Motor Bicycle Inspection Manual

01 December 2015

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TERMS AND CONDITIONS

Form Number: DVT 956
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The purpose of this Manual is to set out the testing procedures and standards for examiners carrying out the statutory inspection of motor bicycles, scooters, mopeds and motor bicycle combinations.

The primary purpose of the manual is to support DVA staff in conducting the annual inspections of vehicles.

The manual is not a legal interpretation of Regulations, therefore is to be taken as guidance only, and does not cover all the requirements of all machines inspected. In addition to the Vehicle Inspection Manuals, Vehicle Examiners may consult appropriate legislation before issuing or refusing a Vehicle Test Certificate. Legislation consulted may include:-

- Motor Vehicle Testing Regulations (Northern Ireland) 2003
- Motor Vehicles (Construction and Use) Regulations (Northern Ireland) 1999
- Road Vehicles Lighting Regulations (Northern Ireland) 2000
- The Road Vehicles (Display of Registration Marks) Regulations 2001

All the above legislation is available from 'The Stationary Office', 16 Arthur Street, Belfast BT1 4GD.

Dates

The 'first used date' in this manual is either: -

Its date of manufacture, if the machines was originally used without being registered (e.g. an imported machine, an ex-HM Forces machine etc),

Or

In any other case, the earlier of either

- Its date of first registration, or
- The date six months after it was manufactured

Dismantling

Stripping or dismantling is not permitted 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. Where panels and covers must be removed, the machine presenter should do this and be requested to check the security of these before leaving the premises.

Disabled Riders Controls

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

If the disabled rider's control or fitments are **additional** to and do not adversely affect the normal motor bicycle equipment they are **not** testable items. Any defect to additional control or fitment found during the inspection should be reported to the machine presenter.

Other Defects

If, during an inspection, a defect is seen in a component, which is not a testable item, and the defect is likely, in the opinion of the examiner, when the machine is driven on the road, to cause

- Danger to any person, or
- Damage to the machine, or to any other property

A notification of refusal must be issued.

Determining the Number of Wheels

Other than for the inspection of tyres, any two wheels of a motor bicycle 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.

Definitions

Moped - A two wheeled vehicle fitted with an engine having a cylinder capacity not exceeding 50 cm^3 if of the internal combustion type and a maximum design speed of not more than 45 km/h,

Motor Bicycle – A two-wheel vehicle with or without a sidecar, fitted with an engine having a cylinder capacity of more than 50 cm^3 if of the internal combustion type and/or having a maximum design speed of more than 45 km/h,

Note: Some motor bicycles have plates giving details of engine cylinder capacity and design speed.

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 machine, an examiner 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 machine;

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

Insecure

The term "insecure" will be used to describe a defective condition. This term should be taken by vehicle examiners to mean either: -

a. That a component on the machine has relative movement (looseness) either at its fixings or in relation to an associated component where there should be none, or
b. That a component is not safely or completely attached either at its fixing or to an associated component.

All components on a machine need to be safely attached while it is in use on the road, however, how safe a component needs to be attached depends on its function.

Areas of the motor bicycle which are considered critical in terms of the ability of the machine to endanger the ride, any passengers and other users of the road, can tolerate fewer fixings which are broken, loose, missing or otherwise ineffective than those in a less critical part of the motor bicycle.

A component secured by a non-standard temporary means should be judged as if the temporary fixing was not fitted.

Minimum Standards

It must be emphasised that these are minimum acceptable standards, which do not necessarily allow for further deterioration when the machine is in service.

Acceptance for Test

Conditions for accepting vehicles for test include: -

- The machine frame number or identification mark must be permanently fixed in an accessible, easy to read, position.

- The machine must be clean enough to allow the component parts to be inspected.

- The machine must not present a health & safety hazard to inspect.

Limits of Wear and Tolerance

Because it is not practicable to lay down limits of wear or tolerance for components of all types of machines, an examiner is expected to use his/her experience and judgement in assessing the condition of a component, the following points should be considered when making an assessment.

- Whether the component has reached the stage where it is obviously likely to affect adversely the roadworthiness of the machines.

- Whether the component has clearly reached the stage where repair, replacement or adjustment is necessary to ensure the road safety of the machine.

- Whether the condition of the component appears to break the law.

Cracked

A flaw or split in a component.

Damage

When assessing the extent of damage it is important to consider whether the performance of the component/ system will be impaired or if the component/system is likely to fail prematurely.

Damage fulfilling either of these criteria is not acceptable and will be a reason for failure.

Deteriorated

This will be a reason for failure if the component or system is weakened to such an extent that it can no longer adequately perform its function.

Excessive Travel

An abnormal amount of movement, which clearly indicates that a component has reached a stage when it requires remedial action to enable it to either: -

a. Operate effectively as designed, or
b. Prevent it from reaching the end of its permitted travel, or
c. Prevent it from exceeding manufacturers known maximum permitted limits.

Excessive Wear

A component, which is worn to such an extent, that it is either: -

a. Likely to fail, or

b. Clearly not functioning effectively as designed, or

c. Visibly worn beyond manufacturers known permitted limits, or

d. Likely to affect the operation or condition of another safety related component.

Fouling

This will only be a Reason for Failure if contact of two parts is likely to cause damage to, or restrict the movement of, a component.

Fractured/broken

Gap, opening or rupture where separation has taken place.

Obligatory

Required to be fitted by law.

Health & Safety

Examiners are reminded that they are obliged to adhere to all relevant Health and Safety Legislation while carrying out an inspection.

Where the engine is required to be running for the inspection, care must be taken when assessing motor bicycles with automatic clutch (twist and go).

The machine presenter should be informed that they are in full control of the motor bicycle and its stability throughout the inspection process.

It is the duty of all staff to take reasonable care for the health and safety of themselves and of all other persons who may be affected by their acts or omissions at work. No staff shall intentionally or recklessly interfere with or misuse anything provided in the interests of health, safety or welfare e.g. fire extinguishers, personal protection equipment etc. Staff have a duty of care not only to themselves and all other persons but also to the property of the Agency and the public.

Note:

1. Whilst we will attempt to be comprehensive and cover all reasons for failure, which could be dangerous, it is inevitable that due to changes in design, or other reasons, from time to time dangerous defects may be found which are not described in any of the reasons for failure. If a defect of this type were found, which is such that the use of the machine on the road would involve a danger of injury to any person, this would justify a failure. It is not intended that this item should be used as a matter of routine but only for exceptional cases.

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ASSESSMENT OF CORROSION

Form Number: DVT 940
Issue: 1
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1. The effect of corrosion on the safety of a motor bicycle 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.

2. Where corrosion is present the examiner 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.

3. Having determined the extent of the corrosion the examiner 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 examiner considers the machine would be safe to use the component should not be regarded as defective. Where the metal thickness has clearly not been significantly reduced, the part should not be regarded as defective: however, the examiner should advise the presenter 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 examiner may refuse to carry out a brake test.

4. 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, are not normally acceptable. If in doubt consult Test centre line manager. 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.

5. 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.

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Form Number: DVT 939
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ANTI-LOCK BRAKES

Information

1. This ABS inspection applies to all systems fitted as ‘standard’, and to ‘optional’ systems fitted.

2. **When testing vehicles that have ABS fitted** the road wheels should not be allowed to rotate clear of the standing surface with the ignition on as this can cause the ABS system to indicate a fault which may require specialist equipment to rectify.

3. The reasons for rejection below only apply where there is clear evidence of an ABS system is fitted to the machine.

Method of Inspection

1. If the motor bicycle is fitted with an anti-lock braking system, check that:

    a. A warning lamp is fitted,
    b. The lamp illuminates,
    c. After a sequence the warning lamp extinguishes

Note:
The sequence varies with the type of system. Before a machine is refused a vehicle test certificate for an ABS warning lamp indicating a fault, the presenter should be given the opportunity to ride the machine and show the examiner the ABS warning light either illuminated or extinguished.

Reason for Rejection

1. The warning lamp:

    a. Is missing,
    b. Does not illuminate,
    c. Indicates an ABS fault.

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Form Number: DVT 941
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BRAKE CONTROLS

Information

1. Motor bicycles first used before 1 January 1927, must have an efficient braking system which works on at least one wheel.
2. Motor bicycles first used 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.
3. 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.
4. Some machines are fitted with a parking brake device, which is additional to the normal braking requirements. Such parking brake controls are subject to Reasons for Rejection 2, 3a, 3c and 5. If the parking brake system has been removed, this is not a Reason for Rejection.

Method of Inspection

Check that the motor bicycle is equipped with the appropriate braking system or systems.
Check the condition and security of all controls and mountings.
Operate the brake pedal and lever fully several times and look for:

a. Wear at pivots
b. Reserve travel
c. The position of the lever or pedal in relation to the handlebar or footrest.
d. Smoothness of operation

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.

Check components for corrosion, distortion and modification.

Reasons for Rejection

1. The motor bicycle does not have the appropriate braking system or systems fitted according to its age.
2.

An insecure brake control or mounting.
An attachment screw loose or missing.
A fractured control lever or mounting

3.

   i. Excessive wear at control lever pivots.
   ii. Inadequate reserve travel.
   iii. A control which is inoperative or so damaged, positioned, bent or shortened that the brake cannot be readily applied.
   iv. A control which cannot be applied and released smoothly.

4.

   a. A hydraulic system control which creeps under load.
   b. Sponginess indicating air in the hydraulic system.

5. Deliberate modification, which significantly reduces the original strength of any component. Excessive corrosion, severe distortion, a fractured or an inadequate repair to a component.

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BRAKE SYSTEMS

Form Number: DVT 943
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Information

A. GENERAL

1. This inspection applies to the braking systems of all motor bicycles and their associated components.

B. MECHANICAL BRAKE COMPONENTS

1. It should be noted that some braking systems have levers, which are designed to operate over-centre.
2. Check for any movement at the bolts securing the back plate reaction brackets or calipers by rocking the machine backwards and forwards with the brake applied.
3. Fully floating brake discs are designed to have some movement. Care must be taken to not unnecessarily fail these items for security.
4. Some machines are fitted with a parking brake device, which is additional to the normal braking requirements. Such parking brakes are also subject to all appropriate Reasons for Rejection in this Section.

C. HYDRAULIC BRAKE COMPONENTS

1. The brake fluid check is confined to transparent reservoirs where these can be seen. Removal of reservoir caps is not a requirement.
2. A hose is to be failed for cracking or chafing only if it is severe enough to expose the hose reinforcement.
3. Damage to a protective sleeve may be acceptable provided the pipe or hose to which it is fitted is not damaged.
4. When testing motor bicycles, fitted with replacement brake hoses with anodised alloy banjo fittings, give close attention to the union nuts/bolts, as all alloy fittings are not recommended for road use.

Method of Inspection

A. GENERAL

1. Examine the complete braking system and check where appropriate the function of the system and associated components.

B. MECHANICAL BRAKE COMPONENTS

1. Examine all the mechanical components of the brakes which can be seen without dismantling, looking particularly for:

    a. Badly chafed rods or levers
    b. Corroded, frayed or knotted cables, or crushed outer casings;
    c. Corroded or damaged rods, levers or linkages;
    d. Worn clevis joints;
    e. Absence or insecurity of locking devices;
    f. The thickness of brake linings or pads;
    g. Insecurity or cracking of brake drums or discs;
    h. Any restriction to the free movement of the mechanism;
    i. Abnormal movement of levers indicating maladjustment or excessive wear;
    j. Insecurity of brake back plates, reaction brackets or calipers;
    k. Contamination of friction surfaces by oil or grease;
    l. Excessive brake disc scoring, pitting or wear;
    m. Brake disc run-out.

C. HYDRAULIC BRAKE COMPONENTS

1. Examine where practicable hydraulic reservoirs and cylinders for:
    a. Security of mounting;
    b. Excessive damage or corrosion;
    c. Presence of reservoir cap;
    d. Fluid level
    e. Leaks

Examine all visible brake pipes for

    a. Chafing, corrosion or damage
    b. Security
    c. Fouling and leaks

Examine all flexible hoses for

    a. Chafing, twisting or kinking
    b. Deterioration, stretching, fouling.

With each hydraulic system held under load check for leakage and hoses for bulging.

On machines with linked type braking systems check all master cylinder and caliper pivot points for freedom of movement and wear.

Reasons for Rejection

A. GENERAL

1. Braking system or associated components inoperative.

B. MECHANICAL BRAKE COMPONENTS

1.
   a. Serious reduction in strength of any component due to excessive wear, cracking or damage (e.g. a brake rod reduced in diameter by more than one third of original dimension).
   b. Excessive chafing to rods or levers
   c. A knotted, excessively corroded or badly frayed cable or a significantly damaged outer casing/cable guide
   d. Excessive corrosion or damage to rods, levers, or linkages.
   e. An excessively worn clevis joints
   f. The absence or insecurity of locking devices, e.g., lock nuts, split pins, etc
   g. Brake linings or pads less than 1.5 mm (1/16") thick at any point, or in the case of sintered brake pads less than 1mm thick at any point.
   h. An insecure or cracked brake drum or disc or securing bolts loose or missing.
   i. Any restriction to the free movement of the system likely to impede its operation.
   j. Abnormal movement of levers indicating maladjustment or excessive wear.
   k. An insecure brake back plate, reaction bracket or caliper. Securing bolts loose or missing.
   l. Contamination of friction surfaces by oil or grease.
   m. An excessively scored, pitted or excessively worn brake disc.
   n. Excessive run out or distortion of a brake disc.

C. HYDRAULIC BRAKE COMPONENTS

1. A reservoir or cylinder

    a. Insecurely mounted.
    b. Severely corroded or damaged
    c. With reservoir cap missing.
    d. With dangerously low fluid level
    e. Leaking hydraulic fluid

2. A brake pipe which is

    a. Excessively chafed, corroded or damaged
    b. Rigid pipes inadequately supported.
    c. Pipes or hoses likely to be fouled or trapped by moving parts.

3. A hose which is excessively

    a. Chafed, twisted or kinked
    b. Deteriorated, fouling or can be stretched by steering or suspension movement.

4. A hose which bulges or any part of the system leaking fluid.

5. An excessively worn or seized master cylinder or caliper pivot.

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Form Number: DVT 944
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CONDITION OF STRUCTURE

Information

1. Particular attention should be paid to all highly stressed parts of the motor bicycle and sidecar if fitted, such as frame joints and connections, reaction brackets and attachment points of shields and fairings.

2. It is particularly important to check for corrosion of box sections and fabricated parts. (See Section 'Assessment of Corrosion').

3. It may be necessary to remove or raise panels to permit the further examination of the structure. Where panels and covers must be removed, the machine presenter should do this and be requested to check the security of these before leaving the premises.

4. Structural members and components includes engine mountings, where the engine is a stressed member of the structure

Method of inspection

1. Examine the structure of the motor bicycle and sidecar (if fitted) for fractures, damage, distortion, corrosion and security of structural members or components.

Reasons for Rejection

1.

a. Any fractures, damage, distortion or corrosion in the motor bicycle or sidecar 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.

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ELECTRICAL WIRING AND EQUIPMENT

Form Number: DVT 947
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

This inspection applies to all motor bicycles

Method of Inspection

1. Check all visible wiring for condition, position and security.
2. Check the battery for condition and security.

Reason for Rejection

1. Wiring:
    a. Not adequately insulated or secured
    b. Positioned so that it is chafing or likely to be damaged by heat

2. Battery:
    o. And/or carrier insecure and likely to become displaced.
    p. Case leaking.
    q. Cell closures missing or insecure

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EXHAUST SYSTEM

Form Number: DVT 948
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

1. A durable repair to an exhaust system which effectively prevents leaks is acceptable providing the system is structurally sound.

Method of Inspection

1. Examine the condition of exhaust system including the silencer(s), and mountings for security, deterioration and completeness.

2. With the engine running assess the effectiveness of the silencer(s) in reducing as far as reasonable the noise emitted.

3. Check the silencer(s) on all machines for any unacceptable markings.

Reason for Rejection

1.
   a. Any part of the exhaust system missing or excessively deteriorated.

   b. A leak in an 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. A silencer that is in such a condition or is of such a type that the noise emitted is obviously well in excess of that which would be produced by a similar machine fitted with a standard silencer in average condition.

3. A silencer marked ‘NOT FOR ROAD USE’, ‘TRACK USE ONLY’ or similar words.

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Form Number: DVT 951
Issue: 1
Origin: DVT
Review: 1 Dec 2020

FUEL SYSTEM

Information

1. This inspection is to be carried out both with and without the engine running.

2. 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, then it must be assumed to be in a satisfactory condition.

Method of Inspection

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.

Check fuel tank cap for presence, positive fit and condition of sealing washer and flange. (ensure the ignition/engine is switched off and the motor bicycle is upright in the normal riding position before removing the fuel cap)

Reason for Rejection

1. Fuel leaking,

2. A fuel system component insecure.

3. A fuel tank cap missing

4. A fuel tank cap does not fasten securely
   a. By a positive means, or

   b. Such that pressure is not maintained on the sealing arrangement,

5. Fuel cap sealing washer torn, deteriorated or missing, or a mounting flange/sealing method defective such that the leakage of fuel is possible.

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HORN

Form Number: DVT 954
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

1. On motor bicycles without a battery or an insufficiently charged battery which are fitted with an electrically operated horn, it will be necessary to run the engine.

2. 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.

3. A motor bicycle first used before 31 December 1976 may be fitted with a bulb horn.

Method of Inspection

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 character of the sound emitted.

Reason for Rejection

1. A horn missing,

2. A horn control

   a. Defective or control not readily accessible
   b. Not functioning.

   A horn not working or 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 31 December 1976 a sound which is

- Not a constant note
- Not continuous or uniform
- Strident, i.e. harsh or grating.

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DIRECTION INDICATORS

Form Number: DVT 945
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

1. 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.

2. If direction indicators are fitted they must meet the requirements of this inspection, but need not be fitted to a machine which:

    a. cannot exceed 30 mph 50 km/h (see distinguishing plate on machines), or

    b. was first used before 24 January 1996, or

    c. 'off road' motor bicycles that are designed to carry only the rider

    d. '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).

3. If a sidecar is attached, the indicators must be on opposite sides of the combination.

4. Motor bicycles first used before 1 October 1968 may be fitted with direction indicators showing a WHITE light to the front and a RED light to the rear.

5. On motor bicycles without a battery or with an insufficiently charged battery, it will be necessary to run the engine.

6. The 'tell-tale' may be audible, visual or both.

7. 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.

8. Motor bicycle first used on or after 24 January 1996, the separation distance between indicator lamps on opposite sides must not be less than 240mm on the front and 180mm on the rear. For motor bicycles first used before 24 January 1996, there is no separation distance requirement.

Method of Inspection

1. Operate the direction indicators on each side in turn and check the colour, flash rate and 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 before1st October 1968 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. Whilst 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 that the illumination of the indicators is not affected by the operation of any other lamp.

4. Check the position, condition and security of each direction indicator.

5. Check the condition and operation of the switch.

Reasons for Rejection

1. A direction indicator.

   a. Missing or obscured
   b. Does not show 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. (If the indicators can be seen from the riding position there is no need for a ‘tell tale’ to operate).

3. The operation of an indicator lamp is affected by the operation of another lamp.

4. An indicator lamp

   a. So damaged or deteriorated that its function is impaired.
   b. Insecure.
   c. Incorrectly positioned.

5. A defective or insecure switch or one which does not operate the direction indicators on the side selected.

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Form Number: DVT 949
Issue: 1
Origin: DVT
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FRONT AND REAR POSITION LAMPS, REGISTRATION PLATE LAMPS

Information

1. 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.

2. A motor bicycle (with or without a sidecar) fitted with a headlamp need not have a front position lamp (but must have one on the sidecar, if sidecar is fitted).

3. The light from a front position lamp may be yellow only if incorporated in a headlamp capable of emitting only a yellow light.

4. A motor bicycle combination maybe fitted with a yellow headlamp on the motor bicycle and a white front position lamp on the sidecar.

5. On machines without a battery or with an insufficiently charged battery, it will be necessary to run the engine.

6. At least 50% of each lamp must be visible from front or rear as appropriate.

7. The inspection does NOT include rear fog lamps.

8. A registration plate lamp is not required on mopeds.

Method of Inspection

1. With the front and rear position lamps switched on, check the lamps for

   a. Presence
   b. Condition

c. Security
d. Fitment and visibility

2. With the front and rear position lamps switched on, see that they each show a light of the correct colour. ***(see information section)***.

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.

4. Check the switch for condition and security. Check the front and rear position lamps are operated by a single switch.

5. With the front and rear position lamps switched on, check that the registration plate lamp illuminates the registration plate. (Note: registration plate lamp not required on mopeds)

Reasons for Rejection

1. An obligatory lamp
   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

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

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.

4. A switch which
   a. Faulty,
   b. Insecure or
   c. Does not operate the front and rear position lamps

5. The registration plate lamp does not illuminate the registration plate.

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HEADLAMP AIM

Form Number: DVT 953
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

1. **This inspection applies to** all obligatory headlamps, and optional (additional) dip beam headlamps.

2. Machines with a single beam headlamp constructed to be incapable of exceeding 30 mph on the level with an engine not exceeding 50cc are only required to have a dipped beam, provided a rear position lamp, stop lamp, and rear reflector are also fitted.

Type of headlamp

3. The aim of headlamps must be checked on main or dipped beam according to their type.

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

5. The method of inspection involves the use of beam checking equipment with a collecting lens.

6. 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 care must be taken.

7. **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.

Masks or converter kits

8. Right hand dip headlamps 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 under European 'E' beam headlamp (except that the top of the beam image will be a straight line).
    b. The light output is not unduly reduced – not usually a problem with commercially produced kits.
    c. The mask or converter is securely attached.

Method of Inspection

To check headlamp aim

1. Position the motor bicycle on the designated headlamp aim standing area.
2. Check that the tyres are not under-inflated.
3. Ensure the motor bicycle is supported in an upright and straight ahead position.
4. Follow the headlamp tester manufacturer's user manual instructions, and
    a. Align the headlamp aim equipment with the longitudinal axis of the machine,
    b. Align the centre of the collecting lens with the centre of the headlamp under test.
5. With the customer sitting on the machine in the normal riding position, switch on the headlamps to the beam on which the headlamp is to be checked.
6. Determine the appropriate headlamp type and its aim. Old machines (approx pre 1960) headlamps beam image may not conform to either of the following types of lamps, or machines without a battery where light output is low. In such cases check the alignment of the light against a vertical surface. Position the machine in front of the vertical surface, at a distance of 25 feet from the surface the headlamp image should be below 3 feet 6 inches.

Note:
When the examiner identifies the type of headlamp, and selects the appropriate testing program, the beam checking equipment will electronically record the test values for each headlamp. When this information is transferred to the test lane, these test values will be automatically compared with the limit values and the headlamp aim will be passed or failed.

EUROPEAN ‘E’ BEAM HEADLAMP (CHECKED ON DIPPED BEAM)

Information

European type headlamp – Characteristics

a. An asymmetric dipped beam pattern with

- A distinctive horizontal cut-off on the right, and
- A 15 degree wedge of light above the horizontal (the ‘Kick up’) towards the left.

b. A lens with one or more asymmetric stepped patterns moulded in the glass

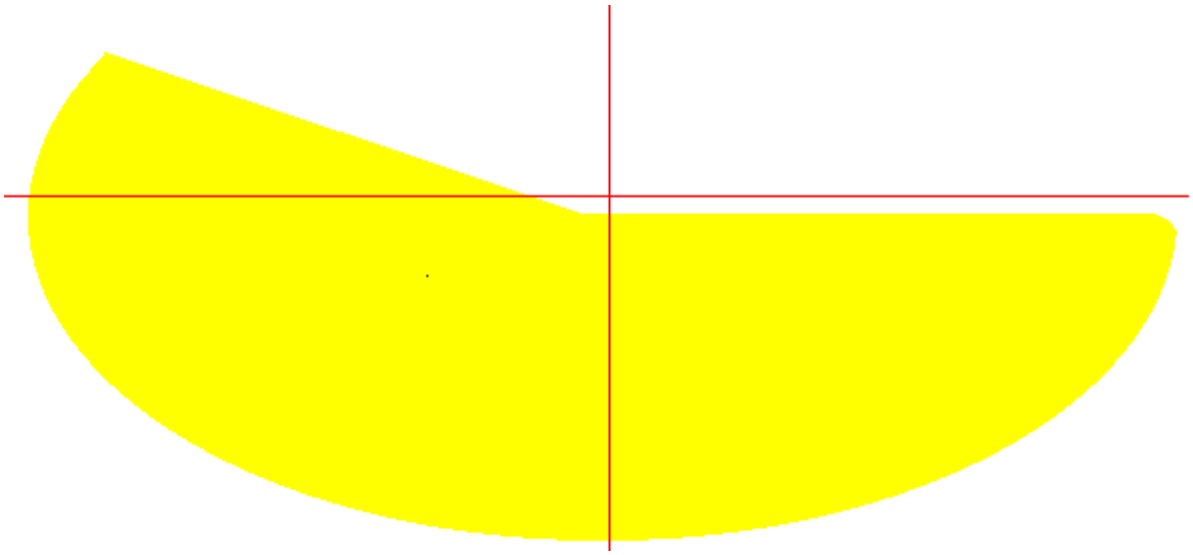
d. A lens may carry

- A European approval mark – a circle containing an ‘E’ and a number, or
- A rectangle containing an ‘e’, and a number.

The European approval mark should incorporate a single or double-headed arrow.

A dipped beam is denoted by either:

- A capital letter ‘C’ above a capital ‘E’.
- A capital letter ‘C’ above an ‘e’.



Reason for Rejection

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

5. 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.

6. 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.

7. The beam image ‘break point’ is

    - To the right of the 0% vertical line, or
    - To the left of the vertical -2% line.

BRITISH AMERICAN HEADLAMPS (CHECKED ON MAIN BEAM)

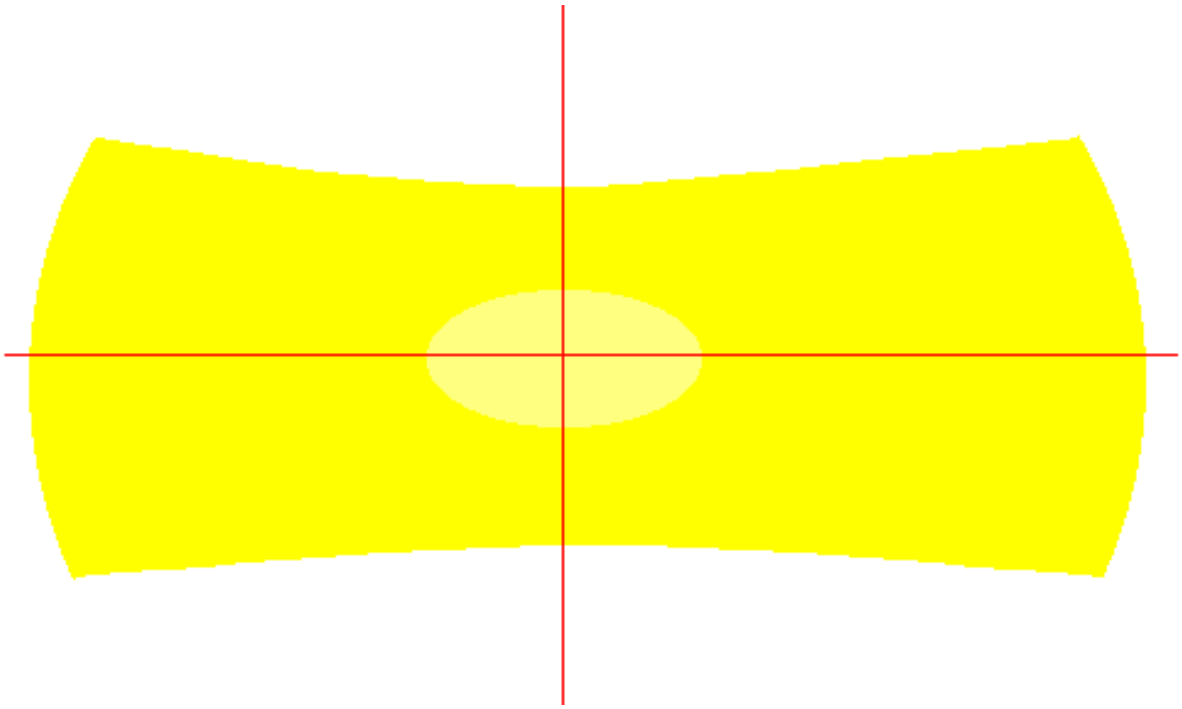
Information

British American type (checked on main beam) – Characteristics:

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

b. This type of lamp generally has a circular lens which may be marked with a figure 1 followed by an arrow indicating the direction of dip.

c. Likely to be of sealed beam construction.



Reason for Rejection

1. 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 downward or downwards and to the nearside.

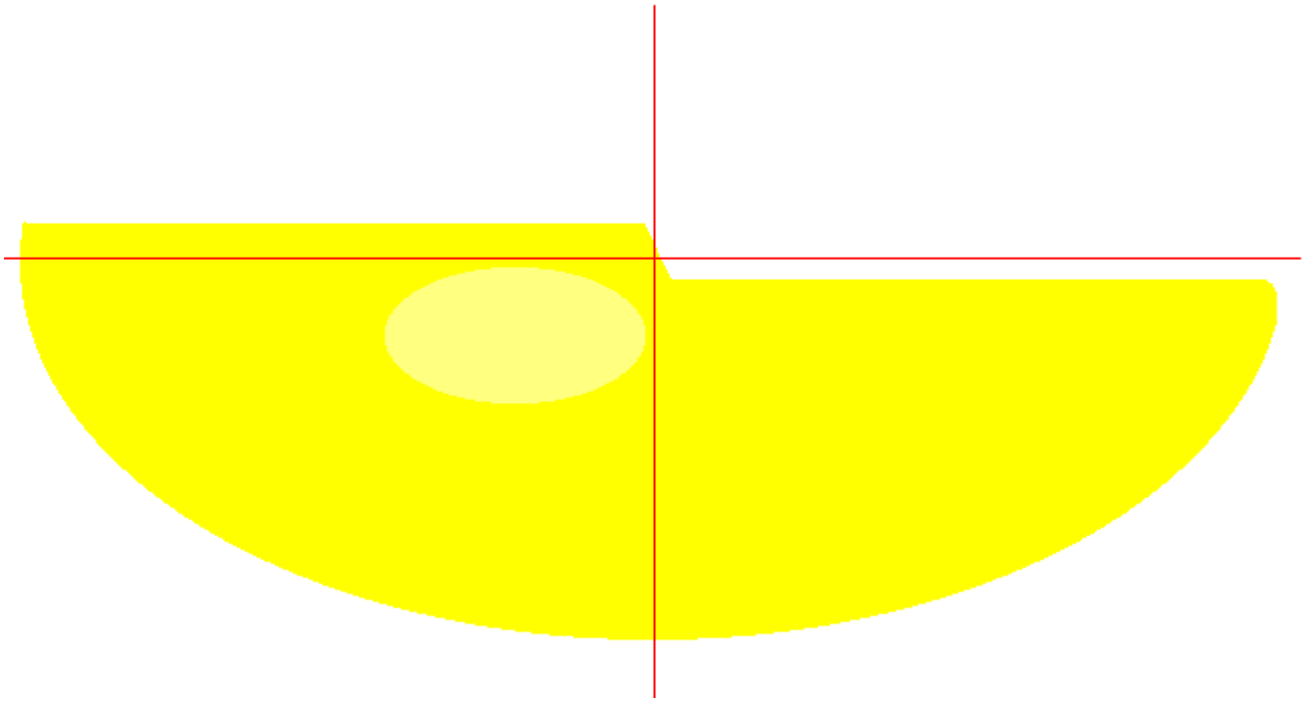
BRITISH AMERICAN TYPE (CHECKED ON DIPPED BEAM)

Information

British American type (checked on dipped beam) – 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.

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



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.

4. The raised portion of the beam image is to the right/offside of the centre line.

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Form Number: DVT 952
Issue: 1
Origin: DVT
Review: 1 Dec 2020

HEADLAMPS

Information

1. 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.

2. 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 examiner should advise if both headlights should illuminate for either function and only one does so.

3. On motor bicycles without a battery or with an insufficiently charged battery, it will be necessary to run the engine. If an automatic transmission is fitted care must be taken.

4. A motor bicycle first used before 1 January 1931 does not need a headlamp.

5. A motor bicycle is only required to have a dipped-beam headlamp (but may also have a main beam) if it:

    a. Cannot exceed 30 mph/48km/h (see distinguishing plate on machines);
    b. Was first used before 1 January 1972 and with an engine capacity of less than 50 cc.

Method of Inspection

The purpose of headlamps is to illuminate the road in front of a machine during the hours of darkness. They may be WHITE or YELLOW in colour. Where twin headlamps are fitted both lights must match, i.e., both white or both yellow. Any additional lamps, such as front fog lamps, are not obligatory headlamps.

1. With the headlamp switched on main and dipped beam in turn, see that it shows a WHITE or YELLOW light of sufficient intensity to illuminate the road in front of the motor bicycle.

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.

3. Check the condition and security of the headlamp.

4. Check the condition and operation of the switch.

Reasons for Rejection

1. The headlamp does not emit a light, which is substantially WHITE or YELLOW in colour and is capable of providing adequate illumination of the road in front.

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 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.

3.
   a. A headlamp missing or so damaged or deteriorated that its function is impaired.
   b. An insecure headlamp.

4. A faulty or insecure switch.

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Form Number: DVT 966
Issue: 1
Origin: DVT
Review: 1 Dec 2020

STOP LAMPS

Information

1. 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.

2. 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 25 mph (see distinguishing plate on machines) or
b. Was first used before 1 January 1936, or
c. Was first used before 24 January 1996 and which has an engine capacity of less than 50cc;

3. On machines without a battery or with an insufficiently charged battery, it will be necessary to run the engine.

4. Stop lamps may operate in conjunction with either the front or the rear brake, or both. On machines first used on or after 24 January 1996, the stop lamp must operate by application of each system.

Method of Inspection

This Inspection applies to all stop lamps which are fitted including additional stop lamps. The purpose of a stop lamp is to warn other road users that the brakes are being applied.

1. Apply each brake in turn and check the colour and functioning of the stop lamp.

    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 and does not flicker when tapped.

3. Check the condition and security of the stop lamp.

Reasons for Rejection

1. A stop lamp

    a. Does not illuminate immediately a brake applies
    b. Emits other than a red steady 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.

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OIL LEAKS

Form Number: DVT 957
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

This inspection applies to all motor bicycles

Method of Inspection

1. Check the motor bicycle for oil leaks from any assembly to the surface on which the machine is standing.

Note:

If necessary the engine may be run at tick-over speed to confirm the existence of an oil leak.

Reason for Rejection

1. An oil leak from any assembly which deposits oil on the ground at a rate of a 75 mm diameter pool in 5 minutes, or a number of leaks which collectively would deposit oil at the same rate.

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Form Number: DVT 960
Issue: 1
Origin: DVT

Review: 1 Dec 2020

REGISTRATION PLATES AND VIN DETAILS

Information

Registration Plates

Unregistered motorcycles need not be fitted with registration plates.

Vehicles manufactured before 1 January 1973 may have registration plates displaying white, silver or grey characters on a black plate.

Vehicles manufactured on or after 1 January 1973 must display registration plates of reflex-reflecting material, yellow at the rear, the characters must be black. The reflex-reflecting material is not part of the inspection.

NOTE:- The following requirements for registration plates fitted to vehicles first registered on or after 1 September 2001 are **not part of the inspection** :-

a. The display of the name and postcode of the registration plate supplying outlet.

b. The display of the BSAU number.

c. The display of the Euro symbol on registration plates which is optional.

Size of Characters

Examiners 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 1 & I)	44mm
Character stroke width	10mm
Space between two characters in groups	10mm
Horizontal space between two groups	30mm
Vertical space between groups	13mm

margins (minimum)	11mm

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

Borders

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

Mandatory Font

Note 1: Three-dimensional characters are permitted to use grey edging in order to achieve the 3D effect on any age of vehicle, provided the font style is adhered to.

Note 2: There is no difference in ‘0’ and ‘o’ nor is there deference in ‘I’ and ’1’.

Registration Plate Layout

Note: Machines registered on or after 1st September 2001, can only use the layout shown above i.e. two rows. While machines registered before 1st September 2001 may also use a three row layout.

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 similar to that illustrated below e.g. letters on one line, figures on another.

Vehicle Identification Number

A Vehicle Identification Number (VIN or frame number) is required on all machines first used on or after 22 June 1987, and to which the NI Regulations apply except those, which are ‘amateur built’ vehicles.

If no VIN is permanently displayed, or there is more that one different VIN displayed, direct the motor bicycle presenter to the nearest Vehicle Registration Office.

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.

Method of Inspection

1. Check that there is a registration plate at the rear of the motor bicycle or sidecar, and check each for security and condition.

2. On machines first registered on or after 1 January 1973, check

    a. the colour of the characters and background

    b. that the registration plates are 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 plates do not display a honeycomb or similar effect background.

4. Check visually that the characters are correctly formed, spaced, and are not obviously likely to be misread due to, for example, badly positioned or uncovered retaining bolts etc.

Vehicle Identification Number

1. 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.

Reason for Rejection

1. A 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. The registration plate on a machine first registered on or after 1 January 1973

   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. A registration plate on a vehicle first registered on or after 1 September 2001 obviously displaying a honeycomb or similar effect background.

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 note on Borders.

Vehicle Identification Number

1.

   a. A Vehicle Identification Number is not permanently displayed or not legible, or

b. More than one different Vehicle Identification Number is displayed.

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Form Number: DVT 958
Issue: 1
Origin: DVT
Review: 1 Dec 2020

REAR REFLECTORS

Information

1. 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

2. 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 motor bicycle is fitted with a sidecar the sidecar will also require a reflector fitted towards the nearside and positioned to reflect squarely to the rear.

3. Extra reflectors fitted to a motor bicycle are not included in this inspection.

4. Reflecting 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 motor bicycle combination, one on the motor bicycle and the other on the sidecar).

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

Reasons for Rejection

1. There is not one unobscured RED reflector (in the case of a motor bicycle 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.

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RECOMMENDED INSPECTION ROUTINE

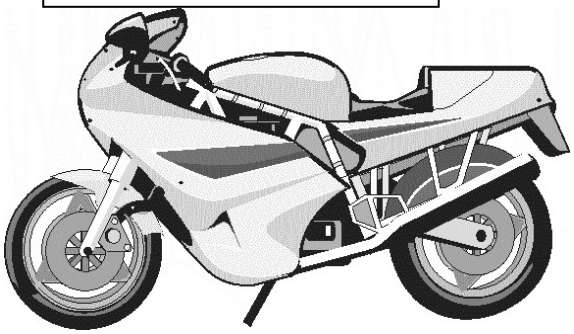
Form Number: DVT 955
Issue: 1
Origin: DVT
Review: 1 Dec 2020

START

1. Check
   - VIN
   - Mileage
   - Registration plate

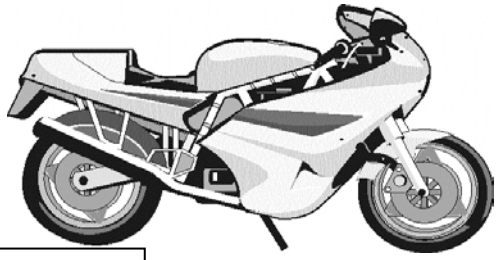
2. Check
   - Headlamp alignment
   - Lights
   - Indicators
   - Reflectors
   - Horn

3. Check
   - Wheel alignment



4. At front check
   - All controls
   - Brake master cylinder (if fitted)
   - Switches
   - Speedometer
   - Handlebars
   - Steering
   - Head bearings
   - Front suspension
   - Forks
   - Tyre
   - Wheel
   - Wheel bearings

5. At nearside check
   - Fuel system
   - Frame
   - Exhaust system
   - Electrical wiring
   - Seat
   - Foot rests
   - Rear suspension
   - Final drive
   - Tyre
   - Wheel
   - Brake



6. At rear check.
   - Rear suspension
   - Final drive
   - Tyre
   - Wheel
   - Brake

7. At offside checkTyre
   - Wheel
   - Brake
   - Frame
   - Rear suspension
   - Final drive
   - Exhaust system
   - Foot rests
   - Fuel system
   - Electrical wiring

8. Check
   - Function of steering, suspension and brakes
   - Brake performance

END

SIDECARS

Tyre, wheel, brake (if fitted) and suspension.

Attachment points and structure.

Swivel joints on leanable sidecars.

Wheel alignment.

Note:
Generally the sidecar examination would be performed towards the end of the inspection of the machine but before conducting a brake function check.

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Form Number: DVT 961
Issue: 1
Origin: DVT
Review: 1 Dec 2020

SEATS, FOOTRESTS, STANDS AND TRANSMISSION

Information

1. Pillion foot rests are not required on motor bicycles, however if fitted, both foot rests must be present and secure.

2. When rejecting transmission and associated components for wear, defects, security or adjustment, the basis of the assessment should be, 'early failure is likely'.

3. A throttle friction device will not constitute a reason for rejection unless it adversely affects the throttle operation.

Method of inspection

1. Check all other parts of the machine for defects which might make it dangerous to ride on the road.

Reason for Rejection

1. a.
   i. A missing rider's seat, footrest 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, belt, sprocket or sprocket carrier worn to excess

   f. A malfunction of a 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.

i. A motor bicycle stand fitted that is insecure or likely to contact the road during normal riding.

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SIDECARS

Form Number: DVT 962
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

1. Due to the variations in sidecar types, it is not possible to give all the likely reasons for failure. However, it is necessary to ensure that the condition of the sidecar will not adversely affect the stability of the combination.

2. It is normal for many sidecar to motor bicycle combinations to be set up in a manner which is not absolutely vertically aligned.

3. Most sidecar wheels toe-in and in many cases may toe-in more than 50mm. Excessive toe-out will adversely affect the handling of a combination, therefore the amount of toe-out is more critical than the amount of toe-in.

Method of Inspection

A. Security

1. Check the attachment of the sidecar to the motor bicycle and ensure that all fixing devices are present and secure.

2. Attempt to move the sidecar in relation to the motorcycle to check for security of attachment.

3. For 'leanable' sidecars check the operation of the attachment pivot joints.

B. Suspension and Wheel Bearings

1. Using body weight, depress the suspension as far as possible and check for freedom of movement and security of the suspension unit.

2. Check for evidence of fouling between fixed and moving parts.

3. With the sidecar wheel raised (where possible) 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.

4. Check hydraulic shock absorbers (if fitted) for oil leakage due to seal failure.

C. Wheel Alignment

1. Visually assess any toe-in or toe-out of sidecar wheels.

2. Check visually the vertical alignment of the motor bicycle and sidecar.

Reasons for Rejection

A. Security

1. Any attachment between the sidecar and motor bicycle:

   a. Missing

   b. Fractured or insecure

   c. Seriously weakened by corrosion, excessive wear or due to an inadequate repair

   d. With excessive wear or play in any attachment pins or bushes

2. Excessively tight, worn or deteriorated pivot points or bushes on a 'leanable' sidecar.

B. Suspension and Wheel Bearings

1. Excessive stiffness of movement such as might be caused by partial seizure of the suspension units.

2. Fouling between fixed and moving parts which affect the movement of the suspension.

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. Oil leakage indicating failure of the seal.

C. Wheel Alignment

1.

a. Excessive toe-out of the sidecar wheel relative to the motor bicycle, which is likely to adversely affect the handling of the combination.

b. Excessive toe-in of the sidecar wheel relative to the motor bicycle, which is likely to adversely affect the handling of the combination.

2. Excessive vertical misalignment between the motor bicycle and the sidecar wheel, which will adversely affect the handling of the combination.

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Form Number: DVT 963
Issue: 1
Origin: DVT
Review: 1 Dec 2020

SPEEDOMETER

Information

This inspection applies to all motor bicycles except:

- Those with a maximum speed not exceeding 25 mph, and
- A motor bicycle first used before 1 April 1984, the engine of which has a cylinder capacity not exceeding 100 cc

Method of Inspection

Visually check

1. For the presence of a speedometer
2. That the speedometer can be read clearly
3. Check the condition of the speedometer
4. Check that the speedometer can be illuminated
5. That the speedometer indicates speed in MPH and KPH (If first used on or after 1/4/1984)

Note 1: MPH and KPH can be displayed simultaneously or by the operation of a switch, separately. Where the vehicle is presented with the display reading MPH only and the examiner is unsure how to switch between MPH and KPH, the benefit should be given to the customer. In any case MPH must be displayed otherwise a certificate should be refused.

Note 2: If a vehicle has been issued with a Department's Approval Certificate (SVA/IVA), the speedometer is only required to be marked in MPH.

3. The relationship between MPH and KPH are reasonably accurate where they are displayed together

Reason for Rejection

1. Speedometer not fitted

2. Speedometer incomplete or clearly inoperative, or dial glass broken or missing.

   Note: It is not a Reason for Rejection if the dial glass is cracked, providing:

   - there is no possibility of misreading the speedometer or
   - there is no possibility fouling of the indicator needle or
   - the cracked glass does not create a safety hazard.

3. The speedometer cannot be illuminated.

4. The speedometer cannot be clearly read.

5. There is clear evidence that the speedometer does not indicate speed in MPH and KPH where required, see notes in Method of Inspection 5

6. Obviously not accurate

Note
Due to motor bicycles not being road tested, the operation of the speedometer can not always be determined.

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Form Number: DVT 964
Issue: 1
Origin: DVT
Review: 1 Dec 2020

STEERING CONTROLS

Information

Handlebars on some machines are rubber mounted. Some movement may be detected when firm pressure is applied to handlebars secured in this way.

Method of Inspection

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.

2. Turn the steering from lock to lock to check that:-

   a. There is no fouling between the moving and fixed parts;

   b. The handlebar grips do not come so close to a fixed part (eg fuel tank or fairing) as to impede the operation of the controls;

   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;

   d. Any steering damper fitted is properly secured and is not likely to impede control of the machine.

   e. Fairings or leg shields do not impede the steering

3. Examine steering lock stops (if fitted).

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

Reason for Rejection

1.
   a. Handlebar clamps not tight, or any bolt loose or missing.

   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.
   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

   c. Restriction to the movement of the handlebars by cables being pulled taut, becoming trapped or by being caught on a projection

   d. A steering damper which is insecure, ineffective or in such a condition that the steering action is impaired.

   e. Any fairing or leg shield insecure or so located that it is likely to impede the steering.

3. A loose, missing, maladjusted or ineffective steering lock stop

4. A significant change in engine speed.

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STEERING SYSTEM

Form Number: DVT 965
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

1. Before failing a machine for excessively stiff steering, check that any adjustable steering damper is released. This should not be done by the examiner, but the motor bicycle presenter must release or adjust any dampers.

2. It is important to distinguish between play in the head bearings and that in the forks.

3. Where the steering geometry has been modified, eg, 'chopper' or lowrider' type motor bicycles, this in itself is not a reason for rejection.

Method of Inspection

Check that the steering head bearings are adjusted correctly and are in good condition as follows:

1. Inspect for tightness and roughness by turning the steering from lock to lock:

    a. With the front wheel on a smooth surface to check the lower bearing, and
    b. With the machine on a stand (where possible) so that the front wheel is clear of the ground to check the upper bearing.

2. Inspect for free play as follows:

    a. Apply the front brake and push the handlebars forward,
    b. Hold the front wheel firmly between your legs rock the steering side to side and assess any free play in the linkage.

Reason for Rejection

1. Steering movement excessively stiff, ‘notchy’, or rough.

2. Excessive free play in the head bearings or any steering linkage.

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Form Number: DVT 950
Issue: 1
Origin: DVT
Review: 1 Dec 2020

FRONT SUSPENSION AND WHEEL BEARINGS

Information

1. 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 with brakes released when checking the damping.

2. It is important to distinguish between play in the forks and that in the wheel bearings.

3. Light rubbing contact between a fork leg or damper body and its shroud is acceptable.

4. Some smaller machines are not fitted with dampers on the front suspension.

5. 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.

6. Light misting causing a thin film of fluid on a suspension damper is not a reason for rejection.

7. Pitting of a fork stanchion is not a reason for rejection unless damage to damper seals has occurred. It may be necessary to request the presenter to pull back any rubber gaiters to conduct this examination if it is possible without dismantling or damage but they must be correctly refitted.

Method of Inspection

1.
   a. Check the condition, alignment and security of the front suspension assembly.

   b. Check condition of suspension spring

   c. Check shock absorbers for oil leak due to seal failure.

2. Check for wear in the front suspension assembly by one of the following methods:

   a. Whilst the machine is held upright grip the front wheel firmly between legs and attempt to turn the handlebars from side to side looking for free play in the forks;
   b. On leading or trailing link type suspensions, with the wheel raised (where possible), attempt to move the swinging fork from side to side and look for play in the pivot bearing bushes.

3. With the front wheel raised (where possible) check that the wheel and its 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.

4. 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.

5. 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.

6. Check condition of steering and suspension with regard to corrosion, distortion and modifications.

Reason for Rejection

1. A suspension assembly component which is missing, loose, cracked or excessively bent, misaligned or corroded.

2. A road spring

   i. Incomplete, cracked or fractured

   ii. Worn or corroded so that it's cross sectional area is reduced such that it seriously weakened

   iii. Repaired by welding

3. Oil leakage indicating failure of the seal

4. Excessive wear or free play in a suspension component.

5.
   a. A loose wheel spindle or securing nuts or locking device missing or insecure.
   b. 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

6.
   a. Fouling between the fixed and moving parts which affect the movement of the suspension.
   b. Excessive stiffness in the suspension movement.
   c. Inadequate damping effect.
   d. An insecure fork brace

7. An insecure or missing mudguard where it forms part of the structure or one able to easily contact the wheel, tyre or any fixed point of the machine.

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.

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REAR SUSPENSION AND WHEEL BEARINGS

Form Number: DVT 959
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

1. Motor bicycles need not be fitted with rear suspension; some customised machines take advantage of this on the rear suspension, eg, 'chopper' or 'lowrider' motor bicycles.

2. It is important to distinguish between play in the rear suspension bearings and that in the wheel bearings.

3. Light rubbing contact between the body and shroud of a damper is acceptable.

4. Shock absorbers fitted to the rear of some small machines may have limited damping.

5. With mono-shock type suspension some linkage movement may be observed when the suspension is in an abnormal position.

6. If twin shock absorbers are fitted the machines presenter should be informed if it appears they are not equally adjusted.

7. It may be necessary to request the motor bicycles presenter to remove side panels or remove the seat to carry out a full inspection.

Method of Inspection

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, its fixings and locking devices are present and secure and check the wheel bearings for tightness or play;
c. spin the wheel and listen for roughness in the bearings.
d. Check condition of suspension with regard to corrosion, distortion and modifications.

3. With the rear wheel on the ground observe the amount of movement and the effectiveness and security of the shock absorber by sitting on the machine and depressing the rear suspension several times as far as possible.

4. On machines fitted with a mono-shock type suspension, check as far as possible the condition of pivot points for wear and security.

Reason for Rejection

1. A rear suspension component which is:

    a. missing, loose, cracked or excessively bent, misaligned or excessively corroded.

    b. A road spring

        i. Incomplete, cracked or fractured
        ii. Worn or corroded so that it's cross sectional area is reduced such that it seriously weakened
        iii. Repaired by welding

    c. Oil leakage indicating failure of the seal

2.
    a. A seized component

    b. Excessive free play or deterioration in a bearing or bush.

    c. A loose wheel spindle or securing nuts or locking device missing or insecure.

    d. 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

    e. 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.
    a. Fouling between fixed and moving parts, which affect the movement of the rear suspension.

b. Excessive stiffness in the movement of the rear suspension. A shock absorber with inadequate damping effect or insecurely mounted

5. Seizure, excessive wear or insecurity at a pivot point on machines fitted with mono-type suspension

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Form Number: DVT 967
Issue: 1
Origin: DVT
Review: 1 Dec 2020

TYRES

Information

1. Spare tyres are not included in the inspection. However, if a defect is seen, the presenter should be notified.

2. Serious under-inflation of tyres is not a reason for failure. However, the examiner may decide not to conduct a brake test if tyre damage is likely or a headlamp test if alignment could be affected.

3. Examples of unsuitable tyres:

a. Sidecar tyres or car tyres on a motor bicycle without a side car. (Note: sidecar outfits may be fitted with 'motor bicycle' 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 an approval mark ‘E’ in a circle or an ’e’ in a rectangle moulded into or on to the tyre wall. A Japanese approval mark (JIS) or an American approval mark (DOT) is acceptable as an alternative to the European ‘e’ mark.

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;

d. A tyre specifically designed for front wheel use fitted to the rear wheel;

e. A radial ply tyre fitted to the front and a cross ply or bias belted tyre fitted to the rear wheel;

f. A bias-belted tyre fitted to the front with a cross ply tyre fitted to the rear wheel.

4. On radial tyres care should be taken to distinguish between normal manufacturing undulations in the carcass and lumps or bulges caused by structural deterioration.

5. 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.

6. 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.

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

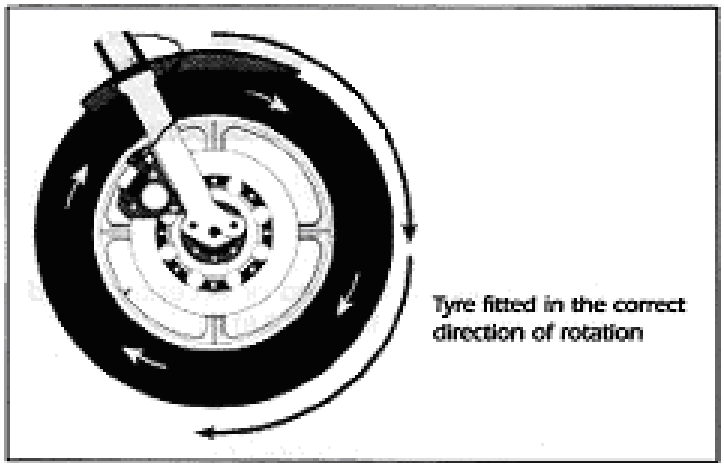
8. Tread pattern excludes tie bars, tread wear indicators, features designed to wear out substantially before the rest of the pattern and other minor features. Original tread pattern must be taken into account when assessing tread wear.

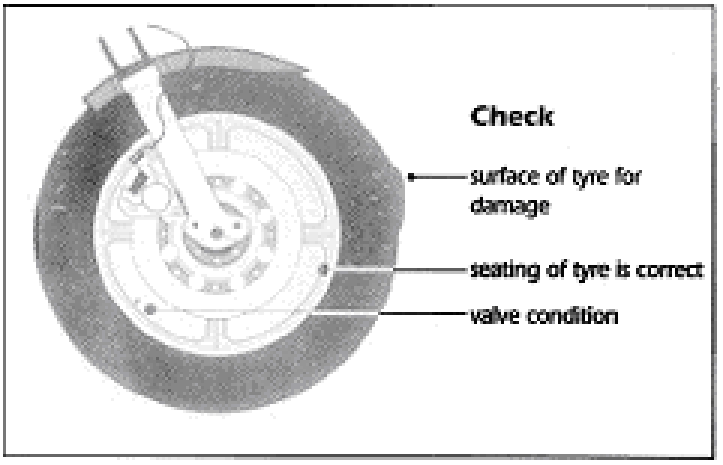
9. The position of tread wear indicators are normally marked ‘TW1’ on the sidewall of the tyre in line with the tread wear indicator.

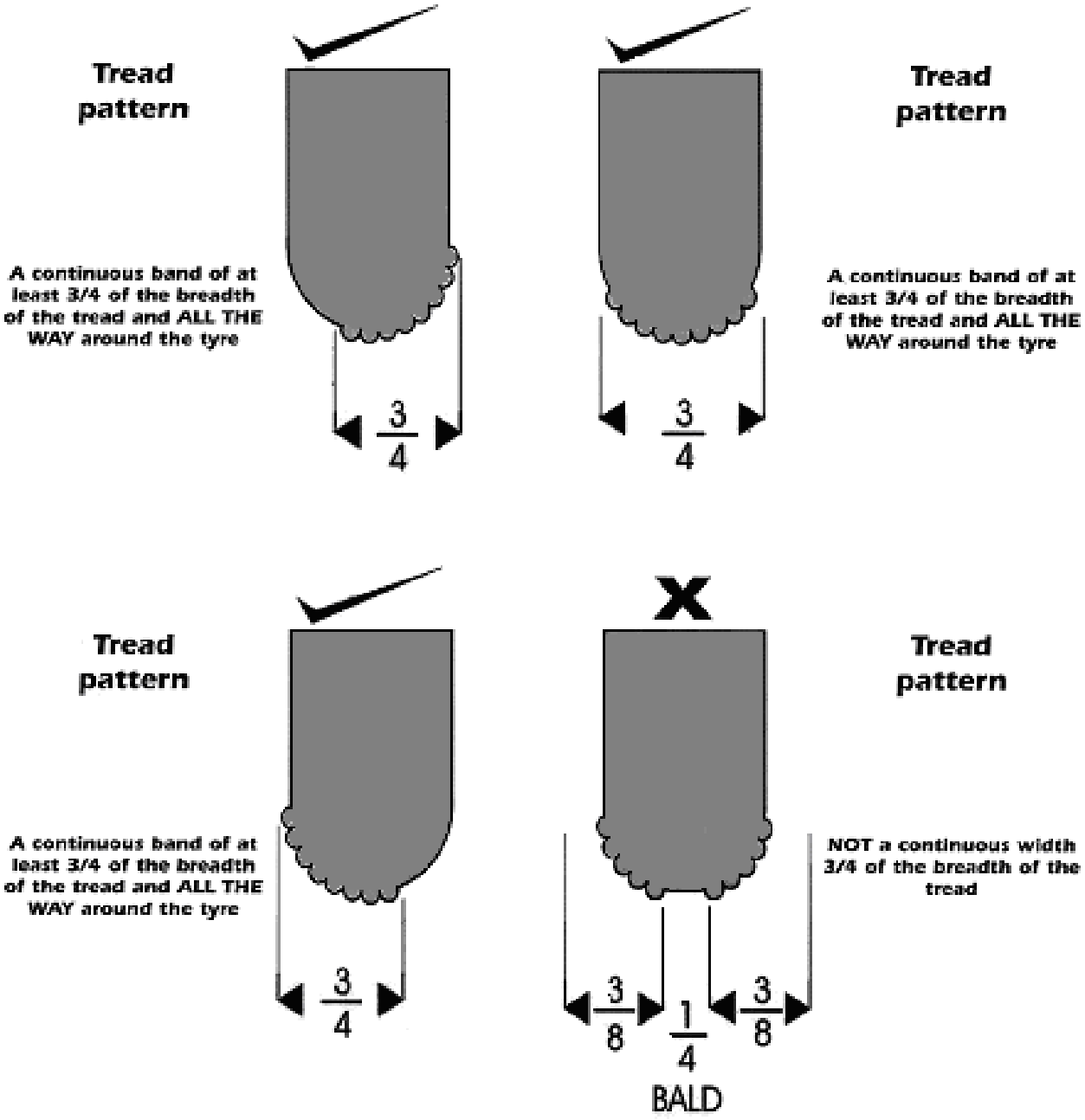
10. .Directional tyres, these tyres must be fitted in accordance with the instructions on the sidewall. The direction of forward rotation is indicated by an arrow, words or both.

11. Additional information.

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







Method of Inspection

1. Examine the tyres for type and suitability.

2. Rotate each wheel slowly and examine each tyre for:
   a. Cuts, lumps, bulges, tears or exposure of the ply or cord, separation of the tread;
   b. Incorrect seating in the wheel rim;
   c. Valve condition and alignment;

d. Recutting of the tread;
e. Fitment in the correct direction of rotation

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.

4. Check for signs of fouling of tyres on other components.

Reason for Rejection

1. An unsuitable tyre.

2.
   a. 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 cord.

   b. A tyre with a lump, bulge or tear caused by separation or partial failure of its structure, including lifting of the tread.

   c. Any ply or cord exposed

   d. A tyre not correctly seated in the wheel rim.

   e. A seriously damaged or misaligned valve stem which could cause sudden deflation of the tyre

   f. A tyre with a recut tread.

   g. A tyre not fitted in accordance with the direction of rotation marked on the sidewall.

3.
   a. The tread pattern is not clearly visible over the whole tread area.

   b. The depth of tread is not at least 1mm throughout a continuous circumferential band measuring at least three quarters of the breadth of the tread.

4. A tyre fouling another component.

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WHEELS

Form Number: DVT 969
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

1. Spare wheels are not included in the inspection but if a defect is seen the presenter should be advised.

2. In considering whether the original strength of a wheel has been significantly reduced the examiner must decide if the wheel is rendered unsafe.

3. The maximum allowable rim distortion limits are as follows:

   a. Lateral, (i.e. run-out or buckling):
      i. For steel rims 4mm

      ii. For aluminium alloy rims
      i. (cast or fabricated) 2mm

   b. Eccentricity:
      i. For all types of rim 3mm

Note: Measurements should be taken from a machined surface in the case of cast aluminium alloy rims.

4. This inspection also applies to the wheel attached to the sidecar.

5. Particular attention should be paid when assessing stainless steel spokes for cracks.

Method of Inspection

1. Examine the condition of the wheels.
2. Where possible spin the wheels and look for buckling and eccentricity.
3. Check the security of the wheels.

Reasons For Rejection

1.

a. A deliberate modification, inadequate repair, excessive corrosion, damaged or fracture of a road wheel which significantly reduces the original strength.

b. A spoke which is missing, excessively loose, bent, corroded or cracked.

c. Loose or missing rivets or bolts in built-up wheels.

2. An excessively distorted or eccentric bead rim.

3. a. Loose or missing wheel nut(s), stud(s) or bolt(s).

b. Insecure wheel.

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WHEEL ALIGNMENT

Form Number: DVT 968
Issue: 1
Origin: DVT
Review: 1 Dec 2020

Information

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

2. 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 an assistant ensure that the front wheel is held upright and in line with the frame.

2. Place a straight edge against the rear tyre parallel to it and as high off the ground as other parts will permit;

3. Estimate the gap (if any) between the straight edge at the front and rear points where it is opposite the front tyre;

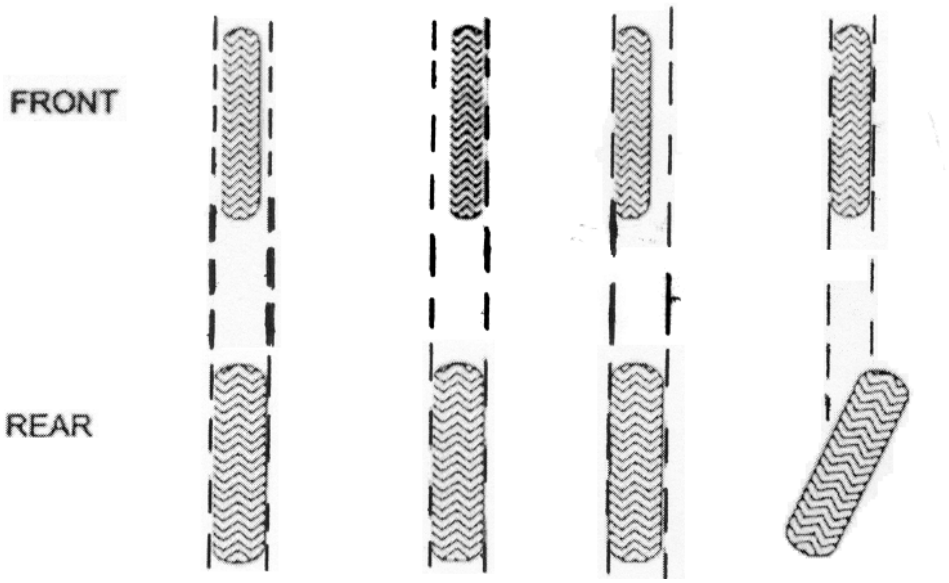
4. Move the straight edge to the other side of the motor bicycle and repeat 2 and 3 above;

5. Sight along the front wheel and forks and assess any misalignment.

Reasons for Rejection

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

Example:



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