




G20/40

 **Read this entire manual. This safety alert symbol is used throughout this manual to call your attention to messages involving your personal safety and the safety of others. Failure to follow these instructions can result in injury or death.**

 **WARNING**

Si no entiende ingles, se prefiere que busque a alguien que interprete las instrucciones para usted.

Owner:	_____
Date Purchased:	_____
Model #:	<u>G20/40</u> Serial #: _____
Manual #:	<u>9MG20402457947</u>

Operator's Manual

Danuser Machine Company, Inc.
500 E. 3rd St.
P.O. Box 368
Fulton, MO 65251
Tel: (573) 642-2246 Fax: (573) 642-2240
E-mail: sales@danuser.com
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Dear Owner/Operator,

Thank you for purchasing this Danuser G20/40 Digger. We appreciate your business.

Your safety as an operator of our product is very important to us. Therefore, *before* you assemble, install, operate, maintain, service, remove, or move your Danuser Digger, read and understand this manual thoroughly. If there is anything you do not understand, immediately contact your dealer, or contact our factory direct.

Phone:	(573) 642-2246
Fax:	(573) 642-2240
E-mail:	sales@danuser.com

Your satisfaction in the performance and longevity of our product is also very important to us and can be prolonged by proper assembly, installation, operation, and maintenance as instructed in this manual.

Thank you again for your business and for your trust in our product. Please feel free to contact us at any time for further assistance.

Sincerely,

Danuser Machine Company, Inc.
500 E. 3rd St.
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Fulton, MO 65251

Tel: (573) 642-2246 Fax: (573) 642-2240
E-mail: sales@danuser.com Website: www.danuser.com

Danuser provides this manual "as is" without warranty of any kind, either expressed or implied. Danuser assumes no responsibility for errors or omissions. Danuser assumes no liability for damages resulting from the use of the information contained herein. Danuser reserves the right to revise and improve its products as it sees fit. This manual describes the state of this product at the time of its publication and may not reflect the product in the future.

Danuser is a registered trademark.

Foreword


Please read this manual thoroughly!

Before you assemble, install, operate, maintain, service, remove, or move your Danuser Digger, read this manual thoroughly. If there is anything you do not understand, immediately contact your dealer, or call our factory direct at (573) 642-2246. Powered equipment can be dangerous if not assembled, installed, operated, maintained, serviced, removed, or moved properly.

Warranty Registration

To activate your warranty coverage and to provide you with efficient customer service, please fill out your WARRANTY REGISTRATION FORM. This form is included in your unit's paperwork package. If you did not complete a WARRANTY REGISTRATION FORM or did not receive one, please call Danuser Machine Company, Inc. Or, register online at www.Danuser.com. Your satisfaction with our product and your safety as a user of our product are both very important to us.

Symbols

 This SAFETY ALERT symbol identifies important safety messages. Carefully read each safety message that follows. Failure to understand and obey a safety message, or recognize a safety hazard, could result in injury or death to you or others around you. The operator is ultimately responsible for the safety of himself as well as others in the operating area of the post hole digger.





<i>Symbol</i>	<i>Meaning</i>
	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, including hazards that are exposed when guards are removed.
	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
	This is important information for proper use of this equipment. Failure to comply may lead to premature equipment failure.

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Important Safety Message for Owners/Operators	Form No. 3346



Working with unfamiliar equipment can lead to careless injuries. Read and understand this manual, the manual for your tractor, and the safety signs attached to the equipment before assembling, installing, operating, or maintaining this post hole digger. If there is anything in this manual you do not understand, contact your dealer or Danuser Machine Company, Inc. The safe use of this machine is strictly up to you, the operator. If this unit is used, loaned, or rented by any other person, it is the owner's responsibility to make certain that the operator prior to operating:

- Reads and understands the operator's manuals
- Reads and understands the safety signs
- Is instructed in safe and proper use

The majority of accidents involve entanglement on the driveline or auger. This entanglement risk becomes greater when you replace the shear bolt or the auger retaining bolt with a bolt longer than specified by Danuser Machine Company, Inc. This improper replacement occurs most often on machines that are loaned or rented to someone who has not read the operator's manual and is not familiar with a post hole digger.

- This post hole digger is designed for one-man operation from the tractor seat. It is the responsibility of the operator to see that no one is within twenty-five feet (25') of the digger when it is started or in use. Do not operate the digger with another person near or in contact with any part of the digger, driveline, or auger. Serious personal injury or death may result if any attempt is made to assist digger operation by hand.
- The use of this equipment is subject to certain hazards which cannot be protected against by mechanical means or product design. All operators of this equipment must read and understand this entire manual, paying particular attention to safety messages and operation instructions, prior to assembling, installing, or operating the digger.
- Please remember it is also important that you read, understand, and follow the safety signs on the digger. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety as well as the safety of others. Danuser Machine Company, Inc. will furnish new safety signs upon request at no charge.
- All things with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes potential hazards and follows reasonable safety practices. Danuser Machine Company, Inc. has designed this post hole digger to be used with all its safety equipment properly attached to minimize the chance of accidents. Study this manual to make sure you have all safety equipment properly attached.
- Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintenance, repair, removal, or movement of the digger.
- When the use of hand tools is required to perform any part of assembly, installation, adjustment, maintenance, repair, removal, or movement of the digger, be sure the tools used are designed and recommended by the tool manufacturer for that specific task.
- Always use two people to handle heavy, unwieldy components during assembly, installation, adjustment, maintenance, repair, removal, or movement of the digger. The post hole digger shall be operated only by an operator positioned in the operator's seat of the tractor.
- Never place any part of your body where it would be in danger if movement should occur during assembly, installation, adjustment, operation, maintenance, repair, removal, or movement of the digger.
- Never allow children to operate or be around this post hole digger.
- Do not allow riders on the digger or tractor at any time. There is no safe place for any riders.

Safety

(continued)

- This post hole digger is designed for use only on tractors with 540 RPM power take-off. Never attach or attempt to operate this digger with any tractor exceeding 540 RPM power take-off.
- Only properly trained people should operate this equipment. A person who has not read or does not understand the operator's manual and safety signs is not qualified to operate the post hole digger.
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- Auger contact with underground gas lines or electrical cables may result in serious injury or death from explosion or electrical shock. Before starting to dig, the operator shall call 811 or the local number to locate underground utilities.
- Before beginning operation, clear the work area of objects which might be picked up and thrown by or entangled in the auger.
- Before you operate the digger, check over all pins, bolts, and connections to be sure all are securely in place. Replace any damaged or worn parts immediately. All replacement parts shall meet original equipment manufacturer's standards and requirements.
- Worn edges or a slightly rounded point can seriously affect auger penetration. Check for wear before each use, and replace as necessary.
- Never replace the shear bolt or the auger retaining bolt with anything other than the specified bolt in this manual. A longer, or protruding, fastener is more likely to grab clothing or gloves, which can result in serious injury or death.
- Do not operate the post hole digger without all safety shields and guards in place. If a safety shield or guard is removed for any reason, it must be replaced before the machine is again operated. Always use, and maintain in place, all shields and guards furnished with the digger and with the tractor.
- Never modify any part of the digger. Modifications may pose additional hazards and shall not be done.
- To prevent entanglement and possible serious injury or death, never add additional weight or use body weight to try to push the auger into the ground. A hydraulic down force kit is available if additional digging force is needed (see *Accessories*).
- Keep hands, feet, hair, jewelry, and clothing away from all moving and/or rotating parts.
- Never place yourself between the tractor and the digger while the tractor is running.
- Never position the auger point by hand or with any tool when the tractor is running.
- Never position the auger point by putting your hands on the auger, gearbox, boom, or driveline.
- Do not shovel dirt away from a rotating auger, as the shovel can be caught and thrown by the auger.
- Do not walk or work under a raised digger unless it is securely blocked or held in position. Do not depend on the tractor hydraulic system to hold the digger in place. Stored energy devices shall be de-energized and/or blocked before disassembly and/or service.
- A heavy load can cause instability of the tractor. Use extreme care during travel. Slow down on turns and watch out for bumps. The tractor may need front counterweights to counterbalance the weight of the digger. It is recommended the tractor be equipped with a Rollover Protection System (ROPS) and a seat belt be used.
- Use stabilizer bars, adjustable sway chains, or sway blocks on your tractor lift arms to keep the post hole digger from swinging side-to-side. Adjust as tight as practical for best performance.

Safety

(continued)

- Do not operate the digger on steep hillsides. When digging on uneven or hilly terrain, position the tractor with the post hole digger uphill. With the post hole digger downhill, the tractor could tip when attempting to pull the auger from its hole.
- To prevent rapid wear of U-joints and possible failure of drivelines, never lift the auger point more than twelve inches (12") off the ground when the PTO is operating.
- To prevent possible instantaneous driveline failure, never move the digger from hole to hole, or transport, while the auger is rotating. This could lead to injury from flying pieces of the failed driveline.
- Always stop the PTO, set the brake, shut off the tractor engine, and remove the tractor key before dismounting the tractor. Never leave equipment unattended with the tractor running.
- Most accidents occur because of neglect or carelessness. Keep all helpers and bystanders twenty-five feet (25') away from an operating digger.
- Always use care when operating a post hole digger.

Safety is a primary concern in the design, manufacture, sale, and use of post hole diggers. As the manufacturer of your post hole digger, we want to confirm to you, our customer, our concern for safety.

Our current production post hole diggers include, as standard equipment, safety signs and guards for auger adapters, gearbox inputs, and drivelines. Older machines can be retrofitted to add these safety signs and guards. If you have an older Danuser post hole digger which does not have standard safety equipment, please contact your dealer about bringing your machine up to the current level of safety.

DANGER

Improper operation of this post hole digger can cause serious personal injury or death. Operation of this post hole digger should only be done by a competent adult acting in compliance with the operator's manual. Since post hole digging operations are beyond our control, we disclaim all liability for any damages, injuries or death which may result.

Decals & Safety Signs



PART NO. PHDC 7
Locations: Boom, right side; Boom, left side



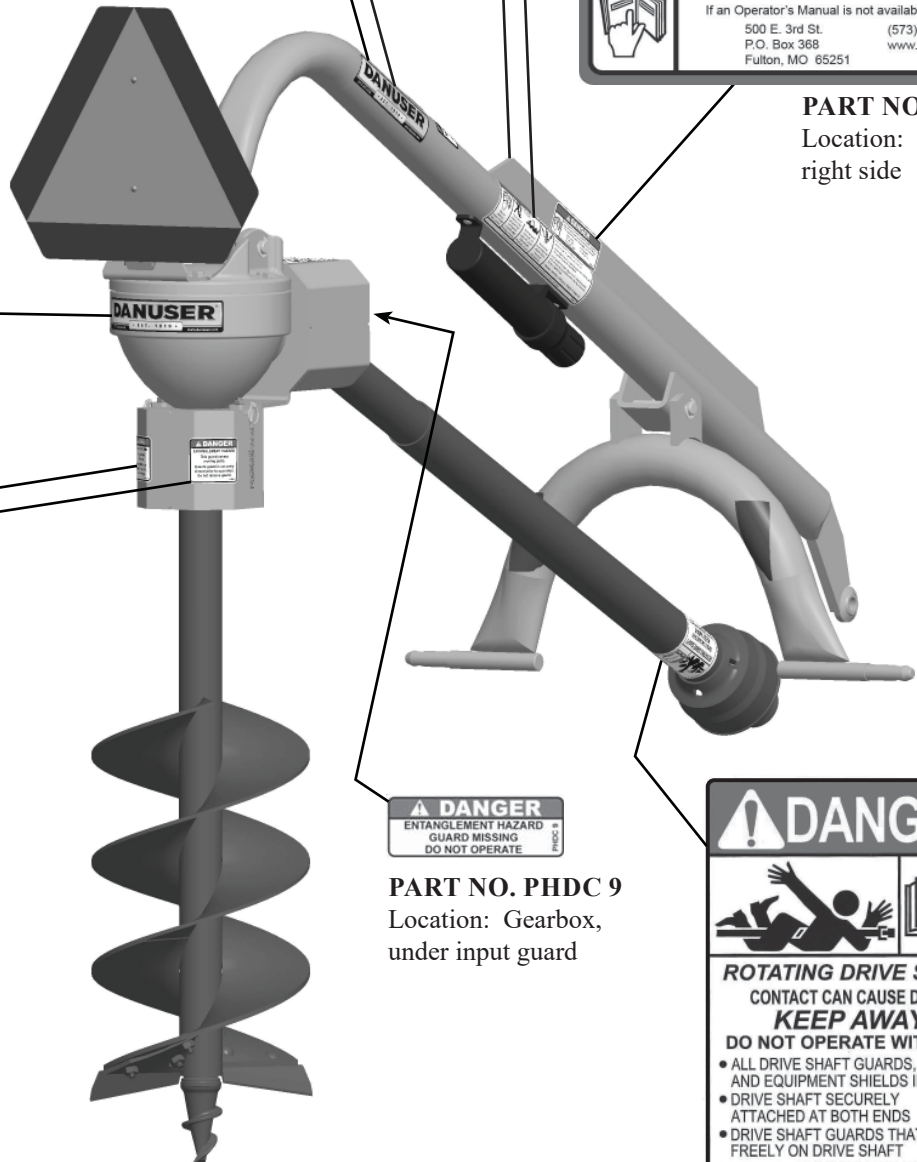
PART NO. DANUSER100
Locations: Boom, right side; Boom, left side; Gearbox



PART NO. PHDC 4
Location: Boom rib, right side



PART NO. PHDC 8
Locations: Auger adapter guard, left side; Auger adapter guard, right side; Input guard, top



PART NO. PHDC 9
Location: Gearbox, under input guard



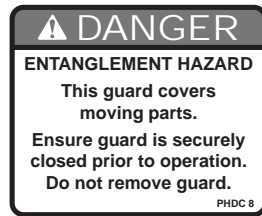
PART NO. 13-10021
Location: Driveline guard

⚠ WARNING

Clean or replace all safety signs if they cannot be clearly read and understood.

Decals & Safety Signs

(continued)



PART NO. PHDC 8
 Locations: Auger adapter guard, left side; Auger adapter guard, right side; Input guard, top



**Know what's below.
 Call before you dig.**

PART NO. 20673
 Location: Input guard, top



PART NO. 9875
 Location: Boom, top

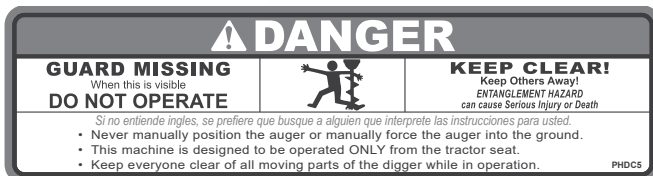


SERIAL NUMBER
 Location: Gearbox, lid



PART NO. DIG4
 Location: Boom, top

PART NO. 13-10022
 Location: Driveline tube, under guard



PART NO. PHDC 5
 Location: Auger, under auger adapter guard



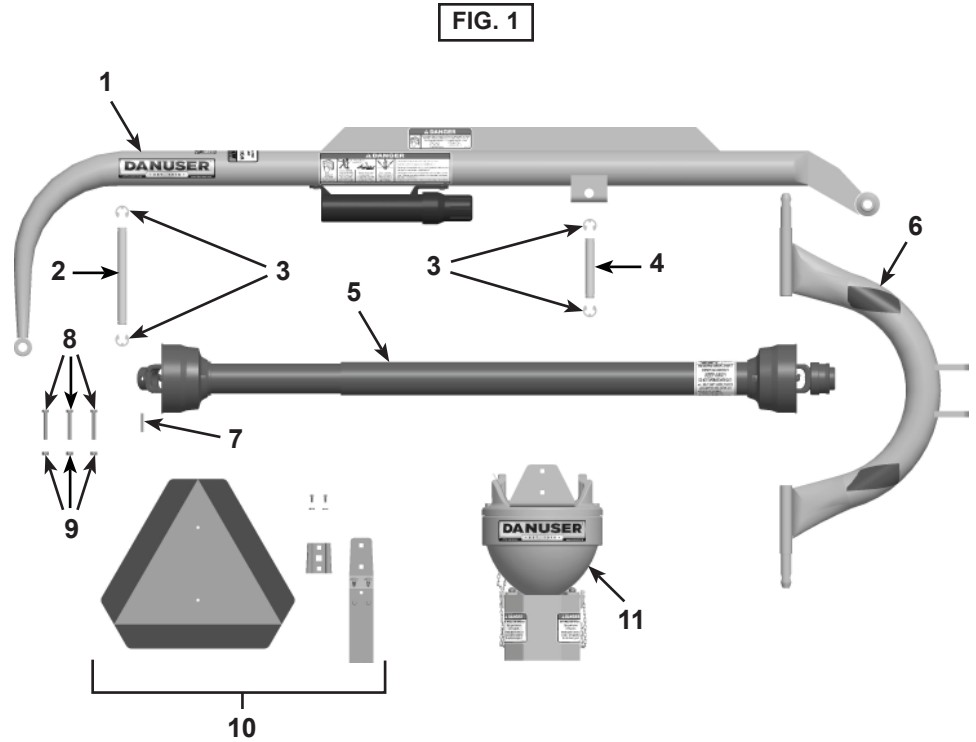
Clean or replace all safety signs if they cannot be clearly read and understood.

Preparation

Check for shipping damage immediately, and verify that all components have been received.

Report all shipping damage to the carrier immediately.

Before you begin assembly, open all packaging and compare the contents to the image (FIG. 1) and table below to ensure you have all of the components and your unit has all of the safety signs and guards required by current production safety standards. If your unit does not comply, contact Danuser Machine Company, Inc. IMMEDIATELY at (573) 642-2246.



REF. NO.	PART NO.	DESCRIPTION	QTY.
1	6045	Boom	1
2	6056	Pin (3/4" x 8")	1
3	2172	Retaining Ring	4
4	6055	Pin (3/4" x 4-15/16")	1
5	6807	Driveline	1
6	6051	Yoke	1
7	6061	Roll Pin (3/16" x 1-1/2")	1
8	6015	Special Shear Bolt (5/16"-18 x 2-1/4", Gr. 5, 13/32" of thread) (one required in unit, two spares included)	3
9	573	Nut (5/16"-18) (one required in unit, two spares included)	3
10	20069	SMV Kit	1
11	6042	Gearbox	1
		Operator's Manual (in canister attached to boom)	1

Assembly & Installation

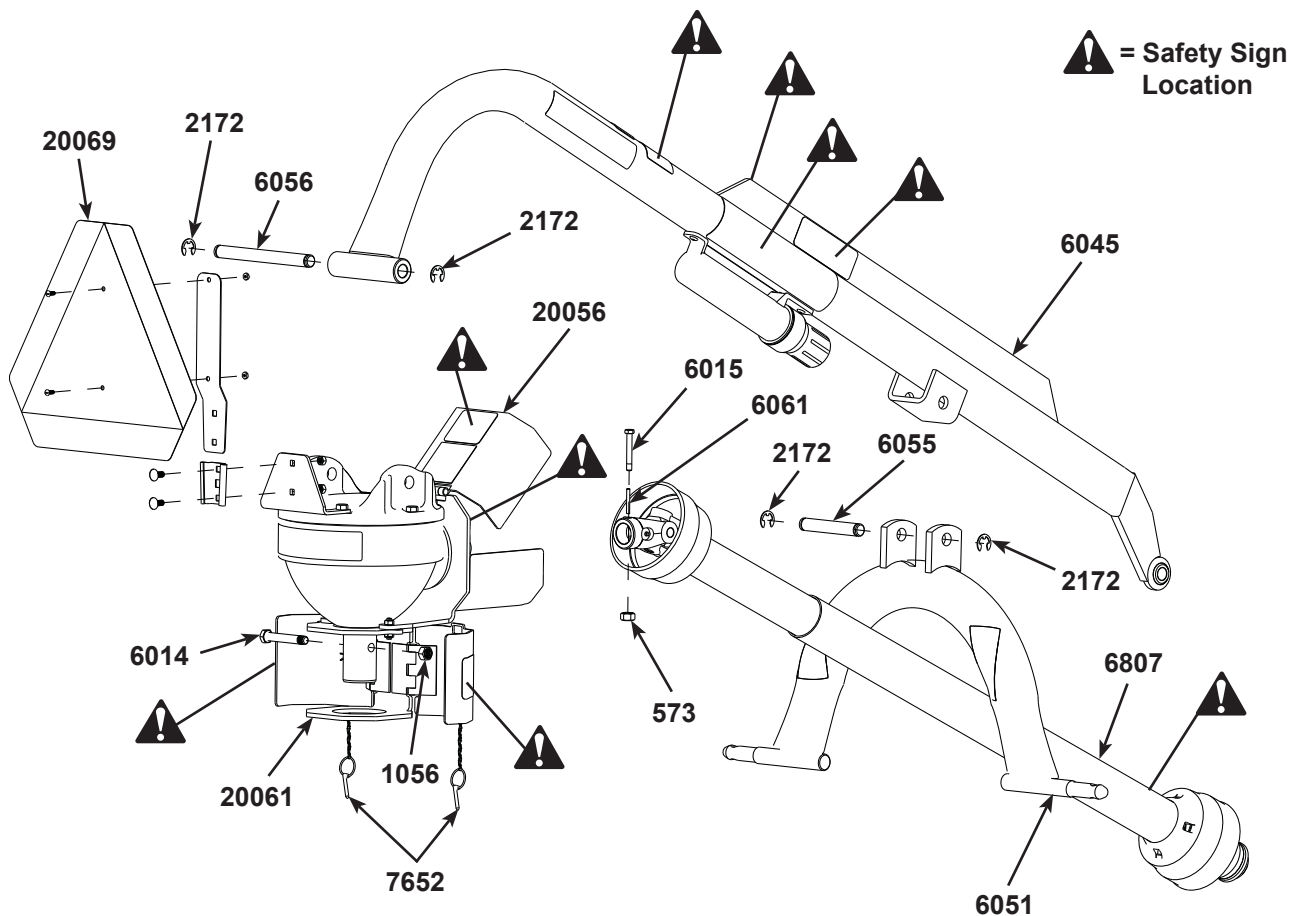
Description

The G20/40 Digger is built to the exacting standards of high quality which have become synonymous with the name Danuser. The G20/40 Digger is designed for one-man operation from the tractor seat to "Dig Holes Sitting Down." The heat-treated straight bevel gear set, tapered roller bearings, and tubular crane boom form an integrated design to provide utility and reliability. The G20/40 Digger is designed for 20 to 40 horsepower, Category I three-point hitch, 540 RPM PTO tractors using sway stabilizers. The digger has a 2 inch round spindle for auger attachment. Augers are available in lengths of 29, 33, and 40 inches, and auger extensions are available in lengths of 7 and 14 inches. Auger diameters range from 4 to 24 inches. Auger diameter must not exceed 24 inches. Danuser augers are built with special wear-resistant steel on the lower flights, replaceable cutting edges, and replaceable points. The auger attaches to the gearbox spindle with a **special** retaining bolt (1/2"-13 x 3-1/4", Gr. 8, 1/2" of thread). The **special** shear bolt (5/16"-18 x 2-1/4", Gr. 5, 13/32" of thread) connects the driveline to the gearbox pinion. Read and understand this manual, the manual for your tractor, and all safety signs before attempting to assemble, install, or operate this post hole digger. If you have any questions, contact your dealer or Danuser Machine Company, Inc. at (573) 642-2246.

Recommended Tools

- Hammer or mallet
- 3/16" roll pin punch
- Emery cloth (for removal of excess paint)
- 1/2", 9/16", 5/8", and 3/4" wrenches
- Flat head screwdriver
- 5/16" allen wrench (for fill plug)

FIG. 2



Assembly & Installation

(continued)

⚠️ WARNING

Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, maintenance, repair, removal, or movement of the digger. Do not allow long hair, loose fitting clothing, or jewelry to be around moving parts.

Instructions (Refer to FIG. 2.)

⚠️ CAUTION

Because of the weight of some components, and because some components are difficult to balance, two people are required for safe assembly and installation of this equipment.

STEP 1: Attach the yoke (PN 6051) to the boom (PN 6045) using pin (PN 6055) and retaining rings (PN 2172). Stabilize components to avoid pinch points during assembly.

NOTE Position yoke so the red reflective tape is visible from the rear of the tractor.

STEP 2: Attach the boom to the tractor upper link bracket with the tractor upper link pin. Avoid pinch points around the pin during assembly.

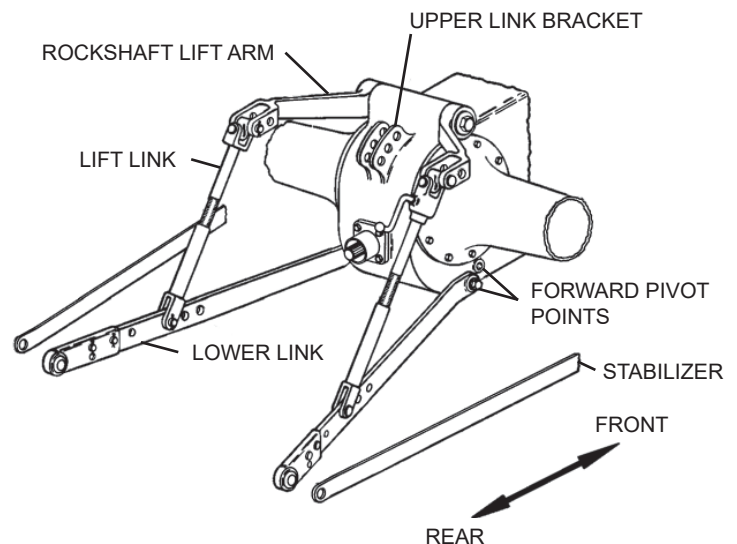
STEP 3: Slip the lower link ball joints over the digger yoke link pins, and secure with the klik pins provided with your tractor hitch. Keep hands away from pinch points while sliding components together.

STEP 4: Adjust the sway stabilizers as tightly as practical for best performance and to keep the post hole digger from swaying side-to-side.

⚠️ CAUTION

Sway stabilizers must be used with the digger.

FIG. 3



STEP 5: Stand the digger gearbox in an upright position resting on the auger adapter guard (PN 20061). Lower the boom to the gearbox, and attach the gearbox to the boom using pin (PN 6056) and retaining rings (PN 2172). Avoid pinch points as the gearbox pivots.

STEP 6: Raise the boom to the highest point, and make sure there is no contact between the boom and the tractor at any point. If necessary, adjust the travel of the boom to provide maximum travel without boom-tractor contact. Refer to your tractor operating manual for instructions on three-point hitch adjustments or refer to *Installation Troubleshooting*.

Assembly & Installation

(continued)

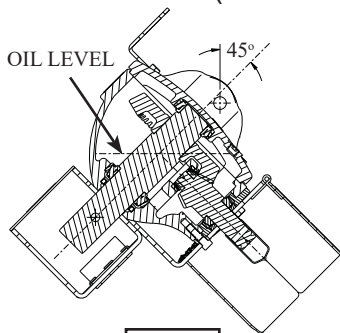


FIG. 4

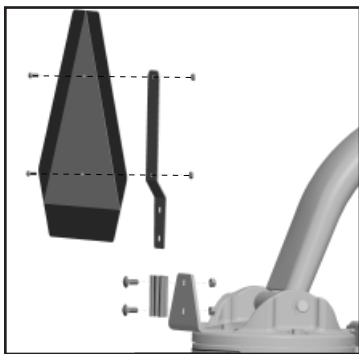


FIG. 5

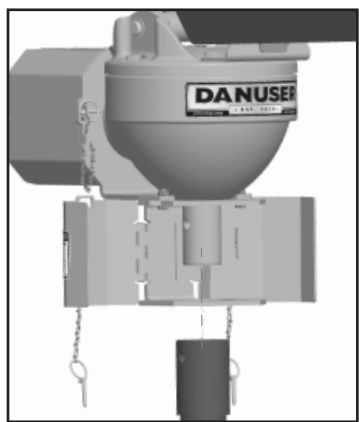


FIG. 6

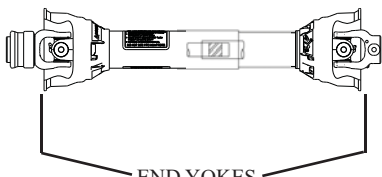


FIG. 7

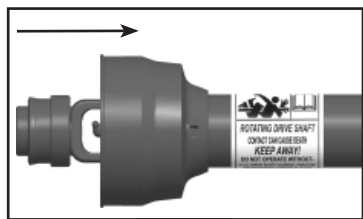


FIG. 8

NOTE

The gearbox of the G20/40 Digger is shipped dry!

STEP 7: Remove the fill plug at the top of the gearbox, and fill the gearbox with two quarts of multigear lubricant EP SAE 140 (or EP SAE 85W/140) **before operating the gearbox**. Tip the gearbox 45 degrees (avoid pinch points as gearbox pivots), and check the level at the plug (see FIG 4). **DO NOT OVERFILL!** Replace the plug before operating the digger.

STEP 8: Install the SMV kit (PN 20069) (see FIG. 5).

STEP 9: Open the auger adapter guard (PN 20061) by unlatching two klik pins (PN 7652). Grease the inside of the auger adapter liberally, and attach the auger with the Danuser 1/2"-13 x 3-1/4", Gr. 8, 1/2" of thread **special** retaining bolt (PN 6014) and nut (PN 1056). **NEVER** use a bolt that does not meet these specifications. Once the auger is installed, close the auger adapter guard and latch the two klik pins (see FIG. 6).

NOTE

Each time an auger or auger extension is attached to the gearbox, the inside of the auger adapter should be coated liberally with grease.

STEP 10: Open the top of the input guard (PN 20056) by unlatching the klik pin (PN 7652). Slide the non-splined end of the driveline (PN 6807) over the gearbox pinion, and secure with the Danuser 5/16"-18 x 2-1/4", Gr. 5, 13/32" of thread **special** shear bolt (PN 6015). Drive roll pin (PN 6061) through the end yoke so it rides in the groove in the pinion. Close the top of the input guard by latching the klik pin.

NOTE

The roll pin retains the driveline if the shear bolt breaks and falls out.

STEP 11: Slide the two driveline halves apart, and pack 1/4 lb. of good grade gun grease into the open end of the driveline. Grease the grease zerk in the tractor end yoke and in the two center crosses. Slide the driveline halves back together with the end yokes in proper alignment (see FIG. 7). Failure to properly align end yokes may result in excessive vibration. Always make sure driveline guards are in place and rotate freely.

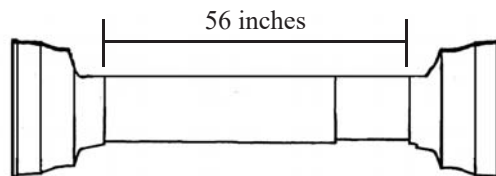
⚠ WARNING

To avoid personal injury, you must stop tractor engine, set brakes, and remove the tractor key before proceeding with the next step!

STEP 12: Make sure the tractor engine is shut off, then connect the driveline to the tractor PTO. The driveline locks on with a retractable retaining ring coupling device. Slide the ring back for installation (see FIG. 8). Make sure the retracted retaining ring is snapped back and locked on the tractor PTO.

⚠ CAUTION

Driveline shaft engagement should not be less than 10" when the digger is raised to its maximum height. To maintain proper engagement, you must not exceed the 56" length shown below.



Assembly & Installation

(continued)

Installation Troubleshooting

NOTE

Refer to your tractor operating manual for instructions on tractor operation, tire inflation, and safety when using a three-point hitch mounted implement.

For tractor three-point hitch adjustment, refer to FIG. 3.

PROBLEM	SOLUTION
1. Front end of boom contacts tractor when boom is raised or lowered.	<ol style="list-style-type: none">Attach the boom to the tractor through a different hole in the upper link bracket. Upper holes will shorten travel. Lower holes will increase travel.Refer to your tractor operating manual for adjustment of the three-point hitch.Relocate or adjust the part of the tractor causing the interference.
2. Digger yoke strikes boom when digger is raised.	<ol style="list-style-type: none">Attach the front end of the boom to a more forward hole on the upper link bracket.Attach the lower links to rear forward pivot points.Lengthen the lower links.Refer to your tractor operating manual for adjustment of the three-point hitch.
3. Tractor has difficulty raising auger.	<ol style="list-style-type: none">Attach the lift links to more forward holes in the rockshaft lift arms to decrease lift range.Move the lift links to more forward holes in the lower links to decrease travel.Check the tractor hydraulic system to be sure it is raising and lowering to the maximum and minimum heights recommended in your tractor operating manual.
4. Driveline strikes tractor power take-off shield when digger is raised.	<ol style="list-style-type: none">Refer to your tractor operating manual for adjustment of the three-point hitch.
5. Tractor action is “jerky” with the digger attached, or the hitch raises and lowers rapidly during transport.	<ol style="list-style-type: none">Adjust tractor hydraulic system for “position control” implement rather than “draft” or “load control.”If applicable, lock tractor upper link bracket in a fixed position.

Operation

WARNING

Serious injury or death can result from misuse of this equipment.

CAUTION

The G20/40 Digger is designed for 20 to 40 horsepower, Category I three-point hitch, 540 RPM PTO tractors using sway stabilizers. Auger size must not exceed 24 inch diameter. Operation of this digger in a manner for which it was not intended will result in poor performance and could create a hazard and the potential for personal injury.

DANGER

Never position the auger point by hand or with any tool when the tractor is running. Never position the auger point by putting your hands on the auger, gearbox, boom, or driveline.

DANGER

All persons should be at least twenty-five feet (25') away. Clear the area of bystanders, especially children. Do not allow anyone to stand behind, or to the side of, a rotating auger.

Read and understand this operator's manual and all safety signs carefully before attempting to operate or adjust the Danuser G20/40 Digger. You are responsible for furnishing this manual to others who may use the unit. If you have any questions regarding the proper assembly, installation, or operation of this digger, contact your dealer or Danuser Machine Company, Inc.

WARNING

Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintenance, repair, removal, or movement of the digger. Do not allow long hair, loose fitting clothing, or jewelry to be around moving parts.

DANGER

This post hole digger was designed for one-man operation from the tractor seat. It is the responsibility of the operator to see that bystanders and all other people are at least twenty-five feet (25') from the digger in operation or under power. Serious personal injury or death may result if any attempt is made to assist digger operation by hand.

STEP 1: Call 811 or contact the local utility companies to make certain there are no buried gas lines, electrical cables, etc. in the work area. Clear area of objects that could wrap around the auger or might be thrown. Check for ditches, stumps, holes, or other obstacles that could cause the tractor to roll.

STEP 2: Lay out and mark where you want to dig your holes.

STEP 3: Adjust the auger to a vertical position:

a. Left to right vertical adjustments -

With the PTO disengaged, raise the auger point off the ground. If the auger pitches left or right, turn the adjusting screw or leveling crank on the lifting link until the auger appears vertical when looking from the tractor seat. Refer to your tractor operating manual for further instructions on three-point hitch adjustments.

NOTE

When mounted to the three-point hitch, your digger must be able to raise and lower through the highest and lowest points of your lift arm travel without binding against the tractor frame. If it does bind, adjust the tractor three-point linkage so that all movement is free.

b. Front to back vertical adjustments -

Lower the auger slowly until the point just touches the ground. Move the tractor slowly forward or backward until the auger appears vertical when looking from the tractor seat.

STEP 4: Set the tractor brakes and take the tractor out of gear to hold the tractor on location to prevent damage to the digger.

STEP 5: Slowly lower the auger point to the ground. Make sure the auger point is on the ground before engaging the PTO.

STEP 6: Lower the auger into the ground slowly, then increase the speed as required so the dirt is augered out from the hole. NEVER exceed 540 RPM. In many types of soil, it may be necessary to hold back against the auger screw suction by moving the hydraulic control lever momentarily to either the "HOLD" or "RAISE" position to keep the auger from screwing into the ground.

Operation

(continued)

WARNING

Replace a broken or damaged shear bolt or auger retaining bolt **ONLY** with an authorized factory replacement. A shear bolt or auger retaining bolt that is too long increases the possibility of personal injury. The shear bolt and auger retaining bolt must be of the proper size and grade to function properly.

WARNING

Input guard must be in place and latched before operating digger.

DANGER

NEVER add additional weight or use body weight to help the auger penetrate the ground. When the ground is too tough to penetrate with your cutting edges and point, replace them and try again. These are replaceable parts and must be in good condition. If you have difficulty penetrating hard ground, refer to *Difficult Digging Suggestions*.

CAUTION

This digger is designed to operate at a maximum PTO speed of 540 RPM. NEVER exceed 540 RPM.

STEP 7: When the auger has been lowered 12 to 18 inches into the ground, raise the auger almost out of the hole, then dig another 12 to 18 inches and raise the auger again. Repeat this procedure until the desired hole depth is reached.

STEP 8: When the auger has reached the full depth required, allow the auger to dwell momentarily at this depth at a slower speed to assist in cleaning out the hole.

STEP 9: Disengage the PTO, and raise the auger from the hole.

NOTE

For “heavy” soil conditions or for tractors requiring driveline rotation to produce lifting power, allow the auger to turn at a slow speed while raising it to the top of the hole.

STEP 10: To remove loose dirt from auger, spin the auger by momentarily engaging the PTO with the engine running at a faster speed than used for digging.

DANGER

Do not shovel dirt away from a rotating auger, as the shovel can be caught and thrown by the auger.

WARNING

To prevent injury, keep an area of at least twenty-five feet (25') around the auger clear of bystanders and all other people.

STEP 11: If you break a shear bolt, the roll pin should retain the driveline on the G20/40 Digger pinion. Replace the **special** shear bolt as follows:

- Disengage the PTO, set the brakes, shut off the tractor engine, and remove the tractor key.
- Open the top of the input guard by unlatching the klik pin, and remove the broken shear bolt.
- Install a new Danuser 5/16"–18 x 2-1/4", Gr. 5, 13/32" of thread **special** shear bolt (PN 6015) and nut (PN 573). This is a **special** thread length bolt - use genuine Danuser replacement parts only. **NEVER** use a bolt longer than 2-1/4".
- Tighten the shear bolt nut securely, close the input guard, and latch the klik pin.

Operation

(continued)

Difficult Digging Suggestions

Removal & Storage

WARNING

Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintenance, repair, removal, or movement of the digger. Do not allow long hair, loose fitting clothing, or jewelry to be around moving parts.

WARNING

Keep others at least twenty-five feet (25') from the auger when applying lift power to raise the freed auger from the ground. Stop auger rotation prior to lifting out of hole.

STEP 12: If the auger becomes lodged on an obstruction below ground, do not attempt to raise the auger by hydraulic lift power alone. Disengage the PTO, set the tractor brakes, shut off the tractor engine, remove the tractor key, and dig around the auger enough to free it from the obstruction before trying to remove the auger from the hole. Apply lift power and slowly rotate the driveline to raise the auger to the top of the hole.

DANGER

Before digging around the auger, disengage the PTO, set the tractor brakes, shut off the tractor engine, and remove the tractor key.

STEP 13: Disengage the PTO when traveling between holes.

CAUTION

To avoid damage to the driveline, and to reduce the risk of personal injury, never transport the digger with the tractor PTO engaged.

Worn edges or a slightly rounded point can seriously affect auger penetration. Check for wear before each use, and replace as necessary. Additional options:

- a. Different Auger Points shown on page 23.
- b. Different Cutting Edges shown on page 23.
- c. Down Force Kit shown on page 24.
- d. Hole Digger Head Augers shown on page 22.
- e. Weld-on Hole Digger Head shown on page 23.

CAUTION

Because of the weight of some components, and because some components are difficult to balance, two people are required for safe disassembly and removal of this equipment.

Following these steps will ensure proper removal of your G20/40 Digger:

STEP 1: Lower the auger tip to the ground.

STEP 2: Disengage the PTO, set the tractor brakes, shut off the tractor engine, and remove the tractor key.

STEP 3: Ensure the digger is properly secured (with bracing, blocks, etc.) before removal from the tractor.

STEP 4: Unhook the driveline from the tractor PTO shaft by pulling back on the collar of the yoke.

STEP 5: Store driveline off of the ground, parallel to the boom, to keep driveline clean and to protect guards.

Removal & Storage

(continued)

Maintenance

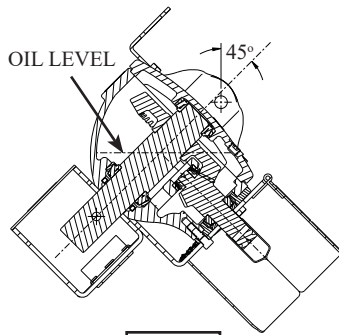


FIG. 9

STEP 6: Unhook the post hole digger from the tractor's three-point hitch.

STEP 7: Lower post hole digger assembly to the ground.

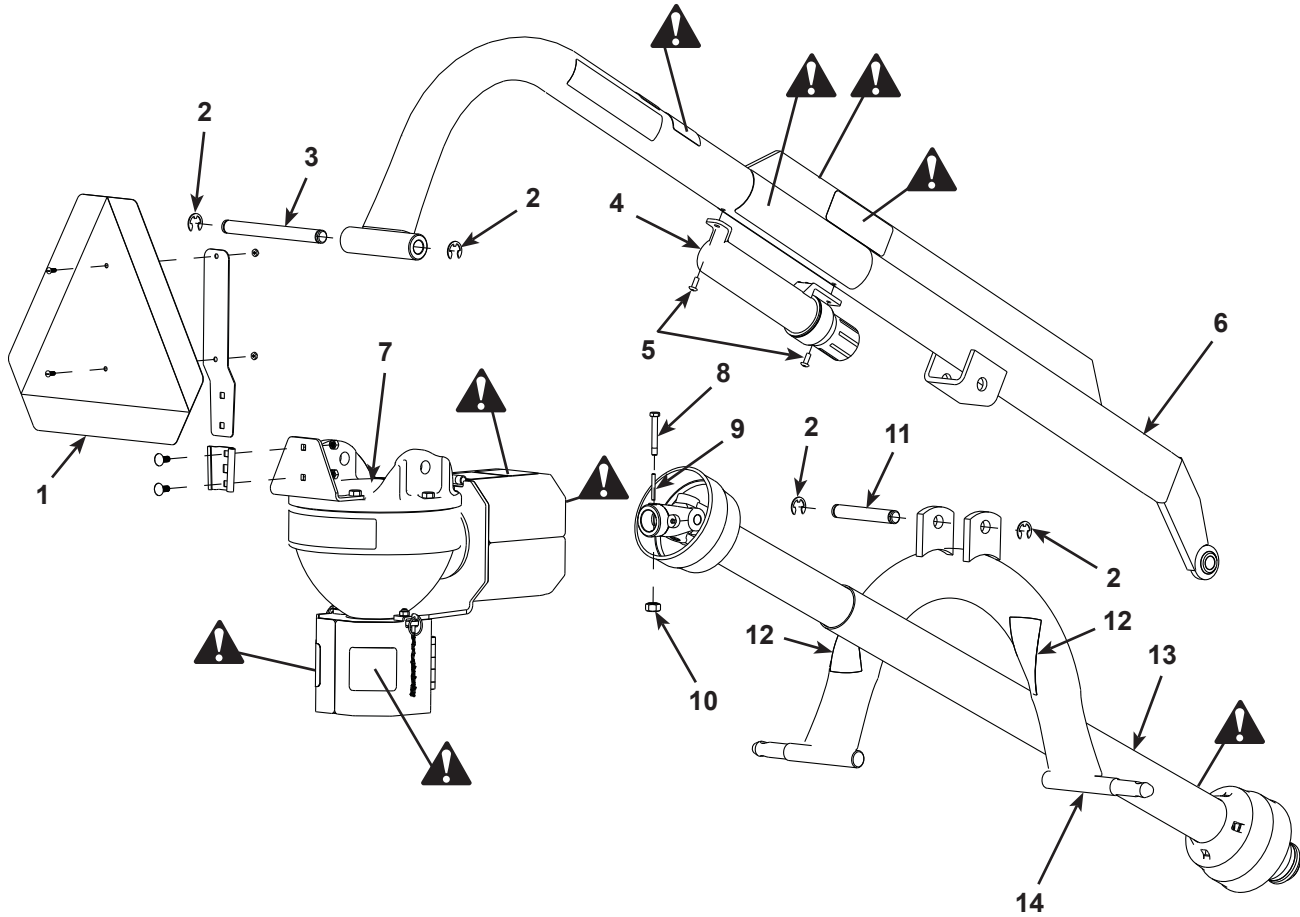
NOTE Store the post hole digger on a solid, level surface to make connecting/disconnecting easier. Storage location should be clean and dry, away from any livestock or people.

WHAT TO DO	WHEN
Check digger for loose bolts or fasteners.	Daily
Check auger for loose, worn, or broken cutting edges or point.	Daily
Check gearbox oil level, fill as necessary with multigear lubricant EP SAE 140*. (Refer to FIG. 9.)	Periodically
Drain gearbox housing, flush, and refill with two quarts multigear lubricant EP SAE 140*.	After 500 hours use
Coat auger with grease to prevent rusting.	After paint has been removed through usage
Lubricate universal driveline fittings with good quality gun grease.	After 300 holes
Lubricate universal driveline bushings with good quality gun grease.	Every 50 hours
Coat the inside of the auger adapter liberally with grease.	Each time an auger or extension is attached to the gearbox

*May also use EP SAE 85W/140

Digger Parts

 = Safety Sign Location



DANUSER G20/40 DIGGER

REF. NO.	PART NO.	DESCRIPTION	QTY.
1	20069	SMV Kit	1
2	2172	Retaining Ring	4
3	6056	Pin (3/4" x 8")	1
4	21258	Operator's Manual Canister	1
5	21259	Drive Rivets	2
6	6045	Boom	1
7	6042	Gearbox Assembly	1
8	6015 *	Shear Bolt (5/16"-18 x 2-1/4", Gr. 5, 13/32" of thread) SPECIAL BOLT: Use Genuine Danuser Replacement Only	3
9	6061	Roll Pin (3/16" x 1-1/2")	1
10	573 *	Nut (5/16"-18)	3
11	6055	Pin (3/4" x 4-15/16")	1
12	9TAPERR1	Red Retro Reflective Tape	2
13	6807	Driveline	1
14	6051	Yoke	1
		Operator's Manual (in canister attached to boom)	1

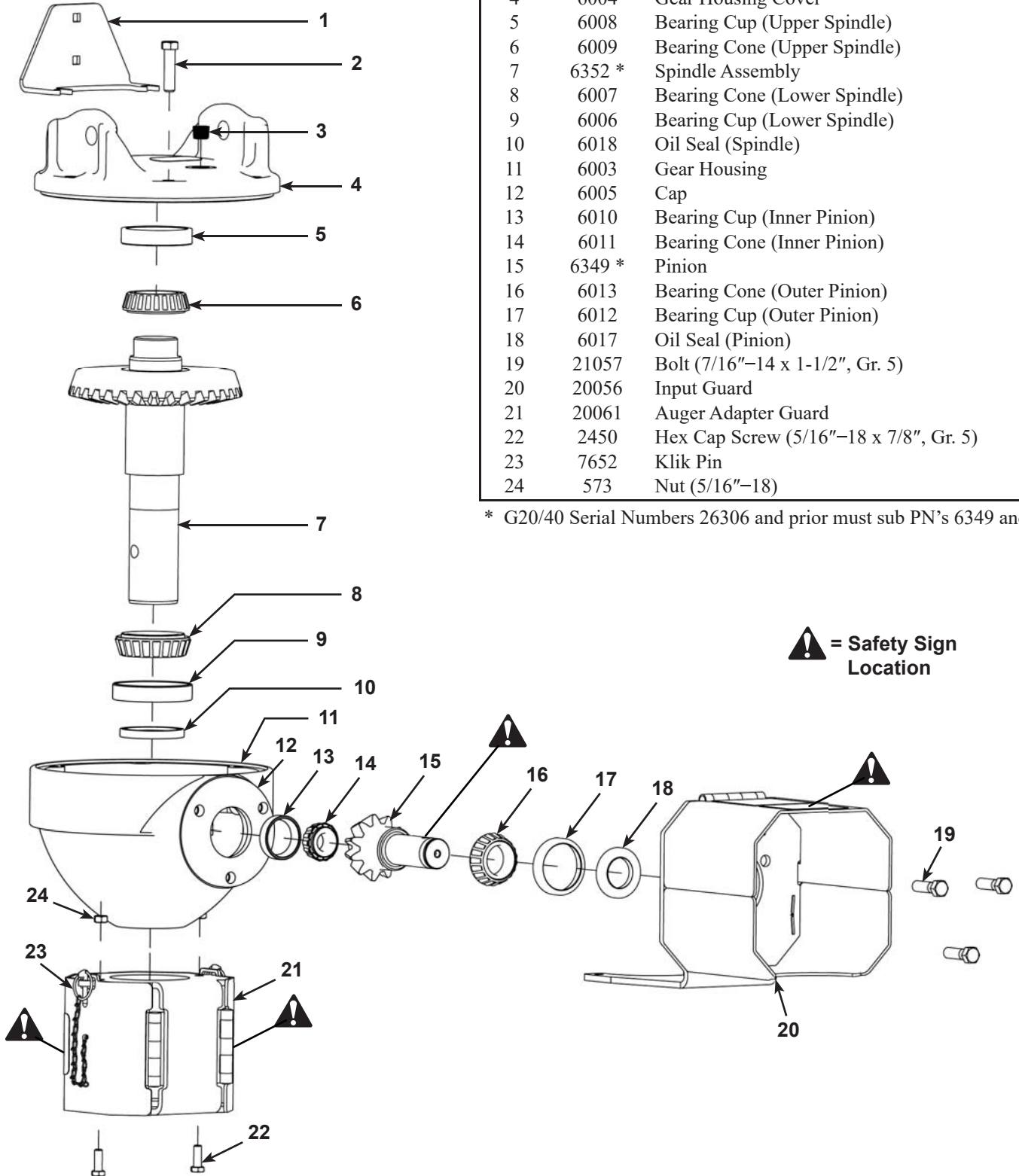
* One required in unit. Two extra are included in package for replacement.

Gearbox Assembly

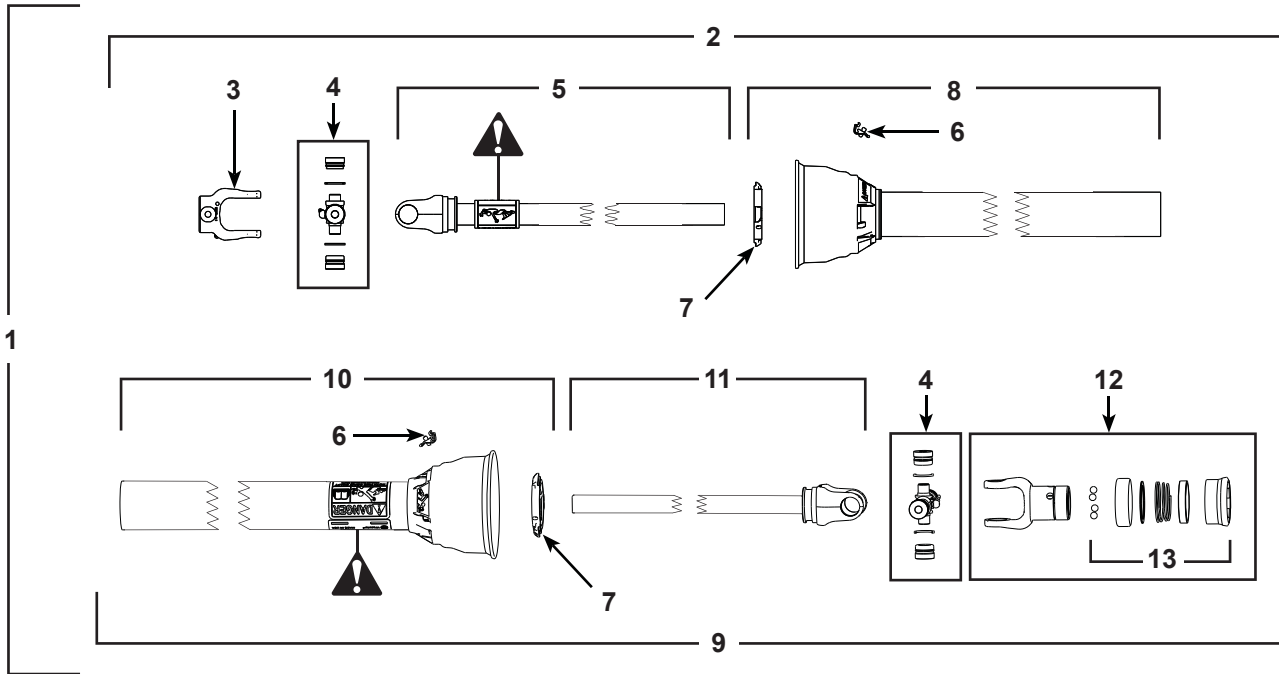
G20/40 GEARBOX ASSEMBLY

REF. NO.	PART NO.	DESCRIPTION	QTY.
----	6042	Gearbox Assembly	1
1	20065	SMV Bracket	1
2	6059	Bolt (7/16"-14 x 1-3/4", Gr. 5)	6
3	1113	Housing Cover Plug	1
4	6004	Gear Housing Cover	1
5	6008	Bearing Cup (Upper Spindle)	1
6	6009	Bearing Cone (Upper Spindle)	1
7	6352 *	Spindle Assembly	1
8	6007	Bearing Cone (Lower Spindle)	1
9	6006	Bearing Cup (Lower Spindle)	1
10	6018	Oil Seal (Spindle)	1
11	6003	Gear Housing	1
12	6005	Cap	1
13	6010	Bearing Cup (Inner Pinion)	1
14	6011	Bearing Cone (Inner Pinion)	1
15	6349 *	Pinion	1
16	6013	Bearing Cone (Outer Pinion)	1
17	6012	Bearing Cup (Outer Pinion)	1
18	6017	Oil Seal (Pinion)	1
19	21057	Bolt (7/16"-14 x 1-1/2", Gr. 5)	3
20	20056	Input Guard	1
21	20061	Auger Adapter Guard	1
22	2450	Hex Cap Screw (5/16"-18 x 7/8", Gr. 5)	2
23	7652	Klik Pin	3
24	573	Nut (5/16"-18)	2

* G20/40 Serial Numbers 26306 and prior must sub PN's 6349 and 6352



Driveline Parts



= Safety Sign Location

G20/40 DRIVELINE PARTS

REF. NO.	PART NO.	DESCRIPTION	QTY.
1	6807	Driveline Telescoping Assembly with Guard	1
2	20092	Digger Half with Guard	1
3	6809	End Yoke	1
4	6817	Center Cross Kit	2
5	6811	Yoke and Tube	1
---	20081	Easy-Lock Repair Kit (Includes REF. NOS. 6 - 7)	
6	20082	Easy-Lock	2
7	20083	Nylon Bearing	2
8	20094	Inner Guard (incl. Centralizer)	1
9	20093	Tractor Half with Guard	1
10	20095	Outer Guard	1
11	6812	Yoke and Shaft	1
12	7269	Spring-Lok Yoke Assembly	1
13	6131	Spring-Lok Kit	1

NOTE

G20/40 Serial Numbers 28599 and prior should call for parts.

CAUTION

Failure to properly align end yokes may result in excessive vibration. Always be sure driveline guards are in place and rotate freely.

DANGER

GUARD MISSING DO NOT OPERATE

DANGER

GUARD MISSING DO NOT OPERATE

DANGER

DANGER

ROTATING DRIVE SHAFT CONTACT CAN CAUSE DEATH KEEP AWAY!

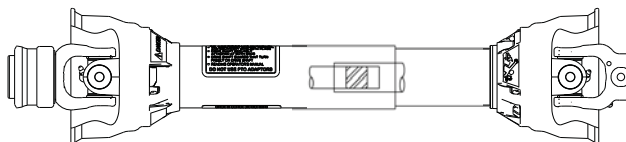
DO NOT OPERATE WITHOUT-

- ALL DRIVE SHAFT GUARDS, TRACTOR AND EQUIPMENT SHIELDS IN PLACE
- DRIVE SHAFT SECURELY ATTACHED AT BOTH ENDS
- DRIVE SHAFT GUARDS THAT TURN FREELY ON DRIVE SHAFT
- READ OPERATOR'S MANUAL

DO NOT USE PTO ADAPTORS

PART NO. 13-10021
Location: Driveline guard

PART NO. 13-10022
Location: Driveline tube, under guard

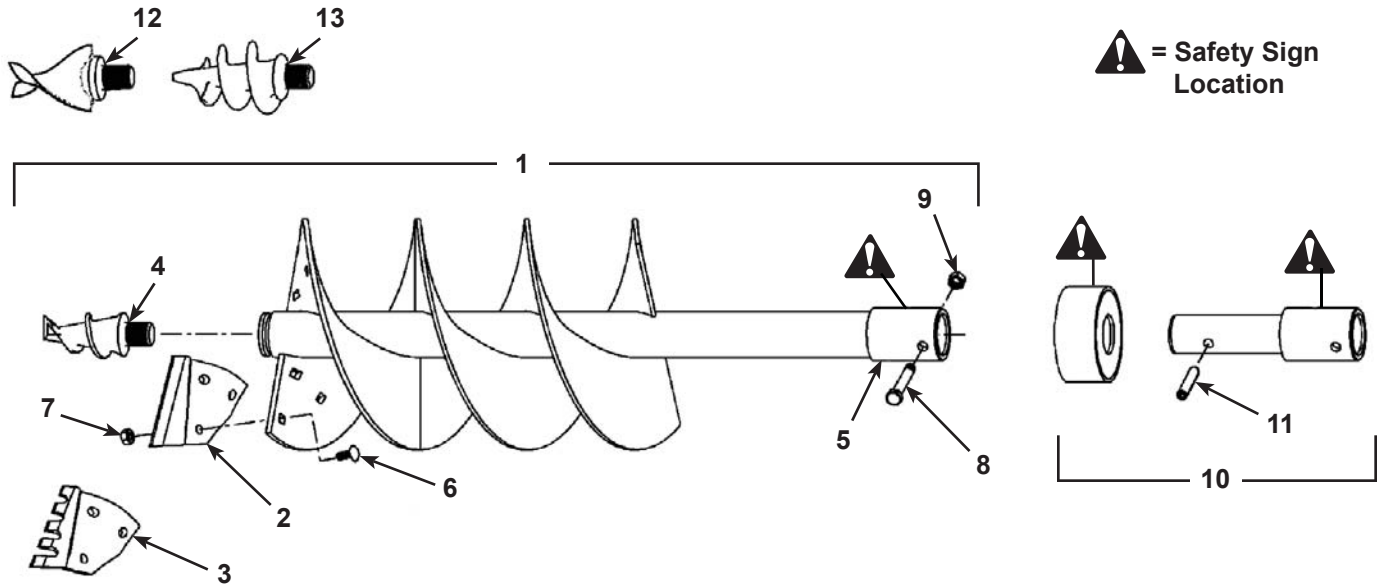


End Yokes Properly Aligned

Auger Assemblies

⚠ DANGER

When using an extension, Ref. No. 8 (PN 6014) and Ref. No. 9 (PN 1056) should be relocated from the auger adapter to the extension adapter, and Ref. No. 11 (PN 6239) should be used to attach the auger to the extension to avoid possible entanglement.



NOTE Augers have replaceable points and edges. Serrated cutting edges (Ref. No. 3) and optional points (Ref. No. 12 and Ref. No. 13) are available to aid penetration in tough digging conditions. Flights are replaceable except on 4" and 6", where the flight is a continuous spiral. Cutting edges on 4" and 6" augers are welded on the auger.

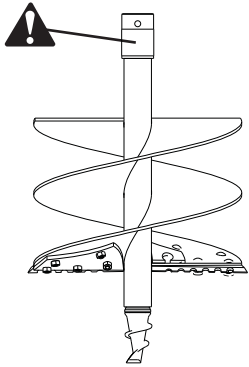
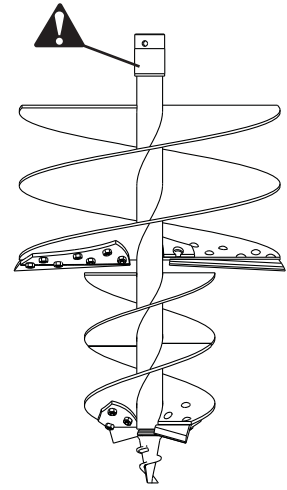
AUGER ASSEMBLIES FOR 2" ROUND SPINDLES

REF. NO.	PART NUMBER BY AUGER DIAMETER								DESCRIPTION	QTY.
	4"	6"	9"	12"	14"	16"	18"	24"		
1	6101	6029	6030	6032	6034	6036	6038	6040	Std. Auger, 40" Long, Plain Edges & Std. Point	1
			6031	6033	6035	6037	6039	6041	Std. Auger, 40" Long, Serrated Edges & Std. Point	1
2	7782	7783							Plain Cutting Edges (Weld On)	1 Set
			7784	7790	7792	7794	7796	7798	Plain Cutting Edges (with Bolts & Nuts)	1 Set
3			7785	7791	7793	7795	7797	7799	Serrated Cutting Edges (with Bolts & Nuts)	1 Set
4	899	831	831	831	831	831	831	831	Standard Auger Point	1
5	6019	6019	6019	6019	6019	6019	6019	6019	Auger Adapter Replacement (for Field Welding)	1
6			784	784	784	784	784	784	Cutting Edge Bolt (3/8"-16 x 1" Carriage)	As Req'd
7			785	785	785	785	785	785	Cutting Edge Nut (3/8"-16 Hex)	As Req'd
8	6014	6014	6014	6014	6014	6014	6014	6014	Retaining Bolt (1/2"-13 x 3-1/4", Gr. 8, 1/2" of thread) SPECIAL BOLT: Use Genuine Danuser Replacement Only	1
9	1056	1056	1056	1056	1056	1056	1056	1056	Retaining Nut (1/2"-13 Hex)	1
10	6080G	6080G	6080G	6080G	6080G	6080G	6080G	6080G	Auger Extension with Guard (7")	1
	6204G	6204G	6204G	6204G	6204G	6204G	6204G	6204G	Auger Extension with Guard (14")	1
11	6239	6239	6239	6239	6239	6239	6239	6239	Coiled Pin (1/2" x 2-3/4") SPECIAL PIN: Use Genuine Danuser Replacement Only	1
12		1937	1937	1937	1937	1937	1937	1937	Special Duty Auger Point	1
13		6210	6210	6210	6210	6210	6210	6210	Aggressive Duty Auger Point	1

Stepped & Orchard Augers

2" ROUND SPINDLE STEPPED AUGERS

PART NUMBER BY AUGER DIAMETER			DESCRIPTION
18" x 10"	24" x 12"	30" x 16"	
6240 (7796 & 7788)			33" Long with Plain Edges & Standard Point (Auger uses both dimensions of cutting edges.)
6248 (7797 & 7789)			33" Long with Serrated Edges & Standard Point (Auger uses both dimensions of cutting edges.)
	6241 (7798 & 7790)	6242 (7890 & 7794)	40" Long with Plain Edges & Standard Point (Auger uses both dimensions of cutting edges.)
	6249 (7799 & 7791)	6250 (7883 & 7795)	40" Long with Serrated Edges & Standard Point (Auger uses both dimensions of cutting edges.)

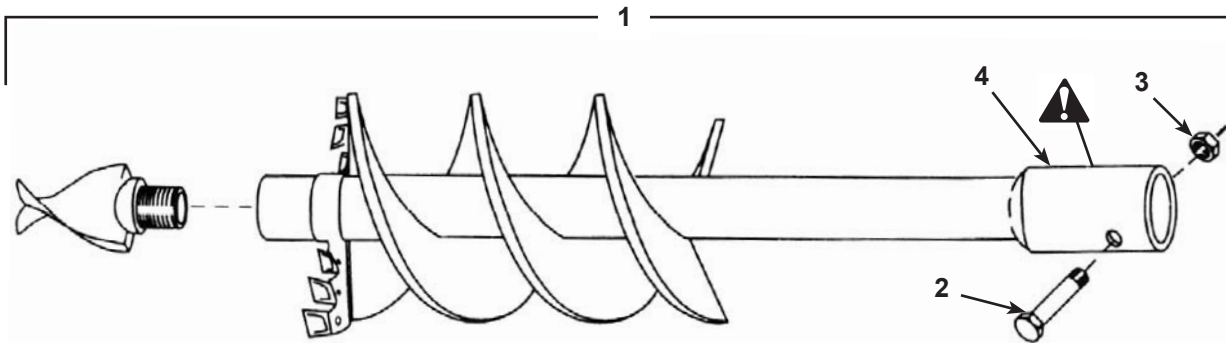


2" ROUND SPINDLE ORCHARD AUGERS

PART NUMBER BY AUGER DIAMETER		DESCRIPTION
18"	24"	
6256	6255	29" Long with Serrated Edges & Standard Point

Hole Digger Head Auger Assemblies

 = Safety Sign Location



NOTE Hole Digger Head Augers have replaceable points and teeth. Flights are replaceable, except on 6".

NOTE Auger Point PN 9353 is the only auger point that can be used with Hole Digger Heads.

AUGER ASSEMBLIES WITH HOLE DIGGER HEADS FOR 2" ROUND SPINDLES

REF. NO.	PART NUMBER BY AUGER DIAMETER						DESCRIPTION	QTY.
	6"	9"	12"	14"	16"	18"		
1	6121	6122	6123	6124	6125	6358	40" Hole Depth Auger with Double Flight Construction	1
2	6014	6014	6014	6014	6014	6014	Retaining Bolt (1/2"-13 x 3-1/4", Gr. 8, 1/2" of thread) SPECIAL BOLT: Use Genuine Danuser Replacement Only	1
3	1056	1056	1056	1056	1056	1056	Retaining Nut (1/2"-13)	1
4	6019	6019	6019	6019	6019	6019	Auger Adapter Replacement (for Field Welding)	1

Accessories

Hole Digger Head Kits can be welded onto standard augers.



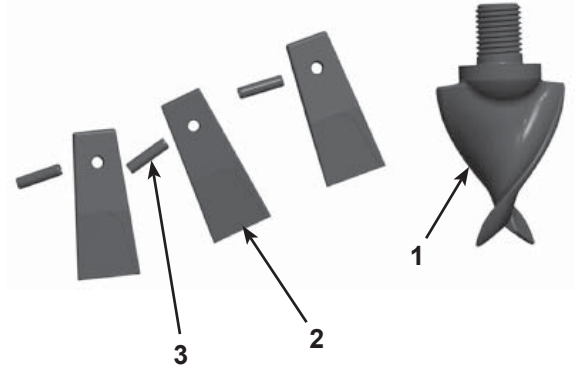
HOLE DIGGER HEAD KIT*
(Field Weld to Auger)

AUGER DIA.	NO. TEETH PER HEAD	PART NO.
6"	2	9386
9"	4	9306
12"	4	9308
14"	6	9309
16"	6	9310
18"	6	9311

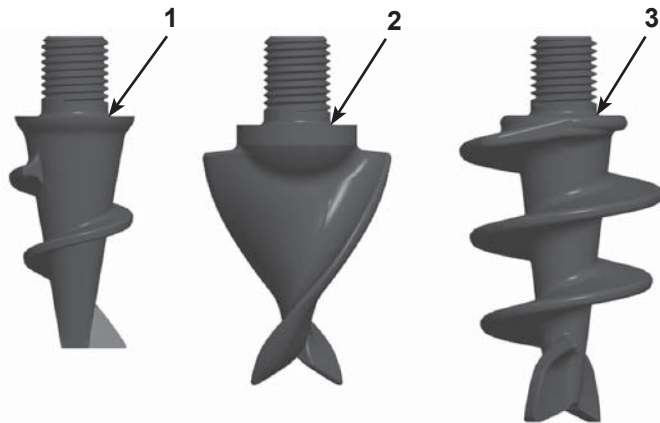
* Includes head with teeth and roll pins, point and point adapter with tube, for welding to auger center column.

HOLE DIGGER HEAD REPLACEMENT PARTS

REF. NO.	PART NO.	DESCRIPTION
1	9353	Hole Digger Head Point
2	9234	Hole Digger Head Tooth
	9964	Hard-Surface Tooth (option)
3	7483	Roll Pin (5/16" x 1-1/4")

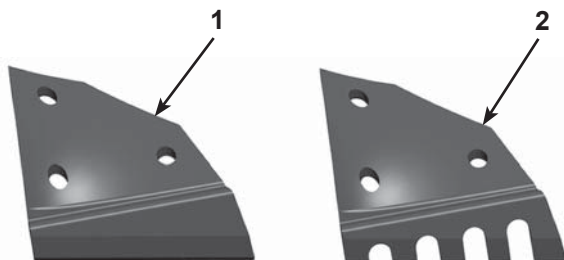


AUGER POINTS



REF. NO.	PART NO.	DESCRIPTION
1	---	Standard
	831	for augers 6" through 24" diameter
	899	only point for 4" augers
2	1937	Special Duty
3	6210	Aggressive Duty

Auger points are available in a variety of styles. See above for Hole Digger Head Point.



CUTTING EDGES

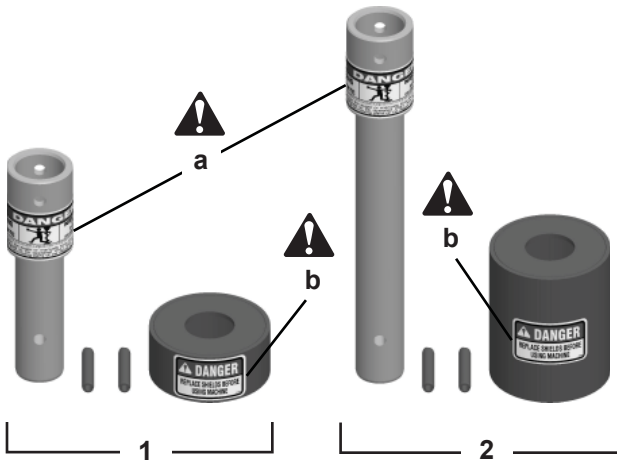
REF. NO.	PART NO.	DESCRIPTION
1	See Page 21	Plain
2	See Page 21	Serrated

Cutting edges are available with plain or serrated edges. See table on page 21 for part numbers.

Accessories

(continued)

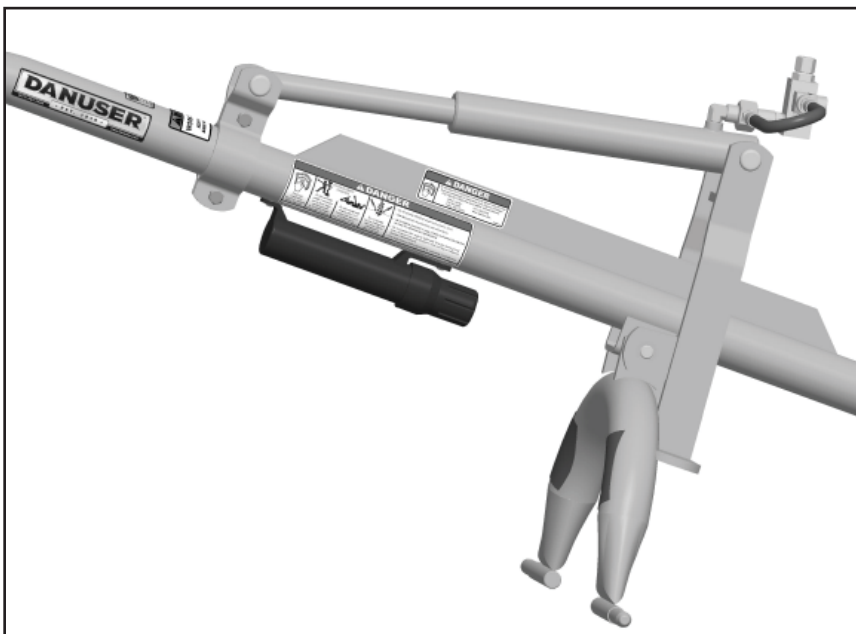
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AUGER EXTENSIONS

REF. NO.	PART NO.	DESCRIPTION
1	6080G	7" Auger Extension with 2 Special Coiled Pins & Auger Extension Guard
2	6204G	14" Auger Extension with 2 Special Coiled Pins & Auger Extension Guard
a	PHDC5	Safety Sign
b	2169	Safety Sign

Auger extensions with auger extension guards are available in lengths of 7 and 14 inches for extra hole depth. Make sure your tractor can accommodate the extra length and still have adequate clearance. Use **only** factory supplied coiled pins to connect the auger to the auger extension. Two coiled pins are shipped with the auger extension, one to install and one spare. When installed, the coiled pin must be flush with the sides of the auger, and the area should be covered by the auger extension guard. The auger retaining bolt should be covered by the auger adapter guard.



DOWN FORCE KIT

A hydraulic down force kit (PN 6220) is available to make difficult digging easier.

The kit attaches to all G20/40 Diggers without alteration and with the use of ordinary hand tools. It provides approximately 500 pounds of additional force to the auger point for easier penetration of hard or frozen ground.

The kit does not interfere with normal digging operations.

The kit operates from the tractor hydraulic system with normal remote cylinder outlets. Customer provides mating coupler tip to fit his particular tractor as well as sufficient hydraulic hose and fittings to connect the valve to the tractor sump.

Warranty

Model #

Serial #

DANUSER MACHINE COMPANY, INC.

LIMITED WARRANTY

This Limited Warranty is extended only to the original purchaser of our products. Danuser Machine Company, Inc. ("Danuser") warrants this product to be free from defects in material and workmanship for a period of one year from the purchase date from an authorized Danuser Dealer. The gearbox warranty can be extended to five years if the WARRANTY REGISTRATION FORM has been completed and is on file at Danuser. Start of the warranty period is determined by purchase date given on your WARRANTY REGISTRATION FORM. Proof of purchase and serial number may be required.

1. Our obligation under this warranty is limited to repair or replacement at our factory or at a location designated by Danuser of the part(s) of Danuser products which Danuser determines to be defective. Our sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.
2. This warranty shall not obligate Danuser to bear any cost of labor for field repair, replacement, testing, or adjustment. This warranty is void if any attempt is made to make field repairs to hydraulic components. To qualify for warranty inspection, the "failed" part must be returned in its original "failed" condition.
3. Parts may not be returned without written authorization from Danuser.
4. Some purchased components, including but not limited to hydraulic components are subject to the inspection and warranty of the respective manufacturer. Thus, delays in a warranty determination can be expected while Danuser awaits their decision.
5. To make a claim under this warranty, first contact your authorized Danuser Dealer. The Danuser Dealer shall complete the Warranty Claim Form and obtain written authorization from Danuser to return parts. All warranty claims must include detailed information regarding make and model of vehicle on which the Danuser product was mounted, hours of use, description of events that led up to the failure, and any other information helpful in reviewing the warranty claim. All warranty returns must be prepaid. Shipments arriving at our factory on a freight collect basis will be refused by our receiving department. The freight charge will be credited if the parts are determined by Danuser to be defective, and the associated freight costs in returning those parts will be prepaid by Danuser.
6. Products or parts thereof which, as determined by Danuser's examination, show wear from normal use, have been improperly operated, damaged by accident or negligence, field repaired, altered or modified are not considered defective in material and workmanship and are not covered by this warranty. This warranty does not apply to parts subject to normal wear or to damage caused by the failure to perform recommended maintenance or to replace worn parts. This warranty shall not obligate Danuser to bear any cost of labor for field repair, replacement, testing, or adjustment nor for damage caused by accident, abuse, misuse, or environmental elements.
7. Any parts or labor required to repair or replace parts not covered under this warranty will be charged to the customer. Parts repaired or replaced by Danuser are then covered by this warranty only for the remainder of the original warranty as if such parts were original parts.
8. Danuser reserves the right to change its specifications and designs at any time.

This warranty is exclusive and in lieu of all other express warranties, if any, including the implied warranties of merchantability and fitness for a particular purpose. It shall not extend beyond the duration of the expressed warranty provided herein and the remedy for violations of any implied warranty shall be limited to repair or replacement of the defective part pursuant to the terms contained herein. No employee, dealer, salesman, or representative is authorized to change this warranty in any way or grant any other warranty. Danuser shall not be liable for any consequential, incidental, or punitive damages, losses, or expenses, including those resulting from or caused by any defects.

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Important Safety Message for Owners/Operators of Post Hole Diggers



As the manufacturer of your post hole digger, we want to confirm to you, our customer, our concern for safety. Please help us ensure your safety and the safety of those in the surrounding work area by following these simple, common sense guidelines, along with those in the operator's manual and on the product safety signs, when using a post hole digger. Failure to follow safety rules and/or improper use can result in severe injury or death to operators or bystanders.

Everyone involved in the assembly, operation, transport, maintenance, and storage of this equipment must be aware, prudent, and properly trained in its safe and proper use. Most post hole digger accidents involve entanglement in the driveline or auger. The entanglement risk becomes greater when you replace our shear bolt or auger retaining bolt with a bolt that does not meet our stated specifications. This improper replacement occurs most often on machines that are loaned or rented to someone who has not read the operator's manual and is not familiar with a post hole digger.

Our current production post hole diggers include, as standard equipment, safety signs and guards for auger adapters, gearbox inputs, and drivelines. Older machines can be retrofitted to add these safety signs and guards. If you have an older Danuser post hole digger which does not have standard safety equipment, please contact your dealer about bringing your machine up to the current level of safety.



If you have not read or do not understand the instructions in the operator's manual and on the attached safety signs, you are not qualified to operate the post hole digger.



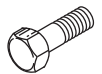
If you do not have an operator's manual and current safety signs attached to the unit, immediately request them from Danuser or your dealer.



Before operating, ensure all shields, guards, and safety signs are in place. All these safety measures are standard equipment on current production diggers. If you have an older digger, contact us or your dealer how to bring it up to current safety standards.



Post hole diggers are designed for one-man operation. Always sit in the tractor seat while operating the digger. Never operate the unit when anyone is near, or in contact with, any rotating or moving part.



Entanglement risk increases when you replace our shear bolts or auger retaining bolts with bolts longer than Danuser specifies in the operator's manual.



Before using the post hole digger, ensure the auger point and teeth are properly installed and in good working condition.



Before starting any project, always call 811 to locate any underground utility lines, pipes, or cables.

Do not use body weight or any body part to force the auger into the ground or to position the auger when it is turning. Do not operate with anyone near, or in contact with, any part of the implement, PTO driveline, or auger. It is the responsibility of the operator to see that no one is within 25 feet of the digger when it is started or in use. The final responsibility for safety rests with the operator of this machine.