

# DR<sup>®</sup> LEAF & LAWN VACUUM

## SAFETY & OPERATING INSTRUCTIONS



Model:  
PRO MAX450

Serial No. \_\_\_\_\_

Order No. \_\_\_\_\_

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

### **WARNING**

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



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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.

OUTDOOR POWER	
MODEL/MODEL/ MODELE	XXXXXX
SERIAL NO N° DE SERIE NU DE SERIE	SERIAL #
POWER (KW)	XXXXXX
WEIGHT (KG)	XXXXXX
ITEM #	XXXXXX
MANUFACTURED DATE	XXXXXX
	
DR POWER EQUIPMENT 800 HINESBURG ROAD SOUTH BURLINGTON, VERMONT 05403	
COUNTRY OF ORIGIN	XXXXXX
	XXXXXX

### **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. 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](http://www.P65Warnings.ca.gov).**

## Chapter 1: General Safety Rules

### **! WARNING**

Read this Safety & Operating Instructions manual before you use the DR LEAF and 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](http://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 PRO MAX450™ LEAF and 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 machine as you set up and before you operate the unit. Replace damaged or missing safety and information labels immediately.



#372291



#188871



#137581



#342781



#388491



#388501



#A0002163843

## Protecting Yourself and Those around You

### WARNING

This is a high-powered machine, with moving parts operating with high energy at high speeds. You must use proper clothing and safety gear when operating this machine to prevent or minimize the risk of severe injury. This machine can cut and sever parts of your body if they come in contact with the moving impeller blades. Always take the following precautions when operating this machine:

- Always wear protective goggles, or safety glasses with side shields, while operating either your tractor lawn deck, the vacuum system, or when performing adjustments to your DR Leaf and Lawn Vacuum, to protect your eyes from possible foreign objects thrown from the machine.
- Avoid wearing loose clothing or jewelry, which can catch on the machine's moving parts.
- We recommend wearing gloves while using your DR Leaf and Lawn Vacuum. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.
- Wear shoes with non-slip treads when using your DR Leaf and Lawn Vacuum. 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 your DR Leaf and Lawn Vacuum.
- Use ear protectors or earplugs rated for at least 20 dba to protect your hearing.

## Safety for Children and Pets

### WARNING

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

- Keep children and pets at least 100 feet from the working area and ensure they are under the watchful care of a responsible adult.
- Be alert and always turn off the lawn tractor engine and the DR Leaf and 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. You cannot see directly behind the collector box.
- Never allow children to operate your Lawn Tractor or Vacuum.
- Never allow children or pets to play in the collector. If they become trapped in the enclosure, they may be exposed to temperatures similar to leaving a child or pet in a car with the windows closed on a sunny day.
- 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 easily ignite 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 completely cooled. 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.

## Safety with Gasoline-Powered Machines (continued)

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### **WARNING**

- 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.
  - Empty the collector box and allow the engine to cool completely before storing your DR Leaf and Lawn Vacuum in any enclosure. Remember, decomposing material can generate heat and 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, space heater, clothes dryer, or furnace.
  - Never make adjustments or repairs with the engine running. Shut down the engine and 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 your hands and combustible substances away from the engine when it is hot. Clean the engine area after each use.
  - To reduce fire hazard, keep the engine cooling fins and muffler area free of debris build-up such as leaves, grass, oil, grease, or any other combustible material.
  - 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, except for adjustment. 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.
  - The exhaust area on the engine becomes very hot with use. Allow the engine to cool before doing maintenance or making adjustments.
- 

## Slope Operation

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### **WARNING**

Slopes are a major factor related to tip over 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 up and down the face of slopes, never across. Exercise extreme caution when changing direction on slopes.
- Remove objects such as stones, glass, and metal objects such as cans.
- Watch out for holes, ruts, or bumps. Tall grass can hide obstacles.

#### NEVER:

- Never vacuum near drop-offs, ditches, or embankments. Your tractor and the vacuum may tip over.
  - Never vacuum on slopes greater than 15 degrees or any excessively steep slopes.
  - Never vacuum on wet slopes. Reduced traction could result in slipping and a possible roll over.
- 

## General Safety

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### **WARNING**

This is a high-powered machine, with moving parts operating with high energy at high speeds. 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:

- Never allow people who are unfamiliar with these instructions to use the DR Leaf and Lawn Vacuum.
  - To be safe, do not operate the machine near small children or pets, and never allow children to operate the vacuum. Stop the vacuum and tractor engine when another person or pet approaches.
  - Never allow people or pets to ride in the collector box or on the frame.
-

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## **WARNING**

- Never run the vacuum engine unless the chute, fabric collector sleeve, and hose are each securely in place and the engine frame is secured to the main frame.
  - Check behind your DR Leaf and Lawn Vacuum before backing up. You cannot see directly behind the collector box.
  - Never attempt to open or empty the collector while the lawn tractor deck is engaged or the DR Leaf and Lawn Vacuum engine is running. Debris may exit at high velocity as you begin to open the collector.
  - Do not operate in sandy areas where you will vacuum large quantities of sand. Sand will erode the vacuum housing. Check for holes after each use and replace the housing and liner when holes develop.
  - Never operate the machine on slopes greater than 15 degrees.
  - Never tow the DR Leaf and Lawn Vacuum faster than 8 mph.
  - Always shut off the lawn tractor engine and the DR Leaf and Lawn Vacuum engine and disconnect the spark plug wire before attempting to clear any obstructions from the hose.
  - Use the DR Leaf and Lawn Vacuum only in daylight.
  - Never straddle or reach over the engine area at any time.
  - Use only your hands to operate the DR Leaf and Lawn Vacuum engine controls.
  - Do not, under any conditions, remove, bend, cut, fit, weld, or otherwise alter standard parts on the DR Leaf and Lawn Vacuum. Modifications to your machine could cause personal injuries and will void your warranty.
  - Do not alter or tamper with safety devices or shields. Make sure they are in their proper position.
  - While using the DR Leaf and Lawn Vacuum, do not hurry or take things for granted.
  - Never leave the DR Leaf and Lawn Vacuum unattended with its engine running.
  - Do not operate the machine when under the influence of alcohol, drugs, or medication.
- 

## **CAUTION**

The DR Leaf and Lawn Vacuum must be operated safely to prevent or minimize the risk of minor or moderate injury. Unsafe operation can create a number of hazards for you. Always take the following precautions when operating this machine:

- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people, their property, and themselves.
  - Never use the DR Leaf and Lawn Vacuum to vacuum anything but yard waste, such as leaves, grass, small twigs and pine cones.
  - If the machine starts to make an unusual noise or vibration, immediately shut off the engine, disconnect the spark plug wire, and allow all moving parts to come to a complete stop and cool. Inspect for clogging or damage. Clean and repair and/or replace damaged parts.
  - See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by DR Power Equipment.
  - Always keep the equipment in good, safe operating condition. Always make certain nuts and bolts are tight and always use the supplied self-locking hardware; do not substitute.
  - For best performance we recommended that you operate your Leaf and Lawn Vacuum in temperatures 40°F and above.
- 

### ***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® PRO MAX450™ LEAF and LAWN VACUUMS 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® PRO MAX450™ LEAF and LAWN VACUUM in a safe manner. Contact us at [www.DRpower.com](http://www.DRpower.com) or call 1-800-DR-OWNER (376-9637) for assistance.

## Chapter 2: Setting Up the DR PRO MAX450™ LEAF and LAWN VACUUM

It may be helpful to familiarize yourself with the controls and features of your DR PRO MAX450™ LEAF and LAWN VACUUM as shown in **Figure 1** before beginning these procedures. If you have any questions at all, please feel free to contact us at [www.DRpower.com](http://www.DRpower.com).

### DR PRO MAX450™ LEAF and LAWN VACUUM Controls and Features

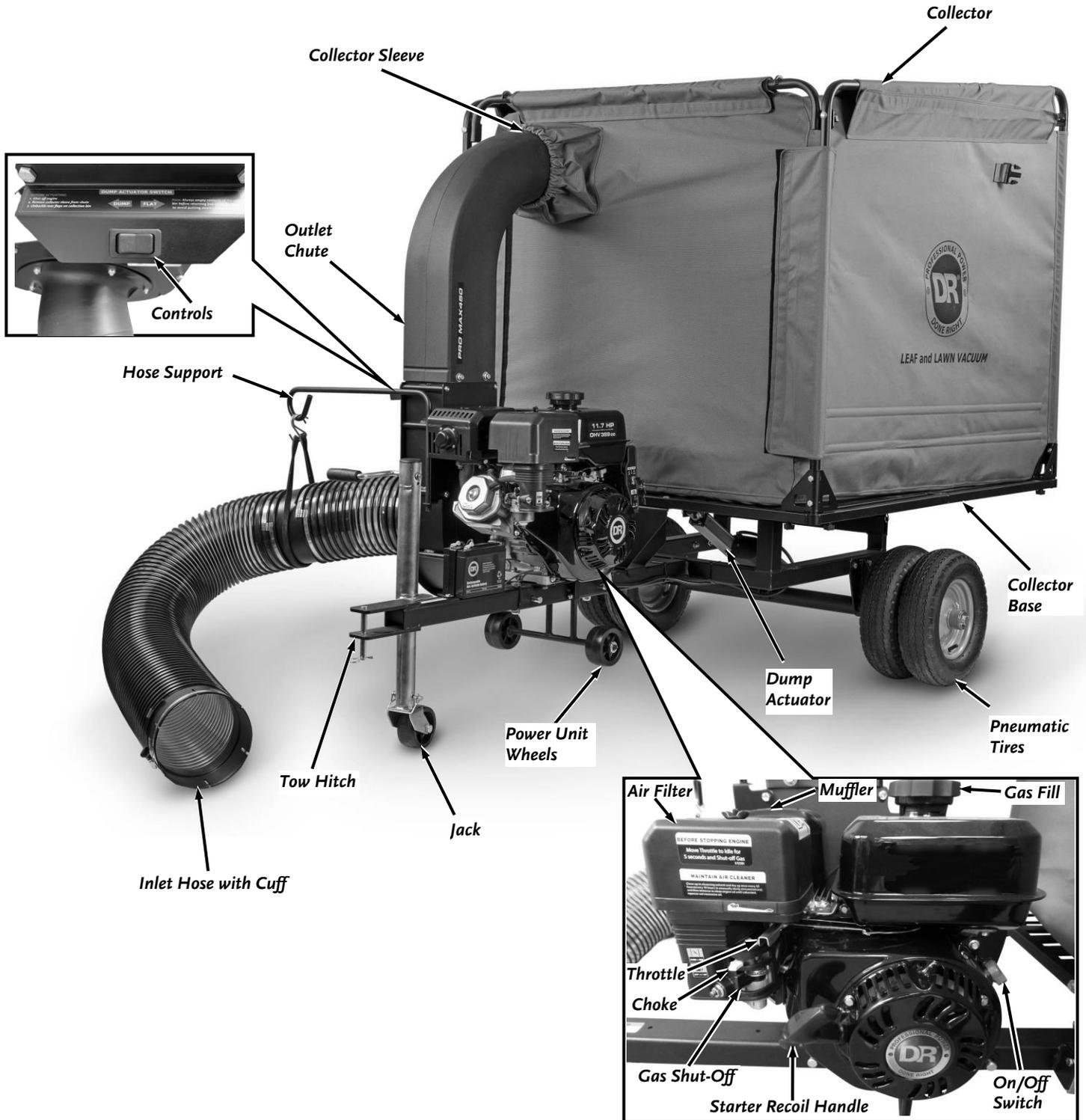


Figure 1

## Specifications

<b>Engine</b>	DR Power Equipment R390
<b>Displacement</b>	389 cc
<b>Cylinders</b>	1 (w/cast iron sleeve)
<b>HP</b>	11.7
<b>Ft-lbs Torque</b>	16.90
<b>Starting</b>	Electric w/ Recoil Backup
<b>RPM</b>	3800
<b>Cooling</b>	Air
<b>Fuel Tank Capacity</b>	6.9 qt
<b>Oil Capacity</b>	37.2 oz
<b>Oil Type</b>	SAE 30W HD
<b>Impeller</b>	Welded Steel
<b>Vanes</b>	5 Curved 3.5" High x .16" Thick Steel
<b>Weight</b>	13.2 Lbs
<b>Mount</b>	Keyless Tapered Direct Engine Mount
<b>Vacuum</b>	Impeller Driven
<b>Hose</b>	8" ID x .035" Wall PVC, 72" L
<b>Collector</b>	Over-center Tilt Design w/ Flatbed Base
<b>Volume Capacity</b>	60 Cu ft, 450 Gallons
<b>Weight Capacity</b>	1100 Lbs
<b>Fabric Enclosure</b>	1800 Denier Polyester, Solution Dyed, Bonded PVC
<b>Dump Tilt</b>	60°
<b>Base</b>	Flatbed, Steel
<b>Frame</b>	Welded Steel, 2 Piece Modular Design
<b>Impeller Housing</b>	Steel Scroll (.12" Thick), Sideplate (.12" Thick)
<b>Wheels</b>	Pneumatic 5.30/4.50-8 4 Ply w/Tube
<b>Quantity</b>	4 (2 Per Side)
<b>Tire Size</b>	14" Diameter x 4.5" Wide
<b>Battery</b>	12 Volt 9 Amp, Spade Terminals
<b>Jack</b>	Standard Equipment
<b>Lawn Mower Recommendations</b>	12 HP Min Flat Terrain otherwise 14 HP (right discharge)
<b>Lawn Mower Hitch</b>	Pin Hitch 8" to 15" from the Ground
<b>Dimensions</b>	92.5" (long) x 46.5" (wide) x 66" (tall)
<b>Tongue Weight</b>	127 Lbs. (empty)
<b>Machine Weight</b>	325 Lbs (empty)

## Assembly Parts Identification

Compare the contents of the Shipping Box with the Parts Supplied lists and Figures 2 thru 7 below. If there are any questions contact us at [www.DRpower.com](http://www.DRpower.com) or call 1-800-DR-OWNER (376-9637).

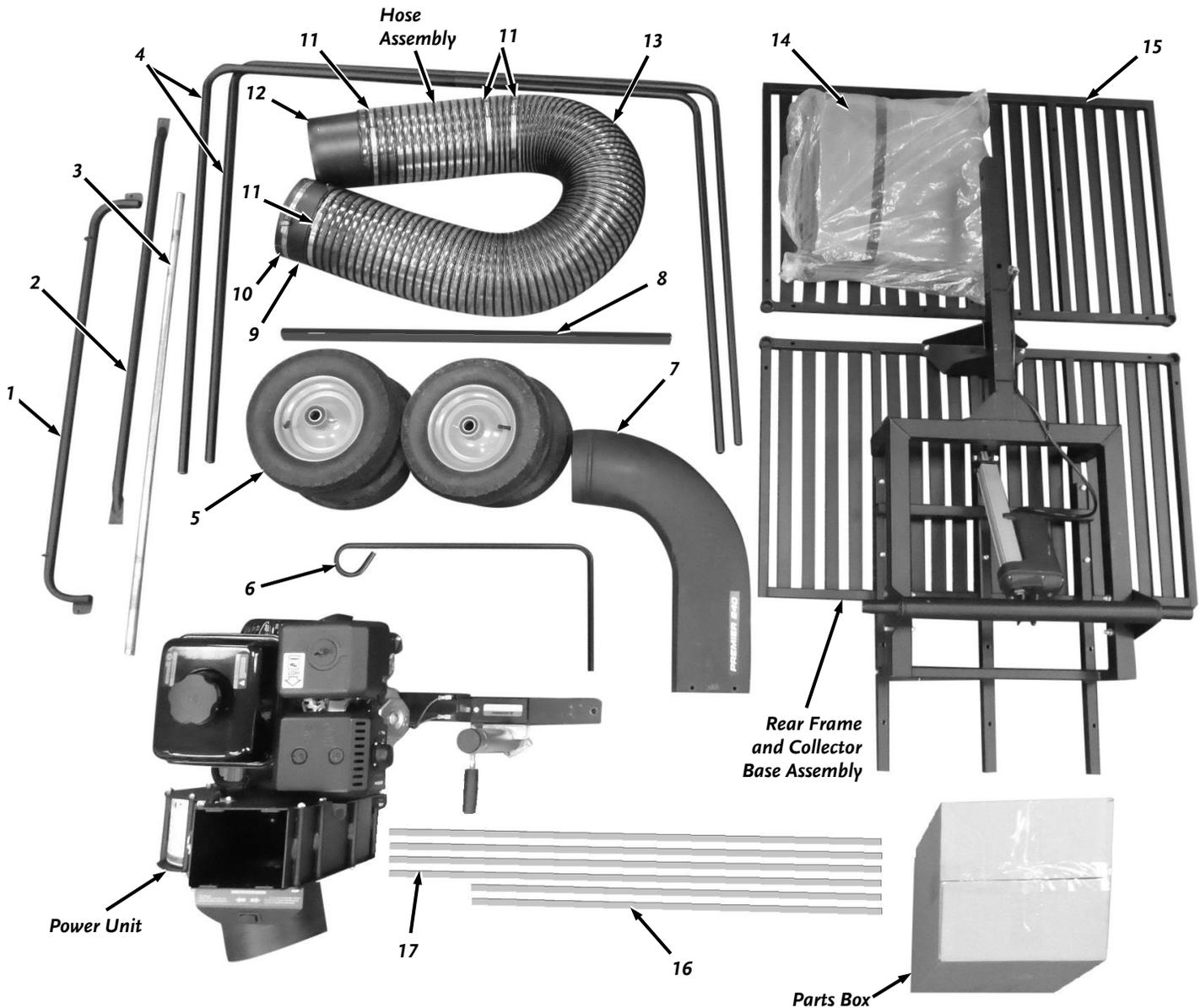


Figure 2

Parts supplied (Figure 2 and list below), Parts box contents listed on following page:

Item #	Part #	Description	Qty
1	A0001234651	Tube Frame, Top Front.....	1
2	A0001234667	Tube Frame, Top Rear .....	1
3	342561	Axle .....	1
4	A0001234650	Tube, Collector, Side Frame .....	2
5	337941	Wheel & Tire, 14X 5.3/4.50-8, 4 Ply	4
6	342441	Rod, Support Hose .....	1
7	A0002325649	Chute w/Label, Impeller Outlet.....	1
8	A0001725342	Insert, Metal, Enclosure.....	1
9	342481	Cuff, Hose, 8" .....	1
10	337971	Clamp, Hose, 8", Thumbscrew .....	1
11	337961	Clamp, Hose, 8", LH Bridge.....	4
12	351981	Coupling.....	1
13	337951	Hose, 8"ID x 72" Long, PVC.....	1
14	A0001721719	Enclosure, Fabric .....	1
15	A0001234669	Base, Collector .....	1
16	361201	Batten, FRP, 0.58" X 0.12" X 40" ....	2
17	A0001234675	Batten, FRP, 0.58" X 0.12" X 47" ....	4



Figure 3

**Parts Box (Figure 3):**

Item #	Part #	Description	Qty
1	A0000926593	Bracket, Tube, Rear	2
2	A0001055802	Bracket, Tube, Front	2
3	342471	Strap, Rubber	1
	350421	Hook, Strap	2
4	388601	Knob Set	1
5	350211	Wheels Hardware Set	1
6	388671	Power Unit Hardware Set	1
7	370361	Funnel, Oil Flexible (snap together)	1

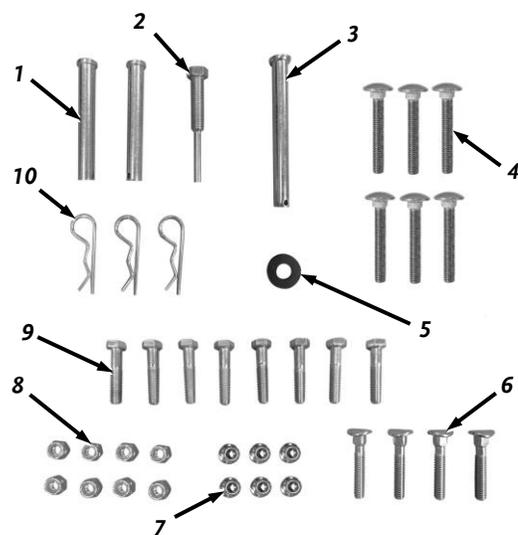


Figure 4

**Hardware in Product Package (Figure 4):**

Item #	Part #	Description	Qty
1	211541	Pin, Clevis, 1/2" X 3.5"L, ZP	2
2	350371	Bolt, Hex, 7/16-20, Impeller Tool	1
3	A0000253563	Pin, Clevis, 1/2 x 4.5"L, ZP	1
4	A0001681944	Bolt, Carriage, 5/16-18 X 2-3/4", GR5, ZP	6
5	189671	Washer, Rubber, 1/2" ID, 1" OD	1
6	350271	Bolt, C-Head, 5/16-18 X 1.75", ZP	4
7	333321	Nut-Nylon Lock Flanged 5/16-18	6
8	110761	Nut, Nylon Lock, 5/16-18	8
9	134431	Bolt, HCS, 5/16-18 X 1.5", GR5, ZP	8
10	160031	Clip, Pin Hitch, 1/2"-9/16"	3



Figure 5

**Knob Set (Figure 5):**

Item #	Part #	Description	Qty
1	388611	Knob, 3 Prong, 5/16-18 Stud	6
2	350301	Knob, 5/16-18 W/Lock, 1.16 DIA	4

**Wheels Hardware Set (Figure 6):**

Item #	Part #	Description	Qty
1	A0001216052	Washer, 1.00" ID X 1.58" OD X .134" Thick	4
2	123341	Bolt, HCS, 3/8-16 X 1.75", GR5, ZP	4*
3	333331	Nut, Nylon Lock, Flange, 3/8-16	4*
4	126851	Pin, Cotter, 3/16" X 1.5"	2

\* This hardware will not be used (with or on) your PRO MAX450 machine.

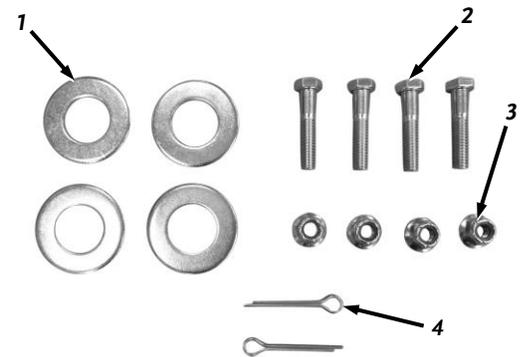


Figure 6

**Power Unit Hardware Set (Figure 7):**

Item #	Part #	Description	Qty
1	265561	Bolt, HCS, 1/2-13 X 2.75", GR5, ZP	2
2	350231	Bolt, Hex, Flange, 5/16-18 X .75"	4
3	112431	Washer, Lock, 5/16", Split, ZP	4
4	112411	Washer, Flat, 5/16" USS, ZP	4
5	333351	Nut, Nylon Lock, Flange, 1/2-13	2

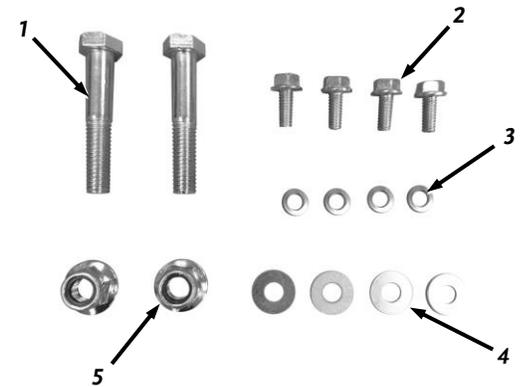


Figure 7

**Installing the Wheels**

(Use Wheels Hardware Set, see Figure 6)

**Tools Needed:**

- Pliers

1. Position the Rear Frame/Collector Base Assembly upside down (Figure 8).
2. Install the Axle into the Axle Actuator Mount.
3. Slide a Wheel onto each end of the Axle with the Valve Stems facing in (Figure 9).
4. Slide a Washer onto the Axle against each Wheel.
5. Slide a second Wheel onto each end of the Axles with the Valve Stem facing out (Figure 10).
6. Install a 1.00" ID X 1.58" OD X .134" Washer against each Wheel and insert Cotter Pins into the Axle holes. Use Pliers to bend the ends of the Cotter Pins to secure the Wheels.

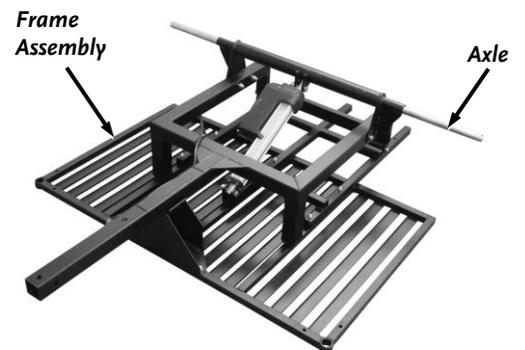


Figure 8

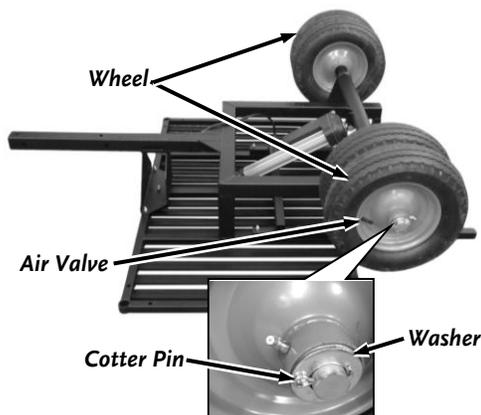


Figure 10

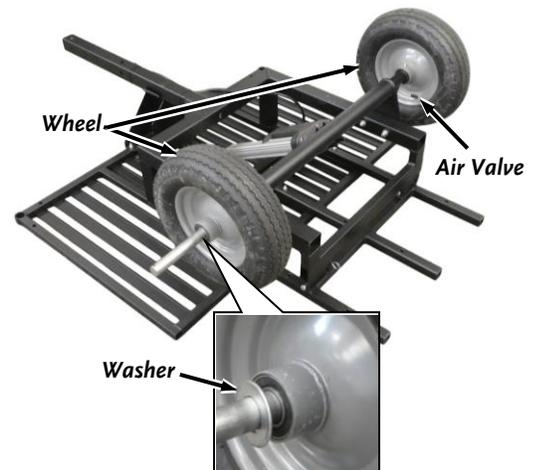


Figure 9

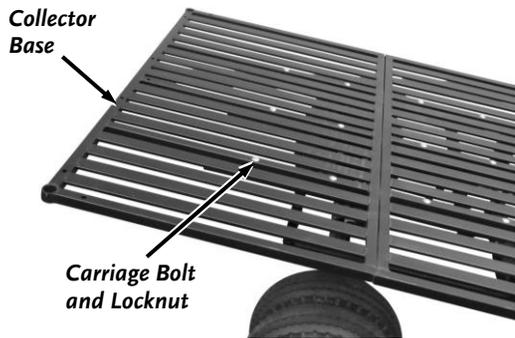


Figure 11

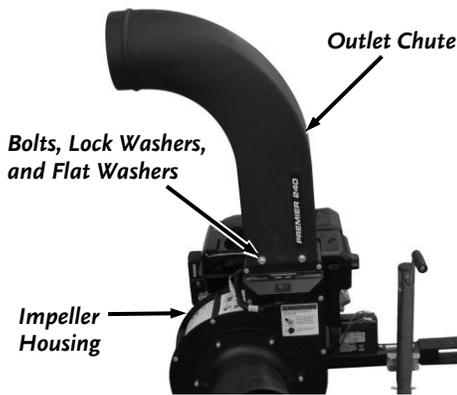


Figure 12

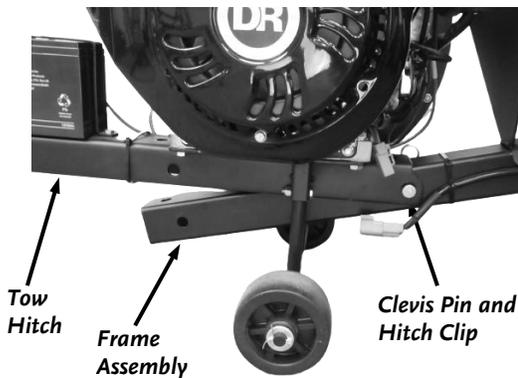


Figure 13



Figure 14

## Installing the Collector Base

### Tool Needed:

- 1/2" Wrench

1. Tip the Rear Frame/Collector Base Assembly over onto the Wheels (**Figure 11**).
2. Position the Collector Base onto the Frame and secure with six Carriage Bolts and Locknuts using a 1/2" Wrench from the Product Pack (**Figure 4**).

## Assembling and Installing the Power Unit

(Use Power Unit Hardware Set, see Figure 7)

### Tools Needed:

- 1/2" Wrench
- Two 3/4" Wrenches
- Floor Jack

1. Place the Outlet Chute on top of the Impeller Housing (make sure to orient as shown) and secure with four Bolts, Lock Washers, and Flat Washers using a 1/2" Wrench (**Figure 12**).
2. Position the Power Unit at the front of the Rear Frame with the Tow Hitch facing forward (**Figure 13**).

**Note:** Clevis Pins and Hitch Clips needed for the next steps are provided in the Product Package.

3. Lift the Rear Frame Assembly Tube to align the rear holes and insert a 1/2" X 3.5" Clevis Pin through the holes (**Figure 13**).

## ⚠ CAUTION

We recommend having a helper to attach the Frames together. There is a chance for injury if you attempt it alone because the Power Unit is heavy.

4. Use a Floor Jack to raise the Rear Frame Assembly into the Tow Hitch Tube to align the front holes and insert a 1/2" X 3.5" Clevis Pin (**Figure 14**).
5. Secure each Clevis Pin with a Hitch Clip.
6. Place the two 1/2-13 X 2.75" Bolts (from underneath) up through the two vertical Holes and secure with 1/2-13 Locknuts using two 3/4" Wrenches (**Figure 15**).
7. Plug in the Actuator Connectors (**Figure 15**).

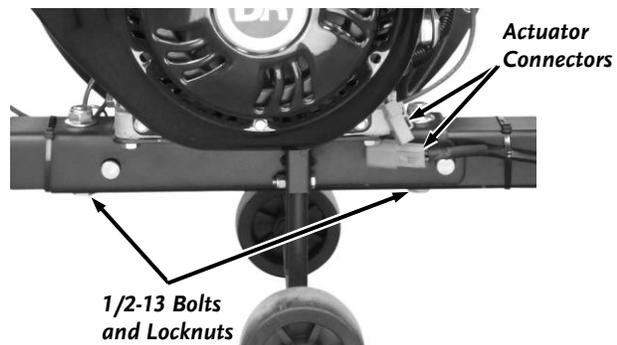


Figure 15

## Assembling the Collector

(Use Product Package Hardware, see Figure 4 and Knob Set, see Figure 5)

### Tools Needed:

- Two 1/2" Wrenches

1. Stand at the right hand side of the machine (**Figure 16**).
2. Unfold the fabric Enclosure partially as shown and place it onto the Collector base.
3. Position the Enclosure with the left side facing up and Enclosure Sleeve located under front fabric at the front right corner (See Note below).

**Note:** Standing at the right side of the machine as shown, the DR Logo will be upside down and the top flap of the Enclosure is towards you.

4. Position a Collector Tube with the Shorter Leg facing the front of the machine and insert the ends into the corner loop openings (**Figure 17**).
5. Push the Tubes all the way through the other end of the loops, exposing the mounting holes at the Tube ends (**Figure 18**).
6. Flip the Enclosure over (side to side) so the other side is facing up.
7. Stand at the left hand side of the machine (**Figure 19**).
8. Position the other Collector Tube with the Shorter Leg facing the front of the machine and insert the ends into the corner loop openings.
9. Push the Tubes through the other end of the loops, exposing the mounting holes at the Tube ends (**Figure 20**).
10. Go to the right side of the machine where the Tube ends are located.

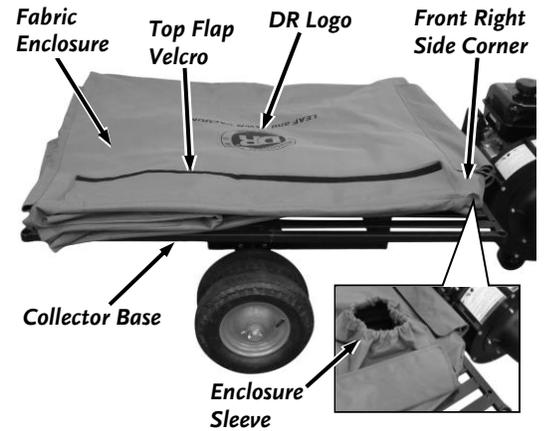


Figure 16

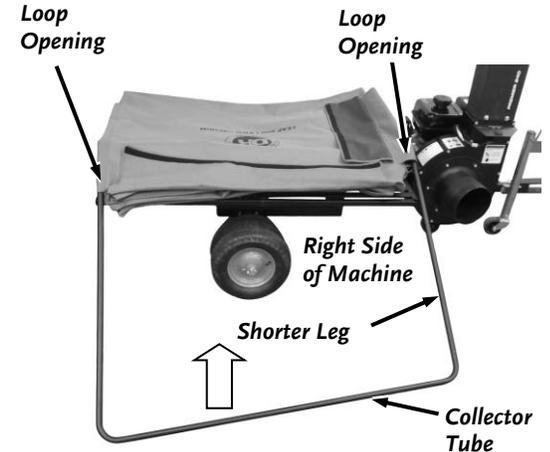


Figure 17



Figure 18

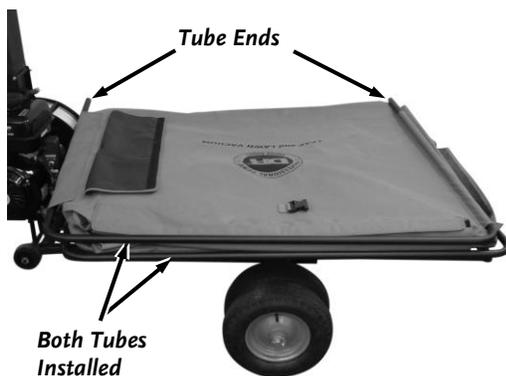


Figure 20

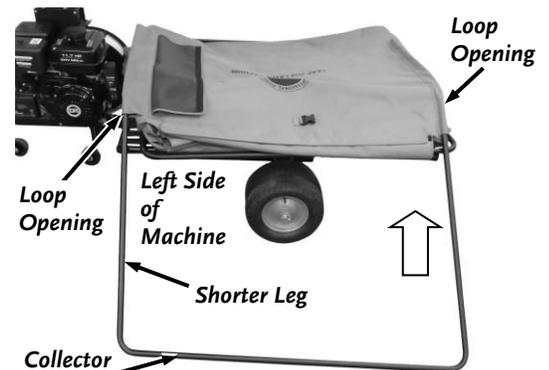


Figure 19

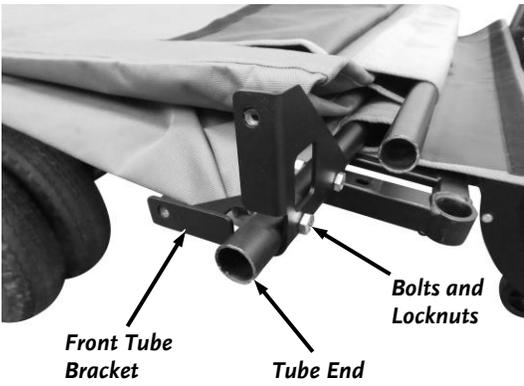


Figure 21

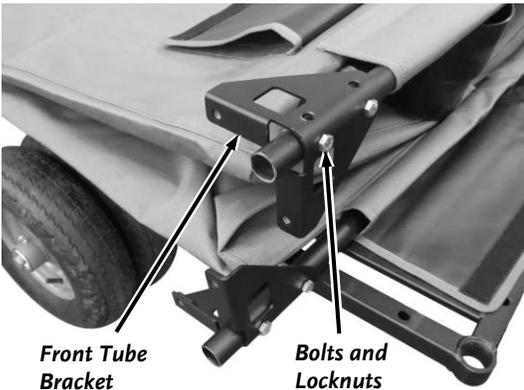


Figure 22

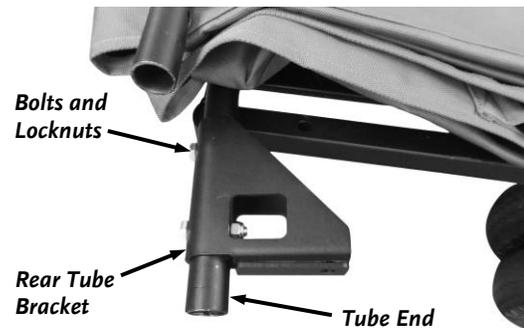


Figure 23

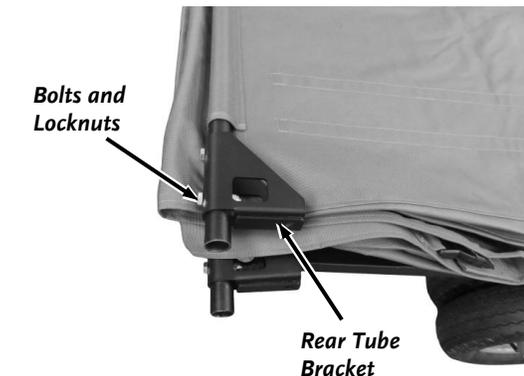


Figure 24

11. Start at the front corner of the Enclosure. Position a Front Tube Bracket on the bottom Tube (**Figure 21**). Secure the Bracket with two 5/16-18 Bolts and Locknuts (found in product pack, Figure 4) using two 1/2" Wrenches but do not fully tighten. Make sure the fabric doesn't get pinched under the Bracket.
12. Position the other Front Tube Bracket on the top Tube and secure with two 5/16-18 Bolts and Locknuts (found in product pack, Figure 4) using two 1/2" Wrenches but do not fully tighten (**Figure 22**). Make sure the fabric doesn't get pinched under the Bracket.
13. At the rear corner of the Enclosure, position a Rear Tube Bracket on the bottom Tube and secure with two Bolts and Locknuts using two 1/2" Wrenches (**Figure 23**). Do not fully tighten until entire frame is secured onto bed platform. Ensure fabric doesn't get pinched under the Bracket.
14. Position the other Rear Tube Bracket on the top Tube and secure with two Bolts and Locknuts using two 1/2" Wrenches (**Figure 24**). Do not fully tighten until entire frame is secured onto bed platform. Ensure fabric doesn't get pinched under the Bracket.
15. Stand up the Enclosure so the Brackets are resting on the Bed. Insert the two ends of the right side Collector Tube into the holes at the corners of the Collector Base (**Figure 25**).

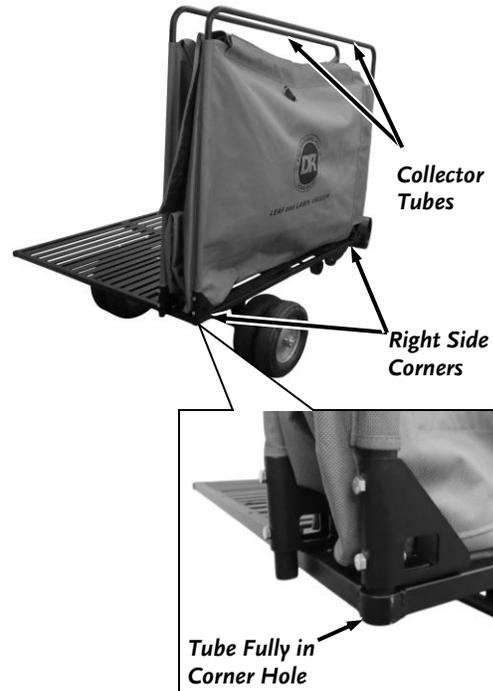


Figure 25

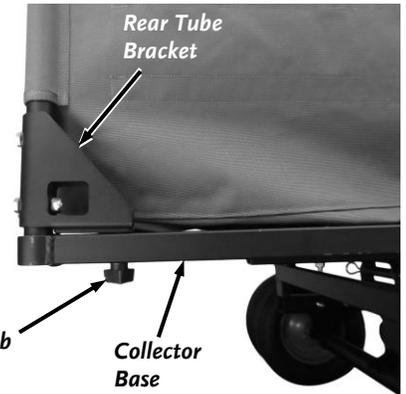
16. Insert the two ends of the left side Collector Tube into the holes at the corners of the Collector Base (Figure 26).
17. Secure the rear Tube Brackets to the Collector Base with one Hand Knob for each Bracket (Figure 27). Do not fully tighten.
18. Secure the front Tube Brackets to the Collector Base with two Hand Knobs for each Bracket (Figure 28). Do not fully tighten.
19. Install the top front Tube Frame to the side Tube Frames and secure with two C-Head Bolts and Threaded Hand Knobs (Figure 29).
20. Slide the top rear Tube Frame through the Enclosure Loop and secure to the Side Tube Frames with two C-Head Bolts and Threaded Hand Knobs (Figure 30).

**Note:** The Top Rear Tube Frame is crimped on both ends. The ends that are crimped create a flat that is offset from the round tube. Install with the offset facing out towards the back so the Top Rear Tube Frame and the tube at the rear of the Collector Tube are aligned and relatively flush with each other.



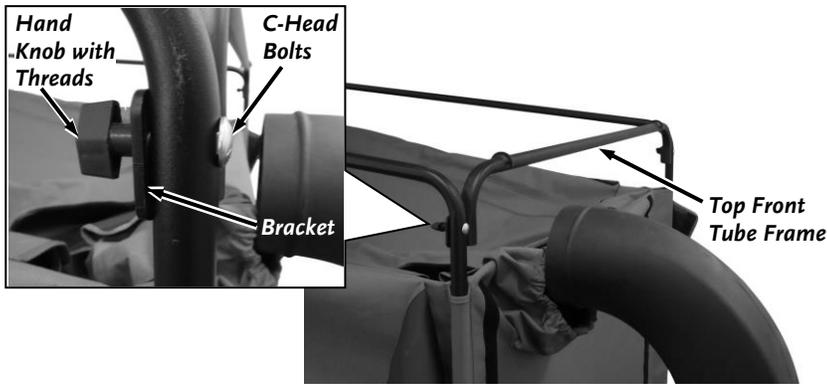
Left Side Tubes

Figure 26



Rear Tube Bracket  
Hand Knob with Stud  
Collector Base

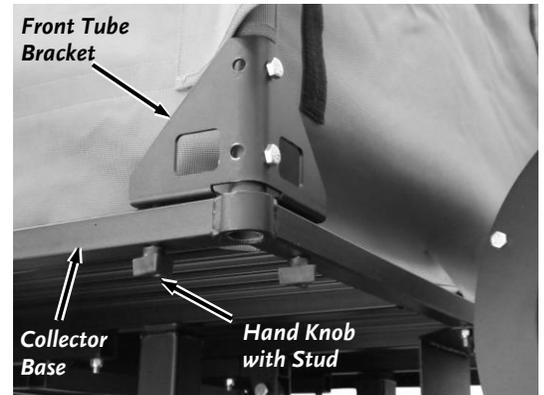
Figure 27



Hand Knob with Threads  
C-Head Bolts  
Bracket

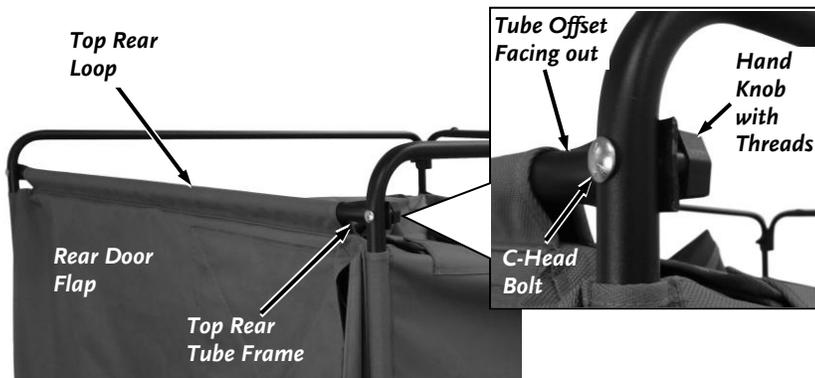
Top Front Tube Frame

Figure 29



Front Tube Bracket  
Collector Base  
Hand Knob with Stud

Figure 28



Top Rear Loop

Rear Door Flap

Top Rear Tube Frame

Tube Offset Facing out  
Hand Knob with Threads  
C-Head Bolt

Figure 30

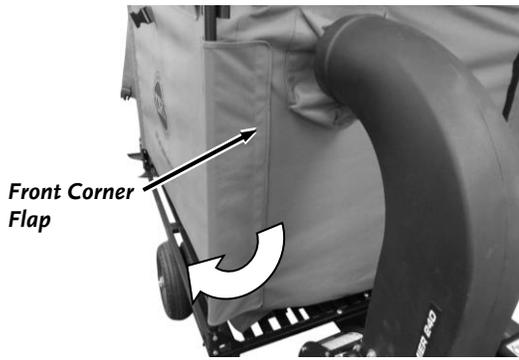


Figure 31

21. Open up the front corner flaps to relieve tension on the Enclosure for the following steps (Figure 31).
22. SIDE FLAPS: Open the inner and outer Side Flaps by pulling at the Velcro closures to separate them (Figure 32).
23. Fold the Inner Flap over the Side Tube and hold it in position (Figure 33).
24. Fold the Outer Flap up and secure it to the Velcro on the Inner Flap. Repeat for the other side (Figure 34).
25. FRONT FLAPS: Open the Front Flaps by pulling at the Velcro closures to separate them (Figure 35).
26. Fold the Outer Flap over the Front Tube and hold it in position (Figure 36).
27. Fold the Inner Flap over onto the Outer Flap to secure the first Velcro Strip (Figure 37).

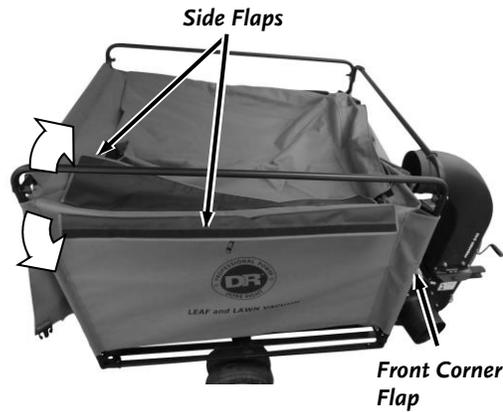


Figure 32



Figure 35

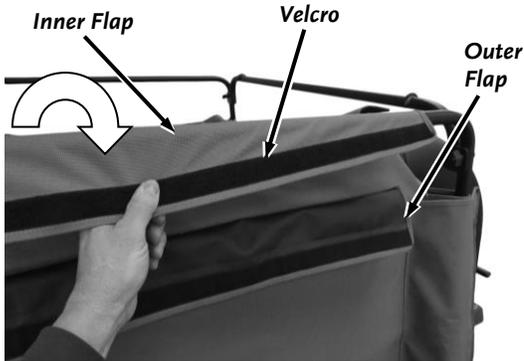


Figure 33

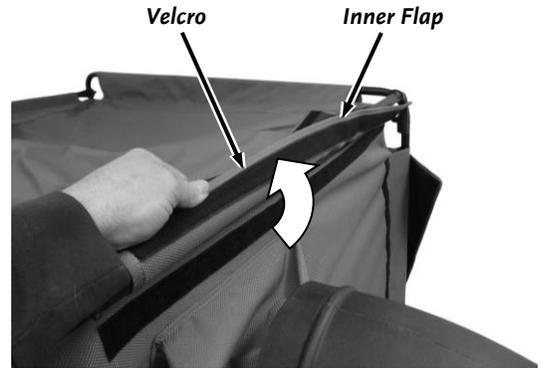


Figure 36



Figure 34

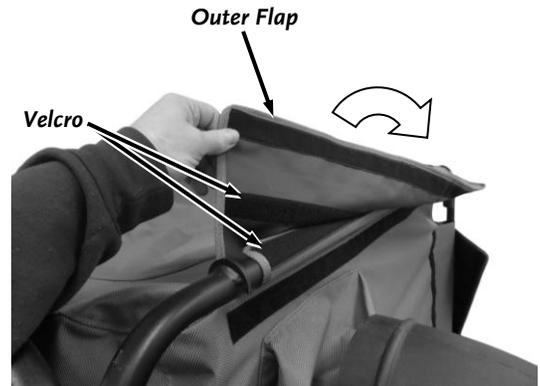


Figure 37



Figure 38

28. Continue folding the edge of the Inner Flap to secure the Velcro at the front of the Enclosure (**Figure 38**).

29. Fold the Front Corner Flaps in and attach the Velcro to tighten the enclosure (**Figure 39**).

**Notice:** Ensure both front corner Flaps in the previous step are pulled in as tight as possible so the side walls do not have any slack. Adjust as needed. This will ensure debris will exit the Collector efficiently.

30. Install the Enclosure Sleeve onto the Outlet Chute and over the rib to secure it (**Figure 40**).

31. Tighten all Enclosure hardware installed in steps 11 thru 18.

32. Open the four Buckles securing the Left and Right Side Door Flaps (**Figure 41**).

33. Swing the doors open and secure the each Side Door Flap to the sides of the Enclosure using the top Buckle (**Figure 42**).

34. Disconnect the one middle Buckle and pull the Lower Door Flap down to open up the back (**Figure 43**).

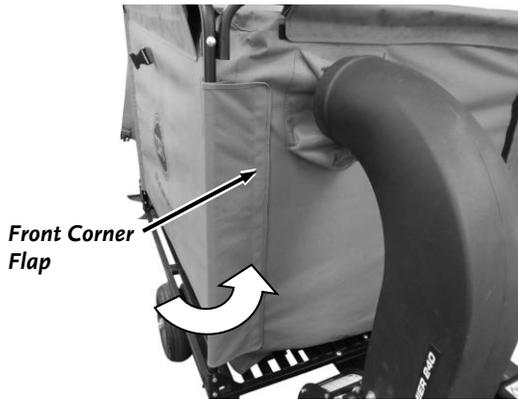


Figure 39



Figure 40

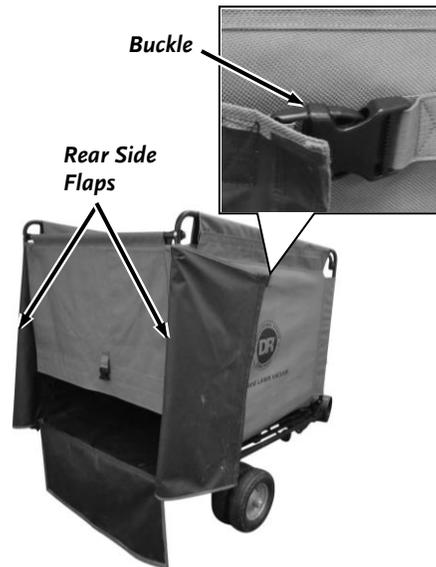


Figure 42

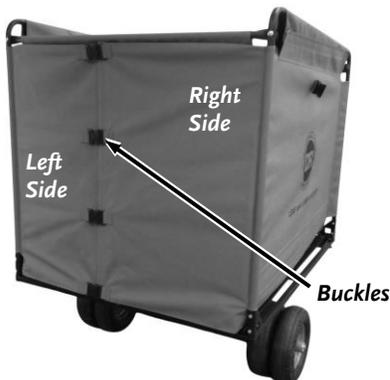


Figure 41

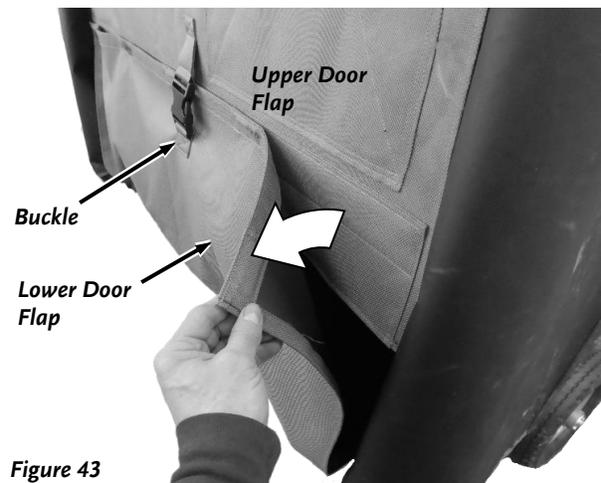


Figure 43

35. Insert the end of a 40" Batten into the opening in the side of the top flap corner in each side doors (**Figure 44**).
36. Rotate the Batten up and push it down into the large pocket that runs the length of the edge until it stops at the other end (**Figure 45**). Ensure the upper end is fully inside the pocket. Do this on both side doors.
37. Insert a 47" Batten end into the inside Pocket (inside canvas) and push it fully into the Pocket (**Figure 46**). Close the Button Snap to secure the Batten.
38. Repeat the last step for the other Batten Pocket on this side and for the two Pockets on the opposite side of the Enclosure.
39. Install the Metal Insert into the Insert Pocket of the rear Top Door Flap (**Figure 47**).
40. Secure the top Door Flap to the bottom Door Flap with the Single Buckle (**Figure 48**).
41. Secure the Magnets of the bottom Door Flap with the Magnets of the Upper Door Flap.
42. Secure the side Doors together with the four Buckles (**Figure 49**).



Figure 44

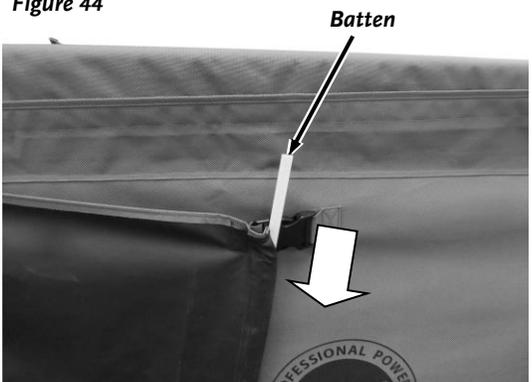


Figure 45

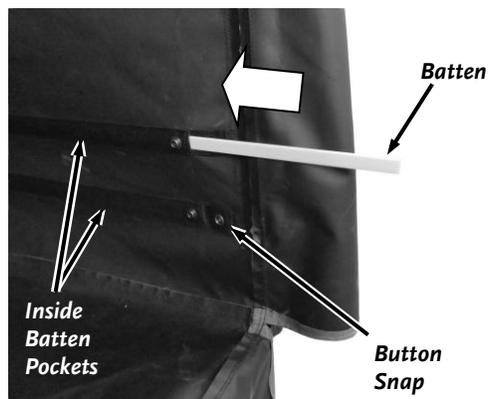


Figure 46

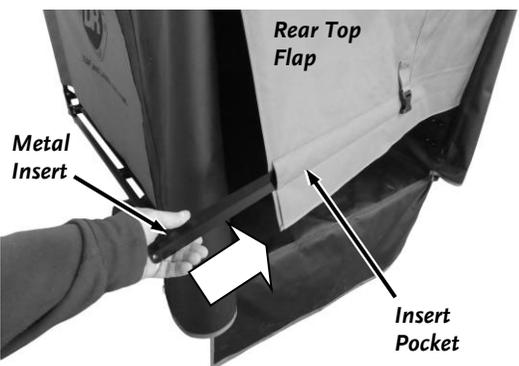


Figure 47

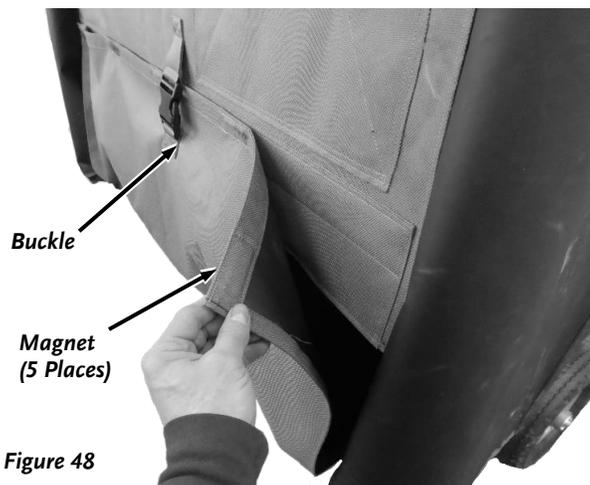


Figure 48

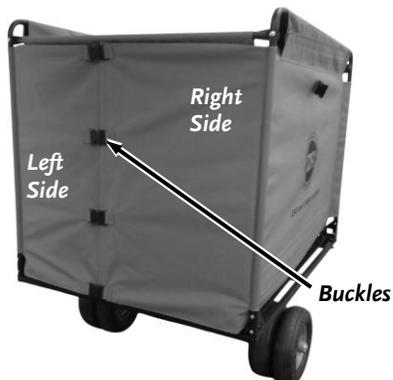


Figure 49

## Installing the Inlet Hose

### Tools Needed:

- Wire Cutters
- Black Marker
- Utility Knife
- Flat Head Screwdriver or 7mm Wrench



Figure 50

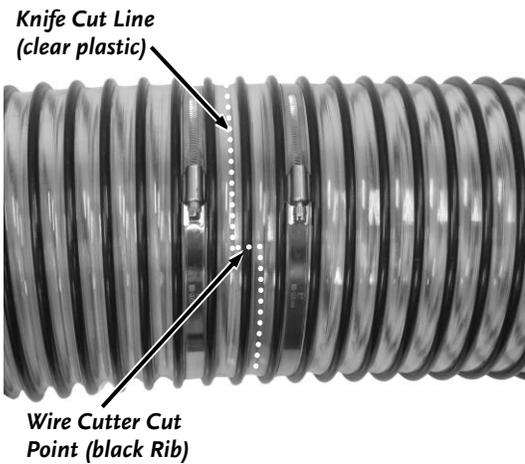


Figure 51

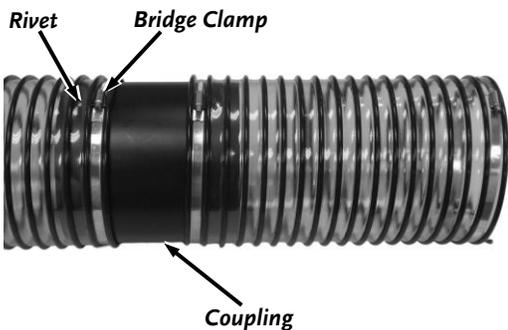


Figure 52

1. Observe the location of the two Bridge Hose Clamps near the Coupling end of the Hose Assembly (**Figure 50**).
2. Cut the black Spiral Rib of the Hose between the two clamps using Wire Cutters (**Figure 51**). Do not cut the clear area of the Hose yet.
3. Mark the path where you will cut the clear Hose using the black Marker to ensure that the cut will meet at the opposite side.
4. Cut the clear area Hose where you marked using the Utility Knife to separate the short Hose/Coupling section from the longer Hose/Cuff section.
5. Flip the Hose/Coupling section around so the Coupling is facing the longer section of Hose (**Figure 52**). Loosen the Hose Bridge Clamp at the end of the longer Hose using a Flat Head Screwdriver or 7mm Wrench. Slide the Coupling into the Hose until the Clamp is just past the Rivet.
6. Tighten the Bridge Hose Clamp onto the coupling using a Flat Head Screwdriver or 7mm Wrench.
7. Using a Flat Head Screwdriver or 7mm Wrench, loosen the Hose Bridge Clamp on the end of the Hose. Slide the Hose onto the Housing neck and tighten the Hose Bridge Clamp (**Figure 53**).

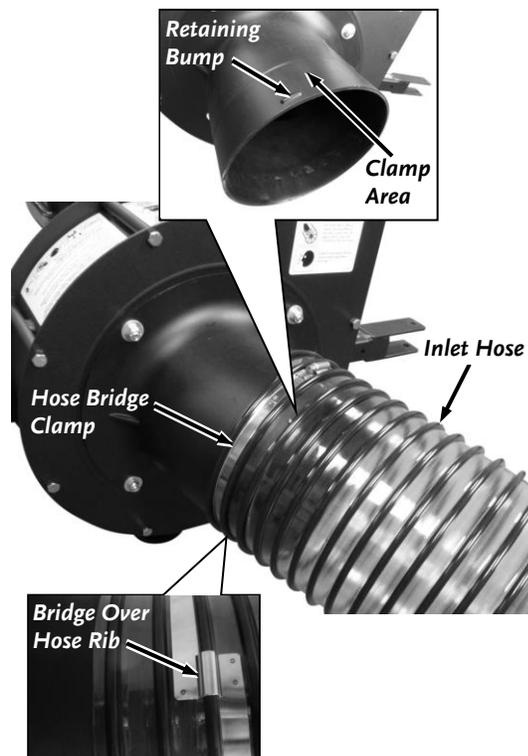
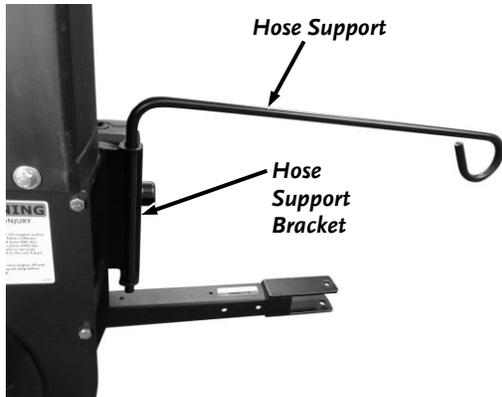
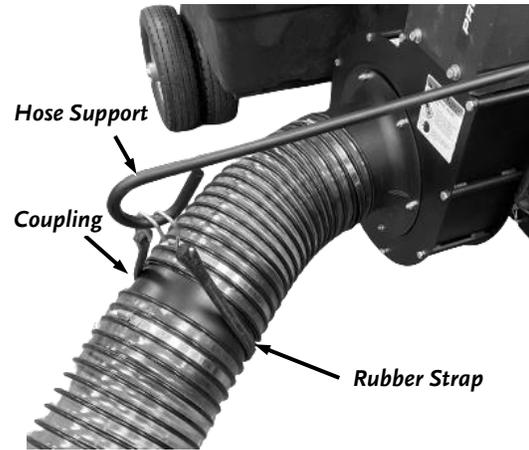


Figure53

8. Slide the Hose Support into the holes of the Hose Support Bracket (**Figure 54**).
9. Support the Hose with the Rubber Strap by hooking one end into the Support Loop, going under the Coupling and securing the other end onto the Support Loop (**Figure 55**).



**Figure 54**



**Figure 55**

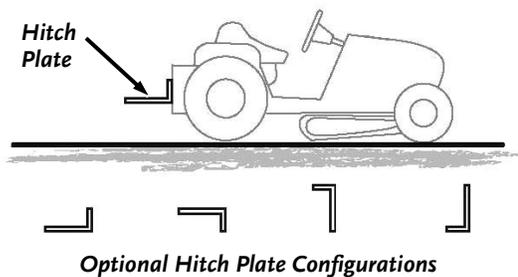


Figure 56

## Setting up your Lawn Mower

### Hitch Plate Kit Installation (optional)

The DR PRO MAX450™ LEAF and LAWN VACUUM requires a Pin Hitch hole on your Lawn Mower. DR Power Equipment offers several different Hitch Plate Kits if one is not provided on your Mower (**Figure 56**). Contact us at [www.DRpower.com](http://www.DRpower.com) or call one of our representatives at 1-800-DR-OWNER (376-9637) and they will be happy to assist you.

### Deck Adapter Installation

The DR PRO MAX450™ LEAF and LAWN VACUUM requires a Deck Adapter on your Lawn Mower to route material to its 8" diameter hose.

- ⇒ DR Power Equipment "Standard" or "Angled" Deck Adapters (for right hand discharge mowers) are available for you to fit to your machine if the Mower manufacturer's Deck Adapter is not available.
- ⇒ A DR Power Equipment Hose Adapter Kit is available to attach to your non DR Power Equipment Deck Adapter to our 8" diameter Hose if needed.

Contact us at [www.DRpower.com](http://www.DRpower.com) or call one of our representatives at 1-800-DR-OWNER (376-9637) to order a Universal Deck Adapter Kit or Hose Adapter Kit.

1. Install the Deck Adapter onto your Lawn Mower (**Figure 57**).
2. If you do not have a DR Deck Adapter and the 8" Hose will not fit your Adapter, order a Kit from us using the contact info above. Install the Hose Adapter Kit onto the end of your Deck Adapter as described in the Kit instructions.

### Connecting the DR PRO MAX450™ LEAF and LAWN VACUUM to your Mower

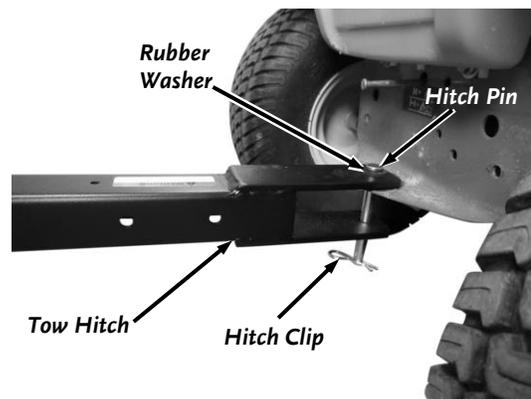


Figure 58

#### NOTICE

Always raise the Jack (if equipped) prior to towing this equipment. An extended Jack can damage or deform the Jack or Frame if the Jack hits the ground or an obstacle.

1. Position the back Hitch Plate of your Mower near the Hitch of the PRO MAX450™ LEAF and LAWN VACUUM on level ground (**Figure 58**).
2. Operate the Jack to move the Frame up or down until the Tow Hitch is aligned with the Mower Hitch Plate.
3. Move the Leaf System into position on the Hitch Plate and install the Hitch Pin with Rubber Washer and Hitch Clip to secure the Tow Hitch to the Mower.
4. Raise the Jack Wheel and install the Jack Safety Pin.

## Connecting the Inlet Hose to the Deck Adapter

### Tools Needed:

- Wire Cutters
- Knife
- Flat Head Screwdriver or 7mm Wrench

1. Slide the Hose Cuff over the Deck Adapter (**Figure 56**).

**Tip:** Position the Thumb Screw Clamp toward the Mower so it will not make contact with objects when mowing.

2. Tighten the Thumb (screw ) Clamp tightly to secure the Hose to the Hose Cuff.

3. Turn the Tractor as far as it will go to the left ensuring that the Tractor is not touching any portion of the Leaf Vacuum (**Figure 57**).

- If the Hose does not appear overly stretched and is not touching the ground, continue to "Adding Engine Oil and Gasoline" on the next page.
- If the Hose is overly stretched, you may need a hose extension. Contact us at [www.DRpower.com](http://www.DRpower.com) for a Extra Hose Kit.
- If the hose is sagging to the ground, shorten it as follows.

### Shorten the Hose:

Make sure you do not shorten the Hose too much while following these procedures. Follow the steps closely to ensure parts are not damaged.

**Note: The Tractor must be turned fully to the left (Figure 57).**

- Remove the Hose Cuff from the Deck Adapter, position it next to the Deck Adapter flange and pull carefully until the Hose is no longer touching the ground (**Figure 58**).
- Make a mark where the Hose aligns with the end of the flange.
- Loosen the Bridge Hose Clamp that secures the Hose to the Hose Cuff with Flat Screwdriver or a 7mm Wrench and pull the Cuff from the Hose.
- Trace the area to cut around the Hose first to ensure your path meets at the opposite side (**Figure 59**).
- Cut the black Rib with Wire Cutters and then cut the clear Hose with the Utility Knife.
- Reinstall the Cuff onto the Hose and tighten the Hose Clamp. Install the Cuff to the Deck Adapter (**Figure 56**).

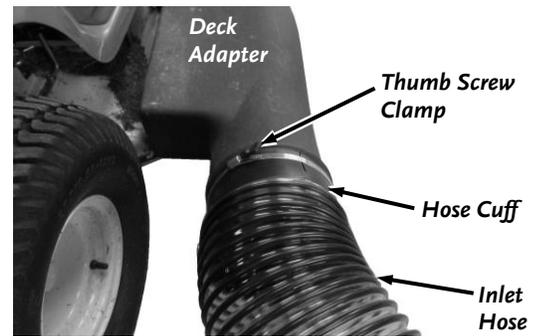


Figure 56

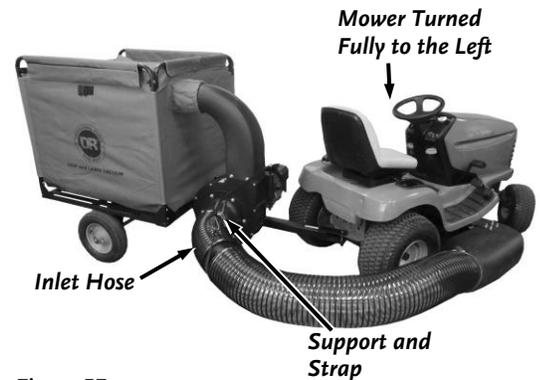


Figure 57

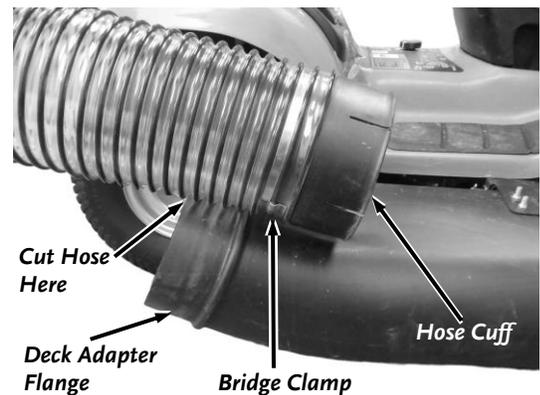


Figure 58

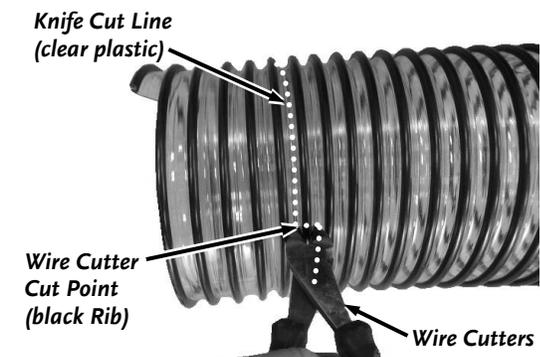


Figure 59

## Adding the Engine Oil and Gasoline

### Tools and Supplies Needed:

- Flexible Oil Fill Funnel (provided)
- Gas and Oil as recommended below

**Tip:** To avoid confusion, we recommend leaving the caps on the Fuel and Engine oil Fills and only removing one cap each time when you are ready to pour gasoline or oil into the correct Fill.

### Adding Oil

**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.

#### 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 dipstick frequently to avoid overfilling.
- The engine needs to be on a level surface or overfilling could occur which could damage the engine during use.
- To check the oil level, insert the dipstick all the way in, but do not screw it down.

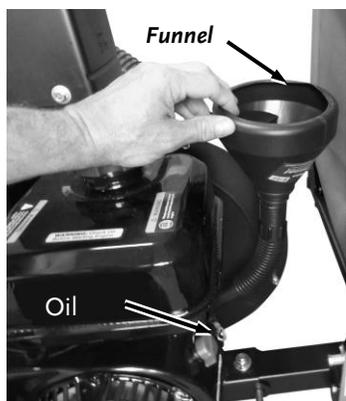


Figure 60

1. Level the DR PRO MAX450™ LEAF and LAWN VACUUM frame by adjusting the Jack height (if equipped) or by propping up the front frame.
2. Lift the collector and bed to gain access to the engine oil dipstick by actuating the dump switch, holding the switch to the "DUMP" setting until the area is open enough to work in.

**Note:** A flexible oil fill funnel is provided with your Leaf and Lawn Vac.

3. Remove the dipstick and add about half the 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 60**).
4. Insert the Dipstick, but do not screw it down to check the oil level. 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.

### Adding Gasoline

1. Fill the gas tank (**Figure 61**) to within 1-1/2 inches below top of fill neck (to allow for fuel expansion) with fresh, unleaded gas. See your Engine Owner's Manual for more information.

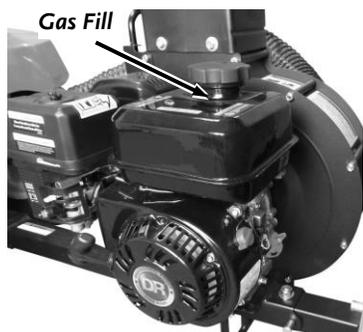


Figure 61

## ***Tire Pressure Check***

### **Tools Needed:**

- Tire Pressure Gauge
- Air Compressor

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### **! WARNING**

Do not over inflate the tires. Inflate to the manufacturers recommended pressure found on the tires.

---

1. Remove the Valve Stem Protective Cap (**Figure 62**) and check the tire pressure with a Tire Pressure Gauge.
2. Check what the manufacturers recommended pressure is that is stamped on the side of the Tire.
3. If the pressure is too low, add air through the Valve Stem with an air hose.
4. Replace the Valve Stem Protective Cap when finished.



**Valve Stem  
with Cap**

**Figure 62**

## Chapter 3: Operating the DR PRO MAX450™ LEAF AND LAWN VACUUM

It may be helpful to better familiarize yourself with the features of your DR PRO MAX450™ LEAF and LAWN VACUUM by reviewing **Figure 1** in Chapter 2 before beginning the steps outlined in this chapter.

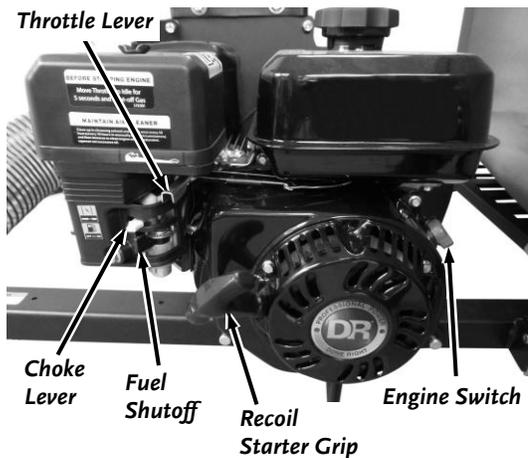


Figure 63

### Before Starting the Engine

#### NOTICE

For best performance we recommended that you operate your Leaf and Lawn Vacuum in temperatures 40°F and above.

#### WARNING

- Inspect the area where you will be working. The site must be free of potentially hazardous obstacles such as stones, metal, or glass. Also, make sure there won't be people or animals in the area around the DR Leaf and Lawn Vacuum.
  - Always refer to the Engine "Operator's Manual" that came with your machine for more detailed Engine operation procedures.
1. Connect the DR PRO MAX450™ LEAF and LAWN VACUUM to your Lawn Tractor (see previous chapter), remove the Safety Hitch Pin from the Jack (if equipped), raise the Jack up and out of the way and replace the Safety Hitch Pin.
  2. Check the Engine oil level every time you use the machine (refer to your Engine Operator's Manual).
  3. Check the Fuel level and make sure the Fuel Shut-Off Valve is in the OPEN position (refer to your Engine Operator's Manual).

### Starting and Stopping the Engine

1. When starting a cold Engine; push the Choke Control lever to the left (CHOKE) position and the Throttle Control lever to the far left (rabbit) position (**Figure 63**). If re-starting a warm Engine, leave the Choke in the (RUN) position.
2. Turn the Engine Switch to the "ON" position.
3. **Manual Start** - Grasp the Recoil Starter Handle and slowly pull until you feel resistance, then pull the cord with a smooth accelerating motion to start the engine. One or two pulls usually starts the DR LEAF and LAWN VACUUM.

**Electric Start** - Turn the Key to START until the Engine starts and then release. The Key will snap back when released and the Engine will continue to run.

4. After the Engine starts when the Choke is on, the Engine will soon begin to run rough. Adjust the Choke Lever until the engine runs smoother. Continue this process until the engine runs well with the Choke fully in the run position. When vacuuming you must operate the Engine with the Throttle in the Fast (Rabbit) position.
5. **To stop the Engine**, move the Throttle to the Slow (Turtle) position allowing the Engine to idle, shut off the gas, and then turn the Engine Switch to "OFF" position.

## Operating Safety

### **!** WARNING

- Never put your hands inside the vacuum hose while the engine is running. Always stop the engine and disconnect the spark plug wire before clearing the vacuum hose.
- Do not refuel the engine while it is hot or running.

### NOTICE

Use common sense when using the machine. Learn to recognize the change in sounds when overloaded. Stop the engine immediately if the machine becomes jammed to prevent damage to the machine.

### Towing the DR PRO MAX450™ LEAF and LAWN VACUUM

1. Make sure you firmly attach the DR PRO MAX450™ LEAF and LAWN VACUUM Hitch to your Lawn Tractor using the Hitch Pin and Hitch Clip (Figure 64).
2. If equipped with a Jack, make sure the wheel is in the fully raised position and the Jack Safety Pin is installed to lock it in place (Figure 65).
3. Make sure the Collector Base is on the Frame, the Enclosure Sleeve is over the Outlet Chute (Figure 66), and the Inlet Hose Cuff is securely attached to the Deck Adapter on your Tractor (Figure 67).

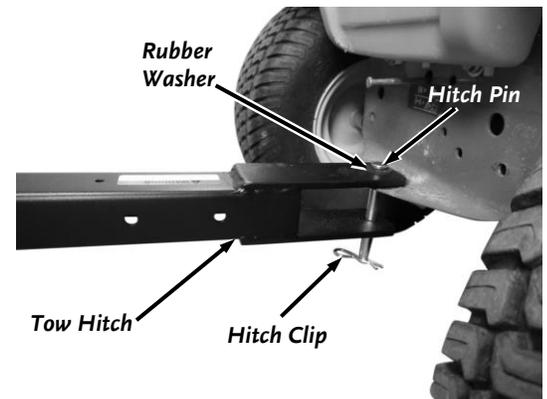


Figure 64

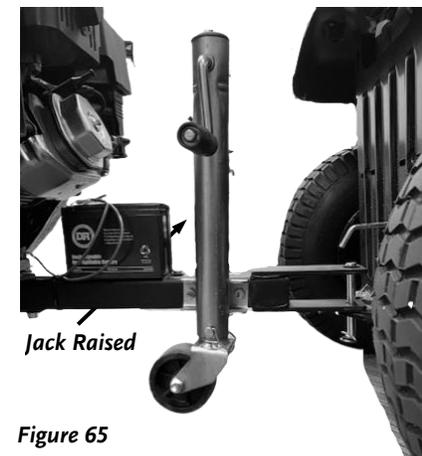


Figure 65

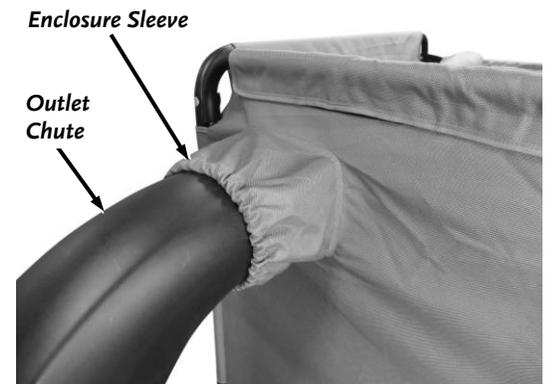


Figure 66

### NOTICE

- Raise the Jack caster wheel as far as it will go and install the locking pin prior to towing this equipment. An extended Jack caster wheel can be damaged or deformed if it hits the ground or an object.
- The DR Leaf and Lawn Vacuum is not equipped for highway use.

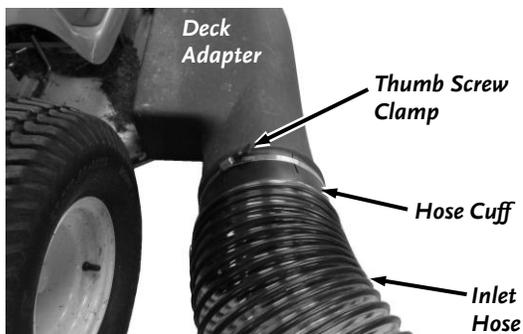


Figure 67

## Towing Safety

### **! WARNING**

- Watch out for low branches, overhangs, and guy wires that may catch on top of the collector.
- Never allow anyone to ride in or on the DR Leaf and Lawn Vacuum.
- Obey local, state, and federal regulations when you tow the DR Leaf and Lawn vacuum across public roads and highways.
- Use caution when backing up your lawn tractor or trying to make tight turns going forward with the DR Leaf and Lawn Vacuum attached. Trying to turn too sharply can cause damage to the hitch and/or the lawn tractor if you hit an obstacle. Go slowly in areas where tight turns are necessary. Straighten out the system before attempting to back up.

## Slopes and Uneven Terrain

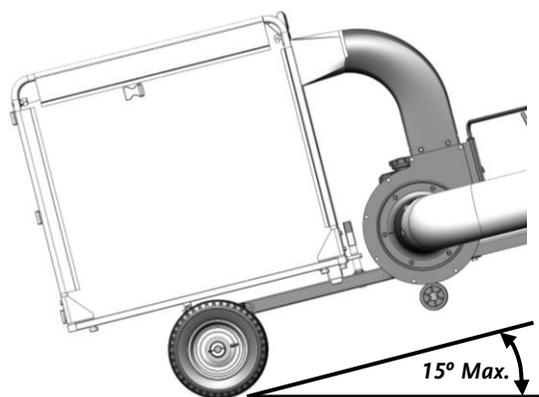


Figure 68

### **! WARNING**

- Do not use the DR Leaf and Lawn Vacuum on slopes greater than 15 degrees (**Figure 68**). Doing so could result in serious injury to yourself or damage to your machine.
- When operating the DR Leaf and Lawn Vacuum over uneven terrain and slopes, use extreme caution to not tip over the machine. Move slowly, especially with a full load, if the ground has ruts, bumps, and other depressions.
- On a slope, a heavy load will tend to shift. When using your DR Leaf and Lawn Vacuum, keep in mind that loads tend to shift to the downhill side of the collector enclosure. The higher and heavier the load, the greater the chance you may tip over the machine.
- Travel up and down slopes and avoid going across slopes. This is the same recommendation for mowing with your lawn tractor alone.

## LEAF and LAWN VACUUM Tips

**Note:** Make sure the Engine is at full throttle when mowing and vacuuming leaves.

### **! WARNING**

Always pick up stones, metal objects, glass, and sticks before vacuuming.

Be careful in corners. Practice in first gear to understand the effects of the machine on your ability to turn sharply. Drive your DR PRO MAX450™ LEAF and LAWN VACUUM into the corner of your property and back out straight to mow as close to the corner as possible. Do not go through ditches.

- The Lawn Deck of your mower may tend to scatter some leaves in front and to the right of the Lawn Deck. Keeping the discharge side toward the remaining leaves will simplify cleanup by avoiding blowing leaves back onto the areas that you already finished. When you need to vacuum with the discharge side toward the completed area of the lawn, overlap the discharge side of the Lawn Deck at least a foot over the already completed section of the lawn.
- To prevent clogging the Deck Adapter, mow grass that is dry and not more 2" at a time. To keep your grass healthy, we recommend cutting less than 1/3 the grass height.
- Run your Lawn Deck with your Tractor at full throttle all the time to maximize the lift from your Lawn Deck and assist your DR PRO MAX450™ LEAF and LAWN VACUUM system.
- Avoid dragging the Hose over curbs, stone walls, or piles of cut branches. The Hose is tough, but can puncture on sharp objects. This could also crack the Mower Deck Adapter.
- Cut wet grass can be very heavy. Fill the Collector only 3/4 full if the material is very wet. This will make the Leaf System easier to pull and to dump.

## Dumping

### **! WARNING**

- Always shut off the tractor and engine vacuum and use caution when dumping the collector load.
- Never back up with the Collector in the dump position.

1. Shut down the Mower and Vacuum Engines and set the Mower Parking Brake when you are at the Dump area.
2. Remove the Enclosure Sleeve from the Outlet Chute (**Figure 69**).
3. Separate the left and right side Door Flaps by disconnecting the four Buckles (**Figure 70**).
4. Attach the top Buckles of the side Door Flaps to the Buckles at both sides of the Enclosure (**Figure 71**).
5. Separate the top and bottom Door Flaps by disconnecting the Buckle and then pulling the bottom Door Flap down to release the Magnets (**Figure 72**). Fold the bottom Door Flap under the Bed to attach the Magnets underneath. The top Door Flap can be left hanging down.
6. Push and hold the Dump Switch towards “DUMP” to tip the Collector back (**Figure 73**) until it reaches full travel or the bed hits the ground.
7. Drive the Mower forward with the collector open to move the Leaf System away from the pile of debris and allow all debris to slide from the Bed.
8. Shake the Collector if necessary to loosen any debris that remains in the bottom.

### **! CAUTION**

Never drive in reverse with the Collector in the dump position.

9. Push and hold the Dump Switch on “FLAT” to tip the Collector back to its flat bed position.
10. Close the Top and Bottom Door Flaps with the magnetic seal and buckle.
11. Undo the Buckles at the sides, close the Left and Right Doors and secure with all four Buckles.

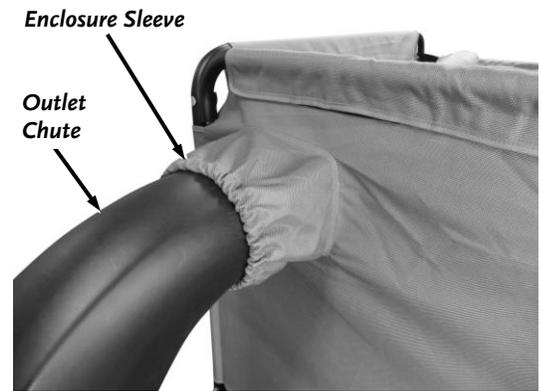


Figure 69

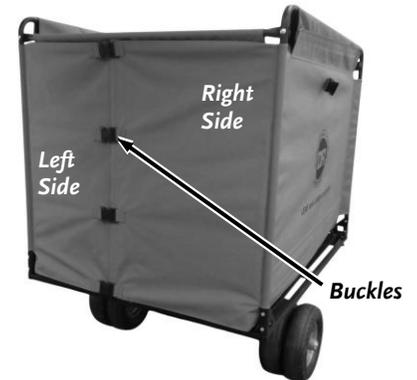


Figure 70

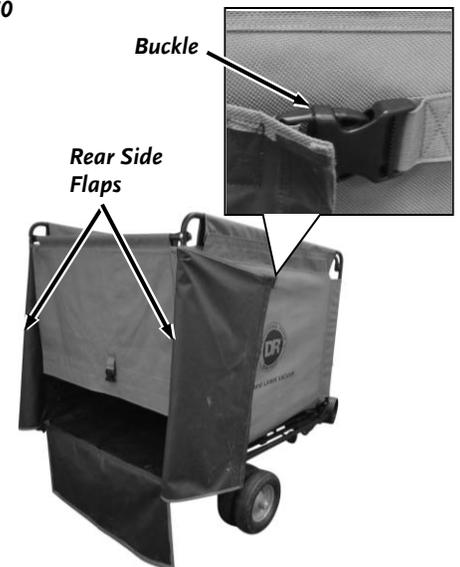


Figure 71

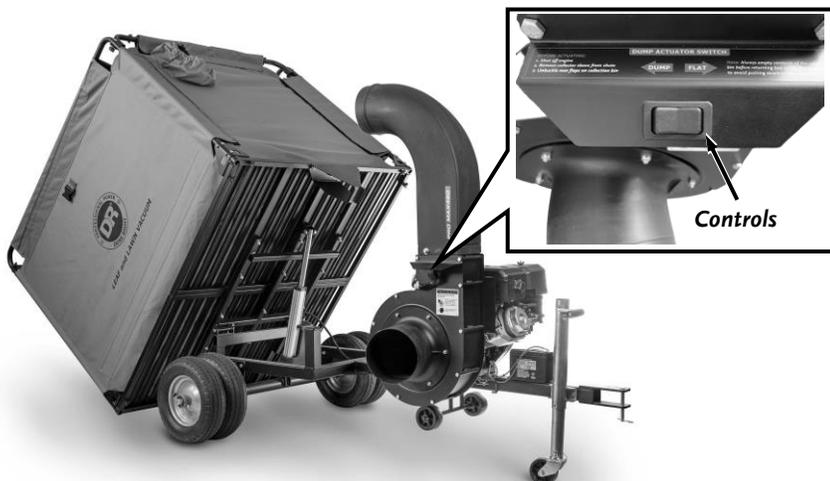


Figure 73

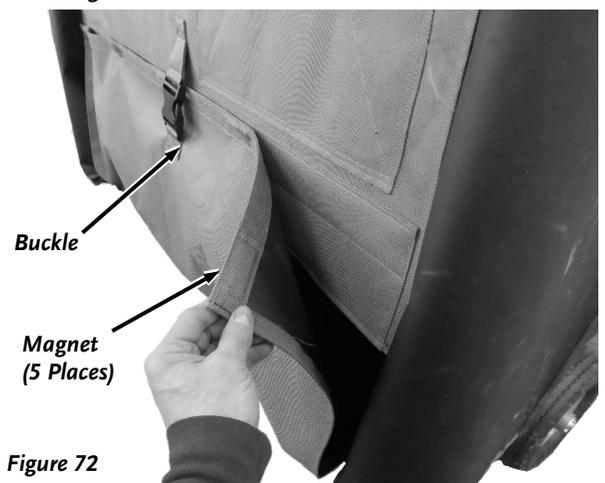


Figure 72

12. Pull the Enclosure Sleeve around the Outlet Chute (Figure 69).

---

**CAUTION**

Empty the Collector after each use. Do not store the Leaf System with debris in the Collector.

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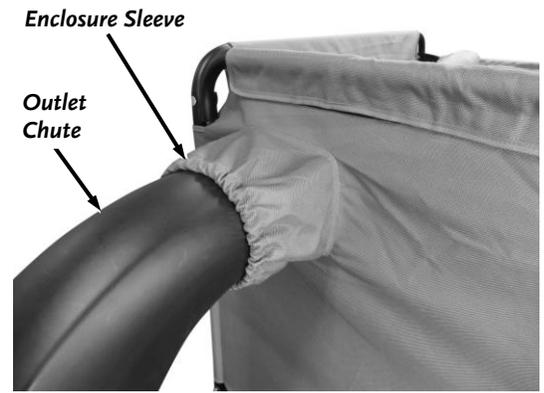


Figure 69

## Converting to Flatbed Trailer Mode

### **! WARNING**

Before performing this procedure, you must first shut off the mower and leaf and lawn vacuum engines, wait five minutes for all parts to stop and cool, and disconnect the spark plug wire of the leaf and lawn vacuum.

#### Tools Needed:

- Flat Head Screwdriver or 7mm Wrench
- Two 3/4" Wrenches

1. Remove the Rubber Strap from the Hose Support (**Figure 74**).
2. Remove the Hose Support from the Bracket.
3. Disconnect the Hose from the Impeller Housing using a Flat Head Screwdriver or 7mm Wrench (**Figure 75**).
4. Turn the Thumb Screw Clamp to disconnect the Hose from the Deck Adapter (**Figure 76**).
5. Pull the Enclosure Sleeve from the Outlet Chute (**Figure 77**).
6. Remove the six Knob Bolts from under the Collector Base corners (**Figure 78**).
7. Loosen the Knobs at the top corners (you do not need to remove them).
8. With help from another person, lift the Enclosure from the Flatbed and set it aside.

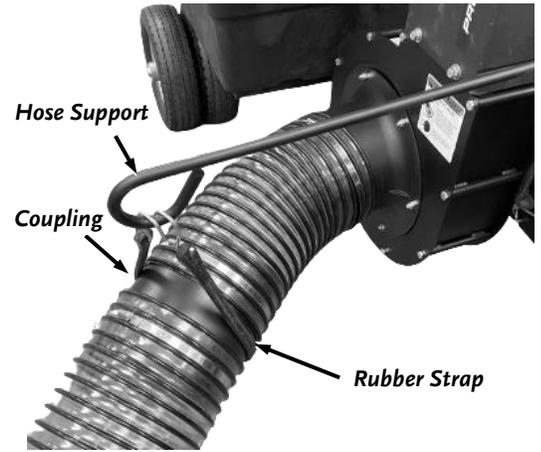


Figure 74

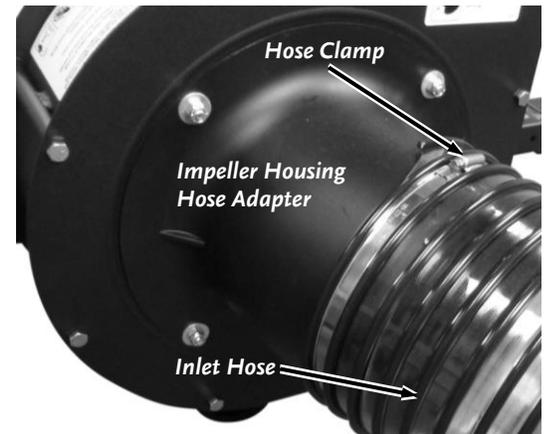


Figure 75

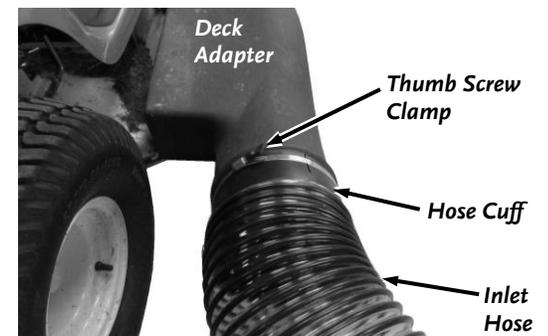


Figure 76

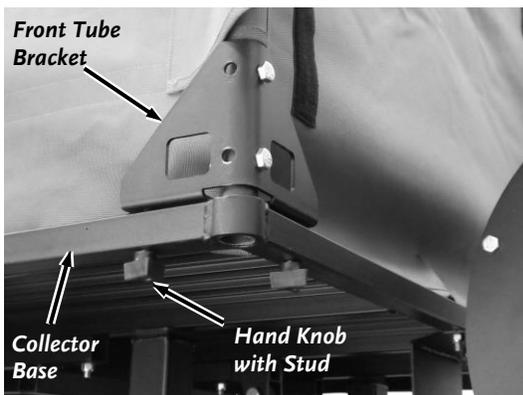


Figure 78

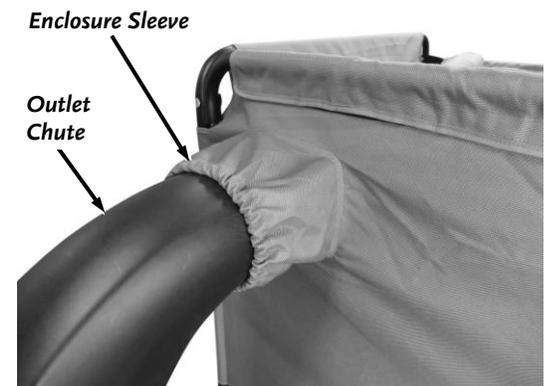


Figure 77

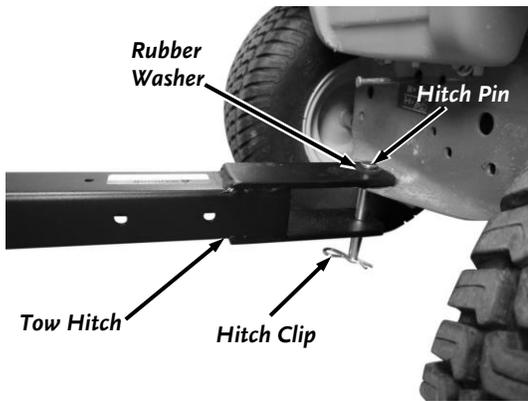


Figure 79

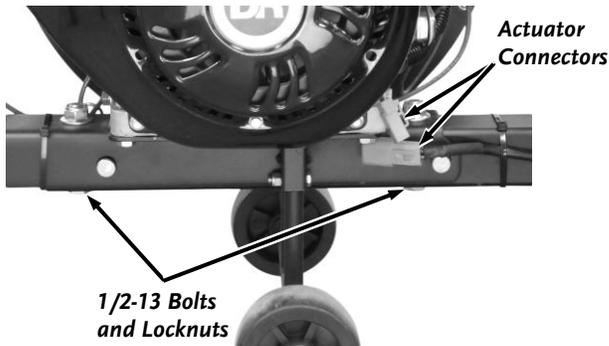


Figure 80

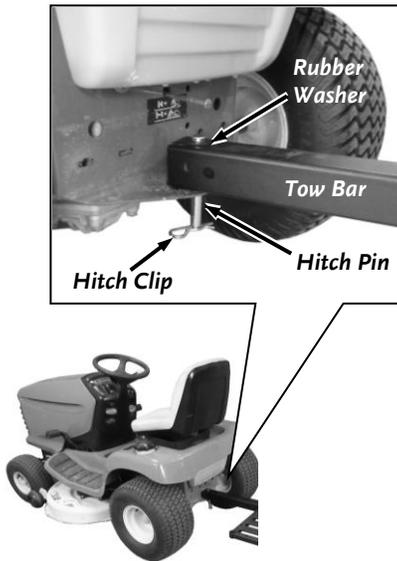


Figure 81

9. Disconnect the Tow Hitch from the Tow Vehicle and keep the Hitch Pin, Rubber Washer and Hitch Clip for securing the Flatbed Trailer in the next section (Figure 79).
10. Remove the two sets of Bolts and Locknuts from the Frame using two 3/4" Wrenches (Figure 80).
11. Disconnect the Actuator Connectors
12. Block the Wheels and have a helper support the Engine to take pressure off the Pins when you perform the next step.
13. Remove the front (closest to the Hitch) Hitch Clip and Clevis Pin from the Power Unit Frame.
14. Remove the rear Hitch Clip and Clevis Pin from the Power Unit Frame.
15. Pull the Power Unit away from the Flatbed Trailer and store Power Unit, Hose, Hose Support and Hardware.

### **⚠ WARNING**

- Never allow anyone to ride on the Flatbed.
- Do not tow on slopes greater than 15 degrees.
- Travel up and down slopes and avoid going across slopes. This is the same recommendation for using your lawn tractor alone.

### **Using the Flatbed Trailer**

1. Hitch the Tow Bar to your Mower using the Hitch Pin with Rubber Washer and secure using the Hitch Clip (Figure 81).

#### **Tips:**

- Be careful in corners. Practice in first gear to understand the effects of the machine on your ability to turn sharply. Do not tow through ditches.
- Distribute material as evenly as possible on the Flatbed.
- Never tow more than 1100 lbs of material at one time.
- Take extra care whenever you are towing long material that hangs over the Flatbed.
- Use bungee cords or straps to hold awkward material down when necessary.
- Don't throw small heavy items (like a bulky rock) onto the Flatbed. Place them on and then strap them down.



## Collapsing the Collector for Compact Storage

The Collector can be stored fully assembled but can also be collapsed for more compact storage.

1. Unlatch the Buckles that secure the left and right side Doors (**Figure 82**).
2. Unlatch the Buckle that secures the top and bottom Doors (**Figure 83**).
3. Locate the metal insert in the top door flap and remove it from its sleeve (Figure 84).
4. Unhook the Velcro Flaps that secure the Enclosure to the Top Front Tube (**Figure 85**).
5. Remove the Hand Knobs and the C-Head Bolts that secure the Top Front Tube Frame and remove the Tube Frame.
6. Remove the Hand Knobs and the C-Head Bolts that secure the Top Rear Tube Frame and remove the Tube Frame from the Enclosure Loop.
7. Tuck in the Enclosure ends as you bring the two Collector Tubes together for storage (**Figure 86**).

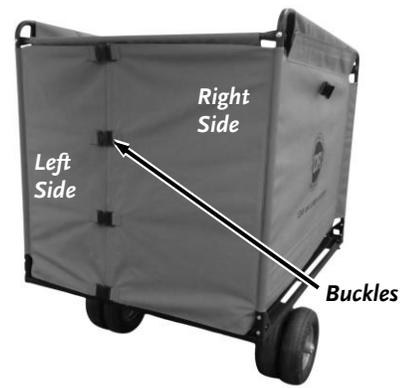


Figure 82

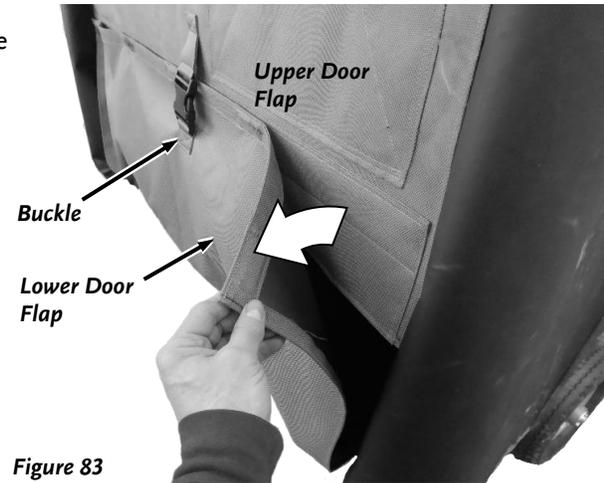


Figure 83

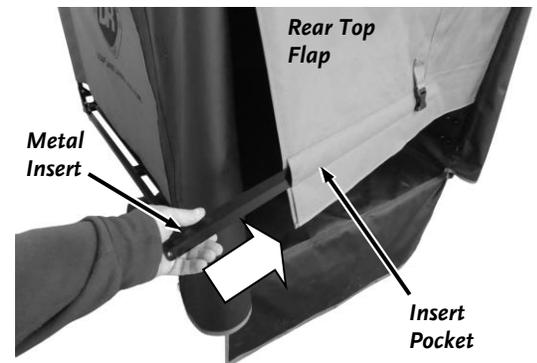


Figure 84

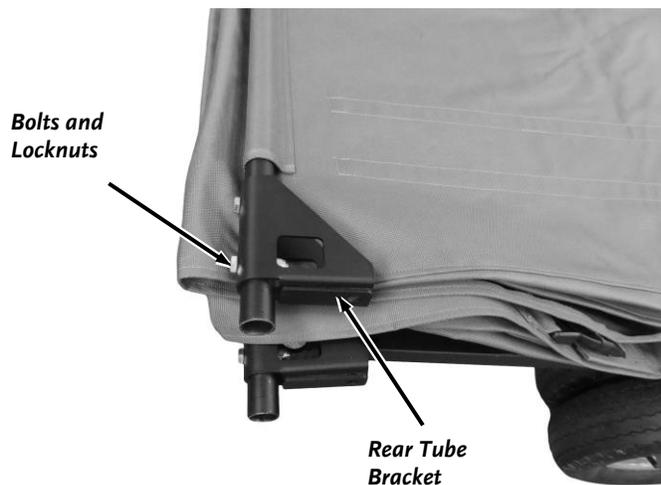


Figure 86

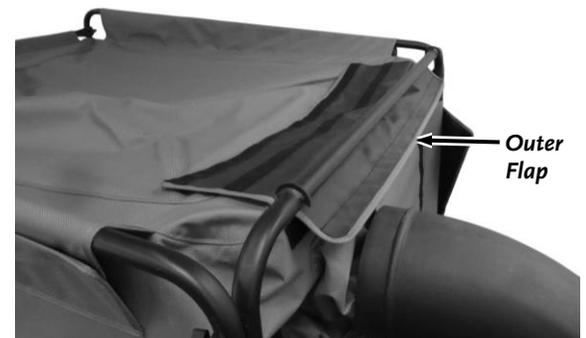


Figure 85

## Chapter 4: Maintaining the DR PRO MAX450™ LEAF and LAWN VACUUM

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

### **! WARNING**

Before performing any maintenance, repairs or inspection, you must first shut off the mower and leaf and lawn vacuum engines, wait five minutes for all parts to stop and cool, and disconnect the spark plug wire of the leaf and lawn vacuum.

### Regular Maintenance Checklist

PROCEDURE	BEFORE EACH USE	AFTER EACH USE	EVERY 25 HOURS	EVERY 100 HOURS
Check Engine Oil Level	▲			
Check General Equipment Condition, e.g. tight nuts, bolts, welds, etc.	▲			
Check Tire Pressure	▲			
Check Hose for wear, holes, or abraded areas	▲			
Clean Engine Exterior & Cooling Fins	▲			
Clean Engine Air Filters, replace as needed*	▲			
Empty the Collector		▲		
Change Engine Oil	1 <sup>st</sup> time 5 hours		▲	
Check Exterior of Impeller Housing for Wear			▲	
Lubricate Wheel Bearings			▲	
Replace Spark Plug				▲
Replace Engine Air Filters				▲

\*Replace the filter if excess oil is found on the foam element or any oil is found in the paper element.

### Lubrication

Your DR PRO MAX450™ LEAF and LAWN VACUUM was lubricated at the Factory. The operator needs to provide Engine lubrication and lubricate the Wheels periodically.

### **! WARNING**

Before performing any maintenance, repairs or inspection, you must first shut off the mower and leaf and lawn vacuum engines, wait five minutes for all parts to stop and cool, and disconnect the spark plug wire of the leaf and lawn vacuum.



Figure 87

#### Tools and Supplies Needed:

- Grease gun with Multipurpose Automotive Grease
- Clean Rags

#### LUBRICATE WHEEL BEARINGS:

1. Clean the Grease Fitting with a clean Rag (**Figure 87**).
2. Lubricate each Wheel with Multipurpose Automotive Grease using a grease gun on the Grease Fitting.

## REMOVING AND REPLACING THE ENGINE OIL

Refer to page 28 as well as the Engine Operator Manual for Engine Procedures for removing and replacing the oil.

**Note:** Be sure to use environmentally safe disposal procedures in disposing of the used oil.

## Replacing the Wheels

### **! WARNING**

Before performing any maintenance, repairs or inspection, you must first shut off the mower and leaf and lawn vacuum engines, wait five minutes for all parts to stop and cool, and disconnect the spark plug wire of the leaf and lawn vacuum.

#### Tools Needed:

- Locking Pliers or Needle Nose Pliers.
- Jack and Stand

1. Jack up the Frame and support it with Blocks or a Jack Stand so the Wheel is off the ground.
2. Remove the Cotter Pin with Locking Pliers or Needle Nose Pliers (**Figure 88**).
3. Remove the Large Washer and Wheel.
4. Install the new Wheel.
5. Install the Large Washer and secure with the Cotter Pin (bend the ends of the Cotter Pin to lock it onto the Axle).



Figure 88

## Impeller Maintenance

An Impeller Tool is provided in case you ever need to remove the Impeller for service. Simply remove the Bolt and Washer holding the Impeller onto the Engine Shaft and thread the Impeller Tool into the Impeller until it releases from the Engine (**Figure 89**).

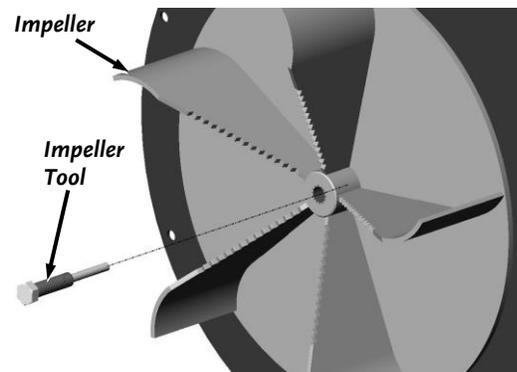


Figure 89

## Battery Care

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 your Engine when the Battery charge is low.

## Charging the Battery

### WARNING

Before performing any maintenance, repairs or inspection, you must first shut off the mower and leaf and lawn vacuum engines, wait five minutes for all parts to stop and cool, and disconnect the spark plug wire of the leaf and lawn vacuum.

### 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.

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

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

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

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

1. Attach the Black (-) alligator clipped wire from the Charger Adapter to the Negative (-) terminal of the Battery, then attach the Red (+) alligator clipped wire to the Positive (+) Battery terminal.
2. Plug the Charger into a standard wall outlet.
  - Typically, the Battery takes between 6 and 8 hours to fully charge. The Battery does not have a “memory”; so don't worry about overcharging the Battery or charging it too often.
  - You can charge the Battery many times. The Battery lasts longer if you charge it before it is fully drained. Keep it fully charged and at room temperature when not using your DR LEAF and LAWN VACUUM.
  - If the Battery does not hold its charge for very long under normal conditions, or it simply won't hold a charge, then replace it. You can purchase replacement Batteries directly from us. To install your new Battery, follow the directions below.

## Replacing the Battery

### Tools Needed:

- Two 7/16" Wrenches
- Wire Cutters

1. Disconnect the Battery Terminals (**Figure 94**).
2. Cut the Cable Tie that securing the Wires to the Clamp using Wire Cutters. (Be careful not to cut the Battery Cables).
3. Remove the Bolts and Locknuts that secure the Battery Clamp using two 7/16" Wrenches.
4. Remove the Clamp and the dead Battery.
5. Install the new Battery.
6. Install the Battery Clamp and secure with the Bolts and Locknuts using two 7/16" Wrenches.
7. Attach the Battery Terminals. Green Wire to negative black Terminal and Red Wire to positive red Terminal. Install new cable ties to ensure cables do not catch while in use.

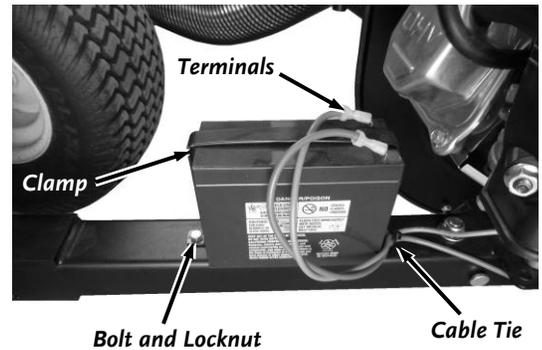


Figure 94

## Disposing of the Battery Responsibly (Electric-Start Models)

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

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

## Recycling a Used Battery

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

You can also visit the [www.Earth911.org](http://www.Earth911.org) for more information. Once there, in the appropriate box, type in what it is you are recycling and also type your zip code. The site will provide a list of recycling centers located near you.

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

INMETCO  
PO Box 720  
245 Portersville Road  
Ellwood City, PA 16117  
(724) 758-2825; fax (724) 758-2845

To learn more about hazardous waste recycling, visit the Web site for Battery Council International [[www.batterycouncil.org](http://www.batterycouncil.org)] or for the Environmental Protection Agency [[www.epa.gov](http://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](http://www.DRpower.com) or call toll-free 1-800-DR-OWNER (376-9637) for support.

### **WARNING**

Before performing any maintenance, repairs or inspection, you must first shut off the Mower and Leaf and Lawn Vacuum engines, wait five minutes for all parts to stop and cool, and disconnect the Spark Plug Wire of the Leaf and Lawn Vacuum.

### Troubleshooting Table

SYMPTOM	POSSIBLE CAUSE
<i>Engine recoil will not pull out or is difficult to pull.</i>	<ul style="list-style-type: none"> <li>⇒ Check the Engine oil level, the Engine may be seized. See your engine owner's manual.</li> <li>⇒ 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.</li> <li>⇒ The Recoil may be broken or jammed. Visit us at <a href="http://www.DRpower.com">www.DRpower.com</a> or call 1-800-DR-OWNER (376-9637) for assistance.</li> </ul>
<i>The Engine won't start (Please refer to the Engine Owner's Manual for engine-specific procedures.)</i>	<ul style="list-style-type: none"> <li>⇒ Check that the engine start switch is in the ON position.</li> <li>⇒ Check that your Battery cables/terminals are connected.</li> <li>⇒ Check that your Battery is charged.</li> <li>⇒ Check that the Spark Plug Wire is attached.</li> <li>⇒ Check the oil and gas level. See your engine owner's manual.</li> <li>⇒ You should be using fresh, clean gas. If the gas is old, change it. Use a fuel stabilizer if you keep gas longer than one month.</li> <li>⇒ Check the Throttle adjustment and travel. See your engine owner's manual.</li> <li>⇒ The Spark Plug should be clean. If the Spark Plug is dirty or cracked, change it. 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 reinstall it.</li> <li>⇒ If the Engine still won't start, visit us at <a href="http://www.DRpower.com">www.DRpower.com</a> or call 1-800-DR-OWNER (376-9637) for assistance.</li> </ul>
<i>Engine smokes.</i>	<ul style="list-style-type: none"> <li>⇒ Check the oil level and adjust as needed.</li> <li>⇒ You may be operating the machine on too great an incline. See "Slopes and Uneven Terrain" on page 31.</li> <li>⇒ Check the Air Filter and clean or replace if needed.</li> <li>⇒ You may be using the wrong oil—too light for the temperature. Refer to your Engine Owner's Manual for detailed information.</li> <li>⇒ Clean the Engine cooling fins and the carburetor housing if they are dirty.</li> <li>⇒ If the Engine still smokes, visit us at <a href="http://www.DRpower.com">www.DRpower.com</a> or call 1-800-DR-OWNER (376-9637) for assistance.</li> </ul>

## Troubleshooting Table (Continued)

### **WARNING**

Before performing any maintenance, repairs or inspection, you must first shut off the mower and leaf and lawn vacuum engines, wait five minutes for all parts to stop and cool, and disconnect the spark plug wire of the leaf and lawn vacuum.

SYMPTOM	POSSIBLE CAUSE
<p><i>The Engine lacks power or is not running smoothly.</i></p> <p><i>(Please refer to the Engine Owner's Manual for engine-specific procedures.)</i></p>	<ul style="list-style-type: none"> <li>⇒ Check the Throttle travel. See your engine owner's manual.</li> <li>⇒ The Choke should be pushed all the way to the right (RUN). See your engine owner's manual.</li> <li>⇒ Check to see if the Air Filter is clean. If it's dirty, change it following the procedure in the Engine Owner's Manual.</li> <li>⇒ The Spark Plug should be clean. If the Spark Plug is dirty or cracked, change it. 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.</li> <li>⇒ You should be using fresh, clean gas. If the gas is old, change it. Use a fuel stabilizer if you keep gas longer than one month.</li> <li>⇒ Check and make sure the Engine has the right amount of clean oil. If it's dirty, change it following the procedure in your engine owner's manual.</li> <li>⇒ If your Engine still lacks power, visit us at <a href="http://www.DRpower.com">www.DRpower.com</a> or call 1-800-DR-OWNER (376-9637) for assistance.</li> </ul>
<p><i>Wheels tracking left or right while being towed.</i></p>	<ul style="list-style-type: none"> <li>⇒ Check the tire pressure. Refer to the Tire manufacturers recommended pressure on the side of the Tire and adjust pressure as needed.</li> </ul>
<p><i>Lawn Deck is not vacuuming well.</i></p>	<ul style="list-style-type: none"> <li>⇒ Be sure the LEAF and LAWN VACUUM Engine is running at full throttle.</li> <li>⇒ Be sure the Lawn Deck Blades are engaged and running at full throttle.</li> <li>⇒ Be sure the Deck is set at the proper mowing height.</li> <li>⇒ Use 1st or 2nd gear on your Lawn Tractor for best results.</li> <li>⇒ Turn off the Lawn Tractor Engine and Vacuum Engine and check the Deck Adapter for clogs.</li> <li>⇒ Look for clogs along the Hose. Shake the Hose to loosen and free any clog.</li> <li>⇒ Turn off the Lawn Tractor Engine and LEAF and LAWN VACUUM Engine and disconnect the LEAF and LAWN VACUUM Engine Spark Plug Wire. Check for clogs in the Outlet Chute and Inlet Hose.</li> <li>⇒ If your Lawn Deck still is not vacuuming properly, visit us at <a href="http://www.DRpower.com">www.DRpower.com</a> or call 1-800-DR-OWNER (376-9637) for assistance.</li> </ul>
<p><i>Leaves or grass come out of the back of the Enclosure.</i></p>	<ul style="list-style-type: none"> <li>⇒ Check that all Rear Door Flaps are secured with the Buckles. Verify that the Top and Bottom Door Flaps are buckled first, and the Side Door Flaps are buckled last.</li> </ul>
<p><i>Leaves or grass come out where the Outlet Chute and Enclosure meet.</i></p>	<ul style="list-style-type: none"> <li>⇒ Be sure the Enclosure Sleeve is fully installed around the Outlet Chute.</li> </ul>
<p><i>The linear actuator stops working.</i></p>	<ul style="list-style-type: none"> <li>⇒ Check to make sure the connectors are plugged in (Page 17, Figure 15)</li> <li>⇒ Check to make sure battery wire terminals are connected.</li> <li>⇒ Check to make sure your battery is not dead.</li> <li>⇒ Check that the 20A fuse has not blown (located in a yellow housing on the switch wire harness).</li> </ul>

## Chapter 6: Parts Lists and Schematic Diagrams

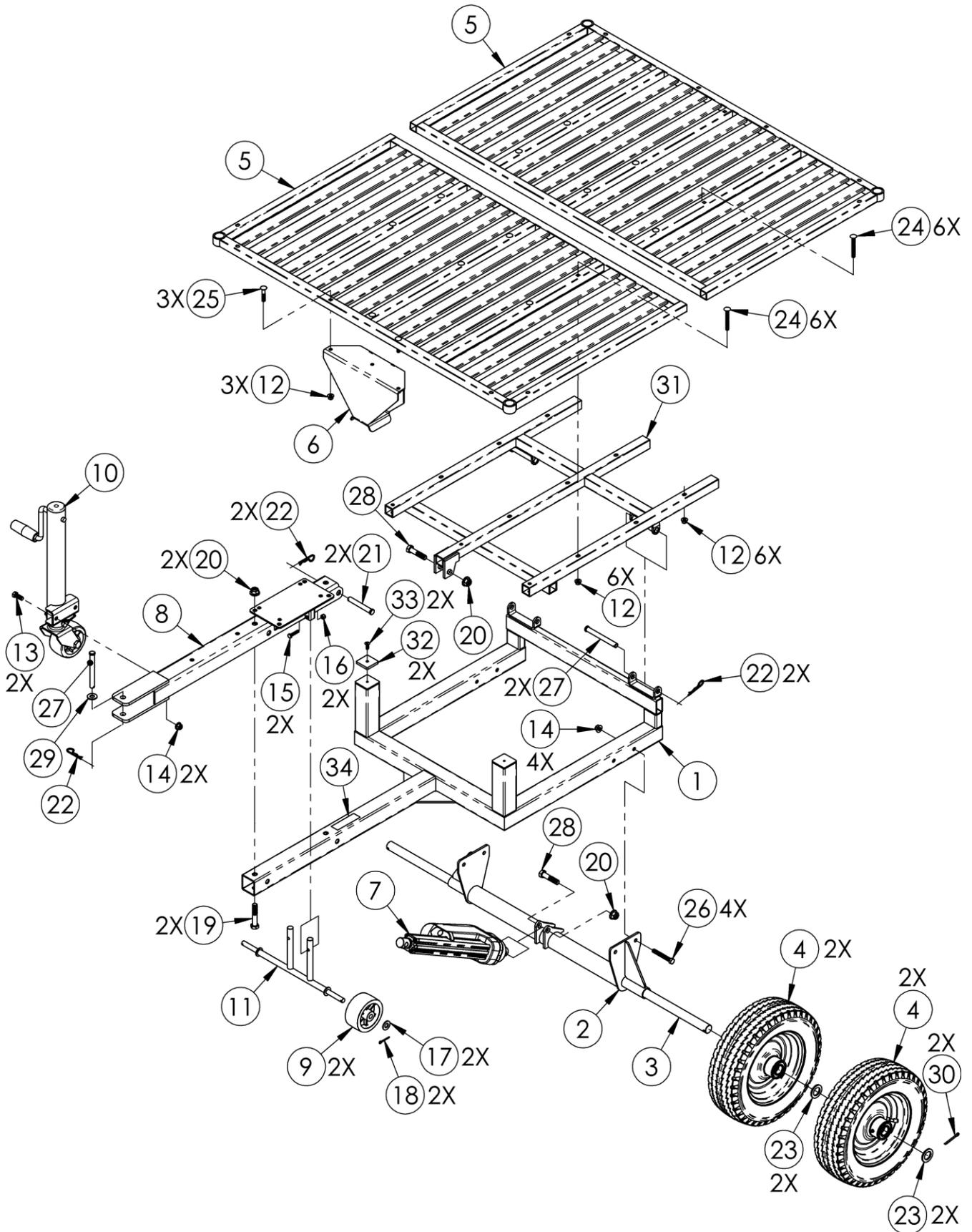
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### Parts List – FRAME AND BED ASSEMBLY

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

<u>Ref#</u>	<u>Part#</u>	<u>Description</u>	<u>Ref#</u>	<u>Part#</u>	<u>Description</u>
1	A0002423743	Frame w/Label, Rear	19	265561	Bolt, 1/2-13 X 2 3/4", GR5, TB
2	A0001501638	Actuator Mount, Axle	20	333351	Nut, Nylon Lock, Flanged, 1/2-13
3	342561	Axle	21	211541	Pin, Clevis, 1/2 X 3.5" L, ZP
4	337941	Wheel and Tire, 14 X 5.3/4.50-8, 4 Ply	22	160031	Pin, Hitch Clip, 1/2"-9/16"
5	A0001234669	Base, Collector	23	A0001216052	Washer, 1.00" ID X 1.58" OD X .134" Thick
6	A0001234670	Rest Plate, Base, Collector	24	A0001681944	Bolt, Carriage, 5/16-18 X 2-3/4", GR5, ZP
7	A0001234728	Linear Actuator, 12V, 260mm Stroke	25	350331	Bolt, Carriage, 5/16-18 X 1.75", GR5, Z
8	A0000543342	Frame, Front, W/ Weld Nuts	26	123371	Bolt, HCS, 3/8-16 X 2-3/4", GR5, ZP
9	342771	Wheel, 4"	27	A0000253563	Pin, Clevis, 1/2" X 4.5" L, ZP
10	342691	Jack, Trailer	28	A0001681945	Bolt, HCS, 1/2-13 X 2-1/4", GR5, ZP
11	388621	Axle, Power Unit	29	189671	Washer, Rubber, 1/2"ID X 1"OD
12	333321	Nut, Nylon Lock, Flanged, 5/16-18	30	126851	Pin, Cotter, 3/16" X 1-1/2"
13	111521	Bolt, HCS, 3/8-16 X 1", GR5, ZP	31	A0001515289	Support, Pivot, Metal Bed
14	333331	Nut, Nylon Lock, Flanged, 3/8-16	32	385601	Bumper, Bed
15	114681	Bolt, HCS, 1/4-20 X 1-1/4", GR5, ZP	33	385941	Bolt, FHCS, 1/4-20 X .75", GR5, ZP
16	110731	Nut, Nylon Lock, 1/4-20	34	372291	Label, Do Not Over Fill Oil
17	234991	Washer, 0.53" ID X 1.06" OD X 0.095", ZP			
18	235001	Pin, Cotter, 7/64" X 1", ZP			

**Schematic – FRAME AND BED ASSEMBLY**

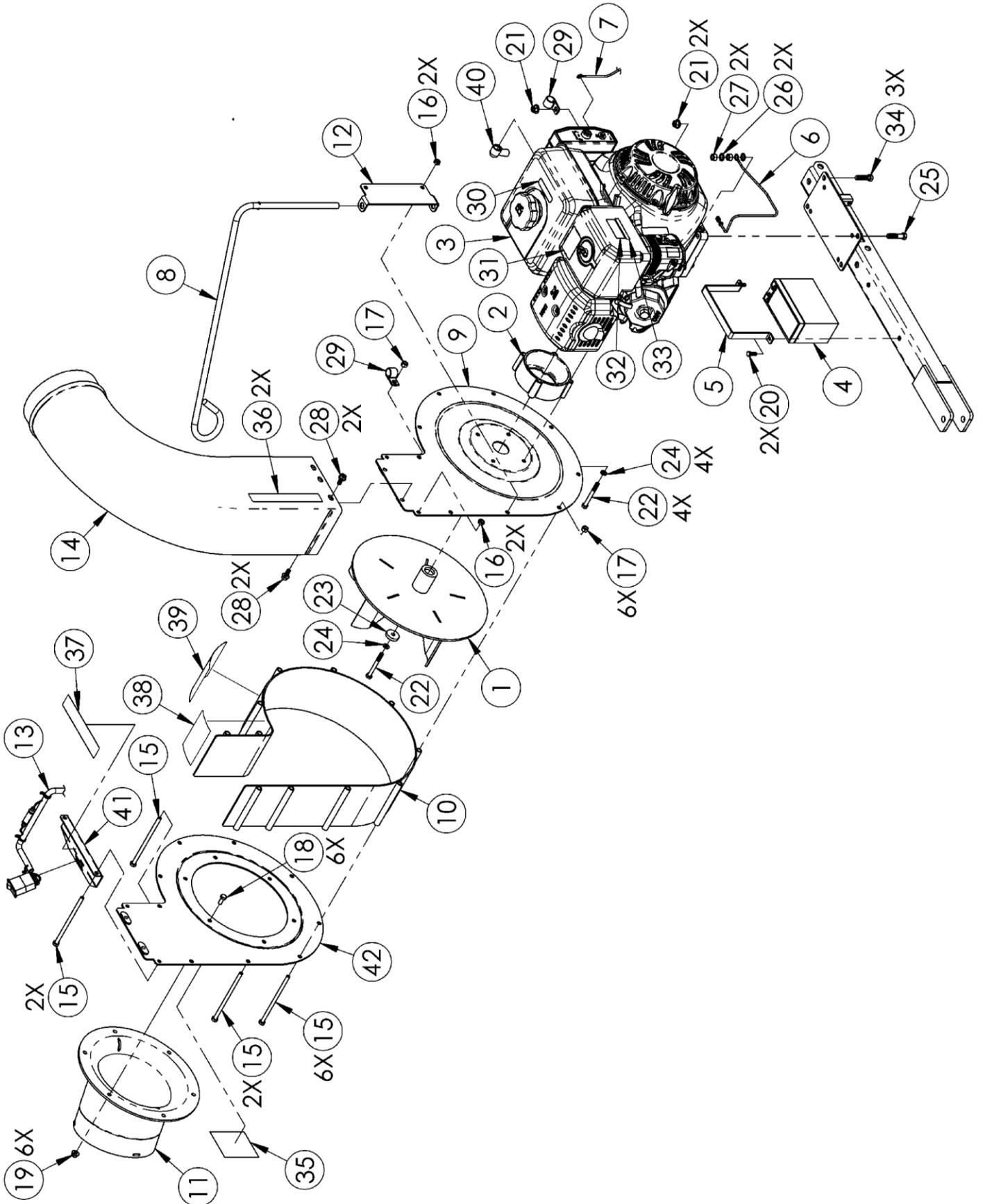


## Parts List – POWER UNIT ASSEMBLY

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

Ref#	Part#	Description	Ref#	Part#	Description
1	A0000094783	Impeller	24	350321	Washer, Lock, 5/16", GR8, YZP
2	342391	Spacer, Impeller	25	123341	Bolt, HCS, 3/8-16 X 1-3/4", GR5, ZP
3	354381	Engine w/Labels, DR 16.96TQ, E/S 50ST	26	350401	Washer, Lock, 3/8", Ext Tooth, ZP
4	134471	Battery, 9 Ah, 12V	27	126831	Nut, Finish, 3/8-16
5	242301	Strap, Battery	28	350231	Bolt, Hex, Flange, 5/16-18 X .75"
6	342751	Wire, Battery, Ground	29	293791	Tube, Clamp, 3/4", Vinyl Coated
7	342761	Wire, Battery, Positive	30	137581	Label, Check Oil, 2.75" X .63"
8	342441	Rod, Support Hose	31	188871	Label, Hot Surface, R/C
9	A0001234672	Sideplate, Housing, Engine	32	372301	Label, Idle Before Stop
10	A0002325639	Scroll, Housing, w/Labels	33	10000036023	Decal, Prop 65, Short Form
11	388591	Adapter, Hose, Impeller Housing	34	119851	Bolt, HCS, 3/8-16 X 1 1/2", GR5, ZP
12	A0001469146	Bracket, Rod, Hose	35	342781	Label, Warning, Chutes and Hose
13	A0001234766	Wire Harness, Actuator	36	A0002163842	Label, PRO MAX450
14	A0002325649	Chute, Impeller Outlet, w/Label	37	A0002163843	Label, Dump Switch
15	386401	Bolt, HCS, 5/16-18 X 6", GR5, ZP	38	388501	Label, Warning Icons
16	187551	Nut, Nylon Lock, 5/16-18, LP	39	388491	Label, Warning, Operating
17	110761	Nut, Nylon Lock, 5/16-18	40	294871	Boot, Rubber, Red
18	123211	Bolt, HCS, 5/16-18 X 3/4", GR5, ZP	41	A0002325644	Bracket, Switch, w/Label
19	333321	Nut, Nylon Lock, Flanged, 5/16-18	42	A0002325641	Sideplate, Housing, Hose
20	119831	Bolt, HCS, 1/4-20 X 3/4", GR2, ZP	<b>Not Shown</b>		
21	333331	Nut, Nylon Lock, Flanged, 3/8-16	370361	Funnel, Oil, Flexible	
22	A0000072109	Bolt, HCS, 5/16-24 X 2-7/8", GR8 YZP	350371	Bolt, Hex, Impeller Tool, 7/16-20	
23	350361	Washer, Flat, 0.344" X 1.25" X 0.25", ZP			

**Schematic – POWER UNIT ASSEMBLY**

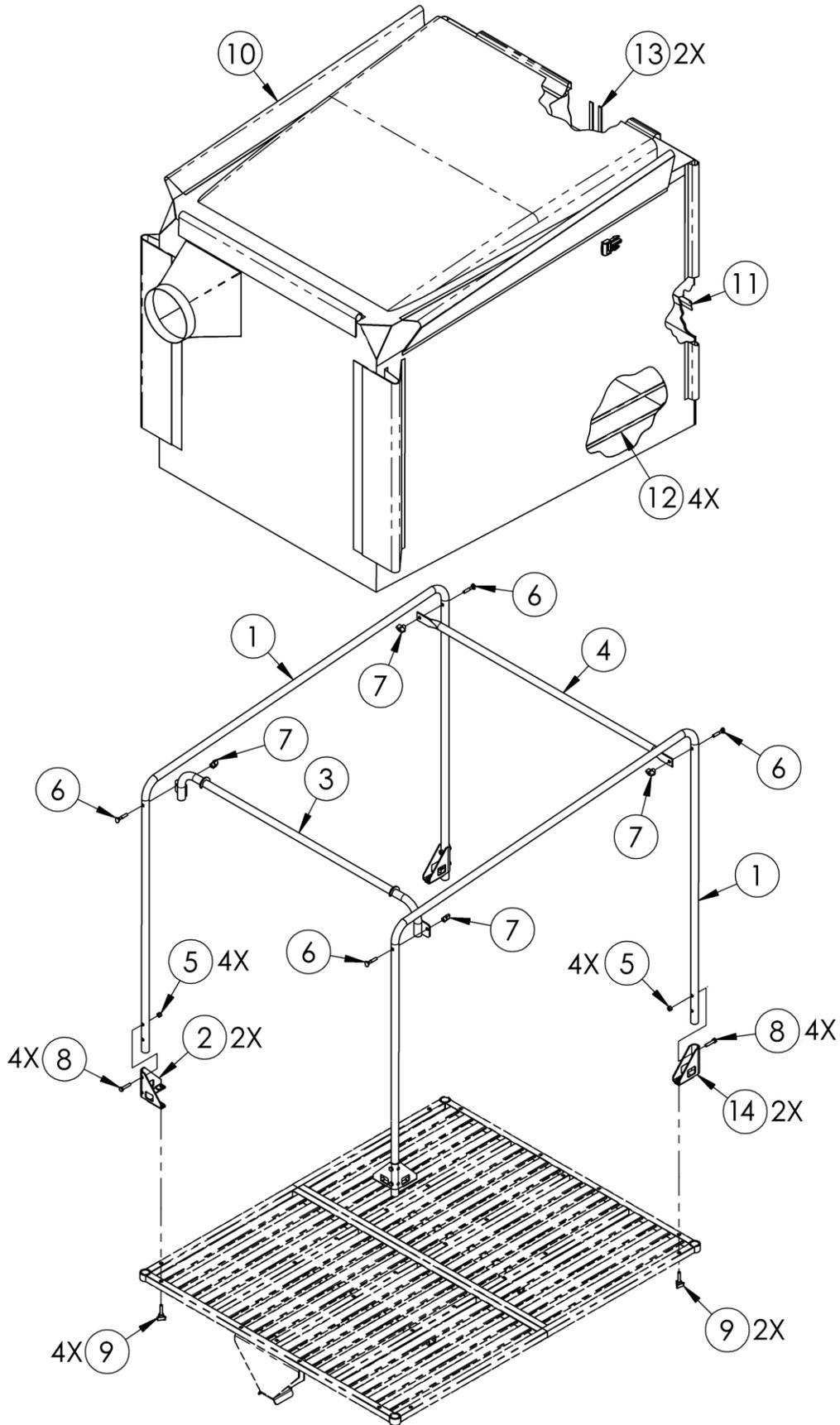


## Parts List – COLLECTOR ASSEMBLY

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

<u>Ref#</u>	<u>Part#</u>	<u>Description</u>	<u>Ref#</u>	<u>Part#</u>	<u>Description</u>
1	A0001234650	Tube, Collector, Side Frame	8	134431	Bolt, HCS, 5/16-18 X 1-1/2", GR5, ZP
2	A0001055802	Bracket, Tube, Front	9	388611	Knob, 5/16-18 X 1.45" Stud W/Lock
3	A0001234651	Tube, Frame, Top Front	10	A0001721719	Enclosure, Fabric
4	A0001234667	Tube, Frame, Top Rear	11	A0001725342	Metal Insert, Enclosure
5	110761	Nut, Nylon Lock, 5/16-18	12	A0001234675	Batten, FRP, 0.58" X .12" X 47"
6	350271	Bolt, C-Head, 5/16-18 X 1.75" ZP	13	361201	Batten, FRP, 0.58" X 0.12" X 40"
7	350301	Knob, 5/16-18 W/Lock, 1.16" Dia	14	A0000926593	Bracket, Tube, Rear

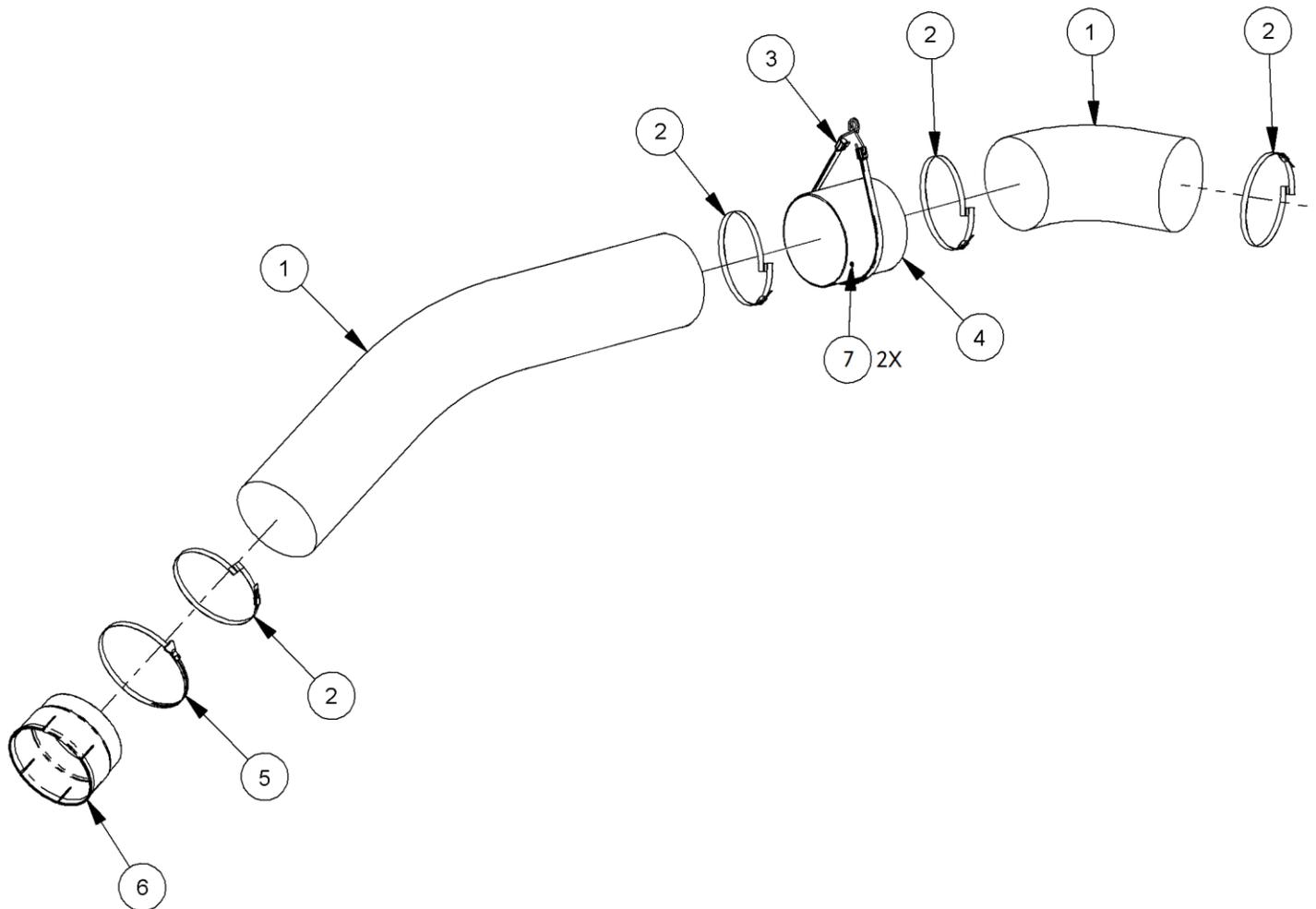
**Schematic – COLLECTOR ASSEMBLY**



## Parts List and Schematic – HOSE ASSEMBLY

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

Ref#	Part#	Description
1	337951	Hose, 8" ID X 72" Long, PVC (cut into two pieces – 56" section and 16" section)
2	337961	Clamp, Hose, 8", Bridge
3	354421	Strap & Hook Set
4	351981	Coupling
5	337971	Clamp, Hose, 8", Thumbscrew
6	342481	Cuff, Hose, 8"
7	164141	Rivet, Pop, 3/16" X 3/16"



# DR<sup>®</sup> LEAF and LAWN VACUUM



## 2-Year Limited Warranty

### Terms and Conditions

The DR<sup>®</sup> LEAF and LAWN VACUUM 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<sup>®</sup> LEAF and LAWN VACUUM 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<sup>®</sup> LEAF and LAWN VACUUM 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 Spark Plug, and Air Filters. 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<sup>®</sup> LEAF and LAWN VACUUM.

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 PRO MAX450™ LEAF and LAWN VACUUM

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### WARNING

Before performing any maintenance, repairs, or inspection, you must first shut off the mower and leaf and lawn vacuum engines, wait five minutes for all parts to stop and cool, and disconnect the spark plug wire of the leaf and lawn vacuum.

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To help maintain your DR PRO MAX450™ LEAF and LAWN VACUUM for optimum performance, we recommend you follow this checklist each time you use your Vacuum.

- [ ] OIL: With the machine on a level surface, remove the Oil Fill Cap and check the oil level. Fill the reservoir according to the Dipstick with the recommended motor oil.
- [ ] GAS: Fill the gas tank with fresh, unleaded gasoline.
- [ ] ENGINE: It is very important to keep the Engine clean. Remove dirt and other debris from the Engine cooling fins and debris guard. A dirty Engine retains heat and can cause damage to internal Engine components.
- [ ] HARDWARE: Check all nuts and bolts to be sure that the components are secure.
- [ ] FRAME: Check all welds to be sure that the frame is intact and secure.
- [ ] HOSES: Inspect the Hose for holes, frayed, worn, kinked, or abraded areas. Replace a damaged or worn Hose.
- [ ] COLLECTOR: Empty the Collector after each use. Do not store the Leaf System with debris in the Collector.

### End of Season and Storage

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### WARNING

Before performing any maintenance, repairs, or inspection, you must first shut off the mower and leaf and lawn vacuum engines, wait five minutes for all parts to stop and cool, and disconnect the spark plug wire of the leaf and lawn vacuum.

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**Note:** Please refer to the Engine Owner's Manual for engine-specific procedures.

- Change the oil. Refer to your Engine Owner's Manual for detailed information.
- If your DR PRO MAX450™ LEAF and 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.
- Remove the spark plug and pour about 1 ounce of motor oil into the cylinder hole. Replace the plug and pull the recoil starter rope until you feel strong resistance. This will coat the piston and seat the valves to prevent moisture buildup.
- Clean or replace the air filter. Refer to your Engine Owner's Manual for detailed information.
- Clean dirt and debris from the cylinder head cooling fins, Impeller housing, debris screen, and muffler area of the engine.
- Clean out residual debris from the Hose and Collector.
- If possible, store the DR PRO MAX450™ LEAF and LAWN VACUUM in a dry, protected area. If it is necessary to store the machine outside, cover it with a protective material (especially the Engine). Contact us at [www.DRpower.com](http://www.DRpower.com) or call 1-800-DR-OWNER (376-9637) to purchase a cover for your DR PRO MAX450™ LEAF and LAWN VACUUM.



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**800 HINESBURG ROAD, SOUTH BURLINGTON, VERMONT 05403**