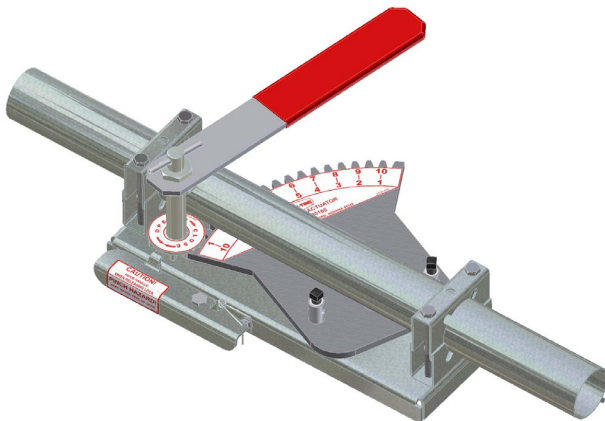


CHORE-TIME[®]

Poultry Production Systems

**REVOLUTION[®] 8 & 12 Feeder
Variable Brood Feeding System**

Installation and Operators Manual



ACCU-CLICK[™] Manual Actuator System



Installation and Operators Manual

Installation and Operators Manual

Contents

Topic	Page
Warranty	4
About This Manual	5
Safety Information	5
Safety Instructions	6
Follow Safety Instructions	6
Decal Descriptions	6
General	6
Information	6
Manufacturer's Recommendations: Birds per Pan	7
Planning the Suspension System	8
General Installation Information	9
Laying out the Suspension System	9
Installing the Suspension System	10
Power Lift Winch Installation	10
Installing the Main Winch Cable	11
Screw Hook Installation	12
Ceiling Hook Installation	13
Drop Installation	13
Hopper Assembly Procedure	15
Assembly	15
Suspend the Hopper	16
Feeder Pan Assembly	17
Installing the Pivot Clip	19
Feeder line planning	20
ACCU-CLICK™ Actuator	20
Feeder Line Assembly and Suspension	22
ACCU-CLICK™ Actuator Installation	22
Feeder Pan and Tube Assembly Process	22
Assemble and Suspend the Feeder Line	24
End Control and Boot Assembly Installation	26
Auger Installation	27
Auger Brazing	30
Actuator Installation	31
Installing Spring Brackets:	31
Spring Bracket installation for 9 foot 4 hole and 12 foot 5 hole tubes	31
Spring Bracket installation for 10 foot 4 hole and 12 foot 5 hole tubes	31
Installing actuator wire:	33
Setting ACCU-CLICK™ Actuator	35
Mid-Line Control	36
Anti-Roost Installation	38
Electro-guard Operation	40
Feeder Management and Operation	41

Contents - continued

Topic	Page
Initial Start-up of the Feeding System	41
General Operation of the Rev. 8 and 12 Feeders	42
REVOLUTION® Feeding System Operation Guide	43
End Control and Mid Line Control Pans	44
Controlling the Feeders (optional equipment)	44
Maintenance	45
Floor Feeding System Maintenance	45
Gear Head Maintenance	45
SENSOR PLUS™ Sensor Switch Adjustment for Control Units	46
Feeder Line	46
Power Lift Winch Maintenance	47
Trouble Shooting the Floor Feeding System	48
Wiring Diagrams	49
Internal Wiring End Control	49
SENSOR PLUS™ Control Wiring Diagram	49
SENSOR PLUS™ Three Phase(Ø) Wiring	50
Mid Line control internal wiring	51
Parts Listing	52
150# Hopper Components	52
Hopper Mount Bracket (Optional)	52
Single Boot Components Part No. 6822	53
Twin Boot Components Part No. 6824	54
Power Winch (Part No. 47687)	54
Feeder Line Components	55
Power Unit Assemblies	56
Power Unit Assembly Part Numbers:	56
Sensor Plus End Control	58
Sensor Plus Mid Line Control	60
50165 ACCU-CLICK™ System	61
Miscellaneous Suspension Components	62
Feeder Components	63

Warranty

CTB, Inc. (“Chore-Time”) warrants the new 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: **April, 2014**

CTB, Inc.
 PO Box 2000
 Milford, Indiana 46542-2000 USA
 Phone (574) 658-4101
 Email: choretime@choretime.com
 Internet: www.choretime.com

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 English measurements.*

Examples:

1" [25.4]

4' [1 219]

- Optional equipment contains necessary instructions for assembly or operation.
- Very small numbers near an illustration (*i.e.*, 1257-48) are identification of the graphic, not a part number.

Note: The original, authoritative version of this manual is the English version produced by CTB, Inc. or any of its subsidiaries or divisions, (hereafter collectively referred to as “CTB”). Subsequent changes to any manual made by any third party have not been reviewed nor authenticated by CTB. Such changes may include, but are not limited to, translation into languages other than English, and additions to or deletions from the original content. CTB disclaims responsibility for any and all damages, injuries, warranty claims and/or any other claims associated with such changes, inasmuch as such changes result in content that is different from the authoritative CTB-published English version of the manual. For current product installation and operation information, please contact the customer service and/or technical service departments of the appropriate CTB subsidiary or division. Should you observe any questionable content in any manual, please notify CTB immediately in writing to: CTB Legal Department, P.O. Box 2000, Milford, IN 46542-2000 USA.

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.

Safety Instructions

Follow Safety Instructions

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

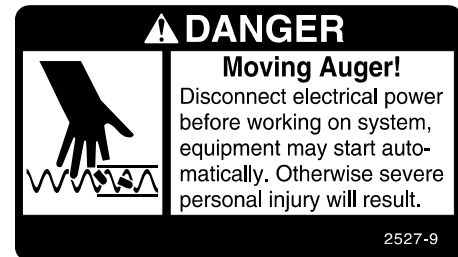
Keep safety signs in good condition. Replace missing or damaged safety signs.

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.

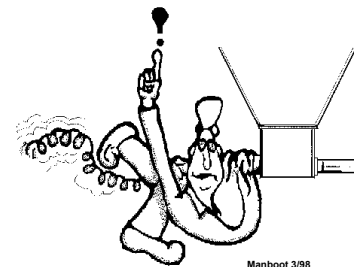
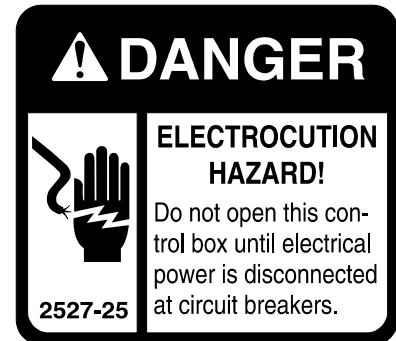
All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes.

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

With the exception of motor overload protection, 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

The Chore-Time REVOLUTION® 8 and 12 Feeder Variable Brood Feeding Systems have been designed to feed poultry. 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 provides a convenient overview of the information in this manual.

Manufacturer's Recommendations: Birds per Pan

Type	Max weight and/or weeks of age	Feeders	Number of birds/pan
Broiler	4.5lbs/2kg.	Revolution 12, Models C2 Plus, C2Plus S, C, H2, H2 Plus	60 - 90
Broiler	7lbs/3.1kg	Revolution 8, C2 Plus, C2 Plus S, G Plus, G Plus S, C, H2, H2 Plus	55 - 75
Broiler	9lbs/4.0kg	Revolution 8, G Plus, G Plus S	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 – 5 weeks	Revolution 8, H2 Plus, H2, G Plus, G Plus S	60 - 65
Turkey Poult	0 – 10 weeks	Revolution 8, G Plus, H2 Plus, H2	40 - 50
Turkey Female	5 + weeks	ATF, ATF Plus	60
Turkey Male	5 + weeks	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 Suspension System

1. Select the House Layout.

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

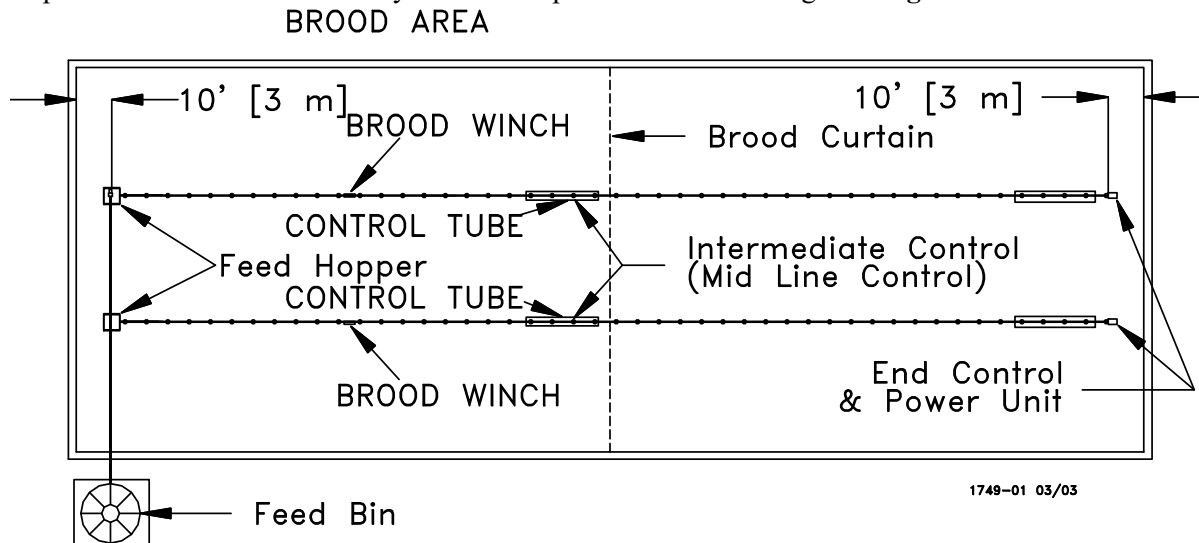


Figure 1. Component location diagram for systems up to 400 feet [122 m]. (Top View).

B. Systems with line lengths over 400' [122 m] 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.

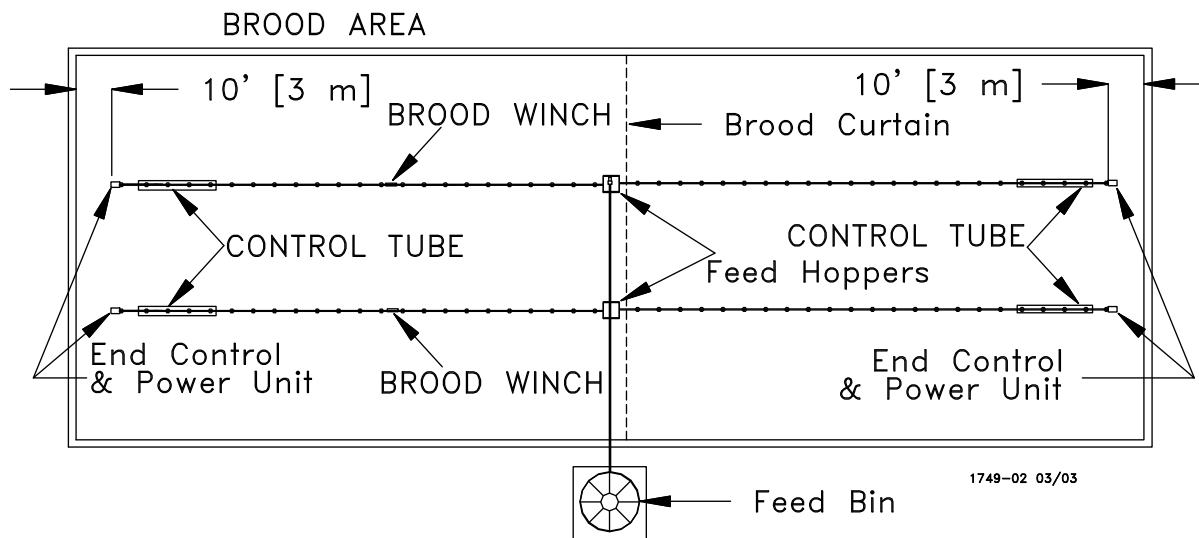


Figure 2. Component location diagram for systems over 400 feet [122 m]. (Top View).

2. Determine the Feed Bin location.
3. Determine the Brood Curtain location.
- 4. Determine the number of actuators (96 pans per actuator Maximum).**
5. 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.**
6. Determine the distance to the Feeder Line from the Side Wall.
7. Determine the distance from the Feed Hoppers to the End Wall for a Straight Line Feeding System.

General Installation Information

Please 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 suspension, hopper assembly, feeder line installation, and anti-roost installation is the same for each system, except where noted otherwise. Please pay particularly close attention to insure proper assembly and installation of the equipment.

The REVOLUTION® 8 and 12 FEEDER Control Units use 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 Rev. 12 and 8 Feeders. 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

1. Select the Suspension type.
 - A. For systems up to 350' [107 m]

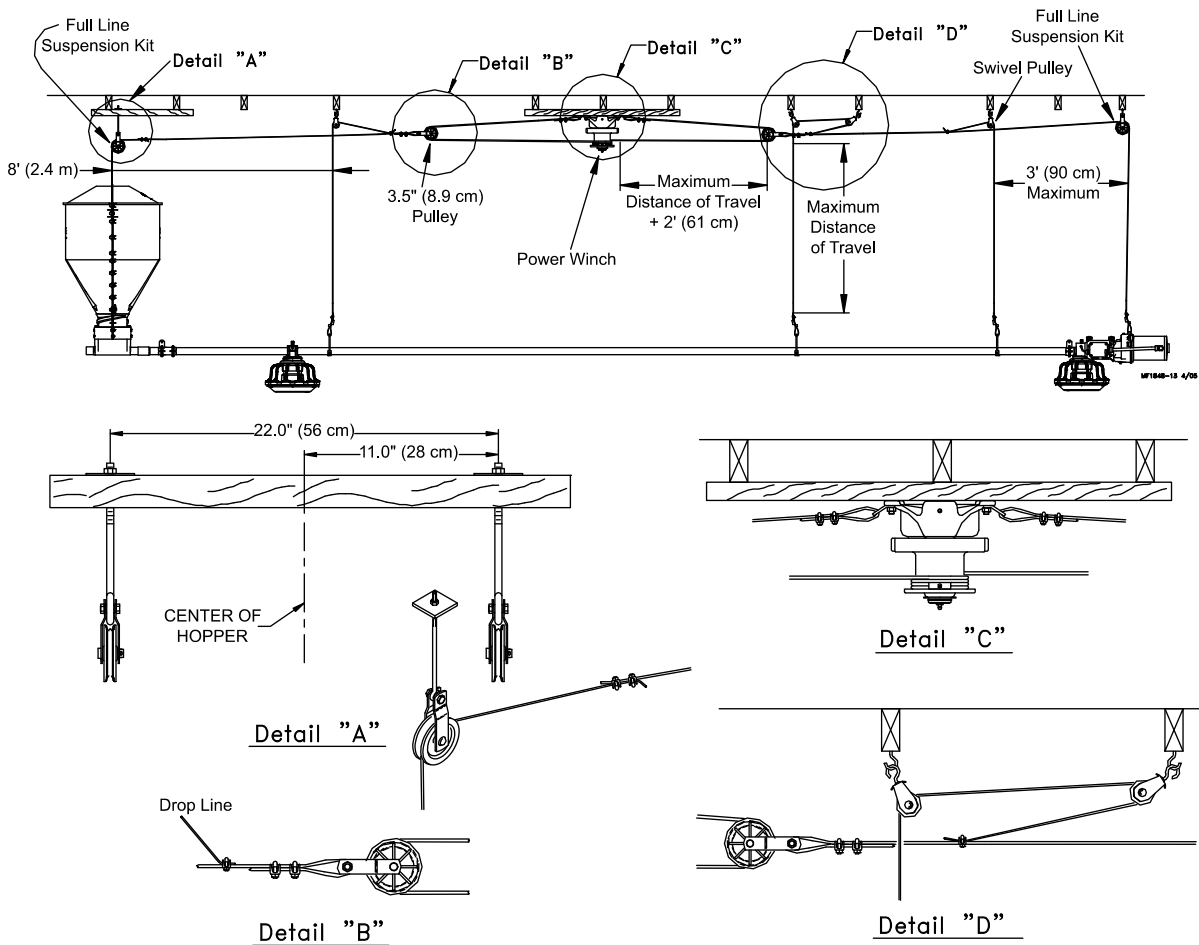


Figure 3. Suspension for systems up to 350' [107 m]

B. For systems over 350' [107 m]

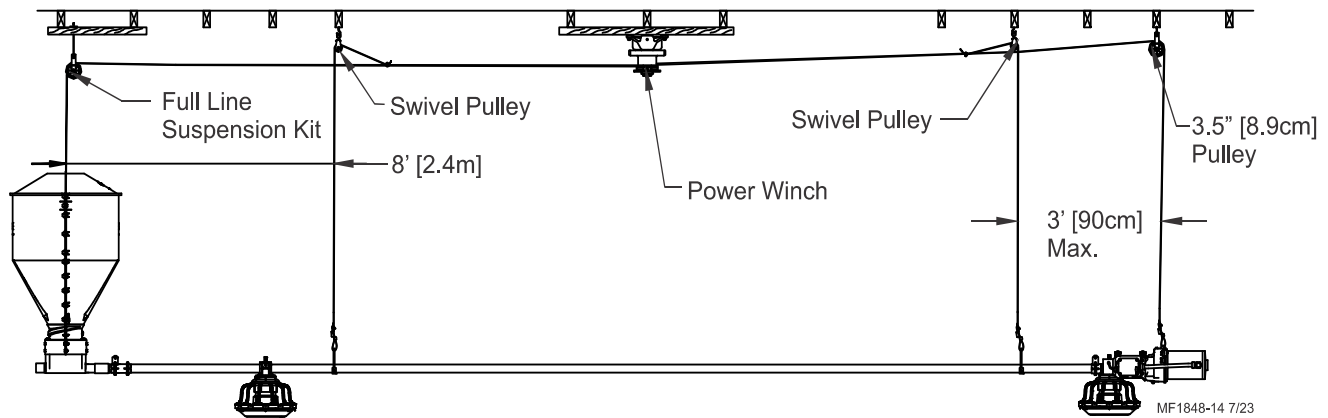


Figure 4. Suspension for systems over 350' [107 m]

2. Locate the Power Lift Winch. The Power Lift Winch requires a support that will span, in a wood frame house at least 3 rafters, and in a steel frame house at least 2 rafters.
3. Locate the Power Unit and Feed Hopper. Special support is required at each Power Unit and Feed Hopper location.
4. Determine the Drop Location and length. 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.
5. Determine the location for Screw Hooks. Mark a straight line or use cable to locate Screw Hooks. Use the offset of Screw Hooks where necessary.

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.

Install a Cable Hook, supplied in Hardware Package, between the mounting bolt and Power Winch frame, as shown in **Figure 6**. Assembling the Power Winch to the Rafters

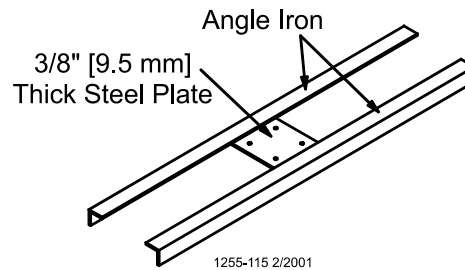


Figure 5. Optional Power Lift Winch support detail

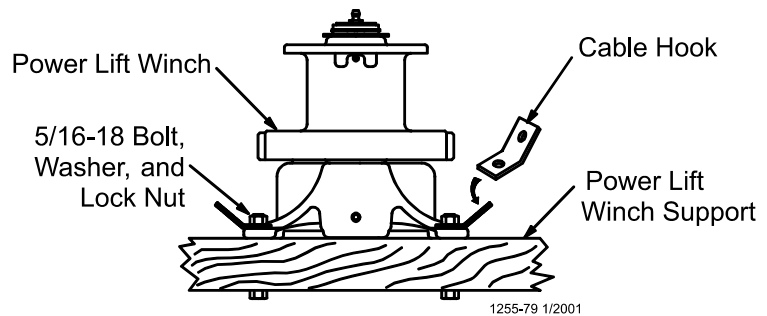


Figure 6. Assembling the Power Winch to the Rafters

2. 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.

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.

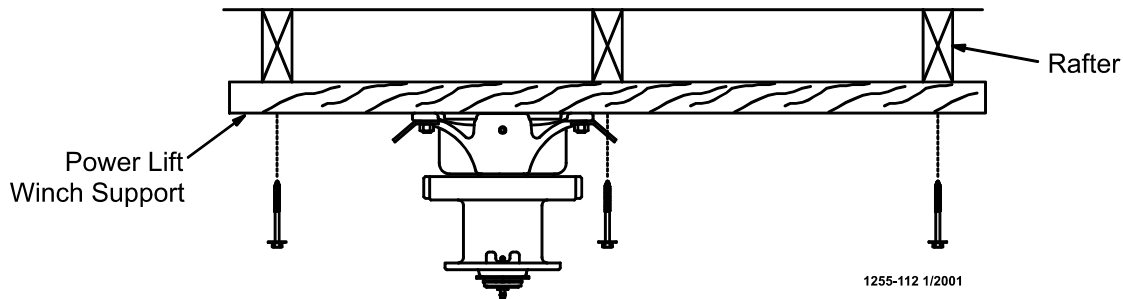


Figure 7. Mounting the Power Lift Winch and Support to the Rafters

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 Suspension System is the same for the Rev. 12 and 8 Feeders. 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' [0.9 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.

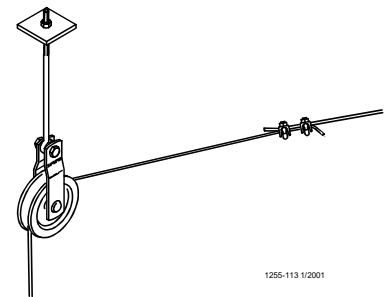


Figure 8. Steel Hopper Suspension

•Feed Hopper Locations: **When steel hoppers with center suspension are used, see figure 8, the feeder line must be supported within 1' [30 cm] of the feed hopper.** When plastic hoppers are installed only 2 point suspension can be used, see figure 9, this does not require additional supports. See page 16 for plastic hopper suspension. 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.

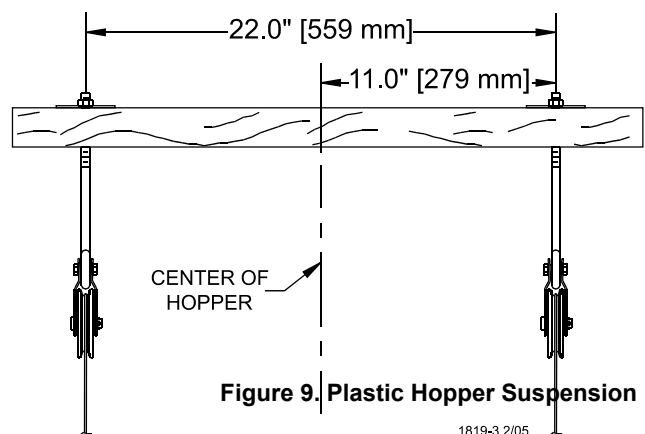


Figure 9. Plastic Hopper Suspension

3. 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 10** shows a double back arrangement for feed lines over 350' [107 m].

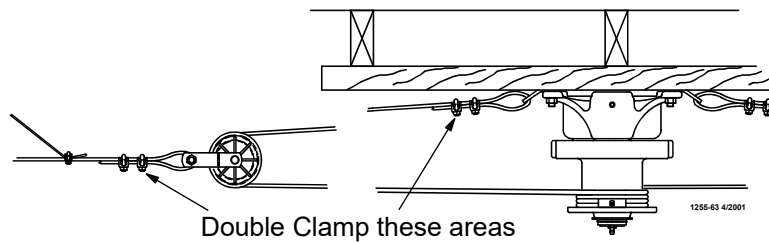


Figure 10. Double back arrangement for feed lines over 350' [107 m]

4. 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 11.**

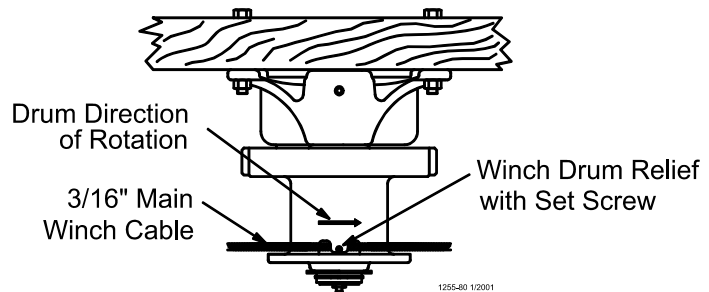


Figure 11. Attaching the Cable to the Power Winch

5. 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 12.**

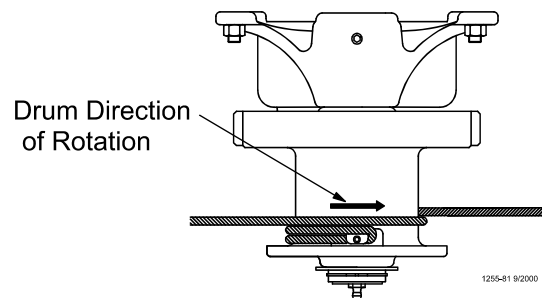


Figure 12. Power Winch Drum Rotation

Screw Hook Installation

1. The recommended distance between the drops for the Rev. 12 & 8 FEEDER is 8' [2.4 m] on center. Do not exceed 10' [3 m] spacing on drop lines.
2. 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 13.**

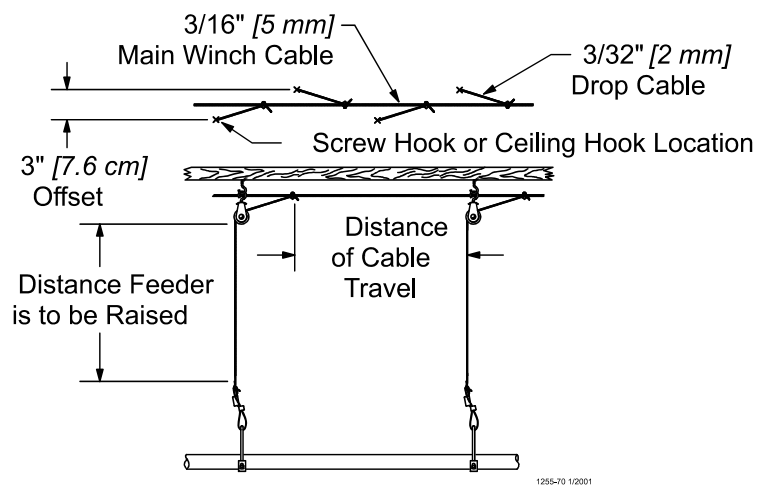


Figure 13. Drop Line Off Set Detail

3. Screw the hook into the truss the full length of the threads to prevent bending.
4. 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 14**.

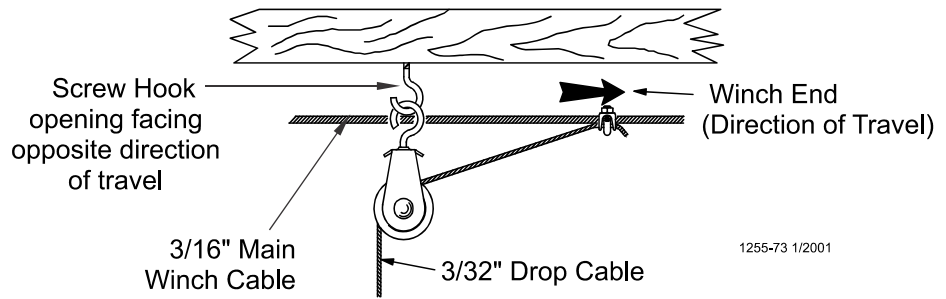
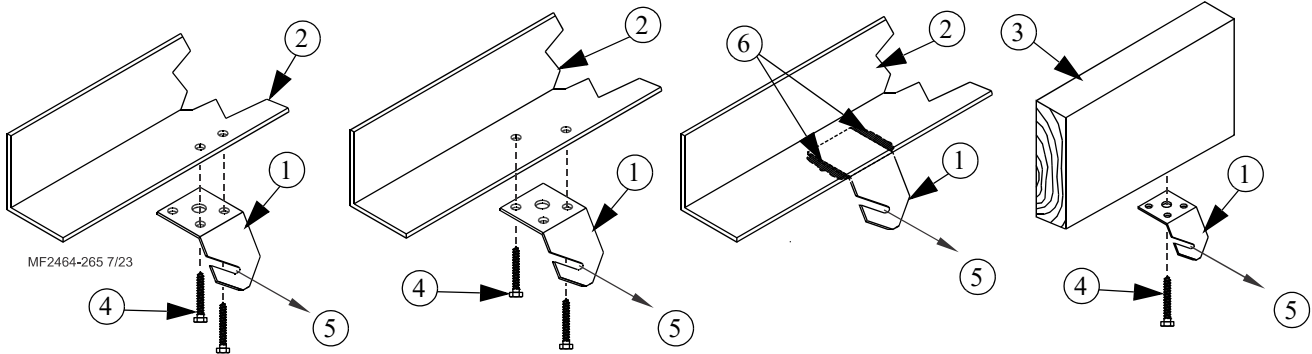


Figure 14. Screw Hook Installation

Ceiling Hook Installation



Item	Description	Part No.
1	Ceiling Hook	28550
2	Steel Truss	--
3	Wood Truss	--
4	1/4-20 Lag Screw	--
5	Cable Travel Direction	--
6	Weld	--

Figure 15. Ceiling Hook Installation

5. After securing the Ceiling Hook to the truss, slide the hook of a Swivel Pulley into the slot, as shown in **Figure 16**.

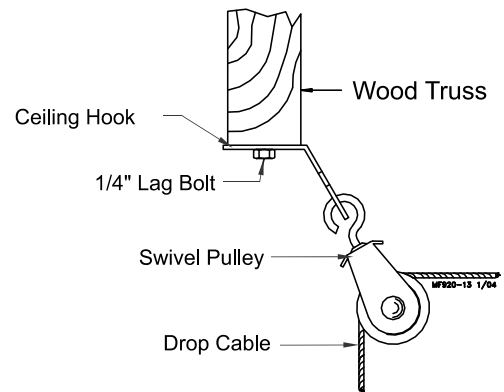


Figure 16. Pulley Installation

Drop Installation

Refer to **page 12 Figure 14**.

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 14 or 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 17**

shows a “throwback” cable arrangement.

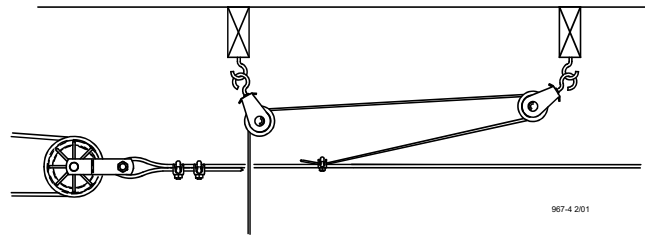


Figure 17. "Throwback" cable arrangement

4. Begin installing suspension drops at the winch and proceed to the ends 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.

Hopper Assembly Procedure

The 150 lb. Hopper Assembly is **NOT designed for single-point suspension**. The upper cross brace is designed for supporting the drop tube **ONLY**. This Hopper Assembly is to have **Two-point** suspension as stated.

Assembly

1. Assemble the 1/4-20 x 1-1/2" bolt to the brace with two 1/4-20 nuts. One nut should be assembled under the brace with the other on top. This bolt is to provide a place for the tube support assembly chain to be hooked, see figure 18.
2. Assemble the 150 lb. hopper halves and brace as shown in Figure 18, using #14 x 5/8" screws (supplied in hardware package).
3. Assemble the #8 x 1/2" screws and chain as shown in Figure 18.

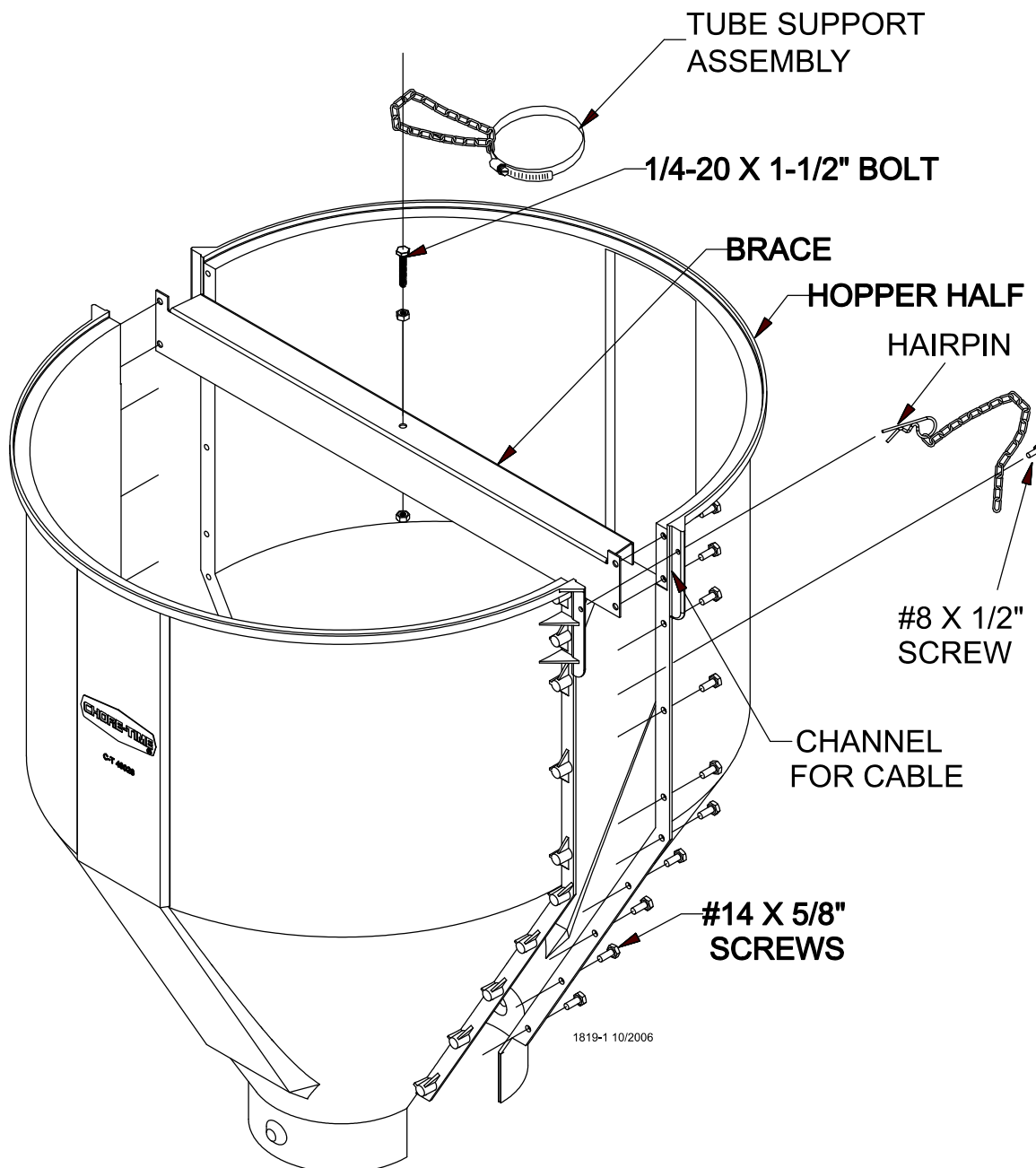


Figure 18. Hopper Assembly

- Assemble suspension angles and suspension braces around feeder line boot (single or twin), using 1/4-20 x 1/2" Hex bolts and nuts (supplied in hardware package), see **figure 19**.
Note: The larger holes on the ends of the suspension angles need to be on the upper side of the assembly.
- Assemble the twist lock collar to the top of the feeder line boot (single or twin) using 1/4-20 x 1/2" bolts and lock nuts (supplied in hardware package), see **figure 19**.
- Assemble the adjustment brackets to the suspension angles with 5/16-18 x 3/4" bolts and nuts (supplied in hardware package).
- Two cable assemblies (cable with a sleeve clamp and a 5/32 thimble) are supplied with the suspension kit to support the hopper. Attach the cable assemblies to the adjustment brackets using the top holes of the adjustment brackets, see **figure 19**.

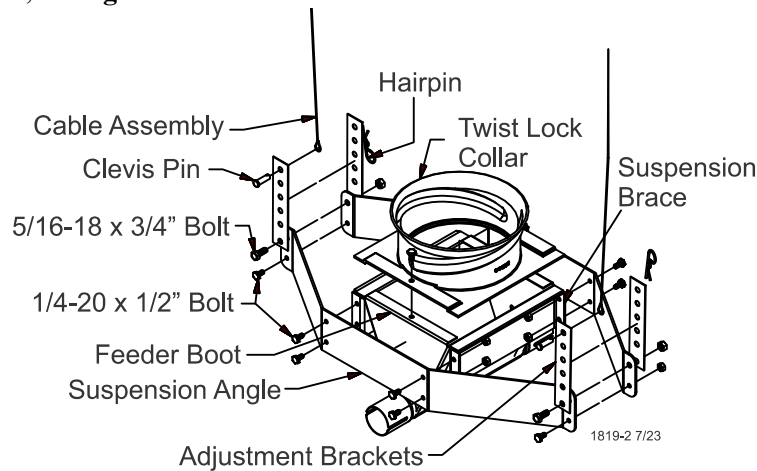


Figure 19. Hopper Assembly (Bottom)

- Install two pulleys to 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 of angle iron that are long enough to span at least 2 rafters. Install the pulleys directly above the feeder line where the hopper is to be located. The pulleys should be spaced 22" [559mm] apart (11" [279 mm] from the center of the hopper in both directions), see **figure 20**.

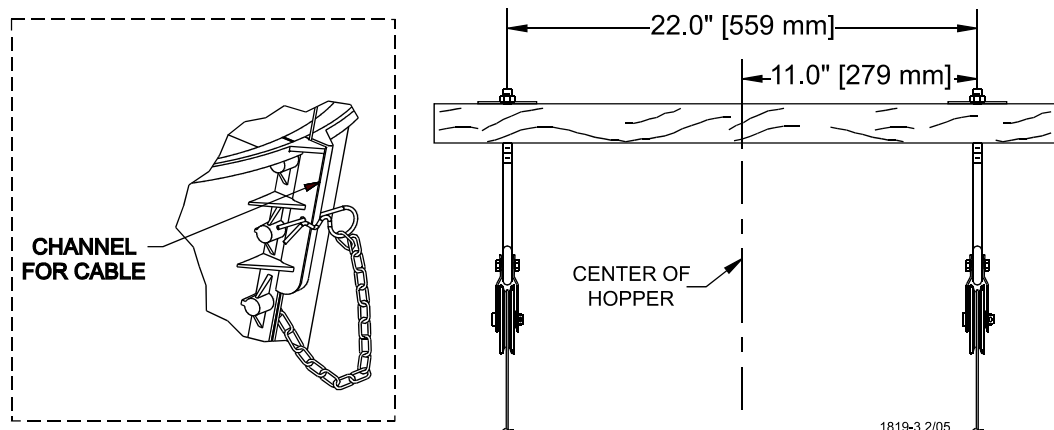


Figure 20. Pulley Installation

Suspend the Hopper

- Attach the boot to the feeder line.
- Route the two cable assemblies up and around the pulleys.
- Level the boot with the feed line and clamp the cables to the main cable using 1 cable clamp per cable assembly.
- Place the hopper on top of the twist lock collar and rotate the hopper 90 degrees into position.

Make sure the cables lay in the channels on the sides of the hopper for support then use the hairpin to contain the cable.

Feeder Pan Assembly

All feeders assemble in the same manor. Refer to **Figure 23 and 25**. The inner cone must turn freely. Align the threads on the outside of the adjustment cone and the grill cap. Turn the cone assembly into the grill cap. Continue turning grill until the pointer lines up with the #4 position. See **Figure 23**. Turn the grill and cone assembly over place the feeder pan on the grill, turn the pan clockwise until the lock engages. Assemble the remaining Feeders. Assembly Box Construction for Rev. 12 and 8 Feeders.

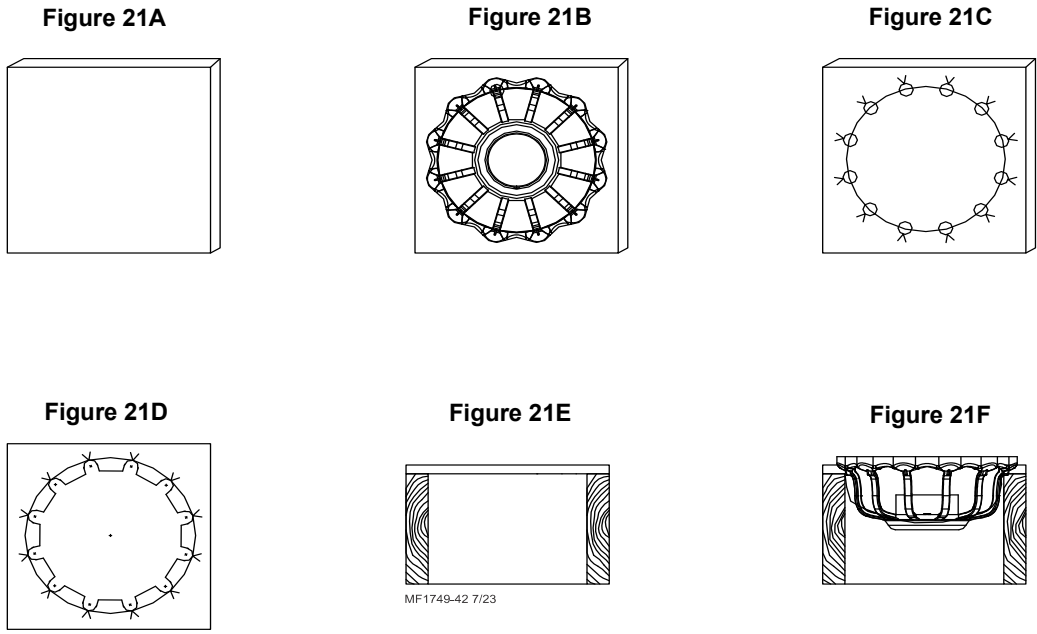


Figure 21. Assembly Box Construction

This information and assembly only applies to Rev. 12 and 8 feeder installations.

Chore-Time recommends building an assembly box to aid in assembling the Rev. 12 and 8 feeders for pan assembly procedure option 1(see next page).

To build the assembly box for the Rev. 12 feeder, use a 16" [406 mm] x 17" [432 mm] piece of plywood and two 14-1/2" and two 17" [432 mm] long pieces of 2" [51 mm] x 12" [305 mm].

1. Cut a piece of 3/4" [19 mm] plywood 16" [406 mm] X 17" [432 mm]. See **Figure 21A**.
2. Center the grill on the 16" [406 mm] X 17" [406mm] piece of plywood. Use a pencil and draw around the in side edge of the grill as shown in **Figure 21B**. Mark a "V" at each strut location.
3. Remove the grill.
Use a 7/8" [22 mm] spade bit to drill a hole at each strut location, as shown in **Figure 21C**.
4. Use a sabre saw to cut along the *inside* circle, between the 7/8" [22 mm] holes. See **Figure 21D**.
5. Use (2) 14-1/2" [368 mm] and (2) 17" [432 mm] 2 [51 mm] x 12's [305 mm] to construct the box sides. Nail the 3/4" [19 mm] plywood fixture to the box. See **Figure 21E**.
It is important to use at least 12" [305 mm] sides for the box. Smaller lumber will not allow sufficient depth for the grill to be placed in the box face down.

Figure 21F shows how the grill should fit down in assembly box. NOTE: Board is cut away for clarity only.

Pan Assembly Procedure for Rev. 12 and 8 Feeders (Option 1)

1. Place a Grill in the pan assembly box fixture.
2. Rotate brood adjustment until cover washer is flush with outer cone, see figure 22.

Rotate before installing grill

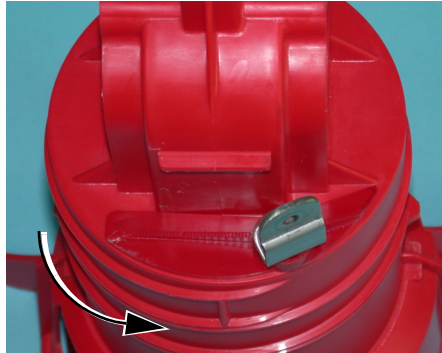


Figure 22. Rotate brood adjustment prior to grill installation.

3. Install cone assembly in the grill, **Check fit, correct, grill and cone should be snug, incorrect if grill and cone have free motion.**
4. Place the feed pan in the grill ring, The pan must be fully seated in the grill then rotate the pan until the pan locks in their grill

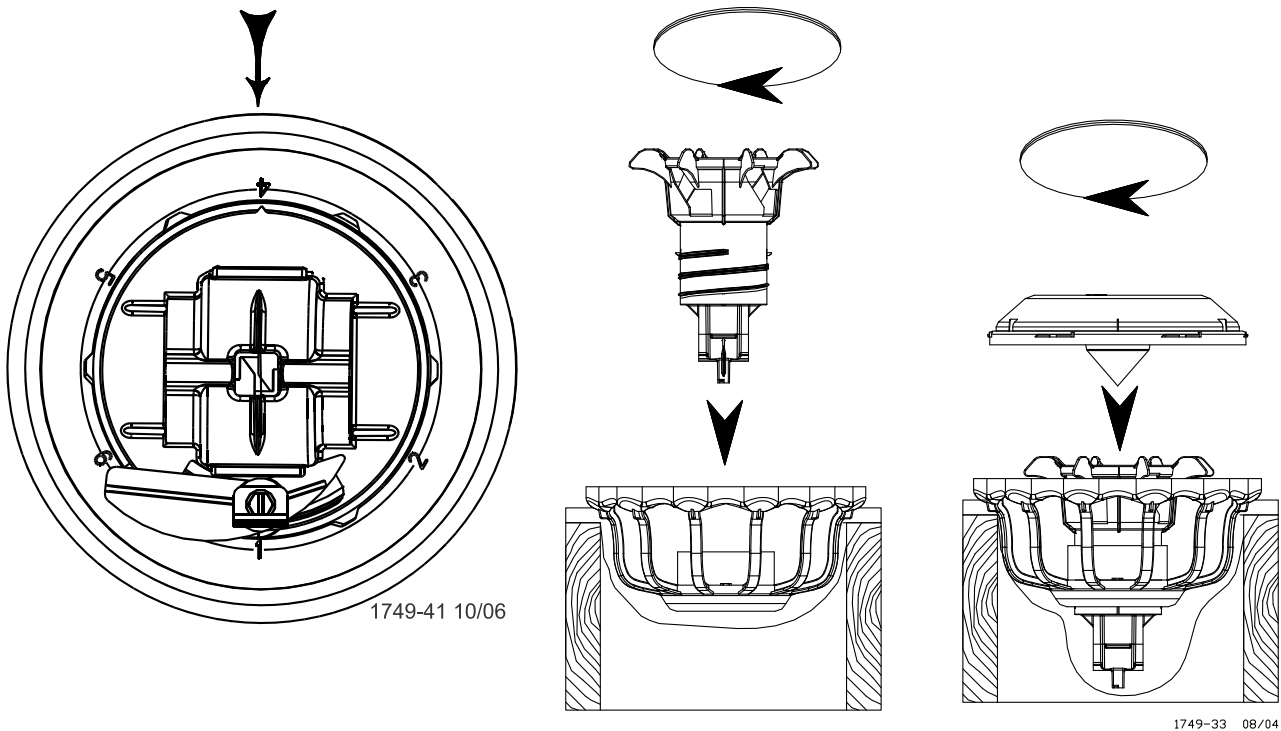


Figure 23. Pan Assembly Option 1

Pan Assembly Procedure for Rev. 12 and 8 Feeders (Option 2)

1. Place cone assembly on a flat surface.
2. Rotate brood adjustment until cover washer is flush with outer cone, see figure 24.

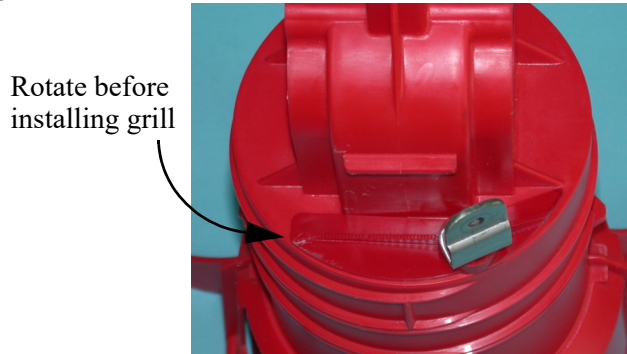


Figure 24. Rotate brood adjustment prior to grill installation.

3. Set grill over the cone.
4. Rotate the grill until the threads are started.
5. Continue rotating the grill until you reach position 4.
6. Turn the assembly over then install the pan by rotating the pan until it latches.

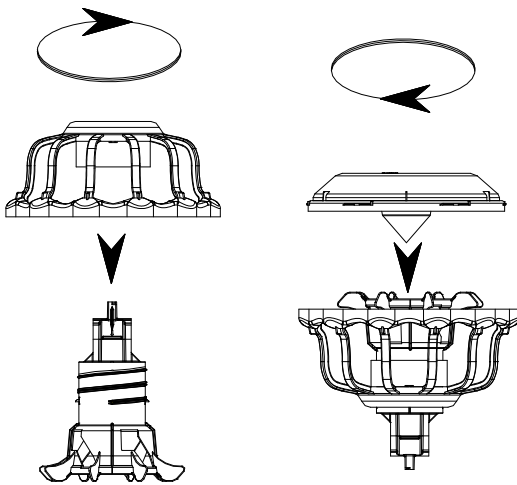
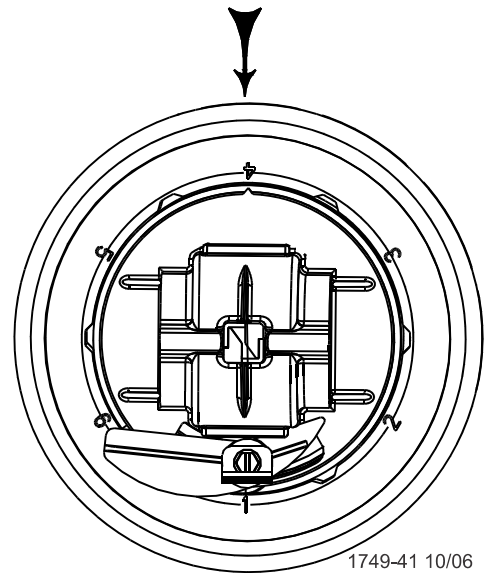


Figure 25. Pan assembly option 2
1749-67 07/03

Adjust to #4 setting



1749-41 10/06

Installing the Pivot Clip.

Loosely assemble the pivot clip to the pivot bracket using the supplied 10-24 x 3/8" [9.5 mm] screw.

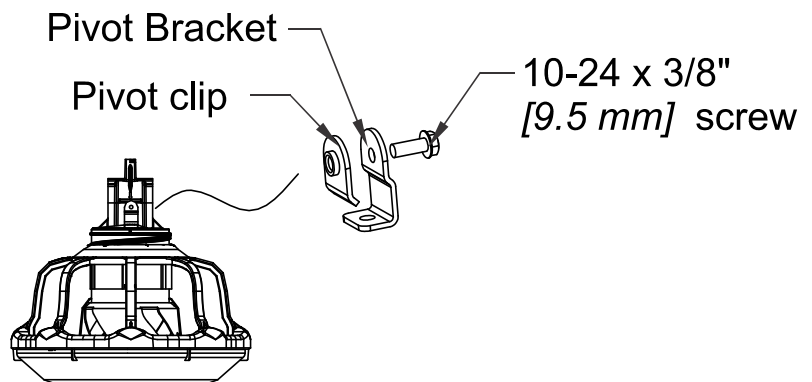
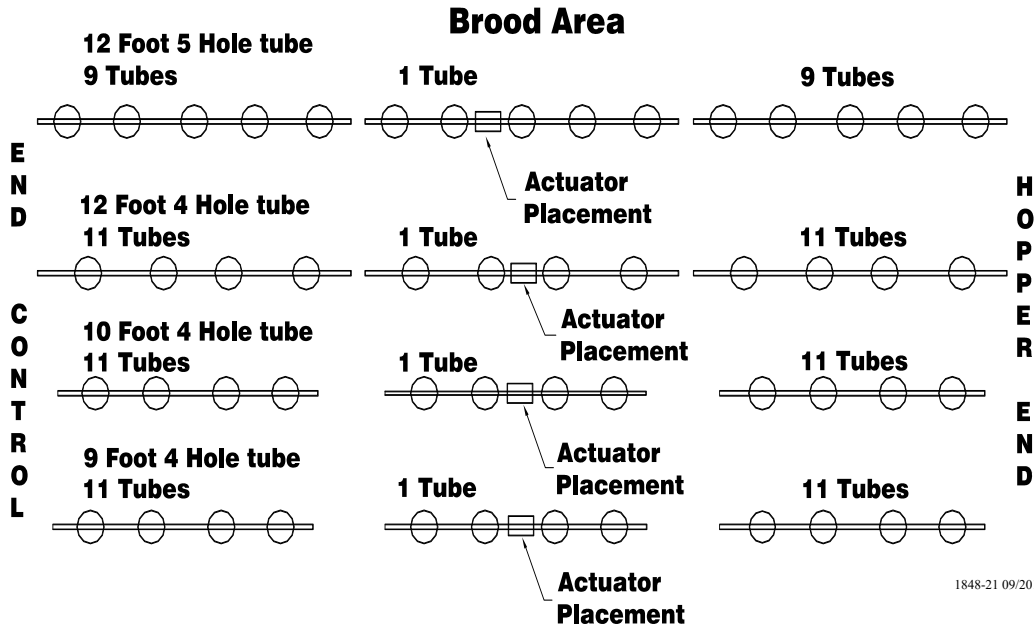


Figure 26. Installing the pivot clip

Feeder line planning

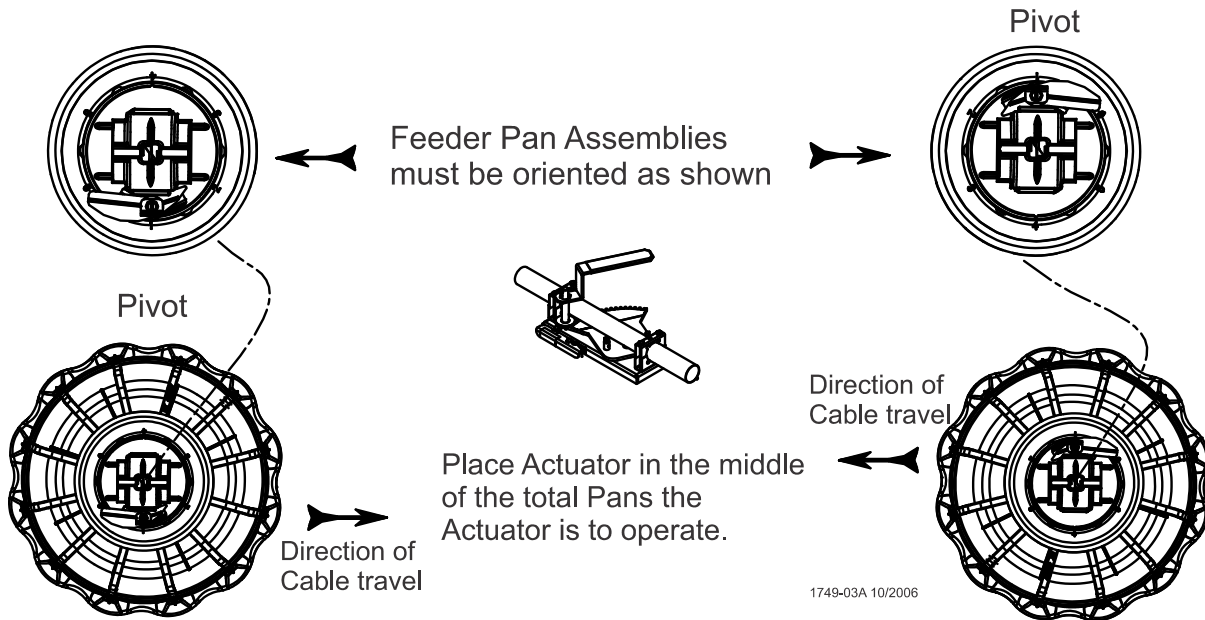
ACCU-CLICK™ Actuator

Layout figured on 96 pans in brood area,



1848-21 09/2014

Figure 27. Typical building layout for Actuator placement.



1749-03A 10/2006

Figure 28. Pan orientation on feeder tube.

Determine the feeder layout to be installed. Assemble the feed pans on the tube according to the layout above.

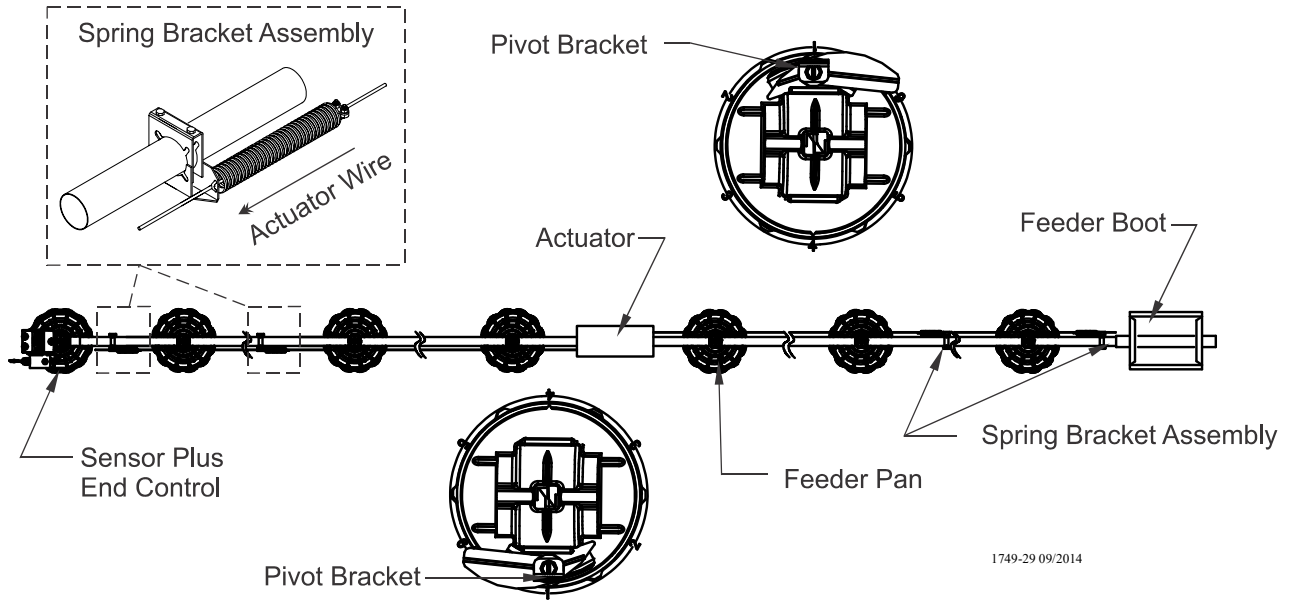
ACCU-CLICK™ Actuator

To ensure the pivot bracket is assembled on the correct side, stand over the actuator looking at the belled end of the tube. The pans in front of you will have the pivot bracket on the left, while the pans behind you will have the pivot bracket on the right.

Example: For a 9 foot tube you will assemble 6 tubes with the pivot bracket on the left side and 6 tubes with the pivot bracket on the right side.

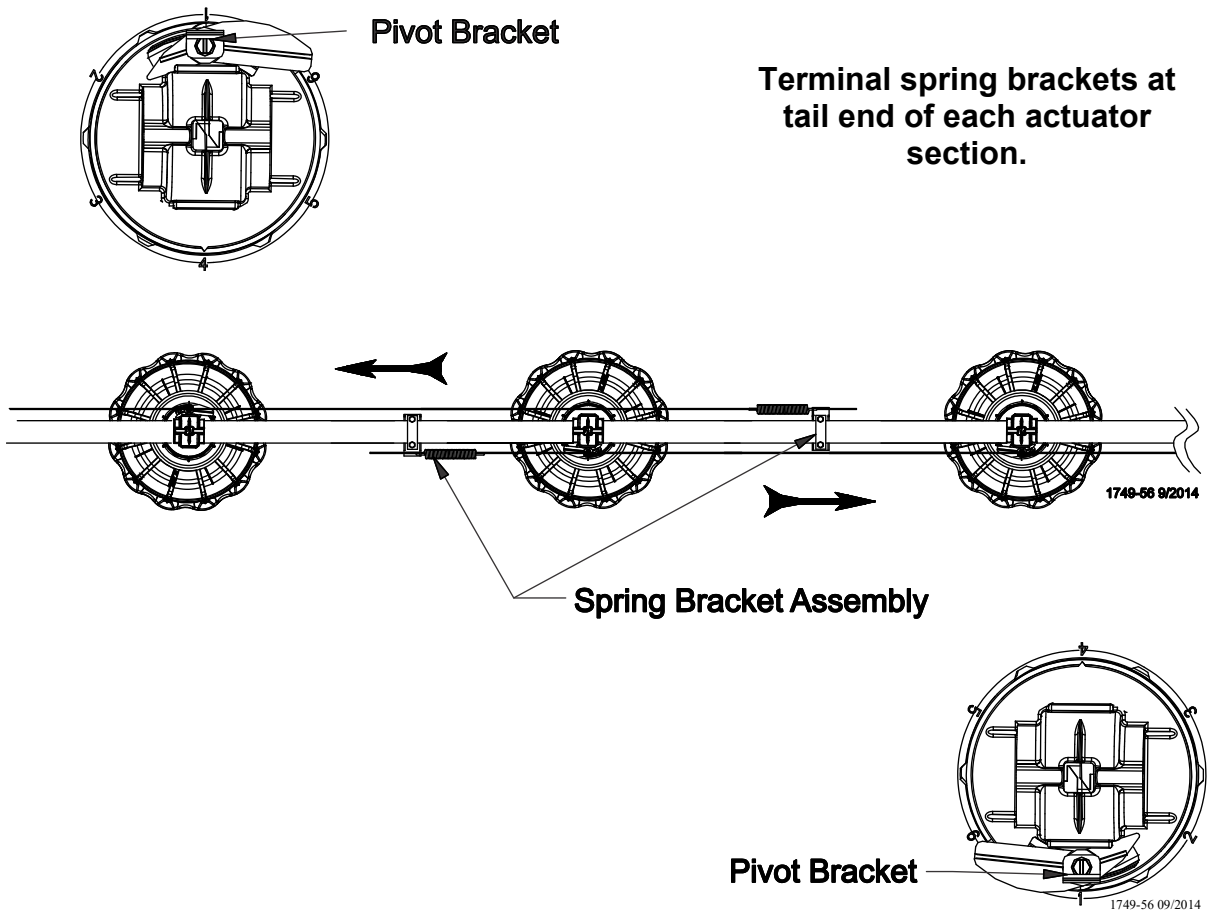
Below is an overview of the feeder installed with the spring brackets and actuator wire installed.

It is very important that the pans be installed with the pivot bracket on the correct side!!!



1749-29 09/2014

Figure 29. Feeder layout



1749-56 9/2014

1749-56 09/2014

Figure 30. Terminal Spring brackets

Feeder Line Assembly and Suspension

ACCU-CLICK™ Actuator Installation

The actuator assembly is to be installed in the middle of the total pans the actuator is to operate. Using two half clamps provided with the actuator attach the actuator assembly to the feeder tube between two pans. **The two halves of the clamps are not the same.** The wider half will attach to the base of the actuator. The other half will be installed over the tube, sliding into the wider half of the clamp.

When Installing the Actuator the Tube Seam must be on the side opposite the Actuator Handle, see figure 31. It may be necessary to use a tube closure kit if the actuator is to be placed near a feed outlet hole on the tube.

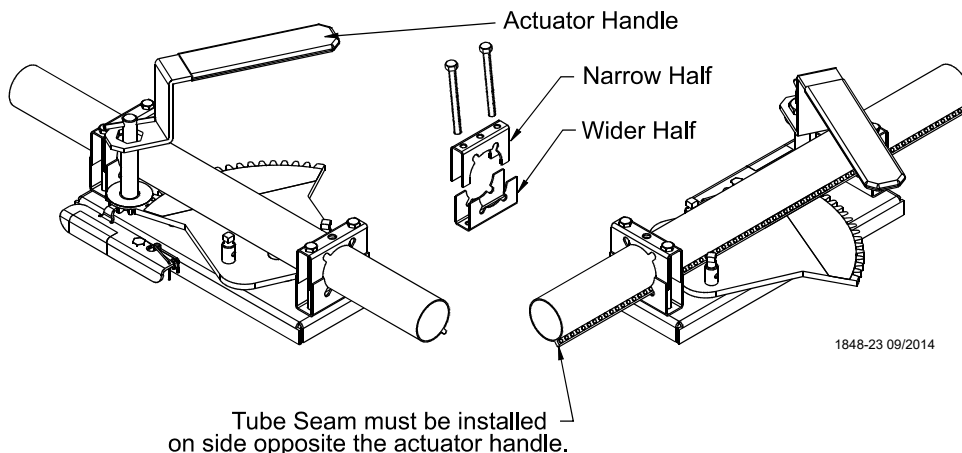


Figure 31. ACCU-CLICK™ Actuator installation

Feeder Pan and Tube Assembly Process

- Slide one Feeder Pan Assembly per hole onto the auger tubes.
IMPORTANT: Install all the feeders on the tubes in the same orientation.
 When sliding the feeders on the tubes, make sure the pivot bracket are on the same side of the tube.
- Rotate the auger tubes so that the seam is down, this holds the Pan Assemblies in place on the tubes.
 See Figure 32.

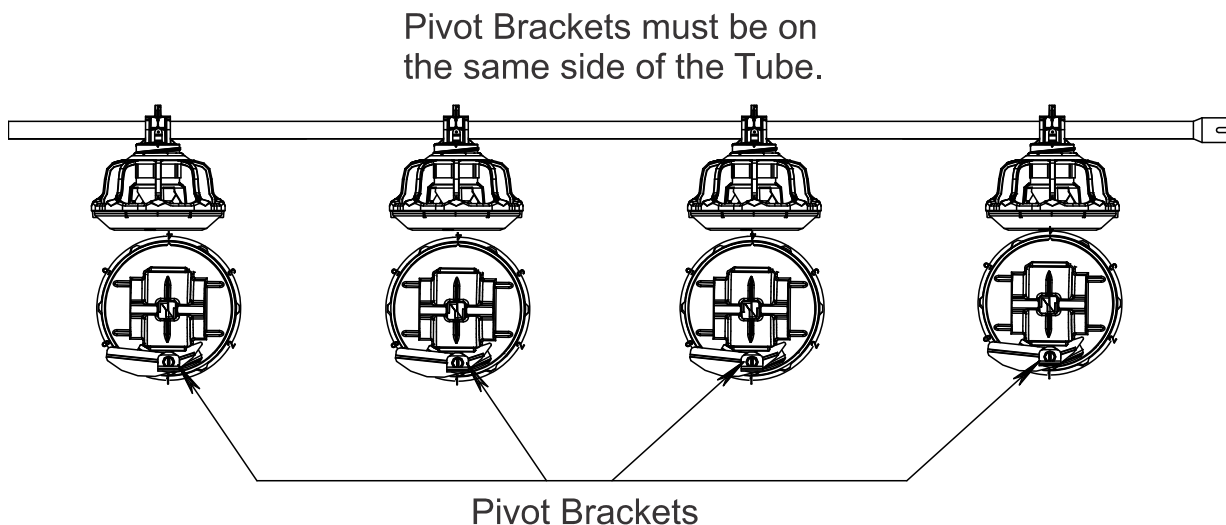
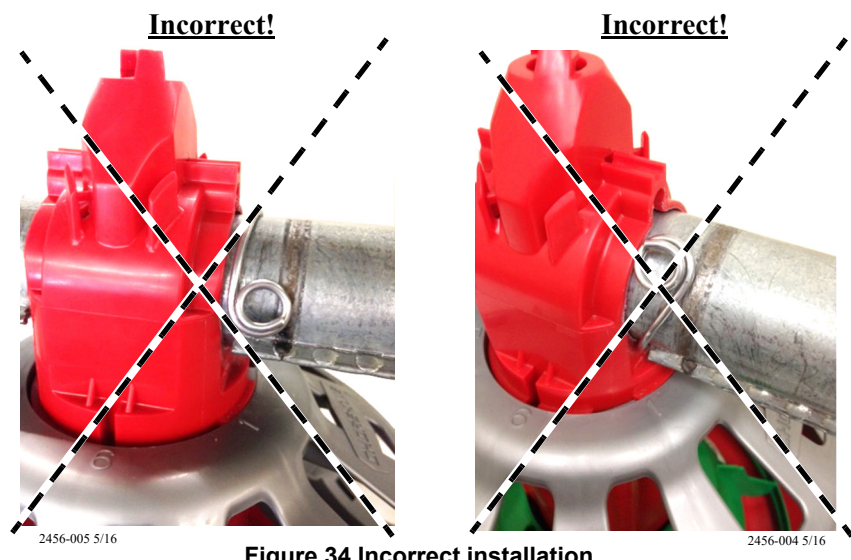
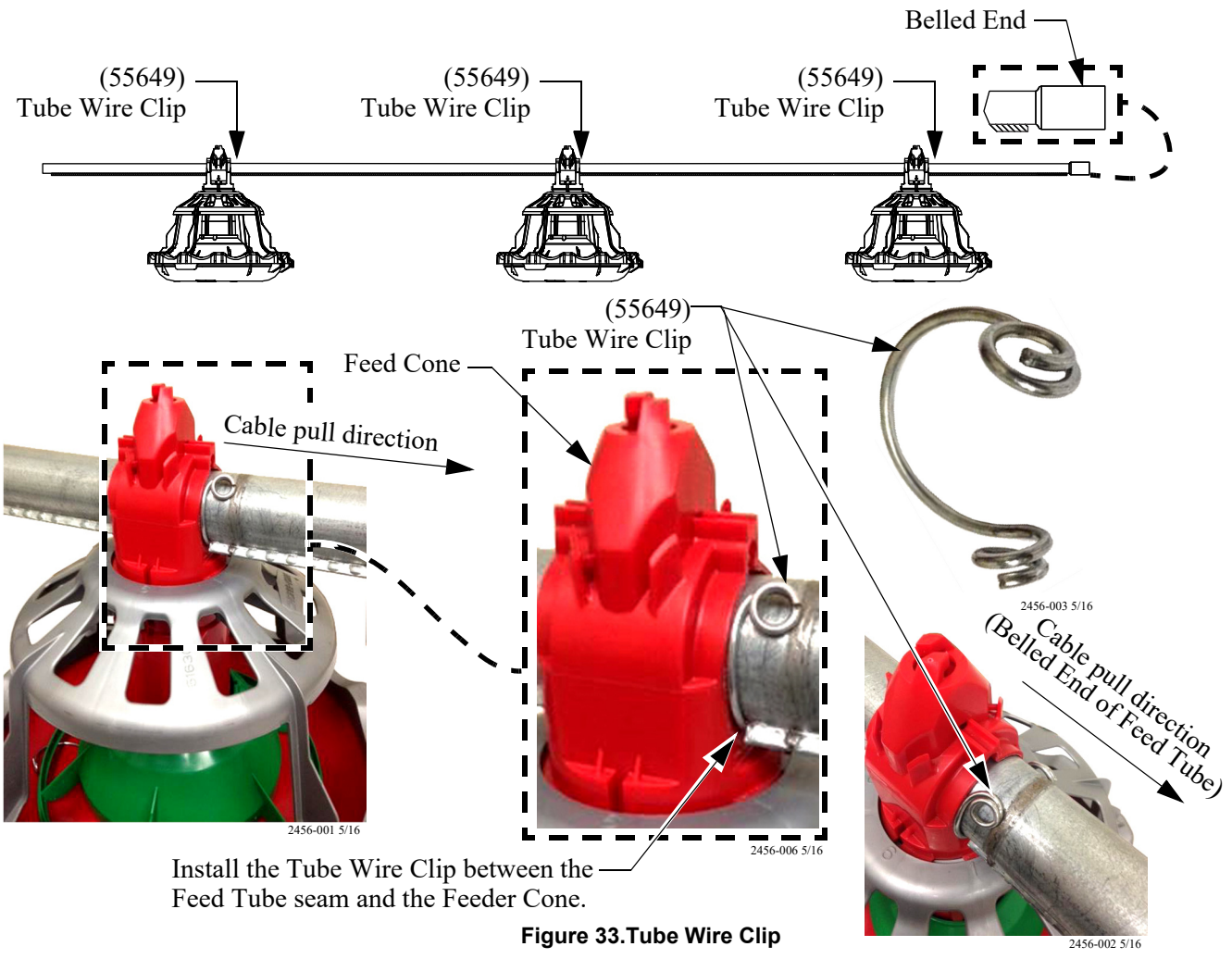


Figure 32. Assemble Feeders on tubes

Assemble half the tubes with the pivot bracket on the left side and half on the right side. The tubes with the actuator mounted will have different pivot bracket orientation on the same tube.

Example: A 9 foot tube will have two pans on the left side and two pans on the right side.

- 3. Install a Tube Wire Clip (55649) on each Feeder as shown.
- 4. Install the Tube Wire Clip on the side of the Feeder that is toward the Belled end of Feeder Tube (Winch/pulling end).
- 5. 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 actuator, 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 (3) Hopper end of the line. See Figure 35.** Be sure to have the correct number of tubes and the actuator is in the center of the section to be controlled by an actuator. **Place the actuator between the tubes near a suspension drop.** All actuators must be installed in the same direction. One actuator handles up to 96 feeder pans with the actuator placed dividing the (96) pans approximately in half.
2. Connect the individual feeder tubes together by inserting the straight end of one tube as far as possible into the (2) belled end of the next tube. **The last Feeder Tube before the (1) End Control Pan or Mid Line Control pan must be a Control Tube.**

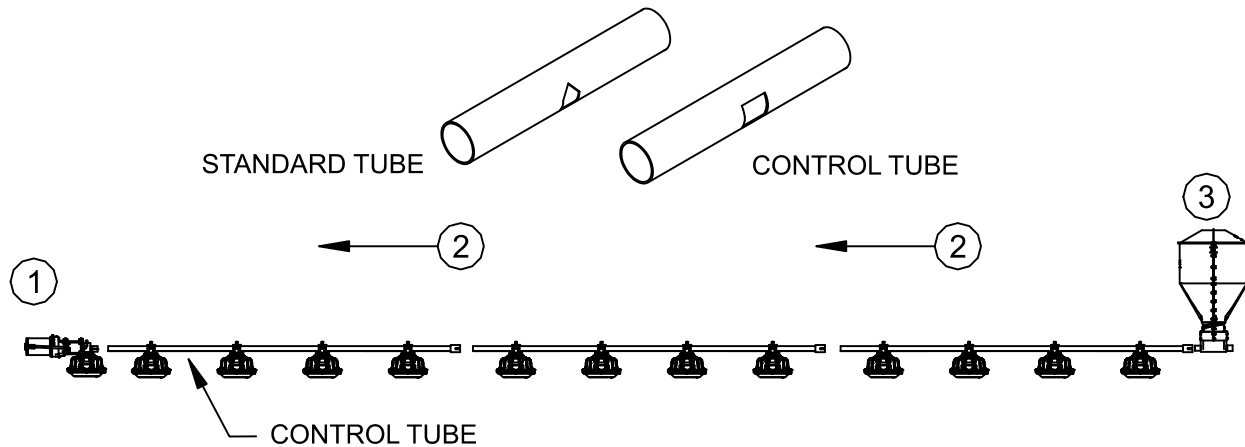


Figure 35. Attaching Feeder Tube Assemblies

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 36.

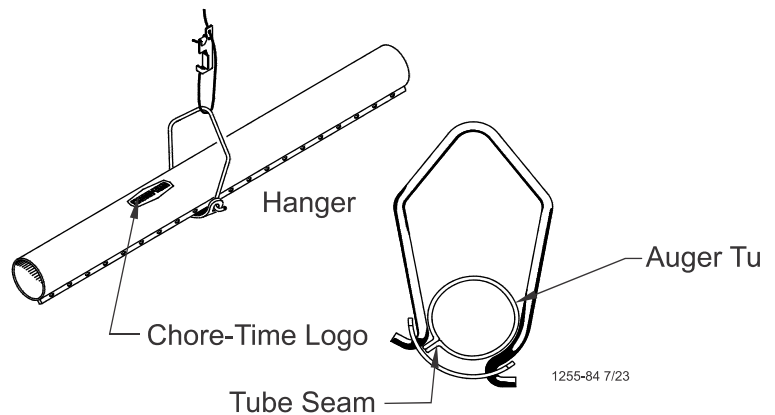


Figure 36. Hanger Installation

4. Place a Tube Clamp Assembly or Clamp/Anti-Roost Bracket at each joint. Figure 37. shows the standard Clamp and Clamp/Anti-Roost Bracket. Systems using 9' or 10' [2.7 or 3 m] tubes require a Clamp/Anti-Roost Bracket at every **fifth** joint. Systems using 12' [3.7 m] tubes require a Clamp/Anti-Roost Bracket at every **fourth** joint. All other joints in the system use the standard Tube Clamp Assembly.

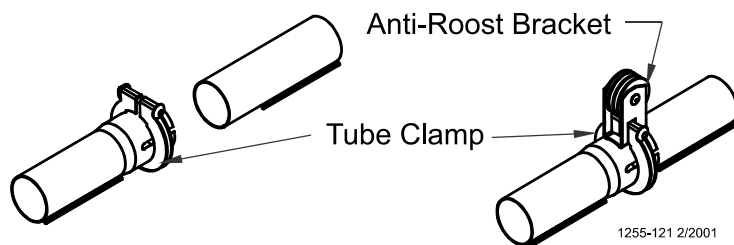


Figure 37. Tube Clamp and Tube Clamp with Anti-Roost Bracket

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 38 shows the proper clamp location on the tube joint. *Do not tighten the clamp at this time.*

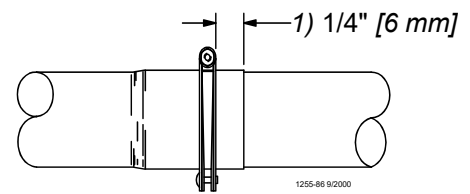


Figure 38. Clamp Installation

5. Install the Hangers on the feed line tube at the 8' [2.4 m] spacings determined by the suspension drop lines. **Figures 36 and 39** 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.

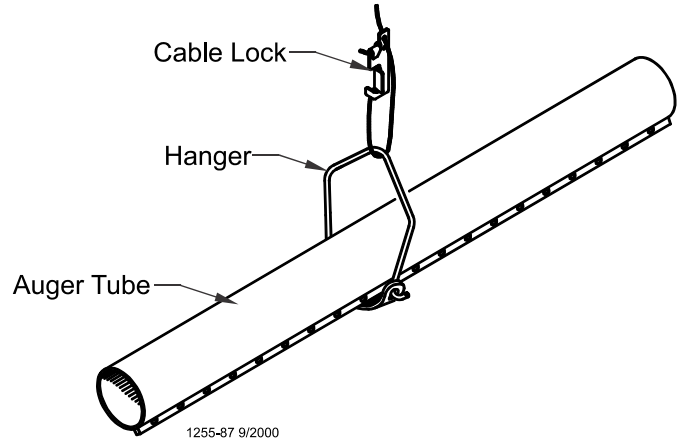


Figure 39. Hanger Installation

6. Install Adjustment Leveler within 6" [152 mm] of feeder line. **Figure 40** shows the proper cable routing around the Adjustment Leveler.
7. 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.
8. Raise the feeder line to a convenient working height.
9. With the feeder line suspended, measure from the floor or ceiling to the auger tubes to level the system.
10. 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.

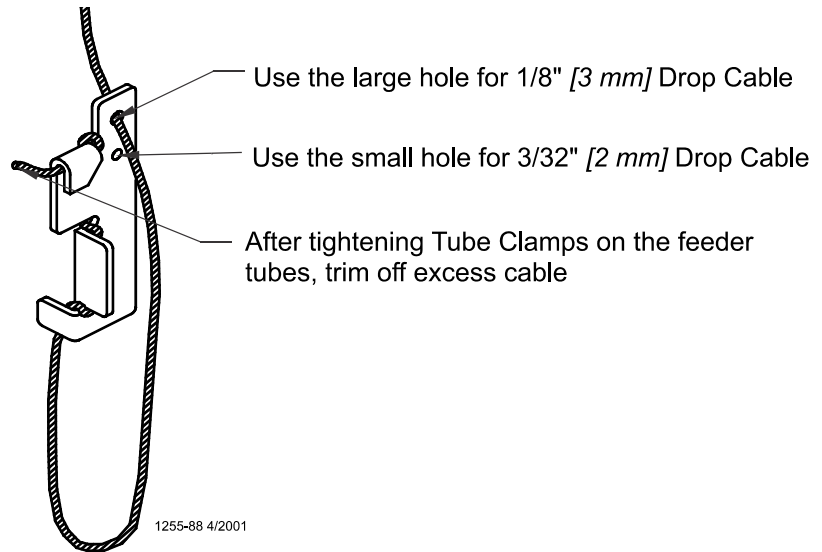


Figure 40. Cable Lock Threading

- if providing total drop out, tubes should be rotated so that the Chore-Time Logo is on crown of tube.
- make sure the clamps are located, as shown in **Figure 38**.
- when tightening the actuator tube the top must be flat.

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 40**.

End Control and Boot Assembly Installation

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 41**. **DO NOT INSTALL THE POWER UNIT AT THIS TIME.**

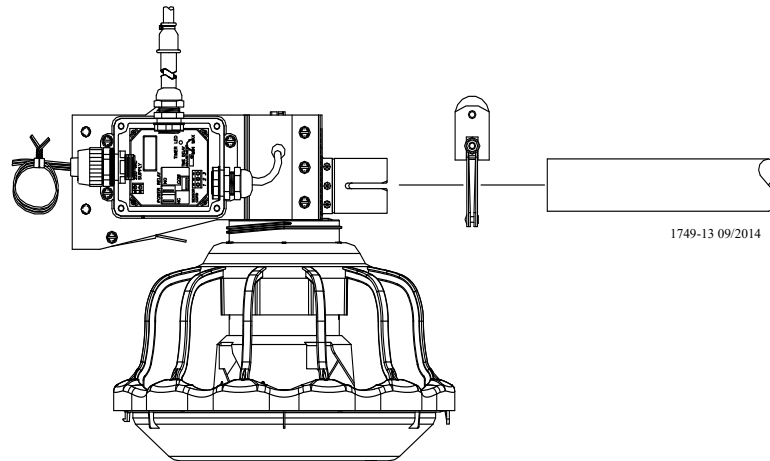


Figure 41. Connecting End Control Unit to the Feed Line Tube

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 feeder line and the open top of the Feeder Boot must be horizontal. See **Figure 42**. **DO NOT INSTALL THE ANCHOR BEARING AND BEARING RETAINER AT THIS TIME.**

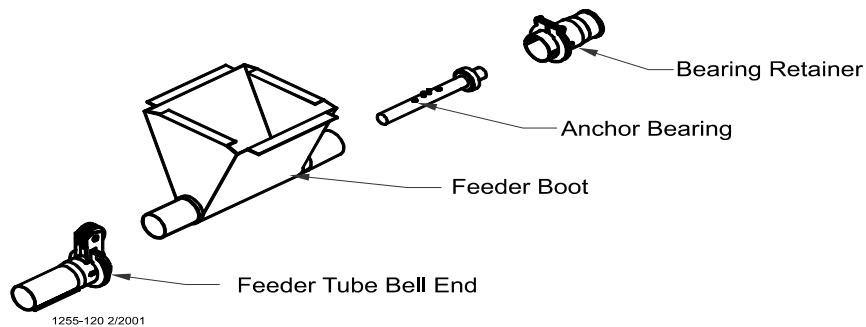
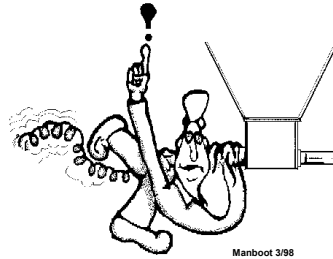


Figure 42. Installing the Feeder Boot

Auger Installation

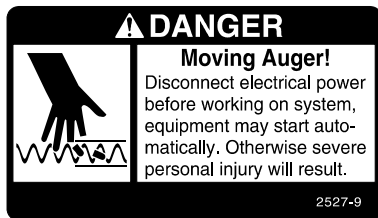
Note: Use extreme caution when working with the auger. The auger is under tension and may spring causing personal injury. Wear protective clothing, gloves, and safety glasses when working with the auger.



BE CAREFUL 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.
 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.
 Push the auger into the tube in short strokes.
 Uncoil and handle the auger carefully to avoid damaging or kinking the auger.
2. 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.
3. Install the Anchor Bracket to the Power Unit/Gearhead, as shown in **Figure 43**, with the included 5/16-18 Bolts.

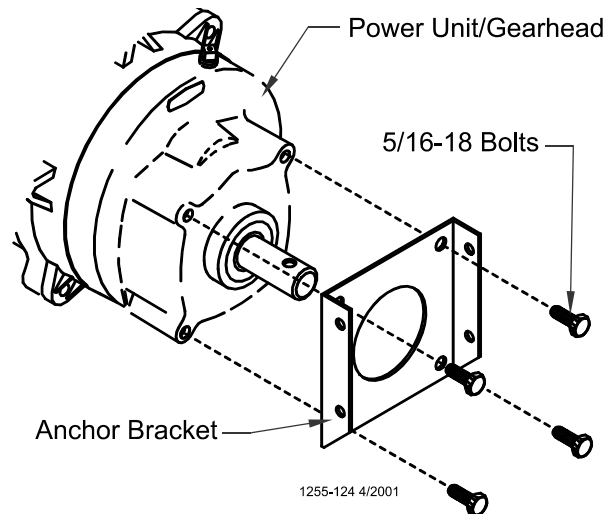


Figure 43. Assemble the Anchor Bracket to the Power Unit/Gearhead

4. Slide the Drive Tube and flat washer over the output shaft on the Power Unit, as shown in **Figure 44**.
5. Continue installing auger until the auger reaches the Control Unit end of the feeder line.

6. Turn the Drive Tube Weldment into the auger, then attach to the output shaft of the Power Unit, as shown in **Figure 44**. Use the Driver Block to secure the auger to the Output Shaft.

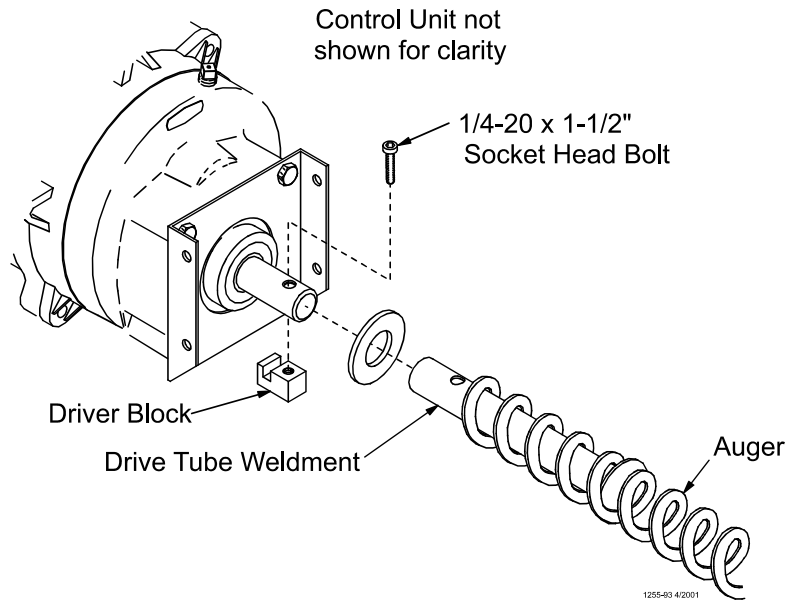


Figure 44. Auger Driver Components

7. 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 45**.

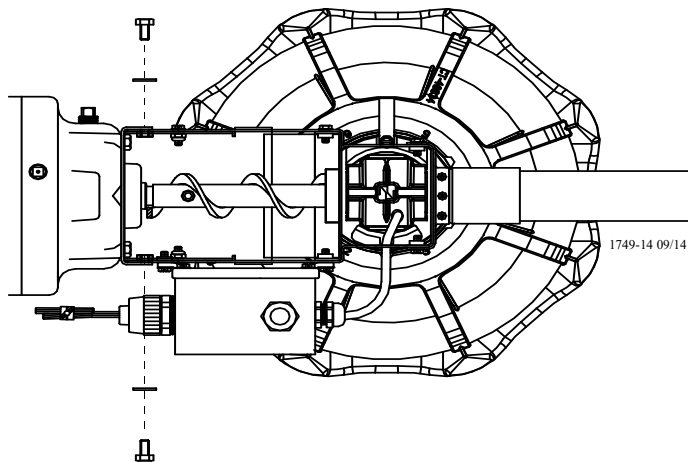
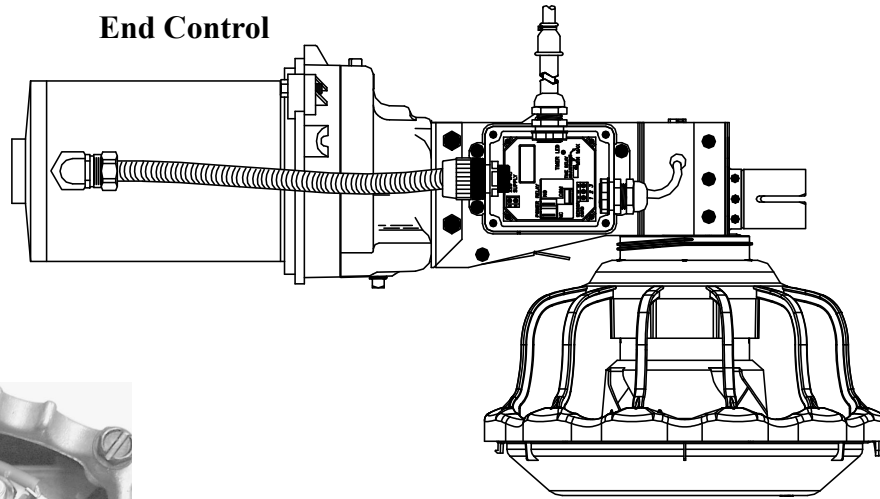


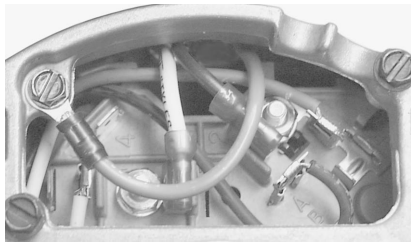
Figure 45. Attaching the Anchor Plate and Gearhead Assembly to the Control Unit Body

8. Install the Metal Water Tight Connector (item 1) in the Feed Line Motor (item 2). Cut the Flex Conduit (item 3) to length. Slide the wires from the end control through the Flex Conduit (item 3). Install the Flex Conduit (item 3) in the connectors. Connect the wires to the Feed Line Motor (item 2), see **figure 9**.

End Control



Motor Wiring



1749-16 09/14

Figure 46. Wiring the Motor

9. Attach covers and wire according to the wiring section of this manual.

10. 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 47**.

11. Auger stretch:

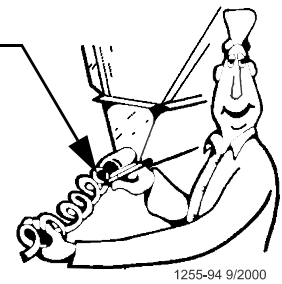
The auger needs to be stretched 7" [180 mm] per 100' [30 m]. Example: A 300' [90 m] feeder line requires 21" [500 mm] of stretch.

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. See **Figure 48**.

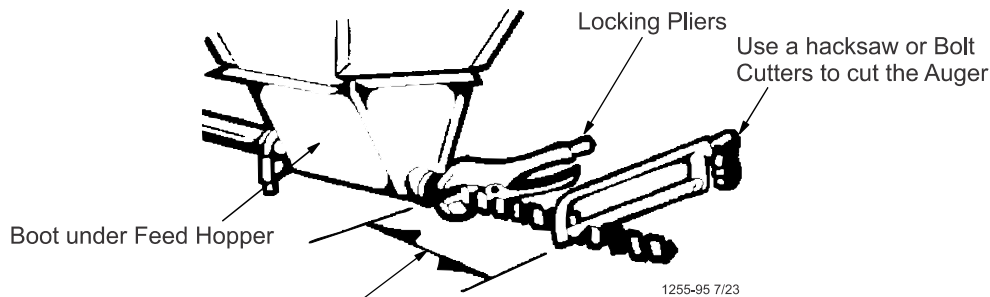
Use a hacksaw or bolt cutters to cut the auger at the stretched auger mark.

Mark the relaxed Auger



1255-94 9/2000

Figure 47. Measure the Auger from the relaxed position



1255-95 7/23

Pull an extra 8" [200 mm] of Auger (minimum) to allow for Anchor and Bearing Installation

Figure 48. Cut the Auger with required stretch

12. 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 49**.

DO NOT OVERTIGHTEN THE SET SCREWS.

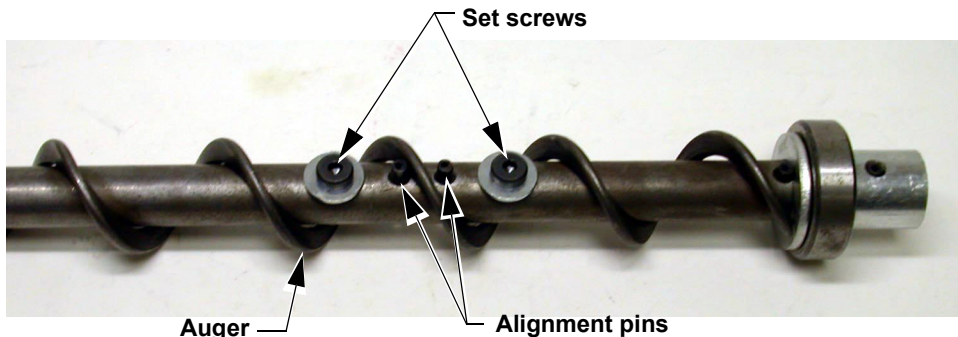
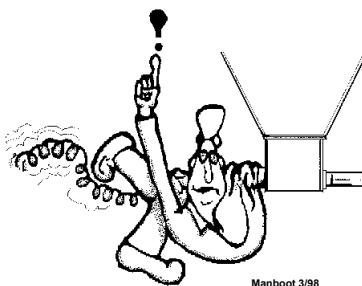


Figure 49. Auger and Anchor Bearing Connection

13. **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.

14. Place the cannonball in the boot.



BE CAREFUL WHEN WORKING WITH THE AUGER!

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 50**. 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.

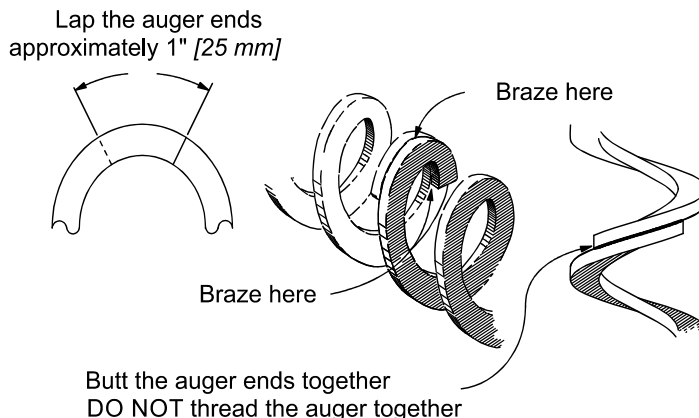


Figure 50. Auger Brazing

Actuator Installation

Installing Spring Brackets:

1. Install the terminal Spring and Bracket (using (2) 1/4-20 x 3 inch hex bolts) at the control unit, see **figure 51 and 54**. If necessary the last pan may need to be setup to push the vari-brood opening, See **Figure 53**.
2. Install the intermediate spring and bracket approximately 30 feet from the terminal bracket.
3. Brackets will be installed using (2) 1/4-20 x 3 inch hex bolts.

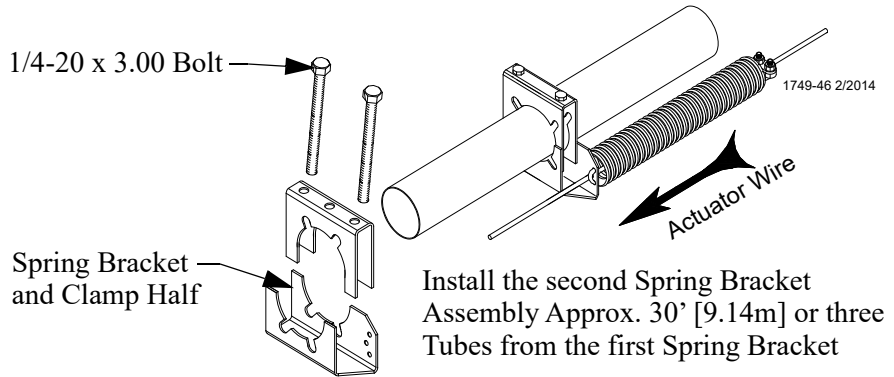


Figure 51. Terminal Spring Bracket

4. Assemble the Spring to the Spring Bracket by sliding the loop of the spring up through the third hole in the bracket, see **figure 52**.
5. Repeat the procedure for the opposite end and complete the installation of all Spring Brackets.
6. Max 48 pans each side of actuator.

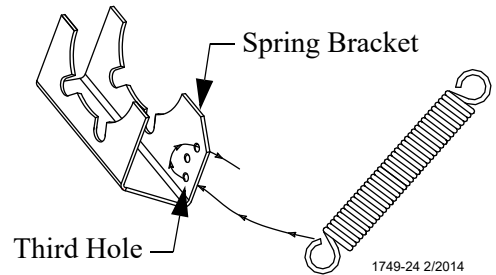


Figure 52. Spring Bracket Assembly

Spring Bracket installation for 9 foot 4 hole and 12 foot 5 hole tubes.

For these applications the last pan will be a pusher to actuate the vari-brood feed feature.

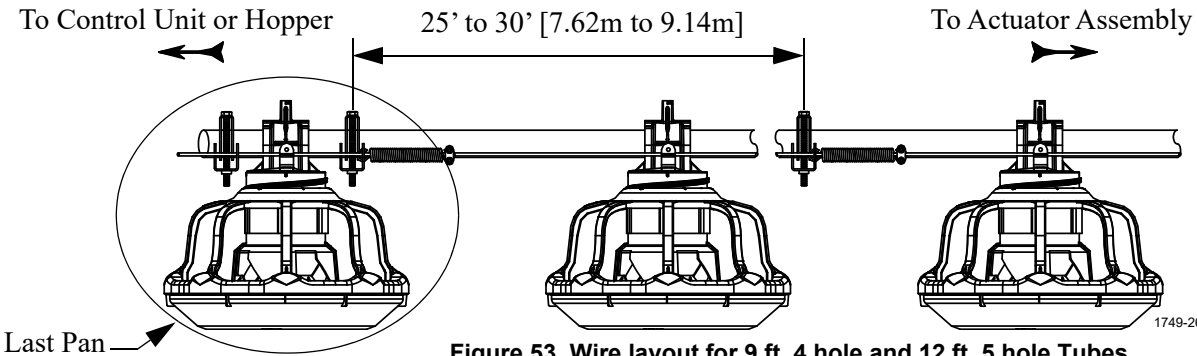


Figure 53. Wire layout for 9 ft. 4 hole and 12 ft. 5 hole Tubes

Spring Bracket installation for 10 foot 4 hole and 12 foot 5 hole tubes.

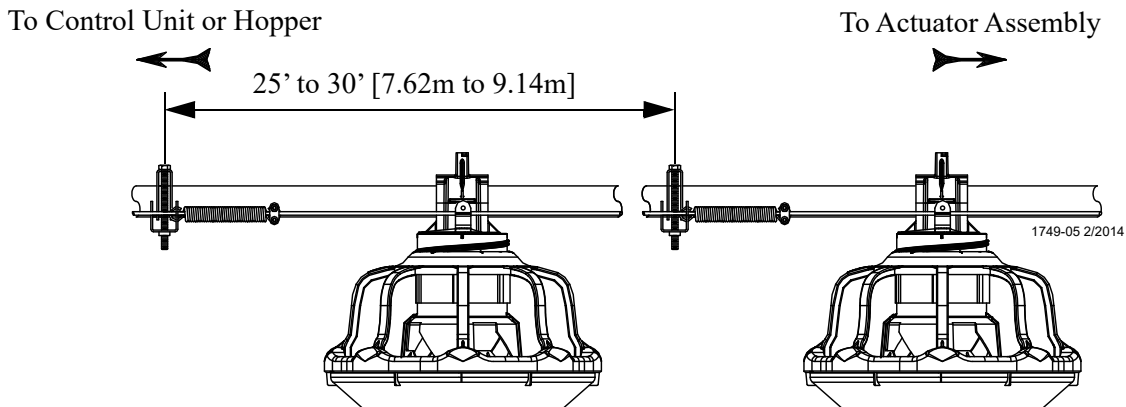


Figure 54. Wire layout for 10 ft. 4 hole and 12 ft. 4 hole Tubes

Unroll the actuator wire and lay the wire behind the pivot brackets on the feeders.

Do not allow the wire to feed from the side!! This will cause excess waves and kinks.

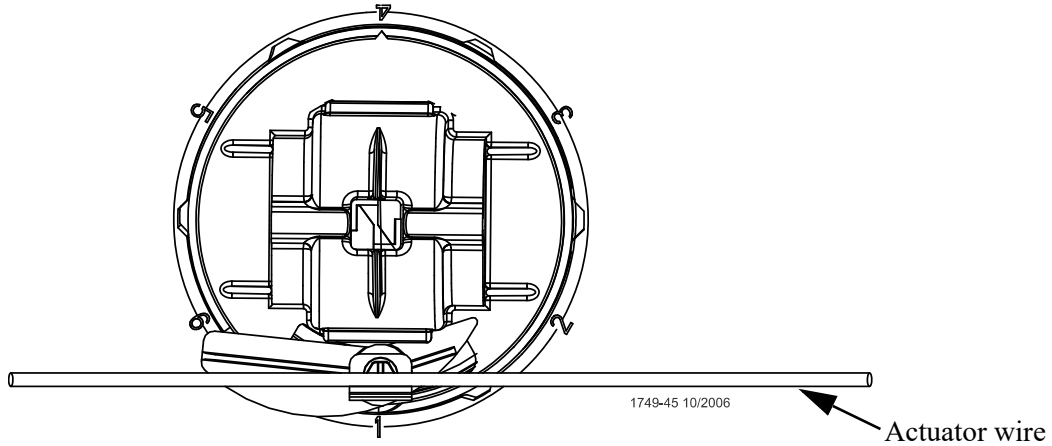
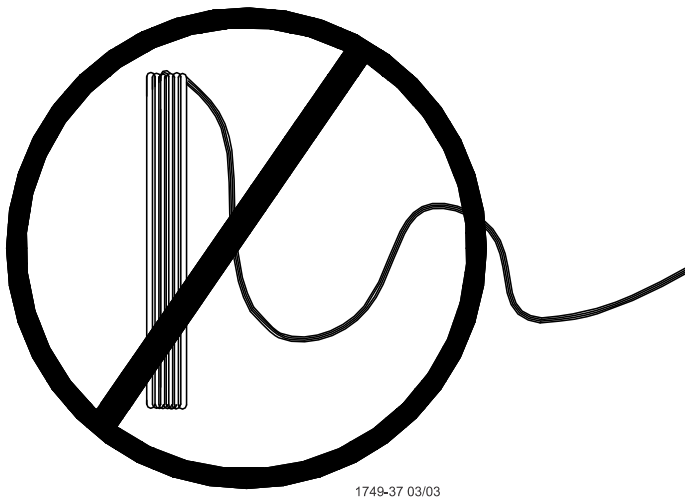


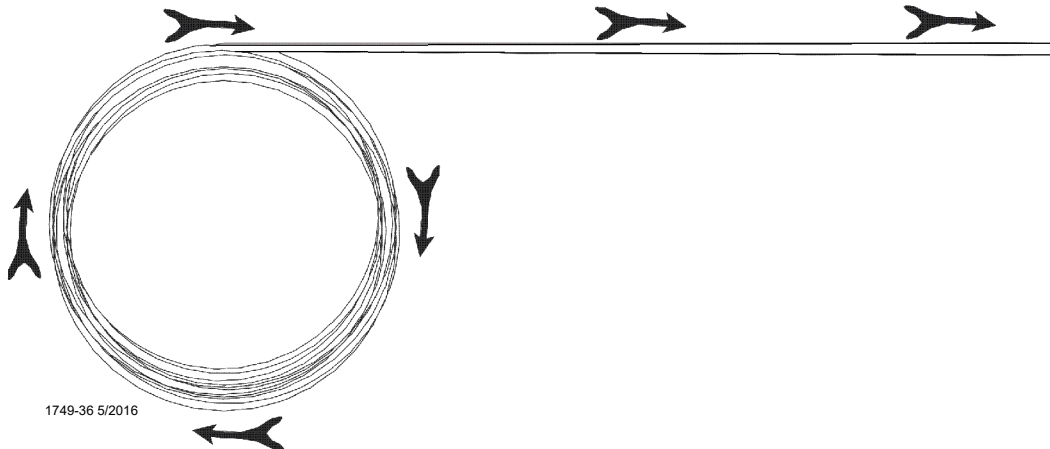
Figure 55.Lay actuator wire behind pivot bracket

Important! Do Not allow the wire to unroll from the side



DO NOT unroll the Actuator Wire from the side of the roll. Doing so will cause Waves and Kinks.

Unroll the Wire as shown to eliminate twist or kinks.



Installing actuator wire:

1. Beginning at the terminal spring bracket or if a pusher pan is used start at that spring bracket. Slide the end of the actuator wire through the two holes in the bracket and through the center of the end spring, **see figure 56**

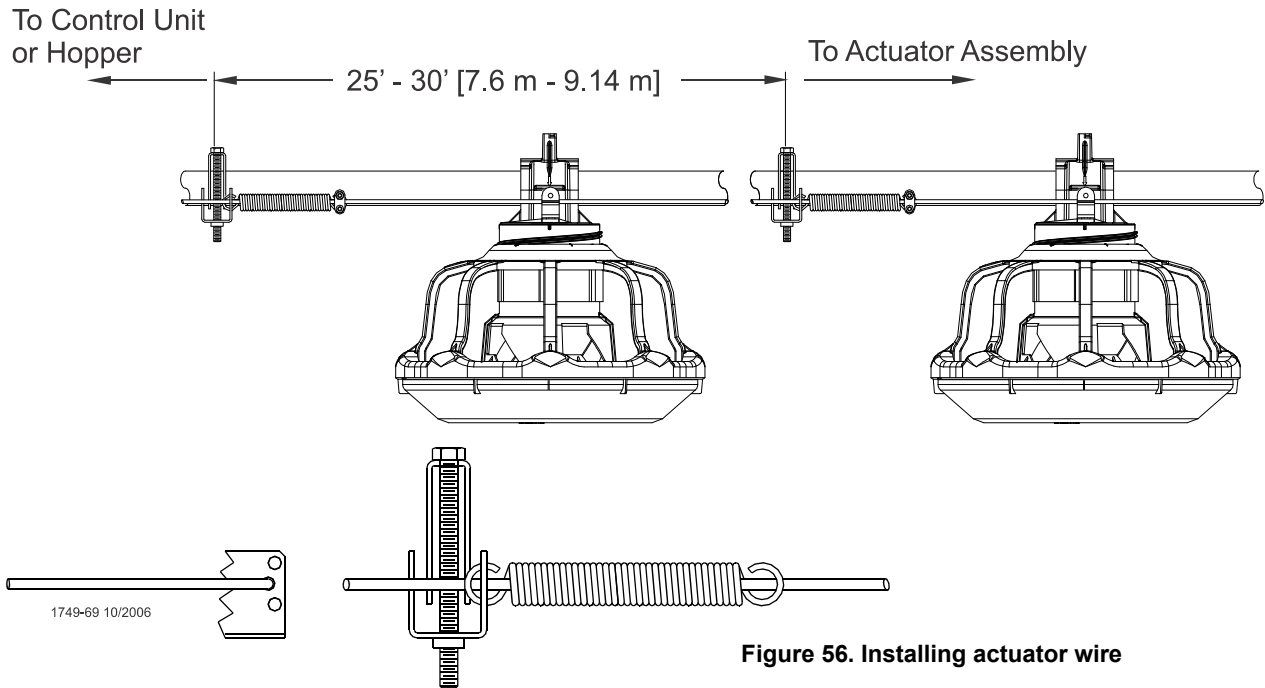


Figure 56. Installing actuator wire

2. Pull the wire through the spring and bracket until you reach the intermediate spring and bracket. Slide the end of the wire through the two holes in the bracket and through the center of the spring.
3. Continue pulling the actuator wire until you reach the actuator. (Lay the unrolled wire behind the pivot brackets, this will help to eliminate slack in the wire.)
4. At the Actuator (ACCU-CLICK)

- Position the actuator in the “Fully Open Brood Gate Position” (**Figure 57.**) if it is not already in the “Fully Open Brood Gate position”.

Feed the actuator wire through the clevis pin on the actuator.

- Allow a minimum of 2" [5.08 cm] of actuator wire to extend past the clevis pin then cut the actuator wire.
- Tighten the set screws on the clevis pins so they clamp down on the actuator wire, (**See Figure 57.**)

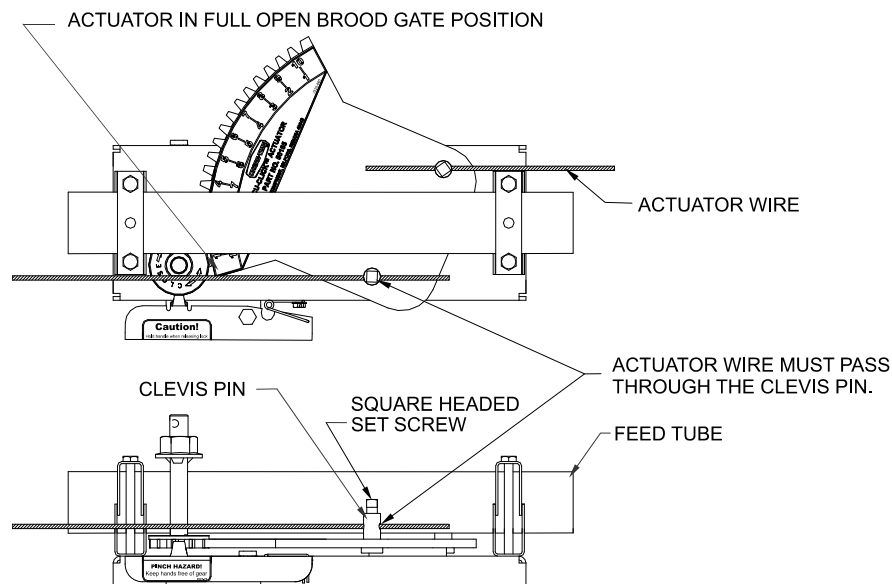


Figure 57. Actuator Wire at ACCU-CCLICK™ Actuator.

5. At the terminal spring bracket end; pull any slack in the actuator wire out from the actuator end, which was clamped in the previous step.
6. Clamp with pliers once slack has been removed from the actuator wire, see figure 58.

Important! Hold both ends of the actuator wire when cutting.

7. Cut the actuator wire allowing approximately 12" of excess wire past the spring bracket.
8. Stretch both of the springs to 14" [35.6 cm].
9. Clamp the springs to the actuator wire using an 1/8 inch cable clamp, see figure 58. Repeat procedure for the remaining actuator wire installation,

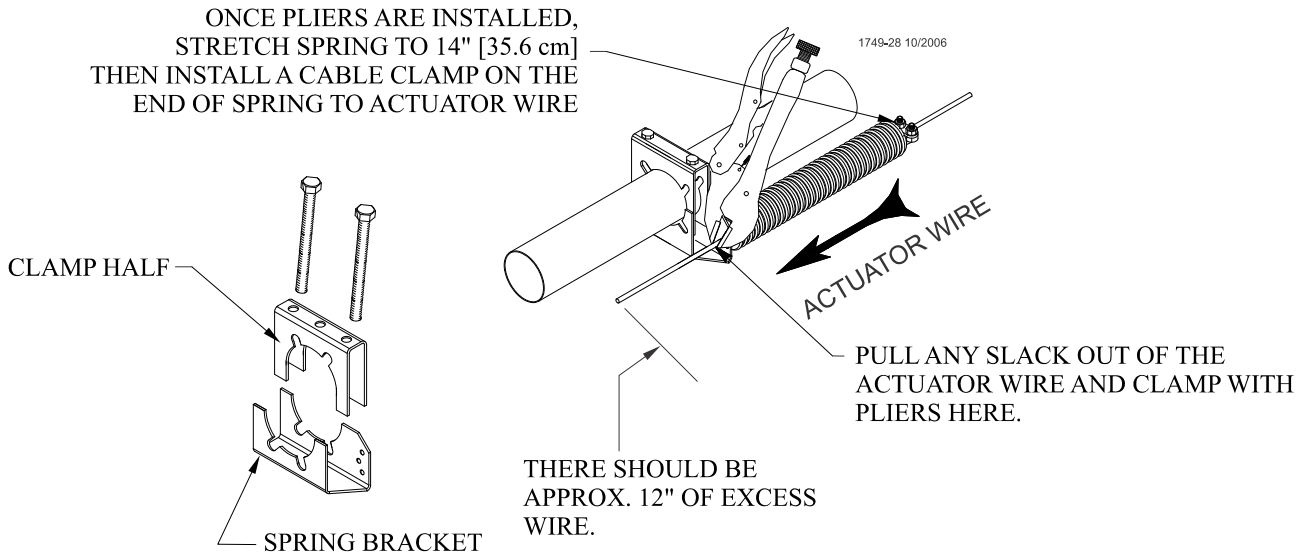


Figure 58. Terminal Bracket

Setting ACCU-CLICK™ Actuator

1. Once all actuators are installed operate actuators to the fully open brood position, **see figure 61.**
2. To set actuator in the fully open brood position turn the actuator handle counterclockwise until the actuator stops.
3. Using the first pan away from the actuator, push the inner cone to the open position. Place the actuator wire between the pivot bracket and pivot clip then tighten the 10-24 screw, **see figure 59.**

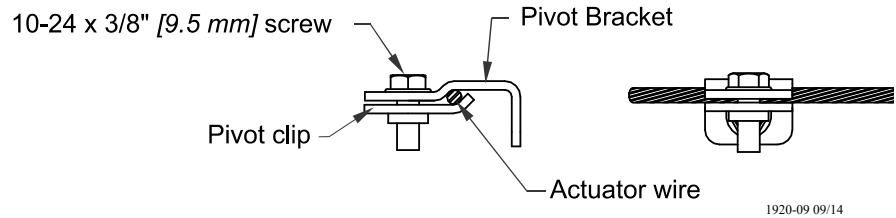


Figure 59. Clamping to actuator wire

4. After the 10-24 screw has been tightened operate the actuator open and closed to check operation.
5. With the actuator in the open position and the brood gate open tighten the 10-24 screw for each pan. With the brood in the open position. Go to the control unit or hopper end to trim the extra actuator wire. Leave **3 inches [7.6 cm]** of excess wire past the spring bracket, **see figure 60.**
6. Repeat for all remaining actuators.

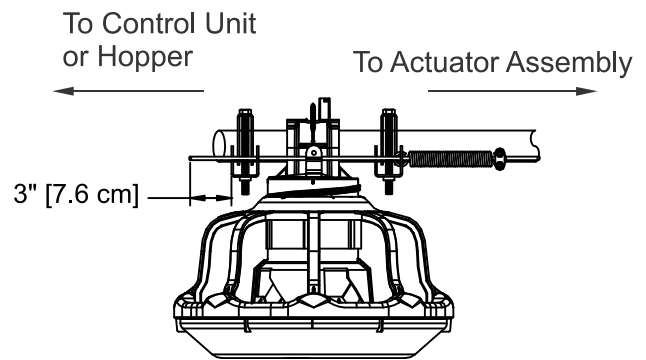


Figure 60. Trim excess actuator wire at control/hopper

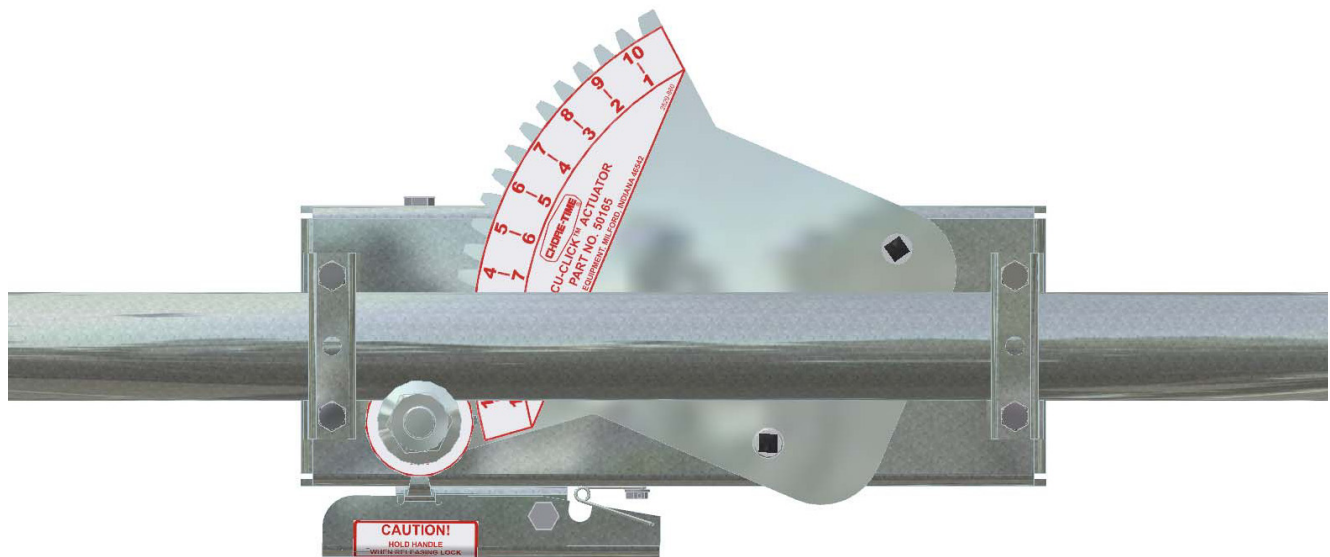


Figure 61. Actuator in Fully Open Brood Position

Mid-Line Control

Mid-Line Control Units are available for the Rev. 8 & 12 Feeders. The Mid-Line Controls are shown in **Figure 62**.

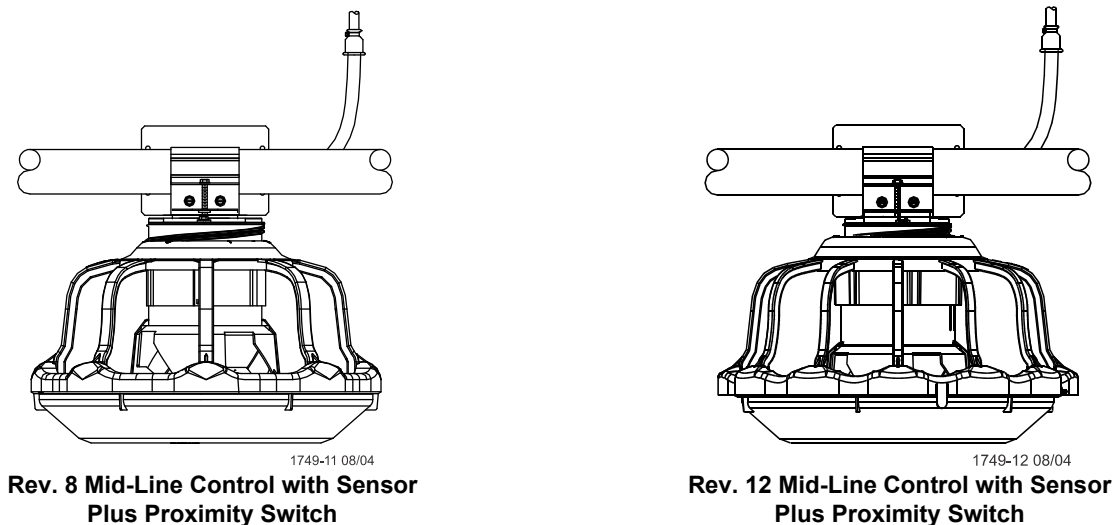


Figure 62. Mid-Line Controls

The Mid-Line Control makes it possible to operate the feeding system when birds are confined away from the End Control Unit. Chore-Time recommends placing the Mid-Line Control Feeder at least 2 pans away from the curtain or partition, **see figure 63**.

- 1. New Feeder Lines:** Leave one feeder pan assembly off the feeder control tube at the point where the Mid-Line Control needs to be placed. The feeder line can be assembled and suspended before attaching the Mid-Line Control; or the Mid-Line 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 Mid-Line Control will be installed.

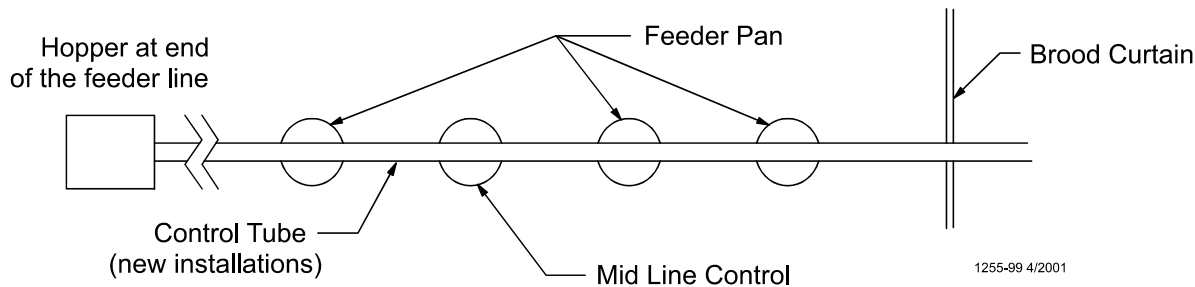


Figure 63. Mid-Line Control Location Diagram

- 2. New Feeder Lines:** Go to step 3.
- Existing Feeder Lines:** Enlarge the outlet hole to approximately 1" [2.5 cm] diameter for the Mid-Line Control, plus enlarge (2) outlet holes in front (to the hopper end) of the Mid-Line Control. Use unibit to enlarge hole size. Be sure there are no burrs inside the tube to catch the auger.

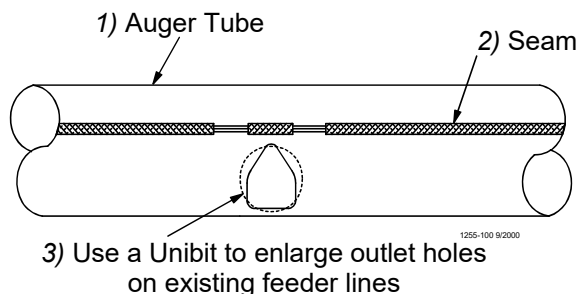
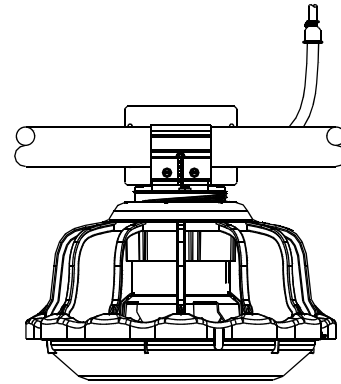


Figure 64. Enlarging Outlet Holes

Sensor Plus Switch:

- a. Assemble the Mid-Line Control over the outlet hole in Tube as shown in **Figure 65**.
 - b. Attach the Mid Line Control to the tube using the clamp on lid, and secure with the 10-24 screw supplied.
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 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.



1749-12 08/04

Figure 65. Installing the Sensor Plus Mid Line Control

Anti-Roost Installation

1. Unroll the bulk anti-roost cable. Note: If the cable is unrolled as shown in **Figure 66**, 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.

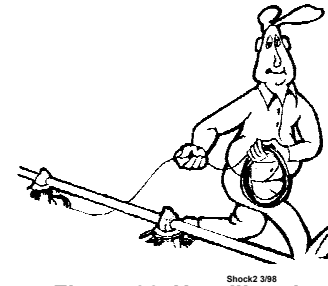


Figure 66. Unrolling the Cable

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 67**.
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 68**.

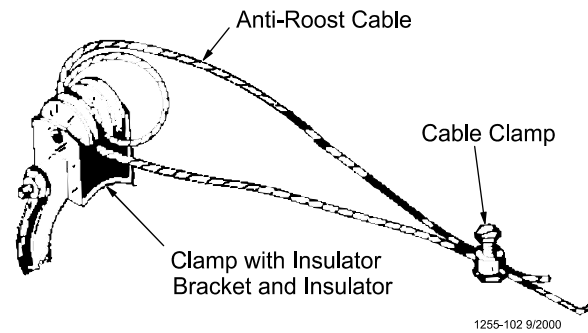


Figure 67. Anti-Roost Cable at the Hopper

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 68**.
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 68**.
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.

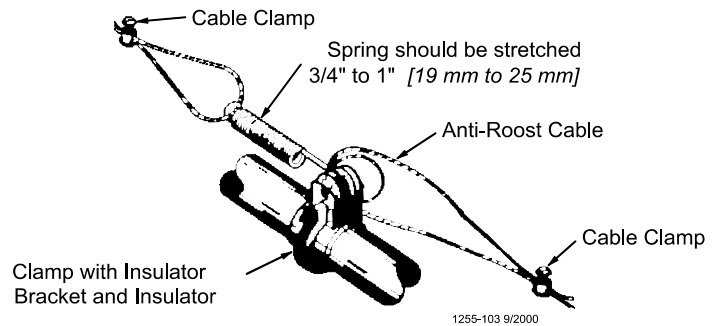


Figure 68. Anti-Roost Cable at the Spring

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 69**.
10. Install the wire form on the control unit insulators. Be sure the guard snaps into the retainers molded into the insulators. See **Figure 69**.

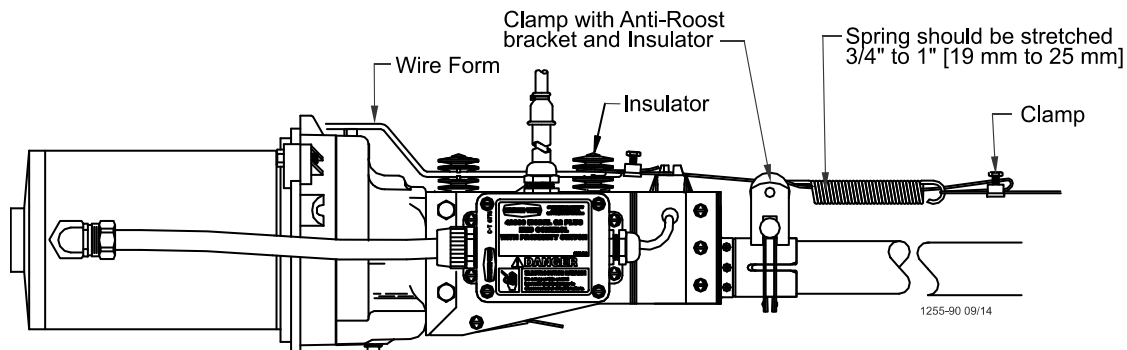


Figure 69. Anti-Roost Installation at the Control Unit

11. Install the Poultry Trainer or Line Charger, as shown in **Figure 70** or **71**.

The Poultry Trainer is used to power all Anti-Roost lines in a house.

The Line Charger is used to power individual Anti-Roost lines in a house. See **Figure 71**.

Route the charger wire 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.

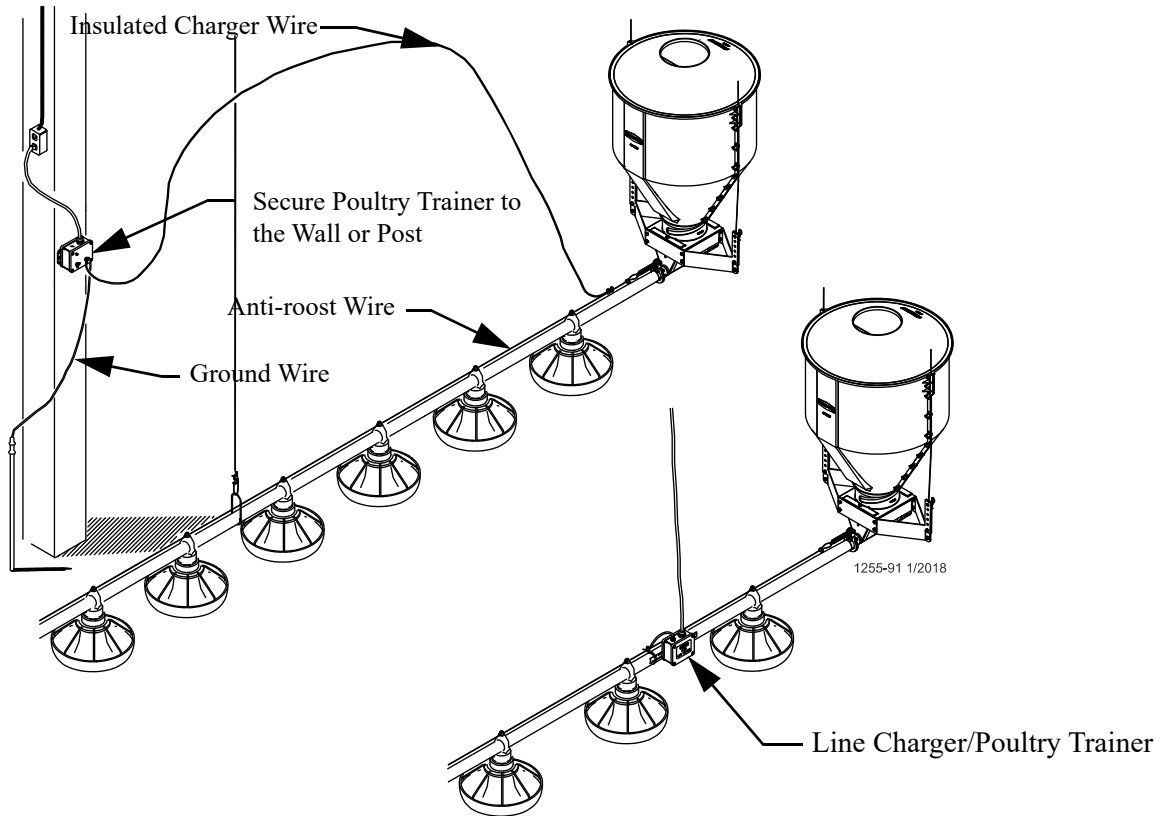


Figure 70. Poultry Trainer Installation

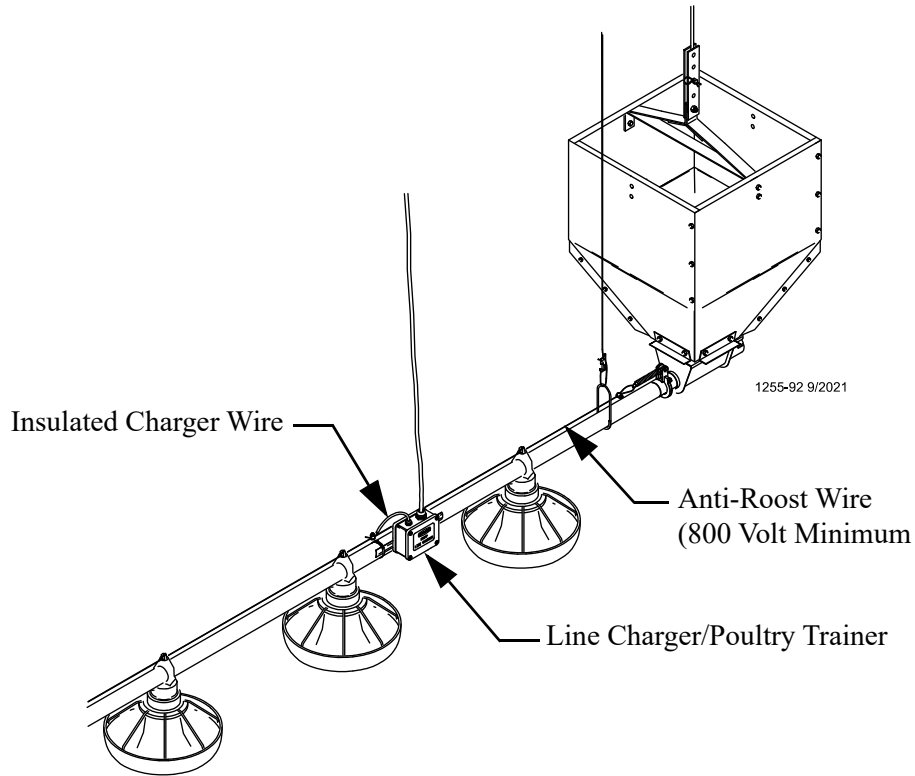


Figure 71. Line Charger Installation

12. 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**.

Electro-guard Operation

The electro-guard chargers should be operated 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.

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 two typical layouts for the feeding system that was determined prior to the installation. Normally if the building is 400' [122 m] or over, a center house hopper set-up is used, see figure 72. For buildings under 400' [122 m], the hopper is placed at one end and the control pan/power unit at the other end, see figure 73.

It is common practice to use partial house brooding during the early days of broiler 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 mid line control pan(s) can be placed on the feeder line.

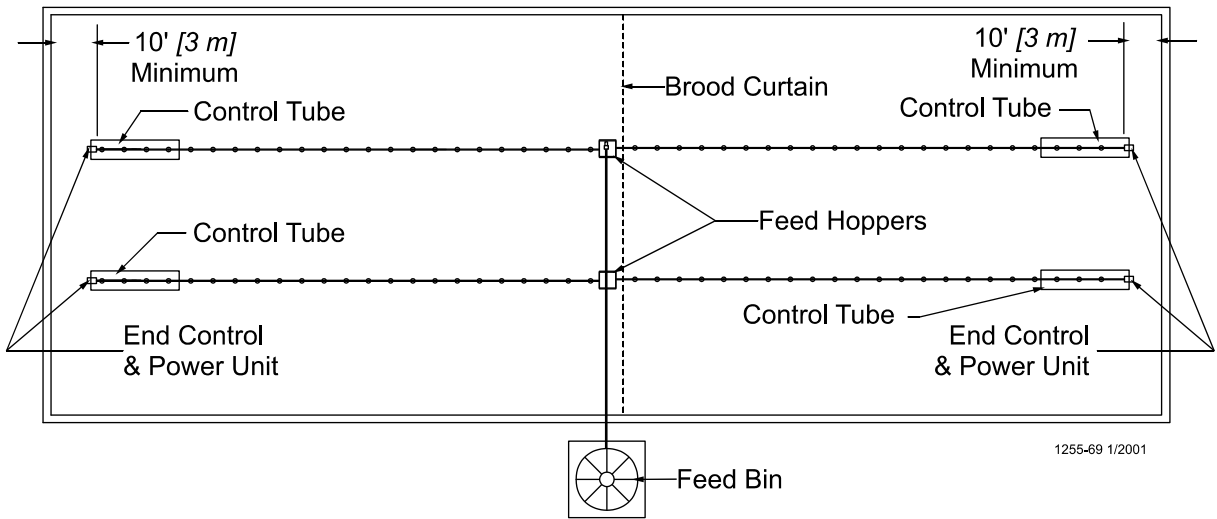


Figure 72. Component location diagram for systems over 400 feet [122 m]. (Top View).

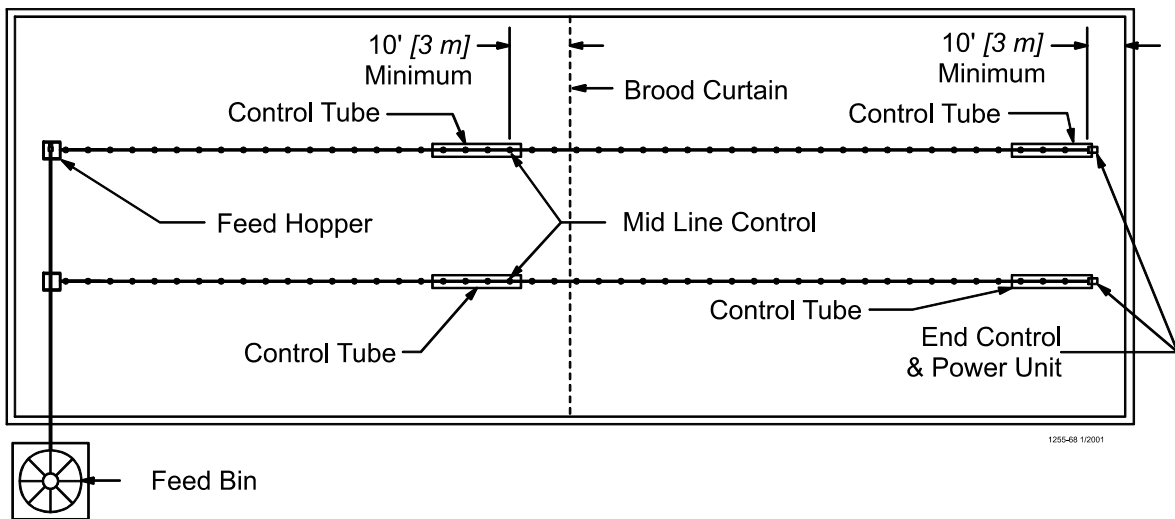


Figure 73. Component location diagram for systems up to 400 feet [122 m]. (Top View).

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

1. Lower feeder lines so the feed pans are resting on the floor and the feed flood windows are completely open. 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.
 2. Apply power to the feeder lines to check the operation. Allow to operate empty for 1-2 minutes.
- NOTE: For feeder lines that have mid line controls, the recommended bypass switch(s) are wired into the system for selection of partial or full house control. Select the switch so the mid line control is functional. As the feeder operates, the feed will stop at the mid line control pan.**
3. 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 1-2" [2.5-5 cm] to allow feed to be conveyed to the feeders.
 4. Once feed begins to be dispensed into the feed hopper(s), manually shut-off the fill system.
 5. 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.
 6. Once the feeder lines have been initially filled with feed, manually dispensing feed in 50 lb. [23 kg] increments will no longer be necessary. **The shut-off slide on the Flex-Auger® fill system must 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 Rev. 8 and 12 Feeders

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 Rev 8 and 12 feeders have a variable brood feed opening which allows the feeder pan, to be filled with a height feed level, to start the young birds. Start young birds with the brood fully open. 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 page 38). 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 brood openings, 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.

The VariBrood should be operated on a time clock. Chore-Time recommends the brood opening be fully open for the first 2 days. The setting should be reduced on the 3rd, 5th, 11th then closed on the 14 to 17 day. Again on the 5 daytime 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 and the birds to waste feed.

As the birds grow and become acclimated to the feeder pans, the feeder will need to be raised to the grow-out position. Before moving the brood opening, it is recommended to allow the birds to eat the feed level down below the feed fin. This will ease the process of the feed flood windows closing properly.

Use the suspension system to raise the feeder(s) line. Raising the feeder will not affect the brood opening. Continue raising the feeder lines until the feed pans just begin to clear the floor or litter.

The VariBrood feature will operate whether the feed pan is on the floor or is suspended.

The feeder should be set on the #4 position for most applications. The adjustment settings are easy to understand and change. Setting numbers are embossed on the top of the grill so they may be easily seen, see figure 74.

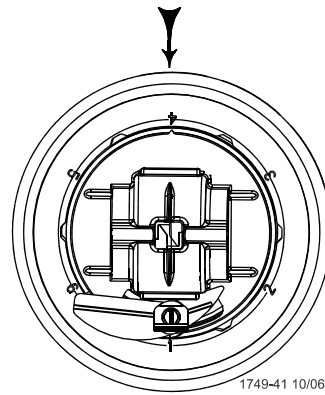


Figure 74. Feeder Pan Assembly adjustment

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 (refer to Figure 75 for pan height information). The operator will learn what performs best for his/her situation with experience.

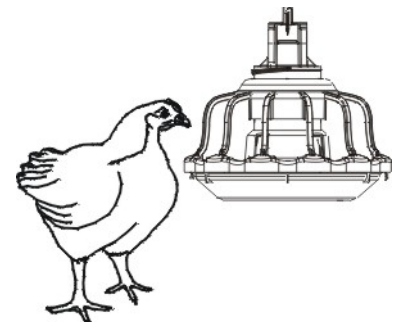


Figure 75. Feeder Pan Assembly height adjustment

REVOLUTION® Feeding System Operation Guide

One - two days prior to housing chicks

1. Lower feeding system so pans are resting on the litter.
2. Completely open all feed windows using winch actuators.
3. Operate feeding system on brood end of building to fill feed pans and chick trays.

Day one - Day 4

1. Observe feed level in feeder pans approximately 6 hours after birds were housed. Activate the feeder control pan manually to allow feeder to refill feed pans (if needed).
2. At day 2, observe feed level in feed pans, if the birds have not activated the control pan(s), do so manually.
3. At day 3-4, close feed windows from setting 1 to 3 (6 clicks of the winch).

Day five - Day 7

1. Depending on feed level and bird activity, close windows from setting 3 to setting 5.

Day 10 – 12

1. If litter under feeders becomes concave and the birds are reaching over to get feed, raise feeder lines to where the pans just clear the litter.
2. Prior to opening the grow-out end of building to move the birds, operate the feeders (windows open).
3. Once the birds have been released to grow end of the building, close feed windows on grow-end feeders to equal the setting of the Brood-end (setting #5).

Day 16

1. Raise feeders so pan/grill edge lip is approximately 4 inches [10.1 cm] off the litter.
2. Close feed windows to setting #7.

Day 18 - 20

1. Close all feed windows

Day 20 – end of flock

1. Raise feeders as needed.

This is a general operation guideline for the REVOLUTION® Feeding System. Bird activity and feed flowability will have a direct effect on the feed level with-in the feeder pans. Operator judgement of actual on site conditions may require modification to the operation guideline.

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 the feed setting of the end control pan be the same as the rest of the feeder pans so the birds activate the feeder (**see page 46 for adjustment of the control**).

The Mid Line control is placed on the feeder line when partial house brooding is desired. It is important the mid line 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 mid line control should be the same as the rest of the feeder pans on the feeder line (**see page 46 for adjustment information**). A toggle switch or disconnect is used to bypass the power to the mid line control. This allows the mid line 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.

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 Rev. 8 and 12 Feeding Systems may be controlled by the #34385 Control Panel or the #34574 Time Clock Control. Refer to the instructions supplied with each control for information.

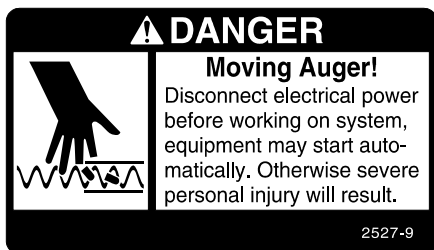
Maintenance

Floor Feeding System Maintenance

The REVOLUTION® Feeder require’s 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 76**.

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

- A. Remove the bottom Pipe Plug to drain the oil. Discard used oil in accordance with local and national codes.
- B. Wipe any debris off the magnet on the bottom Pipe Plug and reinstall. Remove the side Pipe Plug and (top) Vent Plug.
- C. Set the power unit in the horizontal position.
- D. 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.
- E. Install the side Pipe Plug and (top) Vent Plug.

Vent/Oil Fill Plug



1660-22 1/2001

Check the oil level in Gearhead at installation.

Check the oil level every 6 months.

Check the oil level at the side plug if oil is needed use SAE 40W.

Oil capacity for the 2 stage gearhead is 9 oz [266 ml]

Oil capacity for the 3 stage gearhead is 13 oz [384 ml].
The oil should be changed every 12 months.

Figure 76. Gearhead Maintenance

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

SENSOR PLUS™ Sensor Switch Adjustment for Control Units

The SENSOR PLUS™ Pan Half Round Sensor Switch is adjusted at the factory to a sensitivity of .25" [6 mm] from the face of the sensor and a time delay of 15 seconds with the range selector in the "2" position. The time delay adjustment is 0 seconds to 600 seconds.

To adjust the Time Delay: Refer to **Figure 77**.

- For less time — turn Time Delay Adjustment Screw counter-clockwise (Light blinks fast)
- For more time — turn Time Delay Adjustment Screw clockwise (Light blinks slow)

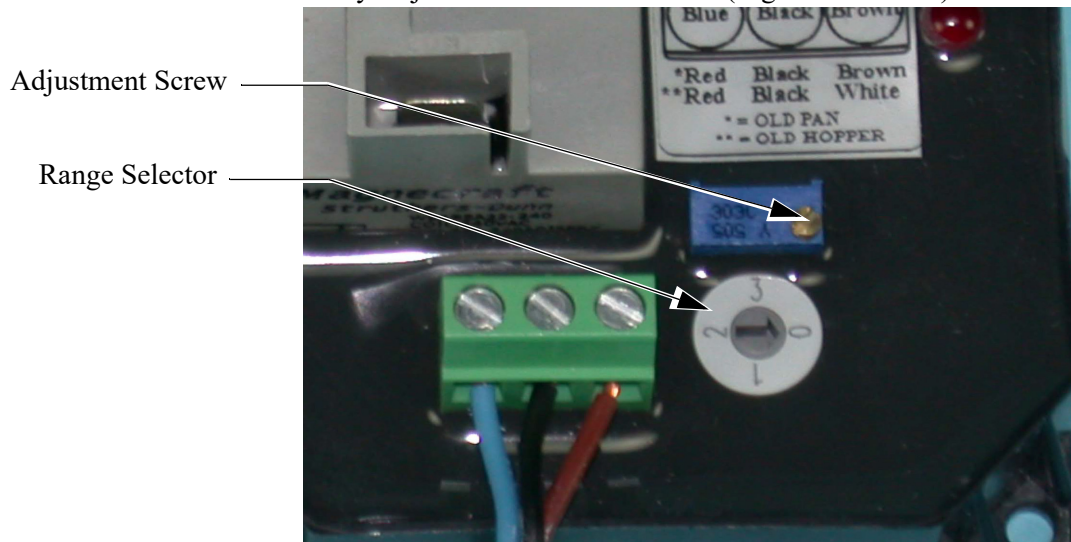


Figure 77. Adjusting the SENSOR PLUS Proximity Switch

Feeder Line

It may be necessary to adjust the actuator system after the first couple flocks are completed.

- Operate the actuator to the full open brood position.
- Ensure all cones are in the full open brood position. Adjust cone brood openings if needed, see Setting actuator on page 35 for details.

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.

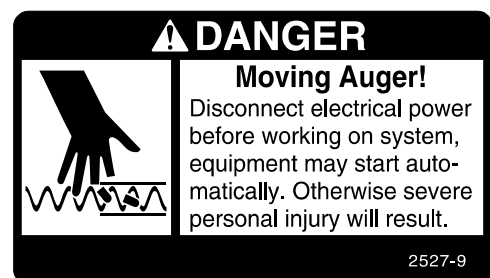
If the system is not to be used for an extended period of time, remove all the feed from the feeder lines and feeder pans.

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.



4. Place a clamp or locking pliers 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 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
2. **DO NOT OVERTIGHTEN THE SET SCREWS.**
3. **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.

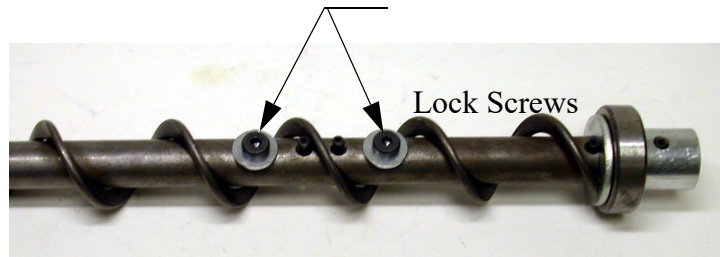


Figure 78. Auger and anchor Bearing Connection

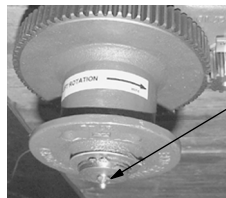
Install the Bearing Retainer and fasten with a tube clamp. Keep the Bearing Retainer flush with the end of the anchor for safety.

Power Lift Winch Maintenance

Refer to **Figure 79.**

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

DO NOT OVER GREASE THE WINCH.



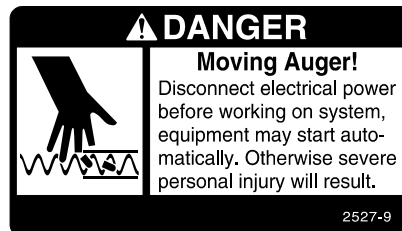
1) Grease the Power Lift Winch every 6 months with 1 to 2 shots of common industrial or automotive grease
DO NOT OVER GREASE THE POWER LIFT WINCH

1660-24 6/2001

Figure 79. Maintenance to the Power Lift Winch

Remove any feed build-up in the Safety Switch Boxes in the Control Units.

It may be necessary to periodically retighten the shocker cable. Be sure to disconnect power to the shocker before servicing the equipment.



Trouble Shooting the Floor Feeding System

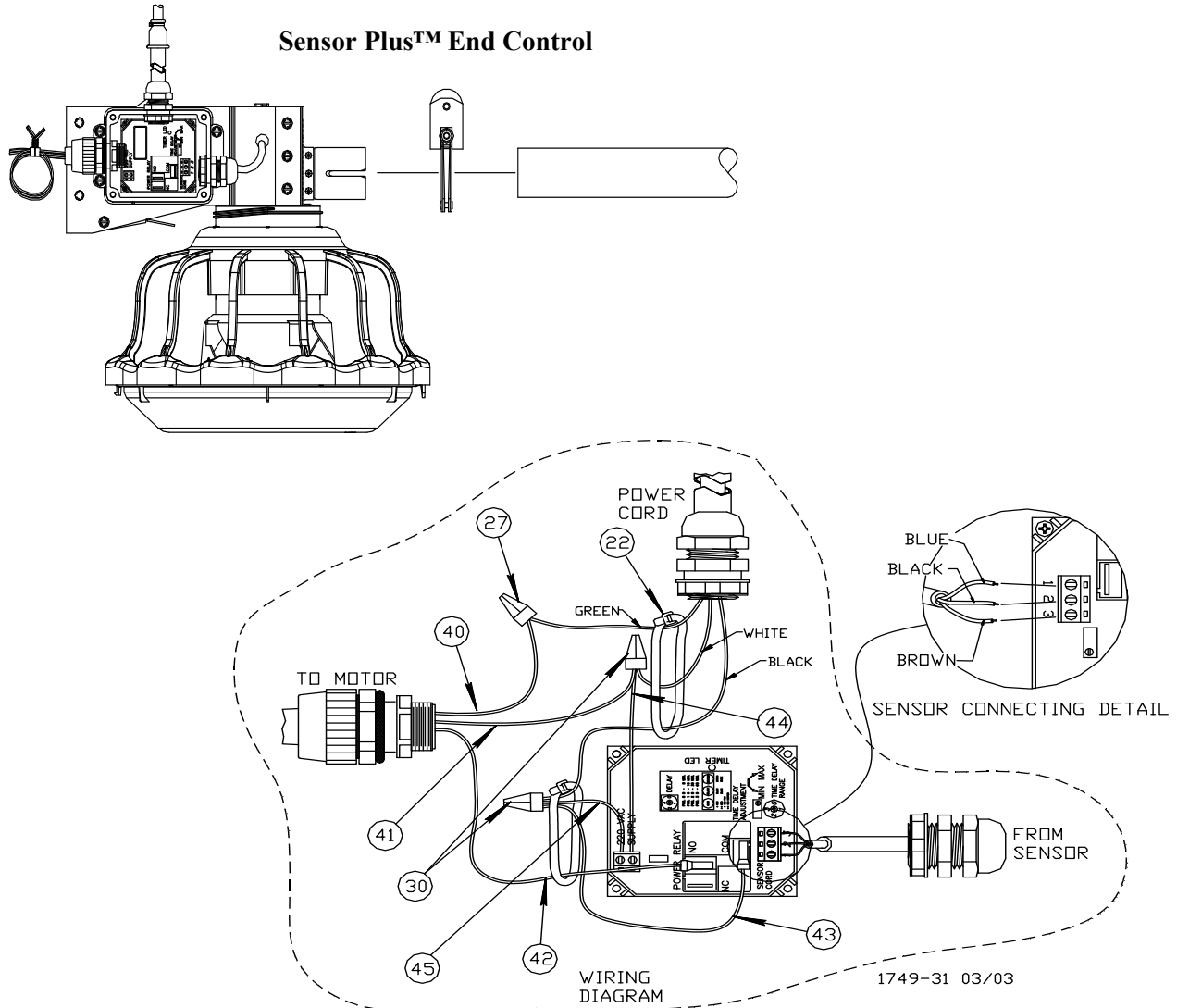
ALWAYS DISCONNECT POWER TO THE SYSTEM WHEN SERVICING OR MAINTAINING THE EQUIPMENT. FAILURE TO DISCONNECT POWER MAY CAUSE INJURY OR DEATH.

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

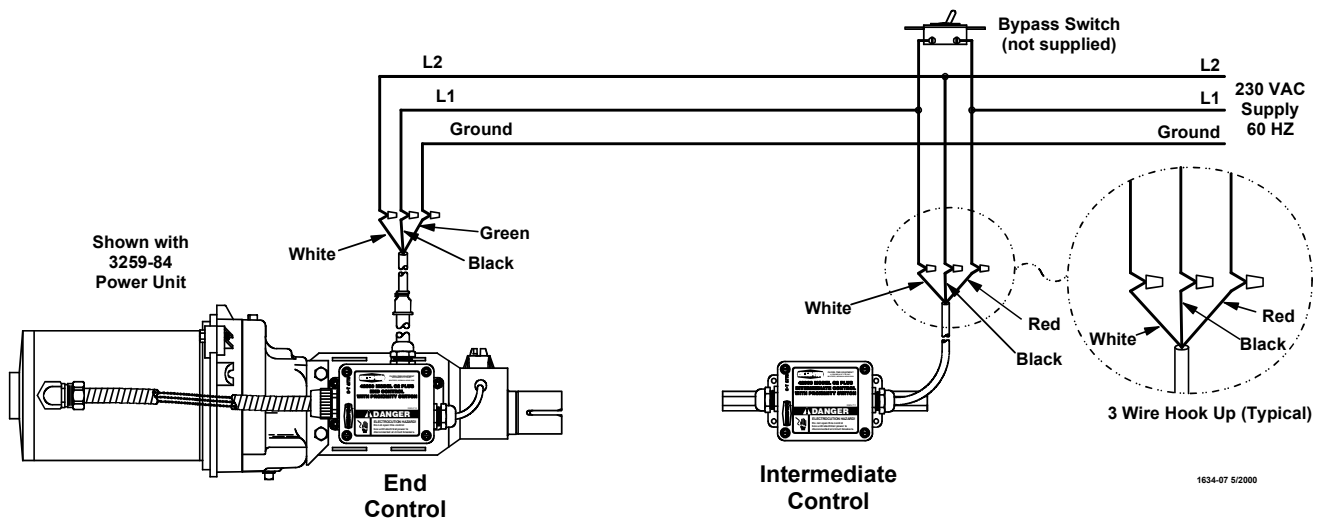
Problem	Possible Cause	Corrective Action
None of the feeder lines will operate	No power supplied to equipment	Replace burned fuses or reset circuit breaker Make sure voltage required is supplied
	Time Clock or relay defective	Replace Time Clock or relay
	Time Clock improperly programmed	Refer to Programming 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
Brood openings will not stay in sync	Loose pivot bracket	Tighten the pivot bracket
Actuator will not move cones	Loose setscrew in pivot pin	Tighten setscrew
One pan will not operate	Loose or missing Pivot bracket	Tighten loose parts
Control pan does not function	Check operation of switch, check time delay check time delay selector	clean off any buildup make sure time delay is working select position 0 for control
Pan will not stay in adjustment	To much pressure or movement in one direction	Reset Brood opening, refer to Setting the Actuator.
Pivots Break	To much pressure on actuator wire	Reset Brood opening, refer to Setting the Actuator.

Wiring Diagrams

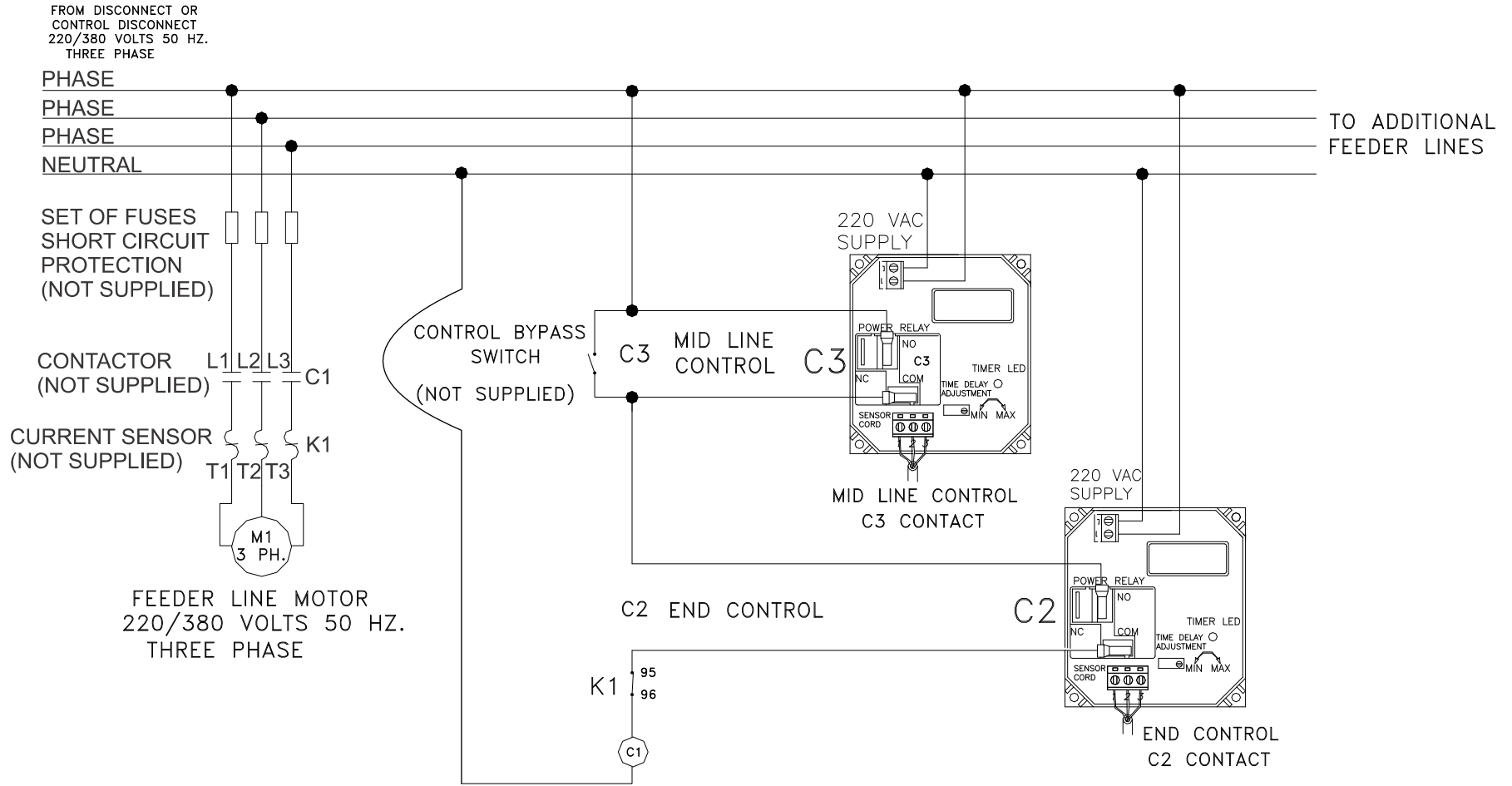
Internal Wiring End Control



SENSOR PLUS™ Control Wiring Diagram



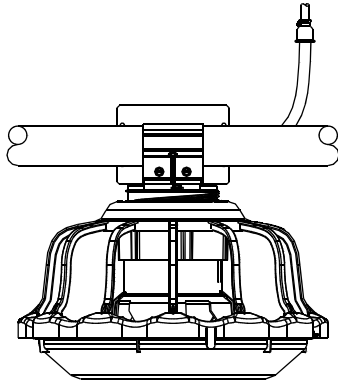
SENSOR PLUS™ Three Phase(Ø) Wiring



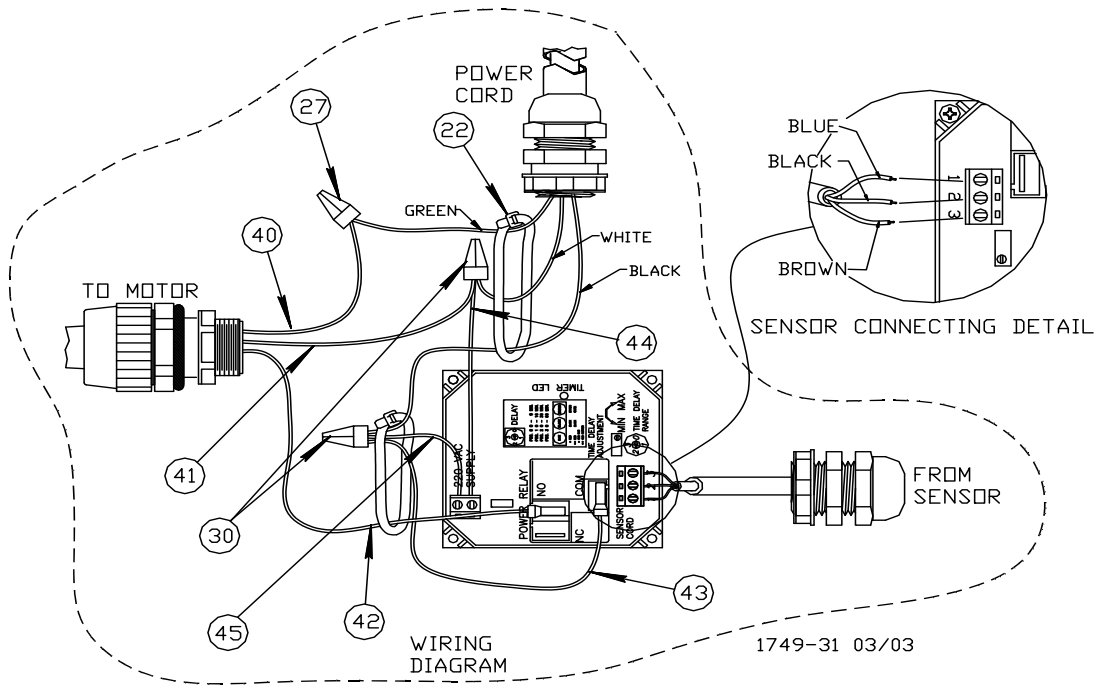
232-62 4/05

Mid Line control internal wiring

Sensor Plus™ Mid Line Control

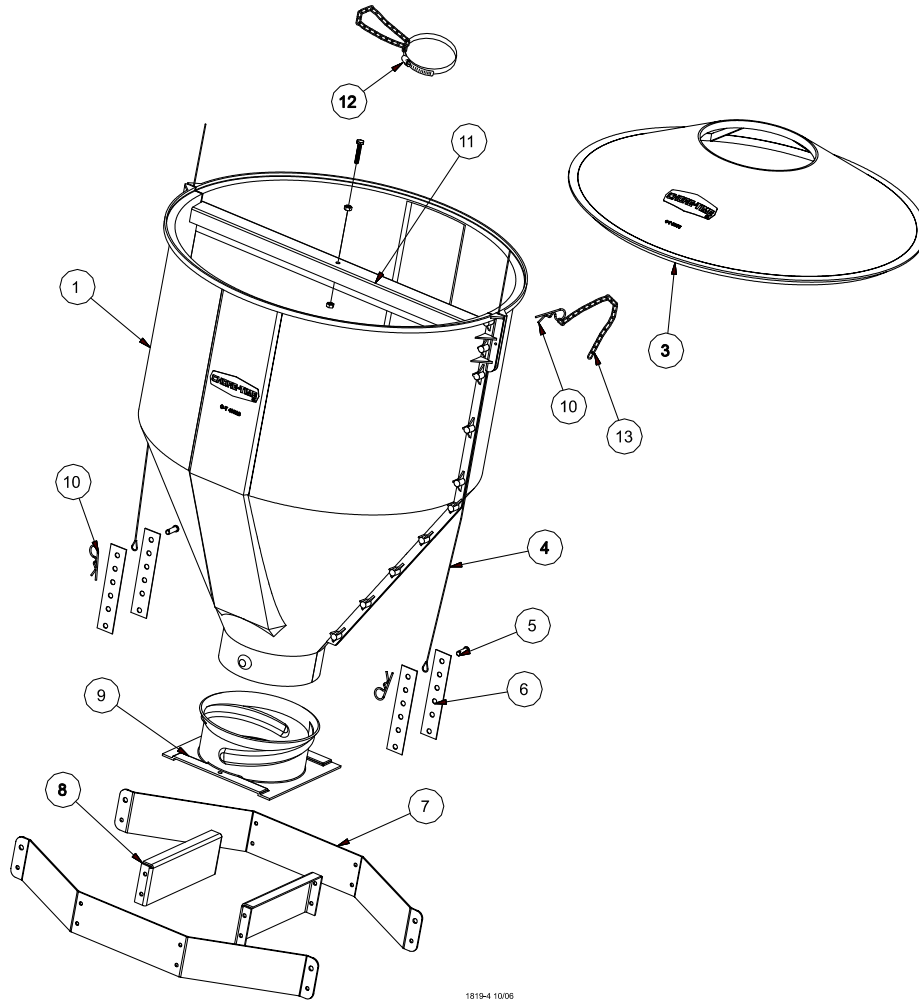


1749-12 08/04



Parts Listing

150# Hopper Components

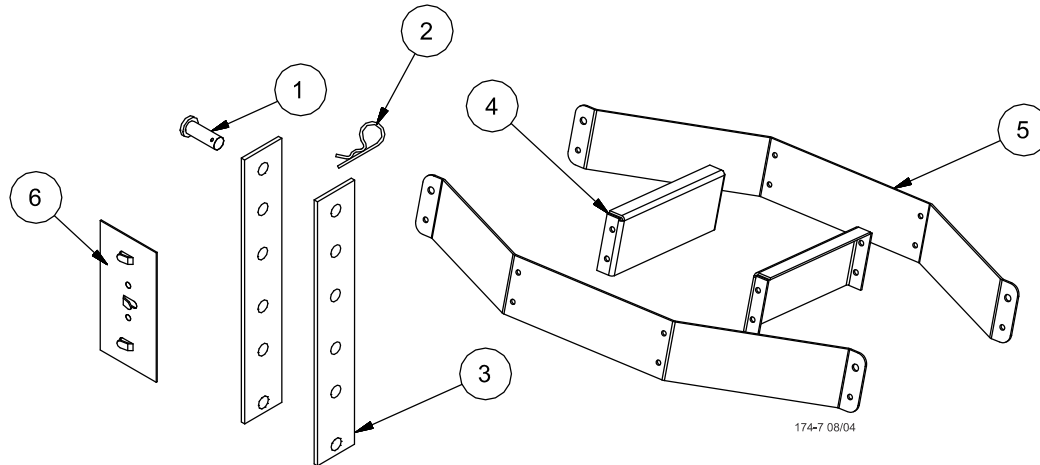


1819-4 10/06

Item	Description	Without Cover	With Cover
		48926	49267
1	Hopper Half	49028	49028
2	--	--	--
3	Cover	--	48675
4	Cable Assembly	2809-3	2809-3
5	Clevis Pin	2797-1	2797-1
6	Adjustment Bracket	2706	2706
7	Suspension Angle	48679	48679
8	Suspension Brace	48680	48680
9	Twist Lock Collar	49041	49041
10	Hairpin	2664	2664
11	Brace	49029	49029
12	Tube Support Assembly	14367	14367
*13	Chain	2128	2128
<p>*Item must be ordered in either 100 ft or 250 ft quantities, 2128-100 is 100 ft and 2128-250 is 250 ft.</p>			

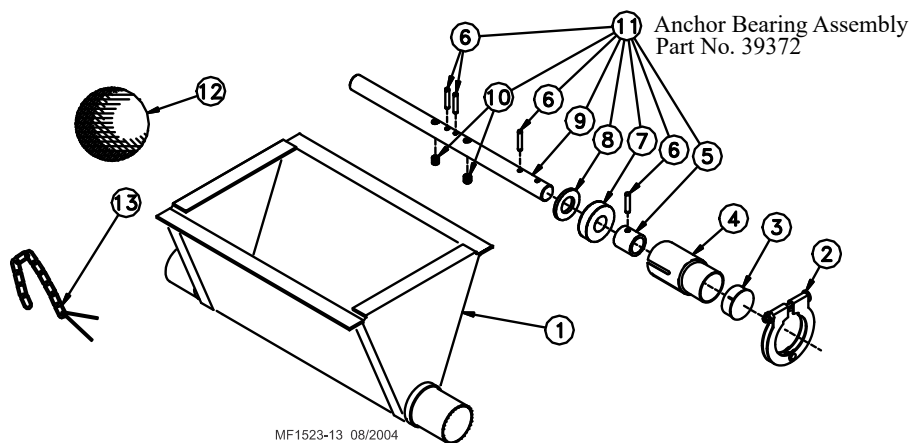
Hopper Mount Bracket (Optional)

Part Number 49358-Hopper Suspension Kit



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 Angle	48679	48679
6	Cable Guide	34573	34573

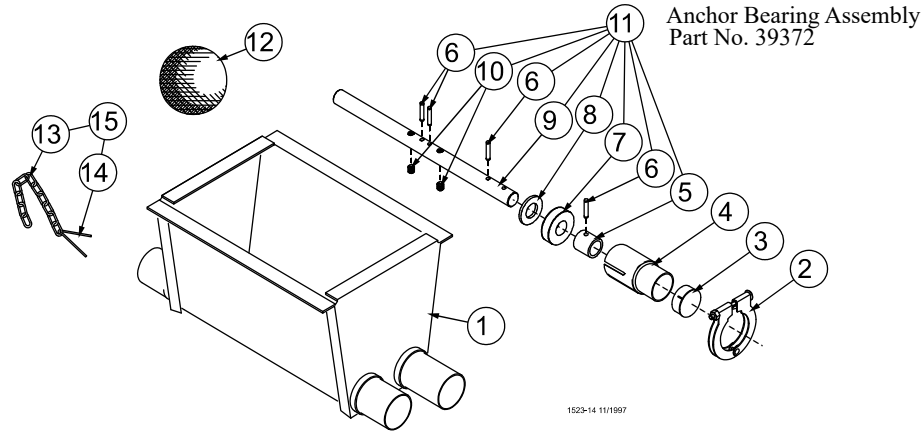
Single Boot Components Part No. 6822



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

Item	Description	Part No.
9	Anchor	38540
10	Setscrew	47867
11	Anchor and Bearing Ass'y	39372
12	Cannonball	3531
13	Latch Pin Ass'y	2683
--	Danger Decal	2527-9

Twin Boot Components Part No. 6824

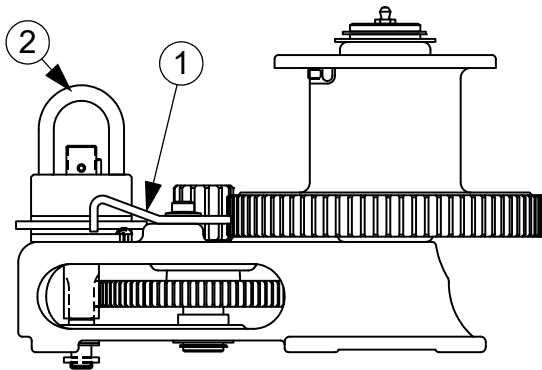


Item	Description	Part No.
1	Boot Weldment	3932
2	Tube Clamp	24063
3	Cap	29373
4	Outlet Tube	4556
5	Sleeve	5648
6	3/16 x 1" Pin	2960-1
7	Bearing	2689
8	Washer	2955-14
9	Anchor	38540

Item	Description	Part No.
10	Setscrew	47867
11	Anchor and Bearing Ass'y	39372
12	Cannonball	3531
13	Latch Pin Ass'y	2683
--*	Jumper Wire Kit	5360
--	Danger Decal	2527-9

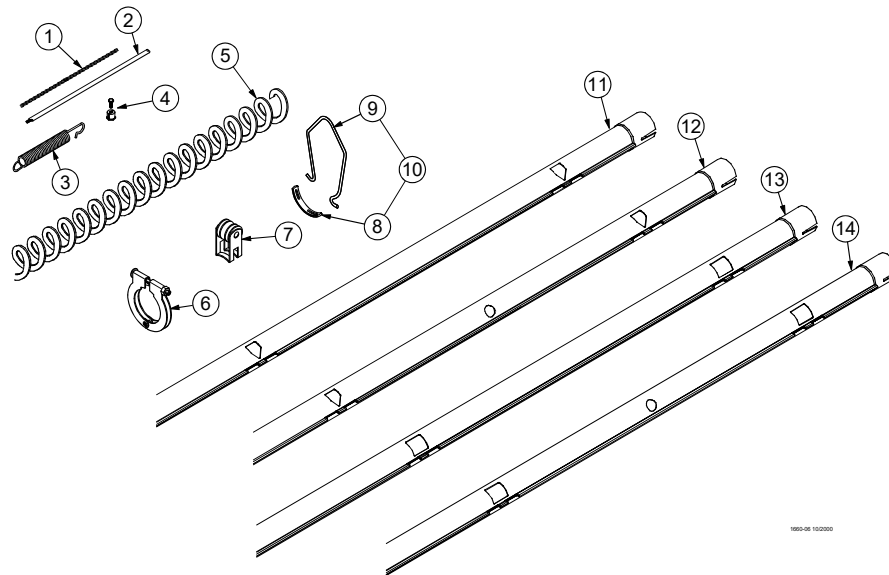
*The Jumper Wire Kit includes an insulated piece of High-Voltage Wire (part no. 28994) and (2) cable clamps.

Power Winch (Part No. 47687)



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

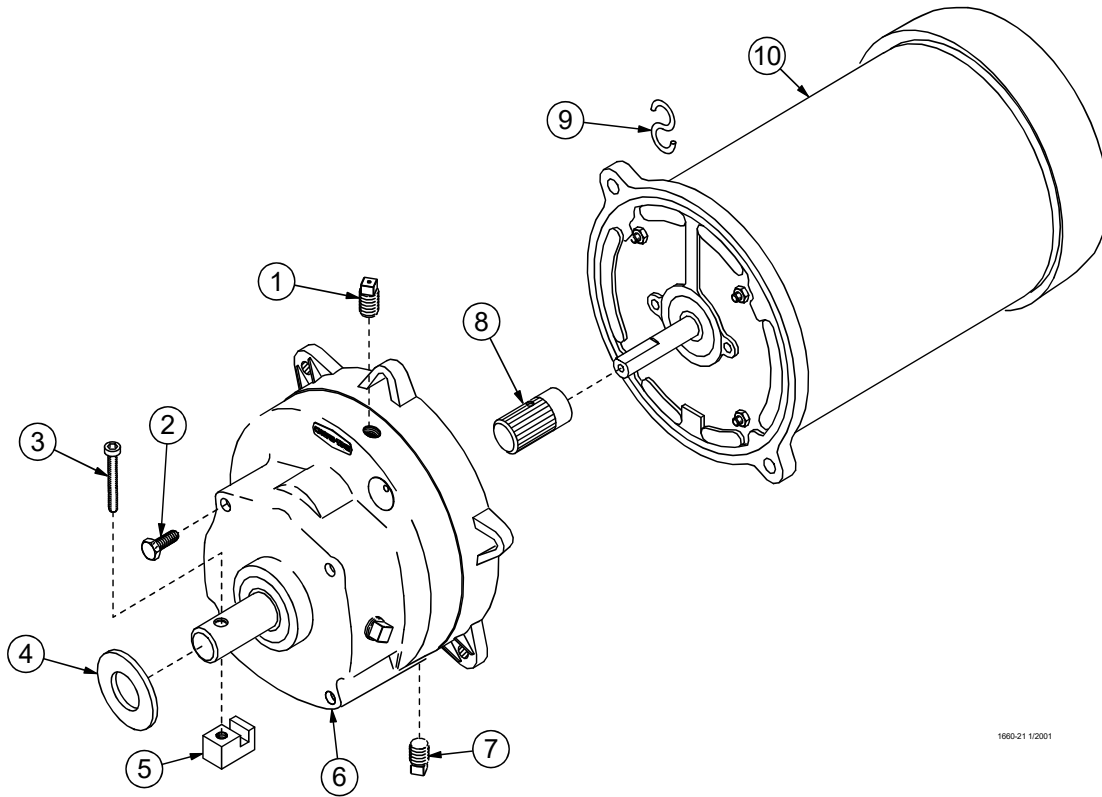
Feeder Line Components



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	7297
9	Hanger Strap	7298
10	Hanger Kit	7299
11	Standard Feeder Tube-1 3/4" Roll Form - 9', 4 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-1 3/4" with Chick Holes (EZ. Holes) - 9', 4 Hole, 4 EZ. Holes - 10', 4 Hole, 4 EZ. Holes - 12', 4 Hole, 4 EZ. Holes - 12', 5 Hole, 5 EZ. Holes - 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-1 3/4" Roll Form - 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-1 3/4" with Chick Holes (EZ. Holes) - 9', 4 Hole, 4 EZ. Holes - 10', 4 Hole, 4 EZ. Holes - 12', 4 Hole, 4 EZ. Holes - 12', 5 Hole, 5 EZ. Holes	43006-15 43006-16 43006-17 43006-18

*Round up to the nearest 10'. Auger lengths from 50' to 500'. Example: 6820-200 would be a 200' roll of 6820 Auger.

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	3523	3523	3523	3523	3523
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	2805	2805	2805	2805	2805
10	Motor	4229	5703	5977	28031	24624
--	Cord Assembly	----	----	28028	----	----
--	Connector (90 Degree)	----	----	4228	----	----

Power Unit Assembly Part Numbers:

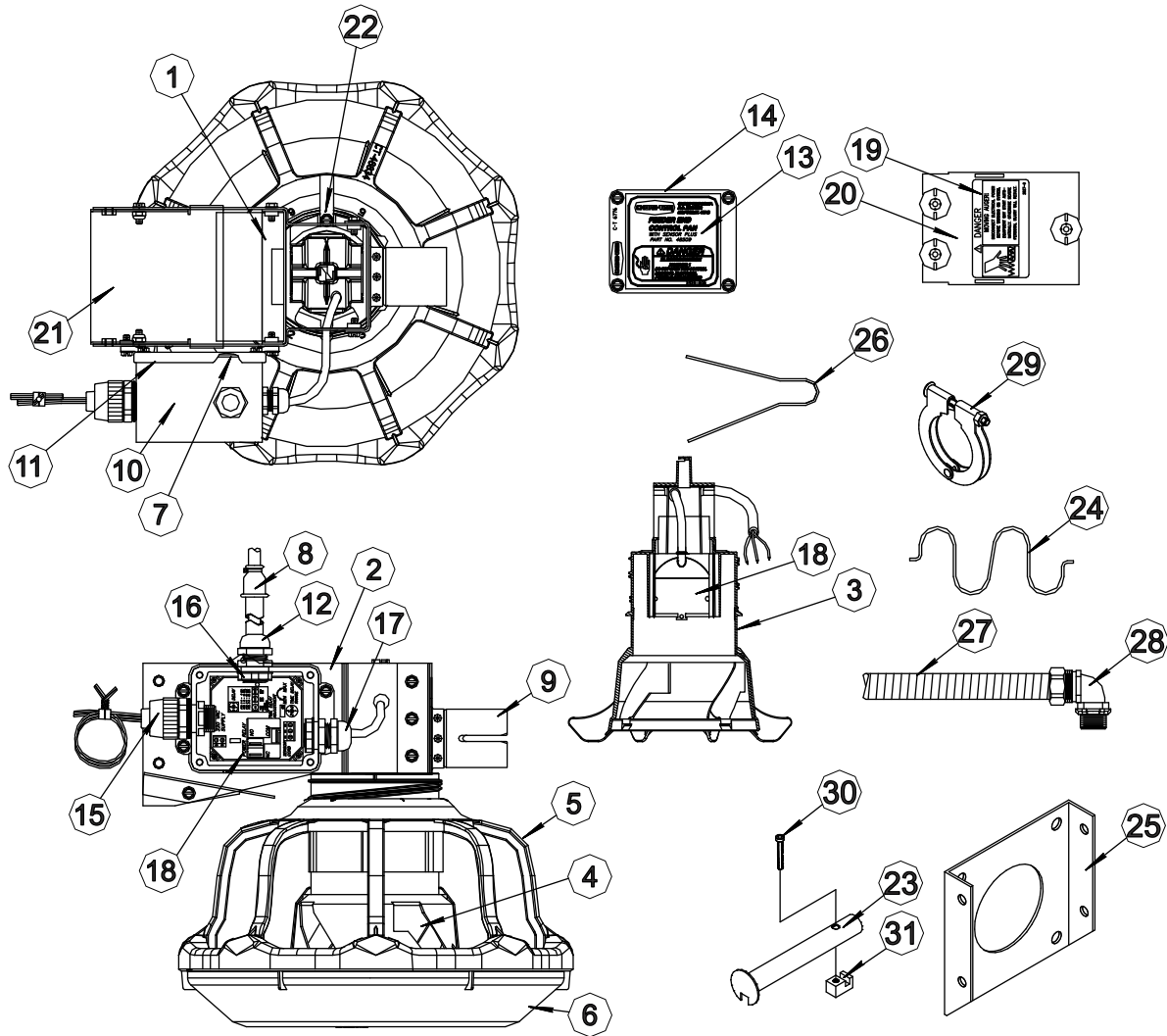
Part No.	HP	RPM	Phase	Hz	Voltage
3259-84	1/3 HP	348 RPM	Single Phase	60 Hz	230
3259-85	1/2 HP	348 RPM	Single Phase	60 Hz	230
3259-98	1/2 HP	348 RPM	Single Phase	50 Hz	230
3259-100	1/2 HP	348 RPM	Three Phase	50 Hz	220/380
3259-128	1/2 HP	348 RPM	Three Phase	60 Hz	230

This page left blank intentionally....

Sensor Plus End Control

Part No. 48047 Rev. 12 END CONTROL

Part No. 48509 Rev. 8 END CONTROL

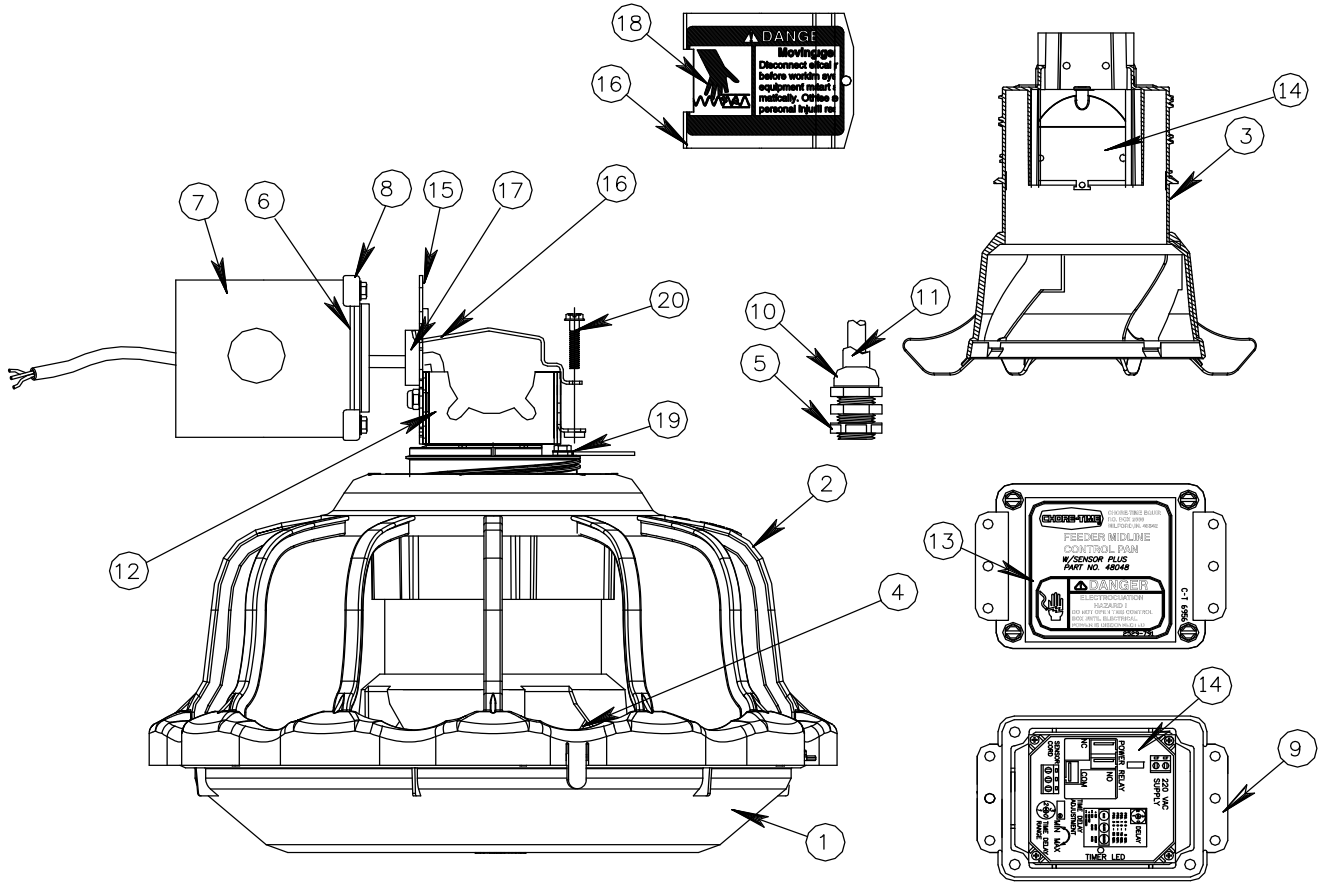


Item	Description	Rev. 12 Feeder End Control (Part # 48047)	Rev. 8 Feeder End Control (Part #48509)
1	Support Bracket	48081	48081
2	Feeder Control Body	48080	48080
3	Machined Support Cone	48490	48490
4	Machined Inner Cone	48533	48533
5	Feeder Grill	46837	46834
6	Feeder Pan	46840	46840
7	Switch Box Gasket	6777	6777
8	Cord Assembly	4999-100	4999-100
9	Tube Weldment	48082	48082
10	General Purpose Box	42627-12	42627-12
11	Terminal Box Mount Cover	6956	6956
12	Liquid Tight Connector	24685	24685
13	End Contrl Decal	2529-790	2529-808
14	Switch Box Cover	6776	6776
15	Liquid Tight Connector	26980	26980
16	Plastic Conduit Nut	43662	43662
17	Liquid Tight Connector	23779	23779
18	Pan Sensor	48200	48200
19	Rotation Danger Decal	2527-9	2527-9
20	Insulator Cover	48491	48491
21	End Control Bottom Cover	48086	48086
22	Lock Arm Control	48525	48525
23	Drive Tube Weldment	44794	44794
24	Spring Lock	48511	48511
25	Anchor Plate	4188	4188
26	Anti Roost Guard	2798	2798
27	1/2" Plastic Conduit Pipe	26982-1	26982-1
28	1/2" Liquid Tight Connector	23810	23810
29	End Control Hardware Kit	43233	43233
30	1/4-20 x 1.75 Socket Head Screw	5083-8	5083-8
31	Drive Block	4642	4642

Sensor Plus Mid Line Control

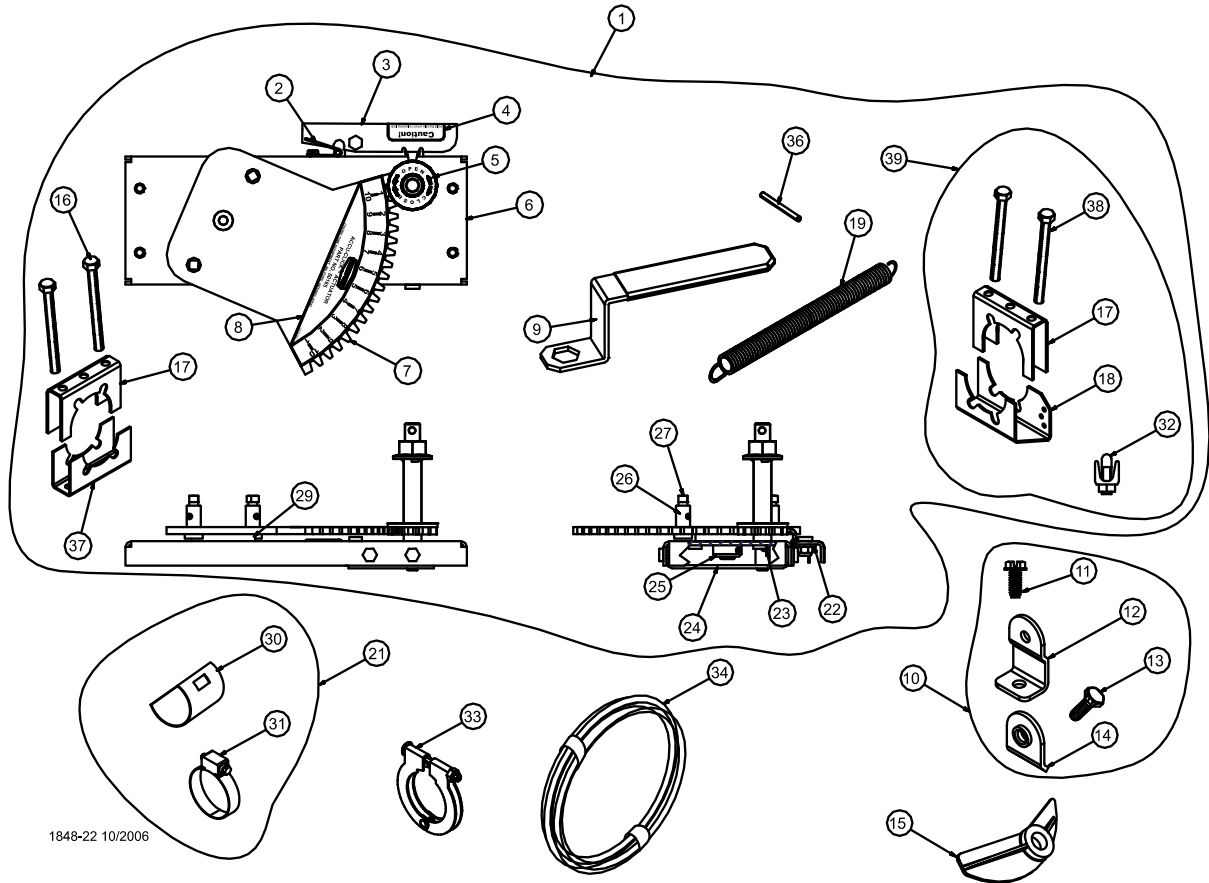
Part No. 48048 Rev. 12 MID LINE CONTROL

Part No. 48510 Rev. 8 MID LINE CONTROL



Item	Description	Rev. 12 Mid line Control (Part no. 48048)	Rev. 8 Mid Line Control (Part no. 48510)
1	Feeder Pan	46840	46840
2	Feeder Grill	46837	46834
3	Machined Support Cone	48492	48492
4	Machined Inner Cone	48533	48533
5	Conduit Lock Nut	43662	43662
6	Swich Box Gasket	6777	6777
7	General Purpose Box	42627-1	42627-1
8	Machined Mounting Cover	48503	48503
9	Mounting Cover	6956	6956
10	Liquid Tight Connector	24685	24685
11	Cord Assembly	4999-103	41999-103
12	Mid Line Control Body	48087	48087
13	Mid Line Control Decal	2529-791	2529-809
14	Pan Sensor	48200	48200
15	Rear Panel	48088	48088
16	Mid Line Control Cover	48089	48089
17	Gasket	6968-1	6968-1
18	Rotation Danger Decal	2527-9	2527-9
19	Control Lock Arm	48525	48525
20	#10-24 X 1.25 Screw	4416-9	4416-9

50165 ACCU-CLICK™ System

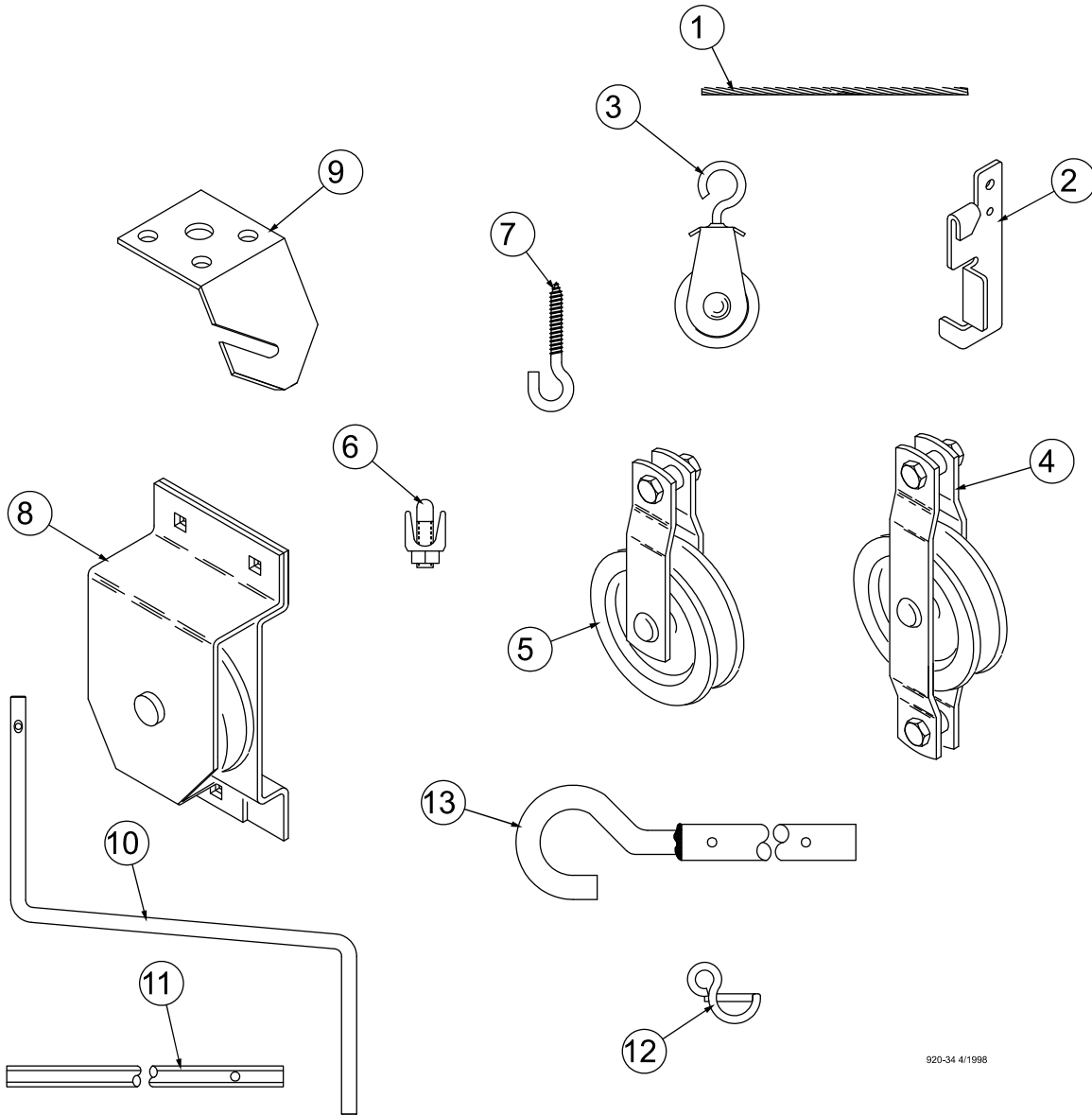


1848-22 10/2006

Item	Part No.	Description
1	50165	ACCU-CLICK Actuator Assembly
2	4976	Torsion Spring
3	50188	Pawl
4	2525-75	Pawl Decal
5	2526-468	Input Shaft Decal
6	50185	Frame Base
7	50186	Intermediate Gear/Shaft WLDT
8	2529-860	ACCU-CLICK Decal
9	50264	Wrench
10	50705	Pivot Bracket Package
11	6980	#10 x 3/4" Twin Helix Screw
12	50545	Pivot Bracket
13	4416-7	10-24 x 3/8" Screw
14	50546	Pivot Clip
15	50541	Cover Washer
16	4404-26	1/4-20 x 3.25 Hex Bolt
17	48487	Half Clamp
18	49958	Spring Support Bracket
19	24302	Spring
20	---	----

Item	Part No.	Description
21	14585	Tube Closure Kit
22	50187	Pawl Mount
23	4129-1	Grooved Pin
24	50189	Pinion Support Plate
25	34558	Set Collar
26	50193	Pivot Pin
27	5095	5/16-18 SQ HD Set Screw
28	50160	Pinion Gear/Shaft WLDT
29	2955-60	Pivot Washer
30	9126	Tube Closure Kit
31	3527	Adjustment Clamp
32	14898	1/8" Cable Clamp
33	24063	Tube Clamp
34	48530	.125 Dia. Wire (500' roll)
35	46298	1/4-20 Serrated Flange Nut
36	2960-9	3/16 Roll Pin
37	50184	Actuator Clamp Base
38	4404-24	1/4-20 x 3.0 Hex Bolt
39	50722	Actuator HDWR Pkg
--	---	----

Miscellaneous Suspension Components



920-34 4/1998

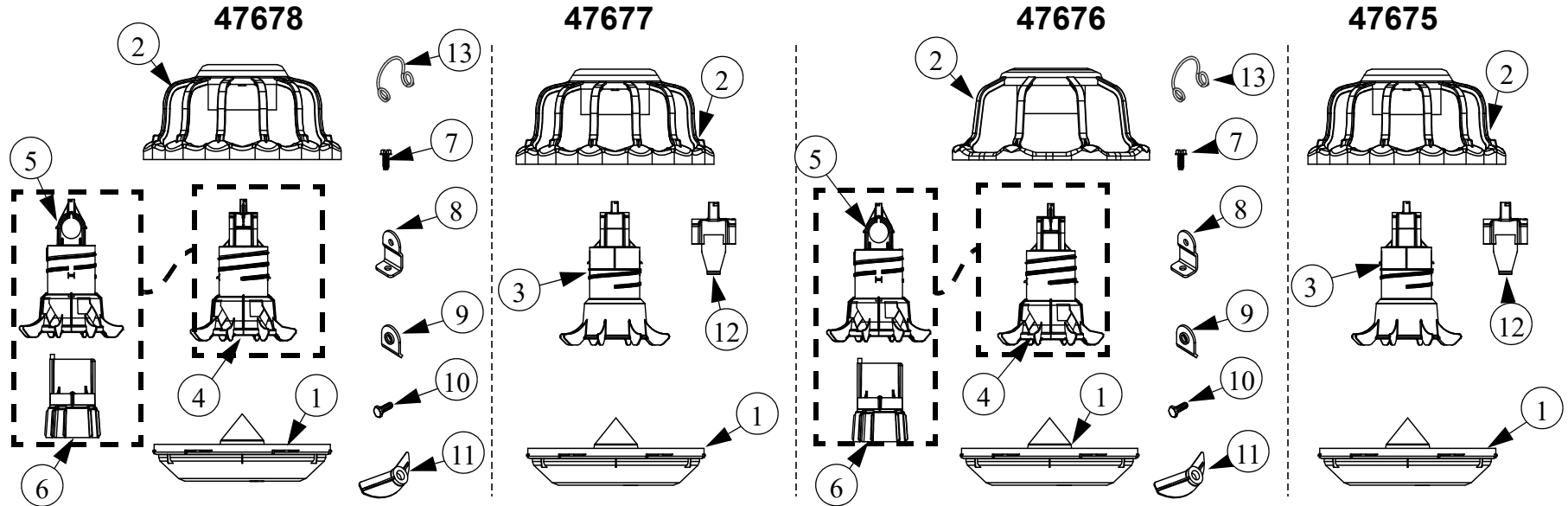
Item	Description	Part No.
1	3/32" Cable 3/16" Cable 1/8" Cable	4973 1213 27975
2	Cable Lock	14337
3	Pulley with Swivel	3004
4	Double Eye Pulley	2501
5	Pulley	2500
6	3/16" Cable Clamp 1/8" Cable Clamp	732 14898
7	Standard Screw Hook Large Screw Hook	1214 2041

Item	Description	Part No.
8	Pulley Assembly	28429
9	Suspension Bracket Suspension Bracket with Screws	28550 28832
10	Handle Shank	3148
11	Drill Adapter Shaft	3151
12	Winch Handle Pin	3761
13	Winch Drive Tube (4') Winch Drive Tube (8') Winch Drive Tube (2')	2884-1 2884-2 2884-4
14	Telescoping drive handle 5 to 8 foot	47638

Item 10 and Item 12 may be ordered as a kit under part no. 2885.

Item 11 and Item 12 may be ordered as a kit under part no. 2886.

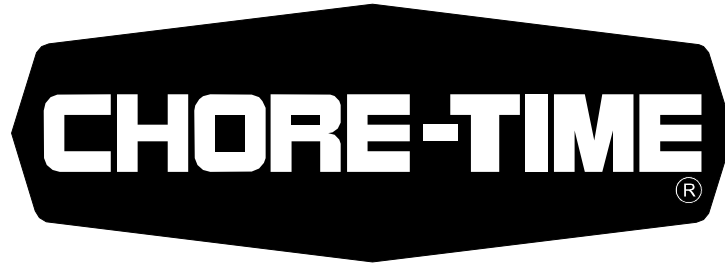
Feeder Components



MF2441-011 5/2016

Item	Description	47678 Rev. 12 Spoke Feeder with VariBrood	47677 Rev. 12 Spoke Feeder Non Brood	47676 Rev. 8 Spoke Feeder with VariBrood	47675 Rev. 8 Spoke Feeder Non Brood
1	Feeder Pan	46840	46840	46840	46840
2	Feeder Grill	46837	46837	46834	46834
3	Support Cone	--	46835	--	46835
4	Adjustment Cone Ass'y	50698	--	50698	--
5*	Machined Inner Cone	50697	--	50697	--
6*	Machined Outer Cone	46838	--	46838	--
7*	#10 x.75 Twin Helix Screw	6980	--	6980	--
8*	Pivot Bracket	50545	--	50545	--
9*	Pivot Clip	50546	--	50546	--
10*	#10-24 x .38 Screw	4416-7	--	4416-7	--
11*	Cover Washer	50541	--	50541	--
12	Repair Top	--	47632	--	47632
13	Tube Wire Clip	55649	--	55649	--

*Included in 50698 (Item 4) Inner and Adjusting Cone Package



MADE TO WORK.

BUILT TO LAST.®

Revisions to this Manual

Page No.	Description of Change	ECO
54	Was 2883 Winch	35577
Various	Updated graphics	

**For additional parts and information, contact your nearest Chore-Time distributor or representative.
Find your nearest distributor at: www.choretime.com/contacts**

CTB, Inc.
PO Box 2000
Milford, Indiana 46542-2000 USA
Phone (574) 658-4101
Email: choretime@choretime.com
Internet: www.choretime.com