



6 dec 2004

Vehicle Emissions Environment group
Ministry of Transport
PO Box 3175
Wellington

Re: New Zealand Vehicle emissions screening programme

Dear **Advisor**

Please find below the response of AECS to your questions in the discussion document.

Q1) The cost of CoF and WoF will have to be increased depending on the volume of tests carried out per year.

The quality of the vehicles will improve, and the durability of the engines, and therefore the cost of ownership per vehicle will decrease.

The fuel consumption will (only with stringent testing!!) decrease, and therefore the running costs, but this will be offset against a more expensive periodical safety test.

The actual periodical test (WoF and CoF) will take a few minutes longer.

Q2) The actual test will take a few minutes longer, so the cost to the vehicle owner has to increase.

The investment per testing station will increase (equipment) resulting in a higher cost per test to the vehicle owner.

Testing stations and garages will resist the initial investment in emission screening equipment. The resistance will only last around 6 months if overseas experience is anything to go by. In many garages (overseas) is the WoF emission tester the most valued piece of equipment as it generates so much work.

Repair of electronic controlled vehicles (all late model vehicles) that fail the emission standard will be very difficult as the standard of knowledge/experience in NZ garages with respect to electronic control and emissions is very low. A lead in time will be needed with a reasonable easy system for temporarily exemptions in place.

Q3) A tiered system like in Europe.

Vehicles newer than a certain age have an emission control system on board, (these all have a special tax code in for example Holland) and all need to comply with strict fixed standards irrespective of the brand and model. Any deviation of this standard is pointless as ANY deviation indicates a defect or modification to the vehicle!

Older vehicles need to comply with commercially available emission data (tune up data) with a certain percentage allowance. These older vehicles are often easy to tune but are also often worn so will have trouble meeting emission standards.

All this data is available in standard tune up specifications / workshop manuals.

- Q4) I believe that screening Petrol vehicles for Particulates is a mistake as it is not measured with the same equipment as Carbon monoxide and hydrocarbons. The particulate test is very hard on petrol vehicles as the free acceleration test is impossible. Please follow the system, which has been in place in many countries throughout the world. Do not reinvent the wheel! Cars on the road in NZ are NOT any different than anywhere else in the world. There is not one car being manufactured in NZ. The NZ landscape is like many other places in the world, that too does not warrant a different approach. Where we differ is our attitude towards emissions and the understatement of the impact the massive quantity of cars have on our health.
- Q5) No. Newly imported vehicles should be tested according the same tiered system as implemented in service.
- Q6) No. Inspectors should be trained individuals (please refer to attached document EA-5/02, Page 14, G5/02 8.2). Trained inspectors will have no difficulties determining in which band a vehicle belongs.
- Q7) Set high standards with a relaxed attitude towards temporarily exemptions. Every owner of an offending vehicle will feel pressure after a failed WoF, but feels extremely relieved and cared for when an temp. exemption allows him to keep using his vehicle. This will create good will but still delivers the message!
- Q8) Training the industry and once again set high standards with a relaxed attitude towards exemptions.
- Q9) Yes I agree
- Q10) Training and investment in equipment.
- Q11)
- Q12) Nation wide 24 Months, I suggest to start in the main centres first and than spread to the smaller centres, before imposing the guidelines to country garages. It enables the owners of offending vehicles to go to 'out of town' garages for a period of time to get the WoF. Reducing the initial mountain of work that applying for exemptions will bring. Good communication with garages on the fringe of the imposed area is needed.
- Q13) If the introduction takes place as suggested in Q12) the distribution of work and income will briefly shift to the country. The small country garages will get for a short period more work and will be able to afford equipment better. In my view will this be a good manner to get the small garages / testing stations interested without mentioning it ever.
- Q14) The overall workload will decline as soon the WoF test will not be viable anymore.
- Q15) Yes I do agree that these tests are the most suitable for NZ as anywhere else in the world.
- Q16) Both the simple test for Petrol and Diesel will return failed results when the engine (oil) is not at operating temperature!
Both the Petrol test and the Diesel test can be 'rigged' to achieve a pass result if the test is not performed with an RPM measurement included. The RPM reading should be on a printout of the tester, which should be kept, for re-inspection purposes for a few weeks or

so.

On the Diesel opacity test the RPM measurement should also indicate the acceleration time and bandwidth of this acceleration time.

Without the RPM bandwidth measurement to get a pass result on a smokey vehicle the inspector only has to slowly accelerate the engine!!! This equipment is readily available anywhere, as soon as the MOT leaves this requirement out of the testing procedure all equipment manuf. and distributors will leave this relative cheap option out of the equipment. Get it right first time!

Q17) The screening should take place every WoF check also on new vehicles at the current frequency. I know of several cases where an under warranty fault has destroyed the catalytic converter. This car will for the rest of its life be a large polluter. Should the expensive repair be done outside the warranty period of the car, simply because the government allows that to happen? How would an unsuspecting second hand car buyer respond?

Q18)

Q19) Yes on a case by case basis. During WoF testing a lot of exemptions will be requested for particular brands and models, the data that transpires will dictate which vehicles should be exempt by default.

Q20)

Q21) Yes.

- As else the administration will be a nightmare. Variable charge out rates, cars skipping WoF's etc. Also will the return on investment for testing stations and garages be less, or the charge-out rate for an emission test will have to be higher, lowering the customer's acceptance level.

- An electronic fault or tampering on the EFI system will destroy the Catalytic converter in a matter of minutes, so even once every six months is futile.

Q22) Yes, see Q21)

Q23) Yes but every WoF or CoF.

Q24)

Q25)

Q26)

Q27) Please use the knowledge, expertise and experience of large companies who have introduced emission screening in many countries throughout the world.

Note:

Many of the raised issues are answered in the EN 45004 document called "General Criteria for the operation of various types of bodies performing inspections".
The document EA-5/02 as attached is for guidance through EN 45004.

Also relevant is the ISO/IEC 17020 document.

Demographics

AECS is a nation wide training provider for the automotive industry. Its roots are in research and development of automotive diagnostics.

AECS' training activities extend into to Australia (for the AADS). A six week training round electronic controlled Diesel and emission training is booked in all the main centres of Australia excluding the north for Feb and March 2005.

In New Zealand the training activities are very dense throughout the country. In most centres have (Euro WoF) emission tests for Diesel engines been taught as part of the Mechanical and electronic Diesel training last year and part of the year before. This coming calendar year many more of those trainings will take place throughout NZ.

AECS is meeting through the training seminars and other business activities many garage owners/operators throughout NZ. The opinions and questions on most matters raised in the discussion document are plentiful and varied. The answers to the discussion document questions are based on most of those comments and concerns.

Yours sincerely

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