Pursuant to the authority vested in 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.

NE FAMILY	ENGINE	FUEL TYPE	& TEST	SERVICE	ECS & SPECIAL FEATURES 3	DIAGNOSTIC 5	
	SIZES (L)		PROCEDURE	CLASS <sup>2</sup>	TAIC SEL MAID HORE HORE	OBD(P)	
06.8BWZ	6.8	LPG	Otto	HDO	100C, SFI, 200R-H02S, H02S		
OL 4		A		ISSIONS CON	ITROL <sup>4</sup>		
N/A							
		ENGINE MC	DELS / CODES (rat	ted power, in I	np)		
		. Ple	ease see the attac	chment.			
	IE FAMILY 06.8BWZ IDLE OL 4	IE FAMILY SIZES (L) 06.8BWZ 6.8 IDLE OL 4	IE FAMILY SIZES (L) 06.8BWZ 6.8 LPG IDLE OL 4 AI ENGINE MC	IE FAMILY SIZES (L) 06.8BWZ 6.8 LPG Otto IDLE OL 4 ADDITIONAL IDLE EN ENGINE MODELS / CODES (ra Please see the attac	IE FAMILY SIZES (L) POLL TIPE & TEST SERVICE CLASS 2 06.8BWZ 6.8 LPG Otto HDO IDLE OL 4 ADDITIONAL IDLE EMISSIONS CON N/A ENGINE MODELS / CODES (rated power, in the please see the attachment.	IE FAMILY LINGRE POLL TIPE & TEST PROCEDURE SERVICE CLASS 2 LOSA SPECIAL PEATORES   06.8BWZ 6.8 LPG Otto HDO TWC, SFI, 2WR-HO2S, HO2S   IDLE OL 4 ADDITIONAL IDLE EMISSIONS CONTROL 4 N/A   ENGINE MODELS / CODES (rated power, in hp)   Please see the attachment.	

L=liter; hp=horsepower, kw=kilowatt; hr=hour;

CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel; 2 L/M/H HDD=light/medium/heavy heavy-duty diesel; UB=urban bus; HDO=heavy duty Otto;

<sup>3</sup> ECS-emission control system; TWC/OC-three-way/oxidizing catalyst; NAC=NOx adsorption catalyst; SCR-U / SCR-N=selective catalytic reduction – urea / – ammonia; WU (prefix) =warm-up catalyst; DPF=diesel particulate filter; PTOX=periodic trap oxidizer; HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor); WR-HO2S=wide range oxygen sensor; TBI=throttle body fuel injection; SFUMFIsequential/multi port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburetor; IDI/DDI=indirect/direct direct direc 3

ESS=engine shutdown system (per 13 CCR 1956.8(a)(6)(A)(1); 30g=30 g/hr NOx (per 13 CCR 1956.8(a)(6)(CR 1956.8(a)(6)(C); Exempt=exempted per 13 CCR 1956.8(a)(6)(B) or for CNG/LNG fuel systems; N/A=not applicable (e.g., Otto engines and vehicles); (2012-08-20)

EMD=engine manufacturer diagnostic system : OBD(F) / (P) / (\$)=full / partial / partial with fine / on-board diagnostic.

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 heavyduty 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 ).<sup>4</sup> parentheses.).

in	NMHC		NOx		NMHC+NOx		co		PM		нсно	
g/bhp-hr	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	*	0.20	*	*	*	14.4	*	0.01	*	0.01	*
CERT	0.07	*	0.13	*	*	*	3.3	*	0.001	*	0.001	*
NTE						*		ł.				ł

g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET= supplemental emissions testing, NTE=Not-to-Exceed emission limit; 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: 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 Dec. 27, 2000, as last amended Oct. 21, 2014 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.

EPA CERTIFICATE	OF CONFORMITY	PRIMARY INTENDED SERVICE CLASS		
JRIIE06.8	3BWZ-002			
C	02	CH	N₂O	
FTP	SET			
627		0.10	0.10	
627	*	*	*	
646	*	*	*	
618 *		0.05	0.03	
	EPA CERTIFICATE JRIIE06.6 C FTP 627 627 646 618	EPA CERTIFICATE OF CONFORMITY       JRIIE06.8BWZ-002       CO2       FTP     SET       627     *       627     *       646     *       618     *	EPA CERTIFICATE OF CONFORMITY     PRIMARY INTENDE       JRIIE06.8BWZ-002     CH4       CO2     CH4       627     *       627     *       646     *       618     *	

VOCATIONAL=vocational engine: FCL=family certification level CERT=certification level, CO2=carbon dioxide; TRACTOR=tractor engine CH4=methane; N2O=nitrous oxide;

CALIFORNIA AIR RESOURCES BOARD

**ROUSH INDUSTRIES INC.** 

**BE IT FURTHER RESOLVED:** Certification to the FEL(s) / FCL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) / FCL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

**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 2035 et seq. (emission control warranty) and 13 CCR 1971.1 (on-board diagnostic).

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 March 2018.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

A Hachment 1/1

**ROUSH** ®

## Engine Model Summary

Manufacturer: Roush Industries, Inc.

EPA Engine Family:

JRIIE06.8BWZ

Manufacturer Family Name: JRIIE06.8BWZ

A-344-0084 2/21/2018

Engine Code	Engine Model	BHP@RPM SAE Net	Torque@RPM SAE Net	Fuel Rate mm3/stoke @ max rated torque	Fuel Rate Ibm/hr @ max rated tq	Emission Control Devise per SAE J1930
JJE418NR5	E450 Incomplete	305 @ 4250	420 @ 3250	82.1	85.2	TWC, HO2S, 2WR-HO2S, SFI
JJE418MR5	Same	Same	Same	Same	Same	Same
JJE41LNR5	Same	Same	Same	Same	Same	Same
JJE41LMR5	Same	Same	Same	Same	Same	Same
JJE418QR5	Same	Same	Same	Same	Same	Same
JJE418RR5	Same	Same	Same	Same	Same	Same
JJE41LQR5	Same	Same	Same	Same	Same	Same
JJE41LRR5	Same	Same	Same	Same	Same	Same