The following instructions are intended to assist the user in the removal of the square style generator and the installation of a round generator with a new generator conversion kit. Please read all assembly instructions before performing modifications. Allow approximately 6 hours to complete the installation.

REQUIRED TOOLS
- Hammer
- Pry Bar or Screw Driver
- Drill
- Ratchet, 3/8 Drive with Sockets
- Fuel Transfer Pump (Optional)
- Engine Hoist w/Chain
- Chock Blocks
- Drill Bit, 3/8"

PARTS
Verify that all parts are accounted for. See Figure 1, Figure 2 and Table 1.

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**Figure 1. Generator Conversion Kit**

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**Figure 2. Generator Conversion Kit**

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**Table 1. Generator Conversion Kit**

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty</th>
<th>Part No.</th>
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<tr>
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<td>49164</td>
<td>KIT, GENERATOR REPLACEMENT</td>
<td>INCLUDES ITEMS W/#</td>
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</tbody>
</table>
WORK SAFELY!

Only a qualified service technician with proper training should perform this installation. If you need assistance with this installation, contact Multiquip for the location of its nearest ASC. Follow all shop safety rules when performing this installation.

STEP 1: SECURE LIGHT TOWER

1. Make sure both outriggers are extended. To extend the outriggers, pull the locking pin on the outrigger and hold while sliding out the outrigger assembly. See Figure 3.

   ![Figure 3. Deploying Outriggers](image)

   Figure 3. Deploying Outriggers

2. As soon as the pin clears the travel position hole, release it and continue sliding out the outrigger. The pin must snap into the outrigger locking hole in the extended position.

3. After extending all outriggers, rotate all trailer jack stands into the foot down position, then turn the crank handle on the jackstands clockwise to lower it and level the light tower.

4. Place chock blocks under each trailer wheel to prevent rolling. See Figure 4.

   ![Figure 4. Chock Blocks](image)

   Figure 4. Chock Blocks

STEP 2: DEPLOY MAST TO VERTICAL POSITION

Refer to Figure 5.

1. To release the mast from the mast cradle support, pull the retaining pin out of the cradle lock/release pin. Pull the cradle lock/release pin. This will unlock the mast from the horizontal position.

2. Remove the mast lock/release pin before raising tower to the vertical position.

3. To place the mast in the vertical position, turn the vertical mast winch hand lever clockwise until the mast is pointing upwards at 90 degrees.

4. Once the mast is in the vertical position, insert the mast lock/release pin to prevent the mast from falling.
STEP 3: DISCONNECT BATTERY CABLE
1. Disconnect negative battery cable. See Figure 6.

Figure 6. Disconnect Negative Battery Cable

STEP 4: REMOVE CABINET
1. For easier access to the generator, remove doors, side and top panels from trailer. Retain mounting hardware. See Figure 7.

Figure 7. Remove Cabinet

STEP 5: DRAIN/REMOVE FUEL TANK
1. Drain the fuel tank by utilizing a fuel transfer pump.
2. Disconnect fuel lines. Mark fuel lines for easy reference when reconnecting later.
3. Remove nuts and washers securing mounting bracket to frame. Remove fuel tank.

Figure 8. Drain/Remove Fuel Tank
STEP 6: DISCONNECT 4-WIRE POWER CABLE
Refer to Figure 9.
1. Remove side panel from ballast box.
2. Remove capacitor cover from the top of the generator.
3. Disconnect the red, black, white and green wires from the terminal block.
4. Secure power cable out of the way with a cable tie.

Figure 9. Disconnect Power Cable

STEP 7: REMOVE AIR CLEANER HOSE
Perkins engine only. Refer to Figure 10.
1. Remove air cleaner hose from air cleaner.
2. Secure air cleaner hose to relay fuse cable with a cable tie to keep them out of the way.

Figure 10. Remove Air Cleaner Hose

STEP 8: HOIST ENGINE
1. Hoist engine slightly with chain utilizing lift hook. See Figure 11. Use chain and lifting device of adequate lifting capacity. This will prevent the engine from tipping when generator is removed.

Figure 11. Hoist Engine
STEP 9: REMOVE SQUARE STYLE GENERATOR
1. Remove and discard generator support plate and hardware securing it. See Figure 12.

2. Remove bolts securing generator to engine. See Figure 13.

3. Use screw driver or pry bar to pry generator housing from engine flywheel. Use force. See Figure 13.

4. Use ratchet to remove bolts securing generator disc plate to flywheel. Remove generator. See Figure 14.

Figure 12. Remove Generator Support Plate

Figure 13. Pry Generator Housing from Engine

Figure 14. Detach Generator Disc from Engine

STEP 10: INSTALL ENGINE MOUNTING HARDWARE
1. Install new rear engine support bracket, P/N 49068. See Figure 15. Shimming may be required to ensure that it is flush with the trailer frame.

NOTICE
Bracket orientation is different for Perkins and Deutz engines. See Figure 15.
2. Using the holes in the rear engine support bracket as a template, drill 4 holes into the trailer frame. Use a 3/8" drill bit. See Figure 16.

3. Use the nuts, bolts, and washers from the kit to secure the rear engine support bracket to the trailer frame. Tighten securely. See Figure 17.

4. **Perkins engine only:** Remove and retain relay/fuse panel. See Figure 18.

5. Install rear engine mounting hardware from the kit. See Figure 19.
6. **Perkins engine only:** Reinstall relay/fuse panel over rear engine mount. Insert washers as required (see Figure 20) to allow more space between panel and engine.

   ![Figure 20. Reinstall Perkins Relay/Fuse Panel](image1)

**STEP 11: INSTALL ROUND STYLE GENERATOR**

1. Free the rotor from the housing by placing the generator disc plate down on top of two wood blocks. Place a shop cloth below to keep the rotor clean. Place a bolt or punch in the center of the rotor bearing and hit with a hammer to dislodge the rotor. See Figure 21

   ![Figure 21. Release Generator Rotor From Housing](image2)

2. Attach generator disc plate and housing to engine flywheel. See Figure 22.

   ![Figure 22. Attach New Style Generator](image3)

**STEP 12: INSTALL NEW ELECTRICAL HARDWARE**

1. Drill 3 holes (use 5/16" drill bits) in the ballast box for mounting of new excitation capacitor (25µF @425V) and terminal block. See Figure 23. Install capacitor with clamp and terminal block with jumper between terminals 2 and 3.

   ![Figure 23. Mount New Electrical Hardware](image4)
2. Connect the 4-wire power cable to the terminal block. Connect the 2 red wires from the generator cable to the capacitor and the 4 black wires to the other side of the terminal block. See Figure 24, Figure 25 and Table 2.

![Figure 24. New Electrical Wiring](image)

<table>
<thead>
<tr>
<th>Table 2. Wire Connections</th>
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<tr>
<td><strong>Generator Power Cable</strong></td>
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<td>33333 (BLACK)</td>
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<td>44444 (BLACK)</td>
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</table>

![Figure 25. Wiring Diagram](image)
**STEP 13: TESTING AND REASSEMBLY**

1. Reassemble the light tower in reverse order. **DO NOT** put the cabinet back on until testing is complete.

2. The main circuit breaker (25 amps) and 4 lamp circuit breakers (10 amps each) are located on the upper control panel (See Figure 26). Each lamp has a 10-amp circuit breaker.

3. Place the main circuit breaker (Figure 26) on the control panel to the ON position.

4. Set lamp circuit breaker #1 on the control panel to the ON position.

5. Wait a few minutes for the ballast to activate. Observe that lamp #1 is ON.

6. Repeat steps 2 and 3 for lamps 2 through 4.

7. If all the lamp circuit breakers are in the ON position (up), then all of the lights should be on.

8. If any of the lamps are not on, refer to the troubleshooting section in your operation manual.

9. Run the light tower for 10 minutes to ensure that the generator is working properly.

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**SHUTDOWN**

1. If a load is attached to the generator of the light tower, remove the load.

2. Set the four lamp circuit breakers on the control panel to the OFF position.

3. Place the MAIN circuit breaker on the control panel to the OFF position.

4. Wait a few seconds and observe that all four lamps are OFF.

5. Let the engine idle for a few minutes with no load.

6. Turn the ignition key to the OFF position. Store key in a safe location.

7. Reassemble the cabinet.

8. Lower light tower mast and place in stow position as outlined in this manual.

9. Place outriggers in tow position, and remove chock blocks.

10. Store light tower in a clean, dry location out of the reach of children and unauthorized personnel.

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**NOTICE**

If servicing is required, allow lamps to cool for about 15 minutes before removing lamps.

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**EMERGENCY SHUTDOWN**

1. Turn the ignition key to the OFF position and turn all circuit breakers to the OFF position.