### California Environmental Protection Agency

## **OB** Air Resources Board

SUBARU CORPORATION Executive Order: A-002-0218

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 GROU	P IN	FORMAT	ION						
MODE		EST G	ROUP	VEHIC	LE CLASS(ES	)	FUEL CATEGORY				FU	FUEL TYPE		
2018	018 JFJXJ02.0FPT L			DT2, PC		DED		SING	LE FUEL	G2	ASOLINE			
ı	USEFUL	LIFE	(miles)	VEH	IICLE EMISSIC	N C	ATEGOR	Y	INT	ERIM / INTI	RMEDIATE IN-USE ST			
EXH	/ORVR		EVAP		FTP		SFTP			FTP		SFTP		
15	0000		150000	CERTI	EV OPTION FYING TO /3 LEV OG+NOX		EV 2 SF	-		*		•		
SPE	CIAL FE	ATUR		IAUST EMISSIO	ON CONTROL			OBD ST	ATU	S	ENGINE	DISPLACEMENT (L)		
1	TWC(2), WR-HO2S, HO2S, TC, CAC, DFI, EGR;						FUI	LL	ALL	MODELS				
*	*						PART	TIAL	*			2.0		
*	*						PARTIA FIN	*		*				
			EV	APORATIVE &	REFUELING (	EVA	P/ORVR)	FAMILY	INFO	RMATION				
EVA	P / ORV	R FAN	MILY	EVAPORATIVE	STD CATEG	ORY		AP EMIS			SPECIA	L FEATURES		
J	FJXR01	303B	A	L	EV 2			P	С		*			
3	JFJXR01	223BV	٧ .	L	EV 2		LDT2				.*			
					EMISSION CR	EDIT	INFORM	IATION						
	A	LLOW	ANCE FO	R TEST GROU	Р		MOG CF			NMOG CRE		OPTIONAL EXH STD FOR WORK		
BASE	ELINE P	ZEV	AT	PZEV	TZEV	NO	N-PZEV	ZERO-E\	VAP	DO	R	TRUCKS		
	* *			*		1	N		N		И			
				NMOG	AND FLEET	AVE	RAGE IN	FORMAT	ION					
NMOG RAF	CH4 RAF	NMC	FTP G/NMHC ATIO	HCHO/NMHC RATIO	NMOG+NOX PC+LDT (0-		0 LVW) LDT (3		+NOX FLEET STD (3751 LVW-8500 R) + MDPV (g/mi)		MDV (10001-14000			
*	*		1.04	0.009	0.	079			0.	092		*		

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 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 24 day of February 2017.

Annotto Hohort 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)

FUEL TYPE

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

CO HCHO PM NMOG+NOx NOx (g/mi) (g/mi) (g/mi) (mg/mi) (g/mi) CERT STD CERT STD CERT STD CERT STD CERT STD \* \* \* \* \* \* \* FTP@50K GASOLINE -FTP@UL 0.0821 0.160 1.19 4.2 \* 0.4 4 0.004 0.01 CA PHASE 2 GASOLINE -0.0957 0.320 0.60 4.2 0.3 30 50°F @4K CA PHASE 2

NMOG+NOx (g/mi) CO (g/mi) **FUEL TYPE** CERT STD CERT STD HWFET @ 50K HWFET @ UL GASOLINE - CA PHASE 2 0.0728 0.160 20°F @ 50K GASOLINE-COLD CO LOW OCTANE 1.38 10.0

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

				US06		SC0	3	COMPOSITE			
	FUEL TYPE	Tier.	NMHC+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	NMHC+NOx (g/mi)	CO (g/mi)	NMOG+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	
@ 4K	GASOLINE - CA PHASE 2	CERT	0.058	0.72		0.025	0.25				
		STD	0.14	8.0		0.20	2.7				
		CERT	*	*	*	*	*	0.0731	*	*	
@ UL	GASOLINE - CA PHASE 2	STD	*	*	*	*	*	0.097	*	*	
		BIN		w	an Subfile.	3/2 3		0.090	i vini je i	V 18-145	

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE VEHICLE EVAPORATIVE TESTING				NG			
EVAPORATIVE FAMILY	FUEL TYPE	3DHS (g/test) @ UL			2DI	HS (g/test) @	RL (g/mi) @ UL			
		CERT	STD	FEL CERT		STD	FEL	CERT	STD	
JFJXR01223BW	GASOLINE - CA PHASE 2	0.338	0.65	*	0.554	0.85	*	0.000	0.05	
JFJXR01303BA	GASOLINE - CA PHASE 2	0.242	0.50	*	0.239	0.65	*	0.000	0.05	

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ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS												
				FUEL ONLY EVAP & CANISTER BLEED								
EVAPORATIVE FAMILY	ORVR (g/g	gallon) @	) UL	FUEL TYPE	3DHS RIG TEST 2DHS RIG TEST (g/test) @ UL (g/test) @ UL				BLEED CANISTER TEST (g/test) @ 4K			
	FUEL TYPE	CERT	STD		CERT	STD	CERT	STD	CERT	STD		
JFJXR01223BW	GASOLINE - TIER 2 UNLEADED	0.034	0.20	*	*	*	*	*	*	*		
JFJXR01303BA	GASOLINE - TIER 2 UNLEADED	0.025	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; 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: seguential/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%"qasoline) fuel; E10; "10%" ethanol ("90%"qasoline) fuel; A; automatic (with lockup); M; manual transmission; SA; semiautomatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: automated manual-selectable transmission; OT: other transmission

### 2018 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
SUBARU	FORESTER	LDT2	2.0	SCV8	JFJXR01223BW	1	F	*
SUBARU	WRX ,	PC	2.0	M6,SCV8	JFJXR01303BA	1	F	*