

RECD Type Approval Certificate No. ARAI/MoEF/RECDTA/CIPL-R1/2023-01

Date: 9<sup>th</sup> February 2023

**CERTIFICATE  
OF  
TYPE APPROVAL  
FOR**

Cert	Rep	Spec + Drg	Total
1	33	178	212 Pgs

**COMPLIANCE TO PARTICULATE MATTER EMISSION  
NORMS FOR RETROFIT EMISSION CONTROL DEVICE  
ON IN-USE DIESEL GENSET ENGINE (up to 800 kW)**

1. In order to establish compliance to the provisions of Particulate Matter emission, applicable as on date, documental verification/ necessary testing was carried out on the following Retrofit Emission Control Device model(s), submitted by the manufacturer / supplier referred below:

Retrofit Emission Control Device Manufacturer (RECD Manufacturer, Assembler Type Approval Certificate Owner)		Retrofit Emission Control Device Manufacturing Plant		Test Report Reference
M/s. Chakr Innovation Pvt. Ltd., Pune, Maharashtra		M/s. Chakr Innovation Pvt. Ltd., Survey No. 236 & 237, Hissa No. 7, Taluka Mulshi, Rajiv Gandhi Infotech Park, Hinjewadi Phase-1, Pune, Maharashtra - 411057		EDL/RECDTA/CIP L-R1/2023/01 dt. 31.01.2023
Retrofit Emission Control Device Model		RECD Class	RECD Family	System and Procedure
Parent	C2-CS1800-R7-V1	Class II	R1	Pollution Control Series PCLS/12/2021-22
Engine Manufacturer	Tested Engine Model	Engine Family	Gross Engine Power	
M/s. Kirloskar Oil Engines Ltd.	6SL1500TA G3	F-114	228 kW @1500 rpm	
Engine Type approval Certificate No.		ARAI/MoEF/DGTA/KOEL-F114/2014-14-E1		
RECD Suitable for Phase II Certified Diesel Generator Engine/Engine families				
Engine Manufacturer	Engine Model	Engine Family	Gross Engine Power	
M/s. Kirloskar Oil Engines Ltd.	6SL1500TA G3	F-114	228 kW @1500 rpm	

2. It is certified that the above-mentioned Retrofit Emission Control Device family/models comply with the emission limits applicable for In-Use Genset Diesel Engines (upto 800 kW), as prescribed under NGT Order O.A. No. 681/2018 dt. 06.08.2019.
3. The above R1 RECD Family / model is suitable for retro fitment of In-use DG Set manufactured on and after 1<sup>st</sup> July 2014.
4. Validity of the Certificate:

This RECD Type Approval Certificate is Valid till	1. The validity of existing emission requirements as per NGT Order No. O.A. 681/2018 dated 06.08.2019 or until further amendment, whichever is earlier.
	2. No change in technical specification of the Retrofit Emission Control Device specified
	3. Explicitly the Type Approval Certificate withdrawn by the engine supplier
	4. Till CoP is not missed

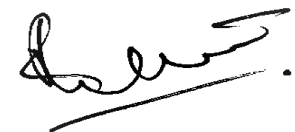
5. Conformity of Production (CoP) requirements:

**COP test shall be carried out every year (between the period 1<sup>st</sup> July and 30<sup>th</sup> June) as per "System and Procedure for Emission Compliance Testing of Retro-fit Emission Control Devices (RECD) For IN-USE Diesel Power Generating Set Engines Up to Gross Mechanical Power 800 kW" or further amendment.**

AUTHORISED SIGNATORY



**A. A. BADUSHA**  
SENIOR DEPUTY DIRECTOR & HEAD  
HOMOLOGATION MANAGEMENT, REGULATIONS,  
VEHICLE & SAFETY EVALUATION, ARAI, PUNE.  
Place of Issue: Pune



**Dr. REJI MATHAI**  
DIRECTOR,  
ARAI, PUNE.

**Disclaimer :**

1. ARAI issues "Type Approval Certificates" (TAC) for RECD suitable for retrofitment of IN-USE Diesel Genset engine(s)/ components/ parts/ assemblies etc. based on the documents produced and /or prototype/s submitted by the applicant and testing thereof.
2. ARAI issues TAC in compliance to "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" published by CPCB (MoEF, Govt. of India) and their provisions as amended from time to time or any other statutory orders under which ARAI is authorised. Other Rules/ Acts are outside the purview/ scope of TAC.
3. Test(s) on prototype(s) is/are carried out on the basis of standard procedures as notified under specific rules. Results of such tests are the property of bearer of TAC. These results cannot be disclosed unless specifically so ordered by Government, Court, etc.
4. The bearer of the TAC is under obligation to ensure production strictly as per the provisions of the specific TAC.
5. ARAI is not responsible for testing each RECD / components/ parts/ assemblies etc. for which TAC is issued. Further, ARAI is not responsible for ensuring manufacturing quality of the type approved RECD / components/ parts/ assemblies etc.
6. ARAI is in no way responsible for any misuse or copying of any design/ type/ system in connection with entire RECD / components/ parts and assemblies covered under the TAC.
7. Breach of any statutory provision of Indian laws or laws of other countries, will be the sole responsibility of the bearer of TAC and ARAI shall not be liable for any claims or damages. The bearer shall alone be liable for the same, and shall undertake to indemnify ARAI in this regard.
8. ARAI has the right, but not under obligation, to initiate cancellation/ withdrawal of the certificate issued, in case of any fraud, misrepresentation, when it surfaces and comes in the knowledge of ARAI.

The appropriate local courts at Pune shall have the jurisdiction in respect of any dispute, claim or liability arising out of this certificate / Report.