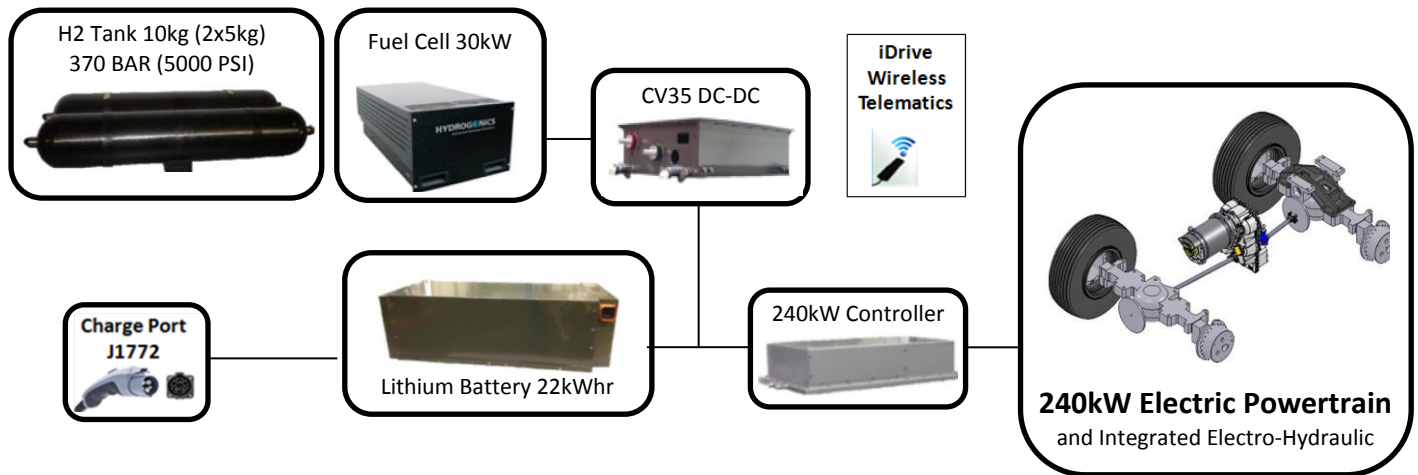
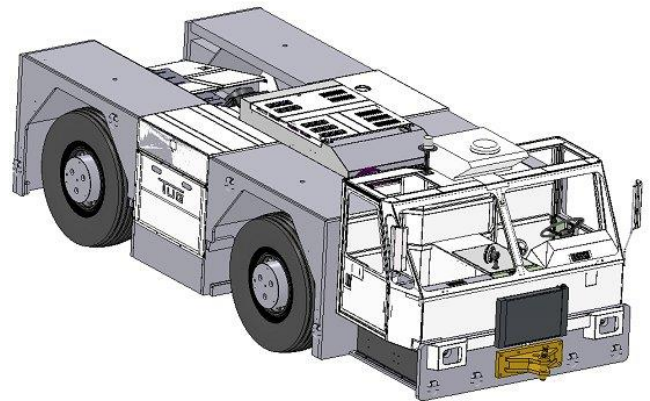


In Development



# H<sub>2</sub>Tug™ Fuel Cell Plug-In Hybrid Electric C-17 Tow Tractor



## Fuel Cell Plug-in Tow Tractor Powertrain System Block Diagram

The C-17 Tow Tractor can be used in a variety of military and airport ground support (Boing 747) applications. It is currently being deployed at US Air Force Joint Base Pearl Harbor- Hickam in Honolulu, Hawaii.



## H<sub>2</sub>Tug™ Fuel Cell Plug-In Electric C-17 Tow Tractor

### Overall Vehicle Specifications

Gross Vehicle Weight	100,00lbs
Max Drawbar Pull	72,000lbs
OEM Manufacturer & Model	TUG Technologies Model U30

### Vehicle Performance Specifications

Range from H <sub>2</sub> and Battery	12 hours
Forward/Reverse Max Speed	15/4MPH max
Turning Radius	260" Outside Diameter, Coordinated Steering
Steering	3-Modes Steering (Coordinated, Track, Carb)
Ground Clearance	10"
Max Grade	7" Approach, 12" Breakover, 17" Departure
Overall dimensions	L=258", Width=110", Height=68"
Wheel Base	124"

### Fuel Cell System Specifications

Fuel Cell Supplier and Model	Hydrogenics HD30
Fuel Cell Technology	PEM
Fuel Cell Voltage, Current, and Power	60V-120V, 500A, 30kW

### Hydrogen Storage System Specifications

Storage Capacity	10kg of H <sub>2</sub> (2 x 5kg tanks)
Max Pressure- Min Pressure	350 BAR/5076 PSI - 13.8 BAR/200 PSI

### Energy Storage Specifications

Battery Cells Type	Li-Ion
Battery Voltage	390V Nominal
Battery Max Power	240kW
Battery Energy	22kWhr
Battery Management	Integrated BMS

### Direct Electric Traction Drive System Specifications

Traction Motor Type	AC Induction
Electro-hydraulic Pump	AC Induction, Integrated
Traction Drive Power	240kW
Hydraulic Drive Power	Integrated Electro-hydraulic PTO
Traction Inverter	IGBT, Digital Vector Drive
Charger Interface	SAE 1772- Level II
Charger- On-board	6.6kW

### Auxiliary Systems Specifications

DC/DC Converter	13.8V, 200A
Telematics	iDrive; Wi-Fi & Cell
Driver Display	Analog Gauges
Information Center Display	Digital with Fault Code Display