

Poultry Production Systems

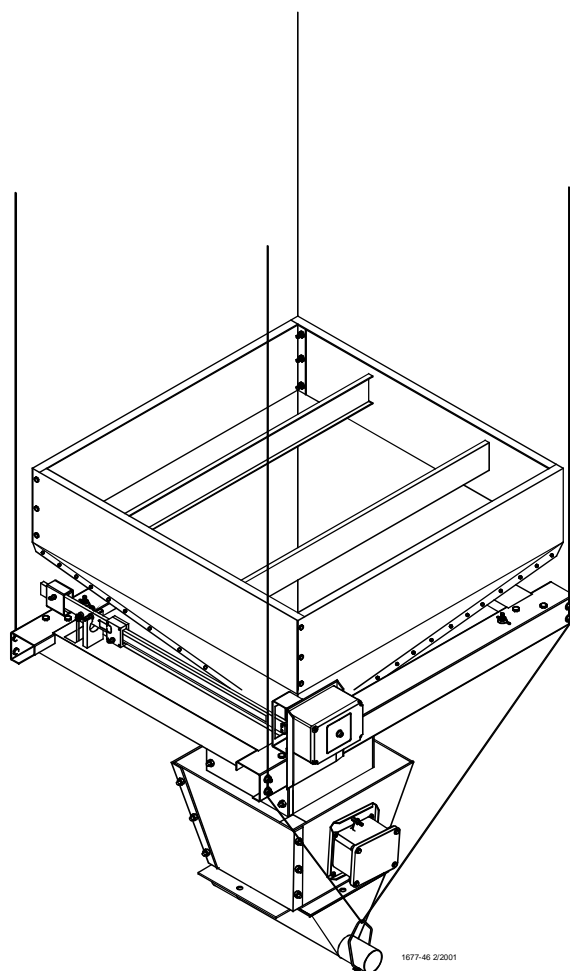
Hopper Scale

Part Number 46280

Installation Manual

Installation and Operators Manual

Installation and Operators Manual



1677-46 2/2001

Chore-Time Warranty

Chore-Time Equipment ("Chore-Time") warrants each new Chore-Time product manufactured by it to be free from defects in material or workmanship for one year from and after the date of initial installation by or for the original purchaser. If such a defect is found by the Manufacturer to exist within the one-year period, the Manufacturer will, at its option, (a) repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement. Labor costs associated with the replacement or repair of the product are not covered by the Manufacturer.

Conditions and Limitations

1. The product must be installed by and operated in accordance with the instructions published by the **Manufacturer or Warranty will be void.**
2. Warranty is void if **all components** of the system are not original equipment supplied by the **Manufacturer.**
3. This product must be purchased from and installed by an authorized distributor or certified representative thereof or the Warranty will be void.
4. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under the Warranty.
5. This Warranty applies only to systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this Warranty.

The **Manufacturer** shall not be liable for any **Consequential or Special Damage** 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.*

THIS WARRANTY CONSTITUTES THE MANUFACTURER'S ENTIRE AND SOLE WARRANTY AND THIS MANUFACTURER EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSES SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Chore-Time Distributors are not authorized to modify or extend the terms and conditions of this Warranty in any manner or to offer or grant any other warranties for Chore-Time products in addition to those terms expressly stated above. An officer of CTB, Inc. must authorize any exceptions to this Warranty in writing. The Manufacturer reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

Effective: **June 2001**

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Thank You

The employees of Chore-Time Equipment would like to thank you for your recent Chore-Time purchase. If a problem should arise, your Chore-Time distributor can supply the necessary information to help you.

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General

Support Information

The Chore-Time Hopper Scale is designed to provide a way to supply a measured amount of feed to a floor feeding system. 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.

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.
- Major changes from the last printing will be listed on the back cover.



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

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

Safety Information

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

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

Safety–Alert Symbol



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

Understanding Signal Words

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



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



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



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

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

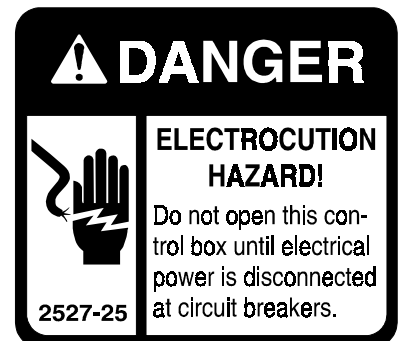
Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

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.

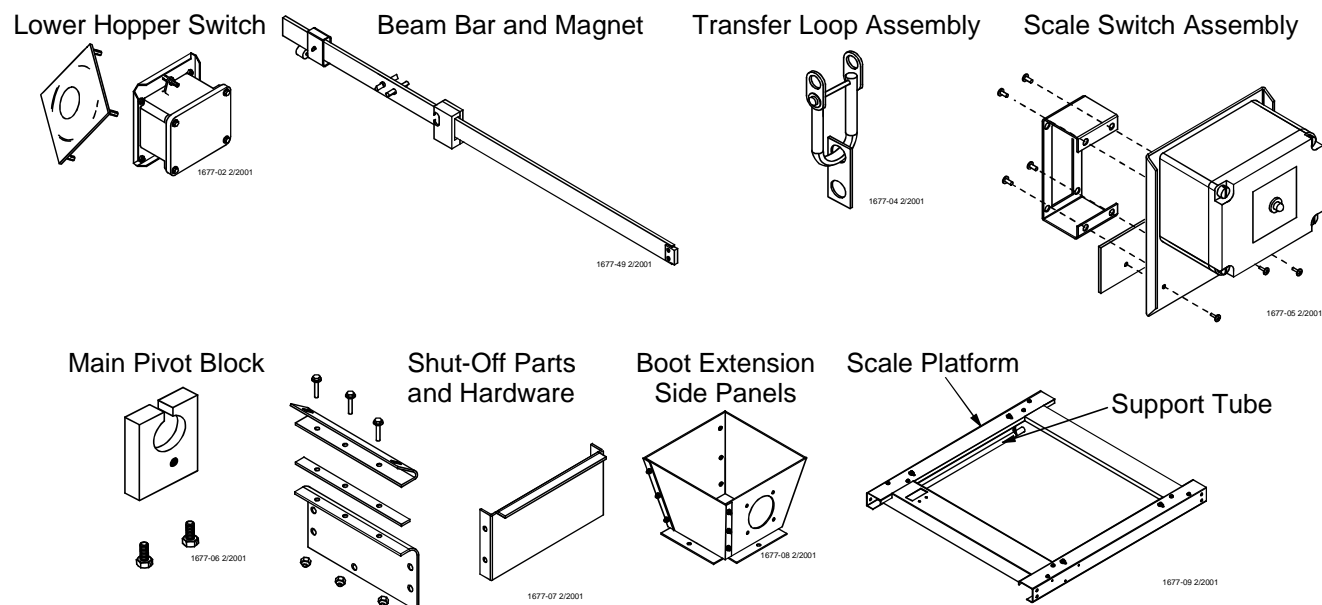
With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.



Assembling the Hopper Scale

Locating the Parts

Open the Hopper Scale package and locate the following parts.



Assemble the Shut-Off Gate

Assemble the two (2) sides for the Shut-Off Gate Side Panels. Use the Hopper Angles with two small holes in the center for the 200 lb. [91 kg] Hopper, or the Hopper Angles with three small holes in the center for the 300 lb. [136 kg] Hopper.

Assemble the Hopper Angle, Spacer, and Side Panel using the included #10-24 x 5/8" Hex Bolts and Lock Nuts. See **Figure 1**.

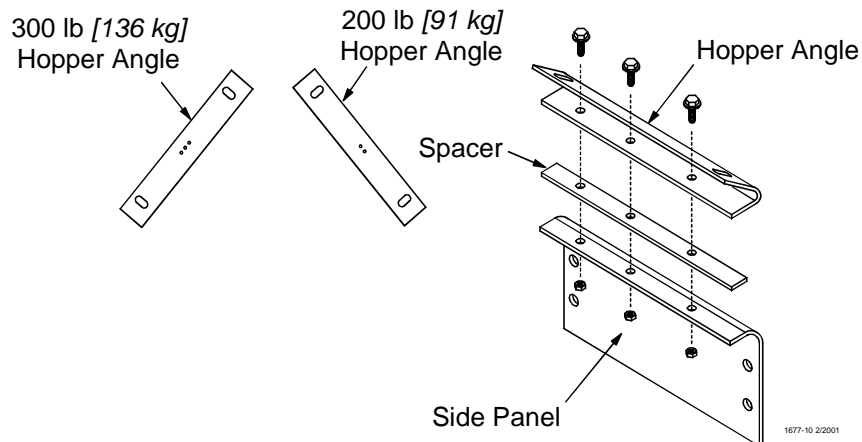


Figure 1. Assembling the Shut-Off Gate Frame Side Panel

After you have the two Shut-Off Gate Side Panels assembled, install the Shut-Off End Panel to the Side Panel Assembly using the included #10-24 x 5/8" Truss Head Screws and Lock Nuts. *The Truss Head should be inside.* See **Figure 2**. Complete the assembly by installing the remaining Shut-Off End Panel and Side Panel Assembly.

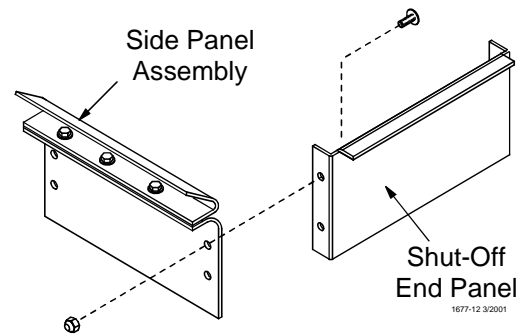


Figure 2. Assembling the Shut-Off Gate Frame

With the Shut-Off Gate Frame assembled, slide the Shut-Off Gate into the opening formed by the Spacer. Install the included #10-24 x 5/8" Hex Bolt and Lock Nut to limit the gates travel. See **Figure 3**.

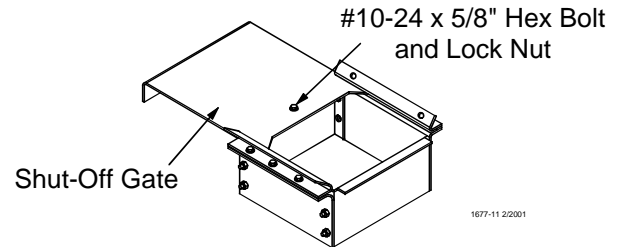


Figure 3. Installing Shut-Off Gate Stop Bolt

Assemble the Boot Extension and Lower Switch

Assemble the Boot Extension using the included #10-24 x 5/8" Truss Head Screws and Lock Nuts. *The Truss Head should be to the inside.*

Assemble the three Boot Extension Side Panels and one Boot Extension Side Panel with Switch Hole. *The overlap should be to the outside.* See **Figure 4**.

After the Boot Extension has been assembled, install the Lower Switch into the Boot Extension Side Panel with Switch Hole.

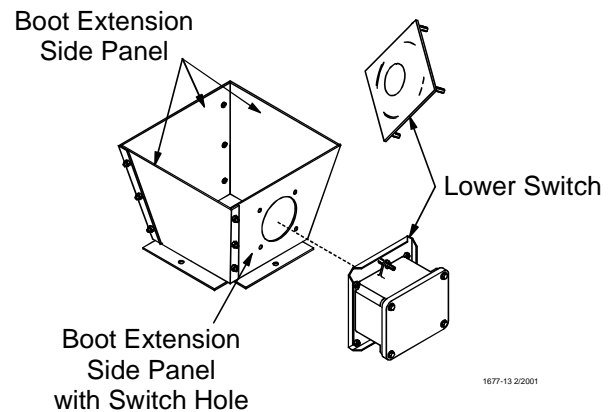


Figure 4. Assembling the Boot Extension

Slide the Boot Extension into the Feeder Boot and lock in place using the cotter pin from the Feeder Boot. See **Figure 5**.

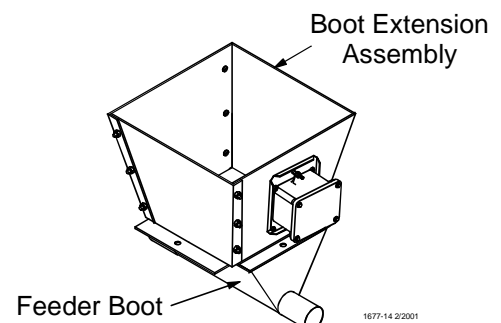


Figure 5. Assembling the Boot Extension to the Feeder Boot

Assemble the Scale Platform

Assemble the Trip Loop to the Switch Assembly using the included #6 x 1/4" Self Tapping Screws. See **Figure 6**.

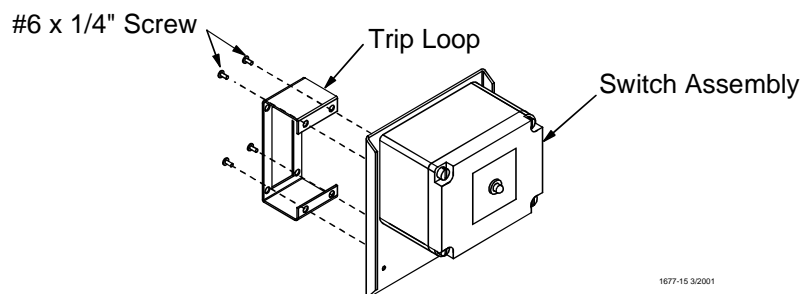


Figure 6. Assembling the Trip Loop to the Switch Assembly

Assemble the Main Pivot Block to the Scale Platform using the included 1/4-20 x 5/8" Hex Bolts. Do not completely tighten the bolts to the Main Pivot Block until the Beam Bar Assembly is installed. See **Figure 7**.

Install the Switch Assembly to the Scale Platform using the included #6 x 3/8" Self Tapping Screws. Make sure that the Switch Spacer is installed between the Switch Assembly Bracket and the Scale Platform. See **Figure 7**.

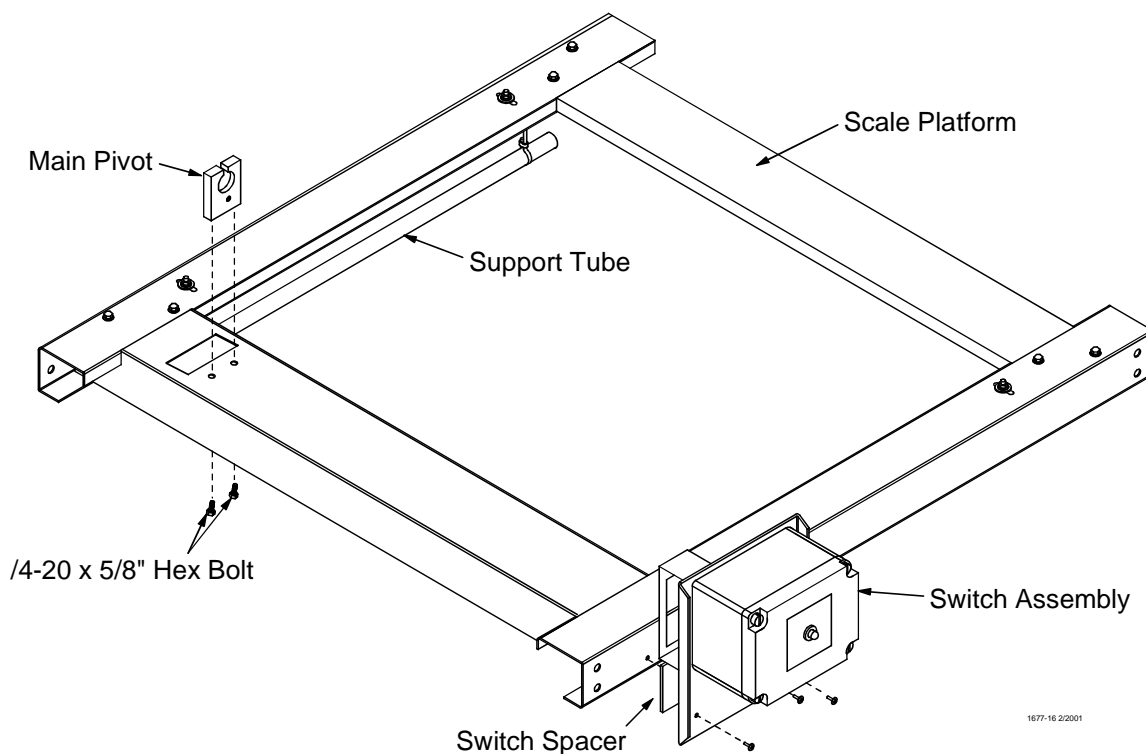


Figure 7. Assembling the Main Pivot and Switch Assembly to the Scale Platform

Install the Transfer Loop to the Beam Bar by sliding the open loops over the Knife Edge Pivot. See **Figure 8**.

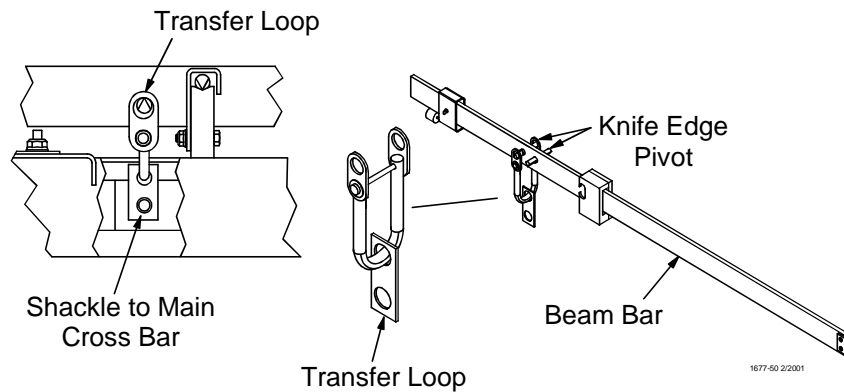


Figure 8. Assemble Transfer Loop to Beam Bar

Align the Beam Bar and Magnet with the Switch Assembly by turning the Main Pivot. Tighten the two 1/4-20 x 5/8" Hex Bolts under the Main Pivot to lock the Beam Bar in place. See **Figure 9**.

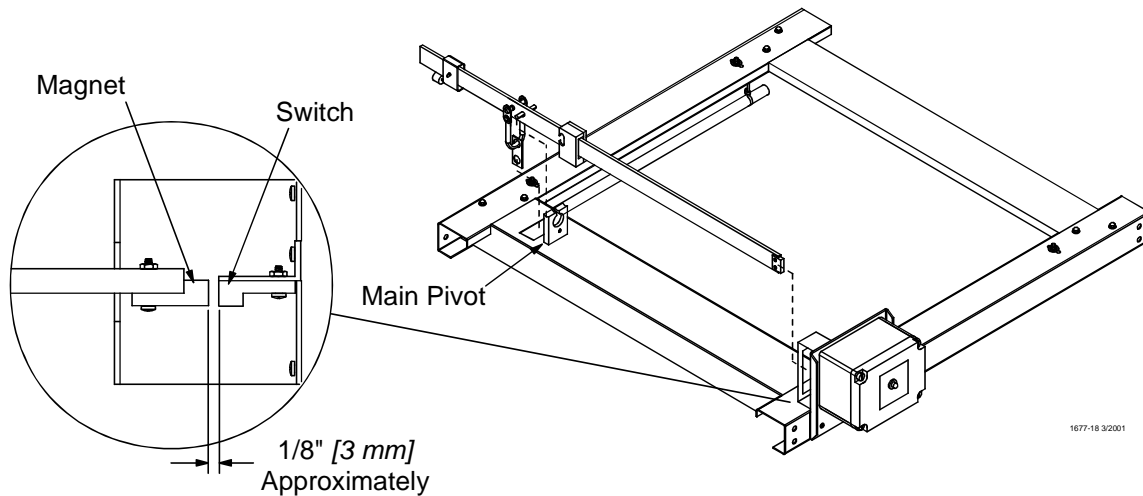


Figure 9. Installing the Beam Bar Assembly to the Scale Platform Assembly

With the Beam Bar setting on the Main Pivot, install the Bar Retainer to the Main Pivot using the included 1/4-20 x 1-1/4" Hex Bolt and Flange Nut. See **Figure 10**.

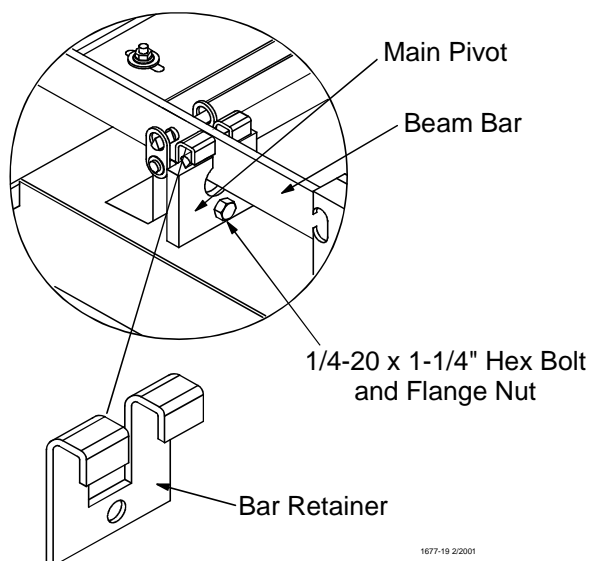


Figure 10. Installing the Bar Retainer to the Main Pivot

Suspending the Scale Platform

Suspend the Scale Platform using four Chore-Time part number 2500 Pulleys (not supplied), four 1/8" cables (not supplied), and a separate hand winch (not supplied). See **Figure 11** for pulley spacing. Center the Scale Platform over the Feeder Line Boot Extension.

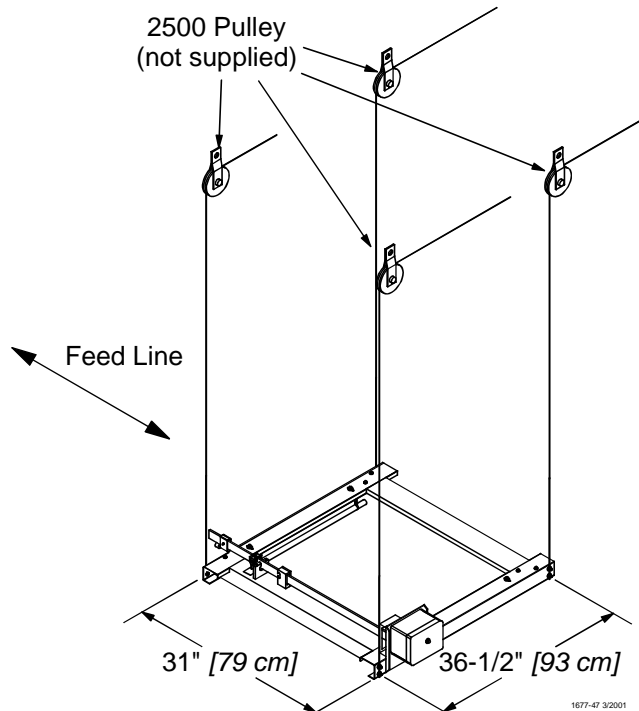


Figure 11. Hopper Scale Suspension

Locate the eight Split Bolts (two per cable) and connect the four cables to the Scale Platform. Leave approximately 5' [1.5 m] of cable below the Scale Platform to support the Feeder Line Boot. If using a Twin Feeder Line Boot, the boot must be supported on both sides of the Scale Platform. *The hex head of the Split Bolt should be to the inside. Do not completely tighten the Split Bolt until the Scale Platform is leveled.*

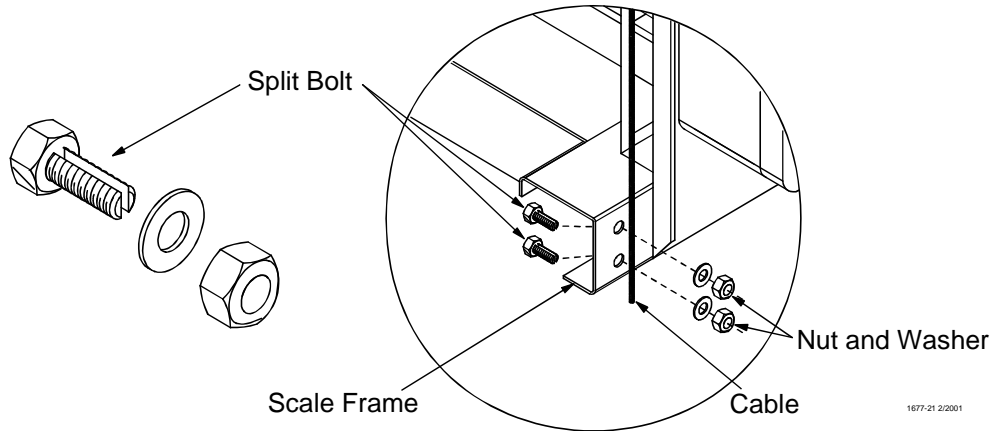


Figure 12. Using the Split Bolts to hang the Scale Platform

The Scale Platform must be level. Check all sides of the Scale Platform.

Tighten all Split Bolts.

Assemble the Hopper

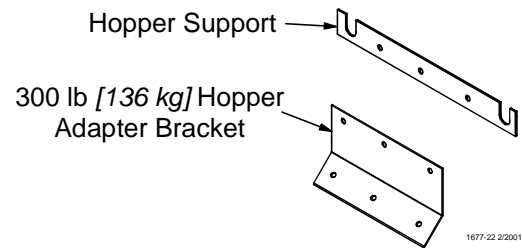


Figure 13. Scale Support Brackets

300 lb. [136 kg] Hopper

Assemble the 300 lb. [136 kg] Hopper per instructions. *Do not install the hopper hangers.* Install 300 lb. [136 kg] Hopper Braces. See **Figure 14**.

Tighten all hardware.

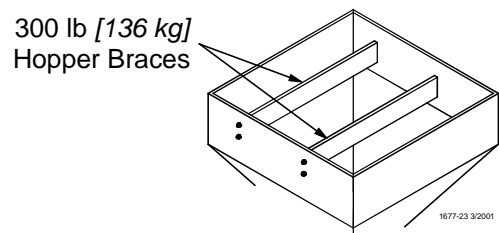


Figure 14. Installing the 300 lb. [136 kg] Hopper Braces

Install the 300 lb. [136 kg] Hopper Adapter Brackets (see **Figure 15**) on the sides where the 300 lb. [136 kg] Hopper Braces are bolted. Position the 300 lb. [136 kg] Hopper Adapter Bracket approximately as shown in **Figure 15**, mark and drill the three 5/16" [8 mm] diameter holes. Repeat for the opposite side of the 300 lb. [136 kg] Hopper.

Assemble the 300 lb. [136 kg] Hopper Adapter Bracket (see **Figure 15**) to the 300 lb. [136 kg] Hopper using the included 1/4-20 x 5/8" Truss Head Screws and Flange Nuts. *The Truss Heads should be to the inside of the 300 lb. [136 kg] Hopper.*

Install the Hopper Support (see **Figure 15**) to the 300 lb. [136 kg] Hopper Adapter Bracket (see **Figure 15**) using the included 1/4-20 x 5/8" Hex Bolts and Flange Nuts.

Tighten all hardware.

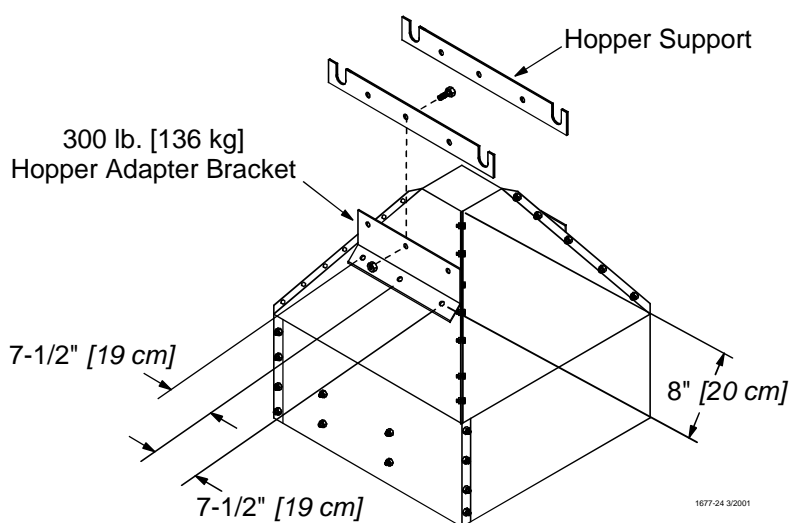


Figure 15. Installing the Scale Support Brackets

200 lb. [91 kg] Hopper

Assemble the 200 lb. [91 kg] Hopper per instructions.

Position the Support Bracket approximately as shown in **Figure 16**, mark and drill three 5/16" [8 mm] diameter holes. Repeat for the opposite side of the 200 lb. [91 kg] Hopper.

Install the Support Bracket (see **Figure 16**) to the 200 lb. [91 kg] Hopper using the included 1/4-20 x 5/8" Truss Head Screws and Flange Nuts. *The Truss Heads should be to the inside of the 200 lb. [91 kg] Hopper.*

Tighten all hardware.

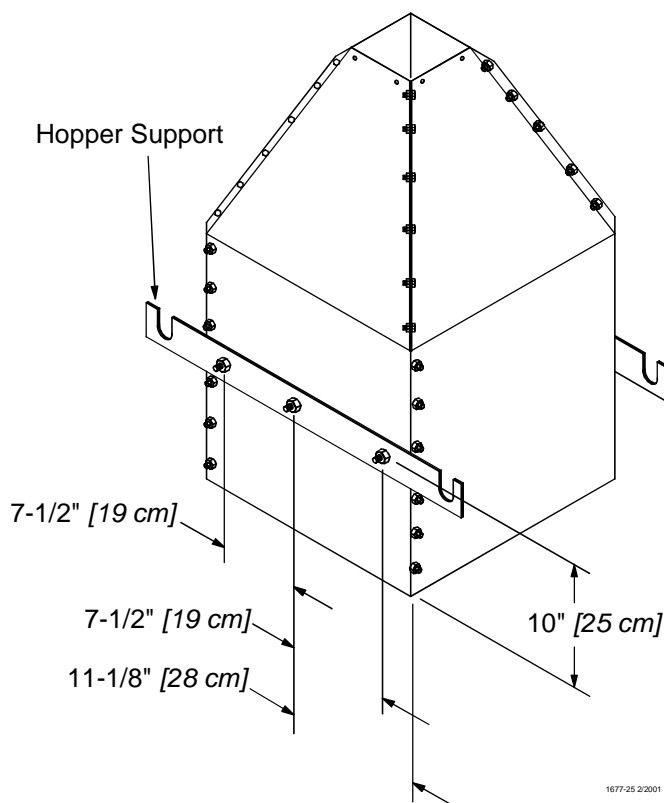


Figure 16. Installing the Hopper Support Bracket

Install the Shut-Off Gate Assembly to the Feed Hopper

Assemble the Shut-Off Gate Assembly to the Feed Hopper using the included 1/4-20 x 1/2" Truss Head Screws and Flange Nuts.

Shut-Off Gate Assembly should be located perpendicular to the Feed Tube.

Use two of the Angle Brackets from the Feed Hopper Kit to complete the assembly of the Shut-Off Gate Assembly to the Feed Hopper.

Tighten all hardware.

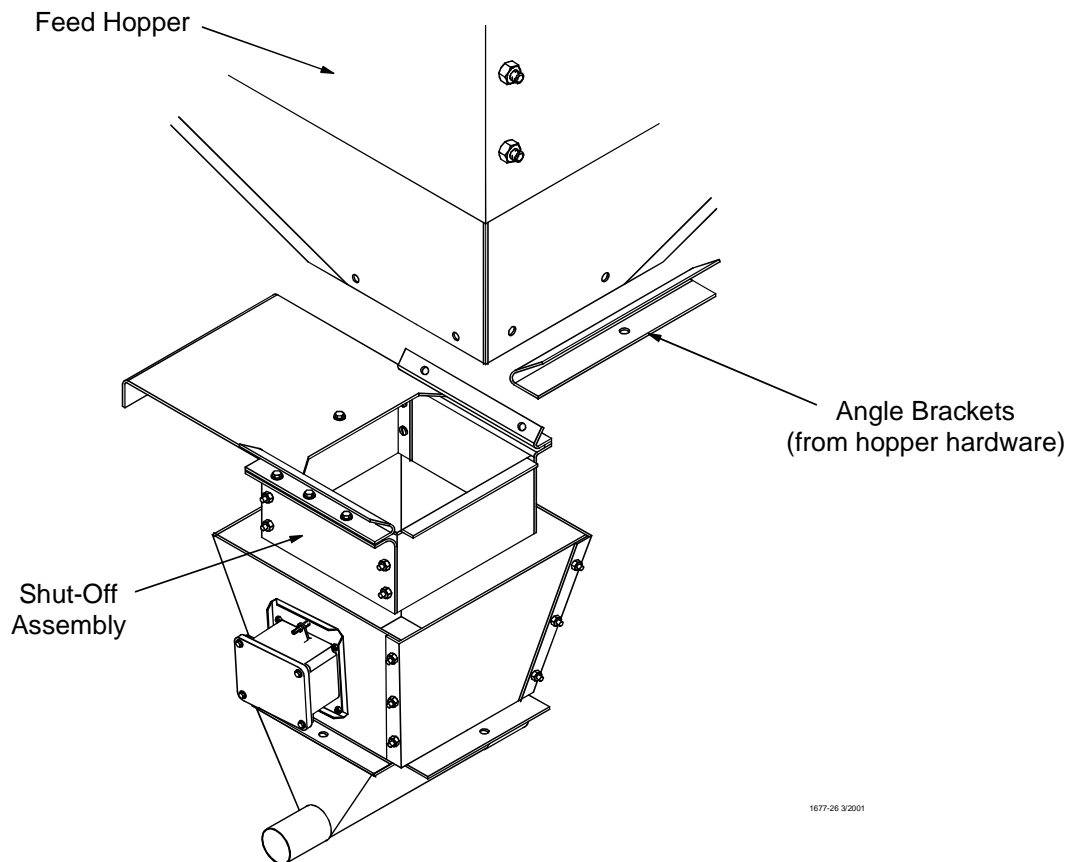


Figure 17. Installing the Shut-Off Gate Assembly to the Feed Hopper

Install Feed Hopper to Scale Platform

1. Angle the Feed Hopper in opposite the Switch Assembly. Hook the Support Bracket over the Support Tube.

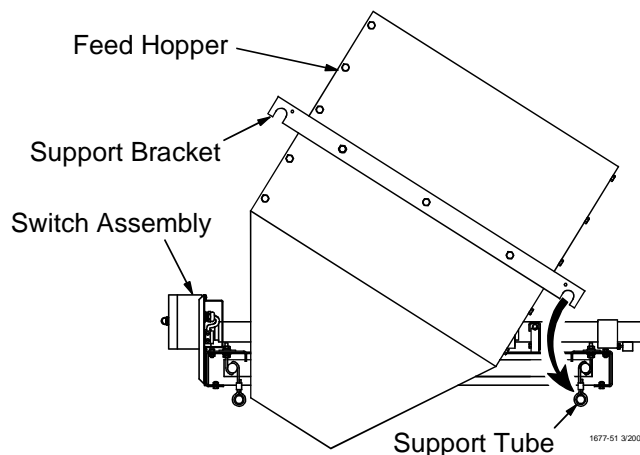


Figure 18. Angle the Feed Hopper and hook on Support Tube

2. Lower the other side of the Feed Hopper and hook over the other Support Tube.

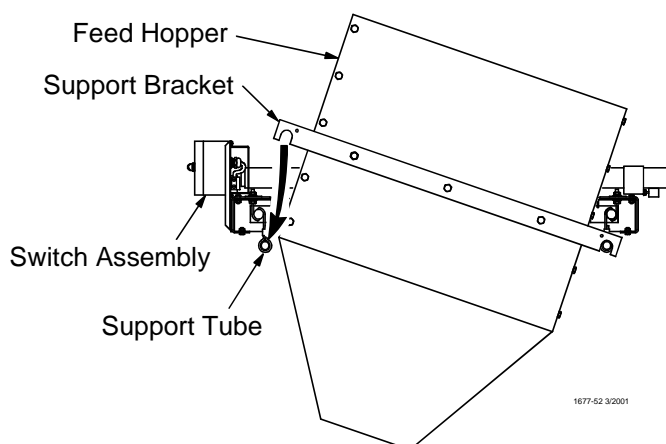


Figure 19. Hook other side of the Feed Hopper over the other Support Tube

When using a 300 lb. [136 kg] Feed Hopper, position the Support Brackets between the center holes of the Support Tube. Slide a 7/8" [22 mm] Flat Washer next to the Support Bracket and lock with a Hair Pin through the hole in the Support Tube.

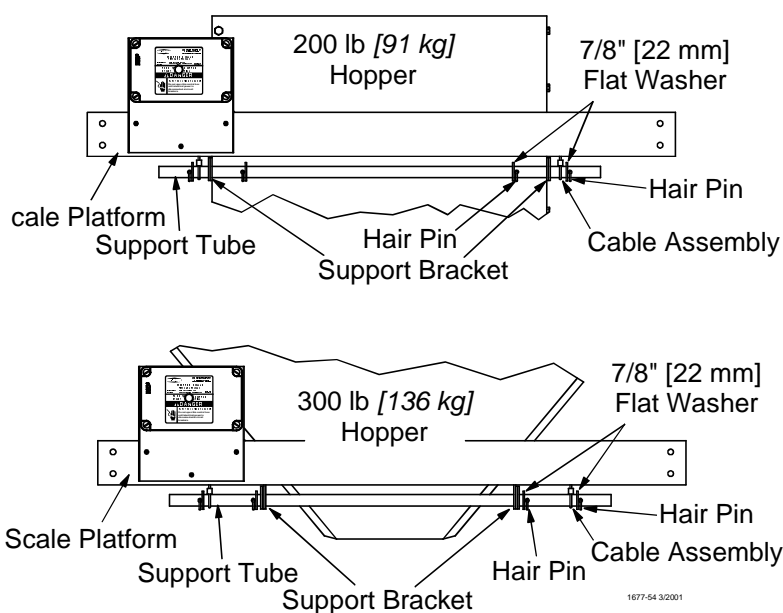


Figure 18. Installing the Feed Hopper to the Scale Platform

Zeroing the Hopper Scale

Slide the Poise to zero.

Slide the Counter Weight to level the Beam Bar.
Use the Fine Adjust to complete the zeroing process.

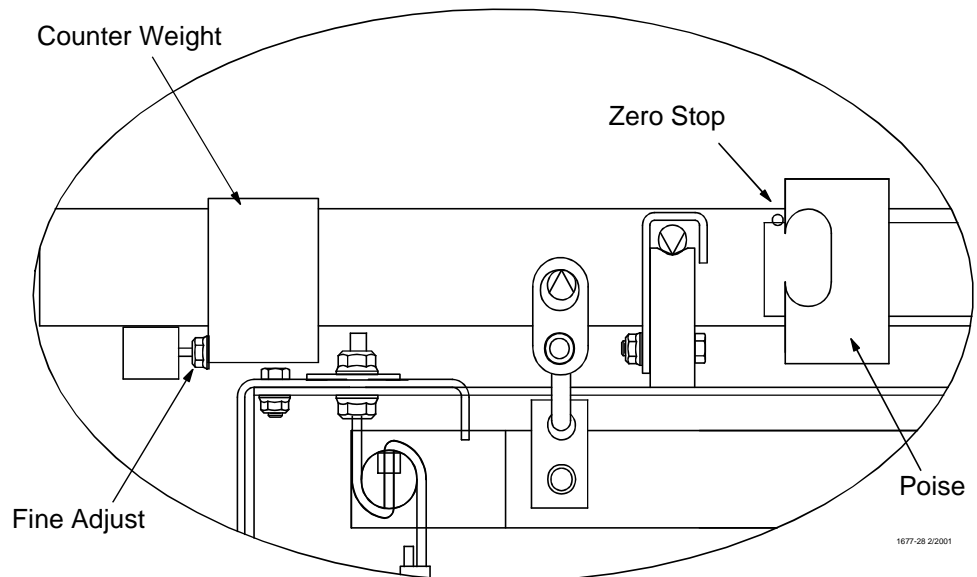


Figure 19. Zeroing the Hopper Scale

Wiring Diagram

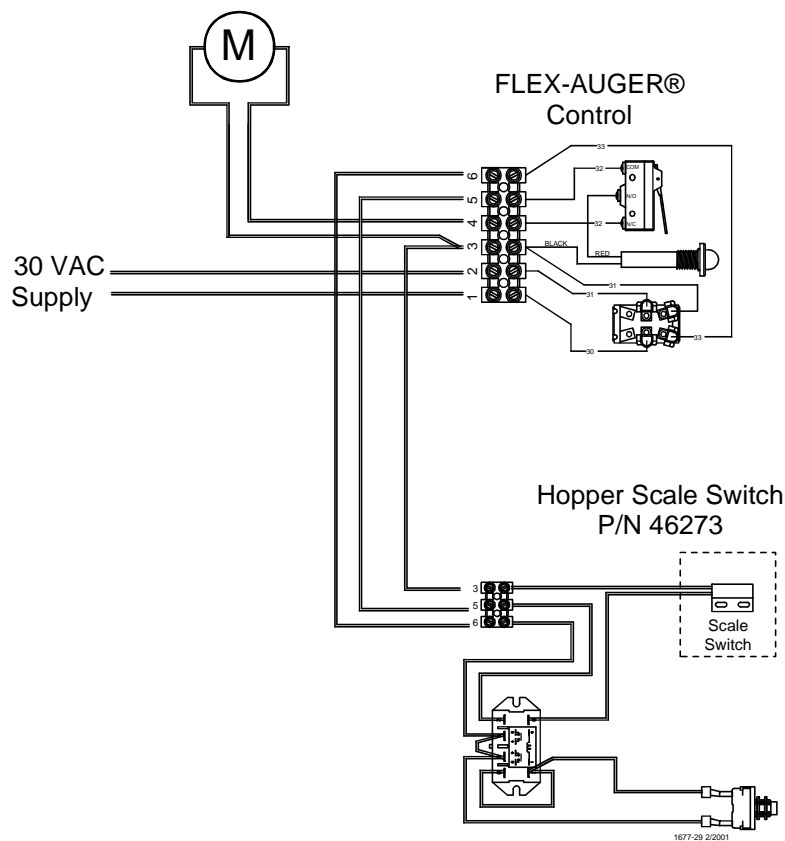


Figure 20 shows the 300 lb. [136 kg] Feed Hopper setting in the Boot Extension. The Shut-Off Gate should set inside the Boot Extension, but *not touch the Boot Extension*.

Take the end of one of the Hopper Scale Suspension Cables and run it through the Feed Line Hanger as shown in **Figure 20**. Bring the other Hopper Scale Suspension Cable down to the first cable and clamp together with a Cable Clamp (not supplied) as shown in **Figure 20**. If supporting a twin boot, the boot must be supported on both sides.

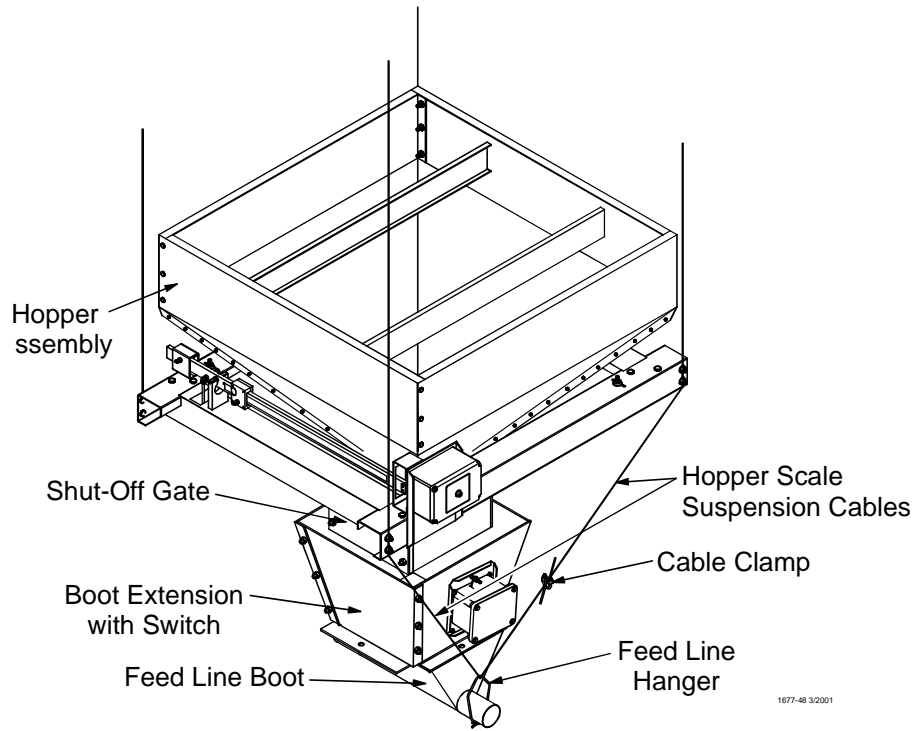


Figure 20. 300 lb. [136 kg] Feed Hopper inside the Boot Extension

Start Up Check List

Check all hardware for tightness. See **Figure 21**.

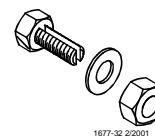


Figure 21. Check Hardware

Insure that the Scale Platform is level. See **Figure 22**.

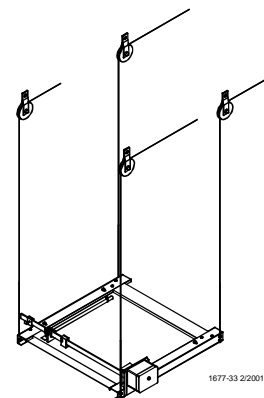


Figure 22. Check Scale Platform

Check cables for straightness, horizontal and vertical. *Cables must hang straight.* The Cable can be adjusted by sliding along the Support Tube as necessary and by loosening the Cable Adjustment Nut and moving the Cable as necessary. See **Figure 23**.

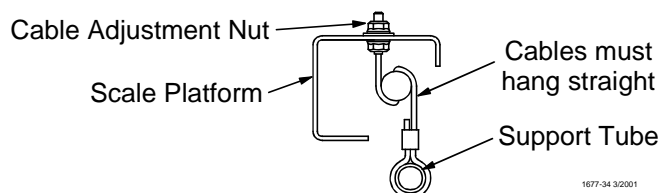
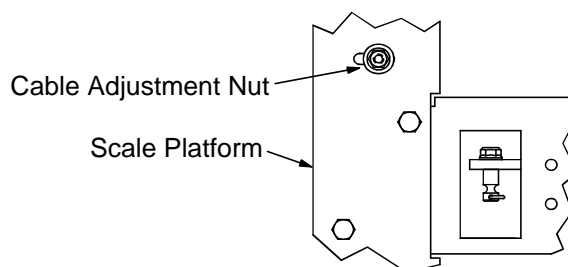


Figure 23. Check Cables for Straightness

Check Support Tube for Hair Pins and Washers. See **Figure 24**.

Check Scale for ease of movement.

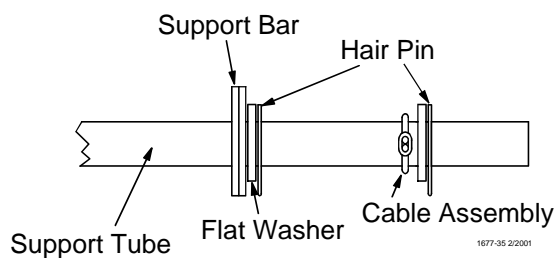


Figure 24. Check Hair Pins and Washers

All Shackles should hang straight. See **Figure 25**.

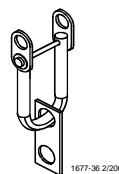


Figure 25. Check all Shackles

Check alignment of Magnet on the Beam Bar and the Switch Assembly. See **Figure 26**.

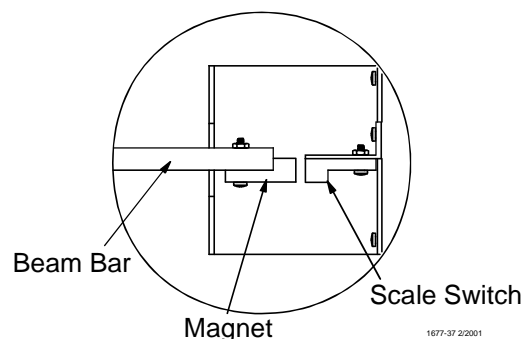


Figure 26. Check Magnet Alignment

Operating the Hopper Scale Assembly

With the Hopper Scale Assembly balanced, slide the Poise to the desired weight. See **Figure 27**.

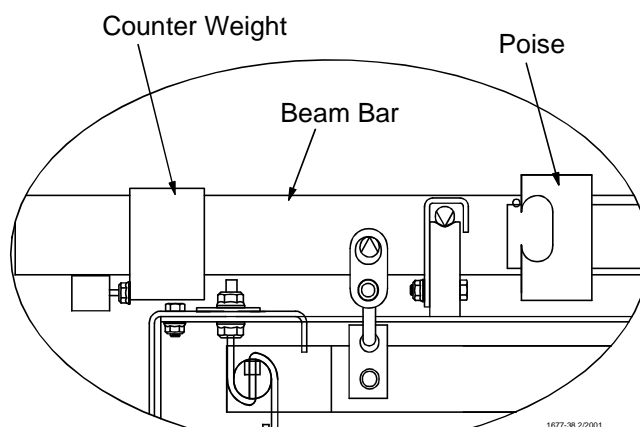


Figure 27. Balance Hopper Scale Assembly

Close the Shut-Off Gate on the bottom of the Feed Hopper. See **Figure 28**.

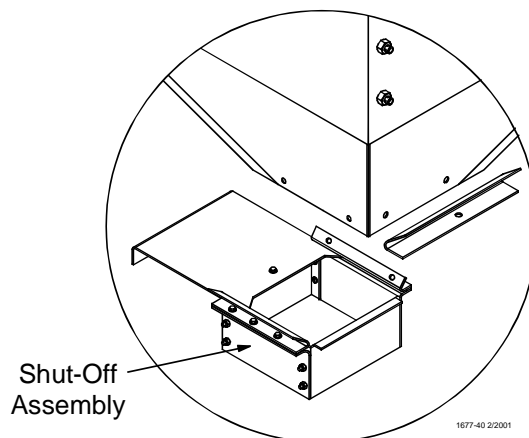


Figure 28. Close the Shut-Off Gate

Push the Push Button on the front of the Hopper Scale Switch Box. The FLEX-AUGER® System should run until the desired weight has been reached. See **Figure 29**.

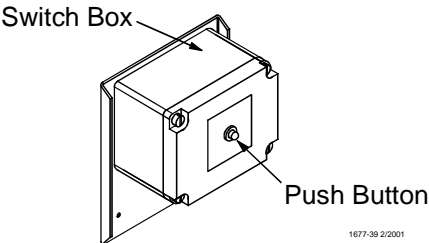
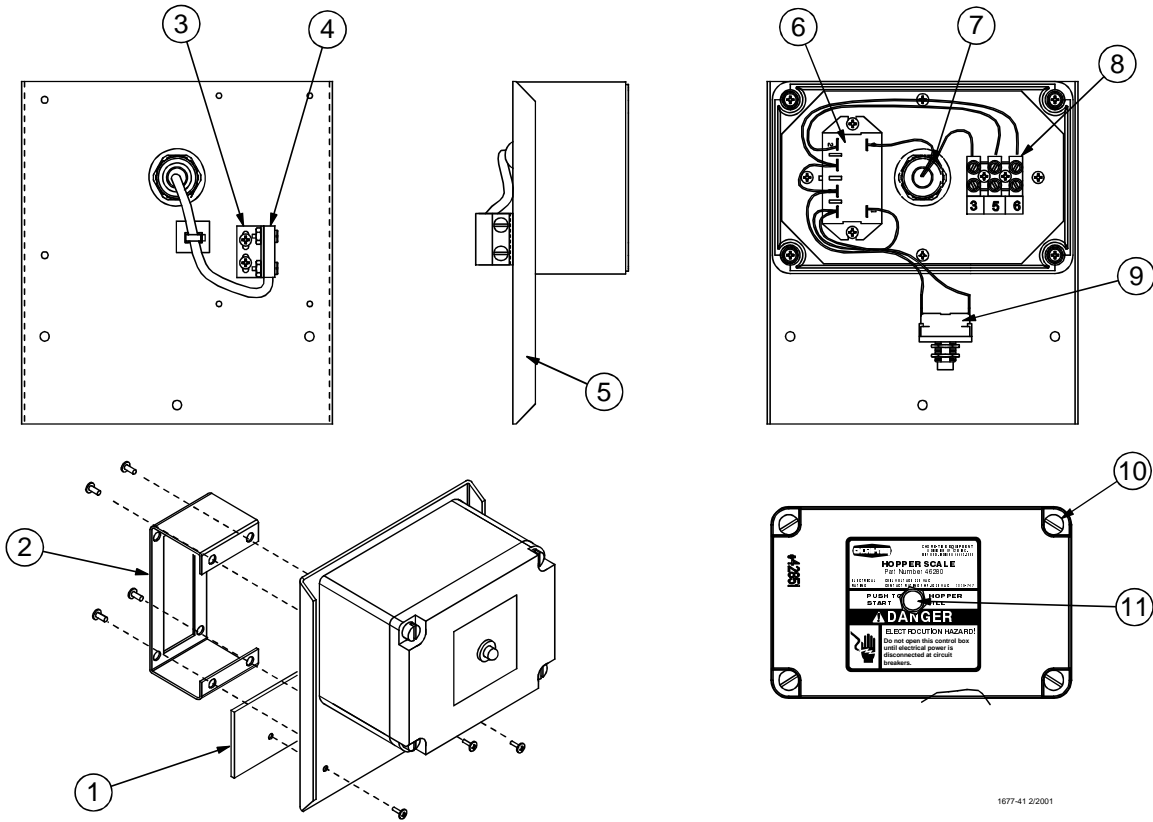


Figure 29. Start the FLEX-AUGER® System

Open the Shut-Off Gate to allow feed to flow into the Feeder Boot. See **Figure 28**.

Parts Listing

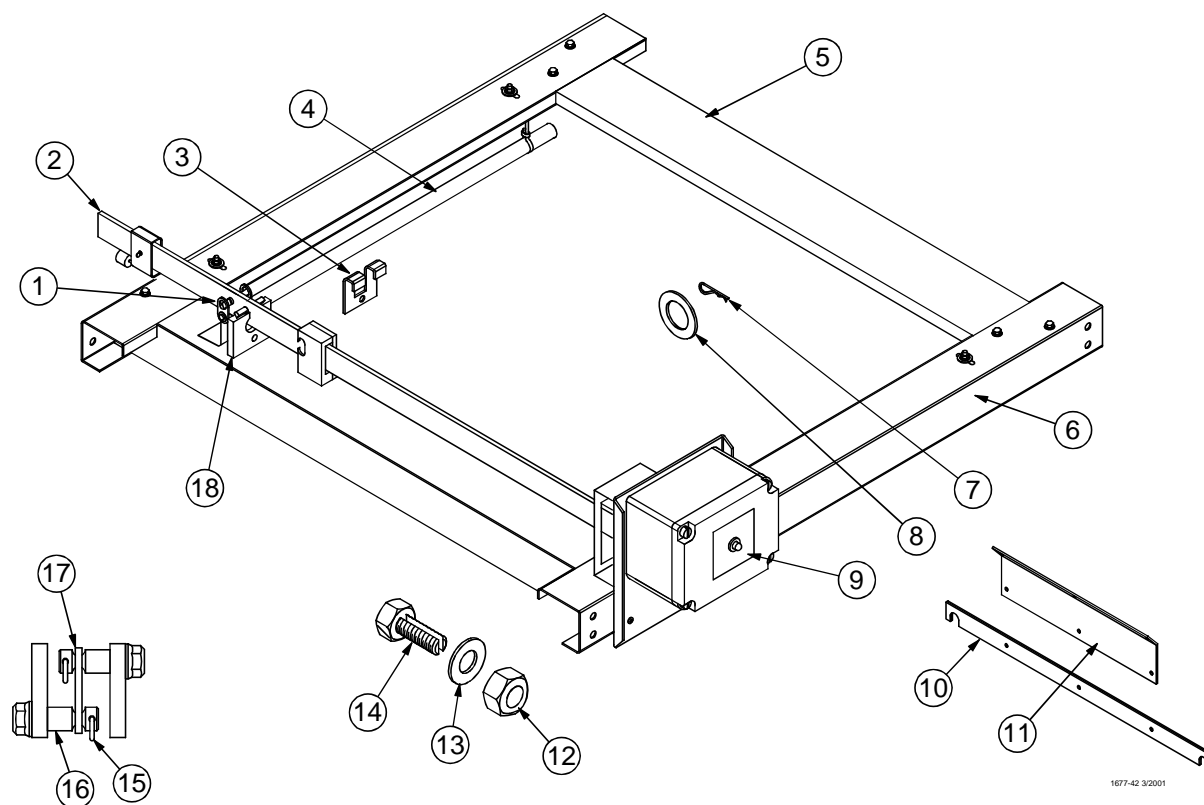
Switch Assembly Part Number 46273



Item	Description	Part No.
1	Scale Control Spacer	46256
2	Trip Loop	46273
3	Scale Switch Bracket	46246
4	Reed Switch	6689
5	Scale Control Mount Panel	46271
6	General Duty Relay	28904

Item	Description	Part No.
7	3/8" Liquid Tight Connector	13477
8	Terminal Block	34925-3
9	Push Button Switch	5785
10	4 x 6 Box Screw (Plastic)	42849
11	Push Button Boot	20784

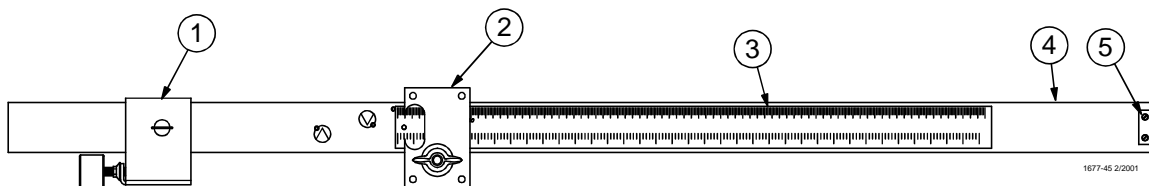
Hanging Scale Part Number 46280



Item	Description	Part No.
1	Transfer Loop	46243
2	Beam Bar Assembly	46279
3	Bar Retainer	46257
4	Support Tube	46270
5	Scale End Frame	46248
6	Scale Side Frame	46247
7	Hair Pin	2664
8	7/8" Flat Washer	2955-14
9	Switch Assembly	46273
10	Support Bar	46251

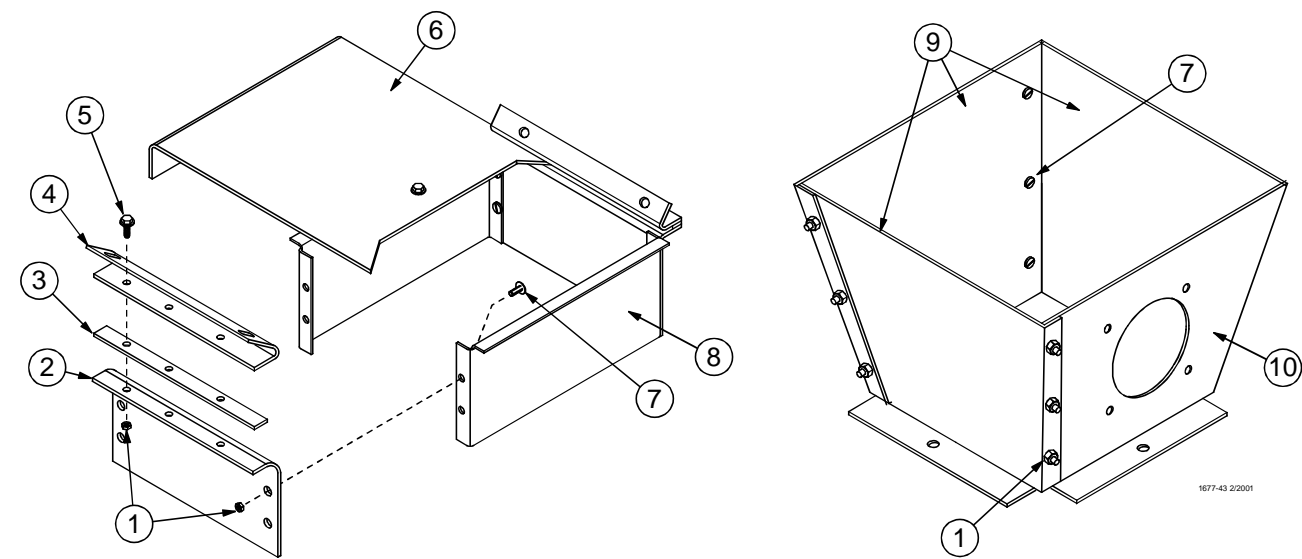
Item	Description	Part No.
11	Hopper Support Adapter	46250
12	3/8" Hex Nut	1549
13	3/8" Flat Washer	4967
14	3/8" Split Bolt	6342
15	Hair Pin	13906
16	Bar Pivot Bearing (short)	46263
17	Pivot Shackle	46254
18	Main Pivot Block	46265
—	Bar Pivot Bearing (long)	46264

Beam Bar Assembly Part Number 46279



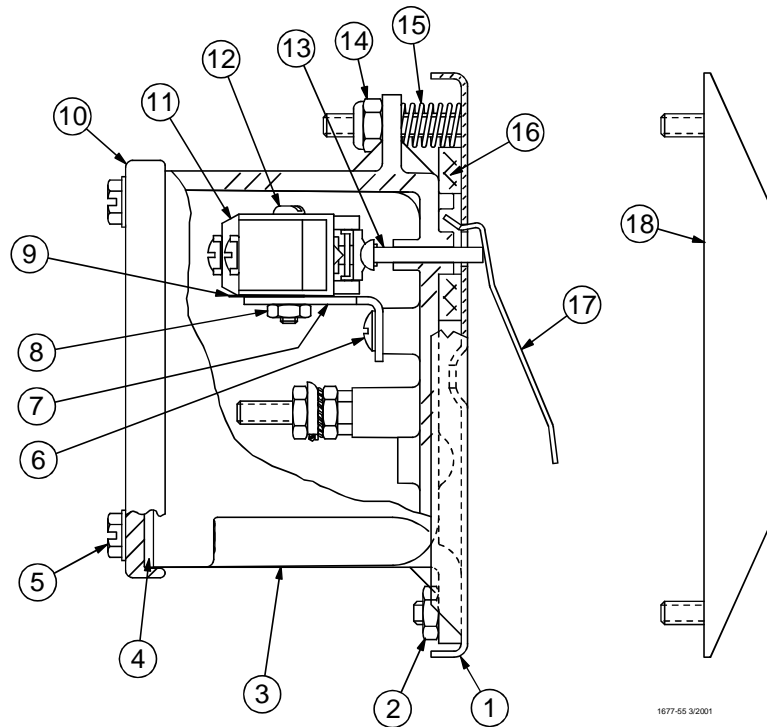
Item	Description	Part No.
1	Counter Weight Assembly	46261
2	Poise Assembly	46268
3	Beam Bar Decal	2529-401
4	Machined Beam Bar	46249
5	Actuator Magnet	5789

Shut-Off Gate Assembly Part Number 46226



Item	Description	Part No.
1	#10-24 Hex Lock Nut	
2	Shut-Off Side Panel	46233
3	Shut-Off Spacer	46228
4	Hopper Angle 200 lb. [91 kg] 300 lb. [136 kg]	46230 46231
5	#10-24 x 5/8" Hex Washer Head Screw	1876
6	Shut-Off Gate	46229
7	#10-24 x 5/8" Truss Head Screw	501A
8	Shut-Off End Panel	46232
9	Boot Extension Side Panel	46234
10	Boot Extension Side Panel with Switch Hole	46235

Lower Hopper Switch Assembly Part Number 8798



Item	Description	Part No.
1	Mounting Plate	7908
2	#10-32 Hex Nut	4297
3	Switch Box	7841
4	Gasket	6777
5	#10 Twin Helix Screw	6980
6	#6 x 3/8" Self Tapping Screw	46011
7	Switch Bracket	7068
8	#6-32 Hex Nut	771
9	Switch Insulation	1907-5
10	Switch Box Cover	6776
11	SPDT Actuator Switch	46091
12	#6-32 x 7/8" Round Head Machine Screw	1921
13	Pin	8757
14	10-32 Hex Lock Nut	6963
15	Spring	6972
16	Gasket	6968-1
17	Paddle	7896
18	Diaphragm Assembly	7900
--	Deflector	28281

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**Made to work.
Built to last.**

Revisions to this Manual

Page No.	Description of Change
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Contact your nearby Chore-Time distributor or representative for additional parts and information.

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