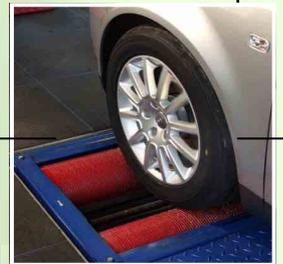


# CITA

COMITÉ INTERNATIONAL DE L'INSPECTION TECHNIQUE AUTOMOBILE  
INTERNATIONAL MOTOR VEHICLE INSPECTION COMMITTEE  
INTERNATIONALE VEREINIGUNG FÜR DIE TECHNISCHE PRÜFUNG VON KRAFTFAHRZEUGEN



## Recommendation no. 5 Inspection of motorcycles



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# CITA

INTERNATIONAL MOTOR VEHICLE INSPECTION COMMITTEE

## Recommendation no. 5

### Inspection of motorcycles

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## RECOMMENDATION N° 5

### INSPECTION OF MOTORCYCLES

Items to be inspected in inspection stations

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#### INTRODUCTION

This document contains a list of items considered to be included in a periodic inspection of motorcycles. It has been prepared with the following general principles in mind:

- 1) The inspections should be carried out using techniques and equipment currently available, and without dismantling or removing any part of the vehicle.
- 2) The equipment used should be currently at an inspection station.
- 3) The inspection must be performed within a limited time.
- 4) Inspections which are not strictly related to the safety of a vehicle but are of a category considered to be necessary to carry out for environmental reasons (e.g. noise) have been included in a separated section.
- 5) Items which are related to the condition of the vehicle and its suitability for use on the road, but which are not considered essential in a periodic inspection have been marked with the indication (X). All the other items listed should be, if possible, considered as mandatory at a periodic inspection of vehicles.

This document identifies the vehicle components to be inspected, it details the method of inspection and provides information on the criteria to be used in determining whether or not the condition of the component is acceptable.

The "principal reasons for rejection" are not necessarily applicable when the item in question is not prescribed in the Regulations of the country carrying out the inspection. But when an item is prescribed and has to respond to quantitative criteria in order to be acceptable the requirements to be met are those defined in the same Regulations. Such requirements are not specified in this document, which merely refers to the need to comply with the Regulations before an item can be regarded as satisfactory.

The document refers to the inspection of a solo motorcycle. Where a side-car is attached to the solo motorcycle it is assumed that the testing authority will extend the inspection to the side-car, using the principles for inspection given in this document.

Where a method of inspection is described as visual it means that, in addition to looking at the items, the inspector has also the possibility to handle the items and listen to them, etc.

A road test has not been incorporated in this document. It should however, be highly recommendable to carry out a road test with regard to the handling qualities of the vehicle, whenever time and circumstances permit.

Regarding the identification of the vehicle, no provision has been made in this document, since this is a matter for administrative arrangements in each country.

Item	Method	Principal reasons for rejection
<b>1. BRAKES</b>		
<b>1. General</b>		
1.1. Mechanical conditions	<ul style="list-style-type: none"> <li>i) Check the handle-bar and brake pedal for security and excess wear at their pivots.</li> <li>ii) Apply the brakes and check the handle-bar lever and brake pedal for reserve travel.</li> </ul>	<ul style="list-style-type: none"> <li>i) A lever loose on the handle or a clamp screw loose or a sing.</li> <li>ii) A pedal insecure or excessive wear at a lever or pedal pivot.</li> <li>iii) Any obstruction to further application of the brake lever or pedal when the brake is fully applied.</li> </ul>
1.1.1. Mechanical brakes	<ul style="list-style-type: none"> <li>i) Examine all brake cable, linkages, rods, outside casings and nipples for excessive wear, corrosion, fraying, rupture of strand of wires or other damage.</li> <li>ii) Check the security of and wear in any clews, pins, bolts or yoke ends in any of the brake operating linkages.</li> <li>iii) Check the security of any brake back plate anchor arm(s) or stop(s).</li> <li>iv) Examine the condition and security of any cable stops and adjusters.</li> <li>v) Examine the condition and security of brake cam shaft levers.</li> <li>vi) Check that the proper amounts of free play are present in the brake pedal and brake lever.</li> </ul>	<ul style="list-style-type: none"> <li>i) Any fractured, deformed or badly corroded parts, rupture of numerous strands or wires.</li> <li>ii) Any clevis, pins or bolts not properly secured.</li> <li>iii) Excessive wear in any clevis, pin, bolt or part of the operating linkages.</li> <li>iv) Any back plate anchor arm or stop insecure or damaged.</li> <li>v) Any brake cable stop or adjuster insecure or damaged.</li> <li>vi) Any brake cam shaft lever loose or damaged, or mounted such that the brake activated cam can lock in the applied position.</li> <li>vii) Inadequate amount of free play in either the brake lever or brake pedal.</li> </ul>
1.1.2. Hydraulically operated brakes	<ul style="list-style-type: none"> <li>i) Operate the brakes and feel whether there is any sponginess or whether with sustained pressure there is a tendency for the lever or pedal to creep.</li> <li>ii) With the brake system pressurised examine all metal pipes, cylinders, reservoirs, flexible hoses and connections for leaks or bulges in flexible hoses.</li> <li>iii) Examine all metal brake pipes for chafing and corrosion.</li> <li>iv) Examine all flexible brake pipes for chafing, perishing and peeling.</li> </ul>	<ul style="list-style-type: none"> <li>i) The brake lever or pedal in such a condition that the brake cannot be applied.</li> <li>ii) The brake lever or pedal creeps when sustained pressure is applied indicating a leak from a pipe, connecting cylinder or wheel unit.</li> <li>iii) A flexible hose bulging.</li> <li>iv) A chafed or badly corroded brake pipe.</li> <li>v) A fractured brake disc or drum.</li> <li>vi) Contamination of a brake disc or drum by brake fluid, lubricating oil or grease.</li> </ul>

Item	Method	Principal reasons for rejection
	<ul style="list-style-type: none"> <li>v) Examine where practical without dismantling, the wear on brake pads or linings and the condition of brake discs and brake drums for deep scoring or fractures.</li> <li>vi) Examine where practical without dismantling each brake disc or drum for contamination by leaking brake fluid, lubricating oil or grease.</li> <li>vii) Examine the security of any brake or disc brake calliper housings. Carry out a test of the brake performance by one of the methods detailed in Annex I and determine the efficiency of the brakes.</li> </ul>	<ul style="list-style-type: none"> <li>vii) An insecure brake back plate, anchor arm or stop or disc-brake calliper housing.</li> </ul>
1.2. Efficiency	Carry out a test of the brake performance by one of the methods detailed in Annex I and determine the efficiency of the brakes.	The brakes do not give at least the minimum efficient figure laid down in the Regulations.

**2. STEERING AND SUSPENSION**

2.1. Steering		
2.1.1. Steering	<p>With the wheels firmly on the ground and in the straight ahead position carry out the following:</p> <ul style="list-style-type: none"> <li>i) Grasp the handlebar by the grips and by the application of firm pressure check for security of the handlebars or fork yokes.</li> <li>ii) Check that the handlebar grips are secure and that any twist grip type control is secure and has the proper amount of free play.</li> <li>iii) Turn the steering from lock to lock and see that there is adequate clearance between the steering parts and fixed parts of the vehicles and that any control cables of the vehicles are not pulled taut and are not likely to be caught up on any projection.</li> </ul>	<ul style="list-style-type: none"> <li>i) Handle-bar clamps insecure.</li> <li>ii) Handle-bar or fork yoke fractured.</li> <li>iii) Handle-bar twist grips insecure, or do not have proper amount of free play.</li> <li>iv) Fouling between steering parts and fixed parts, or steering parts not operating smoothly.</li> <li>v) Insufficient clearance at handle-bar grips on lock</li> <li>vi) Control cables pull taut or full lock or are likely to be caught up on any projection.</li> <li>vii) Variation of the engine speed due to an anomalous tension on the control cables during inspection operation iii).</li> </ul>

Item	Method	Principal reasons for rejection
	iv) Check that any steering damper fitted is properly secure and does not interfere abnormally with the steering action.	viii) Steering damper damaged or secure or interfering abnormally with the steering act.
2.1.2. Steering head bearings and forks	i) With the front wheel raised from the ground turn the steering gently from lock to lock and check that the steering head bearings are not excessively tight. ii) Apply the front brake and push the handle-bars forward and upwards and check for any free play in the steering head bearing. iii) Examine the forks for security and freedom from distortion.	i) An excessively tight steering head bearing. ii) Excessive free play in the steering head bearing. iii) Excessive free play in the fork bearings.
2.2. Suspension		
	i) Check for any excessive free play in the rear suspension. ii) Using body weight, depress the rear suspension as far as possible and check for freedom of movement and security of the suspension unit. iii) Check visually for evidence of any abnormal contact between fixed and moving parts such as might occur when the suspension is fully depressed.	i) Excessive stiffness of movement. ii) An insecure suspension unit. iii) Any fouling between fixed and moving parts.
2.3. Shock Absobers		
	i) With the roadwheels on the ground and using body weight depress in turn the front forks and the rear suspension and by noting the amount of rebound, assess whether the shock absorbers are working. ii) Examine each shock absorber unit, where practical, for damage, fluid leaks and security.	i) A shock absorber missing or not functioning. ii) Extensive damage or corrosion to such an extent that a shock absorber cannot function correctly. iii) A shock absorber or bracket insecure. iv) Excessive fluid leakage from shock absorber to such an extend that it is clear that failure of the fluid seal has occurred.

Item	Method	Principal reasons for rejection
<b>3. ROADWHEELS AND TYRES</b>		
<b>3.1 Roadwheels</b>		
3.1.1. Wheel and wheel bearings	i) With the front and rear wheel raised in turn check each wheel for security in the forks and for wear in the wheel bearings. ii) Check for loose, broken or missing spokes. Rotate each wheel and check for the trueness of the wheel rim. iii) Asses any misalignment, making allowance for any difference in sections of the front and rear tyres. Repeat this on the other side of the wheels.	i) One wheel spindle loose. ii) Excessive free play in a wheel bearing. iii) A broken or missing wheel spoke. iv) A seriously buckled wheel rim.
3.1.2. Wheel alignment	<p><u>Note:</u> this check cannot be carried out if either the front or rear wheel has been found to be buckled to an unacceptable degree at the previous check.</p> i) With a person sitting in the vehicle and with the steering held in the straight ahead position, place a straight edge against the side of the front and rear tyres, parallel to and as high off the ground as practicable.	i) Any significant misalignment which could materially affect the steering and/or the stability of the vehicle.
<b>3.2 Tyres</b>		
	Examine the tyres visually.	i) Tyre of insufficient capacity to carry the load on each axle. ii) The mix of tyre types in the front and rear wheels not in accordance with Regulations. iii) Any damage or cut to a tyre. iv) Insufficient tread on tyres. v) Tyres of the correct type are not fitted to the vehicle. vi) A tyre appreciably under inflated.

Item	Method	Principal reasons for rejection
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<b>4. CHASSIS FRAME AND AUXILIARY ITEMS</b>
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Item	Method	Principal reasons for rejection
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4.1. Fuel tank and piping	Visual.	<ul style="list-style-type: none"> <li>i) Insecure tank or pipes.</li> <li>ii) Leaking fuel or missing effective filler cap.</li> <li>iii) Damaged or chafed pipes.</li> </ul>
4.2. Exhaust pipe and silencer	Visual.	<ul style="list-style-type: none"> <li>i) Insecure or leaking exhaust system.</li> <li>ii) Silencer not functioning efficiently.</li> </ul>
4.3. Power transmission system	Visual.	<ul style="list-style-type: none"> <li>i) Excessive wear or looseness in the transmission from the engine to the driven road wheel.</li> <li>ii) Any leakage of transmission fluid.</li> </ul>
4.4. Mudguards (wings)	Visual.	<ul style="list-style-type: none"> <li>i) A missing, loose or badly corroded mudguard.</li> <li>ii) A mudguard with insufficient clearance of road wheels.</li> </ul>
4.5. Engine mounting and frame	Visual.	<ul style="list-style-type: none"> <li>i) Deteriorated, loose or fractured engine mounting or frame.</li> </ul>
4.6. Electrical wiring	Visual.	<ul style="list-style-type: none"> <li>i) Wiring not adequately cleated or secure.</li> <li>ii) Damaged or deteriorated insulation.</li> </ul>
4.7. Battery	Visual.	<ul style="list-style-type: none"> <li>i) Battery insecurely fixed.</li> <li>ii) Battery leaking.</li> </ul>
4.8. Foot support	Visual.	<ul style="list-style-type: none"> <li>i) A foot support lose or missing.</li> </ul>
4.9. Tilting stand	Visual.	<ul style="list-style-type: none"> <li>i) Tilting stand not rising automatically.</li> </ul>
4.10. Seat (saddle)	Visual.	<ul style="list-style-type: none"> <li>i) A loose seat or seat with defective structure.</li> </ul>
4.11. Driving control	Visual and by operation.	<ul style="list-style-type: none"> <li>i) Any control necessary for the safe operation of the vehicle which is not in good working order and which does not carry out the function for which it is provided.</li> </ul>

Item	Method	Principal reasons for rejection
4.12. Mirrors	Visual.	<ul style="list-style-type: none"> <li>i) A mirror which is does not afford an adequate view to the rear.</li> <li>ii) A loose attachment unit of a mirror.</li> </ul>

## 5. LIGHTING

5.1. Head-lamp		
5.1.1. Aim	With a person sitting on the vehicle to keep the front wheel in the straight ahead position and the vehicle upright, use the head lamp aiming device to determine the longitudinal and vertical aim of the headlamp-both on main and passing beam	<ul style="list-style-type: none"> <li>i) The aim of the headlamp beams is not within the limits laid down by the Regulations.</li> <li>ii) The switching arrangement of the headlamps is not in accordance with the Regulations.</li> <li>iii) Inaccurate commutation of the different headlamp beams.</li> </ul>
5.1.2. Colour		<ul style="list-style-type: none"> <li>i) Colour not in accordance with the Regulations.</li> </ul>
5.1.3. Condition and working	Visual.	<ul style="list-style-type: none"> <li>i) Defective lamp.</li> <li>ii) Defective optical equipment</li> <li>iii) Headlamp not of an approved type.</li> </ul>
5.1.4. Intensity	With a luxmeter determine the intensity of the headlamp.	<ul style="list-style-type: none"> <li>i) Intensity not within the limits stipulated in the Regulations.</li> </ul>
5.2. Front position lights and other mandatory lights		
5.2.1. Compliance with regulations	Visual.	<ul style="list-style-type: none"> <li>i) The colour, position or intensity not in accordance with the requirements of the Regulations.</li> </ul>
5.2.2. Condition and working	Visual.	<ul style="list-style-type: none"> <li>i) Defective lamp.</li> <li>ii) Defective optical equipment.</li> <li>iii) Lamp not of approved type.</li> </ul>
5.3. Rear position lights and other mandatory rear lights		
	As for front lights.	As for front lights.
5.4. Stoplamp		
	As for front lights.	As for front lights.

Item	Method	Principal reasons for rejection
<b>5.5. Non obligatory lights</b>		
	Examine the position, colour, condition and operation of all non obligatory lights fitted to the vehicle.	<ul style="list-style-type: none"> <li>i) A lamp fitted which contravene the Regulations.</li> <li>ii) A lamp in a deteriorated condition or not functioning.</li> </ul>
<b>5.6. Number plate lamp</b>		
5.6.1. Compliance with Regulations	Visual.	As for front lights.
5.6.2. Condition and working	Visual.	As for front lights.
<b>5.7. Rear reflector</b>		
5.7.1. Compliance with Regulations	Visual.	i) Not in accordance with the Regulations.
5.7.2. Condition	Visual.	<ul style="list-style-type: none"> <li>i) Reflecting equipment defective or damaged.</li> <li>ii) Reflector not of an approved type.</li> </ul>
<b>5.8. Direction indicators</b>		
5.8.1. Compliance with Regulations	Visual and by operation.	i) Not in accordance with Regulations.
5.8.2. Condition and working	Visual and by operation.	<ul style="list-style-type: none"> <li>i) Defective optical equipment.</li> <li>ii) Rate of flashing not in accordance with Regulations.</li> <li>iii) Lamps not of an approved type.</li> <li>iv) Defective lamps.</li> </ul>
<b>5.9. Switching</b>		
	Visual and by operation.	<ul style="list-style-type: none"> <li>i) The switching of lamps not in accordance with Regulations.</li> <li>ii) Any provision for special switching of direction indicators (e.g. all indicators flashing at the same time) not operating satisfactorily.</li> </ul>

Item	Method	Principal reasons for rejection
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5.10. Tell tale		
	Visual.	i) Tell tale not operating in accordance with the Regulations.
Item	Method	Principal reasons for rejection

<b>6. ENVIRONMENTAL ITEMS</b>
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6.1. Noise (x)	Carry out a test in accordance with the Regulations.	i) The noise level from the vehicle exceeds the figure laid down in the Regulations.
6.2. Radio anti-interference (x)	Visual examination of anti interference devices.	i) The requirements of the Regulations are not met.



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