EMISSION CONTROL STRATEGY FOR SRI LANKA BY IMPROVING VEHICLE INSPECTION & MAINTENANCE ACTIVITIES

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For the economic development of a country increase in transport industry activity is vital. This will inevitably expose a large portion of urban population exposed to automobile pollution emission. Hence, there is a great need of an emission control strategy to minimize the adverse effects due to pollution by vehicle emission.

In some parts of the world this problem has been addressed by approaches such as traffic management measures, established emission standards, effective vehicle inspection and maintenance programmes (I/M programmes), encouraging public transport, encouraging cleaner fuel and road user charges etc. Even though some of the above measures have been initiated in Sri Lanka, vehicle emission standards or effective I/M programme are almost non-existent.

This paper discusses the present situation of vehicle emission in Sri Lanka and identifies possible measures that could be adopted to control vehicle emission by changing the vehicle technology standards. An overview of principles of automobile emission formation, main sources of emissions, the effects of the fuels used and emission related combustion chemistry is also presented.

The historical development of motor vehicle emission control technology and the standards set by the developed nations have been analysed to identify probable measures to control vehicle emissions in Sri Lanka in the near future with affordable technology. Vehicle emission estimates for different I/M measures, fuel types and vehicle growth scenarios are compared to identify efficient measures in emission control. In estimating vehicle emissions the guidelines given by the Intergovernmental Panel on Climate change (IPCC) and emission factors developed to suit the Sri Lankan conditions have been used.