



THERMO KING

ThermoLite™ 26W Solar Panel Installation Instructions



WARNING: Always wear safety glasses and protective gloves when working with batteries.

SB Unit Installation

1. Switch unit controls to the off position and disconnect the positive battery cable.
2. Temporarily remove the fuse from solar panel harness.
3. Attach adapter bracket (401271) to solar panel assembly as shown using supplied hardware (**Figure 1**).
4. Position solar panel on top of unit towards the curbside avoiding the muffler, condenser air outlet, and center mounting hole (**Figure 2**).

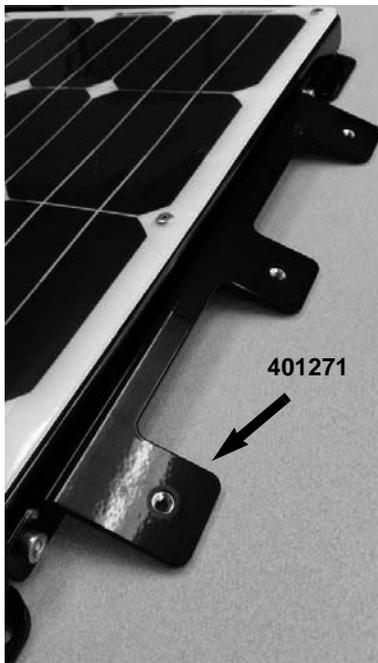


Figure 1

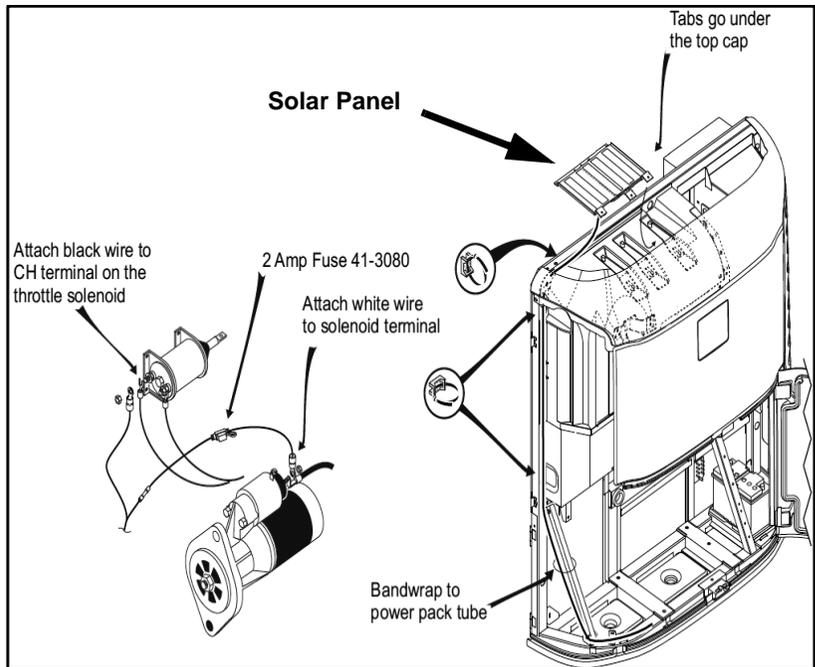


Figure 2

5. Using the mounting bracket as a template, mark and drill three 1/4" dia. holes in the top front cap, and three 3/16" dia. holes in the rear frame member.
6. Install front tabs of solar panel under the top cap and secure panel with supplied hardware (use bolts through top front cap, use rivets for the frame).
7. Route harness down the rear curbside frame member to the angled frame support and along the frame front member to the starter. **IMPORTANT: Do not attach wiring harnesses to the fuel lines.**
8. Attach white/red wire to the positive terminal on the starter solenoid (terminal with the battery cable attached).
9. Attach black wire to CH terminal on throttle solenoid.
10. Secure harness as required with bandwraps and anchors. **NOTE: Avoid drilling holes in plastic bulkhead.**
11. Reinstall fuse, reconnect positive battery cable and return unit to service.

SB Intermodal Guard Installation

1. Switch unit controls to the off position and disconnect the positive battery cable.
2. Temporarily remove the fuse from solar panel harness.
3. Attach adapter bracket (401272) to each side of the solar panel assembly with supplied hardware (**Figure 3**).
4. Position solar panel on top of unit and in the center of the intermodal guard.
5. Using the mounting bracket as a template, mark and drill two 3/16" dia. holes in the front frame member, and two 3/16" dia. holes in the rear frame member.
6. Secure the solar panel to the frame with the supplied rivets.

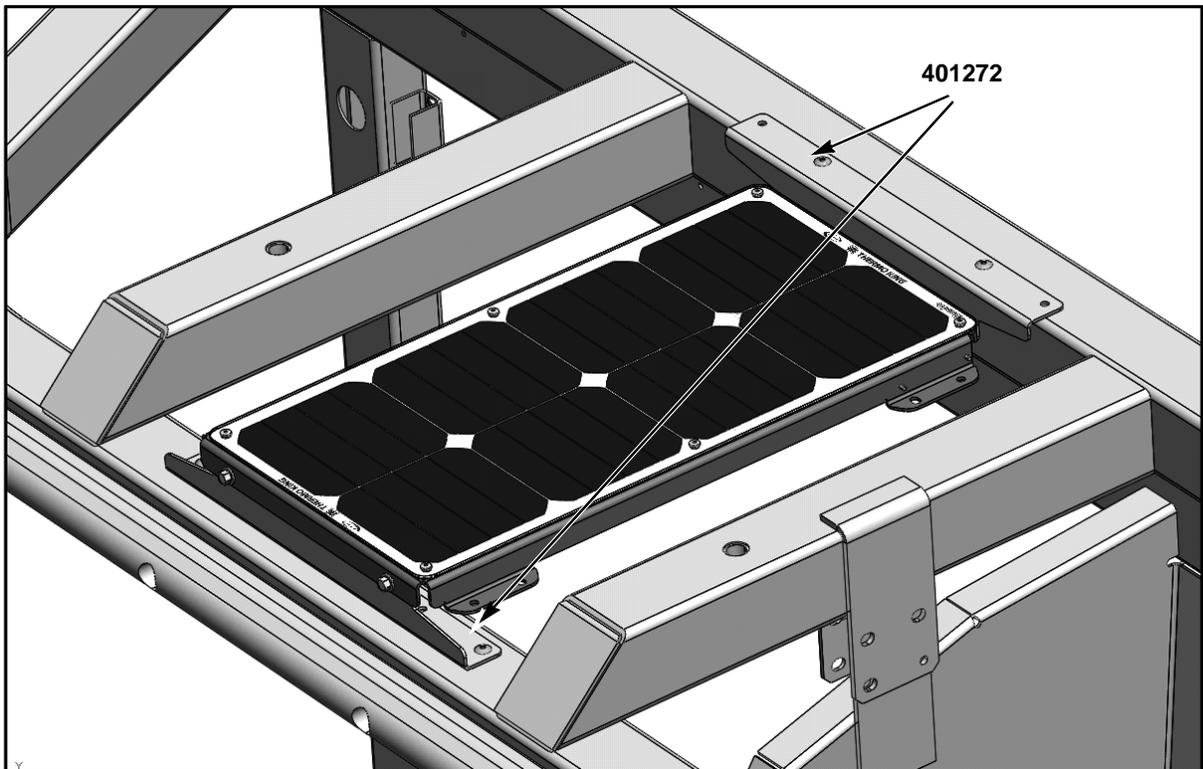


Figure 3

7. Route harness down the rear curbside frame member to the angled frame support and along the frame front member to the starter (**Figure 2**). **IMPORTANT: Do not attach wiring harnesses to the fuel lines.**
8. Attach white/red wire to the positive terminal on the starter solenoid (terminal with the battery cable attached).
9. Attach black wire to CH terminal on throttle solenoid.
10. Secure harness as required with bandwraps and anchors. **NOTE: Avoid drilling holes in plastic bulkhead.**
11. Reinstall fuse, reconnect positive battery cable and return unit to service.

Precedent Unit Installation

1. Switch unit controls to the off position and disconnect the positive battery cable.
2. Temporarily remove the fuse from solar panel harness.
3. Position the solar panel on top of the precedent unit between the condenser fans with the rear mounting tabs against the trailer wall (**Figure 4**).
4. Using the mounting bracket as a template, mark and drill one 3/16" dia. hole in each left and right frame member, and two 3/16" dia. holes in the rear frame member.
5. Secure the solar panel to the frame with the supplied rivets.

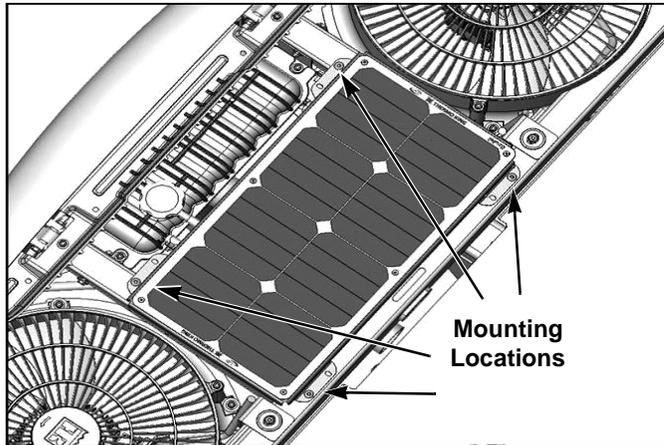


Figure 4

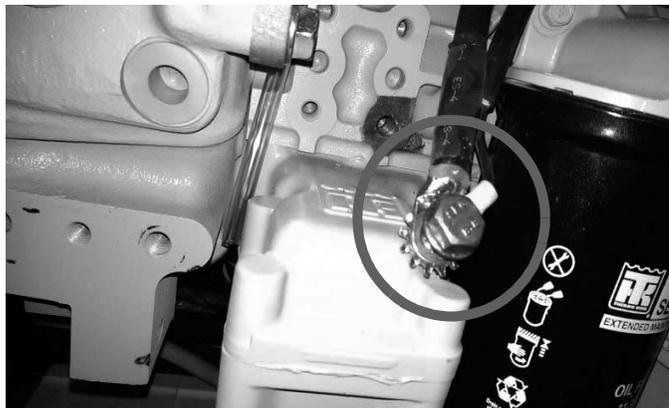


Figure 6 (Note external lock washer position)

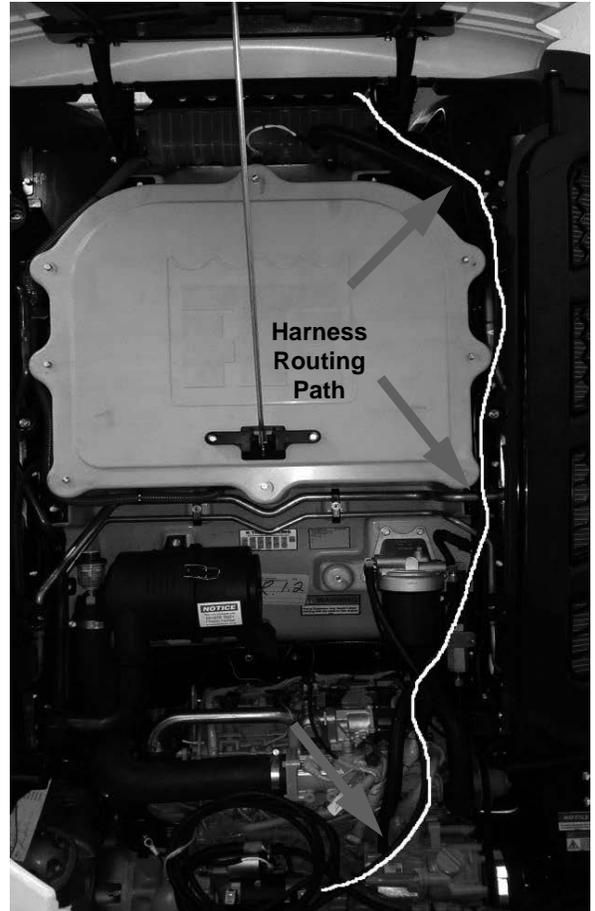


Figure 5

6. Route the harness down the roadside wall next to the condenser wall and under the fuel filter over to the starter (**Figure 5**). Ensure that the harness does not touch hot copper lines and that it is properly secured to other harnesses or to a solid structure. **IMPORTANT: Do not attach wiring harnesses to the fuel lines.**
7. Attach white/red wire to the positive terminal on the starter solenoid (terminal with the battery cable attached).
8. Attach black wire to the engine block ground stud behind the oil filter (**Figure 6**). **NOTE: The solar panel harness terminal ring should be installed under the flat washer followed by the large ground cable and the external lock washer last.**
9. Coil up the extra harness length in front of the starter and secure with bandwraps.
10. Reinstall fuse, reconnect positive battery cable and return unit to service.

Precedent Intermodal Installation

1. Switch unit controls to the off position and disconnect the positive battery cable.
2. Temporarily remove the fuse from solar panel harness.
3. Thermo King does not offer a kit to mount the solar panel onto a intermodal guard. Depending on the configuration of the intermodal guard being used, adapter brackets may need to be fabricated by the installer.
 - Adapter brackets should be a minimum 10 gauge aluminum, painted or powder coated.
 - The mounted panel should not be above the highest point on the intermodal guard.
 - Fabricated adapter brackets should attach to the solar panel in at least four locations and be attached to the intermodal guard in at least four locations also.
4. Follow the cable routing and installation instructions (Steps 6-10) from the Precedent installation section on page 3.

This kit includes:

40-1269 Kit Solar Base (with hardware kit)

Order separately:

40-1271 Kit Solar SB Adapter

40-1272 Kit Solar SB Intermodal Adapter

NOTE: Hardware kit included with 40-1269. This hardware is required to use adapter kits.

TEST PROCEDURE

To properly test the solar output you must have the following items:

- Halogen lamp (500W or greater) or be outdoors in the daylight.
- Voltage meter
- Amp clamp or ammeter

1. Put voltmeter on the battery and measure the voltage.
 - Voltage must be less than 12.8V for the solar panel controller to turn on.
 - If battery voltage is not less than 12.8V then put a 12V load on the battery.
2. If indoors, put at least a 500W halogen lamp approximately 24" above the solar panel and turn it on.
3. Put voltmeter on the battery.
4. Put amp clamp around the positive cable from the solar panel.

Voltage reading should begin increasing or stay the same.

Amperage reading should be greater then .300 mA

The solar panel controller may take up to a minute to turn on. The solar panel must be connected to the battery in order to turn on the charge controller.

