

DR[®] LAWN and GARDEN EDGER

SAFETY & OPERATING INSTRUCTIONS



Model:
PRO XL

Serial No. _____

Order No. _____

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

WARNING

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

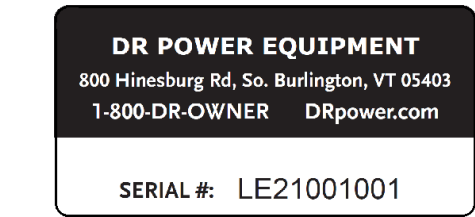


Figure 1

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 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.

California Proposition 65

 **WARNING**

CANCER AND REPRODUCTIVE HARM - www.P65Warnings.ca.gov.

Chapter 1: General Safety Rules

WARNING

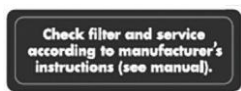
Read this safety & operating Instructions manual before you use the DR LAWN AND GARDEN EDGER. Become familiar with the operation and service recommendations to ensure the best performance from your machine. If you have any questions or need assistance, please contact us at www.DRpower.com or call toll-free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

Labels

Your DR LAWN AND GARDEN 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 DR LAWN AND GARDEN EDGER as you set up and before you operate the unit. Replace damaged or missing safety and information labels immediately.



#A0001004995



#A0001004998



#A0000986541



#A0001004997



#A0001004991



#400561



#A0001004993



#400551

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 Operator Presence Lever to shut off the Engine, 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.

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 AND GARDEN 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 AND GARDEN 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 and GARDEN EDGER

It may be helpful to familiarize yourself with the controls and features of your DR LAWN AND GARDEN 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 AND GARDEN EDGER Controls and Features

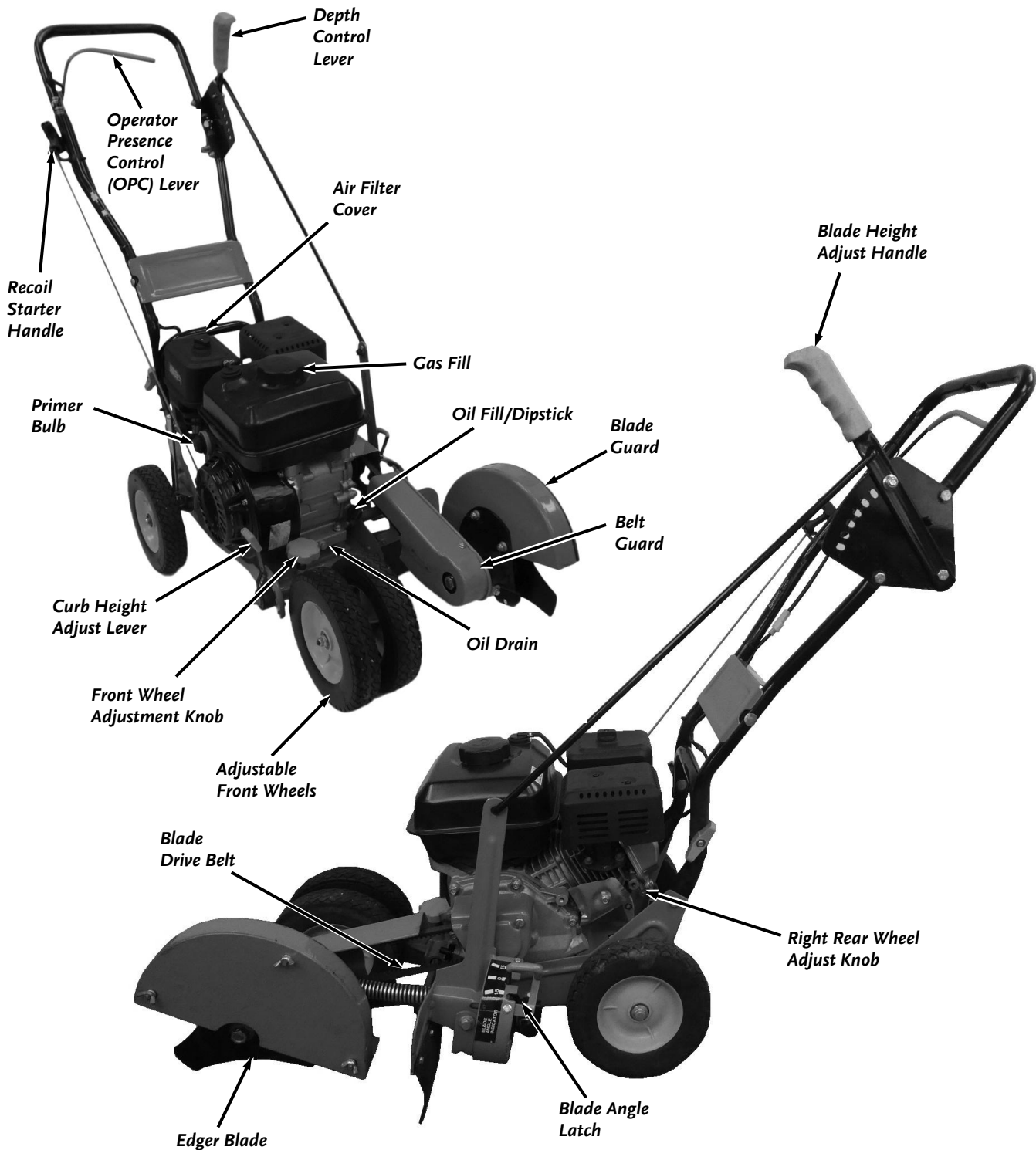


Figure 2

Specifications

Engine	4-stroke OHV
Engine speed	3000 rpm
Displacement	196cc
Torque rating	8.8 ft-lbs (11.9 Nm) gross torque per SAE J1940
Fuel capacity (qt / L)	3.3 / 3.1
Oil capacity (oz / ml)	16.9 / 500
Fuel type	Unleaded gasoline
Blade diameter (in / cm)	9 / 22.8
Cutting depth (in / mm)	0.0–3.0 / 0.0–76
Wheels (in / cm)	8.0 / 20.3
Handlebars	Straight
Machine dimensions (in / cm)	45 x 19 x 39.5 / 114.3 x 48.3 x 100.3
Machine weight (lbs / kg)	73 / 33.1

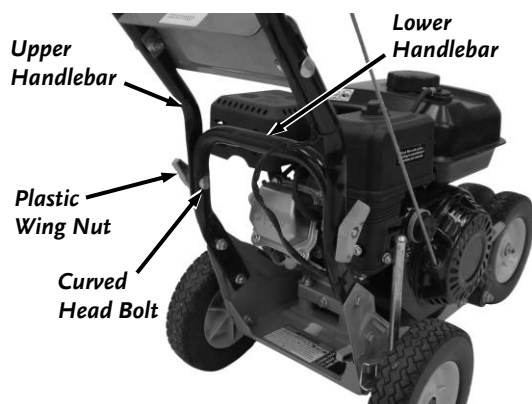


Figure 3

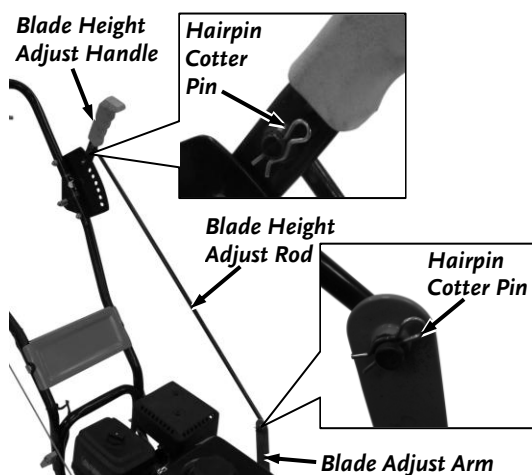


Figure 4

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:

Description	Qty
Edger.....	1
Owner's Manual.....	1
Upper Handlebar	1
Control Rod	1
Hair Pin	2
Wing Nut, Plastic	2
Bolt, M8 X 35mm	2
Wire Tie.....	1
Socket Wrench, Spark Plug, With Rod.....	1

Assembly Instructions

1. Assemble the Upper Handlebar to the Lower Handlebar with two Curved Head Bolts and two Plastic Wing Nuts (**Figure 3**). Firmly hand-tighten the Wing Nuts.
2. Slide one end of the Blade Height Adjust Rod into hole in the Blade Height Adjust Handle (**Figure 4**). Secure with Hairpin Cotter Pin.
3. Slide the other end of Blade Height Adjust Rod through hole in the Blade Adjust Arm. Secure with Hairpin Cotter Pin.

4. Pull the Recoil Starter Handle from the Engine and insert the Rope through the opening in the Pull Cord Wire Guide (**Figure 5**). Twist into position.
5. Remove the temporary insert from Operator Presence Harness Connector (**Figure 5**).
6. Connect the Operator Presence Harness from Engine and Handlebar. Use Cable Ties to secure the Operator Presence Harness to the Handlebar.

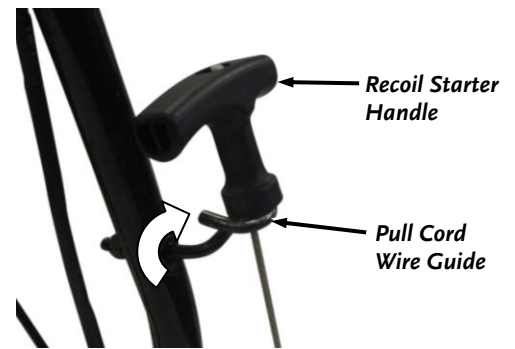


Figure 5

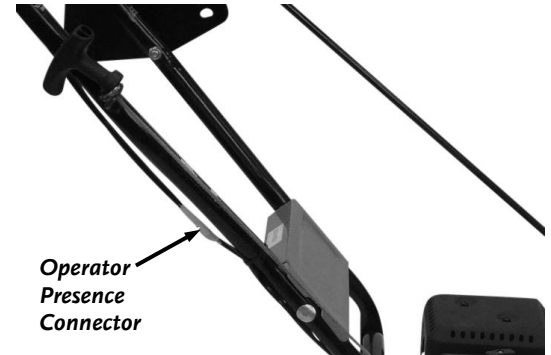


Figure 6

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	0–100 °F (-17–38 °C): SAE 10W-30 50–100 °F (10–38 °C): SAE 30 - For Service, SG, SH, SJ, or higher
Fuel	- Unleaded gasoline - Minimum 88 octane rating - Up to 10% ethanol (gasohol) is acceptable - Non-ethanol premium fuel recommended - DO NOT use E85 - DO NOT use a gas oil mixture

Engine oil capacity is 16.9 oz (500 ml).

Fuel tank capacity is 3.3 qt (3.1 L)

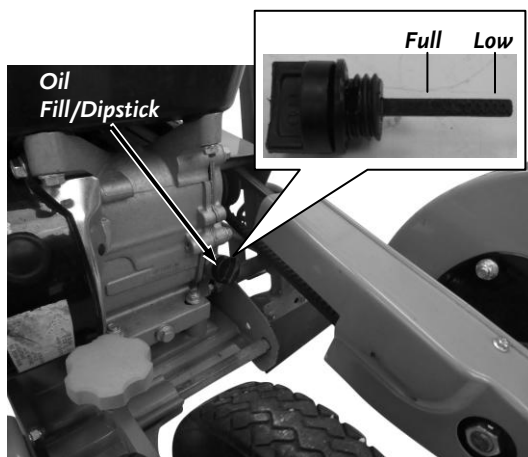


Figure 7

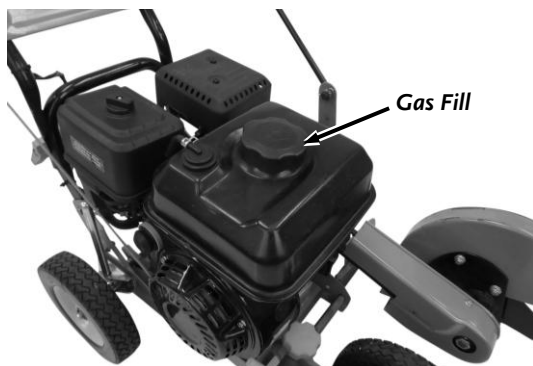


Figure 8

Note: Use only the recommended high detergent engine oil. Other types of oil could cause problems operating your machine.

- Place the Edger on a level surface and verify the adjustable wheel heights are set so the main frame of the Edger is level.
- Clean Oil Fill area (**Figure 7**).
- Remove the Oil Fill/Dipstick and wipe any Oil from the Dipstick using a Rag.
- Insert the Oil Dipstick into Oil Filler Neck but do not screw it in. Remove the Oil Dipstick and verify oil level is within safe operating range on the Dipstick.
- Machines are shipped with no oil. Initially add 8 to 10 oz. of oil. Wait one minute for the oil to settle.
- Check the Dipstick 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.
- Replace the Dipstick and screw it all the way down when full.
- 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.

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.

Chapter 3: Operating the DR LAWN and GARDEN EDGER

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

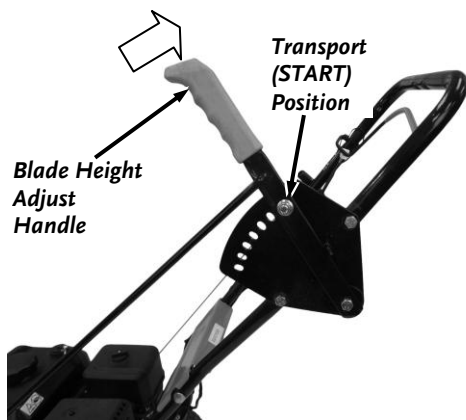


Figure 9

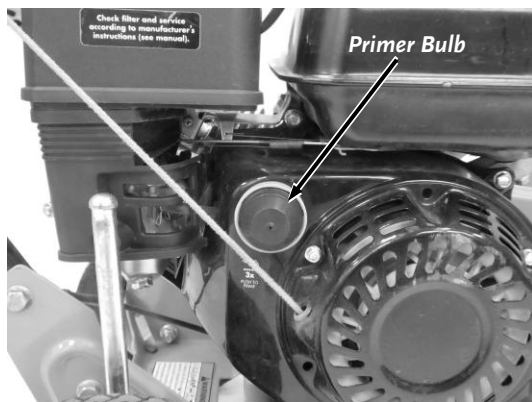


Figure 10

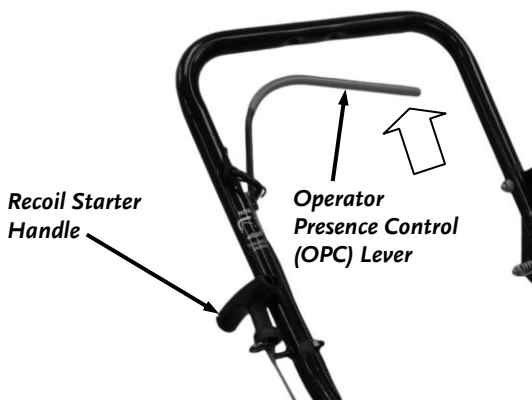


Figure 11

WARNING

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

Operating Tips

- Operate the unit in dry conditions. Wet ground becomes packed around blade, which can cause premature belt wear and decreased performance.
- Remove packed dirt and debris from the Blade Guard for optimal performance.
- First cut at shallow depths, then cut at greater depths until desired depth is reached. Do not over-load the unit by cutting too deep.
- Customize the edging by varying the amount of passes and distance between blade and edge of sidewalk, driveway, or curb.

Starting the Engine

Note: The Engine should start within one to two pulls. See Troubleshooting if unit fails to start after five attempts.

1. Verify unit is level.
2. Set the Height Adjust Handle to the Transport (START) position (**Figure 9**).
3. **Starting a cold Engine only:** Push the Primer Bulb three times (**Figure 10**). Wait two seconds between each push.
4. Firmly hold Operator Presence Control (OPC) Lever against the Handlebar with the left hand as you grasp the Recoil Starter Handle with the right hand (**Figure 11**).
5. Pull Recoil Starter Handle slowly until resistance is felt. Then quickly pull Recoil Starter Handle to completely unwind the starter rope. **Do not** allow the Starter Rope to snap back. Slowly rewind the Starter Rope while holding Recoil Starter Handle.

Stopping the Engine

1. Release the Operator Presence Lever to stop the engine (**Figure 12**).

Edging Lawns

WARNING

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

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

1. Check that the ground is free of foreign objects, such as toys, wires, string, rocks etc.

WARNING

Do not allow the Blade to 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.

2. Move the LAWN and GARDEN 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.

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 if the blade is in contact when starting.
3. Start the Engine as described in the “Starting the Engine” section on page 10.
 4. As you hold the Operator Presence Control Lever to the Handlebar, move the Blade Height Adjust Handle forward slowly to lower the Blade into the ground to increase edge cutting depth (**Figure 13**). Insert the Handle Stud into the hole in the Blade Height Plate when you reach the desired depth. There are six cutting depth settings from approximately ground level to 3.0” (76 mm) deep.
 5. Walk forward as you guide the Handlebars so the blade follows the desired path.
 6. When you have reached the end of the area to be edged, move the Blade Height Adjust Handle back to the Transport position.
 7. Move to the next area to be edged or release the Operator Presence Control Lever to stop the Engine.



Figure 12

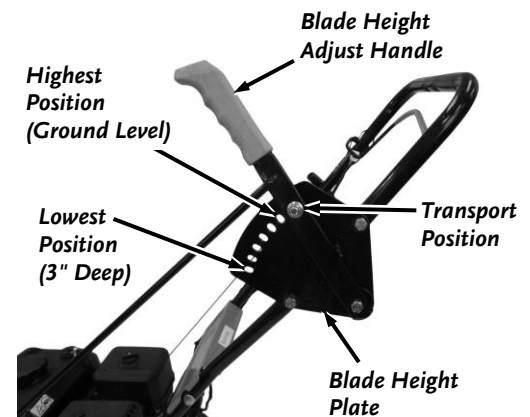


Figure 13

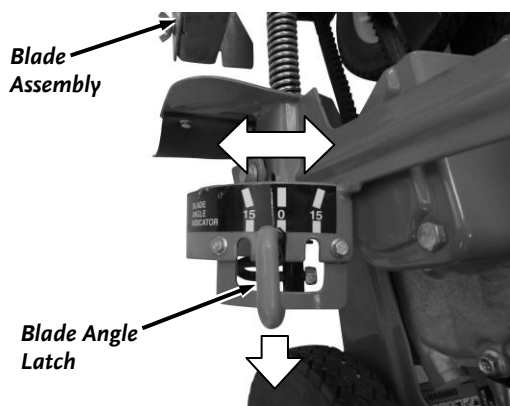


Figure 14

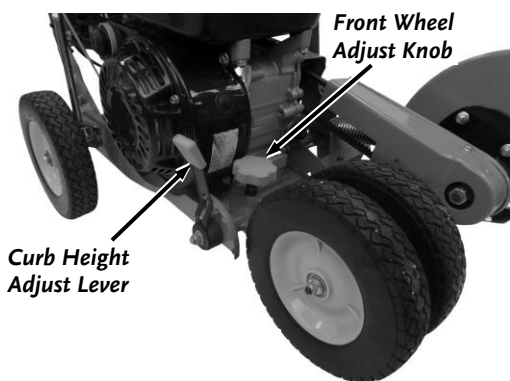


Figure 15

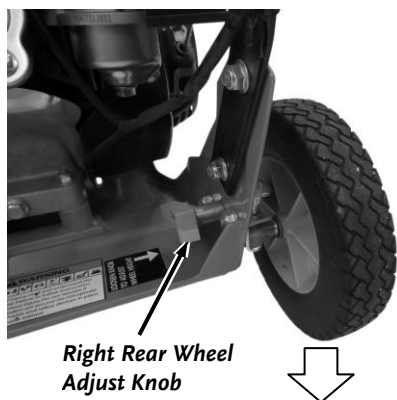


Figure 16

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 Operator Presence Control Lever to turn off the engine before changing the Blade angle.

1. Ensure that the Engine is turned off.
2. Pull the Blade Angle Latch out of the slot and insert it into one of the other desired angle slots (15°, 0°, or -15°) (**Figure 14**).

Adjusting Wheel Height for Curbs

The Wheels can be set up to allow edging on curbs. Follow the steps below to adjust wheel height for curb edging.

1. Ensure that the Engine is turned off.
2. Loosen the Front Wheel Adjust Knob (**Figure 15**).
3. Slide the Wheels to the right, enough to clear the curb and balance the machine.
4. Securely tighten the Front Wheel Adjust Knob.
5. Use the Curb Height Adjust Lever to lower the Front Wheels enough to level the machine.
6. Loosen the Right Rear Wheel Adjust knob (**Figure 16**).
7. Lower the right rear Wheel enough to level the machine.
8. Securely tighten the Right Rear Wheel Adjust Knob.

Slopes

- This unit can be used on slopes up to 15°. Continuous use on slopes steeper than 15° could result in engine damage.
- Avoid sudden turns or maneuvers.

Chapter 4: Maintaining the DR LAWN and GARDEN EDGER

Regular maintenance is the way to ensure the best performance and long life of your machine.

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.

Regular Maintenance Checklist

PROCEDURE	BEFORE EACH USE	EVERY 10 HOURS	EVERY 25 HOURS	EVERY 50 HOURS	EVERY 100 HOURS
Check Fuel and Engine Oil Level	▲				
Check General Equipment Condition	▲				
Check Cutting Blade (replace if excessively worn or damaged)	▲				
Clean Engine Exterior, Cooling Fins, and remove collected Grass*	▲				
Lubricate all pivot points	▲				
Clean any debris from the Blade Assembly area to ensure Blade will rotate freely		▲			
Inspect blade for wear or damage (replace if necessary)		▲			
Inspect Drive Belt (replace if stretched, worn, or damaged)		▲			
Clean Air Filter (replace if necessary)**			▲		
Change Engine Oil		1 st time 5-8 hours		▲	
Replace Spark Plug					▲

*Cleaning the top of the Engine during use is critical for sufficient air flow.

**Change more frequently if used in extremely dusty or dirty conditions.

Removing and Replacing the Engine Oil

Tools and Supplies Needed:

- 12mm Wrench
- Rags and approved Container (for waste oil)
- Small Funnel
- Engine Oil

1. Position the machine so the Frame and Engine are level and place a Waste Oil Container under the Oil Drain Plug (**Figure 17**).
2. Remove the Oil Drain Plug with a 12mm Wrench to drain the Oil into the Container.
3. Replace the Oil Drain Plug.

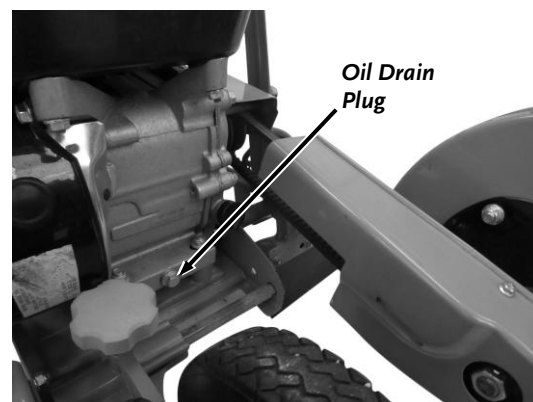


Figure 17

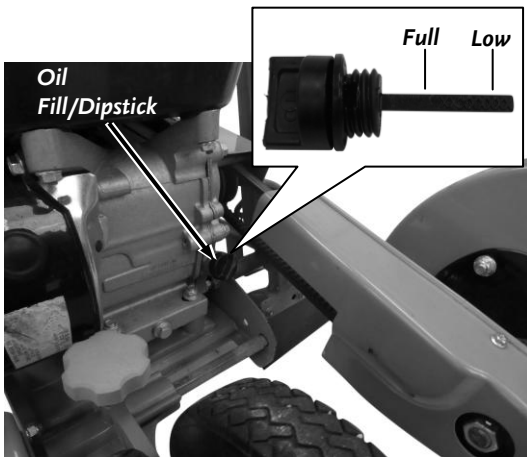


Figure 18



Figure 19

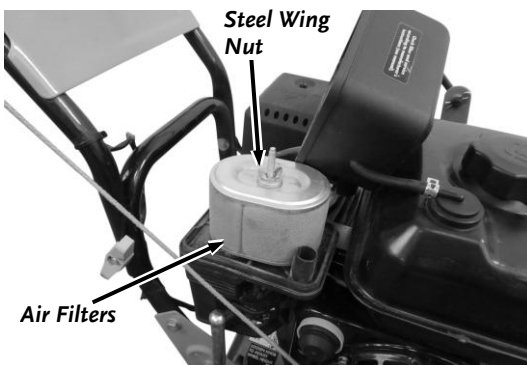


Figure 20

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.

4. Remove the Oil Fill/Dipstick and initially add 8 to 10 oz. of oil into the Oil Fill and wait one minute for the oil to settle (**Figure 18**).
5. Check the Dipstick 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.
6. Screw the Dipstick in all the way when finished.

Cleaning/replacing the Air Filter

! WARNING

Never clean Air Filter Element with gasoline or low flash point detergents. Doing so could result in explosion and fire and could cause death, serious injury, or equipment damage.

1. Remove the outer Plastic Wing Nut that secures the Air Filter. Rotate the Cover off to the side. Be careful of the Rubber Hose that runs through it.
2. Remove the inner Steel Wing Nut that secures the Air Filters and remove the Air Filters.

Note: Ensure the Rubber Gasket stays in place on the Carburetor.

NOTICE: Do not allow dirt or debris to enter the carburetor.

3. Separate the outer Foam Element from inner Paper Filter.
4. Inspect the inner Paper Filter for dirt or debris.
5. Inspect the Foam Element and Paper Filter for tears or damage.

NOTICE: If the inner Paper Filter is dirty, or if either element or Filter is torn or damaged, replace them.

6. Wash the Foam Element in household detergent and water, or in a nonflammable or high flash-point solvent. Squeeze (do not wring) out the water and set aside to dry thoroughly.
7. Lightly tap inner Paper Filter against a hard surface to remove any loose debris.

NOTICE: Do not brush dirt off Paper Filter because this will embed dirt into the fibers.

8. Install cleaned and dry Foam Element onto inner Paper Filter.
9. Reverse steps 1 and 2 to install clean (or new) Filters and Cover onto the Engine.

Replacing the Belt

Tools and Supplies needed:

- 13mm Wrench
- 8mm Wrench
- 6mm Hex Key
- New DR Belt (Part number A0000969795)

1. Remove the Hairpin Cotter Pin and disconnect the lower end of the Blade Height Adjust Rod from the Blade Adjust Arm (**Figure 21**).

Note: Move the Blade Adjust Arm as needed to access the hardware in the following steps 2 and 3.

2. Remove the Cap Screw and Flat Washer at the front of the Engine Pulley Cover using a 6mm Hex Key (**Figure 22**).
3. Remove the Bolt at the rear of the Engine Pulley Cover using a 13mm Wrench and remove the Engine Pulley Cover and Spacer.
4. Remove the three Belt Cover Screws using an 8mm Wrench and remove the Belt Cover (**Figure 23**).
5. Pull back on the Blade Adjust Arm and remove the old Belt from Engine and Blade assembly Pulleys (**Figure 24**).
6. Reverse the above steps to install replacement Belt.

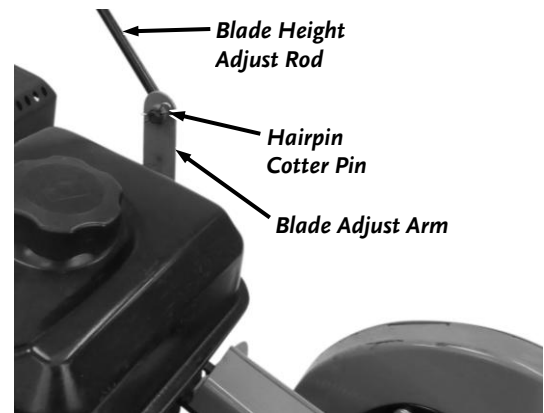


Figure 21

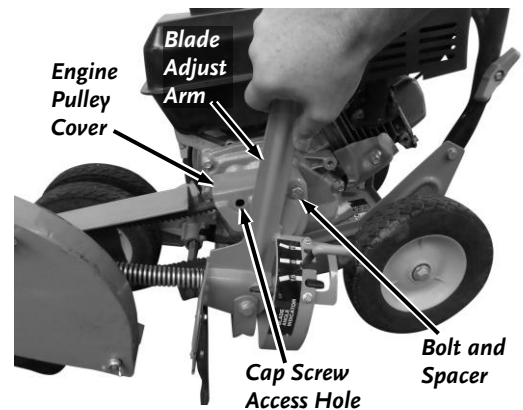


Figure 22

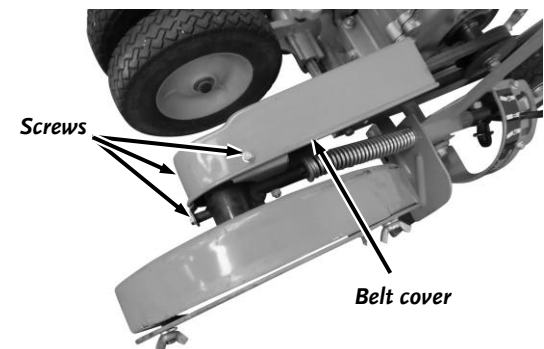


Figure 23

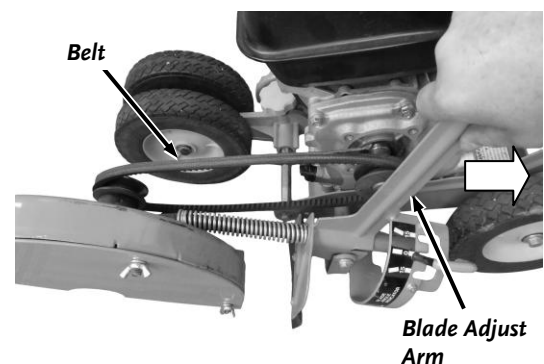


Figure 24

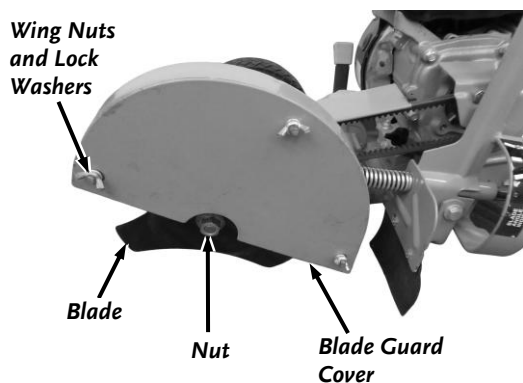


Figure 25

Replacing the Blade

NOTICE: Do not sharpen the Blade. Always install a new Blade when the Blade becomes deformed or damaged.

Tools and Supplies needed:

- Gloves
- Two 19mm Wrenches
- DR Edger Blade (Part number A0000969630)
- Torque Wrench with 19mm Socket

1. Remove the three Wing Nuts and Lock Washers to remove the Blade Cover (**Figure 25**).
2. Hold the Nut that is behind the Blade with a 19mm Wrench and remove the Blade Locknut with another 19mm Wrench.
3. Remove the Blade making sure the Washer behind it stays on the Shaft.
4. Reverse the above steps to install new Blade.
5. Tighten the Blade Locknut to 35–45 ft-lbs (47–61 Nm).

Servicing the Spark Plug

Tools and Supplies needed:

- Spark Plug Wrench (supplied with machine)
- Torque Wrench with Spark Plug Socket
- Feeler Gauges
- Wire Brush
- TORCH F7RTC or equivalent* Spark Plug

***Note:** Use only the recommended Spark Plug or one with the same temperature range.

1. Clean the area around the Spark Plug and Wire (**Figure 26**).
2. Pull the Spark Plug Wire from the Spark Plug.
3. Remove Spark Plug using the Spark Plug Wrench.
4. Inspect the Spark Plug for cracks or damage. Replace the Spark Plug if it is cracked or damaged.
5. Clean the electrodes with a Wire Brush and remove any build up.
6. Measure the Spark Plug Clearance (gap) with a Feeler Gauge (**Figure 27**). The clearance should be 0.028–0.031 in (0.7–0.8 mm) (**Figure 28**).
7. Adjust the Gap as needed to conform to the required limits listed above. The Spark Plug gap must be within the required range for efficient operation.
8. Install the Spark plug by hand and then tighten to 18–22 ft-lbs (25 – 30 Nm) using a torque Wrench with a Spark Plug Socket.

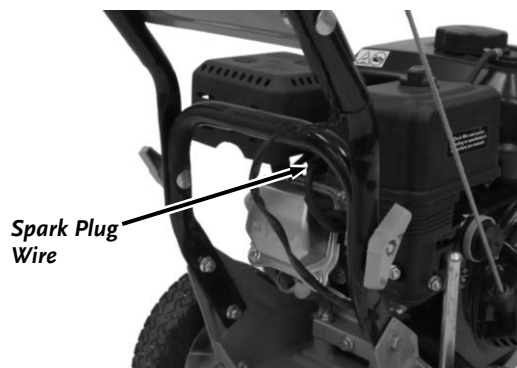


Figure 26

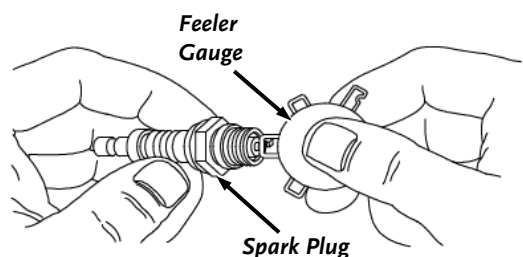


Figure 27

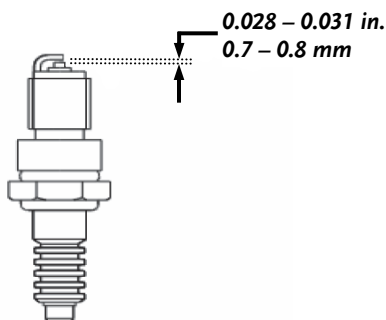


Figure 28

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>	⇒ 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.
<i>The Engine will not start.</i>	⇒ Make sure the Operator Presence Control Lever is held to the Handlebar or the engine will not start. ⇒ Check the oil and gas level. ⇒ Check that the Spark Plug Wire is attached. ⇒ The Air Filter may be dirty; change it. ⇒ 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. ⇒ If your Engine still won't start, visit our website at www.DRpower.com.
<i>The Engine lacks power or is not running smoothly.</i>	⇒ Make sure the Choke Lever is all the way off. ⇒ The Air Filter may be dirty; change it. ⇒ 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.
<i>Engine smokes.</i>	⇒ 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. ⇒ If the Engine still smokes, 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.

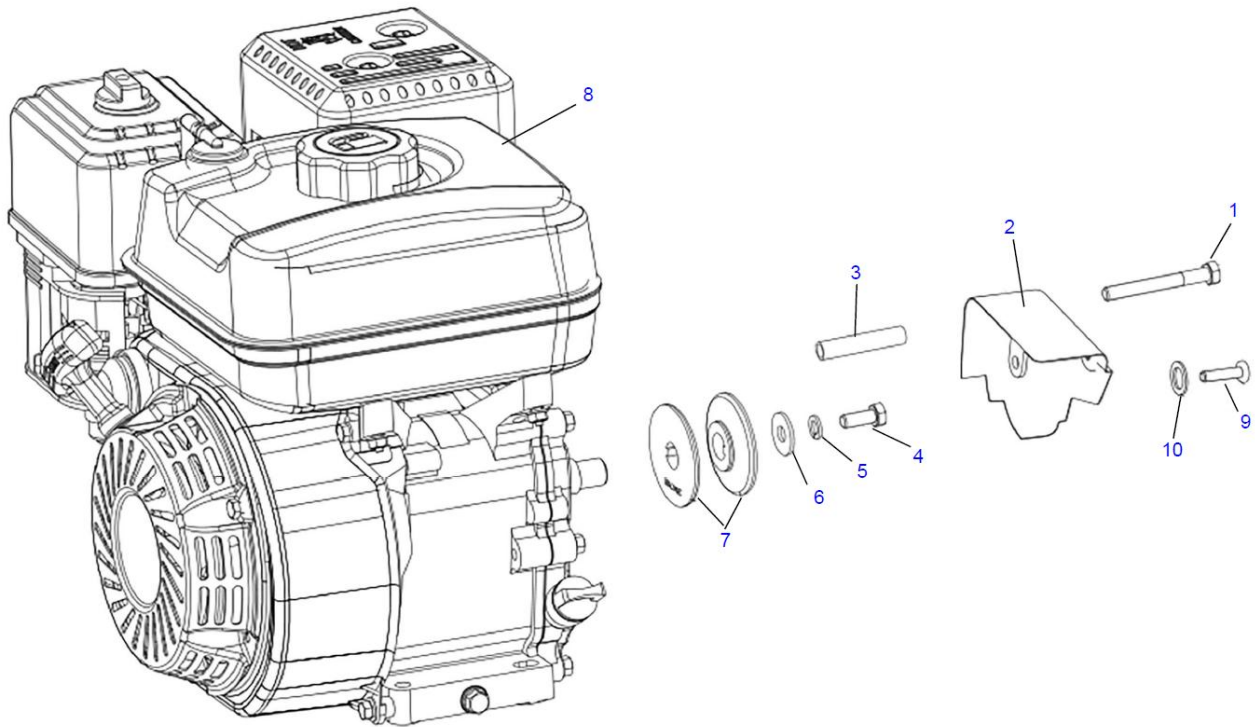
SYMPTOM	POSSIBLE CAUSE
<i>The Engine runs well but the Blade won't move.</i>	⇒ The Blade Height Adjust Handle must be moved from the transport (Start) position to one of the depth settings to engage the Blade ⇒ The Blade Belt is off the Pulleys or broken. Reinstall or change the Belt (refer to "Chapter 4: Maintaining the DR LAWN AND GARDEN 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 35-45 ft-lbs (47-61 Nm) ⇒ Check for excessive soil build-up in the Debris Guard

Chapter 6: Parts Lists and Schematic Diagrams

Parts List and Schematic - ENGINE ASSEMBLY

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

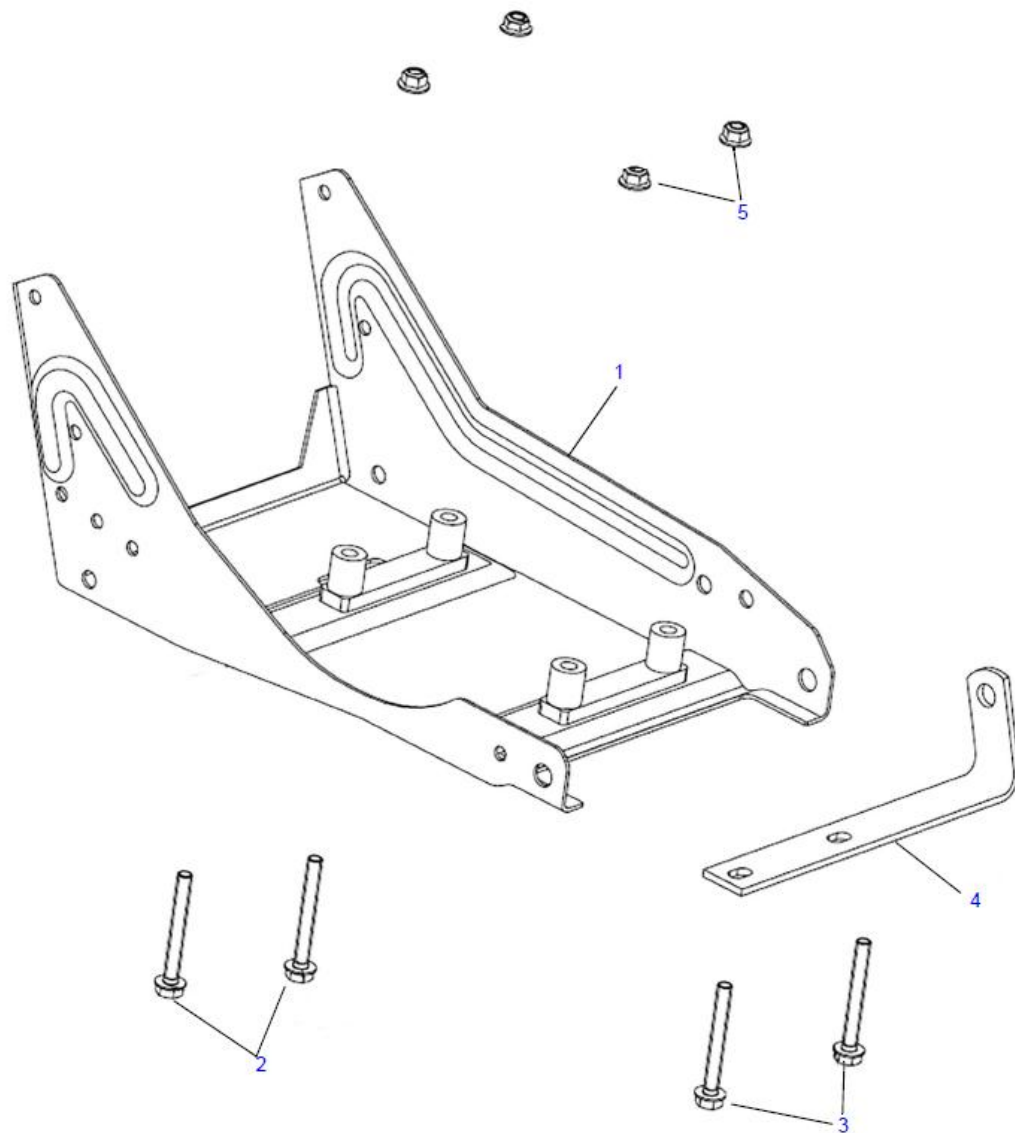
Ref#	Part#	Description	Ref#	Part#	Description
1	A0000969420	Bolt, Hex, M8 X 66	6	A0001074396	Washer, Flat, Large, M8
2	A0001077385	Cover, Engine Pulley	7	A0000969428	Pulley, Drive, V Half
3	A0000969422	Spacer, Engine Pulley Cover	8	A0001076105	Engine, DR 196cc
4	A0000969426	Bolt, Hex, M8 X 1.0 X 20	9	A0000975891	Bolt, M8 X 12
5	A0000940903	Washer, Split Lock, M8	10	A0000947682	Washer, Flat, M8



Parts List and Schematic – FRAME ASSEMBLY

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

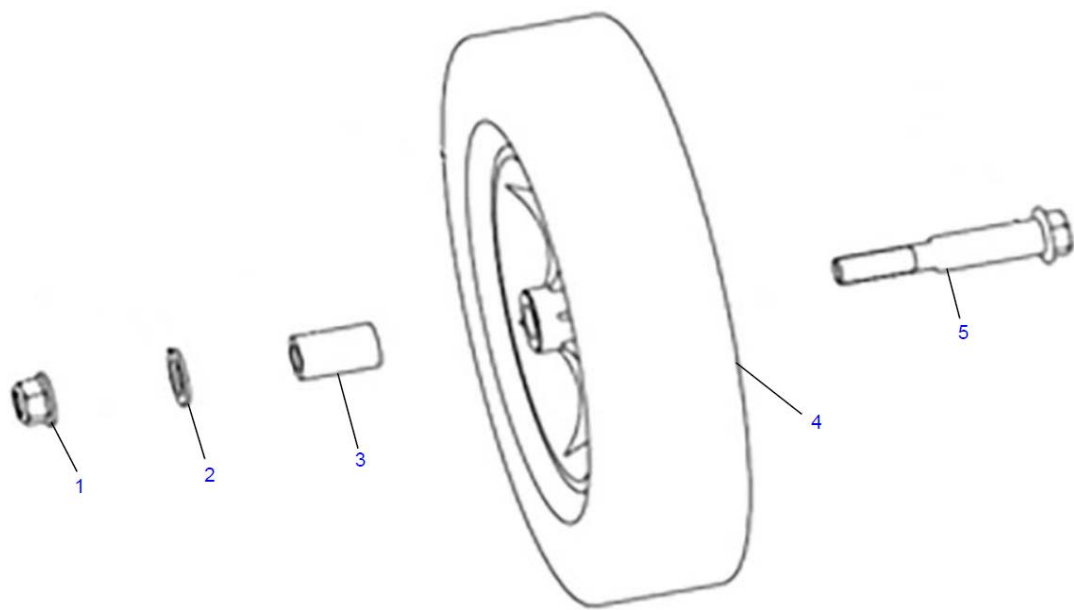
Ref#	Part#	Description	Ref#	Part#	Description
1	A0001077394	Frame	4	A0001077396	Bracket, Engine Mount
2	A0000969449	Bolt, Hex, Flanged, M8 X 65	5	A0000967125	Nut, Lock, Flanged, M8
3	A0000969450	Bolt, Hex, Flanged, M8 X 70			



Parts List and Schematic – LEFT REAR WHEEL ASSEMBLY

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

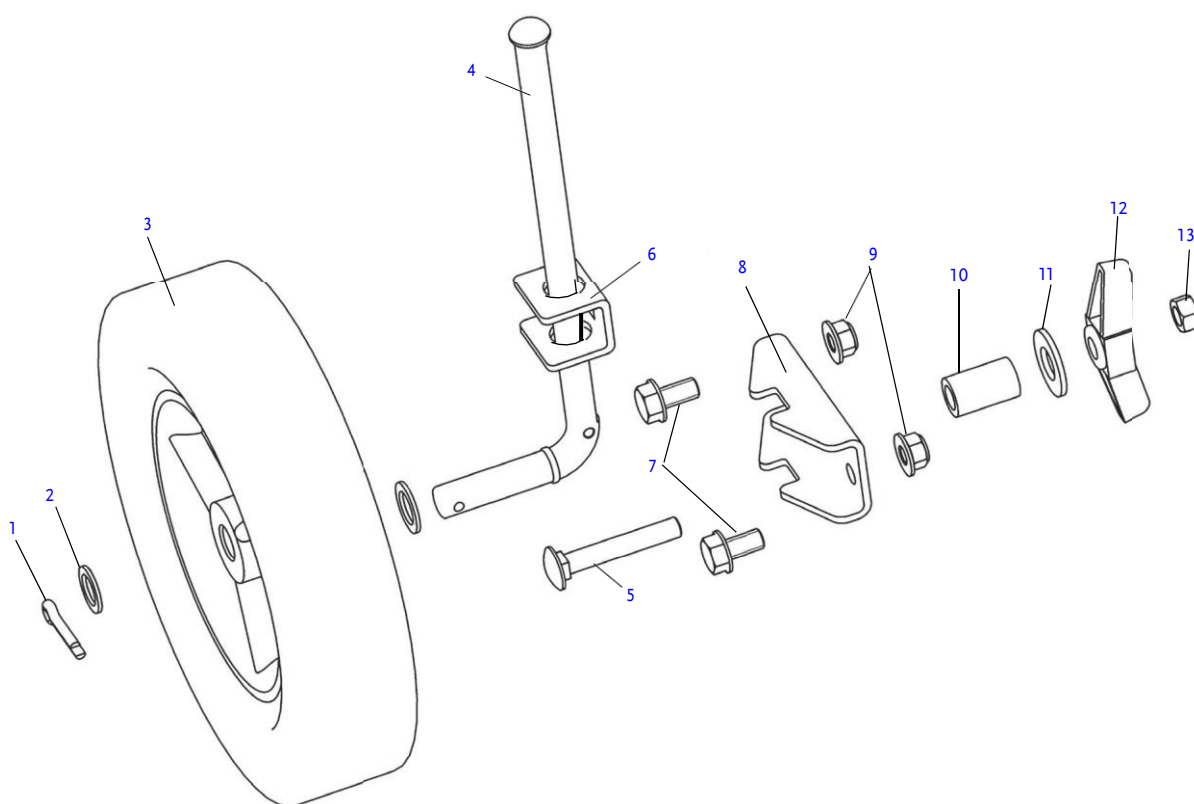
Ref#	Part#	Description	Ref#	Part#	Description
1	A0000969441	Nut, Lock, Flanged, M10	4	A0000969444	Wheel
2	A0000969782	Washer, Flat, 10mm X 32mm X 3mm	5	A0000975714	Wheel Axle, Left Rear, M10 X 70
3	A0000969442	Spacer, Left Rear Wheel			



Parts List and Schematic – RIGHT REAR WHEEL ASSEMBLY

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

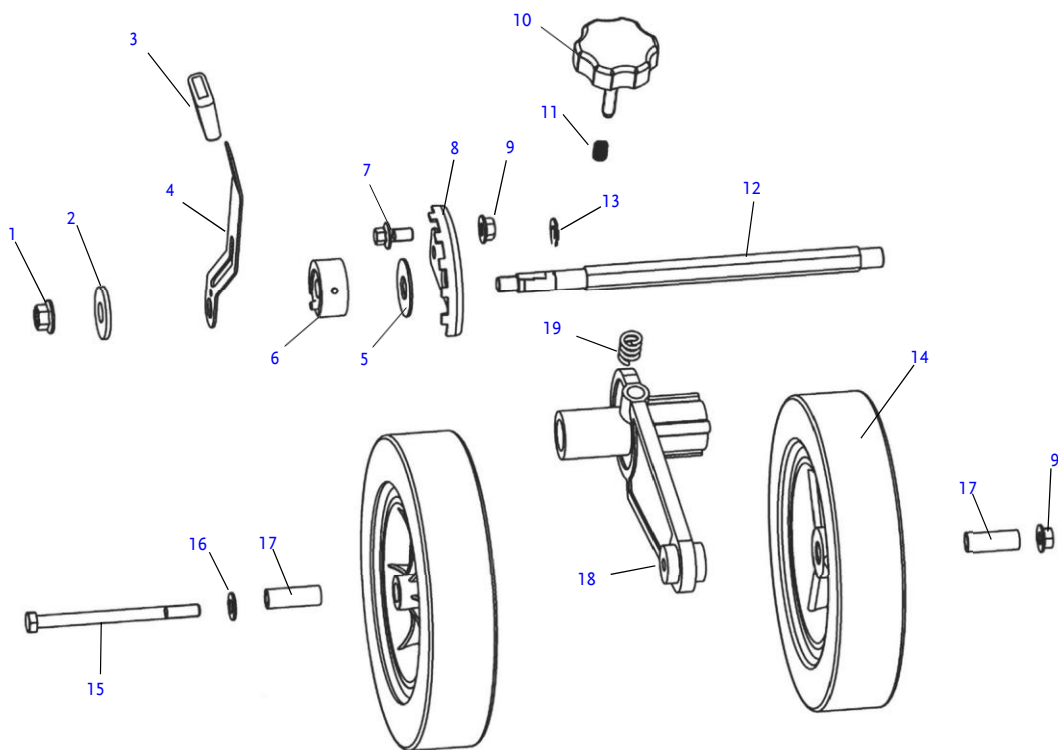
Ref#	Part#	Description	Ref#	Part#	Description
1	A0000975716	Cotter Pin, 2.5mm OD X 20mm	8	A0000969542	Bracket, Rear Curb Height Adjust
2	A0000969784	Washer, Flat, 13.3mm X 20.6mm X 1.5mm	9	A0000940917	Nut, Flange M8
3	A0000969444	Wheel	10	A0000969546	Spacer, Right Rear Wheel
4	A0000969532	Support, Wheel	11	A0000969785	Washer, Flat, 8.5mm X 17.7mm X 1.4mm
5	A0000969537	Bolt, Carriage, M8 X 50	12	A0000969547	Knob, Right Rear Wheel Adjust
6	A0000969538	Clevis, Wheel Support	13	A0000967087	Nut, Lock, M8
7	A0000940915	Bolt, Flange, M8 X 16			



Parts List and Schematic – FRONT WHEEL ASSEMBLY

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

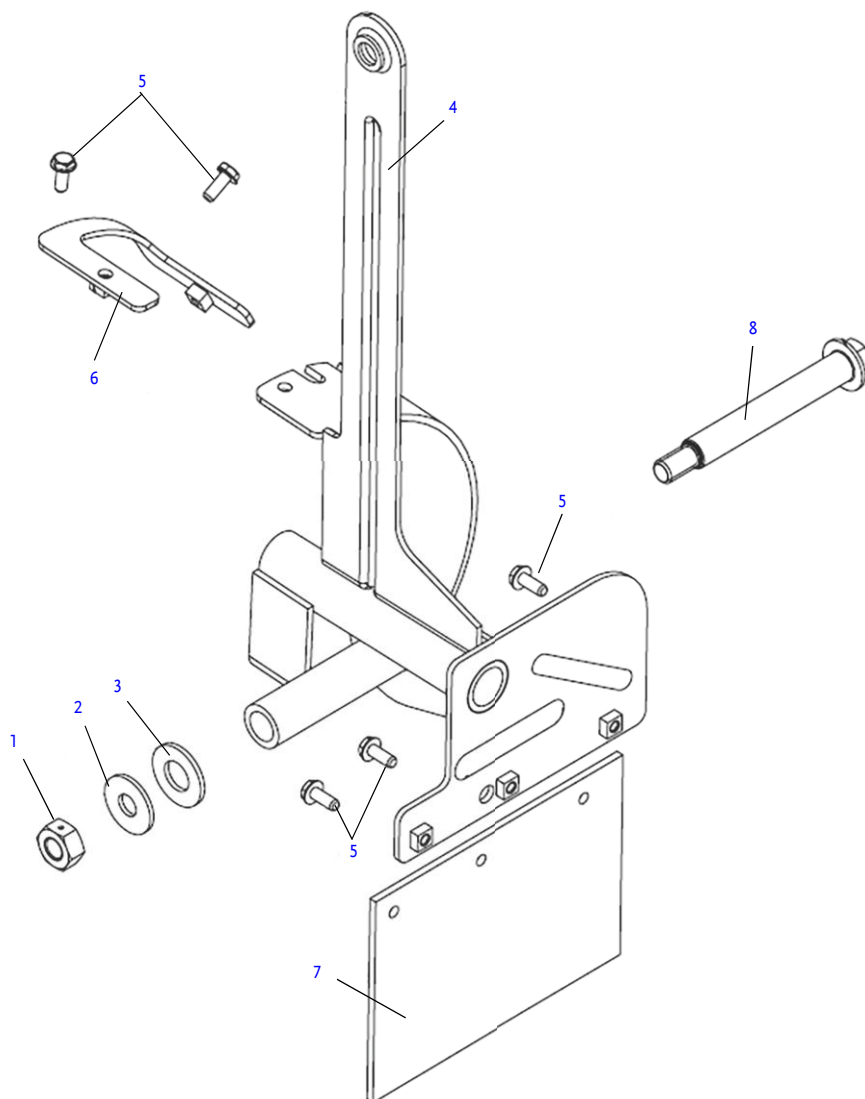
Ref#	Part#	Description	Ref#	Part#	Description
1	A0000969454	Nut, Flanged, M10 X 1.25	11	A0000969463	Spring, Knob, Front Wheel Adjust
2	A0000969456	Washer, Flat, Curb Height Adjust	12	A0000969464	Axle, Curb Height Adjust
3	A0001141085	Grip, Curb Height Adjust	13	A0000969465	Washer, Push Nut
4	A0000969458	Lever, Curb Height Adjust	14	A0000969444	Wheel
5	A0000969459	Washer, Plastic, Curb Height Adjust	15	A0000969473	Bolt, Hex, M8 X 110
6	A0000969460	Spacer, Curb Height Adjust	16	A0000947682	Washer, Flat, M8
7	A0000940915	Bolt, Flanged, M8 X 16	17	A0000969466	Spacer, Front Wheel
8	A0001077397	Bracket, Curb Height Adjust	18	A0001077395	Arm, Front Wheel
9	A0000940917	Nut, Flanged, M8	19	A0000969469	Threaded Insert, M8 X 1.25
10	A0000969462	Knob, Front Wheel Adjust			



Parts List and Schematic – FRAME ASSEMBLY

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

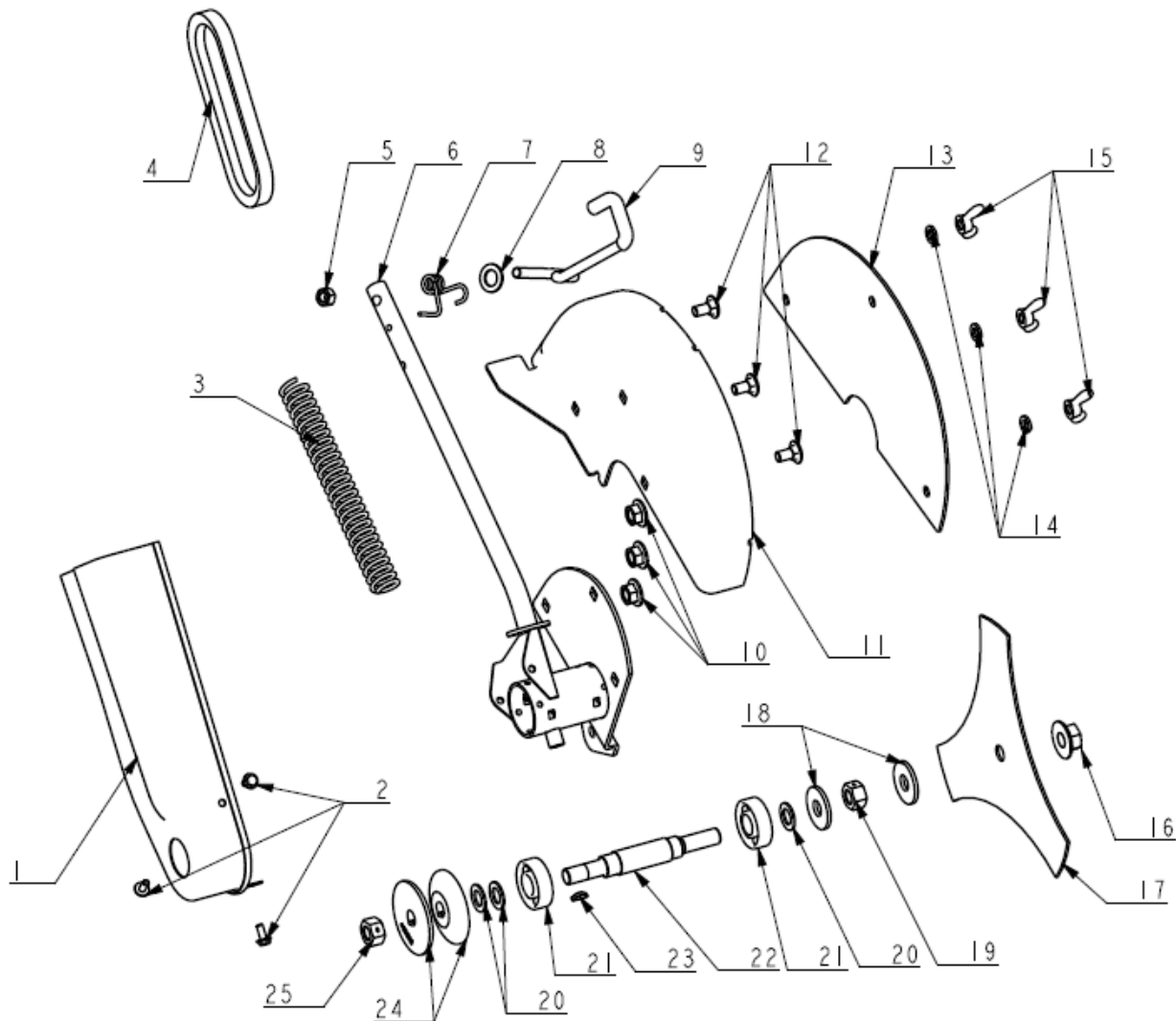
Ref#	Part#	Description	Ref#	Part#	Description
1	A0000953197	Nut, Lock, M10	5	A0000969556	Bolt, Flanged, M5 X 12
2	A0000969787	Washer, Flat, 10.3mm X 25.4mm X 2mm	6	A0001077398	Bracket, Bevel Adjust
3	A0000969788	Washer, Flat, 13.5mm X 27.2mm X 2mm	7	A0000969558	Deflector, Rubber
4	A0001077400	Arm, Blade Adjust	8	A0000969559	Bolt, Blade Adjust Pivot



Parts List and Schematic – BLADE ARM ASSEMBLY

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

Ref#	Part#	Description	Ref#	Part#	Description
1	A0000969600	Cover, Belt	14	A0000940903	Washer, Split Lock, M8
2	A0000969603	Bolt, Hex Flanged, M5 X 10	15	A0000969625	Wing Nut, M8
3	A0000969610	Spring, Blade Height Adjust	16	A0000969629	Nut, Flange, M12 X 1.25
4	A0000969795	Belt	17	A0000969630	Blade, Edger
5	A0000967087	Nut, Lock, M8	18	A0000969791	Washer, Flat, 13mm X 35mm X 3mm
6	A0000969618	Arm, Blade	19	A0000969632	Nut, M12 X 1.25
7	A0000969612	Spring, Bevel Handle Adjust	20	A0000969792	Washer, Flat, 13mm X 22mm X 1.5mm
8	A0000969790	Washer, Flat, 8.5mm X 17.7mm X 1.4mm	21	A0000969633	Bearing, 6203 - 2rs
9	A0000969617	Lever, Bevel Adjust	22	A0000969635	Shaft, Edger Blade
10	A0000940917	Nut, Flange, M8	23	A0000969637	Key, Edger Blade Shaft
11	A0000969621	Guard, Edger Blade	24	A0000969638	Pulley, Blade V Half
12	A0000975718	Carriage Bolt, M8 X 1.25 X 16	25	A0000969632	Nut, M12 X 1.25
13	A0000969622	Cover, Edger Blade Guard			

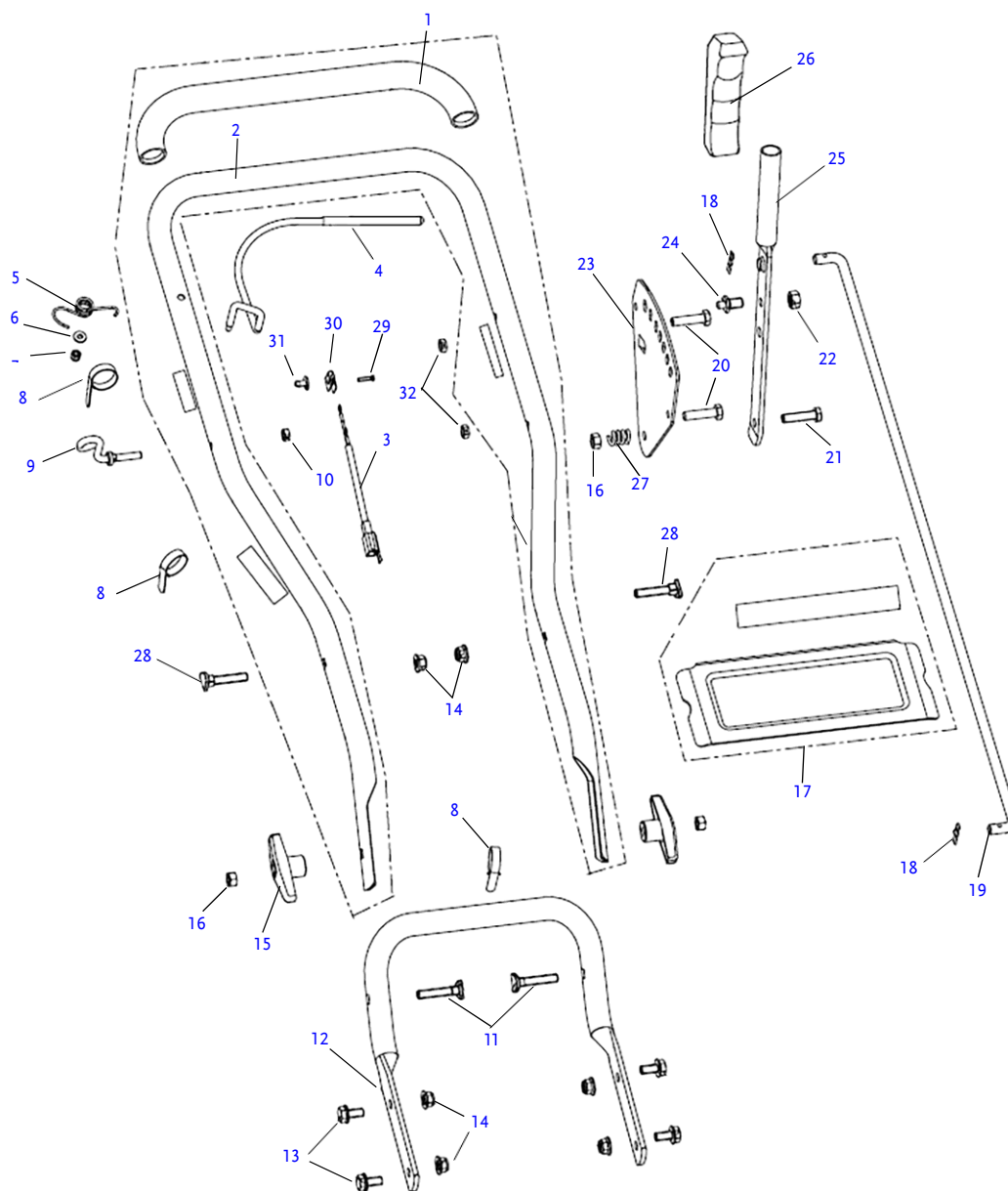


Parts List – HANDLEBAR ASSEMBLY

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

Ref#	Part#	Description	Ref#	Part#	Description
1	A0000969817	Foam, Handlebar	17	A0000969841	Bracket, Handlebar, W/Label
2	A0000969818	Handlebar, Upper	18	A0000975720	Hairpin Cotter Pin
3	A0000969819	Wire, OPC	19	A0000969842	Rod, Blade Height Adjust
4	A0001141092	Bail Bar, OPC	20	A0000969843	Bolt, Hex, M6 X 32
5	A0000969821	Spring, OPC	21	A0000938005	Bolt, Hex, M8 X 30
6	A0000969822	Washer, Flat, 5.2mm X 12mm X 1.5mm	22	A0000969441	Nut, Lock, Flanged, M10
7	A0000967111	Nut, Lock, M5	23	A0000969846	Plate, Blade Height
8	157031	Cable Tie, 0.34 X 36 L 175 Gauge	24	A0000969847	Stud, M10
9	A0000969827	Wire Guide, Pull Cord	25	A0000969848	Handle, Blade Height Adjust
10	110701	Nut, Finish, 1/4-20, ZP	26	A0001141094	Grip, Handle, Blade Height Adjust
11	A0000975719	Bolt, Carriage, C Head, M8 X 1.25 X 36	27	A0000969850	Spring, Blade Height Adjust
12	A0000969830	Handlebar, Lower	28	A0000975719	Bolt, Carriage, C Head, M8 X 1.25 X 36
13	A0000940915	Bolt, Hex Flanged, M8 X 16	29	A0000975721	Screw, 3.5 X 12.7
14	A0000940917	Nut, Flanged, M8	30	A0000969851	Clip, Grounding, OPC
15	A0000969838	Knob, Handlebar Adjust	31	A0000975722	Insulator, Plastic, OPC
16	A0000967087	Nut, Lock, M8	32	A0000947584	Nut, Nylon Lock, M6

Schematic – HANDLEBAR assembly



Notes:

DR® LAWN AND GARDEN 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 and GARDEN EDGER

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

! 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.

- [] Check the engine oil and Gas Tank level.
- [] Check that Engine is clean of debris.
- [] Check the general condition of the LAWN and GARDEN 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 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 AND GARDEN 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. This will coat the piston and seat the valves to prevent moisture buildup.
- If possible, store the LAWN and GARDEN EDGER in a dry, protected place. If it is necessary to store the Edger outside, cover it with a protective material (especially the Engine).



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