California Environmental Protection Agency	GENERAL MOTORS LLC	EXECUTIVE ORDER A006-171			
AIR RESOURCES BOARD		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.

MODEL YEAR	TEST GROUP	VEHICLE TYPE	EXHAUST EMISSION STANDARD CATEGORY	USEFU (mil		IN- COMP (*=N/A or A/E=ex	MEDIATE USE LIANCE full in-use; h. / evap. iate in-use)	FUEL TYPE
2011	BGMXT06.2374	LDT: 6001-8500# GVW, 3751- 5750# ALVW	USEPA Bin 4 Counted as ARB LEV2	EXH / ORVR	EVAP	EXH	EVAP	Flexible Fuel: Ethanol (E85) /
		5/50# ALVW	ULEV	120K	150K	*	*	Gasoline (Tier 2 Unleaded)
No.	ECS &	SPECIAL FEATURES	EVAPORATIVE		AF)	ž	DISPLAC	EMENT (L)
1 2TWC, TWC, 2HO2S(2), SFI, OBD(F)			BGMXR	0176820				
*		BGMXR	BGMXR0223840				.2	
*		*	•					

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, 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 test data to determine the greenhouse gas (GHG) emissions for the listed test group, expressed in grams per mile of carbon dioxide-equivalent (g/mi CO2-e), as required in section E.2.5.2 of the California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, as amended August 4, 2005 (the Test Procedures). Manufacturer shall provide the required data within 45 days after the date of the Executive Order unless (a) an extension is granted by the Executive Officer, or (b) the manufacturer demonstrates to the satisfaction of the Executive Officer that it is exempt from determining GHG emissions for the listed test group under section E.2.5.3 (Intermediate Volume Manufacturers) or E.2.5.4 (Small Volume Manufacturers) of the Test Procedures. Failure to comply with the certification requirement to determine the GHG emissions for the listed test group 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 therein, the manufacturer is not required to determine GHG emissions for any medium-duty vehicles in the listed test group that are not medium-duty passenger vehicles.

#### **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 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 2010.

Annette Hebert, Chief Mobile Source Operations Division

California Environmental Protection Agency AIR RESOURCES BOARD

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

# 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 fue).

															/
NMOG FLEET NMOG @ RAF= AVERAGE [g/mi] CH4 RAF =			NMOG or	HCHO=fo	hane; NMOG: rmaldehyde; I	PM=particul	ate matter;	RAF=rea	ctivity adju	stment fact	or; 2/3 D [g/te	st]=2/3 day	diumal+	-	
CERT	STD	NMOG NMHC		NMHC STD		RL [g/mi]=rur K=1000 miles								am; mg=mu	gram
0.037	0.043	CERT	CERT	[g/mi]		[g/mi]		x [g/mi]		CHO [mg		PM [9/		Hwy NC	)x [g/mi]
		[g/mi]	[g/mi]		CERT	STD	CERT	STE			STD	CERT	STD	CERT	STD
Circuit an	@ 50K	*	*	*	*	*	*	*		*	*	*	*	*	•
	@ UL	0.046 (0.032)	*	0.070 (0.070)	1.1 (1.1)	2.1 (2.1)	0.01 (0.02)	0.04 (0.04		1 *)	11 (11)	*	0.01 (0.01)	0.01 (0.01)	0.05
	@ 50°F & 4K	*	*	*	•	*	*	*		*	*	*	*	*	*
	[g/mi]	and the second sec		NMHC+NC (comp		CO [g (comp		NMHC [g/mi]	+NOx [US06]		[g/mi] IS06]		C+NOx [SC03]		[g/mi] 203]
@ 20	°F & 50K			CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
CERT	* (3.7)	SFTP @ 4	000 miles	*	*	*	*	* (0.03)	* (0.40)	(0.4)	(10.5)	(0.001)	(0.31)	* (0.8)	* (3.5)
STD	(12.5)	SFTP	@ 120000 miles	* (0.04)	* (0.97)	*	*	*	*	(0.7)	(16.9)	•	*	* (1.1)	* (5.6)
E	vaporative Fa	mily		urnal + Hot is/test) @ U		2-Days Diu (grams	irnal + Ho s/test) @ l			Running ams/mile				Refueling \ ams/gallor	
			CERT	S	ГD	CERT	S	TD	CEF	RT [	STD		CERT		STD
BGMXR0176820 0.55		0.	90	0.38	1	.15	0.00	10	0.05		(0.02)	_	0.20)		
BGMXR0223840 0.7		0.71	0.	90	0.76	1	.15	0.00	0	0.05		(0.03)		0.20)	
	*		*		•	*		*	*		*		*		*
·	*		*			*			*		*		* 、		*

\* = not applicable; UL=useful life; PC=passenger car; LDT=light-duty truck; MDV=medium-duty vehicle; ECS= Emission Control System; STD= Standard; CERT= Certification; LVW=loaded vehicle weight; ALVW=adjusted LVW; LEV=low emission vehicle; TLEV=transitional LEV; ULEV=ultra LEV; SULEV=super ULEV; TWC=3-way catalyst; ADSTWC=adsorbing TWC; WU=warm-up catalyst; OC=oxidizing catalyst; 02S=oxygen sensor; HO2S=heated O2S; AFS/HAFS=air- fuel ratio sensor / heated AFS; EGR=exhaust gas recirculation; AIR=secondary air injection; PAIR=pulsed AIR; MFI= multiport fuel injection; SFI=sequential MFI; TBI=throttle body injection; TC/SC= turbo/super charger; CAC=charge air cooler; OBD (F)/(P)=full/partial on-board diagnostic; DOR=direct ozone reducing; prefix 2=parallel; (2) suffix=series; CNG/LNG= compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85="85%" Ethanol Fuel

# 2011 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE MC	MODEL	EVAPORATIVE FAMILY	ECS NO.	ENGINE SIZE (L)	INTERMEDIATE IN-USE COMPLIANCE (*=N/A or full in-use; A/E=exh. / evap. intermediate in-use)		PHASE-IN STD.	OBD II
					EXH	EVAP		
GMC	C1500 YUKON 2WD	BGMXR0176820	1	6.2	*	*	SFTP	Full
GMC	K1500 YUKON DENALI AWD	BGMXR0176820	1	6.2	*	*	SFTP	Full
GMC	C15 SIERRA 2WD	BGMXR0176820	1	6.2	*	*	SFTP	Full
GMC	K15 SIERRA 4WD	BGMXR0176820	1	6.2	*	*	SFTP	Full
GMC	K15 SIERRA AWD	BGMXR0176820	1	6.2	*	*	SFTP	Full
CADILLAC	ESCALADE 2WD	BGMXR0176820	1	6.2	*	*	SFTP	Fuli
CADILLAC	ESCALADE AWD	BGMXR0176820	1	6.2	*	*	SFTP	Full
CHEVROLET	C15 SILVERADO 2WD	BGMXR0176820	1	6.2	*	*	SFTP	Full
CHEVROLET	K15 SILVERADO 4WD	BGMXR0176820	1	6.2	*	*	SFTP	Full
GMC	C1500 YUKON XL 2WD	BGMXR0223840	1	6.2	•	*	SFTP	Full
GMC	K1500 YUKON XL AWD	BGMXR0223840	1	6.2	•	*	SFTP	Full
GMC	K1500 YUKON XL 4WD	BGMXR0223840	1	6.2	*	*	SFTP	Full
CADILLAC	ESCALADE ESV 2WD	BGMXR0223840	1	6.2	•	*	SFTP	Full
CADILLAC	ESCALADE ESV AWD	BGMXR0223840	1	6.2	+	*	SFTP	Full
CADILLAC	ESCALADE EXT AWD	BGMXR0223840	1	6.2	*	*	SFTP	Fuli



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## **GENERAL MOTORS LLC**

EXECUTIVE ORDER A-006-1716

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

CHEVROLET	C1500 AVALANCHE 2WD	BGMXR0223840	1	6.2	*	*	SFTP	Full
CHEVROLET	C1500 SUBURBAN 2WD	BGMXR0223840	1	6.2	*	*	SFTP	Full
CHEVROLET	K1500 AVALANCHE 4WD	BGMXR0223840	1	6.2	*	*	SFTP	Full
CHEVROLET	K1500 SUBURBAN 4WD	BGMXR0223840	1	6.2	*	*	SFTP	Full

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