

Pneg- 1018
June 12, 2001
Revision: 03

Direct Gear Drive Bin Sweep Auger

Installation & Operation Manual

Personnel operating or working around this equipment should read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment. Any misuse of the equipment may void the warranty.

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SAFETY 1st

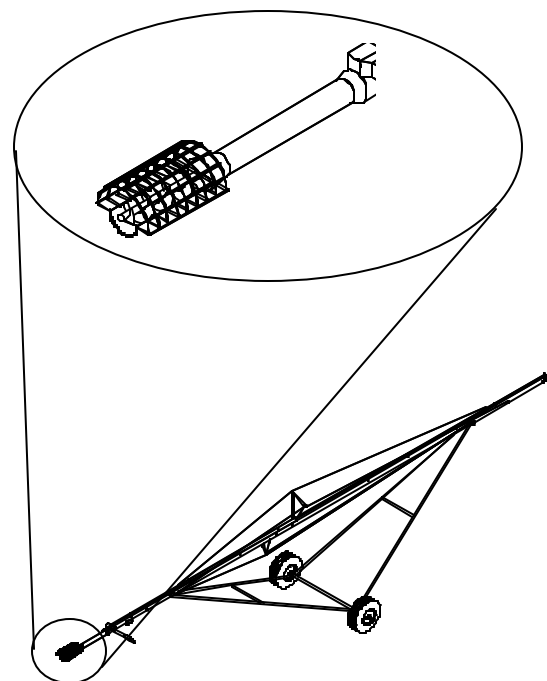
Our equipment is built to provide many years of dependable service to our customers through durable craftsmanship.

One of the most important principles of our engineering staff is **SAFETY 1st** design throughout all product lines. To us, safety is NO ACCIDENT!

With this in mind, the company is implementing its **SAFETY 1st** program. Should you ever need guards, shields, safety decals or owner/operator manuals, simply contact us, and we will supply you with them **FREE OF CHARGE!**

While it is our main goal to be the world leader in auger manufacturing, it is always our first priority to keep our customers safe.

*Replace missing guards and shields
FREE OF CHARGE!*



1. Product Information.

- A. The Direct Gear Drive Bin Sweep Auger includes the following components:
- steel clutch and a chain transmission with a separate enclosure box with a cover
 - two (2) gear boxes with a connecting shaft
 - a bin flange
 - a center well with a slide gate
 - a bin sweep with a steel shield
 - intermediate well(s)
 - unload tube and flighting
- B. The intermediate bearing on the sweep flight stabilizes the flight and shield on units for 24' to 48' (7.32 m - 14.63 m) diameter bins.
- C. Using 1/2" (1.27 cm) rod to the center well and 1/2" (1.27 cm) rod to the intermediate well(s) ensures individual control of the center well.

2. General Information.

- A. It is the plan of the company to improve its product whenever possible and practical to do so. We reserve the right to change, improve and modify products at any time without obligation to make changes, improvements and modifications on equipment sold previously.
- B. This equipment has been designed and manufactured to give years of dependable service. The care and maintenance of this equipment will affect the satisfaction and service obtained. By observing the instructions and suggestions recommended, the owner should receive competent service for many years. If additional information or assistance should be required, please contact the nearest dealer.

3. Capacities and Specifications.



Electrical controls and wiring should be installed by a qualified electrician. The motor disconnect switches and conductor cables should comply with the National Electrical code and any local codes which apply. Reset and motor starting stations should be located so that the operator can see that all personnel are clear of the equipment.

A. Use the chart below to determine the horsepower required.

Bin Diameter	25° Powerhead			Horizontal Powerhead			Vertical Powerhead		
	6" (15.24 cm)	8" (20.32 cm)	10" (25.40 cm)	6" (15.24 cm)	8" (20.32 cm)	10" (25.40 cm)	6" (15.24 cm)	8" (20.32 cm)	10" (25.40 cm)
15' (4.57 m)	3	5	N/A	3	3	N/A	5	5	N/A
18' (5.49 m)	3	5	N/A	3	3	N/A	5	5	N/A
21' (6.40 m)	5	5	N/A	3	5	N/A	5	7.5	N/A
24' (7.32 m)	5	5	10	3	5	7.5	5	7.5	10
27' (8.23 m)	5	5	10	5	5	7.5	5	7.5	10
30' (9.14 m)	5	7.5	10	5	5	7.5	7.5	7.5	15
33' (10.06 m)	5	7.5	10	5	5	7.5	7.5	7.5	15
36' (10.97 m)	5	7.5	10	5	5	10	7.5	7.5	15
39' (11.89 m)	N/A	10	15	N/A	7.5	10	N/A	N/A	N/A
42' (12.80 m)	N/A	10	15	N/A	7.5	10	N/A	N/A	N/A
48' (14.63 m)	N/A	10	15	N/A	7.5	10	N/A	N/A	N/A

The above listed horsepower recommendations are for augering grain with a moisture content less than 15%. Augering grain with a higher moisture content will require a stronger power source if maximum capacity is to be reached and maintained. The higher the moisture content of the grain, the lower the maximum possible capacity. Use a proper size electric motor that runs at 1750 RPM.

B. A magnetic starter should be used for the operator's protection and that of the motor. This is to protect the operator against accidental restart caused by power interruption, conductor fault, low voltage, circuit interruption or motor overload. Therefore, the motor must be restarted manually. If using a motor with built-in thermal overload protection, make sure this type of motor has a manual reset.

C. NEVER install the motor starting controls on the Direct Gear Drive Bin Sweep Auger inside the bin. They must be located safely outside the bin.

3. Capacities and Specifications (cont.)

- D. Disconnect and lockout the power before resetting motor overloads.

- E. Disconnect and lockout the power before entering and servicing the bin.

- F. The reset and motor starting controls must be placed so that the operators have full view of the equipment.

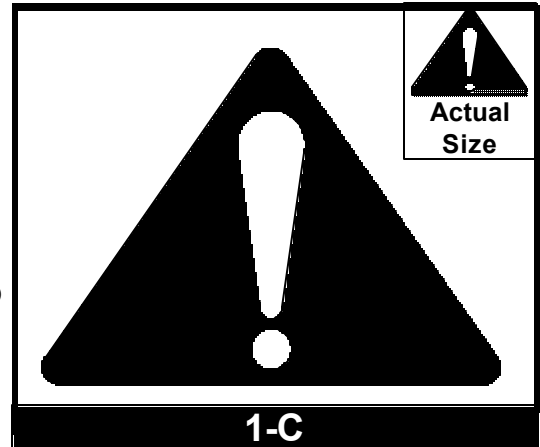


There should ALWAYS be two (2) people in the work area who are fully trained in the operation of the equipment and know what to do in case of an emergency.

- G. Make sure electric motors are grounded.

1. General Safety Statements.

- A. Our principle concern is your safety and the safety of others associated with grain handling equipment. We want to keep you as a customer. This manual is to help you understand safe operating procedures and some problems which may be encountered by the operator and other personnel.



- B. As owner and/or operator, it is your responsibility to know what requirements, hazards and precautions exist, and to inform all personnel associated with the equipment or in the area. Safety precautions may be required from the personnel. Avoid any alterations to the equipment. Such alterations may produce a very dangerous situation, where serious injury or death may occur.
- C. This symbol is used to call attention to instructions concerning your personal safety. Watch for this symbol; it points out important safety precautions. It means “ATTENTION”, “WARNING”, “CAUTION”, and “DANGER”. Read the message that follows, and be cautious to the possibility of personal injury or death.
- D. This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.

1. General Safety Statements (cont.)

- E. Untrained operators subject themselves and others to serious injury or death. NEVER allow untrained personnel to operate this equipment.
- F. Keep children and other unqualified personnel out of the working area at all times.
- G. NEVER start equipment until ALL persons are clear of the work area.
- H. Be sure ALL operators are adequately rested and prepared to perform all functions of operating this equipment.
- I. Keep hair, loose clothing, and shoestrings away from rotating and moving parts. NEVER wear loose fitting clothing when working around augers.
- J. NEVER allow any person intoxicated or under the influence of alcohol or drugs to operate the equipment.
- K. NEVER allow anyone inside a bin, truck or wagon which is being unloaded by an auger or conveyor. Flowing grain can trap and suffocate in seconds.
- L. Make sure someone is nearby who is aware of the proper shutdown sequence in the event of an accident or emergency.
- M. NEVER work alone.
- N. ALWAYS think before acting. NEVER act impulsively around the equipment.
- O. Make sure ALL equipment is locked in position before operating.
- P. Keep hands and feet away from the auger intake and other moving parts.
- Q. NEVER attempt to assist machinery operation or to remove trash from equipment while in operation.


1. General Safety Statements (cont.)

- R. NEVER drive, stand or walk under the equipment.
- S. Use caution not to hit the auger when positioning the load.
- T. Use ample overhead lighting after sunset to light the work area.
- U. ALWAYS lockout ALL power to the equipment when finished unloading a bin.
- V. Keep area around intake free of obstacles such as electrical cords, blocks, etc. that might trip workers.

2. Emergency Shutdown Sequence.

- A. In an emergency, turn off the power to the auger.

3. Pinch Points.

 **A pinch point is any place on the equipment which can injure an operator.**

- A. Components of this equipment have sharp edges which can scrape and/or cut an operator.
- B. A moving auger can sever an operator's limbs or even kill.

4. Shields and Guards.

- A. Always keep all shields and guards in place during operation.

5. Personal Protective Equipment.

A. The proper personal protective equipment should be worn at all times by anyone in the work area.



5-B

B. ALWAYS wear safety glasses when in the work area.



5-C

C. The operator should never wear jewelry.

D. Loose clothing should not be worn. Any clothing that becomes loosened should be tucked in tightly.



5-D,E

E. Loose shoe strings or dangling shoe strings should be tucked in.

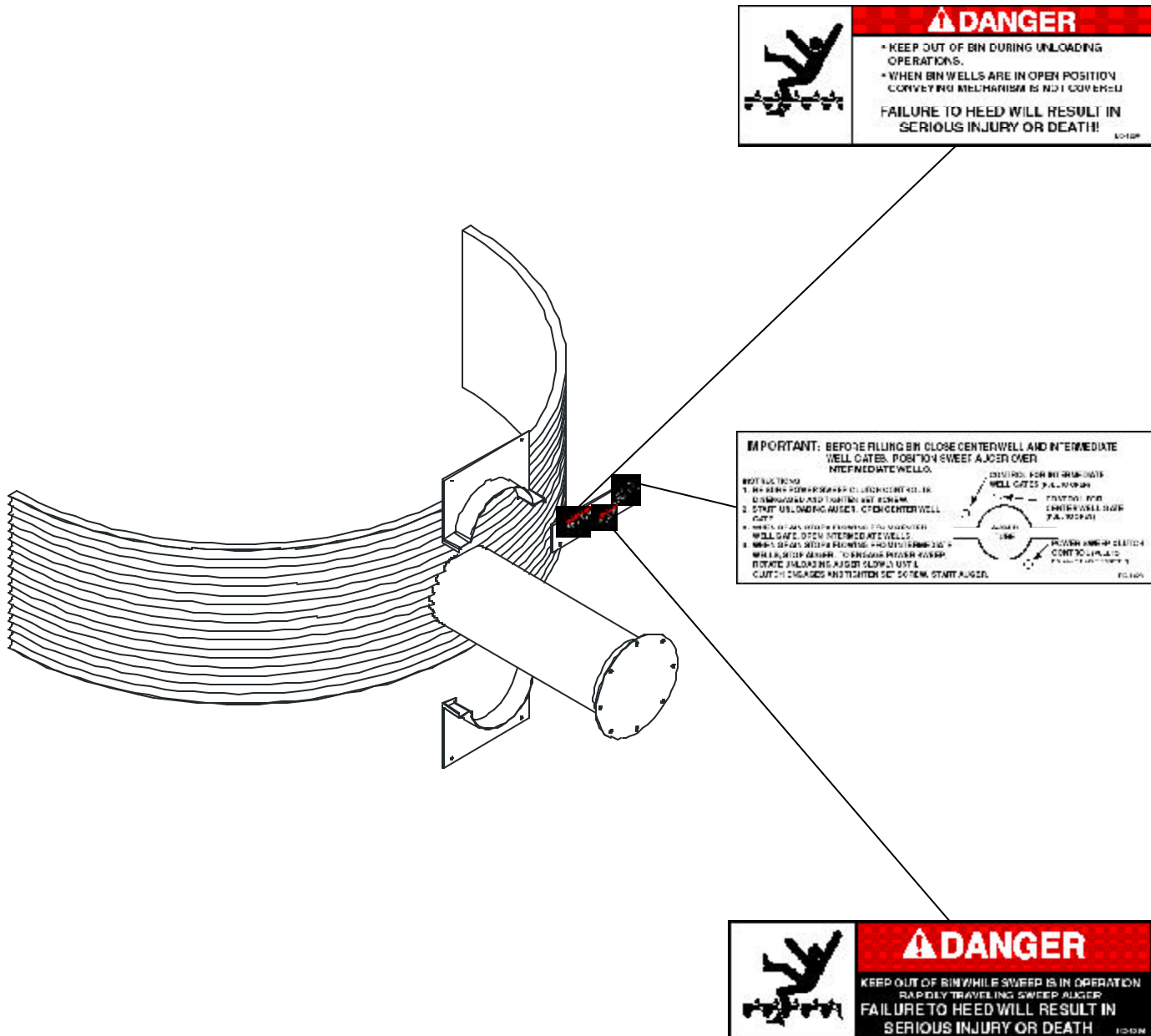
F. Long hair should be tied up and/or back.



5-F

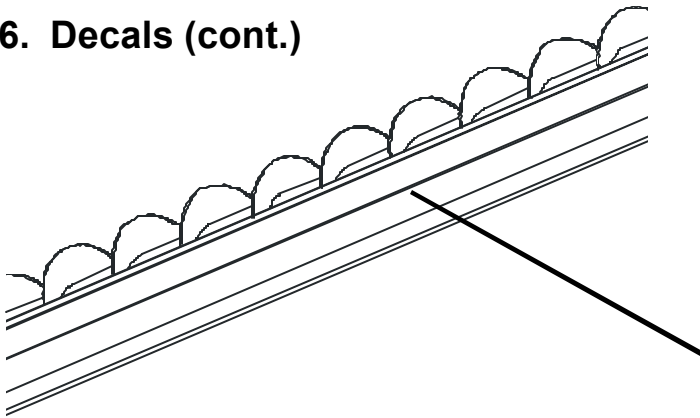
6. Decals.

- A. The image below shows the locations of the decals which should appear on the Direct Drive Bin Sweep Auger.



Please remember safety signs provide important safety information for people working near bin unloading equipment that is in operation. Any safety signs that are worn, missing, illegible or painted over should be replaced immediately. Obtain **FREE** replacements by contacting your dealer.

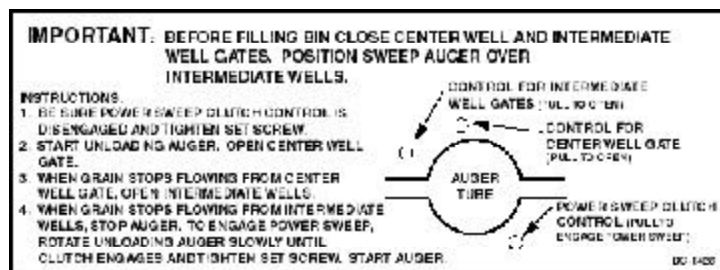
6. Decals (cont.)



- B. The decal above is a danger decal. It is located on the sweep shield. Its statements should be read, understood, and the operator(s) should heed the information. Failure to do so could result in SERIOUS INJURY, DEATH or property damage.




- C. The decal above is a danger decal. It appears on the decal plate. Its statements should be read, understood, and the operator(s) should heed the information. Failure to do so could result in SERIOUS INJURY, DEATH or property damage.

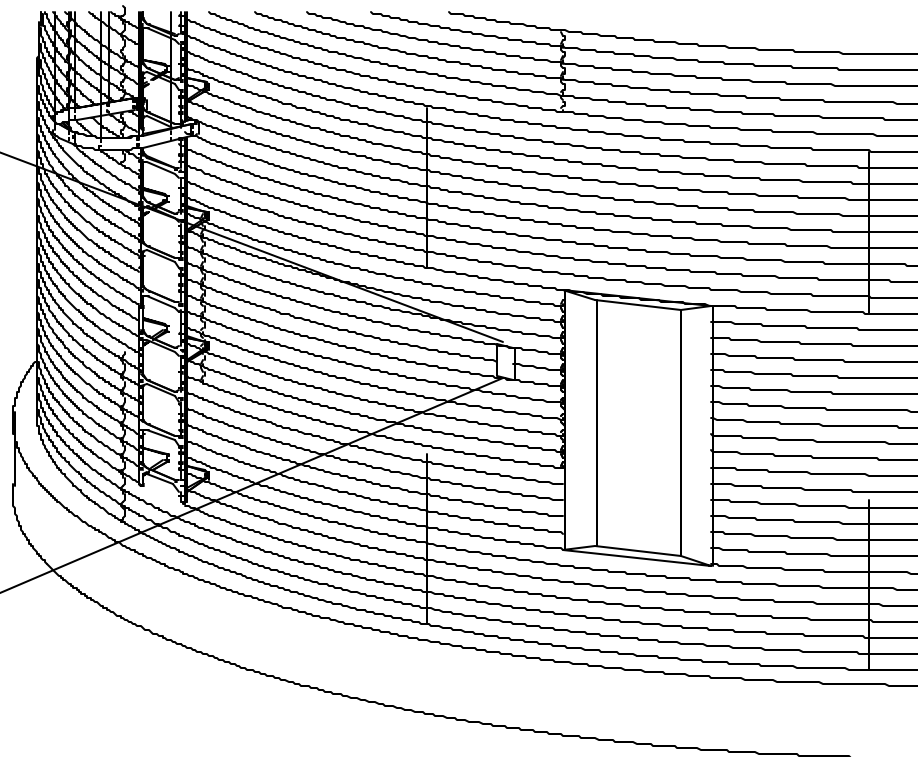



- D. The above pictured decal informs the operator(s) of specific instructions. It appears on the decal plate that is shipped with the product.

6. Decals (cont.)

- E. DANGER Sign No. DC-1395 was supplied with 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 storage building. Do not cover any safety signs or any other signs that are already there.
- F. If the safety sign location suggested is not in full view because of equipment modifications, other equipment in the area or any reason, then locate the safety sign in a more suitable location.
- G. Be certain surface is clean, dry and free of dirt and oil. Peel paper backing from decal and stick into place. The adhesive backing will bond on contact.

 Please remember, safety signs provide important safety information for persons working near bin unloading equipment that is in operation.



 If the Safety Sign cannot be easily read for any reason or has been painted over, replace it immediately.

Additional Safety Signs may be obtained **FREE OF CHARGE** from a Dealer, Distributor, or ordered from the factory.

Order **SAFETY SIGN NO. DC-1395**


7. Operator Qualifications.

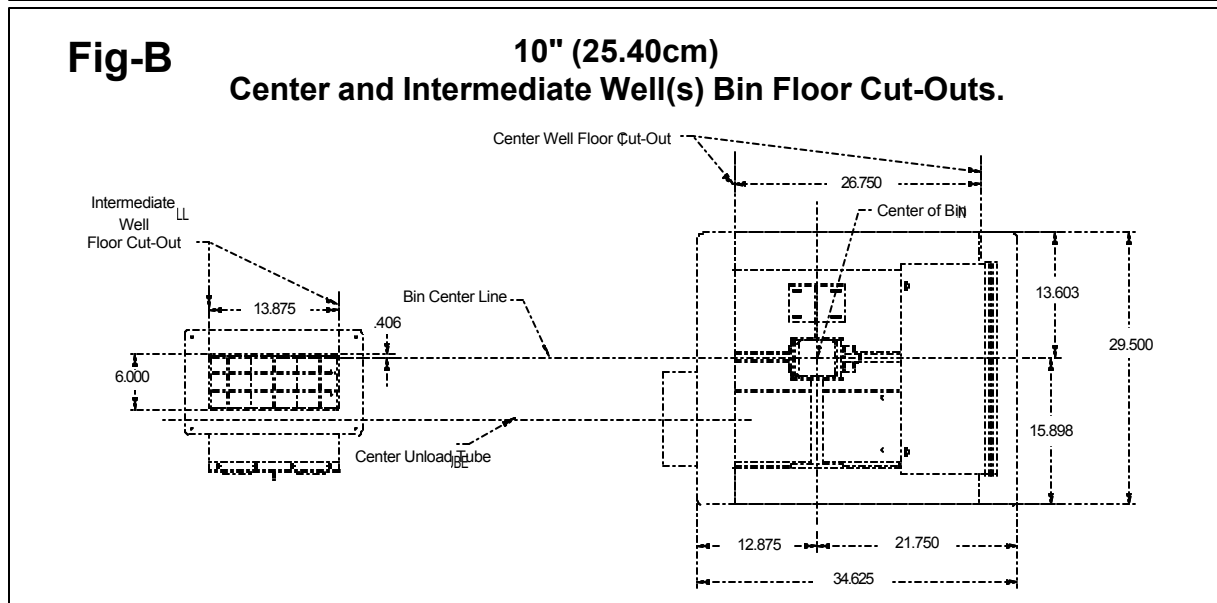
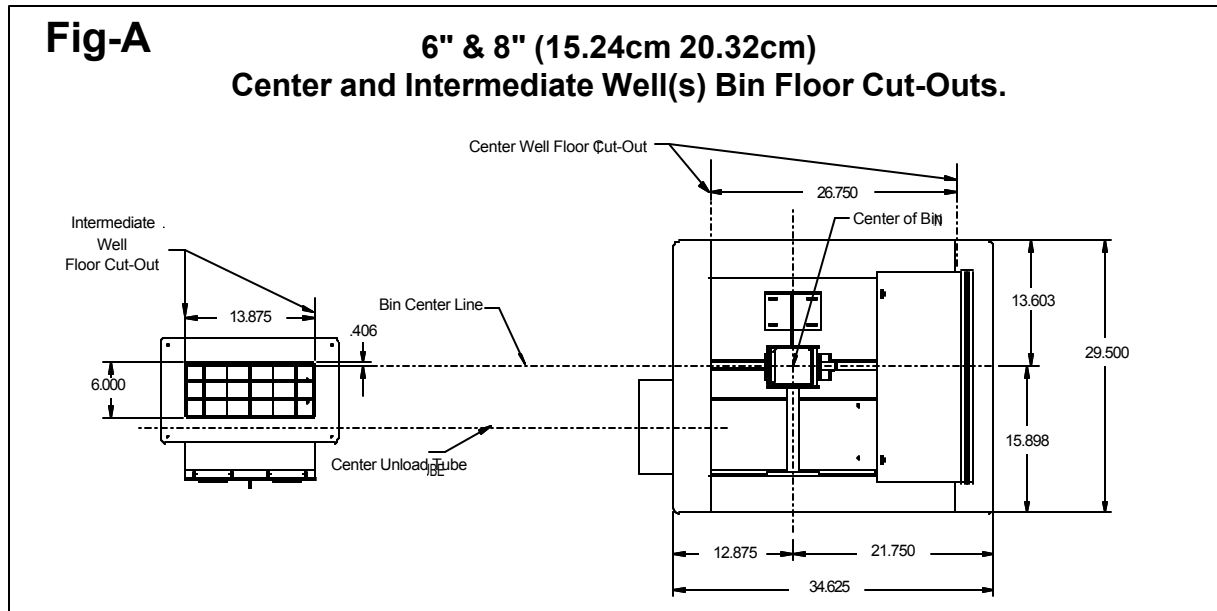
- A. The User/Operator must be competent and experienced to operate auger equipment. Anyone who works with or around augers must have good common sense in order to be qualified. These people must also know and meet all other qualifications, such as:
 - 1. Any person who has not read and/or does not understand all operation and safety procedures is not qualified to operate any auger systems.
 - 2. Certain regulations apply to personnel operating power machinery. Personnel under the age of 18 years may not operate power machinery, including augers. It is your responsibility, as owner and/or supervisor, to know what these regulations are in your area or situation.
 - 3. Unqualified or incompetent persons are to remain out of the work area.
 - 4. O.S.H.A. (Occupational Safety & Health Administration) regulations state:
"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". (Federal Occupational Safety & Health Standards for Agriculture. Sub part D, Section 19287.57 (a) (6).
- B. As a requirement of OSHA, it is necessary for the employer to train the employee in the safe operating and safety procedures for this auger. We included this sign-off sheet for your convenience and personal record keeping. All unqualified persons are to stay out of the work area at all times. It is strongly recommended that another qualified person who knows the shutdown procedure is in the area in the event of an emergency. A person who has not read this manual and understands all operating and safety instructions is not qualified to operate the machine.

DATE	EMPLOYER'S SIGNATURE	EMPLOYEE'S SIGNATURE

1. Pre-Assembly Preparation (cut-outs.)

- A. Locate the center of the bin.
- B. After the center of the bin has been located, use the following diagrams to make cut-outs according to the dimensions.


 **Note the gearbox pivot shaft is not in the center of the well.**

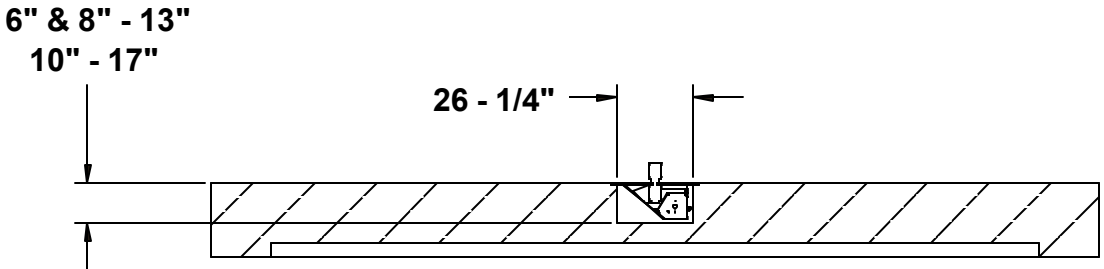
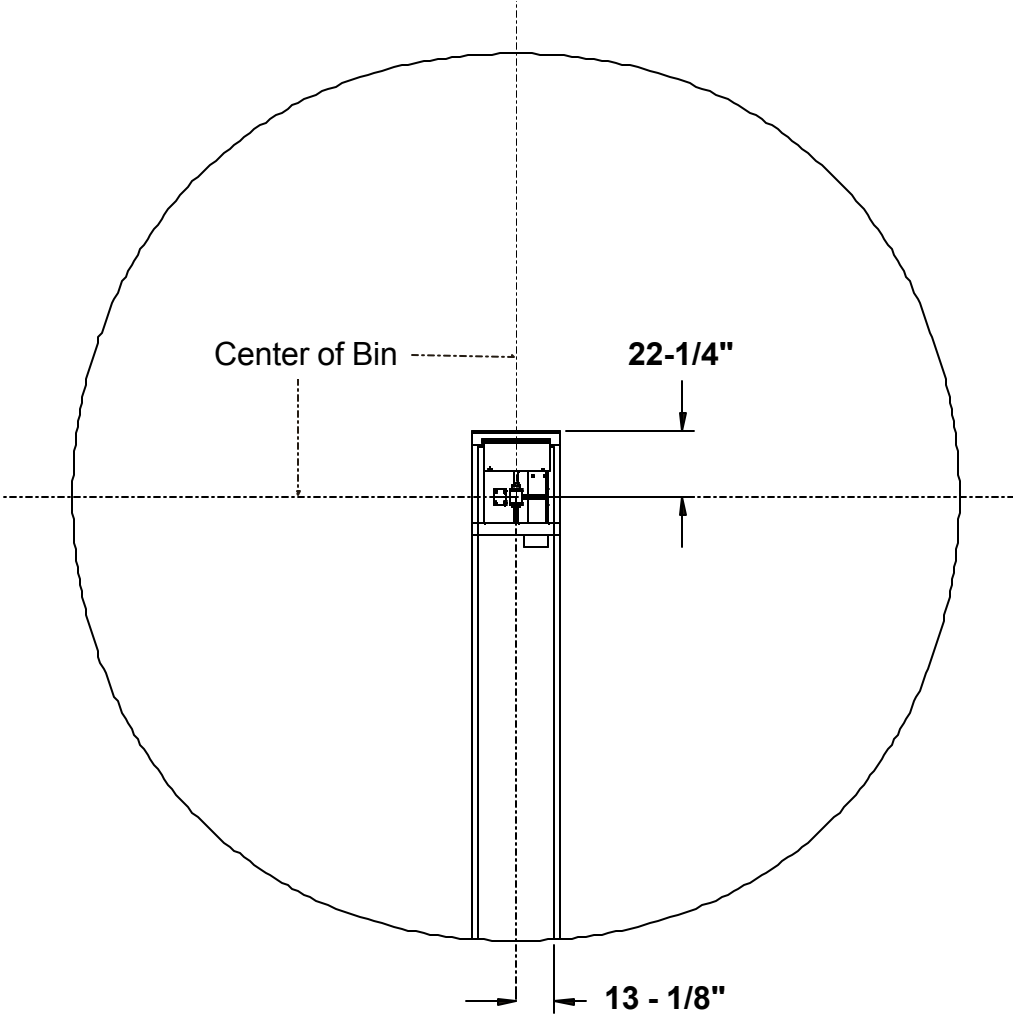


 **The top flange of the intermediate well will be attached later.**

Bin Size	Distance of space between wells	# of Intermediate Wells Required	Bin Size	Distance of space between wells	# of Intermediate Wells Required
15' (4.57 m)	3' 3/4"	1	33' (10.06 m)	2' 3/4"	3
18' (5.49 m)	4' 1/2"	1	36' (10.97 m)	3'	3
21' (6.40 m)	2' 5/8"	2	39' (11.89 m)	3' 1/4"	3
24' (7.32 m)	3'	2	42' (12.80 m)	2' 5/8"	4
27' (8.23 m)	3' 3/8"	2	48' (14.63 m)	3'	4
30' (9.14 m)	3' 3/4"	2			


Trench Layout.

 The company does not recommend setting the Direct Gear Drive Bin Sweep Auger unit in concrete. If installing a unit flush with a concrete floor, we recommend that the unit be installed in a preformed trench. Use the diagram below.



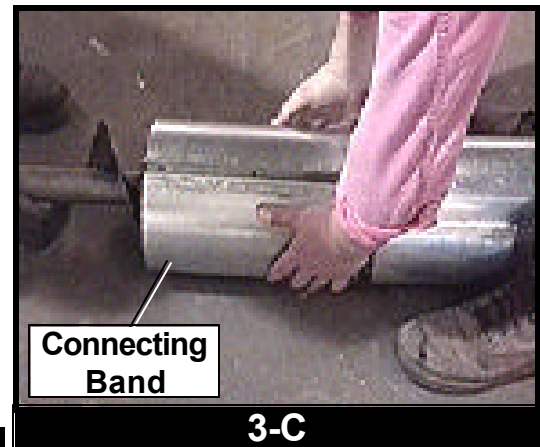
2. Install the Center Well into the Bin Floor.

- A. Place the center well into the cut-out. Make sure that the tube on the center well is facing the direction that the unload tube will be.
- B. Attach the top flange of the center well to the bin floor.

 Hardware not provided.

3. Install the Unload Tube.

- A. According to the diameter of the unload tube, cut an opening in the side of the bin wall the same diameter as the unload tube and align with the tube on the center well.
- B. Insert the unload tube with the angle ring on the outside of the bin.
- C. Place the connecting band onto the end of the unload tube closest to the center well.
- D. Position the unload tube against the center well tube.
- E. Slide the connecting band until it is equally positioned over both the unload tube and the center well tube. Position the connecting band so it will not interfere with the control rods.
- F. Secure the connecting band with three (3) 5/16" x 1-1/2" bolts and locknuts.

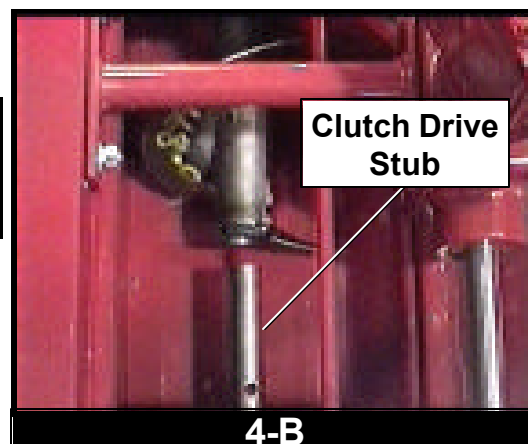
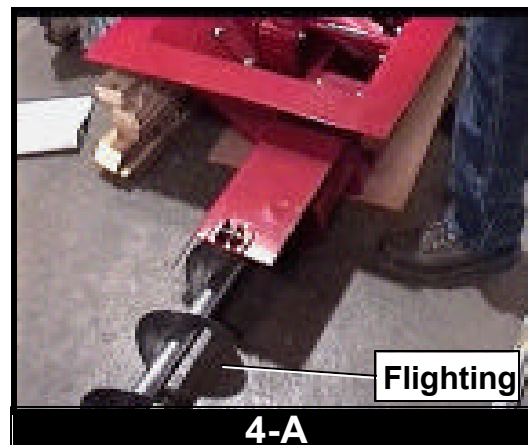


4. Install the Flighting.

- A. Open the slide gate of the center well. Insert the unload flighting into the center well.
- B. Attach the unload flighting to the clutch drive stub using bolts and locknuts.

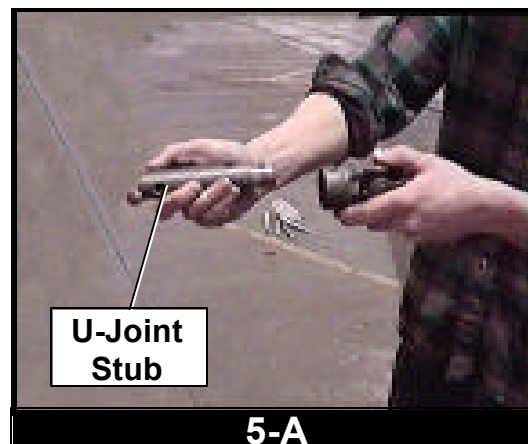
☞	6"	Two (2)	$\frac{3}{8}$ " x 2-1/4"	Bolts
	8"	Two (2)	$\frac{3}{8}$ " x 3"	Bolts
	10"	Two (2)	$\frac{3}{8}$ " x 3"	Bolts

- C. Tighten the bolts in the flighting with a wrench.

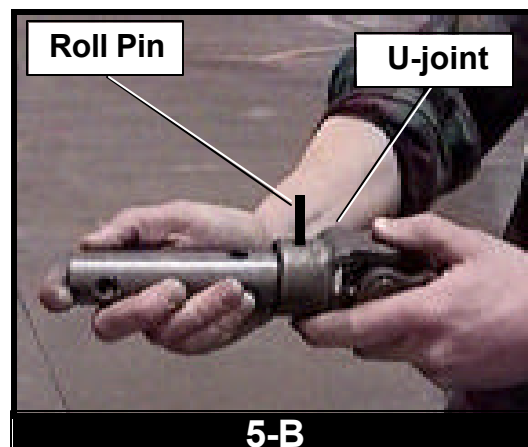


5. Assemble the U-joint.

- A. Insert the stub into the u-joint.



- B. Secure the u-joint stub using a 5/16" x 2" roll pin. Drive the pin in with a hammer.



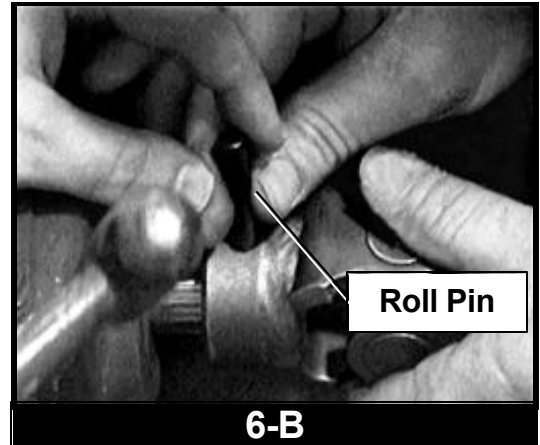
6. Attach the U-joint.

- A. Slide the u-joint onto the top gear box output shaft.
- B. Secure the u-joint using a 5/16" x 2" roll pin.



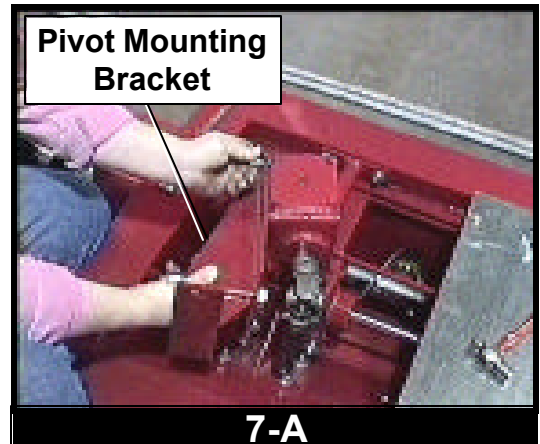
7. Install the Pivot Bracket.


- A. Attach the Pivot Bracket to the left side of the gear box using four (4) 3/8" x 1" bolts, flatwashers, lockwashers and nuts.




8. Install the Flighting.

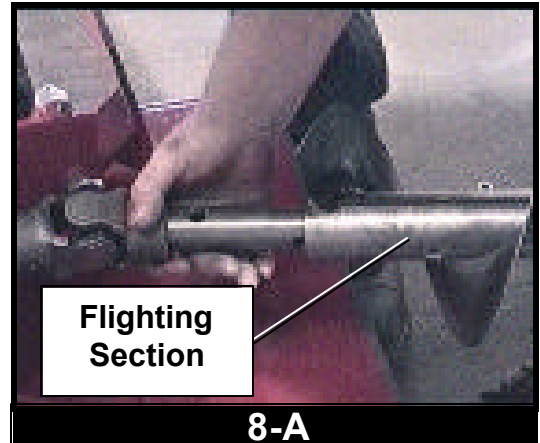
- A. Attach a flighting section to the u-joint stub located on the gearbox. Secure it with bolts, lockwashers and nuts.



	6"	Two (2) 3/8" x 1-3/4"	Bolts
	8"	Two (2) 7/16" x 2-1/4"	Bolts
	10"	Two (2) 7/16" x 2-1/4"	Bolts


 Use the chart below to determine the number of flighting and shield sections needed for the length of sweep to be used.

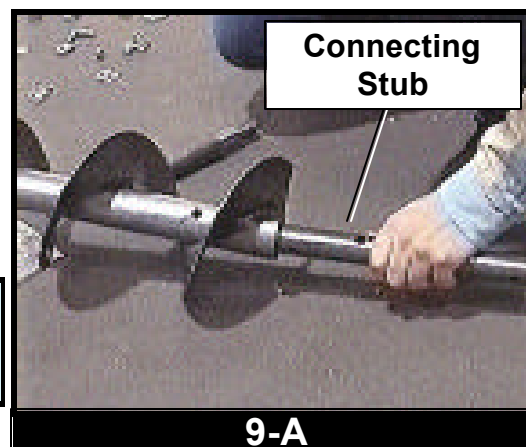
Bin Size	# of Flighting and Shields Required	Lengths
15'	1	5' 10"
18'	1	7' 4"
21'	1	8' 10"
24'	1	4' 4"
24'	1	5' 10"
27'	2	5' 10"
30'	1	5' 10"
30'	1	7' 4"
33'	1	5' 10"
33'	1	8' 10"
36'	1	7' 4"
36'	1	8' 10"
39'	2	8' 10"
42'	1	4' 4"
42'	2	7' 4"
48'	3	7' 4"



9. Install the Connecting Stub to Sweep Flighting.

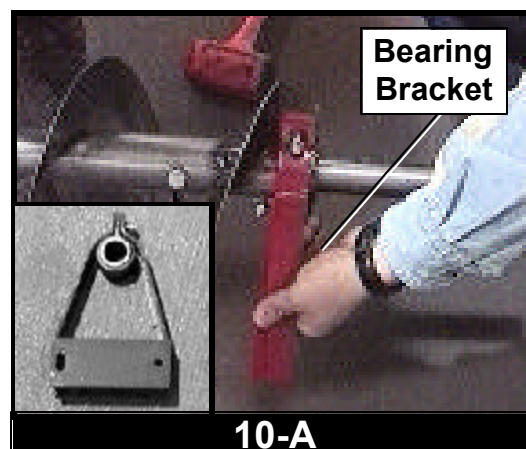
- A. Insert the connecting stub into the flighting. Secure it with bolts, lockwashers and nuts.

	6"	Two (2) 3/8" x 1-3/4"	Bolts
	8"	Two (2) 7/16" x 2-1/4"	Bolts
	10"	Two (2) 7/16" x 2-1/4"	Bolts




10. Install the Bearing Bracket.

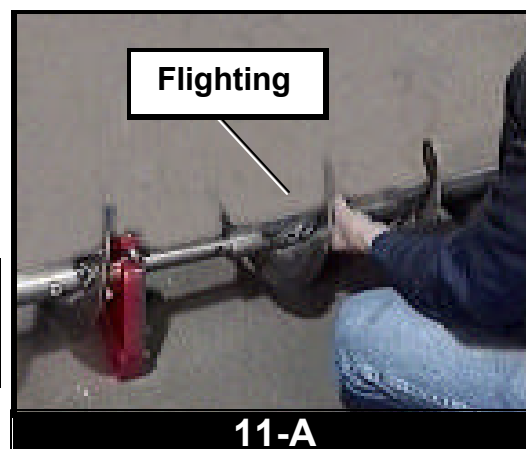
- A. Place the hanger bearing bracket onto the connecting stub.



11. Install the Sweep Flighting.

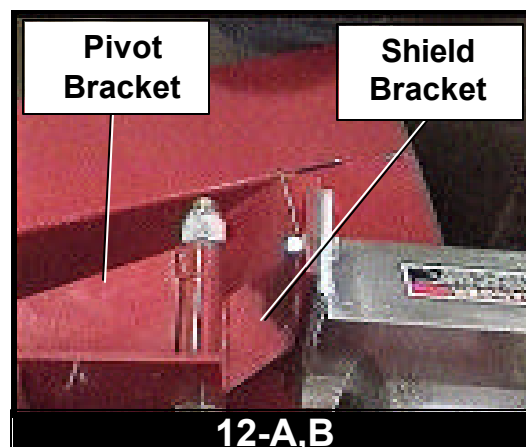
- A. Install the next section of flighting. Secure the flighting with bolts, lockwashers and nuts.

	6"	Two (2) 3/8" x 1-1/4"	Bolts
	8"	Two (2) 7/16" x 2-1/4"	Bolts
	10"	Two (2) 7/16" x 2-1/4"	Bolts



12. Install the Flighting Shield.

- A. Install the first shield to the shield mounting bracket. Secure using two (2) 3/8" x 1-1/4" bolts, flatwashers and nylon locknuts. Make sure the nut is on the side of the slotted hole for adjustment.
- B. Fasten the shield bracket to the pivot bracket on the gearbox using one (1) 3/4" x 5-1/2" bolt, flatwasher and locknut.



12. Install the Flighting Shield (cont.)

- C. Install the first and second section of flighting shield to the hanger bearing bracket (when applicable.) Use two (2) 3/8" x 3" bolts, lockwashers and nuts to secure these together.



13. Installation for 42' and 48' Bins.

- A. Repeat steps 11,12 and 13C when installing in 42' and 48' bins.

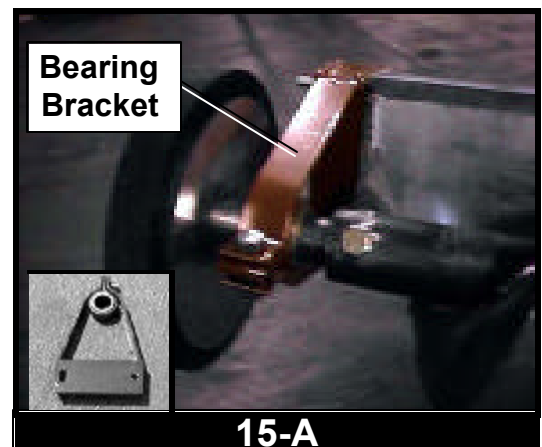
14. Assemble the Wheel Shaft.

- A. Place one (1) steel disc onto the wheel shaft. Place three (3) rubber discs onto the wheel shaft followed by one (1) steel disc. Secure the wheel shaft assembly with a 3/4" lockwasher and left handed nut. Tighten the left handed nut with a wrench.



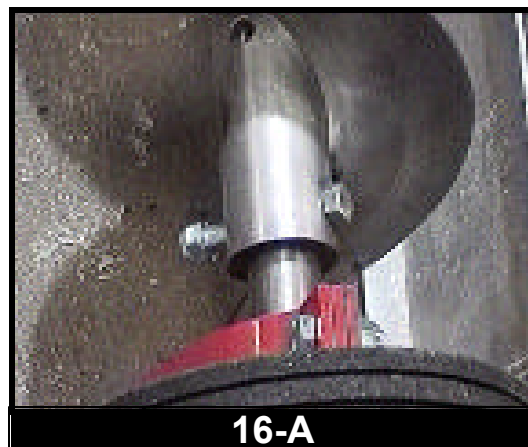
15. Install the Hanger Bearing Bracket.

- A. Place the hanger bearing bracket onto the wheel shaft.



16. Install the Wheel Shaft.

- A. Slide the wheel shaft into the flighting. Secure the wheel shaft to the flighting with one (1) $7/16"$ x $2-1/4"$ bolt and locknut. Tighten with a wrench.
- B. Attach the last shield section to the hanger bearing bracket and secure it using two (2) $3/8"$ x $3"$ bolts, flatwashers and locknuts.



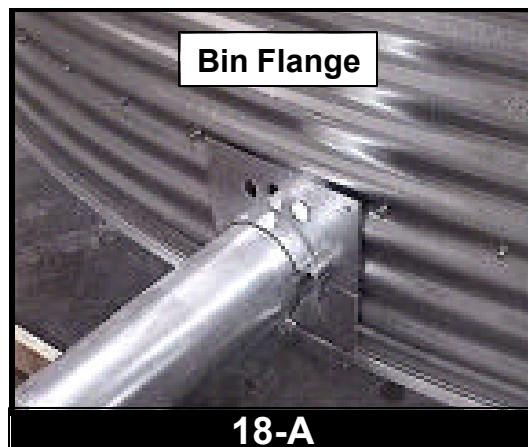
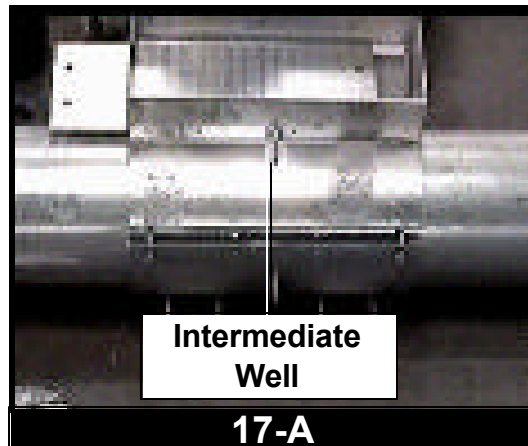
17. Install the Intermediate Wells.

- A. Place the intermediate wells onto the unload tube.
- B. Secure the intermediate wells with four (4) $5/16"$ x $1-3/4"$ bolts and nuts.



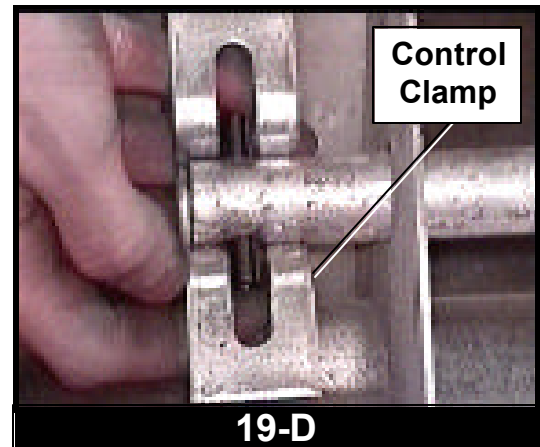
18. Install the Bin Flange.

- A. Knock out the pre-punched holes in the top bin flange assembly.
- B. Loosely fasten the top and bottom bin flange assemblies to the unload tube using two (2) $5/16"$ x $1-1/2"$ bolts and locknuts.
- C. Attach the clutch control rod flange to the bin flange using two (2) $5/16"$ x $1"$ carriage bolts and locknuts.
- D. Slide the bin flange against the bin wall and mark the hole locations to be cut.
- E. Cut the holes at the proper locations.



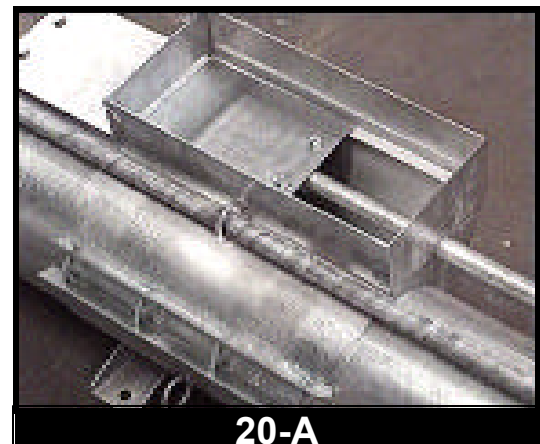
19. Install the Intermediate Well Control Rods.

- A. Measure the distance from the bin wall to the first set of holes in the control gate of the first intermediate well and add 3".
- B. Cut the shortest pipe to the above dimension. Drill one (1) 5/16" hole 5/8" from each end.
- C. Slide the control rod through the bin flange and bin wall and attach it to the first control gate.
- D. Insert one (1) 1" roll pin through the control rod and secure the control rod clamp to the control gate using two (2) 5/16" x 1" bolts and locknuts.
- E. Slide all the control gates halfway open.
- F. Measure the distance between the second set of holes in the previous control gate to the first set of holes in the next control gate and add 1-1/4".
- G. Repeat step (20-F) for the remaining control gates.
- H. Cut the control rods to the above dimensions. Drill one(1) 5/16" hole 5/8" from each end.
- I. Repeat step (20-D) for the remaining control gates.
- J. Cut a control rod approximately 14" and attach it to the second set of holes in the last intermediate well.



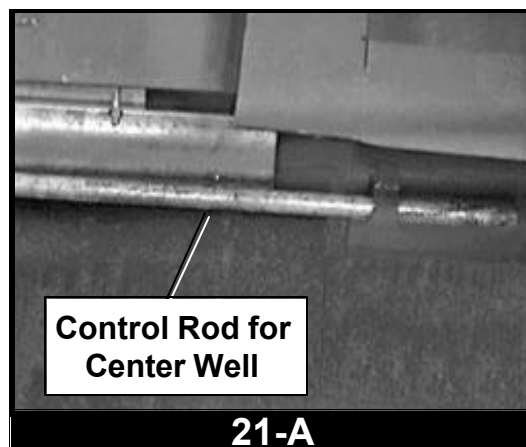
20. Install the Center Well Control Rod.

- A. Slide the shorter of the two remaining control rods through the bin flange, bin wall and the support rings welded to the top side of the intermediate wells.
- B. Secure the control rod to the center well gate using one (1) 5/16" x 2" bolt, flatwasher and locknut.



21. Install the Clutch Control Rod.

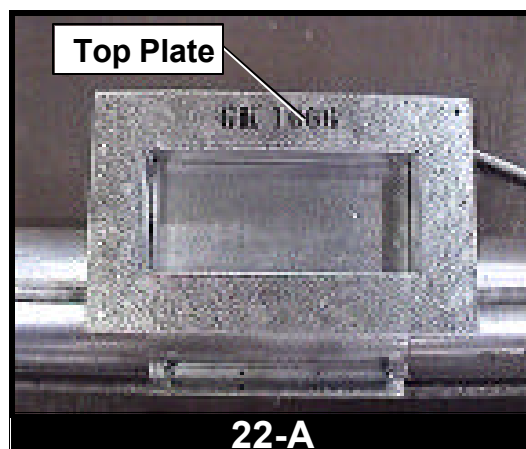
- A. Slide the remaining control rod through the bin flange, bin wall, the support rings that are welded to the bottom side of the intermediate wells and the support tubes welded to the center well.
- B. Fasten the control rod to the clutch control tube using one (1) 5/16" x 2" bolt, flatwasher and locknut.



22. Install the Intermediate Well Top Plate.

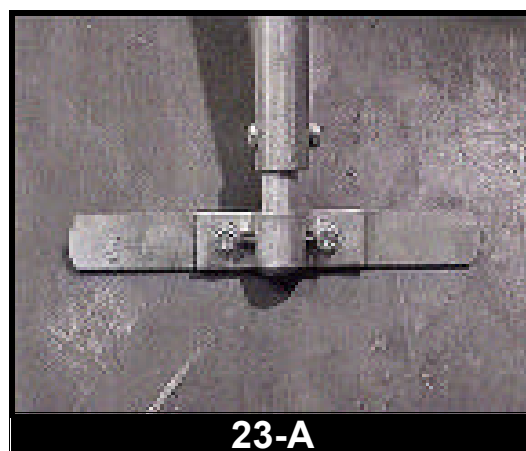
- A. Insert the intermediate well top plate into the well.

 Hardware not provided.



23. Install the Control Rod Handles.

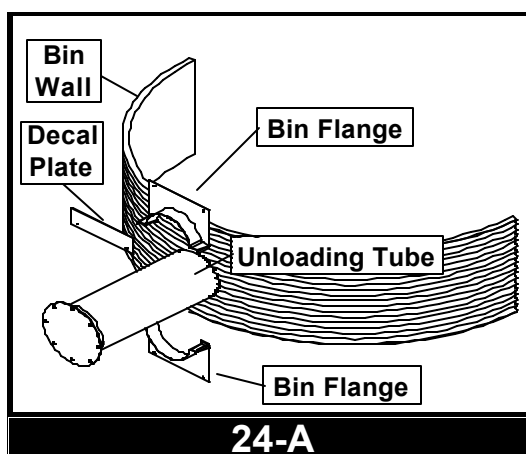
- A. Insert one (1) 5/16" x 1" roll pin through the control rod and secure the control rod clamp to the control rod handle using two (2) 5/16" x 1" bolts and locknuts.
- B. Repeat step (A) for the remaining two(2) control rods.
- C. Place (1) 3/8" x 1" bolt into the clutch control rod flange to lock the control rod in place.



24. Install the Decal Plate.

- A. Place the decal plate onto the bin flange. (Hardware is not provided)

 Hardware not provided.



1. Perform Pre-start Checks.



Failure to perform any or all of these pre-start checks may cause damage to the equipment and/or cause **SERIOUS INJURY** or **DEATH** to those in the work area.

Failure to perform any or all of these pre-start checks may also be a misuse of the equipment. Any misuse of the equipment may void the warranty.

- A. Make sure ALL belts are tensioned properly.
- B. Make sure ALL shields are in place and that the belt(s) and pulley(s) are able to move freely.



ALWAYS keep ALL guards and shields in place, until all the power is disconnected and locked out.

- C. Inspect the drive unit for any problems or potential problems.
- D. Be aware of any emergency shutdown procedures. Two (2) people must always be in a position where the operation of the equipment can be monitored.
- E. Before starting the auger for the first time, make sure that all parts are assembled correctly according to the instructions in this manual.



Make certain **ONLY** trained operators are in the work area before operating or moving the machine. Two (2) people must always be in a position where the operation of the equipment can be monitored.

2. Start the Auger.

- A. Start the auger.



DO NOT start or stop the auger while it is under load. Doing so may cause the auger to “jam.”

- B. Open center well slide gate.
- C. Run the auger through a “break-in” period, if it is being used for the first time or for the first time of the season.
- D. Polish the flighting by running the auger at partial capacity until it is smooth, before attempting full capacity.
- E. Once grain stops running out through center well, open intermediate well slide gate(s).
- F. Once grain stops running out of intermediate well slide gate(s), shut down auger.
- G. Engage direct gear drive sweep by pulling clutch control rod and locking it by tightening the 3/8” bolt on the clutch control flange.
- H. Restart auger.



Center well slide gate must be fully open during sweep operation.



Failures may occur if the auger is run full before it has been “polished” during the “break-in” period.




NEVER operate the auger empty. Operating augers empty for any length of time will cause excessive wear.
NEVER operator the auger at speeds higher than recommended. Auger flight speed in excess of recommended speed causes excessive wear.



Be aware of any unusual vibration or noises during the initial startup and “break-in” period. If anything unusual is detected, immediately shutdown the auger, and disconnect and lockout the power supply before servicing.

1. Operate the Auger.

 The auger capacity can fluctuate greatly under varying conditions. Moisture content, different commodities, amount of foreign matter and speeds all play a part in the performance of the auger. Twenty-five percent (25%) moisture may cut capacity by as much as 40% under some conditions.

- A. Make certain there are at least two (2) people in the work area to monitor operations at all times.

- B. Visually inspect the auger periodically during operation.



Be alert for any unusual vibrations, noises and the loosening of any fasteners. If anything unusual is detected, immediately shutdown the auger, disconnect and lockout the power source before servicing.

- C. Consideration should be given to the proper size auger for a batch drying or any intermittent type operations. When augers are stopped and restarted under full load, it may result in damage to the auger. Using a larger diameter auger and reducing its load level will be far better than subjecting a smaller diameter auger to big loads. If an auger is kept from absolute filling, it will make startup easier and will convey more efficiently.

1. Normal Shutdown.

- A. Before shutting down the unit, be sure the hoppers and augers are empty.
- B. Disconnect and lockout the power source before leaving the work area.

2. Emergency Shutdown.

- A. Know how to shutdown the auger in case of an emergency.
- B. Do not restart the auger while it is under load.



NEVER start the equipment under load. Doing so may cause damage. This type of damage is considered a misuse of the equipment. Any misuse of the equipment may void the warranty.

- C. Close the bin well control gates.
- D. Reconnect and unlock the power source.
- E. Clear the auger gradually, until there is no grain and there are no obstructions.

3. Storage Preparation.

- A. Close all wells to the discharge auger.
- B. Position the direct gear drive sweep directly over the intermediate wells.



Make sure that the clutch control rods are disengaged.

- C. Be sure the unload tube is empty.
- D. Shutdown the auger.
- E. Make sure all fasteners are tight.



DO NOT enter the grain bin unless all power driven equipment has been shutdown.

1. Maintain the Auger.



Properly maintaining this equipment will help to ensure it continues to work properly. Failure to properly maintain this equipment may result in damage to the equipment or may cause **SERIOUS INJURY** or **DEATH** to the operator.

Failure to properly maintain this equipment may also be a misuse of the equipment. Any misuse of the equipment may void the warranty.

- A. The u-joint must be lubricated with SAE multipurpose grease every 10 operational hours, or after each use.

- B. When it is time to re-lubricate the gear boxes, do so as follows:
 - Upper:** Fill about half-full, or add approximately 14 fl. oz.
 - Lower:** Fill about half-full, or add approximately 14 fl. oz.

- C. Use caution when repairing or replacing equipment parts.

- D. Make sure ALL decals are legible and tightly attached to the auger. If necessary, replace them **FREE OF CHARGE** by contacting the dealer, warehouse or the manufacturer.

- E. Mount controls for any electric motors at a safe distance from the machine and in a location accessible in case of an emergency.

- F. Make sure ALL electrical wiring is not damaged, and that it meets proper wiring codes.

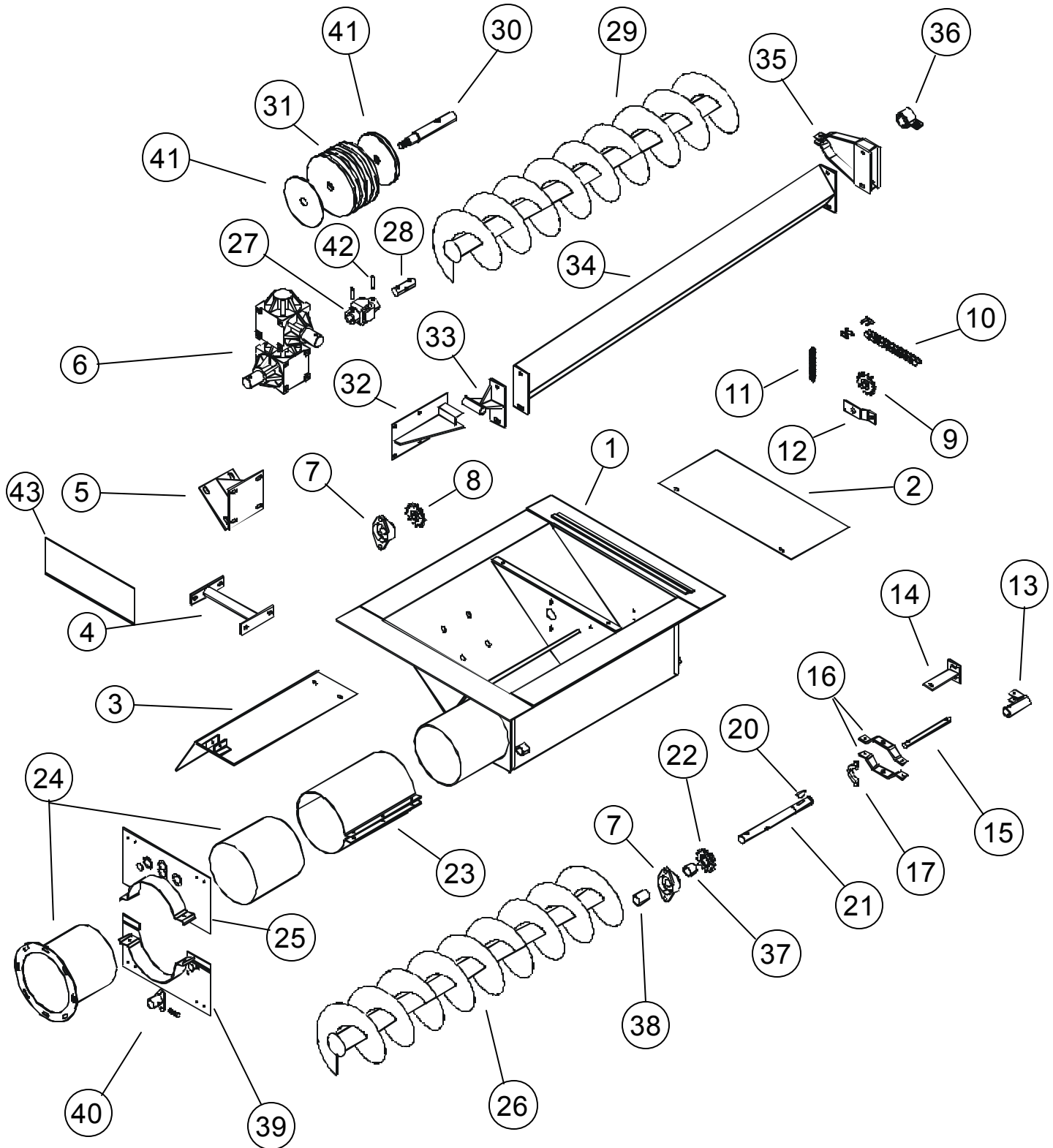
- G. Make sure ALL components are in good working condition before use.

- H. Make sure all components are in good working condition before use.

<i>Problem</i>	<i>Possible Cause</i>	<i>Solution</i>
1. The auger is vibrating.	A. The drive belt may be too tight, binding the head stub and flight. Damage can occur to the auger flighting, causing noise. Damage usually is caused from foreign material being run through the auger.	A1. Adjust the drive belt to the proper tightness. A2. It may be necessary to remove the flighting for inspection.
2. Capacity is too low.	A. There may not be enough grain reaching the auger.	A1. Make sure the intake has not bridged over, restricting flow. The flighting at the intake should be covered with grain for maximum capacity.
	B. The auger is moving too slowly.	B1. Check the auger speed. Low capacity will result from speeds slower than recommended.
3. The auger plugs.	A. The auger may be "jamming" because too much grain is reaching the auger.	A1. Decrease the amount of grain the auger is gathering.
	B. The motor may be too small or wired improperly.	B1. If the motor is a newer light weight aluminum type, the next larger size may be desirable.
	C. The grain may be wet.	C1. If wet grain or other hard-to-move material is being augered, use a larger size motor than recommended for normal use.
	D. The auger may be jammed with foreign material.	D1. Remove any foreign material in the auger.
	E. The discharge end may be plugged.	E1. Unplug any plugs at the discharge end of the auger.

<i>Problem</i>	<i>Possible Cause</i>	<i>Solution</i>
4. The sweep flight and shield are no longer moving.	A. Too much drag.	A1. Check the clearance between the shield and the bin floor. Make sure there is room for the auger to move. Adjusting the shield may be necessary.
	B. Worn sweep wheel.	B1. The sweep wheel wears down over time. Replace the wheel.
	C. Unconditioned grain.	C1. Moisture and/or insects can cause the grain to harden or “cake-up”. Disconnect and lockout the power to the auger before going into the bin to correct this problem or to address any other problem.

6" Parts Breakdown for Direct Gear Drive Bin Sweep



6" Parts List for Direct Gear Drive Bin Sweep

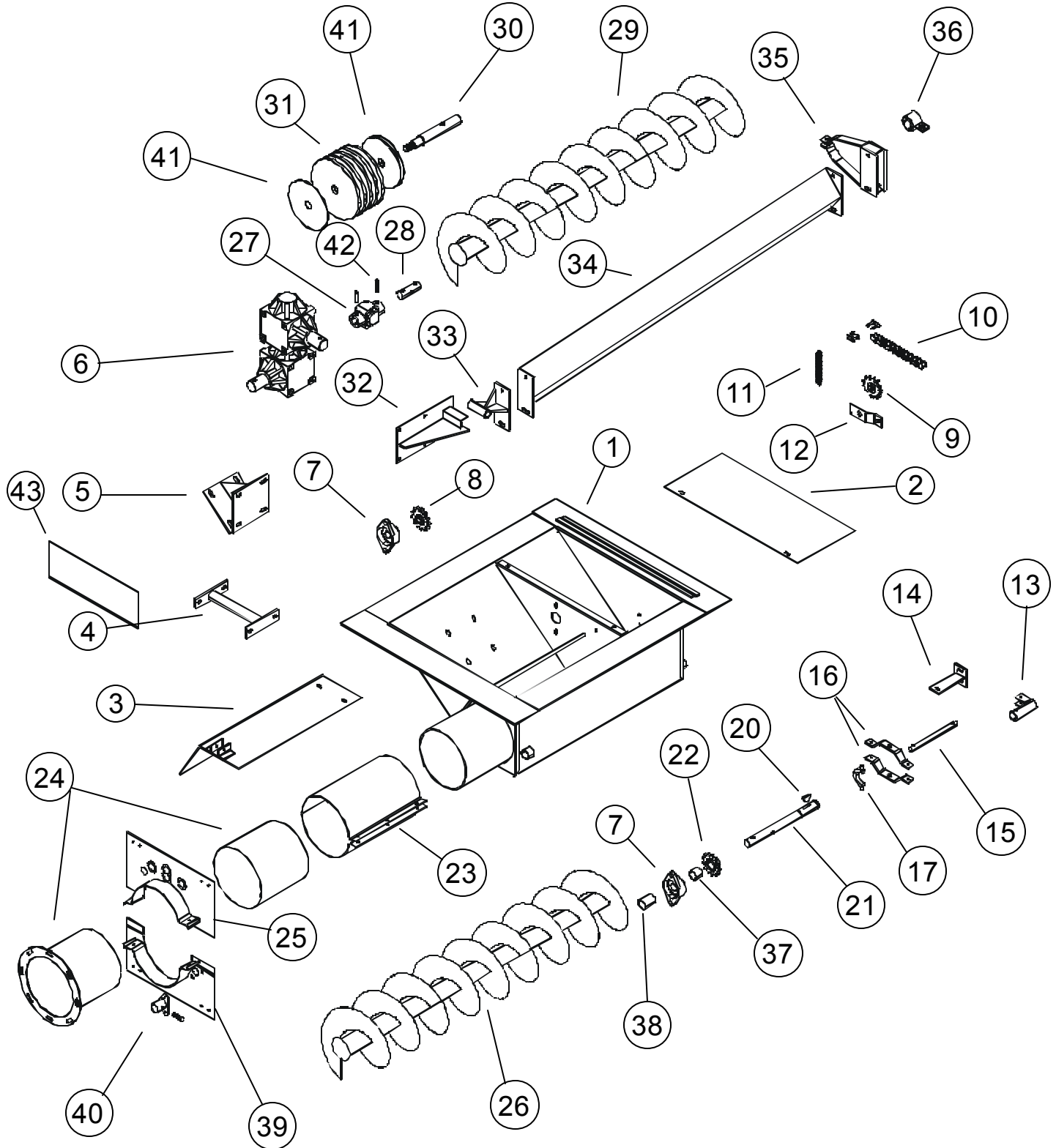
Ref. #	Part #	Description	Qty
1	GK1634	Power Sweep Bin Well Weldment	1
2	GK1691	Drive Cover	1
3	GK1687	Slide Gate	1
4	GK1688	Mounting Bracket for Gearbox	1
5	GK1689	Off-set Mounting Bracket for Gearbox	1
6	GK1690	Double Gearbox Assembly	1
7	GK1049	2-hole Flange Bearing w/ Lock Collar, 1" (2.54 cm) bore	2
8	GK1110	22-tooth Drive Sprocket, #50 x 1" (2.54 cm) bore, w/ Keyway	1
9	GK1701	13-tooth Idler Sprocket, #50 x 5/8" bore, w/ Keyway	1
10	GK1705	#50 Roller Chain, 43 pitch	1
11	GK1704	Idler Sprocket Spring, 5" (12.70 cm) Long	1
12	GK1702	Idler Sprocket Pivot Bracket	1
13	GK1694	Clutch Control Arm	1
14	GK1693	Clutch Control Pivot Bracket	1
15	GK1695	Clutch Control Rod	1
16	GK1697	Clutch Yoke Bracket	2
17	GK1698	Clutch Yoke	1
N/S	GK1696	Clutch (Sliding Jaw)	1
N/S	S-8902	Retainer Ring, outside	1
20	S-8901	Woodruff Key, #21, 1/4" x 1-1/4" Long	1
21	GK1703	Clutch Drive Stub	1
22	GK1699	Clutch Sprocket, 13-tooth, #50 x 1" (2.54 cm) bore, w/ Bushing	1
23	GK1624	Connecting Band 6" x 12" Long	1
24	GK1204	15' Unload Tube with Cap (6" x 8' 0")	1
24	GK1207	18' Unload Tube with Cap (6" x 10' 0")	1
24	GK1208	21' Unload Tube with Cap (6" x 11' 0")	1
24	GK1209	24' Unload Tube with Cap (6" x 12' 6")	1
24	GK1210	27' Unload Tube with Cap (6" x 14' 0")	1
24	GK1211	30' Unload Tube with Cap (6" x 15' 6")	1
24	GK1212	33' Unload Tube with Cap (6" x 17' 6")	1
24	GK1213	36' Unload Tube with Cap (6" x 18' 6")	1
25	GK1051	Top Plate Weldment	1
26	GK1630	15' Unload Flighting 5" x 10' 3/4" O.D.	1
26	GK1639	18' Unload Flighting 5" x 12' 3/4" O.D.	1
26	GK1644	21' Unload Flighting 5" x 13' 3/4" O.D.	1
26	GK1653	24' Unload Flighting 5" x 14' 6-3/4" O.D.	1
26	GK1655	27' Unload Flighting 5" x 16' 3/4" O.D.	1
26	GK1657	30' Unload Flighting 5" x 17' 6-3/4" O.D.	1
26	GK1648	33' Unload Flighting 5" x 19' 6-3/4" O.D.	1
26	GK1660	36' Unload Flighting 5" x 20' 6-3/4" O.D.	1
27	GK1266	Universal Joint, (1" to 1") 5" Long	1
28	GK1267	Connecting Stub	1

6" Parts List for Direct Gear Drive Bin Sweep (cont)

Ref. #	Part #	Description	
29	GK1651	Left Hand Sweep Flighting 5" x 4' 4" O.D.	Refer to Table Below
29	GK1628	Left Hand Sweep Flighting 5" x 5' 10" O.D.	
29	GK1637	Left Hand Sweep Flighting 5" x 7' 4" O.D.	
29	GK1642	Left Hand Sweep Flighting 5" x 8' 10" O.D.	
N/S	GK1650	Sweep Flight Connecting Stub, 1" x 11-1/2"	When needed See Below
30	GK1669	Sweep Tail Stub, 1-1/4" x 8-3/8"	1
31	GK1067	6" Rubber Disc	3
32	GK1625	Pivot Bracket	1
33	GK1621	Shield Bracket	1
34	GK1652	Flighting Shield 6" x 4' 4"	Refer to Table Below
34	GK1629	Flighting Shield 6" x 5' 10"	
34	GK1638	Flighting Shield 6" x 7' 4"	
34	GK1643	Flighting Shield 6" x 8' 10"	
35	GK1626	Bearing Bracket Assembly	Refer to Table
N/S	GK1623	Stand Brg. Assembly 6" PS Shield	
N/S	GK1681	Spacer Bushing	
36	GK1627	Bearing Holder Assembly	1
38	GK1700	Bearing Spacer	1
39	GK1673	Lower Bin Flange	1
40	GK1619	Direct Gear Drive Bin Sweep	1
41	GK1076	Steel Wheel Disc	2
42	S-4377	Roll Pin, 5/16" x 2" (5.08 cm) Long	2
43	GK1620	Bin Flange Decal Plate with Decals	1

Bin Size	# of Flighting and Shields Required	Lengths	GK 1650 Qty.	GK 1623 Qty.
15'	1	5' 10"	0	1
18'	1	7' 4"	0	1
21'	1	8' 10"	0	1
24'	1	4' 4"	1	2
	1	5' 10"		
27'	2	5' 10"	1	2
30'	1	5' 10"	1	2
	1	7' 4"		
33'	1	5' 10"	1	2
	1	8' 10"		
36'	1	7' 4"	1	2
	1	8' 10"		

8" Parts Breakdown for Direct Gear Drive Bin Sweep



8" Parts List for Direct Gear Drive Bin Sweep

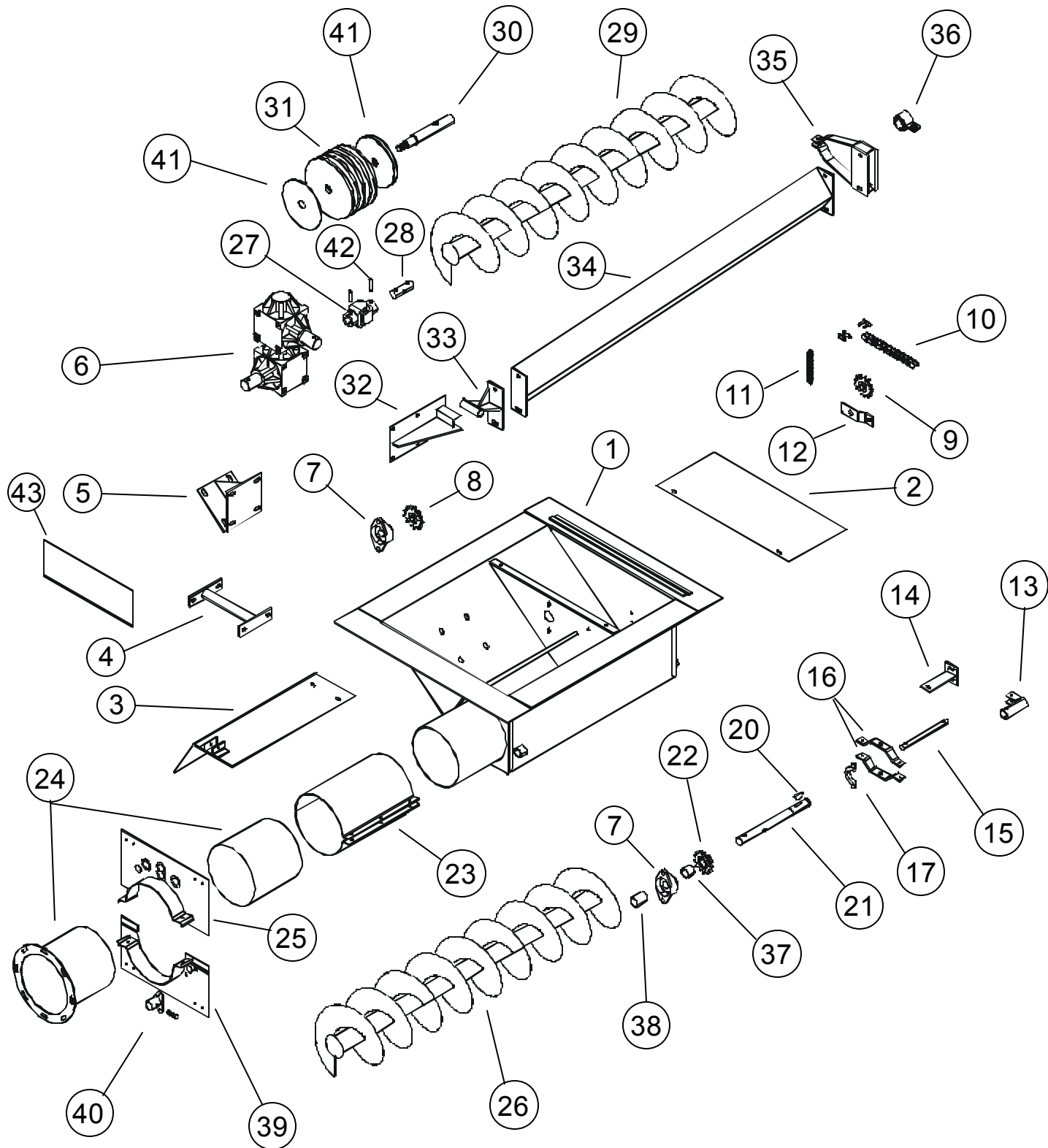
Ref. #	Part #	Description	Qty
1	GK1692	Power Sweep Bin Well Weldment	1
2	GK1691	Drive Cover	1
3	GK1687	Slide Gate	1
4	GK1688	Mounting Bracket	1
5	GK1689	Off-set Mounting Bracket for Gearbox	1
6	GK1690	Double Gearbox Assembly	1
7	GK1049	1" 2Hole Bearing w/Lock Collar	2
8	GK1110	Sprocket 22 Tooth 1" Bore	1
9	GK1701	13 Tooth Idler Sprocket-#50 x 5/8" Bore	1
10	GK1705	#50 Roller Chain, 43 pitch	1
11	GK1704	Idler Sprocket Spring, 5" Long	1
12	GK1702	Idler Sprocket Pivot Bracket	1
13	GK1694	Clutch Control Arm	1
14	GK1693	Clutch Control Pivot Bracket	1
15	GK1695	Clutch Control Rod, 5/8" x 7-1/2" Long	1
16	GK1697	Clutch Yoke Bracket	2
17	GK1698	Clutch Yoke	1
18	GK1696	Clutch Sliding Jaw	1
19	S-8902	Retainer Ring, outside	1
20	S-8901	Woodruff Key, #21, 1/4" x 1-1/4" Long	1
21	GK1703	Clutch Drive Stub	1
22	GK1699	13 Tooth Clutch Sprocket, #50 x 1" Bore	1
23	GK1677	8" x 12" Connector Band	1
24	GK1214	15' Unload Tube with Cap (8" x 8' 0")	1
24	GK1217	18' Unload Tube with Cap (8" x 10' 0")	1
24	GK1218	21' Unload Tube with Cap (8" x 11' 0")	1
24	GK1219	24' Unload Tube with Cap (8" x 12' 6")	1
24	GK1220	27' Unload Tube with Cap (8" x 14' 0")	1
24	GK1221	30' Unload Tube with Cap (8" x 15' 6")	1
24	GK1411	33' Unload Tube with Cap (8" x 21' 0")	1
24	GK1223	36' Unload Tube with Cap (8" x 18' 6")	1
24	GK1410	39' Unload Tube with Cap (8" x 20' 0")	1
24	GK1782	42' Unload Tube with Cap (8" x 22' 0")	1
24	GK1413	45' Unload Tube with Cap (8" x 25' 0")	1
25	GK1672	Flange Bin 8" Upper Weldment	1
26	GK1683	15' Unload Flighting 7" x 10' 3/4" O.D.	1
26	GK1717	18' Unload Flighting 7" x 12' 3/4" O.D.	1
26	GK1727	21' Unload Flighting 7" x 13' 3/4" O.D.	1
26	GK1741	24' Unload Flighting 7" x 14' 6-3/4" O.D.	1
26	GK1747	27' Unload Flighting 7" x 16' 3/4" O.D.	1
26	GK1753	30' Unload Flighting 7" x 12' 6" O.D.	1
26	GK1758	33' Unload Flighting 7" x 19' 6-3/4" O.D.	1
26	GK1765	36' Unload Flighting 7" x 20' 6-3/4" O.D.	1
26	GK1773	39' Unload Flighting 7" x 22' 3/4" O.D.	1
26	GK1783	42' Unload Flighting 7" x 24' 3/4" O.D.	1
26	GK1788	45' Unload Flighting 7" x 27' 3/4" O.D.	1
27	GK1266	U-Joint (1" to 1") 5" Long	1
28	GK1678	Connecting Stub	1

8" Parts List for Direct Gear Drive Bin Sweep (cont)

Ref. #	Part #	Description	Qty
29	GK1738	Left Hand Sweep Flight 7" x 4' 4" O.D.	Refer to Table Below When Needed See Below
29	GK1668	Left Hand Sweep Flighting 7" x 5' 10" O.D.	
29	GK1714	Left Hand Sweep Flighting 7" x 7' 4" O.D.	
29	GK1724	Left Hand Sweep Flighting 7" x 8' 10" O.D.	
N/S	GK1736	Stub Connector 1-1/4" Dia. X 11-1/2"	
30	GK1669	Sweep Tail Stub, 1-1/4" x 8-3/8" (Turned to 1")	1
31	GK1671	8" Rubber Disc	3
32	GK1625	Pivot Bracket	1
33	GK1674	Shield Bracket	1
34	GK1739	Flighting Shield 4' 4"	Refer to Table Below
34	GK1682	Flighting Shield 5' 10"	
34	GK1715	Flight Shield 7' 4"	
34	GK1725	Flight Shield 8' 10"	
35	GK1679	Bearing Bracket Assembly	Refer to Table Below
N/S	GK1675	Stand Brg. Assembly 8" 10" Shield	
N/S	GK1681	Spacer Bushing	
36	GK1680	Bearing Holder Assembly	1
38	GK1700	Bearing Spacer	1
39	GK1673	Flange Bin 8" Lower Weldment	1
40	GK1619	Direct Gear Drive Sweep	1
41	GK1670	Disc Sweep Wheel Outside 6-5/8"	2
42	S-4377	Roll Pin, 5/16" x 2" (5.08 cm) Long	2
43	GK1620	Decal Plate	1

Bin Size	# of Flighting and Shields Required	Lengths	GK 1736 Qty	GK 1679 Qty
15'	1	5' 10"	0	1
18'	1	7' 4"	0	1
21'	1	8' 10"	0	1
24'	1	4' 4"	1	2
	1	5' 10"		
27'	2	5' 10"	1	2
	1	5' 10"	1	2
30'	1	7' 4"		
	1	5' 10"	1	2
33'	1	8' 10"	1	2
	1	8' 10"		
36'	1	7' 4"	1	2
	1	8' 10"		
39"	2	8'10"	1	2
	1	4'4"	2	3
42"	2	7'4"		
	3	7'4"	2	3

10" Parts Breakdown for Direct Gear Drive Bin Sweep



10" Parts List for Direct Gear Drive Bin Sweep (cont)

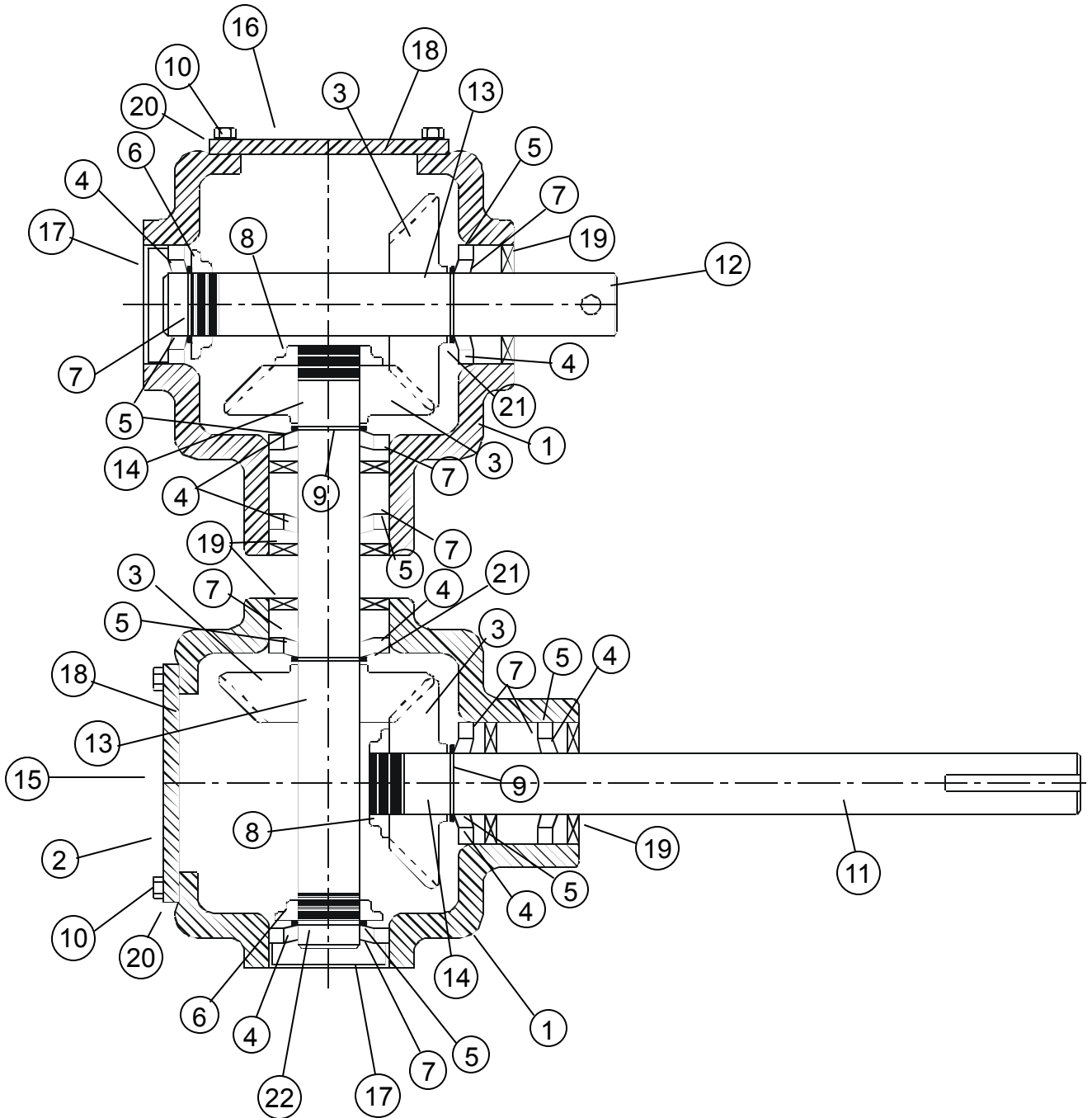
Ref. #	Part #	Description	Qty.
1	GK1922	Power Sweep Bin Well Weldment - 10"	1
2	GK1691	Drive Cover	1
3	GK1687	Slide Gate	1
4	GK1920	Mounting Bracket	1
5	GK1921	Off-set Mounting Bracket	1
6	GK1690	Double Gearbox Assembly	1
7	GK1049	1" 2 Hole Bearing w/Lock Collar	2
8	GK1110	Sprocket 22 Tooth 1" Bore	1
9	GK1701	13-tooth Idler Sprocket-#50 x 5/8" Bore	1
10	GK1924	#50 Roller Chain, 48 Pitch	1
11	GK1704	Idler Sprocket Spring-5" Long	1
12	GK1702	Idler Sprocket Pivot Bracket	1
13	GK1923	Clutch Control Arm	1
14	GK1693	Clutch Control Pivot Bracket	1
15	GK1695	Clutch Control Rod	1
16	GK1697	Clutch Yoke Bracket	2
17	GK1698	Clutch Yoke	1
N/S	GK1696	Clutch Sliding Jaw	1
N/S	S-8902	Retainer Ring, outside	1
20	S-8901	Woodruff Key, #21, 1/4" x 1-1/4" Long	1
21	GK1703	Clutch Drive Stub	1
22	GK1699	13 Tooth Clutch Sprocket, #50 x 1" Bore	1
23	GK1796	10" x 12" Connecting Band	1
24	GK1422	15' Unloading Tube with Cap 10" x 15'	1
24	GK1424	18' Unloading Tube with Cap 10" x 18'	1
24	GK1425	21' Unloading Tube with Cap 10" x 21'	1
24	GK1426	24' Unloading Tube with Cap 10" x 24'	1
24	GK1427	27' Unloading Tube with Cap 10" x 27'	1
24	GK1428	30' Unloading Tube with Cap 10" x 30'	1
24	GK1430	33' Unloading Tube with Cap 10" x 33'	1
24	GK1431	36' Unloading Tube with Cap 10" x 36'	1
25	GK1189	Upper Bin Flange 10"	1
26	GK1918	15' Unload Flighting 9" x 14' 6-3/4" O.D.	1
26	GK1926	18' Unload Flighting 9" x 16' 3/4" O.D.	1
26	GK1929	21' Unload Flighting 9" x 17' 6-3/4" O.D.	1
26	GK1931	24' Unload Flighting 9" x 19' 6-3/4" O.D.	1
26	GK1933	27' Unload Flighting 9" x 20' 6-3/4" O.D.	1
26	GK1935	30' Unload Flighting 9" x 22' 3/4" O.D.	1
26	GK1938	33' Unload Flighting 9" x 24' 3/4" O.D.	1
26	GK1940	36' Unload Flighting 9" x 27' 3/4" O.D.	1
27	GK1266	U-Joint (1" to 1") 5" Long	1
28	GK1678	Connecting Stub	1

10" Parts List for Direct Gear Drive Bin Sweep (cont)

Ref. #	Part #	Description	Qty.
29	GK1738	Left Hand Sweep Flighting 9" x 4' 4" O.D.	Refer to Table Below
29	GK1668	Left Hand Sweep Flighting 9" x 5' 10" O.D.	
29	GK1714	Left Hand Sweep Flighting 9" x 7' 4" O.D.	
29	GK1724	Left Hand Sweep Flighting 9" x 8' 10" O.D.	
N/S	GK1736	Sweep Flight Connecting Stub	When Needed See Below
30	GK1669	Sweep Tail Stub 8"-10" PS 9" Long	1
31	GK1671	Rubber Disc 10" O.D.	3
32	GK1625	Pivot Bracket	1
33	GK1674	Shield Bracket	1
34	GK1739	Sweep Flighting Shield 10" x 4' 4"	1
34	GK1682	Sweep Flighting Shield 10" x 5' 10"	1
34	GK1715	Sweep Flighting Shield 10" x 7' 4"	1
34	GK1725	Sweep Flighting Shield 10" x 8' 10"	1
35	GK1679	Bearing Bracket Assembly	Refer to Table Below
N/S	GK1675	Stand Brg Assembly 8"-10" Shield	
N/S	GK1681	Spacer Bushing	
36	GK1680	Bearing Holder Assembly	1
38	GK1700	Bearing Spacer	1
39	GK1190	Lower Bin Flange-10"	1
40	GK1619	Direct Gear Drive Bin Sweep	1
41	GK1670	Steel Wheel Disc	2
42	S-4377	Roll Pin, 5/16" x 2" (5.08 cm) long	2
43	GK1620	Decal Plate	1

Bin Size	# of Flighting and Shields Required	Lengths	GK1736 Qty for 10"	GK1623 Qty for 10"
15'	1	5' 10"	0	0
18'	1	7' 4"	0	0
21'	1	8' 10"	0	0
24'	1	4' 4"	1	2
	1	5' 10"		
27'	2	5' 10"	1	2
	1	5' 10"		
30'	1	5' 10"	1	2
	1	7' 4"		
33'	1	5' 10"	1	2
	1	8' 10"		
36'	1	7' 4"	1	2
	1	8' 10"		

Upper and Lower Gear Box



Upper and Lower Gear Box Parts List

Ref. #	Description
1	Housing
2	Cover w/ Hole
3	Forged Bevel Gear Tooth
4	Bearing Cone
5	Bearing Cup
6	Stake Nut, 1-1/8" -18 Thread
7	Snap Ring
8	Stake Nut, 1" -18 Thread
9	Snap Ring
10	Bolt (5/16" x 3/4" HHCS Gr. 5)
11	Input Shaft
12	Output Shaft
13	Woodruff Key
14	Square Key, 1/4" x 7/8" long
15	Level Plug
16	Cover
17	Cap
18	Gasket
19	Seal
20	5/16" Lockwasher
21	Washer, 1-1/2" O.D. x 1" I.D. x 10 ga.
22	Vertical Shaft

THE COMPANY WARRANTS ALL PRODUCTS MANUFACTURED TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USAGE AND CONDITIONS FOR A PERIOD OF TWELVE (12) MONTHS AFTER RETAIL SALE TO THE ORIGINAL END USER OF SUCH PRODUCTS. OUR ONLY OBLIGATION IS, AND PURCHASER'S SOLE REMEDY SHALL BE TO REPAIR OR REPLACE, AT THE COMPANIE'S OPTION AND EXPENSE, PRODUCTS THAT, IN THE MANUFACTURERS SOLE JUDGEMENT, CONTAIN A MATERIAL DEFECT DUE TO MATERIALS OR WORKMANSHIP. ALL DELIVERY AND SHIPMENT CHARGES TO AND FROM THE FACTORY WILL BE PURCHASER'S RESPONSIBILITY. EXPENSES INCURRED BY OR ON BEHALF OF THE PURCHASER WITHOUT PRIOR WRITTEN AUTHORIZATION FROM AN AUTHORIZED EMPLOYEE OF THE COMPANY SHALL BE THE SOLE RESPONSIBILITY OF THE PURCHASER.

EXCEPT FOR THE ABOVE EXPRESS LIMITED WARRANTIES, THE COMPANY MAKES NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH (i) PRODUCT MANUFACTURED OR SOLD BY THE COMPANY OR (ii) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF THE COMPANY REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCT OR PRODUCTS.

IN NO EVENT SHALL THE COMPANY BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOSS OF ANTICIPATED PROFITS OR BENEFITS. PURCHASER'S SOLE AND EXCLUSIVE REMEDY SHALL BE LIMITED TO THAT STATED ABOVE, WHICH SHALL NOT EXCEED THE AMOUNT PAID FOR THE PRODUCT PURCHASED. THIS WARRANTY IS NOT TRANSFERABLE AND APPLIES ONLY TO THE ORIGINAL PURCHASER. WE SHALL HAVE NO OBLIGATION OR RESPONSIBILITY FOR ANY REPRESENTATIVE OR WARRANTIES MADE BY OR ON BEHALF OF ANY DEALER, AGENT OR DISTRIBUTOR OF THE COMPANY.

THE COMPANY ASSUMES NO RESPONSIBILITY FOR FIELD MODIFICATIONS. MODIFICATIONS TO THE PRODUCT NOT SPECIFICALLY COVERED BY THE CONTENTS OF THIS MANUAL WILL NULLIFY ANY PRODUCT WARRANTY THAT MIGHT HAVE BEEN OTHERWISE AVAILABLE. THE USE OF OUR EQUIPMENT TO HANDLE MATERIALS OTHER THAN FREE FLOWING, NON-ABRASIVE AND DRY MATERIALS, AS INTENDED, WILL RESULT IN THE VOIDING OF THIS LIMITED WARRANTY.

THE FOREGOING WARRANTY SHALL NOT COVER PRODUCTS OR PARTS WHICH HAVE BEEN DAMAGED BY NEGLIGENT USE, MISUSE, ALTERATION, OR ACCIDENT. ANY NEGLIGENT USE, MISUSE, ALTERATION, OR DAMAGE DUE TO ACCIDENT, AS DETERMINED BY A COMPANY REPRESENTATIVE, MAY VOID THE WARRANTY. THIS WARRANTY COVERS ONLY PRODUCTS MANUFACTURED BY THE COMPANY. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. WE RESERVES THE RIGHT TO MAKE DESIGN OR SPECIFICATION CHANGES AT ANY TIME, BEARING NO RESPONSIBILITY TO MAKE SIMILAR DESIGN OR SPECIFICATION CHANGES ON PREVIOUSLY SOLD MERCHANDISE.

PRIOR TO INSTALLATION, PURCHASER HAS THE RESPONSIBILITY TO RESEARCH AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES WHICH MAY APPLY TO THE LOCATION AND INSTALLATION.

THIS EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT INSTALLATION CODES AND APPLICABLE REGULATIONS WHICH SHOULD BE CAREFULLY FOLLOWED IN ALL CASES. AUTHORITIES HAVING JURISDICTION SHOULD BE CONSULTED BEFORE INSTALLATIONS ARE MADE.

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