

23. The emission standards A, B, C and D include limits on hydrocarbon (HC) and carbon monoxide (CO) emissions as well as  $\text{NO}_x$ . Estimates of emission reductions for these pollutants, relative to the baseline ECE R.15-04 case, are given in table 4.

Table 4: Estimated reductions in HC and CO emissions from petrol-fuelled passenger cars for different technologies

Standard	HC-reduction (%)	CO-reduction (%)
B.	(a) 30-40	50
	(b) 50-60	40-50
	(c) 70-90	70-90
C.	90	90
D.	90	90

24. Current diesel cars can meet the  $\text{NO}_x$  emission requirements of standards A, B and C. Strict particulate emission requirements, together with the stringent  $\text{NO}_x$  limits of standard D, imply that diesel passenger cars will require further development, probably including electronic control of the fuel pump, advanced fuel injection systems, exhaust gas recirculation and particulate traps. Only experimental vehicles exist to date. (See also table 6, footnote a/).

#### Other light-duty vehicles ( $N_1$ )

25. The control methods for passenger cars are applicable but  $\text{NO}_x$  reductions, costs and commercial lead time factors may differ.

#### Heavy-duty petrol-fuelled vehicles ( $M_2, M_3, N_2, N_3$ )

26. This class of vehicle is insignificant in western Europe and is decreasing in eastern Europe. US 1990 and US 1991  $\text{NO}_x$  emission levels (see table 5) could be achieved at modest cost without significant technology advancement.

#### Heavy-duty diesel-fuelled vehicles ( $M_2, M_3, N_2, N_3$ )

27. In table 5, three emission standards are summarized. These are used in table 6 to group engine technologies for heavy-duty diesel vehicles according to  $\text{NO}_x$  reduction potential. The baseline engine configuration is changing, with a trend away from naturally aspirated to turbo-charged engines. This trend has implications for improved baseline fuel consumption performance. Comparative estimates of consumption are therefore not included.