# **GENERAL MOTORS LLC**

**EXECUTIVE ORDER A-006-1969** 

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 1 of 3

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 L	IFE (miles)	FUEL TYPE		
2015	FGMXT05.3382	LDT: 6001-8500# GVW, 3751- 5750# ALVW and 5751-8500#	USEPA Bin 4 Counted as	EXH / ORVR	EVAP	Flexible Fuel: Ethanol (E85)/Gasoline (Tie 2 Unleaded)		
	•	ALVW	ARB LEV2 ULEV	120K	150K			
No.	ECS &	SPECIAL FEATURES	EVAPORATIVE FAMILY (EVAF)			DISPLACEMENT (L)		
1	2TWC, TW	C, 2HO2S(2), DFI, OBD(F)	FGMXR017	FGMXR0176820				
*		*	FGMXR0223840			5.3		
*		•	*	* 1				

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, 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:

The listed vehicle models are federally certified, and are certified under the provisions of 13 CCR Section 1961(a)(14) and the incorporated test procedures. Vehicles certified under this Executive Order shall not be introduced into commerce before January 2, 2014.

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 December 2013.

Erik White, Chief Mobile Source Operations Division SFTP @ 120000

(0.05)

(0.97)

STD

(12.5)

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(1.2)

(5.6)

# **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+NOx FLEET | NMOG @ RAF= | CH4=methane; NMOG=non-CH4 organic gas; NMHC=non-CH4 hydrocarbon; CO=carbon monoxide; NOx=oxides of nitrogen;

AVERAGE [g/mi]		CH4 F	RAF =	NMOG or HCHO=formaldehyde; PM=particulate matter; RAF=reactivity adjustment factor; 2/3 D [g/test]=2/3 day diurnal+  NMHC hot-soak; RL [g/mi]=running loss; ORVR [g/gallon dispensed]=on-board refueling vapor recovery; g=gram; mg=milligram											
		NMOG NMHC		NMHC	mi=mile; K	=1000 miles	F=degrees	s Fahrenhe	it; SFTP=s	supplementa	I federal te	st procedure	e covery, g=gr	am, <b>mg</b> -mili	gram
0.005	0.440	CERT	CERT	[g/mi]	CO	[g/mi]	NO	x [g/mi]	H	CHO [mg/	mi]	PM [g	/mi]	Hwy NC	x [g/mi]
0.095	0.119	[g/mi]	[g/mi]	[g/tin]	CERT	STD	CERT	STE	CE	RT S	TD	CERT	STD	CERT	STD
	@ 50K	*	*	*	*	*	*	. *	1	*	*	*	*	*	*
	@ UL	0.048 (0.063)	*	0.070 (0.070)	0.6 (1.0)	2.1 (2.1)	0.01 (0.02)	0.04			11.	* (*)	0.01 (0.01)	0.01 (0.01)	0.05
@	50°F & 4K	*	*	*	*	*	*	*		*	*		*	*	*
co [				NMHC+NC (compo		CO [g		NMHC [g/mi]	+NOx [US06]		[g/mi] 506]		C+NOx [SC03]		[g/mi] 203]
@ 20°F	& 50K		3 1.5	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
ERT	(1.5)	SFTP @ 4	000 miles	*	*	*	*	* (0.0)	* (0.4)	(0.6)	(10.5)	(0.03)	(0.31)	(1.0)	(3.5)

Evaporative Family	3-Days Diurnal + Hot Soak (grams/test) @ UL		2-Days Diurnal + Hot Soak (grams/test) @ UL		Runnin (grams/m	g Loss ile) @ UL	On-Board Refueling Vapor Recovery (grams/gallon) @ UL		
	CERT	STD	CERT	STD	CERT	STD	CERT	STD	
FGMXR0176820	0.55	0.90	0.38	1.15	0.000	0.05	(0.02)	(0.20)	
FGMXR0223840	0.71	0.90	0.76	1.15	0.000	0.05	(0.03)	(0.20)	
*	*	*	*	*	*	*	*	*	
*	*	*	*	*	*	*	*	*	

(0.7)

(16.9)

\*=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#ALVW; LDT4=LDT 6001-8500#GVWR,5751-8500#ALVW; MDV=medium-duty vehicle; MDV4=MDV 8501-10000#GVWR; MDV5=MDV 10001-14000#GVWR; ECS= emission control system; STD= standard; CERT= certification; LVW=loaded vehicle weight; ALVW=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 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 range/linear/heated air-fuel ratio sensor; NOXS= NOx sensor; RDQS=reductant quality sensor; NH3S = Ammonia sensor; PMS=particulate matter 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;

#### 2015 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	EVAPORATIVE FAMILY	ECS NO.	ENGINE SIZE (L)	VEHICLE TYPE	SPECIAL FEATURES	OBDI
CHEVROLET	C15 SILVERADO 2WD	FGMXR0176820	1	5.3	LDT3, LDT4	*	Full
CHEVROLET	C15 SILVERADO 2WD	FGMXR0223840	1	5.3	LDT4	*	Full
CHEVROLET	C15 SILVERADO 2WD CAB CHASSIS	FGMXR0223840	1	5.3	LDT4	*	Full
CHEVROLET	C1500 SUBURBAN 2WD	FGMXR0223840	1	5.3	LDT4	*	Full
CHEVROLET	C1500 TAHOE 2WD	FGMXR0176820	1	5.3	LDT4		Full
CHEVROLET	K15 SILVERADO 4WD	FGMXR0176820	1	5.3	LDT4	*	Full
CHEVROLET	K15 SILVERADO 4WD	FGMXR0223840	1	5.3	LDT4	*	Full
CHEVROLET	K15 SILVERADO 4WD CAB CHASSIS	FGMXR0223840	1	5.3	LDT4	*	Full
CHEVROLET	K1500 SUBURBAN 4WD	FGMXR0223840	1	5.3	LDT4	*	Full
CHEVROLET	K1500 TAHOE 4WD	FGMXR0176820	1	5.3	LDT4	*	Full
GMC	C15 SIERRA 2WD	FGMXR0176820	1	5.3	LDT3, LDT4	*	Full
GMC	C15 SIERRA 2WD	FGMXR0223840	1	5.3	LDT4	*	Full
GMC	C15 SIERRA 2WD CAB CHASSIS	FGMXR0223840	1	5.3	LDT4	*	Full

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GMC	C1500 YUKON 2WD	FGMXR0176820	1	5.3	LDT4	*	Full
GMC	C1500 YUKON XL 2WD	FGMXR0223840	1	5.3	LDT4	*	Full
GMC	K15 SIERRA 4WD	FGMXR0176820	1	5.3	LDT4	*	Full
GMC	K15 SIERRA 4WD	FGMXR0223840	1	5.3	LDT4	*	Full
GMC	K15 SIERRA 4WD CAB CHASSIS	FGMXR0223840	1	5.3	LDT4	*	Full
GMC	K1500 YUKON 4WD	FGMXR0176820	1	5.3	LDT4	*	Full
GMC	K1500 YUKON XL 4WD	FGMXR0223840	1	5.3	LDT4	*	Full