

Engines, which comply with EC 26/2004 IIIB emission limits (in force from 1st January 2012)

Manufacturer Engine type	Characteristics of the engine							Date of UIC exhaust emissions test	UIC-Emission certificate [Date]	Comments
	Nominal rating [kW]	Nominal speed [r.p.m.]	Mode of operation	Separate circuit after cooling	Number and arrangement of cylinders	Bore [mm]	Stroke [mm]			
MAN D 2066 LE 621	275	1 900	4 stroke	Yes	6-Cyl. in-line vertical	120	155	04/10	2010	Limits for locomotives Certified according Leaflet 623
MAN D 2676 LE 621	338	1 800	4 stroke	Yes	6-Cyl. in-line vertical	126	166	01/12	2012	Certified according Leaflet 623 Derivative from MAN D 2066 LE 621
MTU 16V 4000 R84 (R74 / R64)	2 400 (2200 / 2000)	1 800	4 stroke	Yes	16 V 90°	170	210	01/12	2012	Limits for locomotives Certified according Leaflet 623
MTU 12V 4000 R84 (R64)	1800 (1500)	1 800	4 stroke	Yes	12 V 90°	170	210	08/12	2012	Limits for locomotives Certified according Leaflet 623 Derivative from MTU 16V 4000 R84

Engines, which comply with UIC IIIA emission limits

Manufacturer Engine type	Characteristics of the engine							Date of UIC exhaust emissions test	UIC-Emission certificate [Date]	Comments
	Nominal rating [kW]	Nominal speed [r.p.m.]	Mode of operation	Separate circuit after cooling	Number and arrangement of cylinders	Bore [mm]	Stroke [mm]			
MAN D 2842 LE 622	588	1 800	4 stroke	Yes	12 V 90°	128	142	02/07	2007	Certified according Leaflet 623 Derivative from MAN D 2842 LE 606
MTU 20V 4000 R43L	3000	1 800	4 stroke	Yes	20 V 90°	170	210	05/08	2008	Certified according Leaflet 623 Derivative from MTU 20V 4000 R42
MTU 16V 4000 R43L (R)	2400 (2000)	1 800	4 stroke	Yes	16 V 90°	170	210	07/08	2008	Certified according Leaflet 623 Derivative from MTU 20V 4000 R42
MTU 12V 4000 R43 (L)	1500 (1800)	1 800	4 stroke	Yes	12 V 90°	170	210	03/08	2008	Certified according Leaflet 623 Derivative from MTU 20V 4000 R42
MTU 8V 4000 R43 (L)	1000 (1200)	1 800	4 stroke	Yes	8 V 90°	170	210	08/08	2008	Certified according Leaflet 623 Derivative from MTU 20V 4000 R42
GENERAL ELECTRIC CIS GEVO V12 3a	2982	1050	4 stroke	Yes	12 V 45°	229	267	12/08	2009	
CATERPILLAR 3508C	1000	1800	4 stroke	Yes	8 V 60°	170	190	02/09	2009	Certified according Leaflet 623 Derivative from CAT 3512 SCAC
CATERPILLAR 3512C	1700 (1530/1380)	1800	4 stroke	Yes	12 V 60°	170	215	02/09	2009	
MTU 20V 4000 R53	3150	1 800	4 stroke	Yes	20 V 90°	170	210	03/12	2012	

MTU 20V 4000 R63L	3300	1 800	4 t	Yes	20 V 90°	170	210	01/15	2015	MTU 20V 4000 R63L
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Engines, which comply with UIC II emission limits

Manufacturer Engine type	Characteristics of the engine							Date of UIC exhaust emissions test	UIC-Emission certificate [Date]	Comments
	Nominal rating [kW]	Nominal speed [r.p.m.]	Mode of operation	Separate circuit after cooling	Number and arrangement of cylinders	Bore [mm]	Stroke [mm]			
Caterpillar CAT E3412 E-2T-JWAC	746	2 100	4 stroke	No	12 V 90°	137	152	08/00	2001	Approved according UIC 623
Cummins QSK 19R	565	2 100	4 stroke	Yes	6-Cyl. in-line horizontal	159	159	09/02	2003	Approved according UIC 623
MAN D 2842 LE 602	588	2100	4 stroke	Yes	12 V 90°	128	142	03/01	2001	Derivative from MAN D 2842 LE 606
MAN D 2842 LE 606	662	2 100	4 stroke	Yes	12 V 90°	128	142	04/02	2003	Approved according UIC 623
MAN D 2842 LE 609	635	1 900	4 stroke	Yes	12 V 90°	128	142	04/02	2003	Derivative from MAN D 2842 LE 606
MAN D 2876 LUE 601	375	2000	4 stroke	Yes	6-Cyl. in-line horizontal	128	166	05/03	2003	
MAN D 2876 LUE 602	338	2000	4 stroke	Yes	6-Cyl. in-line horizontal	128	166	05/03	2003	
MAN D 2876 LUE 603	301	2000	4 stroke	Yes	6-Cyl. in-line horizontal	128	166	05/03	2003	
MAN D 2876 LUE 604	375	2000	4 stroke	Yes	6-Cyl. in-line horizontal	128	166	05/03	2003	
MAN D 2876 LUE 605	338	2000	4 stroke	Yes	6-Cyl. in-line horizontal	128	166	05/03	2003	
MAN D 2876 LUE 606	301	2000	4 stroke	Yes	6-Cyl. in-line horizontal	128	166	05/03	2003	

MTU 16V 4000 R41	2100	1 800	4 stroke	Yes	16 V 90°	165	190	06/01	2002	Approved according UIC 623
MTU 16V 4000 R41L	2200	1 860	4 stroke	Yes	16 V 90°	165	190	10/03	2004	Derivative from MTU 16V 4000 R41
IVECO 8V FVQE 2883X* A201	620	2100	4 stroke	Yes	8 V 90°	145	152	07/03	2004	Approved according UIC 623
IVECO 8V FVQE 2883X* A200	550	2100	4 stroke	Yes	8 V 90°	145	152	07/03	2004	Approved according UIC 623
MTU 6H 1800 R 80	315	1900	4 stroke	Yes	6-Cyl. in-line horizontal	128	166	02/04	2004	
MTU 6H 1800 R 81	350	1900	4 stroke	Yes	6-Cyl. in-line horizontal	128	166	02/04	2004	
MTU 12V 4000 R41R	1040/1380	1 500	4 stroke	Yes	12 V 90°	165	190	04/04	2004	Derivative from MTU 16V 4000 R41
MTU 12V 4000 R41	1500	1 800	4 stroke	Yes	12 V 90°	165	190	04/04	2004	Derivative from MTU 16V 4000 R41
MTU 12V 4000 R41L	1650	1 860	4 stroke	Yes	12 V 90°	165	190	04/04	2004	Derivative from MTU 16V 4000 R41
EMD 12N-710G3B-U2	2470	904	2 stroke	Yes	12 V 45°	230	279	06/04	2004	
GENERAL ELECTRIC GE 7FDL12 M1	2461 (2220) 2342	1050 1000	4 stroke	Yes	12 V 45°	229	267	05/05	2005	
MAN B&W 16 Rk 215	3160	1000	4 stroke	Yes	16 V 60°	215	275	09/04	2005	Approved according UIC 623

CATERPILLAR 3508	1000	1800	4 stroke	Yes	8 V 60°	170	190	11/05	2006	Derivative from CAT 3512 SCAC
MTU 20V 4000 R42	2860	1800	4 stroke	Yes	20 V 90°	165	210	05/06	2006	Approved according UIC 623
MAN D 2842 LE 620	662	2 100	4 stroke	Yes	12 V 90°	128	142	11/05	2006	Derivative from MAN D 2842 LE 606
MTU 8V 4000 R41L	1100	1860	4 stroke	Yes	12 V 90°	165	190	10/06	2006	Derivative from MTU 16V 4000 R41
MTU 20V 4000 R42L	3000	1800	4 stroke	Yes	20 V 90°	165	210	05/06	2006	Derivative from MTU 20V 4000 R42
Caterpillar CAT 3512 SCAC	1500	1800	4 stroke	Yes	12 V 60°	170	190	08/07	2008	Approved according UIC 623
Wärtsilä UD 30V12 R3 (R2)	700 (607)	1500	4 stroke	Yes	12 V 60°	175	180/ 192	02/10	2010	