

# Diesel Emission Data - Variable Speed

## LEGEND

EPA	Tier 1	Tier 2	Tier 3	Interim Tier 4	Final Tier 4
EU	Stage I	Stage II	Stage IIIA	Stage IIIB	Stage IV

New emissions regulations take effect January 1st of the year indicated by colour change unless otherwise noted.

## EXAMPLES

NOx	2.0	2.0, the maximum amount of nitrogen oxides (NOx) allowed in grams / kW-hr.
NMHC	0.19	0.19, the maximum amount of non-methane hydrocarbons (NMHC) allowed in grams / kW-hr.
PM	0.025	0.025, the maximum amount of particulate matter (PM) allowed in grams / kW-hr.
NMHC + NOx	7.5	7.5, the maximum amount of NMHC + NOx allowed in grams / kW -hr.
PM	0.80	0.80, the maximum amount of PM allowed in grams / kW-hr.

## EPA NONROAD EMISSIONS REGULATIONS

kW	HP	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0 - 7	0 - 10					7.5 0.80			7.5 0.40							
8 - 18	11 - 24					7.5 0.80			7.5 0.40							
19 - 36	25 - 49				7.5 0.60				7.5 0.30					4.7 0.03		
37 - 56	50 - 74				7.5 0.40				4.7 0.30	Option 1*				4.7 0.03		
						4.7 0.40	Option 2*		4.7 0.03							
57 - 74	75 - 99				7.5 0.40				4.7 0.40				3.4 0.19 0.02			0.40 0.19 0.02
75 - 129	100 - 174			6.6 0.30				4.0 0.30					3.4 0.19 0.02			0.40 0.19 0.02
130 - 224	175 - 299			6.6 0.20												
225 - 449	300 - 599	6.4 0.20						4.0 0.20					2.0 0.19 0.02		0.40 0.19 0.02	
450 - 559	600 - 749		6.4 0.20													
≥ 560	≥ 750							6.4 0.20					3.5 0.19 0.10			3.5 0.19 0.04

\*In the 50 to 75 horsepower category there are two options. Option 1 requires a reduced PM level (.30 vs. .40) but allows Final Tier 4 to be delayed one year (2013).

NOTE: The vertical dashed lines separating the years show when the seven-year life of the Tier 2/3 Equipment Flexibility Provision ends and engines can no longer be placed in vehicle production.

# EU NONROAD EMISSIONS REGULATIONS

kW	HP	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0 - 7	0 - 10	Not regulated in EU														
8 - 18	11 - 24	Not regulated in EU														
19 - 36	25 - 49	8.0 1.5 0.80						7.5 0.60								
37 - 56	50 - 74				7.0 1.3 0.40				4.7 0.40					4.7 0.025		
57 - 74	75 - 99				7.0 1.3 0.40				4.7 0.40				3.3 0.19 0.025			0.40* 0.19 0.025
75 - 129	100 - 174			6.0 1.0 0.30				4.0 0.30					3.3 0.19 0.025			0.40* 0.19 0.025
130 - 559	175 - 749		6.0 1.0 0.20				4.0 0.20					2.0 0.19 0.025			0.40 0.19 0.025	
≥ 560	≥ 750	Not regulated in EU														

\*October 1, 2014

# FUEL SULFUR REGULATIONS

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EPA	5000 ppm						500 ppm			15 ppm					
EU	2000 ppm						1000 ppm			10 ppm					

