

Current & Future Emission Regulations

Model Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015		
US EPA 40 CFR Part 1039 (June 29, 2004)				Production Date				() Note: (NOx or NOx+NMHC / PM) or (NOx / HC / PM) Unit: g/kWh								
0 ≤ P < 8	Tier 1 (10.5 / 8.0 / 1.0)			Tier 2 (7.5 / 8.0 / 0.80)			Tier 4 (7.5 / 8.0 / 0.40*)									
8 ≤ P < 19	Tier 1 (9.5 / 6.6 / 0.80)			Tier 2 (7.5 / 6.6 / 0.80)			Tier 4 (7.5 / 6.6 / 0.40)									
19 ≤ P < 37	Tier 1 (9.5 / 5.5 / 0.80)			Tier 2 (7.5 / 5.5 / 0.60)			Interim Tier 4 (7.5 / 5.5 / 0.30)					Tier 4 (4.7 / 5.5 / 0.03)				
37 ≤ P < 56	Tier 1 (9.2 / --- / ---)			Tier 2 (7.5 / 5.0 / 0.40)			Interim Tier 4 (4.7 / 5.0 / 0.30) (Option #1)					Tier 4 (4.7 / 5.0 / 0.03)				
							Tier 3 (4.7 / 5.0 / 0.40)					Interim Tier 4 (4.7 / 5.0 / 0.03) (Option #2)				
56 ≤ P < 75	Tier 1 (9.2 / --- / ---)			Tier 2 (7.5 / 5.0 / 0.40)			Tier 3 (4.7 / 5.0 / 0.40)					Interim Tier 4 (0.40 / 0.19 / 5.0 / 0.02)		Tier 4 (0.40 / 0.19 / 5.0 / 0.02)		
												Phase-in				
												Alt. NOx Phase-in Option (2.3 / 0.19 / 5.0 / 0.02)		Tier 4 (0.40 / 0.19 / 5.0 / 0.02)		
75 ≤ P < 130	Tier 1 (9.2 / --- / ---)			Tier 2 (6.6 / 5.0 / 0.30)			Tier 3 (4.0 / 5.0 / 0.30)					Interim Tier 4 (0.40 / 0.19 / 5.0 / 0.02)		Tier 4 (0.40 / 0.19 / 5.0 / 0.02)		
												Phase-in				
												Alt. NOx Phase-in Option (2.3 / 0.19 / 5.0 / 0.02)		Tier 4 (0.40 / 0.19 / 5.0 / 0.02)		
130 ≤ P < 225	Tier 1 (9.2 / 1.3 / 11.4 / 0.54)			Tier 2 (6.6 / 3.5 / 0.20)			Tier 3 (4.0 / 3.5 / 0.20)					Interim Tier 4 (0.40 / 0.19 / 3.5 / 0.02)		Tier 4 (0.40 / 0.19 / 3.5 / 0.02)		
												Phase-in Option (4.0 / 3.5 / 0.02) < 50%				
												Alt. NOx Phase-in Option (2.0 / 0.19 / 3.5 / 0.02)		Tier 4 (0.40 / 0.19 / 3.5 / 0.02)		
225 ≤ P < 450	Tier 2 (6.4 / 3.5 / 0.20)			Tier 3 (4.0 / 3.5 / 0.20)					Interim Tier 4 (0.40 / 0.19 / 3.5 / 0.02)		Tier 4 (0.40 / 0.19 / 3.5 / 0.02)					
									Phase-in Option (4.0 / 3.5 / 0.02) < 50%							
									Alt. NOx Phase-in Option (2.0 / 0.19 / 3.5 / 0.02)		Tier 4 (0.40 / 0.19 / 3.5 / 0.02)					
450 ≤ P < 560	Tier 2 (6.4 / 3.5 / 0.20)			Tier 3 (4.0 / 3.5 / 0.20)					Interim Tier 4 (0.40 / 0.19 / 3.5 / 0.02)		Tier 4 (0.40 / 0.19 / 3.5 / 0.02)					
									Phase-in Option (4.0 / 3.5 / 0.02) < 50%							
									Alt. NOx Phase-in Option (2.0 / 0.19 / 3.5 / 0.02)		Tier 4 (0.40 / 0.19 / 3.5 / 0.02)					
Fuel Sulfur	5000ppm						500ppm				15ppm					
							Technical Review		*Optional Tier 4 PM = 0.8g/kW-h (During model year 2008 and 2009) = 0.6g/kW-h (Starting with model year 2010) Engine Condition: hand-startable, air-cooled, and direct injection							