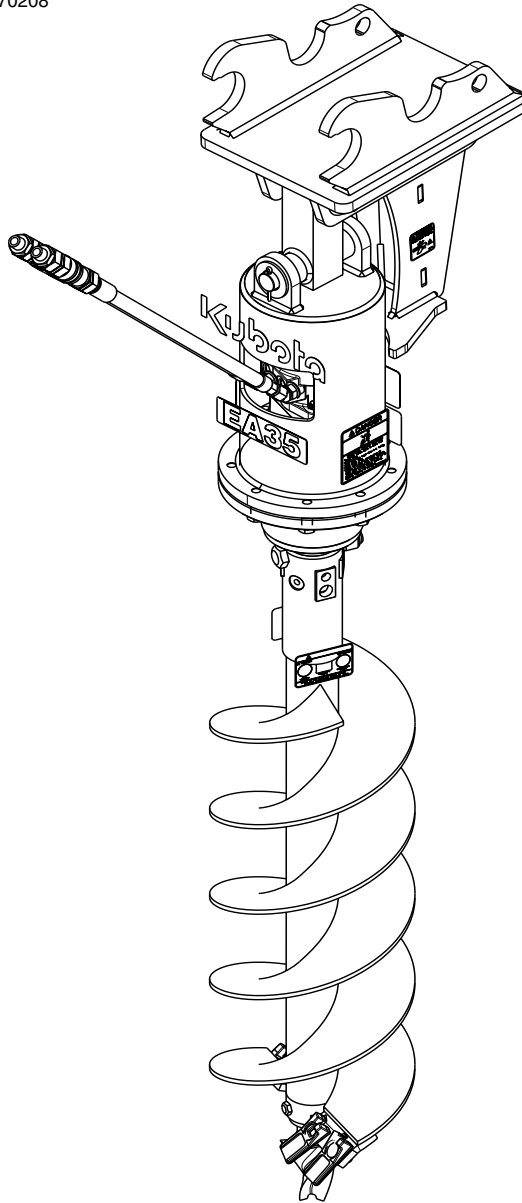


# Excavator Auger

AP-EA35

70208



**317-253MK**  
**Operator's Manual**

**Kubota®**



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

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

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

## 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.

<b>Model Number</b>	
<b>Serial Number</b>	
<b>Machine Height</b>	
<b>Machine Length</b>	
<b>Machine Width</b>	
<b>Machine Weight</b>	
<b>Delivery Date</b>	
<b>First Operation</b>	
<b>Accessories</b>	<hr/> <hr/> <hr/>

## Dealer Contact Information


**Name:** \_\_\_\_\_

**Street:** \_\_\_\_\_

**City/State:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_

**Email:** \_\_\_\_\_

 <b>California Proposition 65</b> <b>WARNING:</b> Cancer and reproductive harm - <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
---

<b>Important Safety Information</b> .....	<b>1</b>	<b>Section 2: Operating Procedures</b> .....	<b>22</b>
Safety at All Times .....	1	Operator's Responsibilities .....	22
Look for the Safety Alert Symbol .....	1	Dual-Angle Teeth .....	23
Safety Labels .....	6	Transport With Auger Attached .....	24
<b>Introduction</b> .....	<b>9</b>	Operating Instructions .....	24
Application .....	9	General Operation .....	26
Using This Manual .....	9	<b>Section 3: Options &amp; Accessories</b> .....	<b>27</b>
Terminology .....	9	Auger Mounts (Option) .....	27
Owner Assistance .....	9	Cradle (Option) .....	27
Serial Number .....	9	Dirt Augers (Option) .....	28
Further Assistance .....	9	Tree Augers (Option) .....	28
<b>Section 1: Assembly &amp; Set-up</b> .....	<b>10</b>	Dirt & Tree Auger Teeth .....	28
Excavator Auger Requirements .....	10	Rock Augers (Option) .....	29
Power Machine Weight .....	10	Bolt-on Rock Heads (Accessory) .....	29
Torque Requirements .....	10	Rock Auger Teeth .....	29
Direction Arrows .....	10	Auger Extensions (Accessory) .....	30
Before You Start .....	10	Auger Adapter (Accessory) .....	30
Excavator Shutdown Procedure .....	10	Puff Augers (Option) .....	30
Gearbox & Optional Cradle Assembly .....	11	Hydraulic Hose Kits (Option) .....	30
Hydraulic Hose Assembly .....	11	<b>Section 4: Maintenance and Lubrication</b> ...	<b>31</b>
Auger Assembly & Disassembly .....	12	Maintenance .....	31
Auger Bit Assembly .....	12	Daily Inspections .....	31
Auger Bit Disassembly .....	12	Long-Term Storage .....	31
Auger Bit Assembly With Extension .....	13	Motor/Gearbox Maintenance .....	32
Auger Bit Disassembly With Extension .....	13	Park Excavator With Auger Attached .....	32
Hook-up Quick Attach Coupler With Cradle .....	14	Disassemble Motor/Gearbox Unit .....	32
Hook-up Auger .....	14	Disassemble/Assemble Hydraulic Motor .....	32
Hook-up Hydraulic Hoses to Excavator .....	14	Assemble Motor/Gearbox Unit .....	32
Unhook Quick Attach Coupler With Cradle .....	15	Lubrication Points .....	33
Hook-up Quick Attach Coupler Without Cradle ...	16	Gearbox Lube .....	33
Hook-up Auger .....	16	Motor Output Shaft .....	33
Hook-up Hydraulic Hoses to Excavator .....	16	Gearbox Output Shaft .....	33
Unhook Quick Attach Coupler Without Cradle ...	17	<b>Section 5: Specifications &amp; Capacities</b> .....	<b>34</b>
Hook-up Wedge Type Quick Coupler With Cradle ..	18	<b>Section 6: Features &amp; Benefits</b> .....	<b>36</b>
Hook-up Auger .....	18	<b>Section 7: Troubleshooting</b> .....	<b>37</b>
Hook-up Hydraulic Hoses to Excavator .....	18	<b>Section 8: Torque Values Chart</b> .....	<b>39</b>
Unhook Wedge Type Quick Coupler With Cradle ..	19	<b>Section 9: Warranty &amp; Legal Disclaimer</b> ....	<b>40</b>
Hook-up Wedge Type Quick Coupler w/o Cradle ..	20		
Hook-up Auger .....	20		
Hook-up Hydraulic Hoses to Excavator .....	20		
Unhook Wedge Type Quick Coupler w/o Cradle ..	21		

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Printed in the United States of America.

See previous page for Table of Contents.



### ***Parts Manual QR Locator***

The QR (Quick Reference) code 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 before operating the power machine and this attachment.

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



## Look for the Safety Alert Symbol

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

## Be Aware of Signal Words

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

- ▲ **DANGER:** Indicates a hazardous situation that, if not avoided, will result in death or serious injury.
- ▲ **WARNING:** Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
- ▲ **CAUTION:** Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.

## Be Aware of Special Notices

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

- ▲ **IMPORTANT:** Indicates that equipment or property damage could result if instructions are not followed.
- ▲ **NOTE:** Indicates supplementary explanations that will be helpful when using the equipment.

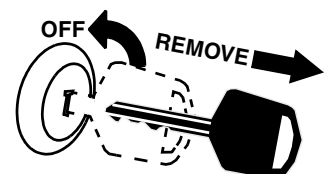
## Safety Precautions for Children

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

- ▲ Never assume children will remain where you last saw them.
- ▲ Keep children out of the work area and under the watchful eye of a responsible adult.
- ▲ Be alert and shut the attachment and excavator 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.

## Excavator Shutdown

- ▲ If engaged, disengage hydraulics to the attachment.
- ▲ Park on solid, level ground.
- ▲ Lower attachment and dozer blade until they are on the ground.
- ▲ Idle engine and turn ignition key to 'STOP' position to shutoff engine.
- ▲ Move lever lock(s) down to the lock position.
- ▲ Turn ignition key to "RUN" and relieve hydraulic pressure to the hydraulic system by operating hydraulic levers. Refer to Excavator Operator's Manual.
- ▲ Turn ignition key to "STOP" and remove to prevent unauthorized starting.
- ▲ Face excavator while using approved steps, grab-handles and anti-slip surfaces when stepping on and off the excavator.



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

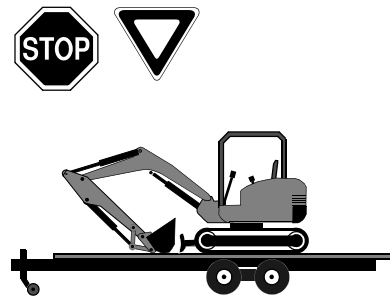
### Dig Safe - Avoid Underground Utilities

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



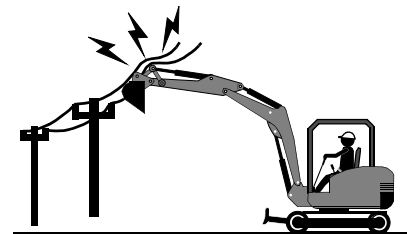
### Towing Safely

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



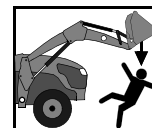
### Transport Safely

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



### Practice Safe Maintenance

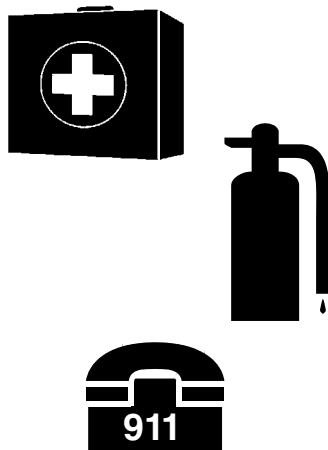
- ▲ Understand procedure before doing work. Refer to the Operator's Manual for additional information.
- ▲ Work on a level surface in a clean dry area that is well-lit.
- ▲ Lower attachment to the ground and follow all shutdown procedures before leaving the operator's seat to perform maintenance.
- ▲ Do not work under any hydraulically supported equipment. It can settle, suddenly leak down, or be lowered accidentally. If it is necessary to work under the equipment, securely support it with stands or suitable blocking beforehand.
- ▲ Use properly grounded electrical outlets and tools.
- ▲ Use correct tools and equipment for the job that are in good condition.
- ▲ Allow equipment to cool before working on it.
- ▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on equipment.
- ▲ Inspect all parts. Make certain that parts are in good condition & installed properly.
- ▲ Replace parts on this attachment with genuine Kubota parts only. Do not alter this attachment in a way which will adversely affect its performance.
- ▲ Do not grease or oil attachment while it is in operation.
- ▲ Remove buildup of grease, oil, or debris.
- ▲ Always make sure any material and waste products from the repair and maintenance of the attachment are properly collected and disposed.
- ▲ Remove all tools and unused parts from 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, dust mask, and ear plugs.
- ▲ Clothing should fit snug without fringes and pull strings to avoid entanglement with moving parts.
- ▲ Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Operating a machine safely requires the operator's full attention. Avoid wearing headphones while operating equipment.



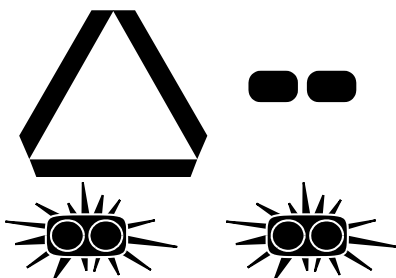
### Avoid High Pressure Fluids

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



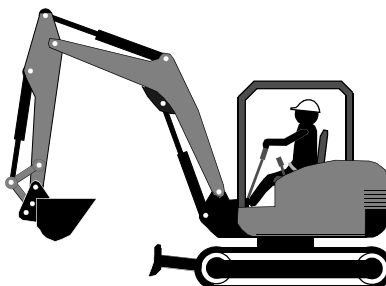
### Use Safety Lights and Devices

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



### Use Seat Belt and ROPS

- ▲ 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 falling and machine overturn.



### Keep Riders Off Machinery

- ▲ Never carry riders on excavator or attachments.
- ▲ 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 excavator or attachment to lift or transport riders.



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

### **Avoid Crystalline Silica (Quartz) Dust**

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

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



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

### **Handle Chemicals Properly**

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





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### Safety Labels

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

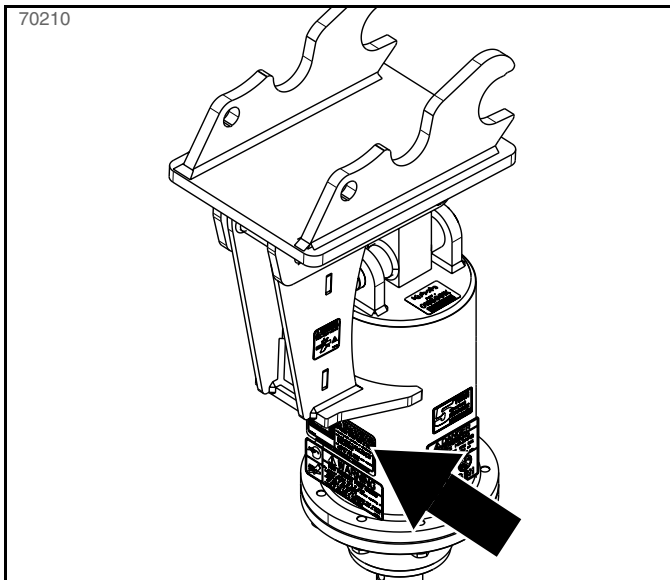
1. Keep all safety labels clean and legible.
2. Refer to this section for proper label placement. Replace all damaged or missing labels. Order new labels from your nearest Kubota dealer. To find your nearest dealer, visit our dealer locator at [www.landpride.com](http://www.landpride.com).
3. Some new 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:

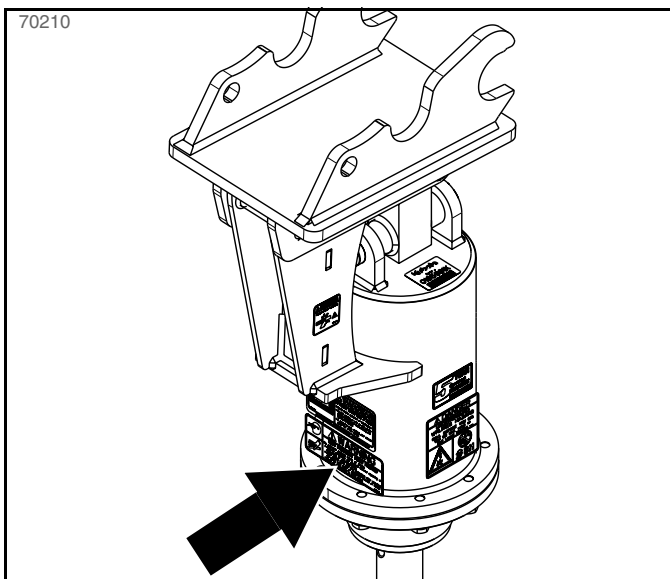
- a. Clean surface area where label is to be placed.
- b. Spray soapy water onto the cleaned area.
- c. Peel backing from label and press label firmly onto the surface.
- d. Squeeze out air bubbles with edge of a credit card or with a similar type of straight edge.



**838-293C**

Warning: Read Operator's Manual

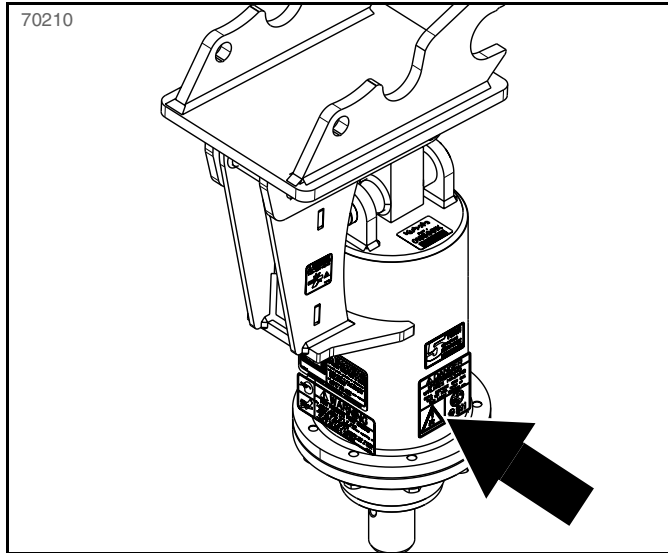
1 Place



**838-094C**

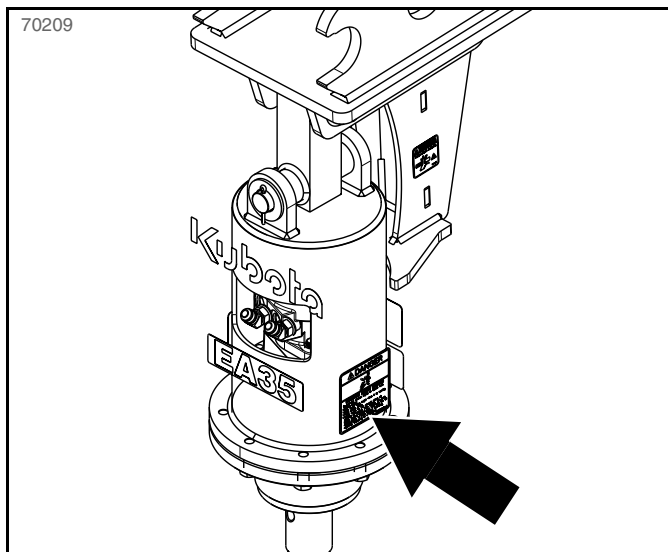
Warning: High Pressure Fluid Hazard

1 Place



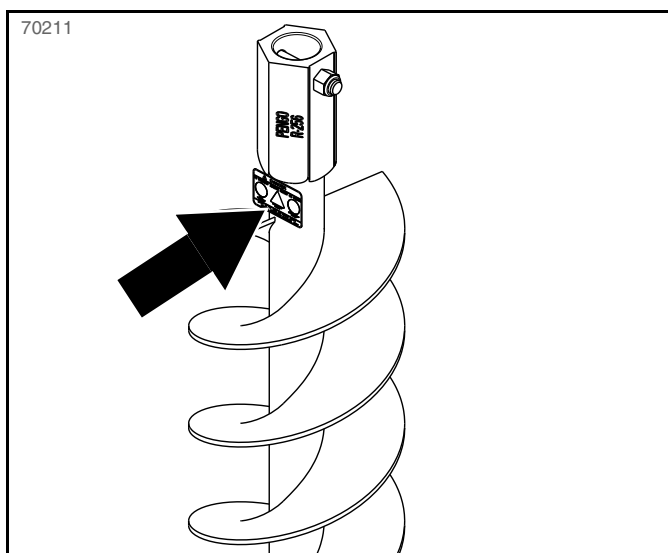
**844-194C**

Danger: Underground Utilities Hazard  
1 Place



**838-294C**

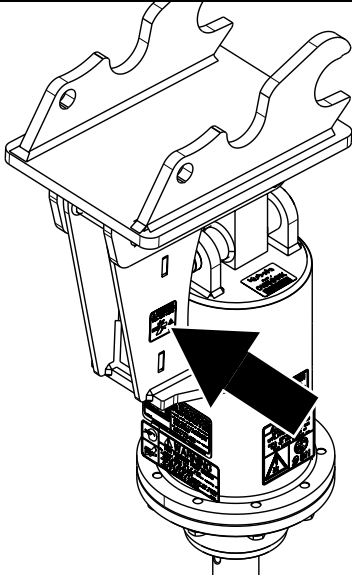
Danger: Rotating Auger Hazard  
1 Place



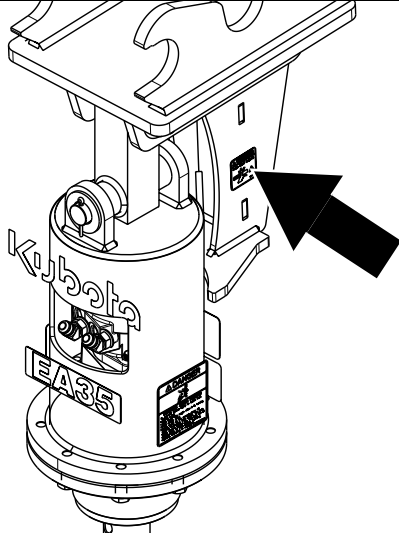
**135500**

Danger:  
Dust Inhalation, Underground, & Entanglement Hazards  
1 Place: On all dirt, tree, rock, and puff augers

70210



70209



70247

### 858-148C

Warning: Pinch Point Hazard

2 Places On both sides of the cradle

## Introduction

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

## Application

Kubota offers a complete line of augers designed to meet a wide range of customer needs and applications. The EA35 is designed to fit most Kubota excavators with a hydraulic flow capacity of 10 to 30 gallons per minute at 1500 to 3500 psi. Its hydraulic motor and planetary gearbox can deliver up to 2,732 ft-lbs of torque and is offered with a 2" hex or a 2 9/16" diameter output shaft that can accommodate dirt augers ranging from 6" to 36" in diameter and rock augers ranging from 6" to 24". It is an industrial duty auger that has uses and applications for nurseries, landscapers, contractors, construction companies, farmers, ranchers, and municipalities.

The EA35 is available with different mounts making it capable of attaching to many Kubota excavators with a mechanical quick coupler. Applying down pressure with the excavator boom improves digging performance in heavy, hardened soil. Should the auger jam in the hole and cannot, under normal operating conditions, be raised, you can reverse its rotation to back the auger out of the jam.

See “**Specifications & Capacities**” on page 34 and “**Features & Benefits**” on page 36 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](http://www.landpride.com)

## Terminology

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

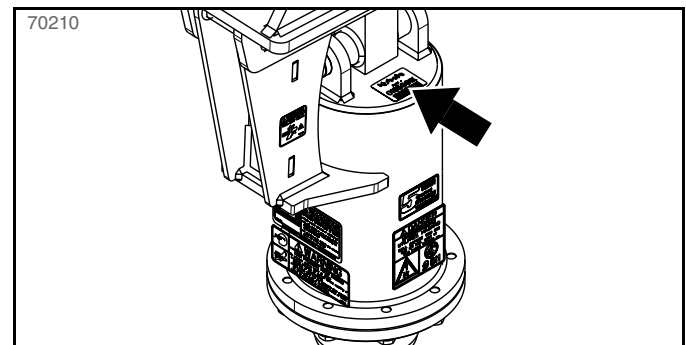
## Owner Assistance

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

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

## Serial Number

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



Serial Number Plate Location  
Figure 1

## Further Assistance

Your Kubota dealer wants you to be satisfied with your new attachment. 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  
[lp servicedept@landpride.com](mailto:lp servicedept@landpride.com)

## Excavator Auger Requirements

This auger is designed to attach to an excavator with the following requirements:

Hitch Type. . . . . Mechanical Quick Attach Coupler  
 Hydraulic pressure rating . . . . . 1,500 - 3,500 psi  
 Hydraulic flow rate . . . . . 10 to 30 gpm  
 Hydraulic Connections . . . . . 1 - Auxiliary circuit

### IMPORTANT: Refer to Figure 1-5 on page 15:

If mechanical quick attach coupler has curl and power hole options, the auger must be operated with bucket link pin in the coupler's power hole (A). Damage to motor/gearbox housing could occur if operated with bucket link pin in curl hole (B).

## Power Machine Weight

Machine horsepower and weight must be capable of controlling the auger under all operating conditions. Lightweight machines must not be used.

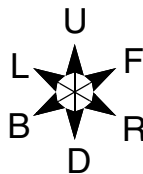
## WARNING

*To avoid serious injury or death: Lightweight power machines may need weight added to the rear to maintain steering control and prevent forward and/or side tipping. Consult your power machine Operator's Manual to determine proper weight requirements and maximum limitations.*

## Torque Requirements

Refer to "Torque Values Chart" on page 39 to determine correct torque values for common bolts.

## Direction Arrows



### Directional Arrows Used in Illustrations

U = up, D = down, L = left,  
 R = right, F = front, and B = back

## Before You Start

Make sure the intended power machine conforms to the requirements provided on this page. Also, read and understand this Operator's Manual for your Post Hole Digger. An understanding of how it works will aid in its assembly and set-up.

Go through the "Pre-Assembly Checklist" before assembling the unit. To speed up your assembly task and make the job safer, have all needed parts and equipment readily at hand.

### Pre-Assembly Checklist

✓	Check	Ref.
	Have a hoist, fork lift, or loader with properly sized chains and safety stands capable of lifting and supporting the equipment.	
	Have a minimum of two people available during assembly.	
	Make sure all safety labels are correctly located and legible. Replace if damaged.	Page 6
	Make sure all major components and loose parts are shipped with the machine.	Parts Manual 317-253PK
	Make sure auger mount (#2) is the correct mount for the excavator. Refer to "Auger Mounts (Option)"	Page 27
	Make sure working parts move freely, bolts are tight & cotter pins are spread.	Operator's Manual
	Make sure unit is properly lubricated.	Page 33
	Check fluid level in the gearbox. Refer to Gearbox Lube.	Page 33

## Excavator Shutdown Procedure

The following are basic excavator shutdown procedures. Follow these procedures and any additional shutdown procedures provided in your excavator Operator's Manual before dismounting the excavator.

1. If engaged, disengage hydraulics to the attachment.
2. Park on solid, level ground and lower attachment and dozer blade until they are on the ground.
3. Reduce engine speed to an idle and turn ignition key to "STOP" position to shut engine off.
4. Turn ignition key to "RUN" position and move lever lock(s) down to lock position.
5. Relieve hydraulic pressure to the hydraulic system by operating the control levers. Refer to Excavator Operator's Manual for detailed instructions.
6. Turn ignition key to "STOP" and remove to prevent unauthorized starting.
7. Face excavator while using approved steps, grab-handles and anti-slip surfaces while stepping on and off the excavator.



### Gearbox & Optional Cradle Assembly

Refer to Figure 1-1:

**IMPORTANT:** Several auger mount options (#2) are available. Make sure the auger mount you have fits your excavator coupler. Refer to “**Auger Mounts (Option)**” on page 27 for optional mounts.

**IMPORTANT:** Make sure motor/gearbox (#1) is mounted with hose port facing away from auger mount (#2) as shown.

1. Remove hardened bushings (#8) from mount (#2). Bushings are not needed for the EA35 Excavator Auger and can be discarded.
2. Attach optional cradle (#5) to auger mount (#2) with 3/4"-10 x 6" GR5 bolts (#7) and hex flange lock nuts (#6). Tighten locknuts to the correct torque.
3. Attach gearbox knuckle (#1) to auger mount (#2) with clevis pin (#4) and cotter pin (#3). Bend legs on end of cotter pin to keep cotter pin from falling out.

### Hydraulic Hose Assembly

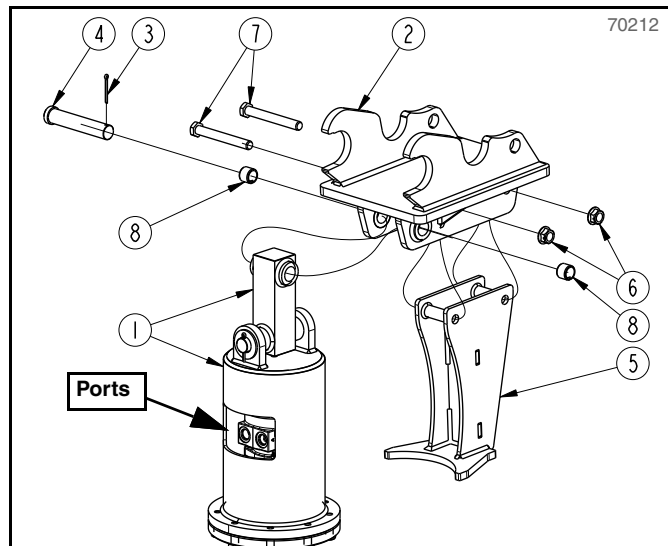
Refer to Figure 1-2:

**NOTE:** Hydraulic hoses in Figure 1-2 may be shipped factory installed. Follow instructions below if shipped loose and when switching to a different hose kit.

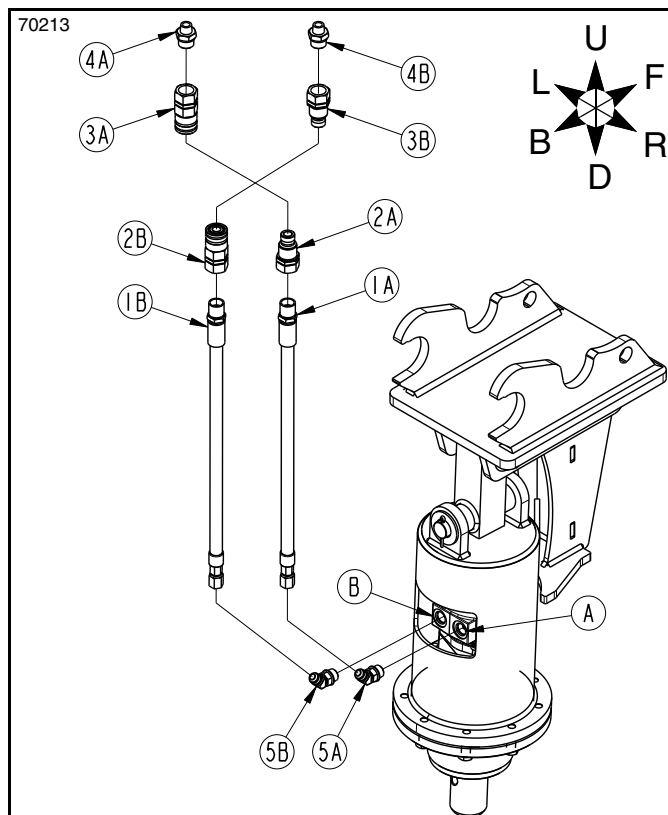
**NOTE:** Hose Kits #317-283A and 317-284A are supplied with 1 1/16" flat faced male and female quick disconnect couplers.

**NOTE:** Hose Kits #317-285A and 317-297A are supplied with 3/4" Poppet type male and female quick disconnect couplers.

1. Remove plugs from motor ports (“A” & “B”).
2. Screw 45° elbows (#5A & #5B) to motor ports (“A” & “B”). With open ends up as shown, tighten elbows (#5A & #5B) to adapters (#6).
3. Screw male coupler (#2A) to hydraulic hose (#1A) until tight.
4. Screw hydraulic hose (#1A) to elbow (#5A) until tight.
5. Screw female coupler (#2B) to hydraulic hose (#1B) until tight.
6. Screw hydraulic hose (#1B) to elbow (#9B) until tight.
7. Teflon tape is supplied by the customer. Do not use teflon tape if installing Hose Kit 317-297A. Otherwise, wrap teflon tape around tapered pipe threads on adapters (#4A & #4B).
8. Screw adapter (#4A) to the auxiliary hydraulic line located on the left-hand side of the excavator arm and adapter (#4B) on the right-hand side of the excavator arm. Tighten adapters (#4A & #4B).
9. Screw female coupler (#3A) to adapter (#4A) until tight.
10. Screw male coupler (#3B) to adapter (#4B) until tight.



**Gearbox and Cradle Assembly (Mount #317-247A Shown)**  
Figure 1-1



Hose Kit Part No	Fits Excavator Model No(s).
317-283A	KX080
317-284A	U35, KX71, KX91, KX033, KX040, U55, & KX057
317-285A	U25 & U27
317-297A	U17 & KX018

**Hydraulic Hose Assembly**  
Figure 1-2

## Auger Assembly & Disassembly

### WARNING

To avoid serious injury or death:

- Keep others away from the auger while the unit is rotating. A person can become entangled in the auger or be hit by the auger if it swings erratically. Anyone helping should be kept a safe distance (a minimum of 10 feet) from the auger while it is rotating.
- 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:** Refer to Figure 1-3: Verify gearbox output shaft (#1) matches auger hub (#4). If it does not, you will need to replace the motor/gearbox or the auger bit. Refer to “Section 3: Options & Accessories” on page 27 for available motor/gearboxes and auger bits.

**IMPORTANT:** Keep auger attached to the excavator to stabilize it while assembling and disassembling the auger bit or auger extension.

1. Park excavator on a flat level surface, lower the auger and auger bit until they are laying on the ground. See Figure 1-5 on page 15 for example of an auger laying on the ground. Do not unhook auger from excavator.
2. Shut excavator down before dismounting. Refer to “Excavator Shutdown Procedure” on page 10.

### Auger Bit Assembly

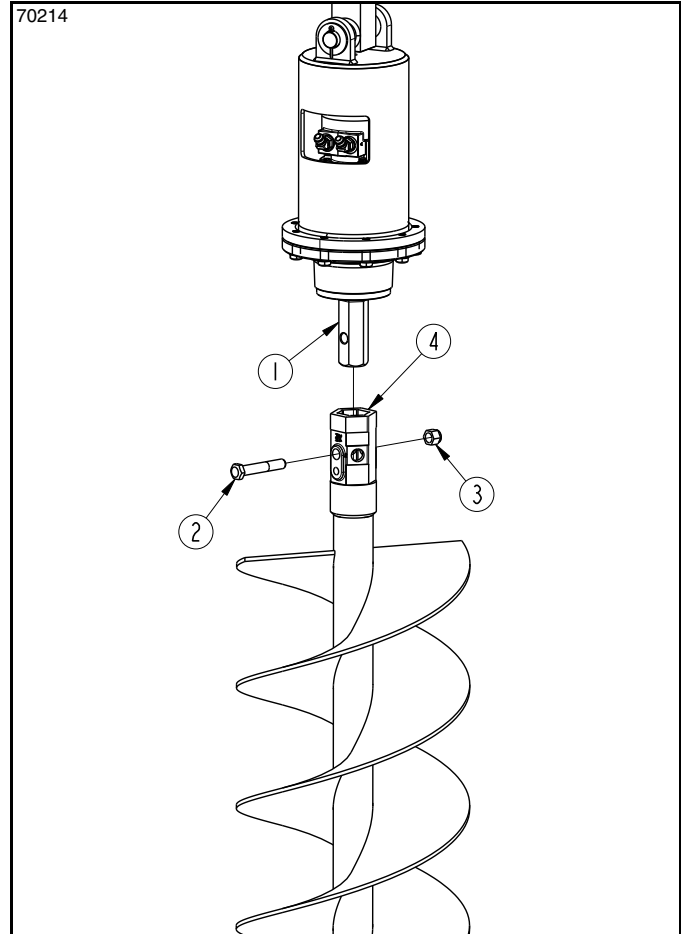
Refer to Figure 1-3:

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.

### Auger Bit Disassembly

Refer to Figure 1-3:

1. Remove nylock nut (#3) and bolt (#2).
2. Remove auger (#4) from gearbox output shaft (#1).



Auger Bit Assembly & Disassembly  
Figure 1-3



## Auger Bit Assembly With Extension

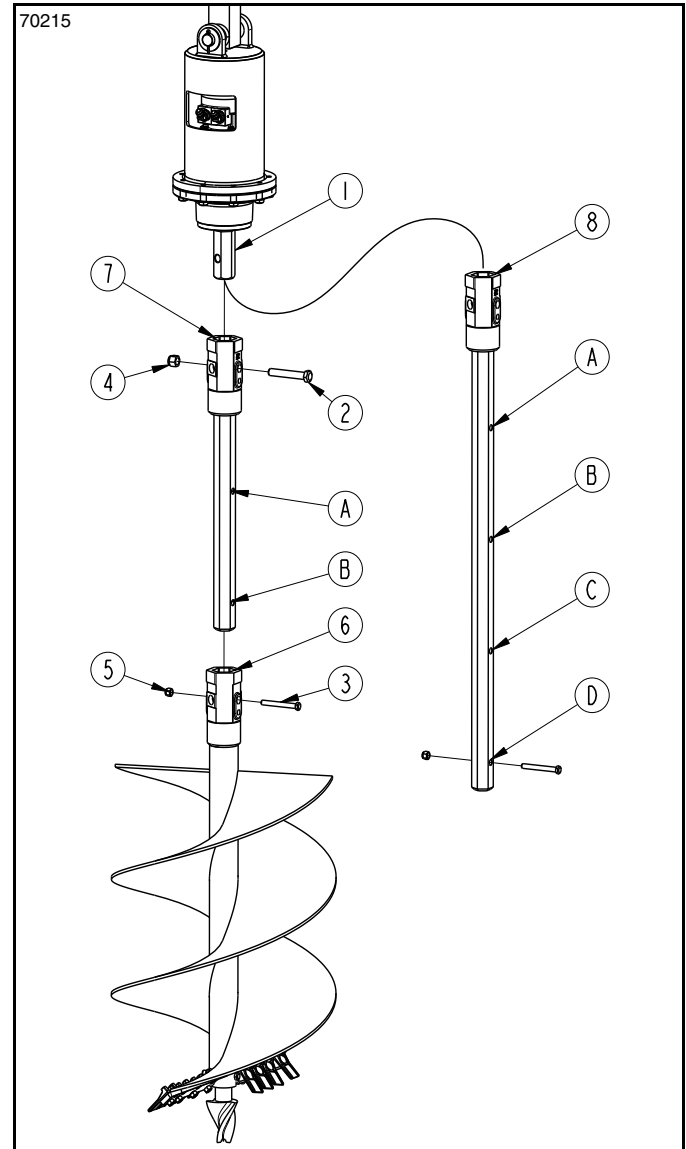
**Refer to Figure 1-4:**

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.
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.

## Auger Bit Disassembly With Extension

**Refer to Figure 1-4:**

1. Remove nylock nut (#4) and bolt (#2).
2. Remove extension (#7 or #8) from gearbox output shaft (#1).



**Auger Bit Assembly/Disassembly with Auger Extension**  
Figure 1-4

## Hook-up Quick Attach Coupler With Cradle

### WARNING

To avoid serious injury or death:

- A crushing hazard exists while connecting and disconnecting the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate controls including lift, extend, and swing while someone is near the power machine and/or attachment.
- Make sure the attachment is properly connected to the coupler on the dipper arm. The coupler must be secured to the attachment with lock pin fully inserted and secured in place with the linchpin. An improperly connected attachment can come loose and fall or being thrown.
- Make sure the coupler housings are free of obstructions such as mud, excess dirt, rocks and ice. Coupler engagement and disengagement may be impeded and could potentially create an unsafe connection for the attachment.
- Never stand beneath or position any body part beneath an attachment that is being removed or installed.
- Never attempt to reposition the attachment on the excavator's arm with the attachment off the ground. A crushing and/or pinch point hazard exists between coupler and attachment. Keep hands and fingers clear.

## Hook-up Auger

Refer to Figure 1-5 on page 15:

### **IMPORTANT:** Refer to note in Figure 1-5:

If mechanical quick attach coupler has curl and power hole options, the auger must be operated with bucket link pin in the coupler's power hole (A). Damage to motor/gearbox housing could occur if operated with bucket link pin in curl hole (B).

**NOTE:** Quick attach coupler assembly (#5) complete with lock pin (#3 & #4) are not included with the Excavator Auger.

1. Check for and remove all debris in the interior of coupler (#5) and auger mount (#11).
2. Remove linchpin (#4) and pull lock pin (#3) from quick attach coupler (#5).
3. Start excavator and place boom in line with attachment to be engaged. Fully retract curl cylinder.
4. Drive excavator slowly forward while maneuvering the boom to align and seat rear coupler bosses (#6) with bucket ears mounting hooks (#7).
5. Extend boom cylinder to lower quick attach coupler bosses (#6) into bucket hooks (#7).
6. Extend curl cylinder to roll quick attach coupler down until boss (#8) are fully seated in slots (#9).
7. Raise auger (#10), cradle (#12), and auger

mount (#11) slightly off the ground. Curl coupler (#5) to the most vertical position safely allowed by the attachment.

8. Without lowering the attachment, shut excavator down before dismounting. Refer to “**Excavator Shutdown Procedure**” on page 10.
9. Insert coupler lock pin (#3) and secure with linchpin (#4).

## Hook-up Hydraulic Hoses to Excavator

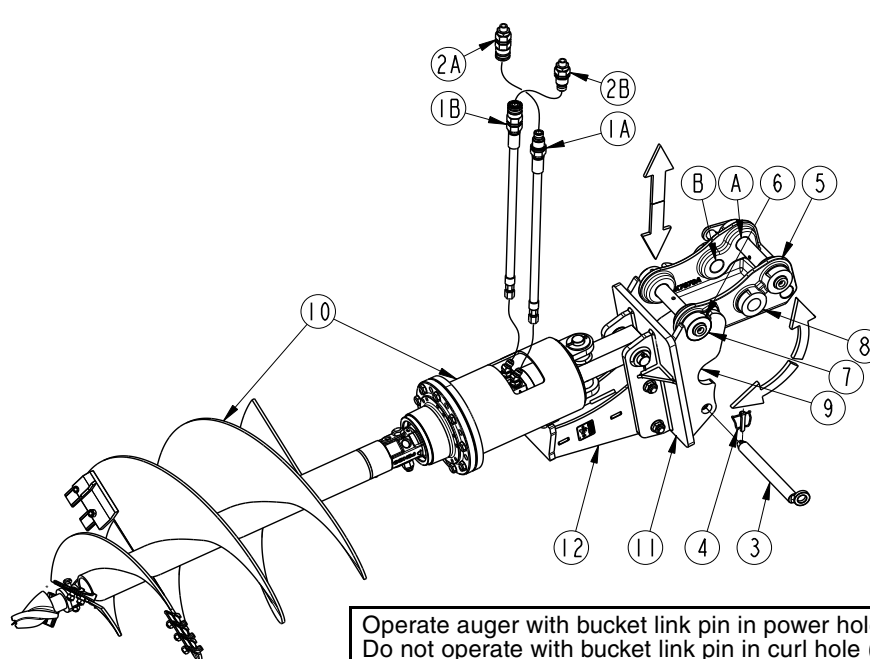
Refer to Figure 1-5 on page 15:

### WARNING

To avoid serious injury or death:

- Hydraulic fluid under high pressure will penetrate the skin or eyes causing 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. If an accident occurs, seek immediate emergency medical care 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 hydraulic hose can burst and leak hydraulic fluid.
1. Attach male coupler (#1A) on the right side to female coupler (#2A) on the left side of the excavator arm.
  2. Attach female coupler (#1B) on the left side to male coupler (#2B) on the right side of the excavator arm.
  3. Return to the excavator. Curl coupler (#5) horizontal while raising auger (#10) off the ground until the auger bit is hanging straight down.
  4. Fully extend and retract curl cylinder to ensure coupler (#5) is fully engaged with auger mount (#11).
  5. With excavator at an idle, engage auger rotation. If auger does not rotate clockwise when viewed from the top, shutdown excavator and switch couplers side-to-side on the excavator arm.

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Operate auger with bucket link pin in power hole (A) as shown. Do not operate with bucket link pin in curl hole (B).

Hook-up/Unhook Quick Attach Coupler With Cradle

Figure 1-5

## Unhook Quick Attach Coupler With Cradle



### WARNING

To avoid serious injury or death:

- A crushing hazard exists while connecting and disconnecting the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate controls including lift, extend, and swing while someone is near the power machine and/or attachment.
- Never stand beneath or position any body part beneath an attachment that is being removed or installed.
- Never attempt to reposition the attachment on the excavator's arm with the attachment off the ground. A crushing and/or pinch point hazard exists between coupler and attachment. Keep hands and fingers clear.

Refer to Figure 1-5:

**IMPORTANT:** Make sure the auger does not come against the dozer blade when laying the auger down to unhook.

**NOTE:** Quick attach coupler assembly (#5) complete with lock pin (#3 & #4) are not included with the Excavator Auger.

1. See “**Long-Term Storage**” on page 31 before storing the auger for long periods.
2. Curl coupler (#5) to the most vertical position safely allowed by the attachment.
3. Lower auger (#10) with boom and arm cylinders until auger (#10), cradle (#12), and auger mount (#11) are slightly above ground level.
4. Shut excavator down before dismounting. Refer to “**Excavator Shutdown Procedure**” on page 10.
5. Disconnect hydraulic hoses (#1A & #1B) from couplers (#2A & #2B). Store hydraulic hose couplers off the ground.
6. Remove linchpin (#4) and lock pin (#3) from quick attach coupler (#5). Use a hammer to tap out lock pin if necessary.
7. Return to the excavator to finish disconnecting the auger.
8. Start excavator and extend boom cylinder to lower auger (#10) and auger mount (#11) until they are resting on the ground.
9. With auger (#10) and auger mount (#11) on the ground, retract curl cylinder to roll coupler boss (#8) out of slots (#9).
10. Retract arm cylinder to lift coupler bosses (#6) out of bucket hooks (#7).
11. Carefully maneuver coupler (#5) out of the way of auger (#10) and auger mount (#11).
12. Coupler (#5) is now ready to engage with another attachment or to be shutdown. If shutdown, replace lock pin (#3) in coupler (#5). Secure lock pin with linchpin (#4).

## Section 1: Assembly & Set-up

### Hook-up Quick Attach Coupler Without Cradle

#### **WARNING**

To avoid serious injury or death:

- A crushing hazard exists while connecting and disconnecting the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate controls including lift, extend, and swing while someone is near the power machine and/or attachment.
- Make sure the attachment is properly connected to the coupler on the dipper arm. The coupler must be secured to the attachment with lock pin fully inserted and secured in place with the linchpin. An improperly connected attachment can come loose and fall or being thrown.
- Make sure the coupler housings are free of obstructions such as mud, excess dirt, rocks and ice. Coupler engagement and disengagement may be impeded and could potentially create an unsafe connection for the attachment.
- Never stand beneath or position any body part beneath an attachment that is being removed or installed.
- Never attempt to reposition the attachment on the excavator's arm with the attachment off the ground. A crushing and/or pinch point hazard exists between coupler and attachment. Keep hands and fingers clear.

### Hook-up Auger

Refer to Figure 1-6 on page 17:

#### **IMPORTANT: Refer to note in Figure 1-6:**

If mechanical quick attach coupler has curl and power hole options, the auger must be operated with bucket link pin in the coupler's power hole (A). Damage to motor/gearbox housing could occur if operated with bucket link pin in curl hole (B).

**NOTE:** Quick attach coupler assembly (#5) complete with lock pin (#3 & #4) are not included with the Excavator Auger.

1. Check for and remove all debris in the interior of coupler (#5) and auger mount (#11).
2. Remove linchpin (#4) and pull lock pin (#3) from quick attach coupler (#5).
3. Start excavator and place boom in line with attachment to be engaged. Fully retract curl cylinder.
4. Drive excavator slowly forward while maneuvering the boom to align and seat rear coupler bosses (#6) with bucket ears mounting hooks (#7).
5. Extend boom cylinder to lower quick attach coupler bosses (#6) into bucket hooks (#7).
6. Extend curl cylinder to roll quick attach coupler down until boss (#8) are fully seated in slots (#9).

7. Raise auger mount (#11) slightly off the ground and curl coupler (#5) to the most vertical position safely allowed by the attachment.
8. Without lowering the attachment, shut excavator down before dismounting. Refer to "**Excavator Shutdown Procedure**" on page 10.
9. Insert coupler lock pin (#3) and secure with linchpin (#4).

### Hook-up Hydraulic Hoses to Excavator

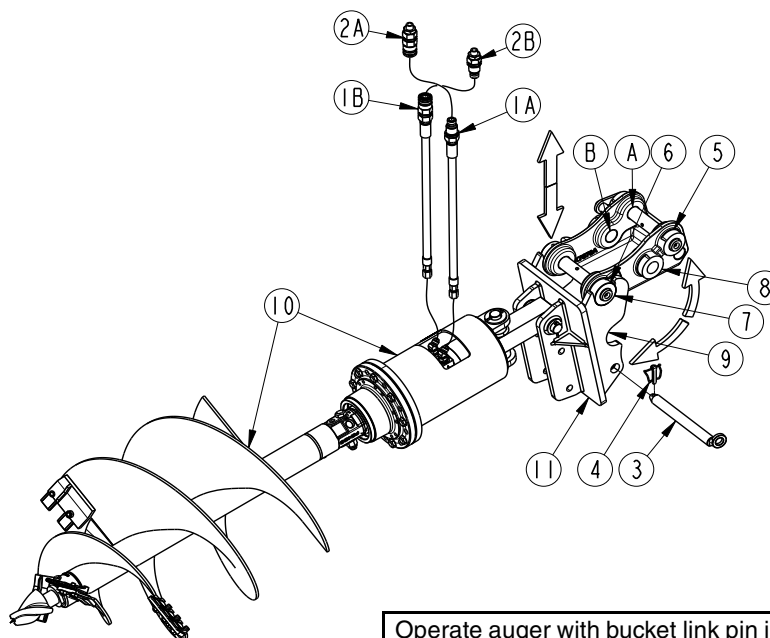
Refer to Figure 1-6 on page 17:

#### **WARNING**

To avoid serious injury or death:

- Hydraulic fluid under high pressure will penetrate the skin or eyes causing 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. If an accident occurs, seek immediate emergency medical care 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 hydraulic hose can burst and leak hydraulic fluid.
1. Attach male coupler (#1A) on the right side to female coupler (#2A) on the left side of the excavator arm.
  2. Attach female coupler (#1B) on the left side to male coupler (#2B) on the right side of the excavator arm.
  3. Return to the excavator. Curl coupler (#5) horizontal while raising auger (#10) off the ground until the auger bit is hanging straight down.
  4. Fully extend and retract curl cylinder to ensure coupler (#5) is fully engaged with auger mount (#11).
  5. With excavator at an idle, engage auger rotation. If auger does not rotate clockwise when viewed from the top, shutdown excavator and switch couplers side-to-side on the excavator arm.

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Operate auger with bucket link pin in power hole (A) as shown. Do not operate with bucket link pin in curl hole (B).

Hook-up/Unhook Quick Attach Coupler Without Cradle

Figure 1-6

## Unhook Quick Attach Coupler Without Cradle



### WARNING

To avoid serious injury or death:

- A crushing hazard exists while connecting and disconnecting the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate controls including lift, extend, and swing while someone is near the power machine and/or attachment.
- Never stand beneath or position any body part beneath an attachment that is being removed or installed.
- Never attempt to reposition the attachment on the excavator's arm with the attachment off the ground. A crushing and/or pinch point hazard exists between coupler and attachment. Keep hands and fingers clear.

Refer to Figure 1-6:

**IMPORTANT:** Make sure the auger does not come against the dozer blade when laying the auger down to unhook.

**NOTE:** Quick attach coupler assembly (#5) complete with lock pin (#3 & #4) are not included with the Excavator Auger.

1. See “**Long-Term Storage**” on page 31 before storing the auger for a long period.
2. Curl coupler (#5) to the most vertical position safely allowed by the attachment.
3. Lower auger (#10) with boom cylinder while driving slowly forward to gently lay the auger on the ground. Leave auger mount (#11) slightly off the ground.
4. Shut excavator down before dismounting. Refer to “**Excavator Shutdown Procedure**” on page 10.
5. Disconnect hydraulic hoses (#1A & #1B) from couplers (#2A & #2B). Store hydraulic hose couplers off the ground.
6. Remove linchpin (#4) and lock pin (#3) from quick attach coupler (#5). Use a hammer to tap out lock pin if necessary.
7. Return to the excavator to finish disconnecting the auger.
8. Start excavator and extend boom cylinder to lower auger (#10) and auger mount (#11) until they are resting on the ground.
9. With auger (#10) and auger mount (#11) on the ground, retract curl cylinder to roll coupler boss (#8) out of slots (#9).
10. Retract arm cylinder to lift coupler bosses (#6) out of bucket hooks (#7).
11. Carefully maneuver coupler (#5) out of the way of auger (#10) and auger mount (#11).
12. Coupler (#5) is now ready to engage with another attachment or to be shutdown. If shutdown, replace lock pin (#3) in coupler (#5). Secure lock pin with linchpin (#4).



## Hook-up Wedge Type Quick Coupler With Cradle

### WARNING

To avoid serious injury or death:

- A crushing hazard exists while connecting and disconnecting the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate controls including lift, extend, and swing while someone is near the power machine and/or attachment.
- Make sure the attachment is properly hooked to the excavator. An improperly connected attachment can fall or be thrown from the excavator.
- Make sure the coupler housings are free of obstructions such as mud, excess dirt, rocks and ice. Coupler engagement and disengagement may be impeded and could potentially create an unsafe connection for the attachment.
- Never stand beneath or position any body part beneath an attachment that is being removed or installed.
- Never attempt to reposition the attachment on the excavator's arm with the attachment off the ground. A crushing and/or pinch point hazard exists between coupler and attachment. Keep hands and fingers clear.

## Hook-up Auger

Refer to Figure 1-7 on page 19:

**NOTE:** Coupler (#9), lock bar (#3), linchpin (#4), and bolt or bolts (#6) are not included with the Excavator Auger. Some lock bars use two bolts.

1. Check for and remove all debris in the interior of coupler (#9) and wedge type auger mount (#11).
2. Remove linchpin (#4), bolt (#6), and lock bar (#3).
3. Start excavator and fully retract bucket cylinder.
4. Drive excavator slowly forward while maneuvering the boom to align coupler pivot pin bosses (#8) with bucket ears mounting hooks (#7).
5. Retract boom cylinder to lower coupler boss (#8) into bucket hooks (#7).
6. Extend bucket cylinder until the far end of coupler (#9) is rotated down and fully against wedge type auger mount (#11).
7. Raise auger (#12) and wedge type auger mount (#11) slightly off the ground. Extend bucket cylinder to curl coupler (#9) to the most vertical position safely allowed by the attachment.
8. Without lowering the attachment, shut excavator down before dismounting. Refer to "**Excavator Shutdown Procedure**" on page 10.

9. Attach lock bar (#3) to coupler (#9) with bolt (#6). Tighten bolt (#6) to the correct torque for 5/8"-11 GR5 bolt. When finished, lock bar should be seated in slots (#10) with tapered notches on the lock bar facing up.
10. Insert linchpin (#4) in alignment pin (#5) and rotate retainer loop over end of alignment pin.

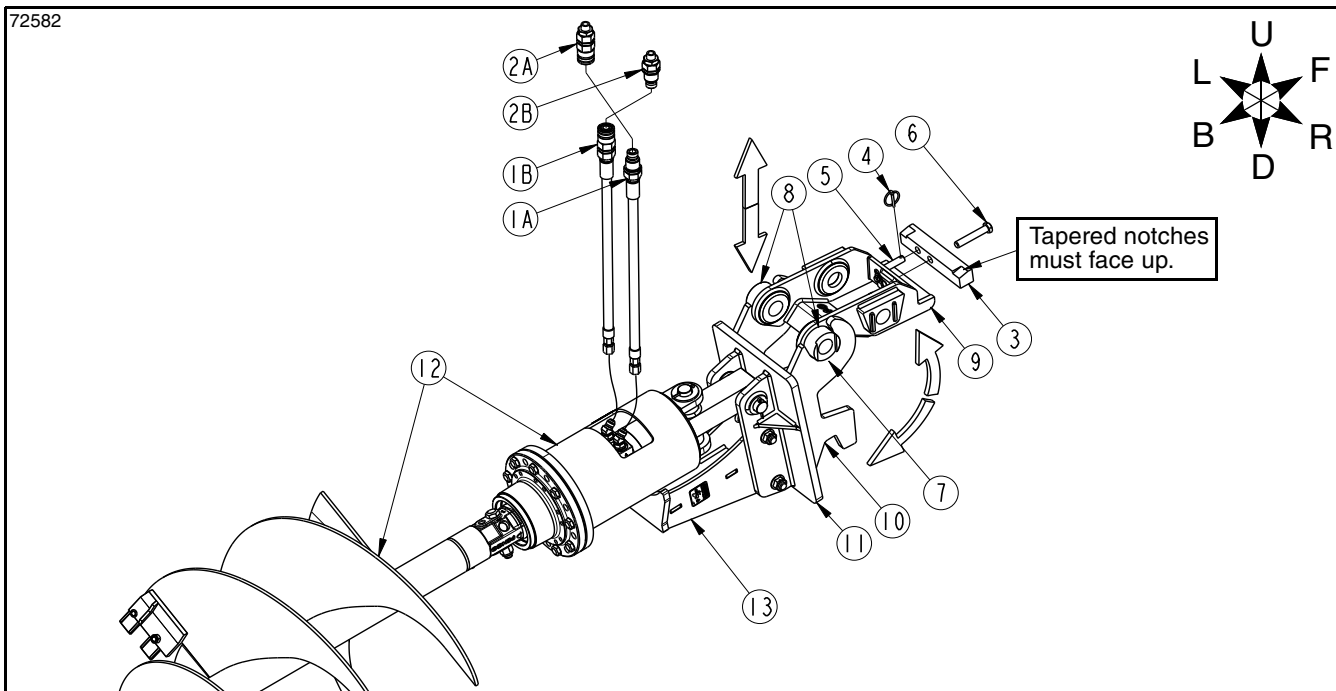
## Hook-up Hydraulic Hoses to Excavator

Refer to Figure 1-7 on page 19:

### WARNING

To avoid serious injury or death:

- Hydraulic fluid under high pressure will penetrate the skin or eyes causing 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. If an accident occurs, seek immediate emergency medical care 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 hydraulic hose can burst and leak hydraulic fluid.
1. On the right side of the auger, locate male coupler (#1A). Attach male coupler (#1A) to female coupler (#2A) on the left side of the excavator arm.
  2. On the left side of the auger, locate female coupler (#1B). Attach female coupler (#1B) to male coupler (#2B) on the right side of the excavator arm.
  3. Return to the excavator. Raise auger (#12) off the ground while retracting bucket cylinder until the auger hangs straight down and coupler (#9) is approximately horizontal.
  4. Fully retract and extend bucket cylinder several times to ensure coupler (#9) is fully engaged with wedge type auger mount (#11). Stop with auger hanging straight down.
  5. With excavator at an idle, engage auger rotation. Auger should rotate clockwise when viewed from the top. If auger rotates counterclockwise, shutdown excavator and switch couplers (#2A & #2B) on the excavator arm.



Hook-up/Unhook Wedge Type Quick Coupler With Cradle  
Figure 1-7

## Unhook Wedge Type Quick Coupler With Cradle



### WARNING

To avoid serious injury or death:

- A crushing hazard exists while connecting and disconnecting the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate controls including lift, extend, and swing while someone is near the power machine and/or attachment.
- Never stand beneath or position any body part beneath an attachment that is being removed or installed.
- Never attempt to reposition the attachment on the excavator's arm with the attachment off the ground. A crushing and/or pinch point hazard exists between coupler and attachment. Keep hands and fingers clear.

Refer to Figure 1-7:

**IMPORTANT:** Make sure the auger does not come against the dozer blade when laying the auger down to unhook.

**NOTE:** Coupler (#9), lock bar (#3), linchpin (#4), and bolt or bolts (#6) are not included with the Excavator Auger. Some lock bars use two bolts.

1. See “Long-Term Storage” on page 31 before storing auger for long periods.
2. Extend bucket cylinder to curl coupler (#9) to its most vertical position safely allowed by the attachment.
3. Lower auger (#12) with boom and arm cylinders until auger (#12), cradle (#13), and auger mount (#11) are slightly above ground level.
4. Shut excavator down before dismounting. Refer to “Excavator Shutdown Procedure” on page 10.
5. Disconnect hydraulic hoses (#1A & #1B) from couplers (#2A & #2B). Store hydraulic hose couplers off the ground.
6. Remove linchpin (#4), bolt (#6), and lock bar (#3). If needed, use a hammer to tap lock bar loose.
7. From the operator's seat, start excavator and retract boom cylinder to lower auger (#12) and auger mount (#11) until they are resting on the ground.
8. With auger (#12) and auger mount (#11) on the ground, retract bucket cylinder to curl coupler (#9) up until horizontal.
9. Extend boom cylinder to lift coupler boss (#8) out of bucket hooks (#7).
10. Carefully maneuver coupler (#9) away from auger (#12) and wedge type auger mount (#11).
11. Coupler (#9) is now ready to engage with another attachment.
12. If shutting down the excavator, follow “Excavator Shutdown Procedure” on page 10 before dismounting.
13. Store lock bar (#3), bolt (#6), and linchpin (#4) in a secure location or assemble them to coupler (#9).

## Section 1: Assembly &amp; Set-up

## Hook-up Wedge Type Quick Coupler w/o Cradle

### WARNING

To avoid serious injury or death:

- A crushing hazard exists while connecting and disconnecting the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate controls including lift, extend, and swing while someone is near the power machine and/or attachment.
- Make sure the attachment is properly hooked to the excavator. An improperly connected attachment can fall or be thrown from the excavator.
- Make sure the coupler housings are free of obstructions such as mud, excess dirt, rocks and ice. Coupler engagement and disengagement may be impeded and could potentially create an unsafe connection for the attachment.
- Never stand beneath or position any body part beneath an attachment that is being removed or installed.
- Never attempt to reposition the attachment on the excavator's arm with the attachment off the ground. A crushing and/or pinch point hazard exists between coupler and attachment. Keep hands and fingers clear.

## Hook-up Auger

Refer to Figure 1-8 on page 21:

**NOTE:** Coupler (#9), lock bar (#3), linchpin (#4), and bolt or bolts (#6) are not included with the Excavator Auger. Some lock bars use two bolts.

1. Check for and remove all debris in the interior of coupler (#9) and wedge type auger mount (#11).
2. Remove linchpin (#4), bolt (#6), and lock bar (#3).
3. Start excavator and fully retract bucket cylinder.
4. Drive excavator slowly forward while maneuvering the boom to align coupler pivot pin bosses (#8) with bucket ears mounting hooks (#7).
5. Retract boom cylinder to lower coupler boss (#8) into bucket hooks (#7).
6. Extend bucket cylinder until the far end of coupler (#9) is rotated down and fully against wedge type auger mount (#11).
7. Raise wedge type auger mount (#11) slightly off the ground. Extend bucket cylinder to curl coupler (#9) to the most vertical position safely allowed by the attachment.
8. Without lowering the attachment, shut excavator down before dismounting. Refer to "**Excavator Shutdown Procedure**" on page 10.

9. Attach lock bar (#3) to coupler (#9) with bolt (#6). Tighten bolt (#6) to the correct torque for 5/8"-11 GR5 bolt. When finished, lock bar should be seated in slots (#10) with tapered notches on the lock bar facing up.
10. Insert linchpin (#4) in alignment pin (#5) and rotate retainer loop over end of alignment pin.

## Hook-up Hydraulic Hoses to Excavator

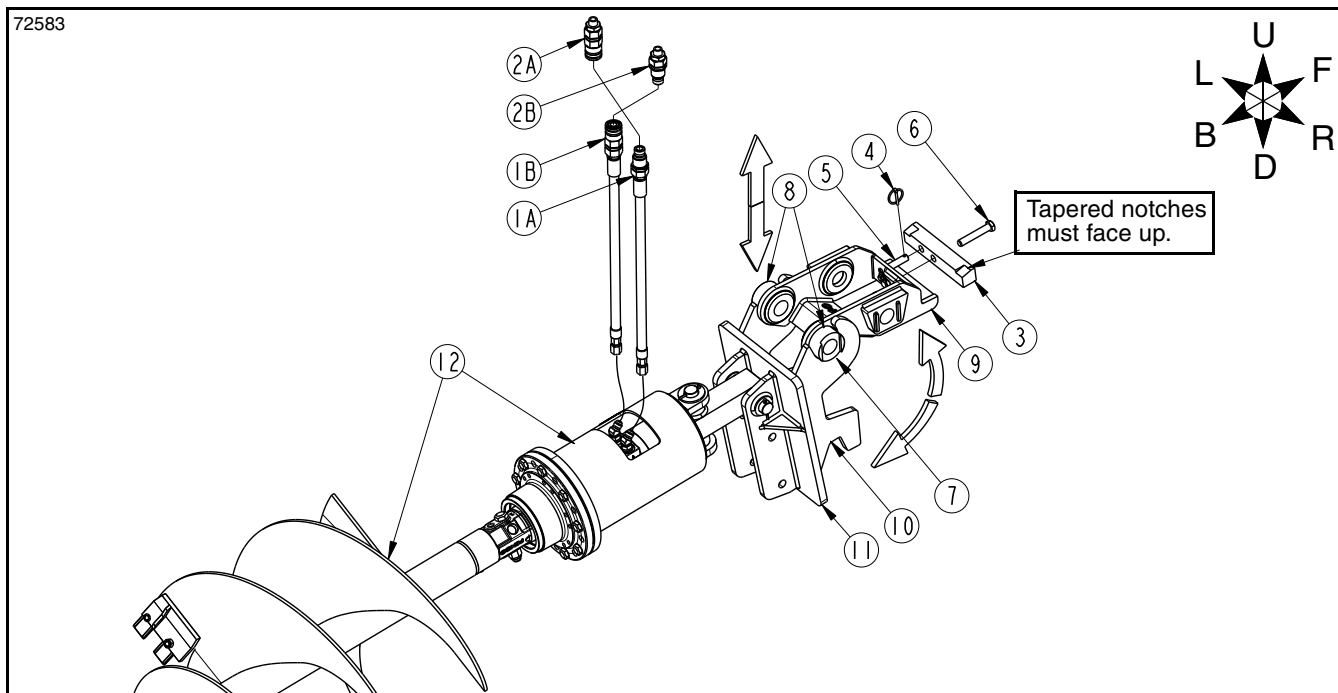
Refer to Figure 1-8 on page 21:

### WARNING

To avoid serious injury or death:

- Hydraulic fluid under high pressure will penetrate the skin or eyes causing 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. If an accident occurs, seek immediate emergency medical care 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 hydraulic hose can burst and leak hydraulic fluid.
1. On the right side of the auger, locate male coupler (#1A). Attach male coupler (#1A) to female coupler (#2A) on the left side of the excavator arm.
  2. On the left side of the auger, locate female coupler (#1B). Attach female coupler (#1B) to male coupler (#2B) on the right side of the excavator arm.
  3. Return to the excavator. Raise auger (#12) off the ground while retracting bucket cylinder until the auger hangs straight down and coupler (#9) is approximately horizontal.
  4. Fully retract and extend bucket cylinder several times to ensure coupler (#9) is fully engaged with wedge type auger mount (#11). Stop with auger hanging straight down.
  5. With excavator at an idle, engage auger rotation. Auger should rotate clockwise when viewed from the top. If auger rotates counterclockwise, shutdown excavator and switch couplers (#2A & #2B) on the excavator arm.





Hook-up/Unhook Wedge Type Quick Coupler Without Cradle

Figure 1-8

## Unhook Wedge Type Quick Coupler w/o Cradle

### WARNING

To avoid serious injury or death:

- A crushing hazard exists while connecting and disconnecting the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate controls including lift, extend, and swing while someone is near the power machine and/or attachment.
- Never stand beneath or position any body part beneath an attachment that is being removed or installed.
- Never attempt to reposition the attachment on the excavator's arm with the attachment off the ground. A crushing and/or pinch point hazard exists between coupler and attachment. Keep hands and fingers clear.

Refer to Figure 1-6:

**IMPORTANT:** Make sure the auger does not come against the dozer blade when laying the auger down to unhook.

**NOTE:** Coupler (#9), lock bar (#3), linchpin (#4), and bolt or bolts (#6) are not included with the Excavator Auger. Some lock bars use two bolts.

1. See “Long-Term Storage” on page 31 before storing auger for long periods.
2. Extend bucket cylinder to curl coupler (#9) to its most vertical position safely allowed by the attachment.
3. Lower auger (#12) with boom cylinder while driving slowly forward to gently lay the auger on the ground. Keep wedge type auger mount (#11) slightly off the ground.
4. Shut excavator down before dismounting. Refer to “Excavator Shutdown Procedure” on page 10.
5. Disconnect hydraulic hoses (#1A & #1B) from couplers (#2A & #2B). Store hydraulic hose couplers off the ground.
6. Remove linchpin (#4), bolt (#6), and lock bar (#3). If needed, use a hammer to tap lock bar loose.
7. From the operator's seat, start excavator and retract boom cylinder to lower wedge type coupler mount (#11) until it is also resting on the ground.
8. With auger (#12) and auger mount (#11) on the ground, retract bucket cylinder to curl coupler (#9) up until horizontal.
9. Extend boom cylinder to lift coupler boss (#8) out of bucket hooks (#7).
10. Carefully maneuver coupler (#9) away from auger (#12) and wedge type auger mount (#11).
11. Coupler (#9) is now ready to engage with another attachment.
12. If shutting down the excavator, follow “Excavator Shutdown Procedure” on page 10 before dismounting.
13. Store lock bar (#3), bolt (#6), and linchpin (#4) in a secure location or assemble them to coupler (#9).

## 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 auger. Therefore, it is absolutely essential that no one operates the auger unless they have read, fully understood, and are totally familiar with the Operator's Manual.

Perform the following inspections before using your Excavator Auger.

### Operating Checklist

✓	Check	Ref.
	Read and follow all Safety Rules carefully. Refer to "Important Safety Information".	Page 1
	Make sure all guards and shields are in place. Refer to "Important Safety Information".	Page 1
	Make sure there are no hydraulic leaks. Refer to "Avoid High Pressure Fluids Hazard".	Page 3
	Read and follow hook-up & Unhook. Refer to "Section 1: Assembly & Set-up".	Page 10
	Read and follow all operating procedures. Refer to "Section 2: Operating Procedures".	Page 22
	Read and follow all Maintenance Instructions. See "Section 4: Maintenance and Lubrication".	Page 31
	Read and follow all Lubrication Instructions. Refer to "Lubrication Points".	Page 33
	Make sure the gearbox is properly lubricated. Refer to Gearbox lubrication.	Page 33
	Check equipment initially and periodically for loose hardware. See "Torque Values Chart".	Page 39

## 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 attachment.
- Never operate equipment 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. Obstacles such as landscape fabric, wire, etc can catch in the auger and pull a bystander into the auger. Hand digging may be necessary to verify the presence of underground materials.
- 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.

- 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. Always call 811 (USA) or local utility companies 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.
- A crushing hazard exists around power equipment. Do not allow anyone near the attachment and/or power machine while connecting and disconnecting the attachment and while operating the excavator and/or attachment.
- Keep others away from the post hole digger while the auger is rotating. A person can become entangled in the auger, hit by the auger if swinging erratically, or pulled into the auger. Anyone helping should be kept a safe distance (a minimum of 10 feet or 3 meters) from the unit while it is rotating.
- Do not remove spoil-pile with hand tools while auger is operating. The person can become entangled in the auger or hurt by tools that become entangled in the auger.
- Always shut excavator down using "Excavator Shutdown Procedure" on page 10 before dismounting the excavator and/or allowing anyone to come near the excavator and attachment.
- 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.
- Hydraulic flow to the equipment must be disengaged and the power machine must be shutdown according to the shutdown procedures provided in this manual before anyone is allowed to clean or service 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 the hydraulics is off.

## WARNING

To avoid serious injury or death:

- Allow only persons to operate this attachment who have fully read and comprehended this manual, and who have been properly trained in the safe operation of this attachment. Serious injury or death can result from failure to read, understand, and follow instructions provided in this manual.
- Never carry riders on the attachment or power machine. Riders can obstruct the operator's view, interfere with controls, be pinched by moving components, become entangled in rotating components, struck by objects, thrown about, fall off and be run over, etc.
- Hydraulic fluid under high pressure will penetrate the skin or eyes causing 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. If an accident occurs, seek immediate emergency medical care or gangrene may result. **DO NOT DELAY.**

## Section 2: Operating Procedures

- 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.
- Operate only power machines equipped with a certified Roll-Over Protective Structure (ROPS) and seat belt. Keep folding ROPS in the "locked up" position when appropriate. If ROPS is in the locked up position, fasten seat belt snugly and securely to help protect against serious injury or death from falling and machine overturn.
- This attachment has a 3500 psi (24.13 mPa) maximum hydraulic pressure rating. Make sure your powered machine's hydraulic pressure to this attachment does not exceed 3500 psi (24.13 mPa). Exceeding this rating can result in equipment damage, serious injury, or death.
- Make sure the attachment is properly connected to the coupler on the dipper arm. The coupler must be secured to the attachment with lock pin fully inserted and secured in place with the linchpin. An improperly connected attachment can come loose and fall or being thrown.
- Keep all persons away from the attachment while lowering and raising the unit. A person can be hit, pinched, or crushed by the unit.
- Keep others away from the auger while the unit is rotating. A person can become entangled in the auger or be hit by the auger if it swings erratically. Anyone helping should be kept a safe distance (a minimum of 10 feet) from the auger while it is rotating.
- 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.
- Do not allow children to play on or around the attachment, including when stored. Children can fall off the attachment or the attachment can fall onto the children.
- 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.
- Always travel with adequate clearance between ground and auger. Hitting an object while traveling can damage equipment and cause the operator to lose control.
- Do not travel across an incline where equipment could slip or roll-over. Consult the Operator's Manual for acceptable inclines the power machine is capable of crossing.
- Always transport loads low to the ground to maintain stability of the skid steer/tractor.
- Make sure the boom and arm do not make contact with buildings, fences, poles, trees, etc, or bystanders while swinging the cab and/or boom from side to side. Hitting property can damage the excavator and/or property. Hitting bystanders can cause serious injuries or death.
- Do not use this attachment to lift, carry, push or tow other equipment or objects. It is not properly designed or guarded for this use. The operator could lose control resulting in equipment damage and/or tipping hazard.
- Do not use this attachment to pull and/or pry fence posts, stumps, roots, rocks, or other objects out of the ground. It is not properly designed or guarded for this use.
- Do not use attachment to wrap wire or any other items. Doing so can result in bodily injury and/or damage to 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.
- 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

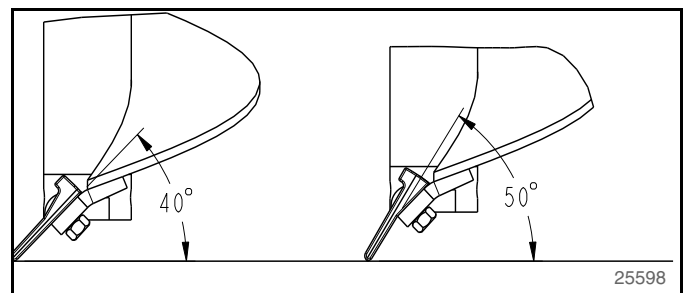
To avoid minor or moderate injury:

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

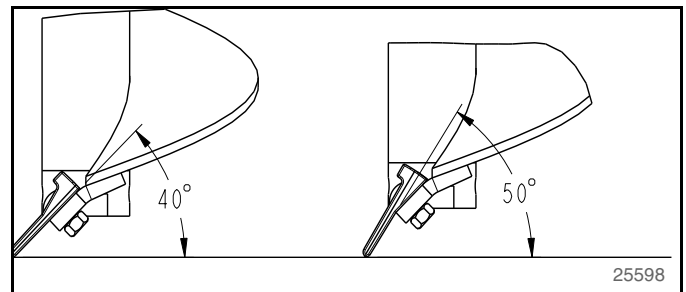
### Dual-Angle Teeth

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 39 for torque ratings.



Auger Teeth Mounted at 40 Degrees  
Figure 2-1



Auger Teeth Mounted at 50 Degrees  
Figure 2-2

## Transport With Auger Attached

### WARNING

To avoid serious injury or death:

- Swing cab to align the boom straight with direction of travel. Should the auger hit a solid object while carrying the auger with boom rotated left or right can damage the auger and excavator and cause operator to lose control.
- 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. Never make turns on the incline.
- 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 hazard 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.
- Make sure the auger does not block the operator's vision while driving the excavator. Poor vision can cause the operator to hit unseen objects and lose control of the excavator.

**IMPORTANT:** Protect gearbox from damage while transporting.

**IMPORTANT:** Transport excavator with auger curled back and carried low to provide overhead clearances when auger bit is bolted to the gearbox and has a cradle for support.

**IMPORTANT:** Transport excavator short distances with auger bit hanging straight down and close to the ground when auger does not have a cradle or does have an extension. Curling auger back in this situation can damage the gearbox and/or auger extension due to bouncing.

**IMPORTANT:** Transport excavator long distances with auger disconnected and boom carried low when auger does not have a cradle or does have an extension. Curling auger back in this situation can damage the gearbox and/or auger extension due to shock loads caused by bouncing.

**IMPORTANT:** Transport with excavator on a trailer and auger bit resting horizontally on the trailer bed. This arrangement provides the lowest overhead clearance and protects the gearbox from damage due to shock loads caused by bouncing.

1. Prepare excavator and excavator auger for traveling. See Important Notes above.
2. Select a safe ground travel speed when transporting from one area to another.
3. Make sure your view is not blocked while traveling. If necessary adjust boom to improve your view.
4. Always travel straight up and straight down inclines. Make turns only on level ground.
5. 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.
6. Reduce ground speed when turning. Leave enough room to clear obstacles such as buildings, trees, and fences.
7. Keep away from electrical power lines. Place an orange warning sign under overhead power lines indicating type of danger above.
8. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
9. 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.
- Do not accidentally or intentionally move excavator forward or backward, or rotate boom or cab while digging. The auger and/or excavator can be damaged. Bystanders can be seriously injured or killed.
- Always stop auger from rotating 1 to 2 feet (30 to 60 cm) 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 the auger starts to screw itself into the ground, stop auger rotation immediately and raise auger to free it. Continue normal digging operations by lowering the auger slowly in the hole.



**IMPORTANT:** If the auger has become jammed in the hole, reverse its rotation to raise it easily. After the auger is free, continue normal digging operations by lowering the auger slowly in the hole.

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

**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.

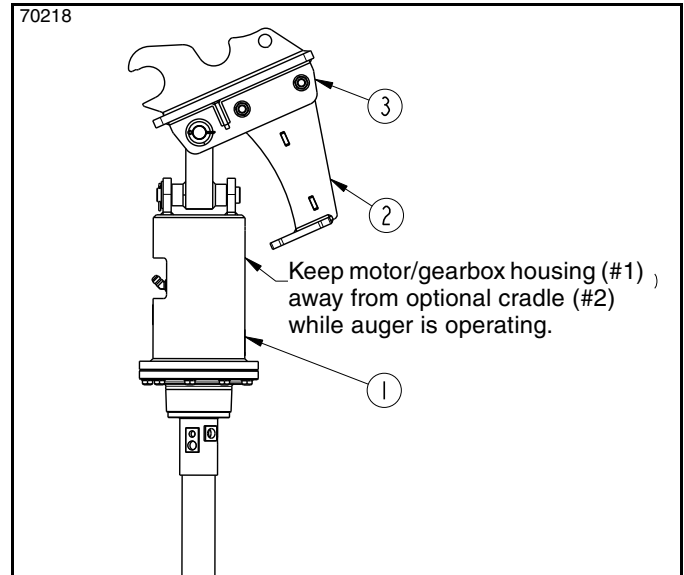
**IMPORTANT:** Be careful to keep the auger vertical throughout the dig. Damage to the unit and/or power machine can occur if bending forces are applied to the auger while digging a hole.

1. Extend curl cylinder and lower auger low to the ground while traveling between drilling positions.
2. It is best to stop the excavator on a surface that is level side to side or on an incline facing straight up or straight down the incline. This will greatly improve balance and down force while digging.
3. Experiment with auger speeds before digging. Increase excavator 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.

**Refer to Figure 2-3:**

**IMPORTANT:** Before digging, curl coupler mount (#3) slightly back as shown in Figure 2-3. This will put distance between motor/gearbox housing (#1) and optional cradle (#2).

4. Raise the boom and retract curl cylinder until optional cradle (#2) is safely away from motor/gearbox housing (#1) as shown. If optional cradle (#2) is not included, auger can be operated with coupler mount (#3) horizontal.
5. With the boom facing straight forward, drive forward or backward as needed to center auger point on the hole to be drilled.
6. Make sure auger has stopped swinging and then lower auger point to the ground while making sure the point is centered on the hole to be drilled.
7. Lower dozer blade to help keep excavator from drifting.
8. Swivel boom left or right as needed to align the auger vertically from left to right.



**Operating Position of Auger Hitch**  
**Figure 2-3**

**NOTE:** A second person may be required to visually verify the auger is vertical from front to back.

9. Adjust arm in or out as needed to align auger vertically from front to back.
10. With engine running at a slow speed, start auger turning clockwise. Increase engine speed to desired digging speed.
11. Lower boom as auger penetrates into the ground. Apply down pressure with the boom to assist ground penetration. Excessive down pressure can cause the hydraulic system to overheat and stall the auger. If auger speed slows or stops, reduce down pressure.
12. Swivel boom left or right and arm forward or backward as needed to keep the auger vertical while digging.
13. After penetrating the ground approximately 24", stop auger rotation and raise it up to remove soil and debris from the hole. Lower auger back into the hole to continue digging. Dig another 24" down except this time raise auger up with it still 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 into the hole to continue digging. Repeat this procedure until hole is at its final depth.
14. 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.
15. Curl auger back to carry auger low when transporting from one digging site to the next. Be careful to watch out for people, obstructions, and uneven terrain.

## General Operation

By now you should have thoroughly read your Operator's Manual, properly attached your auger to your machine, verified auger rotates clockwise when engaged, and gone over the "**Operating Checklist**" on page 22. Be sure to 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. If you have not done all of the things just described above, please stop and do them now. This is necessary for your safety and the safety of others.

Now that you are properly briefed, your EA35 auger is properly installed, and you have the proper digging authorization from the utility companies; it is time for you to transport to the work site. Make sure that the auger is in its carrying position and does not make contact with the ground. Select a safe traveling speed and transport to your site in such a manner that faster moving vehicles can pass you safely. If you are using a public road or right-of-way, install a slow moving vehicle sign where it is visible from the back. If towing the excavator on a trailer, the sign should be covered or removed.

Once you have safely arrived at your digging site, you should position your excavator so that the auger is directly over the spot where you want to dig a hole. Retract curl cylinder until optional cradle is safely away from the motor/gearbox housing. If cradle is not included, retract curl cylinder until coupler is approximately level. Lower auger until auger point is resting on the ground centered over the planned hole. Lower dozer blade to keep excavator from moving. Swivel boom left or right to align the auger vertically from left to right, and rotate arm forward or backward to align the auger vertically from front to back.

Do not operate the auger with auger bit off the ground. The auger could swing erratically causing injury to operator, bystanders, and damage to equipment.

With engine at an idle, engage hydraulic drive circuit and raise engine rpm to operate the auger 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 auger and excavator could result. Use the excavator boom to assist driving the auger into the ground and to align the auger vertically left to right while digging. Use the excavator arm to align the auger vertically front to back while digging.

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

Periodically adjust boom and arm positions to keep auger vertical while digging the hole.

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

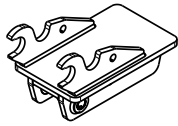
Once the hole is completed, disengage hydraulic drive, raise and curl auger back until it is approximately 12" off the ground, raise dozer blade and move away from the hole.

You should park on a solid, flat, and level surface, lower the boom until the auger mount is resting on the ground, lower dozer blade to the ground, reduce engine speed, remove switch key, and lock control levers before dismounting the excavator.

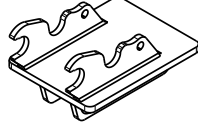
With a little practice and experience you should become very good at operating your Kubota EA35 Excavator Auger.

See "**Features and Benefits**" section or "**Product Specifications**" for additional information on performance enhancing options.

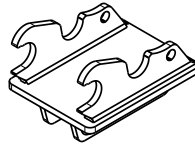
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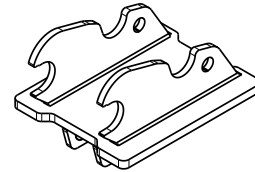
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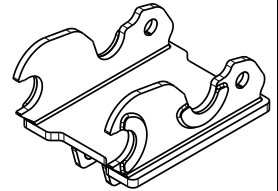
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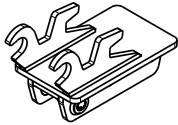


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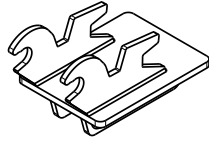


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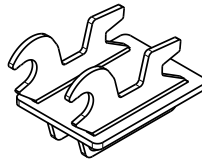
#### Quick Attach Auger Mounts



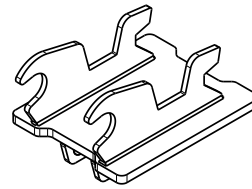
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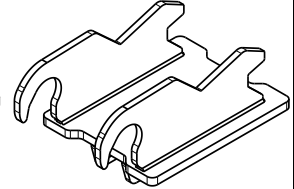
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Part # 317-315A



Part # 317-334A



Part # 317-336A

#### Wedge Type Auger Mounts

Auger Mounts

Figure 3-1

### Auger Mounts (Option)

Refer to Figure 3-1:

Optional auger mounts are available that can be easily changed with the existing auger mount on your auger. If needed, replace your auger mount with an optional auger mount that is designed to fit your excavator model.

### Cradle (Option)

Refer to Figure 3-2:

Add the optional cradle to the auger mount to assist carrying the auger horizontal while transporting and unhooking.

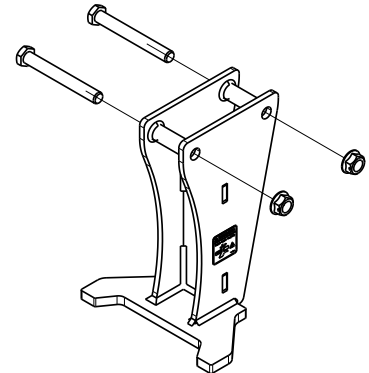
#### Quick Attach Auger Mounts

Part No.	Part Description	For Excavator Models
317-249A	AUGER MOUNT -	-U17 & KX018
317-248A	AUGER MOUNT -	-U25 or U27
317-247A	AUGER MOUNT -	-U35, KX71, KX91, KX033, or KX040
317-250A	AUGER MOUNT -	-U55 or KX057
317-251A	AUGER MOUNT -	-KX080

#### Wedge Type Auger Mounts

317-317A	AUGER MOUNT -	-U17 or KX018
317-332A	AUGER MOUNT -	-U25 or U27
317-315A	AUGER MOUNT -	-U35, KX71, KX91, KX033, or KX040
317-334A	AUGER MOUNT -	-U55 or KX057
317-336A	AUGER MOUNT -	-KX080

25542



Part No.	Part Description
317-255A	EA35 CRADLE ASSEMBLY

Cradle (Optional)  
Figure 3-2

## Dirt Augers (Option)

Refer to Figure 3-3:

Dirt augers are offered with 2 9/16" diameter hubs or 2" hex hubs with replaceable hardened steel pilot points and forged steel teeth. For replaceable teeth, see **"Dirt & Tree Auger Teeth"** on this page.

Dirt Augers	
Part No.	Part Description
317-096A	SA 9" X 2 9/16" - HUB DOUBLE AUGER
317-099A	SA 12" X 2 9/16" - HUB DOUBLE AUGER
317-102A	SA 15" X 2 9/16" - HUB DOUBLE AUGER
317-105A	SA 18" X 2 9/16" - HUB DOUBLE AUGER
317-108A	SA 24" X 2 9/16" - HUB DOUBLE AUGER
317-114A	SA 30" X 2 9/16" - HUB DOUBLE AUGER
317-120A	SA 36" X 2 9/16" - HUB DOUBLE AUGER
317-273A	SA 6" X 2" HEX HUB DOUBLE AUGER
317-095A	SA 9" X 2" HEX HUB DOUBLE AUGER
317-098A	SA 12" X 2" HEX HUB DOUBLE AUGER
317-101A	SA 15" X 2" HEX HUB DOUBLE AUGER
317-104A	SA 18" X 2" HEX HUB DOUBLE AUGER
317-107A	SA 24" X 2" HEX HUB DOUBLE AUGER
317-113A	SA 30" X 2" HEX HUB DOUBLE AUGER
317-119A	SA 36" X 2" HEX HUB DOUBLE AUGER

## Tree Augers (Option)

Refer to Figure 3-4:

Tree augers are offered with 2 9/16" diameter hubs or 2" hex hubs with replaceable hardened steel pilot points and forged steel teeth. For replaceable teeth, see **"Dirt & Tree Auger Teeth"** on this page.

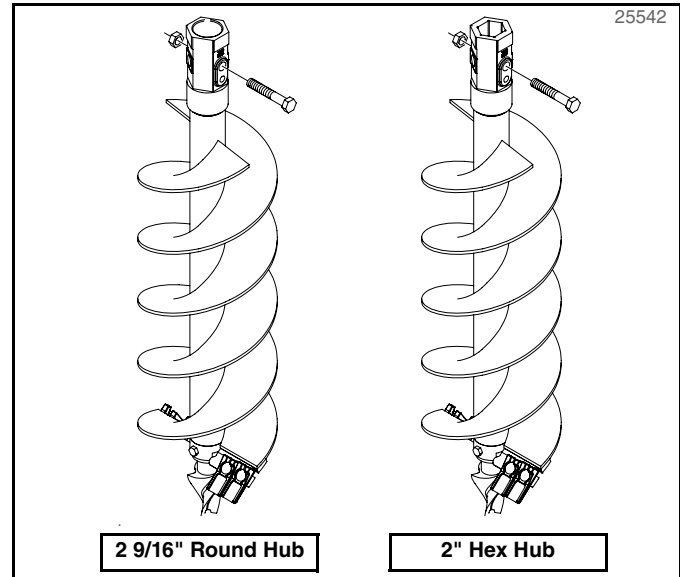
They are excellent for digging holes that are larger in diameter at the top and smaller at the bottom. This hole design is good for planting bush, shrub, and tree bulbs at soil level and allowing the root system to reach down underneath to collect needed nutrients.

Tree Augers	
Part No.	Part Description
317-111A	SA 24" X 2 9/16" HUB TREE AUGER
317-117A	SA 30" X 2 9/16" HUB TREE AUGER
317-123A	SA 36" X 2 9/16" HUB TREE AUGER
317-110A	SA 24" X 2" HEX HUB TREE AUGER
317-116A	SA 30" X 2" HEX HUB TREE AUGER
317-122A	SA 36" X 2" HEX HUB TREE AUGER

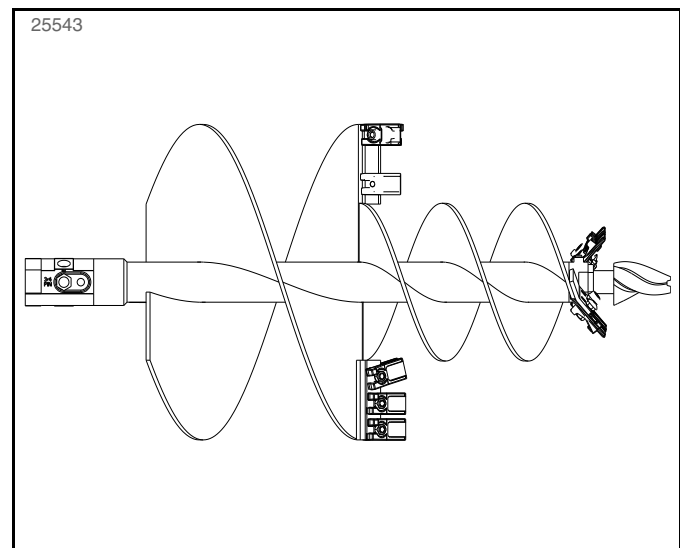
## Dirt & Tree Auger Teeth

Refer to Figure 3-5:

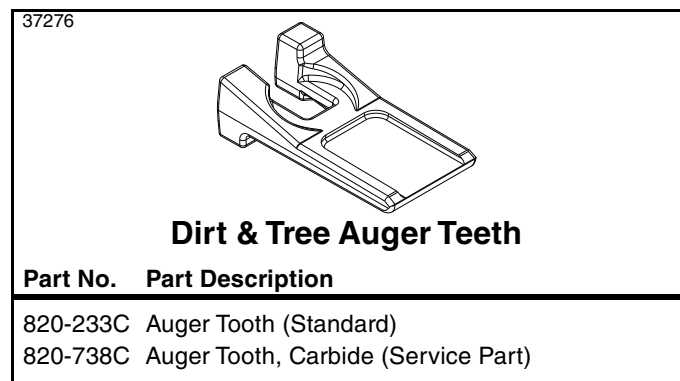
Standard dirt and tree auger teeth are forged steel teeth that can be mounted at a 40° angle for standard digging and 50° angle for aggressive digging. Carbide teeth last longer and should be used when standard teeth can not stand-up to the abrasion.



Dirt Augers  
Figure 3-3



Tree Augers (2" Hex hub shown)  
Figure 3-4



Dirt & Tree Auger Teeth

Part No.	Part Description
820-233C	Auger Tooth (Standard)
820-738C	Auger Tooth, Carbide (Service Part)

Dirt & Tree Auger Tooth  
Figure 3-5

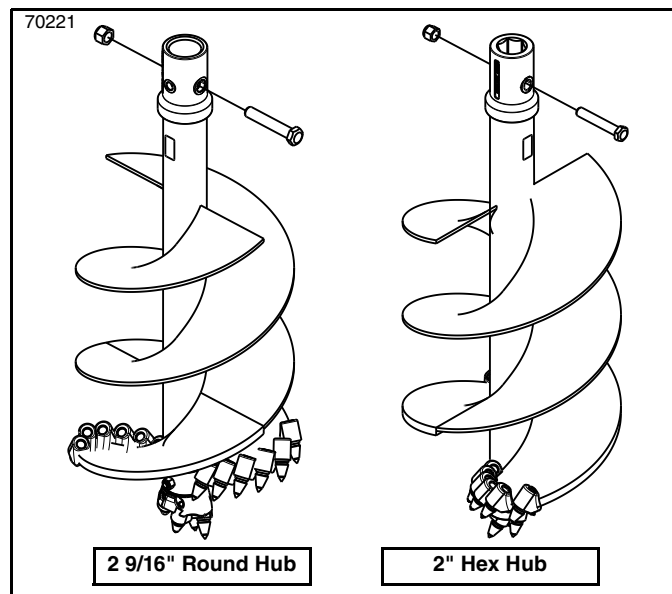


### Rock Augers (Option)

Refer to Figure 3-6:

Rock augers are offered with 2 9/16" diameter hubs or 2" hex hubs with carbide steel teeth. For replaceable teeth, see "Rock Auger Teeth" on this page.

Rock Augers		
Part No.	Part Description	
317-281A	SA 6" X 2 9/16" - - HUB ROCK AUGER	
317-268A	SA 9" X 2 9/16" - - HUB ROCK AUGER	
317-269A	SA 12" X 2 9/16" - HUB ROCK AUGER	
317-270A	SA 15" X 2 9/16" - HUB ROCK AUGER	
317-271A	SA 18" X 2 9/16" - HUB ROCK AUGER	
317-272A	SA 24" X 2 9/16" - HUB ROCK AUGER	
317-280A	SA 6" X 2"	HEX HUB ROCK AUGER
317-263A	SA 9" X 2"	HEX HUB ROCK AUGER
317-264A	SA 12" X 2"	HEX HUB ROCK AUGER
317-265A	SA 15" X 2"	HEX HUB ROCK AUGER
317-266A	SA 18" X 2"	HEX HUB ROCK AUGER
317-267A	SA 24" X 2"	HEX HUB ROCK AUGER



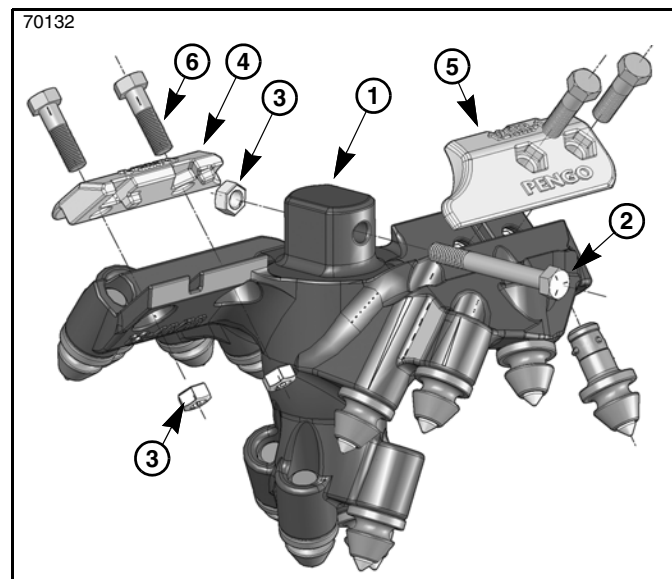
Rock Augers  
Figure 3-6

### Bolt-on Rock Heads (Accessory)

Refer to Figure 3-7:

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.

Bolt-on Rock Heads		
Part No.	Part Description	
317-274A	SA 6" BOLT-ON ROCK HEAD ASSEMBLY	
317-275A	SA 9" BOLT-ON ROCK HEAD ASSEMBLY	
317-276A	SA 12" BOLT-ON ROCK HEAD ASSEMBLY	
317-277A	SA 15" BOLT-ON ROCK HEAD ASSEMBLY	
317-278A	SA 18" BOLT-ON ROCK HEAD ASSEMBLY	
317-279A	SA 24" BOLT-ON ROCK HEAD ASSEMBLY	



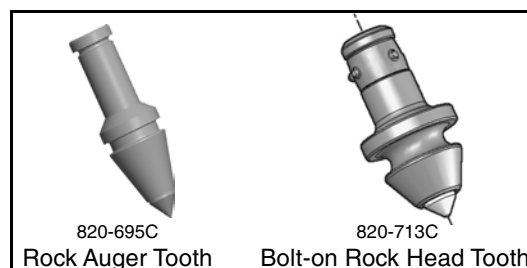
Bolt-on Rock Heads (12" Assembly Shown)  
Figure 3-7

### Rock Auger Teeth

Refer to Figure 3-8:

Rock auger teeth are aggressive carbide teeth that are excellent for digging through rocks.

Rock Auger Teeth		
Part No.	Part Description	
820-695C	Auger Tooth (For Rock Augers)	
820-713C	Rock Auger Tooth (Bolt-on Rock Heads)	



Rock Auger Teeth  
Figure 3-8

### Auger Extensions (Accessory)

**Refer to Figure 3-9:**

If the desired depth cannot be achieved, an extension can be purchased from your nearest Kubota dealer.

Auger Extensions	
Part No.	Part Description
317-133A	SA 24" X 2 9/16"OD AUGER EXT. ASY
317-135A	SA 48" X 2 9/16" OD AUGER EXT. ASY
317-129A	SA 24" X 2" HEX AUGER EXTEN. ASSY
317-130A	SA 36" x 2" HEX AUGER EXTEN. ASSY
317-131A	SA 48" X 2" HEX AUGER EXTEN. ASSY

### Auger Adapter (Accessory)

**Refer to Figure 3-10:**

Two auger adapters are available:

890-963C converts 2 9/16" round shaft to a 2" hex shaft.

892-047C converts 2" hex shaft to a 2.5" round shaft.

Auger Adapters	
Part No.	Part Description
890-963C	Auger Adapter 2 9/16" Round hub; 2" Hex Shaft
892-047C	Auger Adapter 2" Hex Shaft; 2.5" Round Shaft

### Puff Augers (Option)

**Refer to Figure 3-11:**

Two puff augers are available. One has a 2" hex hub and the other has a 2 9/16" diameter hub. The puff auger is a 2" rock drill used for drilling T-post holes in tough conditions.

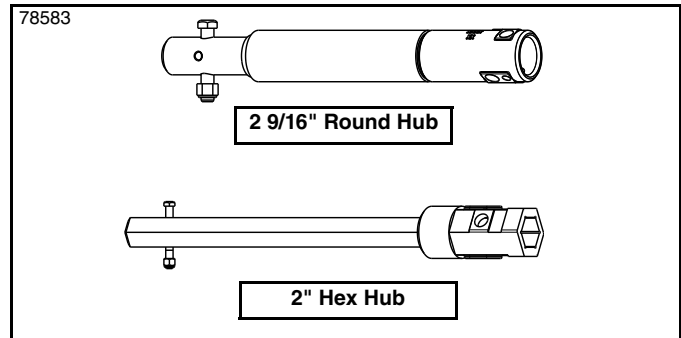
Puff Auger Assemblies	
Part No.	Part Description
317-318A	SA 2" X 2" HEX HUB PUFF AUGER
317-319A	SA 2" X 2 9/16" ROUND HUB PUFF AUGER

### Hydraulic Hose Kits (Option)

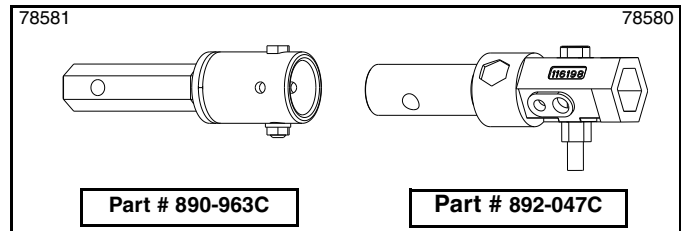
**Refer to Figure 3-12:**

Four optional Hydraulic Hose Kits are available to fit your particular Kubota excavator. Compare your excavator model number with the models listed in Figure 3-12. If your hose kit is not compatible with your excavator, you should replace it with one that is compatible.

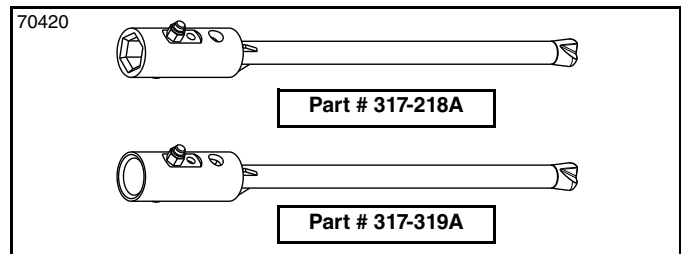
Hydraulic Hose Kits		
Part No.	Part Description	For Excavator Models
317-283A	74" HOSE KIT - - -	KX080
317-284A	54" HOSE KIT - - -	U35, KX71, KX91, KX033, KX040, U55, or KX057
317-285A	32" HOSE KIT - - -	U25 or U27
317-297A	48" HOSE KIT - - -	U17 or KX018



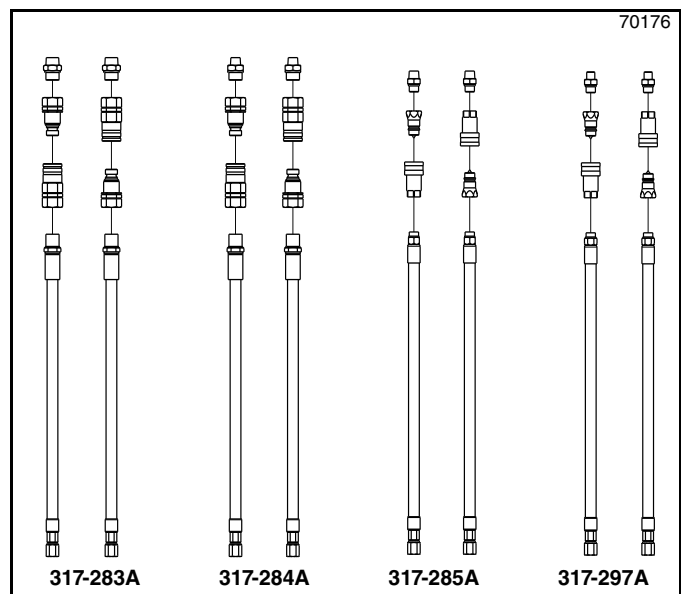
**Auger Extensions  
Figure 3-9**



**Auger Adapters  
Figure 3-10**



**Puff Auger Assemblies  
Figure 3-11**



**Hydraulic Hose Kits  
Figure 3-12**

## Section 4: Maintenance and Lubrication

### Maintenance

Proper servicing and adjustment are key 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 auger. 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 excavator down using “Excavator Shutdown Procedure” on page 10 before dismantling the power excavator and/or allowing anyone to come near the excavator and attachment.
- Hydraulic flow to the equipment must be disengaged and the power machine must be shutdown according to the shutdown procedures provided in this manual before anyone is allowed to clean or service 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 the hydraulics is off.
- All guards and shields must be installed and in good working condition while operating the attachment.



### WARNING

To avoid serious injury or death:

- Make sure controls are all in the neutral position or park before starting the power machine.
- Keep all persons away from the attachment while lowering and raising the unit. A person can be hit, pinched, or crushed by the unit.
- Allow only persons to perform maintenance on this attachment who have been properly trained in the safe operation of this attachment.
- Always lower attachment and dozer blade to the ground, shut engine off, remove switch key, and lock control levers before dismantling the excavator.
- Do not alter attachment or replace parts on the attachment with other brands. Other brands may not fit properly or meet OEM (Original Equipment Manufacturer) specifications. They can weaken the integrity and impair the safety, function, performance, and life of the attachment. Replace parts only with genuine OEM parts.
- Perform scheduled maintenance. Check for loose hardware, missing parts, broken parts, structural cracks, and excessive wear. Make repairs before putting the implement back into service.

- Make sure safety labels are installed in their proper location and are in good condition before operating the attachment. Read and obey all instructions on the labels.

### 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 “Gearbox Lube” on page 33 for detailed instructions.
7. Replace all worn, damaged, or illegible safety labels by obtaining new labels from your Kubota dealer.

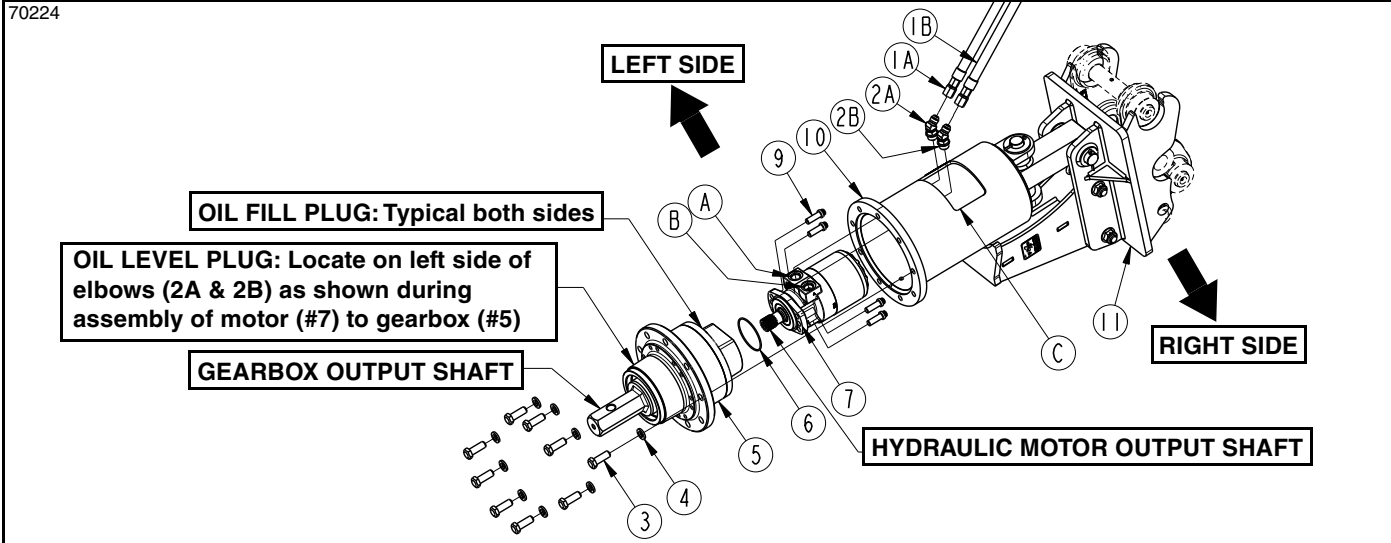
### Long-Term Storage

Clean, inspect, service, and make necessary repairs to the auger 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.
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.

Touch-up Paint	
Part No.	Part Description
821-070C	Gloss black enamel spray can
821-070CTU	Gloss black enamel bottle with brush
821-070CQT	Gloss black enamel quart
821-070CGL	Gloss black enamel gallon

5. Replace all damaged or missing decals.
6. A coating of oil may be applied to the spiral flights to minimize oxidation.
7. Apply a coat of grease to the coupler engagement surfaces of the auger mount to minimize oxidation.
8. Lubricate gearbox and motor as noted on page 33.
9. 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.



Hydraulic Motor &amp; Gearbox Assembly &amp; Disassembly

Figure 4-1

## Motor/Gearbox Maintenance

**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 auger should be hooked-up to the excavator.

### Park Excavator With Auger Attached

1. Park excavator on a flat level surface, lower auger (not shown) and auger mount (#11) until they are resting on the ground as if they were going to be unhooked from the excavator. Do not unhook the auger from excavator.
2. Shut excavator down before dismounting. Refer to “**Excavator Shutdown Procedure**” on page 10.

### Disassemble Motor/Gearbox Unit

1. Uncouple hydraulic hoses (#1A & #1B) from excavator arm.
2. Remove auger or auger extension from gearbox output shaft. Refer to “**Auger Assembly & Disassembly**” on page 12 for detailed instructions.
3. Mark hydraulic hose (#1A) with tape or other method to keep track of this hose being on the left side.
4. Unscrew hydraulic hoses (#1A & #1B) from 45° elbows (#2A & #2B).
5. Unscrew elbows (#2A & #2B) from ports “A” & “B”.
6. Remove bolts (#3) and lock washers (#4) from motor/gearbox housing (#10).
7. Remove motor/gearbox (#5 & #7) from motor/gearbox housing (#10).
8. Check gearbox fluid level and lubricate gearbox output shaft as needed. Refer to “**Lubrication Points**” on page 33 for detailed instructions.

### Disassemble/Assemble Hydraulic Motor

Gearbox (#5) needs to be separated from motor (#7) only when lubricating motor output shaft.

1. Remove bolts (#9) from hydraulic motor (#7).
2. Separate motor (#7) from gearbox (#5). Be careful not to damage O-ring (#6).
3. Lubricate output shaft of hydraulic motor (#7). Refer to “**Lubrication Points**” on page 33 for detailed instructions.
4. Inspect O-ring (#6). Make sure it is properly seated in motor (#7) and not damaged. Replace O-ring if damaged.

**NOTE:** Locate oil level plug to the right side of elbows (#2A & #2B) as shown during assembly of motor (#7) to gearbox (#5).

5. Reattach hydraulic motor (#7) to gearbox (#5) with bolts (#9). Tighten bolts (#9) to the correct torque.

### Assemble Motor/Gearbox Unit

1. Align ports “A” & “B” with motor/gearbox opening “C” and insert motor/gearbox (#7 & #5) in motor/gearbox housing (#10).
2. Secure motor/gearbox (#7 & #5) to motor/gearbox housing (#10) with 5/8"-11 x 1 3/4" GR5 bolts (#3) and lock washers (#4). Tighten bolts (#3) to the correct torque.
3. Screw elbows (#2A & #2B) to ports “A” & “B”. Position elbows as shown and tighten.
4. Screw hydraulic hose (#1A) to elbow (#2A) until tight.
5. Screw hydraulic hose (#1B) to elbow (#2B) until tight.
6. Attach auger or auger extension to gearbox output shaft. Refer to “**Auger Assembly & Disassembly**” on page 12 for detailed instructions.
7. Couple hydraulic hoses (#1A & #1B) to excavator.

### Lubrication Points

#### Lubrication Legend



Multi-purpose  
spray lube



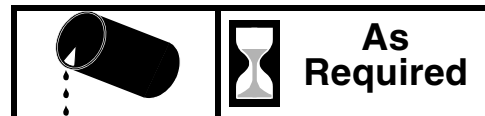
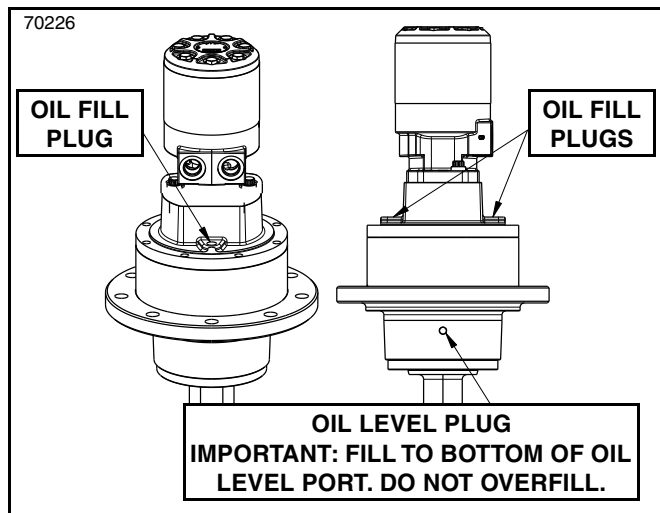
Multi-purpose  
grease lube



Multi-purpose  
oil lube



Intervals in hours at which  
lubrication is required



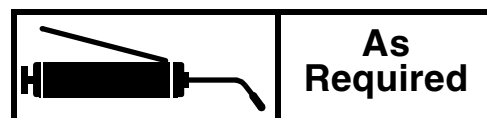
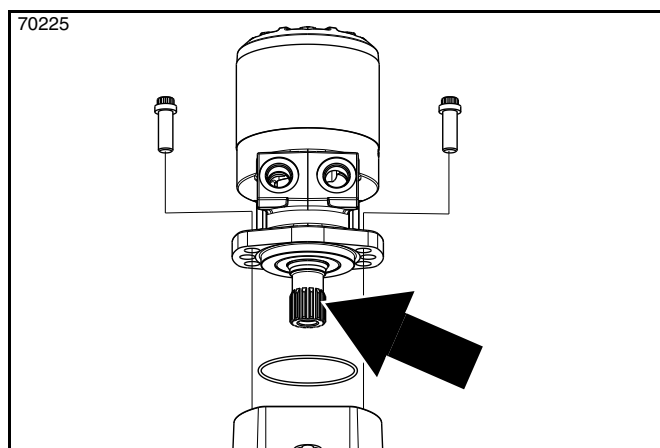
#### Gearbox Lube

**NOTE:** The gearbox is shipped from the factory filled with oil. When checking oil level, position gearbox vertical. When adding or changing oil in the gearbox, remove auger from the gearbox and motor/gearbox unit from the housing. Refer to “**Motor/Gearbox Maintenance**” on page 32.

Change oil after the first 50 hours of operation. Then every 1200 hours or 12 months whichever comes first.

Type of Lubrication: SAE 90W Multi-purpose Lube

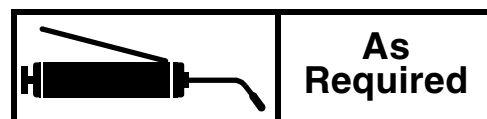
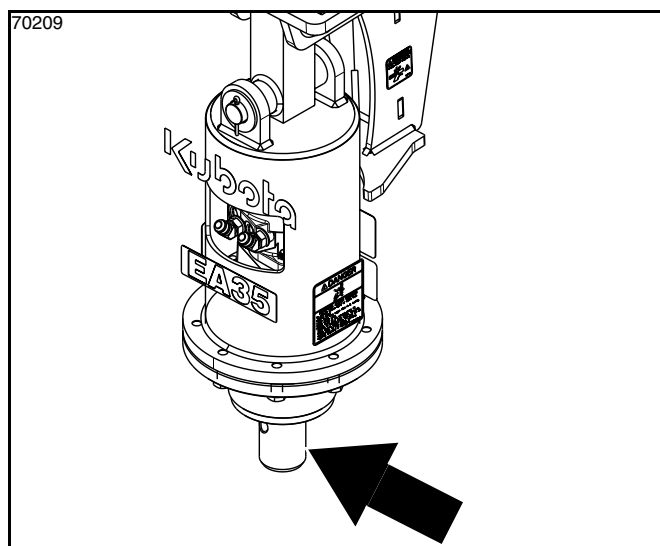
Quantity = Fill with lube until fluid flows from oil level port. Do not over fill.



#### Motor Output Shaft

Type of Lubrication: Multi-purpose grease

Quantity = Light film



#### Gearbox Output Shaft

Type of Lubrication: Multi-purpose grease

Quantity = Light film



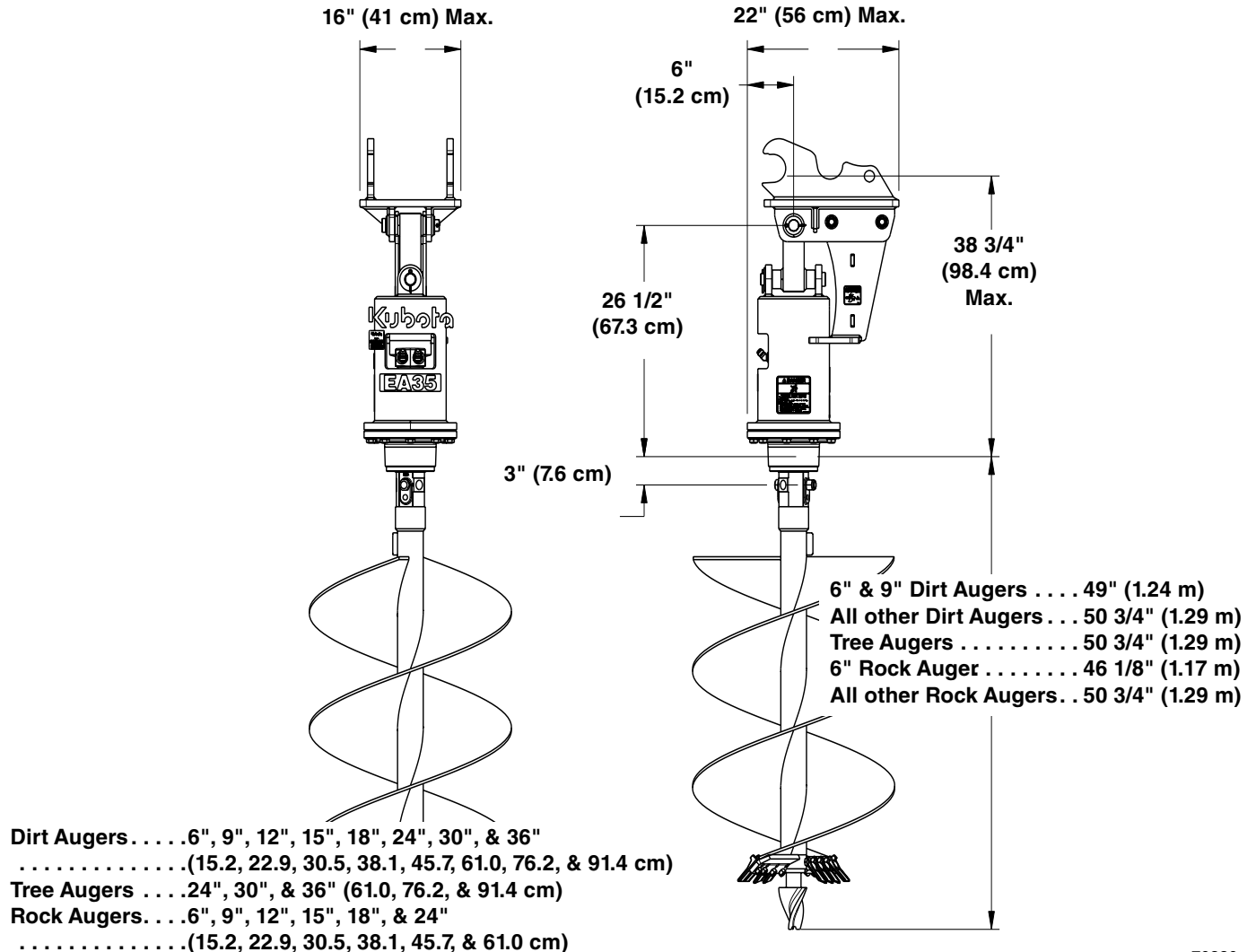
### EA35 Model

Description	Specifications & Capacities
Hydraulic requirements	10-30 gpm (38-114 Lpm) @ 1500 to 3500 psi (10.3 to 24.1 MPa)
Hydraulic motor	18.9 CID (.31L)
Base weight without Options	72 lbs (33 kg) Includes 54" hydraulic hose kit.
Auger flighting thickness	5/16 (8 mm)
Auger pipe	2 1/2" ID (6.4 cm) ID
Auger teeth	Forged, individually replaceable 40 Degree angle installed on flat side 50 Degree angle installed on angled side
Auger drive	Hydraulic
Gearbox	Hydraulically driven planetary gearbox; reversible
Gearbox API-GL-5 oil weight	SAE 90 @ 35° F (35° C) min. temperature
Gearbox oil capacity	1.69 pints (.8 L)
Options and Accessories	
<b>Gearbox/motor output shaft:</b>	
Round shaft . . . . . Part # 317-256A	116 lbs (52.6 kg) 2 9/16" (6.5 cm) Diameter output shaft
Hex shaft . . . . . Part # 317-257A	116 lbs (52.6 kg) 2" (5.1 cm) Hex output shaft
<b>Hydraulic hose kits:</b>	Complete with 2 hoses with quick couplers & 2 adapters with matching quick couplers
32" (.81 m) Hose kit . . . . . 317-285A	3 lbs (1.5 kg) Fits Models: <b>U25 or U27</b>
54" (1.37 m) Hose kit # . . 317-284A	6 lbs (2.7 kg) Fits Models: <b>U35, KX71, KX91, KX033, KX040, U55, or KX057</b>
48" (1.22 m) Hose kit # . . 317-297A	6 lbs (2.7 kg) Fits Models: <b>U17 or KX018</b>
74" (1.88 m) Hose kit # . . . 317-283A	8 lbs (3.6 kg) Fits Models: <b>KX080</b>
<b>Quick attach auger mounts:</b>	
Weight of part # . . . . . 317-249A	52 lbs (23.6 kg) Fits Models: <b>U17 or KX018</b>
Weight of part # . . . . . 317-248A	73 lbs (33 kg) Fits Models: <b>U25 or U27</b>
Weight of part # . . . . . 317-247A	88 lbs (40 kg) Fits Models: <b>U35, KX71, KX91, KX033, or KX040</b>
Weight of part # . . . . . 317-250A	150 lbs (68 kg) Fits Models: <b>U55 or KX057</b>
Weight of part # . . . . . 317-251A	165 lbs (74.8 kg) Fits Models: <b>KX080</b>
<b>Wedge type auger mounts:</b>	
Weight of part # . . . . . 317-317A	54 lbs (24.5 kg) Fits Models: <b>U17 or KX018</b>
Weight of part # . . . . . 317-332A	80 lbs (36 kg) Fits Models: <b>U25 or U27</b>
Weight of part # . . . . . 317-315A	84 lbs (38 kg) Fits Models: <b>U35, KX71, KX91, KX033, or KX040</b>
Weight of part # . . . . . 317-334A	140 lbs (63.3 kg) Fits Models: <b>U55 or KX057</b>
Weight of part # . . . . . 317-336A	166 lbs (77.4 kg) Fits Models: <b>KX080</b>
<b>Cradle part # . . . . . 317-255A</b>	28 lbs (12.7 kg) Fabricated steel
<b>Auger extensions (Accessory):</b>	
24" Round extension # . . 317-133A	14 lbs (6.4 kg) 24" lg x 2 9/16" (61 cm x 6.5 cm) Round extension
48" Round extension # . . 317-135A	48 lbs (21.8 kg) 48" lg x 2 9/16" (121.9 cm x 6.5 cm) Round extension
24" Hex extension # . . . . 317-129A	34 lbs (15.4 kg) 24" lg x 2" (61 cm x 5.1 cm) Hex extension
36" Hex extension # . . . . 317-130A	46 lbs (21 kg) 36" lg x 2" (91 cm x 5.1 cm) Hex extension
48" Hex extension # . . . . 317-131A	58 lbs (26.3 kg) 48" lg x 2" (121.9 cm x 5.1 cm) Hex extension
<b>Augers Adapters (Accessory):</b>	
2 9/16" RND to 2" Hex# . . 890-963C	15 lbs (6.8 kgs) 2 9/16" (6.5 cm) Round hub to 2" (5.1 cm) hex shaft
2" Hex to 2.5" Round # . . 892-047C	15 lbs (6.8 kgs) 2" Hex (5.1 cm) Hex hub to 2.5" (6.4 cm) round shaft
<b>Puff Augers:</b>	
Hex hub puff auger # . . . 317-318A	33 lbs (15 kg) 2" (5.1 cm) Pilot bit x 2" (5.1 cm) hex hub x 38.7" (.98 m) long
RND hub puff auger # . . . 317-318A	29 lbs (13.2 kg) 2" (5.1 cm) Pilot bit x 2 9/16" (6.5 cm) round hub x 38.7" (.98 m) long

### EA35 Model

Auger Diameter	6"	9"	12"	15"	18"	24"	30"	36"
<b>Auger weights lbs (kg)</b>								
<b>Dirt auger - hex hub</b>	45 (20.4)	79 (35.8)	112 (50.8)	116 (52.6)	135 (61.2)	206 (93.4)	224 (101.6)	280 (127)
<b>Dirt auger - round hub</b>	N/A	70 (31.8)	98 (44.5)	119 (54)	131 (59.4)	214 (97.1)	285 (129.3)	380 (172.4)
<b>Tree auger - hex hub</b>	N/A	N/A	N/A	N/A	N/A	209 (94.8)	228 (103.4)	289 (131.1)
<b>Tree auger - round hub</b>	N/A	N/A	N/A	N/A	N/A	162 (73.5)	236 (107)	305 (138.3)
<b>Rock auger - hex and round hub</b>	60 (27.2)	95 (43.1)	116 (52.6)	149 (67.6)	205 (93)	256 (116.1)	N/A	N/A
<b>Bolt-on rock head weights lbs (kg)</b>	24 (10.9)	36 (16.3)	42 (19.1)	47 (21.3)	62 (28.1)	79 (35.8)	N/A	N/A
<b>Number of teeth</b>								
<b>Dirt augers</b>	2	4	4	5	6	8	10	12
<b>Tree augers</b>	N/A	N/A	N/A	N/A	N/A	9	11	13
<b>Rock augers &amp; bolt-on rock heads*</b>	6	10	12	14	16	20	N/A	N/A
<b>Dirt auger lengths in (m)</b>	49 (1.24)		50 3/4 (1.29)					
<b>Tree auger lengths in (m)</b>	N/A					50 3/4 (1.29)		
<b>Rock auger lengths in (m)</b>	46 1/8 (1.17)	45 5/8 (1.16)						
<b>Auger pilots</b>	Cast steel, 3 - drill points Cast steel, 4 - drill points							
<b>Dirt &amp; tree augers</b>								
<b>Rock augers &amp; bolt-on rock heads</b>								

\* Quantity of teeth includes the 4 drill points to make the auger pilot.



### EA35 Excavator Augers (Dirt auger shown with mount #317-247A)

70220

## EA35

Features	Benefits
<b>Optional auger mounts</b>	Fits a wide range of Kubota excavators with a mechanical quick attach coupler or wedge type quick coupler mounted on the end of the excavator arm. Easy hook-up and unhook capabilities. Excavator boom & arm can be used to apply additional down force.
<b>Optional cradle</b>	Supports the auger while traveling. Keeps the auger from swinging erratically. Allows the auger to be carried low without hitting the ground or other protrusions.
<b>Maneuverability</b>	Excavator Augers are able to reach over fences or other obstructions.
<b>Planetary gearbox</b>	Gearbox is completely sealed with all moving parts running in oil for constant lubrication.
<b>Output shaft options</b>	2" Hex shaped output shaft, or 2 9/16" diameter output shaft. Both offer high torque resistance, with the hex shaft being the heaviest available.
<b>Large selection of augers</b>	Variety of Dirt, Tree, and Rock Auger sizes and styles to suit many applications.
<b>Replaceable hardened steel pilot points on dirt augers</b>	Hardened points will last longer than non-hardened. Points are replaceable. Fish tail tips and steel point make it easier to start a hole.
<b>Replaceable carbide pilot points and teeth on rock augers</b>	Points are designed for cutting through rock and are replaceable.
Accessories	
<b>Large selection of bolt-on rock heads</b>	Pengo Dirt Augers can be converted to Rock Augers with this accessory.
<b>Two hex auger extensions and two round auger extensions</b>	Hex and round extensions are available in 2 lengths (24" & 48"). Increases the depth of hole the auger can dig by 24" or 48".
<b>Puff augers</b>	Available with 2" hex hub or 2 9/16" round hub. Used for drilling 2" rock T-post holes in tough conditions.









## Troubleshooting Chart

Problem	Cause	Solution
<b>Auger will not dig</b>	Teeth are dull.	Sharpen or replace teeth.
	Teeth are wearing too fast.	Replace standard auger teeth with carbide auger teeth. Refer to “ <b>Dirt &amp; Tree Auger Teeth</b> ” on page 28.
	Auger is turning too fast and bouncing.	Reduce engine speed. Do not exceed 110 rpm.
	Ground is too hard for the teeth.	Flip teeth over to 50 degree angle.
	Auger is encountering rocks, roots, or other obstructions.	Lift auger from hole and remove obstruction or change location.
	The auger is not positioned over the hole properly.	Move boom and arm to reposition auger. If necessary, reposition excavator.
<b>Auger digs so far, but will not dig deeper</b>	Soil could have a hard pan layer stopping the digging.	Use excavator boom to push auger into the ground.
	Auger has bottomed out and won't go deeper.	Add an extension accessory to go deeper.
<b>Auger is digging at an angle</b>	Excavator moved on its own while auger was in the hole.	1. Dozer blade was not lowered. Lower dozer blade to help stop movement. 2. Brace crawlers with chocks to stop movement.
	Excavator is sideways on an incline causing the boom and arm to be at an angle to the hole.	1. Line excavator straight up or down an incline to keep boom and arm in line with the hole. 2. Swivel boom left or right to keep auger aligned vertical while digging.
	Auger is not vertical with auger point resting on the ground.	1. Extend or retract arm cylinder to align auger vertical from front to back. 2. Swivel boom left or right to align auger vertical from left to right.
	Auger starts to angle as it digs deeper.	1. Extend or retract arm cylinder as needed to keep auger aligned vertical from front to back. 2. Swivel boom left or right to keep auger aligned vertical from left to right.
	Auger is encountering rocks, roots, or other obstructions.	Lift auger from hole and remove obstruction or change hole location.
<b>Excessive oil heating</b>	Flow in hydraulic line is restricted due to dirt particles in fittings and twisted hydraulic hoses.	Remove dirt particles in fittings and untwist hydraulic hoses that may be pinched or kinked.
	Defective or mismatched coupler.	Replace with proper couplers.
	Hydraulic fluid is dirty.	Replace hydraulic fluid and filter.
	Insufficient quantity of hydraulic fluid.	Fill reservoir to proper level. Increase reservoir storage capacity.
	Digging load is excessive.	Reduce load to within machine specifications.
<b>Gearbox is damaged</b>	No oil in gearbox.	Check oil level in gearbox per instructions.
	Oil not changed per instructions.	Change oil in gearbox per instructions.
<b>Jerky operation</b>	Cold oil or air in hydraulic lines.	Allow time for hydraulic oil to warm up.
	Hydraulic system not working properly.	See excavator Operator's Manual.

## Troubleshooting Chart

Problem	Cause	Solution
<b>Insufficient digging power</b>	Excessive wear of auger teeth or point.	Replace auger teeth or point.
	Teeth are wearing too fast.	Replace standard auger teeth with carbide auger teeth. Refer to “ <b>Dirt &amp; Tree Auger Teeth</b> ” on page 28.
	Low system pressure. (psi)	Check system with pressure gauge. If low, investigate cause.
	Relief valve is damaged or is set wrong.	Refer to excavator Operator's Manual.
	Excessive digging load.	Reduce load to within machine specifications.
<b>Hydraulic Oil leaks</b>	Loose or damaged hoses.	Tighten or replace damaged hydraulic hoses.
	Loose or damaged fittings.	Tighten or replace hydraulic fittings.
	Hydraulic motor seals and gaskets are worn or damaged.	See dealer for repair.
<b>Auger turns in reverse direction</b>	Hydraulic hoses are reversed at the couplers.	Re-install hoses correctly.
	Excavator control lever operated incorrect	Reverse excavator control lever direction.
<b>Auger speed is slow</b>	Low hydraulic flow through the system.	Check with flow meter. If low, investigate and correct.
	Flow in hydraulic line is restricted due to dirt particles in fittings and twisted hydraulic hoses.	Remove dirt particles in fittings and untwist hydraulic hoses that may be pinched or kinked.
	Defective or mismatched couplers.	Replace with proper couplers.
	Fittings and/or connections are too small.	Replace with proper size fittings and/or connections.
	Dirty hydraulic oil filter on the excavator.	Replace hydraulic oil filter.
	Worn or damaged hydraulic pump on the excavator.	See dealer for repair.
	Excessive wear on the auger teeth or point.	Replace auger teeth and/or point.

Torque Values Chart for Common Bolt Sizes																	
Bolt Size (inches)	Bolt Head Identification						Bolt Size (Metric)	Bolt Head Identification									
		Grade 2			Grade 5				Grade 8			Class 5.8			Class 8.8		
in-tpi <sup>1</sup>	N · m <sup>2</sup>	ft-lb <sup>3</sup>	N · m	ft-lb	N · m	ft-lb	mm x pitch <sup>4</sup>	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb		
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7				
1/4" - 28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11				
5/16" - 18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27				
5/16" - 24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29				
3/8" - 16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53				
3/8" - 24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62				
7/16" - 14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93				
7/16" - 20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97				
1/2" - 13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105				
1/2" - 20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150				
9/16" - 12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160				
9/16" - 18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230				
5/8" - 11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245				
5/8" - 18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300				
3/4" - 10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355				
3/4" - 16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450				
7/8" - 9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665				
7/8" - 14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780				
1" - 8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845				
1" - 12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550				
1-1/8" - 7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710				
1-1/8" - 12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700				
1-1/4" - 7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220				
1-1/4" - 12	750	555	1680	1240	2730	2010	<sup>1</sup> in-tpi = nominal thread diameter in inches-threads per inch <sup>2</sup> N · m = newton-meters <sup>3</sup> ft-lb= foot pounds <sup>4</sup> mm x pitch = nominal thread diameter in millimeters x thread pitch										
1-3/8" - 6	890	655	1990	1470	3230	2380											
1-3/8" - 12	1010	745	2270	1670	3680	2710											
1-1/2" - 6	1180	870	2640	1950	4290	3160											
1-1/2" - 12	1330	980	2970	2190	4820	3560											
Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above. All locknuts or lubricated fasteners: Use 75% of torque value. (i.e. 1/2"-13 GR5 = 76 ft-lb; 75% of 76 or .75 x 76 = 57 ft-lb)																	

## Warranty

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

**Overall Unit:** One year Parts and Labor.

**Auger:** One year. (Material and workmanship, normal wear not covered.)

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

**Hydraulic Motor:** 5 years Parts and Labor.

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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