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

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INTERPRETATIONS

Interpretation No 1 (Appendix A, Annex 3, Clause 3.1.3)

Question: Will a pair of consecutive noise meter readings on one side of a vehicle which differ by more than 2 dB (A) always result in a non-compliance with the requirements of ADR 83/00?

Answer: Yes. For a pair of consecutive readings to be valid, the readings that constituted a pair that were made on the same side of the vehicle must be within 2 dB (A) of each other.

If one of the corrected readings exceeds the limit and two additional test readings are taken, the reading that exceeded the limit must not differ by more than 2 dB (A) from its paired consecutive reading for the test to be valid. This is the case even though this reading is ignored when choosing the maximum reading from the two additional readings and the one initial corrected reading that was below the limit.

Interpretation No 2 (Appendix A, Annex 3, Clause 3.1.3)

Question: Does a noise meter reading in excess of the limit (i.e. the value specified for a particular type of vehicle as specified in Clause 6.2.) during the measurement of noise of vehicles in motion indicate non-compliance with the requirements of ADR 83/00?

Answer: Not always. If the noise meter reading is over the limit but within 1 dB (A) of the limit then the reading, when corrected by -1dB (A) in accordance with Clause 3.1.3, will be below the limit and therefore acceptable.

If the noise meter reading is over the limit by more than 1dB(A) then that value, when corrected by -1dB(A) in accordance with Clause 3.1.3, will exceed the limit. If only one noise meter reading (uncorrected) out of the four "standard" tests exceeds the limit by more than 1dB(A) the procedure described in Clause 3.1.3 can be used.

If neither of the two noise meter readings obtained from the second series of tests on the noisy side of the vehicle, when corrected by -1dB(A) in accordance with Clause 3.1.3, exceed the limit then the results are acceptable.

If more than one noise meter reading is over the limit by more than 1dB(A) then these values, when corrected by -1dB(A) in accordance with Clause 3.1.3, will be over the limit and will be not acceptable. This applies whether the readings occurred in the four "standard" tests or in the six tests resulting from the four "standard" tests plus the two from the second series of tests.

Interpretation No 3 (M & N category vehicles: Appendix A, Annex 3, Clause 3.2; LC, LD & LE category vehicles: Appendix B, Annex 3, Clause 3.2)

Question: If the specified uniform speed at which the vehicle will approach line AA' can be either NA = X* x ESMP and VA < 50 km/h, or VA = 50 km/h can the manufacturer select the approach speed at which to conduct the drive by test?

Answer: No. Choice of Gear Ratios requires drive by tests to be conducted in specified gears. The selection of the approach speed at NA = X x ESMP or VA = 50 km/h is dependent on the gear being tested. NA = X x ESMP must be selected for those gears where the corresponding VA is less than or equal to 50 km/h. VA = 50 km/h must be selected for those gears where the road speed corresponding to NA = X x ESMP exceeds 50 km/h.

* X may be 0.75 or 0.5 depending on the category and specification of the vehicle.

Interpretation No 4 (M & N category vehicles: Appendix A, Annex 3, Clause 3.2; LA & LB category vehicles: Appendix C, Annex 3, Clause 2; LC, LD & LE category vehicles: Appendix B, Annex 3, Clause 3.2)

Question: Is a vehicle powered solely by an electric motor required to be tested for 'noise in motion' and 'stationary noise'.

Answer: No. Vehicles powered purely by an electric motor need only be tested for 'noise in motion'. Stationary noise test is not required.

Interpretation No 5 (LA & LB category vehicles: Appendix C, Annex 3, Clause 1.3.3; LC, LD & LE category vehicles: Appendix B, Annex 3, Clause 2.1.3)

Question: How is the ambient noise correction factor calculated?

Answer: The correction factor is assessed against the formula:

Correction Factor = − 0.05 x (reported noise – ambient noise) − 0.9, rounded to 2 decimal places.

Therefore, the final noise reading must be calculated according to the relevant clauses (LA & LB, Appendix C, Annex 3, Clause 4; LC, LD & LE category vehicles, Appendix B, Annex 3, Clause 1.5), from this subtract the ambient noise reading to obtain the difference, and use either the formula above or the graph in the relevant clause to obtain the correction factor.

Interpretation No 6 (MD, ME, NB and NC category vehicles: Appendix A, Annex 3, Clause 3.1.2.3.2.3)

Question: Is it permissible for the test vehicle to be tested in more ratios than x/n through to X?

Answer: Yes. The vehicle may be tested in any ratio outside the minimum required ratios in order to find overall ratio that will result in the highest noise level for the vehicle type.

Where the noisiest reading during the standard pre-tests is found to be at ratio x/n, the vehicle may be tested in the ratio x/n – 1, x/n - 2 and so forth to the highest * ratio available in order to find the overall ratio where the maximum noise level generated for the vehicle type.

Where the noisiest reading during the standard pre-tests is found to be at ratio X, the vehicle may be tested in the ratio X + 1, X + 2 and so forth to the lowest ** ratio available in order to find the overall ratio where the maximum noise level generated for the vehicle type.

This method may be used to determine that a test vehicle is representative of its type for all possible combinations of gearbox, differential and tyre size, providing a combination does not exist that may produce a higher noise level reading.

* Highest refers to the numerical ratio of engine revolutions to meters travelled by the vehicle when expressed as an overall ratio. E.g. 2nd gear expressed numerically will be a higher gear than 3rd gear.

** Lowest refers to the numerical ratio of engine revolutions to meters travelled by the vehicle when expressed as an overall ratio. E.g. 6th gear expressed numerically will be lower than 5th gear.

Interpretation No 7 (All categories of vehicle)

Question: If the transmission fitted to the vehicle selected for testing can be set by the driver to operate in either manual or automatic (manual or no manual selector) mode, should the vehicle be tested using the method described for a vehicle equipped with an automatic or a manual transmission?

Answer: The inner workings of the transmission are not a consideration in the determination of the type of transmission for the purposes of ADR 83/00 testing. Only the manner and level of control by the operator over selection of the forward ratio/s will determine the type of transmission (whether manual or automatic). The presence (or lack of) any mechanical components (e.g.: clutch or clutch pedal, torque converter, individual (defined) gear ratios, traditional gear lever etc.) will not effect the type of transmission.

A transmission will be considered manual if the operator's physical action/s are the only controlling factor/s that will change the ratio of the drive to the road wheels from the engine. A transmission will be considered automatic (no manual selection) if the operator has no control after selection of forward over the ratio of the drive to the road wheels from the engine. A transmission will be considered automatic (manual selection) if the operator's physical action can override or restrict the vehicle's selection of a ratio while the vehicle is moving in a forward direction.

The vehicle selected for testing shall be considered to be equipped with the same transmission type as the mode in which the manufacturer recommends the transmission is operated in during normal road use, as stated in the owner's manual.

Should the owner's manual not contain any recommendations for normal road use, the vehicle shall be considered to have a transmission the same as the default mode (i.e., the mode that the transmission defaults to when the engine is started after removal of the ignition key). Should there be no default mode (i.e., the transmission stays in the same mode that the driver selected when the vehicle was last operated), the vehicle shall be tested with the transmission in the mode (no matter what classification of transmission) that will result in the highest engine speed during the test.

The "Transmission Type" as reported on the SE form shall be the mode in which the vehicle was tested.

In the case where the vehicle selected for testing (no matter which type of transmission) has a device that when selected, will result in a change to the shift pattern or points, or to the governed engine speed: the device shall be set in the position that will result in the highest engine speed during the test.

Interpretation No 8 (MA, MB, MC and NA category vehicles: Appendix A, Annex 3, Clauses 3.1.2.3.2.2 and 3.1.3)

Question: If the vehicle is required to be tested in second and third gears, clause 3.1.2.3.2.2 states that the average of the sound levels for these two conditions is to be calculated. However, clause 3.1.3 makes no mention of evaluating this averaged value against the limit. In this case what value is to be evaluated against the limit?

Answer: The value that will be evaluated against the limit shall be the average of the two highest readings in second and in third gears.

Therefore, two consecutive readings must be recorded on each side of the vehicle in both second and in third gears for a total of eight readings. Each reading shall be within 2 dB(A) of its consecutive reading for the result to be valid. If any of the readings in second or third gear exceeds the prescribed limit by more than 1 dB(A), this does not constitute a fail or allow for any additional readings to be made.

The highest of the four readings taken in second gear shall be averaged with the highest of the four readings taken in third gear. This averaged value shall be reduced by 1 dB(A) (to allow for lack of precision in the instrument) and will constitute the result of the test. The result shall be evaluated against the limit to demonstrate compliance.

Interpretation No 9 (M and N categories: Appendix A, Annex 3, Clause 3.2.5.2.)

Question: The ADR states that the vehicle's gear lever must be in neutral with the clutch engaged while the stationary noise test is performed. For an automatic transmission where there is a "Neutral" and a "Park" position, what position should be considered neutral?

Answer: For the purposes of the stationary noise test for ADR 83/00, automatic vehicles shall have the gear selector lever located in the "Park" position while the stationary noise test is conducted.

Interpretation No 10 (Vehicles fitted with Compressed Air Brakes: Appendix A, Annex 6, Clause 1)

Question: Clause 1 instructs that the compressed air noise during ventilating the pressure regulator must be performed while the engine is idling. However, the engine noise at the specified distance indicated in Figure 1 exceeds the limit of 72 dB(A). Does this mean that the vehicle has failed the Compressed Air Noise test (Annex 6)?

Answer: No. As there is no noise limit for an idling vehicle, and the purpose of this test is to measure the noise emitted from the pressure regulator when ventilating, the purpose for the regulation to state that the engine will be idling during this part of the test is that the only time that a pressure regulator will normally vent is while the engine is running.

The manufacturer may choose to perform the test with the engine off and to use an external compressed air supply as a substitute compressor/air supply to activate the pressure regulator ventilating as if the compressor was driven by the engine.

The testing procedure should be conducted in such a way that the rate of increase in air pressure in the braking system would be similar to what would occur should the vehicle be operating under normal conditions.