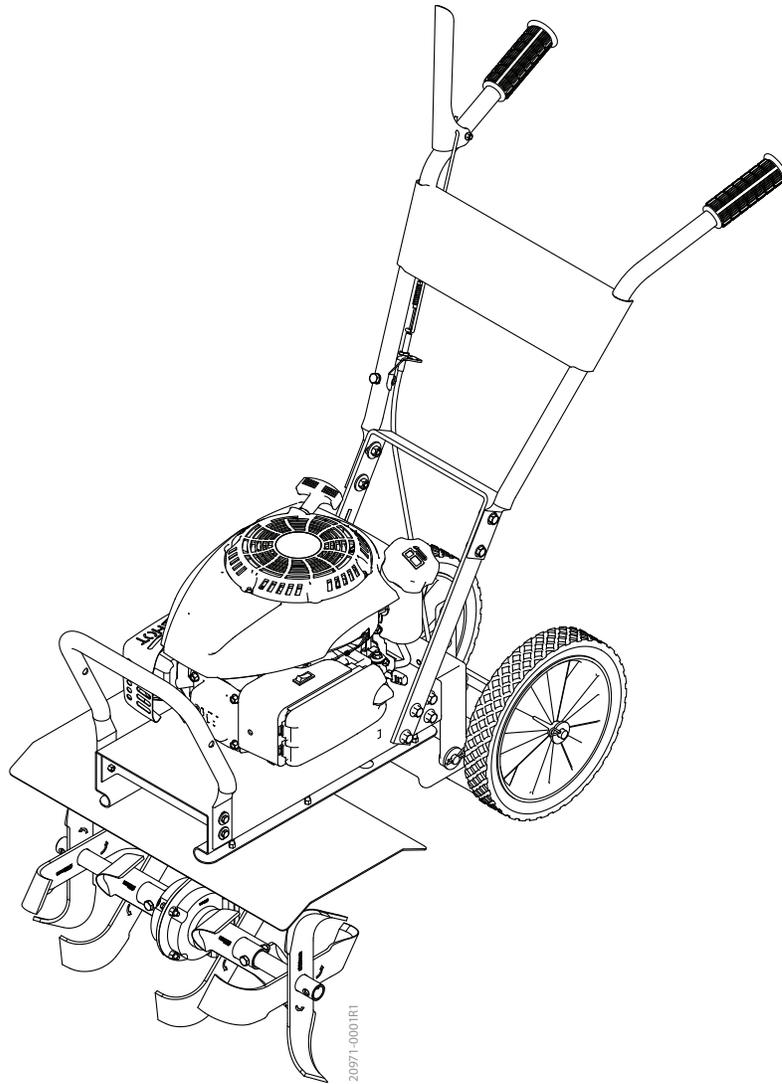




Operator's Manual  
Original Operating Instructions

# 20908 Badger Front Tine Tiller



**Model 20908**  
**KOHLER**  
**6.75 ft-lbs Gross Torque**

Email for more information  
[getearthquake.com](http://getearthquake.com)



P/N: 20980  
ECN: 10594  
REV1: 10/30/14  
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## INTRODUCTION

Thank you for purchasing the Badger 20908 Tiller from Earthquake®. 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.

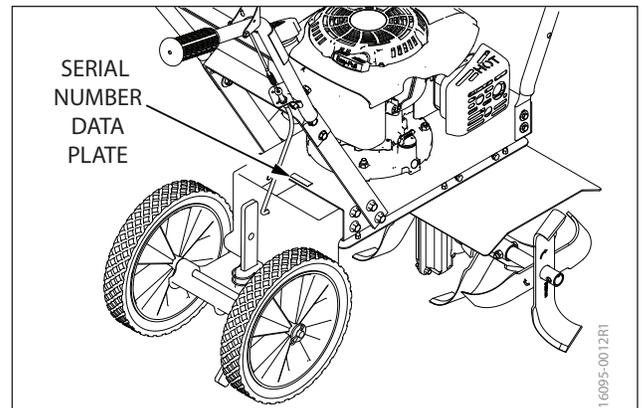
**Please read this entire manual before installation and use. Earthquake® reserves the right to change, alter or improve the product and this document at any time without prior notice.**

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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 online by visiting [www.getearthquake.com](http://www.getearthquake.com), or by mailing it to: Ardisam, 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 Earthquake® 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.**



### DANGER



## 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 machine 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. Flip the ON/OFF switch to the **OFF** position.
- 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 Earthquake® 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.
- Pulleys and belts should be kept free of oil or other moisture for efficient operation.
- Disengage all clutches and leave control lever in the neutral position before starting the engine.

 **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.**

 **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 PUT THE ON/OFF SWITCH TO THE OFF POSITION.**

## 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).
- Never remove the fuel cap or add fuel with the engine running. Stop engine and allow to cool before filling.
- Do not smoke.
- Never drain fuel from engine in an enclosed area.

- 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

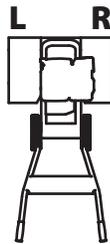
- Dress appropriately when operating the tiller. Always wear sturdy footwear. Never wear sandals, sneakers or open shoes, and never operate the tiller with bare feet. Do not wear loose clothing that might get caught in moving parts.
- Carefully inspect the area to be tilled and remove all foreign objects. 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.

- 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.



## WARNING

**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.**

**THIS IS A MOTORIZED ROTARY TILLER 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.**



## CAUTION

**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.**

## OPERATION

- Do not operate tiller under the influence of alcohol or drugs.
- Never operate tiller without guards, covers, and hoods in place.
- Keep hands, feet, and clothing away from rotating parts. Keep clear of tiller tines at all times.
- Tines rotate when tiller is engaged; tines rotate when the drive safety control lever is pulled down. Releasing the drive safety control lever to neutral stops the tines.
- 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.
- If the unit should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
- Do not run the engine indoors; exhaust fumes are deadly.
- Do not overload the machine capacity by attempting to till too deep at too fast of a rate.
- 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 forward. 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 control lever, stop the engine, wait for all moving parts to stop, and make certain guards and shields are in place.
- When leaving the operating position for any reason:
  - shut off the engine.
  - wait for all moving parts to stop.

## MAINTENANCE AND STORAGE

- 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 the fuel tank.
- Never store equipment with gasoline in the tank inside 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.

## 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 important 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 its meaning or how to comply with these instructions, reread the complete safety instruction text in this manual. For additional questions call Earthquake® Customer Service.

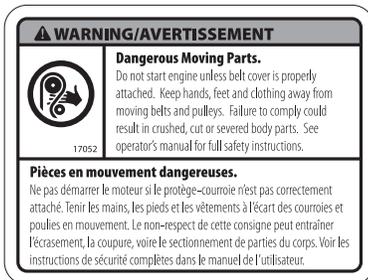
**Part No. 15698**  
**DECAL PICTORIAL LEVER**  
**CLUTCH ENGAGEMENT**



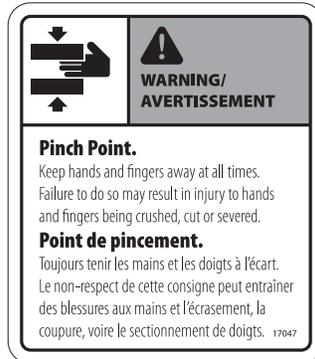
**Part No. 17918**  
**DECAL PLACE FREE HAND HERE**



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



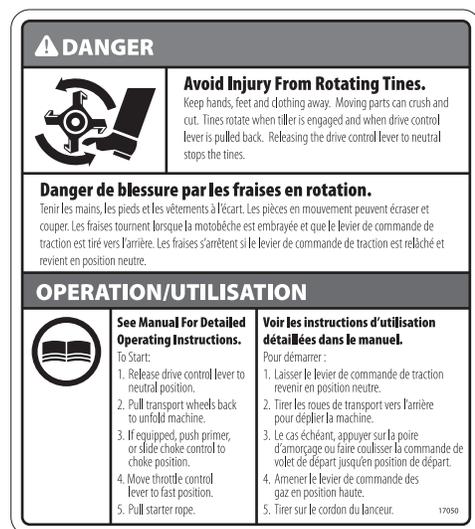
**Part No. 17047**  
**PINCH POINT WARNING**  
**Tail Mount Decal**



**Part No. 17921**  
**HANG TAG**  
**Correct Tine Installation**



**Part No. 17049**  
**MULTI INJURY WARNING**  
**Hood Decal**



**Part No. 17050**  
**TINES DANGER/OPERATION**  
**Hood Decal**

## HAZARD SYMBOLS AND MEANINGS



16095-001 GRT

- 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.

## FEATURES

The advantage of the **Earthquake® gear drive front tine rototiller**, over other front tine tillers, is the exclusive hinged tail mount, wheel and drag stake assembly. This feature gives the tiller its stability and versatility. For easy transport and quick turning in the garden, fold the wheels under the engine. During operation, the wheels unfold back and the drag stake folds down. The long length between the tines and the drag stake make this the most comfortable handling front tine tiller on the market.

SEE FIGURE 1

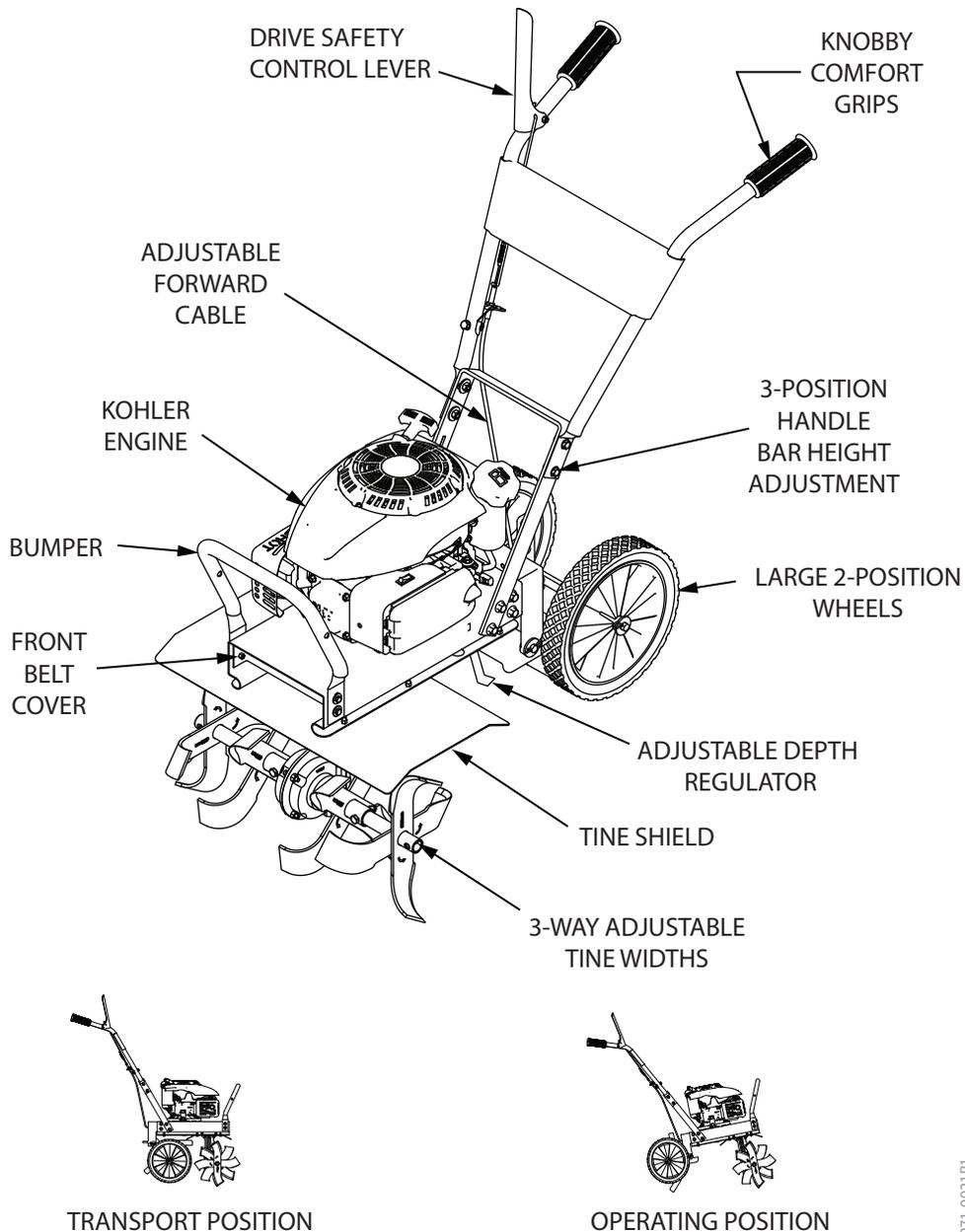


FIGURE 1

20971-0021R1

## WARNING

**DO NOT LIFT THE ROTOTILLER FROM THE CARTON. ROTOTILLER IS HEAVY AND CAN CAUSE INJURY. CUT BOX AWAY FROM ROTOTILLER AND REMOVE BOX.**

## UNPACKING AND ASSEMBLY

### Unpack Tiller And Assemble

#### Carton Contents

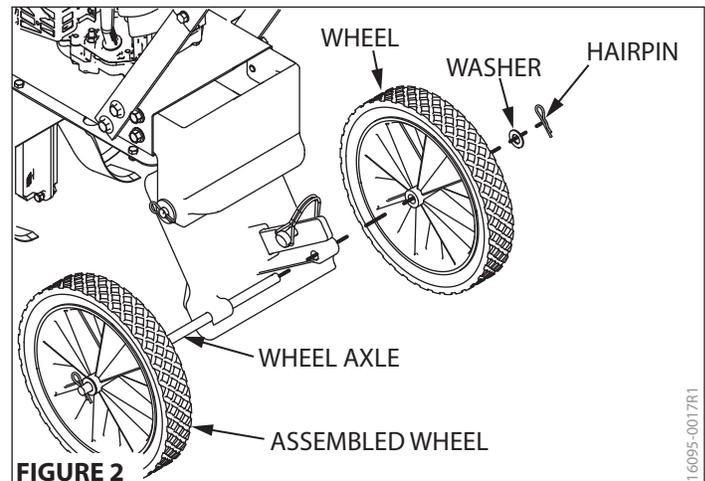
- Front Tine Rototiller
- Parts Bag (with manuals and assembly hardware)
- Parts Box (with tines, wheel axle and drag stake)
- 2 - Wheels

#### Tools Required for Assembly

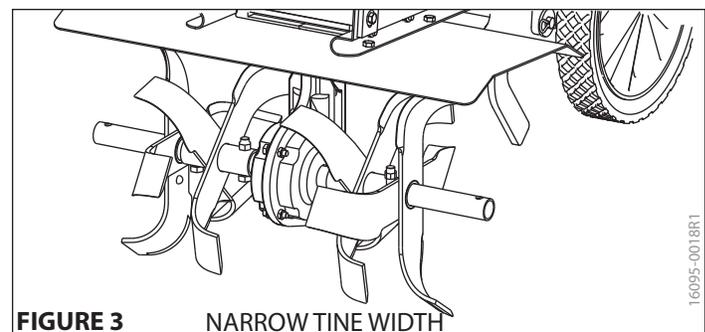
- 10 mm Wrench
- 12 mm Wrench
- (or, two adjustable crescent wrenches)

## ASSEMBLY

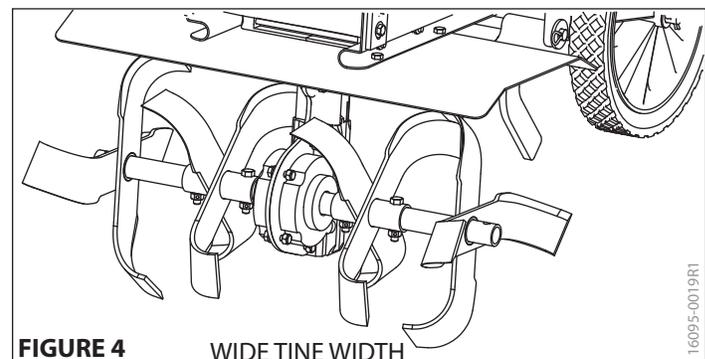
1. Open top of carton and remove handlebar assembly.
2. Find parts packet. Parts packet contains:
  - 4 - M8 X 1.25 X 20MM Bolts
  - 2 - Hairpin 2.5 Dia. X 35MM
  - 1 - Pin Lock 8 X 40MM Pipe Safety Pin
  - 4 - Washers M8 8.4 X 24 X 2.2MM
  - 4 - Bolts M8 X 1.25 X 45
  - 8 - Nut M8 Nylock
  - 2 - Washer 12MM
3. Cut open end of carton and remove machine:
  - a. Install wheels on each end of axle; install 12 mm washers onto axle against wheels; insert hairpins into holes in axle to keep washers and wheels in place. **SEE FIGURE 2**
  - b. Assemble tines to unit, inside tines first with the M8 x 1.25 x 45 bolts and M8 lock nuts. Sharp edge of tine will be away from operator at top, or face down at front of machine.
  - c. Outside tines have two positions- wide 21" and narrow 16". For narrow width, assemble with short side of tine holder pipe towards center of machine. **SEE FIGURE 3**
  - d. For wide width, move the left tine to the right side and right tine to the left side. Assemble with the long half of tine pipe towards machine. **SEE FIGURE 4**
4. Assemble the upper handle bar assembly onto the lower loop mount using M8 X 1.25 X 20MM bolts, M8 flat washers and M8 locknuts. The upper two bolts can be assembled through one of three hole positions depending on the users preferred handle bar height (low, medium, high). **SEE FIGURE 5**
5. Insert depth regulator/drag stake through opening in lower tail mount from the bottom up and secure with lock pin. **SEE FIGURE 6**
6. Add and check engine oil.



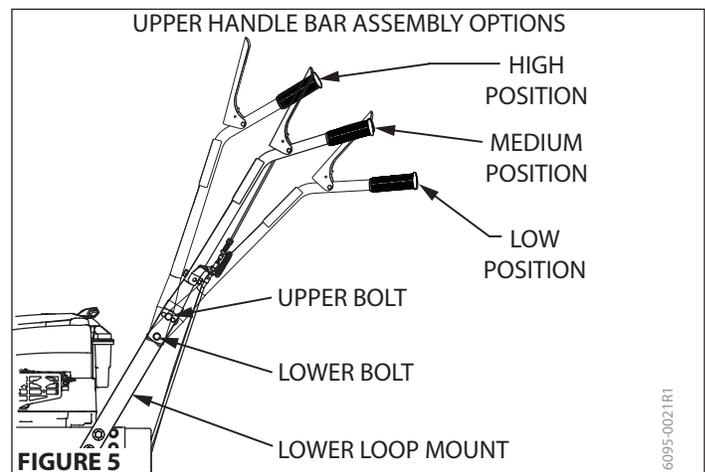
16095-0017R1



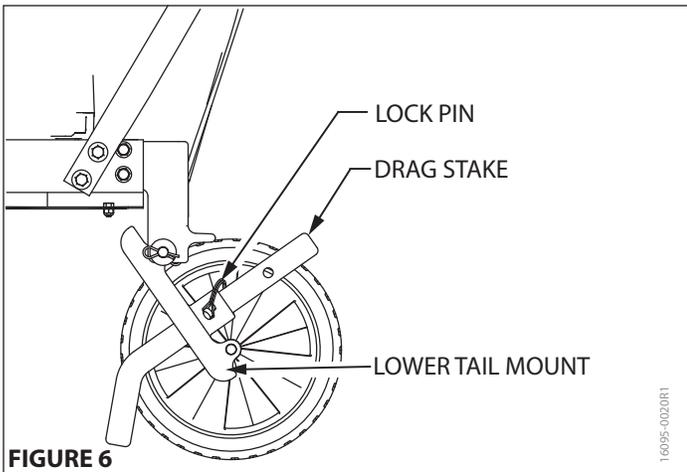
16095-0018R1



16095-0019R1



16095-0021R1



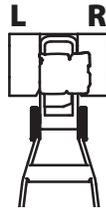
## ⚠ WARNING

**THIS INFORMATION IS PROVIDED HERE ONLY TO INTRODUCE THE CONTROLS. DO NOT START THE ENGINE AT THIS TIME. STARTING AND OPERATING INSTRUCTIONS ARE GIVEN IN THIS MANUAL. 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 TINES AT ANY TIME, RELEASE THE DRIVE SAFETY CONTROL LEVER.**
- **ENGINE SHOULD BE OFF BEFORE ADJUSTING ANY CONTROLS.**
- **DO NOT ADJUST TILLING DEPTH UNLESS DRIVE SAFETY CONTROL LEVER IS RELEASED TO THE NEUTRAL POSITION.**

## ⚠ WARNING

**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.**

## CONTROLS

### Drive SAFETY Control Lever

*Engages tines into forward; releasing stops tines and returns machine to neutral.*

Pulling down on the drive safety control lever engages the tines. Releasing the drive safety control lever disengages the tines to a neutral position.

### Belt Tension Adjustment

Proper belt tension is critical to good performance. After 30 minutes of operation, all cables may have to be adjusted due to initial stretch. Thereafter, check tension after every two hours of operation.

### **To Increase Belt Tension: SEE FIGURE 8 (Next Page.)**

1. Loosen upper jam nut. Turn nut up cable in 1/8" increments.
2. Tighten lower jam nut.
3. Check adjustment per **FIGURE 8** and instructions under "Check Belt Tension" section.

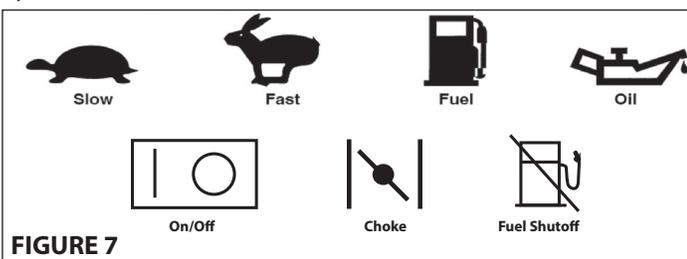
This procedure can be repeated until conduit adjustment bolts have no more adjustment left. If no more adjustment can be made, belt may have to be replaced. **SEE FIGURE 9**

## 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 checking the engine's oil dipstick if provided, or 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.

## CONTROL AND OPERATING SYMBOLS

**FIGURE 7**, shows common control and operating symbols that may be found on the unit or in this manual. Before you operate your unit, learn and understand the purpose for each symbol.



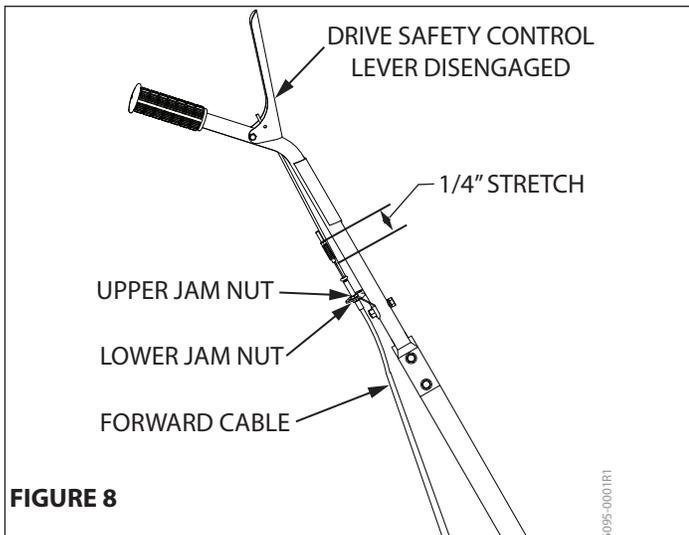


FIGURE 8

5095-0001R1



## WARNING

- DO NOT START YOUR TILLER UNTIL YOU HAVE READ AND UNDERSTAND THIS MANUAL AND THE SECTIONS IN THIS MANUAL COVERING SAFETY AND OPERATION. ONCE YOU HAVE READ THE MANUAL, FOLLOW THE APPROPRIATE STEPS TO START YOUR TILLER. ALWAYS PERFORM THE PRE-START CHECKLIST BEFORE STARTING THE ENGINE.
- 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 AND SAFETY SECTIONS BEFORE PROCEEDING.
- TEMPERATURE OF MUFFLER AND NEARBY AREAS MAY EXCEED 150° F. AVOID THESE AREAS.
- EXTREME CAUTION MUST BE TAKEN IN SELECTING TILLING DEPTH. IF YOU ATTEMPT TO TILL IN CERTAIN SOIL CONDITIONS WITH THE DRAG STAKE IN TOO HIGH OF A POSITION—LOSS OF CONTROL COULD RESULT.
- IF REMOVING MATERIAL FROM THE TINES BY HAND, STOP THE ENGINE AND REMOVE SPARK PLUG WIRE FIRST.
- FAILURE TO FOLLOW INSTRUCTIONS CAN CAUSE INJURY.



## CAUTION

- DO NOT USE CHOKE CONTROL TO STOP ENGINE. BACKFIRE OR ENGINE DAMAGE MAY OCCUR.
- TO STOP THE ENGINE AT ANY TIME, MOVE THROTTLE CONTROL TO THE OFF OR STOP POSITION, OR FLIP THE ON/OFF SWITCH TO OFF.
- TO STOP TINES AT ANY TIME, RELEASE DRIVE SAFETY CONTROL LEVER TO THE NEUTRAL POSITION.
- ALWAYS RELEASE DRIVE SAFETY CONTROL LEVER TO THE NEUTRAL POSITION BEFORE ADJUSTING THE DEPTH OF THE REGULATOR LEVER. ENGINE IS SHIPPED FROM FACTORY WITHOUT OIL. YOU MUST ADD ENGINE OIL BEFORE STARTING ENGINE.
- ALWAYS MAINTAIN CONTROL OF YOUR TILLER. ONLY OPERATE TILLER IN SOIL CONDITIONS THAT ARE CONDUCIVE 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 LEVER IMMEDIATELY SO THAT THE TINES STOP TURNING.
- ENGINE AND SURROUNDING PARTS BECOME EXTREMELY HOT DURING NORMAL USE AND WILL CAUSE SERIOUS BURN INJURIES IF TOUCHED BEFORE THE ENGINE HAS COOLED.
- ALLOW ENGINE TO COOL COMPLETELY BEFORE TOUCHING THESE HOT SURFACES.
- ALWAYS KEEP HANDS AND FEET CLEAR OF ROTATING MACHINE PARTS.
- FAILURE TO FOLLOW INSTRUCTIONS CAN CAUSE DAMAGE TO EQUIPMENT.

## DEPTH REGULATOR LEVER SEE FIGURE 6

*Tilling depth is controlled by the height of the depth regulator lever. The deeper the depth regulator is set, the deeper the unit will till.*

### To Adjust Tilling Depth:

1. Remove lock pin.
2. Raise or lower the depth regulator. The lower the depth regulator, the deeper the tilling depth.
3. Align hole in depth regulator lever with hole in depth regulator bracket and replace lock pin.

**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.**

## OPERATION

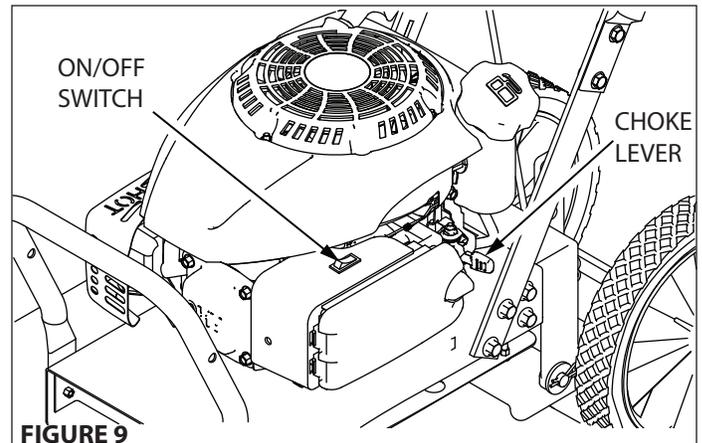
### Pre-Start Inspection

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 one 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.
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.
12. Turn fuel shutoff valve to the **ON** position if engine is equipped with one. It's located between tank and carburetor.

### START-UP

The ON/OFF switch and choke lever required to cold start the rototiller are located on the engine and are marked with ON/OFF and choke control symbols (See Operation Control Symbols in the Controls and Operating Symbols section of this manual). **SEE FIGURE 9**

A description of engine operation and all related precautions and procedures can be found in the engine manufacturer's manual that accompanies each tiller.



**FIGURE 9**

### Cold Starts

1. Push ON/OFF switch to the **ON** position.
2. Move choke lever to full choke position.
3. Pull starting rope out slowly one time and allow to return normally.
4. Pull starting rope out rapidly and allow rope to return normally.
5. When engine starts, gradually move choke lever to no choke position.

**NOTE: The Kohler engine installed on this tiller is fixed speed and does not have a throttle control.**

### Restarting A Warm Engine

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

1. Push ON/OFF switch to the **ON** position.
2. Pull starting rope out rapidly until engine starts. Allow rope to return normally. Repeat until engine starts.

### Shutting Down

To stop the engine at any time, put the ON/OFF switch to the **OFF** or **STOP** position. To stop wheels and tines at any time, release the drive safety control to the **NEUTRAL** position.

### Tilling

1. Adjust the depth regulator lever to achieve 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. Place the tiller in motion by pushing down on the drive safety control lever; this will engage the tines.

## MAINTENANCE

### Maintenance Schedule

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

Maintenance Operation	Page	Before Each Use	50 hours or Every Season
Check belt tension	15	X	
Change forward belt	15		X
Engine maintenance	15-16, EM	X	X
Check oil level/change oil	16, EM	X	1
Clean tine axle shaft	16	X	
Lubrication	16		X

**EM** = See engine manual

**1** Change oil after the first three to five hours of use, then after every 50 hours or every season. Change oil every 25 hours when operating under heavy load or in high temperatures.

### SERVICING THE ROTOTILLER

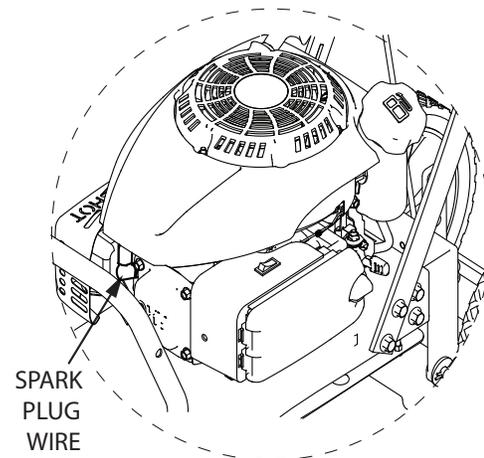
The following information will help you make the necessary checks and perform the procedures required to follow the normal care recommendations made for your rototiller unit.

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

**Important:** Use only approved Earthquake spare parts.

### WARNING

#### 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. ACCIDENTAL ENGINE START CAN CAUSE SERIOUS INJURY.**



## IMPORTANT

**CHECK FORWARD BELT TENSION REGULARLY. TOO MUCH OR TOO LITTLE TENSION WILL CAUSE PREMATURE BELT FAILURE AND DAMAGE TO EQUIPMENT.**

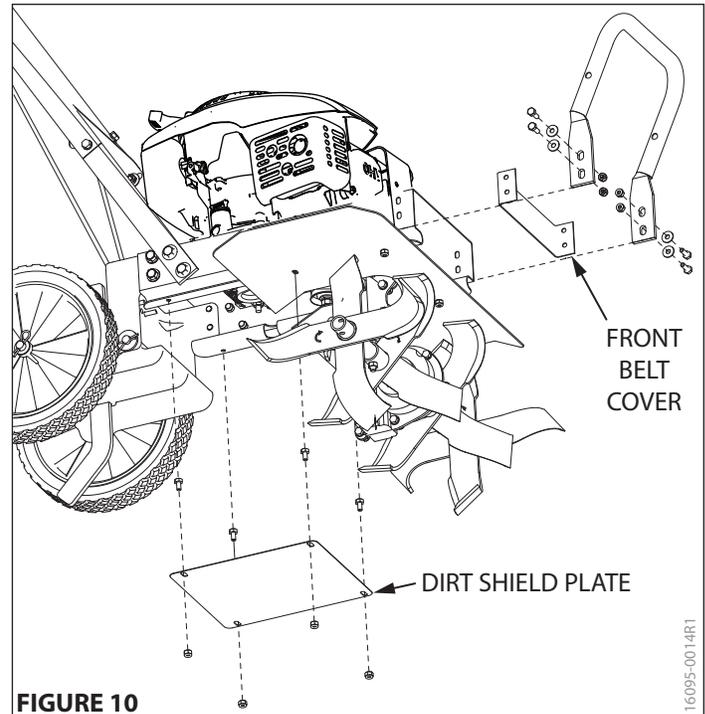
### Check Belt Tension

Belt tension may decrease over time. It must be adjusted within the first half hour of operation and checked after every two hours of operation. Proper adjustment will assure long belt life. Too much or too little belt tension will cause premature belt failure. To check and adjust the forward belt tension, do as follows:

1. Turn off engine. Engine must be cool.
2. Remove spark plug wire from spark plug and secure.
3. With drive safety control lever in the neutral position, measure length of spring when in its relaxed state.
4. Pull down on drive safety control lever and measure length of spring when compressed. Ideal length would be 1/4" shorter. **SEE FIGURE 6** and instruction in the Controls Section of this manual.

### Change Forward Belt

1. Turn off engine. Engine must be cool.
2. Remove spark plug wire from spark plug and secure.
3. Remove front belt cover and dirt shield plate from tiller frame. **SEE FIGURE 10**
  - a. Remove the belt from the engine pulley as follows:
    - Gently pull the engine recoil rope to rotate the pulley.
    - With the pulley turning, force the belt out of the V-groove.
    - Slide the belt free of the engine pulley.
    - Pull the belt down and out of the way.
    - Push the belt forward and out front of machine.
  - b. Install new belt as follows:
    - Place belt in transmission pulley groove.
    - Gently pull the engine recoil rope to rotate the engine pulley while forcing the belt into the V-groove.
4. Reinstall front belt cover and dirt shield plate onto tiller frame.
5. Check and readjust belt tension if necessary.
6. Attach spark plug wire.



**FIGURE 10**

### **BELT REPLACEMENT PART #:**

14978 (forward)



## CAUTION

- **ENGINE IS SHIPPED FROM FACTORY WITHOUT OIL. YOU MUST ADD ENGINE OIL BEFORE STARTING ENGINE.**
- **ENGINE CAN OVERHEAT AND BECOME DAMAGED IF DEBRIS BLOCKS THE COOLING SYSTEM OR ROTATING SCREEN.**
- **NEVER RUN ENGINE WITHOUT COMPLETE AIR CLEANER INSTALLED ON ENGINE.**
- **FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE DAMAGE TO THE ENGINE AND VOID YOUR WARRANTY.**

### 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. Check oil level before each use and after every eight hours of operation.
2. Change oil after first three to five hours of operation.
3. Change oil while engine is warm. Refill with new oil of recommended grade.

4. Check spark plug yearly or every 100 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.

### 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 checking the engine's oil dipstick.
2. Always check oil level before starting engine. Refer to engine manual for capacity and type of oil to use.

### Clean Tine Axle Shaft

1. Turn off engine. Engine must be cool.
2. Remove spark plug wire and secure from spark plug.
3. 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.
4. Replace spark plug wire.

### Lubrication

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

## 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:
  - Coat the axles lightly with axle grease.
2. Drain fuel system completely following engine manufacturer's instructions or add fuel stabilizer to prevent fuel from gumming up during extended storage period. Run engine for at least 5 minutes to distribute fuel stabilizer mixture throughout entire fuel system.
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. Remove spark plug; pour one ounce of SAE 30 oil into spark plug hole.
6. Plug hole and pull starter cord slowly to distribute oil evenly in cylinder head area.
7. Reinstall spark plug.
8. 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 and 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.
9. 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.



### 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.**



### 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 TO YOU OR BYSTANDERS.**

## TROUBLESHOOTING AND REPAIR

### 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.

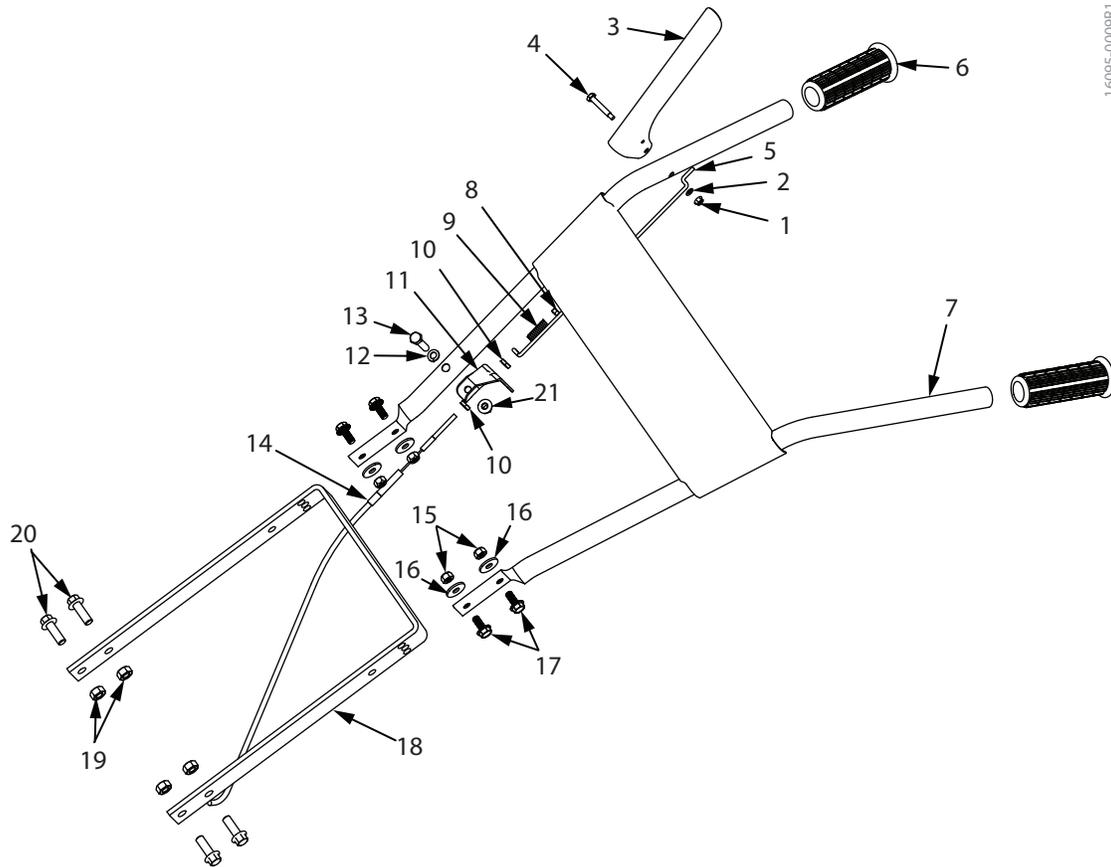
PROBLEM	REMEDY/ACTION
Engine will not start	<ul style="list-style-type: none"> <li>• Add gas to gas tank.</li> <li>• Connect spark plug wire to spark plug.</li> <li>• ON/OFF switch must be turned <b>ON</b> and engine choked for a cold start.</li> </ul>
Engine runs rough, floods during operation	<ul style="list-style-type: none"> <li>• Clean or replace air cleaner.</li> </ul>
Engine is hard to start	<ul style="list-style-type: none"> <li>• Drain old fuel and replace with fresh. Use gas stabilizer at end of season.</li> <li>• Make sure spark plug wire is securely attached to spark plug.</li> <li>• Drive safety control lever must be released to neutral to start the engine.</li> </ul>
Engine misses or lacks power	<ul style="list-style-type: none"> <li>• Raise the tines for shallow tilling by raising the depth regulator lever.</li> <li>• Clean or replace air cleaner.</li> <li>• Improper carburetor adjustment, take to authorized engine service center.</li> <li>• Replace spark plug and adjust gap.</li> <li>• Drain and refill gas tank and carburetor.</li> </ul>
Tiller moves forward during starting	<ul style="list-style-type: none"> <li>• Drive safety control lever must be released to neutral to start the engine.</li> </ul>
Tiller is difficult to control when tilling (machine jumps or lurches forward)	<ul style="list-style-type: none"> <li>• Lower the depth regulator lever for greater resistance and control of the machine.</li> </ul>
Belts squeal in neutral	<ul style="list-style-type: none"> <li>• Adjust forward belt guide: <ul style="list-style-type: none"> <li>- turn engine off and allow muffler to cool</li> <li>- disconnect spark plug wire and secure from spark plug</li> <li>- pull down on drive safety control lever</li> <li>- manually bend forward belt guide so there is 1/16 inch or less clearance between belt guide and belt</li> <li>- replace spark plug wire</li> </ul> </li> </ul>
Belts squeal in forward operation	<ul style="list-style-type: none"> <li>• Turn engine off and allow muffler to cool.</li> <li>• Disconnect spark plug wire and secure from spark plug.</li> <li>• Release drive safety control lever to neutral.</li> <li>• Adjust engage cable.</li> <li>• Replace spark plug wire.</li> </ul>
Excessive heat build up in transmission/tine area during tilling	<ul style="list-style-type: none"> <li>• Remove vegetation.</li> <li>• Check transmission fluid and fill if needed.</li> </ul>

**WARRANTY TERMS AND CONDITIONS****PRODUCT WARRANTY: 5-YEAR LIMITED WARRANTY – 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 five 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 five-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**P/N: 21192  
REV1: 100114  
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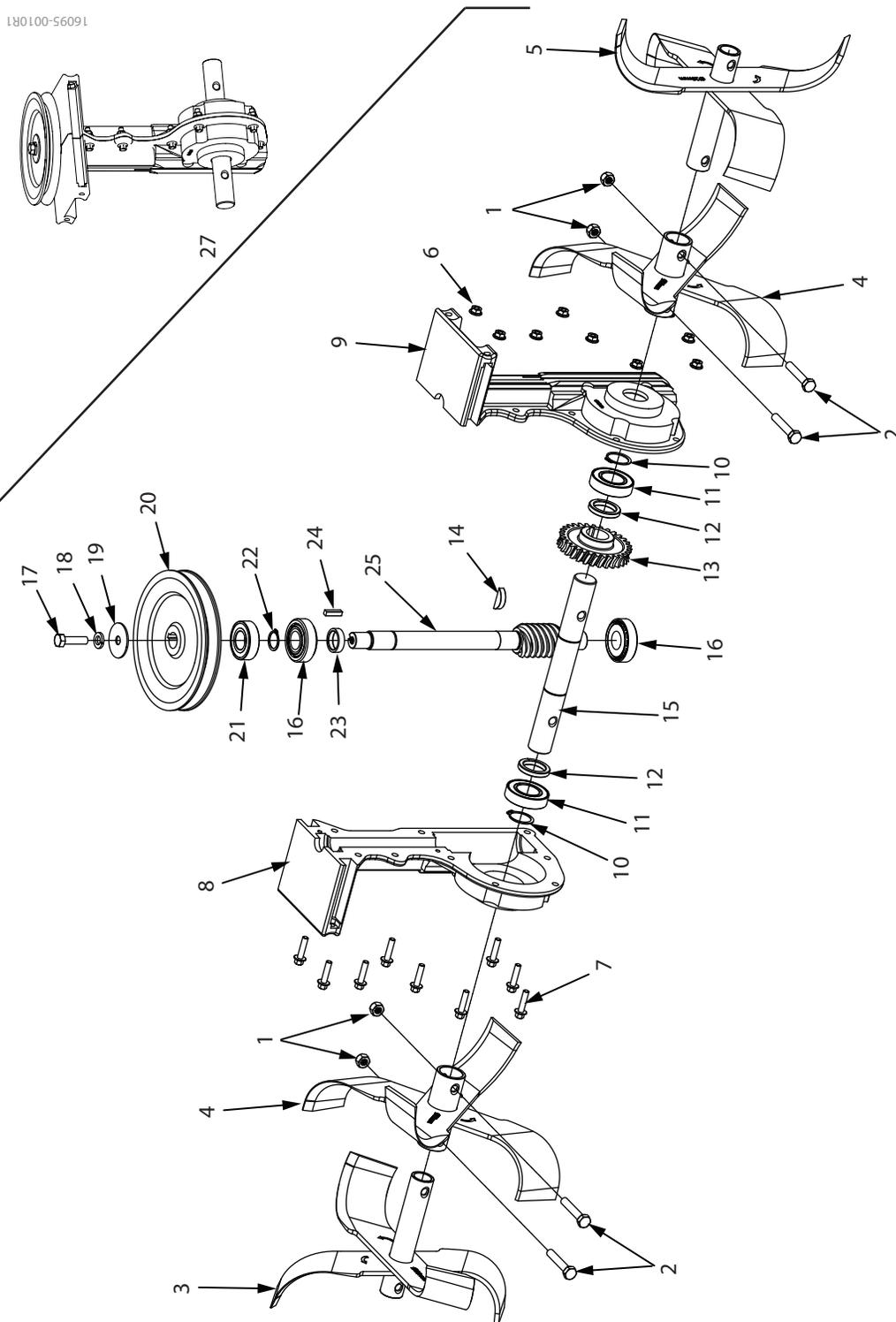
## ILLUSTRATED PARTS BREAKDOWN HANDLEBAR ASSEMBLY



ITEM NO.	PART #	DESCRIPTION	QTY.
1	3248	NUT (M5 X 0.8 HFNYLK GR8.8 ZN)	1
2	3308	WASHER (FLAT M5 X 15 X 1.75 ZN)	1
3	53650	LEVER, CONTROL	1
4	13159	BOLT (M5 X .75 X 7 HH SHLDR 6 X 32MM)	1
5	20841	LINK (317 MM LONG 20 MM TIP)	1
6	13833	GRIP, HANDLE KNOB, TEXTURE (1 IN ID)	2
7	13811	WELDMENT HANDLEBAR FT PRO SERIES	1
8	IN58	NUT (5MM X 0.8 X 5 HNYLK GR8 ZN F-T)	1
9	53620	SPRING, COMPRESSION (FORWARD ARM)	1
10	4620	NUT (M8 X 1.25 HJAM GR8.8 ZN)	2

ITEM NO.	PART #	DESCRIPTION	QTY.
11	53629	BRACKET, CABLE MOUNT	1
12	W1200114	WASHER (M8 X 1.9 SPRLK BLK OX HIGH COLLAR)	1
13	12770	BOLT (M8 X 1.25 X 40MM HH ZN)	1
14	20827	CABLE (M5 END M8 MOUNT 905.5 LONG)	1
15	400023	NUT (M8 NYLOCK)	4
16	3245	WASHER (M8 8.4MM X 24MM X 2.2MM ZN)	4
17	13906	BOLT (M8 X 1.25 X 20 SFH GR8.8 ZN)	4
18	3358	MOUNT, HANDLEBAR, FRONT TINE	1
19	W1265V0903	NUT (M10 X 1.5 HNYLK GR 8.8 ZN)	4
20	20819	BOLT (M10 X 1.5 X 30 HHSF GR8.8 ZN)	4
21	13508	NUT (M8 -1.25 BAR)	1

## ILLUSTRATED PARTS BREAKDOWN TINES AND TRANSMISSION ASSEMBLY

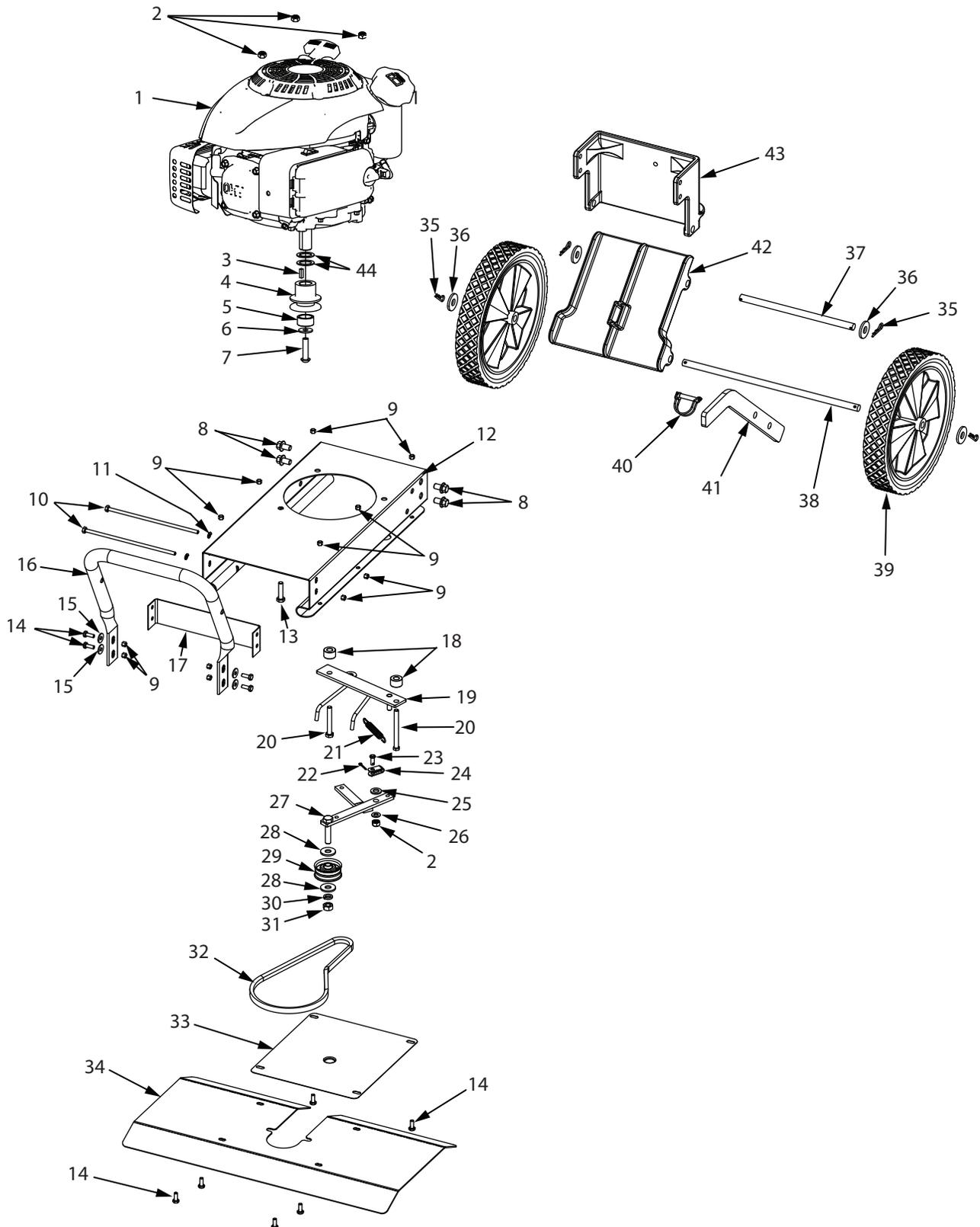


## ILLUSTRATED PARTS BREAKDOWN TINES AND TRANSMISSION ASSEMBLY

ITEM NO.	PART #	DESCRIPTION	QTY.
1	400023	NUT (M8 NYLOCK)	4
2	3316	BOLT (M8 X 1.25 X 45 HHCS GR 8.8 ZN)	4
3	13905	TINE SET, OUTSIDE RIGHT, (FT 25MM SHAFT)	1
4	13903	TINE SET, WELDMENT, INSIDE (25MM SHAFT)	2
5	13904	TINE SET, OUTSIDE LEFT (FT 25MM SHAFT)	1
6	13599	NUT (M6 X 1.0 HHFNYLK)	9
7	13600	BOLT (M6 X 1.0 X 25 HHF)	9
8	--	(ORDER PART NUMBER 13586 TRANSMISSION)	1
9	--	(ORDER PART NUMBER 13586 TRANSMISSION)	1
10	1810	SNAP RING (1 INCH PHOSPHATE EXTERNAL)	2
11	13902	BEARING, BALL (25MM ID 6005RS)	2
12	14421	SPACER (25MM X 35MM X 5.43MM THICK)	2
13	13615	GEAR, BRONZE (25MM ID 6MM KEY 30 TEETH FT)	1
14	17990	KEY (6MMX10MMX25MM HALFMOON)	1
15	13612	TINE SHAFT 25MM OD 6MM KEY FT	1
16	3220	BEARING (20X47X15.2 TAPERED ROLLING 30204)	2
17	17991	BOLT (M8 X 1.25 X 30 HHCS ZN)	1
18	1916965	WASHER, LOCK SPRING (0.375")	1
19	803	WASHER (5/16 ID X 1-1/2" OD FLAT 16 GA)	1
20	13619	PULLEY, TRANSMISSION, SINGLE GROVE	1
21	3309	BEARING (20MM ID X 42MM OD 6004 2RS)	1
22	8924	RING, RETAINING (EXTERNAL 3/4 INCH)	1
23	13590	SPACER, ROUND STEEL (26 X 20.22 X 6.8MM)	1
24	17989	KEY (5MM X 5MM X 20MM)	1
25	13610	DRIVESHAFT WORM (20MM OD VECTOR)	1
*26	20828	BOX TINES DRAG STAKE METRIC FRONT TINE	1
27	13586	TRANSMISSION 7.5:1 WORM BRASS 25MM SHAFT	1
<p>* ITEM NOT ILLUSTRATED; INCLUDES: (2) 13903 INSIDE TINE SET, (1) 13904 LEFT TINE SET, (1) 13905 RIGHT TINE SET, (1) 3157 DRAG STAKE, AND (1) 3331 WHEEL SHAFT IN A BOX.</p>			

## ILLUSTRATED PARTS BREAKDOWN - MOTOR MOUNT AND HOOD PARTS

16095-0011R1



### ILLUSTRATED PARTS BREAKDOWN - MOTOR MOUNT AND HOOD PARTS

ITEM NO.	PART #	DESCRIPTION	QTY.
1	20889	ENGINE & PULLEY GROUP METRIC KOHLER FT	1
2	400023	NUT M8 NYLOCK	4
3	20894	SPACER, ENGINE 23x30x14.317MM	1
4	3364	KEY, SQUARE 3/16" X 5/8"	1
5	20907	PULLEY SINGLE GROOVE ENGINE 4L OFFSET	1
6	3245	WASHER M8 8.4MM X 24MM X 2.2MM ZN	1
7	21035	BOLT 3/8-24 X 1.5 W/PATCH SHBHCS	1
8	20820	BOLT M10 X 1.5 X 16 HHSF GR8.8 ZN	4
9	4650	NUT M6 X 1.0 HNYLK GR8.8 YL ZN	12
10	20824	BOLT M6 X 1.0 X 190 HHCS GR8.8 ZN	2
11	18130	WASHER M6 X 1.5 SPRLCK ZN	2
12	3130A	FRAME ENGINE MOUNT FT FORMED	1
13	20816	BOLT M8 X 1.25 X 35 HHCS GR8.8 ZN	1
14	17986	BOLT M6 X 1.0 X 16 HHCS GR8 ZN	10
15	20148	WASHER M6 X 18 X 1.6 FLAT ZN	4
16	3335	ARM LOWER HANDLEBAR FT BUMPER	1
17	3371	COVER 4 HOLE FT	1
18	744	SPACER FORWARD ARM 10.5 X 22 X 14.5 MM	2
19	20834	BELT GUIDE AND MOUNT METRIC 3365 SERIES	1
20	20144	BOLT M8 X 1.25 X 60 HHCS GR 8.8 ZN F-T	2

ITEM NO.	PART #	DESCRIPTION	QTY.
21	1407	SPRING, FORWARD ARM	1
22	53398	PIN, COTTER 2MM X 16MM	1
23	1416	PIN CLEVIS 6.3 X 16.8 MM	1
24	53596B	YOKE ZINC PLATED CLEVIS	1
25	2431	WASHER M10 X 20 X 2 THK GR 8.8 ZN	1
26	400024	WASHER M8 8.4 X 16 X 1.6 THK ZN	1
27	20835	ARM FORWARD METRIC 3365 SERIES	1
28	W1200126	WASHER M10 X 28 X 2.8 ZN	2
29	1413	PULLEY, REVERSE IDLER	1
30	13559	WASHER M10 SPRING LOCK	1
31	W1265V0903	NUT M10 X 1.5 HNYLK GR 8.8 ZN	1
32	14978	BELT V 4L 675 MM	1
33	3275	SHIELD FRONT TINE FRAME	1
34	3128	TINE SHIELD W/O BRACKETS FORMED FT	1
35	20173	PIN COTTER HAIRPIN 2.5MM DIA. X 35MM	4
36	50175	WASHER 12MM TILLER	4
37	3332	SHAFT TAIL PIVOT	1
38	3331	SHAFT, WHEEL 1/2"	1
39	1714252	WHEEL & TIRE ASSY 11.0 X 1.75	2
40	18039	PIN LOCK 8MM X 40MM PIPE SAFETY PIN	1
41	3157	DRAG STAKE FRONT TINE	1
42	3330	TAIL MOUNT, LOWER FOR FT	1
43	20799	TAIL MOUNT UPPER FRONT TINE METRIC	1
44	21246	SPACER 22.5 X 31.9 X 1.5 MM	2



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All weights, specifications and features are approximate and are subject to change without notice. Due to continuous product improvements, product images may not be exact. Items used for props not included. Some assembly may be required.

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For additional information email [getearthquake.com](mailto:info@ardisam.com) or call 800-345-6007 M-F 8-5