

Current & Future Emission Regulations

Model Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ministry of Land, Infrastructure and Transportation / Recognition system for construction machinery														
() Note: (NO _x +NMHC / HC / CO / PM / (smoke(%))) or (NO _x / HC / CO / PM / (smoke(%))) Unit: g/kWh														
(construction machinery not covered by off-road regulation's type approval)														
0 ≤ P < 7.5 (8)	No Regulation													
7.5 ≤ P < 15	1st Step (12.4/2.4/5)													
8 ≤ P < 19	2nd Step (9.00/1.50/5.00/0.80/) 3rd Step (7.50 / 5.00 / 0.80 / 40)													
15 ≤ P < 30	1st Step (10.5/1.9/5)													
19 ≤ P < 37	2nd Step (8.00/1.50/5.00/0.80/) 3rd Step (6.00 / 1.00 / 5.00 / 0.40 / 40)													
30 ≤ P < 272	1st Step (9.2/1.3/5)													
37 ≤ P < 56	2nd Step (7.00/1.30/5.00/0.40/) 3rd Step (4.00 / 0.70 / 5.00 / 0.30 / 35)													
56 ≤ P < 75	2nd Step (7.00/1.30/5.00/0.40/) 3rd Step (4.00 / 0.70 / 5.00 / 0.25 / 30)													
75 ≤ P < 130	2nd Step (6.00/1.00/5.00/0.30/) 3rd Step (3.60 / 0.40 / 5.00 / 0.20 / 25)													
130 ≤ P < 560	2nd Step (6.00/1.00/3.50/0.20/) 3rd Step (3.60 / 0.40 / 3.50 / 0.17 / 25)													
Mandatory implementation date is to be determined later.														
JPN Ministry of the Environment (6/30/03 Report) Registration of Equipment (2006 Regulation covers off-road special motor vehicle also)														
0 ≤ P < 8	No Regulation													
8 ≤ P < 19	No Regulation													
19 ≤ P < 37	2003 Regulation (8.00/1.50/5.00/0.80/40) 2006 Regulation													
37 ≤ P < 56	2003 Regulation (7.00/1.30/5.00/0.40/40) 2006 Regulation													
56 ≤ P < 75	2003 Regulation (7.00/1.30/5.00/0.40/40) 2006 Regulation													
75 ≤ P < 130	2003 Regulation (6.00/1.00/5.00/0.30/40) 2006 Regulation													
130 ≤ P < 560	2003 Regulation (6.00/1.00/3.50/0.20/40) 2006 Regulation (3.60/0.40/3.50/0.17/25)													
Japan Land Engine Manufacturers Association (below 19kW) Voluntary Regulation														
() Note: (NO _x +NMHC / CO / PM) Unit: g/kWh														
0 ≤ P < 8	Tier 1 (7.5 / 8.0 / 0.80) Tier 2 (7.5 / 8.0 /)													
8 ≤ P < 19	Tier 1 (7.5 / 6.6 / 0.80) Tier 2 (7.5 / 6.6 /)													
*Optional Tier 4 PM = 0.8g/kWh (During model year 2008 and 2009) = 0.6g/kWh (Starting with model year 2010) Engine Condition: hand-startable, air-cooled, and direct injection														