

RECD Type Approval Certificate No ARAI/MoEF/RECDTA/PGIPL-R1/2022-01-E1

Date: 28<sup>th</sup> May 2024

**EXTENSION-1**  
**OF**  
**TYPE APPROVAL**  
FOR

Cert	Rep	Spec + Drg	Total
8	35	433	476 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. Pi Green Innovations Pvt. Ltd. 517, S No. 2 247+14B, Global Square, Yerawada, Pune, Maharashtra - 411006		M/s. Pi Green Innovations Pvt Ltd. Gat No. 95/5,95/6, Muray Vasti, Kurali, Chakan, Pune - 410501		1. EDL/RECDTA/PGIPL-R1/2022/01 dt. 18.10.2022 2. EDL/RECDTA/PGIPL-R1/2024/01 dt. 22.05.2024
Retrofit Emission Control Device Model		RECD Class	RECD Family	System and Procedure
Parent	CCM-F-300	Class I	R1	Pollution Control Series PCLS/12/2021-22
Variant	CCM-F-250			
Engine Manufacturer	Tested Engine Model/s	Engine Family	Gross Engine Power	
M/s Cummins India Limited	QSL 9-G15	F-50	298 kW @ 1500 rpm	
M/s. Kirloskar Oil Engines Limited.	6KL12TASR1	F-10	284 kW @1500 rpm	
Engine Type approval Certificate No.	ARAI/MoEF/DGTA/CIPL-F50/2017-27 ARAI/MoEF/DGTA/IMP/KOEL-F10/2004-26			
RECD suitable for Phase I & Phase II Certified Diesel Generator engine / engine families			See Annexure I	
This extension certificate is issued for the verification of CCM-F-250 for Phase-I engines compliance in addition to already certified Phase-II Engines				
Earlier RECD Type Approval Certificate No.		ARAI/MoEF/RECDTA/PGIPL-R1/2022-01 dt. 04.11.2022		

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 retrofit fitment of In-use DG Set manufactured for Phase I - On or after 1st July 2004 till 1st July 2014 and Phase II - On or after 1st 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 CUM SAFETY EVALUATION & AUTO PLI CELL,  
ARAI, PUNE.  
Place of Issue: Pune



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

## ANNEXURE-I

To

RECD Type Approval Certificate No ARAI/MoEF/RECDTA/PGIPL-R1/2022-01-E1

Date: 28<sup>th</sup> May 2024

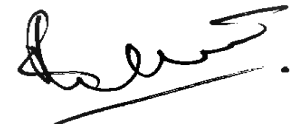
RECD Family	R1	RECD Models	Parent	CCM-F-300
			Variant	CCM-F-250
List of applicable engine/engine families as per GSR771 (E)/ dated 11-December-2013 and its amended wide GSR 232 (E) dated 31-March-2014 Phase II Certified In-use DG Sets for Corresponding RECD Models of RECD Family (203 kW @ 1500 RPM TO 310 kW @1500 RPM)				
Manufacturer	Family	Engine Model	Declared Power	Certificate Reference
Ashok Leyland Ltd.	F5	ALGWD618.428	231.3 KW	ARAI/MoEF/DGTA/ALL-F5/2006-007 Dated: 2 <sup>nd</sup> March 2006
Ashok Leyland Ltd.	F26	AL8NTIG3	223 kW	ARAI/MoEF/DGTA/ALL-F26/2013-047 Dated: 11 <sup>th</sup> July 2013
Ashok Leyland Ltd.	F28	ALV8TA G1	291.3 kW	ARAI/MoEF/DGTA/ALL-F28/2013-060 Dated: 23 <sup>rd</sup> October 2013
BEML	F3	BSA6D125G3 BSA6D125G4	203 kW 215 kW	ARAI/MoEF/DGTA/BEML-F3/2004-036 Dated 11 <sup>th</sup> August 2004
BEML	F5	BSA6D140G1 BSA6D140G2 BSA6D140G3	245 KW 275 KW 309 KW	ARAI/MoEF/DGTA/BEML-F5/2005-19 Dated 1 <sup>st</sup> June 2005
CPIPL	F1	3306 DITA GS-2	203 kW	ARAI/MoEF/DGTA/CPIPL-F1/2007-002 Dated: 12 <sup>th</sup> February 2007
CPIPL	F2	3306 DITA GS-4 3306 DITA GP-3 3306 DITA GS-3 3306 DITA GP-4	250 kW 203 kW 224 kW 228 kW	ARAI/MoEF/DGTA/CPIPL-F2/2007-003 Dated: 02 <sup>nd</sup> December 2007
CPIPL	F3	3406 DITA GP-1	292 kW	ARAI/MoEF/DGTA/CPIPL-F3/2007-004 Dated: 2 <sup>nd</sup> December 2007
Caterpillar India Pvt. Ltd.	F1	3306 DITA-GS-2	203 kW	ARAI/MoEF/DGTA/CIPL-F1/2008-017 Dated: 21 <sup>st</sup> May 2008
Caterpillar India Pvt. Ltd.	F2	3306 DITA-GS-4 3306 DITA-GP-3 3306 DITA-GS-3 3306 DITA-GP-4	250 kW 203 kW 224 kW 228 kW	ARAI/MoEF/DGTA/CIPL-F2/2008-018 Dated: 21 <sup>st</sup> May 2008
Caterpillar India Pvt. Ltd.	F3	3406 DITA-GS-2 3406 DITA-GP-1	250 kW 292 kW	ARAI/MoEF/DGTA/CIPL-F3/2008-019 Dated: 21 <sup>st</sup> May 2008
Cummins India Ltd	F7	NT-14-61 NT-14-62	208.8 kW 228 kW	ARAI/MoEF/DGTA/CIL-F7/2003-33 Dated:4 <sup>th</sup> December 2003
Cummins India Ltd	F8	NTA-14-G2 NTA-14-G1 NTA-14-RG1 NTA-14-RG2	254 kW 283 kW 283 kW 254 kW	ARAI/MoEF/DGTA/CIL-F8/2007-026 Dated: 07 <sup>th</sup> September 2007
Cummins India Ltd	F9	NT-14-G3 NT-14-G4 NT-14-F5	208.8 kW 228 kW 254 kW	ARAI/MoEF/DGTA/CIL-F9/2003-35 Dated: 04 <sup>th</sup> December 2003

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Place of Issue: Pune



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## ANNEXURE-I

To

RECD Type Approval Certificate No **ARAI/MoEF/RECDTA/PGIPL-R1/2022-01-E1**

Date: 28<sup>th</sup> May 2024

RECD Family	R1	RECD Models	Parent	CCM-F-300
			Variant	CCM-F-250
<b>List of applicable engine/engine families as per GSR771 (E)/ dated 11-December-2013 and its amended wide GSR 232 (E) dated 31-March-2014 Phase II Certified In-use DG Sets for Corresponding RECD Models of RECD Family (203 kW @ 1500 RPM TO 310 kW @1500 RPM)</b>				
Manufacturer	Family	Engine Model	Declared Power	Certificate Reference
Cummins India Ltd	F17	6CTAA8.3-G4	231.2 kW	ARAI/MoEF/DGTA/CIL-F17/2004-025 Dated: 17 <sup>th</sup> June 2004
Cummins India Ltd	F17	6CTAA8.3-G4	231 KW	ARAI/MoEF/DGTA/CIL-F17/2007-034-E1 Dated: 18 <sup>th</sup> September 2008
Cummins India Ltd	F19	NT-855-G5-I	228.2 kW	ARAI/MoEF/DGTA/CIL-F19/2004-057 Dated: 27 <sup>th</sup> November 2004
Cummins India Ltd	F20	NTA-855-G2-I	283.4 kW	ARAI/MoEF/DGTA/CIL-F20/2004-058 Dated: 27 <sup>th</sup> November 2004
Cummins India Ltd	F20	NTA-855-G2-I	283 kW	ARAI/MoEF/DGTA/CIL-F20/2007-029 Dated: 7 <sup>th</sup> September 2007
Cummins India Ltd	F21	NTA-855-G1-I	283.4 kW	ARAI/MoEF/DGTA/CIL-F21/2004-059 Dated: 27 <sup>th</sup> November 2004
Cummins India Ltd	F22	NTA-855-G-I	283.4 kW	ARAI/MoEF/DGTA/CIL-F22/2004-060 Dated: 27 <sup>th</sup> November 2004
Cummins India Ltd	F32	QSL9-G7 QSL9-G7.1 QSL9-G7.2 QSL9-G7.3	300 kW 271 kW 257 kW 235 kW	ARAI/MoEF/DGTA-II/CILP-F32/2012-029 Dated: 27 <sup>th</sup> November 2012
DEUTZ AG	F7	TCD 2013 L064 V	227 kW	ARAI/MoEF/IMP/DGTA/DEIPL-F7/2011-014 Dated: 26 <sup>th</sup> March 2011
DEUTZ AG	F10	BF6M1015C	214 kW	ARAI/MoEF/DGTA/IMP/DEU-F10/2011-035 Dated 27 <sup>th</sup> July 2011
Doosan Infracore Co. Ltd.	F1	P126TI IN01 P126TI IN02	241 kW 272 KW	ARAI/MoEF/DGTA/IMP/DICL-F1/2010-080 Dated: 3 <sup>rd</sup> August 2010
Greaves Cotton Ltd.	F12	TBD2V12MKI TBD2V12 TBD2V12MKI TBD2V12MKIIP	275.81 kW 245.65 kW 291.258 kW 291.258 kW	ARAI/MoEF/DGTA/GCLP-F12/2005-24 Dated: 5 <sup>th</sup> September 2005
Greaves Cotton Ltd.	F13	TBD3V8	230.2 KW	ARAI/MoEF/DGTA/GCLP-F13/2003-40 Dated: 31 <sup>st</sup> December 2003
Greaves Cotton Ltd.	F16	TBD4V6 TBD4V8 TBD4IV6	222.86 kW 292.73 kW 222.86 kW	ARAI/MoEF/DGTA/GCLP-F16/2004-065 Dated: 15 <sup>th</sup> November 2004
Greaves Cotton Ltd.	F21	TBD2V8P	204.7 kW	ARAI/MoEF/DGTA/GCLP-F21/2005-34 Dated: 26 <sup>th</sup> November 2005



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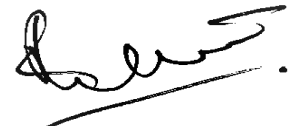
Date: 28<sup>th</sup> May 2024

RECD Family	R1	RECD Models	Parent	CCM-F-300
			Variant	CCM-F-250
List of applicable engine/engine families as per GSR771 (E)/ dated 11-December-2013 and its amended wide GSR 232 (E) dated 31-March-2014 Phase II Certified In-use DG Sets for Corresponding RECD Models of RECD Family (203 kW @ 1500 RPM TO 310 kW @1500 RPM)				
Manufacturer	Family	Engine Model	Declared Power	Certificate Reference
Greaves Cotton Ltd.	F21	TBD2V8MK I TBD2V12MK I TBD2V12 TBD2V12MK II TBD2V12MK IIP	275.81 kW 276.81 kW 244.65 kW 291.258 kW 291.258 kW	ARAI/MoEF/DGTA/GCLP-F21/2007-019 Dated: 7 <sup>th</sup> September 2007
Greaves Cotton Ltd.	F22	TBD4IV6P	245.6 kW	ARAI/MoEF/DGTA/GCLP-F22/2005-33 Dated: 27 <sup>th</sup> October 2005
Greaves Cotton Ltd.	F22	TBD4IV6P TBD4V6 TBD4V8 TBD4IV6	245.65 kW 222.86 kW 292.73 kW 222.86 kW	ARAI/MoEF/DGTA/GCLP-F22/2007-24 Dated: 2 <sup>nd</sup> July 2007
Greaves Cotton Ltd.	F30	TBD3V6MK-II TBD3V8MK-II	230.2 kW 291.3 KW	ARAI/MoEF/DGTA/GCLP-F30/2010-078 Dated: 9 <sup>th</sup> August 2010
Hindustan Power Products Pvt. Ltd.	F1	3306DITA-GS-2	203 kW	ARAI/MoEF/DGTA/HPL-F1/2004-029 Dated 28 <sup>th</sup> July 2004
Hindustan Power Products Pvt. Ltd.	F1	3306DITA GS-2	203 kW	ARAI/MoEF/DGTA/HPL-F1/2006-015 Dated: 07 <sup>th</sup> June 2006
Hindustan Power Products Pvt. Ltd.	F2	3306DITA-GS-4 3306DITA-GP-4 3306DITA-GS-3 3306DITA-GP-3	250 kW 228 KW 224 KW 203 KW	ARAI/MoEF/DGTA/HPL-F2/2004-030 Dated 28 <sup>th</sup> July 2004
Hindustan Power Products Pvt. Ltd.	F2	3306 DITA GS-4 3306 DITA GP-3 3306 DITA GS-3 3306 DITA GP-4	250 kW 203 kW 224 kW 228 kW	ARAI/MoEF/DGTA/ HPL-F2/2006-016 Dated: 07 <sup>th</sup> June 2006
Hindustan Power Products Pvt. Ltd.	F3	3406DITA-GP-1	292 KW	ARAI/MoEF/DGTA/HPL-F3/2004-031 Dated 28 <sup>th</sup> July 2004
Kirloskar Electric Co. Ltd.	F21	6IKC120IZD2	236 kW	ARAI/MoEF/DGTA/KECL-F21/2010-002 Dated: 16 February 2010
Kirloskar Electric Co. Ltd.	F22	12VKK135AZD	300 kW	ARAI/MoEF/DGTA/KECL/F22/2010-013 Dated: 16 <sup>th</sup> February 2010
Kirloskar Electric Co. Ltd.	F25	6IKK135ZLD1	236 kW	ARAI/MoEF/DGTA/IMP/KECL-F25/2011-030 Dated: 22 <sup>nd</sup> July 2011



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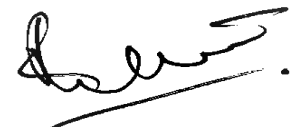
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RECD Family	R1	RECD Models	Parent	CCM-F-300
			Variant	CCM-F-250
<b>List of applicable engine/engine families as per GSR771 (E)/ dated 11-December-2013 and its amended wide GSR 232 (E) dated 31-March-2014 Phase II Certified In-use DG Sets for Corresponding RECD Models of RECD Family (203 kW @ 1500 RPM TO 310 kW @1500 RPM)</b>				
Manufacturer	Family	Engine Model	Declared Power	Certificate Reference
KOEL	F10	6KL12TASRI 6KL12TA 6K12TA SRII	284 KW 241 KW 272 KW	ARAI/MoEF/DGTA/KOEL-F10/2004-026 Dated:24 <sup>th</sup> June 2004
KOEL	F10	DV6ITA SRI DV6ITA DV6ITASRII	284 KW 241 KW 272 KW	ARAI/MoEF/DGTA/IMP/KOEL-F10/2004-026-E2 Dated: 18 <sup>th</sup> June 2012
KOEL	F11	6SL8800TA 6SL8800TASRI	310 kW 254 kW	ARAI/MoEF/DGTA/KOEL-F11/2004-052 Dated: 29 <sup>th</sup> October 2004
KOEL	F23	DV8SR1	294 kW	ARAI/MoEF/DGTA/KOELK-F23/2010-101-E1 Dated: 19 <sup>th</sup> October 2011
KOEL	F114	6SL1500TAG3	228 kW	ARAI/MoEF/DGTA-II/KOEL-F114/2014-001 Dated: 17 <sup>th</sup> January 2014
Lombardini India Pvt. Ltd.	F11	WD10D260 E21	204.3 kW	ARAI/MoEF/DGTA/IMP/LIPL-F12/2009-034 Dated: 11th June 2009
Lombardini India Pvt. Ltd.	F13	WD12D320 E21	228 kW	ARAI/MoEF/DGTA/LIPL-F13/2009-033 Dated: 11th June 2009
Mahindra & Mahindra Ltd.	F25	64205GC 63455GC	280 kW 230 kW	ARAI/MoEF/DGTA/IMP/M&M-F25/2009-019 Dated: 27 <sup>th</sup> May 2009
MTU	F4	6R1600 G10F 6R1600 G20F 6R1600 G70F 6R1600 G80F	249 kW 274 kW 274 kW 301 kW	ARAI/MoEF/IMP/DGTA/MTU-F4/2010-099 Dated: 10 <sup>th</sup> January 2011
MTU	F5	6R1600G10F 6R1600G20F 6R1600G70F 6R1600G80F	249 kW 274 kW 274 kW 301 kW	ARAI/MoEF/IDGTA-II/IMP/MTU-F5/2013-34 Dated: 30 <sup>th</sup> April 2013
Navistar Inc.	F1	GCB330A GCB300A	246 KW 224 KW	ARAI/MoEF/DGTA/IMP/NAV-F1/2010-081 Dated: 12 August 2010
Navistar Inc.	F2	GCB325A	242 KW	ARAI/MoEF/DGTA/IMP/NAV-F2/2010-082 Dated: 12 August 2010
Perkins Engines Company Ltd.	F4	1306C-E87 TAG6 1306C-E87 TAG4	246 kW 224 kW	ARAI/MoEF/DGTA/IMP/PECL-F4/2011-002 Dated: 3 <sup>rd</sup> February 2011
Shanghai Diesel Engines Co. Ltd.	F2	G128ZLD1 G128ZLD2 G128ZLD11	236 kW 206 kW 280 kW	ARAI/MoEF/DGTA/IMP/SDEC-F2/2009-017 Dated: 27 <sup>th</sup> May 2009



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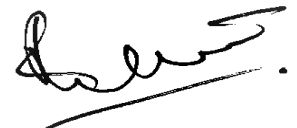
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			Variant	CCM-F-250
<b>List of applicable engine/engine families as per GSR771 (E)/ dated 11-December-2013 and its amended wide GSR 232 (E) dated 31-March-2014 Phase II Certified In-use DG Sets for Corresponding RECD Models of RECD Family (203 kW @ 1500 RPM TO 310 kW @1500 RPM)</b>				
Manufacturer	Family	Engine Model	Declared Power	Certificate Reference
Shanghai Diesel Engines Co. Ltd.	F3	SC11CB300D1 SC11CB350DL	221 kW 248 kW	ARAI/MoEF/DGTA/IMP/SDEC-F3/2009-018 Dated: 27 <sup>th</sup> May 2009
Shanghai Diesel Engines Co. Ltd.	F6	12V135AZD	300 kW	ARAI/MoEF/IMP/DGTA/SDEC-F6/2010-006 Dated: 16 <sup>th</sup> February 2010
Shanghai Diesel Engines Co. Ltd.	F9	SC9D340D2	228 kW	ARAI/MoEF/DGTA/IMP/SDEC-F9/2013-017 Dated: 23 <sup>rd</sup> February 2013
Super Nova Engineers Ltd.	F6	YC6M320D	235.5 kW	ARAI/MoEF/DGTA/IMP/SEL-F6/2008-074 Dated: 1 <sup>st</sup> January 2009
Volvo	F2	TAD1247GE	251.9 kW	ARAI/MoEF/DGTA/VOLVO-F2/2005-04 Dated: 3 <sup>rd</sup> March 2005
Volvo	F3	TAB941GE TAD940GE	280 kW 241 kW	ARAI/MoEF/DGTA/VOLVO-F3/2005-17 Dated: 03 <sup>rd</sup> March 2005
Volvo	F4	TAD740GE	220 kW	ARAI/MoEF/IMP/DGTA/VOLVO-F4/2005-18 Dated: 01 <sup>st</sup> June 2005
Volvo	F5	TAD734GE	216 kW	ARAI/MoEF/DGTA/IMP/VOLVO-F5/2007- 048 Dated: 24 <sup>th</sup> August 2007
Volvo	F8	TAD 1341 GE TAD 1342 GE	271 kW 303 kW	ARAI/MoEF/DGTA/IMP/VOLVO-F8/2010- 083 Dated: 19 <sup>th</sup> August 2010
Volvo	F13	TAD1351GE	286 kW	ARAI/MoEF/DGTA-II/IMP/VOLVO-F13/2013- 067 Dated: 13 <sup>th</sup> December 2013



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Place of Issue: Pune

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**ANNEXURE-I**

To

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Date: 28<sup>th</sup> May 2024

RECD Family	R1	RECD Models	Parent	CCM-F-300
			Variant	CCM-F-250
<b>List of applicable engine/engine families as per GSR771 (E)/ dated 11-December-2013 and its amended wide GSR 232 (E) dated 31-March-2014 Phase II Certified In-use DG Sets for Corresponding RECD Models of RECD Family (204 kW @ 1500 to 300 kW @ 1500)</b>				
Manufacturer	Family	Engine Model	Declared Power	Certificate Reference
Ashok Leyland Ltd.	F40	AL8NTIDG6	223 kW	ARAI/MoEF/DGTA/ALL -F40/2015-11-E1 Dated: 2-Sep-2016
Baudouin (Weifang) Power Co. Ltd.	F11	6M19G320/5E3 6M19G275/5E3 6M19G250/5E3	290 kW 255 kW 235 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL- F11/N-2138 Dated: 16-Nov-2018
Baudouin (Weifang) Power Co. Ltd.	F12	6M16G250/5E3 6M16G225/5E3	240 kW 204 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL- F12/N-2145 Dated: 19-Nov-2018
Baudouin (Weifang) Power Co. Ltd..	6M12G	6M12G6D2/5	235 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-6M12G/P-0840 Dated: 06-July-2020
Baudouin (Weifang) Power Co. Ltd..	6M16G	6M16G4D2/5	290 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-6M16G/P-0838 Dated: 06-July-2020
Cooper Corporation Pvt. Ltd.	F14	6G5D1C228IW	228 kW	ARAI/MoEF/DGTA/CCPL-F14/2017-07 Dated: 18-Aug-2017
Cummins India Ltd.	F32	QSL9 G7 QSL9 G7.1 QSL9 G7.2 QSL9 G7.3	300 kW 271kW 257kW 235kW	ARAI/MoEF/DGTA/CILP-F32/2017-26-E3 Dated: 4th January 2019
Cummins India Ltd.	F50	QSL9 G15 QSL9 G16	298 kW 249 kW	ARAI/MoEF/DGTA/CILP-F50/2017-27-E3 Dated: 4-Jan-2019
Cummins India Ltd.	F56	6L8.9TAAG-4	250 kW	ARAI/MoEF/DGTA/CILP-F56/2015-25-E2 Dated: 7-Feb-2018
Deutz Engines India Pvt. Ltd.	F1	TCD2013L064V	250.7 kW	ARAI/MoEF/DGTA/IMP/DEIPL-F1/2015-01 Dated: 11-Sep-2015
Greaves Cotton Ltd.	F321	D3V8TAG21	284 kW	ARAI/MoEF/DGTA/GCLP-F321/2016-13-E1 Dated: 18-Aug-2021
Greaves Cotton Ltd.	F251	D3V6TAG21	227 kW	ARAI/MoEF/DGTA/GCLP-F251/2015-12-E1 Dated: 18-Aug-2021
Kirloskar Oil Engines Ltd.	F114	6SL1500TAG3	228 kW	ARAI/MoEF/DGTA/KOEL-F114/2014-14-E1 Dated: 09-Feb-2016
Kirloskar Oil Engines Ltd.	F115	DV8TA G1	294.2 kW	ARAI/MoEF/DGTA/KOEL-F115/2014-01-E1 Dated: 11-Sep-2019
Mahindra Heavy Engines Pvt Ltd.	F23	mPower 63905G mPower 63655G mPower 63405G mPower 63105G	287 kW 269 kW 250 kW 228 kW	ARAI/MoEF/DGTA/MHEL-F23/2017-06 Dated: 27-Jun-2017



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SENIOR DEPUTY DIRECTOR & HEAD  
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ARAI, PUNE.  
Place of Issue: Pune

AUTHORISED SIGNATORY



Dr. REJI MATHAI  
DIRECTOR,  
ARAI, PUNE.



## ANNEXURE-I

To

RECD Type Approval Certificate No **ARAI/MoEF/RECDTA/PGIPL-R1/2022-01-E1**

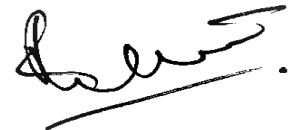
Date: 28<sup>th</sup> May 2024

RECD Family	R1	RECD Models	Parent Variant	CCM-F-300 CCM-F-250
<b>List of applicable engine/engine families as per GSR771 (E) dated 11-December-2013 and its amended wide GSR 232 (E) dated 31-March-2014 Phase II Certified In-use DG Sets for Corresponding RECD Models of RECD Family (204 kW @ 1500 to 300 kW @ 1500)</b>				
Manufacturer	Family	Engine Model	Declared Power	Certificate Reference
Scania Commercial Vehicles India Pvt. Ltd.	F1	DC09 071A 226 DC09 071A 248 DC09 071A 267 DC09 071A 289	226 kW 248 kW 267 kW 289 kW	ARAI/MoEF/DGTA/IMP/SCANIA-F1/2015-01-E1 Dated: 25-Jul-2017
Shandong Heavy Industry India Pvt. Ltd.	F11	6M19G320/5E3 6M19G275/5E3 6M19G250/5E3	290 kW 255 kW 235 kW	ICAT/MoEFCC/DGTA/SHIPL- F11/N-2137 Dated: 16-Nov-2018
Shandong Heavy Industry India Pvt. Ltd.	F12	6M16G250/5E3 6M16G225/5E3	240 kW 204 kW	ICAT/MoEFCC/DGTA/ IMP/BWPCL - F12/N - 2145 Dated: 19-Nov-2018
Shandong Heavy Industry India Pvt. Ltd.	6M12G	6M12G6D2/5	235 kW	ICAT/MoEFCC/DGTA/SHIPL- 6M12G/P-0839 Dated: 06-July-2020
Shandong Heavy Industry India Pvt. Ltd.	6M16G	6M16G4D2/5	290 kW	ICAT/MoEFCC/DGTA/SHIPL- 6M16G/P-0837 Dated: 06-July-2020
Tata Cummins Pvt Ltd.	F55	QSB 6.7-G16 QSB 6.7-G17	209 kW 229 kW	ARAI/MoEF/DGTA/TCL-F55/2019-09-E1 Dated: 21-May-2021
Volvo India Pvt Ltd.	F13	TAD1351GE	286 kW	ARAI/MoEF/DGTA/IMP/VOLVO-F13/2014-03-E1 Dated: 30-Jun-2015
Volvo India Pvt Ltd.	F14	TAD754GE	219 kW	ARAI/MoEF/DGTA/IMP/VOLVO-F14/2014-04-E1 Dated: 30-Jun-2015



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 Place of Issue: Pune

AUTHORISED SIGNATORY



**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.**