#### California Environmental Protection Agency

## **⊘** Air Resources Board

VOLKSWAGEN GROUP OF AMERICA, INC. Executive Order: A-413-0047

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

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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.

						Т	EST GRO	UP	INF	ORN	MATION					
MODEL YEAR		TEST G	ROUP		VEH	IICLE	CLASS(E	S)			FUEL C	ATE	GORY		FU	EL TYPE
2016	GVGAJ03.0AUD LDT2, PC					DEDICATED SINGLE FUEL VEHICLE			GASOLINE		ASOLINE					
L	JSEF	JL LIFE	(miles)		V	EHIC	LE EMISS	ION	CA	TEG	ORY	IN	ITERIM / INT	ERME	DIA	TE IN-USE STD
EXH/	/ORVI	2	EVAP			FTF	Р			SFT	Р		FTP	SFTP		SFTP
120	0000		15000	0	L	EV2 (	ULEV			V 2 TAND	SFTP ARD		*			*
SPEC	CIAL	FEATUR		KHAUST STEMS	EMIS	SION	CONTRO	Ļ			OBD S	TAT	JS	ENG	SINE	DISPLACEMENT (L)
1 :	2TWC	, 2WR-1	HO2S, 2	HO2s,	DFI,	AIR,	SC, 2C	AC			FULL	AL	L MODELS			
*				*					1	P/	ARTIAL		*	3.0		
*	* *							F		TIAL WITH		*				
			Е	VAPOR	ATIVE	& RE	FUELING	(EV	ΆP	/OR\	/R) FAMILY	INF	ORMATION			
EVAF	P / OF	RVR FA	MILY	EVAP	ORAT	IVE S	TD CATE	CATEGORY EVAP EMISSION STD VEHICLE CLASS			SPE	ECIA	L FEATURES			
G'	VGAR	0140AA				LEV	2 PC						*			
G'	VGAR	0140AAI	)			LEV	2		LDT2 *				*			
						EM	ISSION C	RED	IT I	INFO	RMATION					
		ALLOW	ANCE F	OR TES	ST GRO	OUP					CREDIT FO		NMOG CR		OR	OPTIONAL EXH. STD FOR WORK
BASE	LINE	PZEV	A.	T PZEV			TZEV									TRUCKS
* * *									N		N	ı n				
					NM	OG AI	ND FLEET	AV	ER	AGE	INFORMA	TION	l			
NMOG RAF CH4 RAF FTP NMOG/NMHO RATIO				IC I	HCHO/NM	НС	RA	NMOG+NOX FLEET S PC+LDT (0-3750 LVV (g/mi)		750 LVW)	NMOG+NOX FLEET S LDT (3751 LVW-850 GVWR) + MDPV (g/m		751 LVW-8500			
*		*		1.0	)4		0.0	030				0.0	93			0.110

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.

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#### 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.

#### 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).

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 July 2015.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

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# ATTACHMENT

### **EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS**

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; 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

(Wes			IOG mi)		O mi)	1	Ox mi)		HO /mi)		M mi)
4.11		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	GASOLINE - TIER 2 UNLEADED	0.024	0.040	1.1	1.7	0.03	0.05	1	8	*	*
FTP@UL	GASOLINE - TIER 2 UNLEADED	0.029	0.055	1.7	2.1	0.04	0.07	1	11 .	*	0.01
50°F @4K	GASOLINE - TIER 2 UNLEADED	0.039	0.080	0.9	1.7	0.02	0.05	1	16		

	FUEL TYPE	NOx (	(g/mi)	CO (g/mi)		
	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	GASOLINE - TIER 2 UNLEADED	0.01	0.07			
HWFET @ UL	GASOLINE - TIER 2 UNLEADED	0.03	0.09			
20°F @ 50K	GASOLINE-COLD CO HIGH OCTANE	·		2.2	10.0	

		SF	TP EXHAUST E	MISSION S	TANDARDS	AND CERTIFIC	CATION L	EVELS		
-				US06		SC03	3	CON	POSITE	
	FUEL TYPE		NMHC+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	NMHC+NOx (g/mi)	CO (g/mi)	NMHC+NOx (g/mi)	CO (g/mi)	PM (mg/mi)
	GASOLINE	CERT	0.063	2.1		0.043	0.2			1
@ 4K	- TIER 2 UNLEADED	STD	0.14	8.0	My	0.20	2.7			
		CERT	*	*	*	*	*	*	*	*
@ UL	*	STD	*	*	*	*	*	*	*	*
								1		

	WHOLE VEHICL		WHOLE						
EVAPORATIVE FAMILY	FUEL TYPE	3DH	S (g/test) (	@ UL	2DI	HS (g/test) @	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
GVGAR0140AAC	GASOLINE-CA PHASE 2	0.44	0.50	*	0.45	0.65	*	0.00	0.05
GVGAR0140AAD	GASOLINE - TIER 2 UNLEADED	0.47	0.65	*	0.46	0.85	*	0.00	0.05

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ORVR / FU	EL ONLY / CA	NISTER	BLEED	EVAPORATIVE	EMISSION	STANDA	RDS AND	CERTIFICA	TION LEV	ELS			
				FUEL ONLY EVAP & CANISTER BLEED									
EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL TYPE		IG TEST ) @ UL	2DHS RIG TEST (g/test) @ UL		BLEED CANISTER TEST (g/test) @ 4K				
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD			
GVGAR0140AAC	GASOLINE - TIER 2 UNLEADED	0.01	0.20	*	*	*	*	*	*	*			
GVGAR0140AAD	GASOLINE - TIER 2 UNLEADED	0.03	0.20	*	*	*	*	*	*	*			

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: mediumduty 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: 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 sparkignited 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
AUDI	Q5	LDT2	3.0	SA8	GVGAR0140AAD	1	F	*
AUDI	S4	PC	3.0	AMS7	GVGAR0140AAC	1	F	*
AUDI	S4	PC	3.0	М6	GVGAR0140AAC	1	F	*
AUDI	S5	PC	3.0	AMS7	GVGAR0140AAC	1	F	*
AUDI	S5	PC	3.0	м6	GVGAR0140AAC	1	F	*
AUDI	S5 CABRIOLET	PC	3.0	AMS7	GVGAR0140AAC	1	F	*
AUDI	SQ5	LDT2	3.0	SA8	GVGAR0140AAC	1	F	*