

Federal and California Light-Duty Vehicle Emissions Standards for Air Pollutants

There are two standards programs shown in this document: federal standards, known as the [Tier 1](#), [Tier 2](#), and [Tier 3](#) Programs, and California standards, known as the [LEV I](#), [LEV II](#), and [LEV III](#) Programs.

These standards apply to all passenger vehicles, which include light-duty vehicles (i.e., cars), light-duty trucks (e.g., small pickup trucks), and medium-duty passenger vehicles (e.g., certain larger configurations of SUVs); all vehicles are affected, regardless of which fuel they use. The older California programs (LEV I and LEV II) break down medium-duty vehicles into different classes based on weight (i.e., MDV4 and MDV5). For more information on these weight classifications, [visit the California Air Resources Board's website](#). In addition, the first federal program (Tier 1) breaks down light-duty trucks into multiple weight-based classes (i.e., LDT1, LDT2, etc.); [learn more about the different weight classes here](#).

Tier 3 (MY 2025+) and LEV III Program (MY 2015+)

Phase-in began in MY2017 for the Tier 3 Program.

Standards		Emissions Limits (grams/mile)*				
Tier (Federal)	LEV (California)	NOx + NMOG	CO	PM		HCHO
				Tier	LEV**	
Cars, Trucks, and SUVs						
Bin 1	N/A***	0	0	0	0	0
Bin 20	SULEV20	0.02	1	0.01	0.003	0.004
Bin 30	SULEV30	0.03	1	0.01	0.003	0.004
Bin 50	ULEV50	0.05	1.7	0.01	0.003	0.004
Bin 70	ULEV70	0.07	1.7	0.01	0.003	0.004
Bin 125	ULEV125	0.125	2.1	0.01	0.003	0.004
Bin 160	LEV160	0.16	4.2	0.01	0.003	0.004

* Maximum allowed grams of pollutant per mile at vehicle's full useful life (150,000 miles)

** Starting in 2017, LEV PM standards dropped to 0.003 g/mi, with 100% certified by 2021, and drop further starting in 2025

*** ZEVs are handled differently under California's LEV program

Tier 2 Program (MY 2004-2016)

Standard	Emissions Limits (grams/mile)*			
	NOx + NMOG	CO	PM**	HCHO
Cars, Trucks, and SUVs				
Bin 1	0	0	0	0
Bin 2	0.03	2.1	0.01	0.004
Bin 3	0.085	2.1	0.01	0.011
Bin 4	0.11	2.1	0.01	0.011
Bin 5	0.16	4.2	0.01	0.018
Bin 6	0.19	4.2	0.01	0.018
Bin 7	0.24	4.2	0.02	0.018
Bin 8a	0.325	4.2	0.02	0.018

Tier 2 Interim Program.

Additional bins were added to provide flexibility during the phase-in of the program. These bins were restricted to specific mileage years and vehicle classes. For more information about the interim standards, see the table in 40 CFR 86 Subpart S [here](#).

*Maximum allowed grams of pollutant per mile at vehicle's full useful life (100,000-120,000 miles)

LEV II Program (MY 2004-2014)

Standards vary based on vehicle class and weight. For more information on these weight classes, [visit the California Air Resources Board's website](#).

Standard	Emissions Limits (grams/mile)*			
	NOx + NMOG	CO	PM**	HCHO
LDV (Cars), LDT (Small Trucks)				
ZEV	0	0	0	0
PZEV	0.03	1	0.01	0.004
SULEV II	0.03	1	0.01	0.004
ULEV II	0.125	2.1	0.01	0.011
LEV II	0.16	4.2	0.01	0.018
LEV II Option 1	0.19	4.2	0.01	0.018
MDV4				
SULEV II	0.2	3.2	0.06	0.008
ULEV II	0.343	6.4	0.06	0.016
LEV II	0.395	6.4	0.12	0.032
MDV5				
SULEV II	0.317	3.7	0.06	--
ULEV II	0.567	7.3	0.06	--
LEV II	0.19	0.63	7.3	0.12

*Maximum allowed grams of pollutant per mile at vehicle's full useful life (100,000-120,000 miles)

Tier 1 Program (MY 1994-2003)

Standards vary based on vehicle class and weight. For more information on these weight classes [visit EPA's Vehicle Weight Classifications for the Emission Standards Reference Guide](#).

Standard	Emissions Limits (grams/mile)*			
	NOx + NMOG	CO	PM**	HCHO
LDV (Cars)				
LDV	0.91	4.2	0.01	--
LDV diesel	1.56	4.2	0.01	0.8
LDT1				
LDT1	0.91	4.2	0.01	0.8
LDT diesel	1.56	4.2	0.01	0.8
LDT2				
LDT2	1.37	5.5	0.01	0.8
LDT3				
LDT3	1.44	6.4	0.01	0.8
LDT4				
LDT4	2.09	7.3	0.12	0.8

*Maximum allowed grams of pollutant per mile at vehicle's full useful life (100,000-120,000 miles)

LEV I Program (MY 2001-2006)

Standards vary based on vehicle class.

Standard	Emissions Limits (grams/mile)*			
	NOx + NMOG	CO	PM**	HCHO
LDV, LDT1				
ULEV I	0.355	2.1	0.04	0.011
LEV I	0.39	4.2	0.08	0.018
ILEV***	0.39	4.2	0.08	--
TLEV I ****	0.756	4.2	0.08	0.018
LDT2				
ILEV**	0.63	5.5	0.08	--
ULEV I	0.57	2.8	n/a	0.013
LEV I	0.63	5.5	0.1	0.023
TLEV I	1.1	5.5	0.1	0.023
MDV2				
SULEV I	0.372	3.2	0.05	0.013
ULEV I	0.743	6.4	0.05	0.013
LEV I	0.83	6.4	0.1	0.027
MDV3				
SULEV I	0.534	3.7	0.06	0.008
ULEV I	1.067	7.3	0.06	0.016
LEV I	1.18	7.3	0.12	0.032
MDV4				
SULEV I	0.6	4.1	0.06	0.010
ULEV I	1.197	8.1	0.06	0.021
LEV I	1.33	8.1	0.12	0.040
MDV5				
SULEV I	0.83	5.2	0.06	0.013
ULEV I	1.757	10.3	0.06	0.026
LEV I	1.943	10.3	0.12	0.052

* Maximum allowed grams of pollutant per mile at vehicle's full useful life (100,000–120,000 miles)

** PM standard applied only to diesel vehicles

*** No MY specification for this standard

**** Applies only to MY 2001–2003

Acronym List

Vehicle Classes

LDT	Light-duty truck (Note: Divided into 2 classes based on weight)	
• HLDT	Heavy light-duty truck	Ex: Ford F-450
• LLDT	Light light-duty truck	Ex: Ford F-150
LDV	Light-duty vehicle	Ex: Honda Accord
MDPV	Medium-duty passenger vehicle	Ex: Some configurations of the Chevrolet Suburban
MDV	Medium-duty vehicle (same as MDV) (Note: divided into 5 classes based on weight)	Ex: Some configurations of the Chevrolet Suburban

Learn more about EPA Size Classes here: <https://www.fueleconomy.gov/feg/findacarhelp.shtml#epaSizeClass>

Standards

LEV	Low emission vehicle
SULEV	Super ultra-low emission vehicle
TLEV	Transitional low emission vehicle
ULEV	Ultra-low emission vehicle
ZEV	Zero emission vehicle

Pollutants

HCHO	Formaldehyde
NMOG	Non-methane organic gases