8" NORTHERN PORTABLE AUGER
33', 41' & 53' MODELS

OWNER'S & OPERATOR'S MANUAL

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Hutchinson/Mayrath/TerraTrack
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HutchinsonMayrath/TerraTrack
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LIMITED WARRANTY: (a) For a period of (1) year after receipt of goods by the original consumer buyer, Hutchinson/Mayrath/TerraTrack will supply free of charge replacement parts for parts that prove defective in workmanship or material. Defective parts must be returned freights prepaid to a specified Hutchinson/Mayrath/TerraTrack location. Only Hutchinson/Mayrath/TerraTrack original repair parts may be used for warranty repairs.
(b) This limited warranty does not extend to parts designed to wear in normal operation and be replaced periodically, or to damage caused by negligence, accident, abuse or improper installation or operation.
(c) GOODS NOT MANUFACTURED BY HUTCHINSON/MAYRATH/TERRATRACK CARRY ONLY THE MANUFACTURER'S WARRANTY.
(d) THIS UNDERTAKING IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

FAILURE TO FOLLOW THE INSTRUCTIONS CONTAINED IN THE OWNER'S & OPERATOR'S MANUALS AND THE ITEMS LISTED BELOW WILL RESULT IN THE VOIDING OF THIS LIMITED WARRANTY.

(1) Improper assembly, including failure to properly install all safety equipment.
(2) Improper installation (power & wiring included)
(3) Unauthorized alterations of goods.
(4) Goods operated when obviously in need of repair.
(5) Use of unauthorized repair parts.
(6) Irresponsible operation.
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GENERAL SAFETY STATEMENT

This manual was written with the safety of the operator and others who work with the equipment as our prime concern. The instructions presented will help the reader learn SAFE day to day work practices. We want you as our partner in safety.

It is your responsibility as an owner, operator or supervisor to know what specific safety requirements and precautions exist and to make these known to all other personnel working with the equipment or in the area, so that they too may safely perform their duties and avoid any potentially hazardous situations.

Please remember safety equipment provides important protection for persons around a grain handling system that is in operation. Be sure that ALL safety shields and protection devices are installed and properly maintained. If any shields or guards are damaged or missing, contact your dealer to obtain the correct items.

Avoid any alterations of the equipment. Such alterations may create a dangerous situation where serious injury or death may occur.

SAFETY ALERT SYMBOL

The symbol shown below is used to call your attention to instructions concerning your personal safety. Watch this symbol - it points out important safety precautions. It means "ATTENTION! Become alert! Your personal safety is involved!" Read the message that follows and be alert to the possibility of personal injury or death.

BE ALERT! YOUR SAFETY IS INVOLVED.

WARNING

Anyone who will operate or work around this machine shall first read this manual! This manual must be delivered with the equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

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SERIAL NUMBER

To ensure efficient and prompt service, please furnish us with the model and serial number of your auger in all correspondence or other contact. The serial plate is located on the undercarriage mount on the lower section of auger housing.

RIGHT AND LEFT DESIGNATION

When determining which is the left or right hand side of the unit, it is as if a person were standing at the intake end and looking toward the discharge end.

OPERATOR QUALIFICATIONS

Operation of this portable auger shall be limited to competent and experienced persons. In additon, anyone who will operate or work around a portable auger must use good common sense. In order to be qualified, they must also know and meet all other requirements, such as:

1. Some regulations specify that no one under the age of 16 may operate power machinery. This includes portable augers. It is your responsibility to know what these regulations are in your own area or situation.
2. Current OSHA regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved".*
3. Unqualified persons are to stay out of the work area as shown in the work area diagrams. See page 8.
4. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine.

*** Federal Occupational Safety & Health Standards for Agriculture Subpart D, Section 1928.57 (a) (6).**

SIGN OFF SHEET

As a requirement of OSHA it is necessary for the employer to train the employee in the safe operation and safety procedures with this auger. We include this sign off sheet for your convenience and personal record keeping.

DATE	EMPLOYER SIGNATURE	EMPLOYEE SIGNATURE

MACHINE INSPECTION

After delivery of your new auger and/or completion of assembly and before each use, inspection of the machine is mandatory. This inspection should include, but not be limited to:

1. Check to see that all guards listed in the assembly instructions are in place and secured and functional. PTO driveline must rotate easily.
2. Check all safety signs and replace any that are worn, missing or illegible. The safety signs are listed on page P-1 & P-2. Safety signs may be obtained from your dealer or ordered from the factory.
3. Check winch and cable for security and operation. There should be at least three complete wraps of cable around winch drum in full down position. Cable anchor on winch drum must be tight.
4. Are all fasteners tight?
5. Are all belts properly adjusted? (See Maintenance Section).
6. Check oil levels in gearbox and enclosed head drive. (See Maintenance Section).

TRANSPORTING AUGERS

TRANSPORT: Moving the auger with the towing vehicle to or from the work area.

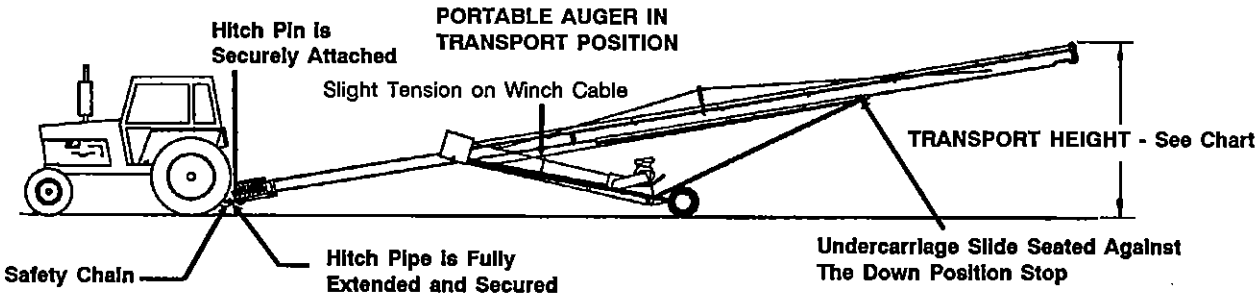
1. HITCHING TO TOWING VEHICLE INSTRUCTIONS:

Make certain the hitch pin is securely attached and an alternate hitch safety chain is secure to the auger and towing vehicle. Check to see that the hitch is fully extended and that the bolt and nut holding it there is tight.

Never raise the intake end higher than is necessary to attach to a towing vehicle. Weight transfers rapidly to the head end when the intake is raised.

NOTE: Empty machine before moving to prevent upending.

Never stand between tractor and machine when hitching unless all controls are in neutral and the brakes locked.



AUGER LENGTH	8" x 33'	8" x 41'	8" x 53'
*TRANSPORT HEIGHT	7'-10"	8'-10"	10'-10"

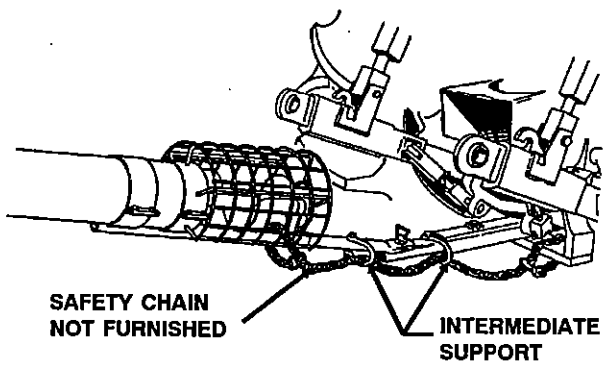
***IMPORTANT: Transport heights are figured with auger attached to towing vehicle with a drawbar height of 1'-6". When the auger intake is resting on the ground, add 1'-6" to transport height of the auger to achieve the overall auger height.**

ALTERNATE HITCH SAFETY CHAIN INSTALLATION

An auxiliary attachment system (safety chain) is required to retain the connection between towing and towed machines in the event of separation of the primary attachment system.

The safety chain should be routed through the intake chain safety screen and around the bearing support at the lower end of the intake flight.

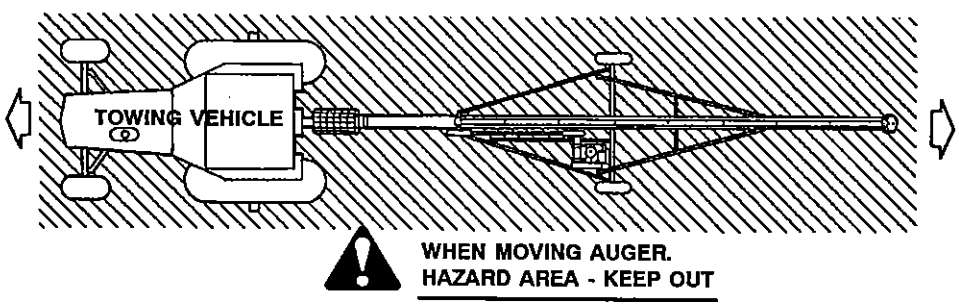
A clevis or intermediate chain support should be fastened to the hitch pipe no farther than 6" from the hitch pin. (A hole is provided in the hitch pipe for this purpose.)



2. MOVING AUGER

Moving your portable auger requires careful planning. A route plan should be considered beforehand to avoid dangerous obstacles and loss of time.

Always transport your auger in the full down position. The lift arm of the undercarriage should be seated against the down position stop with slight tension on the winch cable and at least 3 complete wraps of cable around the winch drum.

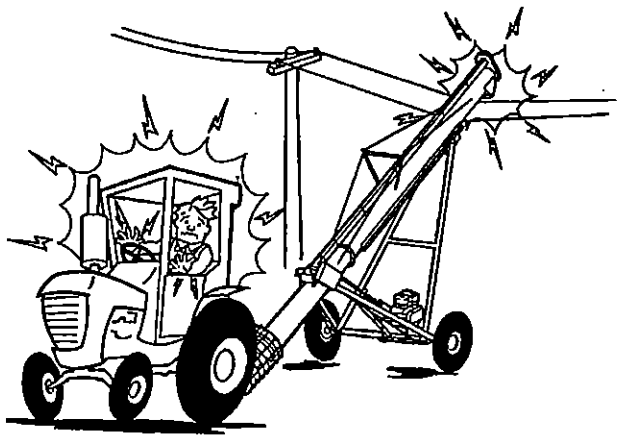


Never allow persons to stand underneath or ride on the auger when moving the auger. Make certain everyone is clear of the work area before moving.

TRANSPORTING AUGERS - CONT.

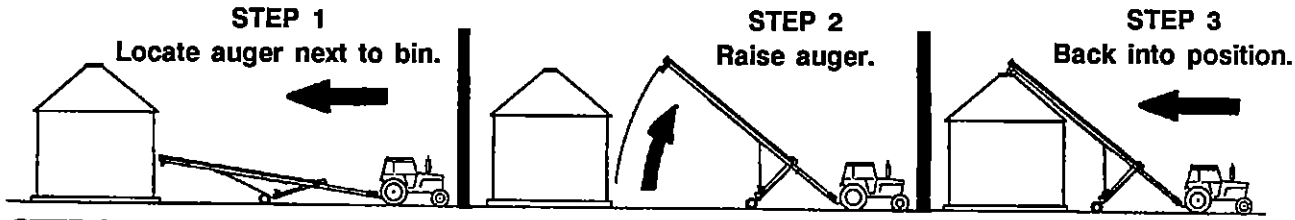
Do not transport the auger at speeds in excess of 20 MPH and comply with your state and local regulations governing marking, towing and maximum width. Observe safe driving and operating practices.

Be alert to overhead obstructions and electrical wires, particularly if towing height is greater than 13'-6". Failure to do so may result in electrocution. Lower auger well below level of power lines before moving. Maintain at least ten (10) feet of clearance. Page 4 contains a chart showing the height of each portable auger in the lowered tran-port position. Check the chart to determine the height of your auger.



PLACEMENT OF AUGER - FILLING GRAIN BIN

Placement - Move the auger into its working positon with a towing vehicle.



STEP 1

Locate the auger as close as possible to the bin or other structure. Move auger slowly towards working position with towing vehicle -- not by hand. When moving the auger towards the working position leave adequate room for convenient path for loaded vehicles to reach the auger intake area.

Make certain everyone is clear of the work area when moving the auger. To prevent tip-over when backing, avoid rolling over any obstructions, also avoid steep slopes. If the auger is to set on a slope, approach the bin uphill. Avoid moving the auger at right angles to a slope.

Make sure entire area above auger and in line of travel is clear of overhead obstructions and electrical wires. Failure to do so may result in electrocution. Maintain at least ten (10) feet of clearance. Electrocution can occur without direct contact.

STEP 2

Raise the auger only high enough to allow minimum clearance above the bin.

TO RAISE THE AUGER WITH HAND WINCH

Turn the handle, clockwise (pull cable onto winch drum). There should be a clicking sound.
NOTE: The winch is equipped with a brake that is actuated by turning the handle. The brake is designed to hold the load whenever the handle is released.

NOTE: Observe the cable as it is winding onto the winch drum. The cable should roll up on the drum evenly; avoid cable build-up on one side of the drum.

Keep hands away from winch drum during operation.

PLACEMENT OF AUGER - FILLING GRAIN BIN (CONT.)

STEP 3
Back auger slowing into working position with towing vehicle. **NEVER MOVE AUGER BY HAND, USE A VEHICLE.**

DO NOT ATTEMPT TO INCREASE AUGER HEIGHT BY POSITIONING WHEELS ON LUMBER, BLOCKS OR BY OTHER MEANS.

Once in place, the wheels should be chocked on both sides of auger so it will not roll when disconnected from the towing vehicle.

When releasing from the towing vehicle, test the intake end of downward weight.
LOWER IT SLOWLY TO THE GROUND.
NOTE: Weight transfers rapidly to the head end if the intake is raised above the tow bar, particularly when the auger is in a raised position.

Remove bolt from hitch and fully retract hitch pipe.
If a hopper is to be used, install at this time.
Lower the auger until the auger discharge is directly over bin opening.

TO LOWER AUGER WITH HAND WINCH

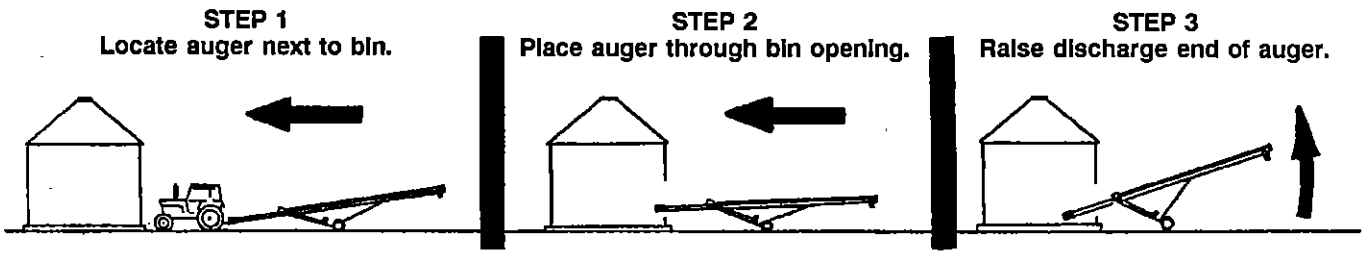
Turn the handle counter-clockwise; there will be no clicking sound. To stop while lowering the auger, turn the handle clockwise until you hear two clicks to lock brake. (About 6" movement of the handle.)

The auger should be anchored at the intake end and/or supported at the discharge end. This will prevent auger from tipping when weight transfers to top end as auger empties. It is a good practice to tie the discharge end of the auger to the bin or grain storage structure to prevent possible wind damage. Remember to untie the auger before attempting to move.

NOTE: When discharging into a grain spreader, always maintain at least 12 inches of space between the auger discharge and the spreader.

PLACEMENT OF AUGER - UNLOADING GRAIN BIN

Determine through what opening in the bin, the auger will be placed to gain access to the grain. This opening must be large enough so the auger intake can be placed into the bin **WITHOUT** removing the intake guard. Only use the axle mounted belt drive model of auger for bin unloading operation.



STEP 1

Locate the auger as close as possible to the bin or storage structure with towing vehicle. Leave the auger in the lowered position.

Make certain everyone is clear of the work area when moving the auger. To prevent tip-over when backing, avoid rolling over any obstructions, also avoid steep slopes. If the auger is to set on a slope, approach the bin uphill. Avoid moving the auger at right angles to a slope.

Make sure entire area above auger and in line of travel is clear of overhead obstructions and electrical wires. Failure to do so may result in electrocution. Maintain at least ten (10) feet of clearance. Electrocution can occur without direct contact. **DO NOT OPERATE AUGER WITHOUT INTAKE GUARD IN PLACE.**

STEP 2
Place auger intake into bin or storage structure. Only raise intake high enough to place into bin opening. Weight transfers rapidly to the discharge end of auger when intake is raised.

PLACEMENT OF AUGER - UNLOADING GRAIN BIN

STEP 3

Place auger intake into the grain. If the auger is placed through the bin doorway, **DO NOT** push the auger into the bin so far that it will restrict access into the bin opening. Leave adequate clearance to enter bin.

DO NOT MOVE THE AUGER WHEN IT IS IN OPERATION.

Use hand winch and raise the discharge end of auger to allow grain to be loaded into truck or grain cart.

WINCH INSTRUCTIONS

HAND WINCH OPERATION (FRICTION TYPE)

Check the handle assembly on your auger to determine that it has been assembled correctly. See assembly manual. There should be a locknut with flat washer attached to the end of the winch shaft to prevent inadvertent removal of the winch handle.

Never fully extend the cable and always keep three complete turns of cable around winch drum.
Never operate winch with wet or oily hands and ALWAYS use a firm grip on the handle.

SAFETY REMINDERS

(1) Operator must pay attention during raising and lowering auger
- (A) Watch cable to see if it is coiling properly onto winch drum evenly.
- (B) Keep hands away from winch drum during operation.
- (C) Don't use hands to guide cable onto winch drum during winch operation.
- (D) Don't allow auger to become hung up on other structures during lowering.
- (E) Don't continue to attempt to raise auger after slide reaches stop.

See the Owner's Manual and Parts List for the winch that is included with this manual for additional winch information.

DESIGNATED WORK AREA

Before starting the auger, designated work area should be established and properly marked. The following diagrams will show the manufacturers designated work areas. These areas shall be marked off with colored nylon or plastic rope hung as portable barriers to define the designated work areas.

RULES FOR SAFE WORK AREA

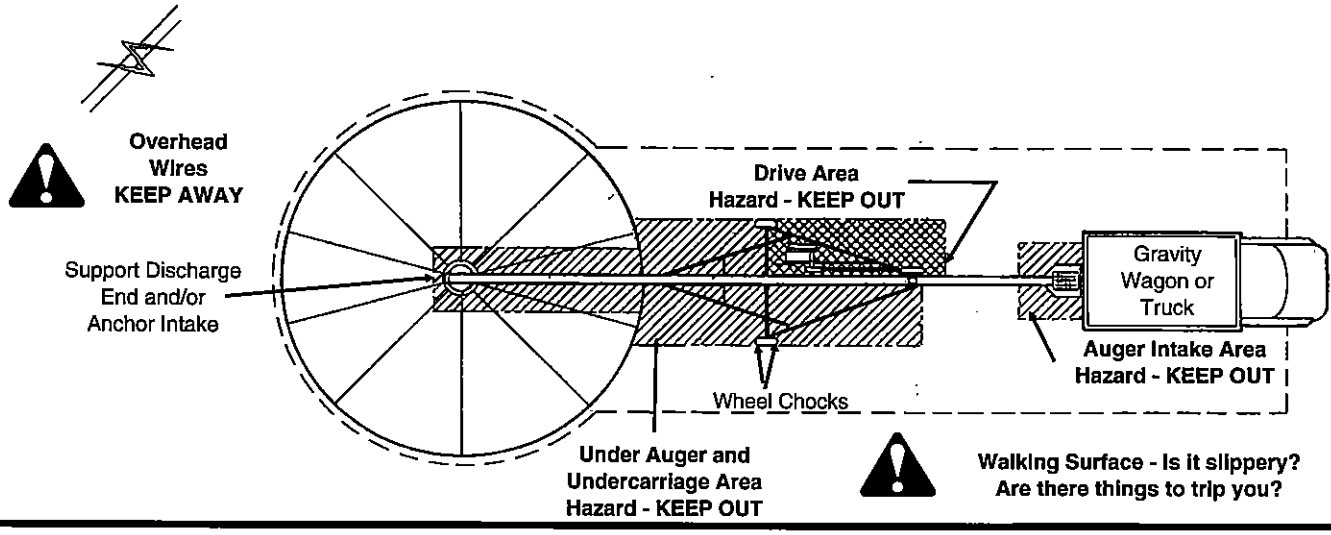
Under no circumstances should persons not involved in the operation be allowed to trespass into the work area.

It shall be the duty of all operators to see that children and/or other persons stay out of the work areas! Trespass into the work area by anyone not involved in the actual operation, or trespass into a hazard area by anyone, shall result in an immediate shut down by the operator.

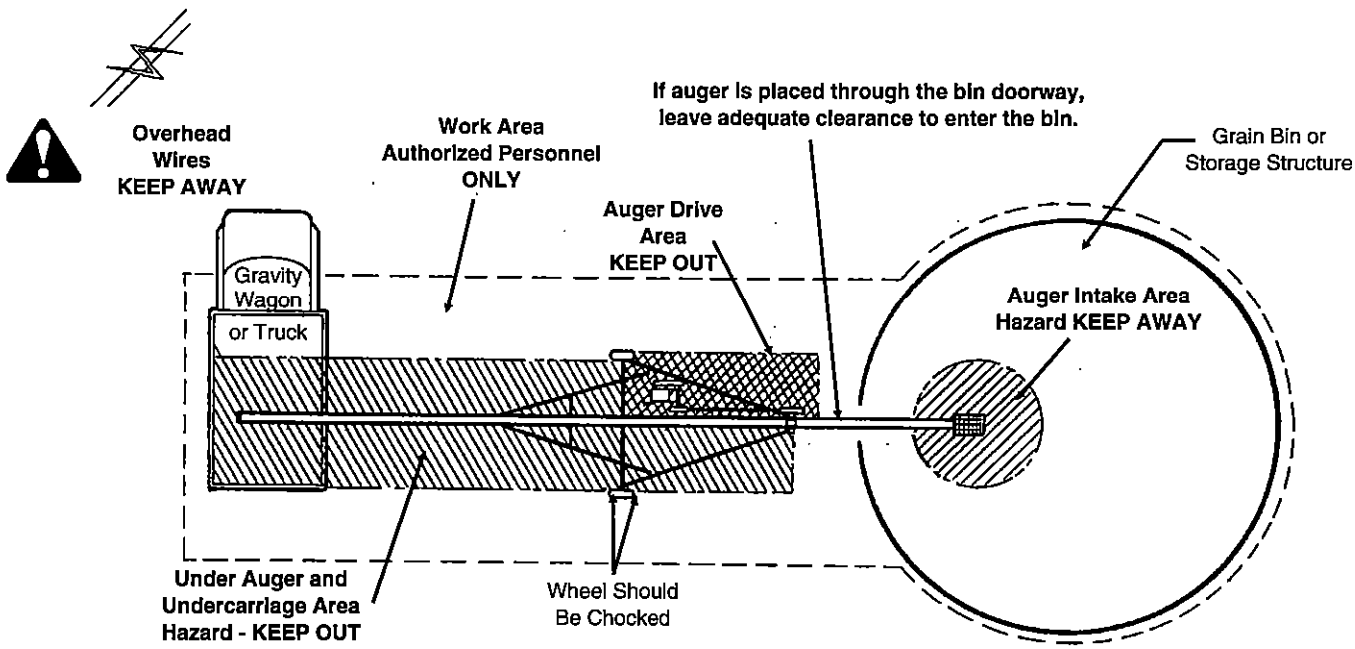
It shall be the responsibility of all operators to see that the work area has secure footing, is clean and free of all debris, and tools which might cause accidental tripping and/or falling. It shall also be their responsibility to keep the work area clean and orderly during the operation.

DESIGNATED WORK AREA

FILLING GRAIN BIN



UNLOADING GRAIN BIN



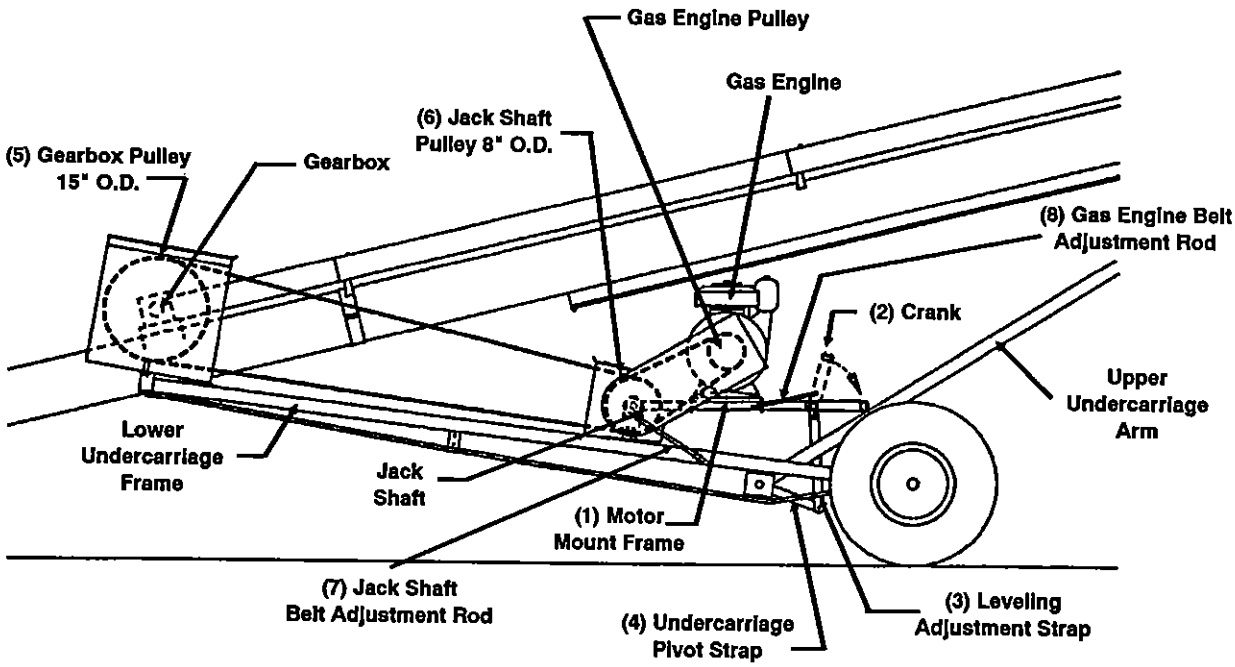
DO NOT enter bin when other unloading equipment is operating inside the bin or under the bin floor.

DANGER, FLOWING GRAIN TRAPS AND SUFFOCATES! BRIDGED GRAIN WILL COLLAPSE AND TRAP!

- **NEVER ENTER THIS GRAIN BIN UNLESS MONITORED BY ANOTHER PERSON.**
- **SHUT OFF AND LOCK OUT ALL POWER BEFORE ENTERING GRAIN BIN.**
- **USE SAFETY HARNESS AND SAFETY LINE WHEN INSIDE GRAIN BIN.**
- **AVOID WALKING ON AREAS OF GRAIN IN THE VICINITY OF GRAIN OUTLETS.**
- **BREAK UP BRIDGED OR CRUSTED GRAIN WITH A POLE BEFORE ENTERING GRAIN BIN.**

OPERATING PROCEDURES

AXLE MOUNTED (BELT) GASOLINE DRIVE



HORSEPOWER

Always use an engine with required H.P. suggested in the Horsepower Recommendations Chart. The horsepower recommendations are for augering reasonably dry grain at varying angles. High moisture grain (above 15%) will require greater power if maximum capacity is to be maintained. The maximum possible capacity will be less with high moisture grain than with dry grain.

AUGER LENGTH	GAS ENGINE H.P.	GEARBOX RATIO	GEARBOX SHEAVE	JACK SHAFT SHEAVE	*GAS ENGINE SHEAVE	SUGGESTED AUGER FLIGHT SPEED OPERATING ENGINE AT 3000 RPM
33'	9	1 1/2 to 1	15" O.D.	8" O.D.	4.6" P.D.	650
41'	12	1 1/2 to 1	15" O.D.	8" O.D.	4.6" P.D.	650
53'	18	1 1/2 to 1	15" O.D.	8" O.D.	4.6" P.D.	650

PD - Pitch diameter
OD - Outside diameter

Flight speed can be regulated by adjusting the gas engine speed.
*Gas engine sheave not furnished with auger.

CHECK THE FOLLOWING BEFORE ADDING POWER:

1. The belt from the gearbox pulley (5) to jack shaft pulley (6) must be adjusted for proper belt tension. Adjustment is made by using the jack shaft adjustment rod (7).
2. The motor mount (1) should be adjusted so gasoline engine will sit in a level position. This can be done by using adjustment holes in leveling adjustment strap (3). Be sure motor mount and gasoline engine are supported to prevent tipping when disconnecting leveling adjustment strap (3) from pivot strap (4).

OPERATING PROCEDURES

AXLE MOUNTED (BELT) GASOLINE DRIVE - CONT.

CHECK THE FOLLOWING BEFORE ADDING POWER: - CONT.

NOTE: The motor mount (1) is self-leveling as the auger is raised or lowered. The bolts holding the leveling strap (3) to the motor mount (1) and pivot strap (4) **MUST NOT** be so tight that the leveling strap cannot pivot as the auger is raised or lowered.

Never attempt to adjust or service the engine or any other drive components while it is in operation.

3. The belt from the jack shaft pulley (6) to the gasoline engine pulley must be adjusted for proper belt tension. Adjustment is made by using the gasoline engine belt adjustment rod (8).

4. Check that all belt guards are in place, secured and functional.

5. Fuel supply in fuel tank should be checked. Fuel tank should be vented.

Shut down and allow engine to cool before filling with fuel.

TO START AUGER

The motor mount (1) is equipped with a crank (2) for sliding the engine to tighten the drive belts between the gasoline engine pulley (9) and jack shaft pulley (6).

1. Before starting engine be certain that crank (2) is disengaged.
2. Start the engine and bring up to working R.P.M.
3. Slowly rotate crank (2) on motor mount until crank locks over center.

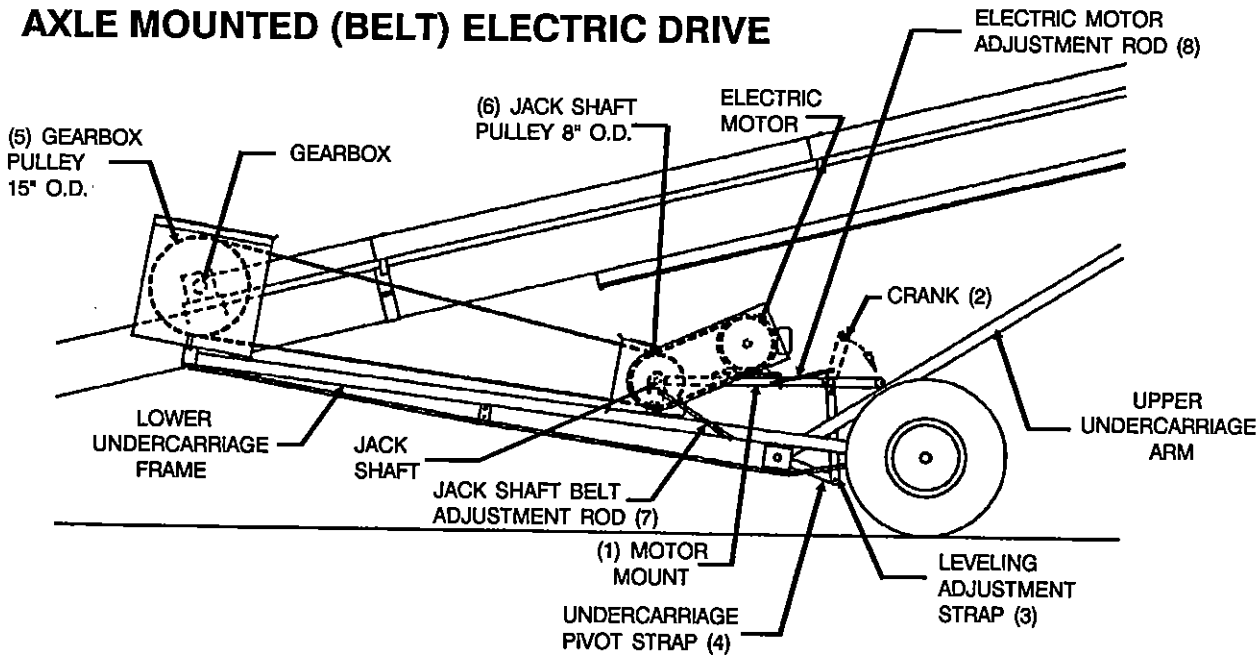
NOTE: If the drive belts slip during grain conveying operations, empty and stop the auger, lock-out the drive then adjust the belt tension.

TO STOP AUGER

1. Let auger empty of grain before stopping.
2. Disengage crank (2).
3. Shut off engine and lockout by removing ignition key, spark plug wire or spark plug.

OPERATING PROCEDURES

AXLE MOUNTED (BELT) ELECTRIC DRIVE



HORSEPOWER

Always use an electric motor with required H.P. suggested in the chart below. The horsepower recommendations are for augering reasonable dry grain at varying angles. High moisture grain (above 15%) will require greater power and maximum possible capacity will be less with high moisture grain than with dry grain.

AUGER LENGTH	MOTOR H.P. REQ'D.	GEARBOX RATIO	JACK SHAFT SHEAVE	GEARBOX SHEAVE	ELECTRIC *MOTOR SHEAVE	AUGER FLIGHT RPM
33'	5	1 1/2 to 1	8" O.D.	15" O.D.	7.4" P.D.	600
41'	5	1 1/2 to 1	8" O.D.	15" O.D.	7.4" P.D.	600
53'	7 1/2-10	1 1/2 to 1	8" O.D.	15" O.D.	7.4" P.D.	600

* Motor sheave is not furnished with the auger.

O.D. - Outside Diameter
P.D. - Pitch Diameter

Always use a motor with required H.P. suggested in charts above. Use motor that operates at 1750 RPM. Electric motors and controls shall be installed by a qualified electrician and must meet the standards set by the National Electrical Code and all local and state codes. Reset and Motor Starting Controls must be located so that the operators have full view of the entire operation.

A magnetic starter should be used to protect your motor when starting and stopping. It should stop the motor in case of power interruption, conductor fault, low voltage, circuit interruption or motor overload. Then the motor must be restarted manually. Some motors have built-in thermal overload protection. If this type motor is used, use only those with manual reset.

Disconnect power before resetting motor overloads.
Make certain electric motors are grounded.

OPERATING PROCEDURES

AXLE MOUNTED (BELT) ELECTRIC DRIVE

CHECK THE FOLLOWING BEFORE ADDING POWER:

1. The belt from the gearbox pulley (5) to jack shaft pulley (6) must be adjusted for proper belt tension. Adjustment is made by using the jack shaft adjustment rod (7).

Never attempt to adjust or service the machine while it is in operation.

2. The belt from the jack shaft pulley (6) to the electric motor pulley must be adjusted for proper belt tension. Adjustment is made by using the electric motor belt adjustment rod (8).

3. Check that all belt guards are in place, secured and functional.

TO START AUGER

The motor mount (1) is equipped with a crank (2) for sliding the motor to tighten the drive belts between the electric motor pulley (9) and jack shaft pulley (6).

1. Before starting electric motor, be certain that crank (2) is disengaged.
2. Start the electric motor and bring up to working R.P.M.
3. Slowly rotate crank (2) on motor mount until crank locks over center.

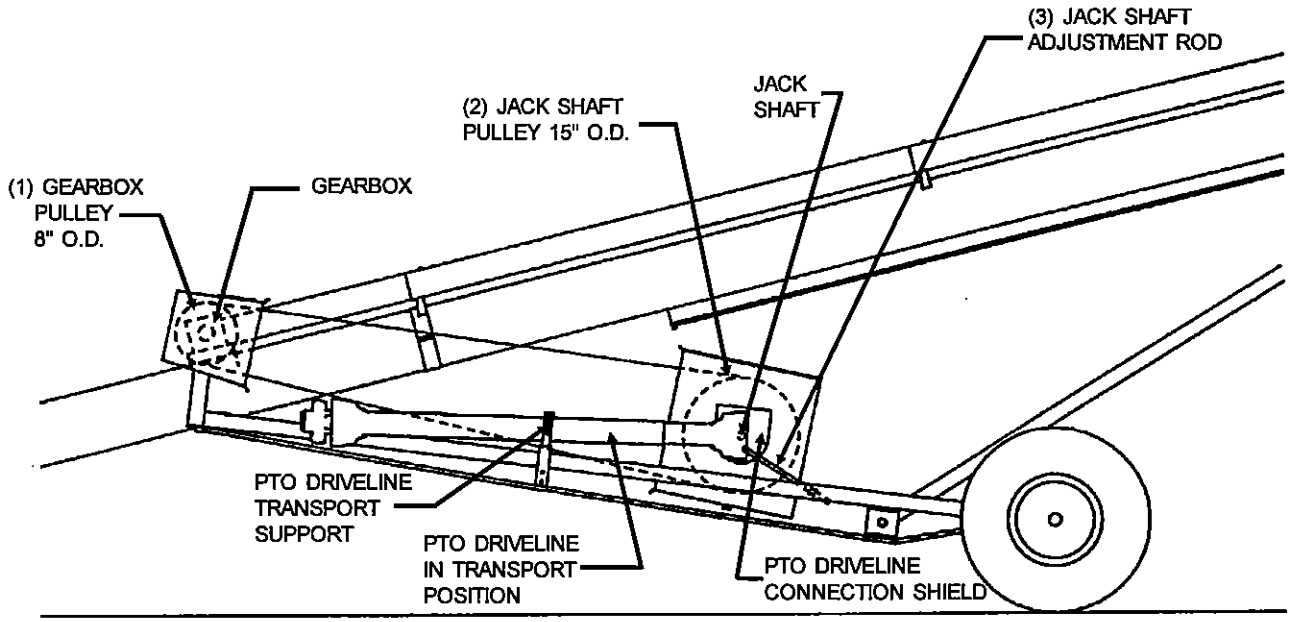
NOTE: If the drive belts slip during grain conveying operations, empty and stop the auger, lockout the drive, then adjust the belt tension.

TO STOP AUGER

1. Let auger empty of grain before stopping.
2. Disengage crank (2).
3. Shut off electric motor and lockout.

OPERATING PROCEDURES

AXLE MOUNTED (BELT) PTO DRIVE



Always use a tractor with 540 RPM power take-off.

Recommended Auger Flight Speed

TRACTOR PTO SPEED	GEARBOX RATIO	GEARBOX SHEAVE SIZE	JACK SHAFT SHEAVE SIZE	AUGER FLIGHT RPM	RESULTING OPERATING SPEED
520	1 1/2 to 1	8" O.D.	15" O.D.	650	Suggested
540	1 1/2 to 1	8" O.D.	15" O.D.	675	Maximum Speed

Flight speed can be regulated by adjusting the PTO speed of the tractor.
NOTE: Use the tractor tachometer to regulate the PTO speed.

NOTICE: The PTO driveline furnished with the auger is equipped with a "quick disconnect" coupler at the tractor end. This type coupler is spring loaded and will fit standard 1 3/8" x 6" spline PTO output shaft from a tractor.

See that the PTO driveline is securely attached and the retaining balls of the "quick" disconnect" coupler lock into the ring groove of the tractor output PTO shaft. Check this by trying to pull the driveline off of the tractor output PTO shaft.

OPERATING PROCEDURES

AXLE MOUNTED (BELT) PTO DRIVE

CHECK THE FOLLOWING BEFORE ADDING POWER:

1. The belt from the gearbox pulley (1) to jack shaft pulley (2) must be adjusted for proper belt tension. Adjustment is made by using the jack shaft adjustment rod (3).

Never attempt to adjust or service the machine while it is in operation.

2. Check that all belt guards are in place, secured and functional.

3. Be certain that the PTO driveline is securely attached to the jack shaft and the tractor.

4. Never use a PTO driveline without a rotating shield in good working order that can be turned freely on the shaft.

5. Align PTO driveline with tractor. The PTO driveline furnished with the auger is a pin stop type–that is, the two telescoping sections will not separate. It is a good practice to operate the driveline in as short a configuration as possible. Keep the PTO driveline in as straight a line as possible during operation. When connecting tractor and auger, always make sure the tractor axle and side of auger are parallel. **KEEP THE U-JOINT ANGLES EQUAL.**

6. If the tractor and auger are on unlevel ground or at different levels, place them so the center line of the tractor and the jack shaft are parallel.

Before engaging P.T.O., be sure that PTO driveline shields turn freely on shaft.

TO START AUGER

1. Before starting the tractor, be certain power to PTO is off.
2. Start the tractor.
3. Engage PTO at a slow RPM, then work up RPM to recommended speed.

IMPORTANT: Engage PTO at a slow RPM to minimize shock loads. Then work up RPM to recommended speed.

NOTE: If the drive belts slip during grain conveying operations, empty and stop the auger, lockout the drive, then adjust the belt tension.

TO STOP AUGER

1. Let auger empty of grain before stopping.
2. Reduce PTO RPM then disengage the PTO.
3. Shut off tractor and lockout by removing ignition key or coil wire.

OPERATING PROCEDURES
Start-Up and Break-In Information

It is essential to inspect your drive before adding power and know how to shut down in an emergency. During the operation of your auger, one person shall be in a position to monitor the operation. Any screw conveyor when it is new or after it sets idle for a season should go through a "break-in" period. The auger should be run at partial capacity until several hundred bushels of grain have been augered to polish the flighting assembly and tube. When the screw and tube are polished and smooth the auger can be run full. Never operate the auger empty for any length of time as excessive wear will result. If at all possible, do not stop or start the auger load, especially before the flight and tube become well polished, as this may cause auger to "freeze-up".

During the initial start-up and break-in period, the operator shall be aware of any unusual vibrations or noises that would indicate a need for service or repair.
Keep all safety shields and devices in place.
Keep hands, feet and clothing away from moving parts.
The operator should have a full view of the auger work area and check that all personnel are free from designated work area before adding power.

Proper auger flight speed is important for efficient operation of the auger.

1. If the flight speed is in excess of what is recommended, excessive wear will result.
2. If the flight speed is slow, the auger flighting is permitted to "load-up". Then high torque will be required to turn the auger flighting and damage to the auger can result. Use an optional control gate to control the amount of grain fed into the auger.

OPERATING CAPACITIES

The results or capacities of screw conveyors or augers can vary greatly undervarying conditions. Different materials, moisture content, amounts of foreign matter, angle of operation, methods of feeding and speed all play a role in the performance of the auger. An auger operating at 45° incline could be cut 20% in capacity over an auger operating horizontally. Twenty-five (25%) moisture could cut capacity back by as much as 40% under some conditions. If an inclined auger has one foot of grain over the inlet flight it will probably get better capacity than if it had only a one inch covering. On the other hand, an auger in the bottom of a cone shaped pit or under a bulk tank with maybe four feet or more of grain on top of it, may be overfed. This overfeeding would be caused from the weight of the grain over the intake forcing more into the auger than it can efficiently move. The result would be an increased horsepower requirement, extra strain on the drive line, and possibly a complete stalling out. Under the "extra" grain pressure conditions a control gate should be used.

SHUTDOWN

A. NORMAL SHUTDOWN

When shutting down the auger make certain that the hopper and auger are empty before stopping the unit. Before the operator leaves the work area, the power source shall be locked out. (See Lockout)

B. INTERMITTENT OPERATION SHUTDOWN

Consideration should be given to the proper size auger for a batch drying, or any intermittent type operations. Using a large diameter auger and reducing its load level will be far better than subjecting a smaller diameter auger to high loads. If an auger is kept from absolute filling, it will make start-up easier and will convey more efficiently.

C. EMERGENCY SHUTDOWN

Should the auger be immediately shut down under load, disconnect and lockout the power source. Clear as much grain from hopper and auger as you can. Reconnect power source and clear auger. Never attempt to start when full.

NOTE: Starting the unit under load may result in damage to the auger. Such damage is considered abuse of the equipment.

OPERATING PROCEDURES

LOCKOUT

If the operator must leave the work area, or whenever servicing or adjusting, the auger must be stopped and the power source turned off. Precaution should be made to prevent anyone from operating the auger when the operator is absent from the work area.

PTO DRIVE: Remove ignition key or coil wire from power source. (If this is impossible, remove the PTO driveline from the work area.)

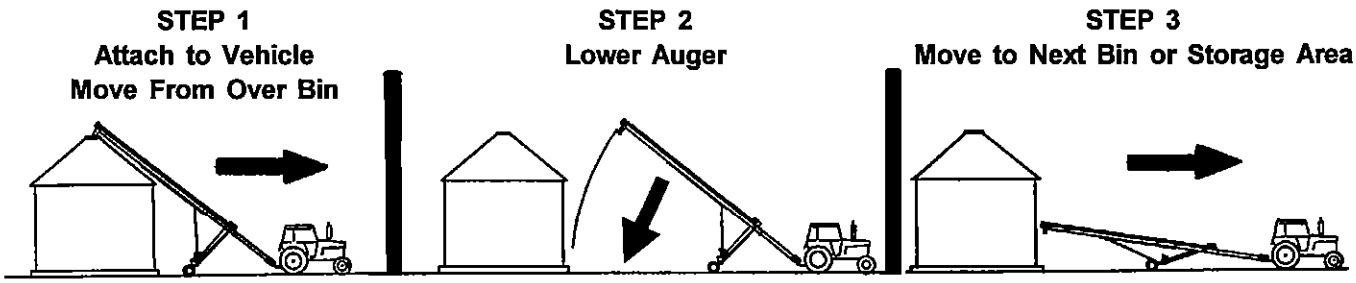
ELECTRIC DRIVE: A main power disconnect switch capable of being locked only in the off position shall be provided.

GASOLINE DRIVE:

1. For engines with rope or crank start - remove spark plug wire or spark plug.
2. For engines with electric start - remove ignition key, spark plug wire or spark plug.

RELOCATION OF AUGER

When grain conveying operation is completed, the auger should be moved away from the bin and lowered. The auger then can be moved to a different bin for more conveying operations or cleaned up and stored.



STEP 1

A. Empty all grain from the auger and clean up area.
B. Untie any anchors or remove all supports.
C. Disconnect the power source.
   Electric Drive - Unplug electric motor, wind up electric cables.
   PTO Drive - Disconnect PTO driveline from tractor and place in support provided for transporting.
   NOTE: The bracket pin must be in place to hold the PTO driveline in the support during transporting.
D. Raise the auger so the discharge spout is clear of bin opening. See Auger Raising Instructions on page 7.
E. Remove hopper from auger intake and secure hitch in place with bolt and nut.
F. Lift the auger intake and hitch to the towing vehicle. (See Hitching Instructions on page 4.)
G. Move auger slowly away from the bin with towing vehicle --NOT BY HAND.

STEP 2

A. Lower auger immediately after clear of bin or storage structure. See Winch Instructions on page 7.
   IMPORTANT: Lower the auger, even if relocating to a bin in the immediate area.

STEP 3

A. Move the auger to next bin or storage area. We recommend that the auger be stored in the full down position with intake end anchored.
B. Inspect the auger as outlined in the "Machine Inspection Section" on page 3.

TROUBLE SHOOTING

LOW CAPACITY

The auger may not be getting enough grain. Check to see the intake has not bridged over restricting the flow.

The exposed flighting at the auger intake should be covered with grain to achieve maximum capacity.

Check auger speed. Refer to operating procedures on page 9. Operating auger below recommended speed will result in low capacity.

AUGER PLUGS

The auger may be getting too much grain where it is "jamming" inside the housing. An optional control gate may be necessary at the intake end.

On motor drive augers the motor may be too small or wired improperly.

If wet grain or other hard to move material is being augered, use a larger size motor than recommended for normal use.

Is the auger free of any foreign material, such as sacks, tarp corners, etc.,? A plug of the discharge end will cause an auger plug.

Check to see that all belts are lined up and tensioned properly.

EXCESSIVE AUGER NOISE

Damage can occur to the auger flighting, thus causing noise. Damage usually occurs because of foreign material having been run through the auger. It may be necessary to remove the flighting for inspection.

IMPORTANT:
An auger should be frequently checked and serviced to operate freely. Keep all guards and shields in place. Replace any that are damaged or lost. An auger should be run partiallly full for several hundred bushels to polish the flighting when it has not been used for an extended period of time. An auger with flighting that has not been polished in this manner requires greater horsepower, and damge to the drive and/or flighting can result if overloaded.

Our augers are well made and we are proud on our line of equipment. We would like you, as our customer, to do your part in using caution and good judgement in using our equipment as well as any other machinery. Any parts for replacement should be replaced with parts of the same type and size. Do not modify or alter any of the auger components.

LUBRICATION AND MAINTENANCE

For economical and efficient operation of your auger maintain regular and correct lubrication. Neglect leads to reduced efficiency, excessive wear and needless down time.

Keep all safety shields and devices in place.
Never clean, adjust or lubricate a machine that is in operation.

The following will detail the parts needing lubrication and the various conditions which determine the time span.

GEARBOX

The gearbox is shipped without oil. At field assembly of auger, 90 E.P. (non-foaming) oil is to be added to the gearbox until half full. Check and maintain the level regularly.

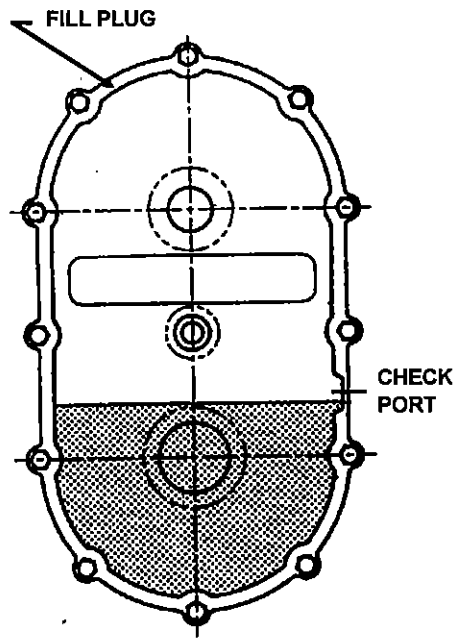
PTO DRIVELINE

Augers equipped with PTO driveline, should have the u-joints lubricated at approximately ten (10) hour intervals with SAE multipurpose type grease.

Before engaging P.T.O., be sure that PTO driveline shields turn freely on shaft.

ENCLOSED DRIVE LUBRICATION

The enclosed drive is located at the discharge end of the auger housing and is shipped without oil. Oil is to be added to the unit during field assembly of the auger. Oil will dissipate under normal operating conditions, therefore the oil level should be checked regularly. Add 90 EP (non-foaming) oil until the level of the oil reaches the check port.
DO NOT ADD MORE OIL THAN RECOMMENDED. ADDITIONAL OIL MAY DAMAGE THE SEALS OR BE FORCED OUT THROUGH THE VENTED PLUG.



For lubrication in normal operating temperature between 40° F to 120° F, we recommend the use of nonfoaming, multi-purpose gear oil, SAE 90 weight. For temperatures below 40° F, use SAE 80 weight oil. Use grade commercially available for automotive differentials. Extra pressure additives may be of value in severe applications.

FRICTION TYPE WINCH

The following lubrication checks should be made to the winch periodically.

The auger should be in the lowered position with undercarriage lift arm slide against the upper head stop when this inspection is being performed. Refer to operating and maintenance instructions furnished with your winch for proper inspection methods.

1. All gears should have a film of grease on them at all times.
2. The following parts must be wet with oil at all times:
   (A) Two bushings located at ends of drum shaft.
   (B) The ratchet pawl pivot.
   IMPORTANT: Do not get oil or grease on brake disc faces (located between ratchet gear, brake hub and pinion shaft.)
3. Check brake disc, if worn to less than 1/16 of an inch thick, cracked or broken, replace both discs.

BELT ADJUSTMENT

On drives that are powered by belts, the belt tension will need periodic adjustment. See the operating procedures section for belt adjustment location.

LUBRICATION AND MAINTENANCE (CONT'D)

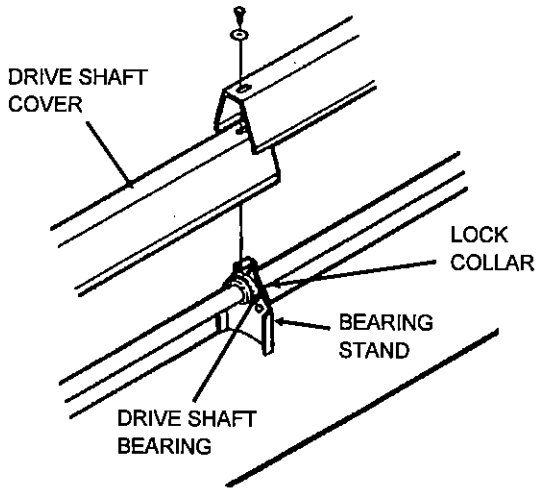
BEARINGS

Drive Shaft Bearing

All drive shafts are supported by self-aligning, sealed ball bearings, which have been packed at the factory and require no further lubrication. There is no adjustment to be made to the bearings but to check that the retainers are firmly fastened to the bearing stand. Also check that the setscrews in the lock collars are tight against the drive shaft, securing the lock collars to the drive shaft.

IMPORTANT: The complete drive shaft must be shielded with drive shaft covers during operation.

KEEP ALL SAFETY SHIELDS AND DEVICES IN PLACE.



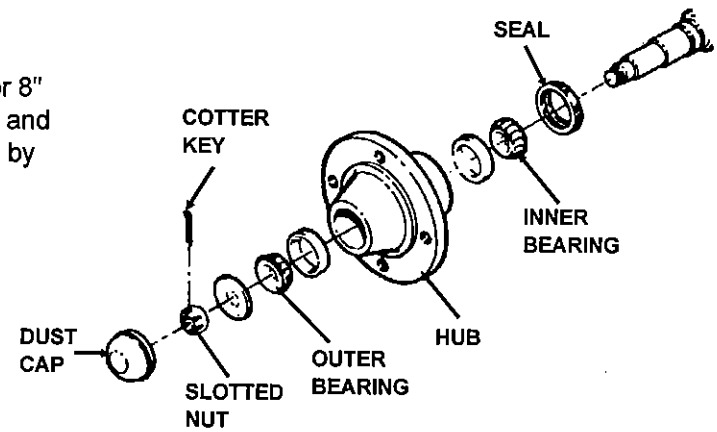
Intake Guard Bronze Bearing

Every auger has a bronze-with-graphite bearing at the intake end. This bearing requires no lubrication. If wire guard is damaged, replace the intake guard.

Undercarriage Axle Spindle Bearing

Tapered roller type bearings are standard for 8" augers and should be repacked with grease and adjusted annually or as needed, determined by usage.

TAPERED ROLLER TYPE BEARING ASSEMBLY



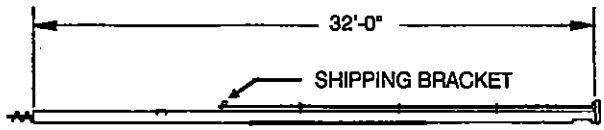
Care must be used in dismantling the tapered roller bearings. First remove the dust cap by prying around its edges. Remove the cotter pin, slotted nut and flat washer. Carefully remove the hub and bearings from the spindle. Inspect all parts for wear or damage and replace with new ones if necessary.

When reassembling the hub, repack both bearing cones with grease and fill the hub cavity 1/3 full. Place inner bearing assemblies into the hub, and then press grease seal into hub and carefully reinstall the hub on the spindle. When placing hub on spindle be careful not to damage the lip of the grease seal. Install outer bearing assembly into the hub, and replace flat washer and slotted nut. Tighten the slotted nut to seal the bearings until the hub binds as you rotate hub. Back off the slotted nut to the next slot and pin with a new cotter pin. Use a 5/32" cotter pin 1-1/4" long. Replace dust cap.

ASSEMBLY INSTRUCTIONS

Choose an area of open level ground accessible to chain hoist or other lifting devices where the auger may be laid out full length. Lay the different sections of tube assemblies in the approximate positions.

33' MODEL - SINGLE TUBE CONSTRUCTION



41' MODEL

53' MODEL

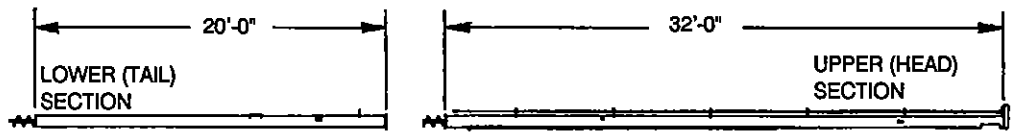


FIG. 1

SHIPPING BRACKET

Remove the shipping bracket from the drive shaft. See Figure 1 for location of shipping bracket on 33' and 41' models of augers.

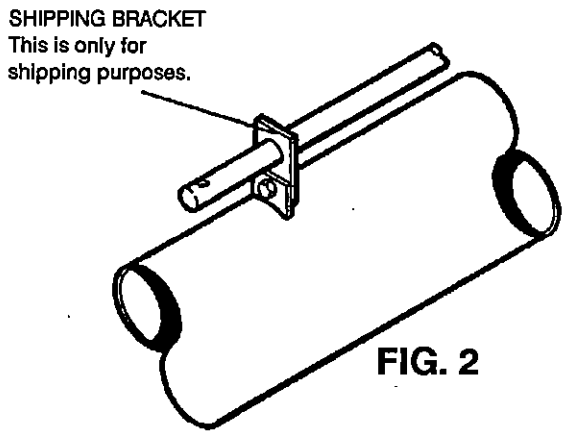


FIG. 2

FLIGHT CONNECTIONS

Bolt the sections of auger flighting together, using two 7/16" x 2 1/2" hardened bolts and locknuts. The lower section of flighting will lap the upper section flighting about one inch on the side toward the auger outlet. See Figure 3.

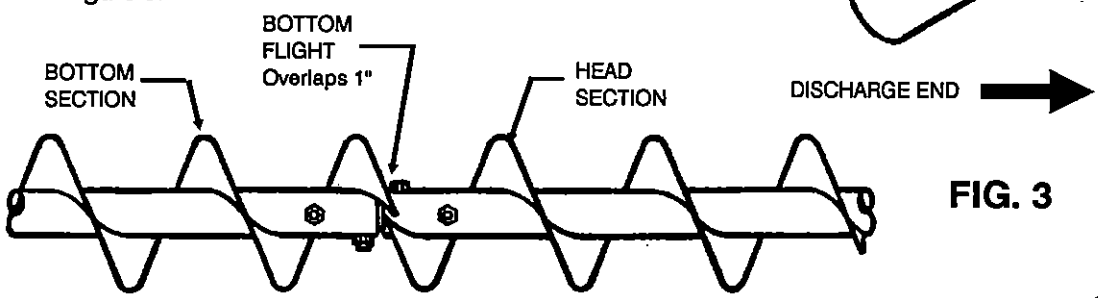


FIG. 3

CONNECTING FLANGE

Slide the tube sections together and bolt the end flanges together using eight 5/16" x 1" hex head cap screws and locknuts.

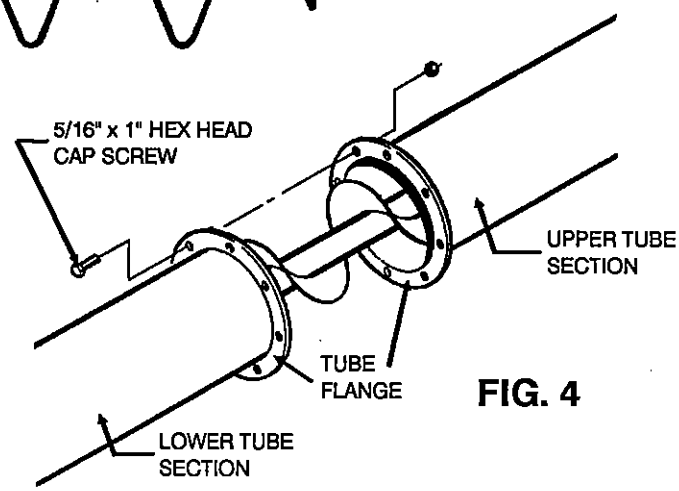


FIG. 4

ASSEMBLY INSTRUCTIONS

ENCLOSED DRIVE LUBRICATION

The enclosed drive is located at the discharge end of the auger housing and is shipped without oil. Oil is to be added to the unit during field assembly of the auger. Oil will dissipate under normal operating conditions, therefore the oil level should be checked regularly. Add 3 pints of 90 EP (non-foaming) oil or until the level of the oil reaches the check port. **DO NOT ADD MORE OIL THAN RECOMMENDED.**

ADDITIONAL OIL MAY DAMAGE THE SEALS OR BE FORCED OUT THROUGH THE VENTED PLUG.

For lubrication in normal operating temperature between 40° F to 120° F, we recommend the use of non-foaming, multi-purpose gear oil, SAE 90 weight. For temperatures below 40° F, use SAE 80 weight oil. Use grade commercially available for automotive differentials. Extra pressure additives may be of value in severe applications.

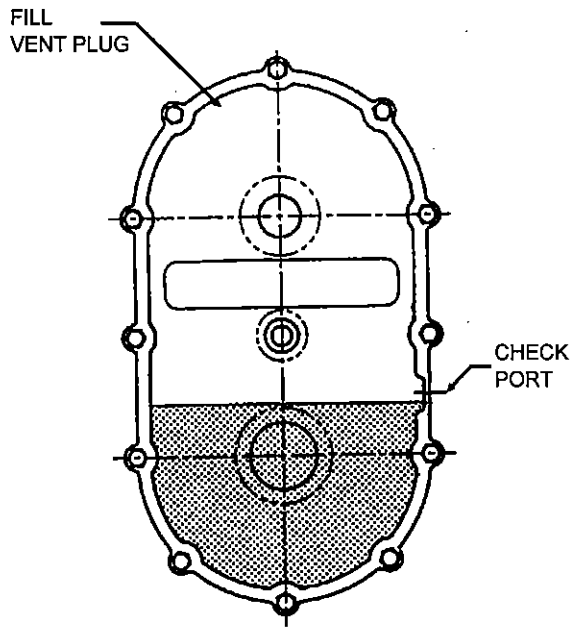


FIG. 5

INTAKE GUARD

Install intake guard assembly at intake end of auger. Slide the assembly over the flighting and the housing. Insert intake stub shaft through the bearing and clamp the assembly to the auger housing. Top upper half band should be above welded stop. See Figure 6.

Attach the hitch pipe to intake guard.

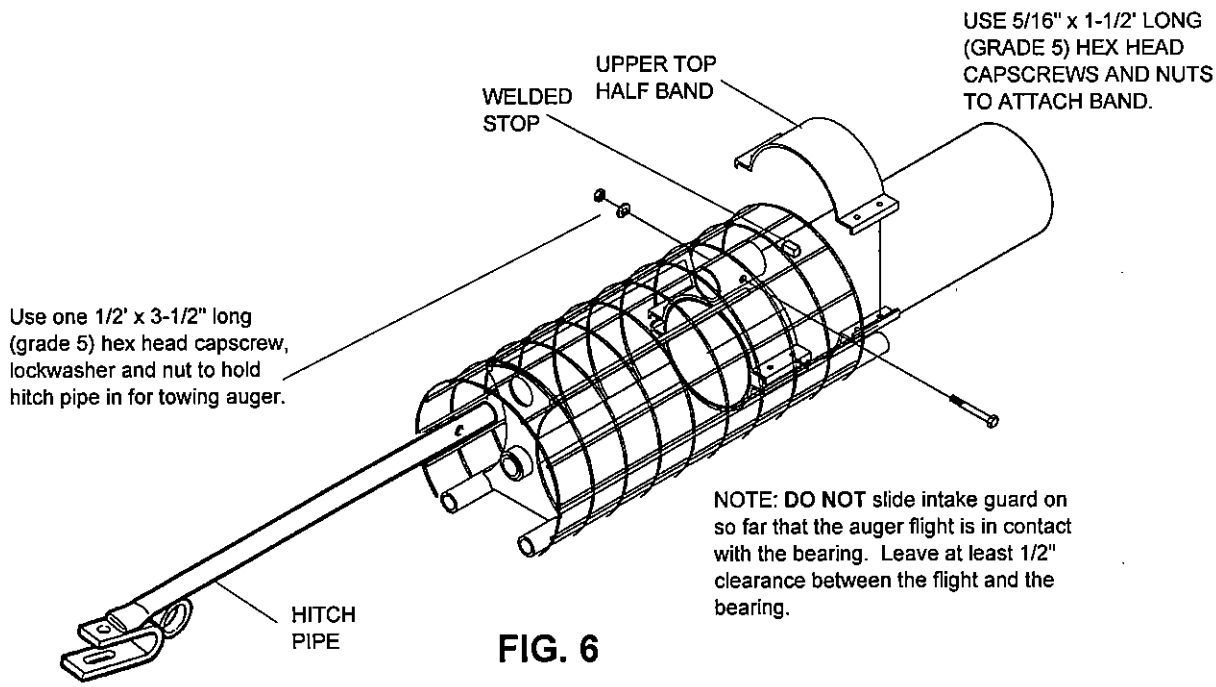


FIG. 6

ASSEMBLY INSTRUCTIONS

NOTICE - The assembly instructions on this page 18A and on page 19A are for Axle Mounted (Belt) PTO, Axle Mounted (Belt) Gas and Axle Mounted (Belt) Electric Driven Augers ONLY.

DRIVE SHAFT EXTENSION ASSEMBLY

On 33' and 41' models, a band-on bearing stand is required. On 53' models, a bearing stand is welded to lower tube section. Assemble flangette bearing to either the band-on bearing stand on 33' and 41' models or weld-on bearing stand on 53' models.

1. Bolt bearing to bearing stands. Attach each bearing using two retainers and one drive shaft cover mounting bracket. (See Figure 7A.)

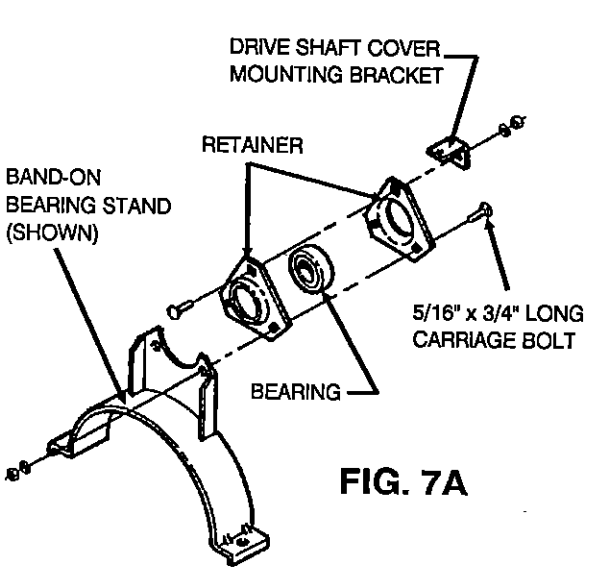


FIG. 7A

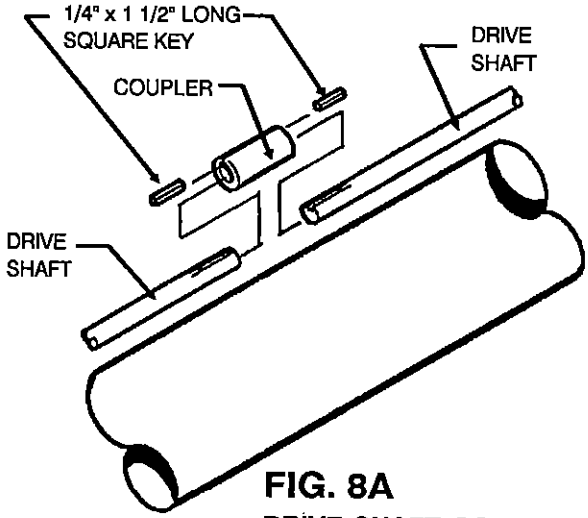


FIG. 8A
DRIVE SHAFT CONNECTION

2. Slide bearing stands onto extension drive shaft. See chart below for lengths of extensions. Attach extension drive shaft to auger drive shaft using a coupler (See Fig. 8A) and two 1/4" x 1 1/2" square keys. See Fig. 9A for correct bearing stand spacing. Fasten band-on bearing stand in place, using half band and two 5/16" x 1 1/2" bolts and nuts. Tighten two bearing setscrews to lock bearing to extension drive shafts.

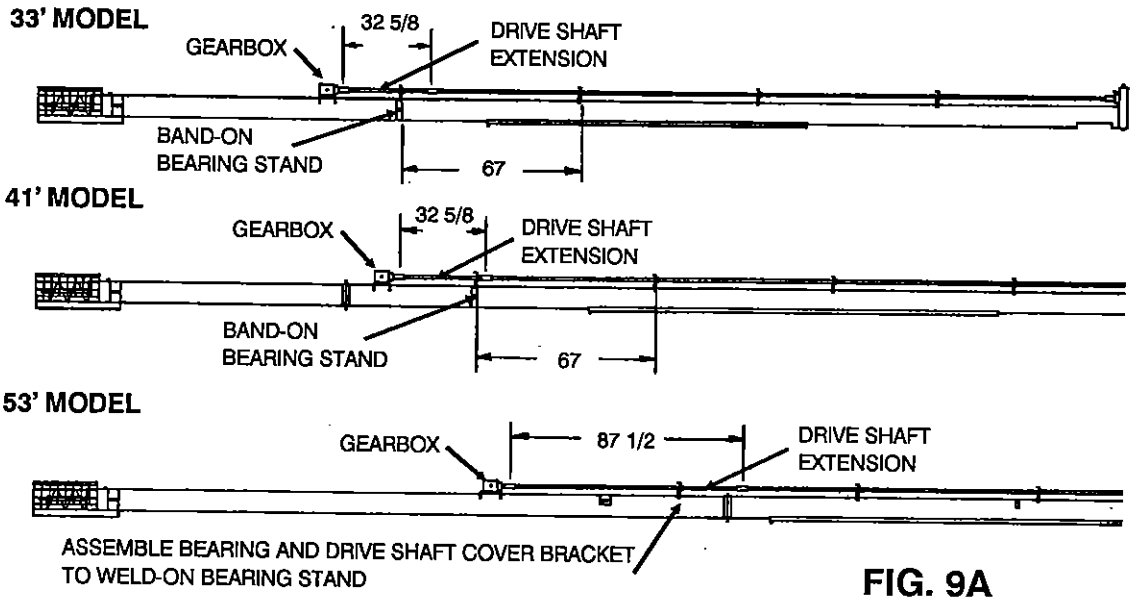


FIG. 9A

ASSEMBLY INSTRUCTIONS

NOTICE - The assembly instructions on this page 19A and on 18A are for Axle Mounted (Belt) PTO, Axle Mounted (Belt) Gas and Axle Mounted (Belt) Electric Driven Augers ONLY.

GEARBOX ASSEMBLY

Gearboxes are equipped with two oil fill plugs and are shipped without oil. One plug is vented and must always be on the top side of the box. **IMPORTANT: ADD 90 EP (non-foaming) oil until the gearbox is half full.**

Set gearbox on mount and connect to drive shaft with coupler and two 1/4" x 1 1/2" long square keys. (See Figure 10A). Attach gearbox to mount with four 3/8" x 3/4" hex head capscrews and lockwashers.

Attach the drive shaft cover bracket to top of gearbox with two 3/8" x 3/4" hex head capscrews with lockwashers.

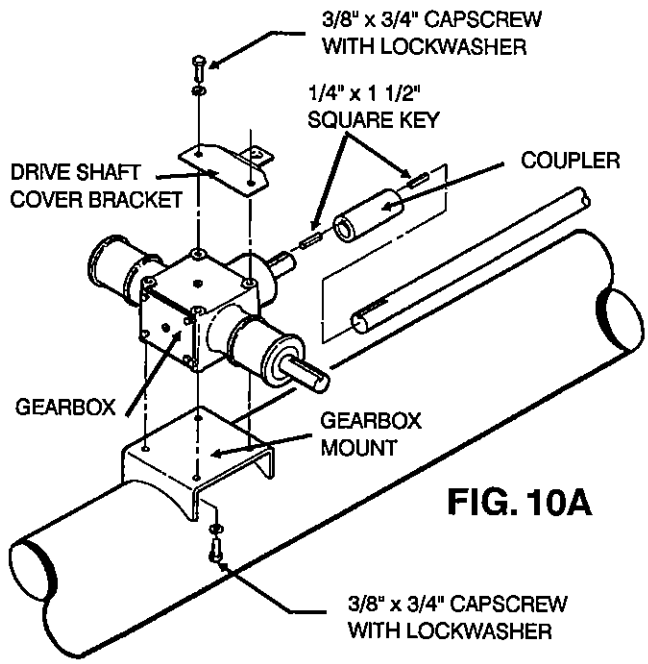
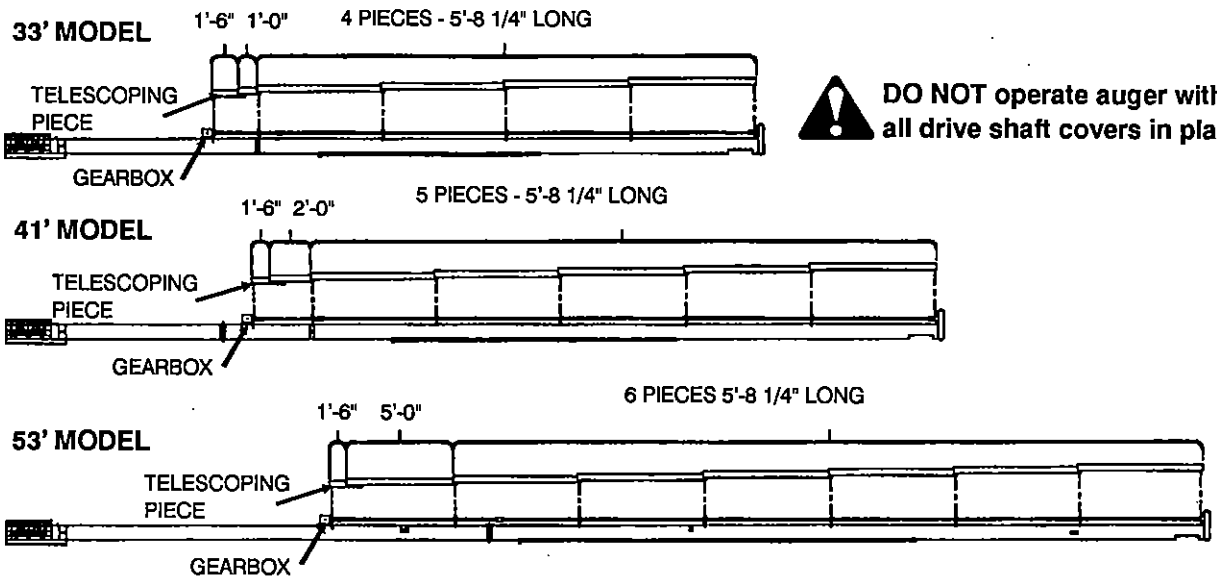


FIG. 10A

DRIVE SHAFT COVERS

The cover should be placed on the auger while it is lying on the ground before it is placed on the undercarriage. **PLEASE REMEMBER THESE COVERS PROVIDE IMPORTANT PROTECTION FOR PERSONS AROUND AN AUGER THAT IS IN OPERATION.** Proper installation is important.

Determine the location of the various lengths of drive shaft covers by placing them alongside the tube assembly in the order shown below. Begin at the intake end of unit. Work up the unit, overlapping covers at each bearing stand. See page 20 for proper assembly of the drive shaft covers.



DO NOT operate auger without all drive shaft covers in place.

FIG. 11A

ASSEMBLY INSTRUCTIONS

DRIVE SHAFT COVERS

TO INSTALL TWO-PIECE DRIVE SHAFT COVER

There is a special two piece section of drive shaft cover that installs between the gearbox and the first bearing stand. It telescopes together to vary in length.

This telescoping cover consists of a standard piece that telescopes into a special piece of cover with retaining bottom edges.

Center the slots in the covers over the hole in the mounting bracket.

Place 1" O.D. flat washer over the slot in the cover and drive the self tapping slotted hex head screw through the hole in the mounting bracket. Tighten the metal screw down to the flat washer and cover. **DO NOT** over tighten and strip out the hole in the mounting bracket. See Fig. 13.

CAUTION: THE TWO PIECE TELESCOPING COVER SHOULD OVERLAP AT LEAST 6" FOR PROPER INSTALLATION.

TO INSTALL ONE-PIECE DRIVE SHAFT COVER

Center the slots in the covers over the hole in the mounting bracket. Place 1" O.D. flat washer over the slot in the cover, and drive the self tapping slotted hex head screw through the hole in the mounting bracket. Tighten the metal screw down to the flat washer and metal cover. **DO NOT** over tighten and strip out the hole in the mounting bracket. See Fig. 13.

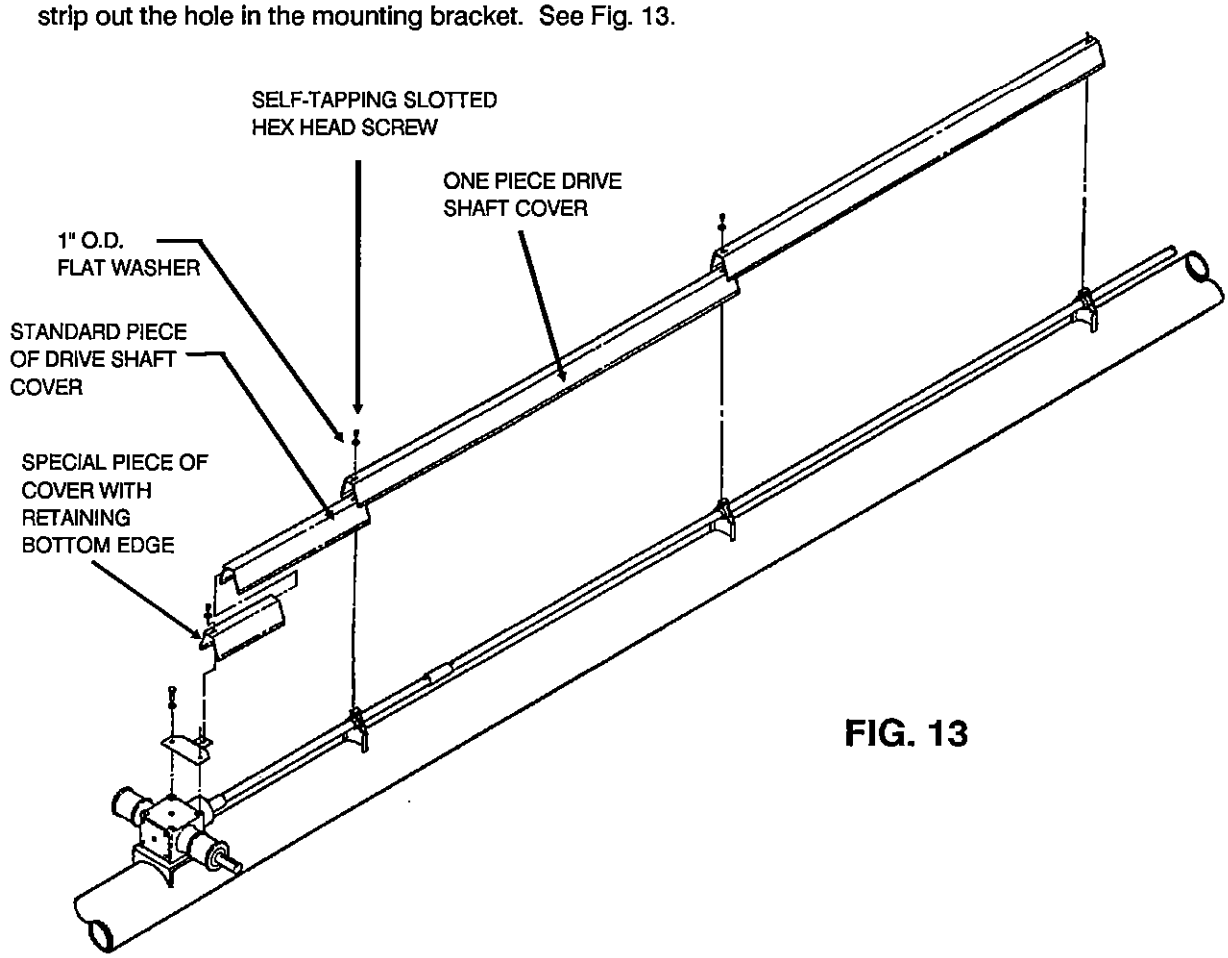


FIG. 13

ASSEMBLY INSTRUCTIONS

TOP TRUSS - 53' AUGERS ONLY

To assemble the bolt-together type truss, attach the vertical truss tubes (20" long) to the truss mounts on the auger tube using 5/8" x 1 1/2" bolts, lockwashers and nuts. (See Detail A.) To locate the truss mounts on the auger tube, measure from the discharge end of tube. It should be 23'-0". **DO NOT** tighten bolts for vertical truss tubes at this time. Attach the truss top crossmember (24" long) to the vertical tubes using 5/8" x 1 1/2" bolts, lockwashers and nuts.

IMPORTANT: Be sure to slide the cable clamp clips through bolt before putting bolts through the top tube. The bolts must go through the tube from the top.

Attach cable to upper cable anchor at discharge end.

Run the cable over the center truss and attach using cable clips. **DO NOT** tighten cable at this time.

Install eye bolt through anchor at intake end, using flat washer and two nuts. (See Detail B.)

Attach cable to eye bolt using two cable clamps, secure the clamp u-bolt against the loose end of the cable. Using eye bolts, tighten cable to remove slack to where the cable is reasonably snug. Tighten both cables the same. **DO NOT** over tighten.

Adjust the truss support to where it is 90° to the tube. Tighten cable clips on top of truss to secure cable in place. Tighten the bolts mounting truss assembly to tube.

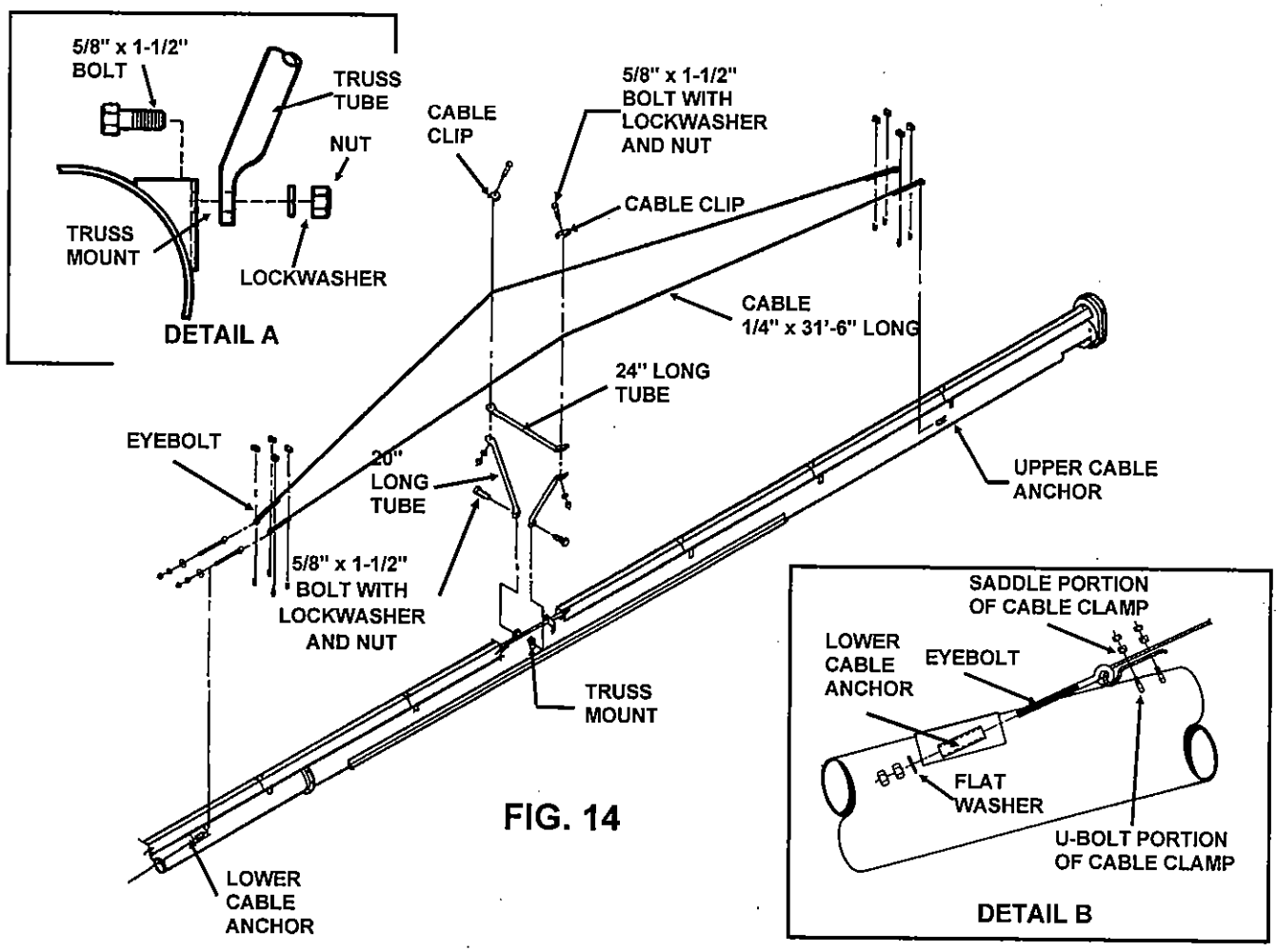


FIG. 14

ASSEMBLY INSTRUCTIONS

UNDERCARRIAGE ASSEMBLY

Lay the undercarriage frames next to the auger housing with the pivot clamps on the lower undercarriage frame towards the intake end of the auger. The slide on the upper undercarriage frame should be toward the discharge end of the auger.

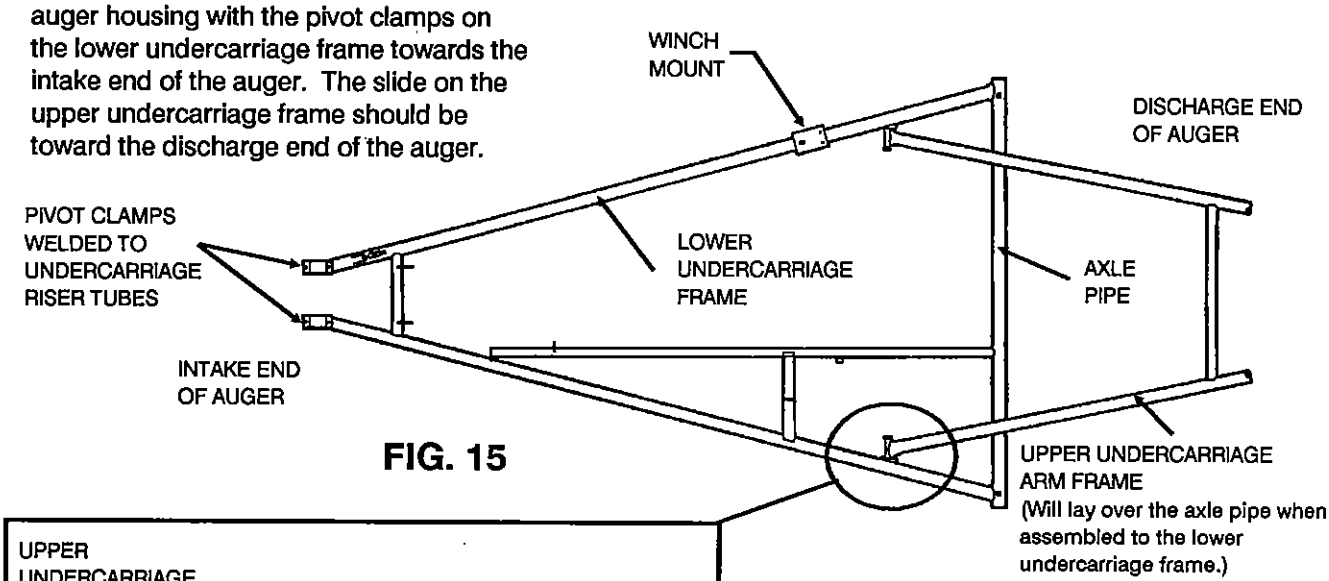
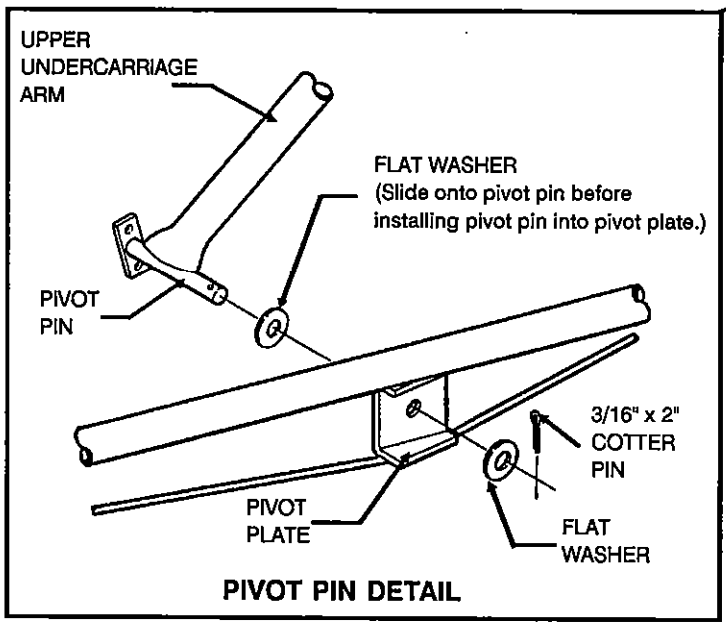


FIG. 15



PIVOT PIN DETAIL

To assemble the upper undercarriage frame to lower undercarriage frame slide a flat washer onto one of the pivot pins and place the pivot pin into the hole in the pivot plate. Secure the pivot pin in place by using a flat washer and 3/16" x 1 1/2" long cotter pin.

Slide a flat washer onto the pivot pin of the unattached upper undercarriage arm. Pull the attached upper undercarriage arm towards the center of undercarriage until the pivot pin will slide into the hole in pivot plate. Secure the pivot pin in place by using a flat washer and 3/16" x 1 1/2" long cotter pin.

HUB AND SPINDLE TO UNDERCARRIAGE ASSEMBLY

The 4 bolt hubs, bearings, seals and spindles are assembled at the factory and are pressure packed with grease at that time.

Slide the 4 bolt hub and spindle assembly into the undercarriage axle and secure with bolt and lock-nut. See Fig. 16.

Secure tire and rims to hubs with lug bolts.

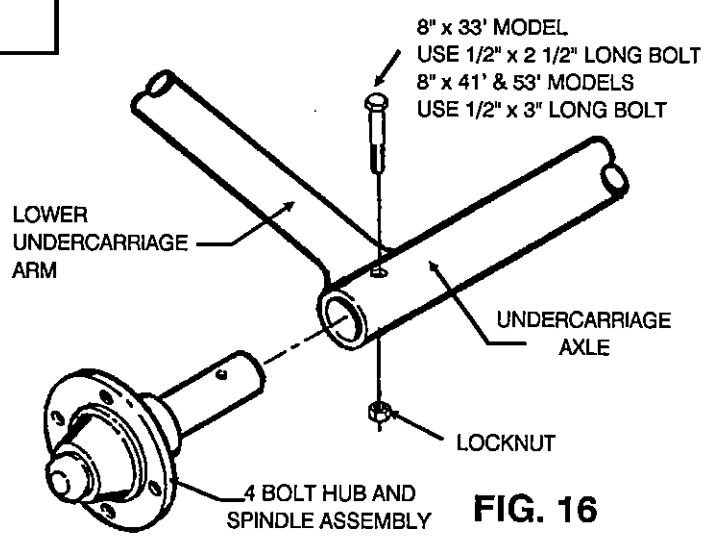


FIG. 16

ASSEMBLY INSTRUCTIONS

UNDERCARRIAGE SLIDE TO TRACK ASSEMBLY

Lift the auger assembly a few feet by lifting at a point near the center of the auger with a chain hoist or other safe, suitable means. **DO NOT** lift the entire weight of the auger from the extreme end. **DO NOT** use drive shaft to lift auger. Use a sling completely around auger tube assembly for lifting. Install the undercarriage slide onto the track from the discharge end. Be sure the undercarriage is installed on the track in a manner whereby it cannot be removed from the track after the stop has been installed. See Fig. 17.

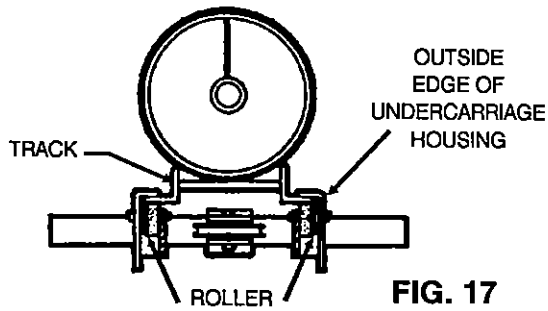
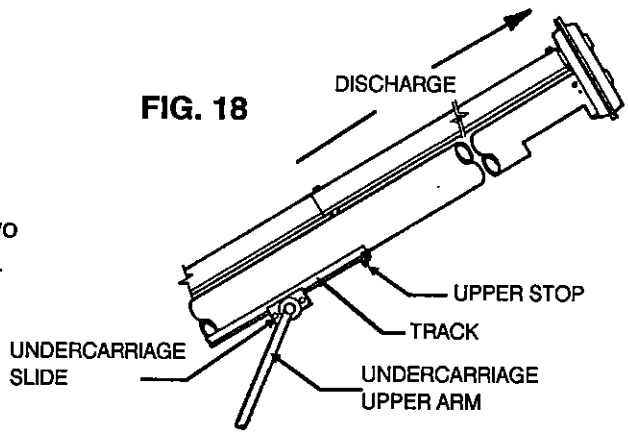


FIG. 17

UNDERCARRIAGE STOP

A stop must be bolted on the discharge end of the undercarriage track on all lengths of auger. Use two 1/2" x 1 1/2" hex head bolts, lock washers and nuts. See Fig. 18.

FIG. 18



LOWER UNDERCARRIAGE ARM TO GEARBOX ASSEMBLY

Lift the auger tube assembly high enough to attach the lower arms of undercarriage to the pivot ears on the gearbox. Keep the undercarriage slide against the upper undercarriage stop by securing temporarily with a chain.

Clamp the lower undercarriage arms to gearbox using 3/8" x 1 1/4" long hex head capscrews and nuts. See Fig. 19.

NOTE: The lower undercarriage frame must be able to pivot freely on the gearbox ears. If the clamps are tight against the ears the undercarriage frame will not be able to pivot and may cause damage to the gearbox. Shims may be used between the clamps, providing clearance to allow the undercarriage frame to pivot.

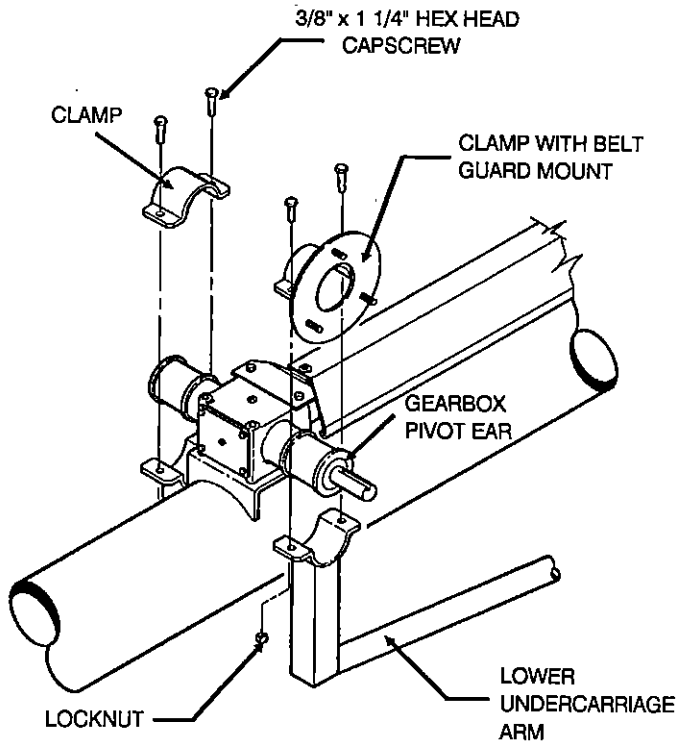


FIG. 19

ASSEMBLY INSTRUCTIONS

WINCH HANDLE ASSEMBLY

33' & 41' AUGERS USE K-1050

Align slot of handle with flat portion of winch pinion shaft. Use hex nut to hold handle in place and tighten securely. It is important that the handle is properly installed for the winch brake to work properly. For additional winch information, follow the instructions and precautions listed in the material supplied with the winch from the manufacturer. See Fig. 20.

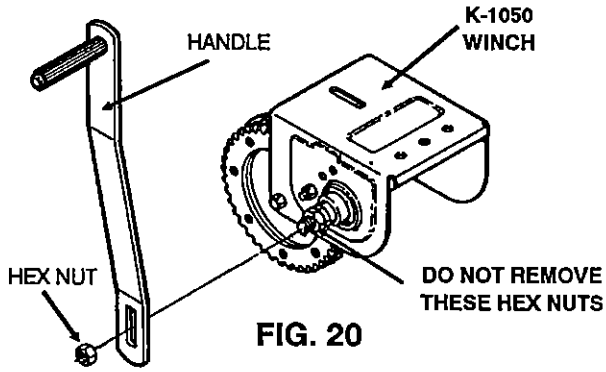


FIG. 20

53' AUGERS USE K-1550 WINCH

Align slot of handle with flat portion of winch pinion shaft. Use hex nut to hold handle in place and tighten securely. It is important that the handle is properly installed for the winch brake to work properly. For additional winch information, follow the instructions and precautions listed in the material supplied with the winch from the manufacturer. See Fig. 21.

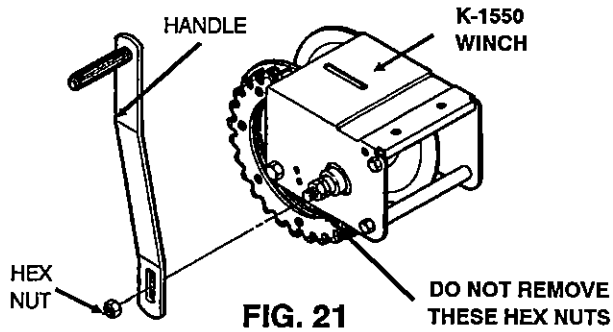


FIG. 21

CABLE TO WINCH ASSEMBLY

Attach 1/4" lift cable to winch drum so cable will wrap over winch drum when turning handle in a clockwise direction. See Fig. 22. From inside of drum, insert the cable through one round hole in the drum side, until it extends 1" past the two square holes. Next clamp the cable to the outside of the drum with the cable keeper, using two 3/16" x 3/4" carriage bolts, lock washers and nuts. Be sure that the carriage bolt heads are on the inside of the drum. See Fig. 22.

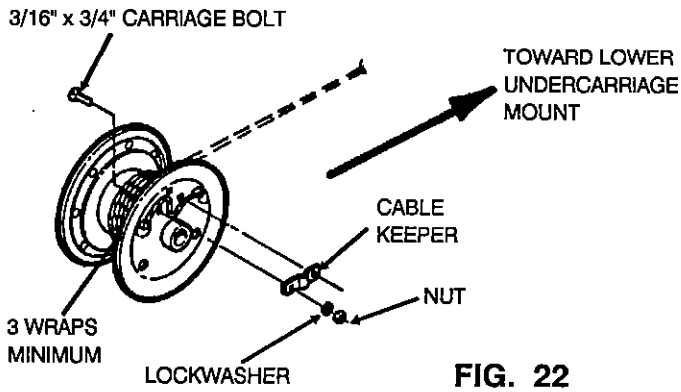


FIG. 22

WINCH TO AUGER ASSEMBLY

Bolt winch assembly to mount on undercarriage frame so the winch drum is towards the lower undercarriage mount. Use three 3/8" x 1" bolts, flat washers, lock washers and nuts to attach winch to mount. See Fig. 23.

Never fully extend the cable and always keep three complete turns of cable around winch drum.

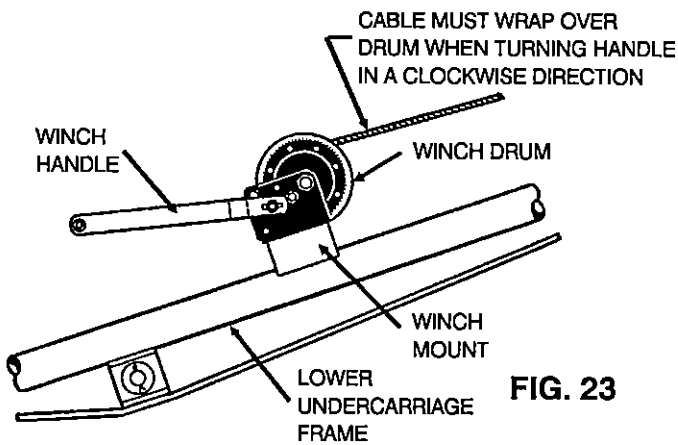
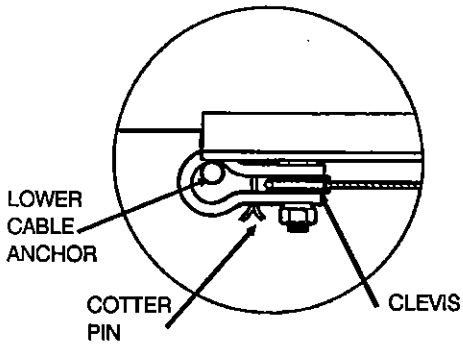


FIG. 23

ASSEMBLY INSTRUCTIONS

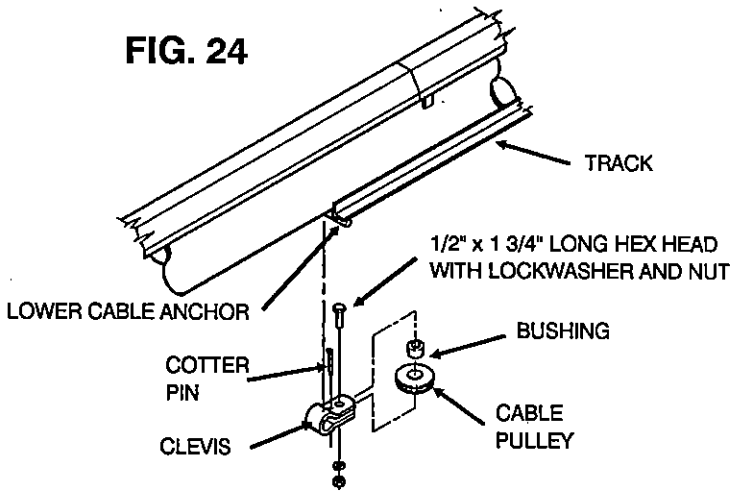
CABLE PULLEY ASSEMBLY FOR 41' & 53' MODELS ONLY

Mount cable pulley and clevis assembly to the lower cable anchor on the lower end of the track. The cable pulley and clevis assembly will need to be disassembled to be installed. See Fig. 24. Be sure to reinstall the cotter pin.



PULLEY CLEVIS DETAIL

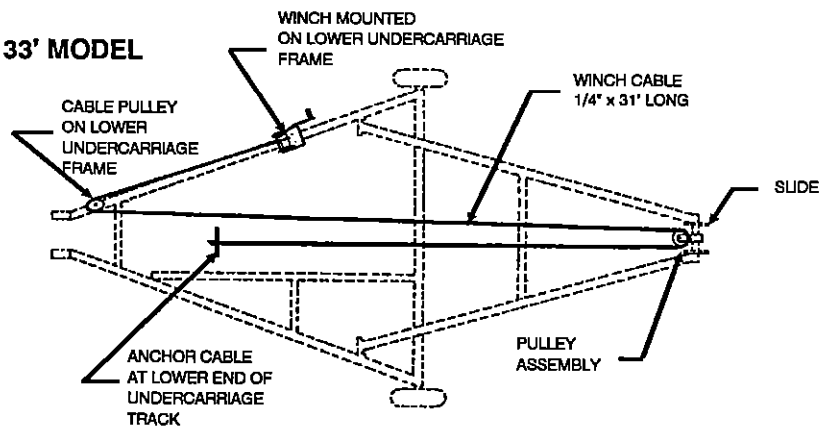
FIG. 24

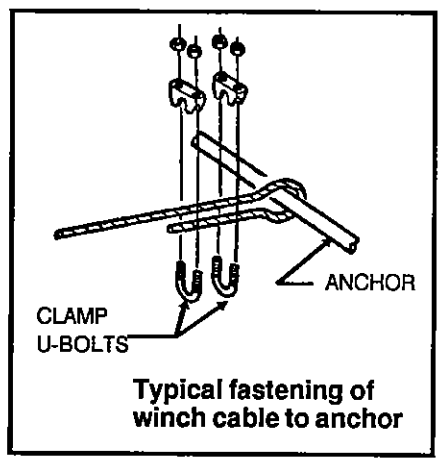


WINCH CABLE ASSEMBLY

Install cable to undercarriage slide. Different lengths of augers will require different rigging of the winch cables. See below for the proper rigging according to model size. Secure all cables with two cable clamps with the clamp u-bolt against the loose end of the cable.

33' MODEL





Typical fastening of winch cable to anchor

41' AND 53' MODEL

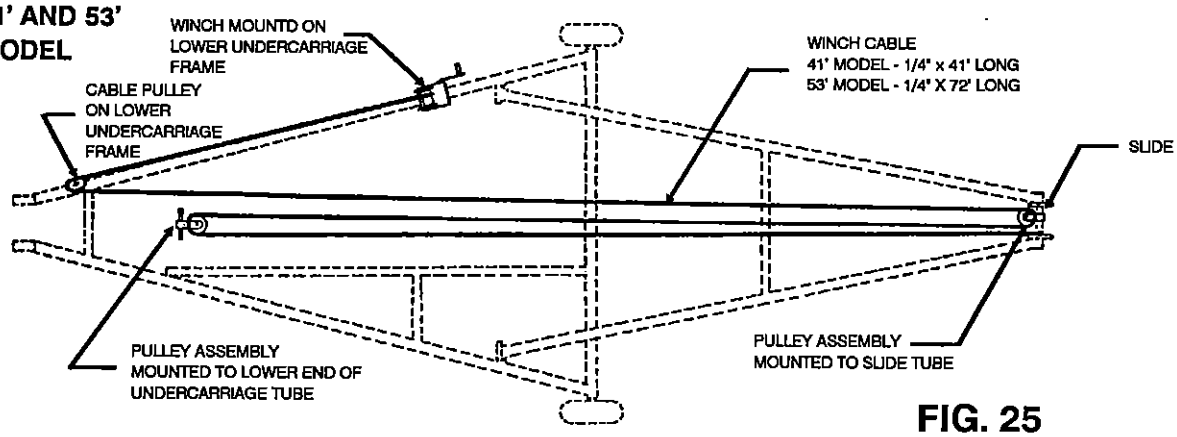


FIG. 25

ASSEMBLY INSTRUCTIONS

AXLE MOUNTED (BELT) GAS AND ELECTRIC DRIVE ASSEMBLY- CONT.

1. Mount jack shaft assembly (1) to lower undercarriage frame using two 1/2" x 1 1/4" hex head capscrews and locknuts. **NOTE: Jack shaft assembly must be able to pivot. DO NOT COMPLETELY TIGHTEN BOLTS DOWN AT THIS TIME.**

2. Thread two 1/2" nuts onto the jack shaft adjustment rod (2). Then install the threaded end of the adjustment rod (2) into anchor tube (3) welded on the side of undercarriage support tube. Insert the hook end of the adjustment rod (2) into the hole in the jack shaft assembly mounting ear. Secure in place with a 1/8" x 1 1/4" cotter pin. Thread two more 1/2" nuts onto the threaded end of the adjustment rod (2) to hold the adjustment rod in place until further assembly is completed. See Detail A.

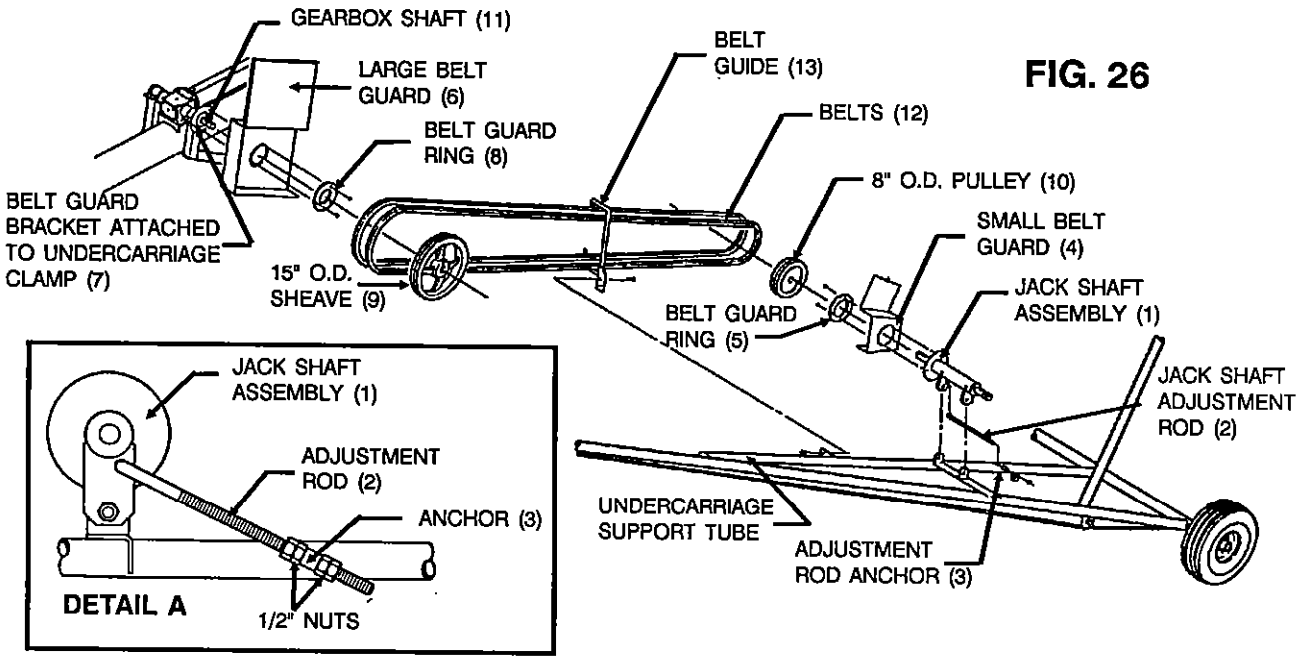


FIG. 26

3. Mount small belt guard (4) over the three bolts welded to belt guard bracket on the jack shaft assembly (1). Use a belt guard ring (5) and three 3/8" locknuts to fasten the belt guard (4) to jack shaft assembly (1). The small belt guard (4) should be allowed to pivot on the three bolts. **DO NOT COMPLETELY TIGHTEN LOCKNUTS DOWN AT THIS TIME.**

4. Mount large belt guard (6) over the three bolts welded to belt guard bracket attached to an undercarriage clamp (7). Use a belt guard ring (8) and three 3/8" locknuts to fasten the belt guard to the belt guard bracket. The large belt guard (6) should be allowed to pivot on the three bolts. **DO NOT COMPLETELY TIGHTEN LOCKNUTS DOWN AT THIS TIME.**

   NOTE: Belt guards will be adjusted after belts are installed and the locknuts holding the belt guard to bracket will be completely tightened then.

5. Install the 15" O.D. sheave (8) to gearbox shaft (11) and the 8" O.D. sheave (10) to the jack shaft. Secure sheaves to shaft by using 1/4" x 2" long square drive key and by tightening the setscrews in sheave hubs. Sheaves should be completely on the shaft, but not rubbing against the back of the belt guards.

6. Install belts (12) onto sheaves and tighten belts by using the nuts on the jack shaft adjustment rod (2). See Detail A.

ASSEMBLY INSTRUCTIONS

AXLE MOUNTED (BELT) GAS AND ELECTRIC DRIVE ASSEMBLY - CONT.

7. Mount belt guide (13) to ear welded on undercarriage support tube using two 5/16" x 1" hex head capscrews and locknuts. Place belts so they are captured inside of the belt guide (13).

8. Slide the undercarriage pivot strap weldment (15) into pivot bracket (22) welded under the undercarriage support tube. Fasten the pivot strap (15) to upper undercarriage arm (16) using two 3/8" x 1" hex head capscrews and locknuts.

9. Fasten motor mount (14) to jack shaft assembly (1). Secure in place with two 3/8" x 3 1/2" hex head capscrews and locknuts. The motor mount (14) must be allowed to pivot on the jack shaft assembly.

10. Bolt motor mount adjustment strap (17) between motor mount (14) and undercarriage pivot strap (15) using two 1/2" x 1 1/4" bolts with locknuts. Use the holes in the adjustment strap (17) that will set the top of the motor mount (14) is level with the ground. The motor mount adjustment strap (17) must be allowed to pivot where it is fastened to the motor mount (14) and where it fastens to the undercarriage pivot strap (15). **DO NOT COMPLETELY TIGHTEN LOCKNUTS DOWN.**

Cont. on page 28.

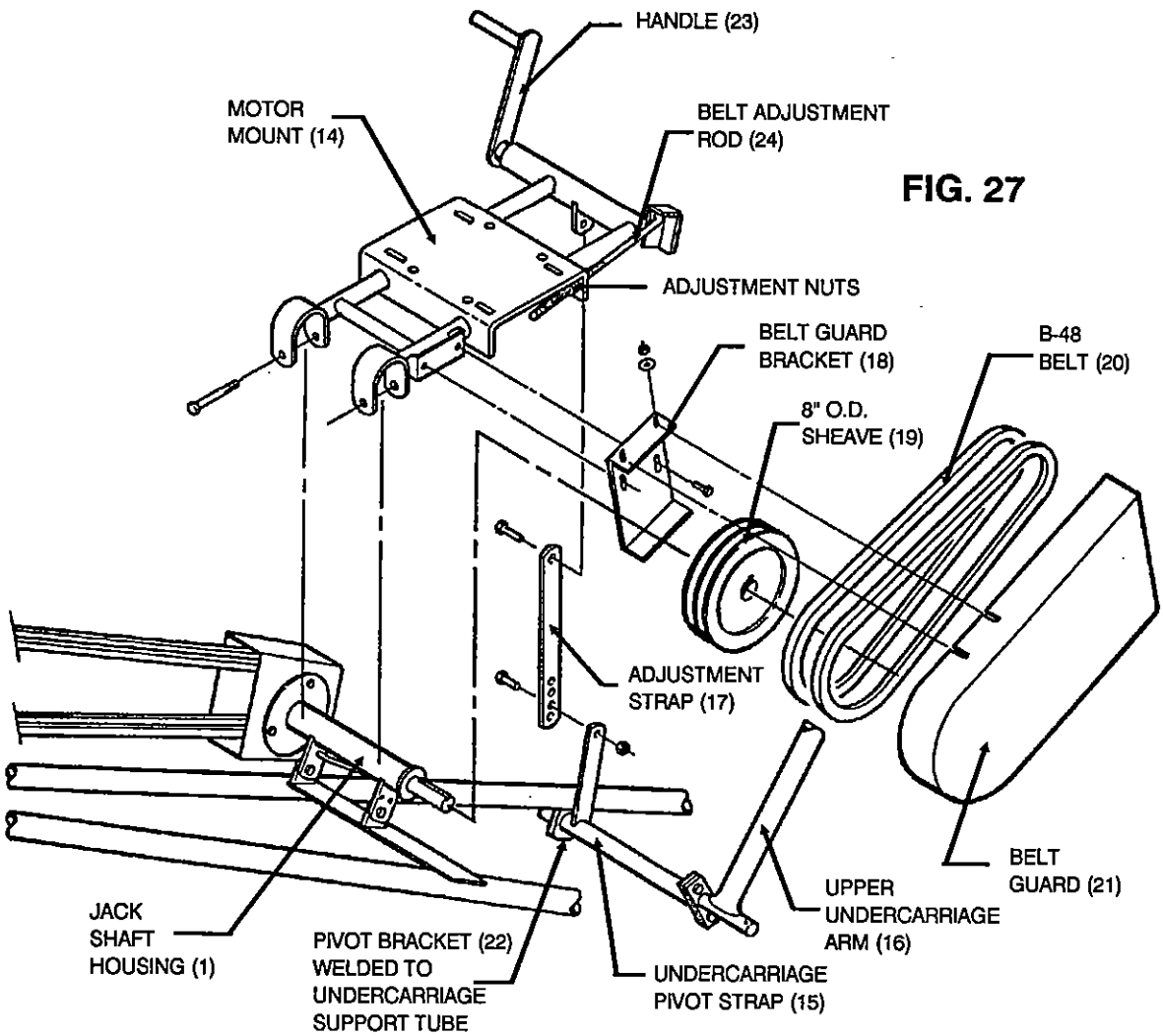


FIG. 27

ASSEMBLY INSTRUCTIONS

AXLE MOUNTED (BELT) GAS AND ELECTRIC DRIVE ASSEMBLY - CONT.

11. Mount belt guard bracket (18) to motor mount (14) using two 3/8" x 1" hex head capscrews, flatwashers and locknuts. **DO NOT TIGHTEN BOLTS. BRACKET WILL BE ADJUSTED AFTER MOTOR, SHEAVES AND BELTS ARE INSTALLED.**

12. Install an 8" O.D. sheave (19) to jack shaft assembly (1) using 1/4" x 2" square drive key. Secure in place by tightening setscrews in sheave.

13. Install either gas engine or electric motor to motor mount (14). Install sheave to engine or motor. **SHEAVE NOT FURNISHED.**
    For Gasoline Power Augers - see page 9A and 10A in the operating procedure portion of this manual for engine and engine sheave size information.
    For Electric Power Augers - see page 9B and 10B in the operating procedure portion of this manual for motor and motor sheave size information.

    IMPORTANT: Use the proper size and speed motor to ensure satisfactory conveyor operation. Too small of a motor will not supply the horsepower required to achieve capacity and possible damage to the motor will occur. Too large of a motor may cause high stress on conveyor components resulting in shorter life for those components.

14. Align sheaves by using a straight edge, placed across the outer faces of both sheaves. Install belts (20) and tighten. To tighten belt, first engage the motor mount handle (23) by rotating down until handle locks over center. Use the nuts on the motor mount belt adjustment rod to tighten belt tension. **DO NOT OVER TIGHTEN BELTS OR EXCESSIVE WEAR OR DAMAGE WILL OCCUR.**

15. Slide belt guard (21) onto belt guard bracket (18) and secure in place by using four 1/4" locknut and flat washer. Adjust the belt guard so it is not rubbing on the sheaves or belts and tighten the belt guard bracket (18) bolts to the motor mount to hold the belt guard securely in place.

AXLE MOUNTED (BELT) PTO DRIVE ASSEMBLY

NOTE: If the drive is being changed from an axle mounted (belt) gas or electric drive to axle mounted (belt) PTO drive, the 15" O.D. sheave and 8" O.D. sheave will need to be switched for the auger to operate at the proper speed. If the sheaves are not switched the auger speed will be too slow and capacity will not be achieved.

1. Mount jack shaft assembly (1) to lower undercarriage frame using two 1/2" x 1 1/4" hex head capscrews and locknuts. **NOTE: Jack shaft assembly must be able to pivot.**
   DO NOT COMPLETELY TIGHTEN BOLTS DOWN AT THIS TIME.

2. Thread two 1/2" nuts onto the jack shaft adjustment rod (2). Then install the threaded end of the adjustment rod (2) into anchor tube (3) welded on the side of undercarriage support tube. Insert the hook end of the adjustment rod (2) into the hole in the jack shaft assembly mounting ear. Secure in place with a 1/8" x 1 1/4" cotter pin. Thread two more 1/2" nuts onto the threaded end of the adjustment rod (2) to hold the adjustment rod in place until further assembly is completed.

(Cont. on page 29.)

ASSEMBLY INSTRUCTIONS

AXLE MOUNTED (BELT) PTO DRIVE ASSEMBLY - CONT.

3. Mount large belt guard (4) over the three bolts welded to belt guard bracket on the jack shaft assembly (1). Use a belt guard ring (5) and three 3/8" locknuts to fasten the belt guard (4) to jack shaft assembly (1). The large belt guard (4) should be allowed to pivot on the three bolts.
   DO NOT COMPLETELY TIGHTEN LOCKNUTS DOWN AT THIS TIME.

4. Mount small belt guard (6) over the three bolts welded to belt guard bracket attached to an undercarriage clamp (7). Use a belt guard ring (8) and three 3/8" locknuts to fasten the belt guard to the belt guard bracket. The small belt guard (6) should be allowed to pivot on the three bolts.
   DO NOT COMPLETELY TIGHTEN LOCKNUTS DOWN AT THIS TIME.

   NOTE: Belt guards will be adjusted after belts are installed and the locknuts holding the belt guard to bracket will be completely tightened then.

5. Install the 8" O.D. sheave (9) to gearbox shaft (11) and the 15" O.D. sheave (10) to the jack shaft. Secure sheaves to shaft by using 1/4" x 2" long square drive key and by tightening the setscrews in sheave hubs. Sheave should be completely on the shaft, but not rubbing against the back of the belt guard.

6. Install belts (12) onto sheaves and tighten belts by using the nuts on the jack shaft adjustment rod (2).

7. Mount belt guide (13) to ear welded on undercarriage support tube using two 5/16" x 1" hex head capscrews and locknuts. Place belts so they are captured inside of the belt guide (13).

8. Align belt guards installed in steps 3 and 4 so they do not rub against the belts. Tighten the 3/8" locknuts holding the belt guard rings to secure belt guard in place.

(Cont. on page 30.)

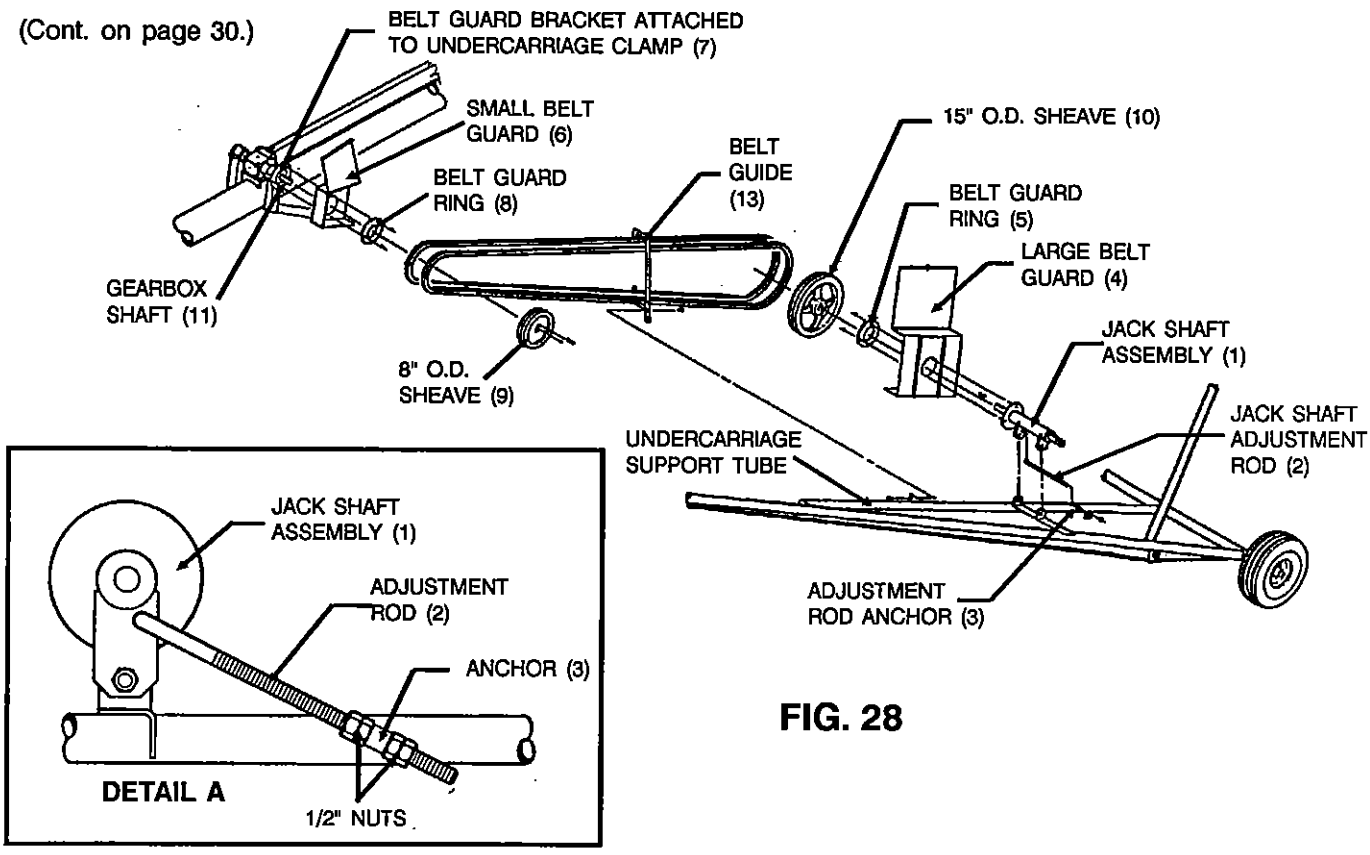


FIG. 28

02153A1 02150A1 A0000685

ASSEMBLY INSTRUCTIONS

AXLE MOUNTED (BELT) PTO DRIVE ASSEMBLY - CONT.

9. Attach shield bracket (14) to mounting ear of jack shaft assembly (1) using two 3/8" x 1" hex head capscrews and locknuts.

10. Attach input drive line (17) to jack shaft using 1/4" x 1 1/2" square drive key (16). Tighten setscrew.

IMPORTANT: For setscrew to be properly engaged on the jack shaft, the jack shaft MUST be slid into the input shaft yoke until the setscrew will sit on the flat portion of the jack shaft. (See Detail B.) Do not extend the jack shaft beyond the inside end of the yoke.

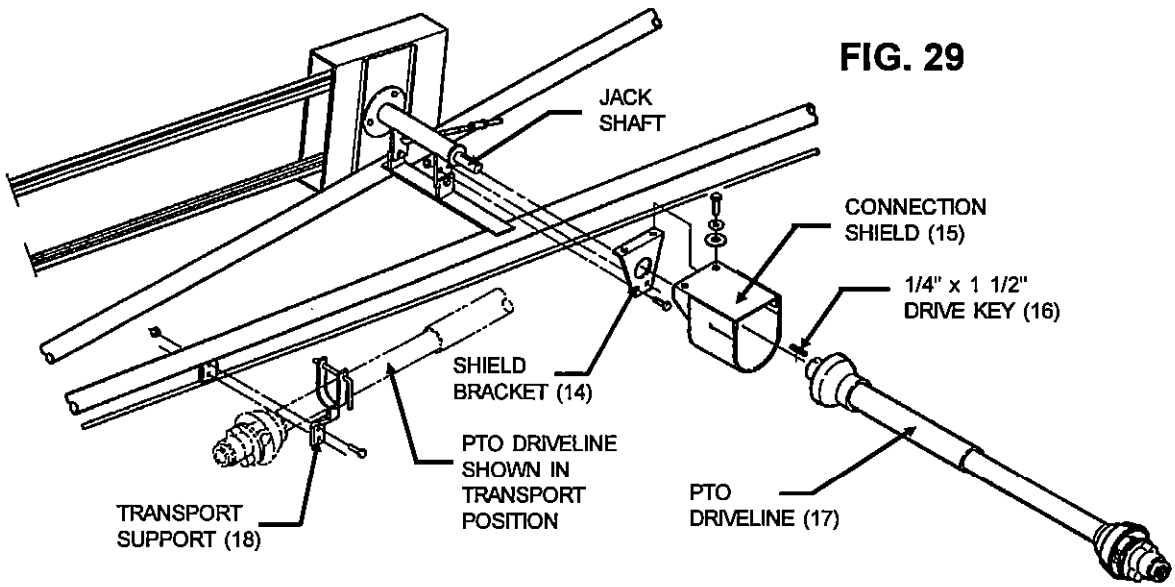
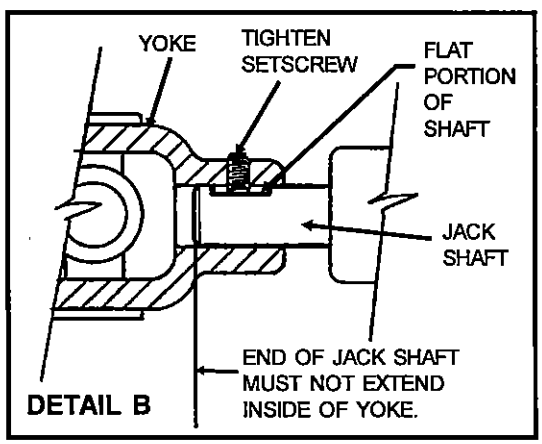


FIG. 29



Before engaging P.T.O. be sure that PTO driveline shields turn freely on shaft.

11. Slide connection shield (15) over PTO driveline (17) and attach to shield bracket (14) using two 3/8" x 3/4" hex head capscrews, 7/16" flat washer, 3/8" flat washer and locknuts.

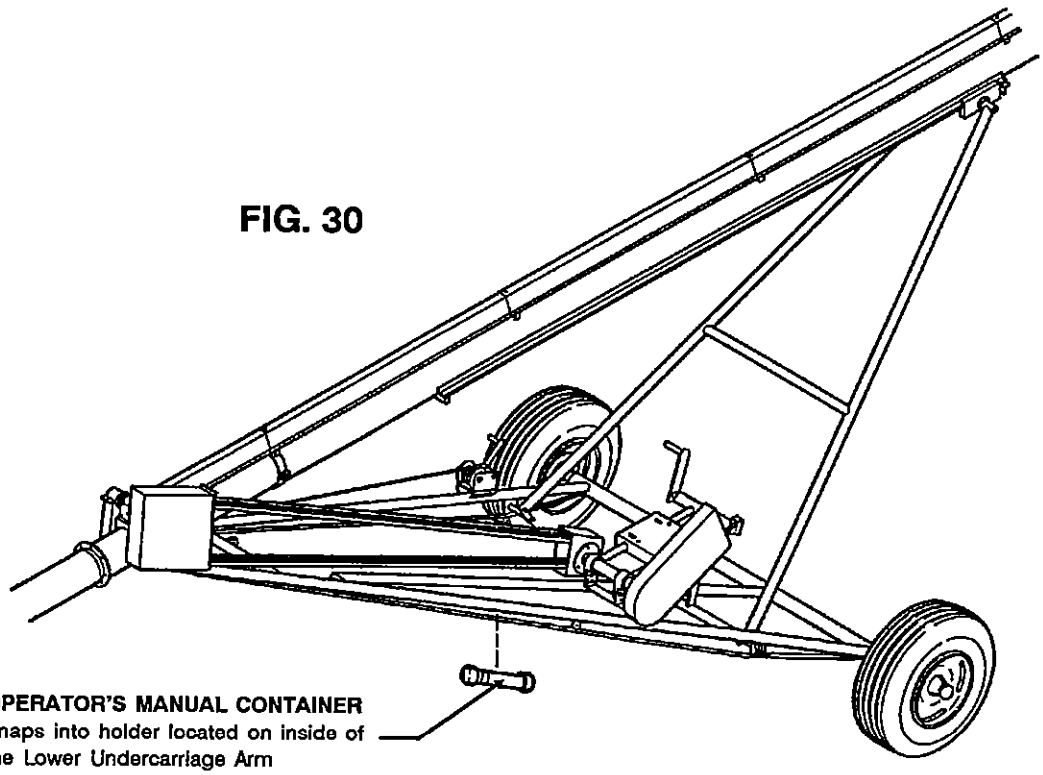
12. Mount the transport support (18) to bracket on lower undercarriage frame using two 5/16" x 1" hex head capscrews and locknuts. Set PTO driveline (17) into the transport support (18) to be sure support is installed properly.

ASSEMBLY INSTRUCTIONS

OPERATOR'S MANUAL CONTAINER

1. Check that an Operator's Manual is in the plastic container.
2. Snap the container into holder located on the inside of lower undercarriage arm.

FIG. 30



OPERATOR'S MANUAL CONTAINER
Snaps into holder located on inside of the Lower Undercarriage Arm

TO DEALER/ASSEMBLER

The assembly of the auger is complete if all the applicable assembly steps in this manual have been followed.

Before delivery to the owner it is a good practice to check the following:

a. Be sure all safety shields and devices are installed properly.
b. Check all safety decals to see if they are clean and readable. If any are missing, damaged, painted over, etc. replace them. See page P1 & P2 for safety sign location. Decals may be obtained from your dealer, distributor or ordered from the factory.
c. Check all bolts and fasteners to see they are tightened and secured properly.

TO THE OWNER

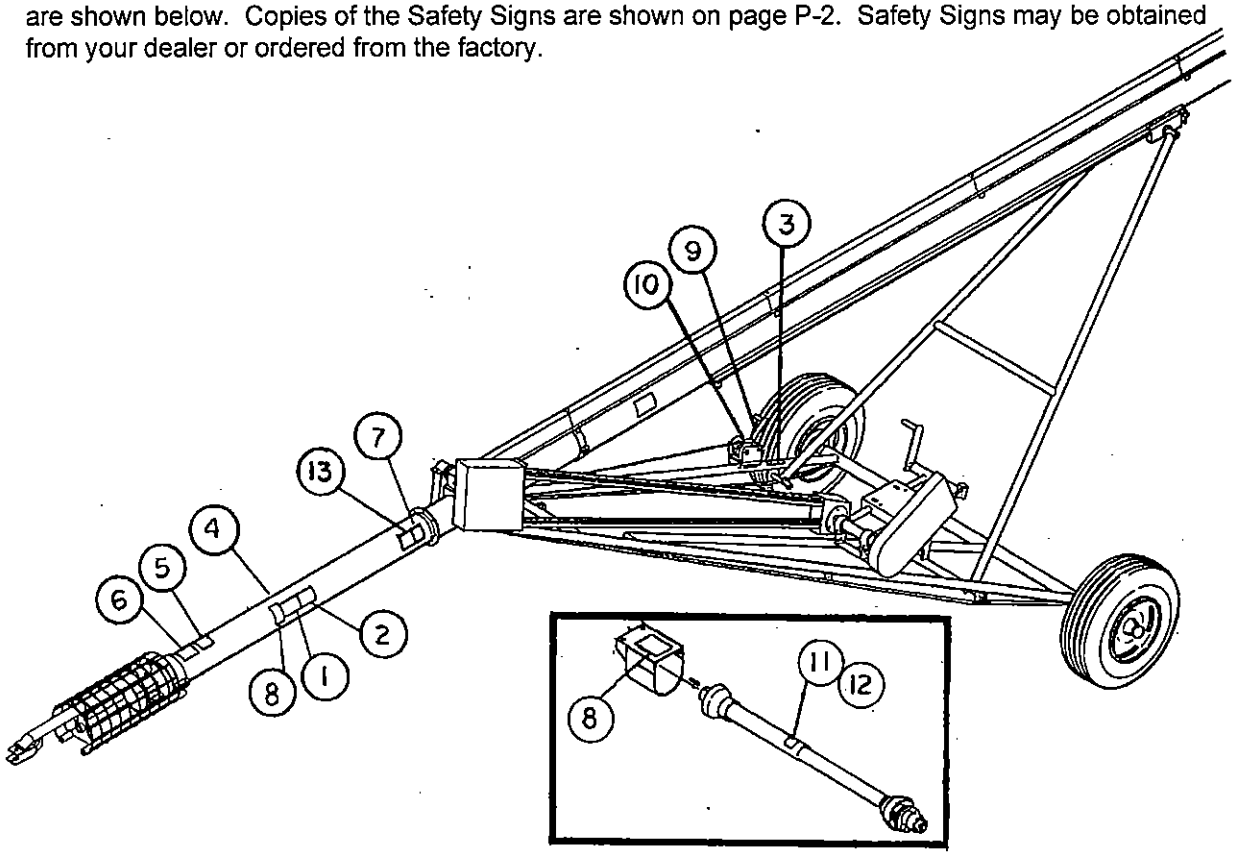
Use the assembly section of this manual as a reference to determine that the auger is assembled properly.

Make sure an Operator's Manual is delivered along with the auger. Anyone who will operate or work around a portable auger shall first read the Operator's Manual! Failure to read the manual and its safety instructions is a misuse of the equipment.

PARTS LIST

SAFETY SIGNS AND DECALS

Check all safety signs and replace any that are worn, missing or illegible. The safety sign locations are shown below. Copies of the Safety Signs are shown on page P-2. Safety Signs may be obtained from your dealer or ordered from the factory.



AXLE MOUNTED PTO DRIVE

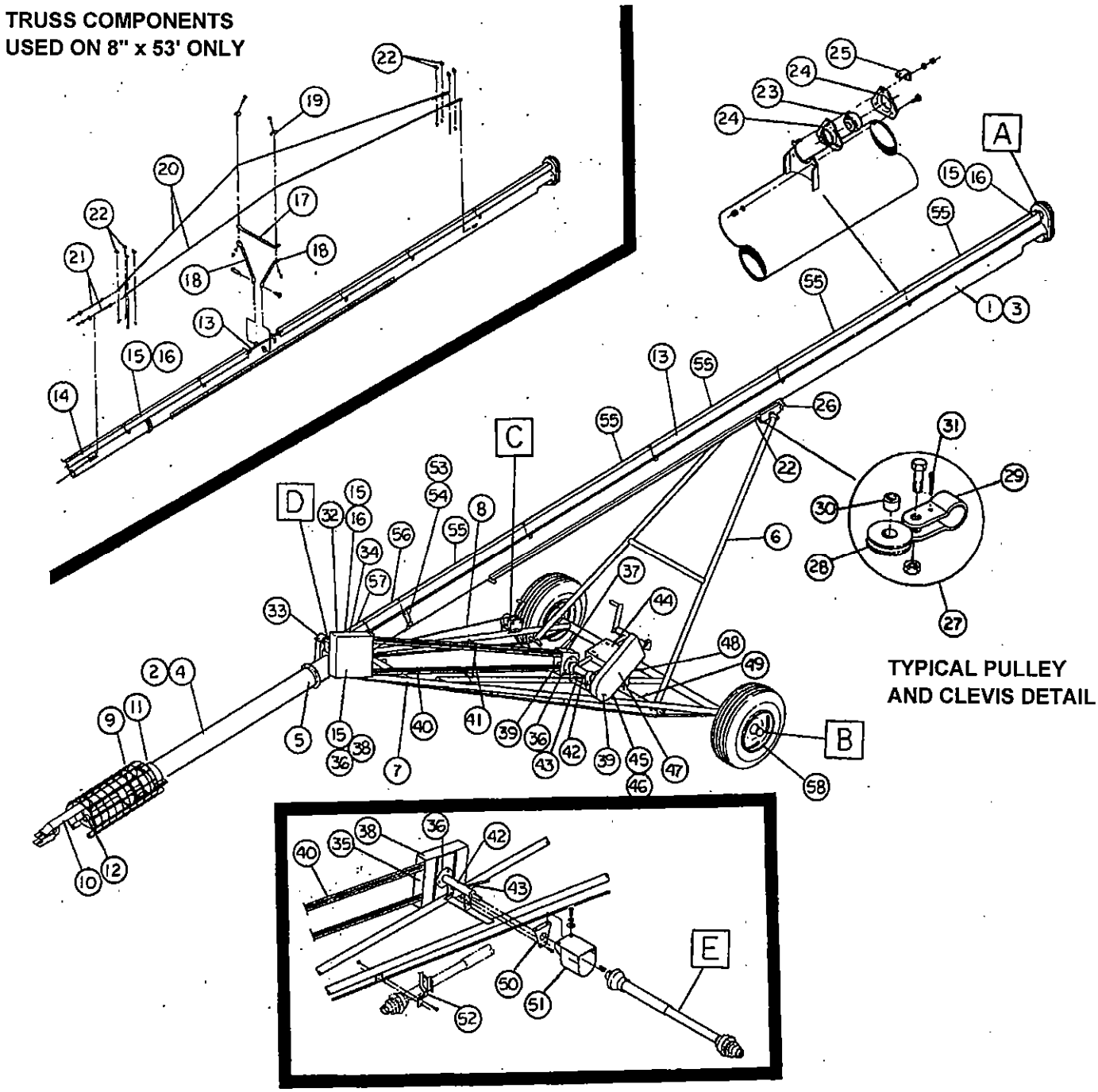
REF. NO.	PART NO.	QTY.	DESCRIPTION	SIZE
1	1001973	2	**CAUTION - GENERAL STATEMENTS 1-8** One on both sides of Auger Housing	4 3/4 x 8
2	1001980	2	**DANGER - BEWARE OF POWER LINES** One on both sides of Auger Housing	4 x 8
3	1002091	1	**WARNING - HAND WINCH OPERATION** One on Lower Undercarriage Arm near winch	2 3/4 X 5
4	1001982	2	**DANGER - ROTATING SHAFT** One on both sides of Auger Housing	4 x 7 1/4
5	1001981	1	**DANGER - UPENDING HAZARD** One on Auger Housing	4 1/2 x 6 1/4
6	1001985	1	**DANGER - ROTATING AUGER** One on Auger Housing	4 1/2 x 6 1/4
7	1001984	2	**DANGER - DO NOT ATTEMPT DISASSEMBLY** One on both sides of Auger Housing	4 x 6
8	1001983	3	**DANGER- ROTATING DRIVE LINE** One on both sides of Auger Housing One on U-joint Shield on PTO Belt Drive Kit	4 x 6 1/4
9	2169A1	1	**CAUTION - WINCH OPERATION** On Hand Winch Handle	—
10	1002805	1	**CAUTION - CABLE OUT/CABLE IN**	—
11	13-10022	1	**DANGER - SHIELD MISSING** Under PTO Driveline Shield	—
12	13-10021	1	**DANGER - ROTATING DRIVE LINE** On PTO Driveline Shield	–
13	1005325	2	**DANGER - "STOP" IF ANY GUARDS, SHIELDS** One of both sides of Auger Housing	4 x 6

PARTS LIST

SAFETY SIGNS - CONT.

PARTS LIST

MAIN AUGER COMPONENTS



AXLE MOUNTED (BELT) PTO DRIVE COMPONENTS

MAIN AUGER COMPONENTS

REF. NO.	PART NO.	DESCRIPTION
A	631368	**Enclosed Drive Assy.**
		(See page P-5 for parts breakdown)
B	1001562	**Spindle & Hub Assy. - 4-Bolt**
		f/8" x 33'
		(See page P-5 for parts breakdown.)
B	1001563	**Spindle & Hub Assy. - 4-Bolt**
		f/8" x 41',53'
		(See page P-5 for parts breakdown.)
C	3339A11	**Winch K-1051 Brake Type**
		f/8" x 33' & 41'
		(See page P-6 for parts breakdown.)
C	3335A11	**Winch K-1550 Brake Type**
		f/8" x 53'
		(See page P-6 for parts breakdown.)
D	1003336	**Gearbox with Pivot Ears**
		(A115) 1 1/2 to 1 Ratio
		(See page P-7 for parts breakdown.)
E	1005256	**Implement Input Driveline (PTO) 48"**
		f/Axle Mounted (Belt) PTO Drive
		(See page P-8 for parts breakdown.)
1		**Tube Housing - Complete (galv.)**
	1005137-G	f/8" x 33'
1		**Tube Housing - Upper Section (galv.)**
	1005139-G	f/8" x 41'
	1005141-G	f/8" x 53'
2		**Tube Housing - Lower Section (galv.)**
	1005138-G	f/8" x 41'
	1005140-G	f/8" x 53'
3		**Flight Assembly - Complete**
	1009613	f/8" x 33' - 399" long
3		**Flight Assembly - Upper Section**
	1009614	f/8" x 41' & 53' - 396" long
4		**Flight Assembly - Lower Section**
	1009617	f/8" x 41' - 99" long
	1009619	f/8" x 53' - 243" long
5	8320A	**Connecting Stub - 1 1/4" x 9 1/2"**
6		**Upper Undercarriage Frame**
	1004588	f/8" x 33'
	1004635	f/8" x 41'
	1004637	f/8" x 53'
7		**Lower Undercarriage Frame**
	1004589	f/8" x 33'
	1004636	f/8" x 41'
	1004638	f/8" x 53'
8		**Winch Cable**
	635098	f/8" x 33' - 1/4" x 31'-0" long
	8381C	f/8" x 41' - 1/4" x 51'-0" long
	848107	f/8" x 53' - 1/4" x 72'-0" long
9	1024775	**Intake Guard**
10	1007734	**Hitch Pipe**
11	5042A1	**Half Band f/Intake Guard**
12	8379C	**Replacement Tail Stub Bearing**
13		**Drive Shaft for Upper Section**
	1004675	f/8" x 33' - 21'-1 3/4" long
	1004763	f/8" x 41' - 27'-4 3/4" long
	1002457	f/8" x 53' - 31'-3 1/2" long
14	1005044	**Drive Shaft for Lower Section**
		f/8" x 53' Only - 87 1/2" long
15	1002382	**Drive Shaft Coupler with Snap Ring**
16	8371C	**Sq. Key 1/4" x 1 1/2" long**

REF. NO.	PART NO.	DESCRIPTION
17	550208	**Top Truss Tube (24" long)**
		f/8" x 53' Only
18	550209	**Side Truss Tube (20" long)**
		f/8" x 53' Only
19	550313	**Cable Clip**
		f/8" x 53' Only
20	1002569	**Truss Cable 1/4" x 31'-6" long**
		f/8" x 53' Only
21	6308C	**Eye Bolt 1/2" x 8" long**
		f/8" x 53' Only
22	6369C	**Cable Clamp 1/4"**
23	6382C	**Drive Shaft Bearing**
24	54008	**Flangette f/Drive Shaft Bearing**
25	54584	**Drive Shaft Cover Mounting Clip**
26	54330	**Bolt-on Track Stop**
27	1006197	**Pulley & Clevis Assembly**
28	3223A1	**1/4" Cable Pulley**
29	5120A1	**Pulley Clevis**
30	50079A1	**Pulley Bushing**
31	D1263	**Cotter Pin 1/4" x 2" long**
32	1002603	**Drive Shaft Cover to Gearbox Bracket**
33	1004569	**Undercarriage Pivot Clamp**
34	1005025	**Undercarriage Pivot Clamp**
		Belt Guard Bracket
35	1005023	**Belt Guard f/15" Sheave**
36	1005051	**Belt Guard Ring**
37	1005024	**Belt Guard f/8" Sheave**
38	40157	**15" O.D. Sheave 2B 1" Bore**
39	1005031	**8" O.D. Sheave 2B 1" Bore**
40		**Drive Belt**
	621039	f/8" x 33' - B-175
	1005030	f/8" x 41' - B-225
	40144	f/8" x 53' - B-300
41	1005022	**Belt Guide**
42	1005037	**Jack Shaft Assembly**
		(includes bearing & shaft)
	1005036	Jack Shaft Only
	1006323	Bearings only f/Jack Shaft Assembly
43	1004996	**Adjustment Rod f/Jack Shaft**
44	1004913	**Motor Mount Frame**
45	1005026	**Belt Guard f/8"**
46	1005042	**Belt Guard to Motor Mount Bracket**
47	40116	**B-48 Belt**
48	1005040	**Connect Strap**
		f/Motor Mount to Pivot Strap
49	1005039	**Pivot Strap**
50	1005035	**Shield Bracket**
51	1005050	**U-Joint Shield**
52	1005034	**PTO Transport Support**
53	630487	**Band-on Bearing Stand**
54	5033A1	**Half Band 2" wide**
55	550651	**Drive Shaft Cover - 5'-8 1/2" long**
56		**Drive Shaft Cover (telescoping)**
	550645	1'-0" long f/33'
	500647	2'-0" long f/41'
	550650	5'-0" long f/53'
57	550646	**Drive Shaft Cover - 1'-6"**
		with Retaining Flange
58	6393D	**Wheel Rim 15" 4-Bolt**

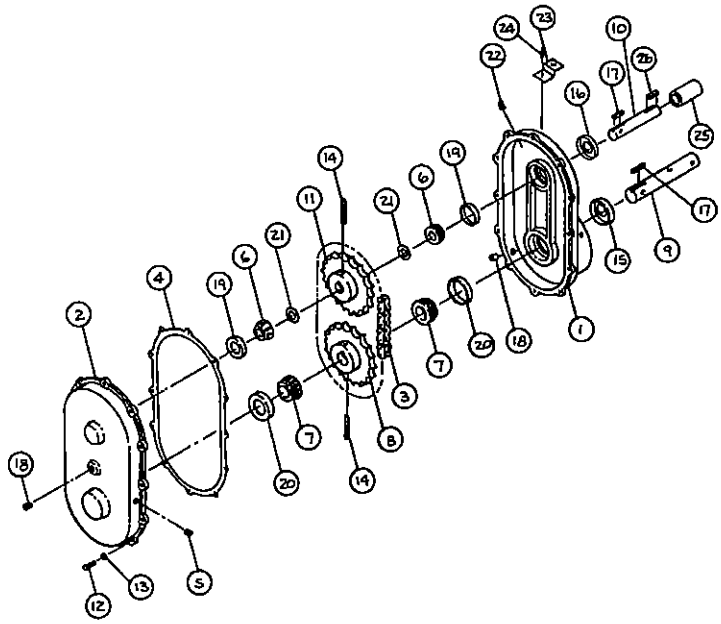
PARTS LIST

A ENCLOSED HEAD DRIVE ASSEMBLIES

(RATIO 1 TO 1)

REF NO.	PART NO.	DESCRIPTION
1	1001439	Aluminum Casting
2	842033-2	Aluminum Casting - Cover
3	842064	# 60 Roller Chain - 38 pitch
4	842035	Gasket
5	458026	3/8" Plug - Vented
6	835174	1" Bearing Cone (Timken No. 07100)
7	106322	1 1/4" Bearing Cone (Timken No. 15123)
8	40039	1 1/4" Bore Sprocket - 19 tooth
9	553629	Stubs Shaft 1 1/4"
10	553628	Stub Shaft 1"
11	835176-1	1" Bore Sprocket - 19 tooth
12	33046	5/16" x 1" HHCS
13	33144	5/16" Lockwasher
14	33203	3/8" x 2 1/2" Roll Pin
15	835168	Screw Shaft Seal - 1 1/4"
16	835169	Drive Shaft Seal - 1"
17	4020A1	Key
18	842083	Drain Plug - 1/4"
19	835175	1" Bearing Cup (Timken No. 07204)
20	106323	1 1/4" Bearing Cup (Timken No. 15245)
21	4542	1" Bearing Spacer
22	1001438	3/8" Pipe Plug
23	*553630	Drive Shaft Mounting Clip
24	*33183	Self-Taping Screw
25	*1002382	4" Long Coupler
26	*8371C	Key 1/4" x 1 1/2"
27	1001131	Decal - Notice Oil Level

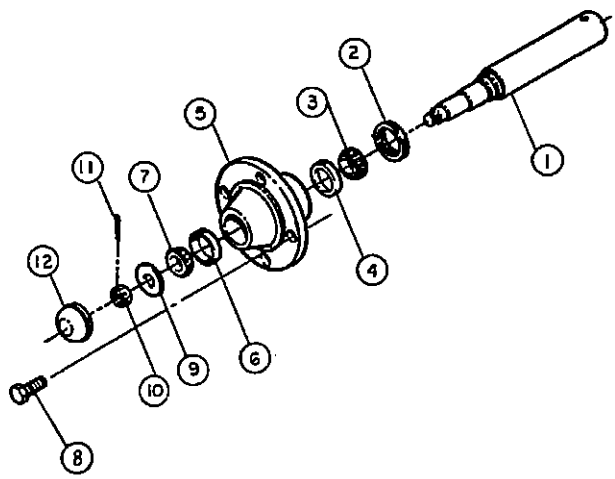
8" ENCLOSED DRIVE
COMPLETE ASSEMBLY NO. 631368



***Indicates items that are not part of the assembly number. These items are sold separately.**

B SPINDLE & HUB ASSEMBLIES

REF NO.	DESCRIPTION	4-BOLT (1-5/8" x 10") f/8" x 33	4-BOLT (2-1/16" x 10") f/8" x 41' & 53'
–	Spindle & Hub Assy.	1001562	1001563
1	Spindle	1001001	1001002
2	Grease Seal	106245	106245
3	Inner Cone (Timken No.)	3079R1 (LM67048)	3079R1 (LM67048)
4	Inner Cup (Timken No.)	3148R1 (LM67010)	3148R1 (LM67010)
5	Hub	90174	90174
6	Outer Cup (Timken No.)	40552 (LM11910)	40552 (LM11910)
7	Outer Cone (Timken No.)	40551 (LM11949)	40551 (LM11949)
8	Lug Bolt	106241	106241
9	Washer	106252	106252
10	Slotted Hex Nut	106250 (5/8")	106250 (5/8")
11	Cotter Pin	D1146 (5/32" x 1 1/4")	D1146 (5/32" x 1 1/4")
12	Hub Cap	106244	106244



PARTS LIST

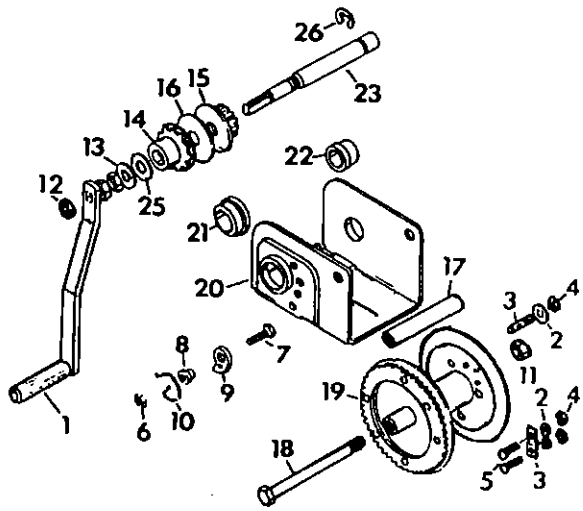
C WINCH - BRAKE TYPE

PARTS LIST FOR FULTON MODEL K-1051 WINCH
USED ON 8" x 33' & 41' AUGERS
COMPLETE WINCH - PART NUMBER 3339A11

NOTE: Repair parts for winch can also be purchased directly from:
Fulton Manufacturing Corp.
P.O. Box 19903
Milwaukee, WI 53219

ITEM NUMBER	DESCRIPTION	QTY. REQ.	HUTCHINSON PART NUMBER	FULTON PART NUMBER
1	11" Handle Assy.	1	41595	2461-01
2-5	Rope Keeper Kit	1	41600	5621S01
6-10	Ratchet Kit	1	40840	6731S00
*11	Locknut - Hex, 3/8-16	1	33234	907-01
*12	Locknut - Hex, 1/2-13	3	33138	952-01
13	Brake Disc	1	41906	2552-01
14	Ratchet Assembly	1	41908	2555-01
15	Pinion Gear Assembly	1	1003595	0434003-01
16	Friction Disc	1	41909	2356-00
17	Spacer Drum	1	41910	6284-05
18	Capscrew Hex - 3/8-16	1	41911	6299-01
19	Drum Assembly	1	41912	9186-01
20	K-1051 Frame Assembly	1	1003588	0436001-01
21	Bushing 1.25 ID x .50	1	41914	4592-19
22	Bushing .75 ID x .50	1	41915	5790-19
23	Pinion Shaft	1	1003589	0469001-01
25	Washer-Thrust	1	1003590	178-00
26	Retaining Ring	1	1003591	57-01

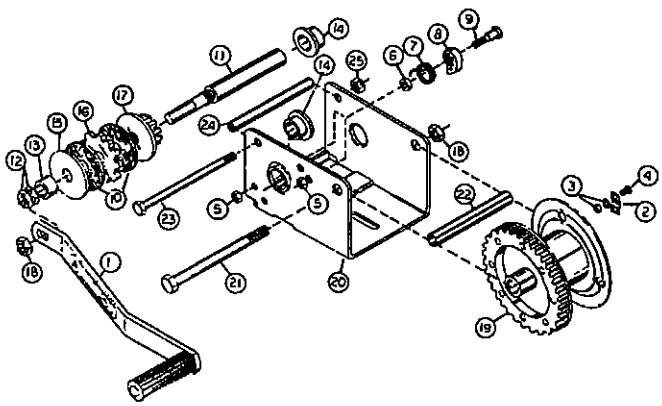
***Indicates Standard Hardware Items**



C WINCH - BRAKE TYPE

PARTS LIST FOR NO. FULTON MODEL K1550 WINCH
USED ON 8" x 53'
COMPLETE PART NUMBER 3335A11

NOTE: Repair parts for winch can also be purchased directly from:
Fulton Manufacturing Corp.
P.O. Box 19903
Milwaukee, WI 53219

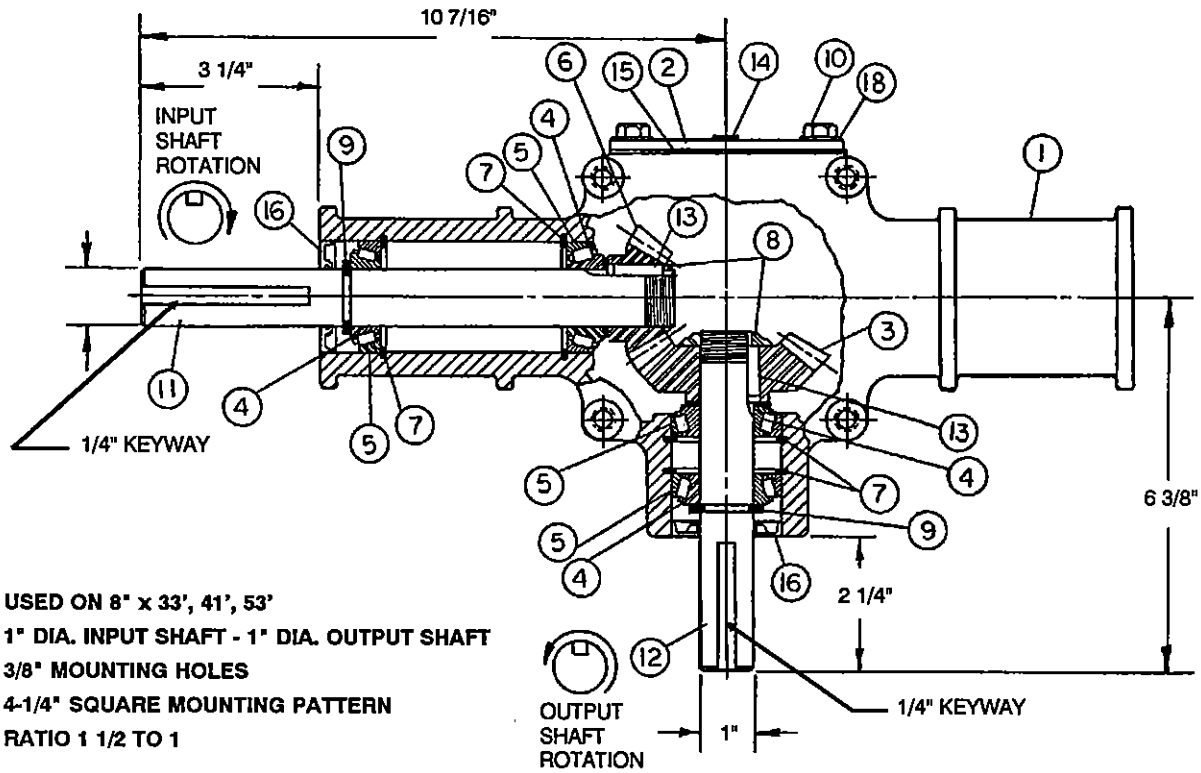


REF. NO.	DESCRIPTION	HUTCHINSON PART NO.	FULTON PART NO.
1	Handle Assembly	41595	2461S01
2	Cable Clamp		
3	Lock Washer & Nut	Cable Keeper	Cable Keeper
4	Carriage Bolt	Kit 41600	Kit 5621S01
5	Lock Nut 5/16" - 18 Hex		
6	Ratchet Spacer	Ratchet Kit	Ratchet Kit
7	Ratchet Spring	40836	6730S00
8	Ratchet Paul		
9	Hex Head Shoulder Bolt 5/16" - 18		
10	Brake Disc Kit	41596	1558S00
11	Input Shaft		
12	Lock Nut 1/2" - 13 Hex		
13	Spacer	Input Shaft	Input Shaft
14	Bushing	Kit	Kit
15	Shaft Brake Disc	41597	1563S01
16	Ratchet Gear		
17	Pinion & Disc Assembly		
18	Hex Lock Nut 1/2" -13	*	*
19	Drum Assembly	**	**
20	Frame	**	**
21	Hex Head Capscrew 1/2" - 13 - 5 3/4"	*	
22	Drum Spacer	**	**
23	Hex Head Capscrew 3/8" - 16 - 5 3/4"	*	
24	Frame Spacer	**	**
25	Hex Lock Nut 3/8" - 18	*	*
26	Handle Label	2169A1	**

*** Indicates standard hardware items - purchase locally.**
**** These items are not available as separate parts because of the precision assembly required. If these parts require replacement, a new winch unit is recommended.**

PARTS LIST

D GEARBOX COMPONENTS FOR GEARBOX 1003336



USED ON 8" x 33', 41', 53'
1" DIA. INPUT SHAFT - 1" DIA. OUTPUT SHAFT
3/8" MOUNTING HOLES
4-1/4" SQUARE MOUNTING PATTERN
RATIO 1 1/2 TO 1

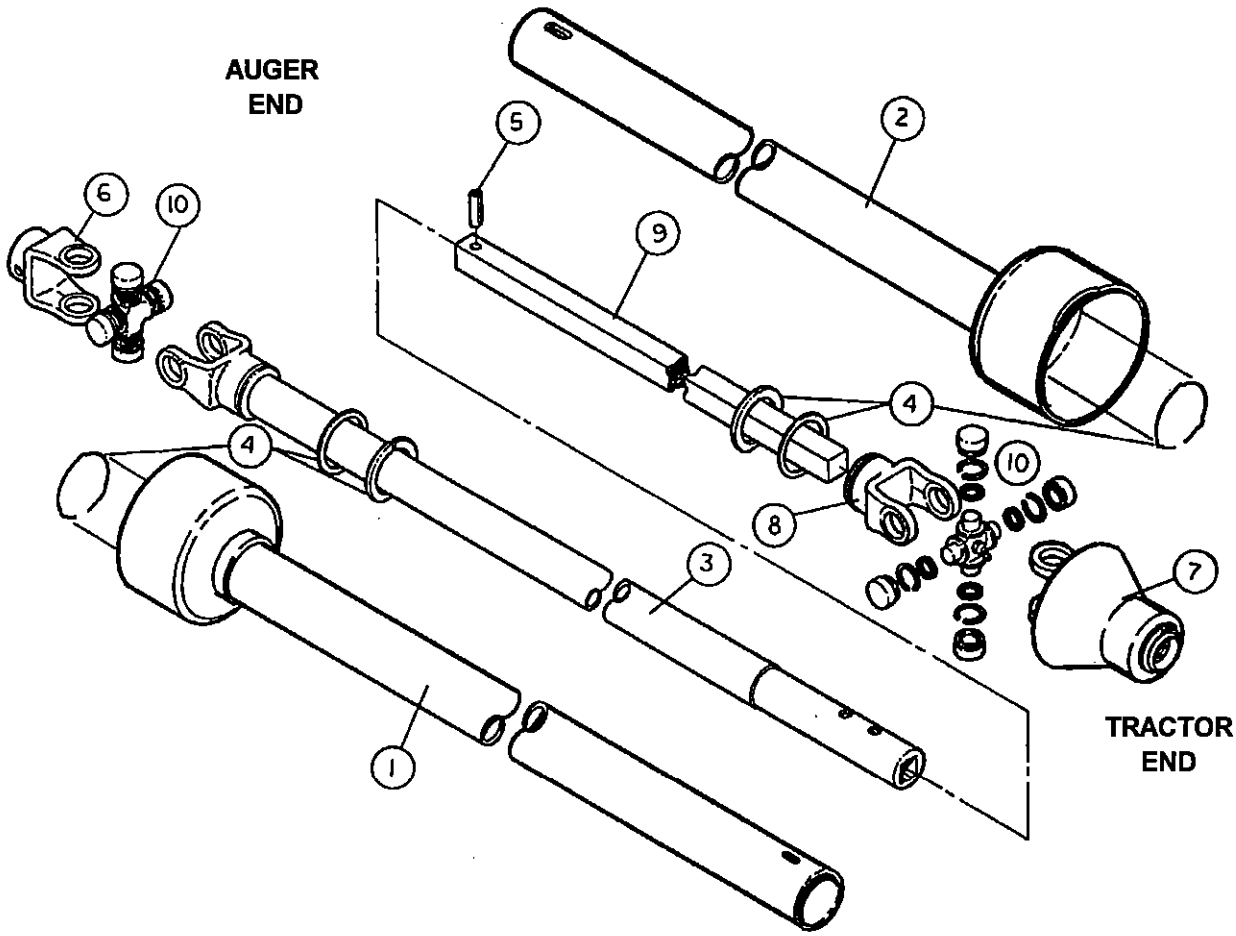
REF. NO.	QTY. REQ'D.	PART NO.	DESCRIPTION
1	1	1002349	Housing
2	1	837062	Cover
3	1	837223	Forged Bevel Gear 24 Tooth
4	4	837019	Brg. Cone L44643
5	4	837020	Brg. Cup L44610
6	1	837224	Forged Bevel Gear 16 Tooth
7	4	837067	Snap Ring
8	2	837130	Stake Nut 1 - 18 Thd.
9	2	837069	Snap Ring
10	4	4701-1	Bolt (5/16" x 3/4" HHCS Gr. 5)
11	1	020324	Input Shaft
12	1	1006591	Output Shaft
13	2	837228	Key 3/16" Square x 3/4" long
14	2	020009	Level Plug
15	1	837072	Gasket
16	2	837013	Seal
17*	1	035916	Vent Plug 1/4" Sq. Head
18	4	33144	5/16" Lock Washer

*** Not Shown**

PARTS LIST

E PTO DRIVELINE

MANUFACTURED BY G & G



COMPLETE PART NO. 1005256
USED ON AXLE MOUNTED (BELT) PTO DRIVE ONLY
U-JOINT TYPE - 12N
PIN STOP TYPE STYLE DRIVELINE
AUGER END 1" BORE WITH TWO SETSCREWS AND 1/4" KEYSEAT
TRACTOR END 1 3/8 - 6B SPLINE

REF. NO.	PART. NO.	DESCRIPTION
1	41953	Inner Plastic Shield with large bell
2	41954	Outer Plastic Shield with large bell
3	40665	12N Torque Tubing Weldment x 28-3/8" long With Slip Sleeve and Half Yoke
4	40554	Bearing Shield Kit
5	40537	Roll Pin (5/16" x 1-1/4" long)
6	1005257	12N Half Yoke
7	41955	"Quick Disconnect" 12N Half Yoke Assembly
8	40533	12N Bar Weld Yoke
9	40534	Rectangular Shaft (1" x 1-1/8" x 22-3/4" long)
10	40515	U-Joint Cross (Repair Kit)
--	40555	Danger Decal

Hutchinson/Mayrath/TerraTrack
*A Division of **GLOBAL** Industries, Inc.*

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