



BAUMALIGHT™

TX Series Generators

OPERATORS MANUAL

TABLE OF CONTENTS

- 1 INTRODUCTION 2
 - 1.1 Overview..... 2
 - 1.2 Harmonic Distortion Values..... 2
- 2 SAFETY..... 2
 - 2.1 Safety Alert Symbol And Safety Words 2
 - 2.2 Operational Hazards..... 3
 - Prepare For Emergencies 4
 - Replace Safety Signs 4
 - Do Not Allow Riders 4
 - Lower Operating Speed 4
 - Avoid Rollover 4
 - Hazards From Modifying Equipment 5
 - 2.3 Maintenance Hazards 5
 - Maintenance 5
- 3 SAFETY SIGNS 6
- 4 ASSEMBLY 8
 - 4.1 Remove Shipping Dunnage And Parts 8
 - 4.2 Remove Generator From Pallet..... 8
 - 4.3 Driveline Dimension 8
- 5 OPERATION 10
 - 5.1 Preparation For Use 10
 - 5.2 Machine Components 10
 - 5.3 Attaching Generator To Tractor..... 11
 - 5.4 Detaching Generator From Tractor 13
 - 5.5 Transporting..... 13
 - 5.6 Operating The Generator 14
 - 5.6.1 Initial Start-Up 14
 - 5.6.2 Monitoring The Load 16
 - 5.6.3 Shutting Down The Generator..... 16
 - 5.6.4 Storing The Generator 17
- 6 SERVICE AND MAINTENANCE 18
 - 6.1 Service 18
 - 6.1.1 Electrical Tests 18
 - 6.2 Maintenance..... 19
 - 6.2.1 Lubrication Symbol 19
 - 6.2.2 Every 250 Hours 19
 - 6.2.3 Every 1000 Hours 19
 - 6.2.4 Severe Service Recommendations 20
 - 6.2.5 Maintaining The Permanent Magnets 20
 - 6.2.6 Restoring Residual Magnetism 20
- 7 TROUBLESHOOTING 21
- BAUMALIGHT GENERATOR WARRANTY..... 24

1 INTRODUCTION

1.1 Overview

Congratulations on your choice of a Baumalight TX 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 TX 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. Call your Baumalight dealer, distributor or the factory 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.

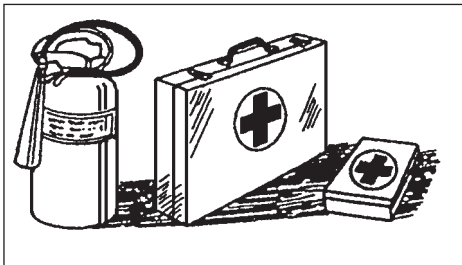
Keep your equipment in proper working condition.

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 Baumalight at 866-820-7603.

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 Baumlight 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 Baumalight at 866-820-7603.

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

Do not make unauthorized modifications. Contact Baumalight at 866-820-7603 before you weld, cut/ drill holes, or make any other modifications.

Always use Baumalight replacement parts.



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.

3 SAFETY SIGNS

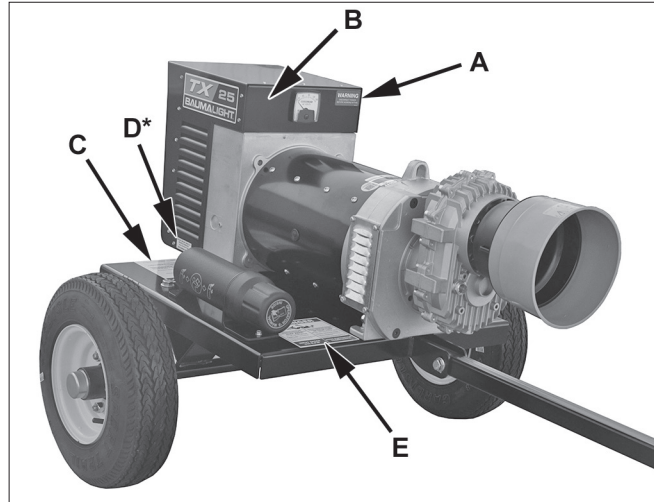


WARNING

Entanglement hazard.

Keep clear of moving components.

Wear proper protective equipment appropriate for the job.



A. MTB-021

WARNING

DISCONNECT POWER
BEFORE WORKING WITHIN

MTB-021

- B. TX7 - D006245
- TX12 - D006241
- TX18 - D006242
- TX25 - D006243
- TX31 - D006244



CAUTION

DO NOT LOAD GENERATOR
WITH ELECTRIC MOTOR
THAT EXCEEDS XX HP

C. MTB-111


DANGER


HIGH VOLTAGE / HAUTE TENSION

READ OWNERS MANUAL BEFORE OPERATING

Failure to read and follow instructions could cause injury to operator and damage to generator.

1. Avoid contact if wet. High shock hazard.
2. Keep children away.
3. Do not allow anyone to operate generator without proper instructions.
4. Do not lift generator with single lifting eye.
5. Neutral bonded to frame.
6. Use in dry environment only.

FOR STANDBY SERVICE:
Connect output of generator to suitably rated transfer switch in accordance with Canadian Electrical Code, Part One.

LIRE LE MONDE D'EMPLOI AVANT LE MISE EN MARCHÉ

Des blessures à l'usage et des dommages à la génératrice pourraient survenir si les instructions du mode d'emploi ne sont pas respectées.

1. Utiliser dans un endroit sec et propre seulement.
2. Garder hors de la portée des enfants.
3. Ne laisser personne utiliser la génératrice sans les instructions appropriées.
4. Ne pas soulever la génératrice en utilisant un seul anneau de levage.
5. Neutre collé sur l'armature.
6. Pour l'usage de dessous d'abri seulement.

USAGE DE SECOURS:
Brancher la génératrice à un inverseur approprié en respectant les exigences du code canadien de l'électricité.

MTB-111

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

D. MTB-050

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

USE RUBBER MOUNTS

MTB-050

D005261

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

D005261

E. MTB-186


DANGER



<p style="font-weight: bold; font-size: 12pt; margin: 0;">ROTATING DRIVELINE CONTACT CAN CAUSE DEATH KEEP AWAY!</p> <p style="font-weight: bold; font-size: 10pt; margin: 0;">Do not operate without:</p> <ul style="list-style-type: none"> All driveline, tractor, and equipment shields in place. Drivelines securely attached at both ends. Driveline shield that turn freely on driveline. 	<p style="font-weight: bold; font-size: 12pt; margin: 0;">ARBRE DE TRANSMISSION TOURNANT LE SIMPLE CONTACT PEUT ÊTRE MORTEL SE TENIR LOIN!</p> <p style="font-weight: bold; font-size: 10pt; margin: 0;">Ne pas faire fonctionner sans:</p> <ul style="list-style-type: none"> Avoir posé les écrans protecteurs de l'arbre de transmission, du tracteur et de la machine. Avoir bien raccordé chaque bout de l'arbre de transmission. Que les écrans protecteurs de l'arbre de transmission tournent librement.
<p style="font-weight: bold; font-size: 12pt; margin: 0;">INPUT SPEED 540 R.P.M</p>	<p style="font-weight: bold; font-size: 12pt; margin: 0;">VITESSE D'ENTRAÎNEMENT 540 COUPS/MINUTE</p>

MTB-186

D005261

⚠ DANGER

NOT ALL PTO GENERATORS
HAVE THE SAME POLARITY

It is the users responsibility to ensure
polarity of cord kit matches generator

⚠ DANGER

TOUS LES GÉNÉRATEURS DE PRISE DE
FORCE N'ONT PAS LA MÊME POLARITÉ.

Il est de la responsabilité de l'utilisateur de
s'assurer que la polarité du kit de câblage
correspond au générateur.

Located On Anderson Connector Except TX7
And TX12

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

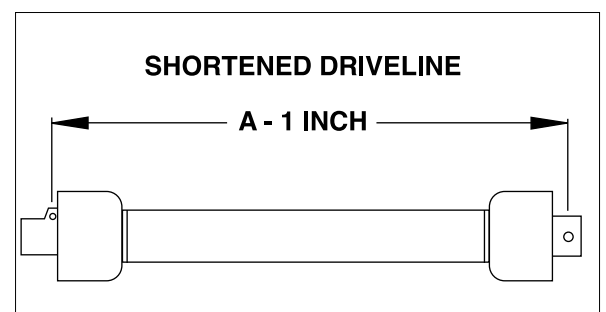
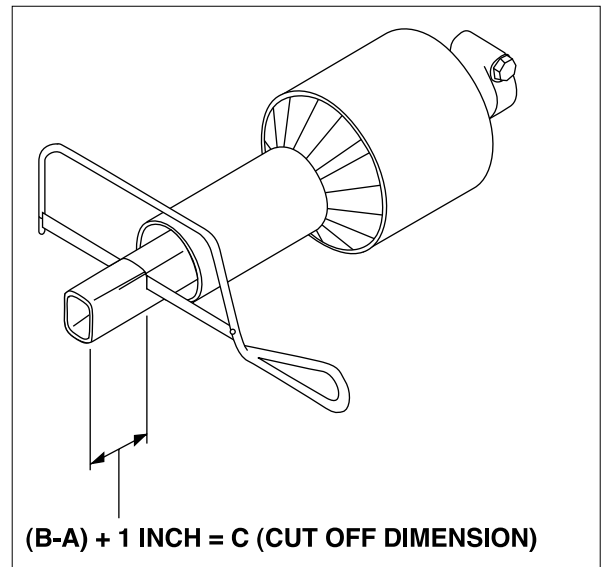
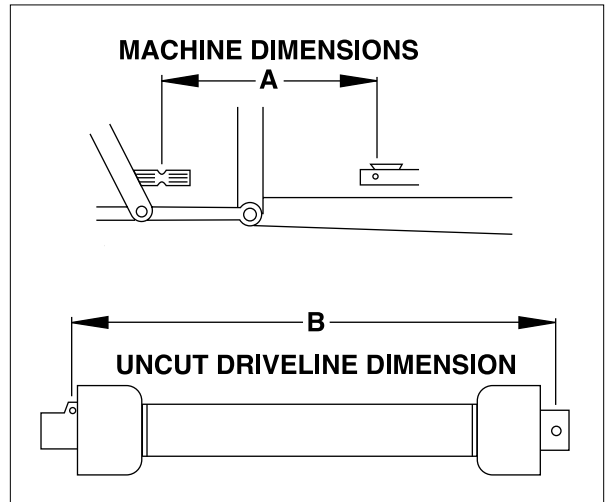
1. Attach hitch to generator frame.
2. Roll generator off of pallet.
3. Install PTO driveline.

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 2 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.



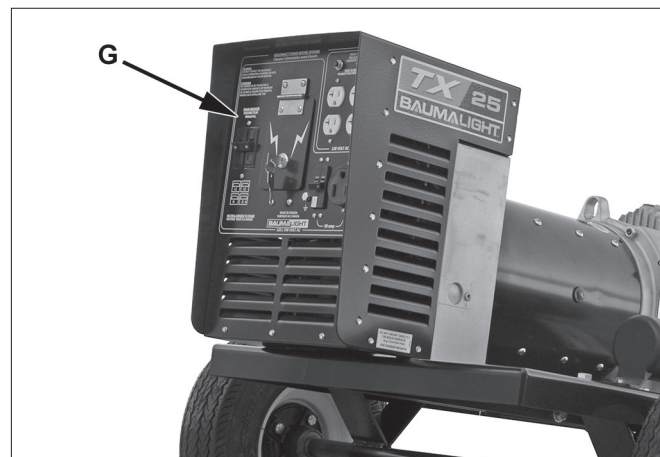
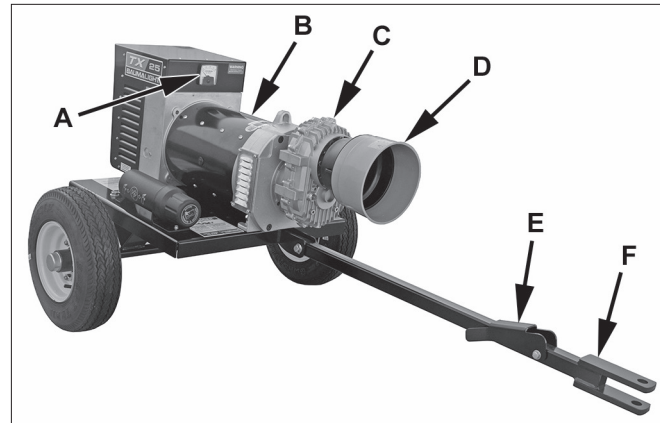
WARNING

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. Voltmeter
- B. Generator
- C. Gear Box
- D. PTO Shaft Guard
- E. PTO Driveline Support
- F. Trailer Tongue
- G. Power Panel

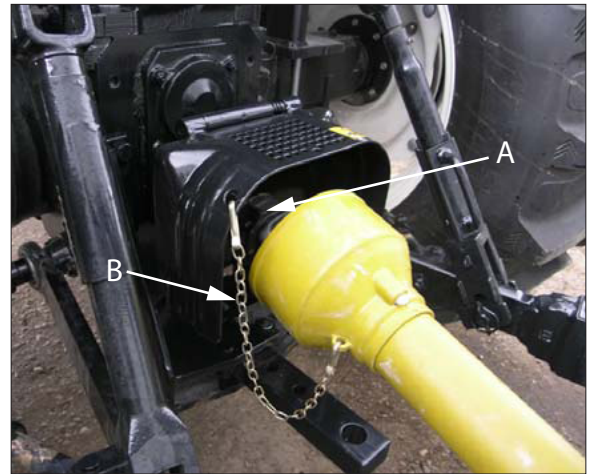
5.3 Attaching Generator To Tractor

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.

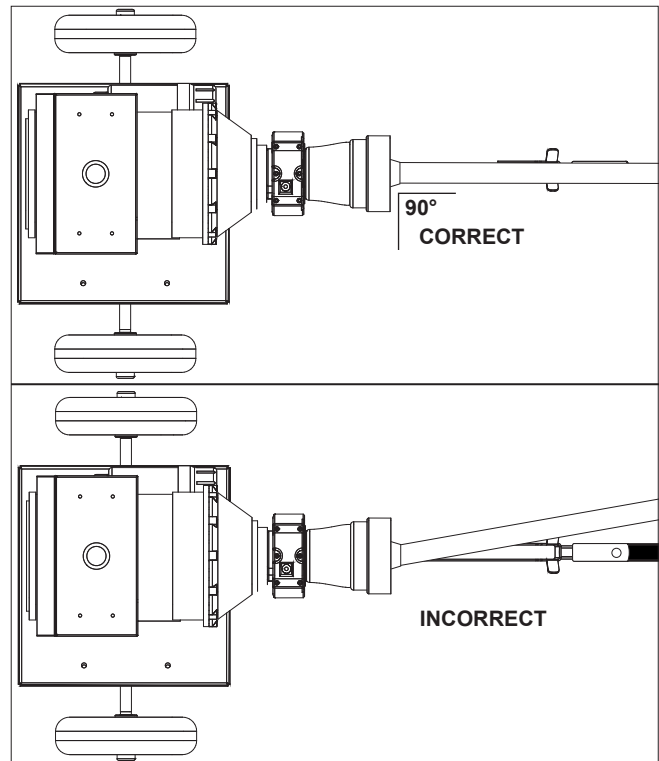
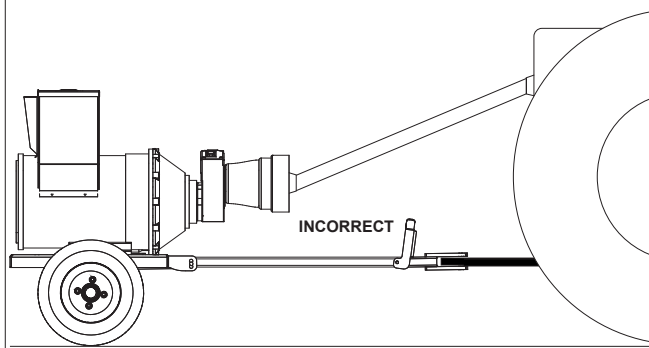
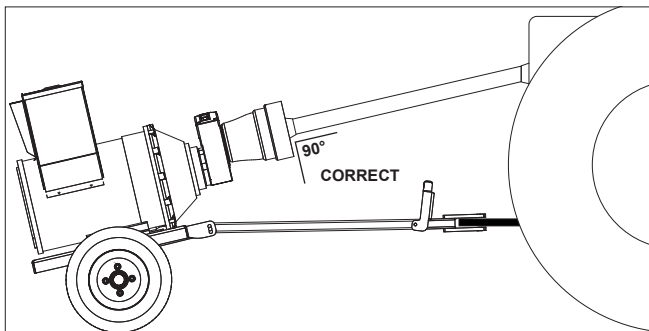
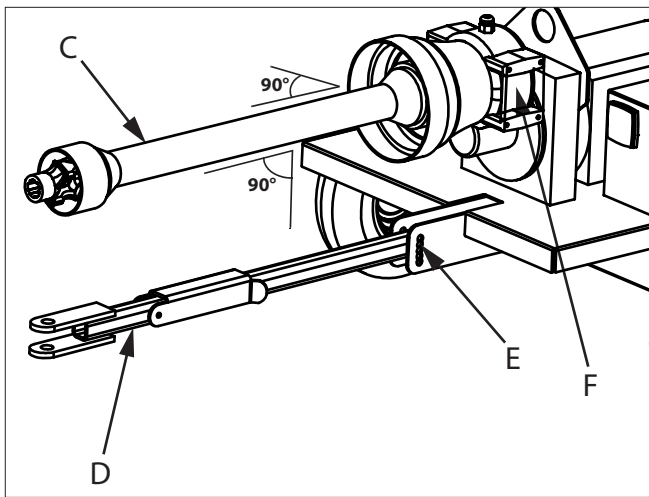
1. Back up tractor to generator.
2. Engage tractor park brake and/or place transmission in “Park”.
3. Shut off engine and remove key.
4. Lift up on trailer tongue and slide onto tractor hitch.
5. Install pin and retaining pin.
6. Pull collar (A) back toward the generator. Align splines on tractor PTO 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

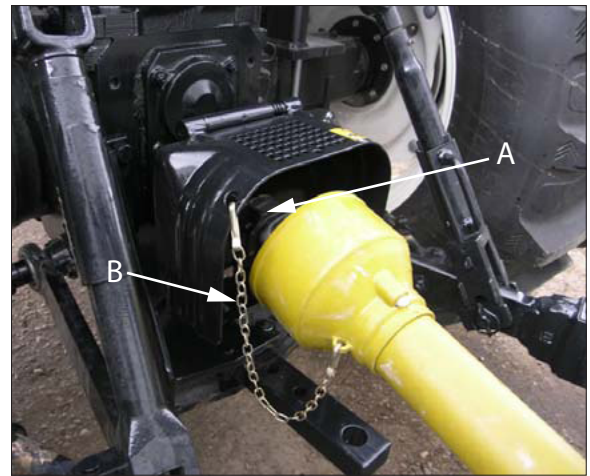
Prevent serious injury or death caused by unexpected movement:

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

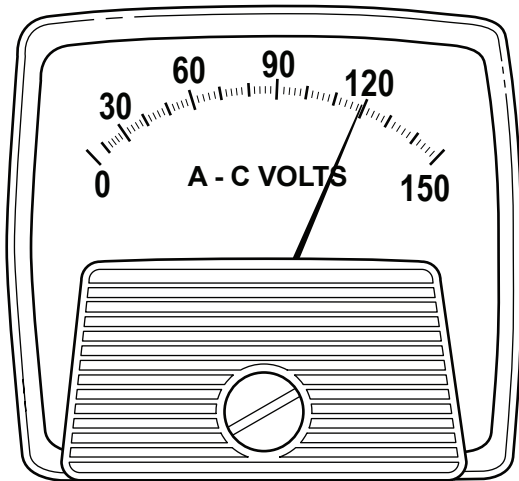
1. Connect the power cable to the generator and to the transfer switch.



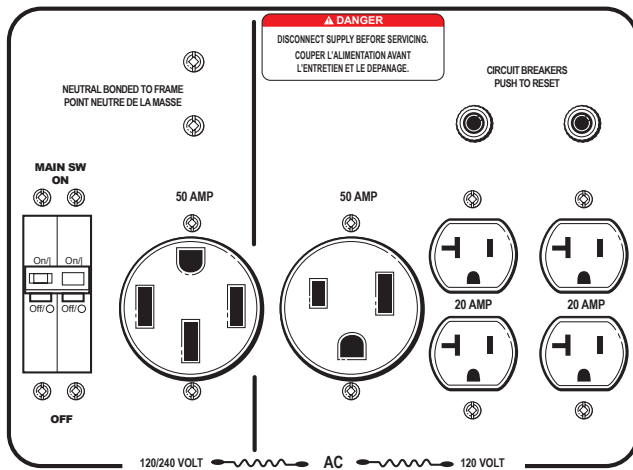
2. Start the tractor and allow it to warm up.
3. With the engine idling, engage the PTO drive.

- Adjust throttle until the VAC meter on the generator displays 120 VAC.

There is a +/- 5 volt variance as the generator regulates to stable voltage. The VAC meter may move up to 10 volts from time to time.



- Turn on the main breaker on the generator.



- Operate the transfer switch so that the load is transferred to the generator.

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.

NOTICE

Risk of generator damage.

Do not exceed the maximum electric motor size for the generator.

To prevent generator damage, do not load generator with an electric motor that exceeds the maximum capacity for the generator. See information below for maximum motor size.

TX7 - 0.75 hp (0.56 kw)
TX12 - 1.25 hp (0.93 kw)
TX18 - 1.5 hp (1.12 kw)
TX25 - 1.75 hp (1.30 kw)
TX31 - 2 hp (1.5 kw)

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 Baumlight 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.

6.2 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.

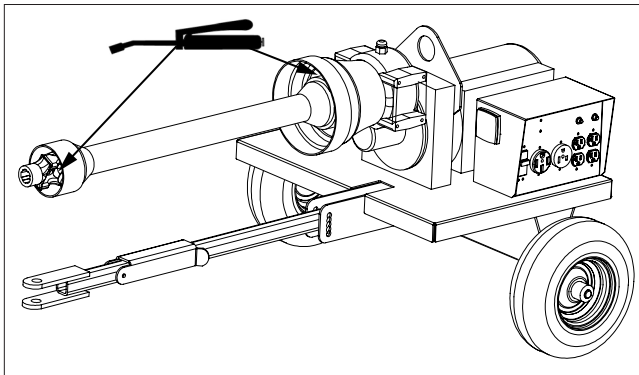
6.2.1 Lubrication Symbol

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



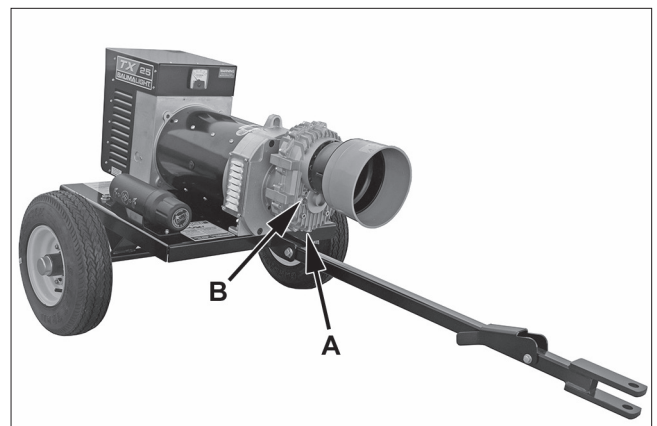
6.2.2 Every 250 Hours

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 (A) and measure quantity of oil.
4. Install plug.
5. Remove fill plug (B).
6. Add the proper amount of synthetic 75-90W gear oil.
7. Install fill plug.



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.

Have a qualified electrician contact Baumalight for assistance restoring residual magnetism.

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.
	Generator produces no voltage.	VAC meter not showing any voltage.
Generator produces no voltage.	Under speed operation.	Check voltage with a separate meter at the generator terminals.
	Defective connections.	Check speed using a tachometer or frequency meter.
	Loss of residual magnetism.	Verify generator connections. Inspect all wiring for loose connections, open circuits, grounds, and short circuits.
	Defective diodes, suppressor or windings.	Restore residual magnetism. Consult your Baumalight dealer.
	Faulty capacitor	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.
		Check and replace.
Generator produces low voltage with no load.	Under speed operation.	Check speed using a tachometer or frequency meter.
	VAC meter not showing any voltage.	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.
	Incorrect capacitor rating.	Check and replace.
	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.

PROBLEM	CHECK	SOLUTION
Generator produces fluctuating voltage.	A small variation is normal.	There is a +/- 5 volt variance as the generator regulates to stable voltage. The VAC meter may move up to 10 volts from time to time.
	Fluctuating engine speed.	Check engine governor systems for malfunction. Check load for fluctuation.
	Uneven rotation.	Check for uniform rotation speed.
	Defective rectifier assembly.	Check assembly for loose connections. Test the diodes.
	Loose terminal or load connections.	Improve connections both mechanically and electrically.
Generator produces low voltage with 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 or low load power factor.	Motor starting currents are too large for the generator when starting multiple motors. Sequence the motors and start the largest motor first. Reduce lagging power factor load.
	Line drop.	If voltage is proper at generator terminals but low at the terminals, Increase external wire size.
	The engine speed slows down.	Check engine governor systems for malfunction.
	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 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.
	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.
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.

BAUMALIGHT GENERATOR WARRANTY

PTO Generators are warranted to be free of defects in materials and workmanship under normal use and service, for a period of two years from the date of purchase. This warranty covers parts and labor, but does not cover misuse, negligence or dealer travel time.

Replacement of individual parts vs. assemblies are at the discretion of the manufacturer.

Baumalight products purchased new must be registered for warranty at <https://baumalight.com/support/product-registration>.

Warranty claims must include the bill of sale to the original purchaser.

This product must be operated and maintained in accordance with the Operating and Maintenance Instructions supplied with this unit.

Under no circumstances will the manufacturer be liable for any consequential damage or expense of any kind, including loss of profits. The manufacturer is under no circumstances liable for tractor damage of any kind. The manufacturer is not liable for the maintenance of the product.

This warranty is extended only to the original purchaser and there never is any warranty on anything sold through auction.

Units are to be returned at the customer's expense to the nearest Authorized Service Center. Damage in transit is not covered by warranty.

The work may be performed by the end user, if they are a qualified mechanic.

The Manufacturer's Liability is limited to repair of the product and/or replacement of parts and is given to the purchaser in lieu of all other remedies including incidental and consequential charges. There are no warranties, expressed or implied other than those specified herein. For the nearest Authorized Service Center call the manufacturer.

Please note the following details and file this information in an appropriate place.

Model Number: _____ S/N: _____

Date of Purchase: _____ Owners Name _____

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