

HYUNDAI MOTOR COMPANY

Executive Order: A-254-0384

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-14-012;

IT IS ORDERED AND RESOLVED: The following vehicles produced by the manufacturer are certified as plug-in hybrid electric vehicles pursuant to Title 13, California Code of Regulations (13 CCR) Sections 1961 or 1961.2, 1962.2, 1976, 1978 and the incorporated test procedures. Production vehicles shall be in all material respects the same as those for which certification is granted.

				TEST GR	OUP IN	NFORMA"	TION				
MODE	- I T	EST GROUP	VEHIC	LE CLASS(ES)		FUEL	CATEGORY		FUEL TYPE	
2019	RI	HYXV01.6P2T		PC PLUG-IN HYBRID ELECTRIC VEHICLE				GASOLINE			
	USEFU	L LIFE (miles)	VEH	ICLE EMIS	SION C	ATEGOR	RY	INTERIM / INT	ERI	MEDIATE IN-USE STD	
EXH	VORVR	EVAP		FTP		SFTP		. FTP		SFTP	
15	0000	150000	LEV3	SULEV30	LEV	3 COMP	OSITE			*	
SPE	CIAL FI	EATURES & EXI	HAUST EMISSION	ON CONTRO	DL		OBD S	STATUS	EI	NGINE DISPLACEMEN	
1	DFI, W	R-HO2S, HO2S	, WU-TWC, TW	C, EGR, E	GRC	FU	LL	* ,			
*			*	- 37- 0		PAR	TIAL	*		1.6	
*			*	3550		PARTIA FIN		ALL MODELS			
		EV	APORATIVE &	REFUELING	G (EVA	P/ORVR)	FAMIL	Y INFORMATION			
EVA	P/ORV	R FAMILY	EVAPORATIVE	STD CATE	GORY	_		ISSION STD LE CLASS	S	PECIAL FEATURES	
B	CHYXRO	L10P2G	LEV ,3	OPTION2				PC		HCT	
				MISSION C	REDIT	INFORM	ATION				
ALL	GR	CE FOR TEST OUP	NMOG+NOX AVE. CRED EXTENDED WA	IT FOR		CREDIT PZEV ZE EVAP		NMOG CREDIT F DOR	OR	OPTIONAL EXH. STD FOR WORK TRUCKS	
	ALL N	MODELS	N			N		N		N	
	***		NMOG	AND FLEE	TAVE	RAGE IN	FORMA	TION			
MOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO	HCHO/NMHC RATIO	NMOG+NO PC+LDT			LDT	6+NOX FLEET ST (3751 LVW-8500 (R) + MDPV (g/mi)		IMOG+NOX FLEET STE MDV (10,001-14,000 GVWR) (g/mi)	
*	*	1.10	*		0.072			0.083		*	

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).

BE IT FURTHER RESOLVED:

The listed vehicle models are conditionally certified in accordance with 13 CCR Section 1968.2(k) (deficiency and fines provisions for certification of malfunction and diagnostic system) because the on-board diagnostic II (OBD) system of the listed vehicle models has been determined to have three deficiencies. The listed vehicle models are approved subject to the manufacturer paying a fine of \$25 per vehicle for the third deficiency for each vehicle in the listed test group that is produced and delivered for sale in California.

On a quarterly basis, the manufacturer shall submit to the Air Resources Board reports of the number of vehicles produced and delivered for sale in California and pay the full fine owed for that quarter pursuant to this conditional certification. Payment shall be made payable to the State Treasurer for deposit in the Air Pollution Control Fund no later than thirty (30) days after the end of each calendar quarter during the 2019 model-year production period. Failure to pay the quarterly fine, in full, in the time provided, may be cause for the Executive Officer to rescind this conditional certification, effective from the start of the quarter in question, in which case all vehicles covered under this conditional certification for that quarter and all future quarters would be deemed uncertified and subject to a civil penalty of up to \$37,500 per violation per vehicle pursuant to HSC Section 43154.

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

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division



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ATTACHMENT

THE PARTY OF THE P	I I FIZE C
EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION	JIEVELS
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EXHAUST	EMISSION	STANDARDS	AND CE	RTIFICA	TION L	EVELS	(FTP, HW	FET, 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

NMOG+NOx CO NOx HCHO PM (g/mi) (g/mi)

FTP@UL	GASOLINE- TIER3 E10	0.015	0.030	0.2	1.0	*	*	*	4	*	0.01
50°F @4K	GASOLINE- TIER3 E10	0.020	0.060	0.2	1.0	+	*	*	8		
				_		NA	OG+NO	x (g/mi)		CO (g/m	i)
			FUEL TYPI	E		CE	RT	STD	CER	Т	STD
HWFET @	50K		*			4		*			

STD

CERT

CERT

STD

CERT

STD

CERT

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STD

CERT

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	*	*		*	*			7-12-9
		STD	*	*		*	*			
		CERT	*	. *	*	* .	*	0.014	0.2	*
@ UL	GASOLINE- TIER3 E10	STD	* .	+	*	*	*	0.090	4.2	*
		BIN			P			0.030		

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY	FUEL TYPE		WHOLE						
		3DHS (g/test) @ UL			2DHS (g/test) @ UL			RL (g/mi) @ UL	
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
KHYXR0110P2G	CASCLINE- LEV3 E10	0.178	0.300	*	0.164	0.300	*	0.00	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			
KHYXR0110P2G	GASOLINE- TIER3 E10	0.03	0.20	*	*	*	*	*	*	*			



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EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)								
EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD					
KHYXR0110P2G	KHYKR0110P2G-AEP	0.00	0.02					

*: 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; GWWR: 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; 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; 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: 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

MODEL NUMBER	MAKE	MODEL	VEH	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	ECS	OBD
1	HYUNDAI	IONIQ PLUG-IN HYBRID	PC	1.6	AM6	KHYXR0110P2G	1	\$

MODEL	DUEV TYPE	UDDS AER	UDDS EAER	US06 AER	HIGHW	AY (MILES)	ZEV
NUMBER	PHEV TYPE	(MILES)	(MILES)	(MILES)	AER	EAER	ALLOWANCE
1	TZEV	43.0	43.2	*	39.2	38.4	0.73