BAUMALIGHT™

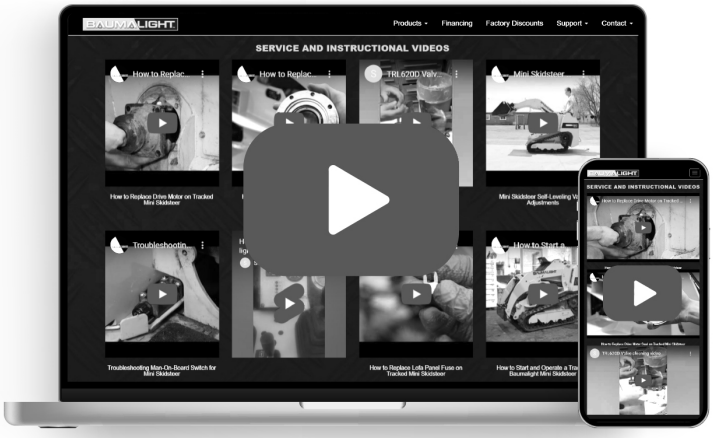


BAUMALIGHT™

QC and KR Series Generators

OPERATORS MANUAL

Issue Date: November 2026



Service And Instructional Videos

Find online at baumalight.com/support

Following is a list of videos and documents available on Baumalights website and also on YouTube to help and enhance maintaining the generator. The list below was current at the time this manual was issued. Additional content may be available.

Activity ID Number	Activity Name	Description	Item Available
94	CES - Compliance	Certificate Of Compliance	Document
327	Automatic Voltage Regulator	Adjusting AVR for QC	Video
167	Replacing Gearbox.	Removing And Installing New Gearbox.	Video
243	PTO Shaft.	Determining Pto Shaft Length.	Video
292	Hi-Power Generator Gearboxes.	Gear Box Leaking Issues.	Document
144	Aligning PTO Shaft.	Properly Aligning Pto Shaft To Avoid Damage.	Video
469	Communicating Measurements.	Why Not To Send Pictures Of Measuring Tapes To Communicate Measurements.	Video

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1 INTRODUCTION

1.1 Overview

Congratulations on your choice of a Baumalight QC or KR Series Generator. This equipment has been designed and manufactured to meet the needs of a discriminating buyer for efficient auxiliary power.

The Generator is powered by the Power Take Off (PTO) on your tractor.

Safe, efficient and trouble free operation of your Generator requires that you and anyone else who will be operating or maintaining the Generator, read and understand the Safety, Operation, Maintenance and Troubleshooting information contained within the Operators Manual.

This manual covers the Baumalight QC and KR Series Generators. Use the Table of Contents as a guide to locate required information.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Contact your Baumalight dealer if you need assistance, information or additional copies of the manuals.

When this machine is worn out and no longer in use, it should be returned to the retailer or other party for recycling.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout this manual, are as seen from the tractor drivers seat and facing in the direction of travel.

1.2 Harmonic Distortion Values

No Load - 4.1%

Loaded - 4.6%

2 SAFETY

2.1 Safety Alert Symbol And Safety Words

You must read, understand and follow the instructions given by the operating unit manufacturers, as well as the instructions in this manual.

The safety information in this manual is denoted by the safety alert symbol:



This symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

The level of risk is indicated by the following signal words:

DANGER

DANGER - Indicates a hazardous situation, which, if not avoided, WILL result in death or serious injury.

WARNING

WARNING - Indicates a hazardous situation, which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION - Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE - Indicates a situation that could result in damage to the equipment or other property.

2.2 Operational Hazards

⚠ WARNING

Prevent serious injury or death.

Read and understand this manual before operating generator.

Never allow anyone near the generator and tractor during operation.

Travel at a safe speed.

⚠ WARNING

Prevent serious injury or death from moving parts.

Moving parts can crush and dismember.

Do not operate without guards and shields in place.

Disconnect and lock out power source before adjusting or servicing.

⚠ WARNING

Use generator only for the designed applications.

Any other use may result in personal injury, damage to equipment and may void the warranty.

⚠ WARNING

Prevent serious injury or death.

Verify generator is connected to tractor before operation or transport.

Verify generator driveline is attached to tractor.

Carefully read all safety messages in this manual and on equipment safety signs. Keep safety signs in good condition and replace missing or damaged safety signs.

New equipment components and repair parts must include the current safety decal.

Learn how to properly operate equipment. NEVER operate or work around this equipment without proper instruction, while fatigued or under the influence of alcohol, prescription or non-prescription medication or if feeling ill.

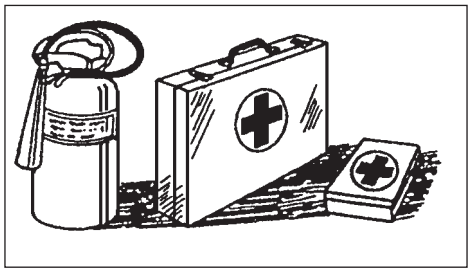
Keep your equipment in proper working condition.

Know the regulations and laws that apply to you and your industry. This manual is not to replace any regulations or laws. Additional information may be found at: www.asae.org or www.osha.gov.

If you do not understand any part of this manual, contact your dealer.

Prepare For Emergencies

- Be prepared in case of emergencies.
- Keep a fire extinguisher and first aid kit close to the machine.
- Keep emergency phone numbers close to your phone.
- Know your address so emergency services can locate you if an emergency arises.



Replace Safety Signs

- Replace missing or damaged safety signs.
- Safety signs are identified in Section 3 of this manual.
- Replacement safety signs are available from your Baumalight dealer.

Do Not Allow Riders

- NEVER carry anyone with generator.
- NEVER use generator as a work platform.
- NEVER allow passengers on generator.

Lower Operating Speed

- Lower operating speed while loading, unloading or performing heavy operations.
- Keep load low and move at slow speeds on rough or uneven terrain.

Avoid Rollover

The equipment may rollover, resulting in death or serious injury. To help prevent rollover:

- Travel at a slow speed.
- Avoid sharp turns & sudden movement on slopes.
- Avoid holes, ditches and other obstructions which may cause equipment to rollover.
- Use caution when operating on slopes and do not operate on excessively steep slopes.

⚠ WARNING

Risk of electrocution. High voltages are present at the generators terminals when the unit is running.

Additionally, accessory equipment such as space heaters can be energized from an outside power source when the unit is at rest. Be sure to disconnect all sources of power before working on equipment.

Detach Generator Safely

Detach generator on a firm and level surface. Generator may roll away if detached on sloping or soft surface. Be sure people, livestock and pets are clear of machinery.

Hazards From Modifying Equipment

Do not make any alterations to your generator. Altering the equipment may cause unsafe conditions and may void the manufacturers warranty.

Stay Clear Of Rotating Drivelines

⚠ WARNING

Entanglement in a rotating driveline can cause serious injury or death.

Keep tractor shields and driveline shields in place at all times. DO NOT operate without driveline guards.

DO NOT wear loose fitting clothing.

2.3 Maintenance Hazards

Maintenance

Before servicing, park machine on a firm and level surface, chock wheels, and place a “Do Not Operate” tag on control panel. Read and understand this manual. If you do not understand any part of the manual, contact your Baumalight dealer.

Always wear face and/or eye protection, safety shoes, and other protective equipment appropriate for the job.

Do not make unauthorized modifications. Contact your Baumalight dealer before you weld, cut/drill holes, or make any other modifications.

⚠ WARNING

Moving parts can crush and cut.

Keep clear of moving components.

Follow lockout procedure before servicing.

⚠ WARNING

Crushing hazard.

Before performing inspections, service or maintenance:

- **Park machine on firm, level surface.**
- **Turn engine off and remove key.**
- **Place “Do Not Operate” tag on control panel.**

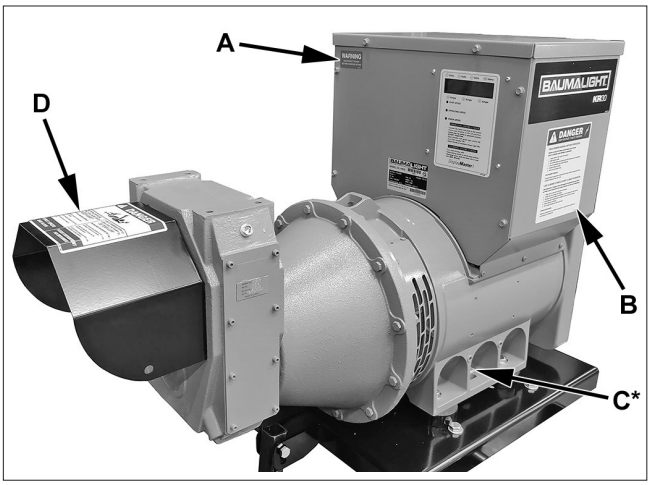
⚠ WARNING

Entanglement hazard.

Keep clear of moving components.

Wear proper protective equipment appropriate for the job.

3 SAFETY SIGNS



KR Series Generator Shown



Located On Anderson Connector Cord

A. MTB-021



B. MTB-111 - On QC series generators, this will be on the opposite side panel.



C. MTB-050

DO NOT MOUNT DIRECTLY ON SOLID SURFACE
(e.g. Concrete Pad)
USE RUBBER MOUNTS

MTB-050

D005261 - *The French decal will be on the opposite side of frame.

NE PAS INSTALLER SUR UNE SURFACE SOLIDE.
(ex. Bloc de Béton)
UTILISER DES SUPPORTS DE CAOUTCHOUC

D005261

D. MTB-186



4 Assembly

4.1 Remove Shipping Dunnage And Parts

⚠ WARNING

Depending on model, approximate weight of the generator is 269 - 674 kg (592 - 1485 lbs)

Do not position feet around or under pallet.

1. Remove crate material from pallet.
2. Remove all shipping bands, wires and loose parts from around generator.

4.2 Remove Generator From Pallet

1. Attach hitch to generator frame.
2. Roll generator off of pallet.
3. Install PTO driveline.

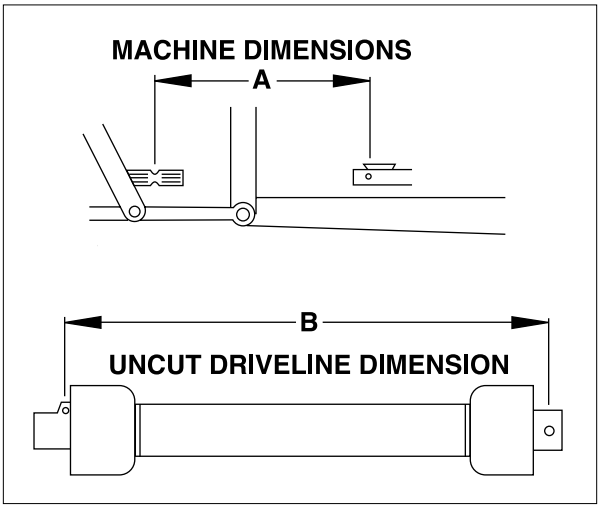
4.3 Driveline Dimension

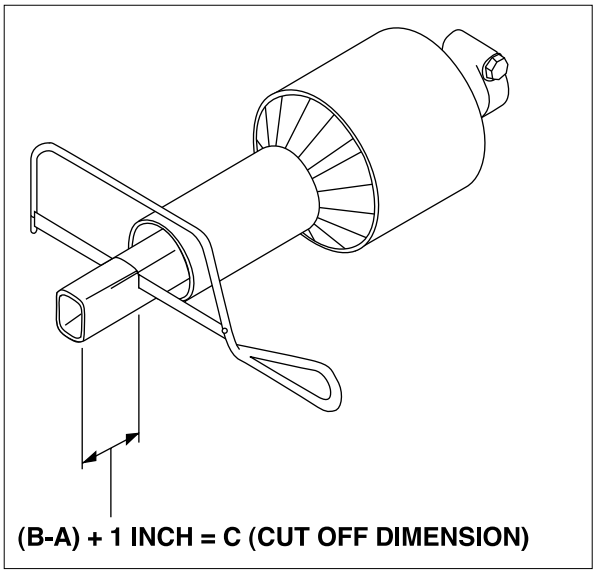
A PTO driveline is supplied with the machine. To accompany the variety of hitch geometry available today, the driveline can be too long for most machines or too short for others. It is very important that the driveline be free to telescope but not to bottom out when going through its working range. If the driveline bottoms out, the bearings on both the machine and tractor PTO shaft will be overloaded and fail in a short time.

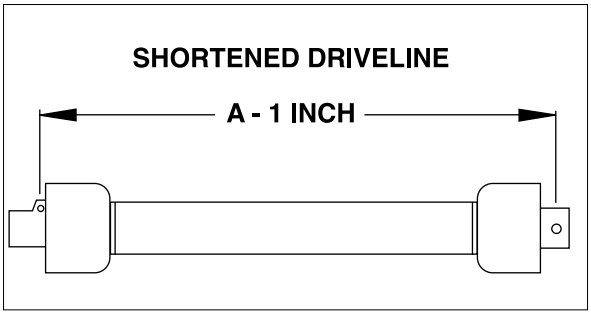
1. To determine the proper length of the driveline, follow this procedure:
   a. Clear the area of all bystanders.
   b. Attach generator to tractor (see section 5.3) but do not attach driveline.
   c. Measure dimension between locking grooves on tractor PTO shaft and machine input shaft.
   d. Measure the same dimensions on the compressed driveline.
   e. If compressed driveline dimension exceeds the machine dimension, driveline will have to be cut.
2. When cutting the driveline, follow this procedure:
   a. Subtract machine dimension (A) from uncut driveline dimension (B) or (B-A). This dimension determines how much too long the driveline is.
   b. Add another 1 inch (25 mm) to the dimension to be sure it doesn't bottom out, to determine (C) the cut off dimension.
   c. Use a hacksaw to cut dimension (C) from both ends. Cut both plastic tubes and metal cores.
   d. Use a file to remove burrs from edges that were cut.

e. Assemble the two ends of the shaft.

f. Make sure shaft can telescope freely. If it does not, separate the 2 parts and inspect for burrs or cuttings on shaft ends. Be sure it telescopes freely before installing.







5 OPERATION

5.1 Preparation For Use

Although the generator has been carefully inspected and checked prior to shipment from manufacturer, it is recommended that the unit be thoroughly inspected.

Check all bolts for tightness and remove all shipping tags, bags, skids, and blocking. Remove any masking materials affixed during painting. Inspect the tractor and any accessory equipment to verify that nameplates and all safety warning, caution signs and decals provided with the equipment are in place and clearly visible.

Visually inspect the unit before each start up. Check for loose or missing parts and any damage that may have occurred during moving or shipping.

Review all tractor pre-start instructions, and ensure that all recommended steps and procedures have been followed.

5.1.1 Neutral Bond To Ground

All units are shipped with neutral bonded to ground inside alternator. Only a qualified electrician may relocate neutral bond to a remote location within electrical service. Electrical connections must comply with federal, state, provincial and local electrical codes.

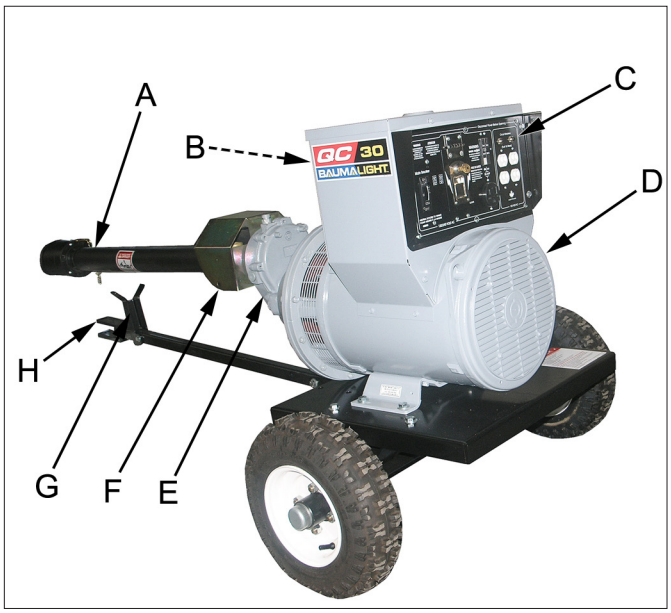
⚠ WARNING

Prevent injury and machine damage.

Units are shipped with neutral bonded to ground inside alternator.

Only a qualified electrician may relocate neutral bond to a remote location within electrical service.

5.2 Machine Components



A. PTO Driveline
B. Display
C. Power Panel
D. Generator
E. Gear Box
F. PTO Driveline Guard
G. PTO Driveline Support
H. Trailer Tongue

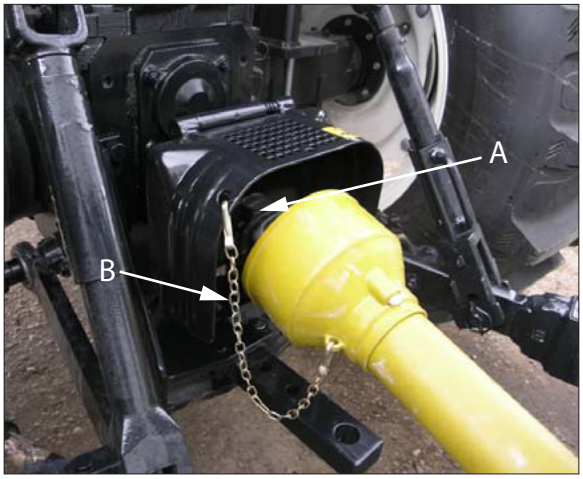
5.3 Attaching Generator To Tractor

⚠ WARNING

To prevent injury or machine damage put transmission in "Park" and check for PTO driveline binding or separation.

Only experienced and properly trained operators should operate the tractor and generator.

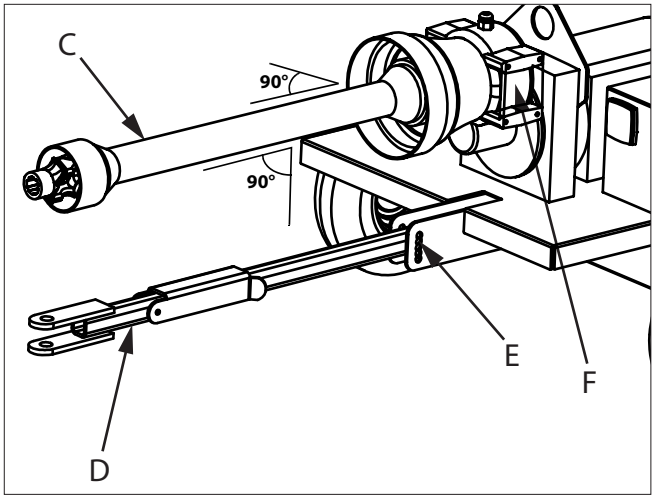
1. Back up tractor to generator.
2. Engage tractor park brake and/or place transmission in "Park".
3. Shut off engine and remove key.
4. Lift up on trailer tongue and slide onto tractor hitch.
5. Install pin and retaining pin.
6. Pull collar (A) back toward the generator. Align splines on tractor PTO shaft and driveline by rotating generator driveline. Push driveline onto PTO shaft until it snaps into place.
7. Pull back on driveline to make sure it is locked on shaft.
8. Attach safety shield chain (B) as shown.

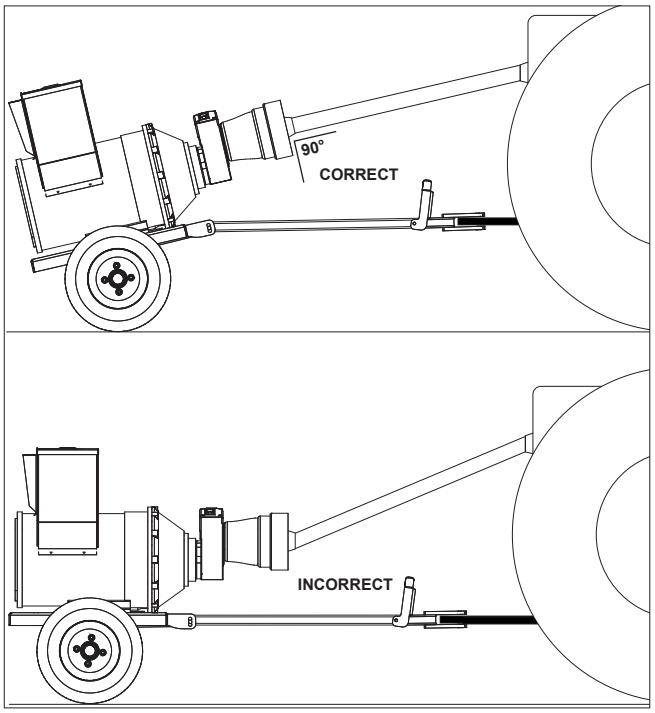


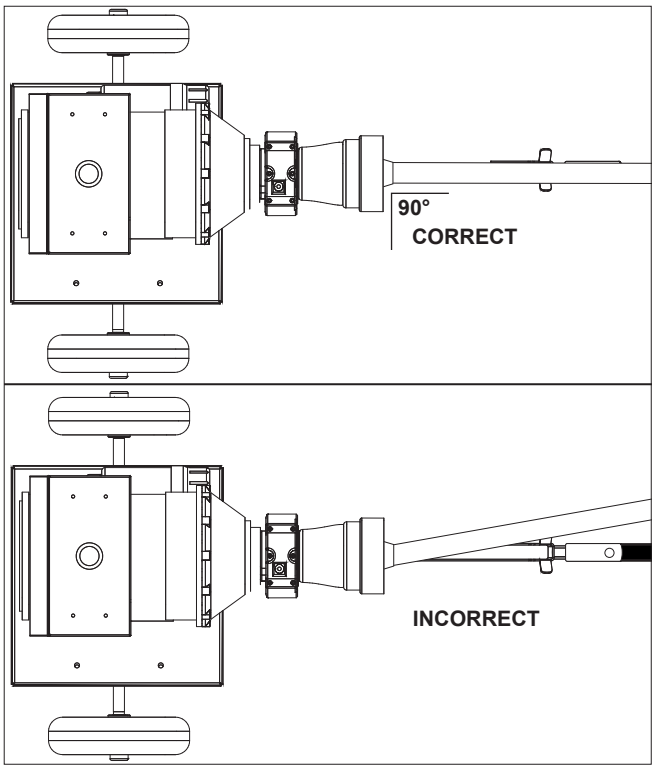
NOTICE

A misaligned PTO shaft on the generator end can cause shuddering and bouncing on the tires which may lead to transmission damage and potentially void the warranty. Be sure PTO shaft is properly aligned with generator transmission.

9. If necessary, remove bolt (E) and adjust the trailer tongue (D) so that the PTO driveline (C) is perpendicular with the generator transmission (F). The shaft must be straight with no bend in the universal joint on the generator side. A bend is allowable at the tractors PTO drive end.







A misaligned PTO shaft on the generator end can cause generator to shudder and bounce on the tires. This may lead to transmission damage and potentially void the warranty.

If shaft is straight and generator bounce persists, reducing generator tire air pressure may help reduce bouncing.

5.4 Detaching Generator From Tractor

⚠ WARNING

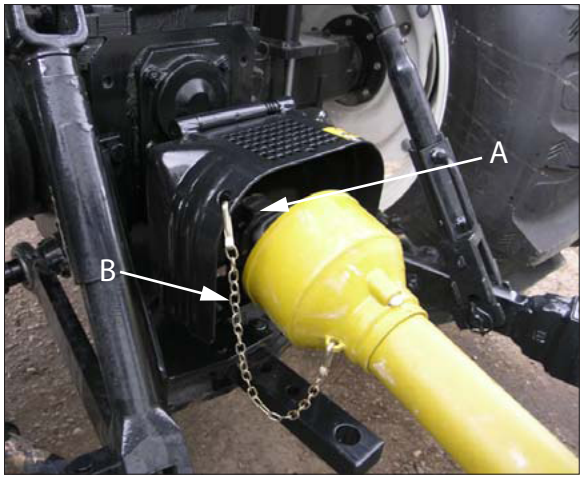
Prevent serious injury or death caused by unexpected movement:

1. **Park tractor on a level surface.**
2. **Engage tractor park brake.**
3. **Disengage PTO.**
4. **Shut off engine and remove key.**

1. Park tractor on a level surface.
2. Shut off engine and remove key.
3. Disconnect driveline safety chain (B).
4. Support driveline with your hand.
5. Pull collar (A) back toward generator and slide off shaft. Place PTO driveline on driveline support.
6. Remove retaining pin and pin from trailer tongue.
7. Lower tongue to ground.

5.5 Transporting

1. Verify all reflectors and Slow Moving Vehicle (SMV) sign are visible.
2. Verify trailer tongue is pinned to tractor hitch.
3. Verify tractor PTO is disengaged.
4. Travel at a reasonable and safe speed.



NOTICE

Do not engage the PTO when towing the generator to a location or generator damage could result.

The generator trailer does not have a suspension. Limit speeds to less than 20 kph (12 mph) to minimize the risk of rollover.

5.6 Operating The Generator

⚠ WARNING

Entanglement in a rotating driveline can cause serious injury or death.

Keep tractor shields and driveline shields in place at all times. DO NOT operate without driveline guards.

DO NOT wear loose fitting clothing.

⚠ WARNING

Never operate tractor when other people are in the vicinity.

Do not allow riders on tractor.

⚠ WARNING

Prevent serious injury or death caused by unexpected movement:

1. **Park tractor on a level surface.**
2. **Engage tractor park brake.**
3. **Disengage PTO.**
4. **Shut off engine and remove key.**

5.6.1 Initial Start-Up

1. Connect the power cable to the generator and to the transfer switch.
2. Start the tractor and allow it to warm up.
3. With the engine idling, engage the PTO drive.
4. Adjust throttle until the volts on DisplayMaster1 display 120 VAC (single phase).
5. Turn on the main breaker on the generator.
6. Operate the transfer switch so that the load is transferred to the generator.


Volts
Volts
Volts
Hertz
120 120 240 60.9
10 10
Amps
Amps
Amps
OVERSPEED
OPERATING SPEED
UNDER SPEED
OPERATING INSTRUCTIONS
• Connect the trailer and shaft to the tractor.
• Place main breaker in the off position.
• Switch pole top switch to generator position.
• START TRACTOR
• Open throttle until green light comes ON.
• Turn main breaker ON.
• Adjust throttle as necessary (Green Light ON).
STOPPING INSTRUCTIONS
• Turn main breaker OFF.
• Switch pole top switch to normal power position.
• Disengage power shaft and allow unit to stop.
• DO NOT BRAKE
DisplayMaster1


WARNING
ATTENTION
Main Breaker
ON
125A
OFF
WARNING
SHOCK HAZARD
NEUTRAL BONDED TO FRAME
POINT NEUTRE À LA MASSE
120/240 VOLT AC

5.6.2 Monitoring The Load

Plan when to change over to generator power. Ideally, the transfer should take place when the system demand is at its lowest. If a big motor can come on stream, change over to generator power before it does so when the load is lesser.

The generator has sufficient capacity to handle rush current (higher demand) during motor start up, so it is permissible to operate temporarily at overload. However, only allow the generator to do so for short periods of time (less than a minute). Carefully monitor the tractor speed settings when the load changes and adjust the throttle to keep the generator operating at 120 VAC (single phase).

NOTICE

Risk of generator damage. Avoid running the generator at overload for excessive periods of time. Doing so can damage the generator and void the warranty.

5.6.3 Shutting Down The Generator

NOTICE

Follow the shut down sequence to minimize the risk of damage to the generator or associated equipment.

1. Switch off the electrical load or allow it to drop to minimum.
2. If possible, operate the transfer switch to transfer the load back to utility power.
3. Turn generator main breaker off.
4. Drop the tractor speed to idle.
5. Disengage the PTO drive. Allow the PTO shaft to gradually come to a stop.
6. Shut off tractor engine and remove key.
7. Disconnect the PTO driveline from tractor.
8. Place the mount on the trailer tongue in the upright position and place PTO driveline on support.
9. Tow unit back to storage.
10. See Storing Generator in this section if generator will not be used for some time.

5.6.4 Storing The Generator

1. Wipe down the unit using a clean rag and water, or a cleaning solvent.
2. Inspect the air louvers and make sure that they are not obstructed. The generator requires a flow of cooling air. Clean them as necessary.
3. With a rag soaked in cleaning solvent, clean the splines on both ends of the connecting drive shaft, on the generator driveline, and on the tractor.
4. Inspect all splines on the driveshaft, the generator, and the tractor for signs of damage or wear. Repair any damage or wear as soon as possible.
5. Apply a light coat of lithium waterproof grease to the surfaces of the connecting driveshaft splines.
6. Examine the universal joints for signs of wear or damage. Repair or replace any worn or damaged part.
7. Using the grease gun, lubricate each universal joint.
8. Inspect the level of the lubricant in the gearcase. Top off as needed with gear lubricant.
9. Verify the tire pressure and adjust as necessary. Check the sidewall of the tires for the recommended pressure.
10. Inspect the generator to look for damage to the generator. If any damage is found, avoid using the generator and report the damage to your Baumalight representative.
11. Check all fasteners and make sure they are properly tightened. This includes the bolts that attach the generator to the trailer, the bolts that attach the guard to the gearcase, and the bolts that attach the tongue to the trailer.
12. Cover generator and store in a clean, dry place.

6 SERVICE AND MAINTENANCE

6.1 Service

6.1.1 Electrical Tests

Continuity and Resistance Test

The generator has four components that can be checked using an ohmmeter:

- Exciter stator
- Exciter rotor
- Main stator
- Main rotor

Each of these components is composed of various windings forming a complete electrical path of relatively low resistance. Using an ohmmeter, measure the loop resistance of each component. Contact Baumalight for specific values for your machine.

Note: Very small resistance values require precision equipment to make accurate measurements; however, a standard ohmmeter will provide a good indication of winding continuity.

Diode Testing

Note: Stop tractor engine before performing this procedure.

1. Remove the two main rotor leads and the three-exciter rotor leads from the rectifier assembly. The rectifier assembly is now electrically isolated from the generator. The diodes remain mounted and the diode leads remain connected to the terminal posts.
2. Using an ohmmeter or a battery light continuity tester, place one test probe on the diode lead terminal post.
3. In succession, touch the other test probe to the lead screw hole in each heat sink.
4. Reverse the probes and repeat the procedure. You have now tested the three diodes connected to this terminal post in both the forward and reverse direction.
5. Repeat the procedure using the other diode terminal post.

When the positive test probe is connected to the diodes anode and the negative test probe is connected to the diodes cathode (forward biased), the diode will switch on and conduct electricity. This is observed by a low resistance reading when using an ohmmeter or the lighting of the bulb when using a battery light continuity tester. Reversing the test leads (reverse biased) will result in the diode switching off and no electricity will be conducted.

The results of these tests should indicate one of three conditions:

Good diode: Will have a much greater resistance in one direction than the other. Typical reverse biased resistance will be less than 10 ohms. The battery light tester will have the light “on” in one direction and “off” in the other.

Shorted condition: Ohmmeter reading will be zero, or very low in both directions. The continuity tester will have light “on” in both directions.

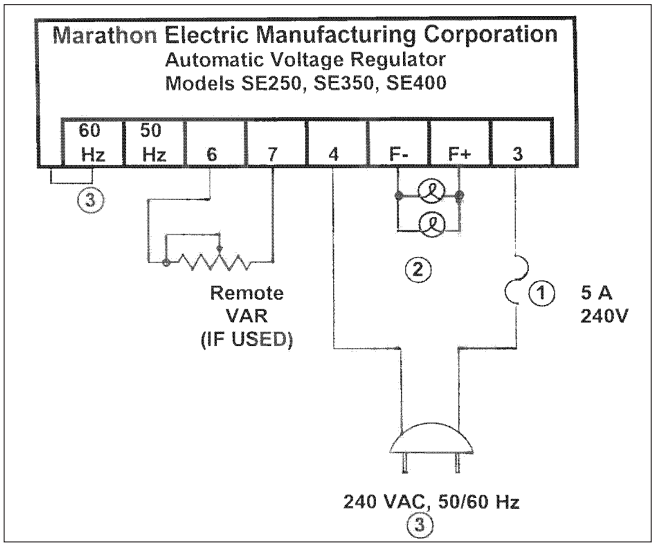
Open condition: Ohmmeter will have a maximum (infinity) reading in both directions. Continuity tester light will be off in both directions.

Diode failure after a 25-hour “run-in” period is generally traceable to external causes such as a lightning strike, reverse current, line voltage spikes, and the like. All 6 diodes are essentially in the same circuit.

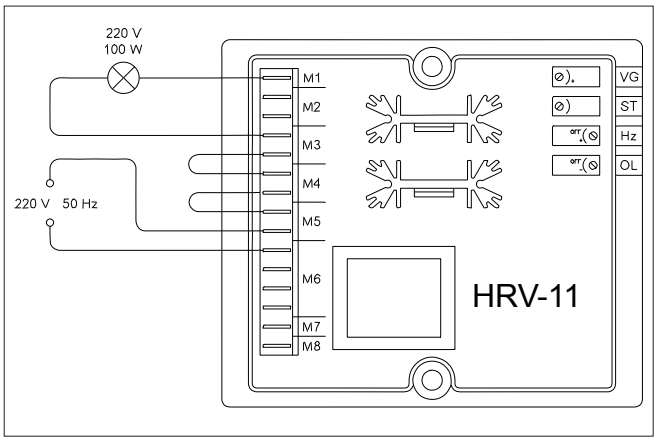
Since determining the remaining life on the diodes when one fails is difficult, replace the entire rectifier assembly, rather than individual diodes, to avoid possible continued failure.

6.1.2 Automatic Voltage Regulator Operational Test

1. Connect the test setup as shown. Do not apply power. Insure that the light bulbs are 120 volts, and less than 100 watts.
2. Adjust the regulator VAR and/or remote VAR and the STABILITY ADJUST to maximum CCW
3. Apply 240 volts, 50/60 Hz power to the regulator. The light bulbs should illuminate.
4. Slowly adjust the regulator VAR control CW. At the regulation point, the light bulbs should extinguish. Small adjustments above and below this level should cause the light bulbs to go off and on. Note that the light bulbs go on and off rapidly.
5. Rotate the STABILITY ADJUST fully CW. Now adjust the regulator VAR above and below the regulation point. The light bulbs should still go off and on, but the transition from off to on (and vice versa) should be much slower than in step 4.



QC Regulators



KR Regulators

6.1.3 Voltage Regulator Adjustment

Voltage Adjust

The screwdriver adjustable potentiometer adjusts the generator output voltage. Adjustment clockwise increases the generator output voltage.

Stability Adjust

System stability is the ability of the generator to respond to load transients. Decreasing the stability makes the generator less sluggish and faster to respond to load transients. If the stability of the regulator is decreased too much, the generator will tend to hunt under steady state conditions.

The screwdriver adjustable potentiometer adjusts the system stability. Adjustment clockwise increases the stability. Increasing the stability increases the response time of the generator. Conversely, decreasing the stability decreases the response time of the generator.

V/HZ Roll-Off Frequency Selection

The roll off point is the frequency where the generator voltage starts to decrease. This reduces the Kilowatt load to the engine, which allows the engine to recover in speed under any load transient condition. Use jumper to select 50 HZ or 60 Hz. The screwdriver adjustable potentiometer sets the roll-off frequency from 54-61 Hz in the 60 Hz setting or from 45-51 Hz inthe 50 Hz setting.

The SE350 has the roll-off point preset to 58 Hz in the 60 Hz mode and 48 Hz in the 50 Hzmode. To change the roll-off point, adjust engine speed to the desired rated speed. (50 or 60 Hz). Set the voltage to the desired setting at rated speed. Adjust engine speed to the desired roll-off point. Turn the potentiometer counterclockwise until the voltage starts to drop off. Then adjust the potentiometer clockwise until the voltage returns to rated voltage. Re-adjust engine speed to rated speed.

6.2 Maintenance

Maintenance Chart		
General Inspection	Inspect the air louvers and make sure that they are not obstructed.	Daily
Driveline	Lubricate U-Joints on PTO driveline.	Every 250 hours.
Gear Box Oil	Change gear box oil. Use synthetic 75-90W gear oil.	Every 1000 hours.

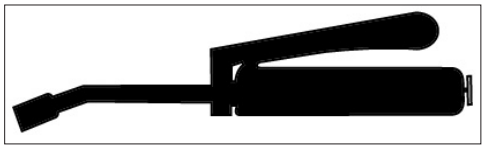
We design many of our products using industry-standard parts that are widely available from local supply stores.

Many replacement parts such as bearings, belts, seals, touch-up paint and cutting teeth can often be found through local suppliers, not just from Baumalight.



6.2.1 Lubrication Symbol

Observe lubrication symbol. Lubricate with SAE multipurpose type grease at hourly intervals.



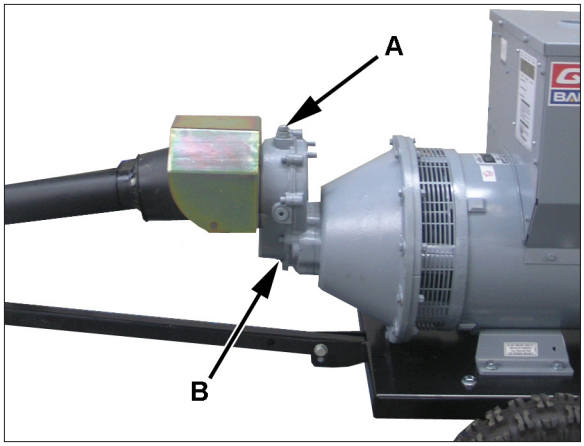
6.2.2 Every 250 Hours

Lubricate U-joints on PTO driveline every 250 hours of use.

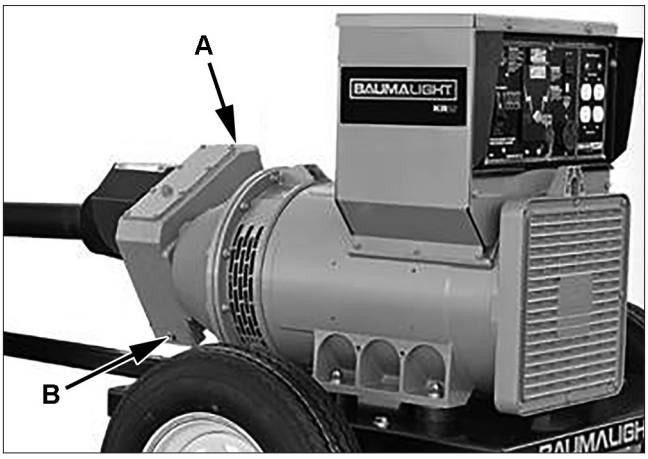


6.2.3 Every 1000 Hours

1. Park tractor and generator on a level surface.
2. Shut off engine and remove key.
3. Remove drain plug (B) and measure quantity of oil.
4. Install plug.
5. Remove fill plug (A).
6. Add the proper amount of synthetic 75-90W gear oil.
7. Install fill plug.



QC12 - QC30 And KR30



QC45 - QC100 And KR44 - KR65

6.2.4 Severe Service Recommendations

Severe service for the generator includes the following:

- More than 100 hours of continuous use in a month.
- Use outdoors for extended periods in extreme weather (dust, high heat, cold, or wet weather).

If the generator is subject to severe service, Baumalight recommends thoroughly cleaning and inspecting the generator. If you suspect that there is damage, have the generator inspected by your Baumalight representative.

6.2.5 Maintaining The Permanent Magnets

If the generator is not used for a long time, it is possible that the permanent magnets that provide the magnetic field for excitation of the field coil will lose their magnetism and the generator will not be able to produce electrical power.

To keep the magnets in good working order, you must run the generator under load for at least an hour once every six months.

See Restoring Residual Magnetism in this section, if your generator loses magnetism.

6.2.6 Restoring Residual Magnetism

NOTICE
Risk of generator damage. Only attempt this procedure if you are trained to do so. If in doubt, contact your Baumalight representative.

Note: *You will need a 120 volt, two prong power cord with flag terminals crimped on the ends to perform this procedure.*

Place 120 VAC for about 2 to 3 seconds across SE350 power input terminals #3 & #4 while the unit was at rest. The basis for this procedure is:

1. The SE350 AVR requires approximately 240 VAC for both input power and sensing across input terminals #3 and #4. With 240 VAC input, maximum forcing voltage is 105 VDC. Maximum forcing current - for 1 minute is 5 amperes. Maximum continuous running current rating of this regulator is 3.5 amperes.
2. MAGNAPLUS exciter fields have a nominal resistance of 24.5 ohms. With 120 volts AC (½ rated voltage) imposed on the AVR power and sensing input, the AVR will go to full conduction of its power rectifier (SCR). With only 120 volts input power, the AVR will only force at half of 105 VDC or 52.5 VDC.
3. With 52.5 VDC imposed upon a 24.5 ohm field, maximum excitation current will be in the area of 2.1 to 2.2 amperes, which is 4.5 times the exciting current imposed on the field with a 12 VDC flashing source. 2.2 amperes is much lower than the SE350's rated continuous current of 3.5 amperes, thus this procedure will not pose a threat to the regulator so long as the exciter field resistance is 15 Ohms or higher.

7 TROUBLESHOOTING

PROBLEM	CHECK	SOLUTION
High vibration, bouncing or shaking while running unit.	Misaligned PTO shaft - either vertically or horizontally (gear box side only).	Correctly align PTO shaft horizontally and vertically (gear box side only). If shaft is straight, reducing generator tire air pressure may help reduce bouncing.
Display locked up.	Tripped fuses.	Disconnect power. Wait one minute for self-resetting fuses. Restart. Connect load once display shows correct speed.
Generator produces no voltage.	Display off or defective.	Check voltage with a separate meter at the generator terminals.
	Defective connections.	Verify generator connections. Inspect all wiring for loose connections, open circuits, grounds, and short circuits.
	Loss of residual magnetism.	Flash fields.
	Defective diodes, suppressor.	Test the generator using the 12 volt battery test or windings as specified in the testing section. If the results indicate generator problems, perform insulation, continuity, and diode tests.
	Regulator protection operating.	Replace fuse.
	Regulator inoperative.	Adjust or replace regulator.

PROBLEM	CHECK	SOLUTION
Generator produces low voltage no load.	Under speed operation.	Check speed using a tachometer or frequency meter.
	Display off or defective.	Check voltage with a separate meter at the generator terminals.
	Incorrect or defective connections.	Verify generator connections (see drawings supplied with the generator or lead connection diagrams in this manual). Inspect all wiring for loose connections, open circuits, grounds, and short circuits.
	Regulator adjustment.	Adjust regulator settings. Consult regulator manual.
	Defective diodes, suppressor or windings.	Test the generator using the 12 volt battery test as specified in the test section. If the results indicate generator problems, perform insulation, continuity, and diode tests.
	Regulator inoperative.	Adjust or replace regulator. Consult regulator manual.
Generator produces fluctuating voltage.	Fluctuating engine speed.	Check engine governor systems for malfunction. Check load for fluctuation.
	Regulator stability.	Adjust regulator stability.
	Defective rectifier assembly.	Check assembly for loose connections. Test the diodes.
	Loose terminal or load connections.	Improve connections both mechanically and electrically.
	Defective regulator.	Replace regulator.

PROBLEM	CHECK	SOLUTION
Generator produces low voltage when load applied.	Excessive load.	Reduce load. The load on each leg should be evenly balanced, and rated current should not be exceeded on any leg.
	Large motor starting.	Motor starting currents are too large for the generator when starting.
	Load power factor.	Multiple motors sequence the motors and start the largest motor first. Reduce lagging power factor load.
	Driver speed drop.	Check driver. Check under frequency setting on regulator Under frequency voltage roll-off may be activated.
	Line drop.	If voltage is proper at generator terminals but low at the terminals, Increase external wire size.
	Defective diodes, suppressor or windings.	Test the generator using the 12 volt battery test as specified in the test section. If the results indicate generator problems. See continuity, and diode tests.
Generator builds voltage from start-up then goes to low (residual) voltage.	Regulator protective circuit operating.	Check indicators on regulator. Correct problems and adjust regulator as is required. Refer to regulator manual.
Generator produces mechanical noise.	Defective bearing.	Replace bearing.
	Loose or misaligned coupling.	Tighten, realign, or replace coupling.

PROBLEM	CHECK	SOLUTION
Generator produces high voltage.	Faulty metering.	Check voltage with a separate meter at Anderson connectors.
	Incorrect connections.	Verify generator connections.
	Regulator requires adjustment.	Adjust regulator settings. Consult regulator manual.
	Leading power factor.	Check power factor of the load. If power factor is leading, change load configuration. Excessive leading power factor (capacitors) can cause voltage to climb out of control.
	Defective regulator.	Replace regulator.
Generator is overheating.	Generator is overloaded.	Reduce load. Check with amps on display and compare with nameplate rating.
	Clogged ventilation screens.	Clean air passages.
	High room temperature.	Improve ventilation or reduce load or altitude.
	Insufficient circulation of cooling air.	Generator location and enclosure design must provide adequate air flow and minimize recalculation.
	Unbalanced load.	The load on each leg should be as evenly balanced as possible and should not exceed rated current on any one leg.
Equipment runs normally on utility power, but will not run on generator set.	Distorted voltage waveform.	Analyze load. Excessive SVR (thyristor) loading will cause distortion. Some equipment may be sensitive to distorted waveforms. Contact Baumalight.
	Improper generator voltage.	Check nameplates of devices comprising the load. Compare required or frequency voltage and frequency with that of the generator. Adjust driver speed and/or generator voltage as necessary to match generator output to load requirements.

8 WARRANTY

To view the warranty, scan the QR Code below, or go to Baumalight.com. From the Support drop down, click on Support, then select Generators. Select Product Warranty.

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