DR® TOW-BEHIND FIELD and BRUSH MOWER
SAFETY & OPERATING INSTRUCTIONS

Model:
PRO MAX 60T

Serial No. _____

Order No. _____

DR Power Equipment
Toll-free phone:
1-800-DR-OWNER (376-9637)

⚠ WARNING

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

Table of Contents

Conventions used in this manual:

⚠ WARNING

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

⚠ CAUTION

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

NOTICE

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

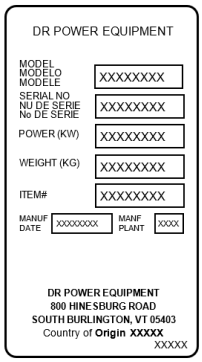


Figure A

Serial Number and Order Number

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

Additional Information and Potential Changes

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

California Proposition 65

⚠ WARNING

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

Chapter 1: General Safety Rules

⚠ WARNING

Read this Safety & Operating Instructions manual before you use the DR TOW-BEHIND 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 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 TOW-BEHIND 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.

#136491

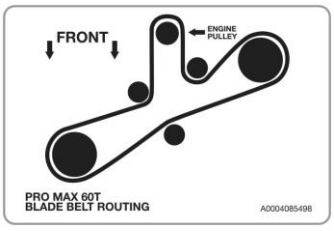
#136831

#137581

#250441

#365811

#365821



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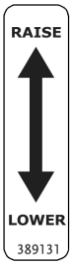


#38913

Protecting Yourself and Those around You

⚠ WARNING

This is a high-powered machine with moving parts operating at high speeds. Always take the following precautions when operating this machine:

- Always wear protective goggles or safety glasses with side shields.
- We recommend wearing sturdy shoes with non-slip tread, long pants, and gloves while using this machine. Be sure the gloves fit properly and do not have loose cuffs or drawstrings.
- Use ear protectors or ear plugs.
- Allow only responsible adults who are familiar with these safety rules and operating instructions to use your DR TOW-BEHIND FIELD and BRUSH MOWER.
- Keep hands and feet away from the blades, belt, pulley, and concealed areas while engine is running.
- Keep people and pets away from the machine and out of the work area at all times. Disengage the blade and stop the engine if a person or pet is within 100 feet of the machine.
- Children are often attracted to the machine and the mowing activity. Never assume children will remain where you last saw them.
- Never allow people to ride on the Mower.
- Before mowing, clear the area of objects such as rocks, toys, wire, bones, sticks, etc.
- Never remove or alter standard parts or add anything to the DR TOW-BEHIND FIELD and BRUSH MOWER, especially all shields and guards.
- Before and while moving backwards, look behind, and down for small children.
- 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 that gives off flammable vapor that can be ignited and cause a fire or explosion. Always follow these precautions:

- Never run the engine in an enclosed area or without proper ventilation as the exhaust contains carbon monoxide, an odorless, tasteless, and poisonous gas.
- Store all fuel and oil in containers specifically designed and approved for this purpose. Keep away from heat and open flame and out of the reach of children.
- Replace rubber fuel lines and grommets when worn or damaged or after 5 years of use, whichever comes first.
- Fill the gasoline tank outdoors with the engine off and after the engine has cooled completely. Don't handle gasoline if you or anyone nearby is smoking.
- If gasoline is spilled do not start the engine. Move the machine away from the area until the gas vapors have dissipated.
- Before performing engine maintenance or repairs, shut down the engine, disconnect the spark plug wire, and wait 5 minutes for the engine to cool.
- Never change the engine governor settings or modify the engine speed.
- Never check for an ignition spark with the spark plug or spark plug wires removed. Always use an approved spark tester.
- Never tamper with safety devices. Regularly check their proper operation.
- Allow the engine to cool completely before storing in any enclosed area.
- Keep combustible substances away from the engine when it is hot. Never cover the machine while the muffler is still hot.
- To reduce fire hazard, keep the engine and muffler free of debris build-up.
- Do not operate the engine with the air cleaner or the carburetor air intake cover removed.
- Do not use flammable solutions to clean the air filter.
- Never operate the engine without the muffler and deflector, if so equipped. Inspect the muffler and deflector periodically and replace if necessary.
- The muffler and engine become very hot and can cause a severe burn. Do not touch.

Slope Operation

⚠ WARNING

Use of machinery on slopes is a major factor in outdoor power equipment accidents. All slopes require caution. If mower feels uneasy on a slope, do not mow it. Always take the following precautions when using this machine on slopes:

- Operate machine up and down the face of slopes. Exercise extreme caution when changing direction on slopes.
- Never operate near drop-offs, ditches, or embankments or on slopes greater than 20 degrees.
- Never operate on wet or slippery slopes.
- Never park tow vehicle on a steep grade or slope.

General Safety

⚠ WARNING

Safe operation of the DR TOW-BEHIND FIELD and BRUSH MOWER is necessary to prevent death or serious injury. Always take the following precautions when operating this machine:

- The DR TOW-BEHIND FIELD and BRUSH MOWER is designed to mow grass and brush. Do not use it for any other purpose.
- Always mount remote control (if supplied) within easy reach of the operator's position.
- If the machine makes an unusual noise or vibration or if there are obstructions underneath the machine, shut off tow vehicle and the DR TOW-BEHIND FIELD and BRUSH MOWER engines. Wait five (5) minutes for the engine to cool. Disconnect spark plug wires, keep them away from the spark plugs and then inspect machine for clogs or loose parts. Clear any obstructions and repair and/or replace damaged parts.
- Mower blades are sharp. Wrap the blades or wear gloves and use extra caution when servicing.
- Always keep machine in good, safe operating condition. Always make certain nuts and bolts are tight. Do not use substitute hardware.
- Use the DR TOW-BEHIND FIELD and BRUSH MOWER only in daylight.
- Always give undivided attention to the machine and the surroundings. Watch for traffic when mowing near roadways.
- Disengage mower blades and exercise extreme caution when on or crossing drives, walks, or roads.
- If leaving the machine, shift tow vehicle into neutral and set parking brake; turn off tow vehicle engine and remove key. Turn off DR TOW-BEHIND FIELD and BRUSH MOWER engine and remove key.
- Do not operate mower when under the influence of alcohol, drugs, or medication.

A Note to All Users

Under California law, and the laws of some other states, the use of an internal combustion engine using hydrocarbon fuels without an engine spark arrester, is not permitted. This also applies to operation on US Forest Lands. All TOW-BEHIND 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 TOW-BEHIND FIELD and BRUSH MOWER in a safe manner. Contact us at www.DRPower.com or call 1-800-DR-OWNER (376-9637) for assistance.

Chapter 2: Assembling the DR TOW-BEHIND FIELD and BRUSH MOWER

Item	Part	Description	Qty	Figure
1	365721	BOLT - HEX - FLANGE - 1/2-13 X 3.5 - GR5	8	
2	187571	BOLT-HCS 5/16-18 X 3.75	2	
3	385991	BOLT-HEX FLANGE 5/16-18 X 1.75 GR5	4	
4	385981	BOLT-HEX FLANGE 5/16-18 X 2.5 GR8	4	
5	362891	BUSHING - SWAY BRACE	8	
6	157201	KEY-IGNITION SWITCH	2	
7	333351	NUT-NYLON LOCK FLANGED 1/2-13	8	
8	333321	NUT-NYLON LOCK FLANGED 5/16-18	10	
9	235001	PIN - COTTER 7/64 X 1.0 ZP	2	
10	255491	PIN CLEVIS - 1/2 X 2.5 in TRT	3	
11	A0000253563	PIN CLEVIS 1/2 X 4.5 in L ZP	1	
12	397351	PIN-ACTUATOR-40 mm	2	
13	160031	PIN-HITCH CLIP 1/2-9/16	4	
14	111701	SCREW - 10-32 X 0.5 TYPE F	2	
15	234991	WASHER - 0.53 ID X 1.06 OD X 0.095 - ZP	4	
16	112411	WASHER-FLAT 5/16 USS	2	
17	123211	BOLT-HCS 5/16-18 X 0.75 GR5 ZP	2	
18	110761	NUT-LOCK NYLON 5/16-18	2	

Compare the hardware of the Product Package with the “Parts Supplied” list above. If there are any questions, please contact us at www.DRPower.com.

Uncrating the PRO MAX 60T

Tools Needed:

- Crowbar
- Wire Cutter

1. Ensure the pallet is placed on relatively even ground and there is plenty of room on the right side of the machine (when standing behind engine). This will help the uncrating process as the pallet will need to completely slide out from underneath machine once built.
2. Remove Plastic and Bubble Wrap from outside of Wooden Box (***Figure 1)***.
3. Use Wire Cutter to cut Cable Ties from outside of crate and remove side, top, and crate ends with help of the Crowbar.
4. Cut the cable ties that hold the frame and wheels to the pallet and loose components ***(Figure 2).***
5. With two people, lift Frame and rotate 90 degrees clockwise. Place frame on Front side of Deck assembly, oriented as shown in (***Figure 3).*** Note the position of the Lugged tires behind the rear of machine.

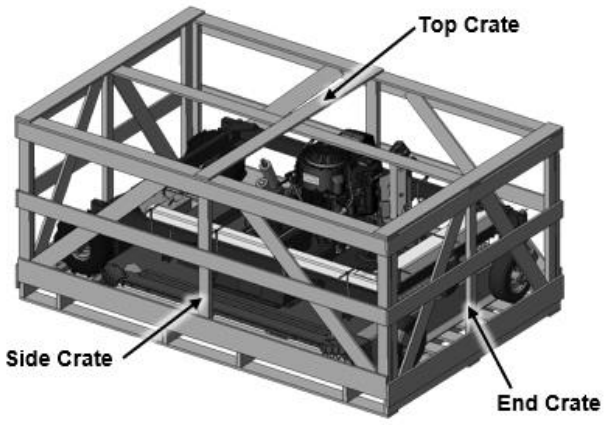
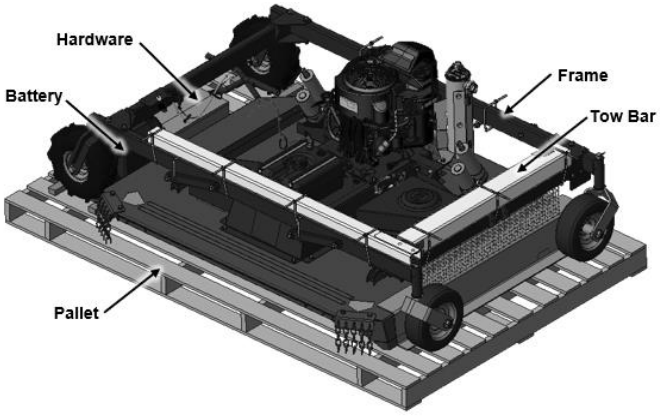


Figure 1

NOTICE

Raise Frame safely to avoid damage to Engine and Muffler.



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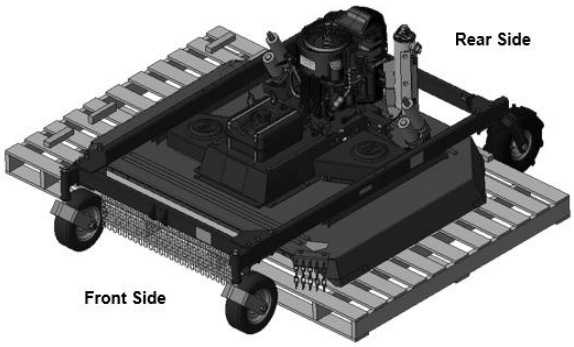

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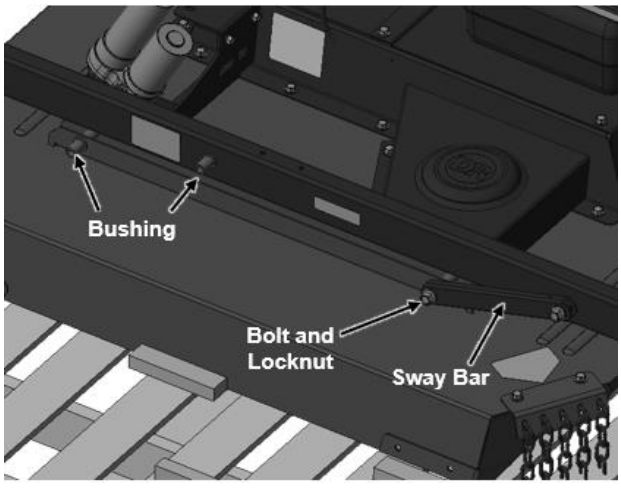


Figure 4

Attaching Frame to Deck Assembly

Tools Needed:

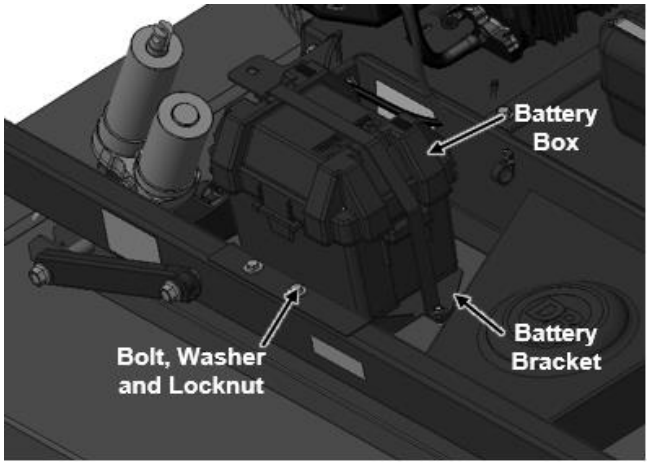
- Two ¾ in Wrenches

1. Insert all 8 bushings PN: 362891, 4 on each side of machine, going through both frame and deck ***(Figure 4).***

Note: Ensure long portion of bushing is oriented all the way through frame and deck bracket.

2. Assemble all 4 sway bars onto the outside of the machine using 8 bolts PN: 365721 and 8 flanged nuts PN: 333351. ***(Figure 4).***
3. Using two ¾ in Wrenches, tighten the Hardware to 35 ft-lb to ensure sway bars are properly secured to deck.

Note: Ensure all Sway Bars are assembled on outside of Frame, as shown in ***(Figure 4)***.



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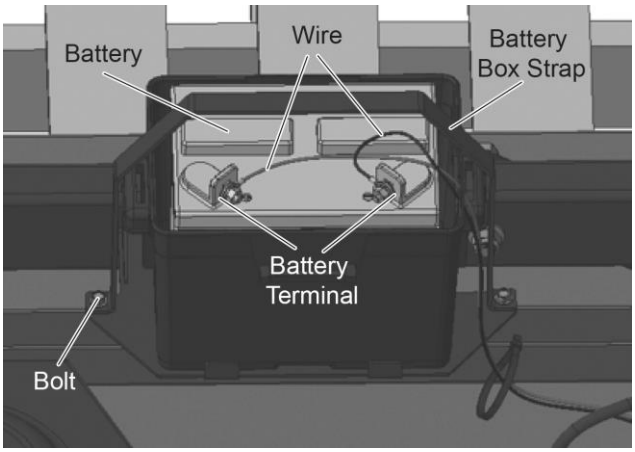


Figure 6

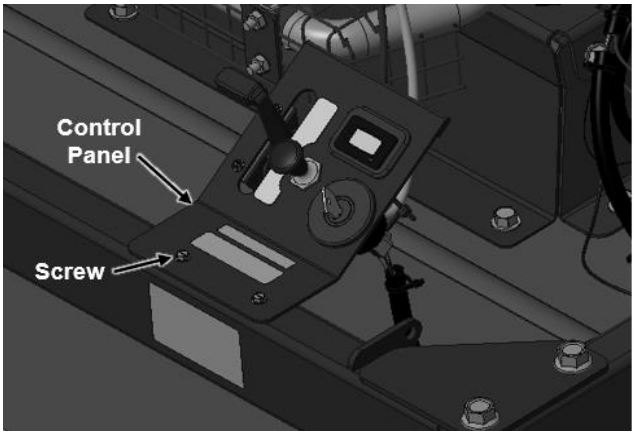


Figure 7

Attaching the Battery Box to the Frame

Tools Needed:
- Two ½ in Wrenches

1. Install Battery Bracket with Battery Box onto Frame to Right Side Support Wheel Bracket ***(Figure 5).***
2. Secure Battery Bracket to Frame with two 5/16-18 X 3.75 in Flanged Bolts PN 187571, two Washers PN: 112411, and two Flanged Locknuts PN: 333321 ***(Figure 5).***
3. Using two ½ in Wrenches, tighten Hardware.

Connecting the Battery Wires

We ship DR TOW-BEHIND FIELD and BRUSH MOWER Electric-Starting machines with the Battery Wire disconnected. This prevents the Battery from discharge during shipment. Before using the DR TOW-BEHIND FIELD and BRUSH MOWER, connect Battery Wires.

Tools Needed:
- One 3/8 in wrench and two ½ in wrenches.

1. Remove Battery Box Strap and Bolts using 3/8 in Wrench ***(Figure 6).***
2. Open Battery Box and first connect red wire to the positive (+) terminal. Next, connect the black wire to the Negative (-) terminal. Connect terminals using two ½ in wrenches, two Bolts PN: 123211, and two Nuts PN: 110761 which can be found in product pack.
3. Close Battery Box lid and re-secure the Battery Strap over the top of box with the previously removed hardware ***(Figure 6).***
4. Using a 3/8 in Wrench, tighten down battery strap to ensure Battery Box is secure.

Attaching the Control Panel to the Frame

Tools Needed:
- 3/16 in Wrench

1. Install the Control Panel to Frame Rear Side ***(Figure 7).***
2. Secure Control Panel to Frame using of two 10-32 x 0.5 in self-tapping screws PN: 111701 ***(Figure 7).***
3. Using 3/16 in Wrench, tighten Hardware.

Note: Ensure Throttle control cable and Choke cable are routed properly with no kinks or twists going to the Engine.

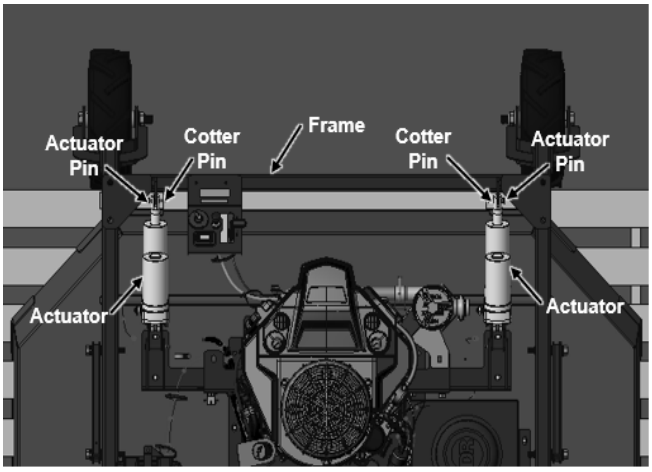


Figure 8

Figure 9

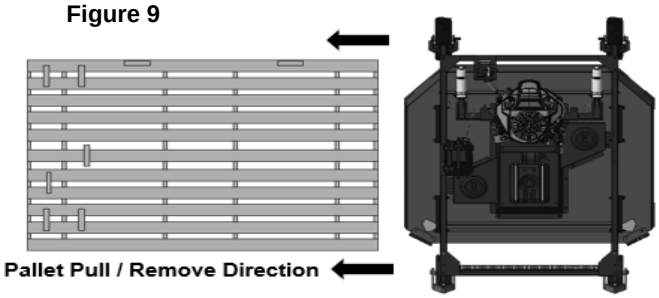


Figure 11

Attaching the Actuator to the Frame

1. Align the Frame with both the Actuators ***(Figure 8).***
2. Raise/Lower the Actuators using the remote-control box until the Actuators mounting holes line up with the Frame.
3. Insert the Actuator Pin PN: 397351 through the Actuator and Frame and secure with the use of the Cotter Pin PN: 235001 ***(Figure 8 & 9***) Do this for each Actuator.

NOTICE

Ensure Cotter Pins for each actuator bend and lock correctly with frame to ensure actuator is secured properly to deck ***(Figure 9)***.

Removing the Wooden Pallet

1. Raise the actuators until the Deck lifts off Pallet ***(Figure 10).***
2. Pull Pallet out from underneath Machine in direction shown ***(Figures 11 & 12).***

⚠ CAUTION

Keep hands clear of the Deck when raising Actuators.

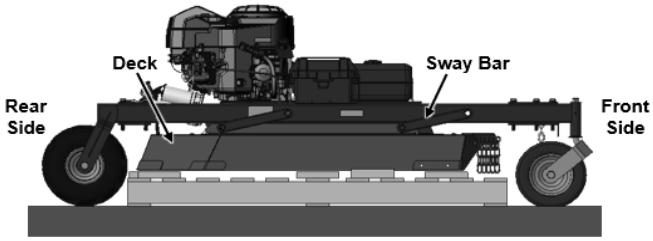


Figure 10

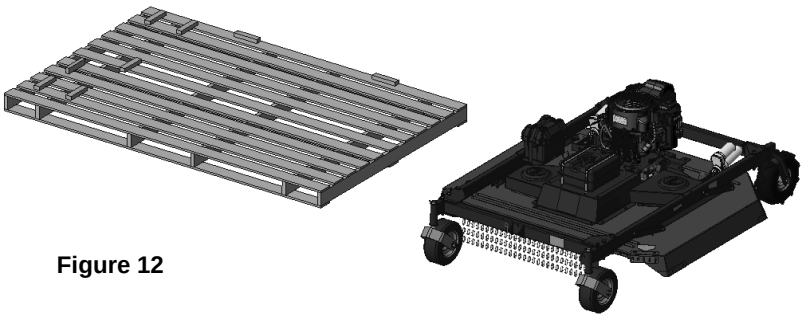


Figure 12

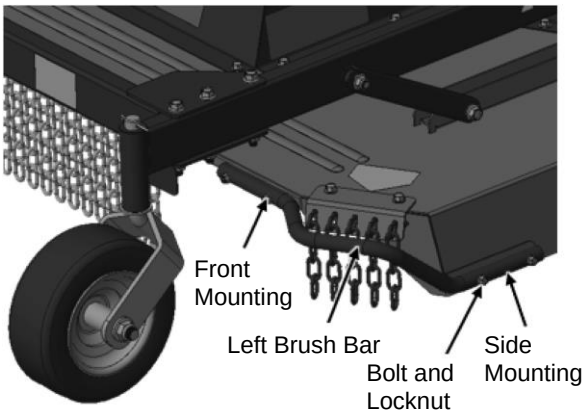


Figure 13 View of “Left Corner” of Machine

Attaching the Brush Bars to the Deck

Tools Needed:

- Two 5/16 in Wrenches

1. Install Brush bars onto each side of Machine ***(Figure 13)***.
2. There is a "left" and a "right" brush bar. Before starting installation, it is recommended to orient and place each part next to each corner of deck.
3. Starting on one side of machine, install first Brush Bar by loosely securing it to the Front Mounting surface of the Deck using Two 5/16-18 X 2.5 in Flanged Bolts PN: 385981 and Two Flanged Locknuts PN: 333321 ***(Figure 13).***
4. Loosely secure Brush Bar to Side Mounting surface of Deck with Two 5/16-18 X 1.75 in Flanged bolts PN: 385991 and Two Flanged Locknuts PN: 333321 ***(Figure 13).***
5. Once Brush Bar is oriented, use Two 5/16 in Wrenches to tighten all Four Mounting hardware locations.
6. Repeat steps 2-4 on remaining Brush Bar on opposite corner of Machine.

⚠ CAUTION

Both brush bars must be installed prior to use for safety.

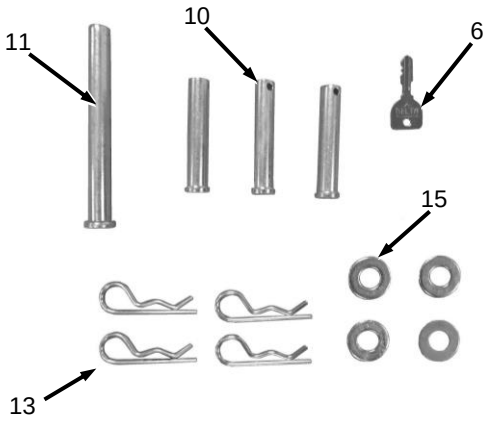


Figure 14

Assembling the DR TOW-BEHIND FIELD and BRUSH MOWER

Hardware Supplied in Product Package (Figure 14 and Table below):

Item #	Part #	Description	Qty
11	A0000253563	PIN Clevis ½ X 4.5 in L ZP	1
10	255491	Pin, Clevis, ½ in X 2-1/2 in, TRT	3
6	157201	Key, Ignition Switch	2
15	234991	Washer, SAE Flat, ½ in, ZP	4
13	160031	Pin, Hair, ½ in to 9/16 in, .12 in Wire	4

Compare the hardware of the Product Package with the "Parts Supplied" list above. If there are any questions, please contact us at www.DRPower.com.

Attaching the Tow Bar to the Push Bar

The Tow Bar can be positioned to the left, to the right, or directly behind center depending on which side of the Tow Vehicle you choose to mow. Refer to "Offset Mowing" in Chapter 4. The following steps describe installing the Offset Bracket to allow offsetting to the left side of the Tow Vehicle.

1. Secure the Offset Bracket to the Push Bar in the configuration shown (for left side offset) using the 4.5 in long Clevis Pin, Washer, and Hair Pin ***(Figure 15).***
2. Align the Tow Bar so it is pointed straight out from the Mower and install a Clevis Pin, Washer, and Hair Pin in the Offset Bracket to lock the Tow Bar into position.

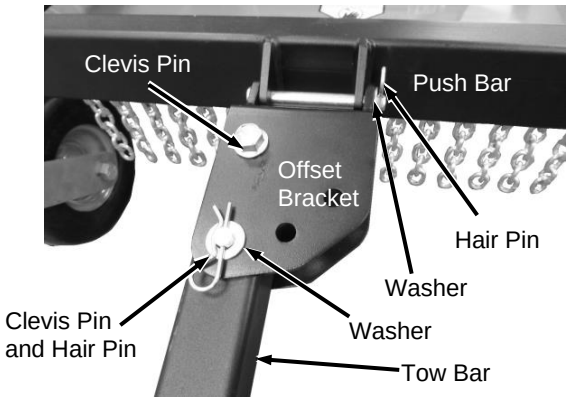


Figure 15

⚠ WARNING

Always install the Clevis Pins from the bottom with the Washers and Hair Pins on top to prevent the Hair Pin from being pulled out by tall grass or bushes.

3. Align the Tow Bar Extension with the Tow Bar and install a Clevis Pin, Washer, and Hair Pin in the Tow Bar to lock the Tow Bar Extension in place ***(Figure 16)***.

Connecting the Remote Control

Tools Needed:

- Wire Cutters
- 5/16 in Socket w/Ratchet

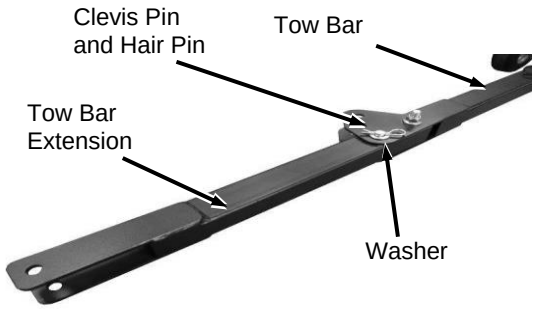


Figure 16

1. Use wire cutters to cut the cable tie that is securing the Remote Control Cable to the frame for shipping.
2. Remove the screws securing the cable clamps to the Tow Bar using a 5/16 in Socket w/Ratchet.
3. Route the Remote Control Cable over the Push Bar and on top of the Tow Bar. Leave some slack in the Remote Control Cable around the Push Bar to allow for Mower Deck movement.

4. Gently spread open the cable clamps and install them onto the Remote Control Cable, positioning the clamps on the tow bar. Keep the Control Cable flat and centered on the Tow Bar ***(Figure 17).***

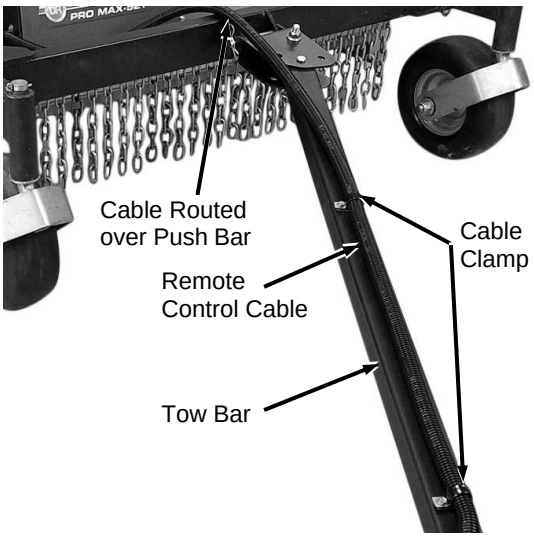


Figure 17

Chapter 3: Setting Up the DR TOW-BEHIND FIELD and BRUSH MOWER

It may be helpful to familiarize yourself with the Controls and Features of your DR TOW-BEHIND FIELD and BRUSH MOWER by reviewing ***Figure 18*** before beginning these procedures. If you have any questions at all, please feel free to contact us at www.DRPower.com.

DR TOW-BEHIND FIELD and BRUSH MOWER Controls and Features

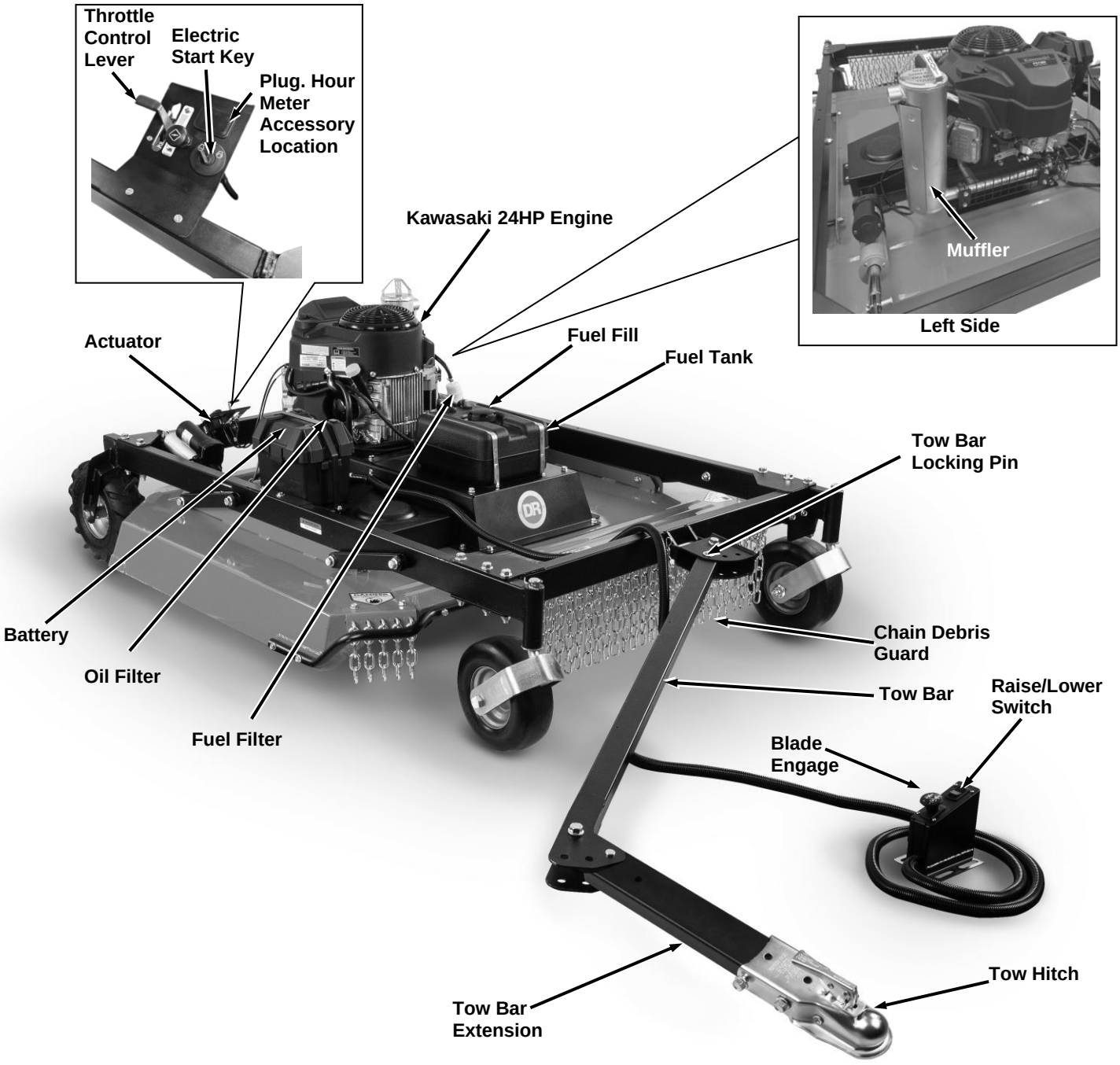


Figure 18

Specifications

	PRO MAX 60T
Engine	See your Engine Manual for Oil Capacity and other Engine specifications.
Starting System	Electric Start
Fuel Tank	2.5 gal. (9.46 L), Gasoline, Unleaded
Battery	12 Volt 14.2 Ah
Wheels	Front: 11 x 4-5, Flat Free. Rear: 13 x 5-6, Lugged (tubeless)
Tether Length	14 ft-5 in
Distance From Centerline to Outer Cutting Edge	72 in - full offset 53.5 in - mid offset
Number of Offset Positions	5 (2 Left, 2 Right, 1 Center)
Adjustable Cutting Height	From 4 in min. to 8 in max.
Cutting Width	60 in
Cutting Capacity	6 ft high grass, 8 ft high weeds & brush, 3 in thick saplings
Blade Tip Speed	18,500 ft/min
Blades	31.5 in fixed blades
Deck	12 GA Welded Steel
Discharge	Rear
Spindle	1-3/8 in Dia. Shaft with 2 Sealed 30 mm Bearings
Belt	Fix Spacing: B108K / 5L1110K
Electric Clutch	95 ft-lb
Fuses	20 AMP Type AGC Fuse (Engine Alternator Circuit) 20 AMP Type AGC Fuse (Lift Harness Circuit) 7 AMP Type AGC Fuse (Clutch Circuit)
Max Speed Mow/Tow	5 mph on flat terrain, 4 mph on rough terrain
Tongue Weight	11 lb
Machine Dimensions	156 in L x 66 in W x 32.5 in H
Machine Weight	650 lb (with battery)

Adding Oil and Gasoline

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.

Engine Oil and Fuel Capacities		
	Engine Oil, refer to Engine Manual for weight recommendation.	Fuel (Unleaded)
Kawasaki – 24 hp	2.0 liters	2.5 gal (9.46 L)

NOTICE

- Oil must be added oil before starting the engine. This machine is shipped without oil. Traces of oil may be in the reservoir from factory testing, but OIL MUST BE ADDED 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 NOT** be screwed down during level checking procedure below.

Note: Several different weights of Oil may be used in this Engine depending on your operating temperatures. Please refer to your Engine Owner's Manual to view the recommended Oil weight. The Engine Owner's Manual can be found in the Product Pack shipped with this Machine.

1. Place the machine on a level surface and remove the Oil Fill Cap/Dipstick ***(Figure 19).*** Initially pour 32 oz of the Engine Manufacture's recommended Oil based on operating temperature range (found in Engine Owner's Manual). This should be about half the required Oil.
2. Remove the Oil Gauge (A) and wipe it with a clean cloth.
3. Continue to slowly pour an additional 32 oz of Oil, frequently checking the Oil Fill Gauge by following the steps below.
4. Insert the Oil Gauge (A) into Tube (B), but do not screw it in.
5. Remove the oil gauge (A) to check the oil level. The level should be between “ADD” and “FULL” marks ***(Figure 20)***. DO NOT overfill.
6. Install and tighten the oil gauge (A).

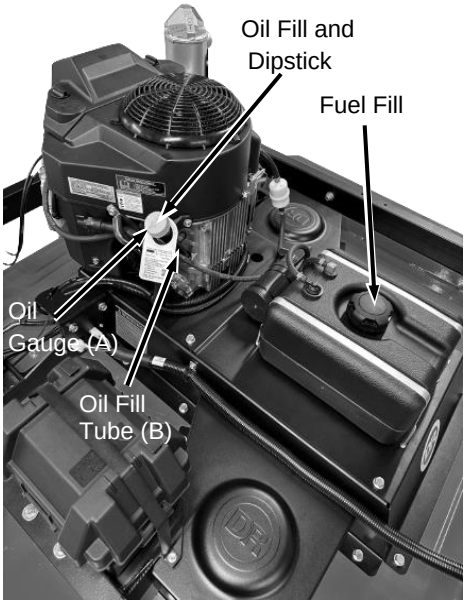


Figure 19

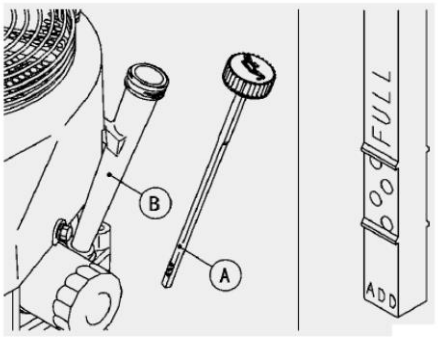


Figure 20

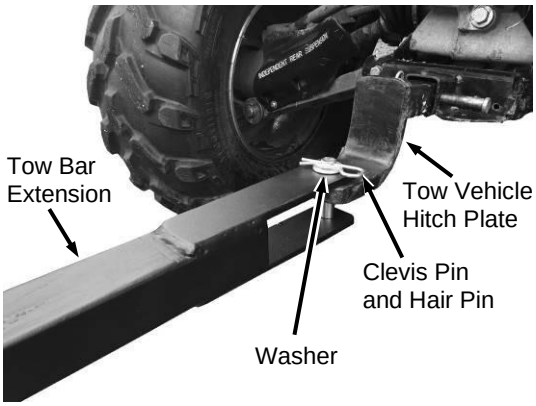


Figure 21

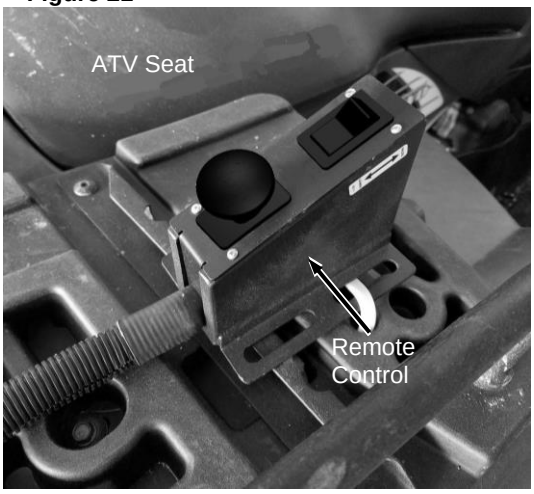


Figure 22a: ATV Mounting

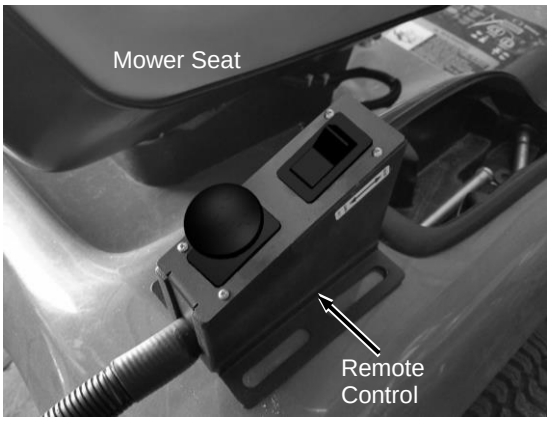


Figure 22b: Mower Mounting

Figure 23

Connecting the DR TOW-BEHIND FIELD and BRUSH MOWER to your Tow Vehicle

The Pin-Type Hitch that comes installed on the DR TOW-BEHIND FIELD and BRUSH MOWER Tow Bar is a quick and easy way to attach to the Tow Vehicles with a hole in the Hitch Plate. A Ball Hitch Kit is also provided if you would prefer attachment to a 2 in Ball on the Tow vehicle. Go to the next page for info on installation and operation of the Ball Hitch.

1. Move your Tow Vehicle to a flat area and set the Parking Brake.
2. Align the Tow Hitch to the hole in the center of your Hitch Plate with the top portion of the Tow Hitch Plate above the Hitch Plate and the bottom portion below ***(Figure 21)***.
3. Secure the Hitch with the Clevis Pin PN: 255491, Hair Pin PN: 160031 and Washer PN: 234991.

Attaching the Remote Control

NOTICE

Be sure to route the Remote Control Cable away from the muffler of the Tow Vehicle to prevent damage to the Cable.

1. Position the Remote Control on your Tow Vehicle within reach of the seated Tow Vehicle driver ***(Figure 22a and 22b).***
2. Secure the Remote Control to a fixed object on your Tow Vehicle using the mounting holes at either end of the Control Box with Cable Ties or equivalent.

Tip: Mounting the Remote Control on the side of the Tow Vehicle will make it easier to access while observing the mower.

Checking the Rear Tire Pressure

Tools Needed:

- Tire Pressure Gauge
- Air Compressor

1. Remove the Valve Stem Protective Cap. ***(Figure 23)*** and check the tire pressure with a Tire Pressure Gauge.
2. Compare the tire pressure reading from Step 1 with the manufacturer's recommended tire pressure 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.

⚠ WARNING

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

Installing and Operating the Ball Hitch Kit (365781)

Parts Supplied (Figure 24):

Item #	Part #	Description	Qty
1	246481	Receiver, 2 in, Class II,	1
2	363081	Extension, Tow Bar, Ball Hitch	1
3	253121	Chains, Safety, 36 in, Individual	2
4	333491	Bolt, Hex, Flange, 1/2-13 X 5 in	2
5	234991	Washer, .53 in ID X 1.06 in OD X .095 in, ZP	4
6	333351	Nut, Nylon Lock, Flanged, 1/2-13	2
7	334431	Link, Chain Threaded Connector	2

Compare the contents of the Parts Box with the "Parts Supplied" list above and ***(Figure 1)***. If you have any questions, please contact us at www.DRPower.com or call 1-800-DR-OWNER (376-9637) for assistance.

Tools Needed:

- Two ¾ in Wrenches
- 10 mm Wrench

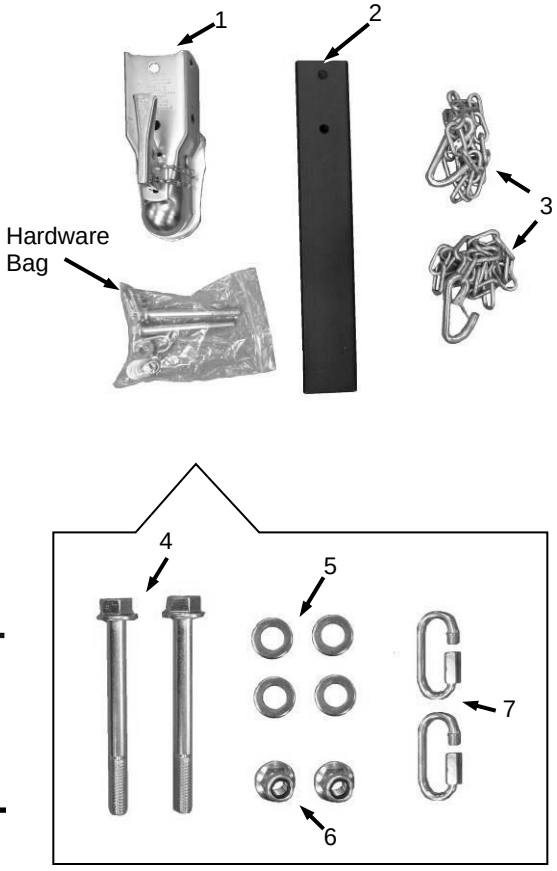


Figure 24

⚠ WARNING

Before performing this kit installation, you must first shut off the engine, wait five minutes to allow parts to cool and disconnect the spark plug wires, keeping them away from the spark plugs.

Installing the Ball Hitch Kit

1. Attach a Threaded Chain Connector to the end of each safety Chain and tighten with a 10 mm Wrench ***(Figure 25).***

Note: To attach the Chains in Step 3, position the Chain Connector so that the shorter end is on the side connected to the Safety Chains ***(Figure 25).***

2. Position the Receiver on the Ball Hitch Extension from the kit and secure the Front End loosely by hand with a 1/2-13 x 5 in Flanged Bolt, Flanged Locknut, and two Washers ***(Figure 26).***
3. Secure the Rear End of the Receiver and the Safety Chains loosely by hand with a 1/2-13 x 5 in Flanged Bolt, Flanged Locknut, and two Washers.

Note: Position each Washer between the Safety Chain and the Receiver.

4. Using two ¾ in Wrenches, tighten the Hardware from Steps 2 and 3.

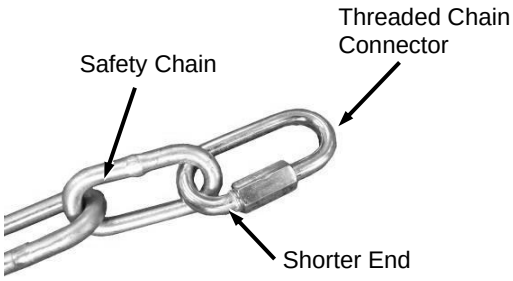


Figure 25

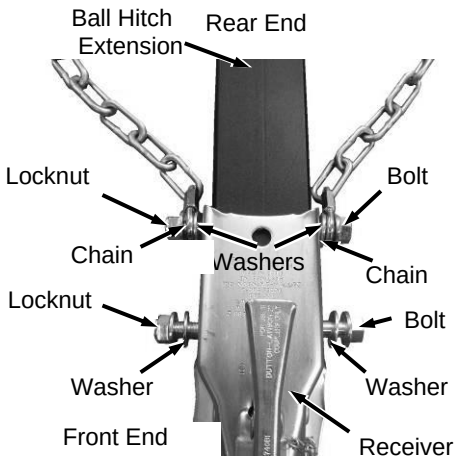


Figure 26

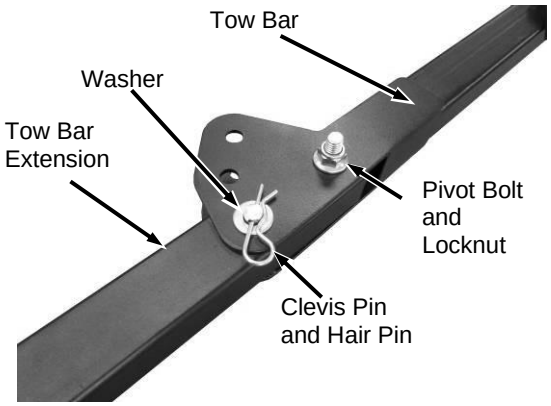


Figure 27

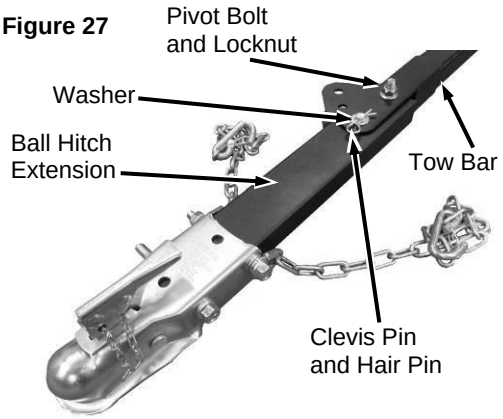


Figure 28

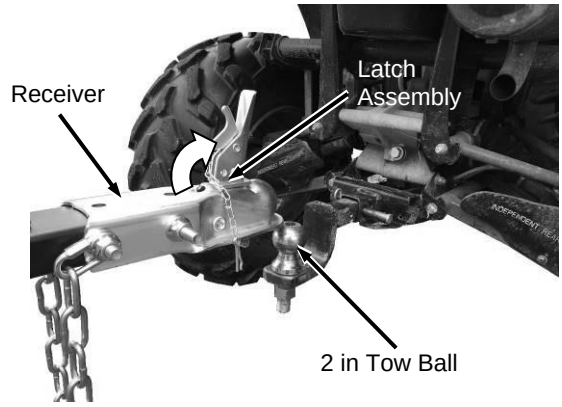


Figure 29

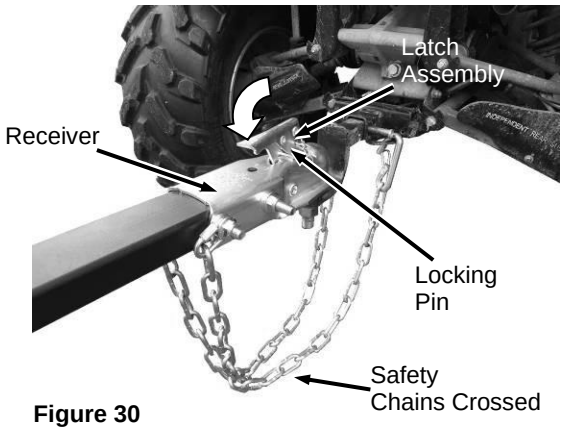


Figure 30

5. Remove the Hair Pin, Washer, and Clevis Pin from the Tow Bar ***(Figure 27).***
6. Remove the Pivot Bolt and Locknut that is securing the Tow Bar Extension to the Tow Bar using two ¾ in Wrenches. Store the Tow Bar Extension for future use.
7. Secure the Ball Hitch Extension from the kit to the Tow Bar using the Pivot Bolt and Locknut you removed in the last step ***(Figure 28).***
8. Reinstall the Clevis Pin, Washer, and Hair Pin in the Tow Bar to lock the Ball Hitch Extension in place.

Note: Make sure the Washer and Hair Pin are always installed on the top side. This prevents the Hair Pin from catching on tall grass.

Connecting the DR TOW-BEHIND FIELD and BRUSH MOWER to the Tow Vehicle

⚠ WARNING

- The Ball Hitch Kit for the DR TOW-BEHIND FIELD and BRUSH MOWER is designed for ATV, UTV, or Tractors with a 2 in Ball installed for towing.
- Do not exceed 10 mph when towing and 5 mph when mowing.
- Never tow on roads.
- Never tow with a truck or other road vehicle.

1. Remove the Locking Pin and Pull the Latch assembly on the Receiver up into the open position ***(Figure 29).*** Position the Receiver onto the tow vehicle's Tow Ball (must be a 2 in Tow Ball).
2. Close the Latch Assembly on the Tow Hitch Assembly to lock it onto the Tow Ball ***(Figure 30)***. Attach the towing Safety Chains to the tow vehicle ensuring there is enough slack for turning.

Note: When attaching the Safety Chains, attach the left chain to the right anchor and the right chain to the left anchor so that that the Safety Chains cross each other under the Ball Hitch ***(Figure 30).***

3. Insert the Locking Pin into the hole in the Latch Assembly.

⚠ WARNING

Making sure the mower is securely attached to the ATV, UTV, or Tractor is the responsibility of the owner/operator. Failure to securely attach the mower can cause loss of control of the tow vehicle or the mower being separated from the vehicle, resulting in serious injury or death.

Receiver Adjustment Check

1. Place a 2 in Ball in the socket of the Receiver and close the Latch Assembly ***(Figure 31)***. Verify that the Locking Trigger is properly engaged in its detent.
2. Pull on the Ball and/or Receiver, trying to remove the Ball from the socket. If the Ball moves more than 1/16 in within the Receiver's socket, the Clamp requires adjustment. Follow the proper adjustment procedure in the following steps.

Receiver Adjustment

3. With the 2 in Ball in the socket of the Receiver, close the Latch of the Receiver completely ***(Figure 32)***. Verify the Locking Trigger is properly engaged in its detent.
4. Tighten the Lock Nut on the underside of the Receiver until the Spring between the Nut and the Clamp is fully compressed. Then back off the Lock Nut ½ turn or just enough that the Latch can clamp and unclamp from the Ball.

If you have any questions, please contact us at www.DRPower.com or call 1-800-DR-OWNER (376-9637) for assistance.

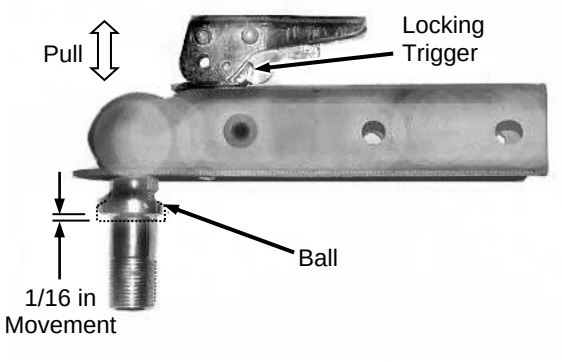


Figure 31

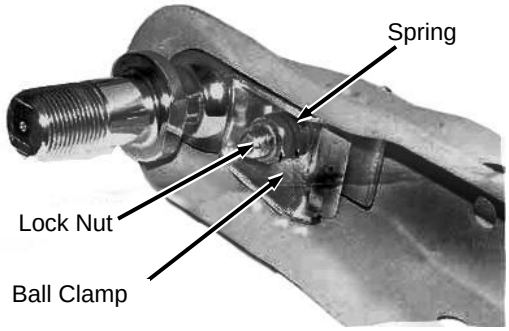


Figure 32

Chapter 4: Operating the DR TOW-BEHIND FIELD and BRUSH MOWER

This chapter covers the procedures for starting and stopping the new DR TOW-BEHIND FIELD and BRUSH MOWER and discusses basic operation features. It may be helpful to review the DR TOW-BEHIND FIELD and BRUSH MOWER Controls and Features before reading this chapter.

⚠ WARNING

- This machine is designed for cutting grass and brush. Never use this machine for any other purpose as it could cause serious injury.
- Contact with internal rotating parts will cause serious personal injury. Never put hands, face, feet, or clothing under the deck or near the discharge area with the engine running.
- Before performing any maintenance procedure or inspection, stop the Engine and wait five (5) minutes to allow all parts to stop and cool. Disconnect the spark plug wires keeping them away from the spark plugs.

Operating Parameters

We recommend a few types of Tow Vehicles for the DR TOW-BEHIND FIELD and BRUSH MOWER. The Tow Vehicle may be either 2 or 4-wheel drive, but some vehicle types are not suitable for rough, hilly terrain or heavy brush conditions. See the Tow Vehicle Restrictions section.

- ATV 420 cc minimum
- Lawn/Garden Tractor (20 hp and above and weighing at least 600 pounds)
- Utility Vehicle
- Compact or Sub-Compact Tractor

Tow Vehicle Restrictions:

- Be able to secure the Blade Engage/Disengage Remote Control of the DR TOW-BEHIND FIELD and BRUSH MOWER within easy reach of the driver seated on the Tow Vehicle.
- Riding Lawn Mowers with Engines under 20 hp and weighing less than 600 pounds are not suitable for use on slopes greater than 5º.
- Never operate the DR TOW-BEHIND FIELD and BRUSH MOWER on slopes greater than 20º using any type of Tow Vehicle.
- If the Tow Vehicle will not travel by itself over the terrain, then it will not be suitable as a Tow Vehicle.

Tip: Riding Lawn Mowers will work best as a Tow Vehicle with their cutting deck removed.

⚠ CAUTION

- We do not recommend driving over 5 mph on flat terrain and over 4 mph on rough terrain while operating the DR TOW-BEHIND FIELD and BRUSH MOWER.
- Never use a truck (2 or 4wd) or jeep to operate the DR TOW-BEHIND FIELD and BRUSH MOWER. It would be difficult to see and operate the mower controls from these types of tow vehicles. Using these vehicles will void the DR TOW-BEHIND FIELD and BRUSH MOWER warranty.

Before Starting the Engine

⚠ WARNING

Inspect the area where you will be working. The site must be free of potentially hazardous obstacles such as glass, large stones, sticks, wire, rope, and string-like materials. Make sure there are no people or animals in the area around the DR TOW-BEHIND FIELD and BRUSH MOWER.

1. Check Oil level every time before using the machine. See the Engine Owner's Manual for more detailed information.
2. Check Gasoline level.
3. Open Fuel Shut-Off Valve on the left-hand side of the Mower (***Figure33)***.
4. Make sure Blade Control Switch is pushed down to the disengaged position (***Figure 33***).

Note: Blade Control Switch must be pushed down, or the Engine will not start.

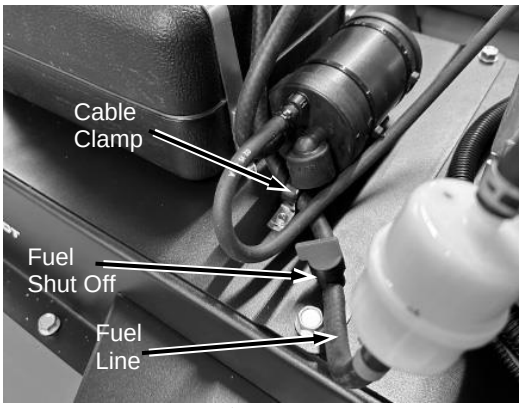


Figure 33

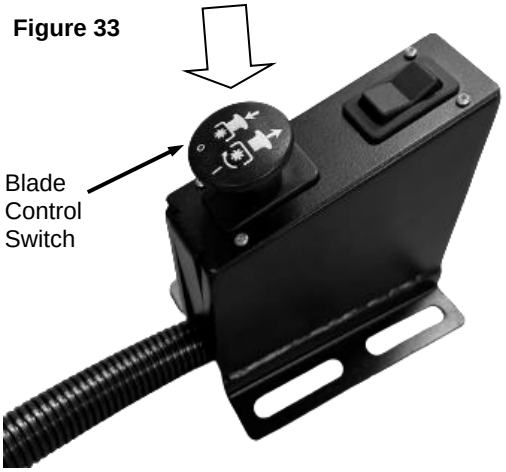


Figure 34

Starting

1. Ensure Blade Control Switch is pushed down ***(Figure 34).***
2. When starting a cold Engine, push the Throttle Control Lever down to the position. Engage the Choke by pulling up the Choke Pull ***(Figure 35)***. When starting an already warm Engine, push the Choke Pull down and ensure the Throttle Control Level remains the same at the position.
3. Turn the Key Switch to the Start position until the Engine starts, then release. The Key will snap back to the center On position and the Engine will continue to run.
4. Once the Engine has started, adjust the Choke Pull back into the down seated position to disengage the Choke. Adjust Throttle Control Lever to the position for maximum performance.

Stopping the Engine

1. Disengage Blades by pushing Blade Control Switch down ***(Figure 33).***
2. Move Throttle Control Lever all the way down to the Idle position and turn Key to Stop ***(Figure 35).***
3. Remove the Key for safety.

Note: Close Fuel Shut-Off Valve when transporting or storing the DR TOW-BEHIND FIELD and BRUSH MOWER ***(Figure 33).***

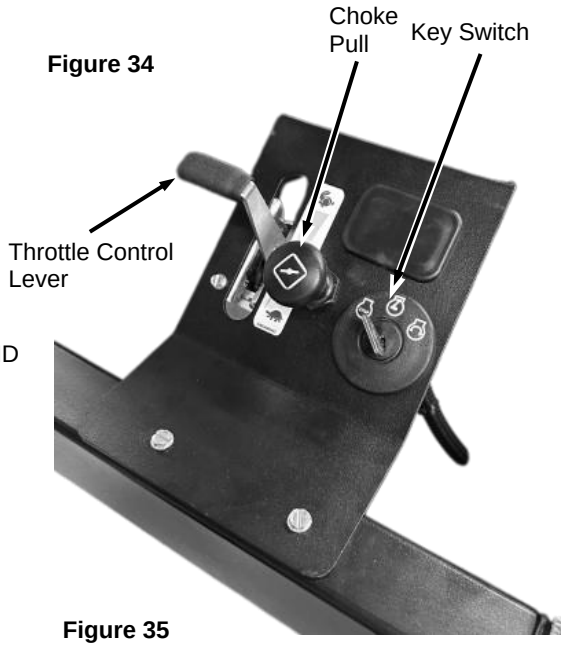


Figure 35

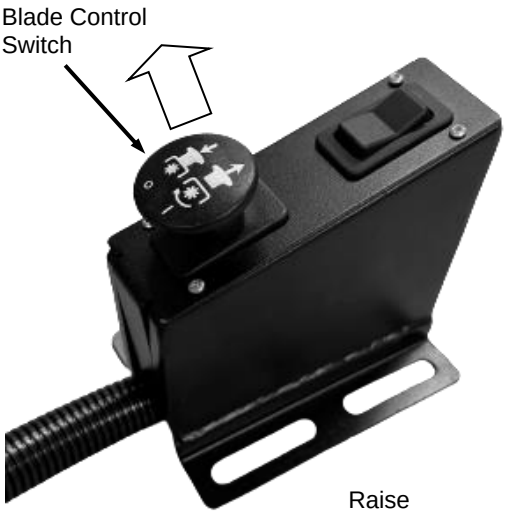


Figure 36

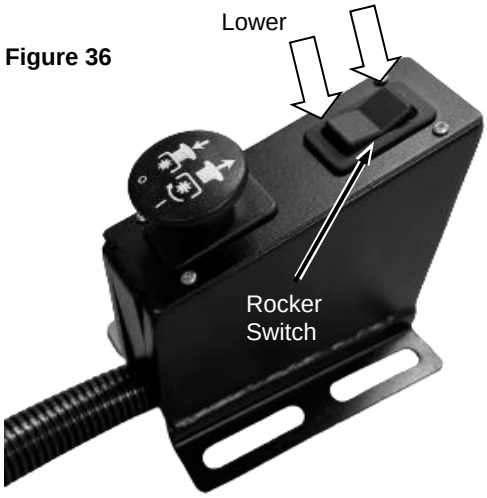


Figure 37

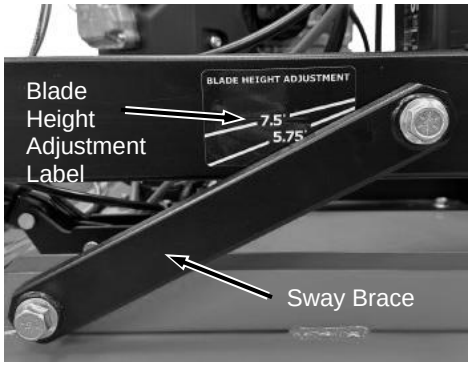


Figure 38

Engaging the Blades

1. Engage Blades by pulling up on Blade Control Switch ***(Figure 36)***.

Stopping the Blades

1. Push down on Blade Control Switch ***(Figure 36).***

Adjusting the Mower Deck Height

⚠ WARNING

- Shut off Brush Mower Engine before adjusting Deck height or serious injury may result. Blades could sever feet if they go under the deck with the Engine running.
- Never get off Tow Vehicle without first stopping Blades and shutting off Tow Vehicle Engine.

⚠ CAUTION

Keep feet clear of Mower Deck when adjusting height. Failing to do so, could pinch feet if they under Deck.

Note: The DR TOW-BEHIND FIELD and BRUSH MOWER Deck cutting Height ranges from a minimum of 4 in to a maximum of 7.5 in.

1. To lower cutting Height of Mower, press “Lower” on Rocker Switch ***(Figure 37)*** until Sway Brace is aligned with desired cutting height lines on Height Adjust label ***(Figure 38).***
2. To raise cutting Height, press “Raise” on Rocker Switch until Sway Brace is aligned with desired cutting height lines on Height Adjust label.

Offset Mowing

The Tow Bar allows it to offset the cutting path of the DR TOW-BEHIND FIELD and BRUSH MOWER up to 72 in from the center of the Tow Vehicle. The provided offset positions are “No Offset” (in line with Tow Vehicle), “Middle Offset” (53-1/2 in from center of Tow Vehicle) or “Full Offset” (72 in from center of the Tow Vehicle). Offset mowing allows user to mow closer to equipment, trees, and fences while Tow Vehicle stays at a safer distance. It also allows user to drive in an area already cut and not through grass and brush that hasn’t been cut yet.

See section Changing the Tow Bar Offset Direction to allow offsetting Mower to left side of Tow Vehicle.

⚠ CAUTION

When performing offset mowing, always be sure that the Tow Bar offset, and the Tow Bar Extension offset match (Figure 38). This ensures the DR TOW-BEHIND FIELD and BRUSH MOWER will track parallel to the tow vehicle path.

Offsetting the Tow Bar:

1. Remove Hair Pin, Washer, and Clevis Pin that secures Tow Bar in Offset Bracket ***(Figure 40).***
2. Rotate Tow bar to Desired Offset (No Offset, Middle Offset, or Full Offset).
3. Reinstall Clevis Pin, Washer, and Hair Pin to Lock Tow Bar in Place.

⚠ WARNING

Always install Clevis Pins from bottom with Washers and Hair Pins on top to prevent Hair Pin from being pulled out by tall grass or bushes.

Offsetting the Tow Bar Extension:

1. Remove Hair Pin, Washer, and Clevis Pin that secures Tow Bar Extension to Tow Bar ***(Figure 41).***
2. Rotate Tow Bar Extension so Offset angle is the same as at the Offset Bracket (No Offset, Middle Offset, or Full Offset).
3. Reinstall Clevis Pin, Washer, and Hair Pin to Lock Tow Bar Extension in Place.

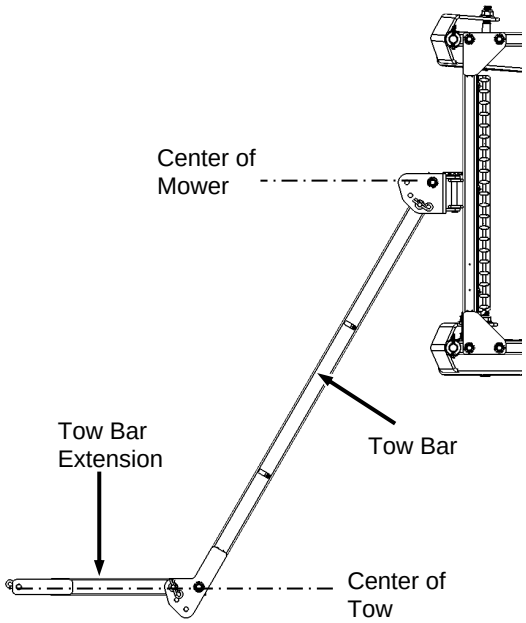
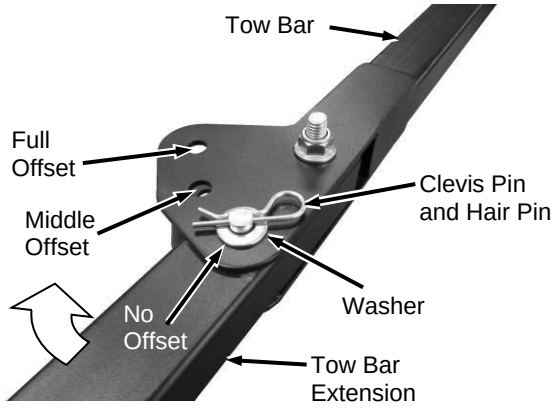


Figure 39: Full Offset



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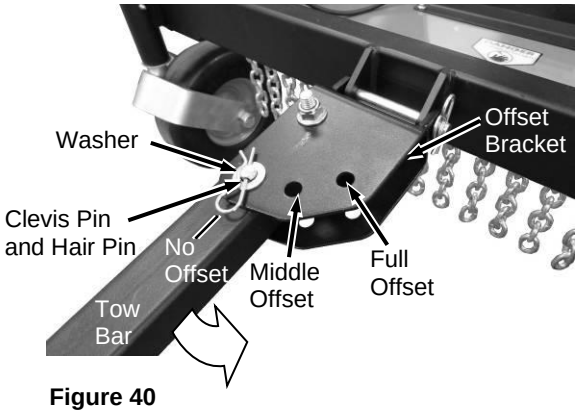

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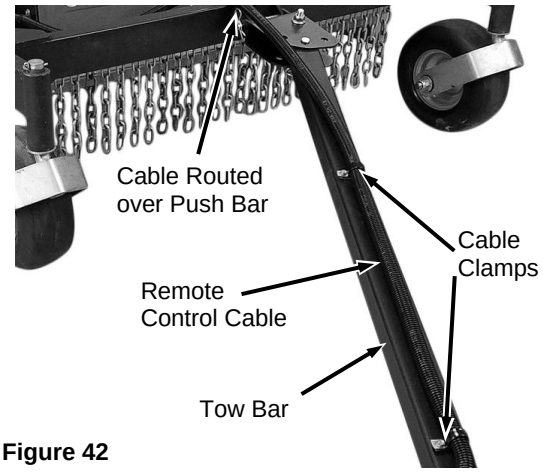


Figure 42

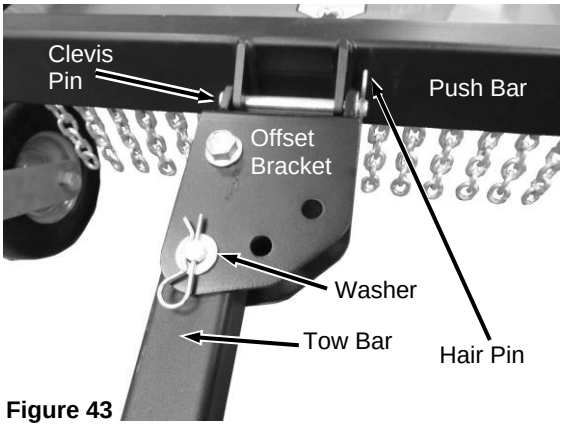


Figure 43

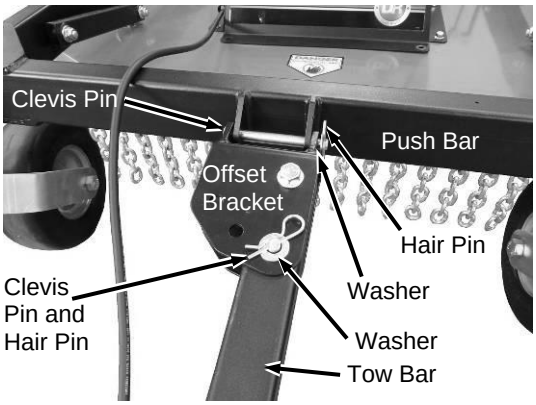


Figure 44

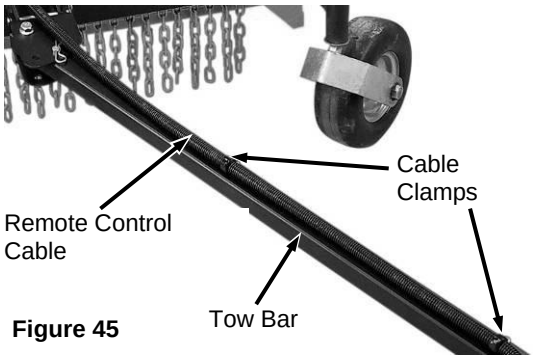


Figure 45

Changing the Tow Bar Offset Direction

Tow Bar can be installed for offsetting to right or left depending on which side of tow vehicle user chooses to mow. The following steps describe installing Offset Bracket to allow offsetting to left side of Tow Vehicle.

Tools Needed:

- 5/16 in Socket w/Ratchet

1. Remove Screws securing Cable Clamps and Remote Control Cable to the Tow Bar using a 5/16 in Socket w/Ratchet ***(Figure 42)***.
2. Support Tow Bar when removing Hair Pin, Washer, and Clevis Pin that secures the Offset Bracket to Push Bar ***(Figure 43)***.
3. Turn Tow Bar over to position Offset Bracket for left side offset and reattach to Push Bar with the Hair Pin, Washer, and Clevis Pin ***(Figure 44)***.
4. Remove Clamps from Remote Control Cable and rotate so that they are facing the opposite direction, then reinstall them onto the cable ***(Figure 45)***.
5. Route cable over the Tow Bar and line up holes in Cable Clamps with holes in Tow Bar. Keep Cable flat and centered on Tow Bar.
6. Secure Cable Clamps to Tow Bar with Screws, using a 5/16 in Socket w/Ratchet.
7. Remove Hair Pins, Washers, and Clevis Pins that are on Tow Bar and Tow Bar Extension offsets and reinstall with Washers and Hair Pins on top.
8. To adjust offset, see section “Offset Mowing”.

⚠ WARNING

Always install Clevis Pins from bottom with Washers and Hair Pins on top to prevent the Hair Pin from being pulled out by tall grass or bushes.

Slopes and Uneven Terrain

⚠ WARNING

- Check owner's manual of the tow vehicle to determine its recommended towing capabilities on slopes.
- When operating DR TOW-BEHIND FIELD and BRUSH MOWER over uneven terrain or slopes, use extreme caution not to tip over machine.
- Never use DR TOW-BEHIND FIELD and BRUSH MOWER on slopes greater than 20 degrees. Doing so could result in serious injury or damage to machine.
- If mowing on sloping terrain less than 20 degrees, mow up and down, never across the slope, for better control.

If the Machine Gets Hung Up

⚠ WARNING

- To leave tow vehicle to clear debris from mower deck, set parking brake and shut off tow vehicle engine, disengage mower blades, shut off DR TOW-BEHIND FIELD and BRUSH MOWER engine, and disconnect spark plug wires.
- Never touch exhaust areas when reaching for spark plugs; they may be very hot.

1. Disengage Blades and STOP Engine. NEVER try to free machine from stumps or debris with blades engaged.
2. Try driving over or backing away from obstacles.

Cutting Brush and Saplings

- This machine can cut up to 3-inch saplings. Anything over this size should not be cut by use of this machine.
- When cutting wood material, small saplings, etc., allow the machine to ride up and over material slowly. Adjust the forward speed to varying conditions.
- After cutting brush, etc., it may warrant mowing over it again to remove any remaining branches. It works best to mow from trunk end toward top as brush lies on the ground.

Cutting Wet and Heavy Growth

- Avoid steep slopes and other slippery areas.
- Use a lower, slower speed when mowing in wet conditions.

Heavy Impacts

- If the machine stalls due to a severe, unintended, impact, immediately shut off the machine.
- With the machine shut off, inspect both blade assemblies for bent or worn blades.
- With the machine shut off, inspect and retorque both bolts that secure the blade assemblies. Refer to "Removing and Replacing the Fixed Blades".

Chapter 5: Maintaining the DR TOW-BEHIND FIELD and BRUSH MOWER

This chapter covers regular maintenance procedures that will ensure the best performance and long life of the DR TOW-BEHIND FIELD and BRUSH MOWER. For Engine maintenance, please refer to the Engine Owner's Manual that came with the machine.

⚠ WARNING

When performing any adjustment or maintenance, first disengage the Blade, shut off the engine, wait five minutes to allow parts to cool, and disconnect the spark plug wires, keeping them away from the spark plugs.

Service intervals listed in the checklist below supersede those listed in the Engine Owner's Manual.

Regular Maintenance Checklist

Note: Consider the service intervals shown as maximum under normal operating conditions. Increase frequencies under extremely dirty or dusty conditions.

PROCEDURE	BEFORE EACH USE	EVERY 25 HOURS	EVERY 100 HOURS
Check Engine Oil Level	▲		
Check General Condition, e.g., nuts, bolts, welds, etc.	▲		
Check the Blades Sharpness	▲		
Clean Engine Exterior & Cooling Fins	▲		
Check Cable connections		▲	
Check Tire Pressure of rear Wheels (psi on side of tire)		▲	
Change Engine Oil and Filter. Note: 1st time after 5 hours		▲	
Replace Air Filter		▲	
Lubricate Wheel Bearings		▲	
Blade Belt		▲	
Replace Spark Plug(s)			▲
Replace In-line Gas Filter			▲

Figure 46

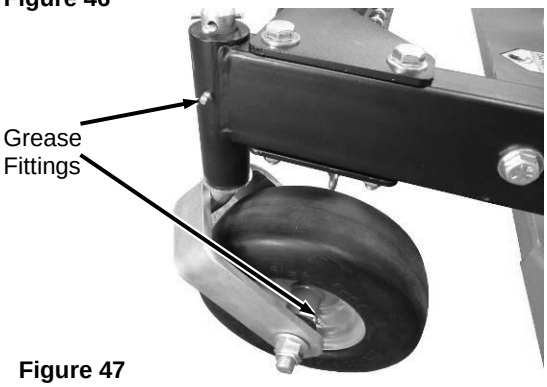


Figure 47

Lubrication

Tools and Supplies Needed:

- Grease gun with Multipurpose Automotive Grease
- Clean Rags

Lubricate Wheel Bearings and Casters:

1. Clean Grease Fitting with a clean Rag ***(Figures 46 and 47)***.
2. Lubricate each Rear Wheel and Caster Shaft with Multipurpose Automotive Grease using a grease gun on Grease Fitting.

Removing and Replacing the Engine Oil and Filter

Note: Refer to Engine Owner's manual for more detailed instructions for Engine maintenance. Drain oil when Engine is warm. Warm oil drains quickly and completely.

Tools and Supplies Needed:

- Oil Filter Wrench (available at local auto parts or hardware store)
- Rags and an approved container for used oil
- Engine Oil, refer to Engine Manual for weight recommendation.

1. Remove Oil Fill Cap/Dipstick ***(Figure 48).***
2. Turn Oil Drain Cap a quarter of a turn counterclockwise and open end of Drain Hose Assembly.
3. Position an appropriate drain container near Drain Hose.
4. Remove Oil Drain Hose Assembly from Bracket and lower cap end over the Container to drain.
5. The Engine Oil Filter is located on the side of the Engine ***(Figure 49).*** Using an Oil Filter Wrench, or grasping the Oil Filter firmly with your hand, unscrew the Oil Filter counterclockwise from the Engine.

Note: Be sure old filter gasket comes off with filter.

6. Wipe mounting base of the Oil Filter with a clean cloth.
7. Apply a thin coat of clean motor oil to new Oil Filter Gasket. Do not use grease or used oil.
8. Line up threads carefully to avoid cross threading and screw new Oil Filter on until the Filter Gasket contacts base. Tighten Oil Filter 3/4 to 1 turn. Do not over tighten.
9. Mount Oil Drain Hose Assembly onto Bracket and replace Oil Fill Cap.
10. Refill oil by following instructions in Chapter 3.

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

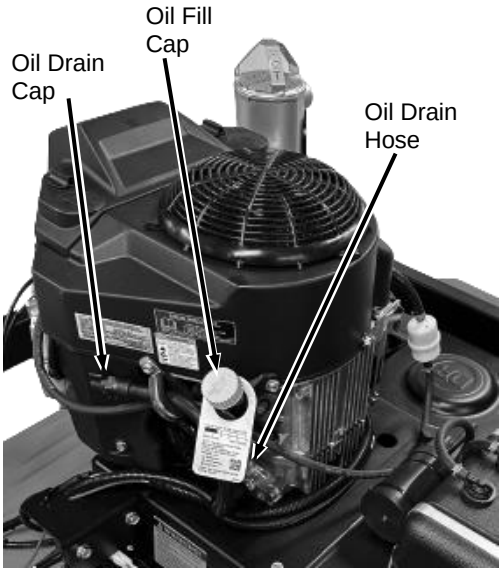


Figure 48

Figure 49

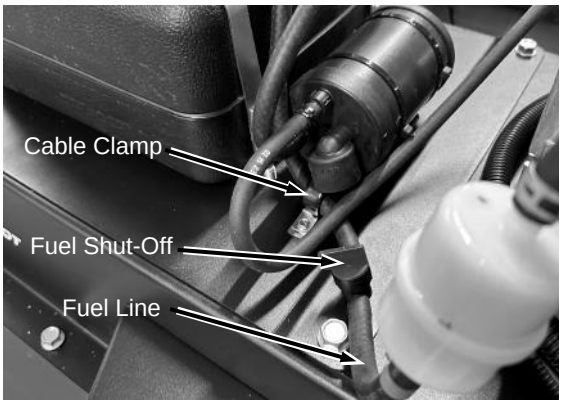


Figure 50

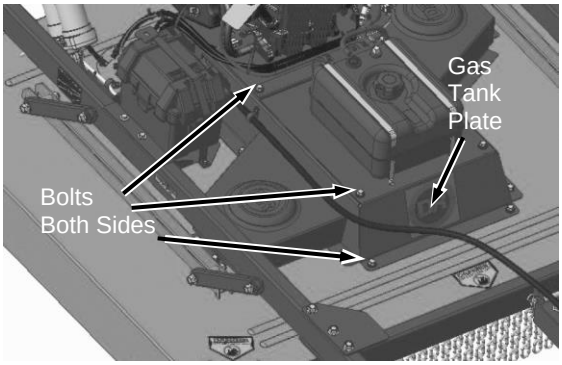


Figure 51

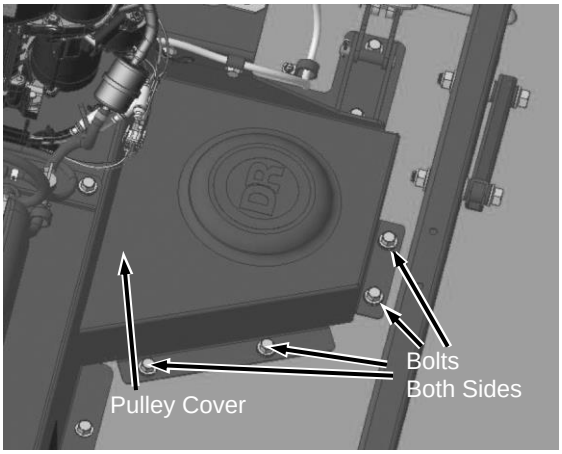


Figure 52

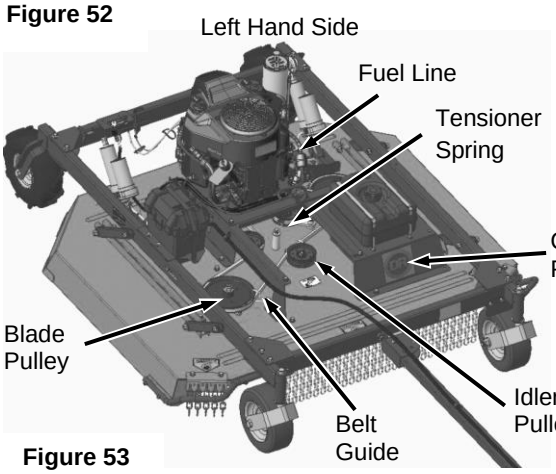


Figure 53

Removing and Replacing the Blade Belt

Tools Needed:

- 5/16 in Socket w/Ratchet
- 9/16 in Wrench
- Gloves

NOTICE

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

Removing the Belt

1. Turn fuel shut-off valve to closed position ***(Figure 50).***
2. Remove six Bolts securing Gas Tank Plate using a 9/16 in Wrench ***(Figure 51).***
3. Remove eight bolts securing both Pulley Covers using a 9/16 in Wrench ***(Figure 52).***
4. Ensure gas tank cap is tight.
5. Carefully lift Gas Tank Plate and position it on the Left side of machine ***(Figure 53).*** Leave enough space to access the Blade Pulley.
6. Remove Service Cap Plug from motor mount plate by popping it out from the underside ***(Figure 55).***

NOTICE

When moving the Gas Tank Plate, be careful not to stress the fuel lines. Failure to do so could damage fuel lines or connections.

7. Looking down through the hole where the Cap was removed, remove Lock Nut from Tensioner Pulley using a 9/16 in Wrench ***(Figure 56).***
8. Remove all three Belt Guides using a 9/16 in wrench. Two Belt Guides are located next to each Blade Pulley. The other is in front of the center Idler Pulley ***(Figure 57).***
9. Rotate Blade Pulley Counterclockwise while rolling Blade Belt up and off Blade Pulley.

Note: It works best to roll Belt off and onto Blade Pulley on the opposite side of Idler Pulley.

10. With Belt no longer under tension, remove Tensioner Spring off Tensioner Pulley and swing it out of the way.
11. At the rear of the machine, use a 9/16 in Wrench to remove the three Bolts securing Belt Cover and set Belt Cover aside ***(Figure 58).***
12. Pull Blade Belt down off Clutch Pulley ***(Figure 59).***
13. Blade Belt should now be completely free and removeable.

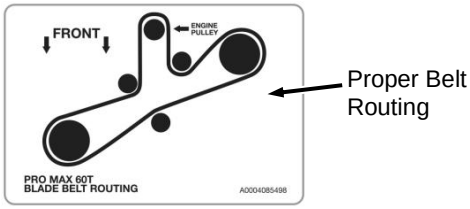


Figure 54

Installing a New Blade Belt

1. Lay in the new Belt referencing the Belt Routing Label located on the center of the Deck ***(Figure 57).***
2. With the Belt still loose, reattach the Tensioner Spring onto the Tensioner Pulley. Tighten down the Locking Nut. Make sure the Nut is fully engaged in the Nylon locking material, but do not tighten all the way down to where the Spring can't freely rotate.
3. With the Belt roughly routed in the correct orientation and the Tensioner spring reattached, lift the Belt into place on the Clutch Pulley at the rear of the machine ***(Figure 59)***.
4. Keeping tension on the Belt so it doesn't fall off the Clutch Pulley, move to the left side of the machine, and route the Belt around the Tensioner Pulley.
5. Insert the Blade Belt into the Blade Pulley "V" Groove on the left side of the machine. Rotate the Blade Pulley Clockwise until the Blade Belt rests fully into the Pulley groove.
6. Continuing to work clockwise, line up belt on the Center Idler Pulley. Try to keep tension on Belt so it doesn't fall off any previously engaged Pulleys.
7. Ensure Belt is engaged around rear Idler Pulley ***(Figure 56).***
8. At this point, Belt should be getting tight. Position Belt above remaining Blade Pulley. Bring belt into "V" Groove at inlet of Blade Pulley and rotate Blade Pulley Clockwise until Blade Belt slides fully into Pulley groove.
9. Perform a final check to ensure Belt is installed properly onto Clutch Pulley, Rear and Center Idler Pulleys, Tensioner Pulley, and both Blade Pulleys. Reference Belt Routing Label on the top of Deck ***(Figure 54)***.
10. Reinstall Belt Cover at the rear of machine ***(Figure 58).***
11. Reinstall both sides of Pulley Covers ***(Figure 52).***
12. Reinstall Gas Tank Plate, making sure Fuel Line, Vapor Lines, and Wire Harness do not get pinched under the Plate ***(Figure 51).***

NOTICE

When positioning the Gas Tank Plate be careful not to stretch the Fuel and Vapor Lines. Ensure that the Fuel and Vapor Lines as well as the Wire Harness are not pinched under the Gas Tank Plate.

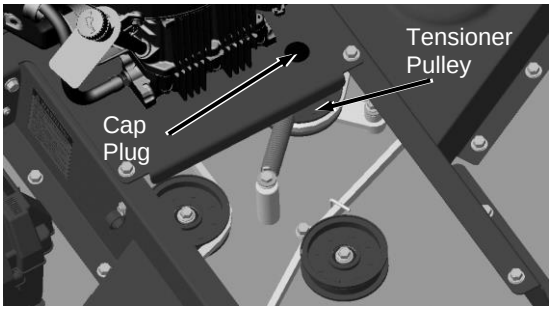


Figure 55

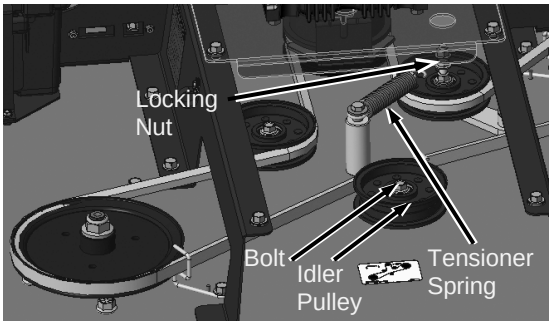


Figure 56

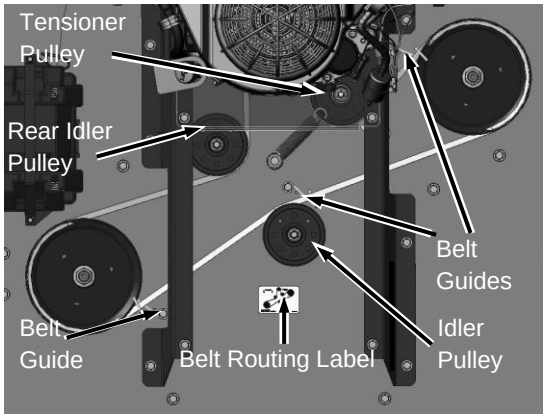


Figure 57

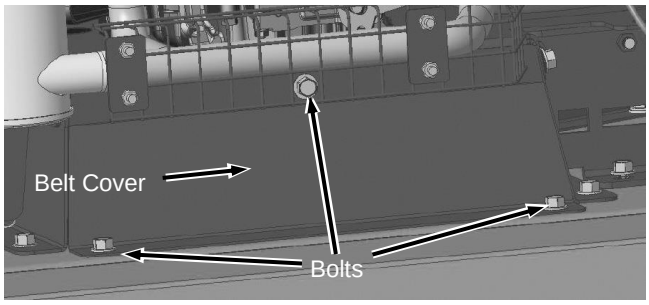


Figure 58

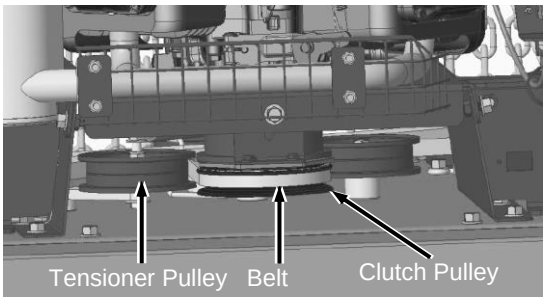


Figure 59

Removing and Replacing Fixed Blades

Note: Replace Blade(s) when worn or damaged.

Tools and Supplies needed:

- 1-1/8 in Wrenches
- Torque Wrench
- Gloves
- Jack
- Jack Stands
- Wheel Chocks
- Dense Wooden Block (recommend 4 in x 4 in)

⚠ WARNING

Wear gloves and use caution when pushing or pulling the wrench next to the blade. If wrench slips off the bolt, serious injury may occur.

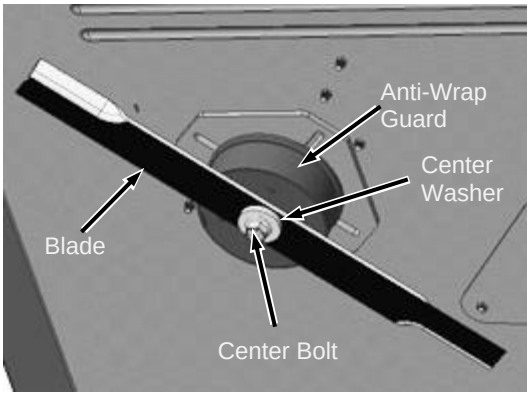


Figure 60

1. Disconnect BRUSH MOWER from the TOW Vehicle.
2. Lift and support front of Mower off Ground using a Jack and Jack Stands. Chock rear wheels to prevent them from moving.
3. Insert a Wooden Block between Blade and Deck to stop rotation of Blade while loosening center Bolt.

Note: The Wood Block must be strong enough to safely secure Blade and long enough to wedge against Deck.

4. Remove Center Bolt by using a 1 1/8 in Wrench. As bolt loosens, Center Washer, Anti-Wrap Guard, and Blade will also loosen. ***(Figure 60)***

Note: Bolt may be tight and could require additional wrench leverage. Use of air impact tools is allowable if needed.

5. With Center Bolt, Center Washer, and Anti-Wrap Guard removed, blade can now be removed from Spindle.
6. Prepare new hardware and blade, whether it is a new or resharpened blade.
7. Prepare new Center Bolt.
8. Apply a ¼ in long bead of Loctite 243® ½ in from the shoulder of bolt.
9. With prepared Center Bolt set aside, begin to install new or sharpened Blade.
10. First, align and hold Spindle Cover and Anti-Wrap Guard up into Spindle Shaft.
11. With Spindle Cover and Anti-Wrap Guard in place, align Blade on Spindle. Make sure center hole on Blade aligns properly with Spindle Shaft.

Note: It is good to have an extra set of hands for this next step as it will be difficult to keep Spindle Cover, Anti-Wrap Guard, and Blade held in place.

12. Ensure the Blade is oriented with Blade Lift Edge pointing up towards the top of Deck. Bring Blade up onto Spindle Shaft, making sure Anti-Wrap Guard and Spindle Cover are still aligned.
13. With Blade held up onto Spindle, Spindle Shaft Surface will sit slightly below Blade surface. This is by design, to provide clamping force from Bolt and Washer.
14. With all parts aligned onto the Spindle, bring Center Washer and Center Bolt up into Spindle Shaft. Begin to tighten Center Bolt to fasten all parts together.
15. Tighten Center Bolt with 1-1/8 in Wrench.
16. Torque Center Bolt to 100 ft-lb using a properly calibrated Torque Wrench.
17. Repeat steps 3 through 17 to remove and install other Blade.

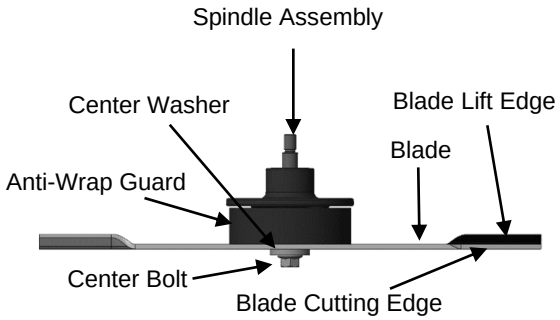


Figure 61

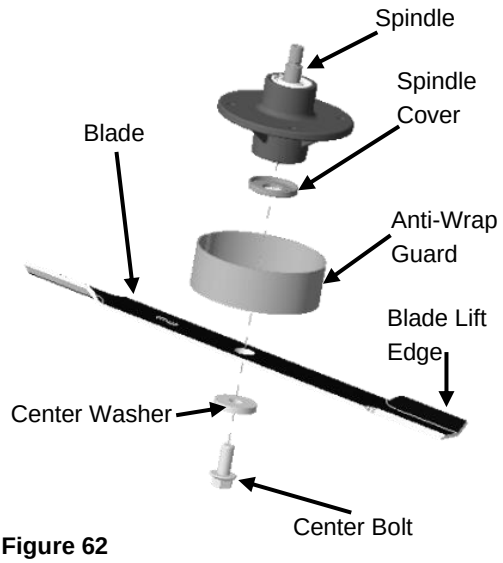


Figure 62

Replacing the Carbon Canister

Tools needed:

- Wire Cutters
- Pliers

1. Turn the Fuel Shut-Off Valve to the CLOSED position.
2. Cut Cable Ties securing Carbon Canister to Gas Tank Plate using wire cutters ***(Figure 63).***
3. Remove Hose Clamp for better access to hoses.
4. Slide hose clamps away from hose connections using pliers. Twist as you pull hoses from Canister.
5. Install hoses onto new Carbon Canister. Position hose clamps onto ends with pliers.

Note: Install hoses onto new canister in the same location as they were on old canister. The canister is labeled “Purge” (this hose is from the engine) and “Tank” (this hose is from the top of the fuel tank).

6. Slide new Cable Ties through Canister Brackets. Position canister on brackets. Make sure filter is installed pointing down.
7. Tighten cable clamps around canister and cut excess with wire cutters.

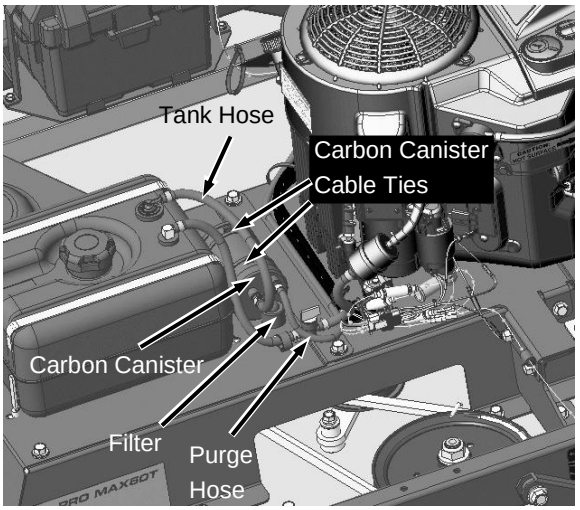


Figure 63

Battery Care

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

- Do not allow battery charge to get too low. If machine is not used, charge battery every 4 – 6 weeks. Operate engine for at least 45 minutes to maintain proper battery charge.
- Store unused battery in a dry area that does not freeze.
- Do not charge an already charged battery. In theory, battery cannot be overcharged with a trickle charger; however, when a battery is fully charged and charger is still on, the heat generated could be harmful to the battery. A fully charged battery will read 12 V-13.2 V with a voltmeter.
- Do not continue to crank 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; battery may explode or leak.
- Do not dispose of lead-acid battery in regular household trash. Laws in most areas prohibit incinerating, disposing in a landfill, or mixing a sealed lead-acid battery with household trash.

Charging the Battery

Operate mower engine for at least 45 minutes to maintain proper battery charge. If battery loses its charge, charge using a trickle charger (like DR Battery Charger) to recharge it. Charger should have an output of 12 volts at no more than 2 amps.

Note: The charging system of a running engine is designed to maintain a battery's present charge. Starting a machine with a significantly discharged or dead battery using the recoil starter or jumper cables will not recharge battery.

To connect a battery charger to the DR TOW-BEHIND FIELD and BRUSH MOWER, follow the steps listed below.

1. Detach the two battery wires going to battery on the mower.
2. Attach black (-) battery charger wire to battery negative (-) terminal and attach red (+) battery charger wire to battery positive (+) terminal.
3. Plug battery charger into outlet.
4. Charge until battery charger indicates it is charged or battery measures to 12-13.2 V.
    - At 1 amp, battery may have to charge for as long as 24 hours.
    - At 2 amps, battery may have to charge for as long as 12 hours.
5. Once charged, disconnect charger from outlet
6. Disconnect battery from charger.
7. Reconnect battery wires.

Recycling a Used Battery

NOTICE

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

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

Visit these sites for more information:
-International Metals Reclamation Company [www.inmetco.com]
-Battery Council International [www.batterycouncil.org]
-Environmental Protection Agency [www.epa.gov]

Chapter 6: Troubleshooting

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

⚠ WARNING

When performing any adjustment or maintenance, first shut off engine, wait five (5) minutes to allow parts to cool, and disconnect the spark plug wires, keeping them away from the spark plugs.

Troubleshooting Table

SYMPTOM	POSSIBLE CAUSE
The Engine will not start. (Please refer to the Engine Owner's Manual for Engine-specific procedures.)	⇒ Check all the items under the section called "Starting" in Chapter 4. ⇒ Check that the Blade Control Switch is DOWN in the disengaged position. ⇒ Make sure the spark plug wires are attached. ⇒ If the engine is cold, make sure the throttle is in the CHOKE position. See "Starting" in Chapter 4. ⇒ The gas must be fresh and clean. If the gas is old, change it. Use a fuel stabilizer if intending to keep gas for longer than one month. ⇒ The Spark Plugs may be dirty or cracked, change them. ⇒ If the Spark Plugs are oily, leave them out, hold a rag over the Plug holes and crank the Engine over a couple of times using the Electric Starter to blow out any oil in the Cylinders, then wipe off the Plugs and reinsert them. ⇒ The Air Filter may be dirty, change it following the procedure in the Engine Owner's Manual. ⇒ There are two Fuses in the Wiring Harness. Check the Fuses and replace if needed. ⇒ Check the wire connections—especially the ground connection, the large green Wire coming from the Battery, where it connects to the Channel Support. ⇒ The Battery may not be charged. Check the voltage yourself or at a service station. If it is low, charge it with a 12-volt, 1 to 2-amp trickle charger. If you do not use your machine for at least 45 minutes at a time, the Battery may need to be periodically charged. See the "Battery Care" section in Chapter 4. ⇒ If the Battery is charged and the DR TOW-BEHIND FIELD & BRUSH MOWER still will not start, visit our website at www.DRPower.com.
The Engine lacks power or is not running smoothly. (Please refer to the Engine Owner's Manual for Engine-specific procedures.)	⇒ The throttle lever may be in the wrong position; Make sure the throttle lever is in the RUN position. ⇒ The air filter may be dirty, change it following the procedure in the Engine Owner's Manual. ⇒ The spark plugs may be dirty or cracked; change them. ⇒ If the spark plugs are oily, leave them out, hold a rag over the Plug holes and crank the engine over a couple of times using the Electric Starter to blow out any oil in the cylinders, then wipe off the plugs and reinsert them. ⇒ The gas must be fresh and clean. If gas is old, change it. Use a fuel stabilizer if intending to keep gas for longer than one month. ⇒ The engine may not have the right amount of clean oil. If dirty, change it following the procedure in Chapter 5. ⇒ If the engine still lacks power, visit our website at www.DRPower.com.

⚠ WARNING

When performing any adjustment or maintenance, you must first shut off the engine, wait five (5) minutes to allow parts to cool and disconnect the spark plug wires, keeping them away from the spark plugs.

Troubleshooting Table (Continued)

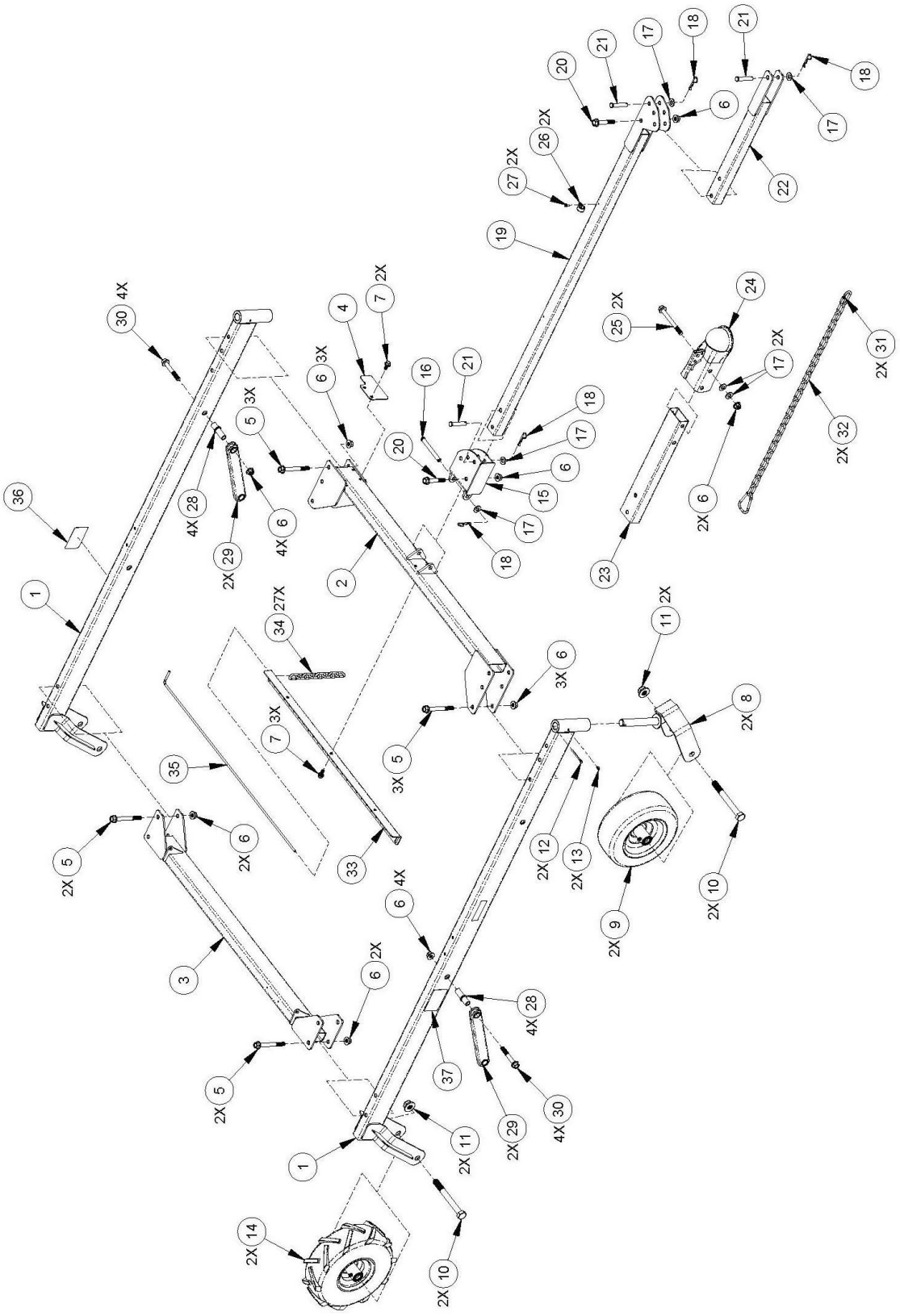
SYMPTOM	POSSIBLE CAUSE
Engine smokes.	⇒ Check the oil level and adjust as needed. ⇒ You may be operating the machine on too great an incline. See "Slopes and Uneven Terrain" in Chapter 4. ⇒ Check the air filter and clean or replace if needed. ⇒ May be using the wrong oil—too light for the temperature. Refer to your Engine Owner's Manual for detailed information. ⇒ Clean the cooling fins and the carburetor housing if they are dirty. ⇒ If the engine still smokes, visit our website at www.DRPower.com for assistance.
The Belt frays or rolls over the Pulley.	⇒ There may be a nick in a pulley groove. Check the belt for wear and hard spots. File off any nicks on the pulley. ⇒ The belt may be stretched; replace it. See Chapter 5.
Blades vibrate when engaged.	⇒ The Blades may not be tight enough. Tighten the bolt, with a 1-1/8 in Wrench, to the prescribed 100 ft-lbs of Torque that is called out in the Blade Replacement section of this manual. ⇒ The spindle bearings may be damaged, or the spindle shaft is bent. ⇒ If the blades still vibrate, visit our website at www.DRPower.com for assistance.
The Blades are not cutting or are loose.	⇒ The Blades may not be tight enough. Refer to blade install section. Tighten the bolt, with a 1-1/8 in Wrench, to the prescribed 100 ft-lbs of Torque that is called out in the Blade Replacement section of this manual. ⇒ Sharpen or replace the Fixed Blades; they may be dull or nicked.
The Blades will not engage and/or disengage.	⇒ Low or weak battery may cause electric clutch to not engage. Check battery for sufficient voltage. ⇒ Faulty Blade Control Switch. Remove and replace the switch on the Remote Control. ⇒ Faulty/Blown Fuse. Remove and inspect fuses, replace them if necessary. ⇒ Faulty electric clutch. Visit our website at www.DRPower.com for assistance.
The Mower Deck Will Not Raise or Lower	⇒ Faulty Blade Control Switch. Remove and replace the switch on the remote control. ⇒ Faulty actuator. Visit our website at www.DRPower.com for assistance. ⇒ Low or weak battery may cause the actuator not to function. Check battery for sufficient voltage. ⇒ Faulty Fuse. Check the fuse and replace if needed.
Excessive Engine stalling.	⇒ The brush or grass is too heavy at the current cutting height or at the current tow vehicle speed. Raise the cutting height and drive slower when cutting.

Parts List – Frame and Tow Bar

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

Ref#	Part#	Description
1	A0004085436	SUPPORT-WHEELS W/LABELS
2	A0004085451	PUSH BAR - TB60
3	397101	PUSH BAR-REAR TB2 52IN
4	397181	GUARD-PUSH-BAR TB2 52IN
5	365731	BOLT - HEX - FLANGE - 1/2-13 X 4.5 - GR8 ZP
6	333351	NUT-NYLON LOCK FLANGED 1/2-13
7	352811	BOLT-HEX FLANGE TL 3/8-16 x 3/4
8	354981	CASTER - FRONT - BRUSH
9	354811	WHEEL - 11 X 4-5IN - FLAT FREE - SMOOTH TRD
10	343241	BOLT-HCS 3/4-10 x 7 GR5 ZP
11	333381	NUT-NYLON LOCK FLANGED 3/4-10
12	186551	PIN-COTTER 3/16x2 IN
13	A0000332299	ZERK-GREASE 1/4-28 STRAIGHT
14	10000025089	WHEEL - 13 X 5-6IN - LUG TREAD - TUBELESS
15	396461	OFFSET BRACKET TB2 GP
16	A0000253563	PIN CLEVIS 1/2 X 4.5IN L ZP
17	234991	WASHER - 0.53 ID X 1.06 OD X 0.095 - ZP
18	160031	PIN-HITCH CLIP 1/2-9/16
19	354961	TOW - BAR
20	345111	BOLT - HEX - FLANGE - 1/2-13 X 3 - GR5 ZP
21	255491	PIN CLEVIS - 1/2 X 2 1/2IN TRT
22	354971	EXTENSION - TOW BAR
23	363081	EXTENSION - TOW BAR BALL HITCH
24	246481	COUPLER-2 IN BALL-3 IN MOUNT
25	333491	BOLT -HEX - FLANGE - 1/2-13 X 5
26	10000031528	CLAMP-LOOP 3/4IN ID X 1-13/16 LONG
27	111701	SCREW - 10-32x1/2 TYPE F
28	362891	BUSHING - SWAY BRACE
29	354941	BRACE - SWAY
30	365721	BOLT - HEX - FLANGE - 1/2-13 X 3.5 - GR5
31	334431	LINK - CHAIN THREADED CONNECTOR - WR3
32	253121	CHAINS - SAFETY 36IN INDIVIDUAL
33	395001	BRACKET-CHAIN GUARD
34	363171	WELDED CHAIN 1/4 IN GRADE 30 PROOF TB2
35	395011	ROD-RETENTION-CHAIN GUARD
36	365821	LABEL - HEIGHT ADJUST - LEFT - TB2
37	365811	LABEL - HEIGHT ADJUST RIGHT - TB2

Schematic – Frame and Tow Bar

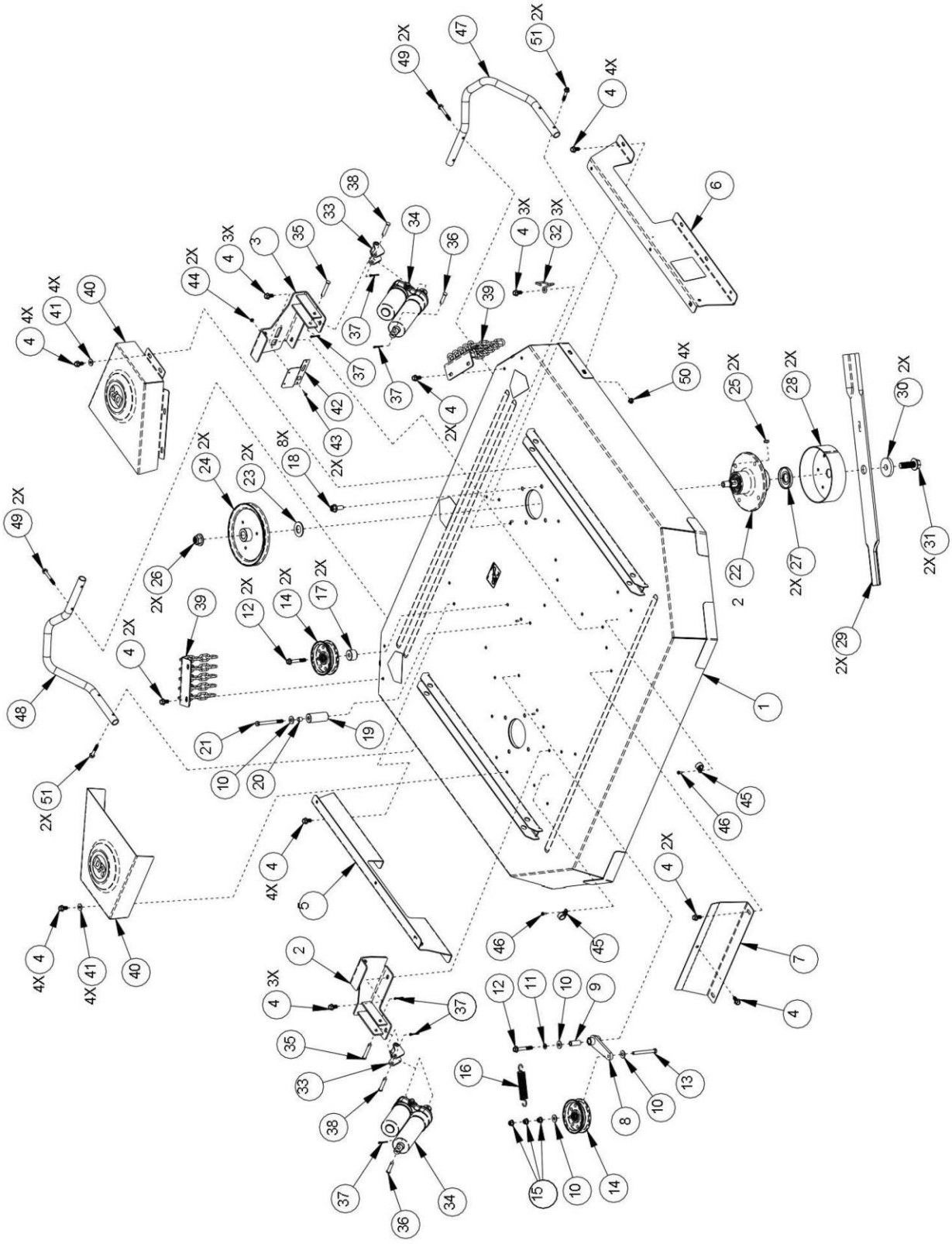


Parts List – Deck Assembly

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

Ref#	Part#	Description
1	A0004085437	DECK - TB60 IN W/LABELS
2	397131	CHANNEL-SUPPORT-LEFT TB2 52IN
3	397121	CHANNEL-SUPPORT-RIGHT TB2 52IN
4	352811	BOLT-HEX FLANGE TL 3/8-16 x 3/4
5	A0004085467	RAIL-SUPPORT-LEFT TB60
6	A0004085438	RAIL-SUPPORT-RIGHT TB60 W/LABELS
7	A0000762114	COVER-BELT-TB2-EXTENDED
8	A0004085504	IDLER ARM - TB60
9	322061	BUSHING - 0.386 X 0.623 X 1.53IN FT1
10	112391	WASHER-FLAT 3/8 USS
11	A0000367023	WASHER - SPLIT - 3/8 - GR8 - ZP
12	333481	BOLT-HEX FLANGE 3/8-16 x 2.5
13	A0004085496	BOLT-HCS FT 3/8-16X3 1/2 GR8 ZP
14	151271	PULLEY FLAT IDLER 4 IN
15	333331	NUT-NYLON LOCK FLANGED 3/8-16
16	373411	SPRING - 1.00 OD - 0.135 WIRE - 5.5 L
17	A0004085499	SPACER-.394 ID X 1.38 OD X .91
18	365631	BOLT - HEX - FLANGE - 1/2-13 X 1.25 -GR8 ZP
19	A0004085503	SPACER - IDLER - TB60
20	350511	SPACER-IDLER
21	245571	BOLT - HCS - 3/8-16 X 4 GR5
22	362591	SPINDLE ASSEMBLY - BRUSH
23	350391	WASHER - 1.06ID X 2OD X 0.13ZP
24	A0004085474	PULLEY V-BELT 8-1/2 IN OD 1 IN ID - TB60
25	322371	KEY - ANSI 806 WOODRUFF - 1/4 X 3/4
26	333381	NUT-NYLON LOCK FLANGED 3/4-10
27	362611	CAP - SPINDLE – BRUSH
28	A0004085475	GUARD - ANTI WRAP - TB60
29	A0004085473	BLADE 31.5 IN AIR TIP
30	363071	WASHER-BLADE CARRIER-TB2
31	A0004085472	BOLT - HEX - FLANGE - 3/4-10 X 2.25-GR8
32	A0004085505	GUIDE - BELT - TB60
33	A0004085478	LINK-PIVOT LIFT SYSTEM - TB60
34	A0004085469	ACTUATOR - LINEAR 8000 N 80 MM STROKE
35	397331	PIN-ACTUATOR-60MM
36	397351	PIN-ACTUATOR-40MM
37	235001	PIN - COTTER 7/64 X 1 ZP
38	397341	PIN-ACTUATOR-50MM
39	A0004085447	FRONT CHAIN GUARD – TB60
40	A0004085476	COVER - PULLEY - TB60
41	112411	WASHER – FLAT 5/16 USS
42	A0001922549	PANEL-RELAY MOUNT TB2 52
43	150491	SCREW-8-32 x 1/2
44	A0001079296	NUT-LOCK SERRATED FLANGE 8-32
45	10000031528	CLAMP-LOOP 3/4IN ID X 1-13/16 LONG
46	111701	SCREW - 10-32x1/2 TYPE F
47	A0004085442	BRUSH BAR - TB60 IN - RH
48	A0004085443	BRUSH BAR - TB60 IN - LH
49	385981	BOLT-HEX FLANGE 5/16-18 x2-1/2 GR8
50	333321	NUT-NYLON LOCK FLANGED 5/16-18
51	385991	BOLT-HEX FLANGE 5/16-18 x 1-3/4 GR5

Schematic – Deck Assembly

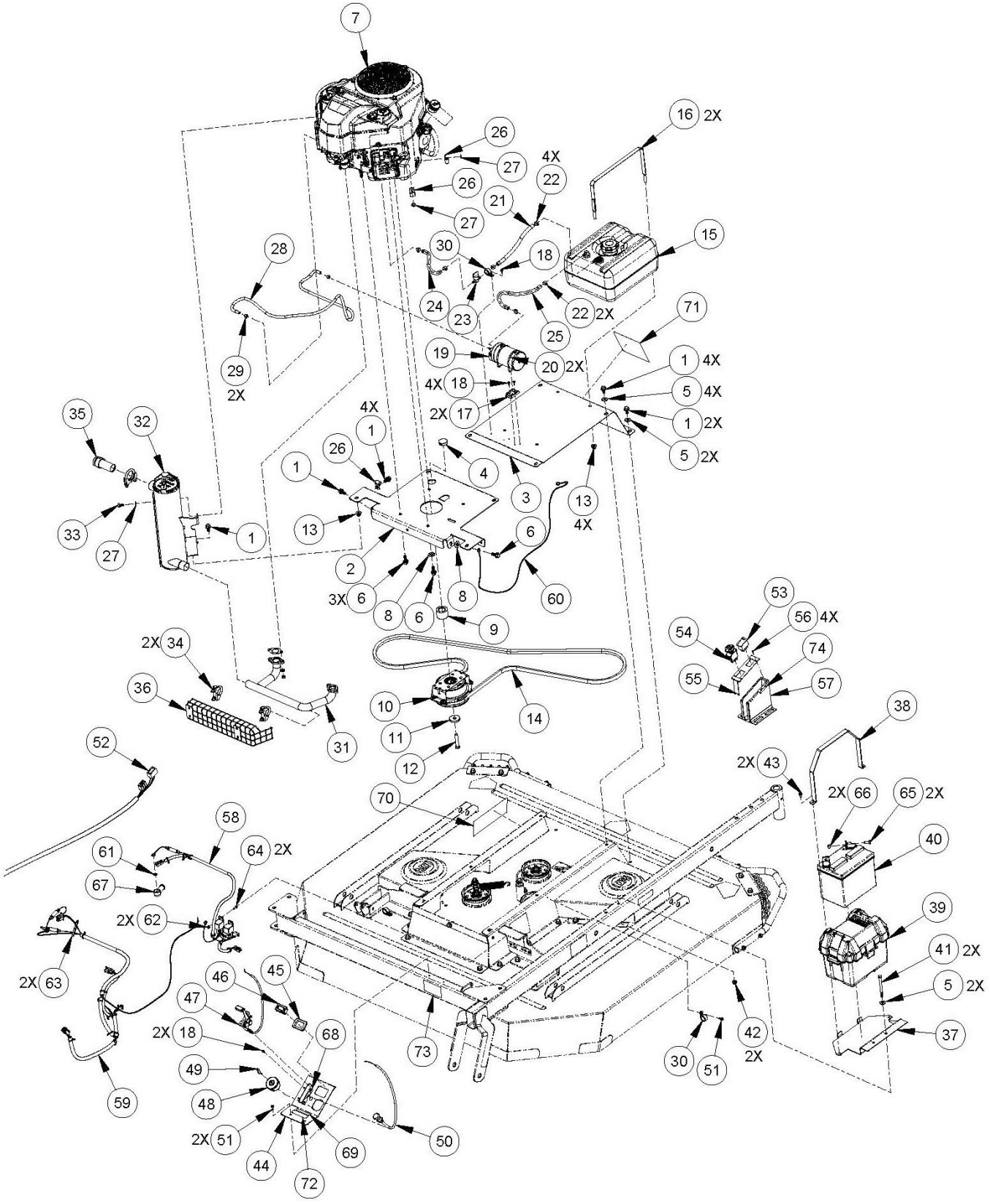


Parts List – Drive Assembly

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

Ref#	Part#	Description
1	352811	BOLT-HEX FLANGE TL 3/8-16 x 3/4
2	A0004085470	MOUNT MOTOR-TB60
3	A0004085466	PLATE-FUEL TANK TB60
4	A0004085477	PLUG DIA 1.25
5	112411	WASHER-FLAT 5/16 USS
6	289901	SCREW-UNSLTD TRILOBE 3/8-16 x 1
7	A0004085439	ENGINEKAWASAKI 24HP 726CC W/LABELS
8	0A4456	WASHER LOCK SPECIAL 3/8
9	A0000253565	SPACER-CLUTCH
10	370501	CLUTCH-OGURA-GT1.5A-GR02
11	191301	WASHER-FLAT .469 ID x 1.62 OD .25 L GR5
12	A000366994	BOLT-7/16-20 x 2-1/4 GR8 ZP
13	333331	NUT-NYLON LOCK FLANGED 3/8 16
14	A0004085493	BELT-TB60
15	A0004149743	FUEL TANK ASSY-2.5 GAL MULTI LAYER
16	385811	STRAP – TANK – 3/8-16 STUDS
17	265771	BRACKET, CARBON CANISTER
18	150491	SCREW-8-8-32 x 1/2
19	385301	CARB CAN 300CC 1/4 TANK 3/16 PRG
20	127971	CABLE TIE-17 IN 50 GA
21	A0000522190	HOSE-FUEL EPA/CARB CERTIFIED
22	A0000313387	CLAMP-FUEL LINE
23	362861	VALVE – FUEL SHUTOFF
24	A0000522190	HOSE-FUEL EPA/CARB CERTIFIED
25	A0000522190	HOSE-FUEL EPA/CARB CERTIFIED
26	10000032635	CLAMP-LOOP 3/8 IN ID 13/32 IN MNT HOLE
27	292511	M8 FLAT WASHER - ZP
28	10000040536	HOSE-VAPOR 3/16 IN ID
29	265811	CLAMP-VAPOR HOSE
30	10000031528	CLAMP-LOOP 3/4 IN ID x 1-13/16 LONG
31	A0004085486	MANIFOLD EXHAUST KAWASAKI 24HP VTWIN
32	A0004085487	MUFFLER EXHAUST KAWASAKI 24HP VTWIN
33	220981	BOLT HEX HEAD M8 X16
34	279601	CLAMP-EXHAUST-1.25 IN
35	A0004085490	SPARK ARRESTER - KAWASAKI 24HP VTWIN
36	A0004085492	GUARD - MANIFOLD - REAR - TB60
37	A0004085482	BRACKET-BATTERY TB60
38	A0004085483	STRAP-BATTERY U1 BOX TB60
39	A0004085484	BATTERY BOX TB60
40	0D4575	BATTERY BCI GROUP U1
41	187571	BOLT-HCS 5/16-18x3-3/4
42	333321	NUT-NYLON LOCK FLANGED 5/16-18
43	179121	BOLT-TRI 1/4-20 x 1/2
44	A0004085488	CONTROL PANEL - TB60
45	179291	ADAPTER-PLUG-MAINT METER
46	217201	MAINT METER-W/66IN WIRE
47	10000029087	CABLE-THROTTLE-14IN
48	222231	SWITCH-SNAP-IN ES TB1
49	157201	KEY-IGNITION SWITCH
50	A0004085489	CHOKE - CABLE - TB60
51	111701	SCREW - 10-32x1/2 TYPE F)
52	A0001944323	WIRE HARNESS-TETHER RELAY TB60
53	A0000149422	SWITCH-ROCKER DPDT (ON)-OFF-(ON)
54	191231	SWITCH PUSH/PULL TPDT
55	A0000303132	COVER-CONTROL BOX-52 IN
56	10000024617	SCREW-NO. 4 X .375 TORX TYPE AB
57	A0000303131	BOX-CONTROL-52 IN
58	A0004085449	WIRE HARNESS-RELAY TB60 ACTUATORS
59	A0004085450	WIRE HARNESS - MACHINE TB60
60	A0004085454	WIRE - BATTERY GROUND TB60
61	112501	WASHER-STAR LOCK 5/16
62	118731	NUT-LOCK NYLON 10-24
63	112141	CABLE TIE 7-1/2 IN L
64	114781	SCREW-PANHEAD 10-24 x 5/8 IN
65	123211	BOLT-HCS 5/16-18 x 3/4 GR5 ZP
66	110761	NUT-LOCK NYLON 5/16-18
67	0L0878	COVER BATTERY POST ELL-TRON 47
68	A0004085435	LABEL - THROTTLE CONTROL PRO MAX60T
69	10000036023	DECAL PROP 65 SHORT FORM
70	A0004085481	LABEL-PRO MAX60T
71	A0000188793	LABEL-DR LOGO-4IN-RED
72	127811	LABEL-WARNING ADD OIL
73	G079552	DATA DECAL OVER LAMI
74	389131	LABEL-RAISE/LOWER

Schematic – Drive Assembly



Notes:

DR® TOW-BEHIND FIELD and BRUSH MOWER

2-Year Limited Warranty
Terms and Conditions

The DR® TOW-BEHIND FIELD and BRUSH MOWER 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® TOW-BEHIND FIELD and BRUSH MOWER 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 except all emission related components. DR Power Equipment limits the implied warranties of merchantability and fitness in duration to a period of two (2) years for all emissions related components. The Engine manufacturer warrants the Engine separately.

The 2-Year Limited Warranty on the DR® TOW-BEHIND FIELD and BRUSH MOWER 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 Drive Belts, Blades, Battery, Spark Plugs, and Filters (Air and Oil). This warranty does not cover attachments and accessories to the machine.
During the warranty period, the warranty holder is responsible for the machine transportation charges, if required. During the warranty period, warranty parts will ship 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® TOW-BEHIND FIELD and BRUSH MOWER.

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 HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

Daily Checklist for the DR TOW-BEHIND FIELD and BRUSH MOWER

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

⚠ WARNING

When performing any adjustment or maintenance, you must first shut off the engine, wait five (5) minutes to allow parts to cool and disconnect the spark plug wires, keeping them away from the spark plugs.

[ ] Check the engine oil and Gas Tank level.
[ ] Check that Engine is clean of debris.
[ ] Check the general condition of the Mower, e.g.; nuts, bolts, welds, etc.
[ ] Check Tire Pressure and wear.
[ ] Check the Frame for wear and damage.
[ ] Check the Blades and Spindle for tightness, nicks, cracks, wear or debris that has wrapped around.
[ ] Check that the Remote Control is secure.

End of Season and Storage

⚠ WARNING

When performing any adjustment or maintenance, you must first shut off the engine, wait five (5) minutes to allow parts to cool and disconnect the spark plug wire(s), keeping it away from the spark plug(s).

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

- Change the Engine oil and Oil Filter and replace the Fuel Filter.
- Remove the Spark Plugs and pour about 1 ounce of motor oil into the Cylinder holes. Replace the Plugs and crank the Engine over a couple of times using the Electric Starter. This will coat the pistons and seat the valves to prevent moisture buildup.
- Clean or replace the Air Filter.
- Clean dirt and debris from the Cylinder Head Cooling Fins, Blower Housing, Debris Screen, and Muffler area of the Engine.
- If your DR TOW-BEHIND 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.
- Remove any wrapped weeds from the Blades Carrier Housing. Clean grass and debris from the top and underneath the mower Deck with a stiff brush.
- Check the Blades for nicks and wear. Remove the Blades and sharpen them or have them professionally sharpened if needed.
- Touch-up all rusted or chipped paint surfaces. Sand them lightly before painting.
- Be sure all nuts, bolts, and screws are securely fastened.
- Inspect moving parts and the Blades' Drive Belt for damage and wear; replace if necessary.
- Store the Battery in a dry area that will not freeze. If you will not use the machine over a long period, charge the Battery every four to six weeks.
- If possible, store your DR TOW-BEHIND FIELD and BRUSH MOWER inside, but not near an open flame or spark such as found in a water heater.
- After the DR TOW-BEHIND FIELD and BRUSH MOWER has cooled, cover the machine with a suitable protective cover that does not retain moisture. Do not use plastic as this material cannot breathe; it also allows condensation to form, which will cause your machine to rust.

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