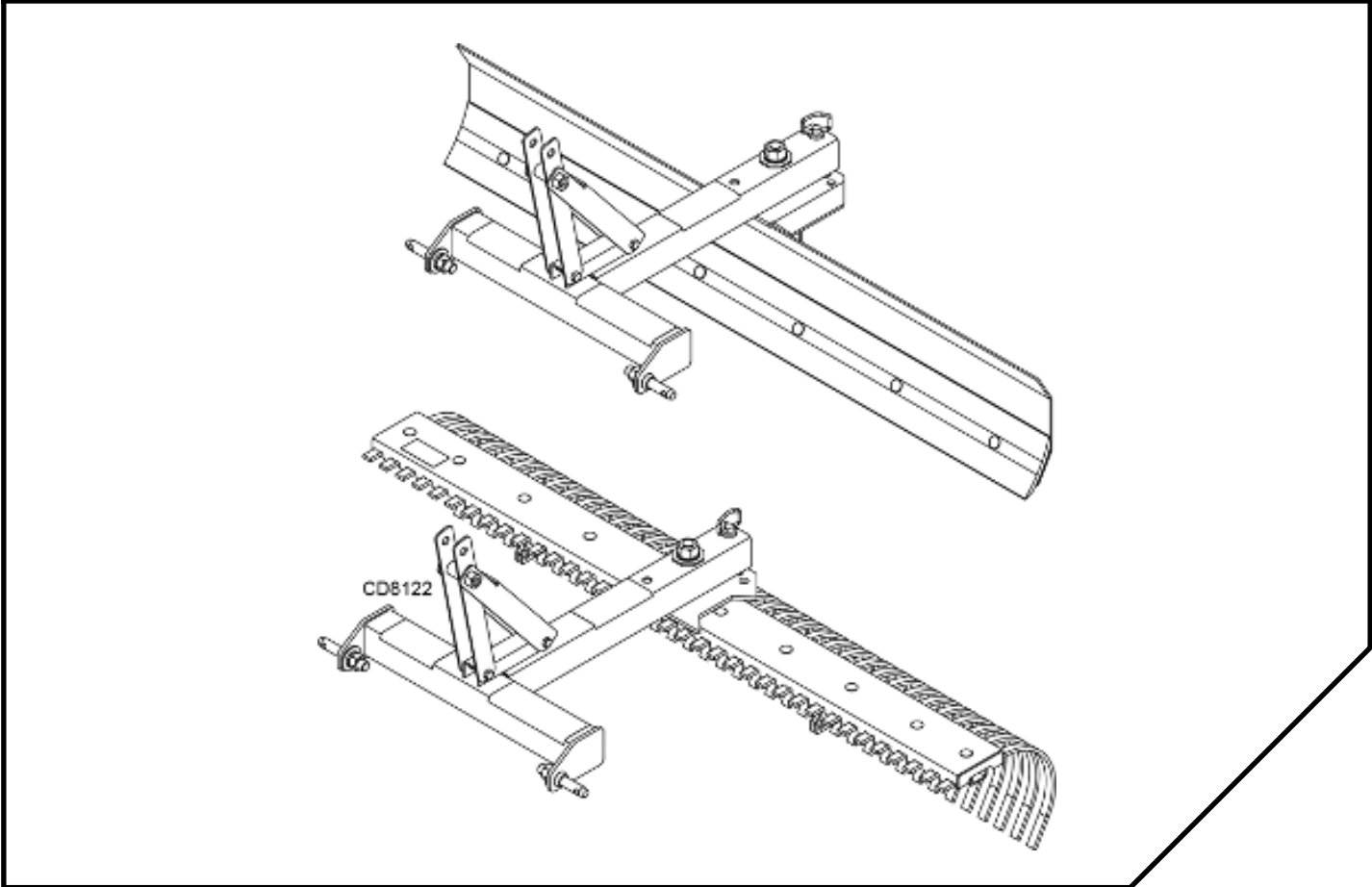




Original Instruction Manual

# REAR BLADE AND LANDSCAPE RAKE

Models 600RB, 720RB, 600LR and 720LR



# Introduction



Read this manual before operating your Oregon 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 OregonProducts.com, or in the United States and Canada call 1-800-525-8322.



**¡LEA EL INSTRUCTIVO! SI NO LEE INGLÉS PIDA AYUDA A ALGUIEN QUE SI LO LEE PARA QUE LE TRADUSCA LAS MEDIDAS DE SEGURIDAD.**

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.

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

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

Use only genuine Oregon 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:

Serial Number Label Location: See Safety Decal Section

Record the information below for future reference.

Model No \_\_\_\_\_

Date of Purchase \_\_\_\_\_

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

Place of Purchase \_\_\_\_\_

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

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# Explanation of Signal Words

This section contains safety information for the Oregon Oregon Rear Blade and Landscape Rake. Throughout this manual, the terms **DANGER**, **WARNING**, and **CAUTION** 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. The term **NOTICE** is used to indicate that failure to observe can cause damage to equipment.



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 hazard with a high level of risk which, if not avoided, will result in death or serious injury.



Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.



Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

**NOTICE**

Indicates a potential situation exists which, if not avoided, may result in damage to your equipment or property.

**NOTE**

Indicates helpful information.

## Specifications

Models	OR60RB-1, OR72RB-1	OR60LR-1, OR72LR-1
Unit Weight (Pounds)	134, 142, 156	156, 168, 186
Horse Power	30 HP Max	30 HP Max
Working Width	59", 71"	60", 72"
Hitch Category	Cat 0/Limited Cat 1/Cat 1	Cat 0/Limited Cat 1/ Cat 1
Angle Adjustments - Increments	Forward - 5 @ 30° / Rearward - 5 @ 30°	
Moldboard Height	13"	NA
Moldboard Thickness	3/16"	NA
Tine Dimensions	NA	5/16" x 1"
Tine Spacing	NA	1"
Tine Beam Dimensions	NA	1.50" x 5.75"
Options	Skid Shoes Parking Stand	Gauge Wheels Parking Stand

## General Information

### WARNING

**Some illustrations in this manual show the equipment with safety shields removed to provide a better view. This equipment should never be operated with any necessary safety shielding removed.**

The purpose of this manual is to assist you in operating and maintaining your 3-point equipment. 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 but, 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 equipment, facing the direction of the 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, judgment, 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 [OregonProducts.com](http://OregonProducts.com), or in the United States and Canada call 1-800-525-8322.) 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 systems in "locked up" position at all times.**
- **Remove accumulated debris from this equipment, power unit, and engine to avoid fire hazard.**
- **Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)**
- **Make sure shields and guards are properly installed and in good condition. Replace if damaged.**
- **A minimum 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, front tractor wheels could raise up resulting in loss of steering. The weight may be attained with front wheel weights, ballast in tires, front tractor weights or front loader. Weigh the tractor and equipment. Do not estimate.**
- **Inspect and clear area of stones, branches, or other hard objects that might be thrown, causing injury or damage.**

## Operation

- Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing equipment.
- Keep bystanders away from equipment.
- Do not operate equipment while under the influence of alcohol or drugs.
- Operate only in daylight or good artificial light.
- Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Always comply with all state and local lighting and marking requirements.
- Never allow riders on power unit or attachment.
- Power unit must be equipped with ROPS or ROPS cab and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS systems in “locked up” position at all times.
- Always sit in power unit seat when operating controls or starting engine. Securely fasten seat belt, place transmission in neutral, engage brake, and ensure all other controls are disengaged before starting power unit engine.
- Look down and to the rear and make sure area is clear before traveling 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.
- 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.
- Refer to the tractor manual for starting, operation of the tractor PTO, and how to shut off in case of emergency.

## 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 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.**
- **Do not modify or alter or permit anyone else to modify or alter the equipment or any of its components in any way.**
- **Your dealer can supply original equipment hydraulic accessories and repair parts. Substitute parts may not meet original equipment specifications and may be dangerous.**
- **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.**
- **Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing equipment.**
- **Make sure attachment is properly secured, adjusted, and in good operating condition.**
- **Never perform service or maintenance with engine running.**
- **Keep all persons away from operator control area while performing adjustments, service, or maintenance.**
- **Tighten all bolts, nuts, and screws to torque chart specifications.**
- **Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)**
- **If shields are provided, make sure shields and guards are properly installed and in good condition. Replace if damaged.**
- **Use a suitable lifting device of sufficient capacity. Use adequate personnel to handle heavy components.**

## Storage

- **Follow manual instructions for storage.**
- **Keep children and bystanders away from storage area.**

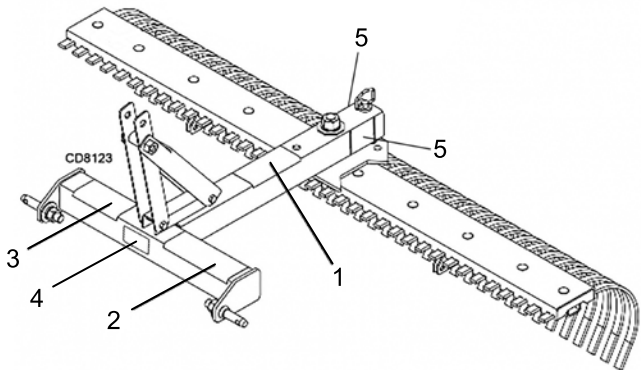
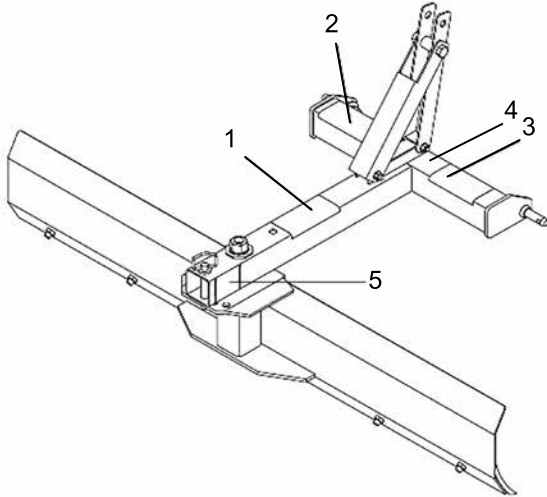


# Safety & Instructional Decals



**ATTENTION! Become alert! Your safety is involved!**

Replace immediately if damaged!



1 - PN 1002941

2 - PN 1004299

3 - PN 1004250

4 - PN 1033176

**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.

1002941-A

**WARNING**

**FALLING OFF CAN 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 CAN RESULT IN SERIOUS INJURY OR DEATH.**

1004299

**WARNING**

**TO AVOID SERIOUS INJURY OR DEATH:**

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

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

1004250

MODEL # XXXXXX  
SERIAL # XXXXXX

OREGON TOOL, INC. PORTLAND, OREGON 97222 USA

5 - PN 1006885

**WARNING**

**PINCH POINT**  
Keep hands clear.

1006885

**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 Oregon dealer. To locate your nearest dealer, check the Dealer Locator at [OregonProducts.com](http://OregonProducts.com), or in the United States and Canada call 1-800-525-8322.**
- **Apply replacement decals to clean dry surface. See page 9 for decals location. Use even pressure to remove any bubbles from beneath the decal.**

# Operation

The operator is responsible for the safe operation of the Rear Blade and Landscape Rake. The operator must be properly trained. Operator should be familiar with the tractor, the Rear Blade and Landscape Rake, and all safety practices before starting operation. Read the safety rules and safety decals on page 6 through page 10.

This equipment is designed for a wide range of applications. The blade may be used for scraping, leveling, grading and backfilling. The rake may be used for loosening, leveling and clearing soil of debris.

The blade or rake may be angled to windrow debris to the side for removal.

## **! WARNING**

- **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 OregonProducts.com, or in the United States and Canada call 1-800-525-8322.) Failure to follow instructions or safety rules can result in serious injury or death.**
- **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.**
- **Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing equipment.**
- **Never allow children or untrained persons to operate equipment.**
- **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.**

- **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.**
- **Make sure attachment is properly secured, adjusted, and in good operating condition.**
- **Read and understand this manual and tractor operator's manuals before operating the unit. Failure to do so may result in death, serious personal injury or property damage.**
- **Shut off the engine, set brake, remove key and remove seat belt. Dismount the tractor.**
- **A minimum 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, front tractor wheels could raise up resulting in loss of steering. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment. Do not estimate.**

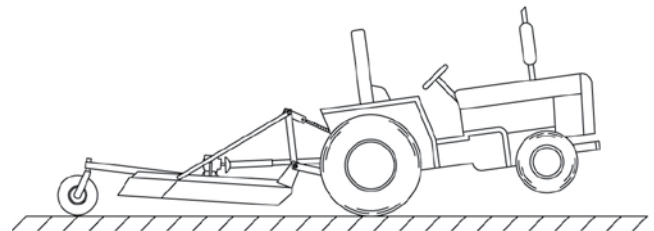


Figure 1. Tractor Stability (Typical)

## Attaching the Rear Blade and Landscape Rake to the Tractor

1. This rake or blade should be mounted on tractors with a maximum drawbar rating of 30 engine hp, not to exceed 2400 lb.
2. Adjust or remove tractor drawbar to eliminate interference with blade or rake.

### Category 1

1. Place tractor 3-point lower lift arms over outer hitch pins.
2. Secure with klik pin (not provided) as shown in Figure 2.
3. Connect tractor top link by inserting tractor clevis pin into top hitch point on rear blade frame assembly and secure (Figure 2).



**Figure 2.** Lower Lift Arm Attachment and Top Link Connection, Category 1

### Quick Hitch (Category 1 Only)

The RBS and LRS will attach to a Category 1 quick hitch.

An optional parking stand is available for use with a quick hitch.

1. Use Bushing Kit 1023725 when using a quick coupler.
2. Place bushings over mounting pin and secure into position with roll pin.
3. Align quick hitch with mounting pins and second hole from top on rear blade frame assembly.

## Operating Procedure

### **⚠ WARNING**

- **Read and understand this manual and tractor operator's manuals before operating the unit. Failure to do so may result in death, serious personal injury or property damage.**
- **Shut off the engine, set brake, remove key and remove seat belt. Dismount the tractor.**

## Rear Blade and Landscape Rake Operations

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

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

When using the rake tool, you may need to adjust the tail wheels after adjusting pitch to maintain the desired working depth.

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

### Reversing (Blade or Rake)

For most tractors, the blade or rake may be rotated 360 degrees without unhooking from the tractor. To rotate without unhooking, pull hitch pin assembly.

Rotate to desired position; replace hitch pin assembly.

### Angling (Blade or Rake)

Remove hitch pin assembly.

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

### Backfilling

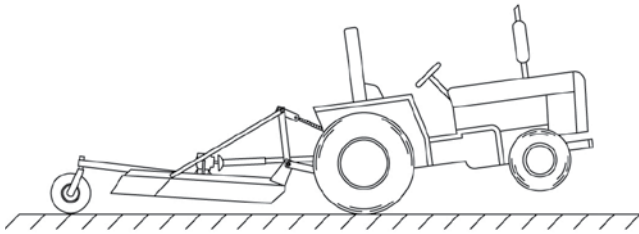
Reverse blade for backfilling ditches or trenches (see Reversing).

The rake may also be used in light backfilling applications.

## Transportation

### **⚠ WARNING**

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



**Figure 3.** Tractor Stability (Typical)

1. Raise the tractor 3-point arms to bring the implement into transport position.
2. Choose a travel speed slow enough so operator stays in full control of the tractor and implement.

## Storage

### **⚠ WARNING**

**Keep children and bystanders away from storage area.**

1. Choose a dry, level location away from children and traffic for storage.
2. If your implement is not equipped with a jack stand, use a block to position hitch of implement off the ground.

## Pre-Operation Check List

### **(Owner's Responsibility)**

- Review and follow all safety rules and safety decal instructions on page 6 through page 10.
- Check that all safety decals are installed and in good condition. Replace if damaged.
- Check that all shields and guards are properly installed and in good condition. Replace if damaged.
- Check that all hardware is properly installed and secured.
- Check that equipment is properly and securely attached to tractor.
- Do not allow riders.
- Keep all bystanders away from equipment working area.
- Make sure tractor ROPS or ROPS CAB and seat belt are in good condition. Keep seat belt securely fastened during operation.
- Check the condition of the point. Replace the point if broken or excessively worn.

## 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

- **Keep all persons away from operator control area while performing adjustments, service, or maintenance.**
- **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.)**
- **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.**
- **Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing equipment.**
- **Never perform service or maintenance with engine running.**
- **Do not modify or alter or permit anyone else to modify or alter the equipment or any of its components in any way.**

- **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.**
- **Regular preventive maintenance and immediate repair of broken or worn parts will ensure maximum efficiency and long life.**

### CAUTION

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

## Replacing Blade Cutting Edge

### Remove Cutting Edge

1. Remove plow bolts (3), and hex lock nuts (4).
2. Remove cutting edge (2) from moldboard (1) and replace with new cutting edge. Re-install hardware previously removed.

### Reverse Cutting Edge

1. Remove plow bolts (3), and hex lock nuts (4).
2. Remove cutting edge (2) from moldboard and reverse cutting edge with sharp edge down. Re-install hardware previously removed.

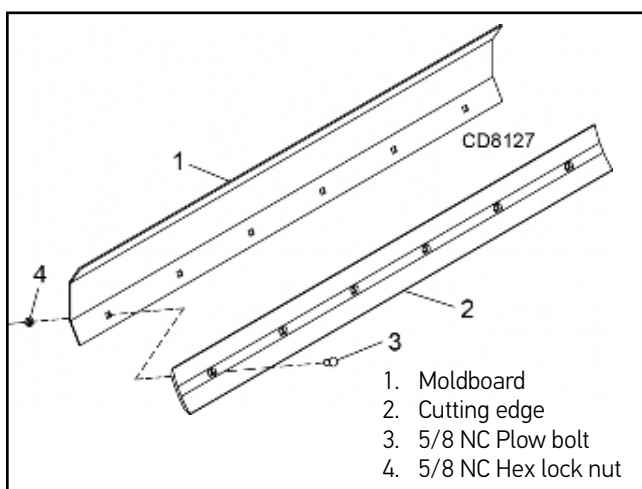


Figure 4. Cutting Edge Replacement

## Rake Tine Replacement

**NOTE:** Tines should be replaced when they cannot be reformed to their original configuration.

**NOTE:** Tine clamp channel (3) does not need to be completely removed to remove tines.

1. Loosen carriage bolts (4) and flange lock nuts (5) holding tine beam (2) and tine clamp channel (3) together. It is not necessary to completely remove hardware. Remove old tine.
2. Inset new tine, hole end first, into slot in rear of tine beam (2) and assemble hole in tine onto nub in front of tine channel. Tighten carriage bolts (4) and flange lock nuts (5).

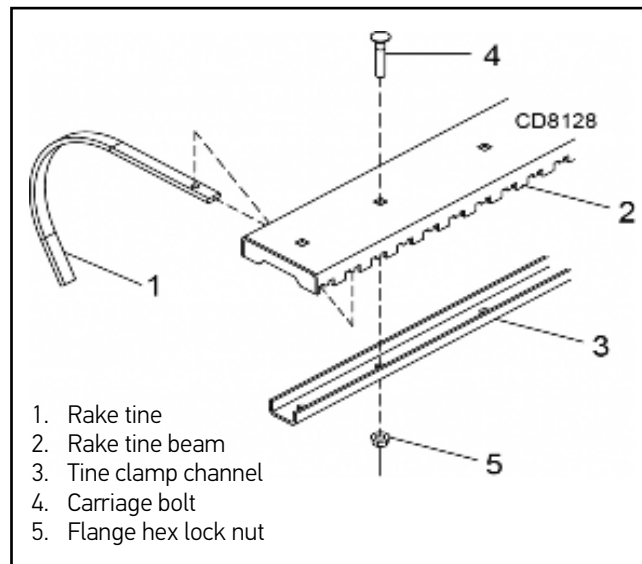


Figure 5. Rake Tine Replacement

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

# Assembly Instructions

## Dealer Set-Up Instructions

Assembly of this Rear Blade/Landscape Rake is the responsibility of the Oregon dealer. It should be delivered to the owner completely assembled, lubricated and adjusted for normal cutting conditions.

The Rear Blade/Landscape Rake 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 20.

### **WARNING**

- **Before dismounting power unit or performing any service or maintenance, follow these steps: disengage power to equipment, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, set parking brake, stop engine, remove key, and unfasten seat belt.**
- **Never go underneath equipment. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak-down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.**
- **Service work does not require going underneath 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.**

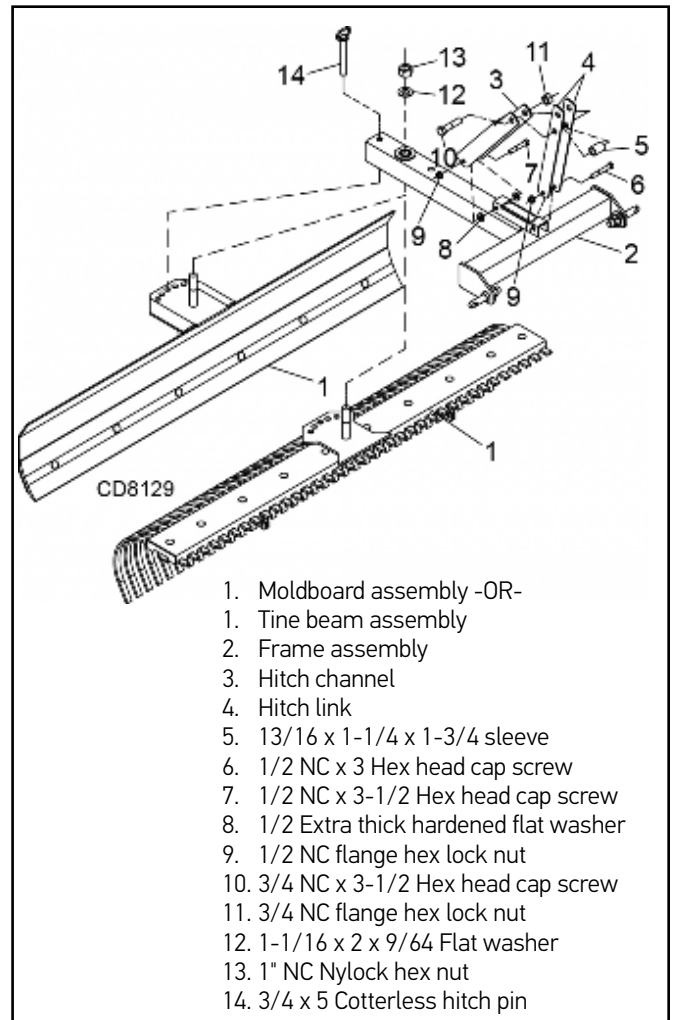
### **CAUTION**

**Always wear relatively tight and belted clothing to avoid entanglement 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.**

## Blade and Rake Assembly

### **Blade and Rake Assembly (Standard)**

1. Assemble frame assembly onto threaded stud on moldboard or tine beam assembly and secure with flat washer (12) and nylock nut (13).
2. Remove hitch channel (3) from frame assembly. Reassemble channel to frame with 1/2 NC x 3-1/2 hex cap screw (7) and 1/2 NC flange lock nut (9).
3. Assemble top holes of hitch channel to middle hole of hitch links (4) using 3/4 NC x 3-1/2 hex cap screw (10) and 3/4 NC flange lock nut (11). Assemble sleeve (5) between hitch links.
4. Install 3/4 x 5 hitch pin (14) through hole in frame assembly and into desired hole in pivot plate of moldboard or tine beam.



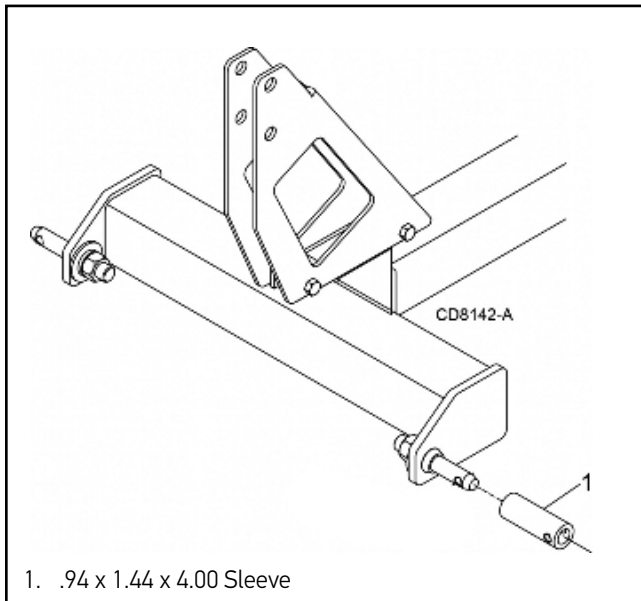
1. Moldboard assembly -OR-
1. Tine beam assembly
2. Frame assembly
3. Hitch channel
4. Hitch link
5. 13/16 x 1-1/4 x 1-3/4 sleeve
6. 1/2 NC x 3 Hex head cap screw
7. 1/2 NC x 3-1/2 Hex head cap screw
8. 1/2 Extra thick hardened flat washer
9. 1/2 NC flange hex lock nut
10. 3/4 NC x 3-1/2 Hex head cap screw
11. 3/4 NC flange hex lock nut
12. 1-1/16 x 2 x 9/64 Flat washer
13. 1" NC Nylock hex nut
14. 3/4 x 5 Cotterless hitch pin

**Figure 6.** Standard Blade and Rake Assembly



## Quick Hitch Bushing Kit (Optional)

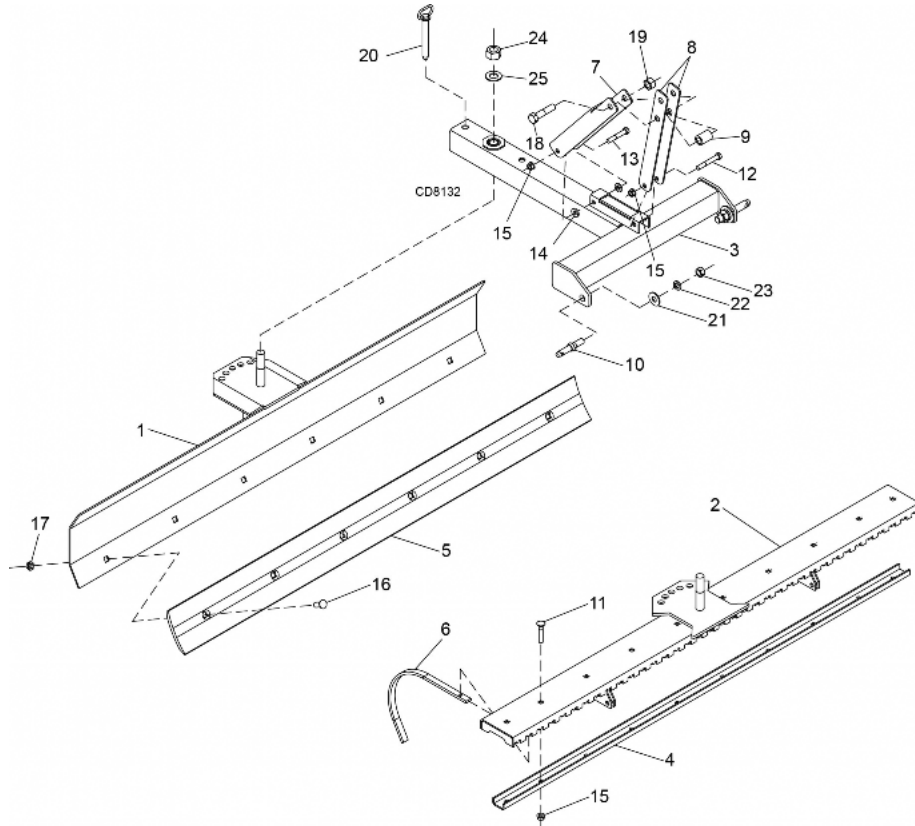
1. Place sleeve (1) over lower 3-point pin. Repeat for opposite side.



**Figure 7.** Quick Hitch Bushing

# Parts Index

## OR60RB-1, OR72RB-1, OR60LR-1, & OR72LR-1 Assembly



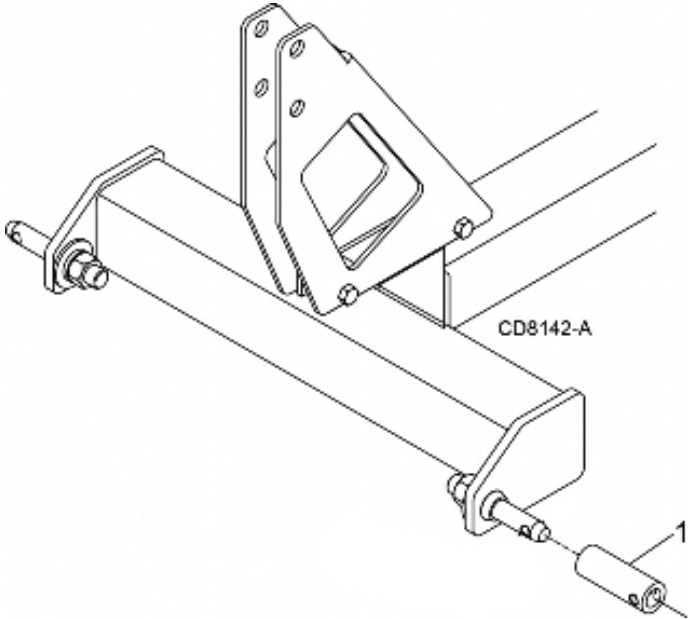
REF	QTY	PART	DESCRIPTION
1	1	NSS	600RB Moldboard
1	1	NSS	720RB Moldboard
3	1	NSS	Hitch frame
5	1	NSS	600RB Cutting edge -OR-
5	1	NSS	720RB Cutting edge
6	A/R	1005370	LRS Rake tine
7	1	NSS	Hitch channel
8	2	NSS	Hitch link
9	1	NSS	Sleeve, .812 x 1.25 x 1.75
10	2	33661RP	Category 1 mounting pin (Includes lock washer 20 & nut 21)
11	A/R	54982*	1/2 NC x 2-3/4 Carriage bolt, GR5
12	1	3489*	1/2 NC x 3 HHCS, GR5
13	1	1637*	1/2 NC x 3-1/2 HHCS, GR5
14	2	57811*	1/2 Extra thick hardened flat washer
15	A/R	11900*	1/2 NC Flange hex lock nut
16	A/R	25265*	5/8 NC x 1-1/2 Plow bolt
17	A/R	6239*	5/8 NC Hex lock nut

REF	QTY	PART	DESCRIPTION
18	1	15007*	3/4 NC x 3-1/2 HHCS, GR5
19	1	W302207*	3/4 NC Flange hex lock nut
20	1	1037591*	3/4 x 4-1/8 Hitch pin
21	2	4258*	7/8 Std flat washer
22	2	30008*	7/8 Lockwasher
23	2	30007*	7/8 NF Hex nut
24	1	1035379*	1 NC Nylock hex nut
25	1	1037449*	1.06 x 2 x .14 Hardened flat washer
Not Shown	1	1002941	Warning Decal, Crush Pinch Hazard
Not Shown	1	1004299	Warning Decal, Fall and Crush
Not Shown	1	1004250	Warning Decal, Read Manual
Not Shown	1	630718	Model 720LR Decal

A/R: As Required  
 HHCS: Hex Head Cap Screw  
 NSS: Not Sold Separately  
 \* Standard Hardware, Obtain Locally

38214 Category 1 Quick Hitch Bushing Kit (Optional)

REF	QTY	PART	DESCRIPTION
1	2	38214	Category 1 quick hitch bushing



# Bolt Torque Chart

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

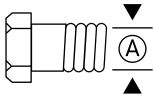
Fasteners must always be replaced with the same grade as specified in the manual parts list.

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)

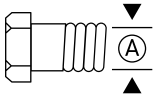


SAE Grade 8  
(6 Radial Dashes)

Ⓐ	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



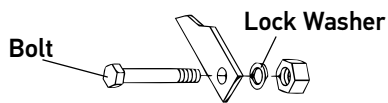
Metric  
Grade 8.8



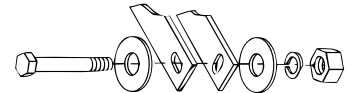
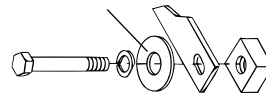
Metric  
Grade 10.9

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

**Typical Washer Installations**



**Flat Washer**

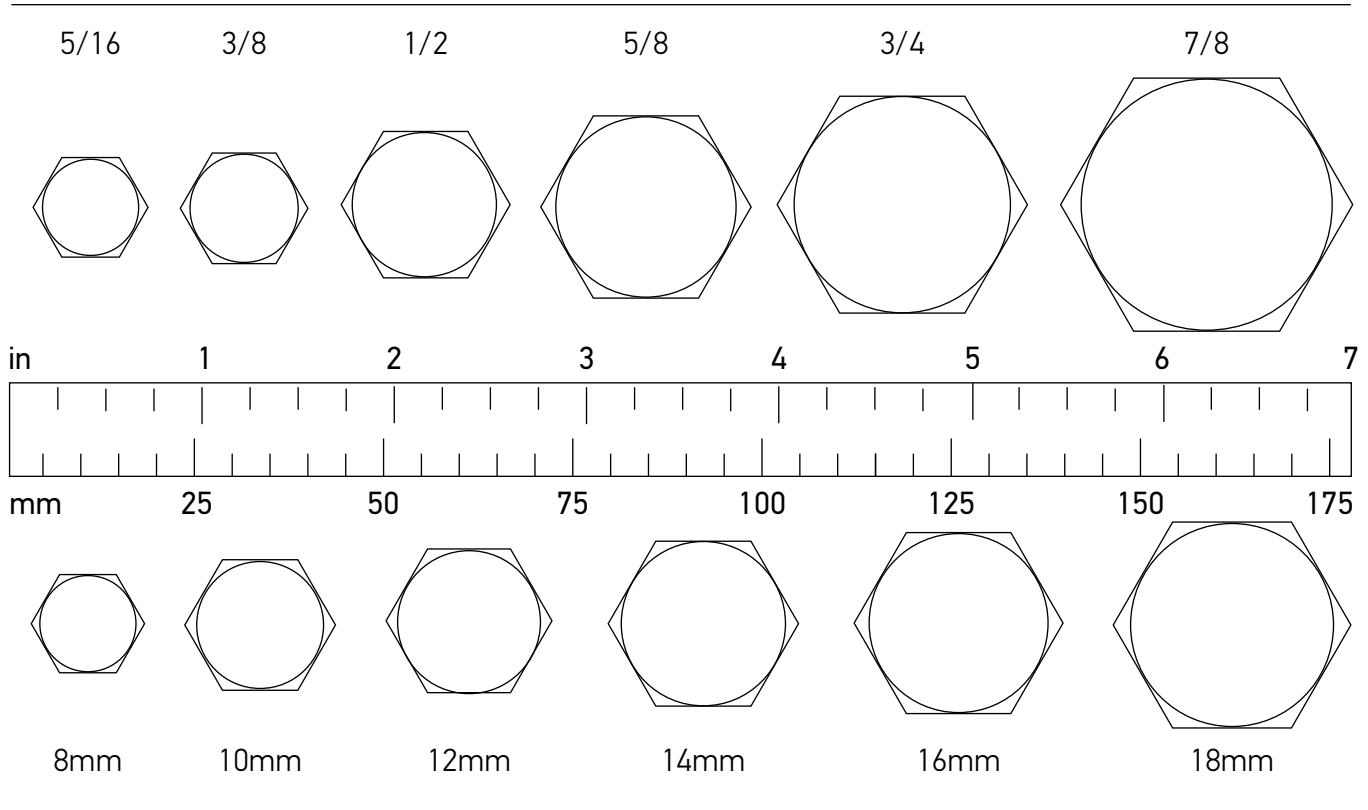


# Bolt Size Chart

**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
ASABE	American Society of Agricultural & Biological Engineers (formerly ASAE)
ASAE	American Society of Agricultural Engineers
ATF	Automatic Transmission Fluid
BSPP	British Standard Pipe Parallel
BSPTM	British Standard Pipe Tapered Male
CV	Constant Velocity
CCW	Counter-Clockwise
CW	Clockwise
F	Female
FT	Full Thread
GA	Gauge
GR (5, etc.)	Grade (5, etc.)

HHCS	Hex Head Cap Screw
HT	Heat-Treated
JIC	Joint Industry Council 37° Degree Flare
LH	Left Hand
LT	Left
m	Meter
mm	Millimeter
M	Male
MPa	Mega Pascal
N	Newton
NC	National Coarse
NF	National Fine
NPSM	National Pipe Straight Mechanical
NPT	National Pipe Tapered
NPT SWF	National Pipe Tapered Swivel Female

ORBM	O-Ring Boss - Male
P	Pitch
PBY	Power-Beyond
psi	Pounds per Square Inch
PTO	Power Take Off
QD	Quick Disconnect
RH	Right Hand
ROPS	Roll-Over Protective Structure
RPM	Revolutions Per Minute
RT	Right
SAE	Society of Automotive Engineers
UNC.	Unified Coarse
UNF	Unified Fine
UNS	Unified Special

## Limited Warranty

This 3-point implement is guaranteed to be free from defects in material and workmanship for the normal service life of the product not to exceed 12 consecutive months from the date of purchase.

- Oregon will repair or replace at Oregon's sole discretion, free of charge, any part or parts of the 3-point implement that are judged to be defective in material or workmanship during the limited warranty period stated above.

The limited warranty does not cover parts that in the judgement of the manufacturer have been subjected to negligent use, misuse, alteration, accident, disassembled in any way or if repairs have been made by anyone except an authorized Oregon service center. Warranty claims must include the product serial number, model number and proof of purchase. All claims must be submitted through an authorized Oregon service center and within thirty days of the date of failure. All costs associated with transporting the equipment, and or defective part, to the service center are to be paid by the purchaser. Costs resulting from a denied claim are the responsibility of the purchaser. This warranty is not transferable and applies to the original purchaser only.

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Oregon Tool, Inc.  
4909 SE International Way  
Portland, Oregon 97222 USA  
800-525-8322

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