

2020

ADVANCED FUEL

BUYER'S GUIDE



COMPRESSED
NATURAL GAS



PROPANE
AUTOGAS



BIODIESEL



ETHANOL



HYBRID



PLUG-IN HYBRID



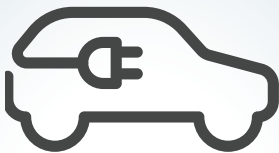
ALL-ELECTRIC



Go Further

BATTERY ELECTRIC VEHICLES (BEVS) CAN OFFER LOWER TOTAL COST OF OWNERSHIP

It's simple: fewer parts = fewer repairs. A typical gas engine contains hundreds of moving parts compared to one (electric motor) on a BEV.¹ This means typical engine repair issues are a non-factor for BEVs. No oil changes, no timing belt, no oxygen sensor, and the list goes on. This is on top of other ways (listed below) a BEV can save you money.



POTENTIAL FUEL SAVINGS

It can cost less than half, on average, to operate an electric vehicle versus one with an internal combustion engine.²



MAINTENANCE SAVINGS

Battery Electric Vehicles do not need as many components to operate and fewer parts means fewer things that may need to be replaced or repaired. This can mean potential lower costs and more uptime.



INCENTIVES

Many local and state governments offer financial incentives to help offset the cost of purchasing a Battery Electric Vehicle.



Battery Electric Vehicles (BEVs)
can mean big savings and lower
costs for your business.

¹<https://avt.inl.gov/sites/default/files/pdf/tsev/compare.pdf>
²<https://www.energy.gov/eere/electricvehicles/saving-fuel-and-vehicle-costs>

Preproduction Computer Generated Image Shown.

WHY ADVANCED FUEL IS IMPORTANT TO YOU AND FORD

Reduced carbon footprint

For many businesses, operating a fleet is the single largest contributor to their carbon footprint.

When a business decides to reduce its carbon output, the fleet managers need to know how to identify which advanced fuel can make the biggest difference.

Reduced dependence on foreign oil





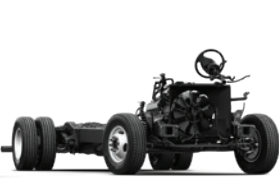





Most of the world's oil reserves are concentrated in the Middle East. Since most advanced fuels are available in the U.S. from U.S. sources, switching to advanced fuels can limit how much money is transferred offshore to support our domestic energy demands.

Cost of ownership

All fleet managers should consider the combination of acquisition costs, fuel prices, and residual values to determine the total cost of ownership of the vehicles in their fleet. Although acquisition costs for advanced fuel vehicles may be higher, these costs are often offset by the lower costs of the advanced fuels. In addition, the lower volatility of advanced fuel prices helps reduce risk of future price shocks.

Changing the way the world moves

We are using innovative thinking and advanced technology to solve tomorrow's biggest transportation challenges today. Since launching our Ford Smart Mobility plan in early 2015, we have made significant progress in connectivity, mobility, autonomous vehicles, customer experience, and data analytics.

Ford offers customers a complete selection of Advanced Fuel Commercial Vehicles										
										
	Transit Connect Cargo Van/ Passenger Wagon	Transit Cargo Van/Crew Van/ Passenger Van	Transit Cutaway/ Chassis Cab	E-350/E-450 Cutaway	E-350/E-450 Stripped Chassis	F-150 Pickup	F-250/F-350/F-450 Super Duty® Pickup	F-350/F-450/ F-550/F-600 Super Duty Chassis Cab	F-650/F-750 Medium Duty Chassis Cab	F-59 Commercial/ F-53 RV Stripped Chassis
Advanced Fuel Type										
Ethanol (E85)	✓ ¹ <i>Ford</i>	✓ ² <i>Ford</i>	✓ ² <i>Ford</i>	✓ <i>Ford</i>	✓ <i>Ford</i>	✓ <i>Ford</i>	✓ <i>Ford</i>	✓ <i>Ford</i>		
Biodiesel (B20)						✓ <i>Ford</i>	✓ <i>Ford</i>	✓ <i>Ford</i>	✓ <i>Ford</i>	
CNG	✓			✓ ⁵	✓ ⁵	✓	✓	✓	✓	✓
Propane				✓ ⁵	✓ ⁵	✓	✓	✓	✓	✓
Electrification Options										
HEV		✓	✓	✓	✓		✓	✓		✓
PHEV						✓	✓			
BEV		✓	✓	✓	✓					✓
GVWR (lbs.)	5,110 - 5,420	8,550 - 10,360	9,070 - 11,000	E-350: 10,050 - 12,500 E-450: 14,000 - 14,500	E-350: 11,500 - 12,500 E-450: 14,000 - 14,500	6,070 - 7,850	9,900 - 14,000	9,800 - 22,000	Gas: 22,000 - 33,000 Diesel: 20,500 - 37,000	16,000 - 22,000 (F-59) 16,000 - 26,000 (F-53)
GCWR (lbs.)	5,930 - 6,380	10,800 - 13,000	11,200 - 15,000	E-350: 13,000 - 18,500 E-450: 18,000 - 22,000	E-350: 13,000 - 18,500 E-450: 18,000 - 22,000	9,600 - 18,600	19,500 - 45,300	19,500 - 43,000	Gas: 37,000 Diesel: 50,000	23,000 - 26,000 (F-59) ⁶ 23,000 - 30,000 (F-53)
Payload (lbs.)†	1,250 - 1,550	2,440 - 4,550	4,420 - 6,400	E-350: 5,030 - 7,210 E-450: 8,480 - 8,980	E-350: 6,870 - 7,820 E-450: 9,140 - 9,690	1,270 - 3,270	2,160 - 7,850	2,620 – 15,090	11,386 - 26,592	10,050 - 15,610 (F-59) ⁷ 9,650 - 18,720 (F-53)
Engine	2.5L DOHC I-4 ⁴ 2.0L GDI I-4 FFV	3.5L PFDI V6 FFV 3.5L EcoBoost® V6	3.5L PFDI V6 FFV 3.5L EcoBoost V6	7.3L V8 Premium (7.3L 2V DEVCT PFI NA V8) 7.3L V8 Economy (7.3L 2V DCVT PFI NA V8) FFV	7.3L V8 Premium (7.3L 2V DECVT PFI NA V8) 7.3L V8 Economy (7.3L 2V DCVT PFI NA V8) FFV	3.3L V6 PFDI FFV 3.5L EcoBoost High Output 2.7L EcoBoost V6 3.5L EcoBoost V6 3.0L V6 Diesel 5.0L V8 PFDI FFV ⁴	6.2L V8 FFV ⁴ 6.7L Power Stroke V8 Diesel 7.3L 2V DEVCT PFI NA V8 Gas	6.2L V8 FFV ⁴ 6.7L Power Stroke V8 Diesel 7.3L 2V DEVCT PFI NA V8 Gas	6.7L Power Stroke V8 Diesel 7.3L 2V DEVCT PFI NA V8 Gas	7.3L 2V DEVCT PFI NA V8 Gas
Transmission	2.5L 6-Speed SelectShift® Automatic with Overdrive 2.0L 8-Speed SelectShift Automatic with Overdrive	10-Speed SelectShift Automatic with Overdrive	10-Speed SelectShift Automatic with Overdrive	TorqShift® 6-Speed Automatic with Overdrive	TorqShift 6-Speed Automatic with Overdrive	6-speed SelectShift Automatic with selectable drive modes (std w/3.3L V6 PFDI) 10-Speed SelectShift automatic with progressive range select and selectable drive modes (std w/3.5L V6 EcoBoost, 2.7L V6 EcoBoost, 3.0L V6 Diesel & 5.0L V8 engines)	TorqShift-G 6-speed with SelectShift with Tow/Haul Mode (F-250 with 6.2L V8) Torshift 10-Speed Automatic with selectable drive modes; normal, Tow/Haul, eco & deep sand/snow (N/A F-250 w/6.2L Gas engine)	TorqShift 10-Speed Automatic with selectable drive modes; normal, Tow/Haul, eco, slippery & deep sand/snow	TorqShift Heavy Duty 6-Speed Automatic with Overdrive	TorqShift 6-Speed Automatic with Overdrive and Tow/Haul Mode

1 Available in certain states only. See dealer for details.
2 Government orders only.
† When properly equipped.

3 Not available in Crew Van or Passenger Van. Late availability.
4 Available with CNG/Propane Gaseous Engine Prep Package.

5 CNG/Propane Gaseous Engine Prep Package for 7.3L is late availability.

6 F-59 has a max GCWR of 29,700 lbs. with the Parcel Delivery Van Package available with the 208" WB and max GCWR of 27,200 lbs. with the Parcel Delivery Van Package available with 168" WB.
7 F-59 has a max payload of 15,750 lbs. with the Parcel Delivery Van Package available with the 178" WB/22,000 lbs. GVWR.

✓ Available directly from Ford.
✓ Available via QVM's.

MEET THE FORD OEM SOLUTIONS THAT ARE HELPING CREATE A MORE SUSTAINABLE WORLD.

Developing advanced fuel vehicles is a priority at Ford Motor Company. We realize that the right vehicles can make a world of difference in the world around us. And it's why we are continually adding more hybrid and electric vehicles to our already impressive lineup.

- **Fusion HEV** – Currently in production
 - **Fusion PHEV** – Currently in production
 - **Escape HEV** – Currently in production
 - **Escape PHEV** – Coming soon
 - **Explorer HEV** – Currently in production
 - **Mustang Mach-E** – Late 2020
- **F-150 HEV** – Available Q4 2020
 - **F-150 BEV** – Timing part of future announcement
 - **All-Electric Transit** – Coming for the 2022 Model Year
 - **Corsair PHEV** – Launching in the summer 2020
 - **Aviator Grand Touring PHEV** – Currently in production

CHARGING INTO THE ELECTRIC VEHICLE MARKET

COST OF OWNERSHIP

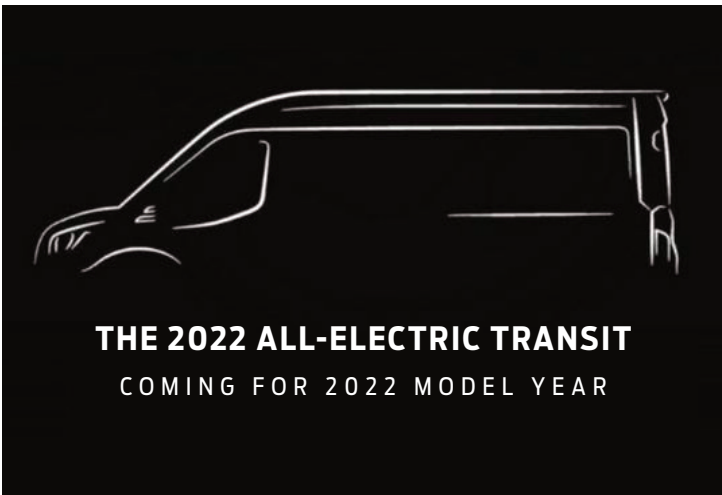
All-electric powertrains mean significantly less scheduled maintenance than internal combustion engines, plus lower operating costs.

UNCOMPROMISED CARGO CAPACITY

Consumers have the power of choice with a variety of chassis options, including cargo van, cutaway and chassis cab, plus three roof heights and three body lengths

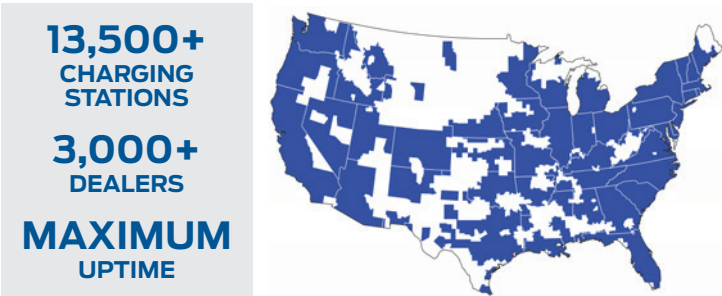
SUSTAINABILITY

Helping businesses achieve sustainability goals while helping cities improve air quality and reduce noise levels.



ALL ELECTRIC TRANSIT

Every Ford BEV includes access to the largest public charging network offered by original equipment manufacturers.*



Do you drive anywhere in the blue area? Chances are you do. If so, a charger is less than 40 miles away (which accounts for 96% of all trips and fits the average daily commute of 32 miles)¹.

North America's largest public charging network. With more places to charge in North America than any other automaker, Ford has you covered.

¹ Census data as of 8/13/19 suggests over 96% of all trips are under 40 miles.
*Based on original equipment manufacturers (OEM)/automotive manufacturers that sell all-electric vehicles and have publicly announced charging networks. Department of Energy data used. FordPass, compatible with select smartphone platforms, is available via a download. Message and data rates may apply.
**Some public charging stations in the network are in garages or other structures that have vehicle height restrictions.

ELECTRIC VEHICLE INFRASTRUCTURE

Commercial

A number of businesses and workplaces offer commercial electric vehicle (EV) charging infrastructure. These commercial grade Level 2 (240V) systems can charge vehicles significantly faster than using an ordinary 120V outlet.

Plug your vehicle in and initiate the charging process. The charging station will indicate that the vehicle is in the process of charging. When charging is complete, users simply stow the cord, keeping it organized for the next user. Stations are available in pedestal or wall-mount configurations. Wall-mount units can either be hardwired for permanent installations or plugged into an existing 240V outlet for simple removal of the unit. As an added benefit, it is possible for network stations to let users know if a vehicle is charging or how much energy was dispensed. This information can be used to determine EV miles driven as well as fuel and CO₂ saved.

Residential Charging:

A 240V (48A) wi-fi connected charging station will be available through Ford dealers. It is branded by Ford Motor Company and can be hardwired. Ford is teaming up with Amazon in the U.S. on residential installation options. Details on this program will be available Summer 2020.

Charging In Public

Ford is providing its all-electric Transit fleet customers easy access to North America's largest charging network. On the road, Ford all-electric Transit fleet customers will have simple and easy access* to Ford's charging network – the largest public charging network offered by original equipment manufacturers with over 13,500 charging stations (over 40,000 plugs) and growing – making them as ubiquitous as some of the most popular pharmacy or coffee chains.**

Private Charging: Home and Business

In addition to access to Ford's charging network, Ford will provide the Ford Mobile Charger with the all-Electric Transit, which will charge on a normal 120V outlet for emergencies or at a 240V outlet for faster charging. In the event customers require a faster charger and connected experience Ford will offer a 240V-48A Home Charge Station. Ford is also developing a set of charging and energy management solutions for the all-electric Transit and other Ford commercial all-electric vehicles. Recognizing the need for a comprehensive offering and tailored solutions, we are developing the best solutions to cover your fleet's charging needs – Charging and Energy Management solutions will be available starting with the all-electric Transit. Ford Charging Solutions will help you to transition your fleet to electrification in a way that helps optimize with costs.



BROAD PORTFOLIO OF QVM SOLUTIONS

QVM Developers

Ford recognizes eight QVM Developers. These companies develop and provide the engine calibration systems, dynamometer testing, compliance with federal safety standards, and adherence to Ford engineering specifications required for successful vehicle operation with advanced fuels. They also hold the emissions certifications (either EPA or CARB) required for air quality assurance. The QVM/eQVM Developers ensure that your vehicle is delivered to your dealership ready to operate.

Electrification

Over the past five years, Ford has incorporated significant customer and QVM/eQVM feedback to help improve the customer experience with advanced fuels. Recently, customer interest in electrification of commercial vehicles has encouraged us to develop a QVM solution for electric and other powertrains (eQVM). This includes several companies such as: XL, Lightning Systems and Motiv. We continue to work with other companies engaged to address these emergent advanced options.

QVM/eQVM Developer Contact Information

Codes	Company	Website	
A	Altech-Eco	altecheco.com	QVM
L	Landi Renzo®	landiusa.com	QVM
R	ROUSH® CleanTech	ROUSHcleantech.com	QVM
W	Westport	westport.com	QVM
M	Motiv	motivps.com	eQVM
X	XL	xlfleet.com	eQVM
LS	Lightning Systems	lightningsystems.com	eQVM
P	Phoenix Motorcars	phoenixmotorcars.com	eQVM

QVM/eQVM Developer Chart

Model	CNG		Propane		Electrification		
	Dedicated	Bi-Fuel	Dedicated	Bi-Fuel	HEV	PHEV	BEV
Transit Connect	—	—	—	—	—	—	—
Transit	—	—	—	—	X	—	LS ²
E-350 – E-450	L [*]	—	R [*]	—	X	—	M ¹ ,P ²
F-150	—	A, L, W	—	W	—	X	—
F-250–F-350	A, L [*] , W	A, L, W	—	—	X	X	—
F-450–F-550	L [*] , W	—	R [*]	—	—	—	—
F-650–F-750	L [*] , W	—	R [*]	—	—	—	—
F-53, F-59 Stripped Chassis	L [*] , W	—	R [*]	—	X	—	M

* CARB Certified.

¹ E-450 only.

² 60 mile range.
CNG/Propane Gaseous Engine Pre Package is late availability (7.3L engine).

Go to FordUpfits.com to find QVM upfitters near you.

FORD ENGINEERING SUPPORT

Advanced Fuel QVM’s (Gaseous Fuel and Electrification)

Advanced Fuels has recently expanded to include a new vocation with the introduction of the eQVM!

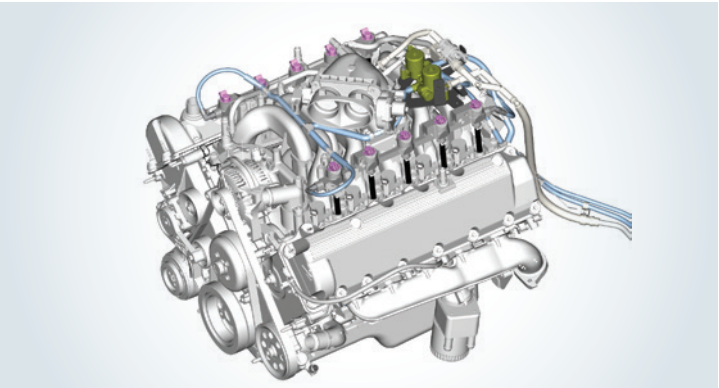
In addition to the Gaseous Fuel Program, owners of vehicles upfit with energy saving electrification now benefit from the same guidelines, modification recommendations, and powertrain operating specifications required to ensure customer satisfaction and reliability in line with Ford Motor Company standards.

Onsite assessments at each QVM/eQVM location help assure conformance to a high standard of manufacturing, assembly, workmanship, and customer service.

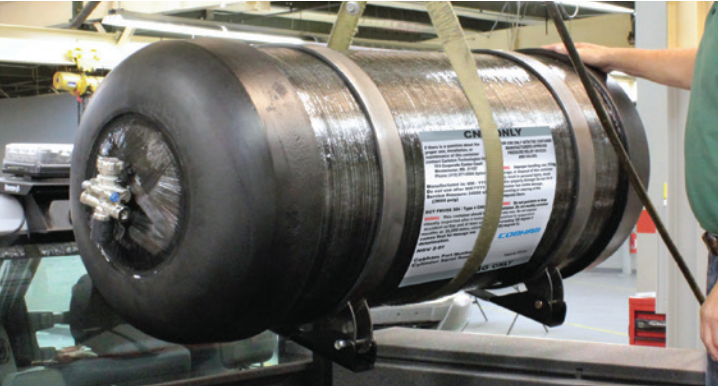
Modifiers that have demonstrated compliance with the overall vehicle modification requirements and vocation specific guidelines and validation are listed on page 5.



Gaseous Fuel



Electrification



DEALERS DEDICATED TO DRIVING YOUR BUSINESS



With over 650 nationwide, Ford Commercial Vehicle Centers are specially trained and equipped to sell, service and finance the most complete line of commercial vehicles to help you get the job done right!

Whether it's an off-the-lot purchase or a fully-customized upfit, our Commercial Vehicle Centers are ready to roll up their sleeves and get you on the road.

COMMERCIAL VEHICLE CENTER BENEFITS

A CERTIFIED COMMERCIAL ACCOUNT MANAGER

We make interacting with your dealer simple, easy and efficient. You're assigned a certified Commercial Account Manager who specializes in commercial vehicles, and is with you every step of the way.

CERTIFIED COMMERCIAL EXPERTS THROUGHOUT YOUR DEALER

When you work with a Ford Commercial Vehicle Center, you're getting certified commercial experts with advanced knowledge who can help you at every turn—be it vehicle sales, service, parts or finance.

COMMERCIAL VEHICLES IN STOCK

Commercial Vehicle Centers are certified experts in finding the right vehicle for your particular application. A great selection of commercial vehicles is available on-site for you to inspect and test-drive, and available for immediate sale.

UPFITTER EXPERTISE & ASSISTANCE

No two businesses are alike. That's why we are working with trusted, Ford-authorized upfitters nearby who can customize your vehicle to fit the particular needs of your business.



EXTENDED SERVICE HOURS

When we say “we’re here for you,” we mean it. Our Commercial Vehicle Centers are available for a minimum 55 hours a week. You don’t have the luxury of working a 40-hour week. Why should we?

PARTS IN STOCK/EXPEDITED SHIPPING

We’re all about keeping you on the road. That’s why participating dealers have access to a stocking system and expedited shipping that ensures they have the parts they need to get you up and running.

ROADSIDE SERVICE – 24/7 TOWING

Have a mishap, or a blown tire? No problem. Our 24-hour road service will take care of you. It’s the kind of peace-of-mind customers have come to enjoy from us.

COMMERCIAL FINANCING & LEASE ALTERNATIVES

Ford Credit offers a wide range of flexible commercial finance and lease options to meet your needs. Our dedicated commercial sales team understands the commercial market and is ready to help you with customized plans and financial solutions.



Vehicles shown with aftermarket equipment.

ADVANCED FUEL INCENTIVES



COMMERCIAL CONNECTION
FORDUPFITS.COM

Commercial Upfit Incentives

The Ford *Commercial Connection* program was created to help businesses upfit their commercial vehicles by providing incentives and special offers. As part of this program, Ford offers incentives¹ for advanced fuel modifications such as CNG or Propane. These incentives are in addition to any potential national retail incentives and are dependent on the vehicle model series. All advanced fuel modifications must be completed by a gaseous fuel QVM (see page 5).

Model	Transit Connect	Transit	E-Series Stripped Chassis	F-Series Super Duty® Pickup	F-Series Super Duty Chassis Cab	F-650/F-750
Incentive ²	\$500	\$1,000	\$1,000	\$500	\$1,000	\$1,500

¹ See dealer for qualifications and complete details. Program rules subject to change.
² Upfit minimum may be required dependent on vehicle. Units receiving any form of CPA (56A), GPC, Long-Term Rental (56K) or other concessions are ineligible. Restrictions apply. See your dealer for qualifications, complete details and possible program extension. Offer correct at time of printing. Program rules subject to change. Claimed incentives cannot exceed actual price of upfit.

It is important for customers to consult with their Ford Commercial Vehicle Center dealer to obtain the most current incentive details. Go to [FordUpfits.com](https://fordupfits.com) for more details.

A GREENER SHADE OF BLUE™

POLICE INTERCEPTOR

The all-new Ford Police Interceptor® Utility is purpose-built to meet the unique needs of law enforcement and represents a smart investment.

The standard hybrid powertrain offers significant potential fuel savings versus traditional gas engines, thanks to reduced engine idle times and significant improvements in EPA-estimated fuel economy.¹ When not in motion, traditional police vehicles must constantly keep their engines running to power on-board electrical equipment, like emergency lights, radios, computers and other items. With the Ford Police Interceptor® Utility hybrid, these electrical loads are powered via the lithium-ion hybrid battery, allowing the gas engine to shut off for extended periods of time... now running intermittently to keep the battery charged. The savings can really add up – potentially over \$3,500 per year, per vehicle, at \$2.75 per gallon.²

And all of this is done with no trade-offs in power or performance. The Police Interceptor with standard hybrid is pursuit-rated and has completed rigorous testing by Michigan State Police and Los Angeles County Sheriff’s Department.

In fact, the hybrid AWD powertrain of the all-new Ford Police Interceptor Utility features more horsepower and torque, better acceleration, and a higher top speed³ vs. the previous-generation 3.7L AWD with no trade-offs in passenger or cargo space. It also outperformed all competitive V8-powered SUVs in independent third-party testing by Michigan State Police.⁴ And it continues to be engineered to meet the 75-mph rear-impact test—the only vehicle in the world tested to this rigorous standard.⁵ It’s this type of leadership that has made Ford the number one choice for law enforcement year after year.



¹EPA-estimated fuel economy 23 city/24 hwy/24 combined mpg. Actual mileage will vary. ²Fuel savings calculator details are available at <https://www.ford.com/police-vehicles/police-interceptor/hybrid-utility/calculator/> ³Based on Michigan State Police test results for the 2019 calendar year. ⁴Fastest 0-60 and 0-100 acceleration times, fastest lap and average lap, and highest top speed vs. competitive SUVs, based on Michigan State Police test results for the 2019 calendar year. ⁵ The full-size spare tire secured in the factory location is necessary to achieve police-rated 75-mph rear-impact crash-test performance attributes.

FORD PROVIDES COMPLETE CUSTOMER SUPPORT



Go Further

Nationwide Dealer Network – ford.com

Ford has a nationwide network of more than 3,000 dealers who provide sales, finance, and service support. Ford is a well-established leader in commercial sales and has a long history of providing vehicles that are Built Ford Tough®.



FORD CREDIT
Commercial Lending Services

Ford Credit Commercial Lending Services – credit.ford.com

Ford Credit Commercial Lending Services help meet the unique demands of your business. Our finance products can be tailored to respond to fleet needs such as advanced fuel upfits, high-mileage leases, or flexible payment plans. We also offer Commercial Lines of Credit to help obtain vehicles quickly and easily.



COMMERCIAL VEHICLE CENTER
WE OWN WORK

Commercial Vehicle Center – fordcommercialvehiclecenter.com

Ford Commercial Vehicle Centers are specially trained and equipped to sell, service, and finance America's best-selling line of hardworking commercial vehicles.*



Gaseous Engine Prep Package

CNG and Propane Autogas (LPG) are increasingly popular choices for cutting fuel costs and greenhouse gas emissions. Ford offers Gaseous Engine Prep packages across our entire commercial vehicle lineup. These packages include hardened valves and valve seats and other components to withstand the higher operating temperatures and lower lubricity of gaseous fuels.



Detailed Engineering Requirements

The Qualified Vehicle Modifier (QVM/eQVM) Program is intended to help modifiers achieve greater levels of customer satisfaction and product acceptance through the manufacture of high-quality vehicles. This program assures vehicle modifiers have the capability and processes in place to maintain the integrity of the Ford systems while meeting federal and Ford Motor Company required standards.

Ford
Authorized
Pool Accounts

Established Truck Equipment Upfitters – fordupfits.com/findanupfitter

To get the equipment your business needs to get work done in an efficient, cost-effective manner, Ford has established Pool Accounts. These equipment specialists assist Ford Dealers to ensure you have the right truck for the right job every time.



Warranty-Parts-Service

Ford Dealers are equipped to provide any necessary service repairs. They stock Ford Authorized parts, and service technicians are factory-trained. Ford service departments are backed by computerized diagnostic equipment and have access to national hotline support.



Roadside Assistance 24 Hours-Seven Days

Ford provides roadside assistance 24 hours a day, seven days a week on all Ford commercial vehicles. By dialing 1-800-241-3673, Ford commercial advanced fuel vehicle customers also have access to flat tire change, locksmith service (if locked out) and towing.

*Based on total U.S. reported sales (2019 CY).



Commercial Vehicle Sales & Marketing
North American Fleet, Lease and Remarketing Operations
Ford Motor Company



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