

EPA vs. EU Nonroad Emissions Regulations

40 cfr Part 89 & 1039 vs. 97/68 & 2004/26

NOx, NMHC or NOx+NMHC g/kW hr PM, g/kW hr

hp(kW)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<11			10.5 1.0					7.5 0.80			7.5 0.40		7.5 0.60					
≥11 <25			9.5 0.80					7.5 0.80			7.5 0.40							
≥25 <50		9.5 0.80					7.5 0.60				7.5 0.30					4.7 0.03		
(19 - 37)				D: 8.0 1.5 0.80						K: 7.5 0.60(2)								
≥50 <75	1998		9.2				7.5 0.4				Option 1 4.7_0.30				Option 1 4.7_0.03			
(37 - 56)		C: 9.2 1.3 0.85					G: 7.0 1.3 0.40				J: 4.7 0.40				Option 2 4.7_0.03			
>75 <100	1998		9.2				7.5 0.40				4.7 0.40				3.4, 0.19 0.02			0.40, 0.19 0.02
(56 - 75)		C: 9.2 1.3					G: 7.0 1.3 0.40				J: 4.7 0.40				N: 3.3 0.19 0.025			R: 0.40 0.19 0.025
≥100 <175	1997		9.2			6.6_0.30					4.0 0.30				3.4, 0.19 0.02			0.40, 0.19 0.02
(75 - 130)		B: 9.2 1.3 0.70				F: 6.0 1.0_0.30					I: 4.0_0.30				M: 3.3 0.19 0.025			R: 0.40 0.19 0.025
≥175 <300						6.6_0.20												
≥300 <600	1996		9.2 1.3 0.54		6.4 0.20					4.0_0.2				2.0, 0.19 0.02				0.40, 0.19 0.02
≥600 <750					6.4 0.20													
(130 - 560)		A: 9.2 1.3 0.54			E: 6.0 1.0 0.20					H: 4.0 0.20				L: 2.0 0.19 0.025				Q: 0.40 0.19 0.025
Fuel Sulfur EPA Off-Road	5000 ppm									500 ppm			15 ppm					
Fuel Sulfur EU Off-Road	2000 ppm										1000 ppm	10 ppm (not finalized)						
Fuel Sulfur EPA On-Road	500 ppm								15 ppm									
EPA	Tier 1	Tier 2	Tier 3	Interim Tier 4	Final Tier 4													
EU	Stage I	Stage II	Stage III A	Stage III B	Stage IV													

1. The dashed lines separating the years show when the 7 year life of the Tier 2/3 Equipment Flexibility Provision ends.

Points of Interest (POI)

- 1) The Tier 2/3 Equipment Flexibility provision for under 50 hp applications has expired
- 2) The Tier 2/3 Equipment Flexibility Provision for 300 to 600 hp applications applications will expire on 31 Dec 07
- 3) In the 50 to 75 hp EPA power category there is an Option 1 & 2. Deere has chosen to go with Option 1 (meet reduced PM level) for Series 250 engine applications as the engines can meet that level today.
- 4) Common question from an OEM will be: can engines from one supplier that meets Option 1 and engine from a different supplier that meets Option 2 be mixed? The answer is yes...see Point 5 below.
- 5) With the mixed approach, an OEM must use engines meeting the 0.03 and .30 PM standards in 2012 in the same proportion as engines meeting the 0.40 and 0.30 standard in the combined years of 2008-2010
- 6) For Interim Tier 4, above 75 hp, the regulation only spans three years. It is assumed OEM's may skip Interim Tier 4 by utilizing the Tier 4 Equipment Flexibility Provision and adopt Final Tier 4 at the later date.
- 7) Note fuel standards at the bottom of the schedule