

PROPOSAL FOR A NEW DRAFT REGULATION:  
**UNIFORM PROVISIONS CONCERNING CABIN AIR QUALITY TO REDUCE FATIGUE AND  
PREVENT ACCIDENTAL OR INTENTIONAL POISONING BY EXHAUST GASES**

Transmitted by Australia

**Proposal**

Australia is proposing that WP.29 consider the development of new regulation which would set a performance standard for a vehicle cabin air quality monitor. The monitor would incorporate oxygen and carbon monoxide sensors, and would be calibrated to detect poor air quality in normal driving conditions (which may contribute to driver fatigue) and to detect the particular circumstances of a suicide attempt.

**Background**

Health authorities and the medical community in Australia have identified that suicide from motor vehicle exhaust gas poisoning is a serious health problem. This suicide method accounts for some 20% (600 people per year) of all suicides in Australia, and its prevalence is increasing. Australia understands that other countries with high vehicle ownership rates also experience considerable numbers of suicides using motor vehicle exhaust. There is research evidence to support the view that reducing access to "acceptable" lethal means, leads to reductions in overall suicide rates, and also "buys time" for intervention.

An electronic monitor has been developed in Australia by the Royal Melbourne Institute of Technology (RMIT) University in attempt to address this issue. The RMIT researchers presented a paper on the development of the device at the SAE 2000 World Congress in Detroit, Michigan in March 2000 (SAE Technical Paper Series 2000-01-0084).

The monitor can be calibrated to operate in two ways.

It can be calibrated to detect the "signature" gas concentrations which only occur when exhaust gas is being redirected into the vehicle cabin in a suicide attempt. Once the levels of carbon monoxide in the cabin become life threatening, the monitor would send a signal to the engine immobiliser to switch off the engine. This would occur only when the vehicle is stationary.

The monitor can also be calibrated to detect oxygen depletion and when the oxygen concentration falls to levels likely to cause drowsiness in drivers, the device can trigger audible or visible warnings to the driver, or alternatively switch the ventilation system to a fresh air mode.

Australia acknowledges that the use of motor vehicles by people to commit suicide is a misuse of the vehicle, and probably outside the normal scope of activities undertaken by WP29. The fatigue issue has clear safety implications and is more in keeping with WP.29's activities.

Nevertheless, as WP.29 is the international body for vehicle standards, Australia's preference is for vehicle standards to be developed and agreed within this forum wherever possible. Australia's view is that this device offers a cost effective means for significantly reducing the death rate from this method of suicide and also offers the capacity to improve driver safety by reducing the incidence of driver fatigue.

**Conclusion and Recommendation**

The use of motor vehicles for committing suicide is a serious problem in Australia and other countries. The development of an ECE Regulation for air quality cabin monitors for both suicide prevention and fatigue management would be expected to reduce suicide rates, and improve driver safety. A harmonised regulation would also minimise the costs for the vehicle manufacturing industry.

Australia recommends that WP.29 agree to put this proposal on the work program. If agreed, Australia will prepare and submit a more detailed proposal for consideration at the next meeting of the relevant Group.

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