

**AA Submission: Vehicle Exhaust Emissions 2006 Rule
(24 Feb 2006)**

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Vehicle Emissions Rule
Rules Team
Land Transport New Zealand
PO Box 2840
WELLINGTON

Dear Sir/Madam

DRAFT VEHICLE EXHAUST EMISSIONS RULE 33001/1

Introduction

The New Zealand Automobile Association (NZAA) appreciates the opportunity to provide comment on the draft Vehicle Exhaust Emissions [2006] Rule.

As an organisation with a membership exceeding 1 million vehicle owners and drivers in New Zealand, close attention is always given to any proposals that will impact upon the use of motor vehicles.

The NZAA has to date acknowledged in principle the need to address vehicle emissions and their impact on reducing air pollution. There is a further recognition by vehicle owners and motorists of the need for initiatives to counter excessive vehicle emissions, and especially, the minority of vehicles which are the worst polluters. However, we have previously stated that such initiatives must be based on fair and reasonable cost – the majority shouldn't have to pay for the transgressions of the minority – balanced against over-riding benefits that can be clearly identified and defined. Any emissions tests must also be consistently applied, and should be carried out as part of the WoF/CoF test, with exemptions for classes of vehicles that could not reasonably be expected to comply.

The NZAA holds the view that initiatives already established such as enhanced fuel specifications and improved technology in new and late-model vehicles entering the vehicle fleet will progressively ensure improvements do occur without the need for rigorous measures for owners least able to afford the added costs such measures may impose. The NZAA suggests that further initiatives targeting emissions should be explored, such as accelerating the uptake of cleaner vehicles via stricter criteria for imported used vehicles, and incentives to purchase low-emission vehicles, whilst not penalising owners of higher-emissions vehicles which have hitherto freely operated on NZ roads.

We circulated the proposed changes to the Rule for comment to our 17 District Councils. Feedback from our District Councils was largely supportive of the proposed changes as tabled.

A summary of the comments and suggestions from our District Councils is provided below. We hope that you will find these helpful in developing the Rule, and we welcome the opportunity for further input into drafting the proposed inspection guidelines for the visible smoke check.

Euro 4

The NZAA supports the introduction of Euro 4, and accepts the reasons for the 1-year delay in the implementation of the emissions standard for new (new-model and existing-model) heavy diesel vehicles. Therefore we support the proposed new implementation dates in the draft Rule.

Visible smoke check

The NZAA's primary concern with any visible smoke check is that the criteria must be clearly defined, and consistently applied. The Rule does not detail these procedures, other than to say "detailed inspection guidelines and supporting information will be developed to ensure that the visible smoke test is applied consistently..." Therefore, our support for the proposed Rule is subject to our approval of the inspection standards once they are developed and consulted upon.

As the draft Rule is currently written, the following details will either need to be clearly specified in the Rule, or detailed in the inspection guidelines:

- the NZAA considers it essential that the visible smoke check be conducted while the engine is warm (and this should be explicitly stated) as cold readings will almost certainly produce a greater number of failures. However, there needs to be guidelines determining what is an acceptable minimum period of time to run the engine until warm;
- the length of the test under 3.1(1) (b) when the engine is being accelerated to 2500rpm or half the maximum engine speed (whichever is lower);
- how will the vehicle inspector determine what half the maximum rpm of every different engine model is ? (and is the maximum rpm the governed rpm or maximum possible power output ?). What if the vehicle in question is not fitted with a rev counter – will only clause 3.1(1) (a) apply in their case ?;
- similarly, is this level of rpm to be achieved by a progressive depression of the accelerator, or rapid acceleration, which can affect smoke levels ? We propose that the Rule, or inspection guidelines, mandate acceleration at a moderate level;
- what is the definition of "visible, dense smoke" and will comprehensive training and examples of a range of passes and failures (such as test cards) be provided to inspectors to ensure uniform interpretation ? Even the level of lighting could affect the amount of smoke noted by the inspector. The NZAA is very concerned that unless the test is applied consistently, high-emissions vehicles could be passed by some inspectors, while low-emissions vehicles are failed by others, thereby undermining benefits accruing to the environment by conducting the test, along with public credibility and support;
- at the same time, the police need to align their "10-second smoky vehicle test" with the visible smoke check procedures, in order to avoid the possibility of a vehicle passing one test but failing the other (or vice versa);
- consideration needs to be given to ambient temperatures when the visible smoke test is conducted, as lower ambient temperatures produce greater visible smoke.

To alleviate these concerns, we suggest that the draft inspection guidelines, once consulted upon, be randomly tested at several geographically diverse locations (perhaps in winter, at different times of the day), conducted by vehicle inspectors who have received the same training, and be performed on a selection of near-identical vehicles of the same age and mileage, and with a similar ownership/use history (such as fleet vehicles) to minimise bias. The aim would be to monitor that the procedures not only work, but were applied consistently. A diagnostic machine test could also be performed to determine the reliability of the visible smoke check.

The NZAA suggests vehicle owners should have the option of seeking a 'second opinion' from a qualified source, who could produce verification of a vehicle's actual emissions, which in

some cases may 'pass' a vehicle which failed the visible smoke check. This documentation should be accepted by the WoF or CoF agent, and the appropriate fitness certificate re-issued as appropriate.

Therefore, it may be appropriate to recommend that vehicles failing the visible smoke check have the option of undergoing a more thorough diagnostic test, using emissions testing equipment. After all, as the vehicle has failed, the owner will need to seek advice from specialists on how to address their vehicle's emission levels. A diagnostic test could help identify the cause and options for the owner, while at the same time collecting valuable data as to the correlation between the accuracy of the visible smoke check, and the true emissions established by the equipment.

While the NZAA opposes any testing which could be unduly onerous, inconvenient or expensive for the vehicle owner (such as having to travel some distance for a specialist diagnostic test as opposed to a visible smoke check at their local WoF agent), this is unlikely to be avoided by anyone failing a visible smoke check, as they would probably need to seek advice from a specialist to determine the best course of action to repair the vehicle. The additional cost of the diagnostic test may be offset in some way by accurately identifying the cause of the poor emissions (rather than carrying out unnecessary repairs without a thorough diagnosis), and may also permit recourse for the owner should the diagnostic test produce evidence disputing the outcome of the visible smoke check.

If a vehicle does fail the visible smoke check, and the owner chooses to repair it, then it could take more than 28 days to effect the repair. This would mean the owner will need to re-submit the vehicle for a WoF or CoF, and perhaps the 28-day period within which an owner can resubmit the vehicle for confirmation that the faults have been rectified should be extended to accommodate this scenario.

Some consideration should also be given to conducting the test annually rather than six-monthly for older vehicles, as emissions are less likely to deteriorate as rapidly as safety items such as tyres or brakes. This could help reduce costs to motorists, and the burden on testing stations, whilst still identifying gross polluters more promptly than under the current testing regime (i.e. not at all).

Other issues which need to be considered are the impact of the proposed requirements on staff resources at testing stations, as the test will (albeit briefly) require two people to perform; one to maintain the engine at fixed speed, and another to check visual emissions. The test may also expose vehicle inspectors to a greater level of emissions than typically experienced at testing stations (more so if the vehicle is to be warmed up first), impacting on the ability to maintain a healthy and safe environment. Consideration will need to be given to monitoring this, as well as the possibility of modifying stations to reduce the risk of over-exposure to fumes (by installing air extraction units). These associated costs, and possible extra resourcing, will likely be recovered from motorists by increasing the WoF/CoF charge more than "between zero and a few cents" as suggested in the draft Rule. For that reason, it is not clear what the true cost of the smoke test component of the WoF or CoF will be, and the NZAA would like some clearer estimates of these, based on performing actual tests.

Draft Rule

Clause 3.1(1) states that a motor vehicle "...must not emit clearly visible, dense smoke..."

The phrase "visible, dense" could be interpreted as "visible *and* dense" or "visible *or* dense" and therefore, to avoid confusion, the word "and" should be inserted in place of the comma.

The reference to a continuous 5 second period for the visible smoke check is quite specific, and may prove not to be an appropriate period of time in which to check for visible smoke. That is to say, after implementation of the Rule, 5 seconds may either not be long enough, or too long, and the number of vehicles passing or failing as a result may differ from predictions. Stating a specific time period in the Rule will also not permit easy adjustments to the inspection criteria should any issues be identified after implementation, or indeed, if changes to the criteria are required in future to cater for improvements in technology, or the acceptable level of visual emissions.

The NZAA proposes, as an alternative, that details such as the length of the visible smoke check be specified in the proposed inspection guidelines instead of the Rule.

Clause 3.1(2) (b) provides the option for owners to produce documentation that proves the engine is original equipment, and its design meant the motor vehicle could not reasonably comply with the visible smoke test. The NZAA suggests the type of acceptable "documentation" needs to be clearly defined in order to avoid disputes as to what is acceptable proof. Should this include manufacturers' specifications, or, if these cannot be obtained, can an independent party issue a certificate of exemption ?

An alternative may be simply to exempt vehicles over a certain age, thereby effectively catering for all classic/vintage or enthusiast vehicles. Any vehicle younger than the cut-off date, but whose engine design may still not comply with the Rule, would then be required to produce the *defined* documentation as required in clause 3.1(2) (b). The agreed age above which vehicles are exempted should be consulted upon with representative groups such as vintage car and motorcycle clubs. An additional proviso could specify a maximum annual mileage in order for the blanket exemption to apply, or otherwise clause 3.1(2) (b) applies. Similar criteria could also be used to exempt low volume vehicles.

Similarly, the NZAA questions whether it is necessary to test new or late-model vehicles, and if not, perhaps vehicles under a certain age (such as 4 years, as in New South Wales) be exempted from the visible smoke check.

The remainder of the wording of the proposed section 3 is acceptable.

Conclusion

The NZ Automobile Association supports the intent of the proposed visible smoke check, and its straightforward, low-cost approach. However, we urge that the inspection procedures be clearly defined, and vehicle inspectors well trained in them, to ensure consistent application. We further suggest that some of our reservations concerning the test procedures could be mitigated by trialling and then monitoring their implementation, as well as considering a simpler way of identifying vehicles which may need to be exempted, such as an age and/or mileage limit for classic vehicles, low volume vehicles, and late-model vehicles.

Yours sincerely

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