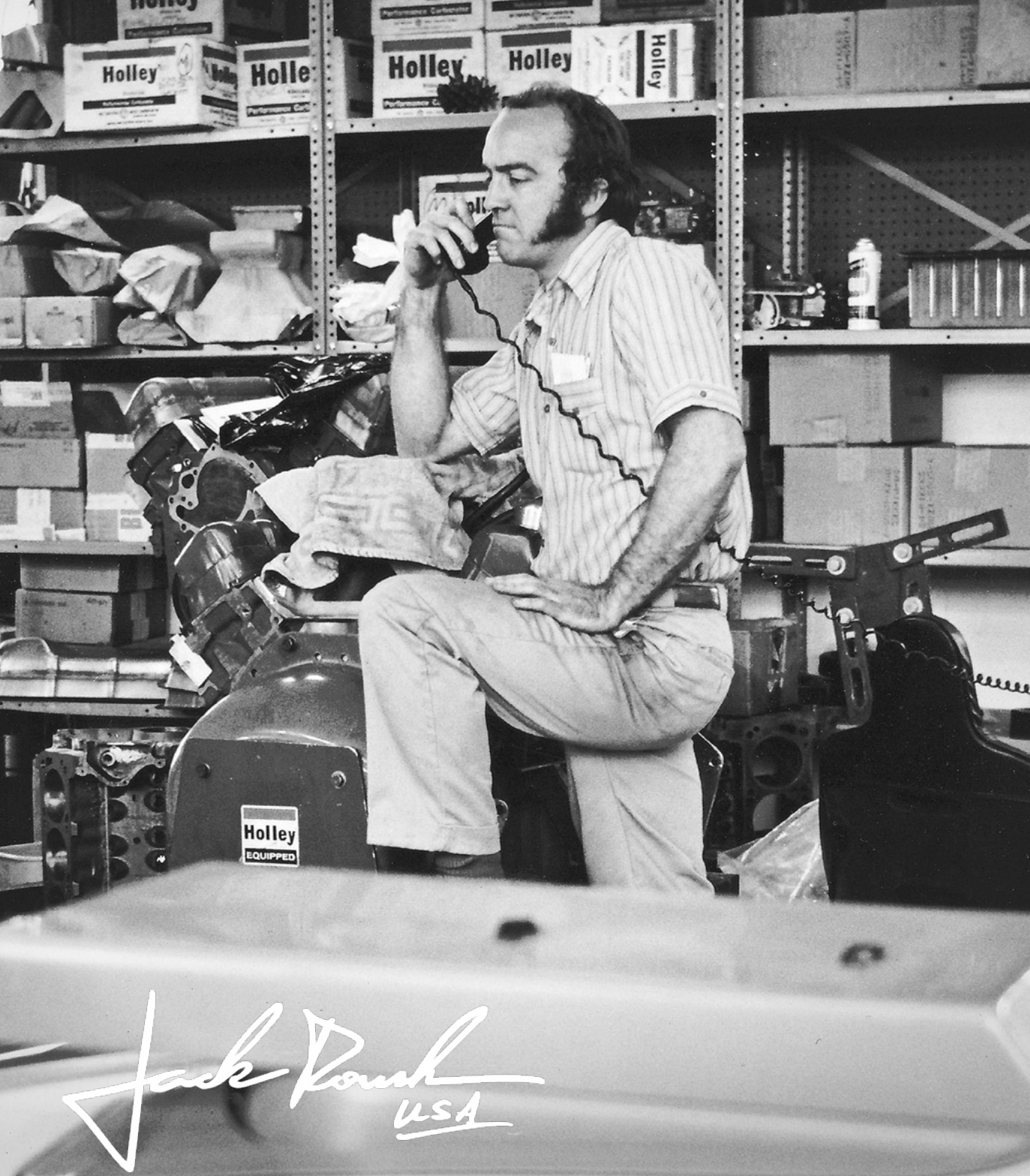




2025 PROGRAM OVERVIEW





For almost half a century, Roush has sustained growth in a constantly evolving mobility marketplace. The company is one of the fastest growing clean technology companies across the nation.

Roush offers its global customers a level of thinking and passion they cannot find anywhere else.

ROUSH[®]

 **ROUSH**[®]
PERFORMANCE

RFK
RACING

ROUSH[®]
CLEANTECH

ROUSH® Enterprises

INGENUITY ON DEMAND

Solving complex problems through ingenuity, curiosity and tenacity.

INDUSTRIES



MOBILITY



DEFENSE



ENTERTAINMENT



AEROSPACE

ABILITIES



DESIGN



ENGINEERING



PROTOTYPE



TESTING



MANUFACTURING

SATISFIED CLIENTS

Aptiv
Argo.ai
BAE Systems
Bell Helicopter

Blue Bird
BMW
Boeing
Disney

FAAC
Ford
GAC
GM

Google/Waymo
Hardwire
Honda
Hyundai

Isuzu
Navistar Defense
Nissan
Oskosh Defense

Pratt & Whitney
Rivian
SAIC
Sikorsky

Toyota
Universal Studios
US Army/TARDEC
Volkswagen

PROPANE AUTOGAS

A CLEAN SOLUTION FOR ALL FLEETS



✓ COST EFFECTIVE

- 40-50% less expensive than conventional fuels.
- Simpler and economical maintenance, with propane fleets reporting 30 to 50% savings on filters and fluids, and even more on labor and shop space.
- Savings up to \$0.37 / mile with propane.
- Millions in funding and incentives available, but not required.

✓ RELIABLE

- 90% cleaner than the strictest EPA standard for nitrogen oxides.
- Robust, affordable and flexible fueling options.
- Cold start-up at negative 40 degrees and quick cabin warm up.
- Fast fill-up time with range of up to 400 miles on a single fueling.

✓ PROVEN

- 28 million propane (also known as LPG) vehicles worldwide.
- Domestic, with more than 90% of the United States propane autogas supply produced domestically and an additional 7% from Canada.
- Backed by third-party validation, including a [West Virginia University study](#) and a [Georgia State University study](#).

WHAT IS RENEWABLE PROPANE?



Renewable propane (also known as biopropane) is a non-fossil fuel that is produced from **100% renewable raw materials**. It's commonly produced from inexpensive and abundant feedstock like animal fat, algae and cooking oil. Renewable propane has the same chemical structure and physical properties as conventional propane. Because it's produced from renewable raw materials, it has an even lower carbon intensity than conventional propane and is far cleaner than other energy sources.

Renewable propane is an important factor in the future of the transportation industry and is an integral part of our nation's energy strategy.

ROUSH CleanTech's propane engines can operate on renewable propane with no modifications.

LIQUID PROPANE FUEL SYSTEM TECHNOLOGY

The ROUSH CleanTech liquid propane fuel system seamlessly integrates into the vehicle. Fuel lines follow the OEM routing and the fuel tank generally replaces the standard tank location. The system delivers propane autogas to the engine in liquid form, ensuring zero compromise in vehicle performance.

FRPCM

The fuel rail pressure control module improves vehicle start-up times, lowers start-up emissions and provides consistent power.

FUEL TANK

The fuel tank meets ASME certification standards. It's built 20 times more puncture-resistant than gasoline tanks and is made in the U.S.

FUEL RAIL

Signature anodized aluminum fuel rails operate under the varying temperatures of liquid propane autogas.

FUEL FILL

The design of the industry-standard valve allows for safe passage of liquid propane autogas into the vehicle. It also includes a check valve to prevent fuel leaks.

FUEL INJECTORS

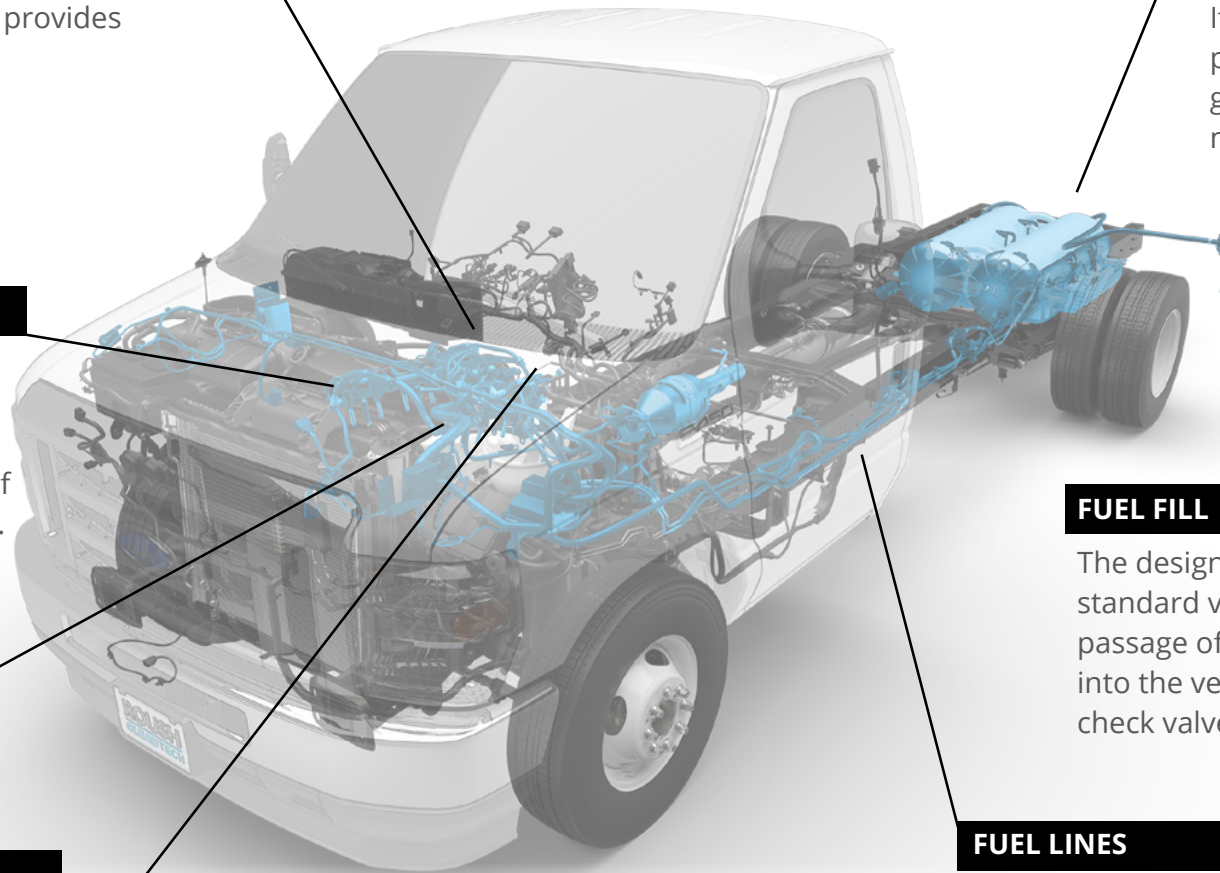
Special fuel injectors inject liquid propane autogas into the engine for ignition.

RECALIBRATED PCM

Reprogrammed Ford on-board computer controls the engine to allow the vehicle to operate properly on propane autogas.

FUEL LINES

The fuel lines, made of high-durability stainless steel to handle varying temperatures and pressures, are designed to route through the factory line locations.



COMMERCIAL VEHICLE OPTIONS



Ford F-53 / F-59

Stripped Chassis
7.3L V8



Tech Specs

EPA & CARB approved
F-53 GVWR: 16,000 – 26,000 lbs.
F-59 GVWR: 19,500 – 22,000 lbs.

Fuel Capacity

LH Saddle	45 gallons usable
Aft Axle	65 gallons usable

Ford F-650 / F-750

Regular /Super Cab
7.3L V8



Tech Specs

EPA & CARB approved
F-650 GVWR: 26,000 – 29,000 lbs.
F-750 GVWR: 31,000 – 37,000 lbs.

Fuel Capacity

Single 86" LH Saddle	50 gallons usable
Left Long, Right Short	74 gallons usable*

Ford E-450

DRW Cutaway
7.3L V8



Tech Specs

EPA & CARB approved
GVWR: >14,500 lbs.

Fuel Capacity

Aft Axle	41 gallons usable
Extended Aft Axle	64 gallons usable

*Total gallons usable for dual tanks combined. Contact ROUSH CleanTech for pricing.

FOR TRANSIT AGENCIES



“We're saving over \$13,000 per vehicle per year with our propane deployment. There's virtually no capital costs or construction needed to get infrastructure started.”

— *Tim Geibel, executive director, Crawford Area Transportation Authority, PA*
OPERATING PROPANE VEHICLES SINCE 2020



“On average, our state contract price per gallon of propane is about half the price of gasoline. We have been able to purchase another vehicle with the fuel savings. Any organization considering the switch to propane should just do it even if there are no grants or assistance with purchasing. The system will still pay for itself in a matter of months.”

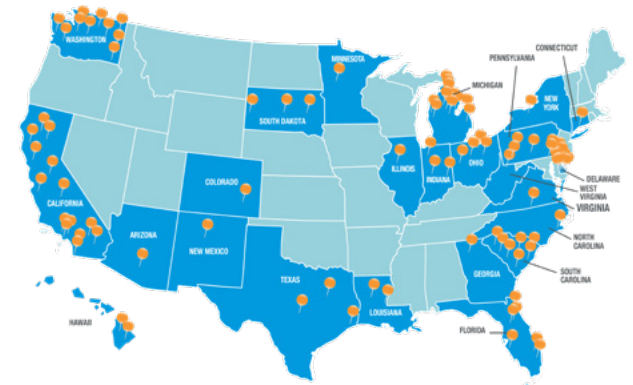
— *Randy Cantor, transportation and fleet services director, Carteret County Area Transportation System, NC*
OPERATING PROPANE VEHICLES SINCE 2021

AVAILABLE MODELS



E-450

F-650 / F-750



Transit agencies across the U.S. rely on ROUSH CleanTech for savings, service and reduced emissions.

REQUEST A DEMO

CALCULATE YOUR SAVINGS

Visit [ROUSHcleantech.com](https://www.roushcleantech.com)



SCHOOL BUS OPTIONS

Blue Bird Vision



“Propane is a more economical way of pursuing a cleaner fuel. It’s half the cost of diesel per gallon and there’s no need for particulate filters. We’re doing everything we can to get the cleanest possible environment for kids and the communities in which our employees drive.”

— Craig Beaver, transportation director,
Beaverton School District, OR
OPERATING PROPANE BUSES SINCE 2015

CONFIGURATION OPTIONS

BODY MODEL	WHEELBASE	PROPANE*	GASOLINE*
BBCV1910	169"	47	45
BBCV2311	189"	69	60
BBCV2508	217"	69	60
BBCV2610	217"	69	60
BBCV2807	238"	69	60
BBCV3011	252"	69	60
BBCV3201	273"	69	60
BBCV3303	273"	69 / 98	60 / 100
BBCV3310	273"	69 / 98	60 / 100
BBCV3507	280"	69 / 98	60 / 100



Tech Specs

EPA & CARB approved
GVWR: 33,000 lbs.
Up to 77 passengers

Fuel Capacity

Short Tank	47 gallons usable
Standard	67 gallons usable
Extended	93 gallons usable



Tech Specs

EPA & CARB approved
GVWR: 33,000 lbs.
Up to 77 passengers

Fuel Capacity

Standard	60 gallons usable
Extended	100 gallons usable

*Tank capacity in gallons. Contact your local Blue Bird dealer at www.blue-bird.com/find-a-dealer for pricing.



Since 2012, Blue Bird and ROUSH CleanTech have partnered to offer two types of school buses fueled by propane: **Type A Micro Bird G5** and **Type C Blue Bird Vision**. More than 37% of the nation's largest school districts operate propane school buses, including Boston Public Schools, Detroit Public Schools, East Chicago Public Schools and School District of Philadelphia.

Micro Bird G5

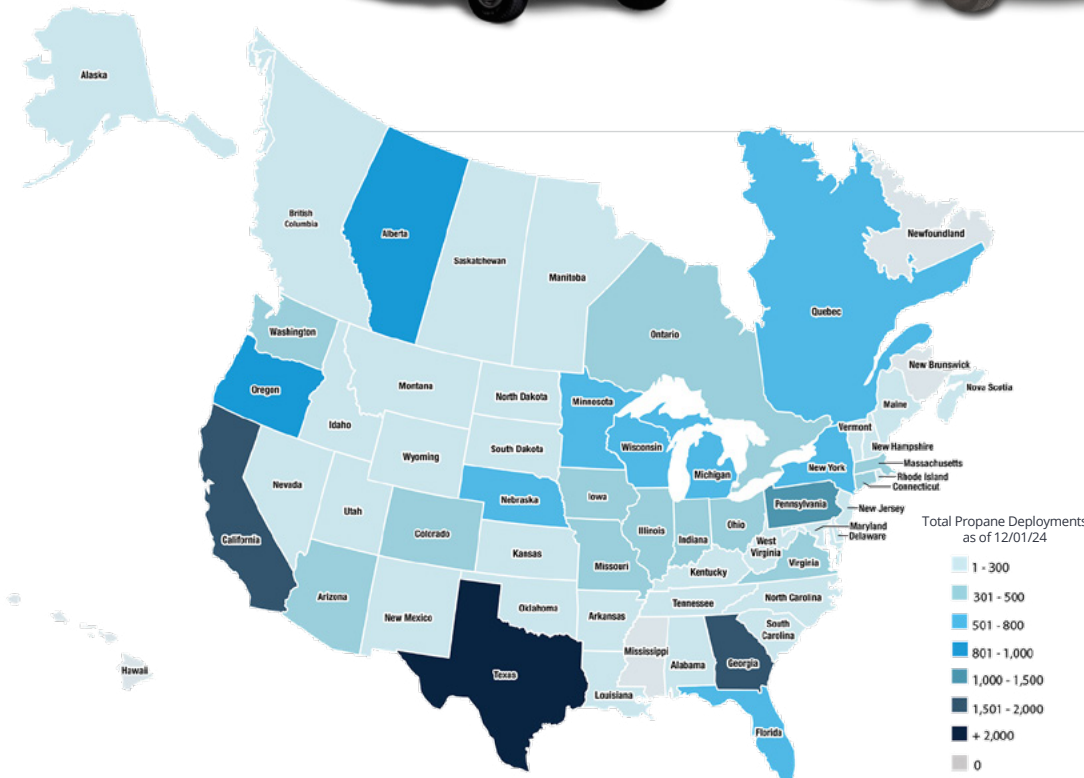


Tech Specs

EPA & CARB approved
 GVWR: 14,500 lbs.
 Up to 30 passengers
 OEM Installation

Fuel Capacity

Aft Axle 41 gallons usable
 64 usable gallons also available in commercial bus



PROPANE SCHOOL BUSES ACROSS NORTH AMERICA

- Over 22,000 Blue Bird propane school buses equipped with ROUSH CleanTech fuel systems in North America.
- Almost 1,100 school districts operating Blue Bird propane buses.

REQUEST A DEMO

CALCULATE YOUR SAVINGS

Visit [ROUSHcleantech.com](https://www.ROUSHcleantech.com)

AFTER SALES SUPPORT



Training and Technical Publications

ROUSH CleanTech offers a variety of propane autogas system training options instructed by one of our expert trainers, a field service engineer or online. Our training library gives customers the flexibility to complete the program at their own pace. If additional training is needed after going through our online training program, we can send a ROUSH CleanTech training expert to complete on-site training.

Technical publications are available on our website at no charge. You can find regularly updated service and diagnostic manuals, wiring schematics and more on our Service web page at ROUSHcleantech.com/service.

FACTORY TECHNICIAN WORKSHOPS provide hands-on training to service centers and customers at our Livonia, Michigan, location. To register for one of our Factory Technician Workshops, please visit the Support tab on the ROUSH CleanTech website.



ON-SITE TRAINING depends on a customer's needs and experience with ROUSH CleanTech vehicles. On-site training ranges from a two-hour Vehicle Overview to a full-day Advanced Diagnostics Training.



ONLINE TRAINING MODULES

- 1 ROUSH CleanTech Propane Fuel System
- 2 ROUSH CleanTech Warranty
- 3 ROUSH CleanTech Diagnostics
- 4 Service and Diagnostic Videos

VIDEOS

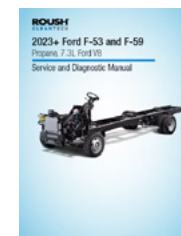


- Repair and Diagnostics
- News Updates
- How To's
- Fuel and Driving Demos

TECHNICAL PUBLICATIONS



ROUSH
E-SERIES
Ford E-350 and E-450
Gen 5 Propane, 7.3L Ford V8
Service and Diagnostic Manual



ROUSH
F-SERIES
2023+ Ford F-53 and F-59
Propane, 7.3L Ford V8
Service and Diagnostic Manual



ROUSH
F-SERIES
Ford F-650 and F-750
Gen 5 Propane, 7.3L Ford V8
Service and Diagnostic Manual



ROUSH
E-SERIES
Blue Bird Vision Propane
2023+ Propane, 7.3L Ford V8
Service and Diagnostic Manual

- Service Manuals
- Diagnostic Manuals
- Repair and Service Procedures
- Special Service Messages



Contact and Support

You can rely on ROUSH CleanTech's in-house Customer Success department after your new vehicles are in operation. Our extensive after-sale customer support includes field service, a call center, warranty assistance, service parts, technical publications and training. Our team members are with you every step of the way.



800.59.ROUSH



support@ROUSHcleantech.com



ROUSHcleantech.com/service



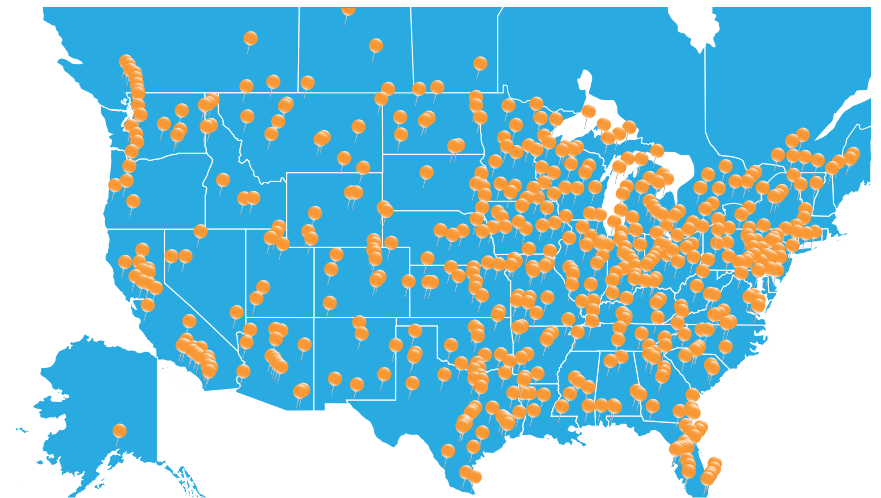
Partners

ROUSH CleanTech partners with Ford, Blue Bird and independent service centers to create a nationwide network of qualified experts.



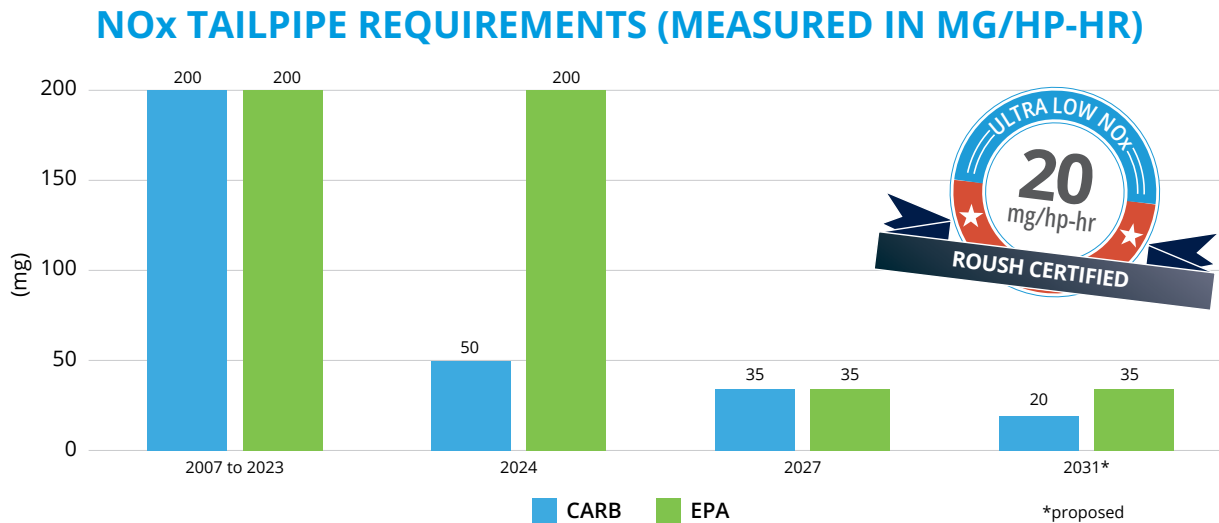
Service Network

ROUSH CleanTech trains and equips its extensive service network partners with the tooling and service diagnostic information required to service and maintain our fuel systems. Our team's mission is to help you diagnose any issues that may arise and get your vehicle back on the road as quickly as possible.



ROUSH CleanTech offers an expanding service network with more than 750 locations across the country.

ROUSH CLEANTECH PROPANE VEHICLES CERTIFIED TO 20 MG/HP-HR



A U.S. Department of Energy [study](#) reports that, compared with vehicles fueled by conventional diesel and gasoline, propane autogas fueled vehicles produce lower amounts of harmful air pollutants and greenhouse gas emissions. Propane autogas naturally contains less carbon and nitrogen than other conventional fuels.

Emissions of nitrogen oxides are federally regulated due to their negative impact on human health and the environment. They can trigger health problems, such as asthma, bronchitis and other respiratory issues, and environmental problems, such as acid rain and deteriorated water quality. ROUSH CleanTech's advanced propane engine technology helps reduce real concerns in our world today.

Propane vehicles also are very quiet, reducing noise in communities by about 50% compared with diesel, and allowing drivers to focus more on their passengers, cargo and the road ahead.



“We had all our upfront costs paid off within the first semester of operating propane buses. And propane fueling is incredibly easy and cost effective.”

— Shawn Brady, director of transportation,
Grain Valley Schools, MO
OPERATING PROPANE BUSES SINCE 2018