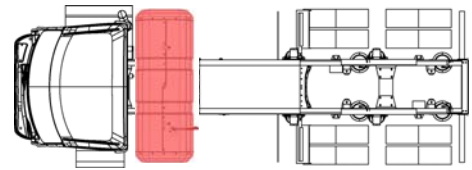


**Part Number:** 116944

**Part Description:** Fuel Storage Module (FSM)  
41 Gen 2 Back Of Cab Slave



## Product Technical Specifications

### General Specifications

Designed Location .....	Back Of Cab (BOC)
Gasoline Gallon Equivalancy (IA) .....	46.6 GGE
Gasoline Gallon Equivalancy (NIST) .....	39.7 GGE
Diesel Gallon Equivalancy (IA) .....	41.0 DGE
Module Weight (Empty) .....	580 lbs (263 Kg)
Module Weight (Full) .....	804 lbs (365 Kg)
Total Internal Cylinder Volume .....	141 ±2 Gallons (534 ±8L)
Fill Panel Location .....	N/A
Cylinder Certifications .....	Refer to Data Sheet 114093
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 149°F (65°C)
Fill Flow Rate (Standard Fill Receptacle with Filter)* .....	N/A
Fill Flow Rate (Standard Fill Receptacle without Filter)* .....	N/A
Fill Flow Rate (High Flow Fill Receptacle with Filter)* .....	N/A
Fill Flow Rate (High Flow Fill Receptacle without Filter)* .....	N/A

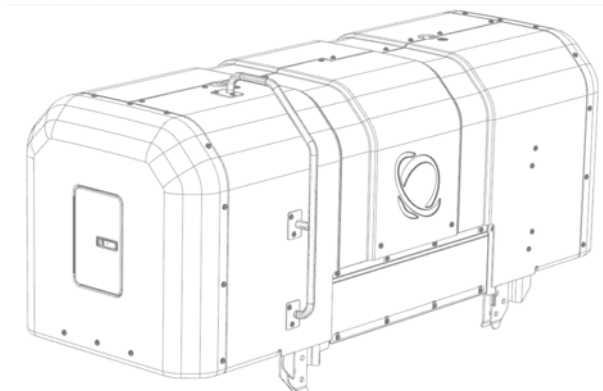
\* System fill rates will vary based on ambient temperatures, station pressures, and fuel quality.

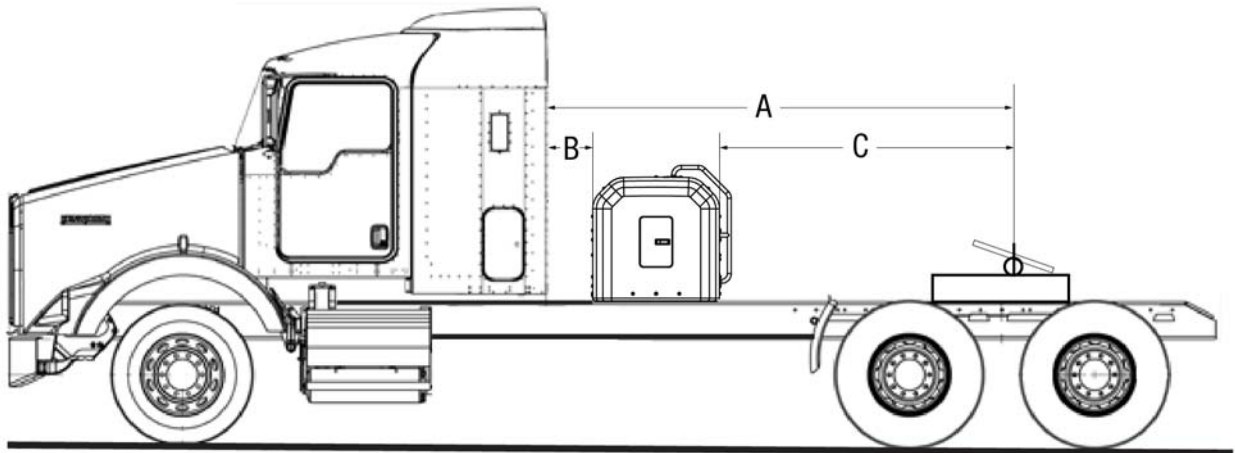
### Standard Equipment:

- Grab Handles, LHS Only

### Features:

- Drop & Go Install
- Easy Service Access
- Grid Friendly Mounting





**⚠ 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) ..... 110.8" (2814mm)
- Minimum Distance Between Cab and FSM (B) ..... 5.0" (127mm)
- Minimum Distance Between FSM and Kingpin (C) ..... 70.0" (1778mm)\*

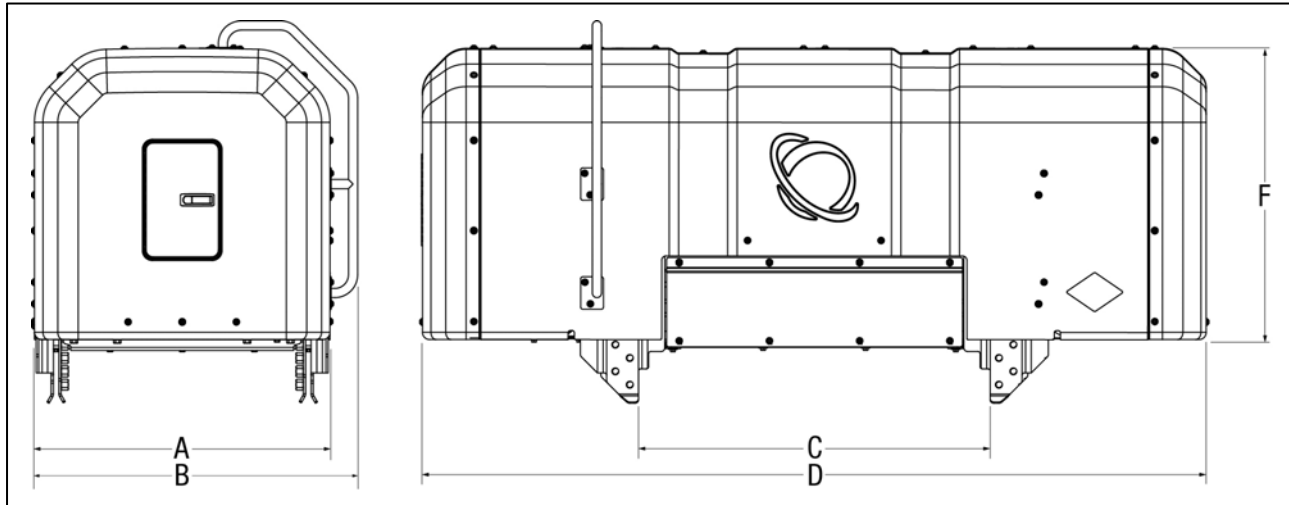
*\* Verify measurement with the 5th wheel in the forward most position. Trailers with non-standard (42" or 48") kingpins may require additional wheelbase and clearance.*

**Electrical Requirements**

- Voltage Range ..... N/A
- Nominal Current Draw ..... N/A
- Peak Current Draw ..... N/A
- Electrical Interface Connector ..... N/A

**Fluid Specifications**

- Coolant Type ..... N/A
- Coolant Flow ..... N/A
- Coolant Concentration ..... N/A



### FSM Dimensions

Depth of CNG Fuel Storage Module (A) .....	32.8" (833mm)
Depth of CNG Fuel Storage Module with Handles (B) .....	35.8" (911mm)
Allowable Frame Width (C) .....	33.7"-34.5" (857-876mm)
Width of CNG Fuel Storage Module (D) .....	86.1" (2187mm)
Height of Load Light (E) .....	N/A
Height of the CNG Fuel Storage Module (Above Frame) (F) .....	33.2" (842mm)
With Handles (Above Frame) .....	36.2" (920mm)

**FSM Vehicle Interface**

Coolant Connection .....	N/A
Fuel Outlet Connection .....	N/A
System Vent Valve Type .....	N/A
Vent Valve Flow Rate (Approximate) .....	N/A
Vent Port Interface .....	Male 37° Flare
TPRD Outlets (2) .....	3/8" tube, Swagelok
High Pressure Fuel Inlet/Outlet Connection .....	1/2" ORFS
High Pressure Fuel Inlet/Outlet Connection .....	3/8" ORFS

**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 .....	TBD
Shipping Width .....	96.0" (2.44m)
Shipping Length .....	75.0" (1.91m)
Shipping Weight (One FSM / Pallet) .....	TBD
Shipping Weight (Two FSM / Pallet) .....	TBD

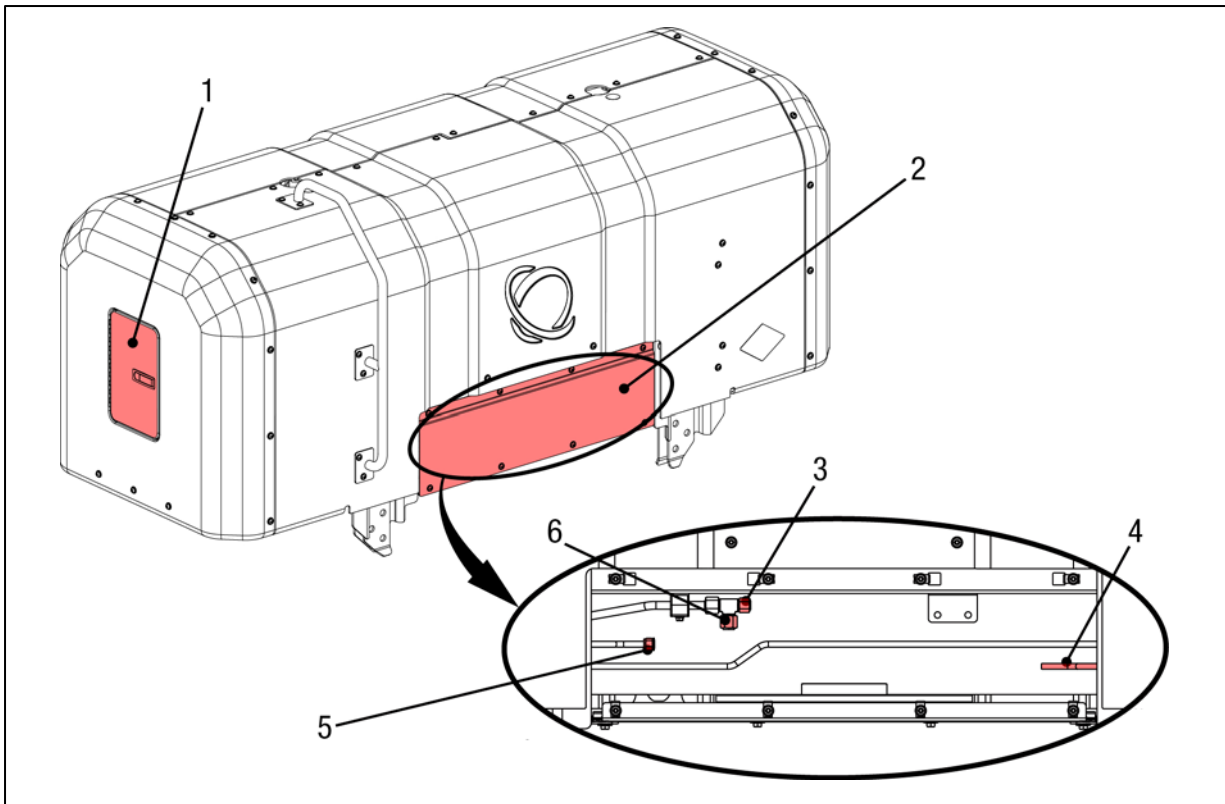
**Kit Contents**

Installation Kit	Part Number	Applications
Installation Kit 50x50 Spacing	117299	Freightliner
Installation Kit 60x50 Spacing	117300	Volvo / Mack
Installation Kit 75x50 Spacing	117301	PACCAR

Each of the installation kits will contain the installation hardware noted below and four of the brackets from table 2.

Installation Hardware	Part Number	Qty.
Screw – Heavy Hex Flange, M16-2.0 X 60	S1-20298-014	40 - 48
Nut, Crimp Lock, Hex Flange, M16-2.00	N1-20300-006	24 - 32
Eyebolt - Lifting, Metric M12	113723-004	2
Hose Clamp, SAE NO. 10, SS	116510	2

Table 2	Part Number	Qty.
Bracket - Mount, 50X50 Spacing	116385	4
Bracket - Mount, 60X50 Spacing	116784	4
Bracket - Mount, 75X50 Spacing	117159	4



**Component Location**

- (1) Cylinder Access Door
- (2) Access Panel
- (3) High Pressure Fuel Inlet/Outlet Connection (1/2" ORFS Connection)
- (4) TPRD Outlet (3/8" Swagelok)
- (5) TPRD Outlet (3/8" Swagelok)
- (6) High Pressure Fuel Inlet/Outlet Connection (3/8" ORFS Connection)

*\*For frame mounted cylinder connection*

**FSM Regulated Outlet Pressure and Flow Rate – N/A**

**FSM Filter Flow Rate – N/A**

**Fuel Flow Data**

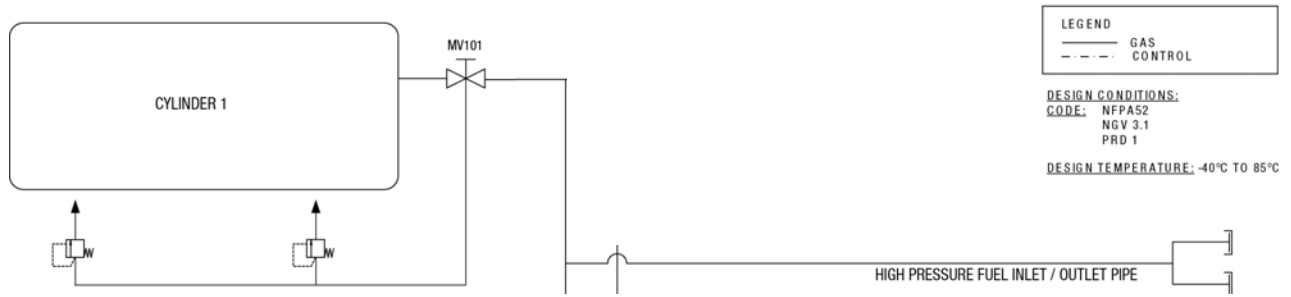
Regulator Set Pressure ..... N/A  
Maximum Regulator Flow @ 250 psi (Inlet) ..... N/A

*\* Refer to the FSM Regulated Outled Pressure and Flow Rate in this document for additional information.*

**Fuel Gauge Driver Module Output Voltages – N/A**



**System Mechanization**



MV101 - Manual Valve

## Accessories

Description	Part Number
RH 25"x90" Slave Module	116691
RH 25"x80" Slave Module	116727
Fuel Outlet Pipe – Standard Module, Left Side	115947
Fuel Outlet Pipe – Slave Module, FSM to Tee	116810
Fuel Outlet Pipe – Slave Module, Left Side	116812
Fuel Outlet Pipe – Slave Module, 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

## FSM Module Options

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

## Ordering Options

Name – Description	Part Number	Qty.
Paint – Standard	117284	1
Paint – Premium	117283	1

## 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](http://www.qtw.com).

**Appendix A – Interface Connections**

**Interface Connections – N/A**

**Interface Harness Options – N/A**