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## KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004

പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004



KSPCB/226/2022-SEE-3

28/09/2024

### ORDER

Sub: - Retrofitting of Emission Control Devices/Equipment in DG sets – reg

- Ref:-
1. Order No PCB/HO/SEE-3/TECH/82/2019 dated 09.12.2020
  2. Order No.KSPCB/517/2023/SEE-3 dated 15/05/2023
  3. Letter No.No:CP-99/86/2022-UPC-I-HO-CPCB-HO dated 31.05.2024
  4. System and Procedure for Emission Compliance Testing of Retro-fit Emission Control Devices (RECD) for Diesel Power Generating Set Engines upto Gross Mechanical Power 800 kW dated 24/01/2023 issued by CPCB
  5. Order of Hon'ble High Court of Kerala dated 05/09/2024 in WANO.1377 of 2022 against judgment dated 11.08.2022 in WP(C) 17676/2022

In the Order dated 09/12/2020, cited 1<sup>st</sup>, Board had directed to retrofit all operational DG sets of capacity 500 KVA and above with an Emission Control Device/ Equipment (RECD) having a minimum specified Particulate Matter capturing efficiency of at least 70% in 5 mode D2 cycle for equivalent KVARatingor Shift to gas based generators by employing new gas based generators or retrofitting the existing DG sets for partial gas usage within a period of 120 days from the date of issuance of the aforementioned order by all stake holders.

DG sets of capacities of and above 500KVA were only mandated in circular no. PCB/HO/SEE-3/TECH/82/2019 dated 09.12.2020 due to the non-availability of type approved agencies for retro fitment. Later adequate numbers of type approved agencies were available for retrofit of emission control device (RECD) in DG sets.

The Board has issued Order dated 15/05/2023 cited 2<sup>nd</sup>, directing to retrofit all operational DG sets of capacity 125 KVA and above with an Emission Control Device/ Equipment (RECD) having a minimum specified Particulate Matter capturing efficiency of at least 70% in 5 mode D2 cycle for equivalent KVA rating or Shift to gas based generators by employing new gas based generators or retrofitting the existing DG sets for partial gas

usage within a period of 120 days from the date of issuance of the afore mentioned order by all stake holders.

Now Hon'ble High Court of Kerala vide Order cited 5<sup>th</sup> has directed the Board to issue orders after advertng to the written instructions received by the Hon'ble Court from Central Pollution Control Board (CPCB) in respect of retrofit emission control devices, which are reproduced in the Order itself

Complying with the Order of the Hon'ble Court, it is clarified thatthere is no requirement for RECDs for genset engines that comply with these revised emission standards specified in MoEF Notification GSR 804 (E) dated 03.11.2022 which is given below in Tables 1&2.

**Table 1: Emission limits for Genset engines up to 800 kW Gross Mechanical Powered by All CI engines and PI engines > 800cc engine displacement.**

Power Category, kW	NOx	HC*/**	NOx +HC*/**	CO	PM		Smoke (light absorption coefficient)	
	CI/PI	CI/PI	CI/PI	CI/PI	CI	PI	CI	PI
	g/kWh						m-1	
P ≤ 8	-	-	7.5	3.5	0.30	-	0.7	-
8 < P ≤ 19	-	-	4.7	3.5	0.30	-	0.7	-
19 < P ≤ 56	-	-	4.7	3.5	0.03	-	0.7	-
56 < P ≤ 560	0.40	0.19	-	3.5	0.02	-	0.7	-
560 < P ≤ 800	0.67	0.19	-	3.5	0.03	-	0.7	-

**Table 2: Emission limits for portable Genset up to 19 kW powered by PI engines (up to 800 cc engine displacement)**

Category Engine Displacement (cc)	CO	NOx +HC */**
	g/kWh	
Up to 99	< 250	< 10
> 99 and up to 225	< 250	< 08
> 225 and upto 800	< 250	< 06

The abbreviations used in Table 1 and Table 2 are as follows:

- (i) NO<sub>x</sub> – Oxides of Nitrogen;
- (ii) HC– Hydrocarbon;
- (iii) CO – Carbon Monoxide;
- (iv) PM – Particulate Matter;
- (v) CI-Compression Ignition engines;
- (vi) PI- Positive Ignition engines;
- (vii) \* HC stands for THC for diesel and gasoline;
- (viii) \*\* HC for alternate fuels shall be as defined in System and Procedure for Generator set.

1. MoEF Notification GSR804 (E) dated 03.11.2022 state that Table 1 and Table 2 emission limits shall be applicable for Type Approval Test and Conformity of Production Test as carried out by authorized certifying agencies.

2. Domestic manufacturer, importer or assembler of engines for power generation up to 800 kW and engine displacement > 800 cc and of portable Gensets up to 19 kW and engine displacement up to 800 cc, shall obtain Type Approval from authorized certifying agency and also comply with Conformity of Production test of their product (s) for the emission limits which shall be valid for the next conformity of Production year or the date of implementation of the revised norms specified above, whichever is earlier.

3. It has been clarified by CPCB vide letter cited 3<sup>rd</sup> that power generating engines/engine families used in DG set which have completed five years from the date/month of engine manufacturing and which comply emission norms as specified in GSR 371 dated 17.05.2002 or GSR 771(E) dated 11.12.2013, are to be retrofitted with RECD as per "System and Procedure for Emission Compliance Testing of Retro-fit Emission Control Devices (RECD) for Diesel Power Generating Set Engines Up to Gross Mechanical Power 800 kW"(cited 4<sup>th</sup>).

4. The list of certification agencies for RECD and list of manufacturers certified for manufacture of RECDs are available, updated periodically, in the website of CPCB.

5. Emission standards for diesel engines (engine: rating more than 0.8MW (800 kW) for power plant, generator set applications and other requirements shall be as per standards notified vide GSR 489 (E) dated 09.07.2002 by MoEF & CC, for compliance of which, any suitable emission control device may be adopted, if required.

All establishments with DG sets shall be regulated based on this Order and necessary conditions shall be included in consents.

  
CHAIRPERSON

To

1. The Chief Environmental Engineer,  
Head Office, Thiruvananthapuram  
Regional Office, Thiruvananthapuram/Ernakulam/Kozhikode.
2. The Senior Environmental Engineer,  
District office. Kottayam, Environmental Surveillance centre, Eloor
3. The Environmental Engineer, District Office,  
Thiruvananthapuram, Kollam, Pathanamthitta, Alapuzha, Idukki,  
Ernakulam- 1, Ernakulam-2, Thrissur, Palakkad, Malappuram, Kozhikode,  
Kannur, Wayanad, Kasargod.

Copy to:-

- 1) All Technical Staff in HO
- 2) IT Cell (for uploading in the website)
- 3) C.A. to CHN & MS