Model No's.
BJ12240BDV - 2 Belt w/ Gear Reducer
BJ12241BDV - 2 Belt w/ gear Reducer
BJ12480BDV - 3 Belt w/ Gear Reducer
BJ12481BDV - 3 Belt w/ Gear Reducer
BJ12720BDV - 4 Belt w/ Gear Reducer
BJ12721BDV - 4 Belt w/ Gear Reducer
BJ12240ADV - Belt Drive Only
BJ12480ADV - Belt Drive Only

IMPORTANT! The reducer gear box is shipped Without Oil.
Oil must be added before operation.
Refer to the Lubrication Section in this manual.
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 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 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.
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 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.

Danger Decal No. 1002303 was supplied with the Hutchinson bin unloading equipment. This safety decal should be applied to the side of the bin near the opening so it will be viewed by people entering into the bin or storage structure. Refer to the instructions included with the decal for proper application.

Caution Decal, Part No. 1002301
Read and Understand the Operator’s Manual Before Operating
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**GENERAL INFORMATION**

**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>DATE</th>
<th>EMPLOYER SIGNATURE</th>
<th>EMPLOYEE SIGNATURE</th>
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**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 (See Page 1).
4. Make sure all hardware and fasteners are tight.
**12” VERTICAL BIN UNLOADING AUGER KIT**

This kit includes the vertical auger, horizontal tube with gear reducer horizontal drive, 3-belt vertical drive, “B” sections, belts, motor mounts, mounting brackets, belt guards and 3’ discharge spout. **The horizontal unloading flight is ordered separately.**

The motor pulley, the electric motor and its mounting hardware are not furnished.

The horsepower recommendations are for augering reasonably dry grain. High moisture grain (above 15%) will require greater power if maximum capacity is to be maintained. The maximum possible capacity will be less with high moisture grain than with dry grain. Use an electric motor of the correct size that operates at 1750 RPM.

### Material

<table>
<thead>
<tr>
<th>Material</th>
<th>Capacity (12” Vertical)</th>
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</thead>
<tbody>
<tr>
<td>Dry Grain</td>
<td>2100 to 2500 BPH</td>
</tr>
<tr>
<td>High Moisture</td>
<td>1750 to 2100 BPH</td>
</tr>
</tbody>
</table>

In case of high moisture or high capacity, use next size larger motor.

**BPH = Bushels Per Hour**

#### Vertical Drive

- Use a 10 hp Electric Motor.
- Use a 3.8” P.D. motor pulley for recommended auger speed of 365 RPM.
- **Motor pulleys are Not Furnished with the auger.**

**PD = Pitch Diameter**

#### Horizontal Drive

Use the horsepower chart according to bin diameter and unloading auger diameter for recommended horsepower and R.P.M.

---

<table>
<thead>
<tr>
<th>Bin Dia.</th>
<th>10” Horizontal Unloading Tube</th>
<th>12” Horizontal Unloading Tube</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Direct Drive</td>
<td>Reducer Drive</td>
</tr>
<tr>
<td></td>
<td>H.P.</td>
<td>Dr. Shv.</td>
</tr>
<tr>
<td>24’</td>
<td>5 hp</td>
<td>5 hp</td>
</tr>
<tr>
<td>27’</td>
<td>5 hp</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>30’</td>
<td>7.5 hp</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>33’–34’</td>
<td>7.5 hp</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>36’</td>
<td>7.5 hp</td>
<td>7.5 hp</td>
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<tr>
<td>37’–39’</td>
<td>7.5 hp</td>
<td>7.5 hp</td>
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<tr>
<td>40’</td>
<td>7.5 hp</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>42’</td>
<td>7.5 hp</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>48’–49’</td>
<td>7.5 hp</td>
<td>10 hp</td>
</tr>
<tr>
<td>54’–55’</td>
<td>10 hp</td>
<td>3.0” OD</td>
</tr>
<tr>
<td>56’</td>
<td>10 hp</td>
<td>3.0” OD</td>
</tr>
<tr>
<td>60’</td>
<td>10 hp</td>
<td>3.0” OD</td>
</tr>
<tr>
<td>63’</td>
<td>10 hp</td>
<td>3.0” OD</td>
</tr>
<tr>
<td>68’–69’</td>
<td>15 hp</td>
<td>3.0” OD</td>
</tr>
<tr>
<td>69’</td>
<td>15 hp</td>
<td>3.0” OD</td>
</tr>
<tr>
<td>72’</td>
<td>15 hp</td>
<td>3.0” OD</td>
</tr>
<tr>
<td>75’</td>
<td>15 hp</td>
<td>3.0” OD</td>
</tr>
<tr>
<td>78’</td>
<td>15 hp</td>
<td>3.0” OD</td>
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<tr>
<td>80’</td>
<td>15 hp</td>
<td>3.0” OD</td>
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<tr>
<td>82’</td>
<td>15 hp</td>
<td>3.0” OD</td>
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<tr>
<td>90’</td>
<td>15 hp</td>
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<tr>
<td>92’</td>
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<tr>
<td>105’</td>
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</tr>
<tr>
<td>113’</td>
<td>15 hp</td>
<td>3.0” OD</td>
</tr>
<tr>
<td>120’</td>
<td>15 hp</td>
<td>3.0” OD</td>
</tr>
</tbody>
</table>

OD = Outside Diameter
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.

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.

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.

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 on Page 4).

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.

ELECTRIC DRIVE POWER REQUIREMENTS
Always use a motor with the required power recommended in the chart below. 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 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.

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.

IMPORTANT: BEFORE FILLING GRAIN BIN
Before filling the bin 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 the equipment and will void the warranty.
OPERATING PROCEDURES

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.

IMPORTANT! The gear reducer is shipped without oil. It is necessary to add oil before operation. See the Lubrication and Maintenance Section in this manual.

1. Check to see that all belts are tensioned properly.
2. Make sure all safety shields and are in place and properly adjusted for belt and pulley clearance.
3. Check assembly instructions to ensure all parts are assembled correctly and that all fasteners are tight.

The bin wells inside the bin should have a control gate. The gate(s) should be closed before start-up and closed before shutdown to permit the machine to clean out.

Use the control gates to regulate a flow of less than full capacity until several hundred bushels of grain have been augered to polish the flighting and tube (See Break-In Information on Page 5).

Start-Up

First, start the electric motor that operates the vertical auger, making sure it is operating properly. Then start the horizontal unload auger. Begin to gradually open the slide gate in the center well. It should not be necessary to open the gate more than 3” to 6” to acquire a full load. Do Not overload the auger by opening the slide gate too far.

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 to the vertical auger before augering grain. Once the vertical auger is running, start the motor for the horizontal unload auger.
2. Open the center well slide gate gradually until desired flow is established, it should not be necessary to open the gate more than 3” to 6” to acquire full load.
   
   Do Not overload the auger. Starting the auger under load may result in damage to the auger.
3. If intermediate wells are being used, they should be opened after grain has stopped flowing into the center well.

To Stop Auger

1. Close the slide gate(s) to allow auger to empty before stopping.
2. Once horizontal and vertical augers have cleared, shut off electric motors 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. below. 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.

“Abnormal Flow”

“Bridging”
SHUTDOWN/LOCKOUT

EMERGENCY SHUTDOWN
Should the auger be immediately shutdown under load, disconnect and lockout the power source.
Close the center and intermediate slide gates. Clear grain away from the discharge opening.
Reconnect the power source and run the auger to clear the grain. Never attempt to start under load.

CAUTION! Starting the unit under load may result in damage to the conveyor. Such damage is considered abuse of the equipment and will not be warranted.

NORMAL SHUTDOWN
When shutting down the auger, close all slide gates and allow the unloading auger 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.
Using a larger diameter auger and reducing its load level will be far better than subjecting a smaller diameter auger to high loads. If an auger is kept from absolute filling, it will make start-up easier and will convey grain more efficiently.
Therefore, if intermittent operation is to be carried out, it is advisable to reduce the load level.

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.

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

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 4).
LUBRICATION

Gearbox Lubrication

WARNING! Never clean, adjust or lubricate a machine that is in operation. Whenever you must service or adjust your equipment, make sure to stop the motor and lockout the power source.

IMPORTANT! The gear reducer is shipped without oil. It is necessary to add oil before operation. Even under normal working conditions, oil will still dissipate. Check oil level in gearbox periodically and maintain proper level.

Lubrication is extremely important for proper auger operation. Follow the instructions on the reducer nameplate, its warning tag and the installation manual provided with the gearbox. Failure to observe these precautions could result in damage to the equipment.

Oil should be changed more frequently when auger is being operated at high temperatures, under extreme dirty conditions, or when operated continuously. Under these extreme conditions, the oil should be changed every 1 to 3 months, depending on severity of the conditions.

CAUTION! Too much oil will cause overheating and too little oil will result in wear and failure. Check oil level regularly.

Very often, small metal particles will show up in the oil due to the wearing process. A magnetic drain plug is provided to help contain these particles.

Recommended Oil:
To add oil, remove the vent/fill plug from the top of the gearbox (See Fig. 1).
Add 6 qts. of an SAE 90* weight high grade petroleum base, rust and oxidation inhibited (R&O) gear oil.

Oil Change Intervals:
Initial change after 2 weeks (if desired, this oil may be filtered and reused).
Thereafter, every 2500 hours or 6 months (whichever comes first). Oil should be drained, magnetic plug cleaned and gearbox flushed and refilled with clean oil.
Under extreme conditions, 1 to 3 months.

Flange Bearings
The bearing located at the top of the vertical auger is self-contained and requires no lubrication. Although it does not require lubrication, it should still be inspected periodically to ensure that the hardware securing it is tight, and that there is no visible wear.

The bearing located at the bottom of the vertical drive is equipped with a lubrication fitting (grease zerk). The bearing is greased at the factory. A high quality lithium based grease should be used to lubricate the bearing once annually. IMPORTANT! Only use one to two pumps when lubricating, too much grease will also damage the seals.

* For temperatures below 40° F (4.4° C), use an 80 weight oil of the same quality as the 90 weight. Extra pressure additives may be of value in severe applications.

Fig. 1

Vent & Fill Plug
Oil Level
Drain Plug

For temperatures below 40° F (4.4° C), use an 80 weight oil of the same quality as the 90 weight. Extra pressure additives may be of value in severe applications.
**VERTICAL DRIVE ASSEMBLY**

The instructions below show a reference number in parenthesis ( ), this number refers to the item shown in the assembly illustrations Fig. 2 and Fig. 3 below.

1. Attach the vertical drive belt guard back (1) to the underside of the crossweldment (auger assembly). Secure using four 3/8” x 1” bolts, lock washers and flat washers (weldnuts are already attached to the guard). See illustration below.

2. Mount the 18.4” sheave and bushing (2) to the tail stub on the bottom of the auger making sure the 3/8” x 2” key is inserted in the keyway (the setscrews should be positioned on the bottom side for easy access).

3. Attach the vertical motor mount plate (3) to the motor mount pivot plate (4) with the pivot rod (5) and secure rod in place using two 3/16” x 1 1/2” long cotter pins.

4. Mount the electric motor to the mount plate (the motor, motor pulley and the motor mounting hardware is not furnished). Refer to Page 4 for correct motor and pulley size.

5. Install the pulley onto the motor shaft and align the pulley with the sheave previously installed onto the tail stub (place a straight edge along the face of the pulley and sheave to align).

6. Install the belts (6) and make sure all motor mounting hardware is tight. Set belt tension using the 3/4” threaded rod (7), once tension has been properly set, use the 3/4” nut to lock the threaded rod into place.

   Belt tension should have approximately 9/16” of deflection when belt is pressed at the center of the span between the pulley and sheave.

7. Attach the belt guard (8) to the guard back using four 3/8” x 1” bolts, lock washers and flat washers (the belt guard already has weldnuts attached).

8. Attach the bearing cap (9) to the top plate and secure using two 5/16” x 3/4” bolts and nylon locknuts.
ATTACH VERTICAL UNLOADER TO BIN

The bin unloading flight will need to be installed before the vertical unloader can be attached to the bin unloading tube. If the unloading flight and/or the unloading tube have not been installed, do so now before continuing with the installation of the vertical auger.

The chart below shows the unloading flight lengths required for different diameter bins. Use the chart to help determine the flight necessary for your particular application.

The unloading flight for larger diameter bins have two, three or four different sections that need to be bolted together during installation. Use the bolts provided in the connecting stubs at the end of the tail flights to make these connections.

Once the bin unloading flight has been installed, continue with the installation of the vertical auger as outlined on Page 11 for reducer drive horizontal flights and Page 12 for belt drive horizontal flights.

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ATTACH VERTICAL UNLOADER TO BIN HORIZONTAL FLIGHT W/ REDUCER DRIVE

CAUTION! The vertical auger assembly is heavy and can easily tip. To avoid personal injury, use assistance when moving or handling the assembly.

1. Position the vertical auger next to the bin unloading tube. Adjust the leg stands to align the horizontal flight tail piece from the vertical auger with the unloading flight (See Fig. 4 below).
   Attach the horizontal tail piece to the bin unloading flight and secure using two 5/8" x 4" bolts and nylon locknuts (it may be necessary to slide the bin unloading flight out of the unloading tube to make the connection).

2. Position the horizontal tube flange from the vertical auger against the unloading tube flange. Using twelve 3/8" x 1" bolts, lock washers and non-lock nuts, secure the flanges together. Make sure the bin unloading flight is properly positioned (connected) to the center well drive component. Make any necessary adjustments with the leg stands to ensure vertical auger is level with bin unloading tube.

3. Locate the 3/4" threaded adjustment rod (Ref. 1) from the box of parts. Thread the rod through the 3/4" nut welded to the motor mount pivot plate as shown in Fig. 5 below (insert the rod from the bottom side of the plate).

4. Thread the rod through the nut until there is approximately 3" of rod extending through the nut, then thread a 3/4" non-lock nut (Ref. 2) onto the rod (the adjustment rod will be used to tighten the belts once they are installed, the nut will then be tightened against the welded nut to lock the rod into place).

5. Position the motor mount (Ref. 3) between the motor mount pivot plate, aligning the pivot rod holes with the mounting holes in the mount plate. Insert the pivot rod (Ref. 4) and secure rod into place using the two 3/16" x 1 1/2" cotter pins provided (See Fig. 5).
ATTACH VERTICAL UNLOADER TO BIN
HORIZONTAL FLIGHT W/ REDUCER DRIVE (con’t.)

6. Mount the belt guard bracket (Ref. 5) to the motor mount pivot plate using three 7/16" x 1 1/4" bolts, flat washers and nylon locknuts (See Fig. 6).

7. Mount the electric motor to the mount plate (the motor, motor pulley and the motor mounting hardware is not furnished). Refer to Page 4 for correct motor and pulley size.

8. Mount the belt guard (Ref. 6) to the mounting bracket as shown below. Use four 5/16" x 1" bolts, eight flat washers and four nylon locknuts.

9. Install the sheave (Ref. 7), bushing (Ref. 8) and the 3/8" x 2" key to the reducer gearbox shaft (make sure key is inserted into keyway). Install the pulley to the electric motor shaft and align the sheave and pulley by placing a straight edge on the face of both. Once properly aligned, tighten the motor pulley and sheave hardware to secure them into place.

10. Install the belts (8) and make sure all motor mounting hardware is tight. Set belt tension using the 3/4" threaded rod, once tension has been properly set, use the 3/4" nut to lock the threaded rod into place.

Belt tension should have approximately 9/16" of deflection when belt is firmly pressed at the center of the span between the pulley and sheave.

ATTACH VERTICAL UNLOADER TO BIN
HORIZONTAL FLIGHT W/ BELT DRIVE

CAUTION! The vertical auger assembly is heavy and can easily tip. To avoid personal injury, use assistance when moving or handling the assembly.

1. Position the vertical auger next to the bin unloading tube. Adjust the leg stands to align the horizontal flight tail piece from the vertical auger with the unloading flight (See Fig. 7 below). Attach the horizontal tail piece to the bin unloading flight and secure using two 5/8" x 4" bolts and nylon locknuts (It may be necessary to slide the bin unloading flight out of the unloading tube to make the connection).

2. Position the horizontal tube flange from the vertical auger against the unloading tube flange. Using twelve 3/8" x 1" bolts, lock washers and non-lock nuts, secure the flanges together. Make sure the bin unloading flight is properly positioned (connected) to the center well drive component. Make any necessary adjustments with the leg stands to ensure vertical auger is level with bin unloading tube.
ATTACH VERTICAL UNLOADER TO BIN
HORIZONTAL FLIGHT W/ BELT DRIVE (con’t.)

The following steps have a reference number shown in parenthesis ( ), this number refers to the item which is shown in the following illustrations.

3. Locate the 3/4” threaded adjustment rod (Ref. 1) from the box of parts. Thread the rod through the 3/4” nut welded to the motor mount pivot plate as shown in Fig. 8 below (insert the rod from the bottom side of the plate).

4. Thread the rod through the nut until there is approximately 3” of rod extending through the nut, then thread a 3/4” non-lock nut (Ref. 2) onto the rod (the adjustment rod will be used to tighten the belts once they are installed, the nut will then be tightened against the welded nut to lock the rod into place).

5. Position the motor mount (Ref. 3) between the motor mount pivot plate, aligning the pivot rod holes with the mounting holes in the mount plate. Insert the pivot rod (Ref. 4) and secure rod into place using the two 3/16” x 1 1/2” cotter pins provided (See Fig. 8).

6. Mount the belt guard bracket (Ref. 5) to the motor mount pivot plate using three 7/16” x 1 1/4” bolts, flat washers and nylon locknuts (See Fig. 9).

7. Mount the electric motor to the mount plate (the motor, motor pulley and the motor mounting hardware is not furnished). Refer to Page 4 for correct motor and pulley size.

8. Mount the belt guard (Ref. 6) to the mounting bracket as shown below. Use four 5/16” x 1” bolts, eight flat washers and four nylon locknuts.

9. Install the sheave (Ref. 7) and the 3/8” x 2” key (Ref. 8) to the bearing head shaft (make sure key is inserted into keyway). Install the pulley to the electric motor shaft and align the sheave and pulley by placing a straight edge on the face of both. Once properly aligned, tighten set screws on sheave and tighten motor pulley hardware.

10. Install the belts (Ref. 9) and make sure all motor mounting hardware is tight. Set belt tension using the 3/4” threaded rod, once tension has been properly set, use the 3/4” nut to lock the threaded rod into place.

Belt tension should have approximately 9/16” of deflection when belt is firmly pressed at the center of the span between the pulley and sheave.
**INSTALL SPOUT and SUPPORT BRACKETS**

1. Install the 45° spout over the discharge opening at the top of the vertical auger tube. Secure the spout using the 4” wide half band and ten 5/16” x 1 1/2” bolts and non-lock nuts (See Fig. 10).

2. Attach the support brackets to the vertical auger tube. Position the half-bands on the upper half of the vertical tube (orient the half-band with the mounting tab so the mount tab is facing towards the bin). Secure the half-bands using four 3/8” x 1 1/2” bolts and non-lock nuts.

3. Locate the telescoping tubes from the kit (if necessary insert the smaller diameter tube into the larger one as shown in Fig. 10). Insert a 3/8” x 3/4” square-head setscrew into each of the weldnuts on the larger diameter tubes (two setscrews for each tube).

4. Attach the telescoping tubes to the mount tabs on the half-band using one 1/2” x 1” bolt and nylon locknut for each mount tab. Extend the smaller diameter tube so it can be attached to an existing bolt on the side of the grain bin.

Once attached to the grain bin, make sure the vertical auger tube is vertical, then tighten the square-head setscrews to lock the tubes into place.
12" Vertical Bin Unload Auger with:
10" Horizontal Belt Drive Unload Auger
10" Horizontal Reducer Drive Unload Auger
12" Horizontal Reducer Drive Unload Auger

The charts below reference Catalog No. information and Part No. for some of the drive components on the 12" Vertical Unload Auger.
The Part No’s. shown can also be found in the illustration and parts lists shown in the following pages.

<table>
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<tr>
<th>Catalog No.</th>
<th>Horizontal Unload Size</th>
<th>Reducer Drive Yes/No</th>
<th>Horizontal Unload No. of Belts</th>
<th>Horizontal Driven Sheave</th>
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<th>Vertical Assembly Part No.</th>
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## 12" VERTICAL BIN UNLOADER

### COMPONENTS

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<td>Lock Washer, 5/16” PLT</td>
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<td>21</td>
<td>3295A1</td>
<td>Bushing, QD SK 1.5” bore</td>
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PARTS LIST

12” VERTICAL BIN UNLOADER

**Spout**

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<td>Tube, 3’ Spout Extension</td>
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Items 1 thru 6 are part of the complete spout but can be ordered separately.

**Complete Spout - Order Part No. 12042**

**Head Plate**

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<td>3</td>
<td>1015711</td>
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<tr>
<td>4</td>
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**Support Brackets**

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<td>Setscrew, 3/8-16 x 3/4”</td>
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<td>9</td>
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<td>Nut 3/8-16 Non-Lock PLT</td>
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12" VERTICAL BIN UNLOADER
W/ HORIZONTAL REDUCER DRIVE
F/ 10" & 12" HORIZONTAL FLIGHT
## PARTS LIST

**12” VERTICAL BIN UNLOADER**

**W/ HORIZONTAL REDUCER DRIVE**

**F/ 10” & 12” HORIZONTAL FLIGHT**

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<td>Cotter Pin, 3/16” x 1 1/2”</td>
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**PARTS LIST**

**Page P-5**
12" VERTICAL BIN UNLOADER
W/ HORIZONTAL BELT DRIVE
F/ 10" HORIZONTAL FLIGHT
## PARTS LIST

**12” VERTICAL BIN UNLOADER**  
*W/ HORIZONTAL BELT DRIVE*  
*F/ 10” HORIZONTAL FLIGHT*

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<td>Stub, Horizontal Flight f/ 10”</td>
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<td>Flat Washer, 3/8” PLT</td>
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## PARTS LIST

### 4:1 GEARBOX REDUCER

**WEASLER 6100**

Complete Gearbox Assembly - Part No. 1025519

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