

Cage Free ULTRAFLO[®] Feeding System

Installation and Operators Manual

Installation and Operators Manual



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

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Chore Time Limited Warranty

Chore-Time Group, a division of CTB, Inc. (“Chore-Time”) warrants the new CHORE-TIME Floor Feeding 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.

Component Part	Extended Warranty Period
RXL Fan (except motors and bearings)	Three (3) Years
TURBO® Fan (except motors and bearings)	Three (3) Years
TURBO® Fan fiberglass housing, polyethylene cone, and cast aluminum blade.	Lifetime of Product
TURBO® fan motor and bearings.	Two (2) Years
Chore-Time® Poultry Feeder Pan	Three (3) Years
Chore-Time® Rotating Centerless Augers (except where used in applications involving high moisture feed stuffs exceeding 17%)	Ten (10) Years
Chore-Time Steel Auger Tubes	Ten (10) Years
ULTRAFLO® Breeder Feeding System auger and feed trough.	Five (5) Years
ULTRAPAN® Feeding System augers .	Five (5) Years

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**

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Introduction

Chore-Time has designed the ULTRAFLO[®] Cage Free Feeding System to feed Poultry Livestock within a Structured and/or Floor feeding environment.

Feed is delivered to the Intake Cups by a Chore-Time FLEX-AUGER System. Feed is drawn out of the Intake Cups by the ULTRAFLO[®] Floor Feeder Auger. Chore-Time does not recommend feeding pellets with the ULTRAFLO[®] system.

The system is designed to feed 4 birds per foot (13 birds per meter) of trough. The feeder will deliver feed at a rate of 80 feet (24.4 m) per minute. The Feeder Auger will hold approximately .55 pounds of feed per foot (.82 kg of feed per meter).

The Auger serves as a stirring device as it delivers feed around the loop.

The ULTRAFLO[®] Feeder uses the Chore-Tronics 3 Control. The fill system and feeder lines are controlled by separate channels. The length of run time will be set when the system is first operated. The length of run time is adjustable and may be changed. The Control also allows settings for number of feedings per day.

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.

Safety–Alert Symbol



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

Understanding Signal Words

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



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



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



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

Follow Safety Instructions

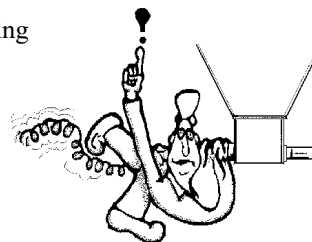
Carefully read all safety messages in this manual and on your equipment safety signs. Follow recommended precautions and safe operating practices.

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

Caution!



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



Decal Descriptions

DANGER: Moving Parts

Disconnect electrical power before working on system, equipment may start automatically. Otherwise personal injury will result.

Severe personal injury will result if the equipment is operated without covers properly installed.



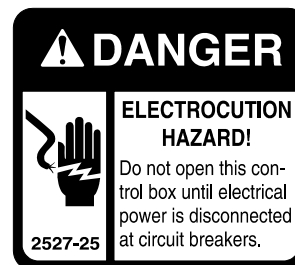
DANGER: Electrical Hazard

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

Ground all electrical equipment for safety.

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

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



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

Planning

Carefully planning the system prior to beginning the installation will save time and effort.

Recommended Power Unit Locations

See **Figure 2** for Power Unit locations.

Houses up to 440' (134 m)

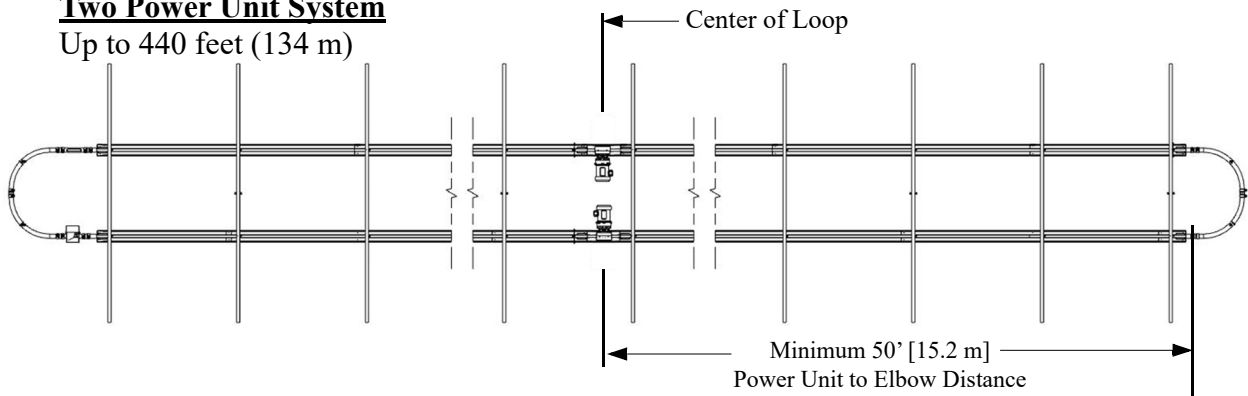
Two Power Units are recommended. These Power Units should be located at the center of the loop and directly across from one another for ease of wiring. (See **Figure 2, page 7**)

Houses 441' to 750' (135m to 229 m)

Four Power Units are recommended. These Power Units should also be spaced evenly around the system. To determine the proper placement of the power units, add the total length of the system, including 4' (1.2 m) for each 90 degree elbow, and divide by 4. This will give an approximate distance between Power Units, round up or down to the nearest suspension drop line. The Power Units should be evenly spaced directly across from each other in the system. The Power Units should be placed in positions (See **Figure 2, page 7**).

Two Power Unit System

Up to 440 feet (134 m)



Four Power Unit System

441' to 750' (135m to 229 m)

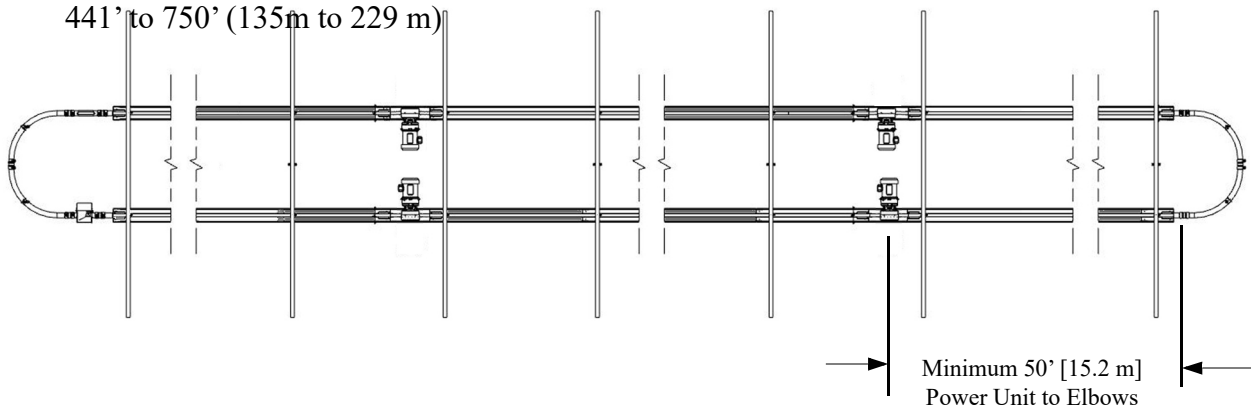


Figure 1.Power Unit Locations

Feeder Loop Layout

Adequate overhead structure must be provided to support the weight of the Feeder, Birds, Power Units, etc.

1. Suspensions Drop Lines should always line up with Trusses. If attaching drop lines to Trusses is impossible, adequate load bearing structure must be provided.
2. Stagger Drop Lines as shown. When Staggered, Drops are spaced 4' [1.2 m] or 5' [1.5 m] apart to coincide with 8' [2.4 m] or 10' [3 m] Truss Spacing.
3. Each 90° Elbow needs its own Suspension Drop.
4. Extra Drop Lines need to be added to support Power Units.

Trough Lengths

Troughs are available in 8' [2.4m] and 10' [3m] lengths. This allows for Troughs to line up with Trusses.

1. Plan so that Trusses line up with suspension points near Trough Joints. (See Figure 2.)

Loop Width

The ULTRAFLO® Feeder loop is 44" [1.12 m] wide (minimum). Additional width may be achieved by adding a straight section of tube between Elbows.

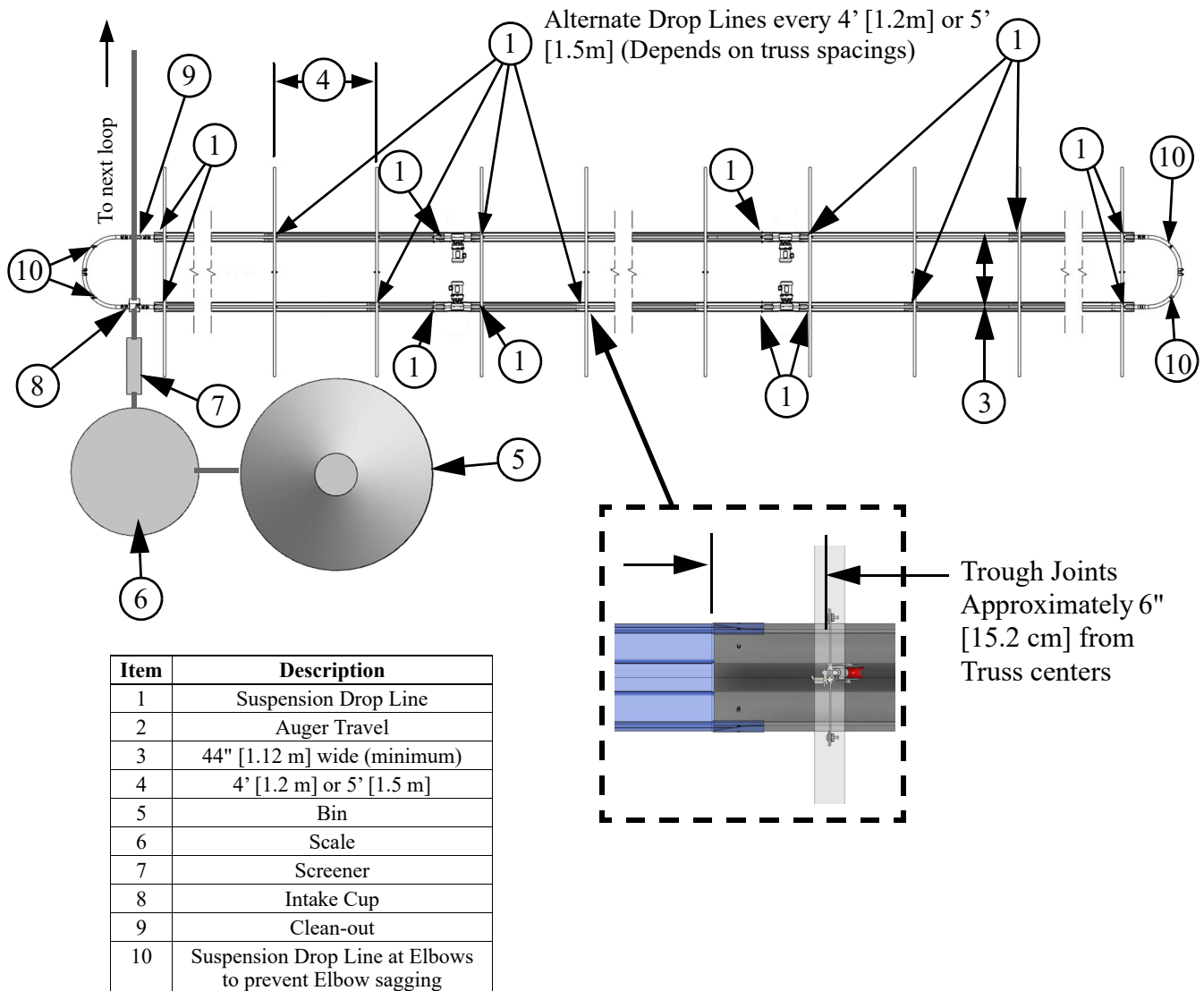


Figure 2. Feeder Loop Layout

Installation

Suspended and Stand Feed Loop Systems Installation

The feeder line suspension is a vital part of your feeding system. Take time to thoroughly plan the system to insure proper operation.

Suspended Systems

Suspended ULTRAFLO[®] Floor Feeders typically utilize two types of suspension:

Winch-able: A winch-able cable system for raising and lowering the empty feeder loops during installation and house clean-out.

Static Chain Suspension: A Static Chain Suspension used to support the load of the Feeding System, feed and birds during regular operation.

- 1.Suspension Systems have a maximum length of 120' [36.5 m].
- 2.A single Winch and suspension system is required to raise and lower the entire Feed Loop.
- 3.Double Back Pulleys required at the Winch.
- 4.Special Pulley Assemblies are required to route the Cable.
- 5.A suspension line is required on each side of any Power Unit to support the weight adequately.
- 6.A suspension line is required on each side of an Intake Cup to support the weight adequately.

Determine 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 is to be installed.

Two cable clamps are required to connect the main cable to the Double Back Pulley.

One cable clamp is required to connect each drop line to the main cable.

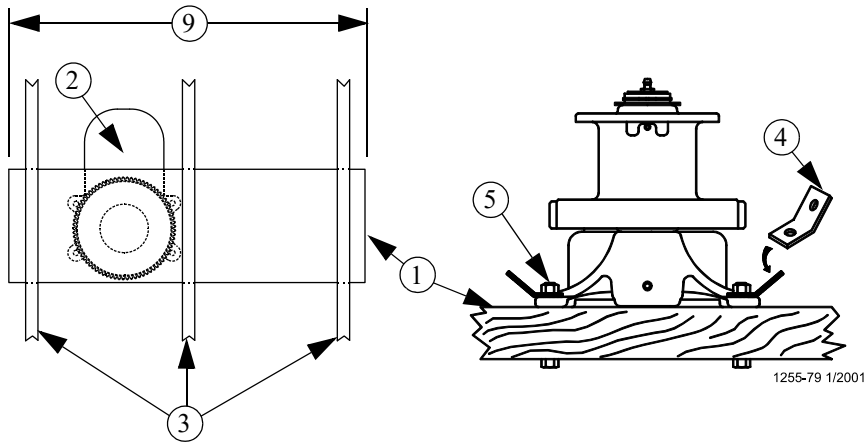
Stand Systems

The ULTRAFLO[®] Feeder Loops are designed to sit on Stands with the use of Supports. If you are installing a Stand system, Skip to “**Loop Components Installation**” on page 18

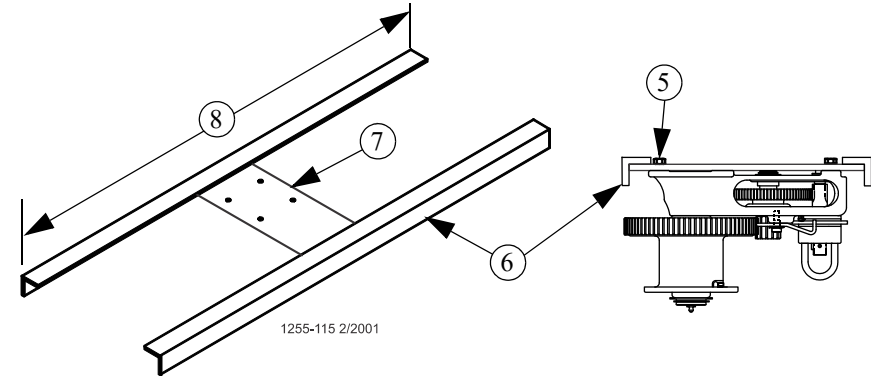
Power Lift Winch Installation

Power Lift Winch Support (Steel or Wood)

Wood Truss Installation



Steel Truss Installation

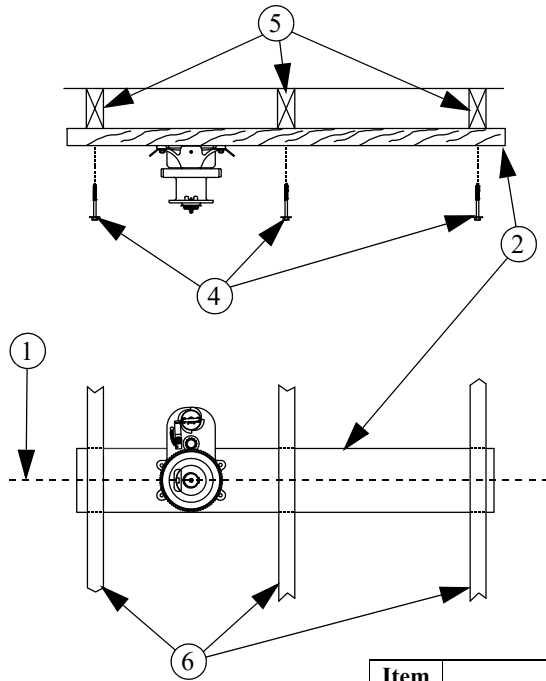


Item	Description
1	Power Lift Winch Support: 2" x 8" [50 x 200 mm] board spanning at least 3 trusses .
2	Power Lift Winch
3	Truss
4	Cable Hook: Install as shown.
5	5/16-18 Bolt, Washer, and Locknut (In parts package)
6	Angle Iron: Long enough to span 2 Trusses .
7	3/8" [9.5mm] Thick Steel Mounting Plate
8	Long enough to span 2 Trusses
9	Long enough to span 3 Trusses

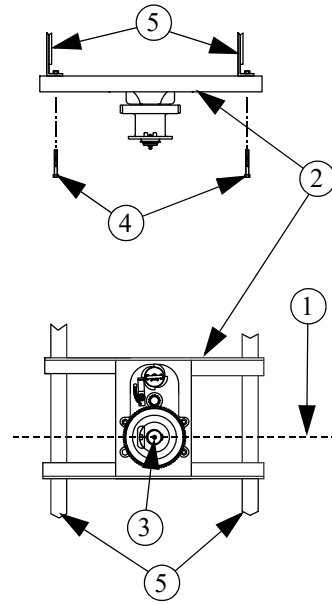
Figure 3. Power Lift Winch Support

Attaching Winch Support to Trusses

Wood Truss Installation



Steel Truss Installation

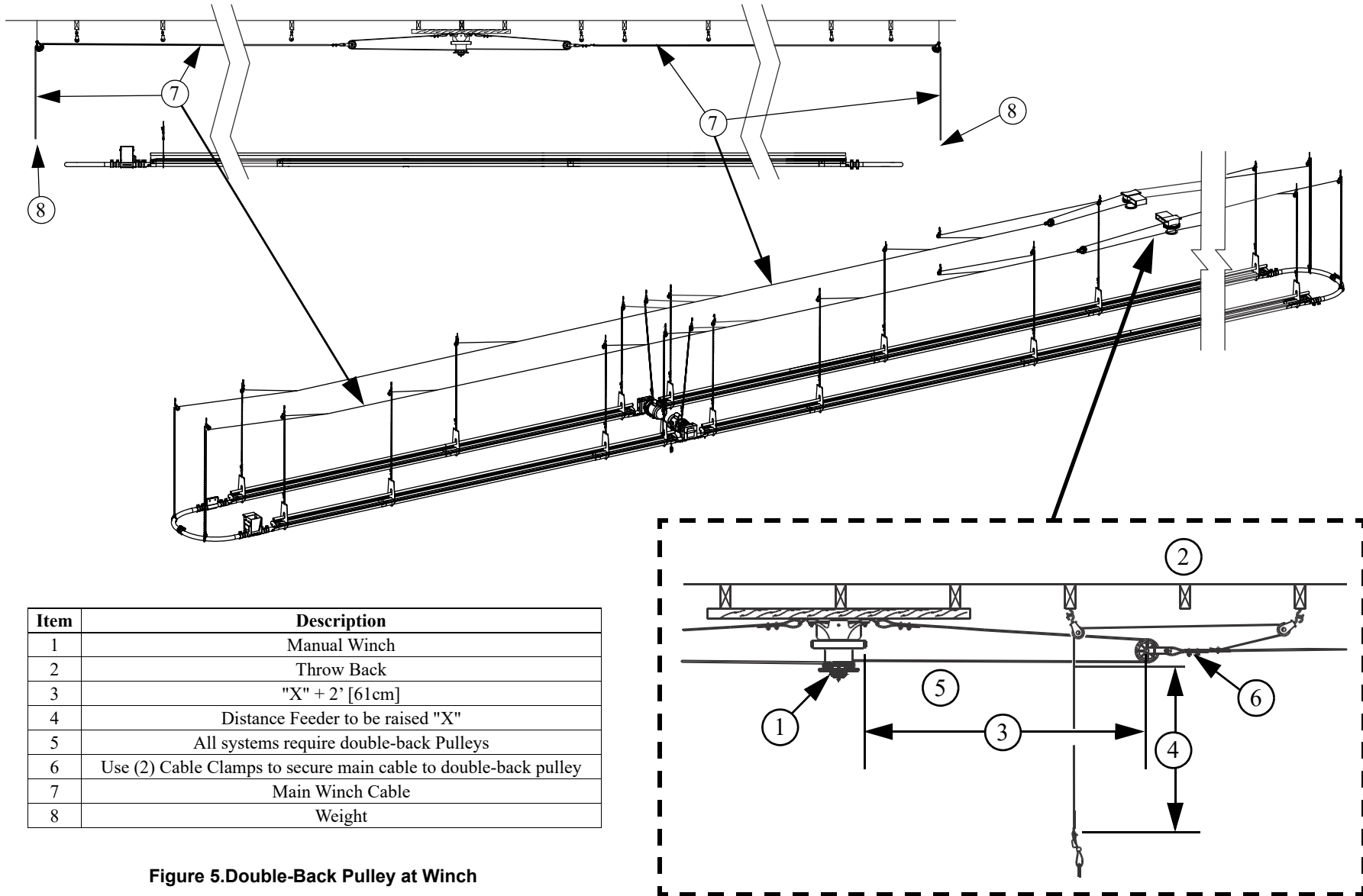


Item	Description
1	Feeder Line
2	Winch & Winch Support
3	Winch Centered directly over Feeder Line
4	Lag Bolts
5	Steel Truss
6	Wood Truss

Figure 4. Mounting the Power Lift Winch and Support to Trusses

Main Winch Cable

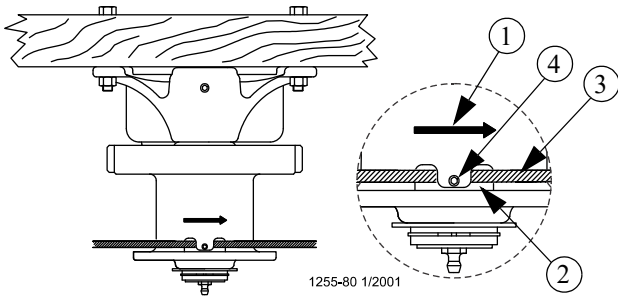
1. Double Back Pulleys are required at the Winch. (See Figure 5.)



Item	Description
1	Manual Winch
2	Throw Back
3	"X" + 2' [61cm]
4	Distance Feeder to be raised "X"
5	All systems require double-back Pulleys
6	Use (2) Cable Clamps to secure main cable to double-back pulley
7	Main Winch Cable
8	Weight

Figure 5. Double-Back Pulley at Winch

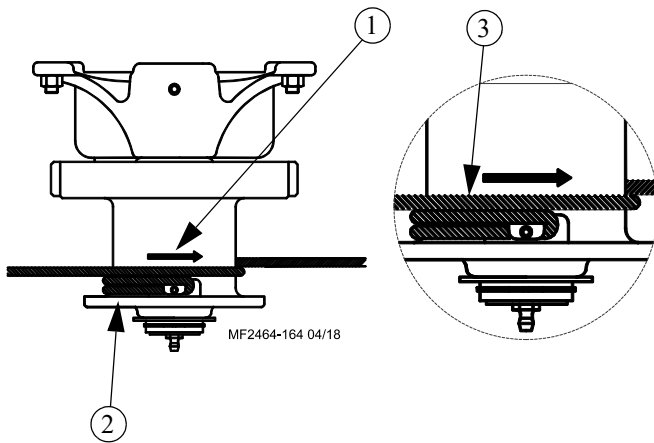
Cable Routing at Winch



Item	Description
1	Direction of Rotation (Clockwise)
2	Winch Drum Relief with Setscrew
3	Route 3/16" Main Winch Cable through Winch Drum Relief
4	Tighten Set Screw to Anchor Cable

Figure 6. Winch Cable Routing

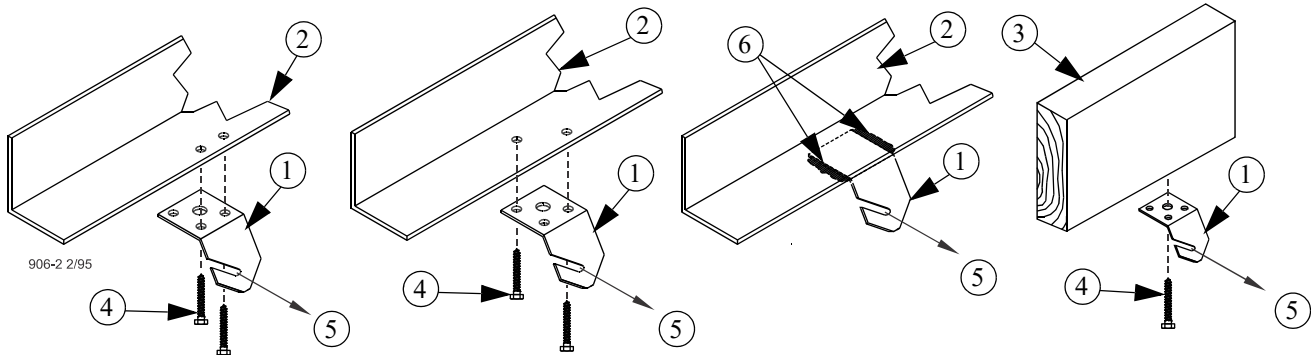
Wrapping Cable on Winch Drum



Item	Description
1	Rotate Winch Drum one full rotation Clockwise
2	Guide Cable against Flange
3	Cable must not overlap. Each Wrap tight to the next.

Figure 7. Wrapping Cable on Winch Drum

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 8. Ceiling Hook Installation

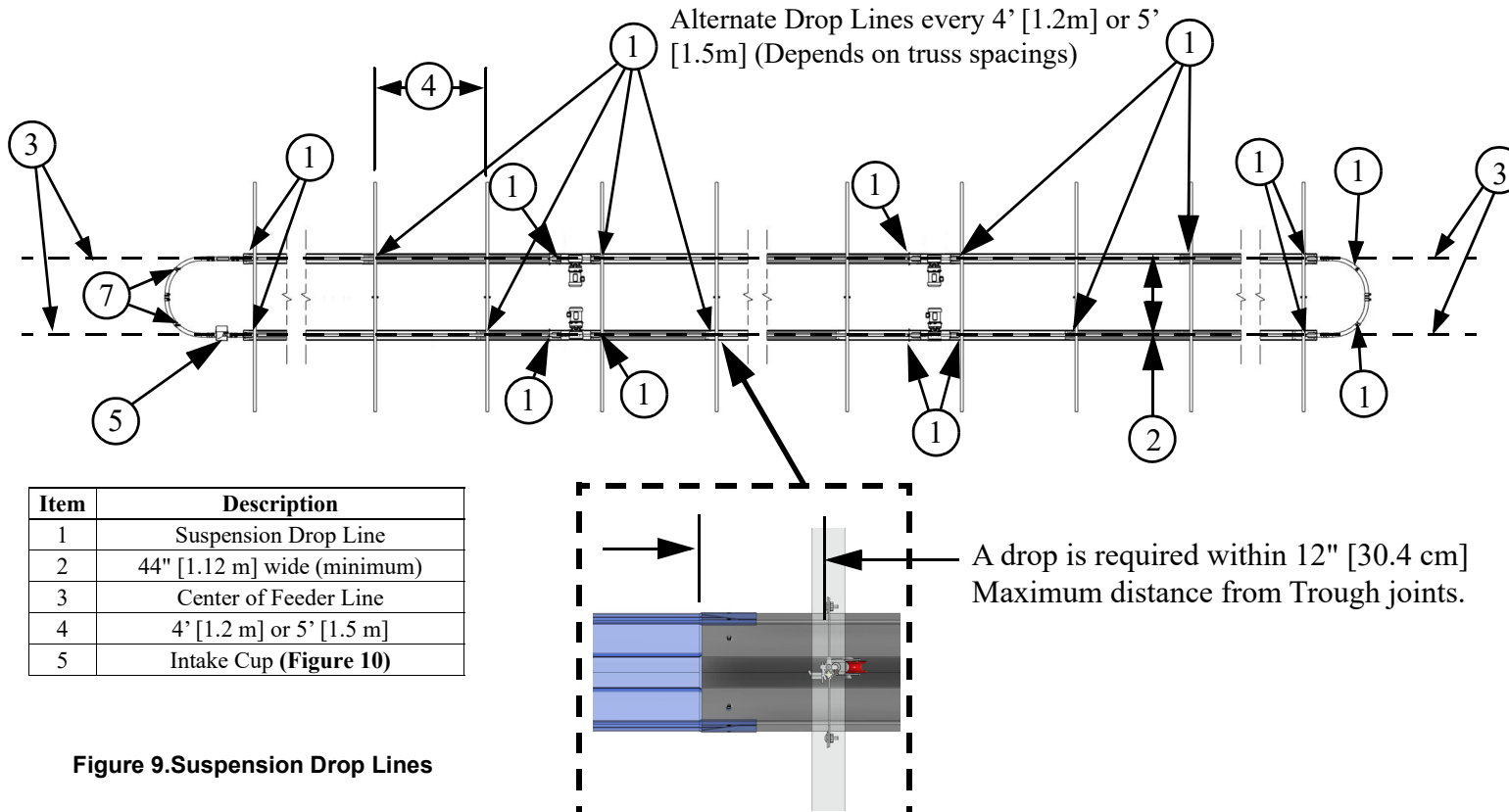
Suspension Drop Lines

Adequate overhead structure must be provided to support the weight of the Feeder, Birds, Power Units, etc. Refer to the “Component Weight Chart” on page 66 for individual component weights.

1. Suspensions Drop Lines should always line up with Trusses. If attaching drop lines to Trusses is impossible, adequate load bearing structure must be used.
2. Stagger Drop Lines **as shown**. When Staggered, Drops are spaced 4' [1.2 m] or 5' [1.5 m] apart to coincide with 8' [2.4 m] or 10' [3 m] Truss Spacing. (See Figure 9.)
3. Drops are required at the ends of the last Trough at both ends, and within 12" [30.4 cm] of each Trough joint. (See Figure 9.)
4. Each 90° Elbow needs its own Suspension Drop. (See Figure 10 on page 14)
5. Extra Drop Lines need to be added to support Power Units. (See Figure 10 on page 14)
6. Extra Drop Lines required at the Intake Cup if installed in middle of loop. (See Figure 10 on page 14)

Loop Width

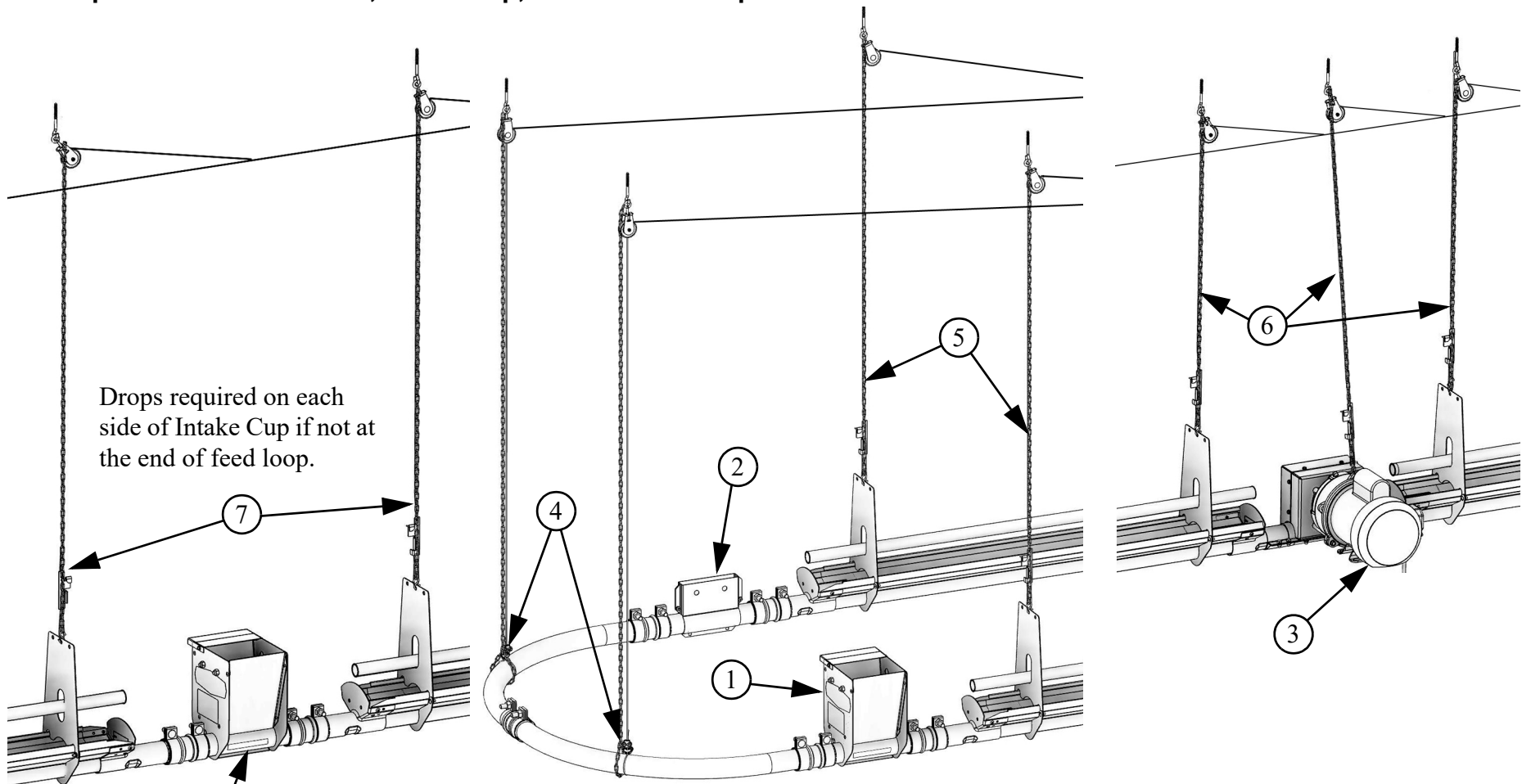
The ULTRAFLO® Feeder loop is 44" [1.12 m] wide (minimum). Additional width may be achieved by cutting less pipe or by adding a straight section of tube between Elbows.



Item	Description
1	Suspension Drop Line
2	44" [1.12 m] wide (minimum)
3	Center of Feeder Line
4	4' [1.2 m] or 5' [1.5 m]
5	Intake Cup (Figure 10)

Figure 9. Suspension Drop Lines

Drop Lines for Power Unit, Intake Cup, and Ends of Loop



Drops required on each side of Intake Cup if not at the end of feed loop.

Item	Description
1	Intake Cup
2	Clean-Out
3	Power Unit
4	Drop Line at center of Elbow Support
5	Drop Line at end of Trough
6	Drop Lines for Power Unit
7	Drop Lines at Intake Cup (Required if located mid loop.

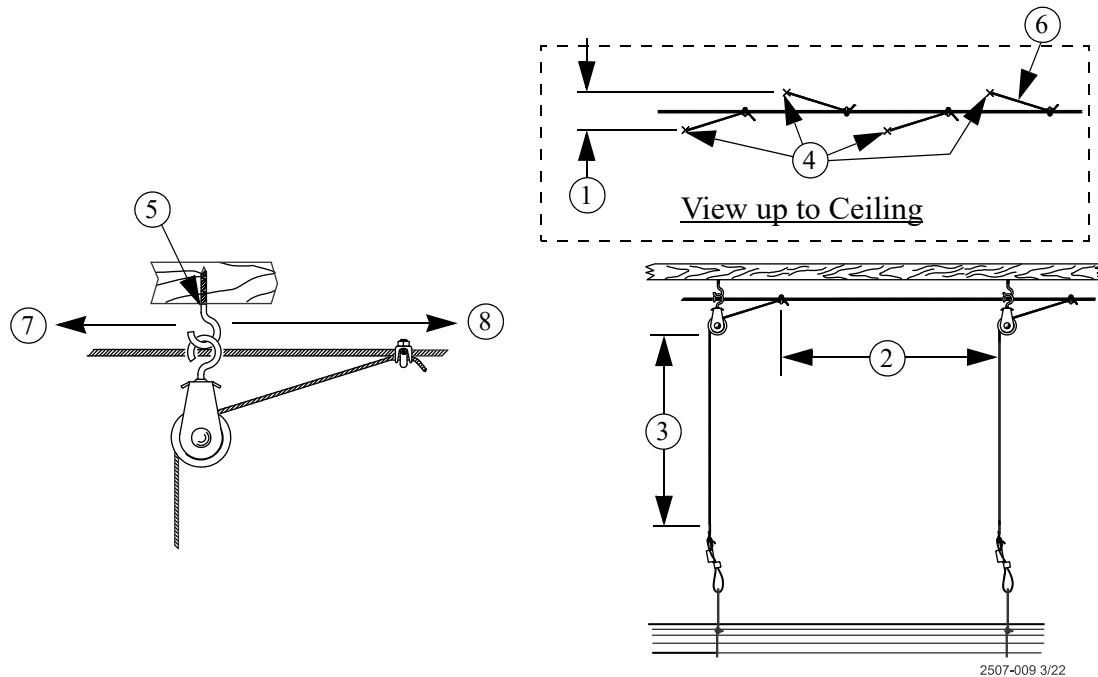
Figure 10.End of Loop and Power Unit Suspension

Screw Hook Installation

Install Screw Hooks at locations shown in (Figure 9).

If distance raised (3) is greater than (2) then stagger Screw hooks (4) as shown.

Important! Suspension Drops must be alternated from side to side on the Feeder Loop to distribute Feeder and Bird loads. This will space the Drops every 4' to 5' [1.2 to 1.5 m] depending on Truss spacing. (See



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Item	Description	Part No.
1	3" [7.6 cm] Offset	
2	Distance of Cable Travel (Recommended 8' [2.4m] on center). Do Not exceed 10' [3m].	
3	Distance Feeder is to be raised	
4	Screw Hook (Stagger as shown if (3) is greater than (2))	2041
5	Screw in Screw Hook full length of threads.	
6	3/32 [2mm] Drop Cable	
7	Screw Hook Opening facing opposite direction of travel.	
8	Winch End (Direction of Travel).	

Figure 11.Screw Hook Installation

Figure 9.)

16 Suspension Drop Line Installation

1. Attach a Pulley (Item 1) 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 Pulley, using a 3/16 inch Cable Clamp (See Figure 11.). Allow enough drop cable to reach the eye of the Hanger (Single Perch), or the Top Perch Tube (3 Perch) and thread back through Adjustment Leveler (Item 8).
3. Begin installing suspension drops at the Winch and proceed toward the elbows.
4. Keep the main cable tight between drops. Hang a weight on the end of the main cable to maintain tension.

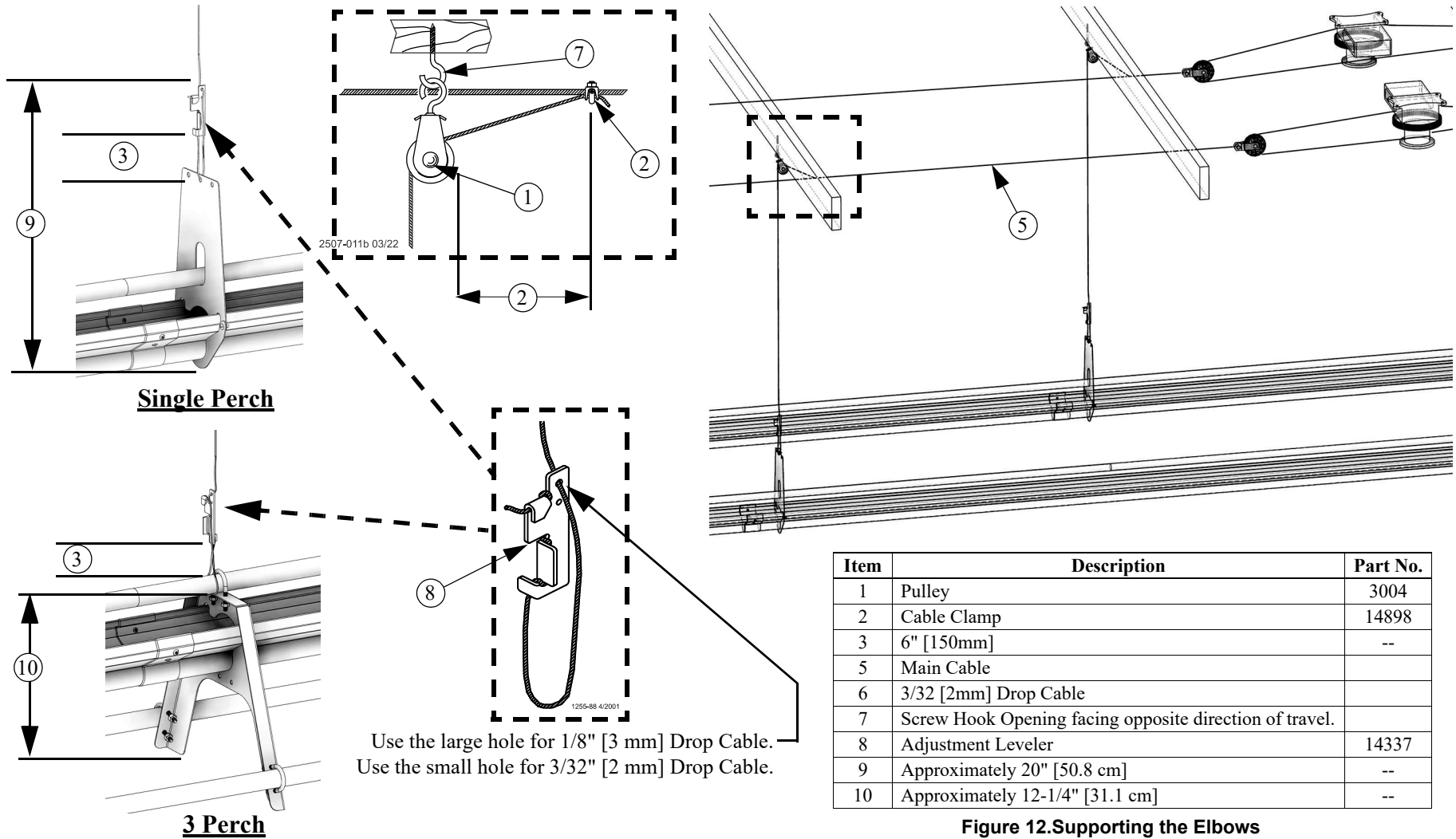
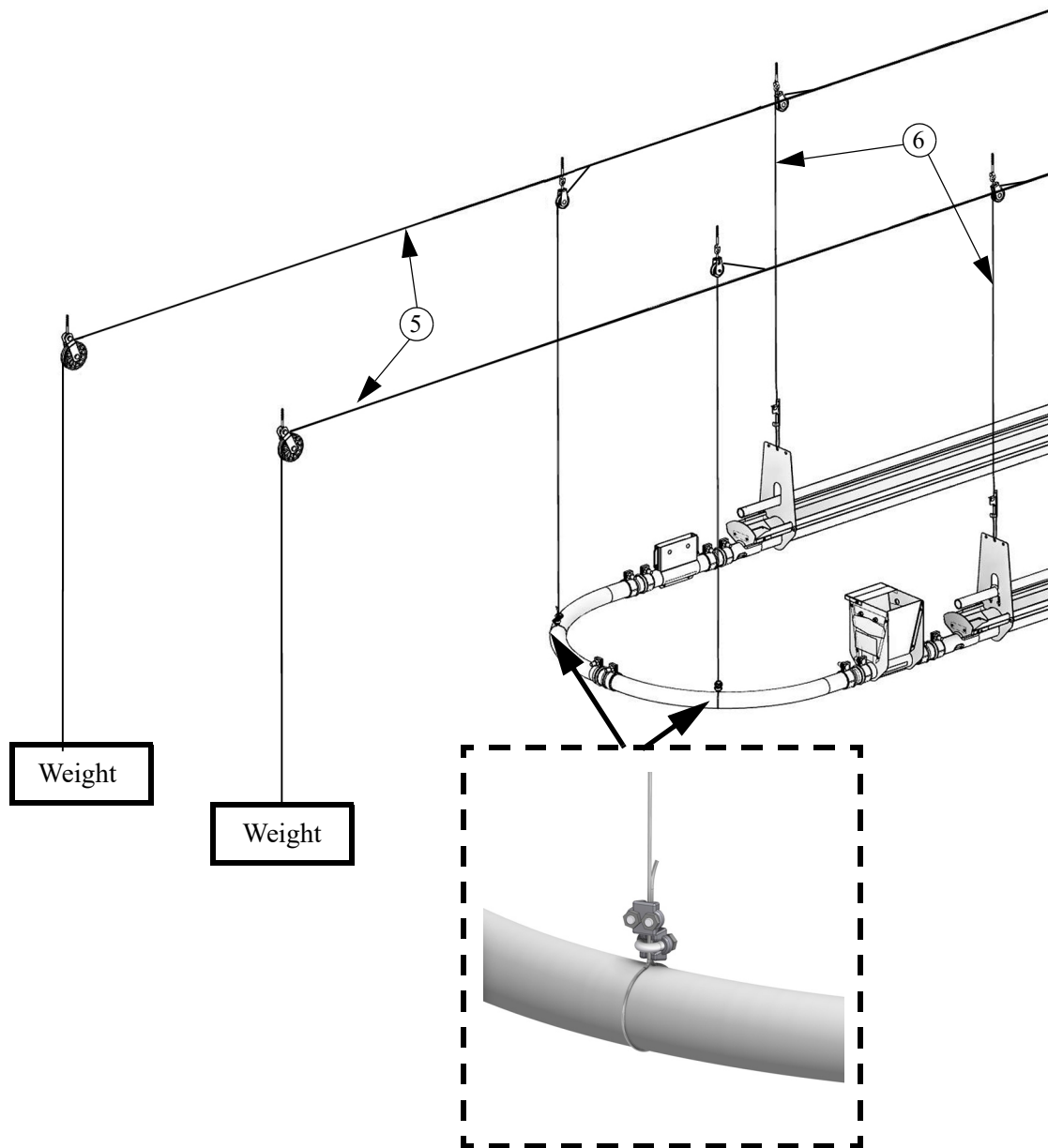


Figure 12. Supporting the Elbows

Elbow Support

- 1.(Figure 13) shows proper suspension points for the elbows.
- 2.Adequate support must be provided at the elbows to prevent sagging.



Item	Description	Part No.
1	Pulley	3004
2	Cable Clamp	14898
3	6" [150mm]	--
4	Weight	--
5	Main Cable	
6	3/32 [2mm] Drop Cable	
7	Screw Hook Opening facing opposite direction of travel.	
8	Winch End (Direction of Travel).	

Figure 13.Supporting the Elbows

Loop Components Installation

The following will provide guidelines for the installation, beginning at Intake Cup location and proceeding in the direction of auger travel.

Suspended Systems: Measure and mark the trough so that when it is installed, the joint with the next trough will be located directly below a suspension drop line.

Intake Cup and Elbows Installation

1. Attach an Elbow (Item 2) to the Intake Cup (Item 1) using a Tube Coupling (Item 3) as shown.
2. Cut Elbows to length to achieve desired width.

Note: 44" [111.8cm] Minimum Center to Center loop width.

Important! Cut the same amount off of each Elbow and leave a minimum 2" of straight. (See Figure 14.)

3. If extra width or length is needed, add a straight piece of Pipe (Item 4). and an extra 2" Tube Coupling.

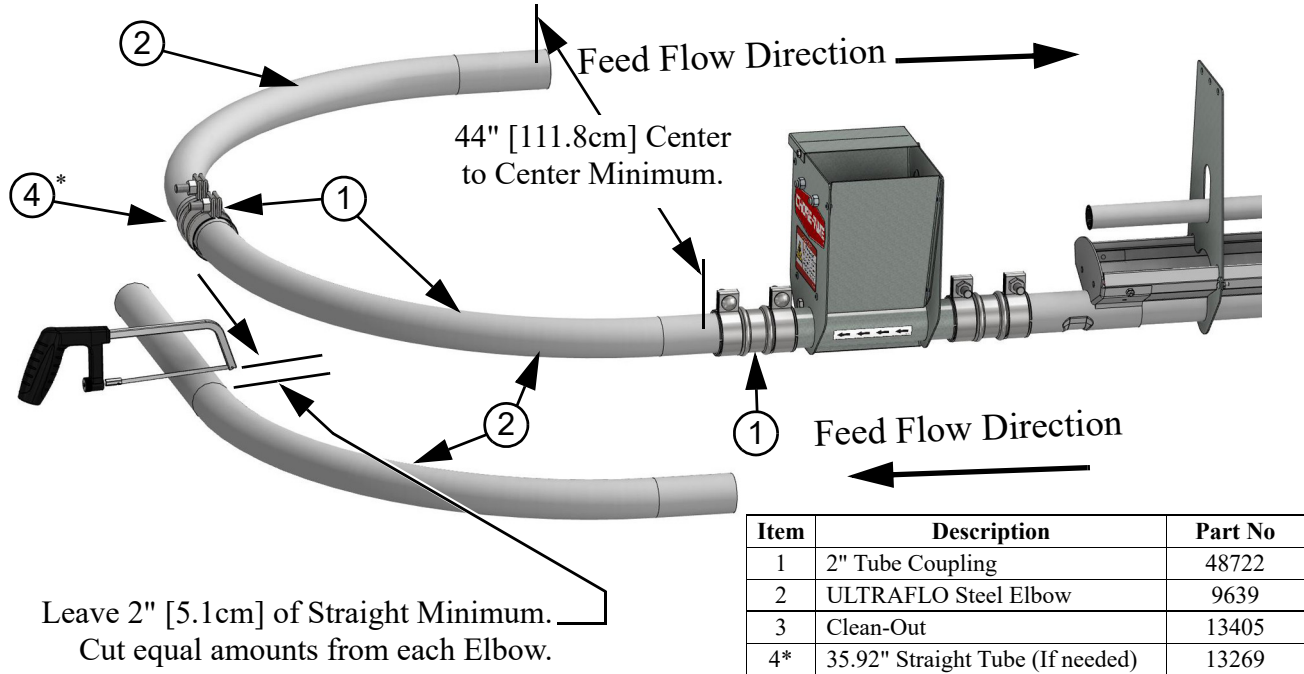
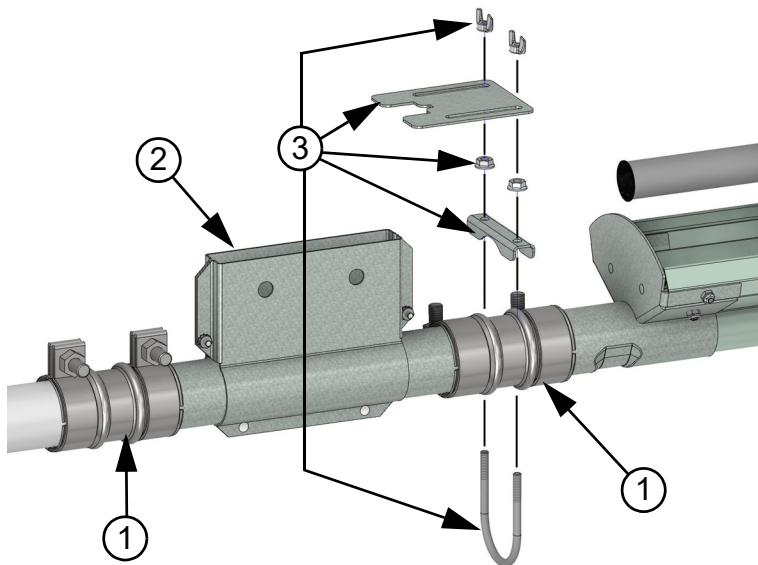


Figure 14. Intake Cup & Elbows Installation

Clean-Out Installation

1. Install a Clean-out (Item 1) between the Elbow and the End Cap using Tube Couplings (Item 2) as shown.
2. Install a Clean-out Lock (Item 3) as shown.



Item	Description	Part No
1	2" Tube Coupling	48722
2	Clean-Out	13405
3	Clean-Out Lock Kit	57375

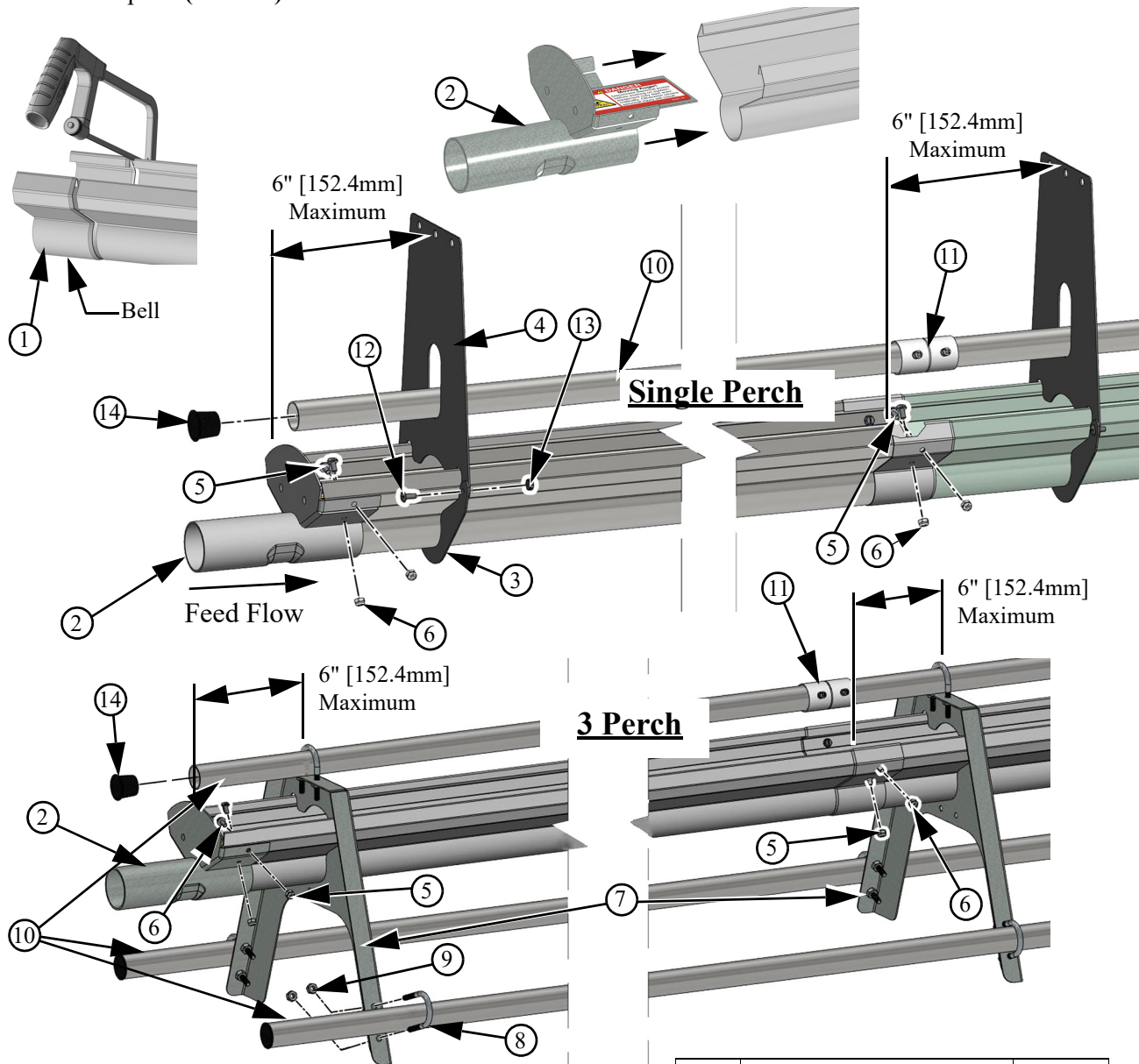
Figure 15. Clean-out Installation

Trough, Trough Hangers, and Perch Tubes Installation Suspended and Aviary Installation

1. Cut the Bell end off of Troughs if needed to install End Cap Assemblies (Item 2). (See Figure 16.)
2. Install Trough Hangers/Supports as follows...
 - **Single Perch and Aviary Application-** Install Trough Hanger Tops (Item 3) and Bottoms (Item 4).
 - **Three Perch-** Install Short 3 Perch Feeder Supports (Item 7).
3. Install an End Cap Assembly (Item 2) if needed.

Important! Do Not use the Nuts included with U-Bolts (Item 8). Use 1/4-20 Lock Nuts (Item 9) instead.

4. Install Perch Tubes (Item 10) using U-Bolts (Item 8), and Conduit Plugs as shown.
5. Use Couplers (Item 11) where needed.



Item	Description	Part No.
1	Double Sided UF Trough	56110-X
2	End Cap Assembly	56115
3	Single Perch UF Feeder Support Bottom	56117
4	Single Perch UF Feeder Support Top	56118
5	10-24 x .375 Machine Screw	25124
6	10-24 Lock Nut	34019
7	Short 3 Perch UF Feeder Support	56476

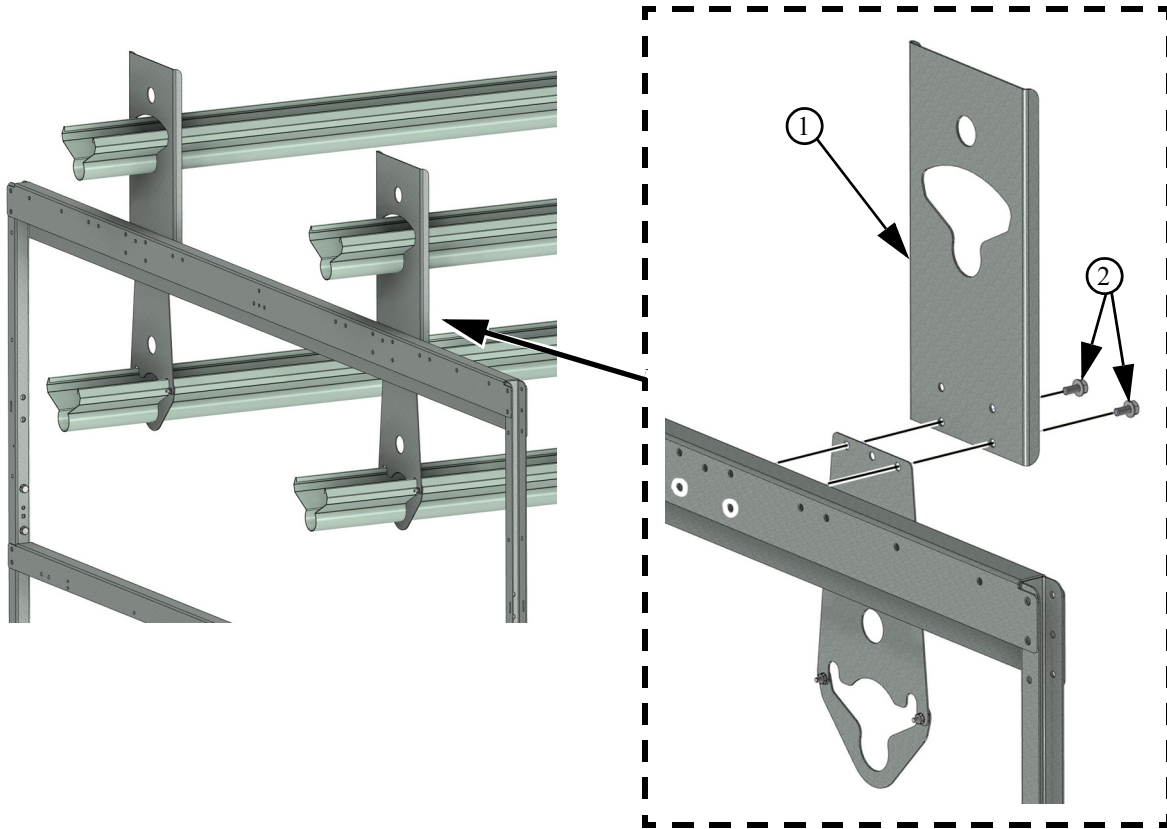
Item	Description	Part No.
8	1/4-20 U Bolt	56487
9	1/4-20 Lock Nut	1269
10	Perch Tube (20' piece)	52767
11	1.00" Aviary Conduit Coupler	52900-1
12	10-24 x .500 Machine Screw	1795
13	10-24 Kepnut	27725
14	1" Conduit Plug	56264

Figure 16. Installing Hangers

Aviary Upper Level Installation

A Feed Loop can be installed on the upper level if needed. The Components install the same way as the other tiers with the exception of the Hangers.

1. Install Upper Level Feeder Supports (Item 1) using M8 Taptites (Item 2) as shown.



Item	Description	Part No.
1	Upper Level Feeder Support	56306
2	M8 x 16 Taptite	201047

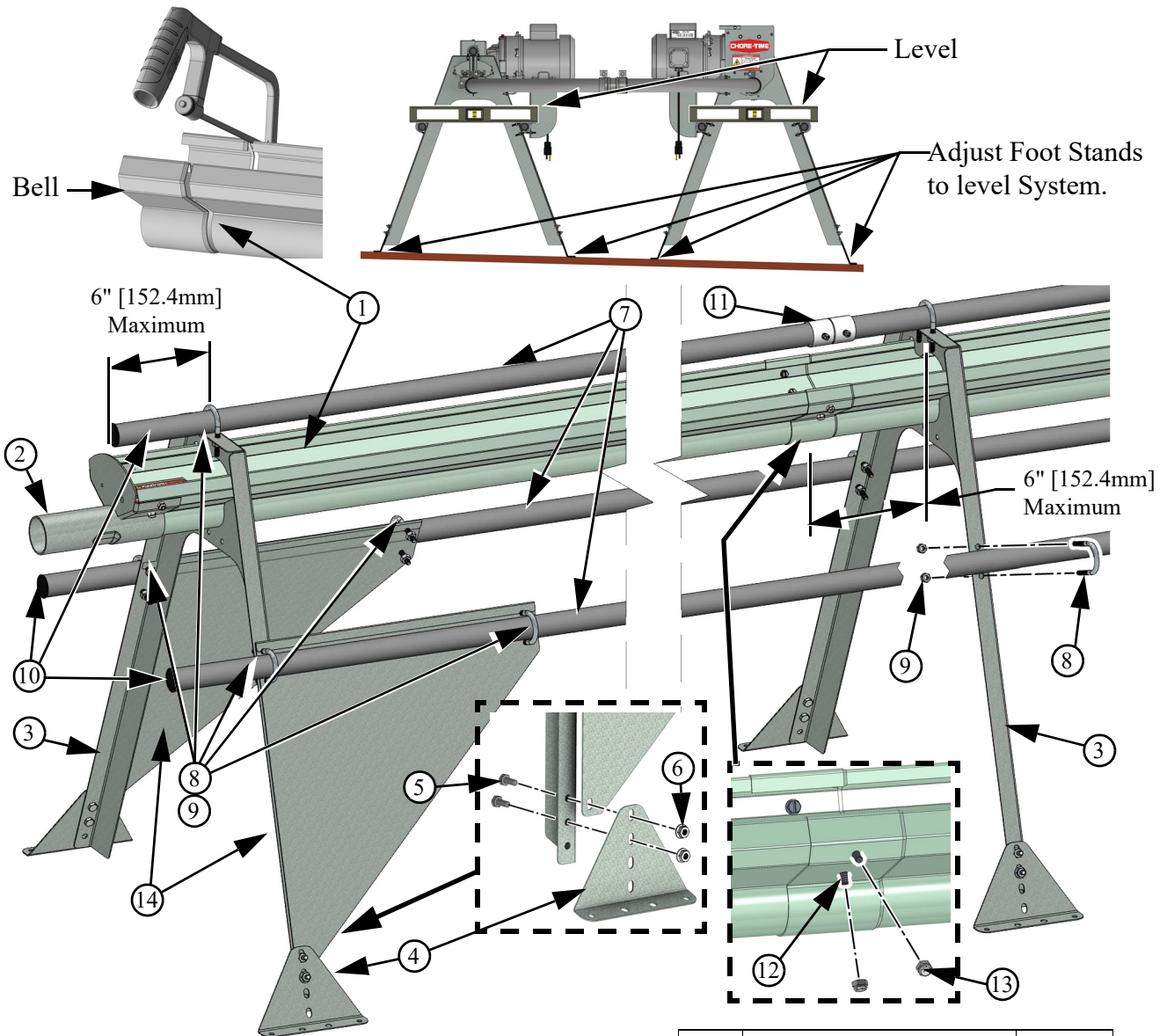
Figure 17. Aviary Upper Level Installation

3 Perch Feeder Supports, Perch Tubes, & Angle Braces (For resting on Stands)

1. Cut the Bell end off of Troughs (Item 1) where End Cap Assemblies (Item 2) are needed. (See Figure 16.)
2. Install Perch Feeder Supports (Item 3) as shown. Supports must be put on before Troughs are fastened together.
3. Install Foot Stands (Item 4) and Feeder Perch Angle Braces (Item 14) as shown. Use appropriate holes in the Foot Stands to level. Angle Braces (Item 14) are required at System Ends and at Power Unit locations.
4. See “Suspension at Elbows” on page 30 for instructions for supporting Elbows.
5. Install End Caps (Item 2) at the ends of System and at Power Units. (See Figure 20 on page 22).

Important! Do Not use the Nuts included with U-Bolts (Item 8). Use 1/4-20 Lock Nuts (Item 9) instead.

6. Install Perch Tubes (Item 7) using 1/4-20 U-Bolts (Item 8) and Conduit Plugs (Item 10) as shown.
7. Use 1" Conduit Couplers (Item 11) where needed to splice Perch Tubes.



Item	Description	Part No.
1	Double Sided UF Trough	56110-X
2	End Cap Assembly	56115
3	Three Perch Feeder Supports	56418
4	Foot Stand	56523
5	1/4-20 x .63 HH5 Bolt	2152
6	1/4-20 Serrated Flange Nut	46460

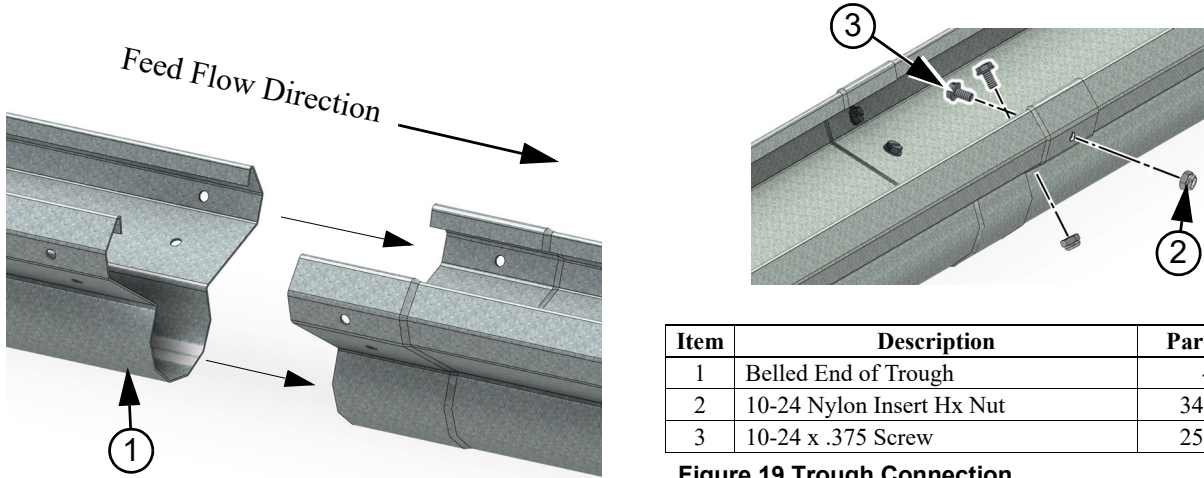
Item	Description	Part No.
7	Perch Tube (20' piece)	52767
8	1/4-20 U-Bolt	56487
9	1/4-20 Lock Nut	1269
10	1" Conduit Plug	56264
11	1.00" Aviary Conduit Coupler	52900-1
12	10-24 x .500 Machine Screw	1795
13	10-24 Kepnut	27725
14	Feeder Perch Angle Brace	56524

Figure 18. Installing 3 Perch Feeder Supports (Stand System)

Connecting Trough Sections together and Trough End Caps

1. Install a Hanger at the next trough joint. Slide the straight end of the trough into the belled end of another section of trough, as shown in **(Figure 19)**.
2. The trough sections are factory punched for (4) 10-24 bolts and locking nuts **(Items 2 and 3)**.

IMPORTANT: Make sure trough is properly butted at each joint, prior to tightening hardware. To insure proper trough assembly, set the trough sections on a flat surface when tightening hardware.

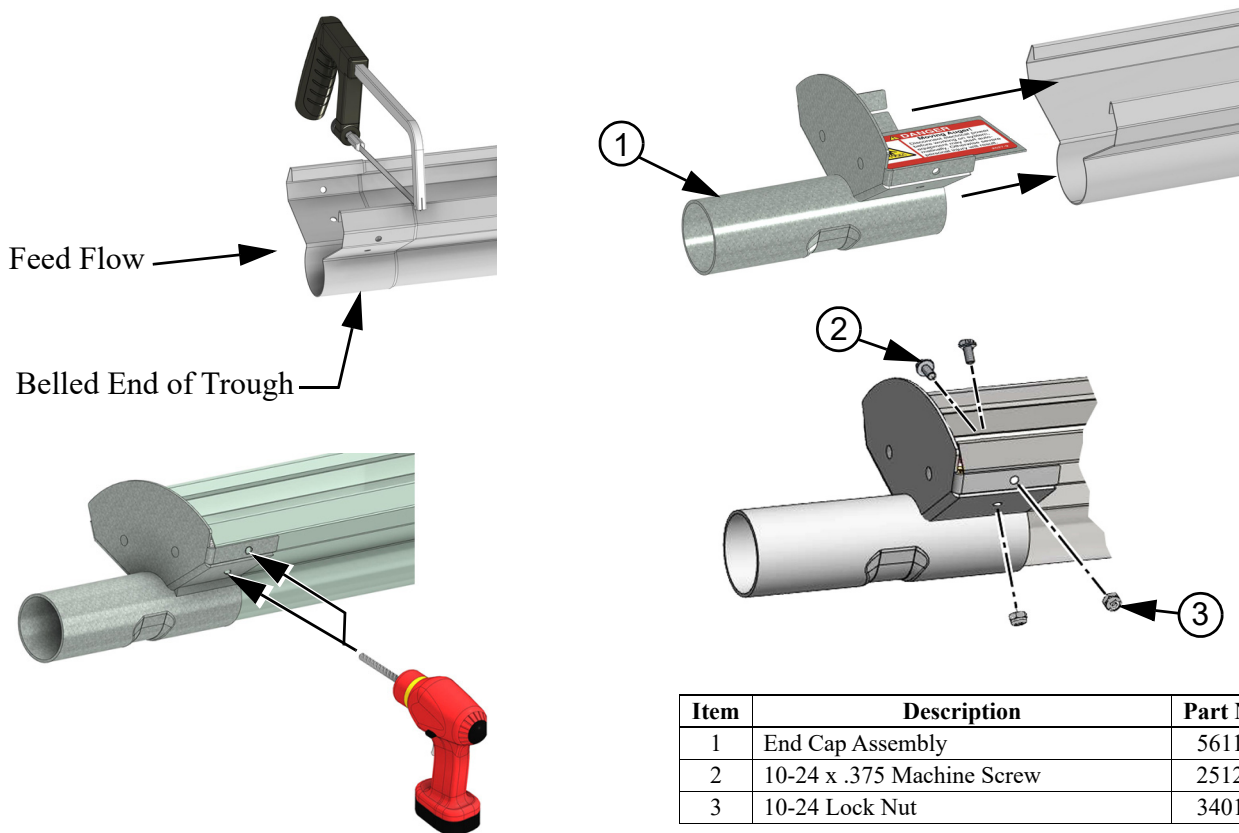


Item	Description	Part No.
1	Belled End of Trough	--
2	10-24 Nylon Insert Hx Nut	34019
3	10-24 x .375 Screw	25124

Figure 19. Trough Connection

Trough Section End Caps

1. The Belled Ends of Trough must always be facing opposite the feed flow. Therefore; it is necessary to cut the Belled end off of the Trough to install End Caps at some Trough Ends. (See **Figure 20.**)
2. Install The End Cap Assembly **(Item 1)** as shown.
3. Use Holes in the End Cap Assembly to drill two 1/4" [6.3 mm] Holes on each side of the Trough.
4. Fasten with 10-24 Machine Screws **(Item 2)** and Nuts **(Item 3)** as shown.



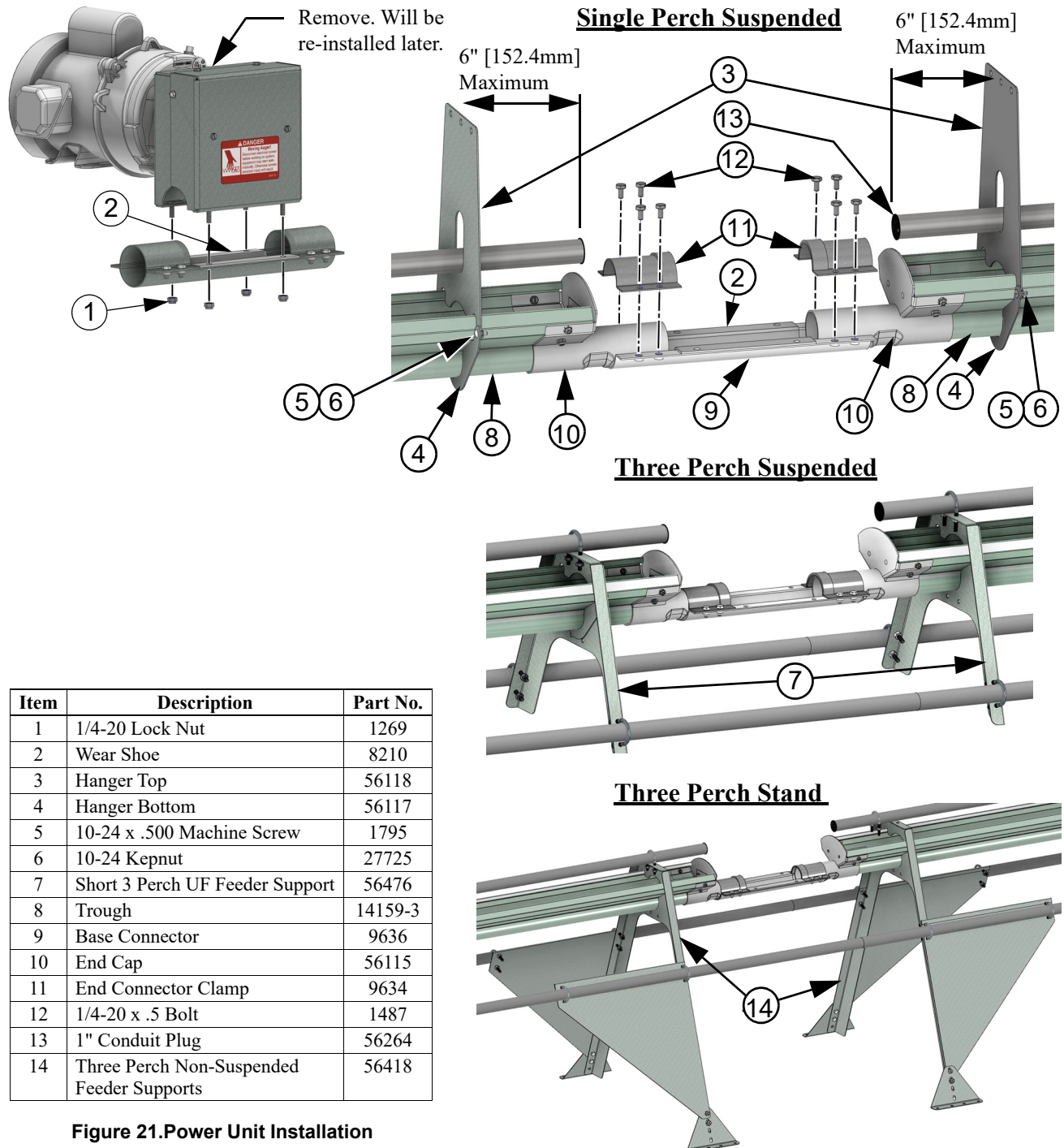
Item	Description	Part No.
1	End Cap Assembly	56115
2	10-24 x .375 Machine Screw	25124
3	10-24 Lock Nut	34019

Figure 20. Trough End Caps

Power Unit Base Installation

Suspended and Stand Systems

1. The Power Units must be located directly under a suspension drop.
2. The Power Unit, Driver Assembly, and Base Connector are shipped assembled. Disassemble the Base Connector from the Power Unit and Driver Assembly by removing the four 1/4-20 Locknuts. (See Figure 21.). Leave the Wear Shoe (Item 2) in place.
3. Install Trough Hangers/Supports as follows....
 - Single Perch**- Install Trough Hanger Tops (Item 3) and Bottoms (Item 4).
 - Three Perch**- Install Short 3 Perch Feeder Supports (Item 7).
 - 3 Perch Non-Suspended**- Feeder Supports (Item 11) as shown. (See Figure 16 on page 19)
4. Install the End Caps (Item 10) (See Figure 20 on page 22)
5. Cut the Perch Tubes even with the End Caps and install Conduit Plugs (Item 10) as shown.

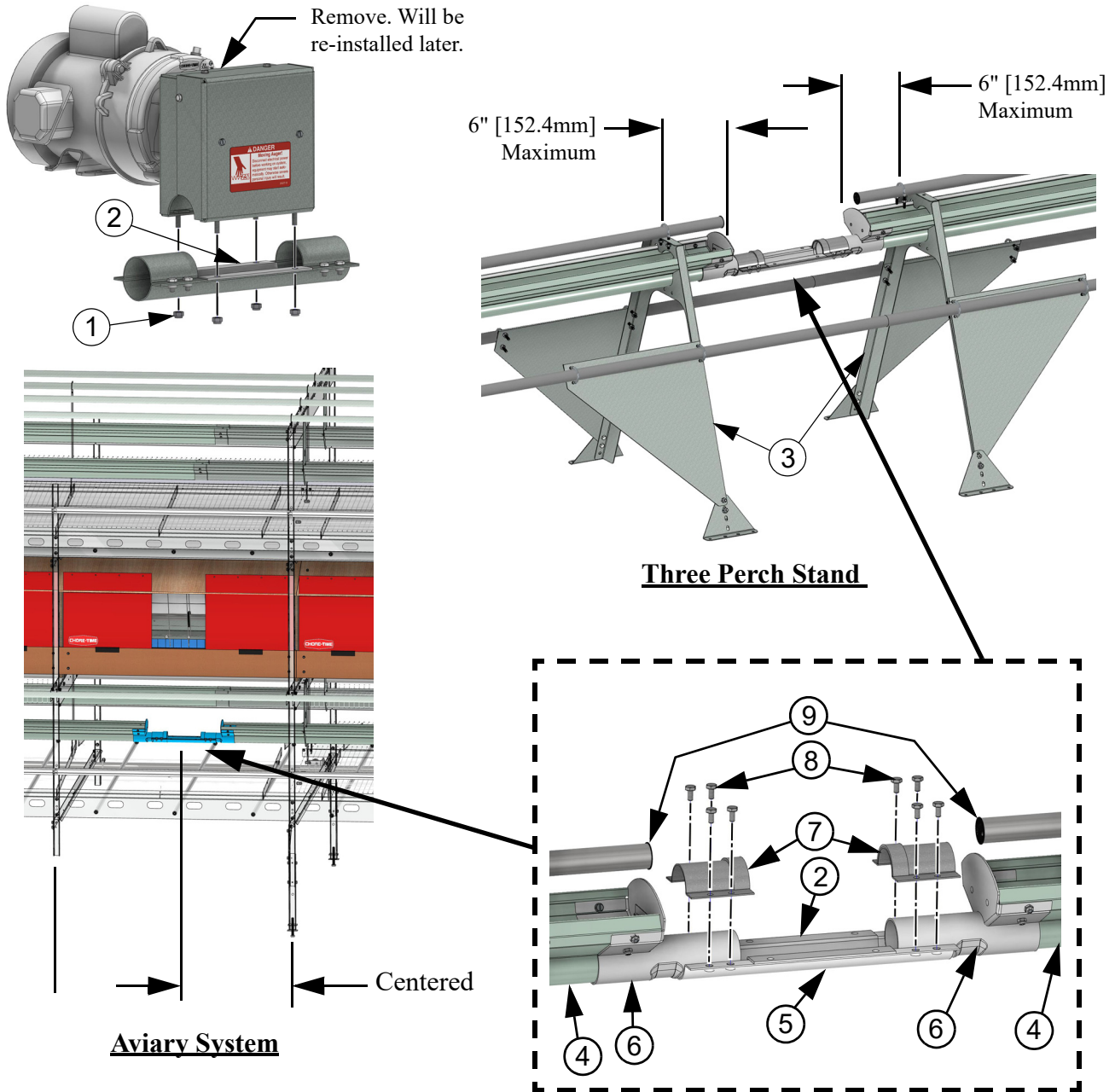


Item	Description	Part No.
1	1/4-20 Lock Nut	1269
2	Wear Shoe	8210
3	Hanger Top	56118
4	Hanger Bottom	56117
5	10-24 x .500 Machine Screw	1795
6	10-24 Kepnut	27725
7	Short 3 Perch UF Feeder Support	56476
8	Trough	14159-3
9	Base Connector	9636
10	End Cap	56115
11	End Connector Clamp	9634
12	1/4-20 x .5 Bolt	1487
13	1" Conduit Plug	56264
14	Three Perch Non-Suspended Feeder Supports	56418

Figure 21. Power Unit Installation

Stand and Aviary Systems

1. The Power Unit, Driver Assembly, and Base Connector are shipped assembled. Disassemble the Base Connector (Item 5) from the Power Unit and Driver Assembly by removing the four 1/4-20 Locknuts. (See Figure 22.). Retain Lock-Nuts to re-install later. Leave the Wear Shoe (Item 2) in place.
 - 3 Perch Systems- Install Feeder Supports (Item 3) as shown. (See Figure 16 on page 19)
 - Aviary Systems- The Power Units should be centered in the structure as shown.
2. Install the End Caps (Item 6) (See Figure 20 on page 22)
3. Cut the Perch Tubes even with the End Caps and install Conduit Plugs (Item 9) as shown.



Item	Description	Part No.
1	1/4-20 Lock Nut	1269
2	Wear Shoe	8210
3	Three Perch Non-Suspended Feeder Supports	56418
4	Trough	56110-X
5	Base Connector	9636

Item	Description	Part No.
6	End Cap	56115
7	End Connector Clamp	9634
8	1/4-20 x .5 Bolt	1487
9	1" Conduit Plug	56264

Figure 22. Power Unit Installation Stand & Cage Systems

ULTRAFLO® Auger Installation



Caution!

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

To avoid kinking the Auger, be careful not to drop or drag the rolled auger when handling. Inspect the auger for kinks carefully as it is installed. Small kinks may be straightened. Large kinks must be cut out and the auger reconnected using an Auger Connector.

Chore-Time recommends connecting the ends of the auger using an Auger Connector, as shown in (Figure 24) and (Figure 25). Auger Connectors are easy to install and generally cause less auger fatigue. Refer to the Auger Connector Installation information below.

1. Loosen the outgoing elbow from the End Cap at the far end of the system.
2. Take the end of the auger that was wound onto the roll last -it generally has a tag on it- and bend the end inwards so that it will not catch. **Slide the end of the auger with the plastic cap through the End Cap and into the trough, first.**

USE EXTREME CAUTION WHEN INSTALLING THE AUGER TO AVOID PERSONAL INJURY.

3. The auger should be pulled into the trough in the direction of feed flow (auger travel). The motors may be used to pull the ULTRAFLO® Auger through the trough. Be careful not to kink the auger when guiding it into the trough. The auger may be installed by hand, using an Auger Puller.
4. If more than one length of auger is needed, connect the second auger to the first auger using an Auger Connector.
5. On all new Auger both ends should be cut back approximately 6", to insure against Auger end damage.
6. After the auger has been installed completely around the system, push and pull the auger back and forth a few times to allow it to relax to its free length.

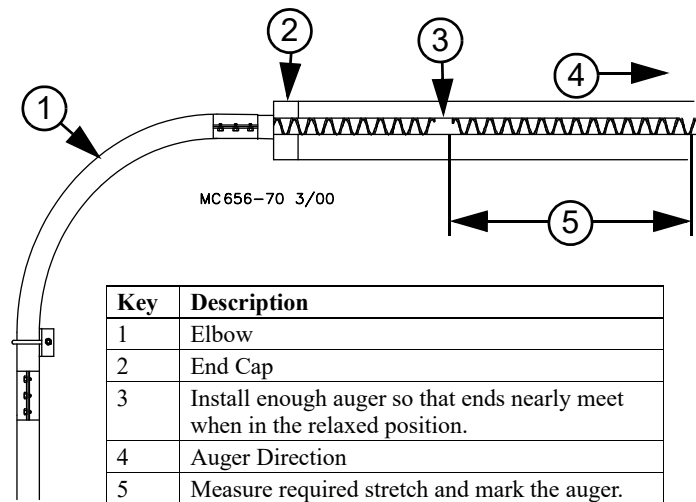
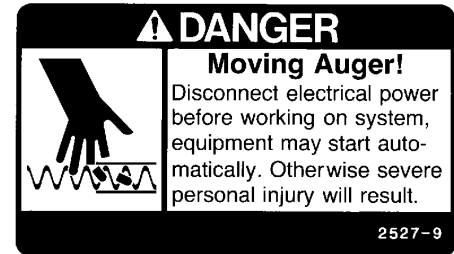


Figure 23. Auger Installation (top view)

Note: The Power Unit Sprockets must be removed to allow the auger to relax. This may be done removing the entire Power Unit or just the Sprockets. After the auger has been stretched and connected, reinstall the Power Units and/or Sprockets.

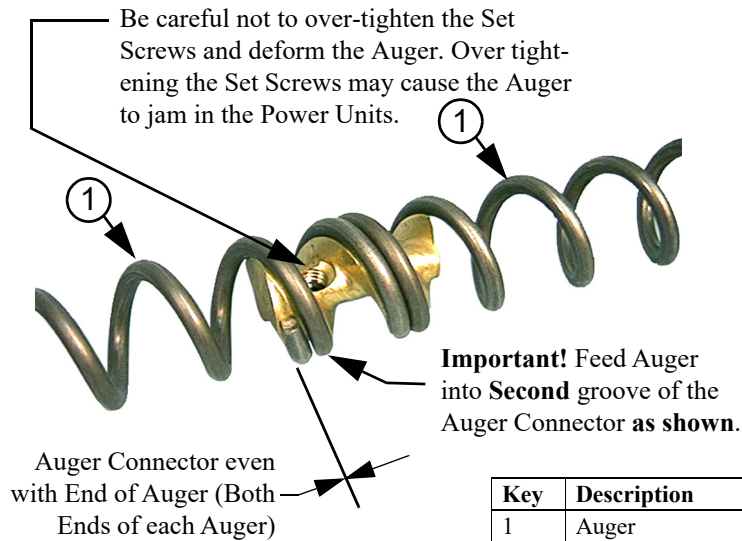
7. Slide the auger through the far end elbow and pipe assembly.
8. Mark and cut the auger, so that when the elbow and pipe assembly is secured to the End Cap, the auger ends meet in the trough (several feet from the End Cap) (See Figure 23.). This will allow room to work with the auger during stretching and Auger Connector installation.
9. Push and pull on the auger a few times to make sure it is in a relaxed position.
10. Calculate the required auger stretch based on 4" per 100 feet (100 mm per 30 m) of total auger length.
11. Measure and mark the stretch required on the auger in the trough.
12. Pull the auger ends out of the trough.
13. Cut the required stretch out of the auger.
14. Connect the ends of the auger using an Auger Connector, as shown in (Figure 24) or (Figure 25).
15. Carefully place the auger back into the trough.



Auger Connector Installation

(50479) Auger Connector

1. Before stretching, allow the Auger to relax to its free length.
2. Cut the Auger and file the end smooth so that there are no sharp edges.
3. Screw the Auger Connector into one end of the Auger. Feed the Auger into second groove of the Auger Connector as shown in Figure below.
4. Untwist the other end of the Auger 1-1/2 turns so that when it is threaded into the other end of the Auger it will return to the relaxed state. Auger ends must be overlapped—Not Butted, when threaded into the track of Connector.
5. Stretch the Auger and twist the Auger ends together. Both ends of the Auger should be even with the end of the Connector, as shown below.
6. Tighten each Set Screw until it touches the Auger. Then tighten 1/2 turn. If Auger can be unscrewed by hand then tighten an additional 1/4 turn. **DO NOT TIGHTEN MORE THAN 3/4 TURN.**
7. File both ends of the Auger so that they are the same diameter as the rest of the Auger.



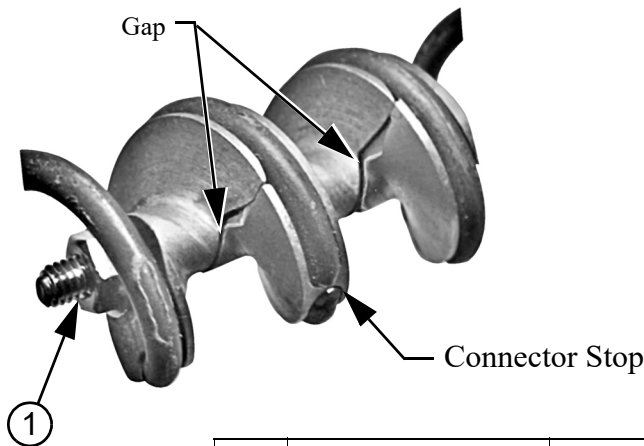
Key	Description	Part No.
1	Auger	50220-X
2	Auger Connector	50479

Figure 24. (50479) Auger Connector Installation

(48401) Auger Connector

1. Screw the end of the Auger into the Auger Connector until it reaches the Stop in the Auger Connector.
2. Untwist the other end of the Auger 1-1/2 turns so that when it is threaded into the other end of the Auger it will return to the relaxed state.
3. Stretch the Auger and twist the Auger ends together. Both ends of the Auger should be even with the Connector Stop as **shown**.
4. Tighten the Connector Bolt to a maximum of 250-300 in-lbs. 21-25 ft-lbs. When the Connector Bolt is tight there will be no gap between connector halves as **shown**.
5. File both ends of the Auger so that they are the same diameter as the rest of the Auger.

Before Connector Bolt is tightened



Key	Description	Part No.
1	Connector Bolt	--

After Connector Bolt is tightened

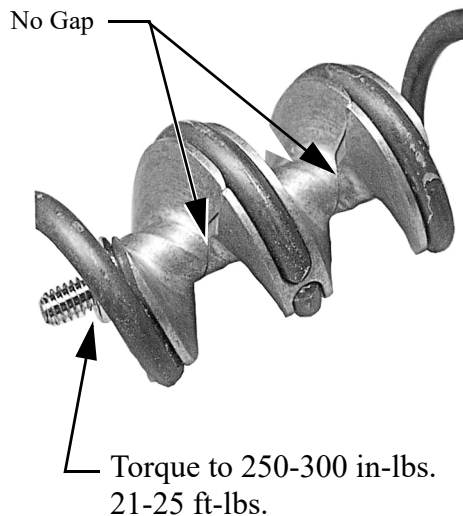


Figure 25. (48401) Auger Connector Installation

Power Unit Installation

Single Perch Suspended Systems

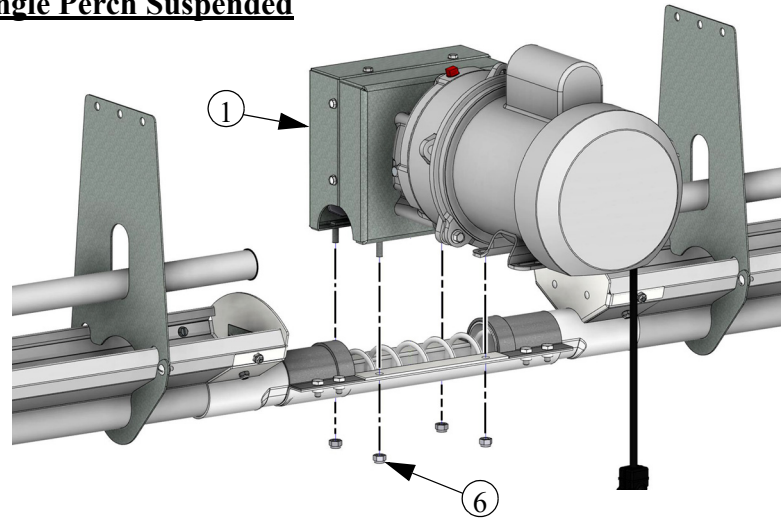
1. Secure the Power Unit (**Item 1**) to the Base Connector, using 1/4-20 Lock Nuts (**Item 6**), previously removed. (See **Figure 26**.)

3 Perch Suspended Systems

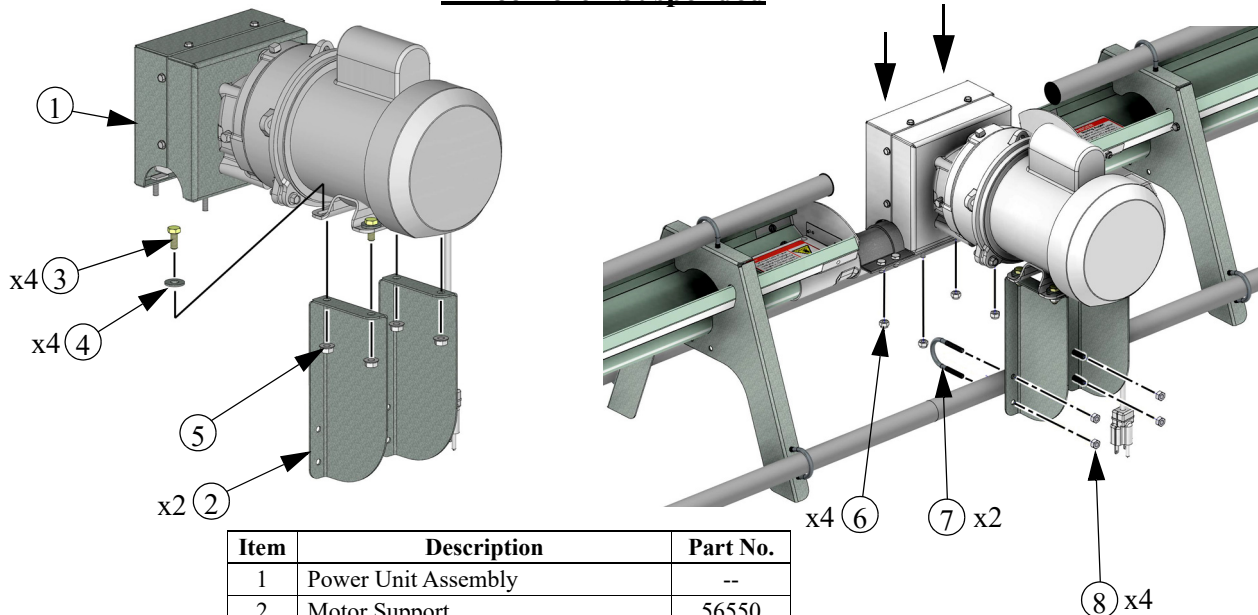
1. Fasten two Motor Supports (**Item 2**) to the Power Unit with 5/16 Bolts and Nuts and Washers (**Items 3, 4, & 5**) as shown.
2. Secure the Power Unit and Driver Assembly (**Item 1**) to the Base Connector, using 1/4-20 Lock Nuts (**Item 6**), previously removed. (See **Figure 26**.)

- Important! Do Not use the Nuts included with U-Bolts (Item 7). Use 1/4-20 Lock Nuts (Item 8) instead.**
3. Secure the Motor Supports to the Perch Tube with U-Bolts (**Item 7**) as shown.

Single Perch Suspended



Three Perch Suspended

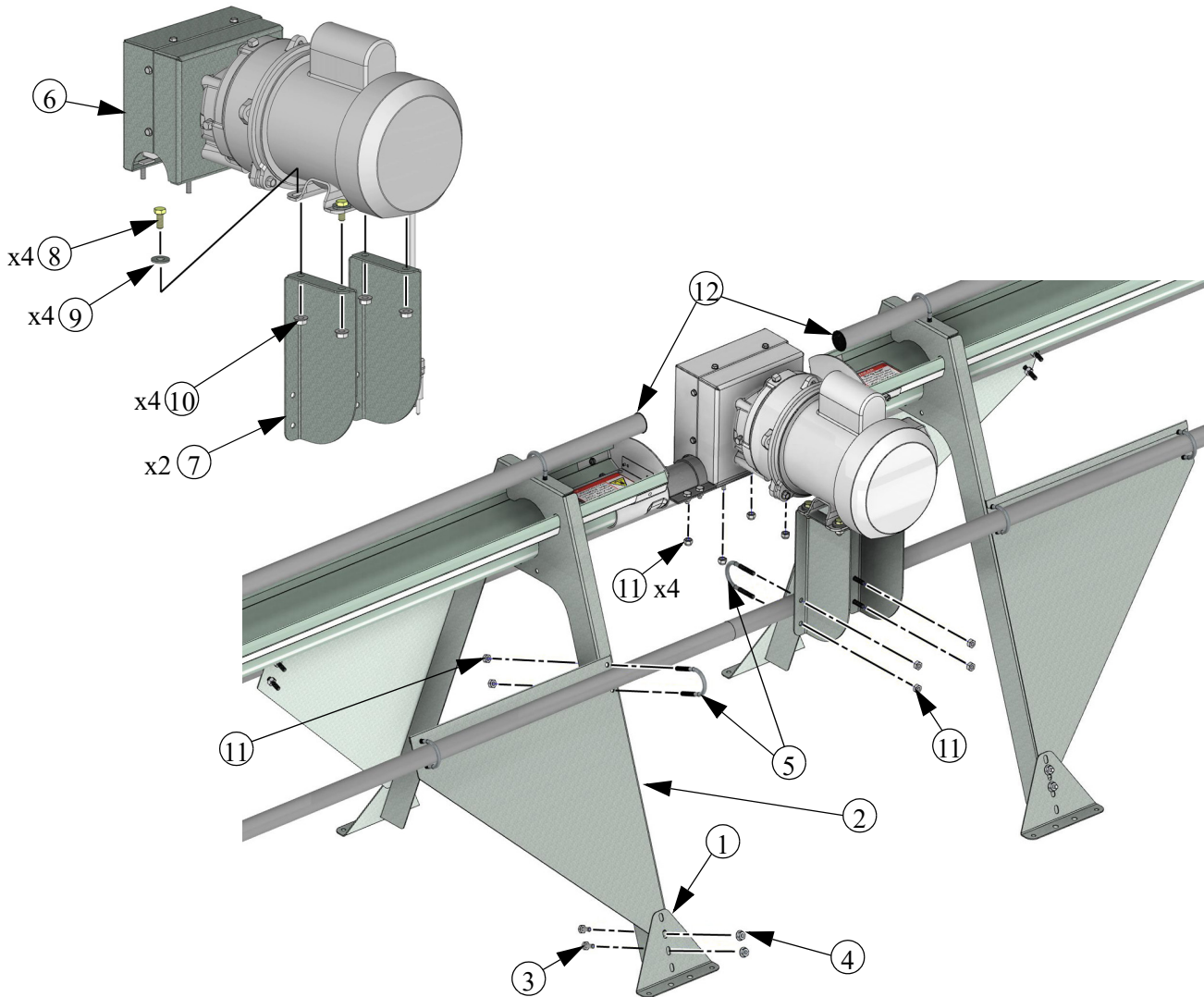


Item	Description	Part No.
1	Power Unit Assembly	--
2	Motor Support	56550
3	5/16-18 x .75 HH5 Bolt	2046
4	.875 x .376 x .079 Washer	546
5	5/16-18 Serrated Flg. Nut	8490
6	1/4-20 Ny. Insert Lock Nut Removed in (Figure 21) on page 23	1269
7	1/4-20 U Bolt	56487
8	1/4-20 Lock Nut	1269

Figure 26.Power Unit Installation

Non-Suspended (Stand) Systems

1. Install Foot Stands (**Item 1**) and Feeder Perch Angle Braces (**Item 2**) as shown. Use appropriate holes in the Foot Stands to level the System.
2. Ensure that Perch Tubes are cut even with the End Caps and install Conduit Plugs (**Item 12**) as shown.
3. Fasten two Motor Supports (**Item 7**) to the Power Unit (**Item 6**) with 5/16 Bolts, Nuts and Washers (**Items 8, 9, & 10**) as shown.
4. Secure the Power Unit (**Item 1**) to the Base Connector, using 1/4-20 Lock Nuts (**Item 11**), previously removed. (See **Figure 21**.)
5. Secure the Motor Supports to the Perch Tube with U-Bolts (**Item 5**) as shown.



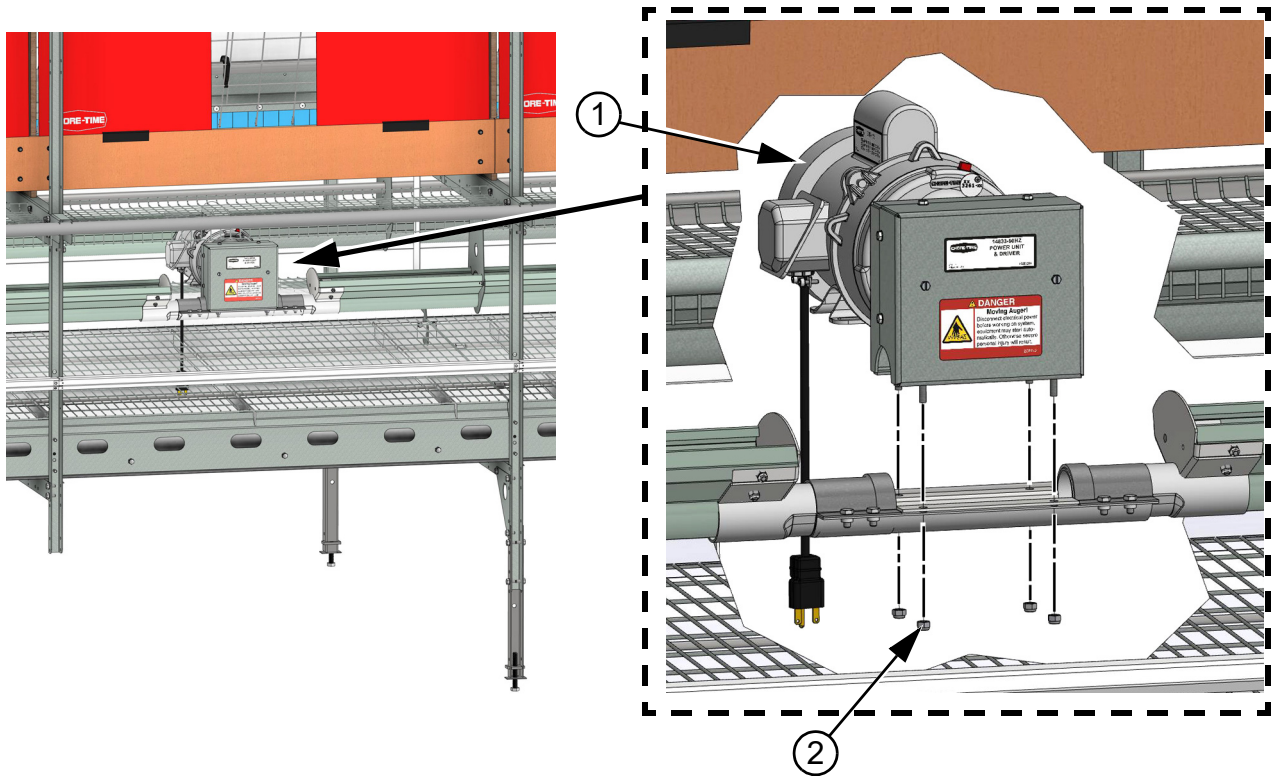
Item	Description	Part No.
1	Foot Stand	56523
2	Feeder Perch Angle Brace	56524
3	1/4-20 x .63 HH5 Bolt	2152
4	1/4-20 Serrated Flange Nut	46460
5	1/4-20 U Bolt	56487
6	Power Unit Assembly	--

Item	Description	Part No.
7	Motor Support	56550
8	5/16-18 x .75 HH5 Bolt	2046
9	.875 x .376 x .079 Washer	546
10	5/16-18 Serrated Flg. Nut	8490
11	1/4-20 Ny. Insert Lock Nut (4 Removed in (Figure 21) on page 23)	1269
12	1" Conduit Plug	56264

Figure 27. Power Unit Installation (Stand systems)

Aviary Systems

1. Secure the Power Unit and Driver Assembly (**Item 1**) to the Base Connector, using 1/4-20 Lock Nuts (**Item 2**), previously removed. (See **Figure 26**.)



Item	Description	Part No.
1	Power Unit Assembly	--
2	1/4-20 Ny. Insert Lock Nut Removed in (Figure 21) on page 23	1269

Figure 28. Power Unit Installation (Aviary)

Suspending the System

Trough Hanger Suspension

Hangers should have been installed at the time of assembly.

1. Route the Drop Cable through the hole in the top of the Adjustment Lever (**Item 1**), and the hole in the hanger leaving a maximum of 6" [15.2 cm] Loop **as shown**. Cut off excess cable **as shown**.
2. On 3 Perch Systems locate the Drop Cables such that the Cable Loops can not slide off the Perch Tubes.
3. Use the Adjustment Leveler to adjust the trough height at each Hanger. Measure from the Floor or ceiling to accurately level the system.

Suspension at Elbows

1. At Elbows use two Cable Clamps (Item 2) rotated 180 degrees from each other to attach Drop Cables **as shown**.

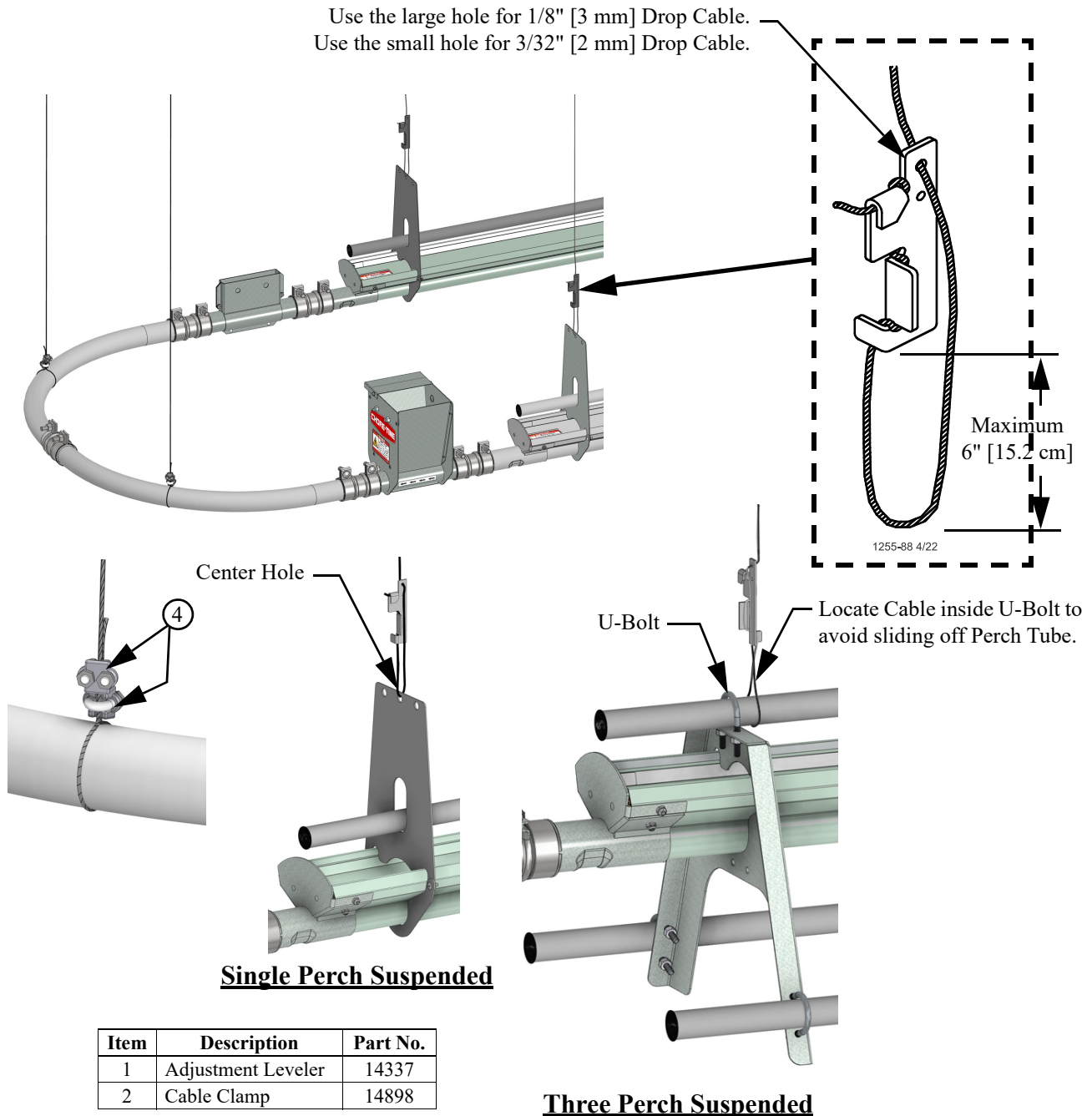


Figure 29. Adjustment Levelers

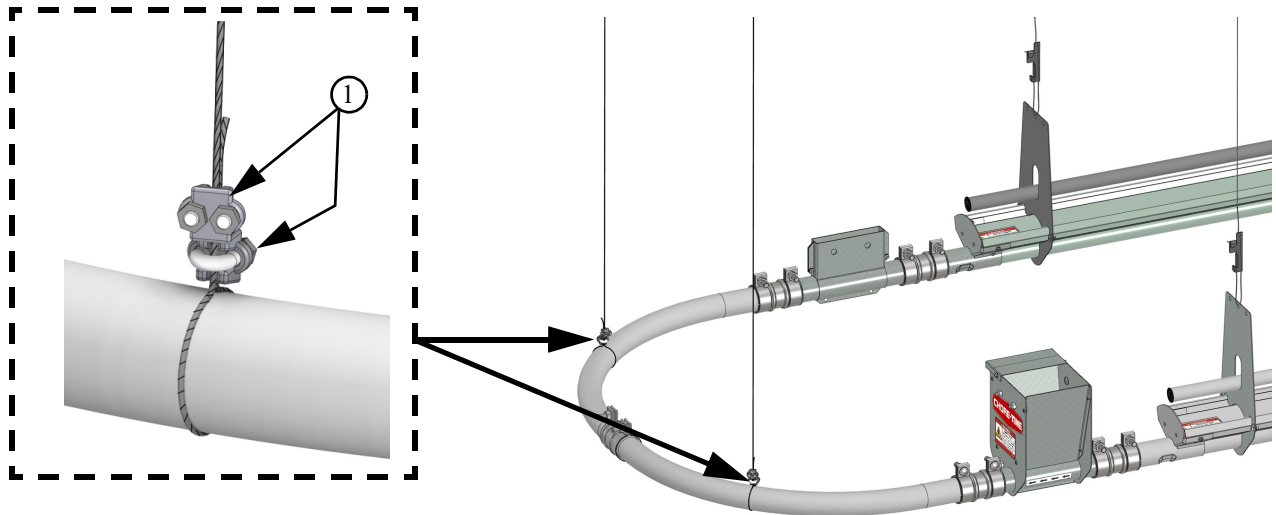
Suspension at Elbows

Suspended Systems

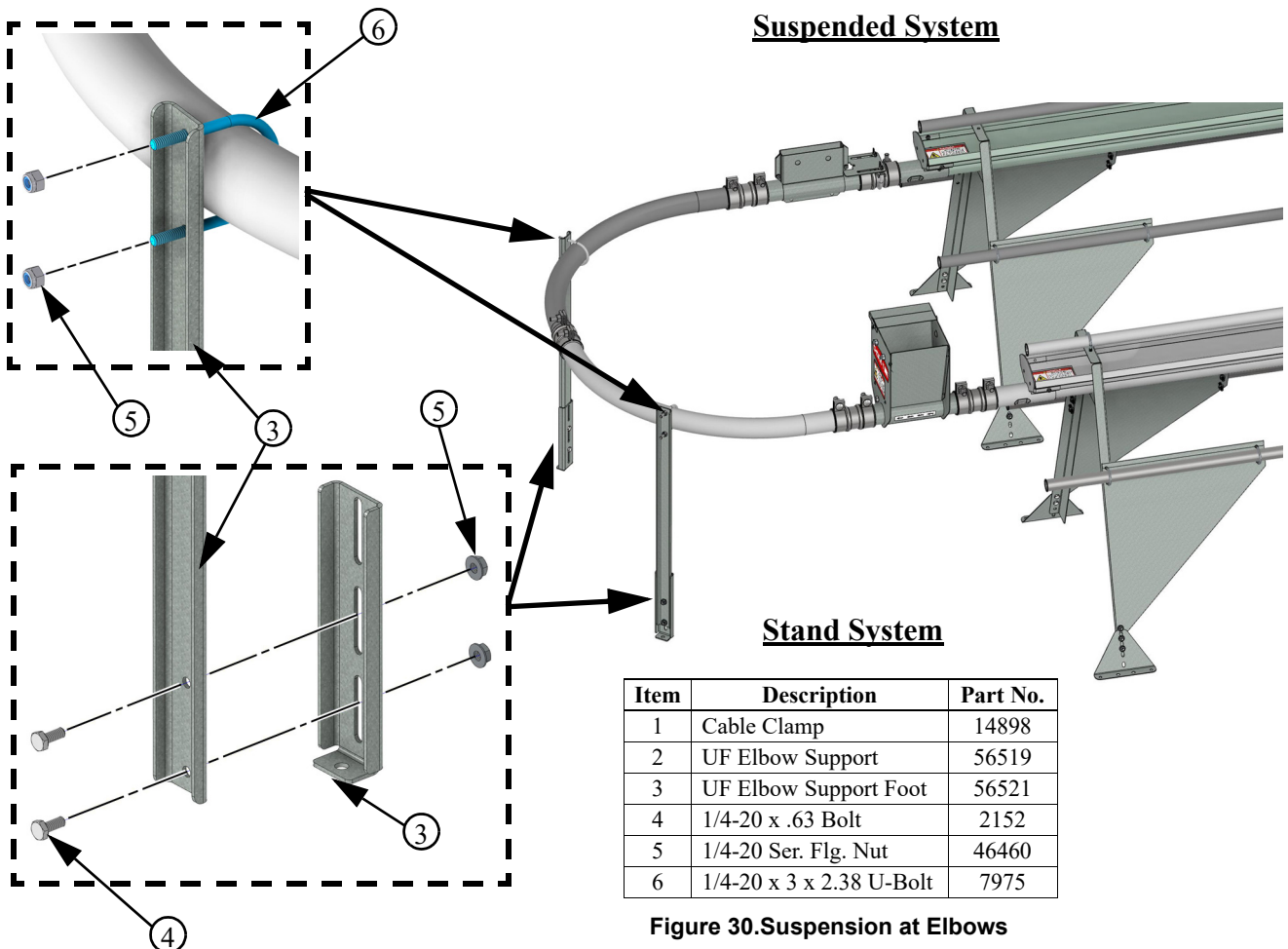
1. At Elbows use two Cable Clamps (**Item 1**) rotated 180 degrees from each other to attach Drop Cables as shown.

Stand Systems

1. Install Elbow Supports (**Item 2**) and Elbow Support Feet (**Item 3**) at each Elbow as shown.
2. Adjust the Feet as needed to level the System on Stands.



Suspended System



Stand System

Figure 30. Suspension at Elbows

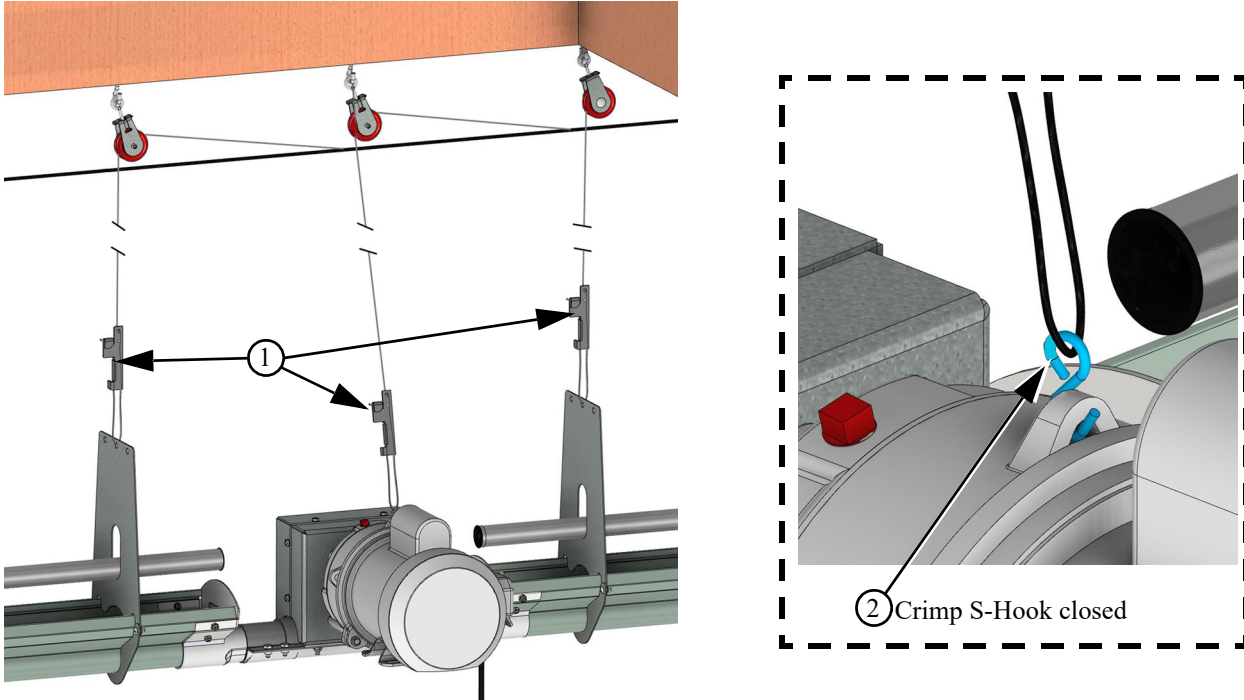
Suspension at Power Unit

Single Perch Power Unit Suspension

1. Attach Drop Cables to Trough Hangers using Adjustment Levelers (**Item 1**) as shown in **Figure 29**, on **page 30**.
2. Attach a Drop Cable to each Power Unit using a S-Hook (**Item 2**) as shown.
3. Use the Adjustment Leveler (**Item 1**) to adjust the trough height at each Hanger. Measure from the Floor or ceiling to accurately level the system.

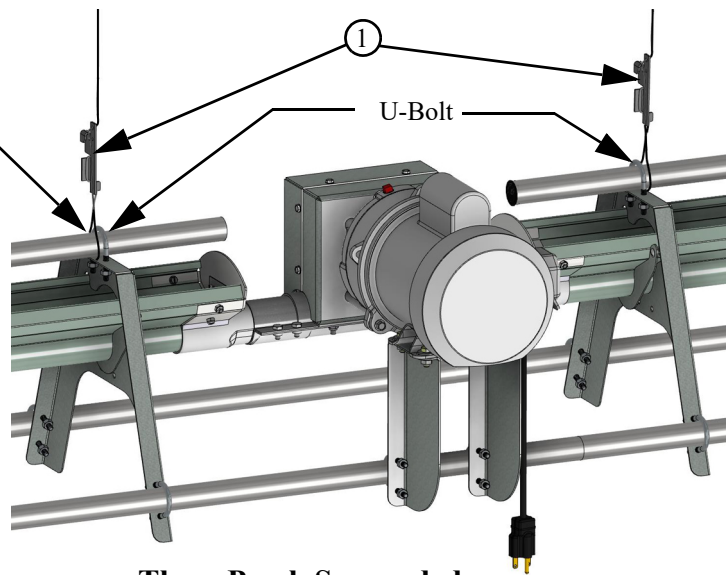
3 Perch Power Unit Suspension

1. On 3 Perch Systems loop the Drop Cables around the Perch Tubes outside the U-Bolts as **shown**.
1. Use the Adjustment Leveler (**Item 1**) to adjust the trough height at each Hanger. Measure from the Floor or ceiling to accurately level the system.



Single Perch Suspended

Locate Cable outside U-Bolts to avoid sliding off Perch Tube.



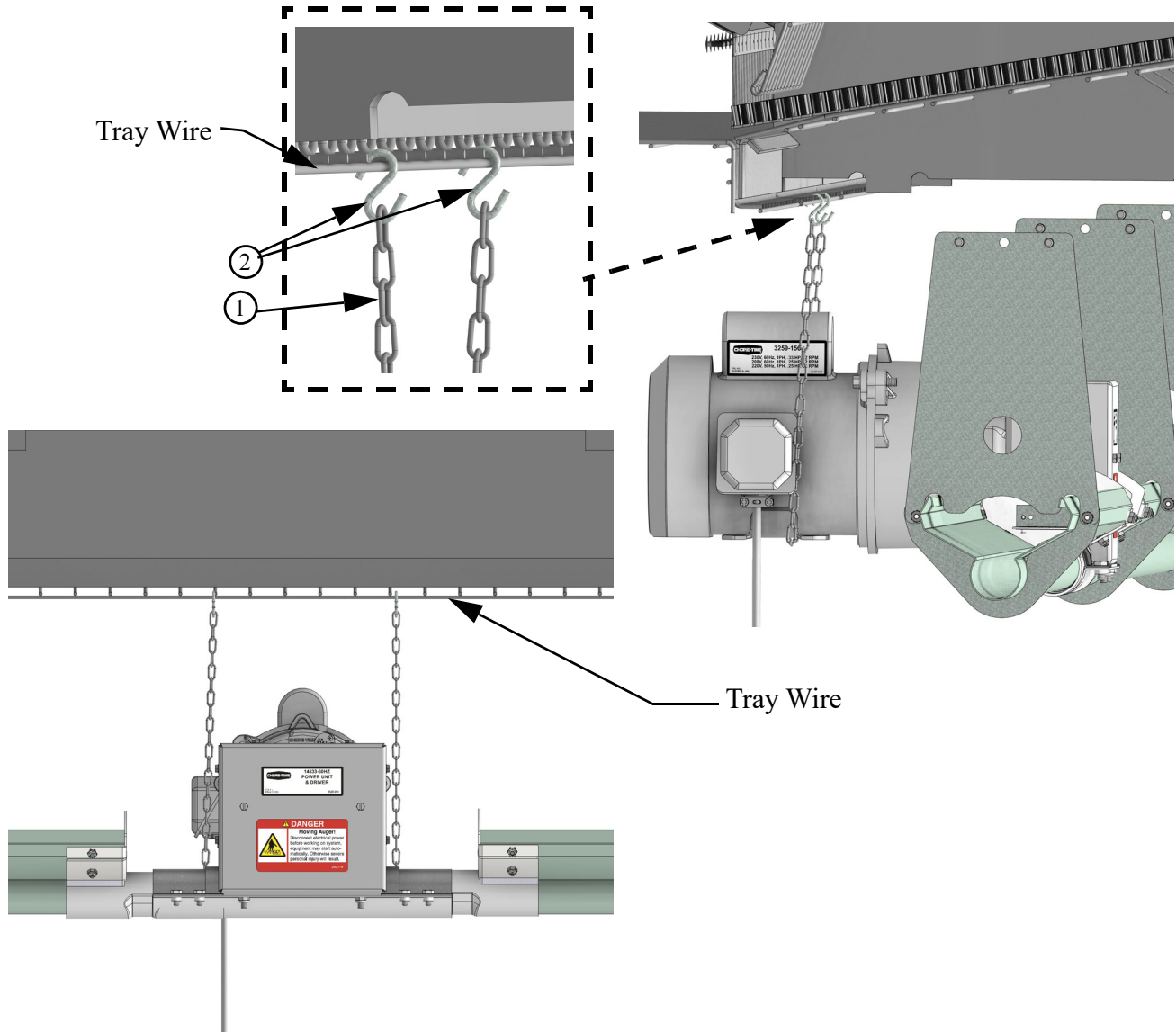
Item	Description	Part No.
1	Adjustment Leveler	14337
2	12 Ga. S-Hook	723

Figure 31. Suspension at Power Units

Three Perch Suspended

Aviary Power Unit Suspension

1. Use Chain (Item 1) and Screw Hooks to suspend the Power Units from the Aviary Wire as shown.



Item	Description	Part No.
1	Chain	1302
2	12 Ga. S-Hook	723

Figure 32.Cage Power Unit Suspension

Static Chain (Not Supplied)

⚠ DANGER Once the Feed System has been raised to the desired height, Static Chain must be used to support the system. The system should not be supported by Cables alone. The weight of the Birds along with the system is too much for Cables only support. Use Chain that is strong enough to support the weight of the equipment and Birds.

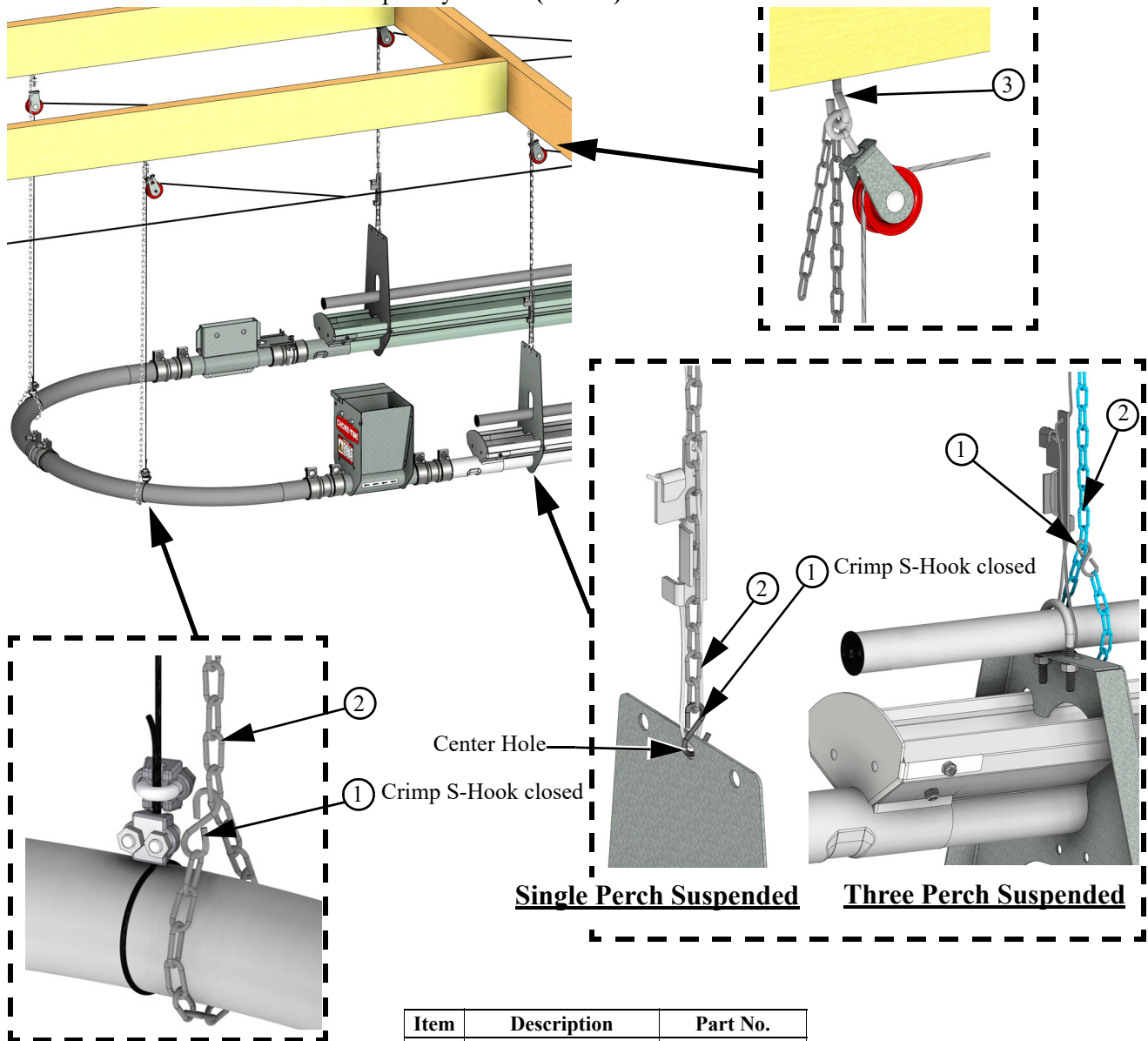
Static Chain at Trough Hangers

Install Static Chain at every Trough Hanger.

1. Use an S-Hook (Item 1) to attach the Static Chain (Item 2) to the center hole of the Trough Hanger (Item 3).
2. Attach Static Chain to the same Open Eye Hook (Item 3) the Drop Cable uses above it as shown.
3. Crimp the S-Hook closed connecting the Chain to the Open Eye Hook

Static Chain at Elbows

1. Install Static Chain (Item 2) with an S-Hook (Item 1) at every Drop Cable at Elbows as shown.
2. Hook the Static Chain on the Open Eye Hook (Item 3) above it.



Item	Description	Part No.
1	12 Ga. S-Hook	723
2	Static Chain	Not Supplied
3	Open Eye-Hook	1214

Figure 33.Static Chain

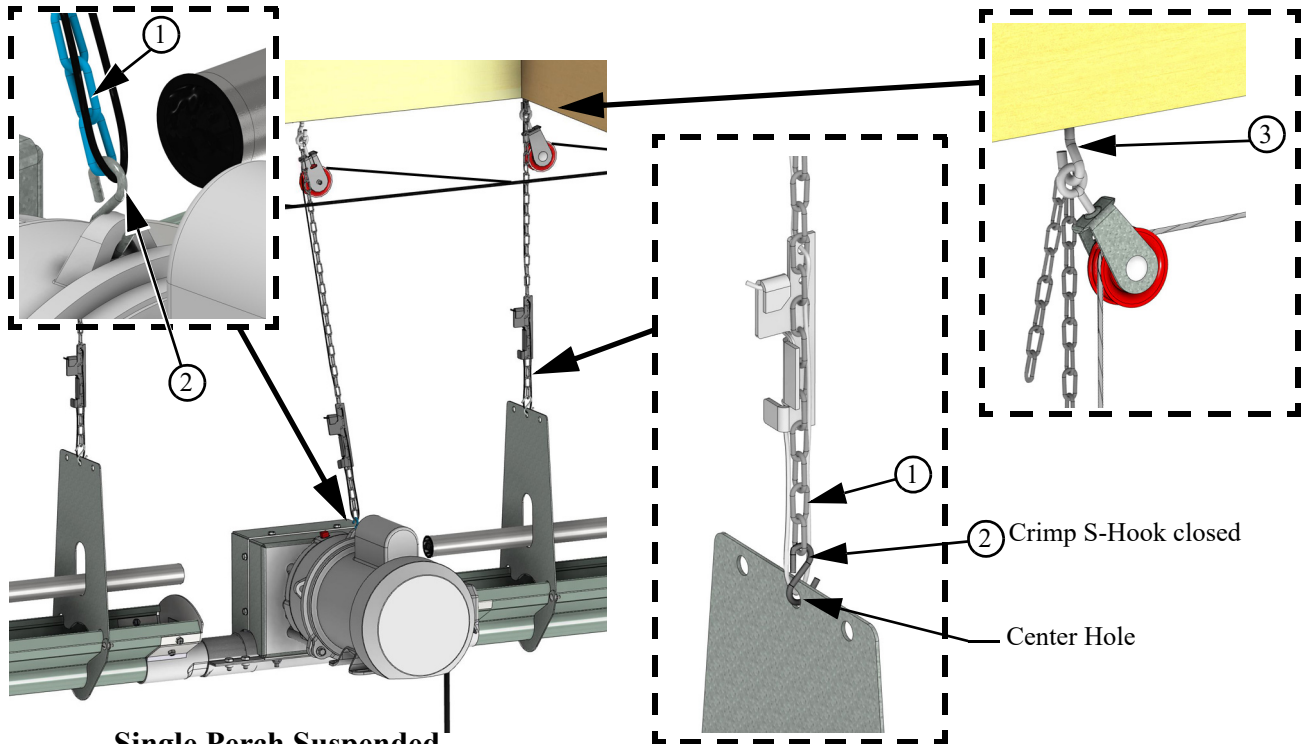
Static Chain at Power Units (Static Chain not supplied)

Single Perch Power Unit Suspension

1. Secure Static Chain (**Item 1**) to the center hole of the Trough Hangers with S-Hooks (**Item 1**).
2. Secure Static Chain (**Item 1**) to the Gear Head with S-Hooks (**Item 1**) as shown.
3. Hook the Static Chain on the Open Eye Hooks (**Item 3**) directly overhead.

3 Perch Power Unit Suspension

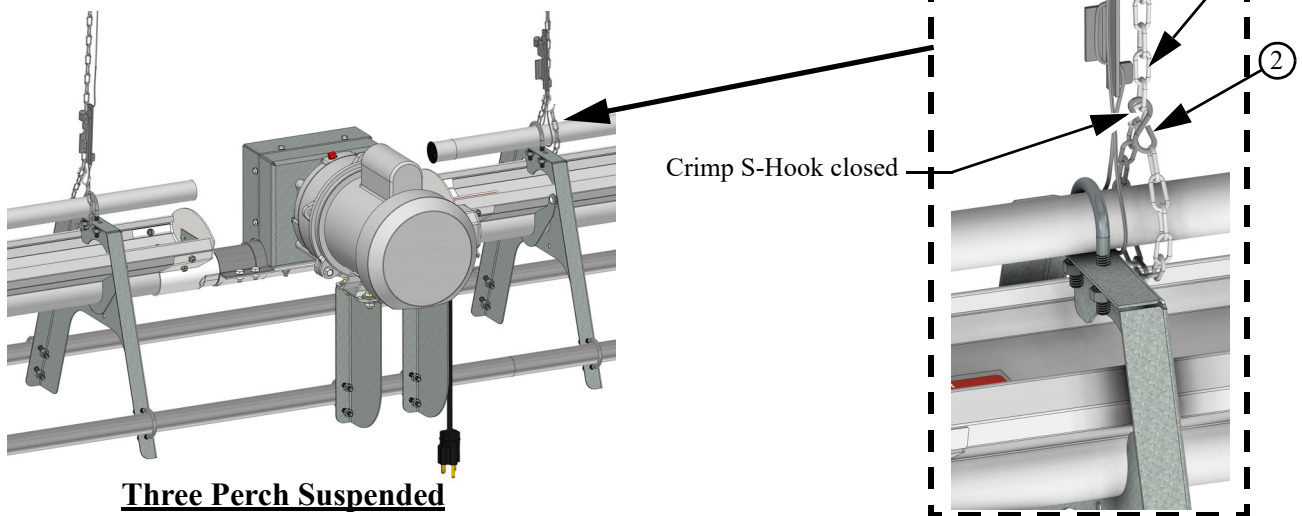
1. Use S-Hooks (**Item 1**) to attach Static Chain (**Item 2**) to Perch Tubes as shown (**Outside U-Bolts**). Crimp the S-Hooks closed so Chain can not come off. Make sure chains are outside Hangers so they do not slide off the end of the Perch Tubes.
2. Hook the Static Chain on the Open Eye Hook (**Item 3**) overhead.



Single Perch Suspended

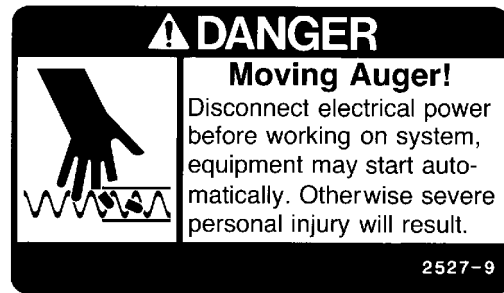
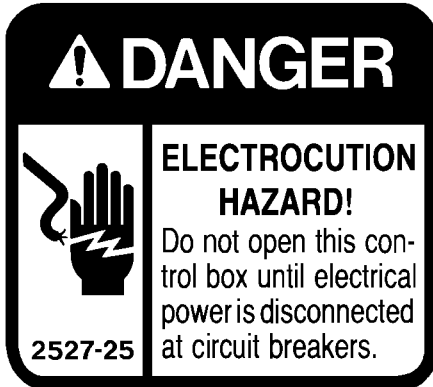
Item	Description	Part No.
1	12 Ga. S-Hook	723
2	Static Chain	Not Supplied
3	Open Eye-Hook	1214

Figure 34. Static Chain at Power Units



Three Perch Suspended

Troubleshooting



Problem #1: One loop not running, motors overloaded.

1. Auger stops because the feed level is too high (motors overloading).
 - A. Check to make sure that the auger running time is set correctly. The auger running time should be set for only 10 seconds more than the amount of time required for the auger to travel from one hopper to the next.
2. Check for foreign objects in the trough. Follow this procedure:
 - A. Reset the motors (push the overload button) and operate the feeder. If the feeder runs fine, the overload was caused by either high feed levels or a foreign object in the trough. (see item B, below).
 - B. If the feeder fails to operate, check the auger for foreign objects or water. The most likely place or object to jam is in the elbows or at a power unit. Foreign objects in the auger will cause the auger to become wedged and may be under pressure.
Using an Auger Puller or pliers, check both elbows and both power units.
CAUTION: Do not handle the auger by hand. Springing auger can cause severe personal injury.
 - C. Remove the object from the auger. If object is found at the power unit, check to make sure the auger was not damaged or distorted. Replace damaged section of auger.
 - D. If an object is not found, check other power units and elbows. It may be necessary to remove the power unit(s) from the trough and check to see if they operate properly. Replace if necessary.
 - E. If water is found in the trough, it may be necessary to help get the auger moving before the power units will take over.
 - F. Check screens in screeners for holes if source of foreign objects cannot be found.

Problem #2: One loop frequently overloads. When motors are reset, feeder runs fine for several minutes (days) before stopping. No foreign objects can be found.

1. Empty the feeder by opening the clean outs. Perhaps the problem is caused by a small object which will fall out with the feed.
2. Check the empty auger for a piece of metal wrapped around a flighting. Often these objects cannot be seen unless the auger is empty. Remove the foreign object.
CAUTION: Do not handle the auger by hand. Springing auger can cause severe personal injury.
3. Check the auger for stretched flightings or kinks. It may be necessary to remove auger from trough. Remove the damaged section(s) of auger and rejoin the auger. If one foot (300 mm) of auger or less is removed it may not be necessary to add a section of auger to replace damaged section.

Problem #3: Auger comes out of trough.

1. Damaged trough-repair or replace trough.
 - A. Close trough by installing trough retaining Clip (part no.14431). This item can be installed at any point in the system to help close up gaps between Troughs.

Problem #4: One or more loops without feed.

1. Check drop tubes for plugging.
2. Check Intake Boots. Remove any foreign material, if present.
3. Check fill system control.
4. Check hoppers for bridging. If bridging is a problem, lower drop tubes.

Problem #5: Fill system motor overloads.

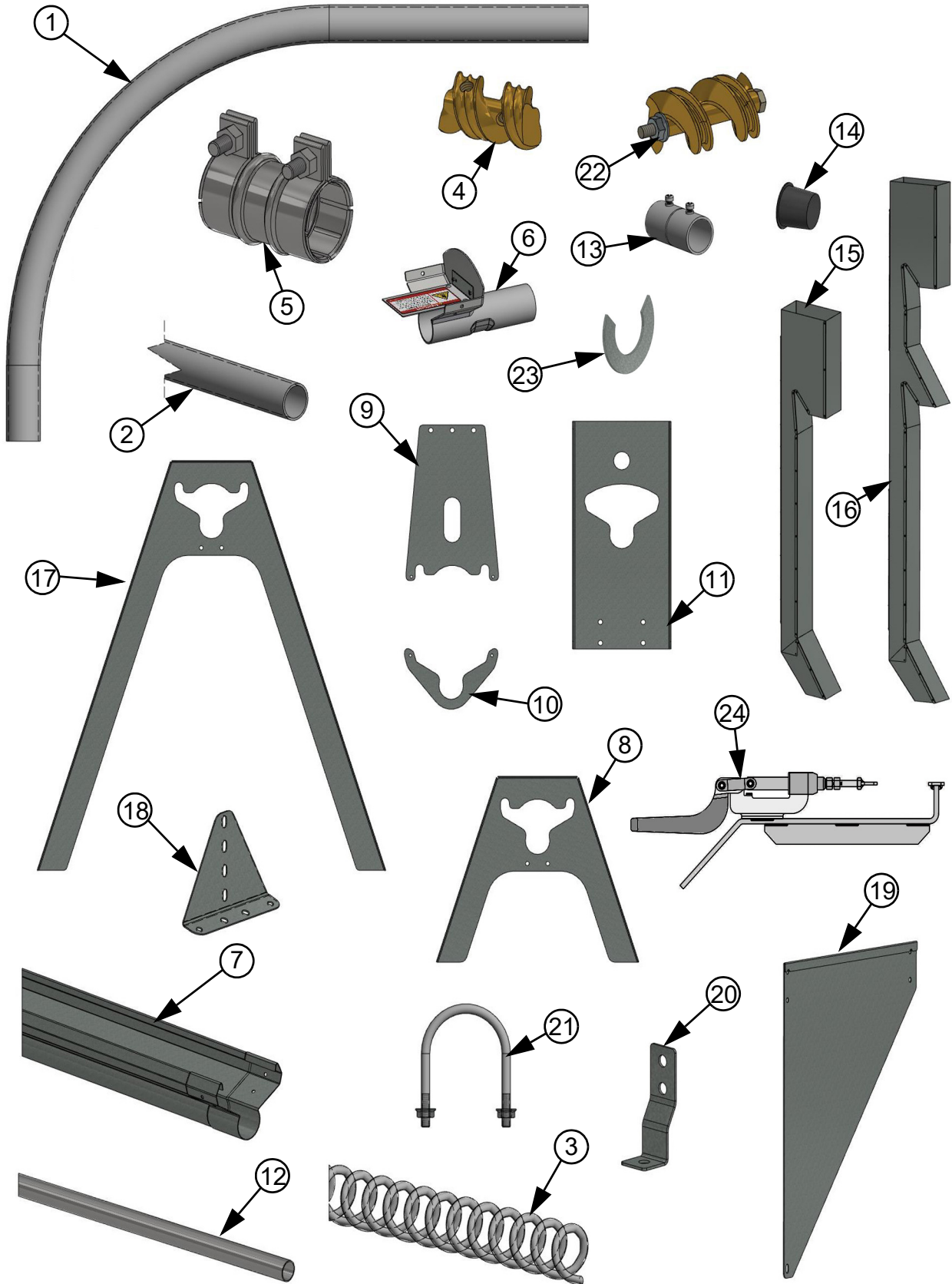
1. Check for objects in auger.
2. Remove auger, check for damage.

Problem #6: Screener

1. The screener bypass bucket should be checked daily.
 - A. If feed is in bucket, check screens for plugging.
 - B. If bucket does not contain normal amounts of whole corn or chunks of feed, check screens for holes.
2. Screener will not turn on.
 - A. Check operation at the switch on the side of screener control.

Parts Listing

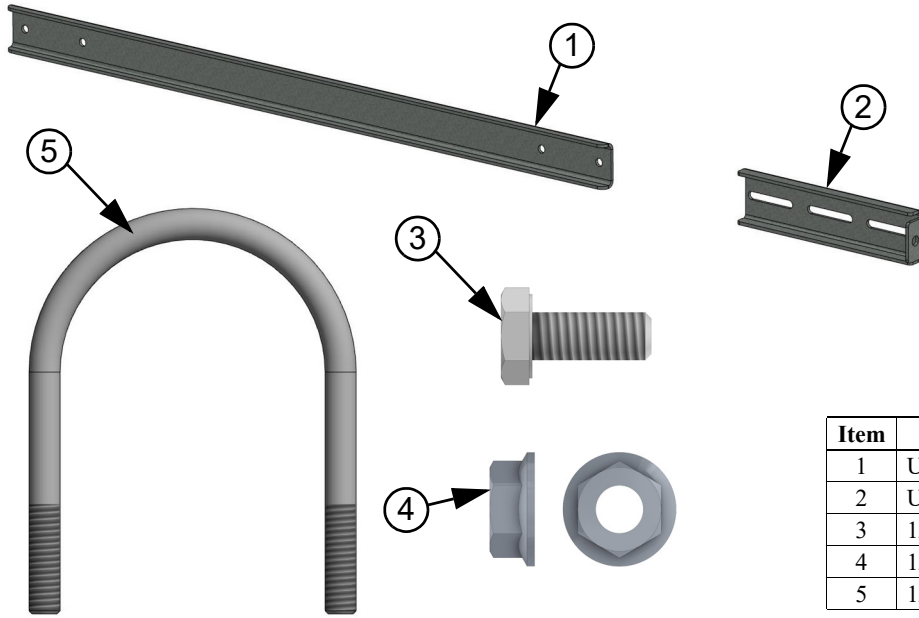
ULTRAFLO® Cage Free Feeder Line Components



Part Numbers

Item	Description	Part No.
1	ULTRA-FLO Steel Elbow	9639
2	35.92" Straight Tube	13269
3*	ULTRA-FLO Auger	50220-X
4	Auger Connector	50479
5	2" Tube Coupling	48722
6	End Cap Assembly	56115
7	8' [2.44m] Double Sided Trough	56110-1
	10' [3.05m] Double Sided Trough	56110-2
	2.4 m Double Sided Trough	56110-3
8	Short 3 Perch UF Feeder Support	56476
9	ULTRA-FLO Upper Hanger	56118
10	ULTRA-FLO Lower Hanger	56117
11	Upper Level Feeder Support	56036
12	20' [6.1m] Perch Pipe	52767
13	Pipe Coupler	52900-1
14	Conduit Plug	56264
15	Vike (2 Feeder) Manifold	55922
16	Vike (3 Feeder) Manifold	55923
17	UF 3 Perch Support	56418
18	UF Stand Foot	56523
19	Feeder Perch Angle Brace	56524
20	Mounting Bracket	57332
21	1/4-20 x 1.25 U-Bolt	56487
22	Split Auger Connector (2 Per Pack)	48401
23	Trough Retainer (C-Clip)	14431
24	Retainer Tool	14493
*Auger available in 10' [3.05 m.] increments up to 500' [152.4 m]. Example: 50220-100 = 100' [30.48 m] of Auger.		

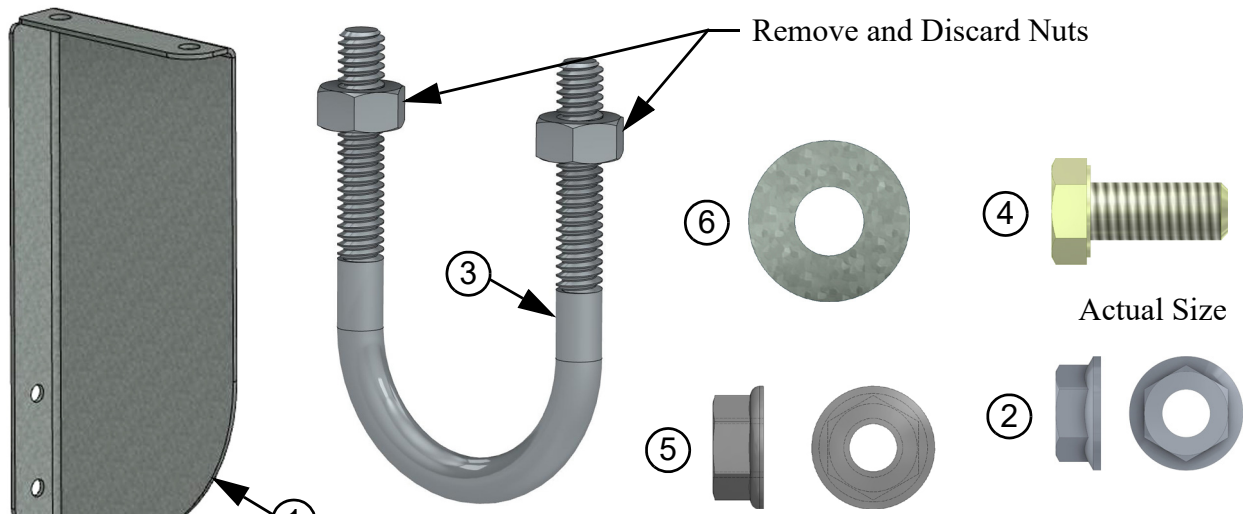
Ultra-FLO Elbow Brace Kit 56520



Item	Description	Part No.
1	UF Elbow Support	56519
2	UF Elbow Support Foot	56521
3	1/4-20 x .63 Bolt	2152
4	1/4-20 Ser. Flg. Nut	46460
5	1/4-20 x 3 x 2.38 U-Bolt	7975

Hardware shown Actual Size

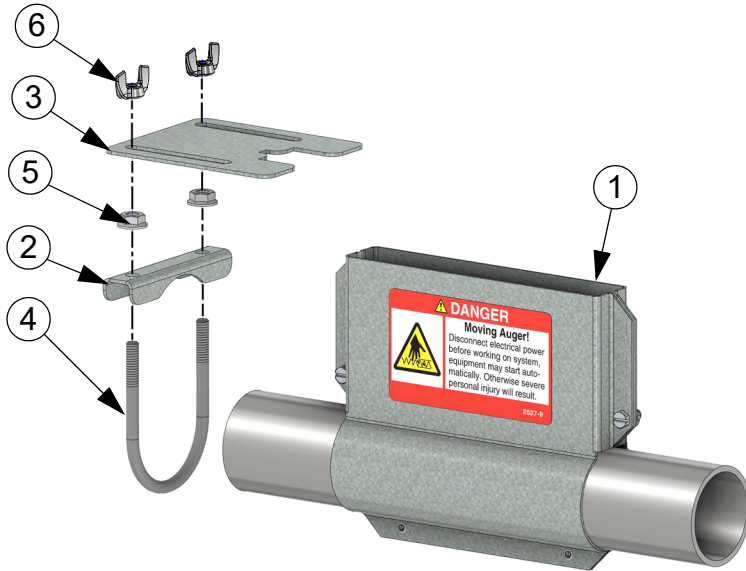
Ultra-FLO Motor Support Kit 56554-X



Hardware shown Actual Size

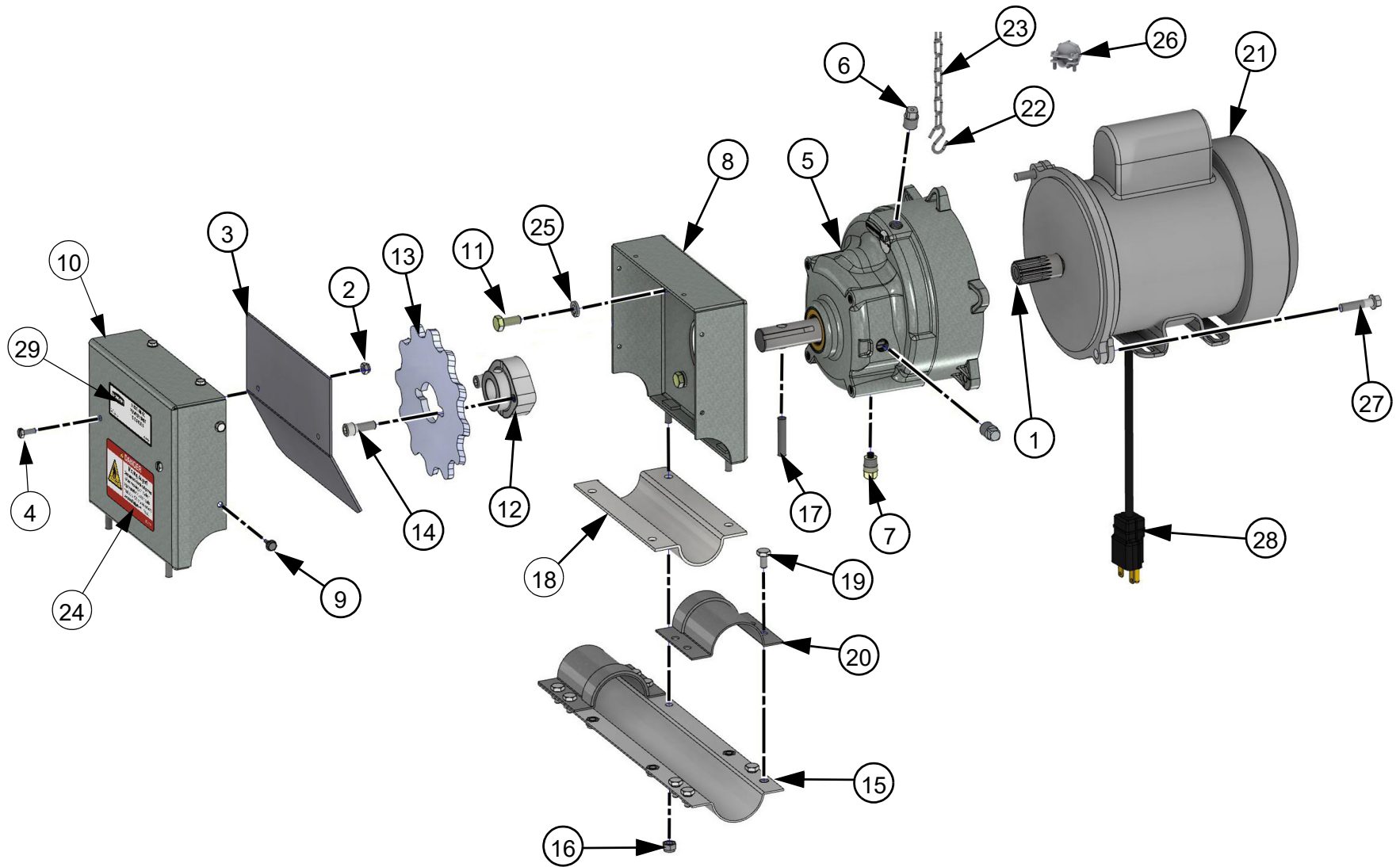
Item	Description	Part No.
1	UF Motor Support	56550
2	1/4-20 Ser. Flg. Nut	46460
3	1/4-20 x 1.25 U-Bolt	56487
4	5/16-18 x .75 Bolt	2046
5	5/16-18 Hex Ser. Flg Nut	8490
6	.875 x .376 x .079 Washer	546
56554-2=2 Motor, 56554-3=3 Motor, 56554-4=4 Motor		

Clean-Out Assembly (Part No. 13405) and Lock Kit (Part No. 57375)



Item	Description	Part No.
1	Clean-out	13405
2*	U-Bolt Pipe Clamp	57374
3*	Clean-out Lock	57376
4*	1/4-20 U-Bolt	7975
5*	1/4-20 Ser. Flg. Nut	46460
6*	1/4-20 Wing Nut	1630
*Included in 57375 Lock Kit		

42 Power Unit and Driver Assembly

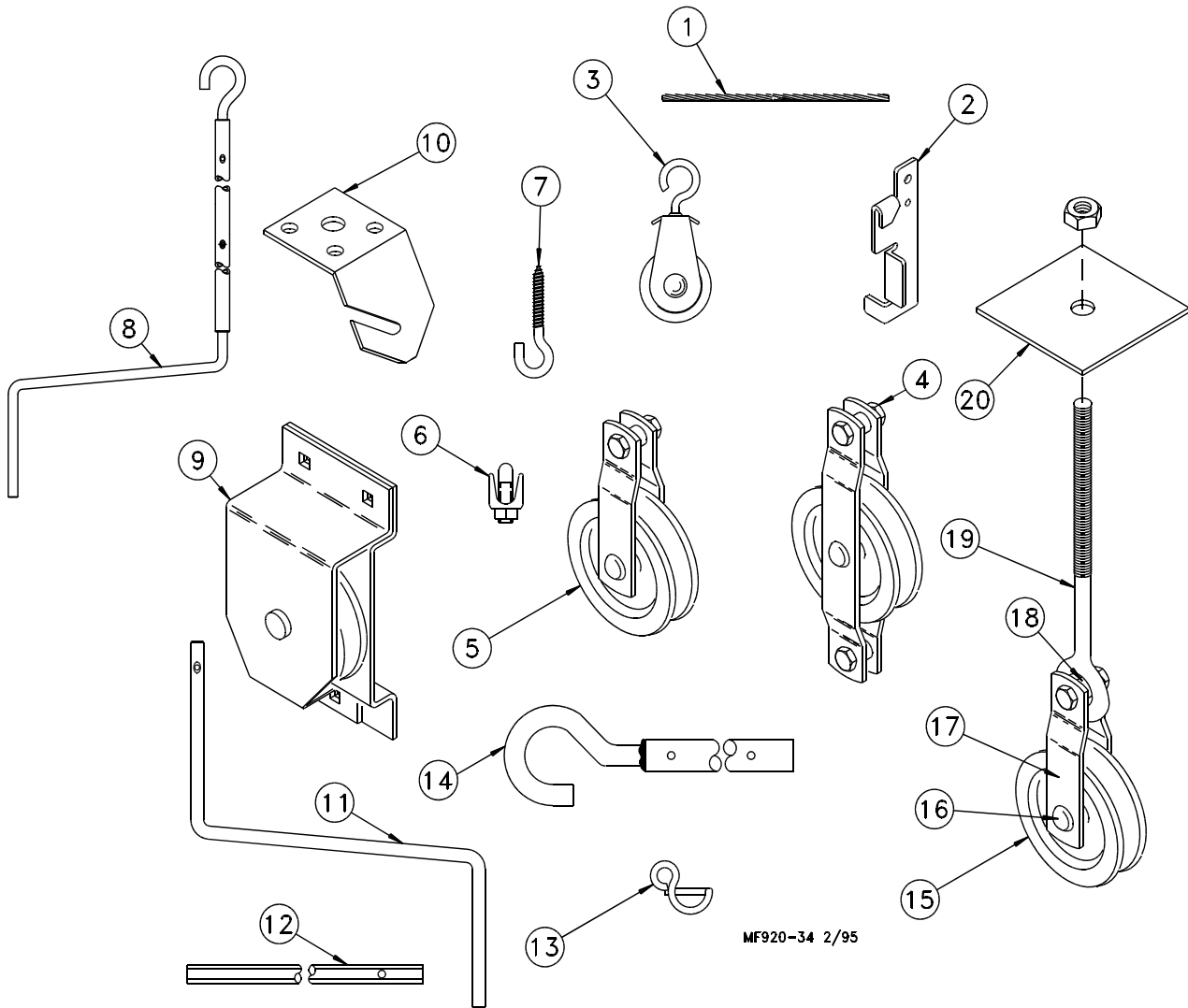


		Power Unit and Driver Assembly Part Numbers						
		14833-60HZ 1/3HP, 230V 60Hz,1Ph.	14833-60LC 1/3HP, 230V 60Hz,1Ph.	24778-60HZ 1/3HP, 230V 60Hz,1Ph.	24625-60HZ 1/2HP, 230V 60Hz,3Ph.	14850-60HZ 1/2HP, 230V 60Hz,1Ph.	41048 1/3HP, 230V 60Hz,3Ph.	53340 1/2HP, 230/460V 50Hz,3Ph.
Item	Description	Part No.						
1	Pinion Assembly	53390	53390	53390	53390	53390	53390	25836
2	10-24 Stamped Nut	1560	1560	1560	1560	1560	1560	1560
3	Auger Brace	24674	24674	24674	24674	24674	24674	24674
4	10-24 Hex Head Screw	4416-3	4416-3	4416-3	4416-3	4416-3	4416-3	4416-3
5	Gearhead Assembly	3261-21	3261-21	3261-21	3261-21	3261-21	3261-21	3261-22
6	Vent Plug (In parts package)	3523	3523	3523	3523	3523	3523	3523
7	Magnetic Pipe Plug	30160	30160	30160	30160	30160	30160	30160
8	Drive Unit Base	8207	8207	8207	8207	8207	8207	8207
9	#10x1/2" Self-Drilling Screw	3037	3037	3037	3037	3037	3037	3037
10	Drive Unit Cover	8208	8208	8208	8208	8208	8208	8208
11	5/16-18x3/4 Hex Head Screw	2046	2046	2046	2046	2046	2046	2046
12	Drive Gear Hub	8213	8213	8213	8213	8213	8213	8213
13	Sprocket	54383	54383	54383	54383	54383	54383	54383
14	5/16-18x7/8 Cap Screw	6850-1	6850-1	6850-1	6850-1	6850-1	6850-1	6850-1
15	Base Connector Weldment	9636	9636	9636	9636	9636	9636	9636
16	1/4-20 Locknut	1269	1269	1269	1269	1269	1269	1269
17	Dowel Pin	8699	8699	8699	8699	8699	8699	8699
18	Wear Shoe	8210	8210	8210	8210	8210	8210	8210
19	1/4-20x1/2" Hex Head Screw	1487	1487	1487	1487	1487	1487	1487
20	End Connector Weldment	9634	9634	9634	9634	9634	9634	9634
21	Motor	14733	14733	30693	24624	14750	30693	28031EUR
22*	S-Hook	723	723	723	723	723	723	723
23*	Chain	1302	1302	1302	1302	1302	1302	1302
24	Danger Decal	2527-9	2527-9	2527-9	2527-9	2527-9	2527-9	2527-9
25	.323x.586x.078 Lock Washer	547	547	547	547	547	547	547
26	Romex Connector	1317	1317	1317	1317	1317	1317	1317
27	5/16-18 x 1.25 Hx WH Screw	38163	38163	38163	38163	38163	38163	38163
28	Cord Assembly	13389	--	4999-54	4999-54	13389	--	4999-112
29	Description Decal	2529-284	2529-284	2529-279	2529-489	2529-667	2529-491	2529-827
**	Gearhead and Driver Assembly	27277	27277	27277	27277	27277	27277	27266

* Not included in the Power Unit/Driver Assembly

** Gearhead & Driver Assembly Part Numbers include items #2 through#20.

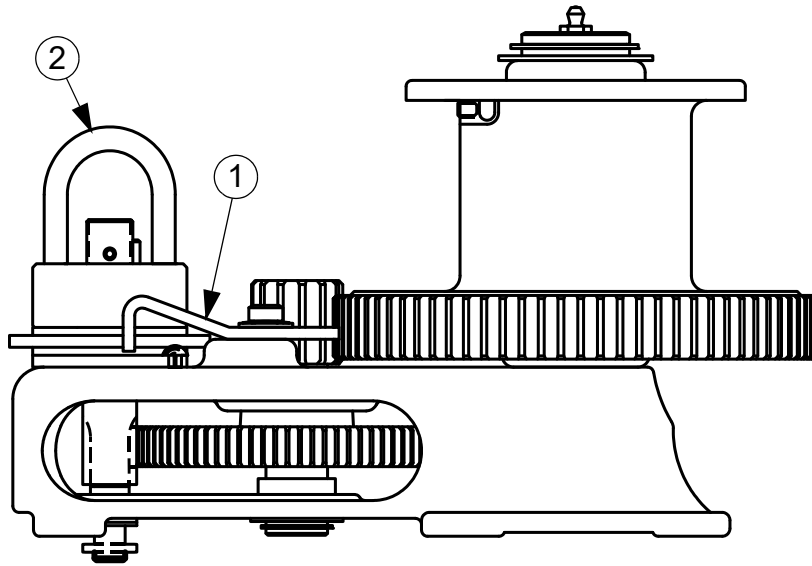
Miscellaneous Suspension Components



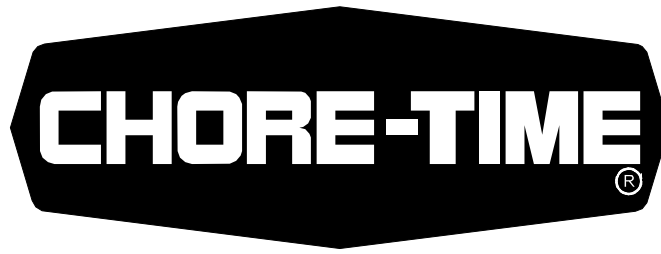
MF920-34 2/95

Item	Description	Part No.	Item	Description	Part No.
1	3/32" Cable (7x7)	4973	13	Winch Handle Pin	3761
	3/16 Cable (7x7)	1213	14	Winch Drive Tube (4')	2884-1
	1/8" Cable (7x7)	27975		Winch Drive Tube (8')	2884-2
2	Cable Lock	14337	15	Pulley	2503
3	Pulley with Swivel	3004	16	Clevis Pin	2498-1
4	Double Eye Pulley	2501	17	Side Bracket	2522
5	Pulley	2500	18	Spacer	2524
6	3/16" Cable Clamp	732	19	Eye Bolt	6362
	1/8" Cable Clamp	14898	20	Foot	1586
7	Standard Screw Hook	1214			
8	Telescoping Winch Handle	47638		Item 11 and Item 13 may be ordered as a kit	
9	Pulley Assembly	28429		under part no. 2885.	
10	Ceiling Bracket	28550			
11	Handle Shank	3148		Item 12 and Item 13 may be ordered as a kit	
12	Drill Adapter Shaft	3151		under part no. 2886.	

The Full Line Suspension Kit including items 15 through 20 and a 2809-2 Cable Assembly may be ordered under part no. 7948.

Winch (Part No. 47687)

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



MADE TO WORK.

BUILT TO LAST.®

Revisions to this Manual

Page No.	Description of Change	ECO
	New Manual	35668

Contact your nearby Chore-Time distributor or representative for additional parts and information.

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