

BOX SCRAPERS

BSS54

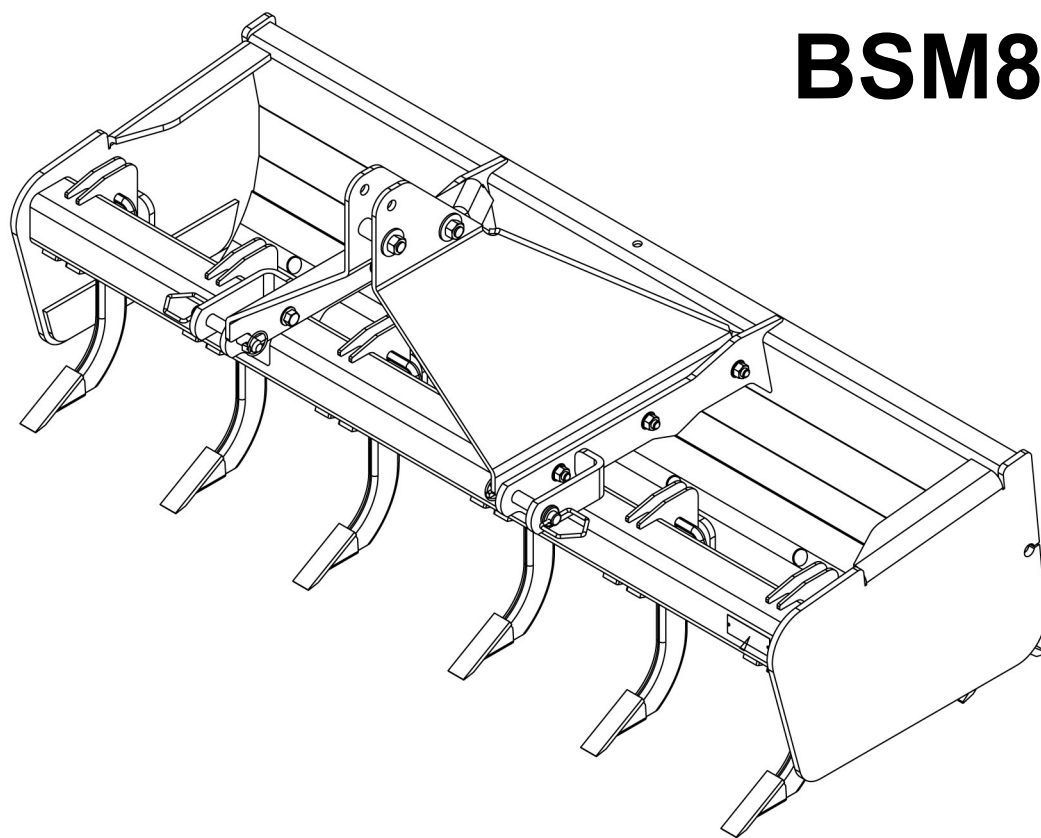
BSS60

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BSM84



MAN0761

(Rev. 1/16/2019)

WOODS®

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. 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, 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 physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



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



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



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

**IMPORTANT
or NOTICE**

Is used to address practices not related to physical injury.

NOTE Indicates helpful information.

ALITEC™
CENTRAL FABRICATORS®
GANNON®
WAIN-ROY®
WOODS®

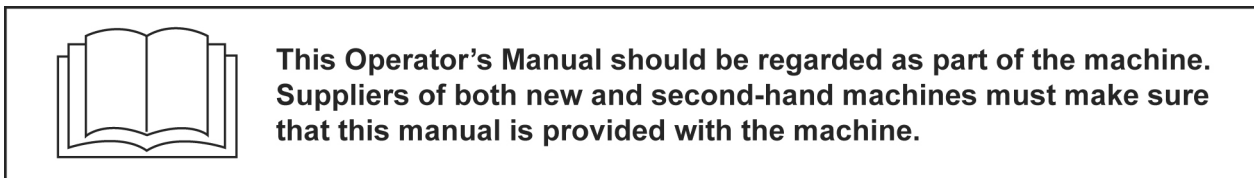
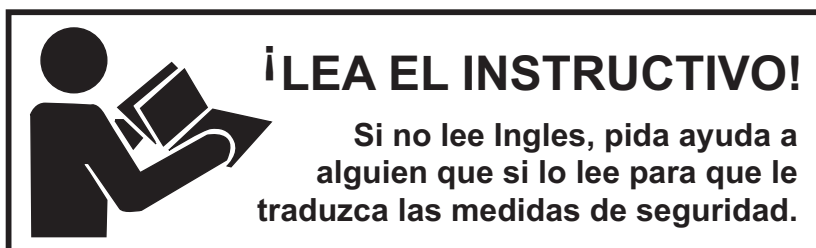
WOODS®
Woods Equipment Company

2 Introduction

Gen'l (Rev. 2/25/2016)

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SPECIFICATIONS

	BSS54	BSS60	BSS65	BSS72	BSM72	BSM84
Width	54"	60"	65"	72"	72	84"
Height to Top Link Pin	34"	34"	34"	34"	34"	34"
Depth	29.6"	29.6"	29.6"	29.6"	29.6"	29.6"
Number of Cutting Edges	2	2	2	2	2	2
Cutting Edge Size	1/2" x 6" (Reversible)	1/2" x 6" (Reversible)	1/2" x 6" (Reversible)	1/2" x 6" (Reversible)	1/2" x 6" (Reversible)	1/2" x 6" (Reversible)
Approximate Weight	486 lbs	514 lbs	528 lbs	551 lbs	680 lbs	750 lbs
Number of Shanks/Points	4	5	5	6	6	7
Floating Hinged Tailgate	No	No	No	No	Optional	Optional
Tractor HP Requirement	45 hp max	45 hp max	45 hp max	45 hp max	65 hp max	65 hp max
Tractor Hitch Class	Cat 1	Cat 1	Cat 1	Cat 1	Cat 1	Cat 1
SAE Quick Hitch	Yes	Yes	Yes	Yes	Yes	Yes
Scarifier Depth Range	0 - 3"	0 - 3"	0 - 3"	0 - 3"	0 - 3"	0 - 3"
Heaped Capacity	9.7 ft ³	10.8 ft ³	11.7 ft ³	13.0 ft ³	13.0 ft ³	15.1 ft ³

GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your Box Scraper. 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.

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, 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.)**

- **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.**

OPERATION

- **Do not operate or transport equipment while under the influence of alcohol or drugs.**
- **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.**
- **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 riders on power unit or attachment.**
- **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.
- Do not allow bystanders within 25 feet of the area when operating, attaching, removing, assembling, or servicing equipment.
- Do not allow bystanders within 25 feet of the area when operating, attaching, removing, assembling, or servicing equipment.
- Do not operate box scraper at speeds above 5 mph.

MAINTENANCE

- Before performing any service or maintenance, lower attachment to ground, turn off engine, set parking brake, and remove key.
- **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.
- Do not modify or alter or permit anyone else to modify or alter the equipment or any of its components in any way.
- Never perform service or maintenance with engine running.
- Keep all persons away from operator control area while performing adjustments, service, or maintenance.
- Eye protection must be used when removing or installing scarifier shank clips.
- 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.)

STORAGE

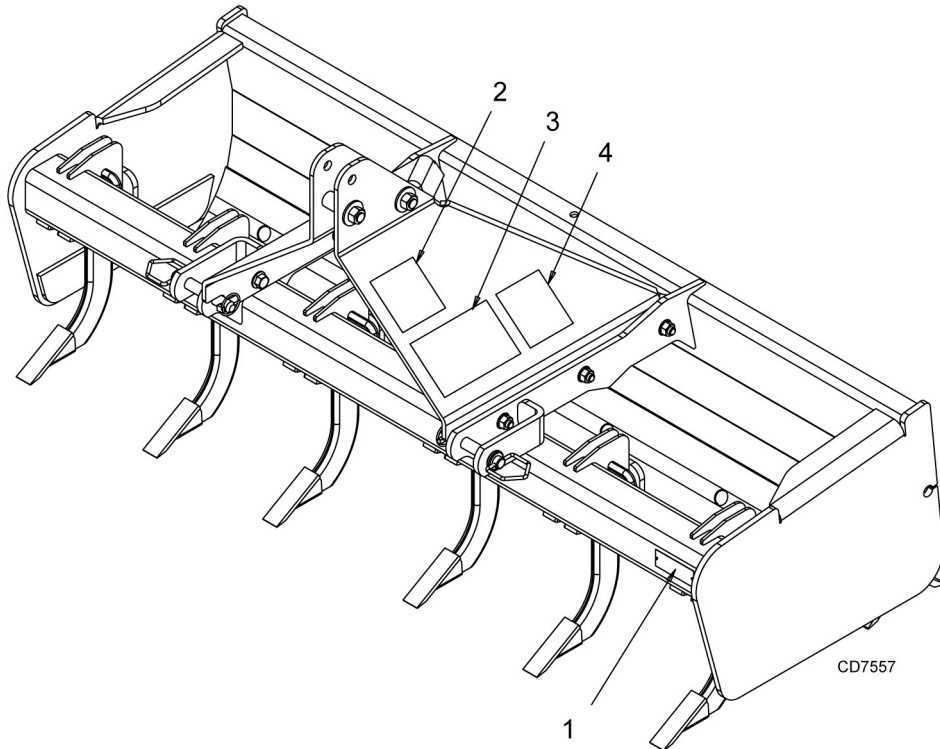
- Block equipment securely for storage.
- Keep children and bystanders away from storage area.
- Lock scarifier bar in lowered position for storage.



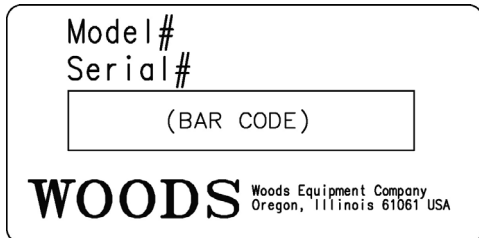


SAFETY & INSTRUCTIONAL DECALS

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



1 – 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.WoodsEquipment.com, or in the United States and Canada call 1-800-319-6637.

2 – 55122

WARNING
<p style="text-align: center;">TO AVOID SERIOUS INJURY OR DEATH:</p> <ul style="list-style-type: none"> ■ 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. ■ Do not transport towed or semi-mounted units over 20 mph. <p style="text-align: center;">FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.</p>
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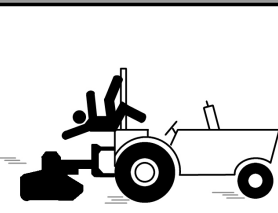
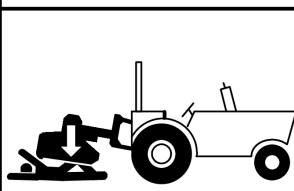


SAFETY & INSTRUCTIONAL DECALS

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



3 - 55121

WARNING	
	<p>FALLING OFF CAN RESULT IN BEING RUN OVER.</p> <ul style="list-style-type: none"> ■ Tractor must be equipped with ROPS (or ROPS CAB) and seat belt. Keep foldable ROPS systems in “locked up” position at all times. ■ Buckle Up! Keep seat belt securely fastened. ■ Allow no riders.
	<p>RAISED IMPLEMENT CAN DROP AND CRUSH.</p> <ul style="list-style-type: none"> ■ 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. ■ Service work does not require going underneath implement. Read manual instructions. <p>FALLING OFF OR GOING UNDERNEATH IMPLEMENT CAN RESULT IN SERIOUS INJURY OR DEATH.</p>

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4 - 1003751

WARNING	
	
<p style="text-align: center;">CRUSHING AND PINCHING HAZARD</p> <ul style="list-style-type: none"> ■ 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. <p style="text-align: center;">FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.</p>	

1003751

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 on page 5 through page 7.

The box scrapers are designed for a wide range of applications: scarifying, scraping, leveling, grading, and back-filling.

PRE-OPERATION CHECK LIST

(OWNER'S RESPONSIBILITY)

- ___ Review and follow all safety rules and safety decal instructions on page 5 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.
- ___ 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.

⚠ 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, front tractor weights or front loader. Weigh the tractor and equipment. Do not estimate.**

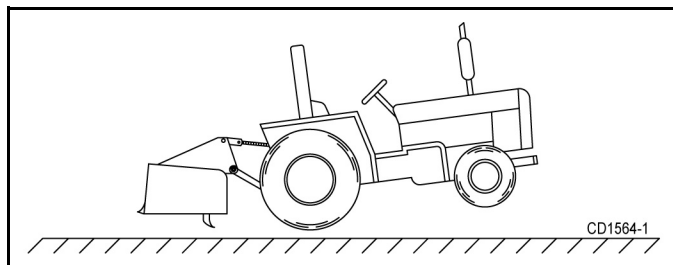


Figure 1. Tractor Stability

CONNECTING BOX SCRAPER TO TRACTOR

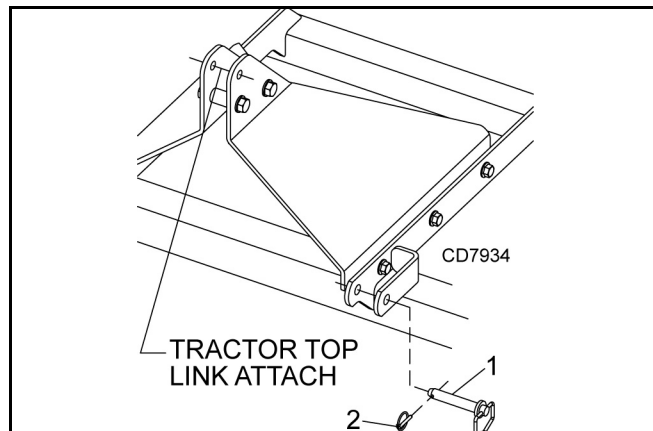


Figure 2. Category 1, 3-Point Hitch Connection

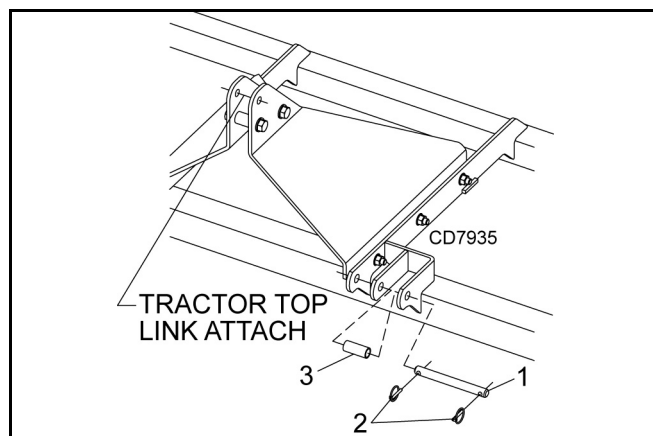


Figure 3. Category 2, 3-Point Hitch Connection

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

1. To avoid interference with the box scraper, adjust tractor drawbar to the shortest and highest position.
2. For tractors with Category 1 hitch: Attach the tractor's lower lift arms to the scraper and secure in place with Category 1 mounting pin (1) and lynch pin (2).
3. For tractors with Category 2 hitch: Attach the tractor's lower lift arms to the scraper in the outer hitch position with adapter sleeves (3) assembled over mounting pins (1) and secured with lynch pins (2).
4. Attach the tractor's top link to the top of the box scraper's mast and secure with the heavy-duty top link pin and retaining pin supplied with the tractor top link.

Quick Hitch Connection

NOTICE

■ The 3/4" bolt and sleeve in the lower hole provide the attachment point for a Category 1 quick coupler. Do not remove this bolt and sleeve when operating the scraper.

For Category 1 quick hitch application, place hitch sleeves over mounting pin.

Align quick hitch with 3-point mount pins and top spacer sleeve between the right and left mast plates.

The top quick hitch hook will seat into spacer sleeve. This sleeve does not interfere when unit is used with a standard 3-point hitch.

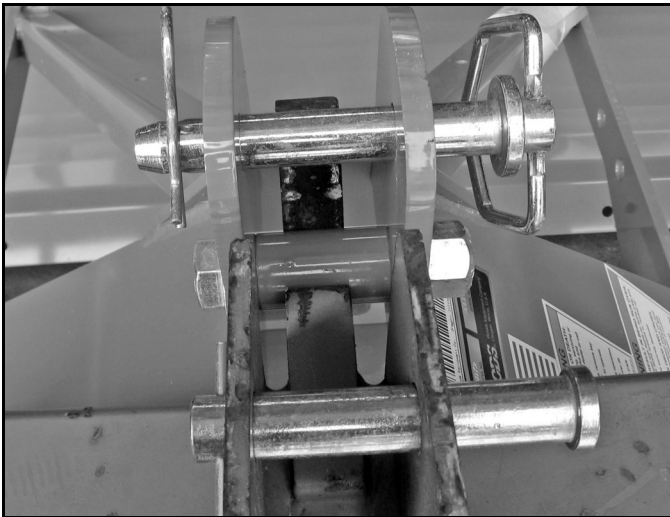


Figure 4. Top Quick Hitch Hook Connection

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 the application being done.

NOTICE

This unit is intended to move materials such as dirt, sand, gravel, etc. Unintended use may damage the box scraper.

SCARIFYING

1. Place the scarifier shanks in position with the points facing toward the tractor.
2. Lock into position with the lock pins provided. The lower 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. Lower the box scraper and drive forward to move material.
2. Adjust the depth of the scraper 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 scraper to provide a more shallow cut.

NOTE: When the top link is adjusted properly, the bowl of the scraper should fill easily and material can be pulled to a desired location.

3. To change the level of the scraper, shorten or lengthen the tractor lift arm tilt link to provide the correct slope.
4. Spread material by gradually raising the box scraper as the tractor moves forward.

NOTE: Top link adjustment for loose or previously scarified material will differ from adjustment for hard or compacted material.

BACKFILLING

1. Raise or remove scarifier shanks.
2. Lower the scraper to the ground and back up into the fill material.
3. Shorten the top link to raise the cutting scraper and control how much the scraper digs in.

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.

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 spray paint of matching color (purchase from your dealer).
- Replace any safety decals that are missing or not readable (supplied free by your dealer). See Safety Decals section for location drawing.

STORAGE

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



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 implement.
- 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 performing any service or maintenance, lower equipment to ground or block securely, turn off engine, remove key, and disconnect driveline from tractor PTO.**

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.**

BLOCKING UP BOX SCRAPER

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

1. Place two 6" x 6" 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 or cutting edge.

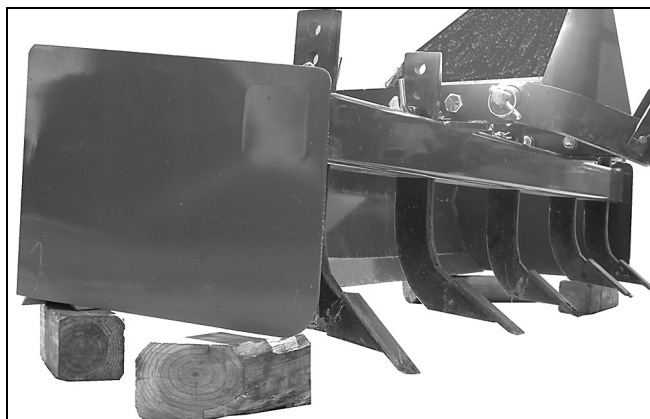


Figure 5. Box Scraper Blocked Up

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 6" x 6" (15.24 x 15.24 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.

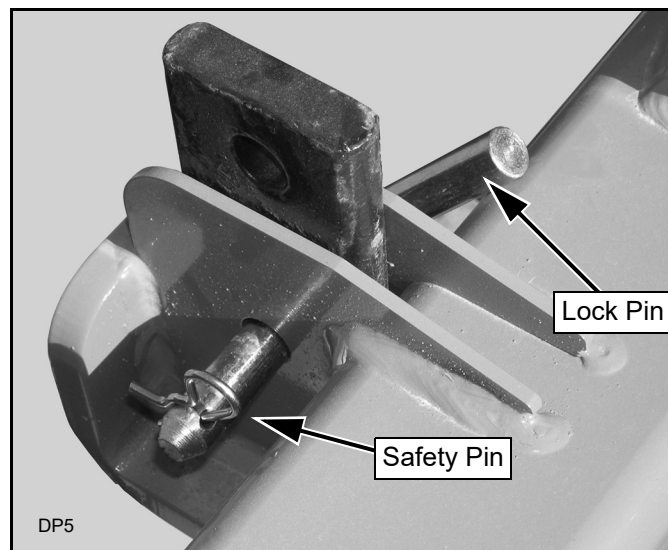


Figure 6. Scarifier Shank Adjustment

REPLACING SCARIFIER SHANK TOOTH

1. Remove scarifier shank from the scarifier bar.
2. Refer to Figure 7. 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.
4. Reinstall the shank in the scarifier holder.

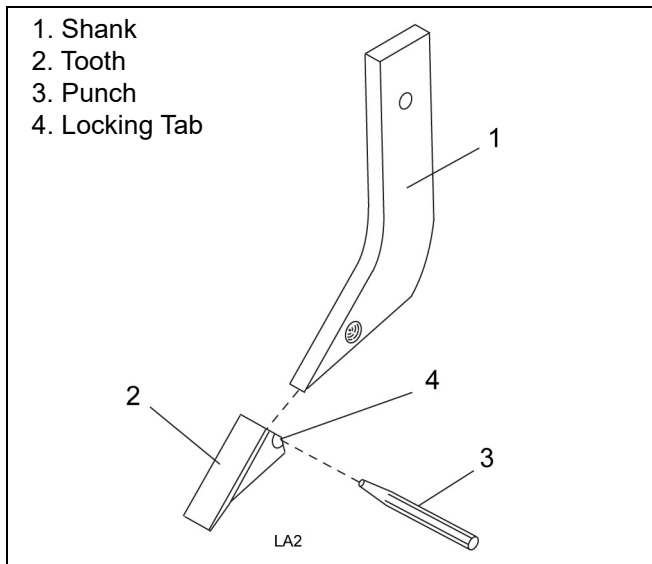


Figure 7. Scarifier Point Replacement

REPLACING CUTTING EDGE

All box scraper models use two 1/2" x 6" (12.7 x 152 mm) cutting edges. They are interchangeable and reversible.

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

1. Place two 6" x 6" (15.24 x 15.24 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. Refer to parts drawing, page 16. Remove the lock nuts (16) and plow bolts (18) from box scraper. Turn cutting edge over and use new edge, or replace it if both edges have been used.
4. Attach cutting edge to box scraper and secure with plow bolts and hex nuts previously removed.

Torque plow bolts to specifications given in Bolt Torque Chart, page 18.



ASSEMBLY

DEALER SET-UP INSTRUCTIONS

Assembly of this Box Scraper 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 15 before delivering the attachment to the customer.

The Box Scraper is 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 18.

WARNING

■ **Before performing any service or maintenance, lower attachment to ground, turn off engine, set parking brake, and remove key.**

■ **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 implement.
- 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

Assemble Box Scraper

1. Remove the banding, straps and lag bolts that holds the box scrapers and mast plates to the pallet.

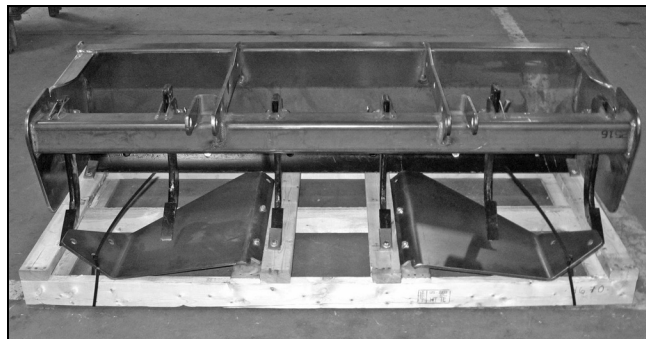


Figure 8. Shipping Configuration - Box Scraper

2. Place right mast plate (2) to the inside of right cross support bar and secure into position using three hex flange screws (19) and flange lock nuts (17). See page 16 for part diagram.
3. Repeat step to install left mast plate (3).
4. Place spacer sleeve (23) between mast plates lower front hole and secure into position using cap screws (22) two (one on either side) flat washers (21) and lock nuts (20). Install second sleeve (23) in lower rear hole.
5. Tighten 5/8 hardware to 170 lbs-ft and 3/4 hardware to 297 lbs-ft.

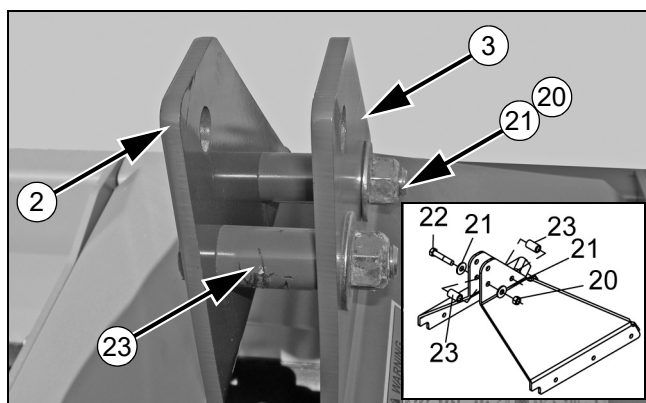


Figure 9. Spacer Sleeve Installation

INSTALL TAILGATE ON BSM MODELS (OPTIONAL)

1. Remove rear cutting edge from box scraper.
2. Place tailgate (5) against rear of box scraper and align mounting holes.
3. Insert tailgate pins (4) through holes on box scraper and tailgate. Secure tailgate pin into position using flat washers (24) and spring pins (15).
4. Attach cutting edge against tailgate and align holes and secure into position using hardware previously removed.

DEALER CHECK LISTS

PRE-DELIVERY CHECK LIST

(Dealer's Responsibility)

Inspect the equipment thoroughly after assembly to be certain it is set up properly before delivering it to the customer. The following check list is a reminder of points to inspect. Check off each item if it is found satisfactory or after proper adjustment is made.

- ___ Check that all safety decals are installed and in good condition. Replace if damaged.
- ___ Check all bolts to be sure they are properly torqued.
- ___ Check that all cotter pins and safety pins are properly installed.

DELIVERY CHECK LIST

(Dealer's Responsibility)

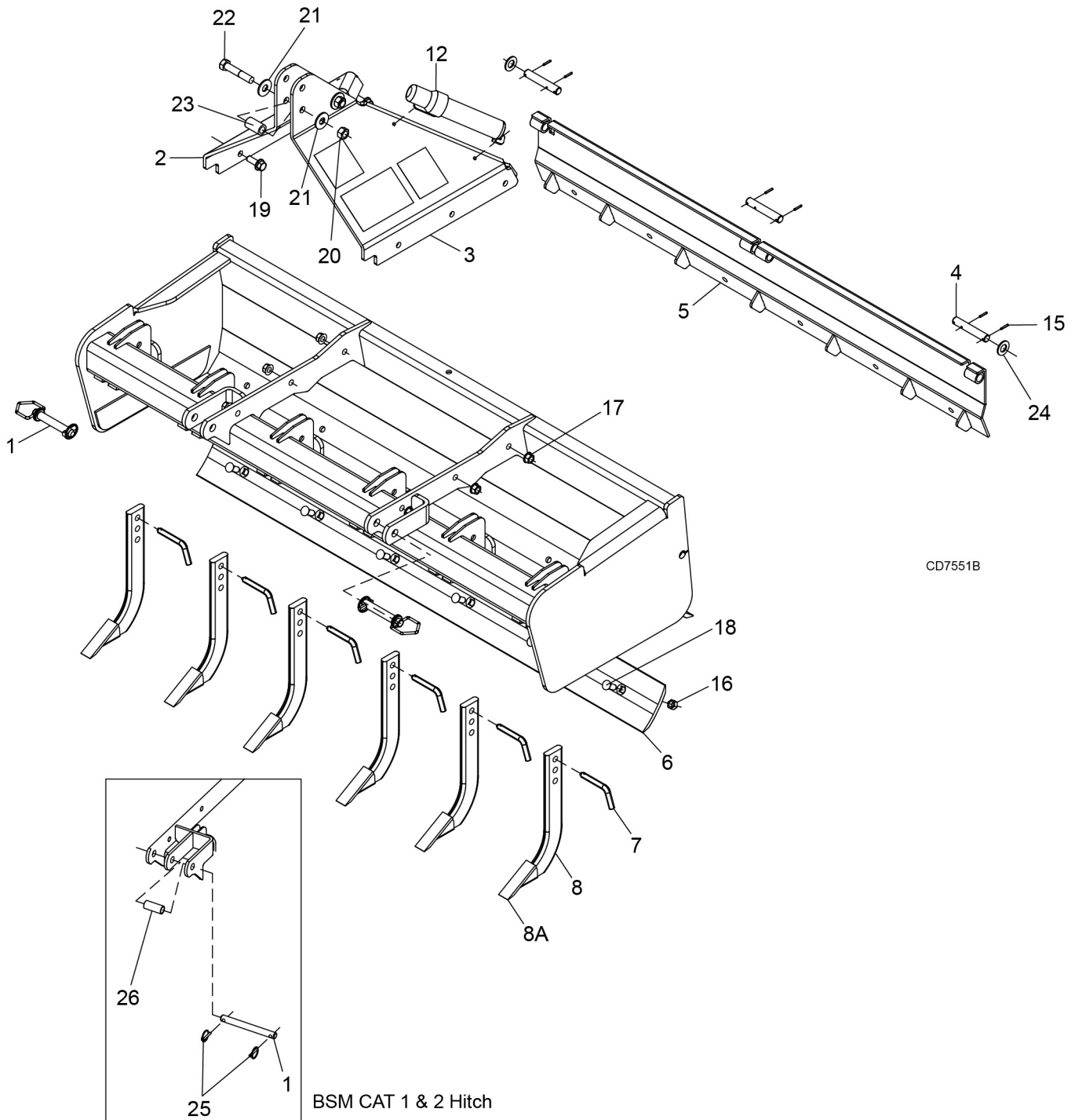
- ___ Show customer the safe, proper procedures to be used when mounting, dismounting, and storing equipment.
- ___ For mounted units, add wheel weights, ballast in front tires, and/or front tractor weight to enhance front end stability. A minimum 20% of tractor and equipment gross weight must be on

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!

- ___ Show customer how to make adjustments.
- ___ 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.
- ___ 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.
- ___ 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.



BSS/BSM BOX SCRAPER



- 9. - Safety Decal Set
- 10. - Complete Decal Set
- 11. - Quick Hitch Cat 1/2 Bushing Kit

16 Parts

MAN0761 (11/7/2008)

BSS/BSM BOX SCRAPER PARTS LIST

REF	BSS	BSM	QTY	DESCRIPTION	REF	BSS	BSM	QTY	DESCRIPTION
1	SU105		2	Drawbar pin w/lynch pin	8	1004635		4	Scarifier & tip (BSS54)
1		HBL233	2	Cat 2 Drawbar pin	8	1004635		5	Scarifier & tip (BSS60 / BSS65)
2	1029092		1	Mast plate - right (BSS)	8	1004635		6	Scarifier & tip (BSS72)
2		1029102	1	Mast plate - right (BSM)	8		1035770	7	Scarifier & tip, HD (BSM72 / BSM84)
3	1029053		1	Mast plate -left (BSS)	8A	1004636			A/R Scarifier tip (BSS)
3		1029101	1	Mast plate -left (BSM)	8A		1035769		A/R Scarifier tip, HD (BSM)
4		1029106	3	Tailgate pin optional	9	1003898	1003898		Safety decal set
5		102908672	1	Tailgate (BSM72) optional	10	1029113	1029113		Complete decal set
5		102908684	1	Tailgate (BSM84) optional	11	1003832	1003832	2	Quick Hitch Bushing Kit (Cat - 2)
6	1029062		2	Cutting edge (BSS54)	12	1026530	1026530	1	Manual tube (optional)
6	32280		2	Cutting edge (BSS60)	15		4115	2	Spring pin, 3/16 x 1-1/8
6	55316		2	Cutting edge (BSS65)	16	6239	6239	*	5/8 NC Lock nut
6	25258	25258	2	Cutting edge (BSS72 / BSM72)	17	19025	19025	*	5/8 NC flange lock nut
6		46440	2	Cutting edge (BSM84)	18	25265	25265	*	5/8 NC x 1-1/2 Plow bolt
7	1005338		4	Pin w/Clip (BSS54)	19	19024	19024	*	5/8 NC x 1-3/4 HFS GR5
7	1005338		5	Pin w/Clip (BSS65)	20	2371	2371	*	3/4 NC Lock nut
7	1005338	1005338	6	Pin w/Clip (BSS72 / BSM72)	21	2864	2864	*	3/4 Flat washer
7		1005338	7	Pin w/Clip (BSM84)	22	31207	31207	*	3/4 NC x 4 HHCS GR5
					23	1002018	1002018	2	Sleeve, .81 x 1.25 x 2.12
					24		28539	2*	7/8 Flat washer
					25		27542	4	7/16 Lynch pin
					26		56598	2	Sleeve, Cat 2 adapter

HFS Hex Flange Screw
 HHCS Hex Head Cap Screw
 A/R As Required
 NS Not Shown
 * Standard hardware,
 obtain locally

BOLT TORQUE CHART

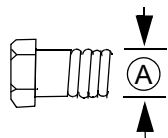
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

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

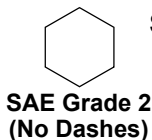
Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for metric hardware.

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.



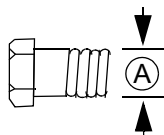
SAE SERIES TORQUE CHART



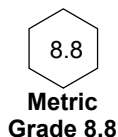
SAE Bolt Head Identification



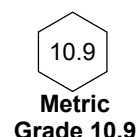
Ⓐ Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
1/4"	7/16"	6	8	10	13	14	18
5/16"	1/2"	12	17	19	26	27	37
3/8"	9/16"	23	31	35	47	49	67
7/16"	5/8"	36	48	55	75	78	106
1/2"	3/4"	55	75	85	115	120	163
9/16"	13/16"	78	106	121	164	171	232
5/8"	15/16"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

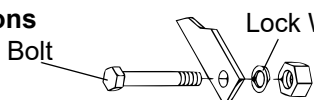


Metric Bolt Head Identification



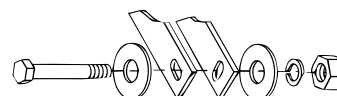
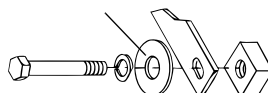
Ⓐ Diameter & Thread Pitch (Millimeters)	Wrench Size	Coarse Thread				Fine Thread				Ⓐ Diameter & Thread Pitch (Millimeters)
		Marking on Head				Marking on Head				
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
		N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 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

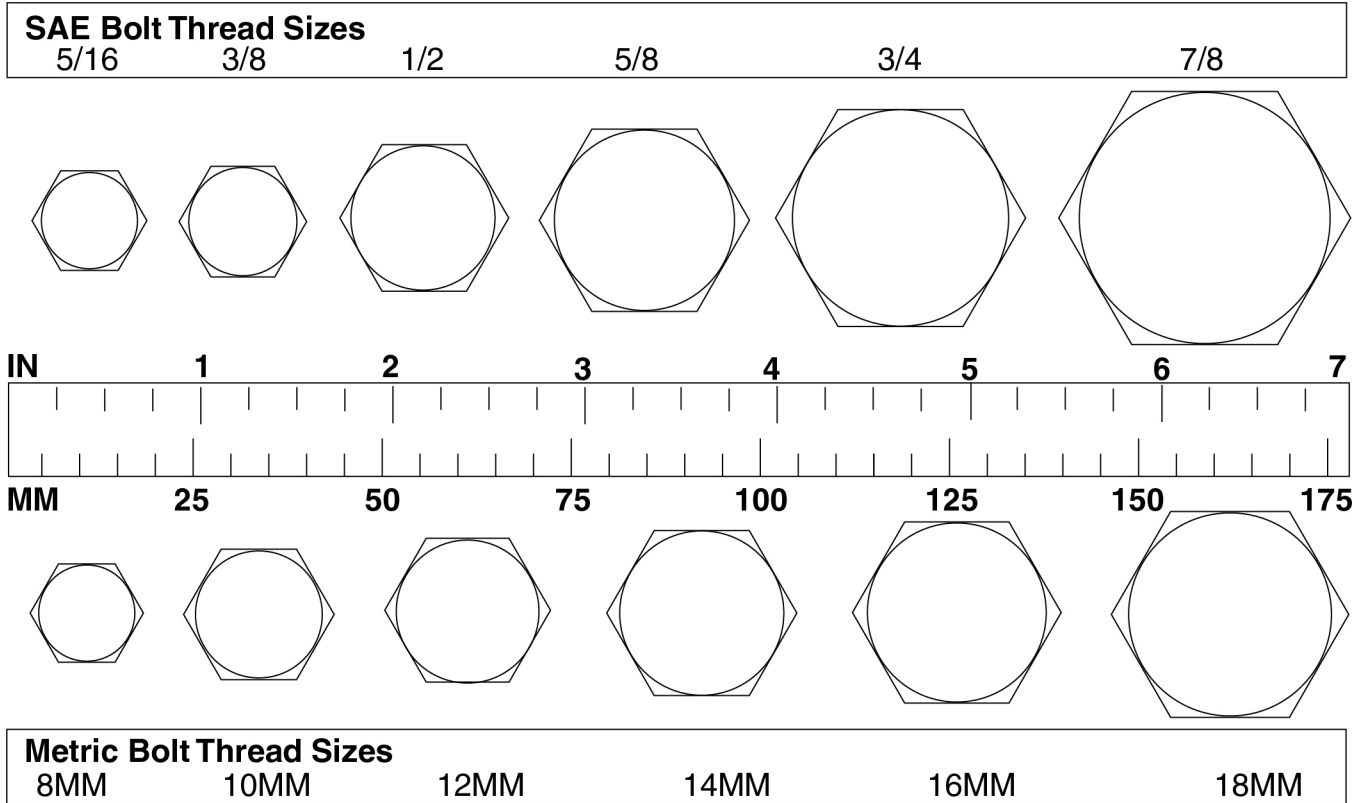
Flat Washer



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	MPa.....	Mega Pascal
ASABE	American Society of Agricultural & Biological Engineers (formerly ASAE)	N	Newton
ASAE	American Society of Agricultural Engineers	NC	National Coarse
ATF	Automatic Transmission Fluid	NF	National Fine
BSPP	British Standard Pipe Parallel	NPSM.....	National Pipe Straight Mechanical
BSPTM	British Standard Pipe Tapered Male	NPT.....	National Pipe Tapered
CV	Constant Velocity	NPT SWF	National Pipe Tapered Swivel Female
CCW	Counter-Clockwise	ORBM	O-Ring Boss - Male
CW	Clockwise	P.....	Pitch
F	Female	PBY.....	Power-Beyond
FT	Full Thread	psi	Pounds per Square Inch
GA	Gauge	PTO.....	Power Take Off
GR (5, etc.).....	Grade (5, etc.)	QD.....	Quick Disconnect
HHCS	Hex Head Cap Screw	RH.....	Right Hand
HT.....	Heat-Treated	ROPS.....	Roll-Over Protective Structure
JIC.....	Joint Industry Council 37° Flare	RPM.....	Revolutions Per Minute
LH.....	Left Hand	RT	Right
LT.....	Left	SAE.....	Society of Automotive Engineers
m	Meter	UNC	Unified Coarse
mm	Millimeter	UNF.....	Unified Fine
M	Male	UNS	Unified Special

WARRANTY

(Replacement Parts For All Models Except Zero-Turn Mowers)

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.

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, 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:

ALITEC™
CENTRAL FABRICATORS®
GANNON®
WAIN-ROY®
WOODS®

WOODS®

WOODS® | A Blount International Brand
2606 South Illinois Route 2
Post Office Box 1000
Oregon, Illinois 61061 USA
800-319-6637 tel
800-399-6637 fax
woodsequipment.com

WARRANTY

All Models Except Mow'n Machine™ Zero-Turn Mowers

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 backhoes, loaders and mounts (except 3-pt. SAF-T-LOK® mounts) are warranted for two (2) years from the date of delivery to the original purchaser. The limited warranty covers any defects in the material and/or workmanship. Following the proper, recommended installation by an authorized Woods Dealer and normal use of a Woods mounting and backhoe or loader, if a tractor incurs damage resulting from the attachment, Woods will cover the existing tractor warranty in the event the manufacturer voids its tractor warranty because of the attachment. Warranty does not cover any misuse or abusive conditions that could cause premature wear or damage to attachment or tractor.

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)
	All units invoiced after 4/30/2012	
Gearbox components	BB48X, BB60X, BB72X, BB84X, BB600X, BB720X, BB840X, BB6000X, BB7200X, BB8400X, DS12.50, TS14.60, DS1440, TS1680, DS8.30, DS10.40, DS8.50, DSO8.50, DS10.50, DSO10.50, DBH5.30, DBH6.30	6 years
	BW12, BW15, BW126X, BW180X, BW126XHD, BW180XHD, BW1260X, BW1800X, BW10.50, BW10.50Q, BW15.50, BW15.50Q, BW10.60, BW10.60Q, BW15.60, BW15.60Q, BW10.70, BW10.70Q, BW15.70, BW15.70Q	
	BW240X, BW240XHD, BW1620X, BW2400X	
	RD990X, PRD6000, PRD7200, PRD8400, S15CD, S20CD, S22CD, S25CD, S27CD, S30CD, TC/R74, TC/R68, TC/R60, TBW144, TBW180, TBW204, TSG50, S12ED, S15ED, S18ED, S20ED, TPD25, TPD35, TPD65, TPD95	
	RDC54, RD60, RD72, TBW150C, TS/R60, TS/R52, TS/R44, RC3.5, RC4, RC5, RC6	3 years (1 year if used in rental or commercial applications)
Blade spindles	RD990X, PRD6000, PRD7200, PRD8400, TBW144, TBW180, TBW204	3 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:

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