

**ESW CleanTech Phoenix®**  
**CARB Verified Engine Family List**  
**Executive Order DE-13-004**  
**VDEC Family Name CA/ECT/2009/PM3+/N00/OF/DPF01**

Model Year	Manufacturer	Engine Family	Displacement (L)	
1996	Case	TX9505R6DTRA	8.3	*
1996	Case	TX9505R6DTRB	8.3	*
1996	Case	TX9505R6DTRC	8.3	*
1996	Caterpillar	TCP10.RZDBRD	10.5	*
1996	Caterpillar	TCP10.RZDBRF	10.5	*
1996	Caterpillar	TCP10.RZDBRK	10.3	*
1996	Caterpillar	TCP12.RZDBRM	12.0	*
1996	Caterpillar	TCP6.6RZDBRB	6.6	*
1996	Caterpillar	TCP6.6RZDBRC	6.6	*
1996	Caterpillar	TCP7.2RZDBRB	7.2	*
1996	Caterpillar	TCP7.2RZDBRC	7.2	*
1996	Caterpillar	TCP7.2RZDBRK	7.2	*
1996	Cummins	TCE359R6DTRA	5.9	*
1996	Cummins	TCE505R6DTRA	8.3	*
1996	Cummins	TCE505R6DTRB	8.3	*
1996	Cummins	TCE505R6DTRC	8.3	*
1996	Cummins	TCE505R6DTRD	8.3	*
1996	Cummins	TCE661RGDTRA	10.8	*
1996	Deere	TJD10.R6DBRA	10.1	*
1996	Deere	TJD10.R6DBRB	10.1	*
1996	Deere	TJD10.RJDBRA	10.5	*
1996	Deere	TJD10.RJDBRB	10.5	*
1996	Deere	TJD6.8R6DBRC	6.8	*
1996	Deere	TJD6.8R6DBRD	6.8	*
1996	Deere	TJD7.6R6DBRA	7.6	*
1996	Deere	TJD7.6R6DBRB	7.6	*
1996	Deere	TJD8.1R6DBRA	8.1	*
1996	Deere	TJD8.1R6DBRB	8.1	*
1996	Deere	TJD8.1R6DBRC	8.1	*
1996	Detroit Diesel Corporation	TDD11.TJDARE	11.1	*
1996	Detroit Diesel Corporation	TDD8.5TJDARE	8.5	*
1996	Deutz	TDZ7.1R6DARA	7.1	*
1996	Deutz	TDZ7.1R6DARB	7.1	*
1996	International	TNV466R6DARA	7.6	*
1996	International	TNV466R6DARB	7.6	*
1996	International	TNV466R6DASC	7.6	*
1996	International	TNV466R6DASD	7.6	*
1996	International	TNV530R6DARA	8.7	*
1996	International	TNV530R6DARB	8.7	*
1996	International	TNV530R6DASC	8.7	*
1996	International	TNV530R6DASD	8.7	*
1996	International	TNV530R8DASE	8.7	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
1996	Iveco	TVE7.7R6DARA	7.7	*
1996	Iveco	TVE9.5R6DARA	9.5	*
1996	Iveco	TVE9.5R6DASA	9.5	*
1996	Komatsu	TKL11.RZDARA	11.0	*
1996	Komatsu	TKL11.RZDARB	11.0	*
1996	Komatsu	TKL11.RZDARC	11.0	*
1996	Komatsu Dresser	TKD505R6DTA	8.3	*
1996	Komatsu Dresser	TKD505R6DTA	8.3	*
1996	Liebherr Machines Bulle SA	TLH9.9R6DARA	10.0	6.6
1996	Liebherr Machines Bulle SA	TLH9.9R6DASA	10.0	6.6
1996	Mercedes-Benz	TMB13.R6DARA	9.6	*
1996	Mercedes-Benz	TMB15.R6DARA	11.0	*
1996	Mercedes-Benz	TMB22.R6DARA	11.0	*
1996	Mitsubishi Motors	TMT460D6DARA	7.5	*
1996	Mitsubishi Motors	TMT729E6DARC	11.9	*
1996	New Holland	TNH7.5R6DARA	7.5	*
1996	Volvo Construction Equipment	TVS12.R6DARA	12.0	*
1996	Volvo Construction Equipment	TVS6.7R6DARA	6.7	*
1996	Volvo Construction Equipment	TVS9.6R6DARA	9.6	*
1997	AB Volvo Penta	VVP12.R6DARA	12.0	*
1997	AB Volvo Penta	VVP5.5R6DARA	5.5	*
1997	AB Volvo Penta	VVP6.7R6DARA	6.7	*
1997	AB Volvo Penta	VVP6.7R6DASA	6.7	*
1997	AB Volvo Penta	VVP9.6R6DASA	9.6	*
1997	Case	VX9505R6DTA	8.3	*
1997	Case	VX9505R6DTB	8.3	*
1997	Case	VX9505R6DTA	8.3	*
1997	Caterpillar	VCP10.RZDARD	10.5	*
1997	Caterpillar	VCP10.RZDARG	10.5	*
1997	Caterpillar	VCP10.RZDARK	10.3	*
1997	Caterpillar	VCP12.RZDARM	12.0	*
1997	Caterpillar	VCP442DZDARK	7.2	*
1997	Caterpillar	VCP6.6RZDARC	6.6	*
1997	Caterpillar	VCP7.0RZDARB	7.0	*
1997	Caterpillar	VCP7.2RZDARB	7.2	*
1997	Caterpillar	VCP7.2RZDARC	7.2	*
1997	Caterpillar	VCP7.2RZDARK	7.2	*
1997	Cummins	VCE359R6DTB	5.9	*
1997	Cummins	VCE505R6DTB	8.3	*
1997	Cummins	VCE505R6DTA	8.3	*
1997	Cummins	VCE505R6DTD	8.3	*
1997	Cummins	VCE661RGDTRA	10.8	*
1997	Daewoo	VDW11.R6DARA	11.0	*
1997	DaimlerChrysler	VMB13.R6DARA	9.6	*
1997	DaimlerChrysler	VMB15.R6DARA	11.0	*
1997	DaimlerChrysler	VMB22.R6DARA	11.0	*
1997	Deere	VJD10.R6DBRA	10.1	*
1997	Deere	VJD10.R6DBRB	10.1	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
1997	Deere	VJD10.RJDBRA	10.5	*
1997	Deere	VJD10.RJDBRB	10.1	*
1997	Deere	VJD6.8R6DBRA	6.8	4.5
1997	Deere	VJD6.8R6DBRB	6.8	*
1997	Deere	VJD6.8R6DBRC	6.8	4.5
1997	Deere	VJD6.8R6DBRD	6.8	4.5
1997	Deere	VJD7.6R6DBRA	7.6	*
1997	Deere	VJD7.6R6DBRB	7.6	*
1997	Deere	VJD8.1R6DBRA	8.1	*
1997	Deere	VJD8.1R6DBRB	8.1	*
1997	Deere	VJD8.1R6DBRC	8.1	*
1997	Detroit Diesel Corporation	VDD11.TJDARE	11.1	*
1997	Detroit Diesel Corporation	VDD8.5TJDARE	8.5	*
1997	Deutz	VDZ7.1R6DARA	7.2	*
1997	Deutz	VDZ7.1R6DARB	7.2	*
1997	International	VNV466R6DASC	7.6	*
1997	International	VNV466R6DASD	7.6	*
1997	International	VNV530R6DARA	8.7	7.6
1997	International	VNV530R6DARB	8.7	7.6
1997	International	VNV530R6DASC	8.7	*
1997	International	VNV530R6DASD	8.7	*
1997	International	VNV530R8DARA	8.7	*
1997	International	VNV530R8DASC	8.7	*
1997	International	VNV530R8DASE	8.7	*
1997	Isuzu	VSZ9.8R6DARB	9.8	*
1997	Iveco	VVE7.7R6DARA	7.7	*
1997	Iveco	VVE9.5R6DARA	9.5	*
1997	Iveco	VVE9.5R6DASA	9.5	*
1997	Komatsu	VKD505R6DTA	8.3	*
1997	Komatsu	VKD505R6DTRC	8.3	*
1997	Liebherr Machines Bulle SA	VLH9.9R6DARA	10.0	6.6
1997	Liebherr Machines Bulle SA	VLH9.9R6DASA	10.0	6.6
1997	Mitsubishi Motors	VMT460R6DARA	7.5	*
1997	Mitsubishi Motors	VMT729R6DARC	11.9	*
1997	New Holland	VNH7.5R6DARA	7.5	*
1997	Volvo Construction Equipment	VVS12.R6DARA	12.0	*
1997	Volvo Construction Equipment	VVS6.7R6DARA	6.7	*
1997	Volvo Construction Equipment	VVS9.6R6DARA	9.6	*
1998	AB Volvo Penta	WVPXL05.5AAA	5.5	*
1998	AB Volvo Penta	WVPXL05.5ABA	5.5	*
1998	AB Volvo Penta	WVPXL06.7AAA	6.7	*
1998	AB Volvo Penta	WVPXL06.7ABA	6.7	*
1998	AB Volvo Penta	WVPXL09.6AAA	9.6	*
1998	AB Volvo Penta	WVPXL09.6ABA	9.6	*
1998	AB Volvo Penta	WVPXL09.6ACB	9.6	*
1998	AB Volvo Penta	WVPXL12.0ABA	12.0	*
1998	Case	WX9XL0239ABA	3.9	*
1998	Case	WX9XL0239ACA	3.9	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
1998	Case	WX9XL0359AAA	5.9	*
1998	Case	WX9XL0359ABA	5.9	*
1998	Case	WX9XL0505AAA	8.3	*
1998	Case	WX9XL0505ABA	8.3	*
1998	Case	WX9XL0505ABB	8.3	*
1998	Case	WX9XL0505ABC	8.3	*
1998	Case	WX9XL0505ACA	8.3	*
1998	Caterpillar	WCPXL06.6MRB	6.6	*
1998	Caterpillar	WCPXL06.6MRC	6.6	*
1998	Caterpillar	WCPXL07.0MRB	7.0	*
1998	Caterpillar	WCPXL07.2HRK	7.2	*
1998	Caterpillar	WCPXL07.2MRB	7.2	*
1998	Caterpillar	WCPXL07.2MRC	7.2	*
1998	Caterpillar	WCPXL10.3ERK	10.3	*
1998	Caterpillar	WCPXL10.5MRD	10.5	*
1998	Caterpillar	WCPXL10.5MRG	10.5	*
1998	Caterpillar	WCPXL12.0ERM	12.0	*
1998	Cummins	WCEXL0359AAA	5.9	*
1998	Cummins	WCEXL0359ABA	5.9	*
1998	Cummins	WCEXL0359ABB	5.9	*
1998	Cummins	WCEXL0505AAA	8.3	*
1998	Cummins	WCEXL0505ABA	8.3	*
1998	Cummins	WCEXL0505ABB	8.3	*
1998	Cummins	WCEXL0505ABC	8.3	*
1998	Cummins	WCEXL0505ACA	8.3	*
1998	Cummins	WCEXL0661AAA	10.8	*
1998	Daewoo	WDWXL11.1AHT	11.0	*
1998	Daewoo	WDWXL11.1BHT	11.1	*
1998	Daewoo	WDWXL11.1BIA	11.1	*
1998	Daimler-Benz	WMBXL6.37DJA	6.4	*
1998	Deere	WJDXL06.8012	6.8	4.5
1998	Deere	WJDXL06.8013	6.8	*
1998	Deere	WJDXL06.8014	6.8	4.5
1998	Deere	WJDXL06.8015	6.8	4.5
1998	Deere	WJDXL07.6010	7.6	*
1998	Deere	WJDXL07.6011	7.6	*
1998	Deere	WJDXL08.1007	8.1	*
1998	Deere	WJDXL08.1008	8.1	*
1998	Deere	WJDXL08.1009	8.1	*
1998	Deere	WJDXL10.1005	10.1	*
1998	Deere	WJDXL10.1006	10.1	*
1998	Deere	WJDXL10.5003	10.5	*
1998	Deere	WJDXL10.5004	10.5	*
1998	Detroit Diesel Corporation	WDDXL08.5TJD	8.5	*
1998	Detroit Diesel Corporation	WDDXL11.1THD	11.1	*
1998	Detroit Diesel Corporation	WMUXL12.0G2V	12.0	*
1998	Deutz	WDZXL07.1003	7.1	4.8
1998	Deutz	WDZXL07.1004	7.1	4.8

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
1998	Deutz	WDZXL15.9002	11.9	*
1998	International	WNVXL0466BNA	7.8	*
1998	International	WNVXL0530ANA	8.7	*
1998	International	WNVXL0530ANB	8.7	*
1998	International	WNVXL0530BNA	8.8	7.8
1998	International	WNVXL0530BNB	8.7	7.6
1998	International	WNVXL0530BNC	8.7	*
1998	International	WNVXL0530BND	8.7	*
1998	Isuzu	WSZXL09.8DTB	9.8	*
1998	Iveco	WVEXL07.7DAR	7.7	*
1998	Iveco	WVEXL09.5DAR	9.5	*
1998	Iveco	WVEXL09.5DAS	9.5	*
1998	Komatsu	WKLXL11.0DA1	11.0	*
1998	Komatsu	WKLXL11.0DB1	11.0	*
1998	Komatsu	WKLXL11.0DC1	11.0	*
1998	Komatsu	WKLXL7.15CB1	7.2	*
1998	Komatsu	WKLXL7.15CC1	7.2	*
1998	Komatsu Dresser	WKDXL0239ABA	3.9	*
1998	Komatsu Dresser	WKDXL0239ACA	3.9	*
1998	Komatsu Dresser	WKDXL0359AAA	5.9	*
1998	Komatsu Dresser	WKDXL0359ABA	5.9	*
1998	Komatsu Dresser	WKDXL0505AAA	8.3	*
1998	Komatsu Dresser	WKDXL0505ABB	8.3	*
1998	Liebherr Machines Bulle SA	WLHAL9.96ARA	6.6	10
1998	Liebherr Machines Bulle SA	WLHAL9.96ASA	6.6	10
1998	Liebherr Machines Bulle SA	WLHAL9.96ATA	10.0	*
1998	Mercedes-Benz	WMBXL12.9R6A	10.0	*
1998	Mercedes-Benz	WMBXL14.6R6A	11.0	*
1998	Mercedes-Benz	WMBXL21.9R6A	11.0	*
1998	Mercedes-Benz	WMBXL5.96R6B	6.0	4
1998	Mitsubishi Motors	WMTXL07.5D6A	7.5	*
1998	New Holland	WNHXL07.5A3V	7.5	*
1998	Volvo Construction Equipment	WVSXL06.7CE1	6.7	*
1998	Volvo Construction Equipment	WVSXL09.6CE1	9.6	*
1998	Volvo Construction Equipment	WVSXL12.0CE1	12.0	*
1999	AB Volvo Penta	XVPXL05.5ABA	5.5	*
1999	AB Volvo Penta	XVPXL06.7AAA	6.7	*
1999	AB Volvo Penta	XVPXL06.7ABA	6.7	*
1999	AB Volvo Penta	XVPXL07.3ABB	7.3	*
1999	AB Volvo Penta	XVPXL07.3ACB	7.3	*
1999	AB Volvo Penta	XVPXL09.6AAA	9.6	*
1999	AB Volvo Penta	XVPXL09.6ABA	9.6	*
1999	AB Volvo Penta	XVPXL09.6ACB	9.6	*
1999	AB Volvo Penta	XVPXL12.0ABA	12.0	*
1999	Case	XX9XL0359ABA	5.9	*
1999	Case	XX9XL0505AAA	8.3	*
1999	Case	XX9XL0505ABA	8.3	*
1999	Case	XX9XL0505ABB	8.3	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
1999	Case	XX9XL0505ABC	8.3	*
1999	Case	XX9XL0505ACA	8.3	*
1999	Caterpillar	XCPXL06.6MRC	6.6	*
1999	Caterpillar	XCPXL07.0MRB	7.0	*
1999	Caterpillar	XCPXL07.2HRK	7.2	*
1999	Caterpillar	XCPXL07.2MRB	7.2	*
1999	Caterpillar	XCPXL07.2MRC	7.2	*
1999	Caterpillar	XCPXL10.3ERK	10.3	*
1999	Caterpillar	XCPXL10.5MRD	10.5	*
1999	Caterpillar	XCPXL10.5MRF	10.5	*
1999	Caterpillar	XCPXL10.5MRG	10.5	*
1999	Caterpillar	XCPXL12.0ERM	12.0	*
1999	Cummins	XCEXL0359ABA	5.9	*
1999	Cummins	XCEXL0359ABB	5.9	*
1999	Cummins	XCEXL0505AAA	8.3	*
1999	Cummins	XCEXL0505ABA	8.3	*
1999	Cummins	XCEXL0505ABB	8.3	*
1999	Cummins	XCEXL0505ABC	8.3	*
1999	Cummins	XCEXL0505ACA	8.3	*
1999	Cummins	XCEXL0661AAA	10.8	*
1999	Cummins	XCEXL0661AAB	10.8	*
1999	Daewoo	XDWXL11.1BHT	11.1	*
1999	Daewoo	XDWXL11.1BIA	11.1	*
1999	Daimler-Benz	XMBXL12.0RJA	11.9	*
1999	DaimlerChrysler	XMBXL12.9R6A	10.0	*
1999	DaimlerChrysler	XMBXL14.6R6A	11.0	*
1999	DaimlerChrysler	XMBXL21.9R6A	11.0	*
1999	DaimlerChrysler	XMBXL6.37RJA	6.4	*
1999	Deere	XJDXL06.8012	6.8	4.5
1999	Deere	XJDXL06.8013	6.8	*
1999	Deere	XJDXL06.8014	6.8	4.5
1999	Deere	XJDXL06.8015	6.8	4.5
1999	Deere	XJDXL08.1007	8.1	*
1999	Deere	XJDXL08.1008	8.1	*
1999	Deere	XJDXL08.1009	8.1	*
1999	Deere	XJDXL08.1019	8.1	*
1999	Deere	XJDXL08.1024	8.1	*
1999	Deere	XJDXL10.1006	10.1	*
1999	Deere	XJDXL10.5003	10.5	*
1999	Deere	XJDXL10.5004	10.5	*
1999	Deere	XJDXL10.5022	10.5	*
1999	Detroit Diesel Corporation	XDDXL08.5TJD	8.5	*
1999	Detroit Diesel Corporation	XDDXL11.1THD	11.1	*
1999	Deutz	XDZXL07.1004	7.2	4.8
1999	Deutz	XDZXL07.1005	7.2	4.8
1999	Deutz	XDZXL15.9002	11.9	*
1999	Deutz	XDZXL15.9003	11.9	*
1999	Hino	XHXML08.8PTD	8.8	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
1999	International	XNVXL0466ANA	7.6	*
1999	International	XNVXL0466BNA	7.6	*
1999	International	XNVXL0530ANA	8.7	*
1999	International	XNVXL0530ANB	8.7	*
1999	International	XNVXL0530ANC	8.7	*
1999	International	XNVXL0530AND	8.7	*
1999	International	XNVXL0530BNA	8.7	7.6
1999	International	XNVXL0530BNB	8.7	7.6
1999	International	XNVXL0530BNC	8.7	*
1999	International	XNVXL0530BND	8.7	*
1999	Isuzu	XSZXL09.8DTB	9.8	*
1999	Iveco	XEVXL09.5DAR	9.5	*
1999	Iveco	XVEXL07.7DAR	7.7	*
1999	Komatsu	XKLXL11.0DA1	11.0	*
1999	Komatsu	XKLXL11.0DB1	11.0	*
1999	Komatsu	XKLXL11.0DC1	11.0	*
1999	Komatsu	XKLXL7.15CB1	7.2	*
1999	Komatsu	XKLXL7.15CC1	7.2	*
1999	Komatsu Dresser	XKDXL0359ABA	5.9	*
1999	Komatsu Dresser	XKDXL0505AAA	8.3	*
1999	Komatsu Dresser	XKDXL0505ABB	8.3	*
1999	Komatsu Dresser	XKDXL0505ACA	8.3	*
1999	Liebherr Machines Bulle SA	XLHAL9.96ARA	10.0	6.6
1999	Liebherr Machines Bulle SA	XLHAL9.96ASA	10.0	6.6
1999	Liebherr Machines Bulle SA	XLHAL9.96ATA	10.0	6.6
1999	Mitsubishi Motors	XMTXL07.5D6A	7.5	*
1999	Mitsubishi Motors	XMTXL07.5D6C	7.5	*
1999	Mitsubishi Motors	XMTXL11.9D6A	11.9	*
1999	New Holland	XNHXL07.5A3V	7.5	*
1999	Volvo Construction Equipment	XVSXL06.7CE1	6.7	*
1999	Volvo Construction Equipment	XVSXL09.6CE1	9.6	*
1999	Volvo Construction Equipment	XVSXL12.0CE1	12.0	*
2000	AB Volvo Penta	YVPXL05.5ABA	5.5	*
2000	AB Volvo Penta	YVPXL06.7AAA	6.7	*
2000	AB Volvo Penta	YVPXL06.7ABA	6.7	*
2000	AB Volvo Penta	YVPXL07.3ABB	7.3	*
2000	AB Volvo Penta	YVPXL07.3ACB	7.3	*
2000	AB Volvo Penta	YVPXL09.6AAA	9.6	*
2000	AB Volvo Penta	YVPXL09.6ABA	9.6	*
2000	AB Volvo Penta	YVPXL09.6ACB	9.6	*
2000	AB Volvo Penta	YVPXL12.0ABA	12.0	*
2000	Case	YX9XL0359ABA	5.9	*
2000	Case	YX9XL0359ABB	5.9	*
2000	Case	YX9XL0505ABA	8.3	*
2000	Case	YX9XL0505ABB	8.3	*
2000	Case	YX9XL0505ABC	8.3	*
2000	Case	YX9XL0505ACA	8.3	*
2000	Caterpillar	YCPXL06.6MRC	6.6	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2000	Caterpillar	YCPXL07.0MRB	7.0	*
2000	Caterpillar	YCPXL07.2HRK	7.2	*
2000	Caterpillar	YCPXL07.2MRB	7.2	*
2000	Caterpillar	YCPXL10.3ERK	10.3	*
2000	Caterpillar	YCPXL10.5MRD	10.5	*
2000	Caterpillar	YCPXL10.5MRG	10.5	*
2000	Caterpillar	YCPXL12.0ERM	12.0	*
2000	Cummins	YCEXL0359ABA	5.9	*
2000	Cummins	YCEXL0359ABB	5.9	*
2000	Cummins	YCEXL0505AAA	8.3	*
2000	Cummins	YCEXL0505ABA	8.3	*
2000	Cummins	YCEXL0505ABB	8.3	*
2000	Cummins	YCEXL0505ABC	8.3	*
2000	Cummins	YCEXL0505ACA	8.3	*
2000	Cummins	YCEXL0661AAA	11.0	*
2000	Cummins	YCEXL0661AAB	11.0	*
2000	DaimlerChrysler	YMBXL12.0RJA	12.0	*
2000	DaimlerChrysler	YMBXL12.0RJB	12.0	*
2000	DaimlerChrysler	YMBXL12.9R6A	10.0	*
2000	DaimlerChrysler	YMBXL14.6R6A	11.0	*
2000	DaimlerChrysler	YMBXL21.9R6A	11.0	*
2000	DaimlerChrysler	YMBXL6.37RJA	6.4	*
2000	Deere	YJDXL06.8012	6.8	4.5
2000	Deere	YJDXL06.8013	6.8	*
2000	Deere	YJDXL06.8014	6.8	4.5
2000	Deere	YJDXL06.8015	6.8	4.5
2000	Deere	YJDXL08.1007	8.1	*
2000	Deere	YJDXL08.1008	8.1	*
2000	Deere	YJDXL08.1009	8.1	*
2000	Deere	YJDXL08.1019	8.1	*
2000	Deere	YJDXL08.1024	8.1	*
2000	Deere	YJDXL10.1006	10.1	*
2000	Deere	YJDXL10.5004	10.5	*
2000	Deere	YJDXL10.5022	10.5	*
2000	Detroit Diesel Corporation	YDDXL08.5TJD	8.5	*
2000	Detroit Diesel Corporation	YDDXL11.1THD	11.1	*
2000	Deutz	YDZXL07.1004	7.2	4.8
2000	Deutz	YDZXL07.1005	7.2	4.8
2000	Deutz	YDZXL15.9002	11.9	*
2000	Deutz	YDZXL15.9003	11.9	*
2000	Hino	YHMXL06.7HTD	6.7	*
2000	Hino	YHMXL08.8PTD	8.8	*
2000	International	YNVXL0466ANA	7.6	*
2000	International	YNVXL0530ANA	8.7	*
2000	International	YNVXL0530ANB	8.7	*
2000	International	YNVXL0530ANC	8.7	*
2000	International	YNVXL0530AND	8.7	*
2000	Isuzu	YSZXL06.5EXA	6.5	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2000	Isuzu	YSZXL07.8EXA	7.8	*
2000	Isuzu	YSZXL09.8ATB	9.8	*
2000	Iveco	YVEXL07.7DAR	7.7	*
2000	Iveco	YVEXL09.5DAR	9.5	*
2000	Komatsu	YKLXL0359ABA	5.9	*
2000	Komatsu	YKLXL0505ABB	8.3	*
2000	Komatsu	YKLXL0505ACA	8.3	*
2000	Komatsu	YKLXL11.0DA1	11.0	*
2000	Komatsu	YKLXL11.0DB1	11.0	*
2000	Komatsu	YKLXL11.0DC1	11.0	*
2000	Komatsu	YKLXL11.0DC1	11.0	*
2000	Komatsu	YKLXL7.15CB1	7.2	*
2000	Komatsu	YKLXL7.15CC1	7.2	*
2000	Komatsu	YKLXL7.15CD1	7.2	*
2000	Liebherr Machines Bulle SA	YLHAL9.96ARA	10.0	6.6
2000	Liebherr Machines Bulle SA	YLHAL9.96ASA	10.0	6.6
2000	Liebherr Machines Bulle SA	YLHAL9.96ATA	10.0	6.6
2000	Mitsubishi Motors	YMTXL05.8D3A	5.8	*
2000	Mitsubishi Motors	YMTXL07.5D6A	7.5	*
2000	Mitsubishi Motors	YMTXL07.5D6C	7.5	*
2000	Mitsubishi Motors	YMTXL11.9D2A	11.9	*
2000	Mitsubishi Motors	YMTXL11.9D6A	11.9	*
2000	New Holland	YNHXL07.5A3V	7.5	*
2000	Volvo Construction Equipment	YVSXL06.7CE1	6.7	*
2000	Volvo Construction Equipment	YVSXL09.6CE1	9.6	*
2000	Volvo Construction Equipment	YVSXL12.0CE1	12.0	*
2001	AB Volvo Penta	1VPXL05.5ABA	5.5	*
2001	AB Volvo Penta	1VPXL06.7AAA	6.7	*
2001	AB Volvo Penta	1VPXL06.7ABA	6.7	*
2001	AB Volvo Penta	1VPXL07.3ABB	7.3	*
2001	AB Volvo Penta	1VPXL07.3ACB	7.3	*
2001	AB Volvo Penta	1VPXL09.6AAA	9.6	*
2001	AB Volvo Penta	1VPXL09.6ABA	9.6	*
2001	AB Volvo Penta	1VPXL09.6ACB	9.6	*
2001	Case	1X9XL0359ABA	5.9	*
2001	Case	1X9XL0505ABA	8.3	*
2001	Case	1X9XL0505ABB	8.3	*
2001	Case	1X9XL0505ABC	8.3	*
2001	Case	1X9XL0505ACA	8.3	*
2001	Case	1X9XL0505ACC	8.3	*
2001	Case	1X9XL0540AAA	8.8	*
2001	Caterpillar	1CPXL06.6MRC	6.6	*
2001	Caterpillar	1CPXL07.0MRB	7.0	*
2001	Caterpillar	1CPXL07.2HRK	7.2	*
2001	Caterpillar	1CPXL07.2HSK	7.2	*
2001	Caterpillar	1CPXL08.8HSK	8.8	*
2001	Caterpillar	1CPXL10.3ESK	10.3	*
2001	Caterpillar	1CPXL10.5MRD	10.5	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2001	Caterpillar	1CPXL10.5MRG	10.5	*
2001	Caterpillar	1CPXL12.0ESK	12.0	*
2001	Cummins	1CEXH0359BAV	#N/A	#N/A
2001	Cummins	1CEXL0239ACA	3.9	*
2001	Cummins	1CEXL0359ABA	5.9	*
2001	Cummins	1CEXL0359ABB	5.9	*
2001	Cummins	1CEXL0359ABC	5.9	*
2001	Cummins	1CEXL0359ABD	5.9	*
2001	Cummins	1CEXL0505ABA	8.3	*
2001	Cummins	1CEXL0505ABB	8.3	*
2001	Cummins	1CEXL0505ABC	8.3	*
2001	Cummins	1CEXL0505ACA	8.3	*
2001	Cummins	1CEXL0505ACB	8.3	*
2001	Cummins	1CEXL0505ACC	8.3	*
2001	Cummins	1CEXL0505ACE	8.3	*
2001	Cummins	1CEXL0540AAA	8.8	*
2001	Cummins	1CEXL0661AAA	10.8	*
2001	Cummins	1CEXL0661AAB	10.8	*
2001	Cummins	1CEXL0661AAC	11.0	*
2001	Cummins	1CEXL0661AAD	10.9	*
2001	Daewoo	1DWXL11.1BIA	11.1	*
2001	DaimlerChrysler	1MBXL12.0RJB	12.0	*
2001	DaimlerChrysler	1MBXL12.0RJC	12.0	*
2001	DaimlerChrysler	1MBXL12.9R6A	10.0	*
2001	DaimlerChrysler	1MBXL14.6R6A	11.0	*
2001	DaimlerChrysler	1MBXL21.9R6A	11.0	*
2001	DaimlerChrysler	1MBXL6.37RJA	6.4	*
2001	DaimlerChrysler	1MBXL6.37RJB	6.4	*
2001	DaimlerChrysler	1MBXL7.20RJA	7.2	*
2001	Deere	1JDXL06.8012	6.8	4.5
2001	Deere	1JDXL06.8013	6.8	*
2001	Deere	1JDXL06.8038	6.8	*
2001	Deere	1JDXL06.8039	6.8	*
2001	Deere	1JDXL08.1007	8.1	*
2001	Deere	1JDXL08.1008	8.1	*
2001	Deere	1JDXL08.1009	8.1	*
2001	Deere	1JDXL08.1019	8.1	*
2001	Deere	1JDXL08.1024	8.1	*
2001	Deere	1JDXL08.1036	8.1	*
2001	Deere	1JDXL08.1037	8.1	*
2001	Detroit Diesel Corporation	1DDXL08.5TJD	8.5	*
2001	Detroit Diesel Corporation	1DDXL08.5YJD	8.5	*
2001	Deutz	1DZXL07.1004	7.2	4.8
2001	Deutz	1DZXL07.1005	7.2	4.8
2001	Deutz	1DZXL15.9002	11.9	*
2001	Deutz	1DZXL15.9003	11.9	*
2001	International	1NVXL0466ANA	7.7	*
2001	International	1NVXL0530ANA	8.7	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2001	International	1NVXL0530ANB	8.7	*
2001	International	1NVXL0530ANC	8.7	*
2001	International	1NVXL0530AND	8.7	*
2001	International	1NVXL0530ANE	8.7	*
2001	International	1NVXL0530ANF	8.7	*
2001	Isuzu	1SZXL06.5EXA	6.5	*
2001	Isuzu	1SZXL07.8ATA	7.8	*
2001	Isuzu	1SZXL07.8EXA	7.8	*
2001	Isuzu	1SZXL09.8EXA	9.8	*
2001	Iveco	1VEXL07.7DAR	7.7	*
2001	Iveco	1VEXL07.8CRS	7.8	*
2001	Iveco	1VEXL09.5DAR	9.5	*
2001	Iveco	1VEXL10.3CRS	10.3	*
2001	Komatsu	1KLXL0359ABA	5.9	*
2001	Komatsu	1KLXL0359ABC	5.9	*
2001	Komatsu	1KLXL0505ABB	8.3	*
2001	Komatsu	1KLXL0505ACA	8.3	*
2001	Komatsu	1KLXL11.0DA1	11.0	*
2001	Komatsu	1KLXL11.0DB1	11.0	*
2001	Komatsu	1KLXL11.0DC1	11.0	*
2001	Komatsu	1KLXL11.0DD3	11.0	*
2001	Komatsu	1KLXL11.0DD4	11.0	*
2001	Komatsu	1KLXL7.15CB1	7.2	*
2001	Komatsu	1KLXL7.15CC1	7.2	*
2001	Komatsu	1KLXL7.15CD1	7.2	*
2001	Liebherr Machines Bulle SA	1LHAL9.96ARA	6.6	10
2001	Liebherr Machines Bulle SA	1LHAL9.96ASA	6.6	10
2001	Liebherr Machines Bulle SA	1LHAL9.96ATA	6.6	10
2001	Liebherr Machines Bulle SA	1LHAL9.96AUA	6.6	10
2001	Mitsubishi Motors	1MTXL05.8D3A	5.9	*
2001	Mitsubishi Motors	1MTXL07.5D6A	7.5	*
2001	Mitsubishi Motors	1MTXL07.5D6C	7.5	*
2001	Mitsubishi Motors	1MTXL11.9D6A	11.9	*
2001	Perkins	1PKXL05.9YK1	5.9	*
2001	Volvo Construction Equipment	1VSXL06.7CE1	6.7	*
2001	Volvo Construction Equipment	1VSXL09.6CE1	9.6	*
2001	Volvo Construction Equipment	1VSXL09.6CE2	9.6	*
2001	Volvo Construction Equipment	1VSXL12.0CE1	12.0	*
2002	AB Volvo Penta	2VPXL05.5ABA	5.5	*
2002	AB Volvo Penta	2VPXL06.7AAA	6.7	*
2002	AB Volvo Penta	2VPXL06.7ABA	6.7	*
2002	AB Volvo Penta	2VPXL07.3ABB	7.3	*
2002	AB Volvo Penta	2VPXL07.3ACB	7.3	*
2002	AB Volvo Penta	2VPXL09.6AAA	9.6	*
2002	AB Volvo Penta	2VPXL09.6ABA	9.6	*
2002	AB Volvo Penta	2VPXL09.6ACB	9.6	*
2002	Case	2X9XL0359ABA	5.9	*
2002	Case	2X9XL0359ABB	5.9	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2002	Case	2X9XL0359ABE	5.9	*
2002	Case	2X9XL0505ABA	8.3	*
2002	Case	2X9XL0505ABB	8.3	*
2002	Case	2X9XL0505ABC	8.3	*
2002	Case	2X9XL0505ABD	8.3	*
2002	Case	2X9XL0505ACA	8.3	*
2002	Case	2X9XL0505ACC	8.3	*
2002	Case	2X9XL0540AAA	8.8	*
2002	Caterpillar	2CPXL06.6MRC	6.6	*
2002	Caterpillar	2CPXL07.0MRB	7.0	*
2002	Caterpillar	2CPXL07.2HRK	7.2	*
2002	Caterpillar	2CPXL07.2HSX	7.2	*
2002	Caterpillar	2CPXL08.8HSK	8.8	*
2002	Caterpillar	2CPXL08.8HSX	8.8	*
2002	Caterpillar	2CPXL10.3ESK	10.3	*
2002	Caterpillar	2CPXL10.3ESX	10.3	*
2002	Caterpillar	2CPXL10.5MRD	10.5	*
2002	Caterpillar	2CPXL12.0ESK	12.0	*
2002	Cummins	2CEXL0239ACA	3.9	*
2002	Cummins	2CEXL0359ABA	5.9	*
2002	Cummins	2CEXL0359ABB	5.9	*
2002	Cummins	2CEXL0359ABC	5.9	*
2002	Cummins	2CEXL0359ABE	5.9	*
2002	Cummins	2CEXL0505ABA	8.3	*
2002	Cummins	2CEXL0505ABB	8.3	*
2002	Cummins	2CEXL0505ABC	8.3	*
2002	Cummins	2CEXL0505ABD	8.3	*
2002	Cummins	2CEXL0505ACA	8.3	*
2002	Cummins	2CEXL0505ACB	8.3	*
2002	Cummins	2CEXL0505ACC	8.3	*
2002	Cummins	2CEXL0505ACE	8.3	*
2002	Cummins	2CEXL0540AAA	8.8	*
2002	Cummins	2CEXL0661AAA	10.8	*
2002	Cummins	2CEXL0661AAB	10.8	*
2002	Cummins	2CEXL0661AAC	10.8	*
2002	Cummins	2CEXL0661AAD	10.3	*
2002	Daewoo	2DWXL11.1BIA	11.1	*
2002	DaimlerChrysler	2MBXL12.0RJB	12.0	*
2002	DaimlerChrysler	2MBXL12.0RJC	12.0	*
2002	Deere	2JDXL06.8012	4.5	6.8
2002	Deere	2JDXL06.8013	4.5	6.8
2002	Deere	2JDXL06.8038	6.8	*
2002	Deere	2JDXL06.8039	6.8	*
2002	Deere	2JDXL06.8049	6.8	*
2002	Deere	2JDXL08.1007	8.1	*
2002	Deere	2JDXL08.1008	8.1	*
2002	Deere	2JDXL08.1009	8.1	*
2002	Deere	2JDXL08.1019	8.1	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2002	Deere	2JDXL08.1024	8.1	*
2002	Deere	2JDXL08.1036	8.1	*
2002	Deere	2JDXL08.1037	8.1	*
2002	Deere	2JDXL08.1045	8.1	*
2002	Detroit Diesel Corporation	2DDXL08.5YJD	8.5	*
2002	Deutz	2DZXL06.1028	4.0	6.1
2002	Deutz	2DZXL07.1004	7.1	4.8
2002	Deutz	2DZXL07.1005	7.1	4.8
2002	Deutz	2DZXL07.1032	7.1	4.8
2002	Deutz	2DZXL15.9002	11.9	*
2002	Deutz	2DZXL15.9003	11.9	*
2002	International	2NVXL0444ANA	7.3	*
2002	International	2NVXL0466ANA	7.6	*
2002	International	2NVXL0530ANA	8.7	*
2002	International	2NVXL0530ANB	8.7	*
2002	International	2NVXL0530ANC	8.7	*
2002	International	2NVXL0530AND	8.7	*
2002	International	2NVXL0530ANE	8.7	*
2002	International	2NVXL0530ANF	8.7	*
2002	Isuzu	2SZXL06.5EXA	6.5	*
2002	Isuzu	2SZXL07.8ATA	7.8	*
2002	Isuzu	2SZXL07.8EXA	7.8	*
2002	Isuzu	2SZXL09.8EXA	9.8	*
2002	Iveco	2VEXL05.9DCR	5.9	*
2002	Iveco	2VEXL07.7DAR	7.7	*
2002	Iveco	2VEXL07.8CRS	7.8	*
2002	Iveco	2VEXL10.3CRS	10.3	*
2002	Komatsu	2KLXL0239ACA	3.9	*
2002	Komatsu	2KLXL0359ABA	5.9	*
2002	Komatsu	2KLXL0359ABC	5.9	*
2002	Komatsu	2KLXL0505ABB	8.3	*
2002	Komatsu	2KLXL0505ABD	8.3	*
2002	Komatsu	2KLXL0505ACA	8.3	*
2002	Komatsu	2KLXL11.0DA1	11.0	*
2002	Komatsu	2KLXL11.0DB1	11.0	*
2002	Komatsu	2KLXL11.0DC1	11.0	*
2002	Komatsu	2KLXL11.0DC3	11.0	*
2002	Komatsu	2KLXL11.0DD3	11.0	*
2002	Komatsu	2KLXL11.0DD4	11.0	*
2002	Komatsu	2KLXL11.0DD5	11.0	*
2002	Komatsu	2KLXL11.0DD6	11.0	*
2002	Komatsu	2KLXL7.15CB1	7.2	*
2002	Komatsu	2KLXL7.15CC1	7.2	*
2002	Komatsu	2KLXL7.15CD1	7.2	*
2002	Liebherr Machines Bulle SA	2LHAL9.96ARA	6.6	10
2002	Liebherr Machines Bulle SA	2LHAL9.96ASA	6.6	10
2002	Liebherr Machines Bulle SA	2LHAL9.96ATA	6.6	10
2002	Liebherr Machines Bulle SA	2LHAL9.96AUA	6.6	10

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2002	Mitsubishi Fuso	2MFTL05.8D3B	5.9	*
2002	Mitsubishi Motors	2MTXL05.8D3A	5.8	*
2002	Mitsubishi Motors	2MTXL07.5D6A	7.5	*
2002	Mitsubishi Motors	2MTXL07.5D6C	7.5	*
2002	Mitsubishi Motors	2MTXL07.5D6D	7.5	*
2002	Mitsubishi Motors	2MTXL11.9D2C	11.9	*
2002	Mitsubishi Motors	2MTXL11.9D6A	11.9	*
2002	New Holland	2NHXL07.5A3A	7.5	*
2002	New Holland	2NHXL07.5A3F	7.5	*
2002	Perkins	2PKXL05.9YK1	6.0	*
2002	Volvo Construction Equipment	2VSXL06.7CE1	6.7	*
2002	Volvo Construction Equipment	2VSXL09.6CE2	9.6	*
2003	AB Volvo Penta	3VPXL07.3ACB	7.3	*
2003	AB Volvo Penta	3VPXL09.6ACB	9.6	*
2003	Caterpillar	3CPXL06.6MTW	6.6	*
2003	Caterpillar	3CPXL07.2HSK	7.2	*
2003	Caterpillar	3CPXL07.2HSL	7.2	*
2003	Caterpillar	3CPXL08.8HSK	8.8	*
2003	Caterpillar	3CPXL08.8HSL	8.8	*
2003	Caterpillar	3CPXL10.3ESK	10.3	*
2003	Caterpillar	3CPXL10.5MRW	10.5	*
2003	Caterpillar	3CPXL12.0ESK	12.0	*
2003	CNH Engine Corporation	3X9XL0359AAC	5.9	*
2003	CNH Engine Corporation	3X9XL0505AAB	8.3	*
2003	CNH Engine Corporation	3X9XL0505ABC	8.3	*
2003	CNH Engine Corporation	3X9XL0505ABD	8.3	*
2003	CNH Engine Corporation	3X9XL0505ACC	8.3	*
2003	CNH Engine Corporation	3X9XL0540AAA	8.8	*
2003	CNH UK Limited	3NHXL06.7DCR	3.9	4.5
2003	CNH UK Limited	3NHXL06.7DTA	3.9	6.7
2003	CNH UK Limited	3NHXL07.5B2H	7.5	*
2003	CNH UK Limited	3NHXL07.5B3A	7.5	*
2003	CNH UK Limited	3NHXL07.5B3C	7.5	*
2003	CNH UK Limited	3NHXL07.5B3F	7.5	*
2003	Cummins	3CEXL0239AAD	3.9	*
2003	Cummins	3CEXL0239AAF	3.9	*
2003	Cummins	3CEXL0275AAA	4.5	*
2003	Cummins	3CEXL0275AAB	4.5	*
2003	Cummins	3CEXL0359AAB	5.9	*
2003	Cummins	3CEXL0359AAC	5.9	*
2003	Cummins	3CEXL0359AAD	5.9	*
2003	Cummins	3CEXL0359ABC	5.9	*
2003	Cummins	3CEXL0359ABE	5.9	*
2003	Cummins	3CEXL0409AAA	6.7	*
2003	Cummins	3CEXL0505ABC	8.3	*
2003	Cummins	3CEXL0505ABD	8.3	*
2003	Cummins	3CEXL0505ACB	8.3	*
2003	Cummins	3CEXL0505ACC	8.3	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2003	Cummins	3CEXL0540AAA	8.8	*
2003	Cummins	3CEXL0661AAC	10.8	*
2003	Cummins	3CEXL0661AAD	10.8	*
2003	Cummins	3CEXL0661AAE	10.8	*
2003	Daewoo	3DWXL05.8COA	5.8	*
2003	Daewoo	3DWXL08.1CPA	8.1	*
2003	Daewoo	3DWXL11.1DJA	11.1	*
2003	DaimlerChrysler	3MBXL12.0RJB	12.0	*
2003	DaimlerChrysler	3MBXL12.0RJC	12.0	*
2003	DaimlerChrysler	3MBXL4.25RJB	4.3	*
2003	DaimlerChrysler	3MBXL6.37RJB	6.4	*
2003	DaimlerChrysler	3MBXL7.20RJA	7.2	*
2003	Deere	3JDXL06.8038	6.8	*
2003	Deere	3JDXL06.8039	6.8	*
2003	Deere	3JDXL06.8041	6.8	4.5
2003	Deere	3JDXL06.8044	6.8	4.5
2003	Deere	3JDXL06.8048	6.8	*
2003	Deere	3JDXL06.8049	6.8	*
2003	Deere	3JDXL06.8052	6.8	*
2003	Deere	3JDXL06.8053	6.8	*
2003	Deere	3JDXL08.1037	8.1	*
2003	Deere	3JDXL08.1045	8.1	*
2003	Deere	3JDXL08.1058	8.1	*
2003	Deere	3JDXL08.1059	8.1	*
2003	Detroit Diesel Corporation	3DDXL08.5YJD	8.5	*
2003	Deutz	3DZXL05.7019	3.8	5.7
2003	Deutz	3DZXL05.7033	5.7	3.8
2003	Deutz	3DZXL06.1028	4.0	6.1
2003	Deutz	3DZXL07.1032	7.2	4.8
2003	Deutz	3DZXL07.1034	7.2	*
2003	Deutz	3DZXL15.9002	11.9	*
2003	International	3NVXL0365AFA	6.0	*
2003	International	3NVXL0530ANE	8.7	*
2003	International	3NVXL0530ANF	8.7	*
2003	Isuzu	3SZXL04.3FTA	4.3	*
2003	Isuzu	3SZXL06.5EXA	6.5	*
2003	Isuzu	3SZXL06.5FTA	6.5	*
2003	Isuzu	3SZXL06.5FXA	6.5	*
2003	Isuzu	3SZXL07.8ETA	7.8	*
2003	Isuzu	3SZXL07.8EXA	7.8	*
2003	Isuzu	3SZXL09.8EXA	9.8	*
2003	Iveco	3VEXL06.7DCR	3.9	4.5
2003	Iveco	3VEXL07.8CRS	7.8	*
2003	Iveco	3VEXL10.3CRS	10.3	*
2003	Komatsu	3KLXL0239AAD	3.9	*
2003	Komatsu	3KLXL0239AAF	3.9	*
2003	Komatsu	3KLXL0359AAB	5.9	*
2003	Komatsu	3KLXL0359ABC	5.9	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2003	Komatsu	3KLXL0505ABD	8.3	*
2003	Komatsu	3KLXL11.0DC3	11.0	*
2003	Komatsu	3KLXL11.0DD3	11.0	*
2003	Komatsu	3KLXL11.0DD5	11.0	*
2003	Liebherr Machines Bulle SA	3LHAL9.96ARA	6.6	10
2003	Liebherr Machines Bulle SA	3LHAL9.96ASA	6.6	10
2003	Liebherr Machines Bulle SA	3LHAL9.96ATA	6.6	10
2003	Liebherr Machines Bulle SA	3LHAL9.96AUA	6.6	10
2003	Mitsubishi Fuso	3MFTL03.9D3A	3.9	*
2003	Mitsubishi Fuso	3MFTL05.8D3A	5.9	*
2003	Mitsubishi Fuso	3MFTL05.8D3B	5.9	*
2003	Mitsubishi Fuso	3MFTL07.5D6A	7.5	*
2003	Mitsubishi Fuso	3MFTL07.5D6D	7.5	*
2003	Mitsubishi Fuso	3MFTL07.5D6E	7.5	*
2003	Mitsubishi Fuso	3MFTL07.5D6E	7.5	*
2003	Mitsubishi Heavy Industries	3MVXL05.0DDD	3.3	5
2003	Mitsubishi Heavy Industries	3MVXL06.4DDD	6.4	*
2003	Mitsubishi Motors	3MTXL11.9D2A	11.9	*
2003	Perkins	3PKXL04.4RH2	4.4	*
2003	Perkins	3PKXL04.4RK1	4.4	*
2003	Perkins	3PKXL06.0VK1	6.0	*
2003	Volvo Construction Equipment	3VSXL09.6CE2	9.6	*
2004	AB Volvo Penta	4VPXL07.3ACB	7.3	*
2004	AB Volvo Penta	4VPXL09.4ACA	9.4	*
2004	AB Volvo Penta	4VPXL09.4ACB	9.4	*
2004	AB Volvo Penta	4VPXL09.4ACC	9.4	*
2004	AB Volvo Penta	4VPXL09.6ACB	9.6	*
2004	Caterpillar	4CPXL07.2HSK	7.2	*
2004	Caterpillar	4CPXL07.2HSL	7.2	*
2004	Caterpillar	4CPXL08.8ESK	8.8	*
2004	Caterpillar	4CPXL08.8HSK	8.8	*
2004	Caterpillar	4CPXL08.8HSL	8.8	*
2004	Caterpillar	4CPXL10.3ESK	10.3	*
2004	Caterpillar	4CPXL10.5MRW	10.5	*
2004	Caterpillar	4CPXL11.1ESK	11.1	*
2004	Caterpillar	4CPXL12.0ESK	12.0	*
2004	Caterpillar	4CPXL12.5ESK	11.1	*
2004	CNH Engine Corporation	4X9XL0239AAB	3.9	*
2004	CNH Engine Corporation	4X9XL0239AAB	3.9	*
2004	CNH Engine Corporation	4X9XL0239AAC	3.9	*
2004	CNH Engine Corporation	4X9XL0359AAK	5.9	*
2004	CNH Engine Corporation	4X9XL0359ABE	5.9	*
2004	CNH Engine Corporation	4X9XL0505AAB	8.3	*
2004	CNH Engine Corporation	4X9XL0505ABC	8.3	*
2004	CNH Engine Corporation	4X9XL0505ABD	8.3	*
2004	CNH Engine Corporation	4X9XL0505ACC	8.3	*
2004	CNH Engine Corporation	4X9XL0540AAA	8.8	*
2004	CNH UK Limited	4NHXL06.7DCR	6.7	5.9

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2004	CNH UK Limited	4NHXL07.5B2H	7.5	*
2004	CNH UK Limited	4NHXL07.5B3A	7.5	*
2004	CNH UK Limited	4NHXL07.5B3C	7.5	*
2004	CNH UK Limited	4NHXL07.5B3F	7.5	*
2004	Cummins	4CEXL0239AAD	3.9	*
2004	Cummins	4CEXL0239AAF	3.9	*
2004	Cummins	4CEXL0275AAB	4.5	*
2004	Cummins	4CEXL0359AAB	5.9	*
2004	Cummins	4CEXL0359AAC	5.9	*
2004	Cummins	4CEXL0359AAD	5.9	*
2004	Cummins	4CEXL0359AAF	5.9	*
2004	Cummins	4CEXL0359AAH	5.9	*
2004	Cummins	4CEXL0359ABC	5.9	*
2004	Cummins	4CEXL0359ABE	5.9	*
2004	Cummins	4CEXL0409AAA	6.7	*
2004	Cummins	4CEXL0505ABC	8.3	*
2004	Cummins	4CEXL0505ABD	8.3	*
2004	Cummins	4CEXL0505ACB	8.3	*
2004	Cummins	4CEXL0505ACC	8.3	*
2004	Cummins	4CEXL0540AAA	8.8	*
2004	Cummins	4CEXL0661AAC	10.8	*
2004	Cummins	4CEXL0661AAD	10.8	*
2004	Cummins	4CEXL0661AAE	10.8	*
2004	Daewoo	4DWXL05.8COA	5.8	*
2004	Daewoo	4DWXL05.8CRN	5.8	*
2004	Daewoo	4DWXL08.1CPA	8.1	*
2004	Daewoo	4DWXL11.1BIA	11.1	*
2004	Daewoo	4DWXL11.1DJA	11.1	*
2004	DaimlerChrysler	4MBXL12.0RJB	12.0	*
2004	DaimlerChrysler	4MBXL12.0RJC	12.0	*
2004	DaimlerChrysler	4MBXL4.25RJB	4.3	*
2004	DaimlerChrysler	4MBXL6.37RJB	6.4	*
2004	DaimlerChrysler	4MBXL7.20RJA	7.2	*
2004	Deere	4JDXL06.8038	6.8	*
2004	Deere	4JDXL06.8039	4.5	6.8
2004	Deere	4JDXL06.8039	4.5	6.8
2004	Deere	4JDXL06.8041	4.5	6.8
2004	Deere	4JDXL06.8044	4.5	6.8
2004	Deere	4JDXL06.8048	4.5	6.8
2004	Deere	4JDXL06.8049	4.5	6.8
2004	Deere	4JDXL06.8052	6.8	*
2004	Deere	4JDXL06.8053	6.8	*
2004	Deere	4JDXL06.8072	6.8	*
2004	Deere	4JDXL08.1037	8.1	*
2004	Deere	4JDXL08.1045	8.1	*
2004	Deere	4JDXL08.1058	8.1	*
2004	Deere	4JDXL08.1059	8.1	*
2004	Detroit Diesel Corporation	4DDXL08.5YJD	8.5	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2004	Deutz	4DZXL05.7019	3.8	5.7
2004	Deutz	4DZXL05.7033	5.7	3.8
2004	Deutz	4DZXL06.1028	4.0	6
2004	Deutz	4DZXL06.1038	6.1	4
2004	Deutz	4DZXL06.5036	6.5	*
2004	Deutz	4DZXL06.5037	6.5	*
2004	Deutz	4DZXL07.1032	7.2	4.8
2004	Deutz	4DZXL07.1034	7.2	*
2004	Deutz	4DZXL15.9002	11.9	*
2004	International	4NVXL0365AFA	6.0	*
2004	International	4NVXL0530ANE	8.7	*
2004	International	4NVXL0530ANF	8.7	*
2004	Isuzu	4SZXL04.3FTA	4.3	*
2004	Isuzu	4SZXL04.3FTA	4.3	*
2004	Isuzu	4SZXL06.5EXA	6.5	*
2004	Isuzu	4SZXL06.5FTA	6.5	*
2004	Isuzu	4SZXL06.5FXA	6.5	*
2004	Isuzu	4SZXL06.5FXG	6.5	*
2004	Isuzu	4SZXL06.8ETA	7.8	*
2004	Isuzu	4SZXL07.8EXA	7.8	*
2004	Isuzu	4SZXL09.8EXA	9.8	*
2004	Iveco	4VEXL05.9DGS	5.9	*
2004	Iveco	4VEXL06.7DCR	6.7	5.9
2004	Iveco	4VEXL07.8CRS	7.8	*
2004	Iveco	4VEXL10.3CRS	10.3	*
2004	Komatsu	4KLXL0239AAD	3.9	*
2004	Komatsu	4KLXL0239AAF	3.9	*
2004	Komatsu	4KLXL0359AAB	5.9	*
2004	Komatsu	4KLXL0359ABC	5.9	*
2004	Komatsu	4KLXL0505ABC	8.3	*
2004	Komatsu	4KLXL0505ABD	8.3	*
2004	Komatsu	4KLXL11.0DC3	11.0	*
2004	Komatsu	4KLXL11.0DD3	11.0	*
2004	Komatsu	4KLXL11.0DD5	11.0	*
2004	Liebherr Machines Bulle SA	4LHAL9.96ARA	6.6	10
2004	Liebherr Machines Bulle SA	4LHAL9.96ASA	6.6	10
2004	Liebherr Machines Bulle SA	4LHAL9.96ATA	6.6	10
2004	Liebherr Machines Bulle SA	4LHAL9.96AUA	6.6	10
2004	Mitsubishi Fuso	4MFTL03.9D3A	3.9	*
2004	Mitsubishi Fuso	4MFTL05.8D3A	5.9	*
2004	Mitsubishi Fuso	4MFTL05.8D3B	5.9	*
2004	Mitsubishi Fuso	4MFTL07.5D6A	7.5	*
2004	Mitsubishi Fuso	4MFTL07.5D6D	7.5	*
2004	Mitsubishi Fuso	4MFTL07.5D6E	7.5	*
2004	Mitsubishi Fuso	4MFTL11.9D2A	11.9	*
2004	Mitsubishi Heavy Industries	4MVXL05.0DDD	3.3	5
2004	Mitsubishi Heavy Industries	4MVXL06.4DDD	6.4	*
2004	Perkins	4PKXL04.4RH2	4.4	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2004	Perkins	4PKXL04.4RH2	4.4	*
2004	Perkins	4PKXL04.4RK1	4.4	*
2004	Perkins	4PKXL06.0VK1	6.0	*
2004	Volvo Construction Equipment	4VSXL09.4CE2	9.4	*
2004	Volvo Construction Equipment	4VSXL09.6CE2	9.6	*
2004	Yanmar	4YDXL4.41K4T	4.4	*
2005	AB Volvo Penta	5VPXL07.3ACB	7.3	*
2005	AB Volvo Penta	5VPXL09.4ACA	9.4	*
2005	AB Volvo Penta	5VPXL09.4ACB	9.4	*
2005	AB Volvo Penta	5VPXL09.4ACC	9.4	*
2005	AB Volvo Penta	5VPXL09.6ACB	9.6	*
2005	Caterpillar	5CPXL07.2ESL	7.2	*
2005	Caterpillar	5CPXL07.2HSK	7.2	*
2005	Caterpillar	5CPXL07.2HSL	7.2	*
2005	Caterpillar	5CPXL08.8ESK	8.8	*
2005	Caterpillar	5CPXL08.8ESL	8.8	*
2005	Caterpillar	5CPXL08.8HSL	8.8	*
2005	Caterpillar	5CPXL10.3ESK	10.3	*
2005	Caterpillar	5CPXL10.5MRW	10.5	*
2005	Caterpillar	5CPXL11.1ESK	11.1	*
2005	Caterpillar	5CPXL12.0ESK	12.0	*
2005	CNH Engine Corporation	5X9XL0239AAB	3.9	*
2005	CNH Engine Corporation	5X9XL0239AAC	3.9	*
2005	CNH Engine Corporation	5X9XL0359AAK	5.9	*
2005	CNH Engine Corporation	5X9XL0359ABE	5.9	*
2005	CNH Engine Corporation	5X9XL0505AAB	8.3	*
2005	CNH Engine Corporation	5X9XL0505AAE	8.3	*
2005	CNH Engine Corporation	5X9XL0505ABC	8.3	*
2005	CNH Engine Corporation	5X9XL0505ABD	8.3	*
2005	CNH Engine Corporation	5X9XL0505ACC	8.3	*
2005	CNH Engine Corporation	5X9XL0540AAA	8.8	*
2005	CNH Engine Corporation	5X9XL0540AAB	8.8	*
2005	CNH UK Limited	5NHXL06.7DCR	3.9	4.5
2005	CNH UK Limited	5NHXL07.5B2H	7.5	*
2005	CNH UK Limited	5NHXL07.5B3A	7.5	*
2005	CNH UK Limited	5NHXL07.5B3C	7.5	*
2005	CNH UK Limited	5NHXL07.5B3F	7.5	*
2005	Cummins	5CEXL0239AAD	3.9	*
2005	Cummins	5CEXL0239AAF	3.9	*
2005	Cummins	5CEXL0275AAB	4.5	*
2005	Cummins	5CEXL0359AAB	5.9	*
2005	Cummins	5CEXL0359AAC	5.9	*
2005	Cummins	5CEXL0359AAD	5.9	*
2005	Cummins	5CEXL0359AAF	5.9	*
2005	Cummins	5CEXL0359AAG	5.9	*
2005	Cummins	5CEXL0359AAH	5.9	*
2005	Cummins	5CEXL0359ABC	5.9	*
2005	Cummins	5CEXL0359ABE	5.9	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2005	Cummins	5CEXL0409AAA	6.7	*
2005	Cummins	5CEXL0409AAB	6.7	*
2005	Cummins	5CEXL0409AAC	6.7	*
2005	Cummins	5CEXL0505AAE	8.3	*
2005	Cummins	5CEXL0505ABC	8.3	*
2005	Cummins	5CEXL0505ABD	8.3	*
2005	Cummins	5CEXL0505ACB	8.3	*
2005	Cummins	5CEXL0540AAA	8.8	*
2005	Cummins	5CEXL0540AAB	8.8	*
2005	Cummins	5CEXL0661AAE	10.8	*
2005	Cummins	5CEXL0661AAF	10.8	*
2005	Daewoo	5DWXL05.8COA	5.8	*
2005	Daewoo	5DWXL08.1CPA	8.1	*
2005	Daewoo	5DWXL11.1BIA	11.1	*
2005	Daewoo	5DWXL11.1DJA	11.1	*
2005	DaimlerChrysler	5MBXL12.0RJB	12.0	*
2005	DaimlerChrysler	5MBXL12.0RJC	12.0	*
2005	DaimlerChrysler	5MBXL4.25RJB	4.3	*
2005	DaimlerChrysler	5MBXL6.37RJB	6.4	*
2005	DaimlerChrysler	5MBXL7.20RJA	7.2	*
2005	Deere	5JDXL06.8038	6.8	*
2005	Deere	5JDXL06.8039	4.5	6.8
2005	Deere	5JDXL06.8041	4.5	6.8
2005	Deere	5JDXL06.8044	6.8	*
2005	Deere	5JDXL06.8048	6.8	*
2005	Deere	5JDXL06.8049	4.5	6.8
2005	Deere	5JDXL06.8052	6.8	*
2005	Deere	5JDXL06.8053	6.8	*
2005	Deere	5JDXL06.8072	6.8	*
2005	Deere	5JDXL06.8078	4.5	6.8
2005	Deere	5JDXL06.8080	6.8	*
2005	Deere	5JDXL06.8084	4.5	6.8
2005	Deere	5JDXL08.1037	8.1	*
2005	Deere	5JDXL08.1045	8.1	*
2005	Deere	5JDXL08.1058	8.1	*
2005	Deere	5JDXL08.1059	8.1	*
2005	Detroit Diesel Corporation	5DDXL08.5YJD	8.5	*
2005	Deutz	5DZXL05.7019	3.8	5.7
2005	Deutz	5DZXL05.7033	5.7	3.8
2005	Deutz	5DZXL06.1028	4.0	6
2005	Deutz	5DZXL06.1038	6.1	4
2005	Deutz	5DZXL06.5036	6.5	*
2005	Deutz	5DZXL06.5037	6.5	*
2005	Deutz	5DZXL06.5042	6.5	*
2005	Deutz	5DZXL07.1032	7.2	4.8
2005	Deutz	5DZXL07.1034	7.2	*
2005	Deutz	5DZXL15.9002	11.9	*
2005	International	5NVXL0365AFA	6.0	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2005	Isuzu	5SZXL04.3FTA	4.3	*
2005	Isuzu	5SZXL04.3FXA	4.3	*
2005	Isuzu	5SZXL06.5EXA	6.5	*
2005	Isuzu	5SZXL06.5FTA	6.5	*
2005	Isuzu	5SZXL06.5FXA	6.5	*
2005	Isuzu	5SZXL06.5FXG	6.5	*
2005	Isuzu	5SZXL07.8ETA	7.8	*
2005	Isuzu	5SZXL07.8EXA	7.8	*
2005	Isuzu	5SZXL09.8EXA	9.8	*
2005	Iveco	5VEXL05.9DGS	5.9	*
2005	Iveco	5VEXL06.7DCR	3.9	4.5
2005	Iveco	5VEXL06.7DGA	6.7	*
2005	Iveco	5VEXL07.8CRS	7.8	*
2005	Iveco	5VEXL10.3CRS	10.3	*
2005	Iveco	5VEXL10.3TR3	10.3	*
2005	Iveco	5VEXL10.3VGT	10.3	*
2005	Komatsu	5KLXL0239AAD	3.9	*
2005	Komatsu	5KLXL0239AAF	3.9	*
2005	Komatsu	5KLXL0359AAB	5.9	*
2005	Komatsu	5KLXL0359AAL	5.9	*
2005	Komatsu	5KLXL0359ABC	5.9	*
2005	Komatsu	5KLXL0409AAB	6.7	*
2005	Komatsu	5KLXL0409AAC	6.7	*
2005	Komatsu	5KLXL0505AAE	8.3	*
2005	Komatsu	5KLXL0505ABC	8.3	*
2005	Komatsu	5KLXL0505ABD	8.3	*
2005	Komatsu	5KLXL11.0DC3	11.0	*
2005	Komatsu	5KLXL11.0DD3	11.0	*
2005	Komatsu	5KLXL11.0DD5	11.0	*
2005	Liebherr Machines Bulle SA	5LHAL10.5LPA	10.5	*
2005	Liebherr Machines Bulle SA	5LHAL9.96ARA	6.6	10
2005	Liebherr Machines Bulle SA	5LHAL9.96ASA	6.6	10
2005	Liebherr Machines Bulle SA	5LHAL9.96ATA	6.6	10
2005	Liebherr Machines Bulle SA	5LHAL9.96AUA	6.6	10
2005	Mitsubishi Fuso	5MFTL03.9D3A	3.9	*
2005	Mitsubishi Fuso	5MFTL05.8D3A	5.9	*
2005	Mitsubishi Fuso	5MFTL05.8D3B	5.9	*
2005	Mitsubishi Fuso	5MFTL07.5D6A	7.5	*
2005	Mitsubishi Fuso	5MFTL07.5D6D	7.5	*
2005	Mitsubishi Fuso	5MFTL07.5D6E	7.5	*
2005	Mitsubishi Fuso	5MFTL11.9D2A	11.9	*
2005	Mitsubishi Heavy Industries	5MVXL05.0DDD	3.3	5
2005	Mitsubishi Heavy Industries	5MVXL06.4DDD	6.4	*
2005	Perkins	5PKXL04.4RH2	4.4	*
2005	Perkins	5PKXL04.4RK1	4.4	*
2005	Perkins	5PKXL06.0VK1	6.0	*
2005	Perkins	5PKXL06.6PJ1	6.6	*
2005	Perkins	5PKXL06.6PJ2	6.6	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2005	Sisu Diesel	5SIDL06.6I2A	6.6	*
2005	Sisu Diesel	5SIDL07.4G4A	7.4	*
2005	Sisu Diesel	5SIDL07.4G4B	7.4	*
2005	Sisu Diesel	5SIDL07.4G5A	7.4	*
2005	Sisu Diesel	5SIDL07.4G5B	7.4	*
2005	Sisu Diesel	5SIDL08.4H4A	8.4	*
2005	Sisu Diesel	5SIDL08.4H5A	8.4	*
2005	Sisu Diesel	5SIDL08.4H5B	8.4	*
2005	Volvo Construction Equipment	5VSXL09.4CE2	9.4	*
2005	Yanmar	5YDXL4.41K4T	4.4	*
2006	AB Volvo Penta	6VPXL9.4BAA	9.4	*
2006	Caterpillar	6CPXL07.2ESL	7.2	*
2006	Caterpillar	6CPXL07.2HSK	7.2	*
2006	Caterpillar	6CPXL08.8ESK	8.8	*
2006	Caterpillar	6CPXL11.1ESK	11.1	*
2006	CNH Engine Corporation	6X9XL0239AAB	3.9	*
2006	CNH Engine Corporation	6X9XL0239AAC	3.9	*
2006	CNH Engine Corporation	6X9XL0359AAM	5.9	*
2006	CNH Engine Corporation	6X9XL0359ABE	5.9	*
2006	CNH Engine Corporation	6X9XL0505AAE	8.3	*
2006	CNH Engine Corporation	6X9XL0505ABD	8.3	*
2006	CNH Engine Corporation	6X9XL0540AAB	8.8	*
2006	CNH Engine Corporation	6X9XL0540AAC	8.8	*
2006	CNH UK Limited	6NHXL06.7DCA	6.7	*
2006	CNH UK Limited	6NHXL06.7DCB	6.7	*
2006	CNH UK Limited	6NHXL06.7DCC	6.7	*
2006	CNH UK Limited	6NHXL06.7DCR	3.9	4.5
2006	CNH UK Limited	6NHXL07.5B2H	7.5	*
2006	Cummins	6CEXL0239AAD	3.9	*
2006	Cummins	6CEXL0239AAF	3.9	*
2006	Cummins	6CEXL0275AAB	4.5	*
2006	Cummins	6CEXL0275AAG	4.5	*
2006	Cummins	6CEXL0359AAB	5.9	*
2006	Cummins	6CEXL0359AAC	5.9	*
2006	Cummins	6CEXL0359AAD	5.9	*
2006	Cummins	6CEXL0359AAF	5.9	*
2006	Cummins	6CEXL0359AAN	5.9	*
2006	Cummins	6CEXL0359ABC	5.9	*
2006	Cummins	6CEXL0359ABE	5.9	*
2006	Cummins	6CEXL0409AAB	6.7	*
2006	Cummins	6CEXL0409AAC	6.7	*
2006	Cummins	6CEXL0505AAE	8.3	*
2006	Cummins	6CEXL0505ABD	8.3	*
2006	Cummins	6CEXL0540AAB	8.8	*
2006	Cummins	6CEXL0661AAF	10.8	*
2006	DaimlerChrysler	6MBXL4.25RJB	4.3	*
2006	DaimlerChrysler	6MBXL7.20RJA	4.3	7.2
2006	Deere	6JDXL06.8038	6.8	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2006	Deere	6JDXL06.8039	4.5	6.8
2006	Deere	6JDXL06.8041	4.5	6.8
2006	Deere	6JDXL06.8044	6.8	*
2006	Deere	6JDXL06.8048	6.8	*
2006	Deere	6JDXL06.8049	4.5	6.8
2006	Deere	6JDXL06.8052	6.8	*
2006	Deere	6JDXL06.8078	4.5	6.8
2006	Deere	6JDXL06.8080	6.8	*
2006	Deere	6JDXL06.8084	4.5	6.8
2006	Deere	6JDXL06.8104	6.8	*
2006	Deere	6JDXL06.8105	4.5	6.8
2006	Deere	6JDXL08.1037	8.1	*
2006	Deutz	6DZXL05.7019	3.8	5.7
2006	Deutz	6DZXL05.7033	5.7	3.8
2006	Deutz	6DZXL06.1028	6.1	4
2006	Deutz	6DZXL06.1038	6.1	4
2006	Deutz	6DZXL06.1061	6.1	*
2006	Deutz	6DZXL06.5035	6.5	*
2006	Deutz	6DZXL06.5036	6.5	*
2006	Deutz	6DZXL06.5037	6.5	*
2006	Deutz	6DZXL06.5042	6.5	*
2006	Deutz	6DZXL07.1034	7.2	*
2006	Deutz	6DZXL07.1053	7.1	*
2006	Doosan Infracore	6DWXL05.8COA	5.8	*
2006	Doosan Infracore	6DWXL05.8UTA	5.8	*
2006	Doosan Infracore	6DWXL07.6UPA	7.6	*
2006	Doosan Infracore	6DWXL08.1BDA	8.1	*
2006	Doosan Infracore	6DWXL11.0UJA	11.0	*
2006	Isuzu	6SZXL04.3FTA	4.3	*
2006	Isuzu	6SZXL04.3FXA	4.3	*
2006	Isuzu	6SZXL06.5FTA	6.5	*
2006	Isuzu	6SZXL06.5FXA	6.5	*
2006	Isuzu	6SZXL06.5FXG	6.5	*
2006	Iveco	6VEXL06.7DCA	6.7	*
2006	Iveco	6VEXL06.7DCB	6.7	*
2006	Iveco	6VEXL06.7DCC	6.7	*
2006	Iveco	6VEXL06.7DCR	3.9	4.5
2006	Iveco	6VEXL06.7DGA	6.7	*
2006	Iveco	6VEXL06.7DGB	6.7	*
2006	Iveco	6VEXL06.7DGS	6.7	*
2006	Iveco	6VEXL08.7TR3	8.7	*
2006	Iveco	6VEXL10.3MLR	10.3	*
2006	Iveco	6VEXL10.3TR3	10.3	*
2006	JCB Power Systems	6JCLB04.4TA1	4.4	*
2006	Komatsu	6KLXL0239AAD	3.9	*
2006	Komatsu	6KLXL0239AAF	3.9	*
2006	Komatsu	6KLXL0275AAG	4.5	*
2006	Komatsu	6KLXL0359AAB	5.9	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2006	Komatsu	6KLXL0359AAL	5.9	*
2006	Komatsu	6KLXL0359ABC	5.9	*
2006	Komatsu	6KLXL0409AAB	6.7	*
2006	Komatsu	6KLXL0409AAC	6.7	*
2006	Komatsu	6KLXL0505AAE	8.3	*
2006	Komatsu	6KLXL0505ABD	8.3	*
2006	Liebherr Machines Bulle SA	6LHAK9.96ASA	6.6	10
2006	Liebherr Machines Bulle SA	6LHAL10.5LPA	10.5	*
2006	Liebherr Machines Bulle SA	6LHAL12.0KPA	12.0	*
2006	Liebherr Machines Bulle SA	6LHAL9.54SPA	9.5	*
2006	Liebherr Machines Bulle SA	6LHAL9.96ARA	6.6	10
2006	Liebherr Machines Bulle SA	6LHAL9.96ATA	6.6	10
2006	Mitsubishi Fuso	6MFTL03.9D3A	3.9	*
2006	Mitsubishi Fuso	6MFTL05.8D3A	5.9	*
2006	Mitsubishi Fuso	6MFTL07.5D6E	7.5	*
2006	Mitsubishi Heavy Industries	6MVXL05.0DDD	3.3	5
2006	Mitsubishi Heavy Industries	6MVXL06.4DDD	6.4	*
2006	Mitsubishi Heavy Industries	6MVXL06.4EEE	6.4	*
2006	Perkins	6PKXL04.4NH1	4.4	*
2006	Perkins	6PKXL04.4NJ1	4.4	*
2006	Perkins	6PKXL04.4RH2	4.4	*
2006	Perkins	6PKXL04.4RK1	4.4	*
2006	Perkins	6PKXL06.0VK1	6.0	*
2006	Perkins	6PKXL06.6PJ1	6.6	*
2006	Perkins	6PKXL06.6PJ2	6.6	*
2006	Sisu Diesel	6SIDL06.6I2A	6.6	*
2006	Sisu Diesel	6SIDL07.4G4B	7.4	*
2006	Sisu Diesel	6SIDL07.4G4D	7.4	*
2006	Sisu Diesel	6SIDL07.4G5B	7.4	*
2006	Sisu Diesel	6SIDL08.4H5B	8.4	*
2006	Yanmar	6YDXL4.41K4T	4.4	*
2007	Caterpillar	7CPXL07.2ESL	7.2	*
2007	Caterpillar	7CPXL08.8ESK	8.8	*
2007	Caterpillar	7CPXL11.1ESK	11.1	*
2007	CNH Engine Corporation	7X9XL0239AAB	3.9	*
2007	CNH Engine Corporation	7X9XL0505AAE	8.3	*
2007	CNH Engine Corporation	7X9XL0540AAB	8.8	*
2007	CNH UK Limited	7NHXL06.7DTA	4.5	6.7
2007	Cummins	7CEXL0275AAB	4.5	*
2007	Cummins	7CEXL0275AAG	4.5	*
2007	Cummins	7CEXL0275AAK	4.5	*
2007	Cummins	7CEXL0409AAB	6.7	*
2007	Cummins	7CEXL0409AAC	6.7	*
2007	Cummins	7CEXL0409AAD	6.7	*
2007	Cummins	7CEXL0505AAE	8.3	*
2007	Cummins	7CEXL0540AAB	8.8	*
2007	Cummins	7CEXL0661AAF	11.0	*
2007	Cummins	7CEXL0661AAJ	10.8	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2007	DaimlerChrysler	7MBXL15.9RJA	12.0	*
2007	Deere	7JDXL06.8038	6.8	*
2007	Deere	7JDXL06.8039	4.5	6.8
2007	Deere	7JDXL06.8041	4.5	6.8
2007	Deere	7JDXL06.8044	6.8	*
2007	Deere	7JDXL06.8048	6.8	*
2007	Deere	7JDXL06.8049	6.8	*
2007	Deere	7JDXL06.8078	4.5	6.8
2007	Deere	7JDXL06.8080	6.8	*
2007	Deere	7JDXL06.8084	4.5	*
2007	Deere	7JDXL06.8104	6.8	*
2007	Deere	7JDXL06.8105	4.5	6.8
2007	Deere	7JDXL08.1037	8.1	*
2007	Deutz	7DZXL06.1038	6.1	4
2007	Deutz	7DZXL06.1063	5.7	*
2007	Deutz	7DZXL06.5042	6.5	5.4
2007	Deutz	7DZXL06.5043	6.5	5.4
2007	Deutz	7DZXL07.1034	7.2	*
2007	Doosan Infracore	7DWXL05.8UTA	5.9	*
2007	Doosan Infracore	7DWXL07.6UPA	7.6	*
2007	Doosan Infracore	7DWXL11.0UJA	11.0	*
2007	Iveco	7VEXL06.7DGB	4.5	6.7
2007	Iveco	7VEXL06.7DGS	6.7	*
2007	Iveco	7VEXL06.7DTA	4.5	6.7
2007	Komatsu	7KLXL0275AAG	4.5	*
2007	Komatsu	7KLXL0409AAB	6.7	*
2007	Komatsu	7KLXL0409AAC	6.7	*
2007	Komatsu	7KLXL0505AAE	8.3	*
2007	Liebherr Machines Bulle SA	7LHAL10.5LPA	10.5	*
2007	Liebherr Machines Bulle SA	7LHAL12.0KPA	12.0	*
2007	Liebherr Machines Bulle SA	7LHAL9.54SPA	9.5	*
2007	Mitsubishi Heavy Industries	7MVXL06.4FFF	6.4	*
2007	Perkins	7PKXL04.4NH1	4.4	*
2007	Perkins	7PKXL04.4NJ1	4.4	*
2007	Perkins	7PKXL06.6PJ1	6.6	*
2007	Perkins	7PKXL06.6PJ2	6.6	*
2007	Sisu Diesel	7SIDL07.4G4D	7.4	*
2007	Sisu Diesel	7SIDL07.4G5B	7.4	*
2007	Sisu Diesel	7SIDL08.4H5B	8.4	*
2007	Yanmar	7YDXL4.41K4T	4.4	*
2008	Caterpillar	8CPXL07.2ESL	7.2	*
2008	Caterpillar	8CPXL08.8ESK	8.8	*
2008	Caterpillar	8CPXL11.1ESK	11.1	*
2008	CNH Engine Corporation	8X9XL0505AAE	8.3	*
2008	CNH Engine Corporation	8X9XL0540AAB	8.8	*
2008	CNH Engine Corporation	8X9XL0540AAC	8.8	*
2008	CNH Engine Corporation	8X9XL0540AAD	8.8	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2008	Cummins	8CEXL0275AAG	4.5	*
2008	Cummins	8CEXL0275AAK	4.5	*
2008	Cummins	8CEXL0409AAB	6.7	*
2008	Cummins	8CEXL0409AAC	6.7	*
2008	Cummins	8CEXL0409AAD	6.7	*
2008	Cummins	8CEXL0505AAE	8.3	*
2008	Cummins	8CEXL0540AAB	8.8	*
2008	Cummins	8CEXL0661AAF	11.0	*
2008	Cummins	8CEXL0661AAJ	11.0	*
2008	DaimlerChrysler	8MBXL15.9RJA	12.0	*
2008	Deere	8JDXL06.8038	6.8	*
2008	Deere	8JDXL06.8039	4.5	*
2008	Deere	8JDXL06.8041	4.5	6.8
2008	Deere	8JDXL06.8049	6.8	*
2008	Deere	8JDXL06.8078	4.5	6.8
2008	Deere	8JDXL06.8080	6.8	*
2008	Deere	8JDXL06.8104	4.5	6.8
2008	Deere	8JDXL06.8105	4.5	6.8
2008	Deere	8JDXL08.1037	8.1	*
2008	Deere	8JDXL09.0114	9.0	*
2008	Deutz	8DZXL06.1063	5.7	6.1
2008	Doosan Infracore	8DWXL05.8UTA	5.9	*
2008	Doosan Infracore	8DWXL07.6UPA	7.6	*
2008	Doosan Infracore	8DWXL11.0UJA	11.0	*
2008	Iveco	8VEXL06.7DGB	4.5	6.7
2008	Iveco	8VEXL06.7DGS	6.7	*
2008	Iveco	8VEXL10.3MLR	10.3	*
2008	Komatsu	8KLXL0275AAG	4.5	*
2008	Komatsu	8KLXL0409AAB	6.7	*
2008	Komatsu	8KLXL0409AAC	6.7	*
2008	Komatsu	8KLXL0505AAE	8.3	*
2008	Liebherr Machines Bulle SA	8LHAL10.5LPA	10.5	*
2008	Liebherr Machines Bulle SA	8LHAL12.0KPA	12.0	*
2008	Liebherr Machines Bulle SA	8LHAL9.54SPA	9.5	*
2008	Mitsubishi Heavy Industries	8MVXL06.4FFF	6.4	4.2
2008	Perkins	8PKXL04.4NH1	4.4	*
2008	Perkins	8PKXL04.4NJ1	4.4	*
2008	Perkins	8PKXL04.4NM1	4.4	*
2008	Perkins	8PKXL06.6PJ1	6.6	*
2008	Perkins	8PKXL06.6PJ2	6.6	*
2008	Scania	8Y9XL11.7BBA	8.9	11.7
2008	Scania	8Y9XL11.7BBB	11.7	8.9
2009	Caterpillar	9CPXL07.2ESL	7.2	*
2009	Caterpillar	9CPXL08.8ESK	8.8	*
2009	Caterpillar	9CPXL11.1ESK	11.1	*
2009	Cummins	9CEXL0275AAG	4.5	*
2009	Cummins	9CEXL0275AAK	4.5	*
2009	Cummins	9CEXL0409AAB	6.7	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2009	Cummins	9CEXL0409AAC	6.7	*
2009	Cummins	9CEXL0409AAD	6.7	*
2009	Cummins	9CEXL0505AAE	8.3	*
2009	Cummins	9CEXL0540AAB	8.8	*
2009	Cummins	9CEXL0540AAD	8.8	*
2009	Cummins	9CEXL0661AAF	11.0	*
2009	Cummins	9CEXL0661AAJ	11.0	*
2009	DaimlerChrysler	9MBXL07.2RJA	7.2	6.4
2009	Deere	9JDXL06.8049	6.8	*
2009	Deere	9JDXL06.8078	4.5	*
2009	Deere	9JDXL06.8080	6.8	*
2009	Deere	9JDXL06.8104	6.8	*
2009	Deere	9JDXL06.8105	6.8	4.5
2009	Deere	9JDXL06.8117	6.8	4.5
2009	Deere	9JDXL08.1037	8.1	*
2009	Deere	9JDXL09.0114	9.0	*
2009	Deutz	9DZXL06.1063	5.7	*
2009	Doosan Infracore	9DICL05.8UTA	5.9	*
2009	Doosan Infracore	9DICL07.6UPA	7.6	*
2009	Doosan Infracore	9DICL11.0UJA	11.0	*
2009	Iveco	9VEXL06.7DGB	6.7	4.5
2009	Iveco	9VEXL06.7DGS	6.7	*
2009	Iveco	9VEXL10.3MLR	10.3	*
2009	Komatsu	9KLXL0275AAG	4.5	*
2009	Komatsu	9KLXL0409AAB	6.7	*
2009	Komatsu	9KLXL0409AAC	6.7	*
2009	Komatsu	9KLXL0505AAE	8.3	*
2009	Liebherr Machines Bulle SA	9LHAL10.5LPA	10.5	*
2009	Liebherr Machines Bulle SA	9LHAL12.0KPA	12.0	*
2009	Liebherr Machines Bulle SA	9LHAL9.54SPA	9.5	*
2009	Mitsubishi Heavy Industries	9MVXL06.4FFF	6.4	4.2
2009	Perkins	9PKXL04.4NJ1	4.4	*
2009	Perkins	9PKXL04.4NM1	4.4	*
2009	Perkins	9PKXL04.4NM2	4.4	*
2009	Perkins	9PKXL04.4RG3	4.4	*
2009	Perkins	9PKXL04.4RJ3	4.4	*
2009	Perkins	9PKXL06.6PJ1	6.6	*
2009	Perkins	9PKXL06.6PJ2	6.6	*
2009	Scania	9Y9XL11.7BBA	11.7	8.9
2009	Scania	9Y9XL11.7BBB	11.7	8.9
2009	Sisu Diesel	9SIDL07.4G4D	7.4	6.6
2009	Sisu Diesel	9SIDL07.4G5B	7.4	6.6
2009	Sisu Diesel	9SIDL08.4H5B	8.4	*
2010	AGCO SISU Power Inc.	ASIDL07.4G4D	7.4	6.6
2010	AGCO SISU Power Inc.	ASIDL07.4G4E	7.4	6.6
2010	AGCO SISU Power Inc.	ASIDL07.4G5B	7.4	6.6
2010	AGCO SISU Power Inc.	ASIDL07.4G5C	7.4	6.6
2010	AGCO SISU Power Inc.	ASIDL08.4H5B	8.4	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2010	Caterpillar	ACPXL07.2ESL	7.2	*
2010	Caterpillar	ACPXL08.8ESK	8.8	*
2010	Caterpillar	ACPXL08.8ESL	8.8	*
2010	Caterpillar	ACPXL08.8ESX	8.8	*
2010	Caterpillar	ACPXL10.3ESL	10.3	*
2010	Caterpillar	ACPXL11.1ESK	11.1	*
2010	CNH UK Limited	ANHXL06.7DCB	6.7	*
2010	Cummins	ACEXL0275AAG	4.5	*
2010	Cummins	ACEXL0275AAK	4.5	*
2010	Cummins	ACEXL0409AAB	6.7	*
2010	Cummins	ACEXL0409AAC	6.7	*
2010	Cummins	ACEXL0409AAD	6.7	*
2010	Cummins	ACEXL0505AAE	8.3	*
2010	Cummins	ACEXL0540AAB	8.8	*
2010	Cummins	ACEXL0540AAC	8.8	*
2010	Cummins	ACEXL0540AAD	8.8	*
2010	Cummins	ACEXL0661AAF	11.0	*
2010	Cummins	ACEXL0661AAJ	11.0	*
2010	DaimlerChrysler	AMBXL07.2RJA	7.2	6.37
2010	DaimlerChrysler	AMBXL15.9RJA	12.0	*
2010	Deere	AJDXL06.8049	6.8	*
2010	Deere	AJDXL06.8078	4.5	*
2010	Deere	AJDXL06.8080	6.8	*
2010	Deere	AJDXL06.8104	6.8	4.5
2010	Deere	AJDXL06.8105	6.8	4.5
2010	Deere	AJDXL06.8117	6.8	4.5
2010	Deere	AJDXL08.1037	8.1	*
2010	Deere	AJDXL09.0098	9.0	*
2010	Deere	AJDXL09.0114	9.0	*
2010	Deere	AJDXL09.0901	6.8	9
2010	Doosan Infracore	ADICL05.8UTA	5.9	*
2010	Doosan Infracore	ADICL07.6UPA	7.6	*
2010	Doosan Infracore	ADICL11.0UJA	11.0	*
2010	Iveco SPA	AVEXL06.7DGB	4.5	6.7
2010	Iveco SPA	AVEXL06.7DGS	6.7	*
2010	Iveco SPA	AVEXL10.3MLR	10.3	*
2010	Komatsu	AKLXL0275AAG	4.5	*
2010	Komatsu	AKLXL0409AAB	6.7	*
2010	Komatsu	AKLXL0409AAC	6.7	*
2010	Komatsu	AKLXL0505AAE	8.3	*
2010	Liebherr Machines Bulle SA	ALHAL10.5LPA	11.0	*
2010	Liebherr Machines Bulle SA	ALHAL12.0KPA	12.0	*
2010	Liebherr Machines Bulle SA	ALHAL9.54SPA	10.0	*
2010	Mitsubishi Heavy Industries	AMVXL06.4FFF	6.4	4.2
2010	Navistar	ANVXL04660FA	7.6	*
2010	Perkins	APKXL04.4NJ1	4.4	*
2010	Perkins	APKXL04.4NM1	4.4	*
2010	Perkins	APKXL04.4NM2	4.4	*

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream

Model Year	Manufacturer	Engine Family	Displacement (L)	
2010	Perkins	APKXL04.4RG3	4.4	*
2010	Perkins	APKXL04.4RJ3	4.4	*
2010	Perkins	APKXL06.6PJ1	6.6	*
2010	Perkins	APKXL06.6PJ2	6.6	*
2010	Scania AB	AY9XL11.7BBA	11.7	8.9
2010	Scania AB	AY9XL11.7BBB	11.7	8.9
2011	AGCO SISU Power Inc.	BSIDL07.4G4E	7.4	6.6
2011	AGCO SISU Power Inc.	BSIDL07.4G5C	7.4	6.6
2011	Caterpillar	BCPXL11.1ESK	11.1	*
2011	Cummins	BCEXL0275AAG	4.5	*
2011	Cummins	BCEXL0409AAC	6.7	*
2011	Deere	BJDXL06.8078	6.8	4.5
2011	Deere	BJDXL06.8104	6.8	*
2011	Deere	BJDXL06.8105	6.8	4.5
2011	Deere	BJDXL06.8117	6.8	4.5
2011	Doosan Infracore	BDICL05.8UTA	5.9	*
2011	Iseki Matsuyama	BICLL3.37D4I	3.4	*
2011	Komatsu	BKLXL0275AAG	4.5	*
2011	Komatsu	BKLXL0409AAC	6.7	*
2011	Mitsubishi Heavy Industries	BMVXL06.4FFF	6.4	4.2
2011	Perkins	BPKXL04.4NJ1	4.4	*
2011	Perkins	BPKXL04.4NM1	4.4	*
2011	Perkins	BPKXL04.4NM2	4.4	*
2011	Perkins	BPKXL04.4RG3	4.4	*
2011	Perkins	BPKXL04.4RJ3	4.4	*
2011	Perkins	BPKXL06.6PJ2	6.6	*
2011	Perkins	BPKXL06.6PJ3	6.6	*
2012	Caterpillar	CCPXL07.2ESJ	7.2	*
2012	Caterpillar	CCPXL08.8ESJ	8.8	*
2012	Caterpillar	CCPXL11.1ESJ	11.1	*
2012	Caterpillar	CCPXL11.1ESK	11.1	*
2012	Deere	CJDXL06.8117	4.5	6.8
2012	Perkins	CPKXL06.6PJ3	6.6	*
2013	Caterpillar	DCPXL07.2ESJ	7.2	*
2013	Caterpillar	DCPXL08.8ESJ	8.8	*
2013	Caterpillar	DCPXL11.1ESJ	11.1	*
2013	John Deere Power Systems	DJDXL06.8104	6.8	*
2013	John Deere Power Systems	DJDXL06.8105	6.5	4.5
2013	Perkins	DPKXL06.6PJ3	6.6	*
2014	Perkins	EPKXL04.4NJ3	4.4	*

**Disclaimer:** This engine family list is provided for your convenience. Although every effort has been made to ensure accuracy, we recommend that for compliance purposes you consult the official CARB engine family list available at the CARB website.

<sup>1</sup> Do not remove Original Equipment DOC, install BP sensor upstream and Phoenix downstream