

AFTER BHARAT STAGE-II-COMES BHARAT STAGE III AND THEN?

THE FIRST Indian emission regulations were idle emission limits, which became effective in 1989. These idle emission regulations were soon replaced by mass emission limits for both gasoline (1991) and diesel (1992) vehicles, which were gradually tightened during the 1990's. Since the year 2000, India started adopting European emission and fuel regulations for four-wheeled light-duty and for heavy-duty vehicles. However, Indian own emission regulations were applicable to two- and three-wheeled vehicles.

The Mashelkar Committee, constituted to finalize an auto fuel policy for the country, has in its interim report recommended extension of Bharat Stage-II emission norms to the whole country from 1st April 2005. In the three cities of Hyderabad, Bangalore and Ahmedabad, however, the norms were introduced from the year 2003. After the report, Bharat Stage II was immediately imposed in the four metropolitan cities of Delhi, Mumbai, Kolkata and Chennai. The Expert Committee, headed by Dr. R. A. Mashelkar, Director General, Council of Scientific & Industrial Research was appointed in the month of September 2001.

The eleven cities which are covered under the strict compliance of emission norms are : Mumbai, Kolkata, Chennai, Bangalore, Hyderabad, Ahmedabad, Pune, Surat, Kanpur and Agra. As for new vehicles, the norm states that no vehicle could be sold in the entire country unless it meets the Bharat II norms after April 2005 and Euro III after April 2010. Vehicles not having emission norms equal to Bharat IV norms would be sold in these cities after April 2010 under the policy.

Regarding applicability of Euro I and Euro II norms to commercial non-private vehicles, the Ministry of Surface Transport, Govt of India has already laid down India 2000 norms vide their notification No. 493 (E) dated 28th August 1997 applicable for all categories of vehicles all over the country with effect from 1st April 2000. They have also notified India 2000 norms only for private vehicles below 3500 kgs. However, Bharat Stage II norms for other

categories of vehicles are still to be notified by the Ministry. The India 2000 and Bharat Stage II norms are broadly equivalent to the Euro I and Euro II norms applicable in Europe.

The Mashelkar roadmap prescribes an incremental approach for upgradation of fuel standard and vehicle design. Basically Bharat Stage-II norms involve supply of Petrol and Diesel with 0.05% sulphur content. In rest of the country, petrol has a Sulphur content of 0.1% with effect from 1.4.2000 as against 0.05% in major cities including Delhi. Similarly, Sulphur content in diesel have been reduced in the country, from a level of 1.0% maximum in 1996 to 0.25% on 1.4.2000. In addition to petrol and diesel, CNG and LPG were permitted to be used as auto fuels. Alternative fuels like di-methyl ether, bio-diesel, hydrogen, electric and fuel cell vehicles etc, are at various stages of experimentation.

In view of the preparedness of the manufacturers of heavy goods vehicles to supply Euro II compliant engines within 6 months of placement of orders and the submission made by the Society of Indian Automobile Manufacturers that Euro II compliant engines in the multi utility vehicles would be available and the fact that 0.05% sulphur diesel would be available in the cities, the Committee recommended that all heavy vehicles as well as light goods vehicles registered in the metropolitan regions from 1st April 2001 must be Bharat Stage II compliant.

Through orders of the Supreme Court and Mumbai High Court, the Euro I and Euro II norms have been made applicable in metropolitan cities (NCR Delhi and Mumbai) even earlier than the dates specified in the notification of Ministry of Surface Transport, Government of India. In Delhi, the India 2000 norms for private vehicles have come in force with effect from 1st June 1999 and Bharat Stage II norms (equivalent to Euro II norms) from 1st April 2000. The Mumbai High Court has made Euro I norms applicable to all vehicles registered in Mumbai city with effect from

Ist January 2000 and Euro II norms with effect from Ist January 2001 for private vehicles.

The Committee, on the basis of position brought out above, recommended that the ministry of Surface Transport, Govt of India should lay down Bharat Stage II mass emission norms (equivalent to Euro II norms) for all categories of vehicles, which were still not covered in Government of India notification dated 31st January 2000.

The West Bengal Pollution Control Board, Kolkata announced that the mass emission standards. (Bharat Stage - II) for vehicles brought for registration in the Kolkata Metropolitan Area on and after Ist November, 2000 in respect of motor cars with sitting capacity of and upto 6 persons (including driver) (both petrol and diesel) and in respect of 4-wheeler passenger vehicles designed to carry more than 6 persons (including driver) (both petrol and diesel) shall be as laid down in Notification No. GSR 77E dated, 31st January, 2000 of the Ministry of Surface Transport, Government of India.

Alarmed at the high level of pollution caused by auto emission, the court has been urging the government for months to ensure that engines of a few lakh buses, private cars and taxis plying in the Kolkata Metropolitan Area (CMA) were made Bharat Stage-II compliant. The State Government however, has failed to convert even a single public vehicle in the CMA. Of about 100,000 non-Bharat II commercial vehicles (7,500 buses, 5,000 minibuses, 30,000 taxis, 15,000 autorickshaws, 15,000 trucks, 12,000 medium goods vehicles and 15,000 other vehicles) plying in the city, not a single commercial vehicle owner has changed engines yet. The vehicles currently plying in Kolkata could not be converted to compressed natural gas (CNG) as it was not readily available here. Even though it could be successfully done in Mumbai or Delhi because of the easy availability of the gas but the situation is different in Kolkata as the gas could not be imported from Bangladesh because of political reasons. Moreover there is also a need for better infrastructure to bring CNG into the state.

In the race to meet the Bharat Stage II deadline, confused customers are taking the cheaper way out. There are two options available: an imported and a local variety. The imported version, highly priced carries government approval, but has no takers. The illegal variety costs much less and sells like hot cakes. While fixed tanks in certified kits have multi-valves to stop the flow of gas in an accident, the single-valve domestic cylinder is extremely dangerous. A car fitted with domestic LPG can cause a huge leak during collisions, resulting in explosion. In Kolkata's traffic, this not only endangers the LPG-fitted vehicle, it jeopardizes the lives of those in adjacent vehicles.

India has lagged behind the European countries in adopting their emission norms by several years. Hence,

there is urgent need to catch up with them at least by 2005 when Euro IV norms come in force there. Accordingly, the Ministry of Surface Transport, Government of India felt that the notification for Euro III and Euro IV equivalent norms should come in force in India with effect from Ist April 2005.

At the point when the crisis with Bharat Stage II is at a critical stage, the Automotive Research Association of India, Pune, decided to implement the Bharat Stage III emission norms for gasoline and diesel vehicles in 11 cities across the country to reduce pollution in the atmosphere. The Bharat Stage III norms are equivalent to the Euro III norms. These norms, to take effect from April 2005 in all eleven cities of India, would be applicable for the four-wheelers to begin with. Then the two and three-wheelers would be upgraded to this segment during this period. The report recommends Euro-III equivalent emission norms to be introduced in 7 mega cities from Ist April, 2005. The Euro-III equivalent emission norms would however, be extended to the other parts of the country from 2010.

It is high time that to meet the air quality targets, the Government should prescribe, as elsewhere in the developed world, only the vehicular emission norms and matching fuel specifications, leaving the choice of vehicle type and the fuel to the user public. Only emission efficient new vehicles and compatible fuels cannot meet the desired air quality targets. The Supreme Court has strong-armed the government into enforcing strict vehicular emission norms in the principal metros. Its chief concern is with public health being put to serious risk by the polluting exhaust from the growing number of motor vehicles. Hence, steps should be taken to control the substantial pollution load from the ill-maintained in-use vehicles, particularly those in the government departments. Measures like comprehensive inspection and certification system for in-use vehicles, surveillance and checking emission warranty systems, better traffic management, construction of by-passes around major cities etc. are essential to attain air quality targets. An institutional mechanism for this purpose is needed to be set up, the details of which can be finalized after interacting with various stake holders including environmentalists, producers of automobiles and auto fuels, associations of the operators of passenger and goods transport and eminent individuals. The development of the infrastructure for availability of suitable gasoline and alternative fuel and Bharat II Complaint engines should be completed before implementing Bharat Stage-II and imposing Bharat stage III. If the country is not ready to tackle the implications of Bharat II even after 4 years of the recommendation, then the consequences of immediately imposing Bharat III and then Bharat IV so after will be disastrous. □

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