PART II
REGULATIONS GOVERNING THE CONSTRUCTION, EQUIPMENT AND MAINTENANCE OF VEHICLES

C
WHEELS, SPRINGS, TYRES AND TRACKS

General requirement as to wheels and tracks

20. Every motor cycle and invalid carriage shall be a wheeled vehicle, and every other motor vehicle and every trailer shall be either a wheeled vehicle or a track-laying vehicle.

Diameter of wheels

21. All wheels of a wheeled vehicle which are fitted with tyres other than pneumatic tyres shall have a rim diameter of not less than 670 mm.

Provided that this regulation does not apply to—

(a) a motor vehicle first used on or before 2nd January 1933;
(b) a trailer manufactured before 1st January 1933;
(c) a wheel fitted to a motor car first used on or before 1st July 1936, if the diameter of the wheel inclusive of the tyre is not less than 670 mm;
(d) a works truck or works trailer;
(e) a refuse vehicle;
(f) a pedestrian-controlled vehicle;
(g) a mobile crane;
(h) an agricultural trailed appliance;
(i) a broken down vehicle which is being drawn by a motor vehicle in consequence of the breakdown; or
(j) an electrically propelled goods vehicle the unladen weight of which does not exceed 1270 kg.

Springs and resilient material

22.—(1) Save as provided in paragraphs (3) and (4), every motor vehicle and every trailer shall be equipped with suitable and sufficient springs between each wheel and the frame of the vehicle.

(2) Save as provided in paragraphs (3) and (4) in the case of a track-laying vehicle—
(a) resilient material shall be interposed between the rims of the weight-carrying rollers and the road surface so that the weight of the vehicle, other than that borne by any wheel, is supported by the resilient material; and

(b) where the vehicle is a heavy motor car, motor car, or trailer it shall have suitable springs between the frame of the vehicle and the weight-carrying rollers.

(3) This regulation does not apply to—

(a) a wheeled vehicle with an unladen weight not exceeding 4070 kg and which is—
   (i) a motor tractor any unsprung wheel of which is fitted with a pneumatic tyre;
   (ii) a motor tractor used in connection with railway shunting and which is used on a road only when passing from one railway track to another in connection with such use;
   (iii) a vehicle specially designed, and mainly used, for work on rough ground or unmade roads and every wheel of which is fitted with a pneumatic tyre and which is not driven at more than 20 mph;
   (iv) a vehicle constructed or adapted for, and being used for, road sweeping and every wheel of which is fitted with either a pneumatic tyre or a resilient tyre and which is not driven at more than 20 mph;

(b) an agricultural motor vehicle which is not driven at more than 20 mph;

(c) an agricultural trailer, or an agricultural trailed appliance;

(d) a trailer used solely for the haulage of felled trees;

(e) a motor cycle;

(f) a mobile crane;

(g) a pedestrian-controlled vehicle all the wheels of which are equipped with pneumatic tyres;

(h) a road roller;

(i) a broken down vehicle; or

(j) a vehicle first used on or before 1st January 1932.

(4) Paragraphs (1) and (2)(b) do not apply to a works truck or a works trailer.

Wheel loads

23.—(1) Subject to paragraph (2) this regulation applies to—

(a) a semi-trailer with more than 2 wheels;

(b) a track-laying vehicle with more than 2 wheels; and

(c) any other vehicle with more than 4 wheels.

(2) This regulation does not apply to a road roller.

(3) Save as provided in paragraphs (4) and (5), every vehicle to which this regulation applies shall be fitted with a compensating arrangement which will ensure that under the most adverse conditions every wheel will remain in contact with the road and will not be subject to abnormal variations of load.

(4) Paragraph (3) does not apply in respect of a steerable wheel on which the load does not exceed—

(a) if it is a wheeled vehicle, 3560 kg; and

(b) if it is a track-laying vehicle, 2540 kg.

(5) In the application of paragraph (3) to an agricultural motor vehicle, wheels which are in line transversely on one side of the longitudinal axis of the vehicle shall be regarded as one wheel.
Tyres

24.—(1) Save as provided in paragraph (2), every wheel of a vehicle of a class specified in an item in column 2 of the Table shall be fitted with a tyre of a type specified in that item in column 3 which complies with any conditions specified in that item in column 4.

(2) The requirements referred to in paragraph (1) do not apply to a road roller and are subject, in the case of any item in the Table, to the exemptions specified in that item in column 5.

**TABLE**

<table>
<thead>
<tr>
<th>Item</th>
<th>Class of vehicle</th>
<th>Type of tyre</th>
<th>Conditions</th>
<th>Exemptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Locomotives not falling in item 6</td>
<td>Pneumatic or resilient</td>
<td>No re-cut pneumatic tyre shall be fitted to any wheel of a vehicle with an unladen weight of less than 2540 kg unless the diameter of the rim of the wheel is at least 405 mm</td>
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<td>2</td>
<td>Motor tractors not falling in item 6</td>
<td>Pneumatic or resilient</td>
<td>The following, if every wheel not fitted with a pneumatic tyre is fitted with a resilient tyre—&lt;br&gt; (a) a vehicle mainly used for work on rough ground;&lt;br&gt; (b) a tower wagon;&lt;br&gt; (c) a vehicle fitted with a turn-table fire escape;&lt;br&gt; (d) a refuse vehicle;&lt;br&gt; (e) a works truck;&lt;br&gt; (f) a vehicle first used before 3rd January 1933.</td>
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<td>3</td>
<td>Heavy motor cars not falling in item 6</td>
<td>Pneumatic</td>
<td>No re-cut tyre shall be fitted to any wheel of a vehicle unless it is—&lt;br&gt; The following, if every wheel not fitted with a pneumatic tyre is fitted with a resilient tyre—</td>
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<td>4</td>
<td>Motor cars not falling in item 6</td>
<td>Pneumatic</td>
<td>No re-cut tyre shall be fitted to any wheel of a vehicle unless it is—&lt;br&gt; The following, if every wheel not fitted with a pneumatic tyre is fitted with a resilient tyre—</td>
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<tr>
<td>Item</td>
<td>Class of vehicle</td>
<td>Type of tyre</td>
<td>Conditions</td>
<td>Exemptions</td>
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<td>(a) an electrically propelled goods vehicle or,</td>
<td>(a) a vehicle mainly used for work on rough ground;</td>
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<td></td>
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<td></td>
<td>(b) a goods vehicle with an unladen weight of at least 2540 kg and the diameter of the rim of the wheel is at least 405 mm.</td>
<td>(b) a refuse vehicle;</td>
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<td>(a)</td>
<td></td>
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<td>(c) a works truck;</td>
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<td>(b)</td>
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<td>(d) a vehicle with an unladen weight not exceeding—</td>
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<td>(i) 1270 kg if electrically propelled;</td>
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<td>(ii) 1020 kg in any other case;</td>
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<td>(e) a tower wagon;</td>
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<td>(f) a vehicle fitted with a turn-table fire escape;</td>
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<td>(g) a vehicle first used before 3rd January 1933.</td>
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<td></td>
<td></td>
<td>Pneumatic</td>
<td>No re-cut tyre shall be fitted</td>
<td>The following, if every wheel not fitted with a pneumatic tyre is fitted with a resilient tyre—</td>
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<td>5</td>
<td>Motor cycles</td>
<td>Pneumatic</td>
<td></td>
<td>(a) a works truck;</td>
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<td></td>
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<td></td>
<td>(b) a pedestrian-controlled vehicle</td>
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<td>6</td>
<td>Agricultural motor vehicles which are not driven at more than 20 mph</td>
<td>Pneumatic or resilient</td>
<td>The same as for item 2</td>
<td>The requirement in column 3 does not apply to a vehicle of which—</td>
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<td></td>
<td>(a) every steering wheel is fitted with a smooth-soled tyre which is not less than 60 mm wide where it touches the road; and</td>
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<td></td>
<td>(b) in the case of a wheeled vehicle, every driving wheel is fitted with a smooth-soled tyre which</td>
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</tbody>
</table>


<table>
<thead>
<tr>
<th>Item</th>
<th>Class of vehicle</th>
<th>Type of tyre</th>
<th>Conditions</th>
<th>Exemptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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<td></td>
<td>(i) is not less than 150 mm wide if the unladen weight of the vehicle exceeds 3050 kg, or 76 mm wide in any other case, and either</td>
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<td>(ii) is shod with diagonal cross-bars not less than 76 mm wide or more than 20 mm thick extending the full breadth of the tyre and so arranged that the space between adjacent bars is not more than 76 mm; or</td>
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<td></td>
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<td>(iii) is shod with diagonal cross-bars of resilient material not less than 60 mm wide extending the full breadth of the tyre and so arranged that the space between</td>
</tr>
<tr>
<td>Item</td>
<td>Class of vehicle</td>
<td>Type of tyre</td>
<td>Conditions</td>
<td>Exemptions</td>
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<td>7</td>
<td>Trailers</td>
<td>Pneumatic</td>
<td>Except in the case of a trailer mentioned in paragraph (d) of column 5, no re-cut tyre shall be fitted to any wheel of a trailer drawn by a heavy motor car or a motor car if the trailer—</td>
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<td>(a) has an unladen weight not exceeding—</td>
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<td>(i) if it is a living van, 2040 kg; or</td>
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<td></td>
<td>(ii) in any other case, 1020 kg; or</td>
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<td></td>
<td>(b) is not constructed or adapted to carry any load, other than plant or other special appliance which is a permanent or essentially permanent fixture and has a gross weight not exceeding 2290 kg</td>
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<td></td>
<td>(c) a trailer used to carry water for a road roller being used in connection with road works; the following if every wheel which is not fitted with a pneumatic tyre is fitted with a resilient tyre—</td>
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<td></td>
<td>(i) a works trailer;</td>
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<td>(ii) a refuse vehicle;</td>
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<td>(iii) a trailer drawn by a heavy motor car every wheel of which is not required to be fitted with a pneumatic tyre;</td>
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<td>(iv) a broken down vehicle; or</td>
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<td></td>
<td>(v) a trailer drawn by a vehicle which is not a heavy motor car</td>
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</tbody>
</table>
(3) Save as provided in paragraph (4) a wheel of a vehicle may not be fitted with a temporary use spare tyre unless either—
   (a) the vehicle is a passenger vehicle (not being a bus) first used before 1st April 1987; or
   (b) the vehicle complies at the time of its first use with ECE Regulation 64.

(4) Paragraph (3) does not apply to a vehicle constructed or assembled by a person not ordinarily engaged in the trade or business of manufacturing vehicles of that description.

Tyre Loads and Speed Ratings

25.—(1) This regulation applies—
   (a) to a goods vehicle first used before 1st April 1987 in respect of which a plating certificate has been issued;
   (b) to a vehicle first used on or after 1st April 1987, which is a goods vehicle, a bus or a trailer; and,
   (c) from 1st April 1990 to every vehicle, whenever first used, which is a goods vehicle, a bus or a trailer.

(2) Each axle of a vehicle to which this regulation applies solely by virtue of paragraph 1(a) shall be equipped with tyres which, as respects strength, are designed and maintained adequately to support the maximum axle weight for that axle.

(3) Each axle of a vehicle to which this regulation applies by virtue of paragraph (1)(b) or (c) shall be equipped with tyres which are designed and maintained adequately to support the maximum axle weight for that axle when the vehicle is driven at the speed shown in column 3 in the Table in the item in which the vehicle is described in column 2 (the lowest relevant speed being applicable to a vehicle which is described in more than one item).

![Table](regulation 25(3))

<table>
<thead>
<tr>
<th>Item</th>
<th>Class of Vehicle</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A vehicle of a class for which a maximum speed is prescribed by the 1984 Act.</td>
<td>The speed so prescribed</td>
</tr>
<tr>
<td>2</td>
<td>An electrically propelled vehicle having a maximum speed less than 70 mph.</td>
<td>The maximum speed</td>
</tr>
<tr>
<td>3</td>
<td>A bus which is not driven at more than 50 mph.</td>
<td>50 mph</td>
</tr>
<tr>
<td>4</td>
<td>A low platform trailer, or a municipal vehicle, or a multi-stop local collection and delivery vehicle.</td>
<td>40 mph</td>
</tr>
<tr>
<td>5</td>
<td>A vehicle not falling in items 1 to 4.</td>
<td>70 mph</td>
</tr>
</tbody>
</table>

(4) In this regulation—
“low platform trailer” means a trailer fitted with tyres of 20 rim diameter and below carrying a rectangular plate 7” × 9” carrying two letters “L” each 5” high and 3½” wide with a stroke width of ½” the letters being black on a white ground.

“maximum axle weight” means—
(a) in the case of a vehicle equipped with a Ministry plate in accordance with regulation 70 the axle weight shown in column (2) of that plate;
(b) in the case of a vehicle not equipped with a Ministry plate, but which is equipped with a plate in accordance with regulation 66, the maximum axle weight shown on the plate in respect of item 9 of Part I of Schedule 8 in the case of a motor vehicle and item 7 of Part II of Schedule 8 in the case of a trailer;
(c) in any other case, the weight which the axle is designed or adapted not to exceed when the vehicle is travelling on a road.

“municipal vehicle” means a motor vehicle or trailer limited at all times to use by a local authority, or a person acting in pursuance of a contract with a local authority, for road cleansing, road watering or the collection and disposal of refuse, night soil or the contents of cesspools, or the purposes of the enactments relating to weights and measures or the sale of food and drugs.

“multi-stop local collection and delivery vehicle” means a motor vehicle or trailer used for multi-stop collection and delivery services to be used only within a radius of 25 miles from the permanent base at which it is normally kept.

Mixing of tyres

26.—(1) Save as provided in paragraph (5) pneumatic tyres of different types of structure shall not be fitted to the same axle of a wheeled vehicle.

(2) Save as provided in paragraphs (3) or (5), a wheeled motor vehicle having only two axles each of which is equipped with one or two single wheels shall not be fitted with—
(a) a diagonal-ply tyre or a bias-belted tyre on its rear axle if a radial-ply tyre is fitted on its front axle; or
(b) a diagonal-ply tyre on its rear axle if a bias-belted tyre is fitted on the front axle.

(3) Paragraph (2) does not apply to a vehicle to an axle of which there are fitted wide tyres not specially constructed for use on engineering plant or to a vehicle which has a maximum speed not exceeding 30 mph.

(4) Save as provided in paragraph (5) pneumatic tyres fitted to—
(a) the steerable axles of a wheeled vehicle; and
(b) the driven axles of a wheeled vehicle, not being steerable axles, shall all be of the same type of structure.

(5) Paragraphs (1), (2), and (4) do not prohibit the fitting of a temporary use spare tyre to a wheel of a passenger vehicle (not being a bus) unless it is driven at a speed exceeding 50 mph.

(6) In this regulation—
“axle” includes—
(i) two or more stub axles which are fitted on opposite sides of the longitudinal axis of the vehicle so as to form—
(a) a pair in the case of two stub axles; and
(b) pairs in the case of more than two stub axles; and
(ii) a single stub axle which is not one of a pair;
“a bias-belted tyre” means a pneumatic tyre, the structure of which is such that the ply cords extend to the bead so as to be laid at alternate angles of substantially less than 90 degrees to the peripheral line of the tread, and are constrained by a circumferential belt comprising two or more layers of substantially inextensible cord material laid at alternate angles smaller than those of the ply cord structure;

“a diagonal-ply tyre” means a pneumatic tyre, the structure of which is such that the ply cords extend to the bead so as to be laid at alternate angles of substantially less than 90 degrees to the peripheral line of the tread, but not being a bias-belted tyre;

“a driven axle” means an axle through which power is transmitted from the engine of a vehicle to the wheels on that axle;

“a radial-ply tyre” means a pneumatic tyre, the structure of which is such that the ply cords extend to the bead so as to be laid at an angle of substantially 90 degrees to the peripheral line of the tread, the ply cord structure being stabilised by a substantially inextensible circumferential belt;

“stub axle” means an axle on which only one wheel is mounted; and

“type of structure”, in relation to a tyre, means a type of structure of a tyre of a kind defined in the foregoing provisions of this paragraph.

Condition and maintenance of tyres

27.—(1) Save as provided in paragraphs (2), (3) and (4), a wheeled motor vehicle or trailer a wheel of which is fitted with a pneumatic tyre shall not be used on a road, if—

(a) the tyre is unsuitable having regard to the use to which the motor vehicle or trailer is being put or to the types of tyres fitted to its other wheels;

(b) the tyre is not so inflated as to make it fit for the use to which the motor vehicle or trailer is being put;

(c) the tyre has a cut in excess of 25 mm or 10% of the section width of the tyre, whichever is the greater, measured in any direction on the outside of the tyre and deep enough to reach the ply or cord;

(d) the tyre has any lump, bulge or tear caused by separation or partial failure of its structure;

(e) the tyre has any of the ply or cord exposed;

(f) the base of any groove which showed in the original tread pattern of the tyre is not clearly visible;

(g) either—

(i) the grooves of the tread pattern of the tyre do not have a depth of at least 1 mm throughout a continuous band measuring at least three-quarters of the breadth of the tread and round the entire outer circumference of the tyre; or

(ii) if the grooves of the original tread pattern of the tyre did not extend beyond three-quarters of the breadth of the tread, any groove which showed in the original tread pattern does not have a depth of at least 1 mm; or

(h) the tyre is not maintained in such condition as to be fit for the use to which the vehicle or trailer is being put or has a defect which might in any way cause damage to the surface of the road or damage to persons on or in the vehicle or to other persons using the road.

(2) Paragraph (1) does not prohibit the use on a road of a motor vehicle or trailer by reason only of the fact that a wheel of the vehicle or trailer is fitted with a tyre which is deflated or not fully inflated and which has any of the defects described in sub-paragraph (c), (d) or (e) of paragraph (1), if the tyre and the wheel to which it is fitted are so constructed as to make the tyre in that condition fit for the use to which the motor vehicle or trailer is being put and the outer sides of the wall of
the tyre are so marked as to enable the tyre to be identified as having been constructed to comply with the requirements of this paragraph.

(3) Paragraph (1)(a) does not prohibit the use on a road of a passenger vehicle (not being a bus) by reason only of the fact that a wheel of the vehicle is fitted with a temporary use spare tyre, unless the vehicle is driven at a speed exceeding 50 mph.

(4) (a) Nothing in paragraph (1)(a) to (g) applies to—

(i) an agricultural motor vehicle that is not driven at more than 20 mph;

(ii) an agricultural trailer;

(iii) an agricultural trailed appliance; or

(iv) a broken down vehicle or a vehicle proceeding to a place where it is to be broken up, being drawn, in either case, by a motor vehicle at a speed not exceeding 20 mph.

(b) Nothing in paragraph (1)(f) and (g) applies to—

(i) a three-wheeled motor cycle the unladen weight of which does not exceed 102 kg and which has a maximum speed of 12 mph; or

(ii) a pedestrian-controlled works truck.

(c) Nothing in paragraph (1)(g) applies to a motorcycle with an engine capacity which does not exceed 50 cc.

(5) A recut pneumatic tyre shall not be fitted to any wheel of a motor vehicle or trailer if—

(a) its ply or cord has been cut or exposed by the recutting process; or

(b) it has been wholly or partially recut in a pattern other than the manufacturer's recut tread pattern.

(6) (a) In this regulation—

“breadth of tread” means the breadth of that part of the tyre which can contact the road under normal conditions of use measured at 90 degrees to the peripheral line of the tread;

“original tread pattern” means in the case of—

a re-treaded tyre, the tread pattern of the tyre immediately after the tyre was re-treaded; a wholly recut tyre, the manufacturer's recut tread pattern; a partially recut tyre, on that part of the tyre which has been recut, the manufacturer's recut tread pattern, and on the other part, the tread pattern of the tyre when new, and any other tyre, the tread pattern of the tyre when the tyre was new.

“tie-bar” means any part of a tyre moulded in the tread pattern of the tyre for the purpose of bracing two or more features of such tread pattern;

“tread pattern” means the combination of plain surfaces and grooves extending across the breadth of the tread and round the entire outer circumference of the tyre but excludes any—

(i) tie bars or tread wear indicators;

(ii) features which are designed to wear out substantially before the rest of the pattern under normal conditions of use; and

(iii) other minor features; and

“tread wear indicator” means any bar, not being a tie-bar, projecting from the base of a groove of the tread pattern of a tyre and moulded between two or more features of the tread pattern of a tyre for the purpose of indicating the extent of the wear of such tread pattern.

(b) The references in paragraph (1)(g)(i) to grooves are references—

if a tyre has been recut, to the grooves of the manufacturer's recut tread pattern; and
Tracks

28.—(1) Every part of every track of a track-laying vehicle which comes into contact with the road shall be flat and have a width of not less than 12.5 mm.

(2) The area of the track which is in contact with the road shall not at any time be less than 225 cm$^2$ in respect of every 1000 kg of the total weight which is transferred to the road by the tracks.

(3) The tracks of a vehicle shall not have any defect which might damage the road or cause danger to any person on or in the vehicle or using the road, and shall be properly adjusted and maintained in good and efficient working order.