

# Table of New Minor and Major Mechanical Defects To Identify During the Mechanical Inspection of a Road Vehicle



## New Minor Defects



## New Major Defects

### 1 - Headlights and lights

In the case of a headlight that uses light emitting diodes (LEDs), less than 100% of the diodes are in working order and in the case of a light that uses LEDs, 75% or less of the diodes are in working order.

An alternately flashing yellow light with which a school bus is equipped is missing, not of the appropriate colour, does not switch on or does not flash.

A single-unit road vehicle with a GVWR of 4,500 kg or more is not equipped with at least one turn signal light located at the rear right or rear left in good working order.

The last vehicle in a combination of road vehicles, where such a vehicle has a GVWR of 4,500 kg or more, is not equipped with at least one turn signal light located at the rear right or rear left in good working order.

### 2 - Steering

A component of the steering system, including the self-steering axle, is deteriorated, damaged or worn to the point of affecting the road vehicle's handling, cracked, broken, insecurely fixed, displaced, deformed, missing or modified.

Play in the steering wheel of a vehicle with a gross vehicle weight rating of 4,500 kg (9,921 lb) or more:

#### **Power steering**

- Play of 75 mm (3 in), where the diameter of the steering wheel is 500 mm (20 in) or less;
- Play of 87 mm (3 1/2 in), where the diameter of the steering wheel exceeds 500 mm (20 in).

#### **Standard steering**

- Play of 87 mm (3 1/2 in), where the diameter of the steering wheel is 500 mm (20 in) or less;
- Play of 100 mm (4 in), where the diameter of the steering wheel exceeds 500 mm (20 in).

The play between each steering stop and its contact point when the steering wheel is fully turned exceeds 6.4 mm (1/4 in).

Play in the steering wheel of a vehicle with a gross vehicle weight rating of 4,500 kg (9,921 lb) or more:

#### **Power steering**

- Play of 87 mm (3 1/2 in), where the diameter of the steering wheel is 500 mm (20 in) or less;
- Play of 100 mm (4 in), where the diameter of the steering wheel exceeds 500 mm (20 in).

#### **Standard steering**

- Play of 140 mm (5 1/2 in), where the diameter of the steering wheel is 500 mm (20 in) or less;
- Play of 196 mm (7 3/4 in), where the diameter of the steering wheel exceeds 500 mm (20 in).

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#### 3 - Chassis frame, underbody, load space and coupling device

A bolt of a grade lower than 8 is used to attach the fifth wheel to the vehicle that is used to tow a semi-trailer with a gross vehicle weight rating of 4,500 kg (9,921 lb) or more.

The drive shaft is insecurely mounted, warped, bent or cracked to the point where it may break away from the vehicle.

While the road vehicle is coupled to a trailer or semi-trailer:

- 25% or more of the locking pins are missing or not working or have a lengthwise play that exceeds 9.5 mm (3/8 in) in the locking mechanism of the slides, in the case of a sliding fifth wheel;
- there is a crack, a weld or a break in the part of a component of the coupling device that bears a load or that is subjected to tension or sheer stress;
- there is wear at the point of contact between the coupling hook and ring in excess of 9.5 mm (3/8 in) for the hook or the ring;
- a component of the coupling device is not securely mounted, cracked, broken, worn, bent, missing, damaged or so maladjusted that it might rupture or fall off;
- more than 20% of the fasteners are missing, broken or slack on a component of the coupling device.

#### 4 - Suspension

A ball is insecurely mounted, shows repair or so damaged that the cord is exposed.

A composite leaf spring is cracked over more than 75% of its length.

A composite leaf spring has an intersection of cracks.

A ball in a pneumatic suspension is absent or deflated.

For a pneumatic suspension, a shock absorber is absent, broken or not fixed at one of its ends.

More than 25% of the components fixing a tank to its group of axles are missing or ineffective on an anchorage component.

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### 5 - Brakes

The brake fluid level is below the minimum level specified by the manufacturer or, where no level is specified, lower than 12.5 mm (1/2 in) below the edge of the filler opening.

A bonded brake lining is less than 1.6 mm (1/16 in) thick for a hydraulic braking system or less than 5 mm (3/16 in) for a pneumatic braking system.

The riveted pads on the active steering axle are less than 4.8 mm (3/16 in) thick or less than 1 mm (1/32 in) above the rivets.

The friction surface of a brake drum is contaminated by oil or grease.

The friction surface of a brake disc is contaminated by oil or grease.

There is an audible air leak in the service braking system.

The low pressure warning buzzer of the vehicle does not activate where the air pressure in the system is less than 380 kPa (55 lb/in<sup>2</sup>).

The low pressure visual or warning light of the vehicle does not activate where the air pressure in the system is less than 380 kPa (55 lb/in<sup>2</sup>).

A heavy vehicle manufactured after May 31, 1996 and fitted with a pneumatic braking system is not equipped with automatic self-adjusting brake levers operating on each wheel.

Air pressure is lowered by more than 130 kPa (19 lb/in<sup>2</sup>) or by more than 20% in the case of a combination of road vehicles.

*(This defect has been withdrawn).*

20% or more of the wheels or combination of wheels of a road vehicle are contaminated by oil or grease on the friction surface of a drum, disc or brake linings or are deeply rusted on both sides of the friction surface of a disc.

A flexible line is worn to the second braid.

A thermoplastic line is worn to the second layer of colour or the second braid.

The safety valve of a tractor truck is absent or does not maintain a minimum of 138 kPa (20 lb/in<sup>2</sup>) while it is towing a trailer or semi-trailer equipped with pneumatic brakes.

None of the low pressure visual and warning lights or buzzers indicating a pressure lower than 380 kPa (55 lb/in<sup>2</sup>) are working.

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### 6 - Fuel system and engine control system

The gas or diesel tank is not fitted with a cap designed for that tank or that can prevent a spill.

### 7 - Exhaust system

For a school bus, the outlet of the exhaust pipe is under or in front of an openable side window.

~~The outlet of the exhaust pipe is under or in front of an openable side window.  
(This defect has been withdrawn).~~

### 8 - Windows and rearview mirrors

One of the first two windows on either side of a school bus having a gross vehicle weight rating of 4,536 kg (10,000 lb) or more is not double glazed and hermetically sealed.

The silvering of a required rearview mirror is unbound (except on the periphery of the reflecting surface without exceeding 10% of the total surface).  
~~(for a school bus or minibus, the silvering shall not be unbound in any way).~~  
*(The last part of the defect has been withdrawn).*

### 9 - Accessories

On the windshield, the outside sun visor extends lower than 150 mm below the top edge of the windshield and covers a section of the surface of the windshield that is swept by the wipers.

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#### 10 - Tires and wheels

The depth of the groove of a tire mounted on a steering axle is less than 3.2 mm (4/32 in).

The wheel bearing lubricant, which is visible through a sight glass, is below the minimum level.

The filler cap, drain plug or hub cap is so damaged that the inside of the hub is exposed, insecurely mounted or missing.

*Tires in a dual tire set are in contact with one another.  
(This defect has been withdrawn).*

A single tire or dual tires in the same wheel assembly designed for off-road driving are mounted on a road vehicle other than a truck specially adapted for farming purposes or a farm trailer.

A tire has a bulge due to a defect in the carcass, is leaking air, is flat or is inflated only to 50% or less of the maximum pressure indicated on the sidewall.

Dual tires in the same wheel assembly have foreign material embedded in the tread or sidewall that could cause a puncture.

The fastening ring for a multipiece wheel is poorly adjusted.

The wheel bearing lubricant is absent or not visible through a sight glass.

#### 11 - Body

An accessory or auxiliary equipment is insecurely mounted.

An accessory or auxiliary equipment required under the Code is missing or not in working order.

A required mudguard is missing or not compliant with the Code.

A trailer or semi-trailer with a GVWR of 4,536 kg (10,000 lb) or more and manufactured on or after September 23, 2005 is not equipped with a bumper that complies with standards.

The seat cushion upholstery of a bus, minibus or motor coach is torn over a length of more than 75 mm (3 in), an area of more than 6,400 mm<sup>2</sup> (10 in<sup>2</sup>) or a depth of more than 6.5 mm (1/4 in).

The seat belt of the driver's seat is missing, inadequate or modified.

The passenger access device does not retract completely.

An air bag for the driver is missing, inadequate or modified.

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#### 11 - Body (cont'd)

The access ramp is not securely fixed to the road vehicle or is inadequate while it is not deactivated.

The alarm and locking system is missing or inadequate while the access ramp is not deactivated.

The luggage compartment or luggage rack is insecurely mounted, or one of its parts is missing, broken or damaged.

The warning light of the air bag system does not come on when the ignition key is in the "ON" position or does not go off within a few seconds.