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| Submitted by expert from IRU | Informal document **GRSG-104-09**  (104th GRSG, 15–19 April 2013  agenda item 8) |

**Need for measures to mitigate fire risks of CNG and LNG vehicles: UN Regulation No. 110 (CNG and LNG)**

The text reproduced below has been prepared by the expert from the International Road Transport Union (IRU) to mitigate risks of fire on CNG vehicles.

I. Analysis

In October 2012, an incident occurred in the Netherlands with a passenger bus equipped with CNG receptacles on the roof. The driver and passengers were alerted to a problem by smoke and flames at the rear of the bus, but they all managed to leave the bus safely before the flames spread rapidly through the bus (click on the movie link [1](http://www.youtube.com/watch?v=AF2sTtoHKnQ)).

The driver attempted to extinguish the fire, with little success, and before long the entire bus was engulfed in flames and heating the CNG receptacles. We know that the cylinders were equipped with relief valves that discharge when pressure becomes too high, but the heat increased so much that the pressure built inside the cylinder causing the main valves to break.

The gas ignited, creating a flamethrower effect until all cylinders were empty, making it impossible for the fire brigade to intervene.

II. Justification

Following this incident and based on the IRU Position on fire mitigation, IRU Members agreed, once again, to support any initiative that can help diminish fire. Indeed,

* The IRU supports any measure that effectively reduces road accidents by targeting their main cause.
* The IRU and its Members are in favour of at source installation of fire detection systems and smoke detection systems in engine compartments and interior compartments respectively.
* Periodical vehicle inspections can mitigate fire risks and mechanical problems and would promote an improved level of safety and compliance in the road transport sector.
* Correct maintenance of all mechanical components of coaches and buses can considerably diminish the risk of fire.
* The pre/post trip inspection list provided by the IRU Checklist Against Fire (see annex) can help prevent coach and bus fires. The checklist should be carefully communicated to all drivers and disseminated to all concerned bodies in the passenger transport sector.

Therefore, the IRU Secretariat General and its Members would like to ask GRSG experts **to conduct a risk assessment on CNG and LNG vehicles versus other fuels**, especially fossil fuels, in order to analyse which measure(s) should be implemented to mitigate the risks of fire in CNG and LNG vehicles.

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