

**Attachment 1: Verified for Stationary Diesel Engines  
Caterpillar DPF for Stationary  
Off-Road Certified Engine Family List (0 ≤ 0.2 g/bhp-hr PM)**

Model Year 1996 Engines

<b>Manufacturer</b>	<b>Engine Families</b>
Caterpillar	TCP14.RZDBRK
	TCP10.RZDBRD
Deutz AG	TDZ16.RGDARA
	TDZ16.RGDARB
	TDZ7.1R6DARA
	TDZ7.1R6DARB
Generac	TGN13.R6DARA
Komatsu	TKL11.RZDARB
Navistar	TNV466R6DARA
	TNV466R6DARB
	TNV466R6DASC
	TNV466R6DASD
	TNV530R6DARA
	TNV530R6DARB
	TNV530R6DASD
	TNV530R8DASC

Model Year 1997 Engines

<b>Manufacturer</b>	<b>Engine Families</b>
Caterpillar	VCP10.RZDARD
	VCP14.RZDARK
Detroit Diesel Corporation	VDD8.5TJDARE
	VDD12.TJDARE
Deere	VJD10.RJDBRB
	VJD12.RJDBRA
	VJD6.8R6DBRA
	VJD8.1R6DBRA
	VJD8.1RBDRB
Deutz AG	VDZ16.RGDARA
	VDZ16.RGDARB
	VDZ7.1R6DARA
	VDZ7.1R6DARB
Generac	VGN13.R6DARA
Navistar	VNV466R6DASC
	VNV466R6DASD
	VNV530R6DARB
	VNV530R6DASC
	VNV530R6DASD

Model Year 1998 Engines

<b>Manufacturer</b>	<b>Engine Families</b>
AB Volvo Penta	WVPXL09.6ACB
	WVPXL12.0ACB
	WVPXL16.0ACB
Case	WX9XL0239ACA
	WX9XL0359ABA
	WX9XL0505ABA
	WX9XL0505ABB
	WX9XL0505ACA
Caterpillar	WCPXL07.0MRB
	WCPXL10.5MRD
	WCPXL10.5MRG
	WCPXL14.6ERK
	WCPXL14.6MRJ
	WCPXL15.8ERK
	WCPXL27.0HRK
Cummins	WCEXL019.AAA
	WCEXL0359ABA
	WCEXL0359ABB
	WCEXL0505ABA
	WCEXL0505ABB
	WCEXL0505ACA
	WCEXL0661AAA
	WCEXL0855AAA
	WCEXL0855AAB
Daewoo	WDWXL11.1BHT
	WDWXL11.1BIA
Detroit Diesel Corporation	VDDXL08.5TJD
	WDDXL09.0TFE
	WDDXL11.1THD
	WDDXL12.1TFE
	WDDXL12.1TFM
	WDDXL12.7TGD
	WDDXL15.9TRE
	WDDXL23.9TRE
Deere	WJDXL06.8012
	WJDXL08.1007
	WJDXL08.1008
	WJDXL08.1009
	WJDXL10.5003

Model Year 1998 Engines Continued

Manufacturer	Engine Families
Deutz AG	WDZXL07.1003
	WDZXL07.1004
	WDZXL15.9001
	WDZXL15.9002
GMC	WGNXL13.3HTA
ISUZU	WSZXL06.4DTA
Komatsu	WKDXL0239AAA
	WKDXL0239ACA
	WKDXL0359ABA
	WKLXL11.0DB1
	WKLXL11.0DC1
	WKLXL15.2EB1
	WKLXL15.2EC1
	WKLXL23.2FC1
	WKLXL7.15CB1
	WKLXL7.15CC1
MTU	WMUXL12.0G2V
Navistar	WNVXL0530ANA
	WNVXL0530BNB
	WNVXL0530BND

Model Year 1999 Engines

Manufacturer	Engine Families
AB Volvo Penta	XVPXL07.3ABB
	XVPXL07.3ACB
	XVPXL09.6ACB
	XVPXL12.0ACB
	XVPXL16.0ACB
	XVPXL16.0ACB
Case	XX9XL0239ACA
	XX9XL0359ABA
	XX9XL0505ABA
	XX9XL0505ABB
Caterpillar	XX9XL0505ACA
	XCPXL07.0MRB
	XCPXL07.0MRD
	XCPXL10.5MRD
	XCPXL10.5MRG
	XCPXL14.6ERK
Cummins	XCPXL15.8ERK
	XCPXL27.0HRK
	XCEXL019.AAA
	XCEXL0359ABA
	XCEXL0505ABA
	XCEXL0505ABB
	XCEXL0505ACA
	XCEXL0661AAA
	XCEXL0855AAA
	XCEXL0855AAB
Daewoo	XDWXL03.3AMN
	XDWXL03.3BMN
	XDWXL03.3LMN
	XDWXL05.8AOA
	XDWXL05.8ARN
	XDWXL05.8ATT
	XDWXL08.1ACN
	XDWXL08.1ADT
	XDWXL11.1BIA
	XDWXL11.1BHT
	XDWXL11.1DJA
	XDWXL14.6AZA
	XDWXL14.6CVT
XDWXL18.3ASA	

Model Year 1999 Engines Continued

Manufacturer	Engine Families
Detroit Diesel Corporation	XDDXL08.5TJD
	XDDXL09.1TFE
	XDDXL11.1THD
	XDDXL12.1TFE
	XDDXL12.1TFM
	XDDXL12.7TGD
	XDDXL14.0TLD
	XDDXL15.9TRE
	XDDXL23.9TRE
Deere	XJDXL06.8012
	XJDXL08.1007
	XJDXL08.1008
	XJDXL10.5022
Deutz AG	XDZXL02.7014
	XDZXL07.1005
	XDZXL07.1004
	XDZXL15.9002
	XDZXL15.9003
Generac	XGNXL13.3HTA
Komatsu	XKLXL0239ACA
	XKLXL03.3JA1
	XKLXL11.0DB1
	XKLXL11.0DC1
	XKLXL15.2EC1
	XKLXL23.2FC1
	XKLXL7.15CB1
	XKLXL7.15CC1
	XKDXL0239ACA
	XKDXL0359ABA
	XKDXL0505ABB
	XKDXL0505ACA
KUBOTA	XKBXL03.3BAC
	XKBXL03.3BCC
Mitsubishi	XMTXL07.5D6C
	XMTXL11.9D6A

Model Year 1999 Engines Continued

Manufacturer	Engine Families
Navistar	XNVXL0466BNA
	XNVXL0530ANA
	XNVXL0530ANB
	XNVXL0530ANC
	XNVXL0530AND
	XNVXL0530BNA
	XNVXL0530BNB
	XNVXL0530BNC
	XNVXL0530BND
Yanmar	XYDXL2.00D4T
	XYDXL2.78D4N
	XYDXL4.41D4N
	XYDXL4.41D4T

Model Year 2000 Engines

Manufacturer	Engine Families	
AB Volvo Penta	YVPXL07.3ABB	
	YVPXL07.3ACB	
	YVPXL09.6ACB	
	YVPXL12.0ACB	
	YVPXL16.0ACB	
Case	YX9XL0239ACA	
	YX9XL0239ADA	
	YX9XL0359ABA	
	YX9XL0359ABB	
	YX9XL0505ABA	
	YX9XL0505ABB	
Caterpillar	YCPXL07.0MRB	
	YCPXL10.5MRD	
	YCPXL10.5MRG	
	YCPXL14.6ERK	
	YCPXL15.8ERK	
	YCPXL27.0HRK	
	YCPXL27.0HRP	
	YCPXL27.0MRH	
	YCPXL27.0MRS	
	YCPXL27.0MRT	
	YCPXL34.5ERK	
	YCPXL69.0ERK	
	Cummins	YCEXL03.3AAA
		YCEXL03.3AAB
YCEXL015.ABA		
YCEXL019.AAA		
YCEXL019.AAB		
YCEXL030.ABA		
YCEXL050.ABA		
YCEXL0239ACA		
YCEXL0239ADA		
YCEXL0359AAA		
YCEXL0359ABA		
YCEXL0359ABC		
YCEXL050.AAA		
YCEXL0505ABA		
YCEXL0505ABB		
YCEXL0505ACA		
YCEXL060.AAA		

Model Year 2000 Engines Continued

Manufacturer	Engine Families
Cummins (cont.)	YCEXL060.ABA
	YCEXL0661AAA
	YCEXL0855AAA
	YCEXL0855AAB
Daewoo	YDWXL11.1BIA
	YDWXL11.1DJA
	YDWXL18.3ASA
Deere	YJDXL21.9AYA
	YJDXL06.8012
	YJDXL08.1007
	YJDXL08.1008
Detroit Diesel Corporation	YJDXL10.5022
	YDDXL08.5TJD
	YDDXL11.1THD
	YDDXL12.1TFE
	YDDXL12.1TFM
	YDDXL12.7TGD
	YDDXL14.0TLD
	YDDXL15.9TRE
	YDDXL23.9TRE
	YDDXL31.8VRE
Deutz AG	YDDXL65.0VTE
	YDZXL02.7014
	YDZXL07.1004
	YDZXL07.1005
	YDZXL15.9002
Genrac	YDZXL15.9003
	YDZXL17.5001
	YGNXL13.3HAA
	YGNXL13.3HTA
Komatsu	YGNXL16.0MAA
	YKLXL0239ACA
	YKLXL0505ACA
	YKLXL11.0DB1
	YKLXL11.0DC1
	YKLXL15.2EC1
	YKLXL23.2FC1
	YKLXL23.2FC2
	YKLXL30.5GC1
	YKLXL30.5GD1
YKLXL7.15CB1	
YKLXL7.15CC1	

Model Year 2000 Engines Continued

Manufacturer	Engine Families
Navistar	YNVXL0466ANA
	YNVXL0530ANA
	YNVXL0530ANB
	YNVXL0530ANC
	YNVXL0530AND
VM Motori	YV5XI02.1R3V
	YV5XL02.8R2T

Model Year 2001 Engines

Manufacturer	Engine Families
AB Volvo Penta	1VPXL07.3ABB
	1VPXL07.3ACB
	1VPXL09.6ACB
	1VPXL12.1ACB
	1VPXL16.0ACB
Case	1X9XL0239ACA
	1X9XL0239ADA
	1X9XL0359ABA
	1X9XL0359ABB
	1X9XL0505ABA
	1X9XL0505ABB
	1X9XL0505ACA
Caterpillar	1CPXL07.0MRB
	1CPXL10.5MRD
	1CPXL10.5MRG
	1CPXL12.0ESK
	1CPXL14.6ESK
	1CPXL15.8ERK
	1CPXL15.8ESK
	1CPXL18.0HRN
	1CPXL27.0HRK
	1CPXL27.0MRS
	1CPXL27.0MRT
	1CPXL34.5ERK
	1CPXL78.1ERK
Cummins	1CEXL03.3AAA
	1CEXL03.3AAB
	1CEXL015.AAA
	1CEXL015.ABA
	1CEXL019.AAB
	1CEXL0239ACA
	1CEXL0239ADA
	1CEXL030.ABA
	1CEXL0359ABA
	1CEXL0359ABB
	1CEXL0359ABC
	1CEXL0359ABD

Model Year 2001 Engines Continued

Manufacturer	Engine Families
Cummins Continue	1CEXL050.ABA
	1CEXL0505ABA
	1CEXL0505ABB
	1CEXL0505ACA
	1CEXL0505ACE
	1CEXL0661AAA
	1CEXL0661AAD
	1CEXL060.AAA
	1CEXL060.ABA
	Daewoo
1DWXL03.3AMN	
1DWXL03.3BMA	
1DWXL03.3LMN	
1DWXL05.8AOA	
1DWXL05.8ARN	
1DWXL08.1ACN	
1DWXL11.1BIA	
1DWXL14.6AZA	
1DWXL14.6CVT	
Detroit Diesel Corporation	1DDXL08.5TJD
	1DDXL08.5YJD
	1DDXL12.7VGD
	1DDXL14.0TJD
	1DDXL14.0VLD
	1DDXL14.0WLD
	1DDXL15.9WRE
	1DDXL23.9WRE
	1DDXL31.8VRE
	1DDXL31.8XRE
1DDXL65.0XTE	
Deere	1JDXL06.8012
	1JDXL06.8038
	1JDXL06.8039
	1JDXL08.1007
	1JDXL08.1008
	1JDXL08.1036
1JDXL08.1037	

Model Year 2001 Engines Continued

Manufacturer	Engine Families	
Deutz	1DZXL02.7014	
	1DZXL02.7015	
	1DDXL08.5TJD	
	1DDXL08.5YJD	
	1DZXL07.1004	
	1DZXL07.1005	
	1DZXL15.9002	
	1DZXL15.9003	
	Generac	1GNXL03.0KTA
		1GNXL04.0HAA
1GNXL04.0HNA		
Isuzu	1GNXL05.0FAA	
	1SZXL06.5BTA	
	1SZXL09.8EXA	
	1SZXL15.7ETA	
International	1SZXL15.7EXA	
	1NVXL0530ANA	
	1NVXL0530ANC	
	1NVXL0530AND	
Komatsu	1NVXL0530ANF	
	1KLXL0239ACA	
	1KLXL0239ADA	
	1KLXL0359ABA	
	1KLXL0359ABC	
	1KLXL0505ABB	
	1KLXL0505ACA	
	1KLXL03.3JA1	
	1KLXL03.3JB1	
	1KLXL7.15CB1	
1KLXL7.15CC1		
Mitsubishi	1KLXL11.0DD3	
	1KLXL15.2EC3	
	1KLXL30.5GC1	
	1KLXL30.5GD1	
	1KLXL060.AAA	
	1MTXL07.5D6A	
1MTXL07.5D6C		
1MTXL11.9D6A		

Model Year 2002 Engines

Manufacturer	Engine Families
Case	2X9XL0239ACA
	2X9XL0239ADA
	2X9XL0359ABA
	2X9XL0359ABB
	2X9XL0359ABE
	2X9XL0505ABA
	2X9XL0505ABB
	2X9XL0505ABD
	2X9XL0505ACA
Caterpillar	2CPXL07.0MRB
	2CPXL10.5MRD
	2CPXL10.5MRG
	2CPXL12.0ESK
	2CPXL15.8ERK
	2CPXL15.8ESK
	2CPXL27.0HRK
	2CPXL27.0MRS
	2CPXL27.0MRT
	2CPXL34.5ERK
	2CPXL58.6ERK
	2CPXL78.1ERK
Cummins	2CEXL03.3AAA
	2CEXL03.3AAB
	2CEXL015.AAA
	2CEXL015.AAB
	2CEXL015.ABA
	2CEXL019.AAB
	2CEXL0239ACA
	2CEXL0239ADA
	2CEXL0359ABA
	2CEXL0359ABB
	2CEXL0359ABC
	2CEXL0359ABE
	2CEXL0505ABA
	2CEXL0505ABB
	2CEXL0505ABD
	2CEXL0505ACA
	2CEXL0505ACB
	2CEXL0505ACE
	2CEXL060.AAA
	2CEXL060.ABA
	2CEXL0661AAA
	2CEXL0661AAD

Model Year 2002 Engines Continued

Manufacturer	Engine Families
Detroit Diesel	2DDXL08.5TJD
	2DDXL08.5YJD
	2DDXL12.7VGD
	2DDXL14.0TJD
	2DDXL14.0VLD
	2DDXL31.8XRE
	2DDXL65.0XTE
Deere	2JDXL06.8012
	2JDXL06.8038
	2JDXL06.8039
	2JDXL06.8041
	2JDXL06.8044
	2JDXL06.8049
	2JDXL08.1007
	2JDXL08.1008
	2JDXL08.1036
	2JDXL08.1037
Deutz AG	2DZXL02.7014
	2DZXL02.7015
	2DZXL05.7033
	2DZXL07.1004
	2DZXL07.1005
	2DZXL07.1032
	2DZXL15.9002
	2DZXL15.9003
Daewoo	2DWXL2.37ANT
	2DWXL03.3AMN
	2DWXL03.3BMA
	2DWXL03.3LMN
	2DWXL05.8AOA
	2DWXL05.8ARN
	2DWXL08.1ACN
	2DWXL11.1BIA
	2DWXL14.6CVT
	2DWXL21.9AYA
Generac	2GNXL04.0HAA
	2GNXL04.0HNA
	2GNXL05.0FAA
	2GNXL03.0KTA
ISM	2H3XL1.49N3V
	2H3XL1.13LCS
	2H3CL2.22NLC

Model Year 2002 Engines Continued

Manufacturer	Engine Families
Isuzu	2SZXL06.5BTA
	2SZXL09.8EXA
	2SZXL15.7ETA
	2SZXL15.7EXA
International Truck	2NVXL0444ANA
	2NVXL0530ANA
	2NVXL0530ANC
	2NVXL0530AND
	2NVXL0530ANF
Komatsu	2KLXL0239ACA
	2KLXL0239ADA
	2KLXL0359ABA
	2KLXL0359ABC
	2KLXL0505ABB
	2KLXL0505ABD
	2KLXL0505ACA
	2KLXL03.3JA1
	2KLXL03.3JB1
	2KLXL11.0DB1
	2KLXL11.0DD3
	2KLXL15.2EC3
	2KLXL30.5GC1
	2KLXL30.5GD1
	2KLXL46.3HC1
	2KLXL7.15CB1
	2KLXL7.15CC1
	2KLXL060.AAA
Mitsubishi	2MTXL07.5D6A
	2MTXL07.5D6C
	2MTXL11.9D6A
	2MVXL24.5AAB
	2MVXL65.4ABA
	2MVXL65.4ABB
	2MVXL65.4ABC
AB Volvo Penta	2VPXL07.3ABB
	2VPXL07.3ACB
	2VPXL09.6ACB
	2VPXL12.1ABA
	2VPXL12.1ACA
	2VPXL12.1ACB
	2VPXL16.0ACB
VM Motori	2V5XL02.8R2T

Model Year 2003 Engines

Manufacturer	Engine Families
Caterpillar	3CPXL12.0ESK
	3CPXL15.8ERK
	3CPXL15.8ESK
	3CPXL18.0HRX
	3CPXL27.0HRK
	3CPXL27.0MRS
	3CPXL27.0MRT
	3CPXL34.5ERK
	3CPXL58.6ERK
	3CPXL78.1ERK
CNH Engine Corp	3X9XL0239AAA
	3X9XL0239ABA
	3X9XL0359AAC
	3X9XL0359ABE
	3X9XL0505AAB
	3X9XL0505ABD
Cummins	3CEXL015.AAB
	3CEXL015.ABA
	3CEXL023.AAA
	3CEXL0239AAD
	3CEXL0239AAF
	3CEXL0275AAA
	3CEXL0275AAB
	3CEXL030.ABA
	3CEXL0359AAB
	3CEXL0359AAC
	3CEXL0359ABC
	3CEXL0359ABE
	3CEXL050.ABA
	3CEXL0505ABD
	3CEXL0505ACB
	3CEXL060.AAA
	3CEXL060.ABA
	3CEXL0661AAD
	3CEXL078.AAB
Daewoo Motors	3DWXL05.8COA
	3DWXL11.1BIA
	3DWXL11.1DJA
	3DWXL21.9AYA



Model Year 2003 Engines Continued

Manufacturer	Engine Families
Detroit Diesel	3DDXL08.5YGD
	3DDXL08.5YJD
	3DDXL12.7VGD
	3DDXL14.0TJD
	3DDXL14.0VLD
	3DDXL15.9WRE
	3DDXL31.8XRE
	3DDXL35.8GRP
	3DDXL65.0GTP
	3DDXL65.0XTE
	3DDXL90.0XTP
	Deere
3JDXL06.8039	
3JDXL06.8041	
3JDXL06.8044	
3JDXL06.8048	
3JDXL06.8049	
3JDXL08.1037	
Deutz AG	3DZXL05.7033
	3DZXL06.1028
	3DZXL07.1005
	3DZXL07.1032
	3DZXL15.9002
Daewoo Heavy Ind.	3DWXL08.1CPA
	3DWXL18.3ASC
	3DWXL2.37ANT
Generac	3GNXL03.0KTA
Isuzu	3SZXL09.8EXA
	3SZXL15.7ETA
	3SZXL15.7EXA
International Truck	3NVXL0530ANF
Komatsu	3KLXL0239AAD
	3KLXL0239AAF
	3KLXL0359AAB
	3KLXL0359ABC
	3KLXL0505ABD
	3KLXL11.0DD3
	3KLXL15.2EC3
	3KLXL23.2FD4
	3KLXL30.5GC1
	3KLXL30.5GD1
3KLXL060.AAA	

Model Year 2003 Engines Continued

Manufacturer	Engine Families
Lombardini Motori	3LBDL2.07CHT
Lister-Petter	3L5X1.17FX8
Mack Trucks	3MKXL11.9P69
Mitsubishi Heavy Ind	3MVXL24.5AAB
	3MVXL24.5ABA
	3MVXL24.5ABB
	3MVXL24.5ABD
	3MVXL24.5ABE
	3MVXL33.9ABA
	3MVXL33.9ABB
	3MVXL33.9ABD
	3MVXL33.9ABE
	3MVXL37.1ABA
	3MVXL37.1ABB
	3MVXL37.1ABC
	3MVXL37.1ABD
	3MVXL49.0ABA
	3MVXL49.0ABB
3MVXL49.0ABC	
3MVXL65.4ABA	
3MVXL65.4ABB	
3MVXL65.4ABC	
3MVXL65.4ABD	
3MVXL65.4ABE	
3MVXL65.4ABF	
3MVXL65.4ABG	
AB Volvo Penta	3VPXL07.3ACB
	3VPXL09.6ACB
	3VPXL12.1ABA
	3VPXL12.1ACA
	3VPXL12.1ACB
	3VPXL16.0ACB
Perkins	3PKXL15.8H16

Model Year 2004 Engines

Manufacturer	Engine Families
Caterpillar	4CPXL12.0ESK
	4CPXL15.8ERK
	4CPXL15.8ESK
	4CPXL18.0ESK
	4CPXL18.0HRX
	4CPXL27.0HRK
	4CPXL27.0MRS
	4CPXL27.0MRT
	4CPXL34.5ERK
	4CPXL58.6ERK
	4CPXL78.1ERK
	CNH Engine Corp.
4X9XL0359AAK	
4X9XL0359ABE	
4X9XL0505AAB	
4X9XL0505ABD	
Cummins	4CEXL015.AAB
	4CEXL015.ABA
	4CEXL023.AAA
	4CEXL0239AAD
	4CEXL0239AAF
	4CEXL0239AAG
	4CEXL0275AAB
	4CEXL0275AAC
	4CEXL0275AAF
	4CEXL03.3ABA
	4CEXL03.3ABB
	4CEXL030.ABA
	4CEXL0359AAB
	4CEXL0359AAC
	4CEXL0359AAD
	4CEXL0359AAE
	4CEXL0359AAF
	4CEXL0359AAH
	4CEXL0359ABC
	4CEXL0359ABE
4CEXL050.ABA	
4CEXL0505ABD	
4CEXL0505ACB	
4CEXL060.AAA	
4CEXL060.ABA	
4CEXL0661AAD	

Model Year 2004 Engines Continued

Manufacturer	Engine Families
Cummins Continue	4CEXL078.AAB
	4CEXL2.28A41
	4CEXL2.28A42
Detroit Diesel	4DDXL08.5YJD
	4DDXL12.7VGD
	4DDXL14.0VLD
	4DDXL23.9WRE
	4DDXL31.8XRE
	4DDXL35.8GRP
	4DDXL65.0GTP
	4DDXL65.0XTE
	4DDXL90.0XTP
Deere	4JDXL03.0064
	4JDXL06.8038
	4JDXL06.8041
	4JDXL06.8048
	4JDXL06.8049
	4JDXL08.1037
Deutz AG	4DZXL03.1039
	4DZXL03.1040
	4DZXL03.1041
	4DZXL05.7033
	4DZXL06.1038
	4DZXL06.5036
	4DZXL06.5037
	4DZXL06.5042
	4DZXL06.5043
	4DZXL07.1032
	4DZXL15.9002
Daewoo	4DWXL05.8COA
	4DWXL05.8CRN
	4DWXL08.1CPA
	4DWXL11.1BIA
	4DWXL11.1DJA
	4DWXL18.3ASC
	4DWXL2.37ANT
	4DWXL21.9AYA
Isuzu	4SZXL03.1GTB
	4SZXL06.5FXG
	4SZXL15.7ETA
	4SZXL15.7EXA

Model Year 2004 Engines Continued

Manufacturer	Engine Families
International Truck	4NVXL0530ANF
Iveco	4VEXL05.9DGS
	4VEXL12.9GEN
Kirloskar	4KOEL031IRPN
	4KOEL042IRPN
Kubota	4KBXL03.3ACD
	4KBXL03.3BAC
	4KBXL03.3BCC
	4KBXL03.8ACD
Komatsu	4KLXL0239AAD
	4KLXL0239AAF
	4KLXL0239ADA
	4KLXL0275AAC
	4KLXL03.3JA3
	4KLXL03.3JB3
	4KLXL03.3JD3
	4KLXL0359AAB
	4KLXL0359AAE
	4KLXL0359ABC
	4KLXL0505ABD
	4KLXL11.0DD3
	4KLXL15.2EC3
	4KLXL23.2FD4
	4KLXL30.5GC1
	4KLXL30.5GD1
	4KLXL060.AAA
Lister Petter	4L5XL1.17FX8
MACK Trucks	4MKXL11.9P69
	4MKXL11.9P72
MOTORENFABRIK HATZ	4HZXL3.43C42
	4HZXL3.43V42

Model Year 2004 Engines Continued

Manufacturer	Engine Families
Mitsubishi Heavy Ind.	4MVXL05.0AAA
	4MVXL05.0AAD
	4MVXL24.5AAB
	4MVXL24.5ABA
	4MVXL24.5ABB
	4MVXL24.5ABD
	4MVXL24.5ABE
	4MVXL33.9ABB
	4MVXL33.9ABE
	4MVXL37.1ABB
	4MVXL37.1ABC
	4MVXL37.1ABD
	4MVXL49.0ABA
	4MVXL49.0ABB
	4MVXL49.0ABC
	4MVXL49.0ABD
	4MVXL49.0ABE
	4MVXL65.4ABA
	4MVXL65.4ABB
	4MVXL65.4ABC
	4MVXL65.4ABD
	4MVXL65.4ABE
	4MVXL65.4ABF
	4MVXL65.4ABG
	4MVXL65.4ABH
MTU	4MTUL21.9R2A
Nissan Diesel	4NDXL03.0FTA
AB Volvo Penta	4VPXL07.3ACB
	4VPXL09.4ACA
	4VPXL09.4ACB
	4VPXL09.4ACC
	4VPXL09.6ACB
	4VPXL09.6ACC
	4VPXL12.1ABA
	4VPXL12.1ACA
	4VPXL12.1ACB
	4VPXL16.0ACB

Model Year 2004 Engines Continued

Manufacturer	Engine Families
Yanmar	4YDXL3.05M4N
	4YDXL3.32J4N
	4YDXL3.32J4T
	4YDXL3.32K4N
	4YDXL3.32K4T
	4YDXL4.41K4T
Perkins	4PKXL04.4RJ1
	4PKXL15.8H16
Scania AB	4Y9XL11.7BBG
	4Y9XL15.6BDA

Model Year 2005 Engines

Manufacturer	Engine Families
Caterpillar	5CPXL12.5ESK
	5CPXL15.2ESK
	5CPXL15.8ERK
	5CPXL18.0ESK
	5CPXL27.0HRK
	5CPXL27.0MRS
	5CPXL27.0MRT
	5CPXL32.0ESK
	5CPXL34.5ERK
	5CPXL58.6ERK
	5CPXL78.1ERK
CNH Engine Corp.	5X9XL0239AAC
	5X9XL0359AAK
	5X9XL0359ABE
	5X9XL0505AAB
	5X9XL0505ABD
	5X9XL0540AAB
Cummins	5CEXL015.AAB
	5CEXL015.ABA
	5CEXL019.AAB
	5CEXL023.AAA
	5CEXL0239AAD
	5CEXL0239AAF
	5CEXL0239AAG
	5CEXL0275AAB
	5CEXL0275AAC
	5CEXL0275AAF
	5CEXL03.3ABA
	5CEXL03.3ABB
	5CEXL030.ABA
	5CEXL0359AAB
	5CEXL0359AAC
	5CEXL0359AAD
	5CEXL0359AAE
	5CEXL0359AAF
	5CEXL0359AAH
	5CEXL0359ABC
	5CEXL0359ABE
	5CEXL0409AAB
	5CEXL0409AAC
	5CEXL050.ABA
	5CEXL0505AAE
	5CEXL0505ABD
	5CEXL0505ACB

Model Year 2005 Engines (Continued)

Manufacturer	Engine Families
Cummins	5CEXL0540AAB
	5CEXL060.AAA
	5CEXL060.ABA
	5CEXL078.AAB
	5CEXL2.28A41
	5CEXL2.28A42
Detroit Diesel Corporation	5DDXL08.5YJD
	5DDXL14.0VLD
	5DDXL15.9WRE
	5DDXL31.8XRE
	5DDXL31.8XRR
	5DDXL35.8GRP
	5DDXL65.0GTE
	5DDXL65.0GTP
	5DDXL65.0XTE
	5DDXL90.0XTP
Deere	5JDXL04.5083
	5JDXL06.8038
	5JDXL06.8041
	5JDXL06.8048
	5JDXL06.8049
	5JDXL06.8078
	5JDXL06.8101
	5JDXL08.1037
	5JDXL08.1059
	5JDXL09.0102
Deutz	5DZXL03.1039
	5DZXL03.1040
	5DZXL05.7033
	5DZXL06.1038
	5DZXL06.5036
	5DZXL06.5037
	5DZXL06.5042
	5DZXL06.5043
	5DZXL07.1032
	5DZXL15.9002
5DZXL71.0021	

Model Year 2005 Engines (Continued)

Manufacturer	Engine Families
Daewoo Heavy Ind.	5DWXL08.1CPA
	5DWXL11.1BIA
	5DWXL11.1DJA
	5DWXL18.3ASC
	5DWXL21.9AYA
MotorenFabrik HATZ GMBH	5HZXL3.43C42
Isuzu	5SZXL03.1GTB
	5SZXL04.3GTG
	5SZXL06.5FXG
	5SZXL09.8EXA
	5SZXL15.7ETA
	5SZXL15.7EXA
Iveco	5VEXL05.9DGS
	5VEXL06.7DGA
	5VEXL07.8CRS
	5VEXL12.9GEN
Komatsu	5KLXL0239AAD
	5KLXL0239AAF
	5KLXL0239ADA
	5KLXL0275AAC
	5KLXL03.3JA3
	5KLXL03.3JB3
	5KLXL03.3JD3
	5KLXL0359AAB
	5KLXL0359AAE
	5KLXL0359AAL
	5KLXL0359ABC
	5KLXL0409AAB
	5KLXL0409AAC
	5KLXL0505ABD
	5KLXL11.0DD3
5KLXL15.2EC3	
Komatsu	5KLXL23.2FD4
	5KLXL30.5GC1
	5KLXL30.5GD1
Kubota	5KLXL060.AAA
	5KBXL03.3BAC
KUKJ	5KBXL03.3BCC
	5KMCL2.28A41
Lombardini Motori	5KMCL2.28A42
	5LBDL2.19CHT

Model Year 2005 Engines (Continued)

Manufacturer	Engine Families
Mitsubishi Heavy Industries	5MVXL05.0AAA
	5MVXL05.0AAC
	5MVXL05.0AAD
	5MVXL24.5ABB
	5MVXL33.9ABB
	5MVXL37.1ABC
	5MVXL49.0ABD
	5MVXL65.4ABB
	5MVXL65.4ABH
	MITF
MTU-Friedrichshafen	5MTUL21.9R2A
Nissan Diesel	5NDXL02.7TNA
	5NDXL03.0FTA
Perkins	5PKXL06.6PJ1
	5PKXL06.6PJ2
	5PKXL18.0H16
	5PKXL18.0H18
SCANIA	5Y9XL11.7BBG
	5Y9XL11.7BBI
	5Y9XL15.6BDB
AB Volvo Penta	5VPXL07.3ACB
	5VPXL09.4ACA
	5VPXL09.4ACB
	5VPXL09.4ACC
	5VPXL09.6ACB
	5VPXL12.1ABA
	5VPXL12.1ACA
	5VPXL12.1ACB
	5VPXL16.1ACB
	5VPXL16.1ACC
	5VPXL16.1ACD
	5VPXL16.1ACE
	5VPXL16.1ACF
	Yanmar
5YDXL3.32J4N	
5YDXL3.32J4T	
5YDXL3.32K4N	
5YDXL4.41K4T	

Model Year 2006 Engines

Manufacturer	Engine Families
AB Volvo Penta	6VPXL12.1BAA
	6VPXL16.1ACB
	6VPXL9.4BAA
Caterpillar	6CPXL08.0ESK
	6CPXL15.2ESK
	6CPXL15.2ESL
	6CPXL18.0ESK
	6CPXL18.1ESK
	6CPXL18.1ESL
	6CPXL27.0ESL
	6CPXL27.0HRK
	6CPXL32.0ESK
	6CPXL34.5E2T
	6CPXL34.5T2E
	6CPXL34.5E2W
	6CPXL51.8E2W
	6CPXL58.6E2T
6CPXL58.6T2E	
6CPXL78.1E2T	
6CPXL78.1T2E	
CNH Engine Corp.	6X9XL0239AAC
	6X9XL0359AAM
	6X9XL0359ABE
	6X9XL0505ABD
	6X9XL0540AAB
Cummins	6CEXK0505AAE
	6CEXL015.AAB
	6CEXL019.AAB
	6CEXL019.AAC
	6CEXL023.AAA
	6CEXL0239AAD
	6CEXL0239AAF
	6CEXL0239AAG
	6CEXL0275AAB
	6CEXL0275AAC
	6CEXL0275AAG
	6CEXL0275AAH
	6CEXL030.AAB
	6CEXL030.AAD
	6CEXL030.ABA
	6CEXL03.3ABC
6CEXL0359AAB	
6CEXL0359AAC	
6CEXL0359AAD	

Model Year 2006 Engines (Continued)

Manufacturer	Engine Families
Cummins (cont.)	6CEXL0359AAF
	6KLXL0359AAL
	6CEXL0359AAN
	6CEXL0359ABC
	6CEXL0359ABE
	6CEXL0409AAB
	6CEXL0409AAC
	6CEXL050.AAD
	6CEXL050.ABA
	6CEXL0505ABD
	6CEXL0540AAB
	6CEXL060.AAD
	6CEXL078.AAB
DAIMLERCHRYSLER	6MBXL7.20RJA
	6MBXL12.8RJB
Deere	6JDXL03.0064
	6JDXL04.5057
	6JDXL04.5083
	6JDXL06.8001
	6JDXL06.8004
	6JDXL06.8006
	6JDXL06.8038
	6JDXL06.8041
	6JDXL06.8048
	6JDXL06.8049
	6JDXL06.8078
	6JDXL08.1037
	6JDXL12.5035
	6JDXL12.5073
	6JDXL13.5103
Detroit Diesel Corporation	6DDXL14.0VLD
	6DDXL31.8XRR
Deutz	6DZXL06.1038
	6DZXL06.1028
	6DZXL05.7033
	6DZXL06.5036
	6DZXL06.5037
	6DZXL06.5042
	6DZXL03.1066
	6DZXL03.1039
	6DZXL03.1040

Model Year 2006 Engines (Continued)

Manufacturer	Engine Families
Isuzu	6SZXL04.3GTG
	6SZXL06.5FXG
	6SZXL05.2HXA
	6SZXL05.2IXA
	6SZXL07.8HXA
	6SZXL15.7HXA
IVECO	6VEXL04.5DGT
	6VEXL04.5DGN
	6VEXL06.7DGA
	6VEXL06.7DGB
	6VEXL06.7DGS
Komatsu	6KLXL0239AAD
	6KLXL0239AAF
	6KLXL0239ADA
	6KLXL0275AAC
	6KLXL0275AAG
	6KLXL0275AAH
	6KLXL03.3JD3
	6KLXL0359AAB
	6KLXL0359AAE
	6KLXL0359AAL
	6KLXL0359ABC
	6KLXL0409AAB
	6KLXL0409AAC
	6KLXL0505ABD
Kubota	6KBXL03.3CCD
Mitsubishi Fuso Truck & Bus Corp	6MFTL05.8D3A
Mitsubishi Heavy Industries	6MVXL05.0AAA
	6MVXL05.0AAD
	6MVXL05.0DDD
	6MVXL06.4DDD
	6MVXL06.4EEE
MotorenFabrik HATZ GMBH	6HZXL3.43C42
	6HZXL3.43V42
Nissan	6NDXL03.0FTA
Perkins	6PKXL06.6PJ1
	6PKXL06.6PJ2
VMMI	6V5XL04.2G5V
Yanmar	6YDXL3.32J4T
	6YDXL3.32K4T
	6YDXL4.41K4T

Model Year 2007 Engines

Manufacturer	Engine Families
AB Volvo Penta	7VPXL09.4BAA
	7VPXL12.1BAA
	7VPXL16.1ACB
Caterpillar	7CPXL07.2ESL
	7CPXL08.8ESK
	7CPXL11.1ESK
	7CPXL12.5ESK
	7CPXL15.2ESK
	7CPXL15.2ESL
	7CPXL18.1ESK
	7CPXL18.1ESL
	7CPXL27.0ESK
	7CPXL32.0ESK
	7CPXL51.8E2W
	7CPXL78.1ERK
	7CPXL34.5T2E
	7CPXL58.6T2E
	7CPXL78.1T2E
CNH Engine Corp.	7X9XL0505AAE
	7X9XL0540AAB
	7X9XL0239AAB
	7NHXL04.5DAA
	7NHXL04.5DCA
	7NHXL06.7DAA
	7NHXL06.7DCA
	7NHXL06.7DCB
	7NHXL06.7DTA
	7NHXL06.7DTC
Cummins	7CEXL015.AAA
	7CEXL015.AAB
	7CEXL015.AAE
	7CEXL019.AAD
	7CEXL023.AAA
	7CEXL0239AAG
	7CEXL0275AAC
	7CEXL0275AAG
	7CEXL0275AAH
	7CEXL03.3ABA
	7CEXL03.3ABB
	7CEXL03.3ACA
	7CEXL03.3ACB
	7CEXL030.AAB
	7CEXL030.AAD

Model Year 2007 Engines (Continued)

Manufacturer	Engine Families
Cummins (cont.)	7CEXL030.ABA
	7CEXL038.AAA
	7CEXL0409AAB
	7CEXL0409AAC
	7CEXL045.AAA
	7CEXL050.AAC
	7CEXL050.AAD
	7CEXL050.ABA
	7CEXL0505AAE
	7CEXL0540AAB
	7CEXL060.AAB
	7CEXL060.AAD
	7CEXL0661AAF
	7CEXL0661AAG
	7CEXL0661AAH
	7CEXL0661AAJ
DAIMLERCHRYSLER	7MBXL12.8RJB
	7MBXL15.9RJA
Deere	7JDXL03.0064
	7JDXL04.5075
	7JDXL04.5076
	7JDXL04.5081
	7JDXL04.5083
	7JDXL06.8038
	7JDXL06.8039
	7JDXL06.8041
	7JDXL06.8044
	7JDXL06.8048
	7JDXL06.8049
	7JDXL06.8078
	7JDXL06.8080
	7JDXL06.8084
	7JDXL06.8101
	7JDXL06.8104
	7JDXL06.8105
	7JDXL06.8106
7JDXL08.1037	
7JDXL09.0102	
7JDXL12.5035	
7JDXL12.5073	
7JDXL13.5103	



Model Year 2007 Engines (Continued)

Manufacturer	Engine Families	
Detroit Diesel Corporation	7DDXL14.0VLD	
	7DDXL14.0WLD	
Deutz	7DZXL03.1039	
	7DZXL03.1040	
	7DZXL03.1066	
	7DZXL06.1038	
	7DZXL06.1059	
	7DZXL06.1060	
	7DZXL06.1061	
	7DZXL06.1063	
	7DZXL06.5042	
	7DZXL06.5043	
	7DZXL07.1051	
	7DZXL07.1053	
	7DZXL07.1055	
	7DZXL15.9065	
	Doosan Infracore	7DWXL05.8CRN
		7DWXL05.8UTA
7DWXL07.6UPA		
7DWXL11.0UJA		
	7DWXL21.9UYA	
GNH UK LTD	7NHXL06.7DCC	
Hino Motors	7HMXL05.1JTA	
	7HMXL07.7JTM	
	7HMXL10.5PUN	
Ishikawajima-Shibaura Machinery	7H3XL2.22N4L	
Isuzu	7SZXL03.0IXA	
	7SZXL03.1GNA	
	7SZXL03.1GNB	
	7SZXL03.1GTB	
	7SZXL04.3GTG	
	7SZXL04.3GXA	
	7SZXL05.2HXA	
	7SZXL05.2IXA	
	7SZXL05.2IXB	
	7SZXL07.8HXA	
	7SZXL07.8HXB	
	7SZXL09.8HXA	
	7SZXL15.7HXA	

Model Year 2007 Engines (Continued)

Manufacturer	Engine Families
IVECO	7VEXL03.9B1Z
	7VEXL04.5DAA
	7VEXL04.5DGN
	7VEXL04.5DGT
	7VEXL06.7DAA
	7VEXL06.7DCA
	7VEXL06.7DCB
	7VEXL06.7DCC
	7VEXL06.7DGB
	7VEXL06.7DGS
	7VEXL06.7DTA
	7VEXL06.7DTC
	7VEXL08.7TR3
	7VEXL10.3MLR
	7VEXL12.9IGR
	7VEXL12.9MLR
	7VEXL12.9TR3
7VEXL20.1DSL	
Komatsu	7KLXL0239ADA
	7KLXL0275AAC
	7KLXL0275AAG
	7KLXL0275AAH
	7KLXL03.3JA3
	7KLXL03.3JB3
	7KLXL03.3JD3
	7KLXL03.3JD6
	7KLXL03.3JD7
	7KLXL0359AAE
	7KLXL038.AAA
	7KLXL0409AAB
	7KLXL0409AAC
	7KLXL045.AAA
	7KLXL050.AAC
	7KLXL0505AAE
	7KLXL060.AAB
	7KLXL078.AAA
	7klxl11.0DD6
7KLXL11.0DD6	
7KLXL15.2ED6	
7klxl15.2ED6	
7KLXL15.2ED7	
7KLXL23.2FD6	
7KLXL30.5GD3	

Model Year 2007 Engines (Continued)

Manufacturer	Engine Families
Kubota	7KBXL02.0FAD
	7KBXL02.4HCD
	7KBXL03.3BAC
	7KBXL03.3BAD
	7KBXL03.3BBB
	7KBXL03.3BCC
	7KBXL03.3BCD
	7KBXL03.3CCD
	7KBXL03.8AHD
	Lombardini S.R.L.
MAHINDRA & MAHINDRA LTD.,	7MMLL03.1NEF
	7MMLL03.2NEF
	7MMLL03.2NET
	7MMLL03.4NEF
	7MMLL03.5NEF
Mitsubishi Fuso Truck & Bus Corp	7MFTL02.8M4A
	7MFTL04.9M5A
	7MFTL07.5M6A
	7MFTL12.9M7A
Mitsubishi Heavy Industries	7MVXL05.0AAA
	7MVXL05.0AAC
	7MVXL05.0AAD
	7MVXL06.4FFF
	7MVXL24.5BBA
	7MVXL33.9BBA
	7MVXL37.1BBA
	7MVXL49.0BBA
7MVXL65.4BBA	
MotorenFabrik HATZ GMBH	7HZXL2.57C41
	7HZXL3.43C42
	7HZXL3.43V42
MTU Detroit Diesel, Inc.	7MDDL31.8XRR
Nissan	7NDXL02.7TNA
	7NDXL03.0FTA
	7NDXL03.2TNA

Model Year 2007 Engines (Continued)

Manufacturer	Engine Families
Perkins Engines	7PKXL03.3DC1
	7PKXL03.3DD1
	7PKXL04.4NH1
	7PKXL04.4NJ1
	7PKXL04.4RE1
	7PKXL04.4RF1
	7PKXL06.6PJ1
	7PKXL06.6PJ2
	7PKXL15.2TA2
	7PKXL15.2TAG
	7PKXL18.1TAG
SCANIA CV AB	7Y9XL11.7BBA
	7Y9XL11.7BBB
	7Y9XL15.6BDE
Shandong Weichai Huafeng Power	7SDWL4.33BBB
	7SDWL7.52AAA
Sisu Diesel	7SIDL03.3G4A
	7SIDL04.4J2A
	7SIDL07.4G4D
	7SIDL07.4G4E
	7SIDL07.4G5B
	7SIDL07.4G5C
	7SIDL08.4H5B
Volvo Construction Equipment AB	7VSXL09.4CE3
	7VSXL12.1CE3
	7VSXL16.1CE3
Yanmar	7YDXL3.05M4N
	7YDXL3.05P4N
	7YDXL3.32J4N
	7YDXL3.32J4T
	7YDXL3.32K4T
	7YDXL3.32P4N
	7YDXL4.41K4T

Model Year 2008 Engines

Manufacturer	Engine Families
AB Volvo Penta	8VPXL09.4BAA
	8VPXL12.1BAA
	8VPXL12.8BCA
	8VPXL16.1ACB
	8VPXL16.1ACW
Caterpillar	8CPXL07.2ESL
	8CPXL08.8ESK
	8CPXL106.T2E
	8CPXL11.1ESK
	8CPXL12.5ESK
	8CPXL15.2ELW
	8CPXL15.2ESW
	8CPXL18.1ESK
	8CPXL18.1ESW
	8CPXL18.1ESX
	8CPXL27.0ESK
	8CPXL27.0ESW
	8CPXL27.0ESX
	8CPXL32.0ESW
	8CPXL32.0ESX
	8CPXL34.5E2W
	8CPXL34.5T2E
	8CPXL51.8E2W
	8CPXL58.6T2E
	8CPXL58.6T2X
8CPXL78.1E2W	
8CPXL78.1T2E	
CNH Engine	8X9XL0540AAB
CNH UK LTD	8NHXL04.5DAA
	8NHXL04.5DAB
	8NHXL04.5DCA
	8NHXL04.5DCB
	8NHXL06.7DAA
	8NHXL06.7DCA
	8NHXL06.7DCB
	8NHXL06.7DCC

Model Year 2008 Engines (Continued)

Manufacturer	Engine Families
Cummins	8CEXL015.AAA
	8CEXL015.AAB
	8CEXL015.AAE
	8CEXL015.AAH
	8CEXL015.AAJ
	8CEXL019.AAD
	8CEXL023.AAA
	8CEXL023.AAB
	8CEXL023.AAC
	8CEXL0275AAG
	8CEXL0275AAH
	8CEXL0275AAK
	8CEXL03.3ACA
	8CEXL03.3ACB
	8CEXL03.3ACD
	8CEXL03.3ACE
	8CEXL030.AAB
	8CEXL030.AAD
	8CEXL030.ABA
	8CEXL0409AAB
	8CEXL0409AAC
	8CEXL0409AAD
	8CEXL045.AAA
	8CEXL050.AAA
	8CEXL050.AAC
	8CEXL050.AAD
	8CEXL050.ABA
	8CEXL0505AAE
	8CEXL0540AAB
	8CEXL060.AAB
8CEXL060.AAD	
8CEXL0661AAF	
8CEXL0661AAG	
8CEXL0661AAH	
8CEXL0661AAJ	
8CEXL078.AAA	
8CEXL078.AAB	
8CEXL2.28A41	

Model Year 2008 Engines (Continued)

Manufacturer	Engine Families
DAIMLERCHRYSLER	8MBXL07.2RJA
	8MBXL12.8RJB
	8MBXL15.9RJA
Detroit Diesel	8DDXL14.0VLD
Deutz	8DZXL02.3099
	8DZXL02.7096
	8DZXL03.2088
	8DZXL03.6081
	8DZXL03.6082
	8DZXL03.6084
	8DZXL03.6086
	8DZXL03.6097
	8DZXL03.6098
	8DZXL04.1069
	8DZXL04.1070
	8DZXL04.1076
	8DZXL04.1078
	8DZXL04.1079
	8DZXL04.1080
	8DZXL04.8064
	8DZXL04.8068
	8DZXL04.8071
	8DZXL05.4087
	8DZXL06.1057
	8DZXL06.1059
	8DZXL06.1060
	8DZXL06.1061
	8DZXL06.1063
	8DZXL06.1067
	8DZXL06.1077
	8DZXL06.5074
	8DZXL06.5075
	8DZXL07.1051
	8DZXL07.1053
	8DZXL07.1055
	8DZXL07.1056
	8DZXL15.9065
DOOSAN INFRACORE	8DWXL05.8UTA
	8DWXL07.6UPA
	8DWXL11.0UJA
	8DWXL21.9UYA
HINO MOTORS	8HMXL05.1JTA

Model Year 2008 Engines (Continued)

Manufacturer	Engine Families
Ishikawajima	8H3XL2.00N4T
	8H3XL2.22N4L
	8H3XL2.22N4T
Isuzu	8SZXL02.2UTA
	8SZXL02.2UXA
	8SZXL03.0IXA
	8SZXL03.0JTA
	8SZXL03.0JXA
	8SZXL03.0JXB
	8SZXL03.0UTB
	8SZXL05.2HXA
	8SZXL05.2IXA
	8SZXL05.2IXB
	8SZXL07.8HXA
	8SZXL07.8HXB
	8SZXL09.8HXA
	8SZXL09.8HXB
	8SZXL15.7HXA
	8SZXL15.7HXB
IVECO	8VEXL03.2TAI
	8VEXL03.2TCE
	8VEXL03.2TCI
	8VEXL04.5DAA
	8VEXL04.5DAB
	8VEXL04.5DCA
	8VEXL04.5DCB
	8VEXL06.7DAA
	8VEXL06.7DCA
	8VEXL06.7DCB
	8VEXL06.7DCC
	8VEXL06.7DGB
	8VEXL06.7DGS
	8VEXL08.7TR3
	8VEXL10.3MLR
	8VEXL10.3TR3
	8VEXL12.9IGR
	8VEXL12.9MLR
	8VEXL12.9TCD
	8VEXL20.1DSL
JCB Power Systems	8JCBL04.4TA7
	8JCBL04.4TA8
	8JCBL04.4TAE
	8JCBL04.4TC6

Model Year 2008 Engines (Continued)

Manufacturer	Engine Families
John Deere Power	8JDXL03.0064
	8JDXL03.0208
	8JDXL04.5075
	8JDXL04.5083
	8JDXL04.5107
	8JDXL06.8038
	8JDXL06.8039
	8JDXL06.8041
	8JDXL06.8049
	8JDXL06.8078
	8JDXL06.8080
	8JDXL06.8101
	8JDXL06.8104
	8JDXL06.8105
	8JDXL06.8106
	8JDXL08.1037
	8JDXL09.0102
	8JDXL09.0114
	8JDXL12.5035
	8JDXL13.5103
Komatsu	8KLXL0275AAG
	8KLXL0275AAH
	8KLXL03.3JA6
	8KLXL03.3JB6
	8KLXL03.3JD6
	8KLXL03.3JD7
	8KLXL03.3JD9
	8KLXL0409AAB
	8KLXL0409AAC
	8KLXL050.AAA
	8KLXL050.AAC
	8KLXL0505AAE
	8KLXL060.AAA
	8KLXL060.AAB
	8KLXL078.AAA
	8KLXL11.0DD6
	8KLXL15.2ED6
	8KLXL15.2ED7
	8KLXL23.2FD5
	8KLXL23.2FD6
8KLXL23.2FD7	
8KLXL30.5GD3	

Model Year 2008 Engines (Continued)

Manufacturer	Engine Families
Kubota	8KBXL02.4FAD
	8KBXL02.4HAD
	8KBXL02.6EAD
	8KBXL03.3CAD
	8KBXL03.6BAC
	8KBXL03.6BAD
	8KBXL03.6BCD
	8KBXL03.6DAD
	8KBXL03.8AAC
	8KBXL03.8AGD
Kukje Machinery	8KMCL2.28A41
M/S. SIMPSON & C.	8SCLL02.7V50
Liebherr Machines	8LHAL10.5LPA
	8LHAL10.5LPE
	8LHAL12.0KPA
	8LHAL12.8RMC
	8LHAL24.2VCE
	8LHAL9.54SPA
Liebherr Werk	8LHAL21.9VMR
Mitsubishi	8MVXL02.5HHH
	8MVXL03.3AAC
	8MVXL04.2BBB
	8MVXL04.2CCC
	8MVXL05.0AAD
	8MVXL05.0AAG
	8MVXL06.4FFF
	8MVXL24.5BBA
	8MVXL33.9BBA
	8MVXL37.1BBA
	8MVXL49.0BBA
	8MVXL65.4BBA
MAHINDRA & MAHINDRA	8MMLL02.5N52
	8MMLL02.5N57
	8MMLL02.5N59
	8MMLL02.5N62
	8MMLL02.5N64
	8MMLL02.7M30
	8MMLL03.3N75
	8MMLL03.3N79

Model Year 2008 Engines (Continued)

<b>Manufacturer</b>	<b>Engine Families</b>
MOTORENFABRIK	8HZXL3.43C42
	8HZXL3.43V42
MTU DETROIT DIESEL	8MDDL31.8XRR
	8MDDL35.8GRR
	8MDDL95.4XTR
NISSAN DIESEL	8NDXL03.2TNA
	8NDXL04.2TNA
Perkins Engines	8PKXL04.4NH1
	8PKXL04.4NJ1
	8PKXL04.4NJ2
	8PKXL04.4NM1
	8PKXL04.4RG3
	8PKXL06.6PJ1
	8PKXL06.6PJ2
	8PKXL15.2TA2
	8PKXL15.2TAG
	8PKXL18.1TAG
Scania	8Y9XL11.7BBA
	8Y9XL11.7BBB
	8Y9XL15.6BDE
Volvo	8VSXL09.4CE3
	8VSXL12.1CE3
	8VSXL16.1CE3
Yanmar	8YDXL2.00N4T
	8YDXL3.32C4N
	8YDXL3.32C4T
	8YDXL3.32R4N
	8YDXL3.32M4N
	8YDXL3.32M4T

Model Year 2009 Engines

Manufacturer	Engine Families	
AB Volvo Penta	9VPXL09.4BAA	
	9VPXL12.1BAA	
	9VPXL12.8BCA	
	9VPXL16.1ACB	
	9VPXL16.1ACW	
	9VPXL16.1BEA	
	9VSXL09.4CE3	
	9VSXL12.1CE3	
	9VSXL16.1CE3	
Caterpillar	9CPXL07.2ESL	
	9CPXL08.8ESK	
	9CPXL106.T2E	
	9CPXL11.1ESK	
	9CPXL12.5ESK	
	9CPXL12.5ESX	
	9CPXL14.2ELW	
	9CPXL15.2ESW	
	9CPXL18.1ESK	
	9CPXL18.1ESW	
	9CPXL18.1ESX	
	9CPXL27.0ESK	
	9CPXL27.0ESW	
	9CPXL27.0ESX	
	9CPXL27.0ESX	
	9CPXL32.0ESP	
	9CPXL32.0ESW	
	9CPXL32.0ESX	
	9CPXL34.5T2C	
	9CPXL34.5T2E	
	9CPXL58.6T2E	
	9CPXL58.6T2X	
	9CPXL58.6T2Y	
	9CPXL78.1E2W	
	9CPXL78.1T2E	
	CNH UK LTD	9NHXL04.5DAA
		9NHXL04.5DAB
		9NHXL04.5DCA
9NHXL04.5DCB		
9NHXL06.7DAA		
9NHXL06.7DCA		
9NHXL06.7DCB		
9NHXL06.7DCC		

Model Year 2009 Engines (Continued)

Manufacturer	Engine Families	
Cummins	9CEXL015.AAA	
	9CEXL015.AAE	
	9CEXL015.AAH	
		9CEXL015.AAJ
		9CEXL019.AAD
		9CEXL023.AAA
		9CEXL023.AAB
		9CEXL023.AAC
		9CEXL0275AAG
		9CEXL0275AAH
		9CEXL0275AAK
		9CEXL03.3ACA
		9CEXL03.3ACB
		9CEXL03.3ACD
		9CEXL03.ACE
		9CEXL030.AAB
		9CEXL030.AAD
		9CEXL030.ABA
		9CEXL0409AAB
		9CEXL0409AAC
		9CEXL0409AAD
		9CEXL045.AAA
		9CEXL050.AAA
		9CEXL050.AAC
		9CEXL050.AAD
		9CEXL050.AAF
		9CEXL050.ABA
		9CEXL0505AAE
		9CEXL0540AAB
		9CEXL0540AAD
	9CEXL060.AAB	
	9CEXL060.AAD	
	9CEXL0661AAF	
	9CEXL0661AAG	
	9CEXL0661AAH	
	9CEXL0661AAJ	
	9CEXL078.AAA	
	9CEXL2.28A41	

Model Year 2009 Engines (Continued)

Manufacturer	Engine Families
Detroit Diesel	9DDXL14.DVLD
Deutz	9DXZL04.8071
	9DZL04.8073
	9DZXL02.3048
	9DZXL02.3099
	9DZXL02.7096
	9DZXL03.2088
	9DZXL03.6081
	9DZXL03.6082
	9DZXL03.6084
	9DZXL03.6086
	9DZXL03.6097
	9DZXL03.6098
	9DZXL04.1069
	9DZXL04.1070
	9DZXL04.1072
	9DZXL04.1076
	9DZXL04.1078
	9DZXL04.1079
	9DZXL04.1080
	9DZXL04.8064
	9DZXL04.8068
	9DZXL06.1057
	9DZXL06.1059
	9DZXL06.1060
	9DZXL06.1061
	9DZXL06.1063
	9DZXL06.1067
	9DZXL06.1077
	9DZXL06.5074
	9DZXL07.1051
	9DZXL07.1053
	9DZXL07.1055
	9DZXL07.1056
	9DZXL15.9065
DOOSAN INFRACORE	9DICL05.8UTA
	9DICL07.6UPA
	9DICL11.0UJA
HINO MOTORS	9HMXL04.0NUA
	9HMXL05.1JTA
	9HMXL07.7JTM
	9HMXL10.5PUN
	9HMXL10.5PUP
	9HXML12.9EUV

Model Year 2009 Engines (Continued)

Manufacturer	Engine Families
Isuzu	9SZXL02.2UXA
	9SZXL03.0IXA
	9SZXL03.0JTA
	9SZXL03.0JXA
	9SZXL03.0JXB
	9SZXL03.0UTB
	9SZXL05.2HXA
	9SZXL05.2IXA
	9SZXL05.2IXB
	9SZXL07.8HXA
	9SZXL07.8HXB
	9SZXL09.8HXA
	9SZXL09.8HXB
	9SZXL15.7HXA
	9SZXL15.7HXB
IVECO	9VEXL03.2TCE
	9VEXL03.2TCI
	9VEXL04.4DCB
	9VEXL04.5DAA
	9VEXL04.5DAB
	9VEXL04.5DCA
	9VEXL06.7DAA
	9VEXL06.7DCA
	9VEXL06.7DCB
	9VEXL06.7DCC
	9VEXL06.7DGB
	9VEXL06.7DGS
	9VEXL08.7TR3
	9VEXL10.3MLR
	9VEXL10.3TR3
	9VEXL12.9IGR
	9VEXL12.9MLR
	9VEXL12.9TCD
	9VEXL20.1DSL
JCB Power Systems	9JCBL04.4TA7
	9JCBL04.4TA8
	9JCBL04.4TAE
	9JCBL04.4TC6



Model Year 2009 Engines (Continued)

Manufacturer	Engine Families
John Deere Power	9JDXL03.0064
	9JDXL03.0113
	9JDXL03.0203
	9JDXL03.0208
	9JDXL04.5083
	9JDXL04.5107
	9JDXL06.8049
	9JDXL06.8080
	9JDXL06.8101
	9JDXL06.8104
	9JDXL06.8105
	9JDXL06.8106
	9JDXL08.1037
	9JDXL09.0102
	9JDXL09.0114
	9JDXL13.5103
	Komatsu
9KLXL0275AAH	
9KLXL03.3JA6	
9KLXL03.3JB6	
9KLXL03.3JD6	
9KLXL03.3JD7	
9KLXL0409AAB	
9KLXL0409AAC	
9KLXL050.AAA	
9KLXL050.AAC	
9KLXL0505AAE	
9KLXL060.AAA	
9KLXL060.AAB	
9KLXL11.0DD6	
9KLXL15,2ED7	
9KLXL15.2ED6	
9KLXL23.2FD5	
9KLXL23.2FD6	
9KLXL23.2FD7	
9KLXL30.5GD3	
9XLXL03.3JD9	

Model Year 2009 Engines (Continued)

Manufacturer	Engine Families
Kubota	9KBXL02.4FAD
	9KBXL02.4HAD
	9KBXL02.6EAD
	9KBXL03.3CAD
	9KBXL03.6BAC
	9KBXL03.6BAD
	9KBXL03.6BCD
	9KBXL03.6DAD
	9KBXL03.8AAC
	9KBXL03.8AGD
	9KBXL03.8AHD
	9KBXL06.1AHD
	Kukje Machinery
Liebherr Machines	9LHAL10.5LPA
	9LHAL10.5LPE
	9LHAL12.0KPA
	9LHAL12/8RMC
	9LHAL24.2VCE
	9LHAL24.2VCI
LOMBARDINI MOTORI	9LBDL2.19CH2
Mitsubishi	9MFTL02.8M4B
	9MFTL04.9M5A
	9MFTL07.5M6A
	9MFTL12.9M7A
	9MVXL03.3AAC
	9MVXL03.3AAH
	9MVXL04.2BBB
	9MVXL04.2CCC
	9MVXL05.0AAD
	9MVXL06.4FFF
	9MVXL24.5BBA
9MVXL33.9BBA	
9MVXL37.1BBA	
9MVXL49.0BBA	
9MVXL65.4BBA	

Model Year 2009 Engines (Continued)

<b>Manufacturer</b>	<b>Engine Families</b>
MOTORENFABRIK	9HZXL2.57C41
	9HZXL2.57V41
	9HZXL3.43C42
	9HZXL3.43V42
MTU DETROIT DIESEL	9MDDL31.8XRR
	9MDDL35.8GRR
NAVISTAR	9NVXL0466ANA
NISSAN DIESEL	9NDXL03.2TNA
	9NDXL04.2TNA
Perkins Engines	9PKXL04.4NJ1
	9PKXL04.4NJ2
	9PKXL04.4NM1
	9PKXL04.4NM2
	9PKXL04.4RG3
	9PKXL06.6PJ1
	9PKXL06.6PJ2
	9PKXL12.5TAG
	9PKXL15.2TAG
	9PKXL15.2TAG
	9PKXL18.1TAG
Scania	9Y9XL11.7BBA
	9Y9XL11.7BBB
	9Y9XL15.6BDE
TOYOTA INDUSTRIAL	9TALL02.51DZ
Yanmar	9YDXL2.00N4T
	9YDXL3.05K4N
	9YDXL3.32C4N
	9YDXL3.32C4T
	9YDXL3.32M4N
	9YDXL3.32M4T

When installing the Permit Filter on 2010 Caterpillar engines listed below, the engine operating parameters (minimum load and exhaust temperature) must be met for 30% of operating time or 2 hours, whichever is longer, for the engine to meet the verification conditions.

Model Year 2010 Engines

Caterpillar Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
ACPXL08.8ESK	40%	335
ACPXL08.8ESL	50%	340
ACPXL08.8ESX	25%	385
ACPXL10.3ESL	50%	375
ACPXL11.1ESK	35%	375
ACPXL12.5ESK	20%	400
ACPXL15.2ELW	10%	336
ACPXL15.2ESW	25%	290
ACPXL15.2ESX	10%	336
ACPXL15.2NZV	35%	320
ACPXL18.1ESK	35%	350
ACPXL18.1ESW	25%	357
ACPXL18.1ESX	50%	360
ACPXL27.0ESK	20%	330
ACPXL27.0ESW	20%	335
ACPXL27.0ESX	35%	325
ACPXL32.0ESP	20%	325
ACPXL32.0ESW	15%	280
ACPXL32.0ESX	25%	280
ACPXL34.5T2C	25%	280
ACPXL58.6T2E	10%	406
ACPXL58.6T2X	25%	335
ACPXL58.6T2Y	25%	350
ACPXL78.1E2W	20%	325
ACPXL78.1T2E	10%	330
ACPXL78.1T2X	25%	332
ACPXL78.1T2Y	25%	340
ACPXL106.T2E	15%	350
ACPXL106.T2M	15%	380

Model Year 2010 Engines (Continued)

Cummins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
ACEXL015.AAH	40%	375
ACEXL015.AAJ	30%	375
ACEXL023.AAB	40%	375
ACEXL0275AAG	50%	375
ACEXL0275AAH	50%	400
ACEXL0275AAK	50%	400
ACEXL030.AAD	40%	375
ACEXL0409AAB	50%	375
ACEXL0409AAC	50%	375
ACEXL0409AAD	50%	375
ACEXL050.AAD	40%	375
ACEXL0505AAE	50%	375
ACEXL0540AAB	50%	375
ACEXL060.AAD	30%	375

John Deere Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
AJDXL04.5107	50%	400
AJDXL06.8078	50%	375
AJDXL06.8104	50%	375
AJDXL06.8106	50%	375
AJDXL06.8117		
AJDXL09.0114	50%	375

Detroit Diesel Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
ADDXL14.0WLD	40%	375

Model Year 2010 Engines (Continued)

Mitsubishi Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
AMVXL24.5BBA	40%	375
AMVXL33.9BBA	40%	375
AMVXL37.1BBA	40%	375
AMVXL49.0BBA	40%	375
AMVXL65.4BBA	40%	375
AMVXL65.4BBB	40%	375

MTU DD Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
AMDDL21.0GWR	40%	375
AMDDL31.8XRR	40%	375
AMDDL35.8GRR	40%	375
AMDDL95.4XTR	40%	375

Perkins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
APKXL04.4NJ1	50%	375
APKXL06.6PJ1	50%	375
APKXL06.6PJ2	50%	375
APKXL12.5TAG	50%	375
APKXL15.2TA2	50%	375
APKXL15.2TAG	50%	375
APKXL18.1TAG	50%	375

AB Volvo Penta Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
AVPXL16.1ACB	40%	375
AVPXL16.1ACG	40%	375
AVPXL16.1ACW	40%	375

When installing the Permit Filter on Caterpillar engines listed below, the engine operating parameters (minimum load and exhaust temperature) must be met for 30% of operating time or 2 hours, whichever is longer, for the engine to meet the verification conditions.

Model Year 2011 Engines

Caterpillar Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
BCPXL08.8NZZ	50%	400
BCPXL106.NZZ	20%	375
BCPXL11.1ESK	35%	375
BCPXL12.5ESK	20%	400
BCPXL15.2ESK	30%	400
BCPXL15.2ESW	20%	400
BCPXL15.2NYS	30%	400
BCPXL15.2NZZ	30%	400
BCPXL18.1ESK	35%	350
BCPXL18.1NYS	30%	400
BCPXL18.1NZZ	25%	300
BCPXL27.0NZZ	30%	375
BCPXL32.0NZZ	40%	375
BCPXL78.1NZZ	20%	350

Model Year 2011 Engines (Continued)

Cummins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
BCEXL015.AAH	40%	375
BCEXL015.AAJ	30%	375
BCEXL023.AAB	40%	375
BCEXL0275AAG	50%	375
BCEXL0275AAH	50%	400
BCEXL0275AAK	50%	400
BCEXL030.AAD	40%	375
BCEXL0409AAB	50%	375
BCEXL0409AAC	50%	375
BCEXL0409AAD	50%	375
BCEXL050.AAD	40%	375
BCEXL0505AAE	50%	375
BCEXL0540AAB	50%	375
BCEXL060.AAD	30%	375

John Deere Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
BJDXL04.5107	50%	400
BJDXL06.8078	50%	375
BJDXL06.8104	50%	375
BJDXL06.8105	50%	375
BJDXL06.8106	50%	375
BJDXL06.8117	50%	375
BJDXL06.8120	50%	375
BJDXL09.0114	50%	375
BJDXL13.5132	40%	375

Detroit Diesel Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
BDDXL14.0WLD	40%	375

Model Year 2011 Engines (Continued)

Mitsubishi Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
BMVXL24.5BBA	40%	375
BMVXL33.9BBA	40%	375
BMVXL37.1BBA	40%	375
BMVXL49.0BBA	40%	375
BMVXL65.4BBA	40%	375
BMVXL65.4BBB	40%	375

MTU DD Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
BMDDL14.0ZWK	50%	375
BMDDL21.0ZWR	40%	375
BMDDL31.8XRR	40%	375
BMDDL35.8GRR	40%	375
BMDDL95.4XTR	40%	375

Perkins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
BPKXL04.4NH1	50%	375
BPKXL04.4NJ1	50%	375
BPKXL06.6PJ1	50%	375
BPKXL06.6PJ2	50%	375

AB Volvo Penta Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
BVPXL16.1ACB	40%	375
BVPXL16.1ACG	40%	375
BVPXL16.1ACW	40%	375

Model Year 2012 Engines

Caterpillar Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
CCPXL07.2ESJ	55%	390
CCPXL08.8ESJ	50%	400
CCPXL08.8NZS	50%	400
CCPXL11.1ESJ	35%	375
CCPXL11.1ESK	40%	375
CCPXL12.5ESJ	20%	400
CCPXL12.5ESK	40%	400
CCPXL15.2ESJ	20%	400
CCPXL15.2ESW	30%	400
CCPXL15.2NYS	30%	400
CCPXL15.2NZS	30%	400
CCPXL18.1ESJ	35%	350
CCPXL18.1ESK	35%	350
CCPXL18.1NYS	30%	400
CCPXL18.1NZS	25%	300
CCPXL27.0NZS	30%	375
CCPXL32.0NZS	40%	375
CCPXL78.1NZS	20%	350
CCPXL106.NZS	20%	375

Cummins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
CCEXL015.AAH	40%	375
CCEXL015.AAI	40%	375
CCEXL015.AAJ	30%	375
CCEXL019.AAD	40%	375
CCEXL023.AAB	40%	375
CCEXL0275AAG	50%	375
CCEXL0275AAH	50%	400
CCEXL0275AAK	50%	400
CCEXL030.AAD	40%	375
CCEXL0409AAB	50%	375
CCEXL0409AAC	50%	375
CCEXL0409AAD	50%	375
CCEXL050.AAD	40%	375
CCEXL0505AAE	50%	375
CCEXL0540AAB	50%	375
CCEXL060.AAD	30%	375

Model Year 2012 Engines (Continued)

John Deere Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
CJDXL04.5107	50%	400
CJDXL04.5119	40%	375
CJDXL04.5141	50%	400
CJDXL06.8120	50%	375
CJDXL09.0114	50%	375
CJDXL09.0140	50%	375
CJDXL13.5132	40%	375

Detroit Diesel Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
CDDXL14.0WLD	40%	375

Mitsubishi Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
CMVXL24.5BBA	40%	375
CMVXL33.9BBA	40%	375
CMVXL37.1BBA	40%	375
CMVXL49.0BBA	40%	375
CMVXL65.4BBA	40%	375
CMVXL65.4BBB	40%	375

MTU DD Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
CMDDL14.0ZWK	50%	375
CMDDL21.0ZWR	40%	375
CMDDL31.8XRR	40%	375
CMDDL35.8GRR	40%	375
CMDDL95.4XTR	40%	375

Model Year 2012 Engines (Continued)

Perkins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
CPKXL04.4NH1	50%	375
CPKXL04.4NJ1	50%	375
CPKXL06.6PJ1	50%	375
CPKXL06.6PJ2	50%	375
CPKXL12.5TAG	50%	375
CPKXL15.2TA2	50%	375
CPKXL15.2TAG	50%	375
CPKXL18.1TAG	50%	375

AB Volvo Penta Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
CVPXL16.1ACB	40%	375
CVPXL16.1ACG	40%	375
CVPXL16.1ACW	40%	375

Model Year 2013 Engines

Caterpillar Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
DCPXL07.2ESJ	55%	390
DCPXL08.8ESJ	50%	400
DCPXL08.8NZZ	50%	400
DCPXL11.1ESJ	35%	375
DCPXL12.5ESJ	20%	400
DCPXL15.2NYS	30%	400
DCPXL15.2NZZ	30%	400
DCPXL18.1ESJ	35%	350
DCPXL18.1NYS	30%	400
DCPXL18.1NZZ	25%	300
DCPXL27.0NZZ	30%	375
DCPXL32.0NZZ	40%	375
DCPXL78.1NZZ	20%	350
DCPXL106.NZZ	20%	375

Cummins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
DCEXL015.AAH	40%	375
DCEXL015.AAJ	30%	375
DCEXL019.AAD	40%	375
DCEXL023.AAB	40%	375
DCEXL0275AAG	50%	375
DCEXL0275AAH	50%	400
DCEXL0275AAK	50%	400
DCEXL030.AAD	40%	375
DCEXL0409AAB	50%	375
DCEXL0409AAC	50%	375
DCEXL0409AAD	50%	375
DCEXL050.AAD	40%	375
DCEXL0505AAE	50%	375
DCEXL0540AAB	50%	375
DCEXL060.AAD	30%	375

Detroit Diesel Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
DDDXL14.0WLD	40%	375

Model Year 2013 Engines (Continued)

John Deere Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
DJDXL04.5119	40%	375
DJDXL04.5141	50%	400
DJDXL04.5214	50%	400
DJDXL06.8120	50%	375
DJDXL09.0114	50%	375
DJDXL13.5132	40%	375

Mitsubishi Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
DMVXL24.5BBA	40%	375
DMVXL33.9BBA	40%	375
DMVXL37.1BBA	40%	375
DMVXL49.0BBA	40%	375
DMVXL65.4BBA	40%	375
DMVXL65.4BBB	40%	375

MTU DD Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
DMDDL14.0ZWK	50%	375
DMDDL21.0ZWR	40%	375
DMDDL31.8XRR	40%	375
DMDDL35.8GRR	40%	375
DMDDL95.4XTR	40%	375

Perkins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
DPKXL04.4NH1	50%	375
DPKXL04.4NJ1	50%	375
DPKXL06.6PJ1	50%	375
DPKXL06.6PJ2	50%	375

Model Year 2013 Engines (Continued)

AB Volvo Penta Engine Families	Minimum Regeneration Criteria	
	% Load	Temp. °C
DVPXL16.1ACB	40%	375
DVPXL16.1ACG	40%	375
DVPXL16.1ACW	40%	375



Model Year 2014 Engines

Caterpillar Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
ECPXL08.8NZS	50%	400
ECPXL12.5NYS	50%	400
ECPXL15.2NYS	30%	400
ECPXL15.2NZS	30%	400
ECPXL18.1NYS	25%	300
ECPXL18.1NZS	30%	400
ECPXL27.0NZS	30%	375
ECPXL32.0NZS	40%	375
ECPXL78.1NZS	20%	350
ECPXL106.NZS	20%	375

Cummins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
ECEXL015.AAH	40%	375
ECEXL015.AAJ	30%	375
ECEXL019.AAD	40%	375
ECEXL023.AAB	40%	375
ECEXL0275AAG	50%	375
ECEXL0275AAH	50%	400
ECEXL0275AAK	50%	400
ECEXL030.AAD	40%	375
ECEXL0409AAB	50%	375
ECEXL0409AAC	50%	375
ECEXL0409AAD	50%	375
ECEXL050.AAD	40%	375
ECEXL0505AAE	50%	375
ECEXL0540AAB	50%	375
ECEXL060.AAD	30%	375
ECEXL13.0AAA	40%	375

Detroit Diesel Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
EDDXL14.0WLD	40%	375

Model Year 2014 Engines (Continued)

John Deere Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
EJDXL04.5119	40%	375
EJDXL04.5141	50%	400
EJDXL04.5214	50%	400
EJDXL06.8120	50%	375
EJDXL09.0114	50%	375
EJDXL13.5132	40%	375
EJDXL13.5146	40%	375

Mitsubishi Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
EMVXL24.5BBA	40%	375
EMVXL33.9BBA	40%	375
EMVXL37.1BBA	40%	375
EMVXL49.0BBA	40%	375
EMVXL65.4BBA	40%	375
EMVXL65.4BBB	40%	375

MTU DD Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
EMDDL14.0ZWK	50%	375
EMDDL21.0ZWR	40%	375
EMDDL31.8XRR	40%	375
EMDDL35.8GRR	40%	375
EMDDL95.4XTR	40%	375

Perkins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
EPKXL04.4NH1	50%	375
EPKXL04.4NJ1	50%	375
EPKXL06.6PJ1	50%	375
EPKXL06.6PJ2	50%	375
EPKXL07.0PW1	50%	375

Model Year 2014 Engines (Continued)

<b>AB Volvo Penta Engine Families</b>	<b>Minimum Regeneration Criteria</b>	
	<b>% Load</b>	<b>Temp.°C</b>
EVPXL16.1ACB	40%	375
EVPXL16.1ACG	40%	375
EVPXL16.1ACW	40%	375

Model Year 2015 Engines

Caterpillar Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
FCPXL08.8NZS	50%	400
FCPXL12.5NYS	50%	400
FCPXL15.2NYS	30%	400
FCPXL15.2NZS	30%	400
FCPXL18.1NYS	25%	300
FCPXL18.1NZS	30%	400
FCPXL27.0NZS	30%	375
FCPXL32.0NZS	40%	375
FCPXL78.1NZS	20%	350
FCPXL106.NZS	20%	375

Cummins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
FCEXL015.AAH	40%	375
FCEXL015.AAJ	30%	375
FCEXL019.AAD	40%	375
FCEXL023.AAB	40%	375
FCEXL0275AAG	50%	375
FCEXL0275AAH	50%	400
FCEXL0275AAK	50%	400
FCEXL030.AAD	40%	375
FCEXL0409AAB	50%	375
FCEXL0409AAC	50%	375
FCEXL0409AAD	50%	375
FCEXL050.AAD	40%	375
FCEXL0505AAE	50%	375
FCEXL0540AAB	50%	375
FCEXL060.AAD	30%	375
FCEXL13.0AAA	40%	375
FCEXL95.0AAA	30%	375

Detroit Diesel Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
FDDXL14.0WLD	40%	375

Model Year 2015 Engines (Continued)

John Deere Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
FJDXL04.5119	40%	375
FJDXL06.8120	50%	375
FJDXL09.0114	50%	375
FJDXL13.5132	40%	375
FJDXL13.5146	40%	375

Mitsubishi Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
FMVXL24.5BBA	40%	375
FMVXL33.9BBA	40%	375
FMVXL37.1BBA	40%	375
FMVXL49.0BBA	40%	375
FMVXL65.4BBA	40%	375

MTU DD Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
FMDDL14.0ZWK	50%	375
FMDDL21.0ZWR	40%	375
FMDDL31.8XRR	40%	375
FMDDL35.8GRR	40%	375
FMDDL40.1GNR	40%	375
FMDDL95.4XTR	40%	375

Perkins Engine Families	Minimum Regeneration Criteria	
	% Load	Temp.°C
FPKXL04.4NH1	50%	375
FPKXL04.4NJ1	50%	375
FPKXL06.6PJ1	50%	375
FPKXL06.6PJ2	50%	375
FPKXL07.0PW1	50%	375
FPKXL07.0PW2	50%	375

Model Year 2015 Engines (Continued)

<b>AB Volvo Penta Engine Families</b>	<b>Minimum Regeneration Criteria</b>	
	<b>% Load</b>	<b>Temp.°C</b>
FVPXL16.1ACB	40%	375
FVPXL16.1ACG	40%	375
FVPXL16.1ACW	40%	375