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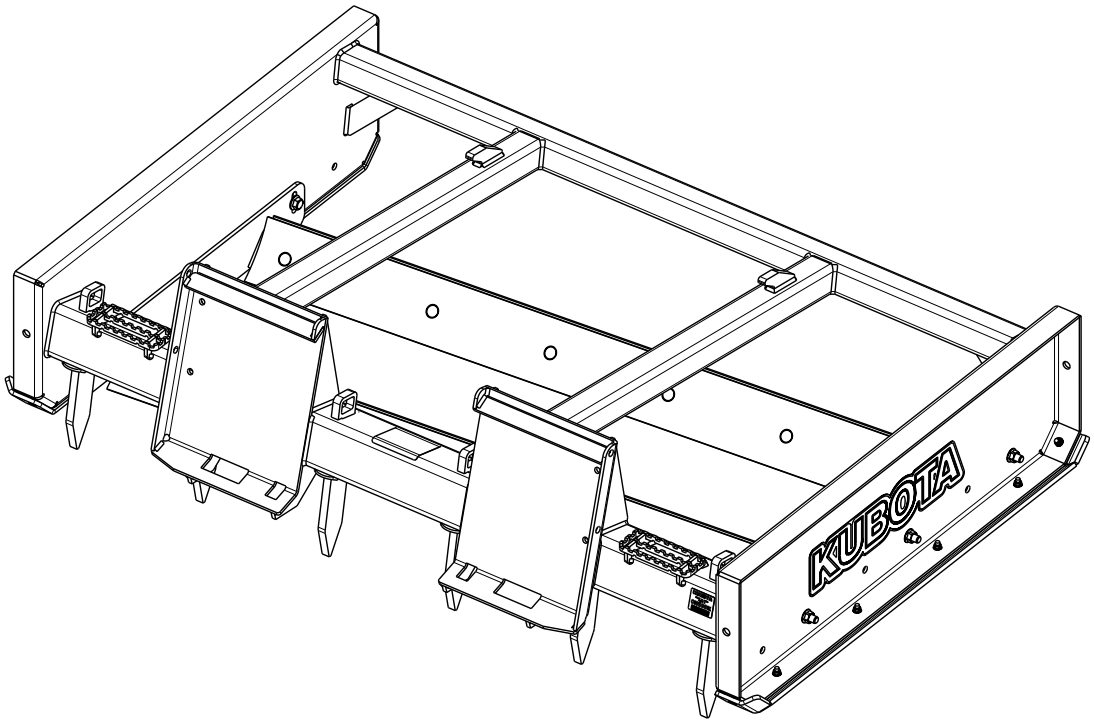
Skid Steer Grader

AP-SG2572 & AP-SG2584



39339

303-458MK
Operator's Manual

Kubota®

Read the Operator's Manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!

Cover photo may show optional equipment not supplied with standard unit.

For an Operator's Manual and Decal Kit in French Language, please see your Kubota dealer.

Printed 5/8/23

Machine Identification

Record your machine details in the log below. If you replace this manual, be sure to transfer this information to the new manual.

If you, or the dealer, have added Options not originally ordered with the machine, or removed Options that were originally ordered, the weights and measurements are no longer accurate for your machine. Update the record by adding the machine weight and measurements provided in the Specifications & Capacities Section of this manual with the Option(s) weight and measurements.

Model Number	
Serial Number	
Machine Height	
Machine Length	
Machine Width	
Machine Weight	
Delivery Date	
First Operation	
Accessories	

Dealer Contact Information

Name: _____

Street: _____

City/State: _____

Telephone: _____

Email: _____

California Proposition 65

WARNING: Cancer and reproductive harm - www.P65Warnings.ca.gov

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Printed in the United States of America.

See previous page for Table of Contents.

Parts Manual QR Locator

The QR (Quick Reference) code on the left will take you to the Parts Manual for this equipment. Download the appropriate app on your smart phone. Scan the QR code and take a picture.

Dealer QR Locator

The QR code on the left will link you to available dealers for Kubota products. Refer to Parts Manual QR Locator on this page for detailed instructions.

Listed below are common practices that may or may not be applicable to the products described in this manual.

Safety at All Times

Careful operation is your best assurance against an accident.

All operators, no matter how much experience they may have, should carefully read this manual and other related manuals before operating the power machine and this attachment.

- ▲ Thoroughly read and understand the “Safety Label” section. Read all instructions noted on them.
- ▲ Do not operate the equipment while under the influence of drugs or alcohol, as they impair your ability to safely and properly operate the equipment.
- ▲ Operator should be familiar with all functions of the tractor/skid steer and attachment and be able to handle emergencies quickly.
- ▲ Make sure all guards and shields appropriate for the operation are in place and secured before operating attachment.
- ▲ Keep all bystanders away from equipment and work area.
- ▲ Start tractor/skid steer from the driver’s seat with steering levers and hydraulic controls in neutral.
- ▲ Operate tractor/skid steer and controls from the driver’s seat only.
- ▲ Never dismount from a moving tractor/skid steer or leave machine unattended with engine running.
- ▲ Do not allow anyone to stand between the attachment and tractor/skid steer while connecting to the attachment.
- ▲ Keep hands, feet, and clothing away from power-driven parts.
- ▲ While transporting and operating equipment, watch out for objects overhead and along the sides such as fences, trees, buildings, wires, etc.
- ▲ Store attachment in an area where children normally do not play. When needed, secure attachment against falling with support blocks.

Look for the Safety Alert Symbol

The SAFETY ALERT SYMBOL indicates there is a potential hazard to personal safety and extra precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. Hazard control, and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.

Be Aware of Signal Words

A signal word designates a degree or level of hazard seriousness. They are:

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

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

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

Be Aware of Special Notices

Special notices are intended to point out important and helpful information that should be followed. They are usually placed inside a box. They are:

IMPORTANT: Indicates that equipment or property damage could result if instructions are not followed.

NOTE: Indicates supplementary explanations that will be helpful when using the equipment.

Safety Precautions for Children

Tragedy can occur if the operator is not alert to the presence of children. Children generally are attracted to attachments and their work.

- ▲ Never assume children will remain where you last saw them.
- ▲ Keep children out of the work area and under the watchful eye of a responsible adult.
- ▲ Be alert and shut the attachment and skid steer/track loader down if children enter the work area.
- ▲ Never carry children on the power machine or attachment. There is not a safe place for them to ride. They may fall off and be run over or interfere with the control of the power machine.
- ▲ Never allow children to operate the power machine, even under adult supervision.
- ▲ Never allow children to play on the power machine or attachment.
- ▲ Use extra caution when backing up. Before the power machine starts to move, look down and behind to make sure the area is clear.

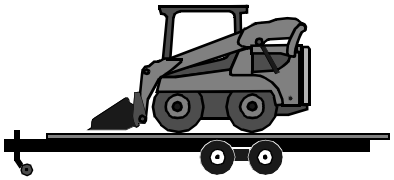
Listed below are common practices that may or may not be applicable to the products described in this manual.

Dig Safe - Avoid Underground Utilities

- ▲ **USA: Call 811**
  CAN: digsafecanada.ca
  Always contact your local utility companies (electrical, telephone, gas, water, sewer, and others) before digging so that they may mark the location of any underground services in the area.
- ▲ Be sure to ask how close you can work to the marks they positioned.

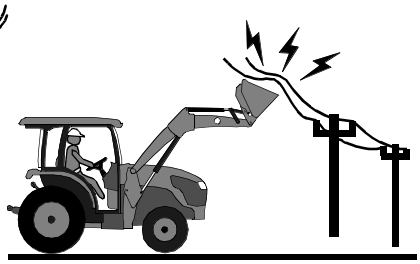
Towing Safely

- ▲ Comply with federal, state, and local laws.
- ▲ Use towing vehicle and trailer of adequate size and capacity. Secure equipment towed on a trailer with chocks, tie downs, and chains.
- ▲ **IMPORTANT:** Do not tow a load that is more than double the weight of the vehicle towing the load.
- ▲ Sudden braking can cause a towed trailer to swerve unexpectedly. Reduce speed if trailer is not equipped with brakes.



Transport Safely

- ▲ Comply with federal, state, and local laws.
- ▲ Avoid contact with any overhead utility lines or electrically charged conductors.
- ▲ Always drive with attachment on the end of the loader arms low to the ground.
- ▲ Follow recommendations in the power machine Operator's Manual when driving uphill or downhill and when parking on an incline.
- ▲ Never travel at a speed which does not allow adequate control of the load, steering, and stopping. Some rough terrains require a slower speed.

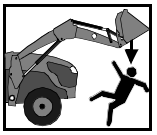


Tire Safety

- ▲ Tire changing can be dangerous and must be performed by trained personnel using the correct tools and equipment.
- ▲ Always properly match the wheel size to the properly sized tire.
- ▲ Always maintain correct tire pressure. Do not inflate tires above recommended pressures shown in the Operator's Manual.
- ▲ When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.
- ▲ Securely support the attachment when changing a wheel.
- ▲ When removing and installing wheels, use wheel handling equipment adequate for the weight involved.
- ▲ Make sure wheel bolts have been tightened to the specified torque.

Practice Safe Maintenance

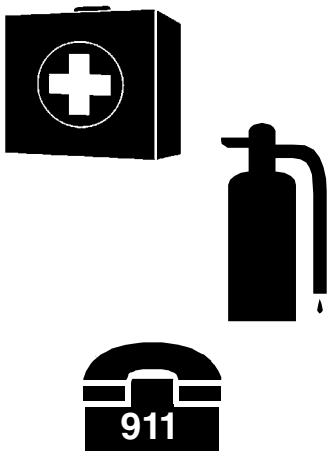
- ▲ Understand procedure before doing work. Refer to the Operator's Manual for additional information.
- ▲ Work on a level surface in a clean dry area that is well-lit.
- ▲ Lower attachment to the ground and follow all shutdown procedures before leaving the operator's seat to perform maintenance.
- ▲ Do not work under any hydraulically supported equipment. It can settle, suddenly leak down, or be lowered accidentally. If it is necessary to work under the equipment, securely support it with stands or suitable blocking beforehand.
- ▲ Use properly grounded electrical outlets and tools.
- ▲ Use correct tools and equipment for the job that are in good condition.
- ▲ Allow equipment to cool before working on it.
- ▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on equipment.
- ▲ Inspect all parts. Make certain that parts are in good condition & installed properly.
- ▲ Replace parts on this attachment with genuine Kubota parts only. Do not alter this attachment in a way which will adversely affect its performance.
- ▲ Do not grease or oil attachment while it is in operation.
- ▲ Remove buildup of grease, oil, or debris.
- ▲ Always make sure any material and waste products from the repair and maintenance of the attachment are properly collected and disposed.
- ▲ Remove all tools and unused parts before operation.



Listed below are common practices that may or may not be applicable to the products described in this manual.

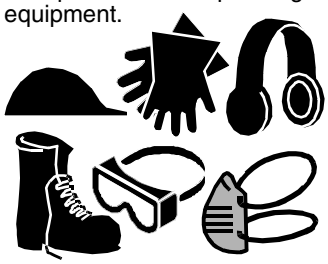
Prepare for Emergencies

- ▲ Be prepared if a fire starts.
- ▲ Keep a first aid kit and fire extinguisher handy.
- ▲ Keep emergency numbers for doctor, ambulance, hospital, and fire department near phone.



Wear Personal Protective Equipment (PPE)

- ▲ Wear protective clothing and equipment appropriate for the job such as safety shoes, safety, glasses, hard hat, dust mask, and ear plugs.
- ▲ Clothing should fit snug without fringes and pull strings to avoid entanglement with moving parts.
- ▲ Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Operating a machine safely requires the operator's full attention. Avoid wearing headphones while operating equipment.

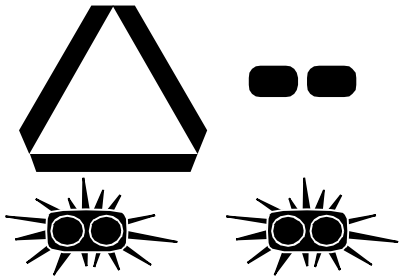


Avoid High Pressure Fluids

- ▲ Escaping fluid under pressure will penetrate the skin or eyes causing serious injury.
- ▲ Relieve all residual pressure before disconnecting hydraulic lines or performing work on the hydraulic system.
- ▲ Make sure all hydraulic fluid connections are properly tightened/torqued and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- ▲ Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- ▲ Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- ▲ **DO NOT DELAY.** If an accident occurs, seek immediate emergency medical care or gangrene may result.

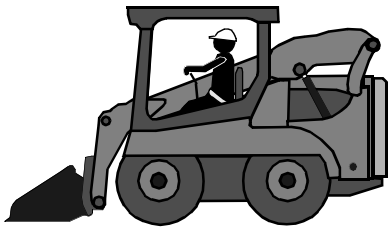
Use Safety Lights and Devices

- ▲ A slow moving power machine can create a hazard when driven on public roads. They are difficult to see, especially at night.
- ▲ Flashing warning lights and turn signals are recommended whenever driving on public roads.
- ▲ For tractors and other agriculture equipment, a Slow Moving Vehicle (SMV) sign is required when traveling on public roads.



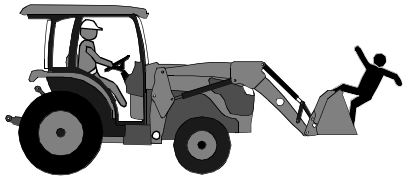
Use Seat Belt and ROPS

- ▲ Land Pride recommends the use of a CAB or roll-over-protective-structures (ROPS) and seat belt in almost all power machines. Combination of a CAB or ROPS and seat belt will reduce the risk of serious injury or death if the power machine should be upset.
- ▲ If ROPS is in the locked-up position, fasten seat belt snugly and securely to help protect against serious injury or death from falling and machine overturn.



Keep Riders Off Machinery

- ▲ Never carry riders on the power machine or attachment.
- ▲ Riders obstruct operator's view and interfere with the control of the power machine.
- ▲ Riders can be struck by objects or thrown from the equipment.
- ▲ Never use the power machine or attachment to lift or transport riders.

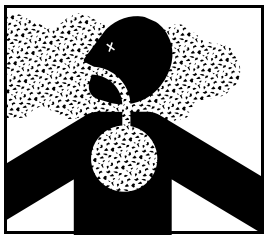


These are common practices that may or may not be applicable to the products described in this manual.

Avoid Crystalline Silica (Quartz) Dust

Because crystalline silica is a basic component of sand and granite, many activities at construction sites produce dust containing crystalline silica. Trenching, sawing, and boring of material containing crystalline silica can produce dust containing crystalline silica particles. This dust can cause serious injury to the lungs (silicosis).

There are guidelines which should be followed if crystalline silica (quartz) is present in the dust.



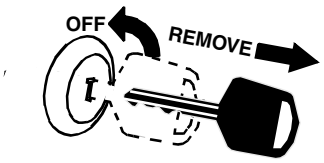
- ▲ Be aware of and follow OSHA (or other local, State, or Federal) guidelines for exposure to airborne crystalline silica.
- ▲ Know the work operations where exposure to crystalline silica may occur.
- ▲ Participate in air monitoring or training programs offered by the employer.
- ▲ Be aware of and use optional equipment controls such as water sprays, local exhaust ventilation, and enclosed cabs with positive pressure air conditioning if the machine has such equipment. Otherwise respirators shall be worn.
- ▲ Where respirators are required, wear a respirator approved for protection against crystalline silica containing dust. Do not alter respirator in any way. Workers who use tight-fitting respirators can not have beards/ mustaches which interfere with the respirator seal to the face.
- ▲ If possible, change into disposable or washable work clothes at the work site; shower and change into clean clothing before leaving the work site.
- ▲ Do not eat, drink, use tobacco products, or apply cosmetics in areas where there is dust containing crystalline silica.
- ▲ Store food, drink, and personal belongings away from the work area.
- ▲ Wash hands and face before eating, drinking, smoking, or applying cosmetics after leaving the exposure area.

Handle Chemicals Properly

- ▲ Protective clothing should be worn.
- ▲ Handle all chemicals with care.
- ▲ Follow instructions on container label.
- ▲ Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil, and property.
- ▲ Inhaling smoke from any type of chemical fire can be a serious health hazard.
- ▲ Store or dispose of unused chemicals as specified by the chemical manufacturer.

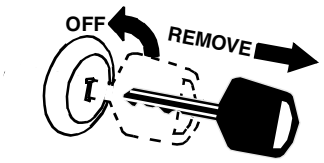
Tractor Shutdown & Storage

- ▲ Reduce engine speed and shut-off all power to the attachment.
- ▲ Park on solid, level ground and lower attachment to ground or onto support blocks.
- ▲ Put tractor in park or set park brake.
- ▲ Turn off engine and remove ignition key to prevent unauthorized starting.
- ▲ Relieve all hydraulic pressures.
- ▲ Wait for all components to stop before leaving operator's seat.
- ▲ Use steps, grab-handles and anti-slip surfaces when stepping on and off the tractor.



Skid Steer Shutdown And Storage

- ▲ Reduce engine speed and shut-off all power to the attachment.
- ▲ Park on solid, level ground and lower attachment until it is flat on the ground or support blocks.
- ▲ Turn off engine. Do not remove ignition key at this time.
- ▲ Turn ignition key to the "RUN" position. Relieve all hydraulic pressure by moving both joysticks.
- ▲ Turn ignition key to Off and remove to prevent unauthorized starting.
- ▲ If included, raise seat bar and move controls until both lock.
- ▲ Wait for all components to stop before leaving operator's seat.
- ▲ Use steps, grab-handles and anti-slip surfaces when stepping on and off the skid steer.



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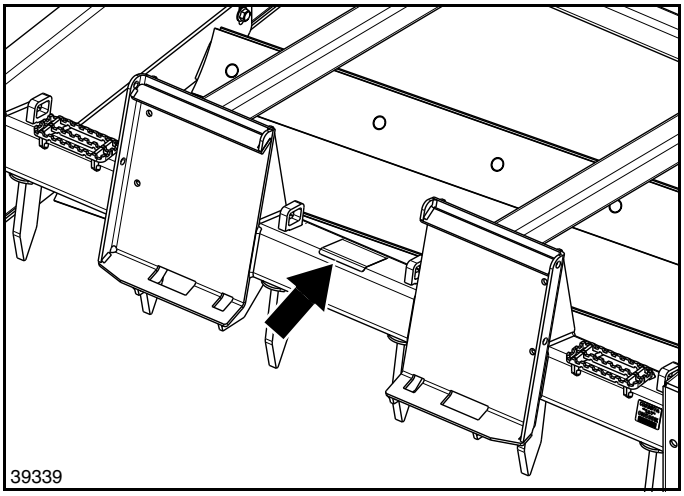
Safety Labels

Your Skid Steer Grader comes equipped with all safety labels in place. They are designed to help you safely operate your attachment. Read and follow their directions.

1. *Keep all safety labels clean and legible.*
2. *Refer to this section for proper label placement. Replace all damaged or missing labels. Order new labels from your nearest Kubota dealer. To find your nearest dealer, visit our dealer locator at www.landpride.com.*
3. *Some new equipment installed during repair requires safety labels to be affixed to the replaced component as specified by Kubota. When ordering new components make sure the correct safety labels are included in the request.*
4. *Refer to this section for proper label placement. To install new labels:*
   a. *Clean surface area where label is to be placed.*
   b. *Spray soapy water onto the cleaned area.*
   c. *Peel backing from label and press label firmly onto the surface.*
   d. *Squeeze out air bubbles with edge of a credit card or with a similar type of straight edge.*



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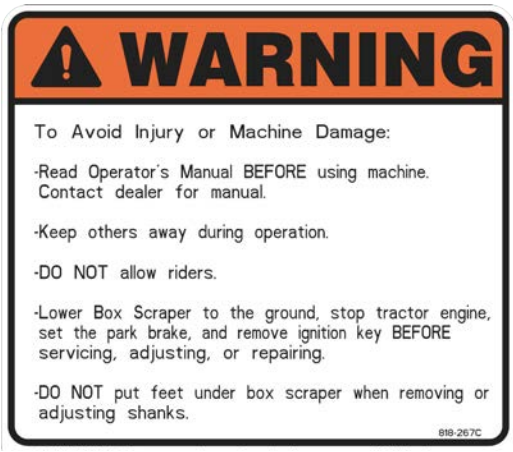
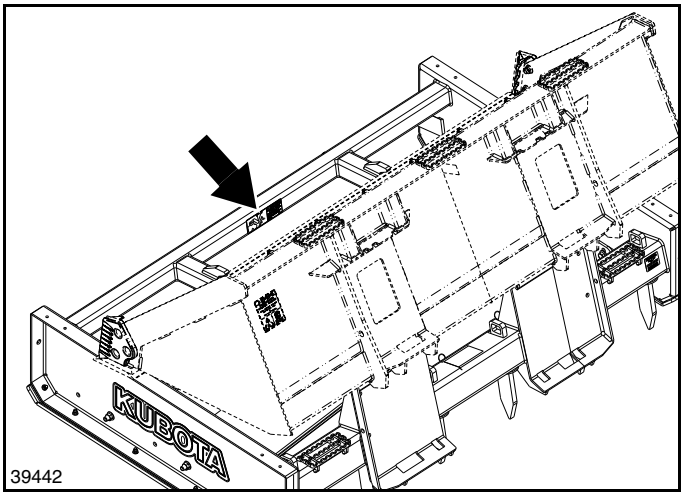


818-267C
Warning: Read Operator's Manual / Service hazard
1 Place



73301

858-707C
Warning: Crushing Hazard
1 Place

Kubota welcomes you to the growing family of new product owners. This Skid Steer Grades has been designed with care and built by skilled workers using quality materials. Proper assembly, maintenance, and safe operating practices will help you get years of satisfactory use from this attachment.

Application

The Kubota AP-SG25 Series Skid Steer Graders come in working widths of 72" (1.83 m) for the AP-SG2572 and 84" (2.13 m) for the AP-SG2584. They are designed for attaching to 40-95 hp (29.8 - 70.8 kW) skid steer loaders and tractors equipped with a front loader and skid steer style mounting hitch plate.

Skid Steer Graders have uses and applications in landscaping, farms, ranches, dairies, construction sites, hunting camps, fishing camps, logging sites, mining operations, large lots, small acreages, sod farms, and municipal and county rural road maintenance facilities. These Skid Steer Graders are uniquely designed to be a user-friendly, low-cost alternative for road grading applications.

Simply setting a properly adjusted AP-SG25 Series Skid Steer Grader on the ground, putting lift arms in float, and driving forward enables the operator to grade off high spots and fill in ruts and low spots on unimproved roads and lanes with little or no manipulation of the skid steer hitch controls. The AP-SG25 Series Skid Steer Grader simply and quickly moves dirt or aggregate from high spots to low spots. Should a large accumulation of unwanted buildup of soil and/or aggregate occur between the blades, initiating a slight raise on the skid steer or tractor lift controls will allow excess material to flow out uniformly and evenly under the leveling grader blades.

See **“Specifications & Capacities”** on page 17 and **“Features & Benefits”** on page 18 for additional information and performance enhancing options.

Using This Manual

- This Operator’s Manual is designed to help familiarize the operator with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.
- The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance.
- To order a new Operator’s or Parts Manual, contact your authorized dealer. Manuals can also be downloaded, free-of-charge, from our website at www.landpride.com

Terminology

“Right” or “Left” as used in this manual is determined by the direction the operator faces while sitting in the operator’s seat looking forward unless otherwise stated.

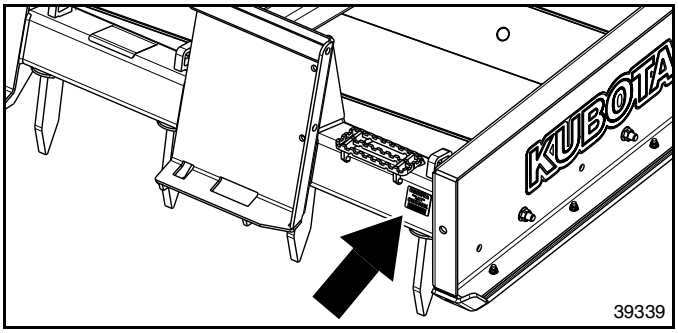
Owner Assistance

The dealer should complete the Online Warranty Registration at the time of purchase. This information is necessary to provide you with quality customer service.

The parts on your Skid Steer Grader have been specially designed by Kubota/Land Pride and should only be replaced with genuine Kubota parts. Contact a Kubota dealer if customer service or repair parts are required. Your Kubota dealer has trained personnel, repair parts, and equipment needed to service the attachment.

Serial Number

For quick reference and prompt service, record model and serial number on the inside cover page and again on the warranty page. Always provide model number and serial number when ordering parts and in all correspondences with your Kubota dealer. For location of your serial number plate, see Figure 1.



Serial Number Plate Location
Figure 1

Further Assistance

Your dealer wants you to be satisfied with your new Skid Steer Grader. If for any reason you do not understand any part of this manual or are not satisfied with the service received, the following actions are suggested:

1. Discuss any problems you have with your attachment with your dealership service personnel so they can address the problem.
2. If you are still not satisfied, seek out the owner or general manager of the dealership, explain the question/problem, and request assistance.
3. For further assistance write to:

Kubota by Land Pride
Service Department

1525 East North Street
P.O. Box 5060
Salina, Ks. 67402-5060

E-mail address
lpservicedept@landpride.com

Power Machine Requirements

The AP-SG25 Series Skid Steer Graders are designed for skid steers and tractors with a front loader that is equipped with a skid steer mounting plate. Tractor horsepower should be within the range noted below. Tractors outside the horsepower range must not be used.

Tractor Weight . . . . . See Warning below.
Required Horsepower: . . . 40-95 hp (29.8 - 70.8 kW)

DANGER

To avoid serious injury or death:

- *Use a skid steer or tractor of adequate size. A light weight machine can tip over causing serious injury or death when loader arms are raised due to high center of gravity.*
- *Lightweight power machines may need weight added to the rear to maintain steering control and prevent forward and/or side tipping. Consult your power machine Operator's Manual to determine proper weight requirements and maximum limitations.*

Torque Requirements For Bolts

Refer to **"Torque Values Chart"** on page 20 to determine correct torque values of fasteners.

Before You Start

DANGER

To avoid serious injury or death:

Allow only persons to operate this attachment who have fully read and comprehended this manual, and who have been properly trained in the safe operation of this attachment. Serious injury or death can result from failure to read, understand, and follow instructions provided in this manual.

Dealer Set-up

The Skid Steer Grader is shipped from the factory fully assembled. Please examine unit to make sure all components are shipped assembled. If need be, refer to **Parts Manual 303-458PK** to verify grader components.

Power Machine Shutdown Procedure

The following are basic power machine shutdown procedures. Follow these procedures and any additional shutdown procedures provided in your power machine Operator's Manual before leaving the operator's seat.

1. Reduce engine speed and shut-off all power to the attachment.
2. Park on solid, level ground and lower attachment until it is flat on the ground or on non-concrete support blocks.

   Skid Steer

   a. Turn off engine. Do not remove ignition key at this time.

   b. Turn ignition key to the "RUN" position. Relieve all hydraulic pressure by moving both joysticks.

   c. Turn ignition key off and remove to prevent unauthorized starting.

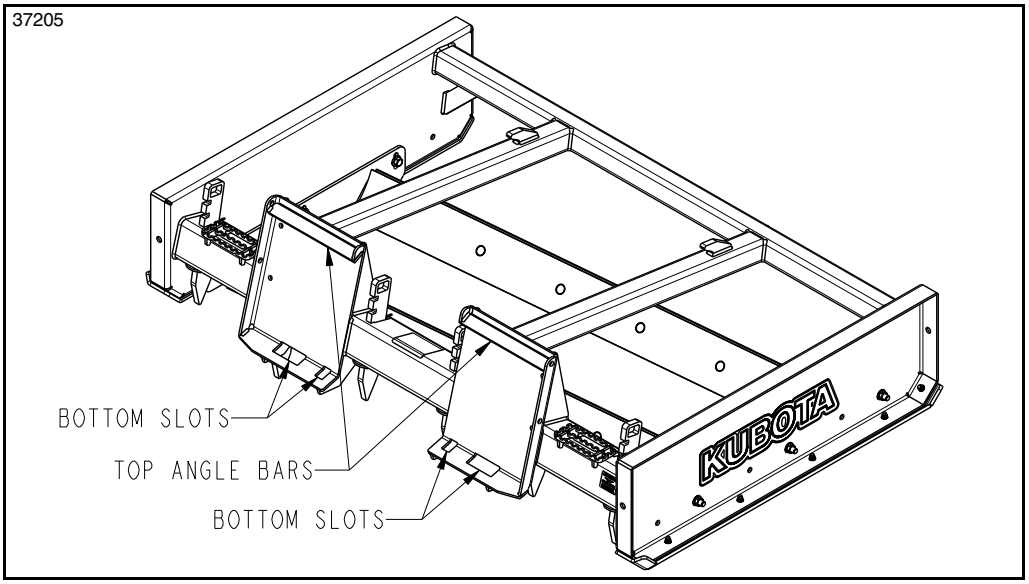
   d. If included, raise seat bar and move controls until both lock.

   Tractor

   a. Put tractor in park or set park brake.

   b. Turn off engine, and remove ignition key to prevent unauthorized starting.

   c. Relieve all hydraulic pressures.
3. Wait for all components to come to a complete stop before leaving the operator's seat.
4. Use steps, grab-handles, and anti-slip surfaces when stepping on and off the power machine.



Hook-up Skid Steer Grade
Figure 1-1

Hook-up Skid Steer Grader

Refer to Figure 1-1:

DANGER

To avoid serious injury or death:

A Crushing Hazard exists when hooking-up equipment. ***Do not*** *allow anyone to stand between the skid steer or tractor and attachment while hooking-up to the attachment.* ***Do not*** *operate hydraulics while someone is near the skid steer/ tractor or attachment.*

CAUTION

To avoid minor or moderate injury:

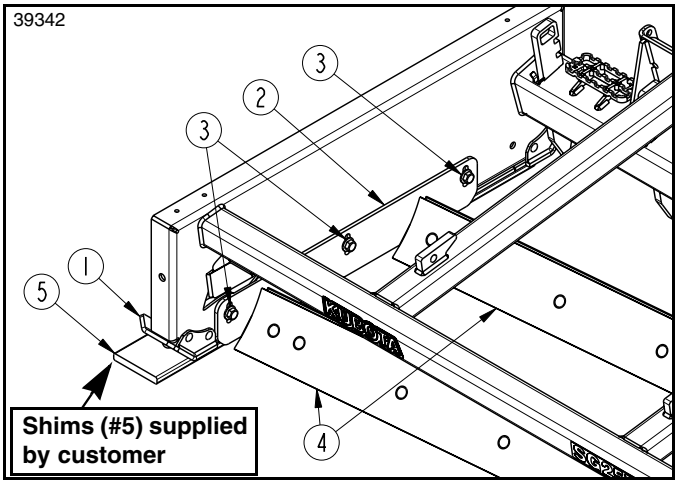
Make sure skid/loader front mounting hitch plate is properly attached to the grader hitch. It must be secured under the grader's top angle bars and lock handles must be locked down with locking pins extending fully through bottom slots in the grader hitch. An improperly attached grader can fall without warning causing serious injury or death.

1. Check for and remove all debris in the skid/loader mounting hitch plate and grader hitch point areas.
2. Raise lock pins on skid/loader mounting hitch plate.
3. Drive skid steer or tractor slowly up to and centered on the grader hitch making sure the skid/loader mounting plate is parallel with grader hitch top angle bars.
4. Rotate top of skid/loader tilt arms slightly forward.
5. Position top of skid/loader mounting plate under the grader top angled bars. Slowly raise loader arms up until mounting plate is seated under the top angle bars.
6. Rotate top of skid/loader tilt arms back until mounting plate makes full contact with grader hitch plate.
7. Shut skid steer or tractor down properly. Refer to **"Power Machine Shutdown Procedure"** on page 8.
8. Lower lock pins on skid/loader mounting plate. Make sure lock pins go through bottom slots in grader hitch plate and are in the locked down position.

Unhook Skid Steer Grader

Refer to Figure 1-1:

1. Shut skid steer and grader down properly. Refer to The Skid Steer Grader is shipped from the factory fully assembled. Please examine unit to make sure all components are shipped assembled. If need be, refer to Parts Manual 303-458PK to verify grader components. on page 8.
2. Pull lock handle(s) to remove pins from bottom slots in grader hitch plate.
3. Return to the skid steer/tractor and raise grader off the ground approximately 6" (15 cm).
4. Rotate top of skid/loader mounting plate forward 5-10 degrees and begin lowering grader down until front of grader is touching the ground.
5. Continue to slowly lower grader hitch plate until grader top angle bar and skid/loader mounting plate have separated.
6. Carefully back skid steer or tractor away from the grader making sure skid/loader mounting plate is free from the grader hitch plate.



Blade Height Adjustment (Left-Hand Side Shown)
Figure 2-1

Cutter Blade Height Adjustment

CAUTION

To avoid minor or moderate injury:

Always keep your feet and hands out from under the blade carrier when adjusting grader blade height. The blade carrier can fall causing injury to your feet, legs, and/or hands.

NOTE: Cutting depth is vertical distance from bottom of skid shoe to bottom of grader blades.

The blade carrier (#2) can be lowered or raised equal amounts on both sides to grade a surface level. Position cutting edges even with bottom of skid shoes for non-aggressive grading action or adjust cutting edges fully downward to 1 1/2" (3.8 cm) depth. The most commonly used cutting depth is 1/4" to 3/8" (6.3 mm to 9.5 mm) below skid shoes.

The blade carrier (#2) can also be lowered on the right-hand side more than on the left-hand side to grade a crown in the middle of a roadway.

Initial Preparation

Refer to Figure 2-1:

1. Park Skid Steer Grader on a level hard surface such as a concrete pad.
2. Shut skid steer or tractor down properly. Refer to **"Power Machine Shutdown Procedure"** on page 8.
3. Loosen bolts (#3) on both ends of blade carrier (#2). Do not remove nuts from bolts (#3).
4. Restart skid steer or tractor and raise grader several inches off the hard surface.
5. Shut skid steer or tractor down properly.
6. Do not use shims if cutting depth is 0 inches. Place one long shim (#5) equal in thickness to the desired cutting depth under each skid shoe (#1). Make sure these shims do not extend under blade carrier frame (#2). Shims (#5) are supplied by customer.

Adjust to Increase Cutting Depth

Refer to Figure 2-1:

NOTE: Shims (#2) should be thicker than current cutting depth.

1. Complete steps 1 to 6 under **"Initial Preparation"**.
2. Restart skid steer or tractor and operate control lever to slowly lower skid shoes (#1) onto shims (#5).
3. Shut skid steer or tractor down properly. Refer to **"Power Machine Shutdown Procedure"** on page 8.
4. Make sure skid shoes (#1) are resting only on shims (#5) and grader blades (#4) are resting on the hard surface.
5. Tighten 5/8"-11 x 1 1/2" GR8 bolts (#3) to the correct torque.

Adjust to Decrease Cutting Depth

Refer to Figure 2-1:

NOTE: Shims (#2) should be thinner than current cutting depth.

1. Complete steps 1 to 6 under **"Initial Preparation"**.
2. Restart skid steer or tractor and operate control lever to slowly lower skid shoes (#1) onto shims (#5).
3. Shut skid steer or tractor down properly. Refer to **"Power Machine Shutdown Procedure"** on page 8.
4. Make sure skid shoes (#1) are resting only on shims (#5) and grader blades (#4) are resting on the hard surface.
5. Tighten 5/8"-11 x 1 1/2" GR5 bolts (#3) to the correct torque.

Adjust to Grade a Crown

Refer to Figure 2-1:

1. Complete steps 1 to 5 under **"Initial Preparation"**
2. Place under left-hand skid shoe (#1) and grader blades (#4) a shim (#5) equal in thickness to the cutting depth.
3. Place under the right-hand skid shoe (#1) (not shown) a second shim (#5) equal to the thickness of the previous shim. Make sure this shim does not extend under blade carrier frame (#2).
4. Restart skid steer or tractor and operate loader arm control lever to slowly lower unit onto shims (#5)
5. Shut skid steer or tractor down properly.
6. On the left-hand side, ensure skid shoes (#1) and grader blades (#4) are resting on shims (#5).
7. On the right-hand side (not shown), check to make sure skid shoe (#1) is resting on shim (#5) and grader blades (#4) are resting on the hard surface.
8. Tighten 5/8"-11 x 1 1/2" GR5 bolts (#3) to the correct torque.
9. Make all grading passes with middle of roadway on the left-hand side of the grader.

Straight Shank Height Adjustment

DANGER

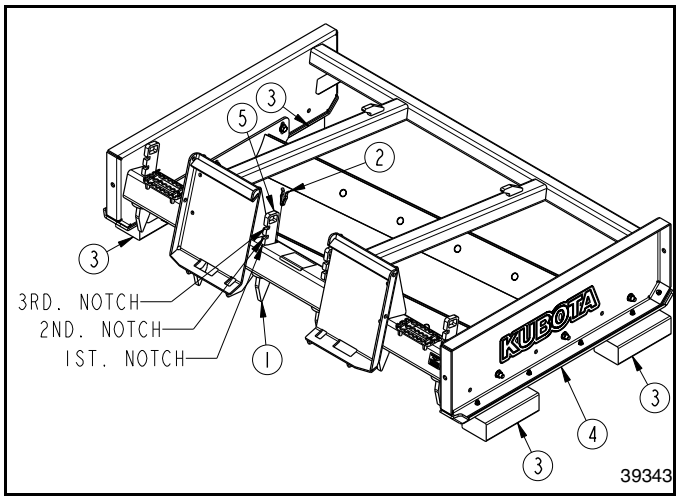
To avoid serious injury or death:

Make adjustments to the Skid Steer Grader after it has been properly attached to a skid steer or tractor and secured with solid support blocks. Do not use concrete blocks. Never work around or under equipment supported by hydraulics. Hydraulics can drop equipment instantly if controls are actuated or if hydraulic lines burst even when power to hydraulics is shut off.

CAUTION

To avoid minor or moderate injury:

- *Always keep your feet and legs out from under the shanks. The shanks can slip from your grip and fall causing injury to your feet and/or legs.*
- *Keep clear of shank slots while adjusting shank height. Shanks can pinch body parts in slots during adjustments.*



Shank Adjustment
Figure 2-2

Initial Preparation

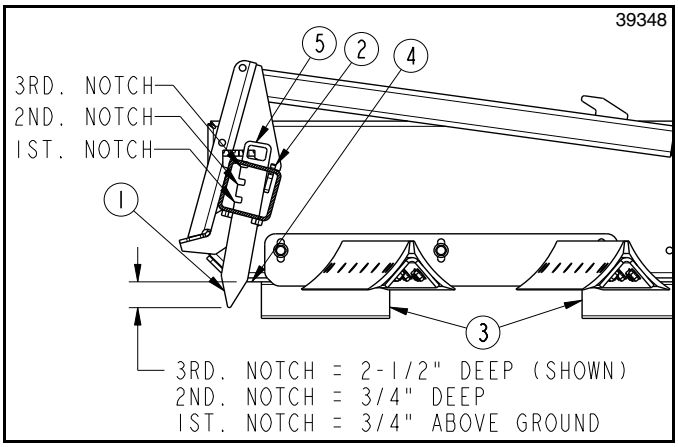
Refer to Figure 2-2:

1. Shut skid steer or tractor down properly. Refer to **"Power Machine Shutdown Procedure"** on page 8.
2. Place four 4" (10 cm) high support blocks (#3) in front of the grader and in-line with skid shoes (#4) with two blocks on each side not being father apart than overall length of skid shoes (#4).
3. Start skid steer, raise grader up about 6" (15 cm), and drive forward until grader skid shoes (#4) are directly over support blocks (#3).
4. Lower grader until skid shoes (#4) are resting on solid support blocks (#3).
5. Shut skid steer or tractor down properly and dismount.

Adjust Shank Height

Refer to Figure 2-3:

1. Complete steps 1 to 5 under **"Initial Preparation"**
2. Press top of shank spring retainer (#2) together with a pair of pliers and pull retainer up out of shank tube slot. Be sure to keep shank notch caught in the tube slot to keep the shank from falling while removing the spring retainer.
3. Manually raise or lower shank with hand grip (#5) until preferred shank notch is seated in the shank tube slot as shown in Figure 2-3.
4. Fasten shank in place with spring retainer clip (#2) by inserting retainer clip into the slot behind the shank until clip snaps in place.



Shank Operating Depth
Figure 2-3

Adjust Shanks to Rip Only

Refer to Figure 2-3:

1. Refer to **"Adjust Shank Height"** on this page and adjust shanks down to the 3rd notch.
2. Use tilt function on the skid/loader and tilt top of mounting plate slightly back until grader blades are at a higher level than the shanks.
3. Lower loader lift arms until shanks penetrate the ground at an acceptable depth.

Leveling The Grading Scraper

1. Adjusted shanks fully up. Refer to **"Adjust Shank Height"** on this page.
2. Park skid steer or tractor on a level surface and lower loader arms until grader is resting on the ground.
3. Set control lever in float.
4. Rotate top of skid/loader mounting plate forward or backward until skid shoes on both sides are flat on the ground or parallel with the ground if grader blades are holding the skid shoes off the ground.
5. Drive forward to perform ripping action with shanks.

Operating Checklist

Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training involved in the operation, transport, storage, and maintenance of the Skid Steer Grader. Therefore, it is absolutely essential that no one operates the Skid Steer Grader unless they have read, fully understood, and are totally familiar with the Operator's Manual. Make sure the operator has paid particular attention to:

- **Important Safety Information**, pages 1 to 6
- **Section 1: Assembly & Set-up,** page 8
- **Section 2: Adjustments**, page 10
- **Section 3: Operating Instructions**, page 12
- **Section 4: Maintenance**, page 15

Perform the following inspections before using your Skid Steer Grader.

Operating Checklist

✔	Check	Page
	Check hook-up. Make sure lock pins have gone through bottom slots in grader hitch plate and skid/loader plate is under grader top angle bars. Refer to "Section 1: Assembly & Set-up".	8
	All grader blades and shank adjustments have been made and secured. Refer to "Section 2: Adjustments".	10
	Make sure operator has read and understands how to operate the Skid Steer Grader. Refer to "Section 3: Operating Instructions".	12
	Check grader initially and periodically for loose bolts and pins. Refer to "Torque Values Chart".	20

Operator's Responsibilities

DANGER

To avoid serious injury or death:

- *Don't get pinned between lift arms and tractor/skid steer frame. Getting pinned is the leading cause of fatal accidents.*
- *Always operate attachment while seated in the tractor or skid steer with seat belt fastened around operator.*
- *Keep your head, arms, and legs inside the cab while operating the tractor/skid steer.*
- *Never operate equipment from outside the cab.*
- *Before leaving the operator's seat, lower attachment to the ground, set park brake, and turn off engine.*
- *Use the skid steer's alternate emergency exit when exit passage through the front is blocked.*
- *Do not use hand or foot controls for hand holds or steps.*
- *Keep mud, snow, ice, and debris out of foot controls.*
- *If included, raise restraint bar and move controls until both are locked and interlock system is activated.*
- *Inspect interlock control system regularly and perform required maintenance to keep it operating properly.*
- *Never bypass or modify a safety device.*
- *Do not operate traveling across a steep incline where the skid steer or tractor could roll-over. Consult your machine's Operating Manual for acceptable inclines.*

WARNING

To avoid serious injury or death:

- *Operate only tractors and skid steers equipped with a Roll-Over Protective Structure (ROPS) and seat belt. Keep folding ROPS in the "locked up" position at all times. Fasten seat belt snugly and securely to help protect against serious injury or death from falling and machine overturn.*
- *Use a skid steer or tractor of adequate size. A light weight machine can tip over causing serious injury or death when loader arms are raised due to high center of gravity.*
- *Some light weight skid steers and tractors will require rear ballast for heavy loads to maintain control. Be sure to consult your machine's Operator's Manual to determine whether or not to add ballast.*
- *Do not allow anyone to operate this Skid Steer Grader who has not been properly trained in its safe operation.*
- *Do not let anyone under the age of 16 operate the Skid Steer Grader.*
- *Do not to allow anyone near the Skid Steer Grader during its operation.*
- *Use Skid Steer Grader for its intended purpose only.*
- *To avoid serious injury or death, never carry riders on the skid steer or tractor or attachment. Riders obstruct operator's view, can be struck by foreign objects, and can fall or be thrown from the equipment.*
- *Never use the Skid Steer Grader as a wagon to carry things or as a working platform.*
- *Always know the weight of the load being lifted. Maximum lift capacity should never exceed rated lift capacity of the skid steer or tractor. Exceeding the machine's rated capacities can result in a rollover or other serious hazards that can cause injury or death.*
- *Do not use grader for lifting front end of tractor or skid steer off the ground. Doing so can damage equipment and cause injury if exceeding lift capacity of unit.*
- *Never use Skid Steer Grader to pull or tow other objects. Doing so can damage grader frame and cause serious bodily injuries or death.*
- *Make sure all safety labels are in their proper location and in good condition before operation.*
- *Never work under the unit without blocking unit up properly.*
- *All nuts, bolts, screws, and fasteners should be checked periodically for tightness. Refer to* ***"Torque Values Chart"*** *on page 20 to determine correct torque values for common bolts.*

- *Avoid exposure to dust containing crystalline silica particles. This dust can cause serious injury to the lungs (silicosis). Because crystalline silica is a basic component of sand and granite, many activities at construction sites produce dust containing crystalline silica. Trenching, sawing, and boring of material containing crystalline silica can produce dust containing crystalline silica.*

CAUTION

To avoid minor or moderate injury:

- *Always keep your feet and legs out from under the shanks. The shanks can slip from your grip and fall causing injury to your feet and/or legs.*
- *Always keep your feet and hands out from under the blade carrier when adjusting grader blade height. The blade carrier can fall causing injury to your feet, legs, and/or hands.*
- *Wear eye protection when operating a skid steer or tractor without an enclosure or protective shield. Dust and debris can get in eyes.*
- *Be sure you are not working over any underground wiring, pipes, or other obstructions. If there is any doubt, call your local utility services so they may mark locations of any under ground utilities in the area. Be sure to ask how close you can work to the marks or flags they positioned.*

Bucket & Grader on Transport Trailer

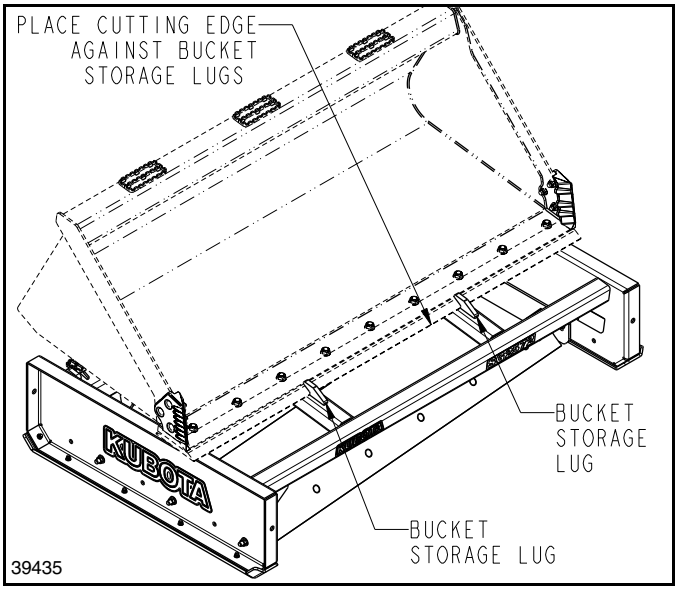
WARNING

To avoid serious injury or death:

- *Never lift Skid Steer Grader with a bucket stored on top. Doing so can damage grader frame, result in bucket falling off, and/or cause skid steer or tractor to rollover.*
- *Do not use bucket storage lugs to pull or tow other objects. Doing so can damage grader frame and cause serious injury or death.*

Refer to Figure 3-1:

1. Load Skid Steer Grader on a trailer in a location where the bucket can be mounted on top later with a front loader.
2. Using a hoist or front loader, center the bucket on the Skid Steer Grader with bucket cutting edge slightly above the bucket storage lugs on the grader.
3. Tilt bucket cutting edge down until cutting edge is beneath the storage lugs but not resting on the grader frame.
4. Move bucket forward until bucket cutting edge is against bucket storage lugs.
5. Lower and rotate bucket until bottom of bucket is resting on the Skid Steer Grader frame and cutting edge is against the bucket storage lugs.
6. Unhook bucket from hoist or front loader. If unhooking from a front loader, follow unhooking instructions in your skid steer or tractor Operator's Manual.
7. Secure bucket and Skid Steer Grader to the trailer with hold-down straps.



Mount Bucket & Skid Grader on Transport Trailer
Figure 3-1

Transporting

DANGER

To avoid serious injury or death:

- *Follow all safety precautions when transporting. Not using safe transporting methods can damage equipment and cause serious injury or death.*
- *Always transport with equipment low to the ground to maintain stability of the skid steer or tractor.*
- *Transporting across inclines, over ramps, grades, bumpy, soft, or slippery surfaces reduces machine stability. Always travel straight up and straight down inclines. Make turns only on level ground.*
- *Keep equipment away from electrical power lines. Place an orange warning sign under overhead electrical power lines indicating type of danger above.*
- *When traveling on public roads at night or during the day, use slow moving vehicle sign (SMV sign), accessory lights, and devices for adequate warning to operators of other vehicles. Comply with all federal, state, and local laws.*
- *When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.*

1. Be sure to reduce skid steer or tractor ground speed when turning; and leave enough clearance so the Skid Steer Grader does not contact obstacles such as buildings, trees, or fences.
2. Select a safe ground travel speed when transporting from one area to another.
3. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
4. When traveling over rough or hilly terrain, shift skid steer or tractor to a lower gear.

General Operating Instructions

By now you should have read the operator's manual and properly attached your AP-SG25 Series Skid Steer Grader to your skid/loader mounting hitch plate. Whether you have chosen our AP-SG2584 or AP-SG2596, the working or grading principals are the same. Your grader blades should be properly adjusted within the frame to achieve the desired effect. Depending on local surface conditions, this may take a little experimentation to get your adjustments set just right. Simply lower your Skid Steer Grader until the left-hand and right-hand skid shoes are firmly in contact with the ground, set control lever in float, and begin driving forward.

The two grader blades should immediately begin grading or shaving off high spots on the surface and allowing dirt or aggregate material to flow under the blades to fill in low spots. The lower the blades are set, the more aggressive the cutting and grading action will be. A build up of grass and/or weeds may occur between the grader blades. This is no cause for concern. Just use the skid/loader hydraulic control lever to simply raise the grader slightly and to allow excess material to flow out from under the blades in an even and level fashion. Return control lever back to float position once excess material has emptied out. You may want to adjust the blade carrier a little if an unwanted accumulation continues to occur between the grader blades. When coming within the last 50 feet (15 m) of a pass, you will want to raise the Grading Scraper up enough to feather excess material out to the end.

If grading freshly tilled soil and the skid shoes are digging into the ground, then use the hydraulic control lever to hold skid shoes at ground level.

If surface conditions are hard-packed and the grader blades are unsuccessful in shaving off high spots, lowering straight shanks to a depth that enables you to achieve the desired effect. Refer to **"Straight Shank Height Adjustment"** on page 11. The shanks can be used traveling forward and backwards.

If attachment is to be operated in reverse, make sure visibility to the rear of the power unit is appropriate for the attachment.

You will want to reduce required horsepower when making multiple ripping passes. To do this you should adjust the shanks down to the 3rd notch and tilt the top of skid/loader mounting plate slightly back until the grader blades are higher than the shanks. You are now ready to begin ripping. Lower the loader arms until the shanks penetrate the ground and start driving forward. When you are through ripping, stop the skid steer or tractor and raise the shanks fully. Reposition top of skid/loader mounting plate until the left-hand and right-hand skid shoes are firmly in contact with the ground, set control lever in float, and begin driving forward to finish grading.

The Kubota APSG25 Series Skid Steer Graders are very user friendly attachments and with a little practice you should begin achieving excellent results.

See **"Specifications & Capacities"** on page 17 and **"Features & Benefits"** on page 18 for additional information and performance enhancing options.

Maintenance

Proper servicing and adjustments are key to the long life of any attachment. With careful inspection and routine maintenance, you can avoid costly downtime and repair.

Check all bolts after using the unit for several hours to be sure they are tight. Replace any worn, damaged, or illegible safety labels by obtaining new labels from your Kubota dealer.

⚠ WARNING

To avoid serious injury or death:

- *Make sure controls are all in the neutral position or park before starting the power machine.*
- *Do not alter Kubota equipment or replace parts with other brands. Doing so can cause equipment to perform improperly and may lead to breakage that can cause bodily injury or death. Replace parts only with genuine Kubota parts.*
- *Never work under the Skid Steer Grader without blocking it up properly first. The grader can fall causing bodily injury or death. Always use solid blocks, never concrete blocks.*
- *Frequently check all hardware to make certain it is tight. Operating attachment with loose pins, bolts, or nuts can cause attachment to not perform properly and may result in a serious breakdown that can cause bodily injury or death.*

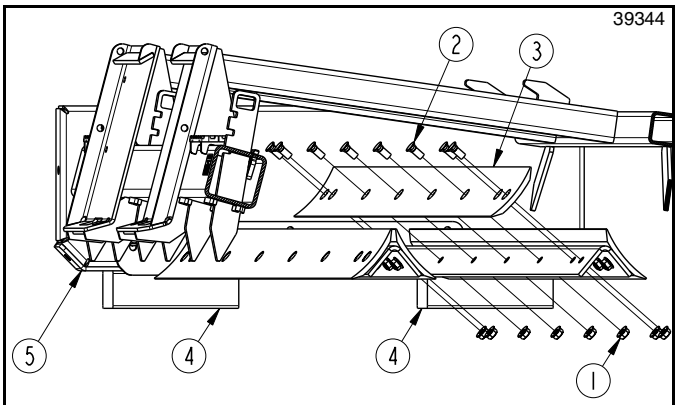
Long-Term Storage

1. Scrape off compacted dirt and then wash the grader thoroughly to remove any dirt and grease that may have accumulated on the grader.
2. Repaint parts where paint is worn or scratched to prevent rust. A coating of oil may be applied to the lower unpainted frame area and blades to minimize oxidation.
3. Check grader blades and bolts for wear and replace if necessary.
4. Inspect for loose, damaged or worn parts and adjust or replace as needed.
5. Repaint parts where paint is worn or scratched to prevent rust. Ask your Kubota dealer for aerosol touch-up paint. Paint is also available in touch-up quarts and gallon sizes.

Kubota Touch-up Paint

Part No.	Part Description
77700-06430	GLOSS BLACK ENAMEL SPRAY CAN
77700-06431	GLOSS BLACK ENAMEL QUART
700 00-00017	GLOSS BLACK ENAMEL GALLON

6. Replace all damaged or missing decals.
7. Store grader on a level surface in a clean, dry place. Inside storage will reduce maintenance and make for a longer grader life.
8. Follow all unhooking instructions on page 9 when disconnecting skid steer or tractor from the grader.



Item	Part No.	Part Description	Qty.
1	803-209C	72" NUT HEX WHIZ 5/8"-11 PLT	
1	803-209C	84" NUT HEX WHIZ 5/8"-11 PLT	
2	802-236C	72" PLOW 5/8"-11 x 1-1/2" GR5	
2	802-236C	84" PLOW 5/8"-11 x 1-1/2" GR5	
3	820-043C	72" GRADER BLADE 1/2"x6"x71-1/2"	
3	820-046C	84" GRADER BLADE 1/2"x6"x83-1/2"	

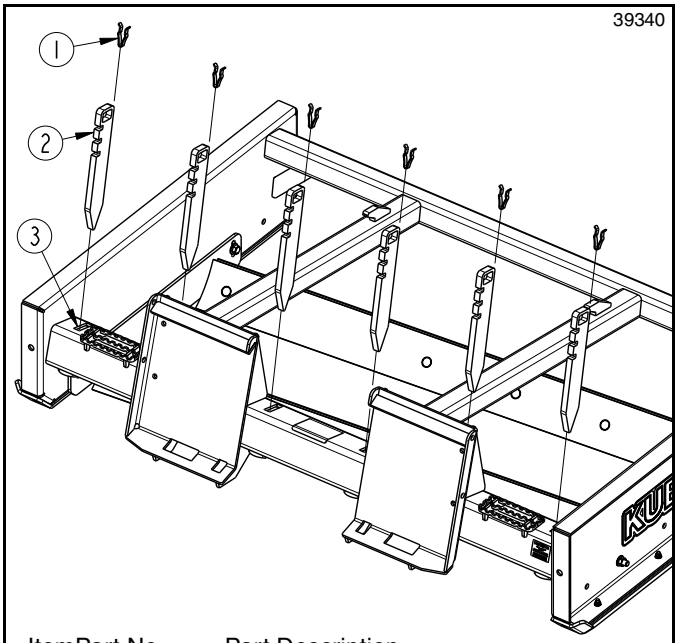
Grader Blade Replacement
Figure 4-1

Grader Blade Replacement

The grader blades (#3) have two cutting edges. They can be unbolted and turned upside down when the bottom edges wear out. Replace grader blades when both edges are worn out with genuine Kubota parts.

Refer to Figure 4-1:

1. Shut skid steer or tractor down properly. Refer to **"Power Machine Shutdown Procedure"** on page 8.
2. Place four 4" high support blocks (#4) in front of the grader and in-line with skid shoes (#5) with two blocks on each side not farther apart than the length of a skid shoes (#5).
3. Start skid steer or tractor, raise grader up about 6" (15 cm), and drive forward until grader skid shoes (#5) are directly over support blocks (#4).
4. Lower grader until skid shoes (#5) are resting on support blocks (#4).
5. Shut skid steer or tractor down properly and dismount.
6. Unbolt hex whiz nuts (#1). Remove plow bolts (#2) and grader blades (#3).
7. Inspect 5/8"-11 GR5 plow bolts (#2) and hex whiz nuts (#1) for wear and replace as needed.
8. Turn existing grader blades (#3) upside down and reattach or attach new grader blades (#3) with plow bolts (#2) and hex whiz nuts (#1). Tighten whiz nuts to the correct torque.



Item	Part No.	Part Description
1	305-111D	72" CLIP SHANK RETAINEER
1	LP_305-111D	84" CLIP SHANK RETAINEER
2	820-557C	72" STRAIGHT SHANK
2	820-557C	84" STRAIGHT SHANK

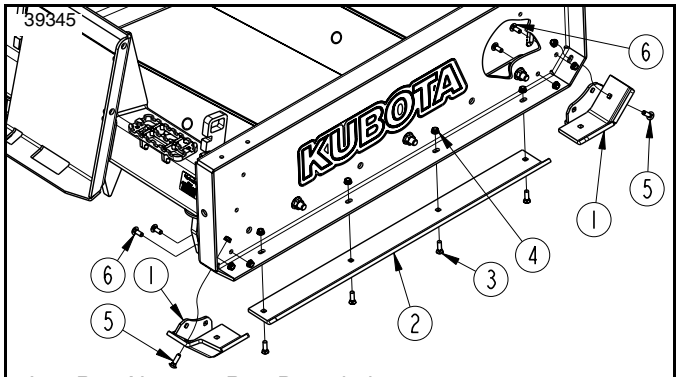
Straight Shank Replacement
Figure 4-2

Straight Shank Replacement

Straight shanks should be inspected frequently and at the end of the season. Replace worn shanks with genuine Kubota parts.

Refer to Figure 4-2:

1. Shut skid steer or tractor down properly as follows:
   - If straight shanks (#2) are adjusted below grade, park grader supported 4" (10 cm) off the ground. See **"Straight Shank Height Adjustment"** on page 11 for detailed instructions.
   - If straight shanks (#2) are adjusted above grade, Shut skid steer or tractor down properly before dismounting. Refer to **"Power Machine Shutdown Procedure"** on page 8.
2. Press top of shank spring retainer (#1) together with a pair of pliers and pull retainer out of shank tube slot (#3).
3. Using hand grip on top, remove shank (#2) from grader hitch tube slot (#3).
4. Insert new straight shank (#2) in grader hitch tube slot (#3) until the preferred notch in shank is seated in hitch tube slot.
5. Insert clips (#1) into hitch tube slot (#3) behind straight shanks (#2) until clip snaps into the slot.
6. Repeat steps 2-5 for remaining straight shanks (#2).



Item	Part No.	Part Description
1	303-439D	END SKID SHOE
2	303-438D	SKID SHOE REVERSIBLE
3	802-466C	PLOW 3/8"-16 X 1-1/4" GR5
4	803-198C	NUT HEX WHIZ 3/8-16 PLT

Skid Shoe Replacement
Figure 4-3

Skid Shoe Replacement

Skid shoes should be inspected frequently and at the end of each season. Replace skid shoes when material thickness is less than 1/8" (3mm) at any point.

To extend their life, end skid shoes (#1) can be relocated from front to the back and vice versa; and reversible skid shoes (#2) can be turned around and installed on the opposite side. Order only genuine Kubota parts.

Replace or relocate skid shoes as follows:

Refer to Figure 4-3:

1. Shutdown power machine properly before dismounting. Refer to **"Power Machine Shutdown Procedure"** on page 8.
2. Place four 4" (10 cm) high support blocks in front of the two grader blades with one on each end of the front blade and one on each end of the rear blade.
3. Raise grader up about 6" (15 cm), and drive forward until grader blades are directly over the support blocks, then lower grader until grader blades are resting on support blocks.
4. Properly shutdown power machine, then dismount.
5. Remove hex nuts (#4), plow bolts (#3), end skid shoes (#1), and reversible skid shoes (#2). Check plow bolts for wear and replaced if needed.
6. Install reversible skid shoes (#2) to the side panels with plow bolts (#3) and nuts (#4). Draw nuts (#4) up snug. Do not tighten at this time.
7. Install end skid shoes (#1) with 1" carriage bolts (#5), 1 1/4" carriage bolts (#6), and nuts (#4).
8. Tighten all nuts (#4) to the correct torque.
9. Start power machine, then raise grader up, and back away from support blocks until fully clear.
10. Properly shut skid steer/tractor down and dismount to place support blocks in an out-of-the-way location.

AP-SG25 Series

Specifications & Capacities			
		AP-SG2572	**AP-SG2584**
Working width	in (m)	72 (1.83)	84 (2.13)
Overall width	in (m)	81 1/4 (2.06)	93 1/4 (2.37)
Number of straight shanks		6	7
Skid steer & tractor hp requirement	hp (kW)	40-95 (29.8-70.8)	40-95 (29.8-70.8)
Unit weight with shanks	lbs (kg)	886 (401.9)	952 (431.8)
Overall length	in (m)	52 1/4 (1.33)	
Overall height	in (cm)	22 (55.9)	
Side panel height with skid shoes	in (cm)	15 1/2 (39.4)	
Side panel length	in (m)	50 (1.27)	
Side panel thickness	in (mm)	1/4 (6) Thick with 2 3/4 (70) formed edges.	
Skid shoe construction	in (mm)	3/8 (10) Thick with a formed bevel to prevent gouging.	
Straight shank construction		Heat-treated 3-position shank.	
Cutting edges	in (cm)	Four 1/2 x 6 (1.3 x 15.2) high-carbon, heat-treated blades that are reversible and replaceable.	
Cutting edge adjustment	in (cm)	Variable vertical adjustment from level grade to 1 1/2 (3.8) below grade.	
Shank adjustments	in (mm)	2 1/2 (64) and 3/4 (19) below grade level. 3/4 (19) above grade level.	
Hitch type		Skid steer mounting plate	

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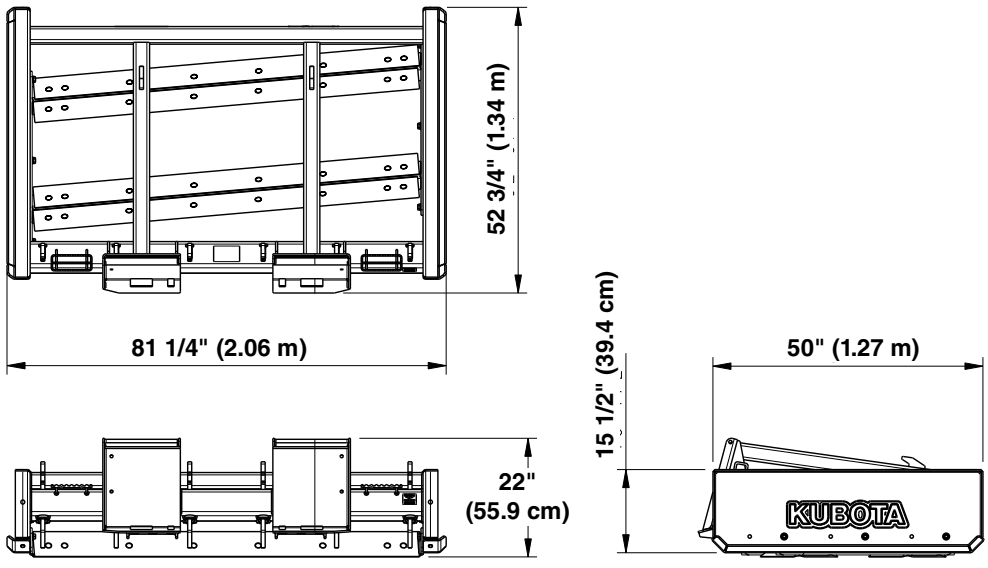

AP-SG25 Series

Features	Benefits
Skid steer mounting plate.	Fits most/all skid steer front loader hitches.
40-95 hp (29.8 - 70.8 kW) power machine requirements.	Makes it compatible with many popular smaller sized skid steers and tractors in use today.
Dual adjustable height grader blades.	Allows the grader to be adjusted to desired amount of cultivation, leveling, and grading action.
3-Position scarifier shanks.	Allows shanks to be adjusted to two depths or above ground.
Ripping-Only Functionality	Frame geometry gives the user the option to solely use straight shanks, reducing horsepower requirements when the surface requires multiple ripping passes.
Reversible heat treated high carbon steel grading blades.	For excellent wear resistance and long service life.
Hardened straight shanks.	Assures long service life.
Full length heavy duty skid shoes.	Makes for easier operation and long unit life.
Replaceable and reversible skid shoes.	Extends the life of the skid shoes.
Heavy duty frame construction.	Assures long lasting reliability and performance.

Troubleshooting Chart

Problem	Cause	Solution
Grader blades do not cut into the ground.	Cutting edge has worn even with the bottom of the blade carrier frame.	Turn existing grader blade upside down or replace with a new grader blade.
	Blade carrier is adjusted too high.	Adjust blade carrier down.
Grader blades make too deep of a cut.	Blade carrier is adjusted too low.	Adjust blade carrier up.
Grader blades make too shallow of a cut.	Blade carrier is adjusted too high.	Adjust blade carrier down.
Grader blades make a deep cut on one side only.	Blade carrier is adjusted to make a crown in the middle of the road.	Adjust blade carrier to cut equal depth on both sides.
Grader blades won't make a crown in the middle of the road.	Blade carrier is adjusted to cut equal depth on both sides.	Adjust blade carrier to cut into the ground on the right side and to be out of the ground on the left side.
	Not making grading passes with middle-of-roadway on the left side of grader.	Grade with the left side on the center of the road.
Grader moves on skid/loader hitch plate.	Grader hitch is not properly attached to skid/loader hitch plate.	Reattach grader hitch to skid/loader hitch plate. Always make certain grader hitch is properly attached before lifting grader.
Shanks are breaking.	Making too sharp of a turn with shanks in the ground.	Don't make sharp turns with shanks in the ground. Replace broken shanks.
Shank is falling out.	Shank spring retainer is missing.	Set shanks to the preferred depth and secure with a new shank spring retainer.
Shank is not digging into the ground as it should.	Shank has changed positions because spring retainer is missing.	Set shanks to the preferred depth and secure with a new shank spring retainer.
	Shank is set in the bottom notch.	Adjust shanks down to the top notch or second notch from the top.
	Shank tip is worn off.	Replace shank.
Shank is digging into the ground when it should not.	Shank has moved because spring retainer is missing.	Set shanks to the preferred depth and secure with a new shank spring retainer.
	Shanks are set in the top notch or the second notch from the top.	Adjust shanks up to the bottom notch.
Skid shoes are gouging into the ground.	Hydraulic control lever for loader lift arms is not set in float position.	Set hydraulic control lever for loader lift arms in float position.
Front of skid steer or tractor is raising off the ground.	Hydraulic control lever for loader lift arms is not set in float position.	Set hydraulic control lever for loader lift arms in float position.
Tractor wants to tip forward.	Tractor does not have enough ballast on the rear.	Add ballast weight to the rear of the tractor.

Torque Values Chart for Common Bolt Sizes

Bolt Size (inches)	Bolt Head Identification Grade 2		Grade 5		Grade 8	
in-tpi [1]	N · m [2]	ft-lb [3]	N · m	ft-lb	N · m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12
1/4" - 28	8.5	6	13	10	18	14
5/16" - 18	15	11	24	17	33	25
5/16" - 24	17	13	26	19	37	27
3/8" - 16	27	20	42	31	59	44
3/8" - 24	31	22	47	35	67	49
7/16" - 14	43	32	67	49	95	70
7/16" - 20	49	36	75	55	105	78
1/2" - 13	66	49	105	76	145	105
1/2" - 20	75	55	115	85	165	120
9/16" - 12	95	70	150	110	210	155
9/16" - 18	105	79	165	120	235	170
5/8" - 11	130	97	205	150	285	210
5/8" - 18	150	110	230	170	325	240
3/4" - 10	235	170	360	265	510	375
3/4" - 16	260	190	405	295	570	420
7/8" - 9	225	165	585	430	820	605
7/8" - 14	250	185	640	475	905	670
1" - 8	340	250	875	645	1230	910
1" - 12	370	275	955	705	1350	995
1-1/8" - 7	480	355	1080	795	1750	1290
1-1/8" - 12	540	395	1210	890	1960	1440
1-1/4" - 7	680	500	1520	1120	2460	1820
1-1/4" - 12	750	555	1680	1240	2730	2010
1-3/8" - 6	890	655	1990	1470	3230	2380
1-3/8" - 12	1010	745	2270	1670	3680	2710
1-1/2" - 6	1180	870	2640	1950	4290	3160
1-1/2" - 12	1330	980	2970	2190	4820	3560

Bolt Size (Metric)	Bolt Head Identification 5.8 Class 5.8		8.8 Class 8.8		10.9 Class 10.9	
mm x pitch [4]	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
M 5 X 0.8	4	3	6	5	9	7
M 6 X 1	7	5	11	8	15	11
M 8 X 1.25	17	12	26	19	36	27
M 8 X 1	18	13	28	21	39	29
M10 X 1.5	33	24	52	39	72	53
M10 X 0.75	39	29	61	45	85	62
M12 X 1.75	58	42	91	67	125	93
M12 X 1.5	60	44	95	70	130	97
M12 X 1	90	66	105	77	145	105
M14 X 2	92	68	145	105	200	150
M14 X 1.5	99	73	155	115	215	160
M16 X 2	145	105	225	165	315	230
M16 X 1.5	155	115	240	180	335	245
M18 X 2.5	195	145	310	230	405	300
M18 X 1.5	220	165	350	260	485	355
M20 X 2.5	280	205	440	325	610	450
M20 X 1.5	310	230	650	480	900	665
M24 X 3	480	355	760	560	1050	780
M24 X 2	525	390	830	610	1150	845
M30 X 3.5	960	705	1510	1120	2100	1550
M30 X 2	1060	785	1680	1240	2320	1710
M36 X 3.5	1730	1270	2650	1950	3660	2700
M36 X 2	1880	1380	2960	2190	4100	3220

[1] in-tpi = nominal thread diameter in inches-threads per inch

[2] N· m = newton-meters

[3] ft-lb= foot pounds

[4] mm x pitch = nominal thread diameter in millimeters x thread pitch

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.
All locknuts or lubricated fasteners: Use 75% of torque value. (i.e. 1/2"-13 GR5 = 76 ft-lb; 75% of 76 or .75 x 76 = 57 ft-lb)

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Warranty

Land Pride warrants to the original purchaser that this Land Pride product will be free from defects in material and workmanship beginning on the date of purchase by the end user according to the following schedule when used as intended and under normal service and conditions for personal use.

Overall Unit: One year Parts and Labor

Scarifier Shanks, Skid Shoes & Grader Blades: Considered wear items.

This Warranty is limited to the repair or replacement of any defective part by Land Pride and the installation by the dealer of any such replacement part, and does not cover common wear items. Land Pride reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This Warranty does not apply to any part or product which in Land Pride's judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. Misuse also specifically includes failure to properly maintain oil levels, grease points, and driveline shafts.

Claims under this Warranty should be made to the dealer which originally sold the product and all warranty adjustments must be made through an authorized Land Pride dealer. Land Pride reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty shall not be interpreted to render Land Pride liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, Land Pride shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery or for any other reason.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

This Warranty is not valid unless registered with Land Pride within 30 days from the date of purchase.

IMPORTANT: The Online Warranty Registration should be completed by the dealer at the time of purchase. This information is necessary to provide you with quality customer service.

Model Number _____ **Serial Number** _____

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KUBOTA TRACTOR CORPORATION
1000 Kubota Drive, Grapevine, TX 76051
Telephone: (817) 756-1171

Western Division: 1175 S. Guild Ave., Lodi, CA 95240
Telephone: (209) 334-9910

Midwest Division: 31700 W. 207th ST., Edgerton, KS 66021
Telephone: (913) 215-5915

Central Division: 14855 FAA Blvd., Fort Worth, TX 76155
Telephone: (817) 571-0900

Northern Division: 6300 at One Kubota Way, Groveport, OH 43125
Telephone: (614) 835-1100

Southeast Division: 1025 Northbrook Parkway, Suwanee, GA 30024
Telephone: (770) 995-8855