

# 12" COMMERCIAL HORIZONTAL POWER HEAD UNLOADER

## OWNER'S & OPERATOR'S MANUAL

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### DIRECT DRIVE MODELS

BJ12240DH  
BJ12480DH  
BJ12720DH

### 3:1 CHAIN REDUCTION DRIVE MODELS

BJ12240DCR  
BJ12330DCR

### 4:1 GEAR REDUCTION DRIVE MODELS

BJ12240DGR  
BJ12480DGR  
BJ12920DGR

**IMPORTANT!** The 3:1 and 4:1 gear boxes are shipped Without Oil.  
*Oil must be added before operation.*  
Refer to the Lubrication Section in this manual.

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## **GENERAL SAFETY STATEMENT**

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

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

Please remember safety equipment provides important protection for persons around a grain handling system that is in operation. Be sure 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.



### **WARNING**

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

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## **OPERATOR QUALIFICATIONS**

Operation of this auger shall be limited to competent and experienced persons. In addition, anyone who will operate or work around a auger 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 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 with which the employee is, or will be involved."\*

3. Unqualified persons are to stay out of the work area. See page 4.
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.

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

## **MACHINE INSPECTION**

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

1. Check to see that all guards 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 are listed in the back of this manual). Safety signs may be obtained from your dealer or ordered from the factory.
3. Are all fasteners tight?
4. Check oil levels in gearboxes. See pages 8 & 9 in the *Lubrication Instructions* section for oil level information.

# GENERAL INFORMATION

## DESIGNATED WORK AREA

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



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

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

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

## OPERATING PROCEDURES

### POWER HEAD INFORMATION

The horizontal unloading kit includes a section of flanged tubing (with flight and stubs) which bolts to the flange on the main unloading tube.

The drive motor is mounted on top of the flanged tube. All motor mounts are designed to take the proper size motor. The electric motor, its mounting hardware and the motor pulley are not furnished with the auger.

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.



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

**Disconnect power before resetting motor overloads.**

**Make certain motor is grounded.**

### ELECTRIC MOTOR DRIVES

Always use a motor with required H.P. suggested in the table on Page 5. Use a motor that operates at 1750 RPM. Too small of a motor will not supply the power required to run at capacity and damage to the motor could occur.

Too large of a motor may cause high stress on the conveyor components resulting in shorter life for them components.

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

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



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

**A main power disconnect switch that can be locked only in the "OFF" position shall be provided. This shall be locked whenever work is being done on the Horizontal Bin Unloading Auger.**

# OPERATING PROCEDURES

## POWER REQUIREMENTS

Power Head Model	Bin Dia.	No. of Belts	Motor Sheave*	Maximum Horsepower (kW)
12" Commercial w/Direct Drive	24' to 42'	2	4.2 PD	10 hp (7.5 kW)
	48' to 68'	3	4.2 PD	15 hp (11.2 kW)
	72' to 90'	4	4.2 PD	20 hp (15.0 kW)
12" Commercial w/3:1 Reduction Chain Drive	24' to 30'	2	3.8 PD	7 1/2 hp (5.6 kW)
	24' to 42'	2	4.6 PD	10 hp (7.5 kW)
	33' to 48'	3	3.8 PD	10 hp (7.5 kW)
	42' to 68'	3	4.6 PD	15 hp (11.2 kW)
12" Commercial w/4:1 Reduction Gear Drive	24' to 42'	2	4.6 PD	10 hp (7.5 kW)
	24' to 90'	2	6.0 PD	15 hp (11.2 kW)
	42' to 68'	3	4.6 PD	15 hp (11.2 kW)
	68' to 90'	3	6.0 PD	20 hp (15.0 kW)
	92' to 120'	4	4.6 PD	25 hp (18.6 kW)

\* Motor sheaves are **not** furnished with auger.

**NOTE:** When using the power head with a power sweep system, use the power recommendation given for the power sweep.

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

## **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 table below.)
2. If the flight speed is too slow and the auger flighting is permitted to "load-up", high torque will be required to turn the auger flighting, and damage to the unit can result. Use the bin well slide gate to control the amount of grain fed into the auger.

Power Head Model	Motor Pulley Dia.*	Driven Pulley Dia.	Auger Speed
12" Commercial w/Direct Drive	3.0" P.D.	18.4" O.D.	250 rpm
	4.2" P.D.	18.4" O.D.	425 rpm
12" Commercial w/3:1 Reduction Chain Drive	3.8" P.D.	7.4" P.D.	312 rpm
	4.6" P.D.	7.4" P.D.	375 rpm
12" Commercial w/4:1 Reduction Gear Drive	4.6" P.D.	7.4" P.D.	280 rpm
	6.0" P.D.	7.4" P.D.	360 rpm

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

P.D. = Pitch Diameter

O.D. = Outside Diameter

# OPERATING PROCEDURES

## START-UP INFORMATION



**Make certain everyone is clear before operating equipment.**

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

**Keep all safety shields and devices in place.**



**Keep hands, feet and clothing away from moving parts.**

**Shut off and lock out power to adjust, service or clean.**

During the operation of the auger, one person shall be in a position to monitor the operation. Inspect the drive before adding power and know how to shut down in an emergency (See Page 7). Visually inspect the auger periodically during operation. **DO NOT** leave the unit operating unattended.

## IMPORTANT: BEFORE FILLING BIN

Make sure all slide gates on the wells are closed before filling the bin. If the gates are left open, the bin 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 is considered abuse of the equipment and would void any warranty.**

## BREAK-IN INFORMATION

An auger should go through a “break-in” period when it is new or after it sets idle for a season. The auger should first be run at partial capacity until the screw becomes polished and smooth before attempting full capacity. A failure will most likely occur when it is run full before it has “polished up”. It is recommended that several hundred bushels of grain be augered at partial capacity to polish the screw.

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

1. If the flight speed is in excess of what is recommended, excessive wear will result.
2. If the flight speed is slow and the auger flighting is permitted to “load up”, high torque will be required to turn the auger flighting and damage to the unit can result. Use the bin well slide gates to control the amount of grain fed into the auger.

## OPERATING CAPACITIES

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

## FULL LOAD OPERATING PROCEDURES



**Observe work area restrictions.  
Make certain everyone is clear before  
operating the equipment.**

Operation of the unload auger will generally include moving grain into or out of grain storage structures.

Grain will enter the auger through a dump hopper or through bin wells in grain bins.

There are flow control devices included with these components that should be used to control grain flow rates into the unloading auger tube.

### NORMAL OPERATION

1. Start the unloading auger motor before conveying any grain.
2. Open the center well gate **gradually** until the desired flow is established, it should not be necessary to open the gate more than 3 to 6 inches (76 to 152 mm) to acquire a full load.

**Do Not overload the auger. Starting the unit under load may result in damage to the auger. Such damage is considered abuse of the equipment and is not covered under the warranty.**

If intermediate wells are being used, they should be opened **after** grain has stopped flowing into the center well.

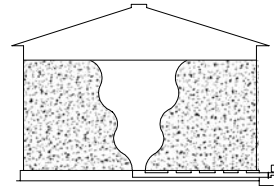
### TO STOP AUGER

1. Close all gates to allow auger to empty before stopping the motor.
2. Once auger is clear, shut off electric motor and lockout the power source.

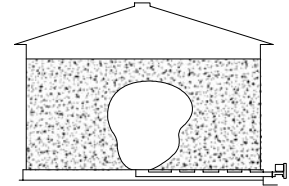


**Do Not enter the grain bin unless all  
power driven equipment has been shut  
down and locked-out.**

**Never enter the grain bin unless  
monitored by another person.**



**FIG. 1**  
(Abnormal Flow)



**FIG. 2**  
("Bridging")



**Do Not enter the bin if the grain has  
"Bridged" or has not flowed normally out  
of the bin, See Figure's 1 and 2.**

**The grain may suddenly break loose and  
bury causing suffocation.**



## SHUTDOWN

### NORMAL SHUTDOWN

Make certain that the bin well slide gates are closed to permit the unloading tube to clean out before stopping the unit. Before the operator leaves the work area, the power source shall be locked out.

### EMERGENCY SHUTDOWN

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

Reconnect power source and clear auger gradually.

**NOTE: Starting the unit under load may result in damage to the auger. Such damage is considered abuse of the equipment and is not covered under warranty.**



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

# OPERATING PROCEDURES

## LOCKOUT

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

**IMPORTANT! Use a main power disconnect switch capable of being locked only in the off position.**

## CLEAN-UP

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

## TROUBLE SHOOTING

### **AUGER VIBRATION...**

Driving belt may be overtightened, putting head stub and drive shaft in a bind.

### **LOW CAPACITY...**

The unloading auger may not be getting enough grain.

The bin well may have bridged over, restricting flow.

The center well gate may not be open enough.

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

### **PLUGGING OF AUGER...**

The unloading auger may be getting too much grain, causing "jamming" inside the housing. Close all well gates to restrict flow.

The drive motor may be too small or wired improperly (See power requirements on Page 5).

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

Assure the auger is free of foreign material, such as sacks, tarp corners, etc. A plug at the discharge end of the auger will cause an unload auger plug.

## LUBRICATION

**IMPORTANT! The 4:1 drive reducer is shipped without oil. Oil needs to be added before operation.**



**Never clean, adjust or lubricate a machine that is in operation.**

### **Oil Level, 4:1 Reducer**

1. With gearbox in the upright position, remove one of the plugs from the side of the gearbox housing (See Fig. 3).

Remove the level check plug from the output shaft side of the gearbox (the plug is below and a little left of the output shaft).

Add approx. 32 oz. (946 ml.) of an SAE 90\* weight oil through the plug opening on the side of the gearbox (installing a pipe nipple to an elbow, then threading the nipple into the plug opening works well to help funnel the oil into the gearbox).

Watch the level check hole when pouring the last of the oil. When oil begins to leak from the hole, stop adding oil. **Do Not** add more oil than what is recommended, additional oil may damage the seals or be forced through the vented plug.

2. Remove the upper 3/8" plug from the input shaft side of the gearbox and replace with the vented plug provided.

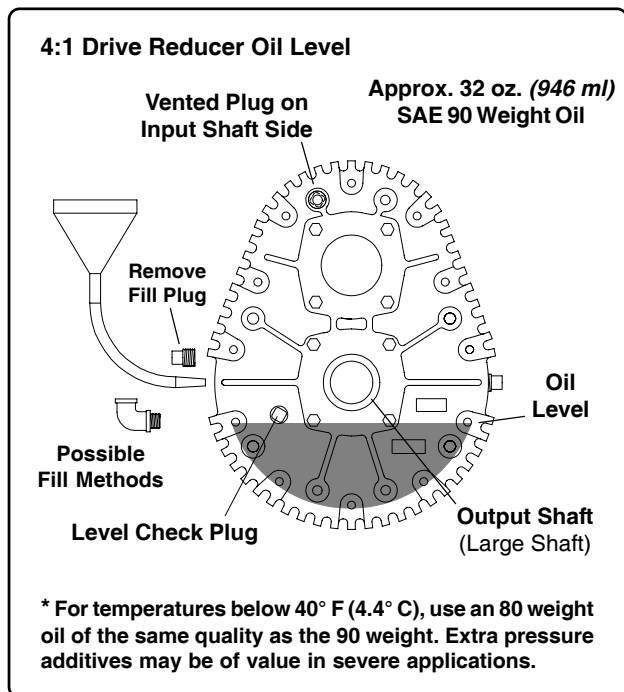


FIG. 3

# ASSEMBLY INSTRUCTIONS

## LUBRICATION (con't.)

**IMPORTANT!** The 3:1 drive reducer is shipped without oil. Oil needs to be added before operation.



**Never clean, adjust or lubricate a machine that is in operation.**

### Oil Level, 3:1 Reducer

1. With reducer in the upright position remove the vented fill plug and the level check plug from the reducer housing (See Fig. 4).

Add approximately 64 oz (1.9 l) of an SAE 90\* weight oil, we recommend a non-foaming, multi-purpose gear oil (same as used commercially for automotive differentials).

Watch the level check hole when pouring the last of the oil. If oil begins to leak from the hole, stop adding oil. **Do Not** add more oil than what is recommended. Additional oil may damage the seals or be forced through the vented plug.

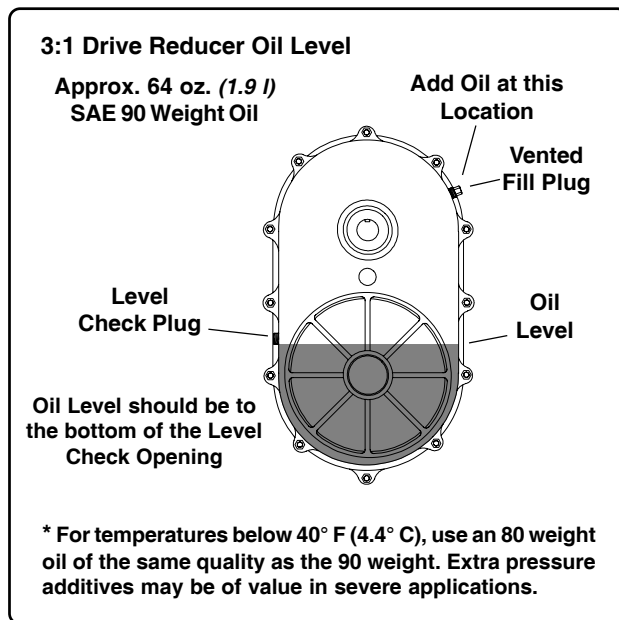


FIG. 4



Some of the parts used in assembly are heavy and may require assistance when lifting and positioning these parts.

Always wear the proper personal safety equipment when working with metal materials and power tools.



Keep work area clean and free from tools and objects which may cause accidental tripping or falling.

## 12" COMMERCIAL HORIZONTAL POWER HEAD, 3:1 REDUCER DRIVE

On most units the auger housing, drive reducer, adapter plate and flight **are already pre-assembled**.

If assembly or parts replacement for the power head is necessary, the following instructions can be used to assist with the proper assembly procedures.

**IMPORTANT!** The reducer gearbox is shipped without oil. Refer to the "Lubrication" Section in the previous column for instructions on adding oil.

1. Fasten the head plate to the housing weldment. Secure using eleven (11) 3/8" x 1" bolts and locknuts (the bolt hole on top of housing flange will not be used, See Fig. 5).

Apply anti-seize compound to the reducer output shaft. Attach the reducer to the head plate ring using four (4) 3/8" x 1" bolts and nylon locknuts.

Apply anti-seize compound to the flight stub provided with the power head. Install the stub into the end of the head flight (See Fig. 5). Secure the stub using two (2) 5/8" x 4" bolts and nylon locknuts.

Attach the head flight to the reducer output shaft and secure using two (2) 5/8" x 4" bolts and nylon locknuts.

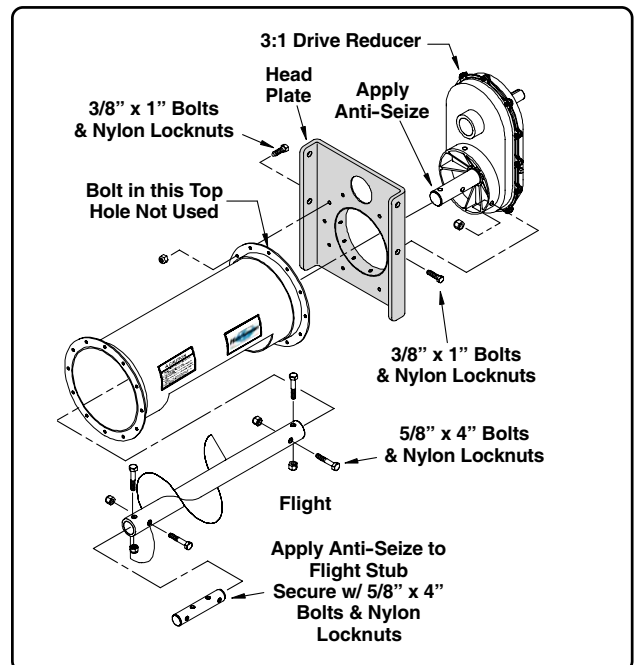


FIG. 5

# ASSEMBLY INSTRUCTIONS

## 12" COMMERCIAL HORIZONTAL

### 3:1 REDUCER DRIVE (con't.)

2. Position the motor mount support over the head plate so the holes for the motor mount pivot rod are positioned on the right hand side of the head plate (right hand as seen when looking from bin center towards bin wall).

Using the rear set of holes on the motor mount support, fasten the support and belt guard brackets to the head plate using four (4) 1/2" x 1 1/4" bolts, lock washers and non-lock nuts (See Fig. 6).

**NOTE: the belt guard brackets will be installed on the outside of the motor mount support.**

3. Thread the adjustment rod down through the nut on the top of the motor mount support until it extends two to three inches above the top of the support (final adjustment will be done after installing the motor and belts).
4. Set the motor mount plate over the top of the motor mount support, aligning the pivot rod holes with the rodholes in the motor mount. Insert the pivot rod through the holes and secure using the two cotter pins provided.

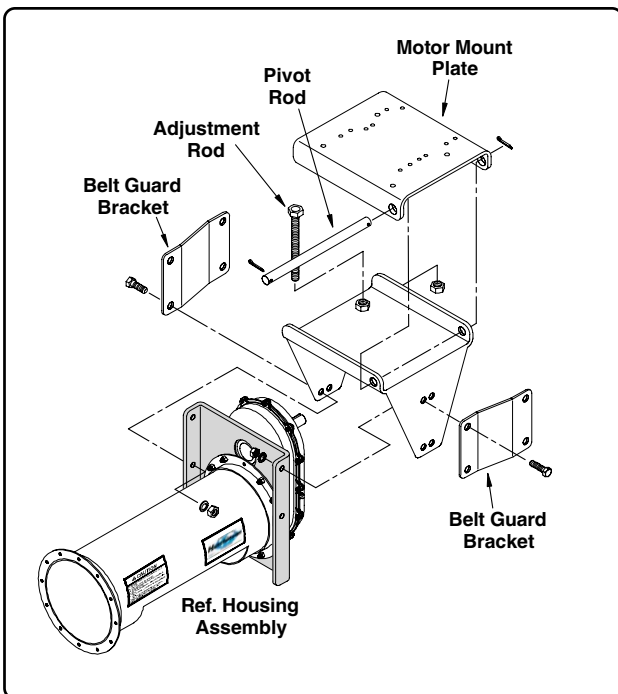


FIG. 6

5. Install the belt guard (See Fig. 7). Secure the guard to the belt guard brackets using four (4) 5/16" x 1" bolts, flat washers, lock washers and non-lock nuts (the belt guard has four slotted holes on each side, use the bottom set of holes to mount the guard).

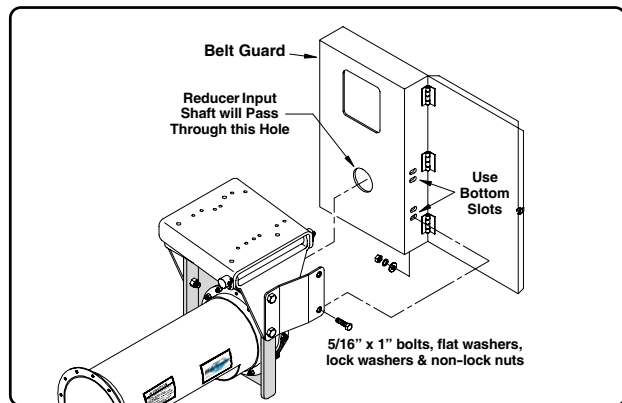


FIG. 7

6. Loosely install the bushing and 7.75" sheave to the reducer input shaft making sure the 1/4" key is in place (the sheave may need to be repositioned when aligning it with the motor pulley). The keys vary in length, 1/4" x 2" for 2 belt sheaves and 1/4" x 3" for 3 belt sheaves.
7. Install the electric motor onto the mount plate using the hole locations as shown on Page 11. **Refer to the power recommendations on Page 5 for proper motor requirements (electric motor not furnished).** Mount the motor pulley (not furnished) onto the shaft and place a straight edge on the outer face of the input sheave and motor pulley for alignment. Tighten motor pulley to motor shaft. Secure sheave to reducer input shaft.

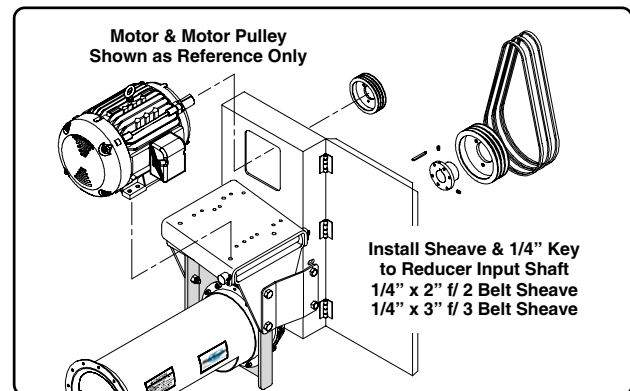


FIG. 8

8. Install the belts and tighten by adjusting the threaded rod against the bottom of the motor mount plate. Once belts are tight, install a 3/4" non-lock nut on the bottom side of the threaded rod and secure it tightly against the bottom of the motor mount support. **Do Not** overtighten the belts as this puts unnecessary load on the shaft bearings.

# ASSEMBLY INSTRUCTIONS

## 12" COMMERCIAL HORIZONTAL

### 3:1 REDUCER DRIVE (con't.)



The head assembly is heavy. To avoid the possibility of personal injury, use assistance when lifting and positioning the head assembly.

- Apply anti-seize compound the flight stub on the head assembly. Attach the head assembly and flight stub to the bin unloading flight. Secure using two (2) 5/8" x 4" bolts and locknuts.

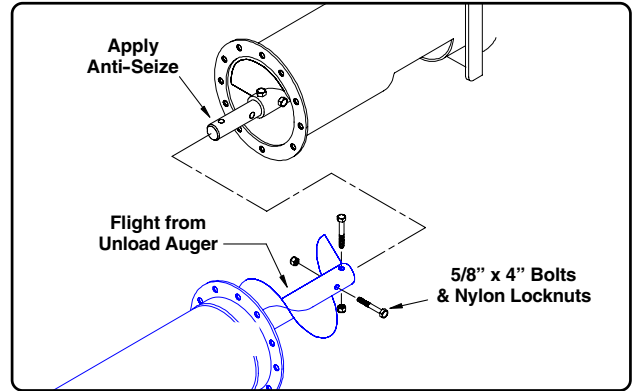
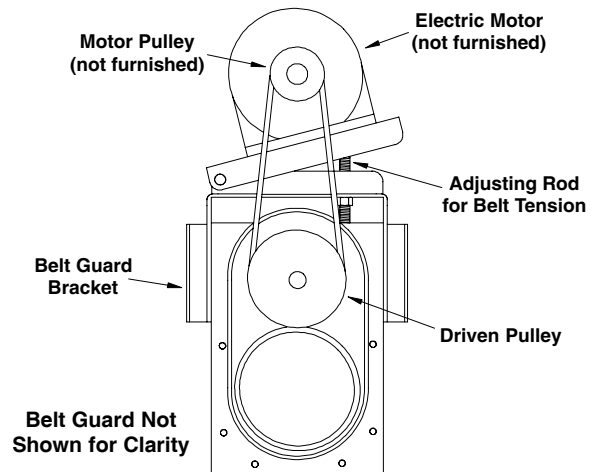
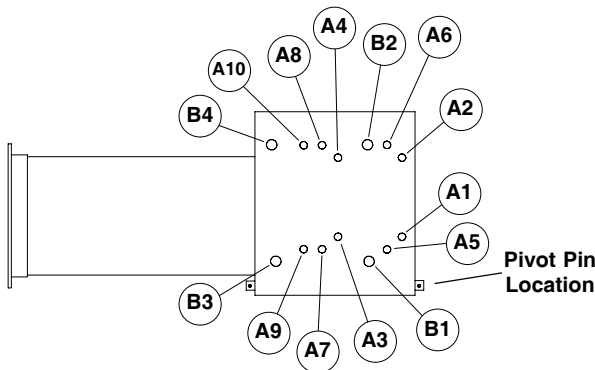


FIG. 9

### Motor Mount Hole Locations

Motor Size H.P. (kW)	Motor Frame Size	Bolt Dia. Req'd.	Mount in Holes Marked (•)															
			A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4		
5 hp (3.7 kW)	184T	3/8"	•	•	•	•												
7 1/2 hp (5.6 kW)	213T	3/8"					•	•	•	•								
10 hp (7.5 kW)	215T	3/8"					•	•			•	•						
15 hp (11.2 kW)	254T	1/2"												•	•	•	•	



Make sure to use the proper size and speed motor to ensure satisfactory auger operation. Too small of a motor will not supply the power required to achieve capacity and could damage the motor. Too large of a motor may cause high stress on auger components resulting in shorter life for those components.

# ASSEMBLY INSTRUCTIONS

## **12" COMMERCIAL HORIZONTAL POWER HEAD, 4:1 REDUCER DRIVE**

On most units the auger housing, drive reducer, head plate, belt guard brackets and flight have already been pre-assembled.

If they have been pre-assembled, continue to Step 4. If they are not, the following instructions will provide the necessary steps needed to complete assembly.



Some of the parts used in assembly are heavy and may require assistance when lifting and positioning these parts.

Always wear the proper personal safety equipment when working with metal materials and power tools.



Be cautious of electrical hazards. Keep work area clean and free from tools and objects which may cause accidental tripping or falling.

**IMPORTANT: The reducer is shipped without oil. Refer to the "Lubrication" Section on Page 8 for instructions on adding oil.**

1. Fasten the head plate to the flange ring on the end of the auger housing. Secure using twelve (12) 3/8" x 1" bolts, lock washers and non-lock nuts. (position the head plate as shown in Fig. 10).
2. The belt guard brackets and the reducer will attach to the head plate as one assembly. Position the brackets on the input shaft side of the gearbox and insert four 1/2" x 5" bolts with lockwashers through the belt guard brackets and then through the gearbox. Secure the gearbox and brackets to the threaded spacers on the head plate.

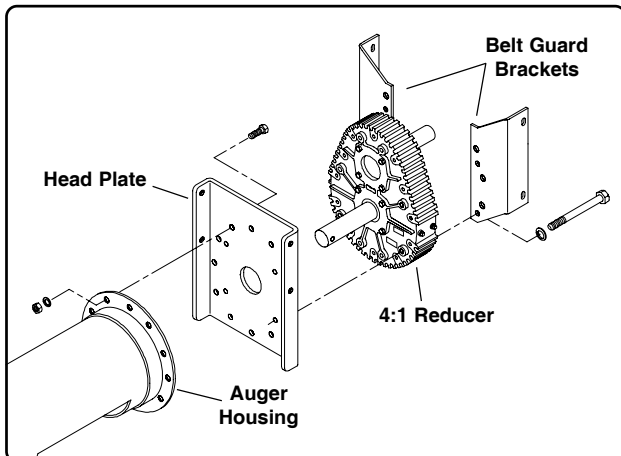


FIG. 10

3. Slide the flight into the auger housing and onto the output shaft of the reducer. Secure using two (2) 5/8" x 4" bolts and nylon locknuts (See Fig. 11).
4. Fasten the motor mount support to the head plate using the **front** pair of holes in each side of the motor mount. Secure using four (4) 1/2" x 1 1/4" bolts, lock washers and non-lock nuts.

**NOTE: Position the motor mount so the pivot shaft holes are on the right hand side (as seen when looking from the intake end of the auger towards the discharge end, See Fig. 11).**

5. Thread the adjustment rod down through the nut on the top of the motor mount support until it extends two to three inches above the top of the support (final adjustment will be done after installing the motor and belts).
6. Set the motor mount plate over the top of the motor mount support aligning the pivot shaft holes with the shaft holes in the motor mount. Insert the pivot shaft through the holes and secure using the two 3/16" x 1 1/2" cotter pins provided.

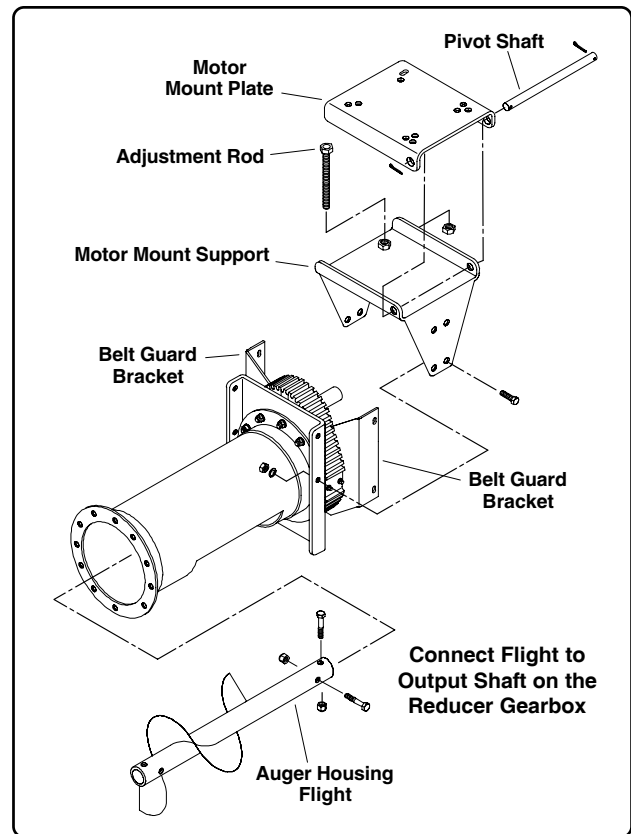


FIG. 11

# ASSEMBLY INSTRUCTIONS

## 12" COMMERCIAL HORIZONTAL POWER HEAD, 4:1 REDUCER DRIVE (con't.)

7. Install the belt guard between the belt guard brackets and secure using four (4) 5/16" x 1" bolts, flat washers, lock washers and non-lock nuts.
8. Install the driven sheave onto the input shaft of the drive reducer using the QD type hub and key.  
**Note: the drives are designed for use with a 7.4" pitch diameter sheave.**
9. Install the electric motor onto the mount plate using the hole locations shown below. **Refer to the Power Recommendation Chart on Page 5 for proper motor requirements.**  
Mount the motor pulley (not furnished) onto the shaft and place a straight edge on the outer face of each pulley for alignment. Secure motor pulley.
10. Install the belts and tighten by adjusting the threaded rod against the bottom of the motor mount plate. Once belts are tight, install a 3/4" non-lock nut on the bottom side of the threaded rod and secure the nut tightly against the bottom of the motor mount support. **Do Not** overtighten the belts as this puts unnecessary load on the shaft bearings.
11. Install the connecting stub to the flight in the head assembly. Secure using two (2) 5/8" x 3 1/2" bolts and locknuts.

12. Attach the head assembly and connecting stub to the bin unloading flight and secure using two (2) 5/8" x 3 1/2" bolts and locknuts.



**The head assembly is heavy. To avoid the possibility of personal injury, use assistance when lifting and positioning the head assembly.**

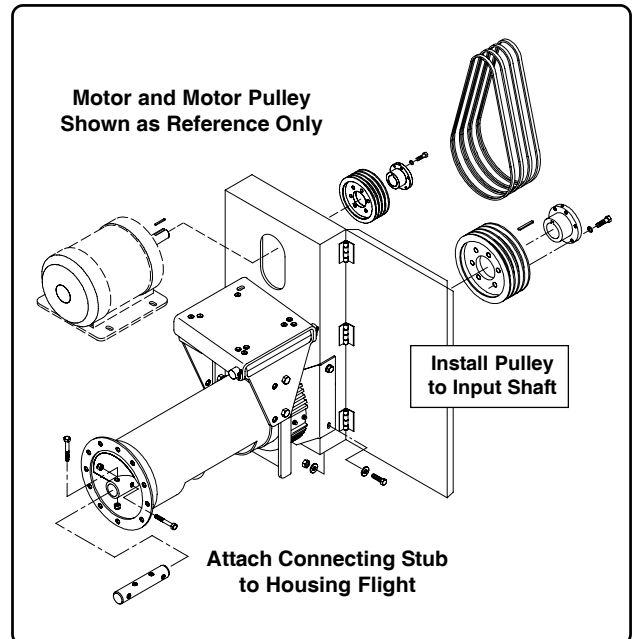
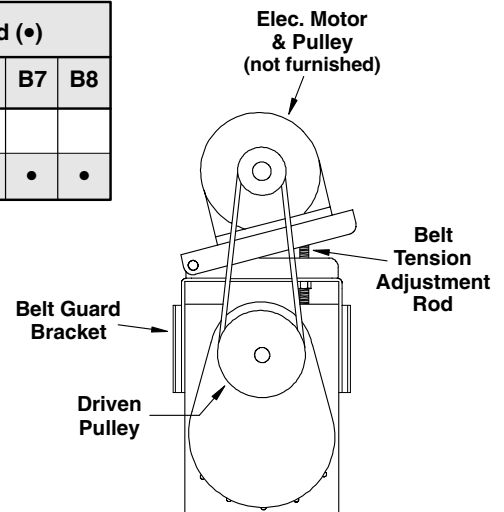
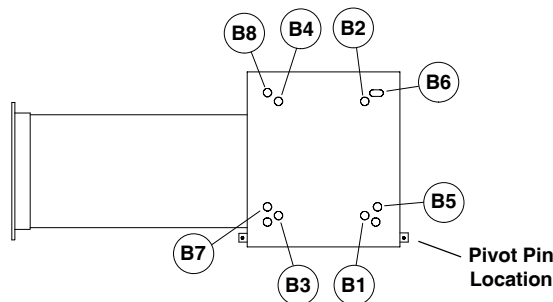


FIG. 12

### Motor Mount Hole Locations

Motor Size H.P. (kW)	Motor Frame Size	Bolt Dia. Req'd.	Mount in Holes Marked (•)							
			B1	B2	B3	B4	B5	B6	B7	B8
15 hp (11.2 kW)	254T	1/2"	•	•	•	•				
20 hp (15.0 kW)	256T	1/2"					•	•	•	•



# ASSEMBLY INSTRUCTIONS

## 12" COMMERCIAL HORIZONTAL POWER HEAD, DIRECT DRIVE



Some of the parts used in assembly are heavy and may require assistance when lifting and positioning these parts.

Always wear the proper personal safety equipment when working with metal materials and power tools.



Be cautious of electrical hazards. Keep work area clean and free from tools and objects which may cause accidental tripping or falling.

1. Slide the head stub into the end of the flighting shaft and secure using two (2) 5/8" x 3 1/2" bolts, and nylon locknuts (See Fig. 13).
2. Attach the bearing to the head plate using four (4) 5/8" x 2" bolts and nylon locknuts.
3. Slide the head plate and bearing onto the head stub. Secure the head plate to auger housing flange using twelve (12) 3/8" x 1" bolts, lock washers and non-lock nuts.

Make sure there is enough stub length extended to mount the pulley and make sure there is at least 1/2" (13 mm) of clearance between the end of the flight shaft and the back of the head plate. Tighten the bearing lock collar to lock shaft into place.

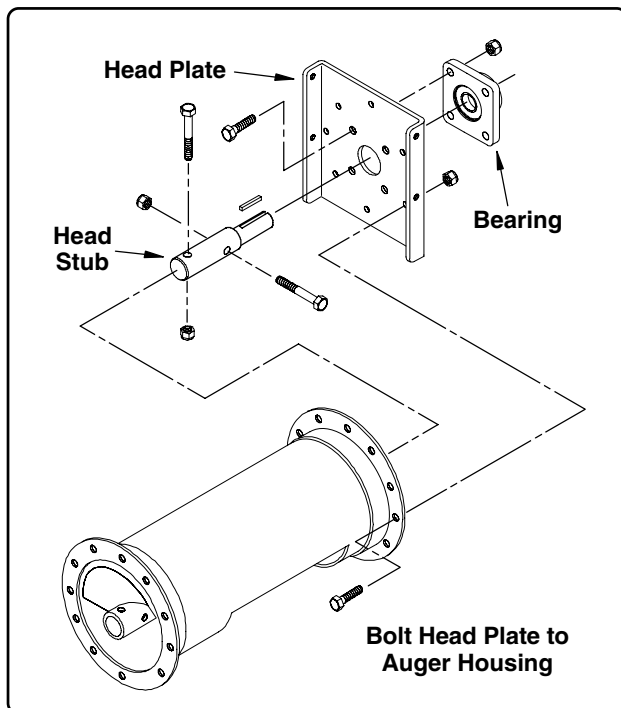


FIG. 13

4. Fasten the motor mount support and belt guard brackets to the head plate using the **back** pair of holes in each side of the support. Secure using four (4) 1/2" x 1 1/4" bolts, lock washers and non-lock nuts (See Fig. 14).

**NOTE:** The belt guard brackets are positioned on the outside of the motor mount support. Also make sure the motor mount support is arranged so that the pivot pin holes are on the right hand side as seen when looking from the intake end of the auger towards the discharge end.

5. Thread the adjustment rod down through the nut on the top of the motor mount support until it extends two to three inches above the top of the support (final adjustment will be done after installing the motor and belts).
6. Set the motor mount plate over the top of the motor mount support aligning the pivot shaft holes with the shaft holes in the motor mount. Insert the pivot shaft through the holes and secure using the two 3/16" x 1 1/2" cotter pins provided.

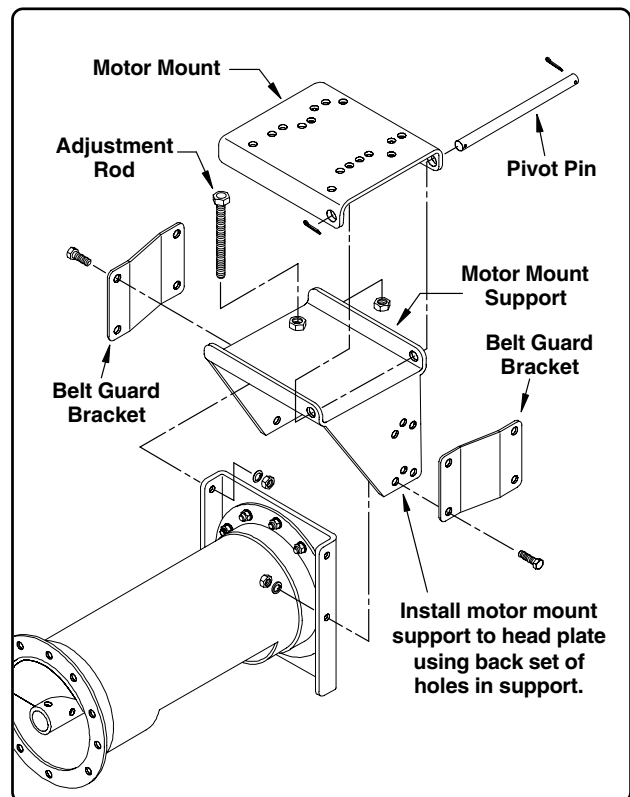


FIG. 14

## 12" COMMERCIAL HORIZONTAL POWER HEAD, DIRECT DRIVE (con't.)

7. Install the belt guard between the belt guard brackets and secure using four (4) 5/16" x 1" bolts, flat washers, lock washers and non-lock nuts (use the bottom set of holes on each side of the guard).
8. Install the driven sheave onto the head stub using the QD type hub and key (See Fig. 15).  
**Note: the drives are designed for use with a 18.4" diameter sheave.**
9. Install the electric motor onto the mount plate using the hole locations shown on Page 16 (electric motor and its mounting hardware are not furnished). **Refer to the Power Recommendation Chart on Page 5 for proper motor requirements.**
10. Mount the motor pulley (not furnished) onto the shaft and place a straight edge on the outer face of each pulley for alignment. Secure motor pulley.
11. Install the belts and tighten by adjusting the threaded rod against the bottom of the motor mount plate. Once belts are tight, install a 3/4" non-lock nut on the bottom side of the threaded rod and secure the nut tightly against the bottom of the motor mount support. **Do Not** overtighten the belts as this puts unnecessary load on the bearing.
12. Attach the head assembly and connecting stub to the bin unloading flight. Secure the flight using two (2) 5/8" x 3 1/2" bolts and locknuts and secure the head assembly using twelve (12) 3/8" x 1" bolts, lock washers and non-lock nuts.

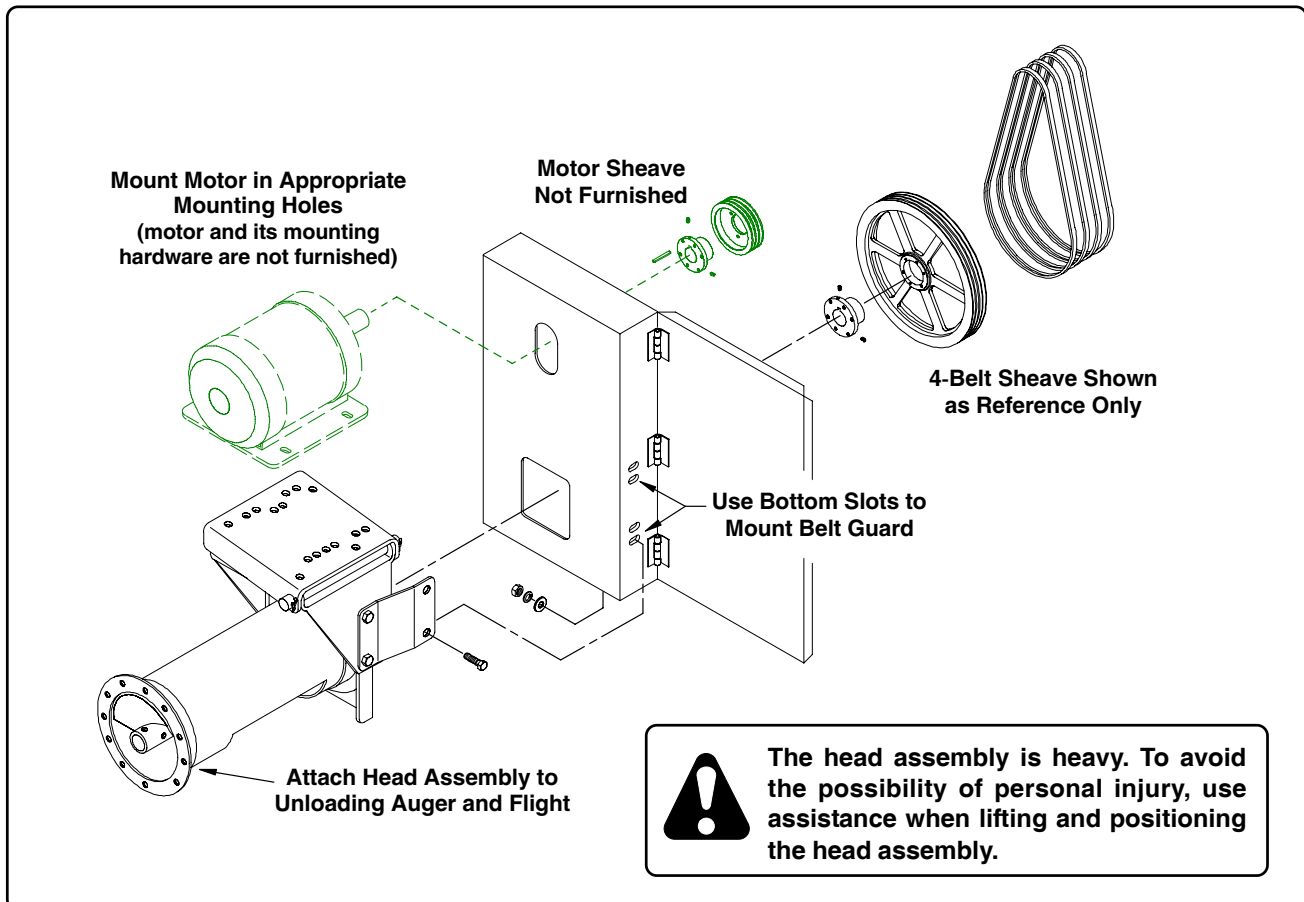


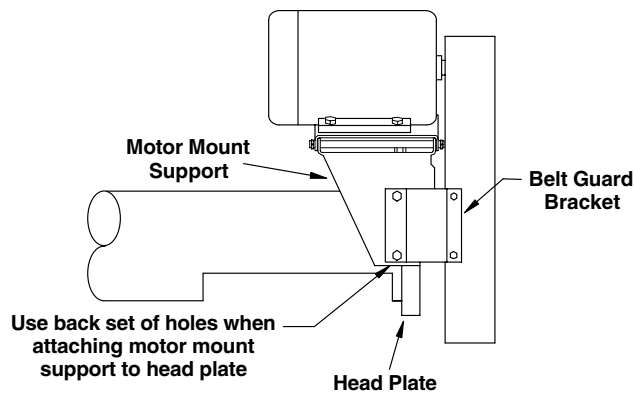
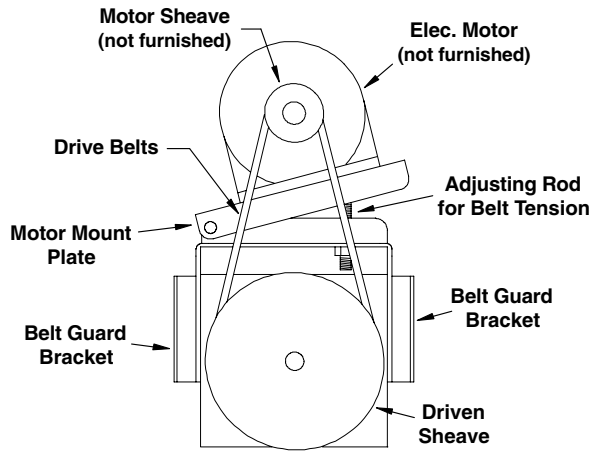
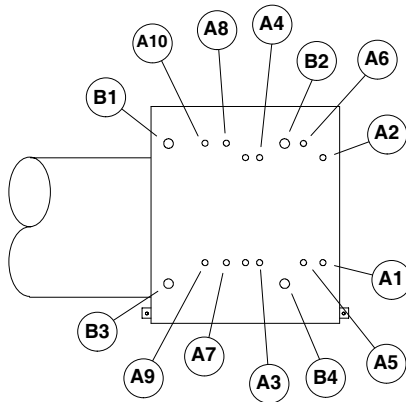
FIG. 15

# ASSEMBLY INSTRUCTIONS

**12" COMMERCIAL HORIZONTAL  
POWER HEAD, DIRECT DRIVE (con't.)**

**Motor Mount Hole Locations**

Motor Size H.P. (kW)	Motor Frame Size	Bolt Dia. Req'd.	Mount in Holes Marked (-)														
			A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	
5 hp (3.7 kW)	184T	3/8"	.	.	.	.											
7 1/2 hp (5.6 kW)	213T	3/8"					.	.	.	.							
10 hp (7.5 kW)	215T	3/8"					.	.			.	.					
15 hp (11.2 kW)	254T	1/2"											.	.	.	.	



# BOLT KITS

## **BOLT KIT for 12" COMMERCIAL HORIZONTAL POWER HEAD**

### **DIRECT DRIVE**

<u>Part</u>	<u>Description</u>	<u>Qty.</u>	<u>Where Used</u>
4073A1	Key, sq. 3/8" x 3" long . . . . .	1 . . .	3B & 4B Pulley to Head Stub
1038D	Key, sq. 3/8" x 2" long . . . . .	1 . . .	2B Pulley to Head Stub
33060	Bolt, 3/8-16 x 1" G5 PLT . . . . .	12 . .	Head Plate to Tube Flange
D1150	Washer, lock, 3/8" PLT . . . . .	12	
D1149	Nut, non-lock 3/8-16 PLT . . . . .	12	
33244	Bolt, 5/8-11 x 2" G5 PLT . . . . .	4 . . .	Bearing to Head Plate
D1171	Washer, lock, 5/8" PLT . . . . .	4	
D1170	Nut, non-lock 5/8-11 PLT . . . . .	4	
33103	Bolt, 5/8-11 x 3 1/2" G5 PLT . . . . .	4 . . .	Head & Tail Stubs to Flight Shaft
33139	Nut, nylon lock, 5/8-11" PLT . . . . .	4	
1002227	Bolt, 1/2-13 x 1 1/2" G5 PLT . . . . .	4 . . .	Motor Mount Support and Belt Guard
D1143	Washer, lock, 1/2" PLT . . . . .	4	Brackets to Head Plate
D1169	Nut, non-lock, 1/2" PLT . . . . .	4	
D1152	Nut, non-lock, 3/4 PLT . . . . .	1 . . .	Motor Mount Adjustment Rod
6676A1	Adjustment Rod (mtr. mnt.) . . . . .	1 . . .	(in box of parts)
33046	Bolt, 5/16-18 x 1" G5 PLT . . . . .	4 . . .	Belt Guard to Belt Guard Brackets
33144	Washer, lock, 5/16" PLT . . . . .	4	
33151	Nut, non-lock, 5/16-18 PLT . . . . .	4	
33023	Washer, flat, 5/16" PLT . . . . .	4	
3337A1	Pin, Cotter, 3/16 x 1 12" . . . . .	2 . . .	Motor Mount Pivot Pin

## **BOLT KIT for 12" COMMERCIAL HORIZONTAL POWER HEAD**

### **3:1 REDUCTION DRIVE**

<u>Part</u>	<u>Description</u>	<u>Qty.</u>	<u>Where Used</u>
4045A1	Key, sq. 1/4" x 2" long f/ 2 belt . . . . .	1 . . .	Driven Pulley to Reducer Input Shaft
4046A1	Key, sq. 1/4" x 3" long f/ 3 belt . . . . .	1 . . .	Driven Pulley to Reducer Input Shaft
D1152	Nut, non-lock, 3/4 PLT . . . . .	1 . . .	Motor Mount Adjustment Rod
33046	Bolt, 5/16-18 x 1" G5 PLT . . . . .	4 . . .	Belt Guard Mounting
33144	Washer, lock, 5/16" PLT . . . . .	4	
33151	Nut, non-lock, 5/16-18 PLT . . . . .	4	
33023	Washer, flat, 5/16" PLT . . . . .	4	
33082	Bolt, 1/2-13 x 1 1/4" G5 PLT . . . . .	4 . . .	Motor Mount Support & Guard Brackets
D1143	Washer, lock, 1/2" PLT . . . . .	4	to Head Plate
D1169	Nut, non-lock, 1/2" PLT . . . . .	4	
1002204	Bolt, 5/8-11 x 4" G8 BLK . . . . .	4 . . .	Connecting Stub to Flights
33139	Nut, nylon lock, 5/8-11" PLT . . . . .	4	
3337A1	Pin, Cotter, 3/16" x 1 12" . . . . .	2 . . .	Motor Mount Pivot Pin

# BOLT KITS

## **BOLT KIT for 12" COMMERCIAL HORIZONTAL POWER HEAD**

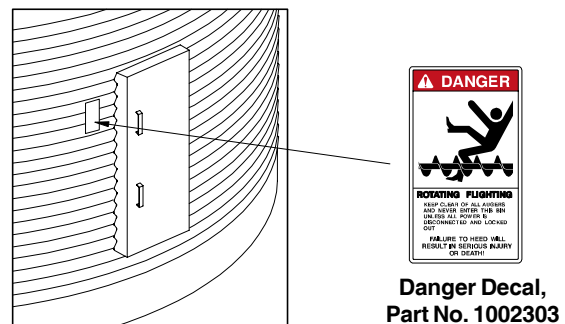
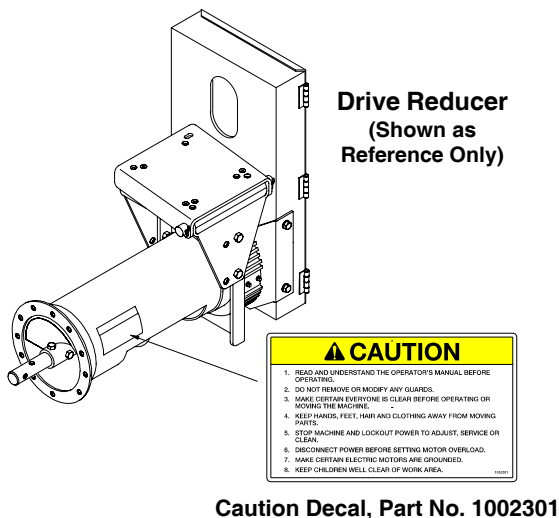
### **4:1 REDUCTION DRIVE**

<u>Part</u>	<u>Description</u>	<u>Qty.</u>	<u>Where Used</u>
4049A1	Key, sq. 3/8" x 1 1/2" long . . . . .	1 . . .	Driven Pulley to Reducer Input Shaft
D1152	Nut, non-lock, 3/4 PLT . . . . .	1 . . .	Motor Mount Adjustment Rod
33046	Bolt, 5/16-18 x 1" G5 PLT . . . . .	4 . . .	Belt Guard Mounting
33144	Washer, lock, 5/16" PLT . . . . .	4	
33151	Nut, non-lock, 5/16-18 PLT . . . . .	4	
33023	Washer, flat, 5/16" PLT . . . . .	8	
33294	Bolt, 1/2-13 x 1" G5 PLT . . . . .	4 . . .	Motor Mount Support to Head Plate
D1143	Washer, lock, 1/2" PLT . . . . .	4	
D1169	Nut, non-lock, 1/2" PLT . . . . .	4	
1010485	Bolt, 5/8-11 x 4" G8 BLK . . . . .	2 . . .	Tail Stub to Unload Flight
33139	Nut, nylon lock, 5/8-11" PLT . . . . .	2	
3337A1	Pin, Cotter, 3/16 x 1 1/2" . . . . .	2 . . .	Motor Mount Pivot Pin
1015290	Vent Plug, 1/8" Pipe . . . . .	1 . . .	For Reducer
1030211	Adapter, 3/8" Pipe to 1/8" Pipe . . . . .	1	

### **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 ordererd through your Hutchnson/Mayrath dealer or direct from the factory..

Danger Decal (Part No. 1002303) should be applied to the side of the bin near the opening, so it will be viewed by people entering the bin or storage building.



# PARTS LIST

**12" COMMERCIAL BIN UNLOADING FLIGHTS**  
**24' to 120' BIN DIAMETERS**

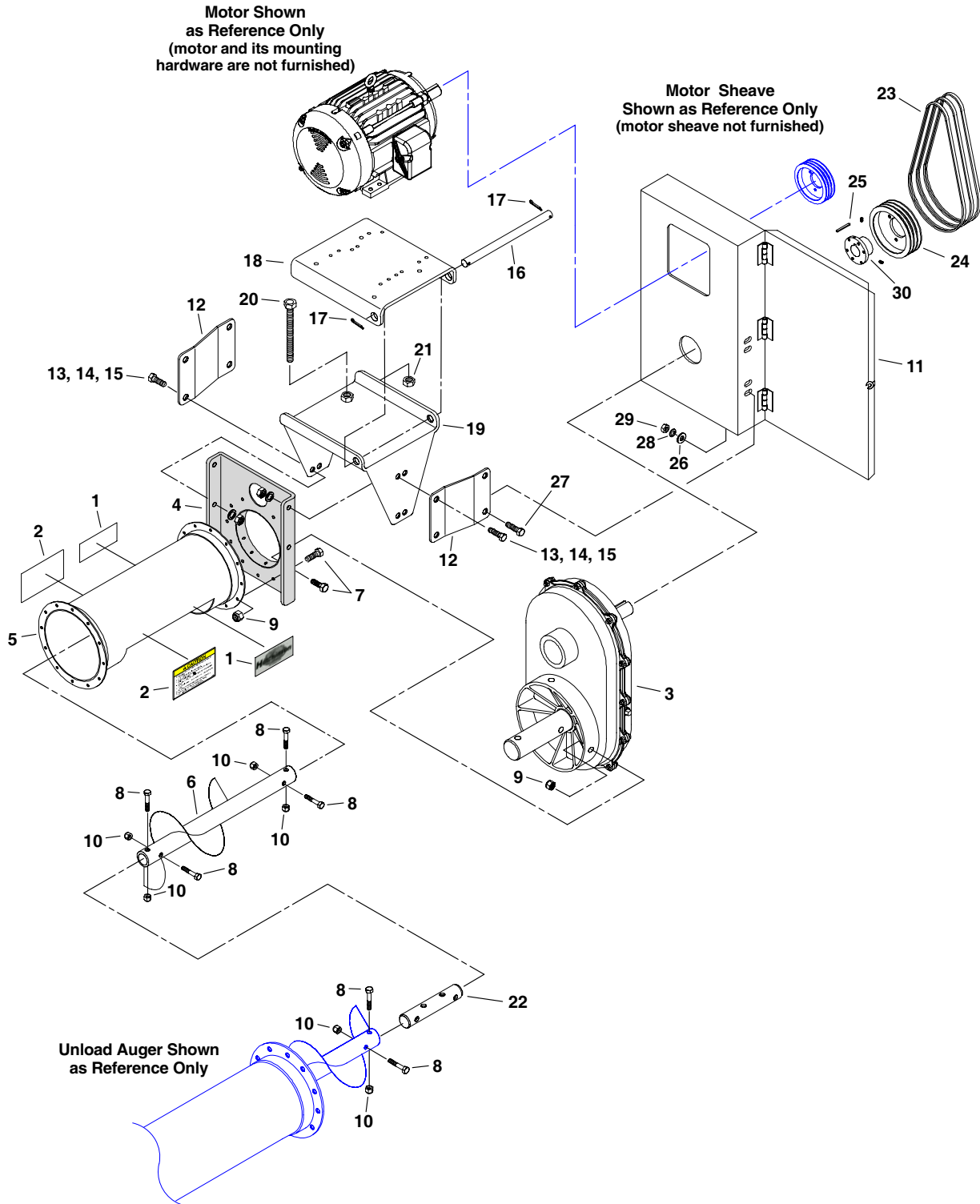
Bin Dia.	Flight Section No. 1		Flight Section No. 2		Flight Section No. 3	
	Length	Part No.	Length	Part No.	Length	Part No.
24'	14'-6"	1014235				
27'	16'-0"	1014236				
30'	17'-6"	1014237				
33' – 34'	19'-6"	1014238				
36'	20'-6"	1014239				
37' – 39'	22'-0"	1014240				
40'	8'-5"	1014241	14'-7"	11812		
42'	18'-5"	1014242	5'-7"	11805		
48' – 49'	18'-5"	1014242	9'-7"	11808		
54' – 55'	18'-5"	1014242	11'-7"	11810		
60'	18'-5"	1014242	14'-7"	11812		
63'	18'-5"	1014242	16'-1"	11813		
68' – 69'	18'-5"	1014242	19'-1"	11815		
72'	18'-5"	1014242	20'-7"	11816		
75'	18'-5"	1014242	22'-1"	11817		
78'	18'-5"	1014242	4'-1"	11804	20'-0"	2224C
80'	18'-5"	1014242	6'-1"	11806	20'-0"	2224C
82'	18'-5"	1014242	7'-1"	11807	20'-0"	2224C
90'	18'-5"	1014242	11'-1"	11809	20'-0"	2224C
92'	18'-5"	1014242	12'-1"	11811	20'-0"	2224C
105'	18'-5"	1014242	18'-7"	11814	20'-0"	2224C
113'	18'-5"	1014242	22'-7"	11818	20'-0"	2224C
120'	18'-5"	1014242	6'-1"	11806	20'-0"	2224C
					( 2 Req'd. ) ( on 120' )	( 2 Req'd. ) ( on 120' )

- Notes:**
- A. The No. 1 flight sections **Do Not** include connecting stubs.  
The No. 2 and No. 3 flight sections **Do** include the connecting stubs.
  - B. Flight sections No. 1 connect to the power head assembly.
  - C. Flight sections No. 3 connect between sections No. 1 and section No. 2.

# PARTS LIST

Page P-2

## 12" HORIZONTAL POWER HEAD, 3:1 DRIVE CHAIN REDUCER for 24' to 68' BIN DIAMETERS



# PARTS LIST

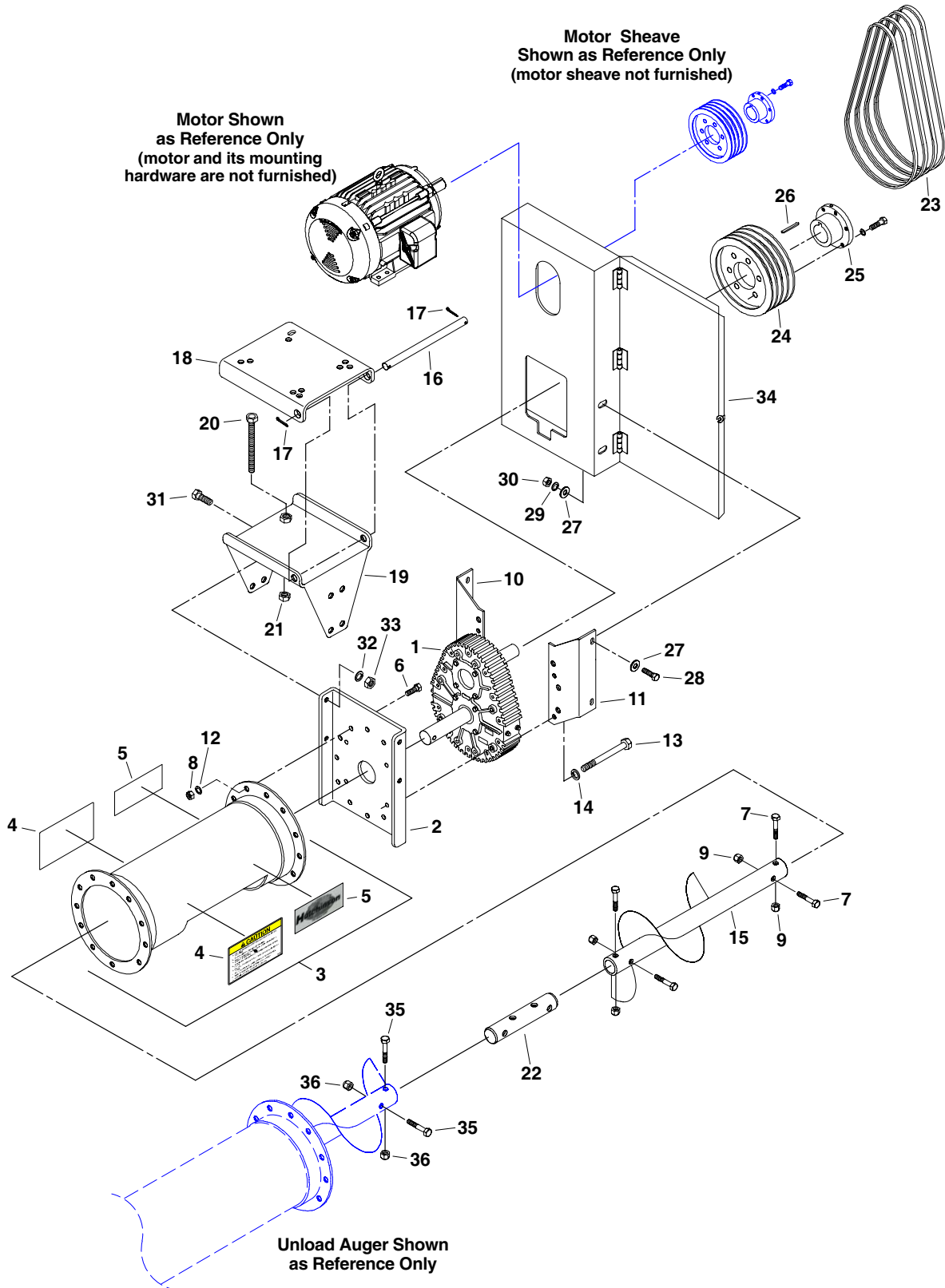
## 12" HORIZONTAL POWER HEAD, 3:1 DRIVE CHAIN REDUCER for 24' to 68' BIN DIAMETERS

Ref. No.	Part No.	Description	Qty.
1	1001128	Decal, Hutchinson Globe	2
2	1002301	Decal, Caution - General Operation	2
3	1030610	Gearbox, enclosed reducer, 3:1	1
4	1022995	Plate, Head	1
5	3801C	Housing weldment	1
6	1032272	Flight	1
7	33060	Bolt, 3/8-16 x 1" G5 PLT	15
8	1002204	Bolt, 5/8-11 x 4"	6
9	33136	Nut, nylon lock, 3/8-16	15
10	33139	Nut, nylon lock, 5/8-11	6
11	1009101	Belt guard	1
12	1026507	Bracket, belt guard	2
13	33082	Bolt, 1/2-13 x 1 1/4" G5 PLT	4
14	D1143	Washer, lock, 1/2"	4
15	D1169	Nut, 1/2-13 non-lock	4
16	1018789	Shaft, pivot	1
17	3337A1	Pin, cotter, 3/16 x 1 1/2"	2
18	1022136	Plate, motor mount	1
19	1022987	Support, motor mount	1
20	1022381	Rod, threaded adjustment	1
21	D1152	Nut, 3/4-10 non-lock	1
22	2221C	Stub, flight connecting	1
23	40116	Belt, B-48 (3 belt drive)	3
(23)	40116	Belt, B-48 (2 belt drive)	2
24	3235A1	Sheave, 2 groove, 7.75" O.D.	1
(24)	3244A1	Sheave, 3 groove, 7.75" O.D.	1
25	4045A1	Key, 1/4" sq. x 2" long (f/ 2 belt)	1
(25)	4046A1	Key, 1/4" sq. x 3" long (f/ 3 belt)	1
26	33023	Washer, flat, 5/16	4
27	33046	Bolt, 5/16-18 x 1" G5 PLT	4
28	33144	Washer, lock, 5/16	4
29	33151	Nut, 5/16-18 non-lock	4
30	3072A1	Bushing, QD	1

**Items 1 thru 10 can be ordered as a complete assembly.  
Order Part No. 1035618.**

# PARTS LIST

## **12" HORIZONTAL POWER HEAD, 4:1 DRIVE GEAR REDUCER** **for 24' to 120' BIN DIAMETERS**



# PARTS LIST

## **12" HORIZONTAL POWER HEAD, 4:1 DRIVE GEAR REDUCER** **for 24' to 120' BIN DIAMETERS**

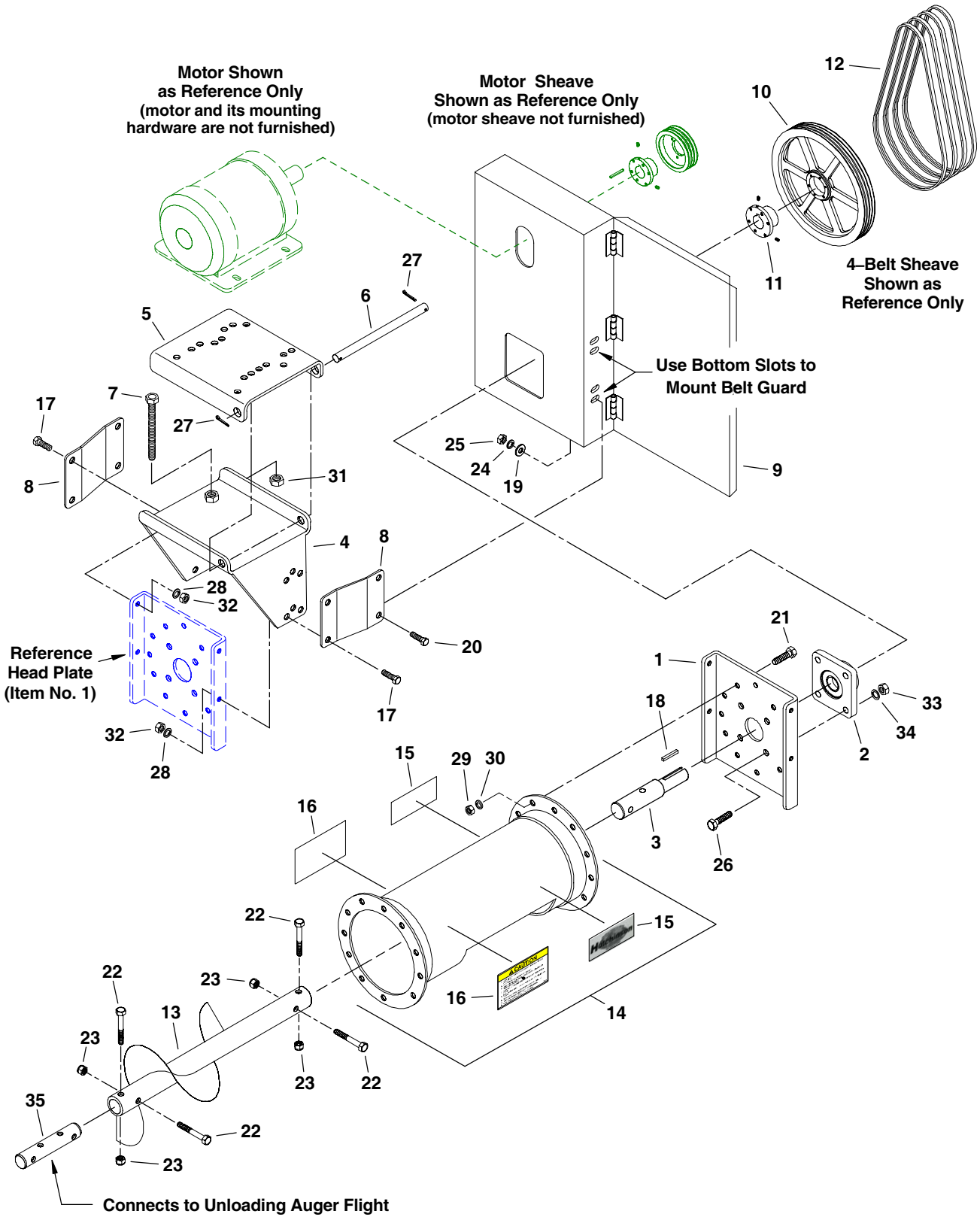
<b>Ref. No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	1025519	Gearbox, enclosed reducer, 4:1	1
2	1022250	Plate, head	1
3	3801C	Housing weldment	1
4	1002301	•Decal, Caution - General Operation	2
5	1001128	•Decal, Hutchinson Globe	2
6	33060	Bolt, 3/8-16 x 1" G5 PLT	12
7	1002204	Bolt, 5/8-11 x 4"	2
8	D1149	Nut, non-lock, 3/8-16	12
9	33139	Nut, nylon lock, 5/8-11	2
10	1014406	Bracket, belt guard (L)	1
11	1014407	Bracket, belt guard (R)	1
12	D1150	Washer, lock, 3/8	12
13	4917	Bolt, 1/2-13 x 5" G5 PLT	4
14	D1143	Washer, lock, 1/2"	4
15	1014247	Flight, power head	1
16	1018789	Shaft, pivot	1
17	3337A1	Pin, cotter, 3/16 x 1 1/2"	2
18	1022137	Plate, motor mount	1
19	1022143	Support, motor mount	1
20	1022381	Rod, threaded adjustment	1
21	D1152	Nut, 3/4-10 non-lock	1
22	2221C	Stub, flight connecting	1
23	40116	Belt, B-48 (4 belt drive)	4
24	3250A1	Sheave, QD 4B, 7.4"	1
25	3295A1	Bushing, QD SK 1.50" bore	1
26	4049A1	Key, square, 3/8 x 1 1/2"	1
27	33023	Washer, flat, 5/16	8
28	33046	Bolt, 5/16-18 x 1" G5 PLT	4
29	33144	Washer, lock, 5/16	4
30	33151	Nut, 5/16-18 non-lock	4
31	33294	Bolt, 1/2-13 x 1" G5 PLT	4
32	D1143	Washer, lock, 1/2"	4
33	D1169	Nut, non-lock, 1/2-13	4
34	1002042	Guard, belt	1
35	1010485	Bolt, 5/8-11 x 4" G8 BLK	2
36	33139	Nut, nylon lock, 5/8-11	2

**Items 1 thru 15 can be ordered as a complete assembly.  
Order Part No. 1031123.**

- Indented parts names indicate these parts are included in the preceding assembly.

# PARTS LIST

## 12" HORIZONTAL POWER HEAD, DIRECT DRIVE for 24' to 90' BIN DIAMETERS



# PARTS LIST

**12" HORIZONTAL POWER HEAD, DIRECT DRIVE**  
**for 24' to 90' BIN DIAMETERS**

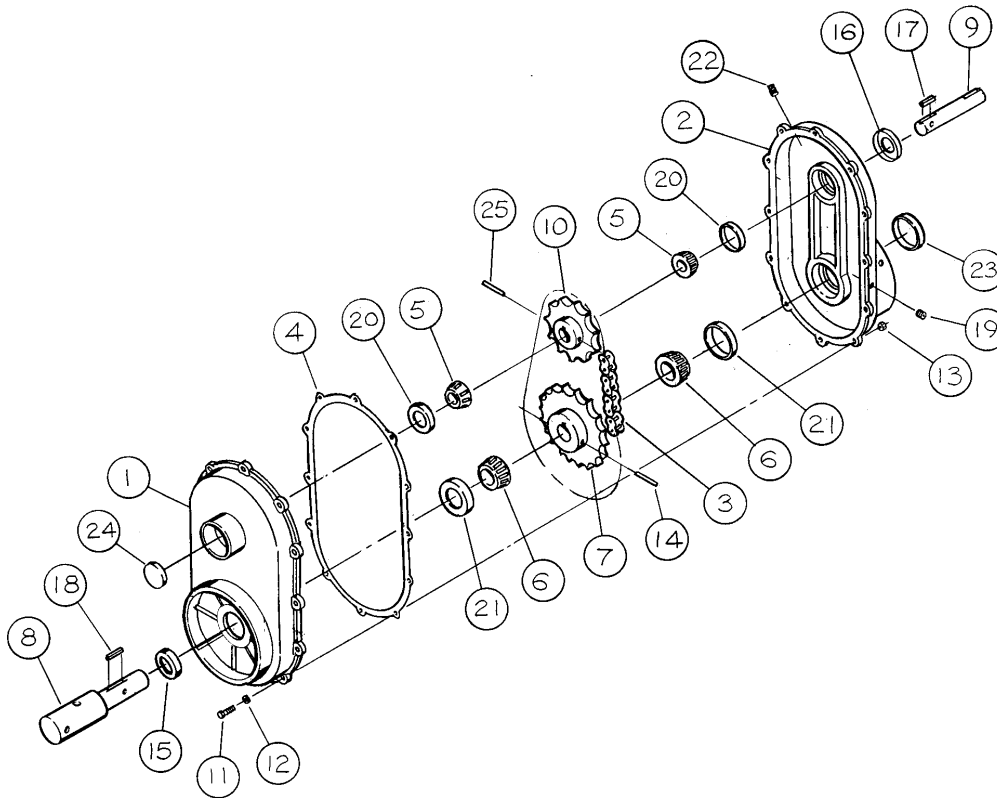
Ref. No.	Part No.	Description	Qty.
1	2229C	Head plate	1
2	2214C	Bearing, 4 hole 2" bore	1
3	2220C	Head stub, 2" x 12" (turned to 1.50" at sheave, f/2-belt)	1
(3)	2215C	Head stub, 2" x 12.50" (turned to 1.50" at sheave, f/3-belt and 4-belt)	1
4	1022140	Motor mount support	1
5	1022136	Motor mount plate	1
6	1018789	Pivot pin, motor mount plate	1
7	1022381	Adjustment rod, threaded (f/motor mount plate)	1
8	1022156	Bracket, belt guard	2
9	1009102	Belt guard	1
10	3238A1	Sheave, 18.4" P.D. (f/2-belt)	1
(10)	3247A1	Sheave, 18.4" P.D. (f/3-belt)	1
(10)	3251A1	Sheave, 18.4" P.D. (f/4-belt)	1
11	3295A1	Bushing, QD SK 1.50" bore (f/2-belt and 3-belt)	1
(11)	3073A1	Bushing, QD SK 1.50" bore (f/4-belt)	1
12	40126	Belt, B-71	As Req'd.
13	1032272	Flight, f/power head	1
14	3801C	Housing, power head	1
15	1001128	•Decal, Hutchinson Globe	2
16	1002301	•Decal, Caution, General Operation	2
17	1002227	Bolt, 1/2-13 x 1 1/2" G5 PLT	4
18	1038D	Key, square, 3/8" x 2" long (f/2-belt)	1
(18)	4073A1	Key, square, 3/8" x 3" long (f/3-belt and 4-belt)	1
19	33023	Flat washer, 5/16"	4
20	33046	Bolt, 5/16-18 x 1" G5 PLT	4
21	33060	Bolt, 3/8-16 x 1" G5 PLT	12
22	33103	Bolt, 5/8-11 x 3 1/2" G5 PLT	4
23	33139	Nut, nylon lock, 5/8-11 PLT	4
24	33144	Lock washer, 5/16" PLT	4
25	33151	Nut, non-lock 5/16-18 PLT	4
26	33244	Bolt, 5/8-11 x 2" G5 PLT	4
27	3337A1	Cotter pin, 3/16" x 1.50"	2
28	D1143	Lock washer, 1/2" PLT	4
29	D1149	Nut, non-lock 3/8-16 PLT	12
30	D1150	Lock washer, 3/8" PLT	12
31	D1152	Nut, non-lock 3/4-10 PLT	1
32	D1169	Nut, non-lock 1/2-13 PLT	4
33	D1170	Nut, non-lock 5/8-11 PLT	4
34	D1171	Lock washer, 5/8" PLT	4
35	2221C	Stub, flight connecting	1

• Indented parts names indicate these parts are included in the previous assembly.

# PARTS LIST

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## 3:1 RATIO DRIVE REDUCER ENCLOSED GEARBOX



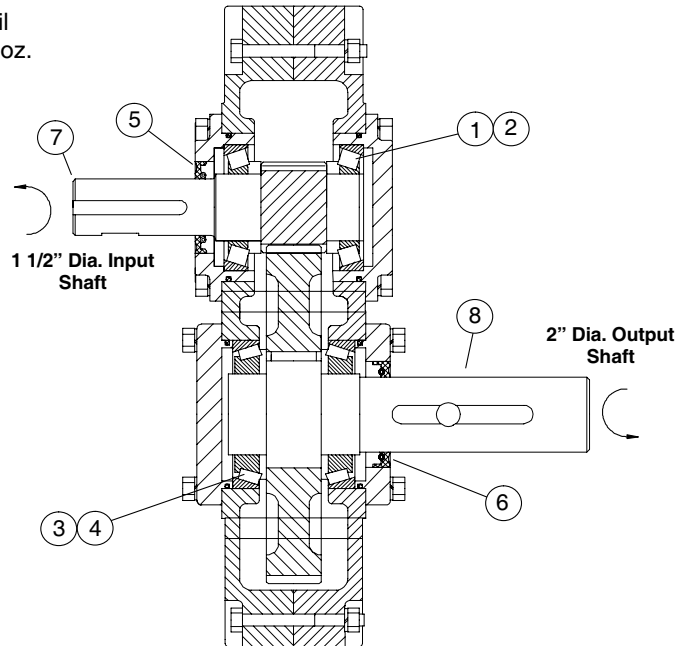
Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	1001523	Aluminum casting (inside)	1	14	33190	Pin, roll, 5/16 x 2 1/2"	1
2	1003044	Aluminum casting (outside)	1	15	035860	Seal, output shaft	1
3	1001847	Chain, #80 roller, 36 pitch (includes connecting link)	1	16	835168	Seal, input shaft	1
4	1001573	Gasket	1	17	4020A1	Key, square, 1/4 x 1"	1
5	106322	Bearing, cone, 1 1/4" bore (Timken No. 15123)	2	18	1002276	Key, square, 3/8 x 1"	1
6	035439	Bearing, cone, 1 1/2" bore (Timken No. LM29749)	2	19	458026	Plug, drain, 3/8 NPT	1
7	1001841	Sprocket, 1 1/2" bore, 27 tooth	1	20	106323	Bearing, cup, 1 1/4" (Timken No. 15245)	2
8	1011905	Stub, output shaft, 1 1/2" dia.	1	21	035440	Bearing, cup, 1 1/2" (Timken No. LM29710)	2
9	1001850	Stub, input shaft, 1 1/4" dia.	1	22	1001438	Plug, vented, 3/8 NPT	1
10	1001840	Sprocket, 1 1/4" bore, 9 tooth	1	23	1001851	Cap	1
11	4757-1	Bolt, 5/16-18 x 1 1/4"	12	24	1001852	Cap	1
12	33144	Washer, lock, 5/16"	12	25	33193	Pin, roll, 5/16-18 x 1 1/4"	1
13	33151	Nut, non-lock, 5/16-18	12	* 26	1002275	Decal, "Fill with Oil"	1

\* Not Shown.

# PARTS LIST

## 4:1 RATIO DRIVE REDUCER WEASLER GEARBOX

Use an EP 90 Wiegth Oil  
Gearbox holds approx. 32 oz.



Ref. No.	Part No.	Description	Qty.
1	1026473	Bearing, cone 25590	2
2	1021344	Bearing, cup 25520	2
3	1026474	Bearing, cone 390A	2
4	1026475	Bearing, cup 394A	2
5	1026476	Seal, 1.50 x 2.44 x 0.315	1
6	1026477	Seal, 2.00 x 3.37 x 0.315	1
7	71-10410	Shaft, input	1
8	71-10411	Shaft, output	1
*	70-00061	Housing set	1
*	70-10062	End cap	1
*	70-10063	End cap	1
*	70-10064	End cap	1
*	70-10065	End cap	1
*	71-00172	Spur gear, Z = 84, DP = 10	1
*	72-40023	Key, 1/2 x 1.18"	1
*	72-00009	Capscrew, 5/16-18 x .79	16
*	72-80012	Nut, 5/16-18	12
*	72-00013	Capscrew, 5/16-18 x 3.54"	12
*	72-70005	O-Ring, 110 x 2.65 dia.	4
*	72-20020	Plug, pipe ZG 3/8-19	6
*	72-10001	Washer, lock M8	28

\* Items not referenced.

# WARRANTY

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## **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.

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**THE SOLE AND EXCLUSIVE REMEDY FOR ANY CLAIM HEREUNDER SHALL BE LIMITED TO REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE. AGI SHALL NOT BE LIABLE FOR DAMAGES CAUSED BY DELAY IN PERFORMANCE AND IN NO EVENT, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION (WHETHER BASED IN CONTRACT, INFRINGEMENT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE), SHALL AGI’S LIABILITY TO BUYER AND/OR ITS CUSTOMERS EXCEED THE PURCHASE PRICE OF THE GOODS. BUYER AGREED THAT IN NO EVENT SHALL AGI’S**

# WARRANTY

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**LIABILITY TO BUYER AND/OR ITS CUSTOMERS EXTEND TO INCLUDE INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES. THE TERM "CONSEQUENTIAL DAMAGES" SHALL INCLUDE, BUT NOT BE LIMITED TO, LOSS OF ANTICIPATED PROFITS, LOSS OF USE, LOSS OF REVENUE, FAILURE TO MEET GOVERNMENT AND/OR ADMINISTRATIVE REQUIREMENTS, CLEAN UP COSTS, COST OF CAPITAL AND DAMAGE OR LOSS TO OTHER GOODS, PROPERTY OR EQUIPMENT.**

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**THIS WARRANTY IS NON-TRANSFERABLE AND APPLIES ONLY TO THE ORIGINAL END-USER AND SHALL BE CONSIDERED VOID IF NOT REGISTERED WITHIN 30 DAYS OF RECEIPT OF THE GOODS BY THE ORIGINAL END USER.**





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