## **GENERAL MOTORS LLC**

**EXECUTIVE ORDER A-006-E001** 

New Light-Duty Engine Package for Light-Duty Specially Constructed 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:

The following light-duty engine package(s) produced by the manufacturer are certified as described below for use in light-duty specially constructed vehicle (SPCNS). Production engines and emission control systems shall be in all material respects the same as those for which certification is granted.

MODEL YEAR TEST GROUP			EXHAUST EMISSION TANDARD CATEGORY	USEFUL LI	FE (miles)	FUEL TYPE  Gasoline (Tier 2 Unleaded)		
2013	DGMXV06.2ER1	Passenger Car	"LEV II" Low Emission	EXH / EVAP				
			Vehicle (LEV II LEV)	120K	150K			
No. ECS & SPECIAL FEATURES			EVAPORATIVE FA		DISPLACEMENT (L)			
1 2TWC(2), 2HO2S(2), SFI, OBD(F)			DGMXR013	*	0.0			
			*	6.2				
		Highest Allowable N/V Ratio				Engine Package Model		
		26.5				E-ROD SCV		

See the Attachment for 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 engine packages 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.

## BE IT FURTHER RESOLVED:

For the listed engine packages, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 2212(g), 2212(h) and the incorporated Section 5(b) [package requirements] of the California Certification Procedures for Light-Duty Engine Packages for Use in Light-Duty Specially Constructed Vehicles for 2012 and Subsequent Model Years (Certification Procedures), 2213 [emission control labels], 2214 [defects warranty], and 2215 [performance warranty].

## **BE IT FURTHER RESOLVED:**

The aforementioned test group is certified conditionally upon final approval of the proposed Light-Duty Engine Packages for Use in Light-Duty Specially Constructed Vehicles (LD Engine Packages) by Office of Administrative Law (OAL). In the event the LD Engine Packages is not approved, the manufacturer shall, upon notification by the California Air Resources Board (ARB), immediately cease introducing the aforementioned test group into commerce in California.

## BE IT FURTHER RESOLVED:

The manufacturer certifying engine packages under this Executive Order shall report to ARB the total number and serial numbers of the certified engine packages produced for the model year by June 30 of the year following the model year of the certified engine packages as required in Section 6 of the Certification Procedures.

Light-duty engine packages 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

Annette Hebert, Chief

Mobile Source Operations Division

**⊘** Air Resources Board

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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.)

NMOG FLEET AVERAGE [g/mi]		NMOG @ RAF=* CH4 RAF = *		NMOG or	CH4=methane; NMOG=non-CH4 organic gas; NMHC=non-CH4 hydrocarbon; CO=carbon monoxide; NOx=oxides of nitrogen; HCHO=formaldehyde; PM=particulate matter; RAF=reactivity adjustment factor; 2/3 D [g/test]=2/3 day diurnal+hot-soak; RL [g/mi]=running loss; ORVR [g/gallon dispensed]=on-board refueling vapor recovery; g=gram; mg=milligram										
CERT	STD	CERT CE	NMHC	NMHC STD [g/mi]	mi=mile, K=1000 miles; F=degrees Fahren  CO [g/mi] NOx [g/mi				ahrenheit; SFTP=supplemental federal		I federal tes	test procedure  PM [g/mi]		Hwy NOx [g/ml]	
*	* . 1		[g/mi]		CERT	STD	CERT	STI				CERT	STD	CERT	STD
(V)	@ 50K	*			*	*	*			•	*			*	*
	@ UL	0.057	*	0.090	1.6	4.2	0.02	0.0	7		18.	*	0.01	0.03	0.09
	@ 50°F & 4K			*	*			*			*	*	*	*	
CC	[g/mi]	*		NMHC+NC (compo					+NOx [US06]			NMHC+NOx [g/mi] [SC03]		CO [g/mi] [SC03]	
@ 20	0°F & 50K			CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
CERT	9.8	SFTP @ 40	000 miles		*	*		0.10	0.14	0.7	8.0	0.08	0.20	1.9	2.7
STD	10.0	SFTP (	miles	*	*	*		*		1					*

Evaporative Family	3-Days Diurnal + Hot Soak (grams/test) @ UL		2-Days Dium (grams/te	ai + Hot Soak est) @ UL		ng Loss nile) @ UL	On-Board Refueling Vapor Recovery (grams/gallon) @ UL		
	CERT	STD	CERT	STD	CERT	STD	CERT	STD	
DGMXR0133ER1	0.22	0.50	0.18	0.65	0.000	0.05	0.01	0.20	
*				•		*	*	*	
*	*	*	*			*	*	*	
*	*	*	*		*	*	*	*	

\* =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,5751-8500#ALVW; MDV=medium-duty vehicle; MDV4=MDV 8501-1000#GVWR; MDV5=MDV 10001-14000#GVWR; ECS= emission control systems 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/SCR-N= selective catalytic reduction-urea/ammonia; NH3OC=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 cogler; 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=pleed carbon canister; prefix 2=parallel; (2) suffix=series; CNG/LNG= compressed/liquefied natural gas; LPG=liquefied petroleum gas; E8s=85% Ethanol ("15% gasoline) Fuel;