

10th May 2023 Date:

TYPE APPROVAL CERTIFICATE Cert Report Specs Drg **Total** FOR 02 16 155 185 pgs

Retro-fit Emission Control Devices (RECD) Compliance

Based on the verification of documents & trials conducted on RECD model "Chakr Shield 2.0_C2-CS1800-R10-V2" (Family designation C2-R1 certified that the following RECD model complies with the provisions of Type Approval of CPCB System Procedure for Retro-fit Emission Control

Generating Set Engines Up to Gross Mechanical	Power 800 kW, as per NGT Order/repor	t Report filed in O.A. No. 681/2018 dated 6.0	8.2019".	~\@	
Documental Reference		RECD Manufacture	er		
231. S.M. 1 85.	M/s.Chakr Innovation Pvt	Ltd 1300	S'HO OLOIS INCIS		
Current Certificate	S.NO 236,Hissa No.7 & S.N	IO 237, Taluka Mulish, Hinjewac	li, Phase 1, Pune - 411 057, Maha	ırashtra	
26 Higgs (236 Higgs	Signs method	385 gliffe			
RECD Family Designation	Engine N	lanufacturer	RECD Model		
C2-R10 10 10 10 10 10 10 10 10 10 10 10 10 1	M/s. Ca	terpillar Inc.	Chakr Shield 2.0_C2-CS1800-I	₹10- ∀2	
Tested Engin	e Model	Engine Cubic Capacity	Gross Engine Power		
C15-2GP-1		15200 cm ³	454 kW @ 1500 rpm		
Engine Baseline emissions CPCB Stage	II Class of RECD Class II	Engine Manufacturing Date	September 2017		
S No. Itam Description	Parent RECD Type	RECD types within the	ne RECD family (if applicable)		
S. No. Item Description	Type 1	Type 2 Type 3	Type 4 Type 5 Ty	pe 6	
No. O.S.	Pring / , ,	Annexure-II	is the white of		

2 Validity of the Certificate

700	This Type Approval Certificate is valid for Genset engine CPCB Stage -II effective from 01.07.2014	a. < ⁸	As per System and procedure for Emission Compliance of Retro-fit Emision 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.	Ž
45		b . 73%	No change in specified RECD technical specification.	905

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
	5 1855 1250 X	System and procedure for Emission Compliance of Retro-fit Emision Control Devices(RECD)	
	CPCB-PCLS/12/2021-22	for Diesel Power Generationg Set Engines up to Gross Mechanical power 800kW as per NGT	01.02.2022
0,0		Order/report Report filed in O.A. No. 681/2018 dated 6,08.2019	Mahio

4. COP: COP shall be completed by 30.06.2024 as per CPCB Procedure, for details refer COP Annexure-1.

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50	S.NO286.Highanho 78S.NO297, Tahirahhilinh, Higherian Prases 1, Pune 411057, Mahahahilinh To. 2GP-1 Enginetiaseine CP-QBS Tapin Il Classo	TECHNOLOGICAL PROPERTY OF THE	S NO236 Hissano 765 NQQZI Takahaluliah Hirjewad Prase) Pu	Little Hall Hall Hall For Sea North Hall Hall Hall Hall Hall Hall Hall Hal	Innovation - Savide - Excellence
	SITARAM KASHYAP DEPUTY GENERAL MANAGER	* MANESAR * N	101	JDAN JOSHI ERAL MANAGER	Page 1 of