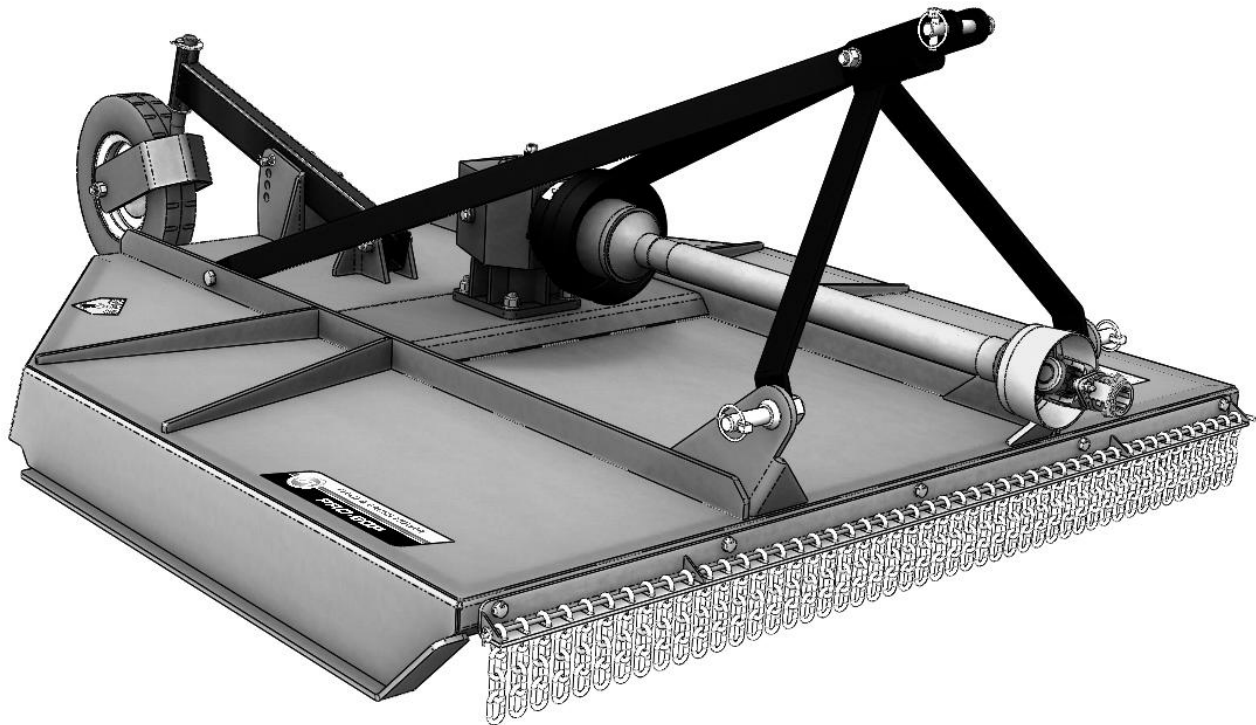


# DR<sup>®</sup> 60" 3-POINT HITCH BRUSH MOWER

## SAFETY & OPERATING INSTRUCTIONS



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

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

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 60" 3-POINT HITCH BRUSH MOWER.

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## Conventions used in this manual

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**! DANGER**

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

---

---

**! WARNING**

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

---

---

**! CAUTION**

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

---

---

**NOTICE**

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

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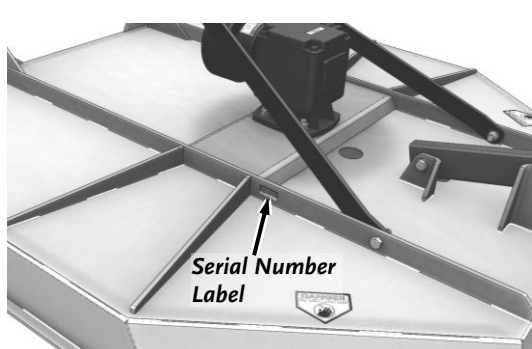


Figure 1

### Serial Number and Order Number

A Serial Number is used to identify your machine and is located on the Serial Number Label on your machine (**Figure 1**). An Order Number is used to check and maintain your order history and is located on the 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**

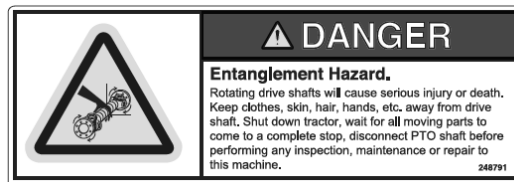
Read this Safety & Operating Instructions manual before you use the DR 60" 3-POINT HITCH BRUSH MOWER. Become familiar with the operation and service recommendations to ensure the best performance from your machine. If you have any questions or need assistance, please contact us at [www.DRpower.com](http://www.DRpower.com) 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 60" 3-POINT HITCH BRUSH MOWER carries prominent labels as reminders for its proper and safe use. Shown below are copies of the Safety and Information labels that appear on the equipment. Take a moment to study them and make a note of their location on your DR 60" 3-POINT HITCH BRUSH MOWER as you set up and before you operate the unit. Replace damaged or missing safety and information labels immediately.



#13649



#24879



#40915



#40914



#40920

### Tractor Safety Information

### **DANGER**

YOUR DR 60" 3-POINT HITCH BRUSH MOWER is driven by a PTO shaft that transfers power from your Tractor. The Tractor and PTO shaft are extremely dangerous and can cause serious injury or death if not used properly. Read and understand all of the Warnings and operating instructions that came with your Tractor and the PTO shaft to protect yourself from severe injury or death.

### Safety for Children and Pets

### **WARNING**

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

- Keep children and pets out of the working area and under the watchful care of a responsible adult.
- Be alert and turn the machine off if children or pets enter the work area.
- Never allow children to operate the DR 60" 3-POINT HITCH BRUSH MOWER.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.

## 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 operate the machine safely. Unsafe operation can create a number of hazards for you, as well as anyone else in the nearby area. Always take the following precautions when using this machine:

- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people, their property, and themselves.
- Always wear protective goggles or safety glasses with side shields while mowing to protect your eyes from possible thrown debris.
- Avoid wearing loose clothing or jewelry, which can catch on the machine's moving parts.
- We recommend wearing gloves while using this machine. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.
- Wear shoes with non-slip treads when using your DR 60" 3-POINT HITCH BRUSH MOWER. If you have safety shoes, we recommend wearing them. Do not use the machine while barefoot or wearing sandals with exposed toes or heels.
- Wear long pants while operating the DR 60" 3-POINT HITCH BRUSH MOWER.
- Use ear protectors or ear plugs rated for at least 20 dba to protect your hearing.
- Keep bystanders at least 100 feet away from your work area at all times. The cutting blades on the DR 60" 3-POINT HITCH BRUSH MOWER can throw sticks, small stones, gravel, and bits of debris over long distances at great velocity. Do not travel over loose materials such as gravel or mulch with the blades spinning. Doing so could cause personal injury or property damage from thrown objects. Disengage the PTO Shaft to stop the spinning blades and shut off the Tractor engine when another person or pet approaches.
- Never tamper with safety devices. Check their proper operation regularly.
- Never operate the machine when under the influence of alcohol, drugs, or medication.

## Operating the Brush Mower Safely

### **WARNING**

This is a high-powered machine, with moving parts operating with high energy at high speeds. You must operate the machine safely. Unsafe operation can create a number of hazards for you, as well as anyone else in the nearby area. Always take the following precautions when using this machine:

- Know how to stop the mower quickly by disengaging the PTO Shaft and shutting down the tractor.
- Never allow people who are unfamiliar with these instructions to use the DR 60" 3-POINT HITCH BRUSH MOWER. Allow only responsible individuals who are familiar with these rules of safe operation to use your machine.
- Do not exceed 5 mph when transporting to prevent damage to the machine.
- Operating your Brush Mower with the deck misaligned with the ground can result in poor cut quality and scalping during cutting, wear on your equipment, and damage to the blades.
- Never place your hands, feet, or any part of your body on or under the mower deck in the path of the spinning blade or near the discharge opening while the tractor is running. Keep area of discharge clear of people, animals, buildings, glass, or anything else that will obstruct clear discharge, cause injury, or damage.
- Your DR 60" 3-POINT HITCH BRUSH MOWER is a powerful tool, not a plaything. Exercise extreme caution at all times. The design of your machine is for mowing grass and small weeds as specified in this manual. Do not use it for any other purpose.
- Whenever you leave the operating position to make adjustments, maintain blades, or if you have to remove grass or debris from the underside of the deck, always disengage the PTO, shut down the Tractor Engine, remove the Key, wait for all moving parts to come to a complete stop, disconnect the PTO shaft from the Tractor, then wait five minutes before performing any maintenance procedure or inspection on the Mower.
- This machine is designed to operate at 540 rpm PTO Shaft speed only! Never operate at a faster speed; doing so can cause serious injury to the operator or bystanders and could cause damage to the machine that is not covered under warranty.

## Operating the Mower Safely (continued)

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### **WARNING**

- Do not transport people, animals, or objects on the Mower.
  - Be mindful of roll over hazards, changes in terrain, slopes, or wet conditions. Use care when backing up.
  - Stop the blades when crossing gravel drives, walks, or roads.
  - Never, under any conditions, remove, bend, cut, fit, weld, or otherwise alter standard parts on the DR 60" 3-POINT HITCH 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 blades strike a foreign object or if your machine should start making an unusual noise or vibration, disengage PTO, shut down the Tractor Engine, remove the Key, wait for all moving parts to come to a complete stop, disconnect the PTO shaft from the Tractor, then wait five minutes before inspection. Vibration is generally a warning of trouble. Clean, repair, and/or replace damaged parts.
  - While using the DR 60" 3-POINT HITCH BRUSH MOWER, do not hurry or take things for granted. When in doubt about the equipment or your surroundings, stop the machine and take the time to look things over. Make sure that you have 100% control of the mower at all times.
  - Watch for traffic when mowing near roadways.
  - Use the machine only in daylight.
  - Be cautious when using your DR 60" 3-POINT HITCH BRUSH MOWER around fencing, rocks, wires, ropes, and hoses. It is possible that these and other debris can hit or become wound around the Cutting Blades of the machine, potentially damaging the machine or injuring you.
  - Do not operate the DR 60" 3-POINT HITCH BRUSH MOWER on slopes greater than is recommended in your Tractor manual.
  - Keep all nuts and bolts tight and keep the equipment in good operating condition.
- 

### California Proposition 65

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### **WARNING**

California Proposition 65:

- This product contains or emits chemicals known to the state of California to cause cancer, birth defects, and other reproductive harm.
- 

### **A Note to All Users**

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 60" 3-POINT HITCH 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 60" 3-POINT HITCH BRUSH MOWER

It may be helpful to familiarize yourself with the controls and features of your DR 60" 3-POINT HITCH BRUSH MOWER as shown in **Figure 2** before beginning these procedures. If you have any questions at all, please feel free to contact us at [www.DRpower.com](http://www.DRpower.com).

### DR 60" 3-POINT HITCH BRUSH MOWER Controls and Features

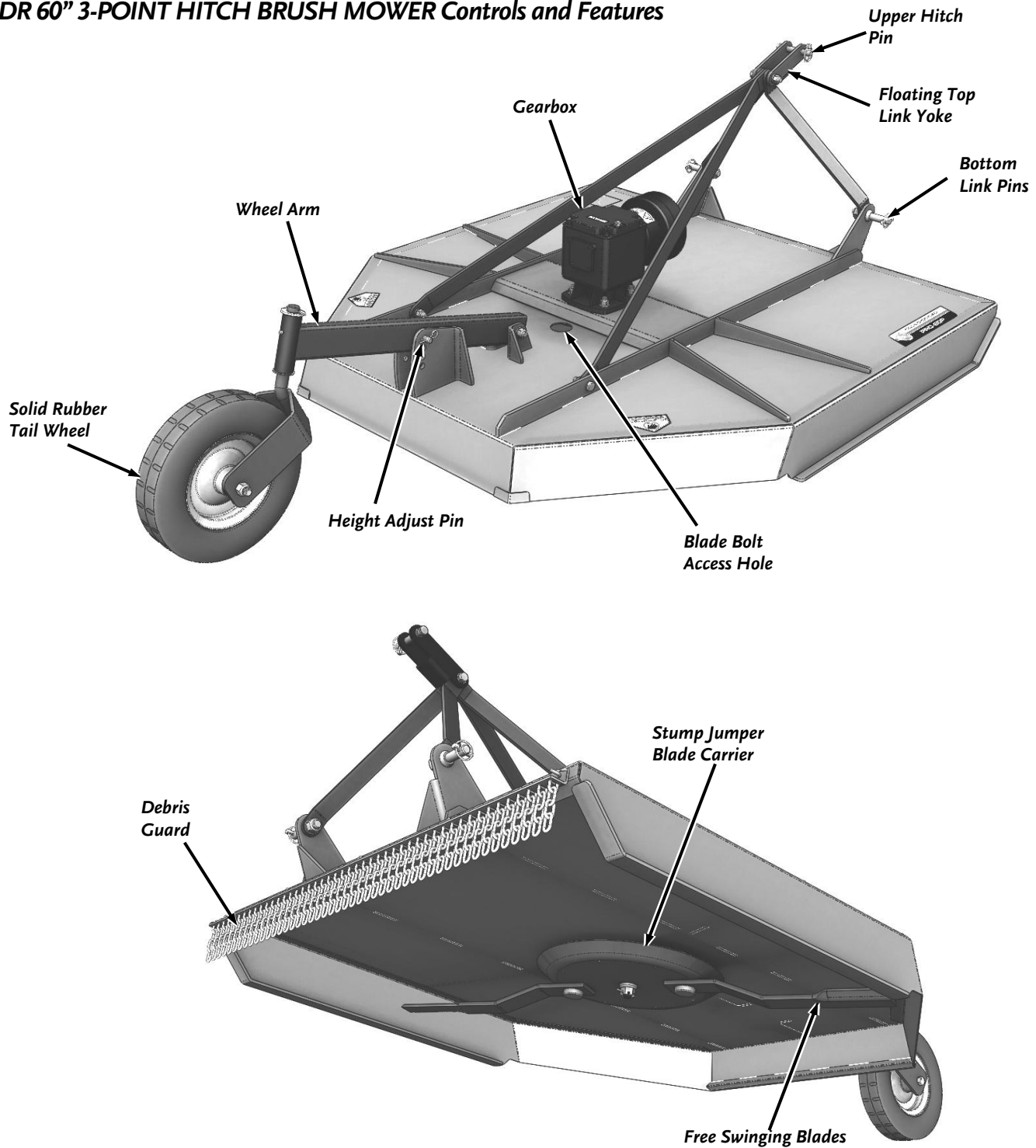


Figure 2

## Specifications

<b>Tractor Requirements</b>	3-Point Hitch, Category 1, 20 to 45 HP Recommended
<b>PTO Speed</b>	540 RPM
<b>PTO Shaft Interface</b>	6 Spline Quick Release Tractor Yoke
<b>Lift Arm Spread</b>	Min of 33"
<b>Mower Drive</b>	Tractor PTO
<b>Cutting Speed</b>	Adjust speed as needed depending on grass height and density
<b>Max Towing Speed</b>	5 mph
<b>Cutting Width</b>	60"
<b>Cutting Height (adjustable)</b>	3" to 10-1/2"
<b>Blade Length</b>	23"
<b>Number of Blades</b>	2
<b>Blade Tip Speed</b>	14,335 ft/min
<b>Discharge Type</b>	Mulching/Rear Discharge
<b>Gearbox Ratio</b>	1:1.69
<b>Gearbox Oil</b>	I.E. S.A.E. 80w/90 or S.A.E. 85w/140 Multi-purpose gear oil
<b>Caster Wheel</b>	16" x 3" Solid Rubber
<b>Deck Material</b>	11 Gauge Powder-Coated Steel
<b>Machine Dimensions</b>	98" L x 66" W x 33" H
<b>Machine Weight</b>	480 Lbs

## Assembling the DR 60" 3-POINT HITCH BRUSH MOWER

### Parts Supplied - (Figure 3 and list below):

Item #	Part #	Description	Qty
1	39052	Bracket, Wheel, Arm	1
2	N/A	Assembly, Tail Wheel	1
3	39047	Strap, Top Link, Front	2
4	39048	Strap, Top Link, Rear	2
5	390551	Yoke, Top Link	1
6	32396	Pin, Linch	3
7	40064	Pin, Bottom Link, PTO Class 1	2
8	40065	Washer, Flat, M24	2
9	40066	Nut, Nylon Lock, M24	2
10	40034	Pin, Top Link, PTO Class 1	1
11	16003	Pin, Hair, 1/2-9/16	1
12	40036	Pin, Height Adjust	1
13	30254	Nut, Nylon Lock, M16	4
14	39060	Bushing, Yoke, Top Link	2
15	40061	Bolt, HHCS, M16 x 100MM, CL8.8	2
16	18655	Pin, Cotter, 3/16 X 2	1
17	40067	Washer, Flat, M30	1
18	38875	Washer, Flat, M16	6
19	30238	Bolt, HHCS, M16 x 50MM, CL8.8	2

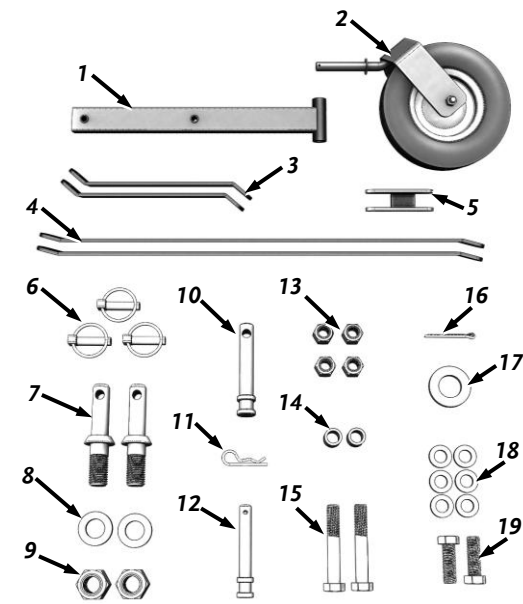


Figure 3

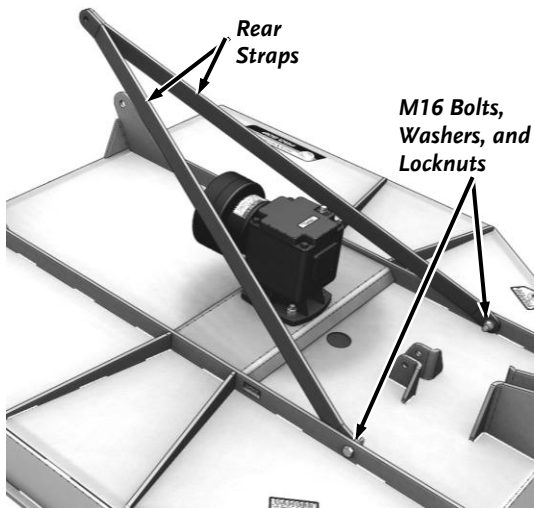


Figure 4

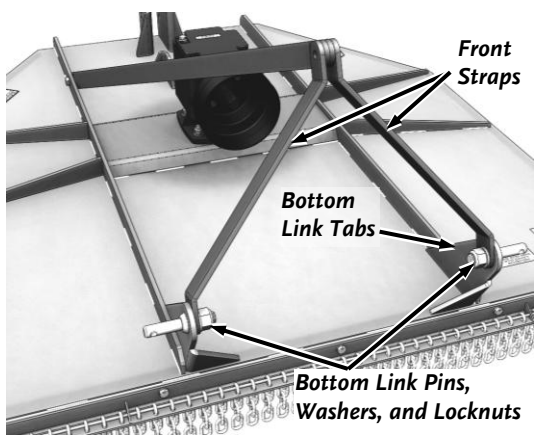


Figure 5

Compare the contents of the Product Package with the "Parts Supplied" list above. If you have any questions please contact us at [www.DRpower.com](http://www.DRpower.com) or call 1-800-DR-OWNER (376-9637) for assistance.

### Tool and Supplies Needed:

- Two 24mm Wrench
- 36mm Wrench or Large Adjustable Wrench
- Screwdriver
- General Purpose Grease

1. Loosely install the two Rear Straps on the **inside** of the Deck Supports using two M16X50 Bolts, M16 Plain Washers and M16 Locknuts (**Figure 4**). Tighten the Hardware moderately using two 24mm Wrenches. Leave the hardware loose enough so that the Straps can be positioned in step 3.
2. Loosely install the two Front Straps on the **inside** of the Bottom Link Tabs using two Bottom Link Pins, M24 Plain Washers, and M24 Locknuts (**Figure 5**). Use a Screw driver in the Hole of the Bottom Link Pin to hold it in place while you tighten the Locknut using a 36mm Wrench or Large Adjustable Wrench. Leave the hardware loose enough so that the Straps can be positioned in step 3.



3. Assemble the Top Link Yoke to the Support Straps using a M16 X 100mm Bolt, two M16 Washers, 2 Yoke Bushings, and a M16 Lock Nut as shown in (Figure 6). Tighten the hardware to clamp the Support Straps together using two 24mm Wrenches.

**Note:** When fully tightened, the Top Link Yoke should be able to rotate freely about the Yoke Bushings.

4. Tighten the hardware that you installed in steps 1 and 2.
5. Secure the Wheel Arm to the Wheel Arm Pivot Bracket using a M16 X 100mm Bolt, two M16 Washers, and a M16 Lock Nut (Figure 7). Tighten the hardware using two 24mm Wrenches. Do not over-tighten; the Wheel Arm should be able to rotate freely about the Bolt.
6. Install the Tail Wheel to the Wheel Arm and secure it using the M30 Washer and Cotter Pin (Figure 8).
7. Position the Height Adjust Pin through the Wheel Arm and Height Adjust Bracket and secure it using the Hair Pin.

**Note:** The Wheel height can be adjusted as needed. This procedure will be discussed in Chapter 3 "Operating the DR 60" 3-POINT HITCH BRUSH MOWER"

### Greasing the Wheel Brackets

1. Wipe all dirt, etc., from the Wheel Support fitting with a clean cloth (Figure 17).
2. Apply quality general-purpose lithium grease with a hand-pumped grease gun to the Wheel Support Grease Fitting as needed.

### Adding Oil to the Gearbox

#### Tool and Supplies Needed:

- S.A.E. 80W/90 or S.A.E. 85W/140 Multi-purpose Gear Oil
- 22mm Wrench
- 19mm Wrench
- Clean Rags

1. Remove the Vented Gearbox Plug from the top of the Gearbox using a 22mm Wrench (Figure 9).
2. Remove the Overflow Plug from the side of the Gearbox using a 19mm Wrench
3. Add oil to the top of the Gearbox until it starts draining from the overflow hole. Allow a few seconds for the oil to settle to get an accurate reading.
4. Reinstall the Overflow Plug into the side hole.
5. Reinstall the Gearbox Plug into the top of the Gearbox.

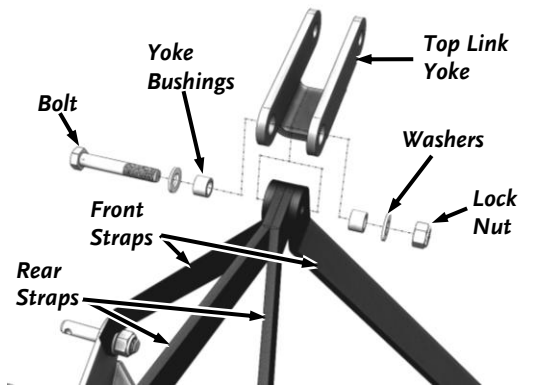


Figure 6

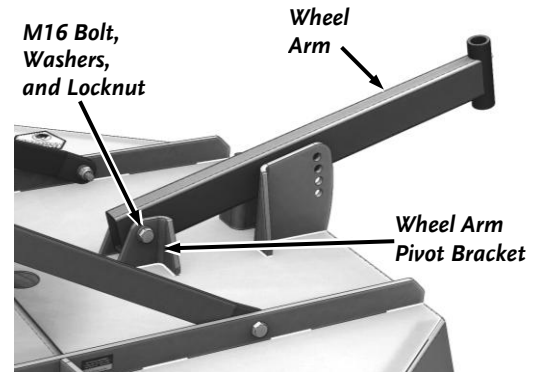


Figure 7

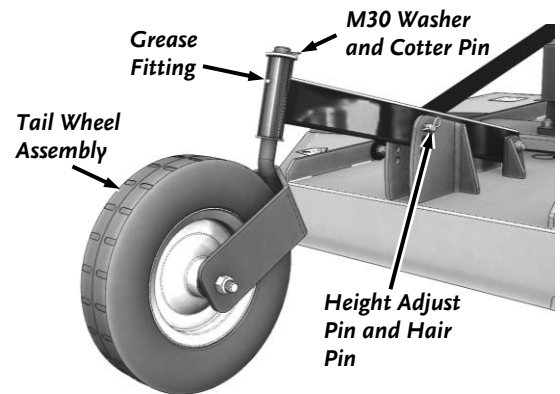


Figure 8

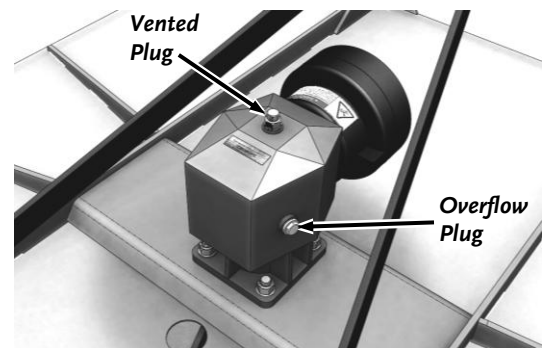


Figure 9

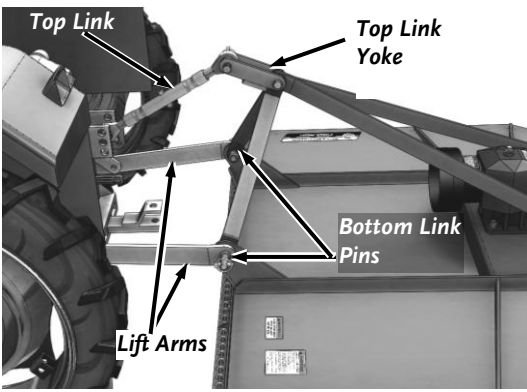


Figure 10

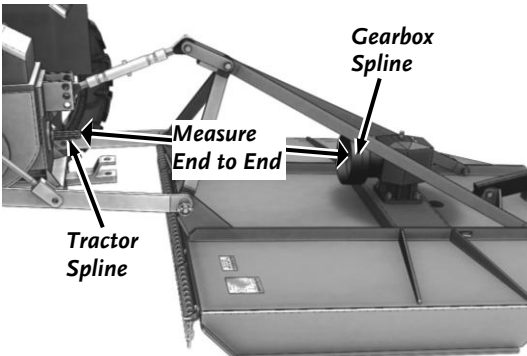


Figure 11: Low Position

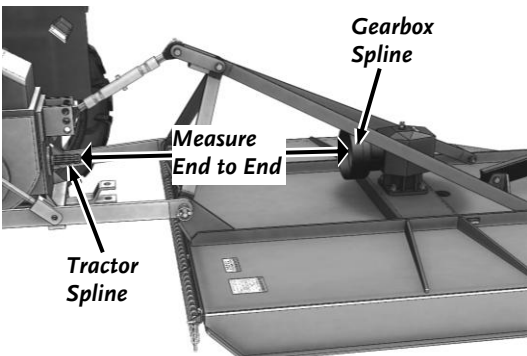


Figure 12: Level Position

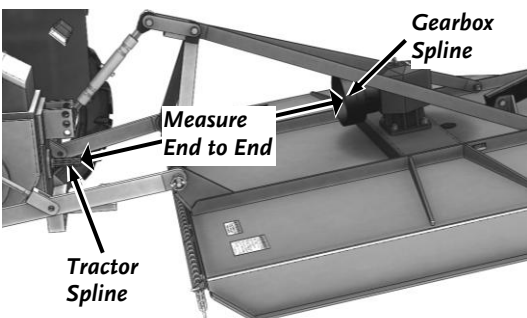


Figure 13: Raised Position

## Attaching the Brush Mower to the Tractor

The Brush Mower must be attached to the 3-Point Hitch of your Tractor before continuing with the final setup of the machine.

1. Position the Lift Arms of the Tractor to the Bottom Links of the Brush Mower and secure using the Linch Pins (Figure 10).
2. Adjust the Top Link of the Tractor to the Top Link Yoke by turning the Handle to lengthen or shorten the Link as needed.
3. Secure the Top Link of the Tractor to the Top Link Yoke using the Top Link Pin and Linch Pin.
4. Refer to your Tractor Owner's Manual to adjust your Lift Arm Side Supports to prevent the Mower from swaying side to side.

## Calculating length of PTO Shaft needed

The PTO Shaft provided with your Mower is 39" overall compressed length and will work "as is" for most applications. Before you install the PTO Shaft it is good practice to run through the following dimension checks to calculate optimum PTO Shaft length to determine if modifications are needed.

### ! WARNING

The minimum recommended overlap of the tubes at the center of the PTO Shaft should be 6". Using a PTO Shaft with less than 6" overlap may fail and cause machine damage or personal injury.

Without the PTO Shaft installed, use the table below to record the dimensions as outlined in the following steps.

TRACTOR SPLINE SHAFT TO GEARBOX SHAFT MEASUREMENTS	
ON GROUND	_____ Inches
SHAFTS LEVEL	_____ Inches
FULLY RAISED	_____ Inches

1. Lower the Mower all the way to the ground in the operating position (Figure 11). Measure from the end of the Tractor Spline Shaft to the end of the Mower Gearbox Shaft and record this dimension in the "ON GROUND" row of the table above.
2. Raise the Mower up until the Tractor PTO Spline and Mower Gearbox Shaft are Level with each other (Figure 12). Measure from the end of the Tractor Spline Shaft to the end of the Mower Gearbox Shaft and record this dimension in the "SHAFTS LEVEL" row of the table above.
3. Raise the Mower up as far as it will go (Figure 13). Measure from the end of the Tractor Spline Shaft to the end of the Mower Gearbox Shaft and record this dimension in the "FULLY RAISED" row of the table above.

Continue on next page

4. Take the shortest recorded measurement you wrote in the table and add 2".
5. Take that number and subtract it from 39" (overall compressed length of the supplied PTO Shaft).
6. This final number is the length that you will need to cut off of the PTO Shaft for it to fit properly to your Tractor.

EXAMPLE: Let's assume the shortest center-to-center measurement in the table is 35".

- $35" + 2" = 37"$  (step 4 above)
- $39" - 37" = 2"$  (step 5 above)
- You would be required to cut 2" off both halves of the PTO Shaft and 2" off the Guard.

**Note:** *If you end up with 0" or a negative number, then no changes are needed. Make sure that there is a minimum of 6" overlap of the tubes at the center of the PTO Shaft.*

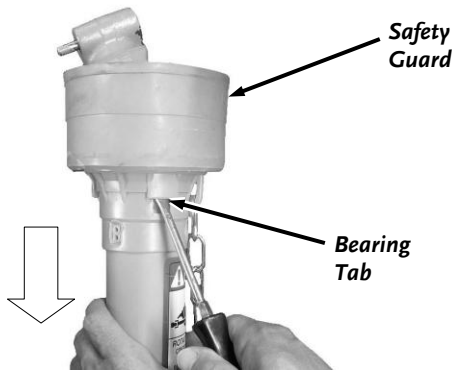


Figure 14

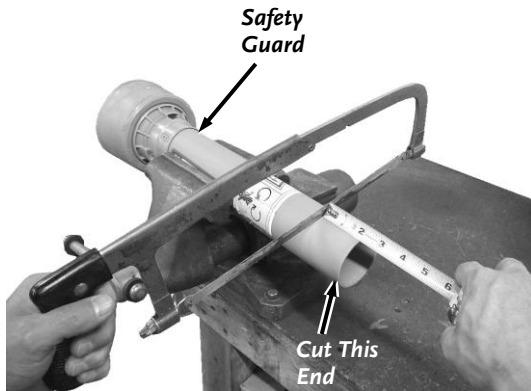


Figure 15

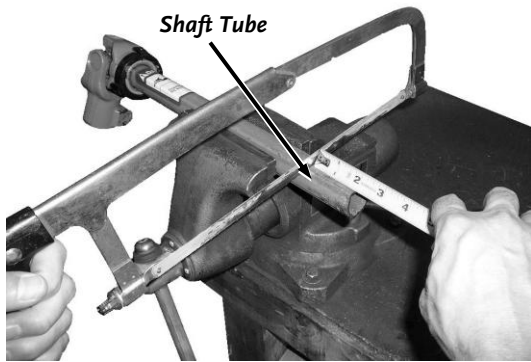


Figure 16

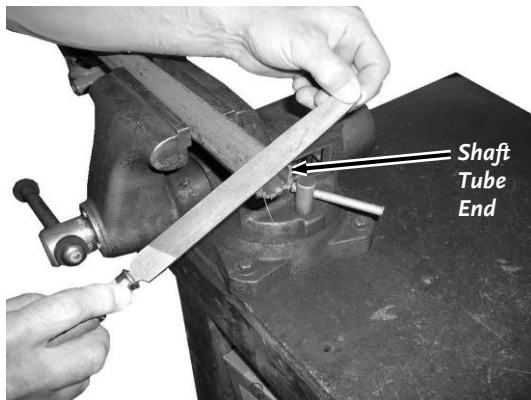


Figure 17

## Modifying the PTO Shaft-if required

If you have determined in the previous steps that the PTO Shaft is too long for your set up, shorten the Shaft as follows:

### Tools and Supplies Needed:

- Hacksaw
- Bench Vise
- Tape Measure
- File
- General purpose Lithium Grease

**Note:** Your actual PTO Shaft may look different than the one shown in these steps but the procedures are the same.

1. Separate the PTO Shaft Halves by pulling them apart.
2. Separate the Guards from the PTO Shaft Halves by inserting a flat tip screwdriver into the Bearing Tab Slots as you pull down on the Safety Guard to release the Safety Guard from the Shaft (**Figure 14**).
3. Measure and cut the ends of both Guards the required amount (**Figure 15**).

**Note:** If you put the Guards in a vise to hold them, be careful not to clamp it too tight because it could crack the plastic.

4. Measure and cut each Shaft Tubes to the required length using the hacksaw (**Figure 16**).
5. File or sand any burrs from the Shaft ends (**Figure 17**).
6. Grease both Shaft Tubes and under the Bearing Rings of each Shaft (**Figure 18**).

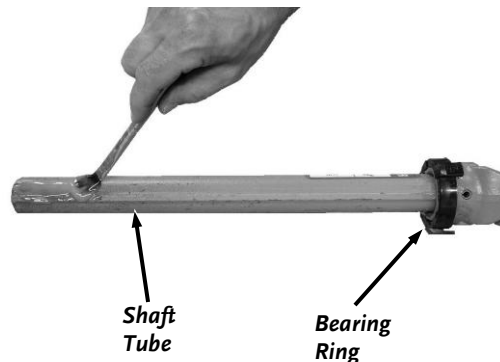


Figure 18

7. Insert the Shaft Halves into the Guards making sure that the Bearing Ring Slot lines up with the Tab on the inside of the Guards for proper installation (**Figure 19**).

8. Slide the two PTO Shaft Halves together.

**Note:** When inserting one half of the PTO Shaft to the other you must line up the splines correctly (two pointed splines and one flat spline).

Continue to the following section to attach the PTO Shaft to the Tractor and Mower.

### Attaching the PTO Shaft to the Tractor and Mower

**Note:** The PTO Driveshaft provided with your new machine is sized to fit a standard category 1 PTO (1-3/8" DIA. x 6" Spline).

The PTO Spline Shaft on the tractor that is to use this machine must rotate clockwise when viewing the PTO from the rear of the tractor. If the PTO rotates counterclockwise, you must have your tractor modified by installing a gearbox to reverse the direction of rotation.

The length of the PTO Driveshaft that is included with your new machine will work in most instances but may need to be modified. See "Calculating Length of PTO Shaft needed" for checking the PTO Shaft length desired and then "Modifying the PTO Shaft if required" instructions if the PTO Shaft is too long.

1. Push in the Spring Pin at the Shear Bolt end of the PTO Shaft and slide it onto the Tractor Spline (**Figure 20**). When the PTO Shaft is started on the Tractor Spline Shaft, release the Pin and continue to push the PTO Shaft until the Spring Pin locks into the Groove of the Tractor Spline.
2. Push in the Spring Pin at the other end of the PTO Shaft and slide it onto the Mower Gearbox Spline. When the PTO Shaft is started on the Gearbox Spline Shaft, release the Pin and continue to push the PTO Shaft until the Spring Pin locks into the Groove of the Gearbox Spline.
3. Attach the PTO Shaft Safety Chains around a solid area of the 3-Point Link Rods with the Chain ends attached to both ends of the PTO Shaft Guard (**Figure 21**). Make sure the Chain has enough slack in the full range of the Tractor 3-Point Arm travel.

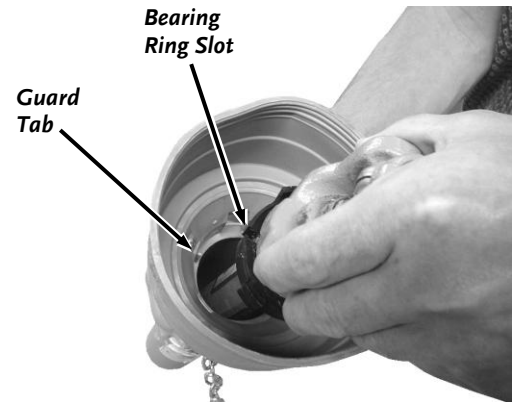


Figure 19

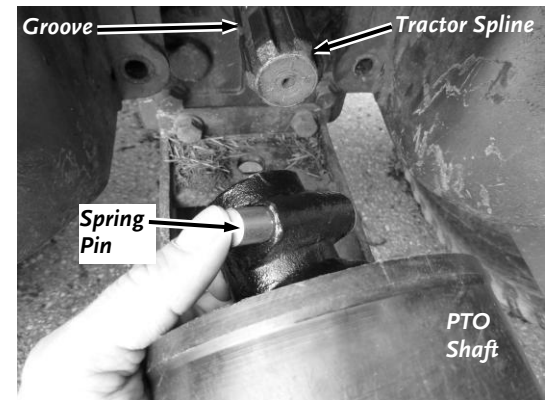


Figure 20

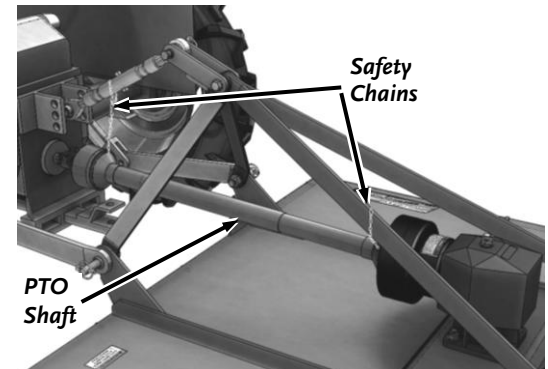


Figure 21

## Chapter 3: Operating The DR 60" 3-POINT HITCH BRUSH MOWER

### **!** WARNING

- This machine is designed to operate at 540 rpm PTO Shaft speed only! Never operate at a faster speed; doing so can cause serious injury to the operator or bystanders and could cause damage to the machine that is not covered under warranty.
- Read and understand your Tractor user's manual and all Tractor safety Warnings for operating your Tractor safely before operating this DR 60" 3-POINT HITCH BRUSH MOWER.

### Operation Notes

- See the Owner's Manual that came with your Tractor for all safety warnings and detailed information for operating your Tractor properly.
- Always operate the Tractor PTO at 540 RPM when Mowing.
- Always operate the machine (mowing) with the Lift Arms lowered so the Tail Wheel is on the ground and the machine is Level.
- Always disengage the PTO, lock the Parking Brake and shut off the Tractor when leaving the Tractor Seat.
- Never transport the Mower while the PTO is turning.
- Remove any debris buildup from the machine before every use of the Mower.

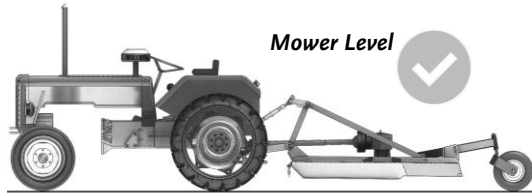
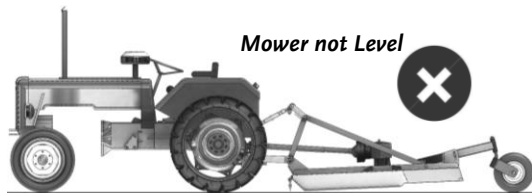


Figure 22

### Setting the Cutting Height

**Note:** The Tractor Lift Arms must be set at the proper height in relation to the height setting of the Tail Wheel to ensure that the Mower sits level (**Figure 22**). Improper setting of the Lift Arms will cause the Mower to be unlevel and will affect the performance.

1. Lift the mower off of the ground using the Tractor Lift Arms.
2. Remove the Hair Pin and Height Adjust Pin from the Height Adjust Bracket (**Figure 23**).
3. Rotate the Wheel Arm to the desired height setting and reinstall the Height Adjust Pin and Hair Pin to lock it in place.
4. Lower the Tractor Arms so that the Wheel is resting on the ground and the machine is Level (**Figure 22**). The performance of the Mower will be affected if the Tractor Arms are not set so that the Mower is level.

### Engaging the Mower Blades

1. Ensure that the Mower is lowered to the ground and all Guards are in place and properly secured before using.
2. Set Tractor throttle at IDLE and engage the PTO.
3. Increase Tractor throttle to the rpm's required to obtain 540 PTO speed.

**Note:** See your Tractor manual for detailed information on Tractor operation.

### Stopping the Blades from Spinning

1. Reduce Tractor throttle to IDLE.
2. Disengaging PTO to stop the Mower.

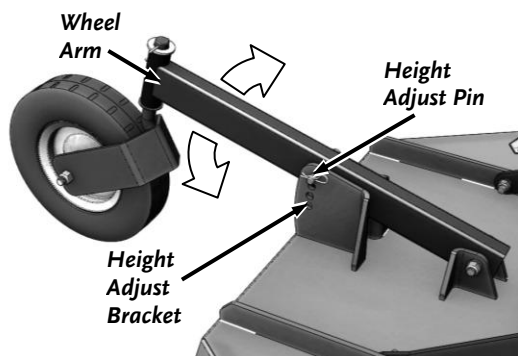


Figure 23

## *Preparing the Mower for Transport*

### **WARNING**

Always disengage the PTO Shaft before lifting the Mower off the ground or transporting the Mower to prevent injury or damage to the machine.

1. Lift the Mower off the ground with the Tractor 3-Point Hitch before transporting to prevent hitting any obstacles.
2. If your Tractor is equipped with a Lift Arm Lock, it should be used during transport.

### ***Obstacles***

Dealing with obstacles in the terrain is easy with your new DR 60" 3-POINT HITCH BRUSH MOWER. The following section explains how to approach most common obstacles.

- 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, disengage PTO, shut down the Tractor Engine, remove the Key, wait for all moving parts to come to a complete stop, then wait five minutes for parts to cool before attempting to untangle the machine.

### ***Heavy Growth***

- Take your time in heavy growth.
- If the machine cannot do it all in one pass, overlap half of the cutting swath.
- Ensure that the Mower is Level and not tilted forward for best performance.
- Ease the DR 60" 3-POINT HITCH BRUSH MOWER into denser growth.

### ***Slopes***

Refer to your Tractor Users Manual for slope safety information and operation guidelines.

## Chapter 4: Maintaining The DR 60" 3-POINT HITCH BRUSH MOWER

Regular maintenance is the way to ensure the best performance and long life of your machine. Please refer to this manual for maintenance procedures.

### WARNING

Disengage PTO, shut down the Tractor Engine, remove the Key, wait for all moving parts to come to a complete stop, disconnect the PTO shaft from the Tractor, then wait five minutes before performing any maintenance procedure or inspection on the Mower.

### Regular Maintenance Checklist

**Note:** Consider that the service intervals shown are the maximum under normal operating conditions. Increase frequencies under extremely dirty or dusty conditions. See the Owners Manual that came with the Tractor and with the PTO Shaft for Specific Tractor and PTO Shaft maintenance.

PROCEDURE	BEFORE EACH USE	EVERY 20 HOURS	EVERY 50 HOURS
Check General Equipment Condition, e.g. Nuts, Bolts, Welds, etc.	▲		
Clean all Debris from the machine.	▲		
Check the Blades for sharpness.	▲		
Replace broken or damaged Cutting Blades.	▲		
Lubricate PTO Shaft Spline ends and center overlap		▲	
Replace Gearbox Oil			▲

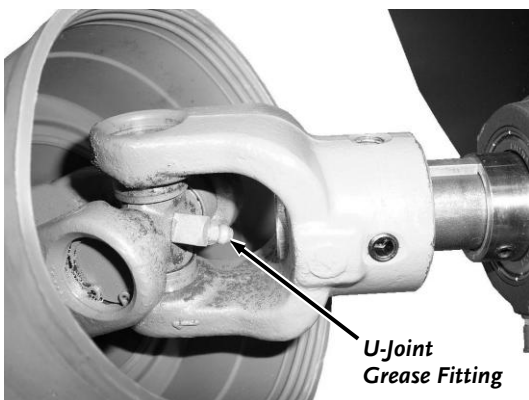


Figure 24

### Greasing the Blade Bearings

Your PTO Shaft was greased at the Factory so it will not need grease until the scheduled maintenance as listed at the beginning of this Chapter.

#### Tools and Supplies needed:

- Flexible hose grease gun
- Lithium grease
- Clean cloth

**Note:** The U-Joint Grease Fitting is sometimes located on the inside of the Joint. The plastic Collar will need to be unclipped and pushed down to access the Fitting for this type.

1. Wipe all dirt, etc., from the PTO Shaft grease fittings with a clean cloth.
2. Apply no more than three pumps of quality general-purpose lithium grease with a hand-pumped grease gun to each of the two U-Joint Grease Fittings (Figure 24).

### Greasing the Wheel Brackets

1. Wipe all dirt, etc., from the Wheel Support fitting with a clean cloth (Figure 25).
2. Apply quality general-purpose lithium grease with a hand-pumped grease gun to the Wheel Support Grease Fitting as needed.

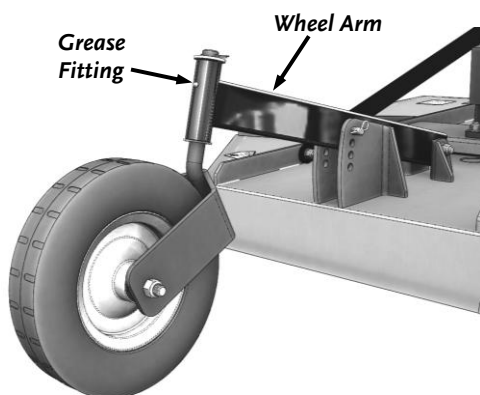


Figure 25



## Replacing the Shear Bolt

The Tiller is protected from Shock Loads by the Shear Bolt Driveline. The Driveline is equipped from the factory with a M8 x 55mm Shear Bolt (**Figure 26**). If the Bolt Shears during operation, replace it with a Grade 8.8 M8 x 55mm Bolt. If the M8 Bolt is not readily available, you may use a Grade 5, 5/16"-18 Bolt. Torque the bolt to 7-9 ft-lbs.

## Adding Oil to the Gearbox

### Tool and Supplies Needed:

- S.A.E. 80W/90 or S.A.E. 85W/140 Multi-purpose Gear Oil
- 22mm wrench
- 19mm Wrench
- Clean Rags

1. Remove the Vented Gearbox Plug from the top of the Gearbox using a 22mm Wrench (**Figure 27**).
2. Remove the Overflow Plug from the side of the Gearbox using a 19mm Wrench
3. Add oil to the top of the Gearbox until it starts draining from the overflow hole. Allow a few seconds for the oil to settle to get an accurate reading.
4. Reinstall the Overflow Plug into the side hole.
5. Reinstall the Gearbox Plug into the top of the Gearbox.

## Replacing the Cutting Blades

### **⚠ WARNING**

- Wear Gloves to protect your Hands from the sharp edges of the Blades. Wear Safety Glasses to protect your eyes from debris.
- Only use DR Power Equipment Cutting Blades. They have been designed and thoroughly tested for this Brush Mower. Use of other Blades may damage the machine and/or cause serious injury to the operator. Damage caused by not using DR Blades is not covered under warranty.

### Tools and Supplies Needed:

- Four Jack Stands
- 36mm Socket with Breaker Bar
- Safety Glasses
- Gloves

1. Lift the Brush Mower Deck with the Tractor high enough off the ground so Jack Stands can be inserted for support.

**Note:** *If the Mower is not attached to the Tractor a Jack can be used to lift the Mower to insert Jack Stands.*

2. Place at least four Jack Stands at the edges of the Mower Deck (one at each corner).
3. Rotate the Blade Carrier so that one of the Blade Bolts can be seen through the Access Hole on the top of the Deck (**Figure 28**).

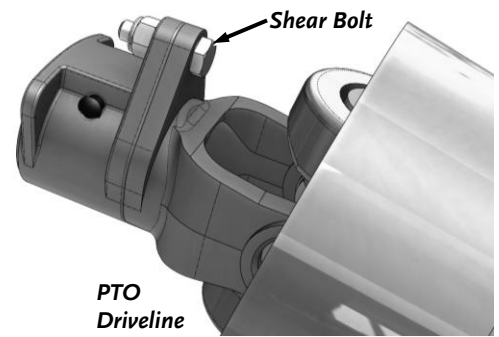


Figure 26

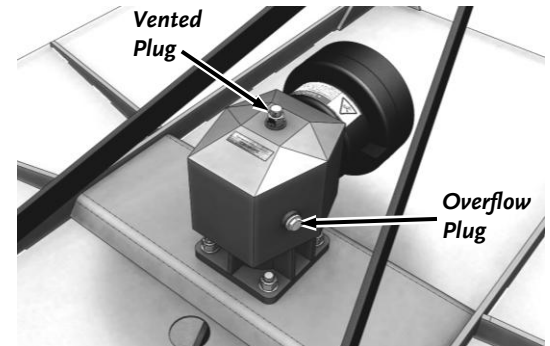


Figure 27

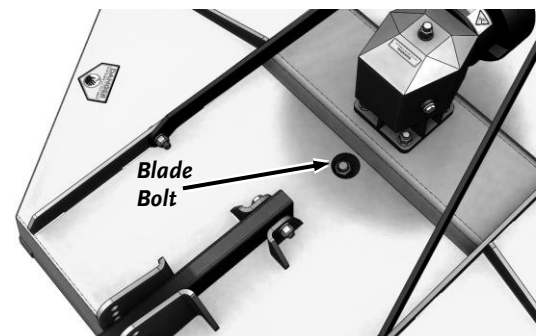


Figure 28

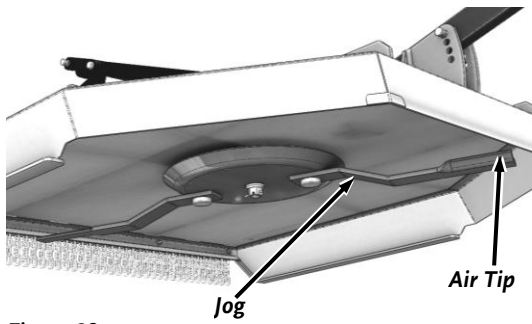


Figure 29

4. Use a 36mm Socket with Breaker Bar to Remove the Locknut from the Blade Bolt. Lift the Brush Blade from underneath the Deck to remove it from the Blade Carrier.

**Note:** The Blade should be installed with the Jog pointed down and the Air Tip pointed up (**Figure 29**).

5. Reinstall the new blade to the Blade Carrier using the Blade Bolt and Lock Nut. Use a 36mm Socket with Breaker Bar to ensure the hardware is fully tight.

**Note:** When fully tightened, the Blade should be able to rotate freely on the Blade Bolt.

6. Repeat Steps 3-5 for the other Blade.
7. Remove the Jack Stands and lower the Brush Mower to the ground.

## Chapter 5: Troubleshooting

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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**

Disengage PTO, shut down the Tractor Engine, remove the Key, wait for all moving parts to come to a complete stop, disconnect the PTO shaft from the Tractor, then wait five minutes before performing any maintenance procedure or inspection on the Trimmer.

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### **Troubleshooting Table**

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>
<i>Poor cut quality</i>	<ul style="list-style-type: none"><li>⇒ Blades need to be sharpened or replaced.</li><li>⇒ PTO not turning at 540 rpm.</li><li>⇒ Tractor speed too fast.</li><li>⇒ Mower is not Level</li></ul>
<i>Gearbox Overheating</i>	<ul style="list-style-type: none"><li>⇒ Low or Improper Lubricant</li><li>⇒ PTO not turning at 540 rpm.</li></ul>
<i>Scalping</i>	<ul style="list-style-type: none"><li>⇒ Tail Wheel setting too low; Adjust as needed.</li><li>⇒ Mower is not Level, Tractor Lift Arms are too Low.</li></ul>
<i>Machine stops cutting</i>	<ul style="list-style-type: none"><li>⇒ Inspect Cutting Blades.</li><li>⇒ Check the Shear Bolt</li><li>⇒ Check PTO rotation.</li></ul>
<i>The Blades won't spin or lacks power</i>	<ul style="list-style-type: none"><li>⇒ Check if PTO Shaft is connected correctly.</li><li>⇒ Check the Shear Bolt</li><li>⇒ If none of the above helps, visit our web site at <a href="http://www.DRPower.com">www.DRPower.com</a> or call 1-800-DR-OWNER (376-9637) for assistance.</li></ul>

# DR<sup>®</sup> 60" 3-POINT HITCH BRUSH MOWER



## 2-Year Limited Warranty

### Terms and Conditions

The DR<sup>®</sup> 60" 3-POINT HITCH 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<sup>®</sup> 60" 3-POINT HITCH BRUSH MOWER is fit for ordinary purposes for which a product of this type is used. DR<sup>®</sup> Power Equipment however, limits the implied warranties of merchantability and fitness in duration to a period of two (2) years in consumer use, ninety (90) days for any other use.

The 2-Year Limited Warranty on the DR<sup>®</sup> 60" 3-POINT HITCH 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 Cutting Blades and PTO shaft. Accessories to the machine are not covered by this warranty.

During the warranty period, the warranty holder is responsible for the machine transportation charges, if required. During the warranty period, warranty parts will be shipped by standard method at no charge to the warranty holder. Expedited shipping of warranty parts is the responsibility of the warranty holder.

SOME STATES DO NOT ALLOW LIMITATIONS ON THE LENGTH OF IMPLIED WARRANTIES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

DR<sup>®</sup> Power Equipment shall not be liable under any circumstances for any **incidental or consequential damages or expenses** of any kind, including, but not limited to, cost of equipment rentals, loss of profit, or cost of hiring services to perform tasks normally performed by the DR<sup>®</sup> 60" 3-POINT HITCH 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.

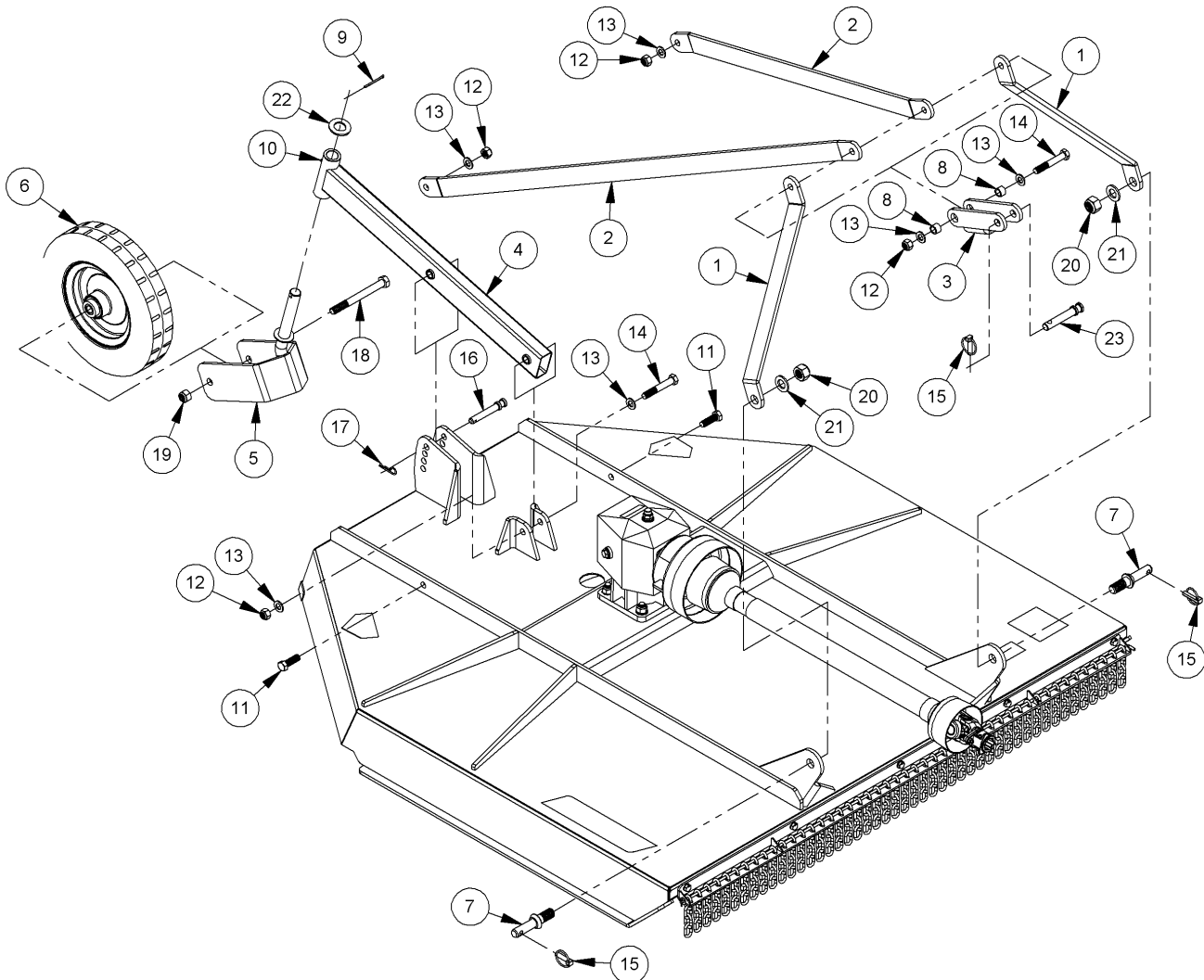
THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

## Chapter 6: Parts Lists and Schematic Diagrams

### Parts List – Height Adjust and Linkage Assembly

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

Ref#	Part#	Description	Ref#	Part#	Description
1	390471	Strap, Top Link, Front	13	388751	Washer, Flat, M16
2	390481	Strap, Top Link, Rear	14	400611	Bolt, M16-2 x 100, Class 8, Zp
3	390551	Yoke, Top Link	15	323961	Pin, Linch, 7/16 X 1.5in, Yzp
4	390521	Arm, Wheel, Tail	16	400361	Pin, Height Adjust, 60" Brush Cutter
5	390531	Caster, Bracket, Tail Wheel	17	160031	Pin, Hair, 1/2 To 9/16, .12 Wire
6	400701	Wheel, Tail, 16" X 3"	18	400621	Bolt, M18 X 180mm, Class 8.8, Zp
7	400641	Pin, Bottom Link PTO Class 1	19	400631	Nut, Nylon Lock, M18 - 2.5
8	390601	Bushing, Yoke, Top Link	20	400661	Nut, Nylon Lock, M24 - 3.00
9	186551	Pin, Cotter, 3/16x2	21	400651	Washer, Flat, M24
10	310621	Zerk, Grease, 1/4-28, 11/16 High	22	400671	Washer, Flat, M30
11	302381	Bolt, M16-2 x 50, Class 8, Zp	23	400341	Pin, Top Link, Pto Class 1
12	302541	Nut, Nylon Lock, M16-2			

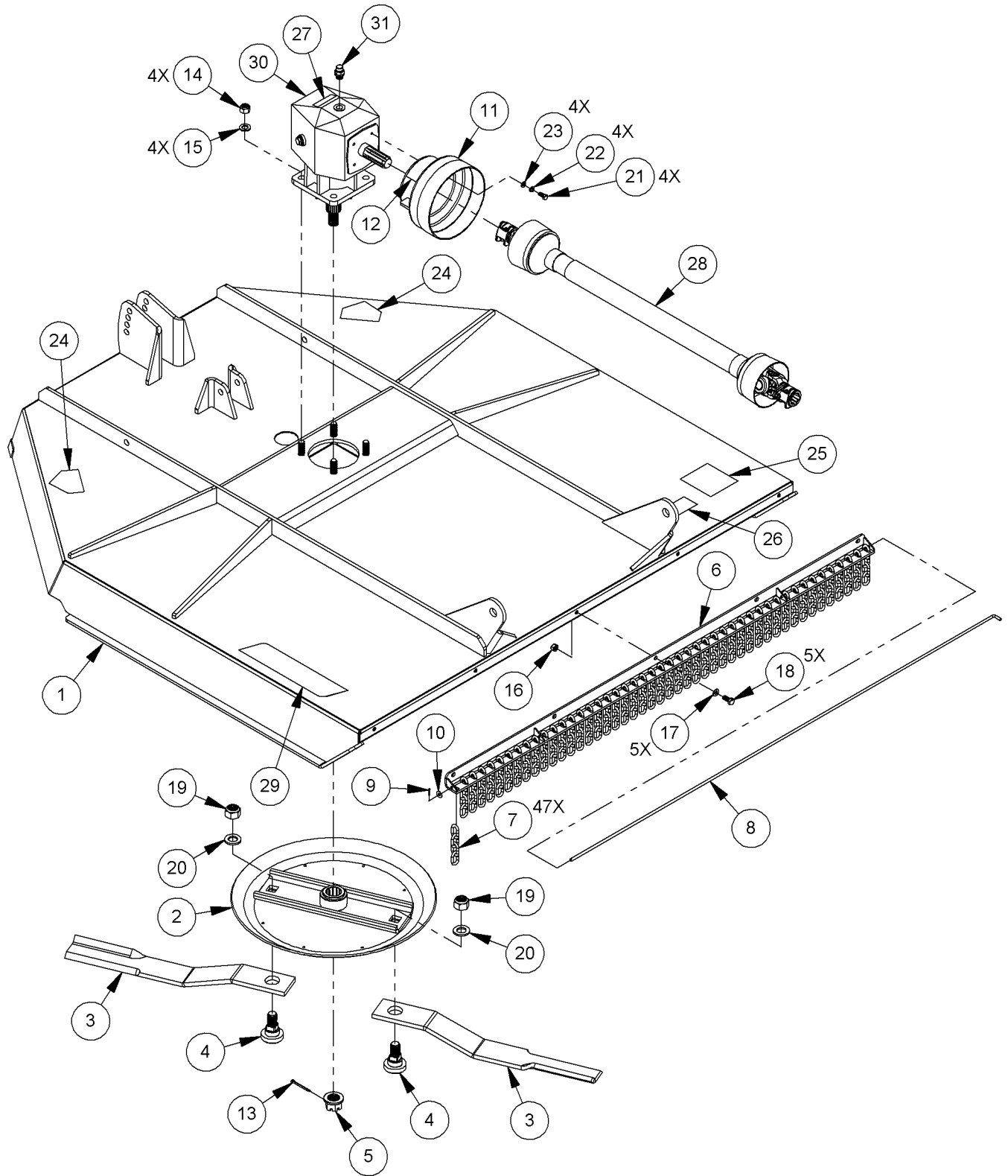


## Parts List – Deck Assembly

**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	378401	Deck, 60" Brush Cutter	17	302501	Washer, M10
2	390511	Carrier, Blade, Stump Jumper	18	400601	Bolt, M10-1.50 X 25mm, Cl 8.8, Zp
3	390541	Blade, Swinging, Air Tip	19	400661	Nut, Nylon Lock, M24 - 3.00
4	394841	Bolt, Blade, 60" Brush Mower	20	400651	Washer, Flat, M24
5	400691	Nut, Castle, Gearbox, 60" Brush Cutter	21	336761	Bolt, M8-1.25 X 20, Cl 8.8, Zp
6	390701	Guard, Chain, Bracket, 60" Brush Cutter	22	337431	Washer, Lock, M8
7	390721	Chain, Guard, 4 Links	23	302471	Washer, M8
8	390711	Guard, Chain, Rod	24	136491	Label, Danger, Blade
9	276761	Pin, Cotter, 3/32 X 1/2, Zp	25	409201	Label, General, Warning, Pto
10	112381	Washer, Flat, 1/4"	26	409141	Label, Warning, 540 Rpm Max
11	390611	Guard, Gearbox, PTO	27	409151	Label, Warning, Add Oil
12	248791	Label, Danger, Entanglement Hazard	28	390741	Pto Shaft, T4, Ø1-3/8in Z6 Yokes, 60" Brush Cutter
13	186551	Pin, Cotter, 3/16x2	29	417471	Label, Branding, PTO Field And Brush Mower
14	302541	Nut, Nylon Lock, M16-2	30	390751	Gearbox, 45HP, Brush Mower
15	388751	Washer, Flat, M16	31	400731	Vented Plug, Gearbox
16	302491	Nut, Nylon Lock, M10-1.5			

# Schematic – Deck Assembly



## ***Daily Checklist for the DR 60" 3-POINT HITCH BRUSH MOWER***

To help maintain your DR 60" 3-POINT HITCH BRUSH MOWER for optimum performance, we recommend you follow this checklist each time you use your machine.

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### **! WARNING**

Disengage PTO, shut down the Tractor Engine, remove the Key, wait for all moving parts to come to a complete stop, disconnect the PTO shaft from the Tractor, then wait five minutes before performing any maintenance procedure or inspection on the Mower

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[ ] CUTTING BLADES: Replace damaged or overly worn Cutting Blades.

[ ] GENERAL CONDITION: Check the general condition of the machine, e.g.; nuts, bolts, welds etc.

## ***End of Season and Storage***

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### **! WARNING**

Disengage PTO, shut down the Tractor Engine, remove the Key, wait for all moving parts to come to a complete stop, disconnect the PTO shaft from the Tractor, then wait five minutes before performing any maintenance procedure or inspection on the Mower

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- Lubricate PTO Shaft Grease Fittings.
- Check the general condition of the machine, e.g.; nuts, bolts, welds, etc. Replace parts or tighten Hardware as needed.
- Store in a dry covered area to protect from moisture.
- Remove any wrapped grass or weeds from the Cutting Blades and Wheel Assembly. Clean grass and debris from the top and underneath the Mower Deck.



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