

HEAVY VEHICLE TESTING PARAMETERS

Category	Sub-category	Defects
1. Vehicle Identification Number	1.1 Vehicle identification (VIN)	No chassis number or not clear
		Non-existence of GCC or manufacturer specification plate
		Missing ID plate of vehicle
		VIN plate not securely fastened or defaced, misplaced or missing numbers, or non-availability of certificate from dealer
	1.2 Number plate	Number plate not issued or approved by RTA
		Number plate obscured (for example by a towing attachment protective cover and/or frame)
		Number Plate old version
2. Brake	2.1 Brake system	No number plate attached to the trailer
		Broken, excessively worn, leaking, contaminated or not securely mounted brake component
		Damaged or severely deteriorated or distorted hydraulic or pneumatic brake hose
	2.2 Brake booster and ABS	One or more additional wheels not linked with brake line
		Any power/vacuum assistance/compressor/vacuum pumps for the brakes not operating
		ABS failure indicator light on
	2.3 Brake pedals	Brake pedal hard when pressure applied
		Non-presence of anti-slip surface on metal brake pedals
		Presence of metal on rubber faced brake pedals
		Missing or broken brake pedal or handle, or associated components
	2.4 Brake efficiency	Less than 20% of the pedal travel remaining when the vehicle brakes are firmly applied (unless specified by manufacturer)
		One or more air brake system components missing or not fixed
		Failure of brake controls in causing the corresponding brake to activate
		Vehicle does not deviate or pull to one side when braking applied to moving vehicle
	2.5 Brake master cylinder and wheel Cylinders	Difference between each wheel brake between 30% to 49% when applying less than 1KN brake force when testing on roller
		Brake test : Front wheel : Between 30%-49% Rear wheel : Between 30%-49% Hand brake : above 65%
		Difference between each wheel brake above 50% when applying less than 1KN brake force when testing on roller
	2.6 Parking brake	Brake test : Front wheel: Above 50% Rear wheel: Above 50%
		Sign of leak on some brake wheel cylinders
		Master brake cylinder pipeline leaking
	2.7 Hydraulic and pneumatic brake hoses	Parking brake not holding on moderate slope
		Failure of hand brake to activate
		Parking brake ratchet or locking device not holding the parking brake in its applied position
	2.8 Air pressure system	Parking brake cable cracked, curled, frayed or torn
		Air pressure relief valve not operating
		Worn, loose or frayed compressor drive belts of the air pressure system preventing proper operation of the compressor
		Clogged air intake cleaner preventing proper air intake
		Loose mounting bolts on air compressor
		Cracked, broken or loose pulley on air compressor

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3. Steering and Suspension	3.1 Steering components	Inability of front wheels to be turned to the full right or left position without binding or interference
		Misaligned or twisted steering coupler rag joint for steering
		Absent or loose U-Bolts, or positioning parts from steering system
		Not properly secured steering wheel
		Free play due to wear in any steering component (exceeding manufacturer's limits)
		Missing, cracked, broken or worn steering component (exceeding manufacturer's limits)
		Steering component can be seen to have been repaired or modified by heating or welding
		Insecurely fixed steering box or rack to the vehicle frame
		Excessive steering ball joint movement (beyond manufacturer's limits)
		Cracked, curled, frayed, torn or holed rubber-bush joints in steering system
		One or more missing or unsecured nut , bolt or locking device in steering system
	3.2 Power steering component	One or more leaking, damaged or inoperative power steering component
		One or more loose, broken, frayed, missing or cracked power steering belts to reinforcing plies
	3.3 idler arm	Free play at the end of the idler arm (exceeding manufacturer's limits)
	3.4 Suspension	Inoperative shock absorber or strut
		Weak shock absorber or with oil leak
		Insecurely mounted shock absorber or strut
		One or more missing or Unsecured nut, bolt or locking device from suspension system
		One or more cracked, loose, broken, missing or worn axle component, U-Bolt, spring hangers, centre bolt associated with the axle installation or performance
	3.5 Leaf spring and shackles	One or more cracked, loose, broken, missing or worn member of leaf spring , U-Bolt, spring hangers, centre bolt
		Any part of the vehicle (excluding wheel rims, tyres and mud flaps) is closer or higher to the ground than manufacturers safe working limits
	3.6 Coil spring and air bags	Cracked, broken or missing springs, or springs displaced by more than 10% of their width or in contact with wheels, brakes or frame
		Missing, cracked or worn rubber bushes from coil spring or air bag
		Air bags leak on air bag suspension type
		Not properly functioning air suspension system
4. Wheel and tyres	4.1 Road wheel	Cracked wheel or rim, or has pieces of casting missing, or is buckled or shows signs of welding
		The wheel nut does not engage the thread or the wheel stud for the full length of the nut, or the fitting of the wheel nut does not match the taper of the wheel stud hole (where these can be seen without removing hubcaps or wheel trims)
		Any hub has one missing or broken wheel mounting nut, stud or bolt
		Any hub has more than 1 missing or broken wheel mounting nut, stud or bolt (where these can be seen without removing hubcaps or wheel trims)
		Missing, loose, broken, bent or cracked spoke on any wheel
		The tyre or rim falls on any component at any point over the full range of suspension travel or steering movement
	4.2 Road tyre	Tyre tread depth less than 1.5 mm for light vehicle, 3.2 for heavy vehicles on the surface which normally contacts road
		Tyre with deep cuts, bulges,exposed cords, or other signs of carcass failure
		Different tyre construction of all tyres on each axle (cross ply, radial ply or bias belted) or non-compatibility of tyre with rim
		Regrooved tyre without certificate (except where indicated on the sidewall that the tyres are suitable for re-grooving)
		Retreaded tyre fitted to the vehicle not marked with the name or identification of the ret reader and speed rating of the tyre
		Dual tyres contacting each other
		Tyre load and/or speed rating as marked on the tyre sidewall are less than the rating specified by the vehicle manufacturer, as displayed on the tyre placard
		The vehicle manufacturer's specified wheel track measurement is exceeded by more than is currently approved for specific vehicle types
		Radial ply tyre used on the same axle with a bias or belted tyre
		Tyres of different sizes used on the same axle (this does not apply in case of emergency)
		Tyres of different types, such as one snow tyre and regular tyre or bias, belted or radial tyres used on the same axle (this does not apply in case of emergency)
		Tyre pressure exceed manufacturer limit

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5. Body Condition	5.1 Doors and door locks	Unsecured or non-functional one or more inside or outside door latch, control or hinge Any bonnet or similar panel which covers the engine, luggage space or battery compartment and which is forward of the windscreen, does not have a device to secure the panel in the closed position Any bonnet or similar panel which opens from the front (that is, the hinges are at the back) and which, when opened, would obstruct the driver's view through the windscreen, does not have a primary and secondary securing device Any hinges, or slides for doors, tailgates, side gates, tipper trucks gate, hatches, or compartment covers are damaged or worn and likely not to prevent load or passenger from falling off
	5.2 Windscreen and front side windows	Presence of cracks on the windscreen interfering with the driver's view, or deteriorated windscreen Hairline crack exceeding 30 mm long on the windscreen or front side windows Crack from edge exceeding 75 mm long on the windscreen or front side windows
	5.3 body panels chassis and sub frame	Presence of sharp edges due to rusted panels or body damage on the exterior body work and fittings Presence of cracks or advanced rust on any structural member such as a sub frame, floor panel, door seal, door pillars, or hinges Advanced rust on the doors of a vehicle Loose chassis frame members or supporting members Cracked, bended, sagging, or broken chassis frame members or supporting members Missing, damaged or unsecured frame members in load areas Tilting cabin or tray latches do not hold the cabin or tray securely in the operating position Advance rust with main structural members such as sub frames and chassis rails, suspension mountings and parts, steering component mounting points, door seals and pillars, door hinges, latch mounting points, floor panels, boot floor and bulkheads
	5.4 Fifth wheel (tractor trailer)	No or not enough grease on sliding point for fifth wheel coupling Malfunctioning king pin locking mechanism for fifth wheel Missing or not fitted air and electrical connection to the semi-trailer Sliding point worn out, cracked or with missing or broken bolts Fifth wheel not compatible with king pin Mudguards not fitted to all wheels of passenger and goods type vehicles
	5.6 Vision mirrors	Cracked, non-reflective rear vision mirrors, or rear vision mirrors not providing a clear view of the road to the rear of the vehicle No external rear vision mirror fitted to each side of truck Insecurely mounted mirrors
	5.7 Wiper blades, arms, water system	Malfunctioning or deteriorated wiper blades, arms or water system
	5.8 Seats and seatbelts	Seat belt not securely fastened to its mounting, or missing, or belt cut, worn, frayed, split, torn, altered or modified Loose, cracked, broken or missing fasteners on seat frames or attaching points Adjustment mechanisms not working properly or any securing device not holding the seat in the selected position One or more seat with exposed sharp edges or other parts that protrude due to damage
	5.9 Horn Warning device	No horn or modified one
6. Lighting	6.1 Lighting	Malfunctioning hazard lights Warning light not fixed on the top of truck Any of the following lights do not work or has incorrect colour: 1. Clearance lights (trucks and cycle yellow/white) 2. Number plate light (white) 3. Headlights (white) 4. Rear combination lamps (red) 5. Hazard lights, signal lights (yellow) Fog lights (white or yellow lights) mounted higher than the headlights Any light has a tinted cover over it, or any tinting applied to it Tarnished headlight reflector or peeling to the extent that headlight performance is impaired Cracked or broken headlight lens Unsecured headlight assembly or out of position Headlight not showing white light Incorrect headlight aim from effective distance when using head light tester

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7. Engine compartment and driveline	7.1 Engine compartment & Driveline	Significant oil leaks from the engine, gearbox or driveline which allow oil to drop onto the road exhaust system or brake components
		Broken or Unsecured engine or transmission mounting
		Loose or missing fasteners on couplings in the driveline
		Bent, damaged, loose or noticeably misaligned transmission drive shaft in the engine compartment
		One or more universal or constant velocity joints has excessive wear, is misaligned, seized or is not securely attached in the engine compartment
		Batteries are not securely mounted or leak.
		Damaged electrical wiring or connectors, or hanging loose in the engine compartment and drivelines
	7.2 Exhaust system	One or more insecurely mounted component of the exhaust system or falling on any other component
		Exhaust pipe outlet not upward of driver cabinet (except for vehicles carrying animals, medicine, hazardous material, foods)
		Leak in the exhaust system (this does not include manufacturer's drain holes in the mufflers)
		Exhaust outlet extending to the outline of the truck top
	7.3 Emissions test	Presence of sparks, flames, excessive gases, heavy black smoke, oil or fuel residue coming out of engine
		Heavy black smoke coming out of exhaust
		Emission levels exceeding above allowable values
		For Petrol Engine: CO :4.5 CO2: 2.5 Nox :12 kwh Hc : 800 ppm For Diesel Engine: CO :4.5 CO2: 2.5 Nox :12 kwh Hc : 800 ppm
	7.4 fuel system	One or more components of the fuel system is Unsecured or damaged leading to a potential risk of a fuel leak
		Missing or unsecure fuel cap, or is of incorrect type
	7.5 Engine Controls	Unsafe extra fuel tank
		Kinked, loose, broken, excessively worn or binding throttle control mountings, pivots, cables or links
	7.6 Transmission controls	No anti-slip surface on throttle pedal
		Any throttle cable or linkage not capable of operating from the idle position to the full throttle position and returning to the idle position by the aid of a throttle return spring without sticking
		Kinked, loose, broken, excessively worn clutch control mountings, pivots, cables or links in the transmission controls
8. Modified vehicles	8.1 Vehicles Modification	No anti-slip surface on metal clutch pedals
		Leaking hydraulic clutch fluid from transmission controls
		Modifications not complying with requirements that were applicable at the date of manufacturing of the original vehicle
		Fuel injectors system modified affecting the air/fuel ratio during emissions test
	8.2 Exhaust manifolds	Fixed turbocharger/supercharger with engine not allowing the vehicle to comply with original requirements
9. Road safety requirements	9.1 Fire extinguisher	Installation of auxiliary/replacement fuel tank not meeting regulatory requirements (with different size and capacity from original fuel tank)
		Vehicle with an LPG/NGV/CNG fitted or modified fuel system not meeting safety criteria
		Noise (dB) level higher than allowed limits
	9.2 Safety equipments and tools	Abnormal sound from engine
		No fire extinguisher cylinder
9. Road safety requirements	9.1 Fire extinguisher	Empty fire extinguisher cylinder
		Malfunctioning fire extinguisher
		One or more safety equipment missing:
	9.2 Safety equipments and tools	-Spare tyre or flat tyre
		-Spare tyre tools
9. Road safety requirements	9.1 Fire extinguisher	-Jack
		-First aid kit
		-Side impact bars (4" channel)
	9.2 Safety equipments and tools	-Safety Triangle