Questions for Bus Vendors:

1. What configurations are you currently offering in the Florida Bid (meeting Florida Specifications) in the Electric bus, type and capacity?

   -Florida Transportation Systems has an 18-p Type A Micro Bird, a 71-p Type C Blue Bird Vision and an 84-p Type D All American Rear Engine electric school bus available on the Florida Department of Education 2020-16 contract for school buses. Please note that to date, Blue Bird has sold 300 EV buses through 11/27/2020 and have deployed 220 EV buses to 11 different states.

2. Based on these configurations, please identify with a fully loaded bus based on capacity of ridership, A/C application, the effective range for each application (bus) before recharge.

   - Maximum range is 120 miles for the Blue Bird electric school buses and 100 miles for the Micro Bird Type A school bus, but can be diminished by as much as 25% with significant a/c usage. Good EV driver habits and the use of regenerative braking will help extend the range.

3. Identify the requirements of percent of charge that the bus must have prior to operation.

   - The electric bus can operate with as little as 1% state of charge and the bus will operate in a limp mode for approximately 10 miles at 0 state of charge. After that, the bus will shut down.

4. Identify all charging options and time requirements that each carry to provide a fully charged bus ready for use.

   - The Blue Bird buses and the Micro Bird bus have a standard CCS1 connector which allows for either Level 2 or DC Fast Charge. With a Level 2 charger, a bus can be fully charge from 0% to 100% in approximately 10-11 hours. With DC Fast Charge, a bus can fully charge from 0% to 100% in approximately 3 – 3.5 hours. These times assume batteries are at 60F-80F. Colder will require more time as will hotter.

5. What level of expertise will be required for Districts to provide internal service of these units? Must technicians have specific certifications?

   -Any work on high voltage components must be performed by a Cummins-certified technician or Ecotuned technician (Type A Micro Bird). For any work or maintenance on other EV components, the expertise level needed would be a similar skill level to a technician doing routine maintenance on most school buses. There are no special certifications required.

   What is the current weight of the bus in comparison to a similar configured diesel bus?

   - The weight is similar. With 71 passengers on a CV, the rear axle will be approaching 23,000 pounds and the front axle around 6,800 pounds.

6. What specialty equipment/tools will be required to be purchased from the district to provide routine maintenance of these units?

   - No special tools are required as Cummins and Ecotuned will take care of the high voltage portions and the districts will already have tools in place for all other maintenance required.

7. Please identify all PM maintenance schedules required along with time expectations to perform.

   - PM schedule attached. These eight items will incur no additional time or expense beyond servicing a traditional diesel unit. However, the total maintenance costs could be approximately 20% of typical annual maintenance costs for a diesel bus.

8. Please identify all associated warranties with the units being purchased.

   - Cummins EV warranty statement attached. The Cummins warranty provides for 5 Years / 100,000 miles on the PowerDrive System and 8 Years / 125,000 miles for the high voltage batteries. Blue Bird's warranty statement is attached. The Blue Bird warranty does not vary from the original 5 year warranty as required by Florida School Bus Specifications Revised 2019. The Ecotuned warranty for the Type A Micro Bird provides battery coverage for 5 Years / 60,000 miles. Micro Bird's warranty does not vary from the original 5 year warranty as required by Florida School Bus Specifications Revised 2019.

   Please identify anticipated costs with battery maintenance, inclusive of replacement costs and disposal costs. - There are no costs related to routine battery maintenance. Battery replacement cost and disposal costs are not yet defined.
   Is there a different type of requirement for battery storage than currently being used for current battery applications? - The chemistry of these batteries does not like to be left fully discharged. Bring the batteries up to 100% SOC if the bus will be idle more than 7 days in order to prolong the life of the batteries.
   Are these batteries available through a general vendor or is there a limited amount of providers? - At this time, the batteries used on our electric buses are only available through Cummins. If replacement is required, Cummins balances the batteries together so that each battery performs the same.
   If there is a battery failure, can isolated batteries be replaced or is it an entire section of batteries? - At this time, if a battery in one of the two strings goes bad, Cummins will replace the entire string with a new set of balanced batteries.

9. Please provide an anticipated build time of these units from time of order to delivery, can you identify a premium time for order based on your factory build schedules.

   - Anticipated delivery times can vary based on backlog of EV orders. Average lead times are 180 days from time of order. During off-peak season (order timing of Sep – Dec), the anticipated delivery times can be less.

10. Please identify the provisions your company has made to ensure warranty service and other service can be performed on these units once purchased by the districts.

    - FTS provides mobile service and support for any district purchasing an electric school bus. Additionally, when the first EV unit is sold into a new area (state or region), the closest Cummins Distributor is trained to provide warranty service and parts support prior to the unit being deployed. School district technician training is also available through FTS and Blue Bird Academy; driver training is also available and encouraged.

11. Has there been a determination of life expectancy of the electric bus based on all required and recommended services performed?

    - Batteries are rated for 3000 cycles at a minimum 70% state of charge. This doesn't require that the batteries be replaced at that point as the bus will still operate but total battery capacity will be diminished.

12. What is the anticipated annual maintenance costs for these units and any milestone major services and are they based on time, hours or mileage?

    - The maintenance schedule is attached and four items require annual attention based on 20,000 miles or annual service. These four items will incur no additional time or expense beyond a traditional diesel unit. However, the total maintenance costs could be approximately 20% of typical annual maintenance costs for a diesel bus.

13. What level of interaction will the dealer provide in working with power companies in providing the appropriate hook up platforms for the connection between bus and charging station.

    - Dealer will work with the district to properly plan for infrastructure and power requirements. Various chargers are unique to the V2G capabilities and will need to be discussed with both the customer and local utility companies.

    Is there an industry standard for hook-up and charging line? Is it based on the level of charging station?

    - This can vary greatly and dependent on the site, equipment, facility upgrades, and charging solution selected.

14. What will be the methodology in ensuring that fire and rescue will be trained in emergency procedures in bus emergencies?

    - Blue Bird offers first responder training.

15. Will there be any additional requirements for bus evacuation procedures in case of an emergency?

    - In the first responder training, special procedures are covered as it relates to the first responders, however, there are no special procedures or actions related to the evacuation itself.

16. What provisions has your company taken to create an upgradable bus as new technologies emerge to enhance this generation of buses being purchased?

    - As with any appliance that operates with controlling software, from time to time that software is upgraded to enhance the performance of the hardware. The local Cummins dealer will be made aware of the upgrade who will then schedule a time that is convenient with the customer to flash in the new software version.

17. Has your company researched the amount of power consumed in charging your electric bus?

    - The amount of power to recharge the bus will be equal the amount of power consumed during its operation. Some EVSE suppliers offer smart charging capabilities that allow the amount of power used to be monitored. Some customers have put power meters on each EVSE to monitor the amount of power used. Cost of that power cannot be estimated as the price per kilowatt will vary from location to location.

18. Please provide across your platform the comparisons on emissions for the Electric Bus, Propane Bus, CNG Bus, Diesel Bus and Gasoline Bus. All based on the newest emission standards.

    -FTS will follow up with engine certifications

Item	Frequency	Fluid	Parts
Check System Coolant Level	Annually or every 20,000 miles (32,000 km)	Orange OAT Ethylene Glycol Long Life (50/50 mix)	
Drain and Refill Coolant System; replace filter	Every 5 years or every 150,000 miles (240,000 km)	Orange OAT Ethylene Glycol Long Life (50/50 mix)	Donaldson PP171276 spin on filter
Check Air Compressor Oil Level	Semi-Annually or every 10,000 miles (16,000 km)	Shell Rotella T4 15w-40 or equal	
Drain and Refill Air Compressor Oil and Replace Oil Filter	First 6,000 miles (10,000 km) and then Annually or every 18,000 miles (30,000 km)	Shell Rotella T4 15w-40 or equal	Filter supplied by Cummins
Check and Clean Air Comperssor Intake Filter	Semi-Annually or every 10,000 miles (16,000 km)		Filter supplied by Cummins
Check Power Steering Fluid Level	Annually or every 20,000 miles (32,000 km)	Dexron III ATF	
Check Torque on Propulsion Motor Mounting Hardware	Annually or every 20,000 miles (32,000 km)		
Check Torque on Battery Frame Mounting Hardware	Annually or every 20,000 miles (32,000 km)		

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-19-095;

IT IS ORDERED AND RESOLVED: The following on-road motor vehicles with a manufacturer's GVWR over 14000 pounds are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

ENGINE DESCRIPTION								
MANUFACTURER	EXECUTIVE ORDER	MODEL YEAR	ENGINE FAMILY	ENGINE SIZES (L)	FUEL TYPE [1]	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS [2]	ECS & SPECIAL FEATURES [3]
ROUSH INDUSTRIES, INC.	A-344-0114	2020	LRIIE07.3BL1	7.3	LPG	Otto	HDO	TWC, HO2S, SFI, 2WR-HO2S

Gasoline, LPG or Alcohol Vehicles Only			VEHICLE DESCRIPTION			
EVAPORATIVE FAMILY	EVAPORATIVE UL (K)	FUEL TANK CAPACITY (gallons)	VEHICLE MODEL YEAR	VEHICLE MAKE & MODELS	ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)
LRIIF0210LPG	150	41, 64	2020	Roush E-Series	7.3	E-Series / LLE41FSR5
		30, 49, 50, 53, 67.5, 73		Roush Medium Duty Truck		Medium Duty Truck / LLFC1FSR5
		35, 50, 67.5		Roush Super Duty Truck		Super Duty Truck / LLFA1FPR5; LLFA1FNR5
		45, 67.5		Roush Step Van		Step Van / LLF41FSR5
		47, 67.5, 93		Blue Bird Vision Bus		Vision Bus / LLF61FSR5; LLF61ESR5
LRIIF0360LPG		41, 64		Roush E-Series		E-Series / LLE41FDR5
		30, 49 ,50, 53, 67.5, 73		Roush Medium Duty Truck		Medium Duty Truck / LLFC1FDR5
LRIIF0365LPG		45, 67.5		Roush Motor Home		Motor Home / LLF51FDR5 (350 hp for all codes)

* =not applicable; **GVWR**=gross vehicle weight rating; **13 CCR xyz**=Title 13, California Code of Regulations, Section xyz; **40 CFR 86.abc**=Title 40, Code of Federal Regulations, Section 86.abc; **L**=liter; **K**=1000 miles; **hp**=horsepower; **kw**=kilowatt;
[1] **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;
[3] **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; **SFI/MFI**=sequential/multi port fuel injection; **DGI**=direct gasoline injection; **GCARB**=gaseous carburetor; **IDI/DDI**=indirect/direct diesel injection; **TC/SC**=turbo/ super charger; **CAC**=charge air cooler; **EGR / EGR-C**=exhaust gas recirculation / cooled EGR; **PAIR/AIR**=pulsed/secondary air injection; **SPL**=smoke puff limiter; **ECM/PCM**=engine/powertrain control module; **EM**=engine modification; **2 (prefix)**=parallel; **(2) (suffix)**=in series;

Following are: 1) the FTP exhaust emission standards or family emission limit(s) as applicable under 13 CCR 1956.1 (urban bus) or 13 CCR 1956.8 (other than urban bus); 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, in g/bhp-hr, 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 1956.1 or 13 CCR 1956.8 are in parentheses.) [4]

	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	*	0.05	*	*	*	14.4	*	0.01	*	0.01	*
CERT	0.05	*	0.02	*	*	*	5.8	*	0.002	*	0.000	*
NTE	*		*		*		*		*		*	

[4] **g/bhp-hr**=grams per brake horsepower-hour; **FTP**=Federal Test Procedure; **SET**=supplemental emissions testing Steady-State Cycle; **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: For the listed vehicle models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 1976(b)(1)(F) {evaporative emission standards}, 13 CCR 2035 et seq. (emission control warranty), and 13 CCR 2235 [fill pipes and openings of motor vehicle fuel tanks].

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 December 19, 2018.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

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-19-095;

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 PROCEDURE	INTENDED SERVICE CLASS [2]	ECS & SPECIAL FEATURES [3]	DIAGNOSTIC [6]
2020	LRIIE07.3BL1	7.3	LPG	Otto	HDO	TWC, HO2S, SFI, 2WR-HO2S	OBD(F)

PRIMARY ENGINE'S IDLE EMISSIONS CONTROL [5]	ADDITIONAL IDLE EMISSIONS CONTROL [5]
N/A	N/A

ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)
7.3	See Attachment

* =not applicable; **GVWR**=gross vehicle weight rating; **13 CCR xyz**=Title 13, California Code of Regulations, Section xyz; **40 CFR 86.abc**=Title 40, Code of Federal Regulations, Section 86.abc; **L**=liter; **hp**=horsepower; **kw**=kilowatt; **hr**=hour;

[1] **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;

[3] **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; **SFI/MFI**=sequential/multi port fuel injection; **DGI**=direct gasoline injection; **GCARB**=gaseous carburetor; **IDI/DDI**=indirect/direct diesel injection; **TC/SC**=turbo/super charger; **CAC**=charge air cooler; **EGR / EGR-C**=exhaust gas recirculation / cooled EGR; **PAIR/AIR**=pulsed/secondary air injection; **SPL**=smoke puff limiter; **ECM/PCM**=engine/powertrain control module; **EM**=engine modification; **2 (prefix)**=parallel; **(2) (suffix)**=in series;

[5] **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)(C); **APS** =internal combustion auxiliary power system; **ALT**=alternative method (per 13 CCR 1956.8(a)(6)(D); **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);

[6] **EMD**=engine manufacturer diagnostic system (13 CCR 1971); OBD**(F) / (P) / ($)**=full / partial / partial with a 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 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		HCHO	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	*	0.05	*	*	*	14.4	*	0.01	*	0.01	*
CERT	0.05	*	0.02	*	*	*	5.8	*	0.002	*	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: 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 December 19, 2018 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	
	LRIIE07.3BL1-003		Vocational	
In g/bhp-hr	CO_2		CH_4	N_2O
	FTP	SET		
STD	627	*	0.10	0.10
FCL	627	*	*	*
FEL	646	*	0.10	0.10
CERT	545	*	0.03	0.02

[4] **g/bhp-hr**=grams per brake horsepower-hour; **FTP**=Federal Test Procedure; **SET**=Supplemental emissions testing; **STD** = standard or emission test cap; **FEL**=family emission limit; **FCL**=family certification level; **CERT**=certification level; **CO_2**=carbon dioxide; **CH_4**=methane; **N_2O**=nitrous oxide; **VOCATIONAL**=vocational engine; **TRACTOR**=tractor engine

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: 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 December 19, 2018.

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 16th day of March 2020.

Allen Lyons, Chief
Emissions Certification and Compliance Division

ATTACHMENT 1 OF 1

Engine Model Summary Template

A-344-0114
02/13/20

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	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
LRIIE07.3BL1	LLE41FSR5	E-Series	350@3900	NA	NA	468@3900	125.4	165.9	TWC/HO2S/SFI/2WR-HO2S
LRIIE07.3BL1	LLE41FDR5	E-Series	SAME			SAME	SAME	SAME	SAME
LRIIE07.3BL1	LLFC1FSR5	Medium Duty	SAME			SAME	SAME	SAME	SAME
LRIIE07.3BL1	LLFC1FDR5	Medium Duty	SAME			SAME	SAME	SAME	SAME
LRIIE07.3BL1	LLFA1FPR5	Superduty	SAME			SAME	SAME	SAME	SAME
LRIIE07.3BL1	LLFA1FNR5	Superduty	SAME			SAME	SAME	SAME	SAME
LRIIE07.3BL1	LLF41FSR5	Step Van	SAME			SAME	SAME	SAME	SAME
LRIIE07.3BL1	LLF51FDR5	Motor Home	SAME			SAME	SAME	SAME	SAME
LRIIE07.3BL1	LLF61FSR5	Blue Bird Vision School Bus	SAME			SAME	SAME	SAME	SAME
LRIIE07.3BL1	LLF61ESR5	Blue Bird Vision School Bus	SAME			SAME	SAME	SAME	SAME

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 16TH day of March 2020.

Allen Lyons, Chief
Emissions Certification and Compliance Division

Limited Warranty: Gold 5/10 - Buses with Option 31300-24

If acquired, this warranty is in lieu of the standard limited warranty. This warranty is applicable to Blue Bird bus products T3FE, T3RE and BBCV built on or after August 29, 2016 specifically for and operated in the United States of America, Canada, Puerto Rico, U.S. Virgin Islands, Guam, and American Samoa.

Blue Bird Body Company (Blue Bird) warrants each bus to be free from defects in material and workmanship under normal use and service within the specified limits below. The warranty period begins either on the Delivery Date of the bus to the original user or on the Manufacture Date of the bus. Blue Bird's obligation is limited to the repair or replacement of such parts as shall, under normal use and service, appear to be defective in workmanship or material.

1. For ten years from Delivery Date:

• Front steer axle, including kingpin assembly, steering arm assembly, and upper and lower steering knuckle assembly, excluding kingpin bushings, kingpin wear, thrust bearings, tie rods and tie rod ends, brakes and axle end components.

2. For five years from Manufacture Date:

• Paint gloss. During first three years, gloss reading shall not drop below 60 on 60^0 meter (70% of initial gloss). For five years, gloss reading shall not drop below 30 on 60^0 meter.

• Paint color retention. During first three years, color coat shall not shift colors more than 4ΔE from the centroid of the national standard. For five years, color coat shall not shift colors more than 8ΔE from the centroid of the national standard.

3. For five years from Delivery Date:

• All other components not specified above, excluding engines, propane fuel systems, automatic transmissions, wheelchair lifts, non-Blue Bird air conditioners, and batteries. The warranties of the excluded components are the responsibility of the respective manufacturers, and are not a part of Blue Bird's limited warranty.

Your Blue Bird Dealer will register the bus with Blue Bird and can assist with registering components that are warranted by the component manufacturers. During the warranty period, this warranty is transferable to subsequent Owners-Operator in the U.S.A. or Canada.

THIS LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED AND ALL OTHER OBLIGATIONS OR LIABILITIES. NO PERSON, INCLUDING SALESPERSONS, DEALERS, OR FACTORY REPRESENTATIVES OF BLUE BIRD, IS AUTHORIZED TO MAKE ANY REPRESENTATION OR WARRANTY CONCERNING BLUE BIRD PRODUCTS EXCEPT TO REFER PURCHASERS TO THIS LIMITED WARRANTY. BLUE BIRD MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BLUE BIRD SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Obtaining Warranty Service

Contact your Blue Bird Dealer immediately upon discovery of a defect and within the warranty period. Your Blue Bird Dealer will help arrange for repairs by the Dealer or another qualified repair facility. Defects must be repaired immediately upon discovery and within the warranty period. It is the responsibility of the Owner-Operator to return the bus to the Blue Bird Dealer, or a qualified repair facility authorized by the Blue Bird Dealer. The Owner-Operator is responsible for operating and maintaining the bus as described in the Driver Handbook and Service Manual. The Owner-Operator shall retain all maintenance records, and present them to the Blue Bird Dealer or the component manufacturer, if requested.

If the defective component is warranted by Blue Bird and the repair is performed by the Blue Bird Dealer, the Blue Bird Dealer will prepare and submit a warranty claim to Blue Bird.

If the defective component is warranted by Blue Bird and the repair is performed by the Owner-Operator or another qualified repair facility, detailed labor and parts invoices must be sent to the Blue Bird Dealer not later than 30 days after the repair date. The Blue Bird Dealer will prepare and submit a warranty claim to Blue Bird.

If the defective component is warranted by the component manufacturer and the repair is performed by the component manufacturer's authorized repair facility, the repair facility will prepare and submit a warranty claim to the component manufacturer.

Limitations and Exclusions

In addition to the limitations described on the previous pages, items specifically not covered include, but are not limited to:

• Engines, automatic transmissions, wheelchair lifts, air conditioners (other than Blue Bird Air™ system), tires, and batteries. The limited warranties for these components are provided solely by and are the responsibility of the component manufacturers and are not a part of Blue Bird's limited warranty.

• Loss of use and incidental consequential expenses, including but not limited to commercial loss, loss of commercial fares, driver time or pay, lease or rental of substitute vehicle, storage, lodging, meals, telephone calls, and other travel costs.

• Any parts or components which must be repaired, replaced, or adjusted during the warranty period due to wear, wear-out, or consumption, including but not limited to brake pads and linings, drums and rotors, wiper blades, light bulbs, filters, lubricants, fluids, belts, bearings other than those specifically covered by the limited warranty, suspension pins and bushings, batteries, worn seat covers, worn steptreads and floor covering, worn door and window seals, discharged fire extinguishers, damaged (scratched, cracked) gauge and light lenses, and tires. Wear not only includes friction-type wear but can also include environmental deterioration including but not limited to surface corrosion on exhaust pipes or clamps and brake drums or rotors, as well as fading, cracking, or discoloration of seat covers caused by U.V.

• Maintenance including but not limited to tightening loose fasteners, axle and wheel alignments, wheel-balancing, tightening body tie-downs, door adjustments, tightening hose clamps, and sealing or caulking windows, doors, roof hatches, and lights.

• Any parts or components which must be repaired, replaced or adjusted during the warranty period as a result of accident damage, abnormal operation, misuse, or abuse, including but not limited to excessive operation on unpaved or unmaintained roads, operation on cross-country trails or off-road conditions, collision, fire, vandalism, explosion, objects striking the vehicle, theft, freezing, riot, or flood.

• Paint adhesion, gloss, or color failures resulting from accidents or abrasions, road chemicals, caustic detergents or cleaners, or improper maintenance. Paint adhesion failures, whether warrantable defects or non-warrantable events, which are not repaired immediately upon discovery of the failure, may deteriorate the finish or panels underneath. Surface corrosion or other progressive deterioration resulting from failure to paint adhesion failures immediately is not covered by this warranty. Contact your Blue Bird Dealer before making any repairs to the paint finish.

• Paint gloss and color failures without evidence of proper care and maintenance, as recommended in the Driver Handbook, or repairs to correct paint gloss or color failures without preapproval by Blue Bird. Contact your Blue Bird Dealer before making any repairs to the paint finish.

• Vehicle modifications or equipment installations performed without the written approval of Blue Bird. To the extent the modifications or equipment installations adversely affect other vehicle components or performance, Blue Bird shall not accept any product liability or claims under the terms of the limited warranty. These claims become the sole responsibility of the company performing the modifications or installations.

• Transportation expenses to deliver the bus to a Blue Bird Dealer or nearest qualified repair facility, including but not limited to, fuel, driver time or pay, mileage and towing.

• Repairs to parts or components which have been previously replaced with parts not obtained from Blue Bird or failures caused by non-Blue Bird parts or components. Rework of repairs not performed by or approved by a Blue Bird Dealer.

• Excessive labor hours, premium labor costs, overtime labor costs, or local taxes. This limited warranty covers reasonable labor to perform replacement or repair.

• Defects not reported to a Blue Bird Dealer and repaired during the warranty period. Repairs are to be made immediately upon discovery of the defect.

• Damage caused by using improper or contaminated fluids, including but not limited to fuels, lubricants, and coolants. Damage caused by using fluids which do not meet Blue Bird's or the Manufacturers' minimum recommendations. Damage caused by the lack of fluids or improper fluid maintenance.

• Using non-Blue Bird service parts. Usage of non-Blue Bird parts will affect future warranty coverage.

• Overloading beyond the normal seated and standee capacity voids all warranties.

Blue Bird reserves the right to make changes in design and changes or improvements upon its products without imposing any obligations upon itself to install the same upon products theretofore manufactured. Any suit alleging a breach of this limited warranty or of any other alleged warranty, including any claim for rescission or revocation of acceptance, must be filed within one year of breach.

Controlling Law and Severability

This limited warranty shall be governed by and construed in accordance with the laws of the State of Georgia, U.S.A. The Owner-Operator agrees and consents to the exclusive jurisdiction of the courts of the State of Georgia for all purposes regarding this limited warranty and further agrees and consents that venue of any action involving this limited warranty or any other alleged warranty, including any claim for rescission or revocation of acceptance, shall be exclusively in Peach County, Georgia. Owner-Operator hereby submits to personal jurisdiction in Peach County, Georgia and waives any objection or argument related to venue, personal jurisdiction, forum non-convenience, or transfer. If any portion hereof is found to be void or unenforceable, the remaining provisions of the limited warranty shall remain in full force and effect.

CALIFORNIA AIR RESOURCES BOARD	BLUE BIRD BODY COMPANY	**EXECUTIVE ORDER A-050-0036** **New On-Road Heavy-Duty Motor Vehicles**

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-19-095;

IT IS ORDERED AND RESOLVED: The following on-road motor vehicles with a manufacturer's GVWR over 14000 pounds are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	VEHICLE FAMILY NAME	EPA CERTIFICATE OF CONFORMITY	VEHICLE TYPE & SUB-CATEGORY	VEHICLE MAKE & MODELS
2020	LBBB2VOCVEMD	LBBB2VOCVEMD-002	Vocational	All American, Vision (Heavy-Duty All-Electric Vehicle)

The following is the Greenhouse Gas Exhaust Emission Standards (STD) or Family Emission Limit(s) (FEL) in g/ton-mile as applicable under 17 CCR 95663:

GVWR (pounds)	CO_2 (in g/ton-mile)		
	STD	Highest Projected FEL	Lowest Projected FEL
19,500 < GVWR ≤ 33,000	225	0	0

BE IT FURTHER RESOLVED: For the listed vehicle family the manufacturer has submitted separate FEL numbers for each subfamily of heavy-duty vehicles produced and delivered for sale in California and all values used in any averaging, banking, or trading (ABT) program as applicable to demonstrate certification compliance with Section 1037.101.3(3) of the California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles (HDV Test Procedures) adopted October 21, 2014, as last amended December 19, 2018.

BE IT FURTHER RESOLVED: The manufacturer has elected to demonstrate compliance with the Greenhouse Gas Emission Standards as specified in Title 17 CCR 95663 and the incorporated "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles" (HDV Test Procedures) adopted October 21, 2014, as last amended December 19, 2018, by demonstrating compliance with the 2014 MY National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1037.101.3 of the HDV 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 vehicle family.

Vehicles 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 6th day of September 2019.

Allen Lyons, Chief
Emissions Certification and Compliance Division

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-19-095;

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 PROCEDURE	INTENDED SERVICE CLASS [2]	ECS & SPECIAL FEATURES [3]	DIAGNOSTIC[6]
2020	LCEXH0540LAT	8.9	Diesel	Diesel	UB UB-Hybrid	DDI, TC, CAC, ECM, EGR, OC, PTOX, SCR-U, AMOX	OBD($)

PRIMARY ENGINE'S IDLE EMISSIONS CONTROL [5]	ADDITIONAL IDLE EMISSIONS CONTROL [5]
Exempt	N/A

ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)
8.9	See attachment for engine models and ratings

* =not applicable; **GVWR**=gross vehicle weight rating; **13 CCR xyz**=Title 13, California Code of Regulations, Section xyz; **40 CFR 86.abc**=Title 40, Code of Federal Regulations, Section 86.abc; **L**=liter; **hp**=horsepower; **kw**=kilowatt; **hr**=hour;

[1] **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;

[3] **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); **TBI**=throttle body fuel injection; **SFI/MFI**=sequential/multi port fuel injection; **DGI**=direct gasoline injection; **GCARB**=gaseous carburetor; **IDI/DDI**=indirect/direct diesel injection; **TC/SC**=turbo/super charger; **CAC**=charge air cooler; **EGR / EGR-C**=exhaust gas recirculation / cooled EGR; **PAIR/AIR**=pulsed/secondary air injection; **SPL**=smoke puff limiter; **ECM/PCM**=engine/powertrain control module; **EM**=engine modification; **2 (prefix)**=parallel; **(2) (suffix)**=in series;

[5] **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)(C); **APS** =internal combustion auxiliary power system; **ALT**=alternative method (per 13 CCR 1956.8(a)(6)(D); **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);

[6] **EMD**=engine manufacturer diagnostic system (13 CCR 1971); OBD**(F) / (P) / ($)**=full / partial / partial with a 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 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]

in g/bhp-hr	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	0.14	0.20	0.20	*	*	15.5	15.5	0.01	0.01	*	*
CERT	0.003	0.002	0.17	0.06	*	*	0.2	0.00	0.001	0.000	*	*
NTE	0.21		0.30		*		19.4		0.02		*	

[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: 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 Diesel-Engines and Vehicles" (HDDE Test Procedures) adopted December 12, 2002, as last amended April 18, 2019 using the 2014 model year National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1036.108 of the HDDE 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	
	LCEXH0540LAT-010		VOCATIONAL	
In g/bhp-hr	CO_2		CH_4	N_2O
	FTP	SET		
STD	555	*	0.10	0.10
FCL	555	*	*	*
FEL	572	*	0.10	0.12
CERT	548	*	0.02	0.11

[4] **g/bhp-hr**=grams per brake horsepower-hour; **FTP**=Federal Test Procedure; **SET**=Supplemental emissions testing; **STD** = standard or emission test cap; **FEL**=family emission limit; **FCL**=family certification level; **CERT**=certification level; **CO_2**=carbon dioxide; **CH_4**=methane; **N_2O**=nitrous oxide; **VOCATIONAL**=vocational engine; **TRACTOR**=tractor engine

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 1971.1 (on-board diagnostic, full or partial compliance) and 13 CCR 2035 et seq. (emission control warranty).

BE IT FURTHER RESOLVED: The listed engine models are conditionally certified in accordance with 13 CCR Section 1971.1(k) (deficiency and fines provisions for certification of malfunction and diagnostic system) because the heavy-duty on-board diagnostic (HD OBD) system of the listed engine models has been determined to have five deficiencies. The listed engine models are approved subject to the manufacturer paying a fine of $75 per engine for the third through fifth deficiencies in the listed engine family that is produced and delivered for sale in California. On a quarterly basis, the manufacturer shall submit to California Air Resources Board reports of the number of engines produced and delivered for sale in California and pay the full fine owed for that quarter pursuant to this conditional certification. Payment shall be made payable to the State Treasurer for deposit in the Air Pollution Control Fund no later than thirty (30) days after the end of each calendar quarter during the 2020 model-year production period. Failure to pay the quarterly fine, in full, in the time provided, may be cause for the Executive Officer to rescind this conditional certification, effective from the start of the quarter in question, in which case all engines covered under this conditional certification for that quarter and all future quarters would be deemed uncertified and subject to a civil penalty of up to $37,500 per engine pursuant to HSC Section 4315.

BE IT FURTHER RESOLVED: The Cummins hybrid engine ratings listed on this Executive Order may only be used with new on-road Allison hybrid system models and BAE hybrid system models whose on-board diagnostic system have been approved as compatible.

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.

This Executive Order hereby supersedes Executive Order A-021-0709 dated November 7, 2019.

Executed at El Monte, California on this 11th day of March 2020.

Allen Lyons, Chief
Emissions Certification and Compliance Division

Attachment: page 1 of 1

R/C

A-021-0709-1

3/8/2020

Engine Model Summary Template

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	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
LCEXH0540LAT	4760;FR95192	L9 330	310@2100	150	106	1100@1300	187	82	~~SCRC, PTOX, PC~~
LCEXH0540LAT	4760;FR95193	L9 280	285@2100	140	99	900@1300	171	75	~~SCRC, PTOX, PC~~
LCEXH0540LAT									
LCEXH0540LAT		Hybrid							
LCEXH0540LAT *	SC94410	L9 330H	310@2100	150	106	1100@1300	187	82	~~SCRC, PTOX, PC~~
LCEXH0540LAT									
LCEXH0540LAT		Hybrid	Stop/Start						
LCEXH0540LAT *	5239;FR95778	L9 330H	310@2100	150	106	1100@1300	187	82	~~SCRC, PTOX, PC~~

DDI, TC, CAC, EGR, OC, PTOX, SCR-4, ECM, Amox

* Added for running change

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-19-095;

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 PROCEDURE	INTENDED SERVICE CLASS [2]	ECS & SPECIAL FEATURES [3]	DIAGNOSTIC [6]
2020	LCEXH0540LBN	8.9	CNG/LNG	Diesel	HHDD	TBI, TC, CAC, ECM, EGR, TWC, HO2S	OBD($)

PRIMARY ENGINE'S IDLE EMISSIONS CONTROL [5]	ADDITIONAL IDLE EMISSIONS CONTROL [5]
N/A	N/A

ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)
8.9	L9N 320 / 4897;FR95631 (320), L9N 300 / 4897;FR95926 (300), L9N 280 / 4897;FR95927 (280), L9N 260 / 4897;FR95928 (260), L9N 250 / 4897;FR95929 (258)

* =not applicable; **GVWR**=gross vehicle weight rating; **13 CCR xyz**=Title 13, California Code of Regulations, Section xyz; **40 CFR 86.abc**=Title 40, Code of Federal Regulations, Section 86.abc; **L**=liter; **hp**=horsepower; **kw**=kilowatt; **hr**=hour;

[1] **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;

[3] **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); **TBI**=throttle body fuel injection; **SFI/MFI**=sequential/multi port fuel injection; **DGI**=direct gasoline injection; **GCARB**=gaseous carburetor; **IDI/DDI**=indirect/direct diesel injection; **TC/SC**=turbo/super charger; **CAC**=charge air cooler; **EGR / EGR-C**=exhaust gas recirculation / cooled EGR; **PAIR/AIR**=pulsed/secondary air injection; **SPL**=smoke puff limiter; **ECM/PCM**=engine/powertrain control module; **EM**=engine modification; **2 (prefix)**=parallel; **(2) (suffix)**=in series;

[5] **ESS**=engine shutdown system (per 13 CCR 1956.6(a)(6)(A)(1); **30g**=30 g/hr NOx (per 13 CCR 1956.8(a)(6)(C); **APS** =internal combustion auxiliary power system; **ALT**=alternative method (per 13 CCR 1956.8(a)(6)(D); **Exempt**=exempted per 13 CCR 1956.6(a)(6)(B) or for CNG/LNG fuel systems; **N/A**=not applicable (e.g., Otto engines and vehicles);

[6] **EMD**=engine manufacturer diagnostic system (13 CCR 1971); OBD(**F**) / (**P**) / (**$**)=full / partial / partial with a 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 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]

in g/bhp-hr	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	0.14	0.02	0.02	*	*	15.5	15.5	0.01	0.01	*	*
CERT	0.01	0.000	0.01	0.004	*	*	1.5	0.3	0.002	0.000	*	*
NTE	0.21		0.03		*		19.4		0.02		*	

[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(a)(2)(A) and section 11.B.7 of the incorporated "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy Duty Diesel-Engines and Vehicles" adopted December 12, 2002, as last amended December 19, 2018.

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 Diesel-Engines and Vehicles" (HDDE Test Procedures) adopted December 12, 2002, as last amended December 19, 2018 using the 2014 model year National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1036.108 of the HDDE 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	
	LCEXH0540LBN-006		TRACTOR / VOCATIONAL	
In g/bhp-hr	CO_2		CH_4	N_2O
	FTP	SET		
STD	555	460	0.10	0.10
FCL	476	418	*	*
FEL	490	431	0.65	0.10
CERT	465	414	0.56	0.02

[4] **g/bhp-hr**=grams per brake horsepower-hour; **FTP**=Federal Test Procedure; **SET**=Supplemental emissions testing; **STD** = standard or emission test cap; **FEL**=family emission limit; **FCL**=family certification level; **CERT**=certification level; **CO_2**=carbon dioxide; **CH_4**=methane; **N_2O**=nitrous oxide; **VOCATIONAL**=vocational engine; **TRACTOR**=tractor engine

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 1971.1 (on-board diagnostic, full or partial compliance) and 13 CCR 2035 et seq. (emission control warranty).

BE IT FURTHER RESOLVED: The listed engine models are conditionally certified in accordance with 13 CCR Section 1971.1(k) (deficiency and fines provisions for certification of malfunction and diagnostic system) because the heavy-duty on-board diagnostic (HD OBD) system of the listed engine models has been determined to have three deficiencies. The listed engine models are approved subject to the manufacturer paying a fine of $25 per engine for the third deficiency in the listed engine family that is produced and delivered for sale in California. On a quarterly basis, the manufacturer shall submit to California Air Resources Board reports of the number of engines produced and delivered for sale in California and pay the full fine owed for that quarter pursuant to this conditional certification. Payment shall be made payable to the State Treasurer for deposit in the Air Pollution Control Fund no later than thirty (30) days after the end of each calendar quarter during the 2020 model-year production period. Failure to pay the quarterly fine, in full, in the time provided, may be cause for the Executive Officer to rescind this conditional certification, effective from the start of the quarter in question, in which case all engines covered under this conditional certification for that quarter and all future quarters would be deemed uncertified and subject to a civil penalty of up to $37,500 per engine pursuant to HSC Section 43154.

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 22ND day of October 2019.

Allen Lyons, Chief
Emissions Certification and Compliance Division

EO#: A-021-0712

8/30/19

Engine Model Summary Template

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	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
LCEXH0540LBN	4897;FR95631	L9N 320	320@2100	N/A	N/A	1000@1300	N/A	N/A	~~TBI,TC,CAC,EGR,~~
LCEXH0540LBN	4897;FR95926	L9N 300	300@2100	N/A	N/A	860@1300	N/A	N/A	~~TBI,TC,CAC,EGR,~~
LCEXH0540LBN	4897;FR95927	L9N 280	280@2200	N/A	N/A	900@1300	N/A	N/A	~~TBI,TC,CAC,EGR,~~
LCEXH0540LBN	4897;FR95928	L9N 260	260@2200	N/A	N/A	660@1300	N/A	N/A	~~TBI,TC,CAC,EGR,~~
LCEXH0540LBN	4897;FR95929	L9N 250	258@2200	N/A	N/A	730@1300	N/A	N/A	~~TBI,TC,CAC,EGR,~~

TBI, TC, CAC,
ECM, EGR,
TWC, HO2S

CALIFORNIA AIR RESOURCES BOARD	CUMMINS INC.	EXECUTIVE ORDER A-021-0707 New On-Road Heavy-Duty Engines Page 1 of 2 Pages

Pursuant to the authority vested in the 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-19-095;

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 PROCEDURE	INTENDED SERVICE CLASS [2]	ECS & SPECIAL FEATURES [3]	DIAGNOSTIC[6]
2020	LCEXH0408BAT	6.7	Diesel	Diesel	MHDD	DDI, TC, CAC, ECM, EGR, OC, PTOX, SCR-U, AMOX	OBD($)

PRIMARY ENGINE'S IDLE EMISSIONS CONTROL [5]	ADDITIONAL IDLE EMISSIONS CONTROL [5]
30g	N/A

ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)
6.7	See attachment for engine models and ratings

* =not applicable; GVWR=gross vehicle weight rating; 13 CCR xyz=Title 13, California Code of Regulations, Section xyz; 40 CFR 86.abc=Title 40, Code of Federal Regulations, Section 86.abc; L=liter; hp=horsepower; kw=kilowatt; hr=hour;

[1] 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;

[3] 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); TBI=throttle body fuel injection; SFI/MFI=sequential/multi port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburetor; IDI/DDI=indirect/direct diesel injection; TC/SC=turbo/super charger; CAC=charge air cooler; EGR / EGR-C=exhaust gas recirculation / cooled EGR; PAIR/AIR=pulsed/secondary air injection; SPL=smoke puff limiter; ECM/PCM=engine/powertrain control module; EM=engine modification; 2 (prefix)=parallel; (2) (suffix)=in series;

[5] 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)(C); APS =internal combustion auxiliary power system; ALT=alternative method (per 13 CCR 1956.8(a)(6)(D); 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);

[6] EMD=engine manufacturer diagnostic system (13 CCR 1971); OBD(F) / (P) / ($)=full / partial / partial with a 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 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]

in g/bhp-hr	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	0.14	0.20	0.20	*	*	15.5	15.5	0.01	0.01	*	*
CERT	0.03	0.02	0.15	0.10	*	*	0.04	0.01	0.001	0.001	*	*
NTE	0.21		0.30		*		19.4		0.02		*	

[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: 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 Diesel-Engines and Vehicles" (HDDE Test Procedures) adopted December 12, 2002, as last amended December 19, 2018 using the 2014 model year National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1036.108 of the HDDE 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	
	LCEXH0408BAT-007		TRACTOR / VOCATIONAL	
in g/bhp-hr	CO_2		CH_4	N_2O
	FTP	SET		
STD	576	487	0.10	0.10
FCL	533	494	*	*
FEL	549	509	0.10	0.10
CERT	525	488	0.02	0.08

[4] g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET=Supplemental emissions testing; STD = standard or emission test cap; FEL=family emission limit; FCL=family certification level; CERT=certification level; CO_2=carbon dioxide; CH_4=methane; N_2O=nitrous oxide; VOCATIONAL=vocational engine; TRACTOR=tractor engine

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: Except in vehicle applications exempted per 13 CCR 1956.8(a)(6)(B), engines in this engine family certified under 13 CCR 1956.8(a)(6)(C) [30 g/hr NOx] and section 35.B.4 of the incorporated "California Exhaust Emissions Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" (HDDE Test Procedures) adopted December 12, 2002, as last amended December 19, 2018, shall be provided with an approved "Certified Clean Idle" label that shall be affixed to the vehicle into which the engine is installed.

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).

BE IT FURTHER RESOLVED: That the manufacturer has elected to include engine models in this engine family which are identified for "emergency vehicle use only". These "emergency vehicle use only" engines are exempt from requirements imposed pursuant to California law and the regulations adopted pursuant thereto for motor vehicle pollution control devices per California Vehicle Code Section 27156.2. The manufacturer must clearly label these engines for "emergency vehicle use only" on the engines' emission control label.

BE IT FURTHER RESOLVED: The listed engine models are conditionally certified in accordance with 13 CCR Section 1971.1(k) (deficiency and fines provisions for certification of malfunction and diagnostic system) because the heavy-duty on-board diagnostic (HD OBD) system of the listed engine models has been determined to have six deficiencies. The listed engine models are approved subject to the manufacturer paying a fine of $125 per engine for the third through sixth deficiencies in the listed engine family that is produced and delivered for sale in California. On a quarterly basis, the manufacturer shall submit to California Air Resources Board reports of the number of engines produced and delivered for sale in California and pay the full fine owed for that quarter pursuant to this conditional certification. Payment shall be made payable to the State Treasurer for deposit in the Air Pollution Control Fund no later than thirty (30) days after the end of each calendar quarter during the 2020 model-year production period. Failure to pay the quarterly fine, in full, in the time provided, may be cause for the Executive Officer to rescind this conditional certification, effective from the start of the quarter in question, in which case all engines covered under this conditional certification for that quarter and all future quarters would be deemed uncertified and subject to a civil penalty of up to $37,500 per engine pursuant to HSC Section 4315.

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 7th day of November 2019.

Michael J. Rogl for AL

Allen Lyons, Chief
Emissions Certification and Compliance Division

Attachment: Page 1 of 2
EO#: A-021-0707
8/30/2019

Engine Model Summary Template

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	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
CEXH0408BAT	4660;FR94746	B6.7 360	360@2600	146	128	800@1800	148	90	SCRC, PTOX, PC
CEXH0408BAT	4660;FR96706	B6.7 360ST	360@2600	146	128	800@1800	148	90	SCRC, PTOX, PC
CEXH0408BAT	4660;FR94745	B6.7 340	340@2600	138	121	700@1600	134	73	SCRC, PTOX, PC
CEXH0408BAT	4660;FR96705	B6.7 340ST	340@2600	138	121	700@1600	134	73	SCRC, PTOX, PC
CEXH0408BAT	4660;FR94744	B6.7 325	315@2600	127	112	750@1800	143	87	SCRC, PTOX, PC
CEXH0408BAT	4660;FR96704	B6.7 325ST	315@2600	127	112	750@1800	143	87	SCRC, PTOX, PC
CEXH0408BAT	4660;FR94743	B6.7 300	300@2600	121	106	660@1600	125	67	SCRC, PTOX, PC
CEXH0408BAT	4661;FR94749	B6.7 300	300@2600	121	106	660@1600	125	67	SCRC, PTOX, PC
CEXH0408BAT	4660;FR94741	B6.7 280	270@2600	109	96	660@1600	125	67	SCRC, PTOX, PC
CEXH0408BAT	4661;FR94742	B6.7 280	270@2600	109	96	660@1600	125	67	SCRC, PTOX, PC
CEXH0408BAT	4569;FR94738	B6.7 260	250@2600	109	96	660@1600	122	66	SCRC, PTOX, PC
CEXH0408BAT	4570;FR94739	B6.7 260	250@2600	109	96	660@1600	122	66	SCRC, PTOX, PC
CEXH0408BAT	4569;FR94736	B6.7 250	245@2600	107	94	660@1600	122	66	SCRC, PTOX, PC
CEXH0408BAT	4570;FR94737	B6.7 250	245@2600	107	94	660@1600	122	66	SCRC, PTOX, PC
CEXH0408BAT	4569;FR94734	B6.7 240	235@2600	103	90	560@1600	104	56	SCRC, PTOX, PC
CEXH0408BAT	4570;FR94735	B6.7 240	235@2600	103	90	560@1600	104	56	SCRC, PTOX, PC
CEXH0408BAT	4569;FR94733	B6.7 220	215@2600	95	83	520@1600	97	52	SCRC, PTOX, PC
CEXH0408BAT	4569;FR95098	B6.7 220	215@2600	95	83	600@1600	111	60	SCRC, PTOX, PC
CEXH0408BAT	4570;FR94748	B6.7 220	215@2600	95	83	520@1600	97	52	SCRC, PTOX, PC
CEXH0408BAT	4570;FR95099	B6.7 220	215@2600	95	83	600@1600	111	60	SCRC, PTOX, PC
CEXH0408BAT	4569;FR94732	B6.7 200	195@2600	87	76	520@1600	97	52	SCRC, PTOX, PC
CEXH0408BAT	4570;FR94747	B6.7 200	195@2600	87	76	520@1600	97	52	SCRC, PTOX, PC
CEXH0408BAT	4660;FR94746	PX-7 360	360@2600	146	128	800@1800	148	90	SCRC, PTOX, PC
CEXH0408BAT	4660;FR96706	PX-7 360ST	360@2600	146	128	800@1800	148	90	SCRC, PTOX, PC
CEXH0408BAT	4660;FR94745	PX-7 340	340@2600	138	121	700@1600	134	73	SCRC, PTOX, PC
CEXH0408BAT	4660;FR96705	PX-7 340ST	340@2600	138	121	700@1600	134	73	SCRC, PTOX, PC
CEXH0408BAT	4660;FR94744	PX-7 325	315@2600	127	112	750@1800	143	87	SCRC, PTOX, PC
CEXH0408BAT	4660;FR96704	PX-7 325ST	315@2600	127	112	750@1800	143	87	SCRC, PTOX, PC

ADI, TC, CAC, ECM, EGR, OC, PTOX, SCR-U, Amox

Page 2 of 2
EO#: A-021-0707

8/30/19

Engine Model Summary Template

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	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
LCEXH0408BAT	4660;FR94743	PX-7 300	300@2600	121	106	660@1600	125	67	SCRC, PTOX, PC
LCEXH0408BAT	4661;FR94749	PX-7 300	300@2600	121	106	660@1600	125	67	SCRC, PTOX, PC
LCEXH0408BAT	4660;FR94741	PX-7 280	270@2600	109	96	660@1600	125	67	SCRC, PTOX, PC
LCEXH0408BAT	4661;FR94742	PX-7 280	270@2600	109	96	660@1600	125	67	SCRC, PTOX, PC
LCEXH0408BAT	4569;FR94738	PX-7 260	250@2600	109	96	660@1600	122	66	SCRC, PTOX, PC
LCEXH0408BAT	4570;FR94739	PX-7 260	250@2600	109	96	660@1600	122	66	SCRC, PTOX, PC
LCEXH0408BAT	4569;FR94736	PX-7 250	245@2600	107	94	660@1600	122	66	SCRC, PTOX, PC
LCEXH0408BAT	4570;FR94737	PX-7 250	245@2600	107	94	660@1600	122	66	SCRC, PTOX, PC
LCEXH0408BAT	4569;FR94734	PX-7 240	235@2600	103	90	560@1600	104	56	SCRC, PTOX, PC
LCEXH0408BAT	4570;FR94735	PX-7 240	235@2600	103	90	560@1600	104	56	SCRC, PTOX, PC
LCEXH0408BAT	4569;FR94733	PX-7 220	215@2600	95	83	520@1600	97	52	SCRC, PTOX, PC
LCEXH0408BAT	4569;FR95098	PX-7 220	215@2600	95	83	600@1600	111	60	SCRC, PTOX, PC
LCEXH0408BAT	4570;FR94748	PX-7 220	215@2600	95	83	520@1600	97	52	SCRC, PTOX, PC
LCEXH0408BAT	4570;FR95099	PX-7 220	215@2600	95	83	600@1600	111	60	SCRC, PTOX, PC
LCEXH0408BAT	4569;FR94732	PX-7 200	195@2600	87	76	520@1600	97	52	SCRC, PTOX, PC
LCEXH0408BAT	4570;FR94747	PX-7 200	195@2600	87	76	520@1600	97	52	SCRC, PTOX, PC
LCEXH0408BAT									
LCEXH0408BAT	Emergency	Vehicle	Ratings	Below					
LCEXH0408BAT	4661;FR94751	B6.7 360 EV	360@2600	146	128	800@1800	148	90	SCRC, PTOX, PC
LCEXH0408BAT	4661;FR94750	B6.7 340 EV	340@2600	138	121	700@1600	134	73	SCRC, PTOX, PC
LCEXH0408BAT	4660;FR94744	B6.7 325 EV	315@2600	127	112	750@1800	143	87	SCRC, PTOX, PC
LCEXH0408BAT	4660;FR94743	B6.7 300 EV	300@2600	121	106	660@1600	125	67	SCRC, PTOX, PC
LCEXH0408BAT	4660;FR94741	B6.7 280 EV	270@2600	109	96	660@1600	125	67	SCRC, PTOX, PC
LCEXH0408BAT	4569;FR94738	B6.7 260 EV	250@2600	109	96	660@1600	122	66	SCRC, PTOX, PC
LCEXH0408BAT	4661;FR94751	PX-7 360 EV	360@2600	146	128	800@1800	148	90	SCRC, PTOX, PC
LCEXH0408BAT	4661;FR94750	PX-7 340 EV	340@2600	138	121	700@1600	134	73	SCRC, PTOX, PC
LCEXH0408BAT	4660;FR94744	PX-7 325 EV	315@2600	127	112	750@1800	143	87	SCRC, PTOX, PC
LCEXH0408BAT	4660;FR94743	PX-7 300 EV	300@2600	121	106	660@1600	125	67	SCRC, PTOX, PC

DDI, TC, CAC
EGR, ECM,
OC, PTOX
SCR, Amox

Limited Warranty: Gold 5/10 - Buses with Option 31300-24

If acquired, this warranty is in lieu of the standard limited warranty. This warranty is applicable to Blue Bird bus products T3FE, T3RE and BBCV built on or after August 29, 2016 specifically for and operated in the United States of America, Canada, Puerto Rico, U.S. Virgin Islands, Guam, and American Samoa.

Blue Bird Body Company (Blue Bird) warrants each bus to be free from defects in material and workmanship under normal use and service within the specified limits below. The warranty period begins either on the Delivery Date of the bus to the original user or on the Manufacture Date of the bus. Blue Bird's obligation is limited to the repair or replacement of such parts as shall, under normal use and service, appear to be defective in workmanship or material.

1. For ten years from Delivery Date:

• Front steer axle, including kingpin assembly, steering arm assembly, and upper and lower steering knuckle assembly, excluding kingpin bushings, kingpin wear, thrust bearings, tie rods and tie rod ends, brakes and axle end components.

2. For five years from Manufacture Date:

• Paint gloss. During first three years, gloss reading shall not drop below 60 on 60^0 meter (70% of initial gloss). For five years, gloss reading shall not drop below 30 on 60^0 meter.

• Paint color retention. During first three years, color coat shall not shift colors more than 4ΔE from the centroid of the national standard. For five years, color coat shall not shift colors more than 8ΔE from the centroid of the national standard.

3. For five years from Delivery Date:

• All other components not specified above, excluding engines, propane fuel systems, automatic transmissions, wheelchair lifts, non-Blue Bird air conditioners, and batteries. The warranties of the excluded components are the responsibility of the respective manufacturers, and are not a part of Blue Bird's limited warranty.

Your Blue Bird Dealer will register the bus with Blue Bird and can assist with registering components that are warranted by the component manufacturers. During the warranty period, this warranty is transferable to subsequent Owners-Operator in the U.S.A. or Canada.

THIS LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED AND ALL OTHER OBLIGATIONS OR LIABILITIES. NO PERSON, INCLUDING SALESPERSONS, DEALERS, OR FACTORY REPRESENTATIVES OF BLUE BIRD, IS AUTHORIZED TO MAKE ANY REPRESENTATION OR WARRANTY CONCERNING BLUE BIRD PRODUCTS EXCEPT TO REFER PURCHASERS TO THIS LIMITED WARRANTY. BLUE BIRD MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BLUE BIRD SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Obtaining Warranty Service

Contact your Blue Bird Dealer immediately upon discovery of a defect and within the warranty period. Your Blue Bird Dealer will help arrange for repairs by the Dealer or another qualified repair facility. Defects must be repaired immediately upon discovery and within the warranty period. It is the responsibility of the Owner-Operator to return the bus to the Blue Bird Dealer, or a qualified repair facility authorized by the Blue Bird Dealer. The Owner-Operator is responsible for operating and maintaining the bus as described in the Driver Handbook and Service Manual. The Owner-Operator shall retain all maintenance records, and present them to the Blue Bird Dealer or the component manufacturer, if requested.

If the defective component is warranted by Blue Bird and the repair is performed by the Blue Bird Dealer, the Blue Bird Dealer will prepare and submit a warranty claim to Blue Bird.

If the defective component is warranted by Blue Bird and the repair is performed by the Owner-Operator or another qualified repair facility, detailed labor and parts invoices must be sent to the Blue Bird Dealer not later than 30 days after the repair date. The Blue Bird Dealer will prepare and submit a warranty claim to Blue Bird.

If the defective component is warranted by the component manufacturer and the repair is performed by the component manufacturer's authorized repair facility, the repair facility will prepare and submit a warranty claim to the component manufacturer.

CALIFORNIA AIR RESOURCES BOARD	BLUE BIRD BODY COMPANY	**EXECUTIVE ORDER A-050-0035** New On-Road Heavy-Duty Motor Vehicles

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-19-095;

IT IS ORDERED AND RESOLVED: The following on-road motor vehicles with a manufacturer's GVWR over 14000 pounds are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	VEHICLE FAMILY NAME	EPA CERTIFICATE OF CONFORMITY	VEHICLE TYPE & SUB-CATEGORY	VEHICLE MAKE & MODELS
2020	LBBB2VOCVEHD	LBBB2VOCVEHD-001	Vocational	All American, Vision (Heavy-Duty All-Electric Vehicle)

The following is the Greenhouse Gas Exhaust Emission Standards (STD) or Family Emission Limit(s) (FEL) in g/ton-mile as applicable under 17 CCR 95663:

GVWR (pounds)	CO_2 (in g/ton-mile)		
	STD	Highest Projected FEL	Lowest Projected FEL
GVWR > 33,000	222	0	0

BE IT FURTHER RESOLVED: For the listed vehicle family the manufacturer has submitted separate FEL numbers for each subfamily of heavy-duty vehicles produced and delivered for sale in California and all values used in any averaging, banking, or trading (ABT) program as applicable to demonstrate certification compliance with Section 1037.101.3(3) of the California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles (HDV Test Procedures) adopted October 21, 2014, as last amended December 19, 2018.

BE IT FURTHER RESOLVED: The manufacturer has elected to demonstrate compliance with the Greenhouse Gas Emission Standards as specified in Title 17 CCR 95663 and the incorporated "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles" (HDV Test Procedures) adopted October 21, 2014, as last amended December 19, 2018, by demonstrating compliance with the 2014 MY National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1037.101.3 of the HDV 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 vehicle family.

Vehicles 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 6th day of September 2019.

Allen Lyons, Chief
Emissions Certification and Compliance Division

Limitations and Exclusions

In addition to the limitations described on the previous pages, items specifically not covered include, but are not limited to:

• Engines, automatic transmissions, wheelchair lifts, air conditioners (other than Blue Bird Air™ system), tires, and batteries. The limited warranties for these components are provided solely by and are the responsibility of the component manufacturers and are not a part of Blue Bird's limited warranty.

• Loss of use and incidental consequential expenses, including but not limited to commercial loss, loss of commercial fares, driver time or pay, lease or rental of substitute vehicle, storage, lodging, meals, telephone calls, and other travel costs.

• Any parts or components which must be repaired, replaced, or adjusted during the warranty period due to wear, wear-out, or consumption, including but not limited to brake pads and linings, drums and rotors, wiper blades, light bulbs, filters, lubricants, fluids, belts, bearings other than those specifically covered by the limited warranty, suspension pins and bushings, batteries, worn seat covers, worn steptreads and floor covering, worn door and window seals, discharged fire extinguishers, damaged (scratched, cracked) gauge and light lenses, and tires. Wear not only includes friction-type wear but can also include environmental deterioration including but not limited to surface corrosion on exhaust pipes or clamps and brake drums or rotors, as well as fading, cracking, or discoloration of seat covers caused by U.V.

• Maintenance including but not limited to tightening loose fasteners, axle and wheel alignments, wheel-balancing, tightening body tie-downs, door adjustments, tightening hose clamps, and sealing or caulking windows, doors, roof hatches, and lights.

• Any parts or components which must be repaired, replaced or adjusted during the warranty period as a result of accident damage, abnormal operation, misuse, or abuse, including but not limited to excessive operation on unpaved or unmaintained roads, operation on cross-country trails or off-road conditions, collision, fire, vandalism, explosion, objects striking the vehicle, theft, freezing, riot, or flood.

• Paint adhesion, gloss, or color failures resulting from accidents or abrasions, road chemicals, caustic detergents or cleaners, or improper maintenance. Paint adhesion failures, whether warrantable defects or non-warrantable events, which are not repaired immediately upon discovery of the failure, may deteriorate the finish or panels underneath. Surface corrosion or other progressive deterioration resulting from failure to paint adhesion failures immediately is not covered by this warranty. Contact your Blue Bird Dealer before making any repairs to the paint finish.

• Paint gloss and color failures without evidence of proper care and maintenance, as recommended in the Driver Handbook, or repairs to correct paint gloss or color failures without preapproval by Blue Bird. Contact your Blue Bird Dealer before making any repairs to the paint finish.

• Vehicle modifications or equipment installations performed without the written approval of Blue Bird. To the extent the modifications or equipment installations adversely affect other vehicle components or performance, Blue Bird shall not accept any product liability or claims under the terms of the limited warranty. These claims become the sole responsibility of the company performing the modifications or installations.

• Transportation expenses to deliver the bus to a Blue Bird Dealer or nearest qualified repair facility, including but not limited to, fuel, driver time or pay, mileage and towing.

• Repairs to parts or components which have been previously replaced with parts not obtained from Blue Bird or failures caused by non-Blue Bird parts or components. Rework of repairs not performed by or approved by a Blue Bird Dealer.

• Excessive labor hours, premium labor costs, overtime labor costs, or local taxes. This limited warranty covers reasonable labor to perform replacement or repair.

• Defects not reported to a Blue Bird Dealer and repaired during the warranty period. Repairs are to be made immediately upon discovery of the defect.

• Damage caused by using improper or contaminated fluids, including but not limited to fuels, lubricants, and coolants. Damage caused by using fluids which do not meet Blue Bird's or the Manufacturers' minimum recommendations. Damage caused by the lack of fluids or improper fluid maintenance.

• Using non-Blue Bird service parts. Usage of non-Blue Bird parts will affect future warranty coverage.

• Overloading beyond the normal seated and standee capacity voids all warranties.

Blue Bird reserves the right to make changes in design and changes or improvements upon its products without imposing any obligations upon itself to install the same upon products theretofore manufactured. Any suit alleging a breach of this limited warranty or of any other alleged warranty, including any claim for rescission or revocation of acceptance, must be filed within one year of breach.

Controlling Law and Severability

This limited warranty shall be governed by and construed in accordance with the laws of the State of Georgia, U.S.A. The Owner-Operator agrees and consents to the exclusive jurisdiction of the courts of the State of Georgia for all purposes regarding this limited warranty and further agrees and consents that venue of any action involving this limited warranty or any other alleged warranty, including any claim for rescission or revocation of acceptance, shall be exclusively in Peach County, Georgia. Owner-Operator hereby submits to personal jurisdiction in Peach County, Georgia and waives any objection or argument related to venue, personal jurisdiction, forum non-convenience, or transfer. If any portion hereof is found to be void or unenforceable, the remaining provisions of the limited warranty shall remain in full force and effect.

US and Canada School Bus Categories - PowerDrive Systems

Coverage

Products Warranted

This Warranty applies to new PowerDrive Systems manufactured by Cummins after October 15, 2020 and delivered to the first user before January 1, 2022, that are used in School Bus categories in the United States and Canada.

The Base Warranty covers any failures of the PowerDrive System (Powertrain and High Voltage Battery) which result, under normal use and service, from a defect in material or factory workmanship (Warrantable Failure).

Powertrain Warranty

The Powertrain Warranty covers Warrantable Failures of the Powertrain. This includes the Propulsion Motor, Inverter, High Voltage Junction Box, Electric Vehicle Accessories, System Controller and Battery Management Controller.

This Coverage begins with the sale of the PowerDrive System by Cummins and ends Five (5) Years or 100,000 miles, whichever comes first, after the date of delivery of the PowerDrive System to the first user.

Battery Pack Warranty

The Battery Warranty covers Warrantable Failures of High Voltage Batteries (covered part). The Battery is defined as the main high voltage energy storage system (ESS) and consists of the following:

- Battery cells and components internal to the Pack
- Battery Management System (BMS) electronics
    - String Control Unit/Battery Disconnect Unit
    - Master Control Unit
    - Battery Telematics Unit
- Pack enclosure
- All electrical connections and components internal to the Pack

This Coverage begins with the sale of the PowerDrive system and ends Eight (8) Years, 125,000 miles, or 160,000 kWh of gross discharge throughput, whichever occurs first, after the date of delivery of the PowerDrive System to the first user.

The warranted usable capacity at the end of the warranty will be at least 70% of the initial usable capacity. Cummins will only warrant the gross throughput of the battery packs and is not responsible for any loss of vehicle range during the warranty period.

“Gross Discharge Throughput” is defined as the total energy discharged through the battery pack during its life and is tracked by the “Battery Management System” (BMS) at the pack level and reported through telemetry. This includes energy discharged while powering auxiliary systems as well as energy discharged that was recuperated from regenerative braking. Use of telematics approved by Cummins is mandatory during the warranty period. If the customer does not report telemetry data or choses to disable or cancel the telemetry data plan during the warranty period, the warranty becomes void.

These Warranties are made to all Owners in the chain of distribution and Coverage continues to all subsequent Owners until the end of the periods of Coverage.

Cummins Responsibilities

During The Base Warranty

Cummins will pay for all parts and labor needed to repair the damage to the PowerDrive System resulting from a Warrantable Failure.

Cummins will pay for antifreeze and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay for reasonable labor costs for PowerDrive System removal and reinstallation when necessary to repair a Warrantable Failure.

Cummins will pay reasonable cost for towing a disabled vehicle, or where mandated by local legislation, to the nearest authorized repair location when caused by a Warrantable Failure. In lieu of towing expense due to a Warrantable Failure, Cummins will pay reasonable cost for mechanics to travel to and from the location of the vehicle, including meals, mileage and lodging, when the repair is performed at the site of the failure.

Owner Responsibilities

During The Base Warranty

Owner is responsible for the cost of antifreeze, filter elements and other maintenance items replaced during Warranty repairs unless such items are not reusable due to the Warrantable Failure.

Owner is responsible for the operation and maintenance of the PowerDrive System as specified by Cummins. Owner is also responsible for providing proof that all recommended maintenance has been performed.

Before the expiration of the applicable Warranty, Owner must notify a Cummins distributor, authorized dealer or other repair location approved by Cummins of any Warrantable Failure and make the PowerDrive System available for repair by such facility. Except for PowerDrive Systems disabled by a Warrantable

Failure during the Base Warranty, the Owner must also deliver the PowerDrive System to the repair facility.

Service locations are listed on the Cummins Worldwide Service Locator at cummins.com.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred as a result of a Warrantable Failure.

Owner is responsible for non-PowerDrive System repairs and for "downtime" expenses, fines, cargo damage, all applicable taxes, all business costs and other losses resulting from a Warrantable Failure.

Limitations

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants; lack of maintenance of cooling systems; improper storage, starting, run-in or shutdown practices; unauthorized modifications of the PowerDrive System. Any unauthorized modifications to the PowerDrive System will void the Warranty. Cummins is also not responsible for failures caused by incorrect coolant.

Parts used to repair a Warrantable Failure may be new Cummins parts, Cummins approved rebuilt parts, repaired or refurbished parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

A new Cummins or Cummins approved rebuilt parts, repaired or refurbished parts used to repair a Warrantable Failure assumes the identity of the part it replaced and is entitled to the remaining Coverage hereunder.

Cummins Inc. reserves the right to interrogate System Control Module (SCM) data for purposes of failure analysis.

CUMMINS DOES NOT COVER WEAR OR WEAROUT OF COVERED PARTS.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THESE WARRANTIES SET FORTH HEREINAFTER ARE THE SOLE WARRANTIES MADE BY CUMMINS IN REGARD TO THE POWERDRIVE SYSTEM. CUMMINS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state or country to country.

** United States includes American Samoa, the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico and the U.S. Virgin Islands.