

DR[®] LAWN EDGER

SAFETY & OPERATING INSTRUCTIONS



Serial No. _____

Order No. _____

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

WARNING

Read and understand this manual and all instructions before operating the DR LAWN EDGER.

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Conventions used in this manual

! WARNING

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

! CAUTION

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

NOTICE

This information is important in the proper use of your machine. Failure to follow this instruction could result in damage to your machine or property.

Serial Number and Order Number

A Serial Number is used to identify your machine and is located on the Serial Number Label on your machine (**Figure 1**). An Order Number is used to check and maintain your order history and is located on the upper left portion of your packing slip. For your convenience and ready reference, enter the Serial Number and Order Number in the space provided on the front cover of this manual.

Additional Information and Potential Changes

DR Power Equipment reserves the right to discontinue, change, and improve its products at any time without notice or obligation to the purchaser. The descriptions and specifications contained in this manual were in effect at printing. Equipment described within this manual may be optional. Some illustrations may not be applicable to your machine.

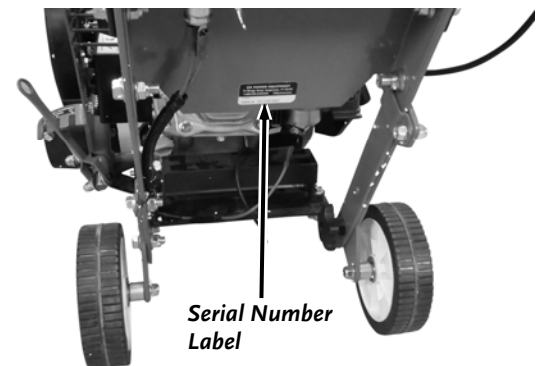


Figure 1

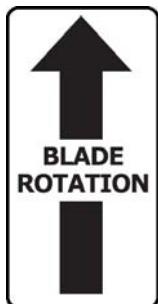
Chapter 1: General Safety Rules

! WARNING

Read this safety & operating Instructions manual before you use the DR LAWN EDGER. 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

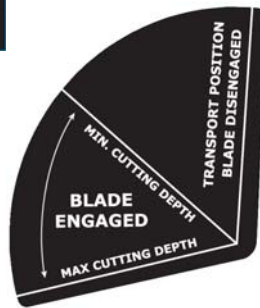
Your DR LAWN EDGER carries prominent labels as reminders for its proper and safe use. Shown below are copies of all the Safety and Information labels that appear on the equipment. Take a moment to study them and make a note of their location on your LAWN EDGER as you set up and before you operate the unit. Replace damaged or missing safety and information labels immediately.



#40056



#40055



#40054



#40052

Protecting Yourself and Those Around You

! WARNING

This is a high-powered machine, with moving parts operating with high energy. You must operate the machine safely. Unsafe operation can create a number of hazards for you, as well as anyone else in the nearby area. Always take the following precautions when using this machine:

- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people, their property, and themselves.
- Always wear protective goggles or safety glasses with side shields while using the LAWN EDGER to protect your eyes from possible thrown debris.
- Avoid wearing loose clothing or jewelry, which can catch on moving parts.
- We recommend wearing gloves while using the LAWN EDGER. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.
- Wear shoes with non-slip treads when using your LAWN EDGER. If you have safety shoes, we recommend wearing them. Do not use the machine while barefoot or wearing open sandals.
- Wear long pants while operating the LAWN EDGER.
- Use ear protectors or ear plugs rated for at least 20 dba to protect your hearing.
- Keep bystanders at least 50 feet away from your work area at all times. Stop the engine when another person or pet approaches.

Safety for Children and Pets

WARNING

Tragic accidents can occur if the operator is not alert to the presence of children and pets. Children are often attracted to the machine and the edging activity. *Never* assume that children will remain where you last saw them. Always follow these precautions:

- Keep children and pets at least 50 feet from the working area and ensure they are under the watchful care of a responsible adult.
 - Be alert and turn the machine off if children or pets enter the work area.
 - Never allow children to operate the LAWN EDGER.
-

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. Always follow these precautions:

- Never run the 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 and open flame, and out of the reach of children.
 - Replace rubber fuel lines and grommets when worn or damaged and after 5 years of use.
 - Fill the gasoline tank outdoors with the engine off and allow the engine to cool completely. Don't handle gasoline if you or anyone nearby is smoking, or if you're near anything that could cause it to ignite or explode. Reinstall the fuel tank Cap and fuel container cap 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 engine to cool completely before storing in any enclosure. Never store a machine that has gas in the tank, or a fuel container, near an open flame or spark such as a water heater, space heater, clothes dryer or furnace.
 - Never make adjustments or repairs with the engine running. Shut down the engine, disconnect the spark plug wire, keeping it away from the spark plug to prevent accidental starting, wait 5 minutes before making adjustments or repairs.
 - Never tamper with the engine's governor setting. The governor controls the maximum safe operation speed and protects the engine. Over-speeding the engine is dangerous and will cause damage to the engine and to the other moving parts of the machine. If required, see your authorized dealer for engine governor adjustments.
 - Keep combustible substances away from the engine when it is hot.
 - Never cover the machine while the muffler is still hot.
 - Do not operate the engine with the air cleaner or the carburetor air intake cover removed. Removal of such parts could create a fire hazard. Do not use flammable solutions to clean the air filter.
 - The muffler and engine become very hot and can cause a severe burn; do not touch.
-

General Safety

WARNING

Operating this LAWN EDGER safely 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 LAWN EDGER:

- Your LAWN EDGER is a powerful tool, not a plaything. Exercise extreme caution at all times. The machine is designed to edge lawns. Do not use it for any other purpose.
 - Know how to stop the LAWN EDGER quickly; see "stopping the engine" in chapter 3.
-

General Safety (continued)

WARNING

- Never operate your unit on a slippery, wet, muddy, or icy surface. Exercise caution to avoid slipping or falling.
- See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by DR Power Equipment.
- Never use the machine without ensuring that all guards and shields are in place.
- Never, under any conditions, remove, bend, cut, fit, weld, or otherwise alter standard parts on the LAWN EDGER. This includes all shields and guards. Modifications to your machine could cause personal injuries and property damage and will void your warranty.
- Allow only one person to operate the LAWN EDGER at any time.
- If the machine should start making an unusual noise or vibration, shut down the engine, disconnect the spark plug wire, keeping it away from the spark plug to prevent accidental starting, wait 5 minutes, then inspect for damage. Vibration is generally a warning of trouble. Check for damaged parts and clean, repair, and/or replace as necessary.
- Never tamper with safety devices. Check their proper operation regularly.
- Before performing any maintenance or inspection procedure on the LAWN EDGER, release the throttle control Bail-Bar, turn the ignition switch to "off" (electric start models), remove the spark plug wire and keep it away from the spark plug.
- Never allow people who are unfamiliar with these instructions to use the LAWN EDGER. Allow only responsible individuals who are familiar with these rules of safe operation to use your machine.
- Never overload or attempt to use the Edger beyond the manufacturer's recommendation. Personal injury or damage to the machine could result.
- While using the LAWN EDGER, don't hurry or take things for granted. When in doubt about the equipment or your surroundings, stop the machine and take the time to look things over.
- Never operate the machine when under the influence of alcohol, drugs, or medication.
- Use the machine only in daylight.
- Stay alert for hidden hazards or traffic.
- Keep all nuts and bolts tight and keep the equipment in good operating condition.

California Proposition 65

WARNING

California Proposition 65:

- Engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.
- This product contains or emits chemicals known to the State of California to cause cancer, birth defects, and other reproductive harm.

A Note to All Users

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® LAWN EDGERS shipped to California, New Mexico and Washington State are provided with spark arresters. Failure of the owner or 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 State Park Association or the appropriate state organization for specific information in your area.

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 this DR LAWN EDGER in a safe manner. Contact us at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance.

Chapter 2: Setting Up The DR LAWN EDGER

It may be helpful to familiarize yourself with the controls and features of your DR LAWN EDGER as shown in **Figure 2** before beginning these procedures. If you have any questions at all, please feel free to contact us at www.DRpower.com.

DR LAWN EDGER Controls and Features

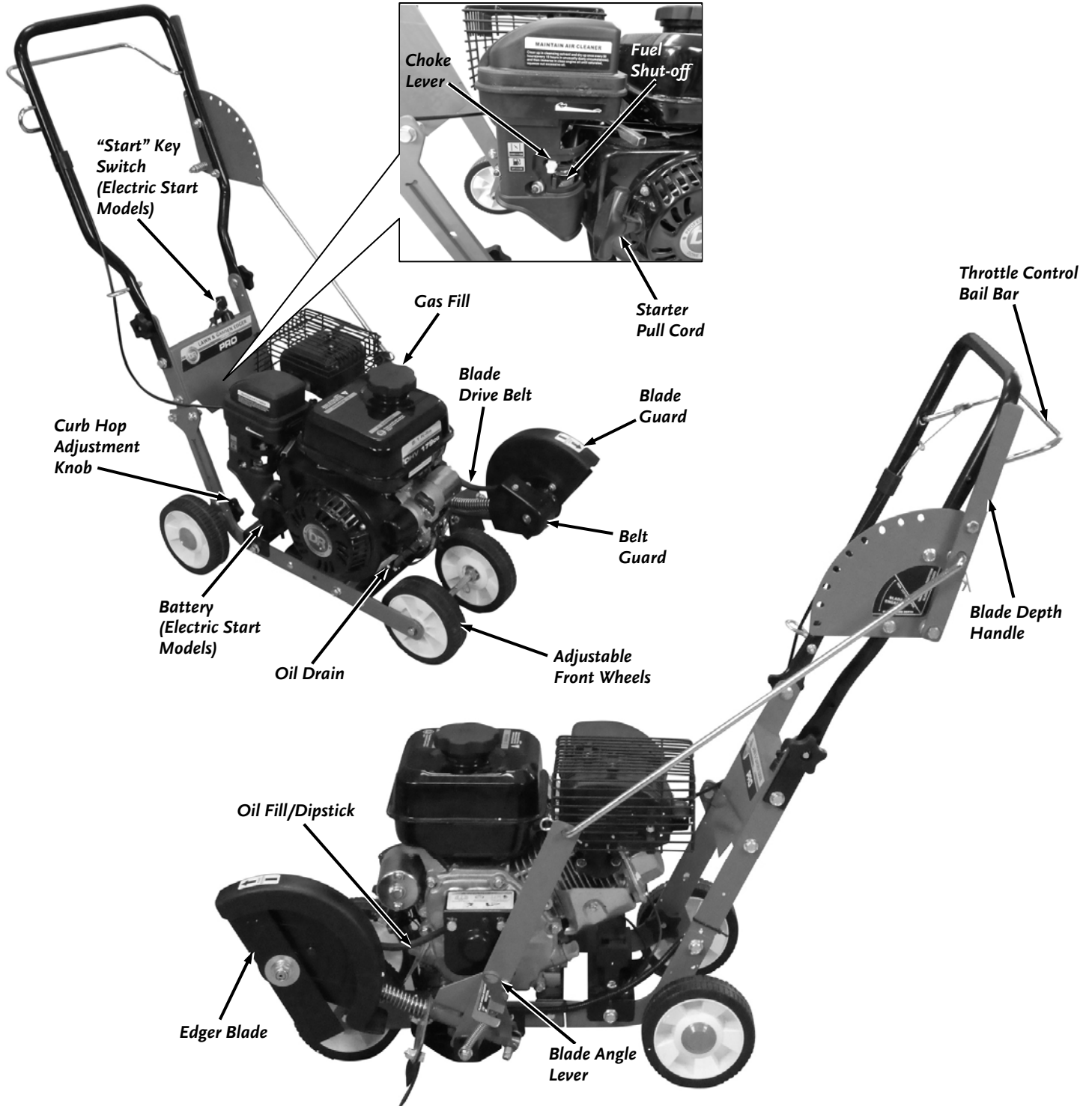


Figure 2

Specifications

	Manual Start	Electric Start
Engine	Rato R180, Recoil start	Rato R180, Key start, Fuse protected starting
Fuel Capacity	0.95 gallons (3.6 L)	0.95 gallons (3.6 L)
Blade Information	9" long x 2" wide, 1/2" center hole. Heat treated alloy steel	9" long x 2" wide, 1/2" center hole. Heat treated alloy steel
Cutting depths	6 settings, 1/2" to 3" max	6 settings, 1/2" to 3" max
Cutting angle	Vertical, +15°, -15°	Vertical, +15°, -15°
Wheels	6" Diameter x 1.5" Wide	6" Diameter x 1.5" Wide
Machine dimensions	18" Wide x 41 1/2" Long x 38" Tall	18" Wide x 41 1/2" Long x 38" Tall
Machine weight	71lbs	73 lbs

Compare the contents with the "Parts Supplied" list below. If you have any questions please contact us at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance.

Parts Supplied (Figure 3):

Item#	Part #	Description	Qty
1	37977	Knob, Five Arm, 3/8-16	2
2	38482	Bolt, Carriage, 3/8-16 X 1.25", GR 5, ZP	2
3	28990	Bolt, Hex, Flange, Tri Lobe, 3/8-16 X 1", GR5 ZP	2
4	33333	Nut, Nylon Lock, Flanged, 3/8-16	2
5	16003	Pin, Hair, 1/2" To 9/16", .12" Wire	2
6	39165	Rod, Linkage, Blade	1

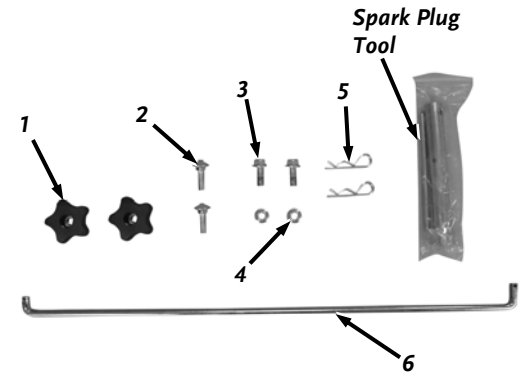


Figure 3

Assembly Instructions

Tools Needed:

- Eye Protection
- Wire Cutters
- Two 9/16" Wrenches

1. Ensure that the Cable Tie that secures the Blade Assembly is cut and removed from the machine (Figure 4).
2. Position the Handlebar onto the Frame Plates and secure at the top holes with two Knobs and Carriage Bolts (Figure 5).
3. Secure the bottom holes of the Handlebar with the Bolts and Locknuts using two 9/16" Wrenches.

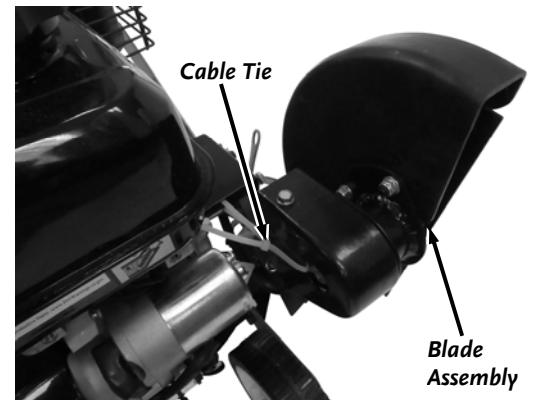


Figure 4

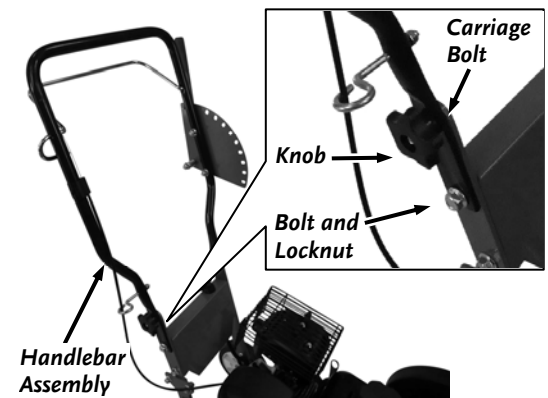


Figure 5

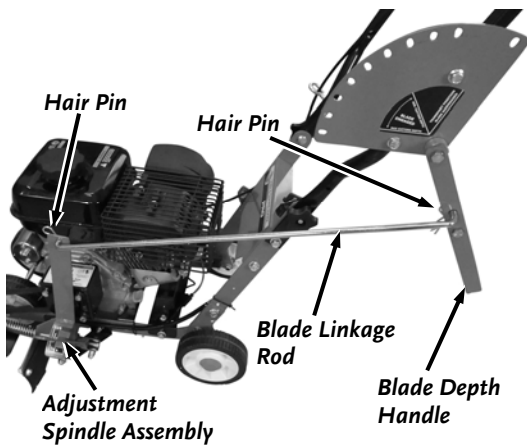


Figure 6

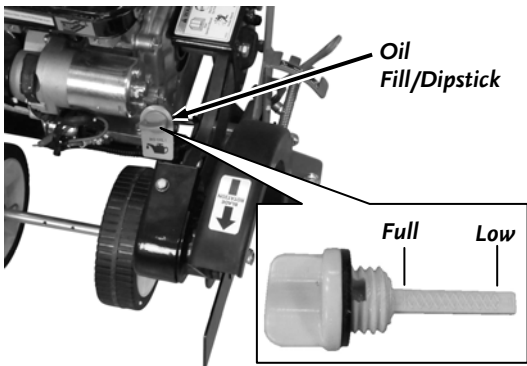


Figure 7

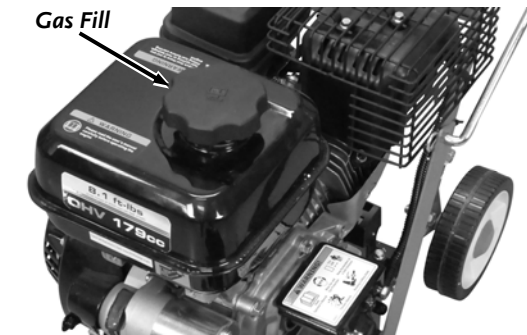


Figure 8

4. Position the Blade Depth Handle as shown to allow room so the Blade Linkage Rod can be installed in the next step (**Figure 6**).
5. Install the Blade Linkage Rod into the holes on the outside of the Blade Depth Handle and Adjustment Spindle Assembly and secure each end with a Hair Pin.

Note: When installing the Hair Pin at the Blade Depth Handle location, push it all the way into the hole so the loop is around the Rod. This lets it hang freely and prevents the Hair Pin from getting bent.

Adding 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 Engine must be level.
 - The dipstick should not be screwed down to ensure an accurate oil level reading.

Engine Oil	SAE 30 and 15w-40: above 50 degrees F; 10w-30: 10-90 degrees F; 5w-30: 30 degrees F or below
Fuel	Unleaded gasoline

Note: Use only the recommended high detergent engine oil. Other types of oil could cause problems operating your machine. Please refer to your Engine Owner's Manual for detailed oil information.

1. Position the machine so the Frame and Engine are level. Remove the Oil Fill/Dipstick (**Figure 7**) and clean the end of it with a rag.
2. Machines are shipped with no oil. Initially add 8 to 10 oz. of the oil recommended by the Engine Manufacturer. Wait one minute for the oil to settle.
3. Remove the Dipstick and check the oil level. Clean the Dipstick with the rag after checking.
4. Continue adding a few ounces of oil at a time, rechecking the Dipstick until the oil reaches the fill mark. Be careful not to overfill.
5. Replace the Dipstick and screw all the way down when full.
6. Remove the Gas Fill Cap and 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 (**Figure 8**). Be careful not to overfill and reinstall the Gas Fill Cap before starting the engine. See your Engine Owner's Manual for more detailed information.

Note: To refill the gas tank, turn the engine OFF and let the engine cool at least five minutes before removing the gas fill cap.

Connect the Battery (Electric Start Models)

We ship all Electric-Starting Edgers with the negative terminal Battery wire disconnected. This prevents the Battery from discharging during shipment. Before using your Edger, you must connect the Battery wire.

Note: *The Battery may have been shipped with a protective Cap over the negative Terminal and the Cap will need to be removed to connect the Negative Wire.*

1. Connect the Black Negative Terminal onto the negative Battery Lug (**Figure 9**).

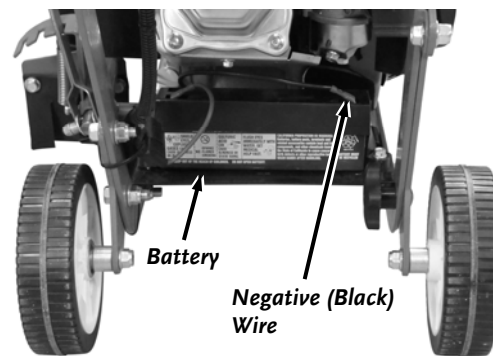


Figure 9

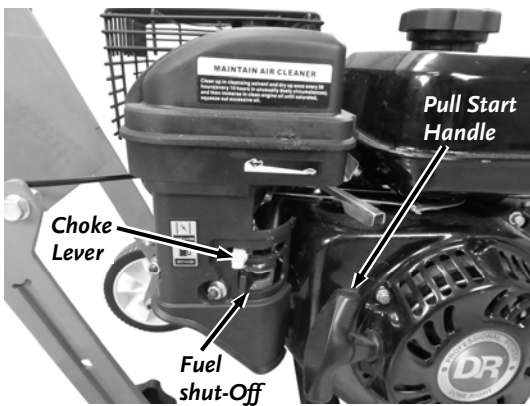


Figure 10

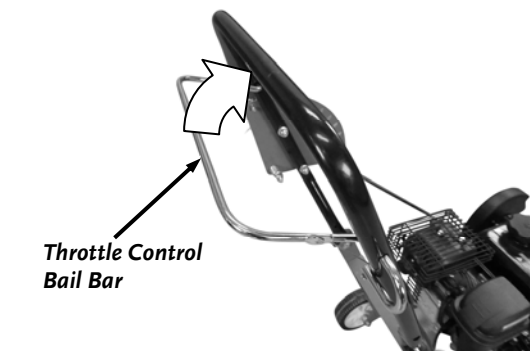


Figure 11



Figure 12

It may be helpful to better familiarize yourself with the features of your LAWN EDGER by reviewing **Figure 2** in Chapter 2 before beginning the steps outlined in this chapter.

⚠ WARNING

Read and understand the warnings listed in “Chapter 2 General Safety Rules” before operating this LAWN EDGER.

Starting the Engine (Manual Start)

1. Make sure the Fuel Shut-off is in the “OPEN” position to the right (**Figure 10**).
2. Move the Choke Control Lever to the left to the choke position (leave in the run position to the right if the engine is already warm).

Note: The Throttle Control Bail-Bar must be held to the handlebar for the Engine to start and continue running. If you need to stop the machine quickly for any reason, let go of the Throttle Control Bail-Bar.

3. Hold the Throttle Control Bail Bar against the Handlebar (**Figure 11**) and slowly pull the Starter Cord until you feel resistance (**Figure 10**), then pull quickly. The Cord will recoil back into position.
4. As the engine warms up, slowly adjust the Choke to the right towards the run position. Wait until the engine runs smoothly before each Choke adjustment.
5. When the Engine is warmed up and running smoothly, ensure that the Choke is fully in the run position to the right.

Starting the Engine (Electric Start)

1. Make sure the Fuel Shut-off is in the “OPEN” position (**Figure 10**).
2. Move the Choke Control Lever to the left to the choke position (leave in the run position to the right if the engine is already warm).

Note: The Throttle bar must be held down for the Engine to start and continue running. If you need to stop the machine quickly for any reason, let go of the Throttle Control Bail-Bar.

3. Hold the Throttle Control Bail Bar against the Handlebar (**Figure 11**) and turn the Key Switch fully to the “Start” position until the engine starts (**Figure 12**). The Key will move back to the center position when released.
4. As the engine warms up, slowly adjust the Choke to the right towards the run position (**Figure 12**). Wait until the engine runs smoothly before each Choke adjustment.
5. When the Engine is warmed up and running smoothly, ensure that the Choke is fully in the run position to the right.

Stopping the Engine

1. Release the Throttle Control Bail Bar to the idle position to stop the Engine (*Figure 13*).

Edging Lawns

These edging instructions are basic guidelines. Try different techniques in direction and depth of cut to determine what works best for your situation.

! WARNING

Read and understand the warnings listed in “Chapter 2 General Safety Rules” before operating this LAWN EDGER.

1. Check that the ground is free of foreign objects, such as toys, wires, string, rocks etc.
2. Move the LAWN EDGER into position with the Blade above the Ground and the wheels on a solid surface. Align the Blade with the line of grass to be edged.
3. Start the Engine as described in the “Starting the Engine” section on page 10.
4. As you hold the Throttle Bail-Bar to the Handlebar, move the Blade Depth Handle to the side to release it from the Height Adjust Plate (*Figure 14*).
5. Slowly lower the blade into the ground by pushing the Blade Depth Handle forward and down to the desired depth and insert the Handle Stud into the hole in the Height Adjust Plate.

! WARNING

Try not to let the Blade hit against hard surfaces such as cement or rocks. Sparks are created by the metal Blade hitting these hard objects and could start a fire in dry materials causing damage to property and could cause personal injury.

NOTICE

- Do not lower the Blade over rocks, Concrete, asphalt etc. Striking hard surfaces can result in damage to the machine and cause personal injury.
 - Always make sure the Blade is not in contact with anything before starting the machine. The machine could be damaged and the operator could be injured.
6. Walk forward as you guide the Handlebars so the blade follows the desired path.
 7. When you have reached the end of the area to be edged, move the Blade Height Lever back to the transport position.

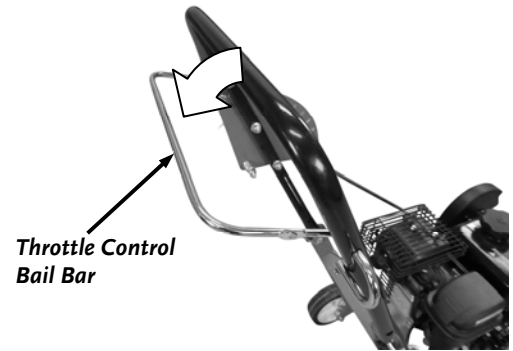


Figure 13

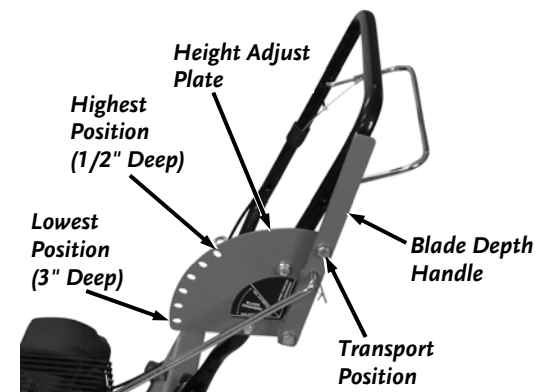


Figure 14

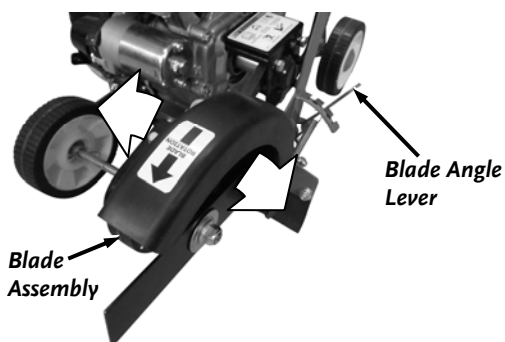


Figure 15

Changing the Cutting Angle

The Blade angle can be adjusted to three different settings from vertical to a 15 degree tilt in either direction. This will allow you to use the Edger for beveled edging.

⚠ WARNING

Never change the cutting angle with the engine running. Always release the Throttle Control Bail-bar to shut off the engine before changing the Blade angle.

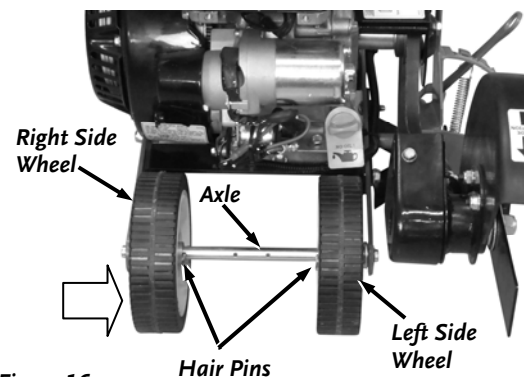


Figure 16

1. Ensure that the Engine is turned off.

1. Pull the Blade Angle Lever out of the slot and insert it into the desired angle slot (*Figure 15*).

Curb Hop Setup

The Wheels can be set up to allow edging on curbs. Follow the steps below to operate the Curb Hop for curb edging.

1. Ensure that the Engine is turned off.

2. Pull the two Hair Pins from the Axle (*Figure 16*). Slide the right side Wheel over against the left side Wheel. Insert one Hair Pin next to the Wheel to secure it. Insert the remaining Hair Pin in one of the remaining holes of the Axle.

3. Position the machine on the Curb with the left side rear Wheel and both front Wheels on the Curb (*Figure 17*).

4. Loosen the Hand Knob at the right side rear Wheel and lower the Wheel to the ground below the Curb (*Figure 18*).

Note: Ensure the machine is level and balanced on the curb when performing the next step.

5. Tighten the Hand Knob to secure the Wheel in the extended position.

6. Position the Edger as shown for Curb edging (*Figure 17*).

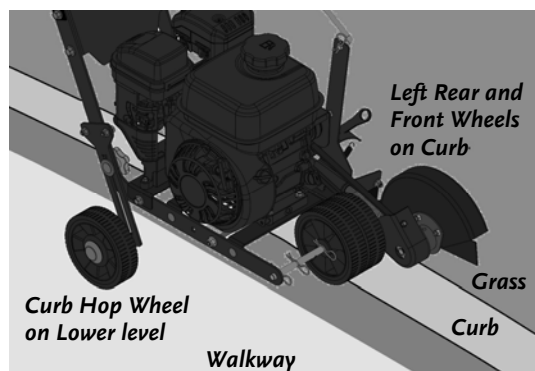


Figure 17

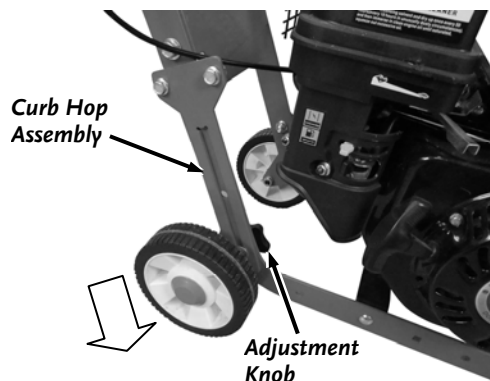


Figure 18

Chapter 4: Maintaining The DR LAWN EDGER

Regular maintenance is the way to ensure the best performance and long life of your machine. Please refer to this manual and the engine manufacturer's owner's manual for maintenance procedures. Service intervals listed in the checklist below supersede those listed in the engine manufacturer's owner's manual.

⚠ WARNING

Before performing any maintenance procedure or inspection, stop the engine, wait five minutes to allow all parts to cool. Disconnect the spark plug wire, keeping it away from the spark plug. Disconnect the Battery Terminals (Electric start only).

Regular Maintenance Checklist

PROCEDURE	BEFORE EACH USE	EVERY 5 HOURS	EVERY 25 HOURS	EVERY 50 HOURS
Check Engine Oil Level	▲			
Check General Equipment Condition	▲			
Check Cutting Blade (If it is excessively worn or damaged)	▲			
Clean Engine Exterior & Cooling Fins	▲			
Remove debris from Debris Guard	▲			
Replace Cutting Blade (Blade life varies depending on use)		▲		
Clean and lubricate Spindle Housing Assembly (with light oil such as WD-40)		▲		
Replace Belt if stretched or worn			▲	
Clean Air Filter			▲	
Lubricate Cables (SAE 30 Oil)			▲	
Change Engine Oil		1 st time 5 hours	▲	
Replace Spark Plug				▲
Replace Air Filter				▲

Removing and Replacing the Engine Oil

Tools and Supplies Needed:

- 10mm Wrench
- Rags and approved Container (for waste oil)
- Small Funnel
- Engine Oil (see your Engine Manual for Oil specifications)

NOTICE

The Frame and Engine must be level to get an accurate reading when adjusting the oil level.

1. Position the machine so the Frame and Engine are level and place a Waste Oil Container under the Oil Drain Plug (**Figure 19**).
2. Remove the Oil Drain Plug with a 10mm Wrench to drain the Oil into the Container.
3. Replace the Oil Drain Plug and remove the Oil Fill/Dipstick.

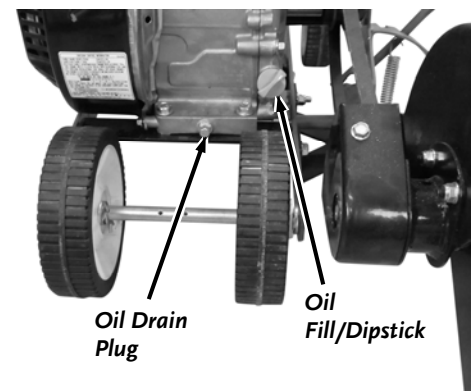


Figure 19

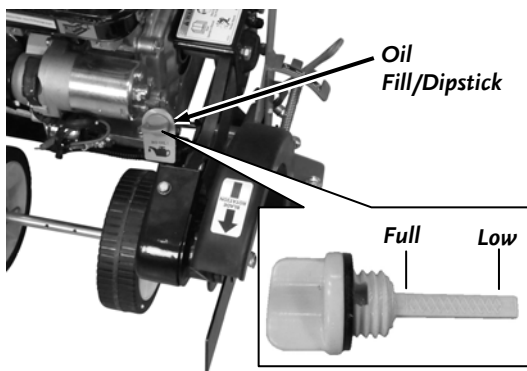


Figure 20

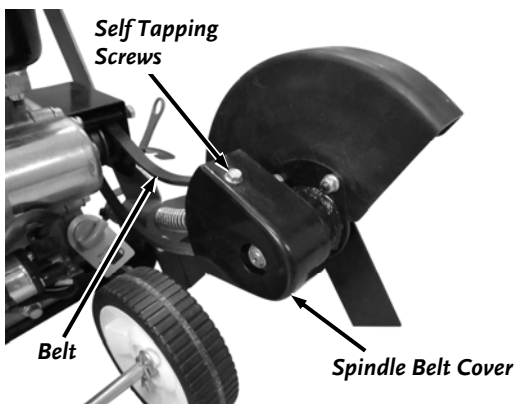


Figure 21

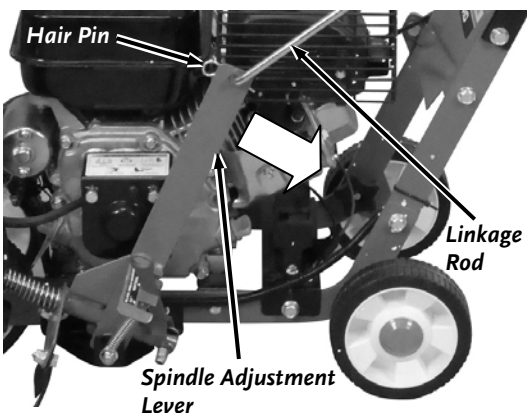


Figure 22

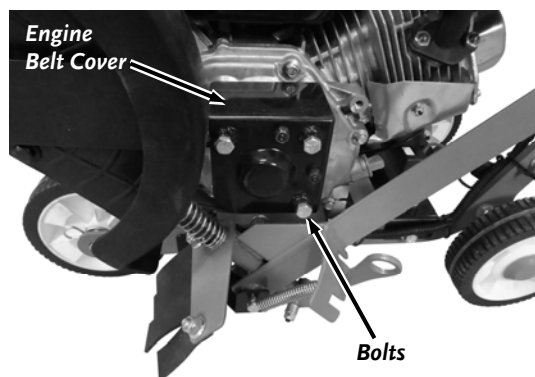


Figure 23

- Initially add 8 to 10 oz. of oil (type of oil recommended by the Engine Manufacturer) into the Oil Fill and wait one minute for the oil to settle.

NOTICE

- Fill the Oil reservoir slowly, checking the level frequently to avoid overfilling.
- To get an accurate reading when checking the oil level:
 - The Engine must be level.
 - The dipstick should not be screwed down to ensure an accurate oil level reading.

- Check the Dipstick (**Figure 20**) and continue adding a few ounces of oil at a time, rechecking the Dipstick until the oil reaches the fill mark. Be careful not to overfill.

Replacing the Belt

Tools and Supplies needed:

- 3/8" Wrench
- 1/2" Wrench
- New DR Belt (Part number 39191)

- Remove the two self tapping Screws from the Spindle Belt Cover using a 3/8" Wrench and remove the Spindle Belt Cover (**Figure 21**).
- Remove the Hair Pin from the lower end of the Linkage Rod and remove the Rod from the Spindle Adjustment Lever (**Figure 22**).
- Rotate the Spindle Adjustment Lever back to gain access to the Engine Belt Cover (**Figure 23**).
- Remove the three Bolts that secure the Engine Belt Cover using a 1/2" Wrench. Remove the Cover from the Engine.
- Remove the worn/damaged Belt.
- Install a new belt onto the Engine and Spindle Pulleys.
- Insert the Linkage Rod into the Spindle Adjustment Lever and secure with the Hair Pin.
- Install the Engine and Spindle Belt Covers.

Replacing the Blade

Tools and Supplies needed:

- 18mm Wrench
- #2 Philips Head Screwdriver
- Torque Wrench with 18mm Socket
- DR Edger Blade (Part number 39173)

1. Position the Height Adjust Handle at the transport position to lift the Spindle off the ground (**Figure 24**).
2. Insert a Philips Screwdriver into the hole in the Shaft to hold the Shaft from turning (**Figure 25**).

Note: You may need to rotate the Blade to get the hole in the Shaft to align correctly.

3. Remove the Blade Locknut using a 18mm Wrench.
4. Remove the outer Compression Washer and the worn/damaged Blade.

Note: Leave the inner Compression Washer and the Flat washers in place on the Spindle.

5. Install the new Blade. Secure the Blade with the Compression Washer and Locknut using a 18mm Wrench. Torque to 25 ft-lbs.
6. Remove the Screwdriver when finished.

Replacing the Battery

Tools Needed:

- 3/8" Wrench
- 7/16" Wrench

1. Disconnect the Battery Terminals (**Figure 26**).
2. Remove the Bolts and Locknuts that secure the Battery Clamp using a 3/8" Wrench for the Bolts and 7/16" Wrench for the Locknuts.
3. Remove the Clamp and the dead Battery.
4. Install the new Battery.
5. Install the Battery Clamp and secure with the Bolts and Locknuts.
6. Attach the Battery Terminals. Black Wire to negative black Terminal and Red Wire to positive red Terminal.

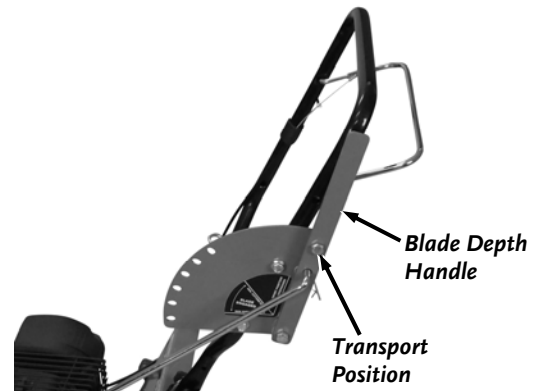


Figure 24

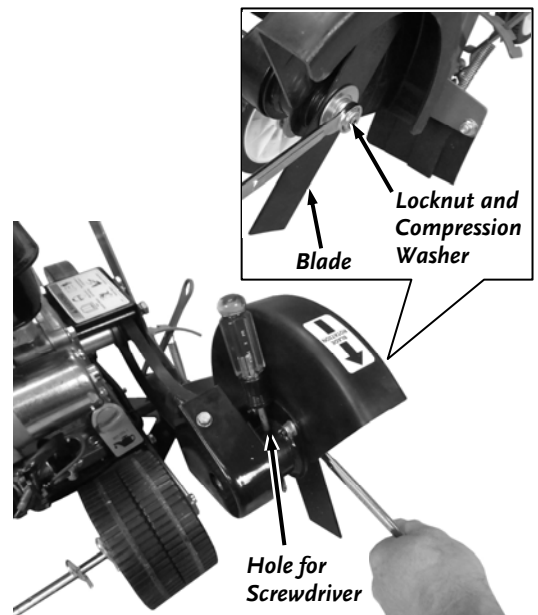


Figure 25

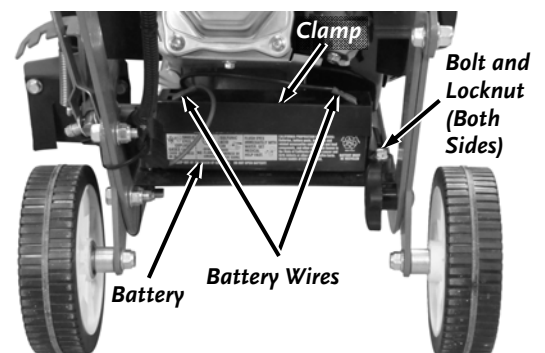


Figure 26

Battery Care (For Electric-Starting Models Only)

Proper care can extend the life of a Battery. Follow these recommendations to ensure your Battery's best performance and long life:

- Do not allow the Battery charge to get too low. If the machine is not used, charge the Battery every 4 – 6 weeks. Operate the engine for at least 45 minutes to maintain proper Battery charge.
- Store an unused Battery in a dry environment with temperatures between +40°F (+5°C) and +95°F (+35°C). Make sure the storage temperatures will never be outside of these limits. The lower the storage temperature is within the specified temperature, the better as the battery will discharge more slowly at low temperatures.
- Do not charge an already charged Battery. In theory, you cannot overcharge our Battery with a trickle charger; however, when a Battery is fully charged and the charger is still on, it generates heat that could be harmful to the Battery. A fully charged Battery will read 12V-13.2V with a voltmeter.
- Do not continue to crank your Engine when the Battery charge is low.

NOTICE

When you are finished charging the battery, disconnect the charger from the outlet first, then disconnect the battery charger wires from the battery. If you leave the battery charger wires connected to the battery, the battery will discharge itself back into the charger.

Charging the Battery

Operate the Engine for at least 45 minutes to maintain proper Battery charge. If the Battery loses its charge, you will need to use a trickle charger (like the DR Battery Charger) to recharge it. The Charger should have an output of 12 volts DC at no more than 2 amps.

- At 1 amp the Battery may need to be charged for as long as 48 hours.
- At 2 amps, the Battery may need to be charged for as long as 24 hours.

NOTE: Using the Recoil Starter and then running the Engine will not recharge a dead or significantly discharged Battery.

To connect a Battery Charger to your DR LAWN EDGER, follow the steps listed below.

1. Attach the Black (-) alligator clipped wire from the Charger Adapter to the Negative (-) terminal of the Battery, then attach the Red (+) alligator clipped wire to the Positive (+) Battery terminal.
2. Plug the Charger into a standard wall outlet.
 - Typically, the Battery takes between 6 and 8 hours to fully charge. Do not leave the charger on the battery longer than 24 hours for a 2 amp charger, or 48 hours for a 1 amp charger as you could potentially damage the battery..
 - You can charge the Battery many times. The Battery lasts longer if you charge it before it is fully drained. Keep it fully charged and at room temperature when not using your DR LAWN EDGER.
 - If the Battery does not hold its charge for very long under normal conditions or it simply won't hold a charge, then replace it. You can purchase replacement Batteries directly from us. To install your new Battery, follow the directions on the next page.

Disposing of the Battery Responsibly (Electric-Start Models)

The Battery is a sealed lead-acid Battery. Recycle or dispose of it in an environmentally sound way.

- Do not dispose of a lead-acid Battery in a fire; the Battery may explode or leak.
- Do not dispose of a lead-acid Battery in your regular, household trash. Law in most areas prohibits incinerating, disposing in a landfill, or mixing a sealed lead-acid Battery with household trash.

Recycling a Used Battery

Please dispose of your used Batteries responsibly by recycling them. Call your local Solid Waste Management District or your local waste handler to locate the collection site nearest you. Some collection sites recycle Batteries year-round; others collect them periodically.

You can also visit the Web site of Earth 911 for more information [www.earth911.org].

For a fee, you can recycle your Batteries with the International Metals Reclamation Company. Visit them at www.inmetco.com and click Services; or contact them at:

INMETCO
One INMETCO Drive
Ellwood City, PA 16117
(724) 758-2800; fax (724) 758-2845

To learn more about hazardous waste recycling, visit the Web site for Battery Council International [www.batterycouncil.org] or for the Environmental Protection Agency [www.epa.gov].

Chapter 5: Troubleshooting

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

WARNING

Shut down the engine, remove the spark plug wire keeping it away from the Spark Plug and wait 5 minutes for parts to cool before performing any maintenance procedure or inspection on the LAWN EDGER.

Troubleshooting Table

SYMPTOM	POSSIBLE CAUSE
<i>Recoil will not pull out or is difficult to pull.</i>	<ul style="list-style-type: none"> ⇒ 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. ⇒ Check the Engine oil level; the Engine may be seized. ⇒ 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"> ⇒ Make sure the Throttle Control Bail-Bar is held to the Handlebar or the engine will not start. ⇒ Check the oil and gas level. ⇒ Make sure that the Fuel Shut-Off is in the ON position. ⇒ Check that the Spark Plug Wire is attached. ⇒ The Air Filter may be dirty; change it following the procedure in the Engine Owner's Manual. ⇒ The gas may be old; change it if necessary. Use a fuel stabilizer if you keep gas longer than one month. ⇒ Check the Throttle and Choke settings, adjustment and travel. ⇒ 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. ⇒ <u>Electric Start Models</u>: Check the wire connections—especially the ground connections to the Engine and the Starter connections. Check to be sure that all of the connections are clean and tight. ⇒ <u>Electric Start Models</u>: The Battery may not be charged. Check the voltage yourself or at a Service Station. If it is low, charge it with a 12-volt, 1 to 2 amp trickle Charger. If you do not use your machine for at least 45 minutes at a time, the Battery may need to be periodically charged. See the "Battery Care" section in Chapter 4. ⇒ 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"> ⇒ Make sure the Choke Lever is all the way off. ⇒ The Air Filter may be dirty; change it following the procedure in the Engine Owner's Manual. ⇒ The Spark Plug may be dirty or cracked; change it if necessary. ⇒ 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. ⇒ Check that the Cooling Fins are clean and free of debris. Clean as needed. ⇒ If your Engine still lacks power, visit our website at www.DRpower.com.

Troubleshooting Table (Continued)

WARNING

Shut down the engine, remove the spark plug wire and wait 5 minutes before performing any maintenance procedure or inspection on the LAWN EDGER.

SYMPTOM	POSSIBLE CAUSE
<i>Engine smokes.</i>	<ul style="list-style-type: none">⇒ Check the oil level and adjust as needed.⇒ Clean the Engine cooling fins and the carburetor housing if they are dirty.⇒ The Air Filter may be dirty; change it following the procedure in the Engine Owner's Manual.⇒ You may be using the wrong oil. Refer to your Engine Owner's Manual for detailed information.⇒ If the Engine still smokes, visit our website at www.DRpower.com.
<i>The Engine runs well but the Blade won't move.</i>	<ul style="list-style-type: none">⇒ The Height Control Lever must be moved from the transport position to one of the lower depth settings to engage the Blade⇒ The Blade Belt is off the pulleys or broken. Reinstall or change Belt (refer to "Chapter 4: Maintaining the DR LAWN EDGER").⇒ Confirm there is nothing wedged/ wrapped around Blade, or Pulleys.⇒ Confirm that Belt has not stretched to a point that it is slipping off the Pulleys.⇒ Inadequate torque on the Blade Nut will allow the blade to stop when it makes contact with the ground. Blade Nut torque should be approximately 25 ft-lbs⇒ Check for excessive soil build-up in the Debris Guard

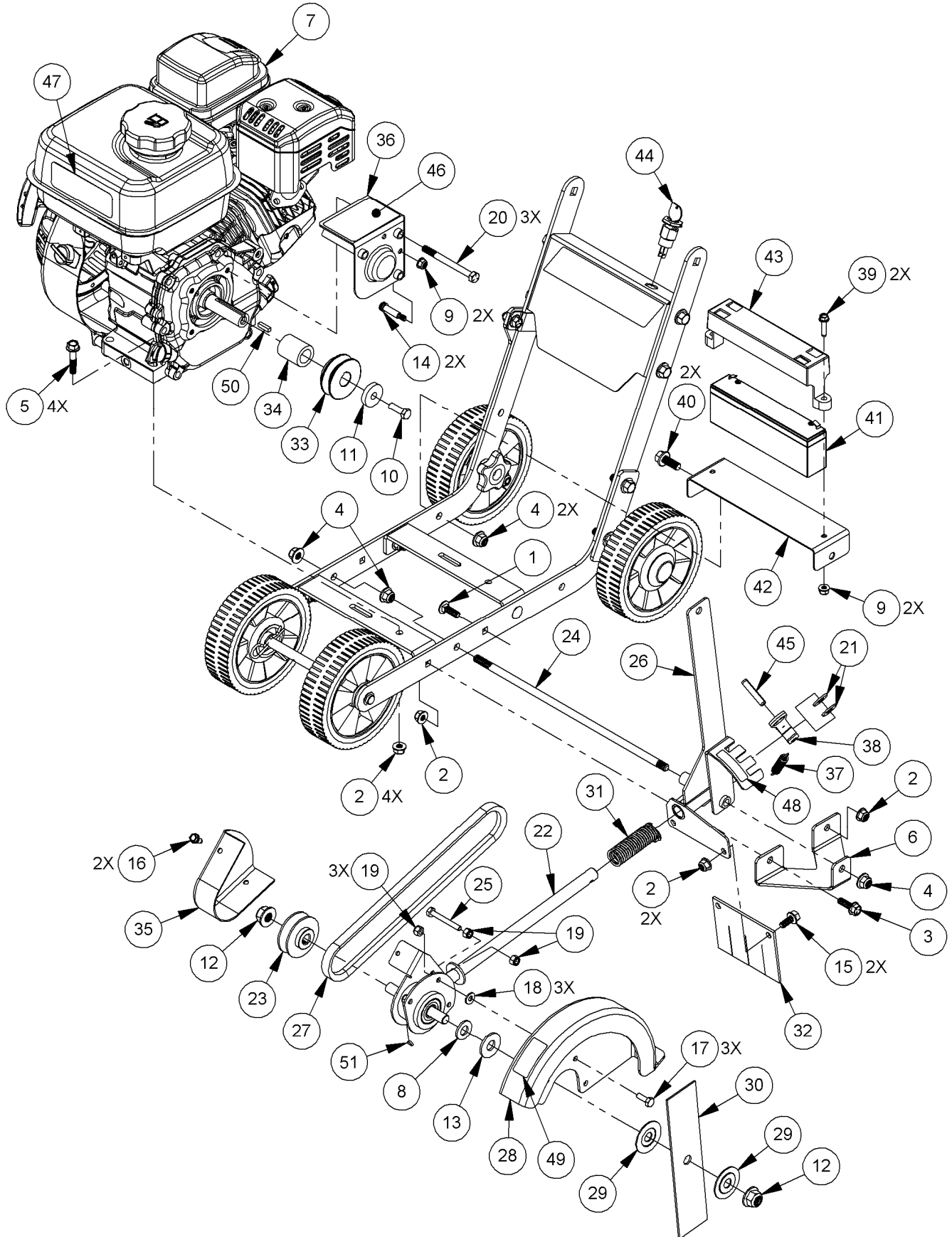
Chapter 6: Parts Lists and Schematic Diagrams

Parts List - DRIVE ASSEMBLY

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

Ref#	Part#	Description	Ref#	Part#	Description
1	18762	Bolt, Carriage, 5/16-18 UNC X 1.00, GR 5, ZP	26	10000028934	Spindle Adjustment Assembly w/Labels
2	33332	Nut, Nylon Lock, Flanged, 5/16-18	27	39191	Belt, A27
3	39354	Bolt, Hex, Flange, 5/16-18 X 1.00", GR5, ZP	28	10000028922	Guard w/Labels, Blade
4	33333	Nut, Nylon Lock, Flanged, 3/8-16	29	39174	Washer, Compression, Blade
5	33352	Bolt, Hex, Flange, 5/16-18 X 1.5"	30	39173	Blade
6	39171	Bracket, Support, Height Adjust	31	39180	Spring, Spindle, Tension
7	10000028960	Engine w/Labels, DR, 179cc, M/S	32	39183	Flap, Mud
	10000028895	Engine w/Labels, DR, 179cc, E/S	33	39193	Pulley, A-Profile, 2.25" OD X .75" ID
8	23499	Washer, SAE Flat, 1/2", ZP	34	39295	Spacer, 25mm OD X .75" ID X1.436"
9	33331	Nut, Nylon Lock, Flanged, 1/4-20	35	39298	Cover, Belt, Spindle
10	17882	Bolt, HCS, 5/16-24 X 1", GR2 ZP	36	10000028951	Cover w/Labels, Belt, Engine
11	27901	Washer, Flat, .385" X 1.25" X .25", ZP	37	39681	Spring, Latch
12	33335	Nut, Nylon Lock, Flanged, 1/2-13	38	39674	Latch, Blade Angle
13	10179	Washer, Flat, 1/2" USS	39	18013	Bolt, Tri Lobe, 1/4-20 x 1.0"
14	39353	Bolt, Shoulder, 5/16" X 1.00", 1/4-20	40	333471	Bolt, Hex, Flange, 3/8-16 X 1"
15	35023	Bolt, Hex, Flange, 5/16-18 X .75"	41	24749	Battery, 2.3 Ah, 12V
16	17912	Screw, 1/4-20 X .500", Tri-Lobe	42	39355	Bracket, Battery
17	15730	Bolt, HCS, 1/4-20 X 3/4", GR5 ZP	43	14385	Clamp, Battery
18	14339	Washer, Flat, 1/4", SAE, ZP	44	11308	Switch, Key B805 W/Hardware
19	11073	Nut, Nylon Lock, 1/4-20, ZP	45	40046	Pin, Roll
20	39382	Bolt, Hex, 5/16-24 X 3.5", GR5, ZP	46	40052	Label, Multi Warning
21	11241	Washer, Flat, 5/16" USS, ZP	47	40057	Label, Engine
22	39184	Spindle Housing Assembly	48	40055	Label, Blade Angle
23	39297	Pulley, A Profile, 2.25" OD X .5" ID	49	40056	Label, Blade Rotation
24	39759	Rod, Thru	50	11914	Key, Sq, 3/16" X 1"
25	11456	Bolt, HHCS, 1/4-20 X 2", GR2, ZP	51	39306	Key, Woodruff, 3mm x 10mm

Schematic – DRIVE ASSEMBLY

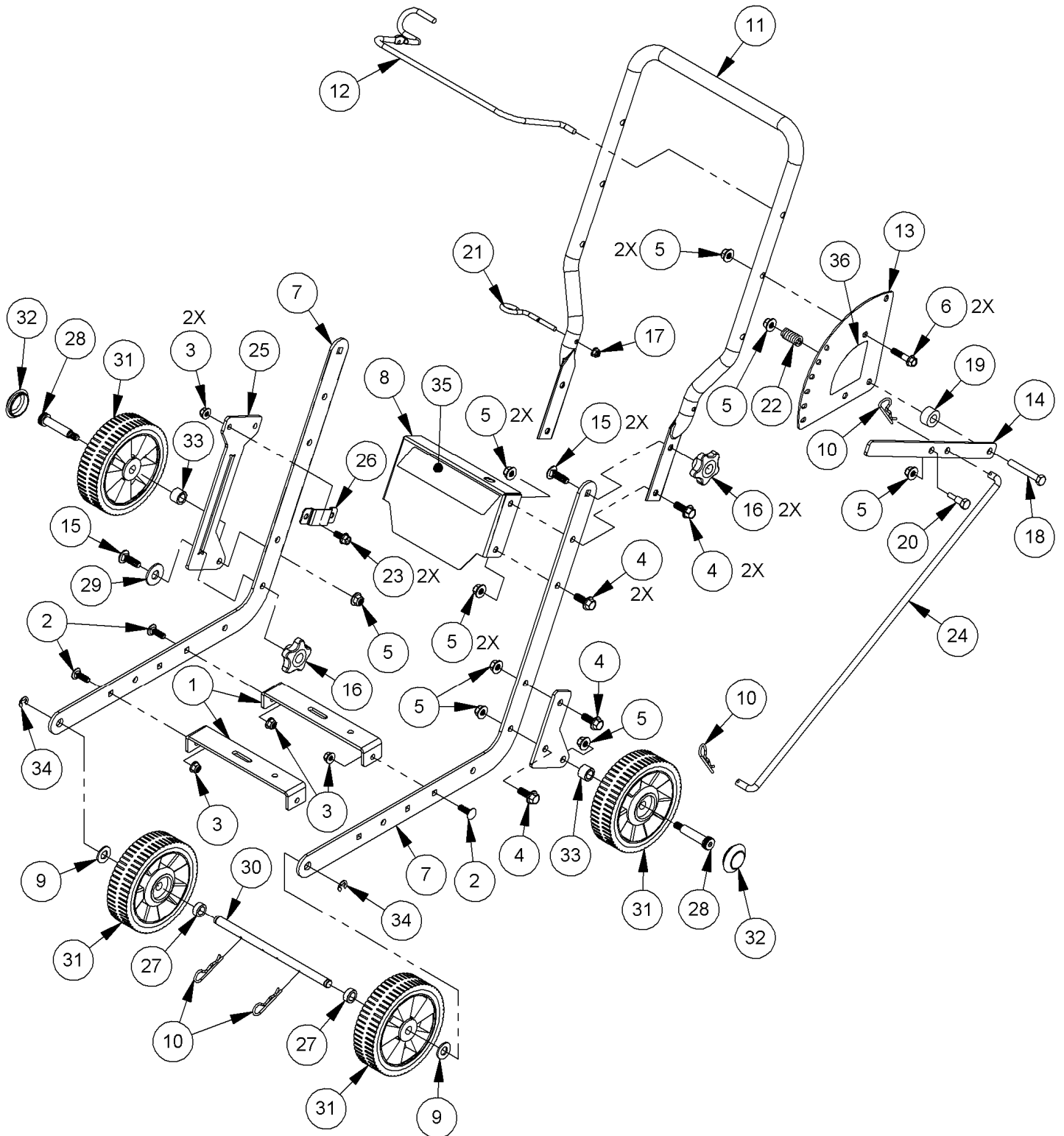


Parts List – FRAME AND HANDLEBAR ASSEMBLY

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

<u>Ref#</u>	<u>Part#</u>	<u>Description</u>	<u>Ref#</u>	<u>Part#</u>	<u>Description</u>
1	39169	Bracket, Mount, Engine	19	39675	Spacer, Handle
2	18762	Bolt, Carriage, 5/16-18 UNC x 1.00", GR5, ZP	20	39302	Pin, Detent, 3/8-16, ZP
3	33332	Nut, Nylon Lock, Flanged, 5/16-18	21	39303	Loop, Engine Pull Cord
4	28990	Bolt, Hex, Flange, Tri Lobe, 3/8-16 X 1", GR5 ZP	22	39182	Spring, Handle Return
5	33333	Nut, Nylon Lock, Flanged, 3/8-16	23	35023	Bolt, Hex, Flange, 5/16-18 X .75"
6	33352	Bolt, Hex, Flange, 5/16-18 X 1.5"	24	39165	Rod, Linkage, Blade
7	39166	Plate, Frame	25	39300	Bracket, Adjustable Wheel
8	10000028894	Bracket w/Labels, Support, Handlebars	26	39301	Clasp, Sliding Wheel
9	23499	Washer, SAE Flat, 1/2", ZP	27	39304	Spacer, Wheel
10	16003	Pin, Hair, 1/2" To 9/16", .12" Wire	28	39307	Bolt, Shoulder
11	39159	Handlebar	29	39676	Washer, Curb Hop
12	39160	Bail Bar	30	39170	Axle, Front
13	10000028933	Plate w/Labels, Height Adjust, Blade	31	39359	Wheel, Bearing
14	39162	Handle	32	39360	Hubcap, Wheel
15	38482	Bolt, Carr, 3/8-16 X 1.25", GR5, ZP	33	40045	Spacer, Rear Wheel
16	37977	Knob, Five Arm, 3/8-16	34	40048	Ring, Retaining
17	33331	Nut, Nylon Lock, Flanged, 1/4-20	35	40050	Label, Branding Edger
18	16484	Bolt, HCS, 3/8-16 X 2.5", GR5, ZP	36	40054	Label, Blade Engage
<u>Not Illustrated</u>					
			39356		Harness, Wire, E/S
			39358		Wire, Ground, Battery
			10000029124		Cable, Engine, to Bail Bar

Schematic – FRAME AND HANDLEBAR ASSEMBLY



Notes:

DR[®] LAWN EDGER



2-Year Limited Warranty

Terms and Conditions

The DR[®] LAWN EDGER 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.

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[®] LAWN EDGER 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[®] LAWN EDGER 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's manuals. The warranty holder is responsible for replacement of normally wearing parts such as the Belt, Air Filter, Spark Plug, and Cutting Blade. 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 be shipped 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[®] LAWN EDGER.

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 ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

Daily Checklist for the DR LAWN EDGER

To help maintain your DR LAWN EDGER for optimum performance, we recommend you follow this checklist each time you use your LAWN EDGER.

WARNING

Before performing any maintenance procedure or inspection, stop the engine, wait five (5) minutes to allow all parts to cool. Disconnect the spark plug wire, keeping it away from the spark plug.

- Check the engine oil and Gas Tank level.
- Check that Engine is clean of debris.
- Check the general condition of the LAWN EDGER, e.g.; nuts, bolts, welds, etc.
- Check Belt for wear and/or stretching.
- Check Tire wear.
- Check the Blade for wear and damage.
- Check the Frame for wear and damage.
- Clean inside of Debris Guard.
- Remove any debris wrapped around the Blade for Belt and Bearing protection.

End of Season and Storage

WARNING

Before performing any maintenance procedure or inspection, stop the engine, wait five (5) minutes to allow all parts to cool. Disconnect the spark plug wire, keeping it away from the spark plug.

- Change the engine oil.
- Clean or replace the Air Filter.
- Check the blade for wear and damage.
- Remove any debris wrapped around the Blade
- If your DR LAWN EDGER 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.
- Clean the exterior of the unit to remove all dirt, grease, and any other foreign material. To prevent rust, touch up painted surfaces that have been scratched or chipped.
- Be sure all nuts, bolts, and screws are securely fastened.
- Inspect moving parts and the Blade Belt for damage and wear; replace if necessary.
- Remove the Spark Plug(s) and pour about 1 ounce of motor oil into the Cylinder hole. Replace the Plug(s) and crank the Engine over a couple of times using the Pull Cord, or the Electric Starter (for Electric Start Machines). This will coat the piston and seat the valves to prevent moisture buildup.
- If possible, store the LAWN EDGER in a dry, protected place. If it is necessary to store the LAWN EDGER outside, cover it with a protective material (especially the Engine). For Electric Start Model, store the machine in a dry environment with temperatures between +40°F (5C) and +95°F (+35C). Make sure the storage temperatures will never be outside of these limits. The lower the storage temperature is within the specified temperature, the better as the battery will discharge more slowly at low temperatures. If it is necessary to store the LAWN EDGER outside make sure to disconnect the battery and store it in an environment as listed above. Make sure the disconnected battery terminals are not resting on any surface that may be prone to collecting water, snow or any other liquid as this may cause damage to the terminals and to the battery when reconnected.



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