



Road Transport Reform (Vehicle Standards) Amendment Regulations 2001 (No.)¹

Statutory Rules 2001 No. ²

I, WILLIAM PATRICK DEANE, Governor-General of the Commonwealth of Australia, acting with the advice of the Federal Executive Council, make the following Regulations under the *Road Transport Reform (Vehicles and Traffic) Act 1993*.

Dated 2001

Governor-General

By His Excellency's Command

Minister for Transport and Regional Services

1 Name of Regulations

These Regulations are the *Road Transport Reform (Vehicle Standards) Amendment Regulations 2001 (No.)*.

2 Commencement

These Regulations commence on gazettal.

3 Amendments

- (1) Schedule 1 amends the *Australian Vehicle Standards Rules 1999*.
- (2) Schedule 2 amends the *Road Transport Reform (Vehicle Standards) Regulations 1999*.

Schedule 1 Amendments of the *Australian Vehicle Standards Rules 1999*

(subregulation 3 (1))

[1] Part 10, Division 1, heading

substitute

**Division 1 Crank case gases and
exhaust emissions**

[2] Rule 146, heading

substitute

**146 Crank case gases — certain petrol-powered
vehicles**

[3] Rule 147, heading

substitute

**147 Visible exhaust emissions — vehicles with
internal combustion engines**

[4] After rule 147

insert

147A Exhaust emissions — diesel-powered vehicles

(1) This rule applies to registered passenger vehicles, omnibuses and goods vehicles:

(a) powered by diesel engines; and

(b) meeting the criteria for an M-category or N-category vehicle under the Australian Design Rules.

(2) In this rule:

vehicle test mass for a vehicle means:

- (a) if the vehicle is a prime mover — half the sum of its tare mass and its GCM; or
- (b) in any other case — half the sum of its tare mass and its GVM.

Note The **vehicle test mass** is the load applied to the dynamometer, while the vehicle is under test, to simulate half-payload operation.

(3) For subrule (4), a vehicle is taken to have been manufactured in the month shown on its compliance plate (that is, the plate, of the kind referred to in section 10A of the *Motor Vehicle Standards Act 1989*, affixed or taken to be affixed to the vehicle) as its month of manufacture.

(4) When a vehicle is tested in accordance with the procedure described in Schedule 1 by means of test equipment that complies with the specification mentioned in subrule (5):

- (a) the vehicle must not emit oxides of nitrogen (NO_x) at a rate (measured in grams of NO_x emitted per kilometre travelled per tonne of the vehicle's test mass) greater than that specified for the vehicle according to its GVM rating and age in the following table:

Vehicle's GVM rating (t)	Rate of NO _x emissions (g/km/t)	
	Vehicle manufactured in December 1995 or earlier	Vehicle manufactured in January 1996 or later
not greater than 3.5	1.5	1.5

Vehicle's GVM rating (t)	Rate of NO _x emissions (g/km/t)	
	Vehicle manufactured in December 1995 or earlier	Vehicle manufactured in January 1996 or later
more than 3.5 but not greater than 12	2.0	2.0
more than 12 but not greater than 25	2.0	1.5
more than 25	1.5	1.2;

and

- (b) the vehicle must not emit particles at a rate (measured in grams of particles emitted per kilometre travelled per tonne of the vehicle's test mass) greater than that specified for the vehicle according to its GVM rating and age in the following table:

Vehicle's GVM rating (t)	Rate of particle emission (g/km/t)	
	Vehicle manufactured in December 1995 or earlier	Vehicle manufactured in January 1996 or later
not greater than 3.5	0.23	0.23
more than 3.5 but not greater than 12	0.23	0.15
more than 12 but not greater than 25	0.08	0.05
more than 25	0.07	0.03;

and

- (c) the opacity of the exhaust gas emitted by the vehicle must not be greater than 25% (averaged

over a DT 80 test cycle in the way described or referred to in the specification).

- (5) The specification for subrule (4) is that set out in the document known as *Technical and functional specification for a diesel vehicle emissions measuring system*, published by the National Road Transport Commission from time to time (as far as that specification requires particular values of measurement capability, accuracy and stability).

[5] After Part 14

insert

**Schedule 1 DT80 transient test
procedure for testing of
diesel-fuelled vehicle
exhaust emissions**

(rule 147A)

- 1 Secure the vehicle on the dynamometer.
- 2 Set the dynamometer to simulate the correct load and inertia for the vehicle.
- 3 Start sampling.
- 4 Idle for 60 seconds.
- 5 Accelerate rapidly to 80 km/hr under simulated inertia using wide open throttle, making gear changes as required for smooth acceleration.
- 6 Decelerate by removing all pressure from the accelerator pedal, disengaging the gears and gently applying brakes to bring the vehicle to a standstill.
- 7 Idle for 10 seconds.

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- 8 Accelerate rapidly to 80 km/hr under simulated inertia, using wide open throttle, making gear changes as required for smooth acceleration.
 - 9 Decelerate by removing all pressure from the accelerator pedal, disengaging the gears and gently applying brakes to bring the vehicle to a standstill.
 - 10 Idle for 10 seconds.
 - 11 Accelerate rapidly to 80 km/hr under simulated inertia using wide open throttle, making gear changes as required for smooth acceleration.
 - 12 Maintain speed at 80 km/hr for 60 seconds, then stop sampling. Bring the vehicle to rest.

Note Explanation of the test procedure

This test has been designed to evaluate vehicle emissions during typical 'real-world' operating modes and conditions. There are 3 simple modes:

- 3 idle periods
- acceleration to 80 km/h 3 times
- maintain speed at 80 km/h.

The graph below indicates the modes of operation. The actual test will result in a graph that has more variation than the indicative graph below, because of the need to change gears when accelerating. Modes B – D and E – G and H – I have no specific time interval. All the specified time periods have an error margin of ± 1 second.

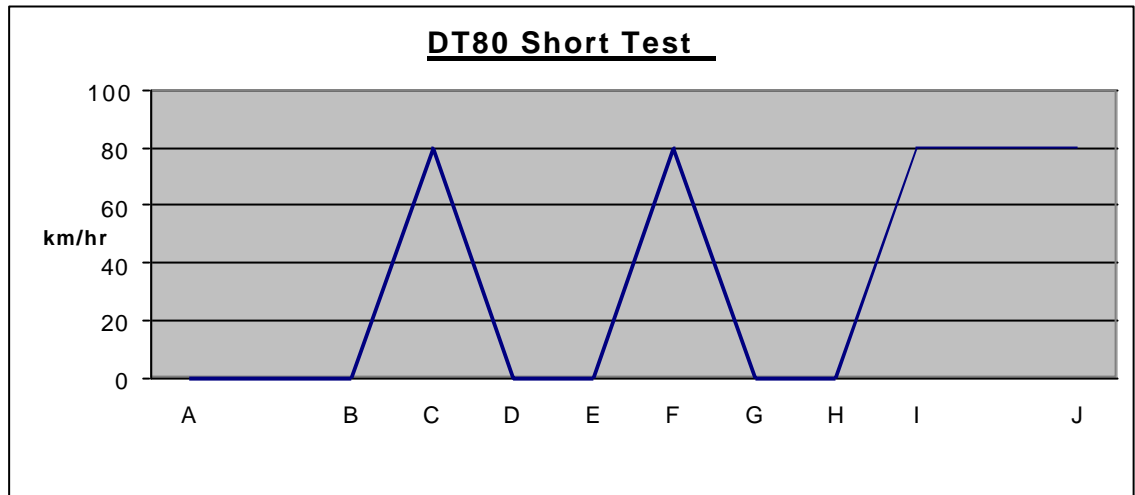
The vehicle is accelerated rapidly to 80 km/h 3 times by applying wide-open throttle.

The driver selects the most appropriate gear change points for the vehicle being tested to achieve the correct speed.

The vehicle test mass for road load and inertia settings must be equal to the mass of the vehicle when operating with $\frac{1}{2}$ its nominal payload (that is, $GVM + \text{tare mass} \div 2$).

The vehicle's rolling resistance (based on tyre and bearing losses, frontal area and drag coefficient) must also be calculated and continuously factored into the dynamometer tractive effort calculations to ensure correct loading.

Empirical algorithms, based on vehicle test mass, GVM or other known parameters, may be used to automatically calculate realistic coefficients for these variables.



A simplified indicative graph produced by a test follows.

[6] Dictionary, after definition of *front fog light*

insert

GCM or **gross combination mass** of a motor vehicle means the greatest possible sum of the maximum loaded mass of the motor vehicle and any vehicle or vehicles that may be towed by it at the same time:

- (a) as specified by the motor vehicle's manufacturer on an identification plate on the motor vehicle; or
- (b) if there is no such specification on an identification plate on the motor vehicle, or there is such a specification on a plate on the motor vehicle but the specification is not appropriate because the motor vehicle has been modified— as certified by the registration authority.

[7] Dictionary, after definition of *tandem axle group*

insert

tare mass of a vehicle means its unladen mass (however described).

Schedule 2 Amendments of the *Road Transport Reform (Vehicle Standards) Regulations 1999*

(subregulation 3 (2))

[1] Subregulation 16 (1)

substitute

- (1) The Minister may, under section 17 of the Act, declare that a specified person or vehicle is exempt from a specified requirement of:
- (a) a provision of these Regulations; or
 - (b) a provision, other than regulation 147A, of the Vehicle Standards.

[2] After subregulation 21 (3)

insert

- (4) In relation to an exemption from the provisions of rule 147A of the *Australian Vehicle Standards Rules 1999*, this Division has effect subject to Division 5.

[3] **Part 4, after Division 4**

insert

Division 5 **Special provisions about
exemptions from rule 147A
of the *Australian Vehicle
Standards Rules 1999***

40A **Exemptions from rule 147A of the *Australian
Vehicle Standards Rules 1999***

- (1) Subject to this Division, Divisions 1 to 4 of this Part apply in relation to the exemption of a vehicle from compliance with the standards in rule 147A of the *Australian Vehicle Standards Rules 1999*.
- (2) Despite subregulation 21 (1), the Authority may give an exemption under this Division either on its own initiative or on application.
- (3) Despite regulation 23, the Authority may give an exemption under this Division only if:
 - (a) the vehicle meets the requirements of subregulation (4); or
 - (b) the Authority is satisfied that there are other exceptional reasons why the vehicle should be exempted.
- (4) The requirements are:
 - (a) after failing to meet the standards in subrule 147A (4) of the *Australian Vehicle Standards Rules 1999*, the vehicle has undergone repairs; and
 - (b) after those repairs it still does not meet the standards; and

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- (c) the vehicle's owner provides to the Authority evidence that the vehicle satisfies all of the following requirements:
- (i) all of the emission-control components fitted to the vehicle by its manufacturer are present and functioning correctly;
 - (ii) repairs to its air/fuel system have resulted in a reduction in its rate of emission of particles even though it still does not meet the standard in paragraph 147A(4)(b) of those Rules;
 - (iii) no modifications likely to adversely affect the vehicle's emission performance have been made to the vehicle.
- (5) The Minister may publish a notice in the *«Gazette or equivalent of this State or Territory»* authorising the *«environment management authority of this State or Territory»* to grant exemptions under this Division.
- (6) If the Minister publishes such a notice, a reference in this Part to the Authority is to be read, in relation to an exemption granted or to be granted under this Division, as a reference to either the Authority (within the meaning given by regulation 5) or the *«environment management authority»*.

40B Applicants to be told about decisions

- (1) This regulation has effect, in relation to an exemption granted under this Division by the Authority on its own initiative, to the exclusion of regulation 24.
- (2) As soon as practicable after the Authority grants such an exemption, the Authority must tell the person to whom the exemption is granted, in writing, of its decision, including when the exemption takes effect.

40C Application of regulation 25

In relation to an exemption granted under this Division by the Authority on its own initiative, regulation 25 has effect as if a reference to the person to whom the exemption is granted were substituted for the reference in paragraph 25 (a) to the applicant for the relevant decision.

40D Recognition of exemptions granted in other jurisdictions

If a competent authority of «*another State or a Territory or a State or another Territory*» exempts a vehicle from compliance with a law of that State or Territory corresponding to rule 147A of the *Australian Vehicle Standards Rules 1999*, the exemption has effect according to its terms in «*this State or Territory*».

Notes

1. These Regulations amend Statutory Rules ^{^year^} No. , as amended by ^{^year^} No. .
2. Notified in the *Commonwealth of Australia Gazette* on 2001.