California Environmental Protection Agency

⊘ Air Resources Board

HYUNDAI MOTOR COMPANY Executive Order: A-254-0337

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 GROUP INFORMATION														
MODEL YEAR	- 1 16	EST G	ROUP		VEHIC	CLE CLASS(E	S)	FUEL CATEGORY			FU	FUEL TYPE		
2017	нн	YXV02	2.4AJ5			PC	PC DEDI			GLE FUEL	G	ASOLINE		
L	JSEFUL	LIFE	(miles)		VE	HICLE EMISS	ION CAT	EGORY	IN	ITERIM / IN	TERMEDIA	TE IN-USE STD		
EXH/	ORVR		EVAP			FTP	S	FTP		FTP		SFTP		
150	0000		150000		LEV	3 ULEV70	LEV 3	COMPOSITE	X	NMOG+NO	x	NMOG+NOX		
SPECIAL FEATURES & EXHAUST EMISSION CONTROL OBD STATU								JS	ENGINE	DISPLACEMENT (L)				
1	W	U-TW	C, TWC,	WR-HC	2S, HC	2S, DFI		FULL	AL	L MODELS				
*				*				PARTIAL		*	1	2.4		
*				*			PA	RTIAL WITH FINES		*				
			EV	APOR	ATIVE 8	REFUELING	(EVAP/C	RVR) FAMIL	Y INF	ORMATION	1			
EVAF	P / ORV	R FAI	MILY	EVAP	ORATIV	E STD CATE	GORY	EVAP EMI VEHICL			SPECIA	L FEATURES		
HI	HYXR01	40AH	3		LEV	3 OPTION1	:	PC			HCT			
						EMISSION CF	REDIT IN	ORMATION						
			ANCE FO		T GRO			NMOG CREDIT FOR NMOG CREDIT FOR				STD FOR WORK		
BASE	LINE P	ZEV	AT	PZEV	ZEV TZEV			NOTE LEVEL TO LEVA!			TRUCKS			
* *						*		N		1	N	И		
NMOG AND FLEET AVERAGE INFORMATION														
NMOG RAF	CH4 RAF NMOG/NMHC RATIO HCHO/NMHC			PC+LDT (NMOG+NOX FLEET ST PC+LDT (0-3750 LVW (g/mi)				MDV	MDV (10001-14000				
*	*		1.10		*	0	.086		0	.101		*		

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.

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],

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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 May 2016.

Emissions Compliance, Automotive Regulations and Science Division

GASOLINE-

LEV3 E10 GASOLINE-

LEV3 E10

FTP@UL

50°F @4K

0.025

0.033

0.070

0.140

0.6

0.5

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16

0.01

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** NMOG+NOx CO NOx HCHO PM (g/mi) (g/mi) (mg/mi) (g/mi) (g/mi) CERT STD CERT STD CERT STD CERT STD CERT STD * * FTP@50K

	EUEL TVDE	N	MOG+	NOx (g/mi)	CO (g/mi)
	FUEL TYPE	CE	RT	STD	CERT	STD
HWFET @ 50K	*		*	*		
HWFET @ UL	GASOLINE-LEV3 E10	0.	016	0.070		
20°F @ 50K	GASOLINE-COLD CO LOW OCTANE			No.	1.6	10.0

1.7

1.7

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS.

				US06		SC03	3	COMPOSITE			
	FUEL TYPE		NMOG+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	NMOG+NOx (g/mi)	CO (g/mi)	NMOG+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	
@ 4K	*	CERT		*		*	*				
		STD	*	*		*	*		44.25	160	
		CERT	*	*	*	*	*	0.027	1.2	*	
@ UL	GASOLINE- LEV3 E10	STD	*	*	*	*	*	0.103	4.2	*	
		BIN			100 C 100 TH			0.070			

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE						
EVAPORATIVE FAMILY	FUEL TYPE	3DH	S (g/test) (g UL	2DI	HS (g/test) (RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
HHYXR0140AHG	GASOLINE- LEV3 E10	0.258	0.350	*	0.287	0.350	*	0.02	0.05

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		
HHYXR0140AHG	GASOLINE - TIER 2 UNLEADED	0.02	0.20	GASOLINE- LEV3 E10	0.04	0.0	0.05	0.0	*	*		

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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; 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

2017 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
HYUNDAI	SONATA	PC	2.4	SA6	HHYXR0140AHG	1	F	*
HYUNDAI	SONATA SPORT TECH, SONATA LIMITED TECH	PC	2.4	SA6	HHYXR0140AHG	1	F	*
HYUNDAI	SONATA SPORT, SONATA LIMITED	PC	2.4	SA6	HHYXR0140AHG	1	F	*