10” UTILITY AUGERS

OWNER’S & OPERATOR’S MANUAL

Effective April 21, 2009 **Publication No. 1034929**

MODEL NO’S.

F10110U
F10160U
F10210U
F10310U
F10410U

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

Hutchinson/Mayrath • P.O. Box 629 • Clay Center, KS. 67432
Ph. 785–632–2161 • Fx. 785–632–5964 • Toll Free 800–523–6993
www.hutchinson-mayrath.com

Hutchinson/Mayrath

*A Division of **GLOBAL** Industries, Inc.*

POLICIES AND PROCEDURES

Prices: Prices in effect at time of shipment will apply. Prices are subject to change without notice. All prices are F.O.B. Clay Center, Kansas. Orders shipped from locations other than Clay Center, Kansas will be subject to additional charges, such as back freight and/or additional freight.

Service Charge: A service charge will be assessed for all past due balances as permitted by state law not to exceed 1-1/2% per month.

Minimum Order: Processing and handling costs necessitate a minimum charge of $15.00 net on all orders.

Back Orders: Back orders will be shipped as they become available. Contact Hutchinson/Mayrath Customer Service for alternative shipping options or if cancellation is desired.

Damaged Goods: It is the consignee's responsibility to check all shipments thoroughly upon receipt of goods. If any damage is discovered, it must be noted on the freight bill of lading before signing. The consignee must make necessary claims against the respective freight line. All damage claims must be submitted within 30 days of delivery receipt.

Shortages: All shortages must be noted at time of delivery. Shortages must be noted on the freight bill of lading before signing. Hutchinson/Mayrath must be advised of all concealed shortages upon discovery. Once notified of concealed shortages Hutchinson/Mayrath will advise corrective action to be taken.

Return of Goods: All returns must be approved by Hutchinson/Mayrath prior to shipment. All return requests will be issued a return authorization number. NO RETURNS WILL BE ACCEPTED WITHOUT A RETURN AUTHORIZATION NUMBER AND PRIOR AUTHORIZATION FROM THE FACTORY. All returns must be shipped prepaid. A 15% restocking charge will be applied to all returned merchandise. Custom Products may not be returned for credit. Only current products in new and salable condition may be returned. No safety devices may be returned for credit.

Modifications: It is the policy of Hutchinson/Mayrath to improve its product whenever possible and practical to do so. We reserve the right to make changes, improvements and modifications at any ti me without incurring the obligation to make such changes, improvements and modifications on any equipment sold previously.

Limited Warranty: (a) For a period of (1) year after receipt of goods by the original consumer buyer, Hutchinson/Mayrath will supply free of charge replacement parts for parts that prove defective in workmanship or material. Defective parts must be returned freight prepaid to a specified Hutchinson/Mayrath location. Only Hutchinson/Mayrath 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 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.
(3) Unauthorized alternations of goods.
(4) Goods operated when obviously in need of repair.
(5) Use of unauthorized repair parts.
(6) Irresponsible operation.
(7) Used to handle materials other than free flowing, nonabrasive and dry materials, as intended.
(8) Damaged through abusive use or accident.

Limitation of Liability: BUYER AGREES THAT IN NO EVENT SHALL HUTCHINSON/MAYRATH HAVE LIABILITY FOR DIRECT DAMAGES THE EXCESS OF THE CONTRACT PRICE OF THE GOODS IN RESPECT OF WHICH CLAIM IS MADE. BUYER FURTHER AGREES THAT IN NO EVENT SHALL HUTCHINSON/MAYRATH ON ANY CLAIM OF ANY KIND HAVE LIABILITY FOR LOSS OF USE, LOSS OF PROFITS, OR FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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 **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 the symbol when a warning is given, be alert to the possibility of personal injury or death.

BE ALERT!

YOUR SAFETY IS INVOLVED

SAFETY DECALS

Check to ensure all Safety Decals are present and in good condition. If a decal cannot easily be read for any reason, or has been painted over, replace the decal immediately. Safety decals are offered free of charge, and can be ordered through your Hutchinson/Mayrath dealer.

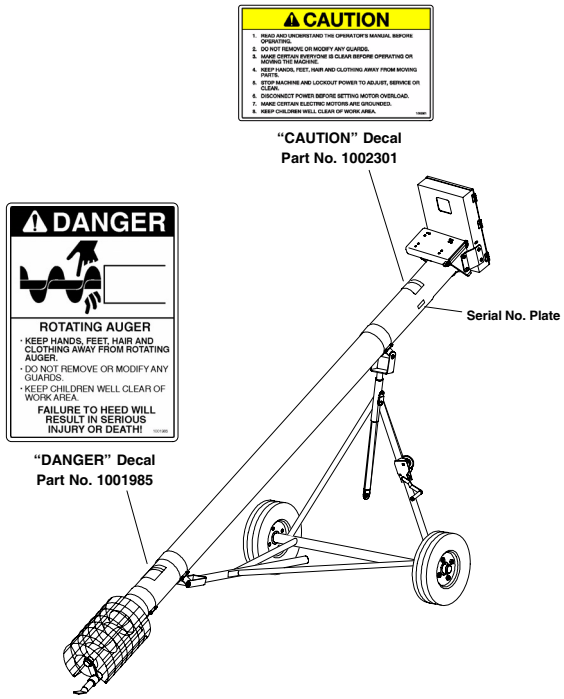


TABLE OF CONTENTS

General Safety Statements 1

Safety Symbol 1

Operator Qualifications 3

Sign-Off Sheet 3

Machine Inspection 3

Designated Work Area 4

Operating Instructions 4-8

- Electric Motor Drive Information 4-5
- Flight Speed Information 5
- Break-In Information 6
- Start-Up 6
- Full Load Operation 7
- Shutdown 7
- Lockout 7
- Clean-Up 7
- Trouble Shooting 8

Assembly Instructions 9-11

Safety Signs P-1

Parts List ..... P-2 to P-3

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 means of contact. The serial number plate is located on the incline tube.

Right and Left Designation

When referencing the left, right, front or rear of the unit, it is always determined by standing at the inlet end of the auger and looking towards the discharge end.

OPERATOR QUALIFICATIONS

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.

Operation of this auger shall be limited to competent and experienced persons. In addition, anyone who will operate or work around an auger must use good common sense. In order to be qualified, the operator 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 this auger. It is your responsibility to know what these regulations are in your 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 safe operation and servicing of all equipment which the employee is, or will be involved with.”*
3. Unqualified persons are to stay out of the work area. See page 11.
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.
2. Check all safety signs and replace any that are worn, missing or illegible. They are listed in the parts section. Safety signs may be obtained from your Dealer or ordered from the factory.
3. Are all fasteners tight?
4. Are all belts properly adjusted? (See Maintenance Section.)

GENERAL INFORMATION

DESIGNATED WORK AREA

Before starting the auger, a designated work area should be established around it.

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

It shall be the duty of the operator to see that children and/or other persons stay out of the work area! 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 the operator to see that the work area has secure footing, is free of debris and tools that may cause accidental tripping or falling. It shall also be their responsibility to keep the work area clean and orderly during the operation.

OPERATING INSTRUCTIONS

Utility Augers are primarily designed as portable units.

They are not designed for permanent installations and are not available in special lengths. Whenever you are selecting an auger for permanent installation, we recommend the Custom-Built Distributing Auger.

A utility auger has many and varied uses. Since it is not sold with an undercarriage or other means of support as standard equipment, it must be supported by the user adequately for the particular job to be done.

Always be sure to fasten the discharge end and intake end in place so the auger will remain in position during operation.

NOTE: An optional undercarriage is available.

WARNING! Make certain everyone is clear before operating the machine.

ELECTRIC MOTOR DRIVES

Always use a motor with required H.P. suggested in the chart on page 5. Use a 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.

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.

WARNING! A main power disconnect switch that can be locked in only the "OFF" position shall be provided. This shall be locked whenever work is being done on the auger.

The reset and starting controls must be located so that the operator has full view of the entire operation.

***Do Not* enter the grain bin unless all power driven equipment has been shut down and locked out.**

Make certain electric motor is grounded.

Disconnect power before resetting motor overloads.

Shut off power and lockout whenever cleaning or servicing the auger.

The horsepower recommendations are based on clean, dry shelled corn or wheat. High moisture grain (above 15%) will require greater power. The maximum possible capacity will be less with high moisture grain than with dry grain. Use chart on next page to determine size of motor required.

ELECTRIC MOTOR DRIVES - CONT.

HORSEPOWER REQUIREMENT

Auger Length	11'	16'	21'	31'	41'
Electric Motor	3 h.p.	5 h.p.	5 h.p.	7.5 h.p.	10 h.p.

***For higher moisture grain (up to 25%) the next larger motor may be used as a maximum.**

FLIGHT SPEED INFORMATION

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

1. If the flight speed is too fast, excessive wear will result. (See chart below.)
2. If the flight speed is too slow and the auger flighting is permitted to "load-up", high torque will be required to turn the auger flighting, and damage to the auger can result. Control the amount of grain fed into the auger inlet. (See chart below.)

WARNING! Disconnect power before resetting motor overloads. Make certain electric motor is grounded.

Model	*Motor Pulley Dia.	Drive Pulley Dia.	Recomm. Auger Speed	Max. Auger Speed	Min. Auger Speed
10" Utility Auger	3.0"	15"	350 rpm	450 rpm	300 rpm

***Motor pulleys are not furnished with the auger.**

START-UP

It is important to be familiar with the following routine operation procedures before attempting start-up.

During the operation of the auger, one person shall be in a position to monitor the operation. Inspect the drive before adding power and know how to shut down in an emergency. (See page 7.)

Visually inspect the auger periodically during operation. For efficient and safe operation, be aware of all the adjustments and checks which should be performed.

WARNING! Make certain everyone is clear before operating equipment.

The operator shall be aware of any unusual vibrations, noises and the loosening of any fasteners.

Keep all safety shields and devices in place.

Keep hands, feet and clothing away from moving parts.

Shut off power and lockout whenever cleaning, adjusting or servicing the auger.

BREAK-IN INFORMATION

Any screw conveyor when it is new or after it sets idle for a season should go though a “break-in” period.

Never operate the auger when empty for any length of time, as excessive wear will result. If at all possible do not stop or start the auger under load, especially before the flight and tube become well polished, as this may cause the auger to “freeze-up”.

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

1. If the flight speed is in excess of what is recommended, excessive wear will result.

2. If the flight speed is slow and the auger flighting is permitted to “load up”, high torque will be required to turn the auger flighting and damage to the auger can result. Control the amount of grain fed into the auger. An optional control gate is available for this purpose.

WARNING! Make certain everyone is clear before operating equipment.

During the initial start-up and break-in period, the operator shall be aware of any unusual vibrations, noises and the loosening of any fasteners.

Keep all safety shields and devices in place.

Keep hands, feet and clothing away from moving parts.

OPERATING CAPACITIES

The results or capacities of screw conveyors or augers can vary greatly under varying conditions. Different materials, moisture content, amount of foreign matter, methods of feeding and speed all play a role in the performance of the auger. Twenty-five (25%) moisture could cut capacity back by as much as 40% under some conditions.

FULL LOAD OPERATION

WARNING! Observe work area restrictions.

Make certain everyone is clear before operating equipment.

TO START AUGER

1. Start electric motor before conveying grain.

TO STOP AUGER

1. Allow the auger to empty before stopping.
2. Shut off electric motor and lockout.

SHUTDOWN

A. NORMAL SHUTDOWN

Permit the auger to clean out before stopping the unit. Before the operator leaves the work area, the power source shall be locked out.

B. EMERGENCY SHUTDOWN

Should the auger be immediately shutdown under load, disconnect and lockout the power source.

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

Reconnect power source and clear auger gradually.

WARNING! Whenever you must service or adjust your equipment, make sure to stop the motor and lockout the power source.

LOCKOUT

If the operator must leave the work area, or whenever servicing or adjusting, theutility auger must be stopped and the power source turned off and locked out.

IMPORTANT: Use a main power disconnect switch capable of being locked only in the "Off" position. This is what "shutdown and lockout" refers to, shut off main power source and lock the handle or breaker switch in the "Off" position.

Precaution should be made to prevent anyone from operating the auger when the operator is absent from the work area.

CLEAN-UP

1. Check to see that all guards listed in the assembly instructions are in place and secured and functional.
2. Check all safety signs and replace any that are worn, missing or illegible. The safety signs are listed in the parts section of this manual. Safety signs may be obtained from your dealer or ordered from the factory.
3. Are all fasteners tight?

TROUBLE SHOOTING

AUGER VIBRATION

Driving belt may be over tightened, putting head stub and flight in a bind. 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.

LOW CAPACITY

The auger may not be getting enough grain.

Check to make sure the intake has not bridged over, restricting flow.

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

Check auger speed. Speeds slower than the recommended speed will result in low capacity.

AUGER PLUGS

The auger may be getting too much grain, causing "jamming" inside the housing.

The motor may be too small or wired improperly. (See HP requirements, page 5.)

If wet grain or other hard-to-move material is being augered, use a larger size motor than recommended for normal use. (See footnote to HP chart, page 5.)

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.

10" x 11' x 16', 21', 31' and 41' UTILITY AUGERS

The instructions below show a reference number in parenthesis ( ), this number refers to the item shown in the assembly illustration on Page 9.

It is recommended to read through the instructions first, before attempting assembly. This will help you become familiar with the assembly procedures as well as what tools/materials you may need.

The 31' and 41' models use a two section flight and housing with a connecting band, otherwise assembly is the same for all models.

All Models

1. Bolt the 9" long tail stub (1) into the intake end of the flight and bolt the 10 1/2" long head stub (2) into the discharge end of the flight. Secure each stub using two 1/2" x 2 1/2" bolts and nylon locknuts (head stub is 11 1/2" long f/41' models)

   11', 16' & 21' Models continue to Step 2. Continue with the following for 31' & 41' Models, then go to Step 2.

31' & 41 Models

After securing the intake and head stubs outlined in Step 1, slide the connecting band (3) onto the lower housing section (4) and connect the upper flight section to the stub welded onto the end of the lower flight section using two 1/2" x 2 1/2" bolts and nylon locknuts.

Make sure housing sections are tight against each other and secure housings with the connecting band (position connecting band so half of band is on each section of housing).

Tighten the connecting band bolts to 25 ft. lbs. Once bolts are tight, recheck all previous bolts to verify they are tight. **Even though they were tight when they were initially torqued, the previuosly tightened bolt will still have a tendency to become loose as the bolt next to it is tightened and so on. Recheck, tighten and recheck again to ensure they are tight.**

All Models

2. Attach the four-hole flanged bearing (5) to the head plate (6) as shown on Page 9. Secure the bearing using four 1/2" x 1 1/2" bolts, lock washers and non-lock nuts (the bolt heads will be on the inside of the plate, the angles on the plate will face towards the intake end of the auger).

   Slide the bearing and head plate onto the head stub and secure the head plate to the housing flange using eight 3/8" x 1 1/2" bolts and nylon locknuts.

3. Tighten the bearing lock collar (tighten by rotating the collar until it seats on the bearing ring, then lightly tap the collar in the direction of shaft rotation to lock collar into place, tighten set screws.

4. Attach the motor mount support plate (7) and belt guard brackets (8) to the sides of the head plate using four 1/2" x 1 1/2" bolts, lock washers and non-lock nuts (the guard brackets will be positioned on the outside of the support plate, use back set of holes in the support plate for mounting).

5. Thread a 3/4" nut (9) onto the threaded rod (10) until the nut contacts the head of the rod. Install the rod into the nut welded on the support plate until the rod is all the way down.

6. Attach the motor mount plate (11) to the support plate using the 3/4" dia. x 14 5/8" long pivot pin (12) and two cotter pins (13).

7. Slide the intake assembly (14) onto the end of the housing while guiding the flight stub through the tail bearing. **Do Not slide the intake guard on so far that the auger flight contacts the tail bearing. Leave at least 1/2" of clearance between the flight and the tail bearing.**

   Secure intake guard to housing using the half-bands (19) and 3/8" x 1 1/2" bolts and non-lock nuts.

8. Attach the belt guard (15) to the brackets previously installed on the support plate. Use four 5/16 x 1" bolts, flat washers, lock washers and non-lock nuts to fasten the guard to the brackets (use the top set of slotted holes in the guard for mounting).

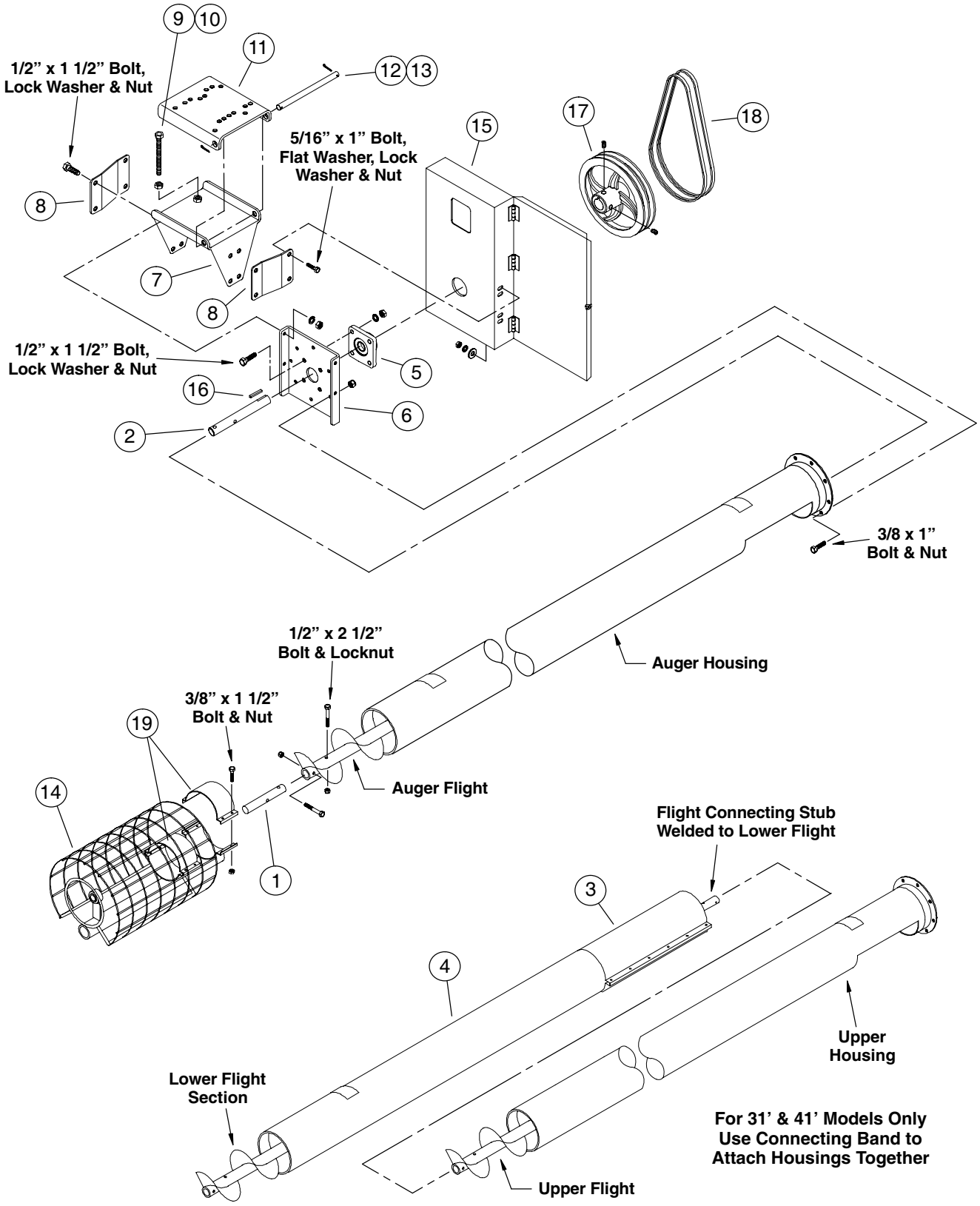
9. Install the 3/8" x 3" key (16) into the keyway on the end of the head stub. Slide the sheave (17) onto the stub until it is as close as possible to the head bearing lock collar without actually touching the collar. Tighten the set screws to secure sheave into place.

10. Use the chart on Page 10 to determine mounting location for the electric motor **(the motor pulley, the motor and its mounting hardware are not furnished).**

    Install the motor and pulley and align the pulley and sheave by placing a straight edge along the face of both.

    Install the belts (18) and using the threaded adjustment rod, tighten the belts. Once belts are tight, use the 3/4" nut to lock adjustment rod into place (belts should have approximately 1/2" of deflection when firmly pressed in the center of the span). **Do Not overtighten the belts, as damage to the auger components can occur.**

10” x 11’ x 16’, 21’, 31’ and 41’ UTILITY AUGERS

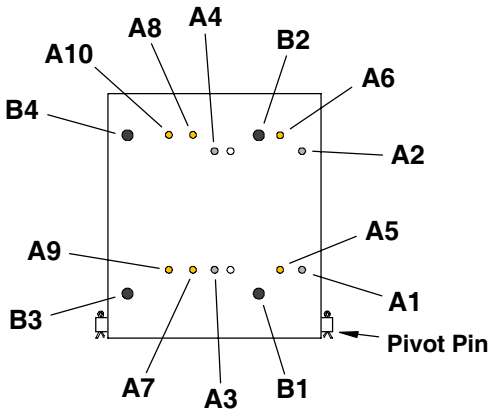


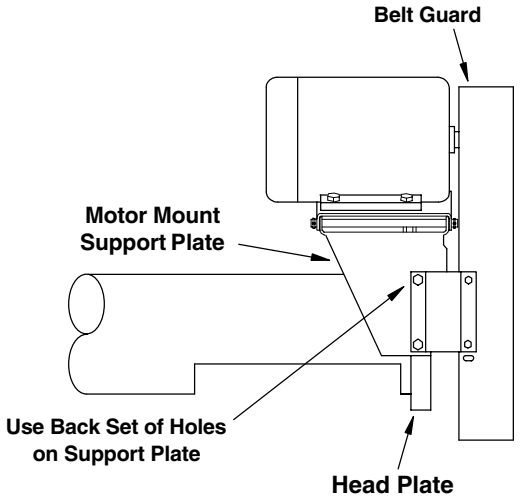
MOTOR MOUNT LOCATIONS

10" x 11', 16' 21' 31' & 41' UTILITY AUGERS

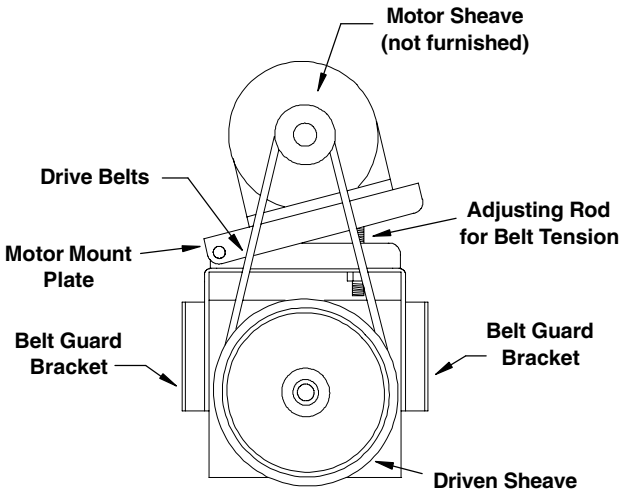
Motor Mount Location Chart

Motor Size HP	Motor Frame Size	Bolt Dia. Req'd.	Mount in Holes Marked (•)													
			A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4
5 hp	184T	3/8"	•	•	•	•										
7.5 hp	213T	3/8"					•	•	•	•						
10 hp	215T	3/8"					•	•			•	•				
15 hp	254T	1/2"											•	•	•	•





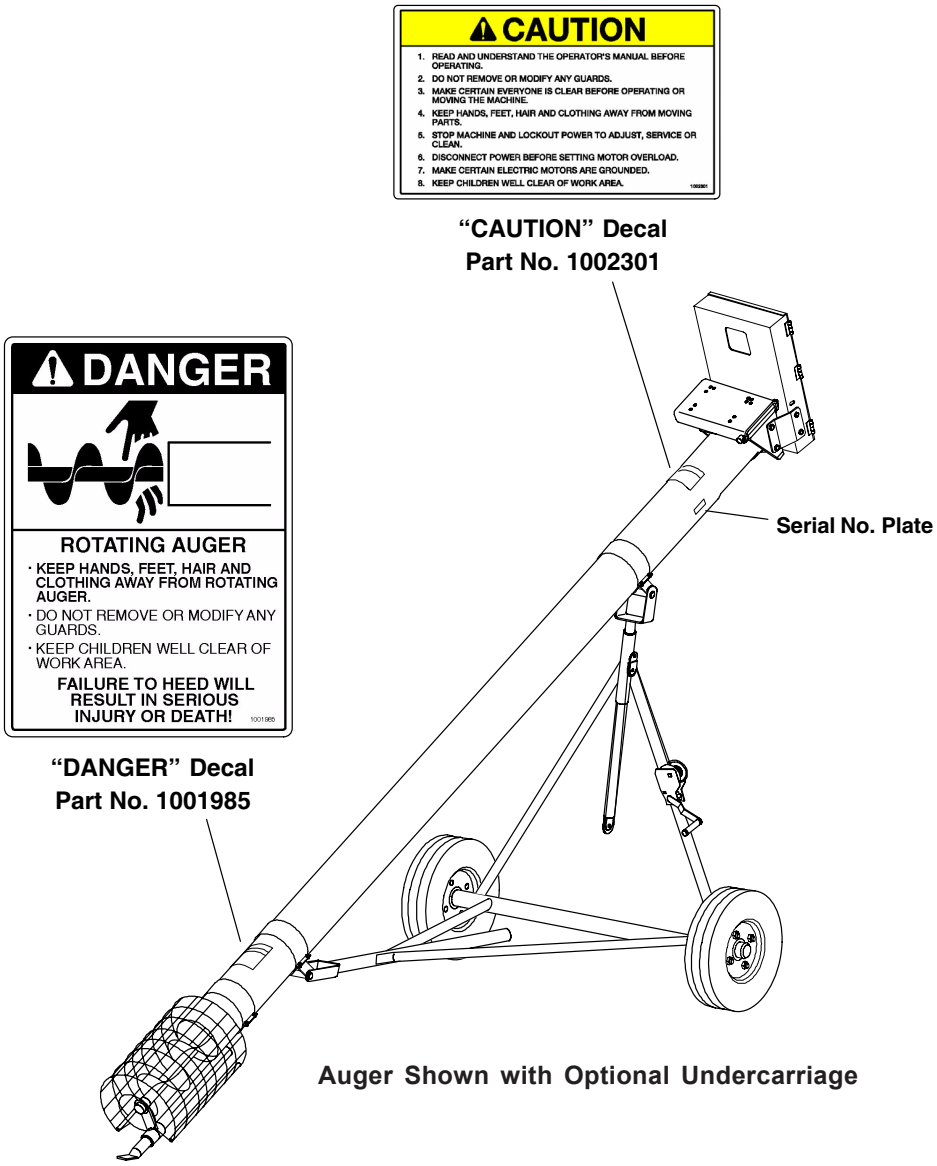
Side View
Shown as Reference Only



Front View
Shown as Reference Only

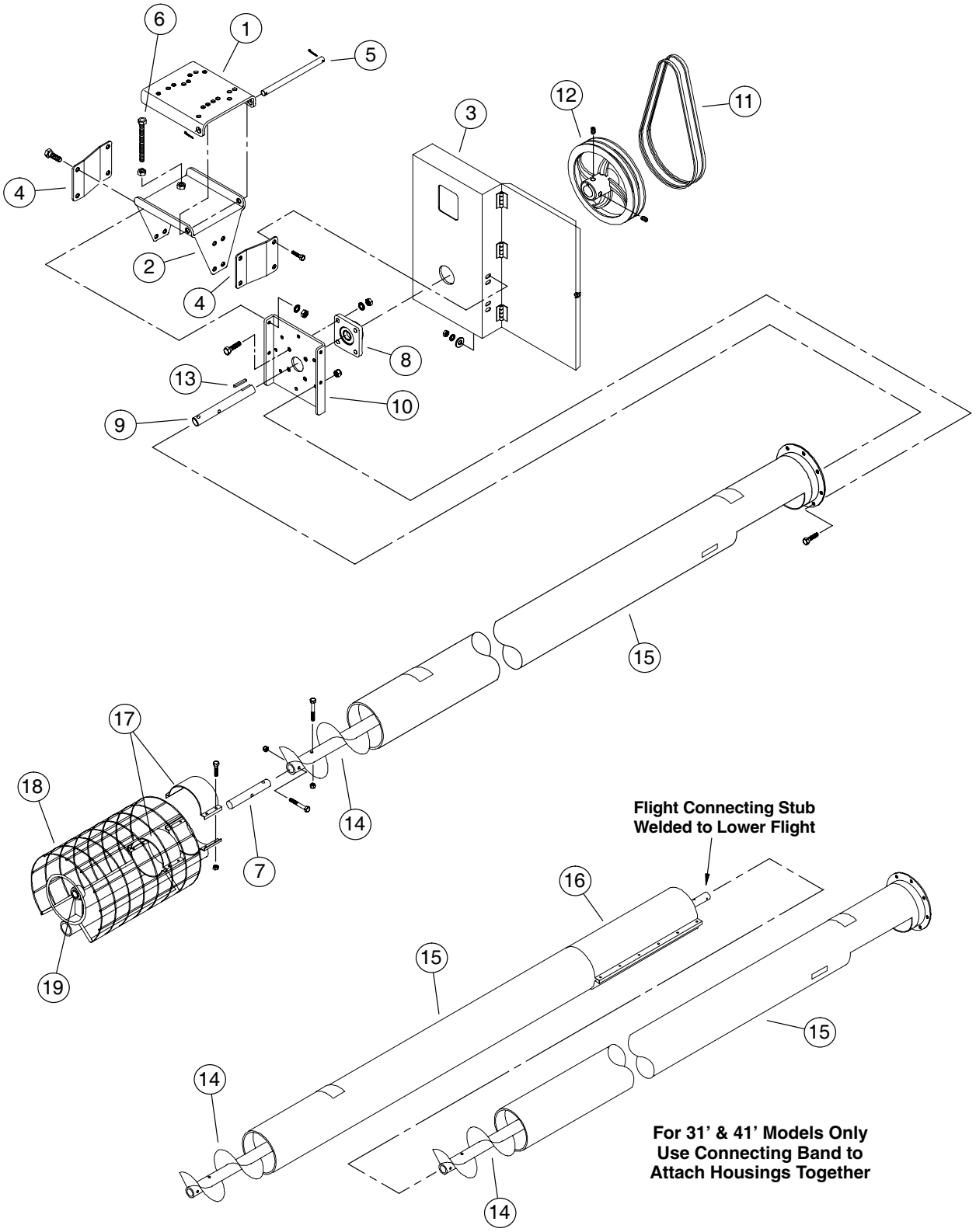
SAFETY SIGNS AND DECALS

Check all safety signs and replace any that are worn, missing or illegible. The safety sign locations are shown below. Safety signs may be obtained from your dealer or ordered from the factory.



To ensure efficient and prompt service, please furnish us with the model and serial no. of your auger in all correspondence or other contacts. The serial no. plate is located on the right side of the housing, near the discharge end.

AUGER COMPONENTS
10” x 11’, 16, 21’, 31’ and 41’ UTILITY AUGERS



AUGER COMPONENTS

10” x 11’, 16, 21’, 31’ and 41’ UTILITY AUGERS

REF. NO.	PART NO.	DESCRIPTION
1	1022136	Motor Mount Plate
2	1022139	Motor Mount Support Plate
3	1009102	Belt Guard
4	1009099	Belt Guard Mount Bracket
5	1018789	Pivot Shaft (motor mount)
6	1022381	Adjustment Rod (motor mount)
7	1006A	Tail Stub, 1.50” x 9.50”
8	1010A	Bearing 1.50” bore, 4 hole flange
9	1040A	Head Stub, 1.50” x 10.50” (f/11’, 16, 21’ & 31’ Models)
(9)	1060D	Head Stub, 1.50” x 11.50” (f/41’ Models)
10	2141C	Head Plate
11	40122	Belt, B–62
12	40159	Sheave, 2B 15” w/1.50” bore (f/11’, 16’, 21’ & 31’ Models)
(12)	40162	Sheave, 3B 15” w/1.50” bore (f/41’ Models)
13	4073A1	Key, Square Drive, 3/8” x 3” long
14	1016905	Flighting for 11’ (10’-11” long, less stub)
(14)	1017443	Flighting for 16’ (15’-11” long, less stub)
(14)	1016003	Flighting for 21’ (20’-11” long, less stub)
(14)	1016003	Flighting, Upper, for 31’ (20’-11” long, less stub)
(14)	1016025	Flighting, Lower, for 31’ (10’ long, with stub)
(14)	1016003	Flighting, Upper, for 41’ (20-11” long, less stub)
(14)	1016045	Flighting, Lower, for 41’ (20’, with stub)
15	1015912-0F	Auger Housing, f/11’ (10’ long)
(15)	1015912-0L	Auger Housing, f/16’ (15’ long)
(15)	1015912-0R	Auger Housing, f/21’, 31’ & 41’ Upper (20’ long)
(15)	1015922-0F	Auger Housing, f/31’ Lower (10’ long)
(15)	1015922-0R	Auger Housing, f/41’ Lower (20’ long)
16	1012D	Connecting Band
17	5930A1	Half-Band, 4” wide
18	6331A1	Intake Guard (less half-band and bolts)
19	1051D	Bushing, 1 1/2” Bronze

Hutchinson/Mayrath

*A Division of **GLOBAL** Industries Inc.*

Hutchinson/Mayrath • P.O. Box 629 • Clay Center, KS. 67432
Ph. 785–632–2161 • Fx. 785–632–5964 • Toll Free 800–523–6993
www.hutchinson-mayrath.com