

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 II	FOR	MATION					
MODI		TEST GROUP VEHICLE CLASS(ES						FUEL C	ATEGORY		FUEL TYPE		
202	1 M	HYXV01.6SB5		PC				DEDICATED SINGLE FUEL VEHICLE			GASOLINE		
	USEFU	L LIFE (miles)	VEH	ICLE EMISS	ATE	GORY	RY INTERIM / INTERMEDIATE IN-USE ST						
EXH/ORVR EVAP				FTP S			SF	FTP FTP			SFTP		
1	50000	15000	0	LEV3	3 ULEV70 LEV 3 C			MPOSITE *			PM		
SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS							OBD		BD STATUS		ENGINE DISPLACEMENT (L)		
1	SFI, W	R-HO2S, HO2	S, WU	-TWC, TW	C, EGR, EG	RC		FULL	ALL MODELS				
*			*				F	PARTIAL	*		1.6		
*						PAR	TIAL WITH	*					
EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION													
EV	EVAP / ORVR FAMILY EVAPORATIVE STD CATEGORY								SSION STD E CLASS		SPECIAL FEATURES		
	MHYXR0	120SBG		LEV 3	OPTION2			E	PC		HCT		
				I	EMISSION CI	REDIT	INFO	ORMATION					
	NMOG+NOX FLEET AVE. CREDIT FOR EXTENDED WARRANTY						ZEV	I NIMOG COEDITEOD DOD			OPTIONAL EXH. STD FOR WORK TRUCKS		
		N			N			N N					
				NMOG	AND FLEET	AVE	RAG	E INFORMA	TION				
NMOG RAF	CH4 RAF	FTP NMOG/NMHO RATIO	NMHC RATIO PC+LDT (0-37			0-375				D			
*	*	1.10		* 0.058 0.065					*				

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.)



### 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 <u>/</u>57 day of July 2020.

Allen Lyons, Chief Emissions Certification and Compliance Division



FUEL TYPE

## 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

					Ox		CO (g/mi)		20						-	M mi)
			CERT		STD	CER	T ST	D	CERT	STD	CER	Т	STD	CE	RT	STD
FTP@50K *			*		*	*	*		*	*	*		*		*	*
@UL GASOLINE- TIER3 E10		_	0.036	0	.070	0.1	1.	7	*	*	*		4		000	0.003
50°F @4K GASOLINE- TIER3 E10			0.081	0	.140	0.1	1.	7	*	*	*		16			
										NMOG+NOx (g/				and the second distance of the second distanc		
						_			C	CERT		_	CEF	RT	-	STD
T @ 50K					*					*	*					
T@UL			GAS	OLIN	E-TIE	R3 E10			0.	.021	0.070					
@ 50K	CC	DLD CO	E10	LO REGULAR GASOLINE (TIER3)								0.		6 10.0		10.0
		SI	TP E	XHAU	IST EM	ISSION	STAND	ARDS	AND O	CERTIFIC	ATION LE	VEL	.S			
				US06					SC03			CC		OMPOSITE		
FUEL T	UEL TYPE				Ox	CO (g/mi)	1 .		1		CO (g/mi)			1		PM (mg/mi)
*	*			*		*				*	*					
				*		*				*	*					
	BIN			*		*		2		*	*	0.037			0.1	*
				*		*		6		*	*	0.077			4.2	*
	WH	OLE VE	HICLI	E EVA								TIO	N LEVE	LS		
			ļ		W	HOLE V	EHICLE	EVAF	PORAT	IVE TEST	TING					
PORATIVE FUEL TYPE 3D			DHS (g	6 (g/test) @ UL				2DHS (g/test) (		@ UL		RL (g/m		II)@UL		
			ľ	CER	TS	STD	FEL	CE	RT	STD	FEL		CE	RT		STD
MHYXR0120SBG				0.21	.3 0	. 300	*	0.25		0.300	*		0.00		0.05	
DRVR / F	JEL (	ONLY /	CANIS	TER	BLEED	EVAP	ORATIV	EEMI	SSION	STANDA	RDS AND	CEF	RTIFICA	TION	LEVE	LS
EVAPORATIVE FAMILY		ORVR (	R (g/gallon) @ UL			FUEL TYPE									BLEED CANISTER TEST (g/test) @ 4	
	FU	EL TYP	ECE	ERT	STD			CE	ERT	STD	CERT		STD	CEI	RT	STD
0120SB				. 01	0.20				*	*	*		*	0.0	07	0.020
	JL GAS TIE GAS TIE GAS TIE C 0 50K T 0 UL 0 50K FUEL T * GASOLI TIER3 ORATIVE MILY 00120SB0 DRVR / FU	GASOLIN TIER3 E GASOLIN TIER3 E GASOLIN TOUL 0 50K CC FUEL TYPE * GASOLINE- TIER3 E10 WH ORATIVE MILY CORATIVE MILY GORATIVE MILY FU	0K  *    JL  GASOLINE- TIER3 E10    4K  GASOLINE- TIER3 E10    4K  GASOLINE- TIER3 E10    7 @ JL	GASOLINE- TIER3 E10 GASOLINE- TIER3 E10 GASOLINE- TIER3 E10 COLD CO E10 SFTP E2 FUEL TYPE GASOLINE- TIER3 E10 CERT GASOLINE- TIER3 E10 CERT GASOLINE- TIER3 E10 BIN CERT CERT GASOLINE- TIER3 E10 BIN WHOLE VEHICL ORATIVE MILY FUEL TYPE CI20SBG GASOLINE- LEV3 E10 ORVR (g/gall GASOLINE- LEV3 E10 CRATIVE ORATIVE CASOLINE- LEV3 E10 CRATIVE CASOLINE- LEV3 E10 CRATIVE CASOLINE- CORATIVE CASOLINE- LEV3 E10 CRATIVE CORATIVE CORATIVE CORATIVE CORATIVE CORATIVE CORATIVE CORATIVE CORATIVE CORVR (g/gall	(g/mi)      OK    *    *      OK    *    *      JL    GASOLINE- TIER3 E10    0.036    0      4K    GASOLINE- TIER3 E10    0.081    0      4K    GASOLINE- TIER3 E10    0.081    0      7    0    UL    GASOLINE- TIER3 E10    0.081    0      7    0    UL    GASOLINE- TIER3 E10    0.081    0      FUEL TYPE    NMOG+N (g/mi)    .    .    .    .      FUEL TYPE    NMOG+N (g/mi)    .    .    .    .      GASOLINE- TIER3 E10    STD    *    .    .    .      GASOLINE- TIER3 E10    STD    *    .    .    .    .      GASOLINE- TIER3 E10    EUEL TYPE    STD    *    .    .    .    .    .      ORATIVE MILY    FUEL TYPE    GASOLINE- LEV3 E10    0.21    .    .    .    .    .    .    .    .    .    .    .	CERT    STD      0K    *    *    *      0L    GASOLINE- TIER3 E10    0.036    0.070      4K    GASOLINE- TIER3 E10    0.081    0.140      4K    GASOLINE- TIER3 E10    0.081    0.140      FUEL TYPE    FUEL TYPE    FUEL TYPE      © 50K    *    *      T @ UL    GASOLINE-TIEI    GASOLINE-TIEI      @ 50K    COLD CO E10 REGULAR GJ    GASOLINE-TIEI      GASOLINE-    STD    *    GASOLINE-      TIER3 E10    STD    *    GASOLINE-      GASOLINE-    STD    *    GASOLINE-      GASOLINE-    STD    *    GASOLINE-      GASOLINE-    LEV3 E10    0.213    0      ORVR (g/gallon) @ UL    GASOLINE-    0.01	(g/mi)      CERT    STD    CERT      0K    *    *    *    *      0L    GASOLINE- TIER3 E10    0.036    0.070    0.1      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1      7    ØL    GASOLINE- TIER3 E10    *    *      7    ØL    GASOLINE- TIER3 E10    0.081    0.140    0.1      %    COLD    CO E10    REGULAR GASOLINE    TERSISION      %    COLD    CO E10    REGULAR GASOLINE    TENSION      %    SFTP EXHAUST EMISSION    CO    (g/mi)    (g/mi)      %    CERT    *    *    *      %    STD    *    *    *      %    STD	(g/mi)    (g/mi)      0K    * <t< td=""><td>(g/mi)    (g/mi)      CERT    STD    CERT    STD      0K    *    *    *    *      0K    *    *    *    *    *      0K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7      0K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7      0FUEL TYPE    FUEL TYPE    FUEL TYPE    FUEL TYPE    US06      FUEL TYPE    VINOG+NOX    CO    PM      (g/mi)    (g/mi)    (g/mi)    (mg/mi)      *    CERT    *    *    2      GASOLINE- TIER3 E10    STD    *    *    6      BIN        0      ORATIVE    FUEL TYPE    SDHS (g/test) @ UL     0<td>Image: state of the s</td><td>(g/mi)    (g/mi)    (g/mi)    (g/mi)      CERT    STD    CERT    STD    CERT    STD      OK    *    *    *    *    *    *    *      ML    GASOLINE- TIER3 E10    0.036    0.070    0.1    1.7    *    *      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7    *    *      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7    *    *      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7    *    *      7 @ UL    GASOLINE-TIER3 E10    0.021    0.021    0.021    0.021      @ 50K    COLD CO E10 REGULAR GASOLINE (TIER3)      SC03    SC03      FUEL TYPE    MMOG+NOX (g/mi)    (g/mi)    (g/mi)    (g/mi)    (g/mi)      *    CERT    *    *    *    *    *      GASOLINE- TIER3 E10    *    *    *    *</td><td>Image: state of the s</td><td>(g/mi)    (g/mi)    (g/mi)&lt;</td><td>(g/mi)    (g/mi)    (g/mi)    (g/mi)    (mg/mi)      CERT    STD    CO    PM    NMOG+NOX    CO    NMOG+NOX<!--</td--><td>(g/ml)    (g/ml)    (g/ml)    (g/ml)    (mg/ml)      CERT    STD    COO    NMOG+NOX</td><td>(g/mi)    (g/mi)    (g/mi)    (mg/mi)    (mg/mi)    (g/mi)      CERT    STD    CERT</td></td></td></t<>	(g/mi)    (g/mi)      CERT    STD    CERT    STD      0K    *    *    *    *      0K    *    *    *    *    *      0K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7      0K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7      0FUEL TYPE    FUEL TYPE    FUEL TYPE    FUEL TYPE    US06      FUEL TYPE    VINOG+NOX    CO    PM      (g/mi)    (g/mi)    (g/mi)    (mg/mi)      *    CERT    *    *    2      GASOLINE- TIER3 E10    STD    *    *    6      BIN        0      ORATIVE    FUEL TYPE    SDHS (g/test) @ UL     0 <td>Image: state of the s</td> <td>(g/mi)    (g/mi)    (g/mi)    (g/mi)      CERT    STD    CERT    STD    CERT    STD      OK    *    *    *    *    *    *    *      ML    GASOLINE- TIER3 E10    0.036    0.070    0.1    1.7    *    *      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7    *    *      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7    *    *      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7    *    *      7 @ UL    GASOLINE-TIER3 E10    0.021    0.021    0.021    0.021      @ 50K    COLD CO E10 REGULAR GASOLINE (TIER3)      SC03    SC03      FUEL TYPE    MMOG+NOX (g/mi)    (g/mi)    (g/mi)    (g/mi)    (g/mi)      *    CERT    *    *    *    *    *      GASOLINE- TIER3 E10    *    *    *    *</td> <td>Image: state of the s</td> <td>(g/mi)    (g/mi)    (g/mi)&lt;</td> <td>(g/mi)    (g/mi)    (g/mi)    (g/mi)    (mg/mi)      CERT    STD    CO    PM    NMOG+NOX    CO    NMOG+NOX<!--</td--><td>(g/ml)    (g/ml)    (g/ml)    (g/ml)    (mg/ml)      CERT    STD    COO    NMOG+NOX</td><td>(g/mi)    (g/mi)    (g/mi)    (mg/mi)    (mg/mi)    (g/mi)      CERT    STD    CERT</td></td>	Image: state of the s	(g/mi)    (g/mi)    (g/mi)    (g/mi)      CERT    STD    CERT    STD    CERT    STD      OK    *    *    *    *    *    *    *      ML    GASOLINE- TIER3 E10    0.036    0.070    0.1    1.7    *    *      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7    *    *      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7    *    *      4K    GASOLINE- TIER3 E10    0.081    0.140    0.1    1.7    *    *      7 @ UL    GASOLINE-TIER3 E10    0.021    0.021    0.021    0.021      @ 50K    COLD CO E10 REGULAR GASOLINE (TIER3)      SC03    SC03      FUEL TYPE    MMOG+NOX (g/mi)    (g/mi)    (g/mi)    (g/mi)    (g/mi)      *    CERT    *    *    *    *    *      GASOLINE- TIER3 E10    *    *    *    *	Image: state of the s	(g/mi)    (g/mi)<	(g/mi)    (g/mi)    (g/mi)    (g/mi)    (mg/mi)      CERT    STD    CO    PM    NMOG+NOX    CO    NMOG+NOX </td <td>(g/ml)    (g/ml)    (g/ml)    (g/ml)    (mg/ml)      CERT    STD    COO    NMOG+NOX</td> <td>(g/mi)    (g/mi)    (g/mi)    (mg/mi)    (mg/mi)    (g/mi)      CERT    STD    CERT</td>	(g/ml)    (g/ml)    (g/ml)    (g/ml)    (mg/ml)      CERT    STD    COO    NMOG+NOX	(g/mi)    (g/mi)    (g/mi)    (mg/mi)    (mg/mi)    (g/mi)      CERT    STD    CERT

A	CA	LI	FO	R	NI	А
IIX	AIR	RESO	URCE	S	BOA	RD

Executive Order: A-254-0457 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 4 of 4

EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)									
EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD						
MHYXR0120SBG	MHYXR0120SBG-QX1	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: \_DT<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; 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; 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; 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

# 2021 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD
HYUNDAI	VENUE	PC	1.6	M6,SCV1	MHYXR0120SBG	1	F