

36-3

AUSTRALIAN

MOTOR VEHICLE

CERTIFICATION BOARD

COMPRISING AUSTRALIAN AND STATE AUTHORITIES

CIRCULAR NO. 36-3

INTERPRETATIONS

Attached are interpretations issued by the Board in respect of Australian Design Rule No. 36 - Exhaust Emission Control for Heavy Duty Vehicles (July 1976). They should be read in conjunction with Circular No. 0-11-1.

AUSTRALIAN MOTOR VEHICLE CERTIFICATION BOARD

INTERPRETATIONS

Australian Design Rule No. 36 - Exhaust Emission Control for Heavy Duty Vehicles

As endorsed by the Australian Transport Advisory Council - July 1976.

Interpretation No.1 (Clause 36.7.2)

Question: Is it permissible for tests to be conducted on an engine with the clutch and transmission installed?

Answer: The clutch and transmission may be installed, provided that the requirements of the Design Rule for engine dynamometers with regard to speed and manifold pressure are met. In the case where the gear ratio of the transmission is not unity the speeds referred to in Clauses 36.4.1, 36.7.1.2 and 36.7.2.1 refer to engine speeds.

Interpretation No. 2 (Clause 36.8.3)

Question: ADR 36 does not specify the sampling position in the exhaust system. Is it permissible for samples to be taken upstream of the muffler, or should the sample probe be inserted into the tail pipe?

Answer: The sample probe should extract a sample of the exhaust downstream of the muffler.

Interpretation No. 3 (Clause 36.9.3)

Question: Clause 36.9.3 specifies that during the dynamometer run the engine air inlet temperature shall be between 20 C and 30 C. Does the temperature refer to the inlet air entering the engine or to the ambient temperature?

Answer: The temperature refers to the inlet air entering the engine.

Interpretation No. 4 (Clause 36.7.1.2)

Question: Clause 36.7.1.2 permits the test cycle to be modified to allow for transition between modes. Is the transition time included in the time allocated for each mode, or is it additional to the time allotted?

Answer: The transition time is additional to the time allotted for each mode and must be less than 20 seconds between any two modes.

Interpretation No. 5 (Clause 36.9.4)

Question: Clause 36.9.4 requires that the sample line be purged with nitrogen upon completion of the test, to establish a constant hydrocarbon 'hang-up' level. What is the sample line and does it include the sample probe?

Answer: The sample line connects the sample probe to the analysis system. It does not include the sample probe.

Interpretation No. 6 (Clause 36.4.7)

Question: Clause 36.4.7 permits one adjustment of engine idle speeds prior to the 125 hour test point. Is it permissible for the engine idle speeds adjustment to be carried out after the pre-conditioning which is performed as part of the 125 hour emission test?

Answer: No. The adjustment of engine idle speeds must be carried out prior to the preconditioning performed as part of the 125 hour emission test.

Interpretation No. 7 (Clause 36.7.1.3)

Question: Clause 36.7.1.3 specifies that the idle operating mode shall be conducted at the manufacturers recommended engine speed. Does this mean that, if the engine idle speed gets out of specification, it can be adjusted to within specification?

Answer: Any adjustment of engine idle speed other than that specifically permitted by the Design Rule would constitute unscheduled maintenance. Unscheduled maintenance may only be conducted with the approval of the Administrator.

Interpretation No. 8 (Clauses 36.4.2 and 36.5.2)

Question: Is it permissible for evaporative emission control systems to be disconnected from the test engine?

Answer: Evaporative emission controls need not be connected during service accumulation, provided normal operating conditions are maintained in the engine induction system. During emission testing, evaporative emission control systems must be fitted and be functioning, except that the fuel tank and vapour line may be disconnected provided normal operating conditions are maintained in the engine induction system.

Interpretation No. 9(Clauses 36.7.1.1 and 36.7.1.2)

Question: Clause 36.7.1.1 specifies that the time in sequence No. 9 (which is the closed throttle mode) be 43 seconds. Where a throttle dashpot is used to delay complete closing of the throttle for a certain period of time after release of the accelerator, is this period considered to be transition time as specified in Clause 36.7.1.2?

Answer: The time during which the throttle dashpot is operating after sequence No.8 (the cruise mode) would be considered to be the initial part of sequence No. 9 (the closed throttle mode). For calculation of emission results, this period would be included in the 43 second closed throttle mode.