

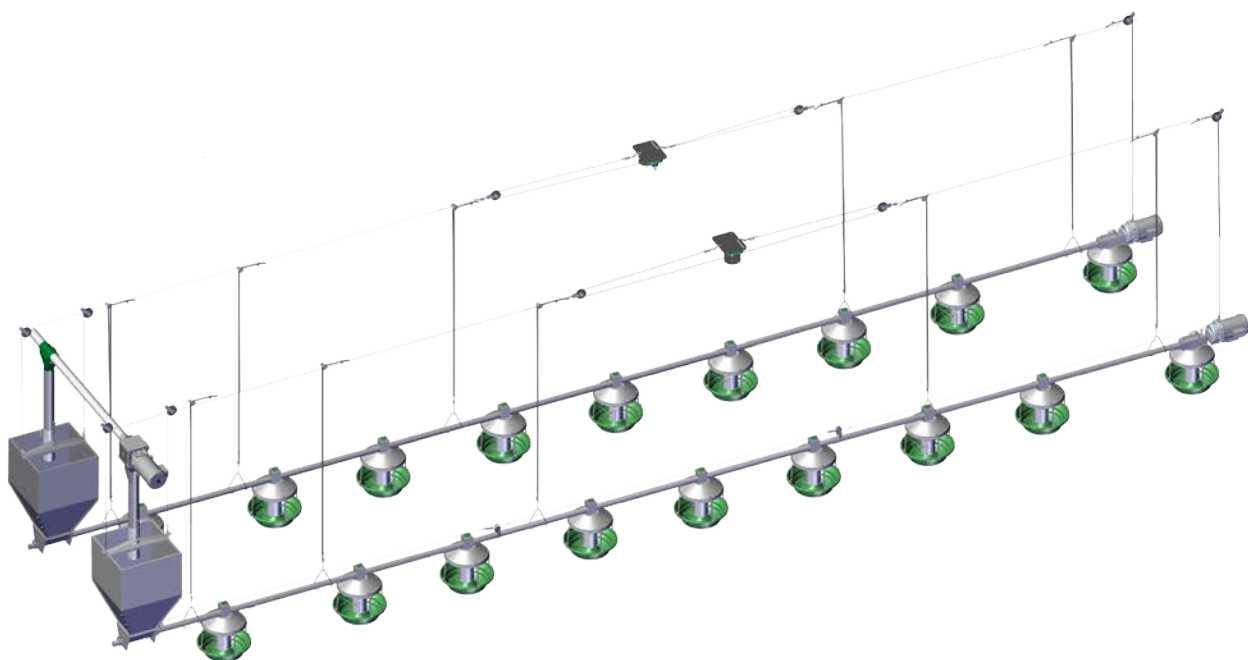


Adult Turkey Feeder and Feed Line Systems

Adult Turkey Pan Feeder - 460217

Turkey End Control Pan - 460250

Installation & Operation Manual



990142
Rev B

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VAL PRODUCTS, INC. WARRANTIES

MANUFACTURED PRODUCTS STANDARD WARRANTY:

Val Products, Inc. (Valco) warrants that Valco-manufactured products (other than the products subject to an extended warranty set forth below) will be free of defects in material and workmanship, when used in a usual and customary fashion, for a period of one (1) year from the date of original purchase from an authorized Valco distributor or three (3) years from the date of original purchase from Valco, whichever period expires first. If Valco is notified that such a defect exists within that time and, upon inspection, agrees that the product is defective, Valco will, at its option, (a) repair or replace (EXW Valco's plant) the defective product, or (b) refund to the original purchaser (Valco's distributor) the original purchase price paid for the defective product less any installation, shipping, or other charges associated with the original purchase. All defective products must be returned to a Valco designated location for evaluation. Valco's determination as to whether the product is defective is final. See the General Conditions and Limitations.

<u>Product</u>	<u>Extended¹ Warranty Coverage Period</u>	<u>Limited² Warranty Coverage Period</u>	<u>Total Warranty Coverage Period (Extended + Limited)</u>
VR & VBL series drinkers	5 years	5 years	10 years
VQ, VA & VBR series drinkers	2 years	3 years	5 years
Roll-formed Tube	3 years	7 years	10 years
Coreless auger ³	3 years	7 years	10 years
FUZE [®] feed pans	2 years	3 years	5 years
Fiberglass fan housings	Lifetime ⁴	na	Lifetime ⁴
Aluminum fan blades	Lifetime ⁴	na	Lifetime ⁴
Z-Fan [™] housings ⁵	7 years	na	7 years

Explanations/Conditions of above listed footnotes for VAL-CO warranties:

1. Extended Warranty Coverage: Valco warrants products subject to an extended warranty (above) will be free of defects in material and workmanship, when used in a usual and customary fashion, for the period of time as stated from the date of original purchase by an authorized Valco distributor. If Valco is notified that such a defect exists within that time and, upon inspection, agrees that the product is defective, Valco will, at its option, (a) repair or replace (EXW Valco's plant) the defective product, or (b) refund to the original purchaser the original purchase price paid for the defective product less any installation, shipping, or other charges associated with the original purchase. All defective products must be returned to a Valco designated location for evaluation. Valco's determination as to whether the product is defective is final. See the General Conditions and Limitations.
2. Limited warranty coverage products will be provided at a charge rate of 50% off the Valco list price at the time the warranty claim is made known to the company in writing and is subject to Valco's standard warranty policy conditions and limitations.
3. Coreless Auger warranty is voided if conveying materials with greater than 18% moisture content.
4. Lifetime warranty for fiberglass fan housings and cast aluminum blades is limited to products that prove to be defective in workmanship or material and become unusable over the life of the structure where the product was originally installed, provided that the product has remained undisturbed in its original installation location, and will be repaired or replaced, at Valco's option, at no charge (excluding labor of removal and installation and shipping), EXW Valco's plant.
5. Z-Fan housings are warranted for 7 years against rust through when employed in poultry housing ventilation applications only. Fan components excluding housing are covered by Valco's standard warranty.

VAL PRODUCTS, INC. WARRANTIES - continued

General Conditions and Limitations

1. The Product must be installed and operated in accordance with instructions published by Valco or the warranty will be void.
2. Warranty will be void if all components of the product or system are not original equipment supplied by the manufacturer.
3. Products not manufactured by Valco and supplied by outside manufacturers (such as, but not limited to, certain electrical motors, certain controls, gas valves, etc.) are warranted separately by the respective manufacturer and only to the extent of the manufacturer's warranty.
4. Valco feed bins are designed to be used with free-flowing agricultural feed materials with a density proximate to 40 pounds (18.15 kilograms) per cubic foot (.03 cubic meter). Soybean meal, meat scraps and other materials, both agricultural and industrial, are not free flowing and may significantly exceed recommended material density. Feed bin structural failure from their use will void this warranty.
5. Valco does not warrant against feed bin structural failure, or bin unloading components such as flexible auger transitions and boots that arises due to the addition of aftermarket devices attached to, or installed within or attached to the feed bin structure for the purpose of enhancing feed material flow and/or the elimination of feed bridging issues.
6. Warranty applies only to products used in applications as originally intended by Valco – other applications in industry or commerce are not covered by the Warranty. Valco products are expressly not designed or authorized for use in any applications where intended to sustain or support human life or any other application where the failure of the product could result in personal injury or death.
7. Malfunctions resulting from misuse, abuse, mismanagement, negligence, alteration, accident, lack of proper maintenance, lightning strikes, electrical power surges, or electrical power interruption shall not be considered defects under the Warranty. Corrosion, material deterioration and/or equipment malfunction caused by or consistent with the excessive additions of chemicals, minerals, sediments or other foreign elements with the product shall not be considered defects under the Warranty.
8. VALCO WILL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR ANY KIND OF SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR CONTINGENT DAMAGES INCLUDING, BUT NOT LIMITED TO, LOST OR DAMAGED PRODUCT, GOODS OR LIVESTOCK, COSTS OF TRANSPORTATION, LOST SALES, LOST ORDERS, LOST INCOME, INCREASED OVERHEAD, LABOR AND INCIDENTAL COSTS AND OPERATIONAL INEFFICIENCIES. IN NO EVENT SHALL THE WARRANTY LIABILITY EXCEED THE INVOICED PRICE OF THE PRODUCT TO THE ORIGINAL PURCHASER.
9. THE WARRANTIES SET FORTH ABOVE CONSTITUTE VALCO'S ENTIRE AND SOLE WARRANTY. VALCO EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES AS TO THE MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, DESCRIPTION OF QUALITY OF THE PRODUCT FURNISHED, AND ANY OTHER WARRANTY ARISING BY OPERATION OF LAW, CUSTOM OR USAGE.
10. Valco denies any authorization of any distributor, dealer, agent, or employee to modify, extend, or otherwise alter the conditions of any warranty in addition to, or in lieu of, those conditions and terms expressly stated above. Any exceptions not noted in the body of the Warranty must be authorized in writing by an officer of Valco. Valco reserves the right to change or delete models, or change specifications at any time without notice or obligation to improve previous products.

Effective April 1, 2020

Introduction

It is important that you read all instructions and pay particular attention to all SAFETY information.
(Measurements throughout the manual are given in both english then metric units with brackets.)



= IMPORTANT INFORMATION — Be sure to read!



= NOTE! This may help you.



= CHECK DETAILS OF ALL REQUIREMENTS OR PROCEDURES BEFORE PROCEEDING.



= PROHIBITED — Do NOT do!



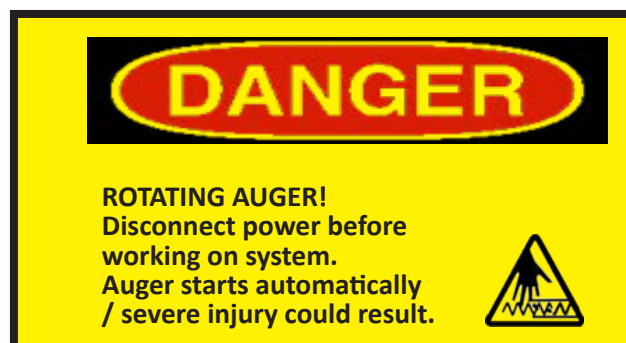
= DANGER — imminent hazard, if ignored serious injury or death WILL occur

= WARNING — probable hazard, if ignored serious injury or death COULD occur

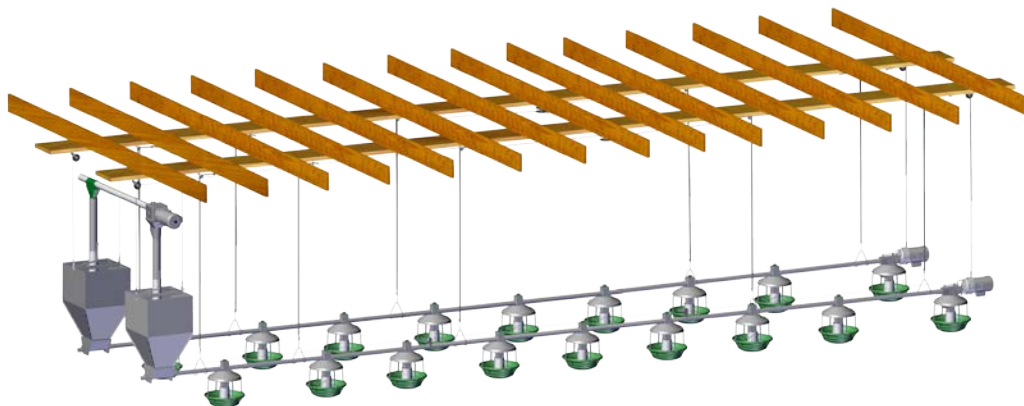
= CAUTION — potential hazard, if ignored, minor or moderate injury MAY occur



= WARNING WITH RELATED GRAPHIC



An Overview of Adult Turkey Feeder System



SAFETY INFORMATION



1. Disconnect electrical power before inspecting or servicing this equipment.
2. Keep hands and tools away from exposed auger.
3. All electrical wiring should be done by a qualified electrician in accordance with Local and National Electrical Codes.
4. Keep all covers and guards in place.
5. Ground all electrical equipment.



Feed Pan Features

The PTF Adult Turkey Pan Feeder

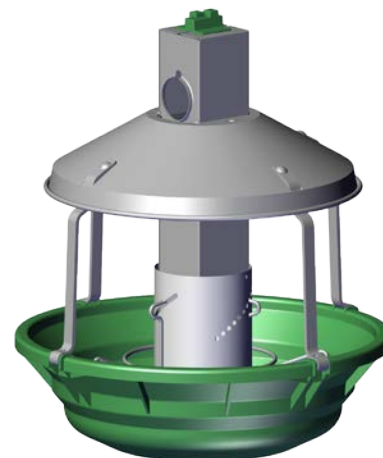
The VAL-CO® turkey feeders and drinkers provide top performance and results that save you time and money. The PTF Turkey Pan Feeder is adjustable and easy to handle giving excellent results. The ample and deep poly pan offers sufficient space for the growing turkeys, avoids feed waste and can easily be removed, exchanged or cleaned.

Features:

- Self-leveling which allows feeder to swing, provides less bruising.
- Steel feed level tube can be adjusted in seconds.
- Even feed distribution.
- Extra strength construction designed to withstand the movements of full-grown turkeys.

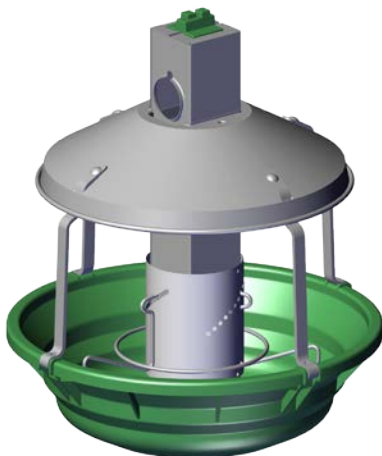
Recommended Density per Pan:

- Toms: 45-50
- Hens: 70-80
- (Densities will vary based upon finish weight.)

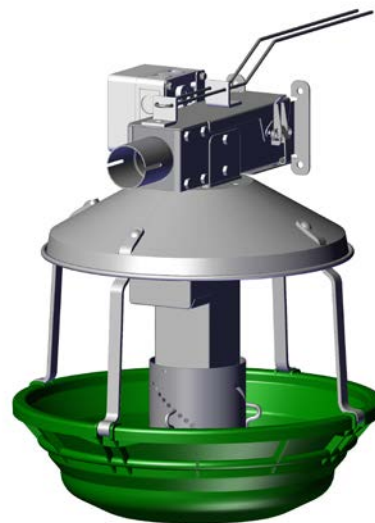


Glossary

460217
TURKEY PAN FEEDER
BASIC FEEDER



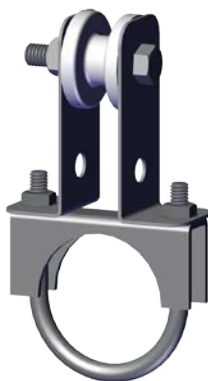
460250
END-HOUSE
DIRECT DRIVE UNIT
CONTROLS FEED FLOW



460022
CLAMP BRACKET



460075
INSULATOR CLAMP BRACKET



720220
TUBE HANGER



VS342
ADJUSTMENT BRACKET



Winch System Installation

General Information

Please read this entire manual before installing the feed system. It provides pertinent information on the VAL-CO® adult turkey feeder, turkey control pan, winch system, hopper, auger/feed line and the anti-roost system. The system is designed in a straight line for using an auger with 10' smooth tubes to deliver feed to the feed pans with a choice of hand or electric winches.

Option 1

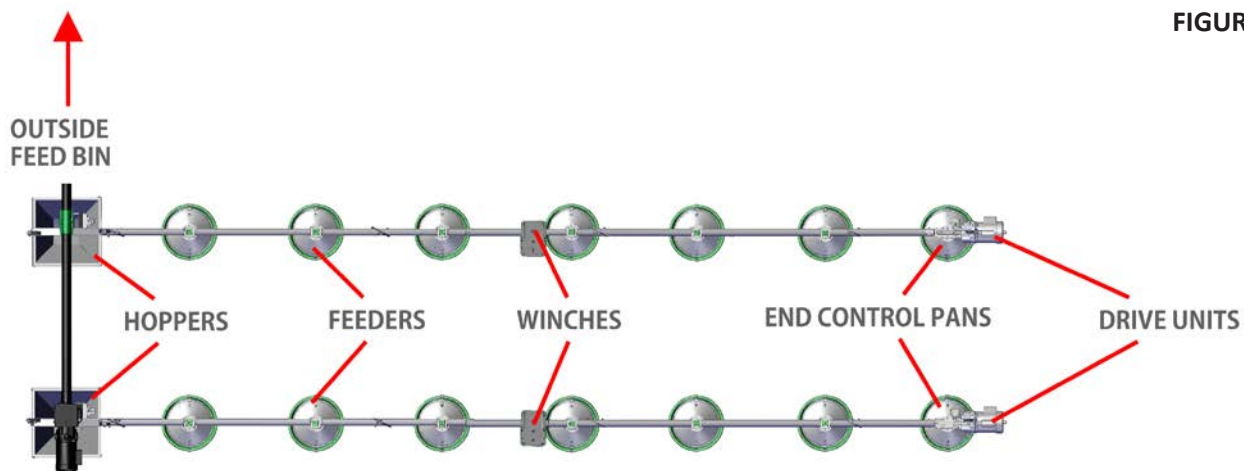


FIGURE 1

Option 2 –A large system should be split in the center. (This will reduce the auger run-time and eliminate the need to use mid-line controls.)

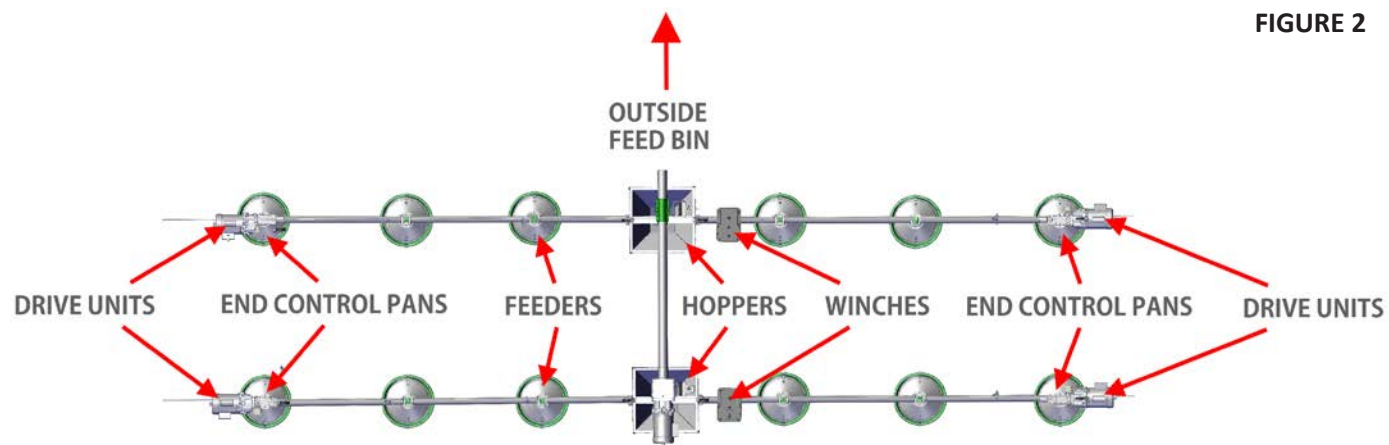


FIGURE 2



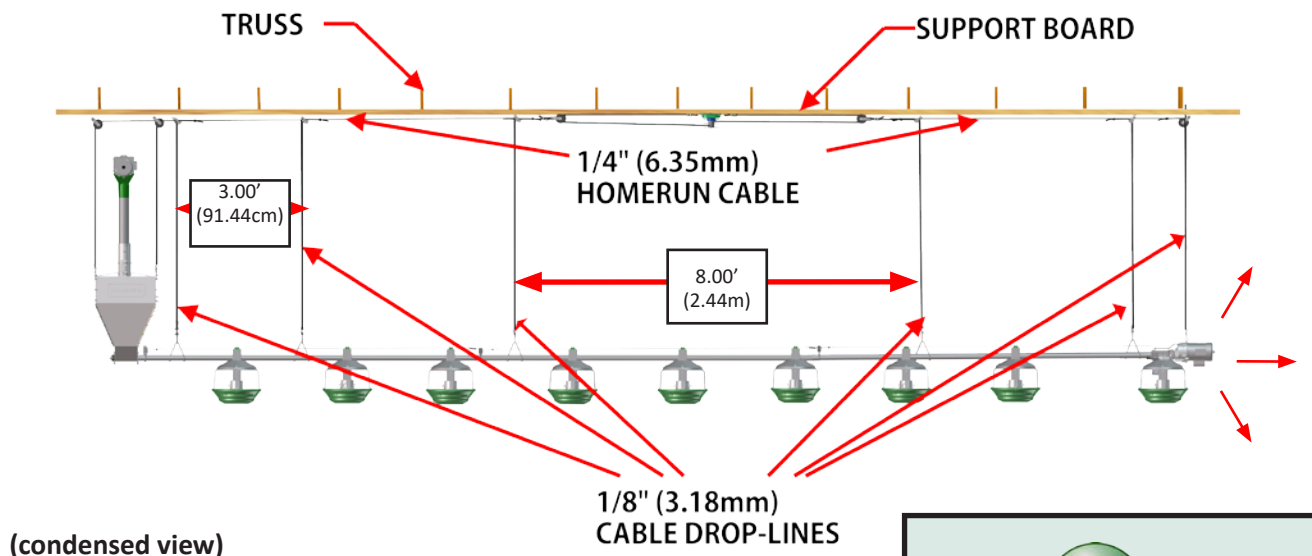
The winch is usually placed approximately in the middle of the feed line for either option. Be sure to leave room for cable travel on first pulley to winch.

Winch System / Suspension

1. Locate the best placement of the winch. The winch requires a support that will span at least 3 rafters in a wood frame house and at least 2 rafters in a steel house.
2. Locate the placement of the control pan units and feed hopper. A special support is required to suspend the drive heads and feed hoppers. Support is also needed at each joint. When planning BE SURE TO ALLOW ENOUGH ROOM AT THE END OF THE FEED LINE AROUND THE CONTROL PAN UNIT FOR BIRD FEEDING, usually 5' (1.52m).
3. Determine drop locations, giving special attention to the placement of the hopper and control unit. The suspension system is based on a ceiling height of 14 feet (4.267m) with drop points every 8 ft (2.438m). Special consideration for support must be used with 10 ft spacing.
4. Determine and mark a straight line or use cable to locate placement of the eye bolts. Offset the eye bolts slightly so that the pulley does not interfere with the homerun cable.

Overview

FIGURE 3



**LEAVE A MINIMUM OF 5 FEET
(1.52M) OF SPACE BEYOND
DRIVE CONTROL PAN UNIT
FOR BIRD FEEDING.**



DO NOT EXCEED 10 FEET (3.05m) BETWEEN SUSPENSION DROPS!

Installation detail on following pages.

Winch System / Suspension - continued

FIGURE 4

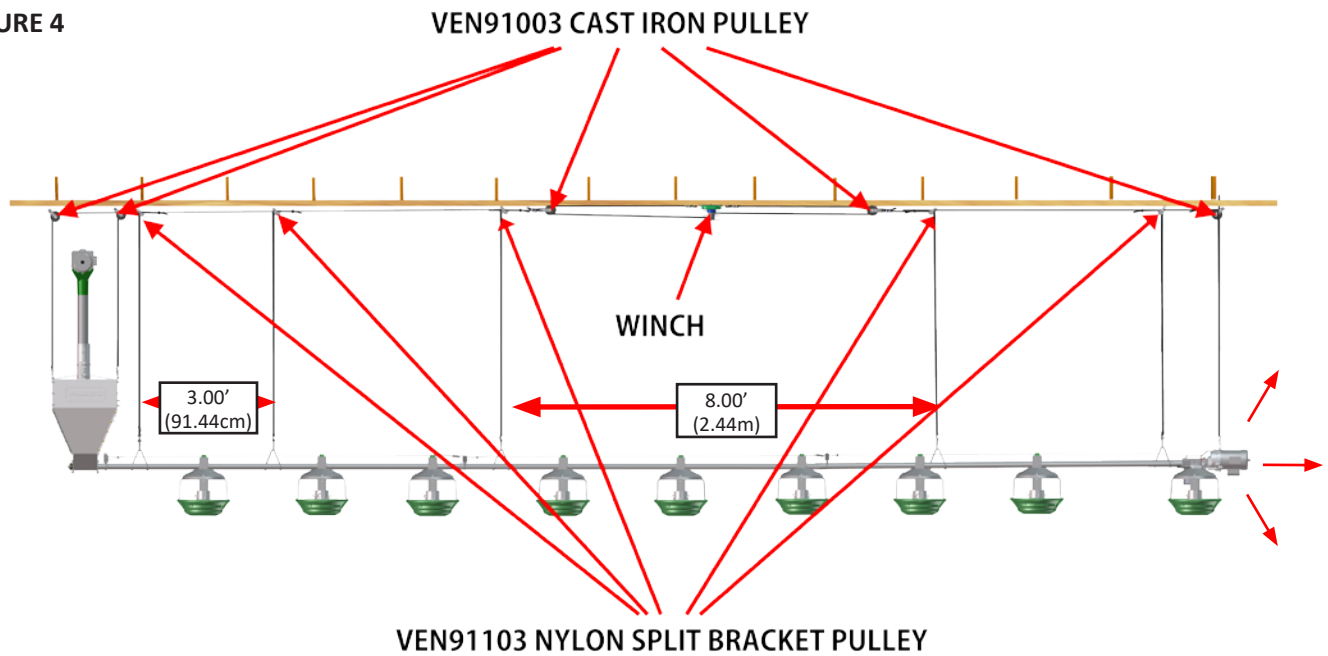
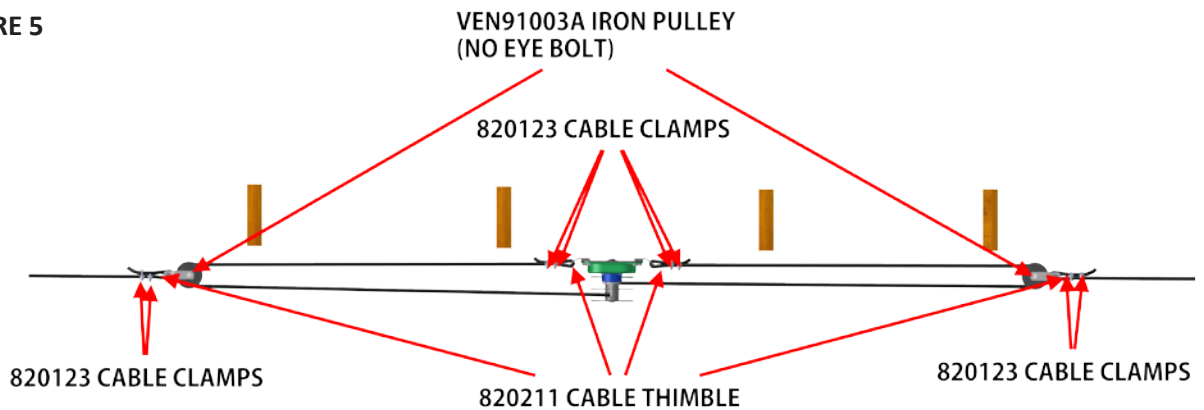




FIGURE 5





CAUTION !
Handle CABLE with caution.
Wear safety glasses & gloves to protect your eyes & hands from injury.



Winch Installation

There are two types of winch supports, angle iron or wood.

FIGURE 6

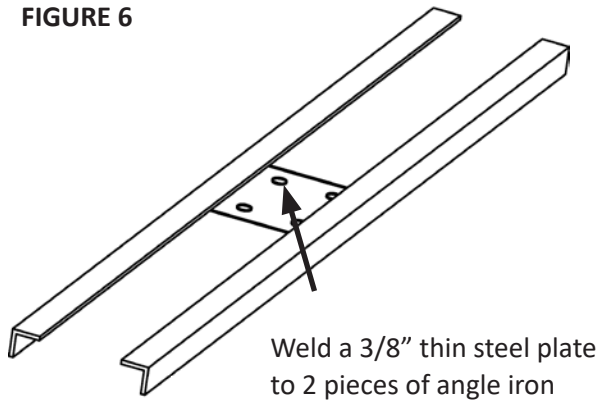


FIGURE 7



1. Bolt the fully assembled winch to the winch support, shown in Figures 8 or 9. Use either a 2 inch x 8 inch (5.08cm X 20.32cm) wooden board that will span (3) TRUSSES or a 3/8 inch (.95cm) thin steel plate welded to (2) pieces of angle iron which are long enough to span (2) TRUSSES, shown in Figures 11 & 12 on the next page.

FIGURE 8

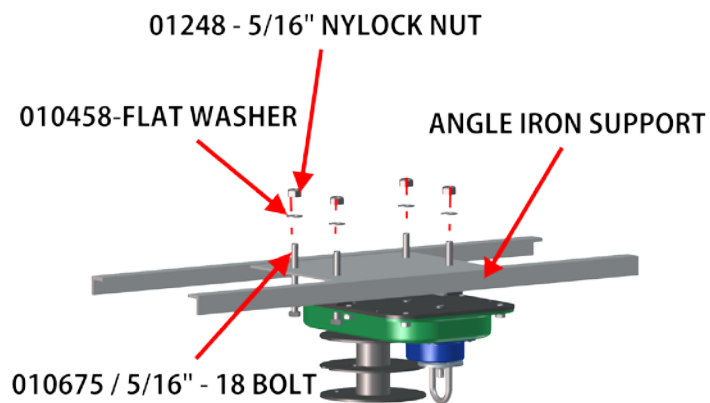
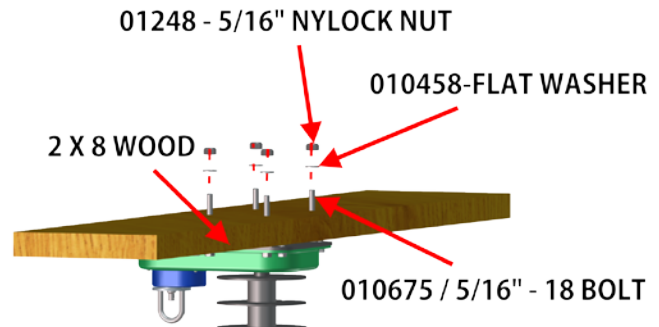


FIGURE 9



If you are using the double back system, install cable hook between the mounting bolt and winch frame, shown in Figure 10, before you attach the winch to the winch support.

Note: cable hooks are not provided.

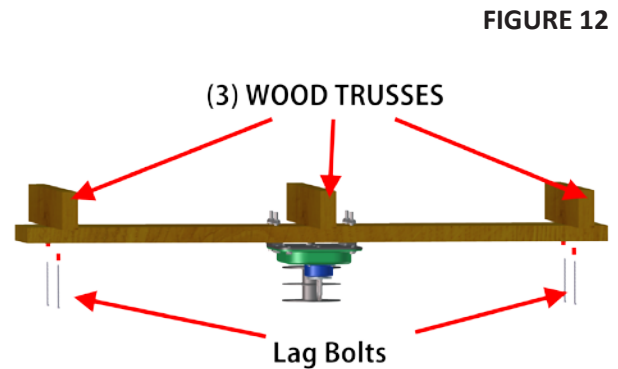
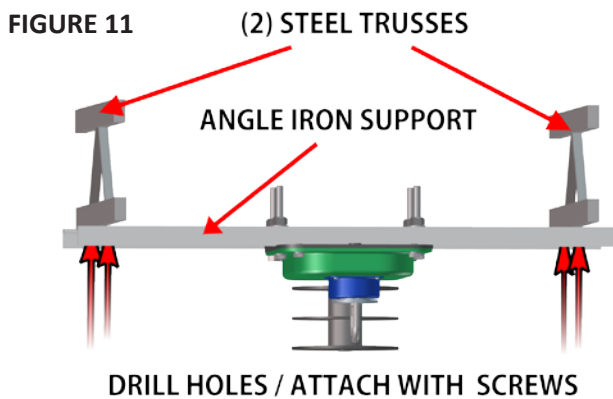


FIGURE 10

Winch Installation - continued

- The winch **MUST BE** secured to the winch support angle iron or 2 inch x 8 inch (5.08cm X 20.32cm) wood board. Attach the winch support to ceiling/trusses at the center of the feeder line, shown in Figures 4 or 5 of previous pages. The winch support **MUST BE PARALLEL** to the feeder line and **MUST SPAN AT LEAST (3) RAFTERS IN A WOOD FRAME HOUSE AND (2) RAFTERS IN A STEEL FRAME HOUSE**. If the hopper is located at the center of the feeder line, place the winch a few feet offset from the center of the feeder line. **MAKE SURE THAT THE WINCH DRUM IS DIRECTLY IN LINE WITH WHERE THE CABLE WILL BE INSTALLED.**

(condensed views, distance of rafters is less than actual)



Installing the Winch Cable

The suspension systems are based on ceiling heights of 14 ft (4.27m) with drop points at approximately every 8 ft (2.44m).

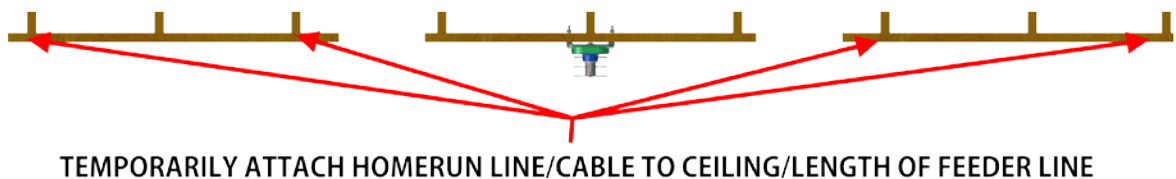


DO NOT EXCEED 10 FEET (3.05M) BETWEEN SUSPENSION DROPS!

Adequate overhead structure must be provided to support the weight of the Feeders, Hoppers, Control Pans, Drive units.

- Extend the main/homerun line winch cable the full length of the feeder line. Attach the cable temporarily to the ceiling with nails, staples, or some type of fasteners.

FIGURE 13

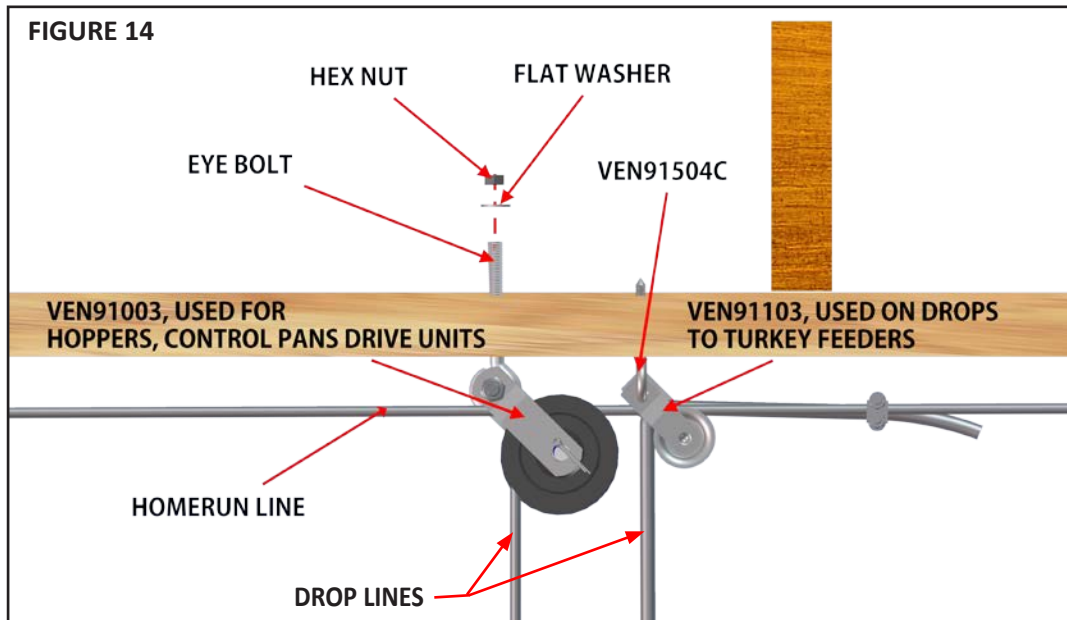


The recommended distance between each drop is 8 feet (2.44m) on center.
DO NOT exceed 10 feet (3.05m).

Eye Bolt & Screw Hook Installation



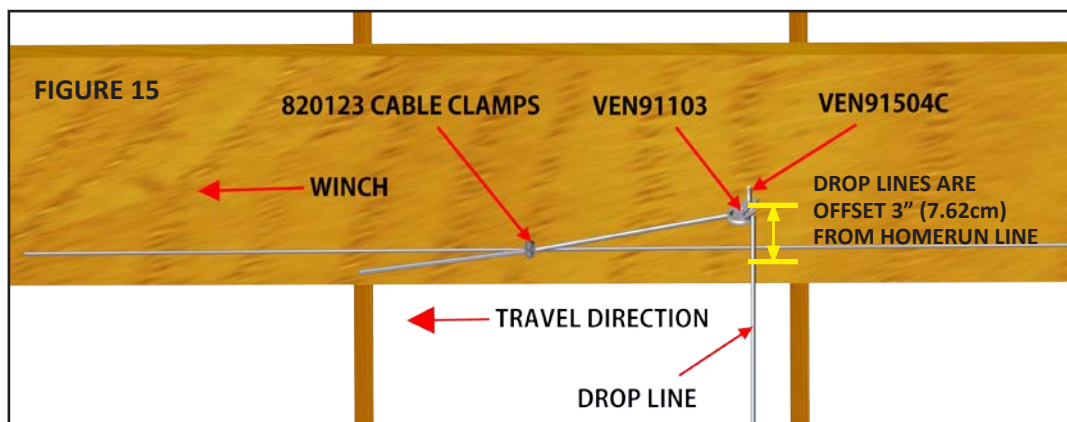
In order to prevent the cable clamps from interfering with the pulleys, offset the hooks 3 inches (7.62 cm) to each side of the line.



DROP LINE OFFSET DETAIL USING SCREW HOOKS

The direction of travel is determined when the Winch raises the feeder line.
The Screw Hook openings MUST POINT AWAY FROM THE DIRECTION OF TRAVEL.

1. Insert a swivel pulley onto each screw hook, shown in Figure 15.
2. Thread the end of the 1/8" cable through the pulley toward the winch, shown in Figure 15. Clamp this end to the Homerun Line/main winch cable about 6ft (1.83m) from the last pulley. (Use a 820123 cable clamp, shown in Figure 15.)
3. Allow enough cable length for installation of the adjustment leveler. (Sufficient cable is included to provide extension on drops located beneath and near the winch.)
4. Begin installing the suspension drops at the winch and proceed outward to the ends of the Feeder line. Keep the main cable tight between the drops.



Drop Installation and Cable Travel - continued

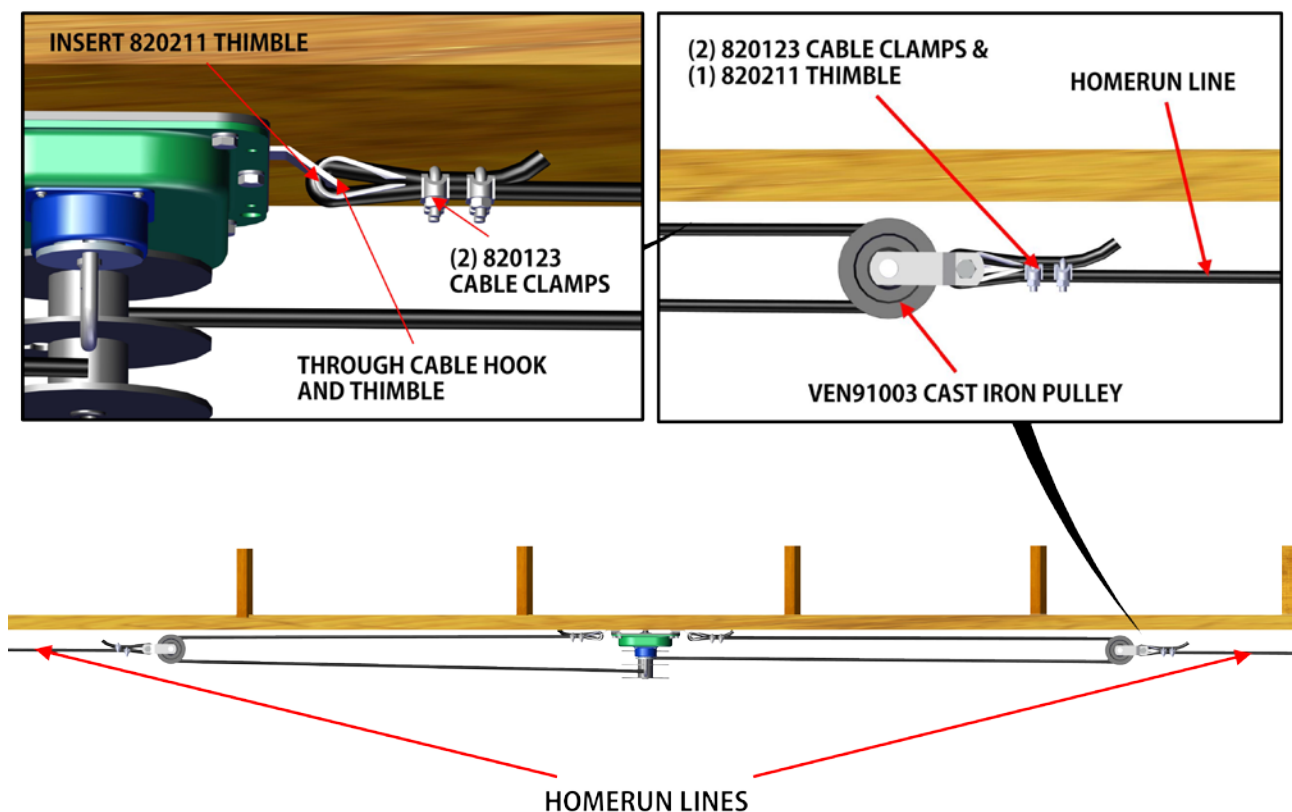


A weight attached to each drop line might be useful to maintain tension in the line. Or you may use the cable lock/adjuster and hangers.

Double Back Cable Detail

1. Thread cable thru cable hook and clamp using (2) 820123 cable clamps and an 820211 cable thimble, shown in Figure 16 detailed view.
2. Run cable around cast iron pulley and back to winch. The cast iron pulleys should be attached to the homerun line, shown in Figure 16.
3. Allow enough cable length for installation of the adjustment leveler. Sufficient cable is included to provide extension on drops located beneath and near the winch.
4. Begin installing the suspension drops at the winch and proceed outward to the ends of the feeder line. Keep the main cable tight between the drops.

FIGURE 16



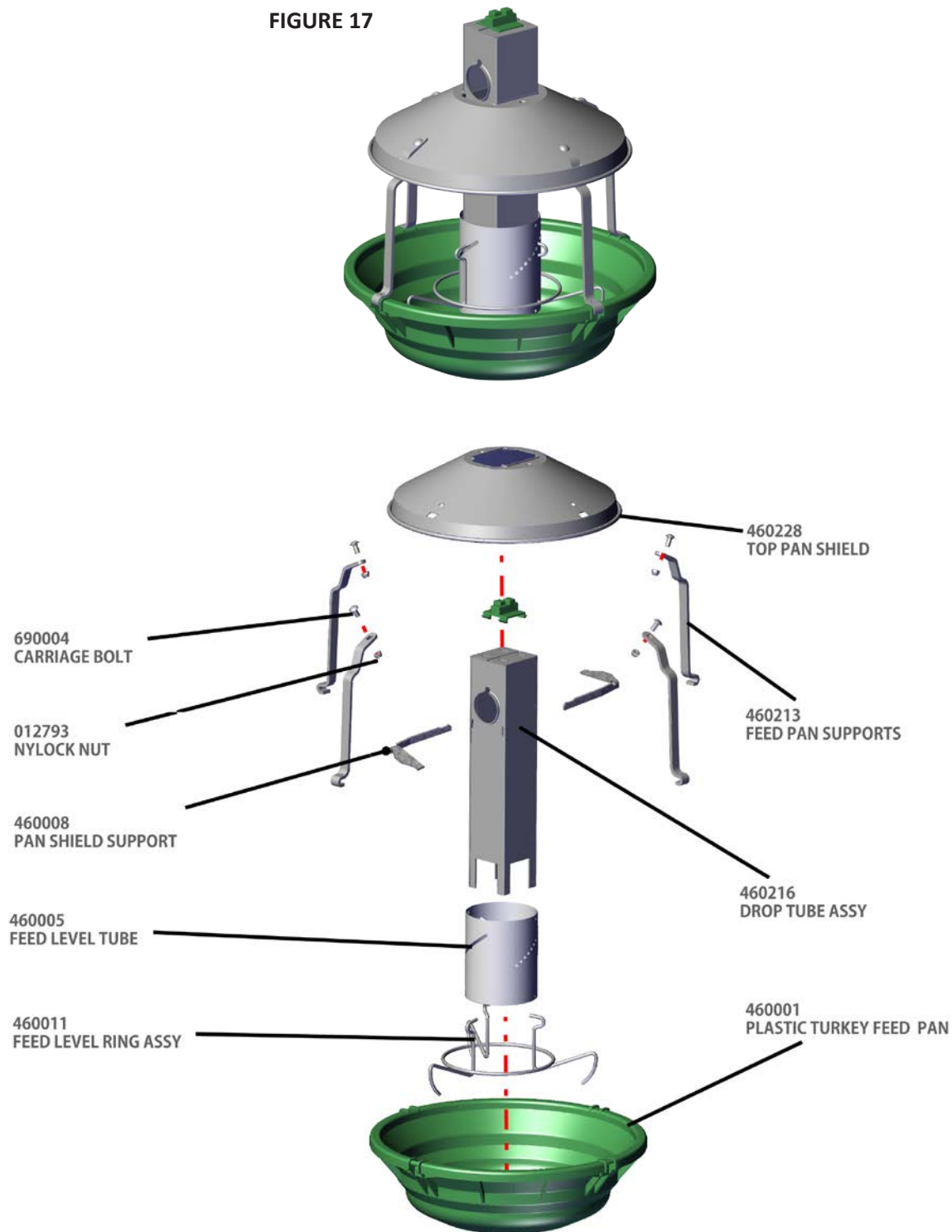
Feeders

Adult Turkey Pan Feeder Assembly Overview



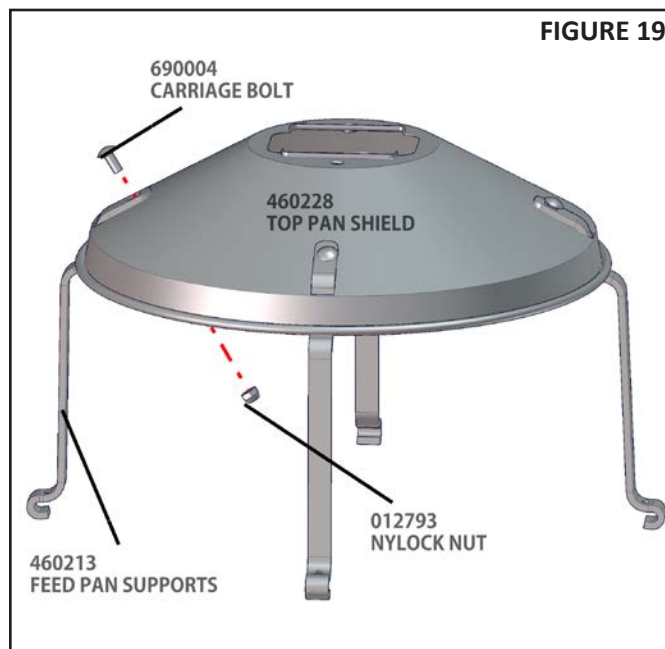
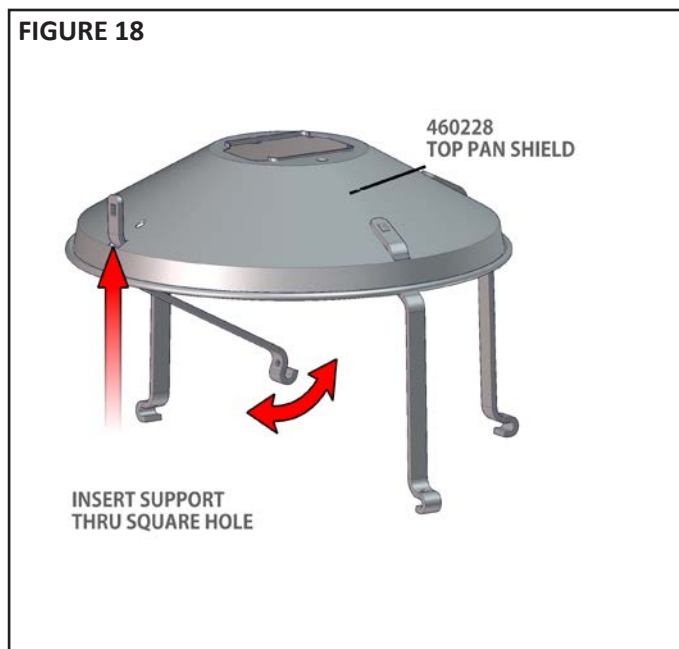
Verify that all the parts ordered are included in the shipment. Assembly kits are broken down by parts and can be found in the part listings at the end of the manual. Assemble feeders before you begin the feed tube line assembly so that you may slide the feeders on as you assemble the feed line.

FIGURE 17



Adult Turkey Pan Feeder Assembly

1. Bolt all four (4) 460213 feed pan supports or struts onto the 460228 top pan shield using 690004 carriage bolts and 012793 nylock nuts, shown in Figure 18 and Figure 19.



2. Attach the 460011 feed level ring assembly to the 460005 feed level tube at the holes and slides provided. Now place the feed level tube and feed level ring assembly onto the feed pan. The legs of the feed level ring should nest nicely in pan bottom of feed pan and feed level tube should be centered in the feed pan. Now set the adjustment using the holes to secure the desired height. The adjustment may be changed as needed at any time.

FIGURE 20

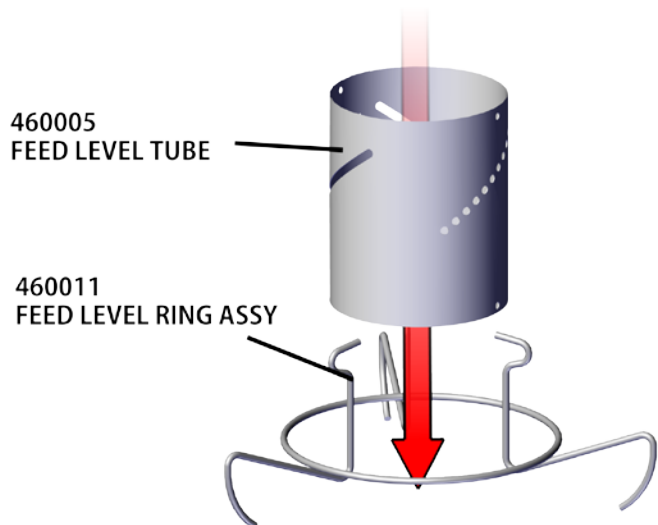
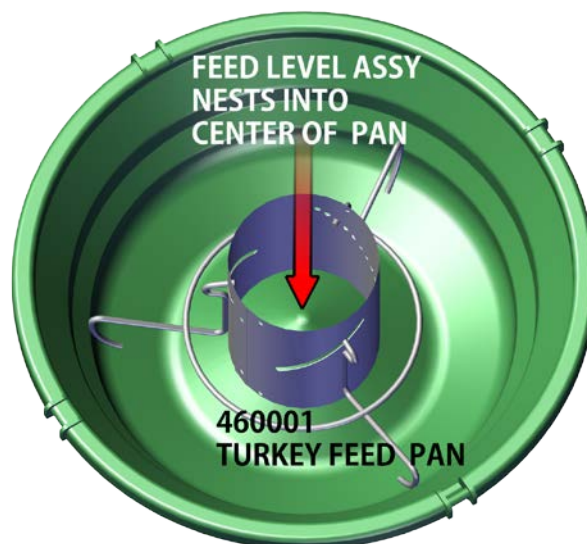
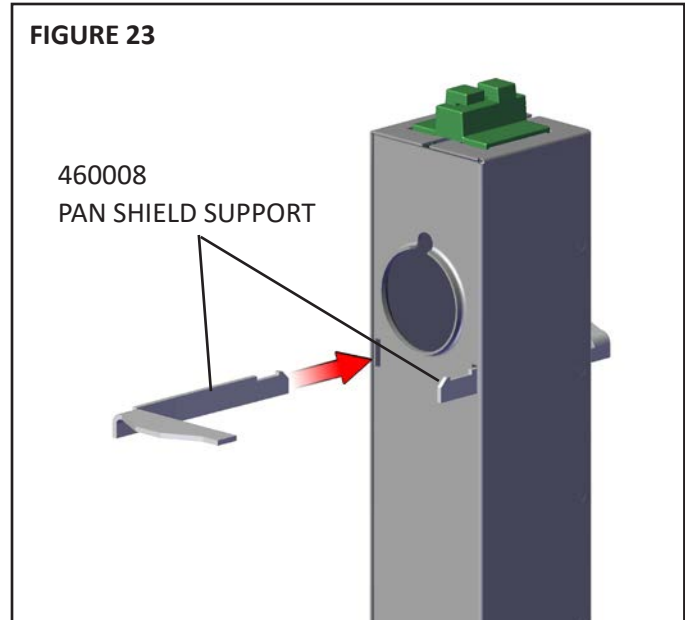
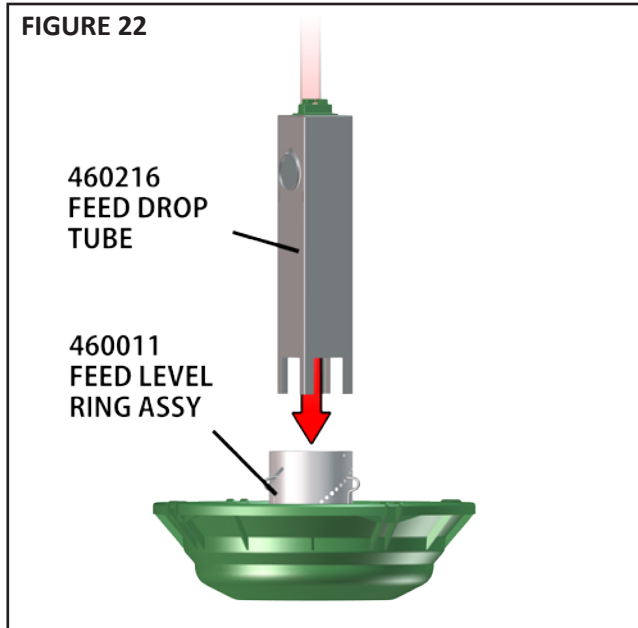


FIGURE 21

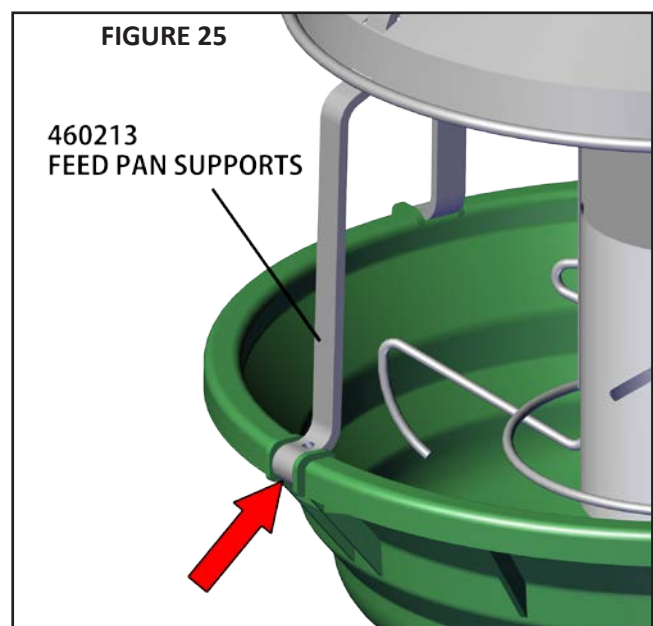
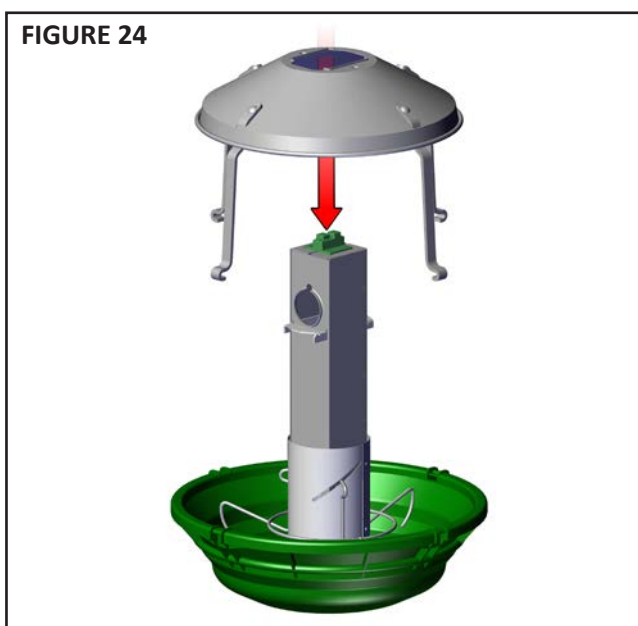


Adult Turkey Pan Feeder Assembly - continued

3. Place the 460216 drop tube into the 460005 feed level tube. Lowering the drop tube until it rests against the 460001 feed pan. Then, insert the 460008 pan shield supports into the 460216 drop tube assembly, shown in Figure 22.
4. Slide 460008 pan shield supports into the slots provided on the drop tube, shown in Figure 23.

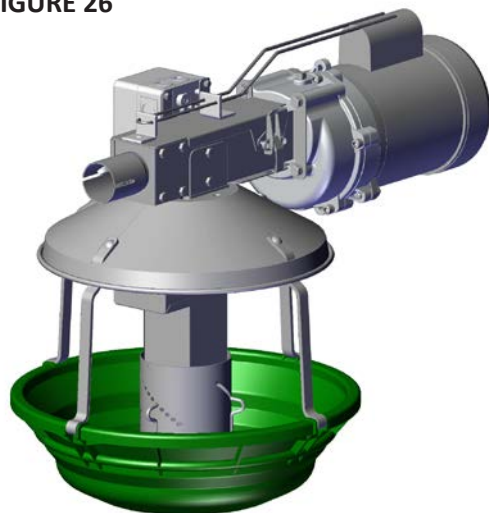


5. Lower the 460228 top pan shield into the 460216 drop tube, orienting the top pan shield to the feed tube, shown in Figure 24.
6. Snap the 460213 feed pan supports one (1) at a time onto the outer edge (at designated channels) of the 460001 feed pan, shown in Figure 25.

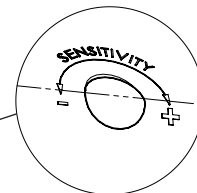
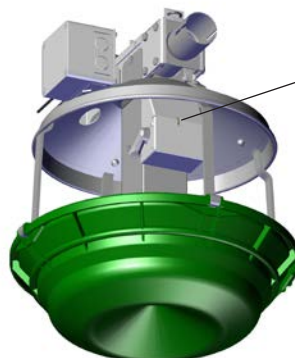


End Control Pan/Direct Drive Assembled

FIGURE 26



END CONTROL PAN IS SHOWN
WITH DIRECT DRIVE HEAD
(MOTOR) AND GEARBOX



To make the switch more sensitive
(will turn the motor off more
quickly), turn the screw clockwise.

To make the switch less sensitive
(will allow the motor to run longer),
turn the screw counter-clockwise.



Birds are sensitive to light, temperature, moisture and drought and will avoid places that do not maintain the average environment. Make sure the END-HOUSE pan area keeps a consistent average temperature, has good ventilation and moisture level. It is advisable to install a small spot light above the END-LINE pan and to keep the END-LINE pan free of litter and manure to attract birds.

End Control Pan / Direct Drive Head & Gearbox Unit - detail

FIGURE 27

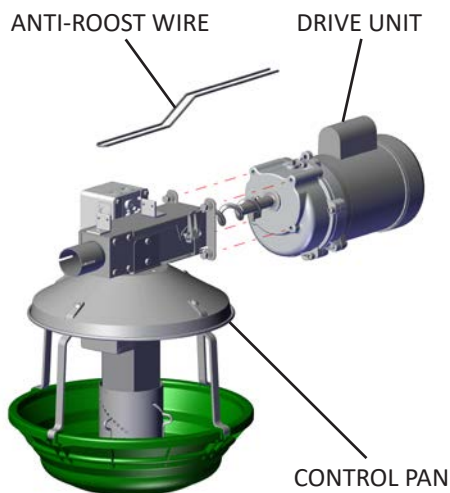
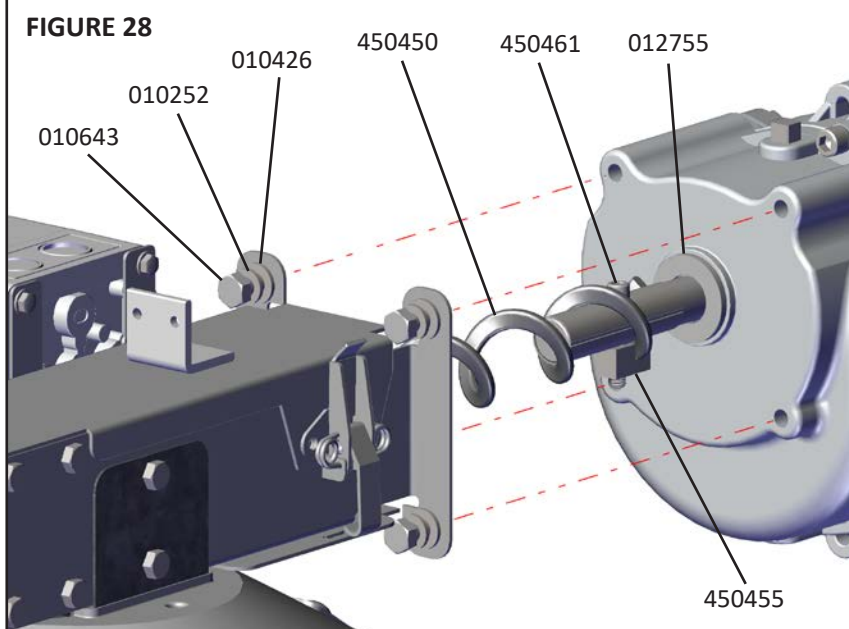


FIGURE 28



Electrical enclosure contains grommets and wire nuts. There are no wires included for wiring to the motor or incoming supply.

Feed Line Assembly & Suspension

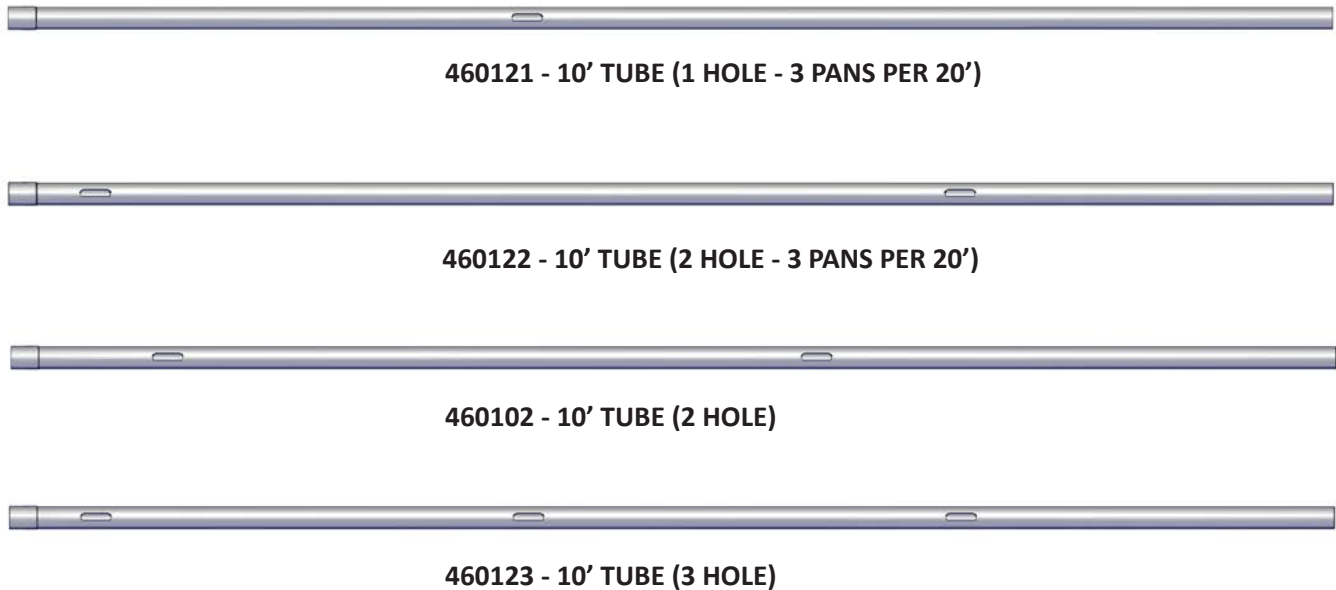
Feed Tubes



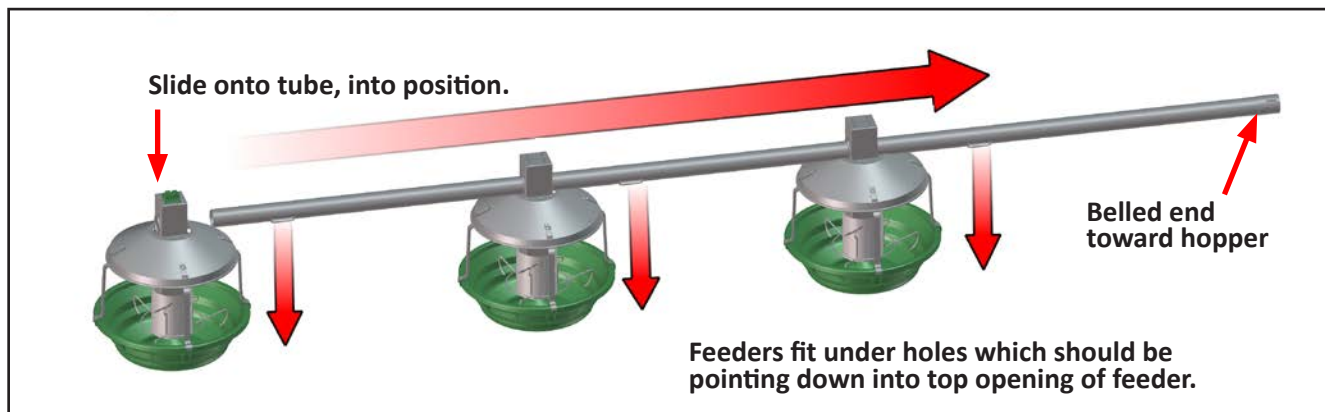
Pay particular attention to the placement of feed tubes. The holes should be located and strategically placed to accommodate the control feeders and proper spacing to all feeders on the feed tube line.

FEEDERS SHOULD BE MOUNTED ON THE FEED TUBE AS THE FEED TUBES ARE BEING PUT TOGETHER.

FIGURE 29

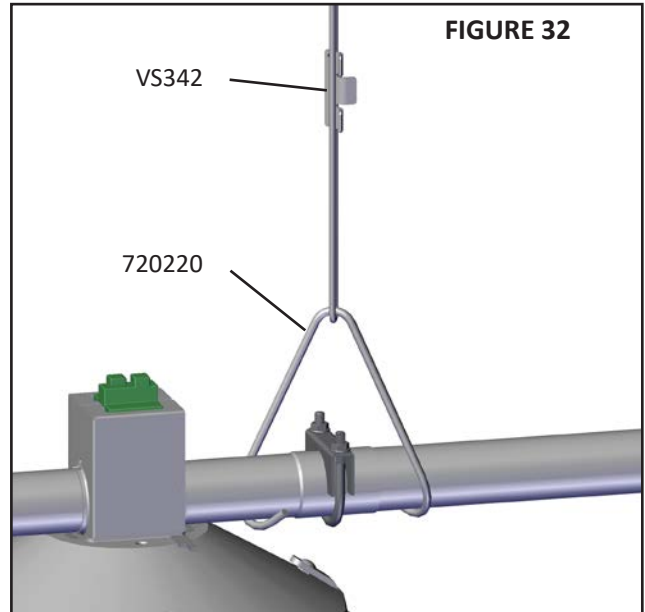
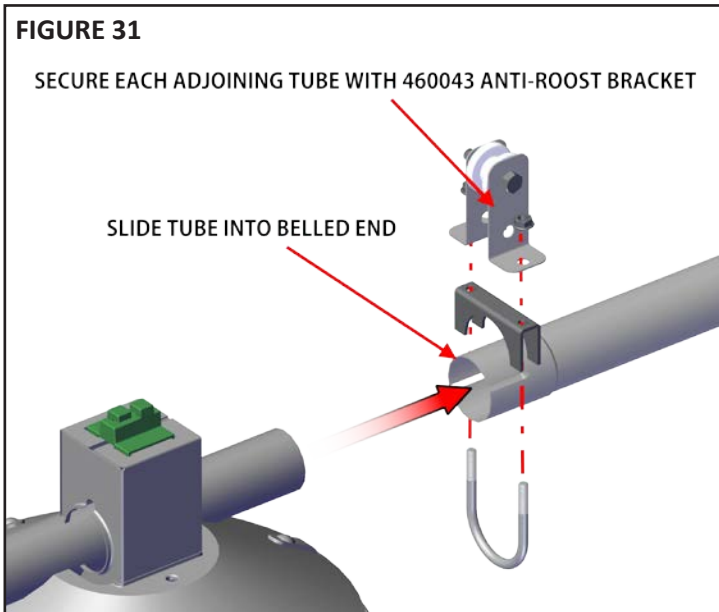


1. Put the tubes with belled ends toward the hopper and feeders on the floor in line with where you want to suspend the feed tubes. You will need to rotate the feed tubes to align feed drop holes and feeder as you slide (one feeder assembly per hole) onto the feed tubes. **Be sure the holes of the feed tubes are pointing down toward the feed drops.** It is important to install all of the feeders on the tubes in the same orientation.



Feed Line Assembly & Suspension - continued

2. To achieve secure and uniform feed drops throughout the system, place hangers as shown in Figures 31 and 32 below. They may be installed by spreading the wire over the feed (auger) tubes or may be slipped on the end of tubes as you connect tubes and feeders. THERE MUST BE A CLIP AT EACH DROP LINE TO ALLOW FOR LEVELING. The spacing will be determined by your drop line / truss spacing, 8' (2.44m) minimum to 10' (3.05m) maximum.
3. Connect the tubes as shown in Figure 31 and continue the entire length of the feeder line.
4. Assemble Insulator support brackets at every 50ft tube joint/connection, as shown in Figure 31.



DO NOT TIGHTEN THE CLAMPS AT THIS TIME.



If you are using the anti-roost system, an insulator bracket & tube clamp assembly must be positioned on the tubes at every FIFTH JOINT or a maximum of 50 ft (15.24m) apart and tube clamps at all other joints. If you are NOT using the anti-roost system, place a tube clamp assembly at each joint.



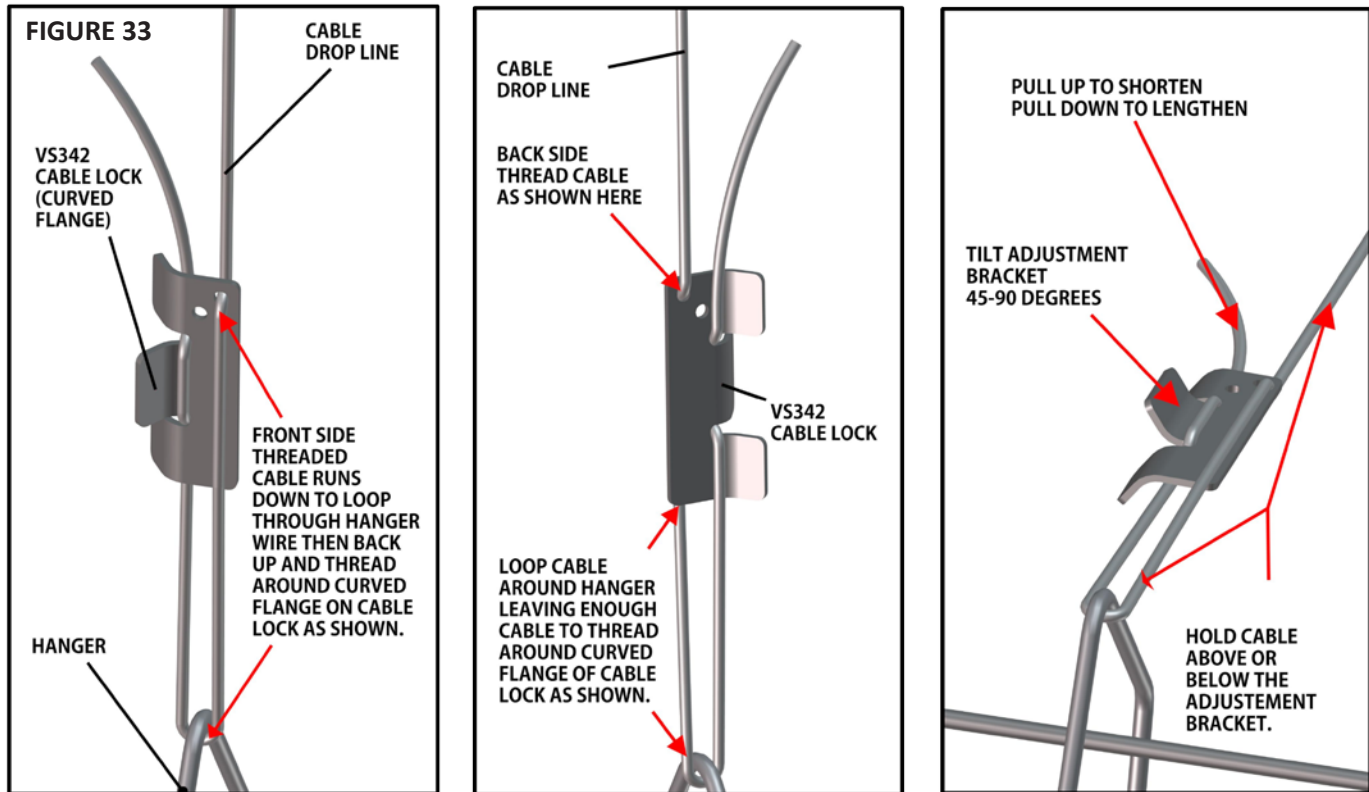
- Push tube into belled end of next tube as far as possible!
- Make sure all feed drop holes are well aligned and pointing downward.
- Place hangers every 8 feet minimum to 10 feet maximum.



REMINDER! Make sure the outlet drop holes are downward when the hangers are installed, otherwise feed will not be allowed to drop into the feeder pans.

Feed Line Assembly & Suspension - continued

5. Install the cable locks/adjusters as you connect and hang feed tubes. Slip the hangers on the feed tubes at the 8ft (2.44m) or 10ft (3.05m) spacing determined by the suspension drop lines. Figure 33 shows the proper installation of the hanger assembly to the cable lock. Be sure the cable lock is within 6 inches (15.24cm) of the feeder line.



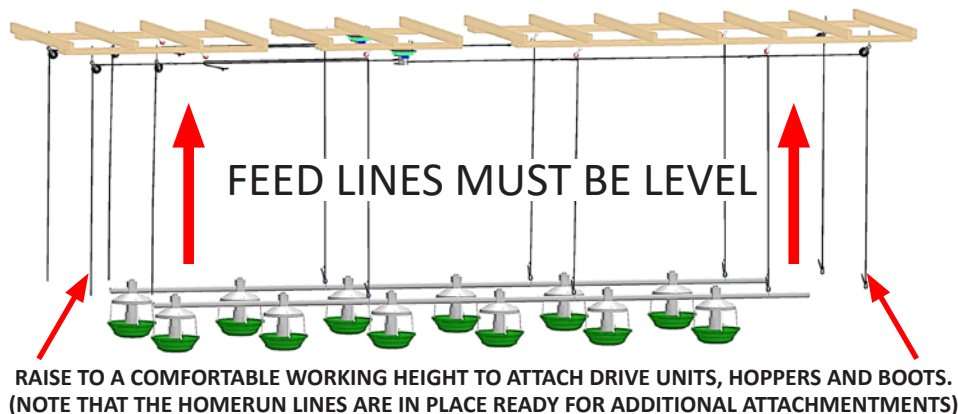
6. Continue the installation for all drops, check drop lines before raising feeder line. **The cable must be tracking properly on all pulleys before raising the feeder line.**

Raising the Feed line

Now you are ready to test the feed line suspension system and raise it to a comfortable working height.

1. Once line is raised adjust feed (auger) lines with the cable locks/adjusters and level. Measure from the floor to level the system. This is to be done while the line is suspended.
2. Before tightening the clamp:
 - Make sure each tube is level. (Make adjustments with cable locks on drop lines.)
 - Ensure that the end of each tube is fully inserted into the belled end of the next tube.
 - Make sure the tube clamps are located correctly.
3. Finally, tighten the tube clamps on the feeder tubes. Clamp the joints securely, **BUT DO NOT CRUSH THE TUBES**. Re-adjust all cable locks as needed and trim off the excess end of the cable.

RAISE FEED LINES WITH WINCH



Hopper/Boot/Level Switch Assy

Typically the Auger is installed from the hopper/boot end of the feed line, however, it may be installed from the control unit end first. This is a matter of personal preference. This manual will instruct the installation from the boot end, therefore, we will start with the hopper/boot assembly. (The order would be reversed if you choose to start with the Control Unit end.)

Hopper Assembly

1. Assemble the 4 panels in order as shown in Figures 34, 35, 36 & 37. Wrap top flanged edge on panel #2 around the top edge of panel #1, then fasten with 1/4" - 20 x 1/2" hex bolt, 1/4" lock-washers and 1/4" finished hex nut.
2. Fasten the flanged bottom ends of both panel #1 & #2 together as shown in the detail of Figure 35.
3. Continue the same until all 4 panels are assembled, as shown in Figures 36 & 37.

FIGURE 34

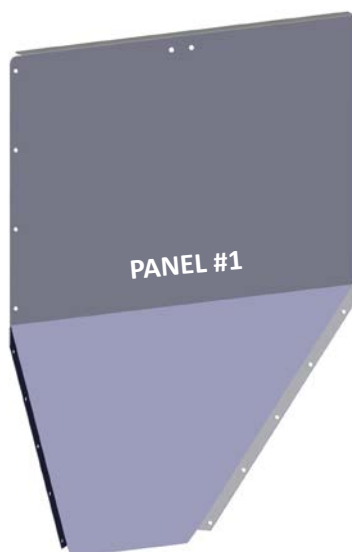


FIGURE 35

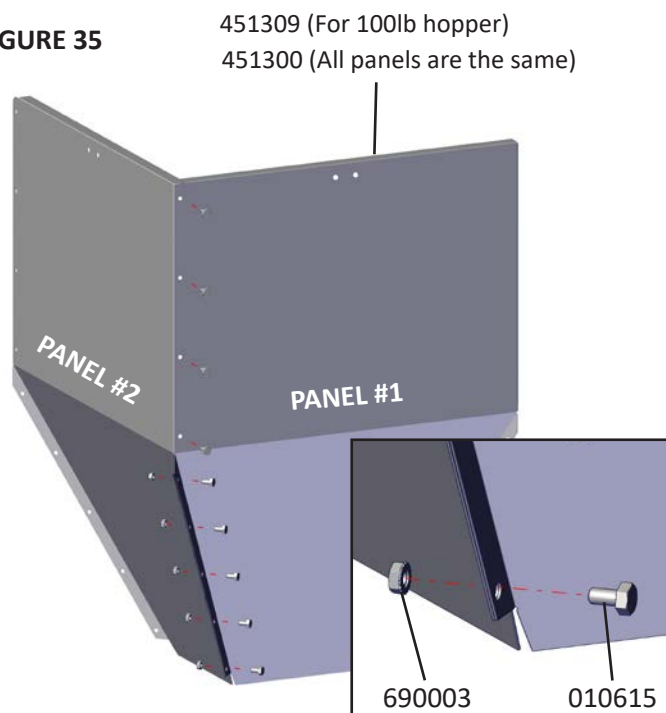


FIGURE 36

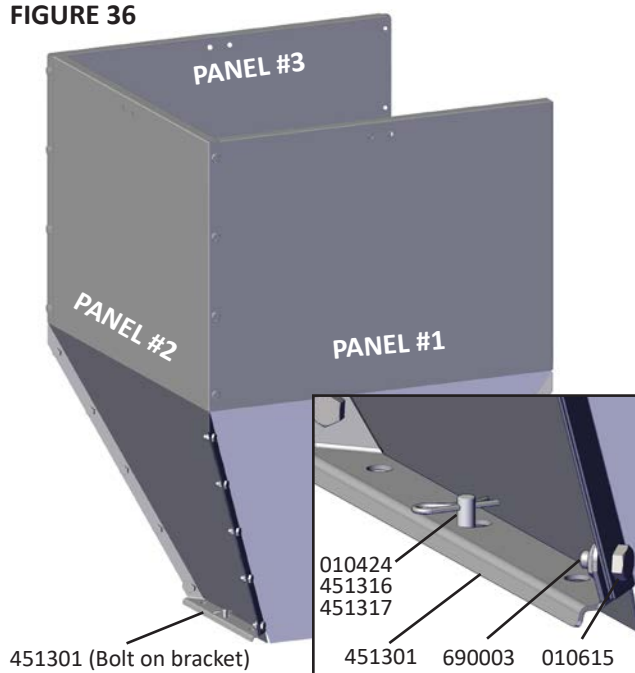
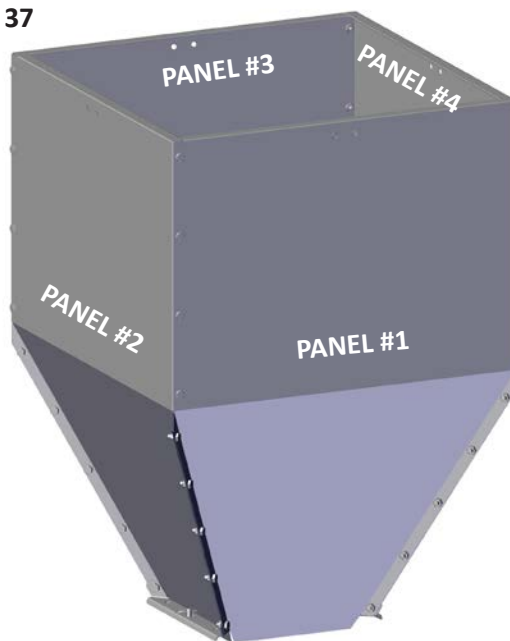
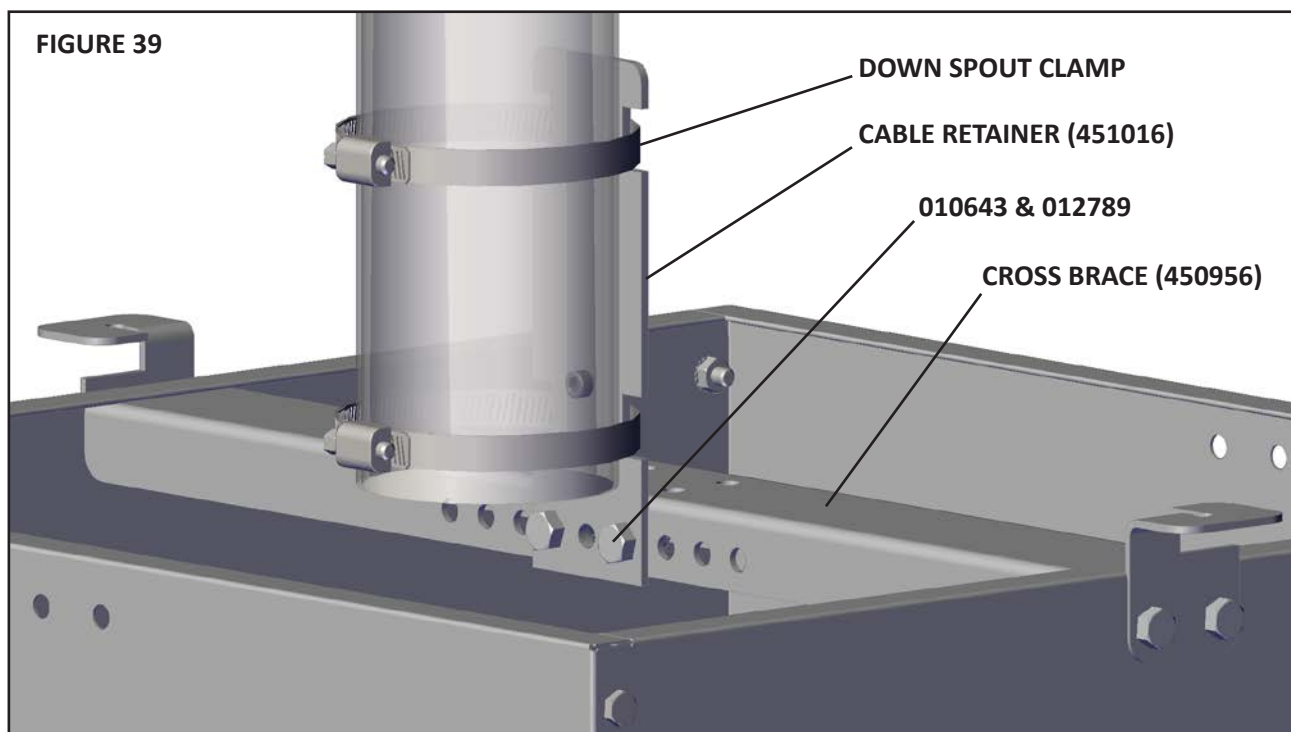
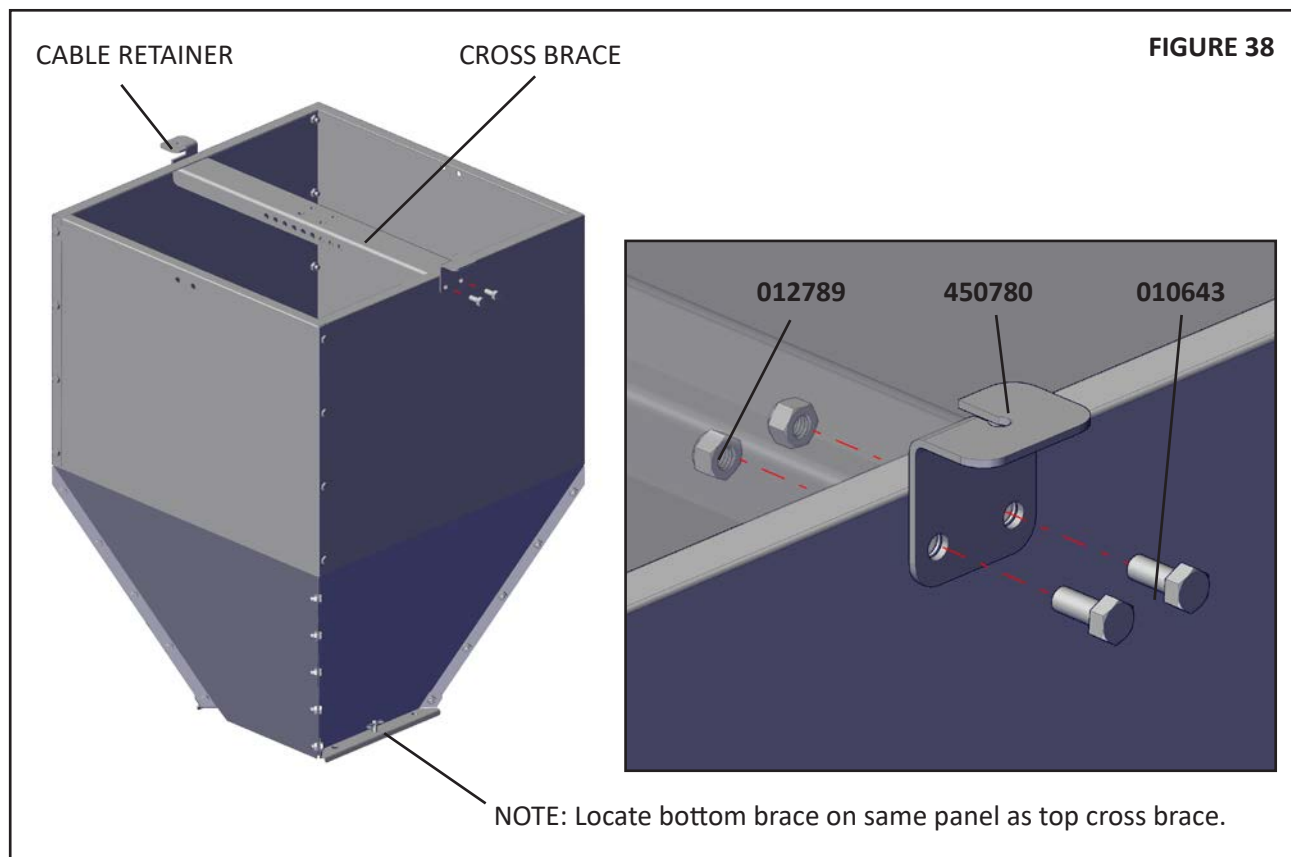


FIGURE 37



Hopper Assembly - continued

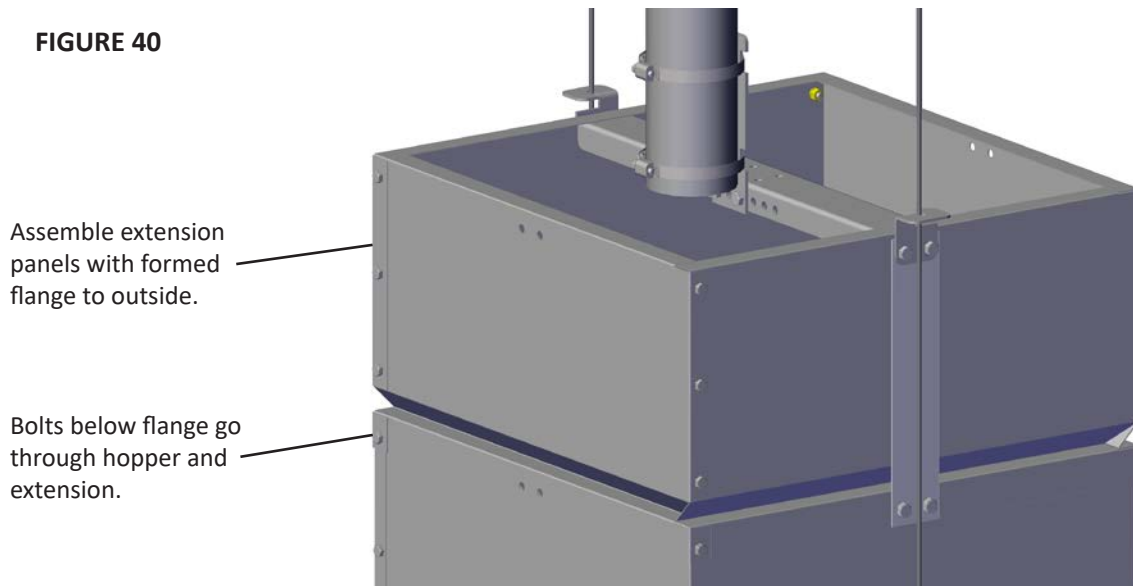
4. Assemble the cross brace and cable retainers with the 5/16" x 3/4" hex bolts and 5/16" nylock nuts as shown in Figure 38 and 39. Locate top cross brace on same panels as bottom braces (451301).



Optional Hopper Extension Installation

Assemble extension panels with formed flanges to the outside. Bolts below formed flanges go through hopper and hopper extension, as shown in Figure 40.

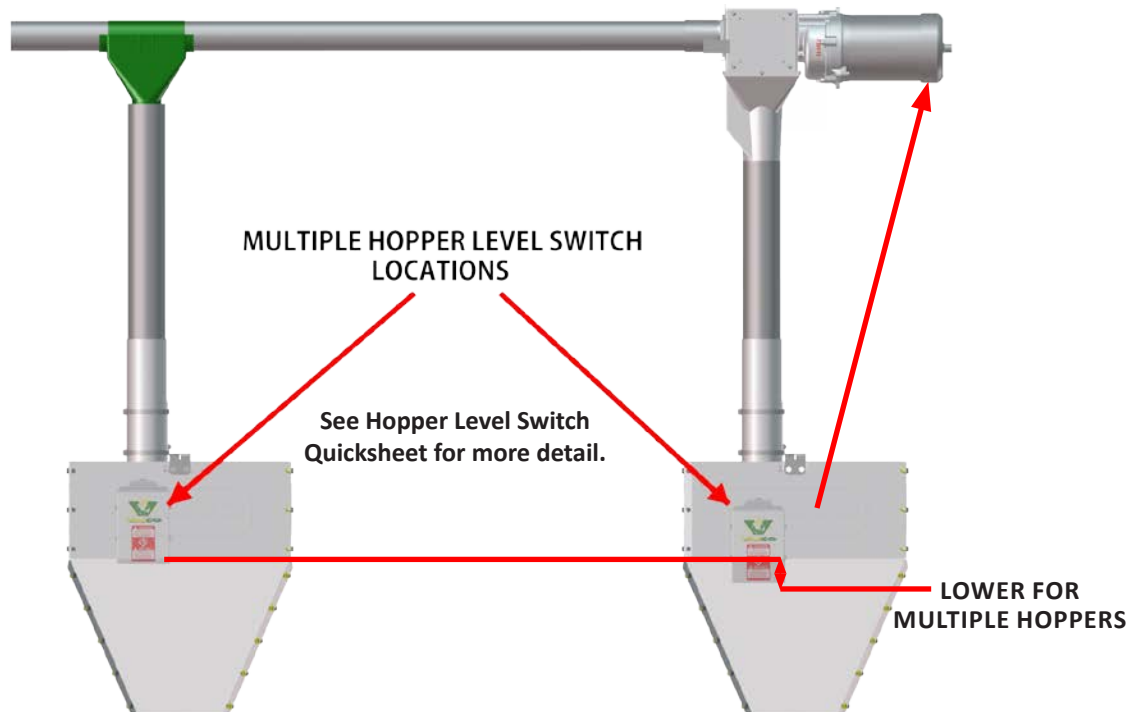
FIGURE 40



Level Switch Installation

1. Install the hopper level switch closest to the fill system motor and lower than the other hopper level switches if you are using multiple hopper level switches. This will ensure that the feed level will be higher in the other hoppers and will cause the system to start in order to maintain the feed level in every hopper, thus providing a reservoir of feed in the fill system in the case that another hopper calls for feed.
2. Position the feed drop tube to the center of the hopper to deliver feed near the top of the hopper and in front of the hopper level switch. The drop tubes and switches should be positioned high in the other hoppers so they fill but do not overflow as shown in Figure 41.

FIGURE 41



Level Switch Installation - continued

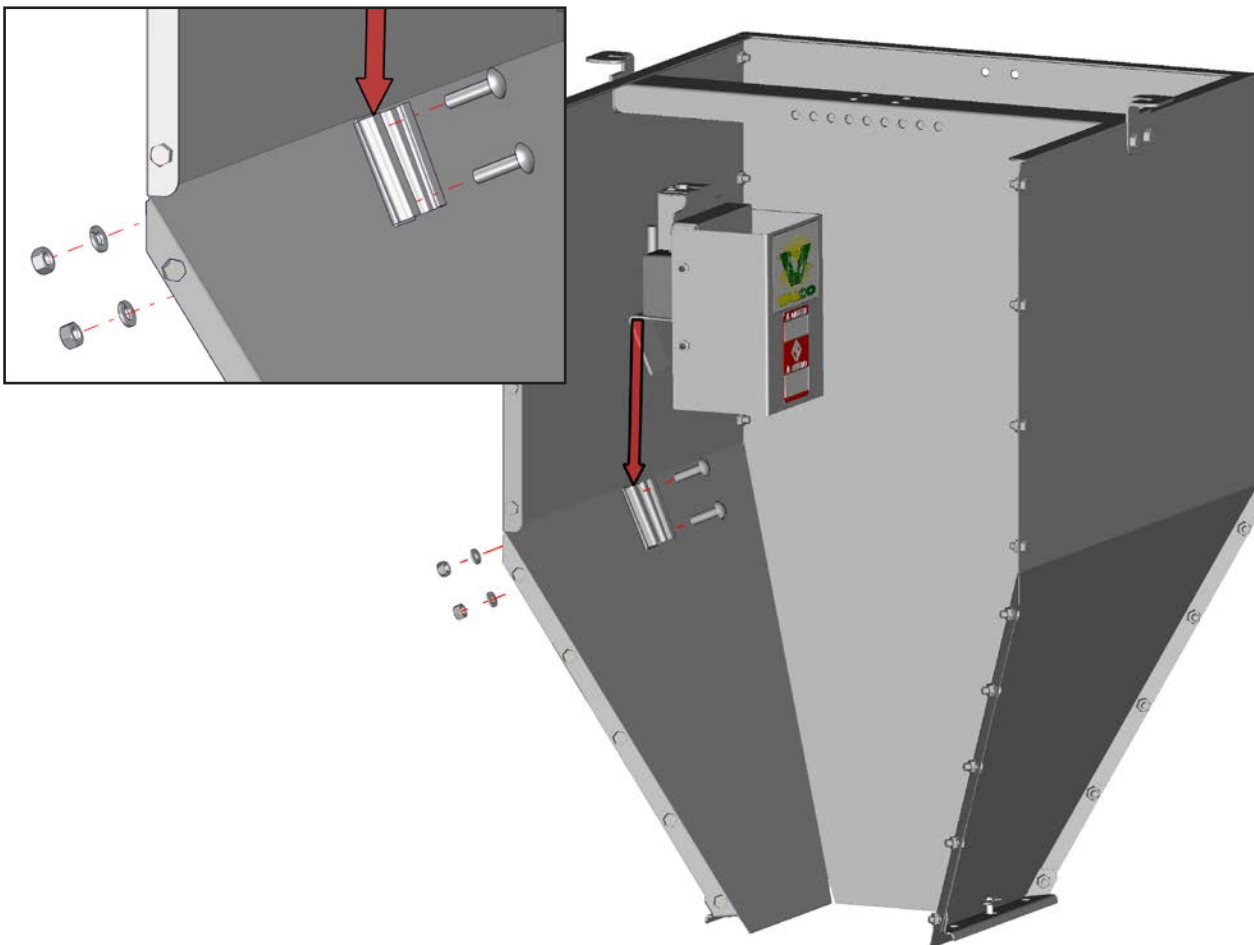


To assure that no hoppers empty before the control unit hopper requires feed, the level switches (controls) may be placed in more than one hopper. **WHEN USED IN THIS MANNER, WIRE ALL SWITCHES IN PARALLEL** so any one switch can start the system.

3. Locate the best position for the level switch shown in Figure 41 and explained in step 1 on the previous page. Use a center punch and drill (2) 11/32inch (.87cm) diameter holes through the panel of the hopper for the mounting bracket shown in Figure 41. Use the bracket as a guide (template) to determine the hole spacing. Secure to the hopper panel using the 5/16" - 18 3/4" hex bolts and 5/16" - 18" lock nuts included.
4. Slide the 720020 hanger bracket on the back side of the level switch control sensor and onto the #720023 mounting bracket which you just secured to the side panel of the hopper, as shown with arrow pointing down in Figure 42.

FIGURE 42

**DRILL HOLES FOR BRACKET
USE BRACKET HOLES FOR TEMPLATE**



The hopper level switch control may be removed for cleaning.

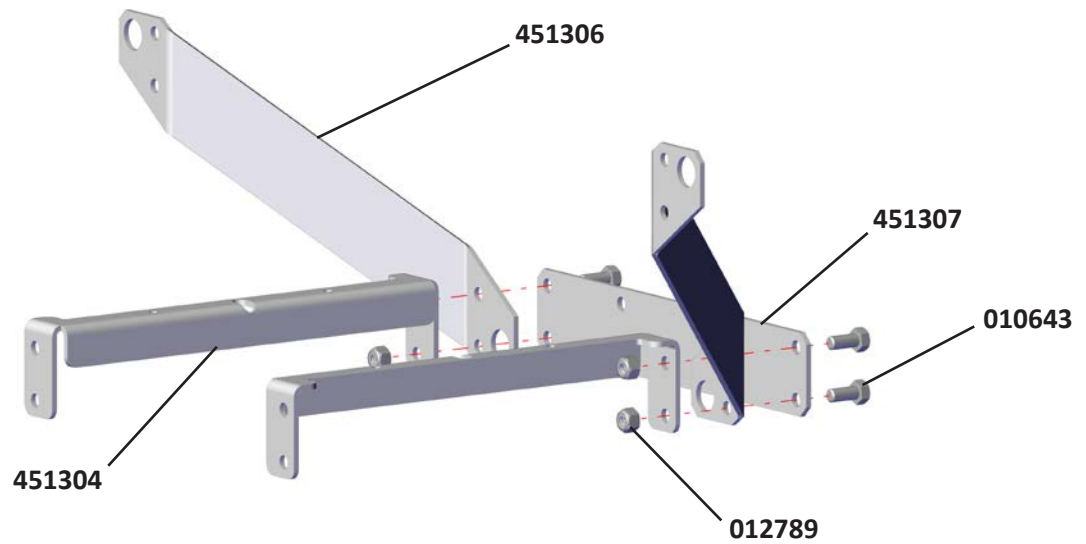


For optimum performance, the feed drop tube should be placed five (5) inches higher than the top edge of the switch shield and at least one (1) inch in front of the switch shield. This will allow the feed to fill the hopper, overflow the sensor and activate the level switch. **THIS UNIT SHOULD ONLY BE WIRED TO A VAL-CO® DISCHARGE HEAD.** It is recommended to mount the boot to the feed hopper and thread the cables through the cable retainers *after* installing the hopper level switch.

Suspension Installation

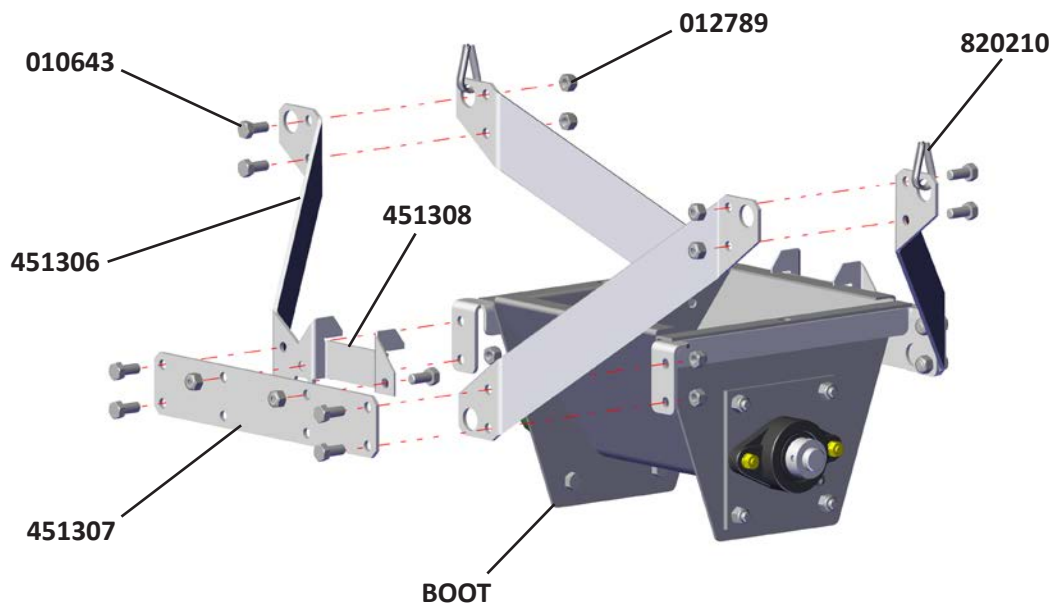
1. Assemble suspension components, as shown in Figure 43.

FIGURE 43



2. Slide suspension components into boot and secure with two 451308 brackets, as shown in Figure 44.

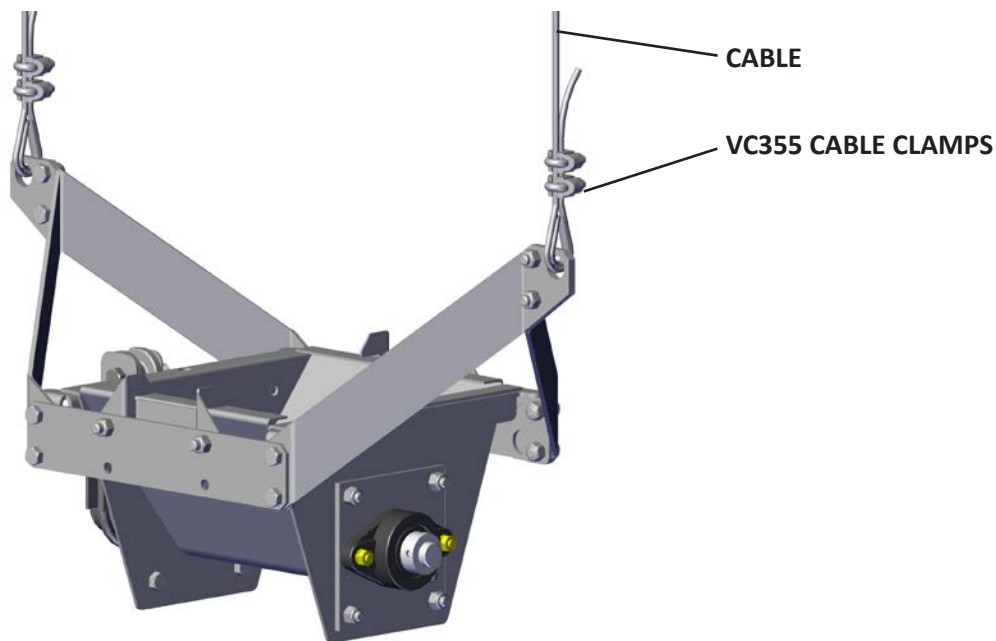
FIGURE 44



Suspension Installation - continued

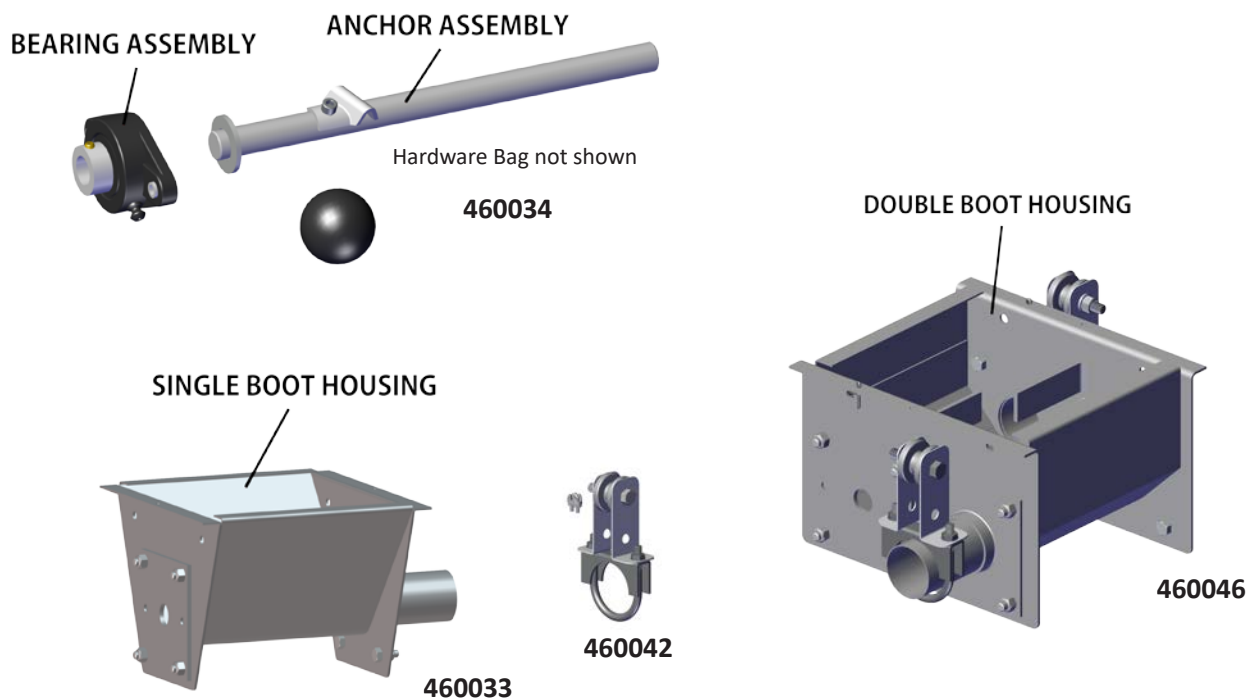
3. Complete bearing and tube assembly. Run cables through 820210 cable retainers and attach to boot hanger using VC355 cable clamps, as shown in Figure 45.

FIGURE 45



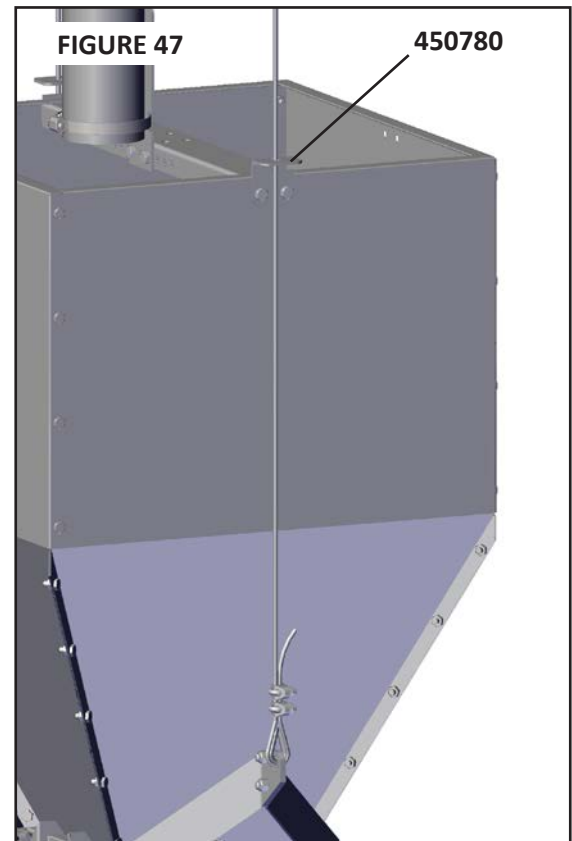
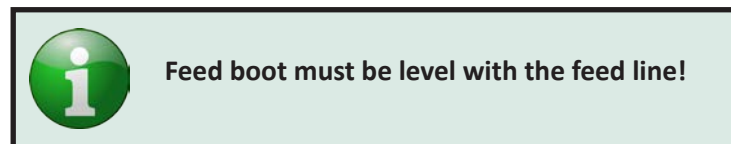
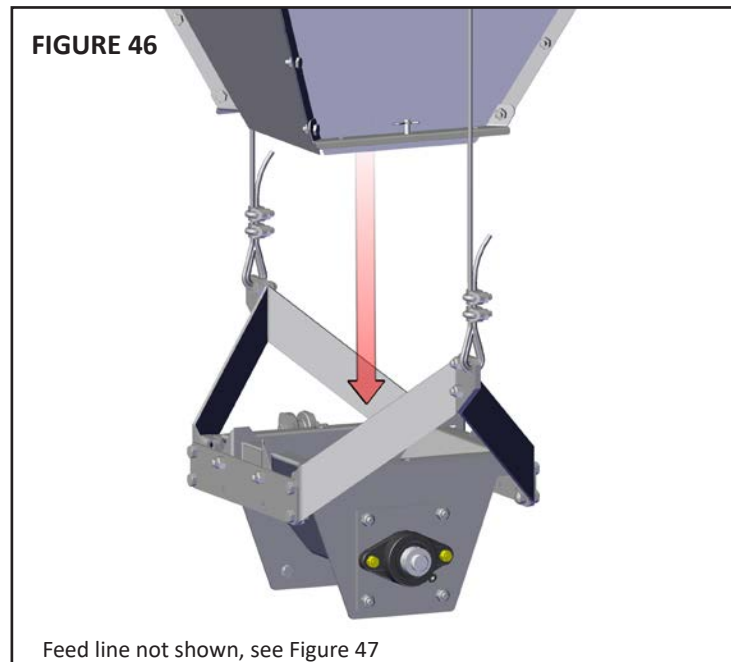
Assemble Boot to Hopper(s)

The single and double boot housing 460033 or 460046 are assembled, however, the 460034 anchor and bearing assemblies are partially assembled with hardware bag 460056 containing the necessary hardware parts to complete assembly to the boot and bearing plate. There should be (2) 460034 assemblies included in your shipment for the double boot. Assembly of the anchor and bearing assemblies may wait until you are ready to install the auger.

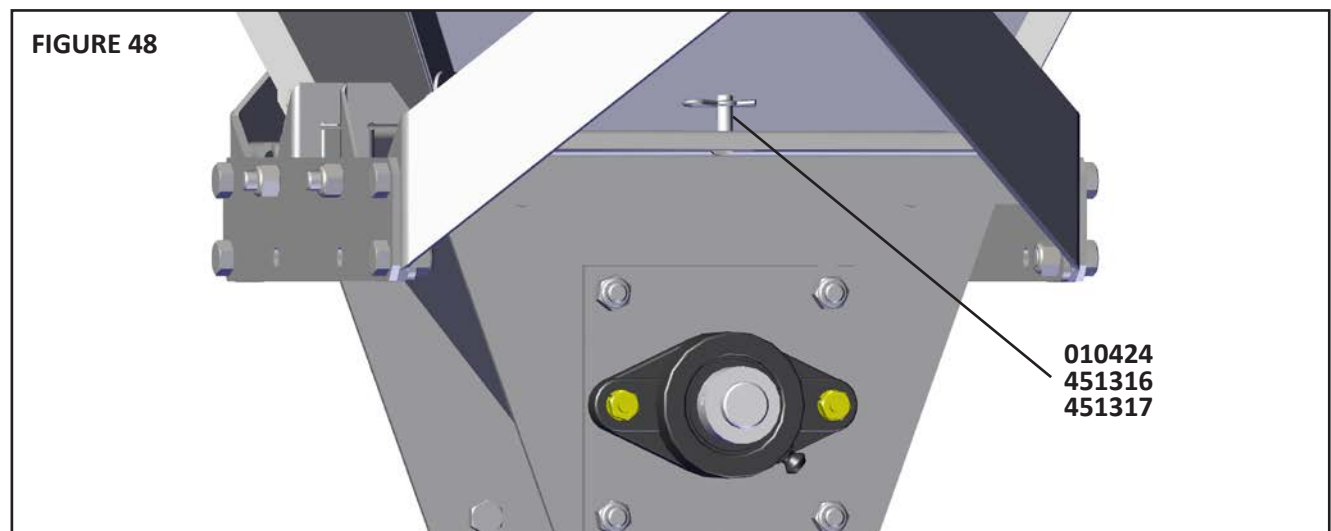


Assemble Boot to Hopper(s) - continued

1. Assemble hopper to boot, as shown in Figure 45. Slide cables into 450780 cable retainers at top of hopper, as shown in Figure 47.

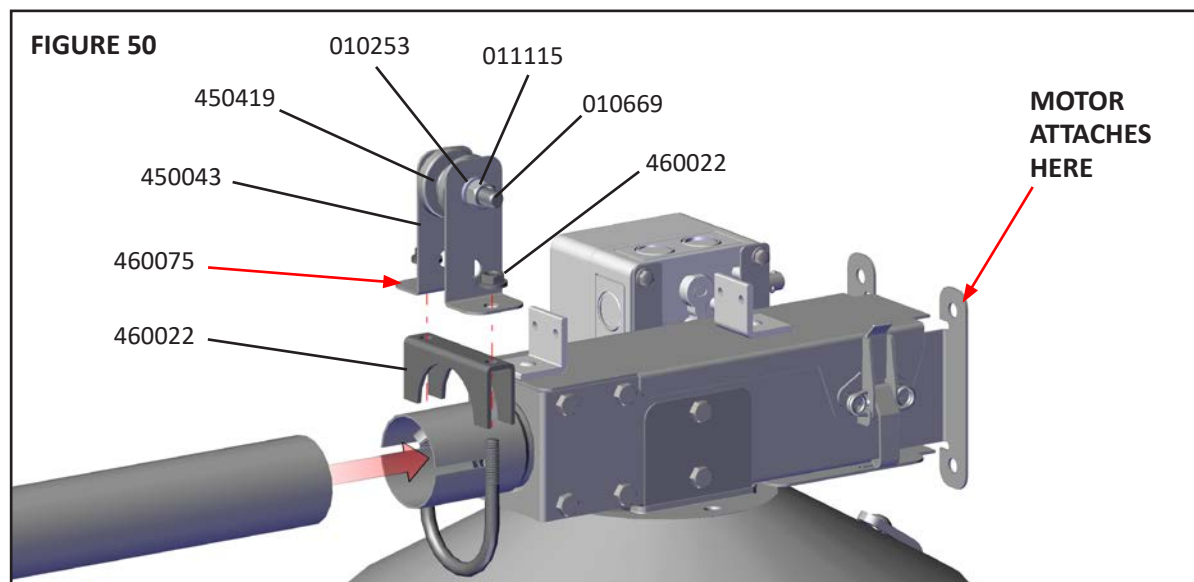


2. Insert pins into holes on both sides of the boot housing flanges to secure hopper to boot, as shown in Figure 48. Reverse order to remove hopper.




Attaching the Control Unit

The control unit may be attached at this time or when attaching the auger to drive unit later. Push the control port tube onto the feed tube as far as it will go and secure the joint using a tube clamp with or without the insulator bracket, depending on use of the anti-roost wire.




Auger Installation



USE EXTREME CAUTION WHEN WORKING WITH THE AUGER!

The auger has tension and may spring which could cause personal injury.

Wear protective clothing, gloves, and safety glasses.

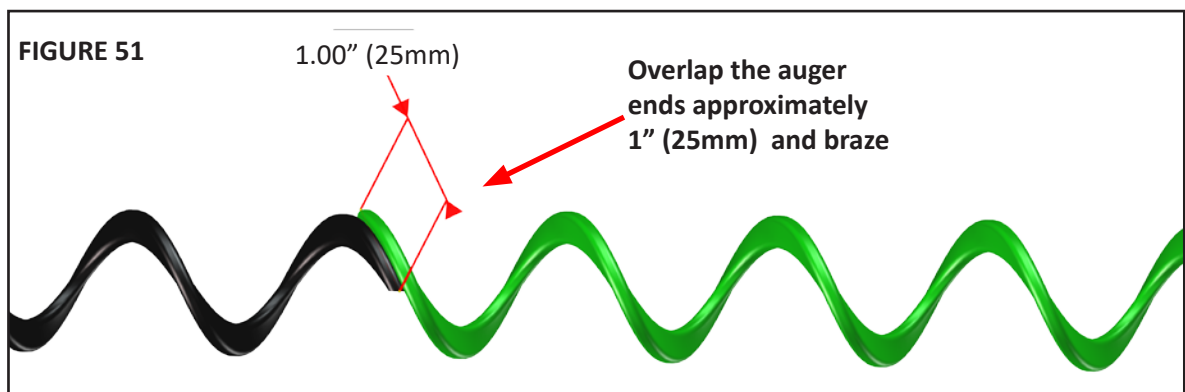


1. To avoid possible kinks in the auger, do not drop the roll when handling.
2. Inspect the auger carefully as it is installed.
3. Kinks must be removed and the auger brazed back together.
4. Cut the first 18" (45.72cm) and the last 18" (45.72cm) off of each roll of auger. (DO NOT USE)



Auger Brazing

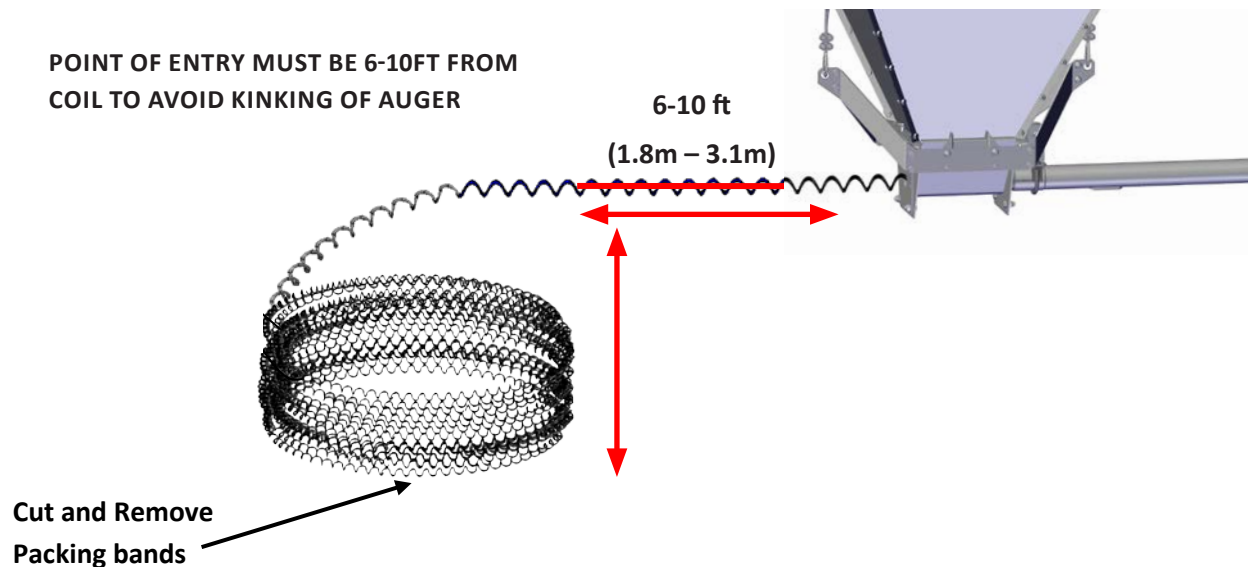
The auger should be brazed as necessary to splice or lengthen it. A bronze, flux coated rod is recommended. The ends of the auger should butt against each other, shown in Figure 51. **DO NOT THREAD INSIDE EACH OTHER.** The joint should be well filled with no sharp edges or rough corners to wear against the tube. To align the auger for brazing, lay it in an angle or channel iron and clamp it firmly in place. Use low heat. Allow the joint to air cool; rapid cooling will cause the auger to become brittle. Brazed joints should not be installed in a 45 degree elbow or in an inclined tube. Installing the brazed joint closer to the drive end of the auger run will help minimize feed flow restrictions.



Feed Auger into Line

1. Place the coiled auger approximately 6 - 10 feet (1.8m – 3.1m) from the end of the boot.
2. Remove all wires and labels and uncoil the auger from the outside of the roll.

FIGURE 52



3. Push the auger into the end of the boot assembly, (opposite the port tube), and through the feed tubes with short strokes until it reaches through the port tube and housing assembly and can be attached to the drive shaft on the direct drive unit.



DO NOT FORGET THAT IF MORE THAN ONE COILED ROLL OF AUGER IS REQUIRED TO REACH THE END CONTROL PAN UNIT, you will need to braze the auger ends together.



Auger Installation - continued

Before you hang the direct drive head & gearbox it is important to read the following to prepare the motor for proper installation and performance.

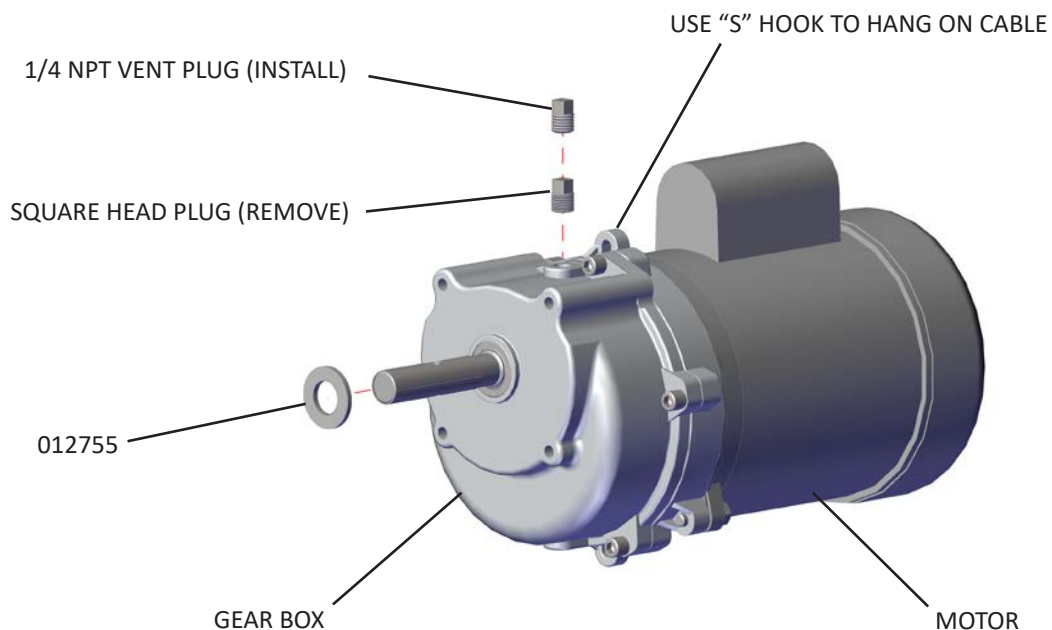


GEAR BOX PREPARATION

Install the vent plug. This unit was filled with 90W transmission oil when assembled. **THE OIL SHOULD BE CHANGED EVERY 500 HRS OF USE.** This unit must be grounded and wired according to your local area's applicable codes.

4. Remove the square head pipe plug that is installed and replace with the vent plug.

FIGURE 53



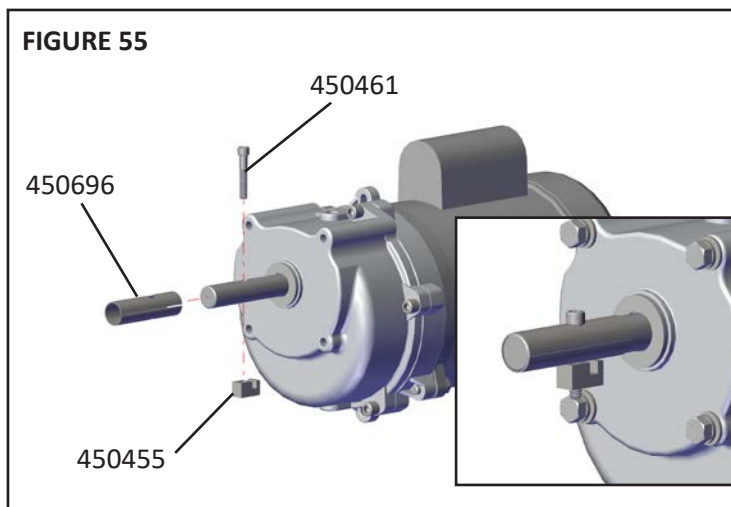
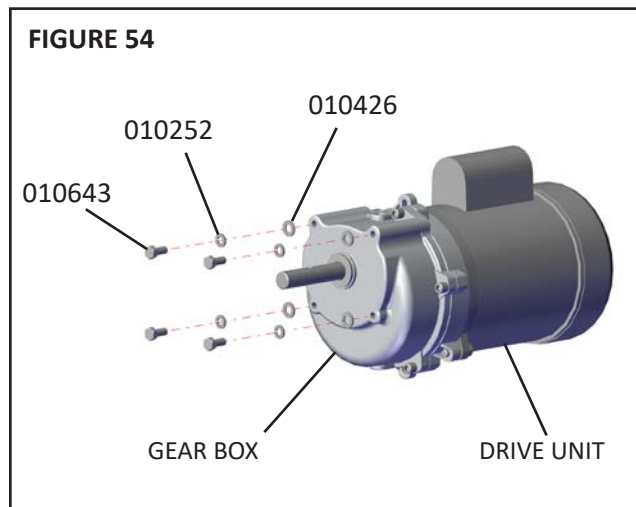
The gearbox must be installed so that the vent plug is to the top of the unit.



OPERATING THIS UNIT WITHOUT A VENT PLUG WILL CAUSE BLOWN SEALS, OIL LOSS AND CONSEQUENT UNIT FAILURE.

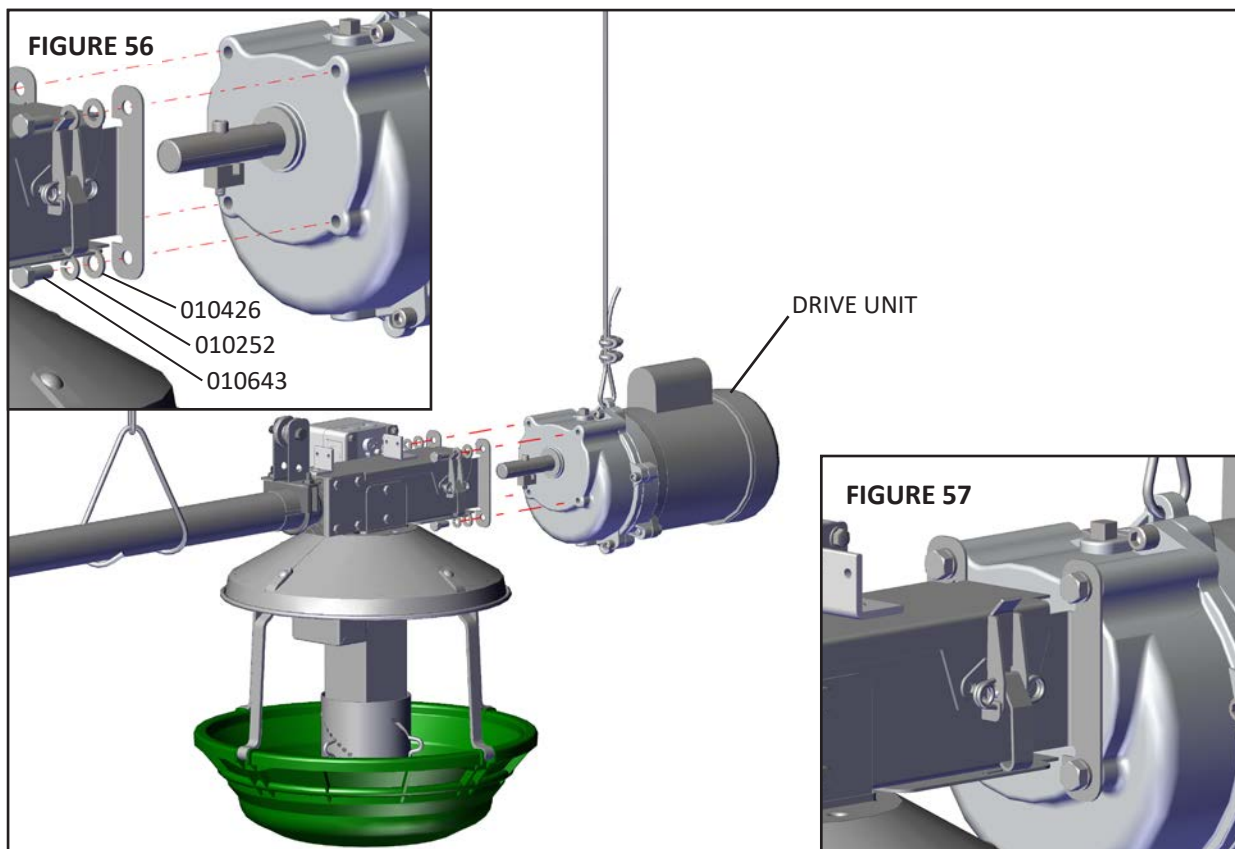
Auger Installation - Connecting the Drive End

5. Prepare the Drive Unit for installation by removing the 010643 hex bolts, 010252 split washer and 010426 flat washer from the gearbox, shown in Figure 54.
6. Slide the optional 450696 Auger Shim onto the Gearbox Shaft (if it is not already on shaft) shown below in Figure 55. (It may be necessary to rotate the auger shim to align the holes.) If auger will not fit with shim installed, remove and discard shim.



Now that you have the auger inserted into the feed line (from the boot end through the feed tubes and end control pan assembly) you will need to pull out enough auger to attach to the direct drive unit.

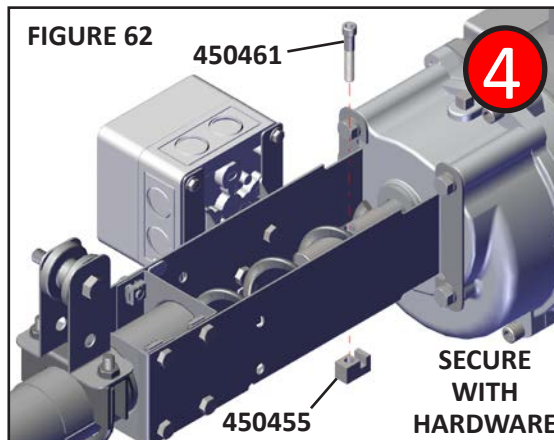
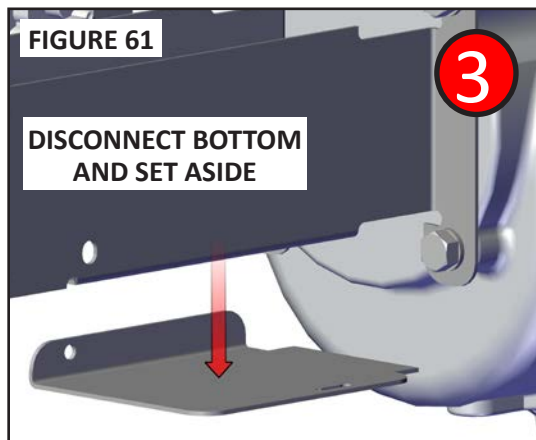
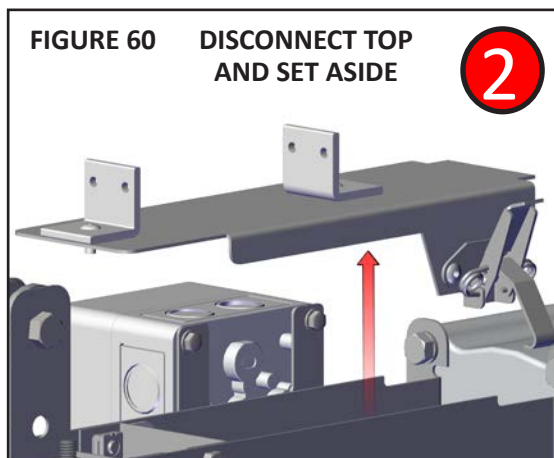
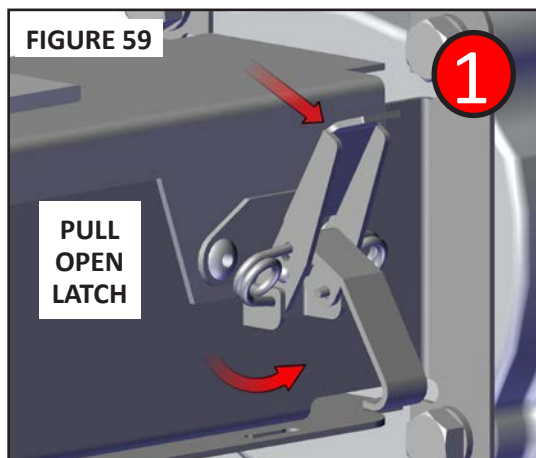
7. Attach drive head and gearbox unit to port tube assembly, as shown in Figure 56 and 57, using (4) 010643 hex bolts, (4) 010252 split washers, and (4) 010426 flat washers from the hardware bag.




Attaching the Auger to the Direct Drive

Now that you have the auger inserted into the feed line from the boot end through the port tube/housing assembly and have pulled enough auger to attach to the drive unit proceed with the following steps.


1. Unlatch spring latch by pulling down top of latch (top arrow) to release the bottom clamp (bottom arrow) of latch, shown in Figure 59.
2. To access the 450461 socket head screw, remove the top lid of the port tube housing, as shown in Figure 60.
3. To access the 450455 retainer, remove the bottom plate of the port tube housing, as shown in Figure 61.
4. Secure the auger to the drive shaft using the 450461 socket head screw and the 450455 retainer included in the hardware bag shown in Figure 62. (Auger retainer may already be attached, if so remove and re-attach. **MAKE SURE THE AUGER IS POSITIONED THROUGH THE SLOT ON THE AUGER RETAINER AND SLIDE ALL THE WAY BACK AGAINST 012755 WASHER.**)



At this time, you may move to the opposite (hopper/boot) end to complete the auger installation or you may assemble the control pan unit at this time. For the purposes of saving time, you may interrupt the auger installation process and assemble the control pan unit to the port tube/housing assembly.



**Disconnect power
to Switch circuit before moving
on to control pan wiring**



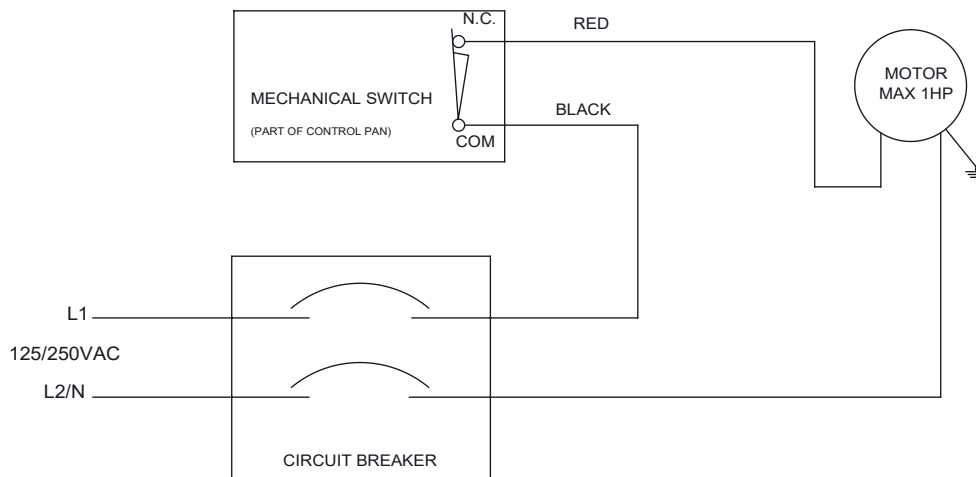
End Control Pan (Mechanical Switch Wiring Diagram)



**RELAYS/COILS
MUST BE
INTEGRATED AS
SHOWN.**



**MECHANICAL
SWITCH MUST
NOT BE USED
TO DIRECTLY
SWITCH
MOTORS OVER
1/2 HP.**



WIRING DIAGRAM

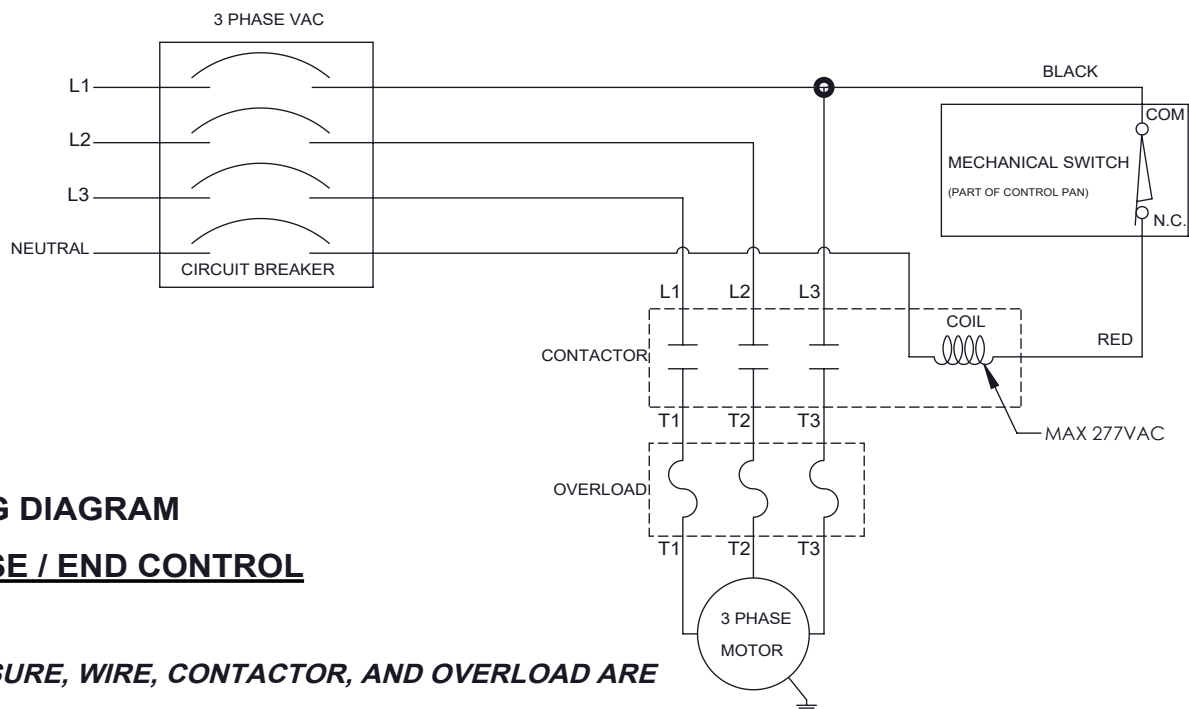
SINGLE PHASE / END CONTROL

**ENCLOSURE, WIRE, CONTACTOR,
AND OVERLOAD ARE TO BE
SUPPLIED BY OTHERS.**



WIRING MUST BE DONE BY A LICENSED ELECTRICIAN.

ALL LOCAL CODES MUST BE FOLLOWED!



WIRING DIAGRAM

3 PHASE / END CONTROL

NOTES:

**ENCLOSURE, WIRE, CONTACTOR, AND OVERLOAD ARE
SUPPLIED BY OTHERS.**

Auger Connection at Hopper/Boot end



**Be sure ALL POWER IS TURNED OFF before servicing this equipment!
Follow Lock Out Tag Out procedures!**



You are ready to perform the final steps to installing the auger.

1. Pull the auger from the boot end until it begins stretching. Other end should already be attached to the direct drive/control pan.
2. Allow the auger to relax.
3. Mark the auger at the end of the boot while the auger is relaxed in the tube, shown in Figure 63.

FIGURE 63

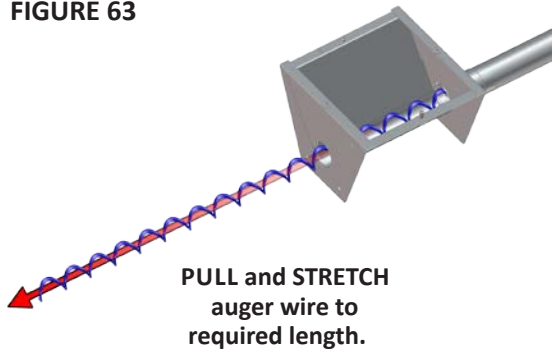
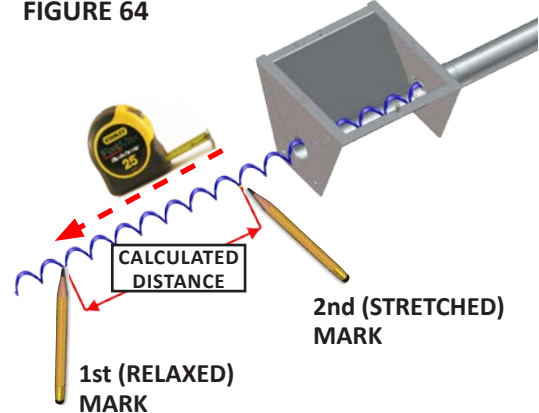


FIGURE 64



4. Stretch the auger 7 inches (178mm) per 100 feet. Example: A 350 feet (107m) feed line requires approximately 24 inches (609mm) of stretch.
5. Beginning at the relaxed mark, measure the required amount of stretch. Mark the auger, as shown in Figure 64.
6. Grip the auger approximately 12" (203mm) ahead of the 2nd (stretched) mark with locking pliers and allow the auger to pull back into the boot so that the pliers rest against the end of the Boot, shown in Figure 65.
7. Cut the auger at the stretched mark with a bolt cutter or grinder, shown in Figure 65.
8. Insert the fighting anchor shaft into the end of the auger while pliers are still attached, shown in Figure 66.

FIGURE 65

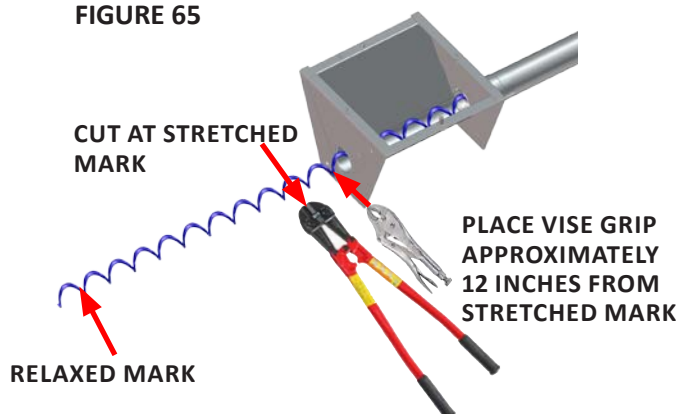
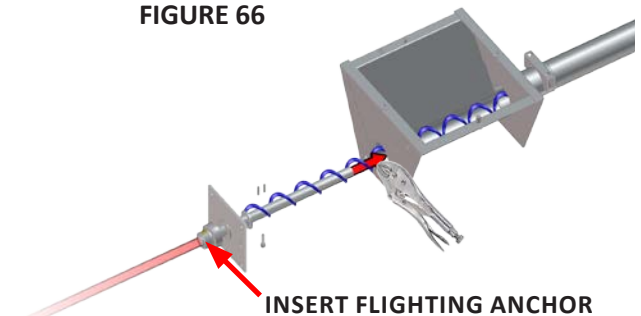


FIGURE 66

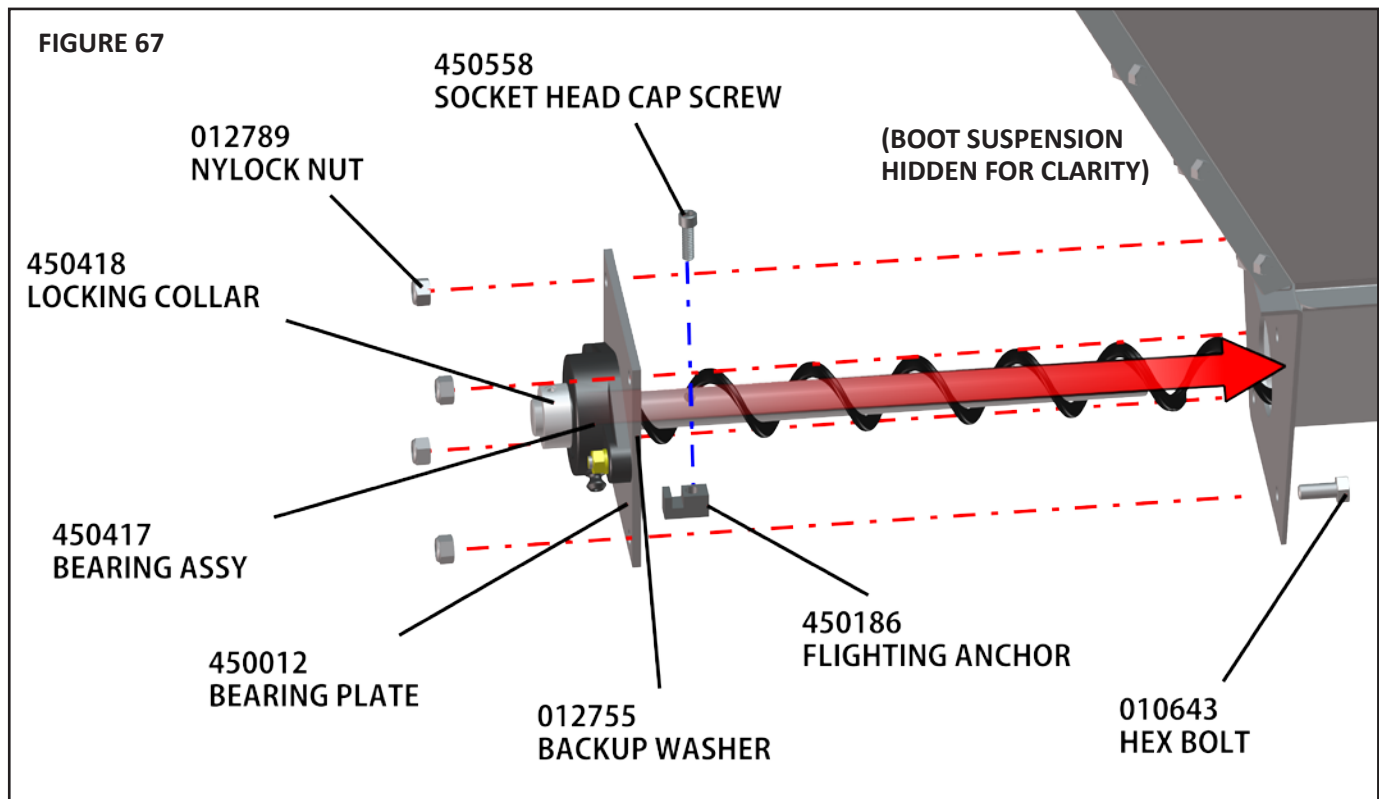


CAUTION !
REMINDER: Don't forget to handle AUGER with caution. Wear safety glasses and gloves to protect your eyes and hands from injury.

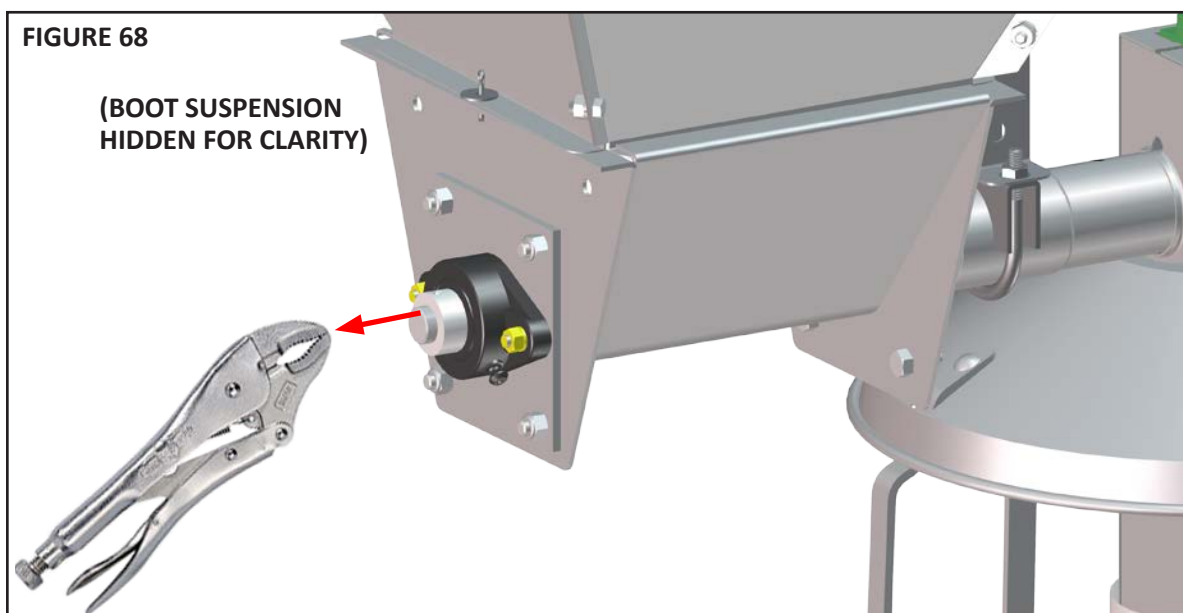


Auger Connection at Hopper/Boot end - continued

9. Rotate the flighting anchor shaft assembly so that the auger moves between the flighting anchor and reaches the backup washer at the head of the shaft, shown in Figure 67. When the auger is in place, the socket head cap screw will need to be tightened to hold the auger securely. It will hold the auger tight to one side of the shaft.



10. Carefully remove the pliers as you hold the auger in place and gradually allow the shaft with the stretched auger to pull back into the boot. The flighting anchor shaft will be held in place by the pull of the auger and the bearing. Install the bolts and nuts to hold the bearing plate in place.



Winch Adjustable Feed Level Tubes (optional)

Valco's Adult Turkey Feeder can be equipped to provide winch adjustable feed level tubes. New systems can be ordered with this feature and existing systems can be upgraded to include feed level tube winching components.

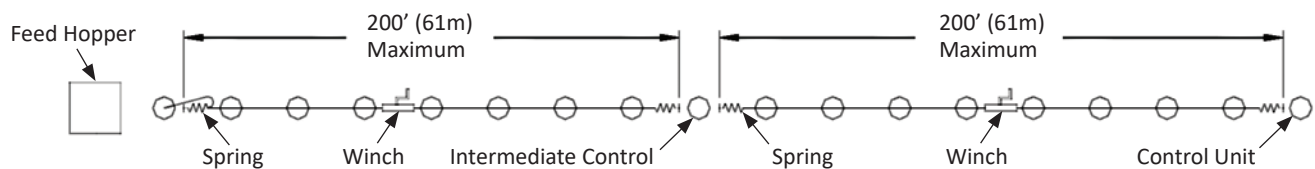
The Feed Level Tubes are adjusted using a winch and cable. The maximum line length for each winch is 200' (61m). The winch should be located in the middle of the line of feeders it is to adjust, as shown below in Figure 69.

Operation

The Feed Level Tubes are winched up to flood the pans with feed to allow maximum access for young turkeys. As the birds grow, the Feed Level Tubes can be lowered to reduce the feed level.

For systems using winchable Feed Level Tubes, the Feed Level Ring will need to be adjusted manually.

FIGURE 69

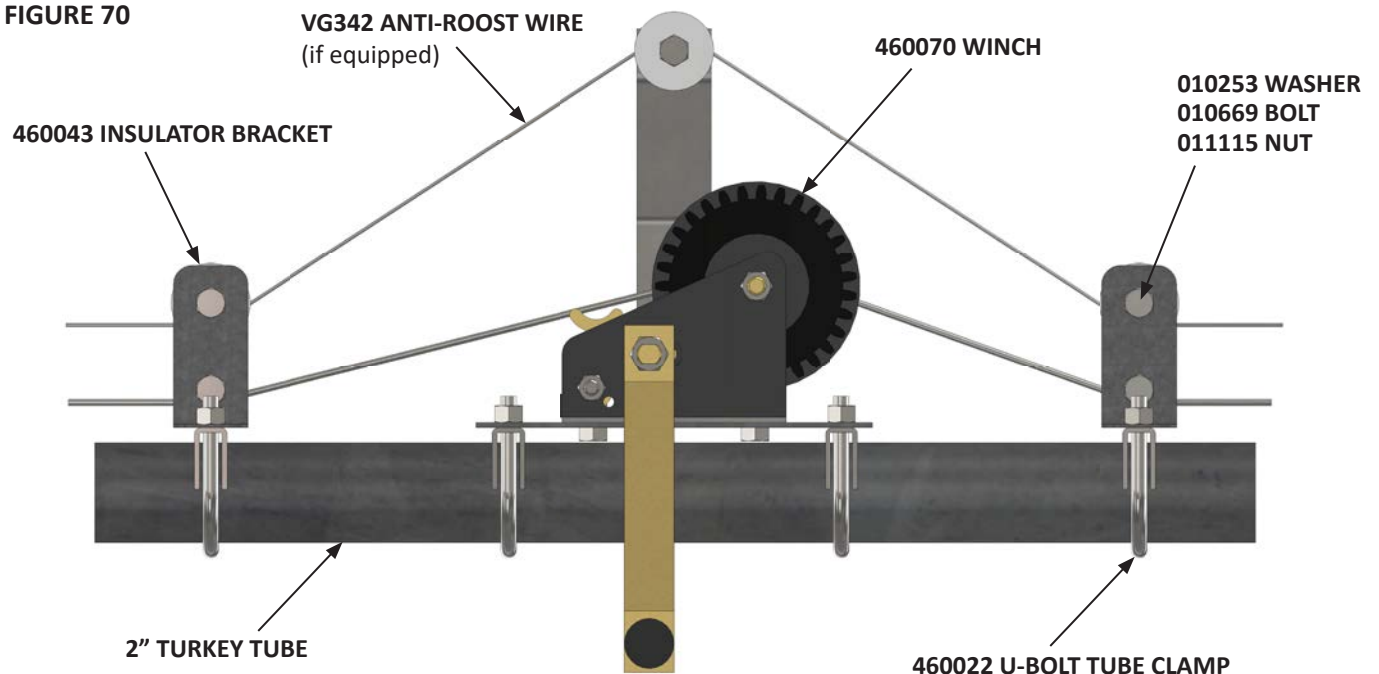


Installation of the Winch Adjustable Feed Level Tube System

1. Use two U-bolts (provided) to fasten the winch to the feeder line tube, as shown in Figure 70. The winch should be placed in the center of the line of Feed Level Tubes it will adjust, as shown in Figure 69.

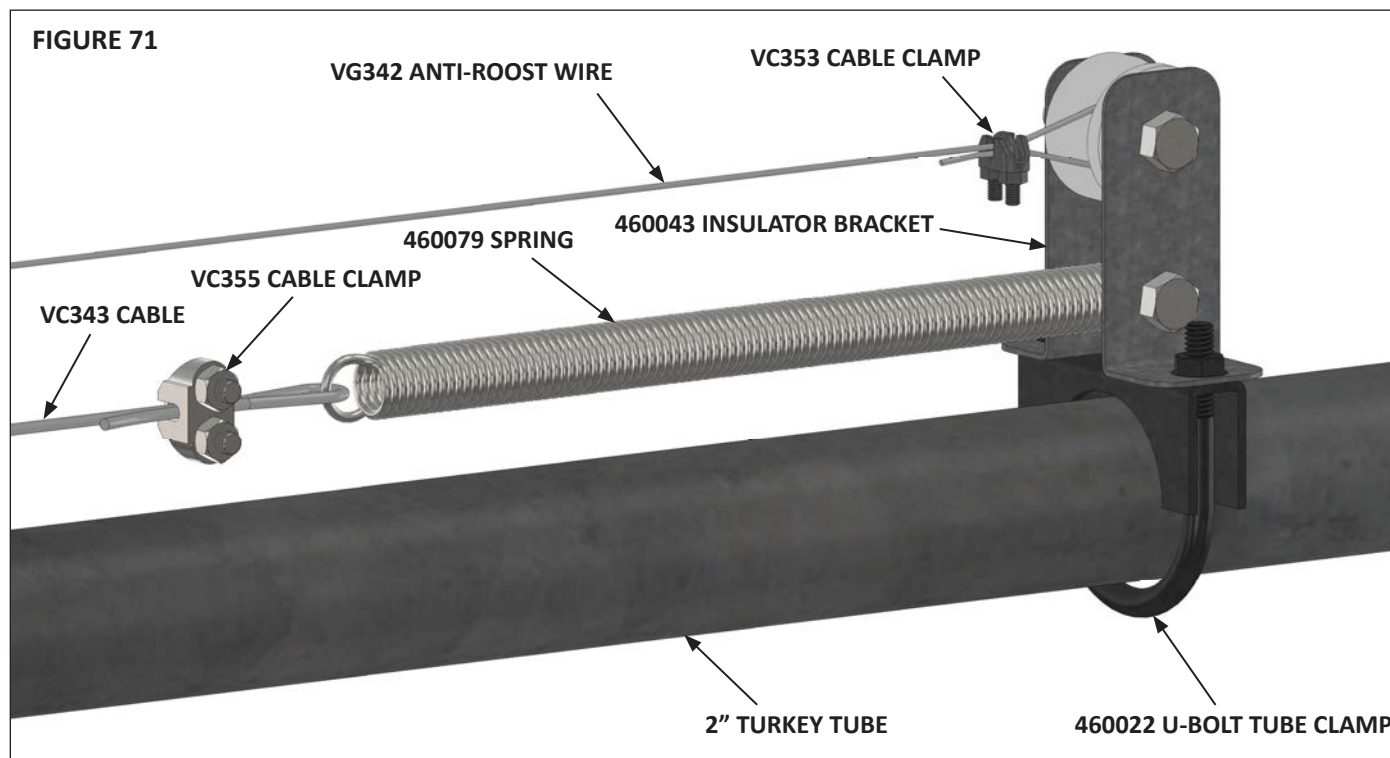
NOTE: The Line Length must NOT exceed 200 feet (61m).

FIGURE 70



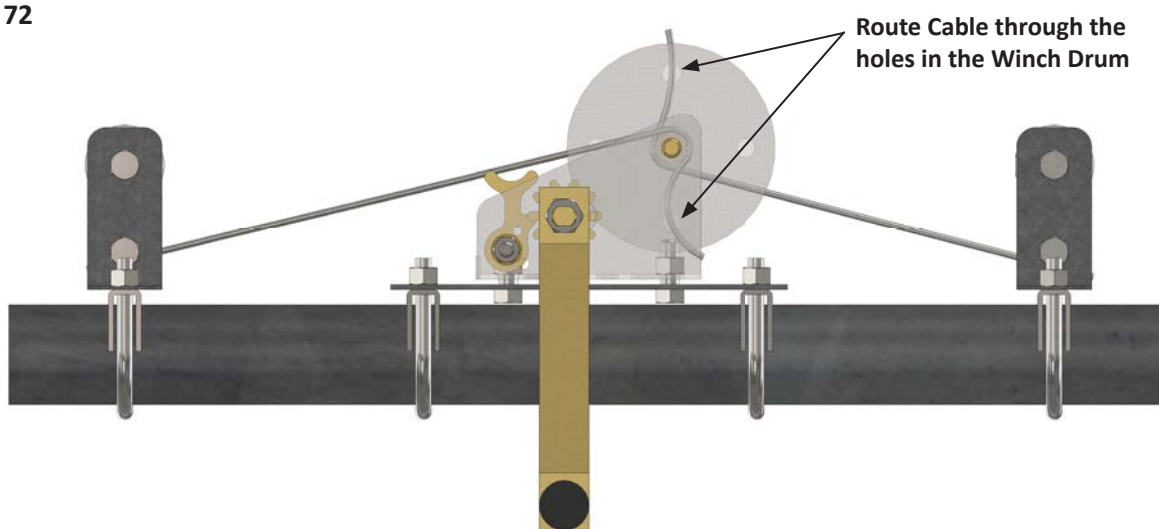
Winch Adjustable Feed Level Tubes (optional) - continued

2. Attach spring to clamp on each side of the winch, as shown in Figure 71. Attach the Tube Clamp/Spring assemblies to the feeder line tube at a maximum distance of 100 feet (30m) from the winch, as shown in Figure 69.



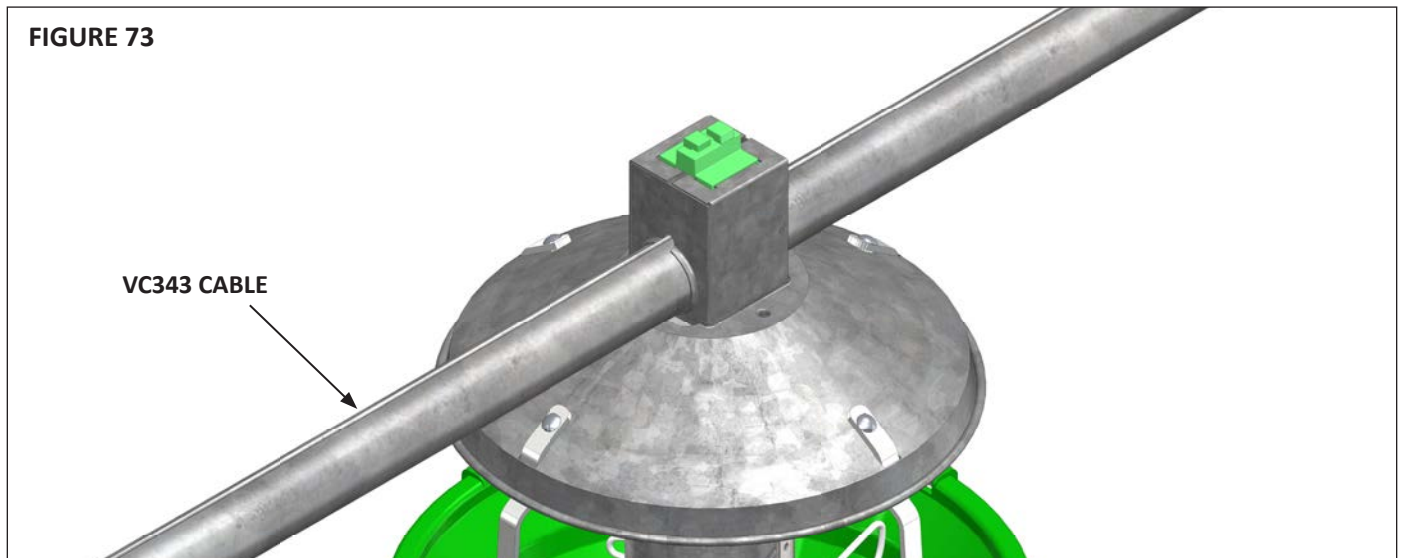
3. Route the cable through the holes in the winch drum. Turn the winch handle clockwise two revolutions to wind some cable onto the winch drum, as shown in Figure 72.

FIGURE 72



Winch Adjustable Feed Level Tubes (optional) - continued

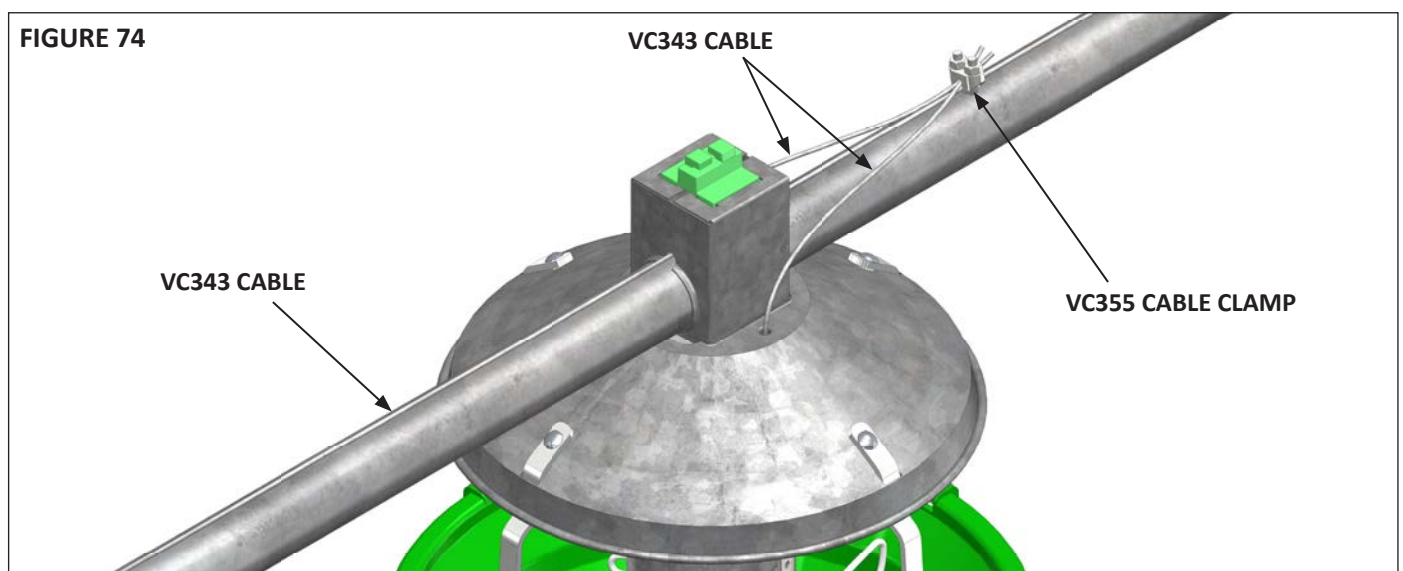
4. Thread the cable through every Drop Tube to support the cable and keep it in position, as shown in Figure 73.



5. Loop the cable around the end of the spring and secure with a cable clamp, as shown in Figure 71.
6. Install two cable assemblies at each feed level tube (if the cable assemblies have not yet been installed). The cable stop should be on the inside of the feed level tube and pulled up tight against the inside.
7. Thread the cable assemblies through the holes on each side of the pan shield from the underside. Then clamp to the master cable with a cable clamp, as shown in Figure 74.

NOTE: Before clamping the cable assemblies to the cable, make sure:

- A. The springs at each end of the cable are stretched approximately 14" (355.6 mm).
- B. The feed level tubes are raised as high as possible.
- C. The stop on the cable assemblies are pulled up against the inside of the feed level tube.



Anti-Roost Installation

REMINDER!



The anti-roost wire is not installed on the control head when shipped. The insulator with the bracket 460075 will NOT be included. The anti-roost wire must have an insulator at least every 50 feet. $(\text{Length} \div 50 \text{ feet (15.24m)} + 1 = \text{number of insulators required})$



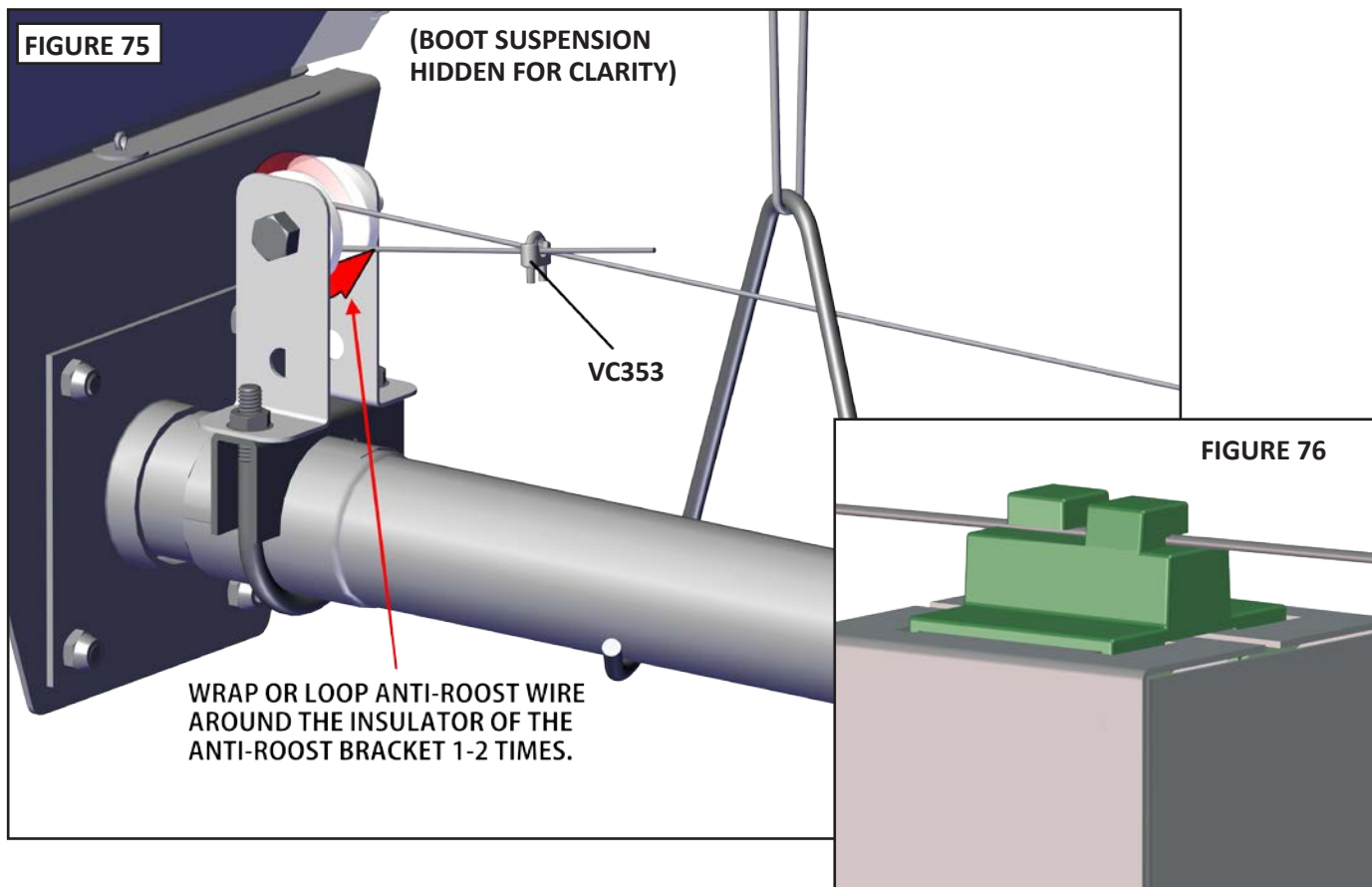
CAUTION !

Handle ANTI-ROOST WIRE with caution.

Wear safety glasses and gloves to protect your eyes and hands from injury.

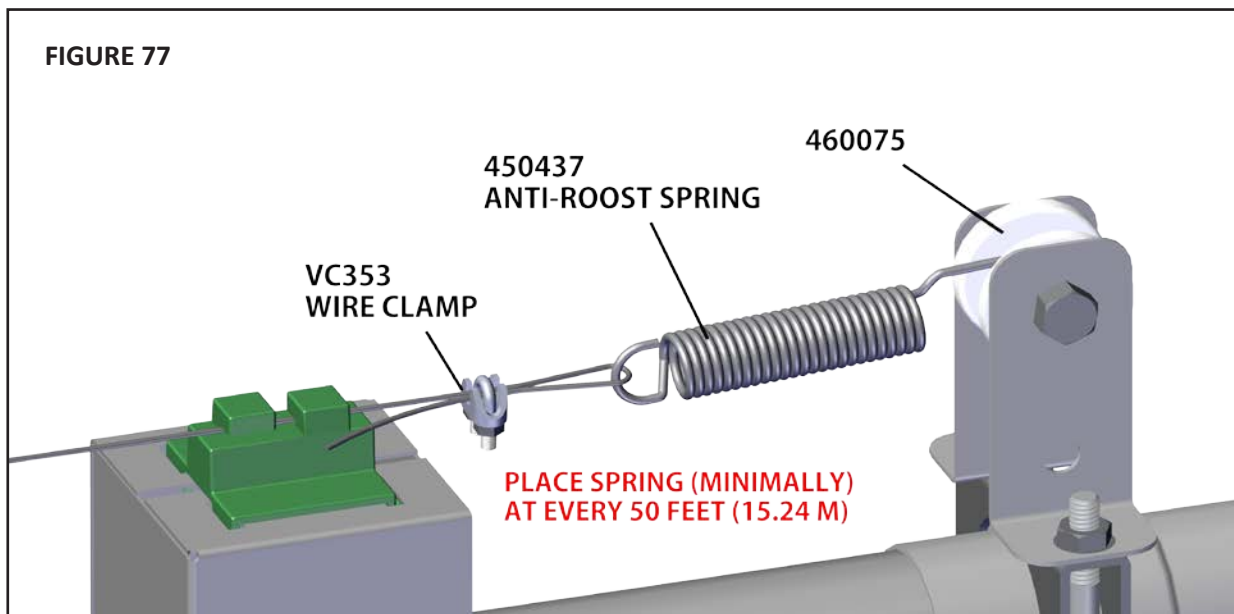


1. Un-wrap the anti-roost wire as you need for installation. The wire is ordered by the foot (30.48cm), 500' (152.4m), or 1000' (304.8m) spools. Large spools may require a cable reel for easier handling.
2. Start at the hopper end of the line and form a loop or double loop (wrap) around the anti-roost bracket and fasten with a 1/16" cable clamp, shown in Figure 75.
3. As you pull the anti-roost wire to the next anti-roost bracket, insert the wire from the insulator into the top of each anti-roost bracket of each feed pan, shown in Figure 76.

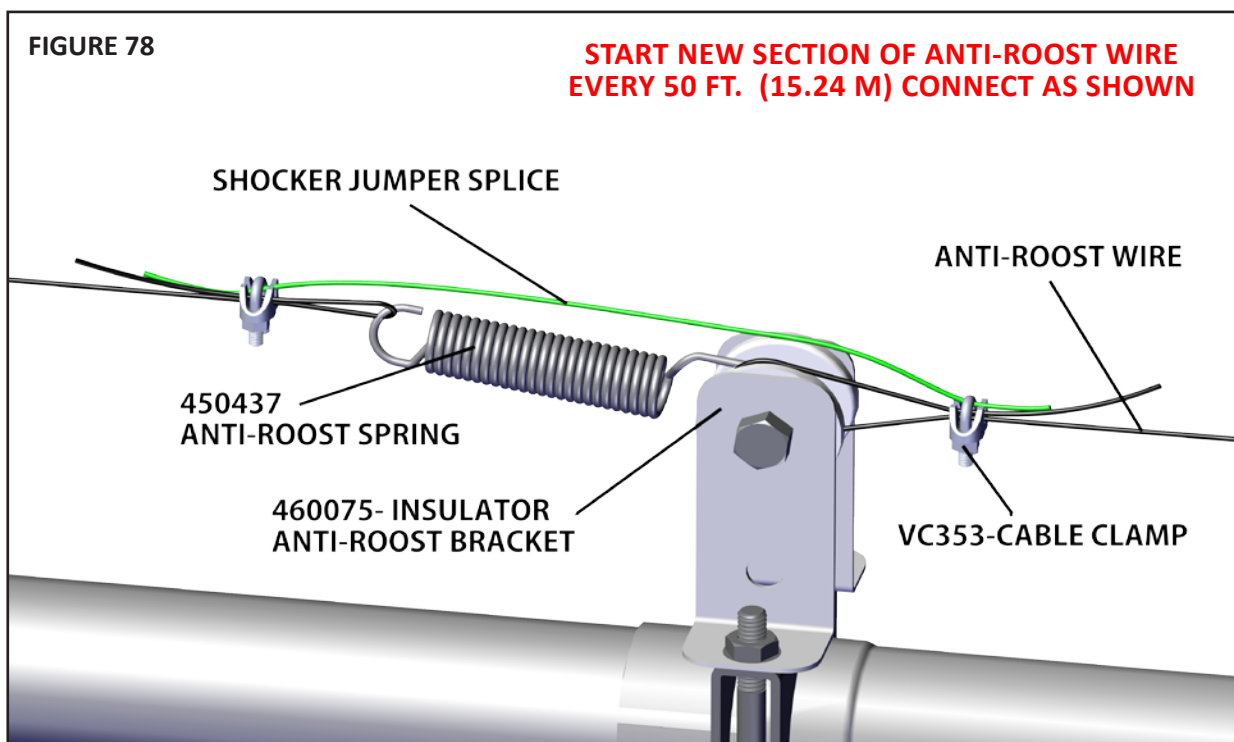


Anti-Roost Installation - continued

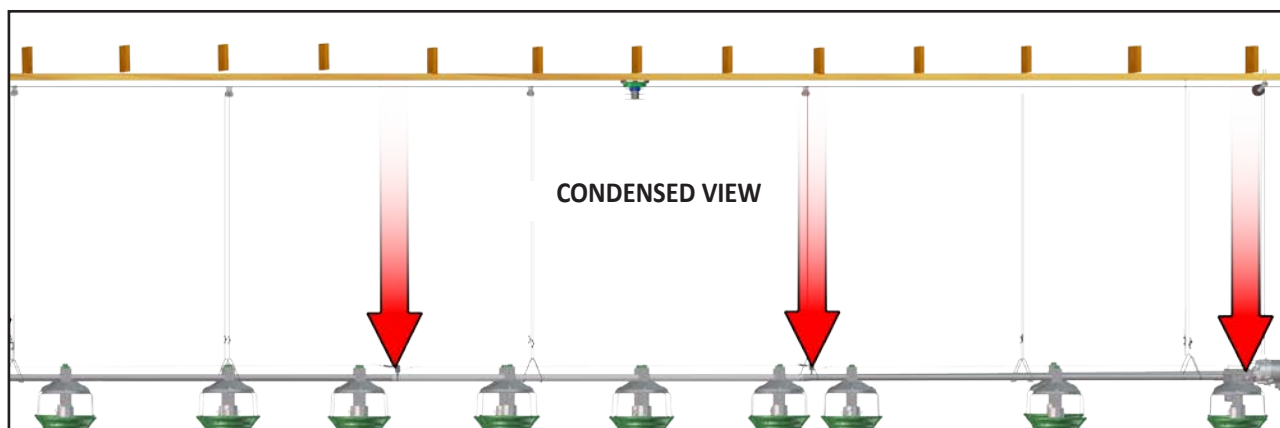
4. Attach the spring onto the center groove at the second (or next) anti-roost bracket, which will be at the 50 ft length from the anti-roost clamp on the hopper end, shown in Figure 77.
5. Thread the end of the wire through the end of the spring. Pull the wire tight so that there is $\frac{3}{4}$ " [20 to 25mm] of stretch in the spring. Clamp the anti-roost wire to form a loop and cut off any excess.



6. Now you need to start the next (50 ft) run of anti-roost wire by attaching the wire to the same insulator that you just attached the spring to. For best results, make a double loop around the anti-roost insulator in the center groove of the insulator and fasten with a $\frac{1}{16}$ " cable clamp just as you did at the hopper end.
7. Attach a jumper cable at the adjoining 50 ft (15.24 M) anti-roost shocking/wire runs as it is shown in Figure 78.

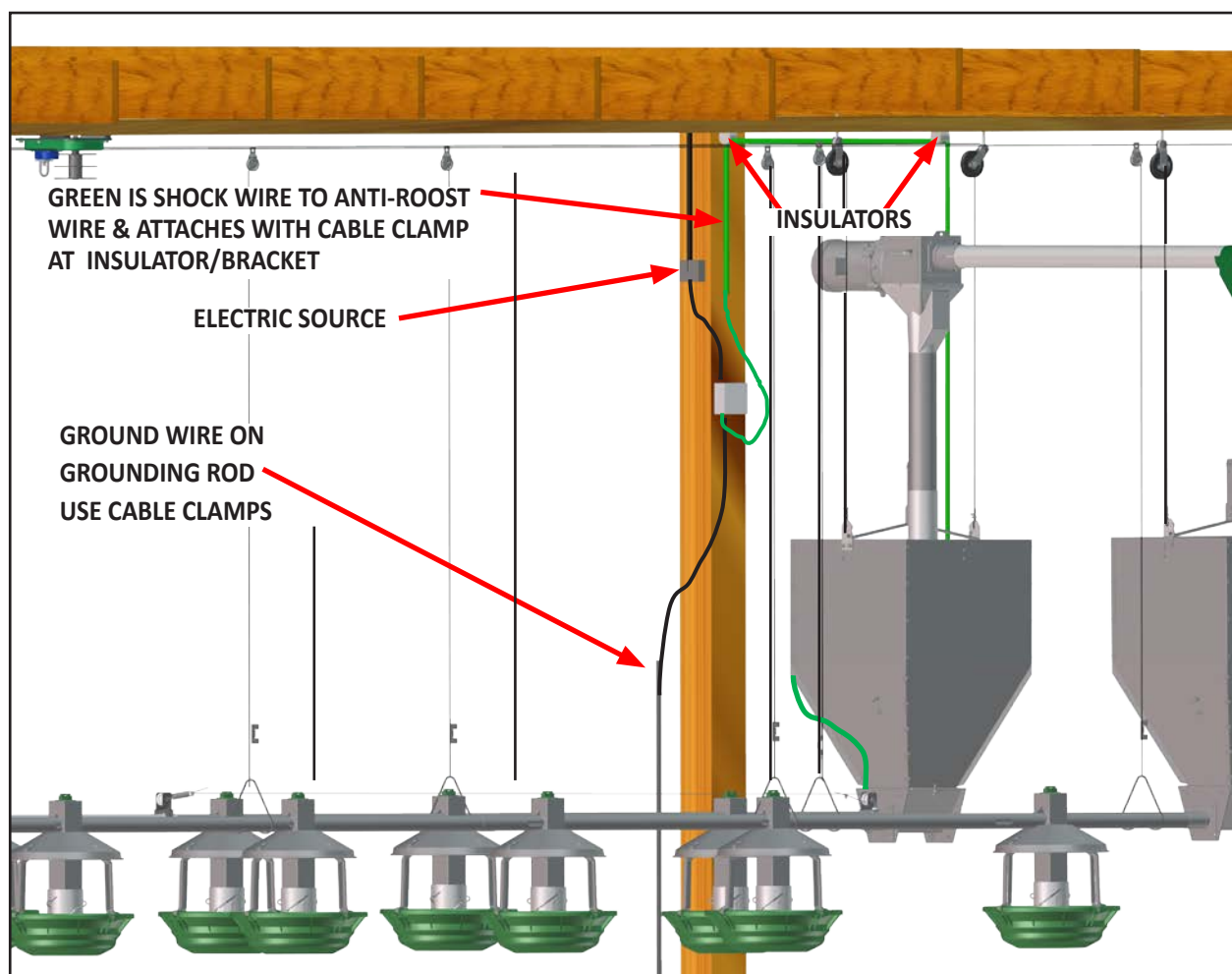


Anti-Roost Installation - continued



7. Run the anti-roost wire to the next anti-roost insulator as you did in step 4 on the previous page.
8. Repeat this installation until the anti-roost wire is installed along the entire feeder line.
9. Install the shocking unit. The shocking unit is used to power all anti-roost lines in a house.
Route the shocking unit wire from the shocking unit to the anti-roost system. Secure the shocking unit wire to the anti-roost wire using a cable clamp. (Suggestion: attach wire to ceiling with insulators, keeping path clear for workers.)

FIGURE 79



Operation Guidelines

1. Keep the lip of the feed pan level with the top of the bird's breast, where the neck joins the body, so that the turkeys reach slightly to get into the pan. This will be around 16" (40.5cm) from the floor at placement. Adjust as the turkeys grow.
2. Keep the depth of feed in the pan around 1 1/2" (3.8cm) to allow easy access but prevent excessive wastage.



These are to be used as general guidelines. Differences in breed, feed consistency, lighting, climate, and other external factors will dictate changes in these guidelines to individualize a growing program to optimize feeding system performance.

Feeder Cleaning and Maintenance

End of Grow-Out - Maintenance

- Empty all pans at the end of grow-out.
- Auger all feed out of the tubes.
- Winch up the complete feed system to a comfortable working height and remove debris.
- For thorough cleaning unsnap three (3) of the four (4) struts, letting the pan hang from the remaining attachment that has a hinging ability.
- Clean with a high pressure cleaner.
- To protect the hopper base from corrosion loosen the tube clamp and turn with the opening downwards before you use the high pressure cleaner.

FIGURE 80

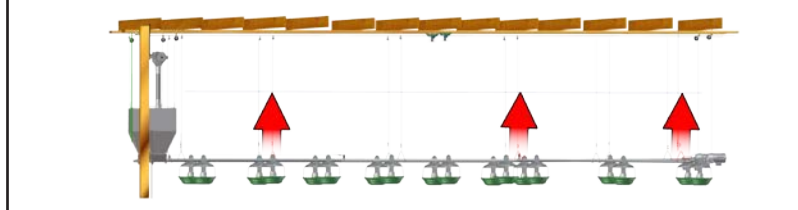
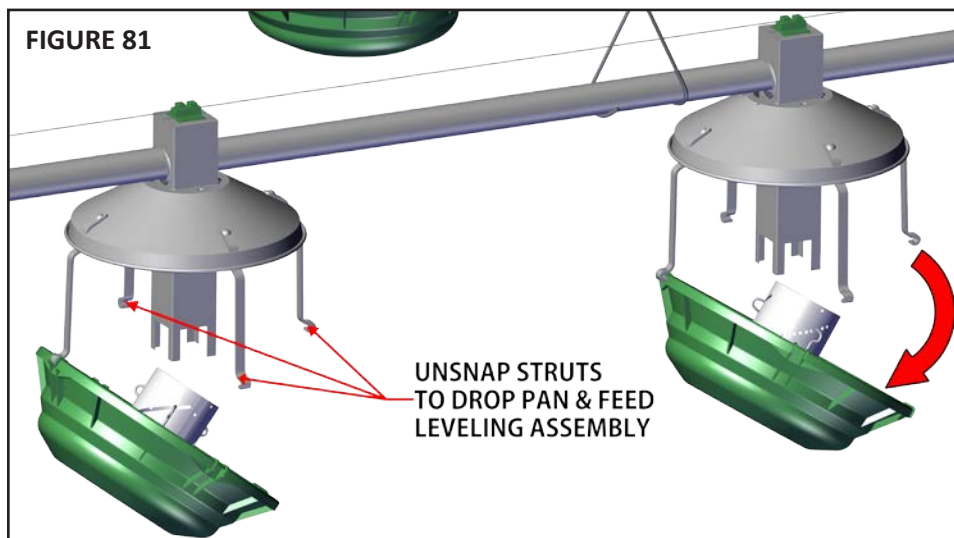


FIGURE 81



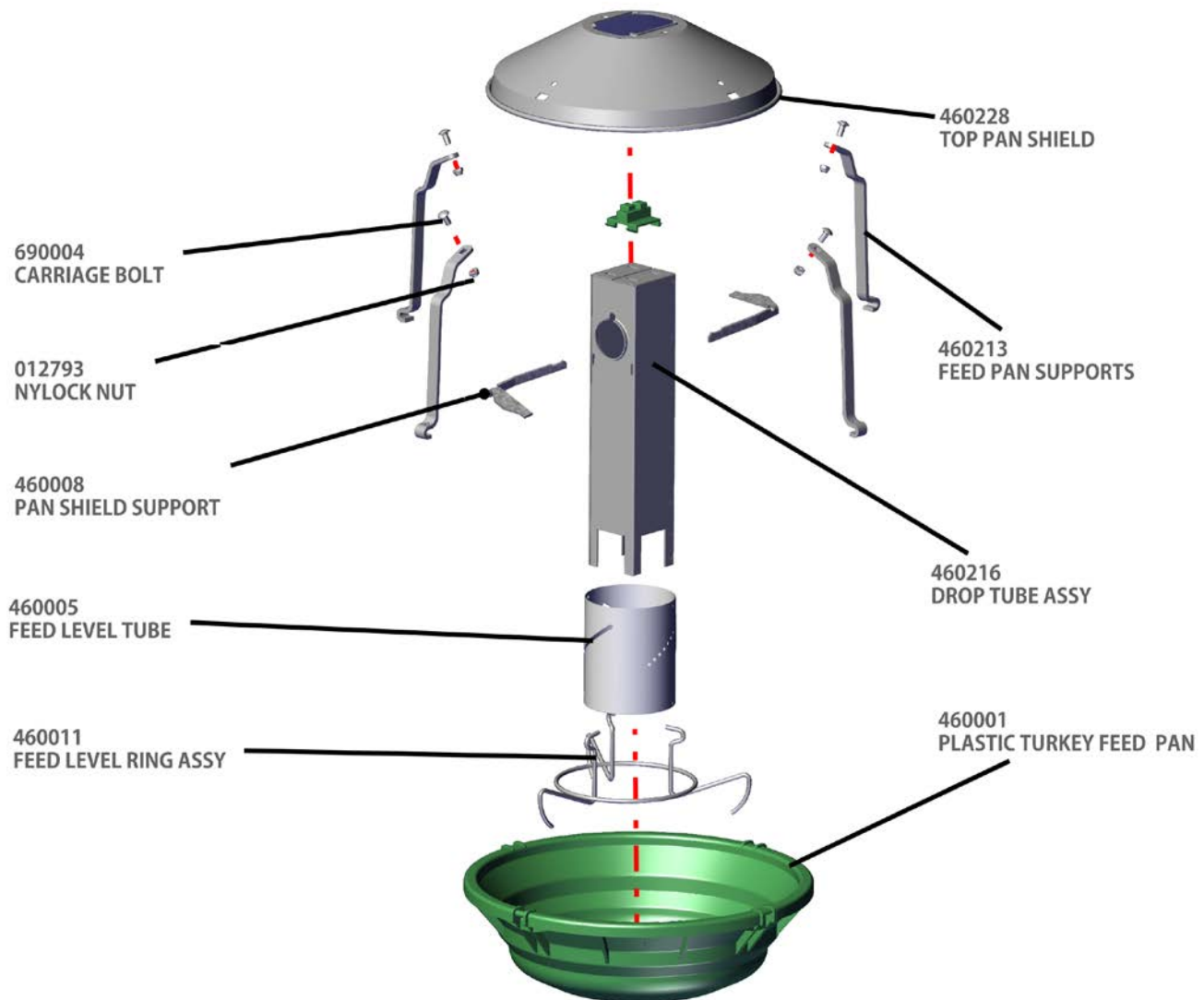
DON'T FORGET TO COVER THE CONTROL PAN AND DRIVE UNIT WITH PLASTIC!

Make sure no water remains in the hopper base or it will CORRODE!

Gaseous formaldehyde (formalin) liquid caustic soda or solution of caustic soda, hypochlorite, or chlorine water cresols are very corrosive and will quickly affect equipment.

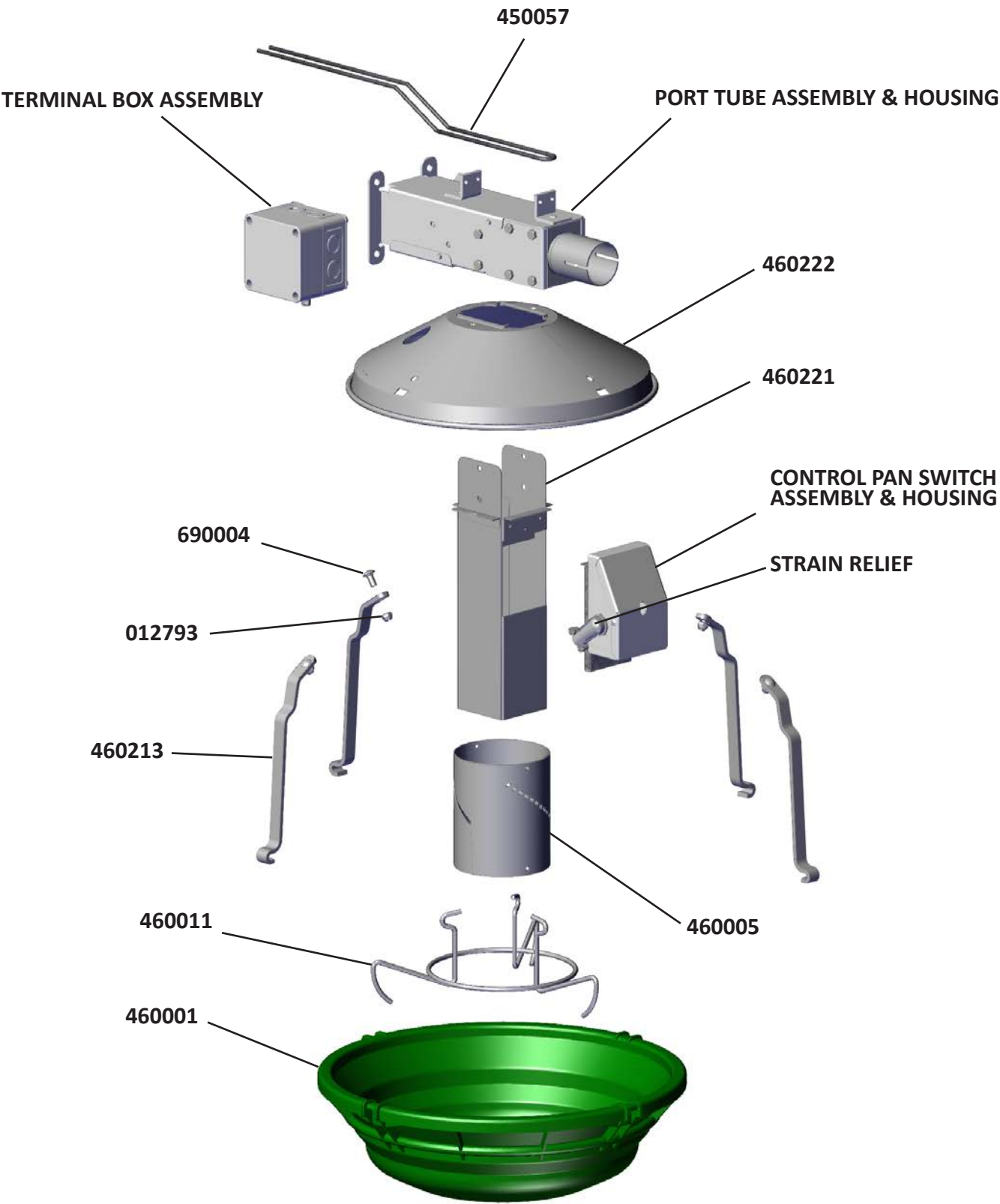
Parts Pages

Adult Turkey Pan Feeder - Exploded View



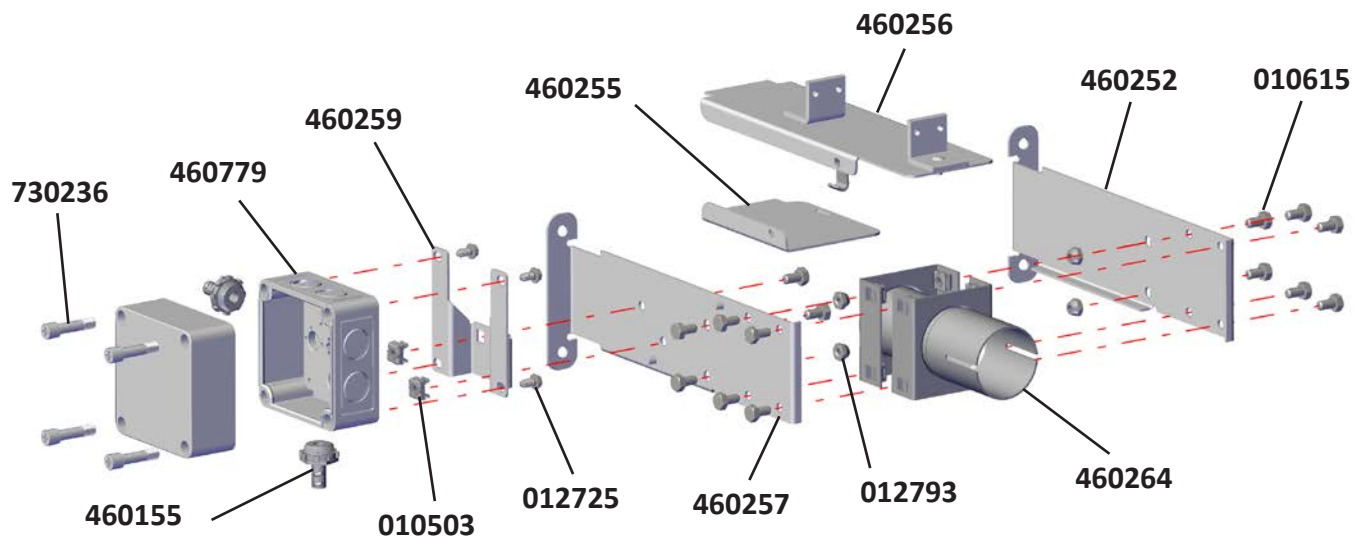
PART #	DESCRIPTION	QTY
460217 - ADULT TURKEY PAN FEEDER		
012793	1/4-20 NYLOCK NUT	4
460001	PLASTIC TURKEY FEED PAN	1
460005	FEED LEVEL TUBE	1
460008	PAN SHIELD SUPPRT	2
460011	FEED LEVEL RING ASSY	1
460213	FEED PAN SUPPORT - ZINC PLATED ADULT TURKEY PAN FEEDER	4
460216	DROP TUBE ASSEMBLY ADULT TURKEY PAN FEEDER	1
460228	TOP PAN SHIELD, ADULT TURKEY PAN FEEDER	1
690004	SCREW, 1/4-20 X 5/8 CRG SN ZP	4

End Control Pan - Exploded View

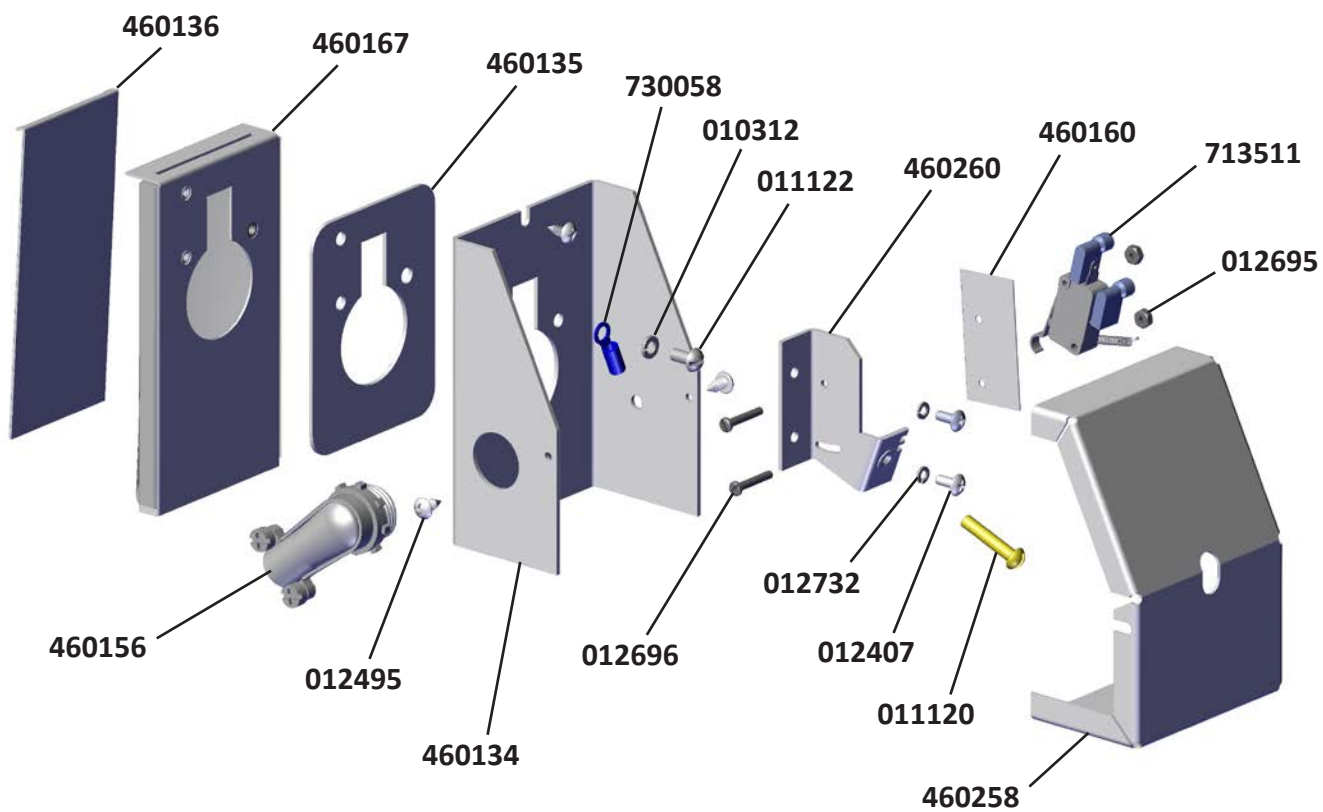


End Control Pan - Exploded View - continued

TERMINAL BOX & PORT TUBE HOUSING ASSEMBLY



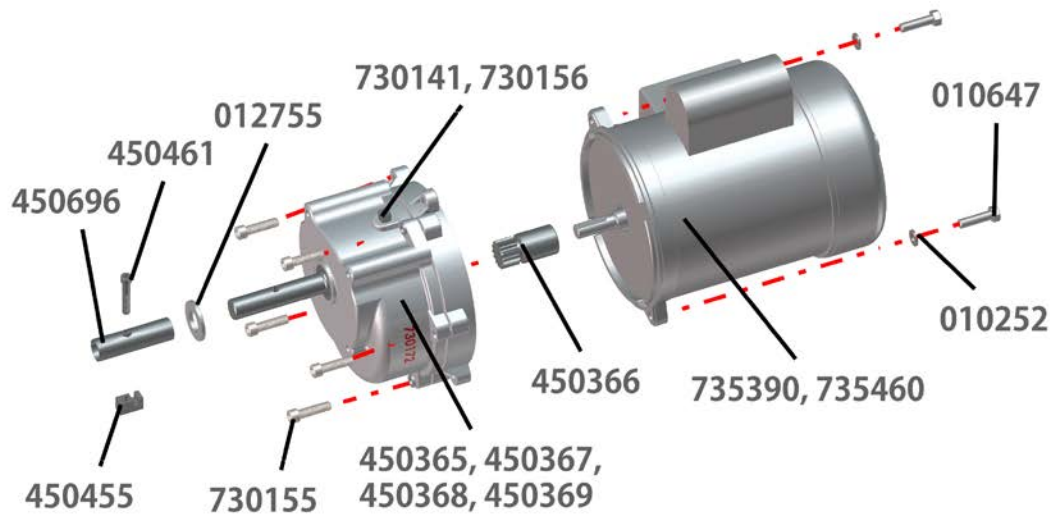
CONTROL PAN SWITCH ASSEMBLY & HOUSING



End Control Pan - Parts List

PART #	DESCRIPTION	QTY
460250 - END CONTROL PAN		
010312	#10 MEDIUM SPLIT LOCKWASHER	1
010503	NUT, RETAINER 1/4-20 ZP	14
010615	1/4-20 X 1/2" HEX BOLT	14
011120	10-24 X 1" PLASTIC PH SCREW	1
011122	#10-24 X 3/8" ROUND HEAD SCREW	1
012407	#6-32 X 3/8" TRUSS HEAD BOLT	2
012495	#8 X 3/8" ROUND HEAD PHILLIPS SHEET METAL SCREW	3
012695	#4-40 MACHINE SCREW NUT	2
012696	#4-40 X 3/4" PHILLIPS HEAD MACHINE SCREW	2
012725	# 12 X 1/2" HEX HEAD SM SCREW	4
012732	#6 LOCKWASHER	2
012793	1/4-20 NYLOCK NUT	8
450057	ANTI-ROOST GUARD WIRE	1
450779	ELECTRICAL BOX	1
460001	PLASTIC TURKEY FEED PAN	1
460005	FEED LEVEL TUBE	1
460011	FEED LEVEL RING ASSY	1
460134	CONTROL PAN SWITCH BASE	1
460135	CTRL PAN BASE SPACER	1
460136	FEED PLATE	1
460155	3/8" SCREW-IN CONDUIT CONNECTOR	2
460156	3/8 X 90 DEG CONDUIT CONNECT	2
460158	1/8" X .016" X 1/2" EXTENSION SPRING	1
460160	.012" PLASTIC INSULATOR	1
460164	18-1/2" X 18-1/2" X 19" CARTON	1
460167	PILOT PLATE ASSEMBLY	1
460199	MICRO SWITCH	1
460213	FEED PAN SUPPORT - ZINC PLATED ADULT TURKEY PAN FEEDER	4
460221	DROP TUBE WELDMENT END CONTROL TURKEY	1
460222	CONTROL PAN SHIELD	1
460252	LEFT HOUSING	1
460255	LOWER COVER	1
460256	TOP COVER ASSEMBLY	1
460257	RIGHT CONTROL PAN HOUSING	1
460258	SWITCH COVER	1
460259	ENCLOSURE BRACKET	1
460260	SWITCH BRACKET	1
460264	PORT TUBE ASSEMBLY	1
690004	SCREW, 1/4-20 X 5/8 CRG SN ZP	4
713511	DISCONNECT, 16-14 FEMALE FLAG .187 X .02 TAB SIZE	2
730058	#16-14 RING TERMINAL	1

Direct Drive/Gearbox - Exploded View/Parts List

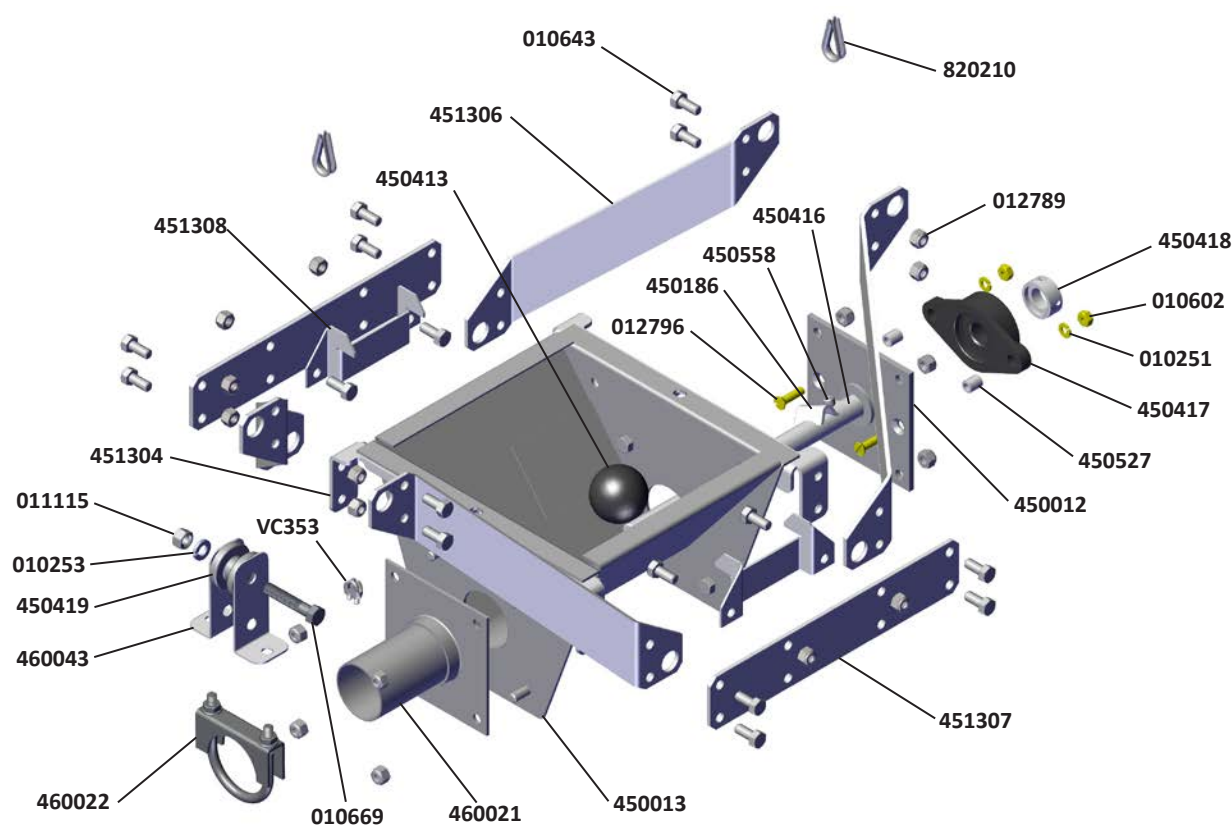


PART #	DESCRIPTION	QTY
450287 MOTOR/GEARBOX ASSY – 543/657 RPM 1P		
735390	MTR,.50HP,115/230V,50/60HZ,1P 1425/1725RPM,56N,SF1.00,IN.B	1
450369	GEARBOX, 2.63:1 RATIO, 3/4 SH 56N DIE CAST AL	1
450366	1/2" PINION DIE CAST- COMPLETE	1
450391 MOTOR/GEARBOX ASSY – 296/359 RPM 3P		
735460	MTR,.50HP,190/380&208-230/460V 50&60HZ,3P,1425/1725RPM,56N	1
450365	GEARBOX, 4.81:1 RATIO, 3/4 SH 56N, DIE CAST AL	1
450366	1/2" PINION DIE CAST- COMPLETE	1
450393 MOTOR/GEARBOX ASSY – 441/367 RPM 1P		
735390	MTR,.50HP,115/230V,50/60HZ,1P 1425/1725RPM,56N,SF1.00,IN.B	1
450368	GEARBOX, 3.91:1 RATIO, 3/4 SH 56N, DIE CAST AL	1
450366	1/2" PINION DIE CAST- COMPLETE	1
450395 MOTOR/GEARBOX ASSY – 441/367 RPM 3P		
735460	MTR,.50HP,190/380&208-230/460V 50&60HZ,3P,1425/1725RPM,56V	1
450368	GEARBOX, 3.91:1 RATIO, 3/4 SH 56N, DIE CAST AL	1
450366	1/2" PINION DIE CAST- COMPLETE	1
450397 MOTOR/GEARBOX ASSY – 187/226 RPM 1P		
735390	MTR,.50HP,115/230V,50/60HZ,1P 1425/1725RPM,56N,SF1.00,IN.B	1
450367	GEARBOX, 7.63:1 RATIO, 3/4 SH 56N, DIE CAST AL	1
450366	1/2" PINION DIE CAST- COMPLETE	1
460025/MOTOR/GEARBOX ASSY – 296/359 RPM 1P		
735390	MTR,.50HP,115/230V,50/60HZ,1P 1425/1725RPM,56N,SF1.00,IN.B	1
450365	GEARBOX, 4.81:1 RATIO, 3/4 SH 56N, DIE CAST AL	1
450366	1/2" PINION DIE CAST- COMPLETE	1
INTERCHANGEABLE PARTS ON NEXT PAGE		

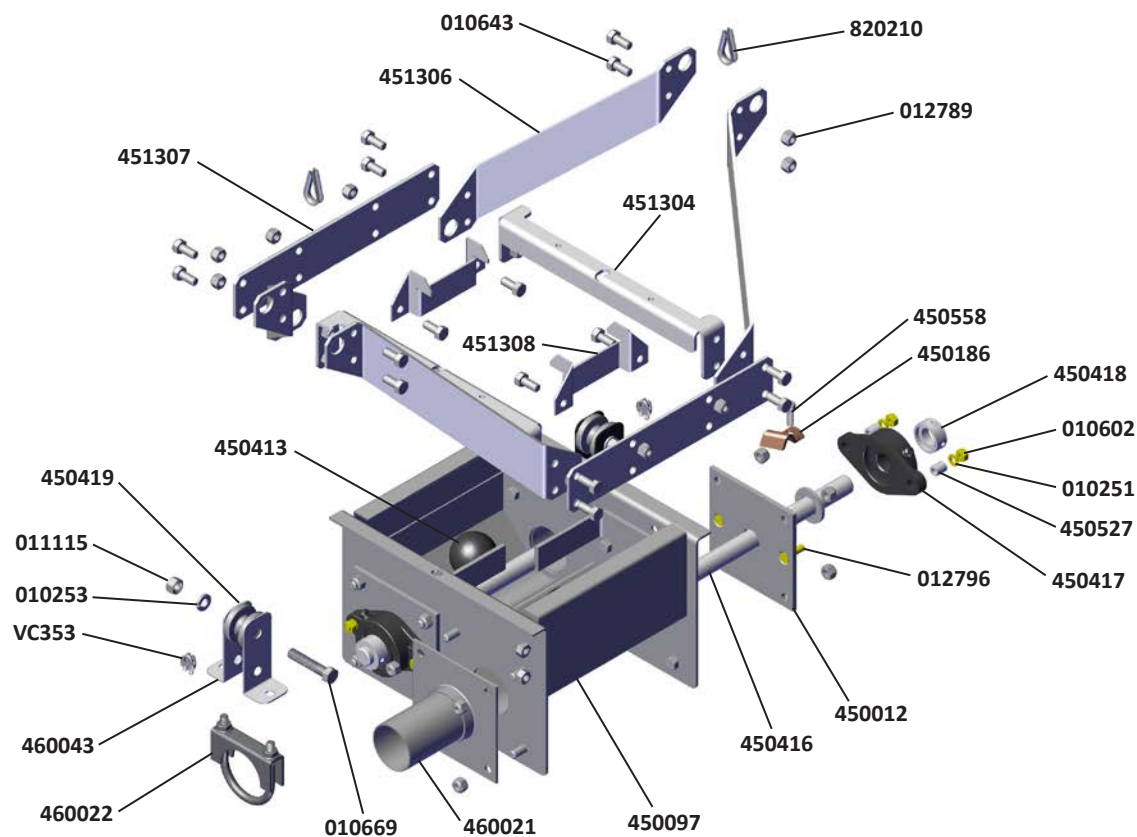
Direct Drive/Gearbox - Parts List, continued

PART #	DESCRIPTION	QTY
DIRECT DRIVE/GEARBOX - INTERCHANGEABLE PARTS		
010252	WASHER, LOCK 5/16" MED SPLIT ZP	2
010647	5/16" X 1-1/4" HEX BOLT	2
012755	WASHER, FLAT, 3/4" SAE	1
450366	1/2" PINION DIE CAST- COMPLETE	1
450455	DRIVE BLOCK	1
450461	1/4" X 1-1/2" SOCKET HEAD SCREW	1
450696	.028 AUGER SHIM	1
730141	NPT VENT PLUG (Part of Gearbox, listed for replacement purposes)	1
730156	NPT PLUG (Part of Gearbox, listed for replacement purposes)	1

Single Boot - Exploded View



Double Boot - Exploded View



Single Boot & Double Boot - Parts Lists

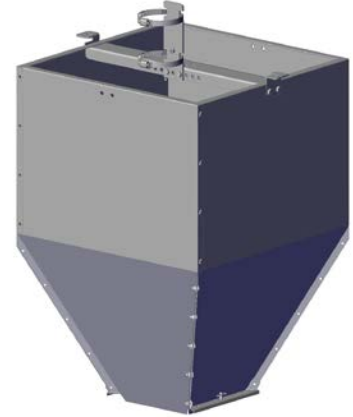
PART #	DESCRIPTION	SINGLE BOOT	DOUBLE BOOT
	460033 SINGLE BOOT		
450013	TURKEY BOOT, SINGLE	1	-
	460046 DOUBLE BOOT		
450097	TURKEY BOOT, DOUBLE	-	1
	INTERCHANGEABLE PARTS		
450012	BEARING PLATE - PAINTED	1	2
450186	450 FLIGHTING ANCHOR	1	2
450413	AGITATOR BALL	1	2
450416	IDLER SHAFT	1	2
450417	BEARING	1	2
450418	LOCKING COLLAR	1	2
450527	NYLON BUSHING	2	4
450558	1/4-20 X 3/4" SOCKET HEAD CAP SCREW	1	2
451304	BOOT SUPPORT BRACKET	2	2
451306	CABLE ATTACHMENT ANGLE	4	4
451307	STRAIGHT SUPPORT	2	2
451308	BOOT HOLDING BRACKET	2	2
460021	BOOT TUBE ASSY. - PAINTED	1	2
460095	HARDWARE BAG, SINGLE TURKEY BOOT	1	-
460096	HARDWARE BAG, DOUBLE TURKEY BOOT	-	1

PART #	DESCRIPTION	SINGLE BOOT	DOUBLE BOOT
	HARDWARE BAG	460095	460096
010251	WASHER, LOCK 1/4" MED SPLIT ZP	2	4
010253	WASHER, LOCK 3/8",MED SPLIT ZP	1	2
010602	NUT, HEX 1/4"-20 A FINISHED ZP	2	4
010643	5/16-18 X 3/4" HEX BOLT	24	32
010669	3/8" X 2" HEX BOLT	1	2
011115	NUT, HEX 3/8-16"A FINISHED ZP	1	2
012789	5/16-18 NYLOCK NUT	24	32
012796	1/4-20 X 1" SLOTTED COUNTERSUNK BOLT	2	4
450419	WIRE PULLEY INSULATOR	1	2
460022	2" TUBE CLAMP ASSY	1	2
460043	INSULATOR BRACKET	2	4
820210	THIMBLE, 3/16" CABLE	2	2
VC353	CLAMP, 1/16 CABLE, WIRE ROPE CLIP	1	2

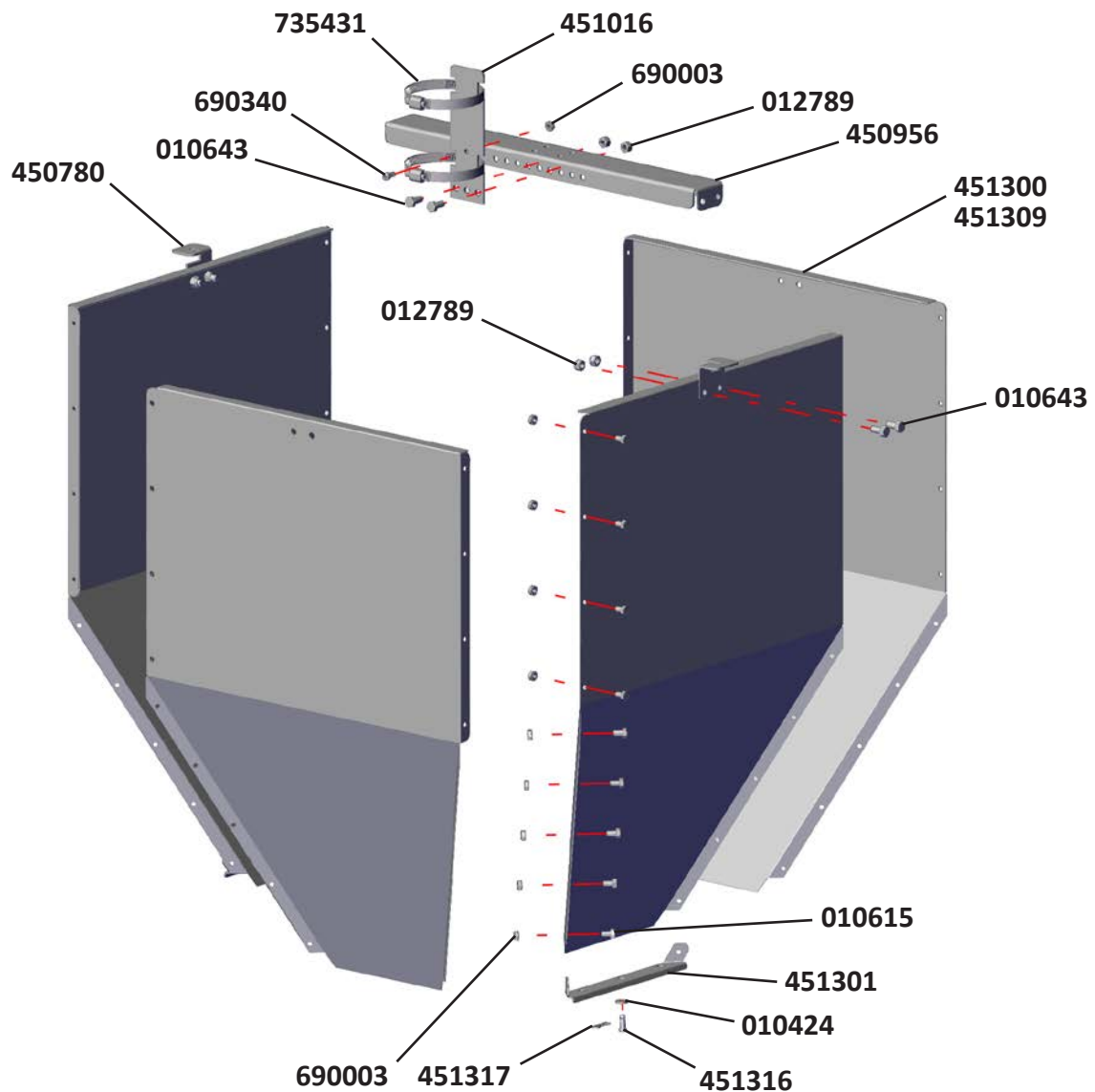
Hopper (100 lb & 200 lb) - Exploded View



451315 - 100lb Hopper



**451320 - 200lb Hopper
(Also shown below)**



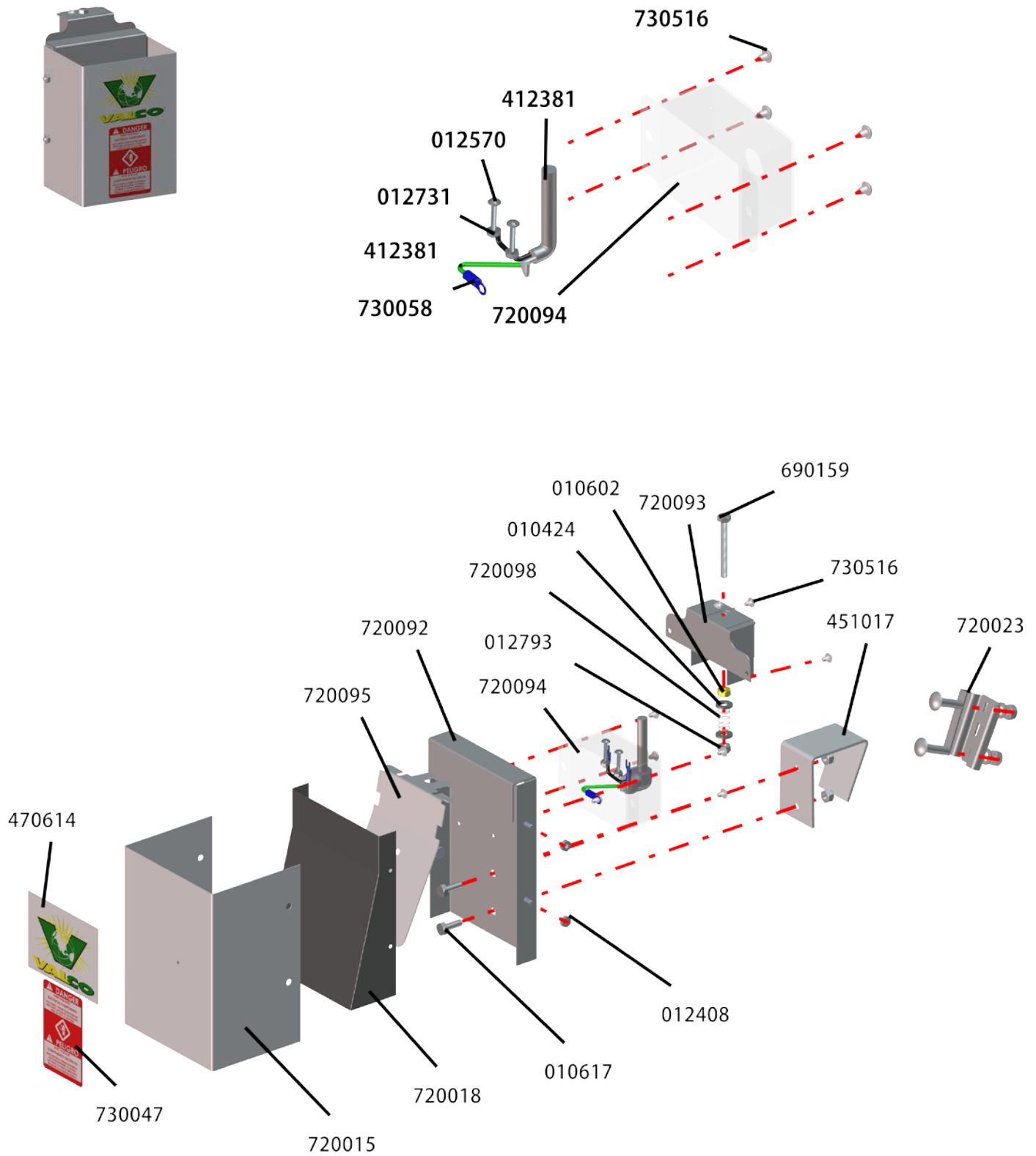
Hopper (100 lb & 200 lb) - Parts List

PART #	DESCRIPTION	QTY 451315	QTY 451320
451315 - 100 LB HOPPER / 451320 - 200 LB HOPPER			
451309	100 LB HOPPER PANEL	4	-
451300	200 LB HOPPER PANEL	-	4
450956	HOPPER CROSS BRACE	1	1
451301	HOPPER BOTTOM BRACE	2	2
451312	HARDWARE BAG, 100 LB HOPPER	1	-
451313	HARDWARE BAG, 200 LB HOPPER	-	1
451312 & 451313 HARDWARE BAGS - INTERCHANGEABLE PARTS			
010424	WASHER, FLAT, 1/4" X 9/16" ZP	2	2
010615	1/4-20 X 1/2" HEX HEAD BOLT ZP	33	37
010643	BOLT, HEX HEAD, 5/16-18 X 3/4" ZP	6	6
012789	5/16-18 NYLOCK NUT	6	6
450780	CABLE RETAINER	2	2
451016	SUPPORT, FEED HOPPER DROP TUBE	1	1
451316	CLEVIS PIN, 1/4" X 9/16" ZP	2	2
451317	COTTER PIN, 5/64" X 1.25" LG ZP	2	2
690003	NUT, KEP 1/4-20 ZP	35	39
690340	SCREW, 1/4-20 X 1/2 SHCS ZP	1	1
735431	4" SS DOWNSPOUT CLAMP	2	2

450804 Cover for 100 lb. & 200 lb. available

451022 Extension for 200 lb. hopper available to increase capacity

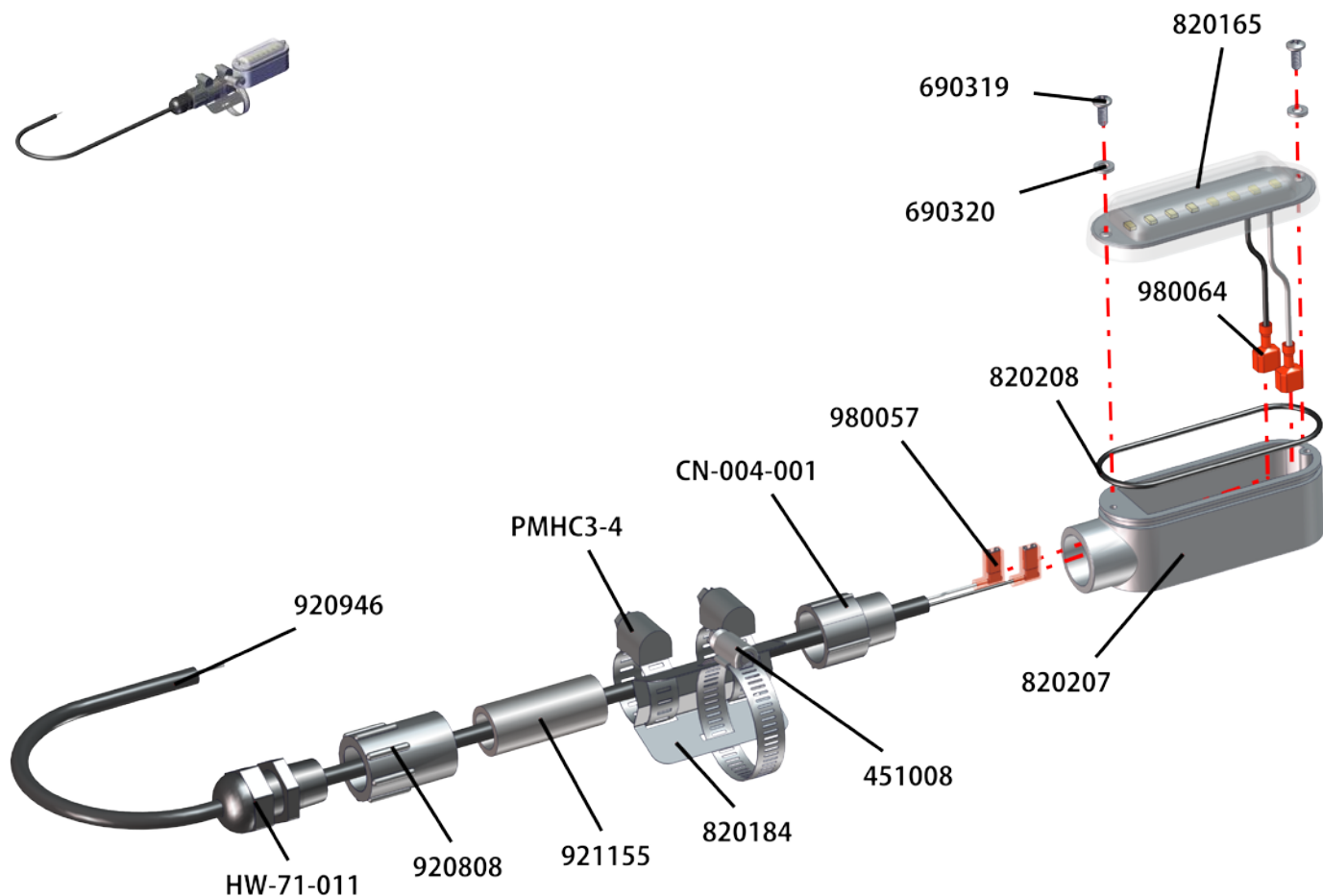
Hopper Level Switch Control - Exploded view



Hopper Level Switch Control - Parts List

PART #	DESCRIPTION	QTY
720097 - HOPPER LEVEL SWITCH CONTROL		
10424	1/4" SAE FLAT WASHER	2
10602	NUT, HEX 1/4"-20 A FINISHED ZP	1
10617	1/4" X 3/4" HEX HEAD BOLT	2
12408	#10-24 HEX KEP LOCKNUT	4
12570	#6-32 X 1" RD HD MACHINE SCREW - SLOTTED	2
12731	#6-32 MACHINE NUT	2
12732	#6 LOCKWASHER	2
12793	1/4-20 NYLOCK NUT	4
412381	14/3 BLACK SJTOW WIRE	8
451017	HANGER BRACKET, 67 DEG	1
470614	4" X 3" VAL-CO DECAL	1
690159	SCREW, 1/4-20 X 2-1/4 HHTB ZP	1
720015	SWITCH SHIELD	1
720018	DIAPHRAM - 7" X 6.5"	1
720020	HANGER BRACKET, 90 DEG	1
720023	MOUNTING BRACKET	1
720092	BODY ASSY, ADJ SWITCH	1
720093	BRACKET, TENSIONER	1
720094	ELECTRIC BOX, ADJ SWITCH	1
720095	SWITCH PLATE, ADJ SWITCH	1
720096	COVER, TENSIONER	1
720098	SPRING, .028 X .437 X .75	1
720099	DECAL, SENSITIVITY ADJUSTMENT	1
720100	STRAIN RELIEF, 90 DEG FOR 14/3	1
730047	HIGH VOLTAGE WARNING LABEL	1
730058	#16-14 RING TERMINAL	1
730516	SCREW, 10-32 X 1/4 PPH TRS ZP	8
730521	TERMINAL, SPADE, 16-14AWG, #6 BLUE	2
730989	MICRO SWITCH, SPDT 20A, 250VAC SCREW TERMINAL	1

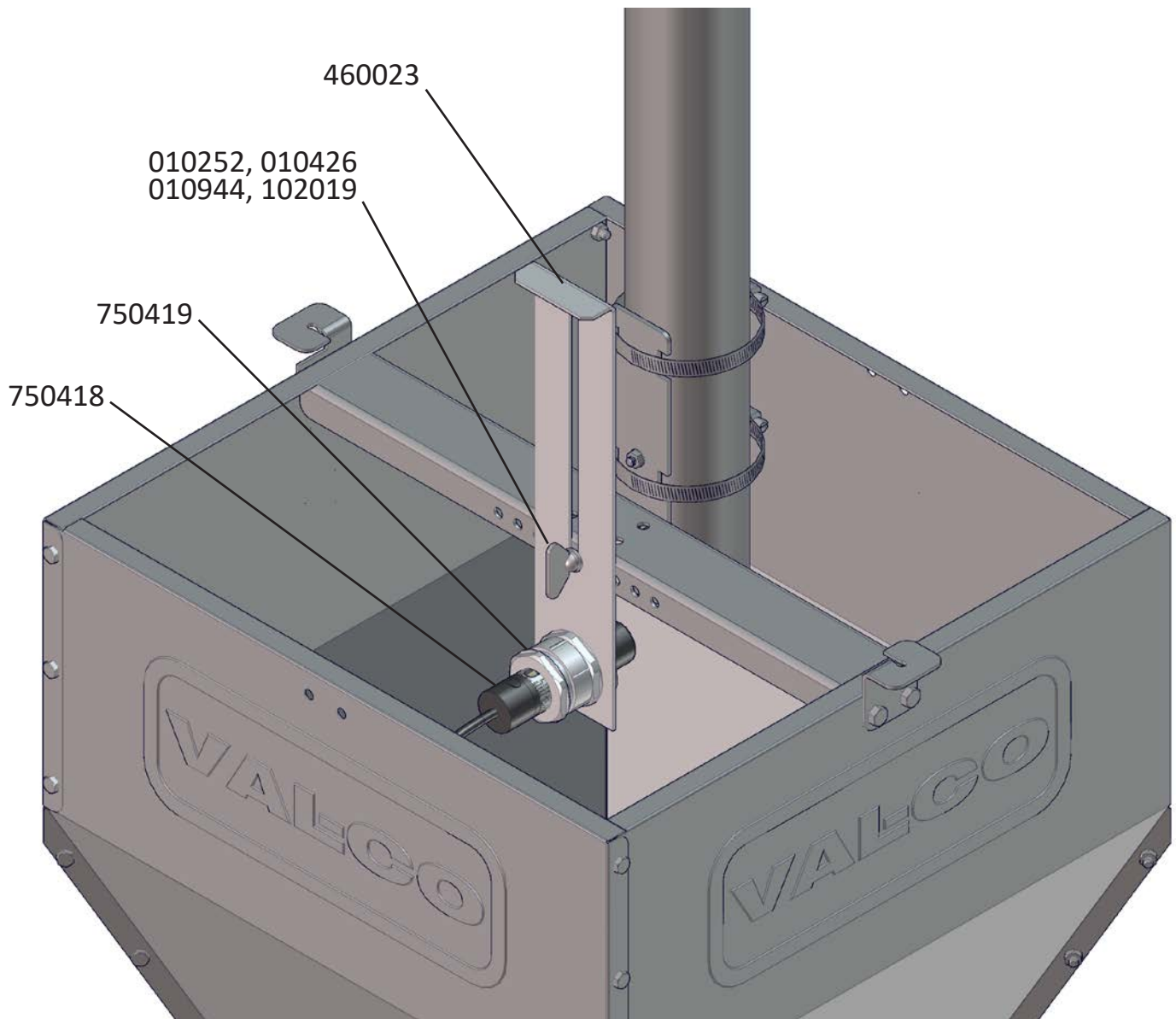
Bird Attracting LED light Universal-Control Pans - Exploded View/Parts List



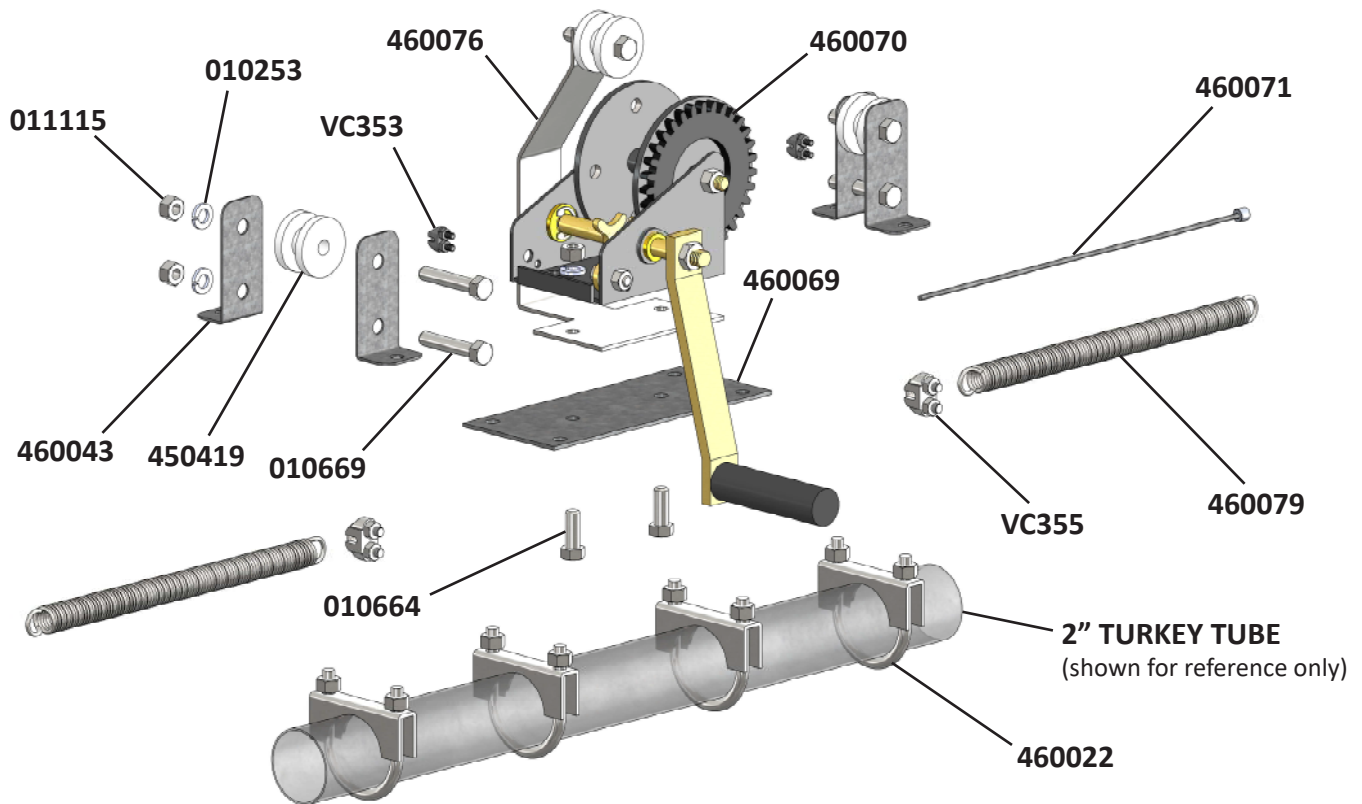
PART #	DESCRIPTION	QTY
820022 - BIRD ATTRACTING LED LIGHT		
451008	1-3/4" SS TUBE CLAMP	1
690319	SCREW, 8-32 X 3/8 PHMS ZP	2
690320	WASHER, FLAT, #8, NYLON,.178 ID X.312 OD X.03THK	2
820165	LIGHT, LED, CONTROL PAN	1
820184	BRACKET, LED FEEDER LIGHT MTG	1
820207	CONDUIT BODY, LED, MACHINED	1
820208	O-RING,.103,-148,BUNA,70A DUR	1
920808	ADAPTER,1/2"NPTF X SKT,SCH40 NON-METALIC	1
920946	CABLE,18/2 18AWG,10A,300V,BLK,PVC JACKET,.29 OD	3
921155	CONDUIT SCH 40 1/2" X 2"	1
980057	CONNECTOR, ELECT, FLAG, FEM, .187X.020, 22-18, FULLY INSUL	2
980064	CONNECTOR,ELECT,STRAIGHT,TAB,.187X.020, 22-18, FULLY INSUL	2
CN-004-001	ADAPTER, 1/2"NPTF X SKT, SCH40,NON-METALIC	1
HW-71-011	STRAIN RELIEF CABLE DOME 1/2	1
PMHC3-4	TRIDON HOSE CLAMP 3/4"	2

Proximity Hopper Level Control Switch - Parts List

PART #	DESCRIPTION	QTY
460057 - PROXIMITY HOPPER LEVEL CONTROL SWITCH - PART NUMBERS		
010252	5/16" SPLIT LOCK WASHER	1
010426	5/16" FLAT WASHER	1
010944	5/16-18 WING NUT	1
102019	5/16-18 X 3/4" THUMBSCREW	1
460023	PROXIMITY SWITCH BRACKET	1
750418	PROXIMITY SENSOR, DOL 33R 220V	1
750419	PLASTIC GLAND FOR PROXIMITY SWITCH	1



Feed Level Winch Kit & Miscellaneous Winching Components - Exploded View/Parts List



PART #	DESCRIPTION	QTY
460072 - FEED LEVEL WINCH KIT		
460069	TURKEY WINCH BRACKET	1
460070	TURKEY WINCH	1
460076	WINCH HANGER	1
460075 - INSULATOR BRACKET & TUBE CLAMP ASSEMBLY (QTY. 2)		
010253	3/8" SPLIT LOCK WASHER	1
010669	3/8" X 2" HEX BOLT	1
011115	3/8-16 HEX NUT	1
450419	WIRE PULLEY INSULATOR	1
460022	2" TUBE CLAMP ASSEMBLY	1
460043	INSULATOR BRACKET	2
VC353	WIRE ROPE CLIP FOR 1/16" CABLE	2
460077 - HARDWARE BAG		
010253	3/8" SPLIT LOCK WASHER	5
010664	3/8" X 1" HEX BOLT	2
010669	3/8" X 2" HEX BOLT	3
011115	3/8-16 HEX NUT	5
450419	WIRE PULLEY INSULATOR	1
460022	2" TUBE CLAMP ASSEMBLY	2
460078	1/8" X 1/8" NICO SLEEVE	2
460079	TURKEY WINCH SPRING	2
PART #	DESCRIPTION	QTY
MISCELLANEOUS WINCHING COMPONENTS		
460071	DROP CABLE ASSEMBLY	-
VC355	WIRE ROPE CLIP FOR 1/8" CABLE	-
VC343	WIRE ROPE, 1/8" CABLE	-

Customer Service

Dealer Name: _____ Phone _____

Customer Service
210 E. Main Street
Coldwater, OH 45828
800.998.2526



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