



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.



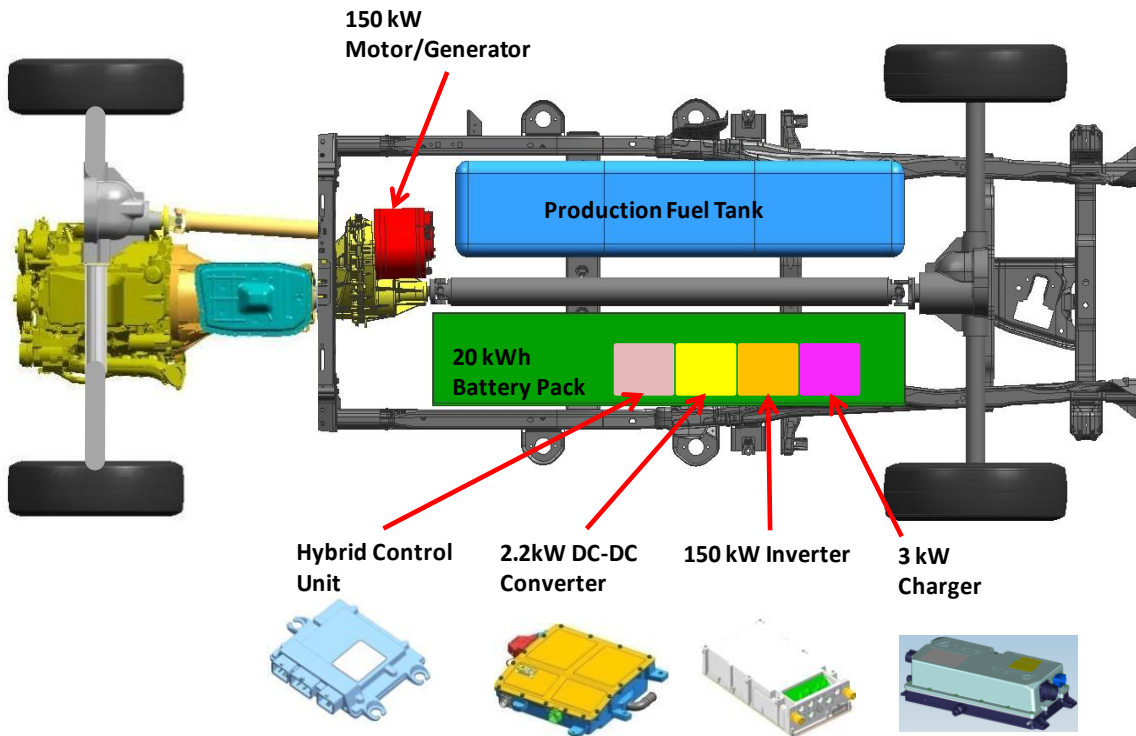
FEATURES

- 35 miles all Electric Range (UDDS Drive Cycle)
- Easily Re-charge at Home/Office using 110 V or 220 V Outlet
- SAE J1772 Compliant Charging System
- Based on F-150 4 X 4 Regular or SuperCab with 145" W.B.
- Parallel Hybrid Configuration
- Top Speed: 85 mph
- 0-60 MPH acceleration in 12 seconds
- 400 Mile Hybrid Operational Range
- Up to 900 lb Payload
- Towing Capacity: Up to 5,800 lbs
- Meets FMVSS Requirements
- High Quality System from Proven Tier 1 Supplier
- 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	3.7L Ti-VCT V6 FFV
Output Power, Speed	302 hp @ 6,500 rpm
Output Torque, Speed	278 ft-lbs, 4000 rpm
Recommended Fuel	Regular or E85
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	21.4 kWh
Voltage Range (Nom/Peak)	247-385 VDC
Current (Cont./Max)	160-320 A
Coolant Type	Liquid Cooled
Size (each of 2 units)	1032 x 516 x 308 mm
Weight	240 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