

# DR<sup>®</sup> FIELD and BRUSH MOWER

## SAFETY & OPERATING INSTRUCTIONS



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

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

**Original Language**

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

### **WARNING**

Read and understand this manual and all instructions before operating the DR FIELD and BRUSH MOWER.

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### *Conventions used in this manual*

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#### **WARNING**

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

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#### **CAUTION**

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

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#### **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.

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### *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 the upper left portion of your packing slip. For your convenience and ready reference, enter the Serial Number and Order Number in the space provided on the front cover of this manual.

### *Additional Information and Potential Changes*

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

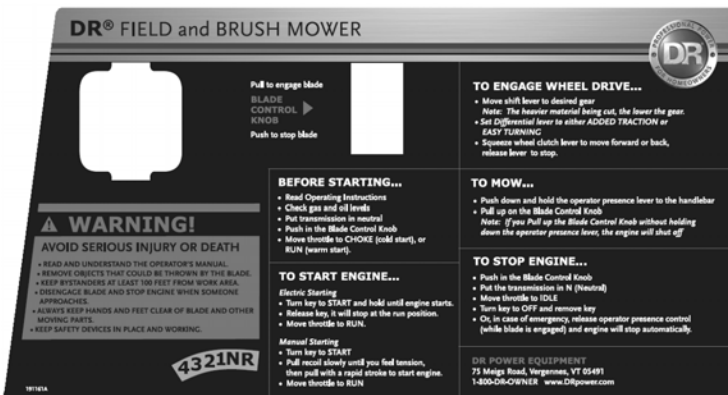
## Chapter 1: General Safety Rules

### **! WARNING**

Read this safety & operating Instructions manual before you use the DR FIELD and BRUSH MOWER. 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 FIELD and BRUSH MOWER 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 Mower as you set up and before you operate the unit. Replace damaged or missing safety and information labels immediately.



#191161A



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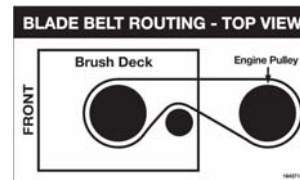
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#191271

### 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 become in contact with the moving blade. Always take the following precautions when operating this machine:

- Always wear protective goggles or safety glasses with side shields while using the Mower to protect your eyes from possible thrown debris.
- Avoid wearing loose clothing or jewelry, which can catch on moving parts.
- We recommend wearing gloves while mowing. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.
- Wear shoes with non-slip treads when using your DR FIELD and BRUSH MOWER. If you have safety shoes, we recommend wearing them. Do not use the machine while barefoot or wearing open sandals with exposed toes or heels.
- Wear long pants while operating the Mower.
- Use ear protectors or ear plugs rated for at least 20 dba to protect your hearing.

## Safety for Children and Pets

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### **WARNING**

Tragic accidents can occur if the operator is not alert to the presence of children and pets. Children are often attracted to the machine and the mowing activity. *Never* assume that children 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 turn the machine off if children or pets enter the work area.
  - Before and while moving backwards, look behind, and down for small children.
  - Never allow children to operate the mower.
  - Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.
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## Safety with Gasoline - Powered Machines

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### **WARNING**

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

- Never run the engine in an enclosed area or without proper ventilation as the exhaust from the engine contains carbon monoxide, which is an odorless, tasteless, and deadly poisonous gas.
  - Store all fuel and oil in containers specifically designed and approved for this purpose and keep away from heat and open flame, and out of the reach of children.
  - Replace rubber fuel lines and grommets when worn or damaged and after 5 years of use.
  - Fill the gasoline tank outdoors with the engine off and allow the engine to cool completely. Don't handle gasoline if you or anyone nearby is smoking, or if you're near anything that could cause it to ignite or explode. Reinstall the fuel tank cap and fuel container cap securely.
  - If you spill gasoline, do not attempt to start the engine. Move the machine away from the area of the spill and avoid creating any source of ignition until the gas vapors have dissipated. Wipe up any spilled fuel to prevent a fire hazard and properly dispose of the waste.
  - Allow the engine to cool completely before storing in any enclosure. Never store a machine that has gas in the tank, or a fuel container, near an open flame or spark such as a water heater, space heater, clothes dryer or furnace.
  - Never make adjustments or repairs with the engine running. Shut down the engine, disconnect the spark plug wire(s), keeping it away from the spark plug(s) 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.
  - Keep combustible substances away from the engine when it is hot.
  - To reduce fire hazard, keep the engine and muffler free of debris build-up.
  - Never cover the machine while the muffler is still hot.
  - Do not operate the engine with the air cleaner or the carburetor air intake cover removed. Removal of such parts could create a fire hazard. Do not use flammable solutions to clean the air filter.
  - The muffler and engine become very hot and can cause a severe burn; do not touch. Allow the engine to cool before doing maintenance or making adjustments.
-

## Slope Operation

### **WARNING**

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

#### ALWAYS:

- Always mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
- Always remove objects such as rocks, tree limbs, etc.
- Always watch for holes, ruts, or bumps. Tall grass can hide obstacles.

#### NEVER:

- Never mow near drop-offs, ditches, or embankments. You could lose your footing or balance.
- Never mow on slopes greater than 20 degrees or any excessively steep slopes.
- Never mow on wet slopes. Reduced traction could result in slipping.

## General Safety

### **WARNING**

Operating this Mower safely is necessary to prevent or minimize the risk of death or serious injury. Unsafe operation can create a number of hazards for you. Always take the following precautions when operating this Mower:

- Never allow people who are unfamiliar with these instructions to use the DR FIELD and BRUSH MOWER.
- Keep bystanders at least 100 feet away from your work area at all times. The mower can throw objects far and at great speeds. To be safe, do not operate the machine near small children or pets, and never allow children to operate the mower. Disengage the blade and stop the engine when another person or pet approaches.
- Clear the area of objects such as rocks, toys, wire, bones, sticks etc., which could be picked up and thrown by the blade.
- Be sure all blade and wheel controls are disengaged before attempting to start the engine. Engage and disengage the blade a few times to get used to it before mowing.
- Keep your hands and feet away from the blade, belts, chains, blade pulleys, and concealed areas while the engine is running. Never reach under the deck or grab hold of any part of the deck when the engine is running.
- Your DR FIELD and BRUSH MOWER is a powerful tool, not a plaything. Exercise extreme caution at all times. The design of this machine is to cut grass and vegetation. Do not use it for any other purpose.
- In an emergency, to quickly stop the cutting blade and shut off the engine, remove your hand from the operator presence lever on the left handlebar.
- Always shut off the engine whenever you leave the machine. Allow the engine to cool five (5) minutes and remove the spark plug wire(s) before adjusting the machine. If you have to stop to remove grass or debris from the underside of the deck, always disconnect the spark plug wire(s) first.
- When operating over uneven terrain and slopes, use extreme caution to ensure solid and firm footing. Keep a firm hold on the handlebars and walk, never run.
- Stop the blade when crossing gravel drives, walks, or roads.
- Use extra caution when mowing in wet or slippery conditions.
- Always operate the mower from behind. Never pass or stand on the discharge (right) side or in front of machine when the engine is running.
- Do not pull the mower backwards unless absolutely necessary. Look down, and behind before and while moving backwards.
- Do not, under any conditions, remove, bend, cut, fit, weld, or otherwise alter standard parts on the DR FIELD and BRUSH MOWER. This includes all shields and guards. Modifications to your machine could cause personal injuries and property damage and will void your warranty.
- If the machine starts to make an unusual noise or vibration, immediately shut off the engine and wait five (5) minutes to cool, and then disconnect the spark plug wire(s). Vibration is generally a warning of trouble. Inspect for clogging or damage. Clean and repair and/or replace damaged parts.

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**⚠ WARNING**

- While using the DR FIELD AND BRUSH MOWER, don't hurry or take things for granted. When in doubt about the equipment or your surroundings, stop the machine and take the time to look things over. Make sure that you have 100% control of the mower at all times.
  - Do not operate the machine when under the influence of drugs, alcohol, or medication.
  - Watch for traffic when mowing near roadways.
  - Use the machine only in daylight.
- 

**⚠ CAUTION**

The mower 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 mower:

- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people, their property, and themselves.
  - Use caution when mowing close to fences, buildings, trees, etc.; so as not to hit the handle bar. Doing so, you may injure your hand or lose control of the machine.
  - See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by DR Power Equipment.
  - Keep all nuts and bolts tight, especially the blade attachment bolt, and keep the equipment and attachments in good operating condition.
  - The mower blade is sharp and can cut. Wrap the blade or wear gloves, and use extra caution when servicing.
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***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® FIELD and BRUSH MOWERS 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 FIELD and BRUSH MOWER 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 FIELD and BRUSH MOWER

It may be helpful to familiarize yourself with the controls and features of your DR FIELD and BRUSH MOWER 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 FIELD and BRUSH MOWER Controls and Features

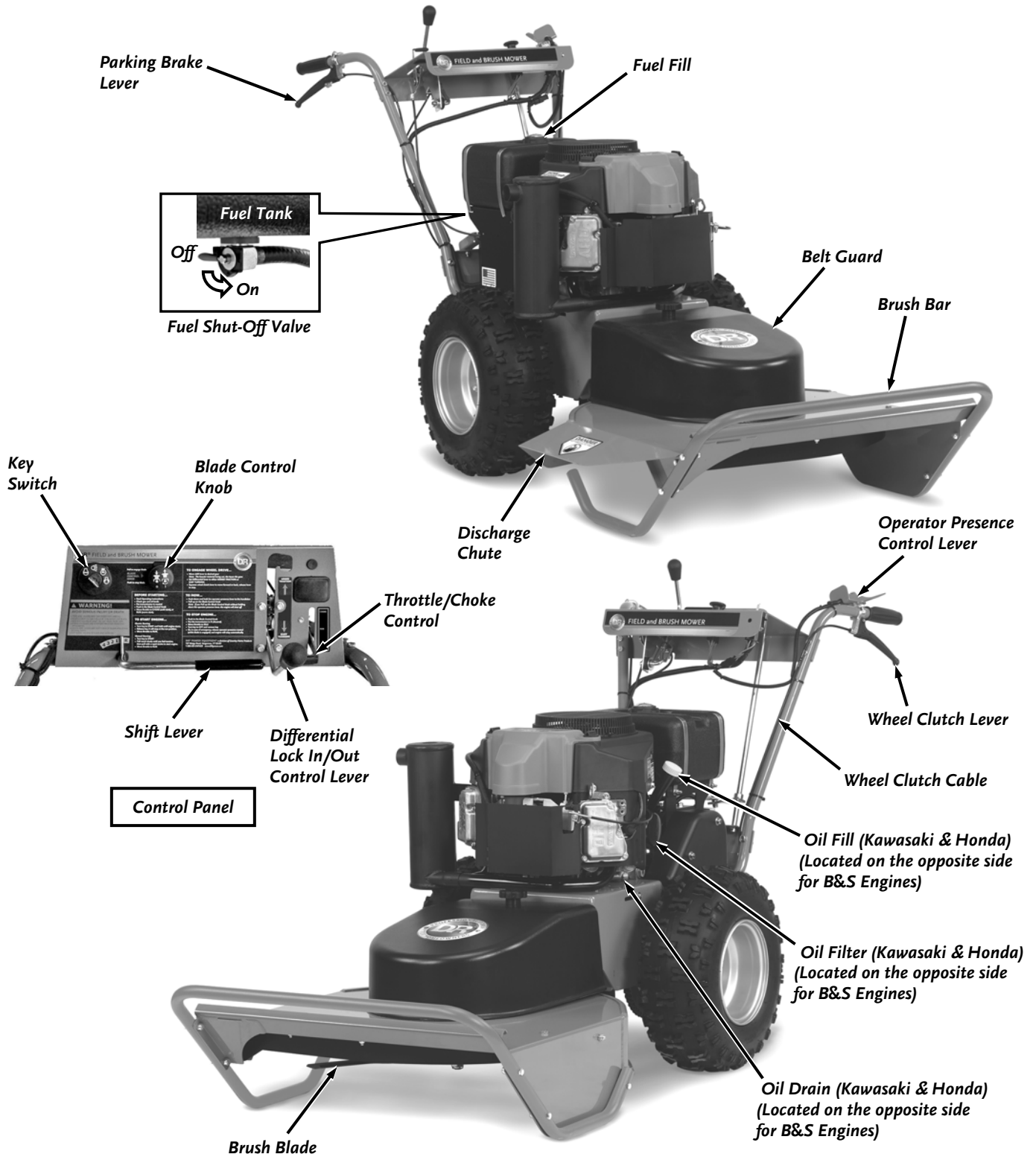


Figure 1

## Specifications

	Premier	Pro	Pro-XL
<b>Engine</b>	See Engine Owners Manual for details	See Engine Owners Manual for details	See Engine Owners Manual for details
<b>Fuel Capacity</b>	2-1/2 Gal. (9.5 L)	2-1/2 Gal. (9.5 L)	2-1/2 Gal. (9.5 L)
<b>Cutting Capacity</b>	4' –High Grass & Weeds; 2"-Thick Saplings	6' –High Grass & Weeds; 2-1/2"-Thick Saplings	6' –High Grass & Weeds; 3"-Thick Saplings
<b>Cutting Width</b>	26"	26"	30"
<b>Cutting Height</b>	4"	4"	4"
<b>speeds</b>	4 Forward; 1 Rev.	4 Forward; 1 Rev.	4 Forward; 1 Rev.
<b>Tires</b>	18" x 6-1/2" Lugged	18" x 6-1/2" Lugged	18" x 6-1/2" Lugged
<b>Machine Dimensions</b>	78"L x 33"W x 41"H	78"L x 33"W x 41"H	78"L x 38"W x 41"H
<b>Machine Weight</b>	334 lbs.	352 lbs.	368 lbs.
<b>Shipping Dimensions</b>	55"L x 46"W x 46"H	55"L x 46"W x 46"H	55"L x 46"W x 46"H
<b>Shipping Weight</b>	459	488	494

## Unpacking the Machine

**NOTE:** Unpacking the DR FIELD and BRUSH MOWER is a two-person job. We recommend you have an extra set of hands available before you begin.

**NOTE:** The Product Package that came with your machine includes a clear Tube to aid in draining Engine Oil. An extra Shear Pulley is included with machines that have the larger 30" Deck as a backup to the Shear Pulley safety setup on your machine.

### Tools & Supplies Needed:

- Screwdriver
- Hammer
- Knife
- Gloves

### CAUTION

The banding is under tension and may snap and cut you. Always stand to one side when cutting the band.

1. Stand to one side and cut the banding.
2. Remove the top of the carton. Cut the cardboard top to bottom on one of the narrow sides of the box and peel it off the pallet. Be careful of the staples.
3. Pry off the fasteners and cut any ties holding the machine to the pallet.

### CAUTION

Wear gloves and be very careful when handling the deck(s). The blades are very sharp, and may spin as you maneuver the deck(s).

4. Remove the Brush Deck by lifting it up and over the supporting lumber, and then remove the lumber. You may need to remove one of the cross slats. At this point, the Lawn Deck (if ordered) is free standing and you can lift it off the pallet.
5. Roll the Power Unit off the pallet. Do not discard the cardboard and pallet until you are fully satisfied with your new DR FIELD and BRUSH MOWER.



## **! WARNING**

Before attaching the deck, be sure the spark plug wire(s) is disconnected.

6. Attach the Deck to the Power Unit following the directions in the next section. The Belt is stored below the black Pulley Cover.
7. If assembling the Lawn Deck, mount the front Caster Wheels before attaching the Deck to the Power Unit.

**NOTE:** Find the Safety and Operating Instructions and the Caster Wheels for the Lawn Deck (if ordered) tucked in one of the cardboard corner supports.

### **To Install the Brush Deck**

## **! WARNING**

Before performing any maintenance procedure, stop the engine and disconnect the spark plug wire(s).

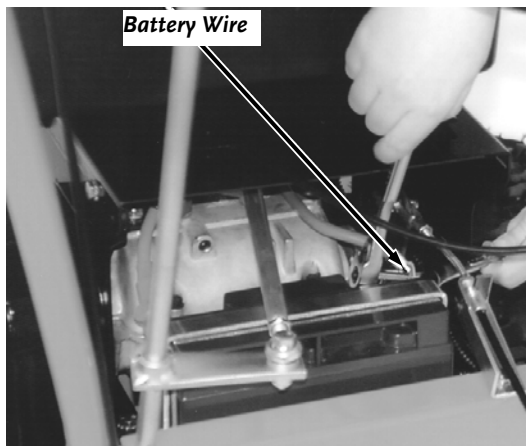
1. Remove the black Belt Guard by unscrewing the black Knob, lifting the Cover and pulling up and back to remove it. The Belt is shipped wrapped around the Pulley.
2. Slide the Power Unit shaft into the Brush Deck and install the Collar and Pin (**Figure 2**).
3. Install the Belt on the Pulley and Clutch (**Figure 3**) and route the Belt per the label on the Spindle Housing (**Figure 4**). The Tension Lever may have to be released where the Lever is secured into the slot. (**Figure 5**).
4. Tighten the Belt Tensioner (**Figure 5**) onto the Belt with the Lever secured in the slot.
5. Replace the Belt Guard and secure in place with the black Knob.

### **Connecting the Battery Wire**

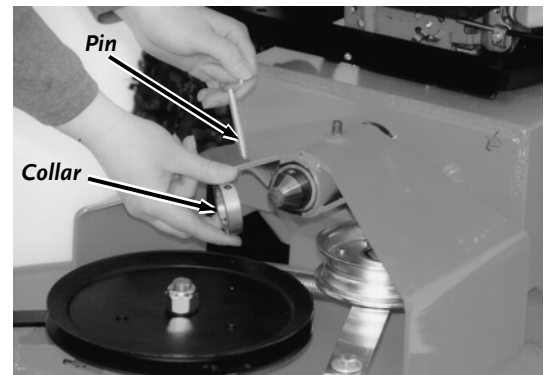
We ship all Electric-Starting Mowers with the negative terminal Battery wire disconnected. This prevents the Battery from discharging during shipment. Before using your Mower, you must connect the Battery wire.

#### **Tools Needed:**

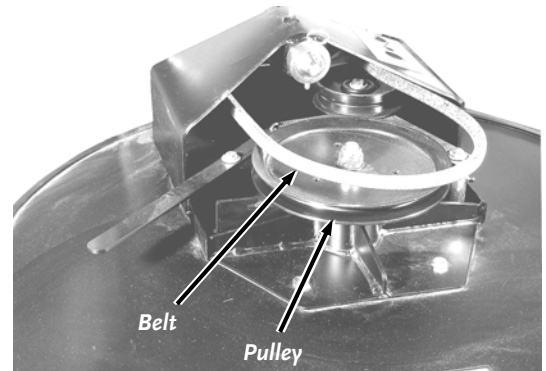
- Two 5/16" Wrenches
1. Connect the negative wire to the negative terminal on the Battery (**Figure 6**).



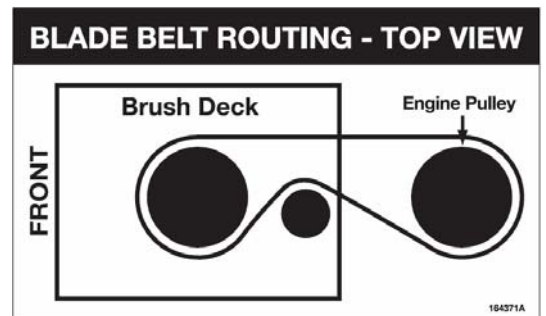
**Figure 6**



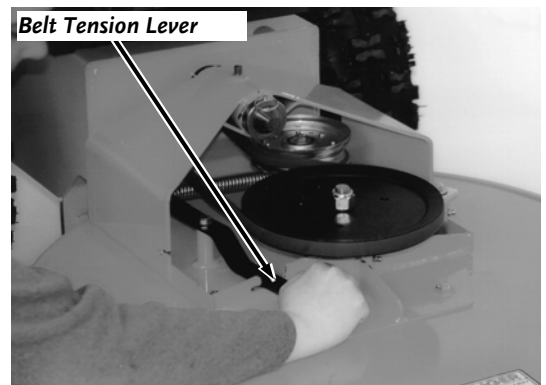
**Figure 2**



**Figure 3**



**Figure 4**



**Figure 5**

## Adding Oil and Gasoline

### NOTICE

- You must add oil before starting the engine. This machine is shipped without oil. Traces of oil may be in the reservoir from factory testing, but you must add oil before starting the engine. Fill the reservoir slowly, checking the level frequently to avoid overfilling.
- To get an accurate reading when checking the oil level:
  - the machine should be on a level surface.
  - the dipstick SHOULD be screwed down on Briggs & Stratton Engines to ensure an accurate oil level reading.
  - the dipstick SHOULD NOT be screwed down on Honda and Kawasaki Engines to ensure an accurate oil level reading.

**Tip:** To avoid confusion, we recommend leaving the caps ON the Fuel and Oil Fills until you are ready to pour either gasoline or oil into the correct Fill.

**NOTE:** Use only SAE 30 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.

1. Place the machine on a level surface and initially add 1/2 of the SAE 30 high detergent oil recommended by the Engine manufacturer into the Oil Fill (**Figure 1** on page 7) and wait one minute for the oil to settle.
2. Check the Dipstick and continue adding a few ounces of oil at a time, rechecking the Dipstick until the oil reaches the full mark. Be careful not to overfill.
3. Fill the Fuel Tank to not more than 1/4" from the bottom of the Fill Neck with fresh, unleaded gas. See your Engine Owner's Manual for more information.
4. Open the Fuel Shut-Off Valve, which is located on the bottom of the Fuel Tank and accessed from the rear (**Figure 1 on page 7**), if your model is equipped with one.

### Check the Tire Pressures

The maximum Tire pressure is marked on the side of each Tire. Do not exceed the manufacturer's recommended maximum pressure

## Chapter 3: Operating The DR FIELD and BRUSH MOWER

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This chapter covers the procedures for starting and stopping your new DR FIELD and BRUSH MOWER and discusses basic operation features. You may find it helpful to review the DR FIELD and BRUSH MOWER Controls and Features in **Figure 1** on page 7 before reading this chapter.

### **The Pre-Start Safety Check**

Your DR FIELD and BRUSH MOWER is fitted with an Operator Presence System to prevent the Blade from cutting without an Operator in the proper position at the controls. In addition, normal wear and tear can bring about the need for adjustment to some running parts to insure that they function properly in terms of safe operation.

For your protection, it is imperative that you perform these test procedures before each use of the machine to verify that the safety equipment is in good order and that no part adjustments are needed for safe operation.

#### **Test your Operator Presence Control System:**

1. Stand in the Operating Position behind the Handlebars, start your machine (see page 12), and engage the Blade (see page 12).
2. Remain behind the Handlebars and release both hands from the controls.
3. THE ENGINE SHOULD SHUT OFF IMMEDIATELY. If the Engine does not stop, your Operator Presence Control System may be damaged or disabled.

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### **! WARNING**

Turn off your machine by using the ignition key and stop using your machine immediately!

---

#### **Inspect the System for the Following:**

- Intentional disabling of the system through part modification or temporary measures used to override the system.
- Loose electrical connections.
- Broken parts.

After inspection, repeat this test. If your system still does not operate properly, REMOVE THE KEY FROM THE IGNITION SWITCH TO PREVENT OTHERS FROM OPERATING THE EQUIPMENT.

Visit our website at [www.DRpower.com](http://www.DRpower.com) or call our Technical Support Representatives Toll Free: 1 (800) DR-OWNER (376-9637) for assistance

#### **Checking the Wheel Clutch engagement:**

1. Start your machine in the normal manner.
2. With the Operator Presence Lever depressed, shift into low gear.
3. Increase the Engine RPM but do not squeeze the Wheel Clutch Lever. The machine should not move when you are NOT squeezing the Wheel Clutch Lever.

---

### **! CAUTION**

If your machine “creeps” during this test, the wheel clutch cable needs adjustment. Consult chapter 4, page 20 of this safety and operating instructions manual, and make all necessary corrections before using.

---

## **Before Starting the Engine**

1. Check the oil level every time you use the machine.
2. Check the gas level.
3. Open the Fuel Shut-Off Valve, which is located on the bottom of the Fuel Tank and accessed from the rear (**Figure 1** on page 7), if your model is equipped with one.

## **Starting**

1. Move the Shift Lever to N (Neutral). (**Figure 1** on page 7).

**NOTE:** The Shift Lever **MUST** be in NEUTRAL and the Blade Engage Button pushed DOWN, or the Engine will not start.

2. Move the Throttle (**Figure 1** on page 7) to the CHOKE position (to the RUN position if the Engine is already warm).
3. Turn the Key (**Figure 1** on page 7) to the START position until the Engine starts, then release. The Key will snap back to the RUN position and the Engine will continue to run.
4. Move the Throttle to the RUN position.

## **Engaging the Wheel Drive**

The DR FIELD and BRUSH MOWER has a four-speed Forward and single-speed Reverse Transmission. Forward speeds range from 1.1 mph in 1st Gear to 4.5 mph in 4th Gear. Use the lower gears for mowing in thick, woody vegetation and the higher gears for wide-open areas and lighter vegetation, or as "travel gears". Reverse is ideal for maneuvering in tight spots.

**NOTE:** Always release the Wheel Clutch Lever (**Figure 1** on page 7) when shifting gears.

1. Move the Shift Lever to the desired gear.
2. Disengage the Parking Brake.
3. Gently squeeze the Wheel Clutch Lever to engage the Wheel Drive.
4. Release the Wheel Clutch Lever if you need to slow down or stop.

## **Engaging the Blade**

1. Squeeze the Operator Presence Lever against the Handlebar Grip (**Figure 1** on page 7).
2. Engage the Blade by pulling UP on the Blade Control Knob (**Figure 1** on page 7).

**NOTE:** If you pull UP on the Blade Control Knob before holding down the Operator Presence Lever, the Engine will shut off.

---

## **CAUTION**

Always disengage the blade of the DR FIELD and BRUSH MOWER before shifting into reverse.

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## **Stopping the Blade**

1. Stop the Blade by pushing DOWN on the Blade Control Knob (**Figure 1** on page 7).

**NOTE:** Releasing the Operator Presence Lever to disengage the Blade will cause the Engine to shut off.

## **Stopping the Engine**

1. Disengage the Blade by pushing DOWN on the Blade Control Knob (**Figure 1** on page 7).
2. Set the Parking Brake by squeezing the Lever and lifting up on the Lock pin.
3. Move the Shift Lever to the "N" (Neutral) position.

4. Move the Throttle Control to the IDLE position.
5. Turn the Key to the OFF position and remove it for safety.

**NOTE:** If your machine is equipped with a Fuel Shut-Off Valve, close it when transporting or storing the Mower.

### Obstacle Tips

Dealing with obstacles in the terrain is easy with your new DR FIELD and BRUSH MOWER. The following section explains how to approach most common obstacles.

#### **! WARNING**

The mower engine's power can easily throw stones, sticks, and other debris at great velocity, which could cause personal injury or property damage. Do not run the machine over gravel driveways or over loose stones or mulch with the mower blade spinning.

- Always check your work area before mowing and remove any debris that might tangle or damage the machine.
- If you do run into debris and the mower becomes tangled, turn off the Engine and disconnect the Spark Plug wire(s) before attempting to untangle the machine.

### Slopes

#### **! WARNING**

- When operating the DR FIELD and BRUSH MOWER over uneven terrain or slopes, use extreme caution not to tip over the machine.
- Do not use the DR FIELD and BRUSH MOWER on slopes greater than 20 degrees. Doing so could result in serious injury or damage to your machine.

1. If you have to mow on sloping terrain, mow across the slope, not up and down, for better control.

**Tip:** Locking IN the Differential will improve traction, and keep the machine traveling on a straighter path. Once on level terrain, Lock OUT the Differential for easier turning.

2. To avoid "free-wheeling", shift into a lower gear before going down a slope. Do not shift while on a slope.
3. Note that the Mowing Deck pivots from side to side, which helps avoid scalping, and keeps the weight balanced over the Drive Wheels when operating on uneven terrain (**Figure 7**).



Figure 7

### If the machine gets hung up

1. Disengage the Blade. Do not try to free the machine from stumps or debris with the Blade engaged.
2. Try putting the machine in reverse and backing away from the obstacle.
3. Try pushing down on the Handlebars to lift the Mowing Deck over the obstacle (**Figure 8**).



Figure 8

#### **! WARNING**

- If you need to leave the operating position to clear debris from the deck, first put the machine in "N" (neutral), turn the engine off, set the brake, and disconnect the spark plug wire(s).
- Do not touch the exhaust areas when reaching for the spark plug(s)—they are very hot.

## ***Cutting Brush and Saplings***



**Figure 9**

1. When cutting woody material, small saplings, etc., allow the machine to ride up and over material slowly. Adjust your forward speed to varying conditions (**Figure 9**).
2. After cutting brush, etc., you may want to mow over it again to remove any remaining branches. It works best to mow from the trunk end toward the top as brush lies on the ground.

## ***Reverse***

1. Be very careful of your footing when operating the machine in reverse. Know what's behind you and take your time.
2. Disengage the Blade before shifting into reverse. Mow in the Forward gears only, using Reverse for maneuvering.
3. If you find it difficult to shift into Reverse, lightly "feather" the Wheel Clutch Lever as you put the Shift Lever into Reverse, then quickly release the Wheel Clutch Lever.

## ***Cutting in Wet and Heavy Growth***

1. Be very careful of your footing when mowing in wet conditions. Avoid steep slopes and other slippery areas.
2. Use a lower, slower speed when mowing in wet conditions.

## ***Cold Weather Operation***

At temperatures below 30°F and a high dew point, your DR FIELD and BRUSH MOWER Engine may experience icing of the carburetor and/or the crankcase breather system. DR Power Equipment offers an optional Engine cover to prevent icing in these weather conditions. You can purchase the cover through DR Power Equipment by visiting our website at [www.DRpower.com](http://www.DRpower.com). Please have your DR FIELD and BRUSH MOWER Model# and Serial# at hand when the call is placed.

**Tip:** As a preventative measure to prevent control cable freeze up; prior to using your DR FIELD and BRUSH MOWER in cold weather, inject "dry gas" into the Brake and Clutch cable-housing openings to absorb any moisture that may have collected. Tip the machine forward slightly so the "dry gas" will flow down the inside of the housings, and then lubricate as outlined on page 16.

## Chapter 4: Maintaining The DR FIELD and BRUSH MOWER

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

### **WARNING**

Some of the following procedures require access to the underside of the machine. If you need to tip the machine back or on its side (with the discharge chute facing up), you must first disconnect the spark plug wire(s), drain the oil and gas, and remove the air filters.

### **Regular Maintenance Checklist**

PROCEDURE	BEFORE EACH USE	EVERY 25 HOURS	EVERY 100 HOURS
Check Operator Presence Switch	▲		
Check Engine Oil Level	▲		
Check General Equipment Condition	▲		
Check Blade for Sharpness	▲		
Lubricate Grease Fittings		▲	
Lubricate Clutch and Brake Cables*		▲	
Lubricate Chain and Lock In/Out Sleeve*		▲	
Check Tire Pressures		▲	
Change Engine Oil and Filter**	1 <sup>st</sup> time 5 hours	▲	
Check Parking Brake Adjustment		▲	
Clean Engine Exterior and Cooling Fins		▲	
Check All Belt Tensions and Condition		▲	
Check the Battery charge		▲	
Check cable connections		▲	
Replace Air Filter and Precleaner**		▲	
Replace Spark Plug(s)			▲
Replace Fuel Filter			▲

\* SAE 30 oil. NEVER use penetrating oil.

\*\* The Engine on your DR may not have a Precleaner or Oil Filter.

### **Lubrication**

### **WARNING**

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

#### REPLACING ENGINE OIL AND FILTER

**NOTE:** Drain the oil when the Engine is warm. Warm oil drains quickly and completely.

#### **Tools & Supplies Needed:**

- 10mm Wrench or Large Flat Head Screwdriver (Kawasaki Engine)
- 17mm Wrench (Honda Engine)
- Oil Filter Wrench (obtainable from a local auto parts or hardware store)
- SAE 30 High Detergent Oil
- Rags and a suitable container for used oil
- Clear Plastic Tube (provided in the Product Package)

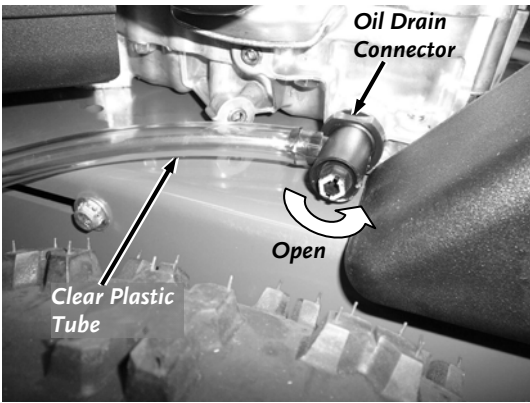


Figure 10

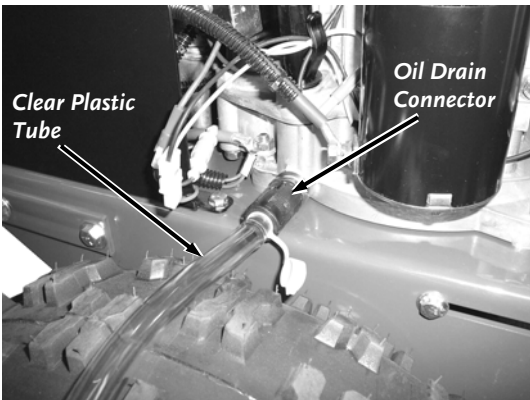


Figure 11

1. Slide one end of the Clear Plastic Tube over the Oil Drain Connector (**Figure 10** Kawasaki, **Figure 11** Briggs) and the other end into the Oil Drain Container. The Honda Engine does not use the Clear Plastic Tube.
2. For Kawasaki Engines, open the Drain Connector with a 10mm Wrench or Flat Head Screwdriver to drain the Oil (**Figure 10**).
3. For Briggs Engines, pull the Cap off the Oil Drain Connector, push in and rotate the Drain Connector to the left to drain the Oil (**Figure 11**).
4. For Honda Engines, follow the Engine Operator Manual for removing and replacing the Oil and Filter.
5. Remove and replace the Oil Filter as described in the Engine Operator Manual.
6. Close the Oil Drain Connectors (Briggs and Kawasaki) and replace the Oil as described in the Engine Operator Manual.

### LUBRICATING YOUR MACHINE

Your DR FIELD and BRUSH MOWER was greased at the Factory. The operator needs to periodically lubricate the Wheel Clutch Cable, Brake Cable, Belt Idler Arm, Drive Chain, and the Differential Lock In/Out Cable and Sleeve Shaft.

#### Tools & Supplies Needed:

- Grease Gun w/General Purpose Grease
- 1/2" Wrench or Socket (Chain Cover)
- SAE 30 oil

Lubricate the Parking Brake Cable, Wheel Drive Clutch Cable, and the Differential Lock In/Out Cable with SAE 30 oil. Apply the lubricant into the Cable Housing while working the Cable back and forth a few times. Do this at both ends of the Cables (**Figure 12**). Perform this lubrication more often in dry and dusty environments.

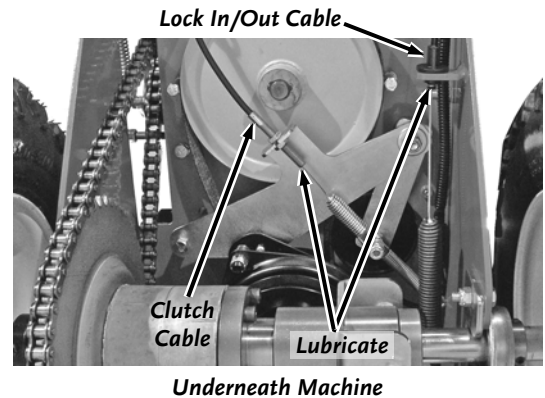
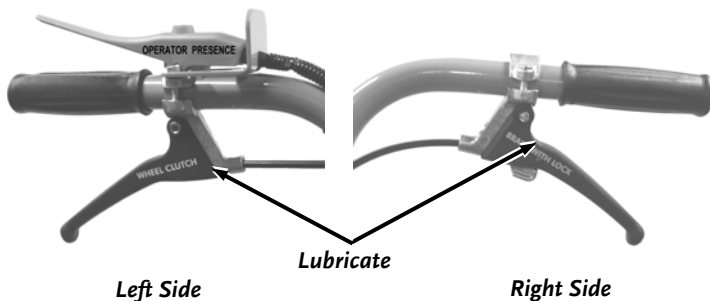


Figure 12



1. There is one Grease Fitting below the black Belt Guard that needs lubrication (**Figure 13**):

- The Belt Idler Arm should have 1-2 pumps of Grease every 25 operating hours.

**NOTE:** Over greasing will cause grease to leak out of the seals onto the Mower Drive Belt. Unless instructed otherwise, pump only until you feel slight resistance (1-2 pumps).

2. You should lubricate the Drive Chain with SAE 30 oil every 25 operating hours—more often if you operate the machine in extremely dusty or wet conditions. Remove the Chain Cover, lubricate the Chain, and replace the Cover (**Figures 14 & 15**).
3. Place the Differential Lock In/Out Lever in the OUT position.
4. Clean the Lock In/Out Sleeve Shaft and Groove of any accumulated grass and debris with a cloth and lubricate the Shaft and Groove using SAE 30 oil (**Figure 16**).
5. Move the Differential Lock In/Out Lever back and forth a few times to distribute the lubricant on the Lock In/Out Sleeve Shaft and Groove.

## Removing and Replacing the Belts

### **WARNING**

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

### **NOTICE**

Use only DR belts on your machine. They have been thoroughly tested and proven for many hours of use.

## To Replace the Blade Belt

1. Remove the black Belt Guard by unscrewing the black Knob, lifting the Cover, and pulling up and back to remove it.
2. Release the Belt Tension Lever (**Figure 17**).

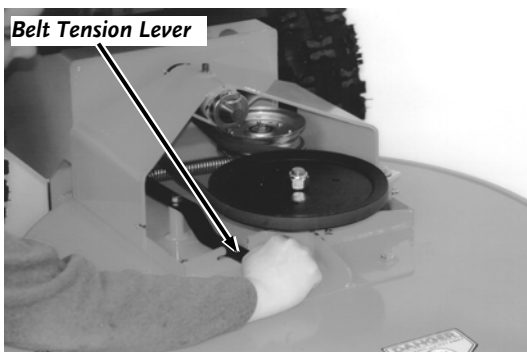


Figure 17

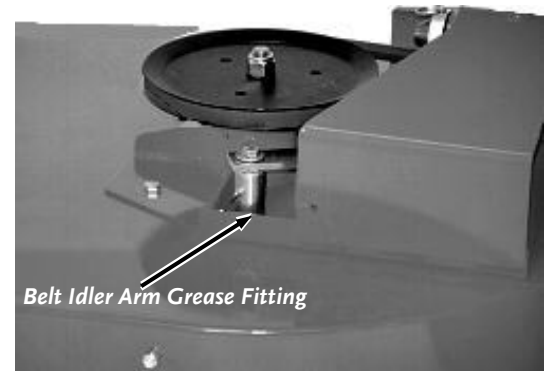


Figure 13

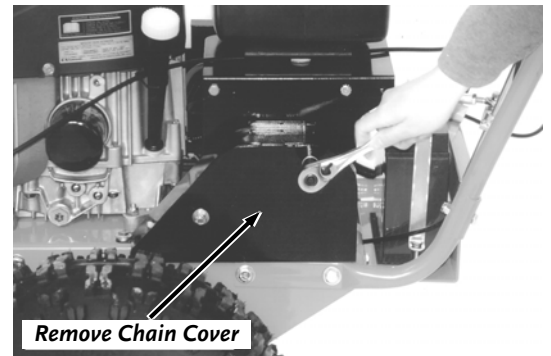


Figure 14

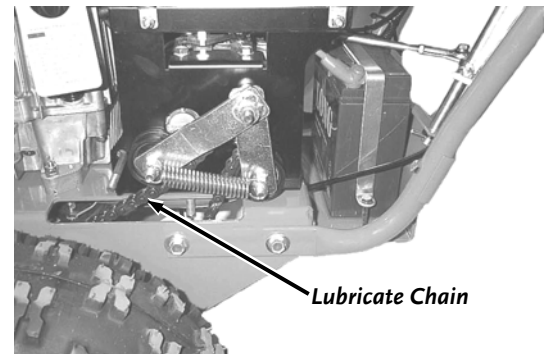


Figure 15

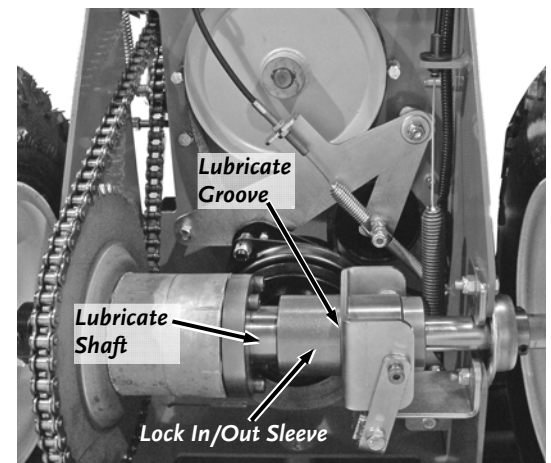


Figure 16

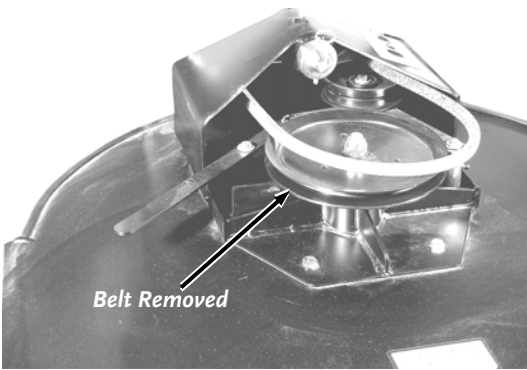


Figure 18



Figure 19

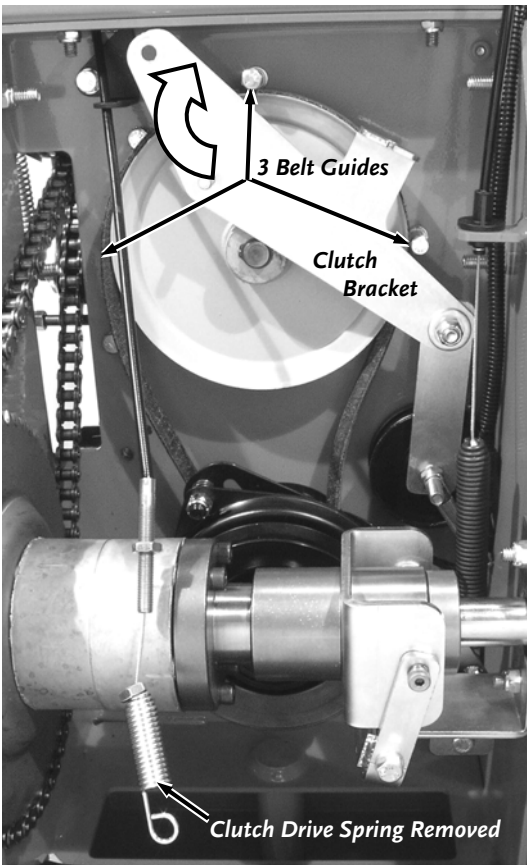


Figure 20

3. Remove the Belt from the Pulley (**Figure 18**), and then drop it from the Engine Pulley below the machine.
4. To mount the Belt, follow the above procedure in reverse.

### To Replace the Drive Belt

#### **! WARNING**

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

#### **NOTICE**

Use only DR belts on your machine. They have been thoroughly tested and proven for many hours of use.

#### Tools and Supplies Needed:

- 7/16" socket
- 1/2" wrench
- 9/16" wrench
- Gloves

1. Drain the gas and oil.
2. Remove the Blade Belt following the instructions as outlined in the previous page.
3. Remove the Pin and Collar (**Figure 19**), and then pull the Power Unit away from the Deck.
4. Tilt the Power Unit forward onto the Attachment Pin (**Figure 20**).
5. Remove the Bolt on the Clutch Bracket and the Nut on the Clutch Drive Spring (**Figure 21**).
6. Remove the Clutch Drive Spring.
7. Lift and swing the Clutch Bracket out of the way.
8. Remove the three (3) Belt Guides (**Figure 20**).

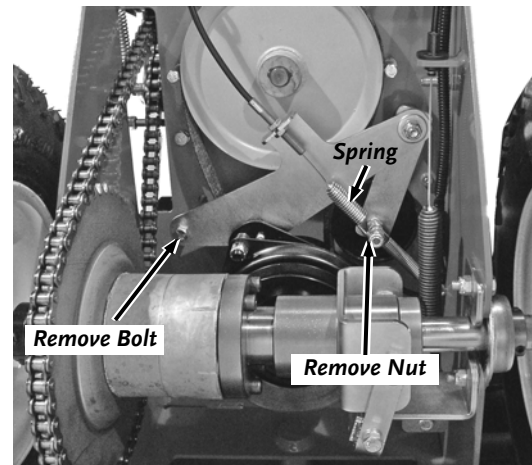


Figure 21

9. Loosen the Belt Retainer Bolts on the outside of the Frame (one on each side) and slide the Retainer back (**Figure 22**).
10. Remove the Belt.
11. To mount the new Belt, reverse the above procedure.

### Removing and Replacing the Blade

#### **! WARNING**

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

Replace the Blade when worn or damaged, but do not use it for over five (5) years.

#### Tools and Supplies needed:

- 15/16" Wrench or Socket
- Torque Wrench (optional)
- Gloves
- 2" x 4" to brace the Blade

1. Block the Blade with a piece of wood between the Blade and the Skid on the Chute side of the Deck (**Figure 23**).
2. Remove the Blade Lock Nut (right-hand, regular thread) and Washer.

#### **! WARNING**

Use care when pushing or pulling the wrench next to the blade. Wear gloves; if the wrench slips off the nut, you may be seriously injured.

3. Remove the Blade.
4. Mount the new Blade, Washer, and Lock Nut and tighten securely (Torque to 30-40 ft-lbs.). If the Locknut is removed and replaced more than once, it should be replaced with a new one.

**NOTE:** Be sure to seat the Blade completely over the small ridge in the Spindle Hub before tightening the Lock Nut.

### Adjusting the Wheel Clutch Cable

#### **! WARNING**

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

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

#### Tools needed:

- (2) 1/2" Wrenches

1. Find the Wheel Clutch Adjuster on the Bracket on the underside of the machine (**Figure 24**).

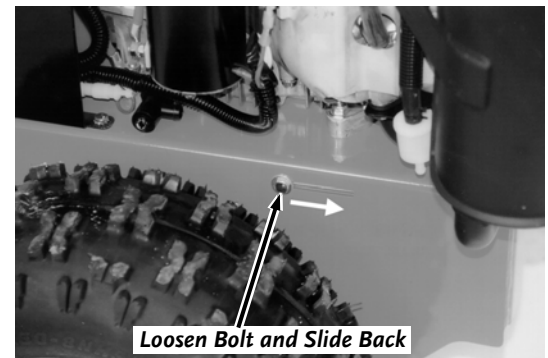


Figure 22

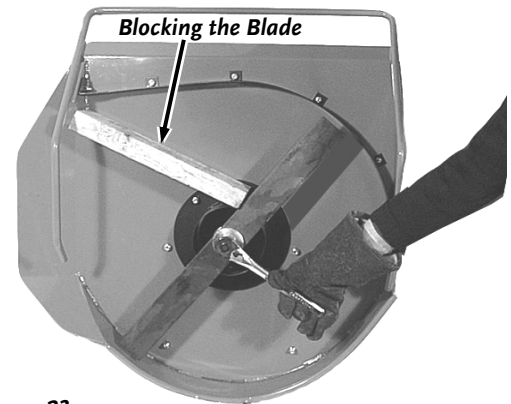


Figure 23

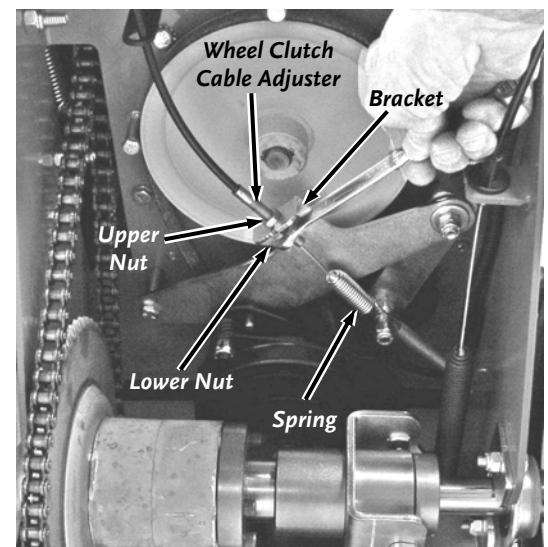


Figure 24

- Loosen the Lower Nut on the Spring side of the Bracket by 1/8" to 1/4", and then tighten the Nut on the Upper side against the Bracket. Check the tension on the Wheel Clutch Lever and repeat the adjustment as needed.

## CAUTION

If you over tighten the wheel clutch cable, the machine may lurch forward when shifting into gear. Use caution when shifting into gear. Test adjustment using the procedure on page 19.

## Removing and Replacing the Drive Chain

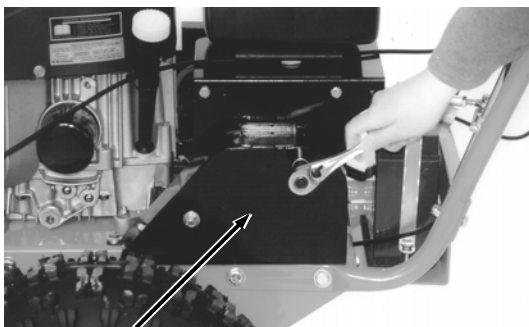
## WARNING

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

### Tools needed:

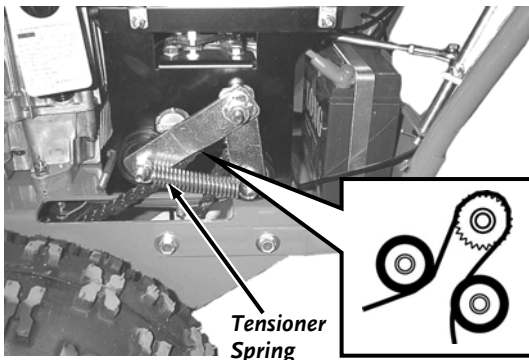
- 1/2" wrench or socket (Chain Cover)
- Flat-head screwdriver
- Needle Nose Pliers

1. Remove the Chain Cover (**Figure 25**).
2. Remove the Tensioner Spring (**Figure 26**).
3. Remove the Master Chain Link (**Figure 27**). First, remove the Lock Clip by spreading the Clip with the Screwdriver and at the same time, slide the Lock Clip back off the Master Link pins with the Needle Nose Pliers. Next, remove the Side Plate, and then remove the Master Chain Link.
4. Slowly feed the Chain out.
5. Install and route the new Chain (**Figure 26**).
6. Add the Master Chain Link (**Figure 27**) in the reverse order of step 3.
7. Replace the Tensioner Spring (**Figure 26**).
8. Replace the Chain Cover and tighten the Lock Nuts.



Chain Cover

Figure 25



Tensioner Spring

Chain Routing

Figure 26

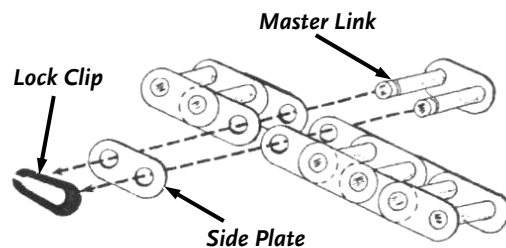


Figure 27

## Adjusting the Differential Lock In/Out Cable

### **⚠ WARNING**

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

**NOTE:** If the Differential will not Lock In or Out, the Cable may need adjustment.

1. Locate the Differential Lock In/Out Cable along the right Handlebar. There is an In-Line Adjuster to change the length of the Cable (**Figure 28**).
2. With the Lock In/Out Lever in the Out position (lever back), there should be a slight amount of slack in the Cable exposed at the spring end (**Figure 29**) and the Lock In/Out Sleeve should be all the way to the right (toward the outside).

**NOTE:** If the cable appears to have plenty of travel and the Sleeve is still not fully to the outside, you may have to clean and lubricate the Sleeve. See page 16 for Lubrication.

3. You can take the slack out of the cable by holding the Hex Flat Section at the top of the In-Line Adjuster and rotating the body of the In-Line Adjuster in the clockwise direction as you look up the Cable toward the Control Panel. If the Cable is too tight, you can loosen the Cable by twisting the adjuster in the opposite direction (**Figure 28**).

## Removing the Wheels

### **⚠ WARNING**

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

#### Tools needed:

- 3/4" Socket with extension
1. Loosen the Wheel Nuts a couple of turns with the Wheel on the ground.
  2. Block the machine so the Wheel you are removing is off the ground.
  3. Remove the three (3) Nuts and slide the Wheel off (**Figure 30**).
  4. Replace the Wheel and finger-tighten the Wheel Nuts before unblocking the machine.
  5. Tighten the Wheel Nuts with the Wheel resting on the ground.

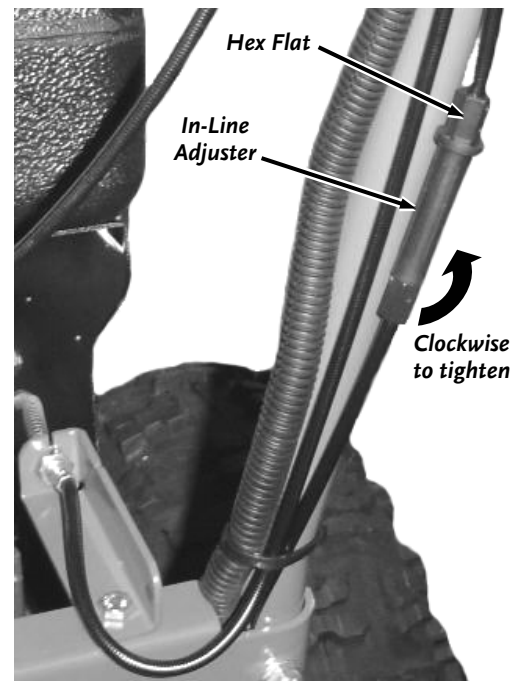


Figure 28

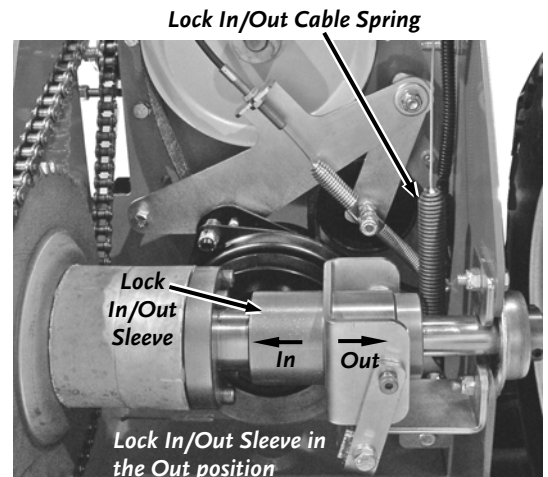


Figure 29

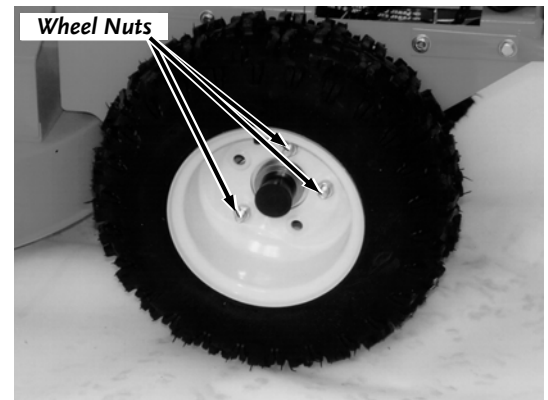


Figure 30

## Adjusting the Parking Brake

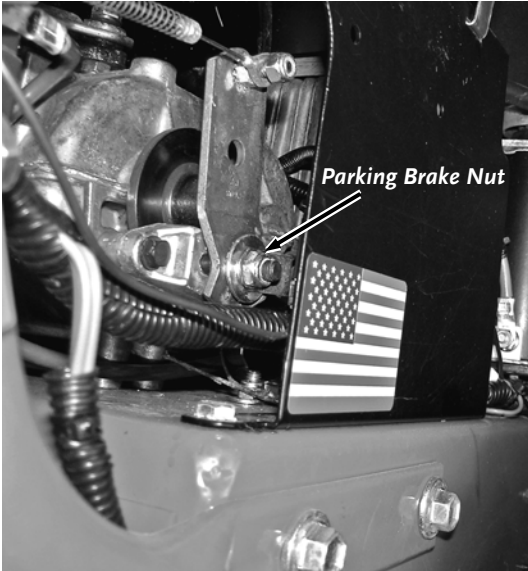


Figure 31

### **⚠ WARNING**

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

#### Tools needed:

- 1/2" Open End Wrench
1. Tighten or loosen the Parking Brake Adjusting Nut as needed (**Figure 31**). Tightening the Nut (clockwise) will increase pressure and loosening the Nut (counterclockwise) will decrease the pressure on the Brake Pad.

### Transmission

The Transmission is maintenance-free. Only the Differential Lock In/Out Sleeve Shaft needs additional periodic lubrication. See the Lubrication section on page 16.

## Removing or Changing the Deck

### **⚠ WARNING**

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

1. Remove the black Belt Guard by unscrewing the black Knob, lifting the Cover and pulling up and back to remove it.
2. Release the Belt Tension Lever (**Figure 32**).
3. Remove the Belt from the Pulley (**Figure 33**).
4. Remove the Pin and Collar (**Figure 34**), and then pull the Power Unit away from the Deck.

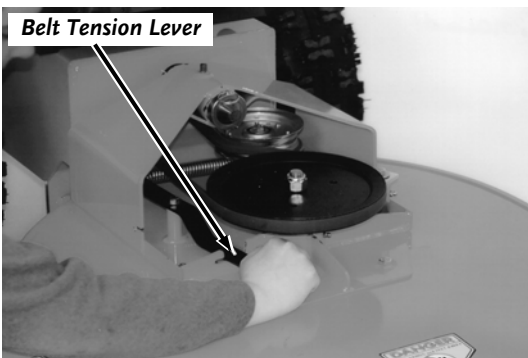


Figure 32

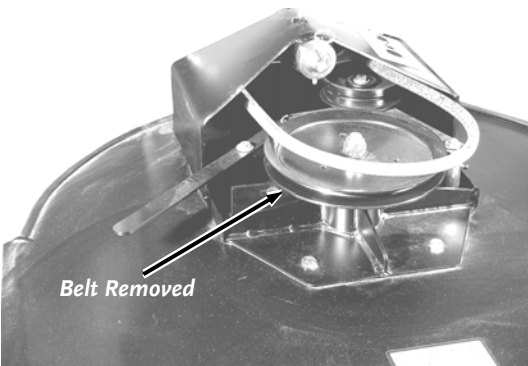


Figure 33

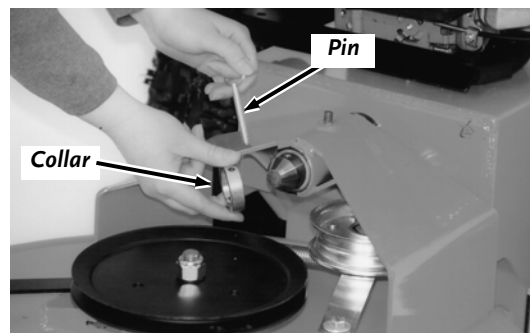


Figure 34

## Replacing the Push Tube Skid

### Tools and Supplies Needed:

- Two 1/2" Wrenches
- Blocks

### WARNING

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

1. Lift the Push Tube Skid off the ground by tipping back on the Field and Brush Mower and support the back of the Deck with Blocks.
2. Remove the five Bolts, Curved Washers and Locknuts that secure the Skid using two 1/2" Wrenches (**Figure 35**).
3. Position the new Push Tube Skid and secure with the five Bolts (bolt head facing out), Curved Washers (under Bolts) and Locknuts.

## Replacing the Shear Pulley (extra Pulley comes in Product Pack of Machine with 30" Deck only)

### Tools and Supplies Needed:

- 1" Wrench
1. Unscrew the Hand Knob and remove the Belt Guard (**Figure 36**).
  2. Release the Belt Tensioner Lever and remove the Belt from the Pulley (**Figure 37**).
  3. Support the Blade with a block as you remove the Locknut using a 1" Wrench.
  4. Remove the damaged Pulley and replace with new Pulley.
  5. Secure the Pulley with the Locknut.
  6. Install the Belt and reset the tension by engaging the Belt Tensioning Lever.
  7. Replace the Belt Guard and Hand Knob.

## Charging the Battery

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

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

**NOTE:** 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 FIELD and BRUSH MOWER, follow the steps listed below.

1. Detach the two (2) Battery wires going to the Battery on your DR FIELD and BRUSH MOWER.
2. Attach the black (-) Battery Charger wire to the Battery negative (-) terminal, and attach the red (+) Battery Charger wire to the Battery positive (+) terminal.

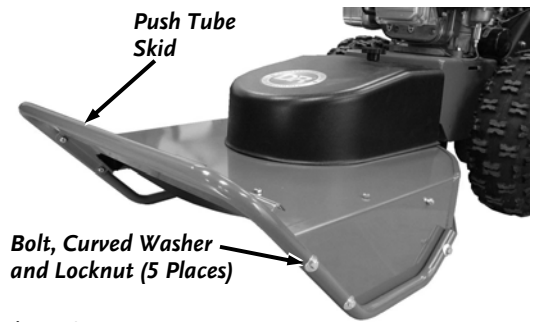


Figure 35

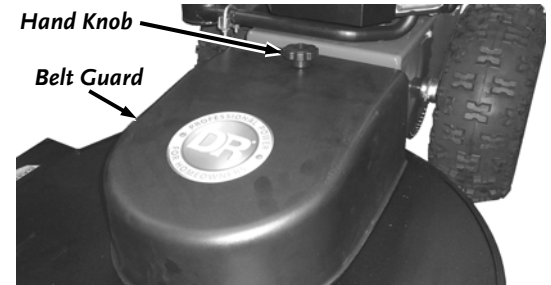


Figure 36

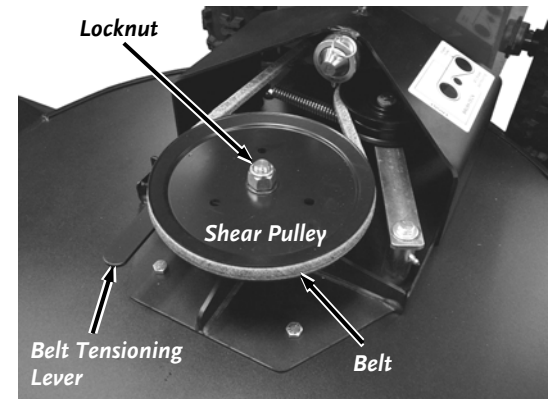


Figure 37

3. Plug the Battery Charger into an outlet.

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**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.

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### ***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 the Engine when the Battery charge is low.

### ***Disposing of the Battery Responsibly***

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

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

### ***Recycling a Used Battery***

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**NOTICE**

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

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

You can also visit the Web site of Earth 911 for more information [[www.earth911.org](http://www.earth911.org)]. Once there, click the Municipal HHW link under Hazardous Household Waste, and enter your zip code. The site lists 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 procedure or inspection, stop the engine, wait five (5) minutes to allow all parts to cool. Disconnect the spark plug wire(s), keeping it away from the spark plug(s).

### Troubleshooting Table

SYMPTOM	POSSIBLE CAUSE
<p><i>The Engine won't start.</i> (Please refer to the Engine Owner's Manual for engine-specific procedures.)</p>	<ul style="list-style-type: none"> <li>⇒ Check all of the items under the section called "Starting" on page 12.</li> <li>⇒ There is a fuse in the wiring harness. Check the fuse and replace if needed.</li> <li>⇒ Check the wire connections—especially the ground connection, the large green wire coming from the Battery, where it connects to the Engine.</li> <li>⇒ Check the wire connections to the Solenoid. Disconnect the green Battery ground wire first to avoid sparks. Check to be sure that all of the connections are clean and tight. Reconnect the Battery ground wire.</li> <li>⇒ Check the ground connection on the Solenoid where it bolts to the Frame. Using a Wrench or Socket, tighten the Bolts to ensure a good connection to the Frame.</li> <li>⇒ The Battery may not be charged. Check the voltage yourself or at a Service Station. If it is low, charge it with a 12-volt, 1 to 2 amp trickle Charger. If you do not use your machine for at least 45 minutes at a time, the Battery may need to be periodically charged. See the "Battery Care" section on page 24.</li> <li>⇒ If the Battery is charged and the Engine still will not start, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.</li> </ul>
<p><i>The Engine lacks power or is not running smoothly.</i> (Please refer to the Engine Owner's Manual for engine-specific procedures.)</p>	<ul style="list-style-type: none"> <li>⇒ Check the Throttle Lever travel and adjustment. Make sure the Throttle Lever is in the Run position.</li> <li>⇒ Check that the Air Filter is clean. If it is dirty, change it following the procedure in the Engine Owner's Manual.</li> <li>⇒ The Spark Plug(s) may be dirty or cracked, change it. If it's oily, leave it out, hold a rag over the Plug Hole(s) and crank the Engine several times to blow out any oil in the Cylinder(s), then wipe off the Plug(s) and reinsert it.</li> <li>⇒ The gas may be old, change it. Use a fuel stabilizer if you keep gas longer than one month.</li> <li>⇒ Check the Fuel Filter, it may be clogged. Replace if necessary.</li> <li>⇒ Check to make sure that your Engine has the right amount of clean oil. If it is dirty, change it following the procedure in the Engine Owner's Manual.</li> <li>⇒ If the Engine still lacks power, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.</li> </ul>
<p><i>Engine smokes.</i></p>	<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" on page 13.</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 Cooling Fins if they are dirty.</li> <li>⇒ If the Engine still smokes, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.</li> </ul>

**! WARNING**

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

**Troubleshooting Table (Cont.)**

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>
<i>Engine runs fine but the machine will not move.</i>	<ul style="list-style-type: none"> <li>⇒ The Drive Belt is broken or out of adjustment. See page 18.</li> <li>⇒ The Chain may be Broken, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.</li> <li>⇒ The Transmission may be defective, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.</li> </ul>
<i>Machine is hard to get into reverse.</i>	<ul style="list-style-type: none"> <li>⇒ If you find it difficult to shift into Reverse, lightly pull the Wheel Clutch Lever as you pull the Shift Lever into Reverse then quickly release the Wheel Clutch Lever.</li> <li>⇒ If the difficulty persists, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.</li> </ul>
<i>A Belt frays or rolls over the Pulley.</i>	<ul style="list-style-type: none"> <li>⇒ A Pulley groove may be rusty or have a nick in it. Clean the pulley with steel wool or file off any nicks.</li> <li>⇒ Check the Belt for wear and hard spots.</li> <li>⇒ The Belt may be stretched, replace it.</li> <li>⇒ If the problem persists, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.</li> </ul>
<i>The cut material is not properly discharging out of the right side of the Deck.</i>	<ul style="list-style-type: none"> <li>⇒ The Discharge Chute may be blocked. Disengage the Blade, turn OFF the Engine, set the Parking Brake and disconnect the Spark Plug wire(s); then check for debris.</li> </ul>
<i>Heavier growth hangs up under the machine and does not discharge.</i>	<ul style="list-style-type: none"> <li>⇒ Try removing the Baffle under the front of the Mowing Deck. Be sure to turn OFF the Engine and remove the Spark Plug wire(s) before performing this operation.</li> </ul>
<i>Excessive vibration when engaging the Blade.</i>	<ul style="list-style-type: none"> <li>⇒ Check the Blade for nicks and wear. Replace or sharpen and balance the Blade if they become dull, or have them professionally sharpened if needed. Never try to straighten a bent Blade. Be sure to replace the Blade in the proper orientation. See page 19.</li> <li>⇒ May have debris wrapped around Blade (wire, etc.), Remove debris from Blade.</li> <li>⇒ The Blade may not be seated properly on the Hub. Loosen the Blade Nut, reseal the Blade, and tighten the Nut. Be sure to turn OFF the Engine and remove the Spark Plug wire(s) before performing this operation.</li> <li>⇒ The Spindle Bearings may be bad. Call 1-800-DR-OWNER (376-9637) for assistance.</li> <li>⇒ Check and retighten all of the fasteners as required.</li> <li>⇒ If the vibrations persist, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.</li> </ul>
<i>The Blade is not cutting or is loose.</i>	<ul style="list-style-type: none"> <li>⇒ The Blade may not be seated properly on the Hub. Loosen the Blade Nut, reseal the Blade, and tighten the Nut. Be sure to turn OFF the Engine and remove the Spark Plug wire(s) before performing this operation.</li> <li>⇒ Sharpen the Blade; it may be dull or nicked. Be sure to replace the Blade in the proper orientation. See page 19.</li> </ul>
<i>The Blade will not Engage and/or Disengage.</i>	<ul style="list-style-type: none"> <li>⇒ Be sure you are holding down on the Operator Presence Lever.</li> <li>⇒ Faulty Blade Control Switch. Remove and replace the Switch on the Control Panel.</li> <li>⇒ An open and/or shorted Blade Control Wiring Harness. Remove and replace the Blade Control Wiring Harness w/Solenoid.</li> <li>⇒ If the problem persists, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.</li> </ul>

**! WARNING**

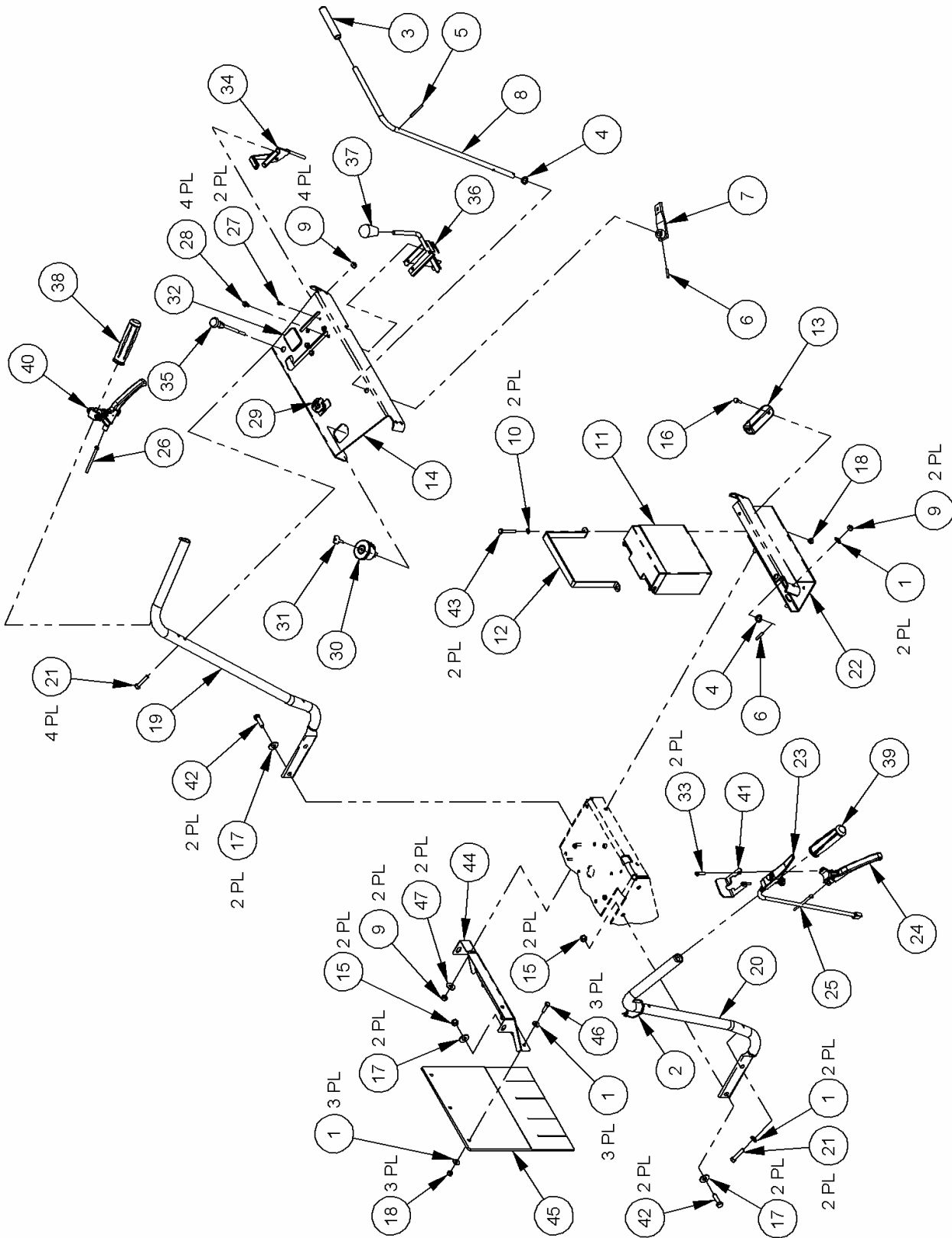
Before performing any maintenance procedure or inspection, stop the engine, wait five (5) minutes to allow all parts to cool. Disconnect the spark plug wire(s), keeping it away from the spark plug(s).

**Troubleshooting Table (Cont.)**

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>
<i>Wheels pulling left or right.</i>	⇒ Check the Wheel Tire pressures against the manufacturer's recommendation listed on the side of the Tires.
<i>The Wheel Drive Clutch and/or Brake lever will freeze up during cold weather operation.</i>	⇒ Moisture is getting into the Cable housing(s) and freezing. Using a lubricating syringe, inject "dry gas" into the Cable-Housing opening to absorb the moisture. Tip the machine forward slightly so the "dry gas" will flow down the inside of the Housing. After the ice blockage has thawed, lubricate the cable(s) with SAE 30 oil. See page 16.
<i>The Differential Lock In/Out will not unlock (stays in the Lock In position).</i>	⇒ Grass and debris has probably accumulated on the Differential Lock In/Out Sleeve. Clean and lubricate the Sleeve. See page 16. ⇒ The Differential Lock In/Out Cable is broken or out of adjustment. See page 21. ⇒ If the problem persists, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.
<i>The Differential Lock In/Out will not Lock In (stays in the Lock Out position)</i>	⇒ The Differential Lock In/Out Cable is broken or out of adjustment. See page 21. ⇒ If the problem persists, visit our web site at <a href="http://www.DRpower.com">www.DRpower.com</a> for assistance.



# Schematic – Handlebar Assembly



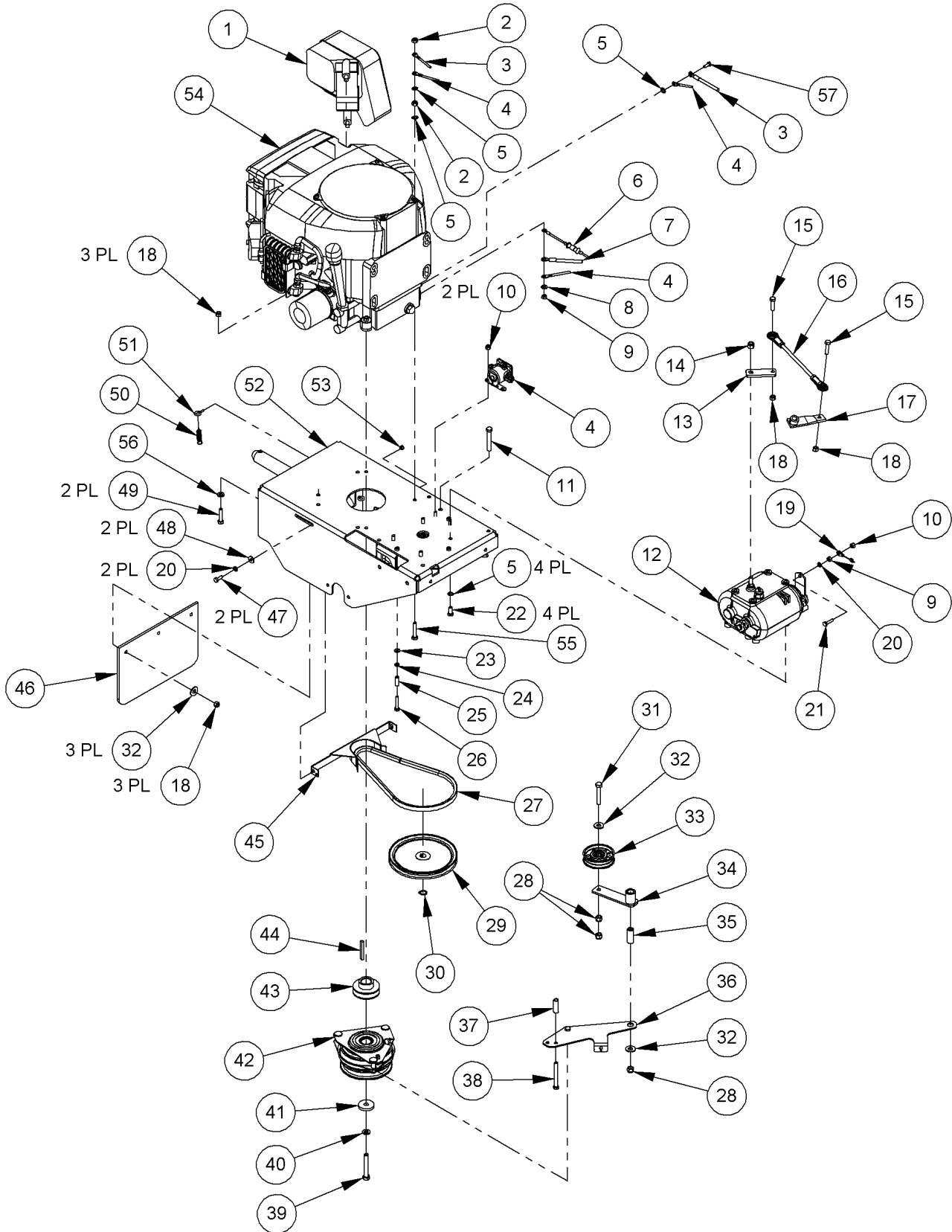
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## Parts List – Power Assembly

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

Ref#	Part#	Description	Ref#	Part#	Description
01	189161	Muffler, 18 HP Honda	36	191261	Bracket, Anti-Rotation
	271511	Muffler/Manifold, 16 & 18HP, Kawasaki	37	112311	Spacer, .327" ID x .50" OD x 1.5" L
02	110691	Nut, 5/16"-18		279541	Spacer, .402"ID x .50"OD x 1.25" L (Kawasaki)
03	150141	Cable, Ground, 16"	38	111411	Bolt, 5/16"-18 x 3", HCS, GR5
04	256681	Wire Harness, B&S, 13.5 HP		129601	Bolt, 3/8"-16 x 3", HHCS, GR5, Kawasaki
	279921	Wire Harness, Kawasaki	39	223241	Bolt, 7/16"-20 x 2-3/4", HCS, GR8, ZP
	191191	Wire Harness, Honda	40	222521	Washer, Lock, 7/16", Split, GR8
05	112501	Washer, Lock, 5/16" External Tooth	41	191301	Washer, Flat, .469" ID x 1.62" OD x .25" THK
06	189421	Wire, Fuse, CDI, 18 HP Honda	42	191241	Clutch, Electric, 75 Ft.-Lbs., 3.86 Amp
07	189101	Wire, Positive, 24" 8 Gauge, (18 HP Honda only)	43	191211	Pulley, Drive, 2-3/4" Dia., 1" Bore
08	112431	Washer, Lock, 5/16", Split	44	106361	Key, 1/4" Square x 2-1/4" L
09	110701	Nut, 1/4"-20	45	150201	Guide, Belt, Engine Pulley
10	110731	Nut, Nylon Lock, 1/4"-20	46	150241	Debris Guard
11	164841	Bolt, 3/8"-16 x 2-1/2", HCS, GR5	47	119831	Bolt, 1/4"-20 x 3/4" HCS
12	150591	Transmission, 4FWD, 1REV, w/Brake	48	112381	Washer, Flat, 1/4" USS
13	151001	Arm, Transmission Shift	49	134431	Bolt, 5/16"-18 x 1-1/2", HCS, GR5
14	150771	Nut, Nylon Lock, 3/8"-24		150431	Bolt, 3/8"-16 x 1-1/4", HHCS, GR5, Kawasaki
15	123361	Bolt, 5/16"-18 x 1-1/4", HCS, GR5	50	150501	Spring, Extension, .438" OD x 2.5" FL
16	160331	Tie Rod, 7.47" L, Rod & Ball Ends	51	175521	Eyebolt, 10-24 x 1/2"
17	100241	Arm, Shift Rod	52	150261	Frame, Main+
18	110761	Nut, Nylon Lock, 5/16"-18	53	118731	Nut, Nylon Lock, 10-24
19	181131	Cable, Transmission, Brake	54	256671	Engine, 13.5 HP, B&S, E/S
20	112481	Washer, Lock, 1/4" External Tooth		271471	Engine, 16 HP, Kawasaki FS, E/S
21	111491	Bolt, 1/4"-20 x 1", HCS, GR5		271481	Engine, 18 HP, Kawasaki FS, E/S
22	123211	Bolt, 5/16"-18 x 3/4", HCS, GR5		189041	Engine, 18 HP, Honda, E/S
23	112371	Washer, Flat, 10-24 USS	55	150451	Bolt, 5/16"-18 x 1-3/4", HCS, GR5, Briggs
24	101811	Washer, Split Lock, 1/4" ZP	56	180811	Washer, Lock, 3/8", Medium Split, Kawasaki
25	111871	Spacer, 1/4" ID, 3/8" OD, 1.0" L	57	280581	Screw, M-8 x 16mm, GR 8.8, Kawasaki
26	101451	Bolt, 1/4"-20 x 1-1/2", HCS, GR2, ZP	<b>Not Illustrated</b>		
27	150061	Belt, A31K, 1/2" x 33"		222451	3/8" NPT Oil Drain Valve, B&S only
28	110751	Nut, Nylon Lock, 3/8"-16		140021	Tubing, Oil Drain, 1 ft., Kawasaki & B&S only
29	111141	Pulley, V-Belt, 7" OD, 5/8" Bore		100941	Fuel Filter, B&S
30	111241	Ring, Retaining, 5/8", Type SH		138741	Fuel Filter, Kawasaki
31	157121	Bolt, 3/8"-16 x 2-1/4", HCS, GR5		279601	Clamp, Muffler, Kawasaki
32	112391	Washer, Flat, 3/8" (USS)		280711	Guard, Front, Kawasaki
33	108501	Pulley, Flat, Idler, 3.0" OD		280731	Gasket, Manifold to Engine, Kawasaki
34	150611	Idler Arm, Traction Drive			
35	151111	Bushing, .390" ID x .62" OD x 1.585" L			

**Schematic – Power Assembly**



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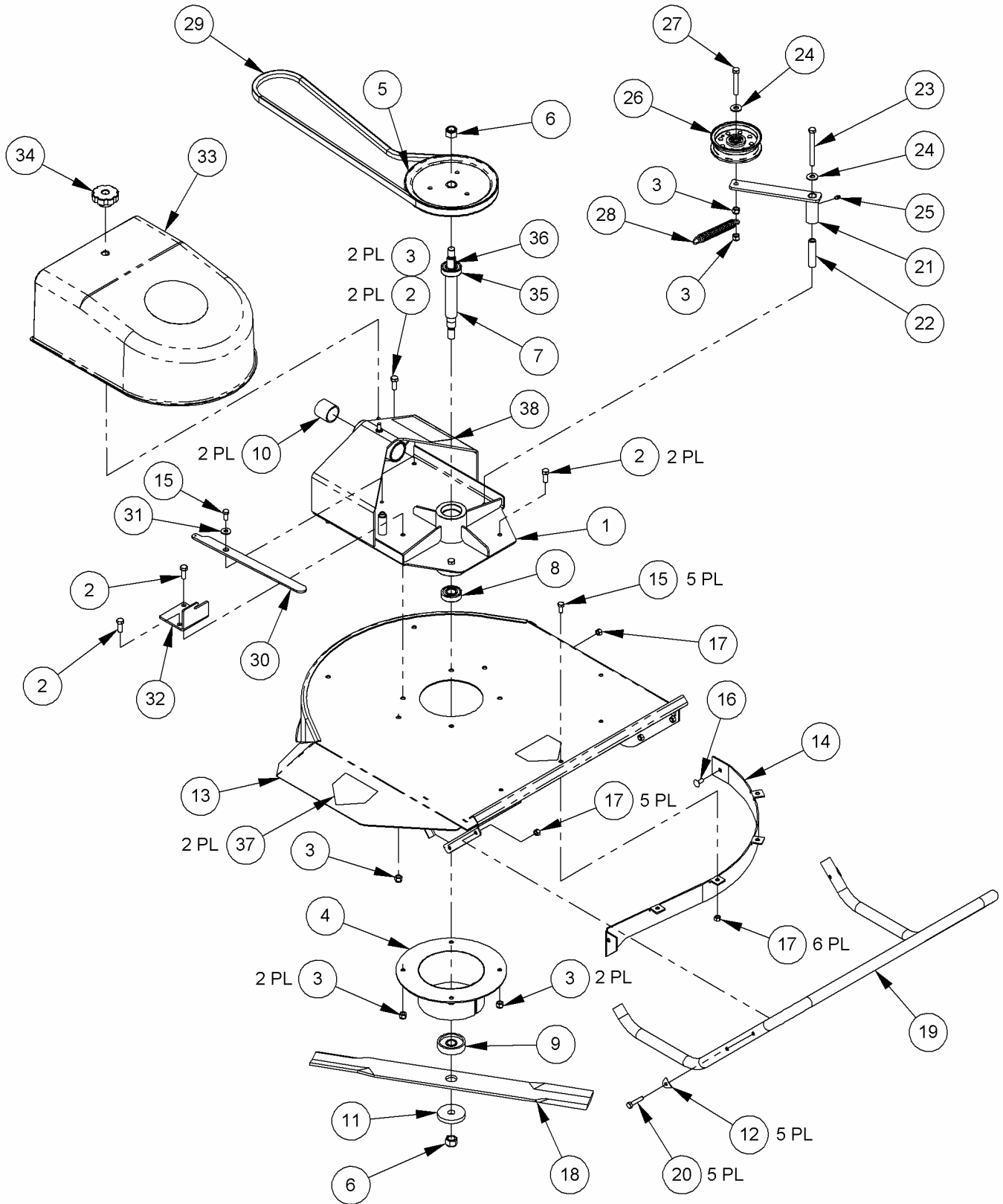
## Parts List – Brush Deck Assembly

**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	150911	Spindle Support And Housing	19	284791	Skid, Push Tube, 26" Deck
2	111521	Bolt, HHCS, 3/8-16 X 1"		284811	Skid, Push Tube, 30" Deck
3	110751	Nut, Nylon Lock, 3/8-16	20	134431	Bolt, HCS, 5/16-18 X 1.5"
4	150641	Ant Wrap Guard	21	150831	Idler Arm, Brush Deck
5	164451	Pulley, V, 8.5 OD 5L or B Belt	22	150711	Bushing, Idler, Brush Deck
6	160071	Nut, Nylon Lock, 5/8-18, Gr.2, Zp	23	150701	Bolt, HCS, 3/8-16 X 3/4"
7	160091	Shaft, Spindle, 5/8-18 Thread	24	112391	Washer, Flat, 3/8", USS
8	187351	Bearing, Ball 6204RS	25	101891	Grease Fitting 1/4-28 Straight
9	151141	Spindle, Hub	26	151271	Pulley Flat Idler 4"
10	150721	Bushing 1.38" ID X 1.63" OD	27	150691	Bolt, HCS, 3/8-16 X 2.50" Long
11	101771	Washer, Blade	28	150941	Spring E .750" OD X .112" Wire
12	285511	Washer, Curved	29	150681	Belt, B63K, 5/8 X 66
13	285441	Deck, 26" Weldment W/ Label	30	164401	Belt Tensioner Arm
	285471	Deck, 30" Weldment W/ Label	31	112411	Washer, Flat, 5/16" USS
14	160511	Baffle, Brush Deck 26"	32	165231	Bracket, Belt, Tensioner, Deck
	160611	Baffle, Brush Deck 30"	33	157271	Guard, Deck, Drive Belt
15	123211	Bolt, HCS, 5/16-18 X .75"	34	143661	Knob, 5/16-18
16	145291	Bolt, Carriage, 5/16-18 X .75"	35	187351	Bearing, Ball, 2 Seals
17	110761	Nut, Nylon Lock 5/16-18	36	106401	Woodruff Key, .188" Thk. X .75" Lg.
18	100481	Blade, 26" Brush	37	136491	Label, Danger, Deck Label
	160891	Blade, 30" Brush	38	164371	Label, Blade Belt Routing



# Schematic – Brush Deck Assembly



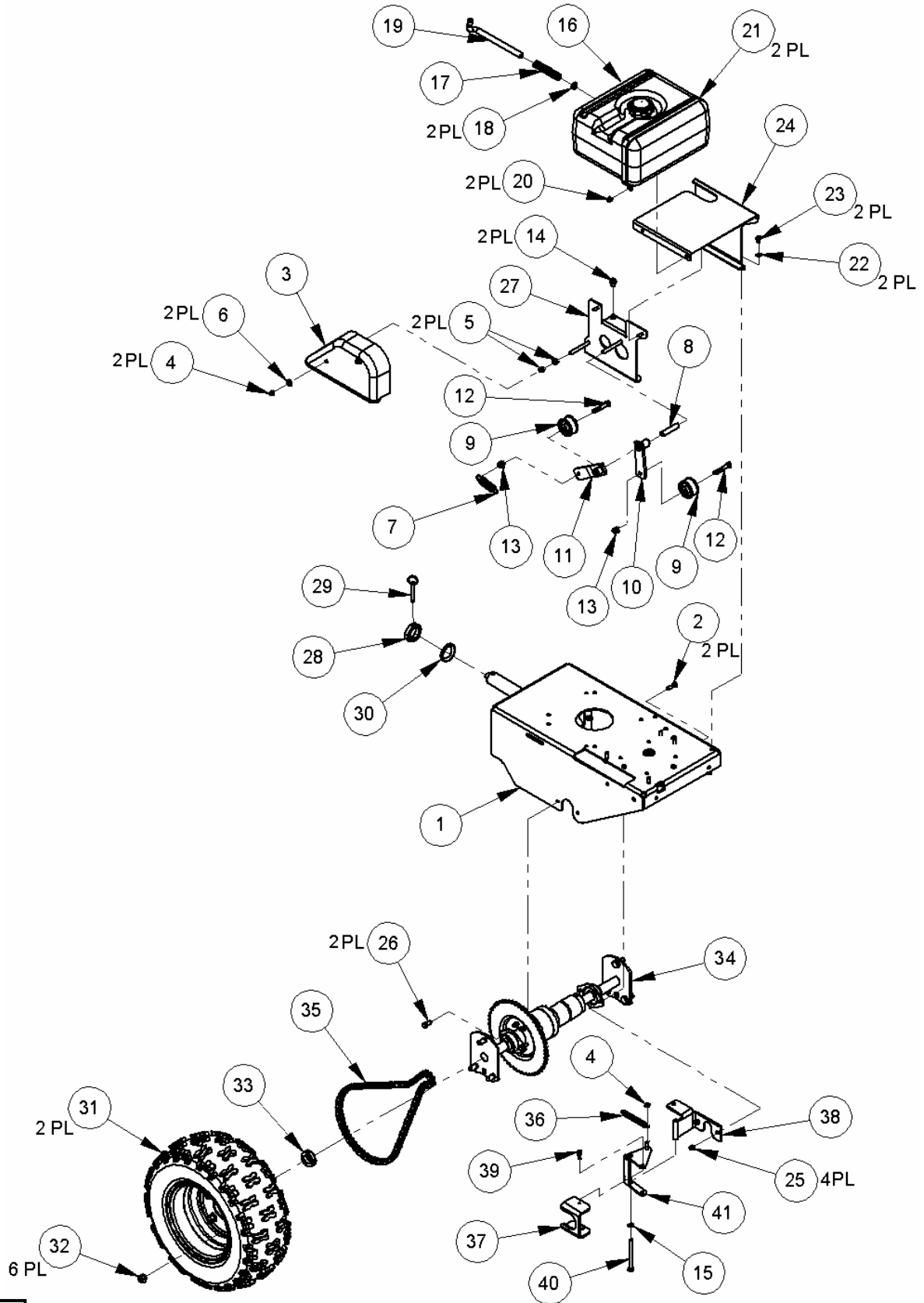
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## Parts List – Frame and Drive Assembly

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

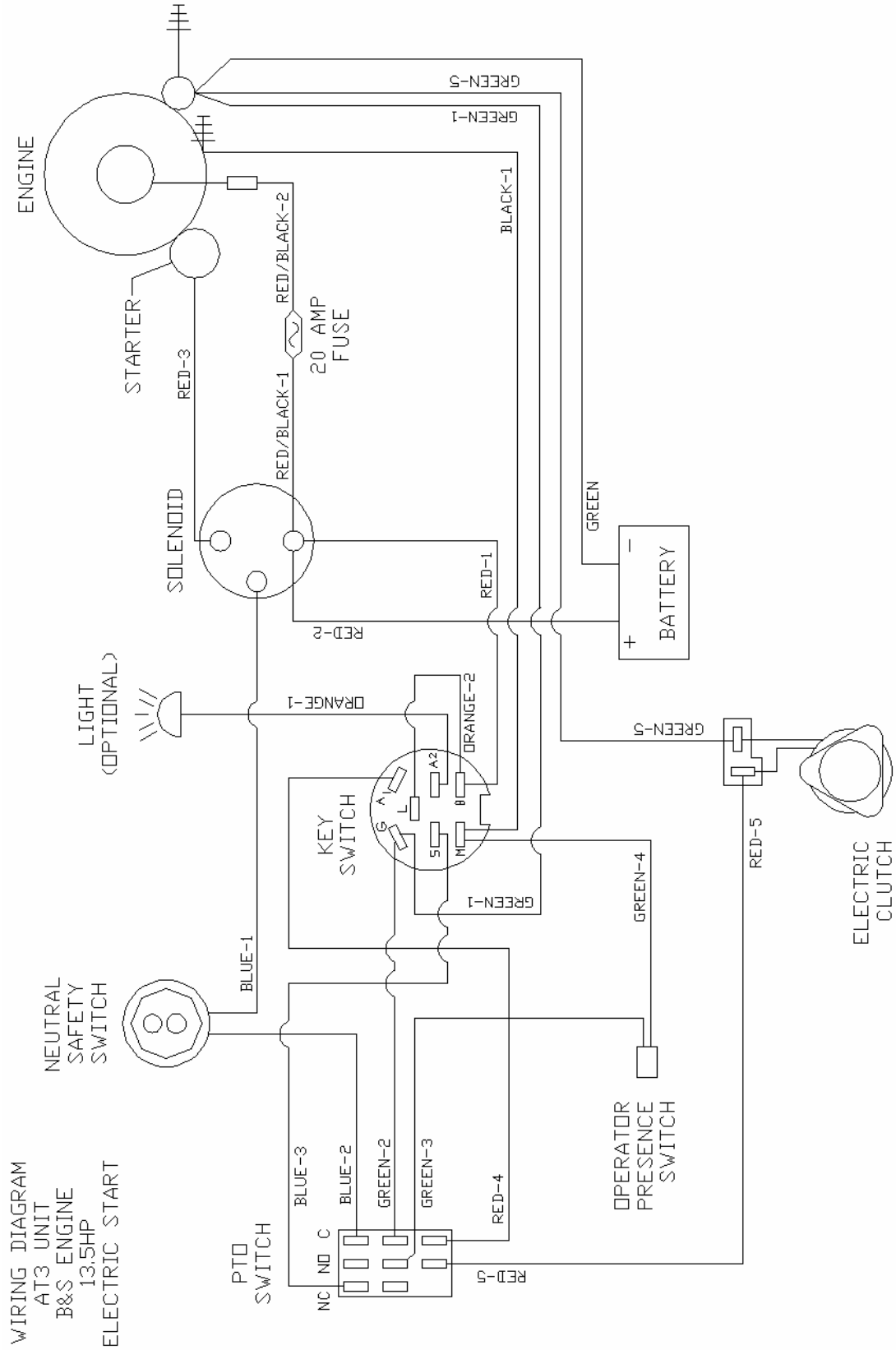
<u>Ref#</u>	<u>Part#</u>	<u>Description</u>	<u>Ref#</u>	<u>Part#</u>	<u>Description</u>
01	150261	Frame, Main	25	110761	Nut, Nylon Lock, 5/16"-18
02	111581	Bolt, 5/16"-18 x 1", HCS, GR2	26	123211	Bolt, 5/16"-18 x 3/4", HCS, GR5
03	150181	Guard, Chain	27	150171	Support, Chain Idler
04	187551	Nut, Nylon Lock, 5/16"-18, Lo-Profile	28	151151	Washer, 1.38" ID, 2.00" OD, for Pin
05	110691	Nut, 5/16"-18	29	150461	Pin, Detent, 1/4" x 2"
06	112381	Washer, Flat, 1/4" USS	30	151381	Washer, 1.375" ID, 2.00" OD, x .25"
07	164801	Spring, Extension, .750" OD x FL	31	192891	Wheel & Tire, 18" x 6.50"- 8", Terrain, 5 Lug, Grey
08	150101	Bushing, .328" ID, .500" OD, 2.32" L		150621	Wheel & Tire, 18" x 6.50"- 8", Terrain, 5 Lug, White
09	150481	Pulley, Flat Idler, 1.88" OD, .375" Bore		151721	Wheel & Tire, 18" x 6.50"-8", Turf, 5 Lug, White
10	164781	Idler Arm, Inner, Chain Adjust		209371	Wheel Stud, 1/2"-20
11	164771	Idler Arm, Outer, Chain Adjust	32	165221	Nut, Lug, 1/2"-20
12	126861	Bolt, 3/8"-16 x 3", HCS, GR5	33	151971	Split Collar, 1.00" ID x 1.75" OD, Clamp-On w/Set Screws
13	110751	Nut, Nylon Lock, 3/8"-16	34	192301	Differential, Lock In/Out
14	111731	Screw, 5/16"-18 x 1/2", Tri-Lobe	35	150191	Chain, #40, 88 Pitches with Master Link
15	112431	Washer, Lock, 5/16", Split	36	193511	Spring, E, 1/2" OD, .069 Wire x 4" L, ZP
16	150291	Fuel Tank Assembly, 2.5 Gallons	37	190581	Cam, Lock In/Out Differential
17	153531	Conduit, Split, 7/16"	38	190601	Support Assembly, Pivot, Lock In/Out
18	100661	Clamp, Fuel Line	39	192321	Screw, Shoulder, 1/4"-20, Lock, .312" Body
19	211661	Hose, Fuel, 1/4" ID, CA Certified	40	187571	Bolt, 5/16"-18 x 3-3/4", HCS
20	110731	Nut, Nylon Lock, 1/4"-20	41	190591	Bracket, Cam Pivot, Lock In/Out
21	150531	Strap, 2.5 Gallon Fuel Tank			
22	112481	Washer, Lock, 1/4" External Tooth			
23	114701	Bolt, 1/4"-20 x 1/2", HCS, GR5			
24	280761	Mount, Fuel Tank			

**Schematic – Frame and Drive Assembly**



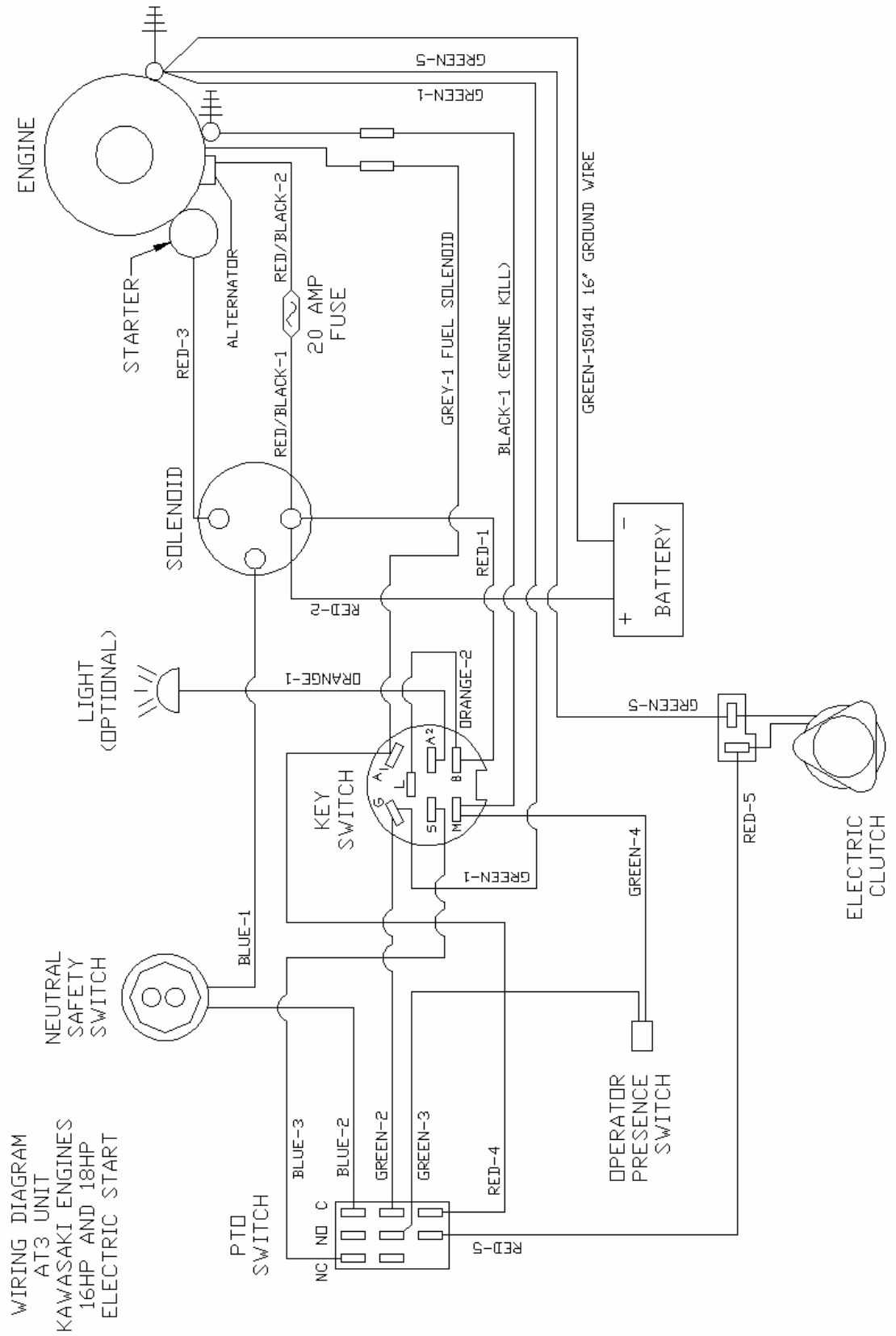
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# Wiring Diagram – Briggs and Stratton Electric Start



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# Wiring Diagram – Kawasaki Electric Start



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**Notes:**

**Notes:**

## Daily Checklist for the DR FIELD and BRUSH MOWER

To help maintain your DR FIELD and BRUSH MOWER for optimum performance, we recommend you follow this checklist each time you use your machine.

### WARNING

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

- Check the engine oil level.
- Check the gas Level
- Check the general condition of the Mower, e.g.; nuts, bolts, welds, etc.
- Check Tire Pressure
- Check belts for wear, proper alignment and tension.
- Check the blade for tightness, nicks and wear. Remove any wrapped weeds and grass from the Blade Bearing Housing to prevent buildup.
- Check that the engine air cooling system is clean of debris.

### WARNING

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

## End of Season and Storage

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

- Change the oil (and oil filter, if applicable). For winter use, use SAE 5W – 30 HD.
- Remove the Spark Plug(s) and pour about 1 ounce of motor oil into the Cylinder hole. Replace the Plug(s) and crank the Engine a couple of times. This will coat the piston(s) and seat the valves to prevent moisture buildup.
- Clean/replace the Air Filters.
- Clean dirt and debris from the Cylinder Head Cooling Fins, Blower Housing, Debris Screen, and Muffler area of the Engine.
- If your Engine has a Fuel Filter, replace it.
- If your DR FIELD and BRUSH MOWER 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. Close the Fuel Shut-Off Valve, if your machine is equipped with one, to prevent Carburetor overflow and leakage.
- Store the Battery in a dry area that will not freeze. If you will not use the machine over a long period, charge the Battery every four to six weeks. See page 23.
- Remove any wrapped weeds from the Blade Bearing Housing. Clean grass and debris from the top and underneath the Mower Deck with a stiff brush.
- Check the Blade for nicks and wear. Remove the Blade and sharpen, or have it professionally sharpened if needed.
- Perform the lubrication as outlined starting on page 16.

**NOTE:** For winter use, please refer to the attachment instructions.



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