



LT12 Series Light Towers

MULTIQUIP® Mecc Alte Generator Conversion Instructions

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.

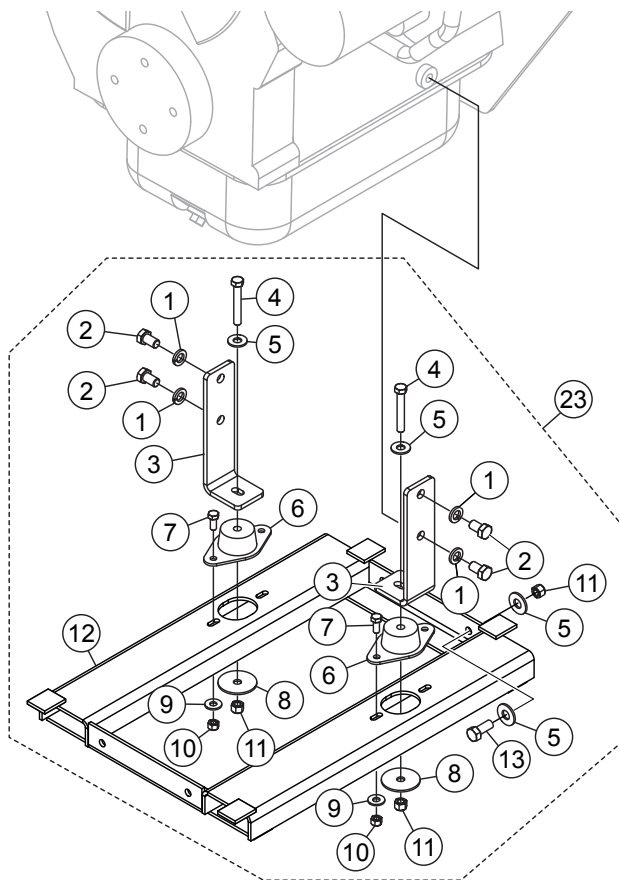


Figure 1. Generator Conversion Kit

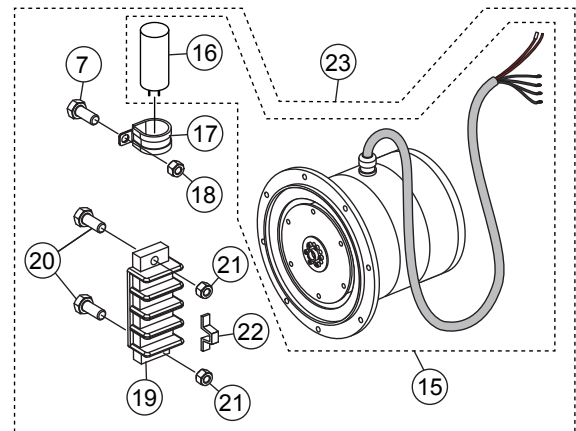


Figure 2. Generator Conversion Kit

Table 1. Generator Conversion Kit

Item	Qty.	Part No.	Description	Remarks
1#	4	5054 A	WASHER, LOCK 1/2 MED	
2#	4	17099	SCREW, HHC M12-1.75 X 20 ZN	
3#	2	49003	MOUNT, REAR ENGINE	
4#	2	8156	SCREW, HHC 3/8-16 X 2-1/2	
5#	10	4001	WASHER, FLAT USS 3/8 PLD	
6#	2	29269	MOUNT, VIB ENG	
7#	5	0655	SCREW, HHC 5/16-18 X 3/4	
8#	2	29043-001	WHEEL, POINTER	
9#	4	19470	WASHER, FLAT USS 5/16	
10#	4	5283	NUT, NYLOC 5/16-18	
11#	6	10133	NUT, NYLOC 3/8-16	
12#	1	49068	REAR ENGINE MOUNT	
13#	4	1023	SCREW, HHC 3/8-16 X 1-1/4	
15#	1	29895	GENERATOR, LT12 RD MECC ALTE LT3-100 60 HZ	INCLUDES ITEMS W/@
16@#	1	GECAP25MF	EXCITATION CAPACITOR, 25µF @ 425V	
17#	1	59005	CLAMP, LOOP 2"	
18#	1	49071	NUT, FLANGED 5/16-18 SERATED PLTD	
19#	1	19968	TERMINAL BLOCK, 4 GANG	
20#	2	8133	SCREW, PHP 10-32 X 3/4	
21#	2	10019	NUT, NYLOC 10-32	
22#	1	29071	JUMPER, QUICK, SCREW	
23	1	49164	KIT, GENERATOR REPLACEMENT	INCLUDES ITEMS W/#

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.

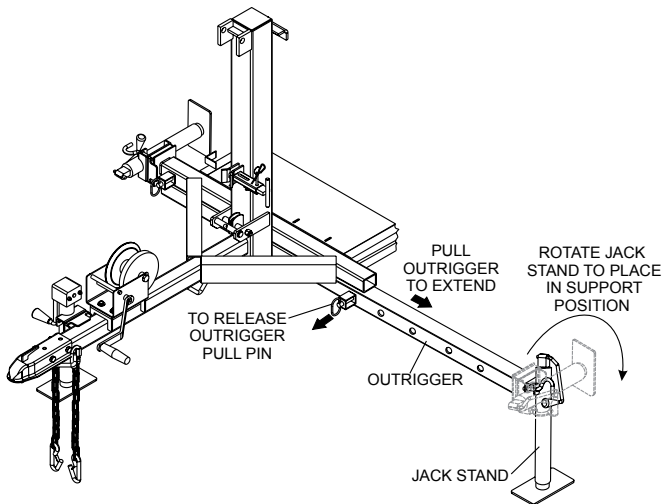


Figure 3. Deploying Outriggers

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.

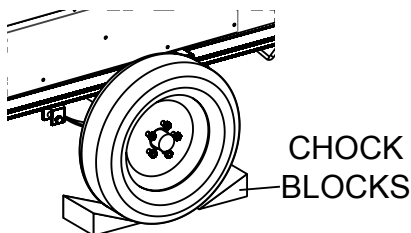


Figure 4. Chock Blocks

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

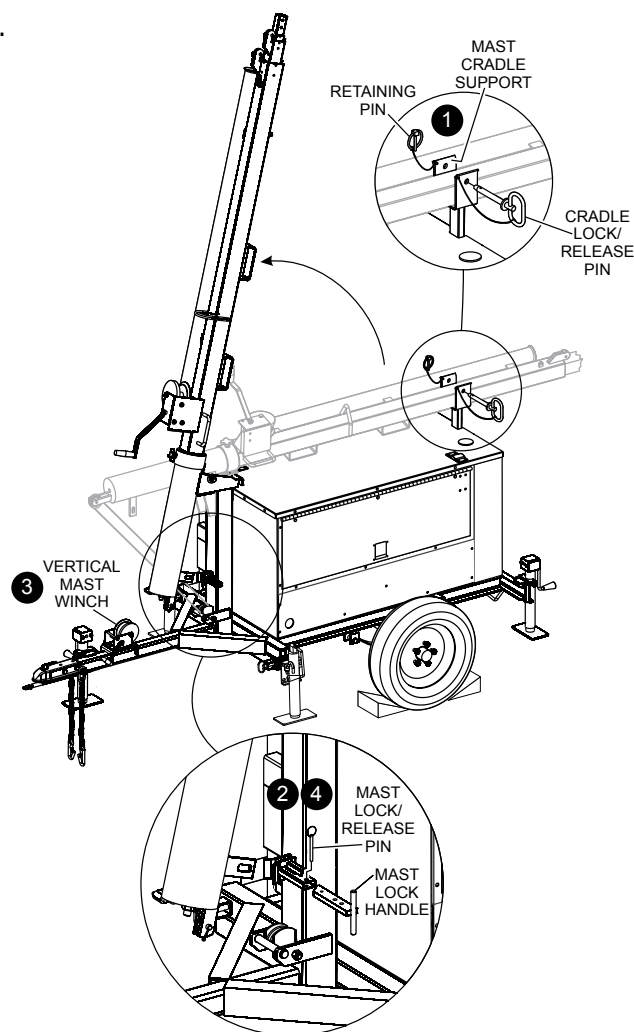


Figure 5. Deploy Mast to Vertical Position

STEP 3: DISCONNECT BATTERY CABLE

1. Disconnect negative battery cable. See Figure 6.

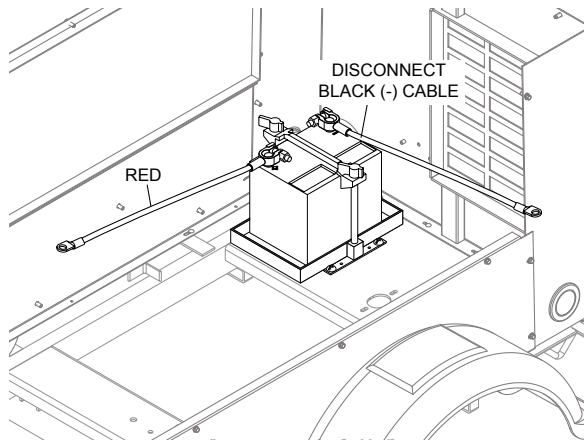


Figure 6. Disconnect Negative Battery Cable

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.

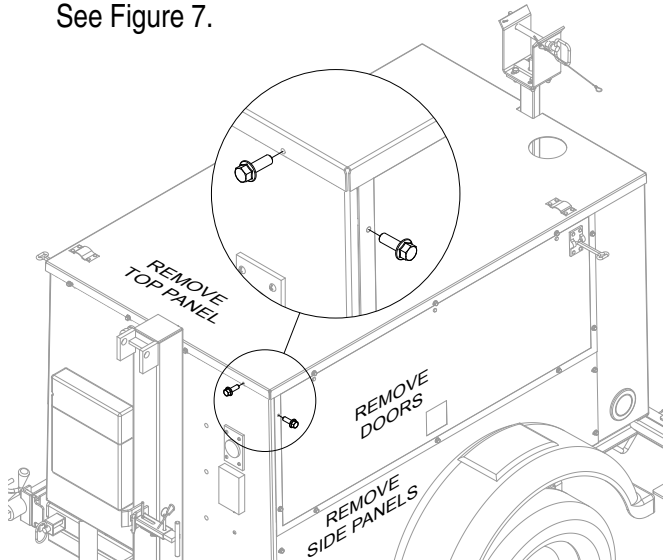


Figure 7. Remove Cabinet

STEP 5: DRAIN/REMOVE FUEL TANK

Refer to Figure 8.

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.

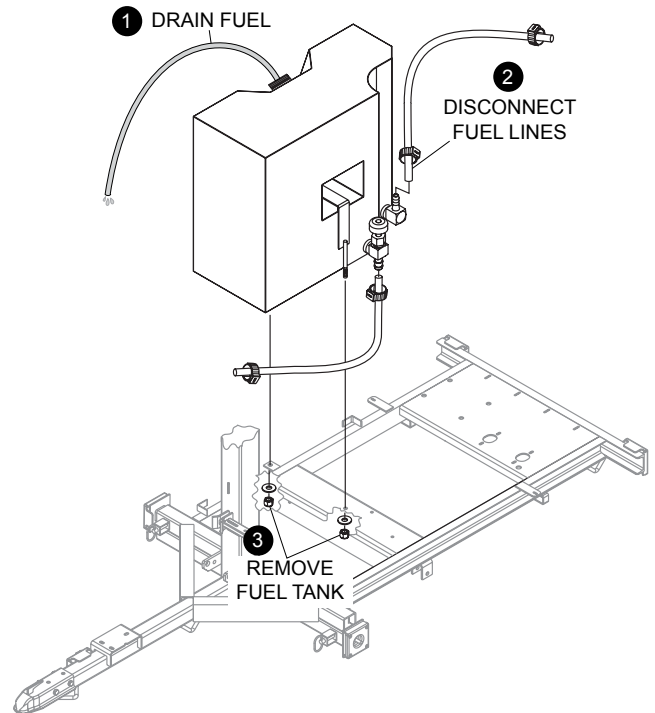


Figure 8. Drain/Remove Fuel Tank

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.

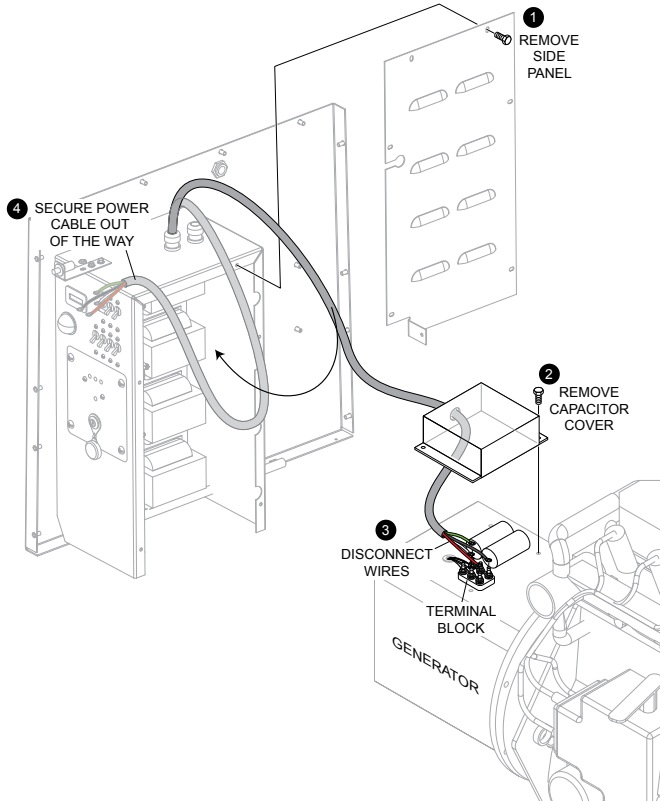


Figure 9. Disconnect Power Cable

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.

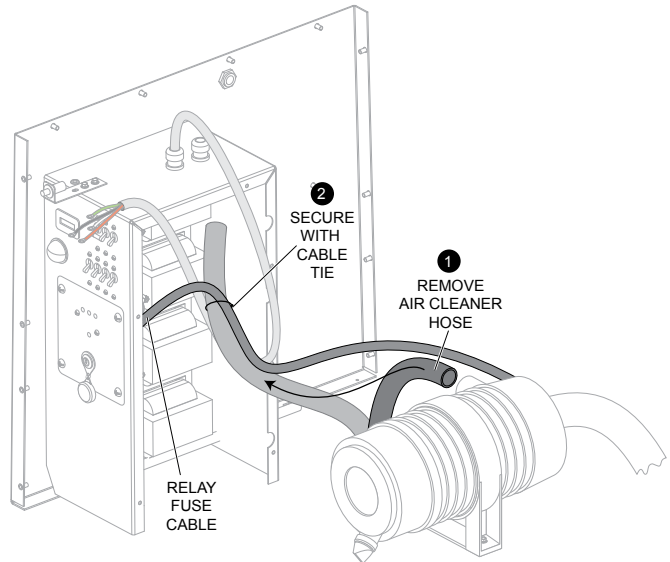


Figure 10. Remove Air Cleaner Hose

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.

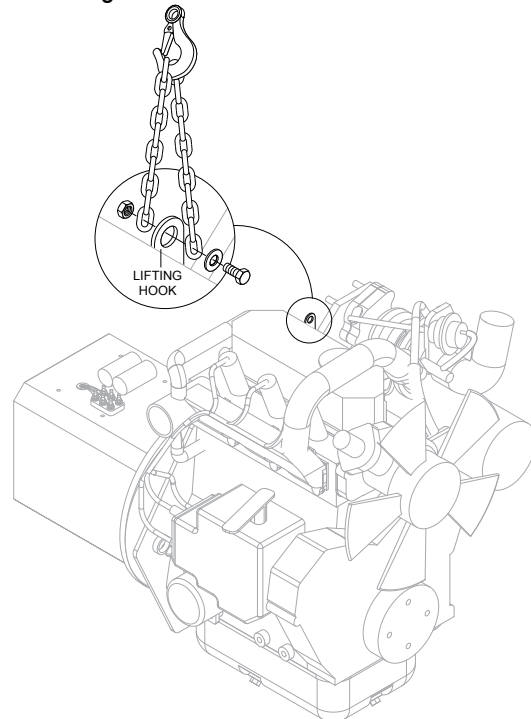


Figure 11. Hoist Engine

STEP 9: REMOVE SQUARE STYLE GENERATOR

1. Remove and discard generator support plate and hardware securing it. See Figure 12.

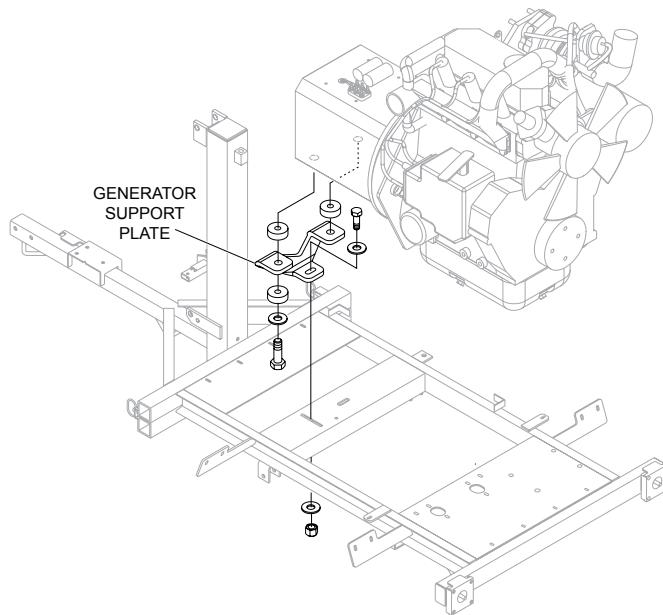


Figure 12. Remove Generator Support Plate

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.

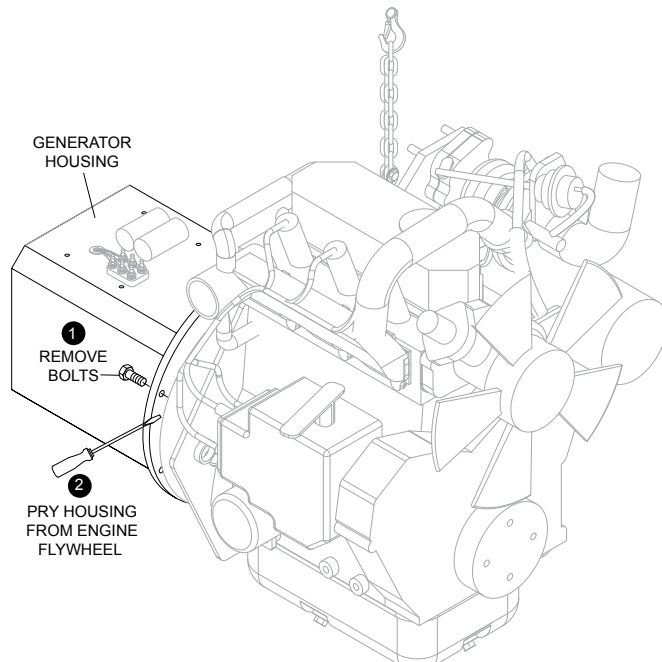


Figure 13. Pry Generator Housing from Engine

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

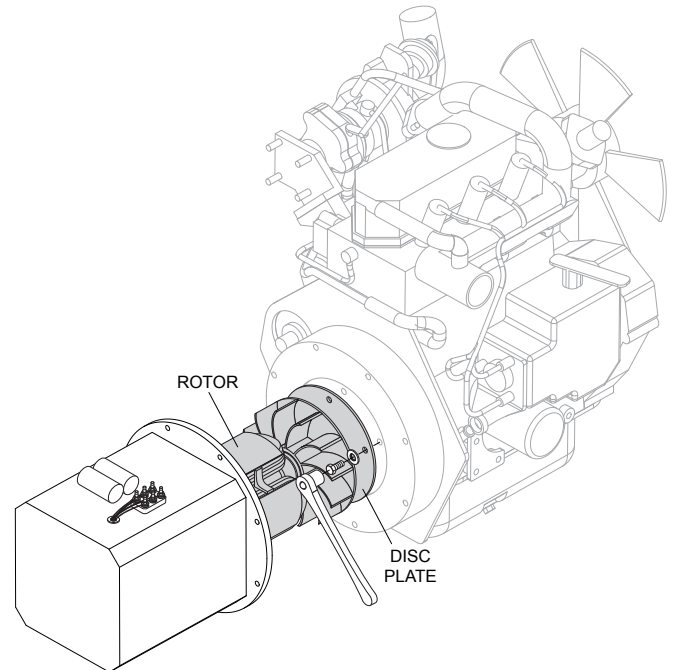


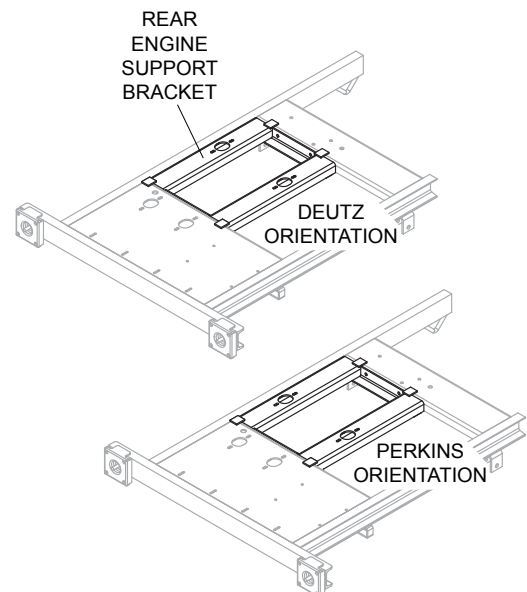
Figure 14. Detach Generator Disc from Engine

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.



- Using the holes in the rear engine support bracket as a template, drill 4 holes into the trailer frame. Use 3/8" drill bit. See Figure 16.

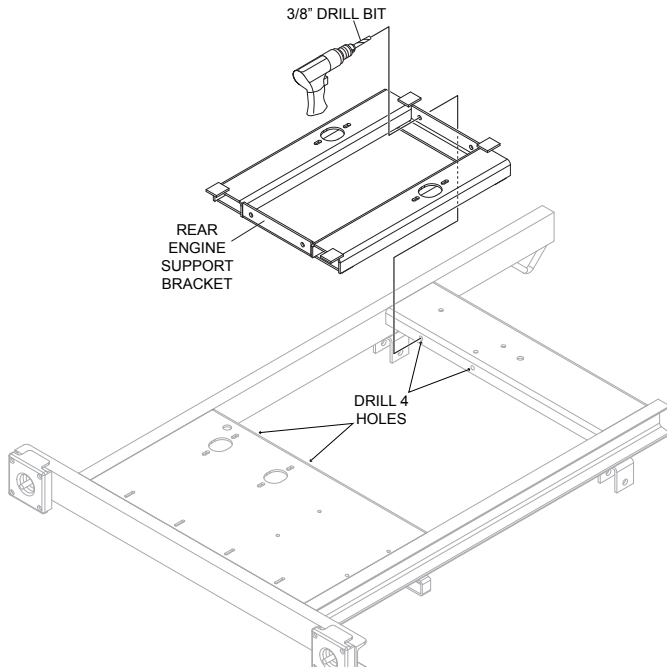


Figure 16. Drill 4 Holes in Trailer

- 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.

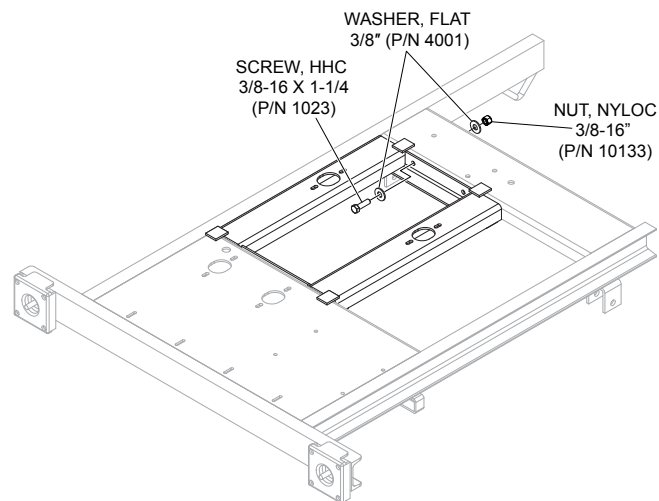


Figure 17. Secure Bracket to Trailer

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

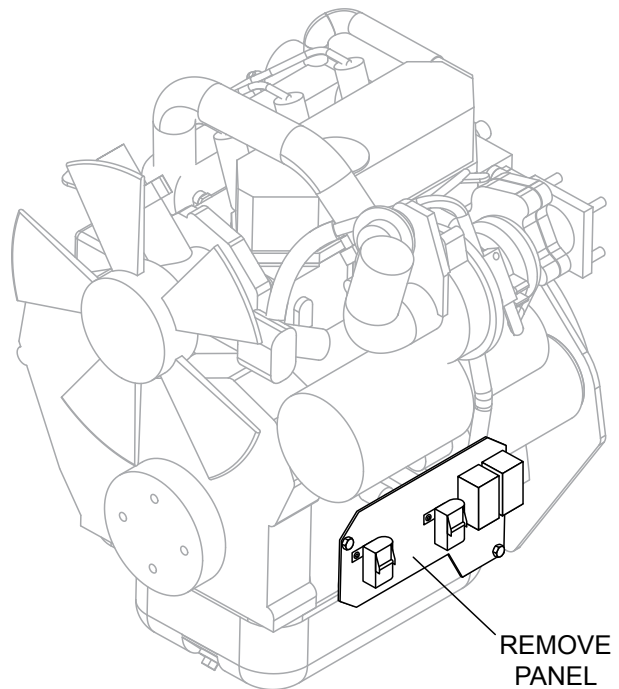


Figure 18. Remove Perkins Relay/Fuse Panel

- Install rear engine mounting hardware from kit. See Figure 19.

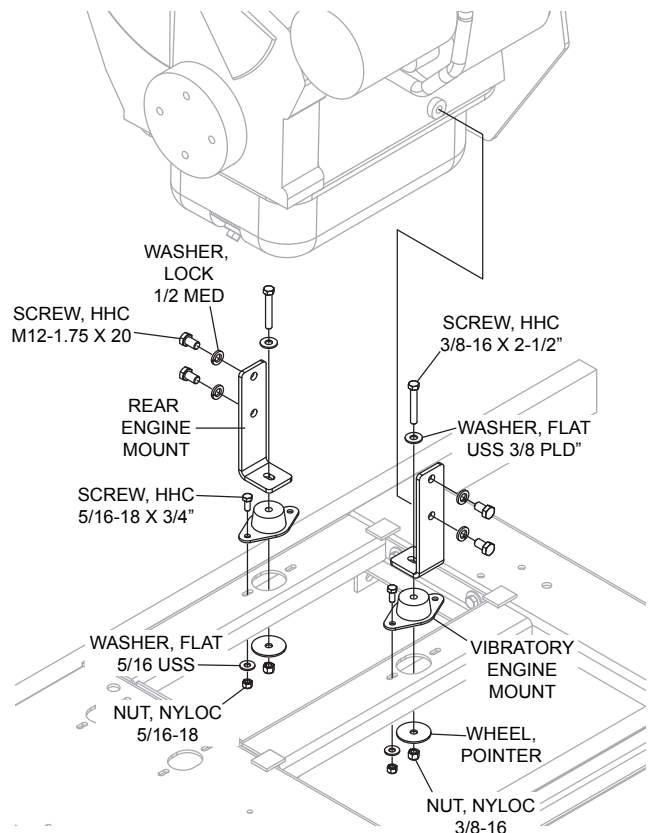


Figure 19. Rear Engine Mounting Hardware

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.

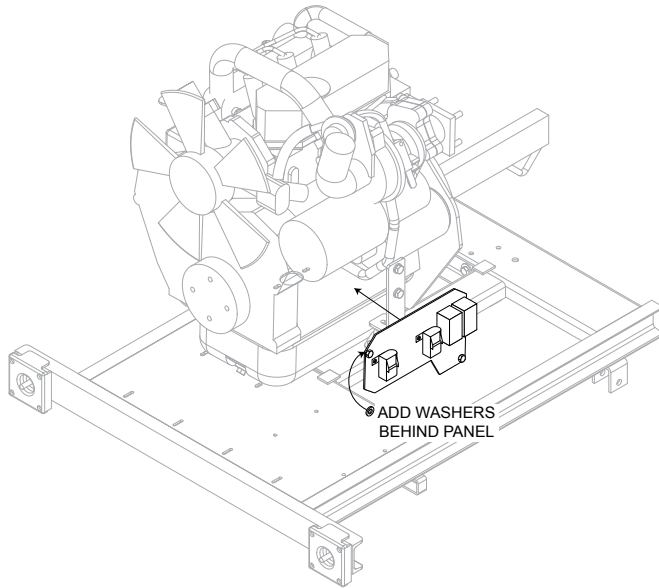


Figure 20. Reinstall Perkins Relay/Fuse Panel

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

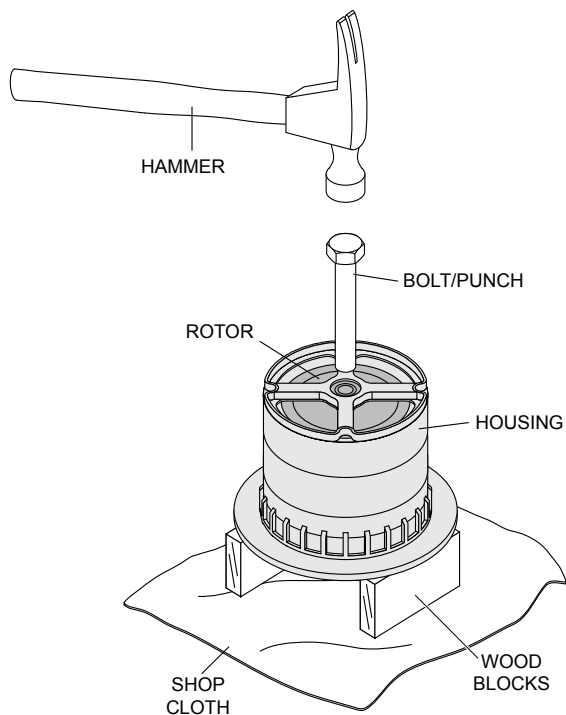


Figure 21. Release Generator Rotor From Housing

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

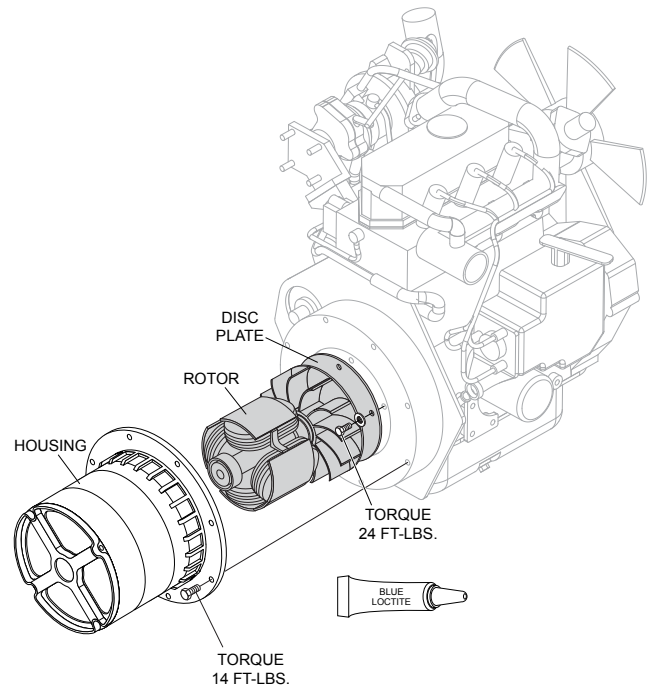


Figure 22. Attach New Style Generator

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 (25 μ F @425V) and terminal block. See Figure 23. Install capacitor with clamp and terminal block with jumper between terminals 2 and 3.

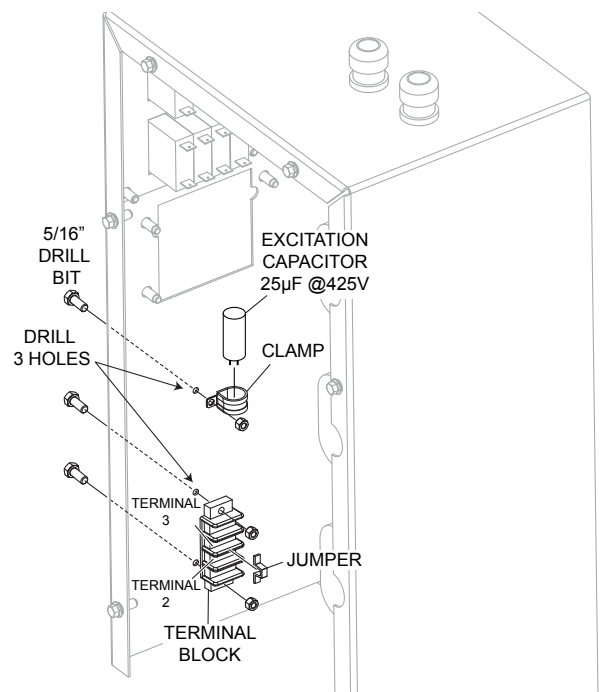


Figure 23. Mount New Electrical Hardware

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.

Table 2. Wire Connections		
Generator Power Cable	Terminal Block	Ballast Power Cable
11111 (BLACK)	TB1-1	RED
22222 (BLACK)	TB1-2	WHITE
33333 (BLACK)	TB1-3	GREEN
44444 (BLACK)	TB1-4	BLACK

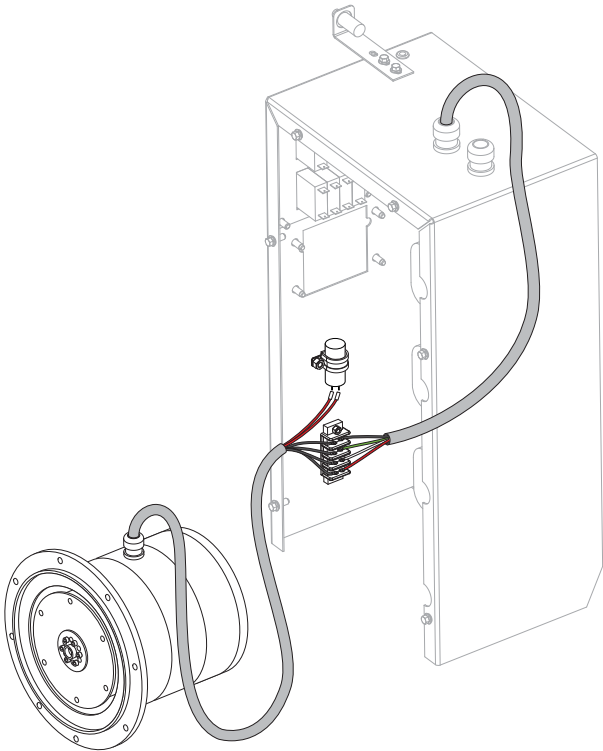


Figure 24. New Electrical Wiring

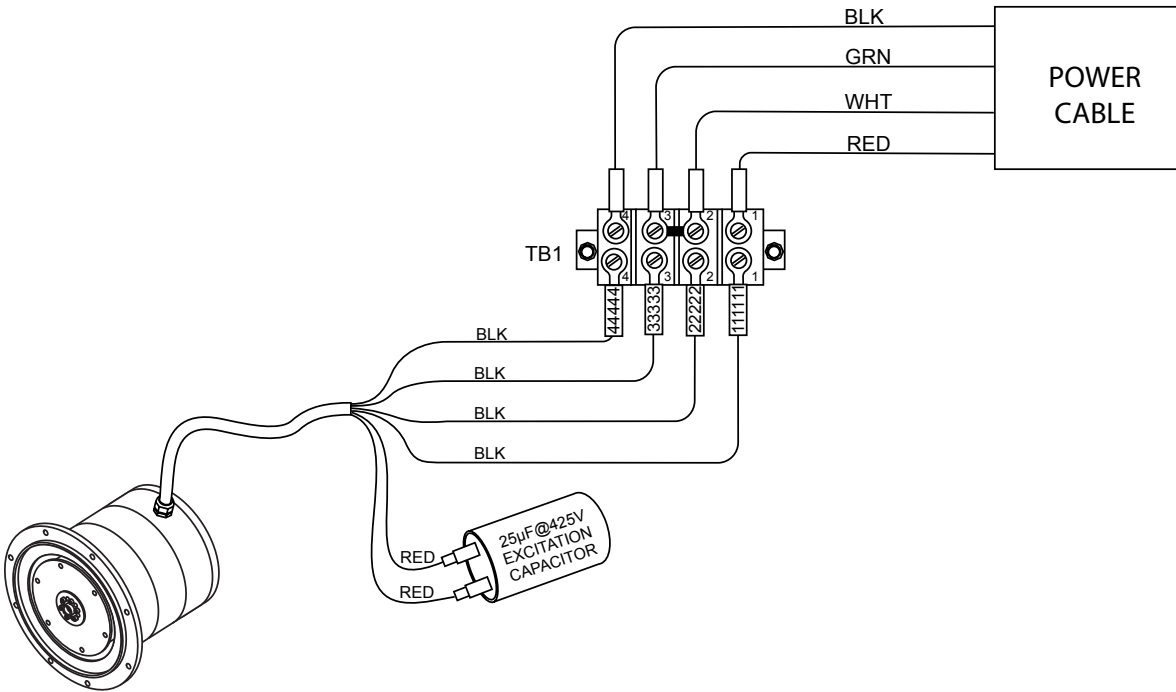


Figure 25. Wiring Diagram

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.

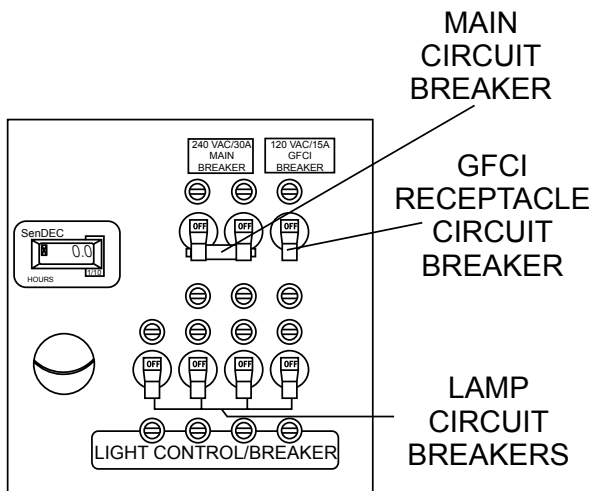


Figure 26. Control Panel Circuit Breakers

NOTICE

Your control panel may be slightly different than that shown in Figure 26.

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.

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.

NOTICE

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

EMERGENCY SHUTDOWN

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

LT12 SERIES LIGHT TOWER MECC ALTE GENERATOR CONVERSION INSTRUCTIONS

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL
NUMBER ON-HAND WHEN CALLING

UNITED STATES

Multiquip Corporate Office

18910 Wilmington Ave. Tel. (800) 421-1244
Carson, CA 90746 Fax (310) 537-3927
Contact: mq@multiquip.com

Service Department

800-421-1244 Fax: 310-537-4259
310-537-3700

Technical Assistance

800-478-1244 Fax: 310-943-2238

MQ Parts Department

800-427-1244 Fax: 800-672-7877
310-537-3700 Fax: 310-637-3284

Warranty Department

800-421-1244 Fax: 310-943-2249
310-537-3700

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