

AUTOMOBILE POLLUTION CONTROL

Growing population, phenomenal rise in the number of vehicles and crowded traffic intersections are the symptoms that characterise the present predicament of the increase in vehicular pollution. Vehicles emit exhaust chemicals, such as carbon monoxide, nitrogen dioxide, nitrogen monoxide, sulphur dioxide and suspended particulate matter. Other constituents of vehicular exhaust include benzene, toluene, xylene, aldehyde etc., which have systemic toxicity on human beings. Few specific carcinogens are found to be typical of diesel exhaust.

In order to combat vehicular pollution, the various steps that were adopted by the West Bengal Pollution Control Board (WBPCB) during the year 2005-2006 are given below.

Canada-India Environmental Institutional Strengthening Project on Autorickshaw LPG conversion Demonstration

Environment Canada is implementing “Canada-India Environmental Institutional Strengthening Project on Autorickshaw LPG

conversion Demonstration” funded by CIDA (Canadian International Development Agency) in association with the Ministry of Environment & Forests (MoEF), Government of India (GoI) and the Central Pollution Control Board. The project includes transfer of Canadian technical expertise for conversion of existing petrol-driven autorickshaws of Bangalore and Kolkata to Liquefied Petroleum Gas (LPG). M/s Yugo-Tech Conversion Gas Systems Inc., Ontario, Canada is the Canadian counterpart in this project.

During the year 2005-2006, M/s Yugo-Tech has developed the LPG conversion kit for the old in-use petrol-driven autorickshaws. They have also conducted a test run by retrofitting the developed kit in one autorickshaw in Kolkata and one in Bangalore. The WBPCB has conducted a workshop on emission testing laboratory for autorickshaws within the premises of Paribesh Bhawan, Kolkata. After the test run, M/s Yugo-Tech applied for approval of the kit including LPG tank from the Automotive Research Association of India, GoI. After receipt of the approval from the



LPG Kit retrofitted in auto-rickshaw

GoI, an expert team from M/s Yugo-Tech retrofitted with LPG kits in 24 on-road autorickshaws of Kolkata. The emission testing of these autorickshaws were made on a regular basis. The starting problem of the autorickshaws was solved by modification of the LPG kit, and the emission testing of the autorickshaws are being continued. The testing report of the autorickshaws are given in *Annexure V*.

Upgraded AETCs in West Bengal

In association with the State Department of Transport, the West Bengal Pollution Control Board has facilitated the setting up of

computerised and upgraded Automobile Emission Testing Centres (AETCs) and Pollution-under-Control (PUC) centres in West Bengal. The AETCs have upgraded their testing facilities with opacimeters, gas analysers, web-camera, compatible software and provisions for networking with the AETCs and the Regional Transport Authorities (RTAs). Each AETC has one set of opacity meter (for smoke density testing) with engine revolution per minute (RPM) sensor for diesel engine, engine oil temperature sensor, computer, web-camera, software (for measured data transfer) and colour printer. For Petrol/LPG/CNG (Compressed Natural Gas) engines, four or five gases analysers with facility for testing exhaust gases like CO, CO₂, O₂ and HC are being installed at the AETC premises. The emission standards for the in-use vehicles under Sub-Rule 2 of Rule 115 of the Central Motor Vehicles Rules, 1989 has been amended vide GSR 111 (E) dated 10-02-2004. The amended features include computer printout of PUC certificates as well as HC for petrol-driven vehicles, reactive HC for LPG-driven vehicles and non-methane HC for CNG-driven vehicles were included along with CO for vehicular emission monitoring. The status of technical recommendation for AETCs in West Bengal during the year 2005-2006 is given in *Annexure VI*.