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Consideration of technical regulations to be listed in the Compendium of Candidates for UN GTRs, if any

Request to list in the compendium of candidate Global Technical Regulations (compendium of candidates) India's Durability Driving Enforcement Procedure for two-wheeled vehicles

Submitted by the representative of India*

The document reproduced below is submitted by India to the Executive Committee (AC.3) for consideration. It is a request to include in the Compendium of Candidates the Durability Driving Enforcement Procedure. In order to be considered by AC.3, this request is accompanied by a copy of the regulations mentioned (see Article 5, paragraphs 5.2.1., 5.2.1.1. and 5.2.2. of the 1998 Agreement).

* In accordance with the programme of work of the Inland Transport Committee for 2021 as outlined in proposed programme budget for 2021 (A/75/6 (part V sect. 20) para 20.51), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



Request to list in the compendium of candidate Global Technical Regulations (compendium of candidates) India's Durability Procedure for two-wheeled and three-wheeled vehicles

1. India requests to include in the Compendium of Candidates the India's Durability Procedure for two-wheeled and three-wheeled vehicles.

I. Background

2. Indian automotive regulations are notified by nodal ministry, i.e., Ministry of Road transport and Highways (MoRTH). MoRTH notified the Bharat Stage -VI (BS-VI) regulations vide GSR 889 (E) dt. 16 September 2016. The notification provides the rules, pollutant limit values, durability mileages, DF, etc for certification according to BS-VI procedure for 2 wheeler, 3 wheeler, Passenger cars and heavy duty vehicles applicable from 1st April 2020.

II. Description of Regulations

3. Outline

(a) Limits, DF and Durability Mileage for 2-wheelers

Limit Values for Two wheelers fitted with PI & CI engines: BSVI

Vehicle Class		BS VI Emission Norms							Durability mileage (km) Type V
		CO mg/km	HC mg/km	NO _x mg/km	NMHC mg/km	PM mg/km	EVAP mg/test	OBD	
PI Vehicles	1 & 2-1	1000	100	60	68	4.5*			20000
	2-2	1000	100	60	68	4.5*			
	3-1 & 3-2	1000	100	60	68	4.5*	1500		35000
CI Vehicles	All	500	100	90	68	4.5*	-	STAGE II	35000
	DF (for all classes)	1.3	1.3 (SI) 1.1 (CI)	1.3 (SI) 1.1 (CI)	1.3 (SI) 1.1 (CI)	1.0 (CI)	300**	-	-

* Applicable to gasoline direct injection (DI) engines only.

** Fixed DF of 300 mg/test shall be added to SHED test results. Alternative to fixed DF, manufacture may opt for ageing of evaporative emission control devices as per procedure specified in AIS 137 and as amended time to time.

(b) Limits and DF for 2-Wheelers (Vehicles with cc ≤ 50 and Vmax ≤ 50 km/hr)

Pollutant	TA=COP norms mg/km	Deterioration Factor (D.F.)	Test Cycle (Cold Start at T=0 sec)
CO	500	1.2	IDC as per AIS137
HC	350	1.2	
NO _x	150	1.2	

(c) Limits, DF and Durability Mileage for 3-wheelers:

Three wheelers fitted with PI and CI Engines: BS VI

Vehicle with PI engines

	CO mg/km	HC+NO _x mg/km	NO _x mg/km	EVAP mg/test	OBD	Durability mileage (km) Type V	Test Cycle (Cold Start at T=0 sec)
Limit	440	435	130	1500	Stage II	35000	IDC AIS137
D.F.	1.20	1.2	1.2	--	--	--	

Vehicle with CI engines

	CO mg/km	HC+N ox mg/km	NO _x mg/km	PM mg/km	OBD	Durability mileage (km) Type V	Test Cycle (Cold Start at T=0 sec)
Limit	220	200	160	25	Stage II	35000	IDC AIS137
D.F.	1.10	1.0	1.00	1.20	--	--	

III. Related documents

4. The above mentioned Indian regulatory text for assessing the durability of Pollution control devices for 2-Wheelers and 3-Wheeler vehicles are detailed in the following linked documents. The documents can be downloaded from the links given therein.

(a) Government Rule notification numbered GSR 889 (E) dt. 16th September 2016 which specifies the emission norms, durability mileage and mathematical DF values for 2W on page no. 32 in English and for 3W on page no. 36 in English. It also refers the relevant Automotive Industry Standards (AIS) that contain the test procedures. The linked file contains the regulatory text both in Hindi (official language) and in English -

https://morth.nic.in/sites/default/files/notifications_document/Notification_no_G_S_R_889_E_dated_16_09_2016_regarding_Mass_Emission_Standards_for_BS_VI_0.pdf

(b) The durability test procedures are detailed in AIS (Automotive Industry Standards) no. 137- Part 1 for 2W and AIS 137-Part 2 for 3 Wheelers (in English). AIS documents can be directly downloaded from below links

(i) 2W AIS standard (refer chapter 5 for durability procedure on page no. 209 onwards)

https://hmr.araiindia.com/Control/AIS/515201944426PMAIS137_Part_1_F.pdf

(ii) 3W AIS standard (refer chapter 5 for durability procedure on page no 161 onwards)

https://hmr.araiindia.com/Control/AIS/524201950214PMAIS_137_Part_2_F.pdf