California Environmental Protection Agency		EXECUTIVE ORDER A-006-1937
OB Air Resources Board	GENERAL MOTORS LLC	New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 1 of 4

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-02-003;

## 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 G	ROUP INFORMA	TION					
MODEL YEAR	TEST GRO	UP VEHIC	CLE CLASS(ES)	FUEL	CATEGORY	FUEL TYPE				
2015	FGMXV03.6	048	PC		ED SINGLE FUE	L	GASOLINE			
5. S.	USEFUL LIF	E (miles)	VEHICLE EI	MISSION CATEGO	DRY	INTERIN		EDIATE IN-USE STD		
EXH/C	RVR	EVAP	FTP	SF	TP	FTP		SFTP		
150,	000	150,000	LEV3 SULEV30	LEV3 CO	MPOSITE	*	* NMO0			
SPECIAL	EATURES &	EXHAUST EMISSION	CONTROL SYSTEMS		OBD STATUS	1.24.200000000000	ENGIN	E DISPLACEMENT (L)		
1	2T	WC, TWC, 2HO2S(2)	DFI	FULL	ALL MOI	DELS	and a second sec			
2	2	TWC(2), 2HO2S(2), E	DFI	PARTIAL				3.6		
*		*		PARTIAL WITH FINES	*					
		E Carlotte a sub-	VAPORATIVE & REFUELI	NG (EVAP/ORVR)	FAMILY INFOR	MATION	The last and a second sec	and the second		
	EVAP / OF	VR FAMILY	EVAPOR	ATIVE STD CATE	GORY	EVAP E	MISSION ST	TD VEHICLE CLASS		
	FGMXR	0123702	L	EV 3 OPTION 1	A.C. (1999) - 0.2		P	°C.		
	FGMXR	010830A	LEV 3	OPTION 2 WITH	FEL		P	C		
	FGMXR	013030B	LEV 3	OPTION 2 WITH	FEL		P	C		
a a the capacity of the	1.178-364-28832		EMISSION	CREDIT INFORM	ATION	A CONTRACT OF LOSING	21 m 2 4 5 2	and a second a second and a second as		
	AL	LOWANCE FOR TEST			CREDIT FOR	NMOG CREDIT	FOR DOR	OPTIONAL EXH. STD FOR		
	NE PZEV	AT PZEV	TZEV	NON-PZ	EV ZERO-EVAP		TORDOR	WORK TRUCKS		
ALL M	ODELS	*			N	N		N		
	the of the Ball of the State		NMOG AND FL	EET AVERAGE IN	FORMATION	I to be determine and the " of the				
NMOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO	HCHO/NMHC RATIO		+NOX FLEET (0-3750 LVW) (g			EET STD LDT (3751 LVW- WR) + MDPV (g/mi)		
*	*	1.10	*		0.100			0.119		

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 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:**

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 2001 through 2014 Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2009 through 2016 Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, amended December 6, 2012 (CA Test Procedures). The manufacturer has elected, under 13 CCR Section

**California Environmental Protection Agency** 

# 🔎 Air Resources Board

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 2 of 4

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, 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 \_\_\_\_\_\_day of March 2014.

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

# California Environmental Protection Agency

# **O** Air Resources Board

### **GENERAL MOTORS LLC**

EXECUTIVE ORDER A-006-1937

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 4 of 4

CADILLAC	ATS	PC	3.6	SA	FGMXR010830A	2	F	PZEV
CADILLAC	ATS AWD	PC	3.6	SA	FGMXR010830A	2	F	PZEV
CADILLAC	CTS SEDAN	PC	3.6	SA	FGMXR013030B	2	F	PZEV
CADILLAC	CTS SEDAN AWD	PC	3.6	SA	FGMXR013030B	2	F	PZEV
CADILLAC	XTS	PC	3.6	SA	FGMXR0123702	1	F	PZEV
CHEVROLET	IMPALA	PC	3.6	SA	FGMXR0123702	1	F	PZEV

**California Environmental Protection Agency** 

OB Air Resources Board

**GENERAL MOTORS LLC** 

**EXECUTIVE ORDER A-006-1937** 

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 3 of 4

# 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)

		CH4=methane; NMOG=non-CH4 organic gas; HC=hydrocarbon; NMHC=non-CH4 HC; CO=carbon monoxide; NOx=oxides of nitrogen; HCH0=formaldehyde; PM=particulate matter, RAF=reactivity adjustment factor; 2DHS/3DHS [g HC/test]=2/3 days diumal+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+NOx (g/mi)		CO (g/mi)		HCHO (mg/mi)		PM (g/mi)		HWY NMOG+NOx (g/mi)			
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD		
FTP @ UL	GASOLINE-LEV3 E10	0.029	0.030	0.5	1.0	*	4	*	0.01	0.006	0.030		
20°F @ 50K	GASOLINE - COLD CO LOW OCTANE	+	*	1.9	10.0	*	*		*	*	* *		
50°F @ 4K	GASOLINE-LEV3 E10	0.026	0.060	0.8	1.0	*	8		*	*	*		

#### SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

		US06 / UC (LA92)					SC03				COMPOSITE					
	FUEL TYPE	PE NMOG+NOx (g/mi)		CO (g/mi)		PM (mg/mi)		NMOG+NOx (g/mi)		CO (g/mi)		NMOG+NOx (g/mi)			CO (g/mi)	
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	BIN	CERT	STD
@ UL	GASOLINE-LEV3 E10	*	*	*	*	*	*	*	.*	*	*	0.026	0.140	0.050	0.33	4.2

WHOLE VEHICLE EVAPORATIVE/ORVR EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY		WHOLE VEHICLE EVAPORATIVE TESTING							RUNNING LOSS		ON-BOARD REFUELING	
	FUEL TYPE	3-DAYS DIURNAL + HOT SOAK (g/test) @ UL			2-DAYS DIURNAL + HOT SOAK (g/test) @ UL			(g/mi)		(g/gallon) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD	CERT	STD	
FGMXR0123702	GASOLINE-TIER2 UNLEADED	0.257	0.350	*	0.218	0.350	*	0.000	0.05	0.01	0.20	
FGMXR010830A	GASOLINE-LEV3 E10	0.223	0.300	0.300	0.174	0.300	0.300	0.000	0.05	*	*	
	GASOLINE-TIER2 UNLEADED	*	*	*	*	*	*	*	*	0.02	0.20	
FGMXR013030B	GASOLINE-LEV3 E10	0.242	0.300	0.300	0.234	0.300	0.300	0.001	0.05	*	*	
	GASOLINE-TIER2 UNLEADED	*		*	•	*	*	*	*	0.01	0.20	

FUEL ONLY & CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY			FUEL ONLY EVAP					
	FUEL TYPE	3-DAYS DIURN/ (g/test		2-DAYS DIURNA (g/test)		CANISTER BLEED (g/test)		
		CERT	STD	CERT	STD	CERT	STD	
FGMXR0123702	GASOLINE - CA PHASE 2	0.04	0.0	*	0.0	*	*	
FGMXR010830A	GASOLINE-LEV3 E10	*	*	*	*.	0.014	0.020	
FGMXR013030B	GASOLINE-LEV3 E10	*	*	*	*	0.008	0.020	

\* =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; 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=transition at 2EV; 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; FIP/\$=full/partial/inf 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-CARB: 85% ethanol+15% CA Phase2 gasoline; E85-EPA: 85% ethanol+15% Tier2 unleaded gasoline; E10-CARB: 10% ethanol+90% CA Phase2 gasoline; E10-EPA: 10% ethanol+90% Tier2 unleaded gasoline; A=automatic transmission; M=manual transmission; SA=semiauutomatic transmission; L=lock-up automatic transmission; CV=continu

## 2015 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH	OBD	PZEV TYPE
BUICK	LACROSSE	PC	3.6	SA	FGMXR0123702	1	F	PZEV