

CIRCULAR NO. 38-3-1

INTERPRETATION

Attached are interpretations issued by the Board in respect of Australian Design Rule No. 38 – Heavy Trailer Braking Systems (February 1984). They should be read in conjunction with Circular No. 0-11-1.

AUSTRALIAN MOTOR VEHICLE CERTIFICATION BOARD INTERPRETATIONS

Australian Design Rule No. 38 - Heavy Trailer Braking Systems

as endorsed by the Australian Transport Advisory council - February 1984.

Interpretation No. 1 (Clause 38.2.3.4)

Question: Is fluid energy which is stored in an energy storage device, solely for the purpose of operating the Emergency Brake System auxiliary release mechanism required in Clause 38.2.3.4, considered to be provided by the tow vehicle?

Answer: Yes, unless there is a source of fluid energy other than from the tow vehicle (e.g. a manually operated pump).

Interpretations No. 2 (Clause 38.2.4.2)

Question: Are spring brake wind-off (or cageing) bolts considered to be capable of immediately reapplying a released Parking Brake which uses spring brakes?

Answer: Yes.

Interpretation No. 3 (Clauses 38.2.3.4 and 38.2.4.2)

Question: Do the location requirements in Clause 38.2.3.4 apply to the device, control or tool which is part of a parking brake release mechanism fitted in addition to the release mechanism required in Clause 38.2.4.2?

Answer: No, providing the mandatory release mechanism alone meets all the requirements of 38.2.3.4 and 38.2.4.2.

Interpretation No.4 (Clause 38.2.1.8)

Question: Is Clause 38.2.1.8 applicable to park brake release devices which do not use stored fluid energy?

Answer: No. Clause 38.2.1.8 is applicable only to auxiliary park brake release devices where that device uses fluid energy to hold the park brakes released.

Interpretation No. 5 (Clause 38.2.1.5)

Question: At what point does the brake system start to apply the brakes?

Answer: The brake system starts to apply the brakes when the friction elements first contact each other, e.g. when linings first touch the brake drum.

Interpretation No. 6 (Clause 38.2.4.2)

Question: Is a Parking Brake System, which relies solely on the Supply Line exhausting as one means of applying the Parking Brake, considered to be able to be

applied by means of a single control?

Answer: Yes.

Interpretation No. 7 (Clause 38.2.1.7)

Question: What does the term "normally remain passive" mean in Clause 38.2.1.7?

Answer: A device which normally remains passive is one which has parts normally in a position of rest which come into action only in the event of a failure of a brake device.

In this context "failure" does not include the activity of coupling and uncoupling the Trailer connections.

Interpretation No.8 (Clauses 38.3.3.4, 38.4.1.3)

Question: Over what range of ERCs or decelerations does a Dog Trailer have to demonstrate that at least one front axle would skid before at least one rear axle (by either road test or by calculating the friction utilisation factors).

Answer: The intention of these Clauses is to ensure that when a Dog trailer is braked normally on a low friction surface (for example on a wet *or* icy road *or* on gravel) and skidding occurs, at least one front axle must skid before all the rear axles skid.

In the road test this is shown by conducting a test on a reduced friction surface. When demonstrating compliance by calculation the axle skid sequence is determined by calculating the friction utilisation; if the front axle utilises more of the available friction than the rear then the front axle will skid first.

In each case compliance need only be demonstrated at a single deceleration. This deceleration will be at the manufacturer's discretion, but it must be above the minimum required. For a two axle Dog trailer the minimum deceleration (ERC) is 0.3, for a Dog trailer with more than two axles it is 0.15.

Interpretation No. 9 (Clauses 38.2.2.3, 38.3.11.3.4)

Question: Are the application response times specified in Clause 38.2.2.3 always to be achieved between 0 and 420 kPa (0.65 E) for compressed air control systems?

Answer: No. If the control system, or part of it, is designed to reach a maximum control signal level other than 650 kPa (when a control signal of 650 kPa is applied to the system's control line) then the application time response of the affected parts of the system should be measured from 0 kPa to 65% of the maximum control signal level.

NOTE:

A control system whose maximum control signal level at the actuators is limited by the air expansion ratio is not considered to be designed-to give a maximum control signal of less than 650 kPa.