

INFORMATION BROCHURE

AN E-NEWSLETTER FROM MAHESH SHARMA & ASSOCIATES, JAIPUR(INDIA)
(ONLY FOR PRIVATE CIRCULATION)

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AMENDMENT IN POLLUTION LAWS : 1

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1. The Central Motor Vehicles (11th Amendment) Rules, 2016—In the principal Rules, 1989—Rule 15—Amended.

G.S.R. 889(E).—Whereas, the draft rules further to amend the Central Motor Vehicles Rules, 1989, were published as required under sub-sec. (1) of Sec. 212 of the Motor Vehicles Act, 1988 (59 of 1988) vide notifications of Government of India in the Ministry of Road Transport and Highways vide number G.S.R. 187(E) dated the 19th February, 2016, in the Gazette of India, Extraordinary, Part II, Section 3, sub-sec. (i), inviting objections and suggestions from all persons before the expiry of thirty days from the date on which copies of the Gazette containing the said notification were made available to public;

Whereas, copies of the said Gazette notification were made available to the public on the 19th February, 2016;

And whereas, the objections and suggestions received from the public in respect of the said draft rules have been considered by the Central Government;

Now, therefore, in exercise of the powers conferred by Sec. 110 of the Motor Vehicles Act, 1988 (59 of 1988), the Central Government hereby makes the following rules further to amend the *Central Motor Vehicles Rules, 1989*, namely:—

1. (1) These rules may be called the **Central Motor Vehicles (11th Amendment) Rules, 2016**.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Central Motor Vehicles Rules, 1989, in Rule 115,—

(A) in sub-rule (2),—

(a) in clause (i), in the proviso, for the entry “Bharat Stage-IV”, wherever it occurs, the entry “Bharat Stage IV or Bharat Stage VI ” shall, respectively, be substituted;

(b) in clause (ii), in the Table, for the entry “Bharat Stage-IV”, wherever it occurs, the entry “Bharat Stage IV or Bharat Stage VI ” shall, respectively, be substituted;

(B) in sub-rule (7), in the proviso, for the entry “Bharat Stage-IV”, the entry “Bharat Stage IV or Bharat Stage VI ” shall be substituted;

(C) after sub-rule (17), the following sub-rules shall be inserted, namely:—

“(18) (i) The Emission Standards for Bharat Stage VI (BS-VI) for category M and N vehicles having Gross Vehicle Weight not exceeding 3500kg, manufactured on or after 1st April 2020 for all models, shall be as under :—

Table 1

Limit Values for M and N Category vehicles fitted with PI & CI Engines: BS VI

		Reference Mass (RM) (kg)	Mass of Carbon Monoxide (CO)		Mass of Total Hydrocarbons (THC)		Mass of Non-Methane Hydrocarbons (NMHC)		Mass of Oxides of Nitrogen (NOx)		Combined Mass of Hydrocarbons and Oxides of Nitrogen (THC + NOx)		Mass of Particulate Matter (PM)		Number of Particles (PN)	
			L1 (mg/km)		L2 (mg/km)		L3 (mg/km)		L4 (mg/km)		L2 + L3 (mg/km)		L5 (mg/km)		L6 (numbers/km)	
Category	Class		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI	CI
M (M1 & M2)	—	All	1000	500	100	—	68	—	60	80	—	170	4.5	4.5	6.0 x 10 ¹¹	6.0 x 10 ¹¹
N1	I	RM ≤ 1305	1000	500	100	-	68	-	60	80	-	170	4.5	4.5	6.0 X 10 ¹¹	6.0 x 10 ¹¹
	II	1305 < RM < 1760	1810	630	130	-	90	-	75	105	-	195	4.5	4.5	6.0 X 10 ¹¹	6.0 x 10 ¹¹
	III	1760 ≤ RM	2270	740	160	-	108	-	82	125	-	215	4.5	4.5	6.0 X 10 ¹¹	6.0 x 10 ¹¹
N2	-	All	2270	740	160	-	108	-	82	125	-	215	4.5	4.5	6.0 X 10 ¹¹	6.0 x 10 ¹¹

PI = Positive Ignition, CI = Compression Ignition

- (3) For positive ignition, particulate mass and number of particles limit shall apply only to vehicles with direct injection engines.
- (4) Until three years after date of implementation for new type approvals and new vehicles, particle number emission limit of 6.0 X 10¹² #/km shall apply to BS VI gasoline direct injection vehicles upon choice of the manufacturer.

Note.—This Regulation shall apply to vehicles of categories M1, M2, N1 and N2 with a reference mass not exceeding 2,610 kg.

At the manufacturer's request, type approval granted under this Regulation may be extended from vehicles mentioned above to M1, M2, N1 and N2 vehicles with a reference mass not exceeding 2,840 kg and which meet the conditions laid down in this notification.

Table 2

Application of Test Requirements for Type-Approval – BS VI

	Vehicles with Positive Ignition Engines including Hybrids									Vehicles with Compression Ignition Engines including Hybrids		
	Mono Fuel					Bi- Fuel ⁽¹⁾			Flex Fuel ⁽¹⁾	Flex Fuel	Mono Fuel	Dual Fuel
Reference Fuel	Gasoline (E5)	LP G	CNG / Bio-Methane/Bio-Gas/LNG	Hydrogen (ICE)	H ₂ CNG (Hydrogen + CNG)	Gasoline (E5)	Gasoline (E5)	Gasoline (E5)	Gasoline (E5)	Diesel (B7)	Diesel (B7)	Diesel + CNG
						LPG	CNG / Bio-Methane	Hydrogen (ICE) ³	Ethanol (E85) / (E100)	Bio-Diesel up to 100% ⁽⁵⁾		
Gaseous Pollutants (Type 1 Test)	Yes	Yes	Yes	Yes ²	Yes	Yes (Both Fuels)	Yes (Both Fuels)	Yes (Both Fuels)	Yes (Both Fuels)	Yes	Yes	Yes
Particulate Mass and Particulate Number (Type 1 Test)	Yes ⁴	-	-	-	-	Yes (Gasoline only)	Yes (Gasoline only)	Yes (Gasoline only)	Yes (Both Fuels)	Yes	Yes	Yes
Idle Emissions (Type II Test)	Yes	Yes	Yes	-	Yes	Yes (Both Fuels)	Yes (Both Fuels)	Yes (Gasoline Only)	Yes (Both Fuels)	-	-	-
Crankcase Emissions (Type III Test)	Yes	Yes	Yes	- -	Yes	Yes (Gasoline only)	Yes (Gasoline only)	Yes (Gasoline only)	Yes (Gasoline only)	-	-	-

	Vehicles with Positive Ignition Engines including Hybrids									Vehicles with Compression Ignition Engines including Hybrids		
	Mono Fuel					Bi- Fuel ⁽¹⁾			Flex Fuel ⁽¹⁾	Flex Fuel	Mono Fuel	Dual Fuel
Evaporative Emissions (Type IV test)	Yes	-	-	-	-	Yes (Gasoline only)	Yes (Gasoline only)	Yes (Gasoline Only)	Yes (Gasoline only)	-	-	-
Durability (Type V Test)	Yes	Yes	Yes	Yes	Yes	Yes (Gasoline only)	Yes (Gasoline only)	Yes (Gasoline only)	Yes (Gasoline only)	Yes (B7 only)	Yes	Yes
In-Service Conformity	Yes	Yes	Yes	Yes	Yes	Yes (both fuels)	Yes (both fuels)	Yes (Gasoline only)	Yes (both fuels)	Yes (B7 only)	Yes	Yes
On-Board Diagnostics and IUPRM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
⁽⁶⁾ CO2 emission and fuel consumption	Yes	Yes	Yes	Yes	Yes	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes	Yes
Smoke Opacity	--	--	--	--	--	--	--	--	--	Yes	Yes	--
Engine Power	Yes	Yes	Yes	Yes	Yes	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes	Yes	Yes

(1) When a bi-fuel vehicle has flex fuel option, both test requirements are applicable. Vehicle tested with E100 need not to be tested for E85.

(2) Only NOx emissions shall be determined when the vehicle is running on Hydrogen.

(3) Reference Fuel is 'Hydrogen for Internal Combustion Engine' as Specified in Annexure IV-W.

(4) For Positive ignition, particulate mass and number limits for vehicles with positive ignition engines including hybrids shall apply only to vehicles with direct injection engines.

(5) Vehicle fuelled with Bio diesel blends up to 7% will be tested with reference diesel (B7) and vehicles fuelled with Bio diesel blends above 7% will be tested with respective blends.

(6) CO₂ emission and fuel consumption shall be measured as per procedure laid down in AIS 137 and as amended time to time.

Notes.—(1) The test shall be on Chassis Dynamometer.

(2) The test including driving cycle shall be as provided in sub-rule (10) with the modifications that—

- (i) the exhaust gas sampling should start at the initiation of the engine start up procedure referred to in Annexure IV-E and as amended from time to time as per AIS-137;
- (ii) the driving cycle shall be at a maximum speed of 90 km/hour referred to in Annexure IV-E and as amended from time to time as per AIS-137.

(3) There shall be no relaxation of norms for Conformity of Production (COP) purposes and procedure for compliance shall be as per AIS137 as amended from time to time.

(4) Specifications for Reference Fuels shall be as below:—

- (a) Reference natural gas fuel used in Natural Gas or Bio-Methane mono-fuel or bi-fuel vehicles shall be as per Annexure IV-L (G20, G23 and G25).
- (b) Reference LPG fuel used in LPG mono-fuel or bi-fuel vehicles shall be as per Annexure IV-M (Fuel A and Fuel B), however, in case of non-availability of reference fuels for CNG / LPG, the commercially available CNG as per BIS 15958:2012 and LPG as per BIS 14861:2000 as amended from time to time shall be used for the purpose of Type Approval and Conformity of Production.
- (c) The reference ethanol fuel (E85) shall be as per the Annexure IV-Q.
- (d) The Reference Gasoline fuel (E5) shall be as specified in Annexure IV-X.
- (e) The Reference Diesel fuel (B7) shall be as specified in Annexure IV-T.
- (f) Hydrogen Fuel vehicles shall be tested with reference fuel specified in the Annexure IV-W to said rules.
- (g) The reference fuel Biogas (Bio-methane) shall be as per IS 16087:2013 and as amended time to time.

(5) Crankcase ventilation system shall not permit the emission of any of the crankcase gases in to the atmosphere.

(6) Evaporative emission shall not be more than 2.0g/test from Gasoline fuelled vehicles. The evaporative emission test procedure for gasoline fuelled vehicles shall be as per the procedure specified in AIS 137 and as amended from time to time.

(7) The Conformity of Production (COP) testing procedure shall be as described in AIS 137 and as amended from time to time.

(8) Conformity of Production (COP) frequency and samples as under :—

- (i) The Conformity of Production period for each vehicle model including its variant(s) shall be once a year.
- (ii) Where production volume in six months is less than 250 per model including its variants, the provisions contained in the provisos to Rule 126-A shall apply.
- (iii) All these tests shall be conducted with the reference fuel as specified in this sub-rule. However, at the manufacturer's request, test may be carried out with commercial fuel.
- (iv) For vehicles approved as per this sub-rule, at least 50% of Vehicle

models, rounded to nearest integer value, produced from particular plant per year shall be selected randomly from dealer's location or warehouse.

(9) Specifications for Commercial Fuels as under :—

- (i) The Commercial Gasoline fuel shall be as per Annexure IV-U and as amended from time to time.
- (ii) Specification for commercial CNG and commercial LPG shall be in accordance with BIS 15958:2012 and as per BIS 14861:2000 respectively and as amended from time to time.
- (iii) Biodiesel used in commercial Diesel shall be as per IS 15607 as amended from time to time.
- (iv) Specification for Commercial Diesel fuel shall be as per Annexure IV-V and as amended from time to time.
- (v) Specifications for commercial E85 shall be as specified in accordance with the Indian Standards as amended from time to time.
- (vi) Specification for commercial Biogas (Bio-methane) shall be as per IS 16087:2013 and as amended time to time.

(10) Specifications of NO_x reduction agent AUS 32 (Aqueous Urea Solution) shall conform to Part 1 and Part 2 of ISO 22241-2006 or DIN standard-DIN V 70070.

(11) For Diesel vehicles, the emission of visible pollutants (smoke) shall not exceed the limit value of smoke density, when expressed as light absorption coefficient for various nominal flows as given in Annex I to sub-rule (9) of Rule 115 when tested at constant speeds over the full load. These smoke limits are without correction factor and engines are to be tested with conditioned air supplied to the engine to maintain atmospheric factor at 0.98 to 1.02.

(12) The engine power shall be measured on engine dynamometer and the measured power shall conform to the power specified in AIS 137 as amended from time to time, when tested as per the procedures laid down in AIS 137 as amended from time to time.

(13) Type II Test: Vehicles fitted with PI engines specified in this sub-clause shall comply with the provisions of clause (i) of sub-rule (2) of Rule 115 as applicable.

(14) Free Acceleration Smoke: Vehicles fitted with CI engines specified in this sub-clause shall comply with the provisions of clause (ii) of sub-rule (2) of Rule 115 as applicable.

(15) Deterioration Factor shall be as given in the following Table :—

Table

Deterioration Factor shall be as given below: BS VI

Engine Category	Assigned Deterioration Factor						
	CO	THC	NMHC	NO _x	HC + NO _x	Particulate Matter (PM)	Particle Number (PN)
Positive Ignition	1.5	1.3	1.3	1.6	—	1.0	1.0
Compression Ignition	1.5	—	—	1.1	1.1	1.0	1.0

- (i) Alternatively, the vehicle manufacturer may opt for a vehicle ageing test of 1,60,000 km or bench ageing durability test, for evaluating the Deterioration factor as per AIS 137 and as amended from time to time.
- (ii) This test may be performed by driving vehicle on a test track, on the road, or on a chassis dynamometer or Engine Test Bench as per AIS 137.
- (iii) The maximum lap speed at 10th lap and at 11th lap shall be 72 km/hour and 90 km/hour respectively.
- (iv) The above ageing test should be carried out by the approved test agency specified in Rule 126.

(16) The vehicles shall be equipped with On-Board Diagnostic (BS VI - OBD) systems for emission control which shall have the capability of identifying the likely area of malfunction by means of fault codes stored in computer memory as per the procedure laid down in AIS 137 and as amended from time to time when that failure results in an increase in emission above the limits given in the following Tables below:—

- (i) OBD Threshold for BS VI vehicles manufactured on or after 1st April 2020:

Table 1

On-Board Diagnostic (BS VI- OBD-I) Threshold: BS VI

Category	Class	Reference mass (RM) (kg)	CO (mg/km)		NMHC (mg/km)		NO _x (mg/km)		PM (mg/km)	
			PI	CI	PI	CI	PI	CI	PI ⁽¹⁾	CI
M (M1 & M2)	—	All	1900	1750	170	290	150	180	25	25
N1	I	RM ≤ 1305	1900	1750	170	290	150	180	25	25
	II	1305 < RM ≤ 1760	3400	2200	225	320	190	220	25	25
	III	1760 < RM	4300	2500	270	350	210	280	30	30
N2	—	All	4300	2500	270	350	210	280	30	30

⁽¹⁾ For positive ignition, particulate mass limits apply only to vehicles with direct injection engines

- (ii) OBD Threshold for BS VI vehicles manufactured on or after 1st April 2023:

Table 2

On-Board Diagnostic (BS VI OBD-II) Threshold: BS VI

Category	Class	Reference mass (RM) (kg)	CO (mg/km)		NMHC (mg/km)		NO _x (mg/km)		PM (mg/km)	
			PI	CI	PI	CI	PI	CI	PI ⁽¹⁾	CI
M (M1 & M2)	—	All	1900	1750	170	290	90	140	12	12
N1	I	RM ≤ 1305	1900	1750	170	290	90	140	12	12
	II	1305 < RM ≤ 1760	3400	2200	225	320	110	180	12	12
	III	1760 < RM	4300	2500	270	350	120	220	12	12
N2	—	All	4300	2500	270	350	120	220	12	12

⁽¹⁾ For positive ignition, particulate mass apply only to vehicles with direct injection engines

(17) In-use performance ratio (IUPR) for BS VI vehicles manufactured on or after 1st April 2023, the in-use performance ratio (IUPR) of a specific monitor M of the OBD systems shall be:

$$\text{IUPRM} = \text{Numerator} / \text{Denominator}$$

- (i) Comparison of Numerator and Denominator gives an indication of how often a specific monitor is operating relative to vehicle operation. Detailed requirements for tracking IUPR are given in AIS 137.
- (ii) If, according to the requirements specified in AIS 137, the vehicle is equipped with a specific monitor M, IUPRM shall be greater or equal to 0.1 for all monitors M.

(18) In service compliance of vehicles shall be as per procedure laid down in AIS137 and as amended time to time.

(19) During type approval and COP applicable from 1st April, 2020, real world driving cycle emission measurement using PEMS shall be carried out for data collection and from 1st April, 2023 real world driving cycle emission conformity shall be applicable. The detailed procedure is laid down in AIS137 and as amended from time to time.

(ii) The Emission Standards for Bharat Stage VI (BS-VI) for category M and N vehicles having Gross Vehicle Weight exceeding 3500kg., manufactured on or after 1st April 2020 for all models, shall be as under :—

Table 1
Limit values for M&N category vehicles: BS-VI

	Limit values							
	CO (mg/kWh)	THC (mg/kWh)	NMHC (mg/kWh)	CH ₄ (mg/kWh)	NO _x (mg/kWh)	NH ₃ (ppm)	PM mass (mg/kWh)	PM number (numbers/kWh)
WHSC (CI)	1500	130	—	—	400	10	10	8.0 x 10 ¹¹
WHTC (CI)	4000	160	—	—	460	10	10	6.0 x 10 ¹¹
WHTC (PI)	4000	—	160	500	460	10	10	6.0 x 10 ¹¹

Notes:

PI = Positive Ignition

CI = Compression Ignition

For M1, N1, M2 & N2 category vehicles with a reference mass not exceeding 2840 kg., at the manufacturer's request, type approval may be granted as per the sub-rule (18)(i) of this rule.

If a vehicle is tested for type approval on Chassis Dynamometer having Reference Mass up to 2610 kg, manufacturer may seek type approval extensions up to reference mass of 2840 kg for its variants exceeding GVW of 3500 kg. In such cases mass emission testing on Engine Dynamometer shall not be required.

Table 2
Applicability of Test Requirements for BS-VI

	Positive-ignition engines					compression-ignition engines			Dual fuel engines
	Gasoline (E5)	CNG / Biomethane / Bio-Gas / LNG	LPG	E85	HCNG (Hydrogen + CNG)	Diesel (B7)	Ethanol (ED95)	Biodiesel blends up to 100% (1)	Diesel + (CNG/LNG)
Gaseous pollutants	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes ⁽²⁾
Particulate Mass	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes ⁽²⁾
PM number	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes ⁽²⁾
Durability	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes ⁽²⁾
OBD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes ⁽²⁾
Off Cycle Emissions (WNTÉ)	—	—	—	—	—	Yes	Yes	Yes	Yes ⁽²⁾
PEMS Demonstration test at Type Approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes ⁽²⁾
In-Service Conformity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes ⁽²⁾

(1) The vehicles/ engines fuelled with bio diesel blends up to 7% shall be tested with reference diesel (B7) and vehicles fuelled with Bio diesel blends above 7% will be tested with respective blends.

(2) The test applicability requirements for dual fuel engine is depending on the Gas Energy Ratio (GER) measured over the hot part of the WHTC test-cycle. GER classification shall be as per AIS 137 and as amended from time to time.

Notes.—(1) The test shall be done on engine dynamometer.

(2) In case of vehicles equipped with Compression Ignition engines, the gaseous and particulate emissions shall be measured as per WHSC and WHTC cycles as per procedure described in AIS 137 as amended from time to time.

(3) In case of vehicles equipped with positive Ignition engines, the gaseous and particulate emissions shall be measured as per WHTC cycle as per procedure described in AIS 137 and as amended from time to time.

(4) Specifications for Reference fuels are as below:-

(a) Reference natural gas fuel used in Natural Gas or Bio-Methane mono-fuel or bi-fuel vehicles shall be as per Annexure IV-L (G20, G23 and G25)

(b) Reference LPG fuel used in LPG mono-fuel or bi-fuel vehicles shall be as per Annexure IV-M (Fuel A and Fuel B). However, in case of non-availability of reference fuels for CNG / LPG, the commercially available CNG as per BIS 15958:2012 and LPG as per BIS

14861:2000 as amended from time to time shall be used for the purpose of Type Approval and Conformity of Production.

- (c) The reference ethanol fuel (ED95) shall be as specified in Annexure IV-R.
- (d) The Reference Gasoline fuel (E5) shall be in Annexure IV-X.
- (e) The Reference Diesel fuel (B7) shall be as specified in Annexure IV-T
- (f) The reference fuel Biogas (Bio-methane) shall be as per IS 16087:2013 and as amended time to time.

(5) The Conformity of Production (COP) testing procedure shall be as described in AIS 137 as amended from time to time.

(6) The Conformity of Production (COP) frequency and samples shall be as under:—

- (i) The conformity of Production period for each engine model including its variant(s) shall be once a year.
- (ii) Where production volume in six month is less than 250 per model including its variant(s), the provisions contained in the provisos to Rule 126-A shall apply.

(7) Specifications for Commercial fuels shall be as under:—

- a. The Commercial Gasoline fuel shall be as per Annexure IV-U and as amended from time to time.
- b. Specification for commercial CNG and commercial LPG shall be in accordance with BIS 15958:2012 and as per BIS 14861:2000 respectively and as amended from time to time.
- c. Biodiesel used in commercial Diesel shall be as per IS 15607 as amended from time to time.
- d. Specification for Commercial Diesel fuel up to 7% of bio diesel blend shall be as per Annexure IV-V and as amended from time to time.
- e. Specifications for commercial E85 and ED95 shall be as specified in accordance with the Indian Standards as amended from time to time.
- f. Specification for commercial Biogas (Bio-methane) shall be as per IS 16087:2013 and as amended time to time.

(8) For CI engine vehicles, the emission of visible pollutants (smoke) shall not exceed the limit value of smoke density, as per Annexure I to sub-rule (9) of Rule 115. These smoke limits are without correction factor and engines are to be tested with conditioned air supplied to the engine to maintain atmospheric factor of 0.98 to 1.02.

(9) The engine power shall be measured on engine dynamometer and the measured power shall conform to the power specified and tested as per procedures prescribed in AIS 137 as amended time to time.

(10) Idle emissions and Smoke Density shall be as under:—

- a. The vehicles equipped with PI engine specified in this sub-rule shall comply with the provisions of clause (i) of sub-rule (2) of Rule 115.
- b. The Vehicles equipped with CI engine specified in this sub-rule shall comply with the provisions of clause (ii) of sub-rule (2) of Rule 115.

(11) Deterioration Factors.—

- (i) Deterioration factors shall be as given in the Table below:

Table 1

Deterioration Factors for BS-VI

Test cycle	CO	THC ¹	NMHC ²	CH ₄ ²	NO _x	NH ₃	PM mass	PM number
WHTC	1.3	1.3	1.4	1.4	1.15	1.0	1.05	1.0
WHSC	1.3	1.3	—	—	1.15	1.0	1.05	1.0

⁽¹⁾Applies in case of a compression ignition engine.

⁽²⁾Applies in case of a positive ignition engine.

- (ii) Alternatively, the vehicle manufacturers may opt for evaluation of deterioration factor over normal useful life period as per procedure described in AIS 137 and as amended time to time.

Useful life period and minimum service accumulation period for evaluation of deterioration factor given in Table below:—

Table 2
Minimum service accumulation period – BS-VI

Category of vehicle in which engine will be installed	Useful Life Period	Minimum service accumulation period
Category N1 vehicles	1,60,000 km or 5 years	1,60,000 km
Category N2 vehicles	3,00,000 km or 6 years	1,88,000 km
Category N3 Vehicles with GVW equal to or less than 16,000 kg	3,00,000 km or 6 years	1,88,000 km
Category N3 Vehicles with GVW above 16,000 kg	7,00,000 km or 7 years	2,33,000 km
Category M2 vehicles	1,60,000 km or 5 years	1,60,000 km
Category M3 Vehicles with GVW equal to or less than 7,500 kg	3,00,000 km or 6 years	1,88,000 km
Category M3 Vehicles with GVW above 7,500 kg	7,00,000 km or 7 years	2,33,000 km

The evaluation of deterioration factor test shall be carried out by the approved test agency specified in Rule 126.

(12) (a) During type approval and COP applicable from 1st April, 2020, emission measurement on vehicles using PEMS shall be carried out on road for data collection and from 1st April, 2023 in-service conformity factor shall be applicable. The detailed procedure is laid down in AIS 137 and as amended from time to time

(b) The type approval vehicle used for the PEMS demonstration test shall be representative for the vehicle category intended for the installation of the engine system. The vehicle may be a prototype vehicle or an adapted production vehicle.

(c) For PEMS demonstration test at type approval, vehicle shall meet the requirements of in-service compliance from 1st April, 2023.

(13) The vehicles specified in this sub-clause shall meet the following World Not-To-Exceed (WNTE) Off-cycle laboratory testing limits for gaseous and particulate exhaust emissions, and as per procedure laid down in AIS 137 and as amended time to time:—

Test cycle	CO mg/kWh	THC mg/kWh	NOx mg/kWh	PM mg/kWh
WNTE	2000	220	600	16

(14) The vehicles specified in this sub-clause manufactured on or after 1st April, 2023 shall have the capability of assessing the in-use performance of on-board diagnostic, as per procedure laid down in AIS 137 and as amended time to time.

(15) The vehicles specified in this sub-clause fitted with engine, which rely on the use of a reagent in order to reduce emissions, shall ensure the correct operation of NOx control measures, as per procedure laid down in AIS 137 and as amended time to time.

(16) The vehicles specified in this sub-rule shall be equipped with an On-Board Diagnostic system (BS VI OBD-I and BS-VI OBD-II) for emission control which shall have the capability of identifying the likely area of the malfunctions by means of fault codes stored in computer memory and communicating that

information off-board, as per procedure described in AIS 137, when that failure results in an increase in emission above the limits given in the following Tables below:—

(a) BSVI- OBD-I threshold for BS VI vehicles manufactured on or after 1st April 2020 shall be as given below:—

Table 1
OBD threshold Limits: (BS-VI OBD-I)

	Limit in mg/kWh	
	NOx	PM Mass
Compression ignition engines	1500	Performance Monitoring ⁽¹⁾
Positive Ignition engines	1500	—

(1)Performance monitoring for wall-flow diesel particulate filter shall be as per AIS-137 and as amended time to time.

(b) BS-VI-OBD-II threshold for BS VI vehicles manufactured on or after 1st April 2023 shall be as given below:—

Table 2
OBD threshold Limits: (BS-VI OBD-II)

	Limit in mg/kWh		
	NOx	PM Mass	CO
Compression ignition engines	1200	25	—
Positive Ignition engines	1200	—	7500

At the manufacturer's request type approval may be granted for compliance to BS-VI OBD-II requirements before its implementation

(19) (i) The Emission Standards for Bharat Stage-VI (BS-VI) for two wheelers vehicle models manufactured on or after 1st April 2020 shall be as per Tables below:-

Table 1
Limit Values for Two wheelers fitted with PI & CI engines: BSVI

		BS VI Emission Norms							
Vehicle Class		CO mg/km	HC mg/km	NOx mg/km	NMHC mg/km	PM mg/km	EVAP mg/test	OBD	Durability mileage (km) Type V
PI Vehicles	1 & 2-1	1000	100	60	68	4.5*	1500	STAGE II	20000
	2-2	1000	100	60	68	4.5*			
	3-1 & 3-2	1000	100	60	68	4.5*			
CI Vehicles	All	500	100	90	68	4.5*	—		
	DF (for all classes)	1.3	1.3 (SI) 1.1 (CI)	1.3 (SI) 1.1 (CI)	1.3 (I) 1.1 (CI)	1.0 (CI)	300**	-	-

- (ii) Alternatively, the vehicle manufacturers may opt for evaluation of deterioration factor over normal useful life period as per procedure described in AIS 137 and as amended time to time.

Useful life period and minimum service accumulation period for evaluation of deterioration factor given in Table below:—

Table 2
Minimum service accumulation period – BS-VI

Category of vehicle in which engine will be installed	Useful Life Period	Minimum service accumulation period
Category N1 vehicles	1,60,000 km or 5 years	1,60,000 km
Category N2 vehicles	3,00,000 km or 6 years	1,88,000 km
Category N3 Vehicles with GVW equal to or less than 16,000 kg	3,00,000 km or 6 years	1,88,000 km
Category N3 Vehicles with GVW above 16,000 kg	7,00,000 km or 7 years	2,33,000 km
Category M2 vehicles	1,60,000 km or 5 years	1,60,000 km
Category M3 Vehicles with GVW equal to or less than 7,500 kg	3,00,000 km or 6 years	1,88,000 km
Category M3 Vehicles with GVW above 7,500 kg	7,00,000 km or 7 years	2,33,000 km

The evaluation of deterioration factor test shall be carried out by the approved test agency specified in Rule 126.

(12) (a) During type approval and COP applicable from 1st April, 2020, emission measurement on vehicles using PEMS shall be carried out on road for data collection and from 1st April, 2023 in-service conformity factor shall be applicable. The detailed procedure is laid down in AIS137 and as amended from time to time

(b) The type approval vehicle used for the PEMS demonstration test shall be representative for the vehicle category intended for the installation of the engine system. The vehicle may be a prototype vehicle or an adapted production vehicle.

(c) For PEMS demonstration test at type approval, vehicle shall meet the requirements of in-service compliance from 1st April, 2023.

(13) The vehicles specified in this sub-clause shall meet the following World Not-To-Exceed (WNTe) Off-cycle laboratory testing limits for gaseous and particulate exhaust emissions, and as per procedure laid down in AIS 137 and as amended time to time:—

Test cycle	CO mg/kWh	THC mg/kWh	NOx mg/kWh	PM mg/kWh
WNTe	2000	220	600	16

(14) The vehicles specified in this sub-clause manufactured on or after 1st April, 2023 shall have the capability of assessing the in-use performance of on-board diagnostic, as per procedure laid down in AIS 137 and as amended time to time.

(15) The vehicles specified in this sub-clause fitted with engine, which rely on the use of a reagent in order to reduce emissions, shall ensure the correct operation of NOx control measures, as per procedure laid down in AIS 137 and as amended time to time.

(16) The vehicles specified in this sub-rule shall be equipped with an On-Board Diagnostic system (BS VI OBD-I and BS-VI OBD-II) for emission control which shall have the capability of identifying the likely area of the malfunctions by means of fault codes stored in computer memory and communicating that

- (ii) Alternatively, the vehicle manufacturers may opt for evaluation of deterioration factor over normal useful life period as per procedure described in AIS 137 and as amended time to time.

Useful life period and minimum service accumulation period for evaluation of deterioration factor given in Table below:—

Table 2
Minimum service accumulation period – BS-VI

Category of vehicle in which engine will be installed	Useful Life Period	Minimum service accumulation period
Category N1 vehicles	1,60,000 km or 5 years	1,60,000 km
Category N2 vehicles	3,00,000 km or 6 years	1,88,000 km
Category N3 Vehicles with GVW equal to or less than 16,000 kg	3,00,000 km or 6 years	1,88,000 km
Category N3 Vehicles with GVW above 16,000 kg	7,00,000 km or 7 years	2,33,000 km
Category M2 vehicles	1,60,000 km or 5 years	1,60,000 km
Category M3 Vehicles with GVW equal to or less than 7,500 kg	3,00,000 km or 6 years	1,88,000 km
Category M3 Vehicles with GVW above 7,500 kg	7,00,000 km or 7 years	2,33,000 km

The evaluation of deterioration factor test shall be carried out by the approved test agency specified in Rule 126.

(12) (a) During type approval and COP applicable from 1st April, 2020, emission measurement on vehicles using PEMS shall be carried out on road for data collection and from 1st April, 2023 in-service conformity factor shall be applicable. The detailed procedure is laid down in AIS 137 and as amended from time to time

(b) The type approval vehicle used for the PEMS demonstration test shall be representative for the vehicle category intended for the installation of the engine system. The vehicle may be a prototype vehicle or an adapted production vehicle.

(c) For PEMS demonstration test at type approval, vehicle shall meet the requirements of in-service compliance from 1st April, 2023.

(13) The vehicles specified in this sub-clause shall meet the following World Not-To-Exceed (WNTe) Off-cycle laboratory testing limits for gaseous and particulate exhaust emissions, and as per procedure laid down in AIS 137 and as amended time to time:—

Test cycle	CO mg/kWh	THC mg/kWh	NOx mg/kWh	PM mg/kWh
WNTe	2000	220	600	16

(14) The vehicles specified in this sub-clause manufactured on or after 1st April, 2023 shall have the capability of assessing the in-use performance of on-board diagnostic, as per procedure laid down in AIS 137 and as amended time to time.

(15) The vehicles specified in this sub-clause fitted with engine, which rely on the use of a reagent in order to reduce emissions, shall ensure the correct operation of NOx control measures, as per procedure laid down in AIS 137 and as amended time to time.

(16) The vehicles specified in this sub-rule shall be equipped with an On-Board Diagnostic system (BS VI OBD-I and BS-VI OBD-II) for emission control which shall have the capability of identifying the likely area of the malfunctions by means of fault codes stored in computer memory and communicating that

information off-board, as per procedure described in AIS 137, when that failure results in an increase in emission above the limits given in the following Tables below:—

- (a) BS-VI- OBD-I threshold for BS VI vehicles manufactured on or after 1st April 2020 shall be as given below:—

Table 1
OBD threshold Limits: (BS-VI OBD-I)

	Limit in mg/kWh	
	NOx	PM Mass
Compression ignition engines	1500	Performance Monitoring ⁽¹⁾
Positive Ignition engines	1500	—

(1) Performance monitoring for wall-flow diesel particulate filter shall be as per AIS-137 and as amended time to time.

- (b) BS-VI-OBD-II threshold for BS VI vehicles manufactured on or after 1st April 2023 shall be as given below:—

Table 2
OBD threshold Limits: (BS-VI OBD-II)

	Limit in mg/kWh		
	NOx	PM Mass	CO
Compression ignition engines	1200	25	—
Positive Ignition engines	1200	—	7500

At the manufacturer's request type approval may be granted for compliance to BS-VI OBD-II requirements before its implementation

- (19) (i) The Emission Standards for Bharat Stage-VI (BS-VI) for two wheelers vehicle models manufactured on or after 1st April 2020 shall be as per Tables below:-

Table 1
Limit Values for Two wheelers fitted with PI & CI engines: BS-VI

	Vehicle Class	BS VI Emission Norms							Durability mileage (km) Type V
		CO mg/km	HC mg/km	NOx mg/km	NMHC mg/km	PM mg/km	EVAP mg/test	OBD	
PI Vehicles	1 & 2-1	1000	100	60	68	4.5*	1500	STAGE II	20000
	2-2	1000	100	60	68	4.5*			
	3-1 & 3-2	1000	100	60	68	4.5*			
CI Vehicles	All	500	100	90	68	4.5*	—		
	DF (for all classes)	1.3	1.3 (SI) 1.1 (CI)	1.3 (SI) 1.1 (CI)	1.3 (I) 1.1 (CI)	1.0 (CI)	300**		

- (ii) Alternatively, the vehicle manufacturers may opt for evaluation of deterioration factor over normal useful life period as per procedure described in AIS 137 and as amended time to time.

Useful life period and minimum service accumulation period for evaluation of deterioration factor given in Table below:—

Table 2
Minimum service accumulation period – BS-VI

Category of vehicle in which engine will be installed	Useful Life Period	Minimum service accumulation period
Category N1 vehicles	1,60,000 km or 5 years	1,60,000 km
Category N2 vehicles	3,00,000 km or 6 years	1,88,000 km
Category N3 Vehicles with GVW equal to or less than 16,000 kg	3,00,000 km or 6 years	1,88,000 km
Category N3 Vehicles with GVW above 16,000 kg	7,00,000 km or 7 years	2,33,000 km
Category M2 vehicles	1,60,000 km or 5 years	1,60,000 km
Category M3 Vehicles with GVW equal to or less than 7,500 kg	3,00,000 km or 6 years	1,88,000 km
Category M3 Vehicles with GVW above 7,500 kg	7,00,000 km or 7 years	2,33,000 km

The evaluation of deterioration factor test shall be carried out by the approved test agency specified in Rule 126.

(12) (a) During type approval and COP applicable from 1st April, 2020, emission measurement on vehicles using PEMS shall be carried out on road for data collection and from 1st April, 2023 in-service conformity factor shall be applicable. The detailed procedure is laid down in AIS137 and as amended from time to time

(b) The type approval vehicle used for the PEMS demonstration test shall be representative for the vehicle category intended for the installation of the engine system. The vehicle may be a prototype vehicle or an adapted production vehicle.

(c) For PEMS demonstration test at type approval, vehicle shall meet the requirements of in-service compliance from 1st April, 2023.

(13) The vehicles specified in this sub-clause shall meet the following World Not-To-Exceed (WNTe) Off-cycle laboratory testing limits for gaseous and particulate exhaust emissions, and as per procedure laid down in AIS 137 and as amended time to time:—

Test cycle	CO mg/kWh	THC mg/kWh	NOx mg/kWh	PM mg/kWh
WNTe	2000	220	600	16

(14) The vehicles specified in this sub-clause manufactured on or after 1st April, 2023 shall have the capability of assessing the in-use performance of on-board diagnostic, as per procedure laid down in AIS 137 and as amended time to time.

(15) The vehicles specified in this sub-clause fitted with engine, which rely on the use of a reagent in order to reduce emissions, shall ensure the correct operation of NOx control measures, as per procedure laid down in AIS 137 and as amended time to time.

(16) The vehicles specified in this sub-rule shall be equipped with an On-Board Diagnostic system (BS VI OBD-I and BS-VI OBD-II) for emission control which shall have the capability of identifying the likely area of the malfunctions by means of fault codes stored in computer memory and communicating that

* 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.

Table 2

Application of Test Requirements for Type-Approval: BS-VI

	Vehicle with SI engines including hybrids									Vehicles with CI engines including hybrids		
	Mono-fuel					Bi-fuel ⁽³⁾			Flex-fuel	Flex-fuel	Mono-fuel	Dual-fuel
	Gasoline (E5)	LPG	CNG/Bio methane/Bio-Gas/LNG	H ₂	HCNG (Hydrogen + CNG)	Gasoline (E5)	Gasoline (E5)	Gasoline (E5)	Gasoline (E5)	Diesel (B7)	Diesel (B7)	Diesel + CNG
						LPG	CNG/Bio-methane	H ₂	Ethanol (E85)/E100	Upto 100% ⁽¹⁾ Biodiesel		
Gaseous pollutant Type I test	Yes	Yes	Yes	Yes	Yes	Yes (both fuels)	Yes (both fuels)	Yes (Both fuels)	Yes (both fuels)	Yes (Both fuels)	Yes	Yes
⁽²⁾ Type I test Particulate mass	Yes	No	No	No	No	Yes (gasoline only)	Yes (gasoline only)	Yes (gasoline only)	Yes (gasoline only)	Yes	Yes	Yes
Idle emission (Type II)	Yes	Yes	Yes	No	Yes	Yes (both fuels)	Yes (both fuels)	Yes (gasoline only)	Yes (both fuels)	Yes (B7 only)	Yes	Yes
Crankcase emission (Type III test)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Evaporative emission (Type IV test)	Yes	No	No	No	No	Yes (gasoline only)	Yes (gasoline only)	Yes (gasoline only)	Yes (gasoline only)	No	No	No
Durability (Type V test)	Yes	Yes	Yes	Yes	Yes	Yes (gasoline only)	Yes (gasoline only)	Yes (gasoline only)	Yes (gasoline only)	Yes (B7 only)	Yes	Yes

	Vehicle with SI engines including hybrids									Vehicles with CI engines including hybrids		
	Mono-fuel					Bi-fuel ⁽³⁾			Flex-fuel	Flex-fuel	Mono-fuel	Dual-fuel
⁽⁴⁾ CO ₂ & Fuel consumption	Yes	Yes	Yes	Yes	Yes	Yes (both fuels)	Yes (both fuels)	Yes (Both fuels)	Yes (both fuels)	Yes (Both fuels)	Yes	Yes
On board diagnosis OBD	Yes	Yes	Yes	Yes	Yes	Yes (gasoline only)	Yes (gasoline only)	Yes (gasoline only)	Yes (gasoline only)	Yes (B7 only)	Yes	Yes
Smoke opacity	No.	No.	NO.	NO.	NO.	No.	NO.	NO.	NO.	Yes (B7 only)	Yes	No.

⁽¹⁾Vehicles fuelled with bio diesel blends up to 7% shall be tested with reference diesel (B7) and vehicles fuelled with Bio diesel blends above 7% will be tested with respective blends.

⁽²⁾In case of PI engines, applicable only to vehicles with direct Injection engines.

⁽³⁾Vehicles models and variants having option for Bi-fuel operation and fitted with limp-home gasoline tank of capacity not exceeding two litres on two wheelers shall be exempted from test in gasoline mode.

⁽⁴⁾CO₂ emission and fuel consumption shall be measured as per procedure laid down in AIS 137 and as amended time to time.

When bi-fuel vehicle is combined with a flex fuel vehicle, both test requirements are applicable. Vehicle tested with E100 need not to be tested with E85.

Notes.—(1) The test shall be on Chassis Dynamometer.

(2) Classification of vehicles and weighting factor for the final emission result shall be as given below:—

TABLE
Classification of vehicles and weighting factor

	Definition of class	WMTC Cycles	Weighting factors for final emission results
Class 1	Vehicles that fulfil the following specifications belong to class 1: 50 cm ³ < engine capacity < 150 cm ³ and v _{max} ≤ 50 km/h or engine capacity < 150 cm ³ and 50 km/h < v _{max} < 100 km/h	Part 1 Reduced Speed cold followed by Part 1 Reduced Speed Hot	Part 1 Reduced Speed cold shall be 50% and Part 1 Reduced Speed hot shall be 50%

	Definition of class	WMTC Cycles	Weighting factors for final emission results
Sub Class 2-1	Vehicles that fulfil the following specifications belong to class 2-1: Engine capacity $< 150 \text{ cm}^3$ and $100 \text{ km/h} \leq V_{\text{max}} \leq 115 \text{ km/h}$ or Engine capacity $\geq 150 \text{ cm}^3$ and $V_{\text{max}} < 115 \text{ km/h}$	Part 1 Reduced Speed cold followed by Part 2 Reduced Speed Hot	Part 1 Reduced Speed cold shall be 50% and Part 2 Reduced Speed hot shall be 50%
Sub Class 2-2	Vehicles that fulfil the following specifications belong to class 2-2: $115 \text{ km/h} \leq V_{\text{max}} < 130 \text{ km/h}$	Part 1 cold followed by Part 2 Hot	Part 1 cold shall be 50% and Part 2 hot shall be 50%.
Sub Class 3-1	Vehicles that fulfil the following specifications belong to Class 3-1: $130 \text{ km/h} \leq V_{\text{max}} < 140 \text{ km/h}$	Part 1 cold followed by Part 2 Hot followed by Part 3 reduced speed	Part 1 cold shall be 25% Part 2 hot shall be 50% and Part 3 reduced shall be 25%
Sub Class 3-2	Vehicles that fulfil the following specifications belong to Class 3-2: $V_{\text{max}} \geq 140 \text{ km/h}$ sub0class 3-2.	Part 1 cold followed by Part 2 Hot followed by Part 3	Part 1 cold shall be 25% Part 2 hot shall be 50% and Part 3 shall be 25%

(3) The test procedure and driving cycle for all test types including alternative durability and OBD shall be as per AIS 137 and as amended time to time.

(4) Specification of Reference Fuels shall be as under:-

- The Reference Gasoline fuel (E5) shall be as specified in Annexure IV-X.
- The reference ethanol fuel (E85) shall be as per Annexure IV-Q.
- The Reference Diesel fuel (B7) shall be as specified in Annexure IV-T.
- The reference ethanol fuel (E100) shall be as per Annexure IV-S
- Reference natural gas fuel used in Natural Gas or Bio-Methane mono-fuel or bi-fuel vehicles shall be as per Annexure IV-L (G20, G23 and G25).

- (f) Reference LPG fuel used in LPG mono-fuel or bi-fuel vehicles shall be as per Annexure IV-M (Fuel A and Fuel B). However, in case of non-availability of reference fuels for CNG / LPG, the commercially available CNG as per BIS 15958:2012 and LPG as per BIS 14861:2000 as amended from time to time shall be used for the purpose of Type Approval and Conformity of Production.
- (g) Hydrogen Fuel vehicles shall be tested with reference fuel specified in the Annexure IV-W to said rules.
- (h) The reference fuel Biogas (Bio-methane) shall be as per IS 16087:2013 and as amended time to time.
- (5) Specifications of Commercial Fuels shall be as under:-
 - (a) The Commercial Gasoline fuel blend shall be as per Annexure IV-U.
 - (b) Specification for commercial CNG and commercial LPG shall be in accordance with BIS 15958:2012 and as per BIS 14861:2000 respectively.
 - (c) Biodiesel used in commercial Diesel shall be as per IS 15607.
 - (d) Specification for Commercial Diesel fuel shall be as per Annexure IV-V.
 - (e) Specifications for commercial E85 shall be as specified in accordance with the Indian Standards.
 - (f) Specification for Biogas (Bio-methane) shall be as per IS 16087:2013 and as amended time to time.

(6) Gasoline/CNG/LPG vehicles specified herein shall comply with the provisions of clause (i) of sub-rule (2) of Rule 115. The Vehicle equipped with CI engine specified in sub rule shall comply with the provision of clause (ii) of sub-rule (2) of Rule 115. For vehicles fitted with CI engine, the emission of visible pollutants (smoke) shall not exceed the limit value of smoke density, as per Annexure I to sub-rule (9) of Rule 115.

These smoke limits are without correction factor and engines are to be tested with conditioned air supplied to the engine to maintain atmospheric factor of 0.98 to 1.02.

(7) Crankcase ventilation system shall not permit the emission of any of the crankcase gases in to the atmosphere.

(8) Alternatively, to the fixed DF mentioned in Table 1 of this sub-rule, the vehicle manufacturers may opt for evaluation of deterioration factor as per procedure described in AIS 137 and as amended time to time.

(9) Conformity of Production (COP) test procedure shall be as per clause (e) of sub-rule (12) of Rule 115. For 2W vehicles, at least 50% of Vehicle models produced from particular plant shall be selected randomly from dealer's location or warehouse.

(10) The engine power shall be measured on engine dynamometer and measured power shall conform to the power specified and tested as per procedure prescribed in AIS 137 and as amended time to time.

(11) The vehicle presented for Type approval shall have been run for at least 1000 km before the test.

(12) The Two wheeler vehicles shall be equipped with On-Board Diagnostic (OBD) systems for emission control which shall have the capability of identifying the likely area of malfunction by means of fault codes stored in computer memory as per the procedure laid down in AIS 137.

The On-Board Diagnostic (OBD) systems for emission control shall be as specified in the following Tables:

Table 1
OBD Functions and associate

Monitoring Items	OBD Stage I (BS VI) 1st April, 2020	OBD Stage II (BS VI) 1st April, 2023
Circuit continuity for all emission related power train component (if equipped)	√	√
Distance travelled since MIL (Malfunction indicator lamp) ON	√	√
Electrical disconnection of Electronic evaporative purge control device (if equipped and if active)	√	√
Catalytic converter monitoring	X	√
EGR system monitoring	√	√
Misfire detection	X	√
Oxygen sensor deterioration	X	√

(13) In-use performance ratio (IUPR) for BS VI vehicles manufactured on or after 1st April 2023, the in-use performance ratio (IUPR) of a specific monitor M of the OBD systems shall be:

$$\text{IUPRM} = \text{Numerator} / \text{Denominator}$$

Comparison of Numerator and Denominator gives an indication of how often a specific monitor is operating relative to vehicle operation. Detailed requirements for tracking IUPR are given in AIS 137.

If, according to the requirements specified in AIS 137, the vehicle is equipped with a specific monitor M, IUPRM shall be greater or equal to 0.1 for all monitors M.

Table 2
**On-board (OBD) diagnostics emission thresholds for
BSVI Applicable from 1st April, 2023**

Vehicle Class	OBD Stage II/Gasoline			
	CO mg/km	NMHC mg/km	NOx mg/km	PM mg/km
1 & 2-1	1900	250	300	50 ⁽ⁱ⁾
2-2	1900	250	300	50 ⁽ⁱ⁾
3-1 & 3-2	1900	250	300	50 ⁽ⁱ⁾
Vehicle Class	OBD Stage II /Diesel			
	CO mg/km	NMHC mg/km	NO _x mg/km	PM mg/km
All	1900	320	540	50

(i) In case of P.I. engines, applicable only to vehicles with direct injection engines.

(ii) The Emission Standards (Bharat Stage VI) for two wheelers with Spark Ignition engines other than those specified in para (19), (i) above: (Vehicles with cc ≤ 50 and Vmax ≤ 50 km/hr) shall be as per the below table:

Table

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	

Notes.—(1) Gasoline/ CNG/ LPG vehicles specified herein shall comply with the provisions of clause (i) of sub-rule (2) of Rule 115

(2) The Reference Gasoline fuel (E5) shall be as specified in Annexure IV-X.

(3) Reference natural gas fuel used in Natural Gas or Bio-Methane mono-fuel or bi-fuel vehicles shall be as per Annexure IV-L (G20, G23 and G25).

(4) Reference LPG fuel used in LPG mono-fuel or bi-fuel vehicles shall be as per Annexure IV-M (Fuel A and Fuel B). However, in case of non-availability of reference fuels for CNG / LPG, the commercially available CNG as per BIS 15958:2012 and LPG as per BIS 14861:2000 as amended from time to time shall be used for the purpose of Type Approval and Conformity of Production. The reference fuel Biogas (Bio-methane) shall be as per IS 16087:2013 and as amended time to time.

(5) The provision clause (a) sub-clause (i) of clause (c), clause (e) and clause (f) of sub-rule (12) of clauses (a), (c)(i), (e) and (f) for sub-rule 12 of Rule 115, except the proviso therein, shall be applicable to the said vehicle.

(6) The driving cycle for Vehicles with $cc \leq 50$ and $V_{max} \leq 50$ km/hr shall be Indian Driving Cycle (IDC) and the exhaust gas sampling shall start at the initiation of cycle in case of gasoline two wheeler vehicles.

(7) The engine power shall be measured on engine dynamometer and the measured power shall conform to the power specified and tested as per procedure prescribed in AIS 137 and as amended time to time.

(20) The Emission Standards Bharat Stage VI (BS VI) for Three wheelers vehicle models manufactured on or after 1st April 2020 shall be as under:-

Table 1

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 + NO _x mg/km	NO _x mg/km	PM mg/test	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	—	—	—

TABLE 2
Application of Test Requirements for Type-Approval : BS-VI

	Vehicle with PI engines including hybrids								Vehicles with CI engines including hybrids		
	Mono-fuel					Bi-fuel ⁽³⁾		Flex-fuel	Flex-fuel	Mono-fuel	Dual-Fuel
	Gasoline (E5)	LPG	CNG / Bio-methane/ Bio-Gas/LNG	H ₂	HCNG (Hydrogen + CNG)	Gasoline (E5)	Gasoline (E5)	Gasoline (E5)	Diesel (B7)	Diesel (B7)	Diesel (B7)
Gaseous pollutant (Type I test)	Yes	Yes	Yes	Yes	Yes	Yes (both fuels)	Yes (both fuels)	Ethanol (E85)	Biodiesel up to 100% (1)	Yes	Yes
⁽²⁾ Type I test Particulate mass	Yes	No	No	No	No	No	No	No	Yes (Both fuels)	Yes	Yes
Idle emission (Type II test)	Yes	Yes	Yes	Yes	Yes	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (Both fuels)	Yes	Yes
Crankcase emission (Type III test)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Evaporative emission (Type IV test)	Yes	No	No	Yes	Yes	Yes (Gasoline only)	Yes (Gasoline only)	Yes (Gasoline only)	No	No	No
Durability (Type V test)	Yes	Yes	Yes	Yes	Yes	Yes (Gasoline only)	Yes (Gasoline only)	Yes (Gasoline only)	Yes (B7 only)	Yes	Yes
⁽⁴⁾ CO ₂ & Fuel consumption	Yes	Yes	Yes	No	No	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes	Yes
OBD Stage II	Yes	Yes	Yes	—	—	Yes (Gasoline only)	Yes (Gasoline only)	Yes (Gasoline only)	Yes (B7 only)	Yes	Yes
Smoke Opacity	No	No	No	No	No	No	No	No	Yes (B7 only)	No	No

(1) Vehicles fuelled with bio diesel blends up to 7% shall be tested with reference diesel (B7) and vehicles fuelled with Bio diesel blends above 7% will be tested with respective blends.

(2) In case of PI engines, applicable only to vehicles with direct Injection engines.

(3) Vehicles models and variants having option for Bi-fuel operation and fitted with limp-home gasoline tank of capacity not exceeding three litres on three wheelers shall be exempted from test in gasoline mode.

(4) CO₂ emission and fuel consumption shall be measured as per procedure laid down in AIS 137 and as amended time to time.

When bi-fuel vehicle is combined with a flex fuel vehicle, both test requirements are applicable. Vehicle tested with E100 need not to be tested with E85.

Notes.—1. The test shall be on Chassis Dynamometer.

2. The test including driving cycle shall be as provided in CMV sub-rule (12) with the modifications that—

i) The exhaust gas sampling should start at the initiation in case of gasoline and diesel three wheeler as per the engine start up procedure referred to in Annexure II.

3. The provision of clauses (a), (c), (d), (e) and (f) of sub-rule (12) of Rule 115, except the proviso therein at the end of this sub rule, shall be applicable to the said vehicles.

4. Specifications of Reference Fuels:

(a) The Reference Gasoline fuel (E5) shall be as specified in Annexure IV-X. The reference Ethanol fuel (E85) shall be as per the Annexure IV-Q.

(b) The Reference Diesel fuel (B7) shall be as specified in Annexure IV-T.

(c) Reference natural gas fuel used in Natural Gas or Bio-Methane mono-fuel or bi-fuel vehicles shall be as per Annexure IV-L (G20, G23 and G25).

(d) Reference LPG fuel used in LPG mono-fuel or bi-fuel vehicles shall be as per Annexure IV-M (Fuel A and Fuel B), however, in case of non-availability of reference fuels for CNG / LPG, the commercially available CNG as per BIS 15958:2000 and LPG as per BIS 14861:2012 as amended from time to time shall be used for the purpose of Type Approval and Conformity of Production.

(e) Reference fuel Biogas (Bio-methane) shall be as per IS 16087:2013 and as amended time to time.

5. Specifications of Commercial Fuels shall be as under:—

(i) The Commercial Gasoline fuel shall be as per Annexure IV-U.

(ii) Specification for commercial CNG and commercial LPG shall be in accordance with BIS 15958:2012 and as per BIS 14861:2000 respectively.

(iii) Biodiesel used in commercial Diesel shall be as per IS 15607.

(iv) Specification for Commercial Diesel fuel shall be as per Annexure IV-V.

(v) Specifications for commercial E85 shall be as specified in accordance with the Indian Standards as amended from time to time.

(vi) Specification of commercial Biogas (Bio-methane) shall be as per IS 16087:2013 and as amended time to time.

6. There shall be no relaxation of norms for Conformity of Production (COP) purposes.

7. The Conformity of Production (COP) testing procedure shall be as described in AIS 137 and as amended time to time. For 3W vehicles, at least 50% of Vehicle models produced from particular plant shall be selected randomly from dealer's location or warehouse.

8. Alternative to fixed DF mention in Table 1, the vehicle manufacturers may opt for evaluation of deterioration factor as per procedure described in AIS 137.

9. The engine power shall be measured on engine dynamometer and the measured power shall confirm to the power specified and tested as per procedure prescribed in AIS 137 and as amended time to time.

10. The vehicle presented for Type approval shall have been run for 1000km before the test.

11. (a) C.I. vehicles specified herein shall comply with the provisions of clause (ii) of sub-rule (2) of Rule 115.

(b) S.I. Vehicles specified herein shall comply with the provision of clause (i) of sub-rule (2) of Rule 115.

12. Crank case ventilation system shall not permit the emission of any of the crankcase gases into the atmosphere. Test procedure shall as per AIS 137.

13. Evaporative emission for gasoline driven vehicles shall not be more than 1.5 g/test. Test procedure shall as per AIS 137.

14. The Three wheeler vehicles shall be equipped with On-Board Diagnostic (OBD) systems for emission control which shall have the capability of identifying the likely area of malfunction by means of fault codes stored in computer memory as per the procedure laid down in AIS 137.

The On-Board Diagnostic (OBD) systems for emission control shall be as specified in the below Tables:-

Table 1
OBD Functions and associate

Monitoring Items	OBD Stage I (BS VI) 1st April, 2020	OBD Stage II (BS VI) 1stApril, 2023
Circuit continuity for all emission related power train component (if equipped)	√	√
Distance travelled since MIL (Malfunction indicator lamp) ON	√	√
Electrical disconnection of Electronic evaporative purge control device (if equipped and if active)	√	√
Catalytic converter monitoring	X	√
EGR system monitoring	X	√
Misfire detection	X	√
Oxygen sensor deterioration	X	√

Table2 :

On-board (OBD) diagnostics emission thresholds for BSVI
Applicable from 1st April, 2023

Vehicle	OBD Stage II Gasoline	
	CO mg/km	NOx mg/km
Gasoline	880	425
Diesel	OBD Stage II Diesel Vehicles	
	CO mg/km	NOx mg/km
	440	300

ANNEXURE IV-T

[See Rule 115 (18)]

Technical specifications of the reference Diesel Fuel (B7)

Parameter	Unit	Limits ¹		Test method
		Minimum	Maximum	
Cetane Index		46.0		EN ISO 4264
Cetane number ²		52.0	56.0	EN ISO 5165
Density at 15°C	kg/m ³	833.0	837.0	EN ISO 12185
Distillation:				
- 50% point	°C	245.0	—	EN ISO 3405
- 95% point	°C	345.0	360.0	EN ISO 3405
- final boiling point	°C	—	370.0	EN ISO 3405
Flash point	°C	55	—	EN ISO 2719
Cloud point	°C	—	-10	EN 23015
Viscosity at 40°C	mm ² /s	2.30	3.30	EN ISO 3104
Polycyclic aromatic hydrocarbons	% m/m	2.0	4.0	EN 12916
Sulphur content	mg/kg	—	10.0	EN ISO 20846 EN ISO 20884
Copper corrosion 3hrs, 50°C		—	Class 1	EN ISO 2160
Conradson carbon residue (10 % DR)	% m/m	—	0.20	EN ISO 10370
Ash content	% m/m	—	0.010	EN ISO 6245
Total contamination	mg/kg	—	24	EN 12662
Water content	mg/kg	—	200	EN ISO 12937
Acid number	mg KOH/g	—	0.10	EN ISO 6618
Lubricity (HFRR wear scan diameter at 60°C)	µm	—	400	EN ISO 12156
Oxidation stability @ 110°C ³	h	20.0		EN 15751
FAME 4	% v/v	6.0	7.0	EN 14078

1 The values quoted in the specifications are 'true values'. In establishment of their limit values the terms of ISO 4259 Petroleum products – Determination and application of precision data in relation to methods of test have been applied and in fixing a minimum value, a minimum difference of 2R above zero has been taken into account; in fixing a maximum and minimum value, the minimum difference is 4R (R = reproducibility). Notwithstanding this measure, which is necessary for technical reasons, the manufacturer of fuels shall nevertheless aim at a zero value where the stipulated maximum value is 2R and at the mean value in the case of quotations of maximum and minimum limits. Should it be necessary to clarify whether a fuel meets the requirements of the specifications, the terms of ISO 4259 shall be applied.

2 The range for cetane number is not in accordance with the requirements of a minimum range of 4R. However, in the case of a dispute between fuel supplier and fuel user, the terms of ISO 4259 may be used to resolve such disputes provided replicate measurements, of sufficient number to archive the necessary precision, are made in preference to single determinations.

3 Even though oxidation stability is controlled, it is likely that shelf life will be limited. Advice shall be sought from the supplier as to storage conditions and life.

4 FAME content to meet the specification of EN 14214.

ANNEXURE - IV-U

[See Rule 115(19)]

Specification of Commercial Gasoline Fuel

Characteristics	Unit	Requirements	
		Regular	Premium
Color, visual		Orange	Red
Density @ 15°C	Kg/m ³	720-775	720-775
Distillation :			
(a) Recovery up to 70°C (E 70)	% volume	10-55 (summer) 10-58 (other month)	10-55 (summer) 10-58 (other month)
(b) Recovery up to 100°C (E 100)	% volume	40-70	40-70
(c) Recovery up to 150°C (E 150)	% volume	75 min	75 min
(d) Final Boiling Point (FBP), max	°C	210	210
(e) Residue, max	% volume	2	2
Research Octane Number (RON) min		91	95
Motor Octane Number (MON), min		81	85
Gum content (solvent washed), max	mg/100ml	4	4
Oxidation Stability, min	minutes	360	360
Sulphur, total, max	mg/kg	10	10
Lead content (as Pb), max	g/l	0.005	0.005
Reid Vapour Pressure (RVP) @ 38°C, max	kPa	67	67
Vapour Lock Index (VLI)			
(a) Summer, max		1050	1050
(b) Other months, max		1100	1100
Benzene Content, max	% volume	1	1
Copper strip corrosion for 3 hrs @ 50°C, max	rating	Class 1	Class 1
Olefin content, max	% volume	21	18
Aromatics content, max	% volume	35	35
Oxygen content, max	% mass	3.7	4.5
Oxygenates Content			
a) Methanol, max	% volume	3	3
b) Ethanol, max	% volume	10	10
c) Iso-propyl alcohol, max	% volume	10	10
d) Iso-Butyl alcohol, max	% volume	10	10
e) Tertiary-butyl alcohol, max	% volume	7	7
f) Ethers containing 5 or more carbon atoms per molecule, max	% volume	15	15
g) Other oxygenates, max	% volume	8	8

Note.—1. Test methods and other provisions and details along with the requirements as given above shall be issued by Bureau of Indian Standards.

2. The Aromatics content, (max) shall be permitted up to 40% in North Eastern States till 01.04.2023

ANNEXURE - IV-V

[See Rule 115(19)]

Specification of Commercial Diesel Fuel

Characteristics	Unit	Requirements
Ash, max	% mass	0.01
Carbon Residue (Ramsbottom) on 10 % residue, max	% mass	0.3 without additives
Cetane number (CN), min		51
Cetane Index (CI), min		46
Distillation :		
95% vol. recovery at °C, max	°C	360
Flash point :		
a) Abel, min	°C	35
Kinematic Viscosity @ 40°C	cst	2.0-4.5
Density @15°C, max	kg/m ³	845
Total Sulphur, max.	mg/kg	10
Water content, max	mg/kg	200
Cold filter Plugging point (CFPP)		
a) Summer, max	°C	18
b) Winter, max	°C	6
Total contaminations, max	mg/kg	24
Oxidation stability, max	g/m ³	25
Polycyclic Aromatic Hydrocarbon (PAH), max	% mass	8
Lubricity, corrected wear scar diameter @ 60°C, max	μ m (microns)	460
Copper strip corrosion for 3 hrs @ 50°C	rating	Class - 1
FAME content max.	% v/v	7.0

Note.—1. Test methods and other provisions / details along with the requirements as given above shall be issued by Bureau of Indian Standards.
2. The Cetane number (CN),(min) shall be permitted up to 48 in North Eastern States till 01.04.2023

ANNEXURE - IV-W

[See Rule 115(18)]

Technical Specification of Reference Hydrogen Fuel.

Characteristics	Units	Limits		Test Method
		Minimum	Maximum	
Hydrogen Purity	% mole	98	100	ISO 14687-1
Total Hydrocarbon	μmol/mol	0	100	ISO 14687-1
Water ¹	μmol/mol	0	2	ISO 14687-1
Oxygen	μmol/mol	0	2	ISO 14687-1
Argon	μmol/mol	0	2	ISO 14687-1
Nitrogen	μmol/mol	0	2	ISO 14687-1
CO	μmol/mol	0	1	ISO 14687-1
Sulphur	μmol/mol	0	2	ISO 14687-1
Permanent Particulates ³				ISO 14687-1

⁽¹⁾Not to be condensed

⁽²⁾Combined water, oxygen, nitrogen, argon: 1.900 μ mol/mol.

⁽³⁾The hydrogen shall not contain dust, sand, dirt, gums, oils or other substances in an amount sufficient to damage the fuelling station equipment of the vehicle (engine) being fuelled.

Annexure-IV-X

[See Rule 115]

Technical specification for Reference fuel E-5

Characteristics	Units	Limits		Test Method
		Minimum	Maximum	
Research octane number, RON		95.0	-	EN25164/prENISO5164
Motor octane number, MON		85.0	-	EN25163/prENISO5163
Density at 15°C	kg/m ³	743	756	ENISO 3675/ENISO12185
Vapour pressure	kPa	56.0	60.0	ENISO 13016-1(DVPE)
Water content	%v/v		0.015	ASTME 1064
Distillation:				
–Evaporated at 70°C	%v/v	24.0	44.0	ENISO3405
–Evaporated at 100°C	%v/v	48.0	60.0	ENISO 3405
–Evaporated at 150°C	%v/v	82.0	90.0	ENISO 3405
–Final boiling point	°C	190	210	ENISO 3405
Residue	%v/v	—	2.0	ENISO 3405
Hydro-carbon analysis:				
–Olefins	%v/v	3.0	13.0	ASTMD1319
–Aromatics	%v/v	29.0	35.0	ASTMD1319
–Benzene	%v/v	-	1.0	EN12177
–Saturates	%v/v	Report		ASTM1319
Carbon/hydrogen ratio		Report		
Carbon/oxygen ratio		Report		
Induction period ²	minutes	480	-	ENISO 7536
Oxygen content ¹	%m/m	Report		EN1601
Existent gum	mg/ml	-	0.04	ENISO 6246
Sulphur content ³	mg/kg	-	10	ENISO 20846/ENISO20884
Copper corrosion		-	Class 1	ENISO 2160
Lead content	mg/l	-	5	EN237
Phosphorus content	mg/l	-	1.3	ASTMD3231
Ethanol ⁵	%v/v	4.7	5.3	EN1601/EN 13132

¹The values quoted in the specifications are "true values". For establishing the limit values, the terms of ISO4259:2006 (Petroleum products— Determination and application of precision data in relation to methods of test) have been applied and for fixing a minimum value, a minimum difference of 2 R above zero has been taken into account; for fixing a maximum and minimum value, the minimum difference is 4R (R=reproducibility).

Notwithstanding this measure, which is necessary for technical reasons, the fuel manufacturer shall nevertheless aim at a zero value where the stipulated maximum value is 2R and at the mean value when quoting maximum and minimum limits. Should it be necessary to clarify whether a fuel meets the requirements of the specifications, the terms of ISO4259:2006 shall be applied.

²The fuel may contain oxidation inhibitors and metal deactivators normally used to stabilize refinery petrol streams, but detergent/dispersive additives and solvent oils shall not be added.

³The actual sulphur content of the fuel used for the Type I test shall be reported.

⁴Ethanol meeting the specification of prEN15376 is the only oxygenate that shall be intentionally added to the reference fuel.

⁵There shall be no intentional addition to this reference fuel of compounds containing phosphorus, iron, manganese or lead.

[Noti. No. RT-11028/ 20/2015-MVL, dt. 16.9.2016—Gaz. of India, Exty., Pt. II-Sec. 3(i), No. 651, dt. 16.9.2016, pp. 24-44 {G.S.R. 889(E)}] = 2017 CCS/P. 60/H. 21

2. The Central Motor Vehicles (18th Amendment) Rules, 2016—In the principal Rules, 1989—Rules 93, 118 and 125—Amended.

G.S.R. 963(E).—Whereas, the draft rules further to amend the Central Motor Vehicles Rules, 1989 were published, as required by sub-sec. (1) of Sec. 212 of the Motor Vehicles Act, 1988 (59 of 1988), vide notification of the Government of India in the Ministry of Road Transport and Highways number G.S.R. 425(E), dated the 18th April, 2016, in the Gazette of India, Extraordinary, Part II, Section (3), sub-sec. (i), inviting objections and suggestions from all persons likely to be affected thereby before the expiry of the period of thirty days from the date on which copies of the said notification containing the draft rules were made available to the public;

And whereas, copies of the said Gazette notification were made available to the public on the 18th April, 2016;

And whereas, the objections and suggestions received from the public in respect of the said draft rules have been considered by the Central Government.

Now, therefore, in exercise of the powers conferred by Sec. 110 of the Motor Vehicles Act, 1988 (59 of 1988), the Central Government hereby makes the following rules further to amend the *Central Motor Vehicles Rules, 1989*, namely:—

1. (1) These rules may be called the **Central Motor Vehicles (18th Amendment) Rules, 2016**.

(2) They shall come into force from the date of their publication in the Official Gazette.

2. In the Central Motor Vehicles Rules, 1989 (hereinafter referred as the said rules),

(I) In Rule 93,—

(a) in sub-rule (2),—

(A) after clause (iii), the following proviso shall be inserted, namely:—

“Provided that on and after the 1st April 2017, in case of articulated vehicles, engaged by automobile manufacturers to carry motor vehicles from their factories to different sale outlets in the country, 18.75 meters:”

(B) after clause (iv), the following provisos shall be inserted, namely:—

“Provided that, on and after the 1st April 2017, in case of truck-trailer or tractor-trailer vehicles engaged by automobile manufacturers to carry motor vehicles from their factories to different sale outlets in the country, 18.75 meters:

Provided further that on and after the 1st April 2017, articulated or truck-trailer or tractor-trailer vehicles engaged by automobile manufacturers to carry motor vehicle from their factories to different sale outlets in the country, shall be provided with a sliding inspection window on the container body, to allow verification of motor vehicles carried in the container and the sliding inspection window shall be minimum of 400 millimeters in length and 300 millimeters in height and at least one sliding inspection window shall be fitted to the middle third of the vehicle, the foremost sliding inspection window being not further than 3 meters from the front and in the case of trailers, account shall be taken of the length of the drawbar for the measurement of this distance and the distance between two adjacent sliding inspection windows shall not exceed 4 meters and the height of the upper edge of the sliding inspection window shall not be more than 1.8 meters from the ground;”;

(II) in Rule 118 of the said rules, in sub-rule (1), after the second proviso, the following proviso shall be inserted, namely:—

“Provided also that on and from 1st April 2017, articulated or truck-trailer or tractor-trailer vehicles engaged by automobile manufacturers to carry motor vehicles from their factories to different sale outlets in the country, shall be

equipped or fitted by the vehicle manufacturer, either in the manufacturing stage or at the dealership stage, with a speed governor (speed limiting device or speed limiting function) having maximum speed of 60 kilometers per hour conforming to AIS 018/2001, as amended from time to time, till such time the corresponding Bureau of Indian Standards specifications are notified.”;

(III) in Rule 125 of the said rules, in sub-rule (2), after the third proviso, the following proviso shall be inserted, namely:—

“Provided also that on and from the 1st April 2017, articulated or truck-trailer or tractor-trailer vehicles engaged by automobile manufacturers to carry motor vehicle from their factories to different sale outlets in the country, shall be equipped with a rear surveillance camera-monitoring device or rear view camera.”.

[Noti. No. RT-11028/29/2006-MVL, dt. 7.10.2016—Gaz. of India, Exty., Pt. II-Sec. 3(i), No. 715, dt. 7.10.2016, p. 2-3 {G.S.R. 963(E)}] = 2017 CCS/P. 85/H. 22

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3. The Central Motor Vehicles (19th Amendment) Rules, 2016—Rule 125(c)(3)—of the principal Rules, 1989—Substituted.

G.S.R. 1034(E).—Whereas the draft rules further to amend the Central Motor Vehicles Rules, 1989, were published, as required under sub-sec. (1) of Sec. 212 of the Motor Vehicles Act, 1988 (59 of 1988), vide notification of the Government of India in the Ministry of Road Transport and Highways number G.S.R. 658 (E), dated the 4th July, 2016 in the Gazette of India, Extraordinary, Part-II, Section 3, sub-sec. (i), inviting objections and suggestions from affected persons before the expiry of a period of thirty days from the date on which copies of the said notification containing the draft rules were made available to public;

And whereas, copies of the said Gazette notification were made available to the public on the 4th July, 2016;

And whereas, the objections and suggestions received from the public in respect of the said draft rules have been considered by the Central Government;

Now, therefore, in exercise of the powers conferred by sub-sec. (1) of Sec. 110 of the Motor Vehicles Act, 1988 (59 of 1988), the Central Government hereby makes the following rules further to amend the *Central Motor Vehicles Rules, 1989*, namely:—

1. (1) These rules may be called the **Central Motor Vehicles (19th Amendment) Rules, 2016**.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Central Motor Vehicles Rules, 1989, in Rule 125-C, for sub-rule (3), the following sub-rule shall be substituted, namely:—

“(3) All goods vehicles of Category N2 and of Category N3, either manufactured by a vehicle manufacturer or a body builder on drive away chassis vehicles shall, till the corresponding BIS specifications are notified under the Bureau of Indian Standards Act, 1986 (63 of 1986) comply with the provisions of AIS-093 (Rev. 1)-2015, as specified in Table I and Table II below, namely:—

Table I

Sr. No.	Test Parameters	Requirements of Specific Clauses of AIS-093 (Rev.1)
(1)	(2)	(3)
1.	Overall Dimensions	2.1.1
2.	External Projections for cabin	2.1.2
3.	Driver / Co-passenger Door	2.1.3
4.	Climb Facility	2.1.4

Sr. No.	Test Parameters	Requirements of Specific Clauses of AIS-093 (Rev.1)
(1)	(2)	(3)
5.	Hand Holds	2.1.5
6.	Window on Cab Door	2.1.6
7.	Driver Seat /Co passenger seat	2.1.7
8.	Safety Belt Assemblies and Anchorages	2.1.8
9.	Sleeper Berth	2.1.9
10.	Mudguards / Spray suppression devices	2.1.10
11.	Driver Work Area	2.1.11
12.	Steering Wheel	2.1.12
13.	Placement of Instrument Panel	2.1.13
14.	Position of Controls	2.1.14
15.	Stowage Space	2.1.15
16.	First Aid Box	2.1.16
17.	Truck Cab Structural Strength	2.2.1
18.	Front Under run Protective Device (FUPD)	2.2.2
19.	Cab Mounting Arrangement and Strength Requirements	2.2.3
20.	Protection of the Occupants in the Event of a Lateral Collision	2.2.4
21.	Installation requirements for Lighting & Signaling devices (except for the vertical orientation of the dipped beam)	2.2.5
22.	Rear view mirror	2.2.6
23.	Driver's Work Area	2.2.7
24.	Door Locks & Hinges	2.2.8
25.	Window	2.2.9
26.	Wind Screen and Wind Screen Wiping System	2.2.11
27.	Fire extinguishers	2.2.12
28.	Cab and Body gap	3.2.2
29.	Stowage Space/ Luggage Carrier	3.2.3
30.	Mudguards / Spray Suppression Devices	3.2.4
31.	Protection of the Occupants of Goods-carrying Power-driven Vehicles against the Shifting of Loads	3.4.1
32.	Retro-Reflective Markings for Heavy and Long Vehicles	3.4.5
33.	Lateral Protective device	3.4.6
34.	Rear Under run Protective Device (RUPD)	3.4.7
35.	Internal Lighting	4.1.2
36.	Position of illumination devices	4.1.3
37.	Driver Cab lighting	4.2
38.	Electrical cables	4.3.1
39.	Fuse	4.3.2
40.	Terminals, Connectors and Elements	4.3.3
41.	Safety requirements	4.4
42.	Batteries	4.5
43.	Technical Provisions for Base Vehicles	5.3
44.	Manner of Display of Class Labels and Identification Marks	5.5

Table II

Sr. No.	Nature of Test / Parameters	Requirements of Specific Clauses of AIS-093 (Rev.1)
1.	Categorization of Truck Load Bodies	3.1
2.	General Requirements	3.2
3.	Overall Dimensions	3.2.1
4.	Rope Hooks and other Provisions	3.2.5
5.	Working Stability	3.3.1
6.	Mounting of the Body or Load Platform of Commercial Vehicles	3.3.2
7.	Body Construction requirements	3.3.3
8.	Securing the Load on the Load body	3.4.2
9.	External Projection	3.4.3
10.	Installation requirements for Lighting & Signaling devices (except for the vertical orientation of the dipped beam)	3.4.4
11.	External Lighting	4.1.1
12.	Type of Bulbs for lamp Assemblies	4.1.4
13.	Technical Provisions for Bodies	5.4
14.	Container Size Designations and Sizes Codes	6.4
15.	Recommendations for Stacking of Load	6.5
16.	Twist Locks	6.6
17.	Container securing arrangements	6.7
18.	Attaching Sub-frames and Bodies	6.8
19.	Tanker Mounting	6.9
20.	Stability Criteria	7.5
21.	Modification of the Vehicle Type and Extension of Approval	7.6
22.	Roll Over Stability / Tilt Table Test Procedure	Annexure - 1
23.	Lateral Stability Calculation	Annexure - 2"

3. The vehicles referred to in sub-rule (3) shall, on and after the 1st day of October, 2018, comply with the provisions of the AIS specified in column (3) of the Table I of the said sub-rule, in respect of the test parameters specified in the corresponding column (2) of the said table.; and on after the 1st day of October, 2019, comply with the provisions of the AIS specified in column (3) of Table II, in respect of the test parameters specified in the corresponding column (2), of the said table:

Provided that the manufacturers or the body builder of the vehicles referred to in sub-rule (3) shall, with effect from the 1st day of April, 2017, be fitted with an air conditioning system for the cabin.

[Noti. No. RT-11028/02/2016-MVL, dt. 2.11.2016—Gaz. of India, Exty., Pt. II-Sec. 3(i), No. 768, dt. 2.11.2016, pp. 5-8 {G.S.R. 1034(E)}] = 2017 CCS/P. 86/H. 23

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4. The Inland Vessels (Prevention and Control of Pollution and Protection of Inland Water) Rules, 2016—Rules framed.

G.S.R. 687(E).—Whereas, the draft Inland Vessels (Prevention and Control of Pollution and Protection of Inland Water) Rules, 2016, were published, in exercise of the powers conferred by Sec. 54-H of the Inland Vessels Act, 1917 (1 of 1917) in the Gazette of India, Extraordinary, Part II, Section 3 sub-sec. (i) dated the 3rd February, 2016, vide GSR 144(E) dated 3rd February, 2016 as required by sub-sec. (1) of Sec. 74 of the said Act inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of the period of thirty days from the date on which copies of the Gazette containing the said draft rules were made available to the public.

The said notification was made available to the general public on the third day of February i.e., the 3rd February, 2016.

And, whereas, objection and suggestions received in respect of the said draft rules have been considered by the Central Government.

Now, therefore, in exercise of powers conferred by Sec. 54-H of the Inland Vessels Act, 1917, the Central Government makes the following Rules, namely:—

1. Short title and commencement.—(1) These rules may be called the Inland Vessels (Prevention and Control of Pollution and Protection of Inland Water) Rules, 2016.

(2) They shall come into force on date of their publication in the Official Gazette.

2. Definitions.—(1) In these rules, unless the context otherwise requires.—

(a) “Act” means the Inland Vessels Act, 1917;

(b) “any person” means any person authorised under Sec. 54-G of the Act which includes a surveyor or appointed under sub-sec. (1) of Sec. 4 of the Act;

(c) “bilge water” means waste water collected in bilge of the vessel;

(d) “holding tank” means a tank used for the collection and storage of oily mixture or bilge water or sludge or pre wash of chemicals and obnoxious substances;

(e) “inland port” means a port located on Inland Waterway with the requisite facilities for safe berthing of vessels, loading and unloading arrangement of cargo, storage of cargo on land and provide water supply and fuel;

(f) “Schedule” means the Schedule annexed to these rules; and

(g) “sludge” means sludge from the fuel or lubricating oil separators, waste lubricating oil from main auxiliary machinery, or waste oil from bilge water separator, oil filtering equipment or drip trays.

(2) Words and expressions used in rules and not defined but defined in the Act, shall have the meaning assigned to them in the Act.

3. The chemicals and substance specified in Schedule I shall be the hazardous chemicals and obnoxious substances for the purpose of a clause (a) Sec. 54-D.

4. Measures to prevent and control of pollution to protect inland water.—Every inland port shall provide oily mixture treatment equipment on shore as specified in Schedule II, within one year from the date of coming into force of these rules.

5. Every inland vessel above 1000 Gross Tonnes shall be equipped with oily mixture treatment equipment on board as specified in Part I of Schedule III, within one year from the date of coming into force of these rules.

6. Every inland vessel shall be equipped with a holding tank or equivalent arrangement of capacity as specified in Part II of Schedule III.

7. Every inland port shall provide reception facilities specified in Schedule IV, based on the nature of operation taking place on twenty four hours basis without delaying the vessel unreasonably, within one year from the date of coming into force of these rules.

8. An inland port at cargo or passenger terminal shall maintain Form and Record Books as specified in Schedule V.

9. At any time after one year from the coming into force of these rules, an inspection shall be carried out under Sec. 54-G of the Act by the surveyor or any person authorised by the State Government in this behalf and the following actions shall be taken,—

(i) if the Inland port is found to be provided with pollution containment equipment and removing material conforming to the orders of the State Government under Sec. 54-F of the Act or the rules made thereunder by the Central Government under Chapter VIAB, a certificate of compliance or conformity shall be issued in the Form prescribed in Schedule VIII;

(ii) if the surveyor finds that the Inland port is not provided with pollution

containment equipment and removing material conforming to the orders of the State' Government under Sec. 54-F of the Act or the rules made thereunder by the Central Government under Chapter VIAB, a notice in the Form as prescribed in Schedule VI pointing out deficiencies and directing the owner of the Inland port to take remedial action and report compliance within a period of thirty days from the date of receipt of notice; and

- (iii) after compliance is reported and the surveyor is satisfied, a certificate of compliance or conformity shall be issued in the Form specified in Schedule VII.

SCHEDULE I

[See Rule 3]

List of hazardous chemicals or obnoxious substances in bulk or in packaged form including wastes Hazardous chemicals or Obnoxious Substances

Acetic anhydride	Chloroform
Acetone	Chlorohydrins(crude)
Acetone Cyanohydrin	Chloropicrin
Acrolein	Chromic acid (Chromium trioxide)
Acrylonitrile	Cococculus (Solid)
Aldrin	Copper compounds
Allylthiocyanate	Cresols
Aluminium phosphide	Cupriethylenediamine
Amonia (28% aqueous)	Cyanide compound
Ammonium phosphate	Cyanogen bromide
Amyl mercaptan	Cyanogen chloride
Aniline	DOT
Aniline hydrochloride	Dichloroanilices
Antimony compounds	Dichlorobenzenes
Atrazine	Dieldrin
Azinphos methyl (Guthion)	Dimethoate (Cygon)
Baiium azide,	Dimethyl amine (40%aqueous))
Barium oxide	Dinitroanillnes
Benzene	4.6-Dinitroorthocresol
Benzenehexachloride isomers (Lindane)	Dinitrophenols
Benzidine	Endosulphan (Thiodan)
Beryllium Powder	Endrin
Bromine	Epichlorohydrin
Bromobenzyl cyanide	Ethyl bromoacetate
n-Butyl acrylate	Ethylene chlorohydrin (2-Chloro-ethanol)
Butyric acid	Ethyl parathion
Cacodyliccompounds	Fentin acetate (dry)
Carbaryl (Sevin)	Fluosilicic acid
Carbon disulphide	Heptachlor
Corbontetrachlrde	Hexachlorobenzene
Chloridane	Hexaethyltetraphosohate
Chloro~Cetophenone	Hydrocyanic acid
Chlorodinitrobenzene	Hydrofluoric acid n(40% aqueous)

Isoprene	2. 4. 5- T
Lead compounds	Liquefied Gases (when carried in bulk)
Lindane (Gammexane. BHC)	Acetaldehyde
Malathion	Anhydrous Ammonia
Mereuric compounds	Butadiene
Methyl alcohol	Butane
Methylene chloride	Butane/Propari mixtures
Molasses	Butylenes.
Naphtalene (moltem)	Chlorine
Naphthylthiourea	Dimethylamine
Nitric acid (90%)	Ethyl chloride
Oleum	Ethane
Parathion	Ethylene
Paraquat,	Ethylene Oxide
Phenol	Methane (LNG)
Phosphoric acid	Methyl Acetylene Propadlene mixture
Phosphorus (elemental)	Methyl Bromide
Polyhalogenated biphenyls	Methyl Chloride
Sodium pentachlorophenate (solution)	Propane
Styrene monomer	Propylene
Toluene	VinylChloride~Monomer
Toluene diisocyanate	Anhydrous Hydrogen Chloride Anhydrous
Toxaphene	Hydrogen Fluoride or Sulphur Dioxide.
Tritolyl phosphate (Tricresyl phosphate)	

SCHEDULE II

[See Rule 4]

Prescription for oily mixture treatment equipment for Inland Port

Oily Mixture treatment equipments.

1. Preliminary treatment:

Settling tanks : The effluent oil concentration for an API separator shall be 50-200 ppm.

2. Secondary treatment:

- (i) *Chemical emulsion breaking or flocculation and floatation* : The water phase effluent quantity of 20-40 ppm shall be achieved with this technique. A large variety of chemicals are available for emulsion breaking. Most frequently iron or aluminum salts and charged polymers are used for emulsion breaking;
- (ii) *Filtration*: The water phase effluent oil concentration shall be approximately 20 ppm, which can be lowered to 5 ppm, when flocculation chemicals are added.
- (iii) *Hydrocyclones* : Hydrocyclones use the density difference between oil and water for separation and separation is achieved. by centrifugal force. The waste water effluent concentration shall be reached with hydrocyclones is approximately 5-15 ppm.
- (iv) *Centrifuges* : They work on the same principle as hydrocyclones. However, they are not static, as the equipment is rotated. They can be used for 3 phase separation (Oil, water and solids).

- (v) Molecular. Coalescence oil or water separator: The main principle is the molecular coagulation of like molecules. The coagulation is achieved by changing the energy pattern from a tranquil phase to a rapid phase. The water content of the oil is less than 10% and frequently less than 1%.

3. *Tertiary treatment:*

Biological treatment : Here the use of micro-organisms for degrading dissolved organic components in wastewater streams is done. For treatment of oily waste, standard aerobic activated' sludge treatment can be used. The discharge level of oil in the effluent shall be reduced to less than 1 ppm by this treatment.

4. *Specification for oily mixture treatment equipment on shore:*

- (i) The oil content of the effluent from the treatment unit shall be as minimum as possible but in no case it exceed 15p
- (ii) The treatment equipment shall be strong and robust in construction and suitable for use.
- (iii) Any electrical equipment that is part of the treatment unit shall be located in a non-hazardous area or certified by the competent authority as safe for use in hazardous areas.
- (iv) The treatment unit shall be so designed that it functions automatically. A fail-safe arrangement to avoid any discharge in case of malfunction shall be provided.
- (v) The system shall require minimum maintenance and attention to bring it into operation. It shall be capable of operating at least twenty four-hours of normal duty without attention.
- (vi) A ppm display and alarm shall be provided
- (vii) The accuracy of the ppm alarm shall be checked as per manufacturer's instruction speriodically as directed by the competent person. A copy of calibration certificate, certifying the date of calibration shall be retained by the port for inspection purpose.

SCHEDULE III

[See Rules 5 and 6]

Prescription for oily mixture treatment equipment for Inland vessel

Part-I

Oil filtering equipment (15 ppm bilge, separator):—

- (1) The 15 ppm bilge separator shall be strongly constructed and suitable for vessel's use bearing in mind its intended location on the vessel.
- (2) It shall, if intended to be fitted in locations where flammable atmospheres may be present, comply with the relevant safety regulations, for such spaces.
- (3) The 15 ppm bilge separator shall be so designed that it functions automatically. However, safe arrangements to avoid any discharge in case of malfunction shall be provided.
- (4) Changing the feed to the 15 ppm bilge separator from bilge to oil bilge water to emulsified bilge water, or from oil and water to air shall not result in the discharge overboard of any mixture containing more than 15ppm of oil.
- (5) The system shall require the minimum of attention to bring it into operation. In the case of engine room bilges, there shall be no need for any adjustment to valves and other equipment to bring the system into operation. The equipment shall be capable of operating for at least twenty-four hours of normal duty without attention.
- (6) All working parts of the 15 ppm bilge separator which are likely to be damaged shall be easily accessible for maintenance.

15 ppm bilge alarm :—

- (1) The 15 ppm bilge alarm shall resist corrosion in the conditions of the marine environment.
- (2) Any electrical equipment which is part of the 15 ppm bilge alarms shall be placed in a non-hazardous area.
- (3) A ppm display shall be provided. Onboard testing according to manufacturer's instructions shall be carried out.
- (4) The response time, that is the time which elapses between an alteration in the sample being supplied to the 15 ppm bilge alarm and the ppm display shall not exceed five seconds.
- (5) The 15 ppm bilge alarm shall record date, time and alarm status and operating status of the 15 ppm bilge separator. The recording device shall also store data for at least eighteen months.
- (6) The accuracy of the 15 ppm bilge alarms shall be checked at renewal survey according to the manufacturer's instructions. The calibration certificate for the 15 ppm bilge alarm, certifying date of last calibration check, shall be retained on board for inspection purpose.

Part-II

Holding tank for Inland vessel : The capacity of bilge water holding tanks shall be as follows: —

Vessels below 150grt or main engine rating upto 750kw.... 1.0m³

Vessels (>150grt and <400grt) or main engine rating upto 1000Kw 1.5 m

Vessels (>400 grt and <3000 grt) or main engine rating

(>1000KW and <20,000kw) capacity: $1.5 + (P-1,000)/1,500$, m³

Vessels (>3000grt) or main engine rating (>20,000kw)

Capacity: $14.2 + 0.2 (P^*-20,000)/1,500$ m³

*(P=main engine rating in kw)

Provided that for Inland Vessels of less than 150 grt, where due to space constraints, it is not practicable to provide 1.0m³ holding tank, the surveyor may allow for providing 0.5m³ holding tank for Inland Vessels of 250 kw to 750 kw engine rating and 0.25m³ for less than 250 KW engine rating.

SCHEDULE-IV

[See Rule 7]

Details of reception facilities for oil or oily mixture, sludge or waste and designated pollutants.

A. *General provision.*—(1) The treatment facility shall be established at Inland Port, but the collection equipment can either be mobile or shore based at a central point.

(2) Collection of oily wastes can be either by floating reception facilities like barges of adequate capacity either towed if non-propelled or self propelled or by fixed reception facilities such as one central shore based waste collection point in inland port. The State Government may prescribe the type of facility based on the size and nature of operation of the Inland port.

B. *Port reception facilities for hazardous chemicals or obnoxious substances :—*

Details of components :

Buffering and equalizing : In buffering/equalizing tanks, the process flow is continuous by using the tanks as buffers and the composition of the waste stream is equalised by mixing several batches of oily waste.

Plate Separation : Plate separators work on the principle of increasing the surface area of separation, resulting in a better separation. The water phase effluent reached with a plate separator is approximately 20-100ppm.

Flocculation : The water phase effluent quantity of 20-40 ppm shall be achieved with this technique. A large variety of chemicals are available for emulsion breaking. Most frequently iron or aluminum salts and charged polymers are used for emulsion breaking.

Flotation : This is a unit operation used to separate solid or liquid particles from a liquid phase. Air bubbles are injected into a waste water tank and the rising air bubbles will attach to the flocculated oil particles and increase their buoyancy. The combined particles and gas bubbles will rise to the surface and the floating particles can be collected.

Biological treatment : Here the use of micro-organisms for degrading dissolved organic components in wastewater streams is done. For treatment of oily waste, standard aerobic activated sludge treatment can be used. The discharge level of oil in the effluent shall be reduced to less than 1 ppm by this treatment.

C. *Port reception facilities for oil or oily mixtures or sludge or waste*

As specified is Schedule II.

Schedule V

[See Rule 8]

Record book for receipt of designated pollutants in inland port.....(period from.....to.....)

S. No.	Name of the vessel	Time and date of receipt of designated pollutants/oil/oily mixture or sludge waste	Name of Inland port	Type of pollutant received	Quantity of pollutants received	Fee levied for the receipt	Method of disposal adopted	Remarks
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

Name and signature of authorised official

Seal or stamp of the authority

Schedule VI

[See Rule 9(ii)]

Format for Notice under Sec. 54-G(1), (2) & (3)

Government of..... (Name of State Govt.)

[Notice under Sec. 54-G (1), (2) and (3)]

This is to bring to your notice that Inland port (name of the port) was inspected under the provision of 54G of the Inland Vessels Act, 1917 on (date and year) at (time) The inspection revealed the following deficiencies (please mention the relevant order or rules violated against each deficiency)

Deficiencies	Relevant rules or Order
1.
2.
3.
4.

You are hereby advised to take the following remedial action and report compliance

1.

2.

3.

4.

Take notice that till the time the above remedial action is taken, all operations at your Cargo/Passenger terminal will remain suspended.

Place of Issue:

Date of Issue:

(Name and Signature of the surveyor issuing the certificate)

(Seal or stamp of issuing authority, as appropriate)

Schedule-VII

[See Rule 9(iii)]

Government of (Name of State Govt.)

Reference number:

Certificate of Compliance/conformity (in context of Schedule VI)

Name and address of Inland Port:

This is to certify that the Inland port (name of the port) has been inspected to verify the compliance of deficiencies stated in Schedule VI. The port now is found to be complying with the requirements as stated in Sec. 54-G of the Inland Vessels Act, 1917 and therefore permitted to resume the operations.

The date of verification of compliance is

Place of Issue:

Date of Issue:

(Name and Signature of the Surveyor
Issuing the Certificate Surveyor)

(Seal or stamp of Issuing authority, as appropriate)

Schedule VIII

[See Rule 9(i)]

Government of (Name of State Govt.)

Certificate of Compliance/conformity
(Issued under Sec. 54-F & 54-H)

Certificate/Serial number

Name and address of Inland Port:

This is to certify that the Inland port (name of the port) has been inspected to verify the compliance of the relevant provisions with respect to equipment, material, containment, treatment and adequacy of reception facilities. The Inland port demonstrates the compliance of stated provisions and therefore Certificate of compliance or conformity is now issued to the Inland port. The validity of this compliance or conformity expires on from the date of issue, but not later than a period of one year subject to the conditions stated below:

1. Prevention and preservation of inland water shall always be given priority over other operations.
2. Any incidents of oil pollution or chemical spillage affecting the port shall be notified to the issuing authority.
3. Any incident of casualty with respect to pollution affecting the port operations shall be notified to the issuing authority.

4. Any malfunction or defect of or in oily water equipment affecting prevention of pollution and preservation of inland water shall be notified to the issuing authority.
5. Any activity relating to new development in Inland port shall be immediately reported to the issuing authority for the purpose of conducting review in respect of any additional requirements.

The date of verification of compliance is

Place of Issue :

Date of Issue :

(Name of Signature of the
Survey or Issuing the Statement)

(Seal or stamp of Issuing authority, as appropriate)

[Noti. No. F. No. NW-11015/1/2004-IWT (Vol. II), dt. 13.7.2016—Gaz. of India, Exty., Pt. II-Sec. 3(i), No. 480, dt. 13.7.2016, pp. 11-12 {G.S.R. 687(E)}] = 2017 CCS/P. 88/H. 24

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5. The Minerals (Transfer of Mining Lease Granted Otherwise than through Auction for Captive Purpose) Rules, 2016—Rules framed.

G.S.R. 560(E).—In exercise of the powers conferred by clause (qqja) of sub-sec. (2) of Sec. 13 read with the proviso to sub-sec. (6) of Sec. 12-A of the **Mines and Minerals (Development and Regulation) Act, 1957** (67 of 1957), the Central Government hereby makes the following rules, namely:—

1. Short title and commencement.—(1) These rules may be called the **Minerals (Transfer of Mining Lease Granted Otherwise than through Auction for Captive Purpose) Rules, 2016**.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. Definition.—(1) In these rules, unless the context otherwise requires,—

- (a) “*Act*” means the **Mines and Minerals (Development and Regulation) Act, 1957** (67 of 1957);
- (b) “*transfer charges*” means the amount to be paid from time to time by the transferee to the State Government as notified in accordance with the provisions of sub-rule (1) of Rule 6;
- (c) “*transferee*” means a person to whom a mining lease granted otherwise than through auction to be used for captive purpose is to be transferred;
- (d) “*transferor*” means a person who holds the mining lease to be transferred, which was granted otherwise than through auction and is being used for captive purpose;
- (e) “*used for captive purpose*” means the use of the entire quantity of mineral extracted from the mining lease in a manufacturing unit owned by the lessee;
- (f) “*value of mineral dispatched*” shall have the meaning as specified in sub-rule (2) of Rule 8 of the **Mineral (Auction) Rules, 2015**.

(2) The words and expressions used in these rules but not defined herein shall have the same meaning as assigned to them in the Act or rules made thereunder.

3. Applicability.—(1) These rules shall apply to transfer of a mining lease granted otherwise than through auction which is being used for captive purpose.

4. Conditions for transfer.—(1) No transfer of mining lease granted otherwise than through auction being used for captive purpose shall be permitted except in accordance with the provisions of these rules.

(2) The transfer of a mining lease granted otherwise than through auction shall be permitted only where the entire quantity of mineral extracted from such mining lease is being used in a manufacturing unit owned by the lessee.

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