

COP Annexure-I

Criteria*	COP Required
RECD Manufacturer/Importer/Retrofitter	<p>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</p> <p>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)</p>

* As Applicable

Annexure-II

S No	Item Description	RECD types within the RECD family (if applicable)		
		Parent RECD Type	Type 1	Type 2
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	C2-R8		
4	RECD type/model designation	C2-CS1800-R8	C2-CS1800-R6	C2-CS1800-R6.1
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/C2-CS1800-R8 Rev. 01 dtd. 13.12.2024 Clause no 1.8		
9	Identifying part number(s) of the RECD	C2-CS1800-R8-V2.3	C2-CS1800-R6-V2.3	C2-CS1800-R6.1-V2.3
10	Engine/ Engine-Family for which the RECD is intended (application range)	DV8TA G1		
11	PM Reduction Efficiency of the RECD	79.39%		
12	Designed for fitment to an engine meeting the emissions requirements of (Regulation and Stage):	CPCB Stage -II		
ICAT Ref No.		2024-0596; IOCS No: 177566		
Base Engine Type Approval Certificate number		ARAI/MoEF/DGTA/KOEL-F115/2014-01		
Test Report Reference		CT0ET 0221 E01 EU0039 dt. 24/01/2025		
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Annexure-III

List of applicable engine(s) as per 771(E) dtd. 11.12.2013 and GSR 232(E) dtd. 31.03.2014 Phase II 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. No.1, Sardar Patel Road, Guindy, Chennai - 6000032	F25	AL6DTIDG4	147 kW	ARAI/MoEF/DGTA/ALL-F25/2014-02-E1,Dt. 26-06-2014
2			AL6DTIDG2	116 kW	
3			AL6DTIDG3	130 kW	
4		F40	AL8NTIDG6	223 kW	ARAI/MoEF/DGTA/ALL-F40/2015-11-E1,Dt. 02-08-2016
5			AL8NTIDG5	180 kW	
6		F50	AL6DTIDG6	116 kW	ARAI/MoEF/DGTA/ALL-F50/2022-19 Dt. 03-02-2022
7	Baudouin (Weifang) Power Co. Ltd. No. 197A, Fushou East Street., High-new Technology, Industrial Development Zone, Weifang, Shandong, China.	F11	6M19G320/5E3	290 kW	ICAT/MoEFCC/DGTA/SHIPL-F11/N-2137,Dt. 16-11-2018
8		F12	6M16G250/5E3	240 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-F12/N-2145,Dt. 19-11-2018
9		F6	6M11G140/5E3	129 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-F6/N-2136,Dt. 16-11-2018
10		6M12G	6M12G6D2/5	235 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-6M12G/P-0840,Dt. 06-07-2020
11		6M16G	6M16G4D2/5	290 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-6M16G/P-0838,Dt. 06-07-2020
12		6M11G	6M11G2D2/5	143 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-6M11G/P-0836,Dt. 06-07-2020
13		4M12G6D5	4M12G6D2/5	125 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-4M12G6D5/P-0884,Dt.13-07-2020
14		4M07G6	4M07G6D2/3	120 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-4M07G6/P-1729,Dt. 01-12-2020
15	Cooper Corporation Pvt. Ltd Plot no. M60-1, Engine Division Post- Kodoli, Addl. MIDC Satara, 415003	F14	6G5D1C228IW	228 kW	ARAI/MoEF/DGTA/CCPL-F14/2017-07 Dt. 18-08-2017
16		F10	6B5D1C190RW	190 kW	ARAI/MoEF/DGTA/CCPL-F10/2014-04-E1 Dt. 17-08-2015
17			4B5DIC113RW	113 kW	
18			6B5D1C150RW	150 kW	
19			6B5D1C170RW	170 kW	
20	Cummins India Limited Cummins India Office Campus Tower A, 5th Floor Survey No. 21, Balewadi, Pune 411045	F50	QSL9 G15	298 kW	ARAI/MoEF/DGTA/CILP-F50/2017-27-E3 ,Dt. 04-01-2019
21			QSL9 G16	249 kW	
22	F56	6L8.9TAAG-4	250 kW	ARAI/MoEF/DGTA/CILP-F56/2015-25-E2, Dt. 07-02-2018	

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S. No.	Manufacturer Name & Address	Engine Family	Engine Model	Rated Gross Mechanical Declared Power	Type Approval Certificate Number
23	Deutz Engines India Pvt. Ltd. 6, Ramabai Ambedkar Road, B Wing, 4th Floor, Heritage House, Pune 411001. Maharashtra, India	F1	TCD2013L064V	250.7 kW	ARAI/MoEF/DGTA/IMP/DEIPL-F1/2015-01, Dt. 11-09-2015
24		F4	TCD2013 L062V (D3UC151)	151 kW	ARAI/MoEF/DGTA/IMP/DEIPL-F4/2016-04 Dt. 08-06-2016
25			TCD2013 L062V (D3UC130)	130.6 kW	
26	EICHER TRACTORS (A Unit Of TAFE Motors & Tractors Ltd.) ,Itarana Road, Alwar- 301 001	F12	1751 ES	118 kW	ICAT/MOEFCC/DGTA/EICHER-F12/O-0982 Dt. 28-05-2019
27	Greaves Cotton Ltd. Industrial Engines Unit, Plot No.J-2/A, MIDC Chikalthana, Aurangabad-431210	F321	D3V8TAG21	284 kW	ARAI/MoEF/DGTA/GCLP-F321/2016-13-E1, Dt. 18-08-2021
28		F500	12V14TAG21	284 kW	ARAI/MoEF/DGTA/GCLP-F500/2014-01-E4 ,Dt. 18-08-2021
29		F101	4G11TAG26	114 kW	ARAI/MoEF/DGTA/GCLP-F101/2015-10-E3, Dt. 18-08-2021
30		F201	6G11TAG29	178.8 kW	ARAI/MoEF/DGTA/GCLP-F201/2015-11-E2 Dt. 18-08-2021
31			6G11TAG28	163 kW	
32			6G11TAG27	144.5 kW	
33		F251	D3V6TAG21	227 kW	ARAI/MoEF/DGTA/GCLP-F251/2015-12-E1 ,Dt. 18-08-2021
34		F161	6G11TAG26	144.5 kW	ARAI/MoEF/DGTA/GCLP-F161/2017-14-E2, Dt. 18-08-2021
35	JCB India Ltd. 23/7, Mathura Road, Ballabgarh-	F9	JCB 448 TCAG-121	121 kW	ICAT/MOEF/DGTA/JC B - F9/K-0463 Dt. 15-06-2015
36	Kirloskar Oil Engines Ltd. Khadki, Pune	F114	6SL1500TA G3	228 kW	ARAI/MoEF/DGTA/KOEL-F114/2014-14-E1, Dt. 09-02-2016
37			6SL1500TA G2	183 kW	
38		F115	DV8TA G1	294.2 kW	ARAI/MoEF/DGTA/KOEL-F115/2014-01-E1, Dt. 11-09-2019
39		F115	DV8TA G1	292.2 kW	ARAI/MoEF/DGTA/KOEL-F115/2014-01
40		F123	6R1080TA G2	114.7 kW	ARAI/MoEF/DGTA/KOEL-F123/2019-26, Dt. 27-12-2019
41		F124	6R1080ETA G1	183.8KW	ARAI/MoEF/DGTA/KOEL-F124/2018-24, Dt. 30-07-2019
42		F112	4K1080TA G2	114.7 kW	ARAI/MoEF/DGTA/KOEL-F112/2019-25-E1, Dt. 05-01-2021
43		F113	6K 1080TA G2	147 kW	ARAI/MoEF/DGTA/KOEL-F113/2014-13, Dt. 22-03-2014

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S. No.	Manufacturer Name & Address	Engine Family	Engine Model	Rated Gross Mechanical Declared Power	Type Approval Certificate Number
44	Kirloskar Oil Engines Ltd. Khadki, Pune	F113	6K 1080TA G2	147 kW	ARAI/MoEF/DGTA/KOEL-F113/2014-13-E4 Dt. 01-06-2021
45			6R1080TAD	114.7 kW	
46			6R1080TA G1	128.7 kW	
47	Mahindra Heavy Engines Pvt. Ltd. Plot # A-1/1, Chakan Industrial Area, Phase-IV, Village Nigoje, Chakan, Taluka- Khed, Pune- 410501	F21	mPower62485G	182 kW	ARAI/MoEF/DGTA/MHEL-F21/2016-05-E4 Dt. 13-11-2017
48			mPower62235G	164 kW	
49			mPower61995G1	146.5 kW	
50			mPower61565G1	114.7 kW	
51		F23	mPower 63905G	287 kW	ARAI/MoEF/DGTA/MHEL-F23/2017-06 Dt. 27-06-2017
52			mPower 63655G	269 kW	
53			mPower 63405G	250 kW	
54		F17	mPower61995G	146.5 kW	ARAI/MoEF/DGTA/MHEL- F17/2014-03-E6 Dt. 17-12-2019
55			mPower61565G	114.7 kW	
56			mPower41565G	114.7 kW	
57	F17	125 KVA MECH CPCB II	114.7 kW	ARAI/MOEF/DGTA/MHEPL-F17/2014-03	
58	F17	125 KVA MECH CPCB II	114.7 kW	ARAI/MoEF/DGTA/MHEL- F17/2014-03-E2, Dt. 08-09-2016	
59	Scania Commercial Vehicles India Pvt. Ltd. Plot No.63 (part),64 66,88- 97, Narsapur, KIADB Industrial Area, Achhatanahalli Village, Narsapur Hobli, Kolar Taluk, District Kolar, Karnataka, PIN-563 130	F1	DC09 071A 226	226 kW	ARAI/MoEF/DGTA/IMP/SCANIA-F1/2015-01-E1 Dt. 25-07-2017
60			DC09 071A 248	248 kW	
61			DC09 071A 267	267 kW	
62			DC09 071A 289	289 kW	
63	Shandong Heavy Industry India Pvt. Ltd. Survey No. 280/281, Hinjawadi Phase II, Village Mann, Taluka Mulshi, Pune - 411057, Maharashtra, India	6M16G	6M16G4D2/5	290 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-6M16G/P-0838, Dt. 06-07-2020
64		6M11G	6M11G2D2/5	143 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-6M11G/P-0836, Dt. 06-07-2020
65		4M12G6D5	4M12G6D2/5	125 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-4M12G6D5/P-0884, Dt. 13-07-2020
66		4M076G	4M07G6D2/3	120 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-4M07G6/P-1729, Dt. 01-12-2020
67		F11	6M19G320/5E3	290 kW	ICAT/MoEFCC/DGTA/SHIPL-F11/N-2137, Dt. 16-11-2018
68		F12	6M16G250/5E3	240 kW	ICAT/MoEFCC/DGTA/IMP/BWPCL-F12/N-2145, Dt. 19-11-2018

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S. No.	Manufacturer Name & Address	Engine Family	Engine Model	Rated Gross Mechanical Declared Power	Type Approval Certificate Number
70	Shandong Heavy Industry India Pvt. Ltd. Survey No. 280/281, Hinjawadi Phase II, Village Mann, Taluka Mulshi, Pune - 411057, Maharashtra, India	F6	6M11G140/5E3	129 kW	ICAT/MoEFCC/DGTA/SHIPL-F6/N-2135,Dt. 16-11-2018
71		6M12G	6M12G6D2/5	235 kW	ICAT/MoEFCC/DGTA/SHIPL-6M12G/P-0839,Dt. 06-07-2020
72		6M16G	6M16G4D2/5	290 kW	ICAT/MoEFCC/DGTA/SHIPL-6M16G/P-0837,Dt. 06-07-2020
73		6M11G	6M11G2D2/5	143 kW	ICAT/MoEFCC/DGTA/SHIPL-6M11G/P-0835,Dt. 06-07-2020
74		4M12G6D5	4M12G6D2/5	124 kW	ICAT/MoEFCC/DGTA/ SHIPL-4M06G6D3/P-0880,Dt. 13-07-2020
75		4M07G6	4M07G6D2/3	120 kW	ICAT/MoEFCC/DGTA/SHIPL-4M07G6/P-1808 ,Dt. 14-12-2020
76	Tata Motors Limited Pimpri, Pune	F33	697 TC 10	115 kW	ARAI/MoEF/DGTA/TML/-F33/2018-08-E1,Dt. 29-05-2019
77	M/s. Cummins India Ltd. DTA unit, Gat No. 311/B, Post Kasar Amboli, Pirangut, Taluka Mulshi Pune-412111, Maharashtra	F40	QSB 5.9-G1	132.2 kW @1500 rpm	ARAI/MoEF/DGTA/CILP-F40-2014-21
78			QSB 5.9-G2	153.6 kW@1500 rpm	
79			QSB 5.9-G3	124.5 kW@1500 rpm	
80	Tata Cummins Pvt. Ltd. Telco Township, Jamshedpur, Jharkhand	F40	QSB 5.9-G2	154 kW	ARAI/MoEF/DGTA/TCL-F40/2017-07 Dt. 23-09-2017
81			QSB 5.9-G1	137 kW	
82		F49	6BTAA5.9-G13	119 kW	ARAI/MoEF/DGTA/TCL-F49/2019-08-E1,Dt. 26-09-2019
83		F55	QSB 6.7-G16	209 kW	ARAI/MoEF/DGTA/TCL-F55/2019-09-E1 Dt. 21-05-2021
84			QSB 6.7-G14	174 kW	
85			QSB 6.7-G15	191 kW	
86	QSB 6.7-G17		229 kW		
87	VE Commercial Vehicle Ltd. 102, Industrial area No-2, Pithampur-454775, Dist-Dhar, Madhya Pradesh	F7	EE694TCI 125KVA CPCB-II	115 kW	ARAI/MoEF/DGTA/VECV-F7/2017-10 Dt. 21-06-2017
88		F12	EE694 TCI 160KVA CPCB-II	148 kW	ARAI/MoEF/DGTA/VECV-F12/2016-09 Dt. 26-08-2016
89	Volvo India Private Limited Volvo Penta. Yalachahally, Tavarekere Post, Hosakote TQ, Bangalore, Karnataka-562 122	F13	TAD1351GE	286 kW	ARAI/MoEF/DGTA/IMP/VOLVO-F13/2014-03-E1,Dt. 30-06-2015
90		F14	TAD754GE	219 kW	ARAI/MoEF/DGTA/IMP/VOLVO-F14/2014-04-E1,Dt. 30-06-2015

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

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