

LIBERTY® Feeding System

Installation & Operators Instruction Manual

Installation and Operators Manual

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Chore-Time Warranty

LIMITED WARRANTY

CTB, Inc. (“Chore-Time”) warrants the new CHORE-TIME Parts manufactured by Chore-Time to be free from defects in material or workmanship under normal usage and conditions, for One (1) year from the date of installation by the original purchaser (“Warranty”). Chore-Time provides for an extension of the aforementioned Warranty period (“Extended Warranty Period”) with respect to certain Product parts (“Component Part”) as set forth in the table below. If such a defect is determined by Chore-Time to exist within the applicable period, Chore-Time will, at its option, (a) repair the Product or Component Part free of charge, F.O.B. the factory of manufacture or (b) replace the Product or Component Part free of charge, F.O.B. the factory of manufacture. This Warranty is not transferable, and applies only to the original purchaser of the Product.

Product	Time Period from Installation	Charge to be paid by the purchaser for replacement
Feeder Pans	0 - 3 years	No Charge
	3-4 years	4/10 of then current list price
	4-5 years	5/10 of then current list price
Rotating Centerless Augers excluding applications involving high moisture feed stuffs (exceeding 18%)	10 years	No Charge
Chore-Time manufactured roll formed steel auger tubes	10 years	No Charge

CONDITIONS AND LIMITATIONS

THIS WARRANTY CONSTITUTES CHORE-TIME’S ENTIRE AND SOLE WARRANTY AND CHORE-TIME EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES. CHORE-TIME shall not be liable for any direct, indirect, incidental, consequential or special damages which any purchaser may suffer or claim to suffer as a result of any defect in the Product. Consequential or Special Damages as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs, and operational inefficiencies. *Some jurisdictions prohibit limitations on implied warranties and/or the exclusion or limitation of such damages, so these limitations and exclusions may not apply to you. This warranty gives the original purchaser specific legal rights. You may also have other rights based upon your specific jurisdiction.*

Compliance with federal, state and local rules which apply to the location, installation and use of the Product are the responsibility of the original purchaser, and CHORE-TIME shall not be liable for any damages which may result from non-compliance with such rules.

The following circumstances shall render this Warranty void:

- Modifications made to the Product not specifically delineated in the Product manual.
- Product not installed and/or operated in accordance with the instructions published by the CHORE-TIME.
- All components of the Product are not original equipment supplied by CHORE-TIME.
- Product was not purchased from and/or installed by a CHORE-TIME authorized distributor or certified representative.
- Product experienced malfunction or failure resulting from misuse, abuse, mismanagement, negligence, alteration, accident, or lack of proper maintenance, or from lightning strikes, electrical power surges or interruption of electricity.
- Product experienced corrosion, material deterioration and/or equipment malfunction caused by or consistent with the application of chemicals, minerals, sediments or other foreign elements.
- Product was used for any purpose other than for the care of poultry and livestock.

The Warranty and Extended Warranty may only be modified in writing by an officer of CHORE-TIME. CHORE-TIME shall have no obligation or responsibility for any representations or warranties made by or on behalf of any distributor, dealer, agent or certified representative.

Effective: **January 2014**

Contents

Topic	Page
Chore-Time Warranty	2
About this Manual	5
Safety Information	5
Follow Safety Instructions	6
Decal Descriptions	6
DANGER: Moving Auger	6
DANGER: Electrical Hazard	6
CAUTION:	6
General Information	6
Support Information	6
Manufacturer's Recommendations: Birds per Pan	7
Planning the Floor Feeding System	8
General Installation Information	9
Laying out the Suspension System	9
For systems up to 350' [107 m]	9
For systems over 350' [107 m]	10
Installing the Suspension System	11
Power Lift Winch Installation	11
Installing the Main Winch Cable	12
Screw Hook Installation	13
Ceiling Hook Installation	14
Steel Truss Installations	14
Drop Installation	15
Support Cone and Feed Cone	15
Support Cords	15
Feed Cone and Center Support Assembly	16
Attaching the Pan to the Grill	17
Feeder Line Assembly and Suspension	17
Feeder Pan Tube Assembly Process	17
Assemble and Suspend the Feeder Line	19
Installing the End Control, Boot Assembly, and Auger	21
Auger Installation	21
Auger Brazing	26
Actuator Installation	26
Planning	26
Actuator Installation	27
Springs at end of system	27
Actuator Springs (9'-4 hole Tubes)	28
Installing Actuator Cable	28
Attaching Feeder Lift Cords to the Actuator Cable	30
Anti-Roost Installation	31
MIDLINE Control	34
Midline Control with Mechanical Switch Installation	35
Midline Control with (ES) Switch Installation	36
LIBERTY Feeder Management and Operation	37
Initial Start-up of the Feeding System	37
General Operation of the LIBERTY Feeder	38
End Control and Mid line Control Pans	39

Contents - continued

Topic	Page
Control Pans utilize the manual ALL-OUT™ FLOOD	39
Maintenance	40
Floor Feeding System Maintenance	40
Gear Head Maintenance	40
Mechanical Switch Adjustment Procedure	41
SENSOR Switch Adjustment for Control Units	41
Feeder Line Maintenance	42
Power Lift Winch Maintenance	42
Trouble Shooting the Floor Feeding System	43
Wiring Diagrams	44
End Control With Electronic Sensor Wiring	44
Electronic Sensor Control Wiring	44
Mid Control with Electronic Sensor Wiring	44
Mechanical Switch Single Phase Wiring Diagram	45
Mechanical Switch Single Phase Wiring Diagram (with Motor Starter)	45
Mechanical Switch Three Phase Wiring Diagram: 220 V	46
Mechanical Switch Three Phase Wiring Diagram: 380/415 V	46
Electronic Sensor Three Phase (Ø) Wiring	47
Parts List	48
150# Plastic Hopper Components	48
Hopper Boot Suspension Bracket (optional)	49
Single Boot Components: Part No. 6822	50
Twin Boot Components: Part No. 6824	51
Feeder Line Components	52
ACTUATOR KIT: Part No. 52494	53
LIBERTY Feeder Components	54
Poultry Trainers and Line Chargers	55
Power Unit Assemblies	56
Power Unit Assembly Part Numbers	56
Silver Control: Part No. 52347 & Green Control: Part No. 52348	57
LIBERTY Feeding System End Control with Electronic Sensor Switch	58
LIBERTY Feeding System Mechanical Midline Control	59
LIBERTY Feeding System Midline Control with Electronic Sensor Switch	60
Power Winch (Part No. 47687)	61

About this Manual

The intent of this manual is to help you in two ways. One is to follow step-by-step in the order of assembly of your product. The other way is for easy reference if you have questions in a particular area.

Important: Read ALL instructions carefully before starting construction.

Important: Pay particular attention to all SAFETY information.

- *Metric measurements are shown in millimeters and in brackets, unless otherwise specified. (" equals inches and (') equals feet in measurements.*

Examples:

1" [25.4]

4' [1 219]

- Optional equipment contains necessary instructions for assembly or operation.
- Major changes from the last printing will be listed on the back cover.



This Planning Symbol is used in areas where planning needs to take place before construction continues.

- Very small numbers near an illustration (*i.e.*, 1257-48) are identification of the graphic, not a part number.

Safety Information

Caution, Warning and Danger Decals have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety decals immediately.

Using the equipment for purposes other than specified in this manual may cause personal injury and/or damage to the equipment.

Safety–Alert Symbol



This is a safety–alert symbol. When you see this symbol on your equipment, be alert to the potential for personal injury. This equipment is designed to be installed and operated as safely as possible...however, hazards do exist.

Understanding Signal Words

Signal words are used in conjunction with the safety–alert symbol to identify the severity of the warning.



DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



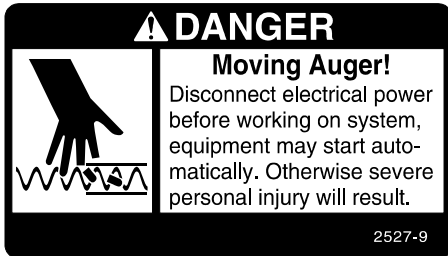
CAUTION indicates a hazardous situation which, if not avoided, **MAY** result in minor or moderate injury.

Follow Safety Instructions

Carefully read all safety messages in this manual and on your equipment safety signs. Follow recommended precautions and safe operating practices.

Keep safety signs in good condition. Replace missing or damaged safety signs.

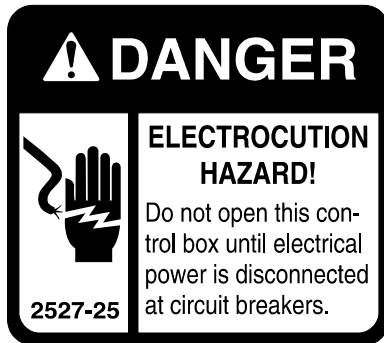
Decal Descriptions



DANGER: Moving Auger

This decal is placed on the Panel Weldment.

Severe personal injury will result, if the electrical power is not disconnected, prior to servicing the equipment.



DANGER: Electrical Hazard

Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

Ground all electrical equipment for safety.

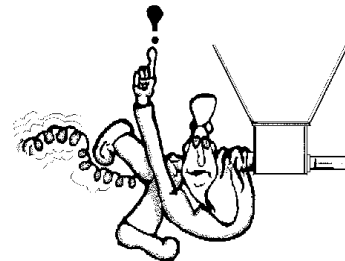
All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes.

Ground all non-current carrying metal parts to guard against electrical shock.

Electrical disconnects and over current protection are not supplied with the equipment.

CAUTION:

Use caution when working with the Auger—springing Auger may cause personal injury.



General Information

Support Information

The Chore-Time LIBERTY® Feeding System is designed to feed poultry feed types. Using this equipment for any other purpose or in a way not within the operating recommendations specified in this manual will void the warranty and may cause personal injury.

This manual is designed to provide comprehensive planning and installation information. The Table of Contents

Manufacturer's Recommendations: Birds per Pan

Type	Max weight and/or weeks of age	Feeders	Number of birds/pan
Broiler	4.5 lbs/2 kg.	REVOLUTION® 12, MODEL'S: C2® Plus, LIBERTY®, C2® Plus S, C™, H2™, H2™ Plus	60 - 90
Broiler	6 lbs/2.7 kg	REVOLUTION 8 & 12, C2 Plus, C2 Plus S, G Plus, G Plus S, C, LIBERTY, H2, H2 Plus	55 - 80
Broiler	7 lbs/3.1 kg	REVOLUTION 8 & 12, C2 Plus, C2 Plus S, G Plus, G Plus S, C, LIBERTY, H2, H2 Plus	55 - 75
Broiler	9 lbs/4.0 kg	REVOLUTION 8, G Plus, G Plus S LIBERTY	45 - 65
Broiler Breeder Pullet – rearing	0 – 18 weeks	C2 Plus (Breeder), C2 Plus S (Breeder)	14 - 15
Broiler Breeder Pullet – rearing	0 – 18 weeks Hi-Yield	C2 Plus (Breeder), C2 Plus S (Breeder)	12-14
Broiler Breeder Male – rearing	0 -- 18 weeks	C2 Plus (Breeder), C2 Plus S (Breeder), G Plus (Breeder), G Plus S (Breeder)	11-13
Broiler Breeder Layer	17 + weeks	C2 Plus (Breeder), C2 Plus S (Breeder)	13 - 14
Broiler Breeder Layer	17 + weeks Hi-Yield	C2 Plus (Breeder), C2 Plus S (Breeder)	12 - 13
Broiler Breeder Male	17 + weeks	REVOLUTION 8, G Plus (Breeder), G Plus S (Breeder)	8-10
Commercial Layer Pullet – rearing	0 – 20 weeks	REVOLUTION 12, C2Plus, H2, H2 Plus	40-60
Commercial Layer	18 + weeks	REVOLUTION 12, C2 Plus, C, H2, H2 Plus	30 - 40
Turkey Poult	0 – 7 weeks	REVOLUTION 8, H2 Plus, H2, LIBERTY, G Plus, G Plus S	60 - 65
Turkey Hens	0 – 7 weeks	REVOLUTION 8, G Plus, H2 Plus, LIBERTY, H2	40 - 50
Turkey Female	5 + weeks	ATF, ATF Plus	60
Turkey Male	5 + weeks	ATF, ATF Plus	40 - 50
Ducks	0 – 3 weeks	G Plus, G Plus S	60 - 70
Ducks	4 – 8 weeks	G Plus, G Plus S	50 - 60

***Notice:** Please be advised that the maximum number of birds that may be successfully produced per feed pan may vary based upon such factors as climate, housing type or style, bird breeds, genetic factors of the birds at issue, grower management practices, etc. All other environmental and management circumstances, such as proper bird density per house, access to adequate nutrients in feed, access to adequate water supply, proper ventilation, adequate health care for the birds, and other similar factors, must meet industry standards and recommendations, if any, of applicable bird breeder companies.

*** NOTICE:** The above Manufacturer's recommendations do not constitute a product warranty and are in no way to be considered as a guarantee of performance for poultry production. In addition, the above information in no way alters or revises the terms and conditions of any applicable Chore-Time manufacturer's warranty.

Planning the Floor Feeding System

1. Select the House Layout.

A. Optional Mid Line Controls may be used for partial house brooding. See **Figure 1**.

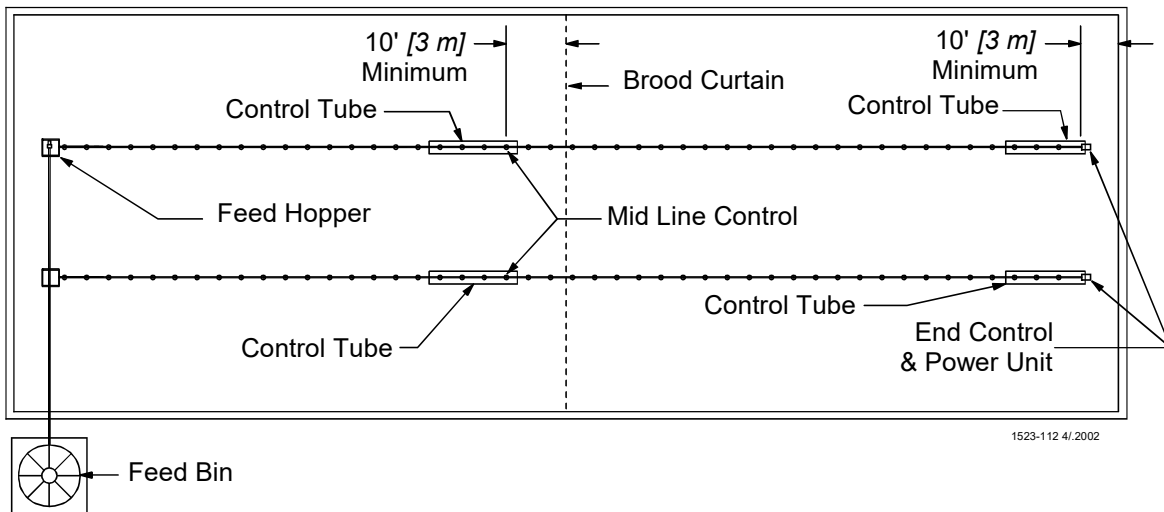


Figure 1.Component location diagram for systems up to 500 feet. (Top View).

B. Systems with line lengths over 500' should be split in the center, as shown in **Figure 2**. This will reduce auger running time and eliminate the need for Mid-Line Controls for partial house brooding.

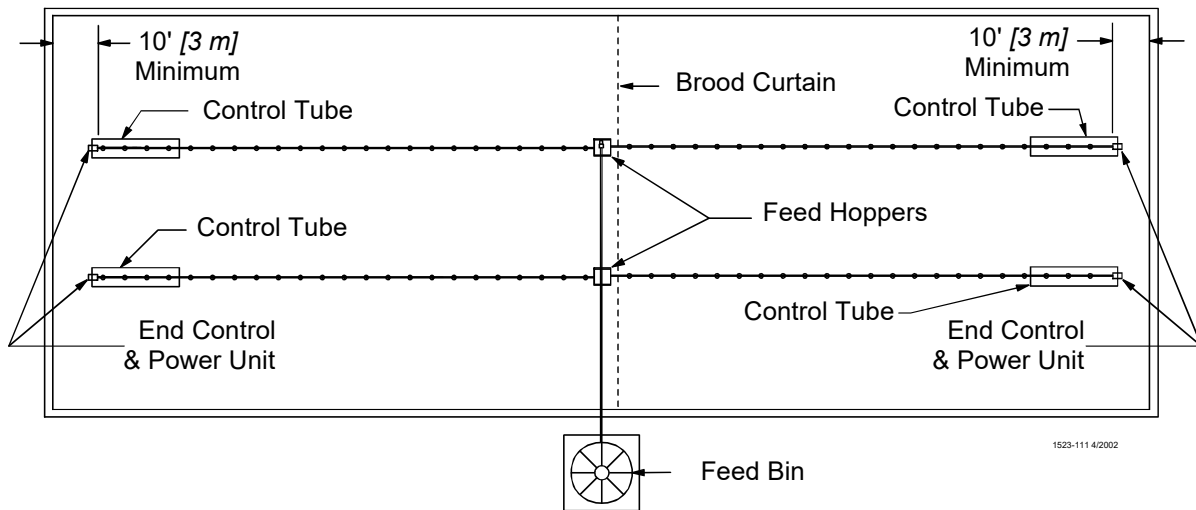


Figure 2.Component location diagram for systems over 500 feet. (Top View).

2. Determine the Feed Bin location.
3. Determine the Brood Curtain location.
4. Determine the location for the End Control Pans, and if used the Mid Line Control Pans. **The Feeder Control Pans should be at least 10' [3 m] from the Wall or Brood Curtain.**
5. Determine the distance to the Feeder Line from the Side Wall.
6. Determine the distance from the Feed Hoppers to the End Wall for a Straight Line Feeding System.

General Installation Information

Liberty Feeding System read the installation instructions in this manual prior to beginning the installation. This manual provides the necessary information on the installation, operation, and maintenance of the Chore-Time feeding equipment you have purchased.

The Liberty Feeding System Control Unit uses a 348 RPM. Gearhead, delivering approximately 17 lbs [7.7 kg] per minute. This rating is based on feed with a density of 40 lbs per cubic foot [640 kg per cubic meter].

Single phase 60 Hz and single and three phase 50 Hz Power Units are available for the Liberty Feeding System Feeder.

Systems up to 300' [91 m] require 1/3 HP Power Units. Systems over 300' [91 m] require 1/2 HP Power Units.

Laying out the Suspension System

For systems up to 350' [107 m]

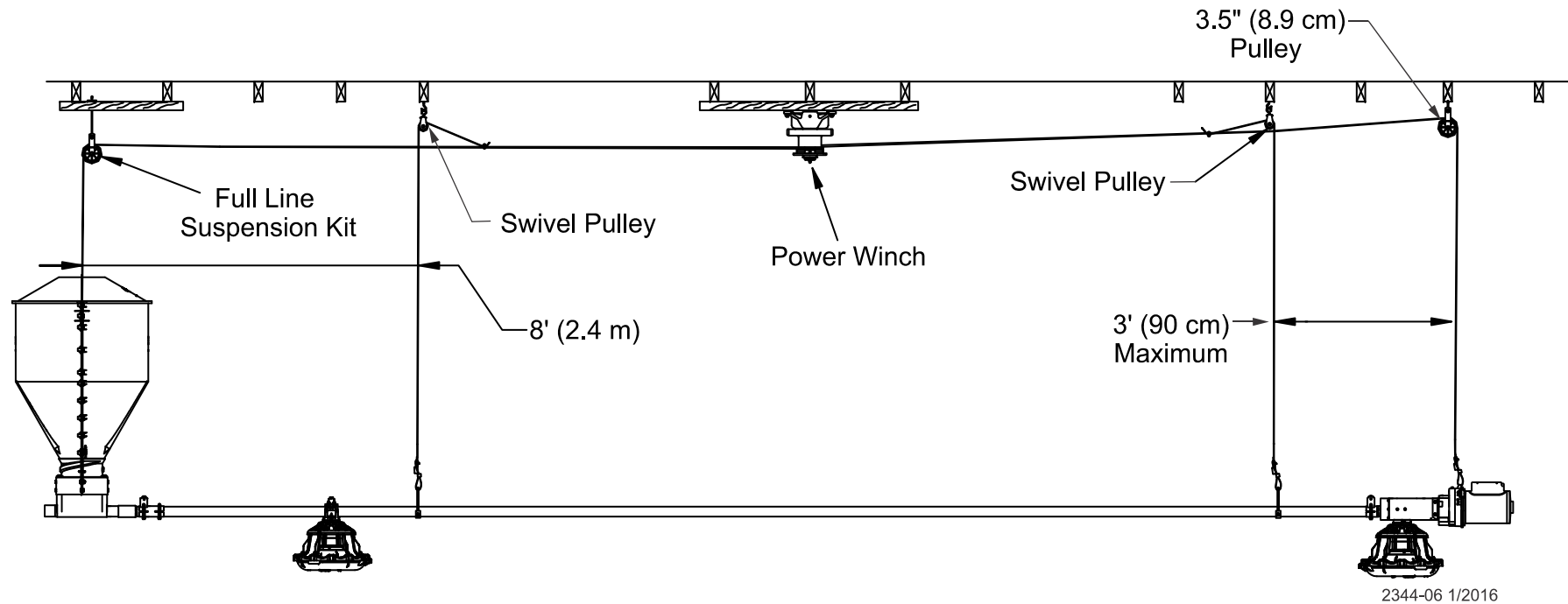


Figure 3. Suspension for systems up to 350' [107 m]

10 For systems over 350' [107 m]

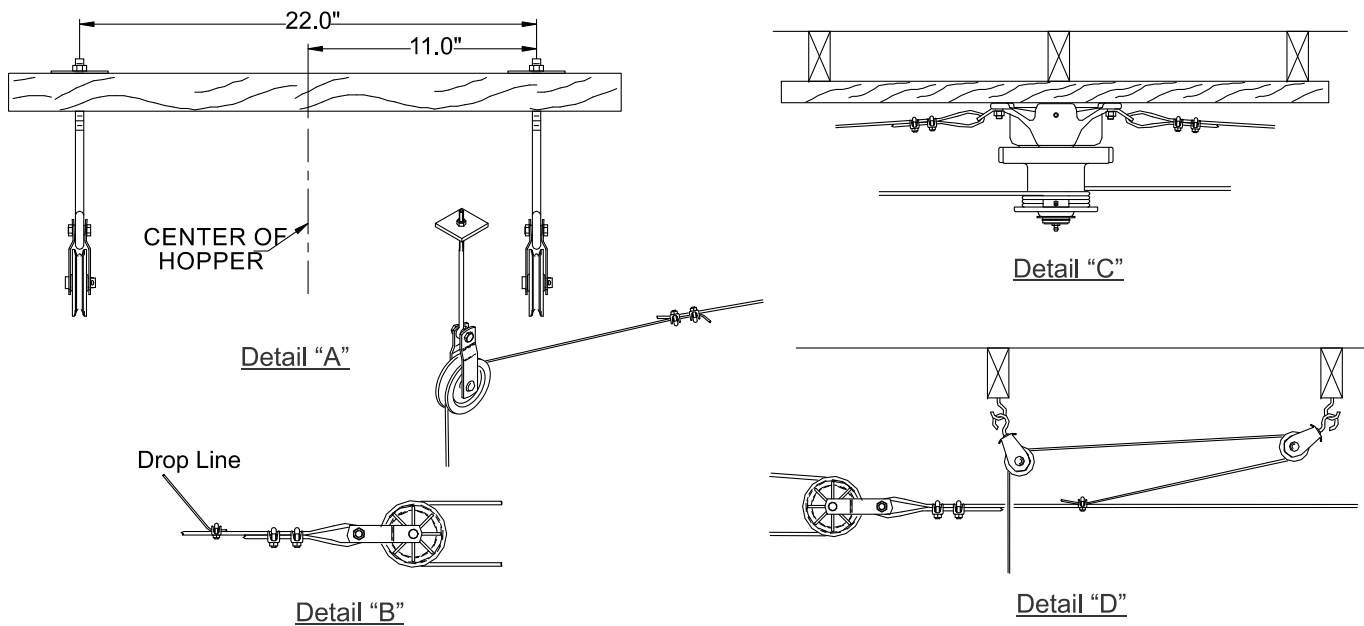
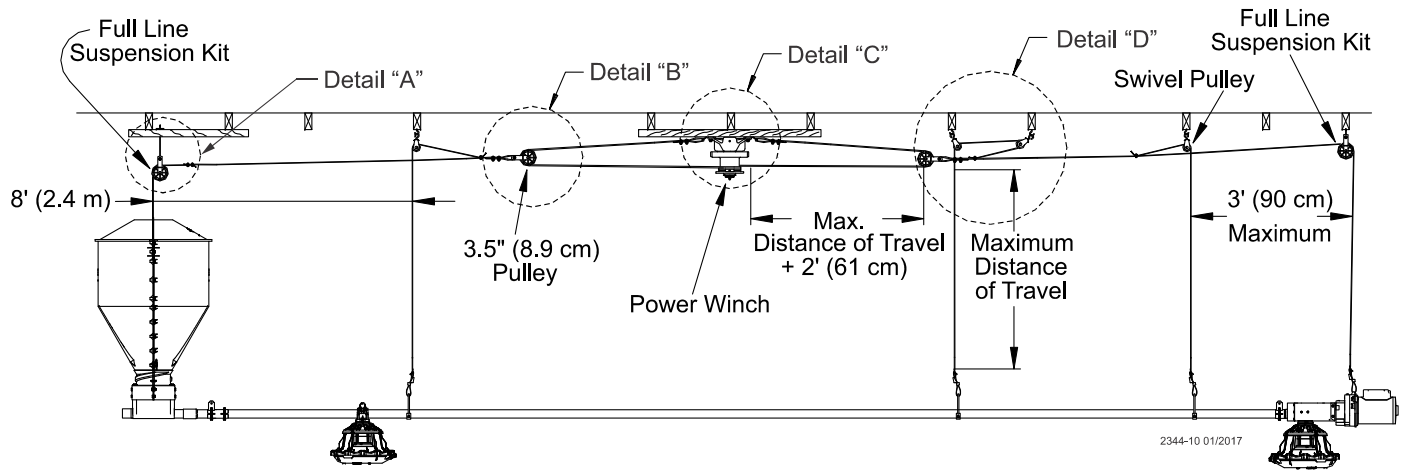


Figure 4. Suspension for systems over 350' [107 m]

Installing the Suspension System

Power Lift Winch Installation

1. Bolt the Power Winch, fully assembled, to the Power Lift Winch Support, either a 2" x 8" [50x200 mm] board that will span at least 3 rafters or a 3/8" [9.5 mm] thick steel plate welded to two pieces angle iron that are each long enough to span at least 2 rafters, using 5/16-18 hardware supplied in the Hardware Package. The brake mechanism will extend toward one side. See **Figure 5**.

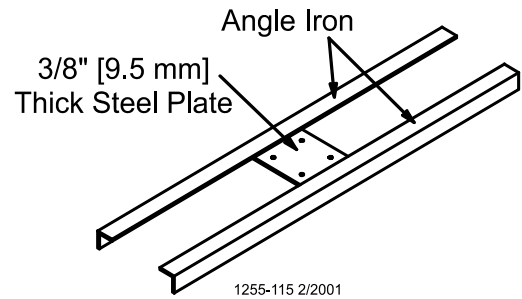


Figure 5. Optional Power Lift Winch Support Detail

2. Install a Cable Hook, supplied in Hardware Package, between the mounting bolt and Power Winch frame, as shown in **Figure 6**.
3. Attach the Power Lift Winch Support (with the Power Winch secured) to the ceiling at the center of the feeder line. See **Figure 7**. The Power Lift 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.

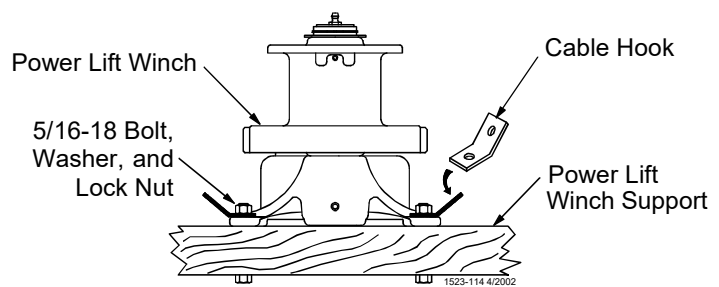


Figure 6. Assembling the Power Winch to the Rafters

4. If the hopper is located at the center of the feeder line, locate the Power Winch a few feet offset from the center of the feeder line. However, the Winch Drum must be directly in line with where the main cable is to be installed.

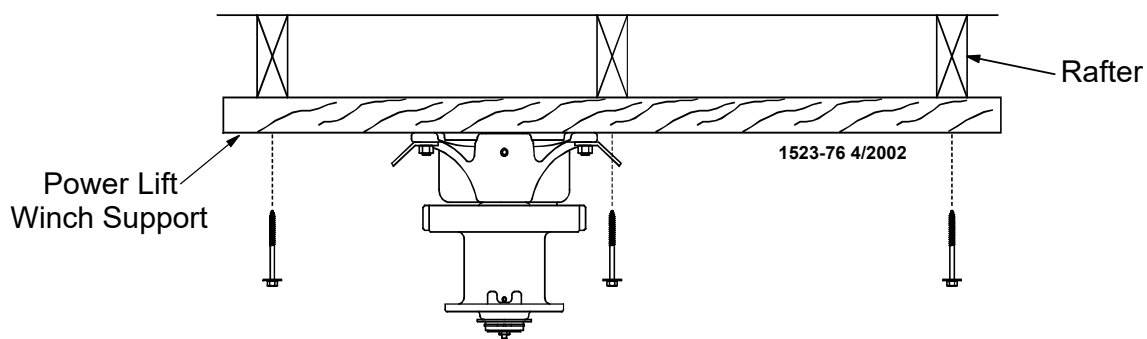


Figure 7. Mounting the Power Lift Winch and support to the rafters.

Installing the Main Winch Cable

The Suspension Systems are based on ceiling heights of 14' [4.3 m] with Suspension Drop points every 8' [2.4 m]. DO NOT EXCEED 10' [3 m] BETWEEN SUSPENSION DROPS. Refer to suspension section in this manual for installation details.

Adequate overhead structure must be provided to support the weight of the feeders, hoppers, power units, etc. The type of installation required depends on the feeder line length.

IMPORTANT: Special support is required at each Hopper location

•Power Unit Locations: **The Feeder Line must be supported within 3' [.9 m] of the Power Unit.** This is in addition to the required Power Unit suspension. If the Control Unit or Hopper does not come out directly under a truss, fasten a pulley to a 2" x 8" [50 x 200 mm] board or steel angle that will span 2 trusses and is capable of supporting 300 lbs [136 kg] for the Hopper and 75 lbs [34 kg] for the Control Unit.

•Feed Hopper Locations: **The Feeder Line must be supported within 1' [30 cm] of the Feed Hopper.** This is in addition to the required Feeder Hopper suspension. After determining the type of suspension system required, decide where the Feeder Line is to be installed. Mark a straight line on the ceiling or rafters the full length of the Feeder Line. Use a string, chalk line, or the winch cable, temporarily attached with staples, to mark the line. Center the line directly over where the Feeder Line is to be installed.

1. Extend the 3/16" [5 mm] Main 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 9** shows a double back arrangement for feed lines over 350' [107 m]

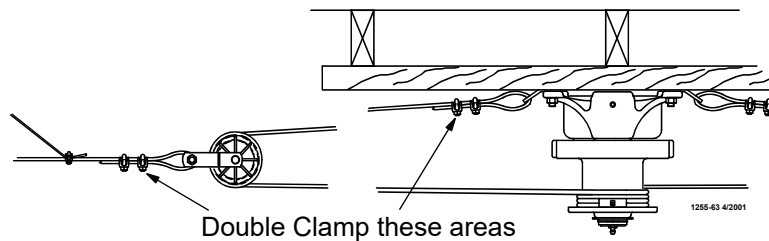


Figure 9. Double back arrangement for feed lines over 350' [107 m]

2. Route the cable through the Winch Drum Relief located near the bottom of the drum. Tighten the set screw to anchor the cable to the drum. See **Figure 10**.

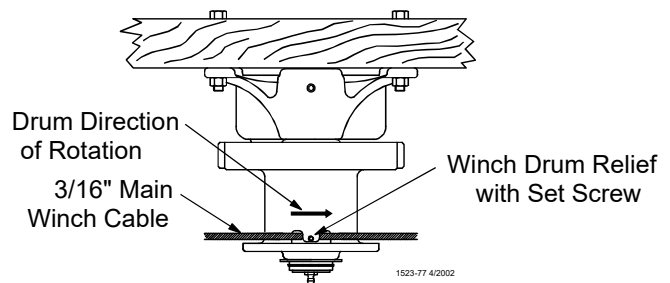


Figure 10. Attaching the cable to the Power Winch

3. Turn the winch drum one full revolution. Guide the cable against the flange at the bottom of the winch drum. The cable must not wrap over itself on the drum, but should be wrapped as close as possible to each previous wrap. See **Figure 11**.

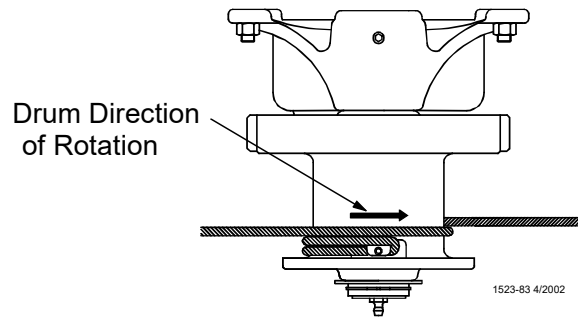


Figure 11. Power Winch Drum Rotation

Screw Hook Installation

The recommended distance between the drops for the Liberty Feeding System is 8' [2.4 m] on center. Do not exceed 10' [3 m] spacing on drop lines.

If the distance raised is greater than the distance between the drop spacings, offset the hooks 3" [7.6 cm] to each side of the line to prevent the cable clamps from catching the pulleys. See **Figure 12**.

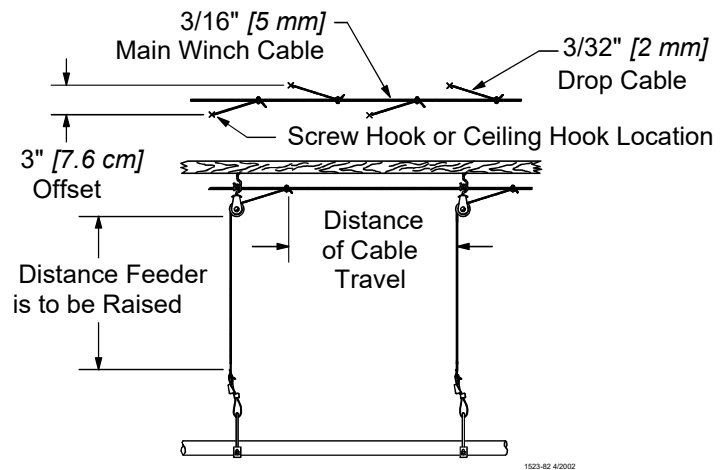


Figure 12. Drop line off set detail

Screw the hook into the truss the full length of the threads to prevent bending.

The openings of the screw hooks must be pointed away from the direction of travel when the Power Winch raises the feeder line. See **Figure 13**.

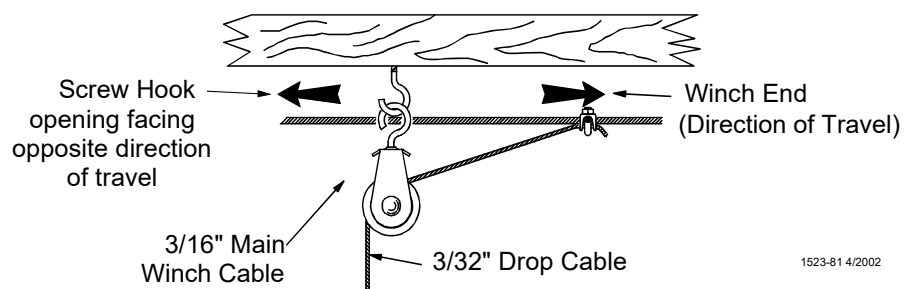


Figure 13. Screw Hook Installation

Ceiling Hook Installation

The ceiling hook may be used in a variety of installations. Depending on your ceiling or rafter type, install the Ceiling Hooks as shown in **Figure 14 - 17**.

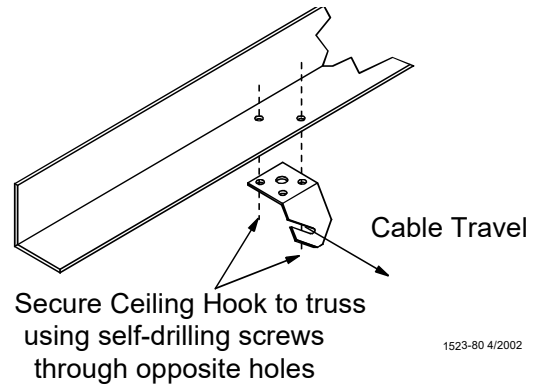


Figure 14. Steel Truss Ceiling Bracket Installation

Steel Truss Installations

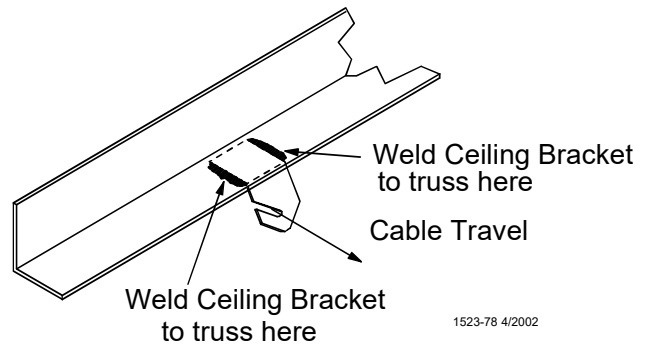


Figure 15. Welded Steel Truss Ceiling Bracket Installation

Wood Truss Installations

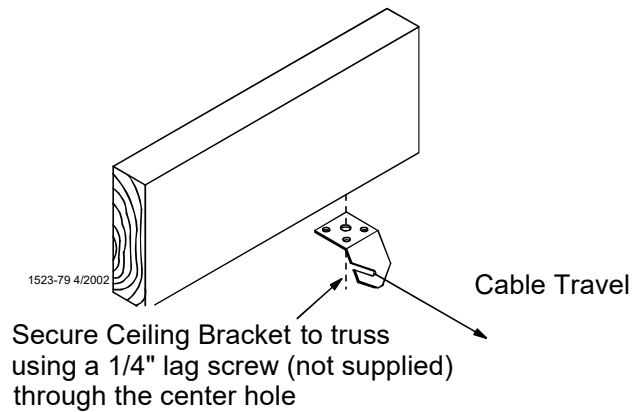


Figure 16. Wood Truss Ceiling Bracket Installation

6. After securing the Ceiling Hook to the truss, slide the hook of a Swivel Pulley into the slot, as shown in **Figure 17**.

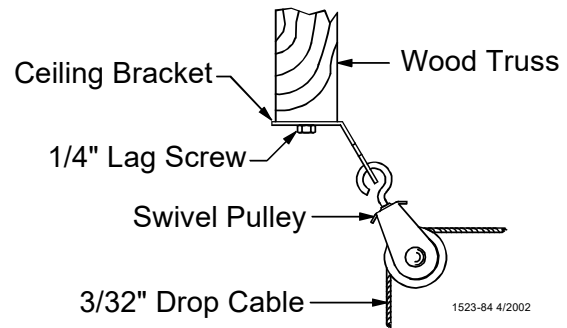


Figure 17. Pulley Installation

Drop Installation

Refer to **Figure 12** on page 11.

1. Attach a 3004 Pulley to each hook.
2. Thread the end of the 3/32" or 1/8" cable through the pulley toward the winch. Clamp this end to the 3/16" winch cable about 6" [150 mm] from the last pulley, using a 3/16" cable clamp. See applicable figure; **Figure 13** or **Figure 17**.
3. Allow enough cable length for installation of the Adjustment Leveler.

Sufficient cable is included to provide "throwbacks" on drops located beneath and near the winch. **Figure 18** shows a "throwback" cable arrangement

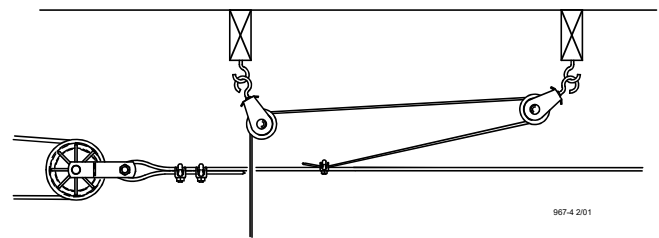


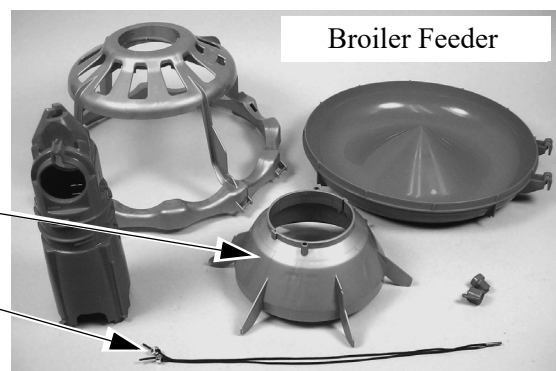
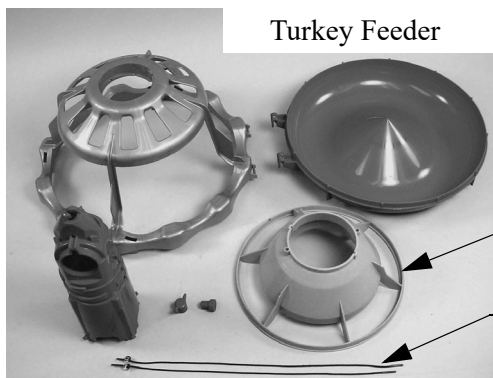
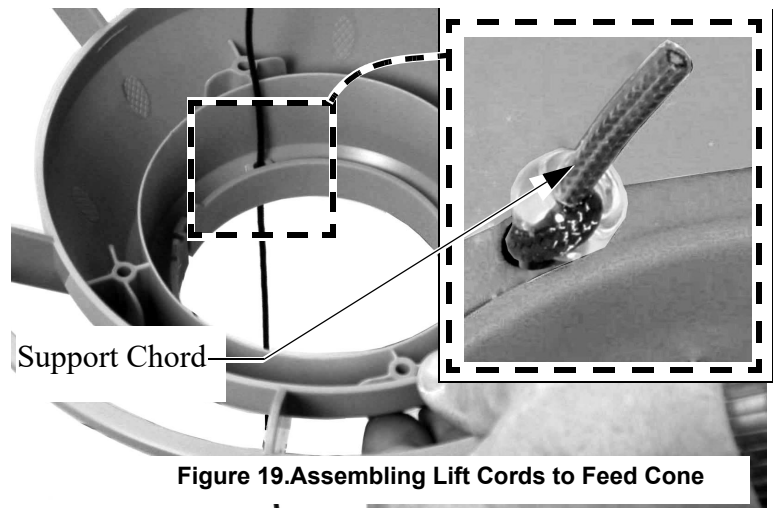
Figure 18. "Throwback" cable arrangement

4. Begin installing suspension drops at the winch and proceed to the end of the feeder line. Keep the main cable tight between drops. It may be necessary to hang a weight on the end of the cable to maintain tension on the line.

Support Cone and Feed Cone

Support Cords

1. With the large end of the Feed Cone up, slide the straight end of the Support Cord in the openings on each side of the Feed Cone. **The Bead of the Cord must lock under the Lip of the Cone.** See **Figure 19**.



Feeder Cone
Support Cord

Feed Cone and Center Support Assembly

- Slide the feed cone down over the top of the support cone. Be sure to align the guides on the support cone. Pass the cords up the channel on the support cone. be sure to run the cord under the retainer as shown. see figure 20.



Figure 20. Assembling Lift Cords to Feed Cone

- Run the end of the cord up through the guides on the top of the support cone.
 - Tie cords together to hold the cords in place.
 - Align the threads and rotate the Cone to engage the threads into the Grill. see figure 21.
- Important!** Do not rotate the Grill by grabbing onto it and twisting with your hands. torquing the Grill too much may cause it to break. Insert a piece of tube/pipe into the Feeder Cone and rotate the Cone to the desired position.

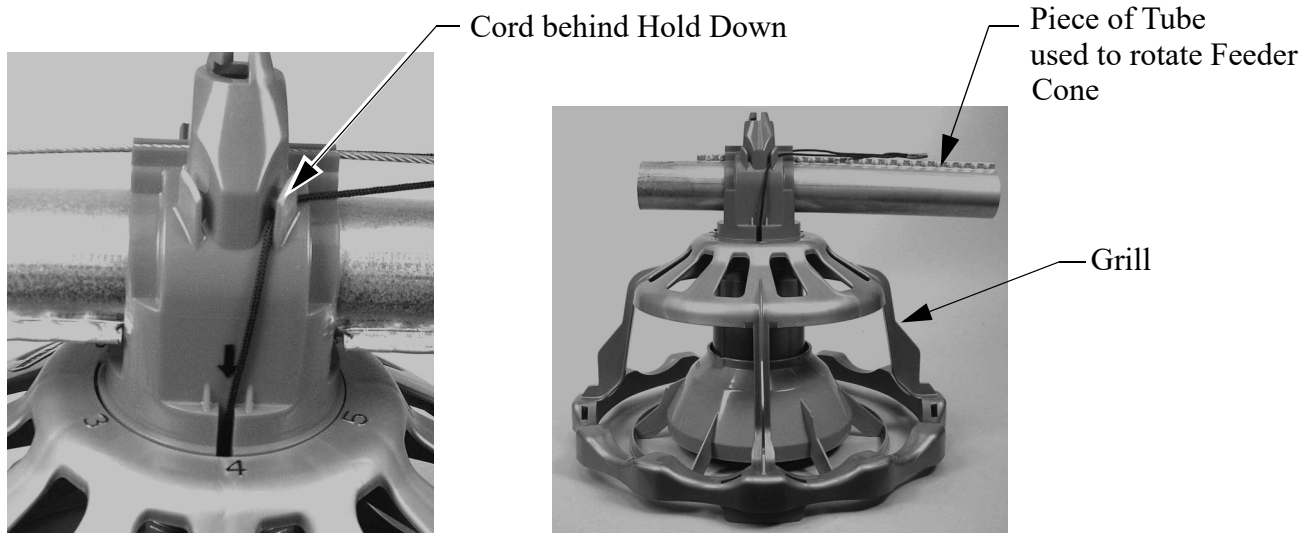


Figure 21. Cord routing/Installing the Grill

- Rotate the Feeder Cone to position:
 - Broiler Feeders- #2 position (See Figure below)
 - Turkey Feeders- #4 position (See Figure below)

Broiler Feeder- Position 2

Turkey Feeder- Position 4



Figure 22. Feeder Position

Attaching the Pan to the Grill

1. Holding the Grill at 90 degree to the Pan. Align the Pan Pivots then snap the lock in place (see figure 23.)
Make sure the Pan Hinges are locked in place.
2. Flip the Pan over and snap the Pan into the Grill. Be sure all snaps are locked in place.

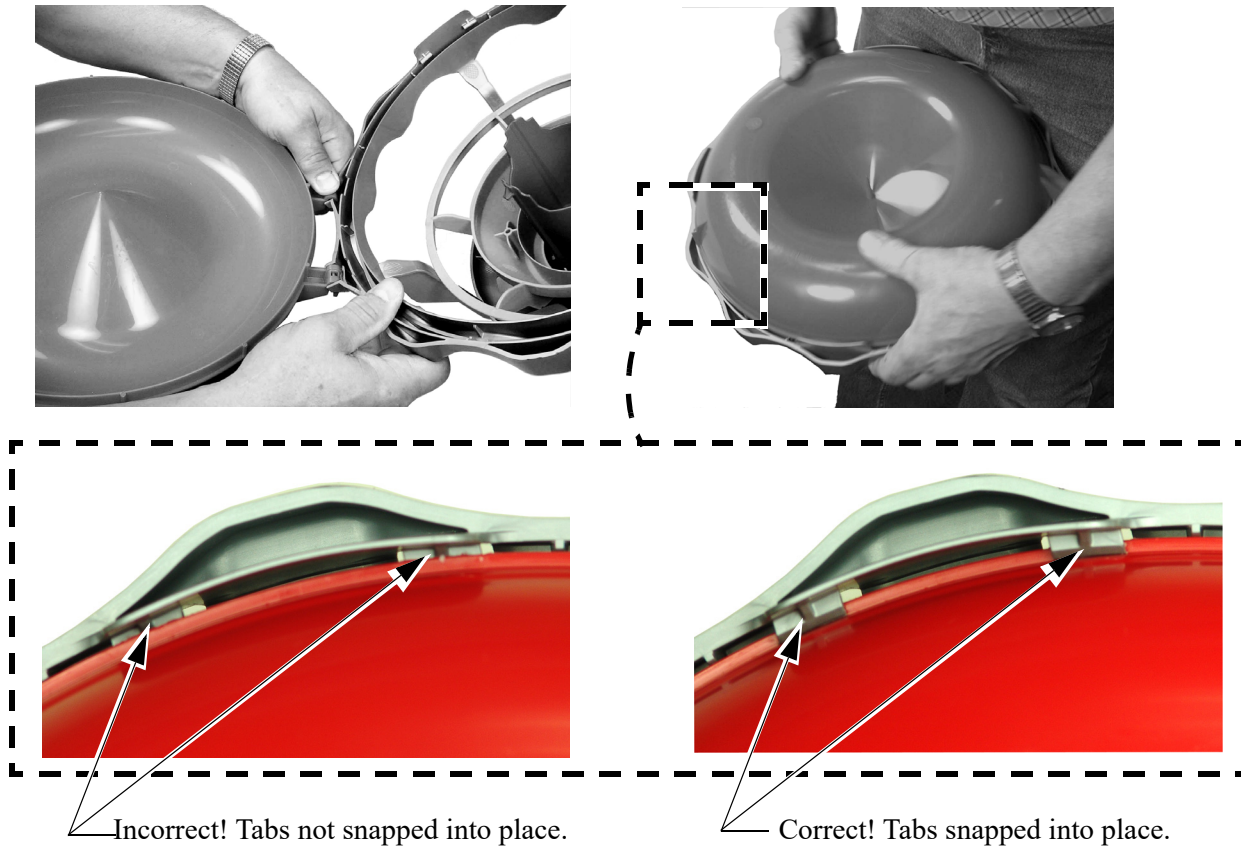
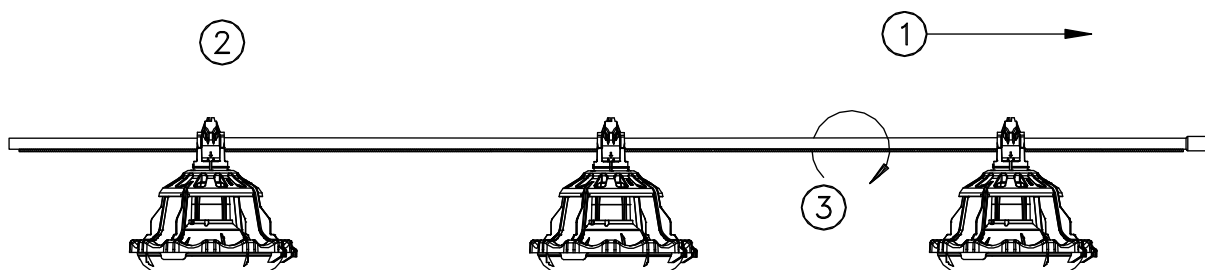


Figure 23. Snapping on Feed Pan

Feeder Line Assembly and Suspension

Feeder Pan Tube Assembly Process

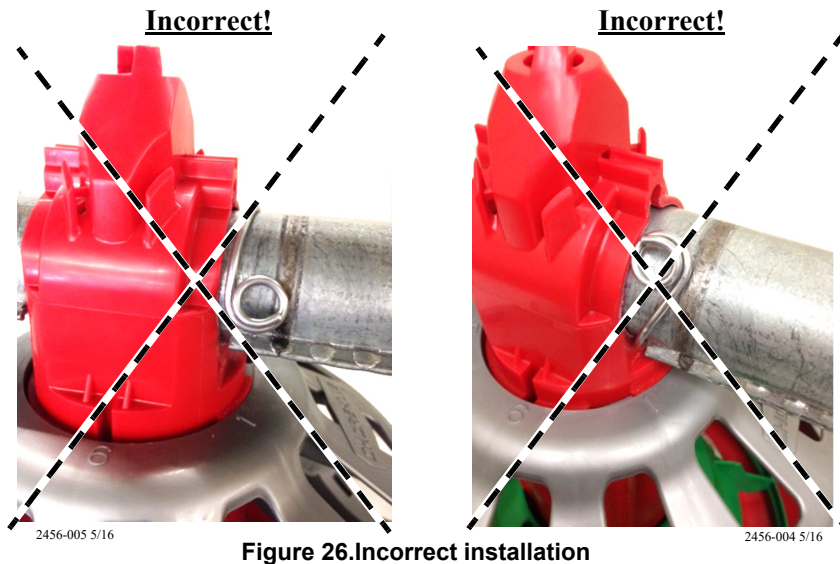
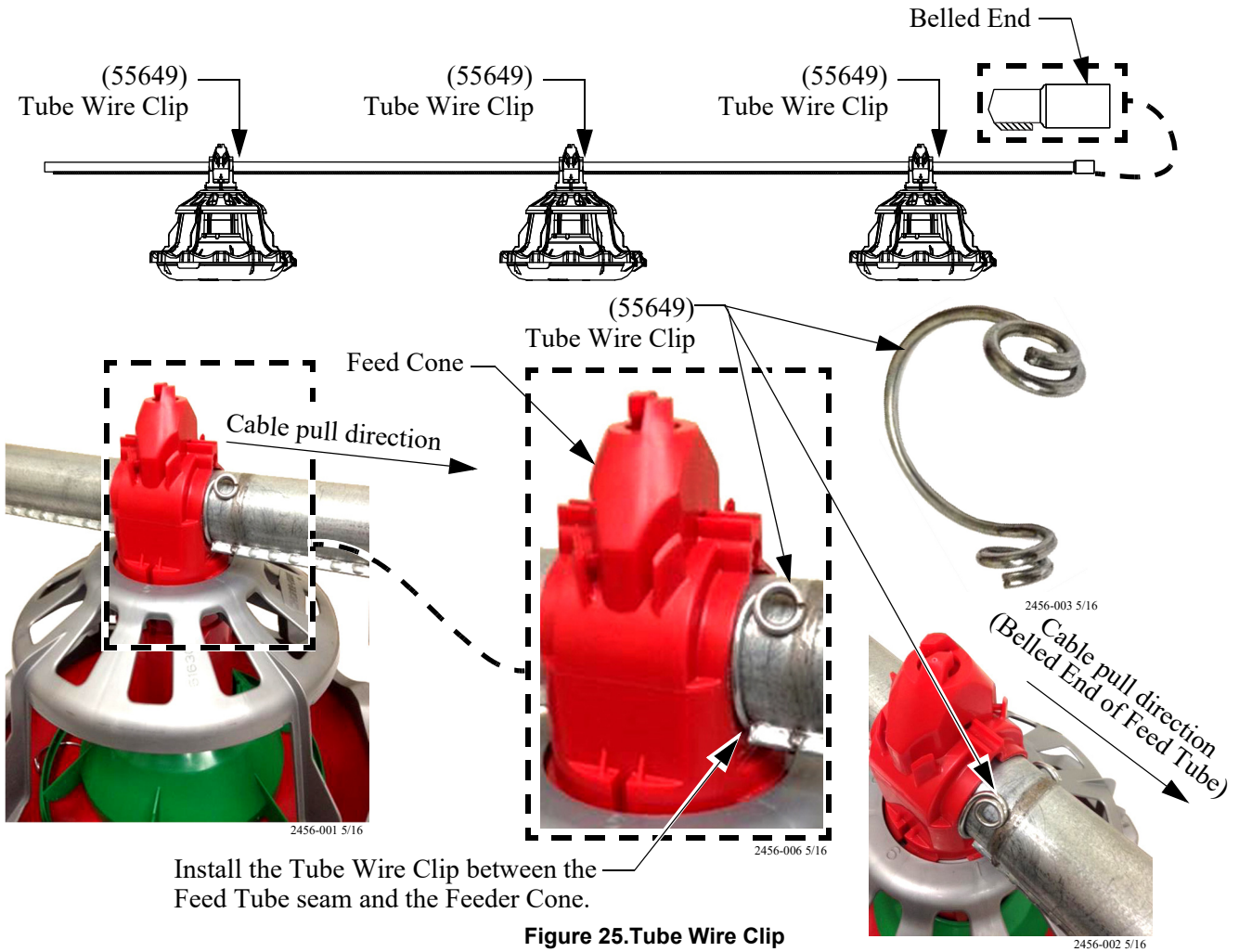
1. Slide one Feeder Pan Assembly per hole onto the auger tubes.
IMPORTANT: Install all the feeders on the tubes in the same orientation.
2. When sliding the feeders on the tubes, make sure the grill openings are on the same side of the tube.
3. Rotate the auger tubes so that the seam is down, this holds the Pan Assemblies in place on the tubes. See Figure 24.



MF2344-11 03/09

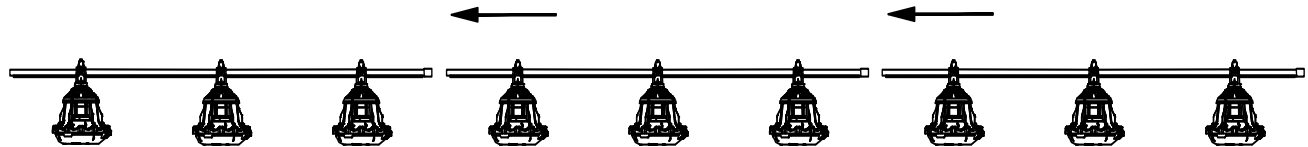
Figure 24. Assembling Feeders on the Tubes

4. Install a Tube Wire Clip (55649) on each Feeder as shown.
5. Install the Tube Wire Clip on the side of the Feeder that is toward the Belled end of Feeder Tube (Winch/pulling end).
6. Ensure that with the Clip snapped in place, the tube seam does not come in contact with the Feed Cone.



Assemble and Suspend the Feeder Line

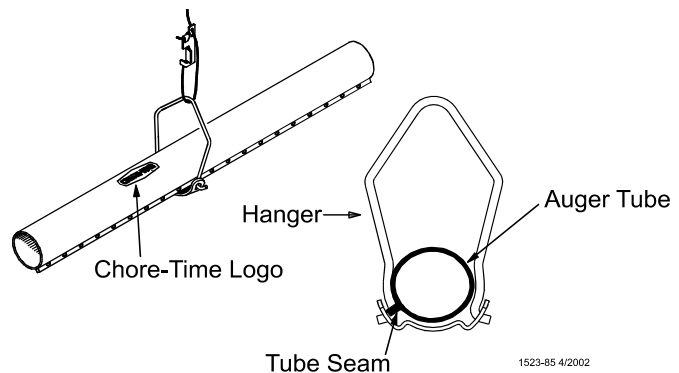
1. The auger tubes and feeders may be laid out end to end in approximately the final location of the line. **The belled end of each tube should be toward the Hopper end of the line.** See **Figure 27**.
2. Connect the individual feeder tubes together by inserting the straight end of one tube as far as possible into the belled end of the next tube. **The last Feeder Tube before the End Control Pan or Mid Line Control Pan needs to be a Control Tube**



MF2344-12 03/09

Figure 27. Assembling Feeders on the Tubes

3. To achieve total feed drop out all along the system, the Chore-Time Logo should be centered at the crown of the tubes and all the Hangers should be installed as shown in **Figure 28**.

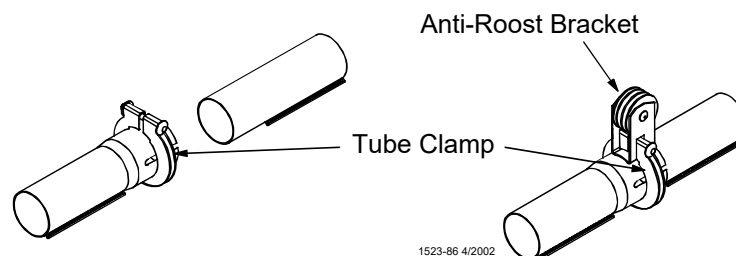


1523-85 4/2002

Figure 28. Assembling Feeders on the Tubes

4. Place a Tube Clamp Assembly or Clamp/Anti-Roost Bracket at each joint. **Figure 29** shows the standard Clamp and Clamp/Anti-Roost Bracket. Systems using 9' or 10' tubes require a Clamp/Anti-Roost Bracket every fifth joint.

Systems using 12' tubes require a Clamp/Anti-Roost Bracket at every fourth joint. All other joints in the system use the standard Tube Clamp Assembly.



1523-86 4/2002

Figure 29. Assembling Feeders on the Tubes

Continue down the entire length of the feeder line so that every joint is secured with a standard Clamp or Clamp/Anti-Roost Bracket. **Figure 30** shows the proper clamp location on the tube joint. Do not tighten the clamp at this time.

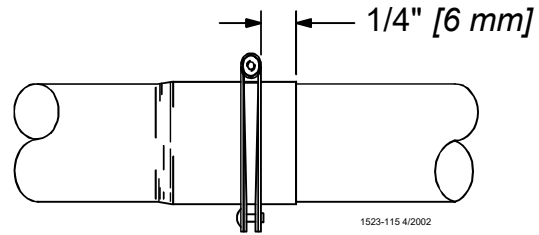


Figure 30. Assembling Feeders on the Tubes

7. Install the Hangers on the feed line tube at the 8' [2.4 m] spacings determined by the suspension drop lines. **Figures 27 and 30** show the proper installation of the Hanger Assembly. Make sure the outlet drop hole is downward when the Hangers are installed, otherwise feed will not be allowed to drop into the feeder pan.
8. Install Adjustment Leveler within 6" [152 mm] of feeder line. **Figure 31** shows the proper cable routing around the Adjustment Leveler.
9. Following the installation of all drops, check drop cables before raising feeder line. Cable must be tracking properly on all pulleys before raising the feeder line.
10. Raise the feeder line to a convenient working height.
11. With the feeder line suspended, measure from the floor or ceiling to the auger tubes to level the system.

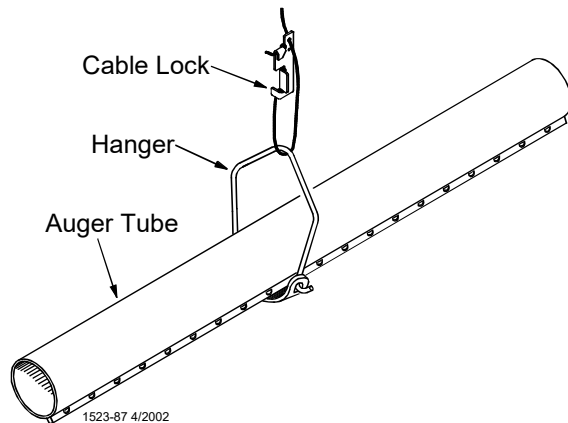


Figure 31. Assembling Feeders on the Tubes

12. Before tightening each clamp:

- make sure each tube is level (not sagging, sloping, etc.).
- make sure straight end of each tube is fully inserted in belled end of next tube.
- if providing total drop out, tubes should be rotated so that the Chore-Time Logo is on crown of tube.

13. make sure the clamps are located, as shown in **Figure 29**.
14. Finally, tighten the Tube Clamps on the feeder tubes. Clamp the joints securely, but do not crush the tubes. Re-adjust all Adjustment Levelers as needed and trim off excess cable as shown in **Figure 32**.

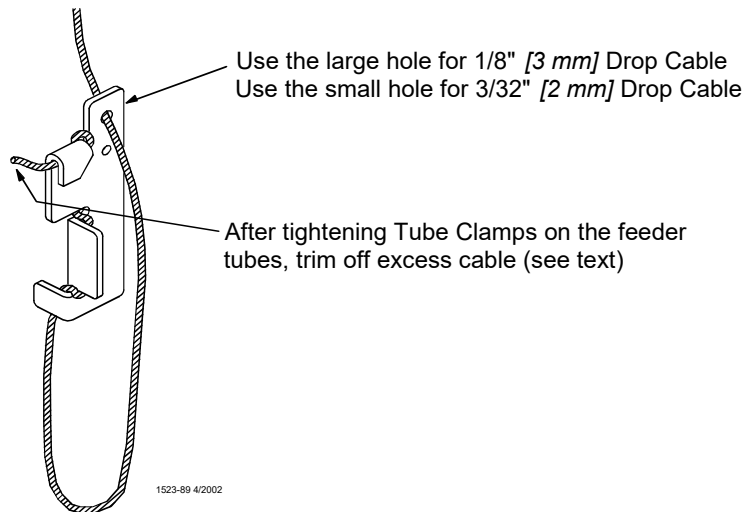


Figure 32. Assembling Feeders on the Tubes

Installing the End Control, Boot Assembly, and Auger

The End Control Unit must be at least 10 feet [3 m] from the end of the building to allow birds access around the end of the feeder line.

1. Assemble the End Control Unit to the Feeder Line Control Tube using a clamp/anti-roost bracket. See **Figure 32**. **DO NOT INSTALL THE POWER UNIT AT THIS TIME.**

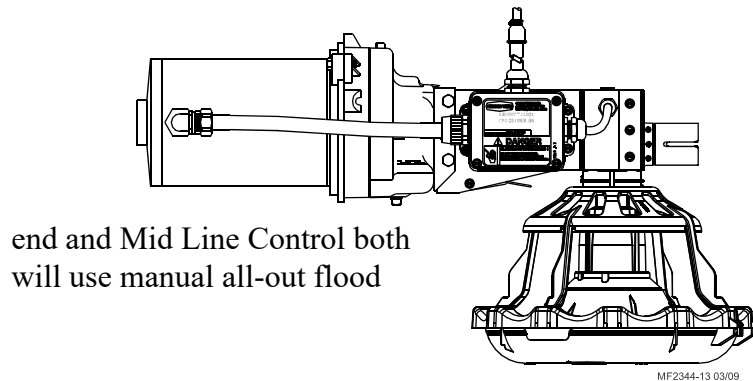


Figure 33. End Control Installation

2. Install the Feeder Boot by sliding the straight end of the Feeder Boot into the belled end of the Feeder Tube. Install a clamp/anti-roost bracket on the bell and tighten. The Feeder Boot must be level with the open top of the Feeder Boot flat. See **Figure 33**. **DO NOT INSTALL THE ANCHOR BEARING AND BEARING RETAINER AT THIS TIME.**

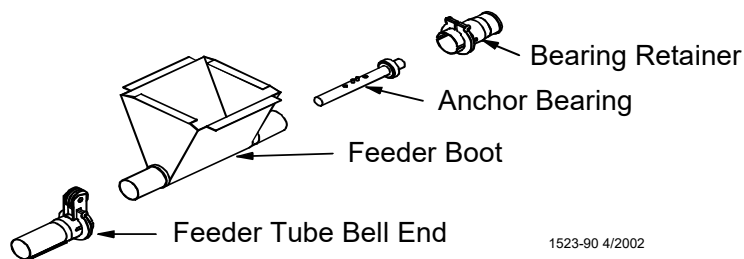
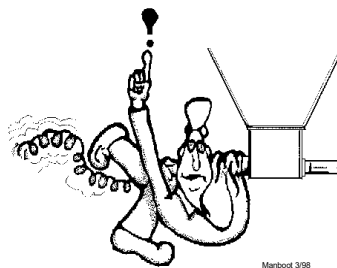


Figure 34. Installing the Feeder Boot

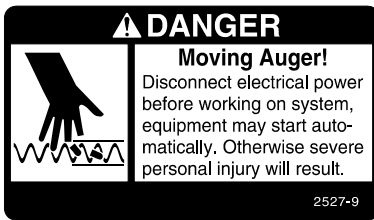
Auger Installation

Note: Use extreme caution when working with the auger. The auger is under tension and may spring causing personal injury. Wear protective clothing, gloves, and safety glasses when working with the auger.



To avoid kinking the auger, be careful not to drop the rolled auger when handling. Inspect the auger carefully as it is installed. Small kinks may be straightened. Large kinks must be removed and the auger brazed back together.

Cut the leading 18" [450 mm] and last 18" [450 mm] off each roll of auger. Also, cut out any other distorted auger sections and reconnect the auger as specified in the Auger Brazing section of this manual.



1. Use extreme caution when pushing the auger into the auger tubes. Keep your hand away from the end of the auger tube to avoid injury.
2. With the auger coiled about 6 feet [1.8 m] from the end of the boot, uncoil the auger from the outside and feed the auger through the boot into the tubes.
3. Push the auger into the tube in short strokes.
4. Uncoil and handle the auger carefully to avoid damaging or kinking the auger.
5. If more than one coil is required for each feeder line, the auger ends will have to be brazed together. Refer to the Brazing the Auger section in this manual.
6. Install the Anchor Bracket to the Power Unit/ Gearhead, as shown in **Figure 35**, with the included 5/16-18 Bolts.

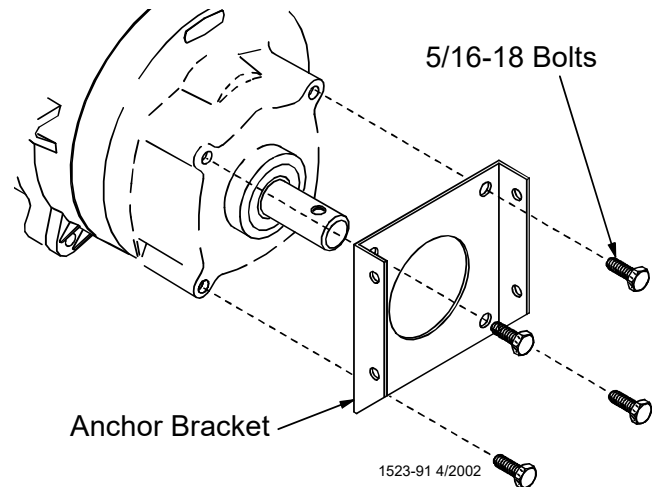


Figure 35. Installing anchor plate

7. Slide the Drive Tube and flat washer over the output shaft on the Power Unit, as shown in **Figure 36**.
8. Continue installing auger until the auger reaches the Control Unit end of the feeder line.
9. Turn the Drive Tube Weldment into the auger, then attach to the output shaft of the Power Unit, as shown in **Figure 35**. Use the Driver Block to secure the auger to the Output Shaft

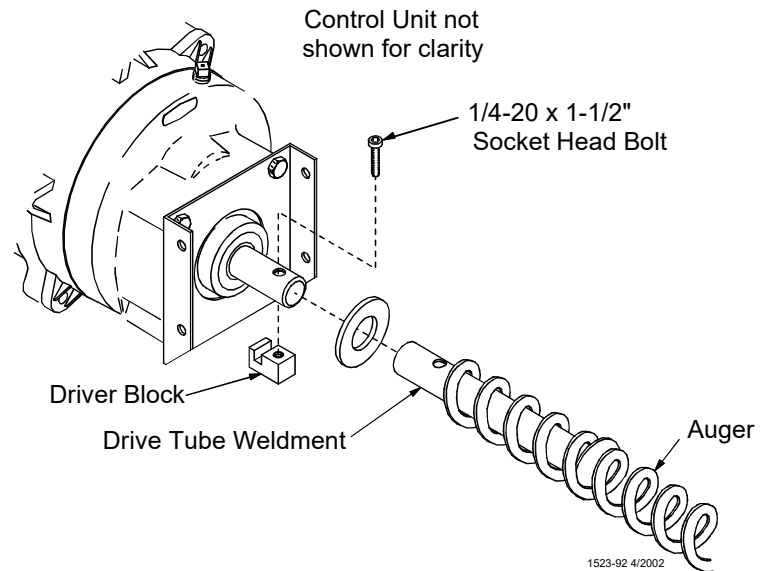


Figure 36. Auger Driver Components

10. Attach the Anchor Plate and Gearhead Assembly to the Control Unit Body using the included 1/4" lock washers and 1/4-20 x 1/2" Bolts. See **Figure 37**.

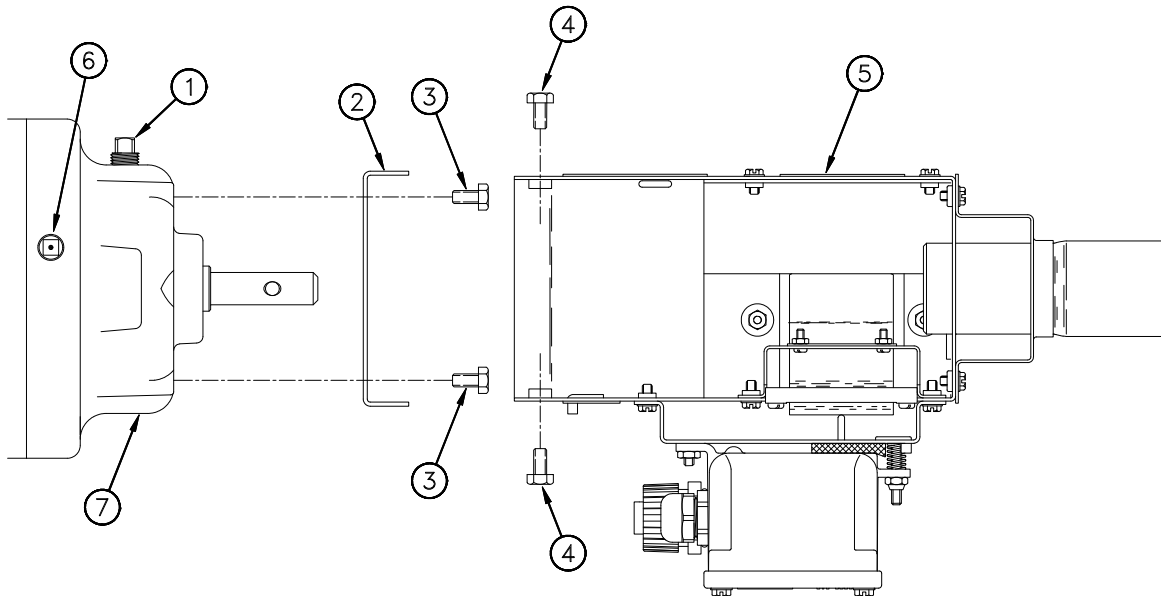


Figure 37. Attaching the Anchor Plate and Gearhead Assembly to the Control Unit Body

11. Install the Metal Water Tight Connector in the Feed Line Motor (single phase applications only). Cut the Flexible Conduit to length. Slide the wires from the end control through the Flexible Conduit. Install the Flexible Conduit in the connectors. Connect the wires to the Feed Line Motor.

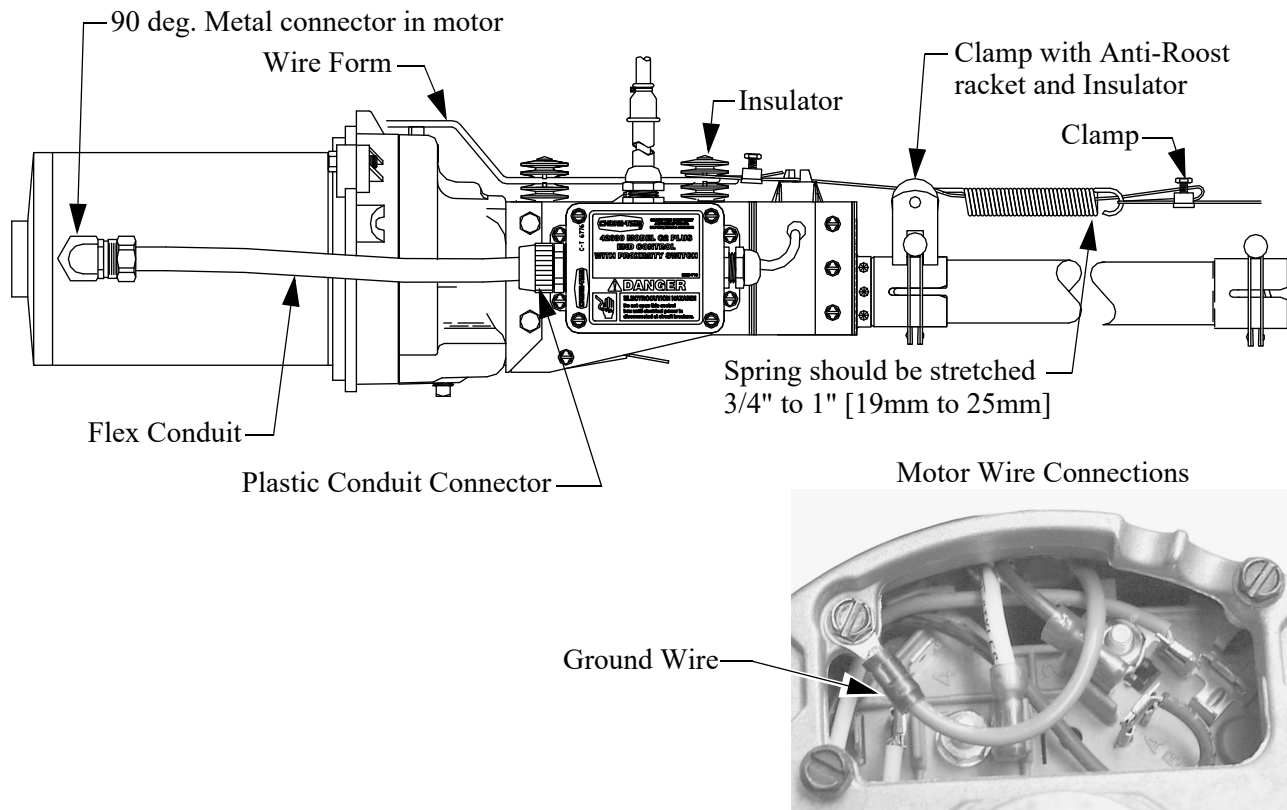


Figure 38. Connecting Conduit

12. Attach all covers and wires according to the wiring section of this manual.
13. Pull the auger at the boot end until it begins stretching. Then let it relax. In the relaxed position, mark the auger at the end of the boot. See Figure 39.

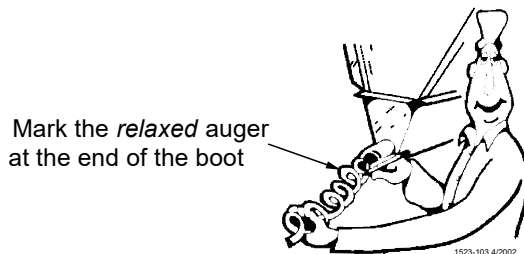


Figure 39. Wiring the Motor

14. Auger stretch:
 The auger needs to be stretched 7" [180 mm] per 100' [30 m]. Example: A 300' [90 m] feeder line requires 21" [500 mm] of stretch.
 Beginning at the *relaxed* position, measure the required amount of stretch. Mark the auger at that point.
 Grip the auger 8" [200 mm] ahead of this mark with locking pliers. Allow the auger to pull back into the boot so that the pliers rest against the end of the boot. **Figure 40.**

Use a hacksaw or bolt cutters to cut the auger at the stretched auger mark.

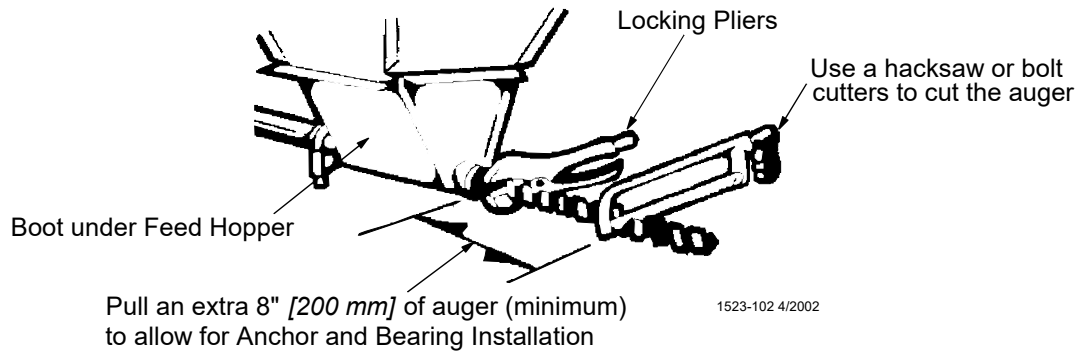


Figure 40. Cut the Auger with required stretch

15. Insert the Anchor Assembly into the auger until it touches the washer at the back of the anchor. Tighten the setscrews in the center of the anchor until they touch the auger, then tighten a maximum of 1/2 turn. See **Figure 41**. Do Not Over-tighten Set Screws.

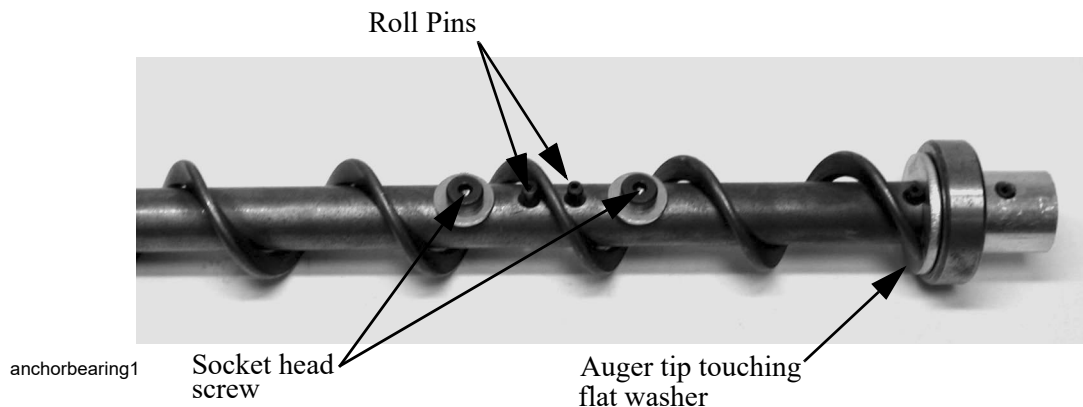


Figure 41. Anchor Bearing

16. Carefully remove the locking pliers while holding onto the Anchor and Bearing Assembly and auger securely.
17. **Slowly** ease the auger back into the tube. Use caution. If the auger is allowed to spring back, the bearing race may crack.
18. Install the Bearing Retainer and fasten with a tube clamp. Keep the Bearing Retainer flush with the end of the anchor for safety.
19. Place the cannonball in the boot.

Auger Brazing

The auger should be brazed if it is necessary to splice or lengthen it. A bronze, flux coated rod is recommended.

The ends of the auger should butt against each other, **DO NOT THREAD INSIDE EACH OTHER**. See **Figure 42** 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 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.

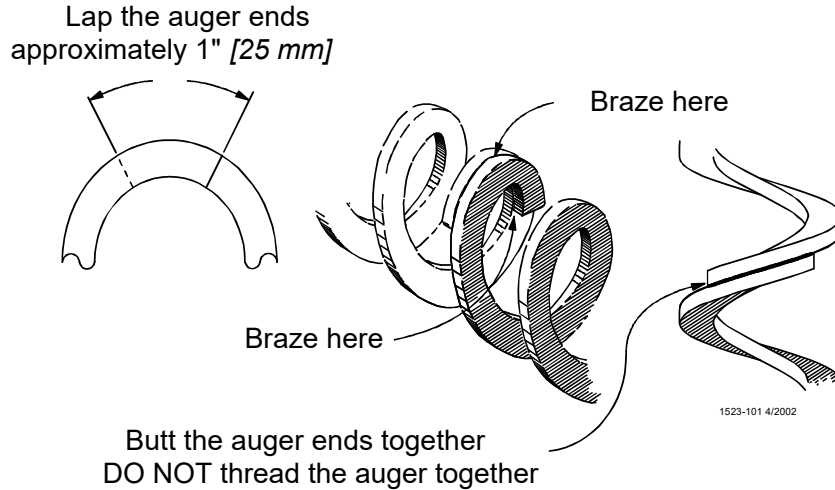


Figure 42. Brazing the Auger

Actuator Installation

The LIBERTY Actuator is used to raise and lower the feed level cone. Settings are #1-#5, with the #1 being the lowest position (grow out) and #5 being the highest position (brooding). For turkey brooding use the #5 position on the actuator for brooding. For broilers brooding use #3 position on the actuator for brooding.

Planning

Figure 43 below shows how to locate the Actuator, Insulator and Springs. Divide up the feeder line length in segments not to exceed 200 ft [60.96m]. Locate the actuator in the center of each segment. max length 100 ft [30.48m] in each direction

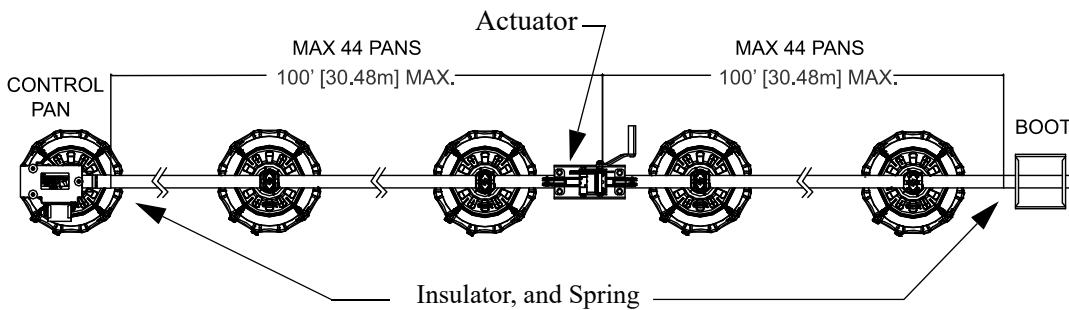


Figure 43. Actuator Planning

Actuator Installation

Attach the Actuator in the Middle of the system (**Figure 43**) It may be necessary to remove a Pan to install the Actuator. Use a Tube Closure (9126) and Band Clamp (3527) to cover the outlet hole where Pans are removed. Mount the winch using the Lower Clamp Half (48487) and 1/4-20 x 2.5" Bolts (4404-4) included in the Actuator Kit. See **Figure 44**

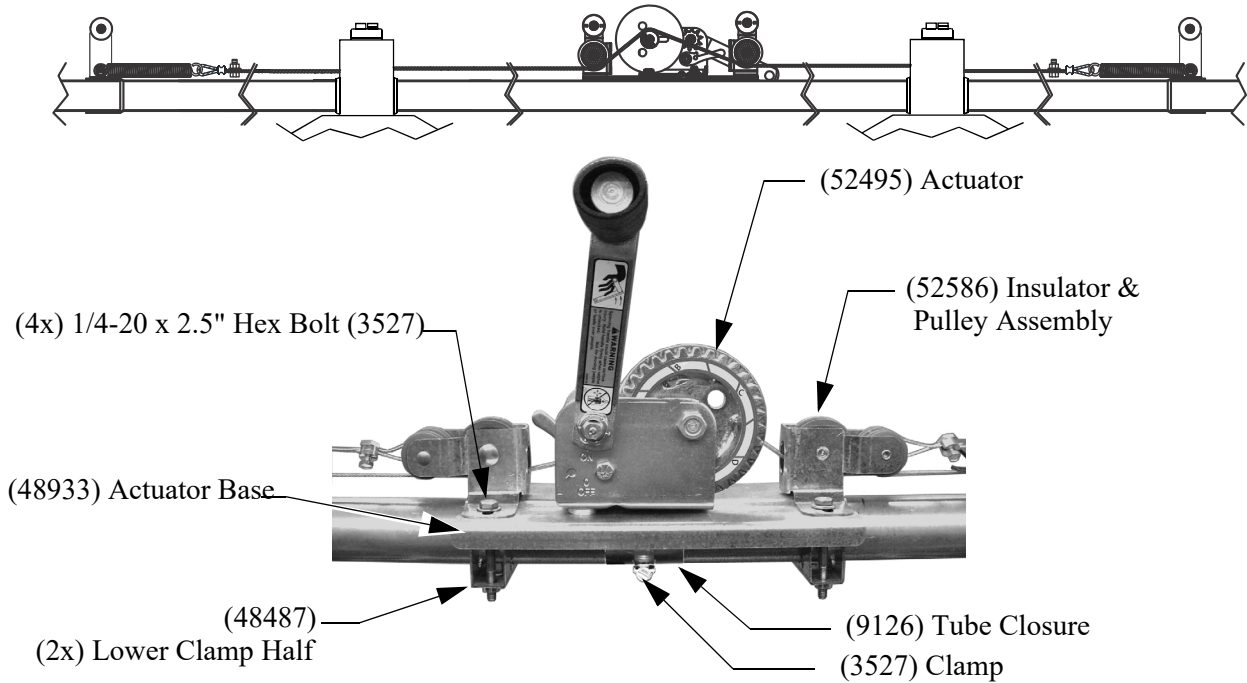


Figure 44. Actuator Installation

Springs at end of system

Attach a Spring at each end of the system as shown in **Figure 45** below.

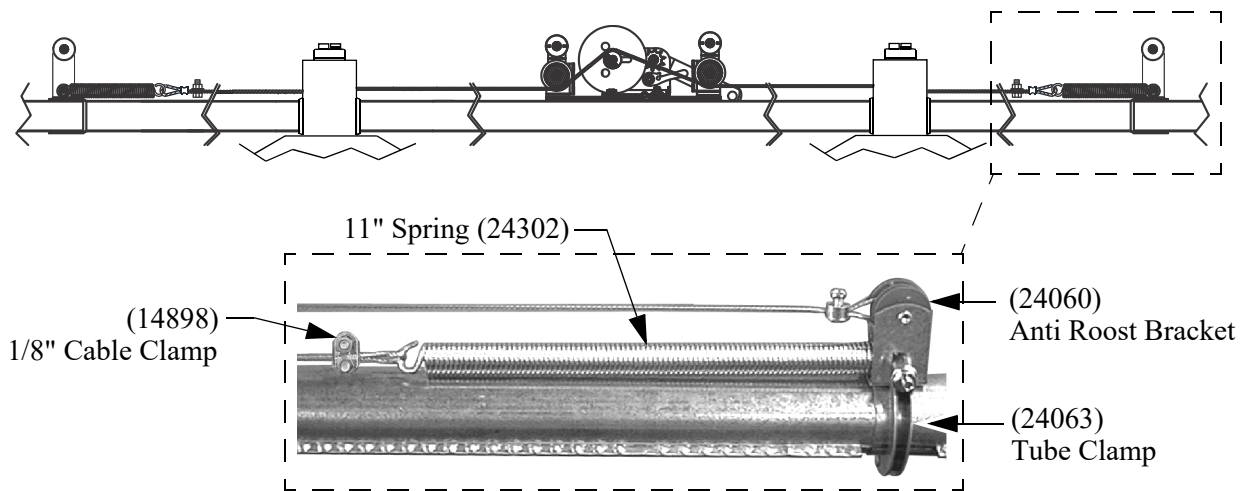
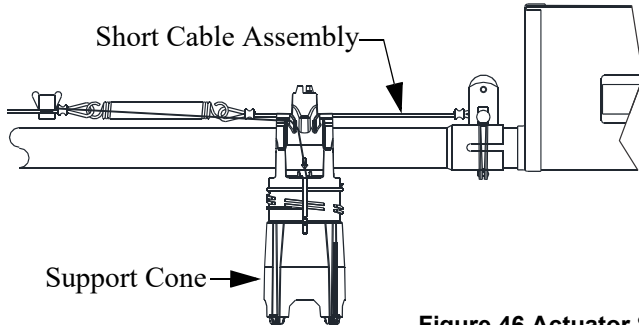


Figure 45. Spring Installation

Actuator Springs (9'-4 hole Tubes)

If using shorter Tube lengths (9' 4 hole system) there are two options for Spring mounting. Option 1: Make up a short Cable Assembly to go from the Tube Clamp through the first Support Cone. Option 2: Remove the Pan at the end of the system and cover the outlet hole with a Tube Closure and Band Clamp. (See **Figure 46**).

Option 1 (9'-4 hole Tube)



Option 2 (9'-4 hole Tube)

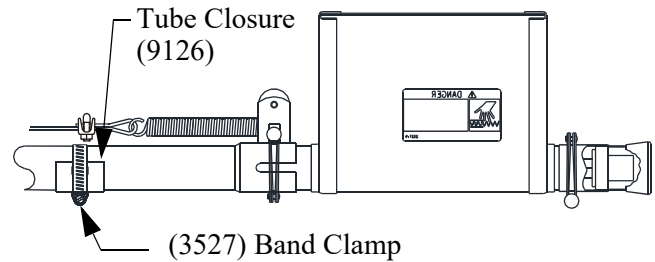


Figure 46. Actuator Springs (9'-4 hole Tubes)

Installing Actuator Cable

1. Fasten one end of the Cable to the Spring at the end of the system as shown below.

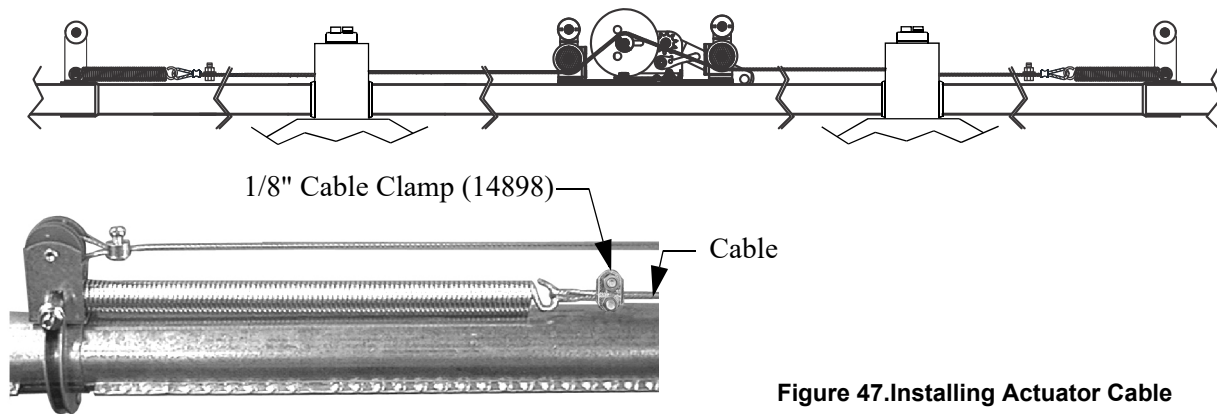


Figure 47. Installing Actuator Cable

2. Route the Cable through the Feed Cones, through the Actuator, through the Feed Cones and attach it to the Spring at the other end of the system

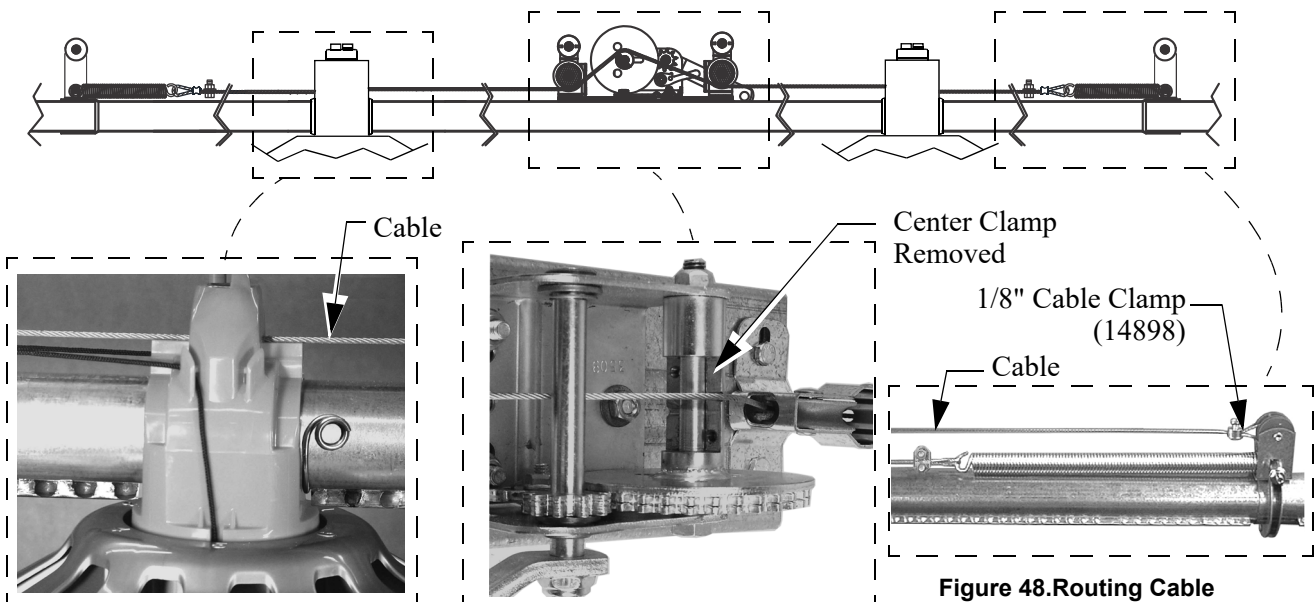


Figure 48. Routing Cable

3. Rotate the Actuator to the "A" position.

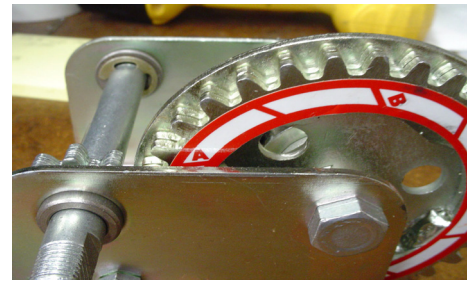


Figure 49. Actuator Position

4. Install the Center Clamp in the Actuator

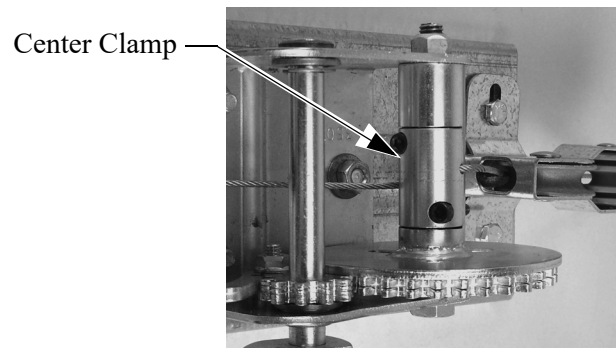


Figure 50. Actuator Center Clamp

5. Actuate the Cable to Stretch the Actuator Springs 1" [25 mm].

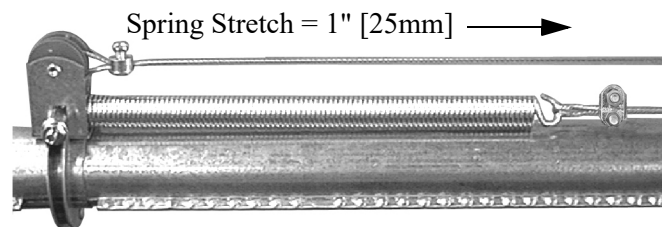
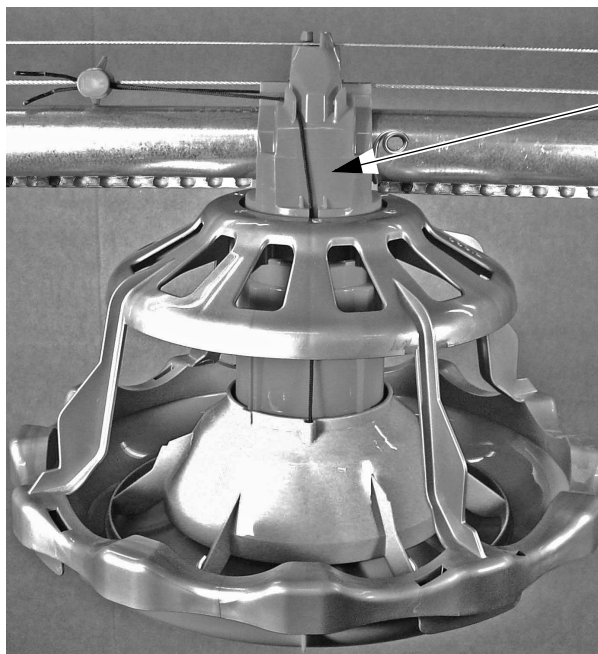


Figure 51. Spring Stretch

Attaching Feeder Lift Cords to the Actuator Cable

With both ends of the Cable securely anchored and Spring stretch set, run the Actuator up and down 2 to 3 times. Return the actuator to A position. Using the Lift Cords raise the Feed Cone then return it to the down position. Starting at the Winch, pull the support Cone toward the actuator, then apply equal pressure to the Lift Cords then connect the Lift cords to the Lift Cable (Do not lift the Feed Cone off the support tabs). The Cords must be routed toward the Actuator (center of the brood area). Lift the Feed Cone to connect Cords



Support Cone pulled toward the Actuator

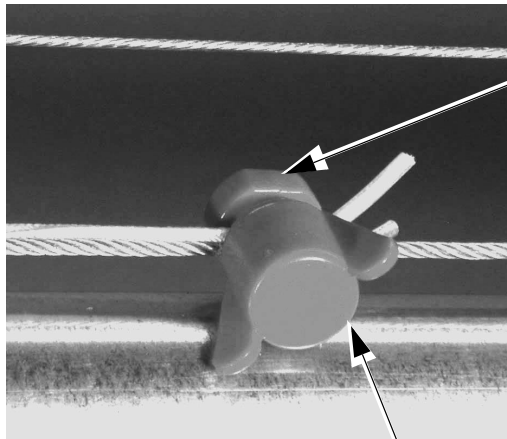
Note: Both the end and mid-line Control will have manual ALL-OUT™ feed flooding.

Figure 52. Connecting the Support Cords

See **Figure 53** for the proper way of connecting the Cords to the Cable. Place the Cord in the Clamp (13057) bottom, then place the cable on top of the Cord. Finally, install the Clamp top.



Do not lift Feed Cone off the stop on the leg. Hold the Cone down when connecting the Lift Cords to the Cable.



Clamp Bottom

Clamp Top

Figure 53. Cable Clamp installation detail.

Using the Feed Line actuator, raise the Feed Cone to the E position. The Actuator will stop at the end of the gear. return the Cones to the A position. Actuator will stop at the end of the gear. Check the position of the Feed Cone. (Cone should be setting on the stop tabs) See **Figure 53**.

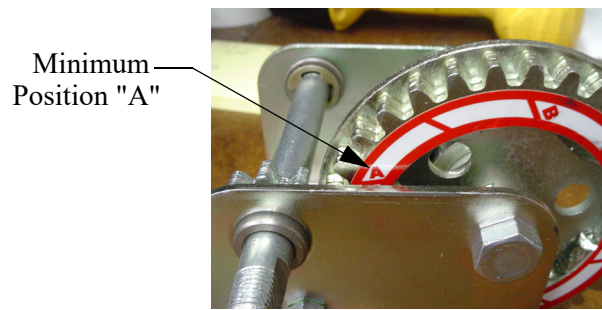


Figure 54.Actuator at minimum position A

Continue to attach the remainder of the feeders to the lift cable, making sure the feeders are in their lowest position when connected.

Remember to route the cords toward the feed cone actuator.

Anti-Roost Installation

1. Unroll the bulk anti-roost cable. Note: If the cable is unrolled as shown in **Figure 55**, taking 5 loops of the coil with one hand, then changing hands to remove 5 loops as it is unrolled, it will lie flat during installation.

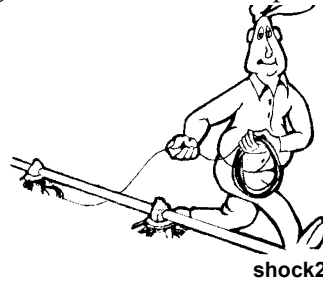


Figure 55.Unrolling the Cable

2. Start at the hopper end of the line and form a loop around the anti-roost bracket. For best results, make a double loop around the anti-roost insulator in the center groove of the insulator and fasten with a 1/16" cable clamp as shown in **Figure 56**.

Key	Description
1	Cable Clamp
2	Clamp with Insulator Bracket and Insulator
3	Anti-Roost Cable

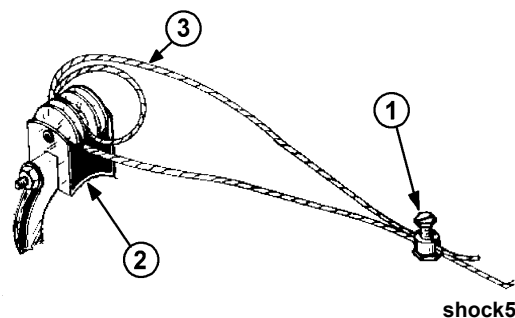
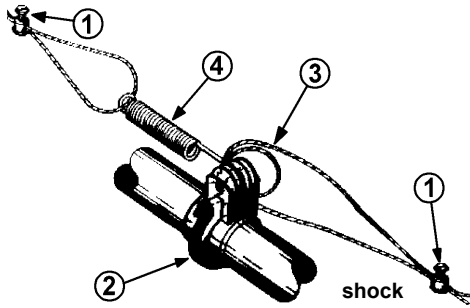


Figure 56.Anti-Roost Cable at the Hopper

3. Insert the cable in the insulator on the top of each Grill Support between the hopper and the next anti-roost bracket.

4. Attach a spring in the center groove at the second anti-roost bracket and cut the cable at this point. See **Figure 57**.
5. Thread the ends of the cable through the end of the spring. Pull the cable tight so that there is 3/4" to 1" (20 to 25 mm) of stretch in the spring. Clamp the cable to form a loop and cut off any excess. See **Figure 57**.
6. Attach the cable to the insulator. For best results, make a double loop around the anti-roost insulator in the center groove of the insulator and fasten with a 1/16" cable clamp as shown in **Figure 57**.



Key	Description
1	Cable Clamp
2	Clamp with Insulator Bracket and Insulator
3	Anti-Roost Cable
4	Spring should be stretched to 3/4" to 1" (19 to 25 mm).

Figure 57. Anti-Roost Cable Mid-Line Connection

7. Run the cable to the next insulator, attach a spring in the center groove at the anti-roost bracket and cut the cable at this point. The cable should be positioned in the insulator built into the top of each grill support along the feeder line.
8. Repeat this installation until the anti-roost cable is installed along the entire feeder line.
9. At the control unit, after clamping the cable to the spring, cut the cable about 8" to 10" (200 to 250 mm) longer than necessary. Feed the end of the cable through the center of the spring, around the first insulator on the control unit, and clamp the cable using the cable clamp supplied with the control unit. See **Figure 58**.
10. Install the wire form on the control unit insulators. Be sure the guard snaps into the retainers molded into the insulators. See **Figure 58**. At the control unit, after clamping the cable to the spring, cut the cable about 8" to 10" (200 to 250 mm) longer than necessary. Feed the end of the cable through the center of the spring, around the first insulator on the control unit, and clamp the cable using the cable clamp supplied with the control unit. See **Figure 58**.
11. Anti-Roost Installation at the Control Unit

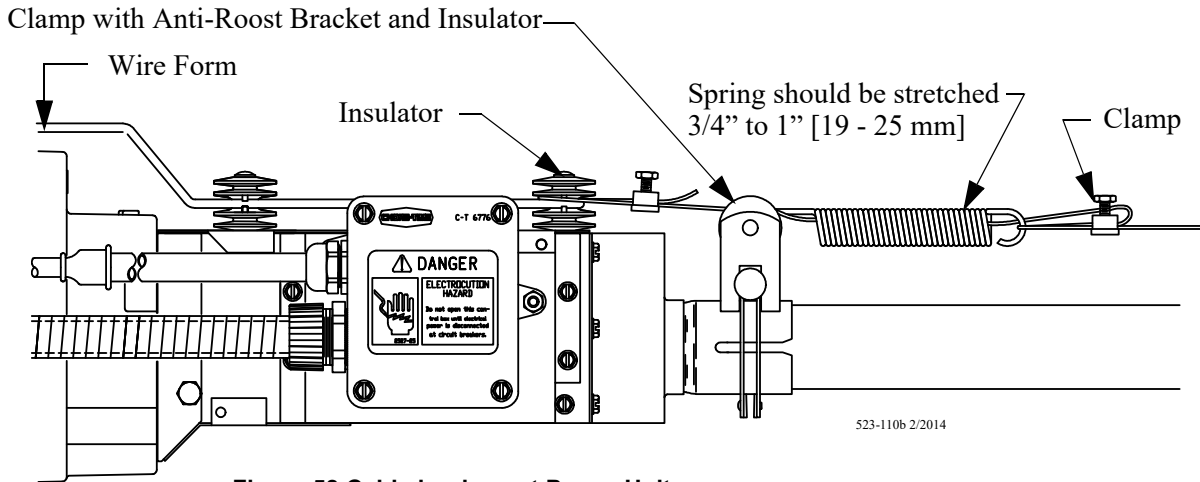


Figure 58. Cable hook up at Power Unit.

12. Install the Poultry Trainer or Line Charger, as shown in **Figure 59** or **Figure 60**.
 The Poultry Trainer is used to power all Anti-Roost lines in a house. See **Figure 60**.
 The Line Charger is used to power individual Anti-Roost lines in a house.

13. Route the charger wire (800 volt minimum) from the Poultry Trainer or Line Charger to the Anti-Roost system. Secure the Charger Wire to the Anti-Roost cable, using a cable clamp.

The anti-roost system must be on a separate electrical circuit, allowing the system to be disconnected by a switch near the door.

Remember, the Anti-Roost System should be grounded through the poultry trainer.

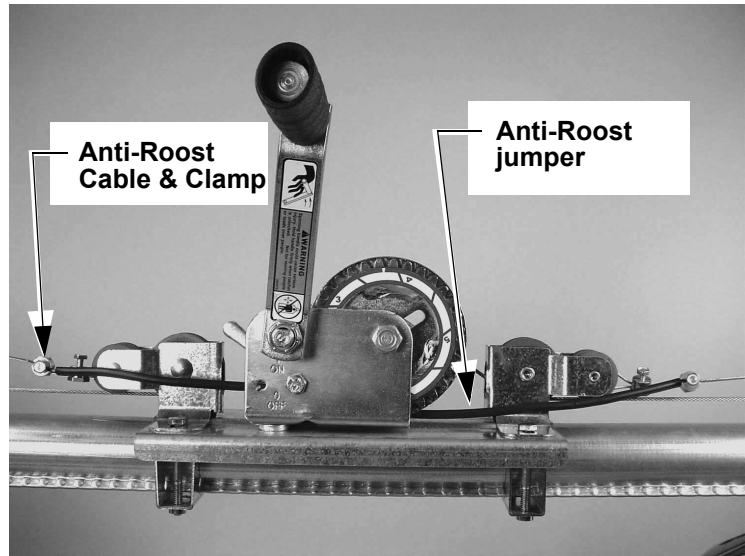


Figure 59. Anti-Roost Cable Connection

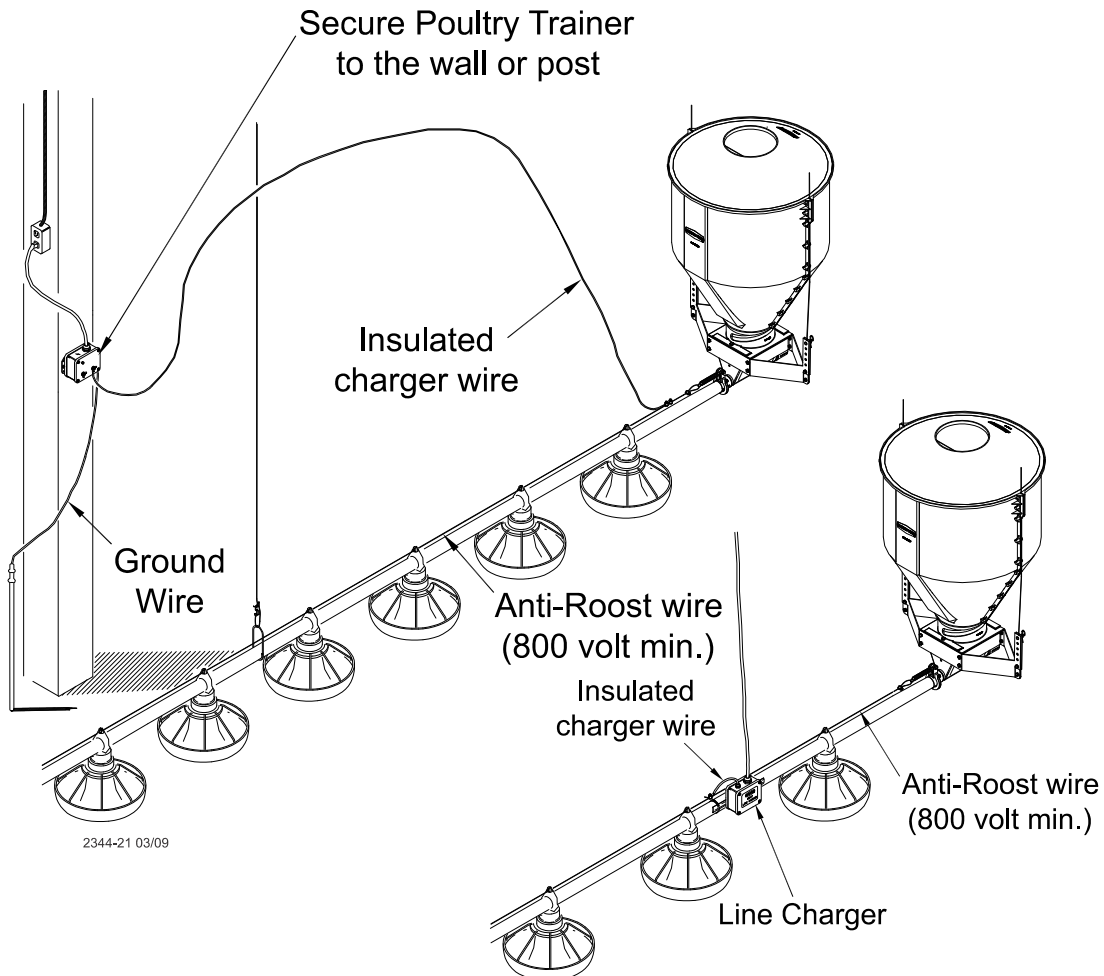


Figure 60. Anti-Roost Cable Mid-Line Connection

MIDLINE Control

Midline Control Units are available for the LIBERTY Feeding System Feeder. The Midline Controls are shown in **Figure 61**.

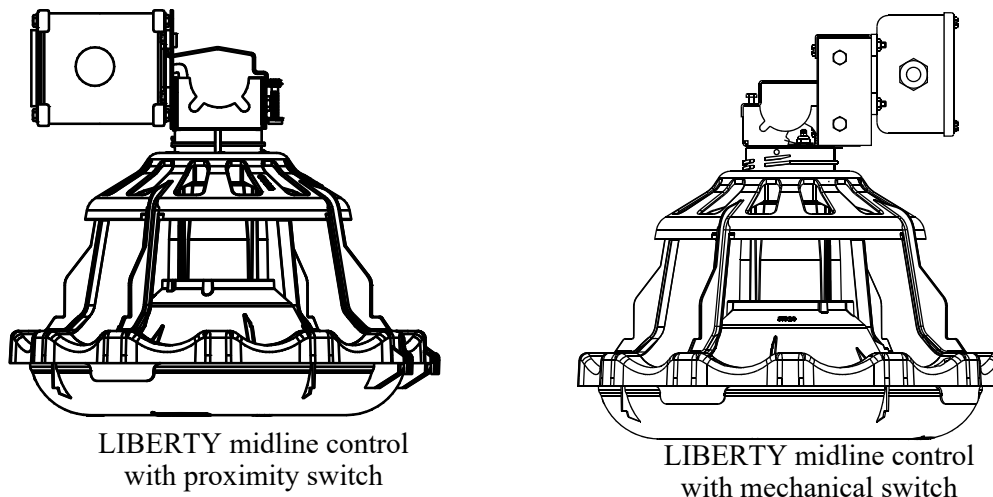


Figure 61. Midline Control Units (Side Views)

NOTE: ALL LIBERTY MID LINE CONTROL HAVE MANUAL FLOODING

The Midline Control makes it possible to operate the feeding system when birds are confined away from the End Control Unit. Chore-Time recommends placing the Midline Control Feeder at least 2 pans away from the curtain or partition. See **Figure 62**.

1. **New Feeder Lines:** Leave one feeder pan assembly off the feeder tube at the point where the Midline Control needs to be placed. The feeder line can be assembled and suspended before attaching the Midline Control; or the Midline Control may be attached to the feeder tube when the other pans are installed.
- Existing Feeder Lines:** Cut the Grill Support and remove the feeder pan at the location where the Midline Control will be installed.

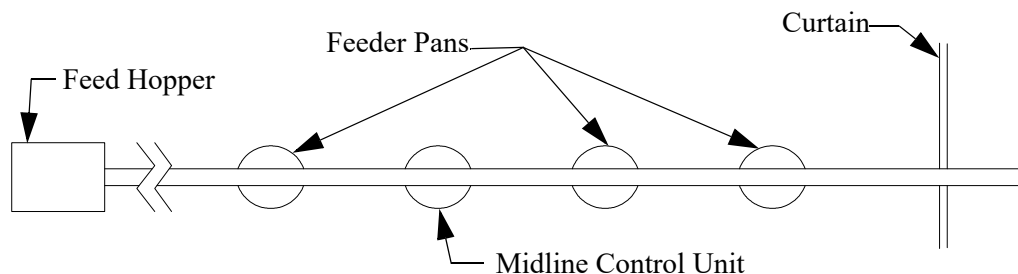


Figure 62. Midline Control Location Diagram (Top View)

Note: Both end and mid-line Controls use *manual* ALL-OUT™ flood.

If a Control Tube with enlarged holes is not used, enlarge the outlet hole for the Midline, (2) outlet holes in front of Midline Control.

See **Figure 63** for recommended size and placement. Use hacksaw and tin snips to enlarge hole size. Be sure there are no burrs inside the tube to catch the auger.

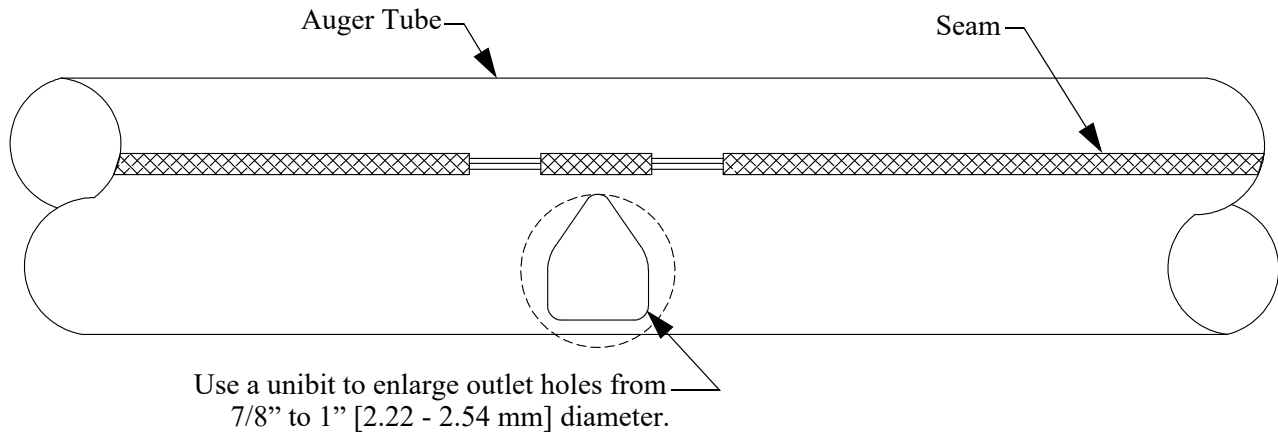


Figure 63. Enlarging Outlet Holes (Side View)

Midline Control with Mechanical Switch Installation

1. Remove the two hex head screws on the control top.
2. Lift off the control top.
3. Cradle the feeder tube in the control housing. The feeder tube may have to be turned slightly to allow the pan to hang straight.
4. Clamp the control in place by inserting tabs on the control top into the slots on the control body. Install and tighten the two hex head screws previously removed.

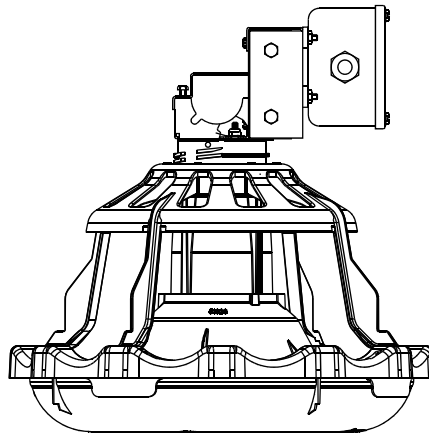


Figure 64. Midline Control Installation

5. Install a toggle switch, out of reach of the birds, to disconnect power to the Midline Control. This allows the Midline Control to serve as standard feeder when not used as a control feeder.
6. Wire the Midline Control as shown in the wiring diagram section of this manual.

Midline Control with (ES) Switch Installation

1. Assemble the Mid-Line Control to the Feeder Tube, as shown in **Figure 65**.
2. Attach the Switch Box Assembly to the Feeder Tube with Hose Clamps as shown in **Figure 65**.
3. Install a toggle switch, out of reach of the birds, to disconnect power to the Mid-Line Control. This allows the Mid-Line Control to serve as a standard feeder when not used as a control feeder.
4. Wire the Mid-Line Control as shown in the wiring diagram section of this manual.

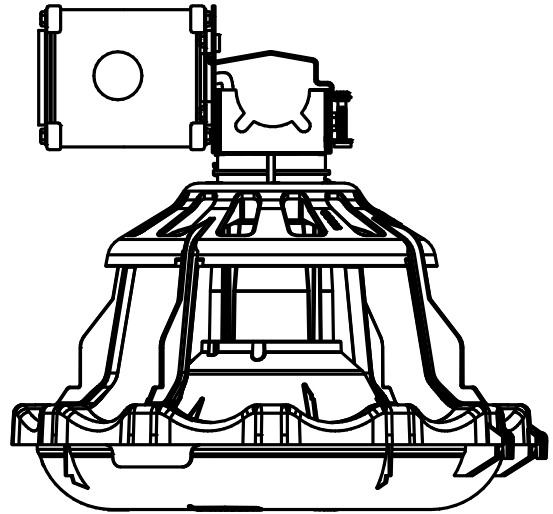


Figure 65. Electronic Control Installation

LIBERTY Feeder Management and Operation

This section provides you with valuable information concerning feeder operation and management. It is important that you read this information and understand how the feeding system was designed to operate. Once you become familiar with the system, you may *custom operate* it to fit your individual needs.

Initial Start-up of the Feeding System

The feeding system should be operated prior to birds being housed to make sure the installation is correct, the switches function properly, and to fill the feeder lines with feed.

There are typical layouts for the feeding system that was determined prior to the installation. Normally if the building is 500' or over, a center house hopper set-up is used (figure 2). For buildings under 500', the hopper is placed at one end and the control pan/power unit at the other (figure 1). It is common practice to use partial house brooding during the early days of poultry production. For buildings that have the feeder split in the center (center hopper set-up), normally only the feeders that are in the brood area are used during brood time. For buildings that have the hopper at one end, brooding can be done on the motor end or an optional Midline control pan(s) can be placed on the feeder line.

The feeder tubes and auger are supplied from the factory with a protective oil coating that will cause the system to deliver feed at a reduced rate. The oil coating will also create a larger load on the power unit (motor) until the system has been initially purged with feed, and becomes broken in.

To operate

5. Lower feeder lines so the feed pans are resting on the floor. Although the major weight of the feeder lines will be on the floor, do not remove all the weight from the suspension system and allow the cables to become slack.
6. Raise the feeder cones to open the feed flood windows by using the feed line winch.
7. Apply power to the feeder lines to check the operation. Allow to operate empty for 1-2 minutes.

NOTE: For feeder lines that have Midline controls, the recommended bypass switches are wired into the system for selection of partial or full house control. Select the switch so the Midline control is functional. As the feeder operates, the feed will stop at the Midline control pan.

8. With the shut-off slide on the feed bin boot closed, energize the Flex-Auger® Fill System. After operation of approximately 1-2 minutes, open the boot slide ½ way to allow feed to be conveyed to the feeders.
9. Once feed begins to be dispensed into the feed hopper(s), manually shut-off the fill system.
10. Apply power again to the feeder lines. Operate the fill system manually to dispense approximately 50 lb. (23 kg.) increments of feed into the feed hopper(s). Allow the feed hopper to become empty for 30 seconds between each increment to reduce load on the feeder motor. Continue this procedure until feed has been dispensed to all the feeder pans. When the feed reaches the control pan, the feeder line will be shut-off.
11. Once the feeder lines have been initially filled with feed, manually dispensing feed in 50 lb. (23kg) increments will no longer be necessary. The shut-off slide on the Flex-Auger® Fill System boot may be completely opened. Refer to the Flex-Auger Fill System Operator's Manual for information when multiple feed bins are used.

General Operation of the LIBERTY Feeder

These recommendations are the guideline to aid producers with the use of the feeding system. With experience a feeding program will be developed to enhance the feeding systems performance. Several factors such as feed content, type of birds, climate, lighting programs, and etc., may dictate change from these recommendations.

The LIBERTY feeder has ALL-OUT™ FLOOD, which allows the feeder pan, to be filled with a high level of feed for the brooding of young birds. Start young birds with the feeder line lowered so the feed pans are resting on the floor and open the feed flood windows using the feed line winch. Although the major weight of the feeder lines will be on the floor, do not remove all the weight from the suspension system and allow the cables to become slack.

It is advisable to provide supplemental feed during the first few days for the young birds. This is especially true when partial house brooding is used (refer to Figure 1). Supplemental feeders, such as the CHORE-TIME® E-Z START® Chick Feeder, provide extra feeding space and access to the feed.

With the feeders lowered to the floor and the feed flood windows open, the operation of the feeder will allow a high level of feed to be placed into the feed pans making it easy for the birds to find feed, adapt to the feeder, and begin to eat.

Do not operate the feeding system on automatic (full demand feed) when the feed windows are open (cones raised). Chore-Time recommends having the feed windows full open for up to the first 14 days for broilers and up to 21 days for turkeys. The feeders will need to be operated at least 2 times a day for the first 5 days, and thereafter, 3 times a day or more as needed, while the windows are open. If it is not possible to operate the feeder manually 1-3 times a day during the brood time (windows open), then a time clock should be utilized to limit the number of times and length of time the feeder can operate. Failure to do one of the above will create the possibility of an excessive high feed level in the feed pans enabling the birds to waste feed.

DO NOT OPERATE THE FEEDING SYSTEM ON AUTOMATIC WHEN THE ALL-OUT™ FLOOD IS BEING USED.

As the birds grow and become acclimated to the feeder pans, the feeder cones can be progressively lowered to the grow-out position over a period of days to reduce the feed level in the feed pans. Before lowering the feed cones, it is recommended to allow the birds to eat the feed level down below the feed cone. This will ease the process of the feed cones being lowered properly.

For broilers, once the feed cones have been lowered to the grow-out position, the suspension system should be used to raise the feeder(s) line to the recommended pan height.

For turkeys, many producers prefer to begin raising the feeder lines at approximately 2 weeks of age prior to completely closing off the feed windows to the grow-up position. This method allows the bird to have a high level of feed and reduces to ability of the birds to waste feed.

When the feeder is raised to just clear the litter, there may be a few places where the litter is lower and the pans seem too high. Do not be concerned as the birds will level the litter and at this young bird age, there will be sufficient feeder space.

The correct feeder pan height adjustment is the area where the bird's neck meets its breast is equal to the top edge of the feeder pan. #4 for turkeys for most applications.

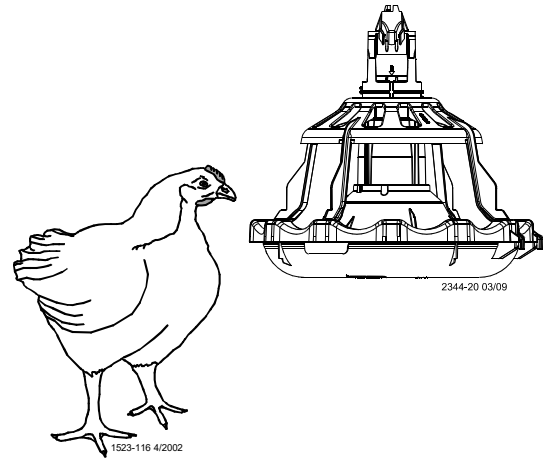
The adjustment settings are easy to understand and change by rotating the grill cap to the selected setting. The setting should be set to **position #2 for broilers**.

Feed texture and consistency, type of bird, or other variables may make it necessary to change to another feed setting position. The combination of proper pan height, feeder setting, and feeder operation will result in optimum feeder performance. The operator will learn what performs best for his/her situation with experience.

End Control and Mid line Control Pans

At installation time, the end control pan of the feeder was placed to be 10 feet (3 m) from the end of the building to allow the birds access around the end of the feeder line. It is important that the feed setting of the end control pan be the same as the rest of the feeder pans so the birds can activate the feeder.

The Midline control is placed on the feeder line when partial house brooding is desired. It is important that the Midline control be installed at least 2 feeder pans away from the curtain or partition so the birds will activate the feeder line. The feed setting for the Midline control should be the same as the rest of the feeder pans on the feeder line. A toggle switch or disconnect is used to bypass the power to the Midline control. This allows the Midline control to serve as a standard feeder after brooding. The feeder can be changed from full house operation to partial house brooding with the activation of the switch.



Control Pans utilize the manual ALL-OUT™ FLOOD

MANUAL OPERATION

The feeder flood can be operated, without cables and lift cords. DAY 1 Raise the feed cone to the top of travel and rotate the feed cone, this will lock the feed cone in the All-Out flood position. DAY 3-5 Lower the feed cone by reversing the process.

Controlling the Feeders (optional equipment)

A time clock control is used with the feeding system to reduce excessive feeder operation time and limit feed wastage. The basic use of a time clock control is to allow periods of time during the day for the birds to reduce the feed level in the feeder pans and to limit the possibility of the birds creating a high feed level and wasting feed. This is not to be confused with lighting programs that have become very common place. If lighting or intermittent lighting programs are to be used, the use of the time clock control will be limited to just the light period. **Caution should be used to not restrict the feed from the birds during the light period.** Experience with the feeding system will determine how the time clock control is used.

The LIBERTY Feeding System may be controlled by the #34385 Control Panel or the #34574 Time Clock Control. Refer to the instructions supplied with each control for information.

Electro-guard Operation

The electro-guard chargers should be wired on a separate electrical circuit so the anti-roost system can be shut off using a switch next to the entrance door when someone enters the building. Birds are less likely to become wild and flighty if the anti-roost is off when people are in the building.

Maintenance

Floor Feeding System Maintenance

The LIBERTY Feeding System Feeders require minimum maintenance. However, a routine periodic inspection of the equipment will prevent unnecessary problems.

Maintenance should be done by a qualified technician.

ALWAYS DISCONNECT POWER TO THE SYSTEM WHEN SERVICING OR MAINTAINING THE EQUIPMENT. FAILURE TO DISCONNECT POWER MAY CAUSE INJURY OR DEATH.

Gear Head Maintenance

Refer to **Figure 66**.

Check the oil level in the gear heads at installation and every 6 months. The Pipe Plug, on the side of the gear head, indicates proper oil level. Add SAE 40W oil when necessary.

The oil in the gearheads should be replaced every 12 months with new SAE 40W oil

1. Remove the bottom Pipe Plug to drain the oil. Discard used oil in accordance with local and national codes.
2. Wipe any debris off the magnet on the bottom Pipe Plug and reinstall. Remove the side Pipe Plug and (top) Vent Plug.
3. Set the power unit in the horizontal position.
 - 2-Stage Gearheads: Add approximately 9 oz. (266 ml) of SAE 40W oil through top hole. This should be just enough oil to reach the side Pipe Plug.
 - 3-Stage Gearheads (3261-9, 3261-12, 3261-14): Add approximately 13 oz. (384 ml) of SAE 40W oil through top hole. This should be just enough oil to reach the side Pipe Plug.
4. Install the side Pipe Plug and (top) Vent Plug.

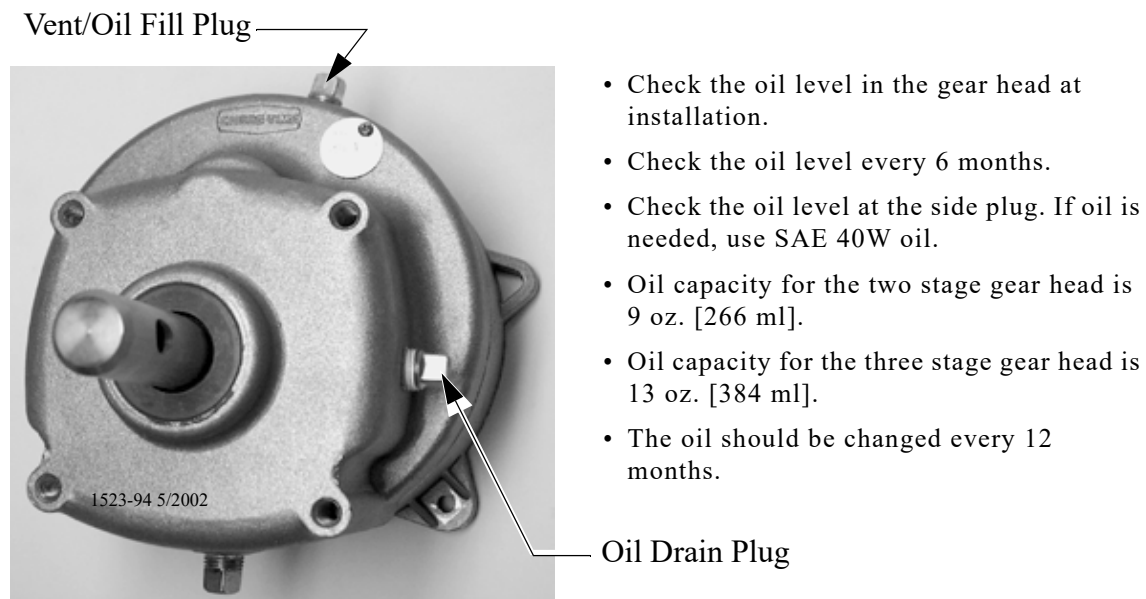


Figure 66. Gearhead Maintenance

Check equipment for loose hardware after the first flock and then every 6 months--including the Anchor Block. Tighten if necessary.

Mechanical Switch Adjustment Procedure

Refer to **Figure 67**.

1. Turn the adjustment nut counter-clockwise until the switch clicks.
2. Turn the adjustment nut clockwise until the switch clicks.
3. Turn the adjustment nut counter-clockwise 3/4 turn.

SENSOR Switch Adjustment for Control Units

The Electron Sensor's sensitivity is preset at the factory. The time delay adjustment is 1 minute to 10 minutes. *The factory setting is 1 minute.* The Sensor also comes with a Safety Timer that can be set to: Off, 1 hour, or 2 hours. The *factory setting is 2 hours.* To get access to the Adjustment Screws See **Figure 68** below.



Adjustment Nut

Figure 67. Switch Adjusting

1. Loosen the Water Tight Connector.
2. Pull the Sensor Down to expose the Safety Timer and Time Delay Adjustment Screws **Figure 68**.
3. Adjust the Timer. (See Instructions below).
4. Push the Sensor back up and tighten the Water Tight Connector.

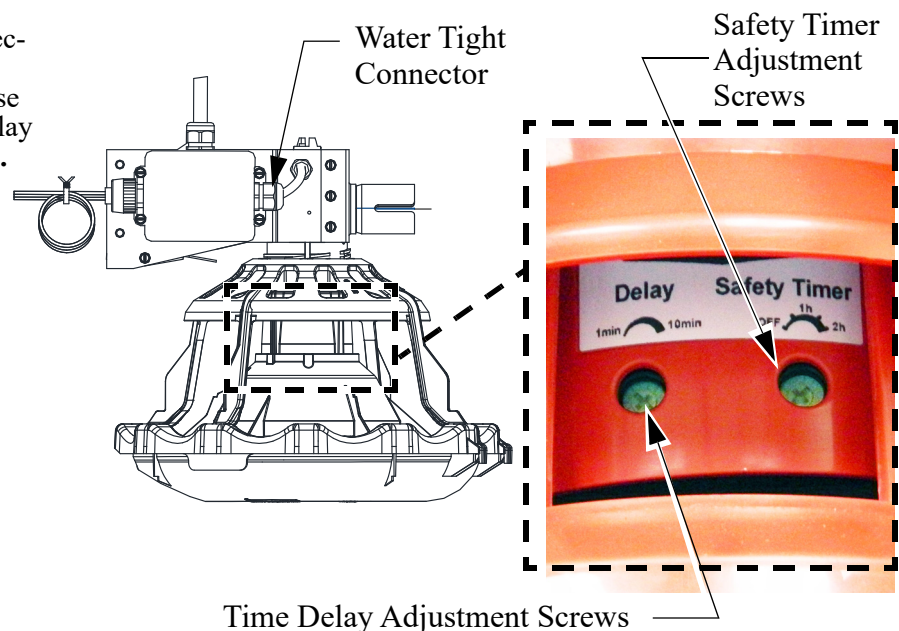


Figure 68. Adjusting the Electronic Sensor

To adjust the Time Delay:

- For less time — turn Time Delay Selector counter-clockwise.
- For more time — turn Time Delay Selector clockwise.

To adjust the Safety Timer:

- If No Safety Timer turn the "Safety Timer" adjustment screw completely **counter** clockwise.
- For a Safety Timer of 1 hour turn the selector **half way** between clockwise and counter clockwise.
- For a Safety Timer of 2 hours turn the selector completely **clockwise**.

If Safety Timer is triggered, simply cycle the power off/on to reset the Sensor.

LED Light indicators:

- Double Blink-Safety Timer
- Steady Blink- Delay Timer
- Solid On- Delay over, Motor on
- Off- Feed present

Feeder Line Maintenance

Keep anti-roost cables tightly stretched. This increases the effectiveness of the electro-guard anti-roost system and keep the pans from being tilted when birds push against them.

Remove all feed from the feeder when there are no birds in the house and when the building is washed and disinfected.

Turn the feeders off prior to removing the birds from the house. This will allow them to clean the feed out of the pans.

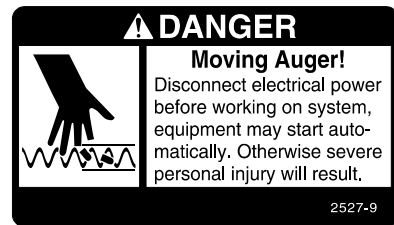
If the system is not to be used for an extended period of time, remove all the feed from the feeder lines and feeder pans.

Disconnect power to the system to prevent accidentally starting the system.

If the system must be disassembled, extreme caution must be used to prevent injury from springing auger.

1. Disconnect power to the entire system.
2. Loosen the Tube Clamp on the bearing at the hopper end of the system. Remove the Tube Clamp and Bearing Retainer.
3. Pull the Anchor and Bearing Assembly and approximately 18" [45 cm] of auger out of the boot.

CAUTION: Stand clear...the auger may spring back into the tube.



BE CAREFUL WHEN WORKING WITH AUGER!

4. Place a clamp or locking plier securely on the auger to prevent it from springing back into the auger boot.
5. Loosen the setscrew in the bearing assembly shaft and remove the Anchor and Bearing Assembly from the auger.

To reinstall the Anchor and Bearing Assembly:

1. Insert the Anchor Assembly into the auger, guide the tip of the auger between the two roll pins in the center of the anchor. Continue to guide the auger until the tip of the auger hits the flat washer. Tighten the setscrews in the center of the anchor until they touch **Figure 68.**

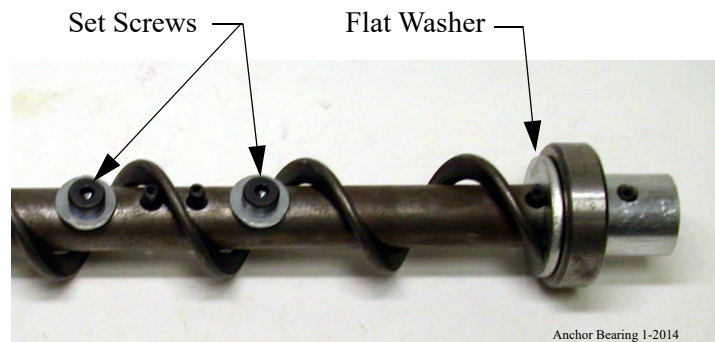


Figure 68. Auger and Anchor Bearing Connection

2. **Carefully** remove the locking pliers while holding onto the Anchor and Bearing Assembly and auger securely. **Slowly** ease the auger back into the tube. Use caution. If the auger is allowed to spring back, the bearing race may crack. Install the Bearing Retainer and fasten with a tube clamp. Keep the Bearing Retainer flush with the end of the anchor for safety.

Power Lift Winch Maintenance

Grease the winch every 6 months with 1 to 2 shots of common industrial or automotive grease. **Figure 69.**

DO NOT OVER GREASE THE WINCH



Grease the Power Lift Winch every 6 months with 1 to 2 shots of common industrial or automotive grease
DO NOT OVER GREASE THE POWER LIFT WINCH

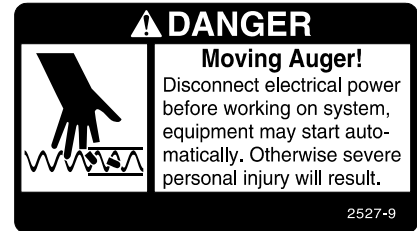
Figure 69. Maintenance to the Power Lift Winch

1600-246/2001

Trouble Shooting the Floor Feeding System

ALWAYS DISCONNECT POWER TO THE SYSTEM WHEN SERVICING OR MAINTAINING THE EQUIPMENT. FAILURE TO DISCONNECT POWER MAY CAUSE INJURY OR DEATH.

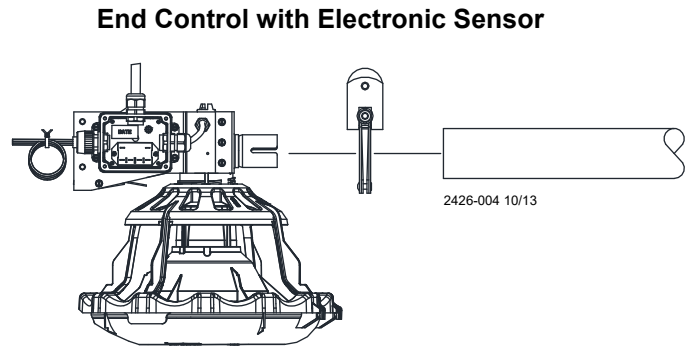
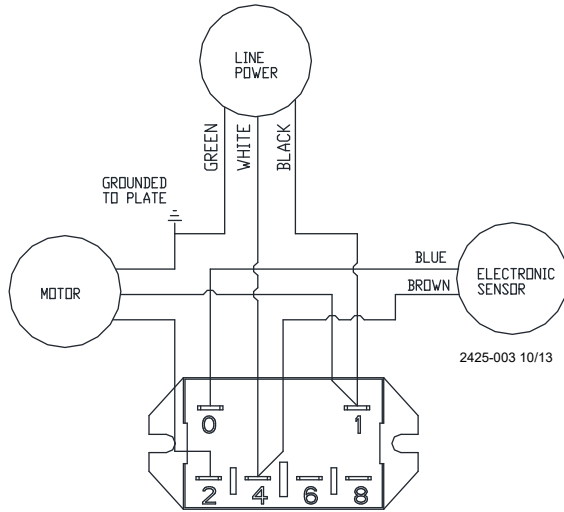
Service and maintenance work should be done by a qualified technician only.



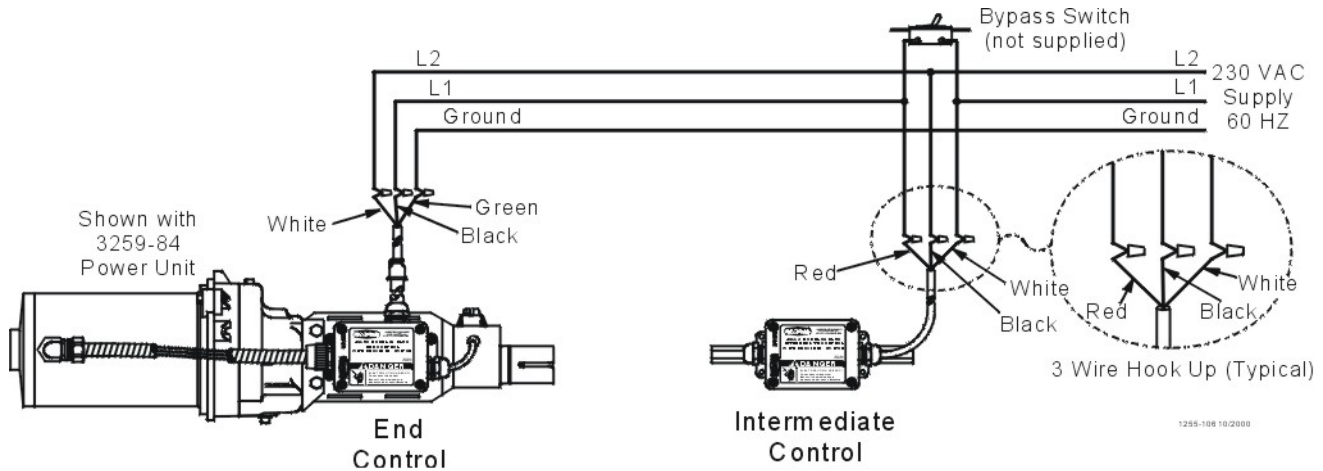
Problem	Possible Cause	Corrective Action
None of the feeder lines will operate	No power supplied to equipment	Replace burned fuses or reset circuit breaker Make sure voltage required is supplied
	Time Clock or relay defective	Replace Time Clock or relay
	Time Clock improperly programmed	Refer to Programming the Time Clock section and reprogram the Time Clock
Feeder line will not operate	Power unit cord not plugged in sufficiently to make contact	Check motor cord plug at control unit and control unit plug at outlet for connection
	Motor cord wires are broken at plug or where cord enters motor	Check cord for continuity Replace if defective
	Power Units thermal overload tripped	Push motor overload reset button to reset
	Control unit switch defective or out of adjustment	Adjust switch according to the Switch Adjustment Procedure in the maintenance section
Motor overloads frequently	Oil on new auger loads motor excessively when feed is carried for first time	Polish auger by running 50 lb (20 kg) increments of feed out to pans
	Inadequate power reaching motors	Check line voltage at the motors Check starting current draw at motors Wiring of adequate size is essential to feeder operation
	Object caught in the auger; motor runs, stalls, then auger spins in reverse	Check hopper boot, control unit and pan outlet holes for foreign objects Remove obstruction
Auger runs erratically	Frozen or cracked bearing at boot anchor	Replace bearing Slowly ease auger back into tube Be careful not to damage the bearing when reinserting the auger
	Insufficient stretch in auger	Shorten the auger
	Obstruction in the auger	Remove obstruction
Auger tube or boot wears out rapidly (Noisy feeder operation)	Auger is bent or kinked	Repair or replace damaged auger
	End of auger is riding up on anchor weldment	Auger must not be positioned over weld on anchor Check for bent or damaged auger
Oil leaking out of seals on power unit	Gearhead vent plug not installed	Replace plastic shipping plug with vent plug
	Defective gear head seal	Replace seal
Not enough feed supplied to the feeder pans	Insufficient time programmed on the time clock	Add more operating time to feeding period
	Feeder line control unit switch out of adjustment	Adjust switch according to the Switch Adjustment Procedure in the maintenance section

Wiring Diagrams

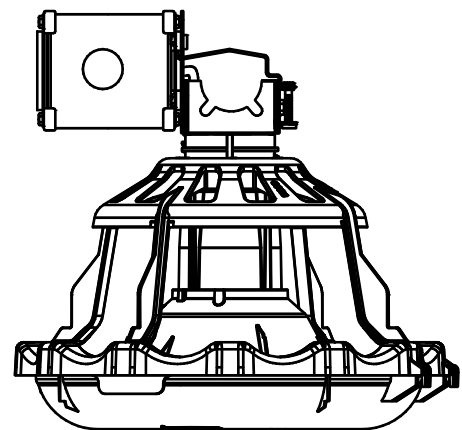
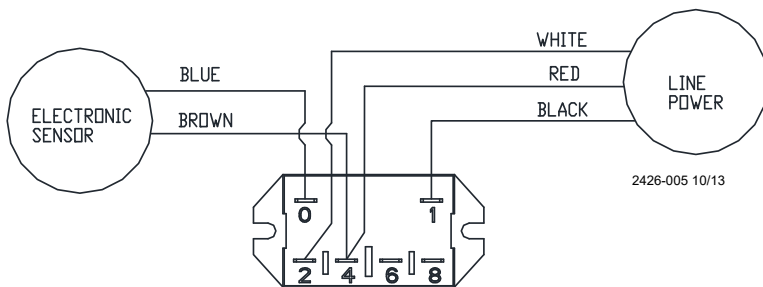
End Control With Electronic Sensor Wiring



Electronic Sensor Control Wiring



Mid Control with Electronic Sensor Wiring

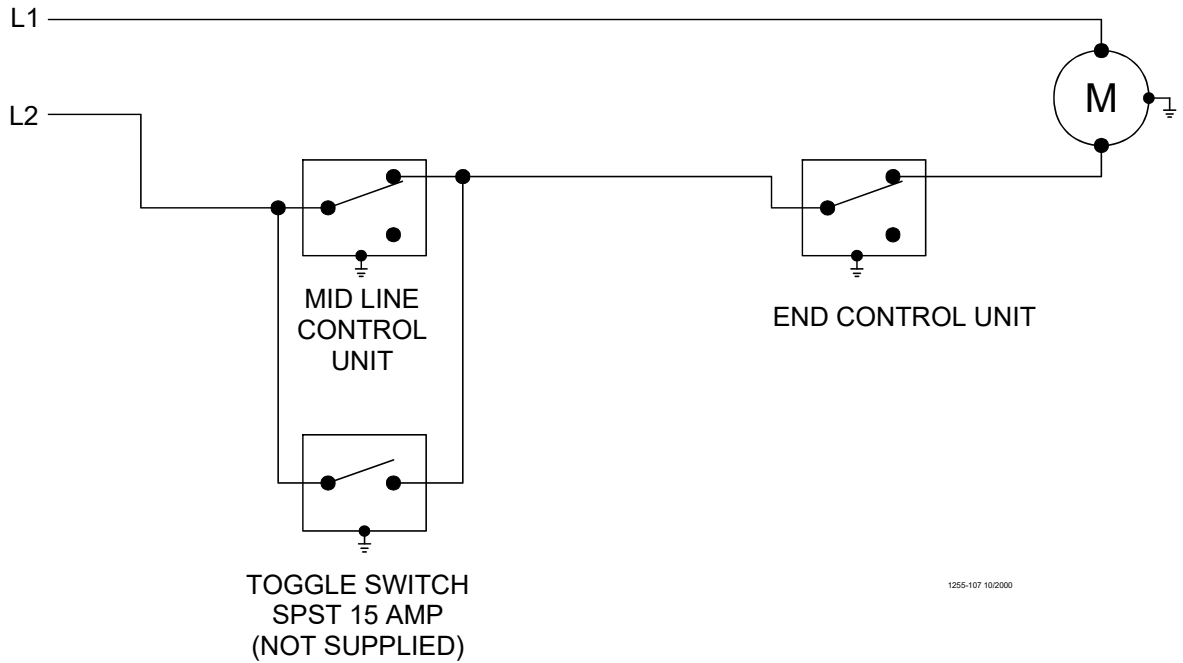


Mechanical Switch Single Phase Wiring Diagram

FROM DISCONNECT OR
CONTROL DISCONNECT
220/230 VOLTS 50/60 HZ

SINGLE PHASE WIRING DIAGRAM

FEEDER LINE MOTOR
220/230 VOLTS 50/60 HZ
SINGLE PHASE

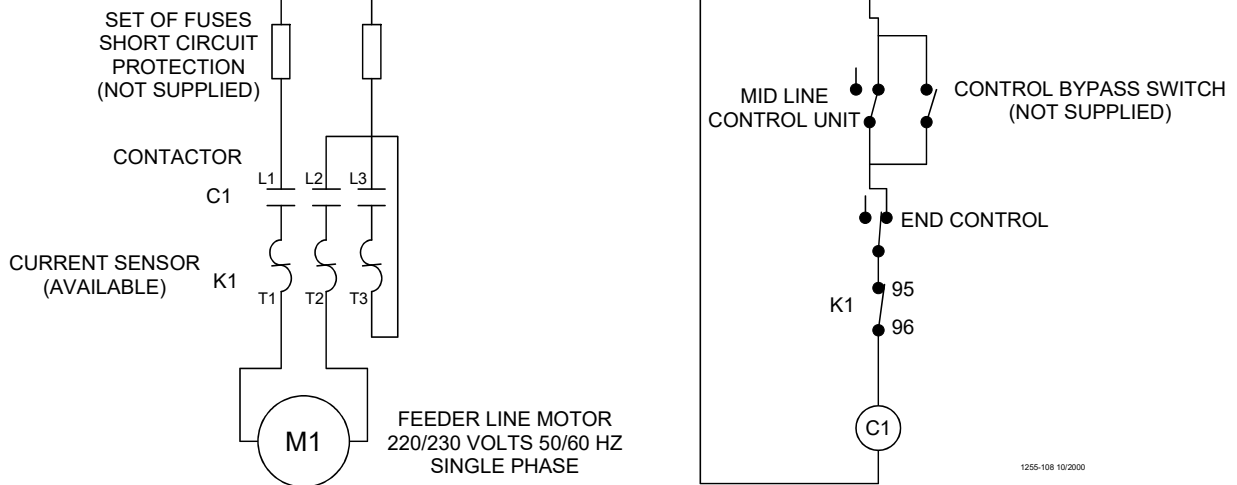


Mechanical Switch Single Phase Wiring Diagram (with Motor Starter)

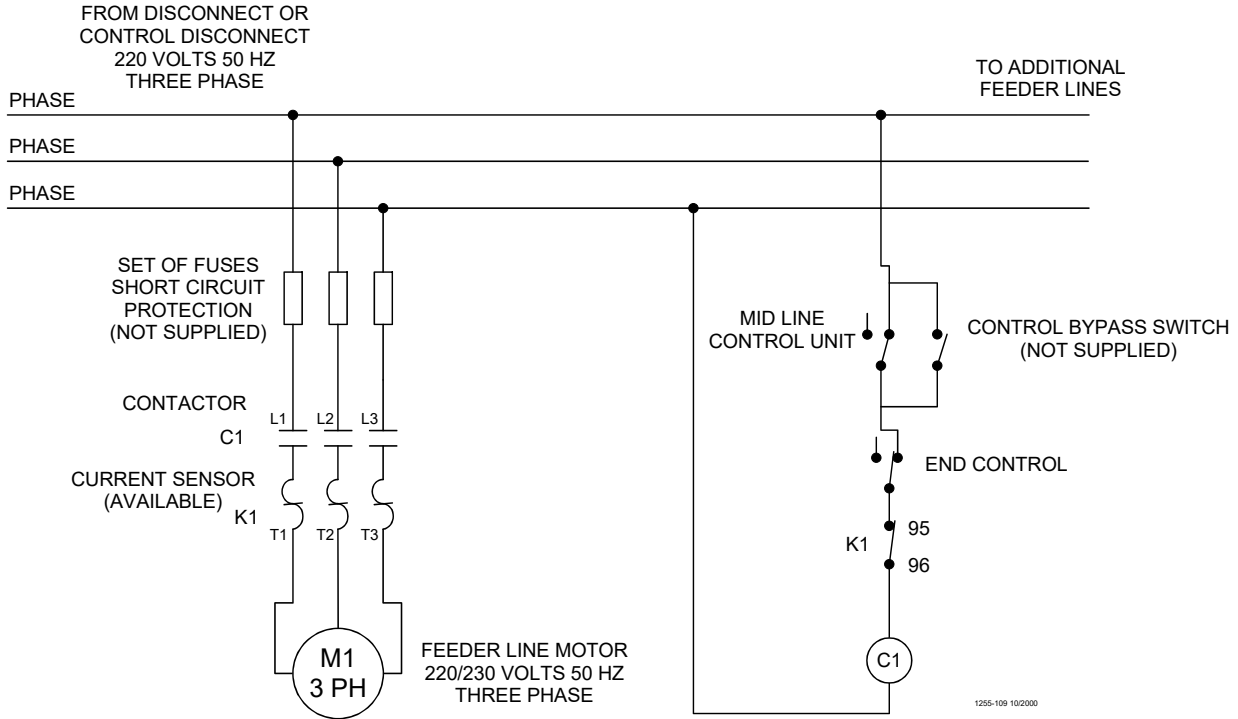
SINGLE PHASE

FROM DISCONNECT OR
CONTROL DISCONNECT
220/230 VOLTS 50/60 HZ

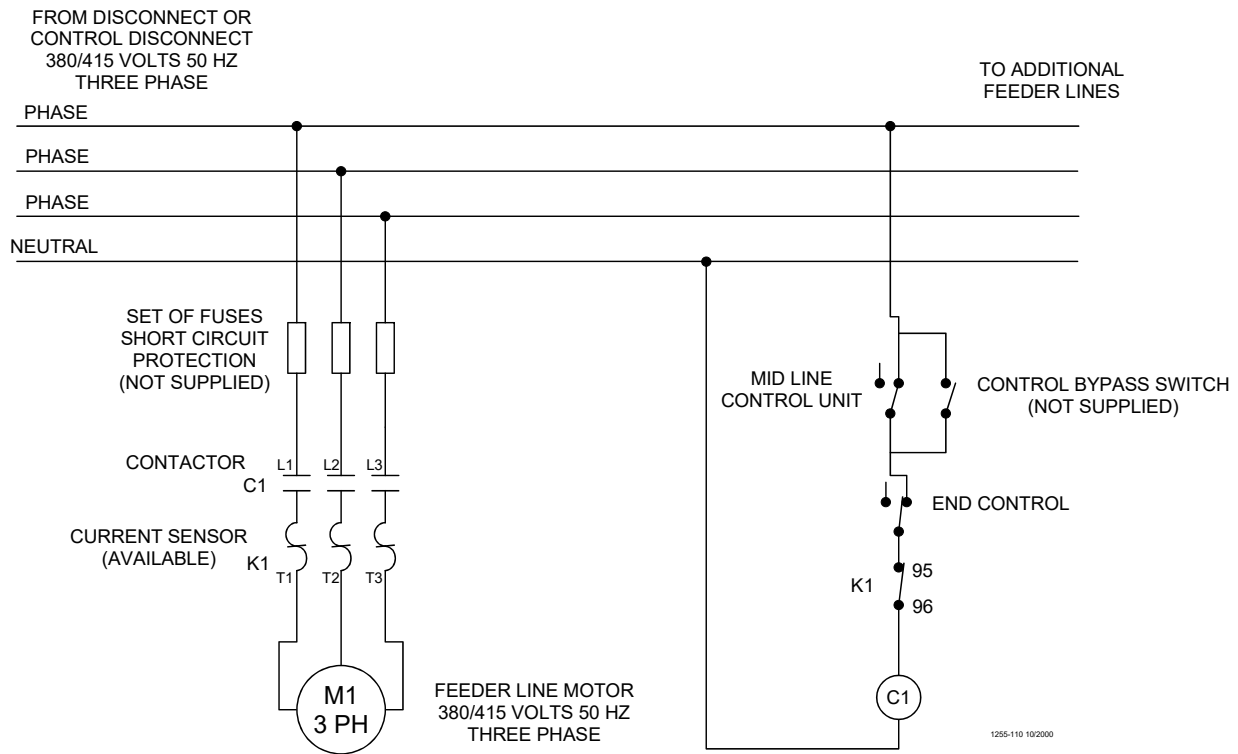
TO ADDITIONAL
FEEDER LINES



Mechanical Switch Three Phase Wiring Diagram: 220 V.

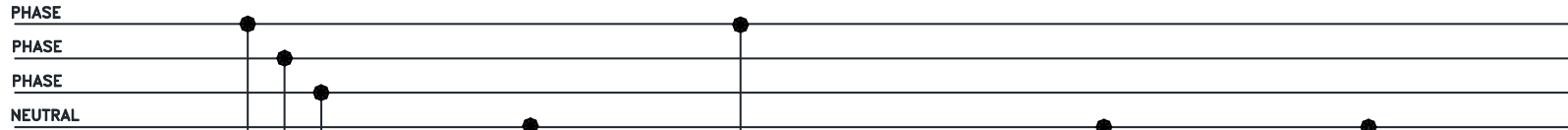


Mechanical Switch Three Phase Wiring Diagram: 380/415 V.



Electronic Sensor Three Phase (Ø) Wiring

FROM DISCONNECT OR
CONTROL DISCONNECT
220/380 VOLTS 50 HZ.
THREE PHASE

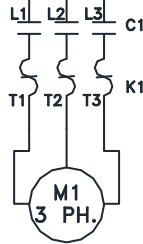


TO ADDITIONAL
FEEDER LINES

SET OF FUSES
SHORT CIRCUIT
PROTECTION
(NOT SUPPLIED)

CONTACTOR
(NOT SUPPLIED)

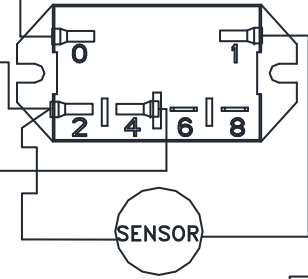
CURRENT SENSOR
(NOT SUPPLIED)



FEEDER LINE MOTOR
220/380 VOLTS 50 HZ.
THREE PHASE

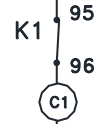
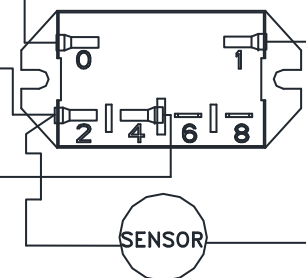
CONTROL BYPASS
SWITCH
(NOT SUPPLIED)

C3 MID LINE CONTROL C3



C2 END CONTROL

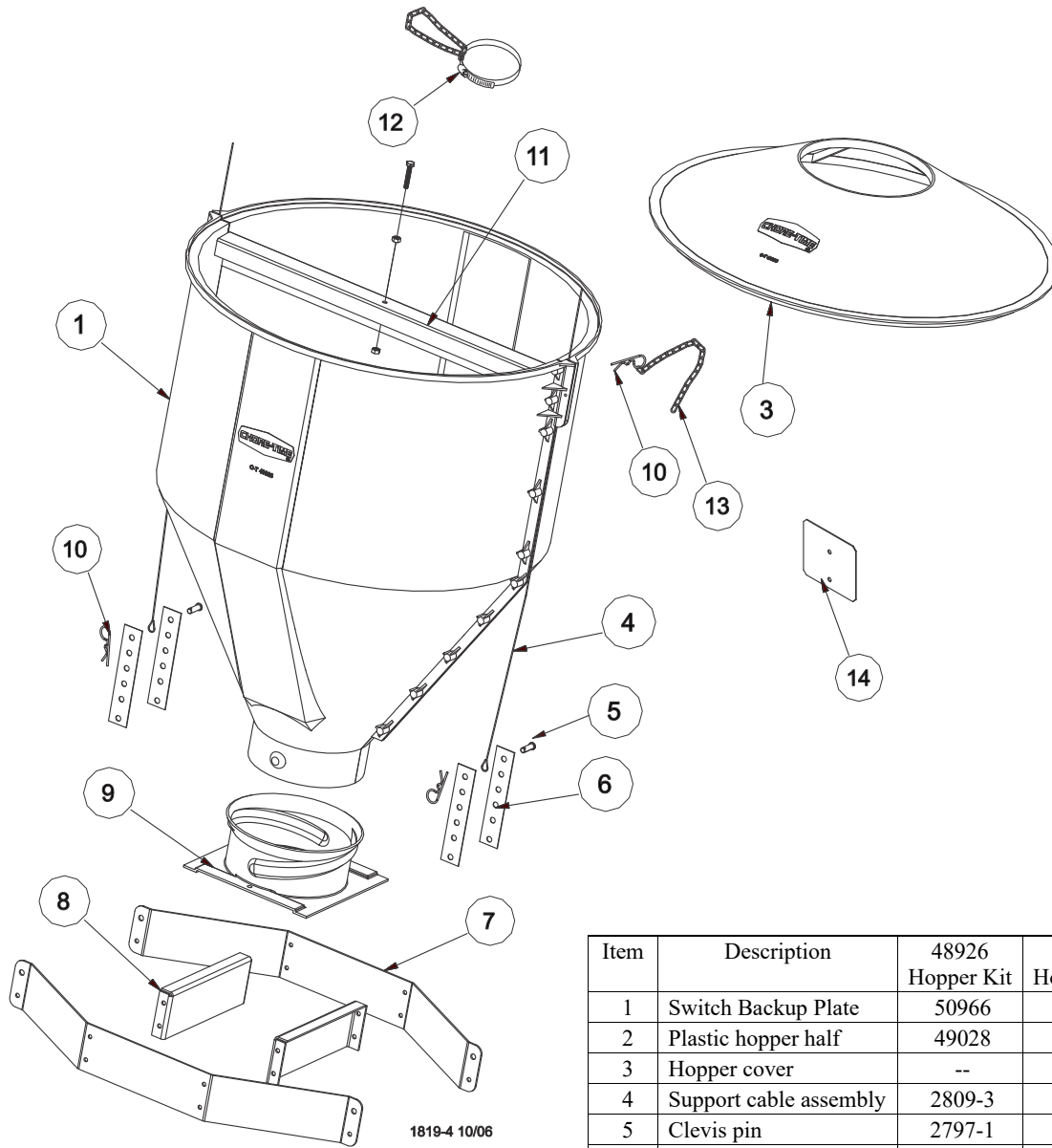
C2



2425-002 2/2014

Parts List

150# Plastic Hopper Components

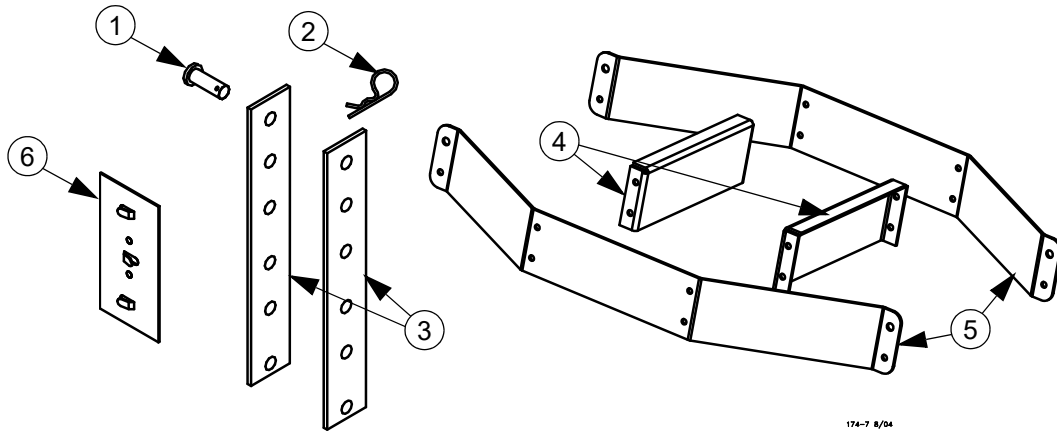


Item	Description	48926 Hopper Kit	49267 Hopper Kit
1	Switch Backup Plate	50966	50966
2	Plastic hopper half	49028	49028
3	Hopper cover	--	48675
4	Support cable assembly	2809-3	2809-3
5	Clevis pin	2797-1	2797-1
6	Boot adjuster bracket	2706	2706
7	Suspension angles	48679	48679
8	Suspension brace	48680	48680
9	Twist lock collar	49041	49041
10	Hair pin	2664	2664
11	Cross brace	49029	49029
12	Drop tube support	14367	14367
13*	Chain	2128	2128
14	Backup Plate	50966	50966

*Item must be ordered in either 100 ft or 250 ft quantities, 2128-100 is 100 ft and 2128-250 is 250 ft.

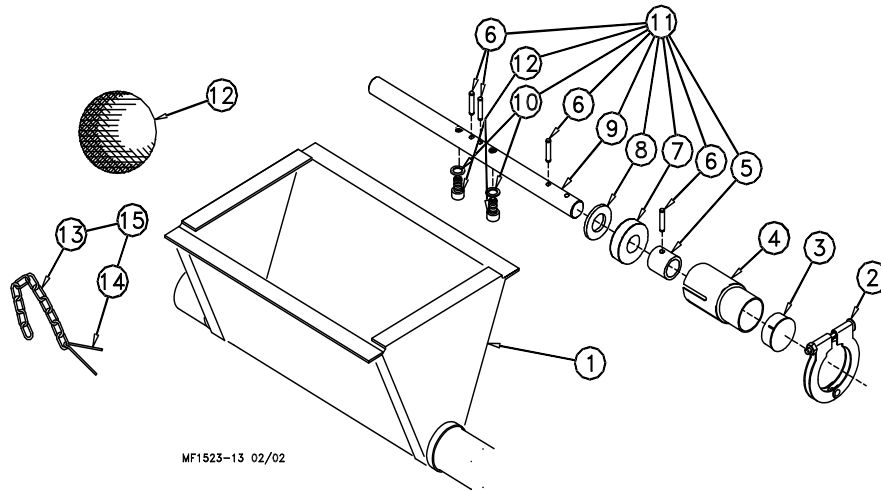
Hopper Boot Suspension Bracket (optional)

For Single and Twin Boot Hopper Support Kit: Part No. 49358



Item	Description	Part No. Single Boot Kit	Part No. Twin Boot Kit
1	Clevis Pin, 5/16" x 1"	2797-1	2797-1
2	Adjustment Bracket	2706	2706
3	Hair Pin	2664	2664
4	Suspension brace	48680	48680
5	Suspension angles	48679	48679
6	Cable guides	34573	34573

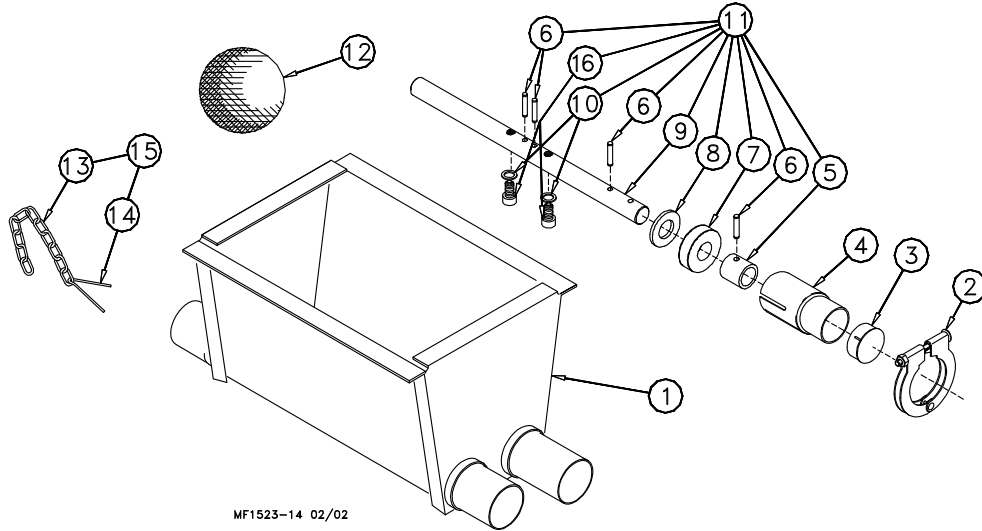
Single Boot Components: Part No. 6822



Item	Description	Part No.
1	Boot Weldment	3760
2	Tube Clamp	24063
3	Cap	29373
4	Outlet Tube	4556
5	Sleeve	5648
6	3/16 x 1" Pin	2960-1
7	Bearing	2689
8	Washer	2955-14
--	Danger Decal	2527-9

Item	Description	Part No.
9	Anchor	38540
10	5/16-18x7/8" Sock Hd Screw	47867
11	Anchor and Bearing Ass'y	39372
12	Cannonball	3531
13	Chain	2128-1
14	Cotter Pin	1639
15	Latch Pin Ass'y	2683
16	Washer	2955-58

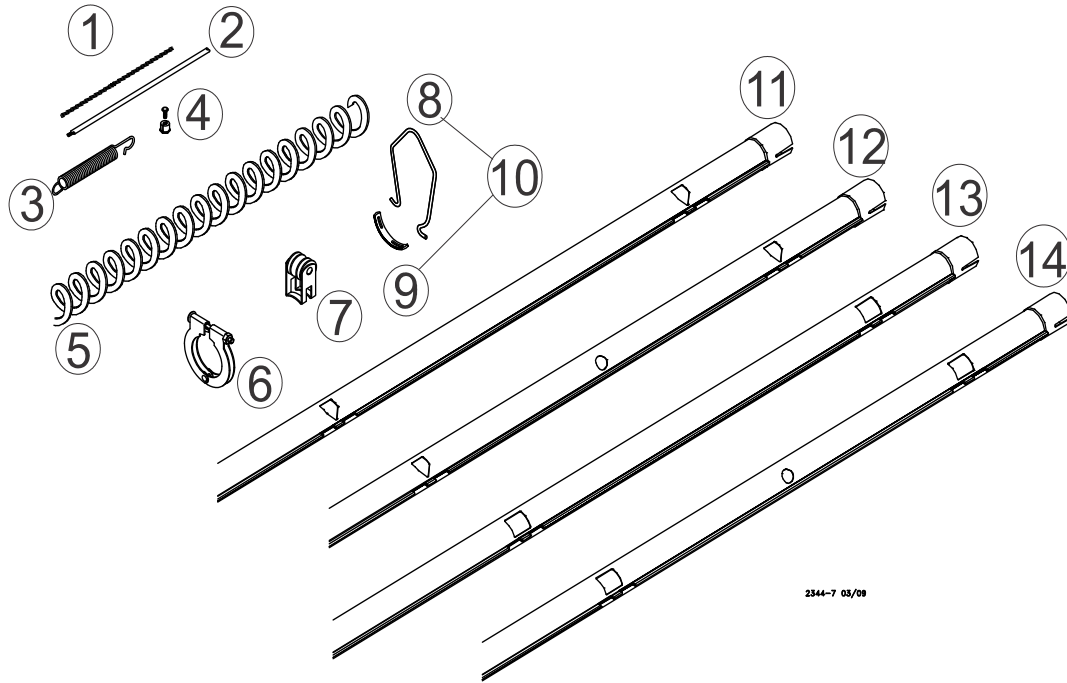
Twin Boot Components: Part No. 6824



Item	Description	Part No.
1	Boot Weldment	3760
2	Tube Clamp	24063
3	Cap	29373
4	Outlet Tube	4556
5	Sleeve	5648
6	3/16 x 1" Pin	2960-1
7	Bearing	2689
8	Washer	2955-14
--	Danger Decal	2527-9

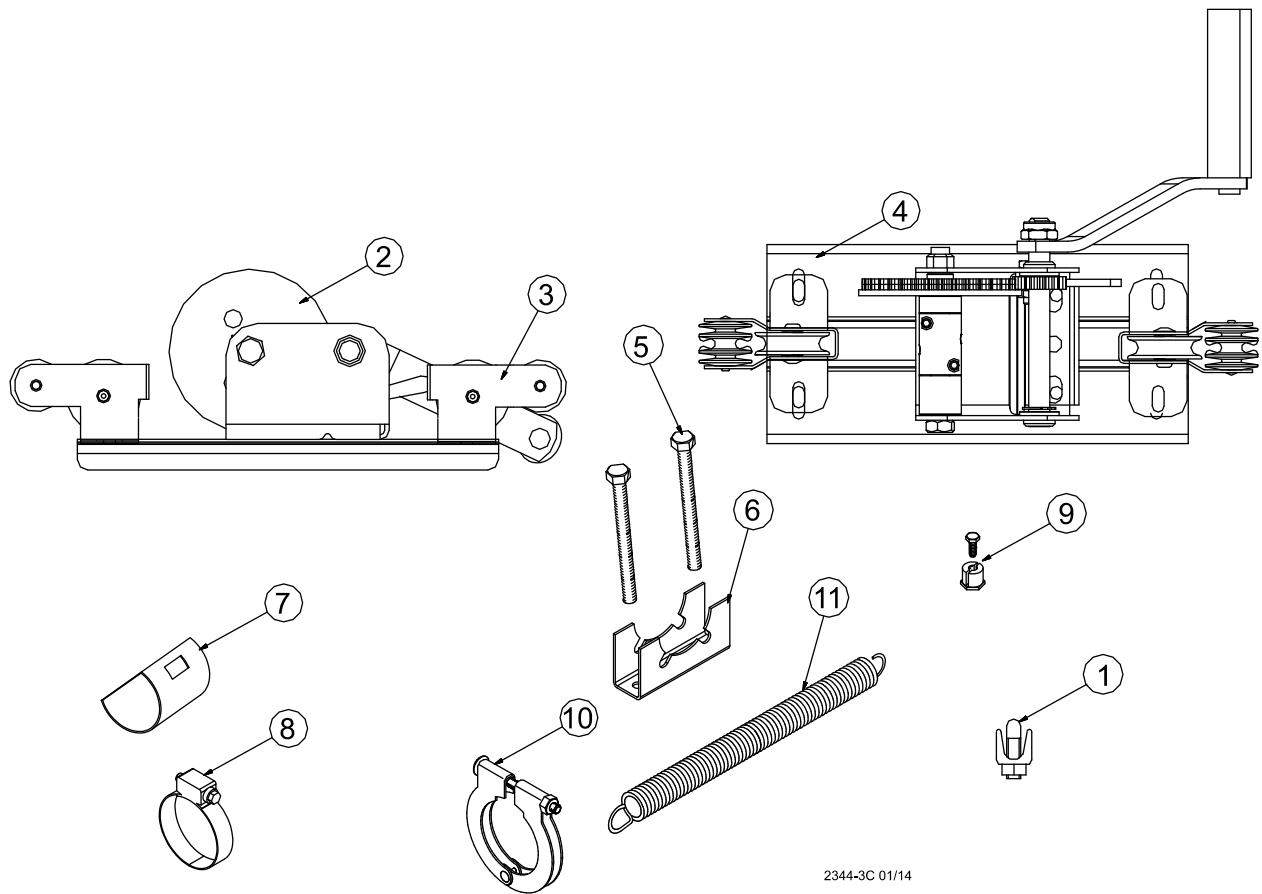
Item	Description	Part No.
9	Anchor	38540
10	5/16-18x7/8" Sock Hd Screw	47867
11	Anchor and Bearing Ass'y	39372
12	Cannonball	3531
13	Chain	2128-1
14	Cotter Pin	1639
15	Latch Pin Ass'y	2683
16	Washer	2955-58

Feeder Line Components



2344-7 05/09

Item	Description	Part No.
1	1/16" Cable	1922
2	Charger Wire (165') Charger Wire (330')	28994-165 28994-330
3	Spring	7551
4	1/16" Cable Clamp	1826
5	Auger	6820-0
6	Tube Clamp	24063
7*	Anti-Roost Bracket	24060
8	Hanger Bracket	50606
9	Hanger Strap	50607
10	Hanger Kit	51763
11	Standard Feeder Tube —9', 5 Hole Tube —10', 3 Hole Tube —10', 4 Hole Tube —12', 3 Hole Tube —12', 4 Hole Tube —12', 5 Hole Tube	6854-1 6854-5 6854-4 6854-8 6854-7 6854-6
12	Standard Feeder Tube with Chick Holes —9', 8 Hole Tube —10', 8 Hole Tube —12', 8 Hole Tube —12', 10 Hole Tube --10', 3 hole, 3 EZ holes --9' 4 hole 2 EZ holes --10' 4 hole 2 EZ holes --12' 4 hole 2 EZ holes	6854-15 6854-16 6854-17 6854-18 6854-19 6854-20 6854-21 6854-22
13	Control Feeder Tube —9', 4 Hole Tube —10', 4 Hole Tube --10' 3 hole tube --12' 3 hole tube —12', 4 Hole Tube —12', 5 Hole Tube	43006-1 43006-4 43006-5 43006-8 43006-7 43006-6
14	Control Feeder Tube with Chick Holes —9', 8 Hole Tube —10', 8 Hole Tube —12', 8 Hole Tube —12', 10 Hole Tube	43006-15 43006-16 43006-17 43006-18

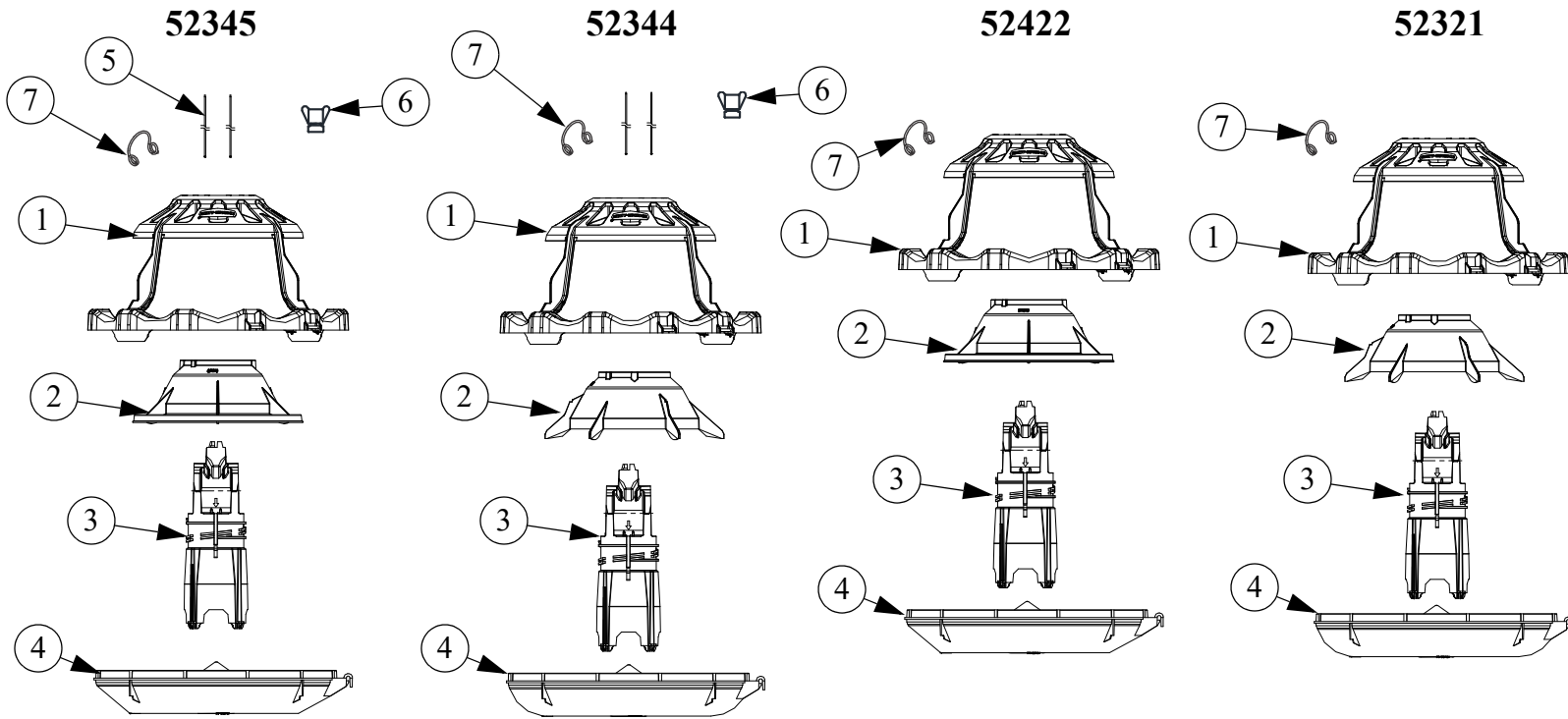
ACTUATOR KIT: Part No. 52494

2344-3C 01/14

KEY	PART NO.	DESCRIPTION
1	14898	1/8" Cable Clamp
2	52495	Actuator
3	52586	Insulator & Pulley Ass'y
4	48933	Actuator Base
5	4404-4	1/4-20 X 2.5 Hex Bolt
6	48487	Clamp Half
7	9126	Tube Closure
8	3527	Band Clamp
9	1826	Small Clamp
10	24063	1.75 Tube Clamp
11	24302	11" Spring

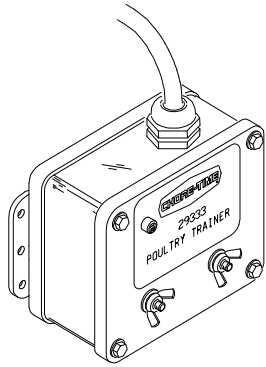
*Included in 14585 Tube Closure Kit

LIBERTY Feeder Components

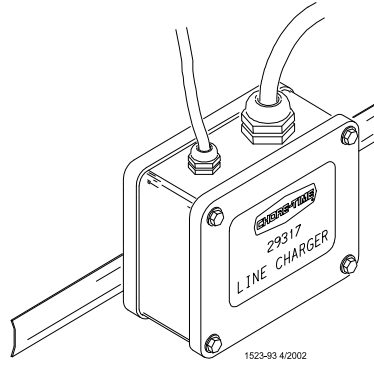


Model Number		52345	52344	52422	52421
		Green LIBERTY Poultry Feeder	Silver LIBERTY Broiler Feeder	Green LIBERTY Manual Brood Feeder without Lift Cords	Silver LIBERTY Manual Brood Feeder without Lift Cords
Item	Description	Part No.			
1	LIBERTY Grill	51630	51630	51630	51630
2	Feed Cone	51629-2	51629-3	51629-2	51629-3
3	Support Cone	51628	51628	51628	51628
4	LIBERTY Feeder Pan	51631	51631	51631	51631
5	Lift Cord	52335	52335	--	--
6	Plastic Clamp	13057	13057	--	--
7	Tube Wire Clip	55649	55649	55649	55649

Poultry Trainers and Line Chargers



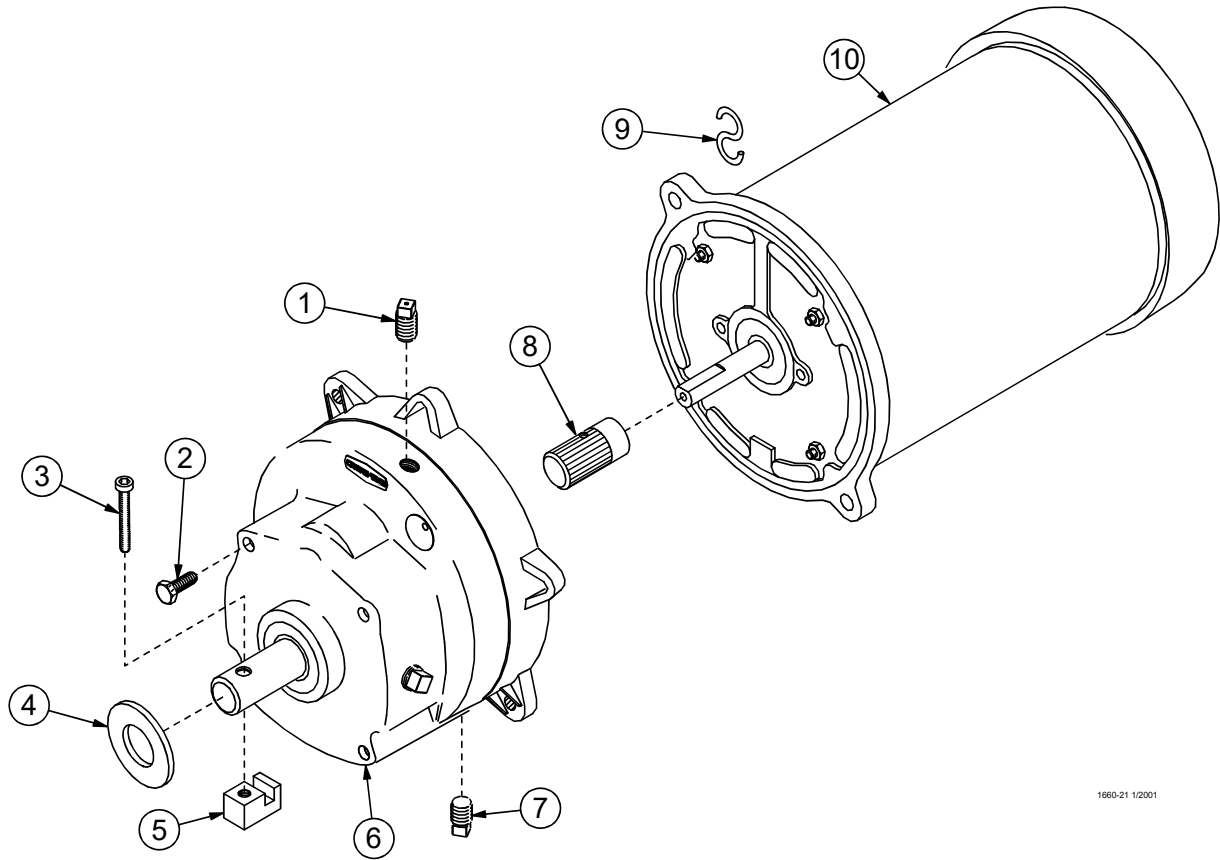
Poultry Trainer



Line Charger

Description	Part No.
Poultry Trainer (110 V, 60 Hz.)	29333
Poultry Trainer (220 V, 50/60 Hz.)	29325
Line Charger (110 V, 60 Hz.)	29317
Line Charger (220 V, 50/60 Hz.)	29341

Power Unit Assemblies



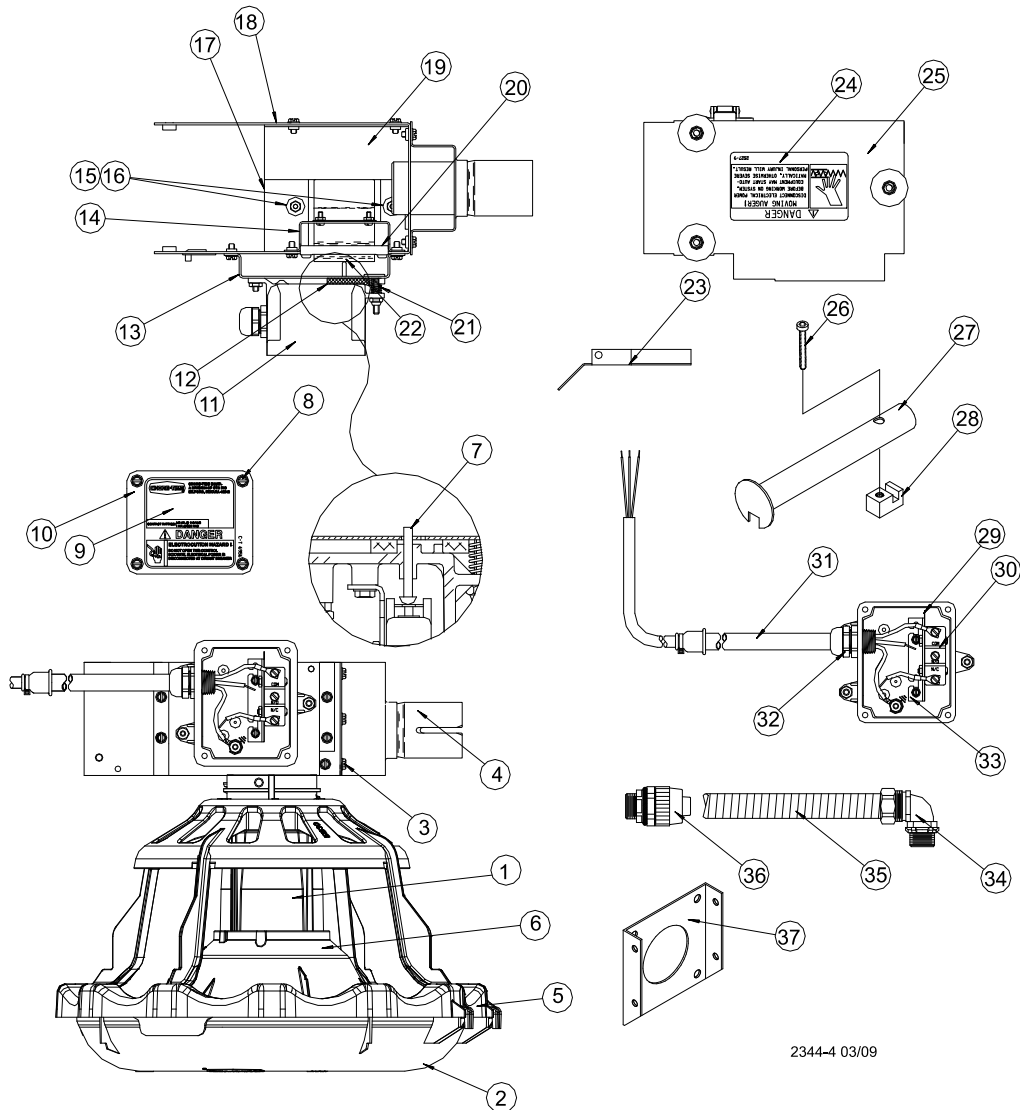
1660-21 1/2001

Item	Description	3259-84 Part No.	3259-85 Part No.	3259-98 Part No.	3259-100 Part No.	3259-128 Part No.
1	Vent Plug	3516	3516	3516	3516	3516
2	5/16-18x5/8 Hex Hd Screw	4412-1	4412-1	4412-1	4412-1	4412-1
3	1/4-20x1-1/2 Socket Hd Screw	5083-8	5083-8	5083-8	5083-8	5083-8
4	Flat Washer	1484	1484	1484	1484	1418
5	Driver Block	4642	4642	4642	4642	4642
6	Gearhead	3261-5	3261-5	3261-11	3261-11	3261-5
7	Pipe Plug (magnetic)	30160	30160	30160	30160	30160
8	Pinion Assembly	5046	5046	5046	5046	5046
9	"S" Hook	4270	4270	4270	4270	4270
10	Motor	4229	5703	5977	28031	24624
--	Cord Assembly	----	----	28028	----	----
--	Connector (Romex)	----	----	----	----	----
--	Connector (90 Degree)	----	----	4228	----	----

Power Unit Assembly Part Numbers

Part No.	HP	RPM	Phase	Hz	Voltage	Usages
3259-84	1/3 HP	348 RPM	Single Phase	60 Hz	230	Use with all Control Units
3259-85	1/2 HP	348 RPM	Single Phase	60 Hz	230	Use with all Control Units
3259-98	1/2 HP	348 RPM	Single Phase	50 Hz	230	Use with all Control Units
3259-100	1/2 HP	348 RPM	Three Phase	50 Hz	220/380	Use with all Control Units
3259-128	1/2 HP	348 RPM	Three Phase	60 Hz	230	Use with all Control Units

Silver Control: Part No. 52347 & Green Control: Part No. 52348



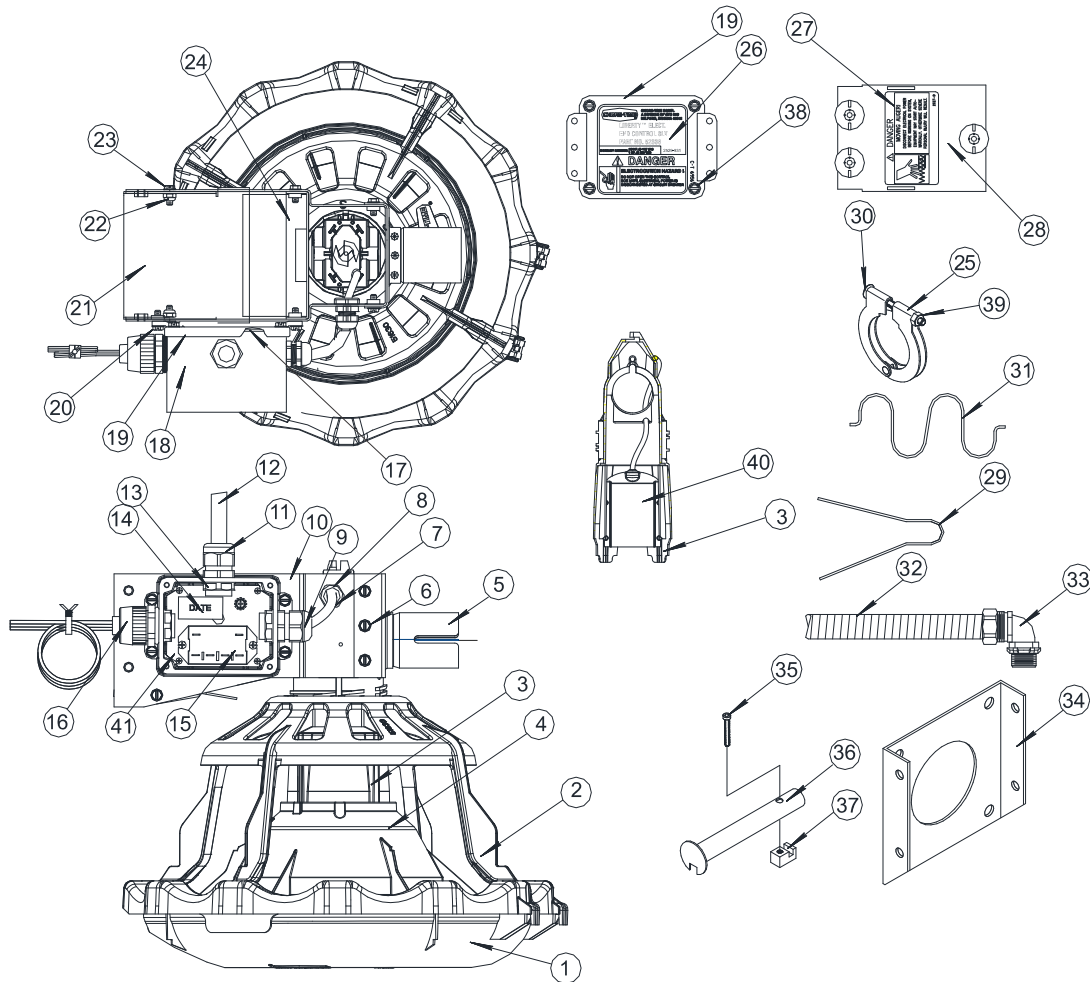
2344-4 03/09

KEY	PART NO.	DESCRIPTION
1	52397	Center Support Cone
2	51631	LIBERTY Feeder Pan
3	4416-7	10-24 X .375 HXHD Screw
4	24683	Support Bracket
5	51630	LIBERTY Pan Support
6	51629-3 51629-2	LIBERTY Feed Cone (SILVER) LIBERTY Feed Cone (GREEN)
7	8757	Rivet 1/8 X 1.00
8	28075	#10 Twin Helix Screw
9	2529-937 2529-938	Control Decal (SILVER) Control Decal (GREEN)
10	6776	Switch Box Cover
11	24702	Switch Box
12	6968-1	Gasket
13	25064	Switch Box Mount
14	25433	Stop Panel
15	34018	10-24 Lock Nut
16	6723	Flat Washer
17	40749	Switch Box

KEY	PART NO.	DESCRIPTION
18	14434	End Control Body
19	41363	Deflector Panel
20	25045	Paddle Retainer
21	6972	Spring
22	46123	Paddle
23	14432	Bottom Cover
24	2527-9	Danger Decal
25	24682	Control Cover
26	5083-8	Socket Head Screw
27	44794	Drive Tube Weldment
28	4642	Drive Block
29	1907-5	Insulation Material
30	46091	Actuator Switch
31	25495	Control Cord
32	24685	1/2" Water Tight
33	46122	Switch Bracket
34	23810	90° Conduit Connector
35	26982-1	Flex Conduit
36	26980	1/2" Liquid Tight Connector
37	4188	Anchor

LIBERTY Feeding System End Control with Electronic Sensor Switch

Silver Control: Part No. 54575 & Green Control: Part No. 54576

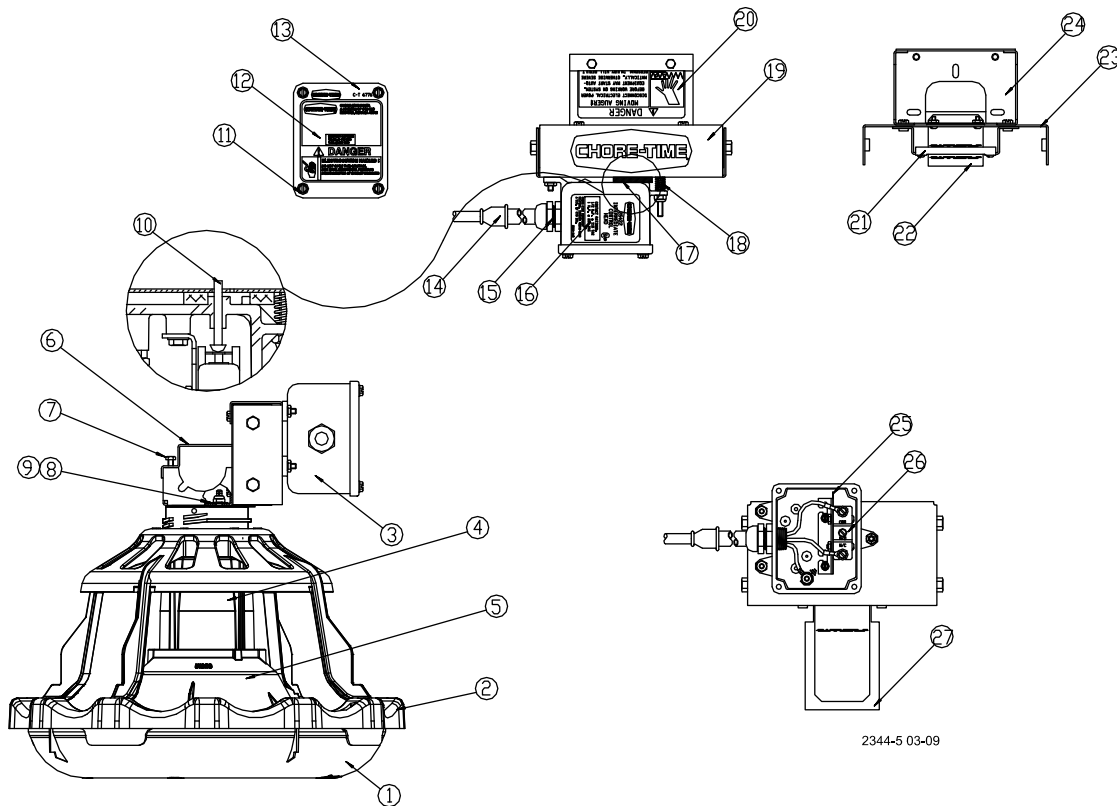


Item	Description	Part No.
1	LIBERTY feeder pan	51631
2	LIBERTY pan support	51630
3	Machined feed cone	52337
4	LIBERTY feed cone (Silver) LIBERTY feed cone (Green)	51629-3 51629-2
5	Tube anchor weldment	48082
6	#10-24 x .375 hwhd screw	4416-7
7	Black tube 10"	14454-4
8	Liquid water tight	13477
9	1/2" liquid water tight	23779
10	End control body	48080
11	1/2" liquid tight	24685
12	Cord assembly	4999-116
13	Conduit nut	43662
14	Date of mfg	2526-377
15	Relay	28904
16	Conduit fitting	26980
17	Gasket	6777
18	Deep junction box	42627-12
19	Mounting Terminal Box Cover	6956
20	10-24 hex screw	4416-7
21	Control bottom cover	48086

Item	Description	Part No.
22	#10-32 lock nut	34019
23	10-24 x .375 hwhd	4416-7
24	Center divider	48081
25	Tube Clamp	24062
26	LIBERTY End Control decal (Silver) LIBERTY End control decal (Green)	2529-1118 2529-1120
27	Danger Decal	2527-9
28	Control body cover	48491
29	Anti-Roost Guard	2798
30	Carriage bolt	7550-3
31	Spring latch	48511
32	1/2" flex conduit	26982-1
33	90 deg. metal connector	23810
34	Anchor Plate	4188
35	Socket head screw	5083-8
36	Drive tube weldment	44794
37	Drive block	4642
38	#10 Twin Helix Screw	28075
39	1/4-20 Flg. Nut	24208
40	Sensor switch	54670
41	Relay Plate	52316

LIBERTY Feeding System Mechanical Midline Control

Silver Control: Part No. 52340 & Green Control: Part No. 52341

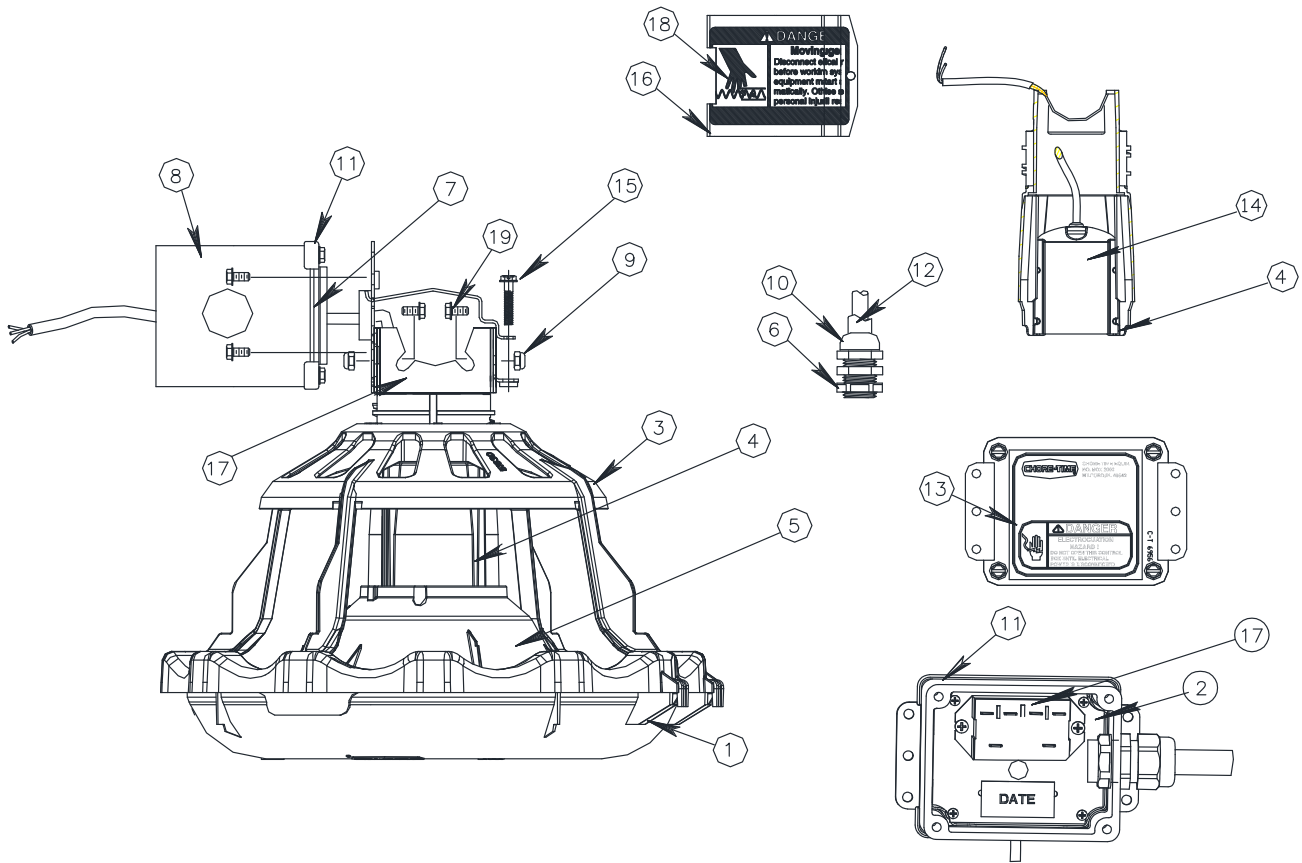


Item	Description	Part No.
1	LIBERTY feeder pan	51631
2	LIBERTY pan support	51630
3	Switch box	34842
4	Machined feed cone	52397
5	LIBERTY feed cone (Silver) LIBERTY feed cone (Green)	51629-3 51629-2
6	Midline cover	14756
7	10-24 x 1.75 Bolt	4416-4
8	10-32 lock nut	34019
9	#10 flat washer	6723
10	Actuator pin	8757
11	#10 Twin helix screw	28075
12	Midline control decal (Silver) Midline control decal (Green)	2529-933 2529-934
13	Plastic box cover	6776
14	Cord assembly	4999-49
15	Liquid tight connector	24685
16	25422 control decal	2529-248

Item	Description	Part No.
17	Gasket	6968-1
18	Spring switch box	6972
19	Midline control body	25047
20	Danger decal	2527-9
21	Paddle retainer	25045
22	Switch paddle	46123
23	Midline front body	25046
24	Midline anchor body	41364
25	Insulation switch	1907-5
26	Actuator switch	46091
27	Mylar assembly	25318

LIBERTY Feeding System Midline Control with Electronic Sensor Switch

Silver Control: Part No. 54587 & Green Control: Part No. 54586

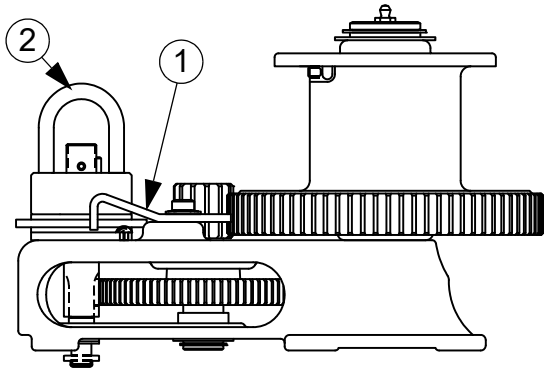


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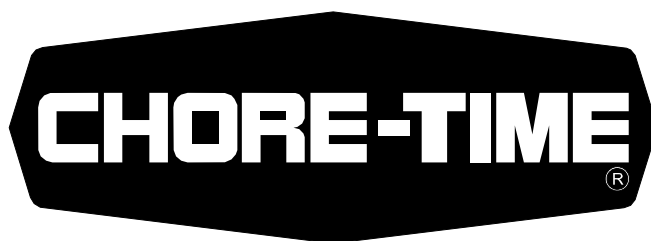
Item	Description	Part No.
1	Feeder pan	51631
2	Relay Plate	52316
3	LIBERTY pan support	51630
4	Machined support cone ass'y	52398
5	LIBERTY feed cone (Silver)	51629-3
	LIBERTY feed cone (Green)	51629-2
6	Conduit nut	43662
7	Gasket	6635
8	Deep junction box	42627-1

Item	Description	Part No.
9	10-24 Lock nut	34019
10	Liquid tight connector	24685
11	Mounting Terminal Box Cover	6956
12	Cord assembly	4999-117
13	LIBERTY mid line decal Silver	2529-1122
	LIBERTY mid line decal Green	2529-1121
14	Electronic Sensor	54670
15	10-24 x 1.25 hwhd	4416-9
16	Midline cover	42627-2
17	Relay	28904
18	Danger decal	2527-9
19	10-24 x .375 hwhd	25124

Power Winch (Part No. 47687)



Item	Qty.	Description	Part No.
1	1	Pawl	47687-5
2	1	Input Shaft Assembly	47687-1



MADE TO WORK.

BUILT TO LAST.®

Revisions to this Manual

Page No.	Description of Change	ECO
61	Was 2883 Winch	35577
Various	Updated Graphics	

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