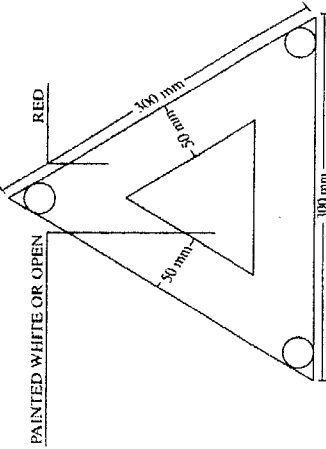


	brake valves (inspection in vehicle)		<p>a) there is any fracture, damage or insecure attachment;</p> <p>b) full travel of the control is obstructed;</p> <p>c) any connection is loose, or</p> <p>d) there is an audible leak in the system.</p>
48.	Motor vehicle capable of travelling back- wards & forwards Reg 211	All motor vehicles	<p>Reject if a motor vehicle, other than a motor cycle, motor tricycle or motor quadracycle, the tare of which exceeds 570 kilograms, cannot be driven backwards and forwards.</p>
49.	Emergency warning signs (Triangles)  Reg 214 SABS 1329	<p>"Motor vehicle" excludes an ambulance, motorcar, motor cycle, tricycle or quadracycle.</p> <p>Note : A new regulation has been published, but will only become effective on 1 July 2004.</p>	<p>Reject if -</p> <p>a) there is not at least one emergency warning sign carried in the motor vehicle that is -</p> <p>i) a double-sided sign, 300mm x 300mm x 300mm;</p> <p>ii) the red portion is not red reflective material or painted red with red retro-reflectors fitted at each corner;</p> <p>b) there is not at least one emergency warning sign carried on a motor vehicle with a gross vehicle mass exceeding 3 500 kilograms which -</p> <p>i) is a warning sign complying with the requirements of standard specifications SABS 1329 "Retro-Reflective and Fluorescent Warning Signs For Road Vehicles", Part 1: "Triangles"; and</p> <p>ii) bears a certification mark.</p> <p>Note : In the case of a semi-trailer or trailer, the emergency warning sign may be carried in the drawing vehicle.</p>

50.	Chassis or frame	All vehicles Excessive corrosion in this context means that its strength has been drastically reduced.	 <p>Reject if -</p> <ol style="list-style-type: none"> <li>there are any cracks in, or if there is excessive corrosion of, any cross-member or main member;</li> <li>any cross-member or main member is deformed to the extent that the control of the vehicle or safe carriage of the load could be affected;</li> <li>any fitch plate, nut, bolt or other fastening between the frame and a cross-member is loose or insecure, or is missing; or</li> <li>there has been any modification, welding or drilling that weakens the chassis or frame</li> </ol>
51.	Electrical wiring and equipment Reg 205	All vehicles Excessive corrosion in this context means that -	<p>Reject if -</p> <ol style="list-style-type: none"> <li>any wiring is not properly insulated or if there is excessive corrosion;</li> <li>any wiring is not secured or is chafing in a manner likely to affect its insulation;</li> <li>the battery and battery carrier are not secure;</li> <li>the battery case is leaking or a battery cap is missing, or</li> <li>any switch is loose or does not operate correctly.</li> </ol>
		<ul style="list-style-type: none"> <li>over 10 % of the original material thickness or area has been lost; or</li> <li>the corrosion that has taken place will cause bad electrical connections.</li> </ul>	

52.	Engine - Starting and functioning	<p>All self propelled vehicles</p> <p>Functioning normally means -</p> <ul style="list-style-type: none"> <li>• the engine is not misfiring;</li> <li>• the engine does not lack power to the extent that the vehicle would hinder road traffic; or</li> <li>• engine failure will not happen very soon (e.g. heavy big-end knock).</li> </ul>	<p>Reject if the engine is not capable of being started by the self-starter or, if not equipped with a self-starter, by means of a crank handle or similar device.</p>
53.	Engine - Smoke and leaks		<p>Reject if, after the engine is started -</p> <ol style="list-style-type: none"> <li>a) the vehicle emits excessive smoke or fumes;</li> <li>b) there is an leak in the engine cooling system, or</li> <li>c) there is any leak in the fuel system.</li> </ol> <p>Reject if, with or without the engine running, there are oil leaks to the extent that the oil visibly moves or drips during inspection.</p>
54.	Engine - Fitting of non-standard engines		<p>If any engine is fitted that is not of the standard make and type for that particular vehicle, reject if, the engine is too powerful for safe operation of the vehicle in question.</p>
55.	Engine cover Reg 206		<p>Reject if the engine is not covered in such manner that the engine is not a source of danger to a person (motorcycles/ tricycles/quadrucycles exempted).</p>
56.	Engine and transmission mountings		<p>Reject if any mounting or mounting bracket -</p> <ol style="list-style-type: none"> <li>a) is missing or is loose or fractured;</li> <li>b) has deteriorated to the extent that its effectiveness is impaired;</li> <li>c) is poorly welded, or</li> <li>d) has had its effectiveness impaired because of cutting of the chassis or the bodywork.</li> </ol>

57.	Drive chain	Motorcycle/tricycle/quadrucycle and any other vehicle with chain and sprockets	<p>Reject if, in the case of a vehicle that has a driving chain and sprockets -</p> <ul style="list-style-type: none"> <li>a) the chain is out of alignment or not properly tensioned;</li> <li>b) the chain is excessively worn or the chain guard is missing, or</li> <li>c) the sprocket teeth are "hooked" or otherwise excessively worn.</li> </ul>
58.	Oil leaks		<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) there is oil leaking from any assembly to the extent that the oil visibly moves or drips during inspection;</li> <li>b) there is any evidence of excessive oil spray, or</li> <li>c) the oil level is not visible on the dip stick.</li> </ul>
59.	Fuel system and fuel tank Reg 205		<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) the fuel tank is not secure or if any part of the system is leaking or has, in the opinion of the examiner, been repaired in an unsatisfactory manner;</li> <li>b) a filler cap is missing or is defective, or</li> <li>c) fuel pipes are damaged, chafed or not secured.</li> </ul>
60.	Exhaust system Reg 209 SABS 0181 SABS 0281 SABS 097		<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) except in the case of slip joints on heavy vehicles where slight leaks are acceptable, the exhaust gas leaves the exhaust system by means other than through the silencer or filling device;</li> <li>b) the exhaust gas or smoke is so dense as to cause a nuisance to or obstruct the vision of other road users;</li> <li>c) the exhaust pipe or silencer is in such a position that oil or other flammable liquid or material can drip or fall onto it, or is not in efficient working order, or is so placed and maintained that exhaust gas or smoke leaks into the driving cab or passenger compartment of the vehicle;</li> <li>d) the exhaust system is within 25 mm of any hydraulic brake system pipe unless it has been properly insulated;</li> <li>e) any exhaust gases are discharged onto any fuel container, fuel hose, spare wheel</li> </ul>

			<p>(if fitted), battery or any part of the brake system;                  f) the exhaust system is not secure, or                  g) when the vehicle is tested in accordance with either SABS 0181 or SABS 097, any of the relevant recommended noise limits given in the relevant standard are exceeded.</p>
61.	Suspension units - Springs		<p>Reject if -                  a) any spring is broken or sagging, or has been "packed" (to counter sagging) with materials or components other than those specified by the manufacturer;                  b) any spring leaf or U-bolt is missing or is loose, broken or cracked;                  c) a spring centre bolt or clip is missing or is broken;                  d) the springs do not maintain the unladen vehicle in a reasonably level position;                  e) there is any crack in the spring cradle, or                  f) any part shows signs of having been repaired by heating or welding.</p>
62.	Suspension units - Shackles	<p>Excessive in this context means that wear has reached the point where -</p> <ul style="list-style-type: none"> <li>• the strength of the shackle has clearly been reduced;</li> <li>• the manufacturer's limits have been exceeded; or</li> <li>• there is a danger of failure of the shackle.</li> </ul>	<p>Reject if -                  a) a shackle or shackle pin shows excessive wear;                  b) the wear in any shackle bearing is excessive;                  c) the side clearance in a shackle is excessive; or                  d) a slipper is fractured, excessively worn or not securely fixed.</p>
63.	Suspension units - Axle locating assembly		<p>Reject if -                  a) any part is missing, or is loose, fractured, permanently distorted or damaged;                  b) bearing surfaces show excessive wear;                  c) in the case of bonded suspension units, the flexible element is not firm or shows evidence of failure of the bond, or                  d) the vehicle is "crabbing".</p>
64.	Suspension units -	Any detectable air leak should cause the	<p>Reject if -</p>

	Air suspension	vehicle to be rejected because it can affect the charging time and reserve capacity of the brake system.	<p>a) there is an excessive air leak in the system;</p> <p>b) the levelling system is defective;</p> <p>c) when fully deflated, a suspension bellows is in such a condition that the body of the vehicle fouls any road wheel, or</p> <p>d) the vehicle is noticeably leaning.</p>
65.	Suspension units - Hydraulic suspension		<p>Reject if -</p> <p>a) any fittings or hydraulic pipes are loose, chafing or leaking; or</p> <p>b) the operation of the hydraulic system is not as prescribed by the manufacturer.</p>
66.	Suspension units - Front and rear forks	Motorcycle/tricycle/quadrucycle	<p>Carefully examine the front and rear forks. Reject if -</p> <p>a) there is any sign of re-design or modification (other than a modification made or approved by the manufacturer) of the front forks or suspension;</p> <p>b) there is any crack, bend or twist (other than bends or twists formed during original manufacture) in the front forks;</p> <p>c) there is any sign of the forks having been heated or welded (other than during original manufacture);</p> <p>d) any bolt or rivet is missing;</p> <p>e) any brake torque arm is not properly secured;</p> <p>f) there is excessive play fore and aft in the front forks, or</p> <p>g) rear suspension fork bushes are excessively worn.</p>
67.	Suspension units - Semi-trailer Reg 219		<p>Reject unless -</p> <p>a) a semi-trailer first registered on or after 1 July 1999 is fitted with only one axle or one axle unit, and</p> <p>b) the axle unit is fitted with one type of suspension only, namely either air suspension, steel suspension or rubber suspension.</p>
68.	Suspension units - Road test		<p>Examine the performance of the steering and front suspension in a road test on a road with a reasonably level, dry, smooth and hard surface (this test may be combined with the braking test on the road).</p>

			<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) the vehicle cannot maintain a straight-ahead direction;</li> <li>b) wheel wobble becomes evident, or</li> <li>c) any defect becomes apparent when the steering is turned from side to side at a speed of 5 km/h to 10km/h.</li> </ul>
69.	Shock absorbers	<p>All vehicles</p> <p>An "excessive fluid leak" in this context means that hydraulic fluid, rather than vapour, is escaping. This is a valid reason to reject the vehicle, because it affects the function of the shock absorber.</p>	<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) a shock absorber is loose;</li> <li>b) an anchorage or a linkage is fractured or is excessively worn;</li> <li>c) an excessive fluid or air leak is present;</li> <li>d) a shock absorber is damaged to the extent that the unit is not functioning correctly;</li> <li>e) where it can be seen that the vehicle is designed for the fitment of shock absorbers and these are missing, or</li> <li>f) in the case of motorcycles/tricycles/quadrucycles, the front mudguard or frame touches the tyre, when the handlebar is pressed down, or the handlebar "hits back solid" when it is allowed to rebound.</li> </ul>
70.	Stub axles, wheel bearings, control arms and kingpins	<p>"Excessive" in this context means that wear has reached the point where -</p> <ul style="list-style-type: none"> <li>• the strength of the equipment has been clearly reduced;</li> <li>• the wear limits have been exceeded;</li> <li>• there is a danger of failure;</li> <li>• free play is felt where it should not be present; or</li> <li>• free play affects the control of direction of the vehicle.</li> </ul>	<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) there is excessive play present;</li> <li>b) the kingpin or ball-joint assembly is loose in the axle beam or its pin-retaining device is missing;</li> <li>c) the control arm bushes are worn or any part is not properly affixed or is missing, or</li> <li>d) the control arms are cracked, or are bent, twisted or welded other than by the vehicle manufacturer.</li> </ul>

71.	Stabilizers and anti-roll bars		<p>Reject if -</p> <p>a) a stabilizer or an anti-roll bar (when critical to vehicle safety), as specified by the manufacturer, is missing;</p> <p>b) a stabilizer or an anti-roll bar is bent or has been repaired by heating or welding;</p> <p>c) stabilizer bushes are worn;</p> <p>d) stabilizer mountings are in poor condition, or</p> <p>e) any welds or bends, other than those introduced by the vehicle manufacturer, or any signs of damage are apparent in the front suspension.</p>
72.	Steering mechanism	<p>"Excessive" in this context means that wear has reached the point where -</p> <ul style="list-style-type: none"> <li>• the strength of the equipment has been clearly reduced;</li> <li>• the wear limits have been exceeded;</li> <li>• there is a danger of failure;</li> <li>• free play is felt where it should not be present; or</li> </ul> <p>free play affects the control of direction of the vehicle.</p>	<p>Reject if -</p> <p>a) any part of the steering mechanism is missing, or is cracked, fractured, damaged, distorted, loose or excessively worn;</p> <p>b) the proper movement of any part is obstructed by another part of the vehicle;</p> <p>c) any fastener, retaining device or locking device is missing or is not correctly fitted;</p> <p>d) any part shows signs of having been repaired by packing, heating or welding that is not approved by the vehicle manufacturer;</p> <p>e) the steering mechanism does not operate smoothly throughout its working range;</p> <p>f) there are excessive oil leaks;</p> <p>g) the minimum turning radius of the vehicle exceeds</p> <ul style="list-style-type: none"> <li>i) 13,1 m if fitted with a single steering axle; or</li> <li>ii) 17,5 m if fitted with twin steering axles in the case of a busstrain or rigid goods vehicle; or</li> </ul> <p>h) steering stops are missing, or are not similarly adjusted on each side.</p>
73.	Power steering	<p>Excessive valve travel causes too much free rotation of the steering wheel when the direction of the vehicle is changed.</p>	<p>Examine the power steering with and without the engine running. Reject if -</p> <ul style="list-style-type: none"> <li>a) the rod anchorage is fractured or loose;</li> <li>b) the cylinder is fractured or leaking;</li> <li>c) the fluid pipes are damaged or leaking or are fouling other parts of the vehicle;</li> <li>d) there is excessive free valve travel or the unit is out of alignment or the power</li> </ul>



74.	Drive train	<p>All vehicles</p> <p>Universal joints : No excessive play up and down and radial play is allowed. The limits are</p> <ul style="list-style-type: none"> <li>• light vehicles: maximum play 0,5 mm; and</li> <li>• heavy vehicles: maximum play 1 mm.</li> </ul>	<p>assistance is inoperative, or there is evidence that the power assistance (when critical to the vehicle safety) has been removed or disconnected.</p> <p>e)</p>
			<p>Reject if -</p> <p>a) a flange bolt is loose or is missing or a flange is loose on its shaft;</p> <p>b) there is excessive wear in a shaft bearing;</p> <p>c) a bearing housing is fractured or not secure;</p> <p>d) there is a damaged or bent shaft;</p> <p>e) there is significant deterioration of the flexible mounting of a bearing housing;</p> <p>f) there is excessive wear on the splined joint;</p> <p>g) there is excessive vibration or abnormal noise (or both);</p> <p>h) the clutch slips or gives excessive shudder;</p> <p>i) gears cannot be selected or will not remain in mesh without manual assistance;</p> <p>j) in the case of an automatic gearbox, the engine will start with the gear lever in one or more of the forward or reverse positions or does not start in the neutral position, or</p> <p>k) a boot of a constant velocity joint is torn or permits lubricant to escape.</p>
75.	Wheel alignment		<p>Use an acceptable alignment indicator to measure the side slip or "scuff" on the front wheels. Check the wheel camber.</p> <p>Reject if -</p> <p>a) side slip or "scuff" of the front wheels exceeds 12 mm/m or the manufacturer's specified limits;</p> <p>b) the camber exceeds the manufacturer's specified limits;</p> <p>c) in the case of a semi-trailer, any axle is out of square to the longitudinal centre-line of the vehicle by more than 10,0 mm per metre of length of trailer, or</p> <p>d) in the case of a motorcycle/tricycle/quadracycle, the front wheel(s) (in the straight-ahead position) and rear wheel(s) are not in the same vertical plane. When</p>

76.	Braking system - General  Reg 154 SABS 1207 SABS 1051 SABS 1506 SABS 1447	All vehicles  "Excessive" in this context means wear to the point where - <ul style="list-style-type: none"> <li>• there is a danger of failure;</li> <li>• the strength of the equipment has been clearly reduced;</li> <li>• the wear is more than that specified by the manufacturer;</li> <li>• there is free play where it should not be present; or</li> <li>• the efficiency of force transmission or displacement has been reduced. Anti-theft device connected to the brake system.</li> </ul>	relevant, check the alignment of the sidcar wheel and reject if it is not parallel to or has slight "toe-in" towards the front wheel (in the straight-ahead position).  Reject if - <ul style="list-style-type: none"> <li>a) any part of the braking system is missing, or is cracked, fractured, damaged, distorted, loose or excessively worn;</li> <li>b) the proper movement of any part is obstructed by another part of the vehicle;</li> <li>c) any fastener, retaining device or locking device is missing or is incorrectly fitted;</li> <li>d) any part shows signs of having been repaired by heating or welding;</li> <li>e) in the case of motor vehicles first registered on or after 1 July 1990, an anti-theft device is connected to the braking system or in any way interferes with the braking system;</li> <li>f) except in the case in paragraph (g), any goods vehicle the gross vehicle mass of which exceeds 3500 kg, a minibuss, bus or tractor that was first registered on or after 1 January 1986 is not fitted with brakes that comply with the relevant parts of SABS 1051 or with SABS 1207;</li> <li>g) a tractor not designed for or capable of operating at a speed exceeding 35 km/h or a trailer drawn by such tractor, and first registered on or after 1 July 1999, is not fitted with brakes that comply with SABS 1051 or SABS 1207 or SABS 1506 or the relevant part of SABS 1447, or</li> <li>h) in the case of a trailer with a gross vehicle mass exceeding 3 500 kg, the trailer is not fitted with a service brake.</li> </ul>
77.	Braking system - Specific items	All vehicles  "Excessive" in this context means wear that has reached the point that - <ul style="list-style-type: none"> <li>• on a 400 mm to 420 mm brake drum (16 inch to 16,5 inch), which is normally fitted to heavy vehicles with 10.00 X 20 or 11.00 X 20 tyres, the brake lining thickness is</li> </ul>	Reject if any of the following are found: <ul style="list-style-type: none"> <li>a) excessively worn linings, pads or discs;</li> <li>b) fractured brake drums;</li> <li>c) levers set to incorrect angles;</li> <li>d) linings or pads contaminated with oil;</li> <li>e) operating cylinders or diaphragms with excessive travel (if the manufacturer's service limits are not available, a limit of 55 mm for diaphragm types or half the</li> </ul>

		<p>less than 8 mm (when the brake lining is less than 8 mm thick, the rivets that attach the brake lining to the brake shoe will soon start to scratch the brake drum); or</p> <ul style="list-style-type: none"> <li>the wear is greater than the limit specified by the manufacturer, as shown by the wear indicators on the brake or in the vehicle.</li> </ul>	<p>length of the cylinder for piston types shall apply);</p> <p>f) spring brakes not operating, or wound off, or with the rewinding bolt missing;</p> <p>g) bending of, or damage to, brake rods;</p> <p>h) fraying of, or other damage to, brake cables;</p> <p>i) any leakage of hydraulic oil;</p> <p>j) brake pipes that are excessively chafed, corroded or damaged, or inadequately secured;</p> <p>k) brake pipes that are kinked or bulging, or so positioned as to be liable to be damaged by moving parts or by heat;</p> <p>l) an air reservoir with no provision for draining, either automatically or manually;</p> <p>m) trailer couplings that are interchangeable but not coded;</p> <p>n) an incorrectly adjusted load-sensing valve;</p> <p>o) automatic slack adjusters that have any parts missing;</p> <p>p) leaking air connections or vacuum connections;</p> <p>q) clogged air cleaners;</p> <p>r) frayed, worn or incorrectly tensioned air compressor drive belts;</p> <p>s) hydraulic reservoirs without caps, or</p> <p>t) excessive water or oil (or both) in any air reservoir.</p>
78.	Trailer parking brake	Trailers See braking system : General for the meaning of excessive.	<p>Reject if -</p> <p>a) the brake does not operate on at least two wheels on the same axle;</p> <p>b) the brake mechanism is fractured, excessively worn or excessively corroded, or</p> <p>c) the parking brake cannot be applied.</p>
79.	Brakes	Motorcycles, tricycles and quadrucycles	<p>Subject to the provisions of all the braking regulations given in the NRTA &amp; R or the RTA &amp; R, a vehicle shall be equipped with two separate braking systems, one acting on the front wheel(s) and one on the rear wheel(s). The performance of each braking system shall be equivalent to that specified for an emergency brake and with both braking systems applied, their combined performance shall be equivalent to the performance specified for a service brake.</p>

			<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) there is not an adequate reserve of travel of both foot brake pedal and hand-operated brake lever when fully applied;</li> <li>b) the foot brake pedal does not have a non-slip surface;</li> <li>c) the brakes are not so adjusted that (after making due allowance for nominal resistance to rotation of wheels owing to disc-pad or transmission drag) the vehicle will move freely when the brakes are released;</li> <li>d) an hydraulic brake is not capable of giving full and efficient application of the brake with only one stroke of the lever or pedal (as relevant);</li> <li>e) the lever or pedal of an hydraulic brake continues to move under a constant pressure maintained for 1 minute, or</li> <li>f) the lever or pedal of a brake does not return to its original position when released after application.</li> </ul>
<p>80.</p>	<p>Brakes Reg 151</p>	<p>Trailers</p>	<p>Reject if a trailer -</p> <ul style="list-style-type: none"> <li>a) of which the GVM does not exceed 750kg, is not fitted with at least a device for keeping the trailer stationary;</li> <li>b) of which the GVM exceeds 750kg but does not exceed 3500kg, is not fitted with at least an overrun brake and a parking brake; or</li> <li>c) of which the GVM exceeds 3500kg, is not fitted with at least a service brake and a parking brake.</li> </ul>
<p>81.</p>	<p>Braking performance</p>	<p>Motorcycles, tricycles and quadrucycles</p>	<p>With the vehicle travelling at an initial speed of 35 km/h on a road with a reasonably level, dry, smooth and hard surface, with the tyres properly inflated and the engine disengaged, take measurements (under all conditions of loading) from the actual instant at which the braking controls are moved. If the following maximum stopping distances are exceeded, repeat the test and, if necessary, implement it a third time:</p> <p>Handbrake (front) 30 m</p>

			<p>Foot brake (rear) 30 m Handbrake and foot brake combined: 14 m</p> <p>Reject if -</p> <ul style="list-style-type: none"> <li>a) during the final test(s), the vehicle cannot, under all conditions of loading, be stopped within the appropriate maximum stopping distance;</li> <li>b) the action of either brake is not even and controllable;</li> <li>c) there is any grabbing of the brakes, or</li> <li>d) the brake application affects the steering or the course of the vehicle.</li> </ul>
<p>82.</p>	<p>Braking performance - Service and emergency brakes - Test methods  Reg 155</p>	<p>Light and heavy vehicles</p>	<p>Determine the brake efficiency of both the service brake and the emergency brake, and the individual brake performance, using the methods described in (a) and (b) below:</p> <ul style="list-style-type: none"> <li>a) direct measurement of brake efficiency: Use an acceptable brake roller testing machine or do an actual road test. Reject the vehicle if the braking force developed is less than the appropriate value shown in tables 1 to 8; and</li> <li>b) individual brake performance: Use an acceptable brake roller testing machine to assess the performance of each individual brake and reject if -             <ul style="list-style-type: none"> <li>i) excessive drum ovality or disc distortion is shown by cyclical variation of the braking force, or</li> <li>ii) the output brake force of any individual brake is different from that of any other brake on the same axle by more than 30%.</li> </ul> </li> </ul> <p>NOTE : A vehicle may be presented laden or unladen. NOTE : Should the brake rollers lock, the vehicle should not necessarily be failed as it could well be a roller brake tester fault. Check first and if it is the vehicle, reject it.</p>
<p>83.</p>	<p>Braking performance - Service and emergency brakes</p>	<p>Light and heavy vehicles</p>	<p>With the vehicle travelling at a speed of 35 km/h (or, when relevant, at the speeds given in the appropriate tables 2, 4, 6 and 8) on a road with a reasonably dry, smooth and hard surface and with the engine disengaged, apply the appropriate brake and note the general braking performance. Measure either -</p>

<p>- General braking performance Reg 155</p>	<p>a) the stopping distance from the point at which the braking control first moved, to the point where the vehicle stops, or b) the deceleration, using an acceptable decelerometer.</p> <p>Reject if -</p> <p>i) the stopping distance is more than, or the deceleration is less than, the appropriate value given in tables 1 to 4 for light vehicles and in tables 5 to 8 for heavy vehicles, or</p> <p>ii) during the road test there is excessive pedal travel or brake shudder or the vehicle is pulling to the left or right during the application of the brakes.</p>
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84. Table 1 : Service brake of light vehicle or combination of vehicles capable of exceeding a speed of 35 km/h

1	2	3	4
Initial speed km/h	Maximum stopping distance m	Minimum deceleration m/s <sup>2</sup>	Minimum equivalent braking force N/kg
35	14	44	44

85. Table 2 Service brake of light vehicle or combination of vehicles not capable of exceeding a speed of 35 km/h

1	2	3	4
Maximum initial speed km/h	Maximum stopping distance m	Minimum deceleration m/s <sup>2</sup>	Minimum equivalent braking force N/kg
15	7	1,9	1,9
20	11	1,9	1,9
25	16	1,9	1,9
30	23	1,9	1,9
35	30	1,9	1,9

86. Table 3— Emergency brake of light vehicle or combination of vehicles capable of exceeding a speed of 35 km/h

1	2	3	4
Initial speed km/h	Maximum stopping distance m	Minimum deceleration m/s <sup>2</sup>	Minimum equivalent braking force N/kg
35	30	19	19

87. Table 4— Emergency brake of light vehicle or combination of vehicles not capable of exceeding a speed of 35 km/h

1	2	3	4
Maximum initial speed km/h	Maximum stopping distance m	Minimum deceleration m/s <sup>2</sup>	Minimum equivalent braking force N/kg
15	12	0,95	0,95
20	20	0,95	0,95
25	29	0,95	0,95
30	41	0,95	0,95
35	55	0,95	0,95

88. Table 5— Service brake of heavy vehicle or combination of vehicles capable of exceeding a speed of 35 km/h

1	2	3	4
Initial speed km/h	Maximum stopping distance m	Minimum deceleration m/s <sup>2</sup>	Minimum equivalent braking force N/kg
35	16	44	44

89. Table 6— Service brake of heavy vehicle or combination of vehicles not capable of exceeding a speed of 35 km/h

1	2	3	4
Maximum initial speed km/h	Maximum stopping distance m	Minimum deceleration m/s <sup>2</sup>	Minimum equivalent braking force N/kg
15	7	1,9	1,9
20	11	1,9	1,9
25	16	1,9	1,9
30	23	1,9	1,9
35	30	1,9	1,9

90. Table 7 — Emergency brake of heavy vehicle or combination of vehicles capable of exceeding a speed of 35 km/h

1	2	3	4
Initial speed km/h	Maximum stopping distance m	Minimum deceleration m/s <sup>2</sup>	Minimum equivalent braking force N/kg
35	30	1,9	1,9

91. Table 8 — Emergency brake of heavy vehicle or combination of vehicles not capable of exceeding a speed of 35 km/h

1	2	3	4
Maximum initial speed km/h	Maximum stopping distance m	Minimum deceleration m/s <sup>2</sup>	Minimum equivalent braking force N/kg
15	12	0,95	0,95
20	20	0,95	0,95
25	29	0,95	0,95
30	41	0,95	0,95
35	55	0,95	0,95

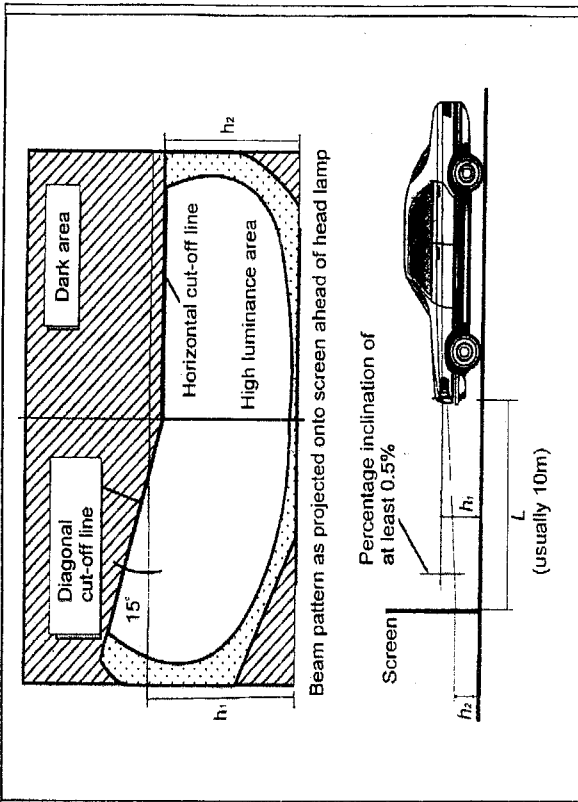
92.	Braking performance - Parking brake Reg 155	Light and heavy vehicles	<p>Test the performance of the parking brake (in both the forward and the reverse direction) on a gradient of not more than 1: 8,33 (12 %), or by using an acceptable brake roller test machine.</p> <p>Reject if, with the engine disengaged, the parking brake alone cannot keep the vehicle stationary.</p>
93.	Overall length Reg 221	All vehicles	<p>Reject if the overall length of -</p> <ul style="list-style-type: none"> <li>a) a bus-train exceeds 22 m;</li> <li>b) a single vehicle, excluding a semi-trailer, including any drawbar or coupling, exceeds 12,5 m;</li> <li>c) a trailer with one axle or axle unit (other than a semi-trailer), the GVM of which does not exceed 12 000 kg, exceeds 8 m, excluding the length of the drawbar or coupling;</li> <li>d) a trailer exceeds 1,8 m and there is no articulation between the drawing vehicle and the trailer, including any drawbar or coupling;</li> <li>e) a trailer with one axle or axle unit (other than a semi-trailer), the GVM of which exceeds 12000 kg, exceeds 11,3 m, excluding the length of the drawbar or coupling;</li> <li>f) a trailer not referred to in (c), (d) and (e) above (other than a semi-trailer), the GVM of which exceeds 12000 kg, exceeds 12,5 m, excluding the length of any drawbar or coupling; or</li> <li>g) a bus exceeds 15 m</li> </ul> <p>Note : Equipment fitted to the front of a vehicle to protect its bodywork and lighting equipment that increases the overall length of that vehicle by not more than 300 millimetres, shall not be taken into account for the purpose of calculation of the overall length of a vehicle: Provided further</p>



94.	Overall width Reg 223	All vehicles	that the said protection equipment does not include the bumper fitted by the manufacturer of the motor vehicle concerned. Reject if the overall width of any vehicle, including a minibus, exceeds 2,5 m, except that 2,6 m is permitted in the case of - a) goods vehicles with a GVM of at least 12 000 kg, and b) buses where the distance between the centre-lines of the two front wheels exceeds 1,9m.
95.	Overall height Reg 224	All vehicles	Reject if the overall height of - a) any vehicle (other than a double-decker bus) laden or unladen, exceeds 4,3 m, or b) a double-decker bus exceeds 4,65 m.
96.	Wheelbase Reg 225	All vehicles	Reject if the wheelbase of - a) a semi-trailer exceeds 10 m; b) a bus-train exceeds 15 m, or c) any other vehicle exceeds 8,5 m. Note : The wheelbase of a bus-train shall be the distance measured from the centre of the front axle to the centre of the middle axle.
97.	Front overhang Reg 226	All vehicles	Reject if the front overhang of - a) a semi-trailer exceeds 1,8 m; or b) any vehicle (other than a semi-trailer or a trailer with one axle or one axle unit) - i) exceeds 60 % of the wheelbase; ii) exceeds 6,2 m less half the wheelbase, in the case of a vehicle in which the front surface of the backrest of the driver's seat at seat level is not more than 1,7 m of the front end of the vehicle, when such seat, if adjustable, is in the rearmost position, or iii) exceeds 5,8 m less half the wheelbase, in the case of any other vehicle.

98.	Rear overhang Reg 226	All vehicles	<p>Reject if the rear overhang of -</p> <p>a) a vehicle referred to in NRTR 230 or RTR 436, bus, self-propelled caravan or any vehicle designed or adapted for use in connection with street cleaning or the disposal of refuse or sewage exceeds 70 % of its wheelbase;</p> <p>b) any trailer with one axle or one axle unit, other than a semi-trailer, exceeds 50% of the length of the body of the trailer;</p> <p>c) any trailer, other than a semi-trailer, with two axles, where the distance between the centre-lines of the axles is less than 1,2 m, exceeds 50% of the length of the body of the trailer, or</p> <p>d) any other vehicle exceeds 60% of the wheelbase.</p>
99.	Lamps : General Reg 157, 158, 181, 182, 183 & 184	All vehicles	<p>Reject if -</p> <p>a) any lamp required in terms of the NRTA &amp; R or the RTA &amp; R is not fitted. These are -</p> <p>i) headlamps with main and dipped beams;</p> <p>ii) front position lamps;</p> <p>iii) rear lamps;</p> <p>iv) stop lamps, and</p> <p>v) registration plate lamp(s);</p> <p>b) any lamp listed in (a) above is damaged, does not work or is not secure;</p> <p>c) any lamp is not bright enough to be seen from a distance of 150 m when visibility is such that persons and vehicles are not clearly discernible at 150 m;</p> <p>d) any lamp other than one authorized in terms of the NRTA &amp; R or the RTA &amp; R is fitted;</p> <p>e) any lamp, excluding a reversing lamp, a direction indicator and an official flashing identification lamp, emits a light that is not red in</p>

<p>100.</p>	<p>Headlamps Reg 159 SABS 1046 SABS 1376-2</p>	<p>All vehicles</p>	<p>colour towards the rear, f) any lamp, excluding an official flashing identification lamp, emits a red light towards the front or to either side of the vehicle; g) any lamp is obscured by portions of the vehicle, excluding protective lamp grilles, or h) any lamp, excluding headlamps, fog lamps, spot lamps and inspection lamps, does not emit a diffused light.</p>
<p>Reject if -</p>			<p>a) the centre of any headlamp is less than 450 mm or more than 1,4 m from ground level, or more than 500 mm behind the front end of the vehicle; b) there is not a dipped-beam headlamp on each side of the longitudinal centre-line of the vehicle, with the outermost portion of its illuminating surface within 400 mm of the outer edge of the vehicle, unless a parking lamp is provided on the same side; c) there are more than three headlamps or more than one dipped-beam headlamp on each side of the longitudinal centre-line of the vehicle; d) any main or dipped beam is incorrectly adjusted in terms of the NRTA &amp; R or the RTA &amp; R;</p>



- e) headlamp beams are not of similar intensity;
- f) any lens or reflective surface is clouded, discoloured, broken or loose;
- g) the dip switch does not function properly;
- h) any lamp is fitted with a lens of clear material, unless the lamp has other means of preventing dazzle;
- i) in the case of a motorcycle, a side-car is not fitted with either:
  - i) a headlamp;
  - ii) a parking lamp on the outer edge of the front of the side-car;
- j) in the case of a motor tricycle with two wheels in front or a motor quadrucycle, there is not a dipped-beam headlamp on each side of the longitudinal centre-line of the vehicle, with the outermost portion of its illuminating surface within 400 mm of the outer edge of the

101.	Fog lamps (if fitted)  Reg 163	All vehicles	<p>vehicle, unless a parking lamp is provided on the same side; the main beam and dipped beam of a head lamp fitted to a motor vehicle first registered on or after 1 January 2001 do not comply with the requirements of SABS 1046 and SABS 1376-2; or</p> <p>l) in the case of a motor cycle without a side-car or a motor tricycle with one wheel in front, is not fitted in front with -</p> <ul style="list-style-type: none"> <li>i) one head lamp capable of emitting a main-beam and a dipped-beam;</li> <li>ii) one head lamp capable of emitting a main-beam and one head lamp capable of emitting a dipped-beam, both of which are fitted in the same vertical plane; or</li> <li>iii) two headlamps, each capable of emitting a main-beam and a dipped-beam, both of which are fitted in the same horizontal plane.</li> </ul>
			<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) there are more than two fog lamps fitted to the vehicle at the front or at the rear;</li> <li>b) any fog lamp is not correctly adjusted;</li> <li>c) any fog lamp fitted to the front of a vehicle has the highest point of its illuminating surface higher than the highest point of the illuminating surface of any dipped-beam headlamp;</li> <li>d) any fog lamp fitted to the rear of a vehicle has the lowest point of its illuminating surface less than 250 mm from ground level, or the highest point of its illuminating surface more than 1 m from ground level;</li> <li>e) any fog lamp at the rear of the vehicle can be brought into operation without a front fog lamp or headlamp being switched on;</li> <li>f) a motorcycle side-car has fog lamps, unless the motorcycle is also</li> </ul>

<p>102.</p>	<p>Parking lamps (if fitted) Reg 164</p>	<p>All vehicles</p>	<p>fitted with a fog lamp or parking lamp, or g) a motorcycle has a fog lamp in front but its sidecar does not have a parking lamp.</p>
<p>Reject if – a) when one parking lamp is fitted at the rear, it is not fitted to the right-hand side of the vehicle, or b) when two parking lamps are fitted at the front and at the rear, any set is not fitted equidistant on either side of the longitudinal centre-line of the vehicle; c) that portion of the illuminating surface furthest from the longitudinal centre-line of the vehicle is more – i) than 500 mm from the adjacent outer edge of the vehicle if registered prior to 1 July 1990; ii) than 400 mm from the adjacent outer edge of the vehicle if registered after 1 July 1990, or d) any head lamp is so fitted that the illuminating surface furthest from the longitudinal centre-line is more than 400 millimetres from the outer-edge of the front of the vehicle, and no parking lamp is fitted.</p>			<p>Reject any vehicle fitted with a lamp that swivels, except those vehicles allowed for in terms of the NRTA &amp; R or the RTA &amp; R, or where, in the opinion of the examiner, such a lamp is used only as an inspection lamp.</p>
<p>103.</p>	<p>Spot lamps (swivelling lamps) Reg 177</p>	<p>All vehicles</p>	<p>A spot lamp that is adjustable – a) may be fitted and used for official purposes on any ambulance, rescue-, fire-fighting-, police-, or traffic-control vehicle; b) may be fitted to a vehicle owned by a medical practitioner or veterinarian, and used in the execution of such person's professional duties; or</p>

104.	Rear lamps (rear position lamps)  Reg 168	All vehicles	<p>c) may be fitted to a breakdown vehicle or a vehicle employed in connection with the supply of electricity or other public essential services: Provided that it is used solely at the scene of an accident or breakdown or for the examination of overhead telephone, telegraph or power lines.</p>
<p>Reject if -</p> <p>a) there is not at least one of the following:</p> <p>i) one rear lamp fitted on either side of the longitudinal centre-line of the vehicle, not more than 400 mm from the outer edges of the widest part of the vehicle;</p> <p>ii) one rear lamp in the centre in the case of a motorcycle/tricycle/quadracycle or a motor vehicle registered before 1 January 1981; or</p> <p>iii) one rear lamp to the right of the centre-line of the vehicle, in the case of a motorcycle/tricycle/quadracycle or a motor vehicle registered before 1 January 1981;</p> <p>b) any rear lamp does not emit a red light of luminous intensity at least two candelas (2 cd);</p> <p>c) in the case of a motor vehicle registered before 1 January 1981, the height, from ground level to the lowest point of the illuminating surface(s) of the rear lamp(s) mentioned in (a) above is lower than 300 mm, or the highest point of the illuminating surface(s) is higher than 2,1 m;</p> <p>d) in the case of a motor vehicle registered on or after 1 January 1981, the height, from ground level to the lowest point of the illuminating surface(s) of the rear lamp(s) mentioned in (a) above, is lower than 350 mm, or the highest point of the illuminating surface(s) is higher than 1,5 m (if the structure of the vehicle makes this impractical, the</p>			

			<p>rear lamps may be fitted such that the highest point of the illuminating surface(s) of the rear lamp(s) is up to 2,1 m from ground level), or</p> <p>e) in the case of a motor vehicle registered before 15 July 1988, excluding a vehicle manufactured before this date and first registered after this date, any rear position lamp is not visible from the specified angles in the horizontal plane as given below:</p> <ul style="list-style-type: none"> <li>i) inwards 45°, and</li> <li>ii) outwards 80°.</li> </ul>
105.	<p>Number plate lamps Reg 170</p>	<p>All vehicles (excluding a tractor)</p>	<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) the rear number plate is not illuminated with a white light (provided by the rear lamp or some other lamp), or</li> <li>b) the white light is visible from the rear other than by reflection.</li> </ul>
106.	<p>Stop lamps Reg 169</p>	<p>All vehicles</p>	<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) any stop lamp is missing;</li> <li>b) any stop lamp does not emit a red light of greater intensity than the rear lamp (rear position lamp);</li> <li>c) any stop lamp does not work when the service brake is applied;</li> <li>d) any stop lamp, when in use, is not visible from 30 m in normal sunlight;</li> <li>e) any stop lamp is not visible from the required angles given in the NRTA&amp;R or the RTA &amp; R -             <ul style="list-style-type: none"> <li>i) inwards and outwards 45°, and</li> <li>ii) upwards and downwards 15°;</li> </ul> </li> <li>f) the height of the centre of any stop lamp is lower than 300 mm or higher than 2,1 m from ground level (although additional stop lamps may be fitted at a height above 2,1 in);</li> <li>g) except in the case of a tractor, or a trailer drawn by a tractor, both of</li> </ul>



			<p>which may have only one stop lamp, there are not two stop lamps; the two stop lamps are not -</p> <ul style="list-style-type: none"> <li>h)             <ul style="list-style-type: none"> <li>i) both fitted equidistant from the longitudinal centre-line of the motor vehicle, and</li> <li>ii) fitted one on each side of the longitudinal centre-line;</li> </ul> </li> <li>i) in the case of a single stop lamp on a motorcycle/tricycle/quadrucycle, the lamp is not in the centre or to the right of the longitudinal centre-line of the vehicle, or</li> <li>j) in the case of a motor quadrucycle or motor tricycle with two back wheels, the two stop lamps are not -             <ul style="list-style-type: none"> <li>i) both fitted equidistant from the longitudinal centre-line of the motor vehicle, and</li> <li>ii) fitted one on each side of the longitudinal centre-line.</li> </ul> </li> </ul> <p>Note : A stop lamp may be incorporated in a rear lamp fitted to a motor vehicle.</p>
<p>107.</p>	<p>Reversing lamps (if fitted)  Reg 175</p>	<p>All vehicles</p>	<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) when a reversing lamp is under the direct control of the driver, it is not connected to a device that makes the driver aware that the lamp is in operation;</li> <li>b) when a reversing lamp is not controlled by the driver, it operates when the reverse gear is not engaged;</li> <li>c) more than two reversing lamps are fitted, or</li> <li>d) the light from a reversing lamp is not diffused and white.</li> </ul>
<p>108.</p>	<p>Side marker lamps (if fitted)  Reg 171</p>	<p>All vehicles</p>	<p>Reject if -</p> <ul style="list-style-type: none"> <li>a) there is no lamp within 400 mm of each end of the vehicle;</li> <li>b) any lamp is less than 300 mm from ground level;</li> <li>c) the distance between successive lamps on any vehicle exceeds 3,6 m;</li> </ul>