



## Ford F-150 Truck PHEV Conversion

Convert your Light Duty Truck Fleet to a Plug-In Hybrid Vehicle Fleet

Take advantage of the performance potential of an electric drive system combined with the utility value of a light duty pick-up truck.

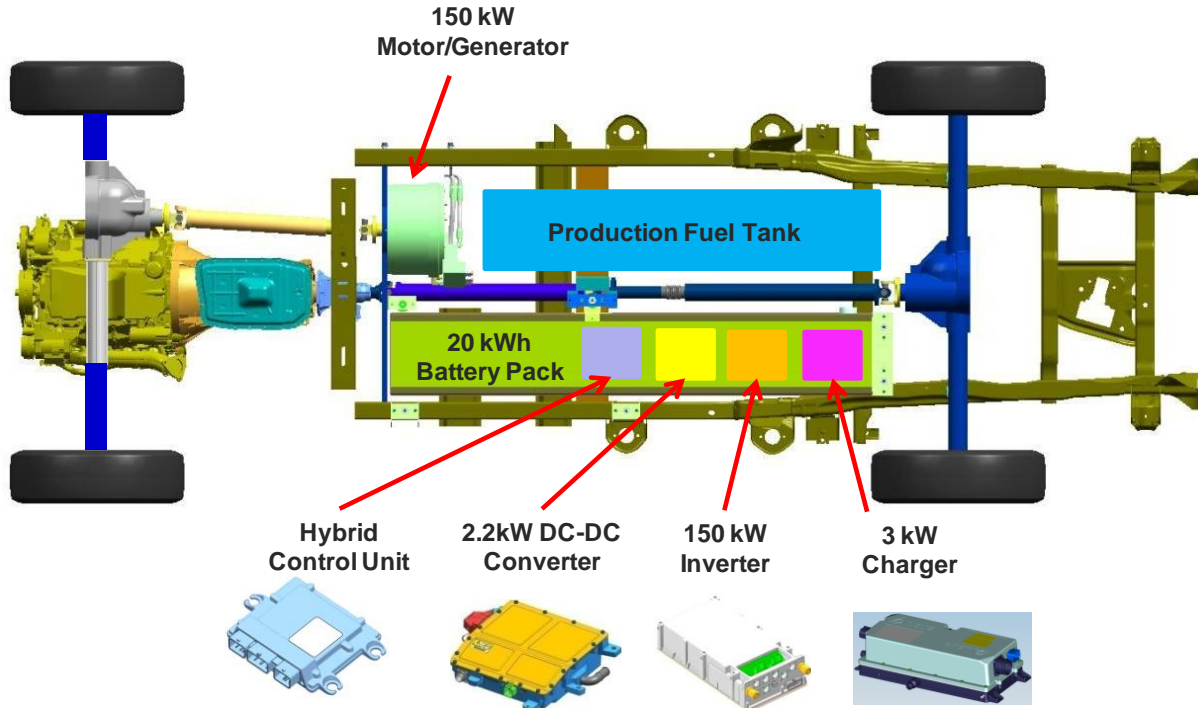


### FEATURES

- 35 miles all Electric Range
- Conversion based on F-150 4 X 4 Extended Cab with 145" W.B.
- "Through the Road" Parallel Hybrid Configuration
- Top Speed: 95 mph
- 0-60 MPH acceleration < 11sec (all electric mode)
- Combined Hybrid Operation for 475 Miles
- Carry 2 People Comfortably with 500 lb Payload
- Towing Capacity: 2,000 lbs
- Design has been Crash Tested to FMVSS 305
- High Quality System from Proven Tier 1 Supplier
- Easily Re-charge at Home/Office using 110 V or 220 V Outlet
- Conversion based on High Volume, Production Validated Components

Quantum's PHEV Light Duty Pick-up truck is a first for the industry. Targeting Fleets of all sizes, Quantum can improve the overall fuel economy of the base F-150 truck while substantially reducing the gasoline requirements on a day to day basis.

# System Overview



## F-Drive Component Overview

### Engine



OEM Gasoline Engine	3.7 L Eco V-6
Output Power, Speed	305 hp @ 6,500 rpm
Output Torque, Speed	280ft-lbs, 4250 rpm
Compression Ratio	655 x 586 x 695 mm
Weight	139 kg

### Traction Motor



Output (Cont/Peak)	100 kW/150 kW
Output Torque (Cont/Peak)	400 Nm/650 Nm
Coolant Temp	-40 to 75 °C
Size	405 mm OD x 360 mm
Weight	91 kg

### DC/DC Converter



Input Power (Volts/Amps)	290-420VDC/0-8 A
Output Power (Volts/Amps)	14 VDC/0-200 A
Coolant Temp	-29 to 75 C
Size	253 X 257 X 79 mm
Weight	4.9 kg

### Power Inverter



Power (Cont/Peak)	100 kW/165 kW
Voltage (Nominal/Max)	375/450 VDC
Curent (Nominal/Max)	100/400 A
Switching Frequency	Up to 20 kHz
Coolant temp	-40 to 75 °C
Size	380 x 365 x 119 mm
Weight	15.9 kg

### Lithium Battery Pack



Capacity	22.6 kWh
Voltage Range (Nom/Peak)	240-385 VDC
Current (Cont./Max)	160-320 A
Coolant Type	Air Cooled
Size (each of 2 units)	1032 x 516 x 308 mm
Weight	310 kg

### 1-3 KW Charger



Input Power (Volts/Freq)	82-264 VAC/45-63Hz
Output Power (Volts/Amp)	300-420 VDC/0-11 A
Coolant Temp	-20 to 65 °C
Size	400 x 165 x 100 mm
Weight	6.0 kg