

**AA Submission: Vehicle Equipment Amendment Rule  
32017/2 (19 Apr 2007)**

New Zealand Automobile Association response to the draft Vehicle Equipment Amendment Rule (2007)

19 April 2007

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

Dear Sir/Madam

## **VEHICLE EQUIPMENT AMENDMENT (Rule 32017/2)**

### **Introduction**

The New Zealand Automobile Association (NZAA) welcomes the opportunity to provide comment on the draft Vehicle Equipment Amendment Rule (2007).

As an organisation with a membership exceeding 1.2 million vehicle owners and drivers in New Zealand, close attention is given to any proposals that apply to vehicle standards, their repair and modification, and in-service use.

We circulated the draft Rule for comment to our 17 District Councils. The AA District Councils are representative of the membership and deal with policy issues. A summary of the feedback from our District Councils is provided below. We hope that you find these helpful in finalising the Rule, and welcome the opportunity for further input.

### **Overview**

The NZAA supports moves to target the “gross emitters” of vehicle exhaust noise, and to reduce the overall noise profile of the light vehicle fleet over time. We recognise that excessively loud vehicle exhausts are a form of noise pollution, which can cause frustration and temporary or permanent health effects (sleep deprivation, hypertension), and that this issue has become increasingly worse in recent years – in part attributed to the wording of the current Rule – and must be addressed. Our Members can on one hand be victims of the inconsiderate ‘boy racer’ phenomenon, while others may also own vehicles with relatively loud exhausts. But they in no way intend to cause annoyance to others, and recognise that noise disturbance should be reduced, just as exhaust emissions must also diminish for the betterment of the environment and public well-being.

In summary, the NZAA:

- supports the introduction of an Objective Noise Test as proposed;
- supports the re-wording of the Subjective Noise Test for light motor vehicles, and using it to screen non-compliant vehicles for the objective test;
- supports the updating of stationary decibel limits to 90dBA, but believes this could be introduced sooner than 2010 without imposing additional costs;
- rejects the proposal for a 3dBA tolerance for wear and tear for used imports from 2010; and
- supports retaining 95dBA for vehicles manufactured before 1985 only.

### **Comments on the proposals**

### **Introduce objective noise testing for light motor vehicles as part of WoF/CoF**

The NZAA strongly supports the introduction of an Objective Noise Test (ONT) at the WoF for vehicles which fail the *subjective* test, and believes this will be an effective and fair method of identifying those “gross emitting” vehicles which exceed NZ’s current decibel limits. The NZAA proposed the option of an objective test in our submission on the original draft Rule in 2003.

We favour the format of an ONT as an exception test, i.e. only applying to vehicles the WoF inspector deems to be noticeably modified and/or excessively loud (according to the wording of the subjective test), thereby providing the owner with definitive proof of the true level of noise emissions, and providing reasonable recourse to motorists who think they have been unfairly rejected based on an inspectors aural judgement. For that reason we strongly oppose mandatory objective noise testing for all light vehicles, as proposed by some other parties. Such an approach would be costly to implement, require substantially more training with a greater risk of procedural error than under the Low Volume Vehicle Technical Association’s regime, and be completely unnecessary for the majority of compliant light vehicles.

We do however have reservations about the ONT procedure itself. These include the limited number of sites authorised to conduct objective tests, the cost, and details of the test procedure itself such as the environment in which it is conducted, and the lack of tolerance for constant ambient noise which might be captured as a result.

Further, we are concerned that some unmodified, factory vehicles may fail the subjective test if the inspector believes (a) they are fitted with modified exhausts and (b) exceed 95dBA (what does a ‘modified’ exhaust look like?), and indeed, later fails the ONT despite being in good repair. Yet the vehicles complied with relevant international standards (such as drive-by tests recognised under clause 2.6[2] – which we endorse), and thus were permitted to operate in NZ.

The NZAA tends to favour the LVVTA suggestion for signature testing a range of factory-standard models, to determine the true noise output, against which identical models can be benchmarked. These signatures could then form the basis of the tolerance that could be permitted for a modified exhaust fitted to an identical model. For example, if a 4-cylinder Subaru was signature tested at 83dBA, then perhaps a 7dBA tolerance could be permitted for modification. But the owner of a factory HSV Commodore V8 shouldn’t be penalised if their car is tested at 96dBA, when it’s supposed to comply at 90dBA, let alone NZ’s 95dBA limit. If this were typical, then maybe 96dBA should be adopted as its signature, but that said, no modification tolerances should be permitted for anything emitting 95dBA or above (or 90dBA for new cars from 2010 [or earlier]). Limiting the amount that cars can be modified in this way will also address the problem of exhausts being excessively modified (say from 82dBA to 95dBA, when the tolerance for a car with that signature might only be 89dBA), or allowing any unmodified car registered in NZ before 2010 to be modified up to 95dBA after this date, when the limit for new cars after 2010 is 90dBA (or 93dBA for used imports as proposed).

The above reservations notwithstanding, we support the introduction of the ONT as proposed, but recommend that its introduction into the WoF regime be monitored (e.g. number of subjective test fails which pass the ONT, ONT fails of known compliant vehicles attributed to procedure, environmental factors etc.), and if necessary reviewed to address any issues encountered. None of this should delay the timing of the Rule, nor would any changes to the ONT regime affect the scope of the Rule as drafted.

Finally, the NZAA also supports the 4dBA tolerance permitted by the ONT for mid- or rear-engined vehicles, and the 2dBA tolerance for motorsport vehicles registered to be driven on public roads, provided they meet the LVVTA standards. We also endorse bringing light omnibuses (GVM of 3,500kg or less) under the regime.

### **Improving the subjective noise test wording for light vehicles**

The NZAA supports the revised wording for the subjective test, that the noise output from a standard or replacement exhaust system of a light vehicle be **less than or similar to** the output from the vehicle's original exhaust, or must not exceed the applicable limit. This was in fact the original wording in the first draft of the Rule in 2003, which we similarly supported, although it was subsequently altered in the final published Rule.

We think this wording is sensible as it does give inspectors discretion to pass vehicles under the subjective test that are fitted with modified exhausts which increase noise output above the original factory system, while not exceeding the maximum allowable decibel level. We support Land Transport NZ's view that the vast majority of light vehicles will not be required to undergo the ONT based on the correct interpretation of this wording, even though, by LTNZ's own figures, some 50,000 vehicles will be affected, at a total cost of over \$6 million based on the low estimate of an individual ONT at \$114 plus GST.

However, as identified in the discussion document, the key to whether or not a vehicle is referred to the ONT is dependant entirely on the skills and experience of the vehicle inspectors. We would expect that over time, inspectors will become familiar with what is and isn't excessive noise. Consistent training of all inspectors nationwide will, however, be essential, or at least for one inspector per WoF agent, but as a subjective test, there is still the risk that some inspectors will apply more (or less) discretion than others. It may be possible to run workshops in the main centres using a range of 4-, 6- and 8-cylinder vehicles with and without modified exhausts for comparison. These could be in conjunction with the LVVTA agents, or perhaps local noise control officers using their own equipment (possibly involving the police to assist them with roadside enforcement).

The importance of ensuring WoF inspectors know what certain engines sound like at certain decibel levels is further complicated by the introduction of a 90dBA stationary limit from 2010 (or in effect, 93dBA as proposed), in addition to the concurrent 95dBA limit for pre-2010 vehicles.

### **Updating the decibel limits for light vehicles**

The NZAA supports plans to reduce the exhaust noise profile of the NZ light vehicle fleet over time, as proposed in the amendment Rule by adopting 90dBA as the maximum stationary limit for new cars from 2010. However, we believe there is no impediment to implementing 90dBA sooner (perhaps as early as 2008 with a 6-month lead-in) for new/used arrivals as they already comply with this international limit (excepting supercars which are exempted by the drive-by standards), and have done so for many years.

However, we reject Land Transport NZ's proposal for a 3dBA tolerance (i.e. up to 93dBA) for used imports from this implementation date (except for pre-1985 vehicles imported after this date, for which we support retaining the 95dBA limit). By adopting a 90dBA stationary limit, NZ will be in line with international standards in those markets which are major suppliers of light vehicles to NZ, such as the European Union and Australia (and which have no such tolerance), whereas an effective 93dBA limit in-service is little improved from the current 95dBA – which is 50% louder than the maximum such new cars can be manufactured to in order to comply with those international standards. (We recognise the Japanese limit is 96dBA, but in practice those cars must comply with the 90dBA limit in order to be sold in Europe or Australia.)

Furthermore, the trend is for decibel limits to decrease, and at 93dBA, NZ would only be further and further out of step with international standards and practice. It is our view that car manufacturers can and do design their exhaust systems to meet 90dBA or less throughout the life of the exhaust, and build any deterioration, production variation and calibration errors into this parameter, and therefore there is no need for an additional 3dBA tolerance. Such a tolerance will simply enable after-market exhaust equipment manufacturers to build new

exhausts that can emit up to 93dBA, whereas a 90dBA in-service limit will ensure that any kits they manufacture remain under the 90dBA limit (including allowing for deterioration), thereby leading to an overall drop in exhaust noise levels over time, as we believe is intended. A reduction from 95 to 93dBA will patently not achieve this.

In addition, with many new cars' exhausts emitting far less than the 90dBA maximum under the stationary test, a 93dBA limit would permit the fitment of modified exhausts that more than double noise output (say from 83 to 93dBA), whereas a maximum 90dBA limit in service will restrict the level of modification permitted, whilst not prohibiting it. Those new cars which already emit close to the 90dBA limit are almost certainly sports/super cars, or fitted with factory sports exhausts, and therefore the opportunity for modification will be very limited, which is reasonable given the design of the car and exhaust system. A 3dBA tolerance would however permit substantial modification, say increasing noise output by 50% from 88 – 93dBA, which is not what the car manufacturer intended for a vehicle designed with a sports exhaust system from the outset.

We would also suggest that when the 90dBA limit is adopted, that this also apply to unmodified vehicles manufactured from January 1985 onwards. This could be assessed at their next WoF, with any such modified vehicles permitted to emit up to 95dBA, and any unmodified vehicles recorded in the LANDATA system as such (OEM or similar exhaust). If those vehicles are modified after the adoption of 90dBA, then they must comply with this lower limit. At the same time, fitment of emissions equipment like catalytic converters should also be recorded, with subsequent tampering resulting in a fail and requiring restoration.

Finally, we note that the draft Rule proposes no change to New Zealand's maximum drive-by limits in Schedule 2 (as there is no test). We support recognising these as an alternative to the stationary test, but since these are out of sync with the international drive-by limits in jurisdictions like the European Union and Australia, they should be aligned at the same time as reducing the stationary limit, so that NZ's higher drive-by standard (81dBA) isn't used instead of the lower stationary limit to comply a vehicle which fails the EU and Australian drive-by limit (74dBA), which should be the default standard. Likewise, we recommend aligning both the drive-by and stationary decibel limits for mopeds, motorcycles, and heavy vehicles with the EU and Australian standards.

### **Issues addressed by initiatives outside the proposed amendment Rule**

We wholly endorse the package of initiatives suggested, such as training of inspectors (as previously discussed in our submission), and especially raising the awareness of the exhaust industry of its legal responsibility, public education, assisting police enforcement, and reviewing the ONT methodology (as also discussed). We consider the after-market exhaust manufacturers and installers have been remiss in ensuring the equipment they supply when fitted does comply with NZ's legal noise limits. Such firms should be encouraged to purchase rudimentary noise meters to ensure the finished vehicles are well within the standard. On that point, we would also encourage WoF agents to purchase meters to assist with assessing vehicles that are subjectively "on the margin" (but factoring in 2-3dBA tolerance for calibration/procedure), or even voluntarily seeking LVVTA certification to perform formal ONTs, to increase the availability of tests and perhaps reduce cost and inconvenience to consumers.

Yours sincerely

**Mike Noon**  
**General Manager Motoring Affairs**  
**New Zealand Automobile Association Incorporated**