



CIRCULAR 35-3-1

INTERPRETATIONS

Attached are interpretations issued by the Board in respect of Australian Design Rule No. 35 - Commercial Vehicle Braking Systems (July 1976). They should be read in conjunction with Circular No. 0-11-1.

AUSTRALIA MOTOR VEHICLE CERTIFICATION BOARD

INTERPRETATIONS

Australian Design Rule 35 - Commercial Vehicle Braking Systems

as endorsed by the Australian Transport Advisory Council -July 1976

Interpretation No. 1 NOT RELEVANT

Interpretation No. 2 (Clause 33.2.5.3)

Question: In the case where a positive pressure service brake power assist unit is controlled by a master cylinder and piston, what volume of the service brake chamber shall be used for the purpose of Clause 35.2.5.3?

Answer: The volume to be used is the total volume of the service brake chamber at the maximum travel of the piston or diaphragm resulting from the maximum travel of the master cylinder piston in the master cylinder. The total volume of the service brake chamber will include the volume available when the piston of the brake power assist unit is in the position it normally occupies before application of the brakes.

Interpretation No. 3 (Clauses 35.5.4.2(b) and 35.5.7)

Question: In a vehicle in which the brake power assist unit is normally supplied with high pressure fluid by an engine-driven pump, total failure of power assistance would render the brake system incapable of meeting those parameters of Clause 35.3.3 which are relevant to secondary braking test. To maintain the required standard of braking performance, provisions have been made for an emergency pump to take over in the event of failure of the primary source of power assistance. Under these circumstances, may a back-up system be regarded as secondary brake system for the purposes of Clauses 35.5.4.2(b) and 35.5.7 of the Rule?

Answer: Yes, provided that the back-up source of power assistance is immediately energized by a pump driven independently of the vehicle engine.



Interpretation No.4 (Clause J5.5 .9.2)

Question: If the vehicle's performance characteristics are such as to preclude it from maintaining the maximum interval between applications specified in Clause 3.5.5.9.1, what is the upper limit of the extended time interval?

Answer: There is no set upper limit associated with the extension to the 'maximum interval between applications' permitted under Clause 35.5.9.2 to allow for vehicles with special performance characteristics. However, the actual extension of the interval should be the minimum required by the vehicle in order to achieve the specified initial speed and to maintain it for 10 seconds before each successive deceleration mode.

Interpretation No. 5 Not Relevant

Interpretation No. 6 {Clause 35.5.1 1}

Question: What is the correct depth of water for the service brake water conditioning procedure for a vehicle of varying tyre sizes between the front and rear wheels?

Answer: For the purpose of Clause 35.5.1 1, and for varying tyre sizes, the correct depth of water must not be less than 60% of the static loaded radius of the larger tyres fitted.

Interpretation No. 7 (Clause 35.4.5 (i))

Question: When carrying out service brake fade tests, is it required by Clause 35.4.5(i) that the test site shall not include any erective upward gradient greater than 1% between the start and end of the test site?

Answer: The requirements of Clause 35.4.5 (i) will be met provided that those portions of the track on which the deceleration of the service brake grade test are carried out do not include effective upward average gradients greater than 1%.

Interpretation No. 8 (Clause JS.6.1 .4)

Question: How should a thermocouple be installed in a brake lining or pad for the measurement of brake temperature?

Answer: The thermocouple should be installed as shown in Figure 2 referred to in Section 6.2:4 of U .S. Federal Motor Vehicle Safety Standard No. 121 -1976.

Interpretation No. 9

Question: During testing of vehicles for the purpose of demonstrating compliance with ADR 35 (other than prescribed in Clause 35.6.1. 4), is it permissible to have thermocouples inserted into brake linings and brake pads?

Answer: Yes. The thermocouples should preferably be of the size and type specified in the U.S. Federal Motor Vehicle Safety Standard No. 121 -1976 and installed in accordance with Section 6.2.4, Figure 2, of that Standard.

Issued by the
Administrator of Vehicle Standards
in consultation with the
Australian Motor Vehicle Certification Board
comprising Commonwealth, State and Territory representatives



Interpretation No. 10 (Clauses 35.5.9.1 .3 and 35.5.12.1)

Question: For the purposes of the above Clauses, what is a sustained deceleration?

Answer: A sustained deceleration is one that is maintained for the complete deceleration mode, except for the period necessary to achieve the specified deceleration level, and once achieved, is never less than that level.

Interpretation No. 11 (Clause 35.2.5.7(i))

Question: Is it necessary to conform precisely to stated 65% of speed corresponding to either maximum power output or governed speed where the energy generation device is a vacuum pump?

Answer: No. The engine speed shall not be greater than 65% of either of the speeds specified.

Interpretation No. 12 (Clause 35.2.2.2)

Question: Does a parking brake control, which requires two separate and distinct movements to enable the brake to be disengaged, meet the requirements of Clause 35 2.2.2 if only one movement needs to be initiated by the operator?

Answer: No. For movements to be separate and distinct, they must each require independent manual initiation.

Interpretation No. 13 (Clauses 35.2.1.2.4 and 35.2.2.3)

Question: Is it permissible to include on the lens of the brake indicator lamps, words and/or symbols additional to the word(s) specified?

Answer: Yes. Provided the additional information is consistent with any condition associated with the Board's approval to fit Compliance Plates and does not distract from the clarity of the specified words.

Interpretation No. 14 (Clause 35.5.17.4)

Question: Is it required that the pressure vessel which is to be connected to the trailer control line coupling point of the towing vehicle be a permanent fixture on the vehicle?

Answer: No. The pressure vessel is required to establish the actuating time during test procedures only.

Interpretation No. 15 (Clauses 35.5.9.1 and 35.4.12)

Question: Do the tolerances of +5, -1 km/h permitted by Clause 35.4.12 apply to the initial and final speeds specified in Clause 35.5.9.1.1?

Answer: No. The tolerances apply only to the speeds tabulated in Clause 35.3.3. However, it should be noted that Clause 35.5.9.1.1 allows variations in initial and final speeds provided the requirements of the formula ($V1^2 - V2^2$) appropriate to the vehicle's category are met for each brake application.

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Interpretation No. 16 (Clause 35.5.9.1)

Question: If a vehicles performance characteristics make it incapable of attaining the initial speed specified for its category in Clause 35.5.9.1.1, or an initial speed allowed by the alternative method may the service brake fade test be conducted?

Answer: It will be acceptable if the initial speed be not less than 80 per cent of the maximum laden vehicle speed determined in accordance with Clause 35.1.14 and the final speed not greater than 10 km/h.

If under these conditions, the maximum interval between applications is exceeded then the provisions of Interpretation No. 4 above shall apply.