DR® WALK-BEHIND LAWN VACUUM

SAFETY & OPERATING INSTRUCTIONS

Models:

- **Premier**
- **Pro SP**

Pro-SP Model Shown

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 WALK-BEHIND LAWN VACUUM.

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Conventions used in this manual

⚠ DANGER

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

⚠ 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 the 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.

⚠ WARNING

Read this safety & operating Instructions manual before you use the DR WALK-BEHIND LAWN VACUUM. 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 WALK-BEHIND LAWN VACUUM 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 WALK-BEHIND LAWN VACUUM as you set up and before you operate the unit. Replace damaged or missing safety and information labels immediately.

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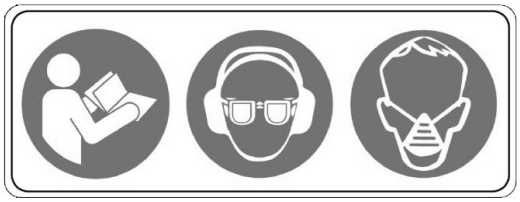

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This label indicates proximity to machine openings with rotating blades inside.

SERIOUS INJURY OR DEATH will occur if hands, feet, or any part of your body are placed in the chipper hopper, discharge opening, or near or under any moving part while the machine is running.

Never run without guards in place.

Always wear protective goggles or safety glasses with side shields while chipping to protect your eyes from possible thrown debris.

Use ear protectors or ear plugs rated for at least 20 dba to protect your hearing.

Read this safety & operating Instructions manual before you use the machine. Become familiar with the operation and service recommendations to ensure the best performance.

Never reach into feed hoppers, discharge opening, or maintenance openings. SERIOUS INJURY OR DEATH may occur.

Wear approved respiratory mask in dusty conditions.

Pinch Point. Keep hands away from rotating assemblies.

SERIOUS INJURY will occur if hands, feet, or any part of your body are placed near or under any moving part while the machine is running.

Protecting Yourself and Those Around You

⚠ WARNING

This is a high-powered machine, with moving parts operating with high energy at high speeds. Use proper clothing and safety gear when operating this machine to prevent or minimize the risk of severe injury. 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 operating this machine:

- Always wear protective goggles or safety glasses with side shields while operating this vacuum system to protect your eyes from possible foreign objects thrown from the machine.
- Wear shoes with non-slip treads when using your DR Walk-Behind Lawn Vacuum. If you have safety shoes, we recommend wearing them. Do not use the machine while barefoot or wearing open sandals.
- Avoid wearing loose clothing or jewelry, which can catch on the machine's moving parts.
- We recommend wearing gloves while using your DR Walk-Behind Lawn Vacuum. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.
- Always wear gloves when emptying the debris bag.
- After vacuuming glass, bottles or cans, dispose of this waste properly, never in a compost pile.
- We recommend changing the debris bag after vacuuming glass and other debris and before using the system to vacuum material that may be used for compost or mulch.
- Wear long pants while operating the machine.
- Use Hearing Protectors or Ear Plugs rated for at least 20 dba to protect your hearing.
- Never allow people who are unfamiliar with these instructions to use the vacuum. Allow only responsible individuals who are familiar with these rules of safe operation to use your machine.
- Never place your hands, feet, or any part of your body near or under any moving part while the machine is running.
- Keep bystanders away from your work area at all times. To be safe, do not operate the machine near small children or pets, and never allow children to operate the vacuum. Stop the engine when another person or pet approaches.
- Never use the machine with the collection bag removed.
- Clear the work area of objects such as rock, string-like material, wire, rope, or rags. Ingesting these objects into the vacuum could damage the machine and/or cause injury.
- Never, under any conditions, remove, bend, cut, fit, weld, or otherwise alter standard parts on the DR Walk-Behind Lawn Vacuum. This includes all shields and guards. Modifications to your machine could cause personal injuries and property damage and will void your warranty
- High speed debris may be ejected from opening. Inspect the Bag before each use and if worn or damaged, replace before using machine.

Safety for Children and Pets

⚠ WARNING

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

- Keep children out of the work area and under the watchful care of a responsible adult.
- Be alert and always turn off the DR Walk-Behind Lawn Vacuum engine if children or pets enter the work area.
- Before, and while moving backwards, look behind, and ***down*** for small children and pets.
- Never allow children to operate the vacuum.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.

Safety with Gasoline-Powered Machines

⚠ WARNING

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

- Never operate the engine with the air cleaner or cover over the carburetor air-intake removed, except for adjustment. Removal of such parts could create a fire hazard. Do not use flammable solutions to clean air filter.
- 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.
- Fill the gasoline tank outdoors with the engine off and allow the engine to cool completely. Do not handle gasoline if you or anyone nearby is smoking, or if you are near anything that could cause it to ignite or explode. Replace the fuel tank and fuel container caps securely.
- If you spill gasoline, do not attempt to start the engine. Move the machine away from the area of the spill and avoid creating any source of ignition until the gas vapors have dissipated. Wipe up any spilled fuel to prevent a fire hazard and properly dispose of the waste.
- Allow the engine to cool completely and empty the debris bag before storing the DR Walk-Behind Lawn Vacuum in any enclosure. Remember, decomposing material generates heat and could start a fire. Never store the machine with gas in the tank or a fuel container, near an open flame or spark such as a water heater.
- Never make adjustments or repairs with the engine running. Disconnect the spark plug wire and keep the wire away from the spark plug to prevent accidental starting.
- Never check for an ignition spark with the spark plug or spark plug wire removed. Use an approved spark tester.
- Never tamper with safety devices. Check their proper operation regularly.
- Never change the engine governor settings or modify the engine speed. Modifications will void your warranty.
- To reduce fire hazard, keep the engine and muffler area free of debris build-up such as leaves, grass, Oil, grease, or any other combustible material. Clean the engine area after each use.
- Never operate the engine without the muffler. Inspect the muffler periodically and replace if necessary. If equipped with a muffler deflector, inspect the deflector periodically and replace if necessary.
- The muffler and engine become very hot and can cause a severe burn; do not touch.
- Always check fuel lines and fittings frequently for cracks or leaks, replace if necessary.
- Replace rubber fuel lines and grommets when worn or damaged and after 5 years of use.

Safety on Slopes

⚠ WARNING

Slopes are a major factor related to slip and fall accidents, which can result in severe injury. All slopes require caution. If you feel uneasy on a slope, do not vacuum it. Always take the following precautions when using this machine on slopes:

Always:

- Vacuum across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
- Remove objects such as stones, wire, rope, or rags.
- Watch for holes, ruts, or bumps in the landscape.

Never:

- ***Never*** vacuum near drop-offs, ditches, or embankments; you could lose your footing or balance.
- ***Never*** vacuum on slopes greater than 20 degrees, or any excessively steep slopes.
- ***Never*** vacuum on wet, or slippery slopes; reduced traction could result in slipping.
- ***Never*** park the vacuum on a steep grade or slope.

General Safety

⚠ WARNING

Operating this Vacuum 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 vacuum:

- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people, their property, and themselves.
- Your DR walk-behind lawn vacuum is a powerful tool, not a plaything. Exercise extreme caution at all times. The design of this machine is to vacuum debris. Do not use it for any other purpose.
- Know how to stop the vacuum quickly.
- Never allow people or pets to ride on the DR Walk-Behind Lawn Vacuum.
- Never start the engine without the discharge chute fully inserted into the debris bag cuff.
- Never attempt to remove the Debris Bag while the DR walk-behind lawn vacuum engine is running. Debris may exit at high velocity out of the openings created in the seams as you unlatch the debris bag.
- Empty the debris bag after each use to prevent spontaneous combustion due to decaying material.
- Do not vacuum in sandy areas where you will vacuum large quantities of sand.
- Never operate the vacuum near hot or burning debris
- Never operate the vacuum near toxic or explosive materials.
- Never operate the vacuum near campfire sites. Even seemingly extinguished fires may retain hot embers and coals.
- If the machine should start making an unusual noise or vibration, stop the engine and wait five minutes to cool. Vibration is generally a warning of trouble. Disconnect the spark plug wire and inspect for clogging, damaged, or worn impeller, loose impeller bolt, or loose engine mounting bolts. Clean and repair and/or replace damaged parts.
- Always shut off the DR Walk-Behind Lawn Vacuum engine, wait five minutes to cool, and disconnect the spark plug wire before attempting to clear any obstructions.
- Always keep the equipment in a good safe operating condition. Always make certain nuts and bolts are tight and always use the supplied self-locking hardware; do not substitute.
- Use the DR Walk-Behind Lawn Vacuum only in daylight.
- While using the vacuum, do not 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 leave the machine unattended with the engine running.
- Do not operate the machine when under the influence of alcohol, drugs, or medication.
- See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by DR Power Equipment.

A Note to All Users

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 Walk-Behind Lawn Vacuums shipped 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 Lawn Vacuum 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® WALK-BEHIND LAWN VACUUM

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

DR WALK-BEHIND LAWN VACUUM PRO SP Controls and Features

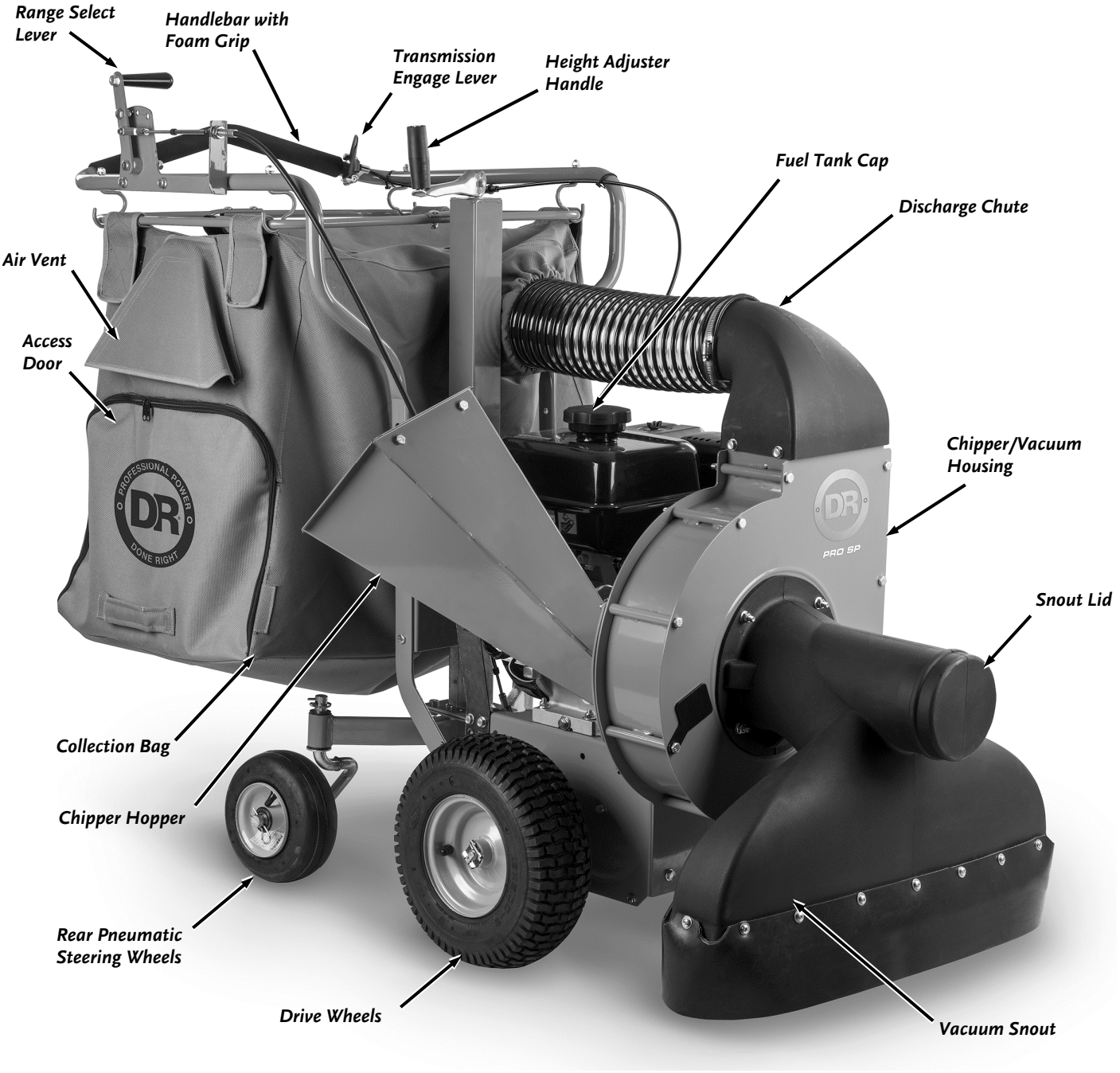


Figure 2a

DR WALK-BEHIND LAWN VACUUM PREMIER Controls and Features

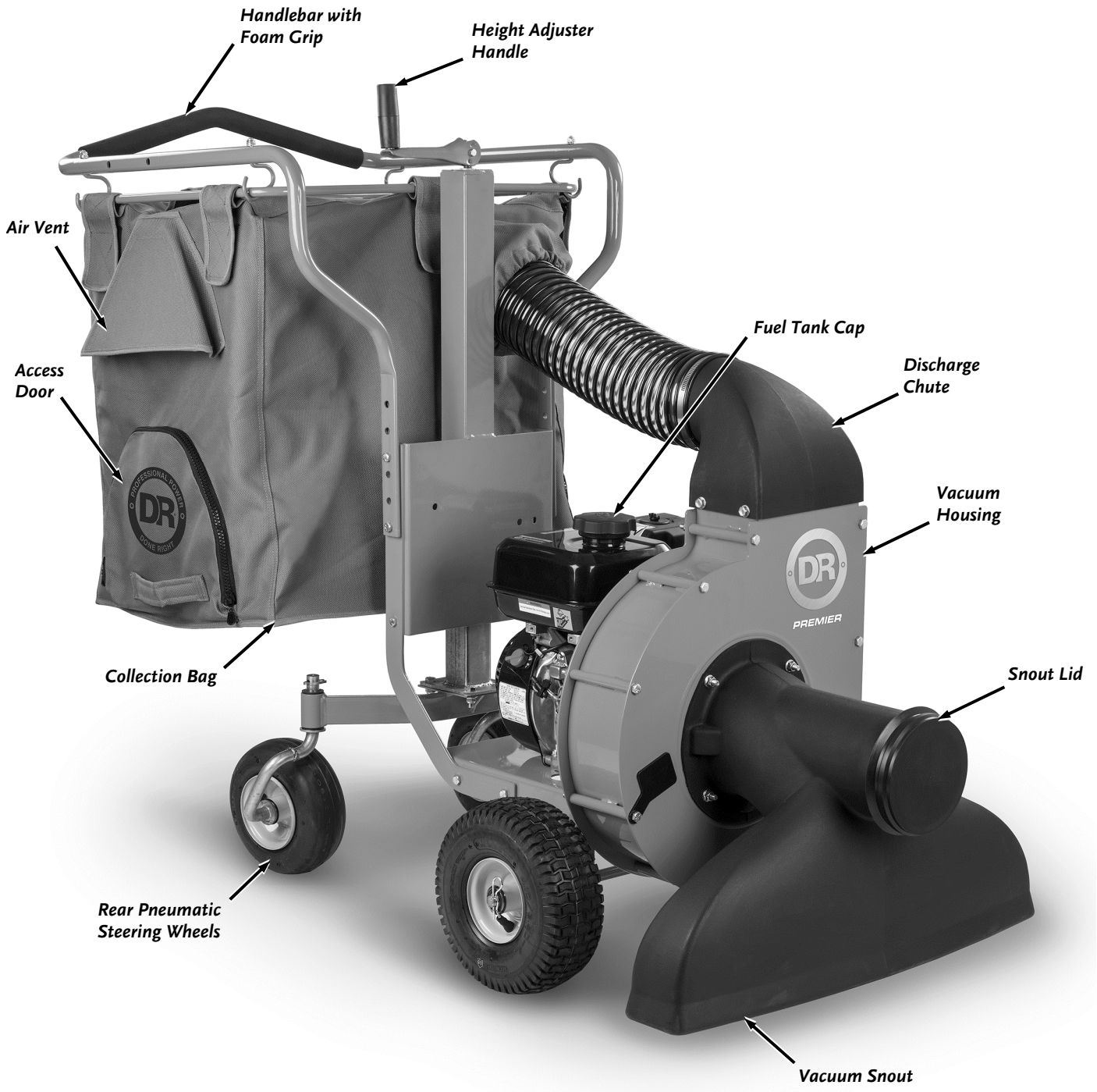


Figure 2b

Specifications

	Premier WB Leaf Vac	Pro WB Leaf Vac M/S	Pro WB Leaf Vac E/S
Engine	See Engine Owner's Manual	See Engine Owner's Manual	See Engine Owner's Manual
HP	5.9	8	
Engine Oil Capacity	0.5 Liters (16.9 oz)	1.1 Liters (37.2 oz)	
Engine Oil Type	10W-30		
Impeller Drive Method	Direct Drive		
Chipper Knife Speed	N/A	134MPH	
Chipper Knife Material	N/A	Hardened Tool Steel	
Chipping Capacity	N/A	2"	
Vacuum CFM	2038	2237	
Vacuum MPH	86	95	
Height Adjustment Range	1/4" to 4"		
Collection Bag Volume	6 cu ft (4.8 Bushel)	8 cu ft (6.4 bushel)	
Leaf Reduction	10:1		
Transmission Type	N/A	Friction Disc	
Speeds	N/A	3 forward (1st: 0.9 MPH, 2nd: 1.7 MPH, 3rd: 2.6 MPH) 1 reverse (1.1 MPH)	
Overall Length	60"	61"	61"
Overall Height	45"	47"	47"
Width	26"	34"	34"
Machine Weight	150 Lbs	250 Lbs	255 Lbs

Figure 3

Parts Supplied in Shipping Crate – (*Figure 3 and list below*):

Item #	Description	Qty
1	Collection Bag Assembly	1
2	Product Package	1
3	Walk-Behind Leaf Vacuum (not shown)	1

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

Assembling the DR WALK-BEHIND LAWN VACUUM

Note: *Assembly should be done on a clean, level surface.*

Tools Needed:

- Two 1/2" Wrenches

The pictures reference the Pro model; however, the assembly is the same for both models.

1. PRO MODEL: Position the Outlet Hose out of the way by swinging it behind the Chipper Hopper ***(Figure 4)*** The Hopper will hold the Hose in this position.
2. Remove the Lower Bolts and Lock Nuts that secure the Height Adjust to the Frame using two 1/2" Wrenches ***(Figure 5)***.
3. Have a helper hold the Handlebar as you remove the Two Upper Bolts and Lock Nuts that secure the Handlebar to the Height Adjust, using two 1/2" Wrenches.
4. Rotate the Handlebars outward in a clockwise rotation until the Foam Handlebar Grip is towards you. Note: On the Pro Model keep the Cables on the outside of the Handlebars.
5. Adjust the Handlebars to the preferred working height and secure the Handlebars to the Height Adjust using the four Bolts and Lock Nuts ***(Figure 6)***.
6. Orient the Collection Bag so that the Inlet Cuff is facing towards the Outlet hose, install the Collection Bag Frame to the Bag Hangers on the Left side of the Handlebar ***(Figure 7)***.

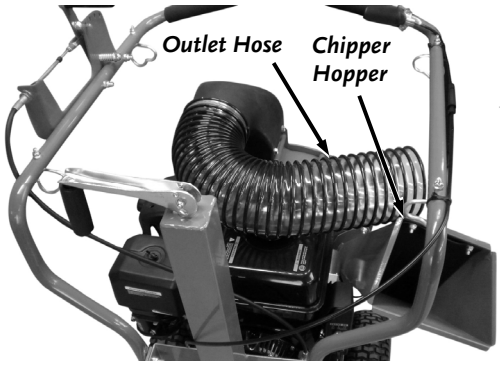
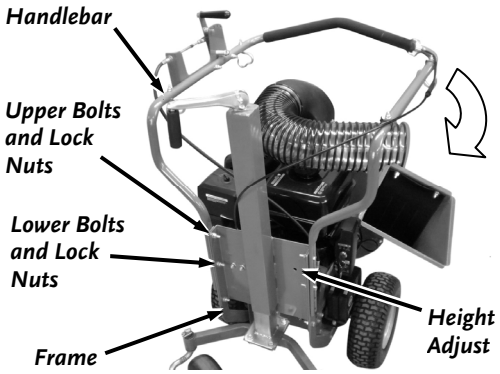


Figure 4



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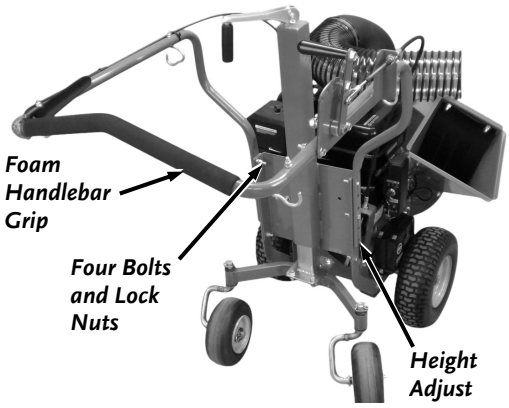

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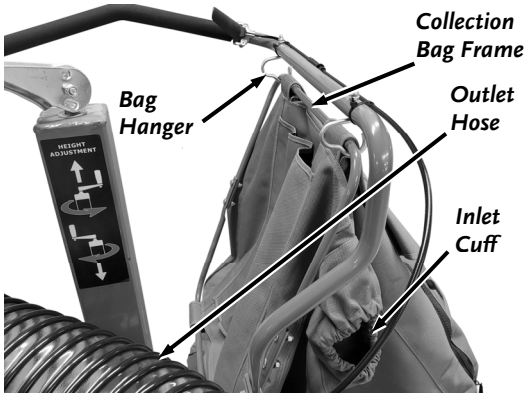


Figure 7

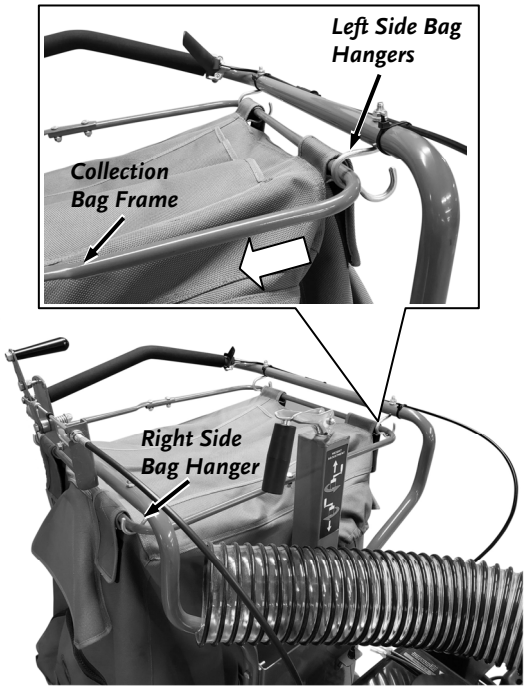
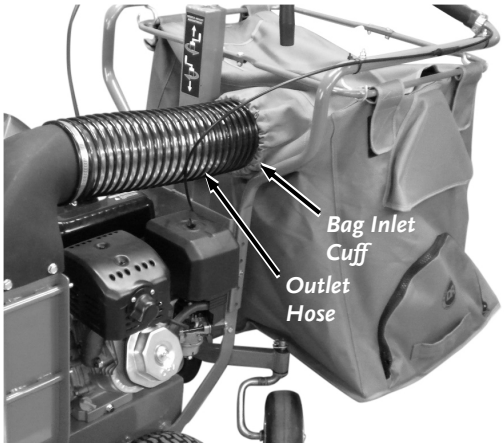


Figure 8

7. Swing the Bag Frame upward while pulling toward the Right-Side Bag Hangers. The Bag Frame will ramp up on the Left Side Bag Hangers allowing you to secure the Frame to the Right-Side Bag Hangers ***(Figure 8).***
8. Install the Outlet Hose to the Collection Bag by expanding the Inlet Cuff and sliding it over the Outlet Hose ***(Figure 9)***. Ensure the Inlet Cuff is pulled fully forward onto the Outlet Hose.
9. Connect the Bag Safety Key into the Bag Safety Switch ***(Figure 10)***.
10. Flip the Height Adjust Handle from the "Shipped" Position to the "In Use" position ***(Figure 11)***.



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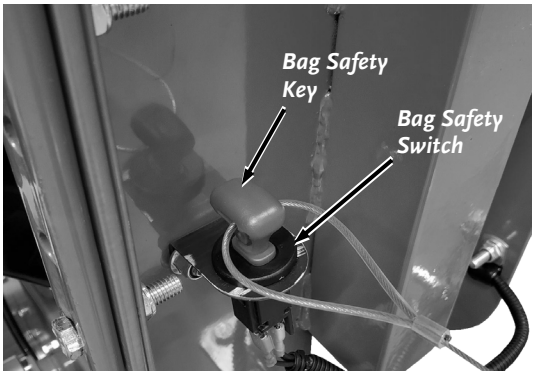


Figure 10

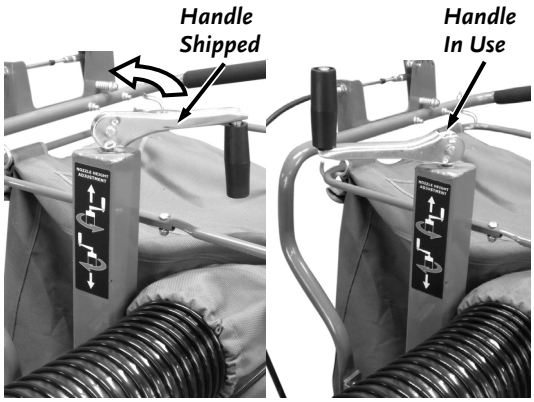


Figure 11

Adding the Engine Oil and Gasoline

NOTICE

- You must add Oil before starting the Engine. This machine is shipped without Oil. Traces of Oil may be in the reservoir from factory testing, but you must add Oil before starting the Engine. Fill the reservoir slowly, checking the level frequently to avoid overfilling.
- The Engine needs to be on a level surface or overfilling could occur which could damage the Engine during use.
- The Dipstick should not be screwed down to ensure an accurate Oil level reading.

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

Engine Oil Type	10W-30
Engine Oil Capacity	Premier: 0.5 Liters (16.9 oz) Pro: 1.1 Liters (37.2 oz)
Fuel	Unleaded gasoline

To add Engine Oil on Premier Models:

1. Level the Lawn Vacuum by rotating the Height Adjust Handle ***(Figure 12)***.
2. Remove the Oil Fill/Dipstick and add an initial quantity of the Oil recommended by the Engine Manufacturer (refer to your Engine Owner's Manual for recommended quantities) and wait one minute for the Oil to settle ***(Figure 13).***
3. Insert the Dipstick, but do not screw it down. Remove the Dipstick to check the Oil level.
4. Continue adding a few ounces of Oil at a time, rechecking the Dipstick until the Oil reaches the fill mark ***(Figure 14).*** Be careful not to overfill.
5. Replace the Dipstick and screw all the way down when full.

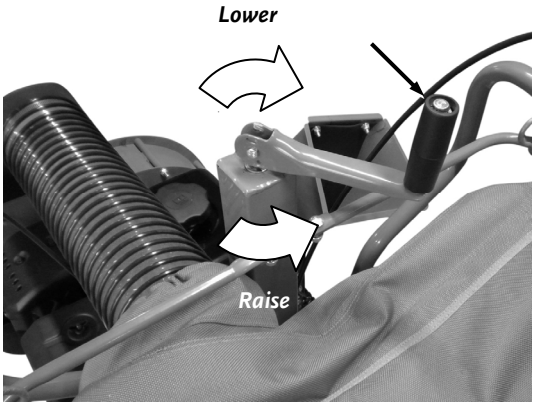
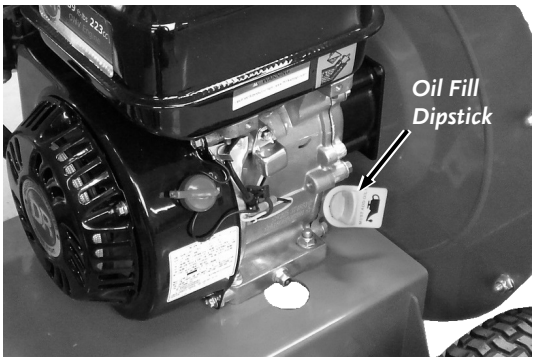


Figure 12



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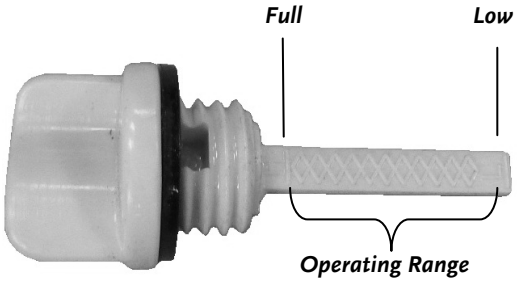
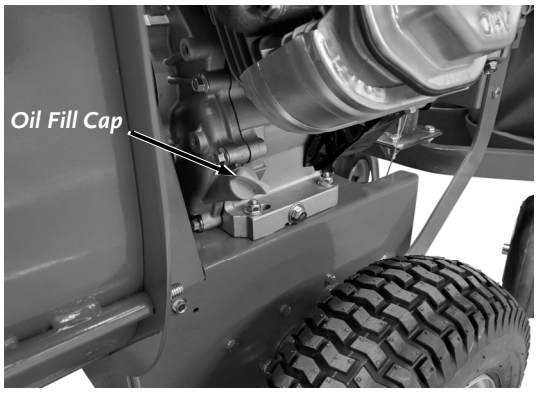


Figure 14



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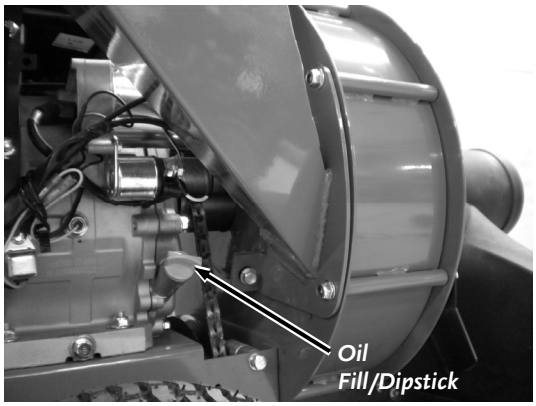

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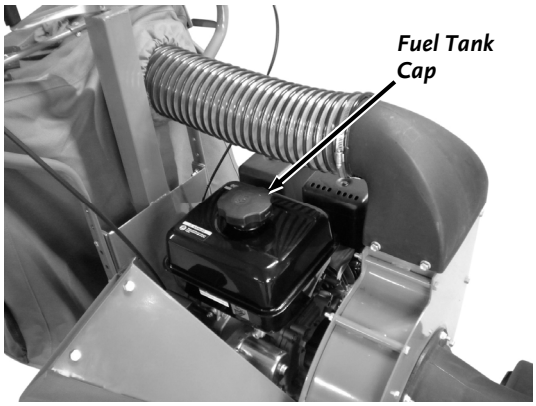


Figure 17

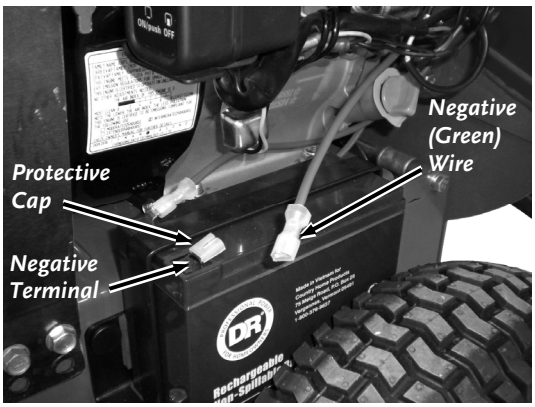


Figure 18

To add Engine Oil on Pro Models:

Your PRO DR WALK-BEHIND LAWN VACUUM Engine comes from the factory with two fill points. The left side has an Oil fill Cap ***(Figure 15)***, and the right side has an Oil Fill/Dipstick ***(Figure 16)***. Because of the Chipper Hopper the location of the Dipstick is inaccessible. To better accommodate adding and checking your Engines Oil, we recommend swapping the position of the Oil Fill Cap and Oil Fill/Dipstick.

1. Level the Lawn Vacuum by rotating the Height Adjuster Handle ***(Figure 12)***.
2. Remove the Oil fill Cap ***(Figure 15)***.
3. Remove the Oil Fill/Dipstick, replace with the Oil Fill Cap ***(Figure 16).***
4. Add an initial quantity of the Oil recommended by the Engine Manufacturer (refer to your Engine Owner's Manual for recommended quantities) and wait one minute for the Oil to settle**.**
5. Insert the Dipstick, but do not screw it down. Remove the Dipstick to check the Oil level.
6. Continue adding a few ounces of Oil at a time, rechecking the Dipstick until the Oil reaches the fill mark ***(Figure 14)***. Be careful not to overfill.
7. Replace the Dipstick and screw all the way down when full

To Add Gasoline

1. Remove the Fuel Tank Cap from the Fuel Tank (***Figure 17***).
2. Fill the Fuel Tank with fresh, clean Unleaded Gasoline to 1 inch below the bottom of the filler neck to provide space for any fuel expansion.

Note: *It may be helpful to use a clean Funnel when adding fuel to the Fuel Tank*

3. Reinstall the Fuel Fill Cap securely and wipe up any spilled gasoline.

Connecting the Battery Wire (Electric Start Models)

We ship all Electric-Starting WALK-BEHIND LAWN VACUUM'S with the Green Negative Battery Wire disconnected. This prevents the Battery from discharging during shipment. You must connect the Battery wire before using your machine.

1. Remove the protective Cap that comes on the Battery Terminals for shipping (***Figure 18***).
2. Insert the Negative Wire Connector onto the Negative Terminal of the Battery.

It may be helpful to better familiarize yourself with the features of your DR WALK-BEHIND LAWN VACUUM by reviewing ***Figure 2a*** for Pro Models and ***Figure 2b*** For Premier Models in Chapter 2 before beginning the steps outlined in this chapter. Always refer to the Engine manual for more specific Engine information.

Starting the Engine (Manual Start)

1. Move the Fuel Shut Off Lever to the ON position (***Figure 19***).
2. Move the Choke Control Lever to the "CHOKE" position (leave in the RUN position if the Engine is already warm).
3. Move the throttle control to "FULL SPEED" (rabbit) position.
4. Turn the On/Off Switch to the ON position.
5. Slowly pull the Starter Cord until you feel resistance, then pull quickly. Once the Engine starts, release the Cord and it will recoil back into position.
6. As the Engine warms up, slowly adjust the Choke to the Left towards the "RUN" position. Wait until the Engine runs smoothly before each Choke adjustment.

Starting the Engine (Electric Start)

1. Move the Fuel Shut Off Lever to the ON position (***Figure 20***).
2. Move the Choke Control Lever to the "CHOKE" position (leave in the run position if the Engine is already warm).
3. Move throttle control to "FULL SPEED" (Rabbit) position.
4. Turn and hold the Ignition Key to the start position until the Engine starts and then release. The key will snap back to the run position and the Engine will continue to run.
5. As the Engine warms up, slowly adjust the Choke lever to the left towards the "RUN" position until the engine runs smoothly.

Stopping the Engine (Manual Start)

1. Slowly move the Throttle Control Lever to the "IDLE" (Turtle) position (***Figure 19***).
2. Turn the On/Off Switch to the OFF position.

Stopping the Engine (Electric Start)

1. Slowly move the Throttle Control Lever to the "IDLE" (Turtle) position (***Figure 20***).
2. Turn the Ignition Key to the OFF position.

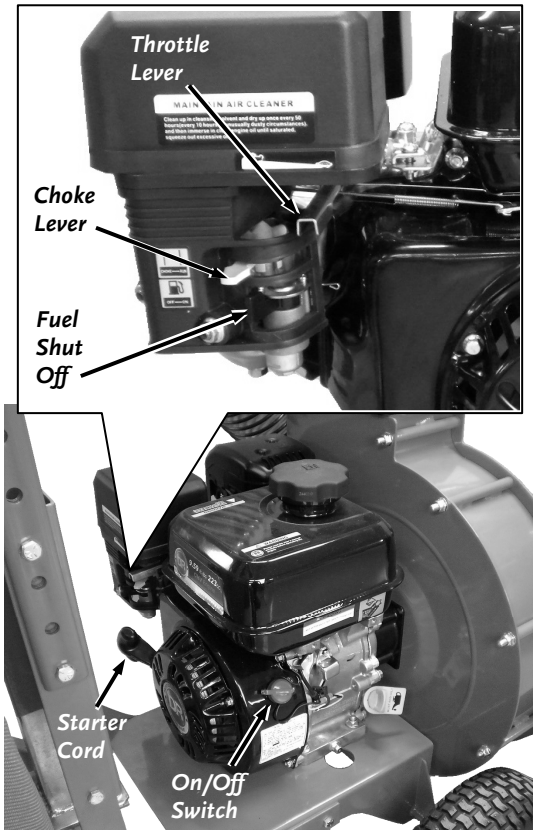


Figure 19

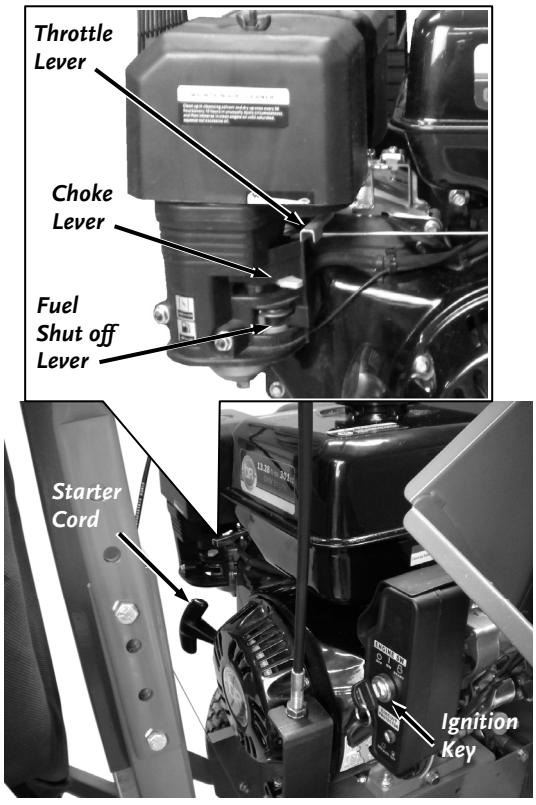


Figure 20

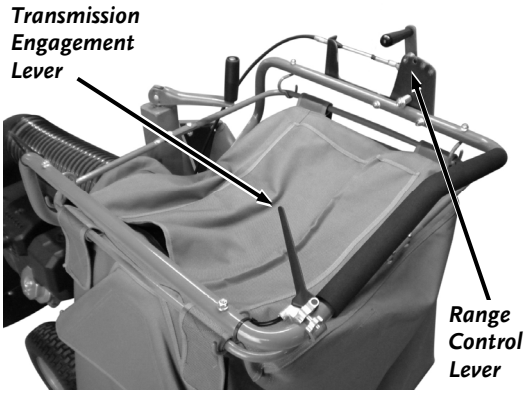


Figure 21

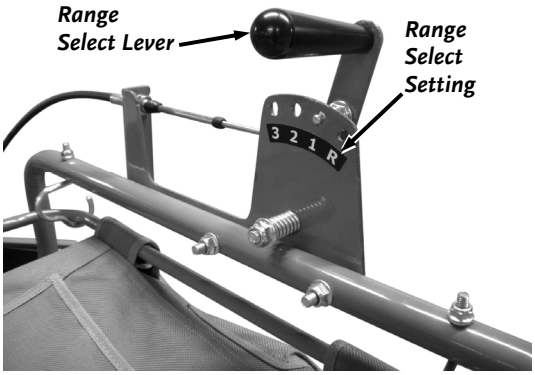


Figure 22

Operating the Drive System (PRO Model)

There are two controls, the Range Select Lever, and the Transmission Engage Lever, that are used to engage and disengage the drive wheels (***Figure 21***). Familiarize yourself with these controls before you start the Engine.

- The Range Select Lever ***(Figure 22)*** is used to select one of the following Range settings: R (Reverse), and 1,2,3.
- The number settings represent forward speeds ranging from "1" (0.9 MPH), "2" (1.7 MPH), "3" (2.6 MPH).
- Shift to R (Reverse) to move the machine in a reverse direction (1.1 MPH).
- 1st gear is the slowest speed and is used when vacuuming in difficult conditions such as heavy leaf drop or damp leaves. 1st gear is also useful for a controlled decent of slopes.
- 2nd gear is a medium speed and used for average conditions. This is the gear you should use most of the time.
- 3rd gear is used for transporting the machine to and from your work site.

Transmission Engage Lever

The Transmission Engage Lever is used to engage and disengage the Drive wheels.

1. Squeeze and hold the Transmission Engage Lever against the handlebar to ENGAGE the drive wheels.
2. Release the Lever to DISENGAGE the wheels. The Engine will continue to run, but the forward and reverse motion will stop.

How to Use the Range Select Lever

1. Release or let go of the Transmission Engage Lever.
2. Shift the Range Select Lever by pulling the lever to the right out of the detent, then pushing or pulling to the desired setting. Release the Lever and assure the lever is captured in the detent.

Throttle Control

When vacuuming and chipping, the Throttle Control Lever should be set all the way to the left at full throttle or the fast position. For starting and stopping the Engine refer to the start/stop Engine sections.

Wheel Drive Operating Tips

- Operate the machine in a large, level, open area until you are familiar with the unit's operation. Begin with 1st gear and gradually work up to 3rd gear.
- To avoid damaging the transmission, always release the Transmission Engage Lever before changing speeds.
- Forward momentum may cause the machine to gradually coast to a stop after the Transmission Engage Lever is released.
- Engage the Transmission Engage Lever slowly when starting off in 3rd gear. The machine may hesitate briefly before the wheels begin turning.
- To make a turn, gently push left or right on the Upper Handlebar.
- Shift to the 1st gear if the wheels lose traction when going up a slope (always avoid excessively steep slopes). Before shifting, turn the machine sideways on the slope to prevent rolling of the machine.
- Never go up or down a slope at an angle as the machine may become unstable and tip over. If the machine does tip over, immediately shut down the Engine and move the machine to stable ground. Check the machine for damage.
- Never force the Range Selector as damage may result. If shifting is difficult, it may be necessary to manually move the machine a few inches forward or backward while trying to move the Range Selector.

Using the Chipper Hopper

The Chipper can chip twigs and branches ranging in size up to 2" in diameter. Cut your materials into manageable lengths before feeding them into the Chipper Hopper. The revolving Chipper Knife mounted on a Rotor, turns branches fed into the Hopper into "chips".

- Be sure that the collection bag is empty and in place before chipping.
- Always wear safety goggles, gloves, and hearing protection when chipping.
- Start the Engine on level ground.
- Keep a moderate feed rate to prevent overloading the machine.
- Use common sense when using the chipper. Learn to recognize the change in sound when the Engine is overloading. Pull back on whatever you are chipping if overloading should occur.
- Green or dry branches chip easily and soft wood will chip easier than hard wood.
- Use caution with small diameter green saplings and branches less than 1" in diameter. Chip these grouped or bundled together to provide support for each other. If the material is 1" or larger, feed only one at a time into the Chipper Hopper.
- Some side shoots or side branches may have to be trimmed from the main stalk before chipping.
- Short stubs of branches may be pushed through the Chipper section with the next branch. NEVER ALLOW YOUR HANDS TO ENTER THE CHIPPER HOPPER. If necessary, push the material further down with a long stick or branch.
- When chipping branches occasionally a "tail" will be left at the end of the branch (usually green wood), which increases in length as you chip and eventually wraps around the shaft. To avoid this, slowly turn the branch as you feed it into the Chipper tube. This will also improve the chipping performance.
- When chipping, frequently empty the Collection Bag to make it easier because of the weight of the accumulative chips.
- If the machine does not chip well, the Chipper Knife may need sharpening or may need to be replaced.

Using the Vacuum

- Before leaves drop, mow your lawn to the shortest recommended height. Your DR WALK-BEHIND LAWN VACUUM will perform better on short grass.
- The DR WALK-BEHIND LAWN VACUUM is designed to be used frequently during periods when leaves are dropping. It is not recommended to let leaves get 4", or deeper.
- The drier the leaves the better.
- The thicker the leaf layer the slower you should proceed. If leaves are wet or matted down use 1st gear and it may be necessary to fluff up leaves before using the vac. If the snout clogs, try going at a slower speed.
- Snout height is critical. The snout should ride above the leaf layer to allow proper vacuuming. Closer is not always better. As a general reference, the front of the snout should scrape the top of the grass.
- You should avoid vacuuming twigs and branches into the snout. This will cause clogging. Twigs and branches should be processed through the Chipper Hopper.
- Avoid overfilling the Vacuum Snout, this will cause clogging.
- Vacuuming wet and soggy material will also cause clogging. A steady pace with a smaller flow of materials provides the most effective results.
- The Collection Bag does not have to be removed for emptying, simply unzip the Side Access Door and dump leaves out. You may need to scoop the heavier debris out.
- Avoid clogging when vacuuming loose, stringy material such as hay or pine straw, by picking up a small amount at a time. Check and empty the Collection Bag frequently.
- Avoid vacuuming in sandy areas, as this will cause excessive wear.
- Use care when vacuuming near plantings, ornamentals, mulches.
- Use extra caution when vacuuming around stone and gravel.

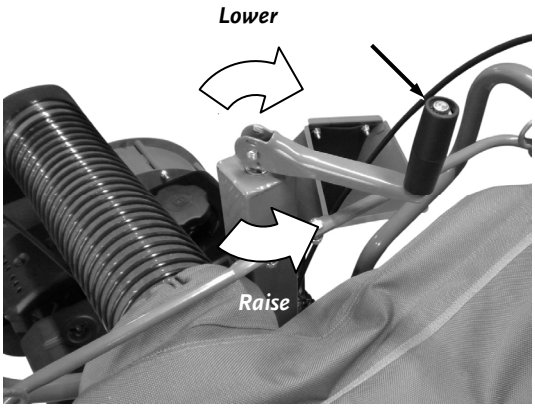


Figure 23

Adjusting the Vacuum Snout Height

The height of the Vacuum Snout can be adjusted to allow you to vary the suction to meet the surface conditions.

- For short turf with light leaf fall, the Snout should be lowered closer to the surface.
- For long turf and heavy leaf fall, the Snout should be raised above the debris.
- For moving the machine long distances, you will avoid damage to the snout by raising it to the highest setting.

1. **To raise the Snout:** Grasp the Height Adjust Handle, and rotate counter clockwise (***Figure 23***).
2. **To lower the Snout:** Grasp the Height Adjust Handle and rotate clockwise.

Emptying the Collection Bag

⚠ WARNING

Never start the Engine without the Collection Bag attached firmly to the Discharge Chute and Outlet Hose.

- Empty the Bag as soon as it is full (check by feeling sides of Bag). Overfilling the bag will cause the vacuuming performance to decrease or stop completely and could lead to clogging of the discharge tube, snout, or both.
- Empty the Bag completely BEFORE storing the machine to prevent premature deterioration of the Bag caused from rotting debris and the possibility of a fire occurring as a result of heat generated by decomposing debris.

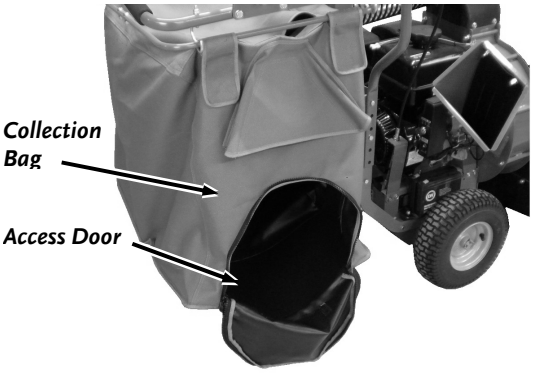


Figure 24

Emptying the Collection Bag while Attached:

1. Shut off the Engine and wait for all moving parts come to a complete stop.
2. Leave the bag in position. Unzip the Access Door and let the debris fall out ***(Figure 24)***. You may have to scoop out the remaining heavy debris with a stick.
3. Zip the Access Door closed.

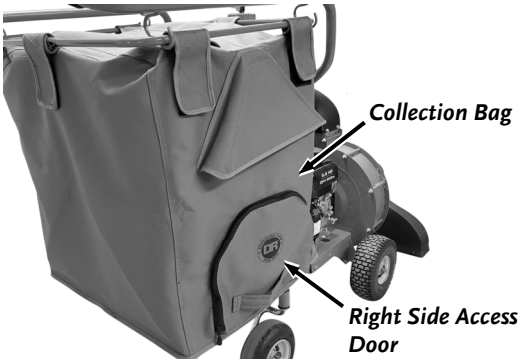


Figure 25

Emptying the Collection Bag by Power Discharge:

⚠ WARNING

- Keep bystanders 25 feet away.
- Never point the Bag Access Door opening towards people, pets, vehicles or buildings.
- Always Open the Access Door opposite the starting position.

1. Shut off the Engine and wait for all moving parts come to a complete stop.
2. Leaving the Collection Bag in position, unzip the Side Access Door opposite from the starting position.
   a. Manual Start Models open the Right-Side Access Door from the operators' position ***(Figure 25)***.
   b. Electric Start Models, Open the Left Side Access Door from the operators' position ***(Figure 26).***
3. Start the machine and allow debris to discharge from the Collection Bag with the aid of airflow.
4. Zip the Access Door closed.

Figure 26

Emptying the Collection Bag by removing the Bag:

1. Shut off the Engine and wait for all moving parts come to a complete stop.
2. Detach the Inlet Cuff from the Outlet Hose ***(Figure 27).***
3. Detach the Collection Bag Safety Key from the Bag Safety Switch.
4. Detach the Collection Bag Frame from the Bag Hangers:
   a. Unhook one side at a time by first Lifting the Bag Frame ***(Figure 34)***.
   b. Pull the Bag Frame over to one side, lifting the out of the Bag Hangers.
   c. Lift the Bag Frame out of the opposite Bag Hangers.

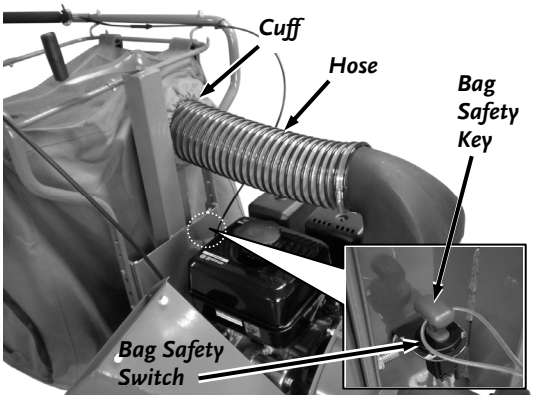


Figure 27

Figure 28

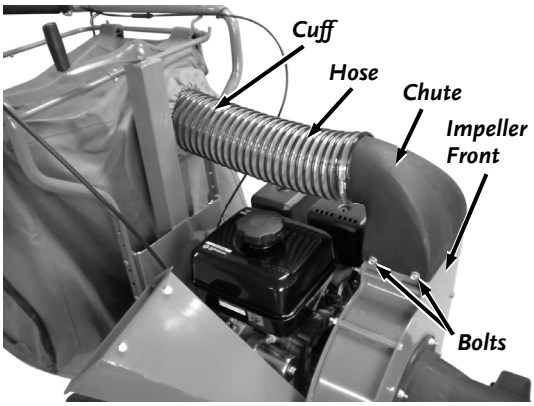


Figure 29

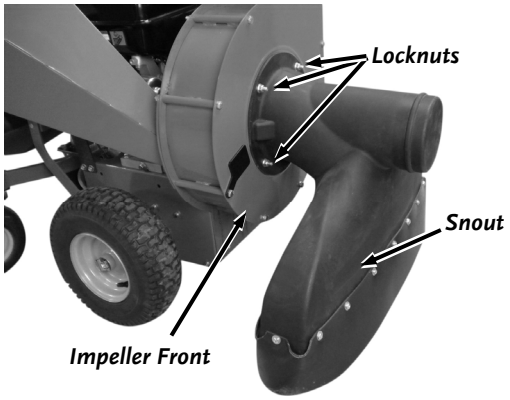


Figure 30

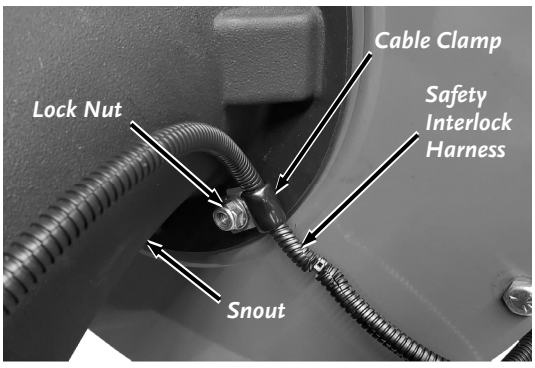


Figure 31

5. Carry the Collection Bag to the dumping area, unzip the Access Door and remove the Material.
6. Zip the Access Door closed.
7. Reattach the Collection Bag ***(Figure 28).***
8. Reinstall the Cuff, pulling the Cuff fully Forward onto the Hose ***(Figure 27).***
9. Reattach the Collection Bag Safety Key to the Safety Switch.

Clearing the Machine of Debris, Clogs or Jams

⚠ WARNING

Before performing any maintenance procedure or inspection, stop the Engine, wait for all moving parts to come to a complete stop and wait five minutes to allow all parts to cool. Disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

A clog or jam in the machine can cause the vacuuming and shredding and chipping operations to decrease or even stop completely. If clogging occurs, check (and clean, if necessary) the following areas.

Tools needed:

- 1/2" Wrench
- Stick

1. Remove any material left in the Chipper Hopper with a stick.
2. Check that the Collection Bag is not overfilled. Empty the debris if Full.

To check the Chute for clogs:

1. Remove the four Bolts that secure the Chute to the Impeller Front and Back using a 1/2" Wrench ***(Figure 29)***. Remove the Chute.
2. Clear and remove any clogged debris.
3. Reinstall the Chute.
4. Reinstall the Cuff, pulling the Cuff fully Forward onto the Hose.

To Check Behind the Impeller for clogs:

1. Remove the four Bolts that secure the Chute to the Impeller Front and Back using a 1/2" Wrench ***(Figure 29)***. Remove the Chute.
2. Clear and remove clogged any debris using a stick.
3. Reinstall the Chute.
4. Reinstall the Cuff, pulling the Cuff fully Forward onto the Hose.

To check the Snout for clogs:

1. Remove the three Lock Nuts that secure the Snout to the Impeller Front using a 1/2" Wrench ***(Figure 30)***. Remove the Snout.
2. Remove the Lock Nut that Secures the Cable Clamp and Safety Interlock Harness to the Snout, using a 1/2" Wrench ***(Figure 31).*** Remove the Snout.
3. Clear and remove any clogged debris using a stick.
4. Reinstall the Snout, securing with three Lock Nuts using 1/2" Wrench ***(Figure 30).***
5. Reinstall the Cable Clamp and Safety Interlock Harness, securing with Lock Nut using 1/2" Wrench ***(Figure 31).***

Chapter 4: Maintaining the DR WALK-BEHIND LAWN VACUUM

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

⚠ WARNING

Before performing any maintenance procedure or inspection, stop the Engine and wait five minutes to allow all parts to cool. If Equipped remove the Key and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

Regular Maintenance Checklist

PROCEDURE	BEFORE EACH	EVERY 25 HOURS	EVERY 50 HOURS
Check Engine Oil Level	▲		
Check Fuel Level	▲		
Check General Equipment Condition	▲		
Check Tire Pressure	▲		
Visually inspect Collection Bag for rips, tears and proper installation.	▲		
Visually inspect Knife for damage and sharpness	▲		
Check for clogs, debris build up	▲		
Clean Engine Exterior & Cooling Fins	▲		
Clean Engine Air Filter		▲	
Lubricate Drive Chain and Gears		▲	
Change Engine Oil	1st time 5 hours	▲	
Replace Drive Belt		▲	
Replace Spark Plug			▲
Replace Air Filter			▲

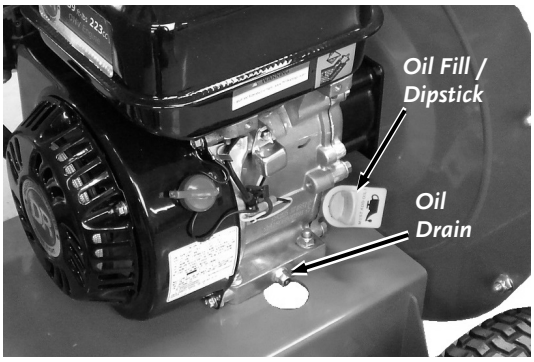


Figure 32

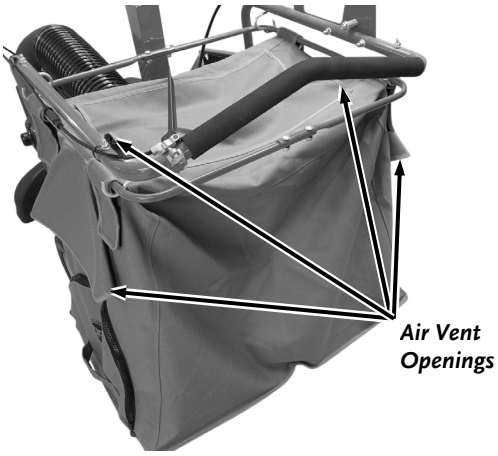


Figure 34

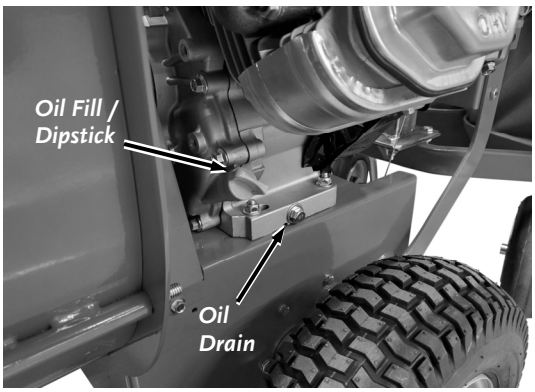


Figure 33

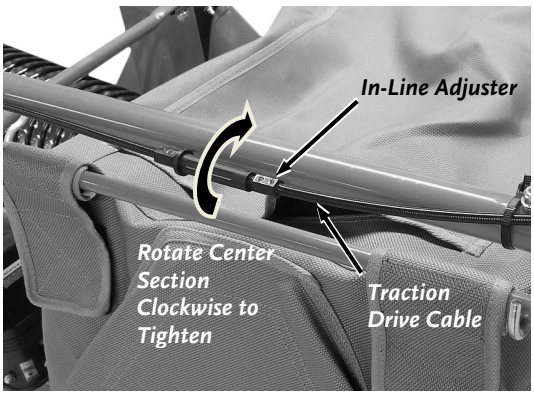


Figure 35

Changing The Engine Oil

Tools and Supplies Needed:

- Engine Oil (see your Engine Manual for Oil specifications)
- 10mm (Premier) or 12mm (Pro) Wrench
- Approved Container for Used Oil
- Small Funnel
- Rags

Note: *Drain the Oil when the Engine is warm. Warm Oil drains quicker and more completely.*

1. Position an Approved Oil Container under the machine below the Engine Oil Drain Plug. The Premier Drain plug is on the right-hand side of the Engine (***Figure 32***), and the Pro Is on the Left-hand side (***Figure 33***)
2. Remove the Engine Oil Fill/Dipstick.
3. Remove the Oil Drain Plug with a 10mm Wrench (Premier) or a 12mm Wrench (Pro) and let the Oil drain into the Container.
4. Replace the Oil Drain Plug.
5. Initially add 14 oz. of Oil (type of Oil recommended by the Engine Manufacturer) into the Oil Fill and wait one minute for the Oil to settle.
6. 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.

Bag Maintenance

- Keeping the Air Vents Clean improves air flow and results in better vacuuming performance ***(Figure 34).***
- Keep the Bag Air Vents clean by occasionally brushing them out by hand or with a cloth to remove large chunks of debris. You can also wash the Air Vents by hand with mild soap and water.
- Do not wash the Bag in an automatic washer, hand wash only.
- Do not use a cleaner which contains bleach.
- Allow the Bag to dry thoroughly before use or storing.

Adjusting the Traction Drive Cable

Note: *When properly adjusted, tension on the Traction Drive Lever should increase when the Lever is about parallel to (almost touching) the Handlebar Grip.*

1. Locate the Traction Drive Cable along the Left Side of the Handlebar ***(Figure 35***). There is an In-Line Adjuster to change the length of the Cable.
2. Rotate the center portion of the In-Line Adjuster clockwise while holding the ends stationary to expand the In-Line Adjuster and remove slack from the Cable.

Replacing the Chipper Knife

The PRO DR WALK-BEHIND VACUUM is shipped with a sharp Chipper Knife and depending upon material being chipped we've found it can remain acceptably sharp for 40 plus hours. When you notice diminished feeding, it is time to replace the knife. You may also choose to have the knife sharpened instead as described on the next page.

⚠ WARNING

Before performing any maintenance procedure or inspection, stop the Engine, wait for all moving parts to come to a complete stop and wait five minutes to allow all parts to cool. Disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

Tools and Supplies Needed:

- 1/2" Wrench
- 3/8" Wrench
- 3/16" Allen Wrench
- Ratchet
- 1/2" Socket
- 6" Extension

1. Remove the Bolts that secure the Belt Cover to the Frame using a 3/8" Wrench (***Figure 36***).
2. Remove the lower Bolt that secures the Hopper to the Impeller Back, using a Ratchet with 1/2" Socket and 6" Extension (***Figure 37***).
3. Support the Hopper as you remove the Two Lock Nuts from the upper Bolts that secure the Hopper to the Impeller Back using two 1/2" Wrenches. Leave the Bolts in place and let the Knife Access Door swing down, out of the way. Remove the Hopper ***(Figure 38).***
4. Using a stick, slowly rotate the Impeller until the Knife is centered in the access opening.
5. Insert a 3/16" Allen Wrench into the head of the Allen Screw (***Figure 39***), then with access through the Knife Access Door opening (***Figure 38***) remove the Nuts that that secure the Knife to the Impeller using a Ratchet with 1/2" Socket and 6" Extension.

Note: *Be cautious not to drop the hardware into the Vacuum Housing. If this happens remove the Chute as described in Chapter 3* "Clearing the Machine of Debris, Clogs or Jams" *to gain access.*

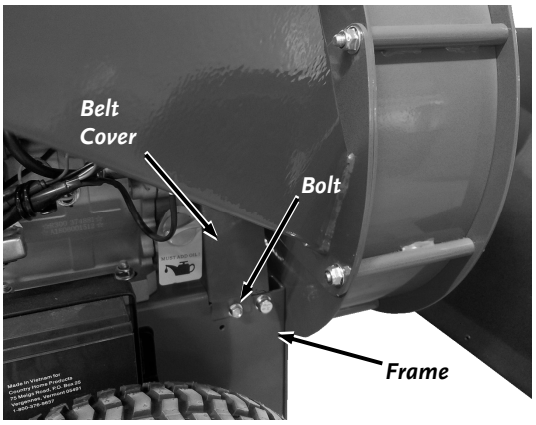
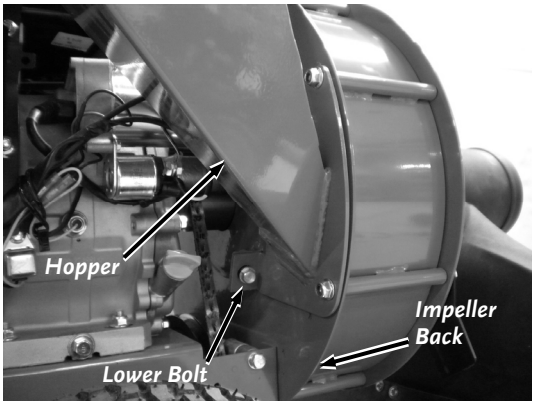


Figure 36



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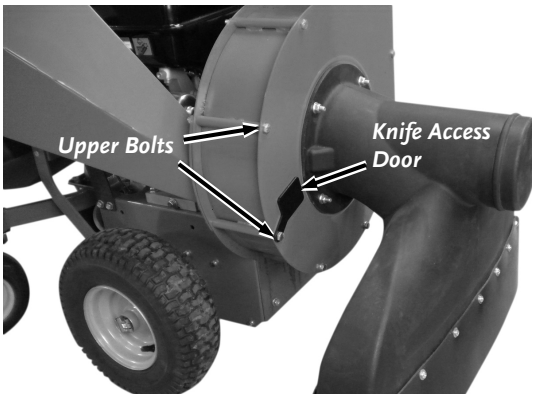


Figure 38

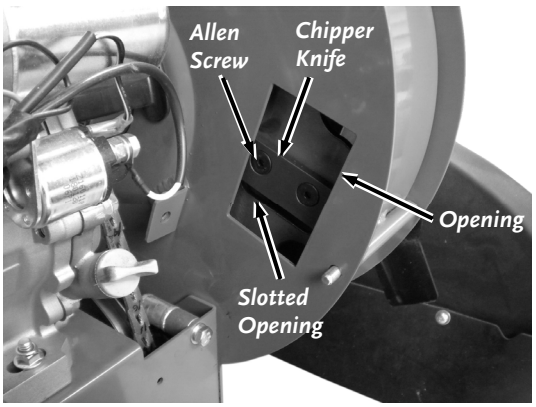


Figure 39

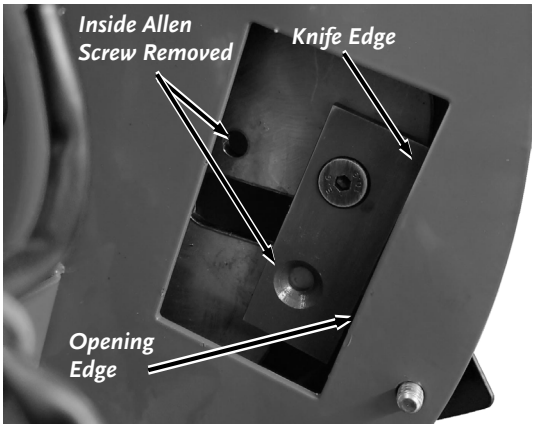


Figure 40

6. Remove the inside Allen Screw from the Knife and carefully allow the Knife to swing down.
7. Align the Knife edge with the long edge of the Window, then carefully remove the Knife and Screw together ***(Figure 40)***.
8. Visually inspect the Knife mounting surface and be sure It is clean. Metal burrs may need filing so the Knife mounts flush against the Flywheel.
9. Install a new or sharpened Knife with the sharp edge toward the slotted opening ***(Figure 39)***. Install In reverse order of removal, inserting the Screws first.

Note: *New Allen Screws and Locknuts are provided with each new Chipper Knife.*

10. Hold the Allen Screw with the 3/16" Allen Wrench while using the 1/2" Socket with Extension to install the Nut. Fully tighten the Knife Hardware.
11. Reposition the Hopper onto the Impeller Back and loosely install the lower Bolt and Lock Nuts onto the Upper Bolts ***(Figure 37)***.
12. Tighten the Upper Bolts and Lock Nuts using two 1/2" Wrenches.
13. Position the Knife Access Door to cover the access opening in the Impeller front using a 1/2" Wrench to help rotate the Access Door ***(Figure 38)***.
14. Tighten the Lower mounting Bolt using Ratchet with 1/2" Socket and 6" Extension ***(Figure 37).***
15. Re install the Belt Cover to the Frame ***(Figure 36).***

Sharpening the Chipper Knife

⚠ CAUTION

Discard a cracked or severely nicked Knife because it could break apart and damage the machine and cause personal injury.

Over a period of time, the cutting edge on the Chipper Cutting Knife will dull. The Cutting Knife must be sharpened or replaced in order to restore performance.

- Only sharpen a Chipper Knife that is dull or that has only small minor nicks.
- You should never attempt to sharpen the Chipper Knife freehand, take the Chipper Knife to a machine shop for proper sharpening.
- It is extremely important to consistently maintain the 45-degree angle for proper performance.
- Excessive heat generated during the sharpening process will damage Knives and weaken the metal. Be sure not to overheat the Knife during sharpening because it will shorten the life of the Knife.
- How many times a Knife can be sharpened is determined by how much material needs to be taken off to sharpen or to compensate for dents or gouges.
- A new Chipper Knife has a 5/16" measurement between the short side bevel edge and the Knife mounting holes (***Figure 41***).

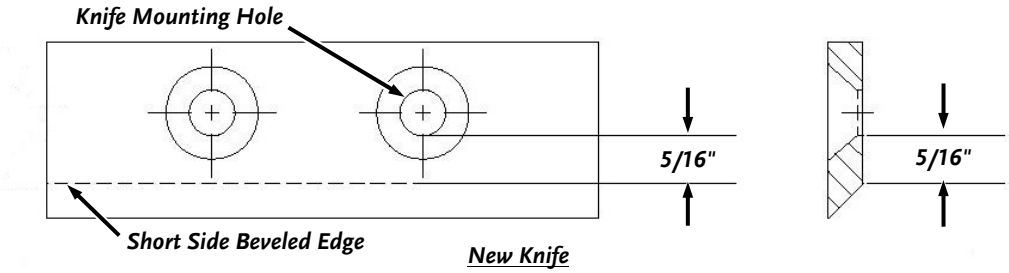


Figure 41

- The knife should never be sharpened to the extent that more than 3/32" is taken off this measurement.
- Once this measurement is below 7/32" (***Figure 42***), or if you are unable to remove dents or gouges with these guidelines, replace the Knife.

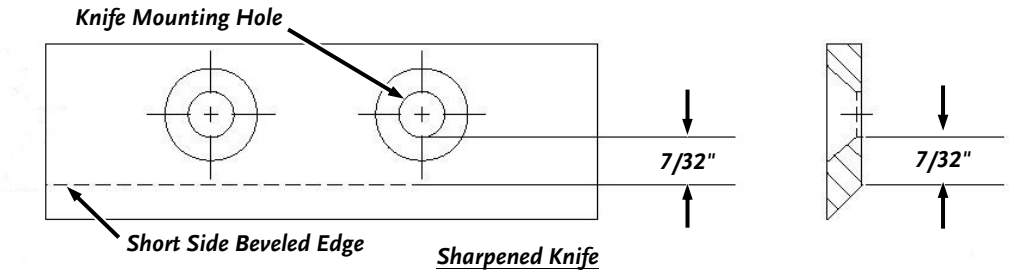


Figure 42

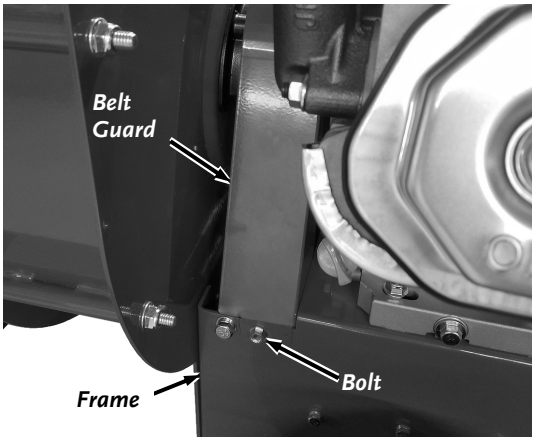


Figure 43

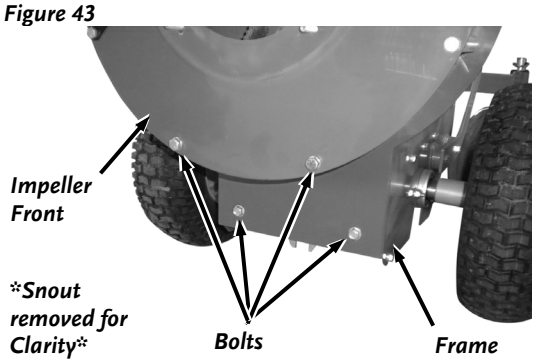


Figure 44

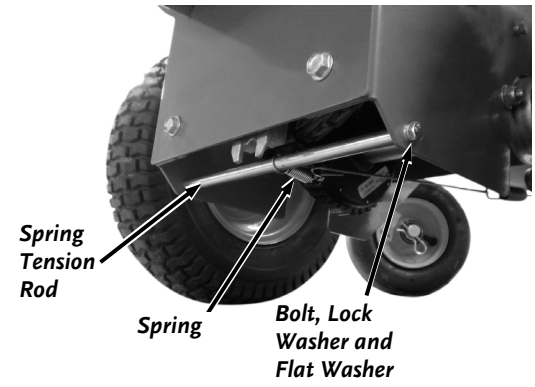


Figure 45

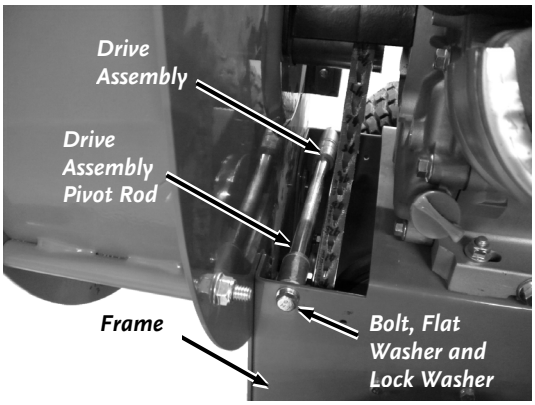


Figure 46

Replacing the Drive Belt

Tools and Supplies needed:

- 10mm Wrench
- 3/8" Wrench
- 13mm Wrench
- 1/2" Wrench
- Pliers
- Diagonal Cutting Pliers

1. Locate a clean flat surface to work on.
2. Use the Height Adjust Handle to raise the Snout so that the machine is tipped back. This will allow access under the machine.
3. Remove the Bolts that Secure the Belt Guard to the Frame using a 3/8" wrench ***(Figure 43)***. Remove the Belt Guard.
4. Loosen the four Bolts that secure the Impeller Front to the Frame using a 1/2" wrench ***(Figure 44)***. Do not remove these Bolts.
5. Remove the Bolts, Lock Washers and Flat Washers that Secure the Spring Tension Rod to the frame using a 10mm Wrench ***(Figure 45)***. Use Pliers to stop the Rod from turning while you loosen the Bolts. Remove the Rod from the Spring and set aside.
6. Remove the Bolts, Lock Washers and Flat Washers that Secure the Drive Assembly to the Frame using a 13mm Wrench ***(Figure 46).*** Use Pliers to hold the Drive Assembly Pivot rod while you loosen the Bolts.

7. Lift the Drive Assembly upward in the Frame as you remove the Linked Belt from the Drive Pulley ***(Figure 47)***.

   Note: *There is a spacer on the Hopper side of the Pivot shaft, this will slide off as you raise the drive unit* ***(Figure 48)***.

8. Lower the Drive Assembly out of the Frame and rest the Drive Assembly under the Machine.
9. Cut the old Linked Belt using Diagonal Cutters and remove it from the Machine.
10. Route the New Linked Belt on to the Impeller Pulley with the "V" opening facing away from you ***(Figure 49)***.

    Note: *The opening of the "V" will face in the direction of Impeller rotation. The direction of Impeller rotation is clockwise from the operators' position.*

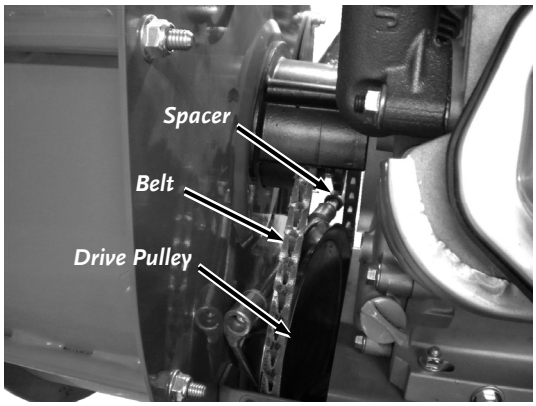


Figure 47

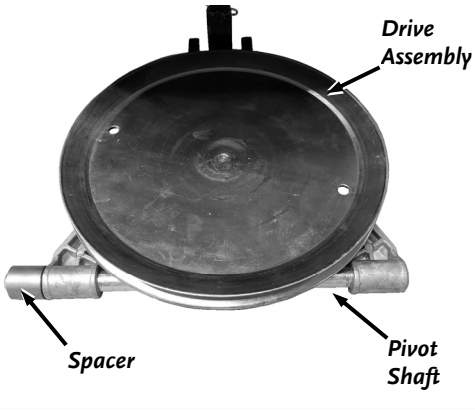


Figure 48

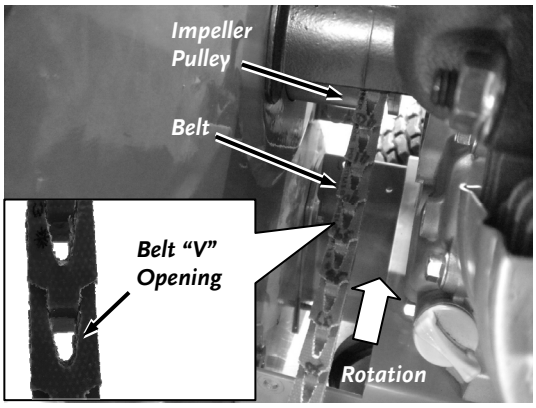


Figure 49

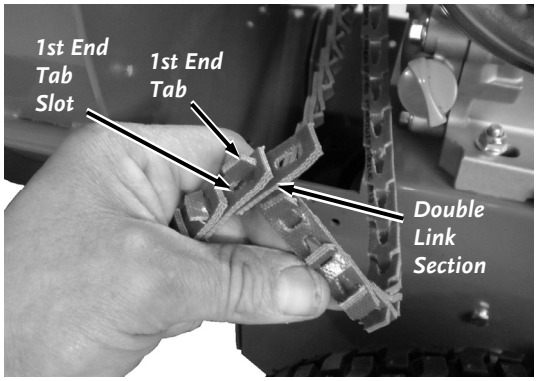


Figure 50

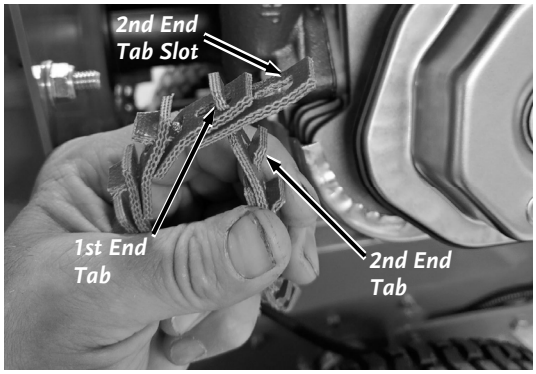


Figure 51

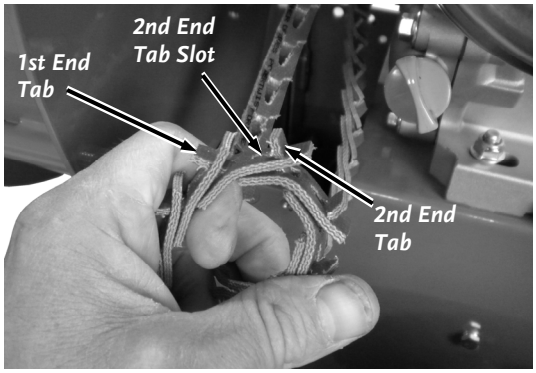


Figure 52

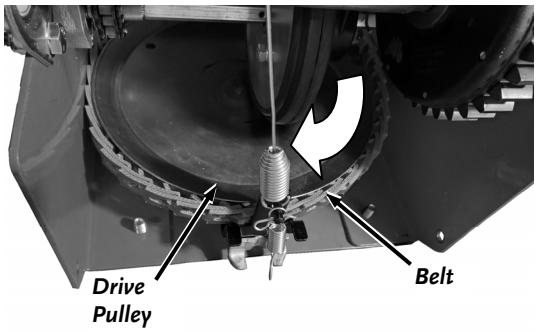


Figure 53

11. Assemble the Belt Link and Tabs:
    a. Twist the Belt to Line up the 1st End Tab with the End Tab Slot in the Doubled Link section. Insert the Tab through the Slot ***(Figure 50)***.
    b. Twist the Belt so the End Tab locks into place and the 2nd End Tab is lined up with the 2nd End Tab Slot ***(Figure 51)***.
    c. While squeezing the Belt together in one hand, twist and insert the 2nd End Tab into the 2nd End Tab Slot, using your other hand ***(Figure 52)***.
    d. Twist the 2nd End Tab to secure it into place.
    e. Ensure that both End Tabs are secured in place. Flip the Belt so that the Tabs are facing inward.
12. Reinstall the Spacer on to the Drive Unit Pivot Shaft and raise the Drive Unit into the Frame ***(Figure 47)***.
13. Route the new Linked Belt onto the Drive Pulley in a clockwise rotation ***(Figure 53)***.
14. Check that the Belt is seated in the groves of the Drive and Impeller Pulley's, lower the Drive Unit into the Frame.
15. Install the Bolt, Lock Washer and Flat Washer to secure the Drive Assembly on the Hopper side of the Frame. ***(Figure 54)***
16. While pushing down on the Drive Assembly, install the remaining Bolt, Lock Washer and Flat Washer. ***(Figure 46)*** Tighten the hardware using a 13mm Wrench.
17. Route the Spring Tension Rod through the Spring and Reattach to the Frame ***(Figure 45)***.
18. Reinstall the Belt Guard to the Frame ***(Figure 43)***.
19. Tighten the Bolts on the Impeller Front using a 1/2" Wrench ***(Figure 44)***.

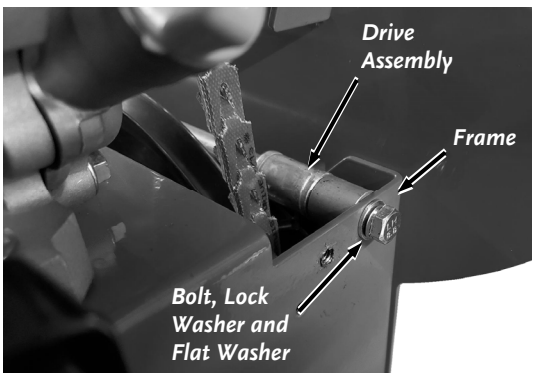


Figure 54

Battery Care (Electric Start Models)

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 area that does not freeze.
- 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 the Engine when the Battery charge is low.

Disposing of the Battery Responsibly

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.

Charging the Battery

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

- At 1 amp, you may have to charge the Battery for as long as 48 hours.
- At 2 amps, you may have to charge the Battery for as long as 24 hours.

Note: *The charging system of a running Engine is designed to maintain a Battery's present charge. Starting a machine that has a significantly discharged or dead Battery using the Recoil Starter or Jumper Cables will not recharge the Battery.*

To connect a Battery Charger to your DR WALK-BEHIND LAWN VACUUM, follow the steps listed below.

1. Detach the two (2) Battery wires going to the Battery on your DR WALK-BEHIND LAWN VACUUM.
2. Attach the black (-) Battery Charger wire to the Battery Negative (-) Terminal and attach the red (+) Battery Charger wire to the Battery Positive (+) Terminal.
3. Plug the Battery Charger into an outlet.

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.

Recycling a Used Battery

NOTICE

Please dispose of used Batteries responsibly, according to your local hazardous materials regulations. Never throw away used Batteries in your household trash.

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 for Battery Recycling and contact info.

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

Before performing any maintenance procedure or inspection, stop the Engine and wait five minutes to allow all parts to cool. Remove the Key and disconnect the Spark Plug Wire, keeping it away from the Spark Plug.

Troubleshooting Table

SYMPTOM	POSSIBLE CAUSE; CORRECTIVE ACTION
Engine fails to start	⇒ Fuel Tank empty; Fill Tank with clean, fresh fuel. ⇒ Spark Plug wire disconnected; Connect Wire to Spark Plug. ⇒ Faulty Spark Plug; Clean, adjust gap or replace the Spark Plug.
Loss of power, operation erratic	⇒ Spark Plug Wire loose; Connect and tighten Spark Plug Wire. ⇒ Running on "CHOKE"; Move Choke Lever to the "RUN" position. ⇒ Blocked fuel line or stale fuel; Clean fuel line; fill tank with clean, fresh gasoline. ⇒ Water or dirt in fuel system; Disconnect fuel line at carburetor to drain fuel tank. ⇒ Carburetor out of adjustment; contact us at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance. ⇒ Dirty air cleaner; Clean or replace air filter.
Engine overheats	⇒ Carburetor not adjusted properly; contact us at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance. ⇒ Engine Oil level low; Fill crankcase with proper Oil. ⇒ Internal Engine cooling fan not working properly due to debris buildup over Engine crank cover; Clean debris away from Engine crank cover for improved air circulation.
Unit does not discharge	⇒ Discharge Chute clogged; Stop Engine immediately and disconnect spark plug wire. Clean inside of blower housing. See "MAINTENANCE" section of this manual. ⇒ Foreign object lodged in Impeller; Stop Engine immediately and disconnect Spark Plug wire. Remove lodged object.
Excessive vibration.	⇒ Loose parts or damaged Impeller assembly; Stop Engine immediately and disconnect Spark Plug wire. Tighten all Bolts & Nuts. Make all necessary repairs. If vibration continues, contact us at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance.
Chipper does not chip	⇒ Solid object jammed in unit; Check & remove any obstruction. ⇒ Broken or missing Chipper Knife; Replace Knife.
Poor chipping performance	⇒ Dull Chipper Knife; Sharpen or replace Knife. ⇒ Engine not reaching full RPM; contact us at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance. ⇒ Excessively worn Engine shaft bearings; contact us at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance. ⇒ Loose mounting Bolt on Impeller assembly; Tighten bolt.
Loss of vacuum	⇒ Vacuum Snout clogged; Remove & clean. ⇒ Collection Bag full; Empty bag. ⇒ Discharge Chute clogged; Remove Collection Bag & clean Chute. ⇒ Processing chamber clogged; Remove Vacuum Snout to clean chamber. ⇒ Engine not reaching full RPM; contact us at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance.

Troubleshooting Table (Continued)

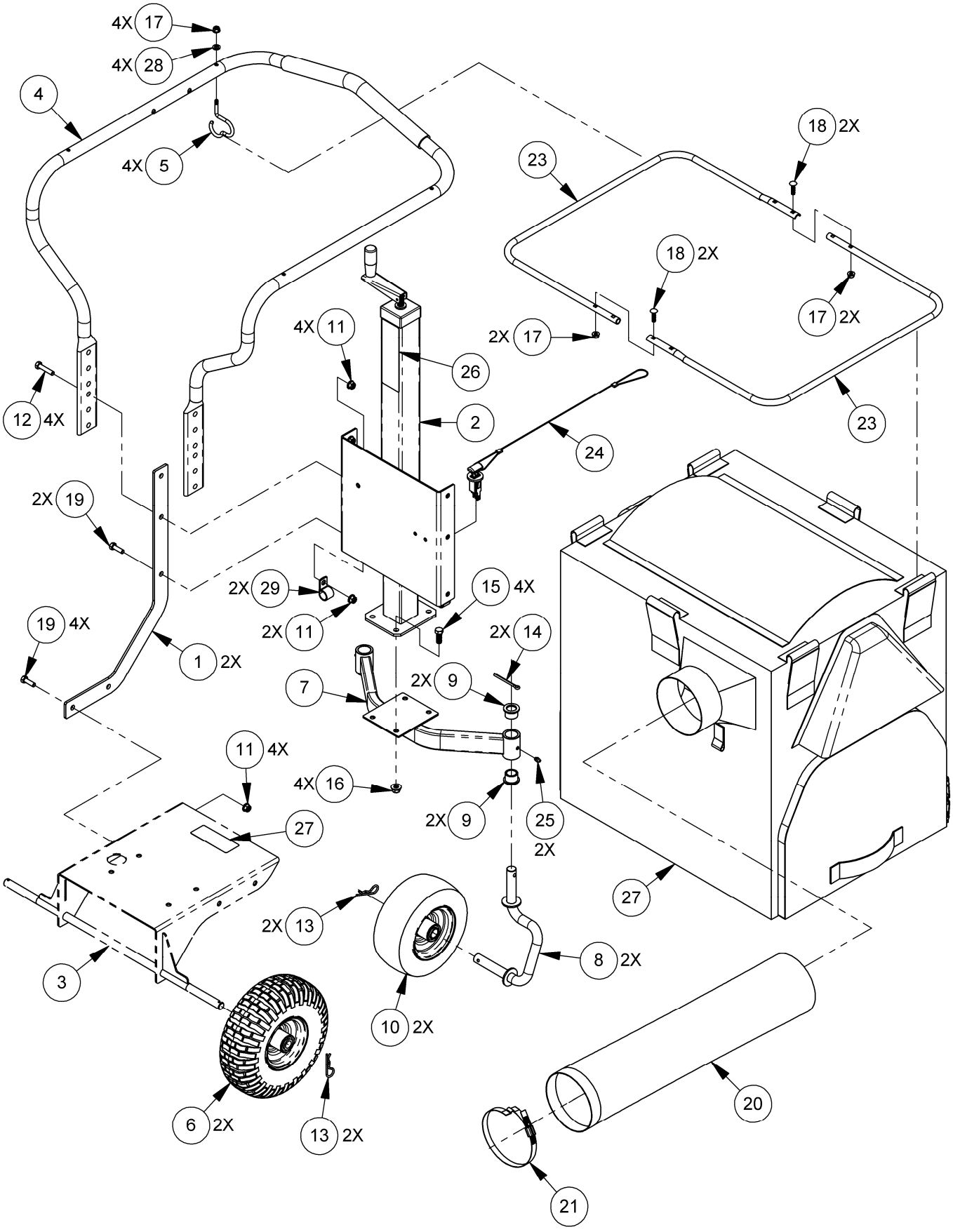
SYMPTOM	POSSIBLE CAUSE; CORRECTIVE ACTION
Debris build-up in Vacuuming/Chipper Housing	⇒ Vacuuming too fast; Clean out housing and vacuum at slower speed.
Loss of traction	⇒ Drive Engagement Cable Loose; Adjust Drive Engagement cable. ⇒ Stretched or broken Drive Belt; Replace Belt. ⇒ Drive Engagement Cable tension spring broken; Reconnect spring or replace cable. ⇒ Malfunction in Range Select Assembly; contact us at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance.
Range Select Lever does not shift	⇒ Loose Range Select Lever; Check connections for loose Nuts and Bolts. ⇒ Broken Range Select Cable; Replace Cable. ⇒ Malfunction in Range Select Assembly; contact us at www.DRpower.com or call 1-800-DR-OWNER (376-9637) for assistance.
Wheels do not stop when Drive Engagement Lever is released	⇒ Drive Engagement Cable Tension Spring broken, stretched, or disconnected; Reconnect Spring or Cable. ⇒ Drive Belt misaligned; Check that Belt is properly aligned on pulleys. ⇒ Drive Engagement Cable out of adjustment; Adjust cable.

Parts List – Premier Handlebar and Bagger Assembly

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

Ref#	Part#	Description
1	10000038366	Side, Common
2	A0000296221	Height Adjust Weldment, w/Label
3	A0000296229	Frame Weldment, w/Labels
4	10000038410	Handlebars
5	10000038357	Hanger, Bag
6	10000040883	Wheel, Pneumatic, 10" X 3.5"
7	10000038505	Frame, Rear Wheel
8	10000038506	Caster, Axle
9	123761	Bushing, .766" ID 1.0" OD
10	10000040835	Wheel, 9 X 3.50-4
11	333321	Nut, Nylon Lock, Flanged, 5/16-18
12	134431	Bolt-HCS 5/16-18 X 1-1/2", GR5, ZP
13	160031	Pin, Hair, 1/2" To 9/16", .12" Wire
14	186551	Pin, Cotter, 3/16" X 2"
15	111521	Bolt, HCS, 3/8-16 X 1", GR5, ZP
16	333331	Nut, Nylon Lock Flanged 3/8-16
17	333311	Nut, Nylon Lock, Flanged, 1/4-20
18	157471	Bolt, Carr, 1/4-20 X 1"
19	111581	Bolt, HCS, 5/16-18 X 1", GR5, ZP
20	10000038622	Tube, Chute
21	10000042708	Clamp, Hose, 5", Bridge
22	10000038428	Bag, Premier
23	10000038358	Frame, Bag, Half
24	A0000117130	Switch, Safety, Bag
25	101891	Grease Fitting, Zerk, 1/4-28, Straight
26	A0000244838	Label, Height Adjust
27	A0000256659	Label, Warning, CE, Blower Engine
28	350321	Washer, Lock, 5/16", GR8, YZP
29	293791	Clamp, Tube, 3/4", Vinyl Coated
Not Shown		
	112141	Cable Tie, 7-1/2" L

Schematic – Premier Handlebar and Bagger Assembly

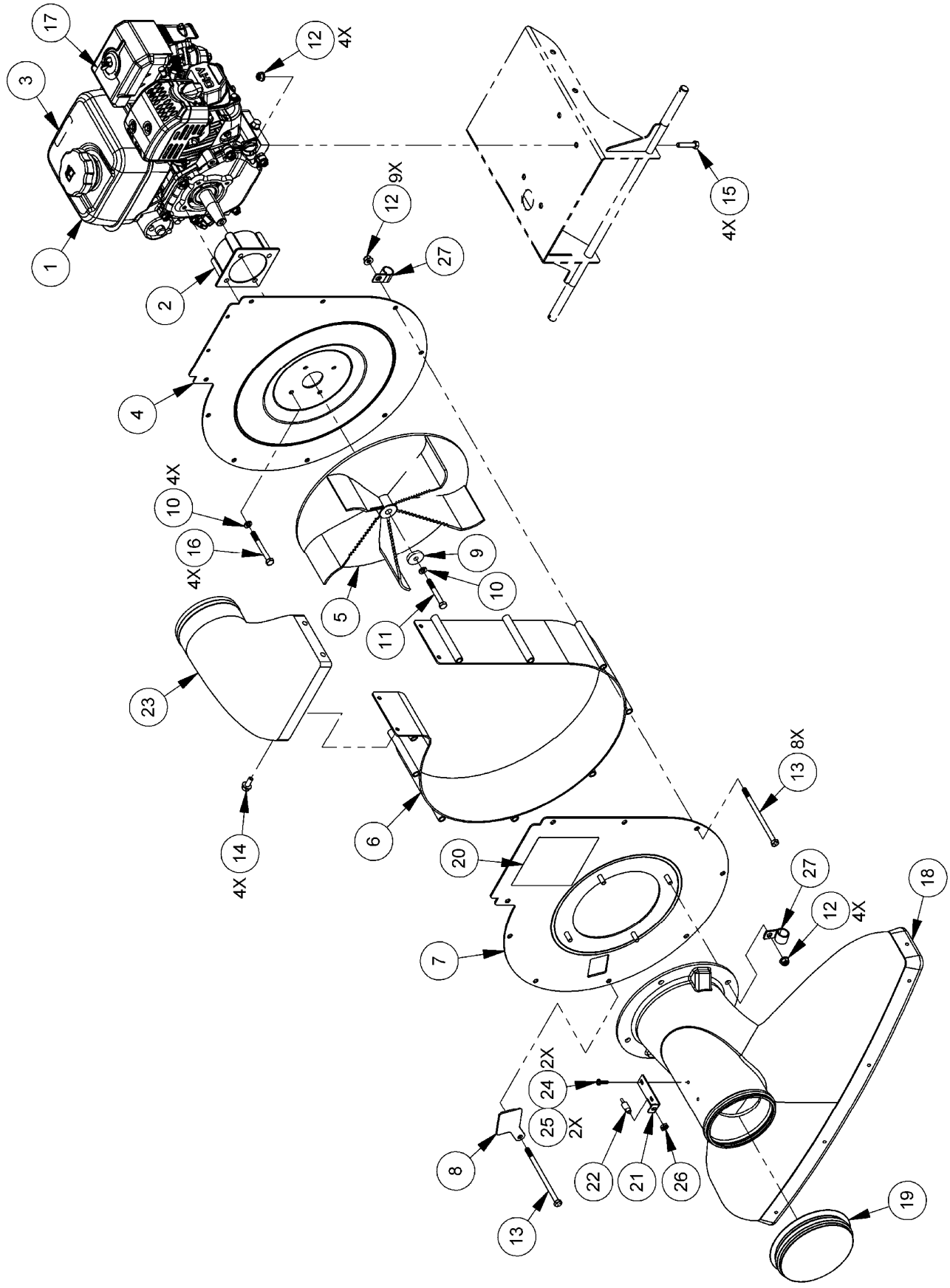


Parts List – Premier Vacuum Assembly

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

Ref#	Part#	Description
1	354331	Engine, DR 9.59TQ, MS 50st W/Labels
2	342401	Spacer, Impeller
3	137581	Label, Check Oil, 2.75" X .63"
4	10000040851	Back, Impeller
5	342361	Impeller
6	10000040059	Scroll
7	A0000296224	Front, Impeller, w/Label
8	10000038604	Door, Chipper Knife
9	350361	Washer, Flat, .344" X 1.25" X .25", ZP
10	350321	Washer, Lock, 5/16", GR8 Split, ZP
11	350351	Bolt, HCS, 5/16-24 X 2.5", GR8 YZP
12	333321	Nut, Nylon Lock, Flanged, 5/16-18
13	385971	Bolt, HCS, 5/16-18 X 5-1/2", GR5, ZP
14	311611	Bolt, Taptite, 5/16-18 X .75"
15	134431	Bolt, HCS, 5/16-18 X 1-1/2", GR5 ZP
16	350311	Bolt , HCS, 5/16-24 X 3", GR8, YZP
17	188871	Label, Hot Surface
18	10000038389	Snout
19	10000038466	Lid, Snout
20	A0000221929	Label, Branding
21	A0000288666	Bracket, Snout Interlock
22	A0000106687	Interlock Harness W/Switches
23	10000038388	Chute
24	180991	Screw, Philips, 10-24 X 1"
25	118731	Nut, Nylon Lock, 10-24
26	334021	Nut, Finish, Thin Hex, M8 X 1.0
27	293791	Clamp, Tube, 3/4", Vinyl Coated

Schematic – Premier Vacuum Assembly

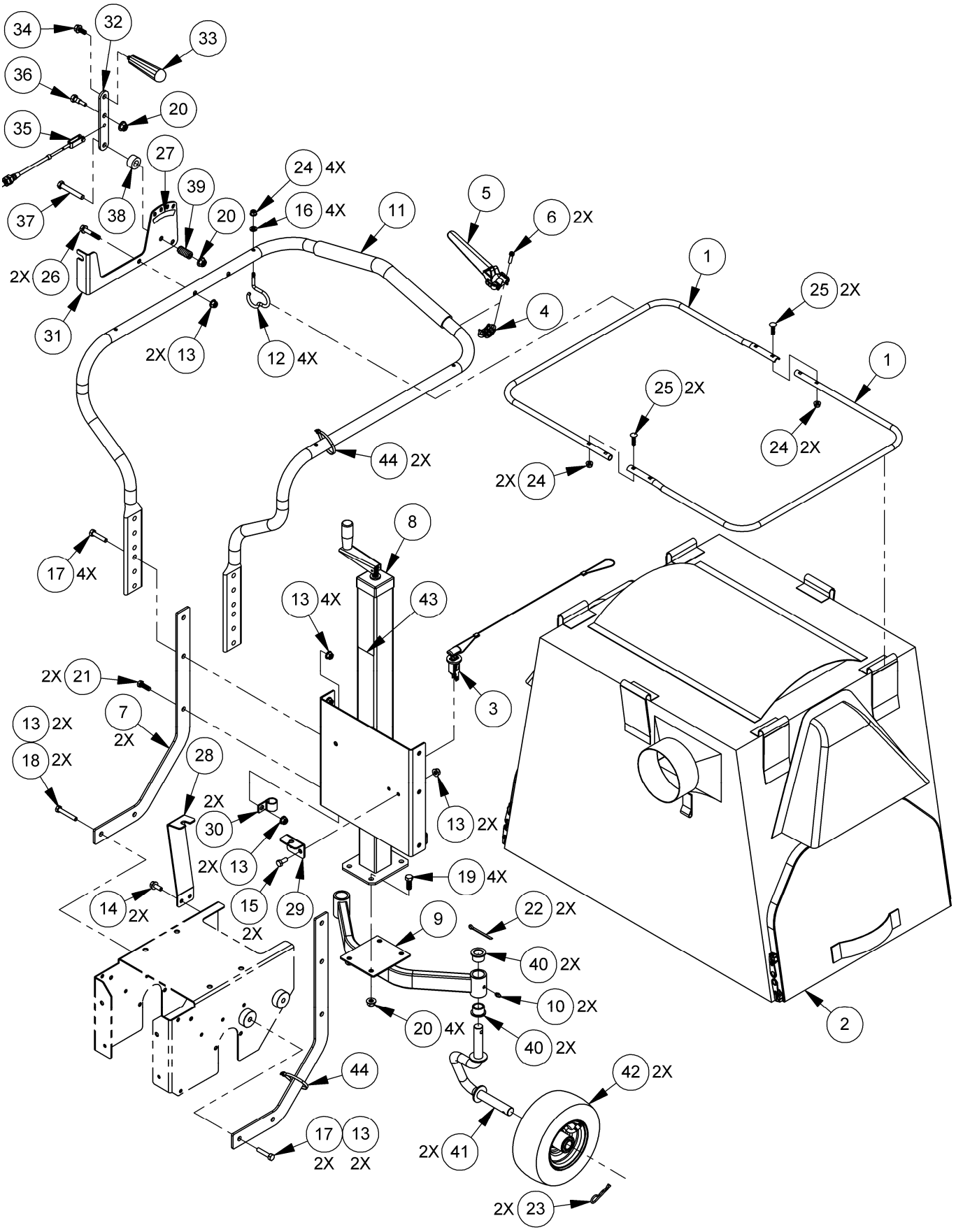


Parts List – Pro Handlebar and Bagger Assembly

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

Ref#	Part#	Description
1	10000038358	Frame, Bag, Half
2	10000038475	Bag, Pro
3	A0000117130	Switch, Bag Safety
4	370511	Collar, Lever, 1", Threaded
5	370521	Lever, Cable, Black, Traction Drive
6	179231	Screw, SH, M6 X 25mm
7	10000038366	Side, Common
8	A0000296221	Height Adjust Weldment, w/Labels
9	10000038505	Frame, Rear Wheel
10	101891	Grease Fitting, Zerk, 1/4-28, Straight
11	10000038410	Handlebars
12	10000038357	Hanger, Bag
13	333321	Nut, Nylon Lock, Flanged, 5/16-18
14	311161	Bolt, HWH, 5/16-18 X .75", Taptite, ZP
15	123211	Bolt-HCS, 5/16-18 X 3/4", GR5, ZP
16	112431	Washer, Lock, 5/16"
17	134431	Bolt, HCS, 5/16-18 X 1-1/2", GR5, ZP
18	132341	Bolt, HCS, 5/16-18 X 2", GR5, ZP
19	111521	Bolt, HCS, 3/8-16 X 1", GR5, ZP
20	333331	Nut, Nylon Lock, Flanged, 3/8-16
21	111581	Bolt, HCS, 5/16-18 X 1", GR5, ZP
22	186551	Pin, Cotter 3/16" X 2"
23	160031	Pin, Hair, 1/2" To 9/16", .12" Wire
24	333311	Nut, Nylon Lock, Flanged, 1/4-20
25	157471	Bolt , Carr, 1/4-20 X 1"
26	385991	Bolt, Hex, Flange, 5/16-18 X 1-3/4", GR5, ZP
27	A0000244841	Label, Wheel Speed
28	A0000077763	Bracket, Range Select
29	A0000014156	Bracket, Traction
30	293791	Clamp, Tube, 3/4", Vinyl Coated
31	A0000296227	Range Select, w/Labels
32	A0000077806	Handle, Range Select
33	396181	Knob, Tapered, Plastic
34	350231	Bolt, Hex, Flange, 5/16-18 X .75"
35	A0000076023	Cable, Range Select
36	393021	Pin, Detent, 3/8-16, Zp
37	164841	Bolt, HCS, 3/8-16 X 2.5", GR5, ZP
38	396751	Spacer, Handle
39	391821	Spring, Handle Return
40	123761	Bushing, .766"ID 1.0"OD
41	10000038506	Axle, Caster
42	10000040835	Wheel, 9 X 3.50-4
43	A0000244841	Label, Height Adjust
44	112141	Cable Tie, 7-1/2" L

Schematic – Pro Handlebar and Bagger Assembly

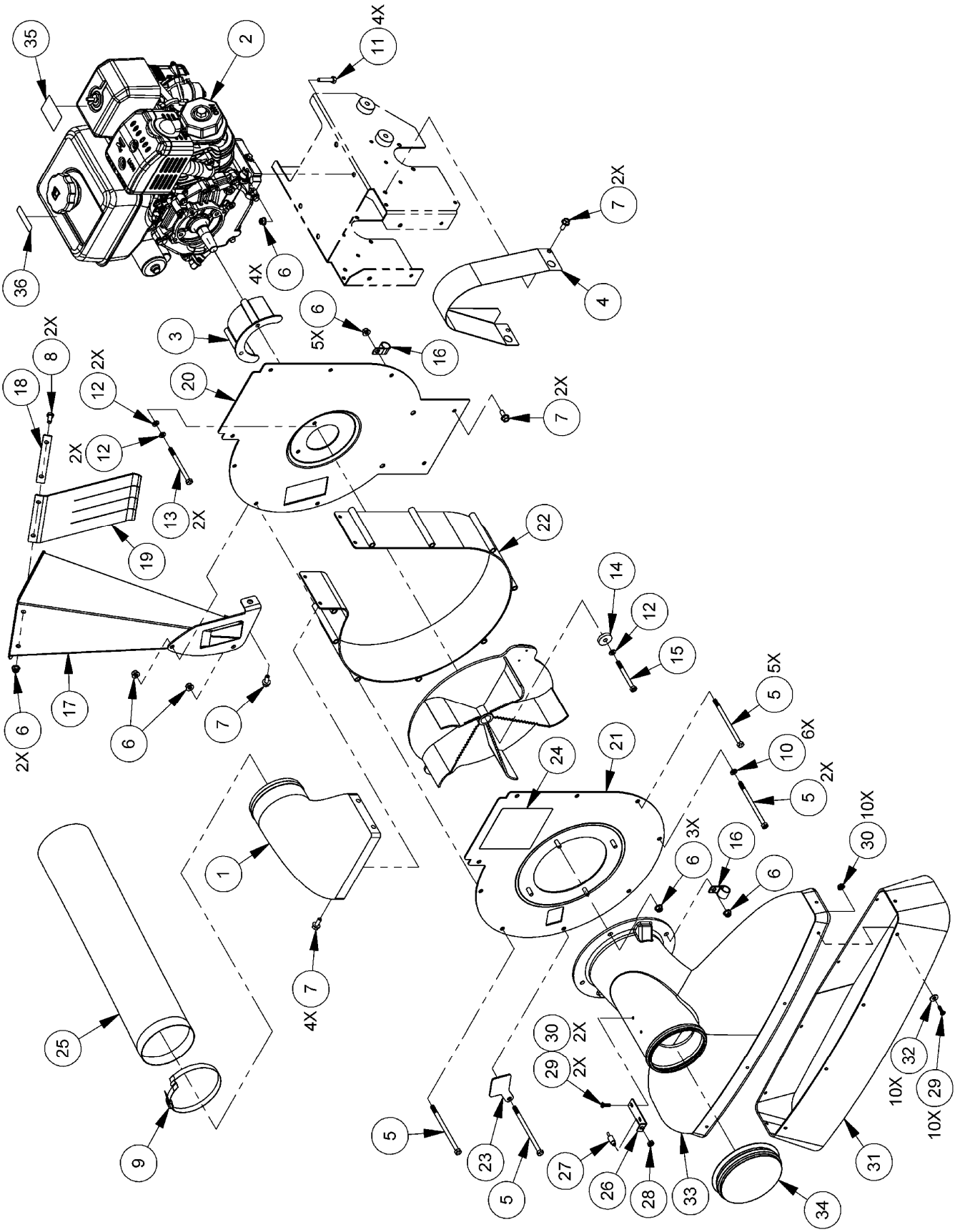


Parts List – Pro Vacuum Assembly

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

Ref#	Part#	Description
1	10000038388	Chute
2	354361	Engine, DR 13.28 TQ, E/S, 50st/Ce W/Labels
3	10000039963	Spacer, Impeller
4	10000038487	Guard, Belt
5	385971	Bolt, HCS, 5/16-18 X 5-1/2", GR5, ZP
6	333321	Nut, Nylon Lock, Flanged, 5/16-18
7	311161	Bolt, HWH, 5/16-18 X .75", Taptite, ZP
8	123211	Bolt, HCS, 5/16-18 X 3/4", GR5, ZP
9	10000042708	Clamp, Hose, 5", Bridge
10	112431	Washer, Lock, 5/16"
11	134431	Bolt, HCS, 5/16-18 X 1-1/2", GR5, ZP
12	350321	Washer, Lock, 5/16", GR8, YZP
13	A0000222864	Bolt, HCS, 5/16-24 X 4", GR5, ZP
14	350361	Washer, Flat, 0.344" X 1.25" X 0.25", ZP
15	G038719	Screw, HHC, 5/16-24 X 3-1/4", GR5
16	293791	Tube, Clamp, 3/4", Vinyl Coated
17	A0000296225	Hopper, Chipper, w/Label
18	10000038651	Plate, Blowback
19	10000038599	Guard, Chipper
20	10000039382	Back, Impeller
21	A0000296223	Front, Impeller, w/Labels
22	10000040059	Scroll
23	10000038604	Door, Chipper Knife
24	A0000221931	Label, Pro Sp
25	10000038622	Tube, Chute
26	A0000288666	Bracket, Snout Interlock
27	A0000106687	Interlock Harness W/Switches
28	334021	Nut, Finish, Thin Hex, M8x1.0
29	180991	Screw, Phillips, 10-24 X 1"
30	118731	Nut, Nylon Lock, 10-24
31	10000038640	Skirt
32	112381	Washer, Flat, 1/4" USS
33	10000038389	Snout
34	10000038466	Lid, Snout
35	188871	Label, Hot Surface
36	137581	Label, Check Oil, 2.75" X .63"

Schematic – Pro Vacuum Assembly

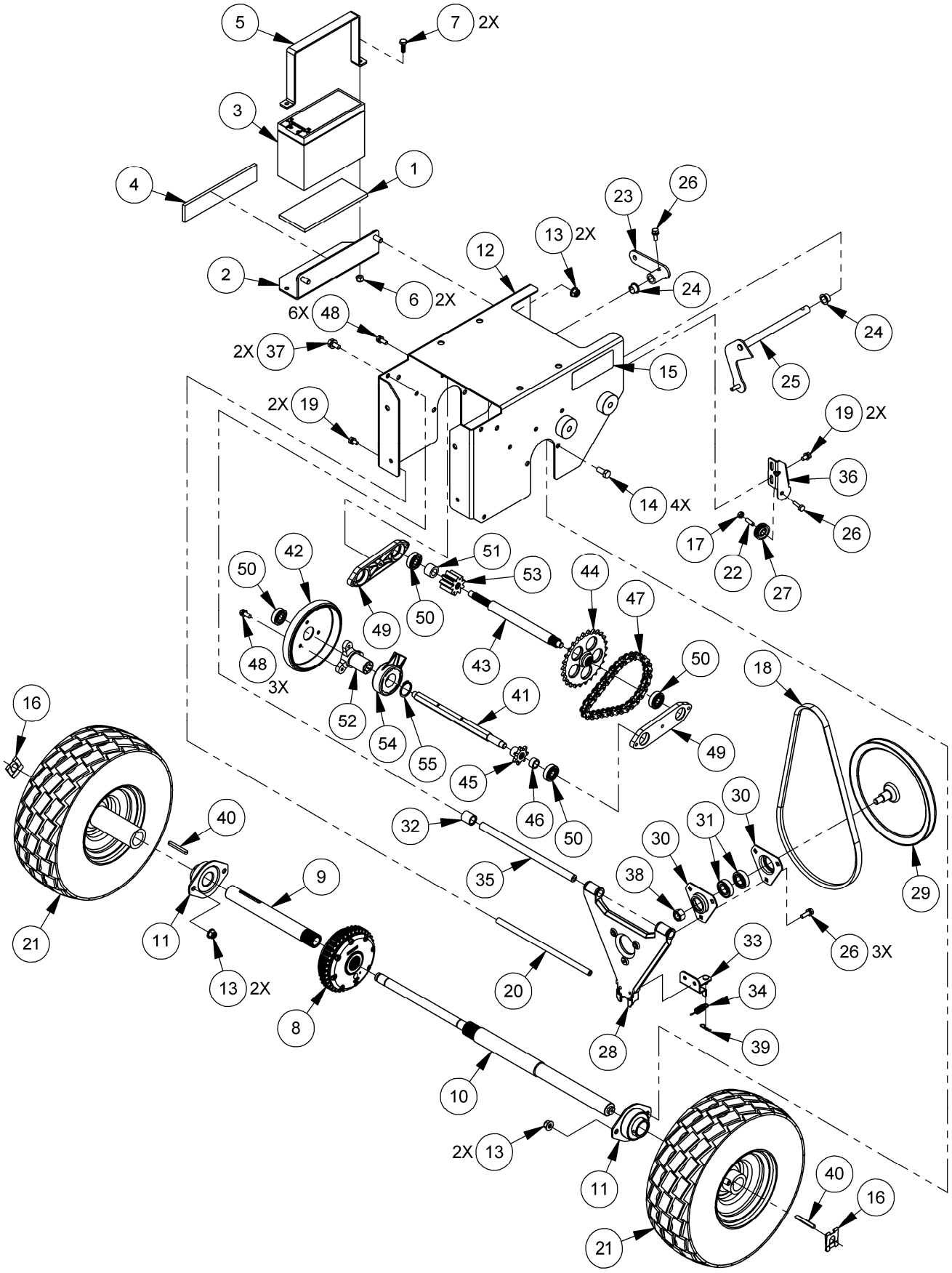


Parts List – Pro Drive Assembly

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

Ref#	Part#	Description
1	286971	Pad, Battery 2.5 X 6.125
2	258621	Bracket, Battery, 9 Ah
3	134471	Battery, 12v, 9ah
4	143861	Battery Pad
5	242301	Strap, Battery, 9ah
6	110731	Nut, Nylon Lock, 1/4-20
7	119831	Bolt, HCS, 1/4-20 X 3/4", GR2, ZP
8	10000039419	Differential, Di-300
9	10000039398	Shaft, Rear, Wrap
10	10000039470	Shaft, Rear, Main
11	258021	Bearing, Stamped Flange, 1" Bore
12	A0000296233	Mount, Engine, w/Labels
13	333321	Nut, Nylon Lock, Flanged, 5/16-18
14	123211	Bolt, HCS, 5/16-18 X 3/4", GR5, ZP
15	A0000256659	Label, Warning, General Safety
16	10000042747	Retainer, 16MM
17	403131	Nut, Jam, M6
18	10000043507	Belt, Linked
19	402891	Bolt, M6x12
20	401311	Strut, Frame Assembly
21	10000040837	Wheel & Tire, 13 X 5.00-6
22	401341	Sleeve, Shaft
23	401451	Connector, Shift
24	401461	Sleeve, Plastic
25	401471	Fork, Shift,
26	402921	Bolt, M6x20
27	401361	Pulley, Wire, Drive Engagement
28	401861	Bracket, Friction Disc
29	401821	Pulley, Belt
30	401831	Seat, Bearing Delta
31	401841	Bearing, Ball, 6002
32	401871	Sleeve, Support, Friction Disc
33	401911	Bracket, Drive Cable
34	401921	Spring, Friction Disc
35	401931	Strut, Friction Disc Support
36	401331	Pulley Seat, Frame
37	402981	Bolt, M8x16
38	403121	Nut, Jam, M12
39	403161	Pin, Cotter, 1.5mm X 25mm
40	401691	Key, Flat, 6 X 4 X 45
41	401561	Shaft, Hexagon, Drive
42	401551	Wheel, Friction Disc
43	401571	Shaft, Transit
44	401581	Sprocket, Large, Drive
45	401591	Sprocket, Small, Drive
46	401601	Sleeve, 12 X 15 X 8
47	401611	Chain, Drive, 085-32
48	402901	Bolt, M6x16
49	401481	Bearing Seat, Drive
50	401491	Bearing Ball, 6200
51	401521	Sleeve, 15 X 20 X 15
52	401531	Seat, Friction Wheel
53	401541	Gear, Small Drive
54	401511	Bearing, Shift
55	401501	Circlip, 25mm

Schematic – Pro Drive Assembly



Notes:

Notes:

Daily Checklist for the DR WALK-BEHIND LAWN VACUUM

To help maintain your DR WALK-BEHIND LAWN VACUUM for optimum performance, we recommend you follow this checklist each time you use your machine.

⚠ WARNING

Before performing any maintenance procedure or inspection, stop the engine and wait five minutes to allow all parts to cool. Remove the Key and disconnect the spark plug wire, keeping it away from the spark plug.

[ ] Check the Engine Oil level.

[ ] Check Fuel Level.

[ ] Check the general condition of the Vacuum, e.g.; Nuts, Bolts, welds, etc.

[ ] Check that the Collection Bag is connected at all Hangers, Outlet Hose is fully inserted into the Cuff and the Zipper is fully zipped.

[ ] Check for and clean accumulated debris in the Snout or Chipper Hopper

[ ] Check and clean Engine Fins and controls of Debris.

End of Season and Storage

⚠ WARNING

Before performing any maintenance procedure or inspection, stop the engine and wait five minutes to allow all parts to cool. Remove the Key and disconnect the spark plug wire, keeping it away from the spark plug.

- If your DR WALK-BEHIND LAWN VACUUM 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.
- Change Engine Oil.
- Clean dirt and debris from the Cylinder Head Cooling Fins, Impeller Housing, Debris Screen, and Muffler area of the Engine.
- Remove the Spark Plug and pour about 1 ounce of motor Oil into the Cylinder hole. Replace the Plug and pull the Recoil Starter Rope until you feel strong resistance. This will coat the piston and seat the valves to prevent moisture buildup.
- Empty and clean the Debris Bag and ensure it is dry. Remember, decomposing material generates heat and could start a fire.
- Clean or replace the Air Filter.
- Clean the exterior of the unit to remove all dirt, grease, and any other foreign material. To prevent rust, touch up paint surfaces that have been scratched or chipped.
- For Electric-Start models, store the Battery in a dry area that will not freeze. If you will not use the machine over a long period, charge the Battery every four to six weeks.
- If possible, store the machine in a dry, protected place. If it is necessary to store the machine outside, cover it with a protective material (especially the Engine and Housing).

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