

Table 1. ARB and USEPA Off-Road Compression-Ignition (Diesel) Engine Standards (NMHC+NOx/CO/PM in g/bhp-hr). When ARB and USEPA standards differ, the standards shown here represent the more stringent of the two.

| Maximum horsepower | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015+ |
|-------------------------|--------------------------|-------------------------------------|------|------|------|-------------------------------------|------|------|------------------|------------------|------|-------------------------------|------------------|------|---|------|--|---|------|------|-------|
| <11 | See Table 2 footnote (a) | | | | | 7.8 / 6.0 / 0.75 | | | 5.6 / 6.0 / 0.6 | | | 5.6 / 6.0 / 0.30 ^a | | | | | | | | | |
| 11≤hp<25 | | | | | | 7.1 / 4.9 / 0.60 | | | 5.6 / 4.9 / 0.60 | | | 5.6 / 4.9 / 0.30 | | | | | | | | | |
| 25≤hp<50 | - | | | | | 7.1 / 4.1 / 0.60 | | | 5.6 / 4.1 / 0.45 | | | 5.6 / 4.1 / 0.22 | | | 3.5 / 4.1 / 0.02 | | | | | | |
| 50≤hp<75 | | | | | | | | | 5.6 / 3.7 / 0.30 | | | 3.5 / 3.7 / 0.22 ^c | | | 3.5 / 3.7 / 0.02 ^c | | | | | | |
| 75≤hp<100 | | | | | | - / 6.9 / - / - ^b | | | | | | 3.5 / 3.7 / 0.30 | | | | | 0.14 / 0.30 / 3.7 / 0.015 ^{b,c} | | | | |
| 100≤hp<175 | | | | | | | | | | 4.9 / 3.7 / 0.22 | | | 3.0 / 3.7 / 0.22 | | | | | 0.14 / 2.5 / 3.7 / 0.015 ^{b,c} | | | |
| 175≤hp<300 | | | | | | | | | 4.9 / 2.6 / 0.15 | | | | | | | | 0.14 / 0.30 / 2.2 / 0.015 ^b | | | | |
| 300≤hp<600 | - | 1.0 / 6.9 / 8.5 / 0.40 ^b | | | | | | | 4.8 / 2.6 / 0.15 | | | 3.0 / 2.6 / 0.15 ^c | | | 0.14 / 1.5 / 2.6 / 0.015 ^{b,c} | | | | | | |
| 600≤hp≤750 | | | | | | | | | | | | | | | | | | | | | |
| Mobile Machines > 750hp | | | | | | | | | | | | | | | 0.30 / 2.6 / 2.6 / 0.07 ^b | | | 0.14 / 2.6 / 2.6 / 0.03 ^b | | | |
| 750hp<GEN ≤1200hp | | | | | | 1.0 / 6.9 / 8.5 / 0.40 ^b | | | | | | 4.8 / 2.6 / 0.15 | | | | | | 0.14 / 0.50 / 2.6 / 0.02 ^b | | | |
| GEN>1200 hp | | | | | | | | | | | | | | | 0.30 / 0.50 / 2.6 / 0.07 ^b | | | | | | |

a) The PM standard for hand-start, air cooled, direct injection engines below 11 hp may be delayed until 2010 and be set at 0.45 g/bhp-hr.

b) Standards given are NMHC/NOx/CO/PM in g/bhp-hr.

c) Engine families in this power category may alternately meet Tier 3 PM standards (0.30 g/bhp-hr) from 2008-2011 in exchange for introducing final PM standards in 2012.

d) The implementation schedule shown is the three-year alternate NOx approach. Other schedules are available.

e) Certain manufacturers have agreed to comply with these standards by 2005.



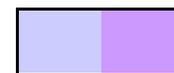
: Tier 1



: Tier 2



: Tier 3



: Tier 4 Interim / Final