

C O S G 0504

CO S G0504

Date: 10th May 2023

TYPE APPROVAL CERTIFICATE

FÓR

 Cert
 Report
 Specs
 Drg
 Total

 02
 16
 155
 12
 185 pgs

Retro-fit Emission Control Devices (RECD) Compliance

1. Based on the verification of documents & trials conducted on RECD model "Chakr Shield 2.0_C2-CS1800-R10-V2" (Family designation C2-R10) for below mentioned manufacturer and it is certified that the following RECD model complies with the provisions of Type Approval of CPCB System Procedure for Retro-fit Emission Control Devices (RECD) Compliance to Diesel Power Generating Set Engines Up to Gross Mechanical Power 800 kW, as per NGT Order/report "Report filed in O.A. No. 681/2018 dated 6.08.2019".

Generating Set Engines Up to	Gross Mechanical Pow	er 800 kW, as per NG	I Order/report	"Report filed in O	A. No. 681/2018 dated	6.08.2019"	97	- 2	
Documental Re	ference	RECD Manufacturer							
Current Certif	"Clo	M/s.Chakr Innovation Pvt Ltd. S.NO 236, Hissa No.7 & S.NO 237, Taluka Mulish, Hinjewadi, Phase 1, Pune - 411 057, Maharashtra							
Chare Into Callett Cellin	CVD	Plant: Hinjewadi, Pune							
RECD Family Des	signation	Engine Manufacturer					RECD Model		
C2-R10 ^{de} M/s. Ca				erpillar Inc.	5Cp	Chakr Sh	Chakr Shield 2.0_C2-CS1800-R10-V2		
Tested Engine Model				Engine Cubic Capacity		(Gross Engine Power		
C15-20		N. C.	, 2 ^{CS}	ූරි <u>1</u> 5200 ci		1 / No.	454 kW @ 1500 rpm		
Engine Baseline emissions	CPCB Stage -II	Class of RECD	Class II	Engine Ma	nufacturing Da	ite	September 2017		
C No. Hom D		Parent RECD Type		RECD types within the RECD family (if applicable)					
S. No. Item De	escription	Type 1		Type 2	Type 3	Type 4	Type 5	Type 6	
ion ilo.	O. K.	NOTE .	\	nnexure-ll	:0/8	2258II	dion	IIC/S	

2. Validity of the Certificate

	This Type Approval Certificate is valid for Genset engine CPCB Stage -II effective from 01.07.2014	a ,5.00	As per System and procedure for Emission Compliance of Retro-fit Emission Control Devices(RECD) for Diesel Power Generationg Set Engines up to Gross Mechanical power 800kW as per NGT Order/report "Report filed in O.A. No. 681/2018 dated 06.08.2019 or until further amendment in the MoEFCC rule, whichever is earlier.
5		b nGR	No change in specified RECD technical specification.

3. It is certified that the above RECD Model (Details listed in Annexure-II)comply with the emission limits for Retro-fit Emission Control Devices (RECD) to Diesel Power Generating Set Engines Up to Gross Mechanical Power 454 kW, as prescribed under the following rules, notified by Ministry of Environment, Forest and Climate Change (MoEFCC), Govt. of India:

Rule No.	Description	Date
16 16 16 16 16 16 16 16 16 16 16 16 16 1	System and procedure for Emission Compliance of Retro-fit Emision Control Devices(RECD)	27GX
CPCB-PCLS/12/2021-22	for Diesel Power Generationg Set Engines up to Gross Mechanical power 800kW as per NGT	01.02.2022
Put V	Order/report "Report filed in O.A. No. 681/2018 dated 6.08.2019	pri li

4. COP: COP shall be completed by 30.06.2024 as per CPCB Procedure, for details refer COP Annexure-I.

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	Neighbor Bogs and Arthor Rose	TRE FOR AUTOM		Chart Chart	Excellence
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5	like ge, K. Huo, Jake y. CVPJ	PCAT E	Edine Ci	Class of Coline by	nnovation
	M/s.ChalpfanovationPvtLtdC15-2GP-1EngineBaselineCPCBStage-IIClassofClaM/s.ChalpfanovationPvtLtdC15-2GP-1EngineBaseline	Innovation • Service • Excellence	M/s.ChakrInnovationPvtLtdC15-2GP-1EngineBaselin	neCPCBStage-IIClassofClaM/s.ChakrInnovationEyiLtdC15-2GP-1EngineBaseline	ing's
	SITARAM KASHYAP	* MANIESAR * NO	MAD MAD	HUSUDAN JOSHI	Page 1 of
6	DEPUTY GENERAL MANAGER	W.V.	DEPUTY	GENERAL MANAGER	200