

MSHA Approval (30 CFR Part 7) of DEUTZ EPA Tier 3 / 4i Engines

*** DEUTZ Corporation *** Status: March, 2013



Engine	Rating			Assigned Vent.		Particulate Index		Approval No.	Issue Date	High Idle [rpm]	Max Perm Press		Max Altitude Bef. Derate (*) [m] / [ft]	8-Mode Cycle Results					Min Filter efficiency for 5 [g/hr]	Min Filter efficiency for 2.5 [g/hr]
	kW	HP	rpm	cfm	cfm/HP	cfm	cfm/HP				Intake mbar	Exhaust mbar		NOx	HC	CO	PM	PM rate [g/hr]		
D 2011 L02i Tier 4i	22.5	30.2	2800	1,500	50	2,000	66	07-ENA040010-0	June 5, 2007	3220	45	48	305 / 1,000	5.77	0.42	2.83	0.267	3.26	0.0%	23.0%
D 2011 L02 Tier 4i	23.5	31.5	2800	1,500	48	2,000	63	07-ENA040010-0	June 5, 2007	3220	45	48	305 / 1,000	5.77	0.42	2.83	0.267	3.26	0.0%	23.0%
D 2011 L03i Tier 4i	35.8	48.0	2800	2,000	42	3,000	62	07-ENA040011-0	June 5, 2007	3220	50	62	305 / 1,000	5.77	0.42	2.83	0.267	4.89	0%	49%
D 2011 L03 Tier 4i	36.5	49.0	2800	2,000	41	3,000	61	07-ENA040011-0	June 5, 2007	3220	50	62	305 / 1,000	5.77	0.42	2.83	0.267	4.89	0%	49%
D 2011 L04i Tier 4i	47.5	63.7	2600	2,500	40	4,500	71	07-ENA110013-0	August 12, 2011	2990	55	70	305 / 1,000	3.47	0.27	1.37	0.288	6.93	28%	64%
TD 2011 L04i Tier 4i	54.7	73.4	2600	3,000	41	2,000	27	07-ENA100005-0	Nov 10, 2010	2990	55	70	305 / 1,000	3.86	0.48	1.85	0.12	3.39	0%	26%
TD 2011 L04 Tier 4i	52.0	69.7	2400	3,000	43	2,000	29	07-ENA100005-0	Nov 10, 2010	2775	55	70	305 / 1,000	3.86	0.48	1.85	0.12	3.39	0%	26%
TD 2011 L04w Tier 3	65.0	87.2	2600	4,000	45	6,000	68	07-ENA110014-0	Aug 26, 2011	2990	55	70	305 / 1,000	4.66	0.40	1.65	0.289	9.64	48%	74%
D 914 L04 Tier 4i	55.0	73.8	2300	3,500	47	4,000	54	07-ENA100007-0	Nov 16, 2010	2645	55	75	305 / 1,000	4.22	0.27	3.24	0.207	5.75	13%	56%
D 914 L06 Tier 3	74.9	100.4	2300	4,500	45	4,500	45	07-ENA100006-0	Nov 10, 2010	2645	55	75	305 / 1,000	3.89	0.63	1.47	0.182	7.41	33%	66%
TCD 914 L06 (ecEGR) Tier 3	129.9	174.2	2300	6,500	37	7,000	40	07-ENA100008-0	Nov 10, 2010	2461	55	70	915 / 3,000	3.10	0.31	0.97	0.166	11.74	57%	79%
TCD 2012 L04 2V Tier 3 EDC control	103 98 93	138 131 124	2400 2400 2400	5,000 5,000 4,500	36 38 36	3,000 3,000 3,000	22 23 24	07-ENA100001-0	Feb 2, 2010	2760	55	100	Automatic	3.47 3.37 3.30	0.18 0.20 0.21	0.66 0.54 0.56	0.091 0.093 0.091	5.04 5.03 4.69	1% 1% 0%	50% 50% 47%
TCD 2012 L06 2V Tier 3 EDC control	147 140 132	197 188 177	2400 2400 2400	7,500 7,000 6,500	38 37 37	7,000 6,000 6,000	36 32 34	07-ENA100002-0	Feb 2, 2010	2760	55	100	Automatic	3.01 3.11 3.17	0.18 0.20 0.20	0.80 0.78 0.68	0.142 0.123 0.134	11.39 9.36 9.68	56% 47% 48%	78% 73% 74%
TCD 2013 L04 Tier 3 EDC control	126 120 113 105	169 161 151 141	2300 2300 2300 2300	6,500 5,500 6,000 5,500	38 34 40 39	3,000 3,000 2,500 3,000	18 19 17 21	07-ENA110005-0	Feb 15, 2011	2645	55	100	Automatic	3.91 3.75 3.77 3.83	0.17 0.17 0.20 0.23	0.61 0.62 0.61 0.65	0.074 0.074 0.068 0.077	5.01 4.84 4.18 4.46	0% 0% 0% 0%	50% 48% 40% 44%
TCD 2013 L06 Tier 3 EDC control	190 173 160	255 232 215	2300 2300 2300	10,500 9,000 7,500	41 39 35	6,000 4,500 4,500	24 19 21	07-ENA110006-0	Feb 15, 2011	2645	55	100	Automatic	3.76 3.65 3.59	0.12 0.14 0.05	0.41 0.42 0.44	0.097 0.086 0.084	9.90 8.02 7.41	49% 38% 33%	75% 69% 66%
TCD 2015 V06 Tier 3	330 300 240	443 402 322	2100 2100 2100	15,500 16,000 11,500	35 40 36	7,500 7,500 7,000	17 19 22	07-ENA120002	Mar 15, 2012	2415	55	100	Automatic	3.73 3.70 3.47	0.16 0.14 0.19	0.82 0.87 1.07	0.068 0.073 0.080	12.05 12.32 10.47	59% 59% 52%	79% 80% 76%
TCD 2015 V08 Tier 3	440 400 350	590 536 469	2100 2100 2100	22,000 20,000 18,000	37 37 38	8,000 8,500 8,500	14 16 18	07-ENA130001	Feb 14, 2013	2415	55	100	Automatic	3.63 3.58 3.48	0.18 0.21 0.30	0.83 0.87 1.01	0.055 0.060 0.070	13.19 13.62 13.62	62% 63% 63%	81% 82% 82%

(*)The altitude listed is the maximum altitude for operation before fuel deration. The fuel rate of the engine must be reduced by 1% per 100 m (328 ft) above the elevation listed.