

### HYUNDAI MOTOR COMPANY

Executive Order: A-254-0604

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

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Pursuant to the authority vested in California 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-19-095;

IT IS ORDERED AND RESOLVED: That 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 IN	NFOR	MATION					
MODI		TEST GROUP VEHICLE CLASS(ES)					FUEL CATEGORY				FUEL TYPE		
202	4 RH	YXV02.5EP5			PC			DEDICATED SINGLE FUEL VEHICLE			GASOLINE		
	USEFUL	. LIFE (miles)		VEH	IICLE EMISS	ION C	CATE	GORY	INTERIM / IN	TERM	MEDIATE IN-USE STD		
EX	H/ORVR	EVAP			FTP		SF	TP	FTP		SFTP		
1	50000	150000		LEV3	ULEV70	LEV	3 C	OMPOSITE	*		*		
SP	ECIAL FE	ATURES & EXI	HAUS TEMS		ON CONTRO	L		OBD S	TATUS	EN	ENGINE DISPLACEMENT (L)		
1	DFI,	SFI, WR-HO2	s, i	HO2S, TWO	C, TC, CAC			FULL	ALL MODELS				
*	*						Р	PARTIAL *		2.5			
*	*							TIAL WITH FINES	*				
	EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION												
EV	AP / ORV	R FAMILY	EVA	PORATIVE	STD CATE	GORY	,	EVAP EMISSION STD VEHICLE CLASS			SPECIAL FEATURES		
	RHYXR01	31EPG		LEV 3	OPTION2			PC			HCT		
				I	EMISSION CI	REDIT	INFO	ORMATION					
	NMOG+NOX FLEET AVE. CREDIT FOR EXTENDED WARRANTY  NMOG CREDIT FOR NON- ZERO-EVAP					ON-P	NMOG CREDIT FOR DOR			~	OPTIONAL EXH. STD FOR WORK TRUCKS		
	n n								N		N		
				NMOG	AND FLEET	AVE	RAGI	INFORMA	TION				
NMOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO		HO/NMHC RATIO NMOG+NOX FLI PC+LDT (0-375 (g/mi)			_						
*	*	1.10		*	0	.037			0.038		*		

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. (As applicable, heavy-duty vehicles (HDV) over 14,000 pounds in GVWR listed in this Executive Order are certified to the requirements in 13 CCR Section 1961.2 applicable to MDV pursuant to 13 CCR Section 1956.8(c)(3) or 13 CCR Section 1956.8(h)(5), as applicable.)



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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 fleet average compliance requirement for NMOG+NOx or Vehicle Equivalent Credit (13 CCR Sections 1961.2(b)(1), 1961.2(b)(3), or 1961.2(c) (3), and the incorporated test procedures, as applicable), or Greenhouse Gas Emissions (13 CCR Section 1961.3, or 17 CCR Section 95663, and the incorporated test procedures, as applicable), for PC, LDT, MDPV or MDV 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 on this \_\_\_\_\_\_ day of October 2023.

Robin U. Lang, Chief

**Emissions Certification and Compliance Division** 

Rolin U. Lang

GASOLINE-

TIER3 E10 GASOLINE- 0.033

0.022

0.070

0.140

0.7

0.3

FTP@UL

50°F @4K

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0.000

16

0.003

# **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** PΜ (g/mi) (g/mi) (mg/mi) (g/mi) (g/mi) **CERT STD CERT STD CERT STD CERT** STD **CERT STD** FTP@50K

50°F @4K	TIEF	R3 E10	0.022	0.140	0.3	1.7	*	*	*	16		
FUEL TYPE								10G+N0x	(g/mi)	CO (g/mi)		
FUEL TYPE							CE	RT	STD	CER	Т	STD
HWFET @	50K			*			*	:	*			
HWFET @	) UL		GASOI	INE-TIEF	R3 E10		0.0	16	0.070			
20°F @ 5	50K	COLD	CO E10 RE	GIILAR GA	SOLINE	(TTER3)				0.6		10 0

1.7

1.7

#### SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

					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	*	*		*	*		со	
		CERT	*	*	3	*	*	0.036	0.8	*
@ UL	GASOLINE- TIER3 E10	STD	*	*	6	*	*	0.057	4.2	*
		BIN						0.070	·	

### WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY	FUEL TYPE		WHOLE \						
		3DH	S (g/test) @	D UL	2DI	HS (g/test) (	RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
RHYXR0131EPG	GASOLINE- LEV3 E10	0.186	0.300	*	0.203	0.300	*	0.01	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			
	<b>FUEL TYPE</b>	CERT	STD		CERT	STD	CERT	STD	CERT	STD		
RHYXR0131EPG	GASOLINE- TIER3 E10	0.01	0.20	GASOLINE- LEV3 E10	*	*	*	*	0.004	0.020		



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EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)								
EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD					
RHYXR0131EPG	RHYXR0131EPG-DN1	0.00	0.02					

the inotapplicable; #: 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; 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; cGPF (coated gasoline particulate filter); 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; HP/LP EGR: High/Low Pressure EGR; EGRC: EGR cooler; AIŔ/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; FFH: fuel fired heater; 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; a hyphen (-) between after treatment ECS indicates multiple functionalities of the after treatment device (ex. DPF-SCRC: SCR coated DPF); 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; AER: all-electric range; EAER: equivalent AER; PHEV: plug-in hybrid electric vehicle; NMOG + NOx Fleet Ave. Credit for Extended Warranty: N = no credits, Y = credits, S = credits for some/select models

2024 MODEL YEAR: VEHICLE MODELS INFORMATION									
MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD		
HYUNDAI	SONATA FWD	PC	2.5	AMS8	RHYXR0131EPG	1	F		