Grain Cleaner

GRAIN CLEANER

OPERATOR'S MANUAL

WALINGA
Start-up/Commissioning Form

This form must be filled out by the sales representative and/or dealer; and signed by both the sales representative and/or dealer and the customer at the time of delivery.	
Delivery date: MM/DD/YYYY	
Owner Operator Name	*Sales Representative / Dealer Name*
Phone	*Phone*
Email	*Email*
Address	*Address*
City *Prov/State*	*City* *Prov/State*
Postal Code/ZIP *Country*	*Postal Code/ZIP* *Country*
Unit Serial Number	
Blower Serial Number	*Airlock Serial Number*

CONFIRMATION OF ACTIONS COMPLETED	
	All items and features accounted for
	Pre-delivery inspection
	Review of warranty terms
	Review of standard notes and terms
	Review operating and safety instructions
	Operator manual supplied
	Supplemental documents supplied
	Guards installed and secured
	All safety signs identified and reviewed
	Discussion regarding applicable standards (see statement on reverse)

Effective: September 10, 2020
Version 1

WALINGA
Start-up/Commissioning Form

It is the responsibility of the Owner Operator to review and determine compliance to local and federal regulations. These regulations include, but are not limited to, local and federal laws as well as standards published by the NFPA (National Fire Protection Agency), ISO (International Organization for Standardization), OSHA (Occupational Safety and Health Administration) or OH&S (Occupational Health and Safety Standards), and ANSI (American National Standards Institute). *Please note: It is a requirement in NFPA 652 that the final operator completes a dust hazard analysis (DHA) of their facility and the products and processes it contains.* Based on this, Walinga understands that a DHA is required to be completed by the owner/operator prior to start-up/commissioning. In the event that a DHA is not available at start-up/commissioning, the owner/operator must provide written acknowledgement of their responsibility and intention to complete a DHA. The owner/operator also agrees that they shall be solely responsible for ensuring that any applicable NFPA standards and regulations shall be satisfied in conjunction with the incorporation of Walinga's equipment into the buyer's specific system of operations.

Date:_____ Owner Operator's Signature:_____

The above equipment has been received by me and I confirm that the sales representative / dealer has completed the start-up/commissioning process.

Date:_____ Owner Operator's Signature:_____

I have completed the actions listed above and confirm that the owner operator has completed the start-up/commissioning process.

Date:_____ Dealer Representative's Signature:_____

I have completed the actions listed above and confirm that the owner operator has completed the start-up/commissioning process.

Date:_____ Manufacturer Representative's Signature:_____

Additional notes:

Walinga Inc.
Pneumatic Conveying System
Warranty Terms

Walinga Inc. is committed to providing a quality product that will meet or exceed your expectations for many years to come. Our warranty terms and our warranty claim process has been designed to ensure that each warranty claim will be resolved in an orderly, fair and timely manner.

The Warranty

Walinga Inc*. ("Walinga") warrants that all new pneumatic products sold by Walinga Inc. will be free from defects in material and workmanship (the "Walinga Warranty").*

Warranty Period

The warranty period for the Walinga Warranty shall expire on the date that is the earlier of: two (2) years after the date of delivery to the original customer; or upon the expiration of five hundred (500) hours of operation; whichever date comes first.

Limitations of and exclusions from the Walinga Warranty

- The Walinga Warranty applies to material and workmanship only.
- With respect to any component parts that are supplied or manufactured by others, the warranty coverage on such component parts will be strictly limited to the warranties of the manufacturers of such component parts.
- The Walinga Warranty shall only be for the benefit of the original purchaser of the pneumatic products.
- A Walinga Warranty may be transferable by the original purchaser to a third party for the balance of the warranty period then remaining, provided that Walinga consents in writing to such transfer of warranty.
- The Walinga Warranty is conditional upon proper storage, installation, use, maintenance, operation and compliance with any applicable recommendations of Walinga.

Warranty Claim Procedure
Should you encounter any difficulties with your unit within its warranty period, please contact your local Walinga dealer or sales representative, your local Walinga Service department or Walinga's Warranty Department to submit a warranty claim application.

To speak with a Walinga Warranty Coordinator, contact:

- Canada / International: 1-888-WALINGA (ext 273); +1-519-824-8520 (ext 273); Email – warranty.canada@walinga.com
- USA: 1-800-466-1197 (ext 8); Email – warranty.usa@walinga.com
- Australia: 07-4634-7344; Email – mail@customvac.com.au

Required Warranty Claim information
The following information must be provided to Walinga in order for us to properly process and consider your warranty application:

- Customer name and contact information (email if available).
- The equipment serial number and/or Vehicle Identification Number (if applicable).
- Date of claimed failure.
- Equipment hours of operation.
- Details, description and photos (upon request) of the claimed failure and the corrective repairs attempted.

Warranty Conditions

- **Equipment must be registered within 30 days of being received by the buyer. It will be within the sole and unfettered discretion of Walinga as to whether it will honour its warranty on non-registered equipment.**

Warranty Conditions (continued)

- The buyer is responsible for promptly notifying Walinga of any defects to the equipment. The buyer is also responsible for making the equipment available to Walinga or its authorized repair facility for evaluation and repair.
- Prior to making any repairs or parts replacements, a warranty application and any estimated associated costs must be approved with the issuance of a claim number by an authorized Walinga representative. Undertaking any work prior to receiving warranty authorization may result in a partial or complete loss of warranty coverage.
- At Walinga's discretion, warranty repairs may be authorized to be completed at a repair facility convenient to the buyer. In such situations the estimated labour time must be approved by Walinga prior to undertaking any work. Labour hours will be reimbursed at the facilities posted hourly labour rate.
- At Walinga's request, parts in question must be returned to the nearest Walinga service facility for evaluation. In such situations a Returned Goods Authorization (RGA) number will be provided to the buyer. The returning shipment must be clearly labeled with the assigned RGA number and include a copy of the RGA form. Unless otherwise arranged, these parts are to be returned to Walinga within 30 days to ensure timely processing of your warranty claim. Failure to return such parts may result in partial or complete loss of warranty coverage.
- Replacement parts provided under warranty are covered for the remainder of the original equipment warranty period.
- Walinga reserves the right to use new, remanufactured or refurbished components when performing warranty repairs and replacements.
- Walinga is entitled to a reasonable amount of time and a reasonable number of attempts to assess the claim, diagnose the problem, and perform any necessary repairs.
- The warranty offered on used or refurbished equipment is limited to that specified on the purchase contract. Where a warranty period has not been stipulated on the purchase contract., and where such equipment is “used”, then such equipment is considered by Walinga to be sold “as is, where is” without the Walinga Warranty. Where such equipment is refurbished, then the Walinga Warranty shall apply.

Without limitation, Walinga reserves the right to reject a warranty claim or for any one or more of the following reasons:

- The warranty claim information provided is insufficient.
- The product evaluation does not substantiate the claim.
- The unit has been operated above and beyond its capacity or not maintained or serviced properly, resulting in damages incurred to major components.
- If the unit was equipped with a factory installed hour meter which has been disconnected, altered or inoperative for an extended period of time; with the result being that the equipment’s operating hours cannot be verified.
- It is apparent that the operator’s manuals have not been followed.
- The equipment is not registered.

Without limitation, Walinga’s Warranty does not cover:

- Damage or deterioration due to lack of reasonable care or maintenance.
- Damage caused or affected by unapproved modifications to the equipment.
- Damage caused by negligence or misuse of the equipment.
- Damage caused by using the equipment for purposes for which it was not designed or intended.

Walinga’s liability under this warranty, whether in contract or tort, is limited to the repair, replacement or adjustment of defective materials and workmanship. In no event will Walinga be responsible for any direct, indirect, loss of time, incidental or consequential expenses including, but not limited to, equipment rental expenses, towing, downtime, inconvenience, or any losses resulting from the inability to use the equipment. Further, Walinga shall not be liable for any damages or inconvenience caused by any delay in the supply or delivery of any equipment or component parts thereof.

The selling Dealer/Sales Person makes no warranty of its own and has no authority to make any representation or promise on behalf of Walinga, or to modify the terms or limitations of the Walinga Warranty in any way.

Punitive, exemplary or multiple damages may not be recovered unless applicable law prohibits their disclaimer.

Warranty related claims may not be brought forward as a class representative, a private attorney general, a member of a class of claimants or in any other representative capacity.

The Walinga Warranty and all questions regarding its enforceability and interpretation are governed by the law of the country, state or province in which you purchased your Walinga equipment. The laws of some jurisdictions limit or do not allow the disclaimer of consequential damages. If the laws of such a jurisdiction apply to any claim against Walinga, the limitations and disclaimers contained here shall be to the greatest extent permitted by law.

TO OUR VALUED CUSTOMERS:

The Walinga network of distribution centres and authorized dealers are dedicated to providing worldwide coverage of original parts and accessories for Walinga Conveying Systems.

Our parts reflect Walinga's continued commitment to provide our customers with the highest quality parts as well as service.

On behalf of all of us at Walinga Inc., Thank you for your continued support!

For your convenience, should you require any information related to Parts, Service or Technical Engineering, please contact one of the following Walinga Personnel

TECHNICAL - ENGINEERING:
Duane Swaving *226-979-8227 mail to:pcs.techsupport@walinga.com
Ken Swaving *519 787-8227 (ext:100) mailtto:ks@walinga.com

To speak with a Walinga Warranty Coordinator, contact:

- Canada 1-888-WALINGA (ext 258)
  International +1-519-824-8520 (ext 258) Email – warranty.canada@walinga.com
- USA 1-800-466-1197 (ext 8) Email – warranty.usa@walinga.com
- Australia 07-4634-7344 Email – mail@customvac.com.au

GUELPH SERVICE:
Kevin VanderZwaag *(519) 763-7000 (ext:273) kevin.vanderzwaag@walinga.com

ORIGINAL PARTS SALES:
Ontario and Eastern Canada:
(ext: 224) parts.canada@walinga.com
Parts Department Fax: (519) 824-0367
Manitoba and Western Canada:
Chad Yeo * 204-745-2951 (ext: 424) chad.yeo@walinga.com
USA:
John VanMiddlekoop * (800) 466-1197 (ext 3) parts.usa@walinga.com

SALES MANAGER:
Tom Linde *519-787-8227 (ext 5) mailto:thl@walinga.com
Peter Kingma (800) 466-1197 jpk@walinga.com

CORPORATE HEAD OFFICE:
5656 Highway 6N
RR#5, Guelph, Ontario, N1H 6J2
PHONE: (888) 925-4642 FAX: (519) 824-5651
www.walinga.com

FACTORY DISTRIBUTION AND SERVICE CENTRES:
938 Glengarry Cres. Fergus, Ontario Canada N1M 2W7
Tel: (519) 787-8227 Fax: (519) 787-8210

1190 Electric Ave. Wayland , MI.USA 49348
Tel: (800) 466-1197 Fax: (616) 877-3474

70 3rd Ave. N.E. Box 1790 Carman, Manitoba Canada R0G 0J0
Tel: (204) 745-2951 Fax: (204) 745-6309

24 Molloy St, Toowoomba, Queensland Australia 4350
Tel: 07-4634-7344 Email: mail@customvac.com.au

SERIAL NUMBER LOCATION

Always give your Dealer the Machine Serial Number of your Walinga Grain Cleaner System when ordering parts or requesting service or other information. The Serial Number is located on the side of the screen housing on the dryer mount type, and below the drive motor on the self-contained type. Record them on this page for your convenience.

FIG. A DRYER MOUNT UNIT

Dryer Mount Serial Number

_____

FIG. B SELF-CONTAINED UNIT

Self-contained Serial Number

_____

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1.0 INTRODUCTION

Thank you for your selection of the Walinga Grain Cleaner to remove fines and impurities from your grain to improve its overall quality. We appreciate your business. Walinga has engineered this unit for heavy on-farm use and we trust that it will meet your needs.

The performance of the Grain Cleaner and your safety are our two priorities. Walinga has created this operation manual for the express purposes of keeping you safe and educating you how to efficiently use your Grain Cleaner to obtain the performance you expect. We urge you to familiarize yourself with this operation manual and then review it as you identify the various elements of the Grain Cleaner and learn how to adjust and operate it safely.

This manual can serve as an excellent reference for your personal troubleshooting as well as an educational tool for other users of the unit. Keep it handy, fill out the pages that request information, and refer to it often.

2.0 SAFETY

Safety is our top priority in making equipment for your use, and we hope safety is your top priority as well. Your family will suffer if you are injured in any mishap on your farm. The first section will examine the safety symbols used on the Grain Cleaner, and then safe operation and storage. If any colleague will be operating the Grain Cleaner, regardless if you are supervising, that person should be familiar with safe operations. Give that colleague a lesson in safe operation and ask him/her to sign the form that is found in section 2.8 The section concludes with examples of safety placards and locations where they can be found on the Grain Cleaner.

2.0 SAFETY (CONTINUED)

This Safety Alert symbol means ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED!

SAFETY ALERT SYMBOL

The Safety Alert symbol identifies important safety messages on the Walinga Grain Cleaner and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

SIGNAL WORDS:

Note the use of the signal words DANGER, WARNING, and CAUTION with the safety messages. The appropriate signal word for each message has been selected using the following guidelines:

DANGER - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

WARNING - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may be also used to alert against unsafe practices.

CAUTION - Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may be also used to alert against unsafe practices.

SAFETY (CONTINUED)

YOU are responsible for the SAFE operation and maintenance of your Walinga Grain Cleaner. YOU must ensure that you and anyone else who is going to operate, maintain or work around the Grain Cleaner be familiar with the operating and maintenance procedures and related SAFETY information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be adhered to while operating the vacuum.

Remember, YOU are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that EVERYONE operating this equipment is familiar with the recommended procedures and follows all the safety precautions. Remember, most accidents can be prevented. Do not risk injury or death.

Grain Cleaner owners must give operating instructions to operators or employees before allowing them to operate the equipment, and at least annually thereafter.

The most important safety feature on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Most accidents can be avoided.

Walinga believes that a person who has not read, understood, and been trained to follow all operating and safety instructions is not qualified to operate the equipment. An untrained operator exposes himself and bystanders to possible serious injury or death.

Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety of the equipment and affect the life of the machine.

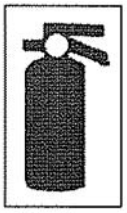
Think SAFETY! Work SAFELY!

2.1 GENERAL SAFETY

1. Read and understand the Operators Manual and all safety signs before operating, maintaining, adjusting, or unplugging the Grain Cleaner.

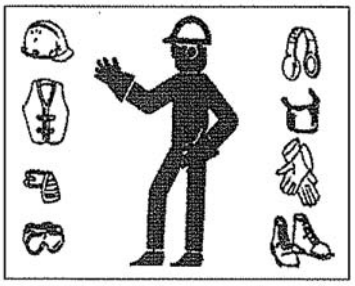
2. Only trained competent persons shall operate the Grain Cleaner. An untrained operator is not qualified to operate the machine.

3. Have a first-aid kit available for use should the need arise and know how to use it.



4. Have a fire extinguisher available for use, should the need arise, and know how to use it.

5. Wear appropriate protective gear. This list includes but is not limited to: A hard hat, protective shoes with slip-resistant soles, protective goggles, heavy gloves, hearing protection.



6. Before servicing, adjusting, repairing, or maintaining unit, ensure that unit power source is completely shut down, and cannot start-up.

7. Wear appropriate hearing protection when operating for long periods of time.

8. Ground all lines to prevent static build-up and electrical discharge/shocks.

9. Review safety related items annually with all personnel who will be operating or maintaining the Grain Cleaner.

2.2 OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before using.

2. Before servicing, adjusting, repairing, or maintaining unit, ensure that unit power source is completely shut down, and cannot start-up.

3. Do not operate when any guards are damaged or removed. Install and secure guards before starting.

4. Lock-out and tag-out master panel before servicing the auger or fan.

5. Keep hands, feet, clothing, and hair away from all moving and/or rotating parts.

6. Clear the area of all bystanders, especially small children, before starting.

7. Ground all lines and hoses to prevent static build-up and electrical discharge/ shocks.

8. Maintain electrical continuity between motors to prevent sparks, shocks, or electrical discharge.

9. Wear appropriate ear protection when operating for long periods of time.

10. Review safety items with all personnel annually.

2.3 MAINTENANCE SAFETY

1. Follow ALL the operating, maintenance, and safety information in the manual.

2. Support the machine with blocks or safety stands when working beneath it.

3. Follow good shop practices:
   -Keep service area clean and dry.
   -Be sure electrical outlets and tools are properly grounded.
   -Use adequate light for the job at hand.

4. Use only tools, jacks, and hoists of sufficient capacity for the job.

5. Before servicing, adjusting, repairing, or maintaining unit, ensure that unit power source is completely shut down, and cannot start-up.

6. Make sure all guards are in place and properly secured when maintenance work is completed.

7. Keep hands, feet, hair, and clothing away from all moving and/or rotating parts.

8. Lock-out and tag-out the master panel before performing any maintenance or service work on the machine auger or fan.

9. Clear the area of bystanders, especially small children, when carrying out any maintenance and repairs or making any adjustments.

10. Be sure that all lines and hoses are grounded when maintenance work is completed.

2.4 ELECTROSTATIC SAFETY

1. Ground all lines and hoses to prevent static build-up and electrical discharge/shocks/sparks.
2. Maintain electrical continuity between motors to prevent sparks, shocks, or electrical discharge.

2.5 STORAGE SAFETY

1. Store unit in an area away from human activity.
2. Do not permit children to play on or around the stored machine.
3. Lock out and tag out master panel to prevent unexpected start-up.

2.6 INSTALLATION SAFETY

1. Use only licensed electricians to provide power to machine. Follow all applicable codes during installation.
2. Keep all components grounded to the master panel to prevent sparks, shocks, and electrical discharges.

2.7 SAFETY SIGN REPLACEMENT

1. Keep safety signs clean and legible at all times.
2. Replace safety signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety signs are available from your Distributor or the factory.

How to Install Safety Signs:

• Be sure that the installation area is clean and dry.

• Be sure temperature is above 50°F (10°C).

• Decide on the exact position before you remove the backing paper.

• Remove the smallest portion of the split backing paper.

• Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.

• Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.

• Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

How to Reorder Your Safety Signs:

Call your local dealer, or the factory branch nearest you.

GUELPH, ONTARIO, CANADA
PHONE(888) WALINGA
FAX (519) 824-5651

CARMAN, MANITOBA, CANADA
PHONE(204) 745-2951
FAX (204) 745-6309

WAYLAND, MICHIGAN, U.S.A.
PHONE(800) 466-1197
FAX (616) 877-3474

DAVIDSON, SASKATCHEWAN, CANADA
PHONE (306) 567-3031
FAX (306) 567-3039

3.0 SAFETY SIGNS

Some of the types of safety signs and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.

Fig. 3-1

Fig. 3-2

REMEMBER - If safety signs have been damaged, removed, become illegible, or parts replaced without signs, new signs must be applied. New signs are available from your authorized dealer or factory direct.

As the new owner of the Walinga Grain Cleaner, we are committed to you to provide equipment that meets your needs and satisfaction. We have designed the Grain Cleaner to do that with the utmost safety in mind. We look to you to make a commitment to maintain the Grain Cleaner with safety in mind also. That includes learning about the safety features, keeping them in place and operational. It becomes your responsibility to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders, and the area around the worksite. Untrained operators are not qualified to operate the machine. To help you ensure the proper employees have been trained to operate the Grain Cleaner, Walinga offers the following record to help you manage the risk of untrained personnel.

SAFETY COMMITMENT

Walinga, Inc., follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the Grain Cleaner must read and clearly understand ALL Safety, Operating and Maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment until such information has been reviewed. Annually review this information with all personnel.

Make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment. We feel that an untrained operator is unqualified to operate this machine.

This sign-off record is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator's Manual and have been instructed in the operation of the equipment.

3.1 SIGN-OFF FORM

Date	Type of Training	Employee Signature	Employer Initials

3.2 SAFETY SIGN LOCATIONS

The types of safety signs and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.

Fig 3-2 SAFETY SIGN: GUARD MISSING

REMEMBER - If safety signs have been damaged, removed, become illegible, or parts replaced without signs, new signs must be applied. New signs are available from your authorized dealer or factory direct.

4.0 OPERATION

1. Read and understand the Operator's Manual and all safety signs before using.

2. Before servicing, adjusting, repairing, or maintaining unit, ensure that unit power source is completely shut down, and cannot start-up.

3. Do not operate when any guards are damaged or removed. Install and secure guards before starting.

4. Lock out and tag out the master panel before servicing.

5. Keep hands, feet, clothing, and hair away from all moving and/or rotating parts.

6. Clear the area of all bystanders, especially small children, before starting.

7. Ground all lines and hoses to prevent static build-up and electrical discharge/shocks.

8. Maintain electrical continuity between motors to prevent sparks, shocks, or electrical discharge.

9. Wear appropriate ear protection when operating for long periods of time.

10. Review safety items with all personnel annually.

4.1 TO THE NEW OWNER OR OPERATOR:

The Walinga Grain Cleaner is specifically designed to produce a clean, uniform grain. Be familiar with all operating and safety procedures before starting.

It is the responsibility of the owner and operator to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the work site. Untrained operators are not qualified to operate the machine.

Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully to learn how to operate the machine safely and how to set it to provide maximum efficiency. By following the operating instructions, in conjunction with a good maintenance program, your Grain Cleaner will provide many years of trouble-free service.

REMEMBER - If safety signs have been damaged, removed, become illegible, or parts replaced without signs, new signs must be applied. New signs are available from your authorized dealer or factory direct.

4.2 MACHINE COMPONENTS

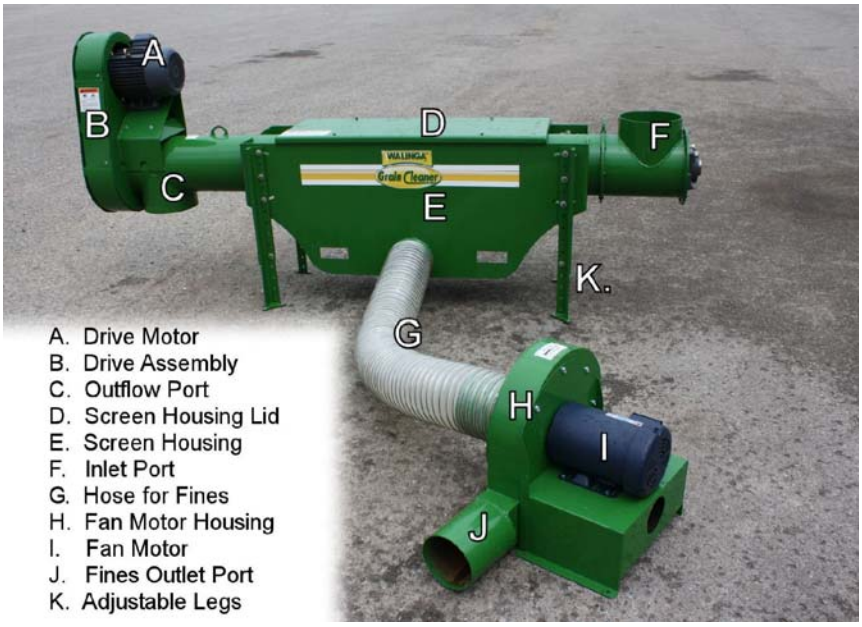


Fig 4-1 MACHINE COMPONENTS (SELF-CONTAINED UNIT SHOWN)

4.2.1 DRIVE MOTOR

The Walinga Grain Cleaner is powered by a 3 hp electric motor, which turns the auger that allows the grain to flow through the screens. The circuit can quickly become deadly if the wiring has become damaged, or the motor is being operated in wet conditions. Operators must keep the unit dry and clean, and inspect the wiring for any damage that might have occurred. Ensure the power connection has complete integrity, whether direct wired to a circuit breaker or utilized as a grounded connection to the electrical circuit.

4.2.2 FAN MOTOR

The fines that are being removed from the grain are propelled away with a fan driven by a 3 hp electric motor, which rests at ground level. This, too, is subject to electrical shock should it be operated in wet conditions. All electrical power connections must be inspected with each use of the Walinga Grain Cleaner to ensure they have integrity and are completely grounded.

Fig. 4-2 DRIVE MOTOR

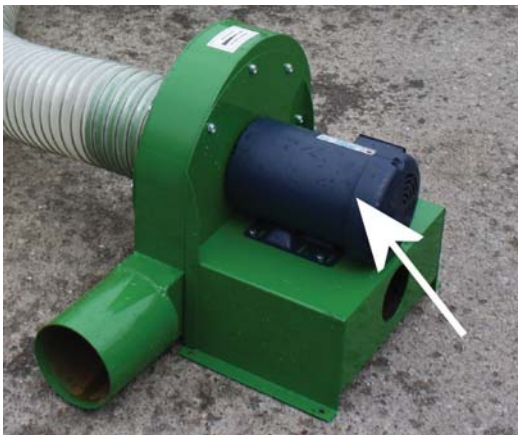


Fig. 4-3 FAN MOTOR

The Walinga Grain Cleaner is a practical, efficient, self-operating machine, however, operators should become familiar with several of the operational features.

4.2.3 INFLOW PORT

Grain to be cleaned enters the Grain Cleaner through the inflow port (**Fig 4-4**).

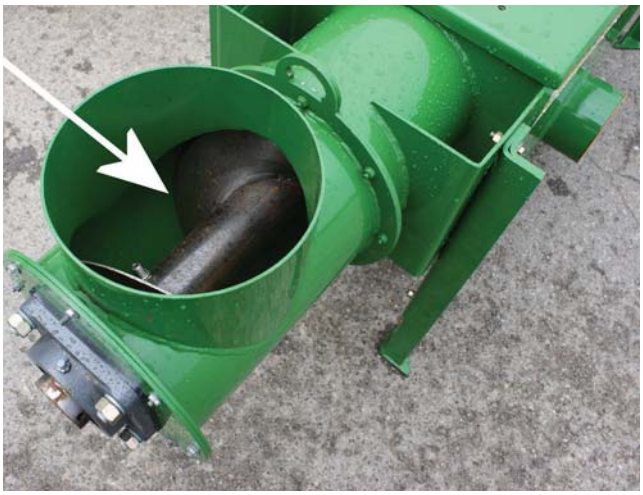


Fig 4-4 INFLOW PORT

Care must be taken to ensure the Grain Cleaner is not overloaded and grain is damaged as it backs up in the inflow port. A steady stream of grain is recommended coming from another auger or a grain dryer, which will keep the cleaning process operating at peak efficiency. Different grains and the content of fines in the grain will require a potentially slower speed than other grains which are cleaner.

4.2.4 SCREEN

The screen separates fines from grain, which passes through the perforations.

Fig 4-5 SCREEN

Fig 4-6 AUGER WITH BRISTLES

The cleaning screen is the heart of the Grain Cleaner (**Fig 4-5 SCREEN**). If the screen becomes plugged, it should be removed and cleaned. Inside the screen depicted in the left photograph are bristles on the flighting of an auger, used to move the grain through the cleaner and keep the screen clear of debris (**Fig 4-6 AUGER WITH BRISTLES**).

4.2.5 FAN MOTOR MECHANISM

Fines are removed by the fan assembly.

Fig 4-7 FAN ASSEMBLY

Fig 4-8 SCREEN HOUSING

Fines which fall through the perforations of the screen are collected in the bottom of the Grain Cleaner, then sucked out with a fan system powered with an electric motor (**Fig 4-7 FAN ASSEMBLY**). The hose allows the operator to see if the fines are passing through properly or becoming congested. The hose should be kept as straight as possible to preserve efficiency of airflow. Sharp bends will quickly clog and require the Grain Cleaner to be stopped while the hose is cleaned. The fan system has a port which blows the fines away to a predetermined spot.. Prior to operation the fan system must be properly attached to the Grain Cleaner, using the port on either side, giving you increased flexibility in your grain cleaning configuration (**Fig 4-8 SCREEN HOUSING**) .

4.2.6 OUTFLOW PORT

Clean grain leaves by way of the outflow port

Fig 4-9 OUTFLOW PORT

Fig 4-10 INFLOW PORT

After grain passes through the screen and fines are removed, it leaves by way of the outflow port (**Fig 4-9 OUTFLOW PORT**). This is 18 inches off the ground which allows a hopper on another auger to collect the clean grain for further storage or transportation. The legs of the Grain Cleaner also can be adjusted to further elevate the outflow port should that be needed. Attachment points on either end of the Grain Cleaner can be used to adjust the elevation to the required height.

4.3 BREAK-IN AND MAINTENANCE SCHEDULE

The Walinga Grain Cleaner is delivered to you ready for operation, without need of detailed assembly. However, the owner must connect the fan to the Grain Cleaner with the supplied hose and clamps. Also, the owner is responsible for hiring a certified electrician to connect the wiring for the electric motor to the proper circuitry. Although there are no operational restrictions on the Grain Cleaner when used for the first time, it is recommended that the following mechanical items be checked:

A. After operating for 1/2 hour:

1. Ensure the auger turns freely.
2. Tighten all fasteners and hardware.
3. Check the drive system. Re-tighten and re-align as required.
4. Check for and remove entangled material from the screen housing.
5. Lubricate all grease fittings.

B. After operating for 10 hours:

1. Ensure the auger turns freely.
2. Tighten all fasteners and hardware.
3. Check the drive system. Re-tighten and re-align as required.
4. Check for and remove entangled material from the screen housing.
5. Then go to the normal servicing and maintenance schedule as defined in the Maintenance Section.

4.4 PRE-OPERATION

Before turning on the Grain Cleaner and hooking it up to a supply of grain to be cleaned, there is a final inspection checklist that needs to be reviewed and implemented.

Efficient and safe operation of the Walinga Grain Cleaner requires that each operator reads and understands the operating procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both personal safety and protection of the Grain Cleaner that this checklist is followed. Before operating the Grain Cleaner and each time thereafter, the following areas should be checked off:

1. Lubricate the machine per the schedule outlined in Section 5.0 Service and Maintenance.
2. Check for and remove entangled material from the screen housing.
3. Close and secure all guards, including the screen cover.

Fig 4-11 SCREEN COVER REMOVED

4.5 MACHINE PREPARATION PRIOR TO ANY OPERATION

If you are using the Grain Cleaner as part of the removal of grain from a storage bin, observe all rules of safety regarding entrapment or engulfment in the flowing grain. Augers removing the grain from the bin and flowing into the Grain Cleaner may be capable of pulling grain fast enough to entrap someone in the cone of the grain flow. Do not enter the bin and step into the grain while it is being removed. Entrapment leads to engulfment, and possible death. Always have someone else in visual and audible contact with anyone in the bin. If you are operating the bin unloading process alone, shut down all power systems and prevent them from being restarted without your presence.

The Grain Cleaner is an efficient machine designed for adult operation. Children and other bystanders unfamiliar with its purpose should not be around the Grain Cleaner while it is operating. Select a location to attach the Grain Cleaner to the grain stream, that still allows you to have complete and easy access to all operating parts. Remove the plugs from the Inflow Port and the Outflow port. Position the Grain Cleaner where it will accept inflowing grain to be cleaned. Position a hopper or other device to collect the cleaned grain for further storage or transportation. Position the fan assembly where it can safely discharge fines.

Check the condition of the electrical connection, if a cable and plug are being used. Ensure there is integrity in both, that the grounding connection will properly function and prevent electrocution, and all guards are in place, including the removable door atop the screen housing.

4.6 OPERATING PROCEDURE

Starting procedure: Ensure the outflow of grain can be properly handled, and conveyors or augers are operating. Turn on the fan to be able to handle fines. Turn on the auger and rotating brush inside the cleaning screen. Gradually increase the flow of grain into the inflow port to ensure it is not overloaded.

Monitoring procedure: Monitor the performance of the Grain Cleaner as needed. Be sure that grain is not flowing in too fast and either spilling onto the ground or congesting the inflow process that might damage the grain. Check the hose that removes fines from the grain to ensure it is not clogged and has the capacity to remove all fines. Check the outflow of clean grain to ensure there is an acceptable amount of fines. If the amount is unacceptable, refer to the troubleshooting checklist to resolve the issue. Check the outflow of the fan to ensure it is not plugged.

Stopping procedure: Stop the flow of grain into the Grain Cleaner and allow it to clear out the clean grain through the outflow port and the fines through the fan. Stop the electric motors on the Grain Cleaner and the fan.

4.7 POST OPERATION MAINTENANCE AND STORAGE

Before prolonged storage, the machine should be thoroughly inspected and prepared for future use.
Repair or replace any worn or damaged components to prevent any unnecessary down time when it is needed.

Follow this procedure:
1. Wash the entire machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris, or residue.
2. Lubricate all grease points. Make sure all grease cavities have been filled with grease to remove any water residue from the washing.
3. Install the plugs into the receiver tank points where the fines are exhausted.
4. Touch up all paint nicks and scratches to prevent rusting.
5. All hoses should be stored inside or under a shelter.
6. Move the machine to its storage position.
7. Select an area that is dry, level, and free of debris.

5.0 SERVICE AND MAINTENANCE

During normal daily use ensure the Grain Cleaner is clean, well maintained, and lubricated to provide the top performance you expect. Walinga recommends the following maintenance standards to protect your warranty.

5.0.1 MAINTENANCE SAFETY

1. Follow ALL the operating, maintenance, and safety information in the manual.
2. Follow good shop practices: Keep service area clean and dry. Be sure electrical outlets and tools are properly grounded. Use adequate light for the job at hand.
3. Use only tools, jacks, and hoists of sufficient capacity for the job.
4. Before servicing, adjusting, repairing, or maintaining unit, ensure that unit power source is completely shut down and cannot start up.
5. Make sure all guards are in place and properly secured when maintenance work is completed.
6. Keep hands, feet, hair, and clothing away from all moving and/or rotating parts.
7. Clear the area of bystanders, especially small children, when carrying out any maintenance and repairs or making any adjustments.

5.1 FLUIDS REQUIRED AND PROPER STORAGE

Grease: Use an SAE multi-purpose high temperature grease with extreme pressure (EP) characteristics. Also acceptable is an SAE multi-purpose lithium-based grease.

Storing lubricants: Your unit can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture, and other contaminants.

5.2 LUBRICATION AND MAINTENANCE INSTRUCTIONS

Refer to Section 5.1 for recommended grease. Use the Service Record checklist provided to keep a record of all scheduled servicing.
1. Use a hand-held grease gun for greasing auger bearings in two locations.
2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
3. Replace and repair broken fittings immediately.
4. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.
5. Ensure all grease fittings are addressed.

5.2.1 BELT TENSION

Rotational power from the power source is transmitted to the auger and brush shaft through the belt drive. To obtain efficient transmission of power and good belt life, the belts must be properly tensioned and the pulleys aligned. Belts that are too tight will stretch and wear quickly or overload the bearings. Belts that are too loose will not transmit the required power and will slip, overheat, and wear quickly. Pulleys that are not aligned will result in rapid belt wear.

Follow this procedure when checking and adjusting belt tension and pulley alignment.
1. Clear the area of all bystanders, especially small children.
2. Stop the unit and wait for all moving parts to stop before attempting any adjustment.
3. Ensure that the unit power source is completely shut down and locked out.
4. Unlatch and remove the belt cover. Lay to the side.
5. Determine the belt deflection in a static condition on a new machine. There should be a ¼ inch deflection.

5.2.2 ADJUSTING TENSION

1. Loosen the jam nuts on the adjusting bolts. Loosen hold down bolts slightly.
2. Turn the adjusting bolt to set the tension. Maintain pulley alignment.
3. Check the tension again. (Over-tightening will cause belt stretching and overload the bearing. Belts that are too loose will slip, tear, and wear rapidly. Check pulley alignment, section 5.2.3.)
4. Tighten jam nuts. Tighten hold down bolts.
5. Install and secure belt/chain covers.

5.2.3 PULLEY ALIGNMENT

1. Lay a straight-edge across the faces of the two pulleys.
2. If the gap between the pulley and the straight-edge exceeds 1/16 inch (1.5mm), the pulleys must be realigned.
3. Measure the distance the pulley needs to move.
4. Loosen belts.
5. Remove bolts from the pulley which is to be moved.
6. Install bolts into pulley's threaded holes and force pulley from bushing. Use all bolts with equal force to ensure that bushing is not damaged.
7. Move bushing as per measurement required.
8. Re-install sheave onto bushing.
9. Re-install belts.

5.3 SERVICE INTERVALS

Fig 5-1 CHECK BELT TENSION

Fig 5-2 MONITOR FINES BUILDUP

A. Check belt tension hourly.
B. Monitor fines build up continuously (**Fig 5-2 MONITOR FINES BUILDUP**).
C. Grease fittings at auger bearings daily.
D. Wash when needed, touch up paint annually.
E. Check grounding connections.

5.4 SERVICE RECORD

Activity/date							
Tighten drive belt							
Grease fittings							
Clean out fines							
Wash							
Touch up paint							
Check grounding							

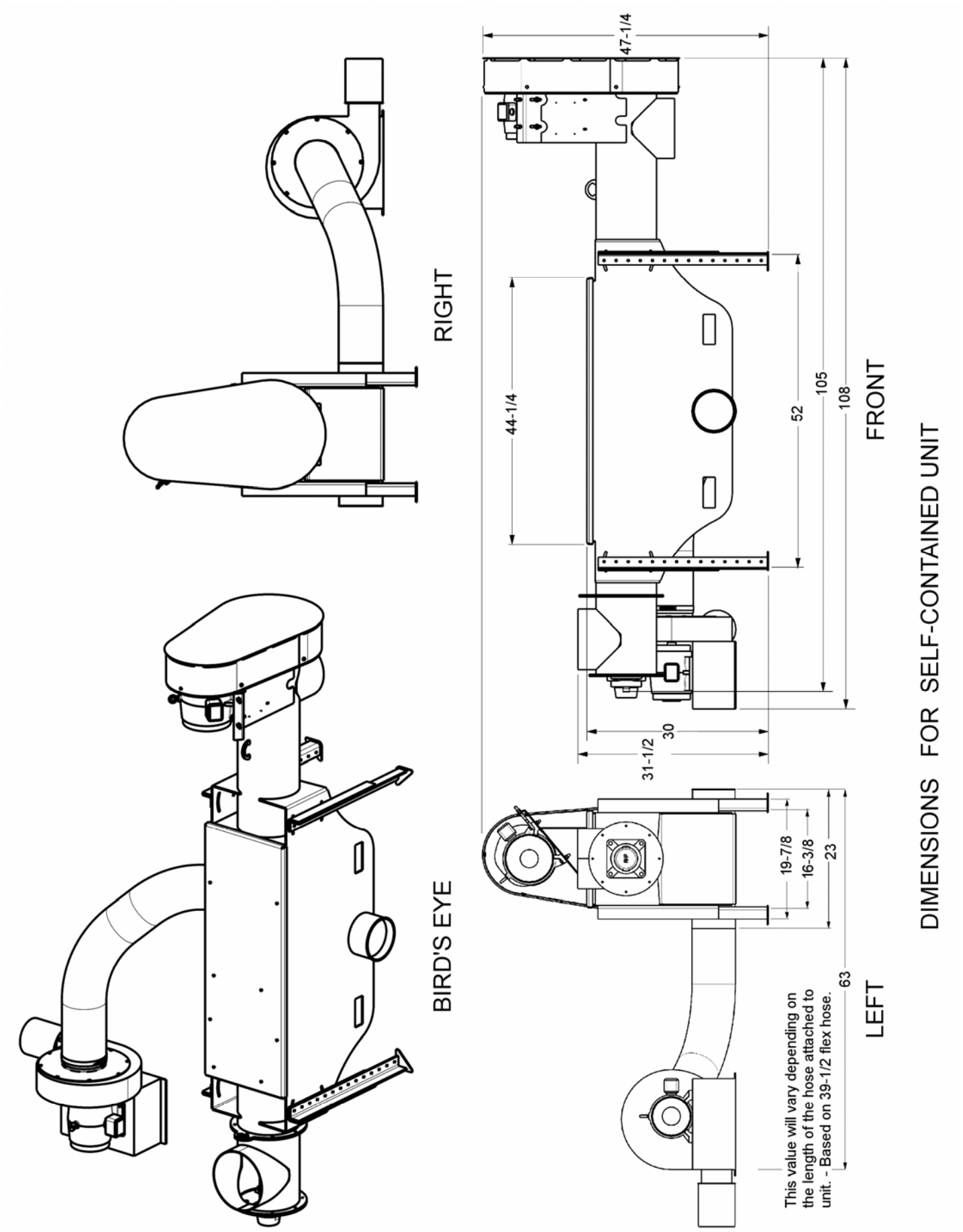
6.0 Troubleshooting

ISSUE	CAUSE	SOLUTION
Too many fines in clean grain.	Screen perforations too small.	Install screen with larger perforations.
	Fines have built up in bottom of tank and not falling through the screen.	Clean out bottom of tank and ensure fan tube is clear and fan working properly.
	Screen is plugged.	Remove and clean screen.
Too many good kernels in the fines and trash.	Screen perforations too large.	Install screen with smaller perforations.
Kernels being ground and damaged.	Inflow port is overloaded and auger is damaging grain.	Reduce inflow of grain into the Grain Cleaner.
Electrical shock from Grain Cleaner.	Unit is not properly grounded.	Call electrician to check and replace grounding connections.
Motor will not operate.	Power not getting to motor.	Check electrical connections, power cord, and connections on the motor. Check circuit breaker, and then determine if there is a power outage.
Auger operating erratically.	Loose belts.	Check tightness of belts and use procedure outlined in 5.2.1 to tighten belts.
Belts wearing and fraying too early in their expected life.	Misaligned pulleys.	Check alignment of pulleys and use procedure in 5.2.3 to align pulleys.

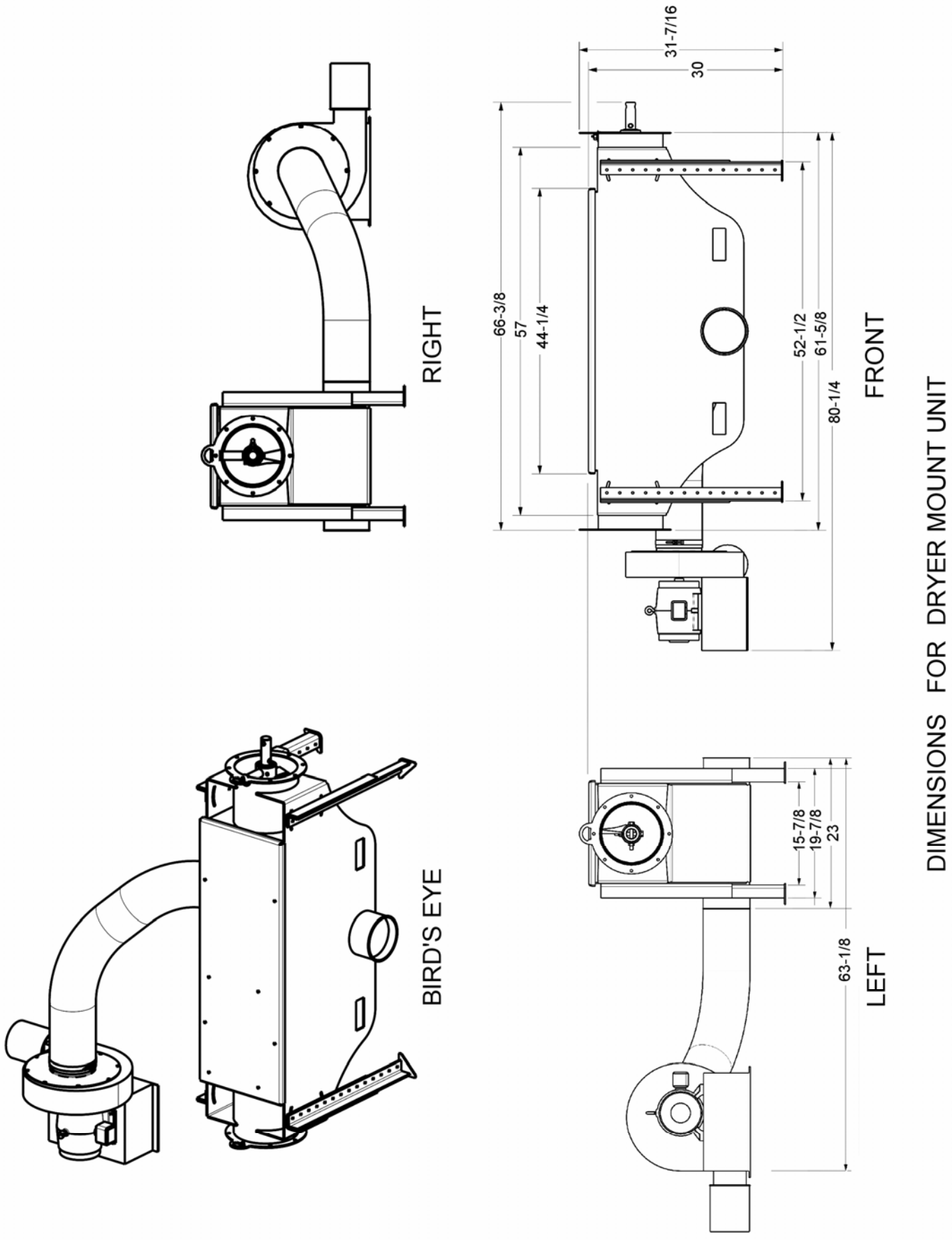
7.0 Specifications

MODEL	DRYER MOUNT	SELF-CONTAINED
Length (inches)	61 5/8	106
Height (inches)	30	47
Weight (pounds)	537	797
Frame		
Drive motor		3hp/1750 rpm
Blower motor	3hp/3450	3hp/3450 rpm

7.1 Dimensions for Self Contained Unit



7.2 Dimensions for Dryer Mount Unit



8.0 GRAIN CLEANER - PARTS LIST

ITEM	QTY	PART #	DESCRIPTION	REQUIRED ON	
				Dryer Mount	Self Contained
1	2	28-81064-6	T-Bolt Clamp, 1-1/4",C410c-15-125-S	X	X
2	1	11-67105-4	Outlet Hose 60” x 7”		
3			Screen Housing	X	X
4	4	11-68018-4	Removable Leg - Inside		
5	2	11-69206-5	Leg Assembly -Right	X	X
6	2	11-68858-6	Plug, Orange, 6.76 ID	X	X
7	2	11-69205-5	Leg Assembly -Left	X	X
8	1	96-69245-6	Protector, Self-Lube, 55P	X	X
9	1	14-71880-4	Spacer Plate - 4 Bolt 2", 2-3/16" BRG	X	X
10	1	11-81616-6	Fan Housing Assembly	X	X
11	1	11-81603-5	Fan Assembly	X	X
12	2	96-71821-6	SF 2 Bearing - 4 Bolt		X
13	1	11-67079-6	Sheave – 2MB25 X 1-1/8		X
14	1	11-68184-6	Sheave, 15.4 X 2-B X SK		X
15	2	11-19388-6	V-Belt, B x 61		X
16	1	11-67085-5	Belt Cover		X
17	1	11-67108-4	Inlet Vent Cover		X
18	1	11-17925-6	Bushing SK X 1-1/4 X 1/4 KW		X
19	1	11-74010-4	Step Key, 5/16 x 1/4-1-3/4"Lg T2		X

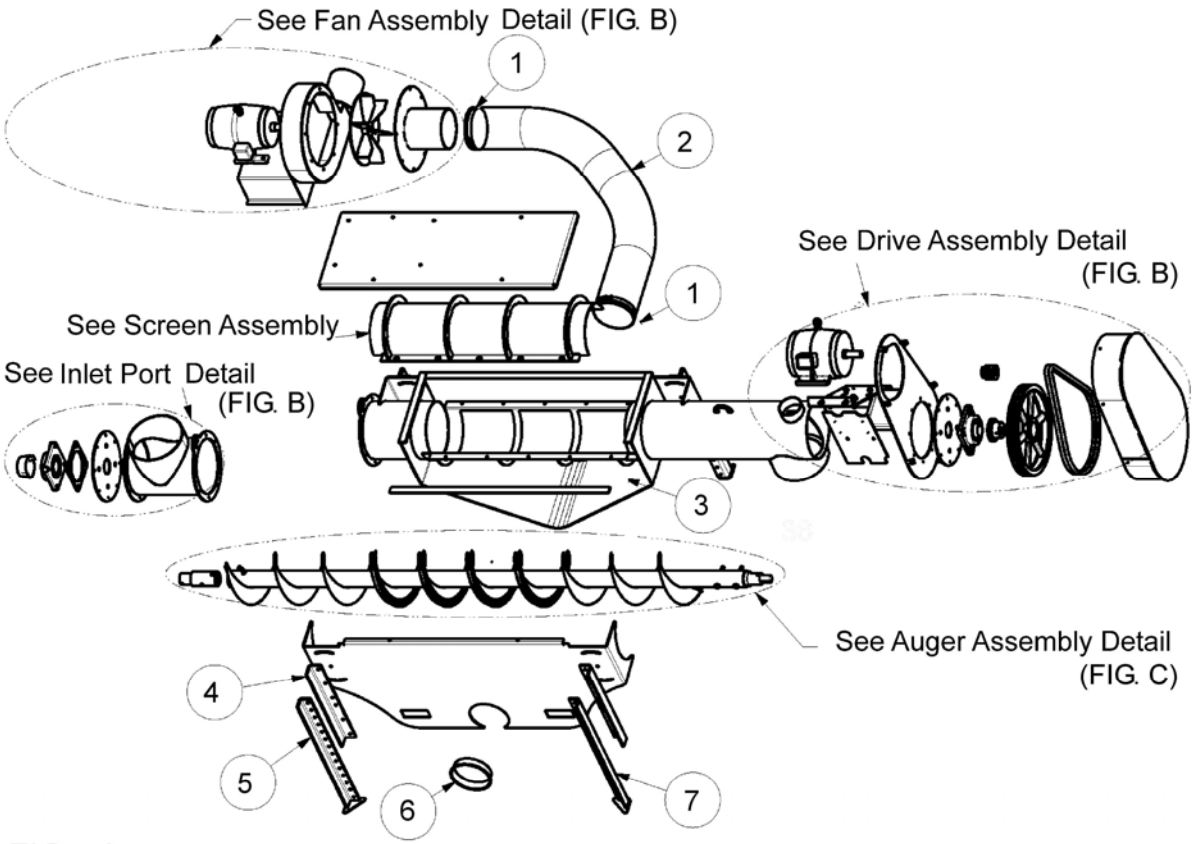


FIG. A GRAIN CLEANER - EXPLODED VIEW (Self Contained Unit Shown)

GRAIN CLEANER ASSEMBLY DRAWING – DETAILS , SCREEN ASSEMBLIES

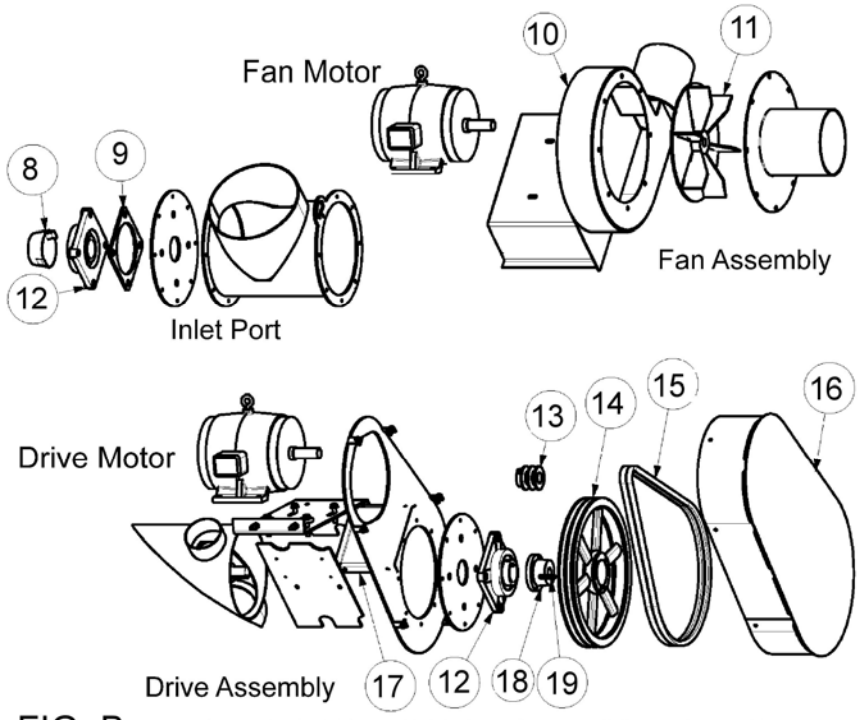
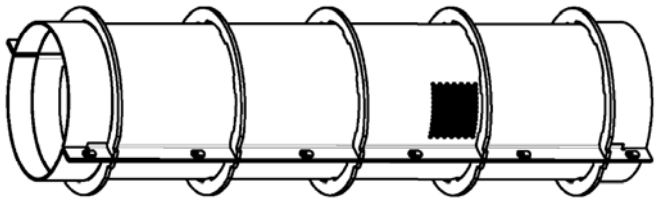


FIG B Fan,Inlet Port & Drive Assembly - Details

SCREEN ASSEMBLIES



To produce a clean uniform product, one of the most important elements is the selection of a screen. Walinga provides a wide selection of screens for the Grain Cleaner.

PART #	DESCRIPTION	FOR RECOMMENDED USE ON
11-73862-5	1/4 Round x 3/8 Slot x 11GA	Corn
11-73866-5	3/16 x1 Slot x 11GA	Edible Beans
11-73861-5	3/16 Round x 5/16 Slot x 12GA	Soybeans
11-73865-5	1/8 x 5/8 Slot x 14GA	Barley, Edible Beans - *Larger Than Normal*
11-73863-5	1/8 x 3/16 Slot x 16GA	Soybeans - *Smaller Than Normal*
11-73864-5	1/16 x 3/4 Slot x16 GA	Wheat , Barley

BRUSH AUGER ASSEMBLIES, MOTORS

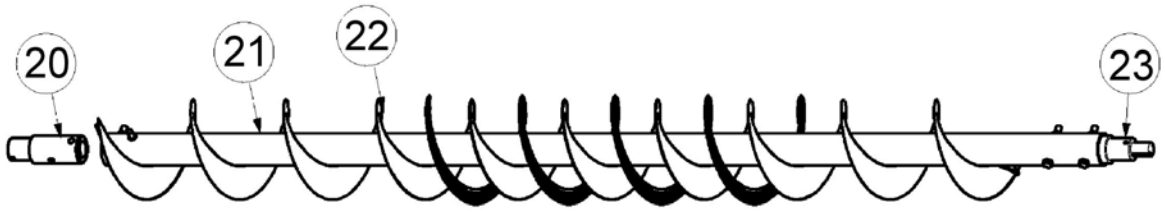
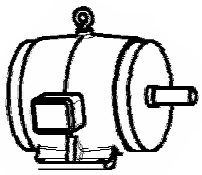


FIG. C Auger Assembly

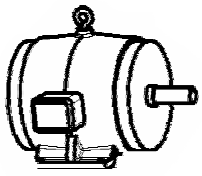
ITEM	QTY	PART #	DESCRIPTION	REQUIRED ON	
				Dryer Mount	Self Contained
20	1	14-02998-4	VA/BA Idler Shaft	X	X
21	1	11-71828-5	Auger c/w Brush 61-5/8" LG	X	
21	1	11-70321-5	Auger c/w Brush 91.25" LG		X
22	1	11-67081-6	Brush (Bristles)	X	X
23	1	14-29295-4	Motor Shaft with Keyway	X	X

DRIVE & FAN MOTORS



PART #	DESCRIPTION	USED ON
11-67847-6	3HP, 1750RPM	230V,1PH
11-69417-6	3HP, 1750RPM	230V/460V,3PH
11-19736-6	3HP, 1750RPM	575V,3PH
For Use on Self Contained Units Only		

DRIVE MOTORS



PART #	DESCRIPTION	USED ON
11-78022-6	3HP, 3450RPM	230V,1PH
11-78025-6	3HP, 3450RPM	230V/460V,3PH
11-78026-6	3HP, 3450RPM	3450,575V,3PH

FAN MOTORS

Grain Cleaner
Operator's Manual
and Parts

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