

ROUSH INDUSTRIES, INC.

EXECUTIVE ORDER A-344-0100 New On-Road Heavy-Duty Engines Page 1 of 2 Pages

Pursuant to the authority vested in California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: The engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE SIZES (L)	FUEL TYPE 1	STANDARDS & TEST	INTENDED SERVICE CLASS 2	ECS & SPECIAL FEATURES 3	DIAGNOSTIC 6			
		SIZES (L)		PROCEDURE	SERVICE CLASS	THE HEAD OF SHE HEAD	000/5			
2019	KRIIE06.8BC1	6.8	CNG	Otto	HDO	TWC, HO2S, SFI, 2WR-HO2S	OBD(F)			
PRIMARY	ENGINE'S IDLE EMIS	SSIONS COI	NTROL 5		ADDITIONAL	IDLE EMISSIONS CONTROL 5				
	N/A			N/A						
ENGINE (L) ENGINE MODELS / CODES (rated power, In hp)										
6.8				Blue Bird	Vision Bus / KKXC10A	AR5 (269 hp)				
L=liter; hp: CNG/LP CNG/LP L/M/H I- ECS=er up catalyst; WR-HO2S=	=horsepower; kw=kilowa #G=compressed/liquefier IDD=light/medium/heavy nission control system; DPF=diesel particulate pwide range oxygen sens	att; hr=hour; d natural gas; r heavy-duty d TWC/OC=thre filter; PTOX= sor; TBI=throti on: TC/SC=tu	LPG=liquefied per liesel; UB=urban be-way/oxidizing ca periodic trap oxidiz lie body fuel injectic rbo/ super charger	troleum gas; E85=85 us; HDO=heavy duty ttalyst; NAC=NOx ad ter; HO2S/O2S=heat on; SFI/MFI=sequent t CAC=charge air co	6% ethanol fuel; MF=multi fuel y Otto; Isorption catalyst; SCR-U / St ted/oxygen sensor; HAFS/AF tial/multi port fuel injection; Dt oler; EGR / EGR-C-exhaust	yz; 40 CFR 86.abc=Title 40, Code of Federal Regule I a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel; CR-N=selective catalytic reduction – urea / – ammoni S=heated/air-fuel-ratio sensor (a.k.a., universal or lin GI=direct gasoline injection; GCARB=gaseous carbu gas recirculation / cooled EGR; PAIR/AIR=pulsed/se	a; WU (prefix) =warm- ear oxygen sensor); retor;			

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 2) the SET and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diesel" CO, SET and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.8 are in parentheses.). 4

	NMHC		NOx		NMHC+NOx		CO		PM		НСНО	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP ·	SET
STD	0.14	*	0.10	*	*	*	14.4	*	0.01	*	0.01	*
CERT	0.02	*	0.04	*	*	*	1.5	*	0.001	*	0.000	*
NTE					*				*		*	

4 g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET=Supplemental emissions testing; NTE=Not-to-Exceed; STD=standard or emission test cap; FEL=family emission limit; CERT=certification level; NMHC/HC=non-methane/hydrocarbon; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde;

BE IT FURTHER RESOLVED: That the listed engine family is certified to the Optional Low NOx Emission Standards as specified in 13 CCR 1956.8(c)(1)(B) and section 10. B. 1 of the incorporated "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles" adopted December 27, 2000, as last amended September 1, 2017.

BE IT FURTHER RESOLVED: The manufacturer has demonstrated compliance with the Greenhouse Gas Emission Standards as specified in Title 13 CCR 1956.8 and the incorporated "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy Duty Otto Cycle Engines and Vehicles" (HDOE Test Procedures) adopted December 27, 2000, as last amended September 1, 2017 using the 2014 model year National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1036.108 of the HDOE Test Procedures. The manufacturer has submitted the required information and therefore has met the criteria necessary to receive a California Executive Order based on the Environmental Protection Agency's Certificate of Conformity for the above listed engine family.



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	EPA CERTIFICATI	E OF CONFORMITY	PRIMARY INTENDED SERVICE CLASS				
	KRIIE06.	8BC1-003	Vocational				
ln .	C	O ₂		N₂O 0.10			
g/bhp-hr	FTP	SET	CH4				
STD	627		0.10				
FCL	596	•		*			
FEL	614	*	0.30	0.10			
CERT	549	*	0.11	0.02			

BE IT FURTHER RESOLVED: For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 1971.1 (on-board diagnostic, full or partial compliance) and 13 CCR 2035 et seq. (emission control warranty).

Engines certified under this Executive Order must 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 day of February 2019.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

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Engine Model Summary Template

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Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque		9.Emission Control eDevice Per SAE J1930
KRIIE06.8BC1	KKXC10AR5	Blue Bird Vision Bus	269@3900	NA	NA	386@3100	8410.5	85.4	TWC/HO2S/SFI/2WR- HO2S