICATIONS REPORT (WHERE REQUIRED)

Method of Testing

1. The vehicle's owner (or the presenter on the owner's behalf) shall confirm whether any repairs or modifications have been carried out to a vehicle since its last NCT which may adversely affect the roadworthiness of one or more of the items to be tested (see Note 1).
2. In respect of vehicles modified since their last NCT, a modifications report must be provided in the following cases;
   a) Chassis work, including lengthening/shortening the wheel base or the replacement of chassis rails (e.g. limousine conversion)
   b) A vehicle which has been converted. This includes (but is not limited to the following):
      - M2 (mini bus) or N1 (light goods vehicle) converted to an M1 (passenger car)
   c) Modification to the steering system (this includes power steering and steering wheel)
   d) Modification to the suspension system (including modifications to anti-roll bars)
   e) Modification to the braking system including the addition or removal of equipment
   f) Modifications to seat belts (including anchorages), air bags or the addition of seats and safety restraint systems.
   g) Major modifications to the cab or body work
   h) Modifications or repairs which may adversely affect the roadworthiness of one or more of the items to be tested as part of the test including where "obviously unsafe repairs or modifications" is specified in this Manual as a reason for failure.

Where during the NCT, the tester notices a repair or modification which may adversely affect the roadworthiness of any of the test items including where unsafe "repairs or modifications" are specified in this Manual as a reason for failure, the tester shall seek a modifications report in writing substantially in the form outlined in 4 below. Where a historic report is provided, the tester shall determine whether this adequately addresses the issue and is in line with the form in 4 below and, if not, shall seek a new modifications report. As the NCT is essentially a maintenance and condition check, it is acknowledged that a tester will not be removing or dismantling any parts in the course of a normal roadworthiness test and that the finding of any modifications or repairs is based on a visual inspection of the vehicle only.

3. In the case of vehicles requiring a modifications report (as per 1, 2 or 3 above), this report shall be one issued by the vehicle manufacturer (or his authorised distributor), or by a Suitably Qualified Individual (see Note No.2). This report shall be on headed notepaper and must state;
   a. Vehicle Make
   b. Vehicle Model and variant
   c. Description of body-type (not code) before and after modification (in the case of a modification). E.g. estate car to hearse.
   d. Vehicle Registration Number
   e. VIN
   f. The purpose of the report
   g. The list of modifications or repairs made to the vehicle
   h. The standard of workmanship and specifications
   i. That the vehicle is safe to use on the road and that the modification/ repair does not diminish the technical status or integrity of the vehicle or other vehicle components and safety features.
   j. That the vehicle meets with the Road Traffic (Construction, Equipment and Use of Vehicles) Regulations (as amended) and the Road Traffic (Lighting of Vehicles) Regulations as amended
   k. That the vehicle meets with the essential technical provisions of the EU Directives to which the modification relates for the year of manufacture and category of vehicle concerned

A template for the modifications report required to be presented can be found in section 62 of this Manual.

MODIFICATIONS REPORT CONT...

Method of Testing

NOTES

(1) In accordance with the Road Traffic (Construction, Equipment and Use of Vehicles) Regulations, S.I. 190 No. of 1963 (as amended), all vehicles on public roads must conform with the general principles set down in these Regulations in relation to the condition and maintenance of vehicles. All parts and equipment of every vehicle shall be in good and efficient working order. It is each vehicle owner's responsibility to ensure his or her vehicle is in compliance with the law and maintained in a roadworthy condition at all times.

(2) A "suitably qualified individual" (SQI) means a mechanical or automotive engineer, an automotive assessor or a person with similar qualifications who, by reason of his or her competence, experience and independence, is an appropriate person to assess the fitness and safety of a vehicle and who carries the appropriate indemnity relative to his or her position.

(3) A modifications report is not required where:

(a) a vehicle has been subject to a post registration modification approval scheme in another Member State prior to being registered in Ireland and documentation (approval report in English) is provided from the competent authority in the Member State concerned, giving details of the nature of the modifications carried out and the VIN of the vehicle.

However, where such documentation has been provided but does not correspond to modifications identified and which may adversely affect the roadworthiness of the vehicle then a modifications report for the relevant modifications shall be required.

(b) a vehicle has been type approved and has one of the following certificates of approval corresponding to the vehicle presented

- EC Certificate of Conformity (EC CoC) for a complete or completed vehicle
- National Small Series Type Approval Certificate of Conformity (Irish NSSTA CoC) for a complete or completed vehicle
- Individual Vehicle Approval Certificate (Irish IVA Certificate)

However, where such documentation has been provided but does not correspond to modifications identified and which may adversely affect the roadworthiness of the vehicle then a modifications report for the relevant modifications shall be required.

ITEM	REASONS FOR FAILURE	SEVERITY
Modifications Report (where required)	(a). Not presented or incomplete.	MaD
	(b). Not in the form (template) acceptable by tester.	MaD
	(c). Does not correspond with modifications identified by tester.	MaD
	(d). Not acceptable (e.g. report includes an expiry date).	MaD

RSA MODIFICATIONS/REPAIR REPORT TEMPLATE

This template should be completed where repairs or modifications are identified which may adversely affect the vehicle roadworthiness (read guidelines and notes before completion).

(USE BLOCK CAPS THROUGHOUT)

VIN: | | | | | | | | | | | | | | | | | | | | | | | | |

Registration Number: | | | | | | | | | |

Make: _____ **Model:** _____

Variant: _____ **Mileage:** _____ ❑ **Km** ❑ **Miles** (tick one)

This report relates to a modification/ repair (delete where appropriate)
In the case of a modification, give description of: body-type before modification: and body-type after modification (if changed):
The purpose of the modification / repair is to: (give brief details of why these repairs or modifications were carried out to the vehicle)
List of the repairs or modifications made to the vehicle (including, but not limited to those involving changes to the braking systems, suspension, steering systems, bodywork, safety belts / restraint system, towing / coupling equipment, or chassis alterations):
In relation to the modifications/ repairs listed above, provide a detailed description of each. (Please use another page where necessary). Notes: • Give full details of any change to the braking system. Include a schematic diagram with key to the components and confirm on which axle's park brakes are fitted. • Where available, list any type approval numbers related to the modified systems • Where available from the component/ system manufacturer, supplementary evidence of compatibility with the type and variant of vehicle concerned may be provided • Details of the standard of workmanship and specifications (including any certification provided by manufacturer / convertor).

The following table must be completed for any vehicle modifications

	Original		Modified	
EU Category				
EU Bodywork Code				
No. of seats (excluding driver)				
No. of doors				
Fuel / Power Source				
Engine Capacity (cm^3)				
Engine Max. Net Power (kw)				
Engine Number				
Type-Approval Number				
DGVW (Design Gross Vehicle Weight((kg)				
	Design weight	Suspension type	Design weight	Suspension type
Design Axle Weights (kg) and Axle 1				
suspension type (air/coil/leaf/torsion bar) Axle 2				

I declare the information provided in relation to the vehicle referred to in this report:

a. Is true and correct. ❑

b. That the modifications/ repairs detailed above have been carried out to the vehicle such that the technical status and integrity of the vehicle and its other components and safety features have not been compromised and that the vehicle is safe to be used on the road and does not present a danger to the vehicle occupants or other road users. ❑

c. That the vehicle meets with the Road Traffic (Construction, Equipment and Use of Vehicles) Regulations (as amended), the Road Traffic (Lighting of Vehicles) Regulations (as amended) and the Road Traffic (Construction and Use of Vehicles) Regulations (as amended). ❑

d. That the vehicle meets with the essential technical provisions of the EU Directives to which the modification relates for the year and category of vehicle concerned. ❑

I declare that (tick ☑ one of the following 3 boxes and complete all of the information necessary):

☐ • I am a "suitably qualified individual" (as per Note 2). The following details must be provided:

Engineering/Technical Qualification (must be Level 7 or higher accredited course):

Level _____ University / Institute _____Programme_____

Or

Membership Grade with Engineers Ireland: ❑ Associate ❑ Chartered ❑ Fellow

Or

Membership Grade with Institute of Automobile Engineer Assessors:

❑ Associate ❑ Member ❑ Fellow ❑ Honorary Fellow

Membership Number | | | | | | | |

Number of year's experience (minimum 5) _____

Details of professional indemnity insurance (include company name (not broker), type of policy, expiry date)

_____

☐ • I am an authorised representative of an Approved Test Centre (ATC) as appointed by the National Standards Authority for Ireland.

ATC Number (Unique identifier issued by NSAI) | | | | | | | |

☐ • I am the manufacturer/ authorised distributor/ convertor of the vehicle (delete as appropriate)

Complete ALL of the following IN BLOCK LETTERS and sign the declaration below;

Name of Certifying Person:

Signature of Certifying Person: _____

Position within company:

Company address:

Email:

Phone:

Date of certification: d d m m y y

Place of certification:

Company Name: _____

Company Address: _____

_____

_____

Official Stamp of the SQI/ ATC/ Manufacturer/ Authorised Distributor/ Convertor

Guidelines for completing Modification / Repair Report Template.

Individuals must first read and fully understand the following important information before completing a modifications report (as per the attached template) in respect of a vehicle presented for NCT testing.

1. Road Traffic (Construction, Equipment and Use of Vehicles) Regulations, S.I. 190 No. of 1963 (as amended)

In accordance with the Road Traffic (Construction, Equipment and Use of Vehicles) Regulations, S.I. 190 No. of 1963 (as amended), all vehicles on public roads must conform to the general principles set down in these Regulations in relation to the condition and maintenance of vehicles. All parts and equipment of every vehicle shall be in good and efficient working order. It is each vehicle owner's responsibility to ensure his or her vehicle is in compliance with the law and maintained in a roadworthy condition at all times.

2. Suitably qualified individual (SQI)

A "suitably qualified individual" (SQI) must have:

- A Mechanical Engineering/Technical Qualification (Level 7 or higher accredited courses) or appropriate accreditation with Engineers Ireland or the Institute of Automobile Engineer Assessors.
- A minimum of 5 years experience of working in a suitable technical environment (preferably automotive or Engineering Environment).
- Access to adequate facilities to carry out a thorough vehicle examination and appropriate professional indemnity insurance.

3. In addition to this report, a vehicle converted from M2 or N1 to M1 requires a letter on official headed paper from the manufacturer or authorised distributor confirming that the vehicle maybe classed as M1 in the converted condition.

FOOTNOTES:

1. 'Requirements[1]' are laid down by type-approval at the date of approval, first registration or first entry into service as well as by retrofitting obligations or by national legislation in the country of registration. These reasons for failure apply only when compliance with requirements[1] has been checked.

2. Unsafe modification means a modification that adversely affects the road safety of the vehicle or has a disproportionately adverse effect on the environment or the modification or repair is not presented with a suitable modification report.

3. In a vehicle registered on or after 1 January 1986, windscreen is not marked with approved Standard Mark or equivalent: Australia — AS/NZS 2080 AS/NZS 2080T; Canada — CMVSS 205 (C2); India — IS2553 (PART 2) 1992 (Note 11); China — CCC; Japan — 11-4-21 (Window glass) JISR 3211; South Africa — SABS 1191 / SABS 1193; UK — BS AU I78 / BS 85 7-2 / BS5282; USA — FMVSS 205 (U); ANSI/SAE Z26.1- 1996 (Section 7); Germany — A three-period sine wave followed by the letter D.;Glazing marked Birkholz, Seitz, Roxite, Para Press or Bonoplex.; Glazing marked PMMA (polymethylmethylacrylate) or PC (polycarbonate); Europe e-mark to Directive 92/22/EEC; E mark to UNECE Regulation No. 43 with one of the following annotations II, II/P, III, IV.

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Revision 4

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Road Safety Authority

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