


<b>California Environmental Protection Agency</b>  <b>Air Resources Board</b>	<b>GENERAL MOTORS</b> LLC.	Executive Order: A-006-2055 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 1 of 5
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Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC), Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: The following exhaust and evaporative emission control systems produced by the manufacturer are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

TEST GROUP INFORMATION									
MODEL YEAR	TEST GROUP		VEHICLE CLASS(ES)		FUEL CATEGORY		FUEL TYPE		
2017	HGMXD06.0399		HDV, MDV5		FLEX-FUEL VEHICLE (FFV)		85% ETHANOL, GASOLINE		
USEFUL LIFE (miles)			VEHICLE EMISSION CATEGORY			INTERIM / INTERMEDIATE IN-USE STD			
EXH/ORVR		EVAP	FTP		SFTP	FTP		SFTP	
150000		150000	LEV3 ULEV400		LEV3 ULEV (HOT1435 UC(LA92), SC03, FTP TEST CYCLE)	NMOG+NOX AND PM		NMOG+NOX AND PM	
SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS					OBD STATUS		ENGINE DISPLACEMENT (L)		
1	2TWC, TWC, 2HO2S(2), SFI				FULL	ALL MODELS	6.0		
*	*				PARTIAL	*			
*	*				PARTIAL WITH FINES	*			
EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION									
EVAP / ORVR FAMILY		EVAPORATIVE STD CATEGORY			EVAP EMISSION STD VEHICLE CLASS		SPECIAL FEATURES		
HGMXF0176860		LEV 2			MDV5		HCT		
HGMXR021260A		LEV 3 OPTION2 WITH FEL			MDV5		HCT		
HGMXR0223842		LEV 2			MDV5		HCT		
EMISSION CREDIT INFORMATION									
ALLOWANCE FOR TEST GROUP					NMOG CREDIT FOR NON-PZEV ZERO-EVAP	NMOG CREDIT FOR DOR	OPTIONAL EXH. STD FOR WORK TRUCKS		
BASELINE PZEV		AT PZEV	TZEV						
*		*	*		N	N	N		
NMOG AND FLEET AVERAGE INFORMATION									
NMOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO (GASOLINE)	HCHO/NMHC RATIO (GASOLINE)	NMOG+NOX FLEET STD LDT (3751 LVW-8500 GVW) + MDPV (g/mi)		NMOG+NOX FLEET STD MDV (8501-10000 GVWR) (g/mi)		NMOG+NOX FLEET STD MDV (10001-14000 GVWR) (g/mi)	
*	*	1.10	*	*		*		*	

See the Attachment for Vehicle Models, Evaporative Family, Engine Displacement, Emission Control Systems, Phase-In Standards, OBD Compliance, Emission Standards and Certification Levels, and Abbreviations.

BE IT FURTHER RESOLVED:

The exhaust and evaporative emission standards and the certification emission levels for the listed vehicles are as listed on the Attachment. Compliance with the 50° Fahrenheit testing requirement may have been met based on the

manufacturer's submitted compliance plan in lieu of testing. Any debit in the manufacturer's NMOG+NOx and greenhouse gas Fleet Average (PC or LDT or MDPV) or "Vehicle Equivalent Credit" (MDV) compliance plan shall be equalized as required.

**BE IT FURTHER RESOLVED:**

For the listed vehicle models, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 1965 [emission control labels], 1968.2 [on-board diagnostic, full or partial compliance], 2035 et seq. [emission control warranty], 2235 [fuel tank fill pipes and openings] (gasoline and alcohol fueled vehicles only), and "High-Altitude Requirements" and "Inspection and Maintenance Emission Standards" (California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for PC, LDT and MDV).

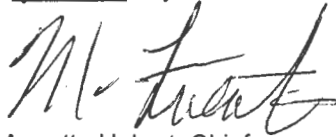
**BE IT FURTHER RESOLVED:**

Listed vehicle models over 14000 lbs GVWR are certified to the requirements in 13 CCR Section 1961.2 pursuant to 13 CCR Section 1956.8(c)(3) (heavy-duty vehicles certified to emissions requirements applicable to medium-duty vehicles).

Vehicles certified under this Executive Order shall conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 24<sup>TH</sup> day of June 2016.

  
For Annette Hebert, Chief  
Emissions Compliance, Automotive Regulations and Science Division

**ATTACHMENT****EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS****EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS (FTP, HWFET, 50°F, 20°F)**

	FUEL TYPE	CH <sub>4</sub> : methane; NMOG: non-CH <sub>4</sub> organic gas; HC: hydrocarbon; NMHC: non-CH <sub>4</sub> HC; CO: carbon monoxide; NO <sub>x</sub> : oxides of nitrogen; HCHO: formaldehyde; PM: particulate matter; RAF: reactivity adjustment factor; 2DHS/3DHS [g HC/test]: 2/3 days diurnal+hot-soak; RL [g HC/mi]: running loss; ORVR [g HC/gallon dispensed]: on-board refueling vapor recovery; g: gram; mg: milligram; mi: mile; K: 1000 miles; F: degrees Fahrenheit; FTP: federal test procedure; SFTP: supplemental FTP									
		NMOG+NO <sub>x</sub> (g/mi)		CO (g/mi)		NO <sub>x</sub> (g/mi)		HCHO (mg/mi)		PM (g/mi)	
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*	*	*	*	*	*	*	*	*	*	*
FTP@UL	GASOLINE- LEV3 E10 (TIER 3 E85 (85% ETHANOL + 15% TIER 3 E10 GAS))	0.158 (0.188)	0.400 (0.400)	1.7 (1.4)	7.3 (7.3)	*	*	*	6 (6)	0.005 (0.002)	0.010 (0.010)
50°F @4K	GASOLINE- LEV3 E10 (TIER 3 E85 (85% ETHANOL + 15% TIER 3 E10 GAS))	0.234 (0.678)	0.800 (0.800)	1.5 (2.4)	7.3 (7.3)	*	*	*	42 (42)		

	FUEL TYPE	NMOG+NO <sub>x</sub> (g/mi)		CO (g/mi)	
		CERT	STD	CERT	STD
HWFET @ 50K	*	*	*		
HWFET @ UL	GASOLINE-LEV3 E10 (TIER 3 E85 (85% ETHANOL + 15% TIER 3 E10 GAS))	0.087 (0.086)	0.400 (0.400)		
20°F @ 50K	*			*	*

**SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS**

	FUEL TYPE		US06			SC03		COMPOSITE		
			NMOG+NO <sub>x</sub> (g/mi)	CO (g/mi)	PM (mg/mi)	NMOG+NO <sub>x</sub> (g/mi)	CO (g/mi)	NMOG+NO <sub>x</sub> (g/mi)	CO (g/mi)	PM (mg/mi)
@ 4K	*	CERT	*	*		*	*			
		STD	*	*		*	*			
@ UL	GASOLINE- LEV3 E10	CERT	*	*	*	*	*	0.147	1.1	3
		STD	*	*	*	*	*	0.550	6.0	7
		BIN						*		


**WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS**

EVAPORATIVE FAMILY	FUEL TYPE	WHOLE VEHICLE EVAPORATIVE TESTING						RL (g/mi) @ UL	
		3DHS (g/test) @ UL			2DHS (g/test) @ UL				
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
HGMXF0176860	GASOLINE-LEV3 E10	0.41	1.00	*	0.30	1.25	*	0.00	0.05
HGMXR021260A	EPA TIER 3 REG	0.456	0.600	0.575	0.467	0.600	0.575	0.00	0.05
HGMXR0223842	E10-EPA	0.65	1.00	*	0.45	1.25	*	0.00	0.05

**ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS**

EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL ONLY EVAP & CANISTER BLEED					
				FUEL TYPE	3DHS RIG TEST (g/test) @ UL		2DHS RIG TEST (g/test) @ UL		BLEED CANISTER TEST (g/test) @ 4K
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	
HGMXR021260A	E10-EPA	0.01	0.20	EPA TIER 3 REG	*	*	*	*	0.007 0.030
HGMXR0223842	GASOLINE - TIER 2 UNLEADED	0.03	0.20	*	*	*	*	*	*

\*: not applicable; #: pounds; UL: useful life; PC: passenger car; LDT: light-duty truck; LDT1: LDT<6000#GVWR,0-3750#LVW; LDT2: LDT<6000#GVWR,3751-5750#LVW; LDT3: LDT 6001-8500#GVWR,3751-5750#ALVW; LDT4: LDT 6001-8500#GVWR,5751-8500#ALVW; MDV: medium-duty vehicle; MDV4: MDV 8501-10000#GVWR; MDV5: MDV 10001-14000#GVWR; MDPV: medium-duty passenger vehicle; HDV: heavy-duty vehicle; ECS: emission control system; CERT: certification; STD: standard; FEL: family emission limit; GVWR: gross vehicle weight rating; LVW: loaded vehicle weight; ALVW: adjusted LVW; LEV: low emission vehicle; ULEV: ultra LEV; SULEV: super ULEV; ZEV: zero-emission vehicle; PZEV: partial ZEV; AT PZEV: advanced technology PZEV; TZEV: transitional ZEV; TWC/OC: 3-way/oxidizing catalyst; ADSTWC: adsorbing TWC; HAC: HC adsorbing catalyst; WU: warm-up catalyst; NAC: NOx adsorption catalyst; SCR-U or SCRC/SCR-N or SCRC-NH3: selective catalytic reduction-urea/ammonia; NH3OC: ammonia oxidation catalyst; CTOX/PTOX: continuous/periodic trap oxidizer; DPF: diesel particulate filter (active); GPF: PM filter for spark-ignited engine; HO2S/O2S: heated/oxygen sensor; WR-HO2S or AFS: wide range/linear/heated air-fuel ratio sensor; NOXS: NOx sensor; PMS: PM sensor; RDQS: reductant quality sensor; NH3S: ammonia sensor; EGR: exhaust gas recirculation; EGRC: EGR cooler; AIR/AIRE: secondary air injection (belt driven)/(electric driven); PAIR: pulsed AIR; SFI/MFI: sequential/multiport fuel injection; DFI/IFI: direct/indirect fuel injection; TC/SC: turbo/super charger; CAC: charge air cooler; F/P/\$: full/partial/partial with fines on-board diagnostic; DOR: direct ozone reducing; HCT: hydrocarbon trap; BCAN: bleed carbon canister; prefix 2: parallel; (2) suffix: series; CNG/LNG: compressed/liquefied natural gas; LPG: liquefied petroleum gas; E85: "85%" ethanol ("15%"gasoline) fuel; E10: "10%" ethanol ("90%"gasoline) fuel; A: automatic (with lockup); M: manual transmission; SA: semi-automatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: automated manual-selectable transmission; OT: other transmission

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2017 MODEL YEAR: VEHICLE MODELS INFORMATION								
MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
CHEVROLET	C35 SILVERADO 2WD	MDV5	6.0	A6	HGMXR021260A	1	F	*
CHEVROLET	C35 SILVERADO 2WD	MDV5	6.0	A6	HGMXR0223842	1	F	*
CHEVROLET	G3500 EXPRESS 2WD CUTAWAY CH	MDV5	6.0	A6	HGMXF0176860	1	F	*
CHEVROLET	G4500 EXPRESS 2WD CUTAWAY CH	HDV	6.0	A6	HGMXF0176860	1	F	*
CHEVROLET	K35 SILVERADO 4WD	MDV5	6.0	A6	HGMXR021260A	1	F	*
CHEVROLET	K35 SILVERADO 4WD	MDV5	6.0	A6	HGMXR0223842	1	F	*
GMC	C35 SIERRA 2WD	MDV5	6.0	A6	HGMXR021260A	1	F	*
GMC	C35 SIERRA 2WD	MDV5	6.0	A6	HGMXR0223842	1	F	*
GMC	G3500 SAVANA 2WD CUTAWAY CH	MDV5	6.0	A6	HGMXF0176860	1	F	*
GMC	G4500 SAVANA 2WD CUTAWAY CH	HDV	6.0	A6	HGMXF0176860	1	F	*
GMC	K35 SIERRA 4WD	MDV5	6.0	A6	HGMXR021260A	1	F	*
GMC	K35 SIERRA 4WD	MDV5	6.0	A6	HGMXR0223842	1	F	*