

6" & 8" POWER SWEEP AUGER

OWNER'S & OPERATOR'S MANUAL

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Hutchinson/Mayrath

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Hutchinson/Mayrath

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

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- (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.
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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 (power & wiring included).
- 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, non-abrasive 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.

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 that 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 and be alert to the possibility of personal injury or death.



BE ALERT! YOUR SAFETY IS INVOLVED.

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 portable auger shall be limited to competent and experienced persons. In addition, anyone who will operate or work around a portable auger must use good common sense. In order to be qualified, they 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 portable augers. It is your responsibility to know what these regulations are in your own 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 the 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 as shown in the work area diagrams. See Page 7.
4. A person who has not read and understood all operating and safety instruction is not qualified to operate the machine.

*Federal Occupational Safety & Health Standards for Agriculture Subpart D, Section 1928.57 (a)(6).

SIGN OFF SHEET

As a requirement of OSHA it is necessary for the employer to train the employee in the safe operation and safety procedures with this auger. We include this sign off sheet for your convenience and personal record keeping.

DATE	EMPLOYER SIGNATURE	EMPLOYEE SIGNATURE

MACHINE INSPECTION

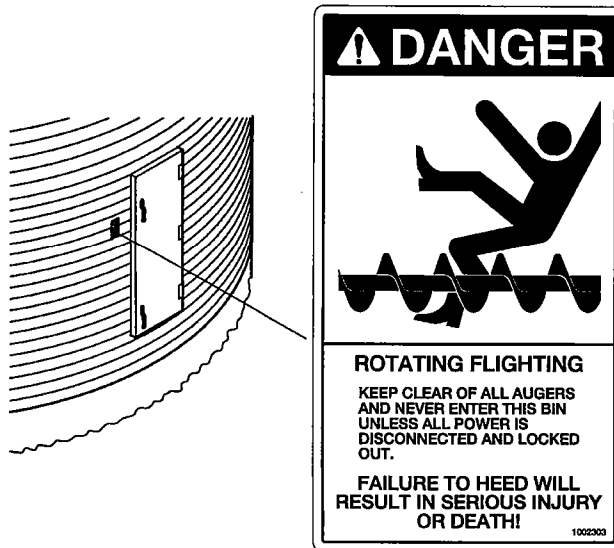
After delivery of your new auger and/or completion of assembly and before each use, inspection of the machine is mandatory. This inspection should include, but not be limited to:

1. Check to see that all guards listed in the assembly instructions are in place and secured and functional. PTO driveline outer shields must rotate easily.
2. Check all safety signs and replace any that are worn, missing or illegible. The safety signs are listed on page P-1 and P-3. Safety signs may be obtained from your Dealer or ordered from the factory.
3. Check winch and cable for security and operation. There should be at least three complete wraps of cable around winch drum in full down position. Cable anchor on winch drum must be tight.
4. Are all fasteners tight?
5. Are all belts and chain properly adjusted? (See Maintenance Section.)
6. Check oil levels in gearbox and enclosed drive unit. (See Maintenance Section.)

SAFETY DECALS

Check components as specified below to ensure that safety decals are present and in good condition. If a decal cannot be easily read for any reason or has been painted over, replace it immediately. Decals may be ordered through your Hutchinson dealer.

DANGER Sign No. 1002303 was supplied with Hutchinson bin unloading equipment. This safety sign should be applied to the side of the bin near the bin opening, so it will be viewed by people entering into the bin or storage building.



DANGER Sign No. 1002303
(red and white)

IMPORTANT: BEFORE FILLING BIN CLOSE CENTER WELL AND INTERMEDIATE WELL GATES. POSITION SWEEP AUGER ALONG SIDE THE INTERMEDIATE WELLS.

INSTRUCTIONS:

1. BE SURE POWER SWEEP CLUTCH CONTROL IS DISENGAGED AND TIGHTEN SET SCREW.
2. START UNLOADING AUGER, OPEN CENTER WELL GATE.
3. WHEN GRAIN STOPS FLOWING FROM CENTER WELL, OPEN INTERMEDIATE WELLS.
4. WHEN GRAIN STOPS FLOWING FROM INTERMEDIATE WELLS, STOP AUGER, TO ENGAGE POWER SWEEP, ROTATE UNLOADING AUGER SLOWLY UNTIL CLUTCH ENGAGES AND TIGHTEN SCREW. START AUGER.

1016726

IMPORTANT Decal No. 1016726
2 3/4" x 7 1/2" (black and white)
Applied to Bin Flange

⚠ DANGER

KEEP OUT OF BIN WHILE SWEEP IS IN OPERATION. RAPIDLY TRAVELING SWEEP AUGER.

FAILURE TO HEED WILL RESULT IN SERIOUS INJURY OR DEATH!

1002304

DANGER Sign No. 1002304
1 3/4" x 7 1/2" (red and white)
Applied to Sweep Flight Shields and to Bin Flange

⚠ DANGER

- KEEP OUT OF BIN DURING UNLOADING OPERATIONS.
- WHEN BIN WELLS ARE IN OPEN POSITION CONVEYING MECHANISM IS NOT COVERED.

FAILURE TO HEED WILL RESULT IN SERIOUS INJURY OR DEATH!

1002305


DANGER Sign No. 1002305
Applied to Bin Flange

ELECTRIC MOTOR INFORMATION

HORSEPOWER CHART

BIN DIA.	HORIZONTAL HEAD		25° HEAD		VERTICAL HEAD		LOWBOY HEAD	
	6"	8"	6"	8"	6"	8"	6"	8"
15'	3	3	3	5	5	5	6" x 20'	8" x 20'
18'	3	3	3	5	5	5	5 HP	7 1/2 HP
21'	3	5	5	5	5	7 1/2	ALL OTHERS Up to 36' 7 1/2 HP 10 HP	
24'	3	5	5	5	5	7 1/2		
27'	5	5	5	5	5	7 1/2		
30'	5	5	5	7 1/2	7 1/2	7 1/2		
33'	5	5	5	7 1/2	7 1/2	7 1/2		
36'	5	5	5	7 1/2	7 1/2	7 1/2		
39'	--	7 1/2	--	10	--	--	--	--
42'	--	7 1/2	--	10	--	--	--	--
48'	--	7 1/2	--	10	--	--	--	--

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. **DO NOT** use a motor size that is greater than what is shown for the largest bin size in your column.

1. 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.
 2. A main power disconnect switch capable of being locked only in the OFF position shall be provided. This shall be locked whenever work is being done on the auger.
 3. 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 a manual reset.
- 
4. The motor starting controls must be located outside the bin. Locate the motor starting controls outside the bin but near the bin door so the operator has full view of the operation inside the bin.
 5. Disconnect power before resetting motor overloads.
 6. Reset and motor starting controls must be located so that the operator has full view of the entire operation.
 7. Make certain electric motors are grounded.
 8. Shut off power to adjust, service or clean.

OPERATING INSTRUCTIONS

GENERAL OPERATIONS

Any screw conveyor when it is new or after it sets idle for a season should go through a "break-in" period. The unload auger should be run at partial capacity until the screw becomes polished and smooth before attempting full capacity.

Auger flight speed in excess of recommended speed causes excessive wear. Use motor sheave sizes recommended in the power head manual.

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

Keep hands, feet and clothing away from moving parts.



Never enter the bin while the power sweep auger is in operation. Never attempt to control the operation of the sweep auger by pushing on the operating sweep auger with shovels, brooms or other devices. Do not attempt to restrain movement of the sweep auger by attaching ropes, bars or other devices to be held by an operator.

During regular full load operation, a person shall be in position to monitor the Power Sweep Auger Unloader. Do not leave the unit operation unattended.



Observe work area restrictions.

Keep all safety shields and devices in place.

Make certain everyone is clear before operating equipment.

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

Shut off power to adjust, service or clean.

NORMAL SHUTDOWN

When operating the horizontal auger only, close the center well gate and allow the horizontal auger and power head to empty before stopping the unit. While using the sweep auger, the unit may be stopped at any time. It is best not to close the center well gate while the sweep auger is operating.

LOCK OUT



A main power disconnect switch capable of being locked only in the off position shall be provided. This shall be locked whenever work is being done on the Power Sweep.

IMPORTANT: BEFORE FILLING BIN

- A. Close the center well and the intermediate well gates. Push the control pipes to close. (See Fig. 3 on page 8.)
- B. Disengage the power sweep clutch control. Push to disengage. NOTE: See instruction sign at the controls outside the bin.
- C. Position the sweep auger along side the intermediate wells.

OPERATING INSTRUCTIONS



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.

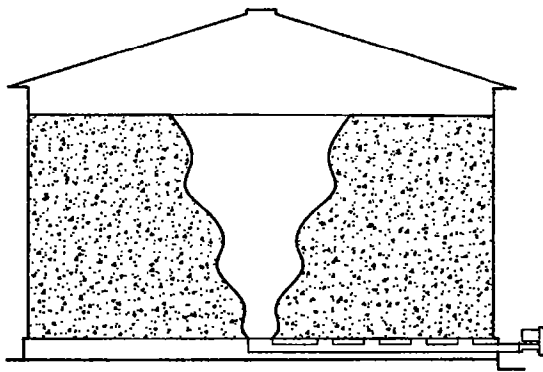


FIG. 1

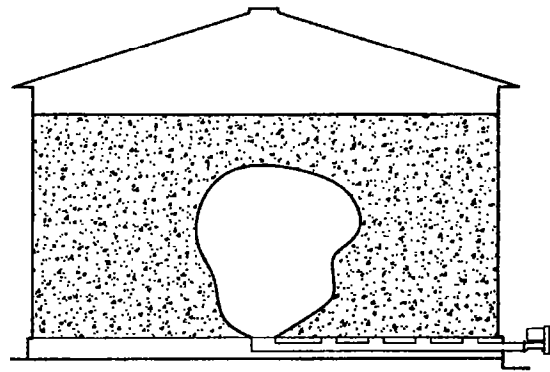


FIG. 2



DO NOT ENTER THE BIN IF THE GRAIN HAS BRIDGED OR HAS NOT FLOWED NORMALLY OUT OF THE BIN SUCH AS SHOWN IN FIG. 1 OR FIG. 2. THE GRAIN MAY SUDDENLY BREAK LOOSE AND BURY CAUSING SUFFOCATION.



OPERATING INSTRUCTIONS

OPERATION

- A. Start the unloading auger. The motor is located on the drive head which is one of four different heads available. A horsepower chart on page 5 includes head type, bin diameter and power sweep diameter.
- B. Open the center well gate which is the small pipe on the top side of the auger tube. Make sure lynch pin has **not** been inserted through the intermediate control pipe. See Fig. 3. Open gradually until the desired flow is established. It should not be necessary to open the gate more than 3 to 6 inches. Always close the center well gate and allow the unloader to clean out before stopping the unloader. When restarting open the center well gate to the previous position immediately after starting the unloader.

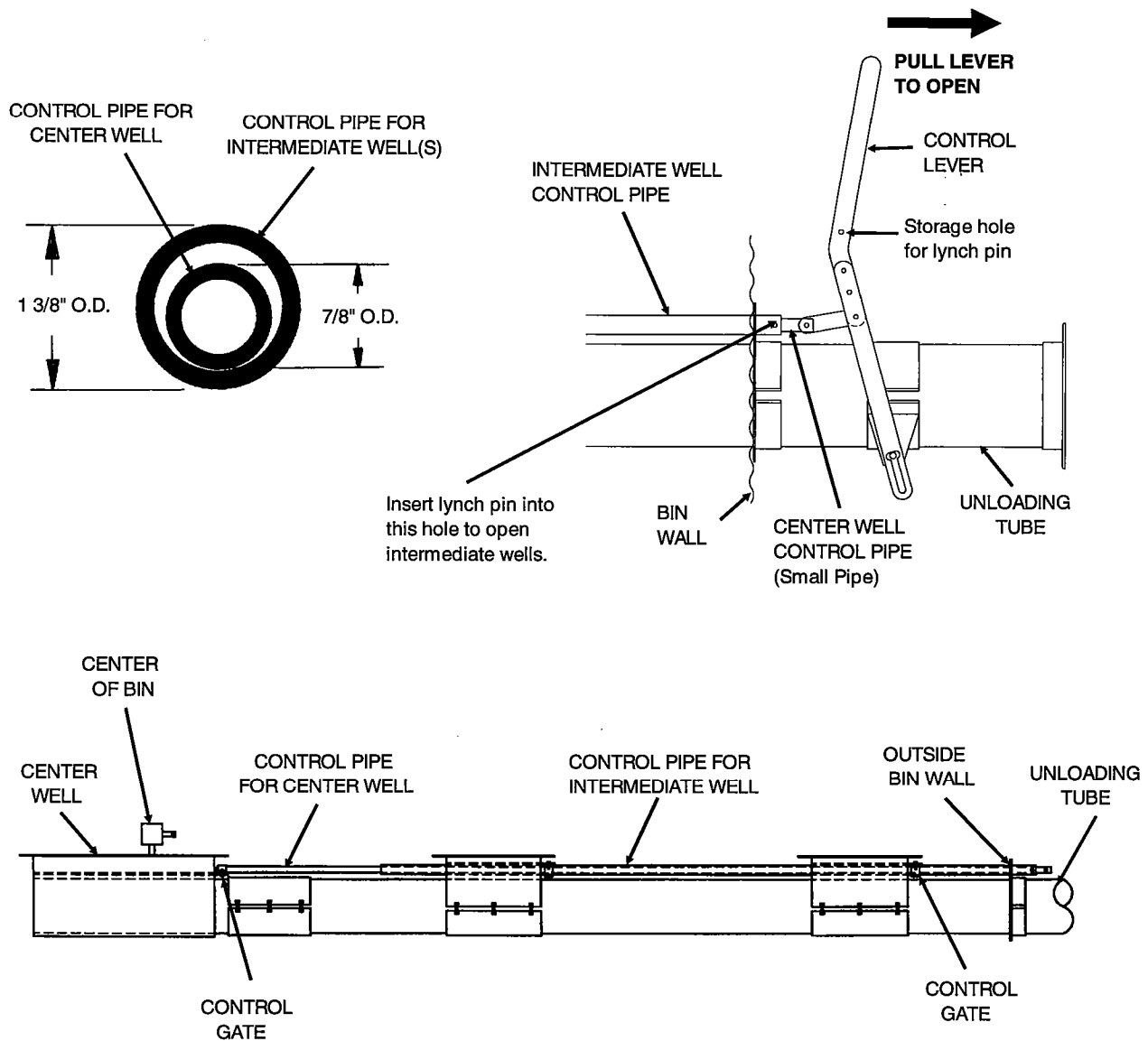


FIG. 3

OPERATING INSTRUCTIONS

OPERATION - cont.

- C. When grain flow stops from center well, close the center well gate and insert lynch pin through the intermediate well control pipe. (See Fig. 3.) Now you will be able to open the intermediate well. *Open gradually until the desired flow is established. It should not be necessary to open the gates more than 2 to 4 inches.

*The grain remaining should appear as in Fig. 4.

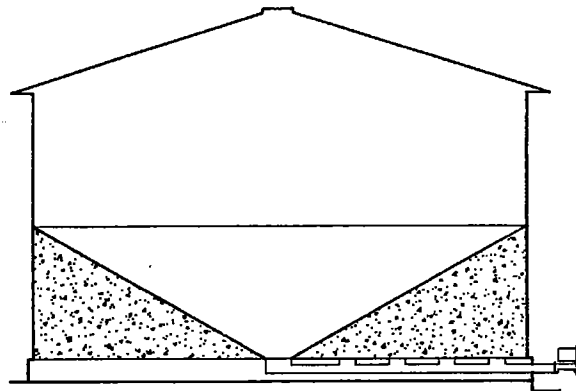


FIG. 4

- D. When grain flow stops, shut down the unloader and lock out. The grain remaining should appear as in Fig. 5.

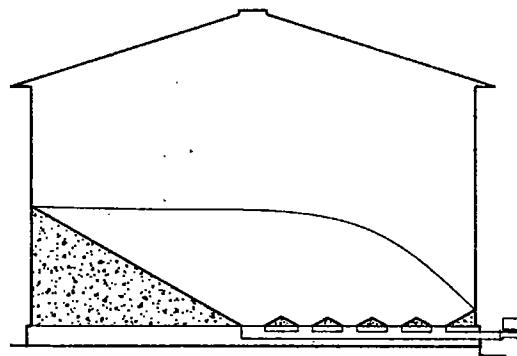


FIG. 5

- E. With electric power to the Power Sweep motor locked out, open a belt drive guard and rotate the large sheave while pulling on the clutch control. The clutch control is the single pipe control at the lower right of the auger tube. The pipe will move as the clutch engages. Tighten setscrew to hold the clutch engaged. Close the belt drive guard.
- F. Restore power and start Power Sweep motor. The sweep auger will start along with the unloading auger. Open the center well full open to more readily receive grain from the sweep. The sweep auger will remain on the floor and clear most grain in one pass. A second pass will clear additional grain, before final clean-out.
- G. Shut down the unloader and lock out.



**KEEP OUT OF BIN WHILE SWEEP IS IN OPERATION.
RAPIDLY TRAVELING SWEEP AUGER.**

OPERATING INSTRUCTIONS

FINAL CLEANOUT

The following procedure is recommended for cleaning the floor of the bin after the sweep auger has removed as much grain as possible.

1. Clean (scoop and sweep by hand) the outer area of the floor into a circular pile towards the center of the bin. See Fig. 6.



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

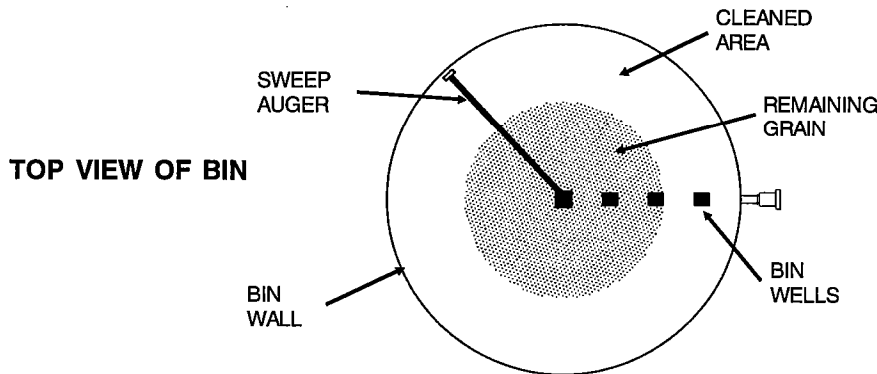


FIG. 6

2. Get out of the bin.
3. After making sure everyone is outside the bin and clear of the equipment, start the Power Sweep Auger. In a short time, the circular pile towards the center of the bin will have been removed.
4. Stop the equipment and lock out.
5. Scoop and sweep by hand the remaining floor area to the center of the bin. See Fig. 7.

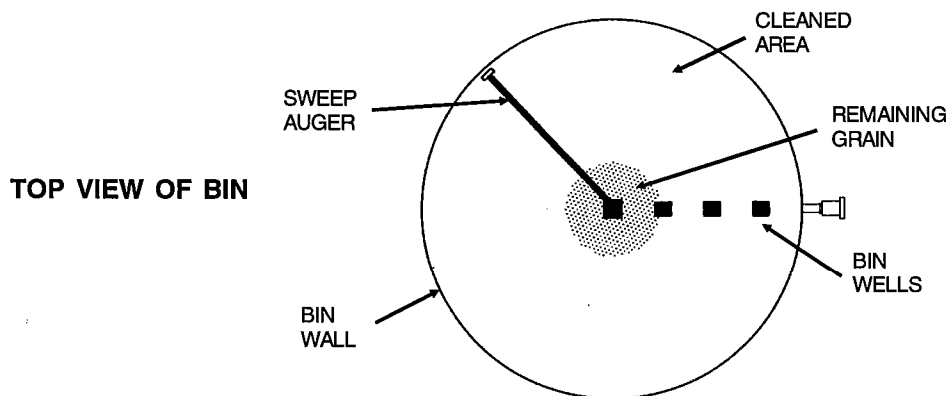


FIG. 7

6. Get out of the bin.
7. Repeat steps 3, 4, 5 and 6 until all grain has been removed from the bin.



Keep out of the bin while sweep is in operation. Rapidly traveling sweep auger. The sweep auger will move rapidly around the bin when the bin is nearly empty.



Stay clear of the under floor unloader at the bin wells. The underfloor unloader is exposed at these locations in the bin floor.

LUBRICATION

1. Lubricate the sweep universal joint each time the grain bin has been emptied.
2. The gearboxes in the center bin well are lubricated at the factory. Check the oil level by removing the plug in the side of the gearboxes. The oil must be up to the plug level. Check oil level each time the bin has been emptied. Use SAE 90 weight multipurpose gear oil.
3. Add two oz. of multipurpose gun grease to the sweep end wheel drive enclosure during assembly and each time the bin has been emptied. Use the zerk on the drive housing.



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

TROUBLE SHOOTING

AUGER VIBRATION

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

LOW CAPACITY

The 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.

AUGER PLUGS

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

The motor may be too small or wired improperly.

Is the auger free of an foreign material, such as sacks, tarp corners, etc? A plug of the discharge end will cause an auger plug.

SWEEP FLIGHT AND BACK SHIELD NOT MOVING

Check clearance between back shield and bin floor for excessive drag. Adjust shield up to clear metal floor splices or cracks in concrete floors.

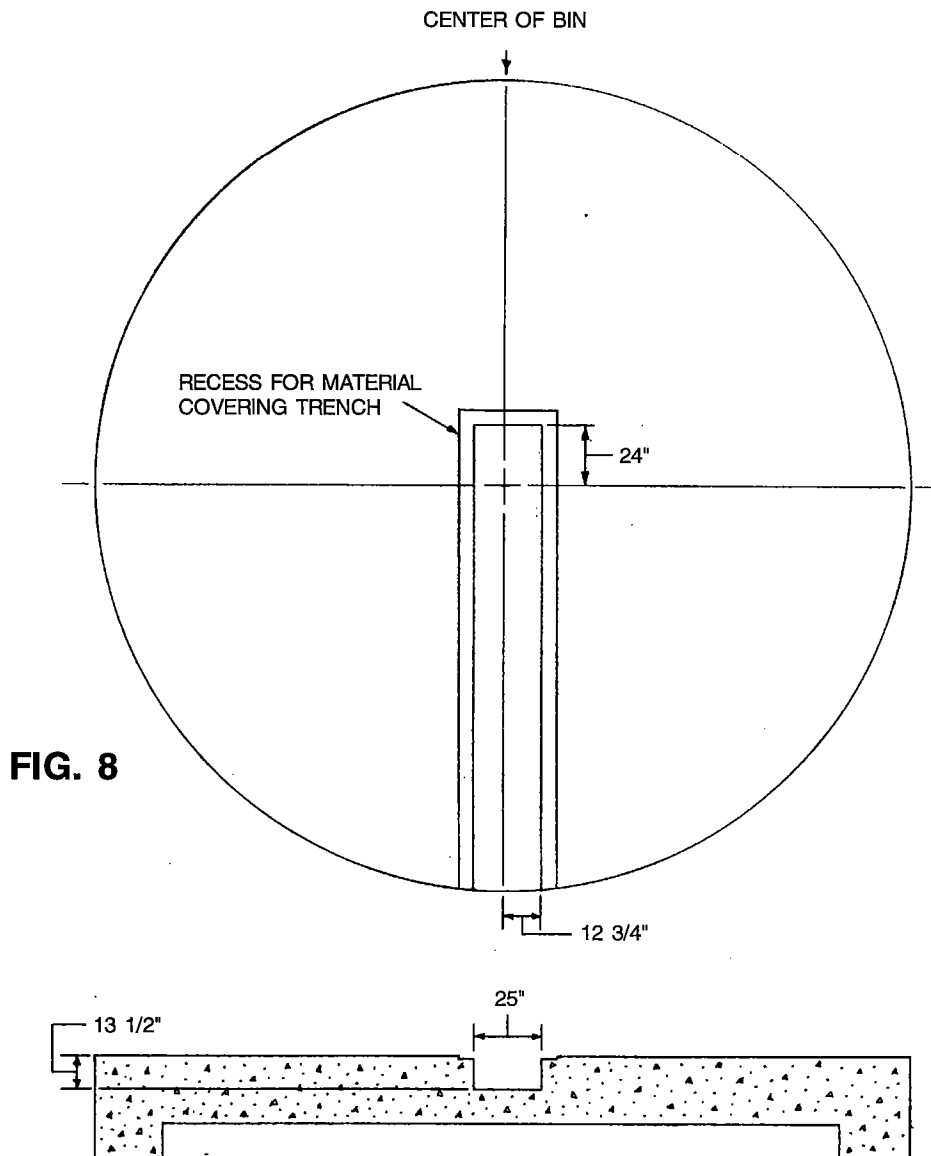
Check the sweep wheel. After extensive use, the wheel material may have worn down to where the wheel diameter is no longer large enough to move the sweep properly. Order replacement wheel or wheel parts from your dealer or the factory.

The grain may have gone out of condition due to moisture or insect activity and has become hard or caked. Stop the sweep auger before entering the bin to correct this or any other difficulty requiring bin entry.

ASSEMBLY INSTRUCTIONS

Power Sweep Auger Unloaders should not be poured into concrete. For installation into grain bins with concrete floors, a pre-formed trench should be made that will accept the Power Sweep unload auger, center well, intermediate wells and controls. The drawing in Figure 8 includes dimensions for a minimum trench size and relative position to the center of the bin.

CONCRETE TRENCH LAYOUT FOR POWER SWEEPS



NOTE: The off-set design of the center well requires that the trench be off-set also, so that the vertical shaft between the gearboxes is located in the center of the bin. A recess should be formed around the outer top of the trench for material used to cover the trench. The depth required for this recess depends on thickness of material used to cover the trench. One fourth inch thick steel plate is often used.

ASSEMBLY INSTRUCTIONS

For bins with raised metal floors, it is necessary to cut openings in the floor for the center well and intermediate wells. Make sure the metal floor is at least 13 inches above the concrete base so there is space for the wells. It will be convenient to complete assembly of the bin floor as the Power Sweep is being installed for better access to components under the floor.

1. Locate the center of the bin and make a cut-out in the bin floor for the center well. See Fig. 9 for cut-out size and location of 6" & 8" wells. Locate the vertical shaft between the gearboxes in the center of the bin. Place suitable supports under the center well to hold it in position.

TOP VIEW OF CUT-OUTS FOR CENTER AND INTERMEDIATE WELLS IN BIN FLOOR.

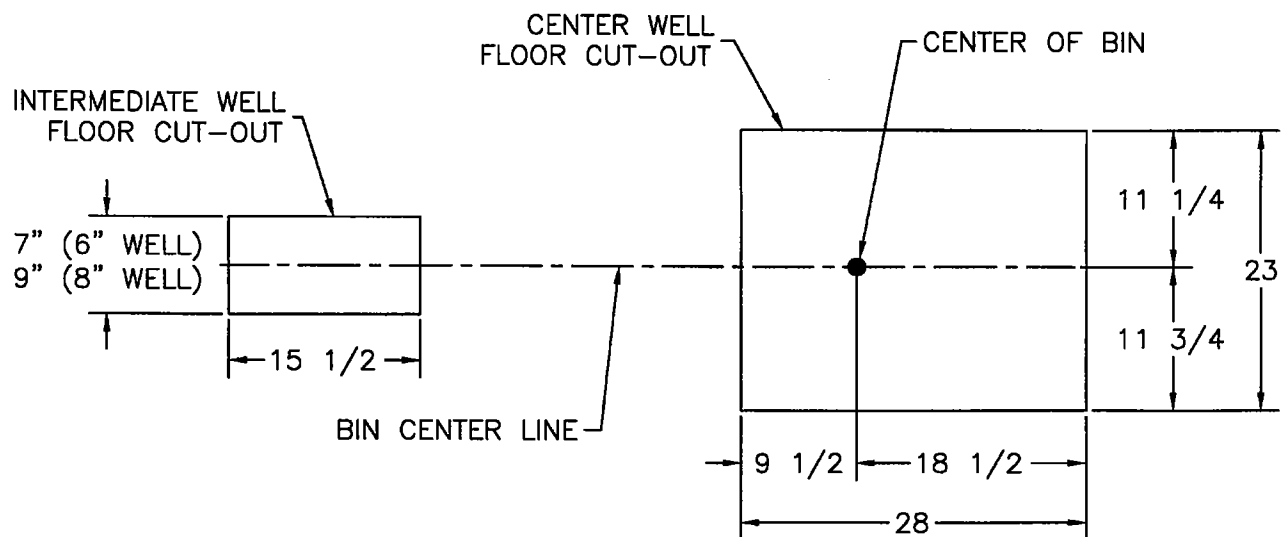


FIG. 9

ASSEMBLY INSTRUCTIONS

- Cut an opening in the bin wall for the unloading tube. Locate the opening below the floor the same distance as the auger tube connection to the center bin well.

Cut a 1 1/2" hole top center for the center and intermediate gate controls.

Cut a 1" hole for the clutch control located lower right. Use the bin flange to locate these holes. See Fig. 10.

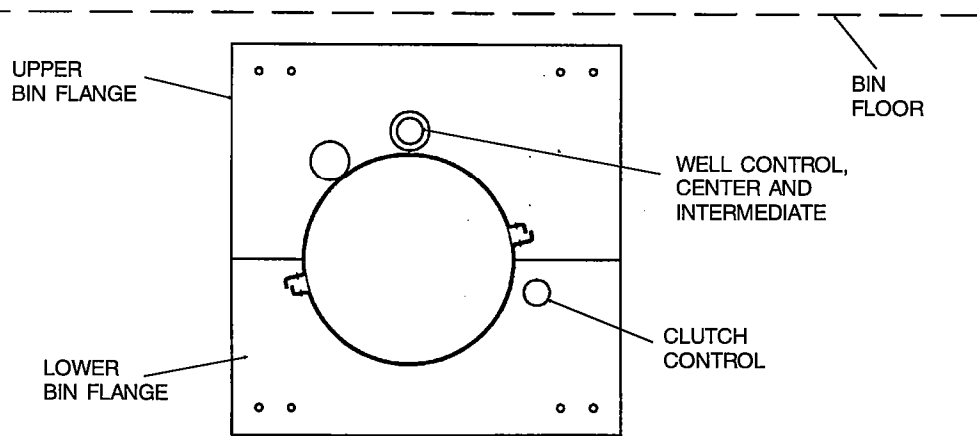


FIG. 10

- Slide the unloading tube through the bin wall and connect to the center well. Use a 12" long connecting band, 5/16" x 1 1/2" bolts and nuts. The unloading tube should be tight against the tube extending from the center well.

Attach the bin flange to the auger tube using 5/16" x 1 1/2" bolts and nuts. Fasten the four corners of the bin flange to the bin by first drilling holes for 5/16" x 1" bolts in the bin wall through existing holes in the flange. Attach the decal plate to the upper flange while attaching to bin. Bolt the clutch lock collar to the lower bin flange half using two 1/4" x 3/4" carriage bolts. Install the bolt heads on the back side of the lower bin flange half, so they will be next to the bin wall when the flange is attached to the bin. (See Fig. 11.)

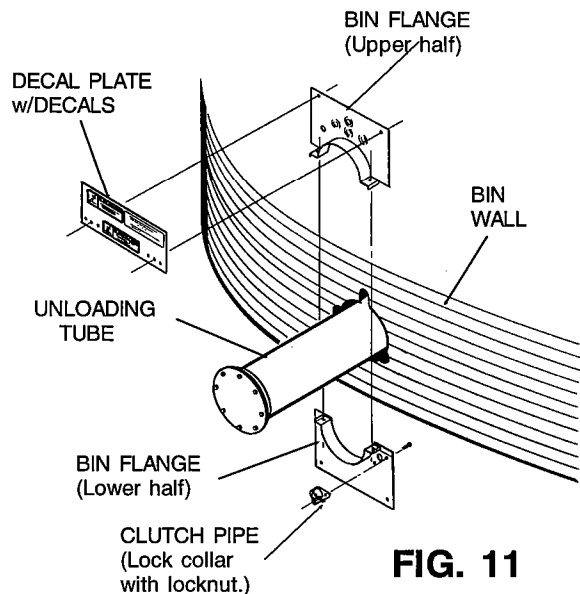


FIG. 11

ASSEMBLY INSTRUCTIONS

4. Cut openings in the bin floor for the intermediate wells. (See Fig. 9 on page 13.) The number of wells depends on bin size. The distances between the bin wall and intermediate wells and the center well should be equal. (See chart and Fig. 12 below.)

BIN SIZE	NUMBER OF INTERMEDIATE WELLS	DISTANCE FROM CENTER OF BIN TO WALL (A)	DISTANCE BETWEEN WELLS (B)	LENGTH OF INT. WELL CONTROL PIPE (C)	LENGTH OF CENTER WELL CONTROL PIPE (D)	LENGTH OF CLUTCH CONTROL PIPE (NOT SHOWN)
15'	1	7'-6"	3'-9"	5'-9"	7'-0"	10'-0"
18'	1	9'-0"	4'-6"	6'-6"	8'-6"	11'-6"
21'	2	10'-6"	3'-6"	9'-0"	10'-0"	13'-0"
24'	2	12'-0"	4'-0"	10'-0"	11'-6"	14'-6"
27'	2	13'-6"	4'-6"	11'-0"	13'-0"	16'-0"
30'	2	15'-0"	5'-0"	12'-0"	14'-6"	17'-6"
33'	3	16'-6"	4'-1 1/2"	14'-5"	16'-6"	19'-6"
36'	3	18'-0"	4'-6"	15'-6"	17'-6"	20'-6"
39'	3	19'-6"	5'-0"	16'-5"	19'-0"	22'-0"
42'	4	21'-0"	4'-3"	19'-0"	20'-6"	23'-6"
48'	4	24'-0"	5'-2"	21'-2"	23'-6"	26'-6"

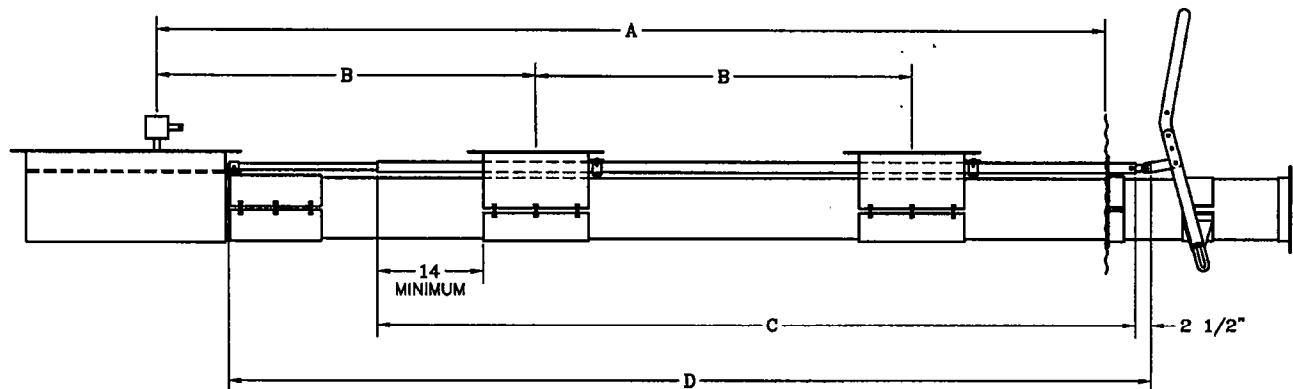
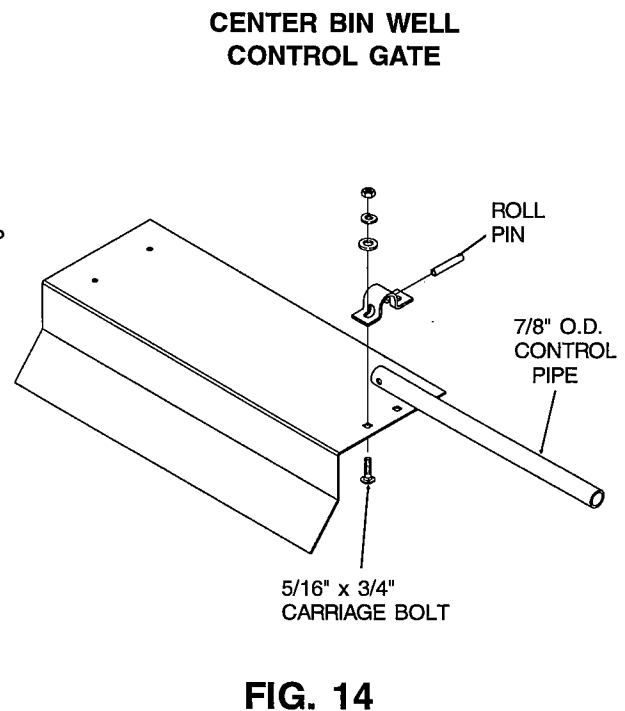
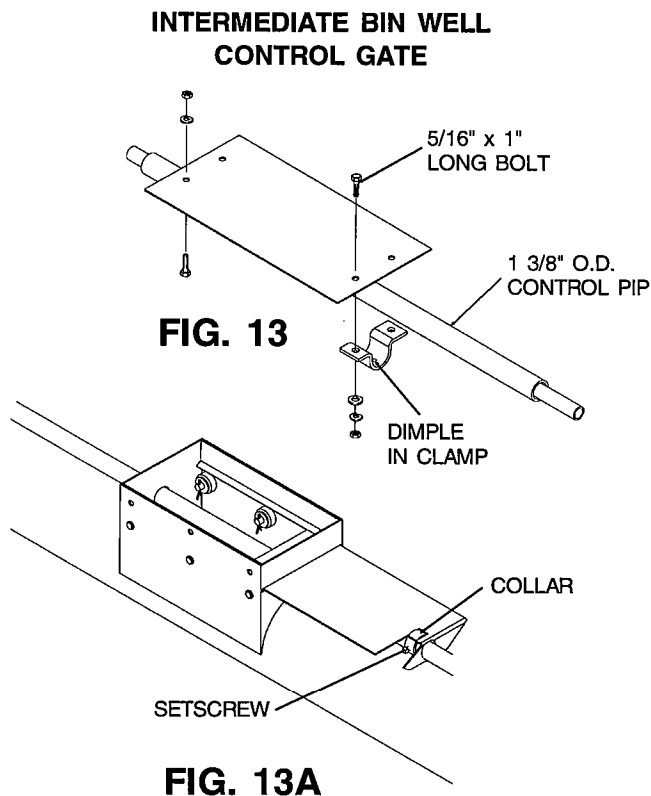


FIG. 12

Place the intermediate wells directly over the unloading tube. Mark the tube and cut openings in the tube for each well. Leave at least 1/2" of tube extending inside the well on all four sides. Make sure the inside of the tube is smooth where the cuts were made and retrieve all pieces of the cut out area from inside the tube. Make sure the intermediate wells are positioned so the gate opens toward the bin wall. Place support material under the unloading tube at each bin well.

ASSEMBLY INSTRUCTIONS

5. Slide the unloading flight into the unloading tube with the square drive end toward the outside of the bin. Bolt the flight to the square drive shaft inside the center well. Make sure a tubular spacer is in place on the shaft between the unloading flight and the bearing. Use two 3/8" x 2 1/4" bolts and lock nuts.
6. Attach the intermediate bin well gate(s) to 1 3/8" O.D. control pipe:
 - A. Shut the intermediate bin well gate(s).
 - B. Check length of control pipe by sliding it into place.
 - C. Drill a 3/8" dia. hole through one side of the 1 3/8" O.D. control pipe. The dimple of the control gate clamp will fit into this hole when clamped to the control gate. Determine the hole location by seeing where the dimple will hit the control pipe when it is bolted in place.
 - D. Fasten the control gate clamp to the control gate and control pipe. Secure in place by using two 5/16" x 1" long (grade 5) hex head capscrews, lockwashers and nuts. See Fig. 13.
- 6A. For intermediate bin wells welded to unloading housing, See Fig. 13A.
 - A. Adjust location of gate on control pipe by using the setscrew in the collar. Make sure setscrew is tightened when finished.



7. Attach the center well gate to 7/8" O.D. control pipe.
 - A. Shut the center control gate.
 - B. Check length of control pipe by sliding it through the control pipe of intermediate well(s). When the control pipe is fastened to the control gate clamp, the center well control pipe should extend past the end of the intermediate well control pipe a minimum of 2 1/2". See Fig. 12 on page 15.
 - C. Attach control gate clamp to control pipe by sliding 5/16" x 1 3/4" long roll pin through clamp and control pipe.
 - D. Fasten clamp to top side of control gate by using two 5/16" x 3/4" long (grade 5) carriage bolt, flat washers, lockwashers and nuts. Install nuts so they secure the 5/16" x 1 3/4" long roll pin in place. See Fig. 14.

ASSEMBLY INSTRUCTIONS

8. Install control lever assembly onto the unloading tube. (See Fig. 15.)
 - A. Attach control pipe straps to the center well control pipe (7/8" O.D. pipe) using a 5/16" x 2" long bolt with a nylon lock nut. Do not over tighten bolt, straps should rotate freely on pipe.
 - B. Bolt control lever to control pipe straps using a 3/8" x 1 1/4" long bolts with nylon lock nuts. Do not over tighten bolt, as lever should rotate freely on straps.
 - C. Locate mounting bracket and half band approximately 4" from end of center well control pipe. Bolt half band to bracket with (4) 5/16" x 1 1/2" long bolts and (4) 5/16" non-lock nuts.
 - D. Attach side straps to mounting bracket with attachment pin, 1/2" washers and 1/8" cotter pins.
 - E. Bolt the side straps to the control lever with (2) 5/16" x 1 1/4" long bolts and nylon lock nuts.
 - F. Store lynch pin in extra hole on control lever. When it is necessary to open the intermediate bin well gates, the lynch pin will need to be installed through the holes in the intermediate and center well control pipes.
 - G. Check gate operation by separately pulling on the control pipes, control gates should slide freely.

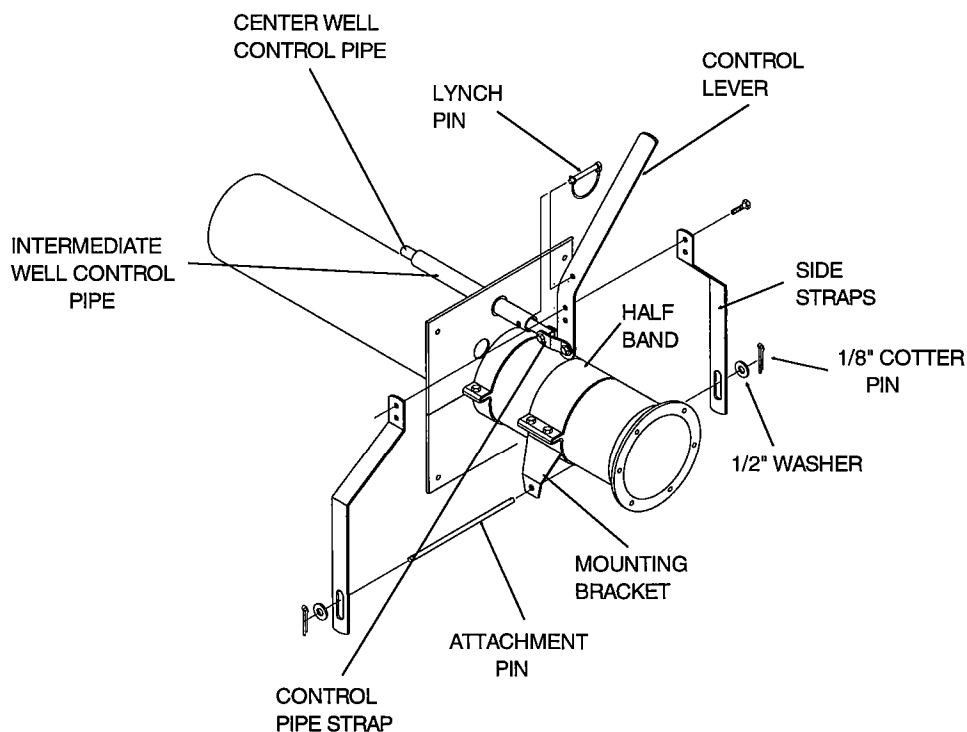


FIG. 15

ASSEMBLY INSTRUCTIONS

9. Install control pipe for clutch on center well. (See Fig. 16.)

- A. For intermediate bin wells welded to the unloading housing, bolt the clutch control pipe brackets to the wells using two 5/16" x 3/4" HHCS and nylon locknuts.
- B. Slide control pipe through the bin flange and the support rings or control pipe brackets on the intermediate and center wells. Slide control pipe into collar of the center well.
- C. Bolt control pipe to collar of the center well using a 5/16" x 1 1/2" long bolt with a lockwasher and non-lock nut.
- D. Attach clamp to control pipe by sliding 5/16" x 1 3/4" long roll pin through clamp and control pipe. Fasten clamp to handle by using two 5/16" x 3/4" long (grade 5) carriage bolts, flat washers, lock washer and nuts. Install nuts so they secure the 5/16" x 1 3/4" long roll pin in place.
- E. Check operation of clutch by pulling the handle to engage the clutch and then pushing the handle to disengage. Control pipe should slide freely. Lock control pipe into disengaged position by tightening the bolt on the lock collar that is attached to the bin flange. See Fig. 11 on page 14.

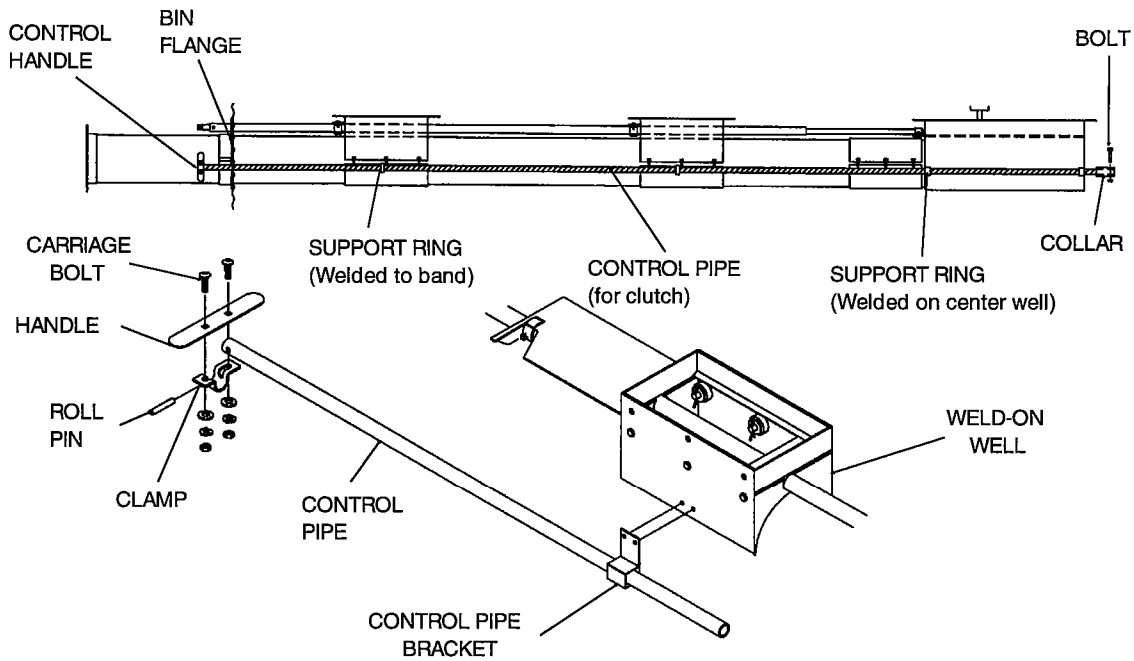


FIG. 16

ASSEMBLY INSTRUCTIONS

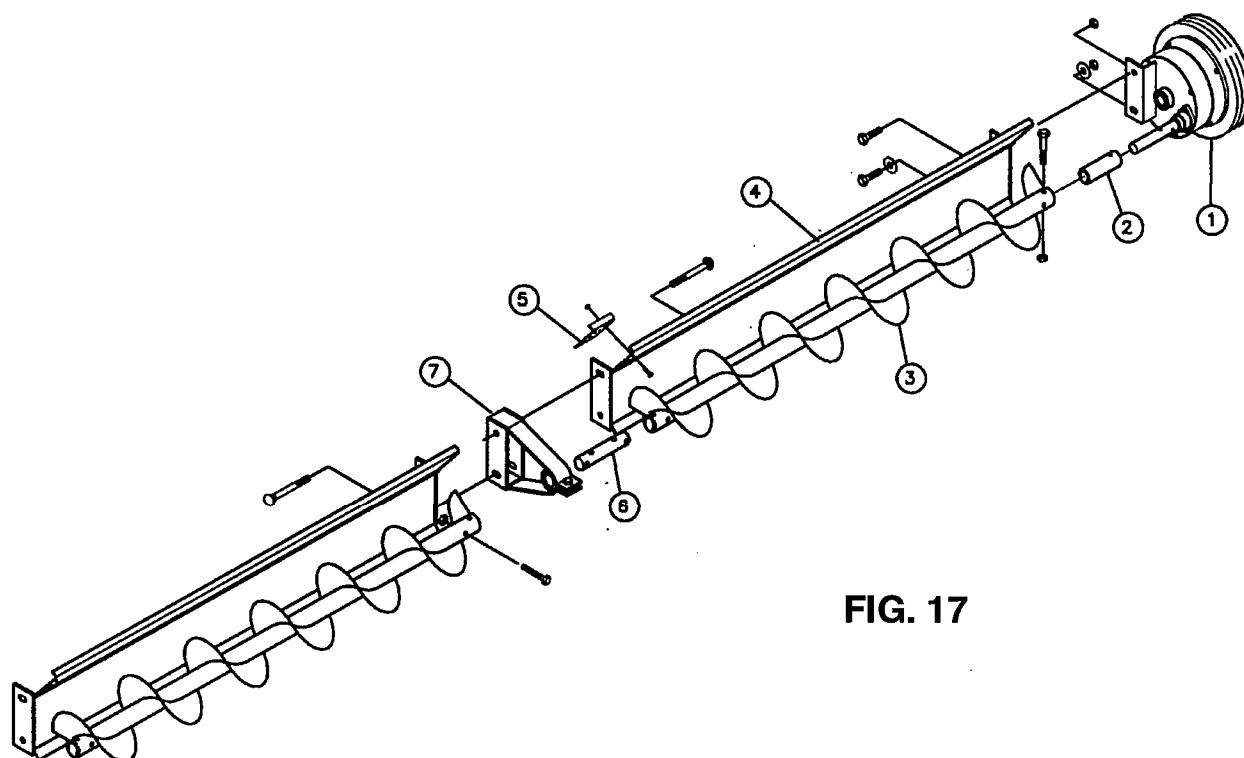


FIG. 17

10. Assemble the sweep wheel to flight and shield. (See Fig. 17.) Add grease to sweep wheel drive enclosure. (See page 11.)
 (NOTE: If there is more than one section of flight and shield, use shortest section.)
- Slide bushing (Ref. 2) onto the sweep wheel stub. The bushing should be orientated so that the hole in the bushing is closest to the wheel.
 - Slide flight (Ref. 3) onto the bushing and sweep wheel stub. Using hole closest to the end of the flight, bolt flight, bushing and wheel stub together using a $3/8" \times 2 1/2"$ long bolt and nylon locknut.
 (NOTE: There are two holes in the sweep wheel stub. Use the one closest to the wheel at this time. You may need to use the other hole for adjustment at a later time during assembly.)
 - Fasten the shield to the sweep wheel using two $3/8" \times 1 1/4"$ long bolts and nylon lock nuts. The bottom bolt uses two flat washers for the slots.
11. If your sweep has more than one section, bolt sections of shield and flights together.
- Bolt stub (Ref. 6) into the flight that is attached to the sweep wheel. Use two $7/16" \times 2 1/2"$ long bolts with nylon locknuts for 6" Power Sweeps or two $1/2" \times 3"$ long bolts with nylon locknuts for 8" Power Sweeps.
 - Slide shield bearing hanger (Ref. 7) onto stub.
 - Bolt the next section of flight to the stub using two $7/16" \times 2 1/2"$ long bolts with nylon lock nuts for 6" Power Sweep or two $1/2" \times 3"$ long bolts with nylon lock nuts for 8" Power Sweeps.
 - Bolt the sweep shields together with the shield bearing hanger (Ref. 7) in between the two sections. Use two $3/8" \times 3"$ long carriage bolts with lockwashers and non-lock nuts. (NOTE: Install carriage bolts so that square portion of the bolt next to the head fits into a slot on the sweep shield. The two bolts will install from different directions.)
 - Install the shield cover (Ref. 5) using four $5/16" \times 3/4"$ long bolts with nylon lock nuts. Orient bolt head to the inside of the shield.

ASSEMBLY INSTRUCTIONS

12. Attach the sweep shield and flight to the center well. (See Fig. 18.)

NOTE: Loosen bolts that hold the bracket onto the gearbox. There are slots in the bracket that allows linear adjustment for making the shield and flight attachments to the center well. If more adjustment is needed, go back to step 10 and use the other hole in the sweep wheel stub to make the connection to the flight.

- A. Bolt the sweep shield to the center well with (2) 3/8" x 1" long bolts, flatwashers and nylon locknuts.
- B. Bolt the sweep flight to the stub using (2) 7/16" x 2 1/2" long bolts for 6" Power Sweeps and 1/2" x 3" long bolts for 8" Power Sweeps with nylon locknuts.
- C. Retighten bolts that hold the bracket to the gearbox.

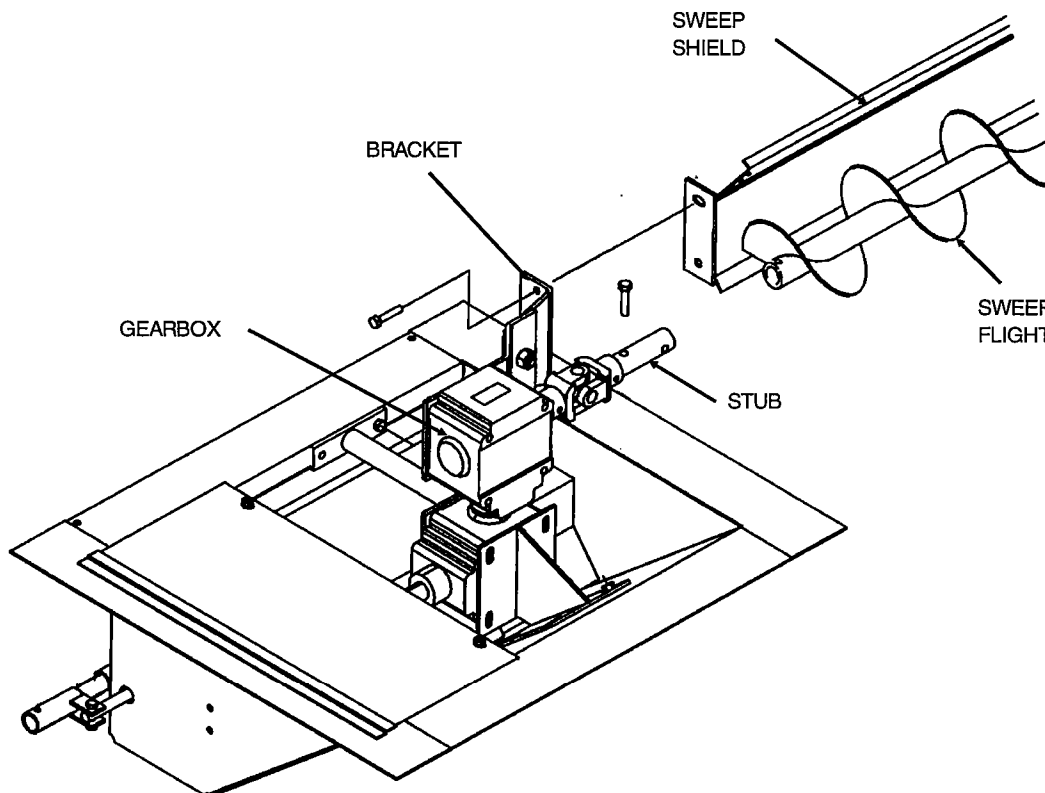
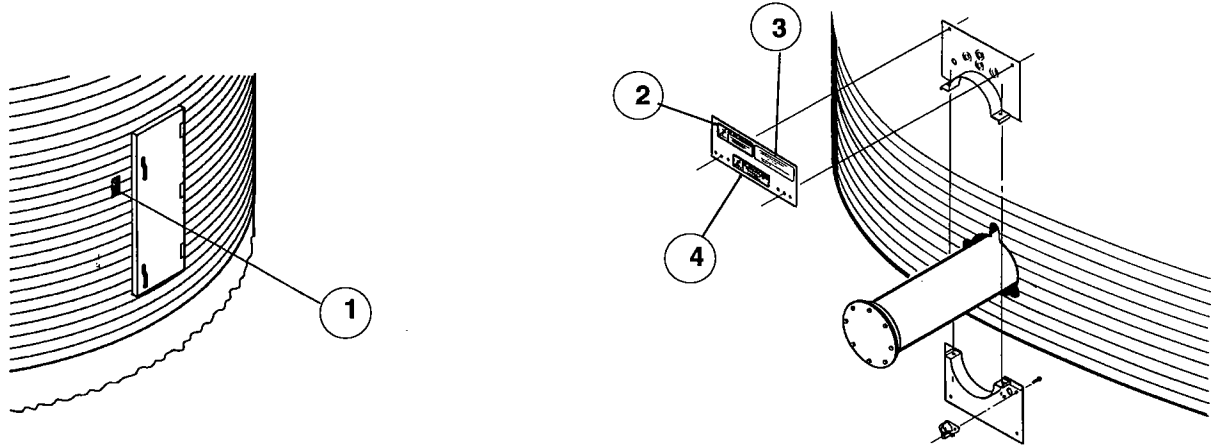


FIG. 18

PARTS LIST

SAFETY SIGNS



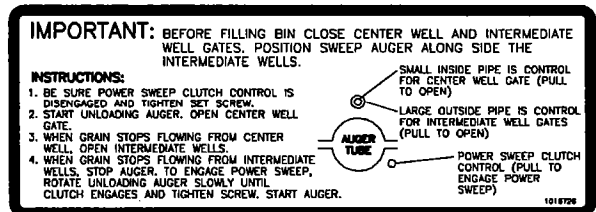
REF. NO.	PART NO.	DESCRIPTION	SIZE
1	1002303	DANGER - Rotating Flighting	4" x 7"
2	1002305	DANGER - Keep out of Bin (Unloading Operations)	2 3/4" x 7 1/2"
3	1016726	Important - Before Filling Bin	2 3/4" x 7 1/2"
4	1002304	DANGER - Keep out of Bin (Rapidly traveling sweep auger)	1 3/4" x 7 1/2"



Part No. 1002303



Part No. 1002305



Part No. 1016726



Part No. 1002304

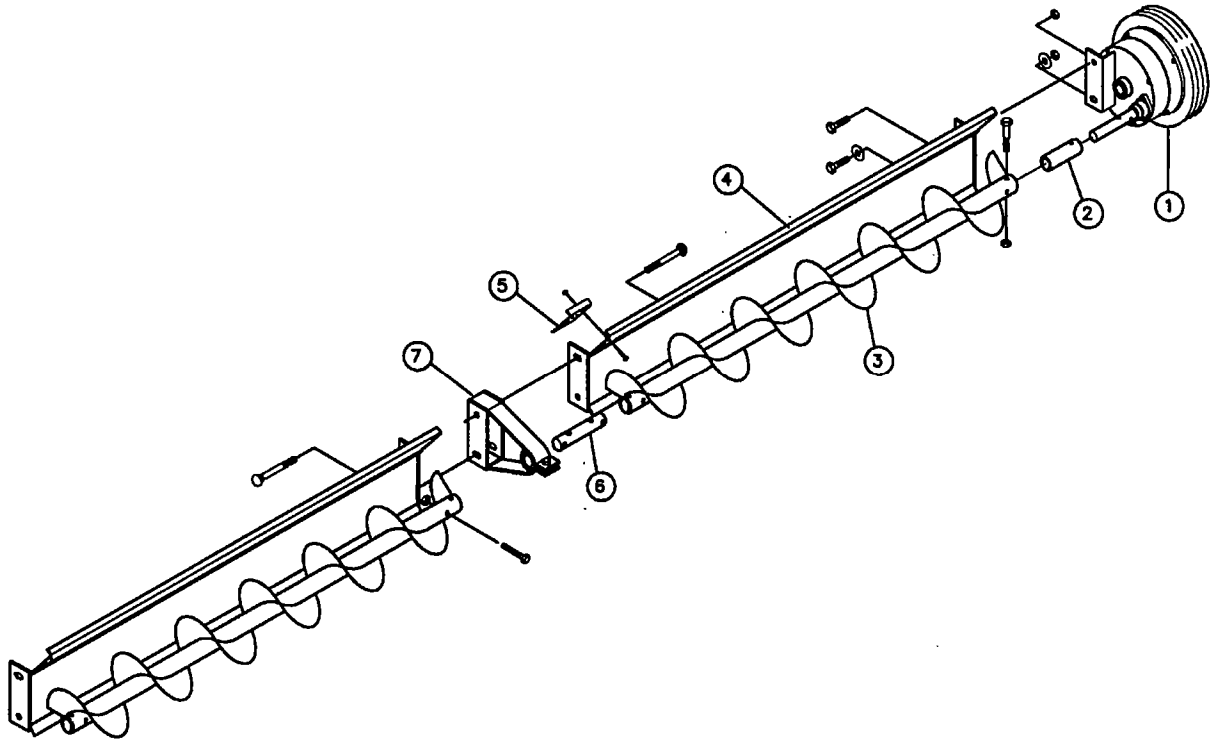
PARTS LIST

CENTER WELL COMPONENTS - CONT.

REF. NO.	PART NO.	DESCRIPTION
8	1014766	6" & 8" Gearbox Mounting Brkt.
9	1015211-2	Double Gearbox Assy.
10	1016619	6" Shield Brkt. for Gearbox
	1016617	8" Shield Brkt. for Gearbox
11	1016620	6" Shield Brkt. Attachment Plate
	1016618	8" Shield Brkt. Attachment Plate
12	33276	Bolt, 5/8" x 1 1/2" long HHCS
13	1005850	Idler Sprocket Arm
14	6821P	Sprocket, 13 tooth Idler, #50 x 5/8" Bore
15	33244	Bolt, 5/8" x 2" long HHCS
16	D1170	Nut, 5/8" Non-lock
17	1005111	Nut, 5/8" Side Depress Lock
18	6823P	Spring for Idler Sprocket x 5" long
19	6818D	Bearing, 2 Hole Flange, 1" Bore w/Lock Collar
20	50266A1	Bearing Spacer
21	6331G	Sprocket, 22 tooth, #50 x 1" Bore
22	8371C	1/4" Square Key x 1 1/2" long
23	1015291	#50 Roller Chain x 44 Pitch (for 6" & 8")
24	6830P	Clutch Sprocket, 13 tooth, #50 x 1" Bore (for 6" & 8")
25	420015	Retaining Ring (IRR 4100-100)
26	552344	Clutch Shaft, 1" dia. x 11 3/4" long
27	8826G	Woodruff Key, 1/4" x 1 1/4" long, #21
28	6812P	Sliding Jaw Clutch
29	6828F	Clutch Yoke
30	6828P	Clutch Yoke Bracket
31	6826P	Clutch Bracket Weldment
32	6827P	Clutch Control Rod, 5/8" dia. x 6 5/8" long
33	61641	Clutch Control Clevis
34	553411	Drive Cover Door
35	51867	Nylon Roller (1 1/2" O.D.)

PARTS LIST

SWEEP FLIGHT & SHIELD COMPONENTS



8" COMPONENTS

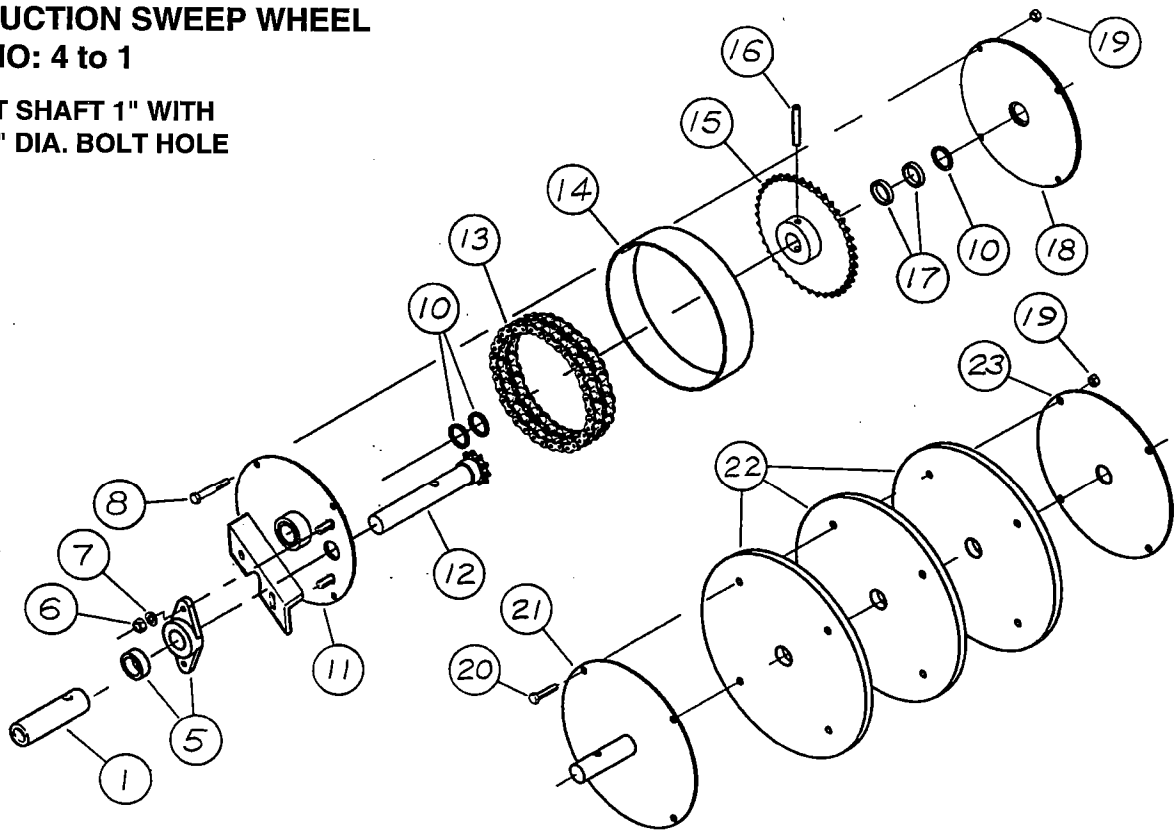
6" COMPONENTS

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	1015107	Enclosed Sweep Wheel Assy.	1	1017549	Enclosed Sweep Wheel Assy.
2	1015481	Bushing for Sweep Wheel Flight	2	1015477	Bushing for Sweep Wheel Flight
3	1016749	Flight (4'-4" long)	3	1016708	Flight (4'-4" long)
	5262H	Flight (5'-10" long)		1017705	Flight (5'-6" long)
	1016750	Flight (7'-4" long)		1017607	Flight (7'-0" long)
	5265H	Flight (8'-10" long)		1017709	Flight (8'-6" long)
4	1016759	Flight Shield (4'-4" long)		5342H	Flight (5'-10" long)
	1015935	Flight Shield (5'-10" long)		1016622	Flight (7'-4" long)
	1016760	Flight Shield (7'-4" long)		5345H	Flight (8'-10" long)
	1015936	Flight Shield (8'-10" long)	4	1014946	Flight Shield (4'-4" long)
5	1014973	Shield Cover		1017702	Flight Shield (5'-6" long)
6	8393C	Stub (1 1/4" x 11 1/2" long)		1014947	Flight Shield (5'-10" long)
7	6668A11	Shield Bearing Assembly		1017608	Flight Shield (7'-0" long)
--	8379C	Bronze Bushing only (1 1/4" I.D.)		1014948	Flight Shield (7'-4" long)
				1017706	Flight Shield (8'-6" long)
				1014949	Flight Shield (8'-10" long)
			5	1014974	Shield Cover
			6	1045D	Stub (1 1/2" x 11 1/2" long)
			7	6670A11	Shield Bearing Assembly
			--	1051D	Bronze Bushing only (1 1/2" I.D.)

PARTS LIST

REDUCTION SWEEP WHEEL RATIO: 4 to 1

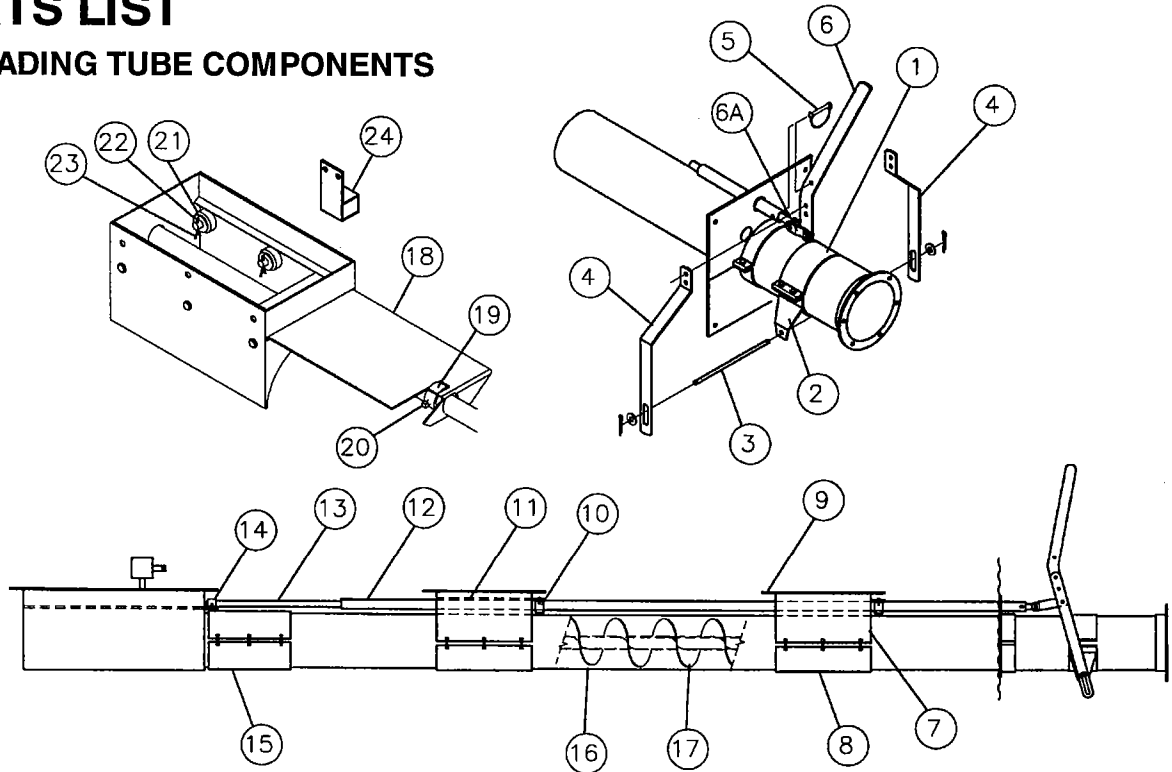
INPUT SHAFT 1" WITH
13/32" DIA. BOLT HOLE



REF. NO.	DESCRIPTION	6" WHEEL PART NO.	8" WHEEL PART NO.
1	Bushing 1" I.D. x 1 1/4" O.D. x 4 3/8" long	1015481	N/A
1	Bushing 1" I.D. x 1 1/2" O.D. x 4 3/8" long	N/A	1015477
5	Two-hole Flange Bearing 1" Bore	1015064	1015064
6	3/8" Hex Nut	---	---
7	3/8" Lock Washer	---	---
8	5/16" NC x 2 1/2" Hex Head Capscrew	---	---
10	1" Nominal x 14 ga. Washer	4542	4542
11	Inner Drive Housing w/Bushing	1015067	1017548
--	Bronze Bushing only	1015070	1015070
12	Sprocket/Shaft Weldment	1015106	1015106
13	#40 Double Roller Chain w/Link 40 pitch	1015105	1015105
14	Housing Ring with 1/4" NPT zerk	1015051	1015051
15	Sprocket #40 x 40 tooth	1015059	1015059
16	Roll Pin, 5/16" x 2" long	6386C	6386C
17	1" Nominal x 10 ga. Washer	035594	035594
18	Outer Drive Housing	1015066	1015066
19	5/16" Nylock Nut	---	---
20	5/16" x 2" Hex Head Capscrew	---	---
21	Inner Disk Plate	1015065	1017544
22	Rubber Disk, 11" O.D.	1014370	---
22	Rubber Disk, 13" O.D.	---	1017550
23	Outer Disk Plate	1015050	1017546

PARTS LIST

UNLOADING TUBE COMPONENTS



REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	5046A1	Half Band, 6" galv. x 4" wide	12	---	Control Pipe (1 3/8" O.D.)
	5042A1	Half Band, 8" galv. x 4" wide		1016728	5'-9" long
2	1016663	Mounting Brkt., Band-on f/6"		1016960	6'-6" long
	1016664	Mounting Brkt., Band-on f/8"		1016961	8'-5" long
3	1016646	Attach Pin x 10 1/2" lg. f/6"		1016729	10'-0" long
	1016647	Attach Pin x 12 1/2" lg. f/8"		1016962	11'-0" long
4	1016638	Side Strap f/6"		1016963	12'-0" long
	1016639	Side Strap f/8"		1016964	14'-5" long
5	1016747	Lynch Pin		1016965	15'-6" long
6	1016643	Control Lever Handle		1016730	16'-5" long
6A	50316A1	Linkage Strap		1016731	19'-0" long
7	1014963	6" Intermediate Bin Well Wlmt.		1016732	21'-2" long
	1014752	8" Intermediate Bin Well Wlmt.	13	---	Control Pipe (7/8" O.D.)
8	1014964	6" Back Band Wlmt.			f/Center Well Gate
	1014753	8" Back Band Wlmt.		52155	7'-0" long
9	1015010	6" Top Flange		52156	8'-6" long
	1014743	8" Top Flange		52157	10'-0" long
10	552406	Clamp f/Intermediate Well Gate		52158	11'-6" long
11	1015006	6" Intermediate Well Gate		52159	13'-0" long
	1014757	8" Intermediate Well Gate		52160	14'-6" long
				54393	16'-6" long
				52162	17'-6" long
				52163	19'-0" long
				52164	20'-6" long
				*	23'-6" long

* Two piece pipe w/connector - order #'s 53845, 52166 & 41089

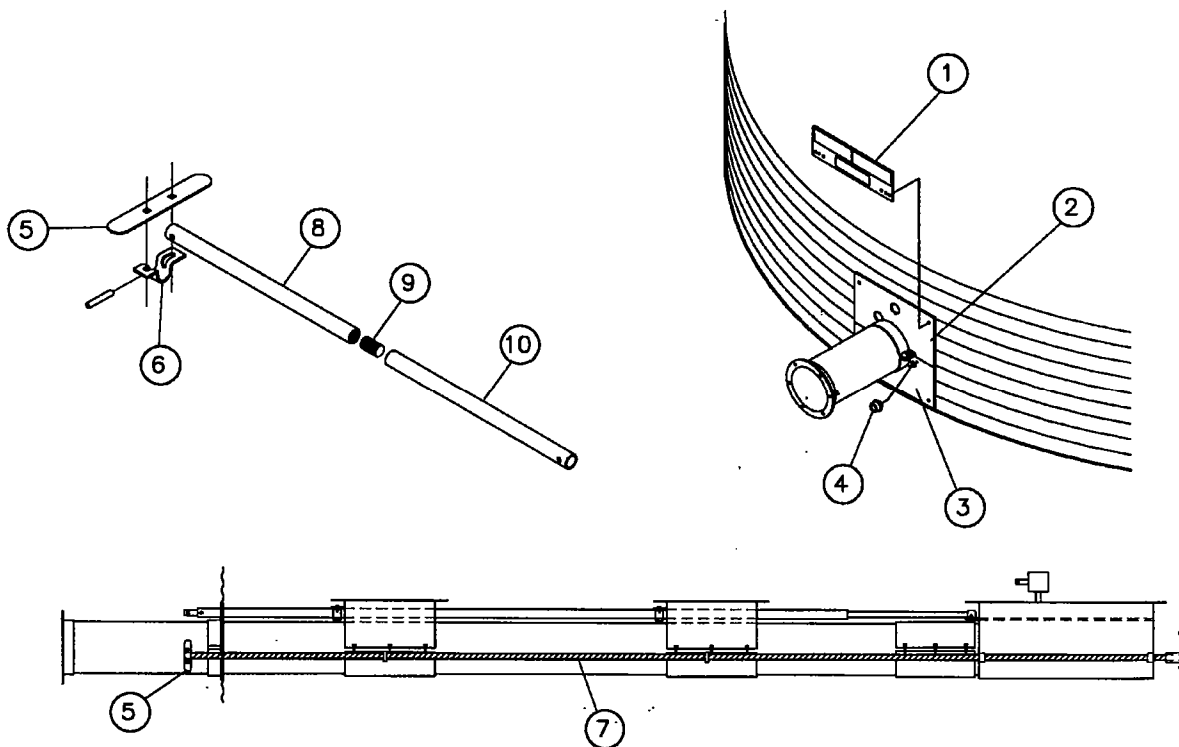
PARTS LIST

UNLOADING TUBE COMPONENTS

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
14	50471A1	Clamp for Center Well Gate			
15	6815P	6" Connecting Band x 12" lg.			
	8815P	8" Connecting Band x 12" lg.			
16	---	6" Unloading Tube (Band-on Wells)			
	6377A91	Unloading Tube f/15' Bin, 8' lg.			
	6378A91	Unloading Tube f/18' Bin, 10' lg.			
	6379A91	Unloading Tube f/21' Bin, 11' lg.			
	6380A91	Unloading Tube f/24' Bin, 12'-6" lg.			
	6381A91	Unloading Tube f/27' Bin, 14' lg.			
	6382A91	Unloading Tube f/30' Bin, 15'-6" lg.			
	12156	Unloading Tube f/33' Bin, 17'-6" lg.			
	6384A91	Unloading Tube f/36' Bin, 18'-6" lg.			
16	---	8" Unloading Tube (Band-on Wells)			
	6385A91	Unloading Tube f/15' Bin, 8' lg.			
	6386A91	Unloading Tube f/18' Bin, 10' lg.			
	6387A91	Unloading Tube f/21' Bin, 11' lg.			
	6388A91	Unloading Tube f/24' Bin, 12'-6" lg.			
	6389A91	Unloading Tube f/27' Bin, 14' lg.			
	6390A91	Unloading Tube f/30' Bin, 15'-6" lg.			
	11827	Unloading Tube f/33' Bin, 17'-6" lg.			
	6392A91	Unloading Tube f/36' Bin, 18'-6" lg.			
	6942A91	Unloading Tube f/39' Bin, 20' lg.			
	6393A91	Unloading Tube f/42' Bin, 22' lg.			
	6394A91	Unloading Tube f/48' Bin, 25' lg.			
	11828	Unloading Tube f/54' Bin, 28' lg.			
	5006A91	Unloading Tube f/60' Bin, 18'-6" lg. w/Connecting Band			
	6388A91	Unloading Tube f/60' Bin, 12'-6" lg.			
16	---	6" Unloading Tube (Weld-on Wells)			
	1018491	Unloading Tube f/15' Bin, 8' lg.			
	1018492	Unloading Tube f/18' Bin, 10' lg.			
	1018493	Unloading Tube f/21' Bin, 11' lg.			
	1018494	Unloading Tube f/24' Bin, 12'-6" lg.			
	1018495	Unloading Tube f/27' Bin, 14' lg.			
	1018496	Unloading Tube f/30' Bin, 15'-6" lg.			
	1018497	Unloading Tube f/33' Bin, 17'-6" lg.			
	1018498	Unloading Tube f/36' Bin, 18'-6" lg.			
16		8" Unloading Tube (Weld-on Wells)			
	1018170	Unloading Tube f/15' Bin, 8' lg.			
	1018171	Unloading Tube f/18' Bin, 10' lg.			
	1018172	Unloading Tube f/21' Bin, 11' lg.			
	1018173	Unloading Tube f/24' Bin, 12'-6" lg.			
	1018174	Unloading Tube f/27' Bin, 14' lg.			
	1018175	Unloading Tube f/30' Bin, 15'-6" lg.			
			16		8" Unloading Tube (Weld-on Wells) - cont.
				1018176	Unloading Tube f/33' Bin, 17'-6" lg.
				1018177	Unloading Tube f/36' Bin, 18'-6" lg.
				1018178	Unloading Tube f/39' Bin, 20' lg.
				1018179	Unloading Tube f/42' Bin, 22' lg.
				1018180	Unloading Tube f/48' Bin, 25' lg.
			17	---	6" Unloading Flight
				6801P	Unloading Flight f/15' Bin, 10'-3/4" lg.
				6802P	Unloading Flight f/18' Bin, 12'-3/4" lg.
				6803P	Unloading Flight f/21' Bin, 13'-3/4" lg.
				6804P	Unloading Flight f/24' Bin, 14'-6 3/4" lg.
				6805P	Unloading Flight f/27' Bin, 16'-3/4" lg.
				6806P	Unloading Flight f/30' Bin, 17'-6 3/4" lg.
				62727	Unloading Flight f/33' Bin, 19'-6 3/4" lg.
				6808P	Unloading Flight f/36' Bin, 20'-6 3/4" lg.
			17	---	8" Unloading Flight
				8801P	Unloading Flight f/15' Bin, 10'-3/4" lg.
				8802P	Unloading Flight f/18' Bin, 12'-3/4" lg.
				8803P	Unloading Flight f/21' Bin, 13'- 3/4" lg.
				8804P	Unloading Flight f/24' Bin, 14'-6 3/4" lg.
				8805P	Unloading Flight f/27' Bin, 16'- 3/4" lg.
				8806P	Unloading Flight f/30' Bin, 17'-6 3/4" lg.
				62728	Unloading Flight f/33' Bin, 19'-6 3/4" lg.
				8808P	Unloading Flight f/36' Bin, 20'-6 3/4" lg.
				8809P	Unloading Flight f/39' Bin, 22'-3/4" lg.
				8810P	Unloading Flight f/42' Bin, 24'-3/4" lg.
				8811P	Unloading Flight f/48' Bin, 27'-3/4" lg.
				1022497	Unloading Flight f/54' Bin, 30'-3/4" lg.
				1018884	Unloading Flight f/60' Bin, 20' lg.
				1018885	Unloading Flight f/60' Bin, 13' lg.
					Weld-on Intermediate Well Components
			18	1018507	6" Intermediate Well Gate
				1018218	8" Intermediate Well Gate
			19	1018220	Collar for Control Pipe
			20	1018221	Setscrew
			21	51867	Roller Nylon (1 1/2" O.D. x 1/2" thick)
			22	33025	1/2" Flat Washer
			23	33161	1/8" x 1" lg. Cotter Pin
			24	1018216	Clutch Control Guide

PARTS LIST

BIN FLANGE & CLUTCH CONTROL COMPONENTS

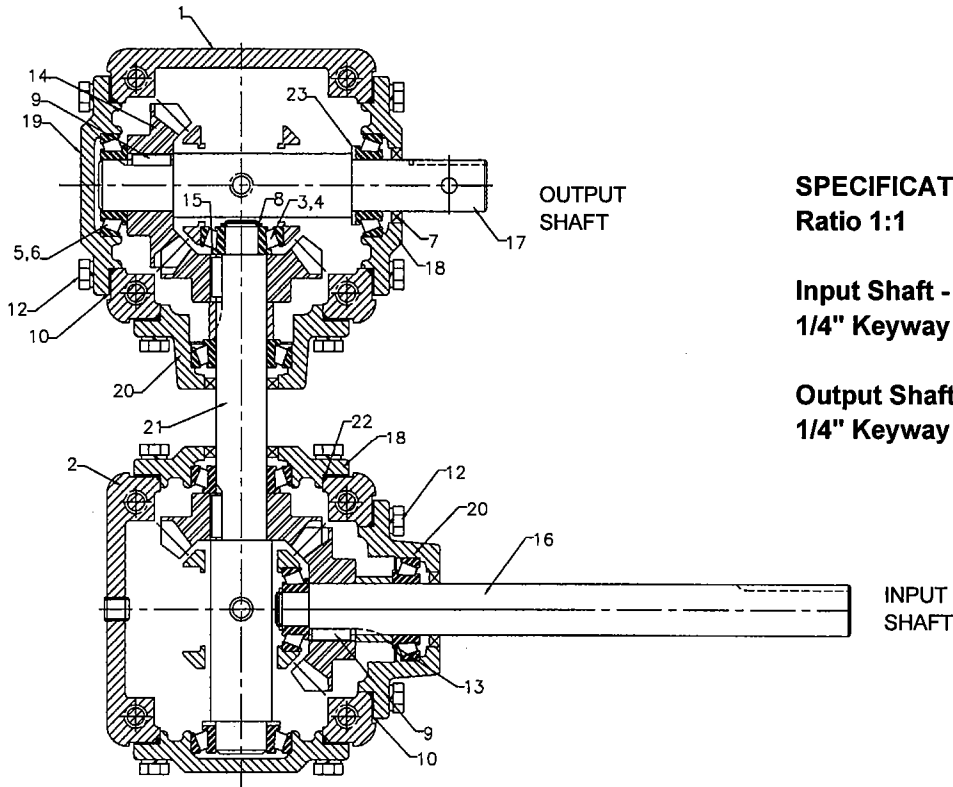


REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	1016733	Decal Plate (See Page P-1 for Decals)	8	53845	Control Pipe x 21'-0" long f/39'-48' Bin
2	60063A1	6" Upper Bin Flange Wlmt.	9	41089	Thread Rod Connector
	60065A1	8" Upper Bin Flange Wlmt.	10	52165	Control Pipe x 1'-0" long f/39' Bin
3	60064A1	6" Lower Bin Flange Wlmt.		52166	Control Pipe x 2'-6" long f/42' Bin
	60066A1	8" Lower Bin Flange Wlmt.		52167	Control Pipe x 5'-6" long f/48' Bin
4	60067A1	Control Pipe Lock Collar		1018861	Control Pipe x 8'-6" long f/54' Bin
5	52154	Handle for Control Pipe		1018862	Control Pipe x 11'-6" long f/60' Bin
6	50471A1	Clamp for Handle			
7	---	One Piece Control Pipe (7/8" O.D.)			
	52157	10'-0" long f/15' Bin			
	52158	11'-6" long f/18' Bin			
	52159	13'-0" long f/21' Bin			
	52160	14'-6" long f/24' Bin			
	52161	16'-0" long f/27' Bin			
	52162	17'-6" long f/30' Bin			
	54394	19'-6" long f/33' Bin			
	52164	20'-6" long f/36' Bin			

PARTS LIST

GEARBOX

COMPLETE PART NO. 1015211-2



SPECIFICATIONS:

Ratio 1:1

**Input Shaft - 1" Dia. with
1/4" Keyway**

**Output Shaft - 1" dia. with
1/4" Keyway and 5/16" hole**

REF. NO.	PART NO.	QTY.	DESCRIPTION
1	---	1	Case (Not available)
2	---	1	Case (Not available)
3	40388	2	Bearing.Cone (LM11749)
4	40389	2	Bearing Cup (LM11710)
5	40377	6	Bearing Cone (LM44643)
6	40378	6	Bearing Cup (LM44610)
7	1023280	4	Seal (Nat. #470553)
8	41384	2	Snap Ring
9	020153	4	Square Key (1/4" x 7/8" long)
10	1023289	A/R	Shim Kit
11	020009	5	1/4" Pipe Plug
12	4701-1	24	5/16" x 3/4" NC Capscrew
13	1027397	2	Spacer Bushing (73-30002)
14	1023286	4	Gear 90° Bevel - 19 tooth
15	1023567	AR	Spacer
16	1023591	1	Input Shaft
17	1023592	1	Output Shaft
18	1023565	2	End Cap f/Shaft (70-10004)
19	1023609	2	End Cap (70-10002)
20	1023571	2	Quill
21	1027398	1	Connecting Shaft (71-10488)
22	1023282	6	O-Ring (3.15" O.D.)
23	1023611	2	Bearing Spacer



Hutchinson/Mayrath

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