

8" ROOF AUGER

OWNER'S & OPERATOR'S MANUAL

Effective September 24, 2024

Publication No. 1028106

Model No's.

A08110RA - 8" x 11'

A08160RA - 8" x 16'

A08210RA - 8" x 21'

This manual also
includes CE Models



Original Instructions

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ROOF AUGER
INTENDED USE

This product is intended to provide the mechanical means to move grains or other commodities of similar physical size and properties from an inlet point on the hopper to a discharge point.

This unit is designed to run at flight speeds of 438 RPM's. The flight speed of the unit should not be altered from the way it has been initially provided.

Allowable capacities in bushels per hour (*metric tons per hour*) is also a factor of auger speed as shown in the table on page 8. Flow of the material being augered, must be regulated into the hopper so that it does not exceed the recommended capacity of the unit.

Any use other than specified in this paragraph is not recommended by the manufacturer.

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.

We suggest the implementation of a Safety Program for all personnel that includes, but is not limited to, the proper use of PPE (personal protective equipment), Fall Protection Systems and Lock Out-Tag Out procedures.

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

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.

SAFETY ALERT SYMBOL

The safety symbol shown is used throughout this manual to alert you to information about unsafe actions or situations, and will be followed by the word DANGER, WARNING, or CAUTION.

DANGER - Indicates immediate hazards that may result in severe injury or death. **WARNING** - Indicates unsafe actions or situations that may cause severe injury, death and/or major equipment or property damage. **CAUTION** - Indicates unsafe actions or situations that may cause injury, and/or minor property damage.

Watch this symbol - it points out important safety precautions. It means - **ATTENTION! Become alert! Your safety and the safety of others is involved!** Read the message that follows the symbol when a warning is given, be alert to the possibility of personal injury or death.

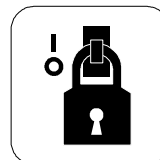


Operate Electric Motor(s) Properly

Do not operate electric motor equipped units until motor(s) are properly grounded.

Know how to "Shutdown and Lockout" the power source. Shutdown and lockout power source before performing any service, maintenance or adjustments to the unit.

Disconnect power on electrical driven units before resetting motor overloads.



Lockout / Tagout



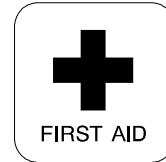
Electric Shock Hazard

Prepare for Emergencies

Keep emergency numbers for doctors, ambulance service, hospital and fire department near your telephone.

Keep a first-aid kit and fire extinguisher handy.

Be prepared if a fire starts



First Aid Equipment



Fire Extinguisher

Follow Safety Instructions

Carefully read all safety messages in this manual and safety signs on your machine. 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 or directly from the factory.

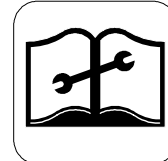
Learn how to operate the machine and how to use controls properly.

Keep your machinery in proper working condition. Understand service procedures before doing work. Never lubricate, service or adjust machine while it is in operation.

Keep work area clean, dry and free from of all debris and tools which may cause accidental tripping or falling.



Read and Understand Manual



Understand Service Procedures



Keep Work Area Clean

Wear Proper PPE (Personal Protective Equipment)

Some materials can create flying debris when they are filed, cut or drilled. Safety glasses should be worn at all times to protect your eyes from such debris.

Hearing protection should be worn when operating power tools or other power equipment that could be harmful to your hearing.

Gloves should be worn to protect your hands from sharp metal and plastic edges, as well as providing protection from the handling of heavy objects.

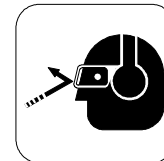
Wear steel toe boots to protect your feet from falling debris.

Wear a hard hat to help protect your head from falling objects as well as from accidental bumping.

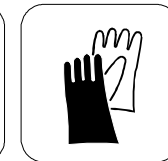
Use caution when working at elevations greater than four (4) feet (1.22 m) above the ground.

Use the appropriate fall protection equipment as set forth by OSHA guidelines and regulations.

A respirator may be needed to prevent breathing potentially toxic fumes and dust, especially when working within a grain bin or storage structure.



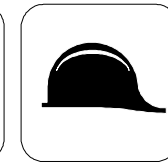
Eye & Hearing Protection



Gloves



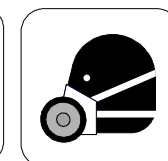
Steel Toe Boots



Hard Hat



Fall Protection

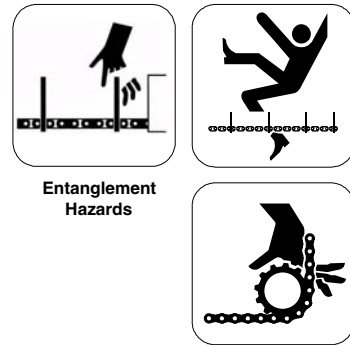


Respirator

SAFETY

Stay Clear of Moving Parts

Keep all shields, covers and safety devices in place at all times. Entanglement in moving chains, rotating impeller arms and sprockets will cause serious injury or death. Wear close fitted clothing. Keep hands, feet and clothing away from moving parts. Shutdown and lockout power source before making adjustments, cleaning or maintaining the equipment.



GRAIN BIN SAFETY

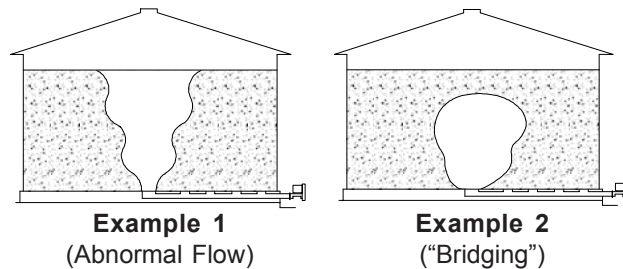
The Roof Auger is generally designed to transfer grain from the hopper into grain bins from atop the structure. **Be aware of the dangers inherent in grain bins.** Consult the grain bin manufacturer's manual for information on the proper loading and unloading of the bins, structural stress analysis, adequate venting and important safety information.

▲ DANGER

WARNING! Do Not enter the bin if the grain has "Bridged" or has not flowed normally out of the bin, See Example's 1 & 2. The grain may suddenly break loose and bury resulting in suffocation.

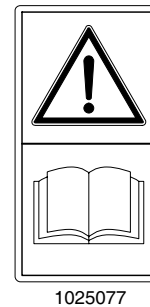
▲ DANGER

Do Not enter the bin unless all power driven equipment has been shut down and locked out. Never enter the bin unless monitored by another person.



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 or directly from the factory. Refer to the Parts List Section for decal Part No's. and location of decals on components.



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 equipment shall be limited to competent and experienced persons. In addition, anyone who will operate or work around a conveyor must use good common sense. In order to be qualified, he 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 conveyor. 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 with which the employee is, or will be involved." *

3. Unqualified persons are to stay out of the work area. See Page 8.
4. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine.
5. Persons operating, servicing or repairing equipment that requires above ground work shall be properly secured with the use of "fall protection" equipment as set forth by OSHA guidelines and regulations.

*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 conveyor. We include this sign off sheet for your convenience and personal record keeping.

<i>Training Sign-Off Sheet</i>		
Date	Employer Signature	Employee Signature

RIGHT and LEFT DESIGNATION

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

MACHINE INSPECTION

Our augers are well made and we are proud of 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.

After delivery of your new auger/conveyor and/or completion of assembly and before each use, inspection of the machine is mandatory. The auger/conveyor should be frequently checked and serviced to operate freely. Use the assembly instructions in this manual as a reference to determine that the conveyor is assembled properly. This inspection should include, but not be limited to:

1. Check to see that all shields listed in the assembly instructions are in place, secured and functional.
2. Check all safety signs (decals) and replace any that are worn, missing or illegible. Safety signs may be obtained free of charge from your dealer or ordered from the factory.
3. Check **all** fasteners; nuts, bolts, set screws etc. for tightness.
4. Are drive belts properly adjusted and damage free (See Maintenance Section).

GENERAL AUGER INFORMATION

WARNING! Use caution when working in areas above the ground. Persons operating, servicing or repairing equipment that requires above ground work shall be properly secured with the use of "fall protection" equipment as set forth by OSHA guidelines and regulations.



Metal buildings, scaffolding and other types of work surfaces can become slippery, especially when surfaces are wet and/or oily. This can create hazardous working conditions. Use caution when working, climbing or walking on these surfaces.



- Inspect the drive before adding power and know how to **shutdown** in an emergency (See Page 8).
- During operation of your auger, one person shall be in a position to monitor the operation.
- Visually inspect the auger periodically during operation, be aware of all adjustments and checks which should be performed.
- Obtain any needed replacement parts from your dealer and install **before** using the machine.

General Information (con't.)



WARNING! During 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 shall have a full view of the conveyor work area and check that all personnel are free from designated work areas before adding power.

- It is important to become familiar with the routine operating procedures before attempting start-up.

OPERATING CAPACITIES

Capacities of screw conveyors and augers can vary greatly under diverse conditions. Different materials, moisture content, amounts of foreign matter, methods of feeding and flight speed all play a role in the performance of the auger.

Maximum possible capacity will be less with high moisture grain (above 25%) than with dry grain. Twenty-five percent (25 %) moisture could cut capacity back by as much as forty percent (40%) under some conditions.

After initial break-in period, and with auger operating at recommended RPM, the 8" auger can achieve a capacity up to 2500 BPH (68 MTPH).

BREAK-IN INFORMATION

Any screw type auger when it is new or after it sits idle for a season should go through a "break-in" period. The hopper should be run at partial capacity until several hundred tons of grain have been augered to polish the flight and housing. Once this is accomplished, the hopper can be run at full capacity.

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

IMPORTANT: BEFORE FILLING BIN

Before filling the bin or storage structure with grain, make sure all slide gates on all wells are closed. If the gates are left open, the wells will fill with grain. Upon start-up, the unload auger would be **under load**, this can result in damage to the auger, the motor or both. Such damage would be considered abuse of equipment and will void the warranty.

ELECTRIC DRIVE POWER REQUIREMENTS



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).

Always use a motor with the required power recommended in the chart below. Use a 60 Hz motor that operates at 1750 RPM (50 Hz @ 1460 rpm’s).

Electric motors and controls shall be installed by a qualified electrician and must meet the standards set by the National Electric Code and all local and state codes.

A magnetic starter should be used to protect your motor when starting or stopping. It should stop the motor in case of power interruption, conductor fault, low voltage, circuit interruption and/or motor overload. The motor should then be restarted manually.

HP (kW) Requirements 8” Roof Auger

Auger Length ft. (m)	Motor HP (kW)
11’ (3.35 m)	1 1/2 hp (1.1 kW)
16’ (4.88 m)	2 hp (1.5 kW)
21’ (6.40 m)	3 hp (2.2 kW)

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.
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, this can result in damage to the auger. Use the center well slide-gate to control the amount of grain fed into the unloading tube.

Use a 3.0” (76 mm) motor pulley for a recommended auger speed of 438 RPM’s. **Motor pulleys are Not furnished with the auger.**

Auger speeds in excess of **600 RPM** should be avoided as excessive wear to the auger, its components and possibly to the motor can result.

Auger speeds below **425 RPM** require a flow control to restrict the amount of grain flowing into the intake. Low speeds can “load-up” the auger if the flow of grain is not controlled. High torque is required to turn the flighting if it becomes over-loaded, thus damage to the auger will occur.

An optional control gate is available for this purpose.

OPERATING PROCEDURES

DESIGNATED WORK AREA



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 all operator's to see that children and/or other persons stay out of the work areas. Trespassing into the work area by anyone not involved in the actual operation, or trespassing into a hazard area by anyone shall result in immediate shutdown by the operator.



It shall be the responsibility of the operator's to see that the work area has secure footing, is clean and free of all debris and tools which might cause accidental tripping, falling or other injuries.



It shall also be their responsibility to keep the work area clean and orderly during the operation.



Use caution when working in areas above the ground. Persons operating, servicing or repairing equipment that requires above ground work shall be properly secured with the use of "fall protection" equipment as set forth by OSHA guidelines and regulations.



Metal buildings, scaffolding and other types of work surfaces can become slippery, especially when surfaces are wet and/or oily. This can create hazardous working conditions. Use caution when working, climbing or walking on these surfaces.



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

Before starting the auger, a designated work area should be established and properly marked.

These areas shall be marked off with colored nylon or plastic rope or banners hung as portable barriers to define the designated work area.

All operator's shall know how to **shutdown and lock-out the equipment in the event of an emergency.**

ELECTRIC DRIVE

SHUTDOWN/LOCKOUT



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



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

Emergency Shutdown

Should the auger be immediately shutdown under load, stop the flow of grain into the auger and **disconnect and lockout the power source.**

Clear as much grain from the inlet and/or discharge end as you can.

When as much grain as possible has been cleared, reconnect the power source and clear the grain gradually (it may be necessary to start and stop the auger to gradually empty itself).

Never attempt to restart auger when full of grain. Starting the unit under load may result in damage to the unit, such damage is considered abuse and is not covered by warranty.

Normal Shutdown

Stop the flow of grain into the auger and let unit empty itself out before stopping. **Before the operator leaves the work area, the power source shall be locked out** (See "Lockout" below).

Intermittent Shutdown

When an auger is stopped and restarted under full load, it may result in damage to the auger and components. Therefore if intermittent operation is to be carried out, it is advisable to reduce the load level.

When kept from absolute filling, auger start-up is easier and operation more efficient.

Lockout

The power source for electric units shall have a main disconnect box that can be locked only in the "Off" position. That is what "shutdown and lockout" refers to - Shut off the main power source and **lock the handle or breaker switch in the "Off" position.**

START-UP INFORMATION



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

The operator shall be aware of any unusual vibrations or noises that would indicate the 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 entire auger work area and check that all personnel are clear of the designated work area before adding power.

Start the electric motor that operates the auger, then begin to gradually open the control gate so an adequate amount of grain flows into the auger hopper. **Do Not overload the motor by feeding too much grain into the hopper, damage to the auger and/or motor can occur.**

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 shutdown in an emergency (See Shutdown/Lockout). Visually inspect the auger periodically during operation.

FULL LOAD OPERATION



WARNING! Observe the work area restrictions.

Make certain everyone is clear of the area before operating the equipment.

To Start Auger

1. Start the electric motor before augering grain.
2. Open the control gate feeding the roof auger gradually until desired flow is established. **Do Not overload the auger. Starting the auger under load may result in damage to the auger.**
Always close the control gate and allow auger to empty before stopping.
3. Monitor all grain flow into the auger and be aware of any foreign materials that may cause restrictions or plugging.

To Stop Auger

1. Close the control gate to stop the flow of grain into the auger. **Allow auger to empty before stopping.**
2. Once auger has cleared, shut off electric motor and lockout the power source.



Do Not enter the bin if the grain has “Bridged” or has not flowed normally out of the bin, See Fig’s. 1 and 2. The grain may suddenly break loose and bury resulting in suffocation.



Do Not enter the bin unless all power driven equipment has been shutdown and locked-out.

Never enter the bin unless monitored by another person.

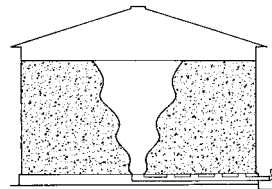


Fig. 1
(Abnormal Flow)

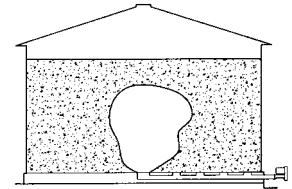


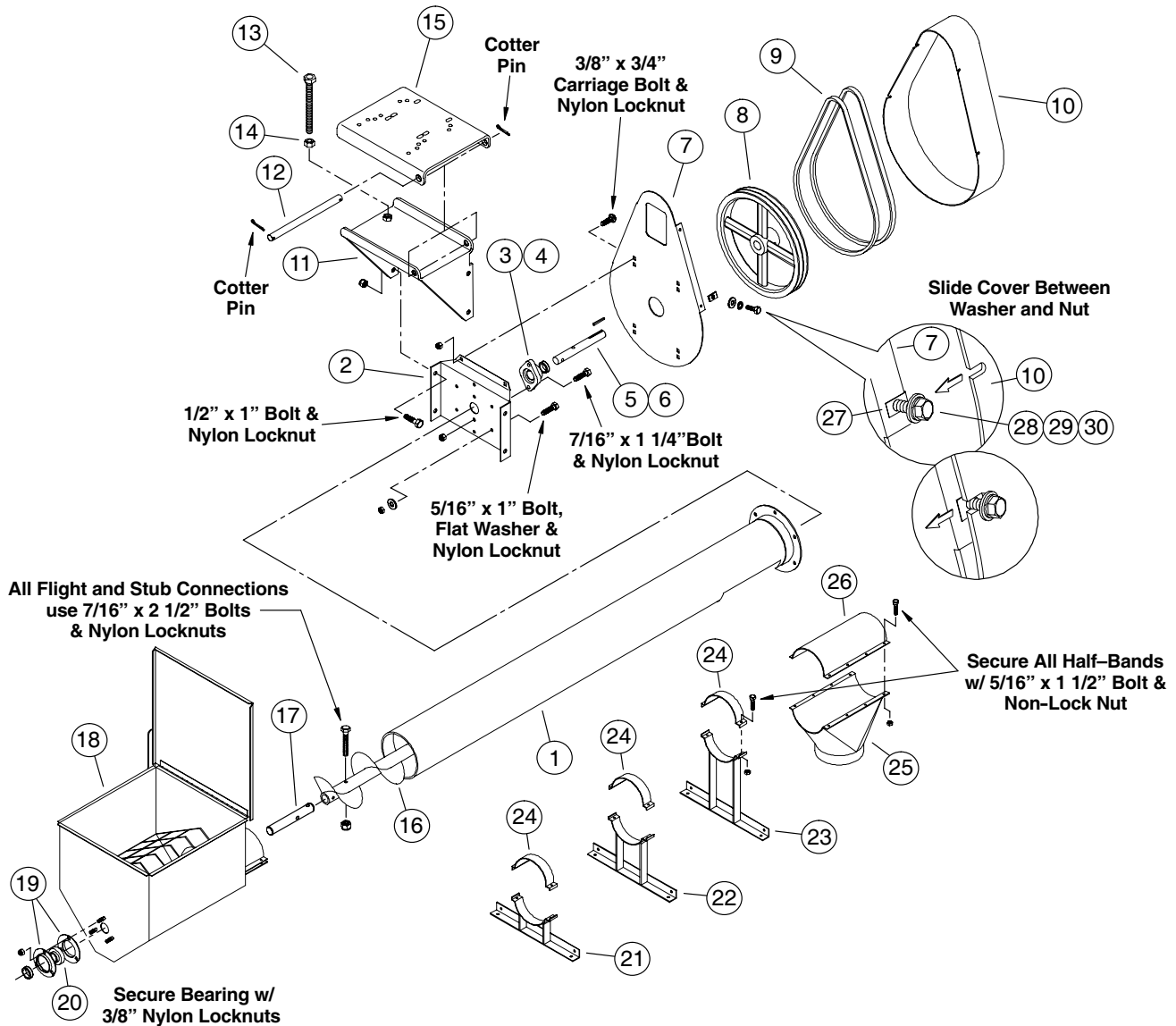
Fig. 2
 (“Bridging”)

ASSEMBLY PROCEDURES

8" ROOF AUGER (CE MODELS)

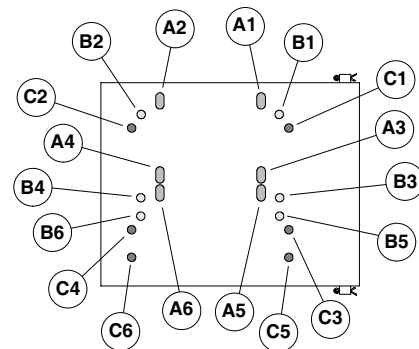
The assembly instructions will show a number in parenthesis (), this number refers to the item shown in the assembly illustration.

1. Bolt the head bearing (3) to the head plate (2) using two 7/16" x 1 1/4" bolts and nylon locknuts.
2. Install the head stub (5) into the end of the head flight (16) and secure using two 7/16" x 2 1/2" bolts and nylon locknuts.
3. Insert the head flight and shaft into the housing (1) and through the bearing (previously attached to the head plate). Make sure the lock collar (4) is on the shaft as well, but **Do Not** tighten the lock collar at this time.
4. Secure the head plate (2) to the flange on the housing (1) using eight 5/16" x 1" bolts, flat washers and non-lock nuts.
5. Attach the belt guard back (7) to the head plate using the four square holes in the belt guard that are farthest from the large round hole in the center of the guard.
Secure the belt guard back using four 3/8" x 3/4" carriage bolts and nylon locknuts.



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6. Install the 1/4" (6) key into the keyway on the end of the head stub. Slide the sheave (8) onto the shaft until the sheave is as close to the head bearing without contacting the bearing. Once properly set, tighten the lock collar and tighten the setscrews in the sheave.
7. Attach the motor mount support plate (11) to the head plate using four 1/2" x 1" bolts and nylon locknuts (make sure the bolts are on the inside with the nuts on the outside).
8. Thread a 5/8" nut (14) onto the threaded adjustment rod (13) until the nut contacts the head of the rod. Install the threaded rod into the nut welded on the support plate (11) until the threaded rod is all the way down.
9. Attach the motor mount (15) to the support plate using the 5/8" x 13 1/8" (16 mm dia. x 33.3 cm) long rod (12) and cotter pins provided.
10. Fasten the discharge spout (25) over the discharge opening. Secure in place using the back-band (26) and eight 5/16" x 1 1/2" bolts and non-lock nuts.
11. Attach the tail bearing (19) and retainers (20) to the three bolts welded on the lower rear side of the inlet hopper (18). Secure bearing and retainers using three 3/8" nylon locknuts.
12. Insert the tail stub (17) into the intake end of the flighting and secure using two 7/16" x 2 1/2" bolts and nylon locknuts.
13. Slide the hopper assembly (18) onto the intake end of the auger housing while positioning the tail stub through the bearing on the rear side of the hopper.
14. Use the roof auger support brackets (21, 22 & 23) to secure the auger assembly to the bin roof. Attach support brackets to auger using the half-bands (24) and 5/16" x 1 1/2" bolts and non-lock nuts.
15. Install the motor and the motor pulley [the 8" models use a 3" O.D. (89 mm O.D.) motor pulley]. Install the belts (9) around the sheave and motor pulley and tighten the belts using the 5/8" threaded adjustment rod. Once the belts are tight, use the 5/8" nut to lock the adjustment rod into place. Belts should have approx. 9/16" (14 mm) of deflection when firmly pressed in the middle of the span between the pulley and sheave.
16. Slide four tinnerman nuts (27) over the holes around the lip of the belt guard back (7). Slide a 1/4" lockwasher (28) and a 1/4" flat washer (29) onto each of the 1/4" x 3/4" bolts (30). **[Do Not tighten completely, leave about a 1/4" (7 mm) space between the washert and the nut].**
17. Install the belt guard (10) by holding the bottom part of the guard away from the belt guard back while sliding the slots on the top part of the guard between the wing-bolt and the tinnerman nut. Once the top of the guard is in position, swing the bottom of the guard down, align the slots between the wing-bolts and tinnerman nuts and push into position. Tighten all wing-bolts.



Use the chart to determine the mounting location for the electric motor (the motor and motor pulley are not furnished).

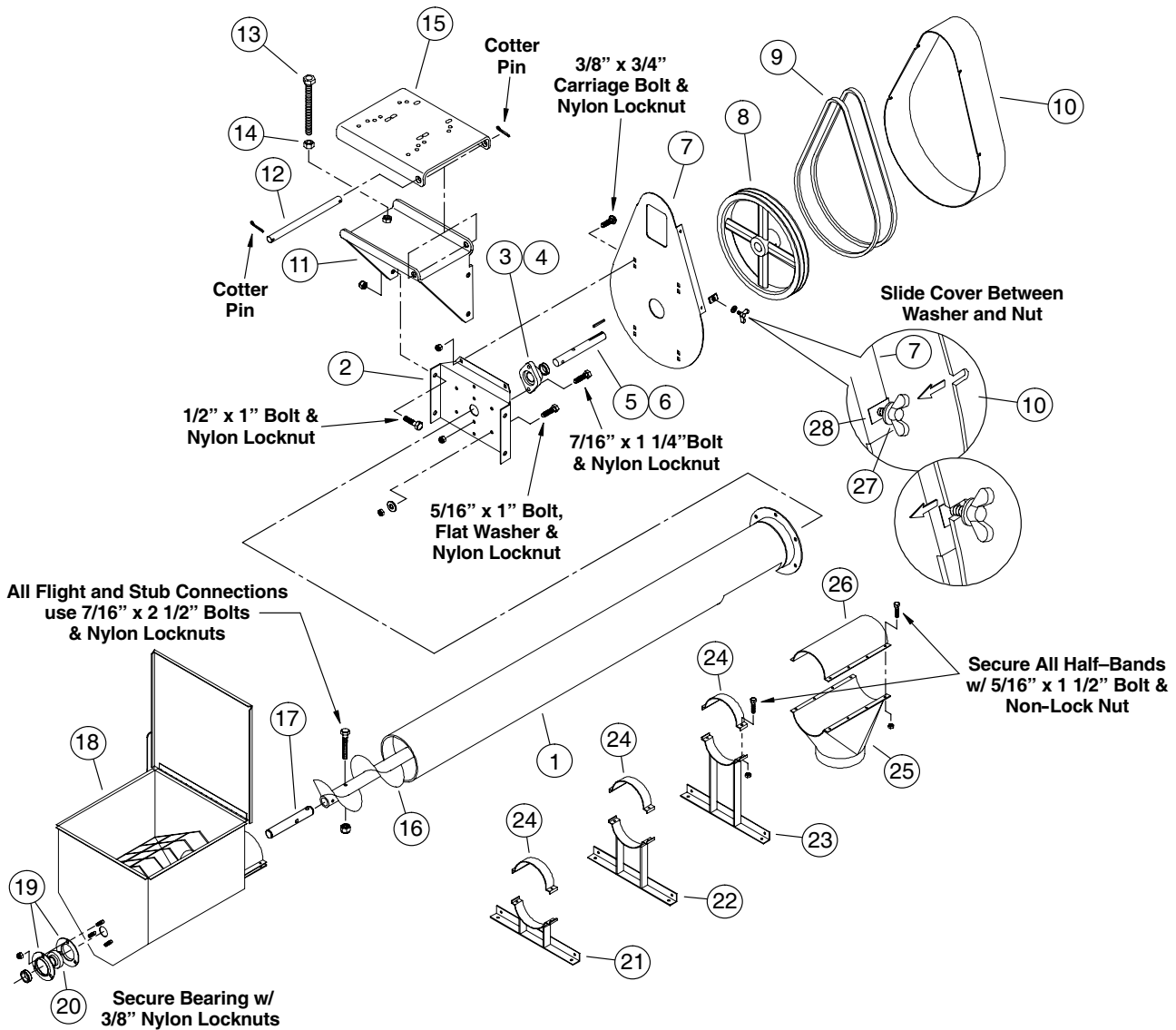
Motor Size HP (kW)	Motor Frame Size	Bolt Dia. Req'd.	Mount in Holes Marked (•)																	
			A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	C6
1 hp (.75 kW)	143T	3/8"	•	•	•	•														
1.5 hp (1.1 kW)	145T	3/8"	•	•			•	•												
2 hp (1.5 kW)	145T	3/8"	•	•			•	•												
3 hp (2.2 kW)	182T	3/8"							•	•	•	•								
5 hp (4 kW)	184T	3/8"							•	•			•	•						
7.5 hp (5.5 kW)	213T	3/8"													•	•	•	•		
10 hp (7.5 kW)	215T	3/8"													•	•			•	•

ASSEMBLY PROCEDURES

8" STANDARD ROOF AUGER

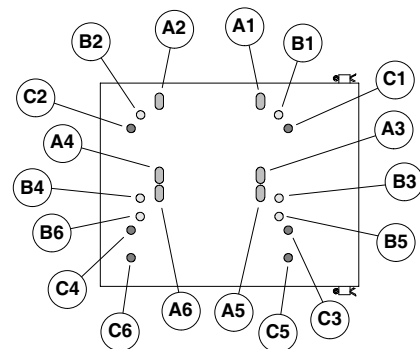
The assembly instructions will show a number in parenthesis (), this number refers to the item shown in the assembly illustration.

1. Bolt the head bearing (3) to the head plate (2) using two 7/16" x 1 1/4" bolts and nylon locknuts.
2. Install the head stub (5) into the end of the head flight (16) and secure using two 7/16" x 2 1/2" bolts and nylon locknuts.
3. Insert the head flight and shaft into the housing (1) and through the bearing (previously attached to the head plate). Make sure the lock collar (4) is on the shaft as well, but **Do Not** tighten the lock collar at this time.
4. Secure the head plate (2) to the flange on the housing (1) using eight 5/16" x 1" bolts, flat washers and non-lock nuts.
5. Attach the belt guard back (7) to the head plate using the four square holes in the belt guard that are farthest from the large round hole in the center of the guard.
Secure the belt guard back using four 3/8" x 3/4" carriage bolts and nylon locknuts.



8" STANDARD ROOF AUGER (con't.)

6. Install the 1/4" (6) key into the keyway on the end of the head stub. Slide the sheave (8) onto the shaft until the sheave is as close to the head bearing without contacting the bearing. Once properly set, tighten the lock collar and tighten the setscrews in the sheave.
7. Attach the motor mount support plate (11) to the head plate using four 1/2" x 1" bolts and nylon locknuts (make sure the bolts are on the inside with the nuts on the outside).
8. Thread a 5/8" nut (14) onto the threaded adjustment rod (13) until the nut contacts the head of the rod. Install the threaded rod into the nut welded on the support plate (11) until the threaded rod is all the way down.
9. Attach the motor mount (15) to the support plate using the 5/8" x 13 1/8" (16 mm dia. x 33.3 cm) long rod (12) and cotter pins provided.
10. Fasten the discharge spout (25) over the discharge opening. Secure in place using the back-band (26) and eight 5/16" x 1 1/2" bolts and non-lock nuts.
11. Attach the tail bearing (19) and retainers (20) to the three bolts welded on the lower rear side of the inlet hopper (18). Secure bearing and retainers using three 3/8" nylon locknuts.
12. Insert the tail stub (17) into the intake end of the flighting and secure using two 7/16" x 2 1/2" bolts and nylon locknuts.
13. Slide the hopper assembly (18) onto the intake end of the auger housing while positioning the tail stub through the bearing on the rear side of the hopper.
14. Use the roof auger support brackets (21, 22 & 23) to secure the auger assembly to the bin roof. Attach support brackets to auger using the half-bands (24) and 5/16" x 1 1/2" bolts and non-lock nuts.
15. Install the motor and the motor pulley [the 8" models use a 3" O.D. (89 mm O.D.) motor pulley]. Install the belts (9) around the sheave and motor pulley and tighten the belts using the 5/8" threaded adjustment rod. Once the belts are tight, use the 5/8" nut to lock the adjustment rod into place. Belts should have approx. 9/16" (14 mm) of deflection when firmly pressed in the middle of the span between the pulley and sheave.
16. Slide four tinnerman nuts (28) over the holes around the lip of the belt guard back (7).
Slide a 1/4" flat washer onto each of the 1/4" x 3/4" wing bolts (27). **[Do Not tighten completely, leave about a 1/4" (7 mm) space between the washer and the nut].**
17. Install the belt guard (10) by holding the bottom part of the guard away from the belt guard back while sliding the slots on the top part of the guard between the wing-bolt and the tinnerman nut.
Once the top of the guard is in position, swing the bottom of the guard down, align the slots between the wing-bolts and tinnerman nuts and push into position. Tighten all wing-bolts.



Use the chart to determine the mounting location for the electric motor (the motor and motor pulley are not furnished).

Motor Size HP (kW)	Motor Frame Size	Bolt Dia. Req'd.	Mount in Holes Marked (•)																	
			A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	C6
1 hp (.75 kW)	143T	3/8"	•	•	•	•														
1.5 hp (1.1 kW)	145T	3/8"	•	•			•	•												
2 hp (1.5 kW)	145T	3/8"	•	•			•	•												
3 hp (2.2 kW)	182T	3/8"							•	•	•	•								
5 hp (4 kW)	184T	3/8"							•	•			•	•						
7.5 hp (5.5 kW)	213T	3/8"													•	•	•	•		
10 hp (7.5 kW)	215T	3/8"													•	•			•	•

GENERAL MAINTENANCE INFORMATION

WARNING! Shut off power and lockout before attempting to adjust, service, clean or repair the auger or any of its components.



Keep hands, feet and clothing away from moving parts.



Make sure all safety devices, shields and guards are in place and functional. Immediately replace any that are damaged or missing.

Never rely solely on mechanical or hydraulic jacks for support. Use jack stands or equivalent for support.

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

Any parts needing replacement should be replaced with parts of the same type and size. **Do Not modify or alter any of the auger components.**

Before beginning operation:

1. Check all fasteners to ensure they are tight.
2. Check all guards to see if they are properly adjusted and securely fastened. Guards should not contact any moving parts and should be kept closed and in place during operation. **Immediately replace any guard that has become worn or damaged.**

BELT ADJUSTMENT

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.

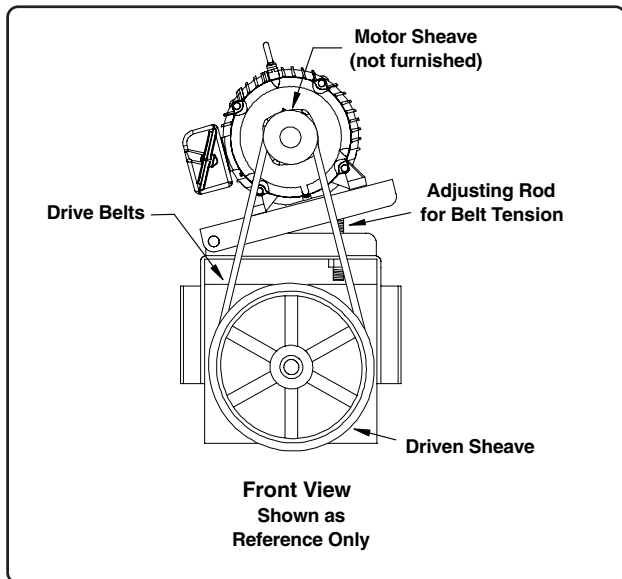


Shut off power and lockout whenever cleaning or servicing the auger.

Check belts frequently for fraying, cracking or other damage. Replace as necessary,

Check belts for proper tension. Belts should deflect approximately 9/16" (14 mm) when firmly pressed in the center of the span between the two sheaves.

To adjust belt tension, loosen the 5/8" nut on the threaded adjustment rod located beneath the motor mount plate (See Fig. 1). Adjust the threaded rod until proper belt tension has been achieved, retighten 5/8" nut to lock adjustment rod into place.

**Fig. 1****TROUBLE SHOOTING****LOW CAPACITY**

- The auger may not be getting enough grain. Check to see that the slide gates are opened.
- Check auger speed. Speeds slower than the recommended RPM's will result in low capacity.

AUGER VIBRATION

- Drive belt may be over tightened, putting head stub and flight in bind, thus causing the noise. Damage usually occurs because of foreign material having been run through the auger. It may be necessary to remove the flighting for inspection.

AUGER PLUGGING

- The auger may be getting too much grain, causing "jamming" inside the housing.
- The motor may be too small or wired improperly.
- Is the auger free of foreign material such as sacks, tarp corners etc? A plug at the discharge end will cause the auger to plug.
- Grain is high in moisture. Excessive feeding of high moisture grain can cause plugging. If wet grain or hard to move material is being augered, use a larger size motor than what is recommended for normal use (See power requirement charts on Page 7).

PARTS LIST TABLE OF CONTENT

Decals and Safety Signs P-1

Roof Auger Components (Standard Models) P-2 to P-3

Auger Housing, Standard 8" Models P2 - P3

Head Plate, Standard 8" Models P2 - P3

Belt Guard, Standard 8" Models P2 - P3

Motor Mount Plate, Standard 8" Models P2 - P3

Roof Auger Flight, Standard 8" Models P2 - P3

Auger Housing, 8" CE Models P4 - P5

Head Plate, 8" CE Models P4 - P5

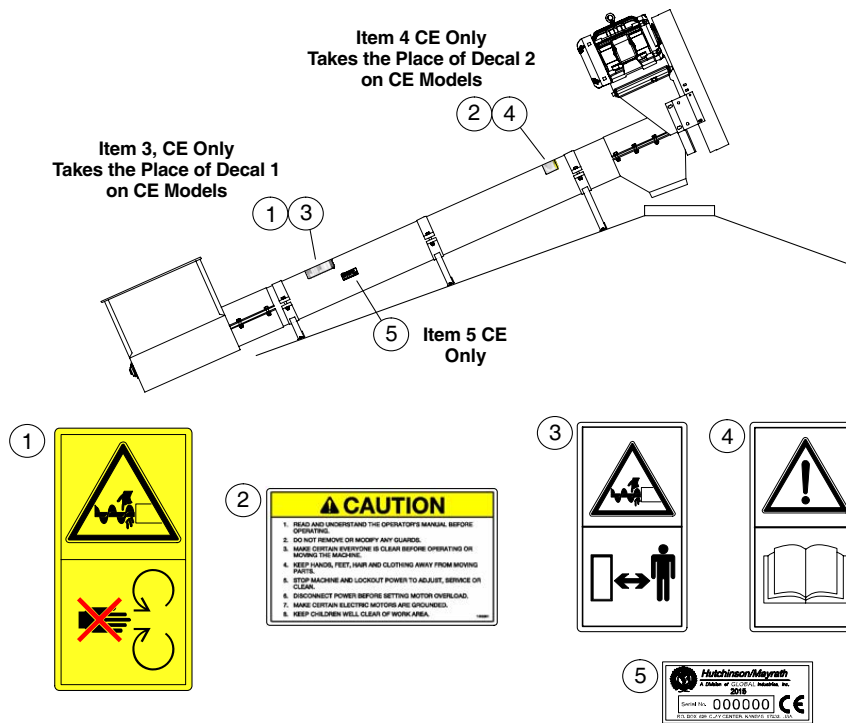
Belt Guard, 8" CE Models P4 - P5

Motor Mount Plate, 8" CE Models P4 - P5

Roof Auger Flight, 8" CE Models P4 - P5

Torque Chart P-6

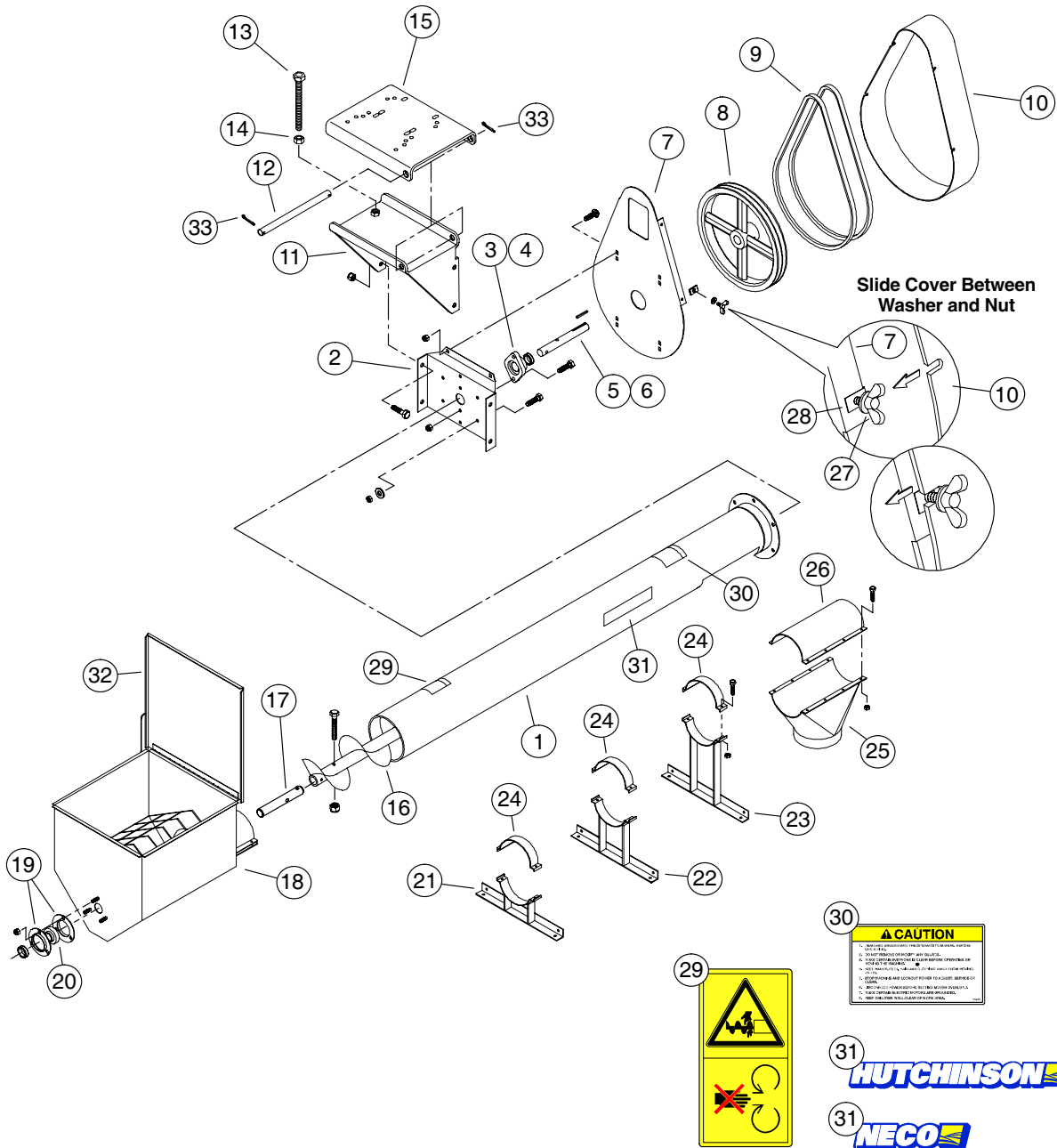
SAFETY DECALS & SIGNS



Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	1001985	Decal, Danger: Rotating Auger...	4	1025077	CE Decal, Caution, Read Manual...
2	1002301	Decal, Caution: General Operating...	5	1025571	CE Serial No. Plate
3	1025080	CE Decal, Danger: Stay Clear...			

PARTS LIST

8" ROOF AUGER STANDARD MODELS



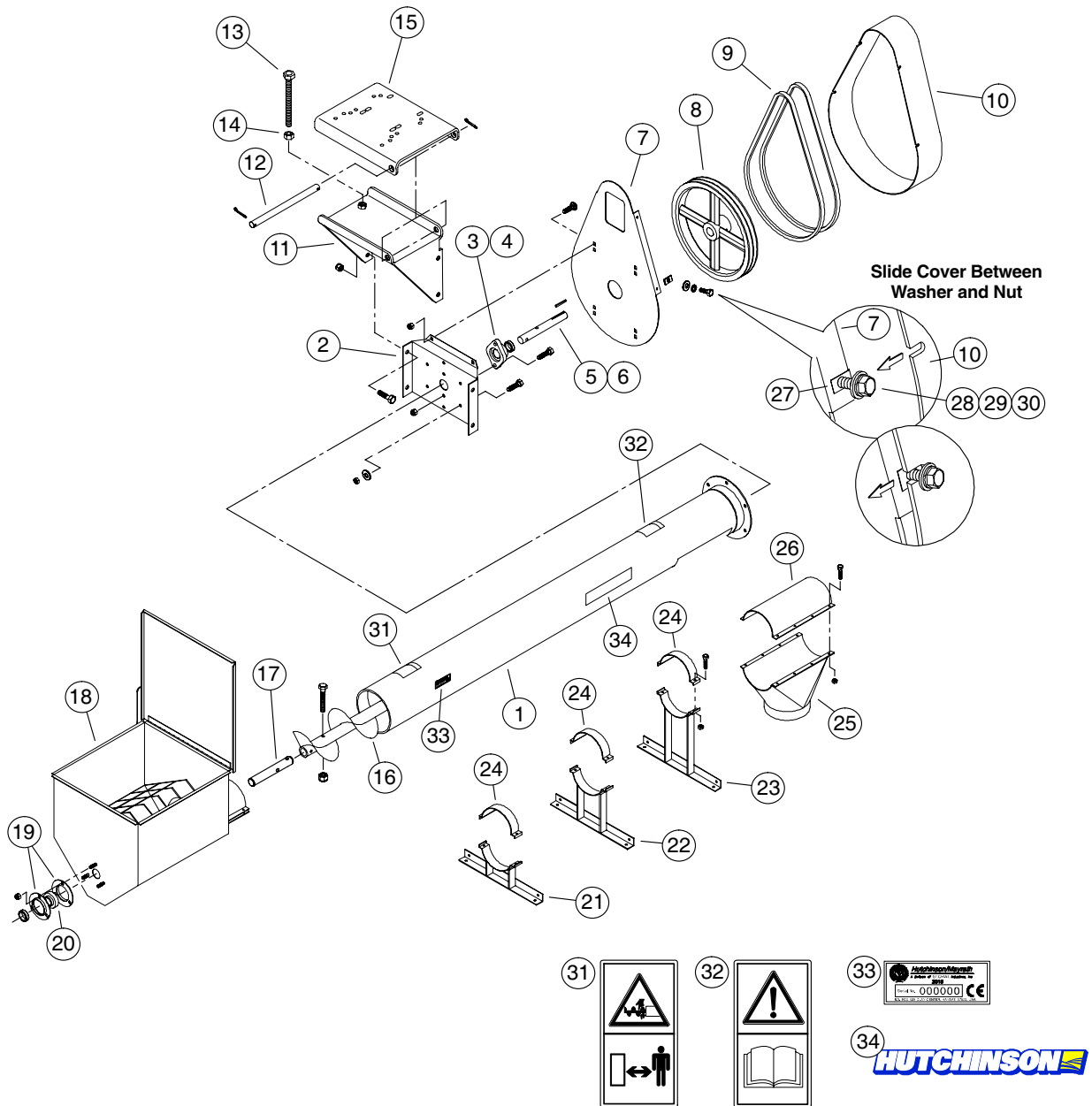
PARTS LIST

8" ROOF AUGER STANDARD MODELS

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	1015353-20F	Auger Housing f/ 11' Model 10' long (3.05 m), Hutch	15	1042260	Plate, Motor Mount
(1)	1015353N-20F	Auger Housing f/ 11' Model 10' long (3.05 m), NECO	16	6306A1	Flight f/ 11' Models (less stub 10' 10 1/2" long (3.31 m))
(1)	1015353-20L	Auger Housing f/ 16' Model 15' long (4.57 m), Hutch	(16)	8316A	Flight f/ 16' Models (less stub 15' 11" long (4.85 m))
(1)	1015353N-20L	Auger Housing f/ 16' Model 15' long (4.57 m), NECO	(16)	6307A1	Flight f/ 21' Models (less stub 20' 11" long (6.38 m))
(1)	1015353-20R	Auger Housing f/ 21' Model 20' long (6.10 m), Hutch	17	8321A	Stub, Tail Flight Connecting 1 1/4" x 9" long (32 mm x 22.9 cm)
(1)	1015353N-20R	Auger Housing f/ 21' Model 20' long (6.10 m), NECO	18	631204	Hopper, 18" x 18" x 18" (45.7 cm x 45.7 cm x 45.7 cm)
2	1027804	Head Plate	19	3029A2	Flangette for Bearing
3	8325A	Bearing, Flange 1 1/4" bore	20	3027A1	Bearing, 1 1/4" w/ Lock Collar
4	- - -	Lock Collar f/ Bearing	21	6300A1	Mounting Bracket, 3" tall (76 mm)
5	8338A	Head Stub, 1 1/4" dia. x 10" long (32 mm dia. x 25.4 cm long)	22	6301A1	Mounting Bracket, 7" tall (17.8 cm)
6	4045A1	Key, 1/4" sq. x 2" long	23	6302A1	Mounting Bracket, 11" tall (27.9 cm)
7	1027782	Belt Guard Back	24	5033A1	Half-Band, 2" Wide
8	40152	Sheave, 2 Groove 12" O.D. x 1 1/4" bore	25	6515A1	Spout, (90 degree)
9	40118	Belt, B52	26	8806D	Back Band f/ Spout, 14" long (35.6 cm)
10	1027801	Belt Guard, Plastic	27	1013131	Wing-Bolt 1/4-20 x 3/4"
11	1042262	Bracket, Motor Mount Support	28	1013133	Nut, Tinnerman, 1/4-20
12	1042145	Pin, 5/8" dia. x 13 1/8" long (16 mm dia. x 33.3 cm long)	29	1001985	Decal, Danger.. Rotating Auger
13	1027780	Adjusting Rod	30	1002301	Decal, Caution.. Read and Understand
14	D1170	Nut, 5/8-11 Non-Lock	31	1001128	Decal, Hutchinson
			(31)	1048742	Decal, NECO
			32	6776A1	Cover, Roof Hopper
			33	33161	Cotter Pin, 1/8" x 1"

PARTS LIST

8" ROOF AUGER CE MODELS






PARTS LIST

8" ROOF AUGER CE MODELS

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	1015353-20FCE	Auger Housing f/ 11' Model 10' long (3.05 m)	(16)	8316A	Flight f/ 16' Models (less stub) 15' 11" long (4.85 m)
(1)	1015353-20LCE	Auger Housing f/ 16' Model 15' long (4.57 m)	(16)	6307A1	Flight f/ 21' Models (less stub) 20' 11" long (6.38 m)
(1)	1015353-20RCE	Auger Housing f/ 21' Model 20' long (6.10 m)	17	8321A	Stub, Tail Flight Connecting 1 1/4" x 9" long (32 mm x 22.9 cm)
2	1027804	Head Plate	18	631204CE	Hopper, 18" x 18" x 18" (45.7 cm x 45.7 cm x 45.7 cm)
3	8325A	Bearing, Flange 1 1/4" bore	19	3029A2	Flangette for Bearing
4	- - -	Lock Collar f/ Bearing	20	3027A1	Bearing, 1 1/4" w/ Lock Collar
5	8338A	Head Stub, 1 1/4" dia. x 10" long (32 mm dia. x 25.4 cm long)	21	6300A1	Mounting Bracket, 3" tall (76 mm)
6	4045A1	Key, 1/4" sq. x 2" long	22	6301A1	Mounting Bracket, 7" tall (17.8 cm)
7	1027782	Belt Guard Back	23	6302A1	Mounting Bracket, 11" tall (27.9 cm)
8	40152	Sheave, 2 Groove 12" O.D. x 1 1/4" bore	24	5033A1	Half-Band, 2" Wide
9	40118	Belt, B52	25	6515A1	Spout, (90 degree)
10	1027801	Belt Guard, Plastic	26	8806D	Back Band f/ Spout, 14" long (35.6 cm)
11	1042262	Bracket, Motor Mount Support	27	1013133	Nut, Tinnerman, 1/4"-20
12	1042145	Pin, 5/8" dia. x 13 1/8" long (16 mm dia. x 33.3 cm long)	28	4605-1	Bolt, 1/4"-20 x 3/4"
13	1027780	Adjusting Rod	29	33022	Washer, 1/4" Flat
14	D1170	Nut, 5/8-11 Non-lock	30	33143	Washer, 1/4" Lock
15	1042260	Plate, Motor Mount	31	1025080	Decal, Danger: Stay Clear
16	6306A1	Flight f/ 11' Models (less stub) 10' 10 1/2" long (3.31 m)	32	1025077	Decal, Caution: Read Manual
			33	1025571	Serial No. Plate f/ CE
			34	1001128	Decal, Hutchinson

PARTS LIST

TORQUE CHART

General Torque Specification Table Use the Following Torques When Special Torques Are Not Given Note: These values apply to fasteners as received from supplier, dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly-disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.													
SAE Grade No.		SAE 2				SAE 5				SAE 8*			
Bolt head identification marks as per grade Note: Manufacturing marks will vary													
		Torque		Torque		Torque		Torque		Torque		Torque	
Bolt Size		Foot Pounds		Newton-Meters		Foot Pounds		Newton-Meters		Foot Pounds		Newton-Meters	
Inches	Millimeters	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4	6.35	5	6	6.8	8.13	9	11	12.2	14.9	12	15	16.3	20.3
5/16	7.94	10	12	13.6	16.3	17	20.5	23.1	27.8	24	29	32.5	39.3
3/8	9.53	20	23	27.1	31.2	35	42	47.5	57.0	45	54	61.0	73.2
7/16	11.11	30	35	40.7	47.4	54	64	73.2	86.8	70	84	94.9	113.9
1/2	12.70	45	52	61.0	70.5	80	96	108.5	130.2	110	132	149.2	179.0
9/16	14.29	65	75	88.1	101.6	110	132	149.2	179.0	160	192	217.0	260.4
5/8	15.88	95	105	128.7	142.3	150	180	203.4	244.1	220	264	298.3	358.0
3/4	19.05	150	185	203.3	250.7	270	324	366.1	439.3	380	456	515.3	618.3
7/8	22.23	160	200	216.8	271.0	400	480	542.4	650.9	600	720	813.6	976.3
1	25.40	250	300	338.8	406.5	580	696	786.5	943.8	900	1080	1220.4	1464.5
1 1/8	25.58	----	----	----	----	800	880	1084.8	1193.3	1280	1440	1735.7	1952.6
1 1/4	31.75	----	----	----	----	1120	1240	1518.7	1681.4	1820	2000	2467.9	2712.0
1 3/8	34.93	----	----	----	----	1460	1680	1979.8	2278.1	2380	2720	3227.3	3688.3
1 1/2	38.10	----	----	----	----	1940	2200	2630.6	2983.2	3160	3560	4285.0	4827.4

*Thick nuts must be used with Grade 8 bolts

WARRANTY

AG GROWTH INTERNATIONAL INC. – FORM OF LIMITED WARRANTY

Ag Growth International Inc. (“AGI”) warrants that the goods and/or services being supplied (the “Goods”) will be free from defects in materials and workmanship under normal conditions, use, service, and maintenance, for a period of twelve (12) months from the date of first operation of the Goods, but in no event more than eighteen (18) months from the date of delivery of the Goods to the end-user (the “Warranty Term”). If the Goods are being used for rental purposes, the Warranty Term for the subject Goods shall be limited to 90 days.

Subject to AGI’s sole discretion, if the Goods, or a component thereof, are found to have a default in materials and/or workmanship within the Warranty Term, AGI will, at its own option and expense, repair or replace the subject Goods or refund the purchase price for the applicable Goods. Any warranty related expenses incurred on behalf of or by the end-user without the prior written consent of AGI shall be the sole responsibility of the end-user. Expenses relating to travel, customs or import duties and tariffs, equipment rental, and any costs associated with accessing the Goods are the sole responsibility of the customer. Warranty shall be void in the event the Goods are returned or disposed of without the written consent of AGI.

The customer shall not assert a claim that the Goods are defective unless the customer gives written notice to AGI of such defect within forty-eight (48) hours of discovering such defect. In the event of a warranty claim, the customer must complete any and all information required by AGI in order to properly assess or investigate the claim. AGI shall be given a reasonable opportunity to inspect and test the Goods in question. Failure by the customer to notify AGI of such claim within 48 hours shall operate as a waiver of any and all such claims by the customer.

THIS IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY AGI WITH RESPECT TO THE GOODS AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHETHER OR NOT THE PURPOSE OR USE HAS BEEN DISCLOSED TO SELLER IN SPECIFICATIONS, DRAWINGS, OR OTHERWISE, AND WHETHER OR NOT AGI’S GOODS ARE SPECIFICALLY DESIGNED AND/OR MANUFACTURED BY AGI FOR BUYER’S USE OR PURPOSE.

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