

**MAN0561**

(Rev. 9/5/2008)

# **HERITAGE™**

# **BOX SCRAPER**

# **& REAR BLADE**

**BSE4**  
**BSE5**  
**RBE4**  
**RBE5**

**WOODS®**  
Tested. Proven. Unbeatable.

**OPERATOR'S MANUAL**

## TO THE DEALER:

Assembly and proper installation of this product is the responsibility of the Woods® dealer. Read manual instructions and safety rules. Make sure all items on the Dealer's Pre-Delivery and Delivery Check Lists in the Operator's Manual are completed before releasing equipment to the owner.

**The dealer must complete the Product Registration online at the Woods Dealer Website** or complete the mail-in form included with the Operator's Manual. If using the mail-in form, the dealer is to return the prepaid postage portion to Woods, give one copy to the customer, and retain one copy. **Failure to register the product does not diminish customer's warranty rights.**

## TO THE OWNER:

Read this manual before operating your Woods equipment. The information presented will prepare you to do a better and safer job. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all adjustment and operating procedures before attempting to operate. Replacement manuals can be obtained from your dealer. To locate your nearest dealer, check the Dealer Locator at [www.WoodsEquipment.com](http://www.WoodsEquipment.com), or in the United States and Canada call 1-800-319-6637.

The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the unit as specified. Observe all safety information in this manual and safety decals on the equipment.

For service, your authorized Woods dealer has trained mechanics, genuine Woods service parts, and the necessary tools and equipment to handle all your needs.

Use only genuine Woods service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation. Record the model number and serial number of your equipment in the spaces provided:

**Model:** \_\_\_\_\_ **Date of Purchase:** \_\_\_\_\_

**Serial Number: (see Safety Decal section for location)** \_\_\_\_\_

Provide this information to your dealer to obtain correct repair parts.

Throughout this manual, the term **NOTICE** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING**, and **DANGER** are used in conjunction with the Safety-Alert Symbol (a triangle with an exclamation mark) to indicate the degree of hazard for items of personal safety.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



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



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



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

**IMPORTANT**  
or **NOTICE**

Is used to address practices not related to personal injury.

**NOTE**

Indicates helpful information.

**WOODS®**

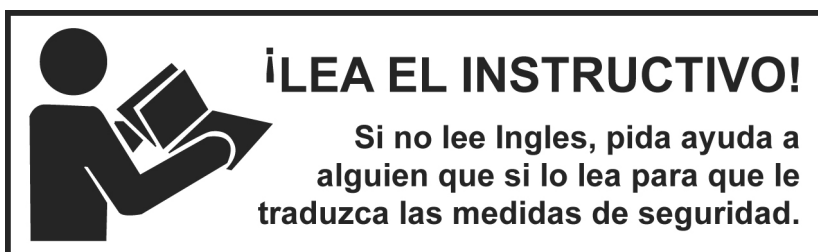
**ALITEC™**  
**BMP®**  
**CENTRAL FABRICATORS®**  
**GANNON®**  
**GILL®**  
**WAIN-ROY®**  
**WOODS®**

## 2 Introduction

Gen'l (Rev. 2/19/2008)

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This Operator's Manual should be regarded as part of the machine. Suppliers of both new and second-hand machines must make sure that this manual is provided with the machine.

# SPECIFICATIONS

	<b>BSE4</b>	<b>BSE5</b>	<b>RBE4</b>	<b>RBE5</b>
<b>Overall Width</b>	48"	60"	48"	60"
<b>Weight</b>	309 lbs.	351 lbs.	164 lbs.	180 lbs.
<b>Cutting Edge</b>	3/8 x 3" Welded	3/8 x 3" Welded	3/8 x 3" Welded	3/8 x 3" Welded
<b>Moldboard Thickness</b>	3/16"	3/16"	3/16"	3/16"
<b>Side Plate Thickness</b>	7-Gauge	7-Gauge		
<b>Scarifier</b>	Adjustable, 3-Position with replaceable wear points	Adjustable, 3-Position with replaceable wear points		
<b>Capacity</b>	7.8 cu. ft.	9.7 cu. ft.		
<b>Tractor Rating</b>	Max. Engine 35 hp	Max. Engine 35 hp	Max. Engine 35 hp	Max. Engine 35 hp
<b>Tractor 3-Point</b>	Category 1	Category 1	Category 1	Category 1
<b>Angle Adjustment</b>			5 Forward & Reverse Positions	5 Forward & Reverse Positions

## GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your Box Scraper and/or Rear Blade. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance.

These instructions have been compiled from extensive field experience and engineering data. Some information may be general in nature, due to unknown and varying operating conditions. However, through experience and these instructions, you should be able to develop procedures suitable to your particular situation.

The illustrations and data used in this manual were current at the time of printing. However, due to possible inline production changes, your machine may vary slightly in detail. We reserve the right to redesign and change the machines as may be necessary without notification.

Throughout this manual, references are made to right and left directions. These are determined by standing behind the tractor, facing the direction of forward travel.

## 4 Introduction

(Rev. 1/26/2007)  
MAN0561 (8/25/2006)

# SAFETY RULES



**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by an operator's single careless act.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, judgement, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.

It has been said, "The best safety device is an informed, careful operator." We ask you to be that kind of operator.

## TRAINING

■ **Safety instructions are important! Read all attachment and power unit manuals; follow all safety rules and safety decal information. (Replacement manuals and safety decals are available from your dealer. To locate your nearest dealer, check the Dealer Locator at [www.WoodsEquipment.com](http://www.WoodsEquipment.com), or in the United States and Canada call 1-800-319-6637.) Failure to follow instructions or safety rules can result in serious injury or death.**

■ **If you do not understand any part of this manual and need assistance, see your dealer.**

■ **Operators must be instructed in and be capable of the safe operation of the equipment, its attachments, and all controls. Do not allow anyone to operate this equipment without proper instructions.**

■ **Never allow children or untrained persons to operate equipment.**

## PREPARATION

■ **Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.**

■ **Make sure attachment is properly secured, adjusted, and in good operating condition.**

■ **Power unit must be equipped with ROPS or ROPS cab and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS system in "locked up" position at all times.**

■ **A minimum 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, tractor could tip over, causing personal injury or death. The weight may be attained with a loader, front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment. Do not estimate.**

■ **Consult local utilities before working. Know location of all underground cables, pipelines, overhead wires, and other hazards in working area and avoid contact.**

## TRANSPORTATION

■ **Always comply with all state and local lighting and marking requirements.**

■ **Never allow riders on power unit or attachment.**

■ **Do not operate or transport on steep slopes.**

■ **Use extreme care and reduce ground speed on slopes and rough terrain.**

■ **Do not operate or transport equipment while under the influence of alcohol or drugs.**

## OPERATION

■ **Never go underneath equipment (lowered to the ground or raised) unless it is properly blocked and secured. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.**

■ **Always comply with all state and local lighting and marking requirements.**

■ **Operate only in daylight or good artificial light.**

■ **Keep bystanders away from equipment.**

■ **Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.**

■ **Never allow riders on power unit or attachment.**

■ **Power unit must be equipped with ROPS or ROPS cab and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS system in "locked up" position at all times.**

*(Safety Rules continued on next page)*

# SAFETY RULES



**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



*(Safety Rules continued from previous page)*

- Always sit in power unit seat when operating controls or starting engine. Securely fasten seat belt, place transmission in neutral, engage brake, and ensure all other controls are disengaged before starting power unit engine.
- Look down and to the rear and make sure area is clear before operating in reverse.
- Use extreme care when working close to fences, ditches, other obstructions, or on hillsides.
- Do not operate or transport on steep slopes.
- Do not stop, start, or change directions suddenly on slopes.
- Use extreme care and reduce ground speed on slopes and rough terrain.
- Stop power unit and equipment immediately upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation.
- Watch for hidden hazards on the terrain during operation.

## MAINTENANCE

- Before dismounting tractor or performing any service or maintenance, lower attachment to ground, turn off engine, set parking brake, operate valve levers to release any hydraulic pressure, and remove key.
- Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.

- Never go underneath equipment (lowered to the ground or raised) unless it is properly blocked and secured. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.
- Make sure attachment is properly secured, adjusted, and in good operating condition.
- Never perform service or maintenance with engine running.
- Keep all persons away from operator control area while performing adjustments, service, or maintenance.
- Tighten all bolts, nuts, and screws to torque chart specifications. Check that all cotter pins are installed securely to ensure equipment is in a safe condition before putting unit into service.

## STORAGE

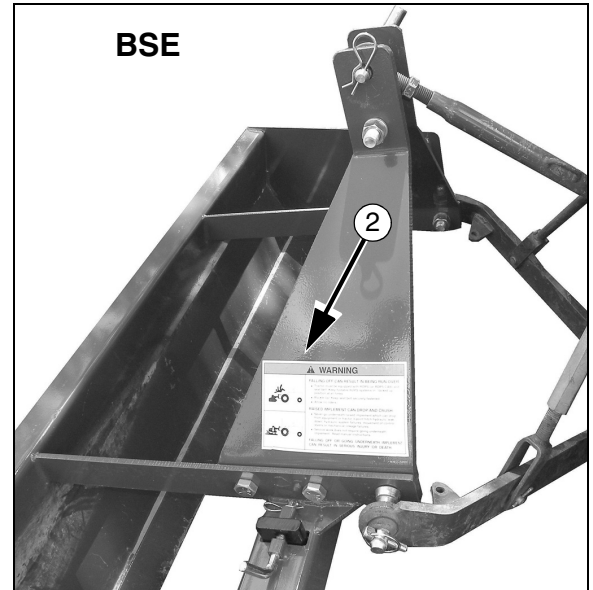
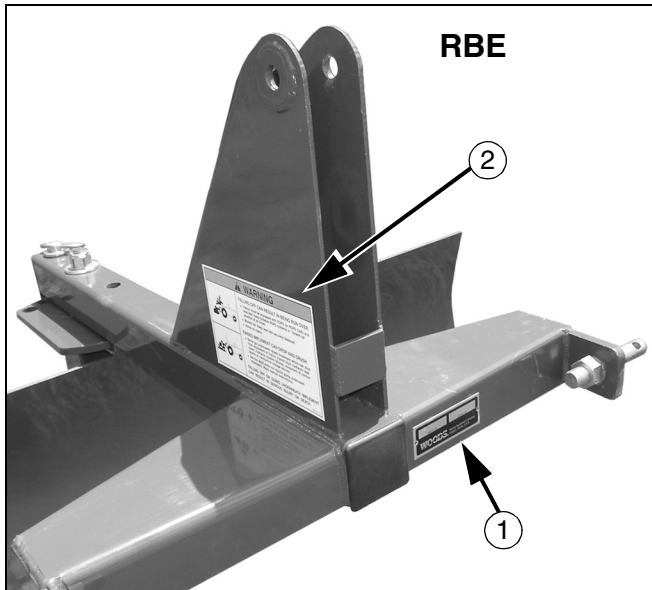
- To help prevent injury caused by a falling implement, always detach on a hard level surface.
- Block equipment securely for storage.
- Do not climb or lean on stored equipment.
- Keep children and bystanders away from storage area.





# SAFETY & INSTRUCTIONAL DECALS

**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**  
**Replace Immediately If Damaged!**



### BE CAREFUL!

Use a clean, damp cloth to clean safety decals.


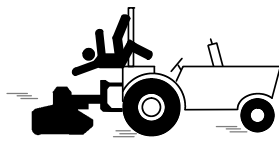
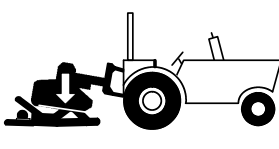
Avoid spraying too close to decals when using a pressure washer; high-pressure water can enter through very small scratches or under edges of decals causing them to peel or come off.

Replacement safety decals can be ordered free from your Woods dealer. To locate your nearest dealer, check the Dealer Locator at [www.WoodsEquipment.com](http://www.WoodsEquipment.com), or in the United States and Canada call 1-800-319-6637.



**1 - Serial Number Plate**

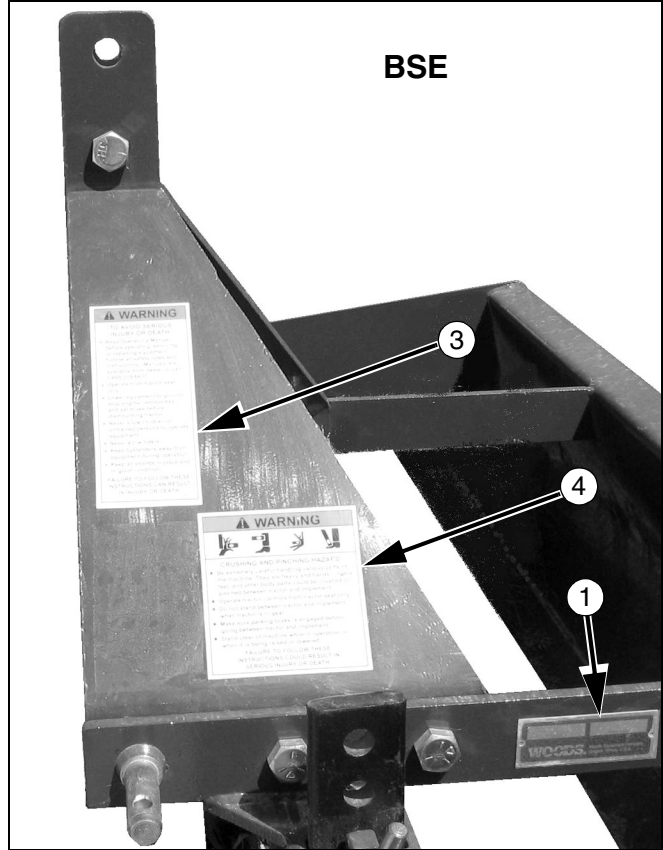
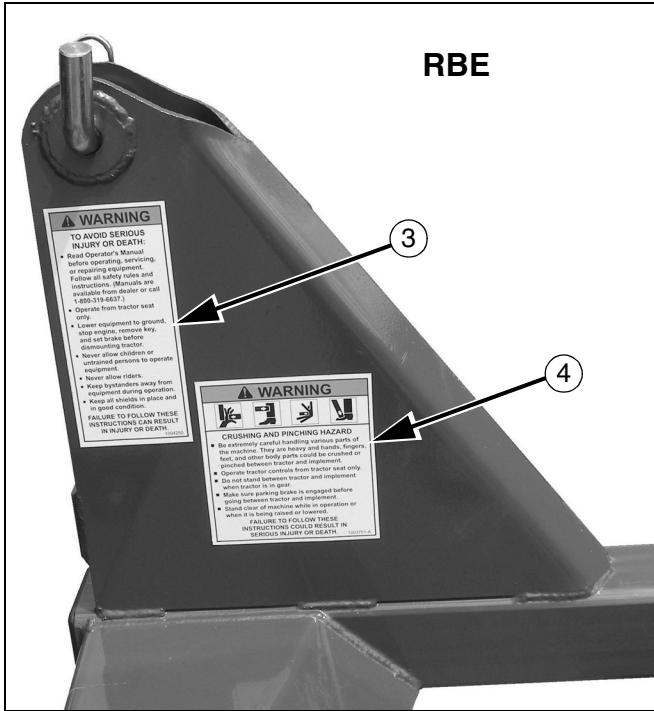
2 - 55121

 <b>WARNING</b>	
	<p><b>FALLING OFF CAN RESULT IN BEING RUN OVER.</b></p> <ul style="list-style-type: none"> <li>■ Tractor must be equipped with ROPS (or ROPS CAB) and seat belt. Keep foldable ROPS systems in "locked up" position at all times.</li> <li>■ Buckle Up! Keep seat belt securely fastened.</li> <li>■ Allow no riders.</li> </ul>
	<p><b>RAISED IMPLEMENT CAN DROP AND CRUSH.</b></p> <ul style="list-style-type: none"> <li>■ Never go underneath raised implement which can drop from equipment or tractor 3-point hitch hydraulic leak down, hydraulic system failures, movement of control levers or mechanical linkage failures.</li> <li>■ Service work does not require going underneath implement. Read manual instructions.</li> </ul>
<p><b>FALLING OFF OR GOING UNDERNEATH IMPLEMENT CAN RESULT IN SERIOUS INJURY OR DEATH.</b></p> <p style="text-align: right;">55121-C</p>	

# SAFETY & INSTRUCTIONAL DECALS

## ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

### Replace Immediately If Damaged!



**⚠ WARNING**

**TO AVOID SERIOUS INJURY OR DEATH:**

- Read Operator's Manual before operating, servicing, or repairing equipment. Follow all safety rules and instructions. (Manuals are available from dealer or call 1-800-319-6637.)
- Operate from tractor seat only.
- Lower equipment to ground, stop engine, remove key, and set brake before dismounting tractor.
- Never allow children or untrained persons to operate equipment.
- Never allow riders.
- Keep bystanders away from equipment during operation.
- Keep all shields in place and in good condition.

**FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.**

1004250

**3 - 1004250**

**4 - 1003751**

**⚠ WARNING**






**CRUSHING AND PINCHING HAZARD**

- Be extremely careful handling various parts of the machine. They are heavy and hands, fingers, feet, and other body parts could be crushed or pinched between tractor and implement.
- Operate tractor controls from tractor seat only.
- Do not stand between tractor and implement when tractor is in gear.
- Make sure parking brake is engaged before going between tractor and implement.
- Stand clear of machine while in operation or when it is being raised or lowered.

**FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.**

1003751-A



# OPERATION

The operator is responsible for the safe operation of this equipment. The operator must be properly trained. Operators should be familiar with the equipment, the tractor, and all safety practices before starting operation. Read the safety rules and safety decals, page 5 through page 8.

The box scrapers and rear blades are designed for a wide range of applications: scarifying, scraping, leveling, grading, and backfilling.

## WARNING

■ Power unit must be equipped with ROPS or ROPS cab and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS system in “locked up” position at all times.

■ Never allow children or untrained persons to operate equipment.

■ Keep bystanders away from equipment.

■ NEVER GO UNDERNEATH EQUIPMENT. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak-down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.

- Service work does not require going underneath.
- Read Operator's Manual for service instructions or have service performed by a qualified dealer.

■ Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.

## CAUTION

■ Stop power unit and equipment immediately upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation.

■ Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.

## CONNECTING ATTACHMENTS

This box scraper or rear blade should be mounted on tractors with a maximum engine rating of 35 hp and not to exceed 2000 lbs.

The box scraper and rear blade are compatible with Category 1, 3-point tractors equipped with side swing type lower lift arms.

Adjust or remove tractor drawbar to eliminate interference with box scraper or rear blade.

## **NOTICE**

■ The 3/4" bolt and sleeve in lower hole provide strength to the box scraper. Do not remove this bolt and sleeve when operating the box scraper. See Figure 1.

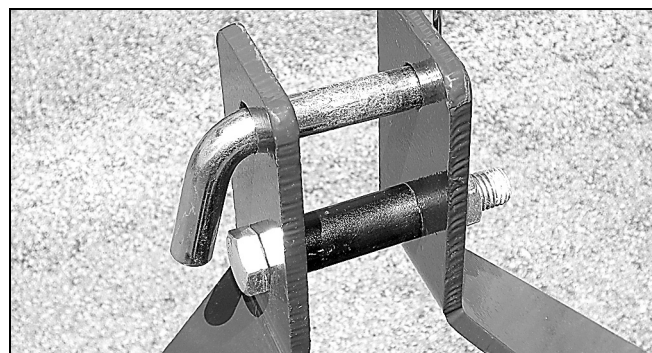


Figure 1. Attaching Box Scraper

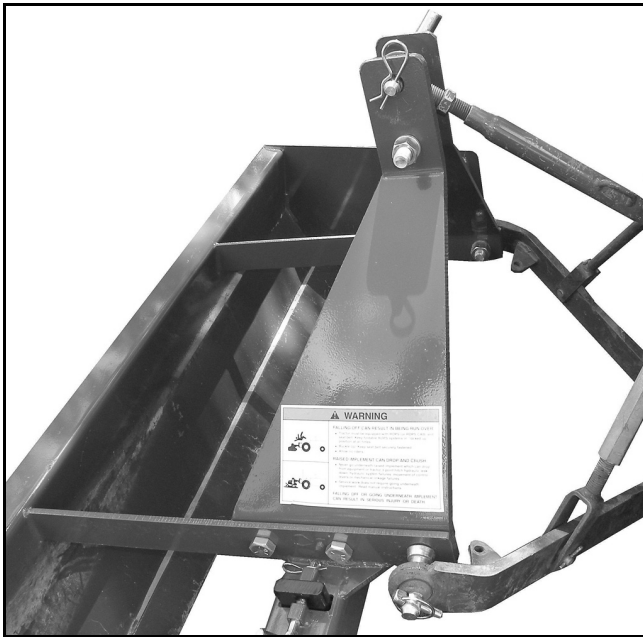
## Category 1

1. Place tractor 3-point lower lift arms over outer hitch pins.
2. Secure with klik pin (not provided) as shown in Figure 2.
3. Attach the tractor's top link to the top of the attachment's A-frame bars.
4. Secure with the heavy-duty top link pin and retaining pin supplied with the tractor's top link as shown.

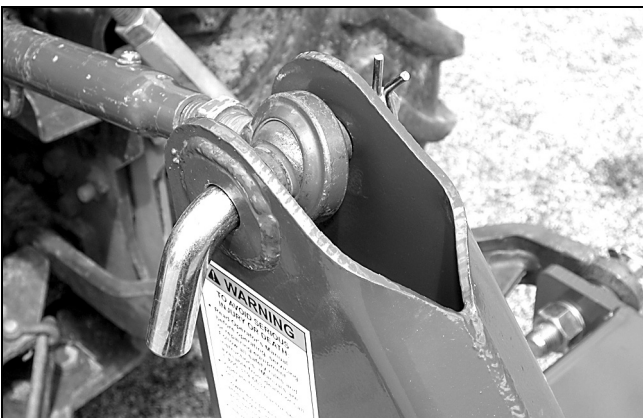
## Quick Hitch (Category 1)

(Refer to parts list drawings, page 18 & page 19.)

1. Use Bushing Kit #1022040 when using a quick coupler
2. Place lower sleeves (A) over lower hitch pins and secure with linch pins (B).
3. **On the box scraper**, replace the top spacer (9) with sleeve (D) by removing and replacing nut (6), washer (7), and bolt (8).
4. **On the rear blade**, install sleeve (C), bolt (E), washer (F), and nut (G) in the top link hole.
5. Align quick hitch with lower and upper sleeves and connect using the instructions with the quick hitch.



**Figure 2.** Top Link Connected - Box Scraper



**Figure 3.** Top Link Connected - Rear Blade

## **OPERATING TECHNIQUES - BOX SCRAPER**

### **Adjusting Top Link**

The box scraper is leveled by adjusting the length of the tractor's top link.

- Shortening the top link will deepen the scarifier tooth penetration.
- Lengthening the top link will provide better scraping and leveling action.

Experience will allow the operator to determine the best setting for each application.

### **Backfilling**

1. Raise or remove scarifier shanks (see page 13).

2. Lower the blade to the ground and back up into the fill material.
3. Shorten the top link to raise the cutting blade and control how much the blade digs in.

### **Scarifying**

1. Place the scarifier shanks in position with the points facing toward the tractor.
2. Lock into position with the pins provided. The lowest shank position provides the greatest ground penetration.
3. Lower the box scraper and drive the tractor ahead to begin the scarifying operation.
4. Adjust the depth of the scarifier by tilting the unit with the tractor top link. Shortening the top link will provide deeper and more aggressive operation.

### **Scraping**

1. Raise or remove the scarifier shanks (see page 13). Lower the box scraper and drive forward to move material.
2. Adjust the depth of the blade by tilting the unit with the tractor top link.
  - Shortening the top link when scraping will transfer more weight on the front of the scraper and will raise the cutting blade to provide a more shallow cut.
  - When the top link is adjusted properly, the bowl of the blade should fill easily and material can be pulled to a desired location.

### **Leveling**

1. Raise or remove scarifier shanks.
2. Shorten the top link so the cutting edge clears the ground.
3. Drive forward with the box scraper in this position and loose material will be leveled.

### **Storage**

#### **⚠ WARNING**

- To help prevent injury caused by a falling implement, always detach on a hard level surface.
- Block equipment securely for storage.
- Do not climb or lean on stored equipment.
- Keep children and bystanders away from storage area.

## OPERATING TECHNIQUES - REAR BLADE

### Adjusting Top Link

Level the A-frame and boom with 3-point connecting links and top link. Adjusting the top link length will change the fore and aft pitch of the tool.

Lengthening the top link will cause the tool to contact the ground with a sharper pitch and feed itself into the ground more readily.

Position 3-point lift arm sway blocks or tighten sway chains to eliminate side sway. Install side braces if necessary.

### Reversing

For most tractors, the blade may be rotated 360° without unhooking from the tractor.

To rotate without unhooking, pull hitch pin assembly, rotate to desired position, replace hitch pin assembly.

### Angling

Remove hitch pin assembly.

The blade may be set 15° or 30° to the left or right for forward grading.

### Backfilling

Reverse blade for backfilling ditches or trenches (see Reversing).

### Storage

#### **WARNING**

- To help prevent injury caused by a falling implement, always detach on a hard level surface.
- Block equipment securely for storage.
- Do not climb or lean on stored equipment.
- Keep children and bystanders away from storage area.

Store the rear blade with the hitch lowered to the ground or use the optional parking stand on the upper hole (Figure 4).

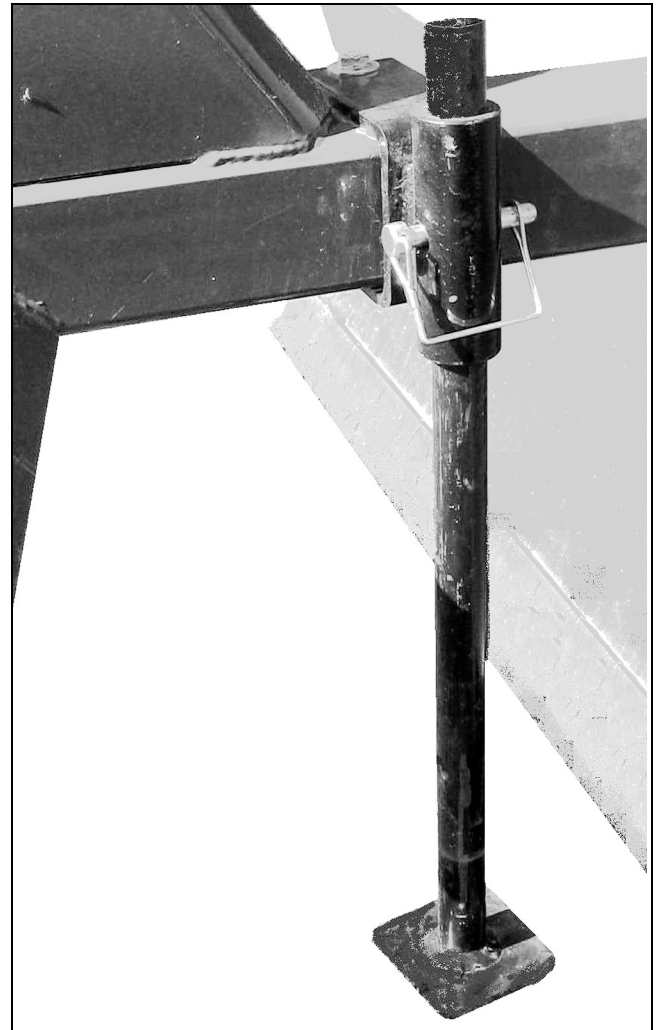


Figure 4. Optional Parking Stand - Rear Blade

### PRE-OPERATION CHECK LIST (OWNER'S RESPONSIBILITY)

- \_\_\_ Review and follow all safety rules and safety decal instructions, page 5 through page 8.
- \_\_\_ Check that equipment is properly and securely attached to tractor.
- \_\_\_ Check that all safety decals are installed and in good condition. Replace if damaged.
- \_\_\_ Check that all hardware is properly installed and secured.
- \_\_\_ Do not allow riders.
- \_\_\_ Make sure tractor ROPS or ROPS cab and seat belt are in good condition. Keep seat belt securely fastened during operation.
- \_\_\_ Check that blade cutting edge is in good condition.

# MAINTENANCE

The information in this section is written for operators who possess basic mechanical skills. If you need help, your dealer has trained service technicians available. For your protection, read and follow the safety information in this manual.

## WARNING

■ **NEVER GO UNDERNEATH EQUIPMENT.** Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak-down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.

- Service work does not require going underneath.
- Read Operator's Manual for service instructions or have service performed by a qualified dealer.

■ **Keep all persons away from operator control area while performing adjustments, service, or maintenance.**

## CAUTION

■ **Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.**

## BOX SCRAPER

### Blocking Up

**NOTE:** To service the box scraper when attached to the tractor, it must be blocked up off the ground.

1. Place two 4" x 4" (10 x 10 cm) blocks under each side frame of the box scraper as shown in Figure 5.
2. Lower the box scraper to rest securely on the blocks.

**NOTE:** Do not block the machine any higher than needed for removing the shanks.

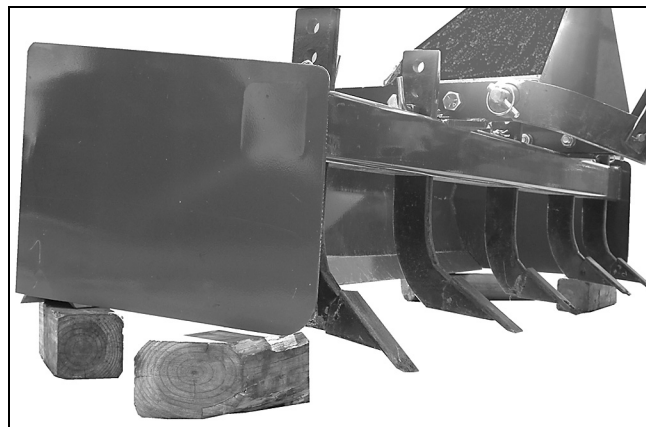


Figure 5. Box Scraper Blocked Up

### Adjusting or Removing Scarifier Shanks

Scarifier shanks have three operating positions in the scraper. They may be removed if scarifying action is not needed.

1. Block up machine by placing two 4" x 4" (10 x 10 cm) blocks under each side-frame of the box scraper (see Figure 5).
2. Lower the box scraper to rest securely on the blocks.

**NOTE:** Do not block the machine any higher than necessary to remove the shanks or cutting edge.

3. Remove safety pin and lock pin. Adjust scarifier to desired position, Figure 6.
4. Replace safety and lock pins.

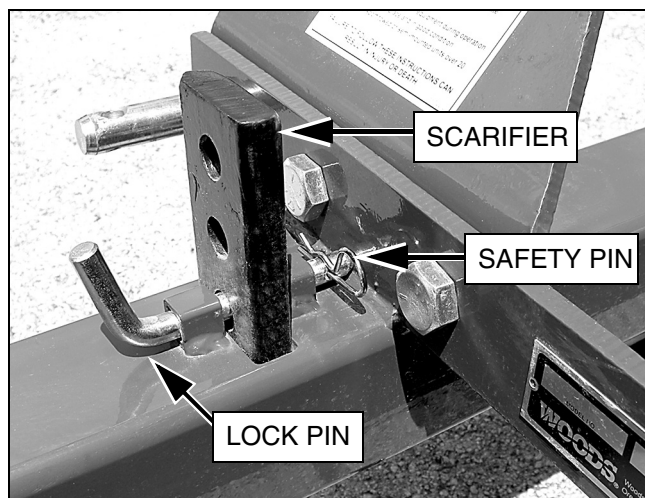
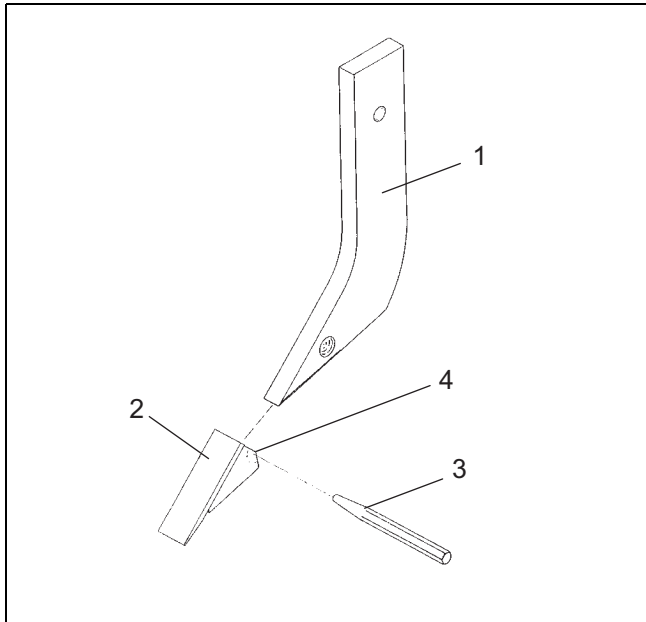


Figure 6. Scarifier Removal or Adjustment

## Replacing Scarifier Tooth

1. Remove scarifier shank (1) from the scarifier bar.
2. Remove the worn tooth by driving a chisel between the shank (1) and tooth (2) .
3. Install replacement tooth and use a punch (3) to bend the locking tab (4) into the retaining hole on both sides of the shank (see Figure 7).
4. Reinstall the shank (1) in the scarifier bar.



**Figure 7.** Scarifier Point Replacement

## CLEANING BOX SCRAPER & REAR BLADE

### After Each Use

- Remove large debris such as clumps of dirt, grass, crop residue, etc. from machine.
- Inspect machine and replace worn or damaged parts.
- Replace any safety decals that are missing or not readable.

### Periodically or Before Extended Storage

- Clean large debris such as clumps of dirt, grass, crop residue, etc. from machine.
- Remove the remainder using a low-pressure water spray.
  1. Be careful when spraying near scratched or torn safety decals or near edges of decals as water spray can peel decal off surface.
  2. Be careful when spraying near chipped or scratched paint as water spray can lift paint.
  3. If a pressure washer is used, follow the advice of the pressure washer manufacturer.
- Inspect machine and replace worn or damaged parts.
- Sand down scratches and the edges of areas missing paint and coat with Woods spray paint of matching color (purchase from your Woods dealer).
- Replace any safety decals that are missing or not readable (supplied free by your Woods dealer). See Safety Decals section for location drawing.



# ASSEMBLY

## DEALER SET-UP INSTRUCTIONS

Assembly of this Box Scraper and Rear Blade is the responsibility of the WOODS dealer. It should be delivered to the owner completely assembled and adjusted for normal conditions.

Complete the Check Lists on page 17 before delivering the attachment to the customer.

The Box Scraper and Rear Blade are shipped partially assembled. Assembly will be easier if components are aligned and loosely assembled before tightening hardware. Recommended torque values for hardware are located on page 20.

### **WARNING**

■ Before dismounting power unit or performing any service or maintenance, follow these steps: disengage power to equipment, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, set parking brake, stop engine, remove key, and unfasten seat belt.

■ NEVER GO UNDERNEATH EQUIPMENT. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak-down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.

- Service work does not require going underneath.
- Read Operator's Manual for service instructions or have service performed by a qualified dealer.

■ Keep all persons away from operator control area while performing adjustments, service, or maintenance.

### **CAUTION**

■ Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.

## BOX SCRAPER

### **Remove Components from Shipping Configuration**

1. Remove the banding that holds the box scrapers to pallet.
2. Remove hitch pins (5) with lock washers and nuts shown in Figure 8.

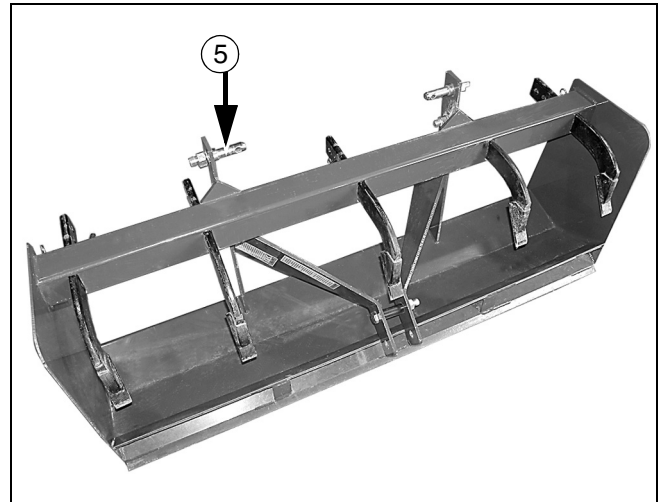


Figure 8. Shipping Configuration - Box Scraper

3. Remove bolts (10), nuts (6) and washers (7) securing A-frame hitch.
4. Remove A-frame hitch from box scraper.

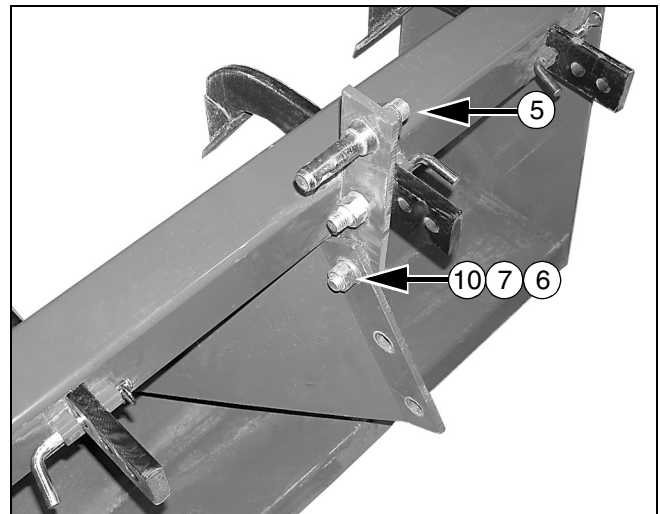
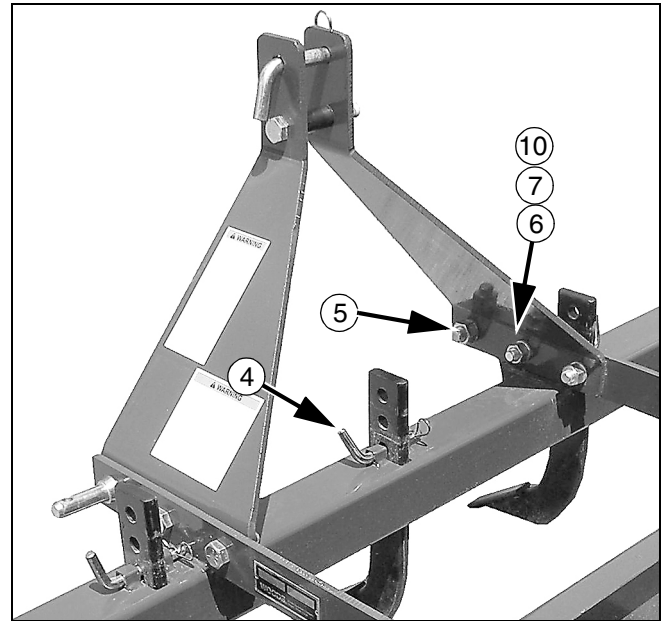


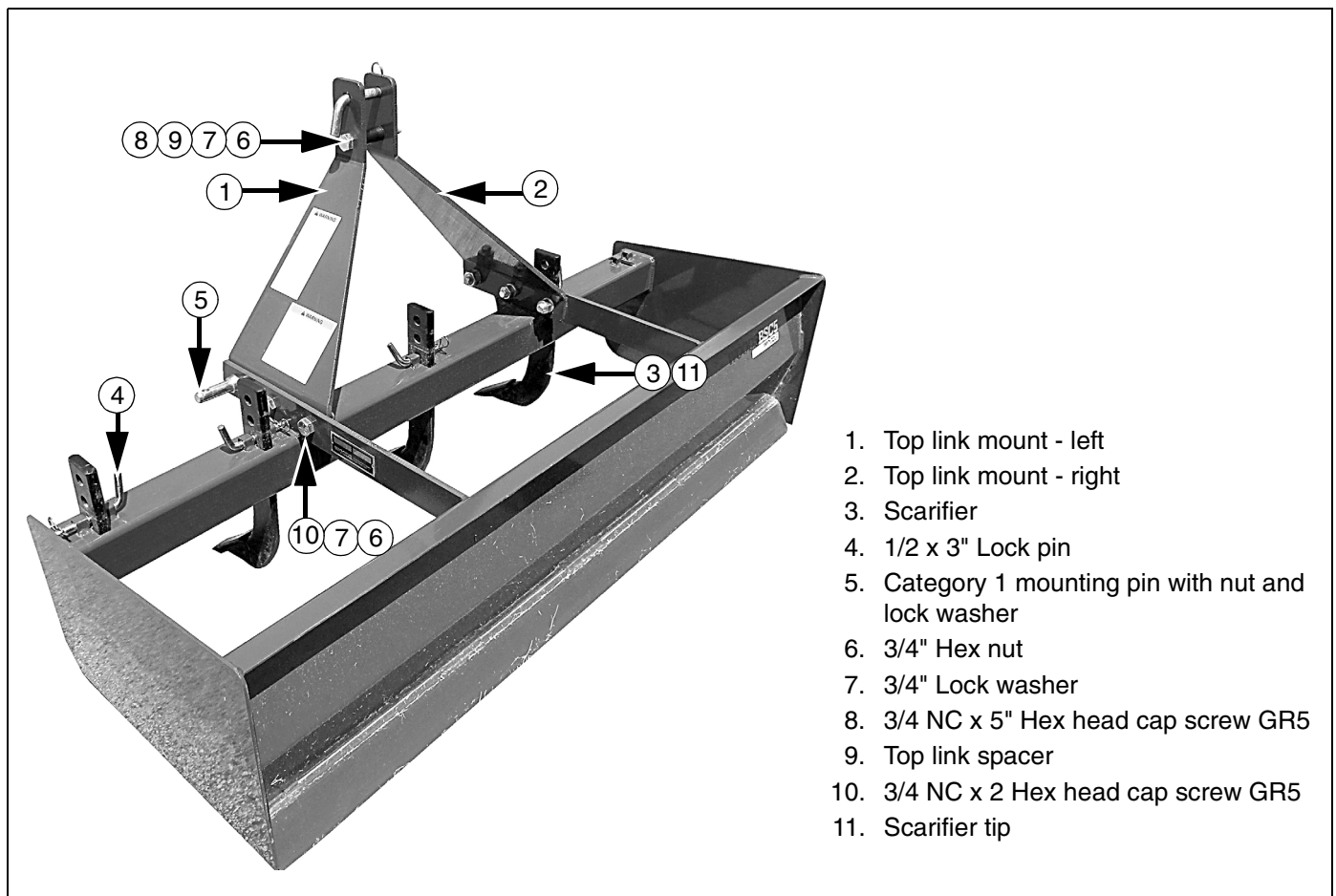
Figure 9. Remove A-Frame Hitch from Shipping Configuration

## Assemble Box Scraper

1. Place the A-frame hitch over the three corresponding holes on the inside of the scraper frame as shown in Figure 10.
2. Secure the hitch pin (5) with lock washer and nut. Repeat for opposite side.
3. Finish securing the frame by installing the four sets of bolts (10), nuts (6) and washers (7).
4. Remove lock pins (4) and scarifiers. Rotate scarifiers so teeth face forward and replace in slots with lock pins and safety pins.



**Figure 10.** A-Frame Support Bars & Scarifiers Assembled



**Figure 11.** Box Scraper Assembled

## REAR BLADE

### Remove Components from Shipping Configuration

1. Remove nut (5), washer (6) and pull pin (7) from top of blade.
2. Remove hitch from the blade.

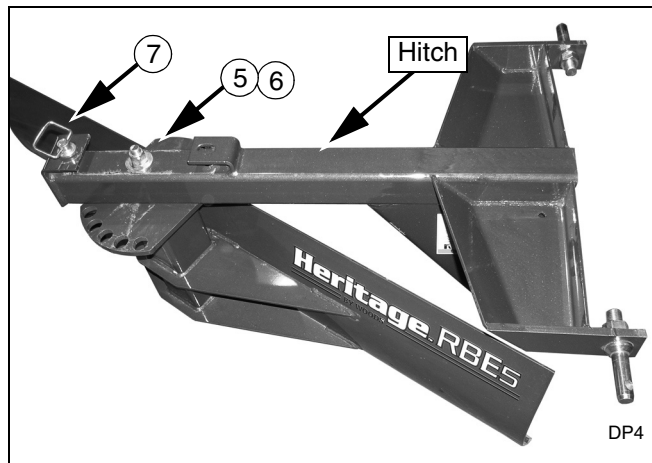


Figure 12. Shipping Configuration - Rear Blade

### Assemble Rear Blade

1. Rotate hitch to its upright position and slide back onto the bolt on top of blade as shown in Figure 13.

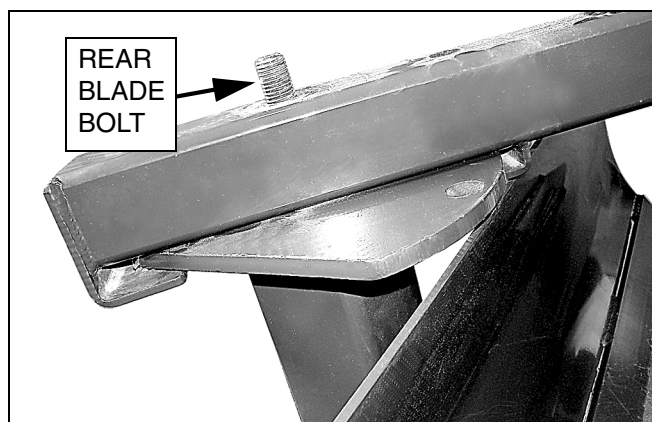


Figure 13. Slide Hitch onto Bolt Atop Rear Blade

2. Secure with the removed nut (5), washer (6) and pull pin (7) as shown in Figure 14.
3. Secure the hitch pins (4) facing outward with lock washers and nuts as shown in Figure 15.

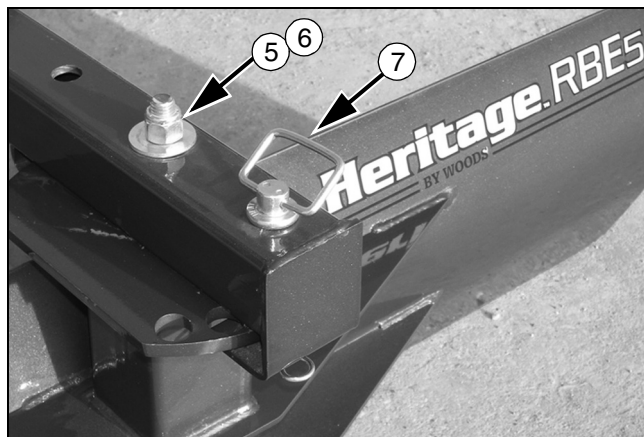


Figure 14. Hitch Attached to Rear Blade

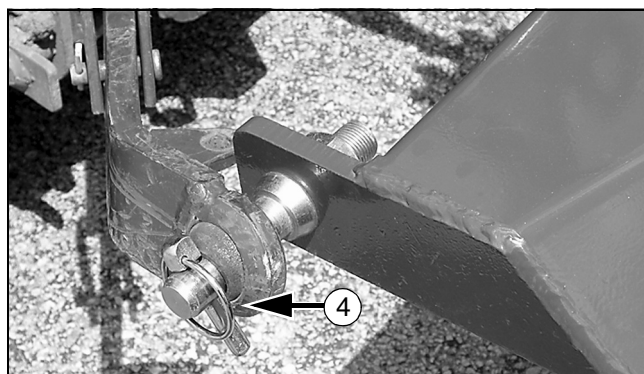


Figure 15. Rear Blade Hitch Pin Assembly

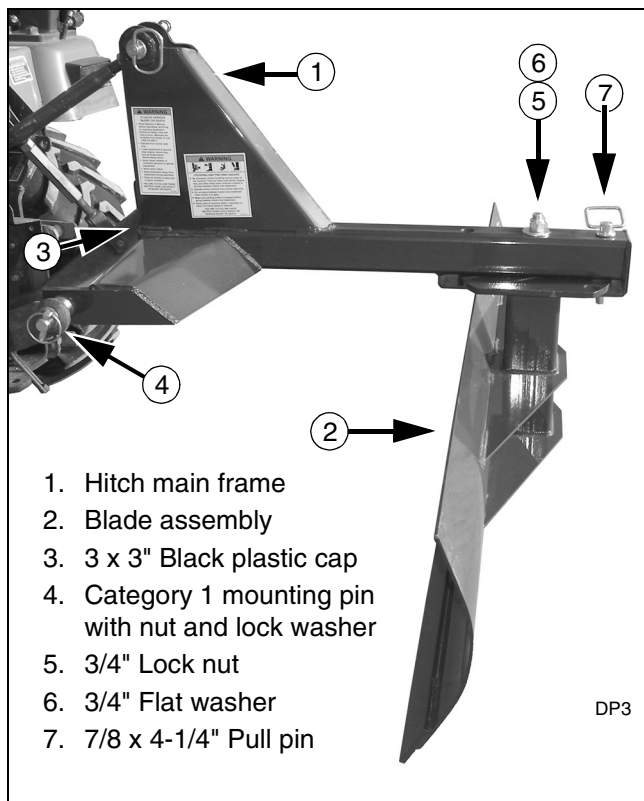


Figure 16. Rear Blade Assembled



# DEALER CHECK LISTS

## **PRE-DELIVERY CHECK LIST**

(DEALER'S RESPONSIBILITY)

Inspect the equipment thoroughly after assembly to ensure it is set up properly before delivering it to the customer.

The following check lists are a reminder of points to inspect. Check off each item as it is found satisfactory or after proper adjustment is made.

- \_\_\_ Check that all safety decals are installed and in good condition. Replace if damaged.
- \_\_\_ Properly attach implement to tractor and make all necessary adjustments.
- \_\_\_ Check all bolts to be sure they are properly torqued.
- \_\_\_ Check that all cotter pins and safety pins are properly installed. Replace if damaged.

## **DELIVERY CHECK LIST**

(DEALER'S RESPONSIBILITY)

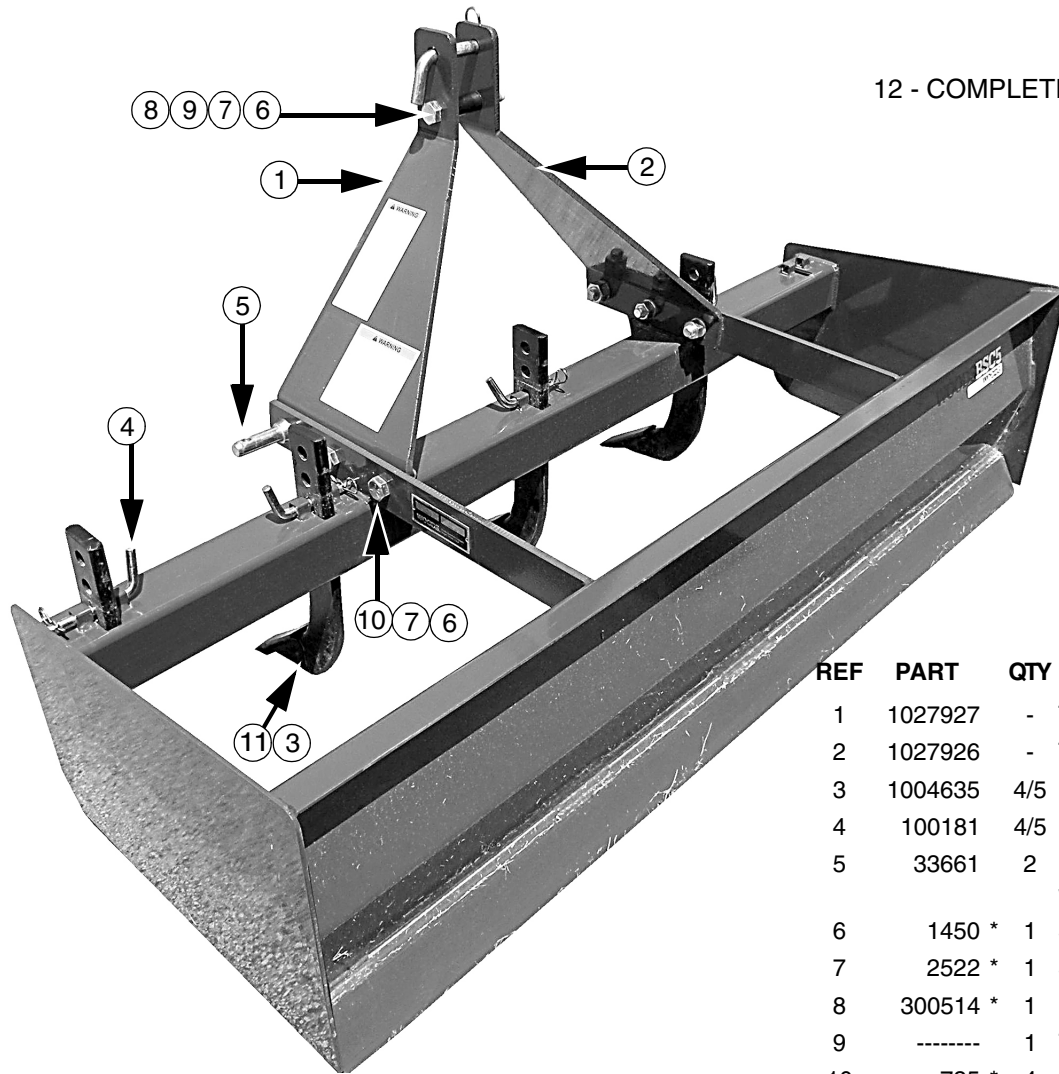
- \_\_\_ Show customer how to make adjustments.
- \_\_\_ Point out the safety decals. Explain their meaning and the need to keep them in place and in good

condition. Emphasize the increased safety hazards when instructions are not followed.

- \_\_\_ Present Operator's Manual and request that customer and all operators read it before operating equipment. Point out the manual safety rules, explain their meanings and emphasize the increased safety hazards that exist when safety rules are not followed.
- \_\_\_ Explain to customer the potential crushing hazards of going underneath raised equipment. Instruct customer that service work does not require going underneath unit and never to do so.
- \_\_\_ Show customer the safe, proper procedures to be used when mounting, dismounting, and storing equipment.
- \_\_\_ For mounted units, add wheel weights, ballast in front tires, and/or front tractor weight to enhance front end stability. A minimum 20% of tractor and equipment gross weight must be on front tractor wheels. When adding weight to attain 20% of tractor and equipment weight on front tractor wheels, you must not exceed the ROPS weight certification. Weigh the tractor and equipment. Do not estimate!



## BSE4 / BSE5 BOX SCRAPER



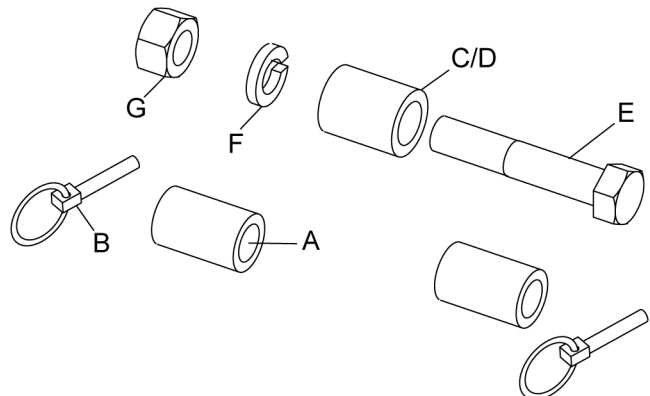
12 - COMPLETE DECAL SET

REF	PART	QTY	DESCRIPTION
1	1027927	-	Top link mount - left hand
2	1027926	-	Top link mount - right hand
3	1004635	4/5	Scarifier & tip assembly
4	100181	4/5	1/2 x 3" Bent pin
5	33661	2	Mounting pin, Cat 1 w/nut & lock washer
6	1450 *	1	3/4 NC Hex nut, plated
7	2522 *	1	3/4 Lock washer ZP
8	300514 *	1	HHCS, 3/4 NC x 5 GR5 ZP
9	-----	1	Top link spacer
10	735 *	4	HHCS, 3/4 NC x 2 GR5
11	1004636	-	Tip scarifier for 1004635
12	1022024	-	Complete decal set

\* Standard hardware; obtain locally

### CATEGORY 1 QUICK HITCH BUSHING KIT #1022040 - OPTIONAL (FOR BSE & RBE MOLDELS)

REF	PART	QTY	DESCRIPTION
A	1003830	2	Lower sleeve, Cat 1 quick hitch
B	43627 *	2	Linch pin, plated
C	-----	1	Sleeve, .81 x 1.25 x 1.94 ( <b>RBE only</b> )
D	-----	1	Sleeve, .81 x 1.25 x 2.62 ( <b>BSE only</b> )
E	31207 *	1	HHCS, 3/4 NC x 4 GR5
F	2522 *	1	3/4 Lock washer ZP
G	1450 *	1	Hex nut, 3/4 NC plated

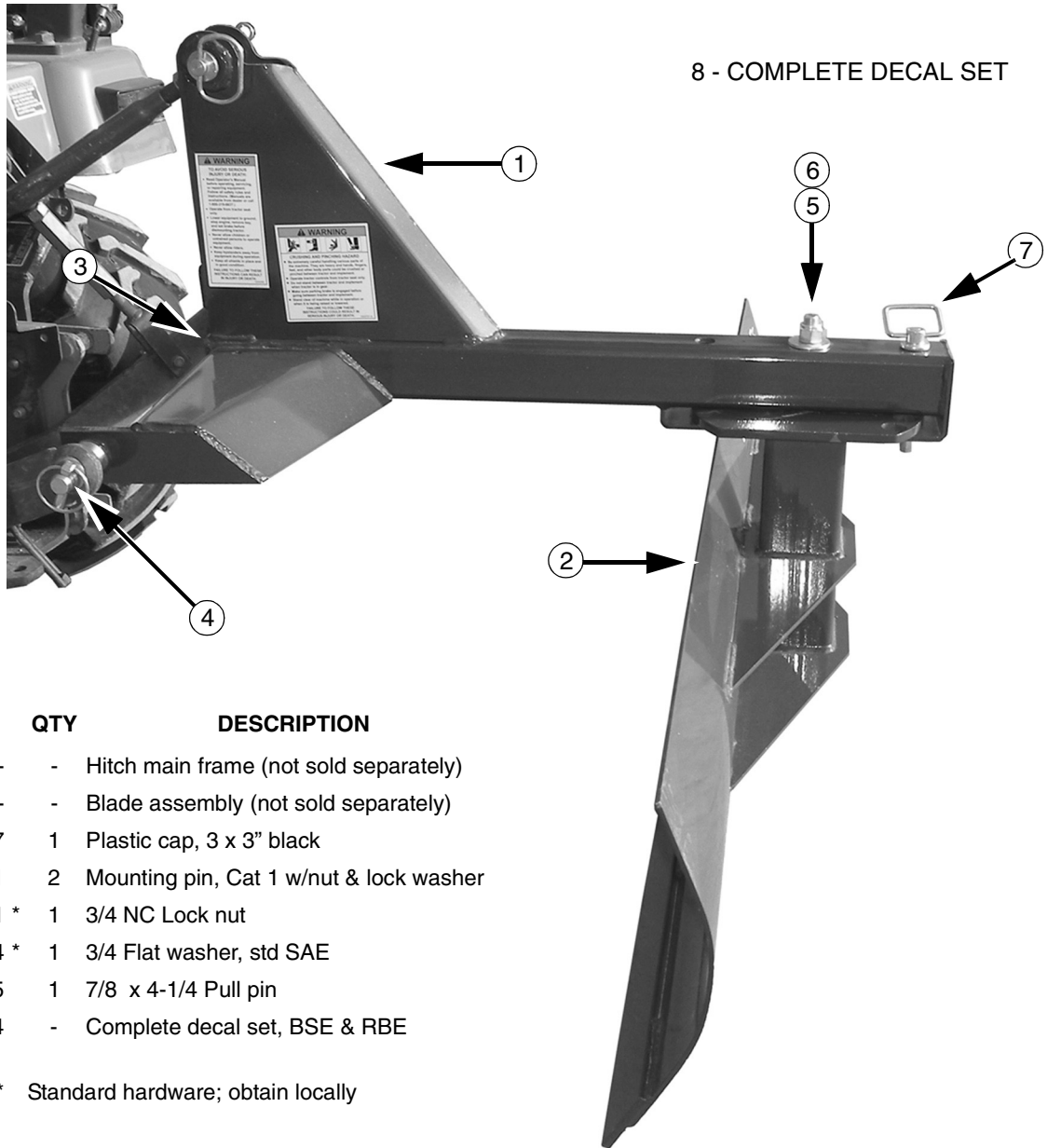


\* Standard hardware; obtain locally

# 18 Parts

(Rev. 10/26/2007)  
MAN0561 (8/25/2006)

## RBE4 / RBE5 REAR BLADE

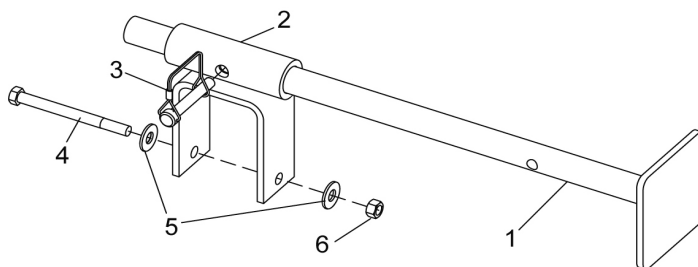


8 - COMPLETE DECAL SET

REF	PART	QTY	DESCRIPTION
1	-----	-	Hitch main frame (not sold separately)
2	-----	-	Blade assembly (not sold separately)
3	1022507	1	Plastic cap, 3 x 3" black
4	33661	2	Mounting pin, Cat 1 w/nut & lock washer
5	2371 *	1	3/4 NC Lock nut
6	2864 *	1	3/4 Flat washer, std SAE
7	SU105	1	7/8 x 4-1/4 Pull pin
8	1022024	-	Complete decal set, BSE & RBE

\* Standard hardware; obtain locally

## PARKING STAND KIT #1021065 - OPTIONAL (FOR REAR BLADE ONLY)



REF	PART	QTY	DESCRIPTION
A	1021065	-	Parking stand kit complete
1	1021062	1	Stand
2	1021058	1	Parking stand holder
3	33000	1	3/8 x 2-1/4 Lynch pin
4	20375 *	1	Hex head cap screw, 3/8 NC x 4-1/4 GR5
5	565 *	2	3/8 Flat washer ZP
6	835 *	1	3/8 NC Hex nut, plated

\* Standard hardware; obtain locally

# BOLT TORQUE CHART

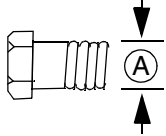
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

Fasteners must always be replaced with the same grade as specified in the manual parts list.

Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for metric hardware.

Make sure fastener threads are clean and you start thread engagement properly.

All torque values are given to specifications used on hardware defined by SAE J1701 MAR 99 & J1701M JUL 96.



## SAE SERIES TORQUE CHART



SAE Grade 2  
(No Dashes)

SAE Bolt Head Identification

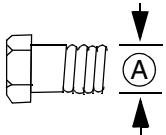


SAE Grade 5  
(3 Radial Dashes)



SAE Grade 8  
(6 Radial Dashes)

Ⓐ Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
1/4"	7/16"	6	8	10	13	14	18
5/16"	1/2"	12	17	19	26	27	37
3/8"	9/16"	23	31	35	47	49	67
7/16"	5/8"	36	48	55	75	78	106
1/2"	3/4"	55	75	85	115	120	163
9/16"	13/16"	78	106	121	164	171	232
5/8"	15/16"	110	149	170	230	240	325
3/4"	1-1/8"	192	261	297	403	420	569
7/8"	1-5/16"	306	416	474	642	669	907
1"	1-1/2"	467	634	722	979	1020	1383



## METRIC SERIES TORQUE CHART



Metric  
Grade 8.8

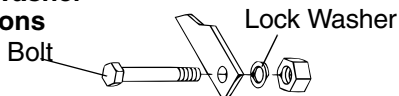
Metric Bolt Head Identification



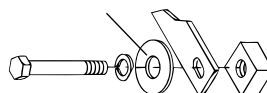
Metric  
Grade 10.9

Ⓐ Diameter & Thread Pitch (Millimeters)	Wrench Size	Coarse Thread				Fine Thread				Ⓐ Diameter & Thread Pitch (Millimeters)
		Marking on Head				Marking on Head				
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
		N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13 mm	20	15	27	20	21	16	29	22	8 x 1.0
10 x 1.5	16 mm	39	29	54	40	41	30	57	42	10 x 1.25
12 x 1.75	18 mm	68	50	94	70	75	55	103	76	12 x 1.25
14 x 2.0	21 mm	109	80	151	111	118	87	163	120	14 x 1.5
16 x 2.0	24 mm	169	125	234	173	181	133	250	184	16 x 1.5
18 x 2.5	27 mm	234	172	323	239	263	194	363	268	18 x 1.5
20 x 2.5	30 mm	330	244	457	337	367	270	507	374	20 x 1.5
22 x 2.5	34 mm	451	332	623	460	495	365	684	505	22 x 1.5
24 x 3.0	36 mm	571	421	790	583	623	459	861	635	24 x 2.0
30 x 3.0	46 mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0

### Typical Washer Installations



### Flat Washer



8/9/00

# BOLT SIZE CHART

**NOTE:** Chart shows bolt thread sizes and corresponding head (wrench) sizes for standard SAE and metric bolts.

## SAE Bolt Thread Sizes

5/16

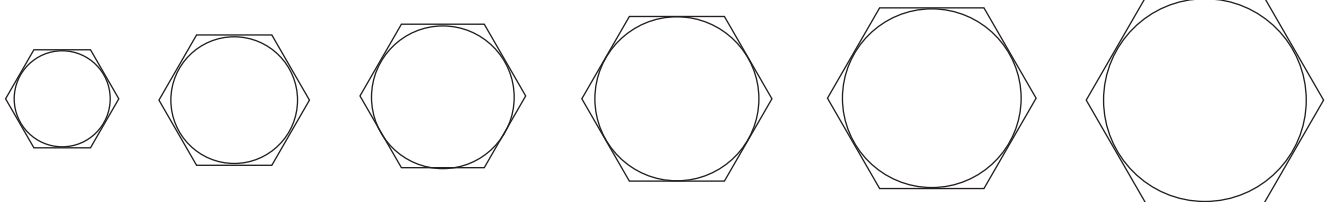
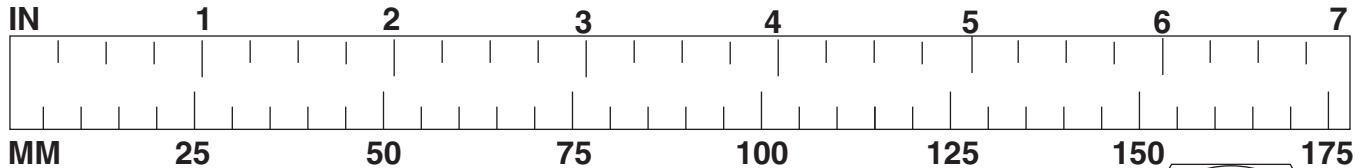
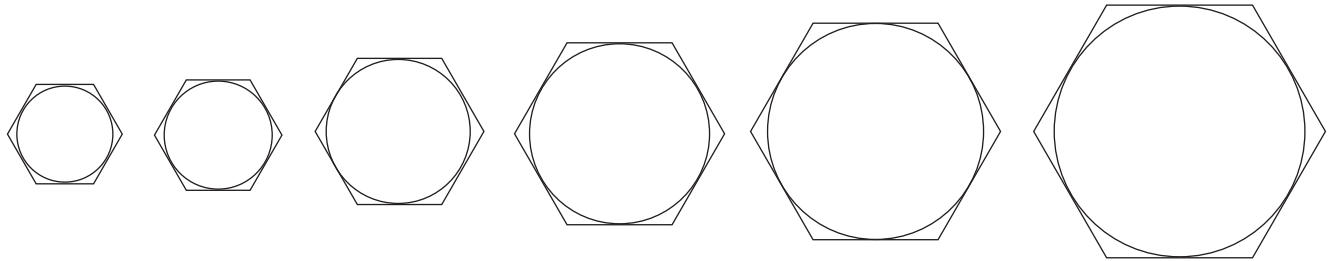
3/8

1/2

5/8

3/4

7/8



## Metric Bolt Thread Sizes

8MM

10MM

12MM

14MM

16MM

18MM

## ABBREVIATIONS

AG ..... Agriculture  
 ASABE..... American Society of Agricultural & Biological Engineers (formerly ASAE)  
 ASAE ..... American Society of Agricultural Engineers  
 ATF ..... Automatic Transmission Fluid  
 BSPP ..... British Standard Pipe Parallel  
 BSPTM ..... British Standard Pipe Tapered Male  
 CV ..... Constant Velocity  
 CCW ..... Counter-Clockwise  
 CW ..... Clockwise  
 F ..... Female  
 FT ..... Full Thread  
 GA ..... Gauge  
 GR (5, etc.) ..... Grade (5, etc.)  
 HHCS ..... Hex Head Cap Screw  
 HT ..... Heat-Treated  
 JIC ..... Joint Industry Council 37° Degree Flare  
 LH ..... Left Hand  
 LT ..... Left  
 m ..... Meter  
 mm ..... Millimeter  
 M ..... Male

MPa ..... Mega Pascal  
 N ..... Newton  
 NC ..... National Coarse  
 NF ..... National Fine  
 NPSM ..... National Pipe Straight Mechanical  
 NPT ..... National Pipe Tapered  
 NPT SWF ..... National Pipe Tapered Swivel Female  
 ORBM ..... O-Ring Boss - Male  
 P ..... Pitch  
 PBYP ..... Power-Beyond  
 psi ..... Pounds per Square Inch  
 PTO ..... Power Take Off  
 QD ..... Quick Disconnect  
 RH ..... Right Hand  
 ROPS ..... Roll-Over Protective Structure  
 RPM ..... Revolutions Per Minute  
 RT ..... Right  
 SAE ..... Society of Automotive Engineers  
 UNC ..... Unified Coarse  
 UNF ..... Unified Fine  
 UNS ..... Unified Special



# WARRANTY

(All Models Except Mow'n Machine™ Zero-Turn Mowers and Woods Boundary™ Utility Vehicles)

Please Enter Information Below and Save for Future Reference.

Date Purchased: \_\_\_\_\_ From (Dealer): \_\_\_\_\_

Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

Woods Equipment Company ("WOODS") warrants this product to be free from defect in material and workmanship. Except as otherwise set forth below, the duration of this Warranty shall be for TWELVE (12) MONTHS COMMENCING ON THE DATE OF DELIVERY OF THE PRODUCT TO THE ORIGINAL PURCHASER.

Woods backhoe models BH70-X, BH80-X, and BH90-X are warranted for two (2) years from the date of delivery to the original purchaser.

The warranty periods for specific parts or conditions are listed below:

Part or Condition Warranted	Model Number	Duration (from date of delivery to the original purchaser)
Gearbox components	BW1260, BW1620, BW1800, BW2400	8 years
	BW240HD	7 years
	BB48X, BB60X, BB72X, BB84X, BB600X, BB720X, BB840X, BB6000X, BB7200X, BB8400X, DS1260, DSO1260, DS1440, TS1680, BW126-3, BW180-3, BW240	6 years
	PHD25, PHD35, PHD65, PHD95, 2162, 3240, DS96, DS120, RCC42, RM550-2, RM660-2, RM990-3, PRD6000, PRD7200, PRD8400, 7144RD-2, 9180RD-2, 9204RD-2, S15CD, S20CD, S22CD, S25CD, S27CD	5 years
	RDC54, RD60, RD72	3 years (1 year if used in rental or commercial applications)
Blade spindles	RM550-2, RM660-2, RM990-3, PRD6000, PRD7200, PRD8400, 7144RD-2, 9180RD-2, 9204RD-2	3 years
Rust-through	BB600, BB720, BB840, BB6000, BB7200, BB8400, BW126-3, BW180-3, BW1260, BW1800, BW240, BW240HD, 2162, 3240, DS1260, DSO1260, DS1440, TS1680	10 years

Under no circumstances will this Warranty apply in the event that the product, in the good faith opinion of WOODS, has been subjected to improper operation, improper maintenance, misuse, or an accident. This Warranty does not apply in the event that the product has been materially modified or repaired by someone other than WOODS, a WOODS authorized dealer or distributor, and/or a WOODS authorized service center. This Warranty does not cover normal wear or tear, or normal maintenance items. This Warranty also does not cover repairs made with parts other than those obtainable through WOODS.

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

WOODS makes no warranty, express or implied, with respect to engines, batteries, tires or other parts or accessories not manufactured by WOODS. Warranties for these items, if any, are provided separately by their respective manufacturers.

WOODS' obligation under this Warranty is limited to, at WOODS' option, the repair or replacement, free of charge, of the product if WOODS, in its sole discretion, deems it to be defective or in noncompliance with this Warranty. **The product must be returned to WOODS with proof of purchase within thirty (30) days after such defect or noncompliance is discovered or should have been discovered, routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid.** WOODS shall complete such repair or replacement within a reasonable time after WOODS receives the product. **THERE ARE NO OTHER REMEDIES UNDER THIS WARRANTY. THE REMEDY OF REPAIR OR REPLACEMENT IS THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY.**

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This Warranty is subject to any existing conditions of supply which may directly affect WOODS' ability to obtain materials or manufacture replacement parts.

No agent, representative, dealer, distributor, serviceperson, salesperson, or employee of any company, including without limitation, WOODS, its authorized dealers, distributors, and service centers, is authorized to alter, modify, or enlarge this Warranty.

Answers to any questions regarding warranty service and locations may be obtained by contacting:

## Woods Equipment Company

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Post Office Box 1000  
Oregon, Illinois 61061 USA

800-319-6637 tel  
800-399-6637 fax  
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## WARRANTY

(Replacement Parts For All Models Except Mow'n Machine™  
Zero-Turn Mowers and Woods Boundary™ Utility Vehicles)

Woods Equipment Company ("WOODS") warrants this product to be free from defect in material and workmanship for a period of ninety (90) days from the date of delivery of the product to the original purchaser with the exception of V-belts, which will be free of defect in material and workmanship for a period of 12 months.

Under no circumstances will this Warranty apply in the event that the product, in the good faith opinion of WOODS, has been subjected to improper operation, improper maintenance, misuse, or an accident. This Warranty does not cover normal wear or tear, or normal maintenance items.

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

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This Warranty is subject to any existing conditions of supply which may directly affect WOODS' ability to obtain materials or manufacture replacement parts.

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