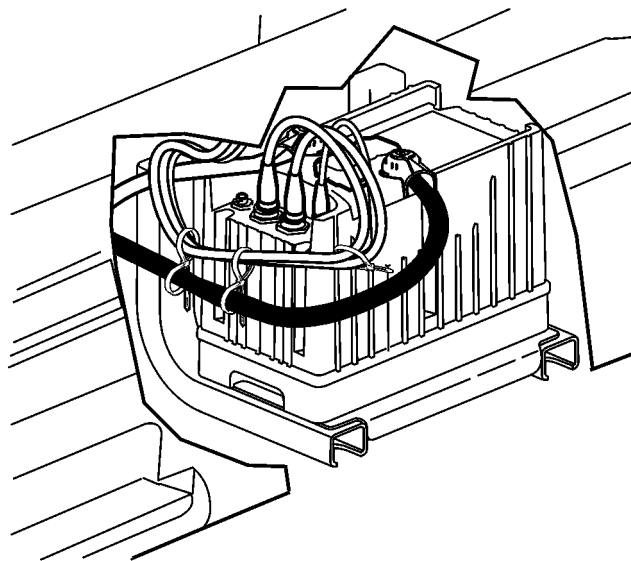


Truckpower Inverter/Charger Replacement Procedure

Inverter/Charger



W3005027

This service information provides repair/installation procedures for the Truckpower¹ inverter/charger.

The Truckpower inverter is a modified sine wave inverter/charger designed to be mounted on the main frame rail of the truck. It is a sealed, dust and water resistant unit weighing approximately 16 kg (35 lb).

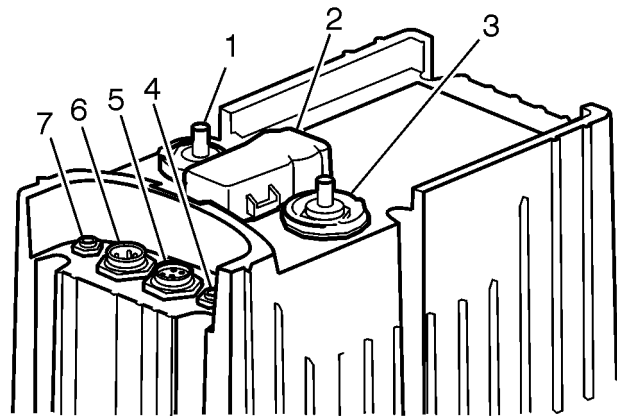
For detailed Truckpower operating and troubleshooting information, refer to the "Truckpower Inverter/Charger Owner's Guide," provided with each vehicle.

¹Truckpower is a trademark of Xantrex International. Xantrex is a registered trademark of Xantrex Technology Inc.

Design and Function

Inverter/Charger

The Truckpower¹ inverter/charger operates as an inverter and charger depending upon its circumstances. When the unit is inverting, it is said to be in invert mode and is referred to as an inverter. When the unit is charging, it is in charge mode and is referred to as a charger. For complete operating information refer to the “*Truckpower Inverter/Charger Owner’s Guide*,” provided with each vehicle.



W3005041

- 1 Positive terminal
- 2 Over-current protection fuse
- 3 Negative terminal
- 4 Remote toggle switch connection
- 5 AC input from Shorepower
- 6 AC output to vehicle
- 7 Battery temperature sensor

Inverter Function, Basic Operation

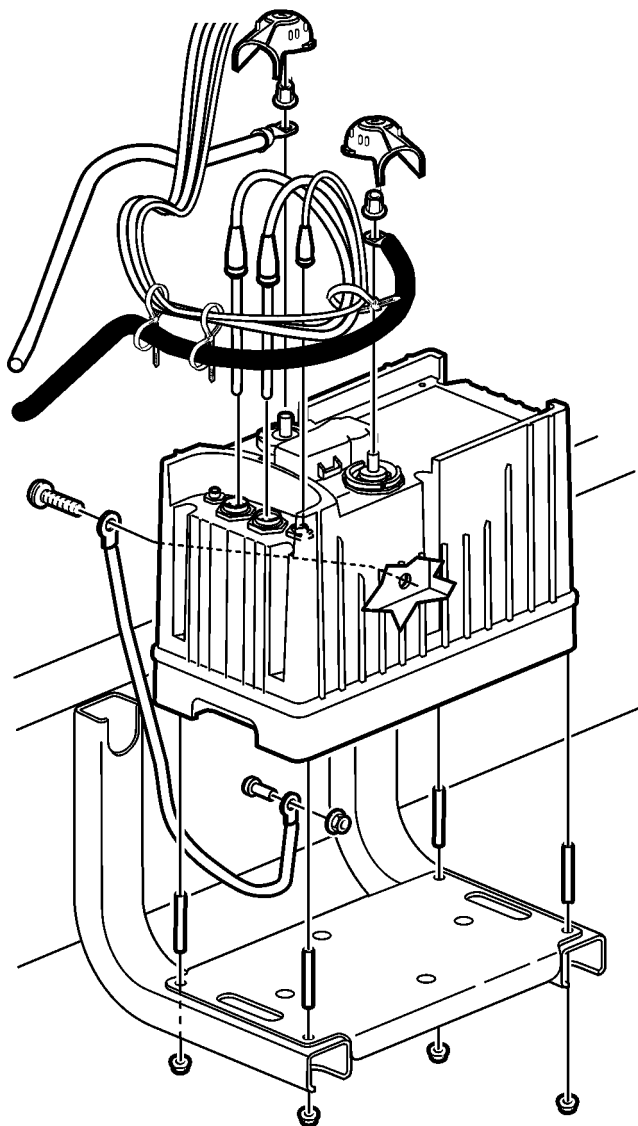
- Ability to run appliances — multiple loads up to 1000 watts total, continuously.
- Surge capability: Truckpower will manage loads up to 3000 watts for short periods of time.
- Low voltage shutdown: The inverter shuts off when the batteries reach a predetermined voltage set in the microprocessor. The built-in microprocessor continually monitors the batteries thus ensuring enough engine starting power. It also regulates frequency and voltage and protects against overload, short circuits and over-temperature.
- Automatic shutdown: when the unit does not detect a load for 24 hours This feature prevents the inverter from drawing power from the batteries if it is inadvertently left on without a load.

Charger Function, Basic Operation

- 50 amp charging when connected to shorepower.
- Automatic transfer to invert mode: When the truck’s AC shorepower cord is disconnected, Truckpower automatically switches to invert mode. When AC shorepower is available again, the inverter automatically switches to charging/pass-through mode.
- Load management capability temporarily reduces charging current when a large AC load is applied to the inverter output.

Service Procedures

3969-03-02-01 Inverter, Replacement



W3005028



WARNING

To reduce the risk of electrical shock, turn off the inverter/charger from the remote switch, then disconnect both AC (shorepower) and DC (battery) power from the unit before working on any circuits connected to it. Turning off the remote ON/OFF switch alone will not reduce the risk of shock.



WARNING

Do not dismantle the inverter/charger; it contains no user-serviceable parts. Internal capacitors remain charged after all power is disconnected. Attempting to service the unit yourself could cause electrical shock or fire.

Do not operate the inverter/charger if it has received a sharp blow, been dropped, or otherwise damaged. If the unit is damaged, return it to your authorized Volvo dealer.

NOTE: Omit steps 1 and 13 in vehicles built before 10-02. Side fairings are not easily removable on earlier models. Work is done from inside fairings.



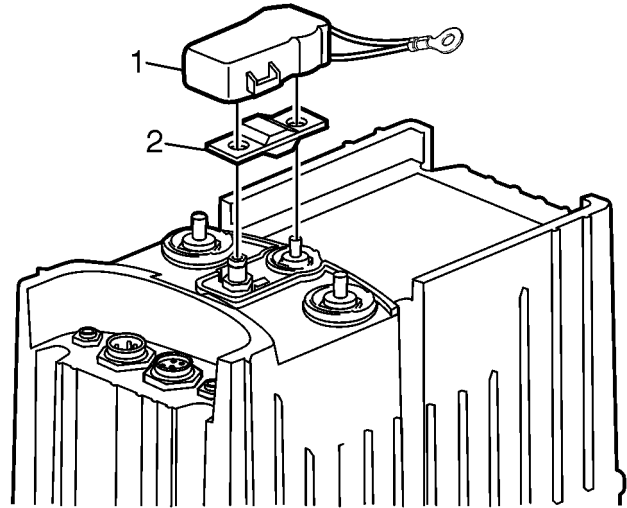
DANGER

Before working on the vehicle, set the parking brakes, place the transmission in neutral, and block the wheels. Failure to do so can result in unexpected vehicle movement and cause serious personal injury or death.

- 1**
Tilt out and remove the lower air fairing, if equipped with "tilt" fairings.
- 2**
Remove the battery negative cables and disconnect any 120 volt power cables (to truck).
- 3**
At the inverter, disconnect positive and negative caps and cable connections.
- 4**
Disconnect the input/output connections.
- 5**
Remove the ground cable from the inverter.

- 6**
Remove the mounting nuts and remove the inverter from the vehicle.
- 7**
Remove the mounting studs from the defective inverter and install them on the replacement inverter.
- 8**
Position the replacement inverter in the mounting bracket and secure fasteners.
- 9**
Install the ground cable.
- 10**
Install the input/output connections.
- 11**
At inverter, install positive and negative cable connections and caps.
- 12**
Install battery negative cables.
- 13**
Install the lower air fairing, if removed in step 1.

Fuse, Replacement



W3005042

- 1 Fuse cover
- 2 Fuse



DANGER

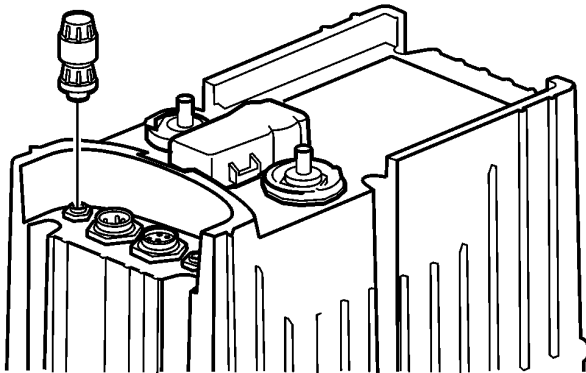
Before working on the vehicle, set the parking brakes, place the transmission in neutral, and block the wheels. Failure to do so can result in unexpected vehicle movement and cause serious personal injury or death.



WARNING

To reduce the risk of electrical shock, turn off the inverter/charger from the remote switch, then disconnect both AC (shorepower) and DC (battery) power from the unit before working on any circuits connected to it. Turning off the remote ON/OFF switch alone will not reduce the risk of shock.

Temperature Sensor, Replacement



W3005043



DANGER

Before working on the vehicle, set the parking brakes, place the transmission in neutral, and block the wheels. Failure to do so can result in unexpected vehicle movement and cause serious personal injury or death.



WARNING

To reduce the risk of electrical shock, turn off the inverter/charger from the remote switch, then disconnect both AC (shorepower) and DC (battery) power from the unit before working on any circuits connected to it. Turning off the remote ON/OFF switch alone will not reduce the risk of shock.

1

Push down and turn to remove.