



Truck Series 770K Kit

for Volvo Trucks

Installation Guide

Truck Series 770K Kit Installation Guide

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IMPORTANT SAFETY INSTRUCTIONS

This manual contains important safety instructions that should be followed during the installation and maintenance of this product.

To reduce the risk of electrical shock, and to ensure the safe installation and operation of this product, the following safety symbols have been placed throughout this manual to indicate dangerous conditions and important safety instructions.



WARNING - A dangerous voltage or condition exists in this area. Use extreme caution when performing these tasks.



CAUTION - This procedure is critical to the safe installation or operation of the unit. Follow these instructions closely.



NOTE - This statement is important. Follow instructions closely.

- All electrical work must be done in accordance with local, national, and/or international electrical codes.
- Before installing or using this device, read all instructions and cautionary markings located in (or on) the manual, the batteries, and the inverter.
- Do not expose this unit to rain, snow or liquids of any type. This product is designed only for indoor mounting.
- To reduce the chance of short-circuits when installing or working with the inverter or the batteries, use insulated tools.
- Remove all jewelry such as rings, bracelets, necklaces, etc., while installing this system. This will greatly reduce the chance of accidental exposure to live circuits.
- The inverter contains more than one live circuit (AC and batteries). Power may be present at more than one source.
- This product contains no user-serviceable parts. Do not attempt to repair this unit.

SAVE THESE INSTRUCTIONS

1.0 INSTALLATION

Pre-installation

1. Unpack the kit to make sure you have everything and familiarize yourself with each component. If parts are missing or damaged contact the point of purchase immediately.
2. Review your truck and identify the locations of:
 - the battery box
 - potential DC, and battery temperature sensor cable runs
 - interior mounting locations for the inverter/charger and the RC8 remote control
3. Gather the following tools and installation accessories:
 - SAE open end wrenches and socket set
 - screw driver set
 - ½" drill motor, drill bit set and 2" hole saw
 - utility knife
 - wire cutters and strippers
 - measuring and fish tape
 - needle-nosed pliers
 - masking tape
 - #10 AWG green wire & #10 AWG crimp-on ring terminal
 - silicon
 - 1 ½" dia. flexible plastic split conduit
 - 9" & 12" nylon ties
 - large cable cutters and cable crimpers (optional)
 - 4/0 welding cable and crimp-on ring terminals (optional)
 - 1" dia. shrink tubing (optional)
 - heat gun or gas torch (optional)

1.0 INSTALLATION

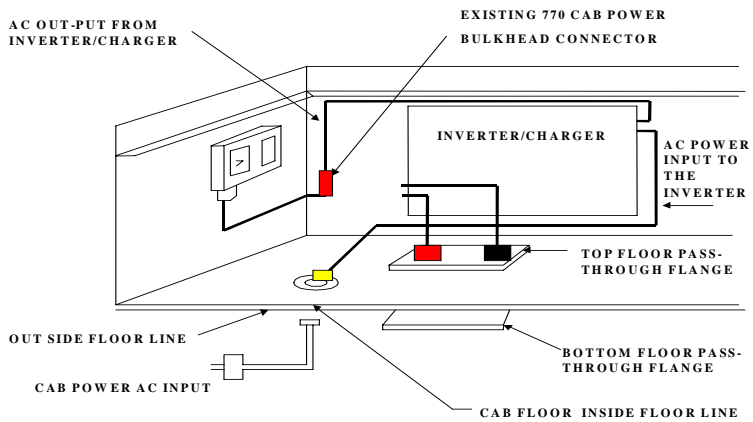


Figure A
Basic Installation and Wiring

1.0 INSTALLATION

1. Disconnect the positive and negative battery cables at the batteries.
2. Locate a position in or immediately around the positive cable end of the battery box to mount the fuse-block assembly.
 - make sure to leave room at both ends to attach the 4/0 battery cables
 - remove the clear plastic cover from fuse-block assembly and set it aside
 - place the fuse-block assembly in a desired location
 - mark mounting hole locations with a pencil or awl
 - drill four ¼" holes in the battery box and mount the fuse-block assembly using the included hardware
3. From below the cab, disconnect the external AC input connector.
 - remove the large nut and washer
4. From inside the cab, lift the AC input harness out of the floor (storage compartment)
 - leave the other end connected to the cab power box located on the driver's side wall of the same storage compartment
5. Mark the location for the inverter/charger mounting bracket.
 - mount the bracket in the front-left corner of driver's side storage compartment approximately 6" to 8" away from the front wall
 - note the vertical part of the bracket mounts away from you and faces toward interior bulkhead wall
 - once the location is identified, climb under the truck and make sure the area is clear of:
 - structural supports
 - wire harnesses
 - exhaust system components
 - using the bracket as a template, drill four ¼" mounting holes through the floor of the cab
 - insert four ¼" X 1" bolts through the mounting bracket and floor and secure using fender washers, lock washers and then nuts



NOTE: Looking down at the top of the pass-through, the positive (red) connection should be on the left and the negative (black) connection on the right.

6. Locate the floor pass-through block adjacent to the mounting bracket (see diagram). Tight turns with heavy 4/0 cable are required so leave yourself enough room.
 - once the location is identified, climb under the truck and make sure area is clear of:
 - structural supports
 - wire harnesses
 - exhaust system components
 - remove the pass-through block template from the box and tape it over the determined mounting location
 - drill the ¼" pilot holes
 - drill out the four corner holes with a 5/16" bit
 - use a 2" hole saw to cut out the remaining three holes

1.0 INSTALLATION

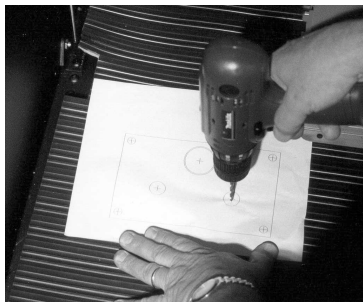


Figure B
Pass-Trough Template

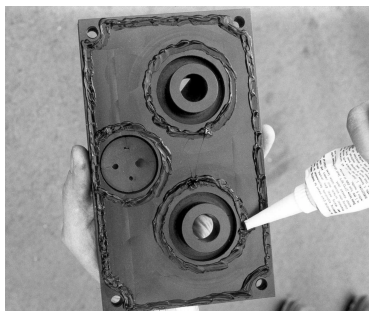


Figure C
Lower Pass-Through Block

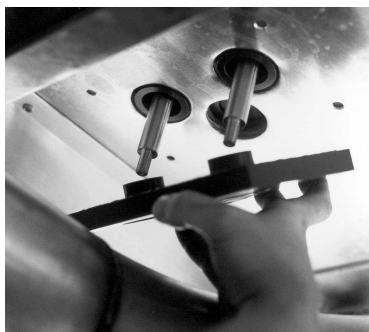
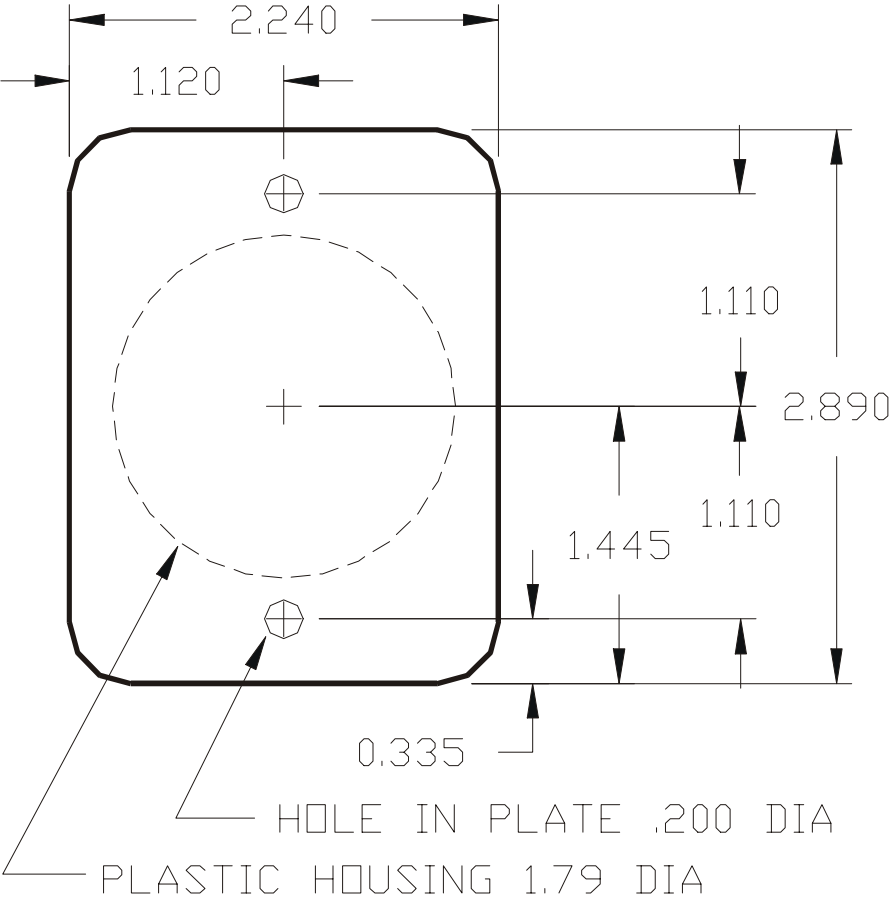


Figure D
Pass-Through Block - Lower Assembly

RC8 Remote Control Template



RC8 Remote Control Template

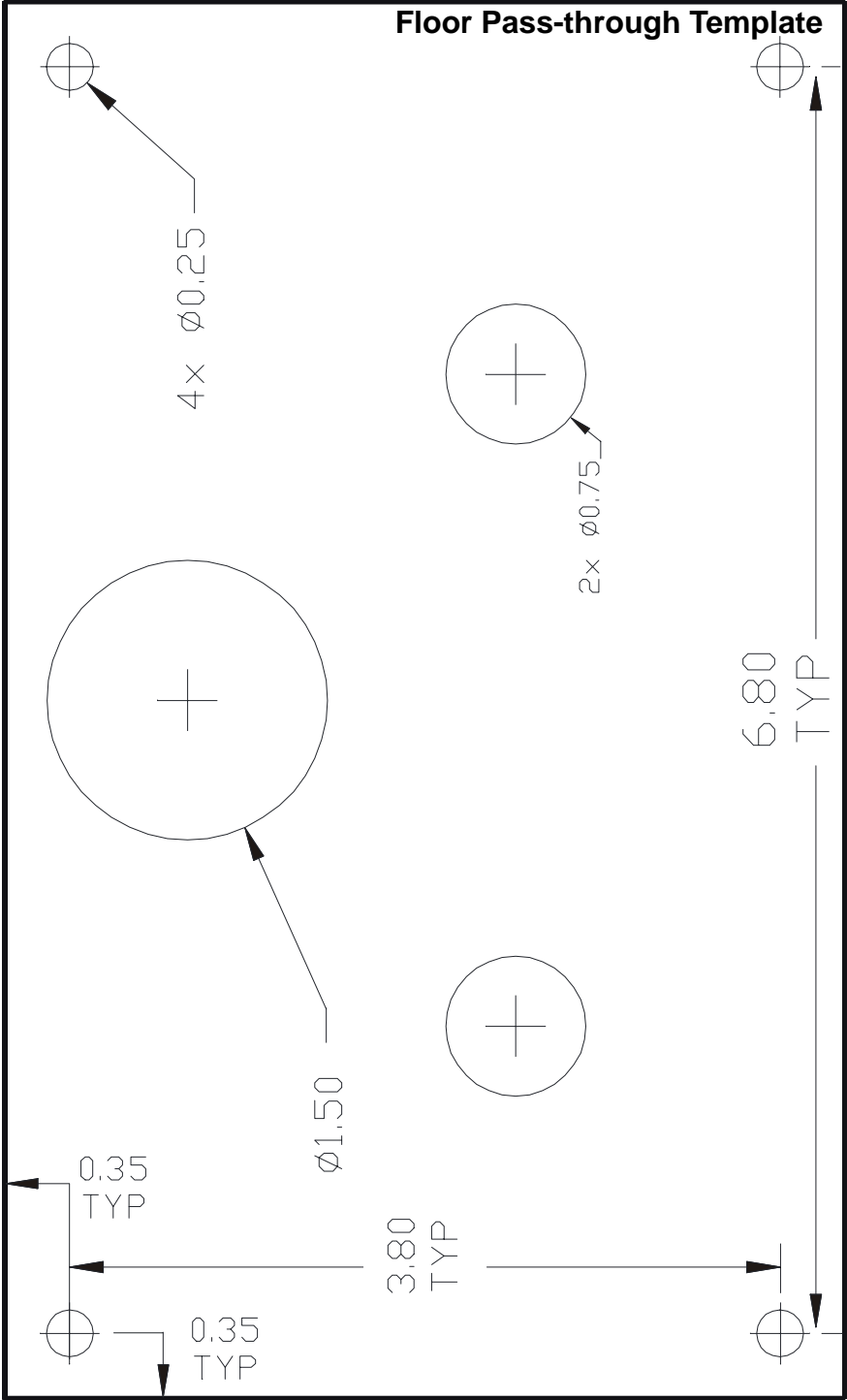
Remove this page from the manual
and place it over the mounting location.



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Floor Pass-through Template



Floor Pass-through Template

Remove this page from the manual
and place it over the mounting location.



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1.0 INSTALLATION

7. Remove the round rubber grommets from the top and bottom flange of the pass-through block and set them aside for later.
 - Screw the brass DC studs into the top half of the pass-through block.
 - Place the top flange into the holes in the cab floor
8. Apply a bead of silicon around the entire outside edge of the bottom pass-through block and around the three internal round holes.
9. Prepare four ¼" X 1" bolts with lock washers. From underneath the truck, place the bottom flange over the brass studs and bolt it into place.
10. Locate an unpainted location on the frame rail for the chassis ground wire.
 - cut a length of #10 AWG green wire that is long enough to go from the location on the frame rail up through the hole in the pass-through block
 - be sure to leave several feet of wire inside the cab for later use
 - crimp a #10 AWG ring terminal on the end of the ground wire and attach it securely to the unpainted frame rail location
 - feed the other end through the hole in the pass-through block
11. Take the black plastic battery temperature sensor (with the bright yellow telephone cord) out of the plastic bag.
 - remove the backing material to expose the adhesive
 - clean a spot between two batteries and attach the sensor to one of them
12. Leaving the batteries disconnected, plan the DC battery cable runs:
 - from the positive battery terminal to one end of the fuse-block
 - from the other end of the fuse-block to the positive stud on the floor-pass-through block
 - from the negative battery terminal to the negative stud on the floor-pass-through block
 - battery temperature sensor cable to the opening in the floor-pass-through block



NOTE: Make sure cable runs are clear of the exhaust system and that you allow enough slack for movement of the cab.

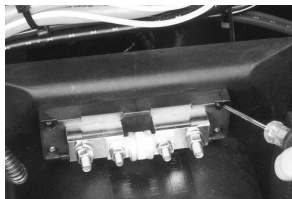


Figure E
Fuse Block Assembly

1.0 INSTALLATION

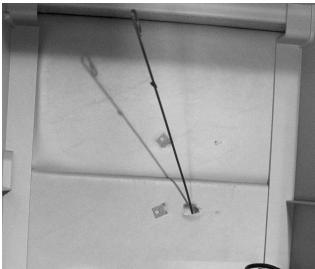


Figure F
Fish Tape

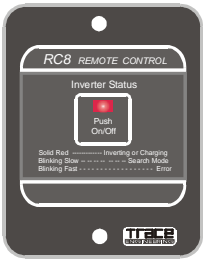


Figure G
RC8 Remote

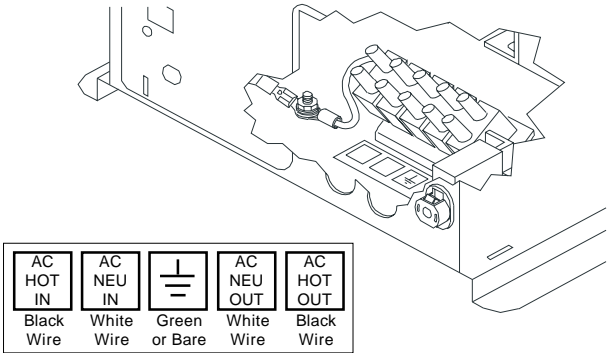


Figure H
Inverter Terminal Block

1.0 INSTALLATION

13. Make (or purchase) 4/00 battery cables of the appropriate length. Welding cable is best as it is the most flexible.

- fit the battery cables with flexible plastic conduit over areas where cables may be subject to chaffing
- install the positive and negative battery cables to the correct studs on the floor-pass-through block using 3/8" fine thread nuts and lock washers



NOTE: Do not insert a washer between the cable terminal and the brass stud.

- install the positive battery cable from the floor pass-through block to one end of the fuse-block
- attach the short positive cable to the other end of the fuse-block using the included lock washers and nuts



NOTE: Do not connect positive cable to battery at this time.

- secure the battery cables and battery temperature sensor cable to the cab supports and frame rails with nylon tie straps

14. Take one of the round rubber grommets and place the cables in the appropriate slot:

- the small round hole is for the green ground wire
- the rectangular slot is for the flat yellow battery temperature sensor cable
- the other two holes are unused

15. Remove the RC8 remote control switch from its packaging and locate the mounting template. The recommended mounting location is as follows:

- looking at the sleeper control panel, locate the remote control on the flat surface immediately to the left of the rotary fan on/off switch
- tape the template over the desired mounting location
- drill 1/8" mounting holes
- drill the 1/4" pilot hole for the hole saw
- remove the template
- cut the 2" opening with the hole saw
- feed fish tape up to hole and attach one end of yellow cable. Pull it down into driver's side storage compartment
- Plug the other end of the yellow cable into the back of the remote control until it snaps into place.
- Place the remote control into mounting hole and screw into place using the included hardware

16. Connect the RC8 remote control and battery temperature sensor cables by inserting them into the RJ-11 jacks on the front of the inverter/charger. When properly seated they will click into place.

17. Locate the chassis ground lug on the back of the inverter/charger.

- run the green chassis ground wire to the lug.
- cut off any excess wire, strip 1/2" of green insulation from wire, insert into the lug and tighten the set screw to secure wire

1.0 INSTALLATION

18. Locate the AC input wiring harness that ships with the kit (it is the harness with the large hexagon shaped nut at one end).
 - referencing page 30 of the inverter/charger manual, follow the procedure for wiring the of AC input to the inverter/charger
 - using the wire clamp supplied with the kit, secure the AC input power cord into the left hole (facing the unit)
19. Locate the AC output wiring harness that ships with the kit.
 - referencing page 30 of the inverter/charger manual, follow the procedure for wiring the AC output from the inverter/charger
 - using the wire clamp supplied with the kit, secure the AC outlet cord in the right hole (facing the unit)
20. Using the supplied hardware install the wiring compartment access cover.
21. Center the holes on inverter/charger mounting flange over the mounting bracket studs and secure it in place with lock washers and nuts.
22. Make (or purchase) 4/00 DC battery cables to go from the inside studs on the floor pass-through block to the DC studs on the back of the inverter/charger.
 - connect the DC battery cables to correct polarity studs on the back of the inverter/charger using the supplied lock washers and nuts
 - cover the connections with the corresponding red and black DC terminal covers (supplied)
23. Install the new AC input harness into the hexagonal hole in the floor of the cab (using the large washer and nut from the harness removed earlier in the installation).
 - reinstall the external input cord (removed earlier from underneath the cab)
24. Connect the AC output harness from the inverter/charger to the old hexagonal connector (removed earlier from the floor).
25. Secure the AC input and output harness wiring to the storage compartment walls using nylon ties.
26. Connect the battery cables to the batteries according to the following instructions:
 - connect the negative battery cable to the negative battery terminal (first)
 - connect the positive battery cable to the positive battery terminal
 - reinstall the battery box cover



NOTE: When you connect the positive battery cable to the positive battery post you can expect a spark. This is caused by the internal capacitors charging and is completely normal.

The installation is now complete. Refer to the inverter/charger owner's manual for complete operating procedures.

2.0 SERVICE INFORMATION

Trace Engineering takes great pride in its products and makes every effort to ensure your unit fully meets your independent powering needs.

If your product needs repair, contact our Service department at: (360) 435-8826 to obtain an RMA# and shipping information; or fax this page with the following information to: (360) 474-0616.

Please provide:

Model Number: _____

Serial Number: (if applicable) _____

Purchase Date: _____

Problem: _____

Include a telephone number where you can be reached during business hours and a complete return shipping address (P.O. Box numbers are not acceptable).

Name: _____

Address: _____

City: _____

State / Province: _____

Zip / Postal Code: _____

Phone: () _____

Country: _____



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3.0 WARRANTY

Limited Warranty

Trace Engineering warrants its power products against defects in materials and workmanship for a period of two (2) years from the date of purchase and extends this warranty to all purchasers or owners of the product during the warranty period. Trace does not warrant its products from any and all defects:

- (1) arising out of material or workmanship not provided by Trace Engineering;
- (2) resulting from abnormal use of the product or use in violation of the instructions;
- (3) in products repaired or serviced by other than Trace Engineering repair facilities;
- (4) in components, parts, or products expressly warranted by another manufacturer.

Trace Engineering agrees to supply all parts and labor, or repair or replace defects covered by this warranty with parts or products of original or improved design, at its option, if the defective product is returned to any Trace Engineering authorized warranty repair facility or to the Trace Engineering factory in the original packaging, with all transportation costs and full insurance paid by the purchaser or owner.

All remedies and the measure of damages are limited to the above. Trace Engineering shall in no event be liable for consequential, incidental, contingent, or special damages, even if Trace Engineering has been advised of the possibility of such damages. Any and all other warranties, expressed or implied, arising by law, course of dealing, course of performance, usage of trade or otherwise, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, are limited in duration for a period of two (2) years from the original date of purchase.

Some countries or states do not allow limitations on the term of an implied warranty, or the exclusion or limitation of incidental or consequential damage, which means the limitations and exclusions of this warranty may not apply to you. Even though this warranty gives you specific legal rights, you may also have other rights which vary from state to state.





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