

August 2018

Limited Warranty

LIMITED WARRANTY

Chore-Time Group, a division of CTB, Inc. ("Chore-Time") warrants the new CHORE-TIME FLEX-AUGER Model 55,75,90, & HMC 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. 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 is not transferable, and applies only to the original purchaser of the Product.

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, 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

Support Information

The Chore-Time FLEX-AUGER[®] Feed Delivery System is designed to convey poultry and 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, operation, and parts listing information. The Table of Contents provides a convenient overview of the information in this manual.

Date of Purchase
Date of Installation

Contents

Topic Page
Limited Warranty
Support Information
Safety and General Information 6 Follow Safety Instructions 6 Decal Descriptions 6 DANGER: Moving Auger 6 DANGER: Electrical Hazard 6 DANGER: Springing Auger 6
General Information. 7 Selecting the System. 7 System Comparison Chart 7 System Weight & Length Specifications 8 Planning. 9
Planning the System
Installation 10 Recommended Layouts 10 Not Recommended Layouts 10 Bin to Building Placement Chart 11 Installation 12 Installation Notes 12 Bin Location and Collar Information 12 Boot Installation 12 Boot Installation 12 Auger Tube Installation 12 Supporting the System Inside the Building 15 Supporting the System Outside the Building 16 Elevated Systems 16 Bin to Bin Fill Systems 16 Long Elevated Systems 17 Outlet Assembly Installation 20 Belt Drive Control Unit Installation 21 Auger Installation 22 Cover Plate Installation 24 Auger Brazing/Filing 24 Auger Brazing/Filing 24 Restrictor Adjustment 25 Straight-Through Tandem Boot 26
Standard FLEX-AUGER Boots and Baffle Locations .27 Boot Baffles for Straight-Through Boot Systems .29 Feed Level Control Installation .30 Hopper Level Control Switch (Single Phase) Wiring .30 Hopper Level Control Switch (Three Phase) Wiring .30 SENSOR PLUS™ Electronic Switch (Single Phase) Wiring .31
Operation. 32 Start-Up Procedure for New Systems. 32
Parts Listing 33 Model 55,75,90,& HMC Feed Delivery System Standard Components 33 Steel Components 33 Power Unit Assembly Part Numbers 34

3259-0 Power Units
Direct Drive Control Unit (Single Phase)
Stainless Steel Direct Drive Control Unit (Single Phase)
International Direct Drive Control Units (3 Phase)
46051 Switch & Plate Assembly
46051SS Switch & Plate Assembly
Standard Belt Drive Control Units
24392-0 Contactor Box
Boot Components
Model 55 Boot Components
Model 75 Boot Components
Model 75 Boot Components (continued)
Model 90 Boot Components
Model 90 Boot Components (continued)
Model HMC Boot Components
Troubleshooting
Maintenance
Livestock and Poultry Feed Consumption

Safety and General 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.

Decal Descriptions

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: 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.

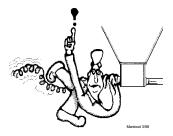
Electrical disconnects and over current protection are not supplied with the equipment.

DANGER: Springing Auger

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







General Information

Selecting the System

CHORE-TIME Feed Delivery systems are designed to handle most common livestock and poultry feeds. We can not guarantee satisfactory operation with all formulations. We suggest that you contact our Technical Service Department concerning the use of new or unusual formulations.

FLEX-AUGER Feed Delivery Systems are the most versatile feed conveying systems available. Their ease of installation, reliability, low maintenance, and adaptability for many different applications, make them an indispensable part of any livestock feeding system.

The FLEX-AUGER Feed Delivery System you choose should be based on the following;

- 1. Particle Size Feed particles that are too large for the system will cause damage to the particles, excessive power requirements, and plugging of the system.
- 2. Moisture Content (18% maximum) The moisture content of the feed, among other factors, determines the amount of buildup that will occur on the auger and auger tubes when conveying feed. Feeds with high moisture content (above 18%) will freeze if exposed to freezing temperatures. This type of feed tends to flow less-easily causing higher power requirements. Feeds in High Moisture Corn applications should not exceed 27% moisture content.
- 3. Feed capacities Each size of FLEX-AUGER delivers feed at a different rate. These rates should be matched to your feed requirements. An application that requires a large volume of feed to be moved should use a larger (i.e. Model 90 or HMC) auger system or possibly two smaller auger (i.e. Model 55 or 75) systems. See below for System Comparison information.
- 4. Running Time Size the system so that the maximum operating time is four hours per day (24 hours). If necessary, refer to "Livestock and Poultry Feed Consumption" on page 53. If your system operating times exceed four hours per day, contact your distributor or Chore-Time's Technical Service Department.

NOTE: The maximum allowable liquid molasses content for all FLEX-AUGER Feed Delivery Systems is 2%. At higher liquid molasses content or at moisture levels above the recommended limits, the auger tubes can become coated. This reduces the carrying capacity of the feed delivery system, causing eventual plugging of the system.

Commercial layer applications require the use of all steel FLEX-AUGER Feed Delivery Systems. Hardened steel elbows are required for these applications. This is due to the abrasive feed particles in commercial layer feed rations. Do not mix steel and PVC components within a system.

System	Tube Dia.	Delivery Rate*	Feed Types	Max. Part. Size
Model 55	2-1/4" (55 mm)	15 lb/min. (7 kg/min.)	mash, crumbles 18% moist. content	1/8" x 1/2" (3 mm x 13 mm)
Model 75	3" (75 mm)	50 lb/min. (22 kg/min.)	mash, crumbles 18% moist. content	1/8" x 1/2" (3 mm x 13 mm)
Model 90	3-1/2" (90 mm)	100 lb/min. (45 kg/min.)	mash, pellets, shelled corn 18% moist. content	3/16" x 1/2" (5 mm x 13 mm)
Model HMC	3-1/2" (90 mm)	50 lb/min. (22 kg/min.)	high-moisture corn, larger pellets,crumbles, mash 27% moist. content	3/8" x 3/4" (10 mm x 20 mm)

System Comparison Chart

*Conveying capacity is based on feed with 40 pounds per cubic foot (640 kg. per cubic meter) density. Conveying capacities for all the FLEX-AUGER Systems are determined using 348 RPM Power Units. Motor

H.P.

1/2

3/4

1

System Weight & Length Specifications

Adequate support must be provided to prevent the tubes from sagging and support the weight of the Control Unit. The auger, tubes, and feed weigh approximately 6 lbs/ft. (9 kg/m). The Control Unit weighs approximately 80 lbs. (36 kg).

Line lengths specified allow for two 45 degree elbows in the elevation. Reduce line length by 30' (9 m) for each additional horizontal 90 degree elbow.

For Tandem Systems, raise the horsepower one size over recommendations in the table below or reduce line length by 50' (15.4 m).

Note: If voltage supplied is 208V, reduce the line lengths by 20%.

Horsepower requirements are based on length of the FLEX-AUGER System and type of system installed--number of turns, tandem systems, etc. The charts included show maximum line lengths for FLEX-AUGER Systems plus maximum lengths for systems using Extension Hoppers.

Model 55			<u>Model 90</u>		
Motor H.P.	Maximum Line Length	Maximum Extension	Motor H.P.	Maximum Line Length	Maximum Extension
1/3	150' (46 M)	185' (56 M)	1/2	30' (9 M)	65' (20 M)
1/2	250' (76 M)	285' (72 M)	3/4	90' (27 M)	125' (38 M)
			1	150' (46 M)	185' (56 M)

Model 75

Maximum

80' (24 M)

150' (46 M)

200' (61 M)

Line Length

Model HMC Maximum Extension Motor Maximum Maximum H.P. Line Length Extension 125' (38 M) 1/2 30' (9 M) 55' (17 M) 185' (56 M) 3/4 90' (27 M) 105' (32 M) 245' (75 M)

150' (46 M)

1

185' (56 M)

Planning the System

See Figure 1. on page 10 for recommended, and Figure 2. on page 10 for non-recommended FLEX-AUGER installations. When laying out the FLEX-AUGER Feed Delivery System, plan the system so that the auger tubes do not interfere with doors, windows, or other equipment.

See "Bin to Building Placement Chart" on page 11 for different elevations and boots.

1. For the easiest installation and most trouble-free operation, locate the feed bin in a direct line with the FLEX-AUGER Feed Delivery System. The "**Bin to Building Placement Chart**" on page 11 also provides some points of reference for bin placement according to the height at which the FLEX-AUGER tube enters the building. Remember, these are only examples. The layouts can be modified by changing the elbows, the tube sections, and/or the distance from the bin to the building. Locate the bin so that the FLEX-AUGER Feed Delivery System does not have to convey feed at an angle of

Locate the bin so that the FLEX-AUGER Feed Delivery System does not have to convey feed at an angle of more than 60 degrees from the horizontal to enter the building at the desired height. Chore-Time considers a 45 degree elevation to be standard--the lower the angle, the more reliable the system.

2. Lay out the system as straight as possible. Avoid extra elbows and curves by locating the feed bin in line with the feeders. One horizontal 90 degree right hand turn is permissible inside the building. 180 degree turns are not recommended under any conditions.

If additional turns or elbows are required, use extension hoppers. Remember: one 90 degree elbow requires the same power as 30' (9.1 m) of straight line.

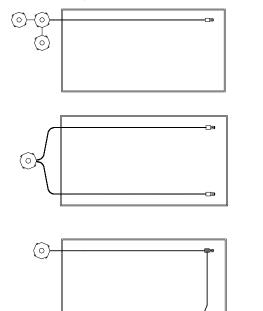
- 3. Plan the system so that the auger tubes are directly over the feeders or hoppers to be filled as possible. The drop tubes may be angled up to a maximum of 45 degrees from the vertical if necessary. At angles greater than 45 degrees, bridging in the drop tubes may occur.
- 4. The control unit must be located over a feeder or hopper that will require as much or more feed than any of the other feeders or hoppers. If frequent filling is desired, mount the drop tube switch or hopper level switch low so that this feeder or hopper will have a low feed level. This causes the feeder to call for feed more often, the system will restart, and the other feeders will be refilled sooner.
- 5. Do not locate outlet drops on or just before an elbow. Install the drop after the elbow so feed will cushion the auger through the curve. If there is some reason why the outlet drop cannot be moved, it must have some "feed bypass" to cushion the auger through the elbow.
- 6. Avoid horizontal left-hand turns if possible. The elbow in a left-hand turn is not cushioned by the feed and will wear faster. On systems with a 90 degree horizontal left-hand turn, reduce the stretch to reduce wear.

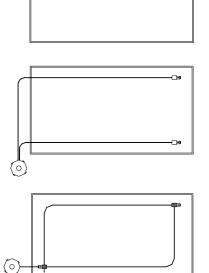
NOTE: A rule of thumb for left-hand turns is to reduce stretch to 1" per 50' (25 mm per 15.2 m) on initial installation. Increase the stretch if necessary. If an extension hopper is used:

- A. Locate the hopper so there will not be any outlet drops on the short tube or elbow leading out of the hopper.
- B. The longer portion of the system with most of the outlet drops should follow the extension hopper. For example: in a 300' (91.4 m) Model 75 System the distance from the bin to the extension hopper should be 100' (30.5 m). From the extension hopper to the control unit should be 200' (61 m) with most outlets placed on the 200' (61 m) section. Refer to "System Weight & Length Specifications" on page 8, for power unit requirements.
- NOTE: The lower part of the extension hopper can be turned 90 degrees to the left or right in relation to the top portion of the extension hopper. This allows the extension hopper to replace a horizontal elbow where both might be located in approximately the same position in the system.
- 7. Remember the following points when installing a Straight-Through Tandem System or Two Motor Tandem System:
 - A.The straight-through tandem bin arrangement uses one continuous auger.
 - B.The Two Motor Tandem bin arrangement uses two separate augers and power units.
 - C.Pour one level concrete pad for both bins (in either system).
 - D.Position bins so that legs will not interfere with the FLEX-AUGER System (in either system). See the Two Motor Tandem System instructions (Model 75, 90, & HMC systems only).
- 8. See **"System Weight & Length Specifications" on page 8** to determine maximum line lengths and power unit requirements.

Installation

Recommended Layouts





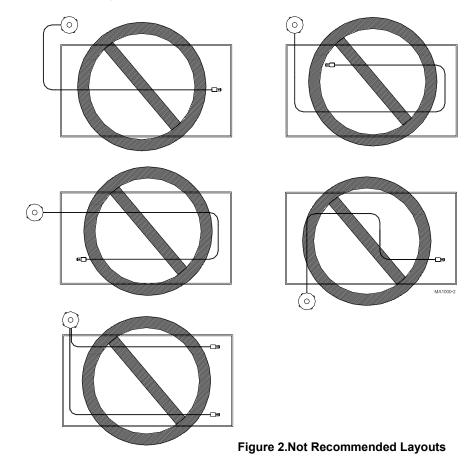
 \bigcirc

MA1000-1

 $\left(\circ\right)$

Figure 1.Recommended Layouts

Not Recommended Layouts

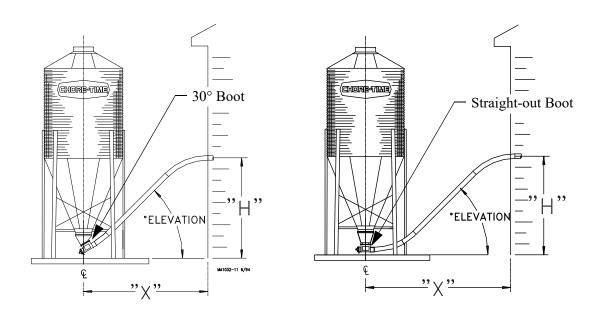


Bin to Building Placement Chart

Use this chart to determine the distance from building to center of bin ("X") at the various entrance heights ("H") and degrees of elevations listed below.

•The bin on the left is shown with a 30 degree bin boot.

System Model	Entrance Height	30 Degree Upper Bin Boot (part no. 4347)		Straight-Out Upper Bin Boot (part no. 6093)			
	"H"	30 Degree	45 Degree	60 Degree	30 Degree	45 Degree	60 Degree
	5' (1.5 m)	9' (2.7 m)			11.5' (3.5 m)	10' (3 m)	
	6' (1.8 m)	11' (3.4 m)	8.5' (2.6 m)	8' (2.4 m)	13.5' (4.1 m)	11' (3.4 m)	10' (3 m)
Model 55, 75, 90,	7' (2.1 m)	12.5' (3.8 m)	9.5' (2.9 m)	8.5' (2.6 m)	15' (4.6 m)	12' (3.7 m)	11' (3.4 m)
or HMC with 5'	8' (2.4 m)	14.5' (4.4 m)	10.5' (3.2 m)	9' (2.7 m)	17' (5.2 m)	13' (4 m)	11.5' (3.5 m)
radius elbows	9' (2.7 m)	16' (4.9 m)	11.5 (3.5 m)	9.5' (2.9 m)	18.5' (5.6 m)	14' (4.3 m)	12' (3.7 m)
	10' (3 m)	17.5' (5.3 m)	12.5' (3.8 m)	10 (3 m)	20' (6.1 m)	15' (4.6 m)	12.5' (3.8 m)
	11' (3.3 m)	19.5' (5.9 m)	13.5' (4.1 m)	10.5' (3.2 m)	22' (6.7 m)	16' (4.9 m)	13' (4 m)
	12' (3.7 m)	21' (6.4 m)	14.5' (4.4 m)	11.5' (3.5 m)	23.5' (7.2 m)	17' (5.2 m)	13.5' (4.1 m)
	13' (4 m)	23' (7 m)	15.5' (4.7 m)	12' (3.7 m)	25.5' (7.8 m)	18' (5.5 m)	14' (4.3 m)
	14' (4.3 m)	24.5' (7.5 m)	16.5' (5 m)	12.5' (3.8 m)	27' (8.2 m)	19' (5.8 m)	15' (4.6 m)
	15' (4.6 m)	26.5' (8.1 m)	17.5' (5.3 m)	13' (4 m)	29' (8.8 m)	20' (6 m)	15.5' (4.7 m)
	16' (4.9 m)	28' (8.5 m)	18.5' (5.6 m)	13.5' (4.1 m)	30.5' (9.3 m)	21' (6.4 m)	16' (4.9 m)
	17' (5.2 m)	30' (9.1 m)	19.5' (5.9 m)	14' (4.3 m)	32.5' (9.9 m)	22' (6.7 m)	16.5' (5 m)
	18' (5.5 m)	31.5' (9.6 m)	20.5' (6.2 m)	14.5' (4.4 m)	34' (10.4 m)	23' (7 m)	17' (5.2 m)
	19' (5.8 m)	33.5' (10.2 m)	21.5' (6.5 m)	15.5' (4.7 m)	36' (11 m)	24' (7.3 m)	17.5' (5.3 m)
	20' (6.1 m)	35' (10.7 m)	22.5' (6.8 m)	16' (4.9 m)	37.5' (11.4 m)	25' (7.6 m)	18.5' (5.6 m)



Installation

Installation Notes

Install the equipment as specified in this manual. Failure to install as specified may cause damage to the equipment and/or cause personal injury or death.

Take special notice of the warnings and safety decals on the equipment and in this manual.

Always wear protective clothing and protective glasses when working with the equipment.

Discarded materials, equipment, and boxes may be recycled. Recycle according to local and national codes.

Unless otherwise specified, the Model 55, 75, 90, & HMC Systems are installed similarly.

All the systems are available with straight-out or 30 degree upper boots, except the Model 55. The Model 55 requires the 30 degree upper boot (the straight-out boot is not available for the Model 55).

Bin Location and Collar Information

For easiest installation and trouble-free operation, locate the feed bin in a direct line with the FLEX-AUGER System. The layout chart provides some points of reference for bin placement according to the height at which the system enters the building.

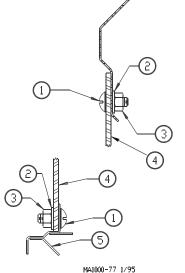
The bin collar is installed during bulk bin assembly. Chore-Time bins have a welded collar. Bin Adapter Kits are available to modify existing bins so that the welded collar can be used. In addition, most other feed bin manufacturers have a collar available to be used with Chore-Time FLEX-AUGER Feed Delivery Systems.

Boot Installation

1. Insert the upper boot into the bin collar opening and turn it to line up with the direction that the auger line will go. The boot must be as far up into the opening as it will go. Use the holes in the ring for drilling guides and drill 11/32" (8.8 mm) holes in the upper rim of the boot. Attach the boot to the Bin Collar using the hardware provided. See Figure 3. for correct use of hardware to attach the boot.

IMPORTANT: Failure to install the hardware as shown in Figure 3 may cause breakage of the Upper boot body.

- 2. Attach the transfer plate to the upper boot. Use truss head bin-seal bolts installed from the inside of the plate, with flat washers placed under the nuts.
- 3. Insert the slide into the transfer plate slot so that it is in its operating position before bolting the slide shield in place. Use two 5/16-18x3/4" hex head machine screws to secure the shield.
- 4. Bolt the lower boot to the transfer plate using four 5/16-18x3/4" hex head machine screws.



- Description Key
- 5/16-18x3/4" Truss Head Screw 1
- 2 5/16" Nylon Washer
- 3 5/16-18 Nylon Hex Nut
- 4 Upper Boot Body
- 5 **Transfer Plate**
- 6 Welded Bin Collar

Figure 3.Boot Installation Diagram

Auger Tube Installation

The FLEX-AUGER Delivery System includes two 45 degree elbows as standard equipment. These elbows are used to make the sloping portion of the auger line at the feed bin, and elsewhere in the system if necessary. If additional elbows are required, they should be ordered separately. **Figure 4** shows how the elbow can be cut into shorter sections.

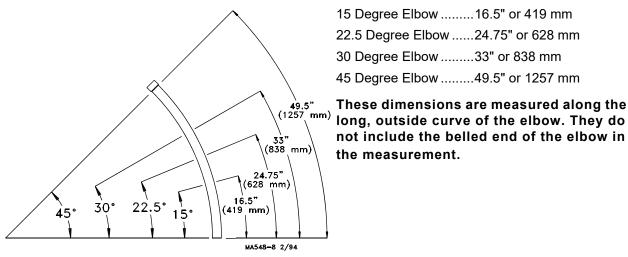


Figure 4.PVC Elbow Cutting Guidelines

- 1. Determine where the entrance hole for the auger tube must be located on the building and cut it.
- 2. Cut the elbow used where the auger enters the building (if necessary). Slide the seal ring and neoprene seal over the straight end of the elbow and place it in the hole cut in the building, with the belled end outside the building. (See Figure 5).
- 3. Model 75, 90, & HMC: Slide the belled end of the elbow or auger tube over the outlet end of the boot. A clamp is provided to secure the elbow or auger tube to the boot.

Model 55: Install the Model 55 Stub Tube over the outlet end of the boot. A clamp is provided to secure the Stub Tube to the boot.

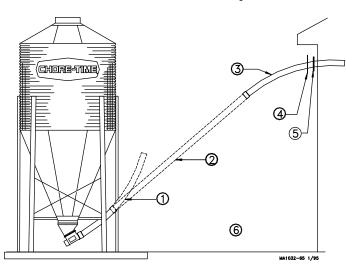
Slide the belled end of the first elbow or auger tube over the stub tube.

4. Place the end of a straight section of tube inside the belled end of the elbow in the building. Hold the straight section of auger tube so that it touches the elbow on the boot. Mark the spot where the tube aligns with the "boot" elbow and cut the elbow at that point.

1 2

3

6



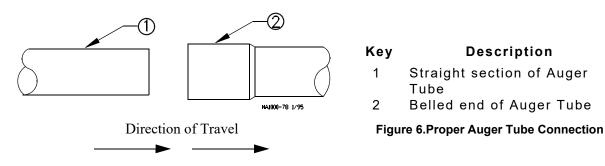
Key Description

- 45° Elbow
- Auger Tube
- 45° Elbow
- 4 Seal Ring
- 5 Neoprene Seal
 - Note: Belled end of elbows and auger tubes should be towards boot.

Figure 5.Elbow Installation outside the building

5. Place the belled end of the auger tube over the end of the elbow just cut, and hold the tube against the top

elbow. Mark and cut the straight auger tube so that it will fit between the two elbows. Remember to cut the auger tube long enough to fit inside the belled end of the elbow in the building. Figure 4 shows the direction the auger is to run in relation to the belled end of the tube. NOTE: In some installations it may be possible to eliminate the elbow on the boot, using only a straight auger tube and one elbow where the tube enters the building.



6. Dry-fit all parts. When satisfied that elbows and tubes fit together smoothly, glue with PVC cement according to the following instructions.

The auger tubes and elbows for the FLEX-AUGER systems are made of specially formulated PVC tubing. Use the PVC solvent cement to make strong, reliable bonds.

FOLLOW DIRECTIONS ON THE CAN FOR SAFE HANDLING OF CEMENT.

1.Be sure tube is cut off squarely. Remove burrs from outside and inside the end of the tube.

2.Dry fit all parts. Tube should fit inside belled end of next tube to full depth without excess force.

3. Clean surfaces to be joined. SURFACES MUST BE FREE OF DIRT OR GREASE!

4. Apply a generous coat of cement to both the inside of the belled end and outside of the other tube. Be sure cement covers all of the joint area so there are no bare spots.

5.Quickly join the tubes, giving them a twisting motion to bring them into alignment as they are joined. 6.Keep pressure on the joint until the PVC cement sets up.

ALL TUBE JOINTS EXPOSED TO MOISTURE AND WEATHER MUST BE SEALED OR CAULKED TO WATERPROOF THEM IN ADDITION TO CEMENTING OR CLAMPING THE JOINT!

- 7.If there is more than 15 feet (4.5 meters) of auger tube between the boot and the building, provide additional support for the tubes so that the boot does not have to carry the weight of the auger. Extra support can be achieved with cables or chains fastened to the bin legs and auger tube.
- 8.Install the remaining tubes in the system AFTER the outlet holes have been located and cut. The auger tubes should be cemented using PVC cement supplied. NOTE: The tubes can be joined by cutting off the belled ends and fastening tubes together with tube connectors if there is some reason why permanent installation is not desired. (Tube Connectors are not standard equipment and must be ordered separately for this type of installation).

Supporting the System Inside the Building

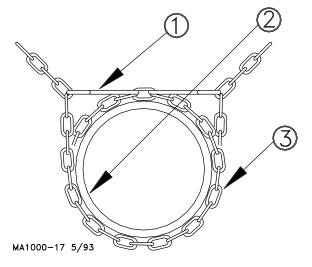
Support the Auger Tubing with chain and "S" Hooks every 5 feet [1.5m]. Steel Tube systems require support every 10 feet [3m]. The system should be restrained from swinging by using chain and "S" hooks to brace the auger tube, every 20 feet [6m], as shown in **Figure 7**.

Horizontal elbows need to be supported in at least two places. Chain, screw hooks, and "S" hooks are supplied as a suspension kit for supporting the equipment. Keep the line as level and straight as possible.

If Drop Feeders, Extension Hoppers, Outlet Drops with long angled Drop Tubes, or other loads are imposed on the system, extra support will be required.

Power Units require extra support to resist the twisting encountered when the motor starts and stops. Use the motor mount base, all of the "ears" on the gearhead as well as the suspension point provided on the 46800 Control Unit Box to support the Power Unit.

Adequate chain and "S" hooks are provided with each system to properly support it. Other means of supporting the system are permissible as long as the system receives the correct support and the auger tube is not dented or flattened. Alternative support systems must allow for expansion and contraction of the Auger Tubes.

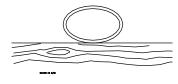


Key Description

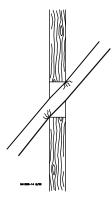
- 1 "S" Hook
- 2 Auger Tube
- 3 Chain

Figure 7. Proper Auger Tube Connection

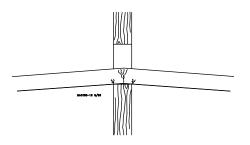
When the auger tube passes through a side wall or partition, especially where it enters the building, the opening should be made large enough so the auger tube can be supported without resting on the wall. If the auger tube rests on the wall or partition, the auger tube may flatten out or become kinked--causing excessive wear. (See Figure 8).



Auger tube flattened because the supports are not high enough to keep the weight of the auger tube off the wall.



Auger tube pinched because the Auger Tube is not in line with the hole in the Wall.



Auger tube flattened because the supports are not high enough to keep the weight of the auger tube off the wall.

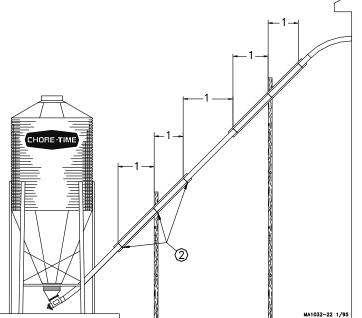
Supporting the System Outside the Building

Some systems require additional support to avoid sagging auger tubes. This support must be adequate to support the weight of the auger tubes filled with feed. Special attention should be given to avoid excessive pressure from the auger being transferred to boot. Chain or cable suspended from the bin or building will not provide adequate support for these systems.

Some common systems are shown in Figure 9, Figure 10, and Figure 11 with the recommended supports.

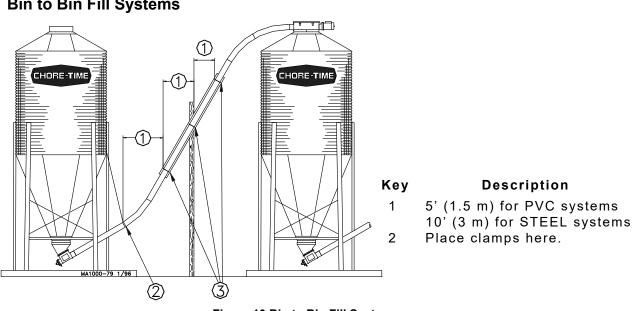
Note:Supports must be designed to prevent (weight) loads from being transferred back onto the boot.

Elevated Systems



Key	Description
1	5' (1.5 m) for PVC systems
2	10' (3 m) for STEEL systems Place clamps here.

Figure 9. Elevated Systems



Bin to Bin Fill Systems

Long Elevated Systems

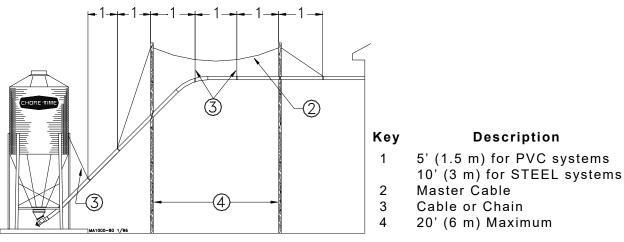


Figure 11.Long Elevated Systems

Outlet Assembly Installation

The Model 55, 75, HMC/90 Outlet Assemblies are designed to drop feed from a Feed Delivery or Feeding System into a Gravity Drop Tube. **Figure 12** shows the components that make up an outlet assembly.

Description

Cord

Outlet Bottom

Retainer (Optional)

Green Indicator Ball

Red Indicator Ball

Clamp (Optional)

Rotary Slide

Outlet Top

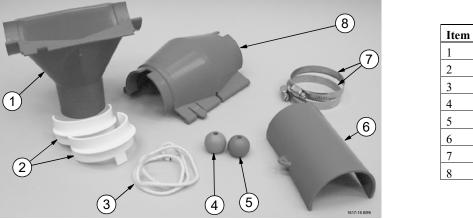


Figure 12.Outlet Assembly Components

1. Determine the location of the Outlet Assembly and drill or cut the desired outlet hole as shown in Figure 13.

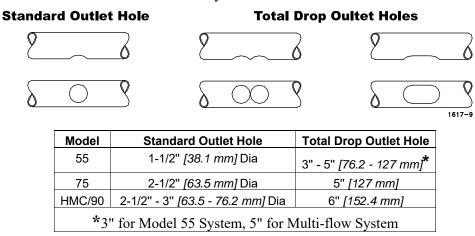
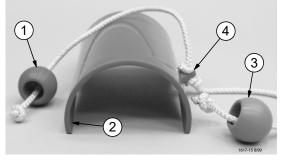


Figure 13.Cutting the Outlet Hole in the Fill System Pipe

2. Insert the Cord through the hole in the Rotary Slide tab, pull until centered, and knot it on both sides of the tab as shown in **Figure 14**. Slide the Indicator Balls on the Cord ends, as shown in **Figure 14**, and knot the Cord ends so the Indicator Balls will not fall off.



Item Description		ltem	Description
1	Red Indicator Ball	3	Green Indicator Ball
2	Rotary Slide	4	Tab on Rotary Slide

Figure 14.Assembling the Rotary Slide

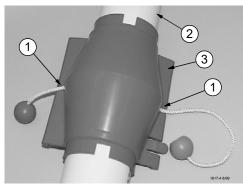
3. Snap the assembled Rotary Slide over the Fill System Pipe as shown in Figure 15.



ltem	Description
1	Fill System Pipe
2	Rotary Slide

Figure 15. Rotary Slide Snapped onto the Fill System Pipe

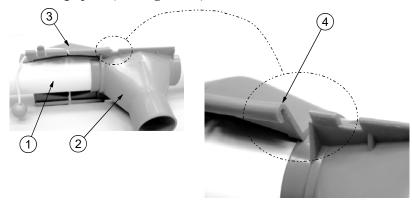
4. Snap the Outlet Top to the Fill System Pipe over the Rotary Slide as shown in **Figure 16**. Make sure the Cord comes out through the notches on each side of the Outlet Top as shown in **Figure 16**.



Item	Description
1	Notch on Top
2	Fill System Pipe
3	Outlet Top

Figure 16.Top Placed over the Rotary Slide

5. Use the Cord ends to hold the Rotary Slide in the full open position (cradled inside of the Outlet Top.) Engage the top edges of the Outlet Bottom into the open ends of the Outlet Top Tracks. Slide the parts together pressing the locking tab on the Outlet Top out of the way, allowing the Outlet Bottom to pass until completely assembled. The locking tab should then snap into place preventing the outlet assembly from sliding apart. (See Figure 17)



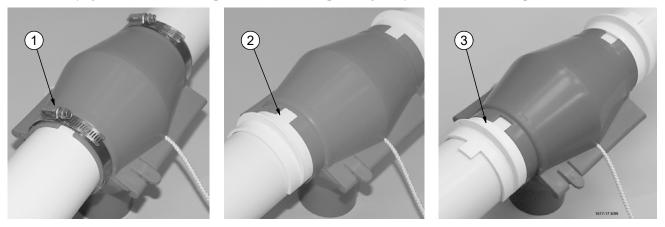
Item	Description
1	Fill System Pipe
2	Outlet Bottom
3	Outlet Top
4	Outlet Top Track

Figure 17.Assembling the Outlet Bottom to the Outlet Top

6. Now add Clamps or Retainers (as ordered) to the Outlet Assembly to prevent it from sliding and/or rotating on the pipe. Clamps will prevent the Outlet Assembly from sliding or rotating on the pipe. Retainers can be used in two different ways. Retainers may prevent the Outlet Assembly from sliding or rotating on the pipe, or prevent the Outlet Assembly from sliding on the pipe, but allow it to rotate. **Figure 18** shows the three different methods for holding the Outlet Assembly in place.

If Clamps are used, place the Clamps on the Outlet Assembly as shown and tighten.

When using the Retainers, for a completely locked Outlet Assembly, insert the tabs on the Retainers into the notches on the Outlet Top when gluing the Retainers in place with PVC Cement. With a rotating Outlet Assembly, glue the Retainers in place with the tabs pointing away from the Outlet Top.

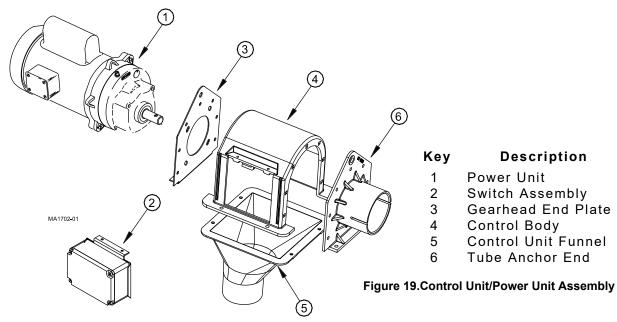


Item	Description
1	Outlet Assembly using Clamps (non-sliding, non-rotating)
2	Outlet Assembly using Retainers (non-sliding, non-rotating)
3	Outlet Assembly using Retainers (non-sliding, rotating)

Figure 18.Installing the Retainers on the Outlet Assembly

Control Unit & Power Unit Installation

1. Attach the tube anchor to the appropriate end (determine the best side of control unit for switch placement) of the control unit body by inserting the 1/4-20x.75 carriage bolts from the inside of the control unit through the tube anchor and attach 1/4-20 flange hex nut.



- 2. Connect the power unit to the gearhead end plate using the 5/16-18 machine screws and the flat washers packed with the control.
- 3. Attach the gearhead end plate to the control unit body the same as the tube anchor.
- 4. Insert the lower section of the switch assembly into the control unit and secure the top with the 2 # 10x.5 screws provided.

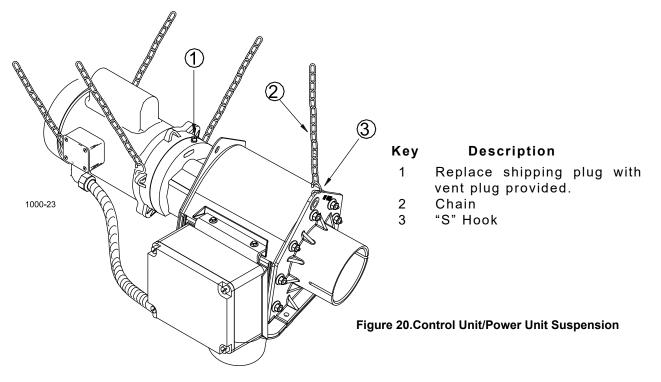
For Single Phase Direct Drive Control Units

- 1.Connect the electrical wires on the power unit to the control unit.
- Drill bottom of control unit switch box with 7/8"(22.2mm) hole to receive the 900 connector and motor wire. Use caution not to disturb any wires or components of the switch box ass'y when drilling holes.
 Attach the 90 degree connector& conduit to the control unit housing.
- 4.Attach the insulated motor wires to the terminal block in the control housing: one wire to terminal "3" and one wire to terminal "4". Attach the bare grounding wire to one of the green colored screws provided for attaching the grounding wires.
- 5. Place the adjustable tube clamp on the tube anchor and connect the control unit/power unit assembly to the end of the FLEX-AUGER tube.

Note: The switch in the control unit is a safety backup switch in case the hopper level switch or drop tube switch fails to shut off the system. DO NOT use the safety switch to control the FLEX-AUGER System. This will cause feed to bridge in the control. 6. Support the Power Unit and Control Unit securely. Points are provided at the gear head and the tube anchor for suspending the equipment with chain and "S" hooks supplied with the delivery system (See Figure 20). NOTE: Other ways of supporting the delivery system can be used where it is practical, as long as the supports do not let the equipment sag or do not make flat spots in the auger tubes.

Note:The motor should be fastened to keep it from twisting. "S" hooks and chain can be attached to the motor base to prevent the motor from shifting.

- 7. Install the driver assembly on the power unit shaft. Start the socket head screws but leave the anchor clamp loose enough to slip in the auger.
- 8. Replace the plastic shipping plug in the gear head with the vent plug provided.



Belt Drive Control Unit Installation

The Belt Drive Control Unit installation is much the same as the direct drive unit. Mount the Belt Drive Adapter and Motor to the control unit, then proceed with installation to the auger tube as described in this manual. **"Standard Belt Drive Control Units" on page 40** can be used as an assembly guide for the Belt Drive Control Unit. **Figure 21** shows a Belt Drive Control Unit suspended.



Figure 21.Belt Drive Control Unit

Auger Installation

Use extreme caution when working with the auger. The auger is under tension and may spring causing injury. Always wear protective clothing and protective glasses when working with the auger.

Use extreme caution when pushing the auger into the auger tubes. Keep your hands away from the end of the auger tube to avoid injury.

Handle the FLEX-AUGER carefully. Dropping the rolls of auger may cause the auger to kink. Do not install an auger that has a sharp kink in it. The kink will cause the auger to wear a hole in the tube at that spot. If the kink cannot be straightened with pliers, the kink must be cut out and the

auger brazed back together. Refer to the "Auger Brazing" section in this manual for the correct brazing procedure.

1. Beginning at the boot, push the auger into the auger tube through the rear of the boot until the auger reaches the control unit end of the line.

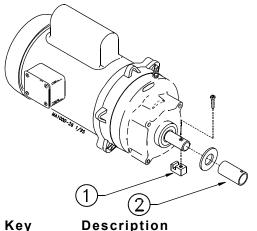
Use extreme caution when pushing the auger into the auger tubes. Keep your hands away from the end of the auger tube to avoid injury.

2. Attach the auger to the driver by rotating the driver and threading the auger through the anchor clamp.

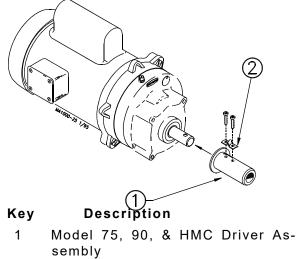
Figure 22 shows the Model 55 Driver installation procedure. Control Unit not shown for clarity.

Figure 22 shows the Model 75, 90, & HMC Driver installation procedure. Control Unit not shown for clarity.

3. Rotate the auger so that it is fully engaged on the Driver. Tighten the screws securely to clamp the auger to the control unit.



- Description
- 1 Model 55 Driver Block
- 2 Model 55 Driver Tube



2 Anchor Clamp

Figure 22.Auger Installation

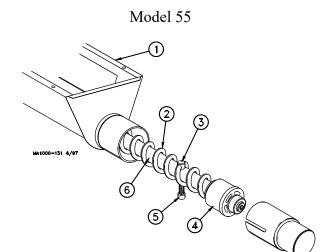


- 4. Assemble the control unit funnel to the tube anchor and the gearhead end plate with 4 1/4-20x.63 hex head bolts and 1/4-20 hex flange nuts. The straight side of the funnel should be position on the power unit side of the control.
- 5. Pull on the loose end of the auger at the boot once or twice until it begins to stretch, then release it slowly. This will bring the auger to its natural length.
 - IMPORTANT: On Single Boot Systems, Stretch the auger 2 inches (50 mm) for every 50 feet (15.2 m) of length. Example: For a 150 ft. (45 m) system the auger should be cut 6 inches (150 mm) shorter than its natural length. Measure the amount of stretch from the rear edge of the boot and cut the auger at that point.
 - Note: For ease of cutting, measure and mark the auger at the point where it is to be cut. Then, pull the auger an additional 6-8" (150-200 mm) and use locking pliers to clamp the auger while you cut it.
- 6. **Figure 23** shows the proper assembly of the Model 55 boot components. Insert the Auger over the Anchor and through the Auger Clamp until Auger touches washer. Torque Set Screw into Auger Clamp 10-12 ft.-lbs. Over tightening the Set Screw may cause damage to the Auger Clamp.

Figure 23 shows the proper assembly of the Model 75, 90, & HMC anchor components. Insert the anchor into the auger until the auger touches the anchor flange. The auger must be threaded onto the Boot Anchor Assembly, through the clamp pin. Use a 5/16" open-end wrench to tighten the clamp pin setscrew on the auger.

Some of the Boot Models have Anchor and Bearing Assemblies with Restrictors that may be shortened, if necessary, to increase capacity.

- 7. Attach the anchor assembly to the boot.
- 8. Place the cannonball in the boot.



Key Description

- 1 Model 55 Lower Boot
- 2 Model 55 Auger
- 3 Auger Clamp
- 4 Anchor Bearing
- 5 Tighten socket screw to
- secure auger to the Anchor.
- 6 Anchor



1 Anchor and Bearing Assembly

Model 90 & HMC Models

1032-27 1/95

- 2 Lower Boot
- 3 Auger
- 4 Tighten Set Screw to secure Auger
 - in Clamp Pin
- 5 Tube Clamp

Figure 23. Anchor and Bearing Installation

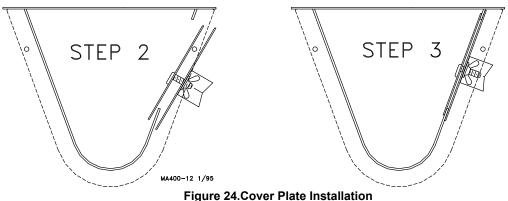
(5

Cover Plate Installation

The cover plate is installed after installation of the auger in the tube (See Figure 24).

To install the cover plate:

- 1. Loosen wing nuts to end of studs
- 2. Start lower side of cover plate in boot opening.
- 3. Slide the cover plate up as far as possible so that plate catches top of boot opening.
- 4. Hold the cover securely while tightening the wing nuts.



Auger Brazing/Filing

If the auger needs to be spliced or lengthened, locate the brazed joint closer to the power unit to minimize feed flow restriction in the line.

To align the auger for brazing, lay it in angle iron and clamp securely.

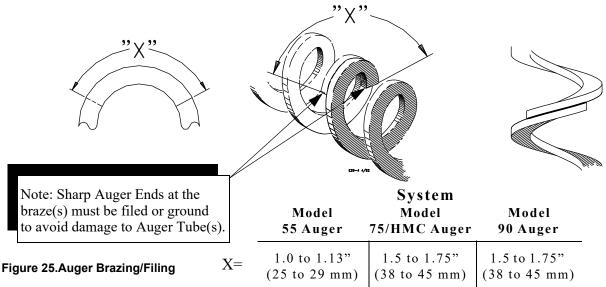
Rotate the auger to allow both the inside and outside edges of the augers to be brazed.

Butt the ends of the auger against each other. DO NOT SCREW ONE AUGER INSIDE THE OTHER--This restricts the feed flow.

Figure 25 and the associated chart specify how far to lap the augers.

A bronze, flux-coated rod is recommended. The joint should be well filled and smooth so that it does not wear against the tube. Allow the joint to air cool.

File the auger edges, as shown in **Figure 25**, to avoid damage to the auger tubes. Also, file off any brazing that extended beyond the outside radius of the auger flightings.





Restrictor Adjustment

Some Boots have Restrictors that may be adjusted for increased delivery capacities.

DO NOT ADJUST THE RESTRICTOR UNTIL THE SYSTEM HAS BEEN IN OPERATION AND THE SYSTEM IS BROKEN IN.

THE MODEL 55 RESTRICTOR IS NOT ADJUSTABLE.

Note:Feed delivery capacities are based on 40 lbs/ ft.3 (640 kg/m3) feed density. Systems using lighter weight feeds may not be able to achieve the maximum capacities listed.

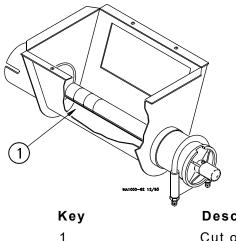
Note:Always refer to the motor amperage nameplate when increasing the feed flow capacity. Exceeding the nameplate amperage may result in nuisance motor overload tripping and/or damage to the system.

- 1. Loosen the tube clamp on the back of the Lower Boot to remove the Anchor and Bearing Assembly from the boot.
- 2. Use extreme caution when working with the auger under tension. Springing auger can cause personal injury.

Pull enough of the auger out of the auger tube to allow the Restrictor Tube to be cut.

Use locking pliers to hold the auger outside the boot.

- 3.Use a hacksaw to cut 1" (25 mm) at a time off the end of the Restrictor Tube to increase feed flow (See Figure 26).
- 4. CAREFULLY remove the locking pliers while holding on to the Anchor and Bearing Assembly and auger securely.
- 5. CAREFULLY allow auger to draw the Anchor and Bearing Assembly back into the Lower Boot. DO NOT ALLOW THE BEARING TO BE SLAMMED BACK INTO THE BOOT.



Description

Cut off approximately 1" (25 mm) of the Restrictor Tube to increase feed flow. Repeat as required.

Figure 26.Restrictor Adjustment Model 90 & HMC Only

Straight-Through Tandem Boot

The Straight-Through Tandem Boots allow one or two augers to remove feed from two separate feed bins. Feed should only be drawn from one bin at a time.

Solid Cannonballs are used in conjunction with the Boot Baffles.

1. Install boots on both feed bins. Be sure the outlets and inlets on the boots are in line and arrow tape is pointed in direction of feed flow. Figure 27 shows a typical Straight-Through Tandem System.

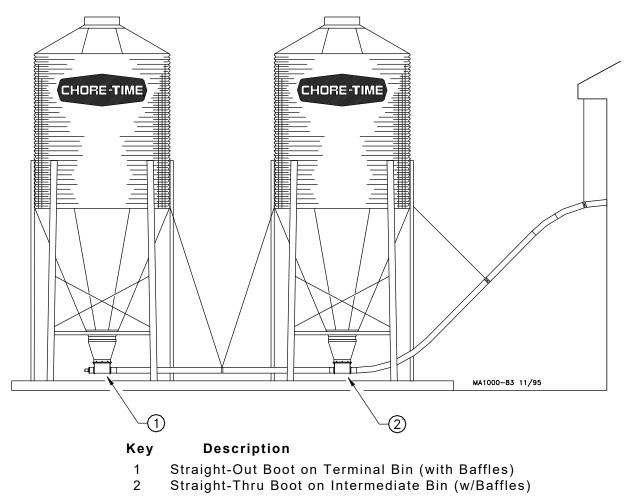


Figure 27.Straight-Through Tandem

2. Measure and cut an auger tube(s) to connect the two boots (See Figure 29).

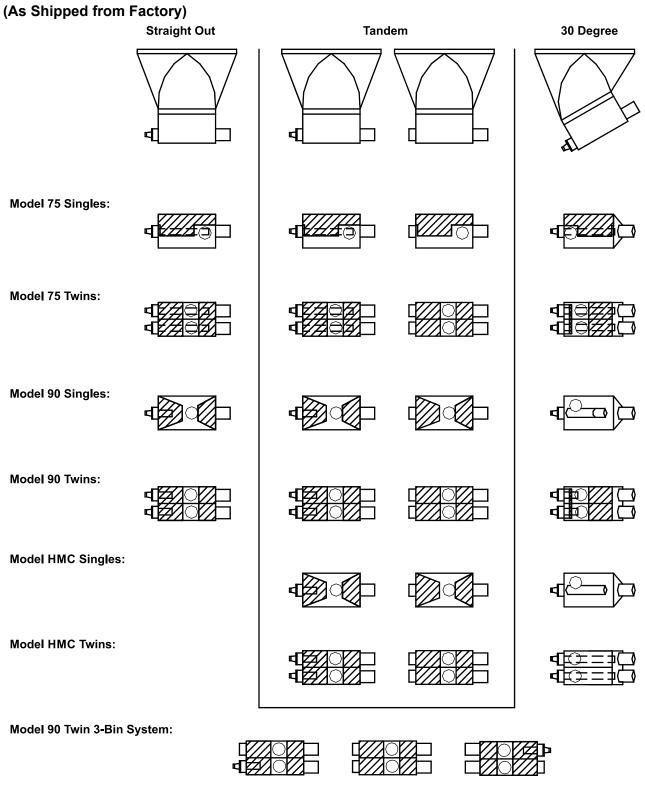
For Model 90 & HMC FLEX-AUGER systems, the belled end of the auger tube fits directly over the outlet end the Straight-Out Boot. The straight end of the Auger Tube connects to the incoming end of the Straight-Thru Boot, using a Tube Connector. (See Figure 29)

For Model 75 FLEX-AUGER (PVC) systems, slide the belled end of the Model 75 Auger Tube over the outlet of the Straight-Out Boot. The straight end of the Auger Tube connects to the incoming end of the Straight-Thru Boot, using a Tube Insert and Tube Connector.

For Model 75 FLEX-AUGER (Steel) systems, slide the straight end of the Model 75 Auger Tube into the outlet end of the Straight-Out Boot. The belled end of the Auger Tube should be slid over the inlet end of the Straight-Thru Boot. (See Figure 29).

Remember to caulk all tube joints exposed to weather or moisture.

Standard FLEX-AUGER Boots and Baffle Locations



1000-138 2/04

Figure 28.Standard FLEX-AUGER Boots and Baffle Locations

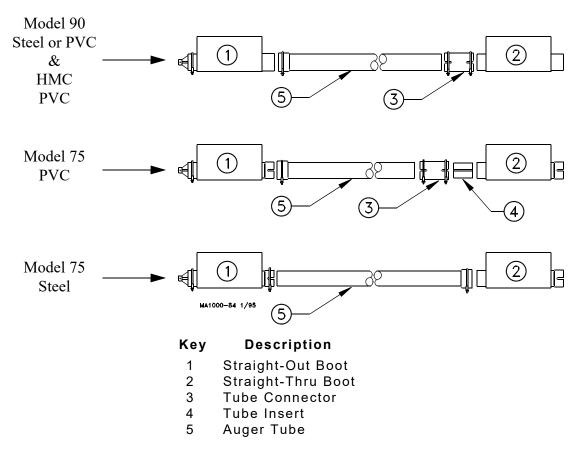


Figure 29.Model 75, 90, & HMC Straight-Through Tandem Boot connections.

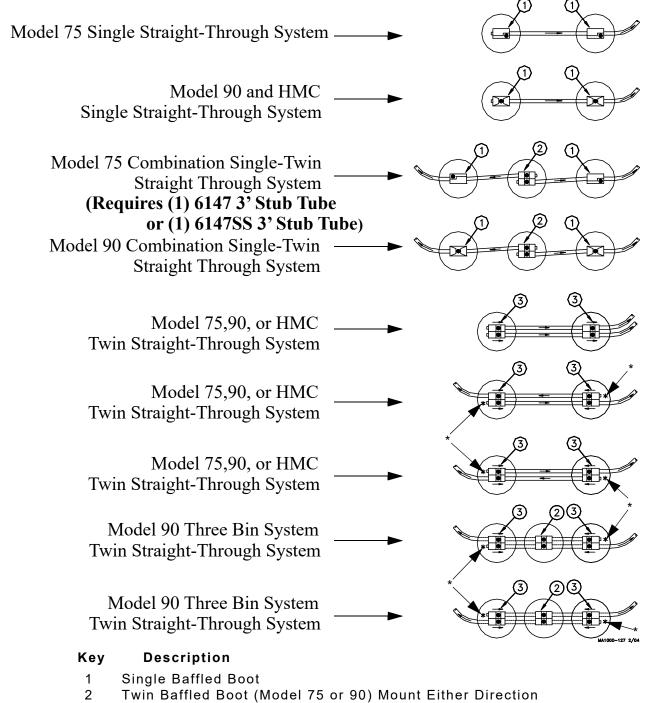
- 3. Push the auger into the line of tubes and anchor it at the power unit end. Stretch the auger 4 inches per 50 feet (100 mm per 15 m) and cut it even with the rear of the straight-out boot. Notice the auger stretch is not the same as for Single Boot FLEX-AUGER Systems. Note: For Model 90 3-Bin Systems, stretch auger 6 inches per 50 feet.
- 4. Use a tube clamp to secure the bearing cap to the boot.

Boot Baffles for Straight-Through Boot Systems

The Chore-Time Boot Baffles are for use with dry, coarse, mash, crumbles, or pelleted feeds to prevent boots from overcharging the system.

The Boot Baffles are intended for use in both "straight-out" & "straight-through" boots. Boot Baffles are factory installed on Straight-Through Boot Systems.

See Figure 30 for applications and auger direction.



- 3 Arrow Tape
- *Note: On twin systems running in opposite directions, follow the tape on the bearing end of the system.

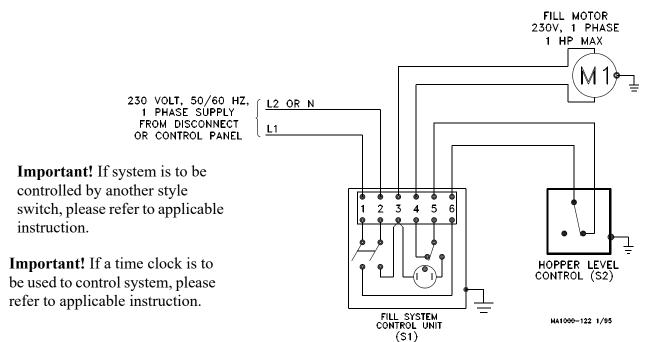
Figure 30. Optional Baffle Configurations

Feed Level Control Installation

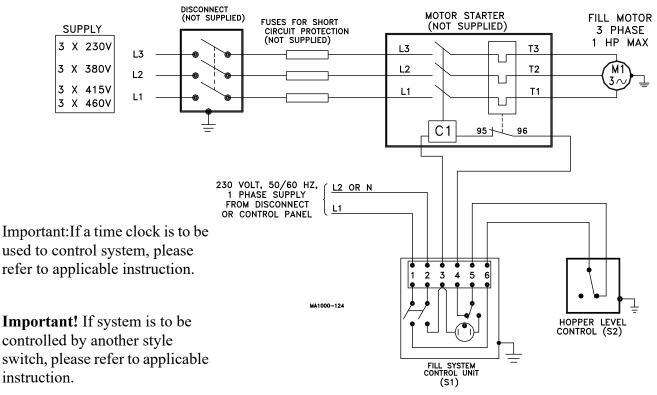
The Hopper Level Control (or Drop Tube Switch) is installed in the feed hopper (or in the drop tube over the feeder) at the power unit end of the line. This feed flow control switch stops the FLEX-AUGER System when the last feeder is full. Install the hopper level control or drop tube switch according to instructions shipped with the unit.

The wiring diagram for each type of delivery system shows how the hopper level control (drop tube switch is the same) must be wired into the control unit.

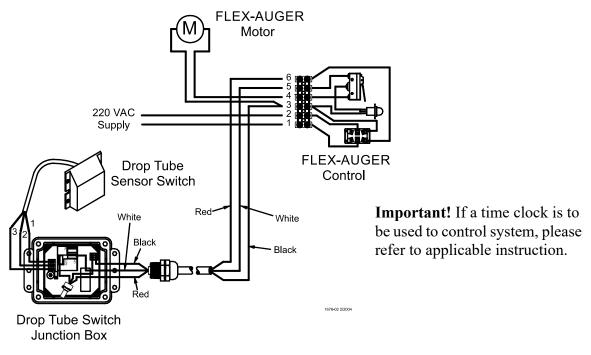
Hopper Level Control Switch (Single Phase) Wiring



Hopper Level Control Switch (Three Phase) Wiring



SENSOR PLUS™ Electronic Switch (Single Phase) Wiring



Operation

- 1. During initial start-up, the boot slide should be only partially open to prevent the auger from being fully charged. Maintain partially open Slide until feed reaches the far end Control Unit. After that, the boot slide must be fully open for proper delivery system operation.
- 2. Do not permit the FLEX-AUGER system to operate empty. Use a time clock or Auger Timer with the system whenever possible. This reduces short cycling by operating on a preset schedule instead of on demand. It also prevents excessive running of the system if the bin becomes empty. If the optional boot switch is used, the fill system will shut down when the bin becomes empty.
- 3. Program the time clock to fill feeders often so the FLEX-AUGER System does not have to run a long period of time to get feeders filled. Poultry feeders supplied by the FLEX-AUGER System should be operated by a time clock so feeders start at the same time. This gives the FLEX-AUGER System a better chance to keep up with them. Note: The hopper level control must be positioned low in the last feeder hopper.
- 4. The red light on the control unit will light if feed has packed inside. If this happens, remove feed from the drop tube and tap the side of the power unit to clear the safety switch. Keep the hopper level control in adjustment and positioned straight up and down so the paddle swings freely. The safety switch does not take the place of the hopper level control.
- 5. If the FLEX-AUGER System must be used to convey high-moisture feed, empty the auger line completely after each running to prevent the feed from setting up in the tubes.
- 6. On Baffled Boots, the flow rates are predetermined with factory installed Baffles. The Baffles are nonadjustable.

On Non-Baffled Boots, the restrictor on the boot anchor regulates the amount of feed flowing into the auger. Start a new system with the restrictor installed as shipped

Allow the system to polish out before adjusting the feed flow. If more feed flow is desirable, the restrictor may be shortened. Refer to "Restrictor Adjustment" on page 25.

7. When feeding with the Straight-Through Tandem System, open the slide on only one bin at a time!

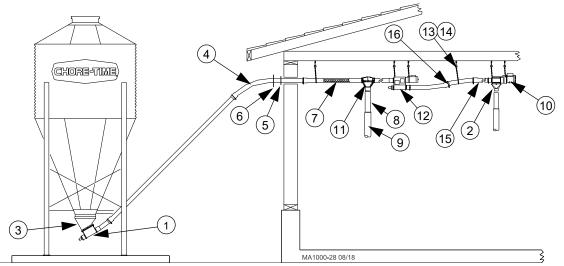
Start-Up Procedure for New Systems

Important! DO NOT RUN FEED THROUGH A NEW SYSTEM UNTIL AFTER THIS PROCEDURE HAS BEEN FOLLOWED OR THE AUGER WILL PLUG AND BIND.

- 1.Close the Slide on the FLEX-AUGER[®] Boot.
- 2.Operate the system empty for one minute.
- 3.Open the slide on the FLEX-AUGER[®] boot no more than 1 inch (25 mm) to allow some feed into the boot.
- 4.Operate the system with the slide in this position until feed has reached the Control Unit. This removes the manufacturing grease and oil from the auger and tubes. If this grease and oil is not removed, the feed may bunch up causing the auger to plug and bind.
- 5.Now the slide can be fully opened and the system operated normally.

Parts Listing

Model 55,75,90,& HMC Feed Delivery System Standard Components



		Model 55	Model 75	Model 90	Model HMC				
Item	Description	Part No							
1	Boot Assembly	See Parts List							
2	Control Unit	See Parts List							
3	Upper Boot		Se	ee Parts List					
4	45 Degree PVC Elbow	34855	7285	7357	7357				
5	Neoprene Seal	6394	2613	5035	5035				
6	Seal Ring	2612	2612	2612	2612				
7**	Auger	7961-0	4744-0	3942-0	4744-0				
8	Plastic Drop Tube	1932	1932	6381	6381				
9	Telescoping Drop Tube	14366-1932	14366-1932	14366-6381	14366-6381				
10	Power Unit		Se	ee Parts List					
11	Outlet Drop Kit w/Clamps	43455C	43475C	43490C	43490C				
	Outlet Drop Kit w/Retainers	43455R	43475R	43490R	43490R				
12	Extension Hopper	40170	7944	7869	7849				
13	Suspension Kit		5043						
	S Hooks (Qty 25)	2805	2805	2805	2805				
	Screw Hooks (Qty 12)	1214	1214	1214	1214				
	***Chain (25') [7.62 m]	2128	2128	2128	2128				
14	Suspension Kit (Stainless Steel)	5043SS*							
	Stainless S Hooks (Qty 25)	2805SS*	2805SS*	2805SS*	2805SS*				
	Stainless Screw Hooks (Qty 12)	1214SS*	1214SS*	1214SS*	1214SS*				
	***Stainless Chain (25') [7.62 m]	2128-25SS*	2128-25SS*	2128-25SS*	2128-25SS*				
15	PVC Auger Tube	7955	6516	6293	6293				
16	Tube Clamp Kit	7976	6515	6721	6721				

**Model 55 Auger (Part No. 7961-0) may be ordered in lengths from 20 ft. to 400 ft. maximum. Example: 7961-155 would be 155' of auger. Model 75 Auger (Part No. 4744-0) may be ordered in lengths from 20 ft. to 300 ft. maximum. Example: 4744-155 would be 155' of auger. Model 90 Auger (Part No. 6942-0) may be ordered in lengths from 20 ft. to 250 ft. maximum. Example: 6942-155 would be 155' of auger. **Chain can be purchased in a 25' [7.62 m] bag (2128-25 or 2128-25SS*), a box of 100' [30.48 m] (2128-100 or 2128-100SS*) or a 250' [76.2 m] reel (2128-250 or 2128-250SS*).

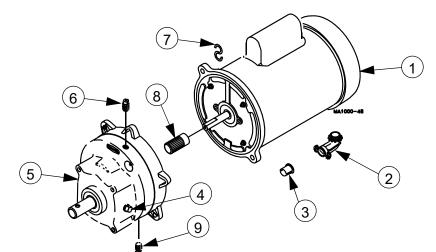
Steel Components

		Model 55	Model 75	Model 90	Model HMC				
Item	Description	Part No							
1	10' [3 m] Steel Tube		2088	5091					
2	45 Degree Hardened Steel Elbow		14324	6472					
3	Tube Connector Kit		2103	6595					

Power Unit Assembly Part Numbers

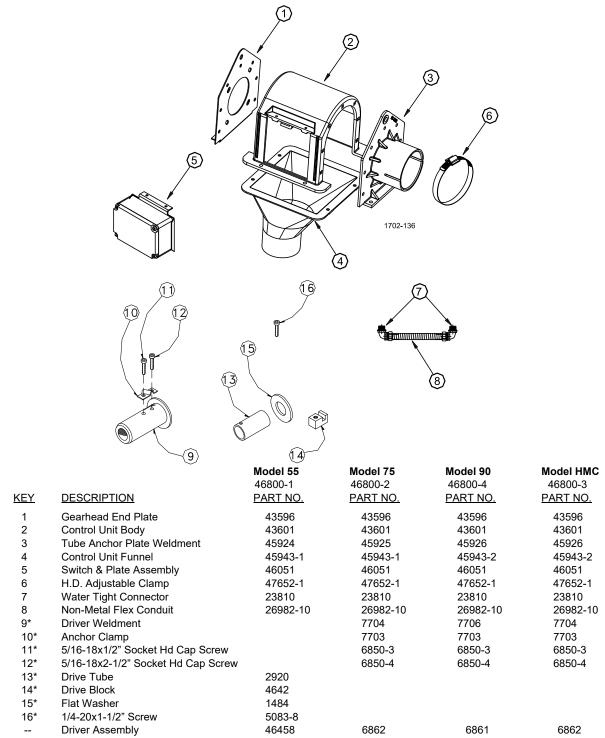
<u>Part Number</u>	<u>HP</u>	RPM	<u>Phase</u>	<u>Hz</u>	<u>Voltage</u>	<u>Usages</u>
3259-49	1.0 HP	348 RPM	Single	60 Hz	230	Model 75, 90, & HMC
3259-50	1/2 HP	216 RPM	Single	60 Hz	230 Mc	del 75/90 Two Motor Tandem
3259-51	1/2 HP	348 RPM	Single	60 Hz	230	Model 75, 90, & HMC
3259-52	3/4 HP	348 RPM	Single	60 Hz	230	Model 75, 90, & HMC
3259-67	1/2 HP	129 RPM	Single	60 Hz	230	Model 75, & HMC
3259-77	1/2 HP	425 RPM	Single	60 Hz	230	Model 90
3259-78	3/4 HP	425 RPM	Single	60 Hz	230	Model 90
3259-79	1.0 HP	425 RPM	Single	60 Hz	230	Model 90
3259-89	1.0 HP	348 RPM	Single	50 Hz	220	Model 75, 90, & HMC
3259-34	1/3 HP	348 RPM	Single	60 Hz	230	Model 55 only
3259-39	1/2 HP	348 RPM	Single	60 Hz	230	Model 55 only
3259-98	1/2 HP	348 RPM	Single	50 Hz	220	Model 55 only
3259-88	3/4 HP	348 RPM	Single	50 Hz	220	Model 75 & 90
3259-108	1.0 HP	474 RPM	Single	50 Hz	220	Model 90
3259-109	1/2 HP	180 RPM	Single	50 Hz	220	Model 75, & HMC
3259-148	1.0 HP	580 RPM	Single	50 Hz	220	Model 90
3259-136	3/4 HP	216 RPM	Single	60 Hz	230	Model 75, & HMC
3259-122	3/4 HP	584 RPM	Single	60 Hz	230	Model 90
3259-123	1.0 HP	584 RPM	Single	60 Hz	230	Model 90
3259-124	1.5 HP	584 RPM	Single	60 Hz	230	Model 90
3259-137	1.0 HP	584 RPM	Three	60 Hz	200	Model 90
3259-102	1/2 HP	180 RPM	Three	50 Hz	220/380-415	Model 75 & HMC
3259-105	1.0 HP	348 RPM	Three	50 Hz	220/380-415	Model 75 & 90
3259-107	1.0 HP	474 RPM	Three	50 Hz	220/380-415	Model 90
3259-117	1.0 HP	348 RPM	Three	60 Hz	208-230/460	Model 75, 90, & HMC
3259-118	1.0 HP	425 RPM	Three	60 Hz	208-230-460	Model 75 & 90
3259-120	3/4 HP	425 RPM	Three	60 Hz	208-230-460	Model 75 & 90
3259-119	3/4 HP	348 RPM	Three	60 Hz	208-230/460	Model 75, 90, & HMC
3259-134	1/2 HP	348 RPM	Three	60 Hz	220-240/380-4	00 Model 55
3259-137	1.5 HP	584 RPM	Three	60 Hz	200/380	Model 90
3259-150	1.0 HP	580 RPM	Three	50 Hz	220/380	Model 90
3259-151	1.5 HP	580 RPM	Three	50 Hz	220/380	Model 90
3259-152	1.0 HP	584 RPM	Three	60 Hz	220/380	Model 90

3259-0 Power Units



		3259-49	3259-50	3259-51	3259-52	3259-89	3259-102	3259-67
<u>Key</u>	Description	<u>Part No.</u>	<u>Part No.</u>	Part No.	<u>Part No.</u>	<u>Part No.</u>	Part No.	<u>Part No.</u>
1	Motor	6857	5050	5050	5051	26157	28033	5703
4	Pipe Plug	2755	2755	2755	2755	2755	2755	2755
5	Gearhead	3261-7	3261-6	3261-7	3261-7	3261-10	3261-6	3261-8
6	Vent Plug	3523	3523	3523	3523	3523	3523	3523
7	S Hook	4270	4270	4270	4270	4270	4270	4270
8	Pinion Assembly	6104	3249	5046	5046	6104	3249	3245
9	Magnetic Pipe Plug	30160	30160	30160	30160	30160	30160	30160
		3259-34	3259-39	3259-98	3259-88	3259-107	3259-108	3259-109
<u>Key</u>	<u>Description</u>	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
1	Motor	4229	5703	5977	6305	28035	26157	5977
2	90 Degree Connector	4228	4228					
3	Anti-Short Bushing	6304	6304					
4	Pipe Plug	2755	2755	2755	2755	2755	2755	2755
5	Gearhead	3261-5	3261-5	3261-11	3261-10	3261-13	3261-13	3261-6
6	Vent Plug	3523	3523	3523	3523	3523	3523	3523
7	S Hook	4270	4270	4270	4270	4270	4270	4270
8	Pinion Assembly	5046	5046	5046	5046	6104	6104	3249
9	Magnetic Pipe Plug	30160	30160	30160	30160	30160	30160	30160
		3259-117	3259-119	3259-105	3259-77	3259-78	3259-79	3259-136
<u>Key</u>	Description	Part No.	<u>Part No.</u>	Part No.	Part No.	Part No.	Part No.	Part No.
1	Motor	34101	34102	28035	5050	5051	6857	5051
4	Pipe Plug	2755	2755	2755	2755	2755	2755	2755
5	Gearhead	3261-7	3261-7	3261-10	3261-10	3261-10	3261-10	
6	Vent Plug	3523	3523	3523	3523	3523	3523	3523
7	S Hook	4270	4270	4270	4270	4270	4270	4270
8	Pinion Assembly	6104	5046	6104	5052	5052	6106	3245
9	Magnetic Pipe Plug	30160	30160	30160	30160	30160	30160	30160
		3259-122	3259-123	3259-124	3259-137	3259-118	3259-120	
<u>Key</u>	Description	Part No.	<u>Part No.</u>	Part No.	Part No.	Part No.	Part No.	
1	Motor	5051	6857	8782	28036EUI	R 34101	34102	
4	Pipe Plug	2755	2755	2755	2755	2755	2755	
5	Gearhead	3261-13	3261-13	3261-13	3261-13	3261-10	3261-10	
6	Vent Plug	3523	3523	3523	3523	3523	3523	
7	S Hook	4270	4270	4270	4270	4270	4270	
8	Pinion Assembly	5052	6106	6106	6106	6106	5052	
9	Magnetic Pipe Plug	30160	30160	30160	30160	30160	30160	
		3259-134	3259-	137 3259	-148 3259	-150 32	259-151	3259-152
Key	Description	Part No.	Part N	<u>lo. Part</u>	<u>t No. Part</u>	No. P	art No.	Part No.
1	Motor	28031EL	JR 28036	EUR 26	157 2803	35EUR 28	036EUR	28035EUR
4	Pipe Plug	2755	2755	27			755	2755
5	Gearhead	3261-5	3261-1					3261-13
6	Vent Plug	3523	3523	35			523	3523
7	S Hook	4270	4270				270	4270
8	Pinion Assembly	5046	6104				104	6104
9	Magnetic Pipe Plug	30160	30160				0160	30160
	5 1			50	-			

Direct Drive Control Unit (Single Phase)



*Parts included in Driver Assembly (Part No's 46458,6862, or 5861 respectively.

Stainless Steel Direct Drive Control Unit (Single Phase)

		<u>(</u> 1)			
			3 1702-200 1/18	6	
)	
<u>KEY</u>	DESCRIPTION	Model 55 46800-27 <u>PART NO.</u>	Model 75 46800-28 PART NO <u>.</u>	Model 90 46800-30 PART NO.	Model HMC 46800-29 <u>PART NO.</u>
		TARTINO.	TART NO.	TART NO.	TANTINO.
	Coordinated Final Dista	4050000	4050000	4050000	4250000
1	Gearhead End Plate	43596SS	43596SS	43596SS	43596SS
2	Control Unit Body	43601	43601	43601	43601
2 3	Control Unit Body Tube Anchor Plate Weldment	43601 45924	43601 45925	43601 45926	43601 45926
2	Control Unit Body	43601	43601	43601	43601
2 3 4	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel	43601 45924 45943-1	43601 45925 45943-1	43601 45926 45943-2	43601 45926 45943-2
2 3 4 5 6 7	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector	43601 45924 45943-1 46051SS 47652-1 23810	43601 45925 45943-1 46051SS 47652-1 23810	43601 45926 45943-2 46051SS 47652-1 23810	43601 45926 45943-2 46051SS 47652-1 23810
2 3 4 5 6 7 8	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit	43601 45924 45943-1 46051SS 47652-1	43601 45925 45943-1 46051SS 47652-1 23810 26982-10	43601 45926 45943-2 46051SS 47652-1 23810 26982-10	43601 45926 45943-2 46051SS 47652-1 23810 26982-10
2 3 4 5 6 7 8 9*	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit Driver Weldment	43601 45924 45943-1 46051SS 47652-1 23810	43601 45925 45943-1 46051SS 47652-1 23810 26982-10 7704	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7706	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7704
2 3 4 5 6 7 8 9* 10*	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit Driver Weldment Anchor Clamp	43601 45924 45943-1 46051SS 47652-1 23810	43601 45925 45943-1 46051SS 47652-1 23810 26982-10 7704 7703	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7706 7703	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7704 7703
2 3 4 5 6 7 8 9* 10* 11*	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit Driver Weldment Anchor Clamp 5/16-18x1/2" Socket Hd Cap Screw	43601 45924 45943-1 46051SS 47652-1 23810	43601 45925 45943-1 46051SS 47652-1 23810 26982-10 7704 7703 6850-3	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7706 7703 6850-3	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7704 7703 6850-3
2 3 4 5 6 7 8 9* 10*	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit Driver Weldment Anchor Clamp	43601 45924 45943-1 46051SS 47652-1 23810	43601 45925 45943-1 46051SS 47652-1 23810 26982-10 7704 7703	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7706 7703	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7704 7703
2 3 4 5 6 7 8 9* 10* 11* 12*	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit Driver Weldment Anchor Clamp 5/16-18x1/2" Socket Hd Cap Screw 5/16-18x2-1/2" Socket Hd Cap Screw	43601 45924 45943-1 46051SS 47652-1 23810 26982-10	43601 45925 45943-1 46051SS 47652-1 23810 26982-10 7704 7703 6850-3	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7706 7703 6850-3	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7704 7703 6850-3
2 3 4 5 6 7 8 9* 10* 11* 12* 13* 14* 15*	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit Driver Weldment Anchor Clamp 5/16-18x1/2" Socket Hd Cap Screw 5/16-18x2-1/2" Socket Hd Cap Screw Drive Tube Drive Block Flat Washer	43601 45924 45943-1 46051SS 47652-1 23810 26982-10 2920 4642 1484	43601 45925 45943-1 46051SS 47652-1 23810 26982-10 7704 7703 6850-3	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7706 7703 6850-3	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7704 7703 6850-3
2 3 4 5 6 7 8 9* 10* 11* 12* 13* 14* 15* 16*	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit Driver Weldment Anchor Clamp 5/16-18x1/2" Socket Hd Cap Screw 5/16-18x2-1/2" Socket Hd Cap Screw Drive Tube Drive Block Flat Washer 1/4-20x1-1/2" Screw	43601 45924 45943-1 46051SS 47652-1 23810 26982-10 2920 4642 1484 5083-8	43601 45925 45943-1 46051SS 47652-1 23810 26982-10 7704 7703 6850-3 6850-4	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7706 7703 6850-3 6850-4	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7704 7703 6850-3 6850-4
2 3 4 5 6 7 8 9* 10* 11* 12* 13* 14* 15* 16* 	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit Driver Weldment Anchor Clamp 5/16-18x1/2" Socket Hd Cap Screw 5/16-18x2-1/2" Socket Hd Cap Screw Drive Tube Drive Block Flat Washer 1/4-20x1-1/2" Screw Driver Assembly	43601 45924 45943-1 46051SS 47652-1 23810 26982-10 2920 4642 1484 5083-8 46458	43601 45925 45943-1 46051SS 47652-1 23810 26982-10 7704 7703 6850-3 6850-4	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7706 7703 6850-3 6850-4	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7704 7703 6850-3 6850-3 6850-4
2 3 4 5 6 7 8 9* 10* 11* 12* 13* 14* 15* 16* 17	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit Driver Weldment Anchor Clamp 5/16-18x1/2" Socket Hd Cap Screw 5/16-18x2-1/2" Socket Hd Cap Screw Drive Tube Drive Block Flat Washer 1/4-20x1-1/2" Screw Driver Assembly 1/4-20 Rd. Hd. Sq Shnk. Bolt (SS)	43601 45924 45943-1 46051SS 47652-1 23810 26982-10 2920 4642 1484 5083-8 46458 7550-6	43601 45925 45943-1 46051SS 47652-1 23810 26982-10 7704 7703 6850-3 6850-4 6862 7550-6	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7706 7703 6850-3 6850-4 6861 7550-6	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7704 7703 6850-3 6850-3 6850-4
2 3 4 5 6 7 8 9* 10* 11* 12* 13* 14* 15* 16* 	Control Unit Body Tube Anchor Plate Weldment Control Unit Funnel Switch & Plate Assembly H.D. Adjustable Clamp Water Tight Connector Non-Metal Flex Conduit Driver Weldment Anchor Clamp 5/16-18x1/2" Socket Hd Cap Screw 5/16-18x2-1/2" Socket Hd Cap Screw Drive Tube Drive Block Flat Washer 1/4-20x1-1/2" Screw Driver Assembly	43601 45924 45943-1 46051SS 47652-1 23810 26982-10 2920 4642 1484 5083-8 46458	43601 45925 45943-1 46051SS 47652-1 23810 26982-10 7704 7703 6850-3 6850-4	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7706 7703 6850-3 6850-4	43601 45926 45943-2 46051SS 47652-1 23810 26982-10 7704 7703 6850-3 6850-3 6850-4

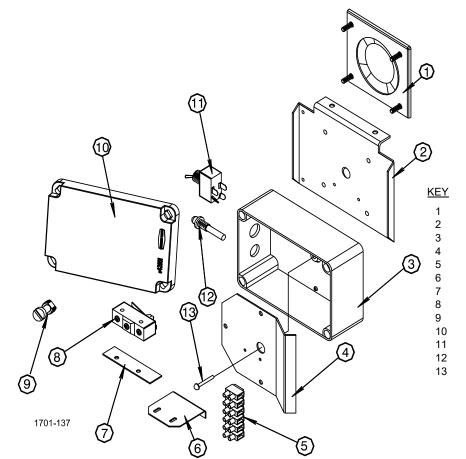
*Parts included in Driver Assembly (Part No's 46458,6862, or 5861 respectively.

International Direct Drive Control Units (3 Phase)

Model 55	Model 75	Model 90	Model HMC
46800-31	46800-32	46800-34	46800-33

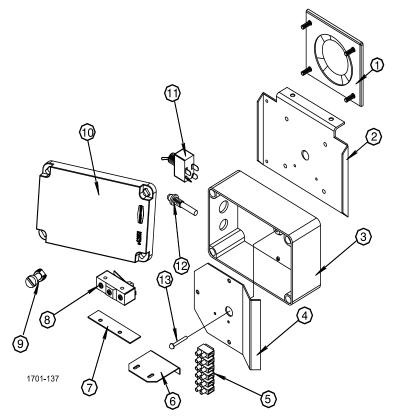
Components - Same as Standard Direct Drive Control Units except does not include the 90° connectors and the flex conduit

46051 Switch & Plate Assembly



DESCRIPTION	PART NO.
Diaphragm Assembly	46159
Switch Cover Plate	46030
4x6 Electrical Box	46070-1
Mount Panel	46072
Terminal Block	34925-6
Switch Bracket	46093
Switch Insulation	1907-5
Micro Switch	46091
Plastic Screw	42849
4x6 Elect Box Cover	42851
Toggle Switch	7767
Pilot Light	46047
Rivet, 3/16 x 1.00	
round Head(S.S.)	46906

46051SS Switch & Plate Assembly



<u>KEY</u>	DESCRIPTION	PART NO.
1	Diaphragm Assembly	46159
2	Switch Cover Plate (SS	46030SS
3	4x6 Electrical Box	46070-1
4	Mount Panel	46072
5	Terminal Block	34925-6
6	Switch Bracket	46093
7	Switch Insulation	1907-5
8	Micro Switch	46091
9	Plastic Screw	42849
10	4x6 Elect Box Cover	42851
11	Toggle Switch	7767
12	Pilot Light	46047
13	Rivet, 3/16 x 1.00	
	round Head(S.S.)	46906

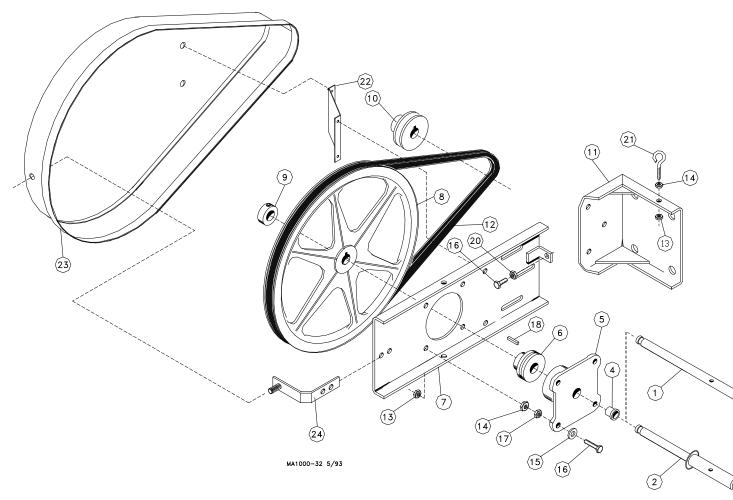
This page left blank intentionally.....

Standard Belt Drive Control Units

		Model 55	Model 75	Model 90	Model HMC
		46800-11	46800-12	46800-14	46800-13
<u>KEY</u>	DESCRIPTION	PART NO.	PART NO.	PART NO.	PART NO.
	Control Unit	46800-6	46800-7	46800-9	46800-8
*	Belt Drive Parts Package	46138-1	46138-2	46138-2	46138-2

*See separate parts list "Boot Components" on page 43 for individual components.

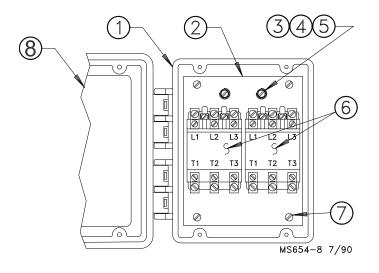
Note: The Belt Drive Control Units include all the Direct Drive Control Unit components, plus the following components.



P	
Ints	
Listi	
рŋ	

		F	Part Number
Item	Description	Model 55	Model 75, 90, and HMC
1^{1}	Model 55 Driver Shaft	27126	
2 ²	Model 75, 90, & HMC Driver Shaft		46156
*31,2	Grease Fitting	6021	6021
*4 ^{1,2}	Flange Bearing	2196	2196
*5 ^{1,2}	Front Plate Bearing Holder	2047	2047
*6 ^{1,2}	Ball Bearing	5930	5930
7	Adjustment Bracket	46301	46301
8	11" Dia. Sheave	46190	46190
9 ^{1,2}	5/8" Set Collar	1386	1386
10	2.25" Dia. Sheave	3208	3208
11	Motor Mount Weldment	3058	3058
12	"V" Gripnotch Belt	4409	4409
13	5/16-18 Hex Locknut	2148	2148
14	5/16-18 Hex Locknut	593	593
15	5/16 Flat Washer	546	546
16	5/16-18x1-3/4" Hex Hd. M.S.	4412-4	4412-4
17	5/16-18 Hex Lock Nut	2148	2148
18 ^{1,2}	3/16" Key	2112-1	2112-1
20	5/16-18 Hex Nut	2145	2145
21	Eyebolt	1503-2	1503-2
22	Belt Guard Mount	46198	46198
23	Belt Guard	46199	46199
24	Angle Guard Mount	46299	46299

24392-0 Contactor Box



Key Description	<u>Part No.</u>
1 Box	30860-3
2 Mounting Plate Support	41436
3 #10 Ext. Lock washer	305
4 #10-32 Hex Screw	34662
5 Cup Washer	5775
6 Contactor	55503-230
7 #10-24 Pan Head Screw	46011
8 Lid	30859-2

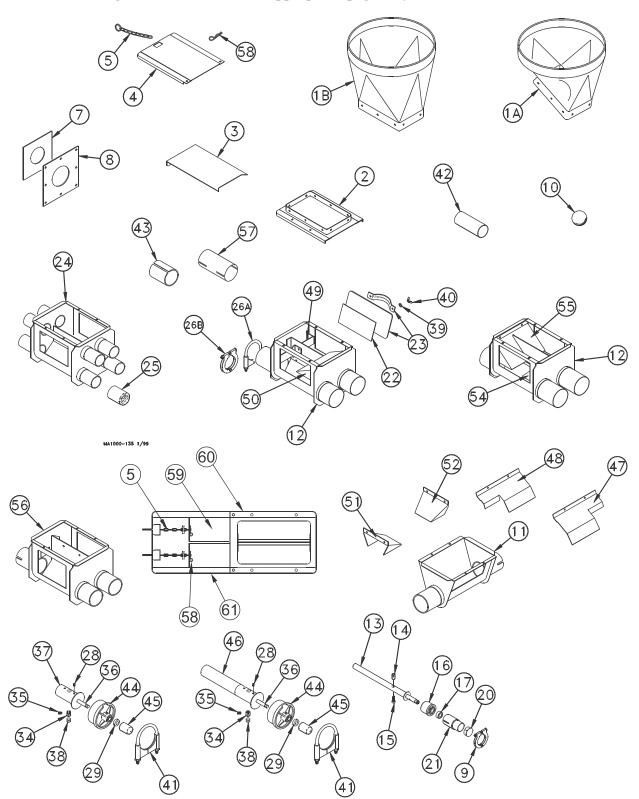
The Contactor Box containing (1) 55503-230 Contactor may be ordered under Part No. 24392-1.

The Contactor Box containing (2) 55503-230 Contactors may be ordered under Part No. 24392-2.

The Contactor Box containing (3) 55503-230 Contactors may be ordered under Part No. 24392-3.

Boot Components

Note: The Parts Listings on the following pages provide the parts numbers associated with this drawing. Be sure to refer to the appropriate page for your model of FLEX-AUGER.



Model 55 Boot Components

See "Boot Components" on page 43 for Part Schematic.

		30 Degree	30 Degree	30 Degree
Item	Description	Single Boot	Twin Boot	Quad Boot
5	Complete System	8465 ⁵	8466 ⁵	8467 ⁵
2	Lower Boot Assembly	9313	9314	9315
1A ⁶	30 Degree Upper Boot	4347R ⁶	4347R ⁶	4347R ⁶
2 ³	Transfer Plate	4359	4359	4359
3 ³	Slide	4357	4357	36091
4 ³	Slide Shield	4876	4876	4876
5 ³	Chain Assembly	27374	27374	27374
7	Neoprene Seal	6394	6394	6394
8	Seal Ring	2612	2612	2612
9	Tube Clamp	29515	29515	29515
10	Cannonball	3621	3621	3621
11	Single Boot Body	7999		
13 ¹	Model 55 Anchor	39410	39410	39410
14^{1}	Auger Clamp	39205	39205	39205
15^{1}	Socket Head Screw	6850-7	6850-7	6850-7
16^{1}	Anchor Bearing	39407	39407	39407
17^{1}	Set Collar	1386	1386	1386
20	Сар	29523	29523	29523
21	Stub Tube	4163	4163	4163
22^{4}	Back Plate Weldment	6298	6298	6298
23 ⁴	Clean-Out Cover	6301	6301	6301
24	Quad Boot Weldment			7980
25	Outlet Cover			8026
26B	Tube Clamp	29520	29520	29520
39 ⁴	Sealing Washer	8491	8491	8491
40^{4}	5/16-18 Wing Nut	2146	2146	2146
42	5" Stub Tube	8555	8555	8555
56	Twin Boot Body Weldment		7998	
58 ³	Hairpin	13906	13906	13906
¹ Thes	se components may be ordered as	a Model 55 Anchor Bearing	Assembly under Chore-Time Pa	rt No. 39405.

¹These components may be ordered as a Model 55 Anchor Bearing Assembly under Chore-Time Part No. 39405.

²Items 2 through 56 and item 58 (as listed above) make up the Lower Boot Assemblies (Single, Twin, or Quad).

³Items 2 through 5 and item 58 may be ordered under Chore-Time Part No. 6284 or 6284SS*.

⁴Items 22, 23, 39, & 40 may be ordered under Chore-Time Part No. 6197 or 6197SS* Clean-Out Cover Ass'y.

⁵All Complete Systems will come with transparent Red upper boot(s) unless specified with a "C" (i.e. Complete System # 8465C) This "C" indicates the Complete System will come with a transparent Clear upper boot.

⁶Upper boot Part No.'s will have a suffix "R" for transparent Red upper boots (i.e. 4347R) or will have a suffix "C" for transparent Clear upper boots (i.e. 4347C).

Model 75 Boot Components

See "Boot Components" on page 43 for Part Schematic.

ItemDescription 30 Degree Single BootStraight-Out Single Boot 30 Degree Vin Boot 30 Degree Vin Boot 30 Degree Vin Boot 5 Complete System 6549^5 of 654085^5 6673^5 of 673585^5 $36680^1 5 \sigma 5608158^5$ $1A^6$ 10 Degree Upper Boot 43478^6 $$ 600386^6 $1B^6$ Straight Out Upper Boot 43478^5 $$ 600386^6 2^3 Transfer Plate Weldment 4357 4357 4357 4357 3^3 Slide Shield 4357 or $4357S8^*$ 4357 4357 4357 3^3 Slide Shield 4357 or $4357S8^*$ 4357 4357 4357 3^3 Slide Shield 4377^4 27374 27374 27374 7^3 Porene Scal 2613 2613 2613 2613 351 3531 3531 3531 3531 3531 3 Back Plate Weldment 6298 or 629885^* 6298 or 629855^* 6301 or 3635085^* 2^4 Plate Weldment 6298 or 629885^* 6301 or 630158^* 6301 or 630158^* 6301 or 630158^* 2^4 Plate Weldment 6101 or 630158^* 6301 or 630158^* 6301 or 630158^* 6301 or 630158^* 2^4 Plate Weldment 6101 or 630158^* 6301 or 630158^* 6301 or 630158^* 6301 or 630158^* 2^4 Plate Weldment 6101 or 630158^* 6301 or 630158^* 6301 or 630158^* 6301 or 630158^* 6301 or 630158^* <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>						
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$					-	-
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		Description				Twin Boot
		Complete System	6539 ⁵ or 6539SS ⁵ *	6540 ⁵ or 6540SS ⁵ *	6873 ⁵ or 6873SS ⁵ *	36801 ⁵ or 36801SS ⁵ *
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		Lower Boot Assembly		36589/ or 36589SS*		36390 or 36390SS*
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					4347R ⁶	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1B6					
	2^{3}					
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	33					
7Neoprene Seal261326132613261326138Seal Ring261226122612261210Cannonball353135313531353111Single Boot Body36588 or 36588S*36588 or 36588S*12Twin Boot Body36350 or 36350S*36350 or 36350S*24Back Plate Weldment6298 or 6298S*6298 or 6298S*6298 or 6298S*6298 or 6298S*24Clan-Out Cover6301 or 6301SS*6301 or 6301SS*6301 or 6301SS*6301 or 6301SS*25ATube Clamp Kit6515651565156515651528 ¹ 5/16-18 x 3/8" Set Screw117411741174117429 ¹ 5/8" Set Collar138613861386138614Clamp Pin470247024702470235 ¹ 5/16-18 x 1/2" Set Screw50955095509536 ¹ Anchor Shaft4328143281432814328140 ⁴ 5/16-18 Wing Nut2146 or 2146SS*2146 or 2146SS*2146 or 2146SS*40 ⁴ 5/16-18 Wing Nut2146 or 2146SS*2146 or 2146SS*2146 or 2146SS*41 ¹ Tube Clamp Kit41414141414142 ⁷ 2.75 x 3.0 Tube61476147614745 ¹ Safety Cap2970229702297022970245 ¹ Safety Cap2970229702297022970246 ¹ Anchor Tube Wel	4^{3}					
8Seal Ring2612261226122612261210Cannonball353135313531353111Single Boot Body36588 or 36588SS*36588 or 36588SS*3530 or 36350SS*3630 or 36350SS*224Back Plate Weldment6298 or 6298SS*6298 or 6298SS*6298 or 6298SS*6298 or 6298SS*234Clean-Out Cover6301 or 6301SS*6301 or 6301SS*6301 or 6301SS*6301 or 6301SS*26ATube Clamp Kit651565156515651526ATube Clamp Kit6515651565152815/16-18 x 3/8" Set Screw11741174117411742915/8" Set Collar1386138613861386341Clamp Pin47024702470247023515/16-18 x 3/2" Set Screw5095509550955095361Anchor Shaft43281432814328143281394Sealing Washer8491 or 8491SS*8491 or 8491SS*8491 or 8491SS*4045/16-18 wing Nut2146 or 2146SS*2146 or 2146SS*2146 or 2146SS*411Tube Clamp Kit4141414141414141472.75 x 3.0 Tube614761476147414Earing Cap35740354403544035440451Safety Cap29702297022970229702461Anchor Tube Weldment684068406840684047Sorigle						
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$						
11Single Boot Body $36588 \text{ or } 36588 \text{ SS}^*$ $36588 \text{ or } 36588 \text{ SS}^*$ $36350 \text{ or } 363508\text{ SS}^*$ $36350 \text{ or } 363508\text{ SS}^*$ 22Twin Boot Body $36350 \text{ or } 363508\text{ SS}^*$ $36350 \text{ or } 363508\text{ SS}^*$ 22^4 Back Plate Weldment $6298 \text{ or } 62988\text{ SS}^*$ $6301 \text{ or } 6301\text{ SS}^*$ $6311 \text{ or } 6301\text{ SS}^*$ $5311 \text{ or } 5311 \text{ SS}^*$ $531 \text{ S}116 \text{ S}^*$ 5410 S^* $3140 $						
12Twin Boot Body36350 or 36350 ss 36350 or 36350 ss 22^4 Back Plate Weldment 6298 or 6298 ss 6298 or 6298 ss 6298 or 6298 ss 6298 or 6298 ss 23^4 Clean-Out Cover 6301 or 6301 ss 6301 or 6301 ss 6301 or 6301 ss 6301 or 6301 ss $26A$ Tube Clamp Kit 6515 6515 6515 6515 6301 or 6301 ss $26A$ Tube Clamp Kit 6117 1174 1174 1174 29^1 $5/8^{\circ}$ set Collar 1386 1386 1386 1386 34^1 Clamp Pin 4702 4702 4702 4702 35^1 $5/16-18$ x $1/2^{\circ}$ set Screw 5095 5095 5095 36^1 Anchor Shaft 43281 43281 43281 43281 43281 43281 43281 43281 39^4 Scaling Washer 8491 or 8491 ss* 8491 or 8491 ss* 8491 or 8491 ss* 40^4 $5/16-18$ Wing Nut 2146 or 2146 ss* 2146 or 2146 ss* 2146 or 2146 ss* 41^1 Tube Clamp Kit 4141 4141 4141 47^2 2.75 x 3.0 Tube 6147 6147 6147 6147 48 Baring Cap 35732 or 35732 ss* $$ $$ 48 30° Single Baffle 35732 or 35732 ss* $$ $$ 48 30° Single Baffle 35732 or 35732 ss* $$ $$ 48 30° Single Baffle <td></td> <td></td> <td></td> <td></td> <td>3531</td> <td>3531</td>					3531	3531
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		6	36588 or 36588SS*	36588 or 36588SS*		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
26ATube Clamp Kit6515651565156515 28^1 5/16-18 x 3/8" Set Screw117411741174 29^1 5/8" Set Collar1386138613861386 34^1 Clamp Pin4702470247024702 35^1 5/16-18 x 1/2" Set Screw5095509550955095 36^1 Anchor Shaft43281432814328143281 39^4 Sealing Washer8491 or 8491SS*8491 or 8491SS*8491or 8491SS*8491 or 8491SS* 40^4 5/16-18 Wing Nut2146 or 2146SS*2146 or 2146SS*2146 or 2146SS*2146 or 2146SS* 41^1 Tube Clamp Kit4141414141414141 42^7 2.75 x 3.0 Tube6147614761476147 44 Bearing Cap3544035440354403544035440 45^1 Safety Cap29702297022970229702 46^1 Anchor Tube Weldment6840684068406840 47 S-O/S-T Single Baffle35731 or 35731S* 48 30° Single Baffle35732 or 35732S*35843 or 35843S* 50 Twin End Baffle (75)35845 or 35845S* 54 Twin End Baffle (75)35845 or 35845S* 54 Twin End Baffle (75)35845 or 35845S* 54 Twin End Baffle (75)						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		-				6515
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	28 ¹	5/16-18 x 3/8" Set Screw	1174	1174	1174	1174
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	29 ¹	5/8" Set Collar	1386	1386	1386	1386
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		Clamp Pin	4702	4702		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		5/16-18 x 1/2" Set Screw	5095		5095	5095
40^4 $5/16-18$ Wing Nut 2146 or $2146SS*$ <th< td=""><td></td><td>Anchor Shaft</td><td></td><td></td><td></td><td></td></th<>		Anchor Shaft				
41^1 Tube Clamp Kit 4141 4141 4141 4141 4141 42^7 $2.75 \ge 3.0$ Tube 6147 6147 6147 6147 44 Bearing Cap 35440 35440 35440 35440 45^1 Safety Cap 29702 29702 29702 46^1 Anchor Tube Weldment 6840 6840 6840 47 S-O/S-T Single Baffle $$ 35731 or $35731SS^*$ $$ 48 30° Single Baffle 35732 or $35732SS^*$ $$ $$ 49 Cannon Ball Guard $$ 35843 or $35843SS^*$ $$ 50 Twin End Baffle (75) $$ $$ 35845 or $35845SS^*$ $$ 54 Twin End Baffle (75) $$ $$ 35846 or 35846 or $35846SS^*$ $58^{3,8}$ Hairpin 13906 13906 13906 13906 59^8 Slide $$ $$ $$ 14821 or $14821SS^*$ 60^8 Transfer Plate Assembly $$ $$ $$ 36642		Sealing Washer	8491 or 8491SS*	8491 or 8491SS*	8491or 8491SS*	8491 or 8491SS*
42^7 2.75×3.0 Tube 6147 6147 6147 6147 44 Bearing Cap 35440 35440 35440 35440 45^1 Safety Cap 29702 29702 29702 46^1 Anchor Tube Weldment 6840 6840 6840 47 S-O/S-T Single Baffle $$ 35731 or $35731SS^*$ $$ 48 30° Single Baffle 35732 or $35732SS^*$ $$ $$ 49 Cannon Ball Guard $$ 35843 or $35843SS^*$ $$ 50 Twin End Baffle (75) $$ 35845 or $35845SS^*$ $$ 54 Twin End Baffle (75) $$ $$ 35845 or $35845SS^*$ $$ 55 Twin Outlet Baffle (75) $$ $$ 35846 or 35846 or $35846SS^*$ $58^{3,8}$ Hairpin13906139061390613906 59^8 Slide $$ $$ $$ 14821 or $14821SS^*$ 60^8 Transfer Plate Assembly $$ $$ $$ 36642	40^{4}	5/16-18 Wing Nut	2146 or 2146SS*	2146 or 2146SS*	2146 or 2146SS*	2146 or 2146SS*
44Bearing Cap35440354403544035440 45^1 Safety Cap297022970229702 46^1 Anchor Tube Weldment684068406840 47 S-O/S-T Single Baffle $35731 \text{ or } 35731 \text{SS}^*$ 48 30° Single Baffle $35732 \text{ or } 35732 \text{SS}^*$ 49 Cannon Ball Guard $35843 \text{ or } 35843 \text{SS}^*$ 50 Twin End Baffle (75) $35845 \text{ or } 35845 \text{SS}^*$ 54 Twin End Baffle (75) $35845 \text{ or } 35845 \text{SS}^*$ 55 Twin Outlet Baffle (75) $35846 \text{ or } 35846 \text{SS}^*$ $58^{3,8}$ Hairpin139061390613906 59^8 Slide14821 or 14821 \text{SS}^* 60^8 Transfer Plate Assembly36642		Tube Clamp Kit	4141	4141	4141	4141
45^1 Safety Cap2970229702297022970229702 46^1 Anchor Tube Weldment 6840 6840 6840 6840 6840 47 S-O/S-T Single Baffle $$ $35731 \text{ or } 35731 \text{SS}^*$ $$ $$ 48 30° Single Baffle $35732 \text{ or } 35732 \text{SS}^*$ $$ $$ $$ 49 Cannon Ball Guard $$ $$ $35843 \text{ or } 35843 \text{SS}^*$ $$ 50 Twin End Baffle (75) $$ $$ $35845 \text{ or } 35845 \text{SS}^*$ $$ 54 Twin End Baffle (75) $$ $$ $35845 \text{ or } 35845 \text{SS}^*$ $$ 54 Twin Outlet Baffle (75) $$ $$ $35846 \text{ or } 35845 \text{SS}^*$ 55 Twin Outlet Baffle (75) $$ $$ $35846 \text{ or } 35846 \text{SS}^*$ $58^{3,8}$ Hairpin139061390613906 59^8 Slide $$ $$ $$ $14821 \text{ or } 14821 \text{SS}^*$ $60^8 Transfer Plate Assembly36642$	42^{7}	2.75 x 3.0 Tube	6147	6147	6147	6147
46^1 Anchor Tube Weldment 6840 6840 6840 6840 47 S-O/S-T Single Baffle $$ $35731 \text{ or } 35731 \text{SS}^*$ $$ $$ 48 30° Single Baffle $35732 \text{ or } 35732 \text{SS}^*$ $$ $$ $$ 49 Cannon Ball Guard $$ $$ $35843 \text{ or } 35843 \text{SS}^*$ $$ 50 Twin End Baffle (75) $$ $$ $35845 \text{ or } 35845 \text{SS}^*$ $$ 54 Twin End Baffle (75) $$ $$ $35845 \text{ or } 35845 \text{SS}^*$ $$ 54 Twin Outlet Baffle (75) $$ $$ $35846 \text{ or } 35845 \text{SS}^*$ 55 Twin Outlet Baffle (75) $$ $$ $35846 \text{ or } 35846 \text{SS}^*$ $58^{3,8}$ Hairpin139061390613906 59^8 Slide $$ $$ $14821 \text{ or } 14821 \text{SS}^*$ 60^8 Transfer Plate Assembly $$ $$ 36642		Bearing Cap	35440	35440	35440	35440
47S-O/S-T Single Baffle \cdots $35731 \text{ or } 35731 \text{SS}^*$ \cdots \cdots 48 30° Single Baffle $35732 \text{ or } 35732 \text{SS}^*$ \cdots \cdots \cdots 49Cannon Ball Guard \cdots \cdots $35843 \text{ or } 35843 \text{SS}^*$ \cdots 50Twin End Baffle (75) \cdots \cdots $35845 \text{ or } 35845 \text{SS}^*$ \cdots 54Twin End Baffle (75) \cdots \cdots $35845 \text{ or } 35845 \text{SS}^*$ \cdots 55Twin Outlet Baffle (75) \cdots \cdots $35846 \text{ or } 35846 \text{SS}^*$ 58 ^{3,8} Hairpin13906139061390659 ⁸ Slide \cdots \cdots \cdots $14821 \text{ or } 14821 \text{SS}^*$ $60^8 \text{Transfer Plate Assembly}$ \cdots \cdots \cdots 36642		Safety Cap	29702	29702	29702	29702
48 30° Single Baffle $35732 \text{ or } 35732 \text{ SS}^*$ 49Cannon Ball Guard $35843 \text{ or } 35843 \text{ SS}^*$ 50Twin End Baffle (75) $35845 \text{ or } 35845 \text{ SS}^*$ 54Twin End Baffle (75) $35845 \text{ or } 35845 \text{ SS}^*$ 55Twin Outlet Baffle (75) $35846 \text{ or } 35846 \text{ SS}^*$ 58 ^{3,8} Hairpin13906139061390659 ⁸ Slide14821 or 14821 \text{ SS}^* $60^8 \text{Transfer Plate Assembly}$ 36642	46^{1}	Anchor Tube Weldment	6840	6840	6840	6840
49 Cannon Ball Guard 35843 or 35843SS* 50 Twin End Baffle (75) 35845 or 35845SS* 54 Twin End Baffle (75) 35845 or 35845SS* 55 Twin Outlet Baffle (75) 35846 or 35846SS* 58 ^{3,8} Hairpin 13906 13906 13906 59 ⁸ Slide 14821 or 14821SS* 60 ⁸ Transfer Plate Assembly 36642	47	S-O/S-T Single Baffle		35731 or 35731SS*		
50Twin End Baffle (75) $35845 \text{ or } 35845 \text{SS}^*$ 54Twin End Baffle (75) $35845 \text{ or } 35845 \text{SS}^*$ 55Twin Outlet Baffle (75) $35846 \text{ or } 35846 \text{SS}^*$ $58^{3,8}$ Hairpin139061390613906 59^8 Slide14821 or 14821 \text{SS}^* 60^8 Transfer Plate Assembly36642	48	30° Single Baffle	35732 or 35732SS*			
54 Twin End Baffle (75) 35845 or 35845SS* 55 Twin Outlet Baffle (75) 35846 or 35846SS* 58 ^{3,8} Hairpin 13906 13906 13906 59 ⁸ Slide 14821 or 14821SS* 60 ⁸ Transfer Plate Assembly 36642	49				35843 or 35843SS	5*
55 Twin Outlet Baffle (75) 35846 or 35846SS* 58 ^{3,8} Hairpin 13906 13906 13906 59 ⁸ Slide 14821 or 14821SS* 60 ⁸ Transfer Plate Assembly 36642	50	Twin End Baffle (75)			35845 or 3584585	5*
58 ^{3,8} Hairpin 13906 13906 13906 59 ⁸ Slide 14821 or 14821SS* 60 ⁸ Transfer Plate Assembly 36642	54					35845 or 35845SS*
59 ⁸ Slide 14821 or 14821SS* 60 ⁸ Transfer Plate Assembly 36642		Twin Outlet Baffle (75)				35846 or 35846SS*
59 ⁸ Slide 14821 or 14821SS* 60 ⁸ Transfer Plate Assembly 36642		Hairpin	13906	13906	13906	13906
		Slide				14821 or 14821SS*
						36642
These common and may be andered as a Model 75 Anaber Bearing Assembly under Chara Time Part No. 27246 with Long	61 ⁸ Sli					14827

¹These components may be ordered as a Model 75 Anchor Bearing Assembly under Chore-Time Part No. 37346 with Long Restrictor and Chore-Time Part No. 37347 with Short Restrictor.

²Items 2 through 55 and item 58 (as listed above) make up the Lower Boot Assemblies (Single or Twin).

³Items 2 through 5 and item 58 may be ordered under Chore-Time Part No. 6284 or 6284SS*.

⁴Items 22, 23, 39, & 40 may be ordered under Chore-Time Part No. 6197 or 6197SS* Clean-Out Cover Ass'y.

⁵All Complete Systems will come with transparent Red upper boot(s) unless specified with a "C" (i.e. Complete System # 6539C) This "C" indicates the Complete System will come with transparent Clear upper boot(s).

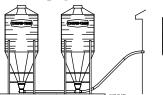
⁶Upper boot Part No.'s will have a suffix "R" for transparent Red upper boots (i.e. 4347R) or will have a suffix "C" for transparent Clear upper boots (i.e. 4347C).

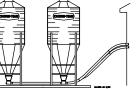
⁷Stub Tube (Item 42) For Opposing Anchor.

⁸Included in 36683 Twin Boot Slide Assembly.

Model 75 Boot Components (continued)

See "Boot Components" on page 43 for Part Schematic.





Item	Description	Straight-Thru Single Tandem	Straight-Thru Twin Tandem
5	Complete System	6541 ⁵ or 6541SS ⁵ *	35880 ⁵ or 35880SS ⁵ *
2	Lower Boot Package	36590 or 36590SS*	36394 or 36394SS*
1A ⁶	30 Degree Upper Boot		
1B ⁶	Straight Out Upper Boot	6093R ⁶	6093R ⁶
2^{3}	Transfer Plate Weldment	4359	
3 ³	Slide	4357 or 4357SS*	
4 ³	Slide Shield	4876	
5 ^{3,8}	Chain Assembly	27374	27374
7	Neoprene Seal	2613	2613
8	Seal Ring	2612	2612
10	Cannonball	3531	3531
11	Single Boot Body	36588 or 36558SS*	
12	Twin Boot Body Weldmer		36350 or 36350SS*
22 ⁴		6298 or 6298SS*	6298 or 6298SS*
23 ⁴	Clean-Out Cover	6301 or 6301SS*	6301 or 6301SS*
26A	Tube Clamp Kit	6515	6515
28^{1}	5/16-18 x 3/8" Set Screw	1174	1174
29^{1}	5/8" Set Collar	1386	1386
34 ¹	Clamp Pin	4702	4702
35 ¹	5/16-18 x 1/2" Set Screw	5095	5095
36 ¹	Anchor Shaft	37345	37345
39 ⁴	Sealing Washer	8491 or 8491SS*	8491 or 8491SS*
40^{4}	5/16-18 Wing Nut	2146 or 2146SS*	2146 or 2146SS*
41	Tube Clamp Kit	4141	4141
42^{7}	2.75 x 3.0 Tube	6147	6147
43	Insert	6524	6524
44^{1}	Bearing Cap	35440	35440
45^{1}	Safety Cap	29702	29702
46^{1}	Anchor Tube Weldment	6840	6840
47	S-O/S-T Single Baffle	35731 or 35731SS*	
54	Twin End Baffle (75)		35845 or 35845SS*
55	Twin Outlet Baffle (75)		35846 or 35846SS*
57	Tube Connector	6512	6512
58 ^{3,8}	Hairpin	13906	13906
59 ⁸	Slide		14821 or 14821SS*
60 ⁸ Tr	ansfer Plate Assembly		36642
61 ⁸ Sli	ide Shield Assembly		14827
1Th as	a a ammon anta mariha andan	d as a Madal 75 Anahan I) again a Aggamhly yn dan Cha

¹These components may be ordered as a Model 75 Anchor Bearing Assembly under Chore-Time Part No. 37346 with Long Restrictor and Chore-Time Part No. 37347 with Short Restrictor.

²Items 2 through 55 and item 58 (as listed above) make up the Lower Boot Packages (Single or Twin).

³Items 2 through 5 and item 58 may be ordered under Chore-Time Part No. 6284 or 6284SS.

⁴Items 22, 23, 39, & 40 may be ordered under Chore-Time Part No. 6197 or 6197SS Clean-Out Cover Ass'y.

⁵All Complete Systems will come with transparent Red upper boot(s) unless specified with a "C" (i.e. Complete System # 6541C) This "C" indicates the Complete System will come with transparent Clear upper boot(s).

⁶Upper boot Part No.'s will have a suffix "R" for transparent Red upper boots (i.e. 4347R) or will have a suffix "C" for transparent Clear upper boots (i.e. 4347C).

⁷Stub Tube (Item 42) For Opposing Anchor.

⁸Included in 36683 Twin Boot Slide Assembly.

Model 90 Boot Components

See "Boot Components" on page 43 for Part Schematic.

		30 Degree	Straight-Out	30 Degree	Straight-Out
Item	Description	Single Boot	Single Boot	Twin Boot	Twin Boot
5		6161 ⁵ or 6161SS ⁵ *	6187 ⁵ or 6187SS ⁵ *	6874 ⁵ or 6874SS ⁵ *	6535 ⁵ or 653588 ⁵ *
2	Lower Boot Assembly	9301 or 9301SS*	36435 or 3643588*	36391 or 36391SS*	36398 or 36398SS*
1A ⁶	30 Degree Upper Boot	4347R ⁶		4347R ⁶	
1B ⁶	Straight Out Upper Boot		6093R ⁶		6093R ⁶
2^{3}_{2}	Transfer Plate Weldment		4359	4359	
3^{3}_{2}	Slide	4357 or 4357SS*	4357 or 4357SS*	4357 or 4357SS*	
4^{3}	Slide Shield	4876	4876	4876	
5 ^{3,7}	Chain Assembly	27374	27374	27374	27374
7 8	Neoprene Seal	5035	5035	5035	5035
8 10	Seal Ring Cannonball	2612 3531	2612 3531	2612 3531	2612 3531
10	Single Boot Body	28873 or 28873SS*	36433 or 36433SS*	5551	5551
12	Twin Boot Body				36354 or 36354SS*
22^{4}	Back Plate Weldment	6298 or 6298SS*	6298 or 6298SS*	6298 or 6298SS*	6298 or 6298SS*
23 ⁴	Clean-Out Cover	6301 or 6301SS*	6301 or 6301SS*	6301 or 6301SS*	6301 or 6301SS*
26A	Tube Clamp Kit	6721	6721	6721	6721
28^{1}	5/16-18 x 3/8" Set Screw	1174	1174	1174	1174
29^{1}_{1}	5/8" Set Collar	1386	1386	1386	1386
34 ¹	Clamp Pin	4702	4702	4702	4702
35^{1}_{1}	5/16-18 x 1/2" Set Screw		5095	5095	5095
36^{1}	Anchor Shaft	43281	43281	43281	43281
37^{1} 38^{1}	Anchor Tube Weldment		26048	26048	26048
38^{-1} 39^{4}	Clamp Spacer	5009 8491 or 8491SS*	5009 8491 or 8491SS*	5009 8491 or 8491SS*	5009 8491 or 8491SS*
40^{4}	Sealing Washer 5/16-18 Wing Nut	2146 or 2146SS*	2146 2146SS*	2146 2146SS*	2146 2146SS*
41	Tube Clamp Kit	6721	6721	6721	6721
44 ¹	Bearing Cap Assembly	34830	34830	34830	34830
45 ¹	Safety Cap	29702	29702	29702	29702
46^{1}	Anchor Tube Weldment	6833			
49	Cannonball Guard			35843 or 35843SS*	
50	Twin End Baffle (90)			36026 or 36026SS*	
51	Single Inlet Baffle (90)		35998 or 35998SS*		
52	Single Outlet Baffle (90)		35999 or 35999SS*		
54	Twin Inlet Baffle (90)				36000 or 36000SS*
55	Twin Outlet Baffle (90)	12000			36001 or 36001SS*
58 ^{3,7} 59 ⁷ Sl	Hairpin	13906	13906	13906	13906
	ansfer Plate Assembly				14821 or 14821SS* 36642
	ide Shield Assembly				14827
1 - 1	iue Silielu Assellioly		 D :		1402/

¹These components may be ordered as a Model 90 Anchor Bearing Assembly under Chore-Time Part No. 35345 with Short Restrictor (except for 30° Single Boot Systems, order Part No. 35343 with Long Restrictor).

²Items 2 through 55 and item 58 (as listed above) make up the Lower Boot Assemblies (Single or Twin).

³Items 2 through 5 and item 58 may be ordered under Chore-Time Part No. 6284 or 6284SS.

⁴Items 22, 23, 39, & 40 may be ordered under Chore-Time Part No. 6197 or 6197SS Clean-Out Cover Ass'y.

⁵All Complete Systems will come with transparent Red upper boot(s) unless specified with a "C" (i.e. Complete System # 6161C) This "C" indicates the Complete System will come with a transparent Clear upper boot(s).

⁶Upper boot Part No.'s will have a suffix "R" for transparent Red upper boots (i.e. 4347R) or will have a suffix "C" for transparent Clear upper boots (i.e. 4347C).

⁷Included in 36683 Twin Boot Slide Assembly.

Model 90 Boot Components (continued)

See "Boot Components" on page 43 for Part Schematic.

	·				
.	D	Straight-Thru	Straight-Thru	Twin Straight-Thru	
	Description	Single Tandem	Twin Tandem	Three Bin System	
5	Complete System	6281 ⁵ or 6281SS ⁵ *	6538 ⁵ or 6538SS ⁵ *	48660 ⁵ or 48660SS ⁵ *	
²	Lower Boot Package	36434 or 36434SS*	36388 or 36388SS*	48661 or 48661SS*	
1B6	Straight Out Upper Boot	6093R ⁶	6093R ⁶	6093R ⁶	
2^{3}_{2}	Transfer Plate Weldment	4359			
3^{3}_{2}	Slide	4357 or 4357SS*			
4^{3}_{2}	Slide Shield	4876			
5 ³	Chain Assembly	27374	27374	27374	
7	Neoprene Seal	5035	5035	5035	
8	Seal Ring	2612	2612	2612	
10	Cannonball	3531	3531	3531	
11	Single Boot Body	36433 or 36433SS*			
12	Twin Boot Body Weldme		36354 or 36354SS*	36354 or 36354SS*	
22 ⁴	Back Plate Weldment	6298 or 6298SS*	6298 or 6298SS*	6298 or 6298SS*	
23 ⁴	Clean-Out Cover	6301 or 6301SS*	6301 or 6301SS*	6301 or 6301SS*	
26A	Tube Clamp Kit	6721	6721	6721	
28 ¹	5/16-18 x 3/8" Set Screw	1174	1174	1174	
29 ¹	5/8" Set Collar	1386	1386	1186	
34 ¹	Clamp Pin	4702	4702	4702	
35 ¹	5/16-18 x 1/2" Set Screw	5095	5095	5095	
36 ¹	Anchor Shaft	43281	43281	43281	
37 ¹	Anchor Tube Weldment	26048	26048	26048	
38 ¹	Clamp Spacer	5009	5009	5009	
39 ⁴	Sealing Washer	8491 or 8491SS*	8491 or 8491SS*	8491 8491SS*	
40^{4}	5/16-18 Wing Nut	2146 or 2146SS*	2146 or 2146SS*	2146 or 2146SS*	
41	Tube Clamp Kit	6721	6721	6721	
44 ¹	Bearing Cap Assembly	34830	34830	34830	
45^{1}	Safety Cap	29702	29702	29702	
51	Single Inlet Baffle (90)	35998 or 35998SS*			
52	Single Outlet Baffle (90)				
54	Twin Inlet Boot Baffle (9		36000 or 36000SS*	36000 or 36000SS*	
55	Twin Outlet Boot Baffle (36001 or 36001SS*	36001 or 36001SS*	
58^{3}_{7}	Hairpin	13906	13906	13906	
59^{7}_{7}	Slide		14821 or 14821SS*	14821 or 14821SS*	
	ansfer Plate Assembly		36641	36641	
61 ⁷	Slide Shield Assembly		14827	14827	

¹These components may be ordered as a Model 90 Anchor Bearing Assembly under Chore-Time Part No. 35345 with Short Restrictor.

²Items 2 through 55 and item 58 (as listed above) make up the Lower Boot Packages (Single or Twin).

³Items 2 through 5 and item 58 may be ordered under Chore-Time Part No. 6284 or 6284SS*.

⁴Items 22, 23, 39, & 40 may be ordered under Chore-Time Part No. 6197 or 6197SS* Clean-Out Cover Ass'y.

⁵All Complete Systems will come with transparent Red upper boot(s) unless specified with a "C" (i.e. Complete System # 6281C) This "C" indicates the Complete System will come with transparent Clear upper boot(s).

⁶Upper boot Part No.'s will have a suffix "R" for transparent Red upper boots (i.e. 4347R) or will have a suffix "C" for transparent Clear upper boots (i.e. 4347C).

⁷Included in 36683 Twin Boot Slide Assembly.

Model HMC Boot Components

See "Boot Components" on page 43 for Part Schematic.

		30 Degree	30 Degree	Single Straight-	Straight-Thru
Item	Description	Single Boot	Twin Boot	Thru Tandem	Twin Tandem
5	Complete System	7921 ⁵ or 7921SS ⁵ *	7920 ⁵ or 7921SS ⁵ *	40082 ⁵ or 40082SS ⁵ *	36795 ⁵ or 3679588 ⁵ *
2	Lower Boot Ass'y/Packag		38506 or 38506SS*	40082 of 4008255 40081 or 40081SS*	36796 or 36796SS*
1A ⁶	30 Degree Upper Boot	4347R ⁶	4347R ⁶		
1B ⁶	Straight-Through Upper E			6093R ⁶	6093R ⁶
2^{3}	Transfer Plate Weldment	4359	4359	4359	
$\frac{2}{3^3}$	Slide	4357 or 4357SS*	4357 or 4357SS*	4357 or 4357SS*	
4 ³	Slide Shield	4876	4876	4876	
5 ^{3,7}	Chain Assembly	27374	27374	27374	27374
7	Neoprene Seal	5035	5035	5035	5035
8	Seal Ring	2612	2612	2612	2612
10	Cannonball	3531	3531	3531	3531
11	Single Boot Body	28873 or 28873SS*		36433 or 36433SS*	
12^{4}	Twin Boot Body		28933 or 28933SS*		36354 or 36354SS*
22^{4}	Back Plate Weldment	6298 or 6298SS*	6298 or 6298SS*	6298 or 6298SS*	6298 or 6298SS*
23	Clean-Out Cover	6301 or 6301SS*	6301 or 6301SS*	6301 or 6301SS*	6301 or 6301SS*
26	Tube Clamp Kit	6721	6721	6721	6721
28^{1}	5/16-18 x 3/8" Set Screw	1174	1174	1174	1174
29^{1}	5/8" Set Collar	1386	1386	1386	1386
34 ¹	Clamp Pin	4702	4702	4702	4702
35^{1}	5/16-18 x 1/2" Set Screw	5095	5095	5095	5095
36 ¹	Anchor Shaft	43281	43281	43281	43281
37 ¹	Tube Anchor Weldment			36393	36393
39 ⁴	Sealing Washer	8491 or 8491SS*	8491 or 8491SS*	8491 or 8491SS*	8491 or 8491SS*
40^{4}	5/16-18 Wing Nut	2146 or 2146SS*	2146 or 2146SS*	2146 or 2146SS*	2146 or 2146SS*
41	Tube Clamp Kit	6721	6721	6721	6721
44^{1}	Bearing Cap Assembly	34830	34830	34830	34830
45^{1}	Safety Cap	29702	29702	29702	29702
46^{1}	Anchor Tube Weldment	6840	6840		
51	Single Inlet Baffle (HMC)		38638 or 38638SS*	
52	Single Outlet Baffle (HM			38639 or 38639SS*	
54	Twin Inlet Boot Baffle (H				36797 or 36797SS*
55	Twin Outlet Boot Baffle (36798 or 36798SS*
58 ^{3,7}	Hairpin	13906	13906	13906	13906
59 ⁷ Sli	ide				14821 or 14821SS*
60^{7}	Transfer Plate Assembly				36641
	de Shield Assembly				14827
¹ Thes	e components may be order	ed as a Model HMC Ar	chor Bearing Assembl	v under Chore-Time Par	t No. 35344 with Long

¹These components may be ordered as a Model HMC Anchor Bearing Assembly under Chore-Time Part No. 35344 with Long Restrictor (except for Tandem Systems, order Part No. 37241 with Short Restrictor).

²Items 2 through 46 and item 58 (as listed above) make up the Lower Boot Assemblies/Packages (Single or Twin).

³Items 2 through 5 and item 58 may be ordered under Chore-Time part no. 6284 or 6284SS*.

⁴Items 22, 23, 39, & 40 may be ordered under Chore-Time Part No. 6197 or 6197SS* Clean-Out Cover Ass'y.

⁵All Complete Systems will come with transparent Red upper boot(s) unless specified with a "C" (i.e. Complete System # 7921C) This "C" indicates the Complete System will come with transparent Clear upper boot(s).

⁶Upper boot Part No.'s will have a suffix "R" for transparent Red upper boots (i.e. 4347R) or will have a suffix "C" for transparent Clear upper boots (i.e. 4347C).

⁷Included in 36683 Twin Boot Slide Assembly.

Troubleshooting

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

Maintenance and repair to the system must be performed by a qualified technician only.





Problem	Possible Cause	Corrective Action
Delivery system will not run.	No power to the system.	Check circuits, fuses, and on-off switches on the equipment.
	Bin level switch has stopped the system due to lack of feed in the boot.	Check feed supply and for possible bridging.
	Motor overloaded and stopped.	Check for foreign material in the line. Push the motor reset button.
	Safety switch actuated in the Control Unit (red pilot light will be lit).	Determine reason for feed pack- ing in the Control Unit. Feed level switch out of adjustment?
Motor overloads after running briefly.	Motor too small.	Use recommended size motor for line length.
	Low voltage (motor runs slow and overheats).	Check line voltage at the motor; use adequate size wire in cir- cuits.
	Foreign object in the auger (motor runs, stalls, then auger spins in reverse).	Check auger line, pull auger to remove objects.
	Motor wired in reverse (motor runs, stalls, no feed conveyed).	Disconnect power and change wire connections (direct drive power unit shaft at rear of motor turns clockwise).
	Boot Anchor tight.	Check for Anchor binding.
	Wet feed being conveyed or allowed to stand in auger tubes. Defective motor (over heats with- out load).	Clean auger and tubes; avoid conveying wet feed or empty line after each feeding. Replace motor.
Motor runs, but auger does not turn.	Sheared driver bolt at Control Unit.	Replace driver bolt.
	Broken power unit pinion.	Examine pinion on motor shaft; replace BOTH gear head and pinion if pinion is damaged.

Auger wears holes in tubes.	Auger kinked or poorly brazed.	See Auger Brazing section in this manual	
Elbows wear out.	Auger is stretched too tight; hori- zontal L.H. turn; auger has been run dry.	Lengthen auger; Install an Exten- sion Hopper; wire Boot Switch into system.	
Excessive auger vibra- tion and noise.	System has been operated too often without feed (auger has scored the auger tubes).	Wire a Boot Switch to stop the system when the feed bin is empty; replace damaged auger tubes; be sure auger has proper amount of stretch.	
	Tubes inadequately supported.	Support the tubes every 5' (1.5 m) or closer.	
	Horizontal L.H. turn.	No outlet drops on or just before an elbow; lengthen the auger; install an Extension Hopper ahead of elbows.	
Fill system short cycles.	Control end feed level switch does not provide large enough feed differential.	Use a time clock to program operating cycles. Use Control end feed level switch w/lockout and time clock.	
Extension Hopper packs full of feed.	Both switches on Extension Hop- per are out of adjustment.	Adjust switches as specified in maintenance section in this man- ual.	
Second portion of extended length system will not start.	Lower switch on Extension Hop- per out of adjustment.	Adjust switch as specified in the maintenance section of this man- ual.	
	Feed level control at end of line out of adjustment.	Examine and make necessary adjustments; see feed level switch adjustment instruction.	
Second portion of	Too much Restrictor in the Boot.	Shorten Restrictor.	
extended length system short cycles.	Too much feed is still dispensing from drops ahead of Extension Hopper.	Last outlet drop before Extension Hopper must have full feed drop out. NOTE: All feeders ahead of hopper must complete filling before feed reaches hopper.	
	Trim Restrictor on first portion to allow more incoming feed.		

52

Maintenance

Maintenance

The FLEX-AUGER Feed Delivery System requires minimum maintenance. However, a routine periodic inspection of the equipment will prevent unnecessary problems.

Maintenance should be done by a qualified technician.

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

- 1. Periodically check and tighten the delivery system hardware.
- 2. Grease boot bearings on grease fittings regularly, using an automotive or industrial type grease.
- 3. Keep the FLEX-AUGER tubes level. Adjust if necessary. Wear increases at the points where tubes sag.
- 4. Replace the Plastic Shipping Plug in the power unit gear head with the Vented Plug during installation of the Power Unit.
- 5. Check the oil level in the gear heads at installation and every 6 months. The Pipe Plug, on the side of the gear head, indicates proper oil level. Add SAE 40W oil when necessary.

The oil in the gear heads should be replaced every 12 months with new SAE 40W oil.

- A. Remove the bottom Pipe Plug to drain the oil. Discard used oil in accordance with local and national codes.
- B. Wipe any debris off the magnet on the bottom Pipe Plug and reinstall. Remove the side Pipe Plug and (top) Vent Plug.
- C. Set the power unit in the horizontal position.
- D. 2-Stage Gear Heads (3261-5, -6, -7, -8, -10, -11, -13, -16, and -17): Add approximately 9 oz. (266 ml) of SAE 40W oil through top hole. This should be just enough oil to reach the side Pipe Plug.

3-Stage Gear Heads (3261-14, -15, -21, and -22): Add approximately 13.5 oz. (384 ml) of SAE 40W oil through top hole. This should be just enough oil to reach the side Pipe Plug.

- E. Install the side Pipe Plug and (top) Vent Plug.
- 6. Extension Hopper Switch Adjustment Procedure:
 - A. CAUTION: DISCONNECT POWER.
 - B. Make sure no feed is against the Paddle.
 - C. Turn adjusting nut clockwise until switch clicks.
 - D. Turn adjusting nut counterclockwise until switch clicks.
 - E. Turn adjusting nut counterclockwise one half turn.
- 7. If the system is not to be used for an extended period of time, remove all the feed from the auger lines. Disconnect power to the system to prevent accidentally starting the system.

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

- A. Disconnect power to the entire system.
- B. Pull the Anchor and Bearing Assembly and approx. 18" (45 cm) of auger out of the boot.
- C. Place a clamp or locking pliers on the auger to prevent it from springing back into the auger tubes.
- D. Remove Anchor and Bearing Assembly.
- E. Carefully release the clamp securing the auger.

CAUTION: Stand clear...the auger will spring back into the tubes.

F. Remove remaining system components in the opposite order they were installed, according to this manual.





Livestock and Poultry Feed Consumption

POULTRY

Poultry applications use automatic feeding systems sized for the building density. The FLEX-AUGER[®] Feed Delivery System's delivery rate should be sized to match or exceed the sum of the delivery rates of the automatic feeders supplied.

CHORE-TIME Floor Feeding Systems	Delivery Rates
Model C, C2, H2, and G with 216 RPM Power Unit	10.8 lbs or 4.89 kg/min.*
Model C, C2, H2, and G with 348 RPM Power Unit	17.0 lbs or 7.71 kg/min.*
Model ATF	18.0 lbs or 8.16 kg/min.*
Pan Breeder Feeder System	
ULTRAFLO Breeder Feeder (per Hopper)	52.0 lbs or 23.58 kg/min.*
ULTRAPAN Feeding System (per Hopper) min.*	50.0 lbs or 22.68 kg/
*Based on 40 lbs/ft3 density (64 kg/m3)	
Genesis Loop (Per Inlet Boot)	65.0 lbs or 29.48 kg/min.*
Genesis Straight-Line	

HOGS

Live weight-lbs/Hog	Total Average Daily Feed-lbs/Head
10-25 (4.5-11.3 kg)	1.2 (.54 kg)
25-50 (11.3-22.7 kg)	2.5 (1.13 kg)
50-75 (22.7-34 kg)	4.0 (1.81 kg)
75-125 (34-56.7 kg)	5.2 (2.35 kg)
125-175 (56.7-79.4 kg)	6.7 (3.04 kg)
175-225 (79.4-102 kg)	
Gestating Sows	5 (2.26 kg)

DAIRY

Milk/Cow/Day-lbs Average	Concentrates*/Cow/Day-lbs Average
30 (13.61 kg)	10 (4.53 kg)
50 (22.68 kg)	20 (9.07 kg)
70 (31.75 kg)	30 (13.61 kg)
80 (36.28 kg)	40 (18.14 kg)

TO DETERMINE THE RUNNING TIME PER DAY-Multiply the number of animals by the feed consumption/head figures from the charts to get Total Feed Consumption.

-Divide Total Feed Consumption by the stated delivery rate of the FLEX-AUGER[®] Feed Delivery System to get running time per day in minutes. Divide this by 60 to get running time per day in hours.



MADE TO WORK.

BUILT TO LAST.[®]

Revisions to this Manual

Page No.	Description of Change	ECO
Various	Added Stainless Steel Boots and Components	33783

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

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