

Clipper Seed Cleaner

SITE PREPARATION MANUAL



A.T. Ferrell

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Since 1869

READ ME FIRST

Equipment Inspection

When your Clipper Seed Cleaner arrives, the unit should be inspected for possible shipping damage to the carton before it is unpacked and to the unit itself. Notify the carrier immediately and file a claim with THE CARRIER for any loss or damage. Shipping damage is not covered under the A. T. Ferrell warranty policy. You can contact A. T. Ferrell for assistance with any claim settlement for damage or loss incurred in shipping.

After unpacking and prior to installation, the delivered equipment should be inspected to insure that all the required materials are on hand, and the Clipper has all the ordered options and configurations. If discrepancies are determined, contact A. T. Ferrell Support at 800-248-8318.

DISCLOSURE NOTICE

This document contains information proprietary to A. T. Ferrell. The data contained herein, in whole or in part, may not be duplicated, used, or disclosed outside the recipient or purchaser for any other purpose other than to evaluate, install or operate the equipment described within the document.

DISCLAIMER

Although A. T. Ferrell has attempted to compile the material in this manual with accuracy, neither it, its employees, or its agents can make any warranty or assume any liability for damages resulting from the use of any information, methods or procedures described.



Safety Information

WARNING!

Periodic attention **MUST BE GIVEN** to tighten all bolts and screws. Check weekly for the first few months.

Tighten Pitman shoe bolts to 75 ft lb.

DO NOT OVER-TIGHTEN

WARNING!

Do not attempt to work on, clean or service this equipment or open or remove any protective cover, guard, grate or maintenance Panel until the power has been turned off and locked out and the machine has come to a complete stop.

WARNING!

Keep all shield and covers in place during operation. Failure to do so can lead to injury or death.

Replace shields after servicing

WARNING!

Do not attempt to service this equipment or open or remove any protective cover, guard, grate or maintenance Panel without the proper knowledge of the machine and its operation.

Attention: The Clipper unit and associated equipment to be installed require special handling, lifting and mounting requirements. Be sure that proper safety precautions are observed at all times. Safety equipment such as goggles, hard hats and fall restraint should be utilized. Lifting devices such as cranes, hoists straps, chains and hardware are to be inspected and verified to be able to handle equipment weights and dimensions. Please refer to Planning and Preparation section of this manual for additional information.

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Manual History

Rev. 1.0	Original release
Rev. 1.1	Updated air discharge requirements
Rev. 1.2	Updated Titan CFM requirements
Rev. 1.3	Added Ceres, removed 224, added manual history, updated logos, added 24 inch minimum ductwork

Section 1: Introduction

Scope

This manual is provided to assist those who prepare the site for installation of Clipper Seed clippers and equipment. Please read, understand, and follow this manual and all applicable federal, state and local requirements before installing the equipment.

This manual is intended to be a general guide for the installation of all metal frame Clipper cleaners. It is not intended to replace the specific manual and drawings related to your model.

Failure to install the Equipment per A. T. Ferrell specifications may void the warranty. Express permission must be obtained for alternative installation schemes and operation applications.

Technical Support

Installers having questions pertaining to the site preparation or installation requirements should contact A. T. Ferrell Technical Support at 800-248-8318.

Related Documents

- CLIPPER Operation and Users Guide for the specific model cleaner you have.
- Installation and assembly drawings for the specific model of Clipper Cleaner you have.
- Additional information and documentation is available at our web site at www.atferrell.com
- See CLIPPER Air Setup Video on our website.

Section 2: Planning and Preparation

Specific Model Specifications

CLIPPER CONQUEST 486 GRAIN-SEED CLEANER

No. of Screenways in Cleaner.....	4
Screen Size.....	54" x 86"
Extreme Height.....	107"
With Bottom Air.....	124"
Extreme Length.....	180"
Extreme Width.....	86"
Length on Floor.....	174"
Width on Floor.....	72-1/2"
Height Where Seed Enters.....	106"
With Bottom Air.....	123"
CFM Requirements - 1800 RPM (10hp).....	6000
CFM Requirements - 2100 RPM (15hp).....	7400
Shipping Weight (Without Bottom Air).....	6000
Shipping Weight (With Bottom Air).....	6500

Approximate Capacities (Bu. Per Hr.)*

A. Seeds & Grass.....	150
B. Seed Grain.....	250
C. Beans & Wheat.....	325
D. Market / Pre-Cleaning.....	1000

Horse Power Requirements:

Main Fan: 10 HP, 3 Phase, 230/460 Volt(1800 RPM) 60 HZ

Mechanical Vibratory Hopper: 1/2 HP, 230 Volt, AC (230 Volt, 3 phase input)

Eccentric / Auger3 HP, 3 Phase, 230 Volt input, AC

Bottom Fan (Optional).....3 HP, 3 Phase, 230 Volt, AC

CLIPPER CONQUEST 586 GRAIN-SEED CLEANER SPECIFICATIONS

No. of Screenways in Cleaner.....	5
Screen Size.....	15 Sections- 54" x 26"
Extreme Height.....	114"
Extreme Length.....	161-3/16"
Extreme Width.....	87-1/4"
Length on Floor.....	160"
Width on Floor.....	71½"
Height Where Seed Enters.....	113"
CFM Requirements - 1800 RPM (10hp).....	6000
CFM Requirements - 2100 RPM (15hp).....	7400
Shipping Weight (Without Bottom Air).....	7000
Shipping Weight (With Bottom Fan).....	7500
Approximate Capacities (Bu. Per Hr.)*	
A. Seeds & Grass.....	150
B. Seed Grain.....	250
C. Beans & Wheat.....	500
D. Market / Pre-Cleaning.....	1500

Horse Power Requirements:

Main Fan: 10 HP, 3 Phase, 230/460 Volt, 60 Hz, 1800 RPM

Mechanical Vibratory Hopper: 1/2 HP, (460 Volt, 60 Hz, 3 Phase

Eccentric/Auger: 3 HP, 3 Phase, 230/460 Volt, 60 Hz, 1800 RPM

CLIPPER NEW GENERATION 668 GRAIN-SEED CLEANER

No. of Screenways in Cleaner.....	6
Screen Size (18 sections).....	54" x 26-1/4"
Extreme Height.....	107"
With Bottom Air.....	124"
Extreme Length.....	180"
Extreme Width.....	86"
Length on Floor.....	174"
Width on Floor.....	72-1/2"
Height Where Seed Enters.....	106"
With Bottom Air.....	123"

CFM Requirements - 1800 RPM (10hp).....	9,300
CFM Requirements - 2100 RPM (15hp).....	11,000

Shipping Weight (Without Bottom Air).....	7650
Shipping Weight (With Bottom Air).....	9450

Approximate Capacities (Bu. Per Hr.)*

A. Seeds & Grass.....	200-375
B. Seed Grain.....	400-650
C. Beans & Wheat.....	600-900
D. Market / Pre-Cleaning.....	1200-1800

Horse Power Requirements:

Main Fan: 10 HP, 3 Phase, 230/460 Volt(1800 RPM) 60 HZ
Main Fan: 15 HP, 3 Phase, 230/460 Volt(1800 RPM) 60 HZ
Main Fan: 15 HP, 3 Phase, 575 Volt(1800 RPM) 60 HZ
Main Fan: 10 HP, 3 Phase, 208/380 Volt(1500 RPM) 50 HZ
Main Fan: 15 HP, 3 Phase, 208/380 Volt(1500 RPM) 50 HZ

Mech Vibratory Hopper: 1/2 hp, 180 Volt, DC (230 Volt, 1 phase input)
Mech Vibratory Hopper: 1/2 hp, 230 Volt, AC (230 Volt, 3 phase input)
Mech Vibratory Hopper....1/2 hp, 460 Volt, AC (460 Volt, 3 phase input)
Mech Vibratory Hopper....1/2 hp, 575 Volt, AC (575 Volt, 3 phase input)
Hopper.....1/2 HP, 90 Volt, DC (115 Volt, 1 Phase)
Hopper Fixed Speed.....1/2 HP, 230 Volt, 3 Phase, AC
Hopper Fixed Speed.....1/2 HP, 460 Volt, 3 Phase, AC
Hopper Fixed Speed.....1/2 HP, 575 Volt, 3 Phase, AC

Eccentric / Auger - E Series...3 HP, 3 Phase, 230/460 Volt, AC
Eccentric / Auger - E Series...3 HP, 3 Phase, 575 Volt, AC
Eccentric / Auger3 HP, 3 Phase, 230 Volt input, AC
Eccentric / Auger3 HP, 3 Phase, 460 Volt input, AC
Bottom Fan (Optional).....3 HP, 3 Phase, 230 Volt, AC
Bottom Fan (Optional).....3 HP, 3 Phase, 460 Volt, AC

CLIPPER TITAN 44 SEED CLEANER

No. of Screenways in Cleaner.....	8
Screen Size (32 Sections).....	54" x 26.25"
Extreme Height.....	161.48"
Extreme Length.....	198.58"
Extreme Width.....	91.33"
Length on Floor.....	197.17"
Width on Floor.....	71.31"
Height Where Seed Enters.....	160.38"
CFM Requirements - 1800 RPM (10hp).....	9,300
CFM Requirements - 2100 RPM (15hp).....	11,000
Shipping Weight (Without Bottom Air).....	11,000
Shipping Weight (With Bottom Air).....	12500
Approximate Capacities (Bu. Per Hr.)*	
A. Seeds & Grass.....	325-650
B. Seed Grain.....	650-1300
C. Beans & Wheat.....	1300-2000
D. Market / Pre-Cleaning.....	2500-3500

Horse Power Requirements:

Main Fan: 15 HP, 3 Phase, 230/460 Volt, 60 Hz, 1800 RPM

Main Fan: 15 HP, 3 Phase, 200/380 Volt, 50 Hz, 1500 RPM

Main Fan: 15 HP, 3 Phase, 230/460 Volt, 60 Hz, 1800 RPM

Mechanical Vibratory Hopper: 2 AMP, 1 Phase, 115 Volt, 60 Hz, AC

Mechanical Vibratory Hopper: 1/2 HP, AC, 230 Volt,(230 Volt, 50 Hz)

Mechanical Vibratory Hopper: 1/2 HP, AC, 230 Volt,(230 Volt, 60 Hz, 3 phase Input)

Mechanical Vibratory Hopper: 1/2 HP, AC, 460 Volt,(460 Volt, 60 Hz, 3 Phase Input)

Eccentric/Auger: 5 HP, 3 Phase, 230/460 Volt, 60 Hz, 1800 RPM

Eccentric/Auger: 5 HP, 3 Phase, 230 Volt, 60 Hz, 1800 RPM (230 Volt, Inverter)

Eccentric/Auger: 5 HP, 3 Phase, 460 Volt, 60 Hz, 1800 RPM (460 Volt, Inverter)

Eccentric/Auger: 5 HP, 3 Phase, 200/380 Volt, 50 Hz, 1500 RPM

Bottom Fan (Optional): 3 HP, 3 Phase, 230 Volt, 60 Hz, 1800 RPM

Bottom Fan (Optional): 3 HP, 3 Phase, 200 Volt, 50 Hz, 1500 RPM

Bottom Fan (Optional): 3 HP, 3 Phase, 460 Volt, 60 Hz, 1800 RPM

*** All Capacities will vary depending on variety of grains/seeds cleaned, amount of foreign material removal and moisture content.**

CLIPPER CERES 686-2-4 SEED CLEANER

No. of Screenways in Cleaner.....	6
Screen Size...(18 Sections).....	54" x 26.25"
Extreme Height.....	132.64"
Extreme Length.....	171.41"
Extreme Width.....	87.64"
Length on Floor.....	170.00"
Width on Floor.....	71.51"
Height Where Seed Enters.....	131.53"

CFM Requirements - 2000 RPM (BACK FAN)..... 8400-11,000

Shipping Weight (Without Bottom Air)..... 11,000

Shipping Weight (With Bottom Air)..... 12500

Approximate Capacities (Bu. Per Hr.)*

Seeds & Grass.....	300
Seed Grain.....	400-700
Beans & Wheat.....	600-1000
Market/Pre-Cleaning.....	2000- 3000

Horse Power Requirements:

Main Fan..... 15 HP, 3 Phase, 230/460 Volt, 60 Hz, 1800 RPM

Main Fan..... 15 HP, 3 Phase, 200/380 Volt, 50 Hz, 1500 RPM

Main Fan..... 15 HP, 3 Phase, 230/460 Volt, 60 Hz, 1800 RPM

Mechanical Vibratory Hopper..1/2 HP, AC, 200 Volt,(200 Volt, 50 Hz, 3 Phase Input)

Mechanical Vibratory Hopper..1/2 HP, AC, 230 Volt,(230 Volt, 60 Hz, 3 Phase Input)

Mechanical Vibratory Hopper..1/2 HP, AC, 460 Volt,(460 Volt, 60 Hz, 3 Phase Input)

Eccentric/Auger5 HP, 3 Phase, 230/460 Volt, 60 Hz, 1800 RPM

Eccentric/Auger5 HP, 3 Phase, 230 Volt, 60 Hz, 1800 RPM (230 Volt, Inverter)

Eccentric/Auger5 HP, 3 Phase, 460 Volt, 60 Hz, 1800 RPM (460 Volt, Inverter)

Eccentric/Auger5 HP, 3 Phase, 200/380 Volt, 50 Hz, 1500 RPM

Bottom Fan (Optional)..3 HP,3 Phase, 230 Volt, 60 Hz, 1800 RPM

Bottom Fan (Optional)..3 HP,3 Phase, 460 Volt, 60 Hz, 1800 RPM

Bottom Fan (Optional)..3 HP,3 Phase, 200Volt, 50Hz, 1500RPM

Bottom Fan (Optional)..3 HP,3 Phase, 380Volt, 50Hz, 1500RPM

*** All Capacities will vary depending on variety of grains/seeds cleaned, amount of foreign material removal and moisture content.**

Location

Careful consideration must be given to selecting the proper location for the cleaner or the best results in efficiency and convenience cannot be expected. Unit must be installed inside a weatherproof structure away from rain, snow and wind. All models should be fastened to a solid, level floor or foundation. **THE ENTIRE BASE OF THE MACHINE SHOULD BE SUPPORTED. 1/2-8 grade 5 bolts are recommended. If an existing machine is being replaced, in almost all cases the exiting mounting stand will not be built heavy enough to support the new machine being installed.** The action of the shaker mechanism must be transmitted to the commodity being cleaned, not the building.

Screens are inserted and withdrawn at the front of the cleaner. Allow clearance for the operator to make screen changes. The individual screen size for larger machines is **26" x 54"**, the Model 334 is **34" x 34"**, and the 324 and 224 are **24-1/2" x 22-1/4 "**. On larger cleaners reaching the front door and screens in the top shoe requires the operator be raised in position to have access. Be sure that some means of elevating, supporting and preventing the potential fall of the operator is in place. Step ladders do not provide adequate support in many cases when removing screen hooks and pulling screens and ball trays. These require more leverage than a step ladder can provide as grain can lodge over time in the screen ways that support these items and prevent their easy removal. There are many different types of elevated working platforms. Make sure the one you select provides safe, easy access to the machine, while providing proper load capacity, height of elevation, mobility and stability. Remember that fall restraint harnesses and cabling may still be necessary when performing service, operation or inspection of the cleaner.



Allow room around the cleaner for the operator to make adjustments and service the machine. Do not install spouting in a position that will interfere with the controls or maintenance. Eventually worn parts must be replaced so allow room to pull all shafts and spouts.

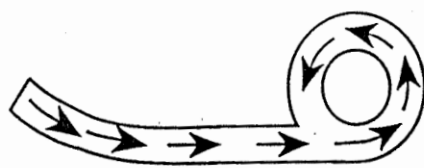
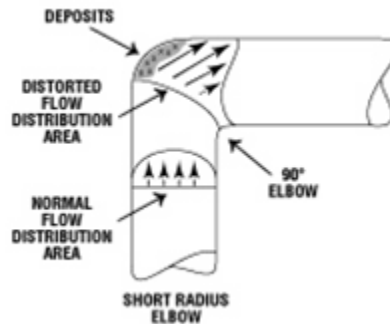
The cleaned grain discharges from the underside of the cleaner, so it should be placed on a floor with a pit or basement underneath so that an elevator with its receiving spout three or four feet below the floor can be used to raise the grain. If the elevator cannot be carried below the floor, and there is sufficient headroom, the cleaner may be placed on a solid platform high enough above the floor to allow the grain to flow into the elevator or sacking spout. Screenings and air siftings discharge from built-in spouts in the cleaner. Provision must be made to handle this material.

The Cleaner hopper is a feeder mechanism - not a storage bin. Cleaners work best when equipped with a surge bin above the hopper to provide a steady supply of the commodity to the hopper. The grain supply to the surge hopper may be by spout from bins located on the floor above or by means of an elevator from a sink or dump hopper on the same level or lower than the cleaner. Spouts must have a fall of at least seven feet in ten to provide free flow and should be carried directly at an angle instead of making right angle jogs. **The feed hopper works best when it is fed across the width of the hopper inlet opening.**

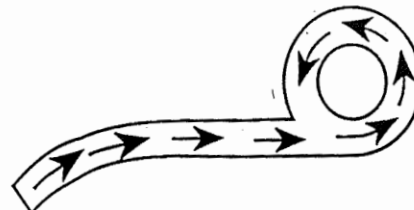
AIR DISCHARGE

The proper operation of the Clipper Seed Cleaner requires the air discharge system connected to it be properly sized and correctly designed. An improperly sized and designed system will create back pressure and internal turbulence that will result in poor aspiration of the product. In order to design the system and choose the proper components it is necessary to calculate the total pressure drop in the line. This should be completed by an approved HVAC technician familiar with dust control systems in an agriculture seed cleaning operation. It is necessary that the air system be able to work with the CFM output from the cleaner. (See individual model CFM requirements) **It is recommended that ductwork of 24 inch minimum diameter be used.**

A properly designed installation includes ductwork that has as few bends as possible. The cleaner should be placed with the fan discharge opening facing, and a short distance away from an outside wall. All transitions must be free from obstructions and sloped to not create excessive pressure loss. Any change in direction or the velocity of the air flow creates back pressure and turbulence such as with tight turns. It may allow trash and debris to settle and form deposits in tight corners that will eventually clog the duct. Dust particles can also cause erosion at these points by hitting the duct. Excessive noise can also result. **A standard rule to follow is that the inside radius of any elbow should be at least two and one half times the recommended diameter of the pipe.** Avoid putting screws through ducting and ensure any slip joints are made to go with the airflow. Make sure that every single part of the duct is smooth and clear.



CORRECT



INCORRECT

The final source of trouble is the cyclone or dust house itself. The cyclone, or whatever dust collector used, should be properly sized, be correctly installed, and be suitable for the maximum air output in question. Undersized cyclones give too much back pressure and result in bad aspiration at the cleaner. Oversized cyclones, on the other hand, give poor dust separation. If it is either too large or too small, or isn't designed

properly, or has a cap over the pipe discharging from the top of it, or in some other way causes back pressure or pressure drop, or turbulence that interferes with the cycloning action of the air inside the collector, the cleaner air system or the collector system may not function properly.

Some seedsmen build their own dust houses. If a house is properly designed and is large enough, it will serve the purpose well. Space does not permit detailed explanations of the following eight basic rules governing good dust house construction:

1. Dust house should be deep.
2. The entry duct should be horizontal.
3. The entry duct should be below the pitch of the roof.
4. The entry duct should enter along one side.
5. The exhaust opening should be greater than the entry area.
6. The exhaust pipe should extend below the entry duct.
7. The exhaust pipe cover should not restrict opening of exhaust pipe.
8. The clean-out opening should be as large as possible.

A common mistake is the use of a single dust house to handle the air from two separate cleaners. If the individual air streams from each cleaner were adjusted exactly the same, it is possible that a single dust house or cyclone would be satisfactory, however, so many times the plant will be cleaning large seed on one cleaner and small seed on the other, and the air streams from the fans will seldom be identical. If one cleaner is operating and the other is idle, there will probably be a blow-back into the air ducting of the inoperative machine. This will either plug that cleaner's piping with dust or cause the dust to be blown back into the work room. It is impossible to adjust one cleaner in this situation without affecting the standing adjustment of the other cleaner.

Note: Avoid sharp bends and compound curves as they reduce the velocity and encourage back pressure.

Note: Install the cyclone as near to the cleaner as possible to eliminate length of air travel and extra cost for excess ducting.

Note: The Eclipse 324, 334 and AGM224 bottom fan **DOES NOT** develop sufficient velocity for a cyclone-type collector to be used because of back pressure created by filters or cyclones. An in line booster fan can be used to provide the additional air required.

Weights and Dimensions

Please use the following chart to determine the total weight and dimension of the unit you are installing. For specific information on your machine, visit our web site at www.atferrell.com

Model	Weight*	Dimension* HxWxL
Titan with bottom fan	12,500lb	162 x 92 x 199 Inches
Ceres 686-2-4	12,725	132.6 x 87 x 173
Hi-Cap 768MC & PC	9,500lb	138 x 88.5 x 189 Inches
Conquest 1386	4,600lb	99 x 87.5 x 155 Inches
Conquest 1360	4,600lb	99 x 89 x 136 Inches
Conquest 586	7,000lb	114 x 87.5 x 161 Inches
Conquest 486	6,500lb	99 x 87.5 x 155 Inches
Prelude 526	3,800lb	91 x 78.5 x 91.5 Inches
Eclipse 334**	1,800lb	85 x 53 x 77 Inches
Eclipse 324**	850lb	62.5 x 40 x 57 Inches
AGM 224**	800lb	62 x 40 x 54 Inches

*weight and dimension may vary by specific model and options

**weight shown is without shipping crate

Moving the Cleaner / Lifting Requirements

1. Remove the carton and / or packaging material and unbolt the wooden pallet from the unit if present. Do not use a shipping pallet as the cleaner base as it will not provide adequate support and stability for cleaner operation.
1. Use a rigid bar and chains with hooks to move the cleaner by lifting into place using provided lifting eyelets.
2. Note the positioning of the air, seed and debris discharges when positioning the unit to its installation point.
3. Use a hoist, crane or fork lift suitable to support the weight and positioning of the unit. All lifting hardware used must meet or exceed the capabilities of the method used.



Warning

Lifting equipment can be hazardous and must be rated to lift the weight of the cleaner. Equipment could fall and cause severe injury or death. Stand clear from the cleaner when lifting or lowering.

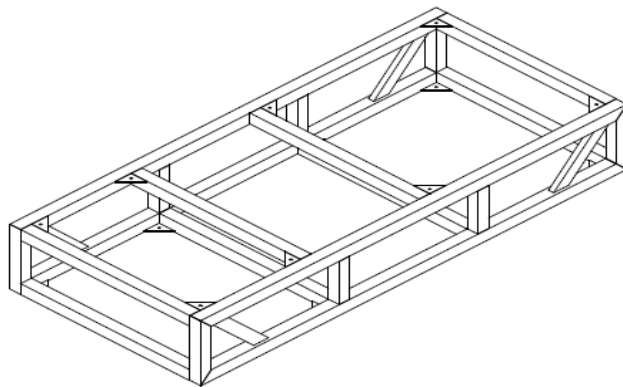
Mounting Requirements

Clipper cleaners are designed and tested to operate in a smooth and vibration free fashion from the factory. But the rocking action of the shoes in the cleaning process does translate to a rocking force on the structure that it is mounted upon. Because of this it is imperative that the clipper cleaner be firmly mounted to a level foundation that will support the weight of the unit as well as provide rigid support to its mechanical movement. It is unacceptable to leave the cleaner on the shipping pallet, unbolted from the floor or mounted on a structure or frame that provides little to no stability.

The best way to provide support to your new Clipper cleaner is to place it on a level concrete foundation that the bottom of the frame rests on entirely. Lag bolts should then firmly fasten it down using provided bolt holes in the frame.

If the clipper cleaner is off the floor in an elevated setting it must be done so that a similar rigid structure is used that provides the same support and stability. The end user is responsible for the finished design of the structure, but A. T. Ferrell can provide assistance and guidance based upon past events and engineering suggestions.

Below you will find an example of a metal frame base that provides support for the unit both vertically as well as front / back and side / side motion. Note that all vertical supports should be located under the legs of the cleaner and need to be rigidly supported by level horizontal supports to support the rocking motion of the cleaning action.



Keep in mind that the higher the cleaner is located from a solid base, the structure supporting the cleaner must be equally reinforced. This is especially true when installing the cleaner in an upper level of a facility or in an inadequate building structure. A.T. Ferrell makes stands for most of its cleaners. Please call and ask about availability.

Electrical Requirements

General Wiring Requirements

- All installations must conform to NFPA (National Fire Protection Agency) codes and regulations, along with all applicable national, state and local code requirements.
- NEC CLASS II, DIVISION II, GROUP G INSTALLATION
- The motors and drive controls supplied with the cleaner meet the requirements of the NEC for this type of installation. All field wiring and electrical components must adhere to the NEC and/or local electrical code requirements, and are not the responsibility of the manufacturer.
- The following instructions apply to CLIPPER Conquest cleaner installations where National Electric Code requirements of Class II, Division II, Group G (T E F C motors, NEMA 4 enclosures) apply.
- Disconnects, motor starter/relay, all field wiring and electrical components must adhere to the NEC and/or local electrical code requirements, and are not the responsibility of A. T. Ferrell Company hereafter referred to as the manufacturer.
- Low voltage wiring must not be combined with high voltage power wiring in common conduits. Movement of factory installed electrical components can affect warranty.
- All wiring must be accomplished by a qualified electrician.
- All wiring must be color coded and/or labeled to facilitate equipment checkout and service.
- All wires must be pulled and connected as a continuous run. No splices or field box terminal connectors should be used.

Ground Requirements – Main Electrical Panel Earth Ground

Earth ground is required for proper equipment operation. The Clipper cleaner and each component associated with the system such as motor controllers and inverters must be connected to the ground bus bar of the main electrical panel to provide a single reference point for earth ground.

- The ground bus bar will be connected to a copper clad ground rod driven no less than 8 feet into the ground, and meet the National Electrical Code requirements.
- Ensure the integrity of the ground rod in relation to the electrical service pole is maintained.

CLEANER DRIVES

All motors and inverters must be ordered to the proper voltage and frequency for use at the facility.

Main Fan Motor

- The main fan drive consists of a 10 or 15HP motor and belt drive. Wiring and motor controls are not supplied by A. T. Ferrell Company.

Mechanical Vibratory Hopper Drive TEFC (460 Volt)

- The hopper drive consists of a 1/2 Hp motor and AC inverter. Wiring between the drive motor and AC inverter is not supplied by A. T. Ferrell Company (See wiring drawing). The AC inverter has not been mounted on the machine by the factory
- The motor and controller have been factory tested and adjusted. No further adjustment of the motor controller should be required at the installation site. The instruction manual for the AC inverter is shipped with each cleaner for reference and should be referred to if control difficulties should arise. Low voltage wiring must not be combined with high voltage power wiring in common conduits.

Eccentric / Augers Drive (Standard)

- The eccentric drive consists of a 3 Hp motor and inverter. Wiring is not supplied by A. T. Ferrell Company.

Glossary

Ampere or Amps

A measuring unit for electric current in a circuit.

AC

Alternating current, also abbreviated VAC.

ACC

AC Common, the current carrying conductor at ground potential.

ACH

AC Hot, the current carrying conductor at 120VAC above ground potential.

CFM

Cubic Feet Per Minute, is a unit of volumetric capacity of airflow produced by in this case, the centrifugal back fan of the cleaner.

Ground

A reference point for all device grounds located at the main power panel ground bus.

HZ

Hertz, a unit of measure for frequency (cycles per second).

L1, L2, L3

Refers to phase 1, 2 & 3 (AC Hot) of the AC circuit at the electrical panel.

N.E.C.

National Electric Code

N.F.P.A.

National Fire Protection Agency.

U.L.

Underwriter's Laboratories.

Notes:
