

DR® ROTO-HOG™ Premier Power Tiller

SAFETY & OPERATING INSTRUCTIONS



Serial No. _____

Order No. _____

DR® Power Equipment
Toll-free phone: 1-800-DR-OWNER (376-9637)
Fax: 1-802-877-1213
Web site: www.DRpower.com

WARNING

Read and understand this manual and all instructions before operating this DR ROTO-HOG Premier Power Tiller.

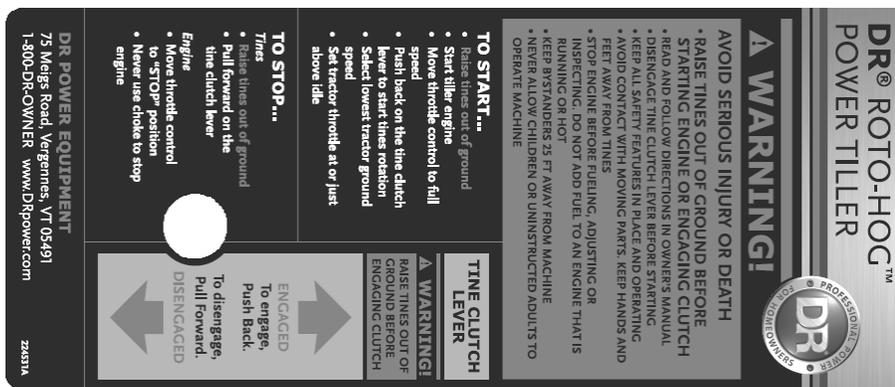
Chapter 1: General Safety Rules

WARNING

Read this safety & operating Instructions manual before you use the DR ROTO-HOG Premier Power Tiller. Become familiar with the operation and service recommendations to ensure the best performance from your machine. If you have any questions or need assistance, please contact us at www.DRpower.com or call toll-free 1-800-DR-OWNER (376-9637) and one of our Technical Support Representatives will be happy to help you.

Labels

Your DR ROTO-HOG Premier Power Tiller carries prominent labels as reminders for its proper and safe use. Shown below are copies of the Safety and Information Labels that appear on the equipment. Take a moment to study them and make a note of their location on your DR ROTO-HOG Premier Power Tiller as you assemble and before you operate the machine. Replace damaged or missing safety and information labels immediately.



#224531A



#224511



#224521

Protecting Yourself and Those Around You

WARNING

The DR ROTO-HOG Premier Power Tiller is a high-powered machine with fast moving parts operating at high speeds. You must operate this machine safely. Unsafe operation can create hazards for you, as well as anyone else in the work area. Use proper clothing and safety gear when operating this machine to prevent or minimize the risk of severe injury. Always take the following precautions when operating the DR ROTO-HOG Premier Power Tiller:

- Always wear protective goggles or safety glasses with side shields to protect your eyes from possible objects thrown from the machine.
- We recommend wearing safety shoes when using this machine. Wear shoes with non-slip treads to improve footing on slippery surfaces. Do not use the machine wearing open sandals or while barefoot.
- Do not wear loose clothing or jewelry, which can catch on the machine's moving parts.
- We recommend wearing long pants and gloves while using this machine. Be sure the gloves fit properly and do not have loose cuffs or drawstrings.
- We recommend the use of ear protectors or ear plugs rated for at least 20 dba to protect your hearing.
- Allow only responsible individuals who are familiar with these general safety rules and operating instructions to use your DR ROTO-HOG Premier Power Tiller. Never allow people who are unfamiliar with these rules and instructions to use your machine.

WARNING

- Have a complete working knowledge of your Tow Vehicle and know how to handle it with the DR ROTO-HOG Premier Power Tiller attached.
 - Never place your hands, feet, or any part of your body near or under any moving part while the DR ROTO-HOG Premier Power Tiller Engine is running.
 - Keep bystanders away from your work area at all times. To be safe, do not operate the DR ROTO-HOG Premier Power Tiller near children or pets, and never allow children to operate the machine. Stop the Tow Vehicle and the DR ROTO-HOG Premier Power Tiller Engine when another person or pet approaches.
 - Do not touch the Muffler and Engine when the machine is in use as they become very hot and can cause severe burns.
 - Clear the work area of objects that might jam or wrap around the tines such as glass, large sticks, stones, metal objects, wire, rope, and string-like materials. Use on these objects could damage the DR ROTO-HOG Premier Power Tiller and/or cause injury.
 - Do not use this machine around large roots and surface rocks that you cannot remove.
 - Do not use this machine around underground pipes and wiring.
 - Never engage the Tines when they are in the ground. If the DR ROTO-HOG Premier Power Tiller Engine should stall, raise the Tines out of the soil and disengage them.
 - Never, under any conditions, remove, bend, cut, fit, weld, or otherwise alter standard parts on the DR ROTO-HOG Premier Power Tiller. This includes all shields and guards. Modifications to your machine could cause personal injuries and property damage and will void your warranty.
-

Slope Operation

WARNING

Use of machinery on slopes is a major factor related to accidents, which can result in severe personal injury. Use of machinery on slopes requires caution. If you feel uneasy using the DR ROTO-HOG Premier Power Tiller on a slope, do not operate it. Always take the following precautions when using this machine on slopes:

Always:

- Exercise extreme caution when changing direction on slopes.
- Watch for holes, ruts, and bumps on the ground.

Never:

- Never operate near drop-offs, ditches, or embankments; you could lose control of your Tow Vehicle and/or the DR ROTO-HOG Premier Power Tiller.
 - Never operate on slopes greater than 5 degrees, or on any excessively steep slope.
 - Never operate on wet, or slippery slopes. Reduced traction could result in tipping over your Tow Vehicle and/or the DR ROTO-HOG Premier Power Tiller.
 - Never park the Tow Vehicle on a steep grade or slope.
-

Safety for Children

WARNING

Tragic accidents can occur if the operator is not alert to the presence of children. Children can be attracted to the DR ROTO-HOG Premier Power Tiller and the tilling activity. Never assume that children will remain where you last saw them.

- Keep children out of the work area and under the watchful care of a responsible adult.
 - Be alert and always turn off your Tow Vehicle and the Tiller Engine if children enter the work area.
 - Before, and while moving your Tow Vehicle backwards, look behind, and down for small children.
 - Never allow children to operate the DR ROTO-HOG Premier Power Tiller.
 - Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.
-

Safety with Gasoline-Powered Machines

WARNING

Gasoline is a highly flammable liquid. Gasoline also gives off flammable vapor that can be easily ignited and cause a fire or explosion. Never overlook the hazards of gasoline and always follow these precautions:

- Never run the DR ROTO-HOG Premier Power Tiller Engine in an enclosed area or without proper ventilation as the exhaust from the Engine contains carbon monoxide, which is an odorless, tasteless, and deadly poisonous gas.
 - Store all fuel and oil in containers specifically designed and approved for this purpose and keep away from heat, open flame, and out of the reach of children.
 - Fill the gasoline tank outdoors with the Engine off and allow the Engine to cool completely. Do not handle gasoline if you or anyone nearby is smoking, or if you are near anything that could cause it to ignite or explode. Replace the Fuel Tank and Fuel Container Caps securely.
 - If you spill gasoline, do not attempt to start the Engine. Move the machine away from the area of the spill and avoid creating any source of ignition until the gas vapors have dissipated. Wipe up any spilled fuel to prevent a fire hazard and properly dispose of the waste.
 - Allow the DR ROTO-HOG Premier Power Tiller Engine to cool completely before storing in any enclosure. Never store the machine with gas in the Tank or with gas in a Fuel Container near an open flame or spark such as a water heater.
 - Never make adjustments or repairs with the Engine running. Before making an adjustment or repair, shut off the DR ROTO-HOG Premier Power Tiller Engine, wait five (5) minutes to cool, then disconnect the Spark Plug Wire and keep the Wire away from the Spark Plug to prevent accidental starting.
 - Never check for an ignition spark with the Spark Plug or Spark Plug Wire removed. Always use an approved Spark Tester.
 - Never tamper with safety devices. Regularly check their proper operation.
 - Never change the Engine Governor settings or modify the Engine speed. Modifications will void your warranty.
 - To reduce fire hazard, keep the Engine and Muffler area free of debris build-up such as leaves, grass, oil, grease, or any other combustible material. Clean the Engine area after each use.
 - Never operate the Engine without the Muffler. Inspect the Muffler periodically and replace if necessary. If the Engine is equipped with a Muffler Deflector, inspect it periodically and replace if necessary.
 - Never operate the Engine with the Air Cleaner or Cover over the Carburetor Air Intake removed, except for adjustment. Removal of such parts could create a fire hazard. Do not use flammable solutions to clean the Air Filter.
 - Always check Fuel Lines and Fittings frequently for cracks or leaks, replace if necessary.
 - Replace rubber Fuel Lines and Grommets when worn or damaged, but do not use over five (5) years.
-

General Safety

WARNING

Safe operation of the DR ROTO-HOG Premier Power Tiller is necessary to prevent or minimize the risk of ***death or serious injury***. Unsafe operation can create a number of hazards for you. Always take the following precautions when operating this machine:

- The DR ROTO-HOG Premier Power Tiller is a powerful tool and not a plaything. When using this machine, exercise extreme caution at all times. The design of this machine is to till soil. Do not use it for any other purpose.
- The operator or user of the DR ROTO-HOG Premier Power Tiller is responsible for accidents or hazards occurring to other people, their property, and themselves.
- Know how to quickly stop the DR ROTO-HOG Premier Power Tiller. See page 11.
- Never allow people or pets to ride on this machine.
- If the machine should make an unusual noise or vibration, shut off the Tow Vehicle and the DR ROTO-HOG Premier Power Tiller Engines. Vibration is generally a warning of trouble. Wait five (5) minutes for the DR ROTO-HOG Premier Power Tiller Engine to cool. Disconnect the Spark Plug Wire and then inspect the machine for clogging, damaged Tines, or loose Engine mounting Bolts. Clear any obstructions and repair and/or replace damaged parts.
- Always keep the machine in good safe operating condition. Always make certain Nuts and Bolts are tight and always use the supplied self-locking hardware. **DO NOT USE SUBSTITUTE HARDWARE.**
- Always shut off the Tow Vehicle and DR ROTO-HOG Premier Power Tiller Engine, wait five (5) minutes to cool, and disconnect the Spark Plug Wire before attempting to clear any obstructions.
- Use the DR ROTO-HOG Premier Power Tiller only in daylight and give complete and undivided attention to the job at hand.
- Do not hurry or take things for granted when using the DR ROTO-HOG Premier Power Tiller. When in doubt about the machine or your surroundings; stop the machine and take time to look things over.
- Exercise extreme caution when on or crossing drives, walks, or roads. Stay alert for hidden hazards or traffic.
- Never leave the DR ROTO-HOG Premier Power Tiller unattended with the Engine running. If leaving the machine, shift the Tow Vehicle into neutral, set the Vehicle Parking Brake, turn off the Vehicle Engine and remove Key; raise the Tines of the Tiller and disengage the Tine Drive then turn off the Tiller Engine.
- Prior to transportation to and from the work area, disengage the Tiller Tine Drive, stop the Tiller Engine, and raise the Tines.
- Do not operate the machine when under the influence of alcohol, drugs, or medication.
- See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by DR Power Equipment.

A Note to All Users

No list of warnings and cautions can be all-inclusive. If situations occur that are not covered by this manual, the operator must apply common sense and operate the DR ROTO-HOG Premier Power Tiller in a safe manner. Visit our website at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance.

Under California law, and the laws of some other states, you are not permitted to operate an internal combustion Engine using hydrocarbon fuels without an Engine Spark Arrester. This also applies to operation on US Forest Lands. All DR ROTO-HOG Premier Power Tillers shipped to California and Washington State are provided with Spark Arresters. Failure of the owner/operator to maintain this equipment in compliance with state regulations is a misdemeanor under California law and may be in violation of other state and/or federal regulations. Contact your local Fire Marshal, Forest Service, State Park Association, or the appropriate state organization for specific information in your area.

Chapter 2: Setting Up Your DR ROTO-HOG Premier Power Tiller

It may be helpful to familiarize yourself with the Controls and Features on your new machine by reviewing *Figure 2* before beginning the steps outlined in this chapter. For technical assistance, please visit our website at www.DRpower.com.

DR ROTO-HOG Premier Power Tiller Controls and Features

NOTE: The model shown in *Figure 2* may look slightly different from your machine.

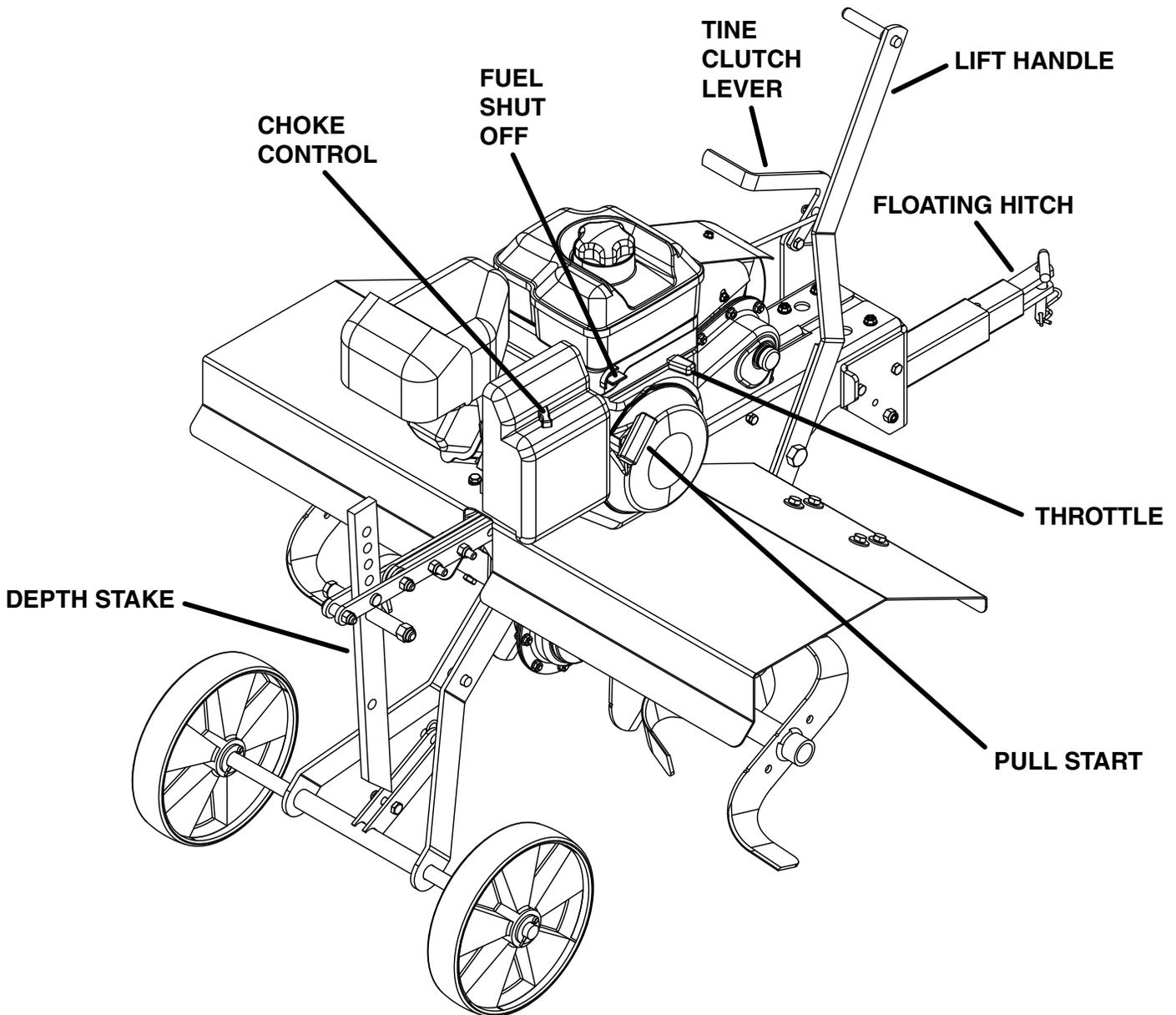


Figure 2

DR ROTO-HOG Premier Power Tiller Specification Sheet

Engine	Briggs & Stratton 9.50 FPT, 208 CC, Single Cylinder
Approximate Run Time on a Tank of Fuel	90 minutes
Towing type	Pin Hitch
Ground Clearance in Transport Mode	1.5"
Height Adjustment	Manual
Range	5.5" deep
Tine Size	12"
Number of Tines	12
Wheels	15" x 6.00"-6 NHS (14" x 5.5")
Machine Size	39"w x 66"L (Transport), 35"H x 77"L (Lowest Position)
Machine Weight	169 lbs
Tongue Weight	90 lbs. (Transport) 112 lbs. (Lowest Position)
Shipping Weight	310 lbs.
Gauge of Steel on Shroud	13
Gauge of Steel on Frame	12 Gauge, 1.5" Tubular Steel

Assembling the Machine

NOTE: Assembling the DR ROTO-HOG Premier Power Tiller is a two-person job, as the Unit weighs 169 pounds. We recommend you have an extra set of hands available before you begin.

Parts Supplied on Shipping Pallet:

- DR ROTO-HOG Premier Power Tiller
- Wheel Box:
 - Two Wheels
 - Hitch Bracket Extension
 - Bolt, 1/2" x 1-1/4"
 - Locknut, 1/2-13
 - *Safety & Operating Instructions Manual*
 - Briggs & Stratton Engine Manual

Tools and Supplies Needed:

- Pliers

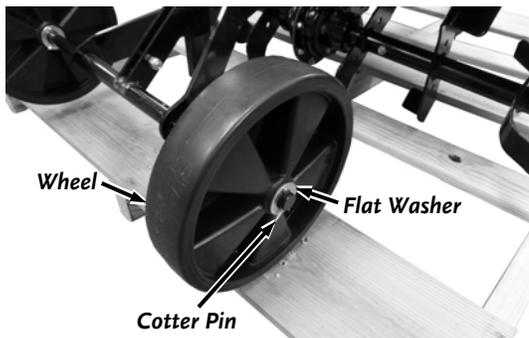


Figure 3

1. Position the Wheels onto the Axle against the Washers and Cotter Pins that were left on the Axle (**Figure 3**).
2. Secure the Wheels with the Washers and Cotter Pins that you removed during unpacking and bend the Cotter Pins with Pliers.
3. Pull the Lift Handle Forward to lower the wheels (**Figure 2 on previous page**).
4. Get help from another person to roll the Tiller from the Pallet.

Adding the Engine Oil and Gasoline

NOTICE

- You must add Oil before starting the Engine. This machine is shipped without Oil. Traces of Oil may be in the reservoir from factory testing, but you must add Oil before starting the Engine. Fill the reservoir slowly, checking the level frequently, to avoid overfilling.
- To get an accurate reading when checking the Oil level the machine should be on a level surface.

Capacities	
Briggs & Stratton - 950 Series, 9.50 FPT, OHV	⇒ 20 oz. (.60L) SAE 30 High Detergent Oil
Gasoline Tank	⇒ Unleaded Gas (85 Octane minimum), 3.2 Qts. (3.0 L)

Tip: To avoid confusion, we recommend leaving the Caps on the Fuel and Engine Oil Fills and only removing one Cap each time when you are ready to pour Gasoline or Oil into the correct Fill.

NOTE: Use SAE 30 High Detergent Oil classified "For Service SF, SG, SH, SJ" or higher. Do not use special additives. Other types of Oil could cause problems operating your machine. Please refer to your Engine Owner's Manual for detailed Oil information.

1. Place the machine on a level surface and initially add 16 oz. (1/2 quart) of SAE 30 High Detergent oil, recommended by the Engine Manufacturer, and wait one minute for the oil to settle (**Figure 4**).
2. Continue adding a few ounces of Oil at a time, until the Oil reaches just below the threads. Be careful not to overfill.
3. Fill the Gas Tank with fresh, unleaded gas (with a minimum of 85 Octane), to approximately 1" to 1-1/2" below the top of the Fill Neck to allow for Fuel expansion. Be careful not to overfill and reinstall the Cap before starting the Engine. See your Engine Owner's Manual for more information.

NOTE: To refill the Gas Tank, turn the Engine OFF, and let the Engine cool at least five (5) minutes before removing the Gas Fill Cap.

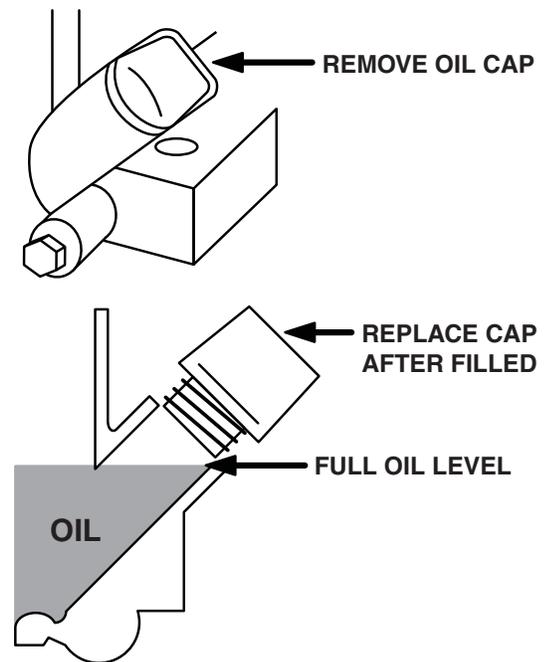


Figure 4

⚠ WARNING

Fill gas tank outdoors or in a well-ventilated area, away from sparks, open flames, pilot lights, heat, and other ignition sources.

Connecting the DR ROTO-HOG Premier Power Tiller to your Tow Vehicle

2. Place the Tiller on level ground and back up your Tow Vehicle so that the Hitch of the Vehicle is in line with and next to the Hitch on the DR ROTO-HOG Premier Power Tiller. Set the Parking Brake on the Tow Vehicle.
2. Attach the Hitch Bracket Extension to the SMOOTH-TRAK™ Hitch of the Tiller using a Hitch Pin and the Hair Cotter Pin (Figure 5).

NOTE: The Hitch Bracket Extension can be attached as shown in Figure 5 or turned upside down for Tractors with lower Draw Bars.

3. Fasten the Hitch Bracket Extension to the Tow Vehicle Draw Bar with a 1/2"-13 x 1-1/4" Hex Bolt and 1/2" Lock nut.

Adjusting the Depth Stake

The top Depth Stake Hole selects a till depth of 5" with each lower Hole decreasing the till depth by 1" to a minimum of 1" using the bottom hole.

1. To change the till depth, remove the Hair Cotter Pin from the Clevis Pin which is connecting the Depth Stake to the Stake Support Bracket (Figure 2 on page 7).
2. Grasp the top of the Depth Stake, remove the Clevis Pin and reposition the Depth Stake. Insert Clevis Pin and Hair Cotter Pin.

NOTE: The Depth Stake should never be removed from the Tiller. It is designed to protect the Tow Vehicles Trans Axle from the thrusting action of the Tiller.

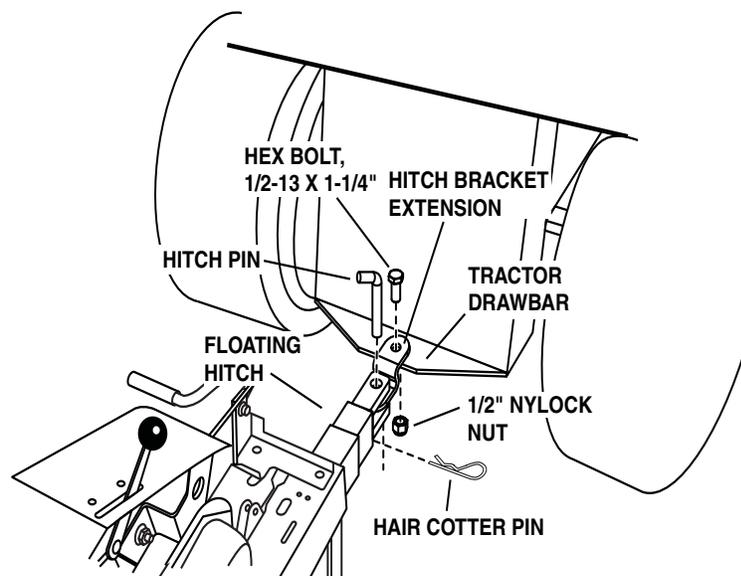


Figure 5

Before Starting the Engine

1. Raise the Tines and place the machine on level ground.
2. Check the Engine Oil level every time you use the machine (**Figure 4** on page 9).
3. Remove any built up debris from the Tines.
4. Attach the Spark Plug Wire to the Spark Plug.
5. Pull the Tine Clutch Lever all the way forward until it locks into place to disengage the Tines. A Safety Interlock Switch prevents the Engine from starting with the Tines engaged.
6. Ensure the Fuel Shut-Off is in the “ON” position (**Figure 6**).

Starting

1. When starting a cold Engine, push the Choke Control Lever to the Choke  position and the Throttle Control Lever to Run  position (**Figure 6**).
2. Grasp the Recoil Starter Handle and **slowly pull until you feel resistance**, then pull the cord with a **smooth accelerating motion** to start the Engine. Do not let the Starter Handle snap back against the Engine. One or two pulls usually starts the DR ROTO-HOG Premier Power Tiller.
3. After the Engine starts, slowly push the Choke Control Lever to the left (RUN). Wait until the Engine runs smoothly before each Choke adjustment. For the best Engine performance, you should operate the Engine with the Throttle in the Run  position.



Figure 6

Breaking in your Tiller

Break-in the Tiller's Belts, Pulleys, and the Control before you actually begin tilling.

1. Start the Engine with the Tiller attached to the Tow Vehicle in transport position. Engage the Tine Clutch Lever to start the Tiller's rotation. Allow the Tines to rotate for five minutes.
2. Check Tine operation and adjust if necessary. See Tine Operation Check in the Service and Adjustments section of this manual.

Stopping the Engine

1. Move the Throttle Control Lever all the way to the STOP position (**Figure 6**).

NOTICE

Never stop the Engine by moving the Choke Lever to the Choke position. This could cause an Engine backfire resulting in Engine damage.

Operating Safety

WARNING

- Engage the Tines in the air without contacting the soil. Slowly lower the Tines into the soil while seated on the Tow Vehicle. Engaging the Tines with them in the soil may cause the DR ROTO-HOG Premier Power Tiller to push the Tow Vehicle forward.
- The first pass on unknown soil conditions should be only about an inch to test the soil conditions.
- Always check for objects and obstacles in the path of this machine before moving.
- Always shut off the DR ROTO-HOG power tiller engine and disconnect the spark plug wire before clearing debris.
- Do not refuel the Engine while it is hot or running.

NOTICE

Use common sense when using the machine. Learn to recognize the change in sounds when it is overloaded. Turn off the Engine immediately if the machine becomes jammed to prevent damage to the drive system.

Operating Parameters

The DR ROTO-HOG Premier Power Tiller is designed to be used with most ATVs, Lawn\Garden Tractors, and Compact Tractors. The Tiller should never be used with a Truck (2WD or 4WD). Use of a Truck will void the DR ROTO-HOG Premier Power Tiller Warranty.

Operating Procedures

There are three (3) applications for the DR ROTO-HOG Premier Power Tiller: Garden Tilling, Sod Busting, and small Food Plot installation. For all applications, engage the Tines while they are raised and not contacting the soil. Then slowly lower the Tines into the soil to the proper depth for the different soil conditions.

Gardens:

1. Check the area for large stones and foreign objects that could snag or wedge into the Tines.
2. Perform a soil test to assess needs for soil treatment.

Tip: If a soil test indicates amendments necessary (lime, fertilizers, sulfur, etc) then apply before tilling to best integrate it into the soil.

3. Check wetness in the soil to determine if clumping will require slower Tow Vehicle speeds.

Food Plot Installation and Sod Busting:

1. Clear the work area of objects such as glass, large sticks and stones, roots, metal objects, wire, rope, and string-like materials.
2. Cut all vegetation to the lowest possible height.
3. Remove the cut vegetation by either rake, vacuum, blowing OR allow it to dry several days and re-cut.

CAUTION

Failure to remove long vegetation will result in frequent stalling of the Engine due to entanglement of the Tines.

4. Refer to seed specifications to determine the optimal depth of tillage necessary.
5. With initial pass, begin breaking only the top inch of soil to breakup sod.
6. Break the soil thoroughly across the entire area. See the following "Tilling Tips".
7. Gradually lower the Tines 1-2 inches and repeat step 6 until you are satisfied with the tillage created.

Tilling Tips

- In compacted soil or sod, or in food plot and sod busting applications, several passes may be necessary to till to a depth of five and a half (5.5) inches. For the first pass, just scratch the surface. The depth for each successive pass needs to be determined by individual site and soil conditions. If the machine stalls repeatedly, you should till slower or not as deep.
- Check the ground moisture. DO NOT till if you can make a ball of soil in your hand from the ground to be tilled; it is too wet. Create full tillage (depths up to 5.5") after entire area is dry.
- To obtain the most efficient tillage, operate the DR ROTO-HOG Premier Power Tiller Engine at full throttle at the slowest speed of your Tow Vehicle.
- When operating the machine for the first time, proceed slowly and carefully until you become familiar with the proper method of operating the machine.
- Soil conditions will determine how deep the machine can penetrate on the first pass.
- In damp soil, till only the top inch of seedbed. Allow tillage to dry for several hours in sunny and/or windy conditions.
- Listen to your DR ROTO-HOG Premier Power Tiller Engine. When the Engine RPM decreases or stalls (overloaded condition) raise the Tines for shallower tilling. If the Engine is lightly loaded, lower the Tines to increase the tilling depth.
- If the soil is extremely hard and dry, it may be desirable to "cross till" an area at a shallow depth first, then till the soil in the direction of planting rows on subsequent passes until the desired tillage is obtained.
- In soil that was tilled the year before, select the tilling depth at which the Tiller Engine runs comfortable and does not stall or pull down. Lower the depth for additional passes if great depth is desired.
- Where possible, we recommend that you till in a pattern similar to that shown in **Figure 7**.

1. Make the first pass.

NOTE: If you raise the Tines at the end of a pass, use care to lower them back to the same depth. Tilling too deep on the first pass may cause the Tow Vehicle to surge forward and/or cause the Tiller to stall or break Shear Bolts.

8. Skip a space equal to the width of the machine then make the return pass.

9. Till the skipped areas.

Cultivating Tips

You can use the DR ROTO-HOG Premier Power Tiller for cultivating (**Figure 8**), which requires a minimum of two (2) inches of soil penetration.

- Set the tines so they will penetrate the soil to a depth of two (2) to three (3) inches.
- Run the DR ROTO-HOG Premier Power Tiller Engine at Full Throttle except when cultivating small plants. A slower Engine speed is necessary to prevent burying small plants.

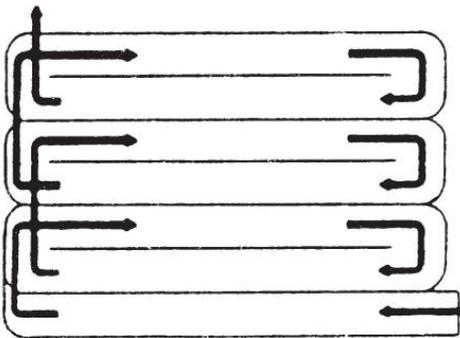


Figure 7

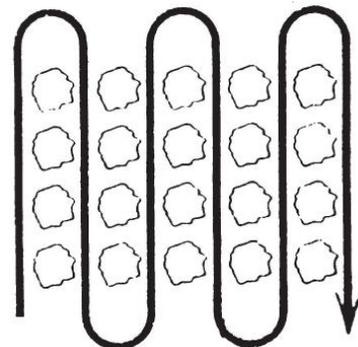


Figure 8

Slopes and Uneven Terrain

WARNING

- Never operate your DR ROTO-HOG Premier Power Tiller on slopes greater than 5 degrees. Doing so could result in serious injury or damage to your machine.
 - When operating the machine over uneven terrain and slopes, use extreme caution to not tip over the machine. Move slowly if the ground has ruts, bumps, and other depressions.
-

Handling and Transporting

WARNING

Never lift the machine while the Engine is running.

We recommend using two (2) people to lift the DR ROTO-HOG Premier Power Tiller. Lift the machine by the SMOOTH-TRAK™ Hitch to connect and disconnect from your Tow Vehicle. To transport the machine with your Tow Vehicle, first raise the Tines to the MAX position (lower the Wheels) using the Lift Handle.

NOTICE

- The DR ROTO HOG Premier Power Tiller is not equipped for towing on any public roadway.
 - When towed, the maximum safe towing speed is 10 mph.
-

Chapter 4: Maintaining Your DR ROTO-HOG Premier Power Tiller

This chapter covers regular maintenance procedures that will ensure the best performance and long life of your DR ROTO-HOG Premier Power Tiller. For Engine maintenance, please refer to the Engine Owner's Manual that came with your machine. Service intervals listed in the checklist below supersede those listed in the Engine Owner's Manual. Maintenance Kits and accessories are available through our website at www.DRpower.com.

WARNING

When performing any maintenance, you must first shut off the Engine; wait five (5) minutes to allow parts to cool and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

Regular Maintenance Checklist

NOTE: Consider that the service intervals shown are the maximum under normal operating conditions. Increase frequencies under extremely dirty or dusty conditions.

PROCEDURE	BEFORE EACH USE	EVERY 8-10 HOURS	EVERY 35 HOURS
Check the Engine Oil Level	▲		
Clean the Tines and Debris Shield*	After each use		
Check the general condition of the machine, e.g. nuts, bolts, welds, etc.	▲		
Clean Engine Exterior & Cooling Fins	▲		
Check the Tines Shear Bolts for wear	▲		
Grease the Tines Shaft		▲	
Check the Transmission Oil Level NOTE: 1st time 5 to 8 hrs.		▲	
Clean Air Filter		▲	
Inspect the Tine Drive Belt for wear			▲
Check Tines for Wear			▲
Change Engine Oil NOTE: 1st time 5 to 8 hrs.			▲
Replace Air Filter and Pre-cleaner			▲
Replace the Tine Drive Belt			▲
Replace Spark Plug			▲

* Cover the Engine Muffler, Carburetor, and Air Filter before using a hose to clean the Tines and Debris Shield.

Lubrication

WARNING

When performing any maintenance, you must first shut off the Engine; wait five (5) minutes to allow parts to cool and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

Your DR ROTO-HOG Premier Power Tiller was lubricated at the Factory. However, periodic lubrication of the Engine and Tines Shaft is required.

Supplies Needed:

- Grease Gun w/General purpose grease

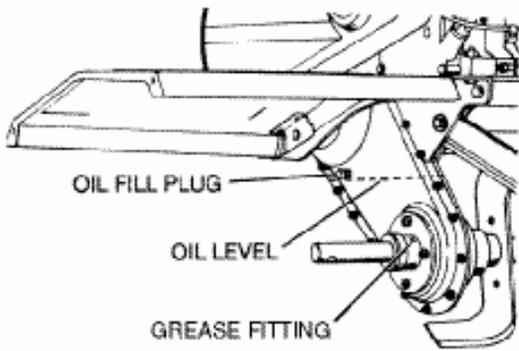


Figure 9

Tines Shaft:

Grease the Tines Shaft using a Grease Gun with General Purpose grease every 8-10 hours. Apply about ten (10) pumps of the grease in the Grease Fitting (**Figure 9**). Perform this lubrication more often in dry and dusty environments.

NOTICE

Never oil or grease Pivot Points. Viscous lubricants will attract dust and dirt that can cause wear on pivot points. If you feel you must lubricate them, use only dry powdered graphite type lubricants.

Removing and Replacing the Engine Oil

! WARNING

When performing any maintenance, you must first shut off the Engine, wait five (5) minutes to allow parts to cool and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

NOTICE

Be certain to fill the Engine with Oil before starting. See page 9.

Tools & Supplies Recommended:

- Flat Head Screw Driver
- Vacuum Pump Oil Drainer
- SAE 30 High Detergent, 20 oz. (0.60L)

NOTE: Remove the Oil when the Engine is warm. Warm Oil flows quickly and completely.

1. Using a Flat Head Screw Driver, remove the Oil Fill Cap and vacuum the Oil from the Engine through the Oil Fill (**Figure 4** on page 9) using a Vacuum Pump Oil Drainer.
2. Replace the Oil by following the instructions on page 9.

NOTE: Use SAE 30 High Detergent Oil classified "For Service SF, SG, SH, SJ" or higher. Do not use special additives. Other types of Oil could cause problems operating your machine. Please refer to your Engine Owner's Manual for detailed oil information.

3. Replace the Oil Fill Cap and reattach the Spark Plug Wire.

NOTE: Be sure to use environmentally safe disposal procedures for the used Oil.

Transmission Lubrication

Check the Transmission Oil Level after the first 5 hours of operation. Remove the Oil Fill Plug (**Figure 9** on page 16). The Oil level must be even with the Plug Hole (with the Tiller level). Add Oil if necessary. Use SAE 30 non-detergent motor Oil. Replace Oil Fill Plug.

NOTE: It is not necessary to change the Oil in the Tiller Transmission. If for any reason it must be changed, Oil capacity is 22 oz.

Removing and Replacing the V-Belt

Replace the Tine Drive V-Belt if damaged from slipping under heavy loads or if it shows cracks or frayed edges.

! WARNING

When performing any maintenance, you must first shut off the Engine; wait five (5) minutes to allow parts to cool and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

NOTICE

Do not move or remove the Belt Guide (**Figure 10**). If you accidentally alter the position of the Belt Guide, return it to the correct setting of 6-1/2" above the Tine Shield Support Plate (**Figure 10**).

Tools and Supplies Needed:

- Screwdriver
 - 7/16" Socket
1. Remove the Screws from the top and rear of the Belt Guard using a 7/16" Socket and remove the Belt Guard. (**Figure 11**).
 2. Disengage the Tine Clutch Lever and remove the worn Belt.
 3. Reverse this procedure to install a new Belt.

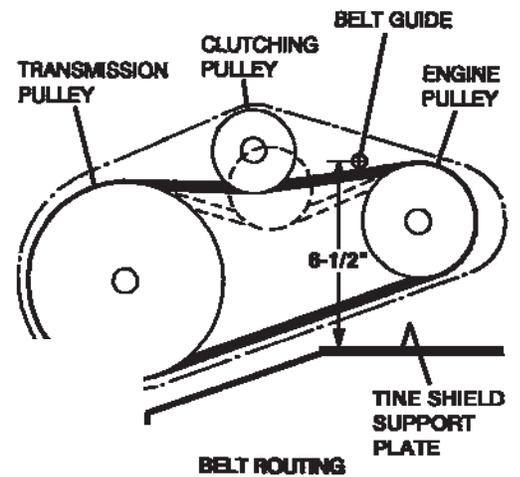


Figure 10

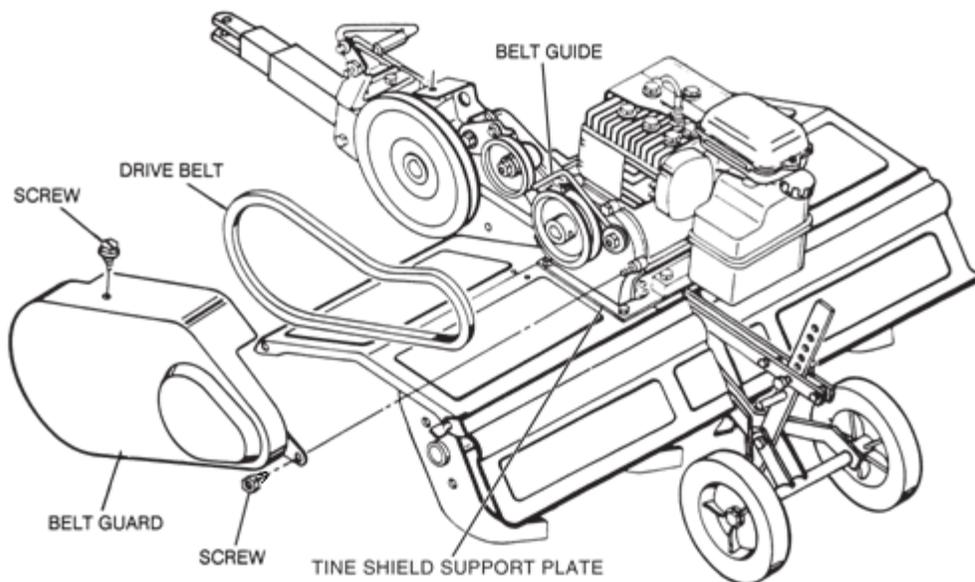


Figure 11

⚠ WARNING

Before performing this check, you must first shut off the Engine; wait five (5) minutes to allow parts to cool and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

Tine Operation Check

1. Disengage the Tines and raise them up off the ground using the Lift Handle.
2. Rotate one set of Tines with your hand; the other set should also rotate.
3. Replace the Spark Plug wire.

⚠ WARNING

When performing any maintenance, you must first shut off the Engine; wait five (5) minutes to allow parts to cool and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

Tine Shear Bolts

- The DR ROTO-HOG Premier Power Tiller drive components are protected from damage by Grade 2 Shear Bolts in the Tine Assemblies. The Shear Bolts hold the Tine Assemblies in proper location on the Drive Axles. Should a Tine Assembly strike or pick up a large hidden object and jam, the Shear Bolt holding the Tine Assembly to the drive shaft will shear or break, protecting the drive components of the DR ROTO-HOG Premier Power Tiller from major damage.
- Two (2) extra sets of Tine Shear Bolts with Lock Washers are included with the DR ROTO-HOG Premier Power Tiller. They are located in the Tiller Stake Support Bracket on the rear of the Tiller.
- The design of the Tine Shear Bolt is to loosely fit when properly installed.

NOTICE

NEVER attempt to use a Bolt or Pin that is larger or harder than the original Grade 2 Shear Bolts.

Chapter 5: Troubleshooting

Most problems are easy to fix. Consult the Troubleshooting Table for common problems and their solutions. If you continue to experience problems, visit our website at www.DRpower.com or call: 1-800-DR-OWNER (376-9637) for support.

Troubleshooting Table

WARNING

When performing any maintenance, you must first shut off the Engine; wait five (5) minutes to allow parts to cool and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

SYMPTOM	POSSIBLE CAUSE
<i>Recoil will not pull out or is difficult to pull.</i>	<ul style="list-style-type: none"> ⇒ Check that the Tine Drive Clutch is disengaged. ⇒ Check the Engine Oil level; the Engine may be seized. ⇒ There may be an Oil compression lock in the Cylinder. Take out the Spark Plug; hold a rag over the Spark Plug Hole and pull the Recoil Cord several times to blow out any Oil in the Cylinder. Wipe off the Spark Plug and reinstall it. ⇒ The Recoil may be broken or jammed. Visit our website at www.DRpower.com.
<p><i>The Engine will not start.</i></p> <p><i>(Please refer to the Engine Owner's Manual for Engine-specific procedures.)</i></p>	<ul style="list-style-type: none"> ⇒ Check that the Tine Drive Clutch is disengaged. ⇒ Check that the Spark Plug Wire is attached. ⇒ Check the Oil and Gas level. See page 9. ⇒ The Gas may be old; change it if necessary. Use a fuel stabilizer if you keep Gas longer than one month. ⇒ The Fuel Tank may be clogged. Remove it and clean it out. ⇒ Check the Throttle and Choke settings, adjustment and travel. ⇒ The Engine is Choked improperly flooding the Engine. Move the Choke to the RUN position, move the Throttle to the FAST position and pull the Recoil Starter several times to clear out Gas. ⇒ The Spark Plug may be dirty or cracked; change it if necessary. If it's oily, leave it out, hold a rag over the Plug Hole and pull the Recoil Cord several times to blow out any Oil in the Cylinder, then wipe off the Plug and reinsert it. ⇒ The Air Filter may be dirty; change it following the procedure in the Engine Owner's Manual. ⇒ If your Engine still won't start, visit our website at www.DRpower.com.
<p><i>The Engine lacks power or is not running smoothly.</i></p> <p><i>(Please refer to the Engine Owner's Manual for engine-specific procedures.)</i></p>	<ul style="list-style-type: none"> ⇒ The Engine is overloaded. Set Depth Stake and Wheels for shallower tilling. ⇒ Check the Throttle; it should be set in the FAST position. ⇒ The Air Filter may be dirty; change it following the procedure in the Engine Owner's Manual. ⇒ Dirty Air Screen. Clean the Air Screen. ⇒ The Spark Plug may be dirty or cracked; change it if necessary. If it's oily, leave it out, hold a rag over the Plug hole and pull the Recoil Cord several times to blow out any Oil in the Cylinder, then wipe off the Plug, check the gap and reinsert it. ⇒ The Gas may be old; change it if necessary. Use a fuel stabilizer if you keep Gas longer than one month. ⇒ The Engine Oil may be dirty. Change it if necessary, following the procedure on page 16. ⇒ If your Engine still lacks power, visit our website at www.DRpower.com.

WARNING

When performing any maintenance, you must first shut off the Engine; wait five (5) minutes to allow parts to cool and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

SYMPTOM	POSSIBLE CAUSE
<i>Engine smokes and overheats.</i>	<ul style="list-style-type: none"> ⇒ Check the Oil level and adjust as needed. ⇒ The Air Filter may be dirty; change it following the procedure in the Engine Owner's Manual. ⇒ Dirty Air Screen. Clean the Air Screen. ⇒ You may be using the wrong Oil. Refer to your Engine Owner's Manual for detailed information. ⇒ Clean the Engine cooling fins and the Carburetor Housing if they are dirty. ⇒ If the Engine still smokes, visit our website at www.DRpower.com.
<i>The Engine runs well but the Tines won't move.</i>	<ul style="list-style-type: none"> ⇒ The Tine Drive Clutch is not engaged. ⇒ The Tine Drive V-Belt is off the pulleys or broken. See page 17.
<i>The Engine runs well but labors when tilling.</i>	<ul style="list-style-type: none"> ⇒ Operator is being too aggressive; raise the Tines. ⇒ The tilling is too deep. Adjust the Depth Stake. ⇒ Be sure the Engine Throttle is set on the Fast (RABBIT) position.
<i>Excessive bounce and difficult handling.</i>	<ul style="list-style-type: none"> ⇒ The area you are tilling may be too dry and hard. Moisten the ground or wait for conditions that are more favorable. ⇒ Be sure the Engine Throttle is set on the Fast (RABBIT) position. ⇒ The Wheels and Depth Stake are incorrectly adjusted. Readjust the Wheels and Depth Stake. ⇒ If your DR ROTO-HOG Premier Power Tiller still bounces, visit our website at www.DRpower.com.
<i>The tilled soil balls up or clumps.</i>	<ul style="list-style-type: none"> ⇒ The ground that you are trying to till is too moist. See Tilling Tips on page 13.
<i>Tow Vehicle surges forward.</i>	<ul style="list-style-type: none"> ⇒ Tines are set too deep. Set the Tines to appropriate depth of 1 to 2 inches per pass. ⇒ The Tines are engaged while on the ground or in the soil. Ensure the Tines are raised and are not in contact with anything before engaging. ⇒ The Tines are too low and engaged when coming to an untilled area at the end of tilled area. Stop the Tow Vehicle so the Tiller Tines are short of the untilled area, disengage and lift the Tines up before continuing. ⇒ Tilling in an area with large roots, surface rocks or other debris. Remove obstacles if possible. If obstacles cannot be removed, do not use the Tiller in that area. ⇒ The rotating Tines are lowered to fast. Lower the Tines slowly into area to be tilled to prevent overload; especially in untilled sod.

Notes:

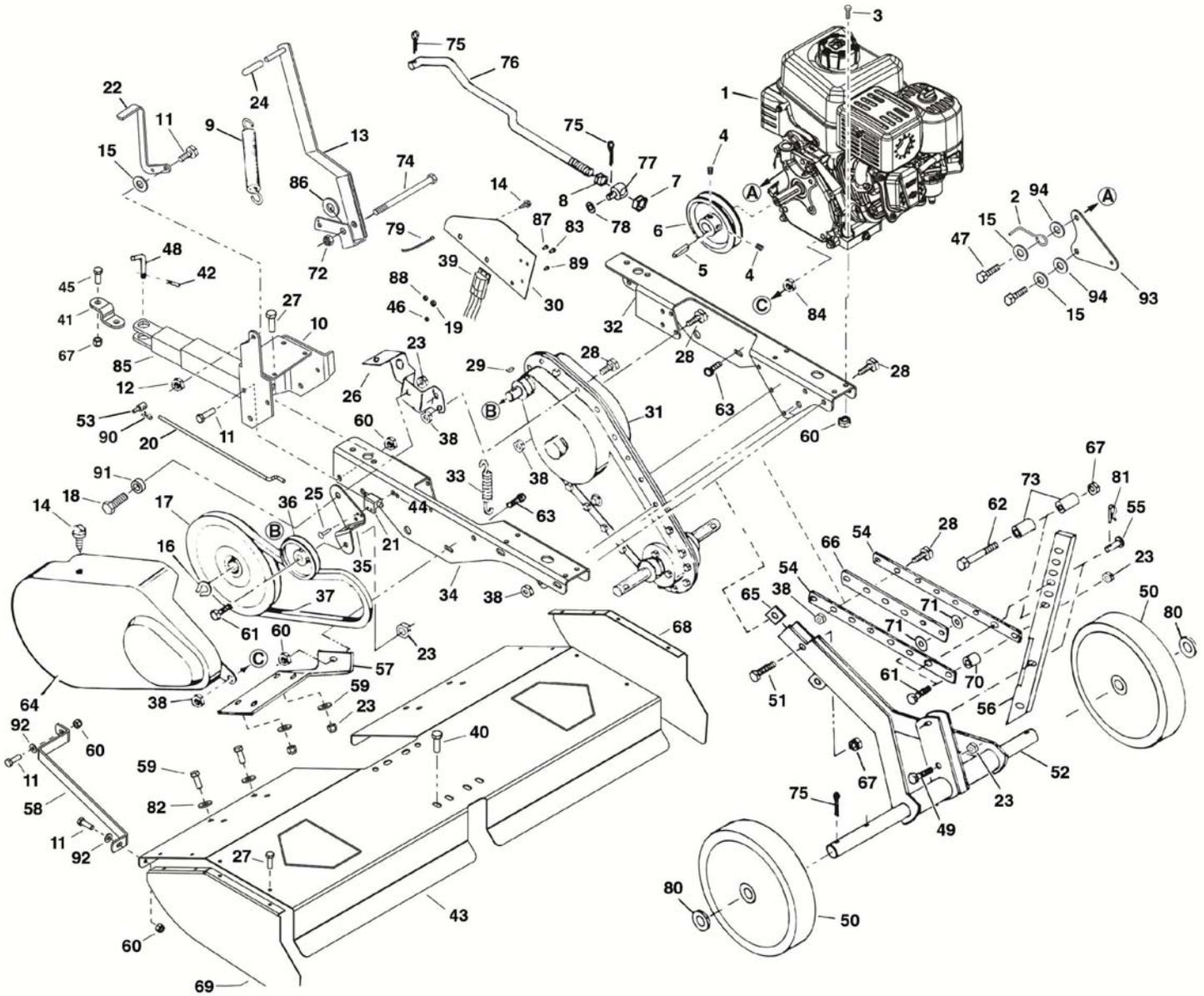
Chapter 6: Parts Lists, Schematic Diagrams and Warranty

Parts List - Main Assembly

NOTE: Part numbers listed are available through DR Power Equipment.

Ref#	Part#	Description	Ref#	Part#	Description
01	37680	Engine, B&S CR 9.50 MS	47	23306	Bolt, Hex, 5/16"-24 x 1"
02	23311	Guide - Belt	48	33013	Pin, Hitch
03	13443	Bolt, Hex, 5/16"-18 x 1-1/2"	49	18458	Bolt, Hex Head, 3/8"-16 x 1-1/2"
04	23338	Set Screw, 5/16"-18 x 5/16"	50	33014	Wheel
05	23336	Key, Square 1/4" x 2"	51	26450	Bolt, Hex Head, 1/2"-13 x 1-3/4"
06	33004	Pulley	52	22313	Pivot Axle Assembly
07	33005	Nut, 1/2"-12 Nylon Lock, Jam	53	33015	Anchor
08	33006	Nut, 1/2"-12 Hex, Jam	54	33016	Strap, Frame Extension
09	33007	Spring, Depth Extension	55	33017	Pin, Clevis
10	37661	Hitch Bracket Assembly	56	33018	Stake, Drag
11	23285	Bolt, Hex Head, 5/16"-18 x 1"	57	33019	Bracket, Wheel Weight Support
12	23286	Nut, Hex, Lock, 5/16"-18	58	26134	Guard, Foot
13	33008	Lift Handle Assembly	59	11152	Bolt, Hex Head, 3/8"-16 x 1"
14	37648	Screw, Self Tapping 1/4"-20 x 1/2" WH	60	18930	Nut, Hex, Nylon Lock, 5/16"-18
15	23287	Washer, 5/16" Std. Wrt.	61	14640	Bolt, Hex Head, 3/8"-16 x 1-3/4"
16	23348	Ring, Retainer	62	33058	Bolt, Hex Head, 1/2"-13 x 5-1/2"
17	23357	Pulley, Input	63	11158	Bolt, Carriage, 5/16"-18 x 1"
18	23356	Bolt, Shoulder	64	22429	Belt Guard (incl. #69)
19	23303	Nut, Hex, Nylon Lock, 1/4"-20	65	33059	Washer, 2" sq, .53" id, .25" thk
20	33009	Clutch Rod	66	33021	Strap, Frame Extension Brace
21	23617	Switch, Safety Interlock	67	25664	Nut, Nylon Lock, 1/2"-13
22	23266	Lever, Clutch	68	26696	Guard, Right Fender
23	23360	Nut, Hex, Nylon Lock, 3/8"-16	69	26697	Guard, Left Fender
24	33010	Grip, Handle	70	33060	Spacer, Flail Knife, PRM TPT
25	23313	Rivet, Pop	71	33061	Washer, .406" id, 1.188" od, .188" thk
26	23347	Belt Guide & Idler Mounting Bracket	72	23331	Nut, Hex, Nylon Lock, 5/18"-11
27	23307	Screw, Self Tap, 5/16"-18 x 3/4"	73	33062	Spacer, Counter Shaft Pulley, PRM TPT
28	23294	Bolt, Hex, 1/4"-20 x 1"	74	23309	Bolt, Hex Head, 5/8"-11 x 7-1/2"
29	23358	Key, Woodruff No. 61	75	26449	Pin, Cotter, 1/8" x 1-1/4"
30	23124	Cover, Drive	76	33024	Rod - Lift
31	30313	Transmission - Complete	77	33025	Anchor - Adjustment
32	23121	Chassis, Left	78	33026	Washer, .531" x 1" x .059"
33	23272	Spring, Extension	79	23145	Plastic Tie w/ #8 Screw Hole
34	23122	Chassis, Right	80	33027	Washer, Flat, 13/16" x 1-1/2" x .134"
35	23133	Bracket, Idler	81	23419	Pin, Hair, Cotter
36	23337	Pulley, Idler	82	14516	Washer, 3/8"
37	21763	V-Belt	83	23284	Bolt, Hex Head, 1/4-20 x 3/4"
38	23304	Washer, Faced Lock Nut, 1/4"-20	84	23291	Nut, Hex, 1/4-20
39	37646	Module Assembly	85	37663	Hitch Tube Assembly (incl. with #10)
40	11142	Bolt, Hex, 5/16"-18 x 3/4"	86	13287	Washer, 5/8"
41	37658	Hitch Bracket Extension	87	23293	Slot Truss Bolt, 10-32 x 5/8"
42	23332	Pin, Hair, Cotter 5/32"	88	23302	Nut, Nylon Lock, 10-32
43	33012	Fender Plate	89	23148	Screw, 8-32 x .625"
44	23295	Washer, #10	90	33063	Pin, Hair, Cotter, .08" OD, 1.125" L
45	37657	Bolt, Hex, 1/2"-13 x 1-1/4"	91	32382	Spacer, Shoulder
46	23279	Nut, Nylon Lock, 8-32	92	11241	Washer, 5/16"
			93	37659	Plate, Guard Mounting
			94	37660	Washer, .344 x 1.125 x .12

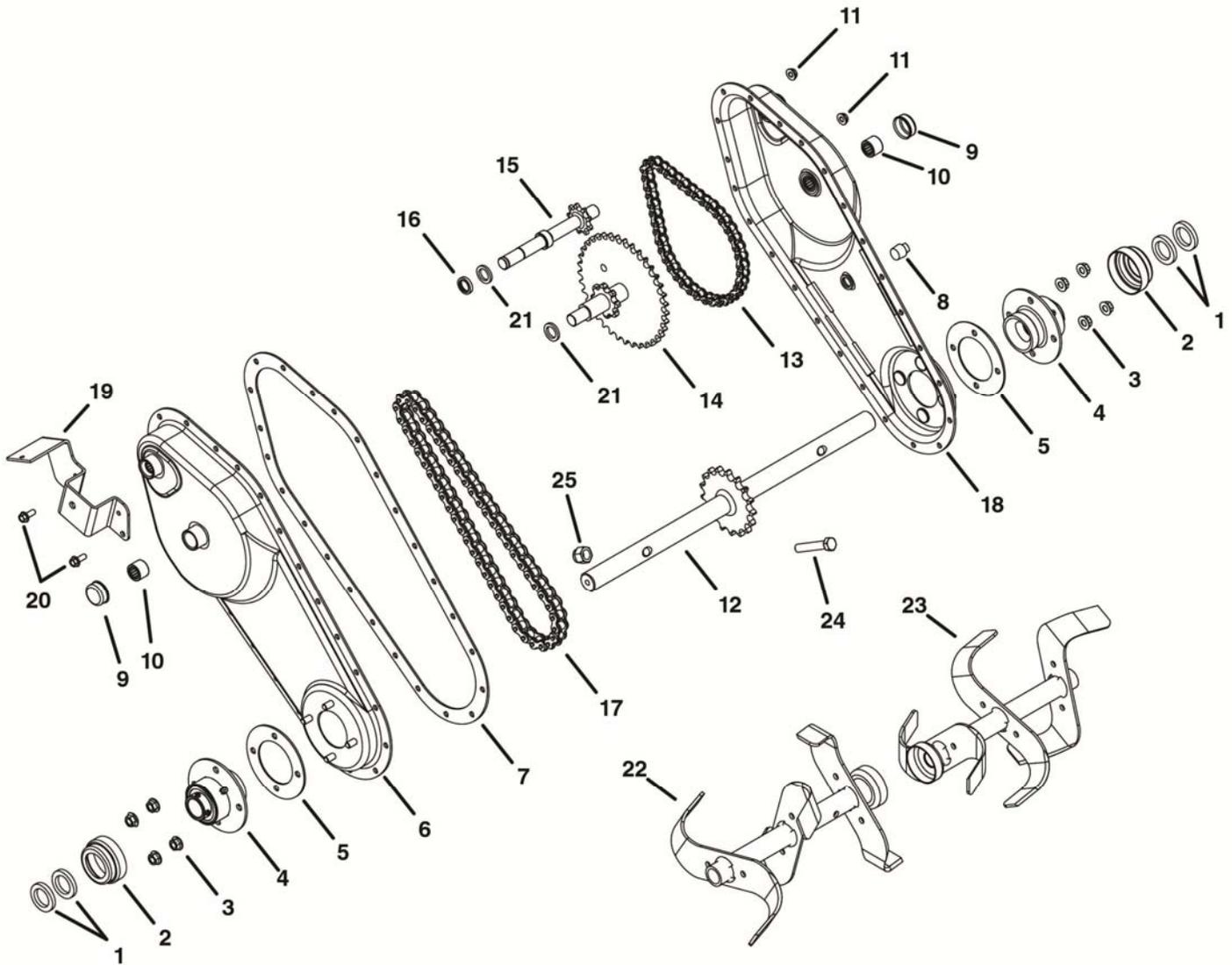
Schematic Diagram - Main Assembly



Parts List and Schematic Diagram -Tine Drive Transmission Assembly

NOTE: Part numbers listed are available through DR Power Equipment.

Ref#	Part#	Description	Ref#	Part#	Description
01	23340	Washer, Felt	14	23344	Assembly, Idler Shaft
02	23138	Cap	15	33030	Assembly, Input Shaft
03	23316	Nut, Hex, Flanged Lock, 5/16"-18	16	23354	Seal
04	30314	Assembly, Flange & Bearing	17	23341	Chain, Roller (Long)
05	23339	Gasket, Flange	18	33031	Assembly, Drive Housing, RH (includes items 9 & 10)
06	33029	Assembly, Drive Housing, LH (includes items 9 & 10)	19	23347	Bracket, Belt Guard & Idler
07	23349	Gasket, Drive Housing	20	23142	Bolt, Hex, 1/4"-20 x 5/8" w/Washer
08	23343	Plug, Oil	21	23342	Washer, Thrust, .64" x .9375"
09	23351	Cap, Bearing	22	33032	Tine Assy, LH
10	23350	Bearing, Roller	23	33033	Tine Assy, RH
11	23304	Nut, Hex, 1/4"-20 w/Lock Washer	24	37647	Bolt, 3/8"-16 x 2", GR2 (2 spare)
12	30315	Assembly, Tine Shaft & Sprocket	25	23360	Nut, Hex, Nylon Lock, 3/8"-16 (2 spare)
13	23345	Chain, Roller (Short)			



Notes:

Notes:

DR[®] ROTO-HOG™ PREMIER POWER TILLER



2-Year Limited Warranty

Terms and Conditions

The DR[®] ROTO-HOG PREMIER POWER TILLER is warranted for two (2) years against defects in materials or workmanship when put to ordinary and normal consumer use; ninety (90) days for any other use. The Engine Manufacturer warrants the Engine separately.

For the purposes of all the above warranties, "ordinary and normal consumer use" refers to non-commercial residential use and does not include misuse, accidents, or damage due to inadequate maintenance.

DR[®] Power Equipment certifies that the DR[®] ROTO-HOG PREMIER POWER TILLER is fit for ordinary purposes for which a product of this type is used. DR[®] Power Equipment however, limits the implied warranties of merchantability and fitness in duration to a period of two (2) years in consumer use, ninety (90) days for any other use.

The 2-Year Limited Warranty on the DR[®] ROTO-HOG PREMIER POWER TILLER starts on the date the machine ships from our factory. The 2-Year Limited Warranty is applicable only to the original owner.

The warranty holder is responsible for the performance of the required maintenance as defined by the manufacturer's owner manuals. The warranty holder is responsible for replacement of normally wearing parts such as the Drive Belt, Tines, Tires, Shear Pins, Spark Plug and Air Filter. Attachments and accessories to the machine are not covered by this warranty.

During the warranty period, the warranty holder is responsible for the machine transportation charges, if required. During the warranty period, warranty parts will ship by standard method at no charge to the warranty holder. Expedited shipping of warranty parts is the responsibility of the warranty holder.

SOME STATES DO NOT ALLOW LIMITATIONS ON THE LENGTH OF IMPLIED WARRANTIES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

DR[®] Power Equipment shall not be liable under any circumstances for any **incidental or consequential damages or expenses** of any kind, including, but not limited to, cost of equipment rentals, loss of profit, or cost of hiring services to perform tasks normally performed by the DR[®] ROTO-HOG PREMIER POWER TILLER.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

Daily Checklist for the DR ROTO-HOG Premier Power Tiller

! WARNING

When performing any maintenance, you must first shut off the Engine; wait five (5) minutes to allow parts to cool and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

To help maintain your DR ROTO-HOG Premier Power Tiller for optimum performance, we recommend you follow this checklist each time you use your machine.

- [] OIL: With the machine on a level surface, remove the Oil Fill Cap and check the Oil level. Fill the reservoir until the Oil reaches just below the threads with SAE 30 HD motor oil. See page 9.
- [] GAS: Fill the Gas Tank with fresh, unleaded gasoline. See page 9.
- [] ENGINE: It is very important to keep the Engine clean. Remove dirt and other debris from the Engine Cooling Fins. A dirty Engine retains heat and can cause damage to internal Engine components.
- [] HARDWARE: Check all nuts and bolts to be sure that the components are secure.
- [] FRAME: Check all welds to be sure that the Frame is intact and secure.
- [] TINES: Make sure that the Tine Assemblies and Debris Shield are free of accumulated debris.

End of Season and Storage

! WARNING

When performing any maintenance, you must first shut off the Engine; wait five (5) minutes to allow parts to cool and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

NOTE: Please refer to the Engine Owner's Manual for Engine-specific procedures.

- Change the Engine oil.
- If your DR ROTO-HOG Premier Power Tiller will be idle for more than 30 days, we recommend using a gas stabilizer. This will prevent sediment from gumming up the Carburetor. If there is dirt or moisture in the Gas or Tank, remove it by draining the Tank. Completely fill the Tank with fresh, unleaded Gas and add the appropriate amount of stabilizer or gasoline additive. Run the Engine for a short time to allow the additive to circulate.
- Remove the Spark Plug and pour about 1 ounce of motor oil into the cylinder hole. Replace the Plug and pull the Recoil Starter Rope until you feel strong resistance. This will coat the Piston and seat the Valves to prevent moisture buildup.
- Clean or replace the Engine Air Filter. Reference the Engine Owner's Manual.
- Clean dirt and debris from the Engine Cylinder Head Cooling Fins, Debris Screen, and Muffler.
- Clean out residual debris from the under the Debris Shield and Tine Assemblies.
- Lubricate the Tine Assemblies and Wheels. See page 16-17.
- Touch up all rusted or chipped painted surfaces. Sand them lightly before painting.
- Be sure all Nuts, Bolts, and Screws are securely fastened.
- Inspect moving parts and the Tine Drive Belt for damage and wear; replace if necessary.
- If possible, store your DR ROTO-HOG Premier Power Tiller inside, but not near an open flame or spark such as found in a water heater.
- After the DR ROTO-HOG Premier Power Tiller has cooled, cover the machine with a suitable protective cover that does not retain moisture. Do not use plastic, as this material cannot breathe; it also allows condensation to form, which will cause your machine to rust.



75 MEIGS ROAD, P.O. BOX 25, VERGENNES, VERMONT 05491