

40 C.F.R. § 1036.805

Symbols, abbreviations, and acronyms.

The procedures in this part generally follow either the International System of Units (SI) or the United States customary units, as detailed in NIST Special Publication 811 (incorporated by reference in § 1036.810). See 40 CFR 1065.20 for specific provisions related to these conventions. This section summarizes the way we use symbols, units of measure, and other abbreviations.

(a) *Symbols for chemical species.* This part uses the following symbols for chemical species and exhaust constituents:

Table 1 to Paragraph (a) of § 1036.805—Symbols for Chemical Species and Exhaust Constituents

Symbol	Species
C	carbon.
CH ₄	methane.
CH ₄ N ₂ O	urea.
CO	carbon monoxide.
CO ₂	carbon dioxide.
H ₂ O	water.
HC	hydrocarbon.
NMHC	nonmethane hydrocarbon.
NMHCE	nonmethane hydrocarbon equivalent.
NMNEHC	nonmethane nonethane hydrocarbon.
NO	nitric oxide.
NO ₂	nitrogen dioxide.
NO _X	oxides of nitrogen.
N ₂ O	nitrous oxide.
PM	particulate matter.

(b) *Symbols for quantities.* This part uses the following symbols and units of measure for various quantities:

Table 2 to Paragraph (b) of § 1036.805—Symbols for Quantities

Symbol	Quantity	Unit	Unit symbol	Unit in terms of SI base units
α	atomic hydrogen-to-carbon ratio	mole per mole	mol/mol	1
A	Area	square meter	m ²	m ²
β	atomic oxygen-to-carbon ratio	mole per mole	mol/mol	1
CdA	drag area	meter squared	m ²	m ²
Crr	coefficient of rolling resistance	newton per kilonewton	N/kN	10 ⁻³
D	distance	miles or meters	mi or m	m
e	efficiency			
ϵ	Difference or error quantity			
E	mass weighted emission result	grams/ton-mile	g/ton-mi	g/kg-km
Eff	efficiency			
Em	mass-specific net energy content	megajoules/kilogram	MJ/kg	m ² ·s ⁻²
f_n	angular speed (shaft)	revolutions per minute	r/min	π 30·s ⁻¹
g	gravitational acceleration	meters per second squared	m/s ²	m·s ⁻²
i	indexing variable			
ka	drive axle ratio			1
$k_{topgear}$	highest available transmission gear			
m	Mass	pound mass or kilogram	lbm or kg	kg
M	molar mass	gram per mole	g/mol	10 ⁻³ kg·mol ⁻¹
M	total number in a series			
M	vehicle mass	kilogram	kg	kg
$M_{rotating}$	inertial mass of rotating components	kilogram	kg	kg
N	total number in a series			
Q	total number in a series			
P	Power	kilowatt	kW	10 ⁻³ m ² ·kg·s ⁻³

ρ	mass density	kilogram per cubic meter	kg/m ³	m ⁻³ kg
r	tire radius	meter	m	m
SEE	standard error of the estimate			
σ	standard deviation			
T	torque (moment of force)	newton meter	N·m	m ² ·kg·s ⁻²
t	Time	second	s	s
Δt	time interval, period, 1/frequency	second	s	s
UF	utility factor			
v	Speed	miles per hour or meters per second	mi/hr or m/s	m·s ⁻¹
W	Work	kilowatt-hour	kW·hr	3.6·m ² ·kg·s ⁻¹
w_C	carbon mass fraction	gram/gram	g/g	1
$w_{CH_4N_2O}$	urea mass fraction	gram/gram	g/g	1
x	amount of substance mole fraction	mole per mole	mol/mol	1
x_b	brake energy fraction			
x_{bl}	brake energy limit			

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