



अंतर्राष्ट्रीय ऑटोमोटिव प्रौद्योगिकी केन्द्र
INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY
[A Division of NATRiP Implementation Society (NATIS), Govt. of India]

C O S G 0613

Date : 20th November 2023

TYPE APPROVAL CERTIFICATE

FOR

Retro-fit Emission Control Devices (RECD) Compliance

Cert	Report	Specs	Drg	Total
09	12	131	14	166 pgs

1. Based on the verification of documents & trials conducted on RECD model "DOFF/OC: HCT/20:100/600" (Family designation C1-R5) 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".

Documental Reference		RECD Manufacturer			
Current Certificate	M/s Chakr Innovation Pvt. Ltd. Survey No. 236, Hissa No. 7 and Survey No. 237 Hinjewadi, Mulsi, Pune, Maharashtra - 411057 Plant : Hinjewadi, Pune				
RECD Family Designation	Engine Manufacturer		Tested Engine Model		
C1-R5	M/s Mahindra & Mahindra Limited		61695 GM		
RECD Model		Engine Cubic Capacity	Gross Engine Power		
DOFF/OC: HCT/20:100/600		5860 cm ³	113.3 kW @ 1500 rpm		
Engine Baseline emissions	CPCB Stage -I	Class of RECD	Class II	Engine Manufacturing Date	February 2014
S. No.	Item Description	Parent RECD Type			
		Annexure-II			
	RECD suitable for Phase I Certified Diesel Generator engine / engine families	Annexure-III			




2. Validity of the Certificate

This Type Approval Certificate is valid for Genset engine CPCB Stage -I effective from 01.07.2004 to 30.06.2014.	a.	As per System and procedure for Emission Compliance of Retro-fit Emission Control Devices(RECD) for Diesel Power Generating 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.
	b.	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 having Gross Mechanical Power 61kW to 113.3kW, as prescribed under the following rules, notified by Ministry of Environment, Forest and Climate Change (MoEFCC), Govt. of India:

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

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

AUTHORISED SIGNATORY		
 SITARAM KASHYAP DEPUTY GENERAL MANAGER		 SAURABH DALELA DIRECTOR
<small>M/sChakrInnovationPvt.Ltd.DOFF/OC:HCT/20:100/600M/sChakrInnovationPvt.Ltd.DOFF/OC:HCT/20:100/600M/sChakrInnovationPvt.Ltd.</small>		<small>M/sChakrInnovationPvt.Ltd.DOFF/OC:HCT/20:100/600M/sChakrInnovationPvt.Ltd.DOFF/OC:HCT/20:100/600M/sChakrInnovationPvt.Ltd.</small>
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DISCLAIMER

1. ICAT issues "Type Approval Certificates" (TAC) for vehicles/ engines/gensets/ parts/ assemblies etc. based on the documents produced and/or prototype / vehicle(s) submitted by the applicant and testing thereof.
2. ICAT issues TAC in compliance to Motor Vehicle Act/ Central Motor Vehicle Rules/ Central Pollution Control Board rules and their provisions as amended from time to time or any other statutory orders under which ICAT is authorized. Other Rules/Acts are outside the purview/scope of the TAC.
3. Test(s) on prototype is/are carried out on the basis of standard procedures as notified under specific rules. Results of such tests are property of bearer of TAC. These results cannot be disclosed unless specifically ordered by Government, Court, etc.
4. The bearer of the TAC is under the obligation to ensure production strictly as per the provisions of the specific TAC.
5. ICAT is not responsible for testing each vehicles/components/parts/assemblies etc. for which TAC is issued. Further, ICAT is not responsible for ensuring manufacturing quality of the type approved vehicles/ components/ parts/ assemblies etc.
6. ICAT is no way responsible for any misuse or copying of any design/type/system in connection with entire vehicle/ components/parts and assemblies covered under the TAC.
7. Breach of any statutory provision of Indian laws or laws of other countries, will be sole responsibility of the bearer of the TAC and ICAT shall not be liable for any claims or damages. The bearer shall alone be liable for the same, and shall undertake to indemnify ICAT in this regard.
8. ICAT 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 ICAT.

The appropriate local court at Gurugram shall have the jurisdiction in respect of any dispute, claim or liability arising out of this certificate/report.

SECURITY FEATURES

This certificate has the following security features:

1. Ultraviolet (UV) printing : This certificate contains following the information printed in UV ink which can be read only under UV light:
 - a) Certificate number (below the certificate number on the top left side)
 - b) Signature of Director (bottom right side)
2. Pantograph (top right below the number of pages) : This box will appear only on original document
3. Watermark (diagonally in the background on full page) : The water mark consists of company name and model name
4. Micro text (horizontal line in signature boxes) : The thin hairline consists of company name and model name
5. Secure Mark (topmost right) : The QR code consists of company name, certificate number & date and model name



3

Date: _____		Cert	Table 7	Div	Total
1 a)		11			2
CERTIFICATE					
COMPLIANCE TO THE CENTRAL MOTOR VEHICLES RULES					
1. In order to establish compliance to the provisions of CMVR, 1989, application on date, documentary verification / necessary testing was carried out on the following base model & its variants , submitted by the vehicle manufacturer referred below:					
Documental Reference	Vehicle Manufacturer				
Current certificate No.	XXXX				
Plant	-				
Diesel/Engine Model /Type	Power	Capacity (cm ³)	Engine Manufacturer		
Base Model	Type & Category	Seating Capacity (incl. driver)	GVW (kg)		
ABC					
1a. Brief technical specifications (XXXXXXXX) of the base model & its variants as declared by the vehicle manufacturer are endorsed with this certificate. Detailed specifications (XXXXXXXX) of the base model & its variants are also separately issued to the vehicle manufacturer.					
2. It is certified that the above base model & its variants comply with the provisions of the CMVR, 1989, as amended up-to-date, including following requirements, (as detailed at ANNEXURE - I & A (B)).					
Standards	Notification	Date	Effective From	Applicable CMVR	
Bharat Stage - VI (including OBD - II)				115 (14) (i)	
Refer ANNEXURE - II					
3. This Certificate is issued as per CMV R. 46 126, to establish compliance with the Central Motor Vehicles Rules 1989, and shall not be construed as a certificate of compliance if any of the other than items listed in ANNEXURE - I, II, III & IV. Compliance to these rules has been verified based on the use of specific components / parts / assemblies etc. details of which are given in the detailed specifications duly endorsed by ICAT as mentioned at clause 1a above. It is the vehicle manufacturer's responsibility to ensure fitment of said components / parts / assemblies etc. before submission of the vehicle for registration.					

Please turn over for Disclaimer			
AUTHORIZED SIGNATORY			
4		1 b)	
NAME	DESIGNATION	NAME	DESIGNATION
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COP Annexure-I

Criteria*	COP Required
RECD Manufacturer/Importer/Retrofitter	RECDs fitted on engines of all ratings shall be subjected to the verification of CoP once for every 500 units per family or once a year, whichever is earlier Wherever applicable, RECDs fitted on engines of all ratings of engines shall be subjected to the verification of PCD once every CoP-year by PCD family (ies) representative RECD(s). Such demonstration is PCD family dependent and irrespective of combined volumes produced and sold under such family (ies)

* As Applicable

Annexure-II

S No	Item Description	Parent RECD Type
		Type 1
1	Manufacturing Plant address	M/s Chakr Innovation Private Limited, Survey No. 236 & 237, Hissa No.7, Taluka - Mulshi, Rajiv Gandhi Infotech Park, Hinjewadi Phase -1, Pune, Maharashtra - 411057
2	Manufacturer's trade name or mark	Chakr Innovation Private Limited
3	RECD family designation	C1-R5
4	RECD type/model designation	DOFF/OC: HCT/20:100/600
5	RECD Category (Domestic/Imported)	Domestic
6	Class of RECD	Class II
7	Type Identification of the RECD	Continuous
8	Location of type ID marking	Refer Specification no. CIPL/TA/C1-CS1800-R5 dtd. 30.10.2023 Clause no 1.8
9	Identifying part number(s) of the RECD	C1-CS1800-R5
10	Engine/ Engine-Family for which the RECD is intended (application range)	61695 GM
11	PM Reduction Efficiency of the RECD	75.94%
12	Designed for fitment to an engine meeting the emissions requirements of (Regulation and Stage):	CPCB Stage -I

ICAT Ref No.	2023-1211; IOCS No: 170340		
Base Engine Type Approval Certificate number	ARAI/MOEF/DGTA/M&M/F26/2009-049		
Test Report Reference	CT0ES 0496 dt. 08/11/2023		
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SITARAM KASHYAP DEPUTY GENERAL MANAGER		SAURABH DALELA DEPUTY GENERAL MANAGER	Page 2 of 9



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Annexure-III

List of applicable engine(s) as per GSR 371(E) dtd. 17.05.2002, GSR 520(E) dtd. 01.07.2003 and GSR 448(E) dtd. 12.07.2004 certified In -Use DG sets for corresponding RECD models of RECD Family.

S. No.	Manufacturer Name & Address	Engine Family	Engine Model	Rated Gross Mechanical Declared Power	Type Approval Certificate Number
1	Ashok Leyland Ltd. Chennai	F24	AL4CTIDG2	59kW	ARAI/MoEF/DGTA-II/ALL-F24/2013-045 dt. 11-07-2013
2		F25	AL4CTIDG3	78kW	ARAI/MoEF/DGTA-II/ALL-F25/2013-046 dt. 11-07-2013
3			AL4CTIDG4	94kW	
4			AL6DTIDG1	94kW	
5			AL6DTIDG2	116kW	
6		F17	AL6DTI G1	91kW	ARAI/MOEF/DGTA/ALL-F17/2008-041 dt. 29-09-2008
7		F18	AL6DTI G2	114kW	ARAI/MOEF/DGTA/ALL-F17/2008-042 dt. 29-09-2008
8	Ashok Leyland Limited, Ennore, Tamilnadu /Hosur, Tamilnadu / Pant Nagar, Uttarakhand	F18	AL6DTI G2	114kW	ARAI/MoEF/DGTA/ALL/F18/2011-031 dt. 13-07-2011
9	Ashok Leyland Hosur	F12	AL412TGI	81.9kW	ARAI/MOEF/DGTA/ALH-F12/2007-012 dt. 28-02-2007
10	Avtec Limited Sector-III, Sagore, Pithampur Industrial Area Dist. Dhar (M.P.) 454 774 & M/s. Avtec Limited, Plot No. 1 & 2, Sector B, Nimpura	F9	AGDH8710015	110kW	ARAI/MOEF/DGTA/AVTEC-F10/2013- 021 dt. 06-03-2013
11		F8	AGDH6408215	84.4kW	ARAI/MOEF/DGTA/AVTEC-F8/2013- 022 dt. 06-03-2013
12	Bharat Earth Movers Ltd. Mysore	F1	BS6D105-1	87kW	ARAI/MOEF/DGTA/BEML-F1/2003-38 dt. 05-01-2004
13	BEML Mysore	F1	BS6D105G6	87kW	ARAI/MOEF/DGTA/BEML-F1/2004-043 dt. 11-08-2004
14			BS6D105G5	78kW	
15			BS6D105G1	61kW	
16			BS6D105G4	72kW	
17			BS6D105G3	70kW	
18			BS6D105G2	68kW	
19		F8	BS4D105G1	58kW	ARAI/MOEF/DGTA/BEML-F8/2006-009 dt. 29-03-2006
20	Cooper Corporation Pvt Ltd MIDC, Satara	F4	3B2D1C85	85kW	ARAI/MoEF/DGTA/CCPL-F4/2012-023 dt. 28-08-2012
21			4B2D1C113	100kW	
22			4B2D1C100	113kW	
23			3B2D1C75	75kW	
24	Cummins India Ltd Daman	F6	6BTA5.9G11	92.4kW	ARAI/MOEF/DGTA/CIL-F6/2003-15 dt. 30-05-2003
25		F5	6BT5.9G1	76.2kW	ARAI/MOEF/DGTA/CIL-F5/2003-16 dt. 30-05-2003

AUTHORISED SIGNATORY

 SITARAM KASHYAP DEPUTY GENERAL MANAGER	 INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY MANESAR • 150701	 SAURABH DALELA DIRECTOR	 Page 3 of 9
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Annexure-III Cont.

S. No.	Manufacturer Name & Address	Engine Family	Engine Model	Rated Gross Mechanical Declared Power	Type Approval Certificate Number
26	Cummins India Ltd. Daman	F12	S3.8G7	58.8kW	ARAI/MOEF/DGTA/CIL-F12/2004-04 dt. 13-02-2004
27		F18	6BTAA5.9G-I	115kW	ARAI/MOEF/DGTA/CILD-F18/2006-037 dt. 17-12-2006
28		F6	6BTA5.9-G5	93kW	ARAI/MOEF/DGTA/CIL-F6/2003-15-E1 dt. 17-02-2008
29			6BTA5.9G2I	114kW	
30	Cummins India Ltd. Low Horsepower Business Unit, 19- 25A Silver Industrial Estate, Bhimpore, Daman-396210 (India)	F5	6BT5.9G1	78kW	ARAI / MoEF / DGTA / CILP - F5 / 2011- 004 dt. 23-02-2011
31		F18	6BTAA5.9-G3	115kW	ARAI/MoEF/DGTA/CILD-F18/2010-089 dt. 01-12-2010
32	Cummins India Ltd Power Generation Business Unit. DTA Unit Gat No-311/B At Post Kasar,Amboli Taluka Mulshi, Pirangut- 412 111, District Pune,Maharashtra,India	F39	S3.8TAA-G14	67.1kW	ARAI/MoEF/DGTA-II/CILP-F39/2013- 023 dt. 28-02-2013
33		F46	4BTAA3.9G3	74kW	ARAI/MoEF/DGTA-II/CILP-F46/2013- 059
34			4BTAA3.9G2	60kW	
35		F47	4BTAA3.9-G4	82kW	ARAI/MoEF/DGTA-II/CILP-F47/2013- 078 dt. 09-01-2014
36	Deutz Engines India Pvt. Ltd. Pune.	F3	BF4M1013FC-D20C101	101kW	ARAI/MoEF/DGTA/IMP/DEIPL-F3/2013- 056 dt. 01-09-2013
37			BF4M1013FC-D20C106	106kW	
38	DEUTZ AG, Otto strasse 1, D- 51149 Koin (Porz-Eil)Germany	F4	BF4M2012C	74.9kW	ARAI/MoEF/DGTA/IMP/DEU-F4/2010- 024 dt. 19-03-2010
39	Deutz (Dalian) Engine Co., Ltd. No49 DangBei Road, Sha Hekou District, Dalian, China	F6	BF4M1013FC	102kW	ARAI/MoEF/IMP/DGTA/DEIPL-F6/2010- 084 dt. 20-09-2010
40	Empower Gensets Pvt Ltd. Survey No. 36/1, Pisoli Road, Pisoli, Taluka Haveli, Ditrict Pune - 411028, India.	F2	BF4M1013FC	106kW	ARAI/MoEF/DGTA/IMP/EGPL-F2/2011- 044 dt. 29-09-2011
41	Greaves Cotton Ltd. Pune	F24	4G11TP	69kW	ARAI/MOEF/DGTA/GCLP-F24/2009-004 dt. 03-09-2004
42		F24	4G11TG1	61kW	ARAI/MOEF/DGTA/GCLP-F24/2009-038 dt. 20-08-2009
43			4G11TG2	69.4kW	
44		F25	4G11TAG1	77.2kW	ARAI/MOEF/DGTA/GCLP-F25/2009-039 dt. 20-08-2009
45			4G11TAG2	93.4kW	
46		F6	6YDAX	74.5kW	ARAI/MOEF/DGTA/GCLP-F6/2004-022 dt. 17-06-2004
47		F10	TD4L4	112.74kW	ARAI/MOEF/DGTA/GCLP-F10/2005-29 dt. 27-09-2005
48		F5	6YDA MK3	62kW	ARAI/MOEF/DGTA/GCLP-F5/2005-40 dt. 01-03-2006

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 SITARAM KASHYAP DEPUTY GENERAL MANAGER	 INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY MANESAR * 197101 INDIA	 SAURABH DALELA DIRECTOR	 Page 4 of 9
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Annexure-III Cont.					
S. No.	Manufacturer Name & Address	Engine Family	Engine Model	Rated Gross Mechanical Declared Power	Type Approval Certificate Number
49	Greaves Cotton Ltd. Pune	F10	TD4L4P	114.7kW	ARAI/MOEF/DGTA/GCLP-F10/2006-022 dt. 20-07-2006
50		F10	TD4L4	113.9kW	ARAI/MOEF/DGTA/GCLP-F10/2004-06 dt. 26-02-2004
51		F9	4YDCMK3	92.6kW	ARAI/MOEF/DGTA/GCLP-F9/2004-013 dt. 20-03-2004
52			3YDCMK3	61.78kW	
53			6YDCMK3	114.3kW	
54	F8	4YDXMK3	68.4kW	ARAI/MOEF/DGTA/GCLP-F8/2004-017 dt. 07-05-2004	
55	Greaves Ltd Chinchwad, Pune	F4	TD2V6	114.6kW	ARAI/MOEF/DGTA/GLP-F4/2003-14 dt. 23-05-2003
56		F9	4YDC MK3	92.5kW	ARAI/MOEF/DGTA/GLP-F9/2003-20 dt. 13-06-2003
57		F7	F6DAX MK3SP	59.6kW	ARAI/MOEF/DGTA/GLP-F7/2003-30 dt. 03-09-2003
58			6YDAX MK35P	81.19kW	
59		F8	4YDX MK3	68.4kW	ARAI/MOEF/DGTA/FLP-F8/2003-21 dt. 18-06-2003
60	Greaves Cotton Ltd. Chinchwad, Pune	F24	4G11T-P	68kW	ARAI/MOEF/DGTA/GCLP-F24/2007-023 dt. 29-06-2007
61		F6	6YDAX	76kW	ARAI/MOEF/DGTA/GCLP-F6/2007-027 dt. 16-07-2007
62		F7	6YDAXMK3SP	81.19kW	ARAI/MOEF/DGTA/GCLP-F7/2007-028 dt. 16-07-2007
63		F3	6YDMK3	66.4kW	ARAI/MOEF/DGTA/GCLP-F3/2007-031 dt. 07-11-2007
64		F5	3YDAMK II	62kW	ARAI/MOEF/DGTA/GCLP-F5/2007/032 dt. 07-11-2007
65		F9	4YDCMK3	93.1kW	ARAI/MOEF/DGTA/GCLP-F9/2007-035 dt. 31-07-2007
66			3YDCMK3	61.78kW	
67			6YDCMK3	114.73kW	
68		F25	4G11TA-P	93kW	ARAI/MOEF/DGTA/GCLP-F25/2007-074 dt. 17-12-2007
69	4G11TA		76.5kW		
70	Greaves Cotton Ltd. (D.E.U.), Chinchwad, Pune	F28	4G11TAG3	114kW	ARAI/MoEF/DGTA/GCLP-F28/2009-063- E1 dt. 02-01-2013
71		F28	4G11TAG3	114kW	ARAI/MoEF/DGTA/GCLP-F28/2009-063- E2 dt. 17-04-2013
72		F80	4G11TAG22	74.5kW	ARAI/MoEF/DGTA-II/GCLP-F80/2014- 009 dt. 28-02-2014
73			6G11TAG21	59kW	

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 SITARAM KASHYAP DEPUTY GENERAL MANAGER		 SAURABH DALELA DIRECTOR	 Page 5 of 9
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S. No.	Manufacturer Name & Address	Engine Family	Engine Model	Rated Gross Mechanical Declared Power	Type Approval Certificate Number
74	Greaves Cotton Ltd. (D.E.U.), Chinchwad, Pune	F100	4G11TAG23	93kW	ARAI/MoEF/DGTA-II/GCLP-F100/2014-010 dt. 28-02-2014
75		F32	4G11TW1	77.2kW	ARAI/MoEF/DGTA/GCLP-F32/2011-001
76	Indo Power Generation	F1	4045HF158	100kW	ARAI/MOEF/DGTA/IMP/PGPL-F1/2009-030 dt. 24-06-2009
77			4045TF158	70kW	
78			4045TF258	83kW	
79			6068TF158	105kW	
80	Kaytee Switchgear Ltd. Hubli	F6	4KSWITC-105	66kW	ARAI/MOEF/DGTA/KSL-F6/2006-038 dt. 02-05-2007
81		F7	6KSWATC-105	110kW	ARAI/MOEF/DGTA/KSL-F7/2006-039 dt. 09-05-2007
82	Kirtoskar Oil Engines Ltd. Khackdi, Pune	F2	4R1040T	81kW	ARAI/MOEF/DGTA/KOEL-F2/2003-001 dt. 28-03-2003
83			6R1080T	93.3kW	
84		F3	4R1040TA	77.2kW	ARAI/MOEF/DGTA/KOEL-F3/2003-003 dt. 28-03-2003
85			6R1080TA	113.2kW	
86		F2	4R1040T	62.7kW	ARAI/MOEF/DGTA/KOEL-F2/2004-020 dt. 17-04-2004
87			6R1080T	93.3kW	
88		F3	4R1040TA	76.7kW	ARAI/MOEF/DGTA/KOEL-F3/2004-021 dt. 17-06-2004
89			6R1080TA	113.2kW	
90		F6	HA694T	61kW	ARAI/MOEF/DGTA/KOEL-F6/2004-035 dt. 11-09-2004
91		F3	4R1040TA	77.2kW	ARAI/MOEF/DGTA/KOEL-F3/2008-034 dt. 07-09-2008
92			6R1080TA	113.2kW	
93		F28	4R1040TC	61kW	ARAI/MOEF/DGTA/KOEL-F28/2008-037 dt. 07-09-2008
94		F37	4K1080TA1	114.7kW	ARAI/MoEF/DGTA/KOEL-F37/2011-043 dt. 29-09-2011
95		F111	4R1040TA G1	74.9kW	ARAI/MoEF/DGTA-II/KOEL-F111/2013-042 dt. 30-05-2013
96		F112	4K1080TAG2	114.7kW	ARAI/MoEF/DGTA-II/KOEL-F112/2013-054 dt. 20-08-2013
97			4K1080TAG1	114.7kW	
98		F108	HA694TCI G1	61kW	ARAI/MoEF/DGTA-II/KOEL-F108/2013-055 dt. 30-08-2013
99	F110	4R 810 TA G1	61kW	ARAI/MoEF/DGTA-II/KOEL-F110/2013-075 dt. 03-12-2013	
100	Kirtoskar Electric Co. Ltd. Hubli	F10	4KSWITC110	84kW	ARAI/MOEF/DGTA/KECL-F10/2009-032 dt. 15-07-2009

AUTHORISED SIGNATORY

 SITARAM KASHYAP DEPUTY GENERAL MANAGER	 SAURABH DALELA DIRECTOR	 SAURABH DALELA DIRECTOR	 Page 6 of 9
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Annexure-III Cont.					
S. No.	Manufacturer Name & Address	Engine Family	Engine Model	Rated Gross Mechanical Declared Power	Type Approval Certificate Number
101	Kirloskar Electric Company Limited Unit 14, Gokul Road, Hubli 580030	F12	6KSWTC105	84kW	ARAI/MoEF/DGTA/KECL-F12/2011-038 dt. 29-08-2011
102	Lombardini India Pvt. Ltd. Aurangabad	F5	TD226B-6IID1	93kW	ARAI/MOEF/DGTA/IMP/LIPL-F5/2008-057 dt. 16-10-2008
103		F10	TD226B-6IID1	116.2kW	ARAI/MOEF/DGTA/IMP/LIPL-F10/2008-058 dt. 16-10-2008
104		F6	TD226B-4IID1	60kW	ARAI/MOEF/DGTA/IMP/LIPL-F6/2008-059 dt. 07-10-2008
105		F19	AL4DTIG2	77kW	ARAI/MOEF/DGTA/ALL-F19/2008-062 dt. 10-03-2008
106			AL4DTIF1	70kW	
107		Mahindra Heavy Engines Pvt. Ltd. Chakan, Pune- 410 501	F13	125kVA Mech.CPCB-I	114.7kW
108	F14		100kVA Mech.CPCB-I	93kW	ARAI/MoEF/DGTA/MHEPL-F14/2013-073 dt. 24-10-2013
109			82.5kVA Mech.CPCB-I	78kW	
110	F15		62.5kVA Mech.CPCB-I	59kW	ARAI/MoEF/DGTA/MHEPL-F15/2013-074 dt. 24-10-2013
111	Mahindra Navistar Engines Pvt. Ltd. Pune, Maharashtra - 412111	F8	MaxxForce 7.2 P Mech CPCB I 125kVA	114.7kW	ARAI/MoEF/DGTA/MNEPL-F8/2013-008 dt. 01-01-2013
112			MaxxForce 7.2 P Mec CPCB I 82.5kVA	77kW	
113		F9	MaxxForce 7.2 P Mech CPCB II 125kVA	114.7kW	ARAI/MoEF/DGTA/MNEPL-F9/2013-016 dt. 01-03-2013
114		F10	MaxxForce 4.8 P Mech CPCB I 100kVA	93kW	ARAI/MoEF/DGTA/MNEPL-F10/2013-024 dt. 07-03-2013
115			MaxxForce 4.8 P Mech CPCB I 82.5kVA	78kW	
116		F39	2205 GM-C2	93kW	ARAI/MOEF/DGTA-IIM&M-F39/2013-026dt. 07-03-2013
117		F5	X12-14-125KVA-Mech	112.5kW	ARAI/MoEF/DGTA/MNEPL-F5/2011-036 dt. 29-09-2011
118			X12-14-100 KVA-Mech	90kW	
119			X12-14-82.5 KVA-Mech	74.25kW	
120			X12-14-75 KVA-Mech	67.5kW	
121	F2	S12-III (125KVA)	114.7kW	ARAI/MoEF/DGTA/MNEPL- F2/2010-086 dt. 23-09-2010	
122	Mahindra & Mahindra Limited Akurfi Road, Kandivalli (E), Mumbai 400101, India.	F14	41425 GC	95kW	ARAI/MoEF/DGTA/IMP/M&M-F14/2011-039 dt. 29-09-2011
123		F17	41225 GC	82kW	ARAI/MOEF/DGTA/IMP/M&M-F17/2008-012-E2 dt. 16-02-2011

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Annexure-III Cont.					
S. No.	Manufacturer Name & Address	Engine Family	Engine Model	Rated Gross Mechanical Declared Power	Type Approval Certificate Number
124	Mahindra & Mahindra Limited Akurli Road, Kandivali (E), Mumbai 400101, India.	F34	61140 GM	76.5kW	ARAI/MOEF/DGTA/M&M/F34/2012-002 dt. 29-02-2012
125		F63	61375 GM-C2	91.6kW	ARAI/MOEF/DGTA-II/M&M-F63/2012-028 dt. 15-10-2012
126		F46	61695 GM-C2	113.34kW	ARAI/MoEF/DGTA-II/M&M-F46/2013-048 dt. 12-07-2013
127		F44	4905 GM-C2	60.2kW	ARAI/MoEF/DGTA-II/M&M-F44/2013-049 dt. 25-07-2013
128		F45	41035 GM-C2	68.9kW	ARAI/MoEF/DGTA-II/M&M-F45/2013-050 dt. 25-07-2013
129		F46	61375 GM-C2	91.6kW	ARAI/MOEF/DGTA/M&M-F46/2014-012 dt. 19-06-2014
130			61695 GM-C2	113.34kW	
131	Mahindra & Mahindra Ltd. Farm Division, Kandivali (E), Mumbai-400	F33	41145 GM	76.5kW	ARAI/MoEF/DGTA/M&M/F33/2010-087 dt. 14-10-2010
132	Mahindra & Mahindra Ltd. Kandivali	F13	4905GM(VNEF)	60.3kW	ARAI/MOEF/DGTA/M&M-F13/2007-045 dt. 13-08-2007
133	Mahindra & Mahindra Ltd. FES, Kandivli, Mumbai	F14	41425GC	95kW	ARAI/MOEF/DGTA/IMP/M&M-F14/2008-011 dt. 25-11-2008
134		F17	41225 GC	82kW	ARAI/MOEF/DGTA/IMP/M&M-F17/2008-013 dt. 15-05-2008
135	Mak Controls and Systems Pvt. Ltd. 7/41-B, Avinashi Road, Coimbatore-	F7	BF4M1013FC	117kW	ARAI/MoEF/DGTA/IMP/MCSP-F7/2011-017 dt. 02-05-2011
136	Shandong Weichai Huafeng Power Co. Ltd. China	F5	R6105ZLD1-P1	84kW	ARAI/MOEF/DGTA/IMP/HUA-F5/2009-022 dt. 06-11-2009
137		F6	R40151ZLD-P1	66kW	ARAI/MOEF/DGTA/IMP/HUA-F6/2009-023 dt. 06-11-2009
138		F8	R6105ZLD-P1	110kW	ARAI/MOEF/DGTA/IMP/HUA-F8/2009-025 dt. 06-11-2009
139		F10	R4105IZLD-P2	66kW	ARAI/MOEF/DGTA/IMP/HUA-F10/2009-027 dt. 06-11-2009
140	Shanghai Diesel Engine Co. Ltd. 2636 JunGong Road, Shanghai,	F7	SC5D145D	95kW	ARAI/MoEF/DGTA/IMP/SDEC-F7/2011-022 dt. 27-07-2011
141		F10	SC4H160D2	105kW	ARAI/MoEF/DGTA/IMP/SDEC-F10/2013-028 dt. 25-03-2013
142	SuperNova Engineers Ltd. Ahmedabad	F4	YC6108ZD	80kW	ARAI/MOEF/DGTA/IMP/SEL-F4/2008-073 dt. 23-12-2008
143			YC6108ZLD	98kW	
144	TATA Engg Pune	F2	497TC65	59kW	ARAI/MOEF/DGTA/TELCO-F2/2003-26 dt. 04-08-2003

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SITARAM KASHYAP
DEPUTY GENERAL MANAGER




SAURABH DALELA
DIRECTOR



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S. No.	Manufacturer Name & Address	Engine Family	Engine Model	Rated Gross Mechanical Declared Power	Type Approval Certificate Number
145	Tata Motors Ltd. Pune	F6	697D50	58kW	ARAI/MOEF/DGTA/TML-F6/2007-001 dt. 31-03-2007
146	Tata Motors Ltd. Pimpri, Pune/Jamshedpur/Chinhat Industrial Area, Lucknow/ Belur Industrial Area, Dharwad/ Udham Singh Nagar, Pantnagar.	F2	497TC 65	59kW	ARAI/MoEF/DGTA/TATA-F2/2003-26- E1 dt. 11-07-2013
147	Telco Pune	F1	697TC54	69.1kW	ARAI/MOEF/DGTA/TELCO-F1/2003/009 dt. 31-03-2003
148	VE Commercial Vehicle Ltd. 102, Industrial area No-2, Pithampur- 454775, Dist-Dhar, Madhya Pradesh	F1	EE483TCI	59kW	ARAI/MoEF/DGTA/VECVL-F1/2011-012 dt. 23-03-2011
149		F2	EE683TCI	77kW	ARAI/MoEF/DGTA/VECVL-F2/2012-008 dt. 29-03-2012
150		F2	EE683TCI 82.5 KVA	77kW	ARAI/MoEF/DGTA/VECVL-F2/2012-027 dt. 11-10-2012
151		F4	EE483TCI 62.5kVA	59kW	ARAI/MoEF/DGTA-II/VECV-F4/2012- 035 dt. 03-01-2012
152		F5	EE683TCI 82.5KVA CPCB- II	77kW	ARAI/MoEF/DGTA-II/VECV-F5/2013- 006 dt. 20-02-2013
153		F4	EE483TCI 62.5kVA	59kW	ARAI/MoEF/DGTA-II/VECV-F4/2012- 035-E1 dt. 08-05-2013
154		F6	EE683TCI 82.5 KVA CPCB II	74.5kW	ARAI/MoEF/DGTA-II/VECV-F6/2013- 033
155		F7	EE694TCI 125KVA CPCB-II	115kW	ARAI/MoEF/DGTA-II/VECVL-F7/2014- 005 dt. 28-01-2014
156			EE694TCI 100KVA CPCB-II	95kW	
157		F8	EE694TCI 100KVA VE CPCB-II	95kW	ARAI/MoEF/DGTA-II/VECVL-F8/2014- 006 dt. 07-02-2014
158	Weichai Weifang Dutz Engines Co. Ltd.	F4	WP6D160E20	117kW	ARAI/MOEF/IMP/DGTA/WWD-F4/2010- 070 dt. 09-06-2010
159			WP4D115E20	85kW	
160	Yuchai Machinery Co. Ltd. 88, Tianqiao West Road, Yulin, Guangxi, P.R.C. China	F3	YC6108D	60kW	ARAI/MoEF/DGTA/IMP/SEL-F3/2010- 091 dt. 21-01-2011
161		F8	YC6B155L-D20	112kW	ARAI/MoEF/DGTA/IMP/SEL-F8/2010- 093 dt. 21-01-2011
162		F2	YC6108ZD	84kW	ARAI/MoEF/DGTA/IMP/SEL-F2/2010- 103 dt. 21-01-2011
163	Mahindra & Mahindra Limited Akurli Road, Kandivali (E), Mumbai 400101, India.	F26	61695 GM	113.3kW	ARAI/MoEF/DGTA/M&M/F26/2009-049

Note: Engine details mentioned above are sourced from : www.cpcb.nic.in

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 SITARAM KASHYAP DEPUTY GENERAL MANAGER	 SAURABH DALELA DIRECTOR	 SAURABH DALELA DIRECTOR	 Page 9 of 9
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