### California Environmental Protection Agency

## **O** Air Resources Board

IMPCO TECHNOLOGIES, INC. Executive Order: A-328-0082

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-14-012;

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 GRO	UP I	NFO	RMATION						
MODI YEA	I T	TEST GROUP				VEHICLE CLASS(ES)				FUEL CATEGORY			FUEL TYPE		
201	6 G	GZ9XD06.0DC2				HDV				DEDICATED SINGLE FUEL VEHICLE			COMPRESSED NATURAL GAS		
USEFUL LIFE (miles)					VEHICLE EMISSION CATE				EGORY	ORY INTERIM / INT			ERMEDIATE IN-USE STD		
EXH/ORVR EVAP				FTP			S	FTP	TP FTP			SFTP			
120000 *				COU	A TIER2 BIN7 NTED AS ARB EV2 SULEV	ED AS ARB *			*			*			
SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS							-		OBD STATUS			EN	ENGINE DISPLACEMENT (L)		
1	2TWC / TWC / 2HO2S(2) / SFI								FULL	AI	ALL MODELS				
*	*								PARTIAL	L *		6.0			
*	*							PA	RTIAL WITI FINES	1	*				
	EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION														
EV	EVAP / ORVR FAMILY EVAPORATIVE STD CATEG						SOR	RY EVAP EMISSION S VEHICLE CLASS				SPECIAL FEATURES		L FEATURES	
GZ9XR0000DCA					LEV 2			*				*			
						EMISSION CF	REDI	T INF	ORMATION	1					
	ALLOWANCE FOR TEST GROUP								MOG CREDIT FOR   NMOG CREDIT FOR			OPTIONAL EXH. STD FOR WORK			
BASELINE PZEV AT PZEV						TZEV			ON-PZEV ZERO-E		VAP DO			TRUCKS	
* * *						*		N			и и				
NMOG AND FLEET AVERAGE INFORMATION															
NMOG RAF	CH4 RAF		NIMOC/NIMBO I			IO/NMHC NMOG+NOX F PC+LDT (0-3) (g/mi			0 LVW) LD1		IOG+NOX FLEET STO .DT (3751 LVW-8500 VWR) + MDPV (g/mi)		NMOG+NOX FLEET STD MDV (10001-14000 GVWR) (g/mi)		
*	*		1.15 0.12 *				*		* *			*			

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 and greenhouse gas Fleet Average (PC or LDT or MDPV) or "Vehicle Equivalent Credit" (MDV) compliance plan shall be equalized as required.

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**⊘** Air Resources Board

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New Passenger Cars, Light-Duty Trucks and

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Page 2 of 4

#### 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 listed vehicle models are federally certified, and are certified under the provisions of 13 CCR Section 1961.2(a)(12) 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

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Emissions Compliance, Automotive Regulations and Science Division

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

Page 3 of 4

# **ATTACHMENT**

	-			-				-			CERT	_					
	E	XHAUS	ST EM	ISSION S	STANDA	RDS AN	ID CERT	IFIC/	ATION L	EVELS	(FTP, HW	FET	, 50°F, 20°	°F)			
	FUEL TYPE		mon adju OR\	CH4: methane; NMOG: non-CH4 organic gas; HC: hydrocarbon; NMHC: non-CH4 HC; CO: carbon monoxide; NOx: oxides of nitrogen; HCHO: formaldehyde; PM: particulate matter; RAF: reactivity adjustment factor; 2DHS/3DHS [g HC/test]: 2/3 days diurnal+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 (g/mi) CERT STD				CO (g/mi)			Ox mi)	HCHO (mg/mi		1		PM (g/mi)		
					STD	CERT S			CERT STD				STD	CERT	STD		
FTP@50H	CNG-	-CARB	0.	044	0.075	1.12	3.4		0.048	0.11	4.6		15	*	0.02		
FTP@UL	CNG	-CARB	0.	044 (	0.090	1.12	4.2		0.048	0.15	4.6	4.6 1		*	0.02		
50°F @4H	<	*		*	*	*	*		*	*	*		*				
				FU	EL TYP	E				NOx (	g/mi)			CO (g/mi)			
					_			CERT		STD		CERT	STD				
HWFET	HWFET @ 50K							*		*							
HWFET @ UL			*						*		*						
20°F @ 50K				*.								* *		*			
	-	•	SFT	PEXHA	JST EM	ISSION	STANDA	RDS	AND C	RTIFIC	ATION LE	VEL	.s				
Company to the State of State		144		US06						SC03				COMPOSITE			
	FUEL TYPE			NMHC+NOx (g/mi)		CO PM (g/mi) (mg/r			ni) NMHC+NOx		CO (g/mi)	NMOG+NO (g/mi)		CO (g/mi)	PM (mg/mi		
@ 4K	*		RT	т *		*			*		. *						
			TD	*		*			<b>1</b> € 1		*	*					
	* S		RT	*		* *			1	*		*		*	*		
@ UL			TD	*		*	*		1		*.		*	*	*		
			IN										*				
		WHOL	E VEH	ICLE EV	APORA	TIVE EN	IISSION	STA	NDARDS	SAND	CERTIFICA	ATIO	N LEVEL	S			
				WHOLE VEHICLE EVAP						E TEST	TING						
FAMILY		FUEL TYPE		PE 3DHS (g/test) @ UL					2DHS	@ UL	UL		RL (g/mi) @ UL				
				CEI	RT S	STD FEL		CE	RT	STD	FEL		CERT		STD		
GZ9XR0000DCA			*			*			* *		*		*		*		
OF	RVR / FU	EL ONL	Y/CA	NISTER	BLEED	EVAPO	RATIVE	EMIS	SSION S	TANDA	RDS AND	CE	RTIFICAT	ION LEVE	LS		
		1						F	UEL ON	LY EVA	P & CANI	STE	R BLEED				
EVAPORATIVE FAMILY		ORVR (g/gal		gallon) (	D UL	FUEL TYPE 3			DHS RIG TEST (g/test) @ UL			2DHS RIG (g/test) @			D CANISTER (g/test) @ 4K		
		FUEL TYPE		CERT	STD			CE	RT	STD	CERT		STD	CERT	STD		
*			k	*	*		*		*	*	*		*	*	*		

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

Page 4 of 4

: not applicable; #: pounds; UL: useful life; PC: passenger car; LDT: light-duty truck; LDT1: LDT<6000#GVWR,0-3750#LVW; LDT2: .DT<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: mediumduty passenger vehicle; HDV: heavy-duty 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: transitional ZEV; 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; F/P/\$: full/partial/partial with 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: "85%" ethanol ("15%"gasoline) fuel; E10: "10%" ethanol ("90%"gasoline) fuel; A: automatic (with lockup); M: manual transmission; SA: semi-automatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: automated manual-selectable transmission: OT: other transmission

2016 MODEL YEAR: VEHICLE MODELS INFORMATION												
MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE				
IMPCO	CHEVY G4500 EXPRESS CUTAWAY CHASSIS	HDV	6.0	<b>A</b> 6	GZ9XR0000DCA	1	F	*				
IMPCO	GMC G4500 SAVANA CUTAWAY CHASSIS	HDV	6.0	A6	GZ9XR0000DCA	1	F	*				