4” BULK TANK AUGER

OWNER’S & OPERATOR’S
MANUAL

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Model No’s.
F4011B
F4015B
F4020B

AGI HUTCHINSON
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AGI NECO
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aggrowth.com
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 time 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 alterations 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 IN 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.
SAFETY

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 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.

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.
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.

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.

<table>
<thead>
<tr>
<th>Training Sign-Off Sheet</th>
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<td>Date</td>
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GENERAL INFORMATION

GENERAL INFORMATION
A Bulk Tank Auger is designed for installation in a bulk tank. These units are not furnished with an intake guard. They are to be used Only in a Bulk Tank. If the auger is removed from the bulk tank to be used for any other means, order the intake guard from the parts list and install it prior to other use. Since the Bulk Tank Auger is not sold with an undercarriage or other means of support, it must be supported by the user adequately for that particular application. Always be sure to fasten the discharge and intake end in place so the auger will remain in position during operation.

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. Read through the manual to become familiar with the operation and assembly of the machine. Verify all parts are accounted for before assembly.
2. Check to see that all guards listed in the assembly instructions are in place, secured and functional.
3. Check all safety signs and replace any that are worn, missing or illegible (safety signs can be ordered free of charge through your dealer or directly from the factory).
4. Make sure all fasteners, nuts, bolts, setscrews, etc. are tight.
5. Ensure drive belts are tightened properly. Check belts for fraying, wear, cuts and other damage.

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 auger 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 auger can be run at full capacity.
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 housing have become well polished, as this may cause the auger to freeze-up.

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

DESIGNATED WORK AREA
Before starting the auger, a designated work area should be established around it. This area shall be marked off with colored rope, or banners, hung as a portable barrier to define the work area.

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.

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 2.5” (65 mm) or 3.0” (76 mm) motor pulley for a recommended auger speed of 550 to 650 RPM. Motor pulleys are Not furnished with the auger.

Auger speeds in excess of 750 RPM should be avoided as excessive wear to the auger, its components and possibly to the motor can result.

Auger speeds below 450 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.

<table>
<thead>
<tr>
<th>Auger Length ft. (m)</th>
<th>Motor HP (kW)</th>
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<tbody>
<tr>
<td>11’ (3.35 m)</td>
<td>1/2 hp (0.37 kW)</td>
</tr>
<tr>
<td>15’ (4.57 m)</td>
<td>1/2 hp (0.37 kW)</td>
</tr>
<tr>
<td>20’ (6.10 m)</td>
<td>3/4 hp (0.55 kW)</td>
</tr>
</tbody>
</table>
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. Position the control gate so an adequate amount of grain flows into the auger. Do Not overload the auger by opening the control gate too far. This may result in damage to both the auger and/or motor. Such damage is considered abuse of the equipment and void the warranty.

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.

To Start Auger
1. Start the electric motor before augering grain.

Normal Operation
1. If control gate is used, open the control gate gradually until desired flow is established. Do Not overload the auger. Starting the auger under load may result in damage to the auger, motor or both.

2. Monitor all the grain flow into the auger and be aware of any foreign materials that may cause restrictions or plugging.

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.

Normal Operation
1. Open the control gate gradually until desired flow is established. Do Not overload the auger. Starting the auger under load may result in damage to the auger, motor or both.

2. Monitor all the grain flow into the auger and be aware of any foreign materials that may cause restrictions or plugging.

To Stop Auger
1. Close the slide gate(s) to allow auger to empty before stopping.

2. Once auger has cleared, shut off electric motor and lockout the power source.

Do Not enter a 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.

Do Not enter a 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.
SHUTDOWN/LOCKOUT

EMERGENCY SHUTDOWN
Should the auger be immediately shutdown under load, disconnect and lockout the power source.
Clear as much grain as possible away from the discharge opening and/or inlet end.
Reconnect the power source and run the auger to clear the grain. Never attempt to start when under load.

CAUTION! Starting the unit under load may result in damage to the auger. Such damage is considered abuse of the equipment and will not be covered by the warranty.

NORMAL SHUTDOWN
When shutting down the auger, close the control gate and allow the auger tube to clean out before stopping the unit.
Before the operator leaves the work area, the power source shall be locked-out (See “Lockout”).

INTERMITTENT SHUTDOWN
When an auger is stopped and restarted while under full load, it may result in damage to the auger. Therefore, if intermittent operation is to be carried out, it is advisable to reduce the load level.
If an auger is kept from absolute filling, it will make start-up easier and will convey grain more efficiently.

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

LOCKOUT
The power source shall have a main disconnect box that can be locked only in the “Off” position. This is what “shutdown and lockout” refers to, shut off the main power source and lock the handle or breaker switch in the “Off” position.

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 5).
4" BULK TANK AUGER

The assembly instructions below will show a number in parenthesis ( ), this number refers to the item that is shown in the assembly illustration. Use the illustration on the following page (Page P-1) to assist with the assembly of the auger.

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

1. Slide the flight (2) into the auger housing (1). The end of the flight that has the longer exposed shaft faces towards the discharge end of the housing. (See illustration, Page P-1.)

2. Bolt head bearing (8) and retainers (9) to head plate assembly (6) using three 5/16" x 3/4" carriage bolts with lockwashers and non-lock nuts. Bearing lock collar must be on front of bearing next to pulley.

3. Thread a 5/8" non-lock nut onto the threaded portion of the motor mount rods (3). Install the nuts far enough onto the rods, so the rods extend past the bottom of the head plate. Position rods into head plate, as shown in the illustration on following page. Thread the other two 5/8" nuts onto the rods to hold them in position. (The 5/8" nuts will be used to tighten the drive belts after they have been installed.)

4. Slide head plate, bearing and rods assembly over discharge end of auger housing (1). Secure head plate assembly bands, using four 1/4" x 1-1/4" hex head bolts and non-lock nuts.

5. Slide flight shaft through head bearing far enough to install the 8" pulley on the shaft. Secure with the 5/16" x 2" roll pin provided. **Note: Roll pin side of pulley must be next to bearing lock collar.**

6. Position head pulley (11) as close as possible to head bearing (8). Secure lock collar and tighten setscrews.

7. Position motor mount straps (top) (4) and motor mount clips (bottom) (5) on mounting rods and loosely clamp together with 5/16" x 1-1/2" carriage bolts and nuts.

8. Install motor onto motor mount straps and install pulley to motor shaft (motor pulley not furnished). Using a straight edge on the face of the motor pulley and driven sheave, position motor to align pulley and sheave. Secure motor mount straps to mounting rods. Install drive belt to pulleys adjusting tension with the 5/8" nuts on the mounting rods. After proper tension has been achieved, tighten the nuts to lock rods into place. Proper belt tension is approximately 1/2" (13 mm) of deflection when firmly pressing on the belt at the center of the span between the pulley and sheave.

9. Place support strap (10) on auger housing directly behind head plate assembly, clamp in place with halfband (15) using two 1/4" x 1-1/4" hex head bolts and nuts. Slide rod support (7) over ends of 5/8" motor mount rods and attach to support strap with one 5/16" x 3/4" carriage bolt, flat washer, lockwasher and nut.

10. Insert one belt guard clamp bar (13) between rod assembly and pulley. Clamp to rod assembly with motor mount clip (5) using one 5/16" x 1-1/2" hex head bolt and nut. Position guard to clear belt and hold in place with clamp bar using two 1/4" x 3" bolts and nuts.

11. Fasten full band to auger housing and secure using one 5/16" x 1-1/2" hex head bolt and nut. A cable can be fastened to that bolt for supporting the bulk tank auger.

12. If unit has trouble starting under load, cut down on amount of exposed flight on auger intake.
# 4" Bulk Tank Auger Assembly & Parts

## Parts List

### Reference and Part Numbers

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Part No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>4300C</td>
<td>Auger Housing f/ 11' Model 10'-6&quot; long (3.20 m), Hutch</td>
</tr>
<tr>
<td>1</td>
<td>4300CN</td>
<td>Auger Housing f/ 11' Model 10'-6&quot; long (3.20 m), NECO</td>
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<td>1</td>
<td>4301A</td>
<td>Auger Housing f/ 15' Model 14'-6&quot; long (4.42 m), Hutch</td>
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<tr>
<td>1</td>
<td>4301AN</td>
<td>Auger Housing f/ 15' Model 14'-6&quot; long (4.42 m), NECO</td>
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<td>1</td>
<td>4302A</td>
<td>Auger Housing f/ 20' Model 19'-6&quot; long (5.94 m), Hutch</td>
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<tr>
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<td>4302AN</td>
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<td>2</td>
<td>6977A1-A</td>
<td>Auger Flight f/ 11' Model 11'-2 1/2&quot; long (3.42 m)</td>
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<td>6977A1-B</td>
<td>Auger Flight f/ 15' Model 15'-2 1/2&quot; long (4.64 m)</td>
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<td>2</td>
<td>6977A1-C</td>
<td>Auger Flight f/ 20' Model 20'-2 1/2&quot; long (6.16 m)</td>
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<tr>
<td>3</td>
<td>3000A1</td>
<td>Motor Mount Rods</td>
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<td>4</td>
<td>5024A1</td>
<td>Straps f/ Motor Mount (top)</td>
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<td>5025A1</td>
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<td>6004A1</td>
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<td>5012A1</td>
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<td>8</td>
<td>6390D</td>
<td>Bearing w/ Lock Collar</td>
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<td>9</td>
<td>6383C</td>
<td>Retainer f/ Bearing</td>
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<td>10</td>
<td>6049A1</td>
<td>Support Strap Weldment</td>
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<td>11</td>
<td>40182</td>
<td>Pulley, 8&quot; dia.</td>
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<td>12</td>
<td>4313C</td>
<td>Belt Guard</td>
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<td>13</td>
<td>4314C</td>
<td>Belt Guard Clamp Bar</td>
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<td>14</td>
<td>40105</td>
<td>Belt, A-38</td>
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<td>15</td>
<td>5261A1</td>
<td>Half-Band, 4&quot; x 2&quot; wide (galv.)</td>
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<td>16</td>
<td>6386C</td>
<td>Roll Pin, 5/16&quot; x 2&quot; long</td>
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<td>Full Band, 4&quot; x 3/4&quot; wide</td>
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<td>1001985</td>
<td>Decal, Danger: Rotating Auger..</td>
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