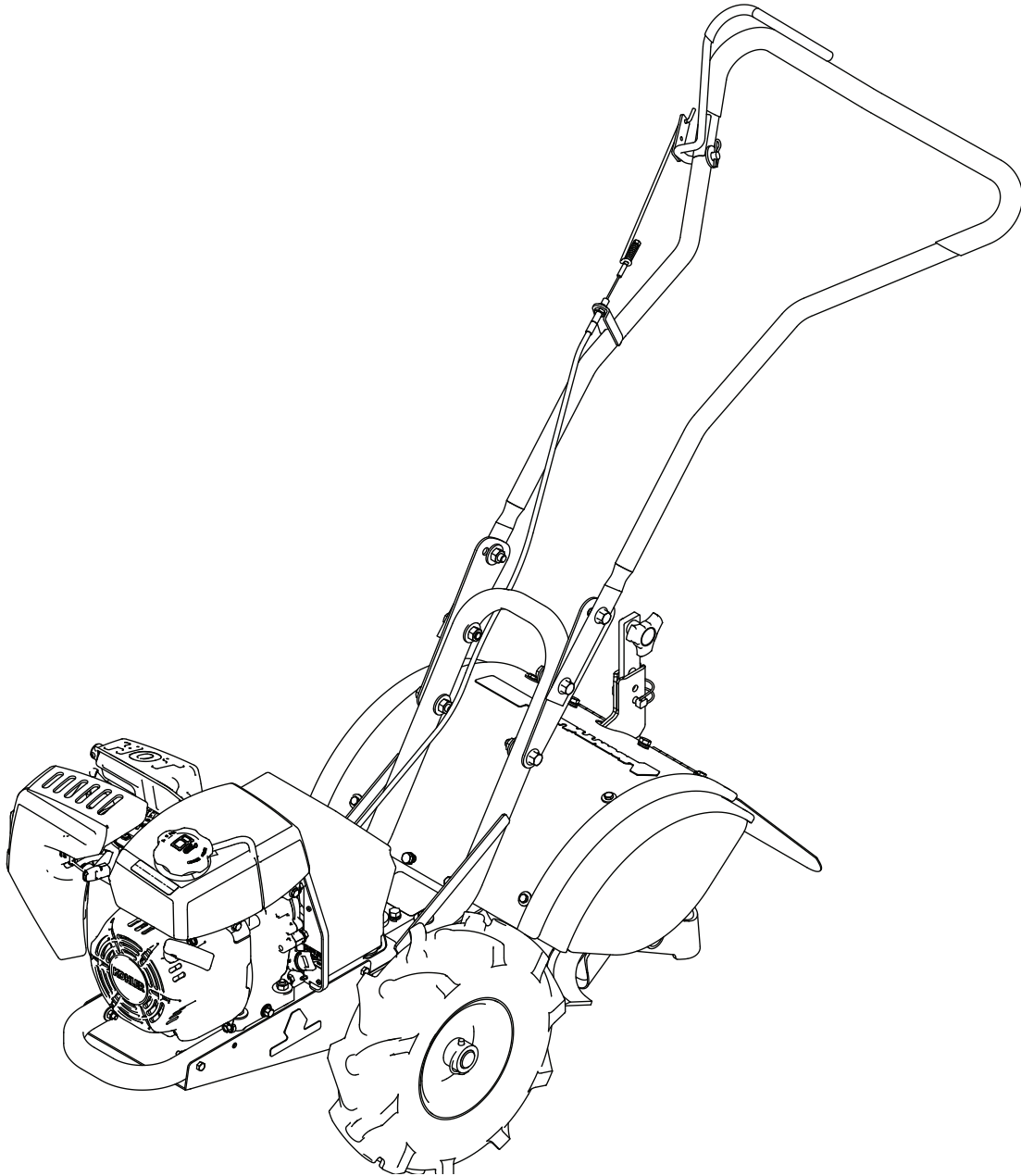




COUNTYLINE®

**Operator's Manual
20969
CRT Tiller**



PRODUCT #: 20969

Email for more information
info@ardisam.com



PN: 21124
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INTRODUCTION

Thank you for purchasing the 20969 CRT Tiller from CountyLine®. We have worked to ensure that this tiller meets the highest standards for usability and durability. With proper care, your tiller will provide many years of service.

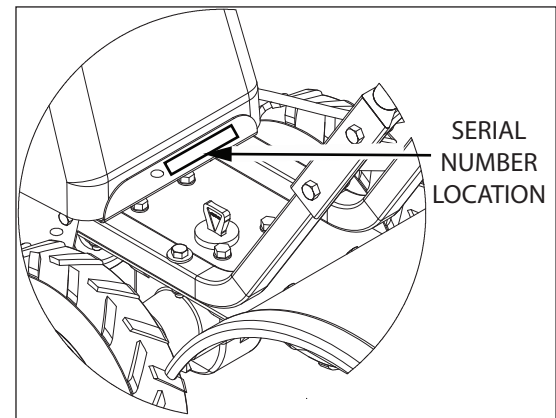
Please read this entire manual before installation and use. CountyLine reserves the right to change, alter or improve the product and this document at any time without prior notice.

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Registration and Service

Record the product model number and serial number in the space provided for easy reference when ordering parts or requesting technical support. Excluding emissions-related warranty items, the warranty is valid only if the completed registration is received by Ardisam within 30 days of purchase. **(SEE WARRANTY SECTION FOR MORE INFORMATION)** You can register your warranty by mailing it to: Ardisam Inc, 1160 8th Avenue, Cumberland, WI 54829. You may also call our customer service department at (800) 345-6007 Mondays through Fridays from 8 a.m. to 5 p.m. CST.



OWNERSHIP RECORDS

Owner's Name:

Owner's Address:

City:

State/Province:

Zip Code/Postal Code:

Model Number:

Serial Number:

Date of Purchase:

Notes:

Read and keep this manual for future reference. This manual contains important information on **SAFETY, ASSEMBLY, OPERATION, AND MAINTENANCE**. The owner must be certain that all the product information is included with the unit. This information includes the **MANUAL**, the **REPLACEMENT PARTS** and the **WARRANTIES**. This information must be included to make sure state laws and other laws are followed. All persons to whom rent/loan this unit must have access to and understand this information. This manual should remain with the product even if it is resold.

WARNINGS AND SAFETY PRECAUTIONS

Owner's Responsibility

Accurate assembly and safe and effective use of the machine is the owner's responsibility.

- Read and follow all safety instructions.
- Carefully follow all assembly instructions.
- Maintain the machine according to directions and schedule included in this CountyLine® operator's manual.
- Ensure that anyone who uses the machine is familiar with all controls and safety precautions.

Special Messages

Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.

NOTE: *General information is given throughout the manual that may help the operator in the operation or service of the machine.*



THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER YOUR PERSONAL SAFETY. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS EQUIPMENT.

Before Operating Equipment:

Please read this section carefully. Read entire operating and maintenance instructions for this product. Failure to follow instructions could result in serious injury or death. Operate the machine according to the safety instructions outlined here and inserted throughout the text. Anyone who uses this machine must read the instructions and be familiar with the controls.

Intended Use / Foreseeable Misuse

IMPORTANT: This is a motorized rotary cultivator that works the soil by means of rotating tines. It is pedestrian-controlled, but not self-propelled, with a gasoline-fueled internal combustion engine to power the tines. It shall not be used for any other purpose.



WARNING

WARNING INDICATES A HAZARD WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY AND/OR PROPERTY DAMAGE.

CAUTION

CAUTION INDICATES YOUR EQUIPMENT CAN BE DAMAGED IF THE SAFETY INSTRUCTIONS THAT FOLLOW THIS SIGNAL WORD ARE NOT OBEYED.

IMPORTANT

INDICATES HELPFUL INFORMATION FOR PROPER ASSEMBLY, OPERATION, OR MAINTENANCE OF YOUR EQUIPMENT.

WARNING

CALIFORNIA PROPOSITION 65 WARNING

ENGINE EXHAUST FROM THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM.

WARNING

YOU MUST READ, UNDERSTAND AND COMPLY WITH ALL SAFETY AND OPERATING INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO SETUP AND OPERATE YOUR MACHINE.

FAILURE TO COMPLY WITH ALL SAFETY AND OPERATING INSTRUCTIONS CAN RESULT IN LOSS OF MACHINE CONTROL, SERIOUS PERSONAL INJURY TO YOU AND/OR BYSTANDERS, AND RISK OF EQUIPMENT AND PROPERTY DAMAGE. THE TRIANGLE IN THE TEXT SIGNIFIES IMPORTANT CAUTIONS OR WARNINGS WHICH MUST BE FOLLOWED.

GENERAL SAFETY RULES

Read, understand, and follow all instructions on the machine and in the manual(s). Be thoroughly familiar with the controls and the proper use of the machine before starting.

- Use this equipment for its intended purpose only.
- Familiarize yourself with all of the safety and operating decals on this equipment and on any of its attachments or accessories.
- Do not put hands or feet near or under rotating parts.
- Only allow responsible individuals who are familiar with the instructions to operate the machine. Do not allow children to operate this machine. Do not allow adults to operate the machine without proper instruction.
- Thoroughly inspect the area where the machine is to be used and remove all foreign objects. Your equipment can propel small objects at high speed causing personal injury or property damage. Stay away from breakable objects, such as house windows, automobiles, greenhouses, etc.
- Wear appropriate clothing such as a long-sleeved shirt or jacket. Also wear long trousers or slacks. Do not wear shorts. Never wear sandals, sneakers or open shoes, and never operate the machine with bare feet.
- Do not wear loose clothing or jewelry. They can get caught in moving parts. Always keep hands, feet, hair and loose clothing away from any moving parts on engine and machine.
- Always wear safety goggles or safety glasses with side shields when operating the machine to protect your eyes from foreign objects which can be thrown from the unit.
- Always wear a protective hearing device.
- Always wear work gloves and sturdy footwear. Wear footwear that will improve footing on slippery surfaces. Leather work shoes or short boots work well for most people. These will protect the operator's ankles and shins from small sticks, splinters, and other debris.
- It is advisable to wear protective headgear to prevent the possibility of being struck by small flying particles, or being struck by low hanging branches, twigs, or other objects which may be unnoticed by the operator.
- Do not operate the machine without proper guards or other safety protective devices in place.
- See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by the manufacturer.
- Operate only in daylight or good artificial light.

- Do not operate product when fatigued or under the influence of alcohol, drugs or other medication which can cause drowsiness or affect your ability to operate this machine safely.
- Never operate machine in wet grass. Always be sure of your footing; keep a firm hold on the handle and walk; never run.
- Watch for traffic when operating near, or when crossing roads.
- If the equipment should start to vibrate abnormally, stop the engine (motor), flip the ON/OFF switch to the **OFF** position. Check immediately for cause. Vibration is generally a warning of trouble. If the noise or vibrations of the machine increase, stop immediately and perform an inspection.
- Never leave the machine unattended when the engine is running. Always turn engine **OFF**.
- Regularly inspect the machine. Make sure parts are not bent, damaged or loose.
- Temperature of muffler and nearby areas may exceed 150° F (65° C). Allow muffler and engine areas to cool before touching. Never pick up or carry the machine while the engine is running.
- Prolonged exposure to noise and vibration from gasoline engine-powered equipment should be avoided. Take intermittent breaks and/or wear ear protection from engine noise as well as heavy work gloves to reduce vibration in the hands.
- Keep all screws, nuts and bolts tight.
- Do not transport the machine from one place to another with the engine running.
- When moving the packaged machine, always do so with a partner.
- Check local regulations for age restrictions on use of this machine.

Product-Specific Safety Rules

- Do not till above underground utilities, including water lines, gas lines, electric cables, or pipes. Do not operate the machine on terrain/soil with large rocks and foreign objects which can damage the equipment.
- After striking a foreign object, stop the engine. Flip the ON/OFF switch to the **OFF** position. Inspect the machine for damage. If damaged, repair before starting and operating the machine.
- The tines of the tiller should not rotate when the drive control lever is released into the neutral position. If it does rotate when in neutral, contact CountyLine customer service for instruction.
- If an object becomes lodged in the tines, flip the ON/OFF switch to the **OFF** position, allow to cool before attempting to remove the foreign object.

 **WARNING**

ENGINES GIVE OFF CARBON MONOXIDE, AN ODORLESS, COLORLESS, POISONOUS GAS. CARBON MONOXIDE MAY BE PRESENT EVEN IF YOU DO NOT SMELL OR SEE ANY ENGINE EXHAUST. BREATHING CARBON MONOXIDE CAN CAUSE NAUSEA, FAINTING OR DEATH, IN ADDITION TO DROWSINESS, DIZZINESS AND CONFUSION.

IF YOU EXPERIENCE ANY OF THESE SYMPTOMS, SEEK FRESH AIR AND MEDICAL ATTENTION IMMEDIATELY.

Engine Safety Precautions

If your product comes with a separate engine manual, be sure to read and follow all safety and warning precautions outlined there, in addition to any in this manual.

Preventing Carbon Monoxide Poisoning

- Always start and run engine outdoors. Do not start or run engine in an enclosed area, even if doors or windows are open.
- Never try to ventilate engine exhaust indoors. Carbon monoxide can reach dangerous levels very quickly.
- Never run engine outdoors where exhaust fumes may be pulled into a building.
- Never run engine outdoors in a poorly ventilated area where the exhaust fumes may be trapped and not easily taken away. (Examples include: in a large hole or areas where hills surround your working area.)
- Never run engine in an enclosed or partially enclosed area. (Examples include: buildings that are enclosed on one or more sides, under tents, car ports or basements.)
- Always run the engine with the exhaust and muffler pointed in the direction away from the operator.
- Never point the exhaust muffler towards anyone. People should always be many feet away from the operation of the engine and its attachments.
- Do not change the engine governor settings or over-speed the engine.

Gasoline Fires and Handling Fuel Safely

Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.

- When storing extra fuel be sure that it is in an appropriate container and away from any fire hazards.
- Prevent fire and explosion caused by static electric discharge. Use only nonmetal, portable fuel containers approved by the Underwriter's Laboratory (U.L.) or the American Society for Testing & Materials (ASTM).

 **WARNING**

HOT GASES ARE A NORMAL BY-PRODUCT OF A FUNCTIONING INTERNAL COMBUSTION ENGINE. FOLLOW ALL SAFETY INSTRUCTIONS TO PREVENT BURNS AND FIRES.

DO NOT ALTER/MODIFY ENGINE:

NEVER ALTER OR MODIFY THE ENGINE FROM THE FACTORY. SERIOUS INJURY OR DEATH MAY OCCUR IF ENGINE IS MODIFIED OR ALTERED.

WHEN WORKING ON OR REPLACING PARTS FOR THE ENGINE OR PRODUCT, YOU MUST ALWAYS FLIP THE ON/OFF SWITCH TO THE OFF POSITION.

- Always fill fuel tank outside in a well ventilated area. Never fill your fuel tank with fuel indoors. (Examples include: basement, garage, barn, shed, house, porch, etc.) Never fill tank near appliances with pilot lights, heaters, or other ignition sources. If the fuel has to be drained, this should be done outdoors. The drained fuel should be stored in a container specifically designed for fuel storage or it should be disposed of carefully.
- Always wipe up excess (spilled) fuel from engine before starting. Clean up spilled fuel immediately. If fuel is spilled, do not start the engine but move product and fuel container from area. Clean up spilled fuel and allow to evaporate and dry after wiping and before starting.
- Allow fuel fumes/vapors to escape from the area before starting engine.
- Test the fuel cap for proper installation before starting and using engine.
- Always run the engine with fuel cap properly installed on the engine.
- Never smoke while refilling engine fuel tank.
- Do not store engine with fuel in fuel tank indoors. Fuel and fuel vapors are highly explosive.

Preparation

- Dress appropriately when operating the tiller. Always wear sturdy footwear. Never wear sandals, sneakers or open shoes, and never operate the tiller with bare feet. Do not wear loose clothing that might get caught in moving parts.
- Carefully inspect the area to be tilled and remove all foreign objects. Do not till above underground water lines, gas lines, electric cables, or pipes. Do not operate the tiller in soil with large rocks and foreign objects which can damage the equipment.
- Disengage all clutches and leave control lever in the neutral position before starting the engine.

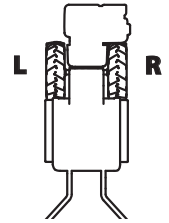
Operational Safety Precautions

- Never operate the tiller without guards, covers and hoods in place.
- Never start the engine or operate the tiller with the wheels in the free-wheel position. Make sure the wheel lock pins are engaged through the wheel hubs and wheel axle. The wheels act as a brake to keep the tiller at a controlled speed. Disengage wheel lock pins to permit free-wheeling only when engine is stopped.
- Keep hands, feet and clothing away from rotating parts. Keep clear of tiller tines at all times.
- Tines and wheels rotate when the drive safety control lever is pulled toward the handle bar (**FORWARD** position). Releasing the drive safety control lever to the **NEUTRAL** position stops the wheels and tines. If the unit does not stop when the lever is in the **NEUTRAL** position an adjustment of the drive control linkage, the belt alignment or the belt guides is required.
- Use extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hidden hazards or traffic.
- After striking a foreign object, stop the engine, remove the wire from the spark plug, thoroughly inspect the tiller for any damage and repair the damage before restarting and operating the tiller.
- If vegetation clogs the tines **STOP THE ENGINE AND DISCONNECT THE SPARK PLUG WIRE** before removing vegetation by hand.
- Engine muffler will be hot from operation. Do not touch it with bare skin or a severe burn may result.
- Do not overload the machine capacity by attempting to till too deep at too fast a rate.
- Never allow bystanders near the unit.
- Never operate the tiller without good visibility or light.
- Be careful when tilling in hard ground. The tines may catch in the ground and propel the tiller backward. If this occurs, let go of the handle bars and do not restrain the machine.
- Take all possible precautions when leaving the machine unattended. Disengage all control levers, stop the engine, wait for all moving parts to stop and make certain guards and shields are in place.

IMPORTANT

THE RIGHT AND LEFT SIDES OF YOUR ROTOTILLER ARE DETERMINED FROM THE OPERATING POSITION AS YOU FACE THE DIRECTION OF FORWARD TRAVEL.

ENGINE IS SHIPPED FROM FACTORY WITHOUT OIL. YOU MUST ADD ENGINE OIL BEFORE STARTING ENGINE.



NEVER START THE ENGINE OR OPERATE THE TILLER WITH THE WHEELS IN THE FREE-WHEEL POSITION. MAKE SURE THE WHEEL LOCK PINS ARE ENGAGED THROUGH THE WHEEL HUBS AND WHEEL AXLE. THE WHEELS ACT AS A BRAKE TO KEEP THE TILLER AT A CONTROLLED SPEED. DISENGAGE WHEEL LOCK PINS TO PERMIT FREE-WHEELING ONLY WHEN ENGINE IS STOPPED.

- When leaving the operating position for any reason:
 - shut off the engine.
 - wait for all moving parts to stop.

General Maintenance and Storage Considerations

- Keep machine, attachments and accessories in safe working condition.
- Check shear bolts, engine mounting bolts and other bolts at frequent intervals for proper tightness to be sure the equipment is in safe working condition.
- To prevent accidental starting, always disconnect and secure the spark plug wire from the spark plug before performing tiller maintenance.
- Never run the engine indoors. Exhaust fumes are deadly.
- Always allow muffler to cool before filling fuel tank.
- Never store equipment with gasoline in the tank inside of a closed building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any building.
- Always refer to the operator's guide instructions for important details if the tiller is to be stored for an extended period.
- Add a fuel stabilizer to gas tank and run for 10-15 minutes to prevent fuel from gumming up during an extended storage period.
- Storing outdoor power equipment inside or using a cover to protect against water and sunlight has been proven to minimize maintenance costs and prolong the life of the machine.

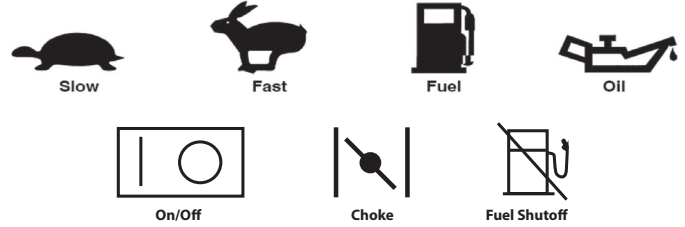
HAZARD SYMBOLS AND MEANINGS



- A: Warning!
- B: Avoid Injury From Rotating Tines.
- C: Read Owner's Manual Before Operating Machine.
- D: Remove Objects that Could Be Thrown By This Machine.
- E: Dangerous Moving Parts.
- F: Be Aware of Moving and Rotating Parts.
- G: Wear Ear and Eye Protection At All Times.
- H: Do Not Service or Adjust Moving Parts Unless Engine is Stopped and Spark Plug Wire is Disconnected.
- I: Dress Appropriately And Wear Sturdy Footwear.
- J: Toxic Fumes—Do Not Operate in Unventilated Areas.
- K: Hot Surfaces.
- L: Fire Hazards.
- M: Do Not Use In Thunderstorms--For severe weather, stop operation of this machine and seek shelter.
- N: Team Lift--For your safety, always have at least two people when lifting this machine.
- O: Do Not Till Above Underground Utility Lines And Pipes.
- P: Do Not Operate When Children Or Others Are Around.

CONTROL AND OPERATING SYMBOLS

Pictured below are control and operating symbols on the unit or in this manual. Before you operate your unit, learn and understand the purpose for each symbol.



SAFETY DECALS

This rototiller unit has been designed and manufactured to provide you with the safety and reliability you would expect from an industry leader in outdoor power equipment manufacturing.

Although reading this manual and the safety instructions it contains will provide you with the necessary basic knowledge to operate this equipment safely and effectively, we have placed several safety labels on the tiller to remind you of this important information while you are operating the unit.

These safety labels are illustrated below, and are shown here to help familiarize you with the location and content of the safety messages you will see as you perform normal tilling operations. Please, review these decals now, and if you have any questions regarding their meaning or how to comply with these instructions, reread the complete safety instruction text in this manual. For additional questions contact CountyLine customer service.

WARNING/AVERTISSEMENT

Dangerous Moving Parts.
Do not start engine unless belt cover is properly attached. Keep hands, feet and clothing away from moving belts and pulleys. Failure to comply could result in crushed, cut or severed body parts. See operator's manual for full safety instructions.

17052

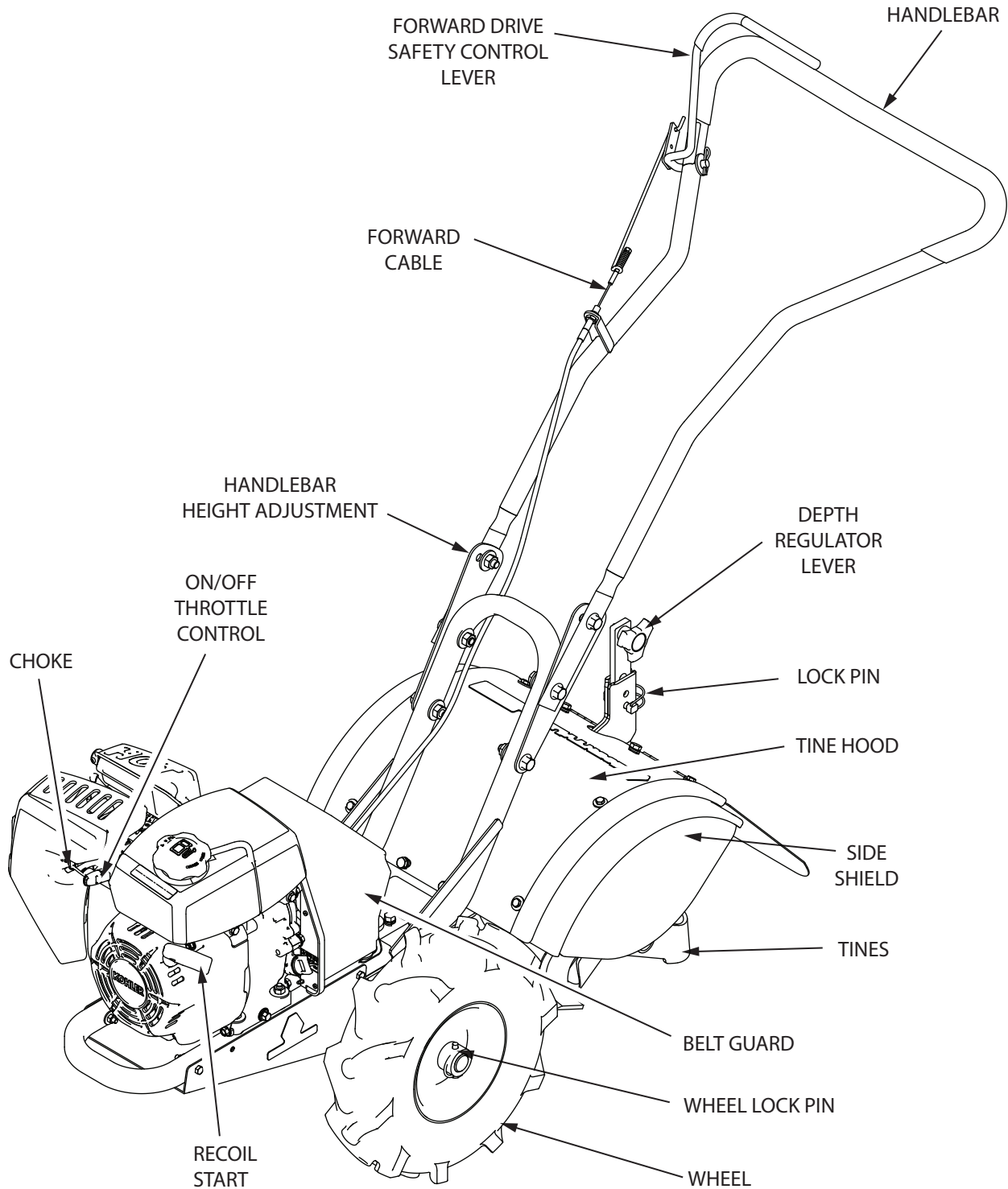
Pièces en mouvement dangereuses.
Ne pas démarrer le moteur si le protège-courroie n'est pas correctement attaché. Tenir les mains, les pieds et les vêtements à l'écart des courroies et poulies en mouvement. Le non-respect de cette consigne peut entraîner l'écrasement, la coupure, voire le sectionnement de parties du corps. Voir les instructions de sécurité complètes dans le manuel de l'utilisateur.

**Part No. 17052
MOVING PARTS WARNING
Frame Near Belt Decal**

<p>▲ DANGER</p> <p>Avoid Injury From Rotating Tines. Keep hands, feet, and clothing away. Moving parts can crush and cut. Once engaged when tiller is engaged forward or reverse. Tines and wheels rotate when drive control levers are pulled toward the handlebar. Do not operate both forward and reverse drive control levers at the same time. In reverse, tines and wheels rotate when the reverse control lever is pulled up. Pulling the drive control levers to the neutral position stops the wheel and tines.</p> <p>Danger de blessure par les fraises en rotation. Tenir les mains, les pieds et les vêtements à l'écart des parties en mouvement pouvant écraser et couper. Les fraises tournent lorsque l'unité est engagée en avant ou arrière. Les fraises et les roues tournent lorsque les leviers de commande de traction sont tirés vers le guidon. Ne pas actionner les deux leviers de commande de traction de marche avant et arrière au même moment. En marche arrière, les fraises et les roues tournent lorsque le levier de marche arrière est tiré vers le haut. Les roues et les fraises s'arrêtent lorsque les leviers de commande de traction sont relâchés et ramenés en position neutre.</p>	<p>▲ WARNING/AVERTISSEMENT</p> <p>Avoid Serious Injury. Read operator's manual. Read indication and function of all controls. Keep hands and feet and clothing away from moving parts. Tines and wheels are engaged. Once engaged when tiller is engaged forward or reverse. Tines and wheels rotate when drive control levers are pulled toward the handlebar. Do not operate both forward and reverse drive control levers at the same time. In reverse, tines and wheels rotate when the reverse control lever is pulled up. Pulling the drive control levers to the neutral position stops the wheel and tines.</p> <p>Lock-Up Wheels. Never raise or open tiller until wheels are fully engaged in the wheel hubs and do not operate. If wheels are not fully engaged, the wheels will slip and damage the tiller or the wheels.</p> <p>Danger de blessure grave. Lire le manuel de l'utilisateur. Lire l'indication et la fonction de toutes les commandes. Maintenir les mains, les pieds et les vêtements à l'écart des parties en mouvement pouvant écraser et couper. Les fraises et les roues tournent lorsque les leviers de commande de traction sont tirés vers le guidon. Ne pas actionner les deux leviers de commande de traction de marche avant et arrière au même moment. En marche arrière, les fraises et les roues tournent lorsque le levier de marche arrière est tiré vers le haut. Les roues et les fraises s'arrêtent lorsque les leviers de commande de traction sont relâchés et ramenés en position neutre.</p> <p>Roues de blocage. Ne jamais élever ou ouvrir le tiller tant que les roues ne sont pas complètement engagées dans les moyeux des roues. Si les roues ne sont pas complètement engagées, les roues glissent et peuvent endommager le tiller ou les roues.</p>	<p>See Manual for Detailed Operating Instructions.</p> <p>1. Read the operator's manual. 2. Never till on a slope that does not match the ground. 3. Check position of wheels and wheel hubs. 4. Make sure control levers are in the proper position. 5. Never pull the control levers to the position of reverse. 6. Do not reverse.</p> <p>Voir les instructions d'utilisation détaillées dans le manuel.</p> <p>1. Lire le manuel de l'utilisateur. 2. Assurez-vous d'être dans la position adéquate pour tiler sur le terrain. 3. Vérifier la position des roues et des moyeux des roues. 4. Faire sûr que les leviers de commande de traction sont en position neutre. 5. Ne jamais tirer les leviers de commande de traction vers l'arrière. 6. Ne pas inverser.</p>
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**Part No. 17051
DANGER & WARNINGS
Hood Flap Decal**

FEATURES



WARNING

DO NOT TRY TO LIFT THE TILLER FROM THE SHIPPING CARTON. THE TILLER IS HEAVY AND CAN CAUSE INJURY. USE TWO PERSONS WHEN LIFTING THE TILLER.

UNPACKING AND ASSEMBLY

Your rototiller comes fully assembled except for a few parts. The following instructions will help you unpack your tiller and assemble and adjust your tiller's depth regulator lever, cable tension and handle bar height. You will need one 16 mm and one 17 mm wrench.

Carton Contents:

- Rear Tine Rototiller w/Handle Bar
- 2 - Side Shields
- 2 - Wheels
- Depth Regulator
- Parts Bag

Tools Required for Assembly:

16 mm & 17 mm wrenches

Unpack:

1. Open top of carton and remove handle bar assembly.
2. Find parts packet. Parts packet contains:
 - M10-1.5 x 45 mm hex head bolts
 - M10-1.5 x 25 mm hex head bolts
 - M10-15 mm nylock nuts
 - M10 flat washers
 - M6-1 x 12 mm hex head bolts
 - M6-1 nylock nuts
 - 1 - Lock pin
 - 12 - M6 flat washers
 - 2 - Handle bar extensions
 - 2 - linchpins

NOTE: Parts packet also includes Engine Manual, Warranty Registration Card and this Operator's Manual.

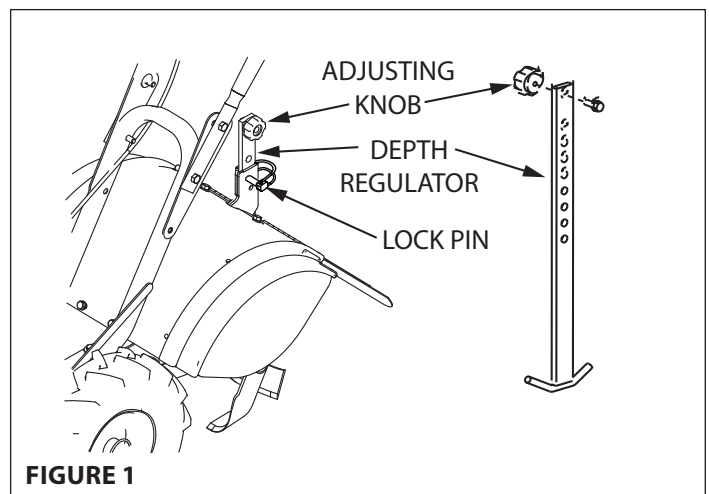
3. Cut open seams of carton, exposing all contents and remove machine by:
 - a. Attaching loose wheels in box onto machine with wheel lock pins in free-wheel position. Slide wheel all the way onto the axle and insert lock pin through the axle hole only. (SEE OPERATION SECTION)

- b. Roll tiller from carton.

Assembly:

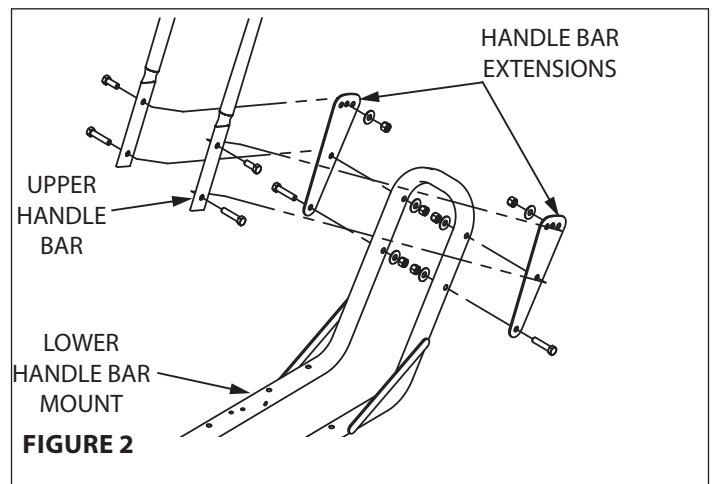
Install Depth Regulator:

1. Locate depth regulator and lock pin. **SEE FIGURE 1**
2. Unscrew adjusting knob from the top of the depth regulator and slide depth regulator up into vertical slot at the rear of the tine shield. **SEE FIGURE 1**
3. Reattach the adjusting knob to the top hole of the depth regulator.
4. Insert lock pin through the hole in the vertical slot and a hole in the depth regulator to hold it in place.



Attach Handle Bar

1. Locate handle bar extensions. **SEE FIGURE 2**
2. Place handle bar extensions on outside of lower handle bar mount. Line up the handle bar extension pieces with the lower handle bar mount as shown in the decal located on the lower handle bar mount next to the mounting location. **SEE FIGURE 2**



3. Insert one M10-1.5 x 45 bolt for each side in lower holes of the extension pieces. The bolts will pass through the lower hole of the lower handle bar mount. Put M10 flat washers onto bolts.

NOTE: Always put washers on the tubing side of bolts.

4. Hand tighten M10-1.5 nuts on each bolt.
5. Now assemble the handle bar to the handle bar extensions.

NOTE: Handle bar goes to the outside of the handle bar extensions.

6. Insert one M10 -1.5 x 45 bolt for each side in lower holes of the handle bar. Note: Bolts will be going through the upper holes of the lower handle bar mount along with the middle holes of the extensions. Put M10 flat washers onto bolts.
7. Hand tighten M10 -1.5 nuts on each bolt.
8. Insert one M10 -1.5 x 25 bolt for each side in upper holes of the handle bar. Bolts will pass through upper holes of the extensions. Put M10 flat washers onto bolts.
9. Hand tighten M10-1.5 nuts on each bolt.
10. Tighten M10-1.5 nuts on each of the 6 bolts connecting the handle bar, handle bar extensions and handle bar mount together.

Attach Tine Side Shields

1. Locate side shields. **SEE FIGURE 3**
2. Take one side shield, raise it up against one side of the tine guard and hold in place.
3. Place a M6 flat washer onto three M6-1 x 12 bolts. Insert these three bolts in each of the three holes of the tine guard, making sure they also pass through the side shield. Put an additional M6 flat washers onto the underside of the bolts.

NOTE: The side shield needs to be below the tine hood when they are attached together.

4. Hand tighten M6-1 nuts on each bolt.
5. Tighten M6-1 nuts on each of the three bolts connecting the two side shields to the tine guard.
6. Repeat steps 2-4 for the second side shield.

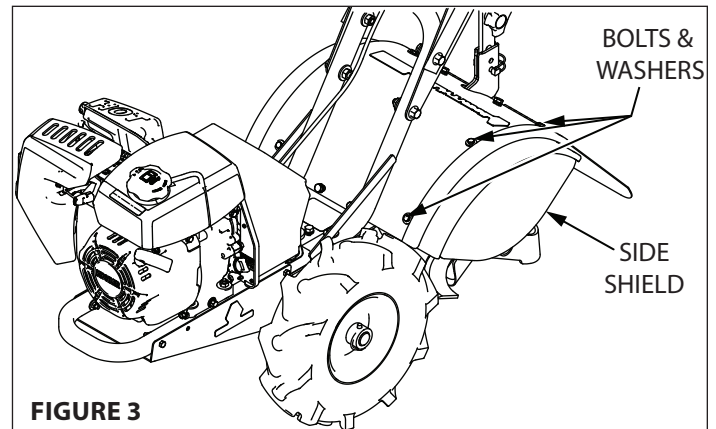
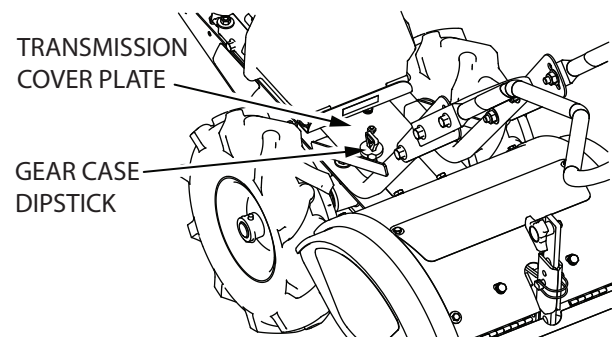


FIGURE 3



CAUTION

DO NOT PUT ENGINE OIL IN TRANSMISSION. TRANSMISSION LUBRICANT IS INSTALLED BY THE MANUFACTURER.



Fill Engine Crankcase

1. Add oil according to engine manual. **Do not overfill.** Use a clean, high quality detergent oil. Use no special additives with recommended oils. **Do not mix oil with gasoline.** Oil level must be full. Check the oil level by removing oil fill plug. Oil level should be up to the bottom of the fill plug opening.
2. Always check oil level before starting engine. Refer to engine manual for capacity and type of oil to use.

 **WARNING**

DO NOT START YOUR TILLER UNTIL YOU HAVE READ THE MANUAL THAT CAME WITH YOUR ENGINE, AND THE SECTIONS IN THIS MANUAL TITLED CONTROLS, ADJUSTMENTS AND SAFETY. IF YOU HAVE READ THESE, FOLLOW THE STEPS BELOW TO START YOUR TILLER. TO AVOID INJURY OR DEATH, ALWAYS PERFORM THIS PRE-START CHECKLIST BEFORE STARTING THE ENGINE.

OPERATION**Preparation**

- Dress appropriately when operating the tiller. Always wear sturdy footwear. Never wear sandals, sneakers or open shoes, and never operate the tiller with bare feet. Do not wear loose clothing that might get caught in moving parts.
- Carefully inspect the area to be tilled and remove all foreign objects. Do not till above underground water lines, gas lines, electric cables, or pipes. Do not operate the tiller in soil with large rocks and foreign objects which can damage the equipment.
- Disengage all clutches and leave all control levers in the neutral position before starting the engine.
- Handle fuel with care; it is highly flammable.
 - a. Use an approved fuel container.
 - b. Never add fuel to a running engine or hot engine.
 - c. Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
 - d. Replace gasoline cap securely and clean up spilled fuel before restarting.
- Never attempt to make any adjustments while the engine is running.

Pre-Start Inspection

1. Make sure all safety guards are in place and all nuts and bolts are secure.
2. Check oil level in engine crankcase. See your engine manual for procedure and specifications.
3. Inspect air cleaner for cleanliness. See your engine manual for procedure.
4. Check the fuel supply. Fill the fuel tank no closer than 1 inch from top of tank to provide space for expansion. See your engine manual for fuel recommendations.
5. Be sure spark plug wire is attached and spark plug is tightened securely.

6. Check position of wheels and wheel lock pins. Lock pins should be in the tilling position with the pins being through both the axle holes and wheel holes
7. Check depth regulator lever position.
8. Examine underneath and around engine for signs of oil or fuel leaks.
9. Inspect fuel hoses for tightness and fuel seepage.
10. Look for signs of engine damage.
11. Remove excessive debris from muffler area and recoil starter.

Engine Preparation

See the engine manufacturer's instructions for the type of gasoline and oil to use. Before you use the unit, read the information on safety, operation, maintenance, and storage.

 **CAUTION**

ENGINE IS SHIPPED FROM FACTORY WITHOUT OIL. YOU MUST ADD ENGINE OIL BEFORE STARTING ENGINE. FAILURE TO ADD OIL CAN CAUSE ENGINE DAMAGE.

Fill Crankcase with Oil

See the engine manual for instructions on the type of oil to use and how to fill engine with oil.

 **WARNING**

GASOLINE IS HIGHLY FLAMMABLE AND MUST BE HANDLED WITH CARE. NEVER FILL THE TANK WHEN THE ENGINE IS HOT OR RUNNING. ALWAYS MOVE OUTDOORS TO FILL THE TANK.

Fill Fuel Tank With Gasoline

See the engine manual for instructions on the type of gasoline to use.

! WARNING

ALWAYS KEEP HANDS AND FEET CLEAR OF ROTATING MACHINE PARTS. ENGINE SHOULD BE OFF BEFORE ADJUSTING ANY CONTROLS. INJURY OR DEATH TO PERSON CAN OCCUR.

! WARNING

THIS INFORMATION IS PROVIDED HERE ONLY TO INTRODUCE THE CONTROLS. DO NOT START THE ENGINE AT THIS TIME. PLEASE READ THIS SECTION AND ALL OPERATING AND SAFETY INSTRUCTIONS BEFORE STARTING YOUR TILLER.

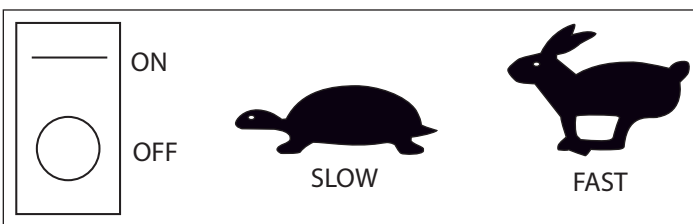
- AS A SAFETY PRECAUTION, THE DRIVE SAFETY CONTROL LEVER WILL NOT LOCK IN THE FORWARD POSITION.
- TO STOP THE WHEELS AND TINES AT ANY TIME RELEASE THE DRIVE SAFETY CONTROL LEVER.

Start-Up

The controls required to start and run the rototiller are located on the engine and are the choke lever, throttle lever and On/Off switch. The choke lever is marked on one end with **CHOKE** and on the other with **RUN**. The throttle lever is marked on one end with a **SLOW** icon and on the other with a **FAST** icon. A more detailed description of engine operation and all related precautions and procedures can be found in the engine manufacturer's manual that accompanies each tiller.

Cold Starts

1. Turn ON/OFF switch to the **ON** position.
2. Move choke lever to **CHOKE** position.
3. Move throttle lever to half way between **SLOW** and **FAST**.
4. Pull starting rope out slowly one time and allow to return normally.
5. Pull starting rope out rapidly, and allow rope to return normally. Repeat until engine starts.
6. When engine starts, gradually move choke lever to **RUN** position and move throttle lever to **FAST** position for tilling.



! WARNING

ENGINE AND SURROUNDING PARTS BECOME EXTREMELY HOT DURING NORMAL USE. TEMPERATURE OF MUFFLER AND NEARBY AREAS MAY EXCEED 150° F. THESE AREAS WILL CAUSE SERIOUS BURN INJURIES IF TOUCHED BEFORE THE ENGINE HAS COOLED.

Restarting A Warm Engine

Restarting an engine that is already warm from previous running does not normally require use of the choke.

1. Move throttle lever to half way between **SLOW** and **FAST**.
2. Pull starting rope out rapidly, and allow rope to return normally. Repeat until engine starts.
3. Adjust throttle speed to **FAST** position for tilling.

Idle Speed

Use the **SLOW** position or a position between **SLOW** and **FAST** on the throttle lever to reduce stress on the engine when tilling is not being performed. Lowering the engine speed to "idle" will help extend the life of the motor, as well as conserve fuel and reduce the noise level of the equipment.

Operating Speed

For tilling, set the throttle lever to **FAST** position.

! CAUTION

DO NOT USE THE CHOKE TO STOP ENGINE. IF CHOKE LEVER IS PLACED IN CHOKE POSITION WHILE ENGINE IS RUNNING, BACKFIRE OR ENGINE DAMAGE MAY OCCUR.

Shutting Down

To stop the engine at any time, move the On/Off switch to the **OFF** position. To stop wheels and tines at any time release drive safety control levers to **NEUTRAL** position. **SEE FIGURE 4**

! IMPORTANT

PRACTICE OPERATING THE CONTROLS AND TILLER WITH TINES OUT OF GROUND BEFORE BEGINNING TO TILL. IT IS IMPORTANT THAT YOU KNOW HOW TO USE THE TILLER PROPERLY, KEEP CONTROL AT ALL TIMES, STOP THE TINES AND WHEELS FROM TURNING, AND STOP THE ENGINE IF NECESSARY. IF YOU DO NOT KNOW HOW TO DO THESE THINGS, READ THE CONTROLS, ADJUSTMENTS AND SAFETY SECTIONS BEFORE PROCEEDING.

! WARNING

TO STOP WHEELS AND TINES AT ANY TIME, RELEASE DRIVE SAFETY CONTROL LEVERS TO NEUTRAL POSITION.

ALWAYS RELEASE DRIVE SAFETY CONTROL LEVERS TO NEUTRAL POSITION BEFORE ADJUSTING THE DEPTH OF THE REGULATOR LEVER. ROTATING TINE CAN CAUSE SERIOUS INJURY OR DEATH.

Drive SAFETY Control Lever

Pull the drive safety control lever toward the handle bar to the **FORWARD** position to engage the wheels and tines. Releasing the lever into the **NEUTRAL** position stops the wheels and tines and brings the tiller to a complete stop. **SEE FIGURE 4**

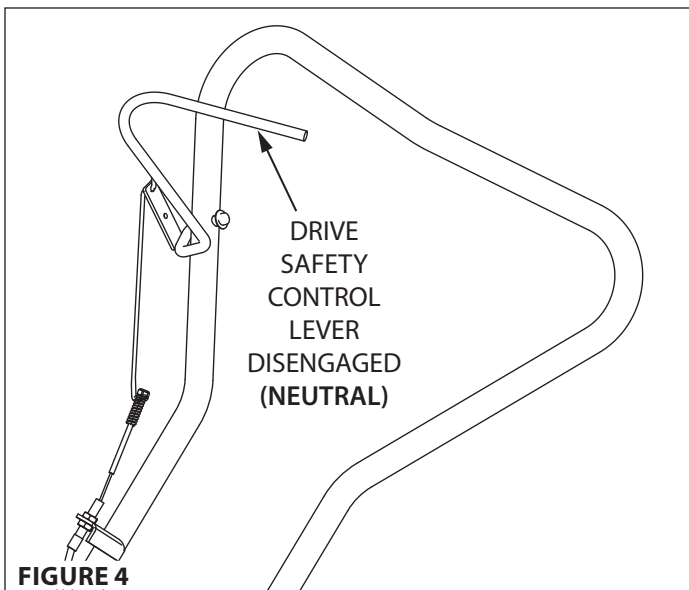


FIGURE 4

! WARNING

EXTREME CAUTION MUST BE TAKEN IN SELECTING TILLING DEPTH. IF YOU ATTEMPT TO TILL TOO DEEPLY FOR SOIL CONDITIONS, THAT IS, WITH THE DEPTH REGULATOR LEVER IN TOO HIGH A POSITION, LOSS OF CONTROL AND INJURY TO PERSONNEL CAN OCCUR.

DO NOT ADJUST TILLING DEPTH UNLESS DRIVE SAFETY CONTROL LEVER IS RELEASED TO NEUTRAL POSITION.

ALWAYS SET THE DEPTH REGULATOR LEVER IN THE TRANSPORT POSITION BEFORE STARTING ENGINE. PLACE THE LOCK PIN IN THE HIGHEST HOLE OF THE DEPTH REGULATOR LEVER

Tilling

1. Adjust the depth regulator lever to desired tilling depth.

NOTE: Raise depth regulator lever up one hole at a time, testing tiller operation after each raise. Raising depth regulator lever too high can result in loss of control of tiller!

2. Move the throttle control to **FAST** position.
3. Place the tiller in **FORWARD** by pulling the drive safety control

Depth Regulator Lever

Tilling depth is controlled by the height of the depth regulator lever.

To adjust tilling depth. **SEE FIGURE 5**

1. Remove lock pin.
2. Raise the depth regulator lever to position tines at chosen tilling depth.
3. Align hole in depth regulator lever with hole in depth regulator bracket and insert lock pin.

Depth Regulator Lever Down = Shallower tilling. Place the lock pin in the top hole of the depth regulator lever for shallowest tilling.

Depth Regulator Lever Up = Deeper tilling. Place the lock pin in the bottom hole of the depth regulator lever for deepest tilling.

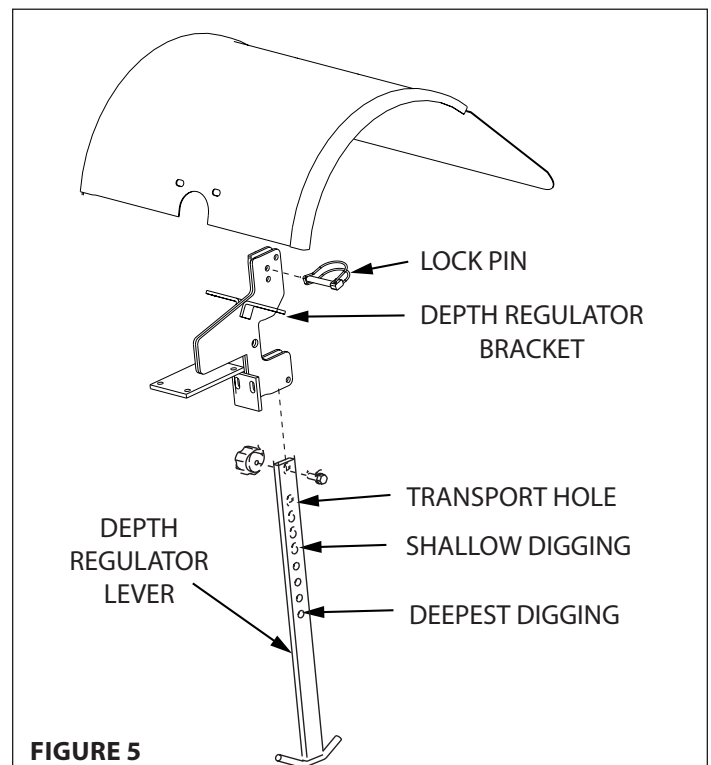


FIGURE 5

! WARNING

NEVER START ENGINE OR OPERATE TILLER WITH WHEELS IN FREE-WHEEL POSITION. ALWAYS SET THE WHEELS IN TILLING POSITION BEFORE STARTING ENGINE. THE FREE-WHEEL POSITION IS FOR TRANSPORTING THE TILLER LONG DISTANCES OVER LEVEL GROUND. DO NOT ATTEMPT TO MOVE THE TILLER UP OR DOWN STEEP GRADES IN THE FREE-WHEEL POSITION. YOU CAN LOOSE CONTROL OF TILLER AND CAUSE SERIOUS INJURY OR DEATH.

Wheel linchpins

To place wheels in free-wheel position do as follows:

NOTE: This allows wheels to turn freely on the axle for easy transportation.

1. Remove lock pin. Slide wheel inward toward machine. **SEE FIGURE 6**
2. Insert linchpin through the axle hole only, fold lock ring to secure pin to axle.
3. Repeat for other wheel.

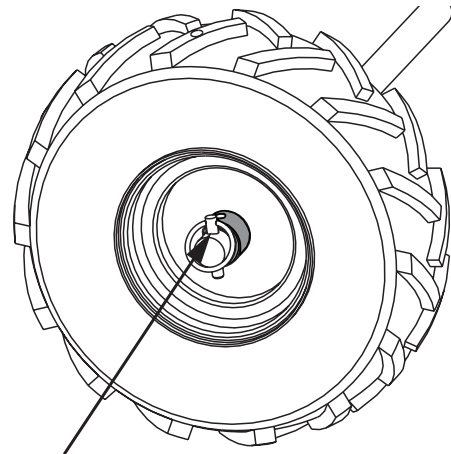
To place wheels in tilling position, do as follows:

NOTE: This locks wheels to the axle so they are able to propel the machine forward while in use.

1. Remove lock pin. Slide wheel slightly outward away from machine. Align hole in axle with hole in wheel hub. **SEE FIGURE 7**
2. Insert linchpin through both holes, fold lock pin ring to secure pin to axle.
3. Repeat for other wheel.

NOTE: Always have both wheel linchpins in or out. Do not operate tiller with only one wheel locked.

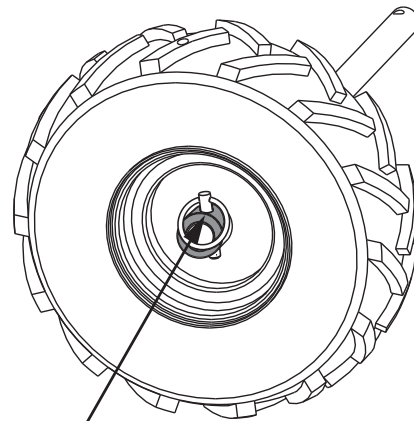
Free-Wheel Position



WHEEL LINCHPIN IN FREE-WHEEL POSITION
(LINCHPIN IN AXLE HOLE ONLY)

FIGURE 6

Tilling Position



WHEEL LINCHPIN IN TILLING POSITION
(LINCHPIN IN AXLE HOLE AND WHEEL HOLE)

FIGURE 7

! WARNING

**PRACTICE SAFETY AT ALL TIMES.
ENGINE MUST BE TURNED OFF AND ALLOWED TO COOL.
SPARK PLUG WIRE MUST BE DISCONNECTED AND SECURED BEFORE ATTEMPTING ANY MAINTENANCE OR REPAIR.
FAILURE TO COMPLY WITH THIS SAFETY REQUIREMENT CAN RESULT IN SERIOUS INJURY OR DEATH TO PERSONEL.**

Belt Tension Adjustment

Proper belt tension is critical to good performance. After 1/2 hour of operation, all cables may have to be adjusted due to initial stretch. Thereafter, check tension after every 2 hours of operation. Proper tension is achieved when the spring compresses 6.4 mm (1/4") when drive lever is engaged.

An indication that the belt may need to be adjusted is a constant buzzing sound that can be heard when the engagement lever is compressed (see page 21).

NOTE: A short buzzing noise can be heard when engagement lever is released. This is normal, caused by the teeth of the cog belt catching the wire guide, stopping the rotation of the of the belt. This does not require the belt tension to be adjusted.

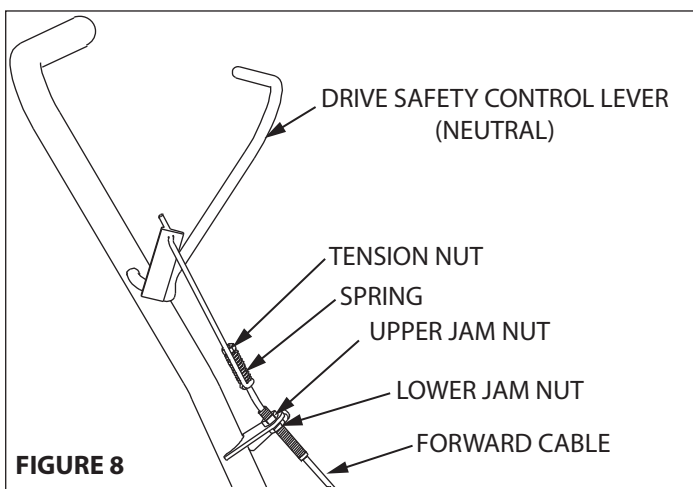
Tools Required for Assembly:

13 mm wrench

To increase belt tension:

1. Loosen upper jam nut. **SEE FIGURE 8**
2. Tighten the lower jam nut in 1/8" increments, making sure not to over adjust the tension.
3. Check adjustment by measuring spring compression when drive lever is engaged. (Proper spring compression 6.4 mm (1/4"))
4. When proper adjustment is achieved, tighten upper jam nut.

This procedure can be repeated until conduit adjustment bolts are fully adjusted. If no more adjustment can be made the belt may need to be replaced.



WARNING

ALWAYS MAINTAIN CONTROL OF YOUR TILLER. ONLY OPERATE TILLER IN SOIL CONDITIONS THAT ARE CONDUCTIVE TO MAINTAINING CONTROL OF THE TILLER. DO NOT OPERATE TILLER IN CONDITIONS THAT CONTAIN ROCKS, FOREIGN OBJECTS, OR ANY OTHER MATERIAL THAT IS NOT SOIL. IF YOUR TILLER BUMPS, JERKS OR LURCHES, LET GO OF THE HANDLE BARS AND THE DRIVE CONTROL LEVERS IMMEDIATELY SO THAT THE TINES AND WHEELS STOP TURNING. FAILURE TO COMPLY WITH THIS SAFETY REQUIREMENT CAN RESULT IN SERIOUS INJURY OR DEATH TO PERSONEL.

DANGER



Tilling Tips

The key to successful tilling is to begin with a shallow cut on the first pass, and then work an inch or two deeper on each successive pass.

- Tilling depth will vary with ground conditions.
- When beginning to till in unbroken ground or in extremely hard soil, set the lock pin in the highest hole of the depth regulator lever (**SEE OPERATION SECTION**). This will allow for shallow tilling. With the depth regulator lever in this position, make several light passes over the area to be tilled. Reset for deeper depths with successive passes.
- If tiller jumps or skids uncontrollably, lower the depth regulator lever by placing the lock pin in a higher hole. This will allow for shallower tilling. Hold firmly to the handle bars to control sudden lurches.

Immediately release the drive control lever if the tines jam or you strike a foreign object. With drive control lever in neutral position, push throttle control to stop position to stop the engine. Disengage the spark plug wire. When tines have stopped, remove foreign objects and check for damage.

Cultivating Tips

If you plan to use your tiller for cultivating:

- Plant rows on 20" - 22" centers for ease of turning.
- Set the depth regulator lever with the lock pin in one of the higher holes. This will allow for shallow cultivation necessary to turn over weeds, and break up and aerate the soil.

MAINTENANCE

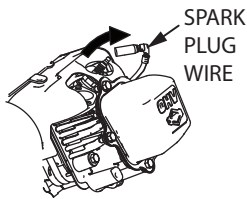
Maintenance Schedule

Your rototiller has been designed and produced by the industry's leading manufacturer of outdoor power equipment to provide you years of reliable operation.

Keeping your tiller in top running condition will prolong its life, and help you obtain optimum performance. Please read this normal care schedule, and note the recommended care operating intervals to extend the life of your unit.

WARNING

TO PREVENT ACCIDENTAL STARTING:



ENGINE MUST BE TURNED OFF AND COOL, AND SPARK PLUG WIRE MUST BE REMOVED AND SECURED FROM SPARK PLUG BEFORE CHECKING AND ADJUSTING ENGINE OR EQUIPMENT.

WARNING

ENGINE AND SURROUNDING PARTS BECOME EXTREMELY HOT DURING NORMAL USE. TEMPERATURE OF MUFFLER AND NEARBY AREAS MAY EXCEED 150° F. THESE AREAS WILL CAUSE SERIOUS BURN INJURIES IF TOUCHED BEFORE THE ENGINE HAS COOLED.

Maintenance Operation	Page	Before Each Use	50 hours or Every Season
Change forward belt	17		X
Engine maintenance	18, EM	X	X
Check or fill engine crankcase	19, EM	X	X
Check tiller transmission grease	18		X
Check tire pressure	19	X	
Lubrication	19	X	
Clean tine axle shaft	19	X	
Lubricate wheel axle shaft	19		X

EM = See engine manual

Servicing The Rototiller

The following information will help you make the necessary checks and perform the procedures required to follow the normal care recommendations made for your rototiller.

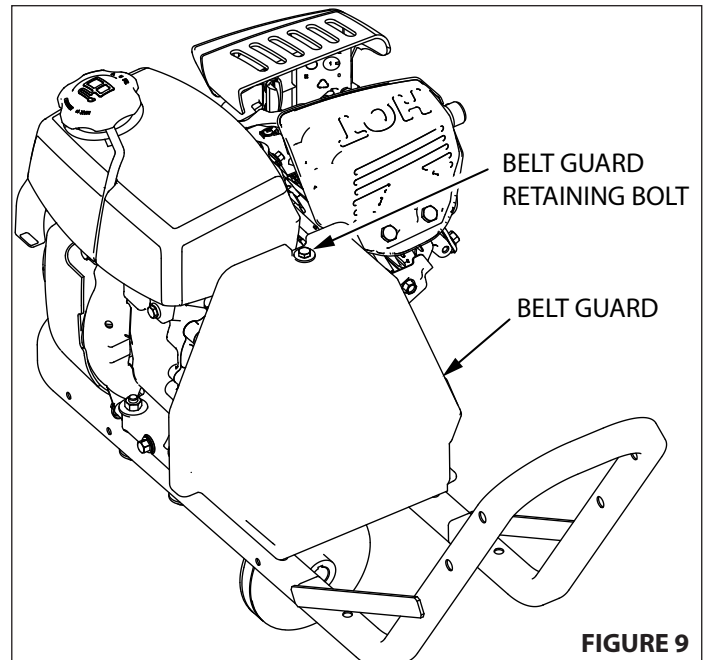
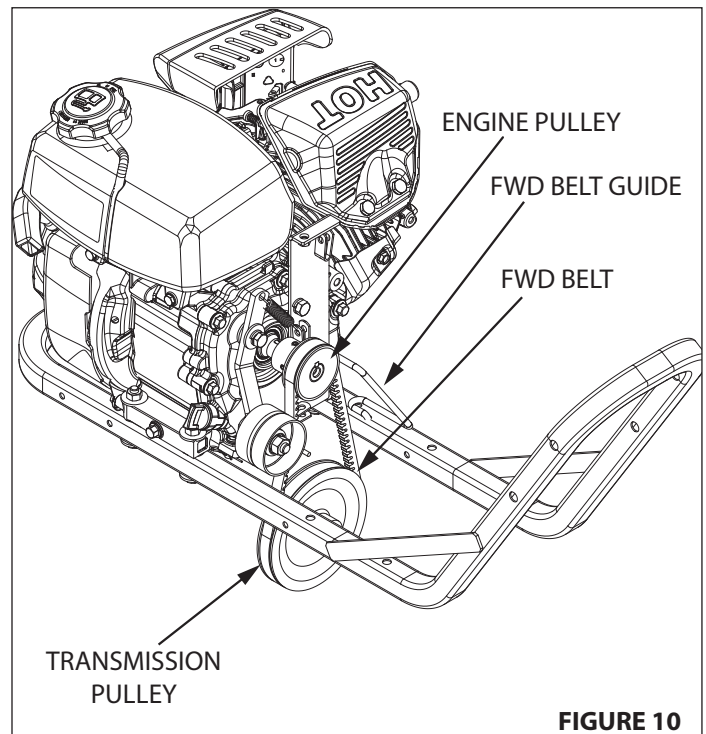
If you prefer, your local authorized dealer can make these checks and perform the required procedures for you.

Important: Use only approved CountyLine spare parts.

Change Forward Belt

1. Turn off engine. Engine must be cool.
2. Remove spark plug wire and secure from spark plug.
3. Remove belt guard as follows: **SEE FIGURE 9**
 - a. Unscrew and remove guard rivet.
 - b. Pull belt guard from machine.
4. Remove forward belt from engine pulley as follows: **SEE FIGURE 10**
 - a. Gently pull the engine recoil rope to rotate the pulley.
 - b. With the pulley turning, force the forward belt out of the V-groove.
 - c. Slide the belt free of the engine pulley.
 - d. Pull the forward belt down and out of the way.
5. Install new forward belt as follows:
 - a. Place forward belt in transmission pulley groove.
 - b. Gently pull the engine recoil rope to rotate the pulley while forcing the forward belt into the V-groove.
6. Re-attach belt guard.
7. Attach spark plug wire.

NOTE: Forward Belt Replacement Part # 22773 .


FIGURE 9

FIGURE 10

Engine Maintenance

Refer to the engine manual included in your parts packet for information on engine maintenance. Your engine manual provides information and a maintenance schedule for performing the following tasks:

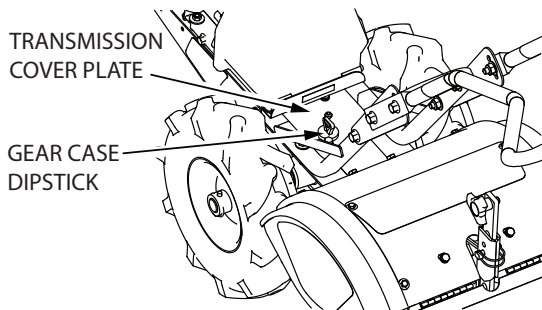
1. Always check oil level before starting engine. Refer to engine manual for capacity and type of oil to use.
2. Change oil after first 5-8 hours of operation. Change oil while engine is warm. Refill with new oil of recommended grade.
4. Check spark plug yearly or every 50 hours of operation.
5. Service air cleaner.
6. Keep engine and parts clean.
7. Check engine and equipment often for loose nuts and bolts, keep these items tightened.

5. Insert the dipstick cut-out created in step 1 into the hole in the transmission cover plate so the top square is resting on the cover plate. **SEE FIGURE 12**
6. Remove the dipstick cut-out and check grease level. If level is in the bottom ADD area or not present, add grease in 200ml increments until grease level reaches a proper level reading (between 1" - 1 3/4" down from top of fill hole). **DO NOT OVERFILL.** The slashed, acceptable grease level area on the dipstick cut-out has a 200ml range.

NOTE: The front wheel transmission and rear tine transmission share a common reservoir. Recommended grease is Mystic 00, or equivalent, transmission grease. Oil must have an API - E.P (extreme pressure) rating of GL4 or lower. Higher E.P. rating (ie - GL5, GL6 etc) will cause the bronze components to soften. For partial fill-ups (a few ozs or less) use SAE 140W or 85W gear oil or SAE 80W-90 weight gear oil with a API rating of GL4 or GL5. When replacing grease, the tiller transmission holds 18-22 ounces. DO NOT OVERFILL.

CAUTION

DO NOT PUT ENGINE OIL IN TRANSMISSION. TRANSMISSION LUBRICANT IS INSTALLED BY THE MANUFACTURER.

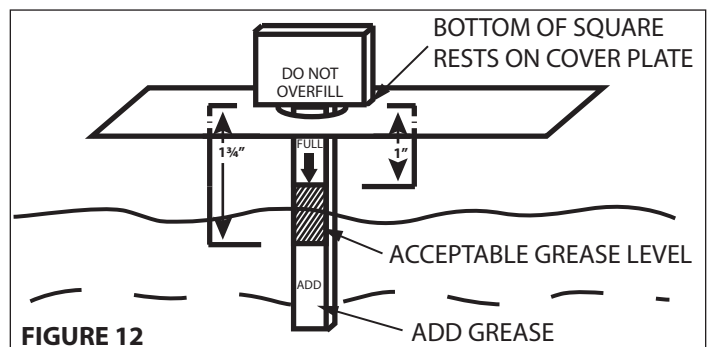
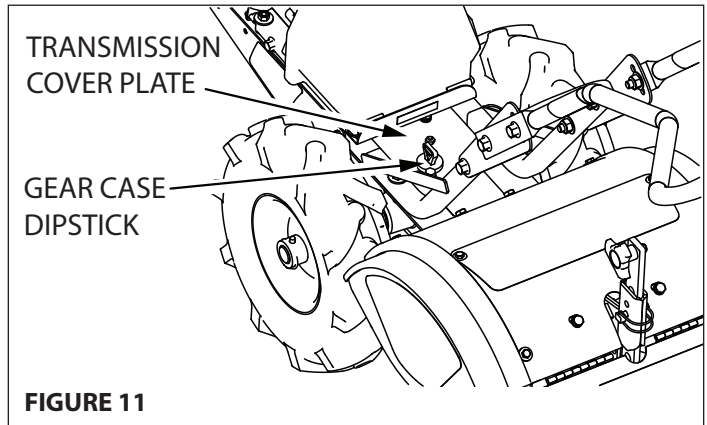


Check Tiller Transmission Grease

Check the grease level annually. To check the grease level:

1. Cut out one of the cardboard stencils in the back of this manual. Take that dipstick cut-out and glue or tape it to a piece of cardboard cut out to match the stencil.
2. Tiller must first be run for approximately 30 minutes to warm up grease for a proper measurement. Once warm let sit 5 minutes to allow grease to settle.
3. Move tiller to level ground, making sure the transmission cover plate is level.
4. Remove the gear case dipstick located between the handle bar mounts and the engine mount.

SEE FIGURE 11



Check or Fill Engine Crankcase

1. Add oil according to engine manual. **Do not overfill.** Use a clean, high quality 4-cycle engine oil. Use no special additives with recommended oils. **Do not mix oil with gasoline.** Oil level must be full. Check the oil level by removing oil fill plug. Oil level should be up to the bottom of the fill plug opening.
2. Always check oil level before starting engine. Refer to engine manual for capacity and type of oil to use.

Lubrication

Proper lubrication of moving mechanical parts is critical for proper care and maintenance. Oil the moving parts at 10 hour intervals using a 30 weight oil.

Check Tire Pressure

Recommended tire pressure is 30 PSI. If tires do not have equal pressure, tiller will pull to one side. If the tire is under inflated, the wheel hub can damage the tire.

Clean Tine Axle Shaft

1. Turn off engine. Engine must be cool.
2. Remove spark plug wire and secure from spark plug.
3. Tip the tiller forward. Block the tiller in position so that it rests on the engine mount and the tines are exposed.
4. Remove all vegetation, string, wire, and other material that may have accumulated on the axle between the inside set of tines and the seal on the transmission housing.
5. Tip the tiller back to a level position.
6. Replace spark plug wire.

WARNING

DO NOT STORE TILLER IN AN UNVENTILATED AREA WHERE FUEL FUMES MAY REACH FLAME, SPARKS, PILOT LIGHTS OR AN IGNITED OBJECT. DRAIN FUEL OUTDOORS AWAY FROM ANY IGNITION SOURCES. USE ONLY APPROVED FUEL CONTAINERS. FAILURE TO FOLLOW WARNING MAY CAUSE SERIOUS INJURY OR DEATH.

STORAGE

Prepare for Storage

Follow the steps below to prepare your tiller for storage. Read your engine manual for detailed instructions on preparing the engine for storage.

1. Protect wheels and axles from rust:
 - Remove lock pin and slide wheel off hub.
 - Coat the axles lightly with axle grease.
 - Slide wheel back on hub and insert lock pin.
2. Drain fuel system completely following engine manufacturer's instructions or add fuel stabilizer to prevent fuel from gumming up during extended storage period.
3. While engine is still warm, drain the oil from the engine. Refill with fresh oil of the recommended grade.
4. Clean external surfaces, engine and cooling fan.
5. Spark plug preparation:
 - Remove spark plug, pour one ounce of SAE 30 oil into spark plug hole.
 - Plug hole and pull starter cord slowly to distribute oil evenly in cylinder head area.
 - Reinstall spark plug.
6. Transport unit to a suitable storage location. If you have chosen to use a fuel stabilizer and have not drained the fuel system, follow all safety instructions storage precautions in this manual to prevent the possibility of fire from the ignition of gasoline fumes. Remember, gasoline fumes can travel to distant sources of ignition and ignite, causing risk of explosion and fire.
7. If there is any possibility of unauthorized use or tampering, remove the spark plug and store it in a safe place before storing the rototiller unit. Be sure to plug the spark plug hole to prevent foreign material from entering.

TROUBLESHOOTING

Troubleshooting Guide

While normal care and routine maintenance will extend the life of your rototiller, prolonged or constant use may eventually require that service be performed to allow it to continue operating properly. The troubleshooting guide below lists the most common problems, causes and remedies.

WARNING

PRACTICE SAFETY AT ALL TIMES. ENGINE MUST BE TURNED OFF AND ALLOWED TO COOL, AND SPARK PLUG WIRE MUST BE DISCONNECTED AND SECURED BEFORE ATTEMPTING ANY MAINTENANCE OR REPAIR. FAILURE TO COMPLY WITH THIS SAFETY REQUIREMENT CAN RESULT IN SERIOUS PERSONAL INJURY OR DEATH TO PERSONS.

PROBLEM	REMEDY/ACTION
Engine will not start	Add gas to gas tank. Connect spark plug wire to spark plug Throttle must be positioned at choke for a cold start
Engine runs rough, floods during operation	Clean or replace air cleaner
Engine is hard to start	Drain old fuel and replace with fresh. Use gas stabilizer at end of season Make sure spark plug wire is securely attached to spark plug Drive safety control levers must be released to neutral position to start the engine
Engine misses or lacks power	Raise the tines for shallow tilling by lowering the depth regulator lever Remove and clean fuel tank Clean or replace air cleaner Improper carburetor adjustment, take to authorized engine service center Replace spark plug and adjust gap Drain and refill gas tank and carburetor
Engine will not stop when throttle control is positioned at stop	See engine manual to check and adjust throttle linkage
Tiller moves forward during starting	Drive safety control levers must be released to neutral position to start the engine
Tiller is difficult to control when tilling (machine jumps or lurches forward)	Lock wheels in tilling position Raise tines for shallower tilling by lowering the depth regulator lever
Tines turn, wheels do not turn	Lock wheels in tilling position Internal transmission failure, see your dealer
Tines turn, wheels turn, tiller does not move	Raise the tines for shallower tilling by lowering the depth regulator lever Lift slightly on handlebars to allow wheels to gain traction
Belts squeal in neutral	Adjust forward belt guide: - turn engine off and allow muffler to cool, - disconnect spark plug wire and secure from spark plug, - remove belt guard, - pull down on drive safety control lever, - manually bend forward belt guide so there is 1/16 inch or less clearance between belt guide and belt, - replace belt guard and spark plug wire.
Excessive heat build up in transmission/tine area during tilling	Remove vegetation by following instructions in Clean Tine Axle Shaft of Normal Care section. Check transmission fluid and fill if needed

PROBLEM	REMEDY/ACTION
Constant buzzing sound is heard while engagement lever is compressed	<ul style="list-style-type: none"> • Fully compress engagement lever • Properly space wire guide against idler pulley • Tighten throttle cable <p>NOTE: If engagement lever is fully compressed, wire guide is properly adjusted, and cable has reach full adjustment and buzzing persists, the belt may be stretched and have to be replaced. *</p>

* Please contact 800-345-6007 for service parts



WARRANTY TERMS AND CONDITIONS

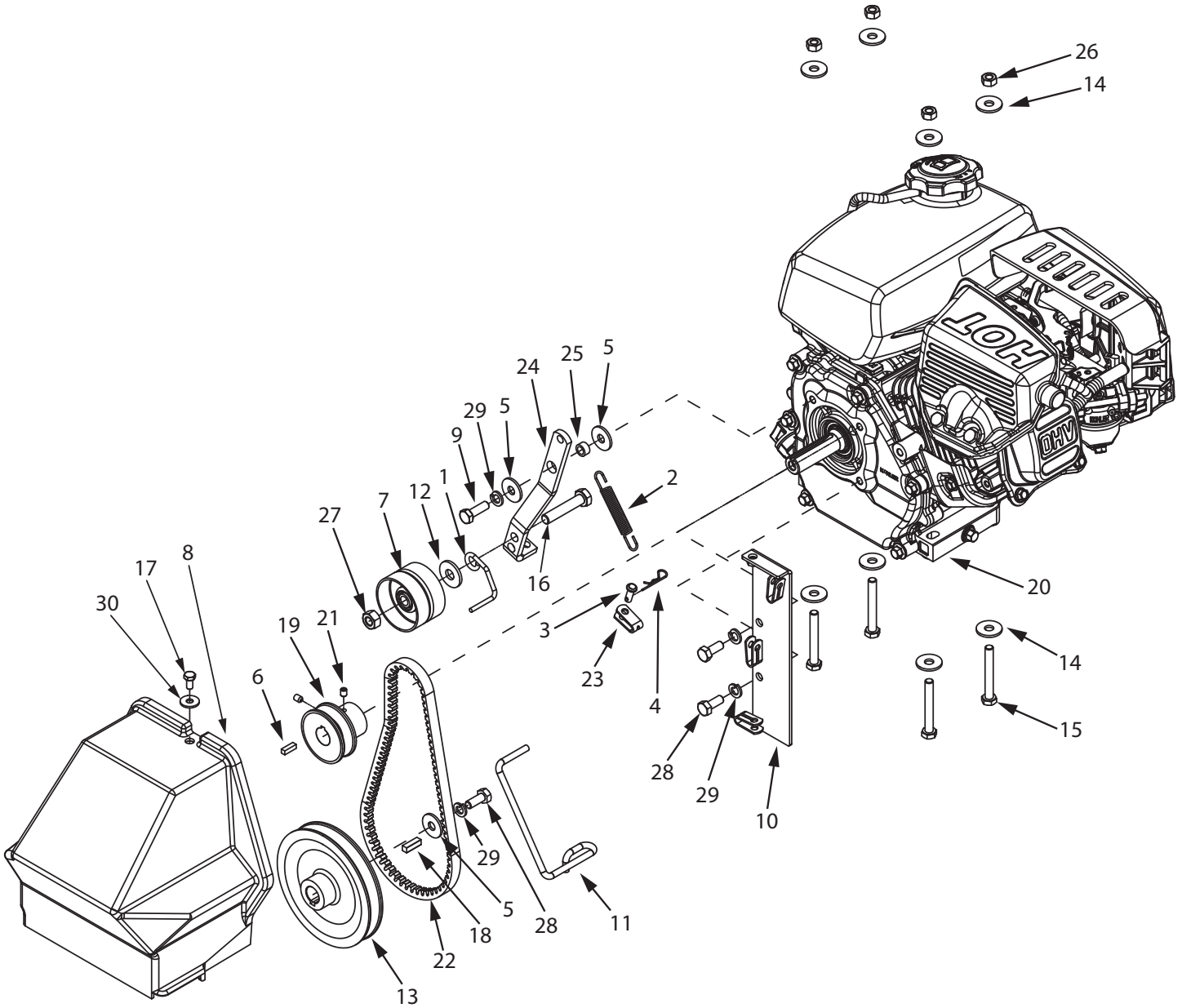
PRODUCT WARRANTY: 3-YEAR LIMITED WARRANTY (COUNTYLINE® TILLERS MANUFACTURED AFTER 10/01/2014)

Ardisam, Inc. (Ardisam), a manufacturing company, warrants this product to be free from defects in the material or workmanship for a period of three years from the date of purchase. If there is insufficient evidence of the purchase date, the effective date of this warranty will begin on the tiller's date of manufacture. During the three-year warranty of this product, Ardisam will furnish, at their discretion, parts and labor to correct any defect caused by faulty material or workmanship. In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. Ardisam reserves the right to inspect any incoming units returned under warranty to determine if the warranty applies before performing any warranty related work (including parts and components). Any unit used in a commercial application, or producing income is covered for a period of 90 days after purchase. This warranty applies to the original owner with a proof of purchase and is not transferable. For the warranty to be valid, the product must be registered online, or the warranty card must be filled out and received by Ardisam, within 30 days of purchase. This warranty excludes tines due to normal wear, wear items such as belts, wheels, tires, and cables, routine maintenance items such as filter elements, o-rings, seals, lubricants, and tune-ups, accessory parts such as tiller furrowers, edger kits, and dethatcher kits, running the tiller dry (without oil), or below minimum oil levels, using the tiller for a purpose other than that for which it was designed and manufactured, using the tiller in violation of local codes, ordinances and good trade practices. *These warranties apply only to products which have not been subjected to negligent use, abuse, misuse, overload, improper installation, alteration, accident, acts of God (or other events beyond Ardisam's control), vandalism, unauthorized parts, failure to use proper fuel and oil, or if repairs have been performed at a non-authorized service facility. These warranties shall not cover damage from normal wear and tear, normal maintenance parts and services, lightning; nor improper installation, operation, storage, or maintenance; nor operating the equipment above recommended maximums as stated in this manual and the accompanying engine manual. These warranties supersede all other warranties either expressed or implied and all other obligations or liabilities on the part of Ardisam. Ardisam, does not assume, and does not authorize any other person to assume for Ardisam, any liability in connection with the sale of Ardisam products. **To be at "No Charge," warranty work must be sent directly to and performed by Ardisam or an Ardisam Authorized Warranty Service Facility.** To obtain warranty service and/or replacement instructions, contact the Ardisam Customer Service Department at 800-345-6007. If you choose to ship your product to Ardisam for warranty repair, you must first have prior approval from Ardisam by calling the Ardisam Customer Service Department for a return material authorization number (RMA#). Under these circumstances, all items must be shipped prepaid. Ardisam will at no charge, repair or replace, at the discretion of Ardisam, any defective part which falls under the conditions stated above. Ardisam retains the right to change models, specifications and price without notice. Ardisam 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.

SEE ENGINE MANUAL FOR ENGINE WARRANTY

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REV1: 040215
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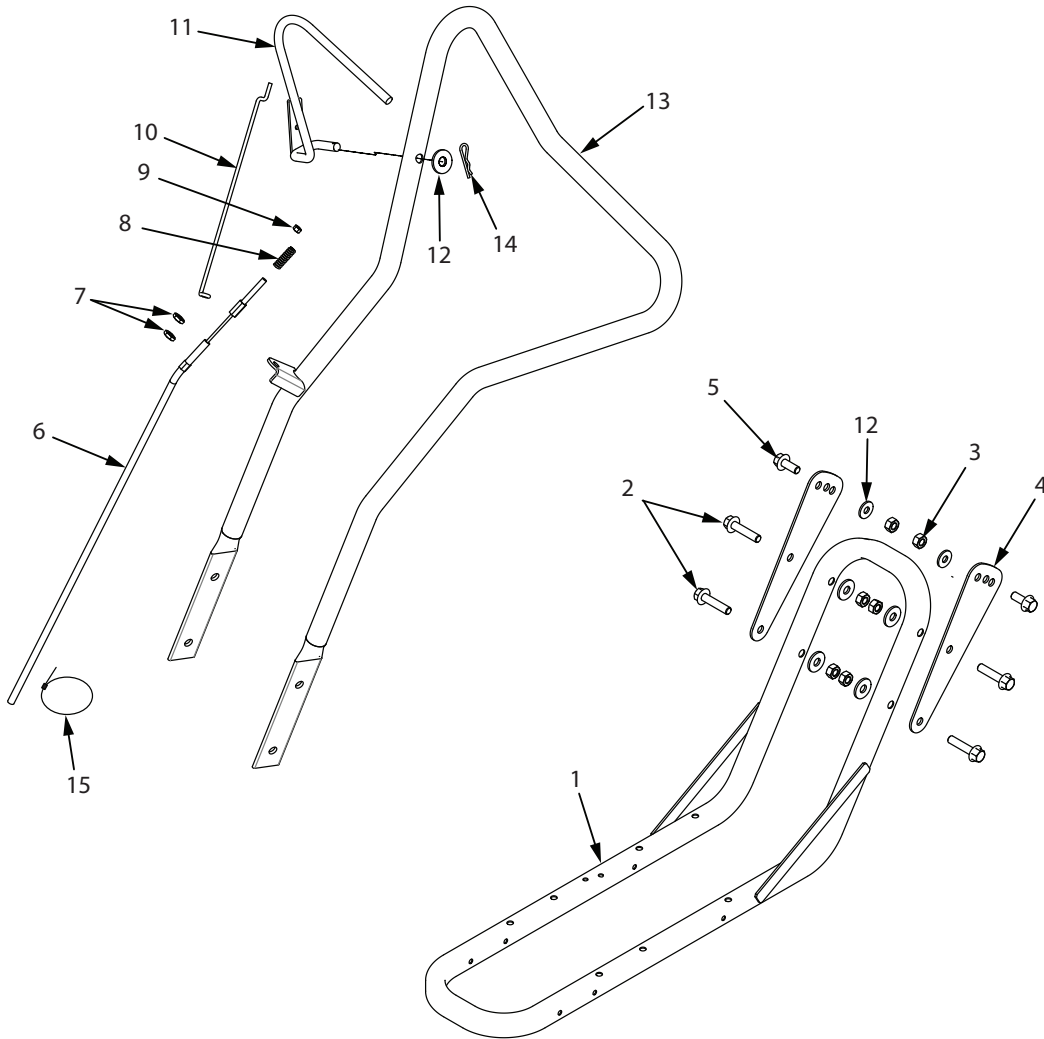
ILLUSTRATED PARTS BREAKDOWN - MOTOR MOUNT



ILLUSTRATED PARTS BREAKDOWN - MOTOR MOUNT

ITEM #	PART #	DESCRIPTION	QTY.	ITEM #	PART #	DESCRIPTION	QTY.
1	22563	WIREFORM BELT CATCH TILLERS	1	24	53617	ARM FORWARD REAR TINE	1
2	1407	SPRING FORWARD ARM	1	25	53637	BUSHING 8.3 MM X 12.4 MM 6.7 MM THK	1
3	1416	PIN CLEVIS 6.3 X 16.8 MM	1	26	W1265V0900	NUT M8 X 1.25 HNYLK GR8.8 ZN	4
4	1418	PIN COTTER 5/64 X 1/2 EXTENDED PRONG ZN	1	27	W1265V0903	NUT M10 HNYLK GR8.8 ZN	1
5	3245	WASHER M8 8.4MM X 24MM X 2.2MM ZN	3	28	W1265V0904	BOLT M8 X 1.25 X 20 HHCS ZN GR8.8	3
6	3364	KEY SQUARE 3/16 X 5/8	1	29	W1200114	WASHER M8 X 1.9 SPRLK BLK OX HIGH COLLAR	4
7	13364	PULLEY IDLER FORWARD 10MM ID	1	30	W1200115	BOLT M6 X 1 X 12 HHCS GR8.8 ZN F-T	1
8	13453	ASSEMBLY BELT GUARD WITH TAB	1				
9	13826	BOLT M8 X 1.25 X 25 HHCS GR8.8 ZN F-T	1				
10	19869	WELDMENT CABLE PULL PLATE NP	1				
11	19895	GUIDE BELT WIRE FORM REAR TINE NP	1				
12	19905	WASHER M10 X 20MM X 2MM FLAT ZN	1				
13	20108	PULLEY TRANNY SINGLE GROOVE 127MM 4L	1				
14	20143	WASHER M8 X 16 X 1.6 FLAT ZN	8				
15	20144	BOLT M8 X 1.25 X 60 HHCS GR 8.8 ZN F-T	4				
16	20145	BOLT M10 X 1.5 X 50 HHCS GR 8.8 ZN P-T	1				
17	20148	WASHER M6 X 18MM X 1.6MM FLAT ZN	1				
18	20197	KEY SQUARE 6MM X 20MM	1				
19	20789	PULLEY SINGLE GROOVE ENGINE 10.060 MM ID	1				
20	20902	ENGINE RH265-3108 KOHLER 196CC HORIZ	1				
21	20919	SET SCREW M6 X 1.0 X 8 SCPC BLK OXIDED	2				
22	22773	BELT V 4LXA 12MM X 660MM TOOTH	1				
23	53596B	YOKE ZINC PLATED CLEVIS	1				

ILLUSTRATED PARTS BREAKDOWN - Handlebar & Hood

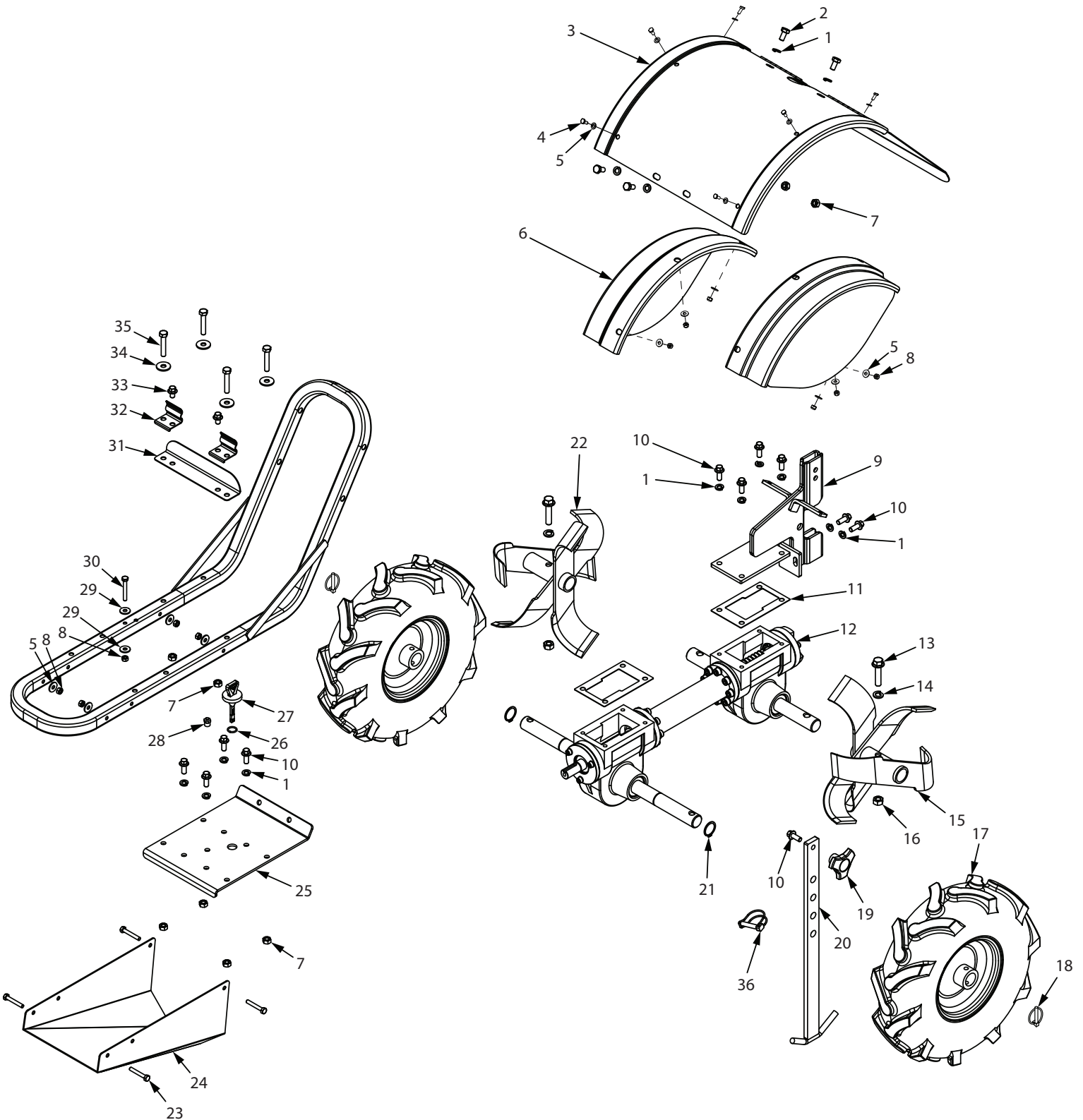


ILLUSTRATED PARTS BREAKDOWN - Handlebar & Hood

ITEM #	PART #	DESCRIPTION	QTY.
1	20887	WELDMENT ENGINE HANDLE MOUNT CL NP	1
2	11509	BOLT M10-1.5 X 45 MM HHFCS GR8.8 ZN	4
3	W1265V0903	NUT M10 X 1.5 HNYLK GR 8.8 ZN	6
4	17499	PLATE HANDLEBAR EXTENSION COUNTYLINE	2
5	19124	BOLT M10 X 1.5 X 25 HH-FCS	2
6	20167	CABLE REAR TINE M5-M8 1016MM SHEATH	1
7	4620	NUT M8 X 1.25 HJAM GR8.8 ZN	2

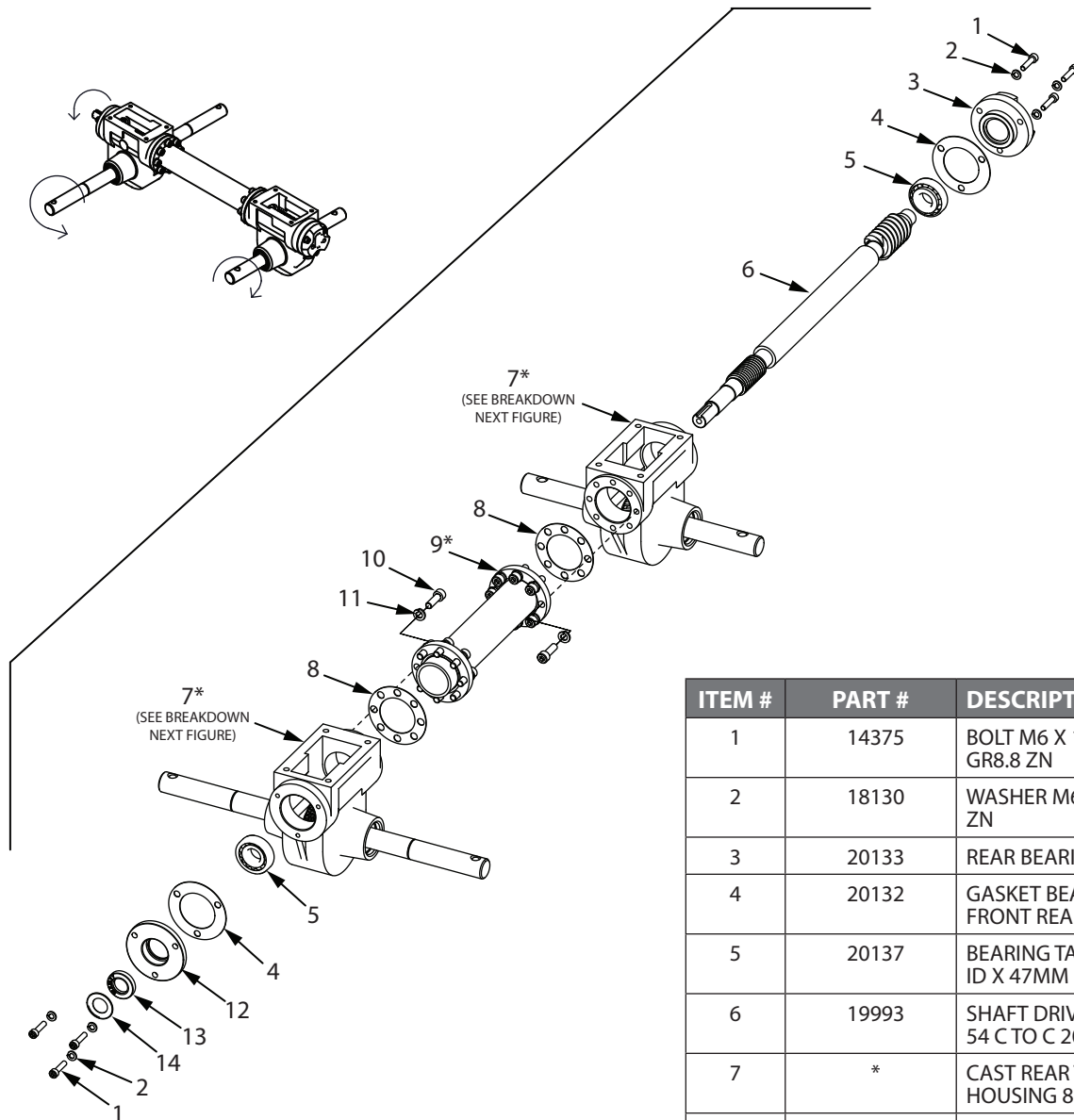
ITEM #	PART #	DESCRIPTION	QTY.
8	53620	SPRING COMPRESSION FORWARD ARM	1
9	11393	NUT M5-0.8 X 4.4 MM HNYLK ZN	1
10	53613	LINK 9 1/2 IN LONG	1
11	17495	LEVER DRIVE VINYL DIP WIREFORM COUNTYLINE	1
12	19905	WASHER M10 X 20MM X 2MM FLAT ZN	7
13	17497	HANDLEBAR LOOP STYLE VINYL DIP COUNTYLINE	1
14	20173	PIN COTTER HAIRPIN 2.5MM DIA. X 35MM	1
15	-	ZIP TIE	1

ILLUSTRATED PARTS BREAKDOWN - Transmission, Tines, & Hood



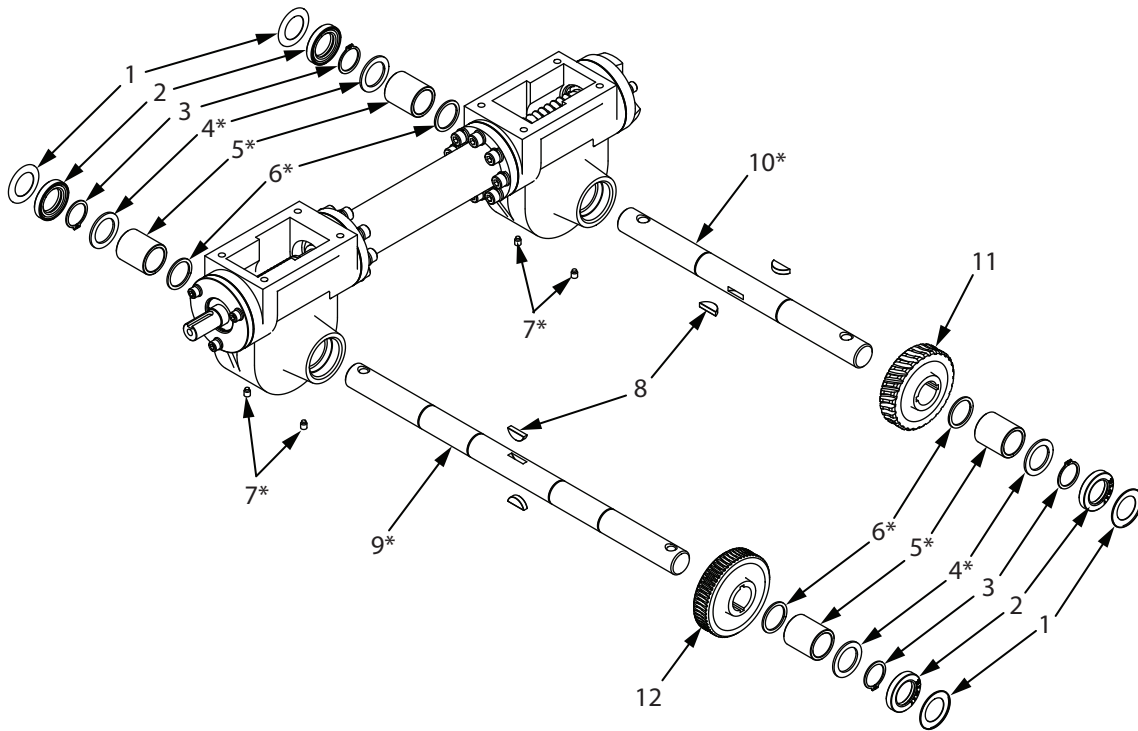
ILLUSTRATED PARTS BREAKDOWN - Transmission, Tines, & Hood

ITEM #	PART #	DESCRIPTION	QTY.
1	W1200114	WASHER M8 X 1.9 SPRLK BLK OX HIGH COLLAR	14
2	20150	BOLT M8 X 1.25 X 15 HHCS GR8.8 ZN	4
3	20892	WELDMENT HOOD WITH EXTENSION HOLES	1
4	W1200115	BOLT M6 X 1 X 12 HHCS GR8.8 ZN F-T	6
5	20141	WASHER M6 X 12 X 1.6 FLAT ZN	16
6	20891	WELDMENT SIDE SHIELD	2
7	W1265V0900	NUT M8 X 1.25 HNYLK GR8.8 ZN	8
8	W1265V0913	NUT M6 X 1.0 HNYLK GR8.8 ZN	11
9	20003	WELDMENT TAIL MOUNT REAR TINE	1
10	19945	BOLT M8 X 1.25 X 20 HHFCS GR8.8 ZN	11
11	19864	GASKET TILLER TRANSMISSION COVER	2
12	20111	TRANSMISSION CRT SHORT	1
13	11509	BOLT M10-1.5 X 45 MM HHFCS GR8.8 ZN	2
14	W1200119	WASHER M10 X 2 THK SPRLK ZN HIGH COLLAR	2
15	1900LCRT	TINE SET ASSEMBLY LS-CRT RS-SRT	1
16	W1265V0903	NUT M10 X 1.5 HNYLK GR 8.8 ZN	2
17	21018	TIRE, WHEEL ASSEMBLY (GREY 10 LUG 12 DEEP)	2
18	20109	LOCK PIN 7 X 44 MM	2
19	13601	KNOB M8 BLACK THREE STAR	1
20	53655	WELDMENT DRAG STAKE CRT TILLER	1
21	20138	SNAP RING 25MM EXTERNAL	2
22	1900RCRT	TINE SET ASSEMBLY RS-CRT LS-SRT	1
23	18103	BOLT (M6 X 1.0 X 40 HH GR 8.8 ZN)	4
24	20524	PAN, LOWER	1
25	23557	ASSEMBLY PLATE TRANNY MOUNT	1
26	20407	ORING (14MM ID X 1.8MM)	1
27	53413	DIPSTICK REAR TINE TRANSMISSION	1
28	20110	VENT, BREATHER (M12 X 1.5)	1
29	20148	WASHER (M6 X 18 X 1.6 FLAT ZN)	2
30	11946	BOLT (M6 X 1.0 X 45 HHCS GR8.8 ZN)	1
31	31306BLK	TAB, BELT GUARD SUPPORT SMALL REARTINE	1
32	53618	CLIP, BELT GUARD TILLER	2
33	4711	BOLT M8 X 1.25 X 12MM HHF YZN	2
34	20143	WASHER (M8 X 16 X 1.6 FLAT ZN)	4
35	18098	BOLT (M8 X 1.25 X 45 HH GR 8.8 ZN)	4
36	18039	LOCK PIN 8 X 40 MM	1

ILLUSTRATED PARTS BREAKDOWN - Transmission Detailed Breakdown


ITEM #	PART #	DESCRIPTION	QTY
1	14375	BOLT M6 X 1.0 X 25 SLHH GR8.8 ZN	6
2	18130	WASHER M6 X 1.5 SPRLCK ZN	6
3	20133	REAR BEARING CAP NP	1
4	20132	GASKET BEARING CAP FRONT REAR NP	2
5	20137	BEARING TAPERED 20MM ID X 47MM OD	2
6	19993	SHAFT DRIVE CRT SHORT 54 C TO C 20 PA NP	1
7	*	CAST REAR TINE TRANNY HOUSING 8 HOLE NP	2
8	14028	GASKET REAR TINES PIPE TO HOUSING 8 HOLE	2
9	*	WELDMENT 2 FLANGED PIPE REAR TINE NP	1
10	400022	BOLT M8 X 1.25 X 25 SHCS GR 8.8 ZN	16
11	W1200114	WASHER M8 X 1.9 SPRLCK BLK OX HIGH COLLAR	16
12	20134	FRONT END CAP NP	1
13	20136	SEAL 20MM SHAFT 35MM BORE	1
14	20131	COVER DRIVE SHAFT SEAL	1

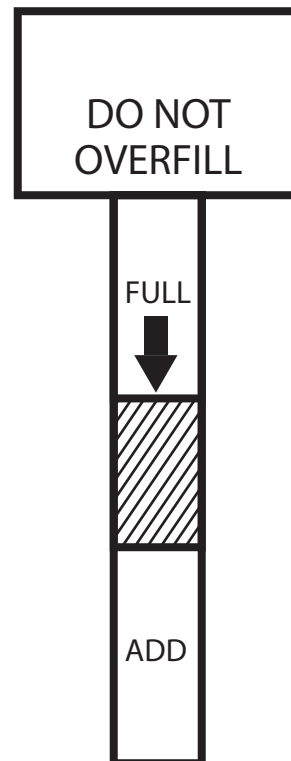
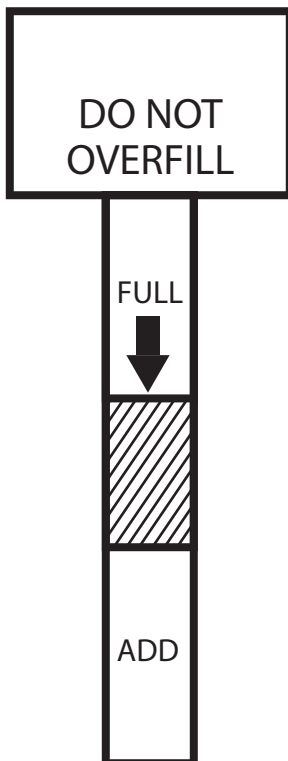
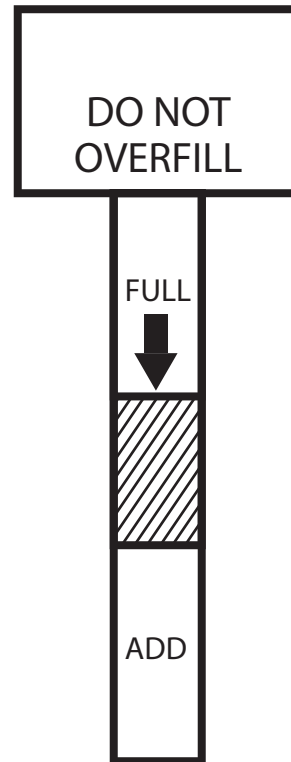
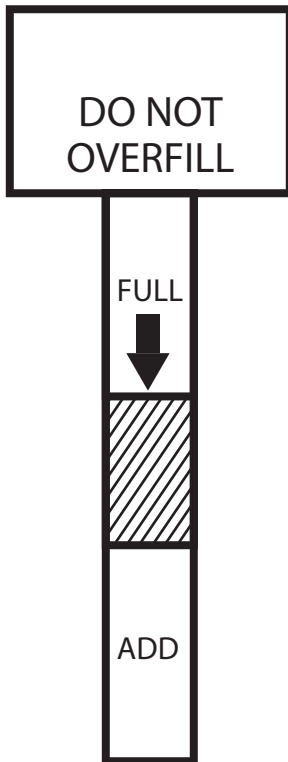
* ORDER TRANSMISSION ASSEMBLY 20111

ILLUSTRATED PARTS BREAKDOWN - Transmission Detailed Breakdown


ITEM #	PART #	DESCRIPTION	QTY
1	20130	COVER SHAFT SEAL NP	4
2	20135	SEAL 25MM SHAFT 40MM BORE	4
3	20138	SNAP RING 25MM EXTERNAL	4
4	*	SHIM 37 MM X 26 MM X 2 MM	4
5	*	BUSHING 25 X 32 X 36.5 MM NP	4
6	*	SHIM 26 X 32 X 1.5 MM NP	4
7	*	SETScrew M6 X 1.0 X 8.5 SDP GR8.8 BLK OX	4
8	1500P113	KEY WOODRUFF 5X9X22	4
9	*	SHAFT PIN STYLE WHEEL DOUBLE KEY NP	1
10	*	SHAFT PIN STYLE TINES DOUBLE KEY NP	1
11	20128	GEAR BRONZE 25MM ID 30T 20.0 PA TWO KEYS	1
12	19982	GEAR BRONZE 25 MM ID 61T 20 PA TWO KEYS	1

* ORDER TRANSMISSION ASSEMBLY 20111

CARDBOARD STENCILS FOR DIPSTICK CUT-OUT





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