California Environmental Protection Agency

ØAir Resources Board

GENERAL MOTORS LLC

EXECUTIVE ORDER A-006-1869

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC), Div. 26, Part 5, Chap. 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 & 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED:

That 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 O	ROUP INFORMA	TION				
MODEL YEAR	TEST GRO	UP VEHICL	E CLASS(ES)	FUEI	CATEGORY		EL TYPE		
2014	EGMXV02.4	069	PC	HYBRID E	LECTRIC VEHICL	E	GASOLINE		
	USEFUL LIF	E (miles)	VEHICLE E	MISSION CATEG	ORY	INTERIM /	INTERME	DIATE IN-USE STD	
EXH	ORVR	EVAP	FTP	S	FTP	FTP		SFTP	
	000,	150,000	LEV3 SULEV30	LEV3 C	OMPOSITE	*		NMOG+NOx	
SPECIAL	FEATURES &	EXHAUST EMISSION C	ONTROL SYSTEMS		OBD STATUS	- Arg	ENGIN	E DISPLACEMENT (L)	
1		WC(2), HO2S(2), DF1, A		FULL	+	nheu Theu			
-		*		PARTIAL	ALL MOD	ELS	2.4		
*		*		PARTIAL WITH FINES	*				
		E\	/APORATIVE & REFUEL	ING (EVAP/ORVI	R) FAMILY INFORM	ATION			
	EVAP / OI	RVR FAMILY	EVAPOR	RATIVE STD CAT	EGORY	EVAP EM	ISSION ST	D VEHICLE CLASS	
	EGMXI	R0117704	100	LEV2			P	C	
		*		*		•	-	` `	
<u></u> :-		*		i	-		, ,	•	
			EMISSIO	N CREDIT INFOR	MATION				
		LLOWANCE FOR TEST	GROUP	NMO	G CREDIT FOR		FOR DOD	OPTIONAL EXH. STD FOR	
BASE	LINE PZEV	AT PZEV	TZEV		ZEV ZERO-EVAP	NMOG CREDIT		WORK TRUCKS	
ALL	MODELS	ALL MODELS	*		N	N N			
			NMOG AND FL	EET AVERAGE	NFORMATION				
NMOG RA	F CH4 RAF	NMOG/NMHC RATIO	HCHO/NMHC RATIO		G+NOX FLEET OT (0-3750 LVW) (q		NMOG+NOX FLEET STD LDT (3751 LVW- ni) 8500 GVWR) + MDPV (g/mi)		
		1		STD PC+LDT (0-3750 LVW) (g/mi) 8500 GVWR) + 0.107 0.11					

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:

That the exhaust and the 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 or NMOG+NOx, as applicable, Fleet Average" (PC or LDT or MDPV) or "Vehicle Equivalent Credit" (MDV) compliance plan shall be equalized as required.

BE IT FURTHER RESOLVED:

That 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 Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model PC, LDT and MDV).

BE IT FURTHER RESOLVED:

The test group listed in this Executive Order is certified conditionally on the manufacturer providing data to demonstrate compliance with California's greenhouse gas fleet average emission standard (CA GHG Standard) specified in Title 13, California Code of Regulations, (13 CCR) Section 1961.1 and the incorporated California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, amended March 29, 2010 (CA Test Procedures). The manufacturer has elected, under 13 CCR Section 1961.1(a)(1)(A)(ii) and under Section E.2.5.1(ii) of the CA Test Procedures, to demonstrate compliance with the CA GHG Standard by demonstrating compliance with the National greenhouse gas program (National GHG Program). Therefore,

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the test group listed in this Executive Order is certified conditionally further on the manufacturer complying with the requirements specified in said provisions in 13 CCR, and Sections E.2.5.1(ii) and H.4.5(b) and H.4.5(c) of the CA Test Procedures (among other things, concerning data and information submission, timing, and format as specified by the Executive Officer). Failure to comply with the certification requirements to demonstrate compliance with CA GHG Standard by demonstrating compliance with the National GHG Program under said provisions in 13 CCR and CA Test Procedures may be cause for the Executive Officer to revoke the Executive Order. Vehicles in the revoked Executive Order shall be deemed uncertified and subject to penalties authorized under California law. Notwithstanding the requirement herein, a manufacturer that becomes, after MY2009, a large-volume manufacturer, as defined in 13 CCR Section 1900, is not required to comply with the CA GHG Standard until the beginning of the fourth model-year from becoming a large-volume manufacturer. Additionally, notwithstanding the requirement herein, a small-volume manufacturer, independent low-volume manufacturer, or intermediate volume-manufacturer, as defined in 13 CCR Section 1900, is not required to comply with CA GHG Standard during model-years (MY) 2012 through 2015.

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

44 day of April 2013.

Annette Hebert, Chief

Mebile Source Operations Division

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ATTACHMENT

EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

(For bi-, dual- or flexible-fueled vehicles, the STD and CERT in parentheses are those applicable to testing on gasoline test fuel.)

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

			matter, RAF=r n-board refueling	H4 organic gas; reactivity adjustm g vapor recovery				-soak; RL (g/n niles; F=degre	es Fahrenh	eit; SFTP=supple	emental federal
	,	NMOG+NOx (g/mi)		CO (CO (g/ml)		mg/mi)	PM (g/mi)		HWY NMOG+NOx (g/ml)	
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
570 G 50K	*	*	*	*	*	*	*	*	*	•	*
FTP @ 50K	E10-CARB	0.022	0.030	0.6	1.0	*	4	*	0.01	0.003	0.030
	GASOLINE-COLD CO LOW		*	1.1	10.0	*	*	*	*	*	*
50°F @ 4K		0.023	0.060	0.3	1.0	*	. 8	*	*	<u> </u>	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

$\vdash \neg$	US06 / UC (LA92)							SC03				COMPOSITE				
	FUEL TYPE		s+NOx mi)	CO (g/mi)	PM (n	ng/mi)		+NOx mi)	co (g/ml)	NMC	G+NOx (g/ml)	CO (g	g/mi)
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	BIN	CERT	STD
63.416		*	*	- -	*	*	-	*	•	*	*	*	*	*	*	*
@ 4K @ UL	E10-CARB		*	*	*	*	*	*	*	*	*	0.021	0.140	0.050	2.0	4.2

WHOLE VEHICLE EVAPORATIVE/ORVR EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY	FUEL TYPE	3-DAYS D		OT SOAK		TESTING FURNAL + H (g/test) @ UL		RUNNIN (g/mi)		ON-BOARD REFUELING VAPOR RECOVERY (g/gallon) @ UL	
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD	CERT	STD
EGMXR0117704	GASOLINE - CA PHASE 2	0.32	0.35	*	0.31	0.35	*	0.000	0.05	0.02	0.20
*	*	*	*	*	*	*	*	*	*	*	•

FUEL ONLY & CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY	FUEL TYPE		UEL ONLY EVAP				
		3-DAYS DIURNA (g/test)		2-DAYS DIURNA (g/test)		CANISTER BLEED (g/test)	
		CERT	STD	CERT	STD	CERT	STD
EGMXR0117704	GASOLINE - CA PHASE 2	0.04	0.0	*	0.0	*	*
*	*	*	*	*	*	*	<u> </u>

* =not applicable; 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#LVW; LDT4=LDT 6001-8500#GVWR,3751-5750#LVW; MDV=medium-duty vehicle; MDV4=MDV 8501-10000#GVWR; MDV5=MDV 10001-14000#GVWR; MDPV=medium-duty passenger vehicle; ECS= emission control system; CERT= certification; STD= standard; FEL= family emission limit; LVW=loaded vehicle weight; ALVW=adjusted LVW; LEV=low emission vehicle; ULEV=ultra LEV; SULEV=super ULEV; standard; FEL= family emission vehicle; AT PZEV=advanced technology PZEV; TZEV=transitional zero-emission vehicle; TWC/OC=3-way/oxidizing catalyst; ADSTWC=adsorbing TWC; 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); HO2S/O2S=heated/oxygen sensor; WR-HO2S or AFS=wide rage/linear/heated air-fuel ratio sensor; NOXS= NOx 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=direct fuel injection; TC/SC= turbo/super charger; CAC=charge air cooler; OBD(F)/(P)(B)=full/partial/both 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

2014 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEHICLE CLASS	ENGINE (L)	TRANSMI SSION	EVAPORATIVE FAMILY	EXHAUST ECS	OBD	PZEV DESIGNATION
BUICK	LACROSSE	PC	2.4	SEMI- AUTOMATIC	EGMXR0117704	1	Partial	AT PZEV (TYPE D)
BUICK	REGAL	PC	2.4	SEMI- AUTOMATIC	EGMXR0117704	1	Partial	AT PZÉV (TYPE D)
CHEVROLET	IMPALA	PC	2.4	SEMI- AUTOMATIC	EGMXR0117704	1	Partial	AT PZEV (TYPE D)
CHEVROLET	MALIBU	PC	2.4	SEMI- AUTOMATIC	EGMXR0117704	1	Partial	AT PZEV (TYPE D)

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