

# WOODS**GILL** CORE AERATOR

**PL48**

**PL60**

**PL72**

**MAN0152**

(Rev. 3/09/2010)

**WOODS**<sup>®</sup>  
Tested. Proven. Unbeatable.

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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 online Product Registration form at the Woods Dealer Website** which certifies that all Dealer Check List items have been completed. Please contact your dealer to complete this form. Dealers can register all Woods product at dealer.WoodsEquipment.com under Product Registration.

**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. 3/5/2010)

# SPECIFICATIONS

Core Aerator	PL48	PL60	PL72
Working Width	48"	60"	72"
Overall Width	54.5"	66.5"	78.5"
Number of Reels	8	12	12
Number of Spoons	64	96	96
Hitch	Cat.I	Cat.I	Cat.I
Tractor HP Requirement	20 - 65 HP	3 - 65 HP	30 - 65 HP
Maximum Additional weight	1000 lbs.	1000 lbs.	1000 lbs.
Weight	437 lbs.	539 lbs.	561 lbs.
Tractor 3-Point Lift Requirement	500 lbs.	600 lbs.	700 lbs.
Frame . . . . .	3/8" Heavy-duty frame with rack to hold additional weight		
Pivot Shaft . . . . .	1-1/4" Shaft with reinforcement structure		
Spoons . . . . .	3/4" OD Hardened closed spoons, 4-1/2" penetration		
Bearings . . . . .	Greaseable journal bearings for each spoon assembly		



**¡LEA EL INSTRUCTIVO!**

**Si no lee Ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.**



**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.**

## GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your Core Aerator. 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 direction. These are determined by standing behind the tractor facing the direction of forward travel.

# 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.
- Know your controls and how to stop engine and attachment quickly in an emergency.
- 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**

- Check that all hardware is properly installed. Always tighten to torque chart specifications unless instructed otherwise in this manual.
- 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.

- Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)
- Make sure shields and guards are properly installed and in good condition. Replace if damaged.
- A minimum 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, front tractor wheels could raise up resulting in loss of steering. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment. Do not estimate.

## **OPERATION**

- Keep bystanders away from equipment.
- Do not operate or transport equipment while under the influence of alcohol or drugs.
- Operate only in daylight or good artificial light.
- Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Always comply with all state and local lighting and marking requirements.
- 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.
- 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.



# SAFETY RULES

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



- Watch for hidden hazards on the terrain during operation.
- Stop power unit and equipment immediately upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation.

## MAINTENANCE

■ 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.

■ 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.

■ 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.

■ Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)

■ Make sure shields and guards are properly installed and in good condition. Replace if damaged.

## STORAGE

- Block equipment securely for storage.
  - Keep children and bystanders away from storage area.
-

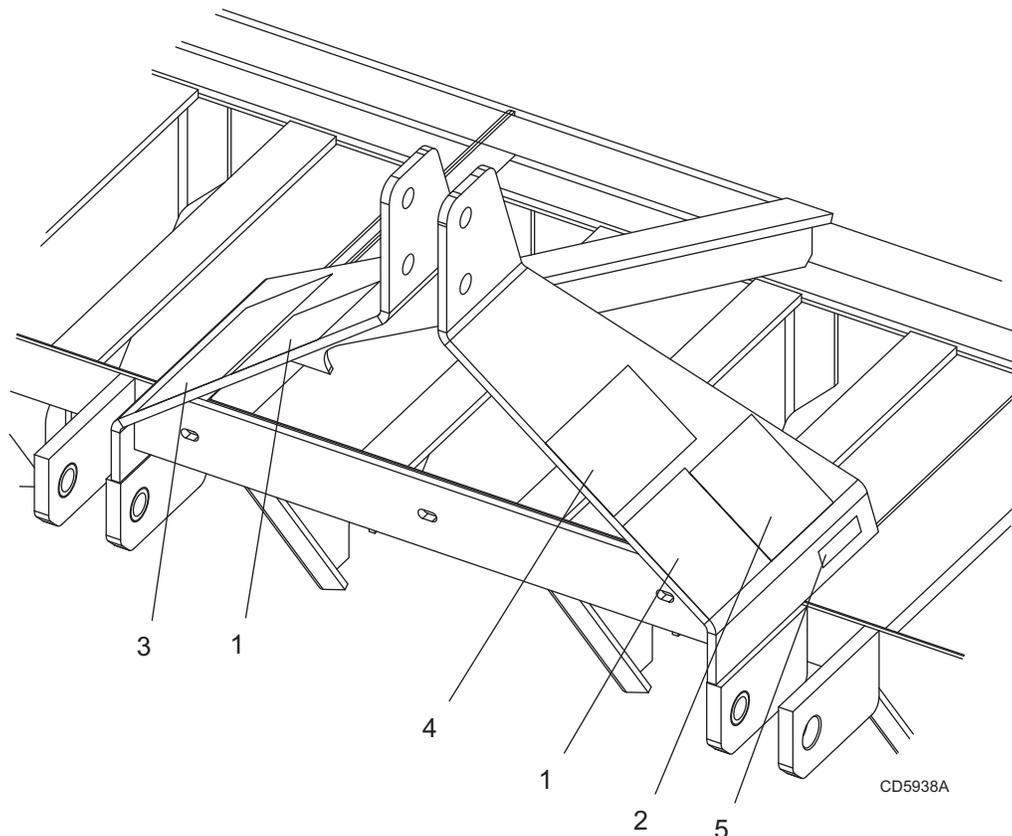


# SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



Replace Immediately If Damaged!



1 - PN 1003751

2 - PN 55122

<b>WARNING</b>			
<b>CRUSHING AND PINCHING HAZARD</b>			
<ul style="list-style-type: none"> <li>■ 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.</li> <li>■ Operate tractor controls from tractor seat only.</li> <li>■ Do not stand between tractor and implement when tractor is in gear.</li> <li>■ Make sure parking brake is engaged before going between tractor and implement.</li> <li>■ Stand clear of machine while in operation or when it is being raised or lowered.</li> </ul>			
<p><b>FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.</b></p> <p style="text-align: right; font-size: small;">1003751-A</p>			

<b>WARNING</b>	
<b>TO AVOID SERIOUS INJURY OR DEATH:</b>	
<ul style="list-style-type: none"> <li>■ 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.)</li> <li>■ Operate from tractor seat only.</li> <li>■ Lower equipment to ground, stop engine, remove key and set brake before dismounting tractor.</li> <li>■ Never allow children or untrained persons to operate equipment.</li> <li>■ Never allow riders.</li> <li>■ Keep bystanders away from equipment during operation.</li> <li>■ Keep all shields in place and in good condition.</li> <li>■ Do not transport towed or semi-mounted units over 20 mph.</li> </ul>	
<p><b>FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.</b></p> <p style="text-align: right; font-size: small;">55122-D</p>	



# SAFETY & INSTRUCTIONAL DECALS

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



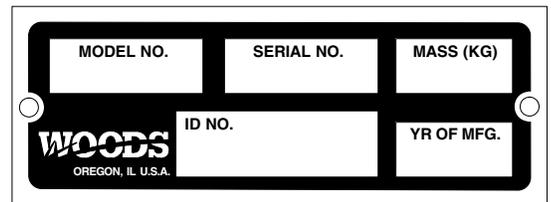
3 - PN 55121

<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>	
55121-B	

4 - PN 57500

<b>WARNING</b>
<p><b>WHEN CONNECTING AND STORING EQUIPMENT</b></p> <ul style="list-style-type: none"> <li>■ Follow all manual instructions and safety rules.</li> <li>■ Properly connect to tractor before raising park stands or adding ballast weight.</li> <li>■ Remove ballast weight before disconnecting equipment from tractor.</li> <li>■ Lower and properly secure all four park stands before disconnecting equipment from tractor.</li> <li>■ Park stands must be functional, kept in good repair, and stored on unit.</li> <li>■ Park and store on hard level ground away from people and children.</li> </ul> <p style="text-align: center;"><b>FAILURE TO FOLLOW INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.</b></p>
57500

**5 - Serial Number Plate**



**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.woodsonline.com](http://www.woodsonline.com), or in the United States and Canada call 1-800-319-6637.

# OPERATION

The operator is responsible for the safe operation of this aerator. 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 on pages page 4 to page 7.

Recommended tractor ground speed is from 2 to 5 mph.

## 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

■ 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.

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

- \_\_\_ Review and follow all safety rules and safety decal instructions on page 4 through page 7.
- \_\_\_ Check that equipment is properly and securely attached to tractor.
- \_\_\_ Check that all safety decals are installed and in good condition. Replace if damaged.
- \_\_\_ Do not allow riders.
- \_\_\_ Check that all hardware is properly installed and secured.
- \_\_\_ Check all lubrication points and grease as instructed in “Service, lubrication information.”
- \_\_\_ Make sure tractor ROPS or ROPS CAB and seat belt are in good condition. Keep seat belt securely fastened during operation.

## GENERAL INFORMATION

### Core Aerator Operation

The Core Aerator is designed to reduce the soil compaction of an established turf area. The hardened spoons attached to the reels penetrate and remove a 3/4 x 4-1/2” plug from the soil. Up to 1000 lbs of additional weight can be added to the frame to ensure the proper penetration by the spoons.

The power for operating the aerator is developed through the weight of the equipment and the contact between the spoons and the turf. Know how to stop the tractor and aerator quickly in an emergency. Survey the area to be worked and remove any obstructions that may affect the performance of the equipment.

## Tractor Stability

### **WARNING**

■ A minimum 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, front tractor wheels could raise up resulting in loss of steering. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment. Do not estimate.

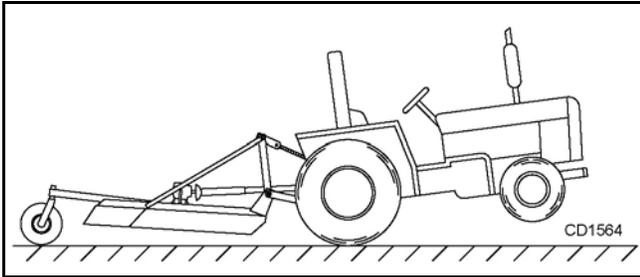


Figure 1. Tractor Stability

### **ATTACH CORE AERATOR TO TRACTOR**

**NOTE:** The Core Aerator is designed for use on Category I, 3-point tractors. See page 3 for specifications.

1. Attach the tractor's lower lift arms to the Core Aerator and secure with mounting pins (18) and klik pins. See Figure 2.
2. Attach the tractor's top link to the upper mast of the aerator. Secure with high-strength top link pin and retaining pin provided with the tractor. See Figure 3.
3. Adjust top link as needed to level the aerator fore and aft.

4. Adjust the lower lift arm anti-sway device to prevent the aerator from excessive side to side movement.

**NOTE:** An optional Quick Hitch mounting kit is available. See page 16 for optional Quick Hitch parts list.

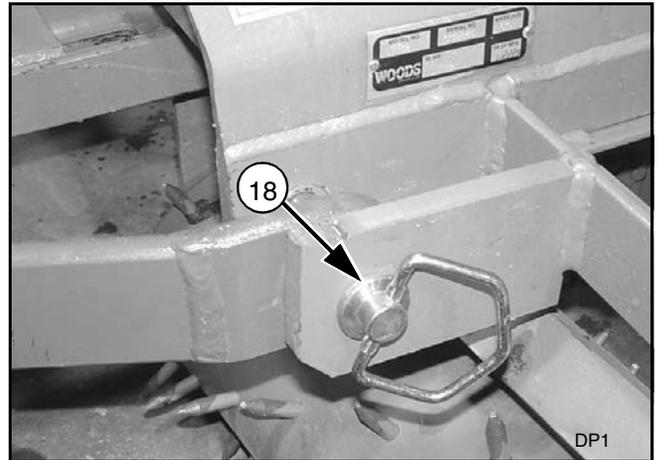


Figure 2. Lift Arms Attached to Aerator (Typical)

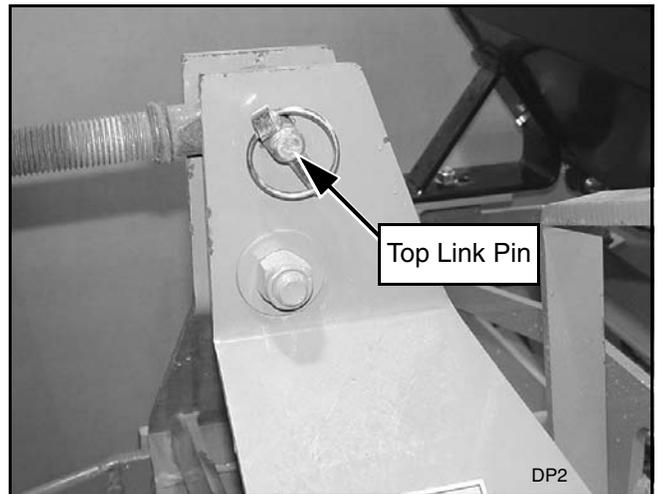


Figure 3. Top Link Attached to Aerator (Typical)



# OWNER SERVICE

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.**

■ **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.**

## 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.**

## LUBRICATION INFORMATION

1. Lubricate grease fittings (A, Figure 4), every 8 hours of operation.
2. Clean fittings prior to lubrication. Do not let excessive grease build up around lubrication points.

**NOTE:** One pump of a good grade multi-purpose grease should be sufficient in most cases. Harsh or dry conditions may require more frequent lubrication.

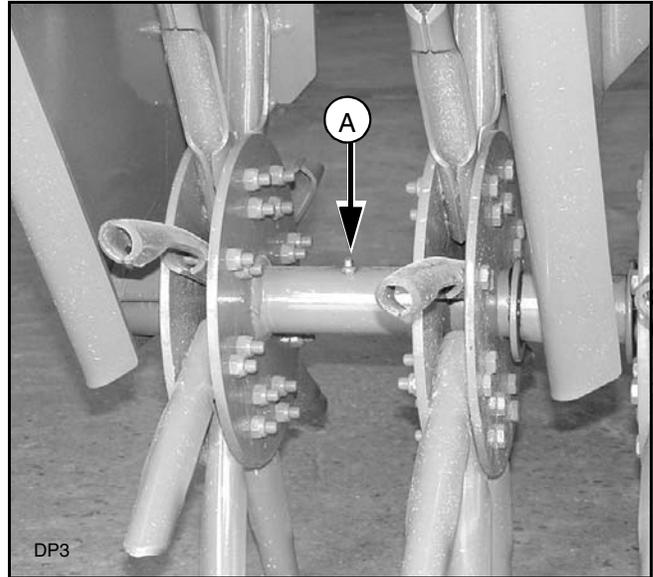
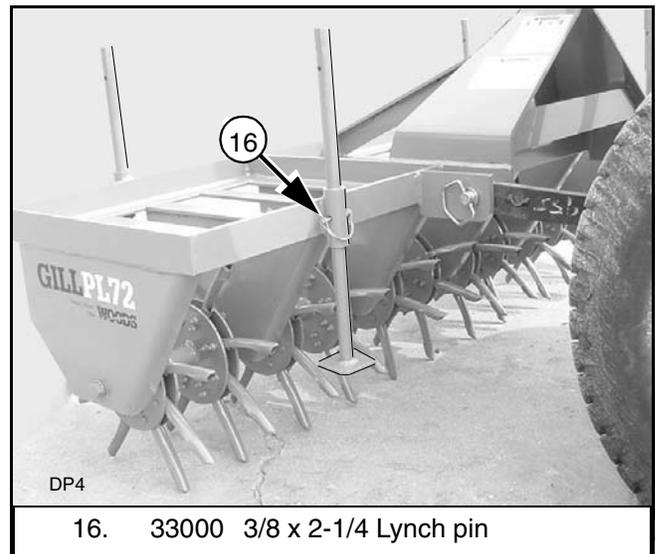


Figure 4 . Lubrication Points

## STORAGE

Refer to Figure 5 and Figure 6.

1. Raise aerator off the ground to provide necessary clearance to adjust parking stands.
2. Remove pins (16) from the parking stand mounting tube and lower stand to the storage position.
3. Reinstall pin.
4. Repeat for remaining three stands.
5. Lower aerator to the ground and disconnect from tractor. Carefully drive tractor away from aerator when disconnected.



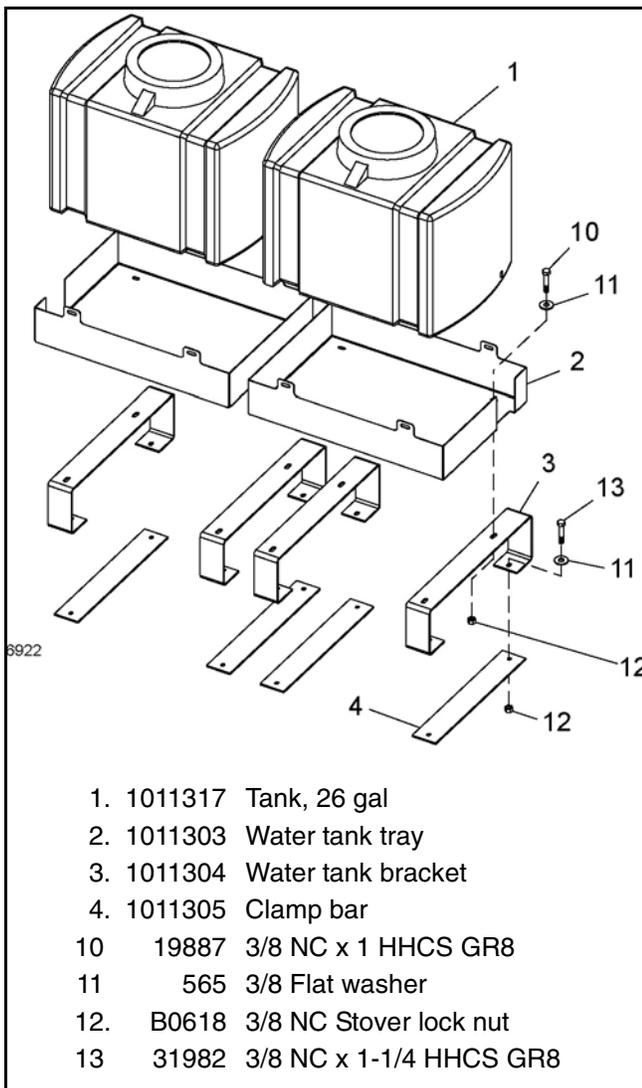
- |     |       |                       |
|-----|-------|-----------------------|
| 16. | 33000 | 3/8 x 2-1/4 Lynch pin |
|-----|-------|-----------------------|

Figure 5. Parking Stands Raised



**Figure 6.** Parking Stands Lowered into Storage Position

### **INSTALL WATER WEIGHT TANK KIT** **OPTIONAL**



**Figure 7.** Water Tank Installation

1. Remove weights from top of aerator frame if previously installed.
2. Remove water kit from shipping pallet, remove parts from inside both tanks, unstrap tanks from trays and remove bracket from trays.
3. Place two brackets (3) on top of right side of aerator frame and two clamp bars (4) below frame.
4. Secure brackets and clamp bars together using two cap screws (13), flat washers (11), and lock nuts (12). Do not tighten hardware at this time.

**NOTE:** Aerator frame should be between brackets (3) and clamp bars (4).

5. Place water tank tray (2) over brackets and align mounting holes. Secure using four cap screws (10), flat washers (11), and lock nuts (12).

**NOTE:** Notch on tray should be towards the outside of the aerator frame. See Figure 8.

6. Repeat steps to install tank on left side of aerator.
7. Torque all hardware to 35 lbs-ft.
8. Place tanks (1) into trays with drain plugs in notch of trays. Secure tanks into position using rubber tie down straps.
9. Fill tanks with desired amount of water.

**NOTE:** Both tanks filled to capacity is approximately 430 lbs of additional weight. Make sure tractor can handle additional weight. See Tractor Stability, page 9 for additional front end weights.



**Figure 8.** Water Tanks Installed

## **CLEANING**

### **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 of 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.
- Drain water from optional water weight kit to avoid freezing and damage to the plastic tanks.



# DEALER CHECK LISTS

## PRE-DELIVERY CHECK LIST

(DEALER'S RESPONSIBILITY)

Assembly of this equipment is the responsibility of the Woods dealer. It should be delivered to the owner completely assembled, lubricated, and adjusted for normal operating conditions.

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.

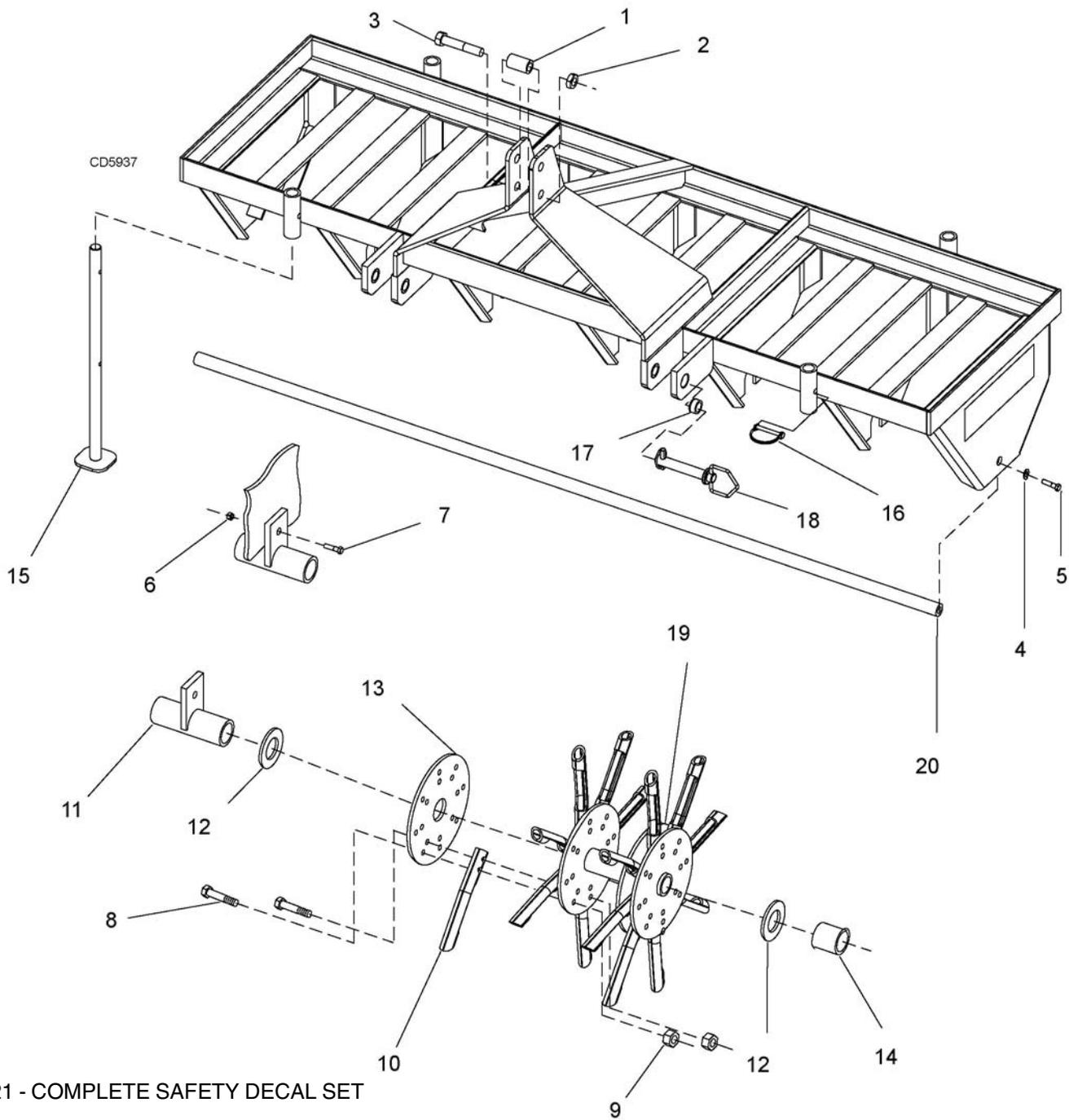
## DELIVERY CHECK LIST

(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.
- \_\_\_ 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!
- \_\_\_ Make customer aware of optional equipment available so that customer can make proper choices as required.



# CORE AERATOR



**14 Parts**

MAN0152 (Rev. 11/17/2006)

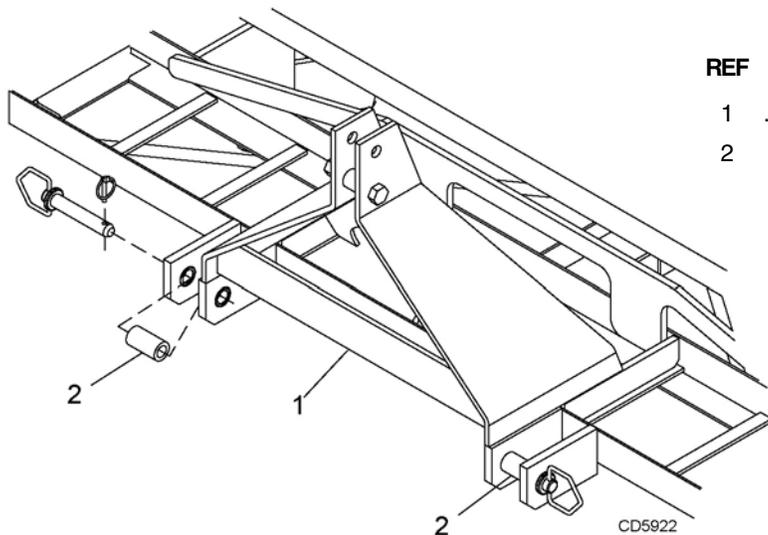
# CORE AERATOR PARTS LIST

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	1002018	1	Sleeve, .81 x 1.12 x 2	12	54893	8	1.25 SAE Flat washer (PL48)
2	2371 *	1	3/4 NC Lock nut	12	54893	12	1.25 SAE Flat washer (PL60 & 72)
3	31207 *	1	3/4 NC 4 HHCS GR5	13	P23	8	Spoon plate (PL48)
4	2522 *	2	3/4 Lock washer	13	P23	12	Spoon plate (PL60 & 72)
5	735 *	2	3/4 NC x 2 HHCS GR5	14	P1372	2	1.62 Spacer
6	71635	3	3/8 NC Stop nut (PL48)	15	P19	4	Parking Stand
6	71635	5	3/8 NC Stop nut (PL60 & 72)	16	33000 *	4	3/8 x 2-1/4 Lynch Pin
7	976 *	3	3/8 NC x 1 HHCS GR5 (PL48)	17	D2213	4	Bushing
7	976 *	5	3/8 NC x 1 HHCS GR5 (PL60 & 72)	18	SU105	2	Cat 1 Pin w/klik pin
8	FA511 *	128	5/16 NC x 2 HHCS (PL48)	19	P22	4	Roller head (PL48)
8	FA511 *	192	5/16 NC x 2 HHCS (PL60 & 72)	19	P22	6	Roller head (PL60 & 72)
9	FA220	128	5/16 NC Nylock nut (PL48)	20	P1448	1	53.62 Axle shaft (PL48)
9	FA220	192	5/16 NC Nylock nut (PL60 & 72)	20	P1460	1	65.62 Axle shaft (PL60)
10	P52	64	Plugger spoon (PL48)	20	P1472	1	77.62 Axle shaft (PL72)
10	P52	96	Plugger spoon (PL60 & 72)	21	54466	1	Complete safety decal set
11	1002966	3	Spacer (PL48)	22	1002965	1	Complete decal set
11	1002971	5	Spacer (PL60)				
11	1002974	5	Spacer (PL72)				

HHCS Hex Head Cap Screw

\* Standard hardware, obtain locally

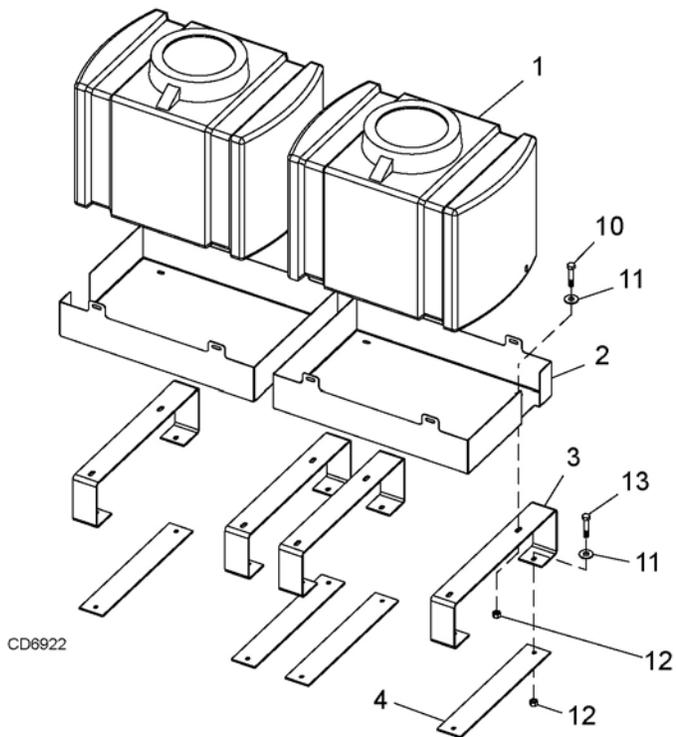
# OPTIONAL QUICK HITCH KIT



REF	PART	QTY	DESCRIPTION
1	.....	1	Frame
2	1001702	2	Quick Hitch sleeve

# 1011306 WATER WEIGHT KIT (OPTIONAL)

REF	PART	QTY	DESCRIPTION
1	1011317	2	Tank, 26 gal
2	1011303	2	Water tank tray
3	1011304	4	Water tank bracket
4	1011305	4	Clamp Bar
10	19887 *	8	3/8 NC x 1 HHCS GR8
11	565 *	16	3/8 Flat washer
12	B0618	16	3/8 NC Stover lock nut
13	31982 *	8	3/8 NC x 1-1/4 HHCS GR8
14	M0024 *	4	Strap, tie down 3/8 x 3' (not shown)
	HHCS		Hex Head Cap Screw
	*		Standard hardware, obtain locally



**16 Parts**

MAN0152 (Rev. 11/17/2006)

# BOLT TORQUE CHART

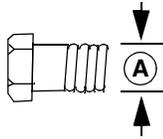
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

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.



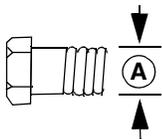
## SAE SERIES TORQUE CHART



SAE Bolt Head Identification



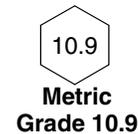
Ⓐ Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
1/4"	7/16"	6	8	10	13	14	18
5/16"	1/2"	12	17	19	26	27	37
3/8"	9/16"	23	31	35	47	49	67
7/16"	5/8"	36	48	55	75	78	106
1/2"	3/4"	55	75	85	115	120	163
9/16"	13/16"	78	106	121	164	171	232
5/8"	15/16"	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 Bolt Head Identification



Ⓐ 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**

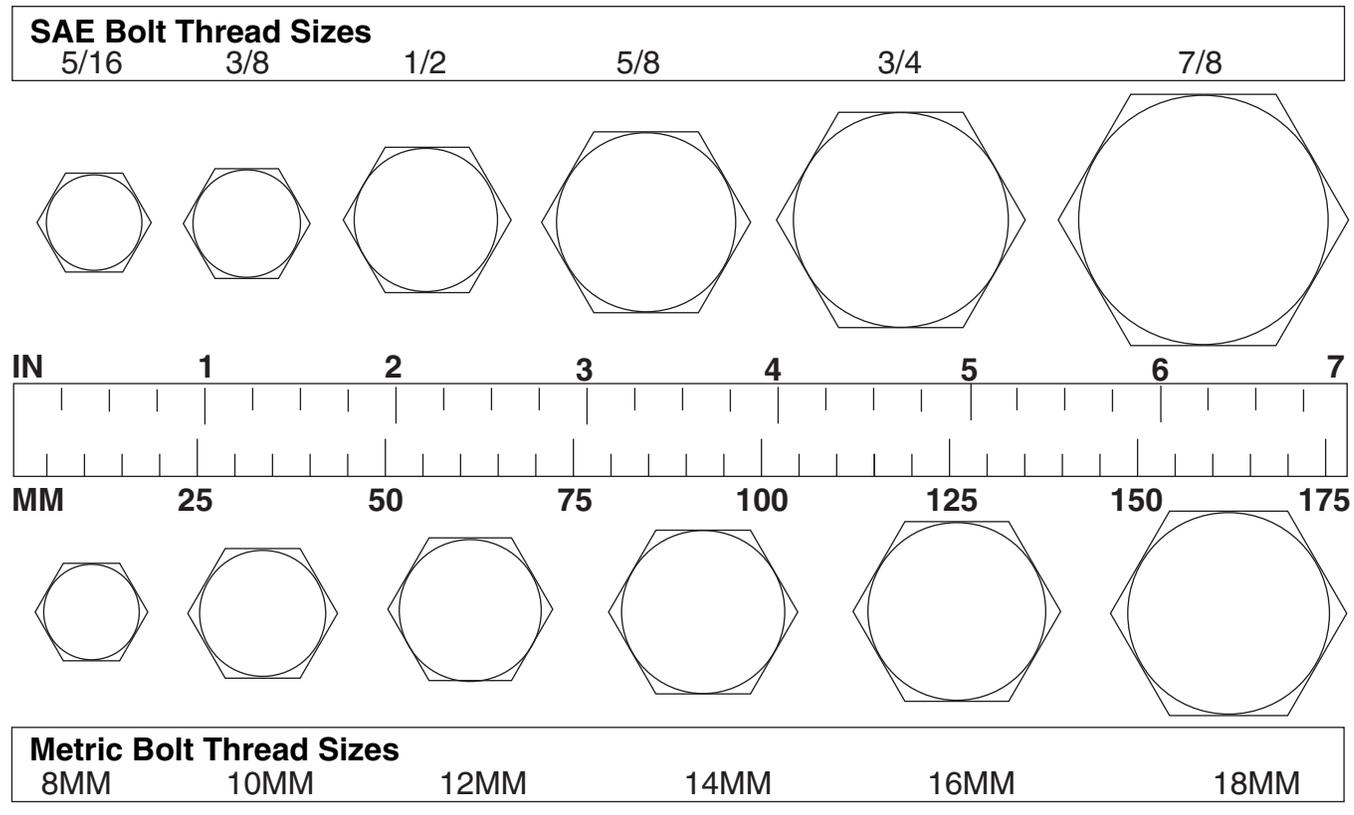
Lock Washer  
Flat Washer

Bolt

8/9/00

# BOLT SIZE CHART

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



## ABBREVIATIONS

AG ..... Agriculture  
 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  
 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  
 PBY ..... 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.

All current model loaders and backhoes 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, BW180HD, BW180HB, BW126HB	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, BW180LH	5 years
	RDC54, RD60, RD72, TBW150C	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, BW126HB, BW180-3, BW180HB, BW180HD, 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.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY. WOODS MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND WOODS SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY AND/OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

**WOODS shall not be liable for any incidental or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory.** Without limiting the generality of the foregoing, Woods specifically disclaims any damages relating to (i) lost profits, business, revenues or goodwill; (ii) loss of crops; (iii) loss because of delay in harvesting; (iv) any expense or loss incurred for labor, supplies, substitute machinery or rental; or (v) any other type of damage to property or economic loss.

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

**Woods Equipment Company**  
 2606 South Illinois Route 2  
 Post Office Box 1000  
 Oregon, Illinois 61061 USA  
 800-319-6637 tel  
 800-399-6637 fax  
 www.WoodsEquipment.com



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



## 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.

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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**WOODS shall not be liable for any incidental or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory.** Without limiting the generality of the foregoing, Woods specifically disclaims any damages relating to (i) lost profits, business, revenues or goodwill; (ii) loss of crops; (iii) loss because of delay in harvesting; (iv) any expense or loss incurred for labor, supplies, substitute machinery or rental; or (v) any other type of damage to property or economic loss.

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, service person, 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:

815-732-2141 tel  
815-732-7580 fax  
www.WoodsEquipment.com

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