

CIRCULAR 35/02 - 2 – 1

SELECTION OF TEST VEHICLES

INTRODUCTION

1. This circular should be read in conjunction with circular 0-2-11 "*General Procedures for Selection of Vehicles and Components for ADR Compliance Testing*" containing requirements applicable to all ADRs, as well as Section 7.14 of ADR 35/02 Alternative Procedures. This circular replaces all previously issued fleet selection circulars for ADR 35/-
-. NA category vehicles may use Circular 31/01-2-2 in lieu of this circular.
2. The intention of the criteria in this circular is to reduce the number of vehicle specifications required to be tested. This circular details the criteria to be considered in selecting the variants of a vehicle model to be tested. The Administrator will usually accept tests conducted in accordance with the criteria as having demonstrated compliance for all variants in the model range. Additional tests may be required for combinations of characteristics not anticipated in this circular.

The Administrator will consider requests for further reductions in the number of tests than established by criteria in this circular on receipt of documented evidence that if tested, the braking test results of the untested vehicles would not result in a less favourable result compared to the tested vehicle. The untested vehicle evidence may be simulated or calculated with any such simulations or calculations being traceable to similar comparisons between tested vehicles.

3. It remains the responsibility of the vehicle manufacturer to ensure that every vehicle to which an identification plate is affixed complies with ADR 35/02 as applicable.

4 SELECTION REQUIREMENTS

Grouping of Braking Systems

4.1 Each unique braking system must be tested. To be considered as the same unique braking system, systems must have a combination of components that have the same physical (material or metallurgical), functional and dimensional properties. Any variation of the components of a braking system will constitute a different unique braking system except for:

- 4.1.1 length, diameter, material or routing of hydraulic, vacuum or air exhaust lines, or electrical wiring included in the system;
- 4.1.2 location of valves, fittings or other devices within a hydraulic or vacuum line;
- 4.1.3 Routing of air pressure lines included in the system.

Grouping of Vehicle Variants

4.2 It is considered that an untested vehicle variant, with the same unique braking system as a tested vehicle variant, will not require testing if when compared to the tested vehicle it:

4.2.1 has the same calibration of any ECU controlling the braking or suspension systems.

4.2.2 has the same configuration of axles;

4.2.3 where applicable, has an equal or lower unbraked trailer mass;

4.2.4 has tyres that are smaller, the same or no more than 2% greater in diameter;

4.2.5 has tyres of the same or greater section width;

4.2.6 has greater or equal brake cooling airflow;

4.2.7 has no higher a road speed per 1,000 rpm for the gear ratio required for the Service Brake Fade Test unless the tested vehicle was fitted with an automatic transmission such that negligible engine braking is provided (e.g. a system with a fluid coupling torque converter);

4.2.8 for tests conducted at the Lightly Loaded Test Mass:

4.2.8.1 has no lower Lightly Loaded Test Mass;

4.2.8.2 for vehicles without ABS or a load sensing variable proportioning system:

4.2.8.2.1 has no less of the proportion of the unladen mass on the rear wheels;

4.2.8.2.2 has no shorter wheelbase length.

4.2.9 for tests conducted at the Maximum Loaded Test Mass:

4.2.9.1 has no greater Maximum Loaded Test Mass.

Note: Where it is not possible to select from a range of vehicle variants, a single test vehicle that satisfies criteria 4.2.8 and 4.2.9, the manufacturer may choose a test vehicle that does not meet criteria 4.2.8.1 and 4.2.8.2.2 provided that the wheelbase of the selected vehicle does not exceed the shortest available wheelbase by more than 15%.

Full Testing of Vehicle Variants

4.3 Vehicles should be selected for testing purposes in accordance with the following criteria:

4.3.1 Where the maximum laden vehicle speeds of all the vehicles in the range are less than 100 km/h, at least one test vehicle shall have the power train giving the highest maximum laden vehicle speed of all vehicles within the range.

4.3.2 Where the maximum laden vehicle speed of any vehicle in the range is 100km/h or greater, at least one test vehicle shall have a power train giving a maximum laden vehicle speed of 100 km/h or greater.

4.3.3 Where the maximum interval between brake applications specified for the service brake fade test cannot be maintained by any vehicle within the range, at least

one test vehicle shall have a power train which most nearly permits the specified maximum interval to be maintained.

4.3.4 Where the maximum interval between applications specified for the service brake fade test can be maintained by one or more vehicles within the range, at least one test vehicle shall have a power train which gives the acceleration which maintains the maximum interval between brake applications specified in Section 7.9 of ADR 35/02.

4.4 For static actuating time and energy reservoir recovery tests, the untested vehicle (or installation) shall when compared to the tested vehicle:

4.4.1 have no longer length of brake pipe;

4.4.2 have no smaller an internal diameter of the corresponding brake pipes;

4.4.3 have no lower a rating of the brake energy generating device (i.e. compressor);

4.4.4 have no lower capacity of the energy reservoir.

Partial Testing of Vehicle Variants

4.5 A previously tested vehicle variant fitted with a variation of a unique braking system may be tested only to the tests that are relevant to the variation in 4.5.1 the braking system. The conditions where a vehicle may be subject to a partial test are described in the paragraphs below:

4.5.1 the parking brake system shall be tested to Section 7.11;

4.5.2 the brake power or assist unit shall be tested to Sections 7.6, 7.7 & 7.8;

4.5.3 the anti-lock system, variable (load) proportioning system or the pressure proportioning control system shall be tested to 7.4, 7.12 & 7.13;

4.5.4 the air pressure actuation system as described in paragraph 4.4 above shall be tested to Section 7.12 and 7.13 as applicable.

Note: The varied design should be assigned its own unique brake system identifier. For the variations requiring retesting described in clauses 4.5.2. and 4.5.3 above, the relevant SE form shall contain the results of all in motion tests conducted relevant to the base braking system, not just those conducted resulting from the design variation. The test report for the varied braking system referenced on the SE form must reference the original full test report. Extension sheets attached to the original test report should reference and collate the additional tests.

ALTERNATIVE STANDARDS

5 An untested vehicle variant which is listed in an appropriate Economic Commission for Europe (ECE) approval document (to one of the ECE regulations listed as an alternative standard in the ADR) may be certified without the selection criteria in the circular being applied. All variants to be covered in the application must be included on the Fleet Selection (SF) form. If all variants listed on the SF form are listed in an ECE approval document the tested/untested status is to be recorded as “ECE Approved”

6 An untested vehicle variant that is not listed in an appropriate ECE approval document (to one of the ECE regulations listed as an alternative standard in the ADR) may be certified on the basis of comparison to a vehicle variant tested in accordance with compliance to the technical requirements of an appropriate ECE regulation if:

- the tested vehicle variant is listed in an appropriate ECE approval document and;
- the untested vehicle variant(s), when compared to the tested variant, meets the criteria of this circular.

7 In this case the variants tested to the ECE regulation and included on the ECE approval are to show the tested/untested status as “ECE - Tested”. The variants not tested to the ECE regulation but included in the ECE approval are to show the tested/untested status as “ECE - Approved” and the variants not tested to the ECE regulation and not included on the ECE approval are to show the

tested/untested status as “Untested”. All variants to be covered in the application must be included on the Fleet Selection (SF) form. A variant marked as Untested may only be compared with a relevant variant which is either “ECE - Tested” or “Tested”.

A vehicle variant fitted with a variation of a unique braking system (under the conditions set out in paragraph 4.5 above) may be certified on the basis of comparison to a vehicle variant shown as “ECE – Tested” on the SF form. In this case, the variant shall be listed on the SF form and shown as “Tested – Partial”.