

Owner's Manual for Tow-Behind Field and Brush Mower



| MODEL NUMBER: | |
|-----------------|--|
| | |
| SERIAL NUMBER: | |
| | |
| DATE PURCHASED: | |

Register your Generac product at: WWW.GENERAC.COM 1-888-GENERAC (888-436-3722)

≜WARNING

CANCER AND REPRODUCTIVE HARM

www.P65Warnings.ca.gov.

(000393a)

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Section 1: Safety Rules & General Information

Introduction

Thank you for purchasing a Generac Power Systems Inc. product. This unit has been designed to provide high performance, efficient operation, and years of use when maintained properly.

The information in this manual is accurate based on products produced at the time of publication. The manufacturer reserves the right to make technical updates, corrections, and product revisions at any time without notice.

Read This Manual Thoroughly



AWARNING

Consult Manual. Read and understand manual completely before using product. Failure to completely understand manual and product could result in death or serious injury. (000100a)

If any section of this manual is not understood, contact Generac Customer Service at 1-888-436-3722 (1-888-GENERAC), or **www.generac.com** with any questions or concerns.

This manual must be used in conjunction with the appropriate installation manual.

SAVE THESE INSTRUCTIONS: The manufacturer suggests that this manual and the rules for safe operation be copied and posted near the unit installation site. Safety should be stressed to all operators and potential operators of this equipment.

Safety Rules

The manufacturer cannot anticipate every possible circumstance that might involve a hazard. The alerts in this manual, and on tags and decals affixed to the unit, are not all inclusive. If using a procedure, work method, or operating technique that the manufacturer does not specifically recommend, verify that it is safe for others and does not render the equipment unsafe.

Throughout this publication, and on tags and decals affixed to the unit, DANGER, WARNING, CAUTION, and NOTE blocks are used to alert personnel to special instructions about a particular operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully. Alert definitions are as follows:

ADANGER

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

(000001)

AWARNING

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

(000002)

ACAUTION

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

(000003)

NOTE: Notes contain additional information important to a procedure and will be found within the regular text of this manual.

These safety alerts cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the action or service are essential to preventing accidents.

How to Obtain Service

When the unit requires servicing or repairs, contact Generac Customer Service at 1-888-436-3722 (1-888-GENERAC), or **www.generac.com** for assistance.

When contacting Customer Service about parts and service, always supply the complete model and serial number of the unit as given on its data decal located on the unit. Record the model and serial numbers in the spaces provided on the inside front cover of this manual.

General Hazards

▲WARNING

Accidental Start-up. Disconnect the negative battery cable, then the positive battery cable when working on unit. Failure to do so could result in death or serious injury. (000130)

AWARNING

Personal injury. Keep out of reach of children. Failure to do so could result in death or serious injury.

(000128a)



AWARNING

Vision loss. Eye protection is required when servicing unit. Failure to do so could result in vision loss or serious injury.

(000377)

▲WARNING

Personal injury and equipment damage. Do not tamper with engine governed speed. Operating engine too fast or slow increases the risk of injury or permanent engine damage. (000254)



AWARNING

Moving Parts. Do not wear jewelry when starting or operating this product. Wearing jewelry while starting or operating this product could result in death or serious injury.

(000115)



AWARNING

Moving Parts. Keep clothing, hair, and appendages away from moving parts. Failure to do so could result in death or serious injury.

(000111)



AWARNING

Hot Surfaces. When operating machine, do not touch hot surfaces. Keep machine away from combustibles during use. Hot surfaces could result in severe burns or fire.

(000108)



AWARNING

Risk of Fire. Hot surfaces could ignite combustibles, resulting in fire. Fire could result in death or serious injury.

(000110)

AWARNING

Risk of injury. Do not operate or service this machine if not fully alert. Fatigue can impair the ability to service this equipment and could result in death or serious injury.

(000215)

WARNING

Environmental Hazard. Always recycle batteries at an official recycling center in coordance with all local laws and regulations. Failure to do so could result in environmental damage, death or serious injury.

(000228)



AWARNING

Hearing Loss. Hearing protection is recommended when using this machine. Failure to wear hearing protection could result in permanant hearing loss. (000107)

AWARNING

Personal injury. Wear sturdy shoes with no-slip tread, long pants, and gloves when operating this unit. Failure to do so could result in death or serious injury.

(000492)

Exhaust and Fuel Hazards



ADANGER

Asphyxiation. Running engines produce carbon monoxide, a colorless, odorless, poisonous gas. Carbon monoxide, if not avoided, will result in death or serious injury.

(000103)



ADANGER

Explosion and Fire. Fuel and vapors are extremely flammable and explosive. Store fuel in a well ventilated area. Keep fire and spark away. Failure to do so will result in death or serious injury.

(000143)



A DANGER

Explosion and Fire. Do not overfill fuel tank. Fill to 1/2 inch from top of tank to allow for fuel expansion. Overfilling may cause fuel to spill onto engine causing fire or explosion, which will result in death or serious injury. (000166b)



ADANGER

Risk of fire. Allow fuel spills to completely dry before starting engine. Failure to do so will result in death or serious injury.

(000174)



AWARNING

Fire risk. Fuel and vapors are extremely flammable. Do not operate indoors. Doing so could result in death, serious injury, or property or equipment damage. (000281)



AWARNING

Explosion and fire risk. Do not smoke near unit. Keep fire and spark away. Failure to do so could result in death, serious injury, or property or equipment damage. (000282)



AWARNING

Explosion and Fire. Do not smoke while refueling unit. Failure to do so could result in death, serious injury, or property or equipment damage. (000284a)

Fire Hazards



AWARNING

Risk of Fire. Verify machine has properly cooled before installing cover and storing machine. Hot surfaces could result in fire.

(000109)



AWARNING

Risk of fire. Never operate engine without the air cleaner installed. Operating engine without the air cleaner could result in death or serious injury.

(000249)

AWARNING

Fire hazard. Do not obstruct cooling and ventilating airflow around the generator. Inadequate ventilation could result in fire hazard, possible equipment damage, death or serious injury. (000217)

Explosion Hazards



ADANGER

Explosion and fire. Fuel and vapors are extremely flammable and explosive. No leakage of fuel is permitted. Keep fire and spark away. Failure to do so will result in death or serious injury.

(000192)



ADANGER

Risk of fire. Allow fuel spills to completely dry before starting engine. Failure to do so will result in death or serious injury.

(000174)



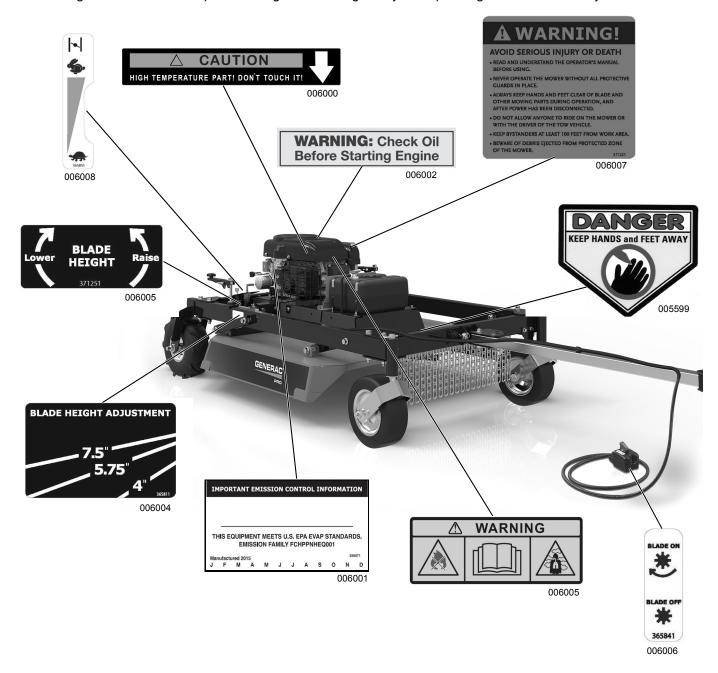
WARNING

Risk of Fire. Hot surfaces could ignite combustibles, resulting in fire. Fire could result in death or serious injury.

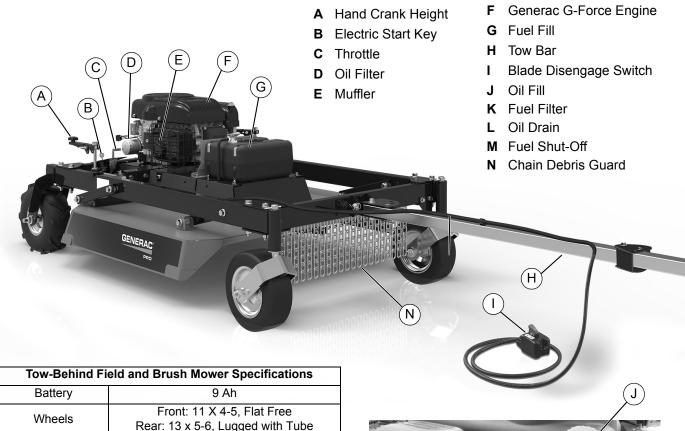
(000110)

Safety and Operating Decals

This unit features numerous safety and operating decals. These decals provide important operating instructions and warn of dangers and hazards. Replace damaged or missing safety and operating decals immediately.



Section 2: General Information and Setup



| Engine Specifications | | | |
|-----------------------|----------------------------------|--|--|
| Engine | Generac G-Force | | |
| Starting System | Electric Start | | |
| Fuel Capacity | 2.5 gal (9.46L) | | |
| Oil Capacity | 54.1 oz (1.6 L) | | |
| Oil Type | See chart in Adding Oil . | | |
| Spark Plug | TORCH F7RTC or equivalent | | |
| Spark Plug Gap | .024032 in (0.6-0.8 mm) | | |

A complete specification sheet is included in the documentation provided with the unit at the time of purchase. For additional copies, contact Generac Customer Service at 1-888-436-3722 (1-888-GENERAC) or www.generac.com.

Emissions

The United States Environmental Protection Agency (US EPA) (and California Air Resources Board (CARB), for engines/equipment certified to California standards) requires that this engine/equipment complies with exhaust and evaporative emissions standards. Locate the emissions compliance decal on the engine to determine applicable standards. For emissions warranty information, please reference the included emissions warranty. It is important to follow the maintenance specifications in the manual to ensure the engine complies with the applicable emissions standards for the duration of the product's life.

Remove Contents from Carton

 See Figure 2-1 and Figure 2-2. Verify carton contents prior to assembly. Carton contents should contain the following.

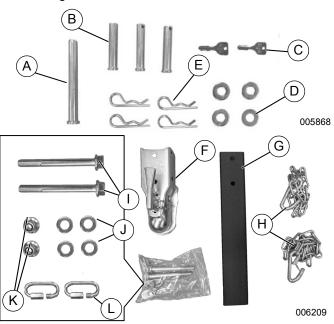


Figure 2-1. Hardware Supplied in Product Package

| Item | Description | QTY |
|------|------------------------------------|-----|
| Α | Pin, Clevis, 1/2" OD X 4.5" LG | 1 |
| В | Pin, Clevis, 1/2" X 2-1/2", TRT | 2 |
| С | Key, Ignition Switch | 2 |
| D | Washer, SAE Flat, 1/2", ZP | 3 |
| Е | Pin, Hair, 1/2" to 9/16", 12" Wire | 3 |
| F | Receiver, 2", Class II | 1 |
| G | Extension, Tow Bar, Ball Hitch | 1 |
| Н | Chains, Safety, 36", Individual | 2 |
| I | Bolt, Hex, Flange, 1/2-13 X 5" | 2 |
| J | Washer, 53" ID X 1.06" OD X .095" | 4 |
| K | Nut, Nylon Lock, Flanged, 1/2-13 | 2 |
| L | Link, Chain Threaded Connector | 2 |

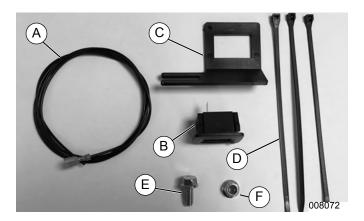


Figure 2-2. Maintenance Meter

| Item | Description | QTY |
|------|----------------------------------|-----|
| Α | Wire, 66 in | 1 |
| В | Meter | 1 |
| С | Mounting Bracket | 1 |
| D | Cable Ties | 3 |
| Е | 5/16-18 x 1" Bolt, Flanged | 1 |
| F | 5/16-18 Nut, Nylon Lock, Flanged | 1 |

- Contact Generac Customer Service at 1-888-436-3722, or www.generac.com with the unit model and serial number for any missing items.
- **3.** Record model, serial number, and date of purchase on front cover of this manual.

Attaching Tow Bar to Push Bar

1. See *Figure 2-3*. Secure offset bracket (A) to push bar with 4.5" long clevis pin, washer, and hairpin (B).

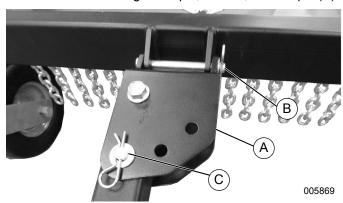


Figure 2-3. Offset Bracket Secured to Push Bar

2. Align hole in tow bar with hole in offset bracket and install clevis pin, washer, and hair pin (C).

AWARNING

Personal injury. Install clevis pins from the bottom with the washers and hair pins on top. Failure to do so could result in death, serious injury, equipment or property damage. (000449)

Installing Hitch

 See Figure 2-4. Attach chain connector (A) to the end of each safety chain (B) with the shorter side (C) toward the safety chain. Tighten with 10 mm wrench.

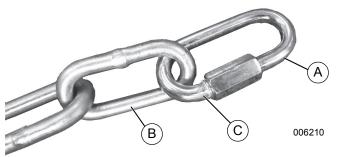


Figure 2-4. Chain Connector

2. See *Figure 2-5*. Place receiver (D) on extension (E).

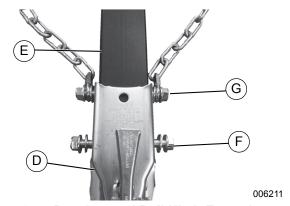


Figure 2-5. Receiver and Ball Hitch Extension

- 3. Loosely secure the front of the receiver with 1/2-13 x 5" bolt with washer and locknut with washer (F).
- **4.** Loosely secure the rear of the receiver and safety chains with 1/2-13 x 5" bolt with washer and locknut with washer (G) with washers between safety chain.
- **5.** Tighten front and rear bolts using two 3/4" wrenches.
- **6.** See *Figure 2-6*. Install ball hitch extension (K) to tow bar with pivot bolt and locknut (L).

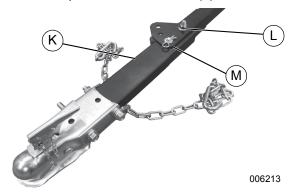


Figure 2-6. Receiver and Ball Hitch Extension

7. Install clevis pin and hair pin with washer (M).

AWARNING

Personal injury. Install clevis pins from the bottom with the washers and hair pins on top. Failure to do so could result in death, serious injury, equipment or property damage. (000449)

Connecting Remote Control

- **1.** Cut cable tie securing remote control cable to frame.
- 2. See *Figure 2-7*. Remove blade engage/disengage remote control (A) from connector (B).



Figure 2-7. Remote Control

3. See *Figure 2-8*. Route remote control cable (C) through tow bar cable clamps (D).

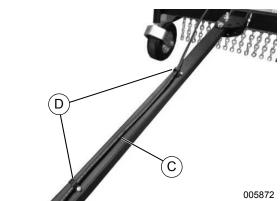


Figure 2-8. Remote Control Installed

4. Plug remote control onto connector.

Maintenance Meter Installation

- See Figure 2-9. Align slot in mounting bracket (A) with mounting hole in control board, and secure mounting bracket to control board with 5/16-18 x 1" bolt and 5/16" locknut (B).
- 2. Insert meter (C) into the bracket opening. Press the meter firmly to ensure the retaining clips on the sides of the meter have snapped into place.

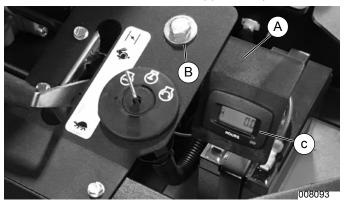


Figure 2-9. Maintenance Meter Installation

- 3. Slide the sensor wire firmly onto the sensor wire connector on the back of the meter.
- **4.** Find a suitable path for the wire leading to the engine spark plug. Use two cable ties to secure the wire to the frame.
- 5. See Figure 2-10. At a convenient point along the spark plug wire wrap four or five turns of meter wire (D) tightly around the spark plug wire (E) and secure the meter wire to itself with a cable tie (F). Cut and discard the balance of the wire.

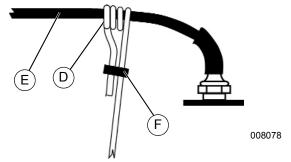


Figure 2-10. Maintenance Meter Installation

NOTE: Avoid placing the wire on or near hot surfaces.

Adding Oil

ACAUTION

Engine damage. Verify proper type and quantity of engine oil prior to starting engine. Failure to do so could result in engine damage.

(000135)

AWARNING

Skin irritation. Avoid prolonged or repeated contact with used motor oil. Used motor oil has been shown to cause skin cancer in laboratory animals. Thoroughly wash exposed areas with soap and water.

(000210)

IMPORTANT NOTE: The unit is shipped without oil in the engine. Oil must be added prior to operation.

- **1.** Place unit on a firm, level surface, and verify engine is cooled.
- **1.** See *Figure 2-11*. Remove oil dipstick/fill cap (A) and wipe dipstick clean.

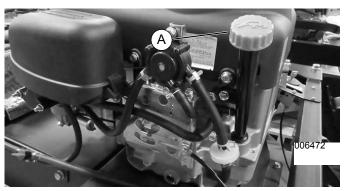
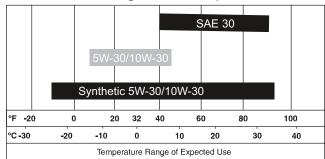


Figure 2-11. Adding Oil

 Add 20 oz (600 mL) of oil. Climate determines proper engine oil viscosity. See *Table 1: Engine Oil Requirements* to select correct viscosity.

NOTE: Use only detergent oil classified SF-SG.

Table 1 – Engine Oil Requirements



- 3. Wait one minute for oil to settle.
- 4. Reinsert dipstick into oil filling hole without screwing it in. Pull the dipstick out, and verify the oil level is between the "MIN" and "MAX" marks.
- If the oil level is low, add a few ounces of oil at a time until the oil reaches the "MAX" mark. Do not overfill.
- **6.** Fully tighten the cap.

Adding Fuel



ADANGER

Explosion and Fire. Fuel and vapors are extremely flammable and explosive. Add fuel in a well ventilated area. Keep fire and spark away. Failure to do so will result in death or serious injury. (000105)



ADANGER

Explosion and Fire. Do not fill fuel tank past full line. Allow for fuel expansion. Overfilling may cause fuel to spill onto engine causing fire or explosion, which will result in death or serious injury.

(000214)



AWARNING

Explosion and Fire. Do not smoke while refueling unit. Failure to do so could result in death, serious injury, or property or equipment damage. (000284a)

- 1. Place unit on a level surface in a well ventilated area.
- 2. Verify unit is OFF and cooled for a minimum of two minutes.
- 3. See Figure 2-12. Remove the gas fill cap (A).



Figure 2-12. Fuel Cap

- **4.** Fill tank with fresh, unleaded gas with a minimum 90 octane rating to 0.25 in (6.4 mm) from the bottom of the fill neck to allow for fuel expansion.
- 5. Install fuel fill cap.

High Altitude Replacement Kit

At high altitude, standard carburetor air-fuel mixture will be too rich. A rich mixture decreases performance, increases fuel consumption, fouls the spark plug and causes hard starting. Operation at high altitude for extended periods of time, may increase emissions.

Proper operation at higher altitudes can be improved by installing an altitude kit when required. See *Table 2: High Altitude Replacement Kit*

Table 2 - High Altitude Replacement Kit

| Altitude Range | Part Number | |
|----------------|--------------|--|
| 0-5000 ft | Not required | |
| 5000-8000 ft | 10000035259 | |

Kits can be obtained by contacting Generac Customer Service at 1-888-436-3722 (1-888-GENERAC), or **www.generac.com**. Kits must be installed by a qualified individual.

NOTE: If a carburetor is replaced, the proper high altitude kit jet will need to be installed into the replacement carburetor.

NOTE: The warranty may be void if installation of a high altitude kit is not made for high altitude use.

Connecting Battery Cable

Units are shipped with the negative terminal battery cable disconnected. Before use, connect the battery cable.

 See Figure 2-13. Connect negative cable (A) to negative (-) battery terminal.

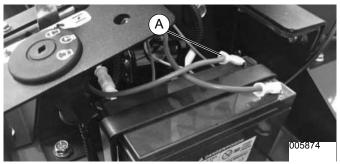


Figure 2-13. Connecting Battery Cable

Checking Tire Pressure

AWARNING

Personal injury. Inflate tires to manufacturer's recommended pressure indicated on tire. Failure to do so could result in death, serious injury, and equipment damage. (000462)

1. See *Figure 2-14*. Remove valve stem cap (A) and check tire pressure with a tire pressure gauge.



Figure 2-14. Valve Stem Location

- **2.** Compare the tire pressure reading with the manufacturer's recommended tire pressure stamped on tire.
- **3.** If pressure is low, add air through the valve stem with an air hose.
- 4. Replace the valve stem cap when finished.

Hitching Unit to Tow Vehicle

AWARNING

Loss of control. Verify the unit is securely attached to the tow vehicle. Failure to securely attach the unit could result in loss of control, resulting in death, serious injury, unit, or property damage. (000506)

AWARNING

Loss of control. Do not tow unit with a passenger car or truck. Doing so could result in death, serious injury, unit, or property damage.

(000456)

AWARNING

Personal injury. Never tow on roads. Towing on roads could result in death, serious injury, unit, or property damage.

(000504)

- Move tow vehicle to a flat area and set parking brake.
- **2.** See *Figure 2-15*. Remove locking pin and pull latch assembly up into the open position (A).
- 3. Position receiver onto tow vehicle tow ball (B).

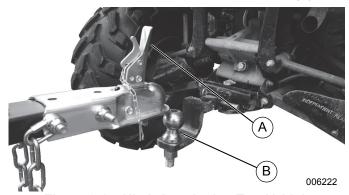


Figure 2-15. Hitch Attached to Tow Vehicle

4. See *Figure 2-16*. Close latch assembly (C) to lock it onto the tow ball.

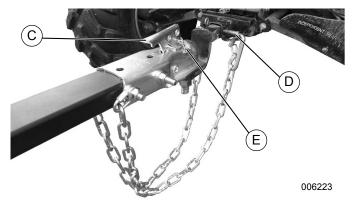


Figure 2-16. Hitch Attached to Tow Vehicle

- **5.** Cross safety chains under ball hitch by attaching left chain to right anchor and right chain to left anchor.
- **6.** Attach towing safety chains to tow vehicle (D) and insert locking pin (E) into latch assembly.

NOTE: Verify safety chains have enough slack for turns.

Attaching Blade Engage and Disengage Remote Control

IMPORTANT NOTE: Route remote control cable away from tow vehicle muffler to prevent cable damage.

 See Figure 2-17 and Figure 2-18. Position blade engage/disengage remote control (A) on tow vehicle within easy reach of seated driver.

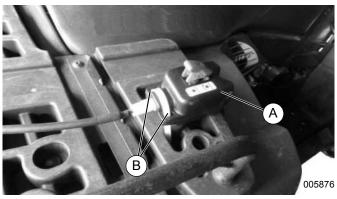


Figure 2-17. ATV Seat



Figure 2-18. Mower Seat

2. Secure remote control to tow vehicle using control box mounting holes (B) with cable ties.

UTV Extension

AWARNING

Accidental start-up. Before servicing or detangling, shut down unit, allow to cool, remove keys, and disconnect spark plug wire(s). Failure to do so could result in death, serious injury, or equipment damage.

(000415)

See Figure 2-19. Pull existing wire harness connector (A) from blade engage control box (B).

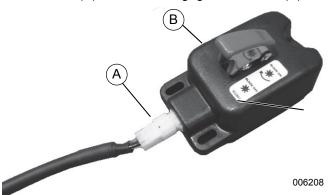


Figure 2-19. UTV Extension

- **2.** Plug UTV extension onto the wire harness.
- 3. Plug blade engage control box onto UTV extension.

NOTE: Don't force the connections. One end of the UTV extension will only fit into the control box and the other end will only fit into the existing wire harness.

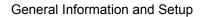
 Secure blade extension control box to tow vehicle.
 See Attaching Blade Engage and Disengage Remote Control.

Blade Clutch Burnishing

The blade clutch must be burnished before initial use to ensure optimum engaging and braking action.

NOTE: The machine must be fully assembled and set up before performing the burnishing procedure.

- 1. Start the engine and set the machine to half throttle. See *Starting Unit*.
- **2.** Engage blade clutch for two seconds, disengage and let cool down for 10 seconds.
- 3. Repeat step 2 for 50 cycles.



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Section 3: Operation



AWARNING

Consult Manual. Read and understand manual completely before using product. Failure to completely understand manual and product could result in death or serious injury. (000100a)



AWARNING

Hot Surfaces. When operating machine, do not touch hot surfaces. Keep machine away from combustibles during use. Hot surfaces could result in severe burns or fire.

(000108)

AWARNING

Personal injury. This unit is designed for cutting grass and brush. Never use this machine for any other purpose. Failure to do so could result in death, serious injury, equipment or property damage. (000450)

AWARNING

Personal injury. Never put hands, face, feet, or clothing under the deck or near the discharge area while the unit is running. Doing so could result in death or serious injury. (000451)

AWARNING

Accidental start-up. Before servicing or detangling, shut down unit, allow to cool, remove keys, and disconnect spark plug wire(s). Failure to do so could result in death, serious injury, or equipment damage. (000415)

Operation and Use Questions

Contact Generac Customer Service at 1-888-436-3722 (1-888-GENERAC), or **www.generac.com** with questions or concerns about unit operation and maintenance.

Operating Parameters

▲WARNING

Loss of control. Do not tow unit with a passenger car or truck. Doing so could result in death, serious injury, unit, or property damage.

(000456)

Recommended tow vehicles include:

- ATV
- Lawn/garden tractor -- 17 hp and above and weighing at least 500 lbs (227kg)
- Riding lawn mower -- 14 hp and above and weighing at least 400 lbs (181 kg)
- Utility vehicle
- Compact or sub-compact tractor

Tow Vehicle Restrictions

AWARNING

Personal injury. Install the blade engage/disengage remote control within easy reach of the driver. Failure to do so could result in death, serious injury, equipment or property damage. (000452)

AWARNING

Personal injury. When towing on slopes, verify towing vehicle has sufficient power and weight. Failure to adhere to these practices could result in death, serious injury, unit, or property damage.

(000453)

AWARNING

Personal injury. Use caution when operating unit over uneven terrain or slopes. Failure to do so could result in death, serious injury, equipment or property damage. (000460)

WARNING

Loss of control. Do no drive over 5 mph (8 km/h) on flat terrain or over 4 mph (6 km/h) on rough terrain. Doing so could resulting in loss of control of the equipment and serious injury. (000455)

WARNING

Personal injury. Use caution when approaching blind corners, shurbs, trees, or other objects that limit vision. Failure to do so could result in death, serious injury, unit, or property damage.

(000493)

AWARNING

Personal injury. Do not ride or allow riders on the unit. Riding on and allowing riders could result in death, serious injury, or equipment damage.

(000409)

Controls and Symbols

See *Figure 3-1*. The Tow-Behind Field and Brush Mower control panel uses icons to represent settings. Be familiar with icon meanings prior to unit operation.





Figure 3-1. Control Symbols

Before Starting Engine

AWARNING

Projectile risk. Remove all debris from work area before operating unit. Failure to do so could result in death, serious injury, or property or equipment damage. (000410)

AWARNING

Projectile risk. Be aware of surroundings at all times when operating unit. Disengage mower blades if people or animals enter the work space. Failure to do so could result in death, serious injury, or property damage.

IMPORTANT NOTE: Oil must be added before starting the engine for the first time. Units are shipped without oil.

- 1. Check engine oil level before use.
- 2. Check fuel level.
- **3.** See *Figure 3-2*. Open fuel shut-off valve (A).

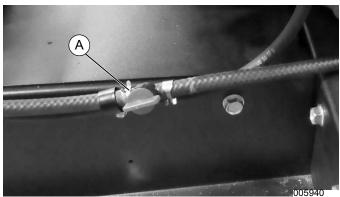


Figure 3-2. Fuel Shut-Off Valve

4. See *Figure* **3-3**. Verify blade control safety cover (A) is pushed down in the disengaged position.



Figure 3-3. Blade Switch Safety Cover

NOTE: The blade switch safety cover must be pushed down in the disengaged position for the engine to start.

Starting Engine

- 1. Verify blade switch safety cover is closed.
- 2. See Figure 3-4. Move throttle (A) to CHOKE position.

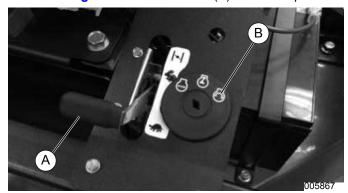


Figure 3-4. Throttle Control Lever

NOTE: When starting an already warm engine, throttle control lever should be in RUN position

- **3.** Turn key switch (B) to START position until engine starts, then release.
- **4.** Move throttle control lever to FAST position.

Stopping Engine

ACAUTION

Equipment damage. Never stop the engine by moving throttle control lever to CHOKE. Doing so could result in engine damage.

(000457)

- Disengage blades by pushing blade control safety cover down.
- 2. Move throttle control lever to IDLE position.
- 3. Turn key to STOP, and remove key.
- 4. Close fuel shut-off valve.

Engaging Blades

 See Figure 3-5. Engage blades by opening blade control safety cover (A) and pushing blade control switch (B) forward.



005915

Figure 3-5. Blade Control Switch

Disengaging the Blades

See *Figure 3-5*. Close blade control safety cover.

Adjusting Mower Deck Height

AWARNING

Personal injury. Shut engine OFF and keep hands and feet away while adjusting deck height. Failure to do so could result in death or serious injury.

(000458)

AWARNING

Personal injury. Never exit the tow vehicle before stopping blades and shutting tow vehicle OFF. Failure to do so could result in personal injury or equipment damage. (000459)

Mower cutting height ranges from 4 in (10.16 cm) to 7.5 in (19.05 cm). Rotating height adjusters clockwise lower the mower deck. Rotating height adjusters counter clockwise lift the mower deck. Ten full rotations adjust the mower deck 1 in (2.54 cm).

1. See *Figure 3-6*. Remove locking pin (A) from height adjuster (B).

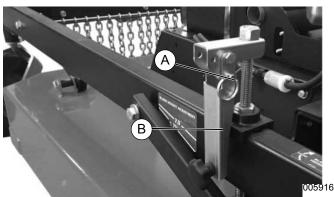


Figure 3-6. Height Adjust Locking Pin

See Figure 3-7 Lift height adjuster into operating position and re-install locking pin.



Figure 3-7. Height Adjust Locking Pin Reinstalled

3. Repeat for height adjuster on the side of the unit.

4. See *Figure 3-8*. Rotate both height adjusters in the same direction, switching sides every ten full turns until the top of sway brace (C) aligns with the desired cutting height lines on height adjust label (D).

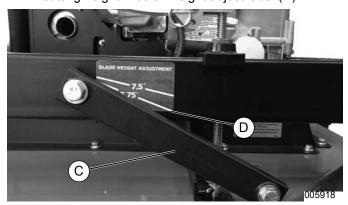


Figure 3-8. Blade Height Adjustment Label

5. Rotate handle to inside of frame, pull locking pin, fold handle down, and reinsert locking pin to secure handle in the down position.

Offset Mowing

WARNING

Personal injury. Install clevis pins from the bottom with the washers and hair pins on top. Failure to do so could result in death, serious injury, equipment or property damage. (000449)

The mower deck can be offset up to 46 in (116 cm) to either side of the tow vehicle. The offset positions are:

- · No offset
- Middle offset -- 27-1/2 in (65.58 cm) off center
- Full offset -- 46 in (116 cm) off center
- See Figure 3-9. Remove hair pin, washer, and clevis pin (A) securing tow bar.

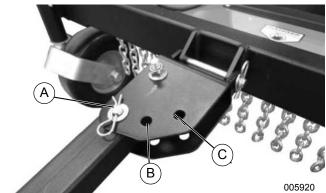


Figure 3-9. Offsetting Tow Bar

- 2. Rotate tow bar from no offset to medium offset (B) or full offset (C).
- 3. Reinstall clevis pin and hair pin with washer.

4. See *Figure 3-10*. Remove clevis pin and hair pin with washer (F) securing tow bar extension.

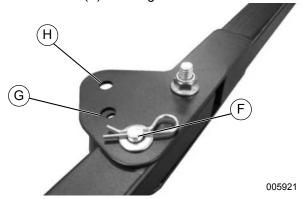


Figure 3-10. Offsetting the Tow Bar Extension

5. Rotate tow bar extension from no offset to medium offset (G) or full offset (H).

IMPORTANT NOTE: See *Figure 3-11*. Tow bar offset angle (I) and tow bar extension offset angle (J) must match to ensure proper tracking.

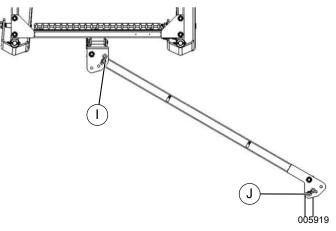


Figure 3-11. Full Offset

6. Reinstall clevis pin and hair pin with washer.

Changing Tow Bar Offset Direction

See Figure 3-12. Remove blade engage/disengage control (A) from connector (B).



Figure 3-12. Blade Engage/Disengage Remote Control

2. See *Figure 3-13*. Remove remote control cable (A) from cable clamps (B).

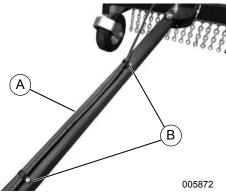


Figure 3-13. Remote Control Cable and Clamps

- 3. Remove cable clamps with 5/16" nut driver.
- **4.** See *Figure 3-14*. Support tow bar while removing clevis pin and hair pin with washer (C).

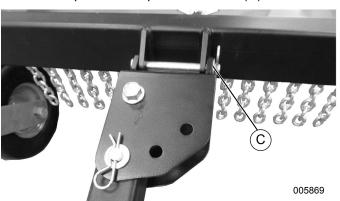


Figure 3-14. Offset Bracket for Right Side Offset

5. See *Figure 3-15*. Turn offset bracket over and reinstall with clevis pin and hair pin with washer.



Figure 3-15. Offset Bracket for Left Side Offset

- **6.** Install cable clamps to top of tow bar with a 5/16" nut driver.
- **7.** Route remote control cable through bar cable clamps.
- **8.** Plug blade engage/disengage remote control onto connector.
- Set tow bar and tow bar extension to the desired offset. See Offset Mowing for instructions on adjusting tow bar and tow bar extension offset.

Mowing Slopes and Uneven Terrain

AWARNING

Personal injury. Never operate mower on wet or slippery slopes as loss of control may result. Operating on wet or slippery slopes could result in death, serious injury, or property or equipment damage.

(000413)

AWARNING

Personal injury. When towing on slopes, verify towing vehicle has sufficient power and weight. Failure to adhere to these practices could result in death, serious injury, unit, or property damage. (000453)

AWARNING

Loss of control. Always mow up and down a slope. Never mow slopes greater than 20 degrees. Failure to do so could result in death, serious injury, equipment or property damage.

(000454)

AWARNING

Personal injury. Use caution when operating unit over uneven terrain or slopes. Failure to do so could result in death, serious injury, equipment or property damage. (000460)

If Mower Becomes Stuck

AWARNING

Personal injury. Never exit the tow vehicle before stopping blades and shutting tow vehicle OFF. Failure to do so could result in personal injury or equipment damage. (000459)



AWARNING

Hot Surfaces. When operating machine, do not touch hot surfaces. Keep machine away from combustibles during use. Hot surfaces could result in severe burns or fire.

(000108)

- 1. Disengage blades and stop the engine. Never try to free the machine from with the blades engaged.
- Drive over or back away from the obstacle.

Cutting Brush and Saplings

- The cutting capacity is 3" saplings.
- · When cutting woody material and small saplings, slowly ride the machine up and over material. Adjust forward speed to varying conditions.

Operation

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Section 4: Maintenance and Troubleshooting

Maintenance

Regular maintenance will improve performance and extend engine/equipment life. Regular maintenance, replacement, or repair of the emissions control devices and systems may be performed by any repair shop or person of the owner's choosing. To obtain emissions control warranty service free of charge, contact Generac Customer Service at 1-888-436-3722 (1-888-GENERAC), or www.generac.com. See the emissions warranty.

AWARNING

Accidental start-up. Before servicing or detangling, shut down unit, allow to cool, remove keys, and disconnect spark plug wire(s). Failure to do so could result in death, serious injury, or equipment damage. (000415)

AWARNING

Personal injury. Mower blades are extremely sharp. Use appropriate personal protective equipment when handling and servicing blades, or use blade protection. Failure to do so could result in death or serious injury.

WARNING

Hot Surfaces. When operating machine, do not touch hot surfaces. Keep machine away from combustibles during use. Hot surfaces could result in severe burns or fire.

(000108)

| Procedure | Before Each Use | Every 25 Hours | Every 100 Hours |
|--|------------------|----------------|-----------------|
| Check engine oil level | • | | |
| Inspect general equipment condition | • | | |
| Check blade sharpness | • | | |
| Clean engine exterior and cooling fins | • | | |
| Check cable connections | | • | |
| Check tire pressure on rear wheels | | • | |
| Change engine oil and filter | 1st time 5 hours | • | |
| Replace air filter | | • | |
| Lubricate wheel bearings | | • | |
| Lubricate height adjustment threads | | • | |
| Check drive belt condition | | • | |
| Replace spark plug(s) | | | • |
| Replace fuel filter | | | • |

Operating Maintenance Meter

See *Figure 4-1*. The maintenance meter monitors accumulated running time, time until engine oil needs to be changed, and time until lubrication is recommended. Pressing function button (A) cycles through the meter functions.



Figure 4-1. Operating Maintenance Meter

After 25 hours of running time, the meter will automatically blink as a signal for an oil change. It will continue to blink for a two hour period of accumulated running time. The next alert will automatically appear in 25 hours.

If the RPM indication is not responding to changes in engine speed, check the connections at the meter and verify the meter wire is wrapped tightly around the spark plug wire.

Changing Engine Oil and Filter

ACAUTION

Engine damage. Verify proper type and quantity of engine oil prior to starting engine. Failure to do so could result in engine damage.

(000135)

▲WARNING

Skin irritation. Avoid prolonged or repeated contact with used motor oil. Used motor oil has been shown to cause skin cancer in laboratory animals. Thoroughly wash exposed areas with soap and water.

(000210)

NOTE: Drain oil when engine is warm. Warm oil drains more completely.

NOTE: To order a replacement oil filter, contact Generac Customer Service at 1-888-436-3722, or **www.generac.com**.

1. See *Figure 4-2*. Place an approved oil container near oil drain (D).

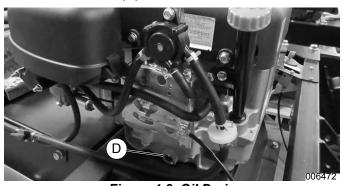


Figure 4-2. Oil Drain

- 2. Remove drain plug with an 8 mm Allen wrench and allow oil to drain into the container.
- See Figure 4-3. Remove oil filter (E) with an oil filter wrench.

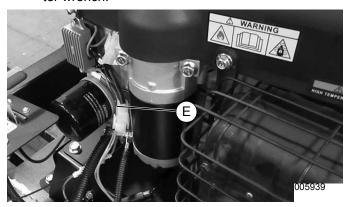


Figure 4-3. Oil Filter

NOTE: Verify the old filter gasket comes off with the filter.

- **4.** Wipe oil filter mounting base with a clean cloth.
- 5. Apply a thin coat of clean motor to **new** filter gasket.
- **6.** Spin on the **new** oil filter until filter gasket contacts the mount, and then tighten the oil filter 3/4 to 1 turn.
- 7. Replace oil drain plug.
- **8.** Refill with oil until the level reaches the full mark on the dipstick. See *Adding Oil*.

Air Filter Maintenance

NOTE: To order a replacement air filter, contact Generac Customer Service at 1-888-436-3722 (1-888-GEN-ERAC), or **www.generac.com**.

- **1.** Clean the area around the filter cover.
- 2. Remove the cover by unscrewing the two knobs.
- 3. Remove the filtering element.
- **4.** Tap the cartridge on a solid surface and blow it from the inside with compressed air to remove dust and debris.
- **5.** Clean the inside of the filter housing. Do not allow dust or debris to enter the inlet duct.

NOTE: If the cartridge is too dirty to clean, clogged, or damaged, replace the cartridge with a new one.

6. Install the cartridge and refit the cover.

Servicing Spark Plug

To service spark plug:

- 1. Clean area around spark plug.
- 2. Remove and inspect spark plug.
- 3. See *Figure 4-4*. Inspect electrode gap with wire feel gauge and reset spark plug gap to 024-.032 in (0.6-0.8 mm).

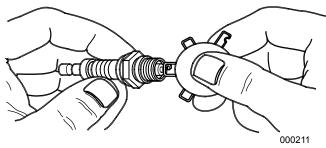


Figure 4-4. Spark Plug

- **4.** Replace spark plug if electrodes are pitted, burned or porcelain is cracked.
- **5.** Install spark plug. If a new spark plug is used, turn it 1/2 turn after compressing the gasket. If reinstalling a used spark plug, turn it 1/8-1/4 turns after compressing the gasket.

Lubrication

Wheel Bearings and Casters Lubrication

1. See *Figure 4-5* and *Figure 4-6*. Clean front and rear wheel grease fittings (A) with a clean rag.



Figure 4-5. Grease Fitting Rear Wheel

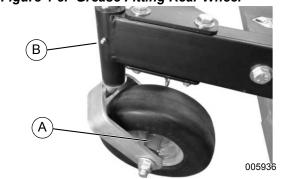


Figure 4-6. Grease Fitting Front Wheel

- **1.** Clean front caster setting grease fittings (B) with a clean rag.
- **2.** Lubricate all wheel and caster shaft grease fittings with multipurpose automotive grease.

Height Adjuster Thread Lubrication

- 1. Raise deck to the highest position.
- **2.** See *Figure 4-7*. Clean height adjuster threads (C) using a wire brush or rag.



Figure 4-7. Height Adjuster Threads

- **3.** Apply lubrication to the full length of the threads.
- 4. Lower deck to distribute lubrication.

Removing and Replacing Drive Belt

Removing Drive Belt

 See Figure 4-8. Turn fuel shut-off valve (A) to the closed position

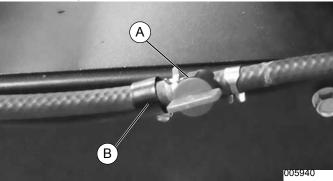


Figure 4-8. Fuel Shut-Off Valve and Fuel Line

- 2. Using a 5/16" nut driver, remove cable clamp (B).
- 3. Remove fuel and vapor lines from engine cable guide.
- **4.** See *Figure 4-9*. Using a 9/16" wrench, remove the eight bolts (D) securing gas tank plate (E) and heat barrier (F).

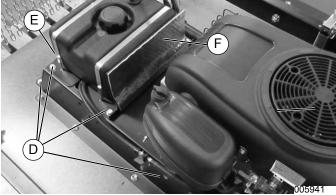


Figure 4-9. Removing Gas Tank Plate

5. See *Figure 4-10*. Lift gas tank plate (H) and position gas tank plate on fuel line side of the machine.

NOTE: When lifting the gas tank plate do not stress the fuel or vapor lines.

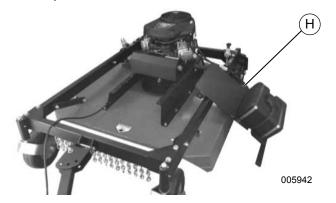


Figure 4-10. Gas Tank Plate Removed

6. See *Figure 4-11*. Use a 9/16" wrench to remove the three bolts (I) securing belt cover (J) and set the belt cover aside.

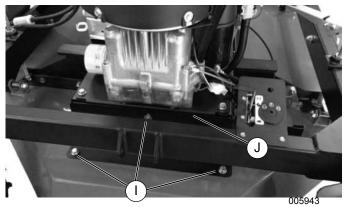


Figure 4-11. Belt Cover Removal

7. See *Figure 4-12*. Rotate blade pulley (K) counter clockwise, and roll drive belt (L) up and over the blade pulley.

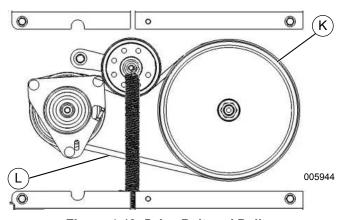


Figure 4-12. Drive Belt and Pulley

- **8.** Push idler pulley away from drive belt and pull belt down to remove it from the clutch.
- 9. Remove drive belt.

Installing Drive Belt

- 1. Insert **new** drive belt under the clutch.
- **2.** Pull idler pulley out and position drive belt onto the clutch.
- **3.** Place drive belt over the top of the blade pulley.
- **4.** Insert the "V" of drive belt into blade pulley groove on the left side of the machine. Rotate blade pulley clockwise until drive belt slides fully into pulley groove.
- **5.** Verify drive belt is properly installed into the clutch, idler and blade pulleys.
- **6.** Reinstall belt cover, gas tank plate, and cable clamps.

NOTE: When positioning the gas tank plate verify the gas tank plate does not stretch or pinch the fuel or vapor lines.

7. Secure fuel and vapor lines.

Replacing Swinging Blades

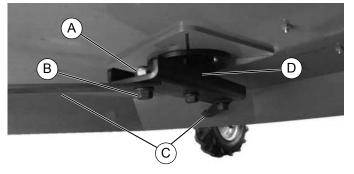
AWARNING

Personal injury. Mower blades are extremely sharp. Use appropriate personal protective equipment when handling and servicing blades, or use blade protection. Failure to do so could result in death or serious injury.

(000400)

NOTE: Replace blades when worn or damaged.

- 1. Disconnect unit from tow vehicle.
- Use jack stands or ramps to lift the front of the mower off the ground. Chock rear wheels to prevent movement.
- 3. See *Figure 4-13*. Remove bolt (B) and lock nut (A) securing swinging blade (C) to blade carrier (D) using two 1-1/8" wrenches, and remove blade.



005947

Figure 4-13. Swing Blades and Blade Carrier

- **4.** Position **new** or sharpened swinging blade under blade carrier.
- 5. Reinstall bolt (B) and secure with locknut (A).
- **6.** Tighten locknut (A) with two 1-18" wrenches until locknut touches blade carrier.

NOTE: The blade must swing freely after tightening. If blade does not swing freely, loosen locknut 1/4 to 1/2 turn.

7. Repeat steps 3 through 7 for other blade.

Replacing Carbon Canister

- Remove the gas tank plate. See Removing and Replacing Drive Belt
- **1.** See *Figure 4-14*. Cut cable ties (A) securing carbon canister and purge hose.

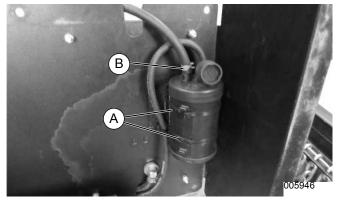


Figure 4-14. Carbon Canister

- 2. Slide hose clamps (B) away from hose connections and twist hoses from canister.
- Install hoses onto new carbon canister in same location as on the old canister and position hose clamps with pliers.
- **4.** Slide **new** cable ties through canister brackets and position canister onto brackets with the filter facing down. Rotate canister if necessary.
- **5.** Tighten cable clamps around canister and cut excess with wire cutters.
- **6.** Install a cable tie around the canister bracket and purge hose to secure it to the carbon canister.

NOTE: Do not over tighten the cable tie.

Ball Hitch Receiver Adjustment

Ball Hitch Receiver Adjustment Check

1. See *Figure 4-15*. Place 2" ball in receiver socket and close latch assembly. Verify locking trigger is properly engaged in detent.

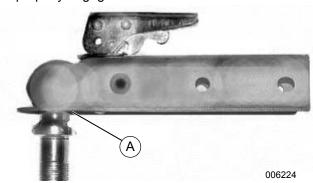


Figure 4-15. Ball Receiver Adjustment Check

2. Try moving the ball in the socket. If ball moves more than 1/16 in, the clamp requires adjustment.

Receiver Adjustment

 See Figure 4-16. With 2" ball in receiver socket, close receiver latch completely. Verify locking trigger is engaged in detent.

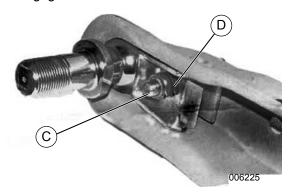


Figure 4-16. Ball Receiver Adjustment Check

2. Tighten lock nut (C) until spring (D) is fully compressed, then back off the lock nut 1/2 turn or enough that the latch can clamp and unclamp from the ball.

Battery Care



AWARNING

Explosion. Batteries emit explosive gases while charging. Keep fire and spark away. Wear protective gear when working with batteries. Failure to do so could result in death or serious injury.

(000137a)

AWARNING

Explosion. Do not dispose of batteries in a fire. Batteries are explosive. Electrolyte solution can cause burns and blindness. If electrolyte contacts skin or eyes, flush with water and seek immediate medical attention.

(000162)

AWARNING

Accidental Start-up. Disconnect the negative battery cable, then the positive battery cable when working on unit. Failure to do so could result in death or serious injury. (000130)

WARNING

Accidental start-up. Before servicing or detangling, shut down unit, allow to cool, remove keys, and disconnect spark plug wire(s). Failure to do so could result in death, serious injury, or equipment damage. (000415)



AWARNING

Risk of burn. Do not open or mutilate batteries. Batteries contain electrolyte solution which can cause burns and blindness. If electrolyte contacts skin or eyes, flush with water and seek immediate medical attention. (000163a)

AWARNING

Environmental Hazard. Always recycle batteries at an official recycling center in accordance with all local laws and regulations. Failure to do so could result in environmental damage, death or serious injury.

(000228)

Always recycle batteries in accordance with local laws and regulations. Contact your local solid waste collection site or recycling facility to obtain information on local recycling processes. For more information on battery recycling, visit the Battery Council International website at: http://batterycouncil.org

Proper care can extend the life of a battery. For best battery performance and long battery life.

- Do not allow battery to fully discharge.
- Charge battery every 4–6 weeks if the unit is not being used. Operate the engine for at least 45 minutes to maintain proper charge.
- Do not charge a fully charged battery. Heat from the trickle charger could damage the battery. The battery will read 12–13.2 volts when fully charged.
- Do not crank the engine when the battery charge is low
- Before charging the battery, observe its external appearance and keep it clean and dry. Never charge or use a battery that shows cracks, changes shape, leaks, or is otherwise damaged.
- Store unused battery in a dry environment with temperatures between +40°F (5°C) and +95°F (+35°C).

Charging the Battery

If the battery loses charge, recharge with a trickle charger. The charger must have an output of 12 volts at no more than 2 amps.

NOTE: Starting a machine that has been significantly discharged using the recoil starter or jumper cables will not recharge the battery.

- 1. Disconnect battery cables.
- Connect the negative (black) battery charger cable to battery negative (-) terminal, and connect positive (red) battery charger cable to battery positive (+) terminal.
- **3.** Plug battery charger into outlet.
- **4.** Charge until battery charger indicates it is charged or battery measures 12-14 volts.
 - At 1 Amp, the battery may need to charge for as long as 24 hours.
 - At 2 Amps, the battery may need to charge for as long as 12 hours.
- **5.** Disconnect charger from outlet once battery has charged.
- **6.** Disconnect battery from charger and remove the cables, removing the negative cable first.
- 7. Connect battery cables.

Troubleshooting

| Symptom | Possible Cause | | | |
|--|--|--|--|--|
| | Verify fuel shut-off valve is OPEN. | | | |
| | Verify blade switch safety cover is in DISENGAGED position. | | | |
| | Verify spark plug wire is attached. | | | |
| | See Starting Engine . Verify throttle is in CHOKE position if engine is cold. | | | |
| | Fuel may be old. Change as necessary. | | | |
| Engine will not start. | Spark plug may be dirty or cracked. Change as necessary. If spark plug is oily, leave it out, hold a rag over the plug hole(s) and crank the engine several times to blow out any oil in the cylinders. Wipe off plug and install. | | | |
| Refer to the engine owner's manual for engine-specific procedures. | Air filter dirty. Change as necessary. | | | |
| procedures. | Check the two fuses in wiring harness. Replace as necessary. | | | |
| | Verify all wire connections are clean and tight, Verify ground connections on handlebar and all connections on solenoid are proper. Disconnect green battery ground wire first to avoid sparks. | | | |
| | Check battery voltage. See Battery Care . If the voltage is low, charge with a 12-volt, 1 to 2-amp trickle charger. The battery may need to be periodically charged if the machine is not used for at least 45 minutes at a time. | | | |
| | Contact Generac Customer Service at 1-888-436-3722, or www.generac.com. | | | |
| | Verify throttle lever is in RUN position | | | |
| Engine lacks power or is not running smoothly. | Air filter may be dirty. Replace as necessary. | | | |
| Refer to the engine owner's manual for engine-specific | Spark plug may be dirty or cracked. Change as necessary. If spark plug is oily, leave it out, hold a rag over the plug hole(s) and crank the engine several times to blow out any oil in the cylinders. Wipe off plug and install. | | | |
| procedures. | Fuel may be old. Replace as necessary. | | | |
| | Contact Generac Customer Service at 1-888-436-3722, or www.generac.com. | | | |
| | Check engine oil level. | | | |
| Engine smokes | Verify unit is not on a steep incline. See <i>Mowing Slopes and Uneven Terrain</i> . | | | |
| | Air filter dirty. Replace as necessary. | | | |
| | Inspect cooling fins. Clean if necessary. | | | |
| | Contact Generac Customer Service at 1-888-436-3722, or www.generac.com. | | | |

| Symptom | Possible Cause | |
|---|---|--|
| | Pulley groove dirty or damaged. Clean pulley with steel wool. File off cuts or nicks. | |
| Belt frays or rolls over pulley | Inspect belt for wear or hard spots. | |
| | Inspect belt for stretching. | |
| | Tighten blade carrier mounting bolt as tight with at least a 1 ft long 1-1/8" wrench. | |
| Excessive vibration when | Tighten swinging blade mounting hardware. See Replacing Swinging Blades | |
| engaging the mower blade | Replace swinging blade if chipped, bent, or broken. | |
| | Inspect spindle bearings or spindle shaft. | |
| | Tighten blade carrier mounting bolt as tight with at least a 1 ft long 1-1/8" wrench. | |
| Blades are not cutting, or are loose | Retighten swinging blade mounting hardware. See Replacing Swinging Blades | |
| | Sharpen dull or nicked swinging blades. | |
| | Verify battery voltage is sufficient | |
| Blades will not engage and/ or disengage | Remove and replace remote control switch. | |
| 3-3- | Contact Generac Customer Service at 1-888-436-3722, or www.generac.com. | |
| Uneven cut | Set left and right height adjusters to same cutting height. | |
| Excessive engine stalling | Raise cutting height and drive slower when cutting | |

