



Form No. 3441-764 Rev D

Count on it.

Operator's Manual

10in Cultivator

Model No. 58601—Serial No. 321000001 and Up



It is a violation of California Public Resource Code Section 4442 or 4443 to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the engine is equipped with a spark arrester, as defined in Section 4442, maintained in effective working order or the engine is constructed, equipped, and maintained for the prevention of fire.

 **WARNING**

**CALIFORNIA
Proposition 65 Warning**

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Use of this product may cause exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

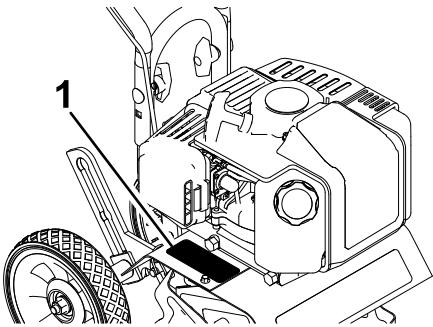
Introduction

This cultivator is intended to be used by residential homeowners or professional, hired operators to cultivate and level soil as well as blend landscape materials, compost and fertilizer. Using this product for purposes other than its intended use could prove dangerous to you and bystanders.

Read this information carefully to learn how to operate and maintain your product properly and to avoid injury and product damage. You are responsible for operating the product properly and safely.

Visit www.Toro.com for more information, including safety tips, training materials, accessory information, help finding a dealer, or to register your product.

Whenever you need service, genuine Toro parts, or additional information, contact an Authorized Service Dealer or Toro Customer Service and have the model and serial numbers of your product ready. [Figure 1](#) identifies the location of the model and serial numbers on the product. Write the numbers in the space provided.



g342516

Figure 1

1. Model and serial number location

Model No. _____

Serial No. _____

This manual identifies potential hazards and has safety messages identified by the safety-alert symbol ([Figure 2](#)), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



g000502

Figure 2
Safety-alert symbol

This manual uses 2 words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

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Safety

This machine has been designed in accordance with ANSI B71.8-2016.

General Safety

This product is capable of amputating hands and feet and of throwing objects. Always follow all safety instructions to avoid serious personal injury or death.

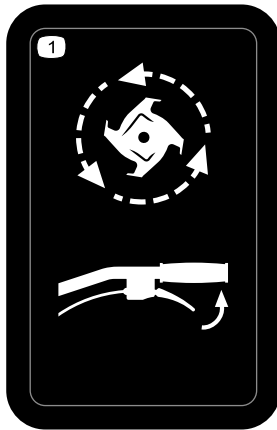
- Read, understand, and follow the instructions and warnings in this *Operator's Manual* and on the machine and attachments before starting the engine.
- Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the machine and disengage the controls quickly.
- Do not put your hands, feet, other body parts, or clothing near or under the rotating tines or other moving parts of the machine.
- Do not operate the machine without all proper shields, guards, and other safety protective devices in place and functioning properly on the machine.
- Keep bystanders, especially small children, and pets out of the operating area.
- Do not allow children to operate the machine. Allow only people who are responsible, trained, familiar with the instructions, and physically capable to operate the machine.
- Shut off the machine and wait for all moving parts to stop before you leave the operator's position. Disconnect the spark-plug wire, keep it away from the plug to prevent accidental starting, and allow the machine to cool before adjusting, fueling, unclogging, servicing, cleaning, or storing the machine.

Improperly using or maintaining this machine can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety-alert symbol , which means Caution, Warning, or Danger—personal safety instruction. Failure to comply with these instructions may result in personal injury or death.

Safety and Instructional Decals



Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



144-4726

decal144-4726

1. Squeeze the throttle to engage the tines.



decal144-4732

144-4732

1. Press the primer 3 times, push the choke lever down, pull the recoil-start handle, and once the engine is running pull the choke lever up.

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.
For more information, please visit www.ttcoCAProp65.com

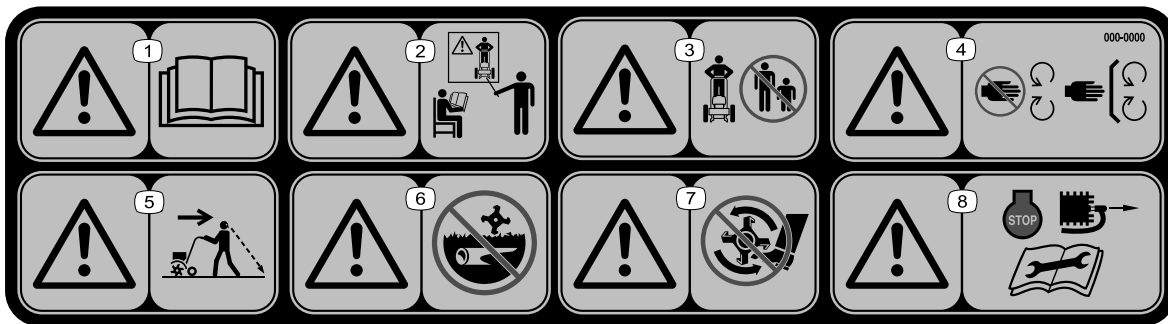
CALIFORNIA SPARK ARRESTER WARNING

Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrester may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.

133-8062

decal133-8062

133-8062



decal144-4727

144-4727

1. Warning—read the *Operator's Manual*.
2. Warning—all operators should be trained before operating the machine.
3. Warning—keep bystanders away.
4. Warning—stay away from moving parts; keep all guards and shields in place.
5. Warning—look behind you when operating the machine in reverse.
6. Warning—do not operate over buried lines.
7. Warning—keep feet away from moving parts.
8. Warning—shut off the engine and disconnect the spark plug and read the *Operator's Manual* before performing maintenance.

Setup

Loose Parts

Use the chart below to verify that all parts have been shipped.

Procedure	Description	Qty.	Use
1	Knob nut	4	Assemble the handle.
	Curved washer	4	
	Saddle bolt	4	
	Middle handlebar	1	
	Upper left handlebar	1	
	Upper right handlebar	1	
2	No parts required	—	Rotate the drag stake.

1

Assembling the Handle

Parts needed for this procedure:

4	Knob nut
4	Curved washer
4	Saddle bolt
1	Middle handlebar
1	Upper left handlebar
1	Upper right handlebar

Procedure

1. Park the machine on a level surface.
2. Set the wheels to the lowest position; [Adjusting the Wheels \(page 12\)](#).
3. Attach the middle handlebar to the lower handlebar.

Note: You can install it in the upper or lower holes, depending on height preference.

Important: Do not overtighten the knob nuts.

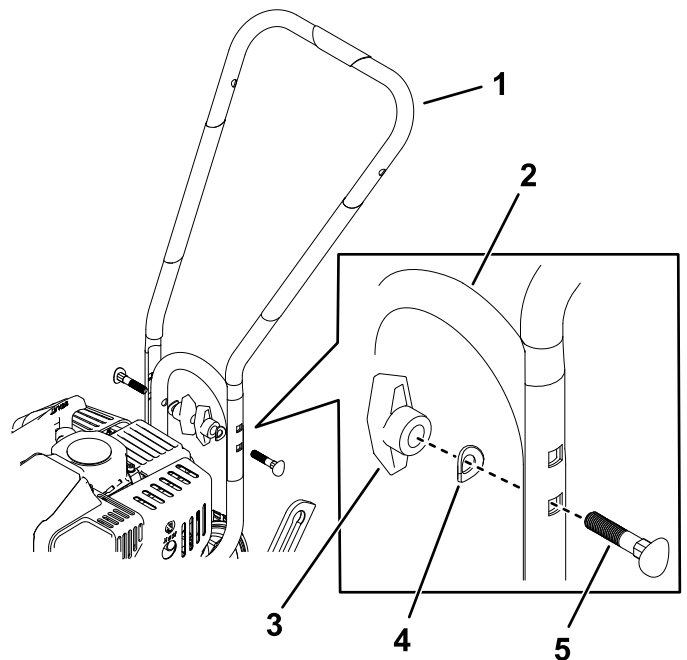


Figure 3

- | | |
|------------------|----------------------|
| 1. Middle handle | 4. Curved washer (2) |
| 2. Lower handle | 5. Saddle bolt (2) |
| 3. Knob nut (2) | |
4. Attach the upper right and upper left handlebars to the middle handlebar.

Important: Do not overtighten the knob nuts.

2

Rotating the Drag Stake

No Parts Required

Procedure

1. Remove the lock pin.
2. Rotate the drag stake so that it points downward, facing toward the tines.
3. Install the lock pin.

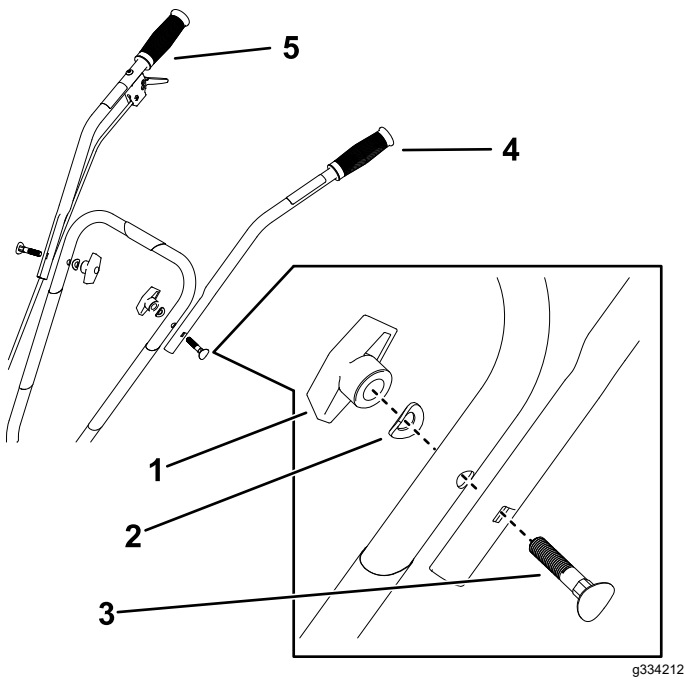


Figure 4

- | | |
|----------------------|-----------------------|
| 1. Knob nut (2) | 4. Left upper handle |
| 2. Curved washer (2) | 5. Right upper handle |
| 3. Saddle bolt (2) | |

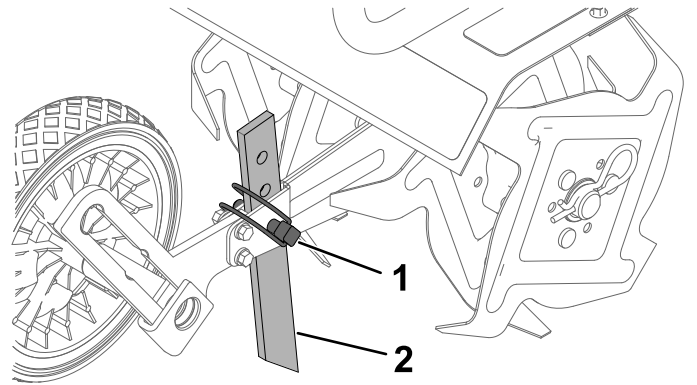


Figure 5

- | | |
|-------------|---------------|
| 1. Lock pin | 2. Drag stake |
|-------------|---------------|

Product Overview

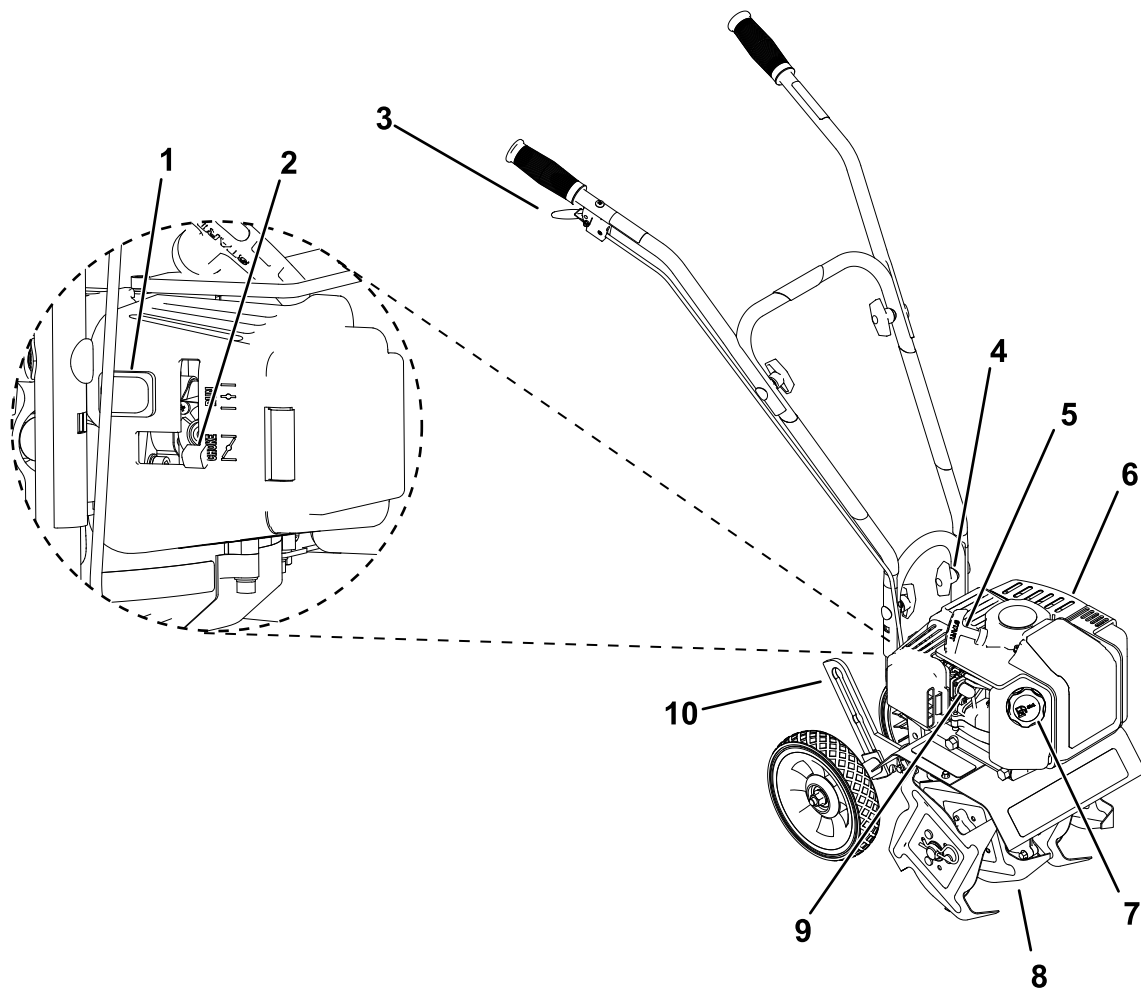


Figure 6

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- | | |
|--------------------------------|--------------------------|
| 1. Engine on/off switch | 6. Engine |
| 2. Choke lever | 7. Fuel cap |
| 3. Throttle control | 8. Tines |
| 4. Handlebar-height adjustment | 9. Primer bulb |
| 5. Starter handle | 10. Wheel vertical guide |

Controls

Engine On/Off Switch

Use the engine On/Off switch to shut the engine off. Ensure that the switch is in the ON position before starting the engine.

Throttle Control

The throttle controls the engine speed, and it has a continuous-variable setting.

Operate the machine using full throttle for best performance.

Choke Lever

Move the choke lever on the engine to the CHOKE position when initially starting a cold engine, then move it into the RUN position once started.

Specifications

Specifications and design are subject to change without notice.

Height	97 cm (38 inches)
Length	89 cm (35 inches)
Width	46 cm (18 inches)
Weight	15 kg (33 lb)
Cultivating width	15 to 25 cm (6 to 10 inches)
Cultivating depth	Up to 20 cm (8 inches)

To ensure optimum performance and continued safety certification of the machine, use only genuine Toro replacement parts and accessories. Replacement parts and accessories made by other manufacturers could be dangerous, and such use could void the product warranty.

Operation

Note: Determine the left and right sides of the machine from the normal operating position.

Before Operation

Before Operation Safety

General Safety

- Do not allow children or untrained adults to operate or service the machine. Local regulations may restrict the age of the operator.
- Using this machine is strenuous. You must be in good physical condition and mentally alert. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating the machine.
- Shut off the machine and wait for all moving parts to stop before you leave the operator's position. Disconnect the spark-plug wire, keep it away from the plug to prevent accidental starting, and allow the machine to cool before adjusting, fueling, unclogging, servicing, cleaning, or storing the machine.
- Become familiar with the safe operation of the equipment, operator controls, and safety signs.
- Check that all guards and safety devices, such as deflectors, are in place and functioning properly. Do not operate the machine unless they are functioning properly.
- Know how to shut off the engine quickly.
- Keep bystanders, especially small children, and pets out of the operating area.
- Thoroughly inspect the area where you will use the machine and remove all objects that could interfere with the operation of the machine or that the machine could throw.

Fuel Safety

- Use extreme care in handling fuel. It is extremely flammable and its vapors are explosive.
- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- Use only an approved fuel container.
- Do not remove the fuel cap or add fuel to the tank while the engine is running or hot.
- Allow the engine to cool before filling the fuel tank.
- Do not fill the fuel tank indoors.

- Do not overfill the fuel tank. Replace the fuel cap and tighten it securely after fueling. Clean up spilled fuel before starting the engine.
- Do not fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground, away from the vehicle before filling.
- Remove the machine from the truck or trailer before filling the fuel tank. If this is not possible, then add fuel from a portable container rather than from a fuel-dispenser nozzle.
- Keep the fuel-dispenser nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
- If you spill fuel on your clothing, change your clothing immediately.
- If you spill fuel, do not attempt to start the engine; move the machine away from the spill and avoid creating a source of ignition until the fuel vapors have dissipated.
- If you must drain the fuel tank, do it outdoors.
- Store fuel in a fuel container and keep it out of the reach of children.
- Do not store the machine with fuel in the fuel tank or fuel container where there is an open flame, spark, or pilot light, such as on a water heater or other appliance. Allow the engine to cool before storing the machine in any enclosure.
- Fuel is harmful or fatal if swallowed. Long-term exposure to vapors can cause serious injury and illness.
 - Avoid prolonged breathing of vapors.
 - Keep your hands and face away from the nozzle and the fuel-tank opening.
 - Keep fuel away from your eyes and skin.

Adding Fuel

Recommended Fuel

Type	Unleaded gasoline
Minimum octane rating	87 (US) or 91 (research octane; outside the US)
Ethanol	No more than 10% by volume
Methanol	None
MTBE (methyl tertiary butyl ether)	Less than 15% by volume
Oil	2-cycle oil; mixed in 50:1 fuel-to-oil ratio

Use only clean, fresh (no more than 30 days old), fuel from a reputable source.

Mixing Fuel

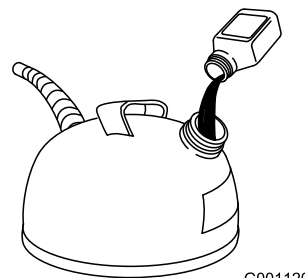
This product is powered by a 2-cycle engine and requires pre-mixing fuel and 2-cycle oil. Pre-mix unleaded gasoline and 2-cycle engine oil in a clean container approved for fuel. Do not mix quantities larger than usable in a 30-day period.

Important: To prevent engine damage, do not use automotive oil (such as SAE 30 or 10W30) or fuel mixed at the wrong fuel-to-oil ratio.

50:1 Fuel-to-Oil Ratio Mixing Chart

Fuel	Oil
3.8 L (1 US gallon)	76 ml (2.6 fl oz)
7.6 L (2 US gallons)	152 ml (5.1 fl oz)
19 L (5 US gallons)	380 ml (13 fl oz)

1. Pour 1.9 L (0.5 US gallon) fresh, unleaded fuel into an approved fuel container.
2. Add 2-cycle oil to the fuel according to the chart.



G001120

g001120

Figure 7

3. Install the cap on the fuel container.
4. Shake the container to mix the fuel and oil thoroughly.
5. Slowly remove the cap and add the remaining amount of fuel.

Note: Do not mix fuel and oil in the fuel tank. Oil at room temperature mixes easier and more thoroughly than cold oil. Oil below 0°C (32°F) requires additional mixing.

Using Stabilizer/Conditioner

Use fuel stabilizer/conditioner in the machine to keep the fuel fresh longer when used as directed by the fuel-stabilizer manufacturer.

Important: Do not use fuel additives containing methanol or ethanol.

Add the amount of fuel stabilizer/conditioner to fresh fuel as directed by the fuel-stabilizer manufacturer.

Filling the Fuel Tank

Fuel-tank capacity: 1.1 L (36 fl oz)

Refer to your engine owner's manual for additional information.

Fill the fuel tank as shown in [Figure 8](#).

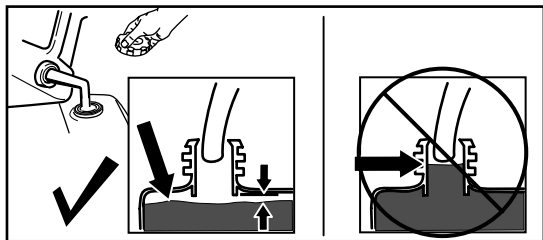


Figure 8

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Performing Daily Maintenance

Before starting the machine each day, perform the Each Use/Daily procedures listed in [Maintenance \(page 15\)](#).

Removing and Installing the Tines

1. Park the machine on a level surface, shut off the engine, and allow the engine to cool.
2. Remove the hairpin cotter from each end of the tine shaft.

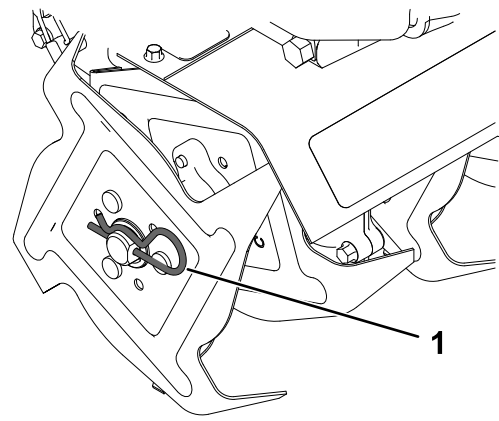


Figure 9

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1. Hairpin cotter

3. Slide the tines off the shaft.
4. Slide the inner tines ("B" and "C") on the shaft.

Note: The letters are stamped on the tines. Slide tine "B" on the left side of the shaft, and slide tine "C" to the right side of the shaft.

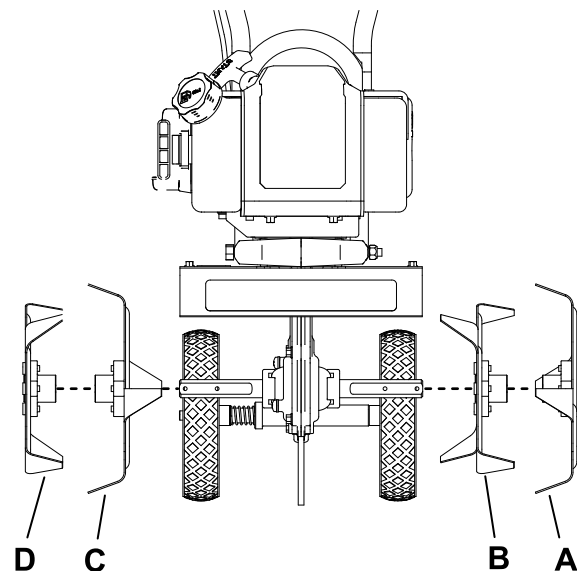


Figure 10

g334237

5. Slide the outer tines ("A" and "D") on the shaft, so that the order of the tines is "A", "B", "C", "D", when viewed from the operating position.

Note: Ensure that the hub collars on both the left and right pairs of tines face each other to ensure adequate spacing between the tine blades.

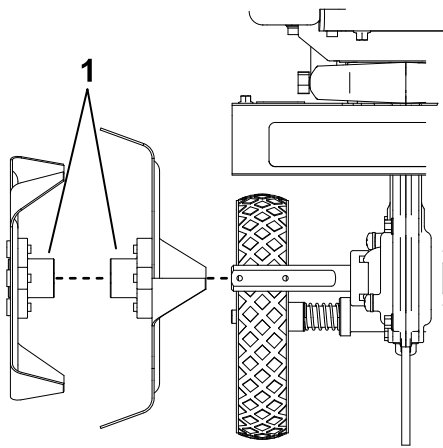


Figure 11

g334236

1. Hub collar

6. Install a hairpin cotter on each end of the tine shaft.

Note: To dig more aggressively, reverse the order of the tines so that the tips face forward (“D”, “C”, “B”, “A”, when viewed from the operating position) as shown in [Figure 12](#).

Note: For a more narrow digging width, do not install tines “A” and “D” in step 5.

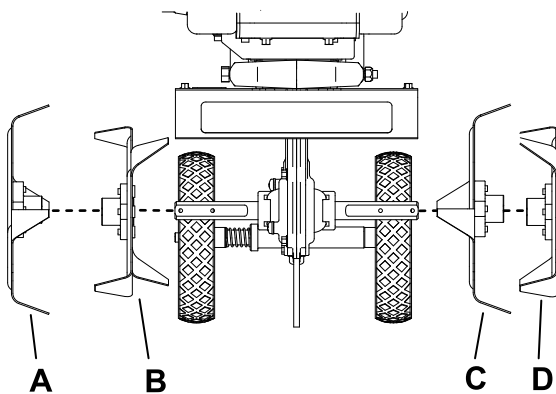


Figure 12

g334238

Tine order for more aggressive digging

During Operation

During Operation Safety

General Safety

- Use your full attention while operating the machine. Do not engage in any activity that causes distractions; otherwise, injury or property damage may occur.
- Do not operate the machine while ill, tired, or under the influence of alcohol or drugs.

- Wear appropriate clothing, including eye protection; long pants; substantial, slip-resistant footwear; hearing protection; and gloves. Tie back long hair and do not wear loose clothing or loose jewelry.
- Keep your hands, feet, other body parts, and clothing away from rotating tines and moving parts of the machine. The tines begin rotating when you start the engine and may continue to rotate momentarily after you shut off the engine.
- Start the engine carefully according to instructions in this *Operator's Manual* and with your feet well away from the tines.
- Use extreme caution when reversing or pulling the machine toward you. To avoid getting pinned against a structure, allow enough distance to reverse direction near a wall or fence.
- Keep bystanders out of the operating area. Keep small children out of the operating area and under the watchful care of a responsible adult who is not operating the machine. Stop the machine if anyone enters the area.
- Before you start the engine, ensure that all drives are in neutral and you are in the operating position.
- Operate the machine only in good visibility and appropriate weather conditions. Do not operate the machine when there is the risk of lightning.
- Do not attempt to adjust the machine while the engine is running.
- If the machine strikes an object or starts to vibrate abnormally, immediately shut off the engine, wait for all moving parts to stop, and disconnect the wire from the spark plug before examining the machine for damage. Vibration is often a warning sign of trouble. Make all necessary repairs before resuming operation.
- Do not operate the machine at high transport speeds on hard or slippery surfaces.
- Look behind and down and use care when reversing.
- Do not overload the machine capacity by attempting to till or cultivate too deep and at too fast a rate.
- Do not pick up or carry a machine while the engine is running.
- Exercise caution and be sure of your footing, especially when backing up, to avoid slipping or falling.
- Be careful when operating the machine in hard ground. The tines can catch in the ground and propel the machine forward. If this occurs, let go of the machine; do not try to restrain it.

- Exercise extreme caution when crossing gravel surfaces. Stay alert for hidden hazards or traffic.
- Do not leave a running machine unattended.
- Shut off the machine and wait for all moving parts to stop before you leave the operator's position. Disconnect the spark-plug wire, keep it away from the plug to prevent accidental starting, and allow the machine to cool before adjusting, fueling, unclogging, servicing, cleaning, or storing the machine.
- Operate the engine only in well-ventilated areas. Exhaust gases contain carbon monoxide, which is an odorless, deadly poison.
- Use only accessories and attachments approved by The Toro® Company.
- Do not change the engine governor settings or overspeed the engine.
- Always be sure of your footing; keep a firm hold on the handle and walk, never run.
- Allow the muffler and engine area to cool before touching them.
- The tines should not rotate when the engine is idling; if they do rotate, contact your Authorized Service Dealer.
- If an object becomes lodged in the tines, shut off the engine, disconnect the wire from the spark plug, and allow the engine to cool before removing the object.
- Do not operate the machine on steep slopes. To prevent overturning, operate the machine up and down the slope.

Starting the Engine

1. Press the primer bulb until the primer hose is filled with gas.

Note: Allow the bulb to return to its original position between presses.

Note: A warm or hot engine may not require priming.

2. Move the choke lever to the CHOKE position.

Note: A warm or hot engine may not require choking.

3. Press the engine On/Off switch to the ON position.
4. Stand in the operating position and grab the handle bar with 1 hand.
5. With your other hand, pull the starter handle lightly until you feel resistance, then pull the handle briskly. Return the starter handle gently.

Note: If the engine does not start after 5 or 6 pulls, press the primer bulb once and pull the starter handle again.

6. Once the engine is running, move the choke lever midway between the CHOKE and RUN positions.
7. When the engine runs smoothly, move the choke lever to the RUN position.
8. Squeeze the throttle lever to the desired speed.

Note: Use full throttle when possible. Do not let the machine idle for extended periods of time.

Shutting Off the Engine

1. Release the throttle lever.
2. Remain in the operating position and grab the handle bar with 1 hand.
3. Move the engine On/Off switch to the OFF position.
4. Wait for all moving parts to stop before leaving the operating position.

Adjusting the Wheels

Adjust the wheels to 1 of 3 positions. Use the low position when transporting the cultivator over level surfaces while the engine is off. Use the middle and high positions to help stabilize the machine when cultivating at different depths.

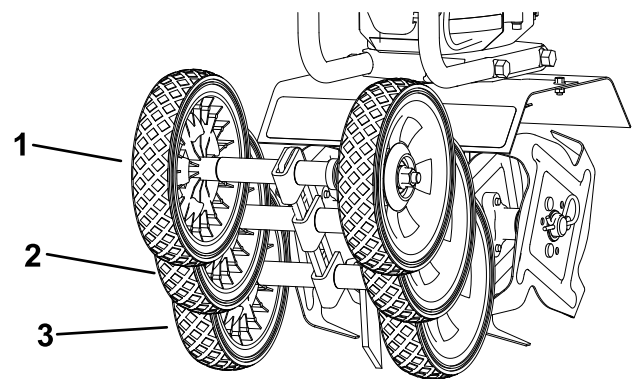


Figure 13

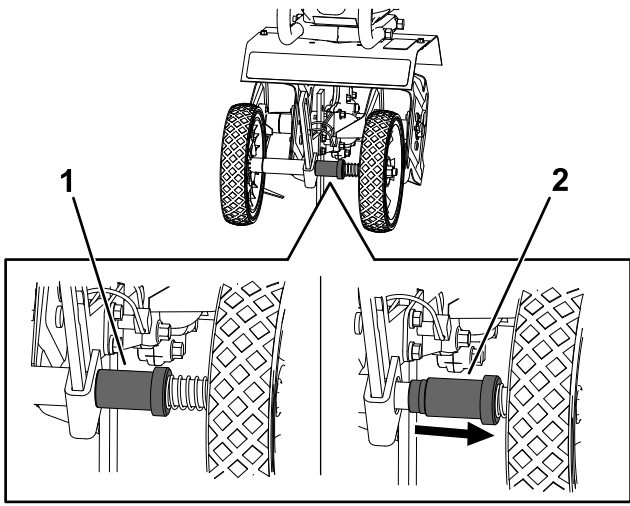
g334240

1. High position
2. Middle position
3. Low position

1. Move the machine to a level surface, shut off the engine, and wait for all moving parts to stop.
2. Pull the locking sleeve away out of the vertical guide to the unlocked position (Figure 14).
3. Slide the wheels to the desired position.
4. Release the locking sleeve and ensure it locks into a notch in the vertical guide.

Operating Tips

- Inspect the area where you will use the cultivator and remove all objects such as large rocks, trash, and branches before cultivating to prevent equipment damage.
- The clutch transfers maximum power after about 2 hours of normal operation. During this break-in period, the clutch may slip. Keep the clutch free of oil and other moisture for efficient operation.
- Always begin cultivating with the slowest ground speed possible. Increase the speed if conditions permit.
- Do not place excessive body weight on the cultivator. Use the weight of the machine to cultivate more efficiently.



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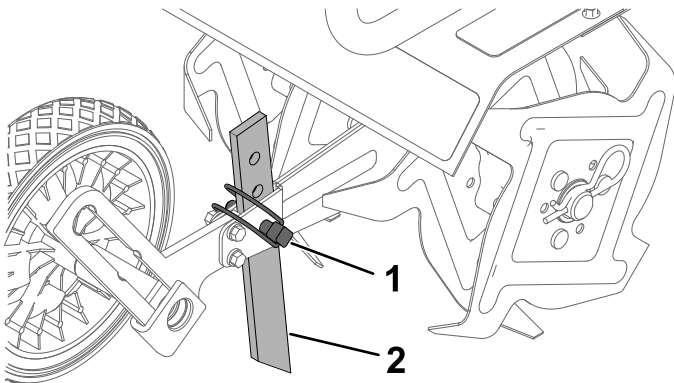
Figure 14

1. Locking sleeve—locked position
2. Locking sleeve—unlocked position

Adjusting the Drag Stake

The drag stake helps regulate cultivating depth and prevents the cultivator from jerking forward during operation. Set the drag stake in the lowest position to increase resistance to forward motion and to dig deeper.

1. Move the machine to a level surface, shut off the engine, and wait for all moving parts to stop.
2. Remove the lock pin.
3. Position the drag stake to the desired depth with the tip pointing downward.
4. Secure the drag stake with the lock pin.



g334215

Figure 15

1. Lock pin
2. Drag stake

After Operation

After Operation Safety

General Safety

- Shut off the machine and wait for all moving parts to stop before you leave the operator's position. Disconnect the spark-plug wire, keep it away from the plug to prevent accidental starting, and allow the machine to cool before adjusting, fueling, unclogging, servicing, cleaning, or storing the machine.
- Clean debris from the machine to help prevent fires. Clean up oil or fuel spills.

Hauling Safety

- Disconnect the wire from the spark plug before loading the machine for hauling.
- Use care when loading or unloading the machine.

Hauling the Machine

⚠ DANGER

When transporting the machine inside an enclosed space inside a vehicle, fuel and fuel vapors may ignite and cause serious injury or death.

Transport the machine in an upright position in an open vehicle or remove fuel from the machine.

Ensure that the fuel cap is tight and transport the machine in an upright position in an open vehicle. Secure the machine from movement.

If fuel is present in the fuel tank and you must transport the machine in an enclosed vehicle, continue as follows:

1. Drain the fuel into an approved fuel container.
2. Start the machine and run it until it shuts off.
3. Wipe away any fuel spills and allow the machine to dry.
4. Tightly screw on the fuel cap.
5. Secure the machine from movement.

Maintenance

Maintenance Safety

- Inspect the machine frequently to ensure that it is in safe working condition and that shear bolts, engine-mounting bolts, and other fasteners are properly tightened.
- Shut off the machine and wait for all moving parts to stop before you leave the operator's position. Disconnect the spark-plug wire, keep it away from the plug to prevent accidental starting, and allow the machine to cool before adjusting, fueling, unclogging, servicing, cleaning, or storing the machine.
- Wear gloves and eye protection when servicing the machine.
- Never tamper with safety devices. Check their proper operation regularly.
- To ensure optimum performance of the machine, use only genuine Toro replacement parts and accessories. Replacement parts and accessories made by other manufacturers could be dangerous, and such use could void the product warranty.
- Replace tines that are bent, damaged, or loose; do not repair or alter them.
- Keep the machine, attachments, and accessories in safe working condition.
- Do not attempt to repair the machine unless you have the proper tools and instructions for disassembling, assembling, and repairing the machine.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
Before each use or daily	• Check the air filter. • Clean debris from cooling fins, air inlets and linkages.
Every 20 hours	• Clean the air filter. (Clean daily in extremely dusty conditions.) • Replace the air filter. • Check, clean, and gap the spark plug.
Yearly	• Replace the air filter. • Replace the spark plug.

Pre-Maintenance Procedures

Preparing for Maintenance

1. Move the machine to a level surface, shut off the engine, and wait for all moving parts to stop.
2. Disconnect the spark-plug wire from the spark plug.

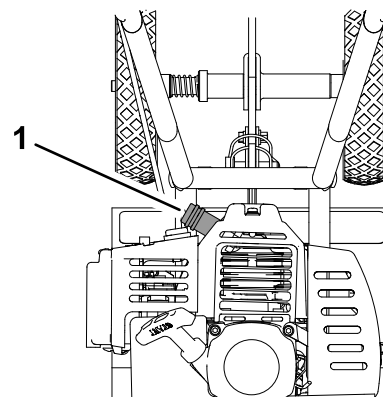


Figure 16

g335329

1. Spark-plug wire

3. After performing the maintenance procedure(s), connect the spark-plug wire to the spark plug.

Important: Before tipping the machine to replace the blade, allow the fuel tank to run dry through normal usage. If you must tip the machine prior to running out of fuel, use a hand fuel pump to remove the fuel.

Engine Maintenance

Servicing the Air Filter

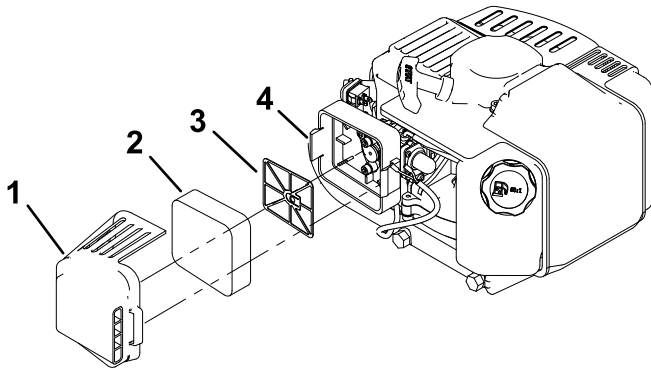
Service Interval: Before each use or daily—Check the air filter.

Every 20 hours—Clean the air filter. (Clean daily in extremely dusty conditions.)

Every 20 hours—Replace the air filter.

Yearly—Replace the air filter.

1. Move the choke lever to the CHOKE position.
2. Squeeze the latch tabs and rotate the air filter cover off the machine.



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Figure 17

- | | |
|------------------------|-------------------------------|
| 1. Air filter cover | 3. Filter-reinforcement plate |
| 2. Foam filter element | 4. Latch tab (2) |

3. Remove and inspect the foam filter element.

Important: Replace the foam element if it is torn or worn.

4. Wash the foam element in liquid soap and warm water. When the element is clean, rinse it thoroughly.

Important: Do not twist the foam element while cleaning it.

5. Dry the element by squeezing it in a clean cloth.
6. Dip the foam element in clean engine oil (30 or 40 weight), then squeeze out the excess oil.
7. Install the filter over the filter-reinforcement plate. Press the foam filter evenly over the plate to ensure it is fully seated into its sealed position.
8. Install the air filter cover. Ensure that it snaps into place and is secured by the latch tabs.

Servicing the Spark Plug

Service Interval: Every 20 hours—Check, clean, and gap the spark plug.

Yearly—Replace the spark plug.

Ensure that the air gap between the center and side electrodes is correct before installing the spark plug.

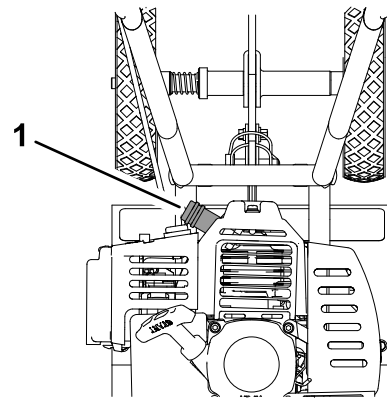
Use a spark plug wrench for removing and installing the spark plug(s) and a gapping tool/feeler gauge to check and adjust the air gap. Install a new spark plug(s) if necessary.

Type: Torch L7RTC, Champion RCJ8Y, or equivalent

Air gap: 0.71 mm (0.028 inch)

Removing the Spark Plug

1. Disconnect the spark-plug wire from the spark plug.



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Figure 18

1. Spark-plug wire
2. Clean around the spark plugs to prevent dirt from entering the engine and potentially causing damage.
3. Remove the spark plug.

Checking the Spark Plug

Important: Do not clean the spark plug(s). Always replace the spark plug(s) when it has a black coating, worn electrodes, an oily film, or cracks.

If you see light brown or gray on the insulator, the engine is operating properly. A black coating on the insulator usually means the air cleaner is dirty.

Set the gap to 0.71 mm (0.028 inch).

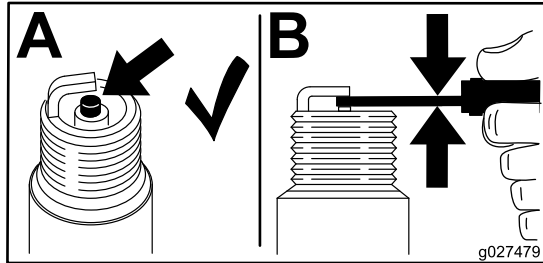


Figure 19

Installing the Spark Plug

1. Thread the spark plug clockwise into the spark-plug hole by hand.
2. Rotate the spark plug clockwise using a spark-plug wrench until the plug and sealing washer are seated.
3. Tighten the spark plug as follows:
 - When installing the original spark plug, tighten the plug an additional 1/2 turn.
 - When installing a new spark plug, tighten the plug an additional 1/8 to 1/4 turn.

Important: A loose spark plug may cause the cylinder to overheat. An over-tight spark plug may damage the threads in the cylinder head.

4. Connect the spark-plug wire to the spark plug.

Storage

Storage Safety

- Shut off the machine and wait for all moving parts to stop before you leave the operator's position. Disconnect the spark-plug wire, keep it away from the plug to prevent accidental starting, and allow the machine to cool before adjusting, fueling, unclogging, servicing, cleaning, or storing the machine.
- Run the engine dry or remove the fuel with a hand pump; never siphon the fuel. If you must drain the fuel tank, do it outdoors.
- Follow the instructions in this *Operator's Manual* to safely unload, transport, and store the machine.
- Do not store the machine with fuel in the fuel tank inside a building where ignition sources are present, such as hot water and space heaters and clothes dryers. Allow the engine to cool before storing the machine in an enclosure.
- Always refer to the *Operator's Manual* for important details if the machine is to be stored for an extended period.

Cleaning and Storing the Machine

1. Park the machine on a level surface, shut off the engine, and wait for all moving parts to stop before leaving the operating position.
2. Remove debris from the cultivator tines and engine.

Important: You can wash the machine with mild detergent and water. Do not pressure-wash the machine. Avoid excessive use of water, especially near the engine and transmission.

3. Service the air filter; refer to [Servicing the Air Filter \(page 16\)](#).
4. Prepare the machine for storage for over 30 days as follows:
 - A. Add fuel stabilizer/conditioner to fresh fuel in the tank. Follow mixing instructions from the fuel stabilizer manufacturer. Do not use an alcohol-based stabilizer (ethanol or methanol).
 - B. Run the engine to distribute conditioned fuel through the fuel system for 5 minutes.
 - C. Shut off the engine, allow it to cool, and drain the fuel tank.
 - D. Start the engine and run it until it shuts off.

- E. Dispose of fuel properly. Recycle the fuel according to local codes.

Important: Do not store fuel containing stabilizer/conditioner longer than the duration recommended by the fuel-stabilizer manufacturer.

- 5. Remove and check the condition of the spark plug; refer to [Servicing the Spark Plug \(page 16\)](#). With the spark plug removed from the engine, pour 15 ml (1 tablespoon) of engine oil into the spark plug hole. Install the spark plug and pull the recoil rope 3 times to coat the cylinder with oil. Do not install the wire on the spark plug.
- 6. Check and tighten all fasteners. Repair or replace any part that is damaged.
- 7. Paint all scratched or bare metal surfaces. Paint is available from your Authorized Service Dealer.
- 8. Store the machine in an upright position in a clean, dry garage or storage area. Keep it out of reach of children or other unauthorized users. Cover the machine to protect it and keep it clean.

Troubleshooting

Problem	Possible Cause	Corrective Action
The engine does not start.	1. The engine switch is in the OFF position. 2. The spark-plug wire is loose or disconnected. 3. The spark plug is wet, pitted, fouled, or the gap is incorrect. 4. The fuel-line hose is not positioned at the bottom of the fuel tank.	1. Move the switch to the ON position. 2. Install the wire on the spark plug. 3. Install a new, correctly gapped spark plug. 4. Push the fuel-line hose into the fuel in the fuel tank.
The engine runs rough or floods during operation.	1. The air filter is dirty. 2. The choke is partially engaged. 3. The carburetor is out of adjustment.	1. Clean or replace the air filter. 2. Move the choke lever to the RUN position. 3. Contact an Authorized Service Dealer
The engine is difficult to start.	1. Stale fuel is in the fuel system. 2. The spark-plug wire is loose or disconnected. 3. The carburetor is dirty. 4. The fuel is not sufficiently primed.	1. Drain the fuel tank and add fresh fuel. 2. Install the wire on the spark plug. 3. Clean the carburetor, use fuel stabilizer, and use a new fuel can. 4. Press the primer bulb 3 times, then pull recoil handle.
The engine does not start, starts hard, or fails to keep running.	1. The fuel tank is empty. 2. The choke is not engaged. 3. The air filter is dirty. 4. Dirt, water, or stale fuel is in fuel system. 5. There is incorrect fuel in the fuel tank.	1. Fill the fuel tank. 2. Move the choke lever to the CHOKE position. 3. Clean or replace the air filter. 4. Contact an Authorized Service Dealer. 5. Drain the tank and replace the fuel with the proper type.
The engine misses or lacks power.	1. The fuel filter is clogged. 2. The air cleaner is dirty or damaged. 3. The carburetor is out of adjustment. 4. The spark plug is wet, pitted, fouled, or the gap is incorrect.	1. Clean the fuel tank and replace the fuel filter. 2. Clean or replace the air-cleaner element. 3. Contact an Authorized Service Dealer 4. Install a new, correctly gapped spark plug.
The engine runs and then stops.	1. The gas cap is not venting. 2. The fuel filter is plugged. 3. The carburetor is out of adjustment.	1. Clean or replace the gas cap; check the vent. 2. Clean or replace the fuel filter. 3. Contact an Authorized Service Dealer
The engine speed is too high.	1. The carburetor is out of adjustment.	1. Contact an Authorized Service Dealer
The tines turn when the machine idles.	1. The idle speed is too high. 2. The clutch spring is broken.	1. Lower the idle speed. 2. Replace the clutch.

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Warranty Terms and Conditions

Product 5-Year Limited Warranty Statement

The Toro Company warrants this product under a five-year limited warranty to be free from defects in the material or workmanship or both for a period not exceeding 60 consecutive months from the date of original purchase by the first retail consumer or first commercial end user. This warranty does not apply to the engine mounted on the product. "Consumer use" means personal recreational use by a retail consumer. "Commercial use" or "commercial application" means all other uses, including use for commercial, income producing, or rental purposes. Once a product has experienced commercial use, it shall thereafter be considered as a commercial use product for the purpose of this warranty. This warranty applies to the original owner who provides a proof of purchase. This warranty is not transferable. The warranty period begins on the date of purchase by the first retail consumer or commercial end user and continues for the 60 month consecutive period thereafter. Any unit used in a commercial application is covered for a period of 90 days after purchase by the first commercial end user. For the warranty to be valid, the product must be registered online within 30 days of purchase, or the warranty card must be filled out and received by Toro within 30 days of purchase. Toro shall not be obligated for transportation charges that result from repair or replacement under the terms of this warranty. Transportation charges are the sole responsibility of the purchaser.

This warranty excludes parts that are worn or damaged due to normal wear such as blades, bearings, belts, tines, debris deflector chain, wheels, tires, tri-hammers, j-hammers, chipper knives, seals, bushings, clutches, pulleys, trimmer line, debris shield, line cutter, grips, shafts, springs and cables. This warranty excludes routine maintenance items such as batteries, filter elements, O-rings, seals, lubricants, tune-ups, rotating parts, accessory parts such as tiller furrowers, edger kits, dethatcher kits, manual canister, battery box, nylon collection bag, collection bag mounts, augers, extensions, shocktops, nylon parts bags and height adjustment heads. These warranties shall not cover damage caused by improper storage and maintenance including but not limited to use of unauthorized parts, failure to perform periodic maintenance as specified in product manual, or repairs performed at unauthorized service centers. These warranties apply only to products which have not been subjected to negligent use, abuse, misuse, alteration or overload which includes but is not limited to running the product dry (without oil), or below minimum oil levels, running engine without proper fuel (straight gasoline or mixed gas), damage to tow bar caused by over cornering, using the equipment for a purpose other than that for which it was designed and manufactured, continued use of product after sudden change in vibration, using the equipment in violation of local codes, ordinances and good trade practices, improper installation, operating the equipment above recommended maximums as stated in the accompanying product and/or engine manuals.

This warranty does not cover events beyond the control of Toro such as accident, acts of God, lightning, and vandalism. This limited warranty applies only to defects in the material or workmanship. There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one year from purchase, or to the extent permitted by law. All other implied warranties are excluded. Liability for incidental or consequential damages are excluded to the extent exclusion is permitted by law. Toro does not assume, and does not authorize any other person to assume for Toro, any liability in connection with the sale of Toro products. To be at "No Charge," warranty work must be sent directly to and performed by Toro or an Toro Authorized Warranty Service Facility. To obtain warranty service and/or replacement instructions, contact the Toro Customer Service Department at 952-888-8801. If you choose to ship your product to Toro for warranty repair, you must first have prior approval from Toro by calling the Toro Customer Service Department for a return material authorization number (RMA#). Under these circumstances, all items must be shipped prepaid. Toro will, in its discretion, at no charge, repair or replace any defective part to which this warranty applies. Toro retains the right to change models, specifications and price without notice. Toro shall not be obligated to ship any repair or replacement product to any location outside of the United States of America or Canada. Some states and countries do not allow the limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state and country to country.

California Proposition 65 Warning Information

What is this warning?

You may see a product for sale that has a warning label like the following:



WARNING: Cancer and Reproductive Harm—www.p65Warnings.ca.gov.

What is Prop 65?

Prop 65 applies to any company operating in California, selling products in California, or manufacturing products that may be sold in or brought into California. It mandates that the Governor of California maintain and publish a list of chemicals known to cause cancer, birth defects, and/or other reproductive harm. The list, which is updated annually, includes hundreds of chemicals found in many everyday items. The purpose of Prop 65 is to inform the public about exposure to these chemicals.

Prop 65 does not ban the sale of products containing these chemicals but instead requires warnings on any product, product packaging, or literature with the product. Moreover, a Prop 65 warning does not mean that a product is in violation of any product safety standards or requirements. In fact, the California government has clarified that a Prop 65 warning "is not the same as a regulatory decision that a product is 'safe' or 'unsafe.'" Many of these chemicals have been used in everyday products for years without documented harm. For more information, go to <https://oag.ca.gov/prop65/faqs-view-all>.

A Prop 65 warning means that a company has either (1) evaluated the exposure and has concluded that it exceeds the "no significant risk level"; or (2) has chosen to provide a warning based on its understanding about the presence of a listed chemical without attempting to evaluate the exposure.

Does this law apply everywhere?

Prop 65 warnings are required under California law only. These warnings are seen throughout California in a wide range of settings, including but not limited to restaurants, grocery stores, hotels, schools, and hospitals, and on a wide variety of products. Additionally, some online and mail order retailers provide Prop 65 warnings on their websites or in catalogs.

How do the California warnings compare to federal limits?

Prop 65 standards are often more stringent than federal and international standards. There are various substances that require a Prop 65 warning at levels that are far lower than federal action limits. For example, the Prop 65 standard for warnings for lead is 0.5 µg/day, which is well below the federal and international standards.

Why don't all similar products carry the warning?

- Products sold in California require Prop 65 labelling while similar products sold elsewhere do not.
- A company involved in a Prop 65 lawsuit reaching a settlement may be required to use Prop 65 warnings for its products, but other companies making similar products may have no such requirement.
- The enforcement of Prop 65 is inconsistent.
- Companies may elect not to provide warnings because they conclude that they are not required to do so under Prop 65; a lack of warnings for a product does not mean that the product is free of listed chemicals at similar levels.

Why does Toro include this warning?

Toro has chosen to provide consumers with as much information as possible so that they can make informed decisions about the products they buy and use. Toro provides warnings in certain cases based on its knowledge of the presence of one or more listed chemicals without evaluating the level of exposure, as not all the listed chemicals provide exposure limit requirements. While the exposure from Toro products may be negligible or well within the "no significant risk" range, out of an abundance of caution, Toro has elected to provide the Prop 65 warnings. Moreover, if Toro does not provide these warnings, it could be sued by the State of California or by private parties seeking to enforce Prop 65 and subject to substantial penalties.