



Assembly and Operations Manual



14" Self-Powered KLEENair Vacuum Grain Screener

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Introduction

General Information

READ THIS MANUAL carefully to learn how to properly use and install equipment. Failure to do so could result in personal injury or equipment damage.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your equipment and should be easily accessible when needed.

Receiving Merchandise and Filing Claims

INSPECT the shipment immediately upon arrival. The consignee is responsible for ensuring that all quantities are correct. Report any damage or shortages by recording a detailed description on the bill of lading to justify the claim from the transport firm. When receiving merchandise, it is important to check both the quantity of parts and their descriptions with the packing list enclosed within each package. All claims for freight damage or shortage must be made by the consignee within ten (10) days from the date of the delivery. The consignee should accept the shipment after noting the damage or loss.

Capacity

A. The capacities may differ greatly under varying conditions. The following factors play a role in the performance of the KLEENair Vacuum Grain Screener.

- | | |
|----------------------|----------------------------|
| - Speed/rpm | - Amount of foreign matter |
| - Angle of operation | - Different materials |
| - Moisture content | - Methods of feeding |

Safety

Safety Instructions

Our foremost concern is your safety and the safety of others associated with this 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.

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.

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.

Follow Safety Instructions

Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machinery in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual or need assistance, contact your dealer.

Operate Motor Properly

To avoid serious injury or death, stay away from unit and make sure everyone is clear of the equipment before starting or operating the unit.

All electrical connections should be made in accordance with the National Electric Code. Be sure equipment is properly grounded.

Do not operate electric motor equipped units until motors are properly grounded.

Disconnect power on electrical driven units before resetting motor overloads.

Do not repetitively stop and start the drive in order to free a plugged condition. Jogging the drive in this manner can damage the equipment and/or drive components.



Read and Understand
Manual



Electric Shock Hazard

Safety Continued

Operate Unload Equipment Properly

- Untrained operators subject themselves and others to **SERIOUS INJURY** or **DEATH**. **NEVER** allow untrained personnel to operate this equipment.
- **NEVER** work alone.
- Keep children and other unqualified personnel out of the working area at **ALL** times.
- Make sure **ALL** equipment is locked in position before operating.
- **NEVER** start equipment until **ALL** persons are clear of the work area.
- Keep hands and feet away from the auger intake and other moving parts.
- **NEVER** attempt to assist machinery operation or to remove trash from equipment while in operation.
- Be sure all operators are adequately rested and prepared to perform all functions of operating this equipment.
- **NEVER** allow any person intoxicated or under the influence of alcohol or drugs to operate the equipment.
- Make sure someone is nearby who is aware of the proper shut down sequence in the event of an accident or emergency.
- **ALWAYS** think before acting. **NEVER** act impulsively around the equipment.
- **NEVER** allow anyone inside a bin, truck or wagon which is being unloaded by an auger or conveyor. Flowing grain can trap and suffocate a person in seconds.
- Use ample overhead lighting after sunset to light the work area.
- Keep area around intake free of obstacles such as electrical cords, blocks, etc., that might trip workers.
- **NEVER** drive, stand or walk under the equipment.



Safety Continued

Prepare for Emergencies

Be prepared if fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital and fire department near your telephone.



Wear Protective Clothing

Wear close fitting clothing and safety equipment appropriate to the job.

Remove all jewelry.

Long hair should be tied up and back.

Safety glasses should be worn at all times to protect eyes from debris.

Wear gloves to protect your hands from sharp edges on plastic or steel parts.

Wear steel toe boots to help protect your feet from falling debris. Tuck in any loose or dangling shoe strings

A respirator may be needed to prevent breathing potentially toxic fumes and dust.

Wear a hard hat to help protect your head.

Wear appropriate fall protection equipment when working at elevations greater than six feet.



Assembly

Assemble Basic KLEENair Body

Contents on the wooden crate should include the assembled 14" KLEENair body with hanger weldments at both ends, brush auger, four legs, 4 hitch pins, red cap, and a lid.

1. While the unit is upside down remove the auger by pulling on the end where you cannot see the welded side of the brush.
2. Attach the four legs to the KLEENair body using the 1/2" x 4-1/2" hitch pins.
3. Stand the unit right side up.
4. Determine which end of the KLEENair you want the Inlet side on and insert the brush auger accordingly (*note: the welded side of the brush auger will be facing the Inlet side and will not touch the grain, so that the good side is facing the discharge end - see figure 2*).



Assembly Continued

5. Remove all of the boxes from the pallet and open up the one that says KL14INLETASSY. There should be two small boxes inside which will have two hanger bearing kits, flanges, bearings, and hardware. Assemble the Hanger Bracket halves as illustrated (see *figure 1*). Do not tighten more than finger tight.

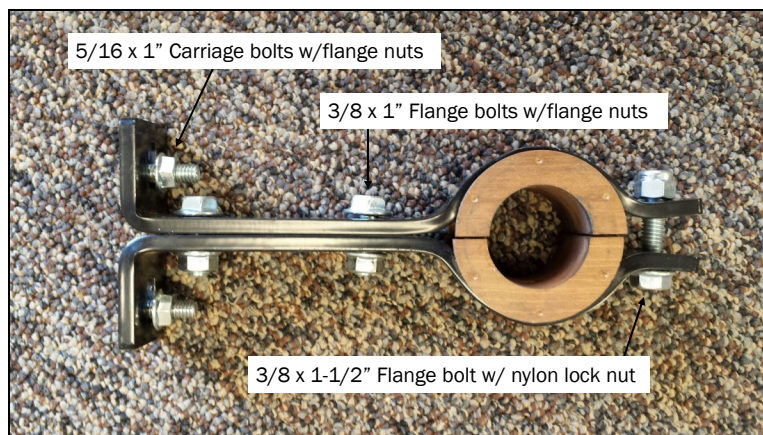


Figure 1

6. Insert the heads of the Carriage Bolts into the slots of the Hanger Bearing Weldment (see *figure 2*). Insert the connecting Coupler Shaft through the center of the Wood Bearing while adding a Thrust Washer to each side.
- a. Secure the Coupler Shaft to the Brush Auger with two 7/16 x 3-1/2" bolts with nylon lock nuts.
- b. Repeat steps 6 and 6a to the opposite end of the KLEENair. Once the auger is centered then finish tightening all the nuts. Do not over tighten the nylon nut. Wood Bearing should be snug, but not so tight that the shaft cannot turn.



Figure 2 (showing the Outlet end)

Assembly Continued

7. On the Inlet end of the KLEENair slide the 2' auger section (with full flighting) onto the Connecting Shaft and secure it in place with two 7/16 x 3-1/2" bolts with nylon lock nuts. (see *figure 3*)



Figure 3 (Inlet Auger)

8. Open up the box that says KL14OUTLETASSY and remove the auger. On the Outlet end of the KLEENair slide the 2' auger section (with partial flighting) onto the Connecting Shaft and secure it in place with two 7/16 x 3-1/2" bolts with nylon lock nuts. (see *figure 4*)



Figure 4 (Outlet Auger)

Assembly Continued

9. Insert the short Idler Shaft into the end of the 2' Inlet auger and the 14" shaft into the end of the Outlet auger and secure in place with two 7/16 x 3-1/2" bolts with nylon lock nuts.
 - a. Add the Inlet Tube (facing up), and the Outlet Tube (facing down) and finger tighten the 12 flanged nuts and bolts (3/8" x 3/4") where the two weldments meet.
 - b. Slide one bearing flange onto the Inlet Shaft (flange towards the inlet). Slide the 1-1/2" ID bearing onto the shaft with the locking collar side facing out. Slide the other flange onto the shaft (flange away from the Inlet). Secure the flange and bearing assembly with 1/2" x 1" hex head bolts using 1/2" washers on the inside and 1/2" flange nuts on the outside. Visually check and make sure there is enough clearance between the head of the bolt and the flighting as it comes around. Slide the lock collar onto the bearing (see figure 5).
 - c. Repeat step 9b on the Outlet end, and secure the flanges with 1/2" x 1-1/2" bolts. Once both ends are in position then tighten the locking collars and bolts.
 - d. Add the Screen Guard on the Inlet end and secure in place with the clips & 5/16 x 1" bolts.



Figure 5

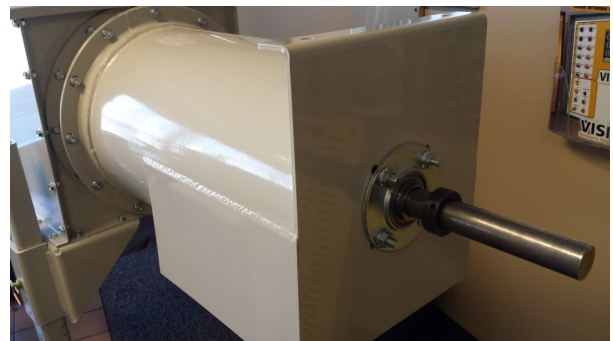


Figure 6

10. Take one of the green 90 degree support brackets out of the Dodge Motor Mount box and attach it to the Dodge TXT205T Taper Bush Reduce. (see figure 7)

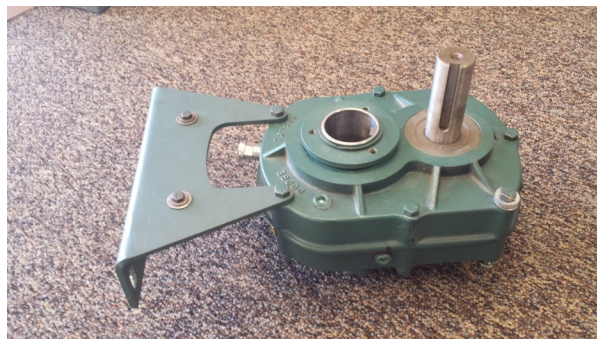


Figure 7

Assembly Continued

11. Open up the small box labeled 1-1/2 TDT2 TAPERED BUSH ASSY. Insert the two keyways and bushings into the Taper Bush Reduce (see *figure 8*), but be sure to leave the bolts loose until you have it positioned on the 14" drive shaft (with about a 1/2" of drive shaft sticking out the end).

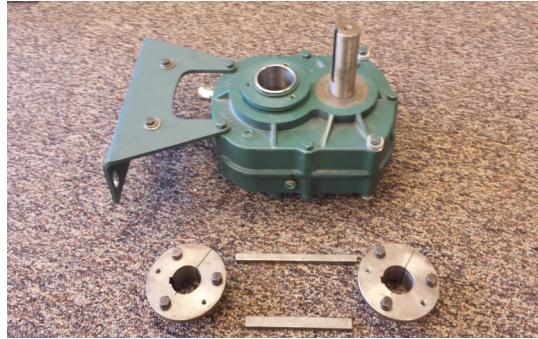


Figure 8

12. Secure the larger plate from the Motor Mount box with four 1/2" x 1-1/2" bolts. Also, add the threaded rods and 1/2" nuts as shown in *figure 9* (two nuts on top and one nut on the bottom with at least 1" of thread showing on the top).

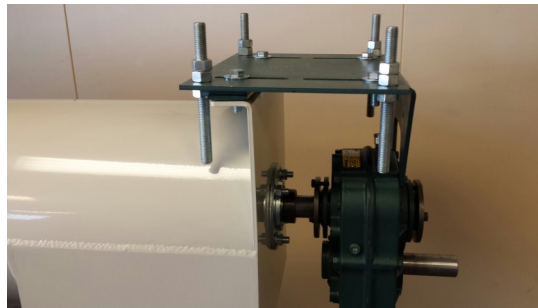


Figure 9

13. Take the smaller green motor plate and attach it to the bottom of the 10hp motor using 3/8 x 1-1/2" bolts and flanged nuts. (see *figure 10*).



Figure 10

Assembly Continued

14. Place the 10hp low-speed motor on top, but do not tighten down the 1/2" nuts until the two drive belts are in place. (see figure 11)



Figure 11

15. Add the belt shield. You may need to add a few washers as spacers. (see figure 12)



Figure 12

16. Attach the 9.4" Pulley to the 10HP motor shaft by using the 1-3/8" Taperlock Bushing. Attach the 12.4" Pulley to the gear reducer by using the 1-7/16" Taperlock Bushing. Be careful not to overtighten the bolts on the bushings as the pulley will crack (do not use an impact). Add the 2 V-Belts and adjust Motor Mount rods to tighten V-belts. (see figure 13)



Figure 13

Assembly Continued

17. Attach the Belt Shield with four washers and 9/16" nuts. (see figure 14)



Figure 14

Cleaning Capacity for the 14" Self-Powered KLEENair: 2,000 to 5,000bph

Unit will run at about 266rpms

Oil Recommendations for the Dodge 5:1 Gear Reducer:
SAE Grades Gear Oil 85W-90W or ISO VG 100-150 (approximately 7/8 quart)

Example: 14" Self-Powered KLEENair Installations



On an MC triple stack Dryer



(with an 8' extension)



On a GSI Tower Dryer



(with a 5' extension)



GRAIN SYSTEMS DISTRIBUTION
7702 E SATE RD 356
OTWELL, INDIANA 47564
812-354-2496

GRAIN SYSTEMS DISTRIBUTION
1104 INDUSTRIAL PARK RD
ROCK FALLS, ILLINOIS 61071
815-625-2838

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MILFORD, INDIANA 46542
574-831-4120