

17. Emission of smoke, vapour etc. from Motor vehicles: CMVR 115

- (1) Every motor vehicle other than motor cycles of engine capacity not exceeding 70 cc, manufactured prior to the first day of March, 1990 shall be maintained in such condition and shall be so driven so as to comply with the standards prescribed in these Rules.
- (2) On and from the date of commencement of the CMV (7th amendment) Rules 2001, every motor vehicle shall comply with the following standards namely;-
- (a) Idling CO (Carbon monoxide) emission limit for all vehicles other than 2 wheelers and 3 wheelers operating on -
- (i) Liquefied Petroleum Gas (LPG), Petrol; or
- (ii) Compressed Natural Gas (CNG), Petrol, shall not exceed 3.0 percent by volume;
- (b) Idling CO (Carbon monoxide) emission EMI(for all 2 wheeler and 3 wheeler vehicles operating on -
- (i) Liquefied Petroleum Gas (LPG), Petrol; or
- (ii) Compressed Natural Gas (CNG), Petrol, shall not exceed 4.5 percent by volume;
- (c) Smoke density for all diesel - driven vehicles shall be as follows :

Sl. No	Vehicle Type	CO %	HC (n-hexane equivalent) ppm
1	2 and 3 wheelers (2 or 4 stroke) (vehicles manufactured on and before 31 st March, 2000)	4.5	90000
2	2 and 3 wheelers (2 stroke) (vehicles manufactured after 31 st March, 2000)	3.5	6000
3	2 and 3 wheelers (4 stroke) (vehicles manufactured after 31 st March, 2000)	3.5	4500
4	4-Wheelers manufactured as per Bharat Stage II norms	3.5	1500
5	4 wheelers manufactured as per Bharat Stage-II , Bharat Stage-III or subsequence norms	0.5	750

Note : The idling Emission Standards for vehicles operating on LPG shall contain Reactive Hydro Carbon (RHC) in place of Hydro Carbon (HC) estimated by the following formula.

$$\text{RHC} = 0.5 \times \text{HC.}$$

In respect of the vehicles operating on Compressed Natural Gas (CNG), shall contain Non-Methane Hydro Carbon (NMHC) in place of Hydro Carbon (HC) estimated by the following formula.

Pollution norms revised CMV Rule 115 (2)(i) vide GSR 277(E) dt. 11-04-2014 & Validity of PUC for BS 4 vehicle is one year.

$$\text{NMHC} = 0.3 \times \text{HC}$$

Method of Test		Maximum Smoke Density	
		Light absorption coefficient (l/m)	Hatridge Units
Free acceleration test for turbo charged engine and naturally aspirated engine	Pre BS IV	2.45	65
	BS IV	1.62	50

The free acceleration test shall be carried out using the instrument type approved as per Rule 116 (3) of the CMVR 1989 with the vehicle engine warmed up to attain oil temperature of minimum 60°C. During each free acceleration, maximum no load

speed reached shall be within band width of 1 [+] 500 rpm of the average value in respect of 3 - wheeler vehicles and 1 [+] 300 rpm of the average value for all other categories of vehicles. The free acceleration test shall be repeated till the peak smoke density maximum no load rpm criteria are situated within a bandwidth of 25% of the arithmetic means (in m-1unit) of these values of within a bandwidth 0.25K, whichever is higher and do not form a decreasing sequence. The smoke density to be recorded shall be arithmetic mean of these four readings. In case the valid readings are not obtained within 10 free accelerations or the smoke density recorded is not within the limits, the testing shall be discontinued and the vehicle owner shall be advised to resubmit the vehicle after repair/service.

18 Visual check of “Malfunction Indicator Lamp” in Pollution Checking Centers

Circular Memo No. 10/7824/K2/2012, Dated : 21-09-2012

The attention of the District Officers is invited to the reference cited. As per GSR 84 (E) dated 9th February, 2009, all Gasoline or Diesel driven BS IV four wheeled upto 3.5 tons GVW manufactured after 1st April, 2010 should have a Malfunction Indicator Lamp (MIL) activated in the instrument panel. This MIL automatically switches on. If the vehicle detects malfunction in any of the sensors / actuator of the vehicle controlling the emission parameters.

All the District Officers are directed to instruct all the pollution checking centers of the concerned district should perform a visual check of “Malfunction Indicator Lamp” at the vehicle instrument panel. If the “Malfunction Indicator Lamp” remains switched ‘ON’, after the engine of the vehicle have been started, the Pollution check should not be undertaken and vehicle driver should be advised to visit a workshop for repairs. Pollution check should only be undertaken if the “Malfunction Indicator Lamp” of the vehicle does not remain switched ‘ON’ after the engine of the vehicle has been started.

All the District Officers are requested to take necessary action and see that the above instructions shall be followed scrupulously. They may initiate stern action against the Pollution checking Centers for any deviation of the above instructions of the Government of India.

19.-NOISE STANDARDS Under Rule 120 (2) of CMV Rules

Every motor vehicle shall be constructed and maintained to conform to noise standards as indicated in the Table below, and these standards shall be tested as per Indian standards IS: 3028.

Category of Vehicles	Maximum Permissible Noise Levels
Two wheelers (Petrol Driven)	80 db (A)
All passenger cars, all petrol driven three-wheelers and diesel driven two wheelers	82 db (A)
Passenger or Light Commercial Vehicles including three wheeled vehicles fitted with diesel engine with GVW upto 4000 kgs.	85 db (A)
Passenger or Commercial vehicles with GVW above 4000 kgs and upto 12000 kgs.	89 db (A)
Passenger or Commercial Vehicles with GVW above 12000 kgs.	91 db (A)