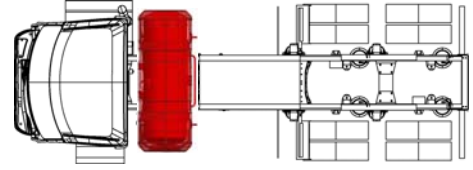


Part Number: 116785

Part Description: Fuel Storage Module (FSM)



Product Technical Specifications

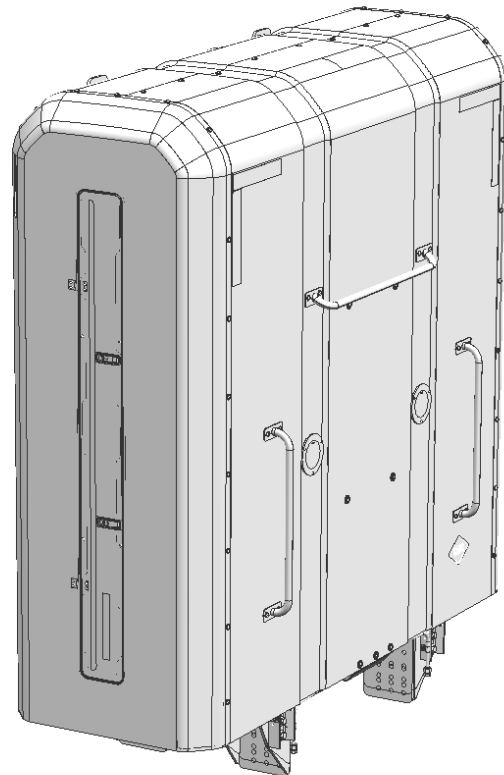
General Specifications

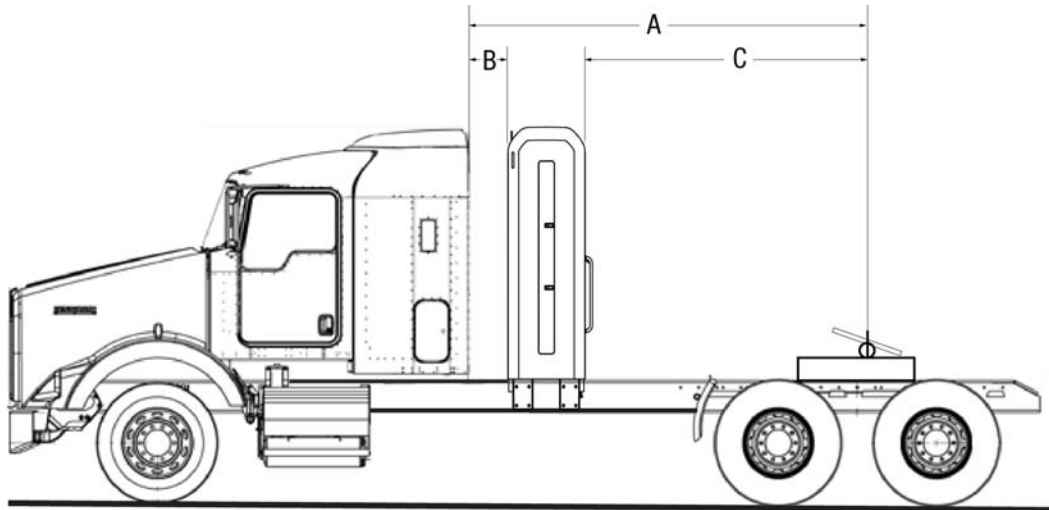
Designed Location	Back Of Cab (BOC)
Gasoline Gallon Equivalancy (IA)	139.8 GGE
Gasoline Gallon Equivalancy (NIST)	119.1 GGE
Diesel Gallon Equivalancy (IA)	123.0 DGE
Module Weight (Empty)	1700 lbs (771 Kg)
Module Weight (Full)	2500 lbs (1134 Kg)
Internal Volume	417 ±6 Gallons (1584 ±24L)
Fill Panel Location	N/A
Cylinder Certifications (114093)	NGV 2-2007
Canadian Registration Number (CRN)	N/A*
Service Pressure	3,600 psi (24.8 MPa) @ 70°F (21°C)
Minimum Working Pressure	290 psi (2 MPa)
Module Temperature Range	-40°F (-40°C) to 122°F (50°C)

* Contact Quantum for additional information.

Standard Equipment:

- Grab Handles
- Load Lights





⚠ DANGER

The FSM has been approved to be installed with the front of the FSM facing forward. The correct installed position can be confirmed with the fill panel on the driver's side of the frame. Failure to install the FSM in the correct approved position may result in death or serious injury.

General Vehicle Requirements

Maximum Distance Between Cab and Kingpin (A)	34.5" (876mm)
Minimum Distance Between Cab and FSM (B)	5" (127mm)
Minimum Distance Between FSM and Kingpin (C)*	70" (1778mm)
Minimum Frame Height	N/A
Minimum Frame Width	N/A

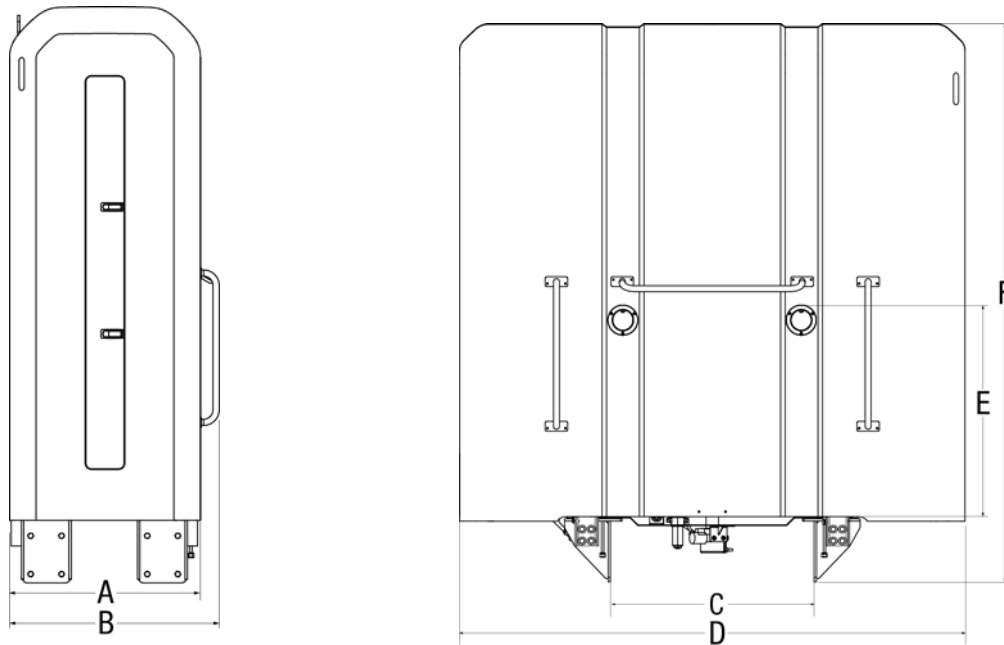
* Verify measurement with the 5th wheel in the forward most position. Trailers with non-standard (42" or 48") kingpins may require additional wheelbase and clearance.

Electrical Requirements

Voltage Range	12-16 VDC
Nominal Current Draw	940 ±40mA
Peak Current Draw	N/A
Electrical Interface Connector	Deutsch HDP30-18-14 PN

Fluid Specifications

Coolant Type	N/A
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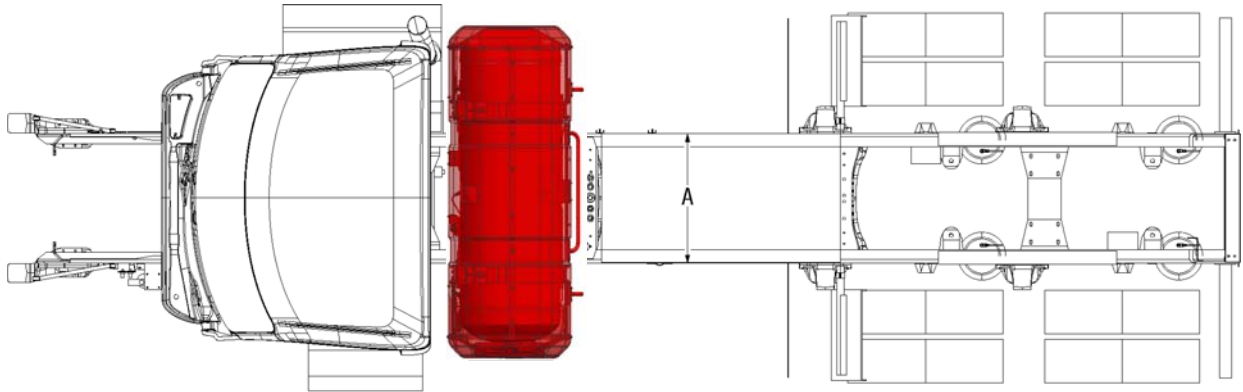


FSM Dimensions

Depth of CNG Fuel Storage Module (A)	30.7" (780mm)
Depth of CNG Fuel Storage Module with Handles (B)	33.8" (859mm)
Maximum Width Between Mounts (C)	34.5" (876mm)
Minimum Allowable Width (C)	33.75" (857mm)
Width of CNG Fuel Storage Module (D)	84.3" (2142mm)
Height of Load Light (E)	35.0" (889mm)
Height of the CNG Fuel Storage Module (F)	93.0" (2362mm)

Width (C) / Part Number

116785-001 (PACCAR / Peterbilt / Kenworth, Slave Module)	34.2" (869mm)
116785-002 (Volvo / Mack, Slave Module)	33.8" (859mm)



FSM Vehicle Interface

Coolant Connection	N/A
Fuel Outlet Connection	-12 37° Flare, Stainless Steel
System Vent Valve Type	N/A
Vent Valve Flow Rate (Approximate)	N/A
Vent Port Interface	N/A

Cylinder Information

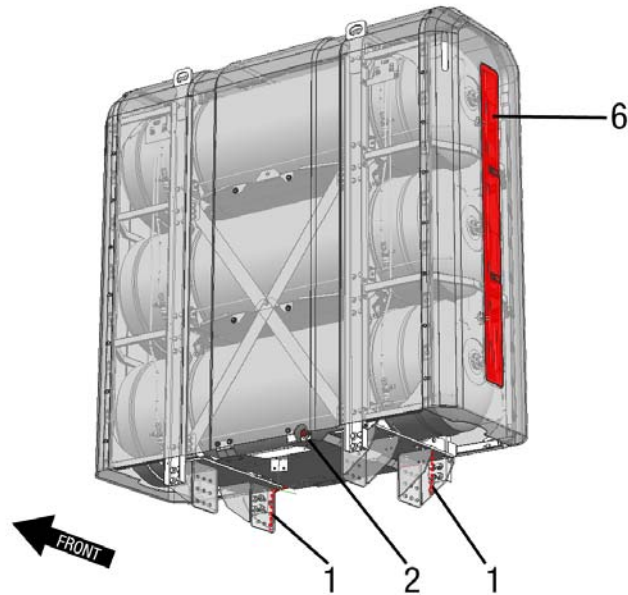
CNG Cylinder Service Life.....	See Cylinder Labels
Recommended Minimum CNG Fuel Quality	SAE J1616
Approved Service Gas	Compressed Natural Gas (CNG)
Cylinder Construction	Type IV
Cylinder Temperature Range	-40°F (-40°C) to 185°F (85°C)
Cylinder Manufacturer	Quantum Technologies

Shipping Information

Shipping Height	99" (2.52m)
Shipping Width	96" (2.44m)
Shipping Length	75" (1.91m)
Shipping Weight (One FSM / Pallet)	1898 lbs. (861kg)
Shipping Weight (Two FSM / Pallet)	3588 lbs. (1533kg)

Kit Contents

Part Number	Quantity	Description
116785	1	Fuel Storage Module
S1-20298-014	16	Screw, Heavy Hex Flange, M16-2.0 X 60
N1-20300-006	16	Nut, Crimp Lock, Hex Flange, M16-2.0
116161-001	2	1/16" Frame Mount Shim 0.0625" (1.6mm)
116161-002	2	1/8" Frame Mount Shim 0.125" (3.2mm)
116341	1	Interface Harness
116510	2	Hose Clamp, SAE No. 10, Stainless Steel



Component Location

Fuel Outlet Pipes (1).....	Base of Back Cover / Next To Left & Right Side FSM Support
Electrical Connector / Interface (2)	Base Of Front Cover / Between Frame Rails
System Vent Valve (3)	N/A
System Vent Cap (4)	N/A
Fill Panel (5)	See Note 1
Cylinder Access Door (6)	Right Side / Middle Of Side Cover

Note 1: This module requires the use of a remote fill panel or must be used in conjunction with a FSM equipped with a fill panel.

Accessories

Description	Part Number
RH 25"x90" Slave Module	116691
RH 25"x80" Slave Module	116727
LH 25"x90" Slave Module	116721
LH 25"x80" Slave Module	116728
Fuel Outlet Pipe – Slave Module, Cylinders to Tee	116810
Fuel Outlet Pipe – Slave Module, Tee to Left Side	116812
Fuel Outlet Pipe – Slave Module, Tee to Right Side	116811
1/16" Frame Mount Shim (0.0625", 1.6mm)	116161-001
1/8" Frame Mount Shim (0.125", 3.2mm)	116161-002
10' CNG Low Pressure Flex Hose	116574-003
12' CNG Low Pressure Flex Hose	116574-004
18' CNG Low Pressure Flex Hose	116574-006

General Maintenance

Inspect the CNG cylinder and brackets every 3 years or 36,000 miles (60,000 km), whichever comes first. The frequency and level of inspection may vary based on state and local requirements.

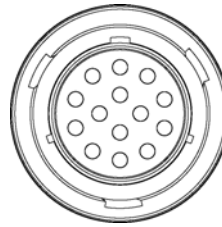
For additional information, refer to the *Type IV Compressed Natural Gas (CNG) Cylinder Installation and Maintenance Guide* available at www.qtw.com.

Configuration Options

Description	Part Number
Fill Receptacles with Filter	TBD
Fill Receptacles without Filter	TBD
Transfer Valve Kit	116665
Grab Handle Relocation Kit	TBD

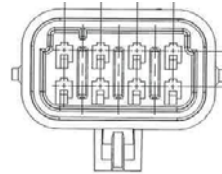
Appendix A – Interface Connections

A	Vehicle Ground	H	Fuel Gauge Driver
B	Low Voltage Disc 12v	I	Fuel Gauge Driver
C	Ignition Solenoid Pwr	K	Fuel Gauge Driver
D	Key Switch 12v Pwr	L	N/A
E	F-CAN	M	Fill Box Lighting Pwr
F	F-CAN	N	Lighting Ground
G	Fuel Gauge Driver	O	Load Lights Pwr



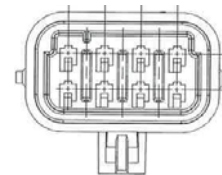
Electrical Connector / Interface

PACCAR / Peterbilt / Kenworth			
A	Vehicle Ground	E	N/A
B	N/A	F	F-CAN
C	Ignition Solenoid Pwr	G	F-CAN
D	Key Switch 12v Pwr	H	Fuel Level Signal



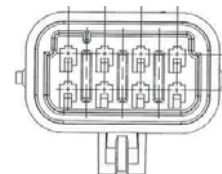
Vehicle 8-Pin Connector

Freightliner			
A	Vehicle Ground	E	N/A
B	N/A	F	N/A
C	Ignition Solenoid Pwr	G	N/A
D	Key Switch 12v Pwr	H	Fuel Level Signal



Vehicle 8-Pin Connector

Volvo / Mack			
A	Vehicle Ground	E	N/A
B	N/A	F	N/A
C	Ignition Solenoid Pwr	G	N/A
D	Key Switch 12v Pwr	H	Fuel Level Signal



Vehicle 8-Pin Connector

Delphi 12142000 2-Pin Connector	
A	Switched Power – Load Lights
B	Lighting Ground

Interface Harness Options

Part Number	MFR Application	Description	Specifications
116341	All	Main Harness - Lights Only	
116818	PACCAR / Peterbilt	Fuel Gauge	
116817	PACCAR / Kenworth	Fuel Gauge	
116819	PACCAR	Wire Harness – Fuel Gauge	
116821	Peterbilt - 300 / 600 SERIES	Wire Harness – Ignition Jumper	
116815-005	As Required	Fuse – ATO, 5A	
116816	Kenworth T800	Terminal – Fuel Gauge	