# 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.

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<thead>
<tr>
<th>Model Number</th>
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## Dealer Contact Information

Name: ______________________

Street: ______________________

City/State: ______________________

Telephone: ______________________

Email: ______________________

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CALIFORNIA PROPOSITION 65

WARNING: Cancer and reproductive harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)
Table of Contents

**Important Safety Information** ........................................... 1
  Safety at All Times .................................................. 1
  Look for the Safety Alert Symbol ..................................... 1
  Safety Labels ........................................................... 6

**Introduction** .............................................................. 8
  Application ............................................................... 8
  Using This Manual ...................................................... 8
  Owner Assistance ........................................................ 8
  Serial Number ........................................................... 8

**Section 1: Assembly & Set-up** .......................................... 9
  Skid Steer/Tractor Requirements ....................................... 9
  Power Machine Weight .................................................. 9
  Torque Requirements ................................................... 9
  Power Machine Shutdown Procedure .................................... 9
  Optional Skid/Loader Plate Assembly .................................. 9
  Gearbox Rest Assembly .................................................. 9
  Motor/Gearbox Assembly ................................................ 10
  Hydraulic Hose Assembly ............................................... 10
  24 Foot Hose Assembly for Tractors .................................. 10
  8 Foot Hose assembly for Skid Steers ............................... 11
  Auger Assembly & Disassembly ......................................... 11
  Auger Assembly .......................................................... 12
  Auger Assembly With Auger Extension ................................ 12
  Auger Disassembly ..................................................... 12
  Auger Extension Disassembly ......................................... 12
  Hook-Up Post Hole Digger .............................................. 12
  Hook-Up Post Hole Digger Hitch Plate ................................ 13
  Hook-Up Hydraulic Hoses to Tractor .................................. 13
  Hook-Up Hydraulic Hoses to Skid Steer ................................ 14
  Unhook Post Hole Digger ............................................... 15

**Section 2: Operating Procedures** ....................................... 16
  Operator’s Responsibilities ............................................ 16
  Dual-Angle Teeth ....................................................... 17
  Transport With Post Hole Digger ....................................... 18
  Operating Instructions .................................................. 18
  Adjust Post Hole Digger Vertically ................................... 19
  General Operation ...................................................... 20

**Section 3: Options & Accessories** ..................................... 21
  Auger Extensions (Accessory) .......................................... 21
  Dirt Augers (Option) .................................................... 21
  Tree Augers (Option) .................................................... 21
  Dirt & Tree Auger Teeth ............................................... 21
  Rock Augers (Option) .................................................... 22
  Bolt-on Rock Heads (Accessory) ....................................... 22
  Rock Auger Teeth ....................................................... 22
  Puff Auger (Option) ...................................................... 23
  Couplers ................................................................. 23
  Hydraulic Motor/Gearboxes ............................................ 23

**Section 4: Maintenance & Lubrication** .................................. 24
  Maintenance ............................................................... 24
  Daily Inspections ........................................................ 24
  Long-Term Storage ....................................................... 24
  Motor & Gearbox Disassembly .......................................... 25
  Disassembly & Assembly of Motor ..................................... 25
  Assembly of Motor & Gearbox ........................................... 25
  Lubrication Points ...................................................... 26
  Gearbox Output Shaft ................................................... 26
  Gear Lube Fluid Level .................................................. 26
  Hydraulic Motor Output Shaft ........................................ 26

**Section 5: Specifications & Capacities** ................................. 27

**Section 6: Features and Benefits** ....................................... 29

**Section 7: Troubleshooting** ............................................. 30

**Section 8: Torque Values Chart** ......................................... 31

**Section 9: Warranty & Legal Disclaimer** ................................ 32

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All other brands and product names are trademarks or registered trademarks of their respective holders.

Printed in the United States of America.

4/3/19 AP-SA20 Hydraulic Post Hole Digger 317-215MK
See previous page for Table of contents.

**Parts Manual QR Locator**

The QR (Quick Reference) code on the cover and to the left will take you to the Parts Manual for this equipment. Download the appropriate App on your smart phone, open the App, point your phone on 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, or have the manuals read to them, 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 the 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 tractor/skid steer and attachment while hooking-up.
- Keep hands, feet, and clothing away from power-driven parts.
- While transporting and operating equipment, watch out for objects overhead and along side 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 involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, 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. The signal words are:

- **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.

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

**Transport 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 tie downs and chains.
- Sudden braking can cause a towed trailer to swerve and upset. Reduce speed if towed trailer is not equipped with brakes.
- Avoid contact with any overhead utility lines or electrically charged conductors.
- Always drive with load on end of loader arms low to the ground.
- Always drive straight up and down steep inclines with heavy end of skid steer or tractor with loader attachment on the “uphill” side.
- Engage park brake when stopped on an incline.
- Maximum transport speed for an attached equipment is 20 mph. DO NOT EXCEED. Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrains require a slower speed.
- As a guideline, use the following maximum speed weight ratios for attached equipment:
  - 20 mph when weight of attached equipment is less than or equal to the weight of machine towing the equipment.
  - 10 mph when weight of attached equipment exceeds weight of machine towing equipment but not more than double the weight.
- IMPORTANT: Do not tow a load that is more than double the weight of the vehicle towing the load.

**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.

**Tire Safety**

- Tire changing can be dangerous and must be performed by trained personnel using the correct tools and equipment.
- 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 hydraulic 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 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 from the equipment 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, 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 equipment safely requires the operator’s full attention. Avoid wearing headphones while operating equipment.

Avoid High Pressure Fluids Hazard

▲ Escaping fluid under pressure can penetrate the skin 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 tight 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, see a doctor familiar with this type of injury immediately. Any fluid injected into the skin or eyes must be treated within a few hours or gangrene may result.

Use Personal Protective Equipment (PPE)

▲ 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.
▲ Avoid wearing headphones while operating equipment.

Use Seat Belt and ROPS

▲ Kubota 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 failing 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 power machine or attachment to lift or transport riders.

Use Safety Lights and Devices

▲ A slow moving excavator can create a hazard when driven on public roads. They are difficult to see, especially at night. Use the Slow Moving Vehicle (SMV) sign when on public roads.
▲ Flashing warning lights and turn signals are recommended whenever driving on public roads.

911
Important Safety Information

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

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 is a serious health hazard.
▲ Store or dispose of unused chemicals as specified by the chemical manufacturer.

Avoid Silica Dust

▲ 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 cannot 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.

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 switch 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.
▲ Detach and store implement in an area where children normally do not play. Secure implement using blocks and supports.

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, and remove switch key to prevent unauthorized starting.
▲ Relieve all hydraulic pressures.
▲ 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.
▲ Detach and store attachment in an area where children normally do not play. Secure attachment by using blocks and supports.

Avoid Silica Dust

▲ 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 cannot 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 is a serious health hazard.
▲ Store or dispose of unused chemicals as specified by the chemical manufacturer.
This page left blank intentionally.
Safety Labels

Your Post Hole Digger 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.

---

**DANGER**

ELECTROCUTION HAZARD UNDERGROUND WIRES

To prevent serious injury or death:

- Do not dig where there are underground wires.
- Check with local authorities before digging.

**838-292C**

Warning: Electrocute Hazard

---

**DANGER**

TO PREVENT SERIOUS INJURY OR DEATH

STAY 10 FT. (3m) OR MORE AWAY UNLESS OPERATING MACHINE 135500

---

**135500**

Danger: Rotating Auger, Stay Away
On all dirt, tree, rock, and puff augers
Warning: Read Manual

Danger: Rotating Auger

Warning: High Pressure
Kubota welcomes you to the growing family of new product owners. This Post Hole Digger 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 Post Hole Digger.

Application
Kubota offers a complete line of Post Hole Diggers designed to meet a wide range of customer needs and applications. Our SA20 Post Hole Digger is hydraulically driven with a planetary gearbox and can accommodate augers ranging from 9" to 36" in diameter. They can be purchased with a hitch plate for attaching to a skid steer or tractor front-end loader equipped with a skid/loader plate. The SA20 features 2 motor options to accommodate hydraulic flow systems ranging from 10 to 30 gpm.

The SA20 is designed to deliver up to 2621 ft-lbs of torque to meet the heavy duty needs of nurseries, landscapers, contractors, construction companies, farmers, ranchers, and municipalities. No matter what your post hole digging needs are, Kubota has a model to meet those needs.

The digging performance can be improved in heavy hardened soil conditions by applying additional down pressure with the loader arms. The ability to reverse auger rotation greatly reduces strain on auger and skid steer/tractor when extracting auger from the ground.

See “Specifications & Capacities” on page 27 and “Features & Benefits” on page 29 for additional information and performance enhancing options.

Using This Manual
• This Operator’s Manual is designed to help familiarize you 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 facing forward in the direction the machine will operate while in use unless otherwise stated.

Definitions

NOTE: A special point of information that the operator should be aware of before continuing.

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 Post Hole Digger 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.

Further Assistance
Your dealer wants you to be satisfied with your new Post Hole Digger. 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

IMPORTANT: A special point of information related to the following topic. Kubota’s intention is this information must be read & noted before continuing.
Skid Steer/Tractor Requirements

This Post Hole Digger is designed to attach to skid steers, track loaders, or tractor front-end loaders with a skid steer type quick attach hitch that meets SAE with the following requirements:

- Hydraulic pressure rating: 1,500 - 3,500 psi
- Hydraulic flow rate:
  - Low flow motor: 6-15 gpm
  - Medium flow motor: 10-20 gpm
  - High flow motor: 15-30 gpm
- Hydraulic Connections: 1 - Duplex outlet

Power Machine Weight

Machine horsepower and weight must be capable of controlling the Post Hole Digger under all operating conditions. Light weight machines must not be used.

⚠️ WARNING

To avoid serious injury or death:

Lightweight power machines may need weight added to the rear to maintain steering control and prevent forward tipping or side tipping caused by a heavy front load or lifting an auger stuck in the ground. Consult your power machine Operator’s Manual to determine proper weight requirements and maximum weight limitations.

Torque Requirements

Refer to “Torque Values Chart” on page 31 to determine correct torque values for common bolts.

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.
3. If shutting down a tractor, put tractor in park or set park brake.
4. Turn off engine, and remove switch key to prevent unauthorized starting.
5. Relieve all hydraulic pressures.
6. If included, raise seat bar and move controls until both lock.
7. Wait for all components to come to a complete stop before leaving the operator’s seat.
8. Use steps, grab-handles, and anti-slip surfaces when stepping on and off the power machine.

Optional Skid/Loader Plate Assembly

The motor/gearbox assembly can be mounted centered on auger hitch (#1) or mounted offset 18” to the right. Two choices are offered to allow accessing hard-to-reach places and to provide best line-of-sight.

Gearbox Rest Assembly

Refer to Figure 1-1:

The auger hitch (#1) is shipped from the factory with gearbox support rest (#2) mounted backwards (not shown) in center mount “A.” Determine which mount (Center Mount “A” or Offset Mount “B”) will be used and reattach support rest facing forward in that mount.

1. Remove nuts (#4), bolts (#3), and gearbox support rest (#2).
2. Turn gearbox support rest (#2) around and reattach it in mount “A” or “B” with removed 3/8"-16 x 4 1/4" GR5 bolts (#3) and hex flange locknuts (#4) as shown.
3. Tighten hex flange locknuts (#4) to the correct torque.
Section 1: Assembly & Set-up

Hydraulic Hose Assembly For Tractors

Refer to Figure 1-3:

3. Thread opposite end of hydraulic hoses (#10) through right-hand hose guide (#2) as shown.
4. Thread hoses (#10) through hose guide (#4) as shown.
5. Remove bolts (#6) and hose cover (#1).
6. Remove plug from motor port “A” and screw o-ring end of straight adapter (#9) to motor port “A” until tight.
7. Screw 90° elbow (#8) to adapter (#9). Draw elbow up snug with open end up. Do not tighten at this time.
8. Remove plug from motor port “B” and screw o-ring end of straight adapter (#9) to motor port “B” until tight.
9. Screw 90° elbow (#8) to adapter (#9). Draw elbow up snug with open end up. Do not tighten at this time.
10. Insert hydraulic hoses (#10) through hose guide (#3) as shown and screw to elbows (#8) until tight.
11. Tighten elbows (#8) to adapters (#9).
12. Replace hose cover (#1) and secure with existing 5/16”-18 x 5/8” GR5 hex flange serrated bolts (#6).
13. Tighten bolts (#6) to the correct torque.

IMPORTANT: Make sure gearbox is mounted with hose guide (#2) on the left-hand side as shown and gearbox support rest (#3) is located directly below the gearbox.

1. Attach knuckle (#4) to upper center mount bracket “A” or to upper offset mount bracket “B” with clevis pin (#6) and cotter pin (#5).
2. Bend both legs of cotter pin to keep cotter pin from falling out.

Hydraulic Hose Assembly

Determine which hitch plate set-up option is included and follow appropriate instructions below:

- Hose assembly for tractor hook-up. Refer to “24 Foot Hose Assembly for Tractors” below.
- Hose assembly for skid steer hook-up. Refer to “8 Foot Hose Assembly for Skid Steers” on page 11.

24 Foot Hose Assembly for Tractors

Refer to Figure 1-3:

NOTE: Pioneer couplers (#11) and straight adapters (#7) are optional. See “Couplers” on page 23 for additional information.

1. Screw MJIC end of adapters (#7) to hydraulic hoses (#10) until tight.
2. Screw quick release couplers (#11) to MORB end (o-ring end) of adapter fittings (#7) until tight.
11

Section 1: Assembly & Set-up

AP-SA20 Hydraulic Post Hole Digger 317-215MK

Table of Contents

Hydraulic Hose Assembly For Skid Steers

Figure 1-4

8 Foot Hose assembly for Skid Steers

Refer to Figure 1-4:

NOTE: Use Kubota’s 90° elbows (#7) if attaching to Kubota CTL.

1. Remove bolts (#6) and hose cover (#1).
2. Remove plug from motor port “A” and screw o-ring end of straight adapter (#9) to motor port “A” until tight.
3. Screw 90° elbow (#8) to adapter (#9). Draw elbow up snug with open end up. Do not tighten at this time.
4. Remove plug from motor port “B” and screw o-ring end of straight adapter (#9) to motor port “B” until tight.
5. Screw 90° elbow (#8) to adapter (#9). Draw elbow up snug with open end up. Do not tighten at this time.
6. Insert hydraulic hoses (#12 & #13) through hose guide (#3) in gearbox housing and screw hoses to elbows (#8) until tight.
7. Tighten elbows (#8) to adapters (#9).
8. Thread hoses (#12 & #13) through left-hand hose guide (#2) as shown.
9. Screw MJIC end of 90° elbows (#7) to hydraulic hoses (#12 & #13) until tight.

10. Select male coupler (#10) or female coupler (#11) that mates with skid steer’s high pressure coupler. Hose (#13) is attached to motor port “A”. Attach selected coupler to hydraulic hose (#13) and tighten.
11. Hose (#12) is attached to motor port “B”. Screw remaining coupler to hydraulic hose (#12) until tight.
12. Replace hose cover (#1) and secure with existing 5/16”-18 x 5/8" GR5 hex flange serrated bolts (#6).
13. Tighten bolts (#6) to the correct torque.
14. Continue with “Auger Assembly & Disassembly” on this page.

Auger Assembly & Disassembly

DANGER

To avoid serious injury or death:
Keep others away from the post hole digger while the auger is rotating. A person can become entangled in the auger or hit by the auger if it swings erratically. Anyone helping should be kept a safe distance (a minimum of 20 feet or 6 meters) from the unit while it is rotating.

WARNING

To avoid serious injury or death:
Do not install a bolt that is longer than what was originally supplied with the auger. Protruding hardware is more likely to entangle a bystander by catching on loose clothing.

IMPORTANT: Use hoist or other lifting device to lift Post Hole Digger. If lifting device is not available, attach Post Hole Digger to a tractor or skid steer and use equipment hydraulics to raise unit. Refer to “Hook-Up Post Hole Digger” on page 12.

NOTE: There are a variety of Dirt, Tree, and Rock Auger sizes and styles available to suit many applications. For detailed information, see “Section 3: Options & Accessories” on page 21.

NOTE: Auger extensions (#7 & #8 in Figure 1-6) are available in two lengths. For detailed information, see “Auger Extensions (Accessory)” on page 21.
Auger Assembly

Refer to Figure 1-5:
1. Slide auger hub (#4) over gearbox output shaft (#1) until mounting hole in gearbox output shaft and 13/16” holes in auger hub are in alignment.
2. Insert 3/4”-10 x 4 1/2” GR5 bolt (#2) and secure with nylock nut (#3). Torque nylock nut tight.

Auger Assembly With Auger Extension

Refer to Figure 1-6:
1. Slide hub of auger extension (#7 or #8) over gearbox output shaft (#1) until mounting hole in output shaft and 13/16” holes in extension hub are in alignment.
2. Insert 3/4”-10 x 4 1/2” GR5 bolt (#2) and secure with nylock nut (#4). Torque nylock nut tight.
3. Slide auger hub (#6) over auger extension (#7 or #8) until 5/8” mounting hole “A” or “B” in extension (#7) or hole “A, B, C” or “D” in extension (#8) align with 9/16” holes in auger hub (#6).
4. Insert 1/2”-13 x 4 1/4” GR5 bolt (#3) through 9/16” holes in auger and auger extension hole and secure with nylock nut (#5). Torque nylock nut tight.
5. Skip to “Hook-Up Post Hole Digger” on page 12.

Auger Disassembly

Refer to Figure 1-5:
1. Remove nylock nut (#3) and bolt (#2).
2. Remove auger (#4) from gearbox output shaft (#1) or auger extension (#7) shown in Figure 1-6.

Auger Extension Disassembly

Refer to Figure 1-6:
1. Remove nylock nut (#4) and bolt (#2).
2. Remove extension (#7 or #8) from gearbox output shaft (#1).

Hook-Up Post Hole Digger

DANGER
To avoid serious injury or death:
A crushing hazard exists while hooking-up and unhooking the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate lift and/or tilt controls while someone is near the power machine and/or attachment.

WARNING
To avoid serious injury or death:
Make sure skid/loader plate is properly attached to the Post Hole Digger. The skid/loader plate must be secured under the auger hitch top angle bar. Lock pins must extend fully through bottom slots in the auger hitch in the locked down position. An improperly attached hitch can allow equipment to fall and/or be thrown towards bystanders and/or operator.
Section 1: Assembly & Set-up

Table of Contents

13

AP-SA20 Hydraulic Post Hole Digger 317-215MK

1. Check for and remove all debris in hitch point areas of skid/loader plate and auger hitch.
2. Raise lock pins on skid/loader plate.
3. Drive skid steer/tractor slowly to Post Hole Digger making sure skid/loader plate is parallel with auger hitch top angle bar.
4. Rotate top of skid steer/tractor tilt arms slightly forward.
5. Position top of skid/loader plate under the auger hitch top angle bar and slowly raise loader arms until skid/loader plate is seated under the top angle bar.
6. Rotate top of skid steer loader arms back until skid/loader plate makes full contact with auger hitch.
7. Lower lock pins on skid/loader plate. Make sure lock pins go through bottom slots in auger hitch and are in the locked down position.

Hook-Up Hydraulic Hoses to Tractor

Refer to Figure 1-8:

1. Connect quick release couplers (#1A & #2A) to the tractor’s high pressure outlets.
2. While seated in the tractor seat, lift Post Hole Digger up until auger is off the ground 1 to 2 inches.
3. With tractor set at an idle, engage hydraulics to view auger rotation. Auger should rotate clockwise when looking down from above. If auger rotates counterclockwise, switch couplers at the duplex out:
   b. Switch quick release couplers (#1A & #2A) at the duplex outlet on the tractor.
4. Return to the tractor and repeat steps 1-3 to verify auger is rotating properly.

5. Secure hydraulic hoses (#1 & #2) with customer supplied ties along tractor loader arm to keep hoses from becoming pinched, stretched, and/or kinked.
6. Cycle loader through complete range of motions to verify hydraulic lines will not become pinched, stretched, and/or kinked. Make any necessary adjustments.

WARNING

To avoid serious injury or death:

Hydraulic fluid under high pressure can penetrate the skin and/or eyes causing a serious injury. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Use a piece of cardboard or wood rather than hands when searching for leaks. A doctor familiar with this type of injury must treat the injury within a few hours or gangrene may result. DO NOT DELAY.

Make sure hydraulic hoses are properly routed without twists to prevent becoming stretched, pinched, or kinked. A damaged hose can burst and leak hydraulic fluid.
Hook-Up Hydraulic Hoses to Skid Steer

**WARNING**

To avoid serious injury or death:

- Hydraulic fluid under high pressure can penetrate the skin and/or eyes causing a serious injury. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Use a piece of cardboard or wood rather than hands when searching for leaks. A doctor familiar with this type of injury must treat the injury within a few hours or gangrene may result. DO NOT DELAY.

- Make sure hydraulic hoses are properly routed without twists to prevent becoming stretched, pinched, or kinked. A damaged hose can burst and leak hydraulic fluid.

**NOTE:** Skid steer hydraulics can vary from one machine to another. Be sure to review “Hydraulic Hook-Up” in your Skid Steer Operator’s Manual before hooking hydraulic hoses to the Skid Steer.

Refer to Figure 1-9:

1. Route hydraulic hoses (#1 & #2) through the most convenient path to access your power equipment couplers. Path shown may not be the most convenient.

**NOTE:** If attaching to a Kubota skid steer, route hydraulic hoses through Kubota’s SVL or SSV Hose Stay as shown in Figure 1-10. Purchase SVL Hose Stay #S6689 or SSV Hose Stay #77700-07225 through your nearest Kubota dealer. Refer to your skid steer Operator’s Manual for more instructions.

2. Clean quick connect couplers of dirt and then connect male and female couplers to the skid steer or tractor outlets. Make sure quick connect couplers have fully engaged. If they have not, check the following:
   a. Make sure couplers are same size and type.
   b. Make sure hydraulic pressure has been released.

3. Attach quick release couplers (male #2A & female #1A) to the skid steer quick release couplers. From inside the skid steer cab, lift Post Hole Digger up until auger is off the ground 1 to 2 inches.

4. With skid steer set at an idle, engage hydraulics to view auger rotation. The auger should rotate clockwise when looking down from above. If auger rotates counterclockwise, switch quick release couplers on hydraulic hoses (#1 & #2) as follows:
   b. Disconnect hose couplers from skid steer outlets and switch male coupler (#1A) with female coupler (#2A) on hydraulic hoses (#1 & #2).

4. Secure hydraulic hoses as needed with zip ties (#3) to keep hoses from becoming pinched, stretched, and/or kinked.

5. Cycle loader through complete range of motions to verify hydraulic lines will not become pinched, stretched, and/or kinked. Make any necessary adjustments.
Unhook Post Hole Digger
Refer to Figure 1-9 on page 14:

⚠️ DANGER
To avoid serious injury or death:
A crushing hazard exists while hooking-up and unhooking the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate lift and/or tilt controls while someone is near the power machine and/or attachment.

1. See “Long-Term Storage” on page 24 before parking Post Hole Digger for a long time.
3. Release all hydraulic system pressure before disconnecting hydraulic hoses from the skid steer/tractor. See your skid steer or tractor Operator’s Manual for additional instructions on how to release hydraulic pressure.
4. Disconnect hydraulic couplers (#1A & #2A) from skid steer/tractor.
5. Store hoses on the Post Hole Digger frame to keep dirt away from the couplers.
6. Disengage lock pins to clear bottom slots in auger hitch.
7. Restart skid steer/tractor and tilt top of skid/loader plate slightly forward.
8. Slowly lower skid/loader plate until it has separated from the auger hitch top angle bar.
9. Back skid steer/tractor slowly away while making sure the skid/loader plate does not interfere with Post Hole Digger.
10. Repeat step 2 above to shut skid steer/tractor down and dismount.
11. Check overturn stability of the unhooked Post Hole Digger. Make sure the unit will not tip over. If needed, add bracing to keep it from overturning.
Operator’s Responsibilities
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 Post Hole Digger. Therefore, it is absolutely essential that no one operates the Post Hole Digger unless they are age 16 or older and have read, fully understood, and are totally familiar with the Operator’s Manual. Make sure the operator has paid particular attention to:

Perform the following inspections before using your Post Hole Digger.

**Operating Checklist**

<table>
<thead>
<tr>
<th>Check</th>
<th>Ref.</th>
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<tbody>
<tr>
<td>Read and follow all safety rules carefully. Refer to “Important Safety Information”:</td>
<td>1</td>
</tr>
<tr>
<td>Make sure all guards and shields are in place. Refer to “Important Safety Information”:</td>
<td>1</td>
</tr>
<tr>
<td>Make sure there are no hydraulic leaks. Refer to “Avoid High Pressure Fluids Hazard”:</td>
<td>3</td>
</tr>
<tr>
<td>Read and follow hook-up &amp; preparation. Refer to “Section 1: Assembly &amp; Set-up”:</td>
<td>9</td>
</tr>
<tr>
<td>Read and follow all operating procedures. Refer to “Section 2: Operating Procedures”:</td>
<td>16</td>
</tr>
<tr>
<td>Read and follow all Maintenance Instructions. See “Section 4: Maintenance &amp; Lubrication”:</td>
<td>24</td>
</tr>
<tr>
<td>Read and follow all Lubrication Instructions. Refer to “Lubrication Points”:</td>
<td>26</td>
</tr>
<tr>
<td>Make sure gearbox is properly lubricated. Refer to gearbox lubrication.</td>
<td>26</td>
</tr>
<tr>
<td>Check equipment initially and periodically for loose hardware. See “Torque Values Chart”:</td>
<td>31</td>
</tr>
</tbody>
</table>

⚠️ DANGER

To avoid serious injury or death:

- Inspect interlock control system regularly and perform required maintenance to keep it operating properly.
- Never bypass or modify a safety device.
- All guards and shields must be installed and in good working condition while operating the implement.
- Never operate equipment from outside the cab.
- Always operate skid steer while seated in the cab with seat bar lowered when equipped and seat belt properly fastened. The operator can be pinched, crushed, or thrown if not properly seated in the cab or if operating loader arms from outside the cab.
- Keep your head, arms, and legs inside the cab while operating the power machine. Any extremity extended outside the cab can be crushed by the loader arms and attachment.
- Make sure the site is free from hazards before drilling. Look for obstacles on the ground, beneath mulching, and below the ground that may need to be removed such as landscape fabric, wire, etc. Hand digging may be necessary to verify the presence of underground materials.
- Keep attachment, loader arms, and/or load away from overhead electrical power lines. Place an orange warning sign under overhead lines indicating type of danger above.
- Keep all persons away from the post hole digger while lowering and raising the unit. A person can be hit, pinched, or crushed by the unit.
- Do not drill through landscape fabric. Prior to drilling, cut a hole in the fabric sufficiently larger than the diameter of the auger to prevent auger entanglement with the fabric. Fabric caught in the auger can pull a bystander into the auger.
- Do not allow anyone to manually guide the auger bit to position its point on the ground while it is rotating. A person will become entangled in the auger or hit by the auger.
- Do not allow anyone to manually push down on the post hole digger, or put anything or anyone on the unit for the purpose of adding weight to the unit. Objects and people can be thrown, pinched, or entangled in the unit.
- Keep others away from the post hole digger while the auger is rotating. A person can become entangled in the auger or hit by the auger if it swings erratically. Anyone helping should be kept a safe distance (a minimum of 20 feet or 6 meters) from the unit while it is rotating.
- Do not remove spoil-pile with hand tools while auger is operating. Doing so can result in serious injury or death.
- Do not go near or under raised lift arms unless an approved lift-arm support is available and is used to secure the lift arms in the raised position.
- Use the skid steer’s alternate emergency exit when exit passage through the front is blocked.
- Do not use hand or foot controls for handholds or steps. Using them for handholds or steps can activate the controls.
- 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.
- Always secure equipment with solid, non-concrete supports before working under it. Never go under equipment supported by concrete blocks or hydraulics. Concrete can break, hydraulic lines can burst, and/or hydraulic controls can be actuated even when power to hydraulics is off.

⚠️ WARNING

To avoid serious injury or death:

- Allow only persons to operate this implement who have fully read and comprehended this manual, who have been properly trained in the safe operation of this implement, and who are age 16 or older. Serious injury or death can result from the inability to read, understand, and follow instructions provided in this manual.
- Always shut power machine down following the “Shutdown Procedure” provided in this manual before leaving the operator’s seat.
- Do not travel across inclines where equipment could slip or roll-over. Consult your power machine Operator’s Manual for acceptable inclines they are capable of crossing.
Never carry riders on the implement or power machine. Riders can obstruct the operator’s view, interfere with control of the equipment, be pinched by moving components, become entangled in rotating components, be struck by objects, be thrown or fall from the equipment, etc.

Hydraulic fluid under high pressure can penetrate the skin and/or eyes causing a serious injury. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Use a piece of cardboard or wood rather than hands when searching for leaks. A doctor familiar with this type of injury must treat the injury within a few hours or gangrene may result. DO NOT DELAY.

Check hitch fit-up frequently. An improper fit-up can cause the attachment to come loose from the loader hitch plate and fall.

Operate only power machines equipped with a certified Roll-Over Protective Structure (ROPS) and seat belt. Fasten seat belt snugly and securely to help protect against serious injury or death from machine overturn.

Always travel with adequate clearance between ground and auger. Hitting an object while traveling can damage equipment and cause operator to lose control.

Always travel with attachment lowered to reduce the chances of tip over due to high center of gravity.

Do not install a bolt that is longer than what was originally supplied with the auger. Protruding hardware is more likely to entangle a bystander by catching on loose clothing.

This attachment has a 3500 psi maximum hydraulic pressure rating. Make sure your powered machine’s hydraulic pressure to this attachment does not exceed 3500 psi. Exceeding this rating can result in equipment damage, serious injury, or death.

Do not use attachment to lift, carry, push or tow other equipment and objects. It is not properly designed or guarded for this use. The operator could lose control and cause a tipping hazard.

Never adjust tractor pressure relief valve for a pressure rating higher than what is recommended by the tractor manufacturer.

Protect freshly dug holes immediately after digging by filling it with a post, covering the hole with a cover capable of supporting a person, or place a physical boundary around the hole to stop entry into the area.

Do not use post hole digger to wrap wire or any other items. Doing so can result in bodily injury and/or damage to the equipment.

Never work near utilities such as gas lines, electrical lines, or other hazards that can cause serious injury or death from electrocution, explosion, or fire.

Never make contact with underground utilities such as electrical power lines, gas lines, phone lines, etc. They can cause serious injury or death from electrocution, explosion, or fire. If in doubt, call 811 (USA) before digging so that they can mark the location of underground services in the area. For contact information, see Dig Safe in the “Important Safety Information” starting on page 1.

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:
Auger tip gets hot after digging. Allow time for the tip to cool before touching or servicing the tip.

Dual-Angle Teeth
Refer to Figure 2-1 & Figure 2-2:
The Auger is shipped with teeth mounted at 40 degrees (see Figure 2-1). If you are experiencing difficulty in penetrating the soil, they can be turned over and mounted at 50 degrees (see Figure 2-2) for a more aggressive bite. Be sure to tighten all mounting hardware to the proper torque when securing teeth to the Auger. See “Torque Values Chart for Common Bolt Sizes” on page 31 for torque ratings.
Transport With Post Hole Digger

**WARNING**

To avoid serious injury or death:

- Cross ditches and enter inclines slowly and carefully. The auger can come in contact with the ground causing damage to the equipment and operator to lose control.
- Always travel straight up and straight down inclines. Make turns only on level ground.
- Slow down when traveling over rough or hilly terrain that can cause equipment to bounce, or to hit obstacles that are close by. Either situation can cause damage and/or the operator to lose control.
- When traveling on public roadways, travel in such a way that faster moving vehicles may pass safely. Use accessory lights, clean reflectors, and a slow moving vehicle sign that is visible from the back to warn operators in other vehicles of your presence. Always comply with all federal, state, and local laws.

1. Select a safe ground travel speed when transporting from one area to another.
2. Transport with cylinders on end of loader arms fully retracted, motor/gearbox housing supported in the rest support, and auger low to the ground at a height that does not block your view.
3. Always travel straight up and straight down inclines. Make turns only on level ground.
4. Enter ditches and inclines slowly to make sure the auger does not dig into the ground. Stop and raise auger if needed to cross a ditch or start up an incline.
5. Reduce skid steer ground speed when turning.
6. Keep away from electrical power lines. Place an orange warning sign under overhead power lines indicating type of danger above.
7. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
8. Reduce transport speed when traveling over rough or hilly terrain.

Operating Instructions

**WARNING**

To avoid serious injury or death:

- Auger point should be on the ground before engaging hydraulics to start drilling. An auger not resting on the ground can swing erratically and damage equipment or hit a bystander.
- Care should always be taken when first starting to drill a hole. The auger, when first entering the soil, can hit a solid object causing damage to the auger and/or auger to swing erratically and hit a bystander.
- Always stop auger from rotating 1 to 2 feet before it is out of the hole. This will keep the auger from wobbling with an unbalanced dirt load.
- Operate only one hydraulic function at a time. Operating two or more functions at a time can cause damage to the equipment and/or operator to lose control.

**IMPORTANT:** Do not reverse auger rotation when raising it up. This will dump soil back into the hole.

**IMPORTANT:** If auger stalls while digging, raise auger to free it. Continue normal digging operations by lowering the auger slowly into the hole.

**IMPORTANT:** If auger starts to screw itself into the soil, stop auger rotation immediately and raise auger to free it. Continue normal digging operations by lowering the auger slowly into the hole.

**IMPORTANT:** If the dirt auger bit can not penetrate an obstruction, change auger head to the optional rock auger head, switch auger bit to the optional rock auger bit, or dig a new hole nearby. See “Options & Accessory” Section in this manual for optional rock auger heads and rock auger bits.

**IMPORTANT:** Some power machines have a hydraulic relief valve to protect the equipment. This valve will open in a stalled situation to allow oil to bypass. Check your power machine Operator’s Manual to see if it is equipped with a relief valve.

**IMPORTANT:** Operate one loader function at a time. Operating two or more functions at a time (loader arms, tilt arms, engine speed, and loader positioning) can lead to damaged equipment.

**IMPORTANT:** Avoid moving or causing side pressure on the auger while in the ground. This can damage the auger and drive components.

**IMPORTANT:** Before digging, rotate auger hitch (#3) horizontal as shown in Figure 2-3. This will put distance between motor/gearbox housing (#1) and support rest (#2). The auger, when first entering soil, could hit a solid object causing auger to swing around and damage equipment. Care should always be taken when first starting to drill a hole.
1. Rotate top of tilt arms back to carry auger low to the ground while traveling between drilling positions.

2. Position skid steer/tractor on the upside of hill when drilling a hole. This will greatly improve balance and down force.

3. Experiment with auger speeds before digging. Increase skid steer/tractor engine speed to increase auger speed and decrease engine speed to reduce auger speed. Run at higher auger speeds when digging in soft and/or sandy soils and at lower auger speeds when digging in hard, rocky, or frozen soils. Normal auger speed is 85 to 100 rpm. Never exceed 110 rpm or the equipment can be damaged.

4. Extend hydraulic cylinders on end of skid steer/tractor loader arms until auger hitch (#3) is horizontal as shown.

5. Maker sure auger rotation is stopped and then lower auger point to the ground.

6. With engine running at a slow speed, start auger turning clockwise. Increase engine speed to desired digging speed.

7. Periodically adjust machine’s position to keep auger vertical while drilling. Be careful not to damage gearbox or auger. Refer to “Adjust Post Hole Digger Vertically” on page 19.

8. Apply down pressure to assist ground penetration. Excessive down pressure can stall auger. If auger speed slows or stops, reduce down pressure.

9. After penetrating the ground approximately 24", stop auger rotation and raise it up to remove soil and debris from the hole. Lower auger back down to continue digging. Dig another 24" and again raise auger up except this time keep auger turning to lessen the strain on the equipment. Stop raising auger within 1 to 2 feet of being out of the hole and lower it back down to continue digging. Repeat this procedure until hole is at its final depth.

10. Allow auger to turn several revolutions at final depth. With auger still turning, raise auger up to within 1 to 2 feet of being out of the hole. Stop auger rotation and continue to raise auger out of the hole.

11. Roll tilt arms into a low carry position when transporting from one digging site to the next. Be careful to watch out for people, obstructions, and uneven terrain.

Refer to Figure 2-3:

Refer to Figure 2-4:
The patent pending vertical indicator arrow (#1), when in view of the operator, helps operator to verify that the Post Hole Digger is operating vertical from front to back.

- Stop skid steer/tractor on a surface that is level side to side.
- Lower loader arms until auger point is resting on the ground at the location the hole is to be drilled.
- Ease skid steer/tractor forward or rearward and/or extend or retract hydraulic cylinders on the end of the skid steer/tractor loader arms until vertical indicator arrow (#1) point is on the “Vertical Line” as shown.

IMPORTANT: Be careful not to move forward or backward while digging except to keep auger vertical. Damage to auger and/or hitch can occur.

- To keep auger vertical while digging, repeat adjustments outlined in step 3 above as needed.
Section 2: Operating Procedures

General Operation

By now you should have thoroughly read your Operator’s Manual, properly attached your Post Hole Digger to your machine, verified auger rotation turns clockwise, and gone over the “Operating Checklist” on page 16. Make sure your operator protective shield or safety door is securely in place. If you plan to dig holes immediately, you should have contacted your local utility companies to make sure it is safe to dig where you plan to work. If you haven’t done all of the things just described above, please stop and do them now. This is a must for your safety and the safety of others.

Now that you are properly briefed, your SA20 Post Hole Digger is properly installed, and you have the proper digging authorization from the utility companies; it’s time to transport to the work site. Make sure that the Post Hole Digger is in the raised position and not in contact with the ground. If you have an extensive distance to travel, you may want to secure the auger with ropes, slings, or chains to keep auger from falling off its support rest causing damage. Select a safe speed and transport to your digging site in such a manner that faster moving vehicles can pass you safely. A slow moving vehicle sign should be employed if you are using a public road or right-of-way.

If attachment is to be operated in reverse, make sure visibility to the rear of the power unit is appropriate for the attachment. Backup camera or mirror is recommended. Maintain cleanliness of lens or mirror.

Once you have safely arrived at your digging site, position your skid steer/tractor so that the auger is directly over the spot where you want to dig a hole. Extend hydraulic cylinders on end of skid steer/tractor loader arms to rotate auger hitch horizontal as shown in Figure 2-3 on page 19. Lower skid steer/tractor arms and auger until auger point is on the ground where the hole is to be dug. If needed, adjust skid steer/tractor position forward or rearward to align auger vertically.

Do not operate Post Hole Digger with auger more than 2” or 3” above ground. The auger could swing erratically causing injury to operator and damage to equipment.

With engine at idle, engage hydraulic drive circuit and raise engine rpm to operate Post Hole Digger at its rated hydraulic flow. Auger should be turning clockwise at an approximate speed of 85 to 100 rpm. Do not operate auger above 110 rpm or damage to the Post Hole Digger and skid steer/tractor could result. Use loader arm controls to lower auger into the ground. After penetrating the ground approximately 24”, stop auger rotation and raise auger up to remove soil and debris from the hole. Lower auger back down and continue digging. Dig another 24” and again raise auger up except this time keep auger turning to lessen the strain on the equipment. Stop raising auger within 1 to 2 feet of being out of the hole and lower auger back down to continue digging.

Repeat this procedure until hole is at its final depth. Allow auger to turn several more revolutions at final depth. With auger still turning, raise auger up to within 1 to 2 feet of being out of the hole. Stop auger rotation and continue to raise auger out of the hole.

Periodically adjust skid steer/tractor position to keep auger vertical while digging the hole. Use vertical indicator as a guide. Be careful not to damage gearbox or auger.

Apply down pressure to assist ground penetration. If auger speed slows or stops, reduce down pressure. Excessive down pressure can stall auger. Stop auger rotation immediately if an obstacle is encountered that stalls the auger while digging. Reverse auger rotation and lift up to clear the obstacle.

Once hole is completed, disengage hydraulic drive, raise auger to a point where the auger tip is approximately 12“ off of the ground, release park brake and move away from the hole.

Before dismounting your skid steer/tractor; you must always set park brake, lower your loaders arms and attachment to the ground, turn off machine, and remove ignition key. If you must park on a hillside you should always chock skid steer/tractor wheels for an extra measure of safety.

With a little practice and experience you should become very good at operating your Kubota SA20 Series Post Hole Digger.

See “Features and Benefits” section or “Product Specifications” for additional information on performance enhancing options.
Auger Extensions (Accessory)
Refer to Figure 3-1:
Kubota offers as an accessory 24" and 48" long auger extensions with mounting holes (A, B, C, & D) spaced every 12".

<table>
<thead>
<tr>
<th>Auger Extensions (Option)</th>
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<tbody>
<tr>
<td>Part No.</td>
</tr>
<tr>
<td>317-129A</td>
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<tr>
<td>317-131A</td>
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</table>

Dirt Augers (Option)
Refer to Figure 3-2:

<table>
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<th>Dirt Augers</th>
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<tbody>
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<td>Part No.</td>
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</tr>
</tbody>
</table>

Tree Augers (Option)
Refer to Figure 3-2:
Tree augers are excellent for digging holes that are larger in diameter at the top and smaller at the bottom. This hole design is good for planting bush, shrub, and tree bulbs at soil level and allowing the root system to reach down underneath to collect needed nutrients.

<table>
<thead>
<tr>
<th>Tree Augers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part No.</td>
</tr>
<tr>
<td>317-110A</td>
</tr>
<tr>
<td>317-116A</td>
</tr>
<tr>
<td>317-122A</td>
</tr>
</tbody>
</table>

Dirt & Tree Auger Teeth
Refer to Figure 3-4:

<table>
<thead>
<tr>
<th>Dirt &amp; Tree Auger Teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part No.</td>
</tr>
<tr>
<td>820-233C</td>
</tr>
</tbody>
</table>

Dirt Auger Extensions
Figure 3-1

Dirt Augers
Figure 3-2

Tree Augers
Figure 3-3

Dirt & Tree Auger Teeth
Figure 3-4
Rock Augers (Option)
Refer to Figure 3-5:

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>317-280A</td>
<td>SA 6&quot; X 2&quot; HEX HUB ROCK AUGER</td>
</tr>
<tr>
<td>317-263A</td>
<td>SA 9&quot; X 2&quot; HEX HUB ROCK AUGER</td>
</tr>
<tr>
<td>317-264A</td>
<td>SA 12&quot; X 2&quot; HEX HUB ROCK AUGER</td>
</tr>
<tr>
<td>317-265A</td>
<td>SA 15&quot; X 2&quot; HEX HUB ROCK AUGER</td>
</tr>
<tr>
<td>317-266A</td>
<td>SA 18&quot; X 2&quot; HEX HUB ROCK AUGER</td>
</tr>
<tr>
<td>317-267A</td>
<td>SA 24&quot; X 2&quot; HEX HUB ROCK AUGER</td>
</tr>
</tbody>
</table>

Bolt-on Rock Heads (Accessory)
Refer to Figure 3-6:
The SA20 Dirt Augers can be converted to Rock Augers with this accessory. Remove existing dirt auger teeth and point. Attach rock head (#1) to the auger with 1/2"-13 GR5 bolt (#2) and locknut (#3). Clamp rock head to the auger’s spiral flighting with wear caps (#4 & #5), 1/2"-13 GR5 bolts (#6), and locknuts (#3). Tighten locknuts (#3) to the correct torque.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>317-274A</td>
<td>SA 6&quot; Bolt-on Rock Head Assembly</td>
</tr>
<tr>
<td>317-275A</td>
<td>SA 9&quot; Bolt-on Rock Head Assembly</td>
</tr>
<tr>
<td>317-276A</td>
<td>SA 12&quot; Bolt-on Rock Head Assembly</td>
</tr>
<tr>
<td>317-277A</td>
<td>SA 15&quot; Bolt-on Rock Head Assembly</td>
</tr>
<tr>
<td>317-278A</td>
<td>SA 18&quot; Bolt-on Rock Head Assembly</td>
</tr>
<tr>
<td>317-279A</td>
<td>SA 24&quot; Bolt-on Rock Head Assembly</td>
</tr>
</tbody>
</table>

Rock Auger Teeth
Refer to Figure 3-7:

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>820-695C</td>
<td>Belltec Auger Tooth (For Rock Augers)</td>
</tr>
<tr>
<td>820-713C</td>
<td>Pengo Rock Auger Tooth (Bolt-on Rock Heads)</td>
</tr>
</tbody>
</table>
Puff Auger (Option)
Refer to Figure 3-8:
The puff auger is a 2" rock drill used for drilling T-post holes in tough conditions.

Couplers
Refer to Figure 3-9:
SMALL FLAT FACE COUPLERS . . . . . . . . . . . . . . .301-505A
Small flat face couplers consist of one small flat face male coupler, one small flat face female coupler, and two 90° elbows.

Hydraulic Motor/Gearboxes
Refer to Figure 3-10:
HYD MOTOR/GEARBOX MED (10-20 gpm) . . . . . .317-209A
HYD MOTOR/GEARBOX HI (15-30 gpm) . . . . . . . .317-217A
Three motor/gearbox assembly options are offered to meet your hydraulic flow requirements. All are interchangeable and do not require adapter kits. Compare your skid steer/tractor rating with ratings above. If your hydraulic motor is not compatible with your skid steer/tractor, you should replace it with one of the assemblies above that is compatible.

NOTE: The SA20 gearbox is compatible with all three hydraulic motors. If preferred, you can order an alternate motor and decal from your nearest Kubota dealer to meet your machine flow requirements. When changing motors, be sure to also replace flow decal on gearbox.
Section 4: Maintenance & Lubrication

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

Read and obey all safety labels on the Post Hole Digger. Securely block raised equipment before working under or around it. Do not allow anyone to operate or perform maintenance on this attachment who has not been properly trained in its safe operation. Do not alter equipment in a way which will adversely affect its performance or reliability, or for a purpose the product is not designed.

DANGER
To avoid serious injury or death:
• Always shut power machine down using “Power Machine Shutdown Procedure” on page 9 before dismounting the power machine and/or allowing anyone to come near the power machine and attachment.
• All guards and shields must be installed and in good working condition while operating the attachment.
• Keep all persons and animals away from rotating components. They can become entangled in the equipment.
• Always secure equipment with solid, non-concrete supports before working under it. Never go under equipment supported by concrete blocks or hydraulics. Concrete can break, hydraulic lines can burst, and/or hydraulic controls can be actuated even when power to hydraulics is off.

WARNING
To avoid serious injury or death:
• Do not alter attachment or replace parts on the attachment with other brands. Other brands may not fit properly or meet OEM specifications. They can weaken the integrity and impair the safety, function, performance, and life of the attachment. Replace parts only with genuine OEM parts.
• Allow only persons to perform maintenance on this implement who have been properly trained in its safe operation.
• Perform scheduled maintenance. Check for loose hardware, missing parts, broken parts, structural cracks, and excessive wear. Make repairs before putting implement back into service.
• Make sure safety labels are in their proper location and are in good condition before operating the attached implement. Read and obey all instructions on the labels.
• Backup alarm must be in good working order to warn others. Use a backup camera or rear-view mirror that is in good condition to help see undesirable situations behind the unit. Drive at a slower speed to compensate for blind spots.

Daily Inspections
1. Inspect auger point and teeth for wear and loose fit. Keep cutting edges sharp. Sharp cutting edges dig easier and better.
2. Inspect auger flighting for wear, bend, and cracks.
3. Inspect auger mounting hardware for wear, bend, and loose fit.
4. Inspect all connecting pins and hardware for wear, bend, and loose fit.
5. Inspect output shaft for bend and wear.
6. Check gearbox fluid level periodically. Refer to “Gear Lube Fluid Level” on page 26 for detailed instructions.
7. Replace all worn, damaged, or illegible safety labels by obtaining new labels from your Kubota dealer.

Long-Term Storage
Clean, inspect, and make necessary repairs to the Post Hole Digger when storing it for long periods and when storing it at the end of a working season. This will help ensure the auger is ready for field use the next time you hook-up to it.

1. Clean dirt and grease that may have accumulated on the unit. Scrape off compacted dirt and then wash thoroughly with a garden hose. A coating of oil may also be applied to the spiral flights to minimize oxidation.
2. Check auger flighting for wear, bend, and cracks and repair or replace as needed.
3. Inspect auger for loose, damaged, or worn components and adjust or replace as needed.
4. Repaint parts where paint is worn or scratched to prevent rust. Ask your Kubota dealer for touch-up paint. Paint is available in aerosol can, quarts, and gallon sizes. See chart below.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>821-070C</td>
<td>GLOSS BLACK ENAMEL SPRAY CAN</td>
</tr>
<tr>
<td>821-070CTU</td>
<td>GLOSS BLACK ENAMEL BOTTLE &amp; BRUSH</td>
</tr>
<tr>
<td>821-070CQT</td>
<td>GLOSS BLACK ENAMEL QUART</td>
</tr>
<tr>
<td>821-070CGL</td>
<td>GLOSS BLACK ENAMEL GALLON</td>
</tr>
</tbody>
</table>

5. Replace all damaged or missing decals.
7. Store unit on a level surface in a clean, dry place. Be sure unit is properly supported so as not to fall on any one during storage.
8. Follow “Unhook Post Hole Digger” on page 15 when disconnecting skid steer/tractor from Post Hole Digger.

Touch-Up Paint

5. Replace all damaged or missing decals.
7. Store unit on a level surface in a clean, dry place. Be sure unit is properly supported so as not to fall on any one during storage.
8. Follow “Unhook Post Hole Digger” on page 15 when disconnecting skid steer/tractor from Post Hole Digger.
Motor & Gearbox Disassembly

Refer to Figure 4-1:

The gearbox and motor will need to be removed from the motor/gearbox housing to lubricate. To do this, the Post Hole Digger should be hooked-up to the skid steer or tractor. The Post Hole Digger hitch should be resting on the ground and auger laying horizontally on the ground.

2. Disconnect hydraulic hoses from skid steer/tractor.
3. Remove auger or auger extension from gearbox output shaft. Refer to “Auger Assembly & Disassembly” on page 11 for detailed instructions.
4. Remove bolts (#5) and hose cover (#1) from gearbox housing (#2).
5. Mark hydraulic hose and elbow (#8A) with tape or other method to keep track of it.
6. Unscrew 90° elbows (#8A & #8B) from straight adapters (#9A & #9B).
7. Remove bolts (#3) and lock washers (#7) from gearbox (#11).
8. Remove motor/gearbox (#12 & #11) from motor/gearbox housing (#2).

Disassembly & Assembly of Motor

Hydraulic motor (#12) needs to be separated from gearbox (#11) only when lubricating hydraulic motor output shaft.

1. Remove bolts (#4) and lock washers (#6) from hydraulic motor (#12).
2. Separate motor (#12) from gearbox (#11). Be careful not to damage O-ring (#10).
4. Inspect O-ring (#10). Make sure it is properly seated in motor (#12) and not damaged. Replace O-ring if damaged.
5. Reattach hydraulic motor (#12) to gearbox (#11) with 1/2"-13 x 1 1/2" GR5 bolts (#4) and lock washers (#6). Tighten bolts (#4) to the correct torque.

Assembly of Motor & Gearbox

1. Align adapters (#9A & #9B) with motor/gearbox opening “A” and insert motor/gearbox (#12 & #11) in motor/gearbox housing (#2).
2. Secure motor/gearbox (#12 & #11) to motor/gearbox housing (#2) with 5/8"-11 x 2" GR5 bolts (#3) and lock washers (#7). Tighten bolts (#3) to the correct torque.
3. Screw elbow (#8B) to adapter (#9B) until tight.
4. Screw elbow (#8A) to adapter (#9A) until tight.
5. Attach hose cover (#1) to motor/gearbox housing (#2) with 5/16"-18 x 5/8" GR5 hex flange serrated bolts (#5). Tighten bolts (#5) to the correct torque.
Lubrication Points

### Gearbox Output Shaft

Type of Lubrication: Multi-purpose grease  
Quantity = Light film

### Gear Lube Fluid Level

The motor/gearbox should be removed to check, add, and/or change gearbox oil. Refer to “Motor & Gearbox Disassembly” on page 25 for detailed instructions.

Change oil after the first 50 hours of operation. Then every 100 hours or 12 months whichever comes first.

Check oil weekly before use as follows: Lay unit horizontal with oil plugs on both sides. Remove plug located above center. If oil level is below bottom of plug hole, add oil through same plug hole until level with bottom of plug hole.

Quantity: Fill to bottom of plug hole. Do not overfill. Replace oil plug when finished.

Type of API-GL-5 lubricant: SAE 90 @ 35°F min. temperature

### Hydraulic Motor Output Shaft

The motor/gearbox must be removed and disassembled to lubricate motor output shaft. Refer to “Motor & Gearbox Disassembly” on page 25 for detailed instructions.

Type of Lubrication: Multi-purpose grease  
Quantity = Light film
# Section 5: Specifications & Capacities

## SA20 Model

<table>
<thead>
<tr>
<th>Specifications &amp; Capacities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydraulic requirements</strong></td>
</tr>
<tr>
<td><strong>Base Weight without Options</strong></td>
</tr>
<tr>
<td><strong>Auger length</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Auger flighting thickness</strong></td>
</tr>
<tr>
<td><strong>Auger pipe</strong></td>
</tr>
<tr>
<td><strong>Auger teeth</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Number of auger teeth</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Hex Head Tree Augers</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Rock Augers</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Auger pilot</strong></td>
</tr>
<tr>
<td><strong>Auger drive</strong></td>
</tr>
<tr>
<td><strong>Gearbox</strong></td>
</tr>
<tr>
<td><strong>Gearbox output shaft</strong></td>
</tr>
<tr>
<td><strong>Gearbox API-GL-5 oil weight</strong></td>
</tr>
<tr>
<td><strong>Gearbox oil capacity</strong></td>
</tr>
<tr>
<td><strong>Puff auger part # . . . . . . 317-318A</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

## Options and Accessories

<table>
<thead>
<tr>
<th>Hitch options &amp; weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal quick attach hitch that meets SAE standards:</td>
</tr>
<tr>
<td>With 8 foot (2.44 m) hoses for skid steer mount = 127 lbs (57.6 kg)</td>
</tr>
<tr>
<td>With 24 foot (7.32 m) hoses for tractor front loader mount = 145 lbs (65.8 kg)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hydraulic motor options &amp; weights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medium flow</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>High flow</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Auger sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dirt</strong></td>
</tr>
<tr>
<td>(15.2 cm, 22.9 cm, 30.5 cm, 38.1 cm, 45.7 cm, 61.0 cm, 76.2 cm, &amp; 91.4 cm)</td>
</tr>
<tr>
<td><strong>Tree</strong></td>
</tr>
<tr>
<td>24&quot;, 30&quot;, &amp; 36&quot;</td>
</tr>
<tr>
<td>(61.0 cm, 76.2 cm, &amp; 91.4 cm)</td>
</tr>
<tr>
<td><strong>Rock</strong></td>
</tr>
<tr>
<td>6&quot;, 9&quot;, 12&quot;, 15&quot;, 18&quot;, &amp; 24&quot;</td>
</tr>
<tr>
<td>(15.2 cm, 22.9 cm, 30.5 cm, 38.1 cm, 45.7 cm, &amp; 61.0 cm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bolt-on Rock Head Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot;, 9&quot;, 12&quot;, 15&quot;, 18&quot;, or 24&quot; (15.2 cm, 22.9 cm, 30.5 cm, 38.1 cm, 45.7 cm, or 61.0 cm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Auger extensions (Accessories)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot; (5.1 cm) Hex extension: 24&quot; = 34 lbs and 48&quot; = 58 lbs</td>
</tr>
<tr>
<td>(61.0 cm = 15.4 kg and 1.22 m = 26.3 kg)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coupler options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pioneer, large flat face, or small flat face = 3 lbs (1.4 kg)</td>
</tr>
</tbody>
</table>
Post Hole Digger For Skid/Loader Hitch Plate, Center & Offset Gearbox Mount

AUGER DIA.  
(15.2 cm, 22.9 cm, 30.5 cm, 38.1 cm, 45.7 cm, 61.0 cm, 76.2 cm, & 91.4 cm)
## Table of Contents

### Section 6: Features and Benefits

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skid steer type quick attach that meets SAE</td>
<td>Fits a wide range of tractors and skid steers.</td>
</tr>
<tr>
<td></td>
<td>Easy hook-up and unhook capabilities.</td>
</tr>
<tr>
<td></td>
<td>Loader arms can be used to apply additional down force.</td>
</tr>
<tr>
<td>Center and 18&quot; offset mounts on auger hitch</td>
<td>Choice of two motor/gearbox mounting points allows operator to pick which</td>
</tr>
<tr>
<td></td>
<td>mount is best for accessing hard-to-reach places and for best line-of-sight.</td>
</tr>
<tr>
<td></td>
<td>Steps are incorporated into mounting points for safe entry to skid steers.</td>
</tr>
<tr>
<td>Gusseted corners &amp; hitch bar</td>
<td>Provides added strength where others do not.</td>
</tr>
<tr>
<td>Dual openings for hose routing</td>
<td>Allows hoses to be routed out either side of hitch frame.</td>
</tr>
<tr>
<td>Patent pending vertical indicator</td>
<td>Indicates when auger is vertical, makes it easier to drill straight vertical holes.</td>
</tr>
<tr>
<td>2&quot; Hex output shaft</td>
<td>High torque resistance.</td>
</tr>
<tr>
<td>Choice of drive motors</td>
<td>Two flow ranges (10-20 gpm, and 15-30 gpm) cover a wide range of skid steers and tractors.</td>
</tr>
<tr>
<td>Hydraulic hoses routed out top of motor/gearbox housing</td>
<td>Allows motor/gearbox housing to follow auger into hole and dig a deeper hole without damaging hoses. Some competitors don’t offer this.</td>
</tr>
<tr>
<td>Large selection of augers</td>
<td>Variety of Dirt, Tree, and Rock Auger sizes and styles to suit many applications.</td>
</tr>
<tr>
<td>Large selection of Bolt-on Rock Heads (Accessory)</td>
<td>Pengo Dirt Augers can be converted to Rock Augers with this accessory.</td>
</tr>
<tr>
<td>Puff auger</td>
<td>Used for drilling 2&quot; rock T-post holes in tough conditions.</td>
</tr>
</tbody>
</table>
# Troubleshooting Chart

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auger will not dig</td>
<td>Teeth are dull.</td>
<td>Sharpen or replace teeth.</td>
</tr>
<tr>
<td>Auger is turning too fast and bouncing.</td>
<td></td>
<td>Reduce engine speed.</td>
</tr>
<tr>
<td>Auger is encountering rocks, roots, or other obstructions.</td>
<td></td>
<td>Lift auger from hole and remove obstruction or change location.</td>
</tr>
<tr>
<td>Tractor/skid steer is not positioned properly.</td>
<td></td>
<td>Reposition skid steer/tractor.</td>
</tr>
<tr>
<td>Auger digs so far, but will not dig deeper</td>
<td>Soil could have hardpan layer below surface.</td>
<td>Use tractor to push auger into ground. May need to use an extension.</td>
</tr>
<tr>
<td>Auger is digging at an angle</td>
<td>Skid steer/tractor moved on its own while auger was in the hole.</td>
<td>Always make sure gear selector is in neutral or park and brakes are set.</td>
</tr>
<tr>
<td>Auger is encountering rocks, roots, or other obstructions.</td>
<td></td>
<td>Be careful not to damage gearbox or auger when moving. While digging, move skid steer/tractor in small increments to keep the hole straight.</td>
</tr>
<tr>
<td>Excessive oil heating</td>
<td>Flow in hydraulic line is restricted due to dirt particles in fittings and twisted hydraulic hoses.</td>
<td>Remove dirt particles in fittings and untwist hydraulic hoses that may be pinched or kinked.</td>
</tr>
<tr>
<td></td>
<td>Defective or mismatched coupler.</td>
<td>Replace with proper couplers.</td>
</tr>
<tr>
<td></td>
<td>Hydraulic fluid is dirty.</td>
<td>Replace hydraulic fluid and filter.</td>
</tr>
<tr>
<td></td>
<td>Insufficient quantity of hydraulic fluid.</td>
<td>Fill reservoir to proper level.</td>
</tr>
<tr>
<td></td>
<td>Digging load is excessive.</td>
<td>Increase reservoir storage capacity.</td>
</tr>
<tr>
<td></td>
<td>Auger motor does not match skid steer/tractor hydraulic flow.</td>
<td>Change motor to match.</td>
</tr>
<tr>
<td>Gearbox is damaged</td>
<td>No oil in Gearbox.</td>
<td>Check oil level in gearbox per instructions.</td>
</tr>
<tr>
<td></td>
<td>Oil not changed per instructions.</td>
<td>Change oil per instructions.</td>
</tr>
<tr>
<td>Jerky operation</td>
<td>Cold oil or air in hydraulic lines.</td>
<td>Allow time for the hydraulic oil to warm up.</td>
</tr>
<tr>
<td>Insufficient digging power</td>
<td>Excessive wear of auger teeth or point.</td>
<td>Replace auger teeth or point.</td>
</tr>
<tr>
<td></td>
<td>Low system pressure. (psi)</td>
<td>Check system with pressure gauge. If low, investigate cause.</td>
</tr>
<tr>
<td></td>
<td>Relief valve is damaged or is set wrong.</td>
<td>Refer to skid steer/tractor or Operator’s Manual.</td>
</tr>
<tr>
<td></td>
<td>Excessive digging load.</td>
<td>Reduce load to within machine specifications.</td>
</tr>
<tr>
<td>Hydraulic Oil leaks</td>
<td>Loose or damaged hoses.</td>
<td>Tighten or replace hydraulic hoses.</td>
</tr>
<tr>
<td></td>
<td>Loose or damaged fittings.</td>
<td>Tighten or replace hydraulic fittings.</td>
</tr>
<tr>
<td></td>
<td>Hydraulic motor seals and gaskets are worn or damaged.</td>
<td>See Dealer for repair.</td>
</tr>
<tr>
<td>Auger turns in reverse direction</td>
<td>Hydraulic hoses are reversed at the couplers.</td>
<td>Re-install hoses correctly.</td>
</tr>
<tr>
<td></td>
<td>Tractor/skid steer control lever operated incorrect</td>
<td>Reverse skid steer/tractor control lever direction.</td>
</tr>
<tr>
<td>Auger speed is slow</td>
<td>Low hydraulic flow through the system.</td>
<td>Check with flow meter. If low, investigate and correct.</td>
</tr>
<tr>
<td></td>
<td>Flow in hydraulic line is restricted due to dirt particles in fittings and twisted hydraulic hoses.</td>
<td>Remove dirt particles in fittings and untwist hydraulic hoses that may be pinched or kinked.</td>
</tr>
<tr>
<td></td>
<td>Fittings and/or connections are too small.</td>
<td>Replace with proper size fittings and/or connections.</td>
</tr>
<tr>
<td></td>
<td>Dirty oil filter.</td>
<td>Replace oil filter.</td>
</tr>
<tr>
<td></td>
<td>Worn or damaged hydraulic pump.</td>
<td>See dealer for repair.</td>
</tr>
<tr>
<td></td>
<td>Excessive wear of auger teeth or point.</td>
<td>Replace auger teeth and/or point.</td>
</tr>
</tbody>
</table>
# Torque Values Chart for Common Bolt Sizes

<table>
<thead>
<tr>
<th>Bolt Size (inches)</th>
<th>Grade 2</th>
<th>Grade 5</th>
<th>Grade 8</th>
<th>Bolt Size (Metric)</th>
<th>Class 5.8</th>
<th>Bolt Head Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; - 20</td>
<td>N·m 7.4</td>
<td>N·m 5.6</td>
<td>N·m 11</td>
<td>M 5 X 0.8</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ft-lb 5.6</td>
<td>ft-lb 11</td>
<td>ft-lb 8</td>
<td>M 6 X 1</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>- 28</td>
<td>8.5</td>
<td>6</td>
<td>13</td>
<td>M 8 X 1.25</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>5/16&quot; - 18</td>
<td>15</td>
<td>11</td>
<td>24</td>
<td>M 8 X 1</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>5/16&quot; - 24</td>
<td>17</td>
<td>13</td>
<td>26</td>
<td>M 8 X 1.25</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>3/8&quot; - 16</td>
<td>27</td>
<td>20</td>
<td>42</td>
<td>M 6 X 1</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>3/8&quot; - 24</td>
<td>31</td>
<td>22</td>
<td>47</td>
<td>M 10 X 0.75</td>
<td>39</td>
<td>29</td>
</tr>
<tr>
<td>7/16&quot; - 14</td>
<td>43</td>
<td>32</td>
<td>67</td>
<td>M 10 X 1.75</td>
<td>58</td>
<td>42</td>
</tr>
<tr>
<td>7/16&quot; - 20</td>
<td>49</td>
<td>36</td>
<td>75</td>
<td>M 12 X 1.5</td>
<td>75</td>
<td>55</td>
</tr>
<tr>
<td>1/2&quot; - 13</td>
<td>66</td>
<td>49</td>
<td>105</td>
<td>M 8 X 1</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>1/2&quot; - 20</td>
<td>75</td>
<td>55</td>
<td>115</td>
<td>M 12 X 1.5</td>
<td>60</td>
<td>44</td>
</tr>
<tr>
<td>9/16&quot; - 12</td>
<td>95</td>
<td>70</td>
<td>150</td>
<td>M 6 X 1.5</td>
<td>90</td>
<td>66</td>
</tr>
<tr>
<td>9/16&quot; - 18</td>
<td>105</td>
<td>79</td>
<td>165</td>
<td>M 10 X 1.5</td>
<td>145</td>
<td>105</td>
</tr>
<tr>
<td>5/8&quot; - 11</td>
<td>130</td>
<td>97</td>
<td>205</td>
<td>M 10 X 1.5</td>
<td>155</td>
<td>115</td>
</tr>
<tr>
<td>5/8&quot; - 18</td>
<td>150</td>
<td>110</td>
<td>230</td>
<td>M 12 X 1.5</td>
<td>145</td>
<td>105</td>
</tr>
<tr>
<td>3/4&quot; - 10</td>
<td>235</td>
<td>170</td>
<td>360</td>
<td>M 12 X 1.5</td>
<td>155</td>
<td>115</td>
</tr>
<tr>
<td>3/4&quot; - 16</td>
<td>260</td>
<td>190</td>
<td>405</td>
<td>M 14 X 2</td>
<td>145</td>
<td>105</td>
</tr>
<tr>
<td>7/8&quot; - 9</td>
<td>225</td>
<td>165</td>
<td>585</td>
<td>M 14 X 2</td>
<td>155</td>
<td>115</td>
</tr>
<tr>
<td>7/8&quot; - 14</td>
<td>250</td>
<td>185</td>
<td>640</td>
<td>M 16 X 2</td>
<td>145</td>
<td>105</td>
</tr>
<tr>
<td>1&quot; - 8</td>
<td>340</td>
<td>250</td>
<td>875</td>
<td>M 16 X 2</td>
<td>155</td>
<td>115</td>
</tr>
<tr>
<td>1&quot; - 12</td>
<td>370</td>
<td>275</td>
<td>955</td>
<td>M 16 X 1.5</td>
<td>155</td>
<td>115</td>
</tr>
<tr>
<td>1-1/8&quot; - 7</td>
<td>480</td>
<td>355</td>
<td>1080</td>
<td>M 18 X 1.5</td>
<td>155</td>
<td>115</td>
</tr>
<tr>
<td>1-1/8&quot; - 12</td>
<td>540</td>
<td>395</td>
<td>1210</td>
<td>M 18 X 1.5</td>
<td>155</td>
<td>115</td>
</tr>
<tr>
<td>1-1/4&quot; - 7</td>
<td>680</td>
<td>500</td>
<td>1520</td>
<td>M 18 X 2.5</td>
<td>160</td>
<td>115</td>
</tr>
<tr>
<td>1-1/4&quot; - 12</td>
<td>750</td>
<td>555</td>
<td>1680</td>
<td>M 18 X 2.5</td>
<td>195</td>
<td>145</td>
</tr>
<tr>
<td>1-3/8&quot; - 6</td>
<td>890</td>
<td>655</td>
<td>1990</td>
<td>M 20 X 2</td>
<td>205</td>
<td>160</td>
</tr>
<tr>
<td>1-3/8&quot; - 12</td>
<td>1010</td>
<td>745</td>
<td>2270</td>
<td>M 20 X 2.5</td>
<td>280</td>
<td>205</td>
</tr>
<tr>
<td>1-1/2&quot; - 6</td>
<td>1180</td>
<td>870</td>
<td>2640</td>
<td>M 20 X 1.5</td>
<td>310</td>
<td>230</td>
</tr>
<tr>
<td>1-1/2&quot; - 12</td>
<td>1330</td>
<td>980</td>
<td>2970</td>
<td>M 20 X 1.5</td>
<td>310</td>
<td>230</td>
</tr>
</tbody>
</table>

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

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
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 and Driveline:** One year Parts and Labor

**Auger:** One year (somewhat considered a wear item)

**Gearbox:** 5 years on housing, gears, and shafts

**Hydraulic Motor:** 5 years

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 original 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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