



Made in the U.S.A.

Owner: _____
Date Purchased: _____
Model #: <u>G20/40</u> Serial #: _____
Manual #: <u>9MG20402454105</u>

**! DANGER**

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

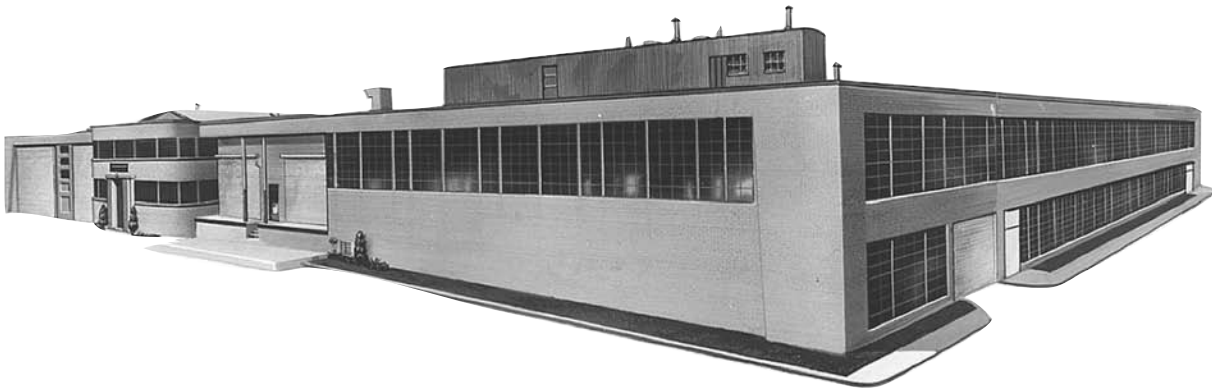
## Owner's Manual

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My grandfather, K.B. Danuser, began building wagons and repairing all types of machinery in a small shop in Fulton, Missouri in 1910. With pride in his Swiss craftsmanship, he established one policy for his concern which is the hallmark of Danuser Machine Company, Inc. to this day: "Good enough won't do - it must be right."

# Since 1910



Today, a new modern plant built by my father, Henry Danuser, is located on the original site. This building and those who work in it are dedicated to the tradition of fine craftsmanship and to the production of quality implements. The challenge of changing economic conditions is being met with improved manufacturing methods. From this sound growth will come new products, designed to better serve agriculture and industry.

Jerry Danuser

# Foreword

Please read this manual thoroughly!

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

### Warranty Registration

Your WARRANTY REGISTRATION FORM & INSPECTION REPORT serves two purposes: it activates warranty coverage; and it allows Danuser to notify you, the owner, of improvements to the equipment or of new safety features that may be retrofitted to previously sold diggers. Please return your completed form, so we can provide this service to you. If you did not complete a WARRANTY REGISTRATION FORM & INSPECTION REPORT, please call Danuser Machine Company, Inc. at (573) 642-2246. 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.

### Symbol

### Meaning

	This is important information for proper use of this equipment. Failure to comply may lead to premature equipment failure.
	Failure to follow these instructions may cause damage to the implement or the tractor, or minor personal injury.
	Failure to follow these instructions may result in personal injury or death.
	Immediate hazard! Failure to understand and obey this warning is likely to result in personal injury or death.

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Working with unfamiliar equipment can lead to careless injuries. Read and understand this manual and the manual for your tractor 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 Owner's Manuals
- 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 Owner'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.
- 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.
- 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. During post hole digger operation, no one is to be within twenty-five feet (25') 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.
- 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.

# Safety

(continued)

- Only properly trained people should operate this equipment. Do not allow anyone who has not read this entire manual and understood the safety rules, safety signs, and operation instructions to use this 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.
- 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 unit exceeding 540 RPM power take-off.
- 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.
- Consult local utility companies to make certain there are no buried gas lines, electrical cables, etc. in the work area before beginning operation.
- 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.
- Do not operate the digger without all safety shields and guards in place.
- Never replace the shear bolt or the auger retaining bolt with anything other than the specified length 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.
- 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.
- To prevent entanglement and possible serious injury or death, never use body weight to try to push the auger into the ground.
- Worn edges or a slightly rounded point can seriously affect auger penetration. Check for wear before each use, and replace as necessary.
- 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.
- 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.
- 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.

# Safety

(continued)

- 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 dismantling 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 shields or guards for auger adapters, pinions, and drivelines. Older machines can be retrofitted to add these safety signs and shields or guards. If you have an older Danuser post hole digger which does not have current standard safety equipment, please contact your dealer about bringing your machine up to the current level of safety.



**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 Owner's Manual. Since post hole digging operations are beyond our control, we disclaim all liability for any damages, injuries or death which may result.**

# Preparation

## Package Inspection Component Identification

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 photo (Fig. 1) and shipping list (Table 1) below to ensure you have all of the components and your unit has all of the safety signs and shields or guards required by current production safety standards. If your unit does not comply, contact Danuser Machine Company, Inc. IMMEDIATELY at (573) 642-2246.

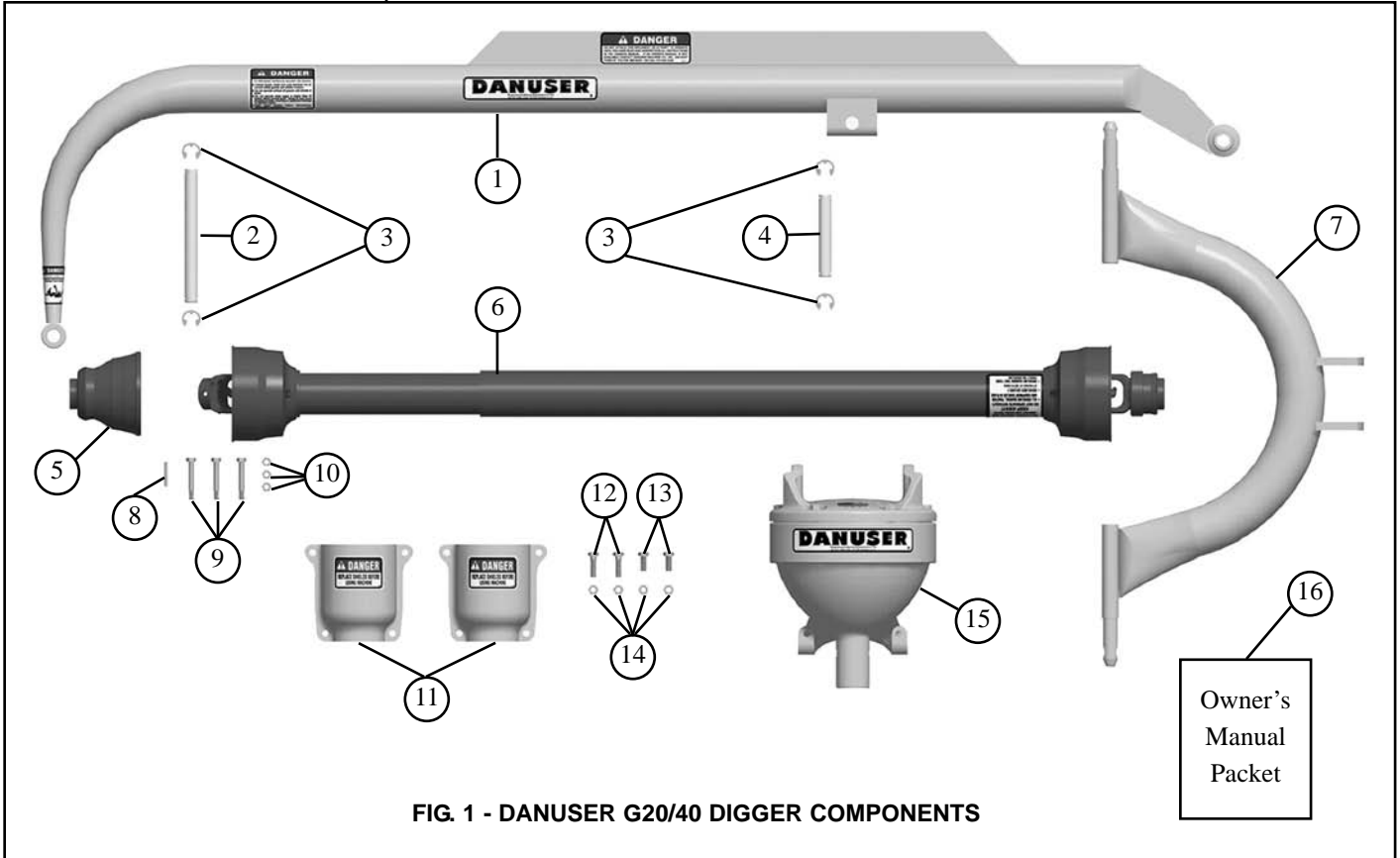


FIG. 1 - DANUSER G20/40 DIGGER COMPONENTS

TABLE 1 - SHIPPING LIST OF DANUSER G20/40 DIGGER (PN 6000)

Ref. No.	Description	Part No.	Qty.
1	Boom	.6045	.1
2	Pin (3/4" x 8")	.6056	.1
3	Retaining Ring	.2172	.4
4	Pin (3/4" x 4-15/16")	.6055	.1
5	Pinion Guard	.6057	.1
6	Driveline	.6807	.1
7	Yoke	.6051	.1
8	Roll Pin (3/16" x 1-1/2")	.6061	.1
9	Special Shear Bolt (5/16"-18 x 2-1/4" Gr. 5) (one required in unit, two spares included)	.6015	.3
10	Nut (5/16"-18) (one required in unit, two spares included)	.573	.3
11	Auger Adapter Shield	.6137	.2
12	Bolt (3/8"-16 x 1-1/4" Gr. 5)	.1180	.2
13	Bolt (3/8"-16 x 7/8" Gr. 5)	.2339	.2
14	Nut (3/8"-16)	.2168	.4
15	Gearbox		.1
16	Owner's Manual		.1

# Assembly & Installation

## Description Recommended Tools Instructions

### 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** Grade 8 bolt. The shear bolt is a **special** Grade 5 bolt and connects the driveline to the gearbox pinion. Read and understand this manual and the manual for your tractor 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
- 5/16" allen wrench (for fill plug)

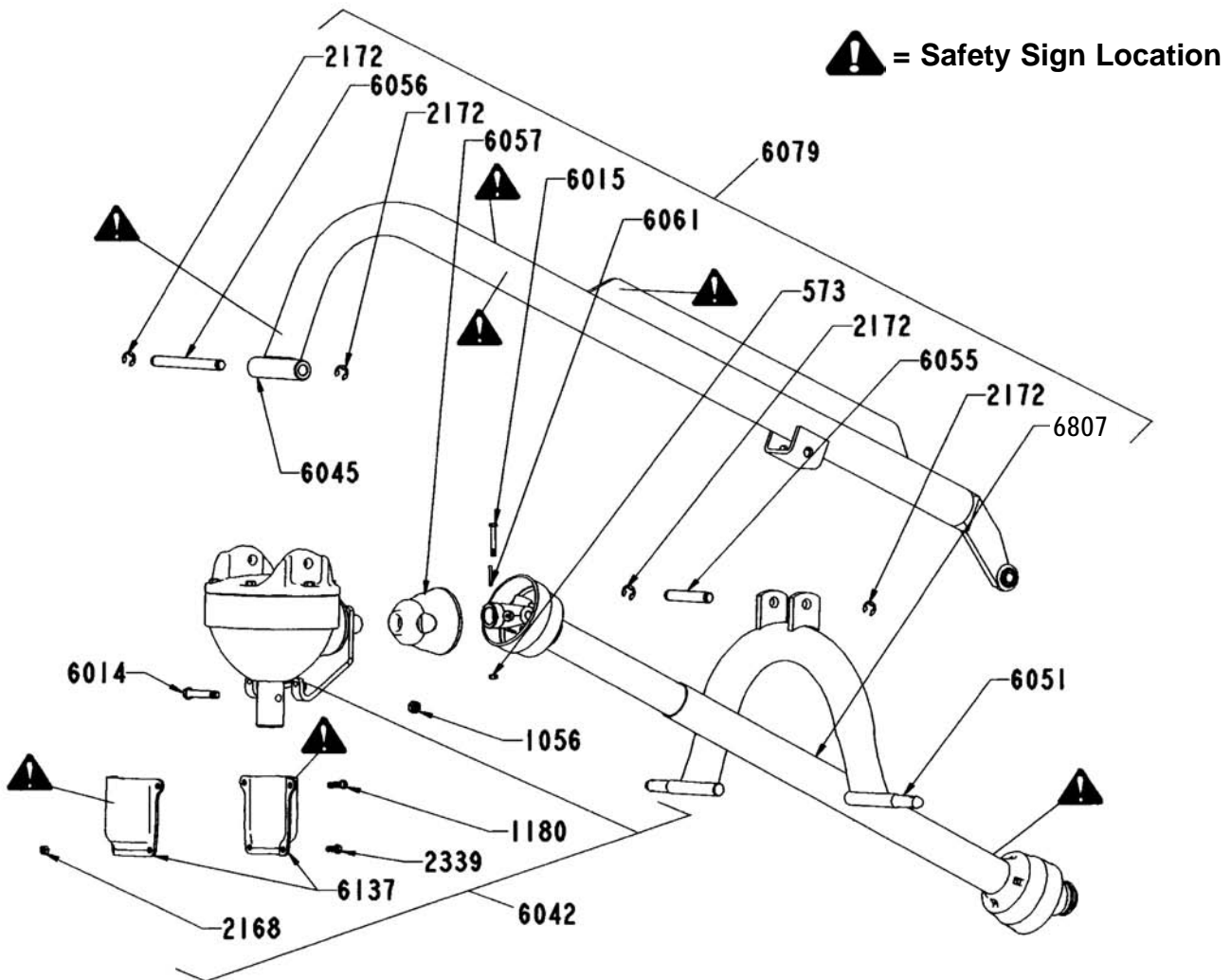


FIG. 2 - G20/40 ASSEMBLY SEQUENCE



# Assembly & Installation

(continued)

## 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.

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.
- 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.

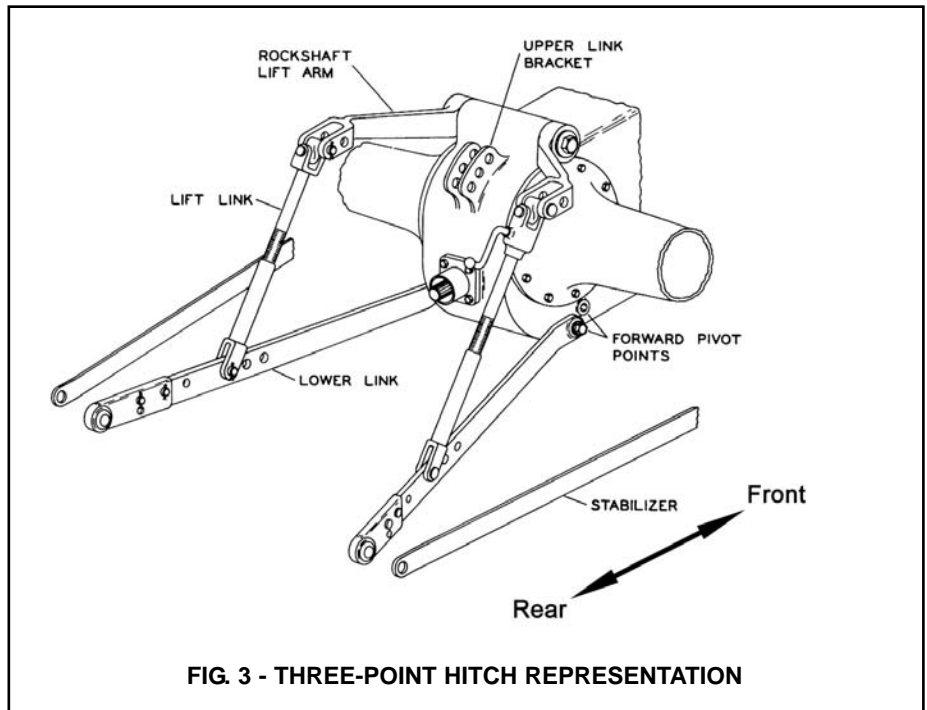
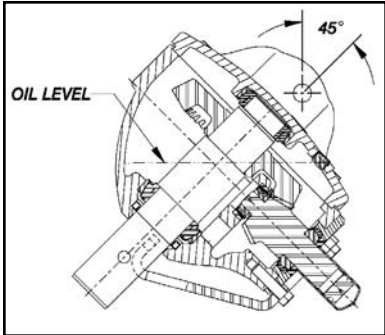


FIG. 3 - THREE-POINT HITCH REPRESENTATION

- STEP 5: Stand the digger gearbox in an upright position resting on the spindle. 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 and 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

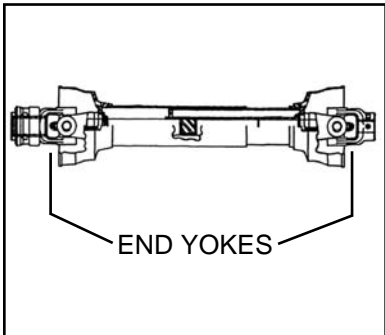
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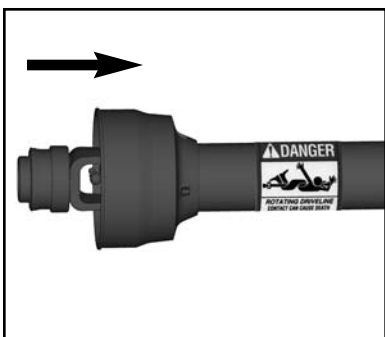
**FIG. 4 - PIVOT GEARBOX 45 DEGREES TO CHECK OIL LEVEL**



**FIG. 5 - PINION GUARD**



**FIG. 6 - END YOKES PROPERLY ALIGNED**



**FIG. 7 - RETRACT RING FOR INSTALLATION**

**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:** Grease the inside of the auger adapter liberally, and attach the auger with the Danuser 1/2"-13 x 3-1/4" (1/2" of thread) **special** retaining bolt (PN 6014) and nut (PN 1056). **NEVER** use a bolt longer than 3-1/4".

**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 9:** Discard the pinion protection cap (PN 6016). Slide the Pinion Guard (PN 6057) over the gearbox pinion (see Fig. 5). Slide the non-splined end of the driveline over the gearbox pinion, and secure with the Danuser 5/16"-18 x 2-1/4" (13/32" of thread) **special** shear bolt (PN 6015). Drive roll pin (PN 6061) through the hole in the Pinion Guard and into the end yoke so it rides in the groove in the pinion.

**NOTE**

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

**STEP 10:** 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. 6). Failure to properly align end yokes may result in excessive vibration. Always make sure guards are in place and rotate freely.

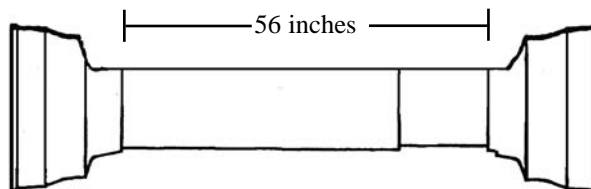
## **! WARNING**

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

**STEP 11:** Make sure the tractor engine is shut off, then connect the driveline to the tractor PTO. The drive shaft locks on with a retractable retaining ring coupling device. Slide the ring back for installation (see Fig. 7).

## **! 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)



**FIG. 8 - AUGER ADAPTER GUARD INSTALLED**

## Installation Troubleshooting

STEP 12: Install the Auger Adapter Shields (PN 6137) around the auger adapter and secure to the guard bracket (PN 6274) with two bolts (PN 1180) and two nuts (PN 2168). Install two bolts (PN 2339) and two nuts (PN 2168) in the bottom two holes of the Auger Adapter Shields. (Refer to Fig. 8.)

**NOTE** When removing the digger from the tractor, disconnect the driveline from the tractor PTO to prevent damaging the driveline and safety guards.

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

1. Front end of boom contacts tractor when boom is raised or lowered.	(a) 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.
	(b) Refer to your tractor operating manual for adjustment of the three-point hitch.
	(c) Relocate or adjust the part of the tractor causing the interference.
2. Digger yoke strikes boom when digger is raised.	(a) Attach the front end of the boom to a more forward hole on the upper link bracket.
	(b) Attach the lower links to rear forward pivot points.
	(c) Lengthen the lower links.
	(d) Refer to your tractor operating manual for adjustment of the three-point hitch.
3. Tractor has difficulty raising auger.	(a) Attach the lift links to more forward holes in the rockshaft lift arms to decrease lift range.
	(b) Move the lift links to more forward holes in the lower links to decrease travel.
	(c) 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.	(a) 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.	(a) Adjust tractor hydraulic system for “position control” implement rather than “draft” or “load control.”
	(b) 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.

## WARNING

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.

Read and understand this Owner's Manual 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: Contact 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: Layout and mark where you want to dig your holes.
- STEP 3: Adjust the auger to a vertical position:
- 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.
- 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 augured 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)

## 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.

## 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.

## DANGER

**NEVER** 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 to penetrate. If you have difficulty penetrating hard ground, refer to *Difficult Digging Suggestions*.

## WARNING

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.**

## DANGER

**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:

- (a) Disengage the PTO, set the brakes, shut off the tractor engine, and remove the tractor key.
- (b) Remove the broken shear bolt.
- (c) Install a new Danuser 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".
- (d) Tighten the shear bolt nut securely.

# Operation

(continued)



**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 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.



**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.



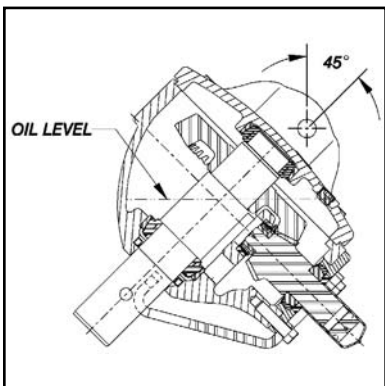
**To avoid damage to the driveline, and to reduce the risk of personal injury, never transport the digger with the tractor PTO engaged.**

## Difficult Digging Suggestions

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 22.
- b. Different Cutting Edges shown on page 22.
- c. Down Force Kit shown on page 23.
- d. Hole Digger Head Augers shown on page 21.
- e. Weld-on Hole Digger Head shown on page 21.

## Maintenance



**FIG. 9 - PIVOT GEARBOX 45 DEGREES TO CHECK OIL LEVEL**

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
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

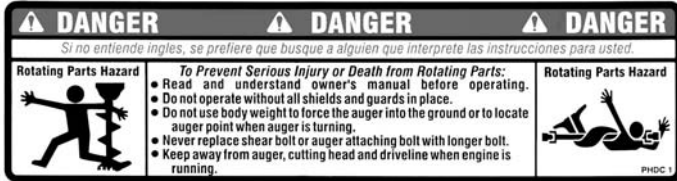
# Decals & Safety Signs



**PART NO. PHDC 2**  
Location: Boom, left side



**PART NO. PHDC 3**  
Location: Boom, right side



**PART NO. PHDC 1**  
Location: Boom, rear, above gearbox



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



**SERIAL NUMBER**  
Location: Gearbox, lid



**PART NO. 9875**  
Location: Gearbox, lid



**PART NO. 13-10021**  
Location: Driveline Guard



**PART NO. 2169**  
Locations:  
Auger Adapter Shield, rear half;  
Auger Adapter Shield, front half



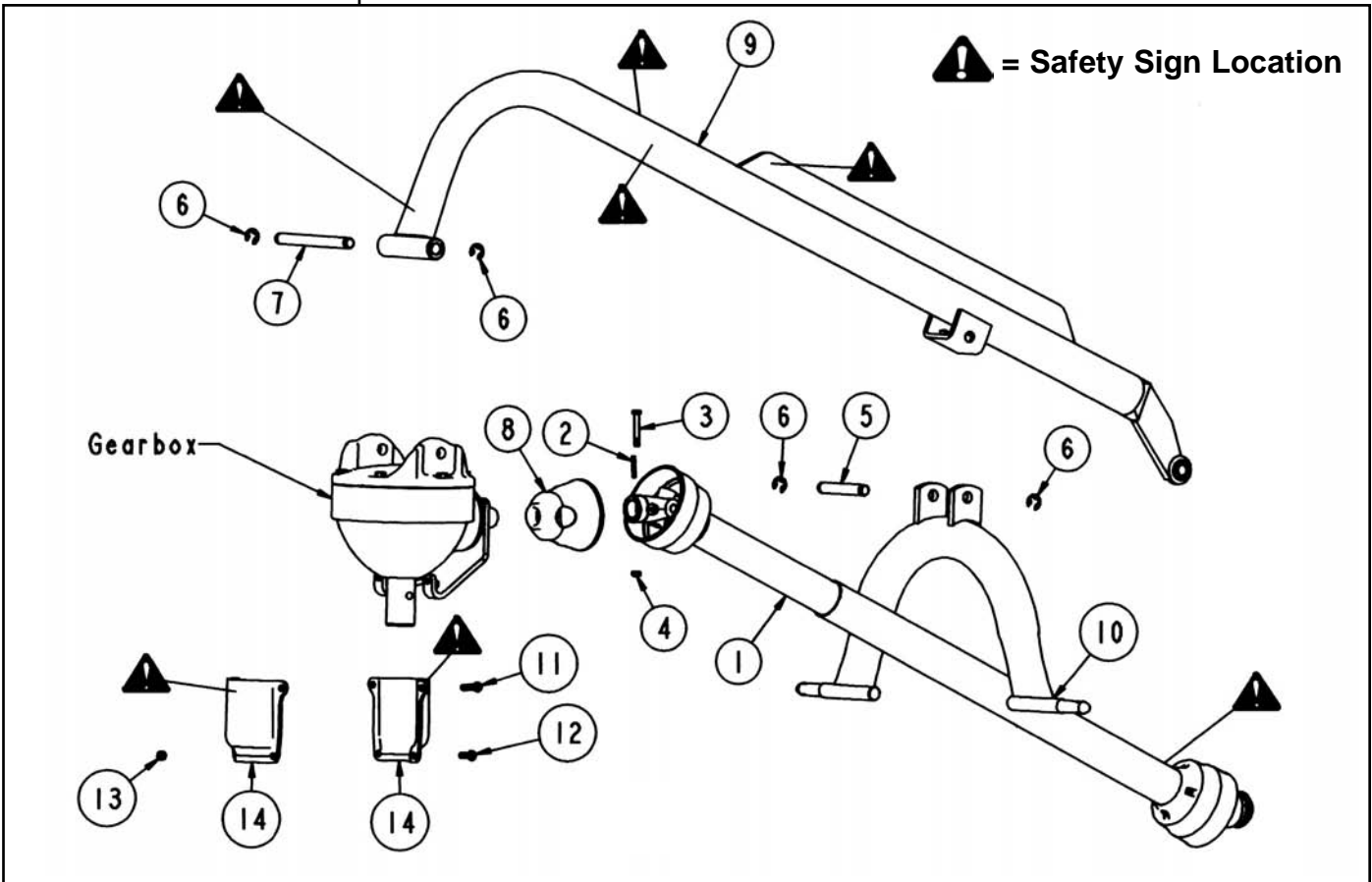
**PART NO. 2088**  
Locations: Boom, right side; gearbox



**PART NO. PHDC 5**  
Location: Auger, under Auger Adapter Guard



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



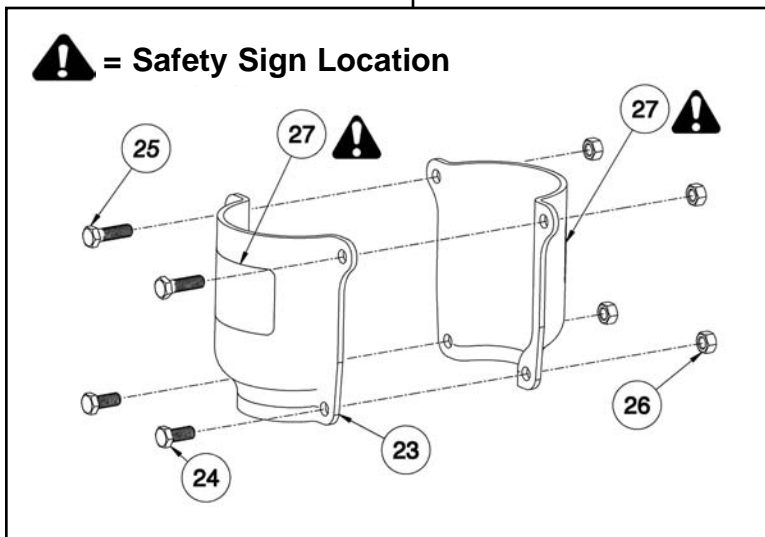
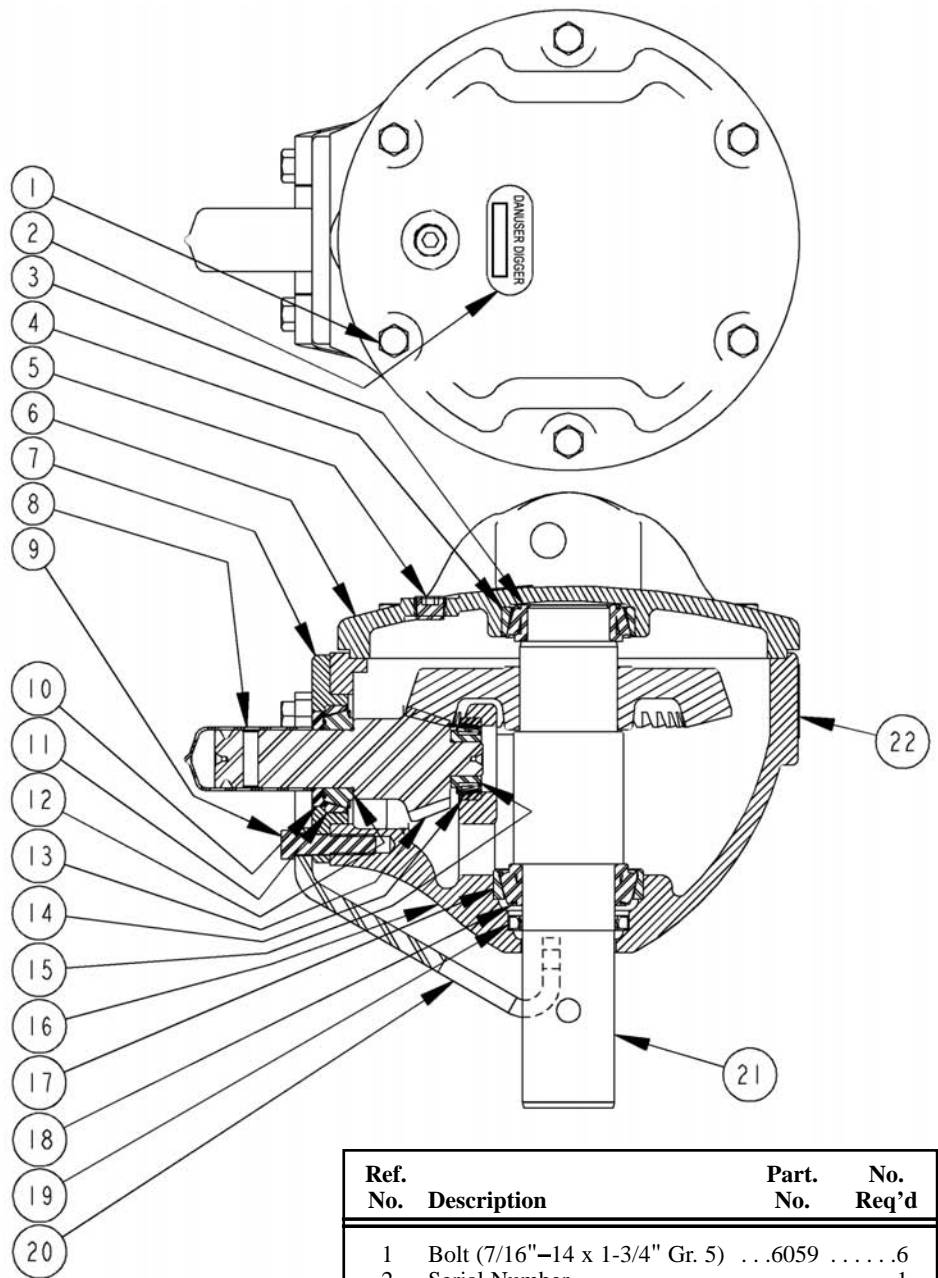
## DANUSER G20/40 DIGGER

Ref. No.	Description	Part No.	No Req'd
	Driveline & Hardware Package . . . . .	.6079	. . . . .1
	(consists of the following)		
1	Driveline . . . . .	.6807	. . . . .1
2	Roll Pin (3/16" x 1-1/2") . . . . .	.6061	. . . . .1
3	Shear Bolt (5/16"-18 x 2-1/4" Gr. 5, 13/32" of thread) . . . . .	.6015*	. . . . .3
	(SPECIAL BOLT: Use Genuine Danuser Replacement Only)		
4	Nut (5/16"-18) . . . . .	.573*	. . . . .3
5	Pin (3/4" x 4-15/16") . . . . .	.6055	. . . . .1
6	Retaining Ring . . . . .	.2172	. . . . .4
7	Pin (3/4" x 8") . . . . .	.6056	. . . . .1
8	Pinion Guard . . . . .	.6057	. . . . .1
9	Boom . . . . .	.6045	. . . . .1
10	Yoke . . . . .	.6051	. . . . .1
	Gearbox Assembly . . . . .	.6042	. . . . .1
	(consists of the following)		
11	Bolt (3/8"-16 x 1-1/4" Gr. 5) . . . . .	.1180	. . . . .2
12	Bolt (3/8"-16 x 7/8" Gr. 5) . . . . .	.2339	. . . . .2
13	Nut (3/8"-16) . . . . .	.2168	. . . . .4
14	Auger Adapter Shield . . . . .	.6137	. . . . .2
	Owner's Manual (in digger box) . . . . .		. . . . .1

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

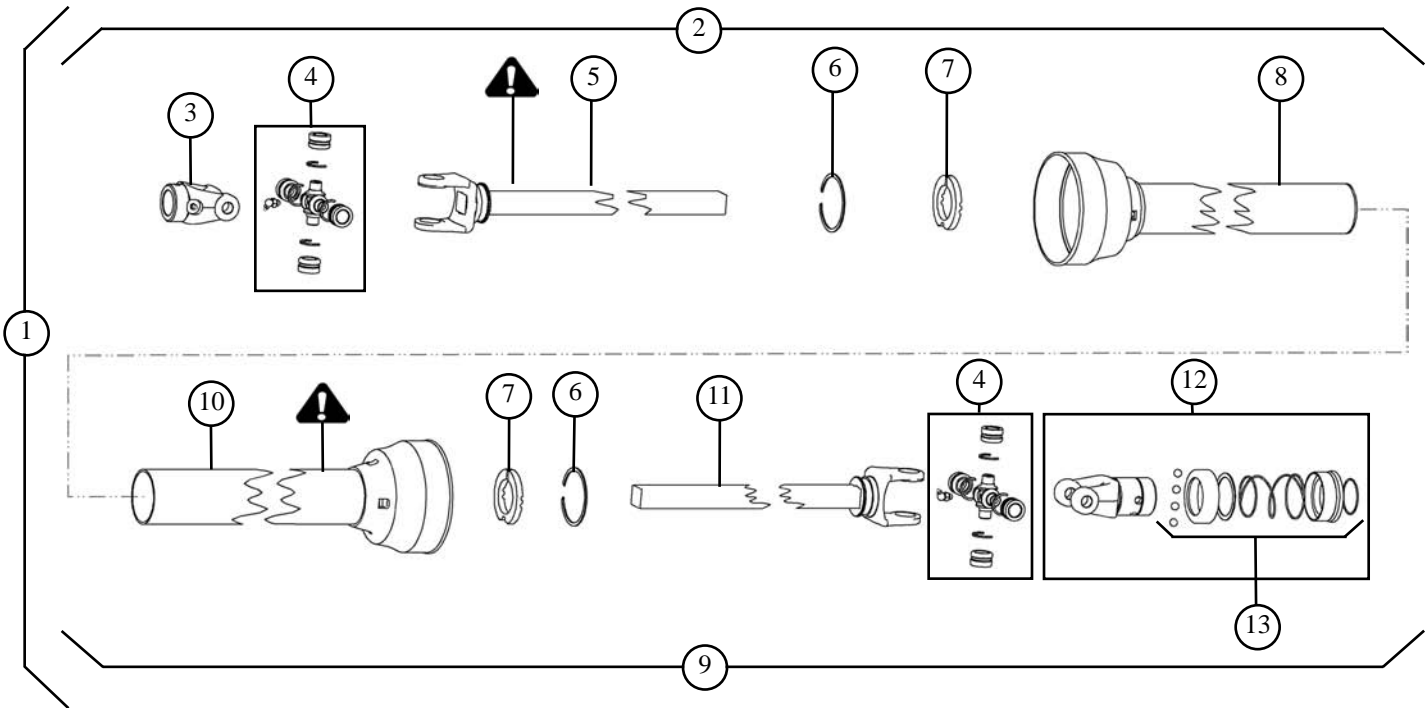


# Gearbox Assembly



Ref. No.	Description	Part. No.	No. Req'd
1	Bolt (7/16"–14 x 1-3/4" Gr. 5) . . . . .	.6059	. . . . .6
2	Serial Number . . . . .		. . . . .1
3	Cone (Upper Spindle) . . . . .	.6009	. . . . .1
4	Cup (Upper Spindle) . . . . .	.6008	. . . . .1
5	Housing Cover Plug . . . . .	.1113	. . . . .1
6	Gear Housing Cover . . . . .	.6004	. . . . .1
7	Cap . . . . .	.6005	. . . . .1
8	Cap (Pinion Protection) . . . . .	.6016	. . . . .1
9	Bolt (7/16"–14 x 1-3/4" Gr. 5) . . . . .	.6059	. . . . .3
10	Oil Seal (Pinion) . . . . .	.6017	. . . . .1
11	Cup (Outer Pinion) . . . . .	.6012	. . . . .1
12	Cone (Outer Pinion) . . . . .	.6013	. . . . .1
13	Pinion . . . . .	.6349	. . . . .1
14	Cup (Inner Pinion) . . . . .	.6010	. . . . .1
15	Cone (Inner Pinion) . . . . .	.6011	. . . . .1
16	Gear Housing . . . . .	.6003	. . . . .1
17	Cup (Lower Spindle) . . . . .	.6006	. . . . .1
18	Cone (Lower Spindle) . . . . .	.6007	. . . . .1
19	Oil Seal (Spindle) . . . . .	.6018	. . . . .1
20	Guard Bracket . . . . .	.6274	. . . . .1
21	Spindle Assembly . . . . .	.6352	. . . . .1
22	Danuser Decal . . . . .	.2088	. . . . .1
23	Auger Adapter Shield . . . . .	.6137	. . . . .2
24	Bolt (3/8"–16 x 7/8" Gr. 5) . . . . .	.2339	. . . . .2
25	Bolt (3/8"–16 x 1-1/4" Gr. 5) . . . . .	.1180	. . . . .2
26	Nut (3/8"–16) . . . . .	.2168	. . . . .4
27	Safety Sign . . . . .	.2169	. . . . .2

# Driveline Parts



= Safety Sign Location

## G20/40 DRIVELINE PARTS

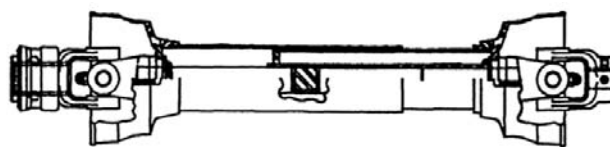
Ref. No.	Description	Part. No.	No. Req'd
1	Driveline Telescoping Assembly with Guard	.6814	1
2	Digger Half with Guard	.6815	1
3	End Yoke	.6809	1
4	Center Cross Repair Kit	.6817	2
5	Yoke and Tube	.6811	1
6	Bearing Retainer	.6067	2
7	Nylon Bearing	.7258	2
8	Inner Guard (incl. Centralizer)	.6810	1
9	Tractor Half with Guard	.6816	1
10	Outer Guard	.6813	1
11	Yoke and Shaft	.6812	1
12	Spring-Lok Yoke Assembly	.7269	1
13	Spring-Lok Repair Kit	.6131	1



**Part No. 13-10022**  
Location: Driveline tube, under guard



**PART NO. 13-10021**  
Location: Driveline Guard



End Yokes Properly Aligned

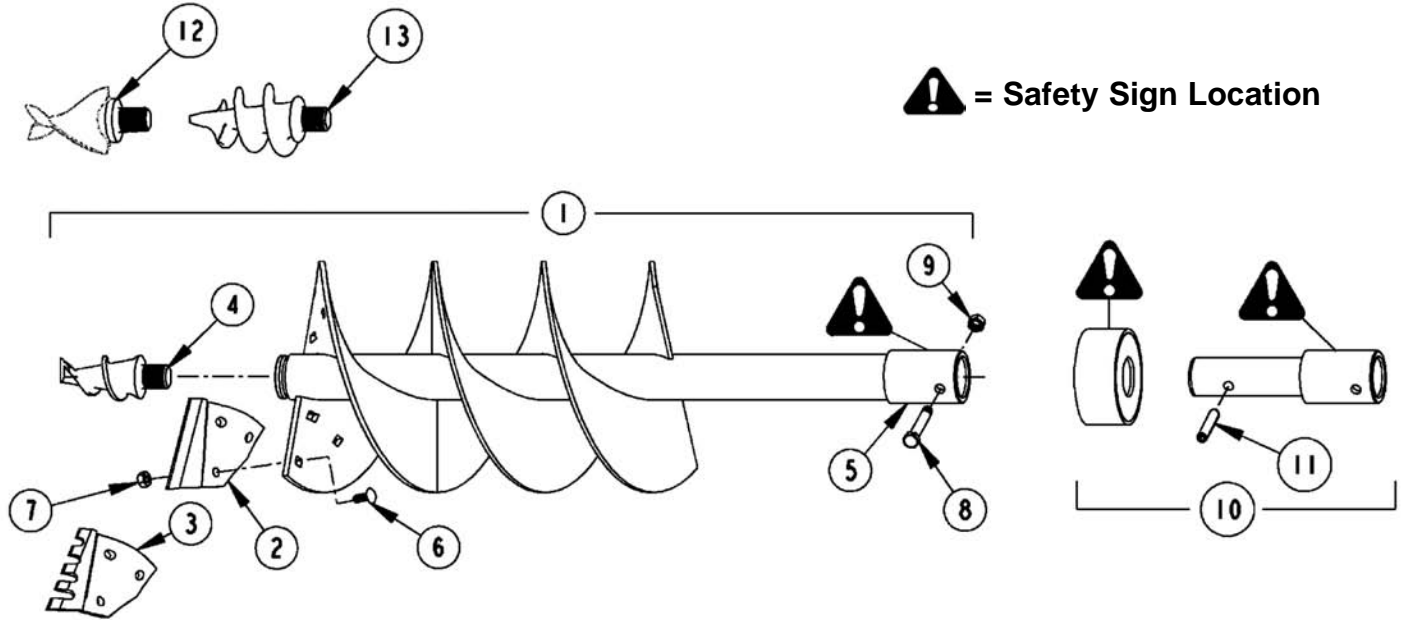
## CAUTION

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

# Auger Assemblies



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**

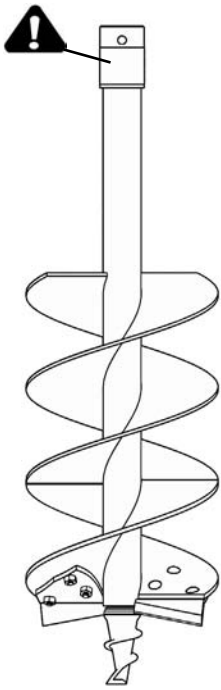
Augers have replaceable points and edges. Serrated cutting edges (Ref. No. 3) and optional points (Ref. No. 12 and Ref. No. 13) are available to aid penetration in tough digging conditions. Flights are replaceable except on 4" and 6", where the flight is a continuous spiral. Cutting edges on 4" and 6"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

## AUGER ASSEMBLIES FOR 2" ROUND SPINDLES

Ref. No.	Part Number by Auger Diameter								Description	No. Req'd
	4"	6"	9"	12"	14"	16"	18"	24"		
1	See next page for available augers.								Auger	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) <b>SPECIAL BOLT:</b> 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") <b>SPECIAL PIN:</b> 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

# 2" Round Augers

 = Safety Sign Location

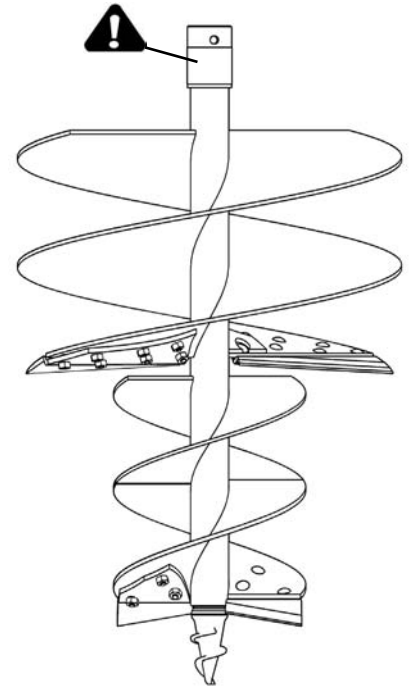


## 2" ROUND SPINDLE AUGERS

Part Number by Auger Diameter								Description
4"	6"	9"	12"	14"	16"	18"	24"	
6101	6029	6030	6032	6034	6036	6038	6040	40" Long with Plain Edges & Standard Point
		6031	6033	6035	6037	6039	6041	40" Long with Serrated Edges & Standard Point

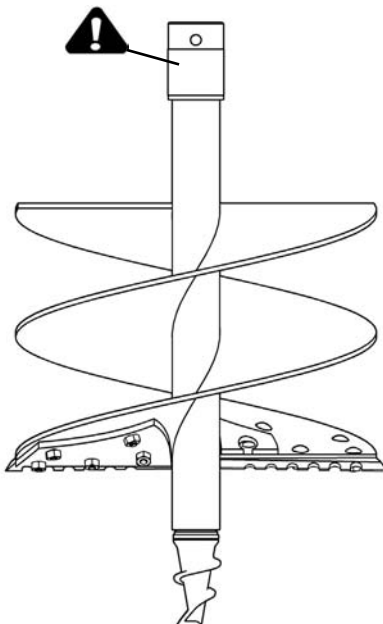
## 2" ROUND SPINDLE STEPPED AUGERS

Part Number by Auger Diameter			Description
18" x 10"	24" x 12"	30" x 16"	
6240			33" Long with Plain Edges & Standard Point Auger Uses Both Dimensions of Cutting Edges - See Page 19
6248			33" Long with Serrated Edges & Standard Point Auger Uses Both Dimensions of Cutting Edges - See Page 19
	6241	6242	40" Long with Plain Edges & Standard Point Auger Uses Both Dimensions of Cutting Edges - See Page 19
	6249	6250	40" Long with Serrated Edges & Standard Point Auger Uses Both Dimensions of Cutting Edges - See Page 19



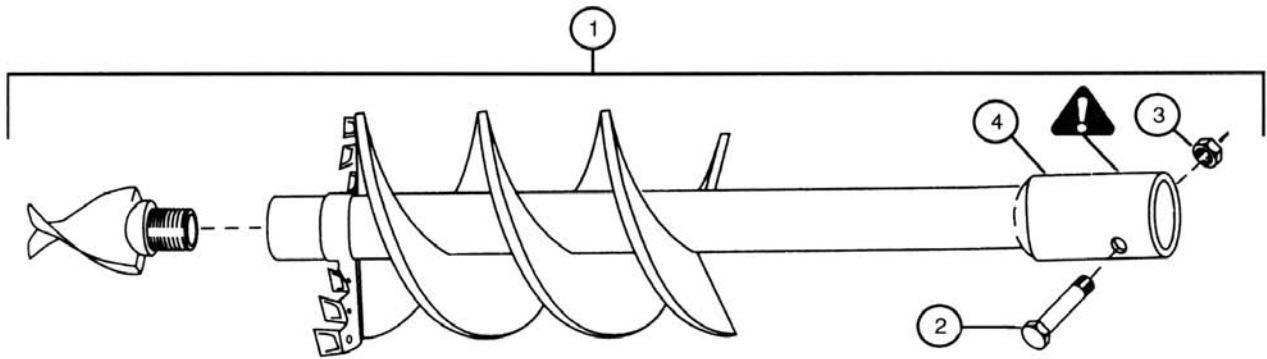
## 2" ROUND SPINDLE ORCHARD AUGERS

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	No. Req'd
	6"	9"	12"	14"	16"		
1	6121	6122	6123	6124	6125	40" Hole Depth Auger with Double Flight Construction	1
2	6014	6014	6014	6014	6014	Retaining Bolt (1/2"-13 x 3-1/4" Gr. 8, 1/2" of thread) <b>SPECIAL BOLT:</b> Use Genuine Danuser Replacement Only	1
3	1056	1056	1056	1056	1056	Retaining Nut (1/2"-13)	1
4	6019	6019	6019	6019	6019	Auger Adapter Replacement (for Field Welding)	1

Hole Digger Head Kits can be welded onto standard augers.



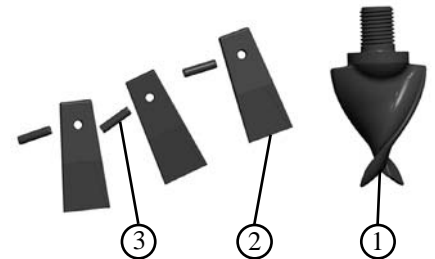
### HOLE DIGGER HEAD REPLACEMENT PARTS

Ref. No.	Description	Part. No.
1	Hole Digger Head Point . . . . .	9353
2	Hole Digger Head Tooth . . . . .	9234
	Hard-Surface Tooth (option) . . . . .	9964
3	Roll Pin (5/16" x 1-1/4") . . . . .	7483

### HOLE DIGGER HEAD KIT\* (Field Weld to Auger)

Auger Diameter	No. Teeth per Head	Part. No.
6" . . . . .	2 . . . . .	9386
9" . . . . .	4 . . . . .	9306
12" . . . . .	4 . . . . .	9308
14" . . . . .	6 . . . . .	9309
16" . . . . .	6 . . . . .	9310

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



# Accessories

Standard



①

Special Duty



②

Aggressive Duty



③

## AUGER POINTS

Ref. No.	Description	Part No.
1	Standard for augers 6" through 24" diameter . . . . .831 <b>only</b> point for 4" augers . . . . .899	
2	Special Duty . . . . .1937	
3	Aggressive Duty . . . . .6210	

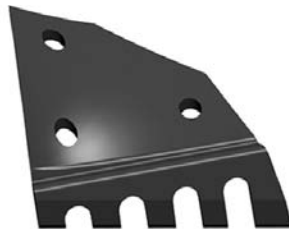
Auger points are available in a variety of styles.  
See page 21 for Hole Digger Head Point.

Plain



①

Serrated



②

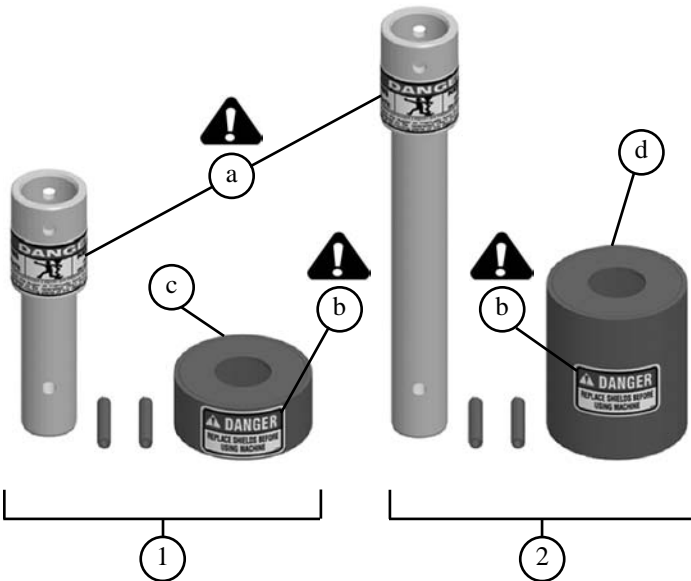
## CUTTING EDGES

Ref. No.	Description	Part No.
1	Plain . . . . .See page 19	
2	Serrated . . . . .See page 19	

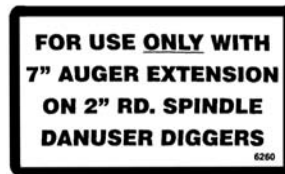
Cutting edges are available with plain or serrated edges.  
See table on page 19 for part numbers.

## AUGER EXTENSIONS

Ref. No.	Description	Part No.
1	7" Auger Extension with 2 Special Coiled Pins & Auger Extension Guard . . .6080G	
2	14" Auger Extension with 2 Special Coiled Pins & Auger Extension Guard . . .6204G	
a	Safety Sign . . . . .PHDC5	
b	Safety Sign . . . . .2169	
c	Decal . . . . .6260	
d	Decal . . . . .6262	



= Safety Sign Location



③



④

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.

## Accessories

(continued)



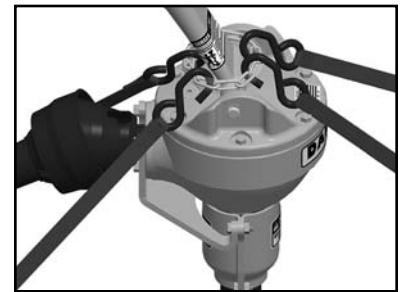
## DOWN FORCE KIT

A 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.



G20/40 shown above

The Danuser Auger Cart, U.S. Patent No.: 6,419,245 B1, allows you to quickly and easily attach/detach, transport, and store Danuser 3-pt. Hitch Diggers: F8 (shown), G20/40, 8800, and 8900.

The Danuser Auger Cart has four wheels, steering capabilities, and a parking brake. It can be used on any level surface. Maximum auger diameter is 24".



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# Warranty

DANUSER MACHINE COMPANY, INC.

## SERVICE ADJUSTMENT POLICY

### LIMITED WARRANTY

Model # \_\_\_\_\_

Serial # \_\_\_\_\_

This Warranty is extended only to the original purchaser of our products. Danuser Machine Company, Inc. 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 & INSPECTION REPORT has been completed and is on file at Danuser Machine Company, Inc. Start of the warranty period is determined by purchase date given on your WARRANTY REGISTRATION FORM & INSPECTION REPORT. Proof of purchase and serial number may be required.

1. Our obligation under this warranty is limited to repair or replacement at our factory of the part(s) of Danuser products which Danuser Machine Company, Inc. determines to be defective. Our sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement at our factory.
2. This warranty shall not obligate Danuser Machine Company, Inc. to bear any cost of labor for field replacement, testing, or adjustment.
3. Parts may not be returned without authorization by Danuser Machine Company, Inc.
4. To file a warranty inspection claim, your dealer must contact his Danuser Distributor for a Service Adjustment Request (SAR). The Danuser Distributor should complete this form and forward a copy to Danuser Machine Company, Inc. If the return of the part(s) listed on the SAR is approved for warranty inspection, Danuser will issue a SAR number for the return of parts. Your dealer should then tag the part(s) with the SAR number and return the part(s) to Danuser. Shipments arriving at our factory on a freight collect basis will be refused by our receiving department.
5. All parts returned under a warranty inspection claim must be returned PREPAID to our factory. The freight charge will be credited, if the parts are determined by Danuser Machine Company, Inc. to be defective.
6. Products or parts thereof which, as determined by Danuser Machine Company, Inc.'s examination, show wear from normal use, have been improperly operated, damaged by accident or negligence, field repaired, or altered are not considered defective and are not covered by this warranty.
7. Some purchased components, including, but not limited to, hydraulic valves, motors, and cylinders, are subject to the inspection and warranty of the respective manufacturer. Thus, delays in a warranty determination can be expected while we await their decisions. NOTE: Hydraulic valves, motors, and cylinders must arrive with all ports sealed from dirt and moisture. If they arrive with open ports, the warranty is void and no inspection will be made.
8. The foregoing 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 product pursuant to the terms contained herein. Danuser Machine Company, Inc. shall not be liable for any consequential or incidental damages whatsoever.
9. We reserve the right to change our specifications and design at any time.

**Danuser Machine Company, Inc.**  
**500 East Third Street**  
**P.O. Box 368**  
**Fulton, Missouri 65251**

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



## IMPORTANT SAFETY MESSAGE FOR OWNERS/OPERATORS OF POST HOLE DIGGERS



Safety is a primary concern in the design, manufacture, sale, and use of post hole diggers. As manufacturers of post hole diggers, we want to confirm to you, our customers, our concern for safety. We also want to remind you about the simple, basic, and common sense rules of safety when using a post hole digger. Failure to follow these rules can result in severe injury or death to operators or bystanders.

It is essential that everyone involved in the assembly, operation, transport, maintenance, and storage of this equipment be aware, concerned, prudent, and properly trained in safety. The majority of accidents involve entanglement on the driveline or auger. This entanglement risk becomes greater when you replace our shear bolts with bolts longer than those specified by the manufacturer. This improper replacement occurs most often on machines that are loaned or rented to someone who has not read the owner's manual and is not familiar with a post hole digger.

Our current production machines include, as standard equipment, guards or shields for auger adapters, drivelines, pinions, and safety signs. Older machines can be retrofitted to add these new guards or shields and, of course, safety signs. If you have an older machine which does not have standard safety equipment, please contact your dealer about bringing your machine up to the current level of safety.

Below are some of the most important safety rules to be understood and followed by anyone who works with post hole diggers:

- Before operating a post hole digger, an operator must read and understand all the information in the owner's manual and in the safety signs attached to the product. A person who has not read or understood the owner's manual and safety signs is not qualified to operate the digger. If you do not have an owner's manual or current production safety signs, contact the manufacturer or your dealer immediately.
- Post hole diggers are designed for one-man operation. You must always dig holes while sitting in the tractor seat. Never operate the digger with anyone near, or in contact with, any part of the implement, PTO driveline, or auger. Accidents have occurred when more than one person is in the immediate area of the operating equipment. Be sure no one else, including bystanders, is near you when you operate this product.
- Do not operate the digger unless all shields and guards are in place.
- Never replace the shear bolt or auger retaining bolt with one longer than those supplied and specified by the manufacturer. See your owner's manual.
- Do not use the digger unless the auger point and cutting edges are intact and in good working order.

Following these simple, basic safety rules, as well as others identified in the owner's manual and in product safety signs, will help minimize the possibility of accidents and increase your productivity in using this product. Be careful and make sure that everyone who operates the digger knows and understands that it is a very powerful piece of machinery, and if used improperly, serious injury or death may result. The final responsibility for safety rests with the operator of this machine.