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Proposed Revised Vehicle Exhaust Emissions Rule

Submission to Land Transport New Zealand
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Introduction and Summary

The IPENZ Transportation Group ("IPENZ TG") is pleased to present this submission on the Proposed Revised Vehicle Exhaust Emissions Rule. IPENZ TG consists of nearly 700 transportation and traffic engineering professionals working in central government, local government, academia and the private sector. IPENZ TG represents a segment of considerable expertise in the fields of traffic and transportation and has a significant interest in managing the effects of transportation on society and in managing vehicle emissions.

This submission has been prepared for the management committee of IPENZ TG. Because of the diversity of members of IPENZ TG there is also a diversity of views on issues such as this and this submission may not represent the views of all members.

We consider the changes to the Emissions Rule as a positive step by government to reduce vehicle emissions, and we look forward to further progress.

Detailed Comments

1. Table 2.2

With regard to the detail of the proposed changes, IPENZ TG agrees with the proposed amendment to Table 2.2, delaying the introduction date for the Euro 4 and ADR 80/01 emissions standard requirement by 12 months, thus mirroring the delay in the introduction of these standards in overseas jurisdictions.

2. Application of the Rule to heavy vehicles assembled or built in New Zealand

It is also recommended the Rule be amended to ease the unintentional burden it provides to those who manufacture heavy vehicles in New Zealand by limiting the application of the Rule to the extent the referred-to emissions standards apply to the engine for heavy vehicles assembled or built in New Zealand.

For heavy vehicles, the engine is required to meet an emissions standard and, for some standards referred to in the Rule tables, the vehicle and engine combination is also required to meet an emissions standard. At issue is that a manufacturer in New Zealand may purchase a certified engine and install it in accordance to the engine manufacturer's specification but full approval to the Rule would require further certification of the vehicle as a whole. New Zealand does not have the facilities readily available for this later approval and hence this obstructs the domestic manufacture of heavy vehicles approved for use in New Zealand (using engines complying to recent standards).

Restricting the Rule's application to heavy vehicles to 'the extent the referred-to emission standards apply to the engine' avoids this. At risk would be the potential for increased emissions from ill-matched engine and chassis combinations, that is, where the mass (and inertia) of the vehicle is high relative to the engine size. However, it is believed would be a very unlikely occurrence. The definition of 'manufactured' or 'assembled in New Zealand' may also require careful consideration to avoid creating a loophole that creates a lesser stringent compliance option for the supply of mainstream vehicles.

3. Updating from Japan 02/04 to Japan 05/06

It is also recommended consideration be given to referring to Japan 05/06 after 1 January 2009 and not Japan 02/04 as given in the current Rule. Japan 05/06 could not be referred to during the original drafting of the Rule as Japan 05/06 was not a legal entity in Japan at that time (and only recognised emission standards can be referred in rules and regulations). It is believed Japan 02/04 is a reasonable less stringent emissions build than Euro 4 and ADR 80/01 and referring to the Japan 05/06 build for diesel vehicles may be more appropriate.

4. Agreement with proposed visible smoke checks as component of vehicle fitness inspection

Regarding visible smoke checks, IPENZ agrees with the introduction of a visual smoke check at the time of a vehicle's fitness inspection as one component of a greater vehicle emissions reduction strategy. By itself, the benefits of the visual emissions check are believed limited. However, this simple test could provide a good platform from which to lever public awareness and other initiatives that could bring about reasonable change and hence it is expected the Government will use the visual check as such a platform.

5. Other measures to support the visible smoke check

There are believed to be a number of weaknesses with the visual smoke check in isolation including: the smoke issued from a vehicle during acceleration being dependent upon the rate of engine acceleration, among other factors, and that acceleration rate being subjective; the pass-fail criteria being subjective in itself; and the ease by which the pump setting on diesel engines can be changed, just prior to the check, say, to achieve a far lower emission of smoke. For these reasons it is believed the visual smoke check cannot operate in isolation, instead being supported by active on-road policing of the 10-second Rule through enforcement both by officers of the law and the public and the introduction of anti-tampering checks, among other others.

6. Enforcement of "10 second rule" using public complaints

Regarding 'public enforcement' of the 10-second Rule it is believed there would be many benefits realised through a regime that provides more authority to members of the public that 'dob in' smoky vehicles, within limitations. For example, owners of vehicles that have received multiple public non-compliance reports may be issued a notice that requires them to present their vehicle for inspection by an authorised inspector within a given period after being issued such a notice.

7. Anti-tampering requirements

With regard to anti-tampering, it is believed the vehicle's emissions-related equipment should not be tampered with, this including banning the removal of exhaust catalysis and, in the case of diesel engines, checking seals on pump settings are intact.

8. Cost of visible smoke checks as part of vehicle fitness inspections

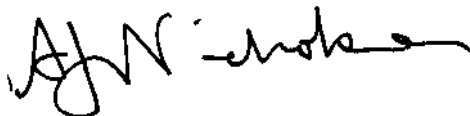
Information provided by the Ministry of Transport suggests the visual smoke check would take no more than one minute, will not need the purchase of new equipment and would likely cost between zero and a few cents.¹ This substantially underestimates the disruption such testing is likely to have on the inspection process and overlooks the likely need for additional emissions extraction equipment, for example:

- A visual inspection of tailpipe emissions requires two inspectors: one to accelerate the engine and one to carry out a visual inspection. Currently inspections can be carried out by a single inspection officer;
- The risk of additional (high smoke, et al) emissions will likely require the use of exhaust extraction equipment over and above that currently used. The cost of additional emissions extraction equipment would cost the order of \$5,000 to \$10,000 per testing lane;
- A one-minute operation on an inspection lane, charged at \$200 per hour, say, is a \$3.33 process. Some visual smoke checks will take longer than this and will disrupt the flow of vehicles through that lane more than by one minute.

It is suggested the cost of a visual smoke check could be more the order of \$5, not a few cents as has been suggested.

We look forward to the Government progressing its vehicle emission reduction initiatives.

For further clarification of the points raised in this submission, please contact Andrew Campbell (acampbell@fueltechnology.net or phone 04 – 977 5795), or contact the undersigned.



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¹ MoT notes on the Rule changes, <http://www.ltsa.govt.nz/consultation/vehicle-emissions/overview.html>.