Installation of the 941B0466J AIM Environmental Protection Enclosure Kits for New Refrigeration Trailer Installs.

The 941B0466 AIM Environmental Protection Enclosure Kits are designed to provide environmental protection for AIM2 and AIM2.4 modules so they may be mounted externally, exposed to the weather. The 941B0466J AIM Environmental Protection Enclosure Kits can only be utilized with analog installations. This product bulletin covers the 941B0466J kit for AIM installations on new trailers with refrigeration units. This is an abstract of PB-150, Installation of the 941B0466 Environmental Protection Enclosure Kits. The AIM2 Installation Manual must be utilized for performing AIM module connections to the refrigeration trailer.

The 941B0466 AIM Environmental Protection Enclosure Kits are not required when utilizing the AIM2HD or AIM2.4HD Heavy Duty AIM modules and cables.

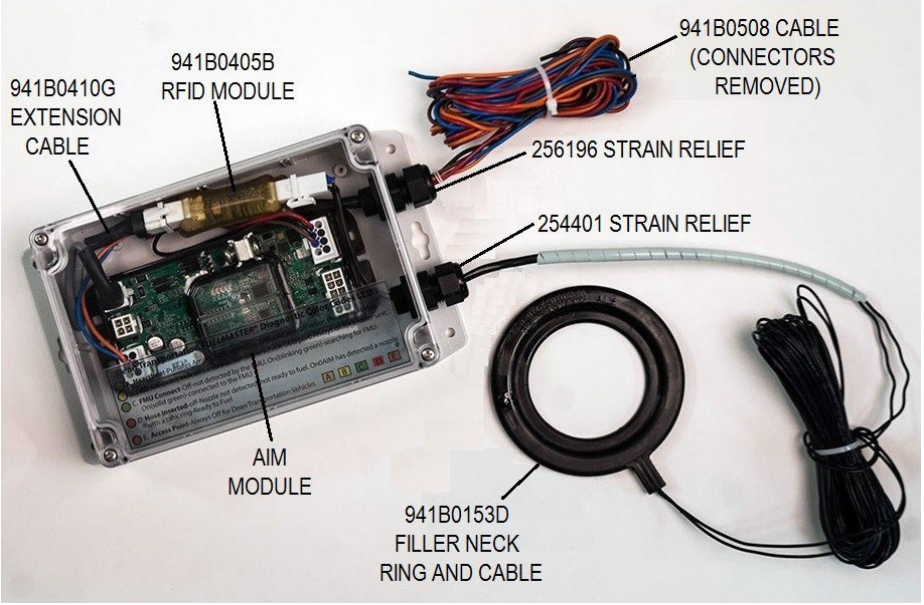

Figure 1. 941B0466 AIM Environmental Protection Enclosure Kit Options (Assembled View; One Configuration)

Kit Components

Components of 941B0466J are illustrated in Figure 1. The AIM module with an internal antenna is mounted in a weatherproof enclosure. RF can penetrate the plastic enclosure. Kit components are as shown below. The 3M Dual Lock Fasteners fit and function like Velcro, but have a different brand name.

Description	Qty	Part Number
Enclosure Base and Cover	1	257214
3M Dual Lock Fasteners, 8 inch	1	243973
Nylon Lock Nut	2	252409
O-Ring	2	252417
Small Cable Strain Relief	1	254401
Large Cable Strain Relief	1	256196
8-32 x 1-1/2-inch Screws	4	256714
8-32 Self-locking Nuts	4	228524
RFID Interface Module	1	941B0405B
Cable Assembly, AIM Ext Power/Chronometer, 7 Ft	1	941B0508
Fill Ring, 3-1/2 OD X 25 Ft	1	941B0153D
Cable Assembly, Ext, RF ID, AIM 2, 6 Inch	1	941B0410G

Selecting a Mounting Location

The orientation of the trailer when it is fueling is important. Select a mounting location for the enclosure that provides RF line-of-sight with the antennas on the FMU when fueling.

Connections will be required to the AIM module Power/Speed Sensor Port, the Chronometer Port, a Tank Ring Port, and a ground. Wherever the enclosure is mounted must support routing of these cables/wires to the enclosure.

For troubleshooting, visibility of the LEDs on the AIM module, and accessibility to update the firmware should be retained. The environmental enclosure has a see-through cover to provide visibility to the LEDs.

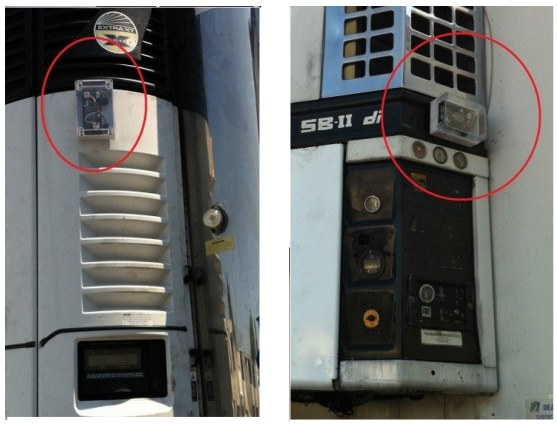

Figure 2. Mounting Examples Circled

Assembly/Installation.

Assembly and installation are performed concurrently. Perform the following:

1. Unpack and inspect all parts. Verify all parts are included, and nothing was damaged in shipment.

2. Installation will require three cable and wire connections to the AIM module using the 941B0508 cable, the 941B0153D cable, and a 12AWG ground wire. Select a mount location that best supports these connections, and provides RF line-of-sight to the FMU during fueling.

3. Plan and layout a route for the 941B0153D Filler Neck Ring Cable from the fuel tank filler neck to the enclosure mount location.

NOTE

- The enclosures are not predrilled for cable entry. Where the cables enter the enclosure may not be the same for every installation. Illustrations in these instructions show some mounting examples. Depending upon the desired mounting method, holes for the strain reliefs may be drilled anywhere in the base of the enclosure.
- A step drill (Figure 3) is a good choice for cutting holes in the enclosure for the strain reliefs. A 0.60-inch hole is required. The step drill needs to include steps for (as a minimum) 9/16 and 5/8 inch hole cuts.

Figure 3. Step Drill

4. Using Figure 1 for a reference, temporarily mount the AIM module in the enclosure to determine the best mounting location that supports installation of the equipment and strain reliefs. In some instances, it may be desirable to attach the strain reliefs so the wiring may be fed directly into the vehicle. Mark locations to cut holes for the strain reliefs.

5. Remove the AIM module, and drill holes for the strain reliefs. If a step drill is used, a smaller pilot hole may be necessary before using the step drill. Remove the plastic shavings. Verify the strain reliefs fit in the newly drilled holes.

6. At the selected mounting location, use the enclosure as a pattern and mark four mount holes for the enclosure.

7. Drill four 3/16” mount holes to mount the enclosure.

NOTE In some applications it may be necessary to replace the 8-32 x 1-1/2” screws and nuts with self-tapping screws.

8. Using the supplied 8-32 x 1-1/2” screws and nuts, mount the enclosure to the 3/16” mount holes.

9. The 256196 large strain relief is used with the 941B0508 cable. The 254401 small strain relief is used with the 941B0153D cable. Insert the strain reliefs in the enclosure. Install an o-ring over the threaded end of the strain relief, then install a nylon locknut tight against the o- ring. The strain reliefs have dual purpose: as a strain relief and weather seal.

10. See Figure 4. The figure illustrates the mounting of the Dual Lock Fasteners (like Velcro). An 8-inch length of the fasteners is supplied with the kit. Cut the 8-inch

length into two 4-inch lengths. Remove the backing from one side of the fasteners, and attach one piece to the bottom side of each end of the AIM module.

NOTE	Do not place the fasteners over the AIM serial number.

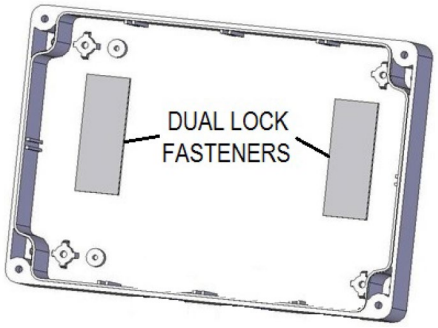

Figure 4. Placement of Dual Lock Fasteners To Mount AIM

11. Remove the backing from the other side of the fasteners, and adhere the AIM module to the enclosure.
12. The 941B0508 cable is two cables in one, and the connectors are removed from one end to allow for installation through the large strain relief. The fixed connectors are on the end of the cable outside the enclosure. Perform the following:
    a. Disassemble the large strain relief and thread the end of the cable without the connectors through the strain relief into the enclosure. Ensure the cable passes through all the components of the strain relief.
    b. Attach the connectors to the cable. See Figure 5 for reference. On plug C, insert the three pins into the corresponding receptacles in the connector. On plug D, insert the two pins into the corresponding receptacles in the connector.

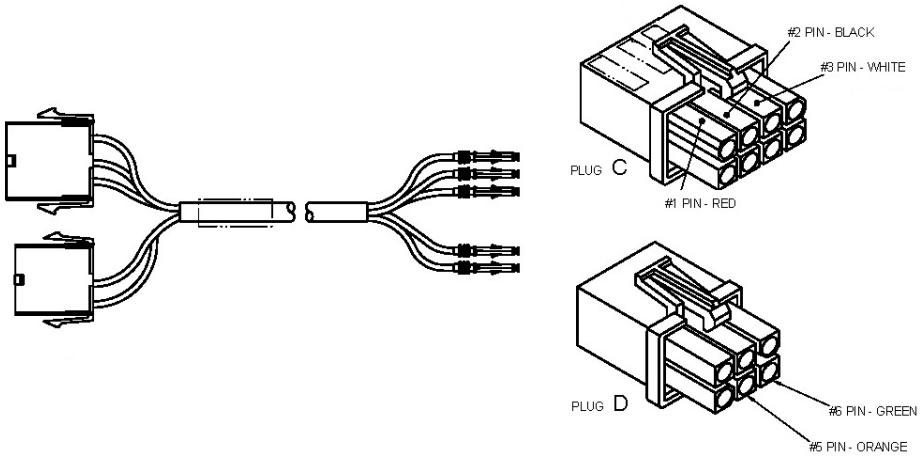

Figure 5. Reassemble 941B0508 Cable

    c. Insert plug C into the AIM module 8-pin receptacle.
    d. Insert plug D into the AIM module 6-pin receptacle.
    e. Reassemble the large strain relief.
13. Plug the 941B0508 cable 8-pin connector into the AIM module 8-pin Power/Speed Sensor Port.

14. Plug the 941B0508 cable 6-pin connector into the AIM module 6-pin Chronometer Port.
15. Outside the enclosure, connect the 941B0508 cable 8-pin connector to the 941B0411 Analog Speed Sensor Cable. Connect the 941B0508 6-pin connector to the 941B0421 Analog Chronometer Cable.
16. The 941B0153D cable has the RFID module connector removed to allow for installation through the small strain relief. Perform the following:
    a. Disassemble the small strain relief, and insert the end of the cable through the strain relief into the enclosure. Ensure the cable passes through all the components of the strain relief.
    b. Attach the connector to the cable. There are two pins on the end of the cable, and two pin receptacles in the connector. Either pin may be inserted into either pin receptacle in the connector.
    c. Reassemble the large strain relief.

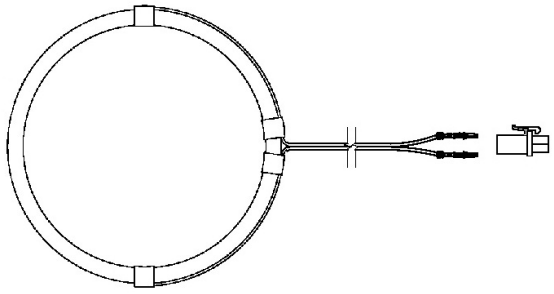

Figure 6. Reassemble 941B0153D Cable

17. Plug one end (either end) of the 941B0410G RFID AIM Extension Cable into one of the two AIM module Tank Ring Ports.
18. Plug the other end of the 941B0410G cable into the 4-pin connector end of the RFID Interface Module.
19. Plug the connector on the 941B0153D filler neck ring cable into the 2-pin connector end of the RFID Interface Module.
20. Extend the filler neck ring on the 941B0153D cable to the filler neck of the trailer fuel filler neck. Install the filler neck ring over the trailer fuel filler neck in accordance with the AIM2 Installation Manual.
21. Using cable ties, secure the 941B0411 cable, the 941B0421 cable, and the 941B0153D cable to the trailer.
22. Install/close the enclosure cover.
23. Perform Post Installation Tests in accordance with he AIM2 Installation Manual.

TIP	If any questions arise, contact Syntech Systems, Inc.'s Customer Satisfaction Center (CSC) at 1-800-888-9136, ext. 2, or email support@myfuelmaster.com.