### California Environmental Protection Agency

# **⊘** Air Resources Board

JAGUAR LAND ROVER LIMITED Executive Order: A-409-0043

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 GRO	UP INF	ORMAT	ON					
MODE	- I T	EST G	ROUP	VEHI	CLE CLASS(E	S)		FUEL CATEGORY		FUEL TYPE			
2018	JJ	LXJ03	.OFSP		LDT2, PC		DEDI	CATED SI VEHIC	NGLE FUEL	G	ASOLINE		
ı	USEFUL	LIFE	(miles)	VE	EHICLE EMISS	ON CA	TEGOR	Y	NTERIM / INT	ERMEDIA	TE IN-USE STD		
EXH	/ORVR		EVAP		FTP		SFTP	No. of the last of	FTP	SFTI SFTI			
15	0000		150000	LEV	3 SULEV30		7 3 SUL		PM		PM		
SPE	CIAL FE	ATUR		IAUST EMISS	SION CONTRO	-		OBD STAT	rus	ENGINE	DISPLACEMENT (L)		
1	2TWC	, 2WR	-HO2S, 2	2HO2S(2), D	FI, SC, CAC		FUL	LA	LL MODELS				
*				*			PART	IAL	*	* 3.0			
*				*			PARTIAL FINE		*				
			EV	APORATIVE	& REFUELING	(EVAP	ORVR)	FAMILY IN	FORMATION				
EVA	P / ORV	R FAN	IILY	EVAPORATI	VE STD CATE	ORY		AP EMISSI EHICLE C		SPECIA	L FEATURES		
J	JLXR01	40P12		LEV	3 OPTION2			LDT2			*		
J	JLXR01	60P1z	4	LEV	3 OPTION2			PC			*		
					EMISSION CE	REDIT	NFORM	ATION					
	Α	LLOW	ANCE FO	R TEST GRO	ÜP			EDIT FOR	NMOG CRE		OPTIONAL EXH STD FOR WORK		
BASE	ELINE P	ZEV	AT	PZEV	TZEV	NON	N-PZEV Z	ERO-EVA	P DO	R	TRUCKS		
	*			*	*		N		N		N		
				NMC	G AND FLEET	AVER	AGE INF	ORMATIO	N				
NMOG RAF	CH4 RAF	NMO	FTP G/NMHC ATIO	HCHO/NMH RATIO	PC+LDT (			LDT (37	OX FLEET STI 51 LVW-8500 MDPV (g/mi)	MDV	NOX FLEET STD (10001-14000 VWR) (g/mi)		
*	*	:	1.10	0.02	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 and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for PC, LDT and MDV).

#### BE IT FURTHER RESOLVED:

For evaporative families JJLXR0140P1Z and JJLXR0160P1Z, the manufacturer has attested to compliance with the 0.02 inch effective leak diameter standard in 13 CCR Section 1976(b)(1)(G)6 ["Effective Leak Diameter Standard And Procedure"].

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 1479

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Annette Hebert, 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)

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

F	U	Εl	. T	Y	P	E

THE RESERVE AND A PROPERTY OF											
		NMOG+NOx (g/mi)		CO (g/mi)		NOx (g/mi)		HCHO (mg/mi)		PM (g/mi)	
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*,	*	*	*	*	*	*	*	*	*	*
FTP@UL	GASOLINE- LEV3 E10	0.023	0.030	0.4	1.0	*	*	0	4	0.002	0.003
50°F @4K	GASOLINE- LEV3 E10	0.059	0.060	0.4	1.0	*		1	8		

(本) (本)	FUEL TYPE	NMOG-	NOx (g/mi)	CO (g/mi)		
and the state of t	FUEL TYPE	CERT	STD	CERT	STD	
HWFET @ 50K	*	*	*		经规则	
HWFET @ UL	GASOLINE-LEV3 E10	0.008	0.030			
20°F @ 50K	GASOLINE-LEV3 E10		A Markovice (by	1.3	10.0	

#### 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	*	*		*	*	0.524.745.1434 0.544.745.1434			
		CERT	0.033	0.5	0	0.009	0.6	*	*	*	
@ UL	GASOLINE- LEV3 E10	STD	0.050	9.6	10	0.020	3.2	*	*	*	
		BIN						*	4.40%		

#### WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

			WHOLE \								
EVAPORATIVE FAMILY	FUEL TYPE	3DHS (g/test) @		(g/test) @ UL		2DHS (g/test) @ UL			RL (g/mi) @ UL		
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD		
JJLXR0140P1Z	GASOLINE- LEV3 E10	0.227	0.400	*	*	0.400	*	0.00	0.05		
JJLXR0160P1Z	GASOLINE- LEV3 E10	0.238	0.300	*	*	0.300	*	0.00	0.05		

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ORVR / FU	EL ONLY / CA	NISTER	BLEED	EVAPORATIVE	EMISSION	STANDA	RDS AND	CERTIFIC	ATION LEV	ELS		
			- 9	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		
JJLXR0140P1Z	GASOLINE - TIER 2 UNLEADED	0.01	0.20	GASOLINE- LEV3 E10	*	*	*	*	0.018	0.020		
JJLXR0160P1Z	GASOLINE - TIER 2 UNLEADED	0.01	0.20	GASOLINE- LEV3 E10	*	*	*	*	0.010	0.020		

\*: 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; 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: semiautomatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: automated manual-selectable transmission; OT: other transmission

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MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD	PZEV TYPE
JAGUAR	F-PACE	LDT2	3.0	SA8	JJLXR0140P1Z	1	F	*
JAGUAR	F-PACE R	LDT2	3.0	SA8	JJLXR0140P1Z	1	F	*
JAGUAR	F-TYPE 400 SPORT AWD CONVERTIBLE	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	F-TYPE 400 SPORT AWD COUPE	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	F-TYPE 400 SPORT CONVERTIBLE	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	F-TYPE 400 SPORT COUPE	PC	3.0	SA8	JJLXR0160P1Z	1	F'	*
JAGUAR	F-TYPE CONVERTIBLE	PC	3.0	M6,SA8	JJLXR0160P1Z	1	F	*
JAGUAR	F-TYPE COUPE	PC	3.0	M6,SA8	JJLXR0160P1Z	1	F	*
JAGUAR	F-TYPE S AWD CONVERTIBLE	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	F-TYPE S AWD	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	F-TYPE S CONVERTIBLE	PC	3.0	M6,SA8	JJLXR0160P1Z	1	F	*
JAGUAR	F-TYPE S COUPE	PC	3.0	M6,SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XE	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XE AWD	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XE S	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XE S AWD	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XF	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XF AWD	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XF S	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XF S AWD	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	ХJ	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XJ AWD	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XJL	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
JAGUAR	XJL AWD	PC	3.0	SA8	JJLXR0160P1Z	1	F	*
LAND ROVER	RANGE ROVER VELAR	LDT2	3.0	SA8	JJLXR0140P1Z	1	F	*