Vehicle and Operator Services Agency

THE MOT INSPECTION MANUAL

MOTOR BICYCLE AND SIDE CAR TESTING

Preface

The purpose of this Manual is to set out the testing procedures and standards for those who carry out the statutory test on motor bicycles, scooters, mopeds and motor bicycle combinations. Owners should also find the Manual useful as it details the inspections to which machines should be subjected and the reasons why a test certificate may be refused. This Manual was based on the regulations in force at the time of going to print, but changes in the law or in vehicle or equipment design may result in variations to the test requirements. General information regarding the responsibilities of those involved in testing and documentation are contained in the MOT Testing Guide.

Written by the Vehicle and Operator Services Agency

First published 1985

First edition crown copyright 1985

Second edition crown copyright 1993

Third impression 1994

Fourth edition 2001

Fifth Edition crown copyright 2004

ISBN 09549239-1-X

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Subject

Abbreviations and Definitions

	AE	Authorised Examiner - the organisation that operates and manages one or more VTSs and is responsible for controlling the quality of testing carried out. Except in the case of a 'sole trader' the AE is not a person but a legal entity (e.g. a company or partnership)
	Catch Up	The process where test data recorded while testing under Emergency Testing is subsequently entered via the VTS Device.
	ET	Emergency Testing, the process by which testing may continue when the computerised system is not available due to a wide scale failure affecting a significant number of VTSs
	Fallback	The process by which testing may continue when the computerised system is not available at a VTS, for example, following the breakdown of the VTS Device
	Fallback Review	The process by which test data recorded while testing under Fallback is subsequently confirmed on the MOT computer database
	Immediately	Taking place without delay
	MoI	Method of Inspection
	NT	Nominated Tester - a person nominated by an AE to carry out tests, Inspectors appointed by Designated Councils to carry out tests, all of which are approved by VOSA. Also VOSA staff appointed under section 66A of the Road Traffic Act 1988
	Password	Personal Identification, used in conjunction with a Smart Card to access the MOT database via the VTS Device. Can be numbers or letters, or a combination of both
	QC	Quality Control
	RfR	Reason for Rejection
	Replacement manual pages	Replacement pages are normally sent out under a Special Notice. They must be inserted into the manual immediately. Superseded pages should be removed and Manual Appendix A completed
	SBS	Siemens Business Services Ltd – Service provider for MOT Computerisation
	Smart Card	A card issued to an authorised user to access the MOT database via the VTS Device

	SN	Special Notice - an official notice issued from time to time by VOSA to inform AEs, NTs and other system users of changes to the testing scheme SNs may also be used to highlight areas of concern and to advise of developments of the scheme
	VOSA	The Vehicle and Operators Services Agency
	VSI	Vehicle Specific Information, provided to NTs to aid the correct assessment of a vehicle under test
	VT20	An MOT Test Certificate which includes the English/Welsh dual language version (VT20W)
	VT20 ET	An MOT Test Certificate for issue during a period of Emergency Testing
	VT30	A notice of refusal of a MOT Test Certificate including the Welsh counterpart (VT30W)
	VT32	An Advisory Notice – issued to advise of items of concern identified during the test that do not justify the refusal of a test certificate
	VT40	MOT Inspection Check List used by a NT during a test for vehicles other than motor bicycles (see VT40M)
	VT40M	Motor bicycle MOT Inspection Check List used by a NT during a test
	VTS	Vehicle Test Station
	VTS Device	The Computer device installed at each VTS on which each test must be registered, from which MOT documentation is produced and to perform certain administrative functions
	V5C	Harmonised Registration Certificate. Issued by the Driver and Vehicle Licensing Agency.

1. Application (Class I & II)

This Manual is a detailed guide to the inspection for statutory MOT testing of the following classes:

Class I: Motor bicycles (with or without side cars) up to 200cc.

Class II: All motor bicycles (including Class I) (with or without side cars).

Important

A motor bicycle and side car has a layout in which one of the wheeled elements is clearly recognisable as a side car. It is acceptable that in adapting a solo machine for use with a side car attachment that changes to the systems e.g. tyres and suspension may have been made.

Class I and II testing stations are not authorised to test motor tricycles. They are therefore not covered by this Manual.

A motor tricycle is a three wheeled vehicle on which none of the wheeled elements is recognisable as a side car. These vehicles are in Class III or IV, depending on their weight.

Other than for the inspection of tyres, any two wheels of a motorcycle shall be regarded as one wheel if the distance between the centres of the areas of contact between such wheels and the road surface is less than 460 mm.

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Scope of Examination

The MOT Test does not allow for any stripping or dismantling, except for the removal of panels or covers, designed to be easily removed without the use of tools, where it is necessary to allow the examination of an item.

Panels and covers must be securely replaced at the end of the test.

It is appreciated that machines fitted with only a side-stand can present a problem when trying to check the suspension correctly, particularly if the machine is fitted with a fairing and/or belly pan.

If you feel that you cannot properly and safely carry out the inspection then you should refuse to test the machine (see Introduction item 2). Alternatively, you may request the presenter to remove the belly pan, if possible, before commencing the test, if this will allow you to safely raise the machine.

2. Refusal to test

This Manual does not include the reasons for refusing to test a vehicle in the Reasons for Rejection columns. VTSs may only test those Classes and types of vehicle that they are authorised to test and which are of a size and weight that can be accommodated by the authorised equipment.

If any of the following reasons apply, the test should not be carried out, the vehicle presenter informed and any fee paid for the test must be returned. It is therefore advised that 'refusal' items are checked before starting the test.

If the vehicle presenter requires written confirmation of why the test cannot be carried out, the test should be registered using the VTS Device. A VT30 should be issued clearly showing the reason(s) why the test could not be carried out. The test should then be abandoned.

If reason to refuse 'i.' applies, issue a hand written VT30 containing as many of the vehicle details as possible. A copy of the VT30 should be retained by the VTS.

The reasons for refusing to carry out the test are:

a. The log book/registration certificate or other evidence of the date of first use is not produced if the information therein, is necessary for the test to be carried out.

Note: Normally this evidence is only necessary if the vehicle has a 'cherished' registration mark or if the registration mark's year letter does not make clear the standard that should be applied - for instance, regarding the requirement for post 1st August 1986 vehicles to be fitted with direction indicators.

b. The vehicle or any part or equipment on the vehicle is so dirty that examination is unreasonably difficult.

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c. The vehicle is not fit to be driven when necessary to complete the test because of a lack of fuel, or oil, or for any other reason.

d. The NT considers insecurity of a load or other items would prevent a proper test being carried out - unless the load is secured or removed.

e. The VTS asks for the fee to be paid in advance and this is not done.

f. The vehicle emits **substantial** quantities of **avoidable** smoke.

g. A proper examination cannot be carried out because any cover or other device designed to be readily opened cannot be readily opened, e.g. a seat is locked down and lifting it is required in order to inspect the structure of the machine.

h. The condition of the vehicle is such that, in the opinion of the NT, a proper examination would involve a danger of injury to any person or damage to the vehicle or other property.

i. The vehicle has neither registration mark nor VIN/Chassis No./Frame No. by which it can be identified, or that all such identifications are illegible or use letters and numbers not normally used in the English language.

In addition to this an NT must decline to test any vehicle that is not of a class they are authorised to test, of such a size, weight or configuration it cannot be properly or safely tested on the approved facilities or a vehicle that has the frame stamped either '**not for road use'**, or words to that effect.

If despite due care initially, it becomes apparent during a test that the test cannot be completed **for any of the above reasons**, you must fail the vehicle because the test could not be satisfactorily completed.

Any re-examination and fee must be in line with normal policy (See Fees and Appeals Poster) treating the component which could not be examined, as a failure item.

3. Inspection Procedure

Each vehicle must be registered for test by the NT prior to the start of the test. This will normally be done via the VTS Device. When testing in Fallback (see MOT Testing Guide) this must be done by contacting the SBS Service Desk. The only exception to this is when testing using ET procedures.

The NT who registered the vehicle for test must personally carry out the test, without avoidable distraction or interruption. Using a suitable assistant where necessary.

The diagram on page 10 shows a typical inspection routine which will aid the tester in making a thorough inspection of the vehicle. This routine may need to be varied to suit different test bay layouts and equipment types.

For example, at some testing stations, where the roller brake tester is positioned in advance of the standing area, it might be more convenient to conduct the brake performance test before inspecting the rest of the vehicle.

This practice is permissible, but it must be noted that a tester should not proceed with the brake performance test if there is a defect with the vehicle which could cause;

- injury to any person;
- or damage to the vehicle or other property.

It is advisable to examine, as far as possible, all of the vehicle before carrying out a brake performance test.

Once the inspection is completed, the NT must record the test results using the VTS Device, or by contacting the SBS Service Desk when testing in Fallback. The only exception to this is when testing using ET procedures.

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Measured values achieved during a test should be recorded and entered on the VTS Device after the completion of the test.

During Fallback the NT must, calculate the efficiencies, supply appropriate values requested by the SBS Service Desk and retain the readings for later data entry or confirmation.

If testing under ET , the brake efficiency of each system must be calculated by the NT and the readings retained for later data entry.

4. Re-examination following failure

If the vehicle stays at the test station for repair you must carry out a re-examination of all the failed items and any items affected by the repair.

If the vehicle leaves the test station having **only** failed on one or more of the items listed on the fees and appeals poster and is returned before the end of the next working day - carry out a partial examination.

In any other case a **full examination must** be carried out.

Note:- If during any re-examination it is clear that an additional defect is present which would mean the issue of a test certificate is not justified, a VT30 must be issued.

5. Recording defects

Reasons for Rejection

The Reasons for Rejection within this Manual are selected using the VTS Device, via a component-based menu system.

The User will first select the vehicle component that is required. Then, via on-screen selection, select the appropriate Reason for Rejection.

Some Reasons for Rejection are not accessible due to, for instance the testable age of the vehicle.

Dangerous defects

If in the opinion of the NT the vehicle has a dangerous defect this must be recorded in box C of the VT30 or in box C of the VT32 as appropriate.

Dangerous defects must be clearly explained to the vehicle presenter.

Other defects

It is considered best practice to advise the vehicle presenter of:

- any items which are near to, but which have not yet reached the point of test failure
- any peculiarities of the vehicle identified during the inspection
- any defects on non-testable items which are found during the inspection procedure.

These defects should be recorded on the appropriate documentation.

6. Testing Personnel

Inspections must be carried out by a properly approved NT. An assistant must be used, where necessary, to carry out the inspection correctly.

In appropriate cases, the person submitting the vehicle ('the vehicle presenter') is permitted to act as an assistant, if they are willing, the NT is satisfied with their competence and that all Health and Safety requirements are met. For example, the vehicle presenter will normally be capable of operating light switches etc., but might not be able to properly push, pull or lever road wheels etc.

Only the NT carrying out the inspection is empowered to make a decision about the results of the inspection of a particular item.

7. Vehicle Specific Information (VSI)

The computerised MOT system will provide NTs with additional information about the vehicle under test in the form of VSI.

VSI may also include information regarding the test methods and/or standards to be adopted, where alternatives exist within this Manual.

Some VSI will normally be provided on the MOT checklist (VT40), NT's should access any further information, where this is provided via the VTS device.

When testing under Fallback, VSI will be available via the SBS Service Desk.

VSI may not be available when testing under ET.

8. The MOT Testing Guide

The Guide explains what is required of people and organisations authorised to conduct statutory tests on certain motor vehicles. It includes amongst other things, the administration of the MOT scheme.

At least one up to date paper copy of the Guide must be available to testing staff at all times in all testing stations.

9. The VTS Device User Guide

The VTS Device User Guide, which forms part of the MOT Testing Guide, explains how to use the VTS Device.

At least one up to date copy of the Guide must be available to testing staff at all times in all testing stations.

10. Road Testing

The statutory test does not specifically include a road test of the vehicle. However, one is permitted if the NT considers it necessary to check the results of an inspection.

The NT must be qualified to carry out the road test. The NT must also ensure it is safe to conduct the road test.

11. Health and Safety

AEs and their staff are reminded that they are obliged to adhere to all relevant Health and Safety Legislation while MOT testing.

Advice can be obtained from your local Health and Safety Enforcement Officer or Local Authority Environmental Health Officers as appropriate.

How to Use This Manual

1. The Manual

This Manual is written on the assumption that the inspection will be carried out by a qualified NT, with an assistant working under their direction.

It should be read in conjunction with all current Special Notices relevant to the class of vehicle under test.

Further guidance may be gained by consulting the Vehicle Specific Information held on the MOT database for the vehicle under test.

This Manual is also available electronically via the VTS Device.

2. Page Layout

a) Information Columns
These contain important details a NT needs to know, and should be used in conjunction with the other columns.

b) Method of Inspection Columns
These detail:
- The way in which the inspection of items on the vehicle must be carried out, and
- The equipment to be used.

c) Reasons for Rejection Columns
These list the defects which result in a vehicle failing the MOT test.

3. Vehicle 'first used' dates - application of test criteria

NT's will normally be provided with the vehicle details as part of the Vehicle Specific Information supplied by the MOT database. This will usually include the vehicle's 'first used' date. Where this information is available, the NT should only use Reasons for Rejections applicable to the vehicle's age.

However, in cases where this information is not available or incorrect, the NT should determine the vehicle's 'first used' date as follows;

a. Its date of manufacture, if the vehicle was originally used without being registered in GB (e.g., an imported vehicle or ex-HM Forces vehicle), or

b. Vehicles having a Q plate registration when presented for MOT are to be treated as being first used on **1 January 1971,** or

c. In any other case, the earlier of either
   - Its date of first registration, or
   - The date six months after it was manufactured.

This information should be entered onto the VTS Device to enable the NT to select the appropriate Reason for Rejection.

Example of 'first used' date

The requirements for stop lamps to operate by the application of each brake system applies to vehicles first used on or after 1 April 1986.

4. Assessment of Component Wear and Deterioration

Because it is not practicable to lay down limits of wear and tolerances for all types of components on different models of vehicle, a NT is expected to use experience and judgement in assessing the condition of a component. The main criteria to be used when making such an assessment are;

(i) whether the component has reached the stage where it is obviously likely to affect adversely the roadworthiness of the vehicle;

(ii) whether the condition of the component has clearly reached the stage when replacement, repair or adjustment is necessary.

5. Use of Equipment

The statutory test must be conducted using **only** equipment designated as acceptable for the test, and the designated equipment must always be used for the test.

In the event of any item of designated test equipment failing, the VOSA local office must be notified. This will usually be via the VTS Device. Testing must stop on any class or type of vehicle as soon as any mandatory item of equipment malfunctions, in a way that could prevent a test being properly conducted on that class or type of vehicle. Where the failure is to a roller or plate brake tester, testing may continue using a calibrated decelerometer for 2 working days, **only** for vehicles previously booked in before the breakdown occurred.

The Vehicle and Operator Services Agency publishes a list of equipment which it has accepted for statutory testing within the relevant vehicle Classes. This does not apply to general workshop equipment such as levers, inspection lamps, tyre pressure gauges, or stands for use in Class I & II.

Some items of approved test equipment are provided with a device to enable information to be transferred to the VTS Device via the NT's Smart Card.

6. Disabled Drivers Controls

A defective disabled driver's control or fitment that is a testable item justifies failure in the normal way.

The defect description must include an explanation of the control type or fitment and its clear function so that it is clear it applies to disabled driver's equipment.

If the disabled driver's controls or fitments are **additional** to and do not adversely affect the normal vehicle equipment, they are **not** testable items. Any defective additional control or fitment found during the test should be reported to the vehicle presenter.

7. Special Notices (SNs) and Manual Replacement Pages

SNs and replacement pages containing amendments or additions to the Manual must be retained and acted upon. A printed copy of the SNs must be filed and retained in a readily retrievable manner. It may also be wise to copy appropriate items into the Manual.

SNs will be produced electronically via the VTS Device.

All Manual amendments must be signed off using the table in Appendix A.

The electronic version of the Manual will be updated automatically, in line with the amendments issued for the paper copy.

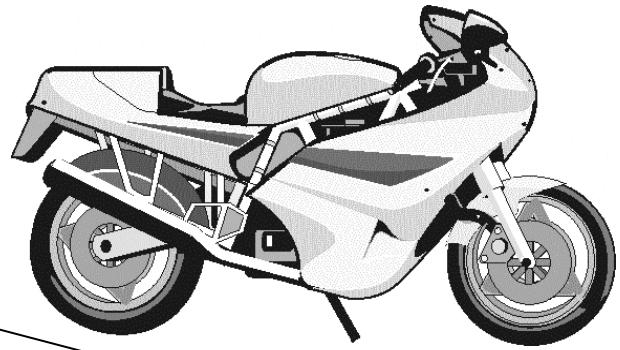
Appropriate VTS personnel will be notified of any changes or updates to the Manual.

Start

1. Sit on Machine. **Check**
- all controls
- switches
- horn
- front suspension
- forks
- head bearings
- handlebars

Go to Front.

2. At front. **Check**
- front lights
- indicators
- front brake master cylinder (if fitted)



3. Place machine on its stand.
Raise front wheel. **Check**
- steering
- front forks
- tyre condition
- front brake
- head bearings
- wheel
- wheel bearings

Lower front wheel.

Go to right side.

4. On the right side. **Check**
- frame
- seat
- final drive*
- rear wheel/brake
- foot rest
- exhaust system

Go to Rear.

5. Raise the rear wheel. **Check**
- rear wheel
- tyre condition
- rear brake components
- rear suspension
- final drive*

Lower rear wheel.
Remove from stand

6. At rear. **Check**
- rear position lamp/s
- stop lamp/s
- reflector
- indicators
- test rear suspension

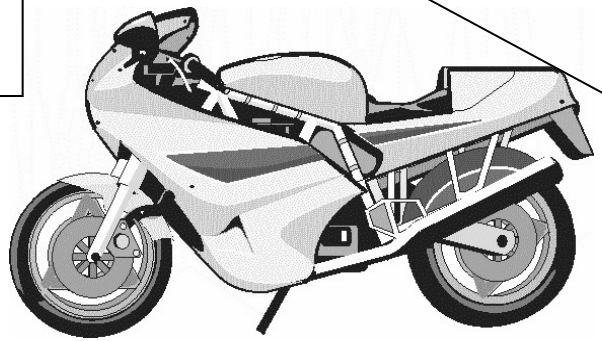
Go to left side.

7. On the left. **Check**
- frame
- rear suspension
- exhaust system
- rear wheel & brake
- foot rest
- final drive*
- rear tyre

Go to Front.

End

8. At front. **Check**
- wheel alignment
- headlamp aim
- brake performance



*final drive may be fitted to the left or right of the rear wheel.

- ***Prior to the inspection starting, check reasons to refuse/decline to test items.***
- ***The routine shown is one recommended by VOSA. It is not meant to be exhaustive. Testers must ensure that all testable items are checked in a routine appropriate for the vehicle.***
- ***For certain checks the use of an assistant may be essential, there are other checks where an assistant is desirable. It is therefore advisable that an assistant remains with the tester for the whole duration of the test.***

Recommended Inspection Routine

Lighting and Signalling Equipment

Section Contents

1.1 Front and Rear Position Lamps

Information	Method of Inspection	Reason for Rejection
This inspection applies to: all machines, except those which have neither front nor rear position lamps, or have such lamps permanently disconnected, painted over or masked that are ▪ only used during daylight hours, and ▪ not used at times of seriously reduced visibility If this situation occurs the machine presenter should be issued with a VT32 (advisory notice) recording the above.	1. With the front and rear position lamps switched on, check the lamps for (See information column). a. presence b. condition **Note:** At least 50% of light sources in a lamp must illuminate c. security. d. fitment and visibility	1. An obligatory lamp (see information column) a. missing b. so damaged or deteriorated that its function is impaired c. an insecure lamp d. is obscured or does not face the front or rear as appropriate
Front position lamps and headlamps A motor bicycle (with or without a side car) fitted with a headlamp need not have a front position lamp (but must have one on the side car, if a side car is fitted).	2. Check the front and rear position lamps show light of the correct colour	2. a. a front position lamp shows a light other than WHITE to the front, (or yellow if incorporated in a yellow headlamp) b. a rear position lamp shows a light other than RED to the rear
Front position lamps incorporated in yellow headlamps The light from a front position lamp may be yellow only if incorporated in a headlamp capable of emitting only a yellow light. A motor bicycle combination may be fitted with a yellow headlamp on the motor bicycle and a white front position lamp on the side car.	3. Check that each lamp: a. illuminates immediately it is switched on, b. that the illumination of each lamp is not affected by the operation of any other lamp or the horn, and c. does not flicker when tapped.	3. A lamp which a. does not illuminate immediately it is switched on, b. is adversely affected by the operation of another lamp or the horn, c. flickers when tapped lightly by hand.
Obscured At least 50% of each lamp must be visible from the front or rear as appropriate.		
Cont'd ⬇	**Cont'd ⬇**	**Cont'd ⬇**

Information	Method of Inspection	Reason for Rejection
On machines without a battery or with an insufficiently charged battery, **it will be necessary to run the engine.** **Fog lamps and amber lamps** The inspection (1.1) does NOT include rear fog lamps or amber lamps located within the indicators.	4. Check the switch for condition and security. Check the front and rear position lamps are operated by a single switch.	4. A switch which a. is faulty b. is insecure, or c. does not operate the front and rear position lamps

1.1 Front and Rear Position Lamps

1.2 Headlamps

Information	Method of Inspection	Reason for Rejection
This inspection applies to: all machines, except those which have neither front nor rear position lamps, or have such lamps permanently disconnected, painted over or masked that are ▪ only used during daylight hours, and ▪ not used at times of seriously reduced visibility If this situation occurs the machine presenter should be issued with a VT32 (advisory notice) recording the above. **A motor bicycle first used before 1 January 1931** does not need a headlamp. **A motor bicycle is only required to have a dipped-beam headlamp** (but may also have a main beam) if it: ▪ was first used on or after 1 May 1995 and cannot exceed *30 mph / 50 km/h with an engine capacity not exceeding 50cc, or* ▪ was first used before 1 January 1972 and with an engine capacity of less than 50cc. ▪ any machine having a maximum speed not exceeding 30mph / 50km/h.	1. Check the headlamp emits a WHITE or YELLOW light 2. Check that the illumination of the headlamp is not affected by the operation of any other lamp or the horn and does not flicker when tapped (see information column). 3. Check the condition and security of the headlamp.	1. The headlamp does not emit a light which is substantially WHITE or YELLOW in colour 2. a. does not have at least one headlamp which illuminates when selected on: (i) dipped beam (ii) main beam b. operation of the dip switch does not (i) extinguish all main beam headlamps and leave on at least one dipped beam headlamp, or (ii) deflect the main beam/s to make them dipped beam/s. c. either beam as selected is affected by the operation of another lamp or the horn, or which flickers when tapped lightly by hand (See info column) 3. a. a headlamp missing or so damaged or deteriorated that its function is impaired. (See info column) b. an insecure headlamp.
Cont'd ⬇	**Cont'd ⬇**	**Cont'd ⬇**

Information	Method of Inspection	Reason for Rejection
Twin headlamp systems On twin headlamp systems only one or both headlamps may need to be illuminated for either dipped or main beam. Each headlamp that can be illuminated on dipped beam must meet the requirement for dipped beam headlamps. Twin headlamps must be mounted either one above the other or symmetrically without regard to any sidecar and not more than 200mm apart measured from the edge of the reflecting surface. The tester should advise if both headlights should illuminate for either function and only one does so. **On machines without a battery or with an insufficiently charged battery,** it will be necessary to run the engine.	4. Check the condition, operation and security of the switch.	4. A faulty or insecure switch.

1.3 Stop Lamps

Information	Method of Inspection	Reason for Rejection
This inspection applies to: all machines, except those which have neither front nor rear position lamps, or has such lamps permanently disconnected, painted over or masked that are ▪ only used during daylight hours, and ▪ not used at times of seriously reduced visibility If this situation occurs the machine presenter should be issued with a VT32 (advisory notice) recording the above. **Exemptions** If a stop lamp is fitted, it must meet the requirements of this inspection, but need not be fitted to a machine which: a. cannot exceed 25mph, or b. was first used before 1 January 1936, or c. was first used before 1 April 1986 and which has an engine capacity of less than 50cc. **Machines first used before 1 April 1986** must have a stop lamp that operates from at least one brake control. **Machines first used on or after 1 April 1986** must have a stop lamp that operates from both brake controls. However, a small number of machines first used from this date were approved with the stop lamp operated by only one control. A machine should only be failed if you are certain that it was originally manufactured to operate from both controls. **On machines without a battery or with an insufficiently charged battery,** it will be necessary to run the engine.	1. Apply each of the brakes in turn and check the colour and functioning of the stop lamp. (see information column). **Note:** At least 50% of light sources in a lamp must illuminate 2. Check that the illumination of the lamp is not affected by the operation of any other lamp or the horn. 3. Check the condition and security of the stop lamp (see information column).	1. A stop lamp a. does not illuminate immediately a brake applies b. emits other than a steady red light c. that is obscured d. flickers when tapped lightly by hand e. remains on when the brake is released. 2. The illumination of the stop lamp is affected by the operation of another lamp or the horn. 3. A stop lamp a. missing or so damaged or deteriorated that its function is impaired b. insecure.

Information

This inspection applies to: all machines except those which either have no front or rear position lamps or have such lamps permanently disconnected, painted over or masked that are

- only used during daylight hours, and
- not used at times of seriously reduced visibility

If this situation occurs the machine presenter should be issued with a VT32 (advisory notice) recording the above.

Statutory reflectors
Mopeds and motor bicycles require one unobscured red reflector which is aligned to the vehicles longitudinal centre line and is positioned to reflect squarely to the rear. If the motorcycle is fitted with a side car the side car will also require a reflector fitted towards the nearside and positioned to reflect squarely to the rear.

Extra reflectors fitted to a motorcycle are not included in this inspection.

Reflecting and Retroreflective tape must NOT be regarded as a substitute for an obligatory reflector.

Method of Inspection

1. Check the presence and colour of the rear reflector (two in the case of a motorcycle combination, one on the motorcycle and the other on the sidecar). (see information column).

2. Examine the reflector(s) for condition, security position and that it is not obscured.

Reason for Rejection

1. There is not one unobscured RED reflector (in the case of a motorcycle combination one on the machine and one on the sidecar) positioned to reflect squarely to the rear.

2. A reflector

   a. so damaged, dirty or deteriorated that its function is impaired

   b. obscured

   c. insecure

   d. obviously incorrectly positioned

1.4 Rear Reflectors

1.5 Direction Indicators

Information	Method of Inspection	Reason for Rejection
This inspection applies to: all motor bicycles except those which either have no front or rear position lamps or have such lamps permanently disconnected, painted over or masked that are ▪ only used during daylight hours, and ▪ not used at times of seriously reduced visibility. If this situation occurs the machine presenter should be issued with a VT32 (advisory notice) recording the above. **Exemptions** If direction indicators are fitted they must meet the requirements of this inspection, but need not be fitted to a machine which ▪ cannot exceed 30mph / 50kph, or ▪ was first used before 1 August 1986, or ▪ 'off road' motor bicycles that are designed to carry only the rider ▪ 'off road' motor bicycles with side car designed to carry the rider and one passenger in the side car. 'Off road' motor bicycles are constructed or adapted primarily for use off road (whether by reason of its tyres, suspension, ground clearance or otherwise). **Statutory indicators** The precise position and angle of visibility of direction indicators are not part of this inspection, but they must be on each side of the longitudinal axis of a solo machine. If a side car is attached, the indicators must be on opposite sides of the combination.	1. Operate the direction indicators on each side in turn and check the colour, flash rate and it is not obscured. Check that the illumination of the indicators are not affected by the operation of any other lamp. Each lamp must emit an amber light, except vehicles first used before 1 September 1965 where both front indicators may be white and both rear indicators red. **Note:** At least 50% of light sources in a lamp must illuminate 2. Operating the indicators see that the operation of each front indicator is readily visible from the riding position or that the 'tell tale' is operating correctly. 3. Check the condition and security of each direction indicator. 4. Check the condition and operation of the switch.	1. A direction indicator a. missing or obscured b. does not show a light of the appropriate colour c. not working or not flashing 60 to 120 times per minute, or which is affected by the operation of another lamp. 2. A 'tell tale' does not function or operate correctly. **Note:** If the indicators can be seen from the riding position there is no need for a 'tell tale' to operate. 3. An indicator lamp a. so damaged or deteriorated that its function is impaired. b. insecure. 4. A defective or insecure switch or one which does not operate the direction indicators on the side selected.

Cont'd ⬇

Information

Motorcycles first used before 1 September 1965 may be fitted with direction indicators showing a WHITE light to the front and a RED light to the rear.

On motorcycles without a battery or with an insufficiently charged battery, it will be necessary to run the engine.
The 'tell tale' may be audible, visual or both.

Amber lamps located within the indicator lamp must not adversely affect the operation of the indicator i.e. the indicator must go on and off to function not dim and bright.

1.6 Headlamp Aim

Information

Headlamps fitted to motorcycles fall into two main groups, ie those which are intended to be set on main (driving) beam (diagram 2) and those on dipped beam (diagrams 1 & 3).

Some of the more prominent features which will aid identification are given below and on Pages 3, 4 and 5.

Machines with a single beam headlamp first used on or after 1 May 1995 so constructed to be incapable of exceeding 30mph/50kph on the level with an engine capacity not exceeding 50cc are only required to have a dipped beam, provided a rear position lamp, stop lamp and rear reflector are also fitted (see also information notes at 1.2 headlamps).

On machines without a battery or with an insufficiently charged battery it will be necessary to run the engine. If an automatic transmission is fitted the light output may be low but the hot spot can usually be identified.

Check that the tyres are not under-inflated.

A flat top dip beam pattern is not a reason for rejection.

An alternative headlamp dipped beam pattern (not being one of the examples) is acceptable providing all of the beam upper edge, including any "peak" is contained within the appropriate tolerance band.

Method of Inspection

A1. USING A RAIL MOUNTED HEADLAMP AIM TESTER

Locate the machine on the area designated as the 'standing area' for the headlamp test.
Clamp the front wheel or otherwise support the machine so that it is upright and in the straight ahead position.
With an assistant sitting on the machine in the normal riding position align the beam tester with the longitudinal axis of the motorcycle and align the centre of the collecting lens with the centre of the headlamp under test in accordance with the equipment manufacturer's instructions.
Switch the headlamp to the beam on which the headlamp is to be checked.
Follow the instructions given by the manufacturer for the particular headlamp aim equipment being used.

Method of Inspection

A2. USING AN AIMING SCREEN

Place the machine on the standing area.
Position the machine or motorcycle part of a combination, with the headlamp lens the appropriate distance away from the aiming screen and its longitudinal centre line at right angles to the screen.
Clamp the front wheel or otherwise support the machine so that it is upright and adequately supported.
Align the screen vertical zero line with the motorcycle *headlamp* centre line.
With an assistant sitting on the machine in the normal riding position align the horizontal zero line with the horizontal axis of the headlamp using the headlamp height measuring equipment. Switch the headlamp to the beam on which it is to be checked.

Cont'd ⬇

1.6 European ‘E’ Beam Headlamp (Checked on Dipped Beam)

Information

European type – Characteristics

a. an asymmetric dipped beam pattern which when correctly aimed, produces an image with a distinct line rising at 15° (45° in some lamps) on the nearside;

b. a lens or reflector with one or more asymmetric stepped patterns moulded in the glass/plastic;

c. a lens may carry
- a European approval mark - a circle containing an ‘E’ and a number, or
- a rectangle containing an ‘e’, and a number.

Masks or converter kits.
Right hand dip headlights can be temporarily altered for use in the UK by fitting masks or converter kits which remove the beam “kick up” to the right. A headlamp altered in this way is not a reason for rejection, if;

A. the headlamp aim is not rejected for the reasons listed in the Reason for Rejection column (except that the top of the beam image will be a straight line).

B. the light output is not duly reduced.

C. the mask or converter is securely attached.

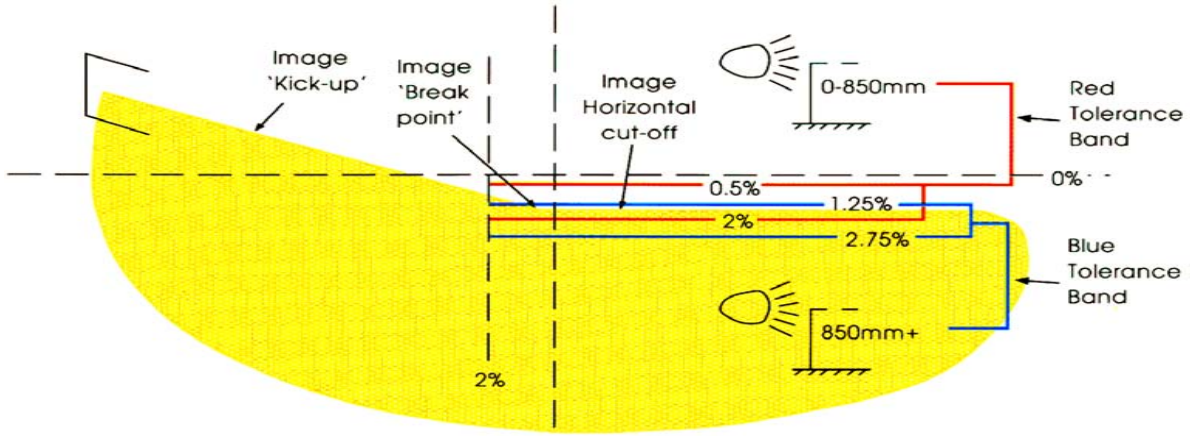


Diagram 1

Check the beam image ‘kick up’ is to the nearside.

Check the image horizontal cut-off is between

- for headlamps not more than 850mm from the ground, the 0.5% and 2% lines, i.e. the red tolerance band
- for headlamps with centres more than 850mm from the ground, the 1.25% and 2.75% lines ie the blue tolerance band.

Check the beam image ‘break point’ is between the 2% and 0% vertical lines.

Reason for Rejection

B1. The beam image ‘kick-up’ is to the offside.

2. For headlamps with centres **not more than** 850 mm from the ground the beam image horizontal cut-off is not between the horizontal 0.5% and 2% lines, i.e. the **red** tolerance band.

3. For headlamps with centres **more than** 850 mm from the ground, the beam image horizontal cut-off is not between the horizontal 1.25% and 2.75% lines, i.e. the **blue** tolerance band.

4. The beam image ‘break point’ is to the right of the 0% vertical line or to the left of the vertical 2% line.

Information

Headlamps tested on main beam have a symmetrical main beam pattern with a central area of maximum intensity ('hot spot').

This type of lamp generally has the following characteristics:

a. a circular lens which may be marked with a figure 1 followed by an arrow indicating the direction of dip;

b. likely to be of sealed beam construction.

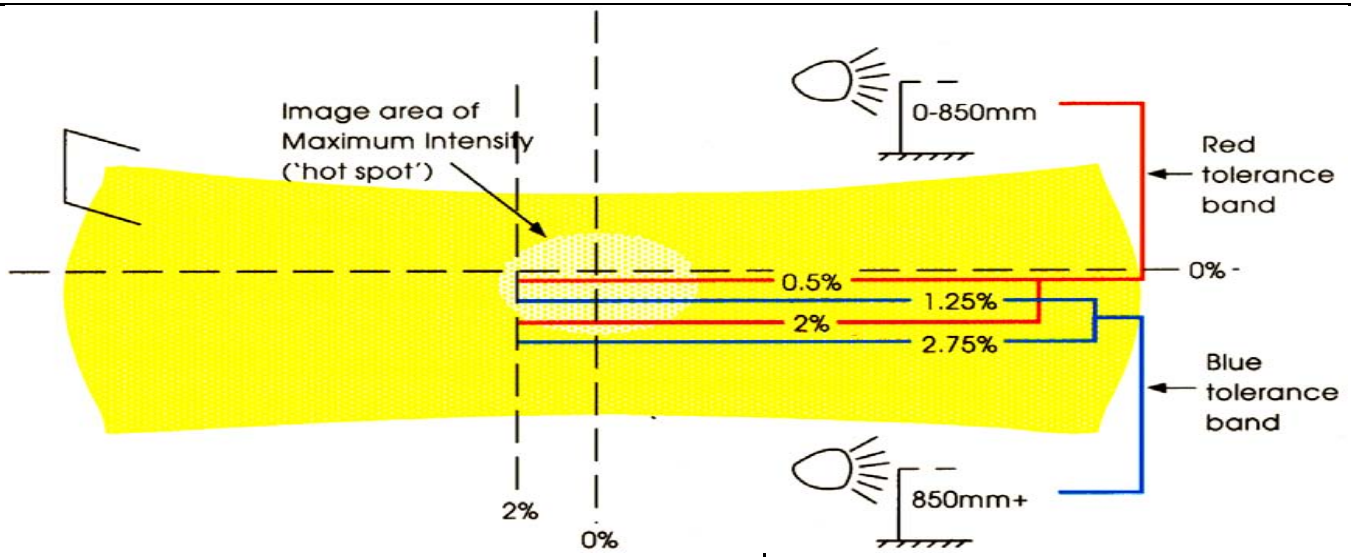


Diagram 2

Main beam image.

Check the position of the centre of the area of maximum intensity ('hot-spot').

Reason for Rejection

C1. the 'hot spot' centre is above the horizontal 0% line.

2. the 'hot spot' centre is to the right of the vertical 0% line, or to the left of the vertical 2% line.
3. for headlamps whose centre is **not more than** 850 mm from the ground the 'hot spot' centre is below the horizontal 2% line.
4. for headlamps whose centre is **more than** 850 mm from the ground, the 'hot spot' centre is below the horizontal 2.75% line.
5. when dipped the brightest part of the image does not move downwards.

1.6 British American Type (Checked on Dipped Beam)

Information

British American type – Characteristics

a. an asymmetric dipped beam pattern which when correctly aimed has a flat topped area of high intensity extending above and parallel with the horizontal zero line on the nearside;

b. a circular lens marked with the figure 2 which may also have an arrow showing the direction of dip;

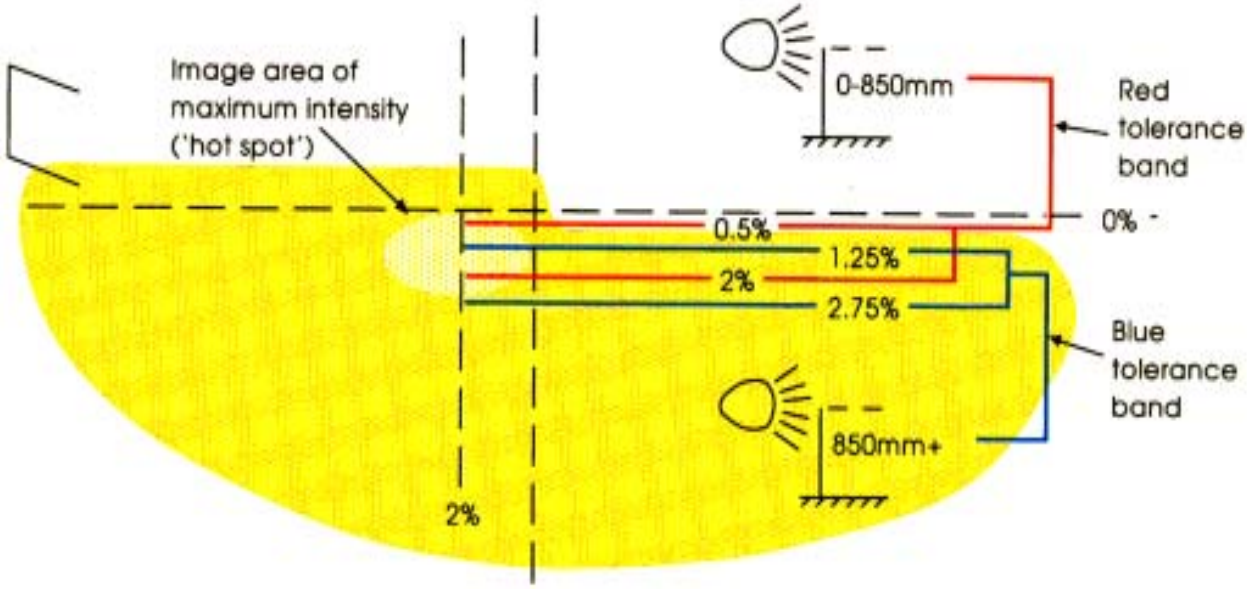


Diagram 3

Dipped beam image

Check the position of the upper and right hand edge of the area of maximum intensity ('hot spot')

Reason for Rejection

1. the upper edge of the 'hot spot' is above the horizontal 0% line.

2. the upper edge of the 'hot spot' is below the horizontal 2.75% line.

3. the right hand edge of the 'hot spot' is to the right of the vertical 0% line or to the left of the vertical 2% line.

Information	Method of Inspection	Reason for Rejection
On a motor bicycle without a battery or an insufficiently charged battery which is fitted with an electrically operated horn, it will be necessary to run the engine. **An audible warning device** is usually an electrical horn. A horn is defined as an instrument, not being a bell, gong or siren, capable of giving audible and sufficient warning of the approach or position of a vehicle. A motor bicycle first used before 1 August 1973 may be fitted with a bulb horn.	1. Check that the motor bicycle is fitted with a horn. 2. Check the accessibility and operation of the horn control. 3. Operate the horn and listen to the sound emitted.	1. A horn missing. 2. A horn control a. defective or not readily accessible b. not functioning. 3. a. A horn not working or not loud enough to be heard by another road user b. a motor bicycle fitted with a gong, bell, siren or horn which emits two or more alternating tones c. in the case of a motor bicycle first used on or after 1 August 1973 a sound which is ▪ not a constant note ▪ not continuous or uniform ▪ harsh or grating.

1.7 Horn (Audible Warning)

Steering (including Suspension)

Section Contents

2.1 Steering Controls

Information	Method of Inspection	Reason for Rejection
Rubber mounted handlebars Handlebars on some machines are rubber mounted. Some movement may be detected when firm pressure is applied to handlebars secured in this way	1. With the wheels supporting the weight of the machine grasp the handlebars by the grips and by the application of firm pressure check for movement at the grips, clamps or any weakness of the handlebars or fork yokes.	1. a. handlebar clamps not tight, or any bolt loose or missing (see information column.) b. handlebar or fork yoke deformed, fractured, cracked or excessively corroded c. handgrips *missing* or not secure to handlebars d. an excessively deteriorated handlebar flexible mounting
	2. With the front wheel clear of the ground, turn the steering from lock to lock to check that: a. there is no fouling between moving and fixed parts; b. the handlebar grips do not come so close to a fixed part (e.g. fuel tank or fairing) as to impede the operation of the controls.	2. a. any fouling between components which would interfere with the free movement of the steering from lock to lock b. insufficient clearance at either full lock position for the handlebar grips to be properly grasped or the controls to be properly operated
	Cont'd ⬇	**Cont'd ⬇**

Information	Method of Inspection	Reason for Rejection
	c. the control cables are not pulled taut on full lock and that they are not likely to be trapped or caught on a projection	c. restriction to the movement of the handlebars by cables being pulled taut, becoming trapped or by being caught on a projection
	d. any steering damper fitted is properly secured, effective and is not likely to impede control of the motor bicycle	d. a steering damper which is insecure, ineffective or in such a condition that the steering action is impaired. (see Sub-Section 2.2 information column)
	e. fairings or leg shields do not impede the steering.	e. any fairing or leg shield insecure or so located it is likely to impede the steering.
	3. Examine steering lock stops (if fitted).	3. A loose, missing, maladjusted, or ineffective steering lock stop.
	4. Check for any change in the engine speed with the front wheel on the ground, the engine running and turning the steering from lock to lock.	4. A significant change in engine speed.

2.2 Steering System

Information	Method of Inspection	Reason for Rejection
A modification to steering geometry is not in itself a reason for rejection.	Check that the steering head bearings are adjusted correctly and are in good condition as follows:	
Before failing a machine for excessively stiff steering, check that any adjustable steering damper is released. The tester may at his discretion consider that a road test is necessary to establish whether stability or control is adversely affected. If the damper is released during the test the machine presenter must be informed (Reference Introduction Item 10).	1. Inspect for tightness and roughness by turning the steering from lock to lock a. with the front wheel on the ground (or on a turning plate) to check the lower bearing, and b. with the machine raised so that the front wheel is clear of the ground to check the upper bearing.	1. Steering movement excessively stiff, 'notchy' or rough (see information column). a. with weight on the lower bearing, b. with the wheel raised.
It is important to distinguish between play in the head bearings and that in the forks. *It may be necessary to use the assistant to apply the brake whilst the machine is pushed so that a proper assessment can be made by hand and eye.*	2. Inspect for free play as follows: a. apply the front brake and push the handlebars forward, or b. for lightweight machines, with the aid of an assistant raise the front wheel clear of the ground, apply the front brake, and lift the front of the front wheel. (It may be necessary to support the centre of the machine if it does not have a suitable stand) c. for machines with steering linkage: hold the front wheel firmly between your legs, rock the steering side to side and assess any free play in the linkage.	2. Excessive free play in the head bearings or any steering linkage (see information column).

Information	Method of Inspection	Reason for Rejection
It is important to distinguish between play in the suspension and that in the wheel bearings.	1. Check the condition, alignment and security of the front suspension assembly.	1. A suspension assembly component which is missing, loose, cracked, or excessively bent, misaligned or corroded.
Some smaller machines are not fitted with dampers on the front suspension.	2. Check condition of suspension springs	2. A road spring a. incomplete, cracked or fractured b. worn or corroded so that it's cross sectional area is reduced such that it is seriously weakened; c. repaired by welding.
Some fork arrangements rely on the bracing incorporated in the mudguard fixings to maintain their alignment. A mudguard insecurely fixed to the forks may therefore adversely affect the handling of the machine.		
Light misting causing a thin film of fluid on a suspension damper is not a reason for rejection.	3. Check shock absorbers for oil leaks	3. Oil leakage indicating failure of the seal.
Pitting of a fork stanchion is not a reason for rejection unless damage to damper seals has occurred. It may be necessary to pull back any rubber gaiters to conduct this examination if it is possible without dismantling or damage but they must be correctly refitted.	4. Check for wear in the front suspension assembly.	4. Excessive wear or free play in a front suspension component.
	5. With the front wheel raised check that the wheel and it's associated fixing and locking devices are present and secure and that the wheel bearings are not excessively tight or do not have excessive free play. Spin the wheel and listen for roughness in the bearings.	5. a. a loose wheel spindle or securing nut(s) or locking device missing or insecure b. excessive roughness, tightness or free play in the wheel bearings
Cont'd ⬇	**Cont'd** ⬇	**Cont'd** ⬇

2.3 Front Suspension and Wheel Bearings

2.3 Front Suspension and Wheel Bearings

Information	Method of Inspection	Reason for Rejection
Anti-dive front suspension Some machines are fitted with an anti-dive system which restricts front suspension movement when the brake is applied. In these cases, the front wheel will need to be placed against a solid object when checking the damping. **Light rubbing contact** between a fork leg or damper body and its shroud is acceptable	6. Observe the freedom of movement and the effectiveness of the damping by applying the front brake and depressing the front suspension several times as far as possible. (see information column).	6. a. fouling between fixed and moving parts which affects the movement of the suspension b. excessive stiffness in the suspension movement c. inadequate damping effect.
	7. Check the security of the front mudguard and look for evidence of it having been in contact with either the wheel, the tyre or any fixed part of the machine.	7. An insecure mudguard or one able to *easily* contact the wheel, tyre or any fixed point of the machine.
	8. Check condition of steering and suspension with regard to corrosion, distortion and modifications.	8. Deliberate modification which significantly reduces the original strength, excessive corrosion, severe distortion, a fracture or an inadequate repair of a load bearing member or its supporting structure.

Information	Method of Inspection	Reason for Rejection
Motorcycles need not be fitted with *rear suspension*; some customised machines take advantage of this on the rear suspension, eg 'chopper' or 'lowrider' motorcycles. **It is important to distinguish between** play in the rear suspension bearings and that in the wheel bearings. **Light rubbing contact** between the body and shroud of a shock absorber is acceptable. **Smaller machines** Shock absorbers fitted to the rear of some small machines may have limited damping. **Access** It may be necessary to remove side panels or remove the seat to carry out a full examination (see Introduction Items 1 and 2). **If no centre stand is fitted**, care should be taken when jacking the machine. It may be desirable to use an assistant.	**A. ALL SUSPENSION TYPES** 1. a. Check the condition, security and alignment of the rear suspension components. b. Check condition of suspension springs c. Check shock absorbers for oil leakage due to seal failure 2. With the rear wheel clear of the ground: a. look for play in the suspension bearings or bushes by attempting to move the suspension from side to side and up and down; b. ensure that the wheel, it's fixings and locking devices are present and secure and check the wheel bearings for tightness or play;	1. a rear suspension component which is: a. loose, cracked, excessively bent, misaligned or excessively corroded b. A road spring. (see information column.) (i) incomplete, cracked or fractured; (ii) worn or corroded so that it's cross sectional area is reduced such that it is seriously weakened; (iii) repaired by welding. c. Oil leakage indicating failure of the seal. 2. a. (i) Excessive free play or deterioration in bearing or bush. (see information column). (ii) a seized component. b. a loose wheel spindle or securing nut(s) or locking device missing or insecure.
Cont'd ⬇	**Cont'd** ⬇	**Cont'd** ⬇

2.4 Rear Suspension and Wheel Bearings

Information	Method of Inspection	Reason for Rejection
With mono-shock type suspension some linkage movement may be observed when the suspension is in an abnormal position.	c. spin the wheel and listen for roughness in the bearings	c. excessive tightness or free play in the wheel bearings, excessive roughness in a wheel bearing whilst the wheel is rotating indicating early failure is likely
If twin shock absorbers are fitted the machines presenter should be informed if it appears they are not equally adjusted.	d. Check condition of suspension with regard to corrosion, distortion and modifications.	d. deliberate modification which significantly reduces the original strength, excessive corrosion, severe distortion, a fracture or an inadequate repair of a load bearing member or its supporting structure
	3. With the rear wheel on the ground observe the amount of movement and the effectiveness and security of the shock absorbers by sitting on the machine and depressing the rear suspension several times as far as possible.	3. a. fouling between fixed and moving parts which affects the movement of the rear suspension. (See information column) b. excessive stiffness in the movement of the rear suspension. A shock absorber with inadequate damping effect or insecurely mounted (see information column)

Information	Method of Inspection	Reason for Rejection
	B. MONO-SHOCK TYPE SUSPENSION	
	4. On machines fitted with mono-shock type suspension, check as far as possible the condition of pivot points for wear and security (see information column)	4. Seizure, excessive wear or insecurity at a pivot point.

2.5 Wheel Alignment (Solo Machine)

Information

This check need not be carried out if either the front or rear wheels have already been failed under Section 4.2 for unacceptable buckling, eccentricity or damage.

A clamp may be used if available, provided it does not obstruct the straight edge or cord.

If misalignment is considered excessive, a road test may be conducted at the tester's discretion, to assess the effect on the handling of the motor bicycle (see Introduction Item 10).

Parallel misalignment
Some shaft driven motor bicycles and those motor bicycles which have been adapted for use with a side car may have a certain amount of parallel misalignment.

Method of Inspection

1. Using a wheel clamp or an assistant ensure that the front wheel is held upright and inline with the frame

   a. place a straight edge or cord against the rear tyre parallel to it and as high off the ground as other parts will permit

   b. estimate the gap (if any) between the straight edge or cord at the rear points where it is opposite the front tyre

   c. move the straight edge or cord to the other side of the motor cycle and repeat 1a and 1b above

   d. sight along the front wheel and forks and assess any misalignment.

Reason for Rejection

1. Any misalignment which is sufficient to adversely affect the handling or steering of the motor bicycle.

Examples of alignment positions

Brakes

Section Contents

3.1 Brake Controls

Information	Method of Inspection	Reason for Rejection
Motor bicycles first registered before 1 January 1927, must have a braking system which works on at least one wheel.	1. Check that the motor bicycle is equipped with the appropriate braking system or systems.	1. The motor bicycle does not have the appropriate braking system or systems fitted according to its age.
Motor bicycles registered on or after 1 January 1927, must have an efficient braking system with two means of operation or two braking systems with separate means of operation.	2. Check the condition and security of all controls and mountings.	2. a. An insecure brake control or mounting b. an attachment screw loose or missing c. a fractured control lever or mounting.
Various locations may be used for braking controls. Some motor bicycles have both braking systems operated from the handlebars and some are linked where both the brakes to the wheels can be operated from either control.	3. Operate the brake pedal and lever fully several times and look for	3.
The vehicle presenter should be advised of any defects found on an ABS system.	a. wear at pivots	a. Excessive wear at control lever pivots
	b. reserve travel	b. inadequate reserve travel
	c. the position of the lever or pedal in relation to the foot rest or handlebar	c. a control which is inoperative or so damaged, positioned, bent or shortened that the brake cannot be readily applied
	d. smoothness of operation.	d. a control which cannot be applied and released smoothly.
	Cont'd ⬇	**Cont'd** ⬇

Information	Method of Inspection	Reason for Rejection
	4. In the case of hydraulic systems, fully apply the control twice, first slowly and then rapidly, each time to a point where sustained pressure can be held and check for creep and sponginess.	4. a. a hydraulic system control which creeps under load b. sponginess indicating air in the hydraulic system.
	5. Check components for corrosion, distortion and modifications	5. *deliberate modification which significantly reduces the original strength of any component. Excessive corrosion, severe distortion, a fracture or an inadequate repair to a component.*

3.2 Brake Systems

Information	Method of Inspection	Reason for Rejection
Some braking systems have levers which are designed to operate over-centre	**A. MECHANICAL BRAKE COMPONENTS**	
Check for any movement at the bolts securing the back plate reaction brackets or calipers by rocking the machine backwards and forward with the brake applied.	1. Examine all the mechanical components of the brakes which can be seen without dismantling, looking particularly for:	1. Serious reduction in strength of any component due to excessive wear, cracking or damage (eg a brake rod reduced in diameter by more than 1/3rd of original dimension)
Where there is doubt about the effect of an observed defect, the tester may at his discretion carry out a road test. (See Introduction item 10)	a. badly chafed rods or levers	a. excessive chafing to rods or levers
Fully floating brake discs *are designed to have some movement. Care must be taken to not unnecessarily fail these items for security.*	b. corroded, frayed or knotted cables, or crushed outer casings	b. a knotted, excessively corroded or badly frayed cable or a significantly damaged outer casing
It may be necessary to use an assistant to operate the brake/s to ascertain the condition and adjustment of the mechanical components.	c. corroded or damaged rods, levers or linkages	c. excessive corrosion or damage to rods, levers or linkages
	d. worn clevis joints	d. an excessively worn clevis joint
	e. absence or insecurity of locking devices	e. the absence or insecurity of locking devices (eg lock nuts, split pins etc)
	f. the thickness of brake linings or pads	f. (i) Brake linings or pads, (other than sintered pads) less than 1.5mm thick at any point (ii) Sintered brake pads less than 1.0mm thick at any point
	g. insecurity or cracking of brake drums or discs	g. An insecure or cracked brake drum or disc or securing bolts loose or missing
	Cont'd ⬇	**Cont'd ⬇**

Information	Method of Inspection	Reason for Rejection
	h. any restriction to the free movement of the mechanism	h. any restriction to the free movement of the system likely to impede its operation
	i. abnormal movement of levers indicating maladjustment or excessive wear	i. abnormal movement of levers indicating maladjustment or excessive wear. (see information column)
	j. insecurity of brake back plates, reaction brackets or calipers;	j. an insecure brake back plate, reaction bracket or caliper. Securing bolts loose or missing. (see information column)
	k. contamination of friction surfaces by oil or grease	k. contamination of friction surfaces by oil or grease
	l. brake disc scoring, pitting or wear;	l. an excessively scored, excessively pitted or excessively worn brake disc
	m. brake disc run-out.	m. excessive run out or distortion of a brake disc.

3.3 Brake Performance

Information	Method of Inspection	Reason for Rejection
Serious under inflation of tyres is not a reason for failure however a tester may decide not to conduct a brake test if tyre damage is likely. **When using a roller brake tester** the wheel not on the rollers must be braked and chocked against the reaction force. This is especially important for lightweight machines and those with small wheels. **In the case of a linked brake system,** it may not be possible to apply the brake of the wheel not being tested prior to starting the test. **If a roller brake test is repeated,** the chock should be removed, the machine resettled in the rollers and the chock replaced. **The retardation force of a side car brake** is not to be included unless it is operated by one of the motorcycle brake controls.	A. ROLLER BRAKE TEST With the tester seated on the machine locate the front wheel in the rollers of the brake tester. Ensure that the machine is lined up in the straight ahead position and settled in the rollers. (see information column) Select the correct direction of operation so that the wheels rotate in the forward direction. 1. Start the brake rollers and allow the front wheel to stabilise. With the rear brake fully applied (see information column) gradually apply the front brake until maximum effort is achieved or the wheel locks and slips on the rollers. Note the reading at which the maximum braking effort is achieved and release the brake. Start the rollers, gradually increase the front brake effort to about half the maximum reading and observe the way it builds up. Hold steady and check for fluctuations. Release the brake and observe the way in which the braking effort reduces.	1. a. a sticking or binding brake. (see information column) b. severe grab or judder. (see information column) c. a braking effort that does not rise or fall in proportion to the lever or pedal force applied d. excessive fluctuation of brake effort with steady application of the brake. (see information column).
Cont'd ⬇	**Cont'd** ⬇	**Cont'd** ⬇

Information	Method of Inspection	Reason for Rejection
The efficiency of each system operated by a single brake control is the ratio of the total retarding force generated by that system divided by the weight of the machine and rider $\text{Efficiency \%} = \frac{\text{Total retarding force for one system}}{\text{Weight of machine plus rider (tester)}} \times 100$ **Most machines have two controls,** one operating the front wheel brake and the other the rear wheel brake. The efficiency for front and rear wheels can then be calculated as above, (or checked by a gradient test). **Where a linked or dual system** is operated by one control, the retarding force used in the efficiency calculation is the total from both wheels **when operated by that control only**. In this case, the other control will probably operate on one wheel. The reasons for failure 1 and 2 apply whether single or dual systems are fitted. **Motorcycles first registered on or after 1 January 1927 require two means of operating the brakes, one achieving a minimum efficiency of 30% and the other a minimum of 25%. Machines before this date are only required to have one means of operating the brakes, which shall have an efficiency of at least 30%.** **Cont'd ⬇**	Move the machine forward until the rear wheel is located in the rollers. Repeat procedures 3.3A1 and 3.3A2. Check the side car wheel brake if applicable (see information column) as in procedures 3.3A1 and 3.3A2. 2. Record the appropriate results of the brake test via the VTS Device, which will calculate the results. Where the VTS Device is unserviceable see the Introduction section paragraph 3.	2. a. no brake control achieves an efficiency of 30% b. the less effective brake control does not achieve an efficiency of 25% (Note: this RFR is only to be applied if 1 control achieves 30% and the other control fails to achieve 25%). c. Neither brake control achieves an efficiency of 25%

3.3 Brake Performance

Information	Method of Inspection	Reason for Rejection
The tester may know that a higher brake efficiency is normally obtainable for the model tested, although the machine has passed the performance test. In this case the owner should be advised that the braking system appears to require adjustment or repair. **Where there is doubt about the effect** of a defect noted during the brake test, the tester may at their discretion, carry out a road test. (see Introduction item 10). **The assessment of bind, grab and judder** in sub-sections 3.3C and 3.3D can be performed at any appropriate point during the test. **If a motor bicycle wheel locks** on the operation of a brake control, the efficiency requirement of 30% is considered to have been met for that control. This does not apply to a braked wheel on a sidecar.		

Information	Method of Inspection	Reason for Rejection
As 3.3A	**B. PLATE BRAKE TEST** To calculate the brake efficiency it is necessary to determine the combined weight of the motorcycle and the tester while seated in the normal riding position. 1. At a steady speed of approximately 4 mph drive the machine onto the plate tester. As soon as the front wheel is on the plate high friction braking surface gradually apply the front brake until maximum effort is achieved or the wheel locks and skids. Note the way in which the brake effort increases and the maximum value achieved. Repeat procedure 1. above for the motorcycle rear wheel and in appropriate cases (see information column) the sidecar wheel. Calculate the efficiency of each braking system (see information column). **Cont'd ⬇**	1. a. a sticking or binding brake (see information column). b. severe grab or judder (see information column). **Cont'd ⬇**

Information	Method of Inspection	Reason for Rejection
	Repeat procedures 1. and 2. above a second time to confirm any reasons for failure.	
	2. Record the appropriate results of the brake test via the VTS Device, which will calculate the results. Where the VTS Device is unserviceable see the Introduction section paragraph 3.	2. a. no brake control achieves an efficiency of 30%. b. The less effective brake control does not achieve an efficiency of 25% (Note: this RFR is only to be applied if 1 control achieves 30% and the other control fails to achieve 25%). c. Neither brake control achieves an efficiency of 25%

Information	Method of Inspection	Reason for Rejection
As 3.3A	**C. THE FLOOR TEST** The apparatus required for this test comprises a spring balance and system of pulleys so arranged that the effort required to pull a machine and rider forward against the brakes may be measured. The spring balance may be used to determine the weight of the motorcycle and rider. With the machine held upright and in a straight ahead position, attach the cable from the spring balance to the front of the motorcycle using a strap around the front forks or the headstock. The tester should sit astride the machine operating each brake in turn and note the readings while the assistant operates the spring balance system. 1. With each brake applied in turn record the effort required to move the motorcycle and rider forward. Record the appropriate results of the brake test via the VTS Device, which will calculate the results. Where the VTS Device is unserviceable see the Introduction section paragraph 3.	1. a. no brake control achieves an efficiency of 30%. b. the less effective brake control does not achieve an efficiency of 25% (Note: this RFR is only to be applied if 1 control achieves 30% and the other control fails to achieve 25%). c. neither brake control achieves an efficiency of 25%. d. a sticking or binding brake (see information column). e. severe grab or judder (see information column).

3.3 Brake Performance

Information	Method of Inspection	Reason for Rejection
As 3.3A and To check the efficiency of 25% one end of the platform must be raised to a height equivalent to 25% of the platform length (ie 700mm for a 2.8m platform). Similarly to check a 30% efficiency one end must be raised to a height equivalent to 30% of the platform length (ie 840mm for a 2.8m platform). Each brake must be tested separately and the tester must not exert any other retarding force.	**D. THE GRADIENT TEST** The equipment required for this test consists of a platform one end of which can be raised. Raise the end of the platform by the appropriate amount (see information column). 1. Sit astride the 'downhill' facing machine. Apply each brake in turn and confirm that the machine can be held stationary. Record the appropriate results of the brake test via the VTS Device. Where the VTS Device is unserviceable see the Introduction section paragraph 3.	1. a. no brake control achieves an efficiency of 30%. b. the less effective brake control does not achieve an efficiency of 25% (Note: this RFR is only to be applied if 1 control achieves 30% and the other control fails to achieve 25%). c. neither brake control achieves an efficiency of 25%. d. a sticking or binding brake (see information column). e. severe grab or judder (see information column).

Information	Method of Inspection	Reason for Rejection
As 3.3A and **Conducting decelerometer tests** On a small number of machines it may not be possible to carry out a Roller Brake Test. In these circumstances a decelerometer test may be carried out. It is important that the tester has confirmed that the machine is in a safe condition to carry out a decelerometer test. If it is not considered safe the tester should refuse to complete the test (Introduction item 2.i.) During the decelerometer test, each application of the brake should be gradual and the tester should endeavour to achieve only the required percentage to pass, rather than the best possible result. **Roads used for decelerometer brake testing** Decelerometer testing is potentially hazardous and it is therefore important that the road used • is reasonably flat and level • has a good surface • is suitable for brake tests with regard to the weather conditions, and • has a minimum of traffic The road used for tests should be varied wherever possible to avoid cause for complaint from residents.	**E. DECELEROMETER TEST** 1. If the vehicle is of a type which cannot be tested on a roller brake tester ▪ set up the decelerometer on the machine in accordance with the equipment manufacturer's instructions ▪ drive the vehicle on a level road at a steady speed of approximately 20mph (32kph) and note the brake efficiency recorded when applying only one brake control ▪ repeat the test applying only the other brake control ▪ while the machine is decelerating under the action of each brake, note the progression of application and any grab or judder ▪ record the appropriate results of the brake tests via the VTS Device. Where the VTS Device is unserviceable see the Introduction section paragraph 3.	1. a. no brake control achieves an efficiency of 30% b. the less effective brake control does not achieve an efficiency of 25% (Note: this RFR is only to be applied if 1 control achieves 30% and the other control fails to achieve 25%) c. neither brake control achieves an efficiency of 25% d. a sticking or binding brake e. severe grab or judder

Tyres and Wheels

Section Contents

4.1 Tyres

Information	Method of Inspection	Reason for Rejection
Spare tyres are not included in the inspection. However, if a defect is seen, the vehicle presenter should be notified.	1. Examine the tyres for type and suitability. (see information column)	1. An unsuitable tyre. (see information column)
The owner should be advised of loose or missing security bolts.	2. With the wheels raised clear of the ground, rotate each slowly and examine each tyre for:	2.
Serious under-inflation of tyres is not a reason for failure. However, the tester may decide not to conduct a brake test if tyre damage is likely, or a headlamp test if alignment could be affected. Advise the owner.	a. cuts, lumps, bulges, tears or exposure of the ply or cord, separation of the tread	a. (i) A tyre has a cut longer than 25mm or 10% of the section width of the tyre, whichever is the greatest, and deep enough to reach the ply or cord. (ii) A tyre with a lump, bulge or tear caused by separation or partial failure of its structure, including lifting of the tread. (see information column). (iii) Any ply or cord exposed
A tyre repair may be drawn to the attention of the vehicle presenter.		
Examples of unsuitable tyres: a. side car tyres or car tyres on a solo machine (note side car outfits may be fitted with 'solo' type tyres on any wheel); b. Motocross or similar tyres, i.e. tyres where the space between tread blocks is substantially greater than the size of the blocks themselves; *which do not have MST (multi service tyre) with an 'E' in a circle or an 'e' in a rectangle moulded into or on to the tyre wall*	b. incorrect seating in the wheel rim	b. a tyre not correctly seated in the wheel rim
	c. valve condition and alignment	c. a seriously damaged or misaligned valve stem which could cause sudden deflation of the tyre
	d. recutting of the tread	d. a tyre with a recut tread
	e. fitment in the correct direction of rotation	e. A tyre not fitted in accordance with the direction of rotation marked on the sidewall *(see information column).*
Cont'd ⬇	**Cont'd ⬇**	**Cont'd ⬇**

Information	Method of Inspection	Reason for Rejection
c. tyres designated by their manufacture as unsuitable for road use e.g. racing tyres or those marked 'NHS' or 'NOT FOR HIGHWAY USE' on the sidewall.	3. Check that there is a visible tread pattern around the complete circumference of the tyre. Ensure that the tread depth meets the requirements using a depth gauge.	3. (i) the tread pattern is not clearly visible over the whole tread area. (see information column)
d. a tyre specifically designed for front wheel use fitted to the rear wheel;		(ii) The depth of tread is not at least 1 mm throughout a continuous circumferential band measuring at least three quarters of the breadth of the tread. (see information column).
e. a bias belted tyre fitted to the front with a cross-ply tyre fitted to the rearwheel		
f. a radial tyre fitted to the front and a cross ply or bias belted tyre fitted to the rear wheel	4. Check for signs of fouling of tyres on other components.	4. A tyre fouling another component.
On radial tyres care should be taken to distinguish between normal manufacturing undulations in the carcass and lumps or bulges caused by structural deterioration.		
Where the engine capacity is not greater than 50cc, tread depth may be less than 1mm, if the tread pattern is clearly visible around the entire circumference and across the whole breadth of the tread.		
Directional tyres these tyres must be fitted in accordance with the instructions on the sidewall. The direction of forward rotation is indicated by an arrow, words or both.		
Cont'd ⬇		

Information

Tyres which do not meet the three-quarters width rule when new must have a minimum of 1mm tread over the whole of the original tread pattern.

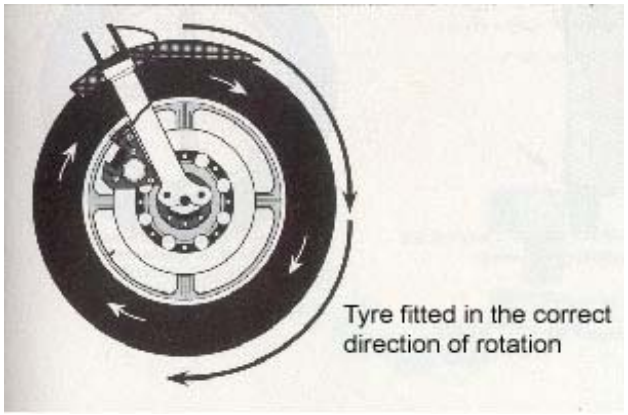
'Breadth of tread' means that part of the tread which can contact the road in normal use, including cornering.

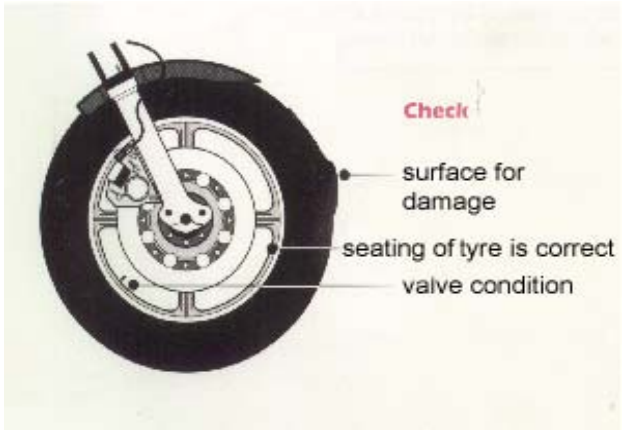
'Tread pattern' excludes tie-bars, tread wear indicators, features designed to wear out substantially before the rest of the pattern and other minor features. *Original tread pattern must be taken into account when assessing tread wear.*

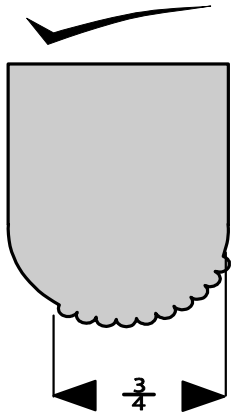
The position of tread wear indicators are normally marked 'TWI' on the sidewall of the tyre in line with the tread wear indicator.

Information

A Metzeler 100/80 - 17 52s ME22 *tyre is suitable for fitment to the rear wheel of an Aprilia AF 50 motorcycle provided it is fitted in the reverse to the direction of rotation indicated on the tyre wall.*

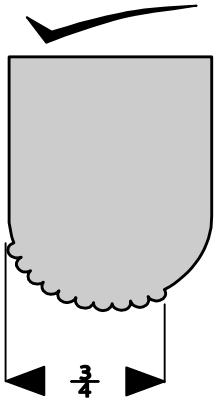






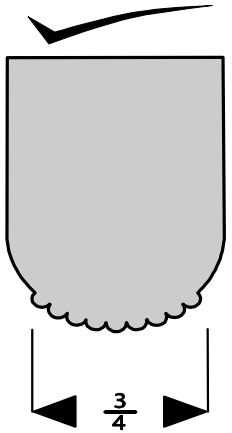
Tread Pattern

A continuous band at least 3/4 of the breadth of the tread and ALL THE WAY around the tyre



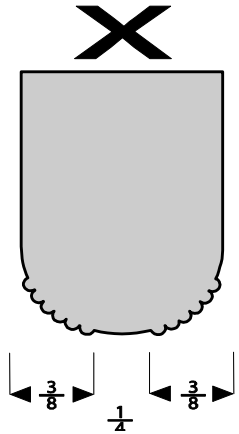
Tread Pattern

A continuous band at least 3/4 of the breadth of the tread and ALL THE WAY around the tyre



Tread Pattern

A continuous band at least 3/4 of the breadth of the tread and ALL THE WAY around the tyre.



Tread Pattern

BALD

NOT a continuous width 3/4 of the breadth of the tread

4.2 Wheels

Information	Method of Inspection	Reason for Rejection
Spare wheels are not included in the inspection, but if a defect is seen the owner should be advised. **In considering whether the original strength of a wheel** has been significantly reduced the tester must decide if the wheel is rendered unsafe. **The maximum allowable rim distortion limits are as follows** Lateral (ie run out or buckling) a. For steel rims: 4mm b. For aluminium alloy rims: 2mm (cast or fabricated) Eccentricity: a. For all types of rim: 3mm **Measurements should be taken from a machined surface** in the case of cast aluminium alloy rims. **This inspection also applies** to the wheel attached to the side car. **Particular attention should be paid when assessing stainless steel spokes** for cracks	1. Examine the condition of the wheels. (see information column) 2. Spin the wheels and look for buckling and eccentricity. 3. Check the security of the wheels.	1. a. deliberate modification, inadequate repair, excessive corrosion, damage or fracture of a road wheel which significantly reduces the original strength (see information column) b. a spoke which is missing, cracked, excessively loose, bent or corroded c. loose or missing rivets or bolts in built-up wheels 2. An excessively distorted or eccentric bead rim. (see information column). 3. a. loose or missing wheel nuts, studs or bolts b. an insecure wheel.

Side cars

Section Contents

5.1 Security

	Method of Inspection	Reason for Rejection
	1. Check the attachment of the side car to the motorcycle and ensure that all fixing devices are present and secure.	1. Any attachment between the side car and motorcycle: a. missing b. fractured or insecure c. seriously weakened by corrosion, excessive wear or due to an inadequate repair d. with excessive play in any attachment pins or bushes
	2. For 'leanable' side cars check the operation of the attachment pivot joints.	2. Excessively tight, worn or deteriorated pivot points or bushes on a 'leanable' side car.

Information	Method of Inspection	Reason for Rejection
	1. Using body weight, depress the suspension as far as possible and check for freedom of movement and security of the suspension unit.	1. Excessive stiffness of movement such as might be caused by partial seizure of the suspension units.
	2. Check for evidence of fouling between fixed and moving parts.	2. Fouling between fixed and moving parts which affects the movement of the suspension.
	3. With the side car wheel raised check that the wheel is secure and that the wheel bearings are not excessively tight or do not have excessive free play. Spin the wheel and listen for roughness in the bearings.	3. a. an insecure suspension unit. b. a loose wheel spindle or securing nuts or locking device loose or missing. c. excessive tightness or free play in the wheel bearings. d. excessive roughness in a wheel bearing whilst the wheel is rotating indicating early failure likely.
	4. Check hydraulic shock absorbers (if fitted) for oil leakage due to seal failure	4. Oil leakage indicating failure of the seal.

5.3 Wheel Alignment

Information	Method of Inspection	Reason for Rejection
The wheel alignment of the motor bicycle part of the combination is dealt with under section 2.5 of this manual. **Vertical Alignment.** It is normal for many side car to motor bicycle combinations to be set up in a manner which is not absolutely vertically aligned. **If the misalignment is considered excessive**, a road test may be conducted at the tester's discretion, to assess the effect on the handling of the combination. A tester may ride with the owner of the combination to make this assessment. (see Introduction Item 10).	1. With the steering in the straight ahead position, place a straight edge or cord against the outer walls of the rear tyre. Place a second straight-edge or cord against the outer walls of the side car tyre and measure between the straight-edges or cord at the front and rear of the combination. Assess any toe-in or toe-out of motorcycle and side car wheels. 2. Check visually the vertical alignment of the motorcycle and side car.	1. a. Toe-out of the side car wheel relative to the motorcycle b. Excessive toe-in of the side car wheel relative to the motorcycle. 2. Excessive vertical misalignment between the motorcycle and the side car wheel which adversely affects the handling of the combination (see information column).

Body and Structure

Section Contents

6.1 Condition of Structure

Information	Method of Inspection	Reason for Rejection
Particular attention should be paid to all highly stressed parts of the motor bicycle and side car, if fitted, such as frame joints and connections, reaction brackets and attachment points of shields and fairings. **It is particularly important to check for corrosion** of box sections and fabricated parts (see Appendix B). **It may be necessary to remove or raise panels** to permit the further examination of the structure (see Introduction items 1 and 2). **Structural members and components** includes engine mountings, where the engine is a stressed member of the structure	1. Examine the structure of the motor bicycle and side car (if fitted) for fractures, damage, distortion, corrosion and security of structural members or components.	1. a. Any fracture, damage, distortion, or corrosion in the motor bicycle or side car structure to the extent that control of the machine is likely to be adversely affected b. any deliberate modification which significantly reduces the original strength c. any insecurity of structural members or components to the extent that control of the machine is likely to be adversely affected.

Information	Method of Inspection	Reason for Rejection
Pillion foot rests are not required on motor bicycles that only have a single seat. In addition some motor bicycles used on or after 14 June 1993, which are intended to carry a passenger may not be fitted with footrests but with hand holds attached to the motor bicycles frame adjacent to, or part of the seat. Refer to manufacturers information eg owners handbook. **When rejecting transmission** and associated components for wear, defects, security or adjustment, the severity of the defect should be where early failure is likely. **A throttle friction device** will not constitute a reason for rejection unless it adversely affects the throttle operation.	1. Check all other parts of the machine for defects which might make it dangerous to ride on the road.	1. a. (i) A missing riders seat or any seat insecure (ii) a missing or insecure footrest b. a defect which is likely to impede the rotation of the rear wheel c. a drive chain/belt guard, insecure or fouling another component d. a drive chain/belt excessively loose, tight, or fouling another component e. a drive chain, sprocket or sprocket carrier worn to excess f. a malfunction of the throttle control or linkage that does not allow the throttle to operate as intended g. a clutch lever so damaged, positioned, bent or shortened that it cannot be readily operated h. any locking device not correctly fitted e.g. the horseshoe device on a drive chain fitted with the open end in the direction of rotation.

6.3 Registration Plates and Vehicle Identification Number

Information	Method of Inspection	Reason for Rejection
Registration Plates **This inspection only applies to rear registration plates** **Unregistered motor bicycles** Unregistered motor bicycles need not be fitted with a registration plate. **Foreign, diplomatic and military vehicles** This inspection does not apply to foreign registered, diplomatic or military vehicles. **Motor bicycles manufactured before 1 January 1973** may have registration plates displaying white, grey or silver characters on a black background.	1. Check that there is a registration plate fitted at the rear of the motor bicycle or side car and check it for security and condition.	1. The registration plate a. missing or incorrect b. so insecure that it is likely to fall off c. letter or figure missing or incomplete d. faded, dirty, delaminated, deteriorated or obscured, so that it is likely to be misread or is not easily legible by a person standing approximately 15 meters to the rear of the machine e. background overprinted or shadowed with text e.g. vehicle manufacturer name
	2. On machines first registered on or after 1 January 1973, check that the registration plate a. has black characters on a yellow background b. is mounted vertically, or as close to vertical as is reasonably practical	2. The registration plate a. does not have black characters on a yellow background b. is not fixed vertically, or as close to vertical as is reasonably practical
	3. On machines first registered on or after 1 September 2001, check that the registration plate does not display a honeycomb or similar effect background.	3. A registration plate obviously displaying a honeycomb or similar effect background.
Cont'd ⬇	**Cont'd ⬇**	**Cont'd ⬇**

	Method of Inspection	Reason for Rejection
	4. Refer to pages 4 and 5 and check visually that the letters and figures are correctly formed, spaced, and are not obviously likely to be misread due to, for example, badly positioned or uncovered retaining bolts etc.	4. A registration plate with a. characters which are obviously not the correct height, character width, stroke width, not of equal width along their entire length or incorrectly spaced b. a character not correctly formed, sloping, or likely to be misread c. any feature that has the effect of changing the appearance or legibility of any of the characters, so that the true identity of the vehicle is less easily established d. characters formed using a font which is not substantially similar to the prescribed font e. characters formed using broken or multiple strokes f. characters laid out in an incorrect format g. a margin obviously less than the minimum requirement h. a non-reflective border obviously wider than permitted or positioned too close to the characters (see page 5).
	Cont'd ⬇	**Cont'd ⬇**

6.3 Registration Plates and Vehicle Identification Number

Information	Method of Inspection	Reason for Rejection
Vehicle Identification Number A Vehicle Identification Number is required on all machines first used on or after 1 August 1999, except those which are amateur built. If a VIN cannot be found the vehicle presenter should be advised of the likely location of the VIN and asked to thoroughly search for the number with the aid of the registration certificate. If following this action the VIN cannot be found the vehicle presenter should contact the nearest Vehicle Registration Office. If more than one different VIN is found, the vehicle presenter should contact the nearest Vehicle Registration Office.	5. Check that the machine is permanently displaying a legible Vehicle Identification Number. This can be either • on a plate secured to the frame of the machine, or • stamped or etched on the frame of the machine.	5. a. a Vehicle Identification Number not permanently displayed or not legible, or b. more than one different Vehicle Identification Number displayed. **Note** It is acceptable for a vehicle that has been manufactured as part of a multistage build, (a modification taken place to a vehicle at the manufacture stage before sold as new) to show more than one VIN. The second and subsequent stage VINs will also be a 17 digit VIN and will be displayed on an additional plate. When a multistage built vehicle is presented for test the last stage VIN must be used for MOT documentation.

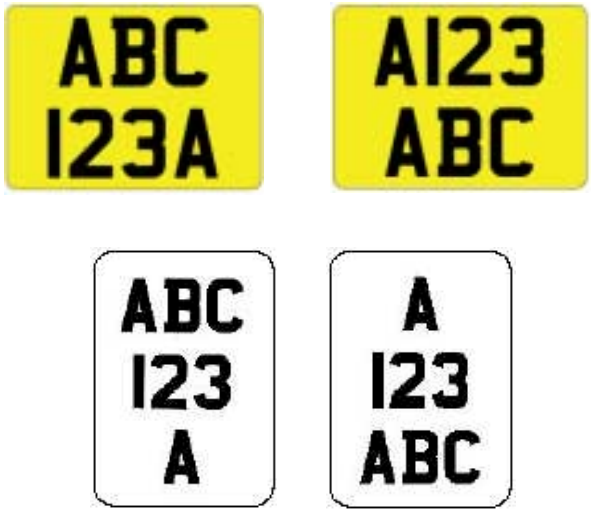
Prescribed Font

Note: 3D and some other style characters are permissible, provided the font style is adhered to.

Format

New style (from 1 September 2001) registrations must be set out in the following format

Vehicles registered before 1 September 2001, can be set out in either a two or three line format, as illustrated below



Single line format registration plates are not acceptable.

Cherished Plates

Older style registrations must meet the registration plate requirements according to the date of first registration of the machine, with a format style as illustrated below e.g. letters on one line, figures on another

Cont'd ⬇

Cont'd ⬇

6.3 Registration Plates – Additional Information

Northern Ireland Registration Plates
These are not age related and usually consist of three letters followed by four numbers. They must conform to the same standards as other UK registration plates, depending on the date of first registration. This includes the optional display of the distinguishing sign of the UK.

Borders
Registration plates can optionally display a non-reflective border with a maximum width of 6mm and not closer than 5mm to the characters.

Size of Characters
Testers are not required to physically measure the characters or their spacing and the following information is provided for guidance only. Registration plates should only be rejected for character dimensions or spacing if they are clearly incorrect.

Relevant Dimension	Size
Character height	64mm
Character width (except for the figure 1 or letter I)	44mm
Stroke width	10mm
Space between two characters in group	10mm
Vertical space between groups	13mm
Horizontal space between groups	30mm
Margins (minimum)	11mm

Note: The space permitted between a "1" or an "I" and another character is proportionately greater than the above dimensions.

Fuel and Exhaust Systems

Section Contents

7.1 Exhaust System

Information	Method of Inspection	Reason for Rejection
A durable repair to the exhaust system that effectively prevents leaks is acceptable providing the system is structurally sound. .	1. Examine the condition of the exhaust system including the silencer(s) and mountings for security, deterioration and completeness.	1. a. Any part of the exhaust system missing or excessively deteriorated b. a leak in the exhaust system which causes excessive noise to be emitted c. an exhaust system mounting missing or one which is in such a condition that it does not fully support the exhaust system.
	2. With the engine running assess the effectiveness of the silencer(s) in reducing as far as is reasonable the noise emitted.	2. A silencer that is in such a condition or is of such a type that the noise emitted is clearly in excess of that which would be produced by a similar machine fitted with a standard silencer in average condition.
	3. Check the silencer(s) on all machines for any unacceptable markings.	3. A silencer marked ‘NOT FOR ROAD USE’, ‘TRACK USE ONLY’ or similar words.

Information	Method of Inspection	Reason for Rejection
Running the engine This inspection is to be carried out both with and without the engine running. **Locking fuel caps** If access cannot be gained to the fuel cap because it is locked and the key is not readily available or because it cannot be opened for some other reason see heading 2 of the introduction to this manual.	1. Check the following for leaks or insecurity: a. fuel tank(s) b. all visible fuel hoses, pipes and unions c. all visible fuel system components 2. Check fuel tank cap for presence, positive fit and condition of sealing washer and flange.	1. a. fuel leaking b. a fuel system component insecure 2. A fuel tank cap a. missing b. does not fasten securely • by a positive means, or • such that pressure is not maintained on the sealing arrangement c. sealing washer torn, deteriorated or missing, or a mounting flange/sealing method defective such that the leakage of fuel is possible

Amendment Number	Date	Signature and Position	Amendment Number	Date	Signature and Position
1			**19**		
2			**20**		
3			**21**		
4			**22**		
5			**23**		
6			**24**		
7			**25**		
8			**26**		
9			**27**		
10			**28**		
11			**29**		
12			**30**		
13			**31**		
14			**32**		
15			**33**		
16			**34**		
17			**35**		
18			**36**		

Appendix A - Amendment Record

Amendment Number	Date	Signature and Position	Amendment Number	Date	Signature and Position
37			**55**		
38			**56**		
39			**57**		
40			**58**		
41			**59**		
42			**60**		
43			**61**		
44			**62**		
45			**63**		
46			**64**		
47			**65**		
48			**66**		
49			**67**		
50			**68**		
51			**69**		
52			**70**		
53			**71**		
54			**72**		

Assessment of Corrosion

The effect of corrosion on the safety of a motorcycle is a difficult matter to resolve since it depends not only on the extent of the corrosion but also on the function of the section in which it has occurred. A small amount of corrosion which substantially weakens an important component or part of the structure would render the machine unsafe, whilst significant corrosion of a less important part may be acceptable.

Where corrosion is present the tester must make an assessment of its severity and identify whether it is in a load bearing member or a highly stressed part such as a frame or suspension component, reaction bracket etc. The extent of the corrosion should be determined by pressing hard with finger and thumb. If necessary careful scraping and light tapping of the affected areas with the Corrosion Assessment Tool is permitted. Sharp instruments or heavy blows must not be used. Excessively corroded metal or metal treated with filler (which may camouflage corrosion) emits a duller sound than uncorroded metal.

Having determined the extent of the corrosion the tester must use his experience in judging whether the degree or position of the corrosion has significantly affected the strength of the part having regard to the amount of sound metal remaining.

A further criterion which may be applied in judging a part which is excessively corroded is whether it is likely to make the machine dangerous to use on the road under any condition of use including fast cornering, emergency braking etc. If the tester considers the machine would be safe to use the component should not be regarded as defective: however the tester should advise the owner of the presence and location of this corrosion. On the other hand if the strength of certain parts is very seriously reduced by corrosion the tester may refuse to carry out a brake test.
(Ref: Introduction: Item 2).

Where a corroded part has been repaired it is essential that this has been carried out using suitable materials and techniques so that it is virtually as strong as the original part. Repairs to load bearing members or sections by pop riveting or glass fibre are not acceptable, but in some cases these methods may be used for repairs to non load bearing parts. Welded repairs to highly stressed components such as suspension arms etc are not normally acceptable. If in doubt consult the vehicle or component manufacturer. Brazing, soldering, glass fibre and body filler are bonding processes; they are not regarded as strong enough for repairs to load bearing members although they are normally adequate for other repair work.

Brazing, bonding and riveting are only acceptable where used by the vehicle manufacturer and the standard of any such repair must be comparable to the original.

It is sometimes difficult to distinguish between welding and brazing after the repair has been covered in paint or underseal. However, brazing may be detected by the smooth fillet of filler or a gold colouration at the edge of a joint. Glass fibre, body filler, aluminium etc may often be detected by a difference in appearance, in sound when tapped, or by the use of a magnet.