

Installation and Operators Manual

December 2017

WARRANTY INFORMATION

Chore-Time Group, a division of CTB, Inc. ("Chore-Time") warrants the new CHORE-TIME Flag Drop Feeding equipment 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, WIHTOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES. CHORE-TIME shall not be liable for any direct, 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

Chore-Time Group, A division of CTB, Inc. PO Box 2000 Milford, Indiana 46542-2000 USA Phone (574) 658-4101 Fax (877) 730-8825 Internet: www.choretimepoultry.com E-mail: poultry@choretime.com

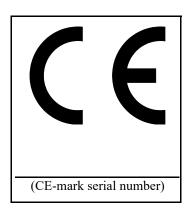
Support Information

The CHORE-TIME Flag Drop Feeding System is designed to convey livestock feed types. Using this equipment for any other purpose or in a way not within the operating recommendations specified in this manual will void the warranty and may cause personal injury and/or death.

This manual is designed to provide comprehensive planning, installation, wiring, and parts listing information. The Table of Contents provides a convenient overview of the information in this manual. The Table of Contents also specifies which pages contain information for the sales personal, installer, and consumer (end user).

IMPORTANT: CE stands for *certified Europe*. It is a standard which equipment must meet or exceed in order to be sold in Europe. CE provides a benchmark for safety and manufacturing issues. CE is required only on equipment sold in Europe.

CHORE-TIME Equipment recognizes CE Mark and pursues compliance in all applicable products. Please fill in the CE-Mark serial number in the blank space provided for future reference.



Please include the names and address of your CHORE-TIME Distributor

Please fill in the following information about your this manual in a clean, dry p	
Distributor's Name	
Distributor's Address	
Distributor's Phone	Date of Purchase
Installer's Name	
Installer's Address	
Installer's Phone	Date of Installation
System Specifications	
Feed Delivery System Supplying	

Tools needed to install your Flag System include:

- 1. Regular Screwdriver
- 2. Allen Wrenches
- 3. Box-End Wrenches
- 4. Drive Ratchet and Sockets
- 5. Locking Pliers
- 6. File
- 7. Saw to cut PVC Tubes
- 8. 1.5", 2.5", or 3" Hole Saw or Sabre Saw
- 9. Screw-Hook Driver
- 10. Bolt Cutters or Hack Saw

- 11. PVC Cleaning Solvent
- 12. Wire Cutters
- 13. Wire Strippers
- 14. Adequate Size and Quantity of Electrical Wire
- 15. Electrical Drill and Drill Bits
- 16. Abrasive Cut-off Saw (for steel systems only)
- 17. Oxy-Acetylene Torch and Brazing Rod
- 18. Another person to help!!

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*Legend: C = Customer (end user), D = Distributor (sales), I = Installer of	^e quipme	nt

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 signs.

Using the equipment for purposes other than specified in this manual may cause personal injury 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. CHORE-TIME equipment is designed to be installed and operated as safely as possible...however, hazards do exist.



Signal Words

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

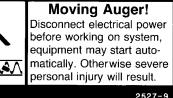
- DANGERindicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.
- WARNINGindicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.
- CAUTIONindicates a hazardous situation which, if not avoided, MAY result in minor or moderate injury.



DANGER: MOVING AUGER

This decal is placed on the Clean-Out Cover of the FLEX-AUGER Control Unit.

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



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.

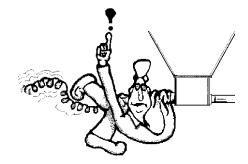
Ground all non-current carrying metal parts to guard against electrical shock.

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



SAFETY INFORMATION





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

Introduction:

The CHORE-TIME Flag System is designed to be used in installations that have one Fill System supplying several lines of feeders, as shown in Figure 1, on page 9. The Alternate Flag System Layout Diagrams on pages 12 and 13 show alternative Fill System layout options.

The Flag System uses a Model 75 or Model 90 FLEX-AUGER Fill System to supply two or more Flag Feeder Lines.

A Delay/Relay Kit is recommended for use on flag fill systems to avoid potential short cycling.

The FLEX-AUGER Fill System supplying the Flag System must be sized properly to provide enough feed, without over-charging the system. The following chart specifies the feed delivery rates of the Model 75 and Model 90 FLEX-AUGER Fill Systems operated at 216 RPM, 348 RPM, and 425 RPM.

	Model 75	Model 90
216 RPM	30 lbs./min.	60 lbs./min.
	13.6 kg./min.	27.2 kg./min.
348 RPM	50 lbs./min.	100 lbs./min.
	22.7 kg./min.	45.4 kg./min.
425 RPM	60 lbs./min.	120 lbs./min
	27.2 kg./min.	54.4 kg./min.

Feed Delivery System Capacities

The feed delivery rate of a Single Transfer Boot is 20 lbs./min. or 9 kg./min. Note: The feed delivery rate of a Twin Transfer Boot is 40 lbs./min. or 18 kg./min. (20 lbs./min. (9 kg./min.) per side.

Flag Lines up to 200 feet (61 m) require using a 1/3 H.P., 1-Phase, 60 Hz, 220 V Power Unit (Part No. 3259-34).

Flag lines between 200 feet (61 m) and 400 feet (122 m) require using a 1/2 H.P., 1-Phase, 60 Hz, 220 V Power Unit (Part No. 3259-39).

Two 1/2 H.P. Power Units are available for 50 Hz applications. They are primarily for Flag Systems up to 400 feet (122 m). See the Power Unit Parts Listing on page 29.

Refer to the Fill System Power Unit Selection Guide on page 7 (in feet) or page 8 (in meters) to determine which Power Unit is required for your individual system.

Fill System Power Unit Selection Guide (in feet)

230 V, 60 Hz, Single Phase Power Units												
Model 75 Fill System Model 90 Fill System												
348 RPM 425 RPM							348 RPM	[2	425 RPM	[
No. of Flag Lines	up to 80'	81' to 150'	151' to 200'	up to 60'	61' to 120'	121' to 160'	up to 30'	31' to 90'	91' to 150'	up to 20'	21' to 70'	71' to 120'
2	3259-51	3259-52	3259-49									
3				3259-77	3259-78	3259-79						
4				3259-77	3259-78	3259-79						
5							3259-51	3259-52	3259-49			
6 or more										3259-77	3259-78	3259-79

	230 V, 50 Hz, Single Phase Power Units									
	Model 75 Fill System Model 90 Fill System									
	3	48 RPM	1			3	348 RPM	[
No. of Flag Lines	up to 60'	61' to 150'	151' to 200'			up to 30'	31' to 90'	91' to 150'		
2	3259-88	3259-88	3259-89							
3	3259-88	3259-88	3259-89							
4	3259-88	3259-88	3259-89							
5						3259-87	3259-88	3259-89		
6						3259-87	3259-88	3259-89		

220/380 V, 50 Hz, Three Phase Power Units										
	Model 75 Fill System Model 90 Fill System									
	3	48 RPM				3	348 RPM	[
No. of Flag Lines	up to 60'	61' to 150'	151' to 200'			up to 30'	31' to 90'	91' to 150'		
2	3259-103	3259-104	3259-105							
3	3259-103	3259-104	3259-105							
4	3259-103	3259-104	3259-105							
5						3259-103	3259-104	3259-105		
6						3259-103	3259-104	3259-105		

Fill System Power Unit Selection Guide (in meters)

230 V, 60 Hz, Single Phase Power Units												
Model 75 Fill System Model 90 Fill System												
348 RPM 425 RPM					3	348 RPM	[2	425 RPM	[
No. of Flag Lines	up to 24.3 m	24.7 to 45.7 m	46 to 61 m	up to 18.3 m	18.6 to 36.6 m	36.9 to 48.8 m	up to 9.1 m	9.4 to 27.4 m	27.7 to 45.7 m	up to 6.1 m	6.4 to 21.3 m	21.6 to 36.6 m
2	3259-51	3259-52	3259-49									
3				3259-77	3259-78	3259-79						
4				3259-77	3259-78	3259-79						
5							3259-51	3259-52	3259-49			
6 or more										3259-77	3259-78	3259-79

230 V, 50 Hz, Single Phase Power Units Model 75 Fill System Model 90 Fill System 348 RPM 348 RPM No. of Flag 18.6 to 46 to 9.4 to 27.7 to up to up to 27.4 m Lines 18.3 m 45.7 m 61 m 9.1 m 45.7 m 3259-89 2 3259-88 3259-88 - -3 3259-88 3259-88 3259-89 - - - -- - - -- - - -4 3259-88 3259-88 3259-89 - - - -- - - -- - - -5 3259-87 3259-88 3259-89 - - -6 3259-87 3259-88 3259-89 - - - -- - -

	220/380 V, 50 Hz, Three Phase Power Units							
	Model 75 Fill System Model 90 Fill System							System
	3	48 RPM		1	3	348 RPM	[
No. of Flag Lines	up to 18.3 m	18.6 to 45.7 m	46 to 61 m		up to 9.1 m	9.4 to 27.4 m	27.7 to 45.7 m	
2	3259-103	3259-104	3259-105					
3	3259-103	3259-104	3259-105					
4	3259-103	3259-104	3259-105					
5					3259-103	3259-104	3259-105	
6					3259-103	3259-104	3259-105	

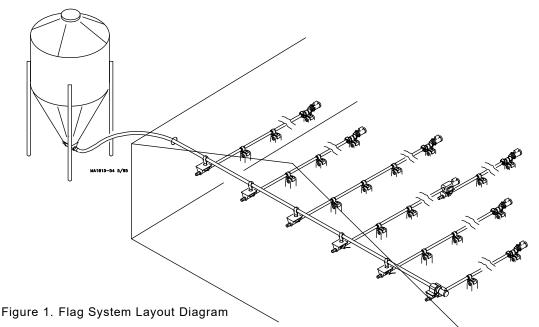
Installation:

Refer to Figures 1 through 5 for proper component installation information.

1. Install the FLEX-AUGER Fill System as specified in the Installation Manual supplied with the Fill System Control Unit.

Install an Outlet Drop Assembly at each flag line location.

Remove the Funnel from the Control Unit.



2. An Adapter Plate (Part No. 45970) is required to connect the Fill System Control Unit to the last flag line. The Adapter Plate must be ordered separately.

Secure the Adapter Plate to the control unit, using 1/4-20 hardware supplied with the control unit.

Secure the Transfer Boot to the bottom of the adapter plate, using the 1/4-20 hardware supplied. See Figure 2.

Make sure the outlet end of the boot is directed toward the feeder line.

3. Assemble a Transfer Plate to the top of each of the remaining Transfer Boots, using the 1/4-20 eye bolts supplied. See Figure 3.



Key	Description
1	Adaptar Blata

- Adapter Plate 2 Transfer Boot
- 3
- Proximity Boot Switch Fill System Control 4
 - (Model 75 or 90)
- 5
- Outlet End of Boot
- Flag Line 6

Figure 2. Fill System Control Unit/Terminal Boot Installation

4. Suspend a Boot and Transfer Plate assembly directly below each Outlet Assembly. Make sure the outlet end of the boot is directed toward the feeder line.

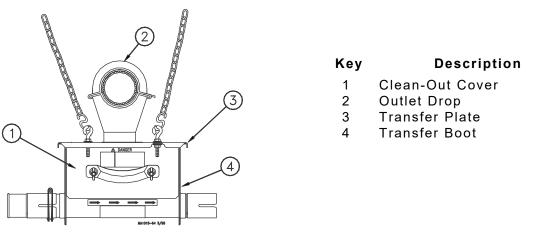


Figure 3. Transfer Boot Installation (w/o Prox. Boot Switch).

The bottom of the Outlet Assembly should pass through the hole in the Transfer Plate. Note: The Transfer Plate hole is sized for a Model 75 Outlet Drop. Enlarge the hole by removing the knock-out for Model 90 Outlet Drops.

It may be necessary to install a Proximity Boot Switch in a Transfer Boot to prevent excessive empty auger running time. See Figure 4. Consider installing a Proximity Boot Switch in any line that would run more than 10 minutes without feed.

5. Install the individual feeder lines, feeders, and Control Units as specified in the specific installation manual(s).

NOTE: The individual feeder lines must be suspended from the ceiling or rafters. Do not use the Fill System Auger Tubes to support the weight of the feeder line.

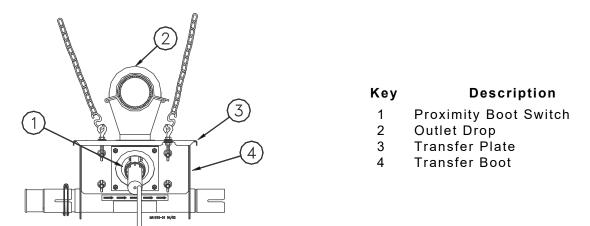
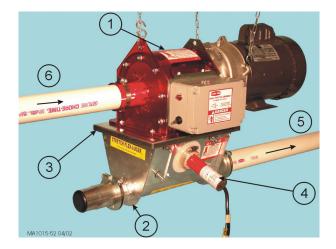


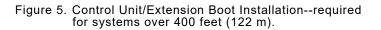
Figure 4. Transfer Boot Installation (w/ Prox. Boot Switch).

- 6. Install the Delay/Relay Kit near the Fill System Power Unit.
- 7. For lines over 400' (122 m), a Transfer Boot (w/switch), Adapter Plate, and Control Unit are **required**. Install as shown in Figure 5 near the center of the line.



Key Description

- 1 Control Unit
- 2 Transfer Boot
- 3 Adapter Plate
- 4 Proximity Boot Switch
- 5 Outgoing Feed
- 6 Incoming Feed



Wiring the system:

The Flag System components may be configured in a variety of ways, as specified in **Figures 1 and 6** - **9**. Determine which layout diagram matches your system and refer to the appropriate wiring diagram for wiring connections.

Note: 1-Phase Control Wiring diagrams for **Standard** and **Alternate Flag Systems #1** are shown on page 14.

3-Phase Control Wiring diagrams for **Standard** and **Alternate Flag Systems #1** are shown on page 15.

System Wiring Diagrams for the **Standard** and **Alternate Flag System #1** layouts are provided on pages 16 through 19.

1-Phase Control Wiring diagrams for **Alternate Flag Systems #2, #3, & #4** are shown on page 20.

3-Phase Control Wiring diagrams for **Alternate Flag Systems #2, #3, & #4** are shown on page 21.

System Wiring Diagrams for the Alternate Flag Systems #2, #3, & #4 layouts are provided on pages 22 through 26.

Setting the Delay:

Set the 2 to 30 second delay as required to prevent the Fill System Control Unit from short cycling. Setting the delay to approximately 15 seconds is usually a good starting point. The amount of delay may need to be fine tuned to match feed type, system performance, etc.

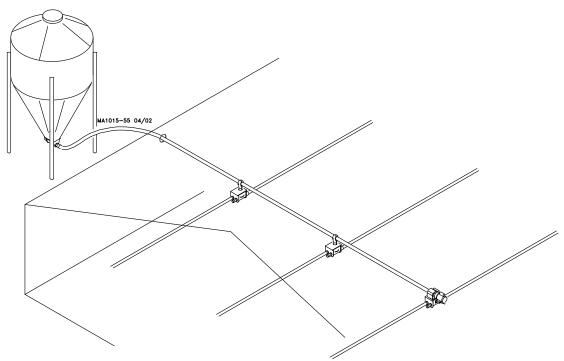


Figure 6. Twin Boot Flag System Layout

Alternate Flag System Layout Diagram #2

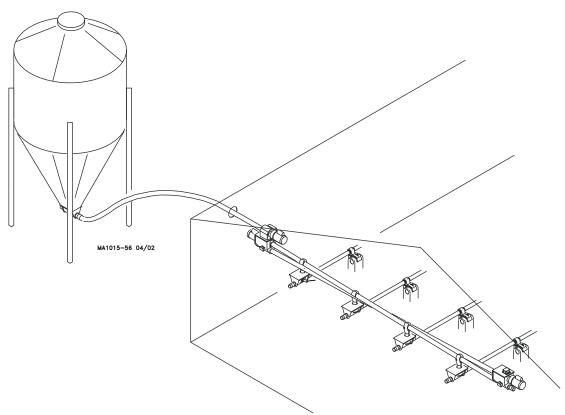
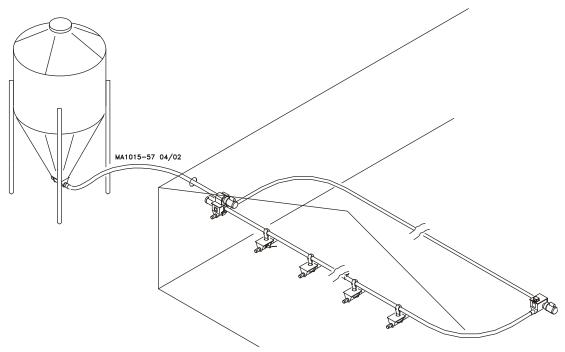


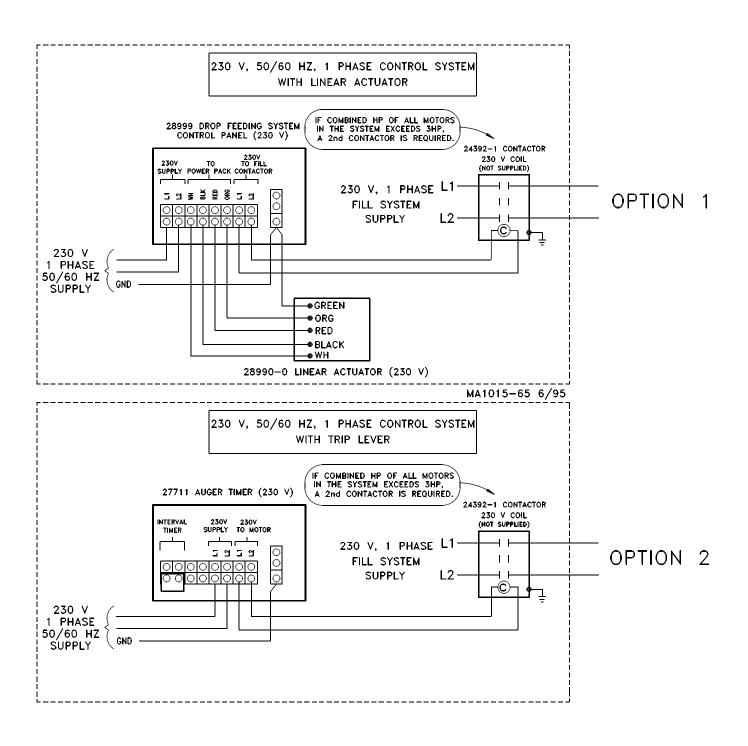
Figure 7. Return Flag System Layout

Alternate Flag System Layout Diagram #3

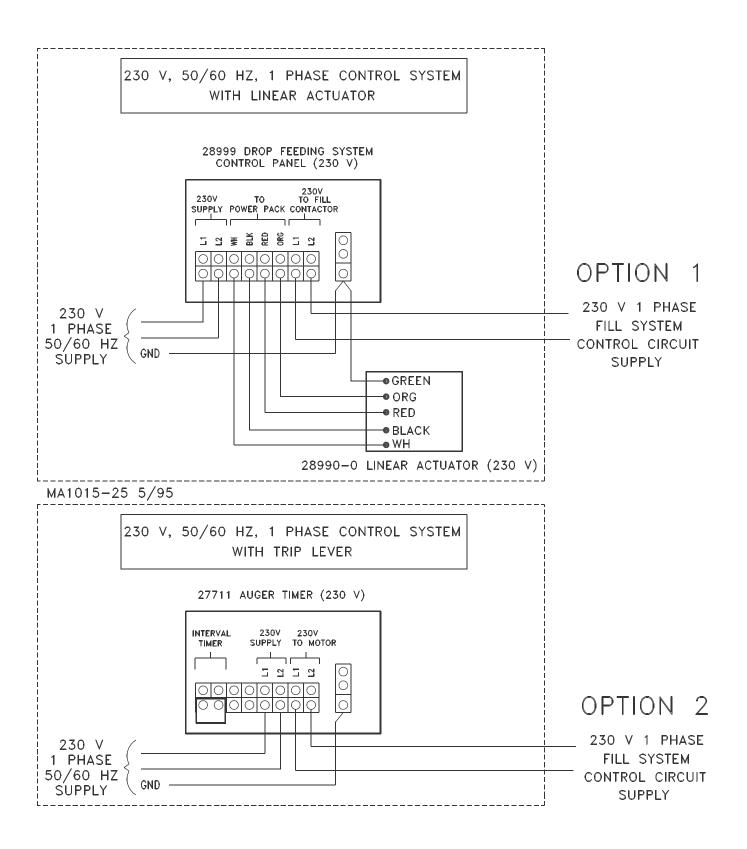




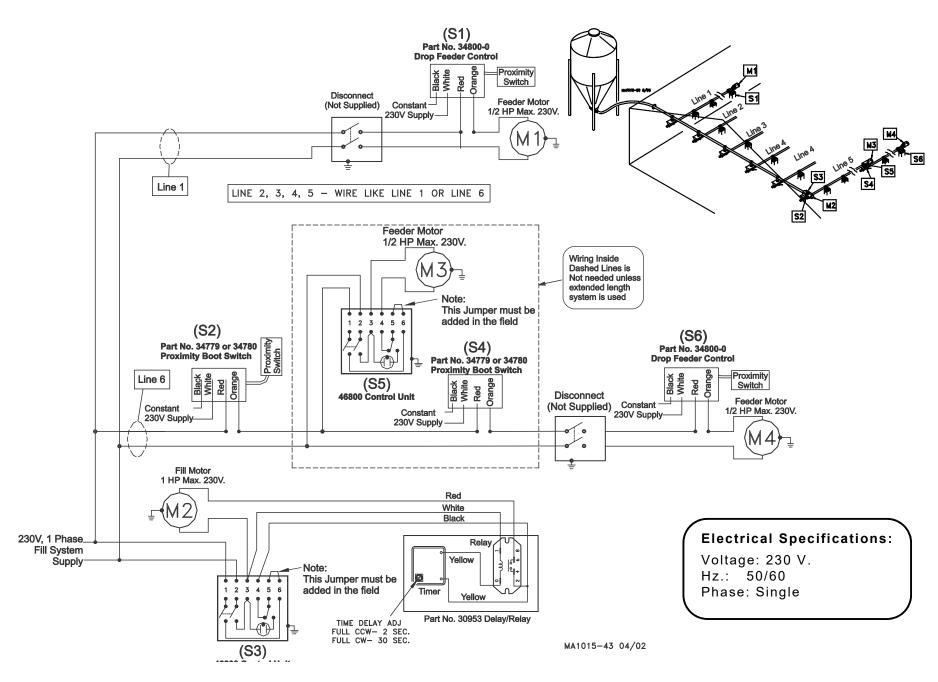
Flag System Control Options (for 1-Phase Standard and Alternate #1 Flag Systems only)



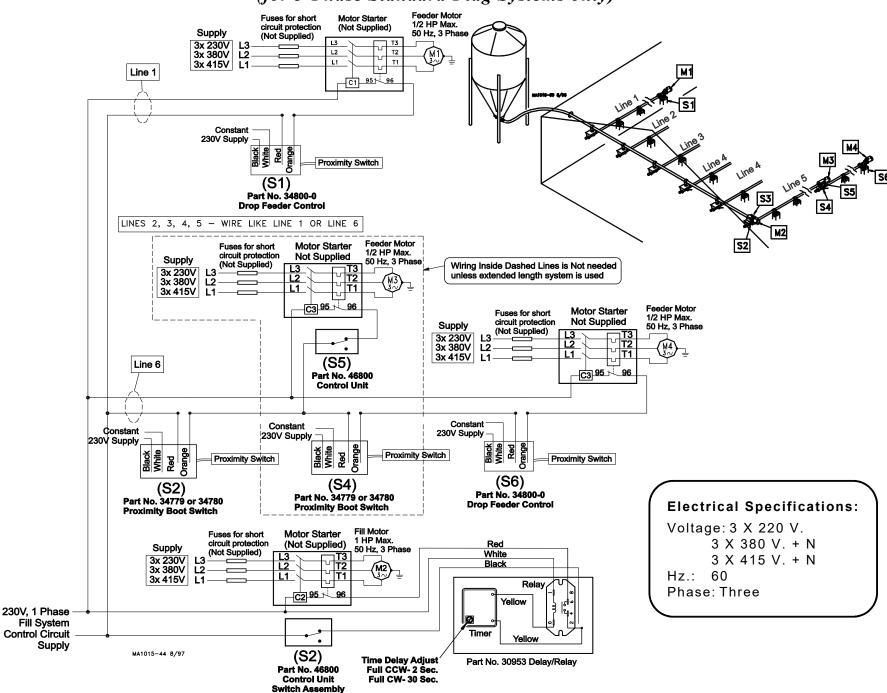
Flag System Control Options (for 3-Phase Standard and Alternate #1 Flag Systems only)



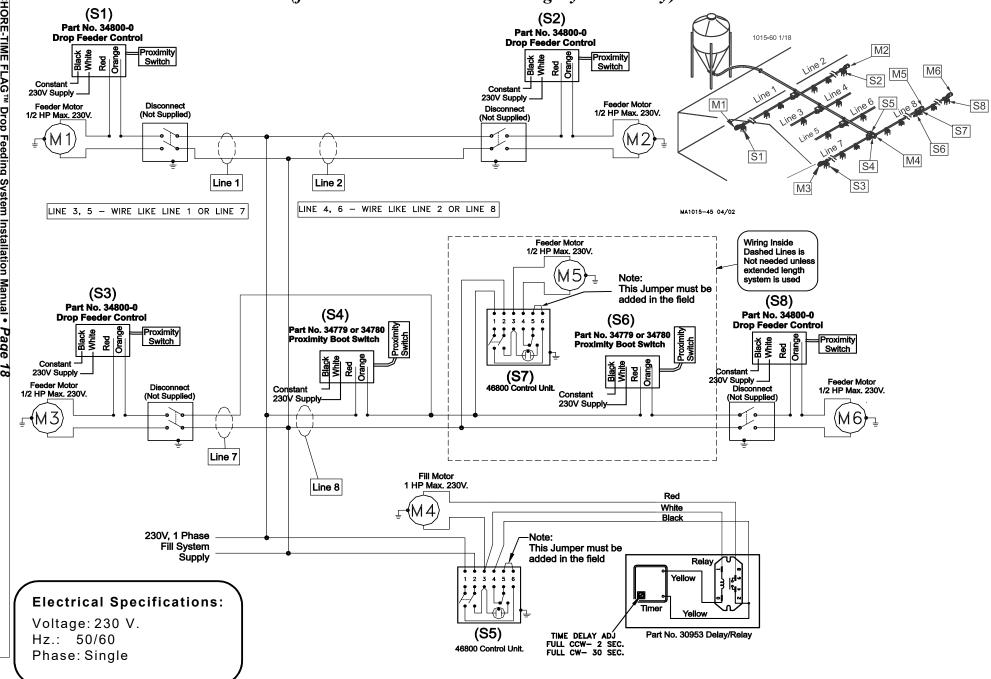
Flag System Control Options (for 1-Phase Standard Flag Systems only)

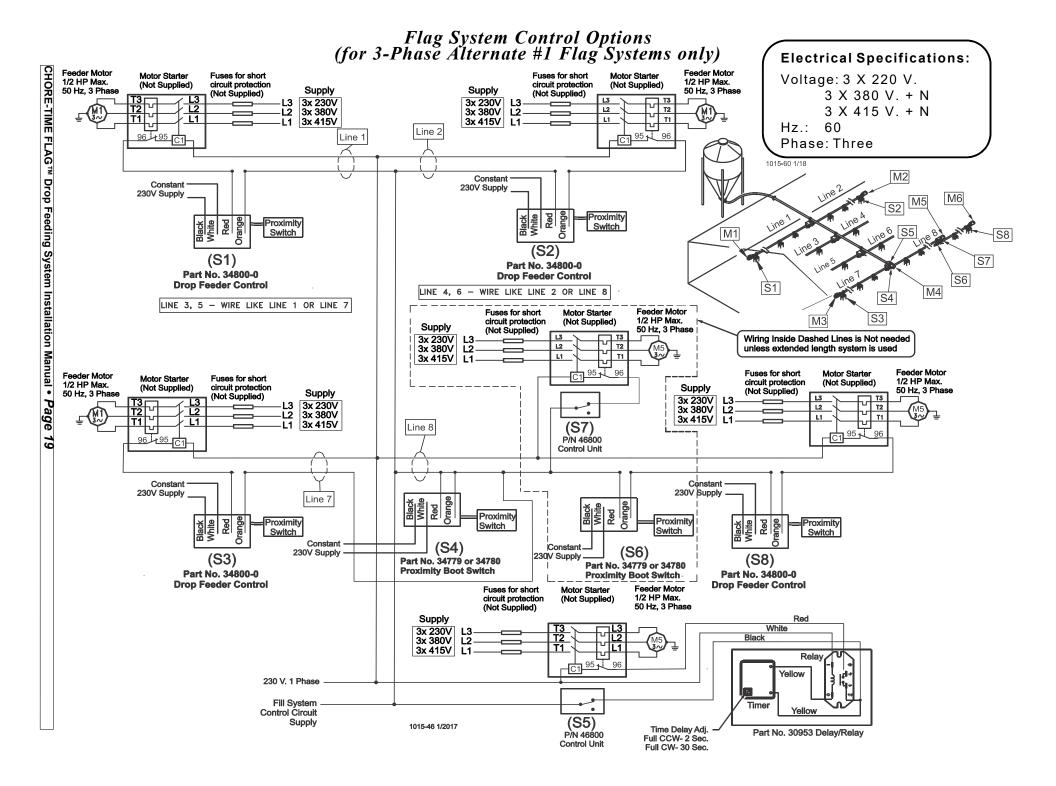


Flag System Control Options (for 3-Phase Standard Flag Systems only)

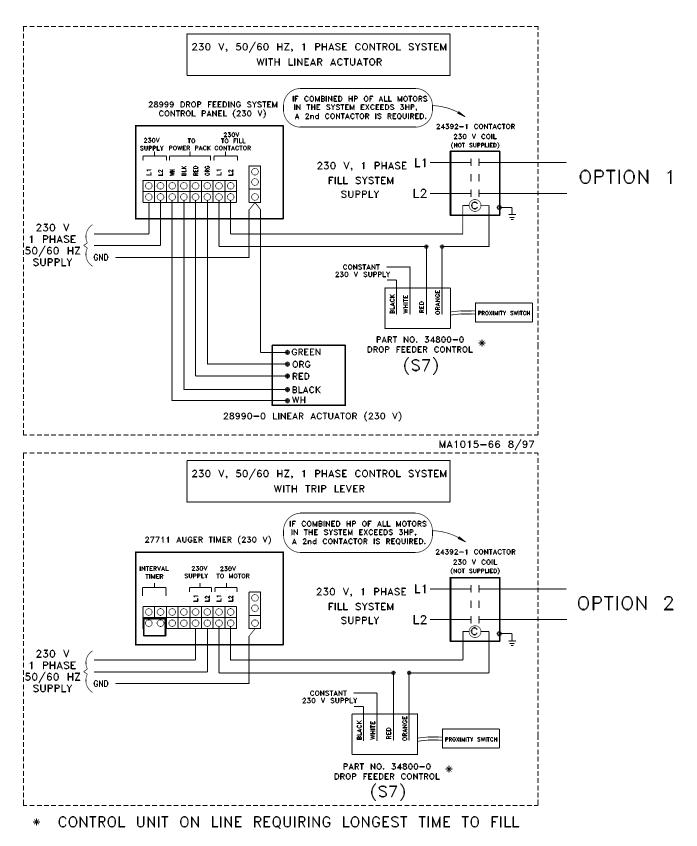


Flag System Control Options (for 1-Phase Alternate #1 Flag Systems only)



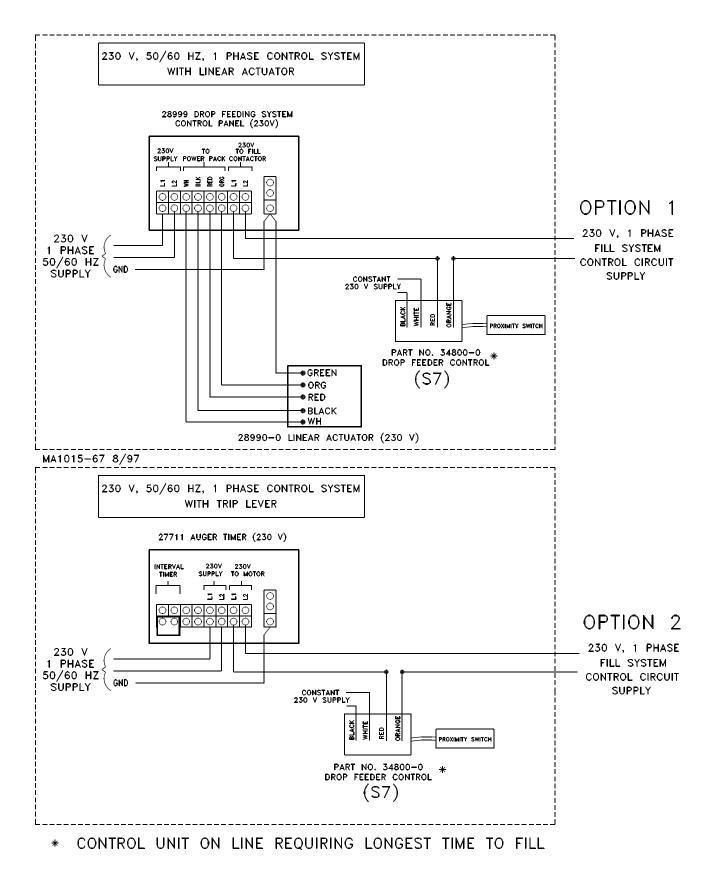


Flag System Control Options (for 1-Phase Alternate #2, and #3 Flag Systems only)

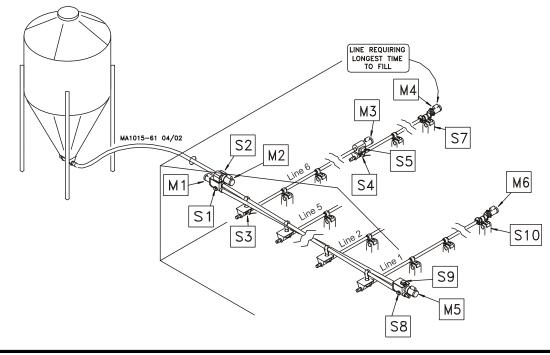


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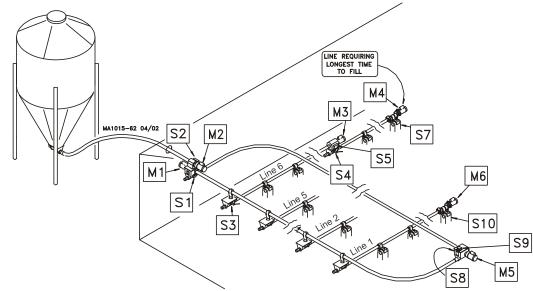
Flag System Control Options (for 3-Phase Alternate #2, and #3 Flag Systems only)



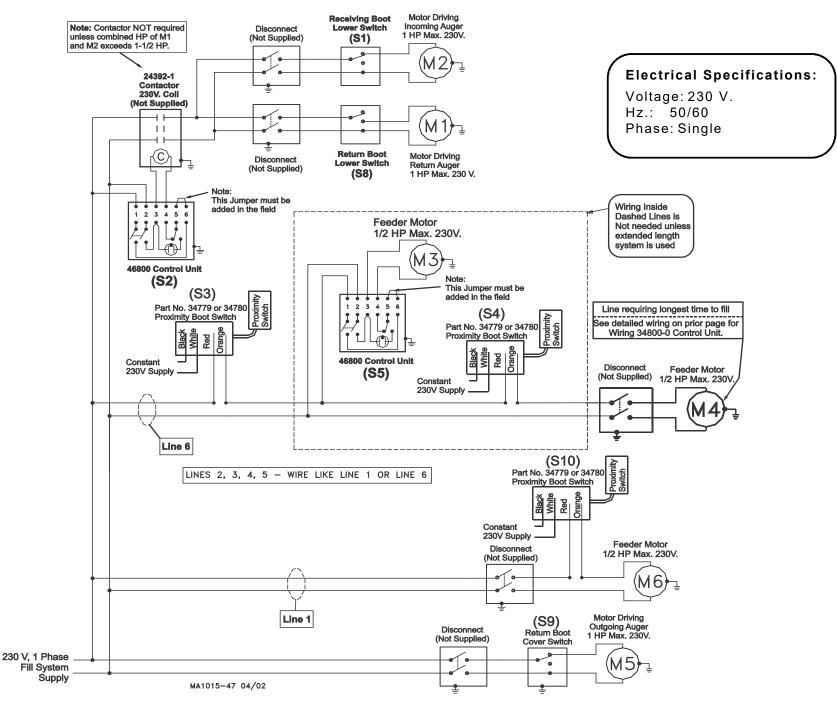
Flag System Control Options (for 1-Phase Alternate #2 Flag Systems only)

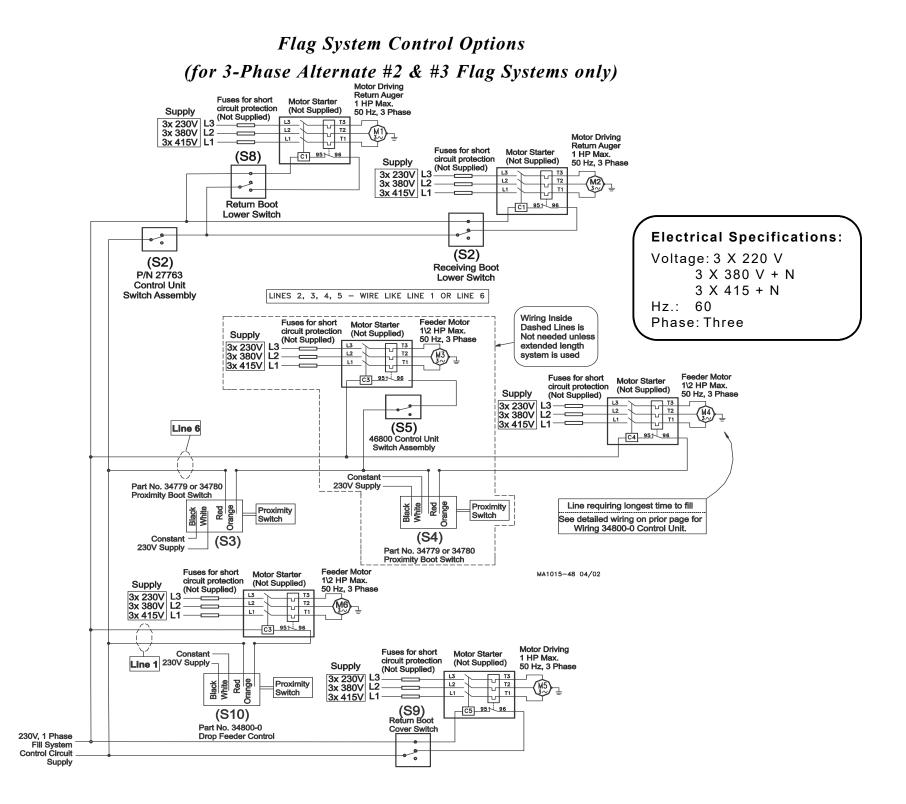


Flag System Control Options (for 1-Phase Alternate #3 Flag Systems only)

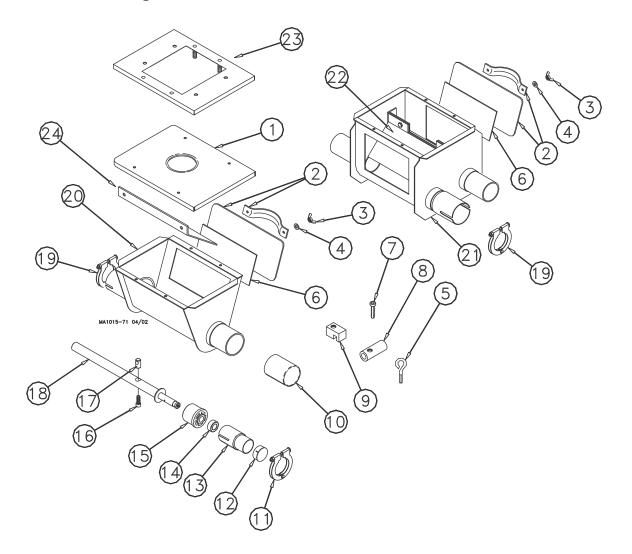


Flag System Control Options (for 1-Phase Alternate #2 & #3 Flag Systems only)





Transfer Boot Assembly Single Part No.: 35727 • Twin Part No.: 35942



Key	Description	Part No.
1	Transfer Cover	29872
2	Clean-Out Cover	6301
3	5/16-18 Wing Nut	2146
4	Sealing Washer	8491
5	1/4-20 Eyebolt	1928
6	Back Plate Assembly	6298
7*	1/4-20 x 2" Socket Hd C.S.	5083-4
8*	Drive Tube	30932
9*	Driver Block	4642
10	5" Stub Tube	8555
11	2" Clamp	29520
12	Сар	29523
13	Stub Tube	4163
14**	Set Collar	1386
15**	Anchor Bearing	39407
16**	Socket Screw	6850-6
17**	Auger Clamp	39205
18**	Flag Anchor	39414

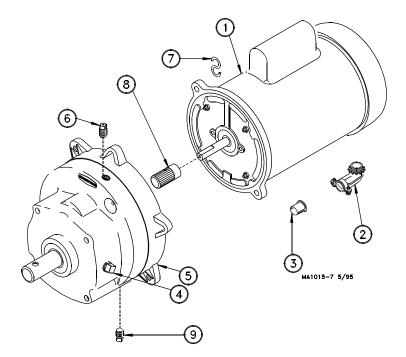
Key	Description	Part No.
19	Model 55 Tube Clamp	35726
20	Boot Body Weldment (Single)35646
21	Boot Body Weldment (Twin)	35936
22	Twin Flag Baffle	35941
23***	Adapter Plate	45970
24	Single Flag Boot Baffle	35646
	Danger Decal	2527-9

*These items may be ordered as an assembly under CHORE-TIME Part No. 30931.

**These items may be ordered as an assembly under CHORE-TIME Part No. 39408.

***The Adapter Plate is not included with the Transfer Boot Assemblies. It must be ordered separately.

3259-0 Fill System Power Units for Flag Systems



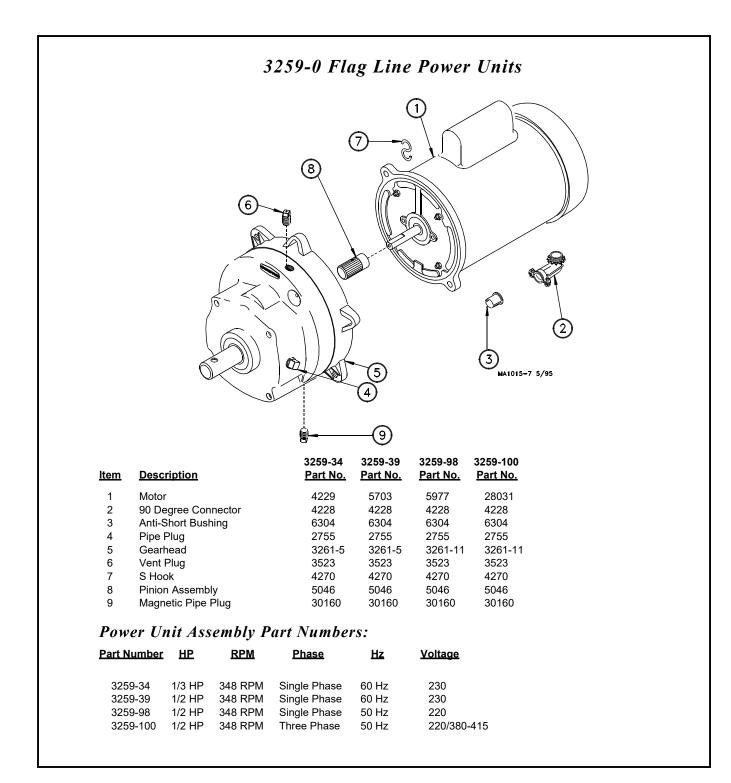
14	Description	3259-49	3259-51	3259-52	3259-77	3259-78	3259-79	3259-88
<u>ltem</u>	<u>Description</u>	<u>Part No.</u>						
1	Motor	6857	5050	5051	5050	5051	6857	6305
2	90 Degree Connector	4228	4228	4228	4228	4228	4228	4228
3	Anti-Short Bushing	6304	6304	6304	6304	6304	6304	6304
4	Pipe Plug	2755	2755	2755	2755	2755	2755	2755
5	Gearhead	3261-7	3261-7	3261-7	3261-10	3261-10	3261-6	3261-10
6	Vent Plug	3523	3523	3523	3523	3523	3523	3523
7	SHook	4270	4270	4270	4270	4270	4270	4270
8	Pinion Assembly	6104	5046	5046	5046	5046	3249	5046
9	Magnetic Pipe Plug	30160	30160	30160	30160	30160	30160	30160
		3259-89	3259-103	3259-104	3259-105			
<u>ltem</u>	Description	Part No.	<u>Part No.</u>	<u>Part No.</u>	<u>Part No.</u>			
1	Motor	26157	28035	28034	28035			
2	90 Degree Connector	4228	4228	4228	4228			
3	Anti-Short Bushing	6304	6304	6304	6304			
4	Pipe Plug	2755	2755	2755	2755			
5	Gearhead	3261-10	3261-10	3261-10	3261-10			

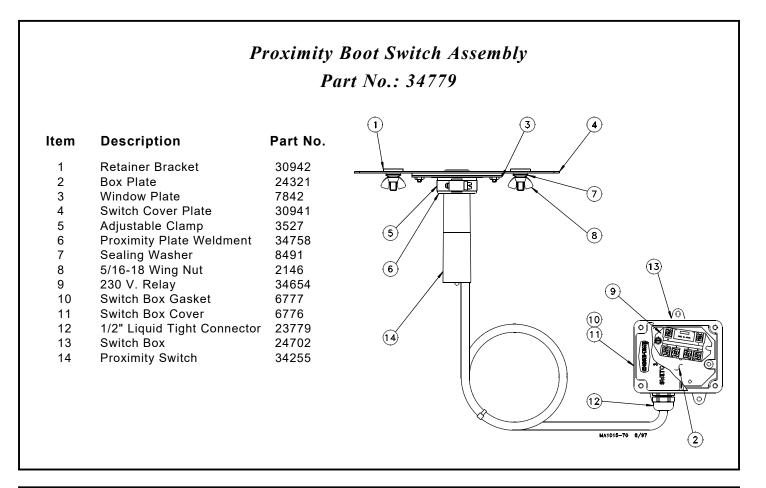
6	Vent Plug	3523	3523	3523	3523
7	S Hook	4270	4270	4270	4270
8	Pinion Assembly	6104	5046	5046	6104
9	Magnetic Pipe Plug	30160	30160	30160	30160

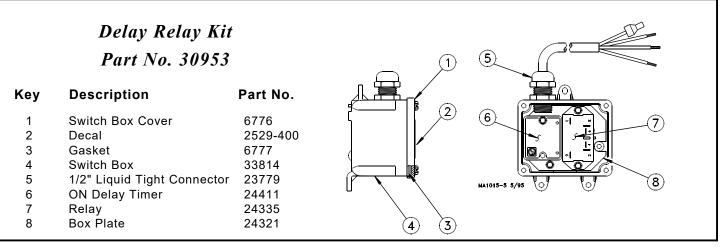
Power Unit Assembly Part Numbers:

<u>Part Number</u>	<u>Number HP RPM Phase</u>		<u>Hz</u>	<u>Voltage</u>	
3259-49	1 HP	348 RPM	Single Phase	60 Hz	230
3259-51	1/2 HP	348 RPM	Single Phase	60 Hz	230
3259-52	3/4 HP	348 RPM	Single Phase	60 Hz	230
3259-77	1/2 HP	425 RPM	Single Phase	60 Hz	230
3259-78	3/4 HP	425 RPM	Single Phase	60 Hz	230
3259-79	1 HP	425 RPM	Single Phase	60 Hz	230
3259-88	3/4 HP	348 RPM	Single Phase	50 Hz	220
3259-89	1 HP	348 RPM	Single Phase	50 Hz	220
3259-103	1/2 HP	348 RPM	Three Phase	50 Hz	220/380-415
3259-104	3/4 HP	348 RPM	Three Phase	50 Hz	220/380-415
3259-105	1 HP	348 RPM	Three Phase	50 Hz	220/380-415

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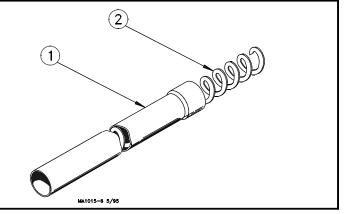




Miscellaneous Components

Key	Description	Part No.
1 2* 	10' PVC Tube Auger Extension Boot Control Unit	7955 25058F-0 6500-8

*Auger may be ordered in lengths from 50 ft. (15 .2 m) to 400 ft. (122 m). Example: 25058F-150 would represent 150 ft. (45.7 m) of 25058F Auger.



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THANK-YOU for purchasing a Chore-Time Flag Delivery System.



Revisions to this Manual

Page No.	Description of Change	ECO
2	Updated Warranty	33284
	Deleted alternate #4 Wiring options	
Various	Various other changes	

Contact your nearby Chore-Time distributor or representative for additional parts and information. CTB, Inc. P.O. Box 2000, Milford, Indiana 46542-2000 U.S.A. Phone: 574-658-4101 • E-Mail: poultry@choretime.com