

**LIST OF DIESEL ENGINES WHICH HAVE SUCCESSFULLY PASSED THE UIC TEST PROCEDURE ASSESSING THEIR SUITABILITY FOR USE ON
MOTIVE POWER UNITS**

Engines compliant with EC 26/2004 IIIB emission limits (in force from 01/01/2012)

NB: In September 2019 UIC Leaflets 623-1 (7th edition dated February 2017) and 623-2 (8th edition dated February 2017) were migrated, without any changes, into the IRS 60623-1 and 60623-2. Diesel engines which have already successfully passed the UIC test procedure according to UIC Leaflets 623-1 and 623-2 before the publication of IRS 60623-1 and IRS 60623-2 are still part of the list.

Manufacturer Engine type	Characteristics of the engine							Date of UIC exhaust emission test	Emission of UIC Certificate	Comments
	Nominal Rating [kW]	Nominal speed [rpm]	Mode of operation	Superchargi ng air cooling in separate circuit	Number and arrangement of cylinders	Bore [mm]	Stroke [mm]			
MAN D 2066 LE 621	275	1.900	4 strokes	Yes	6 cylinders in line vertical	120	155	04/2010	2010	Compliant with the limits for locomotives
MAN D 2676 LE 621	338	1.800	4 strokes	Yes	6 cylinders in line vertical	126	166	01/2012	2012	Derivative from MAN D 2066 LE 621
MTU 16V 4000 R84 (R74/R64)	2.400 (2.200/2.000)	1.800	4 strokes	Yes	16 V 90°	170	210	01/2012	2012	Compliant with the limits for locomotives
MTU 12V 4000 R84 (R64)	1.800 (1.500)	1.800	4 strokes	Yes	12 V 90°	170	210	08/2012	2012	Compliant with the limits for locomotives Derivative from MTU 16V 4000 R84

**LIST OF DIESEL ENGINES WHICH HAVE SUCCESSFULLY PASSED THE UIC TEST PROCEDURE ASSESSING THEIR SUITABILITY FOR USE ON
MOTIVE POWER UNITS
Engines compliant with UIC IIIA emission limits**

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Manufacturer Engine type	Characteristics of the engine							Date of UIC exhaust emission test	Emission of UIC Certificate	Comments
	Nominal Rating [kW]	Nominal speed [rpm]	Mode of operation	Superchar ging air cooling in separate circuit	Number and arrangement of cylinders	Bore [mm]	Stroke [mm]			
MAN D 2842 LE 622	588	1.800	4 strokes	Yes	12 V 90°	128	142	02/2007	2007	Derivative from MAN D 2842 LE 606
MTU 20V 4000 R43L	3.000	1.800	4 strokes	Yes	20 V 90°	170	210	05/2008	2008	Derivative from MTU 20V 4000 R42
MTU 16V 4000 R43L (R)	2.400 (2.000)	1.800	4 strokes	Yes	16 V 90°	170	210	07/2008	2008	Derivative from MTU 20V 4000 R42
MTU 12V 4000 R43 (L)	1.500 (1.800)	1.800	4 strokes	Yes	12 V 90°	170	210	03/2008	2008	Derivative from MTU 20V 4000 R42
MTU 8V 4000 R43 (L)	1.000 (1.200)	1.800	4 strokes	Yes	8 V 90°	170	210	08/2008	2008	Derivative from MTU 20V 4000 R42
MTU 20V 4000 R63	3.000	1.800	4 strokes	Yes	20 V 90°	170	210	05/2008	2013	Derivative from MTU 20V 4000 R42
MTU 20V 4000 R63R	2.700	1.800	4 strokes	Yes	20 V 90°	170	210	05/2008	2013	Derivative from MTU 20V 4000 R42
CATERPILLAR 3508C	1.000	1.800	4 strokes	Yes	8 V 60°	170	190	02/2009	2009	Derivative from CAT 3512 SCAC

**LIST OF DIESEL ENGINES WHICH HAVE SUCCESSFULLY PASSED THE UIC TEST PROCEDURE ASSESSING THEIR SUITABILITY FOR USE ON
MOTIVE POWER UNITS
Engines compliant with UIC II emission limits (1/2)**

NB: In September 2019 UIC Leaflets 623-1 (7th edition dated February 2017) and 623-2 (8th edition dated February 2017) were migrated, without any changes, into the IRS 60623-1 and 60623-2. Diesel engines which have already successfully passed the UIC test procedure according to UIC Leaflets 623-1 and 623-2 before the publication of IRS 60623-1 and IRS 60623-2 are still part of the list.

Manufacturer Engine type	Characteristics of the engine							Date of UIC exhaust emission test	Emission of UIC Certificate	Comments
	Nominal Rating [kW]	Nominal speed [rpm]	Mode of operation	Supercharging air cooling in separate circuit	Number and arrangement of cylinders	Bore [mm]	Stroke [mm]			
CATERPILLAR CAT E 3412 E- 2T- JWAC	746	2.100	4 strokes	No	12 V 90°	137	152	08/2000	2001	
CUMMINS QSK 19R	565	2.100	4 strokes	Yes	6 cylinders in line incl. 75°	159	159	09/2002	2003	
MAN D 2842 LE 602	588	2.100	4 strokes	Yes	12 V 90°	128	142	03/2001	2001	Derivative from MAN D 2842 LE 606
MAN D 2842 LE 606	662	2.100	4 strokes	Yes	12 V 90°	128	142	04/2002	2003	
MAN D 2842 LE 609	635	1.900	4 strokes	Yes	12 V 90°	128	142	04/2002	2003	Derivative from MAN D 2842 LE 606
MTU 16V 4000 R41	2.100	1.800	4 strokes	Yes	16 V 90°	165	190	06/2001	2002	
MTU 16V 4000 R41L	2.200	1.860	4 strokes	Yes	16 V 90°	165	190	10/2003	2004	Derivative from MTU 16V 4000 R41
IVECO 8V FVQE 2883X* A201	620	2.100	4 strokes	Yes	8 V 90°	145	152	07/2003	2004	
IVECO 8V FVQE 2883X* A200	550	2.100	4 strokes	Yes	8 V 90°	145	152	07/2003	2004	
MTU 12V 4000 R41R	1.040/1.380	1.500	4 strokes	Yes	12 V 90°	165	190	04/2004	2004	Derivative from MTU 16V 4000 R41
MTU 12V 4000 R41	1.500	1.800	4 strokes	Yes	12 V 90°	165	190	04/2004	2004	Derivative from MTU 16V 4000 R41

Manufacturer Engine type	Characteristics of the engine							Date of UIC exhaust emission test	Emission of UIC Certificate	Comments
	Nominal Rating [kW]	Nominal speed [rpm]	Mode of operation	Supercharging air cooling in separate circuit	Number and arrangement of cylinders	Bore [mm]	Stroke [mm]			
MTU 12V 4000 R41L	1.650	1.860	4 strokes	Yes	12 V 90°	165	190	04/2004	2004	Derivative from MTU 16V 4000 R41
MAN B&W 16 Rk 215	3.160	1.000	4 strokes	Yes	16 V 60°	215	275	09/2004	2005	
MTU 20V 4000 R42	2.860	1.800	4 strokes	Yes	20 V 90°	165	210	05/2006	2006	
MAN D 2842 LE 620	662	2.100	4 strokes	Yes	12 V 90°	128	142	11/2005	2006	Derivative from MAN D 2842 LE 606
MTU 8V 4000 R41L	1.100	1.860	4 strokes	Yes	12 V 90°	165	190	10/2006	2006	Derivative from MTU 16V 4000 R41
MTU 20V 4000 R42L	3.000	1.800	4 strokes	Yes	20 V 90°	165	210	05/2006	2006	Derivative from MTU 20V 4000 R42
CATERPILLAR CAT 3512 SCAC	1.500	1.800	4 strokes	Yes	12 V 60°	170	190	08/2007	2008	
CATERPILLAR CAT 3508 SCAC	1.000	1.800	4 strokes	Yes	8 V 60°	170	190	11/2005	2006	Derivative from CAT 3512 SCAT
MAN D 2676 LE 624	353	1.800	4 strokes	Yes	6 cylinders in-line vertical	126	166	02/2017	2017	

**LIST OF DIESEL ENGINES WHICH HAVE SUCCESSFULLY PASSED THE UIC TEST PROCEDURE ASSESSING THEIR SUITABILITY FOR USE ON
MOTIVE POWER UNITS
Engines compliant with UIC I emission limits**

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Manufacturer Engine type	Characteristics of the engine							Date of UIC exhaust emission test	Emission of UIC Certificate	Comments
	Nominal Rating [kW]	Nominal speed [rpm]	Mode of operation	Supercharging air cooling in separate circuit	Number and arrangement of cylinders	Bore [mm]	Stroke [mm]			
RENAULT RVI MIHR 06.20.45	249	2.000	4 strokes		6 cylinders in line horizontal	120	145	04/1992	1994	
IVECO Aifo 8297 SRI 10.00	698	2.100	4 strokes		12 V 90°	145	130	11/1993	1995	
MAN D 2866 LUE 602	300	2.100	4 strokes	Yes	6 cylinders in line horizontal	128	155	01/1994	1995	
CUMMINS NTA 855 R4	310	2.100	4 strokes		6 cylinders in line horizontal	140	152	08/1994	1995	
IVECO Aifo 8217 SRI	294	1.800	4 strokes	Yes	6 cylinders in line horizontal	137	156	02/1995	1996	
IVECO Aifo 8217 SI	206	2.000	4 strokes	No	6 cylinders in line horizontal	137	156	12/1996	1997	Derivative from Aifo 8217 SRI
MAN D 2866 LUH 21	257	1.500	4 strokes	Yes	6 cylinders in line horizontal	128	155	03/1997	1997	Derivative from MAN D 2866 LUE 602
ISOTTA FRASCHINI V 1712 T2F	1.400	1.800	4 strokes	Yes	12 V 90°	170	170	04/1997	1999	
ANGLO BELGIAN CORPORATION 6 DZC-1000-144	1.150	1.000	4 strokes	Yes	6 cylinders in line vertical	256	310	01/1998	1999	
ISOTTA FRASCHINI V 1712 NF	412	1.500	4 strokes	No	12 V 90°	170	170	10/1999	2000	Derivative from ISOTTA FRASCHINI V 1712 T2F