#### California Environmental Protection Agency

# **⊘** Air Resources Board

HYUNDAI MOTOR COMPANY Executive Order: A-254-0313

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.

	·					TEST GRO	UP II	NFOR	MATION	-					
MOD YEA	;	TEST G	ROUP	VEHICLE CLASS(ES)				FUEL CATEGORY			FUEL TYPE				
201	.6	GHYXV03	3.81NE			PC		DEDICATED SINGLE FUEL VEHICLE			GASOLINE				
	USEF	UL LIFE	(miles)		VEHI	CLE EMISS	ON	ATE	GORY	IN	ITERIM / INT	ERME	DIA	TE IN-USE STD	
EX	H/ORV	R	EVAP		F	TP		SF	TP		FTP			SFTP	
1	.20000		15000		LEV2	ULEV	I		SFTP		*			*	
SP	ECIAL	FEATUR		HAUST EN	ISSIOI	N CONTRO	-		OBD S	TAT	JS	ENG	INE	DISPLACEMENT (L)	
1		2WU-	TWC, 2	TWC, 2HO2	3(2),	DFI			FULL	AL	L MODELS				
*		*							PARTIAL *		3.8				
*	* *							PAF	RTIAL WITH FINES	н *					
	EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION														
EV	AP / OF	RVR FA	MILY	EVAPOR	TIVE	STD CATE	ORY	RY EVAP EMISSION STD VEHICLE CLASS			SPECIAL FEATURES				
	GHYXR	01401N	E		LEV 2				P	C				*	
					E	MISSION CE	REDI	TINF	ORMATION		****				
		ALLOW	ANCE F	OR TEST G	ROUP				G CREDIT FO		NMOG CR		OR	OPTIONAL EXH. STD FOR WORK	
BAS	SELINE	PZEV	A.	r PZEV		TZEV	NO	ON-PZ	ZEV ZERO-E	VAP	DC	)R	TRUCKS		
* * *						*			N		N	ſ		N	
				N	MOG	AND FLEET	AVE	RAG	E INFORMA	TION	1				
INMOC DAE CHADAE I III				P NMOG/NI RATIO	HCHOWNE			RATIO	NMOG+NOX FLEET STD PC+LDT (0-3750 LVW) (g/mi)		750 LVW)	LD	NMOG+NOX FLEET STD LDT (3751 LVW-8500 GVWR) + MDPV (g/mi)		
	* * 1.04 *					t		0.093 0.110			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 June 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

**FUEL TYPE** 

The state of the s											
		NMOG (g/mi)		CO (g/mi)		NOx (g/mi)		HCHO (mg/mi)		PM (g/mi)	
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	GASOLINE - TIER 2 UNLEADED	0.026	0.040	0.7	1.7	0.01	0.05	*	8	*	*
FTP@UL	GASOLINE - TIER 2 UNLEADED	0.031	0.055	0.9	2.1	0.02	0.07	*	11	*	0.01
50°F @4K	GASOLINE - TIER 2 UNLEADED	0.054	0.080	0.5	1.7	0.01	0.05	*	16		

	FUEL TYPE	NOx (	(g/mi)	CO (g/mi)		
and the state of t	POELTIPE	CERT	STD	CERT	STD	
HWFET @ 50K	GASOLINE - TIER 2 UNLEADED	0.01	0.07			
HWFET @ UL	GASOLINE - TIER 2 UNLEADED	0.01	0.09		American Company	
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE			0.8	10.0	

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

		31" LT		US06		SC0:	3	COM	<b>IPOSITE</b>	
	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	0.03	0.7	Pepulation of the Control of the Con	0.04	0.6			
@ 4K	- TIER 2 UNLEADED	STD	0.14	8.0		0.20	2.7			
		CERT	*	*	*	*	*	*	*	*
@ UL	*	STD	*	*	*	*	*	*	*	*
		BIN		erige to L		The season of the		*		

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE \						
EVAPORATIVE FAMILY	FUEL TYPE	3DH:	S (g/test) (	D UL	2DI	HS (g/test) (	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
GHYXR01401NE	GASOLINE-CA PHASE 2	0.257	0.50	*	0.330	0.65	*	0.016	0.05

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ORVR / FUI	ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS													
				FUEL ONLY EVAP & CANISTER BLEED										
EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL TYPE	3DHS RIG TEST (g/test) @ UL		2DHS RIG TEST (g/test) @ UL		BLEED CANISTER TEST (g/test) @ 4K					
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD				
GHYXR01401NE	GASOLINE - TIER 2 UNLEADED	0.015	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; ÚLEV: 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/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%"qasoline) 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
HYUNDAI	GENESIS COUPE	PC	3.8	SA8	GHYXR01401NE	1	F	*