



BOX SCRAPERS

BS48.20

BS60.20

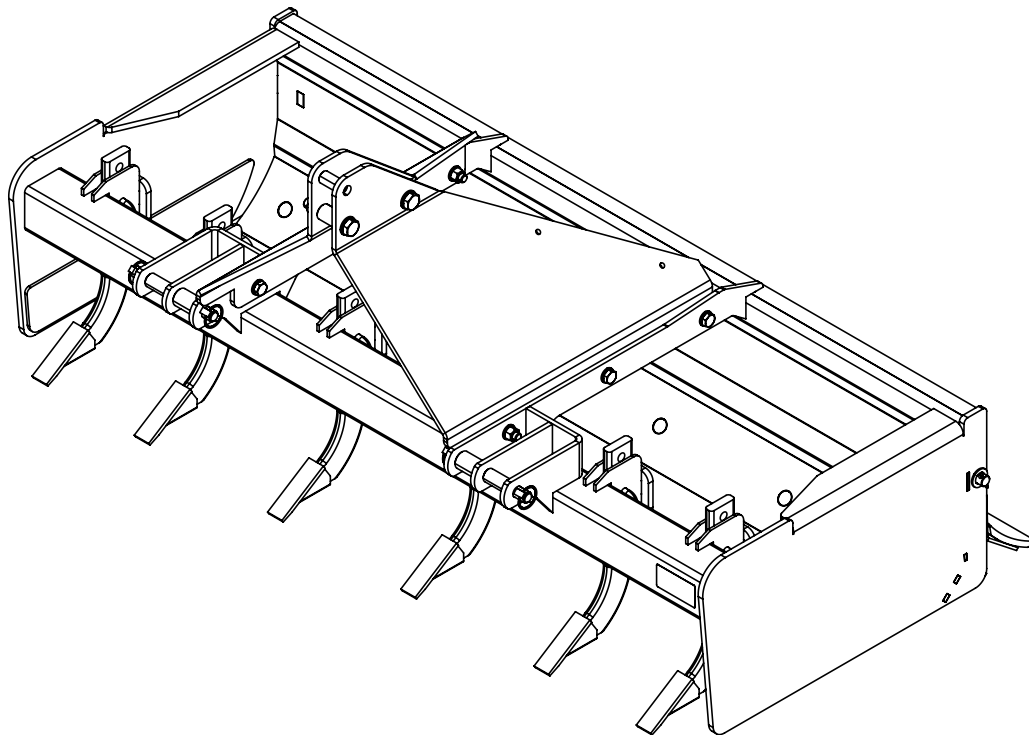
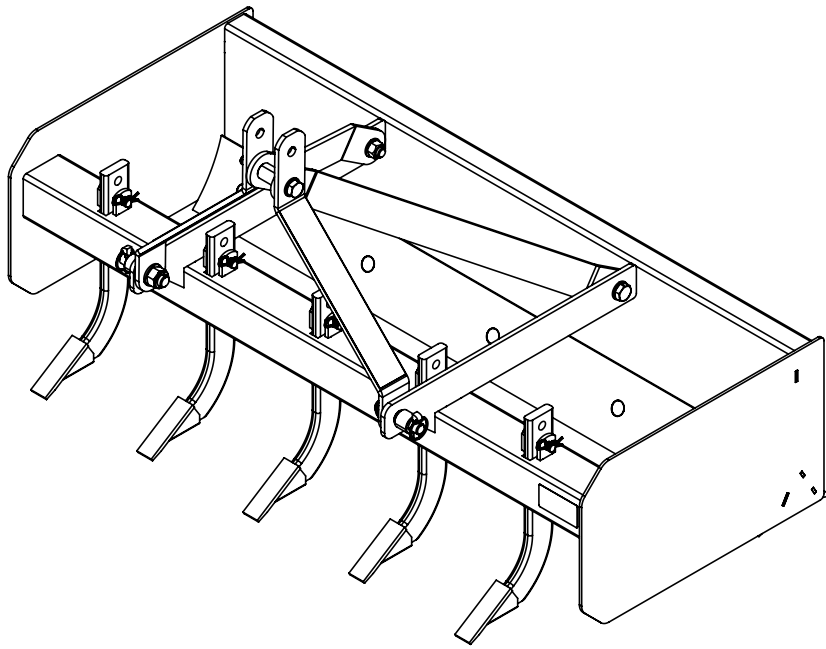
BS72.20

BS60.30

BS72.30

BS72.40

BS84.40



MAN1377
(Rev 05/10/2024)

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 Checklists in the Operator's Manual are completed before releasing equipment to the owner.

The dealer must complete the Product Registration included with the Operator's Manual. The customer must sign the registration which certifies that all Dealer Checklist items have been completed. The dealer is to return the prepaid postage portion to Woods, give one copy to the customer, and retain one copy.

Failure to register the product does not diminish customer's warranty rights.

TO THE OWNER:

Read this manual before operating your Woods equipment. The information presented will prepare you to do a better and safer job. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all adjustment and operating procedures before attempting to operate. Replacement manuals can be obtained from your dealer. To obtain complete warranty details, visit WoodsEquipment.com/warranty. You may also request a hard copy by calling 1-800-319-6637 or mail your request to: Woods Equipment Company, Attn: Warranty Dept. 2606 South Illinois Route 2, Oregon, IL 61061. 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

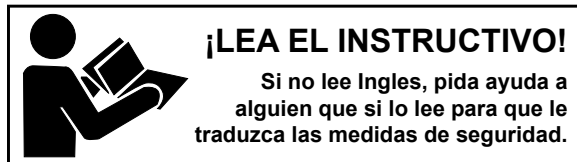
Indicates helpful information.

2 Introduction

MAN1377
(05/10/2024)

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

SPECIFICATIONS

| Model | BS48.20 | BS60.20 | BS72.20 | BS60.30 | BS72.30 | BS72.40 | BS84.40 |
|-----------------------------|----------------------------|---------|---------|-------------------|---------|---------------|---------|
| Tractor HP | 20-35 | | | 25-45 | | 40-65 | |
| Tractor Hitch Category | Limited Cat 1/ Cat 1 | | | Cat 1 | | Cat 1 / Cat 2 | |
| Working Width (in) | 48 | 60 | 72 | 60 | 72 | 72 | 84 |
| Capacity, Heaped (cubic ft) | 7.3 | 11.5 | 13.9 | 15.6 | 18.9 | 19 | 22.3 |
| Approximate Weight (lbs) | 260 | 370 | 425 | 500 | 560 | 730 | 800 |
| Number of Scarifiers | 4 | 5 | 6 | 5 | 6 | 6 | 7 |
| Scarifier Depth (in) | 0, 1.5", 3.0" | | | | | | |
| Scarifier Mounted | Slot in Tube | | | Heavy Duty Saddle | | | |
| Tailgate Type | Fixed | | | | | Floating | |
| Cutting Edges | 2 - 1/2" x 6" (Reversible) | | | | | | |

GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your Rear Blade. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance. These instructions have been compiled from extensive field experience and engineering data. Some information may be general in nature, due to unknown and varying operating conditions. However, through experience and these instructions, you should be able to develop procedures suitable to your particular situation.

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

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

4 Introduction

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(05/10/2024)

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 responsible, trained, familiar with the instructions and be physically 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 entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head.
- 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 systems in "locked up" position at all times.
- Remove accumulated debris from this equipment, power unit, and engine to avoid fire hazard.
- Due to the mass of the (mounted) machine itself and loaded materials, the tractor machine combination can influence maneuverability and stability. 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. Without this weight, tractor could tip over, causing personal injury or death. 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.
- Make sure shields and guards are properly installed and in good condition. Replace if damaged.
- Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)
- Inspect and clear area of stones, branches, or other hard objects that might be thrown, causing injury or damage.

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 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.

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



- 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.
- 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, children or animals within 25 feet of the area when operating, attaching, removing, assembling, or servicing equipment.
- Do not operate box scraper at speeds above 5 mph.
- 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 (lowered to the ground or raised) unless it is properly blocked and secured. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death. Follow Operator's Manual instructions for working underneath and blocking requirements or have work done by a qualified dealer.

TRANSPORTATION

- Always comply with all state and local lighting and marking requirements.
- Never allow riders on power unit or attachment.
- Do not operate or transport on steep slopes.
- Do not operate or transport equipment while under the influence of alcohol or drugs.

MAINTENANCE

- Service and maintenance work not covered in OWNER SERVICE must be done by a qualified dealership. Special skills, tools, and safety procedures may be required. Failure to follow these instructions can result in serious injury or death.
- 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 (LOWERED OR RAISED) UNLESS IT IS PROPERLY BLOCKED AND SECURED. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak-down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.
 - 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.

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



- Never perform service or maintenance with engine running.
- Keep all persons and animals away from operator control area while performing adjustments, service, or maintenance.
- Eye protection must be used when removing or installing scarifier shank clips.
- Do not allow bystanders, children or animals in the area when operating, attaching, removing, assembling, or servicing equipment.
- 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.)
- Use a suitable lifting device of sufficient capacity. Use adequate personnel to handle heavy components.

STORAGE

- Follow manual instructions for blocking equipment and storage.
- Keep children, bystanders, and animals away from the equipment and the storage area.

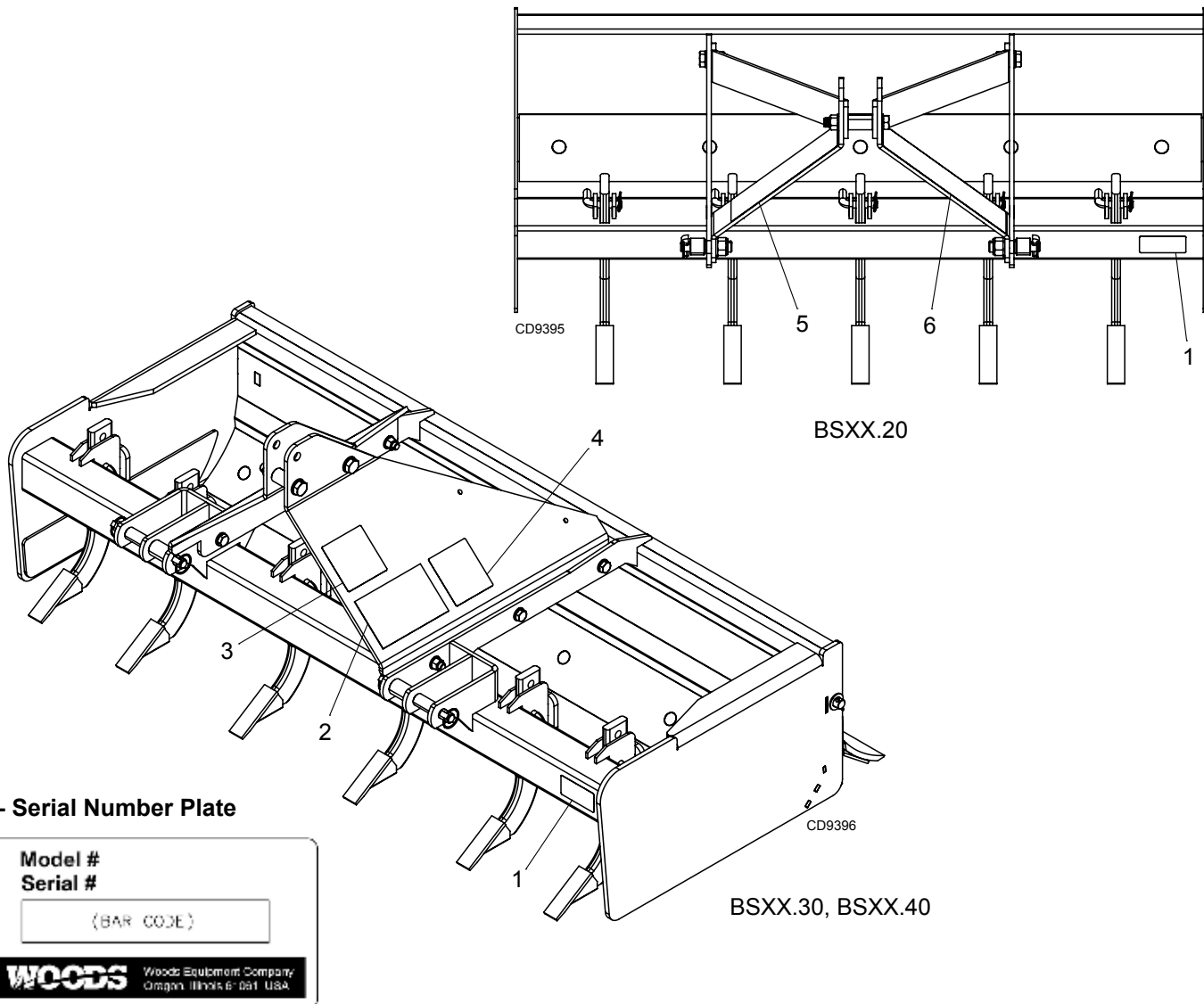
SAFETY & INSTRUCTIONAL DECALS



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



Replace Immediately If Damaged!



BE CAREFUL!

Keep safety decals clean and visible.

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.

Replace safety decals if they are missing or illegible.

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.

SAFETY & INSTRUCTIONAL DECALS




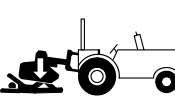
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



Replace Immediately If Damaged!

2 - PN 55121

DANGER

FALLING OFF WILL RESULT IN BEING RUN OVER.

- 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.

RAISED IMPLEMENT CAN DROP AND CRUSH.


- 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.

FALLING OFF OR GOING UNDERNEATH IMPLEMENT WILL RESULT IN SERIOUS INJURY OR DEATH.

55121 AE

5 - PN 1021069

DANGER




RAISED IMPLEMENT CAN DROP AND CRUSH

- 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.

GOING UNDERNEATH IMPLEMENT WILL RESULT IN SERIOUS INJURY OR DEATH.

6 - PN 1021070

DANGER



FALLING OFF WILL RESULT IN BEING RUN OVER.

- 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.

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

3 - PN 55122

WARNING

TO AVOID SERIOUS INJURY OR DEATH:

- Read Operator's Manual before operating, servicing or repairing equipment. Follow all safety rules and instructions. (Manuals are available from dealer or call 1-800-319-6637.)
- Operate from tractor seat only.
- Lower equipment to ground, stop engine, remove key and set brake before dismounting tractor.
- Never allow children or untrained persons to operate equipment.
- Never allow riders.
- Keep bystanders away from equipment during operation.
- Keep all shields in place and in good condition.
- Do not transport towed or semi-mounted units over 20 mph (30 km/h).

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

55122 AE

4 - PN 1003751

WARNING




CRUSHING AND PINCHING HAZARD

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

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

1003751 AD

WARNING




CRUSHING AND PINCHING HAZARD

- Handle machine parts carefully. Body parts could be crushed or pinched between tractor and implement.
- Operate tractor controls from tractor seat only.
- Do not stand between tractor and implement when tractor is in gear.
- Make sure parking brake is engaged before going between tractor and implement.
- Stand clear of machine while in operation or when it is being raised or lowered.

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

1021069 AB

WARNING



CRUSHING AND PINCHING HAZARD

- Handle machine parts carefully. 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.

WARNING

TO AVOID SERIOUS INJURY OR DEATH:

- Read Operator's Manual before operating, servicing, or repairing equipment. Follow all safety rules and instructions. (Manuals are available from dealer or call 1-800-319-6637.)
- 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.

1021070 AB

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 9.

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

PRE-OPERATION CHECKLIST

(OWNER'S RESPONSIBILITY)

- _____ Review and follow all safety rules and safety decal instructions on pages 5 through 9.
- _____ 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 and cotter pins are properly installed and secured.
- _____ Check that all lubrication points are greased.
- _____ Check that blade cutting edge is in good condition.
- _____ Check that all hydraulic hoses and fittings are in good condition and not leaking before starting tractor. Check that hoses are not twisted, bent sharply, kinked, frayed or pulled tight. Replace any damaged hoses immediately.

WARNING

- **Due to the mass of the (mounted) machine itself and loaded materials, the tractor machine combination can influence maneuverability and stability. 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. Without this weight, tractor could tip over, causing personal injury or death. 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.**

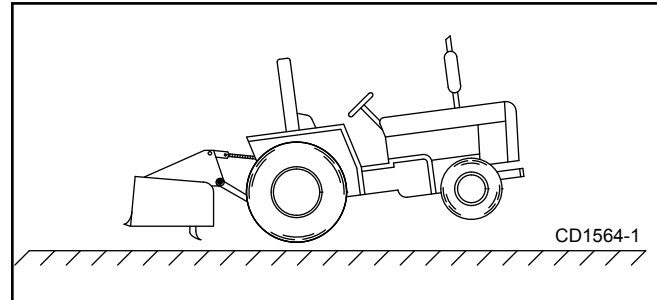


Figure 1. Tractor Stability

CONNECTING BOX SCRAPER TO TRACTOR

The BSXX.20 and BSXX.30 models are compatible with Category 1, 3-point tractors equipped with side swing-type lower lift arms. BSXX.40 models are compatible with Category 1 and 2 3-point hitches.

To avoid interference with the box scraper, adjust tractor drawbar to the shortest and highest position.

BSXX.20 Models

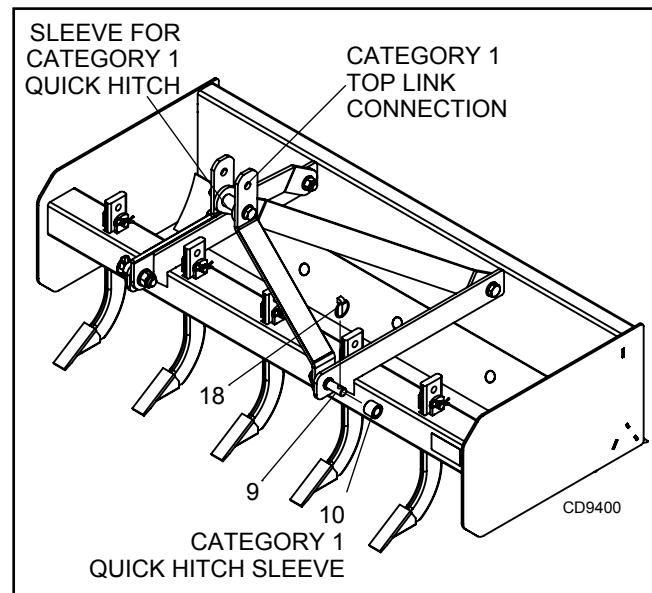


Figure 2. BSXX.20 Models

1. Attach tractor's lower 3-point arms to scraper lower hitch pin (9) and secure in place with klik pin (18).
2. Attach tractor top link to upper hole in A-frame bars using tractor heavy-duty top link pin. Secure with retaining pin supplied with tractor top link.
3. When using a Quick Hitch, install sleeve (10) on lower pins and secure with klik pin.
4. Quick Hitch attaches to lower hitch pin sleeves and sleeve between A-frame bars.

BSXX.30 Models

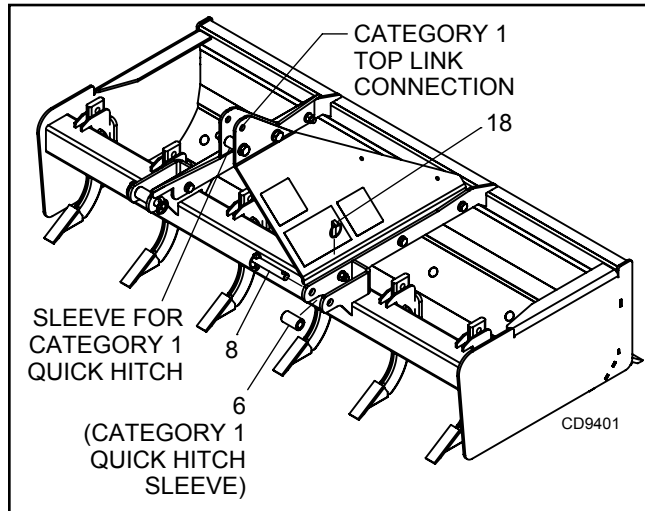


Figure 3. BSXX.30 Models

1. Attach tractor's lower 3-point arms to scraper lower hitch pin (8) and secure in place with klik pin (18).
2. Attach tractor top link to upper holes in mast plates using tractor heavy-duty top link pin. Secure with retaining pin supplied with tractor top link.
3. When using a Quick Hitch, install sleeve (6) on lower pins and secure with klik pin.
4. Quick Hitch attaches to lower hitch pin sleeves and sleeve between mast plates.

BSXX.40 Models

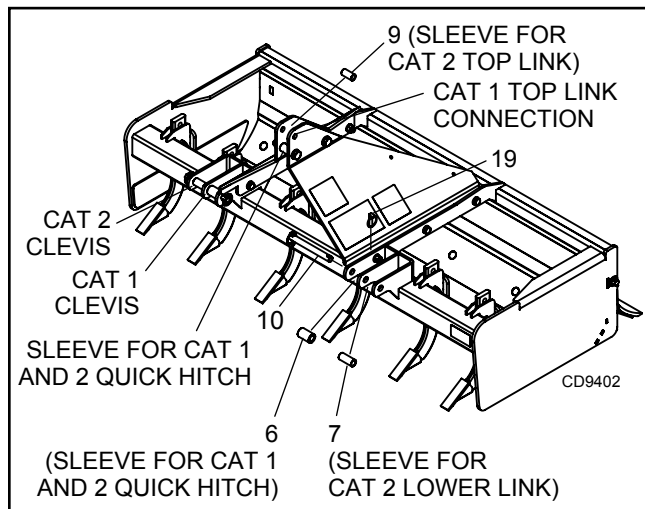


Figure 4. BSXX.40 Models

Category 1 Three Point Hitch

1. Attach tractor's lower 3-point arms to scraper lower hitch pin (10) in the inner clevis of hitch bracket. Secure in place with klik pin (18).
2. Attach tractor top link to upper holes in mast plates using tractor heavy-duty top link pin. Secure with retaining pin supplied with tractor top link.

3. When using a Category 1 Quick Hitch, install sleeve (6) on inner clevis of lower hitch bracket and secure with klik pin.
4. Quick Hitch attaches to lower hitch pin sleeves and sleeve between mast plates.

Category 2 Three Point Hitch

1. Attach tractor's lower 3-point arms to sleeve (7) and scraper lower hitch pin (10) in the outer clevis of hitch bracket. Secure in place with klik pin (18).
2. Attach tractor top link to sleeve (9) and upper holes in mast plates using tractor heavy-duty top link pin. Secure with retaining pin supplied with tractor top link.
3. When using a Category 2 Quick Hitch, install sleeve (6) on outer clevis of lower hitch bracket and secure with klik pin.
4. Quick Hitch attaches to lower hitch pin sleeves and sleeve between mast plates.

Quick Hitch Connection

NOTICE

- The 20 mm bolt and sleeve in the lower hole provide the attachment point for a Category 1 or 2 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.

For Category 2 quick hitch, make sure sleeves are in outer clevis position on lower 3-point pins.

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.

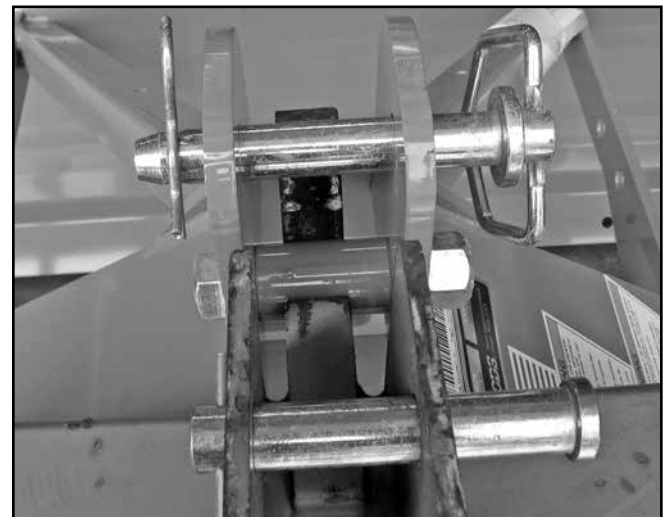


Figure 5. Top Quick Hitch Hook Connection

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.

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 and animals 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" (15 x 15 cm) blocks under each side frame of the box scraper as shown in Figure 6.
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.

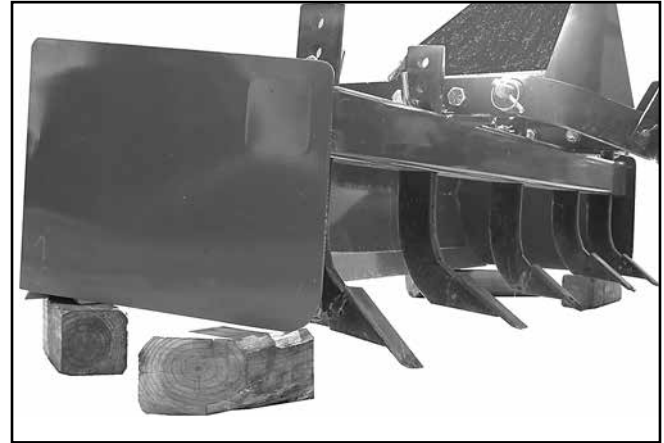


Figure 6. Box Scraper Blocked Up

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 x 15 cm) blocks under each side-frame of the box scraper (see Figure 6).
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 bent pin. Adjust scarifier to desired position, Figure 7.
4. Replace safety and lock pins.

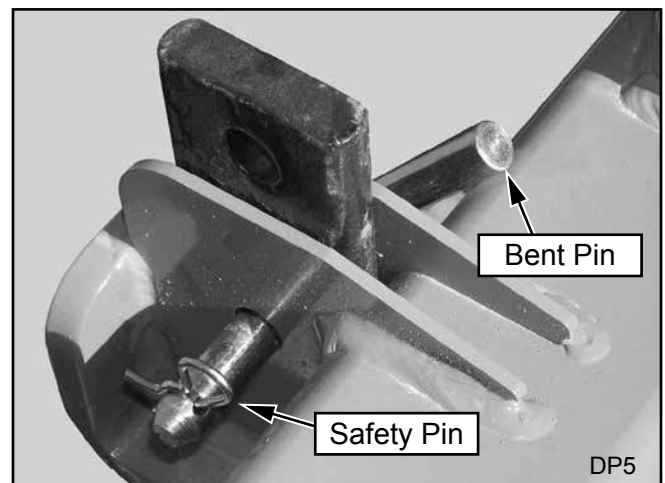


Figure 7. Scarifier Shank Adjustment
(BSXX.30, BSXX.40 Shown, BSXX.20 Similar)

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 x 15 cm) blocks under each side-frame of the box scraper (see Figure 6).
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 for your model, pages 20 - 25. Remove the lock nuts and plow bolts 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 26.

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.

STORAGE

- Block equipment securely for storage.
- Keep children, bystanders, and animals away from the equipment and the 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.

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 Checklists on page 17 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 26.

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 and animals 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.**

ASSEMBLE BOX SCRAPER

BSXX.20 Models

1. Remove frame, loose parts and hardware from shipping crate.
2. Attach right A-frame bar (2) to scraper frame (1) using hitch pin (9). Secure with washer (25) and nut (26). Refer to safety decals to identify right hand part.
3. Repeat step 2 for left hand A-frame bar (3).
4. Attach rear support (4) to scraper frame right hand rail using cap screw (21), washers (23) and nut (24).
5. Repeat step 4 for left hand rear support bar.
6. Align rear support bars with lower hole in A-frame bars. Install sleeve (7) between rear support bars. Secure with cap screw (22), washers (23) and nut (24).
7. Torque hardware to recommended values shown on page 26.

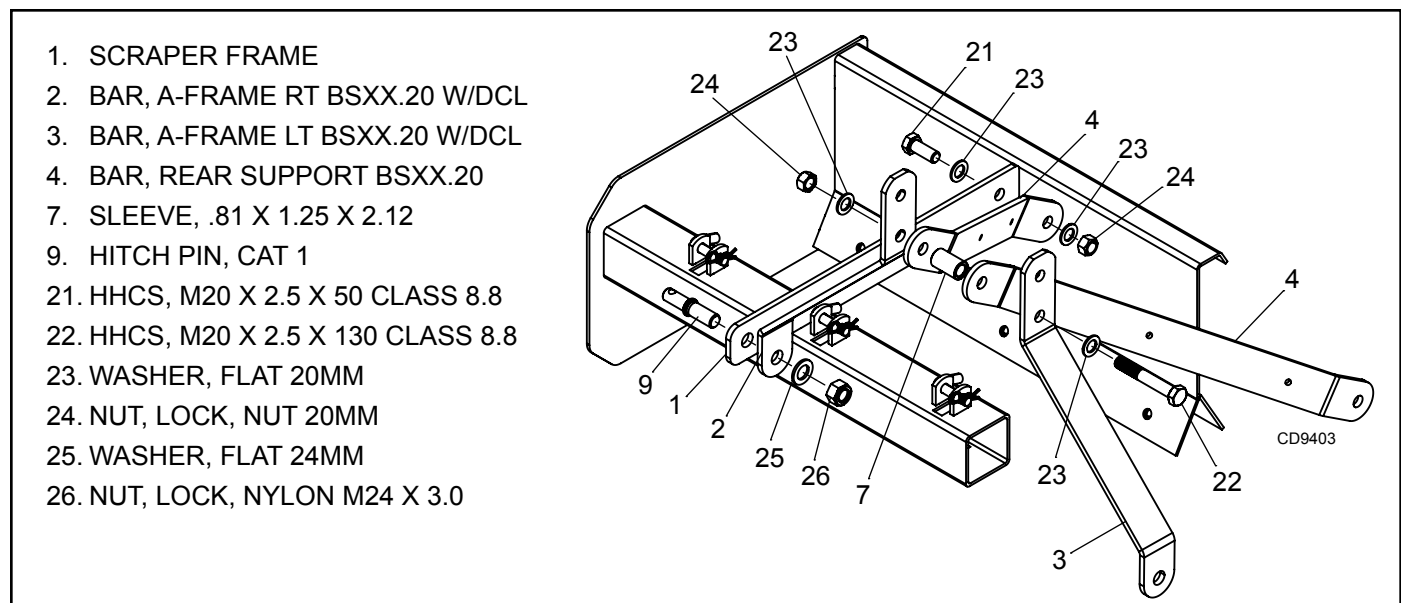


Figure 8. BSXX.20 Models

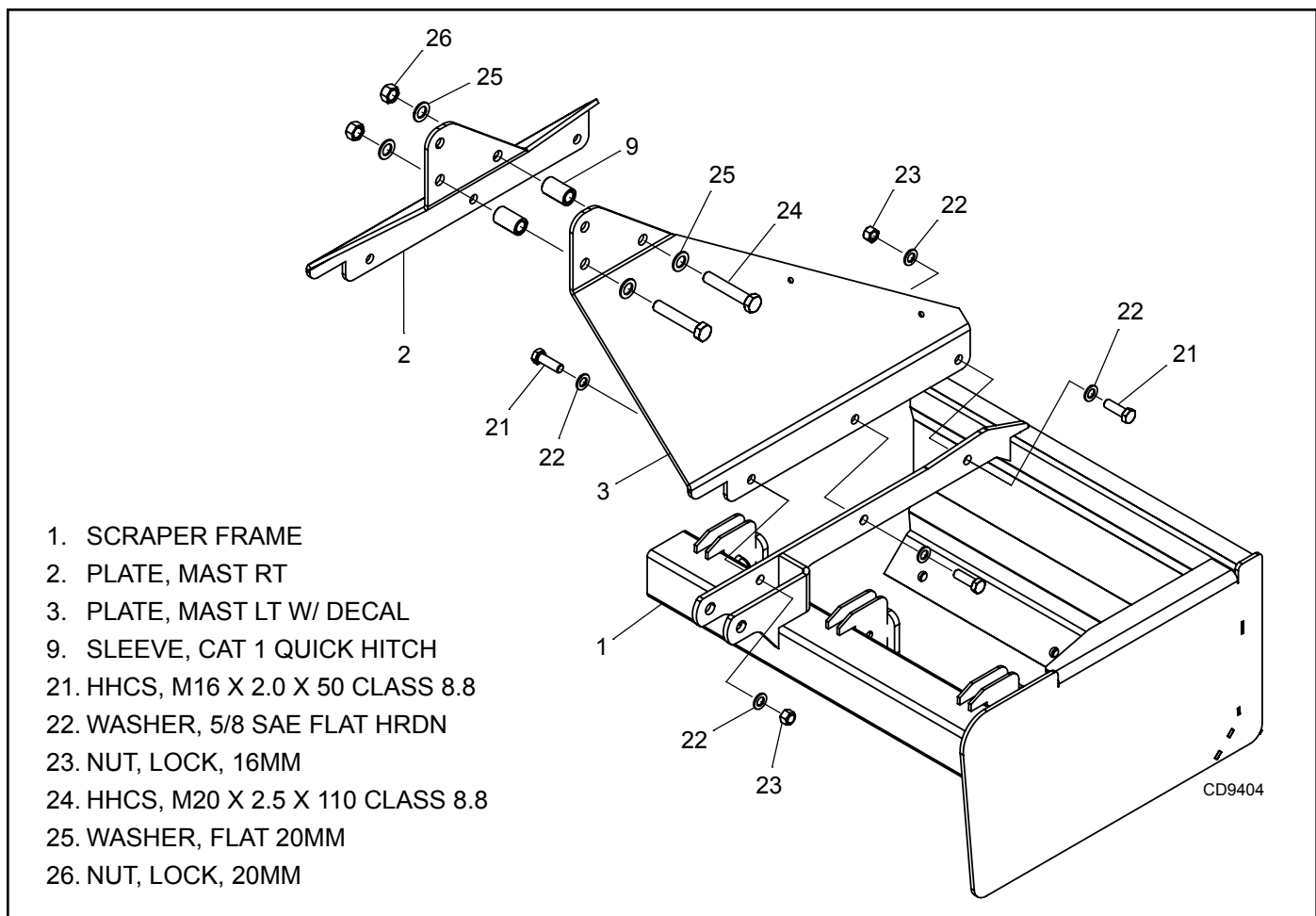


Figure 9. BSXX.30, BSXX.40 Models

BSXX.30, BSXX.40 Models

1. Remove frame, loose parts and hardware from shipping crate.
2. Attach left mast plate (3) to scraper frame (1) using cap screws (21), washers (22) and nuts (23).
3. Repeat step 2 for the right mast plate (2).
4. Locate sleeves (9) between mast plates lower holes. Secure with cap screws (24), washers (25) and nuts (26).
5. Torque hardware to recommended values shown on page 26.

All Models

Early production models do not have scarifiers installed for shipment. Locate scarifiers in shipping crate.

1. Block up scraper by placing two 6" x 6" (15.24 cm x 15.24 cm) blocks under each side frame (see Figure 6).
2. Lower scraper to rest securely on the blocks.
NOTE: Do not block the scraper any higher than necessary to install the scarifiers.
3. Remove safety pin and bent pin from scarifier mount. (Figure 7)
4. Install scarifier in the desired hole. Retain with bent pin and safety pin.
5. Repeat for remaining scarifiers.

DEALER CHECKLISTS

DEALER PRE-DELIVERY CHECKLIST (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 checklist 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. Replace if damaged.

DEALER DELIVERY CHECKLIST (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.

NOTES

18 *Notes*

MAN1377
(05/10/2024)

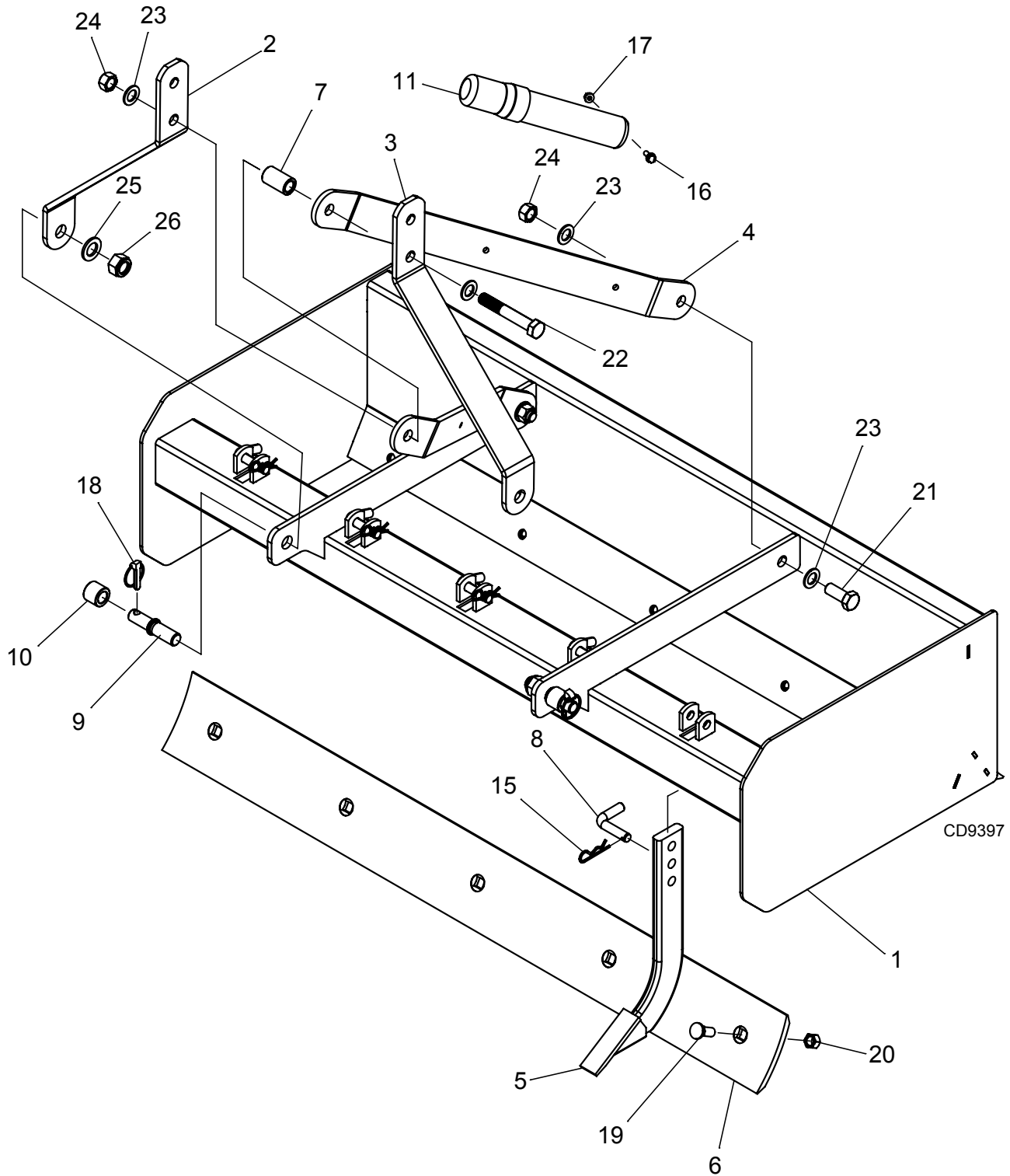


Box Scrapers

| | | |
|----------------|----------------|----------------|
| BS48.20 | BS60.30 | BS72.40 |
| BS60.20 | BS72.30 | BS84.40 |
| BS72.20 | | |

| | |
|-------------------------------------|---------|
| BS48.20, BS60.20, BS72.20 | 20 - 21 |
| BS60.30, BS72.30 | 22 - 23 |
| BS72.40, BS84.40 | 24 - 25 |

BS48.20, BS60.20, BS72.20



20 Parts

MAN1377
(05/10/2024)

BS48.20, BS60.20, BS72.20 PARTS LIST

| REF | BS48.20 | BS60.20 | BS72.20 | QTY | DESCRIPTION |
|-----|---------|---------|---------|-----|---|
| 1 | NSS | NSS | NSS | 1 | SCRAPER FRAME |
| 2 | 645142 | ---- | ---- | 1 | BAR, A-FRAME RT BS48.20 W/ DECAL |
| 2 | ---- | 645138 | 645138 | 1 | BAR, A-FRAME RT BS60.20, BS72.20 W/ DECAL |
| 3 | 645143 | ---- | ---- | 1 | BAR, A-FRAME LT BS48.20 W/ DECAL |
| 3 | ---- | 645139 | 645139 | 1 | BAR, A-FRAME LT BS60.20, BS72.20 W/ DECAL |
| 4 | 645129 | ---- | ---- | 1 | BAR, REAR SUPPORT BS48.20 |
| 4 | ---- | 645132 | 645132 | 1 | BAR, REAR SUPPORT BS60.20, BS72.20 |
| 5 | 1035770 | 1035770 | 1035770 | A/R | SCARIFIER AND TIP ASSEMBLY |
| 6 | 645155 | 645157 | 645158 | 2 | CUTTING EDGE W/ HARDWARE (INCLUDES 19 AND 20) |
| 7 | 1002018 | 1002018 | 1002018 | 1 | SLEEVE, .81 x 1.25 x 2.12 |
| 8 | 1005338 | 1005338 | 1005338 | A/R | BENT PIN .62 X 3.0 (INCLUDES SAFETY PIN ITEM 15) |
| 9 | 645149 | 645149 | 645149 | 2 | HITCH PIN W/ HARDWARE (INCLUDES 25 AND 26) |
| 10 | 38214 | 38214 | 38214 | 2 | SLEEVE, CAT 1 QUICK HITCH |
| 11 | 1026530 | 1026530 | 1026530 | 1 | MANUAL TUBE (OPTIONAL) |
| 15 | 2688 | 2688 | 2688 | * | SAFETY PIN, 5/32 |
| 16 | 71632 | 71632 | 71632 | * | BOLT, WHIZ HEX .312-18 X 1 (OPTIONAL) |
| 17 | 14139 | 14139 | 14139 | * | NUT, HFN 5/16 NC, LOCK, GR G (OPTIONAL) |
| 18 | 27542 | 27542 | 27542 | * | PIN, KLIK HT 7/16 X 11/32 |
| 19 | 25265 | 25265 | 25265 | * | BOLT PLOW 5/8 NC X 1-1/2 |
| 20 | 6239 | 6239 | 6239 | * | NUT, LOCK, 5/8 NC |
| 21 | ---- | ---- | ---- | * | HHCS, M20 X 2.5 X 50 CLASS 8.8 |
| 22 | ---- | ---- | ---- | * | HHCS, M20 X 2.5 X 130 CLASS 8.8 |
| 23 | ---- | ---- | ---- | * | WASHER, FLAT 20MM |
| 24 | ---- | ---- | ---- | * | NUT, LOCK, NUT 20MM |
| 25 | ---- | ---- | ---- | * | WASHER, FLAT 24MM |
| 26 | ---- | ---- | ---- | * | NUT, LOCK, NYLON M24 X 3.0 |
| NS | W72478 | W72478 | W72478 | 1 | DECAL, MODEL, WOODS ORANGE 1.52 X 8.00 |
| NS | 642647 | 642648 | 642650 | 1 | DECAL, MODEL BSXX.20 |
| NS | 642832 | 642833 | 642834 | 1 | DECAL, MODEL, BSXX.20 FOR MASSEY FERGUSON |

* STANDARD HARDWARE, OBTAIN LOCALLY

A/R AS REQUIRED

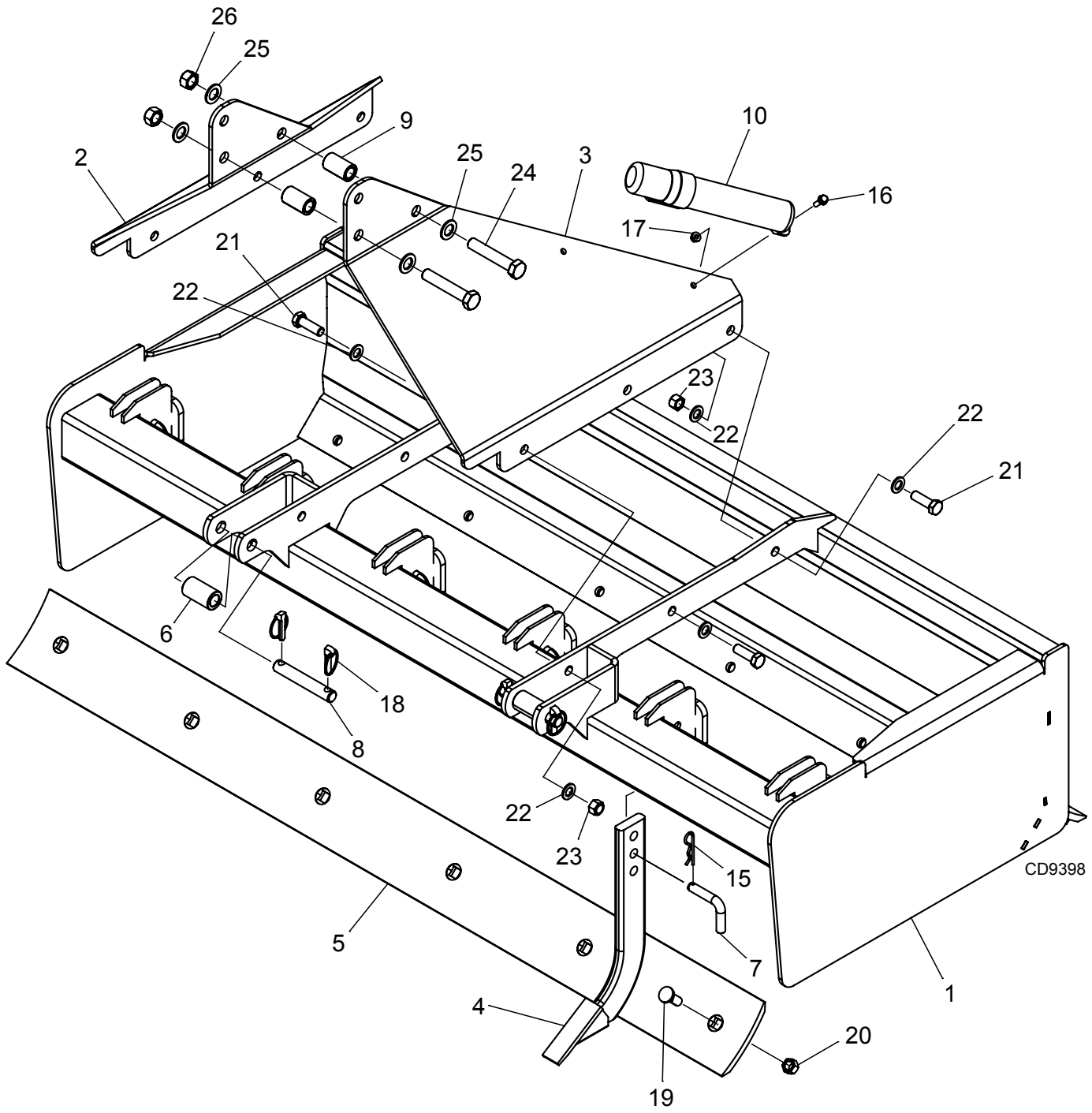
NS NOT SHOWN

NSS NOT SOLD SEPERATLY

HHCS Hex Head Cap Screw

NOTE: For safety decals, see pages 8 and 9.
Order decals separately.

BS60.30, BS72.30



22 Parts MAN1377 (05/10/2024)

BS60.30, BS72.30 PARTS LIST

| REF | BS60.30 | BS72.30 | QTY | DESCRIPTION |
|-----|---------|---------|-----|---|
| 1 | NSS | NSS | 1 | SCRAPER FRAME |
| 2 | 645136 | 645136 | 1 | PLATE, MAST RT BSXX.30 |
| 3 | 645137 | 645137 | 1 | PLATE, MAST LT BSXX.30 W/ DECAL |
| 4 | 1035770 | 1035770 | A/R | SCARIFIER, SHANK AND TIP |
| 5 | 645157 | 645158 | 2 | CUTTING EDGE W/ HARDWARE (INCLUDES 19 AND 20) |
| 6 | 1002013 | 1002013 | 2 | SLEEVE, .89 x 1.44 x 2.19 |
| 7 | 1005338 | 1005338 | A/R | BENT PIN .62 X 3.0 (INCLUDES SAFETY PIN ITEM 15) |
| 8 | SU105 | SU105 | 2 | HITCH PIN (FOR REPAIR USE CAT 1 DRAWBAR PIN W/LYNCH PIN ITEM 18) |
| 9 | 1002018 | 1002018 | 2 | SLEEVE, CAT 1 QUICK HITCH |
| 10 | 1026530 | 1026530 | 1 | MANUAL TUBE (OPTIONAL) |
| 15 | 2688 | 2688 | * | SAFETY PIN, 5/32 |
| 16 | 71632 | 71632 | * | BOLT, WHIZ HEX .312-18 X 1 (OPTIONAL) |
| 17 | 14139 | 14139 | * | NUT, HFN 5/16 NC, LOCK, GR G (OPTIONAL) |
| 18 | 27542 | 27542 | * | PIN, KLIK HT 7/16 X 11/32 |
| 19 | 26920 | 26920 | * | BOLT PLOW 5/8 NC X 1-3/4 |
| 20 | 6239 | 6239 | * | NUT, LOCK, 5/8 NC |
| 21 | 37863 | 37863 | * | HHCS, M16 X 2.0 X 50 CLASS 8.8 |
| 22 | 57817 | 57817 | * | WASHER, 5/8 SAE FLAT HRDN |
| 23 | 1008146 | 1008146 | * | NUT, LOCK, 16MM |
| 24 | ---- | ---- | * | HHCS, M20 X 2.5 X 110 CLASS 8.8 |
| 25 | ---- | ---- | * | WASHER, FLAT 20MM |
| 26 | ---- | ---- | * | NUT, LOCK, 20MM |
| NS | W72478 | W72478 | 1 | DECAL, MODEL, WOODS ORANGE 1.52 X 8.00 |
| NS | 642651 | 642652 | 1 | DECAL, MODEL BSXX.30 |
| NS | 642836 | 642837 | 1 | DECAL, MODEL, BSXX.30 FOR MASSEY FERGUSON |

* STANDARD HARDWARE, OBTAIN LOCALLY

A/R AS REQUIRED

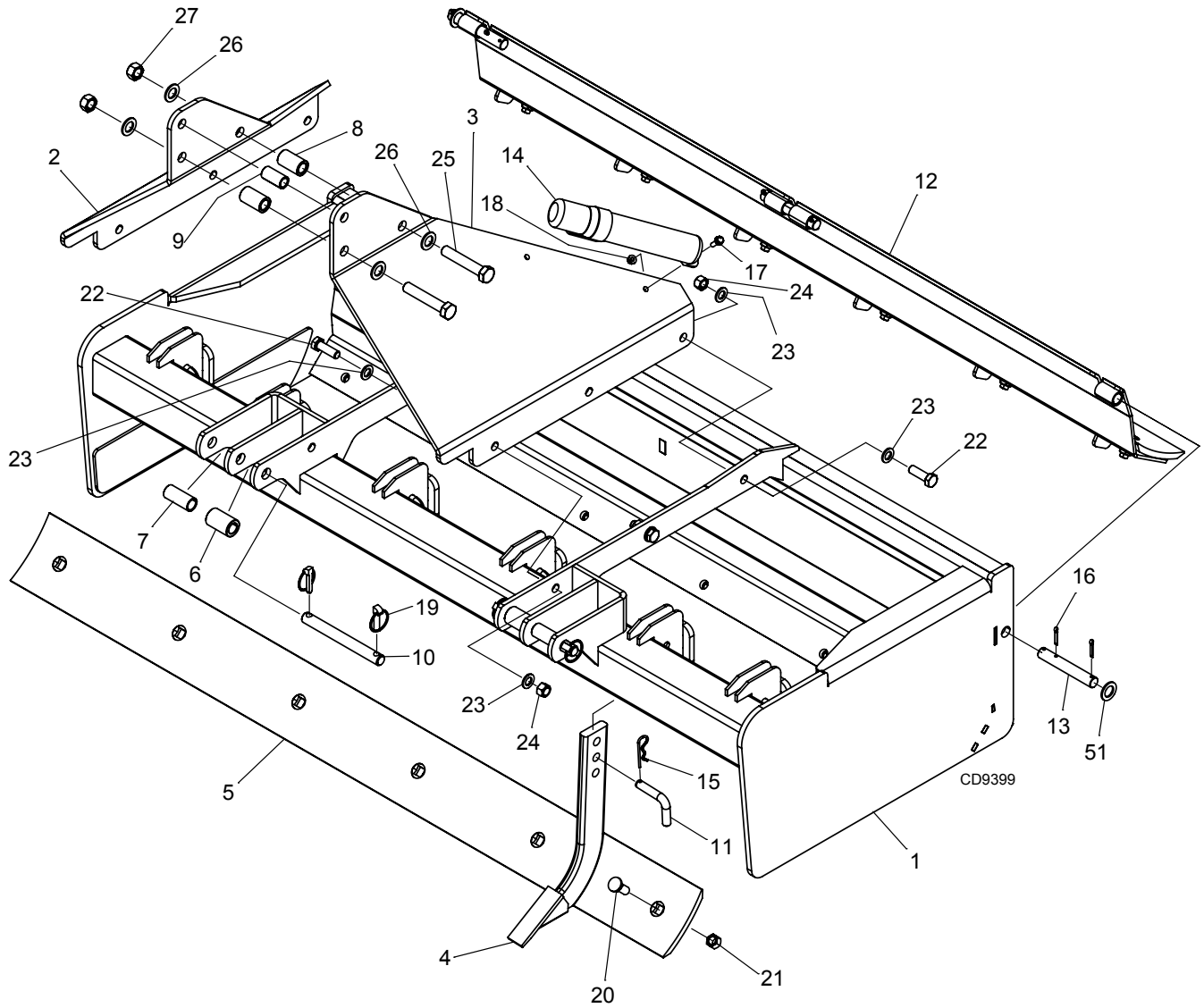
NS NOT SHOWN

NSS NOT SOLD SEPERATLY

HHCS Hex Head Cap Screw

NOTE: For safety decals, see pages 8 and 9.
Order decals separately.

BS72.40, BS84.40



24 Parts

MAN1377
(05/10/2024)

BS72.40, BS84.40 PARTS LIST

| REF | BS72.40 | BS84.40 | QTY | DESCRIPTION |
|-----|---------|---------|-----|---|
| 1 | NSS | NSS | 1 | SCRAPER FRAME |
| 2 | 645134 | 645134 | 1 | PLATE, MAST RT BSXX.40 |
| 3 | 645135 | 645135 | 1 | PLATE, MAST LT BSXX.40 W/ DECAL |
| 4 | 1035770 | 1035770 | A/R | SCARIFIER, SHANK AND TIP |
| 5 | 645158 | 645159 | 2 | CUTTING EDGE W/ HARDWARE (INCLUDES 20 AND 21) |
| 6 | 1002013 | 1002013 | 2 | SLEEVE, QUICK HITCH (.89 x 1.44 x 2.19) |
| 7 | 56598 | 56598 | 2 | SLEEVE, CAT 2 (.89 X 1.12 X 2.62) |
| 8 | 1002018 | 1002018 | 2 | SLEEVE, QUICK HITCH (.81 X 1.25 X 2.12) |
| 9 | 30067 | 30067 | 1 | SLEEVE, CAT 2 (.77 X 1.00 X 1.69) |
| 10 | HBL233 | HBL233 | 2 | HITCH PIN (.875 X 6.94) |
| 11 | 1005338 | 1005338 | A/R | BENT PIN .62 X 3.0 (INCLUDES SAFETY PIN ITEM 15) |
| 12 | 645146 | 645147 | 1 | TAILGATE, BSXX.40 |
| 13 | 645148 | 645148 | 3 | PIN, DRL, .866 X 5.71 |
| 14 | 1026530 | 1026530 | 1 | MANUAL TUBE (OPTIONAL) |
| 15 | 2688 | 2688 | * | SAFETY PIN, 5/32 |
| 16 | 1266 | 1266 | * | PIN, COTTER 3/16 X 1-1/2 |
| 17 | 71632 | 71632 | * | BOLT, WHIZ HEX .312-18 X 1 (OPTIONAL) |
| 18 | 14139 | 14139 | * | NUT, HFN 5/16 NC, LOCK, GR G (OPTIONAL) |
| 19 | 27542 | 27542 | * | PIN, KLIK HT 7/16 X 11/32 |
| 20 | 26920 | 26920 | * | BOLT PLOW 5/8 NC X 1-3/4 |
| 21 | 6239 | 6239 | * | NUT, LOCK, 5/8 NC |
| 22 | 37863 | 37863 | * | HHCS, M16 X 2.0 X 50 CLASS 8.8 |
| 23 | 57817 | 57817 | * | WASHER, 5/8 SAE FLAT HRDN |
| 24 | 1008146 | 1008146 | * | NUT, LOCK, NUT 16MM |
| 25 | ---- | ---- | * | HHCS, M20 X 2.5 X 110 CLASS 8.8 |
| 26 | ---- | ---- | * | WASHER, FLAT 20MM |
| 27 | ---- | ---- | * | NUT, LOCK, NUT 20MM |
| NS | W72478 | W72478 | 1 | DECAL, MODEL, WOODS ORANGE 1.52 X 8.00 |
| NS | 642653 | 642654 | 1 | DECAL, MODEL BSXX.40 |
| NS | 642838 | 642839 | 1 | DECAL, MODEL, BSXX.40 FOR MASSEY FERGUSON |

* STANDARD HARDWARE, OBTAIN LOCALLY

A/R AS REQUIRED

NS NOT SHOWN

NSS NOT SOLD SEPERATLY

HHCS Hex Head Cap Screw

NOTE: For safety decals, see pages 8 and 9.
Order decals separately.

BOLT TORQUE CHART

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

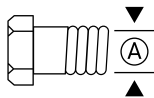
Fasteners must always be replaced with the same grade as specified in the manual parts list.

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



SAE Grade 2
(No Dashes)



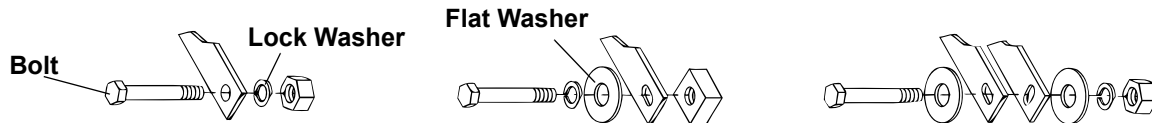
SAE Grade 5
(3 Radial Dashes)



SAE Grade 8
(6 Radial Dashes)

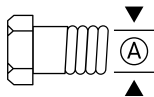
| Ⓐ | Wrench Size | Marking on Head | | | | | |
|-------|-------------|-----------------|-----|--------|-----|--------|------|
| | | SAE 2 | | SAE 5 | | SAE 8 | |
| | | lbs-ft | N-m | lbs-ft | N-m | lbs-ft | N-m |
| 1/4" | 7/16" | 6 | 8 | 10 | 13 | 14 | 18 |
| 5/16" | 1/2" | 12 | 17 | 19 | 26 | 27 | 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 |

TYPICAL WASHER INSTALLATIONS



METRIC SERIES TORQUE CHART

Metric Bolt Head Identification



Metric
Grade 8.8



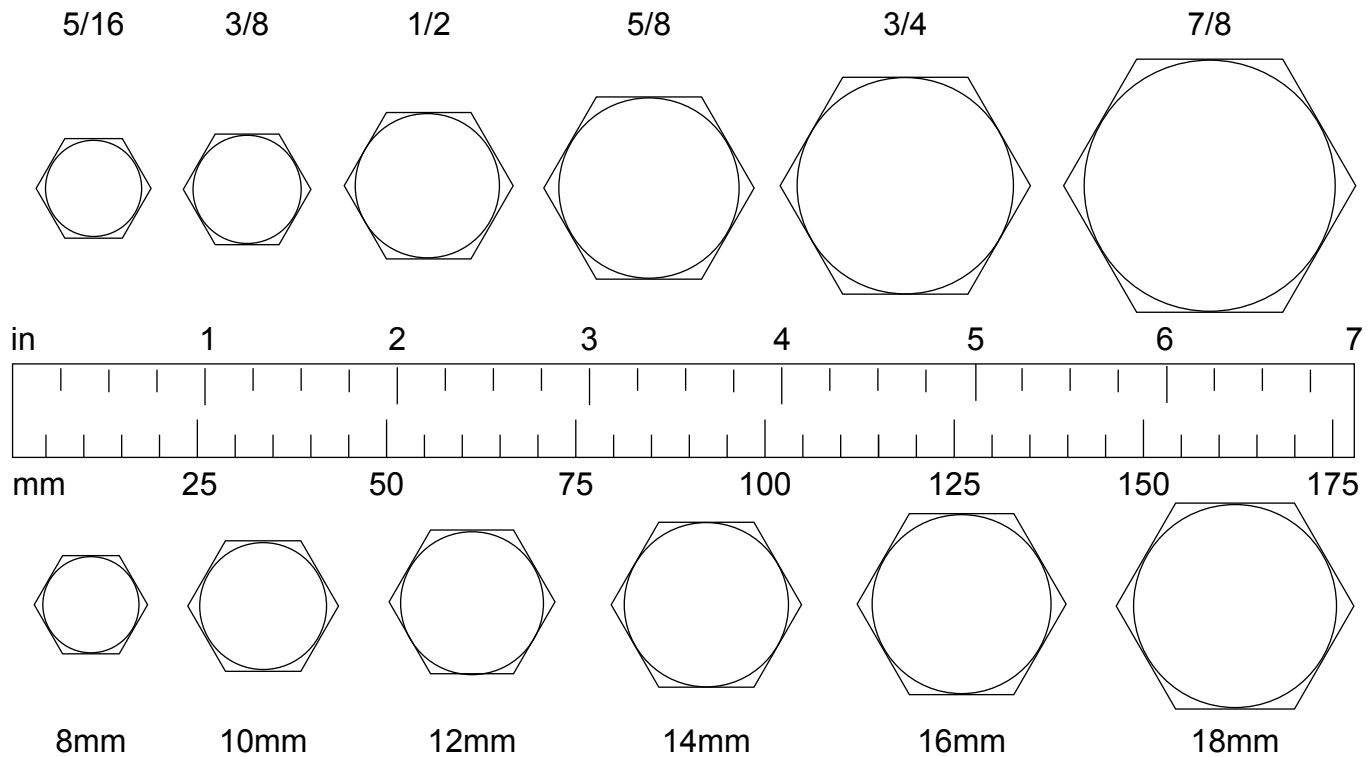
Metric
Grade 10.9

| Ⓐ | Wrench Size | Marking on Head | | | | | | | | Ⓐ |
|---------------------------------------|-------------|-----------------|--------|-------------|--------|-------------|--------|-------------|--------|---------------------------------------|
| | | Coarse Thread | | | | Fine Thread | | | | |
| | | Metric 8.8 | | Metric 10.9 | | Metric 8.8 | | Metric 10.9 | | |
| Diameter & Thread Pitch (Millimeters) | | N-m | lbs-ft | N-m | lbs-ft | N-m | lbs-ft | N-m | lbs-ft | Diameter & Thread Pitch (Millimeters) |
| 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 |

BOLT SIZE CHART

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

SAE BOLT THREAD SIZES



METRIC BOLT THREAD SIZES

ABBREVIATIONS

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

PART NO.
MAN1377

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