

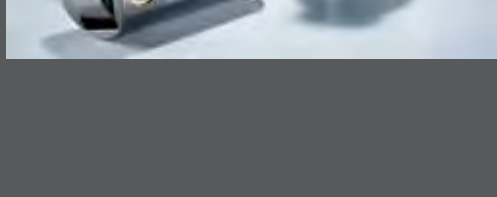
2012

HEAVY-DUTY DIESEL ENGINES

North American Availability & Specifications 37-1120 kW (50-1500 hp)

MAHLE PRODUCTS

Engine Systems and Components



Filtration and Engine Peripherals



Engineering Services



LEGEND FOR NORTH AMERICAN HEAVY-DUTY DIESEL ENGINES 2012

- AG: Agriculture
- GS: Generator Set
- IS: Industrial/Stationary
- M: Marine
- NA: Not Available
- OH: Off-Highway Mobile
- SFC: Specific Fuel Consumption
- TB: Truck/Bus/Coach
- VFC: Valves per Cylinder

1. North American engine production estimates provided by Rhein Associates, Inc.

* Meet Tier 4 Interim regulations using Transitional Program for Original Manufacturers (TPM)

Brand (Maker)	Engine Family	Engine Model	Displacement (L)	Production Location	2011 Production Volume 1	U.S./EU Emissions Level	Layout	Cylinder Head, VPC	Power, kW (hp) @ rpm	Torque, N-m (lb-ft) @ rpm	Bore x Stroke, mm (in)	Compression Ratio	Application	MAHLE Components
AM GENERAL														
General Engine Products	Optimiser	6500	6.5	Franklin, OH	100	NA	V8	DI, 2	119-187 (160-250) @ 3000 to 3400	393-746 (290-550) @ 1700-2000	103 x 97 (4.06 x 3.82)	20.2:1	GS, M, TB, TB	✓
CATERPILLAR														
Caterpillar	C	C2.2	2.2	Peterborough, UK; Griffin, GA	5,500	Tier 4 Interim / Stage IIA	4, inline	DI	31.0-49.3 (41.6-66.1) @ 2400-3000	130-288.4 (95.9-153.7) @ 1800	84 x 100 (3.3 x 3.9)	23.3:1	AG, IS, OH	✓
Caterpillar	C	C3.4	3.3	Japan	7,800	<56 kW = Tier 4 Interim, Available in other regulated areas	4, inline	DI/Oh	47-62 (63-83) @ 2500	200-265 (147.5-195.4) @ 1800	94 x 120 (3.7 x 4.7)	22.1:	AG, IS, OH	✓
Caterpillar	C	C3.4B	3.4	Japan	6,700	<56 kW = 2013 Tier 4 Final / Stage IIB >56 kW = Tier 4 Interim / EU Stage IIB	4, inline	DI	45-86 (60.3-115.3) @ 2200-2500	243-420 (179.2-309.8) @ 1400-1600	99 x 110 (3.9 x 4.3)	17.0:1	AG, IS, OH	✓
Caterpillar	C	C4.4	4.4	Peterborough, UK	20,000	Tier 4 Interim	4, inline	DI	55.5-83 (74.4-111.3) @ 2200-2400	307-418 (226-308) @ 1400	105 x 127 (4.1 x 5.0)	18.2:1	AG, IS, OH	✓
Caterpillar	C	C4.4 ACERT	4.4	Peterborough, UK	25,000	Tier 4 Interim	4, inline	DI	61.5-106.2 (82.5-142) @ 2200	360-556 (265-410) @ 1400	105 x 127 (4.1 x 5.0)	18.2:1	AG, IS, OH	✓
Caterpillar	C	C4.4 ACERT	4.4	Peterborough, UK	15,000	Tier 4 Interim / Stage IIB	4, inline	DI	61.5-129.4 (82.5-173.5)	347-750 (256-553) @ 1400	105 x 127 (4.1 x 5.0)	16.5:1	AG, IS, OH	✓
Caterpillar	C	C6.6 ACERT	6.6	Peterborough, UK	22,000	Tier 4 Interim	6, inline	DI	89-205 (118.4-274.5) @ 1800-2500	545-1580 (402-1144) @ 1400	130 x 157 (5.1 x 6.2)	16.5:1	AG, IS, OH	✓
Caterpillar	C	C6.6 ACERT	6.6	Peterborough, UK	9,500	Tier 4 Interim / Stage IIB	6, inline	DI	89-129.4 (118.3-173.5)	545-825 (402-298) @ 1400	105 x 127 (4.1 x 5.0)	16.5:1	AG, IS, OH	✓
Caterpillar	C	C7 ACERT	7.2	Greenville, SC	4,300	Tier 4 Interim	6, inline	DI	168-224 (225-300) @ 1800-2200	1028-1274 (758-943) @ 1400	110 x 127 (4.3 x 5.0)	16.5:1	AG, IS, OH	✓
Caterpillar	C	C7.1 ACERT	7.0	Peterborough, UK	3,000	Tier 4 Interim / Stage IIB	6, inline	DI	140-225 (187.3-301.7) @ 2200	890-1274 (656.4-939.6) @ 1400	105 x 135 (4.1 x 5.3)	16.5:1	AG, IS, OH	✓
Caterpillar	C	C9 ACERT	8.8	Greenville, SC	17,800	Tier 4 Interim	6, inline	DI	205-280 (275-375) @ 1800-2200	1225-1688 (904-1238)	112 x 140 (4.4 x 5.6)	16.3:1	AG, IS, OH	✓
Caterpillar	C	C9.3 ACERT	9.3	Mossville, IL	2,000	Tier 4 Interim / Stage IIB	6, inline	DI	224-261 (300-350) @ 1800-2200	753-2-878.4 (1010-1178) @ 1400	115 x 149 (4.53 x 5.87)	17.8:1	AG, IS, OH	✓
Caterpillar	C	C11 ACERT	11.1	Mossville, IL	400	Tier 4 Interim	6, inline	DI	242-336 (325-450) @ 1800-2100	1487-2056 (1097-1516) @ 1400	130 x 140 (5.1 x 5.5)	17.2:1	AG, IS, OH	✓
Caterpillar	C	C13 ACERT	12.5	Mossville, IL	4,500	Tier 4 Interim	6, inline	DI	287-388 (385-520) @ 1800-2100	1107-1151 (1484-1544) @ 1400	130 x 157 (5.1 x 6.2)	17.3:1	AG, IS, OH	✓
Caterpillar	C	C13 ACERT	12.5	Mossville, IL	4,200	Tier 4 Interim / Stage IIB	6, inline	DI	287-388 (385-520) @ 1800-2100	989-6-1398 (719.93-1000-2000)	130 x 157 (5.1 x 6.2)	16.9:1	AG, IS, OH	✓
Caterpillar	C	C15 ACERT	15.0	Mossville, IL	5,000	Tier 4 Interim	6, inline	DI	328-444 (440-595) @ 1800-2100	2012-2716 (1464-2004) @ 1400	137.2 x 171.4 (5.4 x 6.7)	16.8:1	AG, IS, OH	✓
Caterpillar	C	C15 ACERT	15.2	Mossville, IL	17,500	Tier 4 Interim	6, inline	DI	354-433 (475-580) @ 1800-2100	1197-1460 (1905-1998) @ 1400	137 x 171 (5.4 x 6.7)	17.1:1	AG, IS, OH	✓
Caterpillar	C	C18 ACERT	18.1	Mossville, IL	3,000	<<559 kW = Tier 4 Interim / Available in other regulated areas >>559 kW = Tier 4 Interim / Available in other regulated areas	6, inline	DI	429-597 (575-800) @ 1800-2100	2627-1759 (1938-2599) @ 1400	145 x 183 (5.7 x 7.2)	16.3:1	AG, IS, OH	✓
Caterpillar	C	C18 ACERT	18.1	Mossville, IL	4,700	<<559 kW = Tier 4 Interim / Available in other regulated areas >>559 kW = Tier 4 Interim / Available in other regulated areas	6, inline	DI	447-597 (600-800) @ 1800-1900	1512-3656 (2027-2697) @ 1400	145 x 183 (5.7 x 7.2)	17.1:1	AG, IS, OH	✓
Caterpillar	C	C27 ACERT	27.0	Griffin, GA	1,000	* Tier 4 Interim / Available in other regulated areas	V12	DI	597-858 (800-1150) @ 1800-2100	3657-5255 (2697-3876) @ 1400	172 x 152 (6.8 x 6.0)	16.5:1	AG, IS, OH	✓
Caterpillar	C	C27 ACERT	27.0	Griffin, GA	3,100	* Tier 4 Interim / Available in other regulated areas	V12	DI	597-933 (800-1050) @ 1800-2100	2003-2641 (2696-3542) @ 1400	137.2 x 152 (5.4 x 6.0)	16.1:1	AG, IS, OH	✓
Caterpillar	C	C32 ACERT	32.1	Griffin, GA	1,000	* Tier 4 Interim / Available in other regulated areas	V12	DI	708-1007 (950-1350) @ 1800-2100	4338-6166 (3200-5458) @ 1400	145 (6.12) 5 (7.1) x 3.38	16.5:1	AG, IS, OH	✓
Caterpillar	C	C32 ACERT	32.1	Griffin, GA	2,400	* Tier 4 Interim	V12	DI	709-895 (950-1200) @ 1800-2100	2383-2387 (3169-4005) @ 1400	145 (6.12) 5 (7.1) x 3.38	16.5:1	AG, IS, OH	✓
Caterpillar	3500	3508	34.5	Lafayette, IN	25	* Tier 4 Interim / Available in other regulated areas	V8	DI	507-746 (680-1000) @ 1200-1800	Up to 4263 (3144) @ 1400	170 x 190 (6.7 x 7.5)	13.0:1	AG, IS, OH	✓
Caterpillar	3500	3508B	34.5	Lafayette, IN	70	* Tier 4 Interim / Available in other regulated areas	V8	DI	746-820 (1000-1100) @ 1800	Up to 4337 (3199) @ 1400	170 x 190 (6.7 x 7.5)	14.0:1	AG, IS, OH	✓
Caterpillar	3500	3512	51.8	Lafayette, IN	5	* Tier 4 Interim / Available in other regulated areas	V12	DI	761-1119 (1020-1500) @ 1200-1800	Up to 6210 (4580) @ 1400	170 x 190 (6.7 x 7.5)	13.0:1	AG, IS, OH	✓
Caterpillar	3500	3512B	51.8	Lafayette, IN	2,400	* Tier 4 Interim / Available in other regulated areas	V12	DI	1119-1231 (1500-1650) @ 1800	Up to 7153 (5276) @ 1400	170 x 190 (6.7 x 7.5)	14.0:1	AG, IS, OH	✓
Caterpillar	3500	3516	60.0	Lafayette, IN	3,650	* Tier 4 Interim / Available in other regulated areas	V16	DI	1011-1492 (1355-2000) @ 1200-1800	Up to 8391 (6189) @ 1400	170 x 190 (6.7 x 7.5)	13.0:1	AG, IS, OH	✓
Perkins	400	404D-22	2.2	UK; Griffin, GA	5,000	Tier 4 Interim / Stage IIA	4, inline	DI	31.0-38.0 (41.6-51.0) @ 2200-3000	130-142.9 (95.9-105.6) @ 1800	84 x 100 (3.3 x 3.9)	23.3:1	AG, IS, OH	✓
Perkins	400	404D-22T	2.2	UK; Griffin, GA	6,000	Tier 4 Interim / Stage IIA	4, inline	DI	36.3-45.5 (48.7-61.0) @ 2000-3000	154.0-189.1 (113.9-139.5) @ 1800	84 x 100 (3.3 x 3.9)	23.3:1	AG, IS, OH	✓
Perkins	400	404D-22TA	2.2	UK; Griffin, GA	1,200	Tier 4 Interim / Stage IIA	4, inline	DI	49.3 (66.1) @ 2800	208 (153.7) @ 1800	84 x 100 (3.3 x 3.9)	23.3:1	AG, IS, OH	✓
Perkins	800	804D-33	3.3	Japan	1,000	Tier 4 Interim / Stage IIA	4, inline	DI	47.0 (63.0) @ 2500	200 (147.5) @ 1800	94 x 120 (3.7 x 4.7)	22.0:1	AG, IS, OH	✓
Perkins	800	804D-33T	3.3	Japan	6,800	<56 kW = Tier 4 Interim >56 kW = Tier 4 Interim	4, inline	DI	55-62 (73.8-83) @ 2500	245-265 (180.7-195.4) @ 1400	94 x 120 (3.7 x 4.7)	19.5:1	AG, IS, OH	✓
Perkins	800	854E-E34TA	3.4	Japan	2,200	Tier 4 Interim / Stage IIB	4, inline	DI	63-86.0 (84.5-115.3) @ 2200-2500	340-420 (250-309.8) @ 1400-1600	99 x 110 (3.9 x 4.3)	17.0:1	AG, IS, OH	✓
Perkins	800	854F-E34T	3.4	Japan	4,500	Tier 4 Final / Stage IIB	4, inline	DI	45-5.4 (60.3-74.3) @ 2200-2500	243.310 (179.2-228.6)	99 x 110 (3.9 x 4.3)	17.0:1	AG, IS, OH	✓
Perkins	1100	1104D-44T	4.4	Peterborough, UK	20,000	* Tier 4 Interim	4, inline	DI	55.5-74.5 (74.4-99.9) @ 2200-2400	307-392 (226-289) @ 1400	105 x 127 (4.1 x 5.0)	18.2:1	AG, IS, OH	✓
Perkins	1100	1104D-44TA	4.4	Peterborough, UK	10,000	Tier 4 Interim	4, inline	DI	68-83 (91.2-111.3) @ 2200-2400	393-418 (290-308) @ 1400	105 x 127 (4.1 x 5.0)	18.2:1	AG, IS, OH	✓
Perkins	1100	1104D-44AT	4.4	Peterborough, UK	15,000	* Tier 4 Interim	4, inline	DI	61.5-74.5 (82.5-99.9) @ 2200	360-420 (265-309) @ 1400	105 x 127 (4.1 x 5.0)	16.2:1	AG, IS, OH	✓
Perkins	1100	1104D-44TA4	4.4	Peterborough, UK	15,000	* Tier 4 Interim	4, inline	DI	74.5-102.0 (99.9-142.0) @ 2200-2400	468-556 (345-410) @ 1400	105 x 127 (4.1 x 5.0)	16.2:1	AG, IS, OH	✓
Perkins	1100	1106D-66TA4	6.6	Peterborough, UK	22,000	* Tier 4 Interim	4, inline	DI	89-205 (119-275) @ 1800-2500	545-1050 (402-1144) @ 1400	105 x 127 (4.1 x 5.0)	16.2:1	AG, IS, OH	✓
Perkins	1200	1206E-E64TA	4.4	Peterborough, UK	18,000	Tier 4 Interim / Stage IIB	4, inline	DI	61.5-110.1 (82.5-147.8) @ 2200	347-580 (256-413) @ 1400	105 x 127 (4.1 x 5.0)	16.5:1	AG, IS, OH	✓
Perkins	1200	1206E-E64TA4	4.4	Peterborough, UK	18,000	Tier 4 Interim / Stage IIB	4, inline	DI	105.1-129.4 (118.3-173.5) @ 2200	630-750 (464.7-523) @ 1400	105 x 127 (4.1 x 5.0)	16.5:1	AG, IS, OH	✓
Perkins	1200	1206E-E6TA4	6.6	Peterborough, UK	9,500	Tier 4 Interim / Stage IIB	6, inline	DI	89-129.4 (118.3-173.5) @ 2200	545-825 (402-298) @ 1400	105 x 127 (4.1 x 5.0)	16.5:1	AG, IS, OH	✓
Perkins	1200	1206E-E70TA	7.0	Peterborough, UK	3,500	Tier 4 Interim / Stage IIB	6, inline	DI	140-225 (187.3-301.7) @ 2200	890-1274 (656.4-939.6) @ 1400	105 x 135 (4.1 x 5.3)	16.5:1	AG, IS, OH	✓
CUMMINS														
Cummins	B	B3.3	3.3	Japan; India	32,000	Tier 4 Interim	4, inline	DI, 2	45-63 (60-85)	214-181 (158-245) @ 1600	95 x 115 (3.74 x 4.53)	NA	AG, IS, OH, GS	✓
Cummins	B	B5.9	3.3	Japan	10,000	Tier 4 Interim	4, inline	DI, 4	56-89 (75-129)	375-415 (277-306) @ 1600	95 x 115 (3.74 x 4.53)	NA	AG, IS, OH, GS	✓
Cummins	B	B5.9L4	4.5	Rocky Mount, NC	3,500	Tier 4 Interim	4, inline	DI	82-122 (110-163)	488-832 (360-466) @ 1500	107 x 124 (4.21 x 4.88)	NA	AG, IS, OH, GS	✓
Cummins	B	B5.9L6	6.7	Rocky Mount, NC	24,000	Tier 4 Interim	6, inline	DI, 4	194-224 (146-300)	540-760 (392-1030) @ 1500-1800	107 x 124 (4.21 x 4.88)	NA	AG, IS, OH, M, GS	✓
Cummins	B	B5.9L7	6.7	Rocky Mount, NC	116,000	EPA 2010	6, inline	DI, 4	200-325 (149-243) @ 2300	705-1017 (520-750) 800 @ 1600/1800	107 x 124 (4.21 x 4.88)	NA	AG, IS, OH, GS, TB	✓
Cummins	C	CSB3.3	3.3	Rocky Mount, NC	19,000	EPA 2010	6, inline	DI, 4	194-261 (260-350) @ 2000	895-1356 (660-1000) @ 1400	114 x 135 (4.5 x 5.3)	NA	AG, IS, OH, GS, TB	✓
Cummins	L	OSL9	8.9	Rocky Mount, NC	20,000	EPA 2010	6, inline	DI, 4	172-296 (230-400)	915-1627 (675-1200)	114 x 145 (4.5 x 5.7)	NA	AG, IS, OH, GS, TB	✓
Cummins	L	SL9.1	8.9	Rocky Mount, NC	12,000	EPA 2010	6, inline	DI, 4	257-285 (345-380) @ 1900	1150-1300 (1569-1763) @ 1400	114 x 145 (4.5 x 5.7)	NA	AG, IS, OH, GS, TB	✓
Cummins	X	QS11.9	11.9	Jamestown, NY	200	Tier 4 Interim	6, inline	DI, 4	224-373 (293-500)	1481-2169 (1090-1500) @ 1400	130 x 150 (5.11 x 5.91)	NA	AG, IS, OH, GS	✓
Cummins	X	QS12	11.9	Jamestown, NY	9,900	EPA 2010	6, inline	DI, 4	231-317 (310-435) @ 1800	1559-2237 (1150-1650) @ 1200	130 x 150 (5.11 x 5.91)	NA	AG, IS, OH, GS, TB	✓
Cummins	X	QS15	14.9	Jamestown, NY	500	Tier 4 Interim	6, inline	DI, 4	298-447 (400-500) @ 1800	2034-2778 (1500-2050) @ 1400	137 x 159 (5.39 x 6.65)	NA	AG, IS, OH, GS, TB	✓
Cummins	X	QS15	14.9	Jamestown, NY	79,000	EPA 2010	6, inline	DI, 4	298-447 (400-500)	1966-2778 (1450-2050) @ 1100	137 x 159 (5.39 x 6.65)	NA	AG, IS, OH, GS, TB	✓
Cummins	X	QS19	19.0	Seymour, IN	1,500	* Tier 4 Interim	6, inline	DI, 4	377-597 (606-800) @ 2100	2755-3084 (2032-227				