California Environmental Protection Agency

*6*章 Air Resources Board

GENERAL MOTORS LLC

EXECUTIVE ORDER A-006-1782-1

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 1 of 2

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.

MODEL YEAR	TEST GROUP	VEHICLE TYPE	EXHAUST EMISSION STANDARD CATEGORY	USEFUL LI	FE (miles)	FUEL TYPE Gasoline (Tier 2 Unleaded plus Battery-Assist	
2012			"LEV II" Super Ultra Low	ORVR	EVAP		
	CGMXV02.4069	Passenger Car	Emission Vehicle (LEV II SULEV)	150K 150K			
No.	ECS & SP	ECIAL FEATURES	EVAPORATIVE FA	EVAPORATIVE FAMILY (EVAF)			
1	TWC(2), HO25	S(2), DFI, AIR, OBD(P)	CGMXR012	CGMXR0123702			
*		*	*	*			

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 Fleet Average" (PC or LDT) 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, 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.

BE IT FURTHER RESOLVED:

That the listed vehicle models have been certified as an advanced technology partial zero emission vehicle (AT-PZEV) -Type D Hybrid Electric Vehicle (HEV) and are granted a baseline partial zero emission vehicle (PZEV) allowance of 0.2 and additional PZEV allowance under 13 CCR Section 1962.1(c).

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. This Executive Order hereby supersedes Executive Order A-006-1782 dated September 8, 2011.

Executed at El Monte, California on this

day of September 2012.

Annette Hebert, Chief Mobile Source Operations Division

GENERAL MOTORS LLC

EXECUTIVE ORDER A-006-1782-1

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 2 of 2

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.)

NMOG FLEET NMOG @ RAF≈* AVERAGE [g/mi] CH4 RAF = *		NMOG or NMHC PM=neithane; NMOG=non-CH4 organic gas; NMHC=non-CH4 hydrocarbon; CO=carbon monoxide; NOx=oxide NCHO=formaldehyde; PM=particulate matter; RAF=reactivity adjustment factor; 2/3 D [g/test]=2/3 day diurnal+hot-soax; RL [g/mi]=running loss; ORVR [g/gallon dispensed]=on-board refueling vapor recovery; g=gram; mg=m								durant					
CERT	STD	NMOG	14101214		I DOT-SOBK, F	RL [g/mi]=rui =1000 miles	ทิกเกิด ได้ธร:	ORVR io/o	alion disce	nsedi=on-bo	ard refueli	no vanor re	COMPONE ASSO	ram; mg= milli	gram
0.028 0.035			CERT [g/mi]	STD [g/mi]	CO [g/ml]		NC	NOx [g/mi]		HCHO [mg/mi]		PM [g/mi]		Hwy NOx [g/ml]	
Section of the sectio	1000		[B,,,,,,]		CERT	STD	CERT	STI	CE	RT S	TD	CERT	STD	CERT	STD
	@ 50K	*	*	. *	<u>.</u> . *	*	*	*		•	+	*	*	•.	+
	@ UL		*	0.010	0.8	1.0	0.01	0.0	2	•	4.	•	0.01	0.003	0.03
	@ 50°F & 4K	0.007	*	0.020	0.8	1.0	0.01	0.0	2	*	8.	•		*	*
	[g/mi]	[g/mi]		NMHC+NOx [g/ml] (composite)					NMHC+NOx [g/mi] [US06]		[g/mi] 306]	NMHC+NOx [g/mi] [SC03]		CO [g/mi] [SC03]	
@ 20	PF & 50K	Music	46	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
CERT	3.0	SFTP@4	000 miles	*	* .	*	*	0.02	0.14	1.2	8.0	0.01	0.20	1.0	2.7
STD	10.0	SFTP	@ * miles	*	*	+	*	*	*	*	*	*	*	1.0	*

3-Days Diurnal + Hot Soak (grams/test) @ UL						On-Board Refueling Vapor Recovery (grams/gallon) @ UL		
CERT	STD	CERT	STD	CERT	STD	CERT	STD	
0.26	0.35	0.22	0.35	0.000	0.05	0.01	0.20	
*	*	•	*	+	*	-	*	
•	+	*	*	+	*	*		
*	•	+	*	+ -	*	*		
	(grams/to	(grams/test) @ UL CERT STD	(grams/test) @ UL (grams/test) CERT STD CERT	(grams/test) @ UL (grams/test) @ UL CERT STD CERT STD	(grams/test) @ UL (grams/test) @ UL (grams/m CERT STD CERT STD CERT	(grams/test) @ UL (grams/test) @ UL (grams/mile) @ UL CERT STD CERT STD CERT STD	(grams/test) @ UL (grams/mile) @ UL Recovery (gram CERT STD CERT STD CERT STD CERT	

* =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; LDT3=LDT 6001-8500#GVWR,5751-8500#ALVW; MDV=medium-duty vehicle; MDV4=MDV 8501-10000#GVWR; EDS=emission control system; STD= standard; CERT= certification; LVW=loaded vehicle weight; ALW=adjusted LVW; LEV=low emission vehicle; ULEV=ultra LEV; SULEV=super ULEV; TWC/OC=3-way/oxidizing catalyst; ADSTWC=adsorbing TWC; WU=warm-up catalyst; NAC=NOX adsorption catalyst; SCR-U/SCR-N= selective catalytic reduction-urea/ammonia; NH30C=ammonia oxidation catalyst; CTOX/PTOX= continuous/periodic trap oxidizer; HO2S/O2S=heated/oxygen sensor; AFS=(heated) air-fuel ratio sensor; NOXS=NOX sensor; RDQS=reductant quality sensor; EGR=exhaust gas recirculation; EGRC=EGR cooler; AIR/AIRE=secondary air injection (belt driven)/(electric driven); PAIR=pulsed AIR; SFI/MFI= sequentia/ 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;

2012 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	EVAPORATIVE FAMILY	ECS NO.	ENGINE SIZE (L)	VEHICLE TYPE	SPECIAL FEATURES	OBD II				
BUICK	REGAL	CGMXR0123702	1	2.4	PC	нст	Partial				
BUICK	LACROSSE	CGMXR0123702	1	2.4	PC	HCT	Partial				