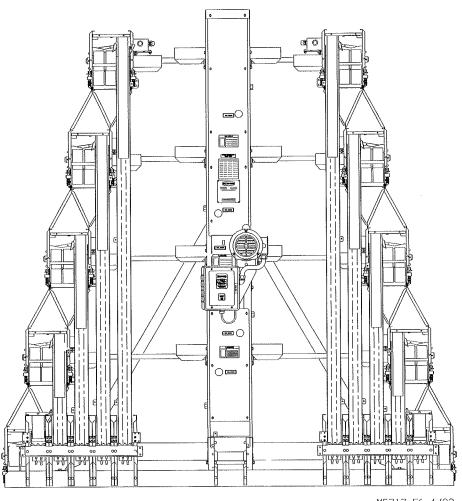


Dura-Cage Egg Collector Installation Manual

3-Hi, 4-Hi, & 5-Hi Collectors

for



ME717.56 4/92

SAFETY INFORMATION

CHORE-TIME is concerned about the safety of its customers. 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 intacted and easy to read at all times. Replace missing or damaged safety signs.

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.



Signal Words

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

DANGER.....identifies immediate hazards which WILL result in severe personal injury or death.

WARNING.....identifies hazards or unsafe practices which

COULD result in severe personal injury or death.

CAUTIONidentifies hazards or unsafe practices which

COULD result in minor personal injury or product or property damage.

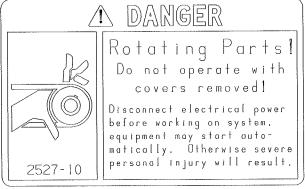






DANGER--ROTATING PARTS

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



MVB41.32 3/90

DANGER--ELECTRICAL HAZARD

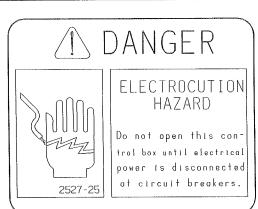
Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

Ground all electrical equipment for safety.

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

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

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



MA580.14 12/89

Table of Contents

Safety Information2	
General Information3	
Planning the System4 - 5	
Installation of Plastic Egg Guides6	
Position the Egg Collectors6	
Install Egg Trays7	
Egg Tray Extension Installation7	
Install the Collector End Framing7	
Rear Return Framing Installation8	
Installing Rear Return Assemblies8	
Installation of Egg Belt9	
Egg Tray Brace Installation10	
Install Egg Sweep Braces and Cross Braces10	
Install Egg Sweeps10	
Rod Transfer Kit10	
Install the Controls10	
Three Phase Controls10	
Egg Counter Control Box11	
Recommendations and Guidelines/Operat11	
Maintenance Recommendations11	
Wiring Notes11	
System Wiring Diagram (Single Phase) 12 - 13	3
System Wiring Diagram (Three Phase)14 - 1:	5
3-Hi Counter Wiring Diagram16	
4-Hi Counter Wiring Diagram17	
5-Hi Counter Wiring Diagram18	
Egg Collection System Logic Diagram 19	
Parts Lists	6
Trouble Shooting Guide47	
Warranty48	

Thank-you for purchasing a Chore-Time DURA-CAGE™ Egg Collector!

This instruction will provide you with the necessary information for installing, wiring, and operating the collectors. Read it carefully prior to beginning the installation.

Wiring should be done by a qualified electrician, in accordance with local and national electrical codes.

This bar denotes changes made to this instruction since the last printing. It will appear in the left or right hand border, near the revised information.

PLEASE read the installation instructions prior to beginning the installation. The collectors MUST be installed properly to insure proper operation of the cross conveyor equipment.

If necessary, refer to these Chore-Time Installation Manuals. They provide additional information necessary to assemble the various components into a complete egg gathering system.

Rod Conveyor Installation	.ME894
12" Cross Conveyor Installation Manual	.ME626
18" & 24" Cross Conveyor Install. Manual	.ME836
DURA-CAGE Cage Installation Manual	.MC689
ULTRAFLO Cage Feeding System	.MC656

Please fill in the following information about your egg gathering future reference	
Distributor's Name	
Distributor's Address & Phone	
Collector Specifications	Date of Purchase
System Specifications (model, length, tiers.)	
Cross Conveying System Specifications	

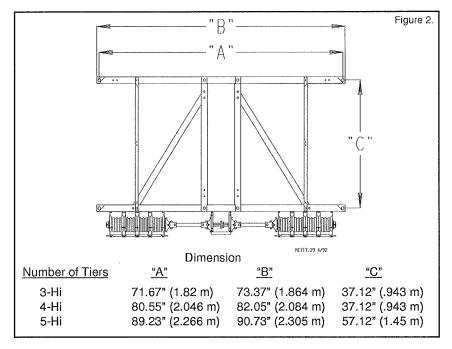
Planning the System

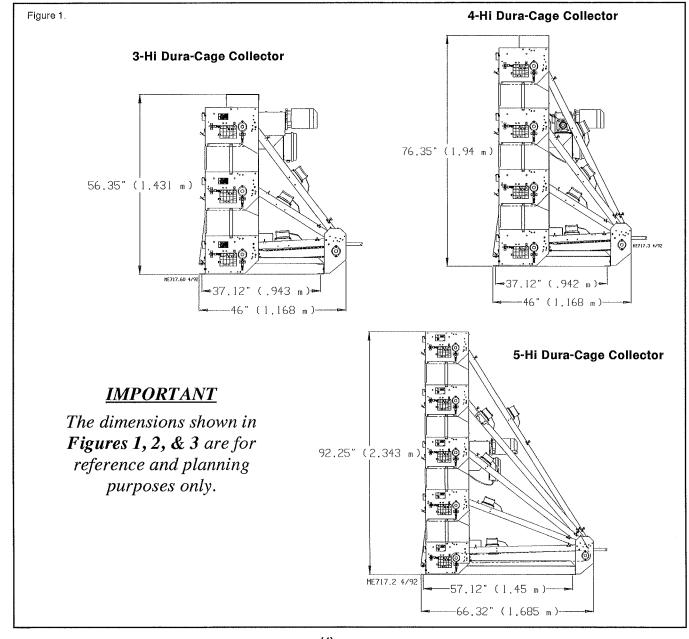
Dimensions are shown for the 3-Hi, 4-Hi, & 5-Hi DURA-CAGE Egg Collectors in Figures 1, 2, & 3. Use these dimensions when planning the collector and cross conveyor installation.

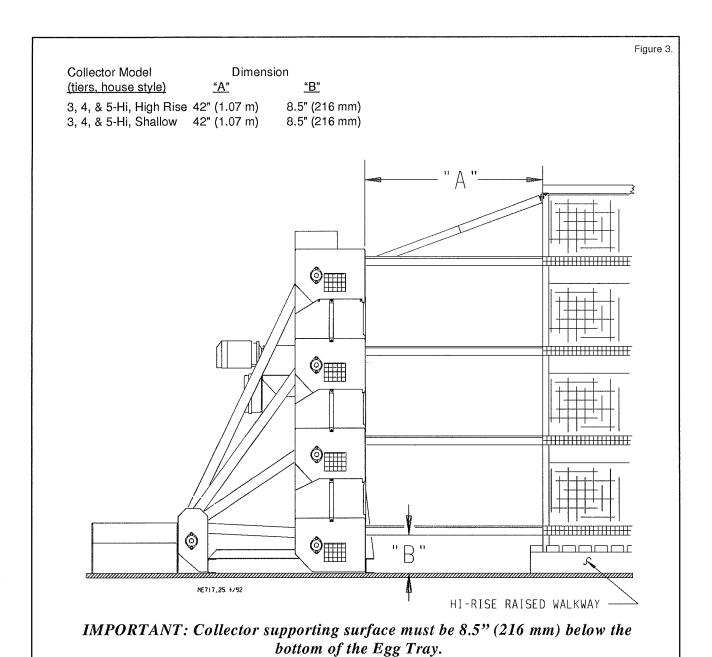
3-Hi & 4-Hi DURA-CAGE Egg Collectors require a minimum of 48" (1.72 m) to move the unit through a door of an existing building.

5-Hi DURA-CAGE Egg Collectors require a minimum of 68" (1.72 m) to move the unit through a door of an existing building.

DURA-CAGE Collectors require anchor spacing as shown in Figure 2. Note that this spacing is different than the required spacing for cage floor supports. Figure 3 shows placement and dimensional requirements for installing collectors to cage row.

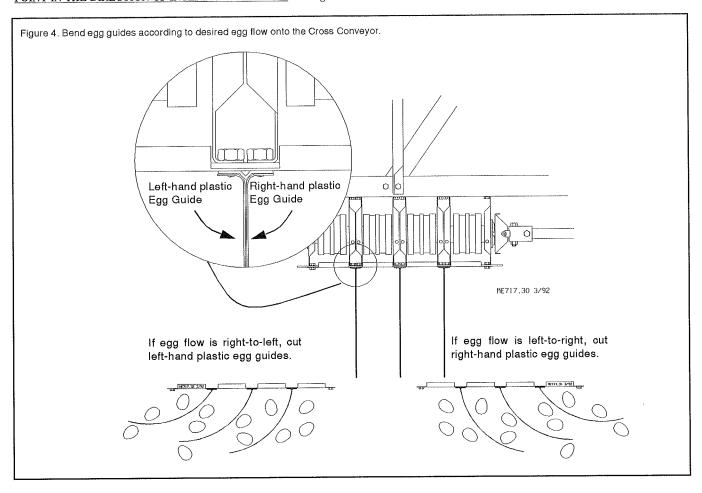






Installation of the Plastic Egg Guides

Before installation of the collectors, prepare the egg guides on the front of the collector according to the intended direction of egg flow onto the cross conveyor. Each collector is manufactured with plastic egg guides installed for egg flow in either direction. Cut off plastic egg guides that <u>DO NOT POINT IN THE DIRECTION OF INTENDED EGG FLOW.</u> See Figure 4.



Position the Egg Collectors

Position each Egg Collector on the supports, in roughly its final position. Observe the collector dimensions and placement requirements carefully when positioning the unit.

Dimensions are shown in Figures 1, 2, and 3 for reference purposes in planning and installing the equipment.

IT IS IMPORTANT TO ALIGN THE FRONT OF THE COLLECTORS. Otherwise, installation of the cross conveyor equipment will be difficult.

Determine the desired location of the collector fronts, then snap a chalk line and use it to position the egg collectors.

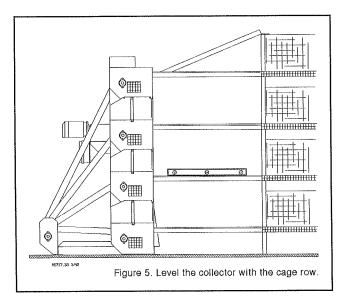
Optional alignment method: Install the "outside" collectors, first. Stretch a line between these collector fronts. Align the remainder of the collectors to this line.

Each collector must be centered with its cage row. This can be accomplished by stretching a line from the center wire of the cage egg tray (near the second "A" frame) to the Entrance Tray in the module. Mark this position and repeat procedure on the other side of the collector. Divide the difference between the two marks to center the collector as accurately as possible.

Temporarily install the bottom line egg trays and tray extensions on both sides of each collector. The egg trays are shipped in the egg collector assembly kit.

Use a carpenter's level and shims (shims are provided in the assembly kit) to level each machine front-to-back and side-to-side. See Figure 5.

Drill holes for lag screws and anchor the collectors securely after they are level and in their final position.



Install Egg Trays

Install the egg trays and extensions connecting the cage row to the collector. Tabs on the egg trays hook under cage egg tray. See Figure 6. NOTE: Bend the tip of the egg tray slightly to "nose" it under the egg tray wire. Bend the tabs to hold egg tray to the cage wire.

Install Egg Tray Support Wires as shown in Figure 7.

Use 10-24 machine screws and hex nuts to attach the trays to the collector entrance. The Belt Riser attaches inside the Egg Tray on the aisle side, using two 10-24 machine screws. See Figure 8.

Fasten the egg sweep to the egg tray as shown in Figure 8. The sweeps help single file the eggs as they go into the de-escalator.

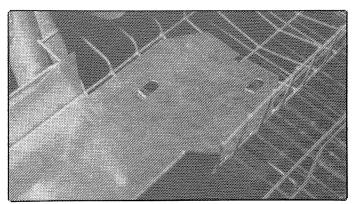


Figure 6. Egg Tray fastened to Egg Tray Wire.

Egg Tray Extension Installation

Egg Tray Extensions are used when the Egg Trays will not reach the de-escalator as shown in Figure 9.

- Hook the Egg Tray to the cage Egg Tray, then fasten the Egg Tray
 Extension to the collector.
- 2. Lay the Egg Tray into the Egg Tray Extension.

Important: <u>Do not</u> bolt the Egg Tray and Egg Tray Extension together using the holes in the bottom of the tray. Instead, the trays should be bolted together up on the sides of the trays. Use four 10-24 truss head screws and nuts to secure the trays together (two at each joint.)

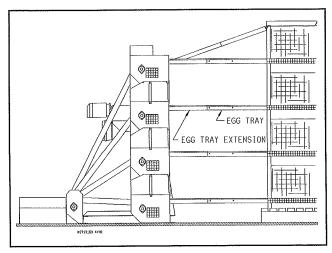


Figure 9. Egg Tray Extensions and Collector End Framing diagram.

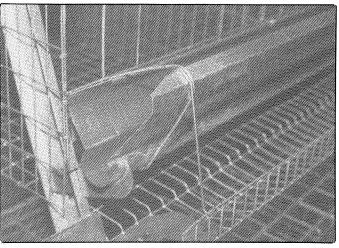


Figure 7. Egg Tray Support Wire.

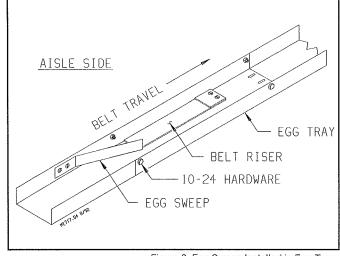
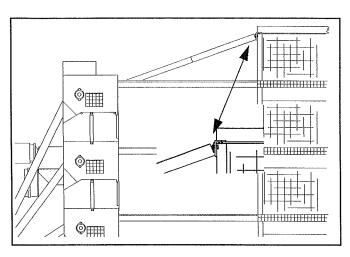


Figure 8. Egg Sweep Installed in Egg Tray.

Install the Collector End Framing

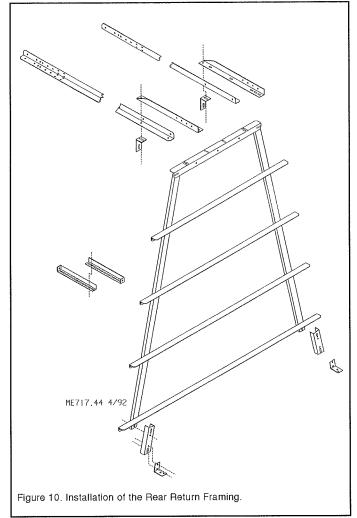
Installation of the collector end framing for the 3-Hi, 4-Hi, & 5-Hi Dura-Cage Collector is the same. Install the framing as shown in Figure 9. Place washers over the slots in the end framing during framing assembly.

Important: Use (2) bolts to fasten each set of braces together. This prevents braces from bending at the joints.



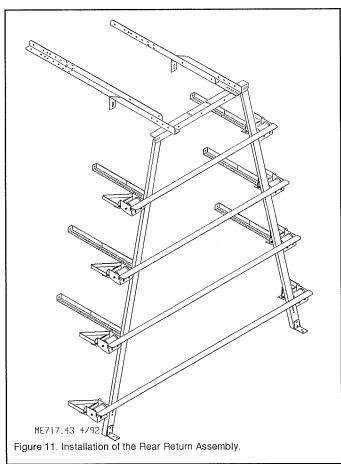
Rear Return Framing Installation

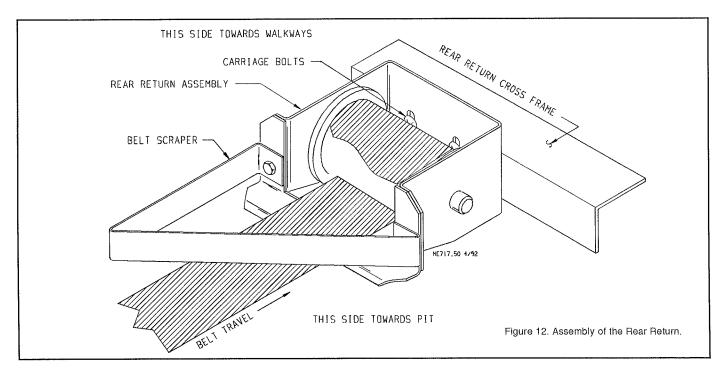
Assemble the rear return framing as shown in Figure 10. Attach the framing to the cage floor supports.



Installing Rear Return Assemblies

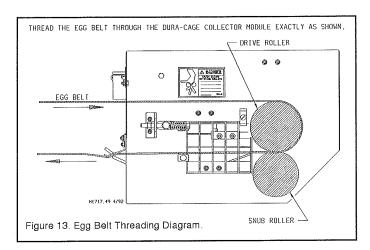
The Rear Returns are installed on the rear return framing as shown in Figure 11. The Rear Return Assembly should be installed so that he belt pulls up against the belt scraper as it comes out from beneath the egg tray. See Figure 12. Be sure to install the Rear Returns on the correct side of the cage row. The belt scrapers are angled so that the scrapings are pushed toward the pit area. See Figure 12.



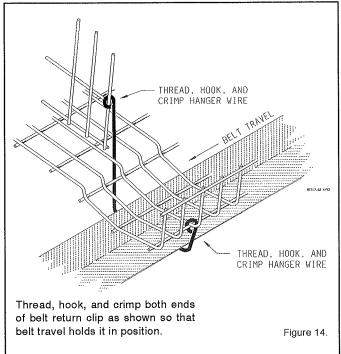


Installation of the Egg Belt

- Unroll the egg belt in the egg tray. Thread the belt around the Rear Return Roller and pull the belt back to the collector beneath the egg tray.
- 2. Thread the egg belt through the collector module, as shown in Figure

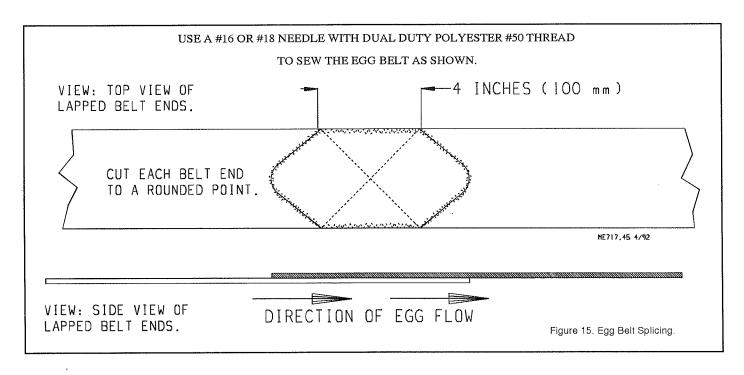


Install Belt Return Clips on all cage rows after the belt is installed. Install a Belt Return Clip ONE CAGE PARTITION FROM EACH END OF THE CAGE ROW; then, beginning at the Collector end of the line, install a clip at the first partition past each cage floor support. Install Belt return Clips on all cage rows. Belt return clips should be installed so that belt travel holds it in position. See Figure 14 for proper installation.



NOTE: Do not install Belt Return Clips below a watering cup, instead, install it on the next partition.

- 4. Stretch the belt by hand. The belt should be stretched 1/2% of the belt length, or 6" (152 mm) of stretch per 100' (30 m) of belt.
- 5. Cut and sew the belt.
 - A. Trim the belt to a rounded point. See Figure 15.
 - B. Overlap the ends of the belt 4" (100 mm), as shown in Figure 15. There must be four inches (100 mm) of FULL WIDTH BELT OVERLAP.
 - C. Sew the belt. Be sure the two ends are in line so that the belt will not be crooked. BE SURE THE ENDS OF THE BELT ARE COMPLETELY STITCHED DOWN!
 - D. Apply PVC glue over the stitched down ends of the belt to help prevent the belt from unraveling.



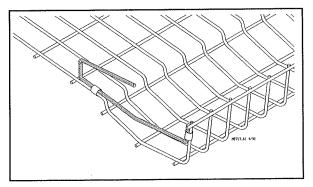


Figure 16. Egg Tray Brace Installation.

Install Egg Sweep Braces and Egg Sweep Cross Braces

Install four egg sweep braces and two cross braces on each collector, as shown in Figures 17 and 18. Use hardware as shown.

Install the Egg Sweeps

Install plastic egg sweeps as shown in Figure 17. Only attach to the cross brace at the two locations shown. The bottom of the plastic egg sweeps should be 5/8" (15 mm) above the cross conveyor.

Rod Transfer Kit

The Rod Transfer Kit is used with the Dura-Cage Collector when a rod-type cross conveyor is used.

See the instructions packed with the Rod Transfer Kit for proper installation.

Install the Controls

Cross conveyor system and flow control installation is covered in the applicable installation manual. The manual also contains information for installation and field wiring of egg collector controls. All electrical wiring should be done by a qualified electrician in accordance with local and National Electrical Codes. Ground all electrical equipment.

Three Phase Controls

On collectors with three phase motors, the motor voltage and motor rotation must be set by the electrician at the job site.

Egg Tray Brace Installation

Install an Egg Tray Brace at the rear return end of the cage egg tray. Use extra ferrules to attach the brace as shown in Figure 16.

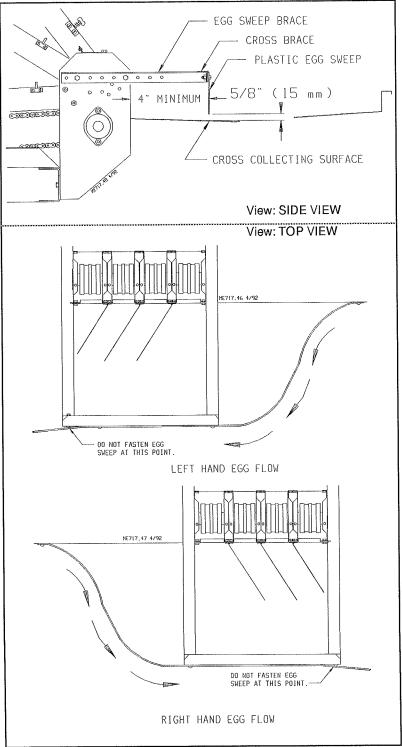


Figure 17. Install Cross Brace at each de-escalator

Egg Counter Control Box

Use water-tight connectors on the Counter Junction Box and Counter Box Assembly. The reliability of the counters depends on a dry, clean environment inside the boxes. Note: The warranty is voided if water tight connectors are not used.

<u>3-Hi DC Collectors</u> require a 20 gauge, 7-conductor cable that meets local and national electric codes is recommend to connect the Counter Junction Box to the Counter Box Assembly.

4-Hi DC Collectors require a 20 gauge, 9-conductor cable that meets local and national electric codes is recommend to connect the Counter Junction Box to the Counter Box Assembly.

<u>5-Hi DC Collectors</u> require 20 gauge, 5-conductor & 6-conductor cables that meets local and national electric codes, to connect the Counter Junction Box to the Counter Box Assembly.

CAUTION When securing the electrical wires to the building or equipment, do not:

- --kink the wire
- --place it against sharp objects
- --short the wire by installing metal straps or staples so that they cut the insulation
- --route the wires anywhere the birds can reach them.

The counters may be reset by pressing the red button on the front of each counter. DO NOT RESET THE COUNTER WHILE THE COLLECTOR IS OPERATING.

Use only Dura-cell ("D" size) batteries for replacement of the power supply. Replace the batteries in the position indicated by the decal.

Recommendations & Guidelines For Operation

The control switch for the egg collector and cross conveyor power units has three positions; OFF, MANUAL, and REMOTE.

Manual operation permits each collector to operate independently. This is used most commonly for servicing the equipment.

Remote operation ties the egg collectors and cross conveyor equipment into the master control panel. Individual collectors and the cross conveyor can start and stop as needed. Flow controls installed on the cross conveyor tray control collector operation according to the volume of eggs.

Operation of the cross conveyor is controlled by the master switch on the Master Control Panel.

Maintenance Recommendations

! IMPORTANT!

- 1. Ground all electrical equipment.
- All electrical wiring should be done by a qualified electrician in accordance with Local and National Electrical Codes.
- 3. Use wire of adequate size.
- 4. Keep all guards and shields in place.
- 5. Disconnect electrical power before inspecting or servicing the equipment!

DAILY MAINTENANCE

- Before operating the equipment, check all lines to be sure nothing is blocking the egg belts.
- Observe the Rear Returns while making daily rounds. All belts should track straight through the Rear Returns. Adjust if necessary.
- Turn each machine to "Manual" switch position to check for blown fuse/the fuse is blown if the indicator lights.
- 4. Check flow controls for satisfactory operation.
- 5. Clean build-up from around transition pieces.

WEEKLY MAINTENANCE

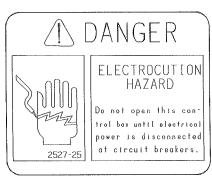
- Check Egg Collector De-Escalators for tracking and alignment. Adjust if necessary.
- Clean the collector carefully. Do not allow dirt or feathers to build up on the collector equipment.

MONTHLY MAINTENANCE

- Check for dirt build-up around the collector power unit. Clean as needed.
- Check for dirt build-up under the cross conveyor belt in front of each machine. Clean as needed.
- Clean idler end framing.
- 4. Oil drive chains on the collector.
- Adjusting the Tracking. If an Egg Belt tracks incorrectly, loosen the bolts holding the bearing in place on the side of the Modules. Since the belt will track in the direction it's tightest, adjust the bearing accordingly and tighten bearing bolts.

Wiring Notes-

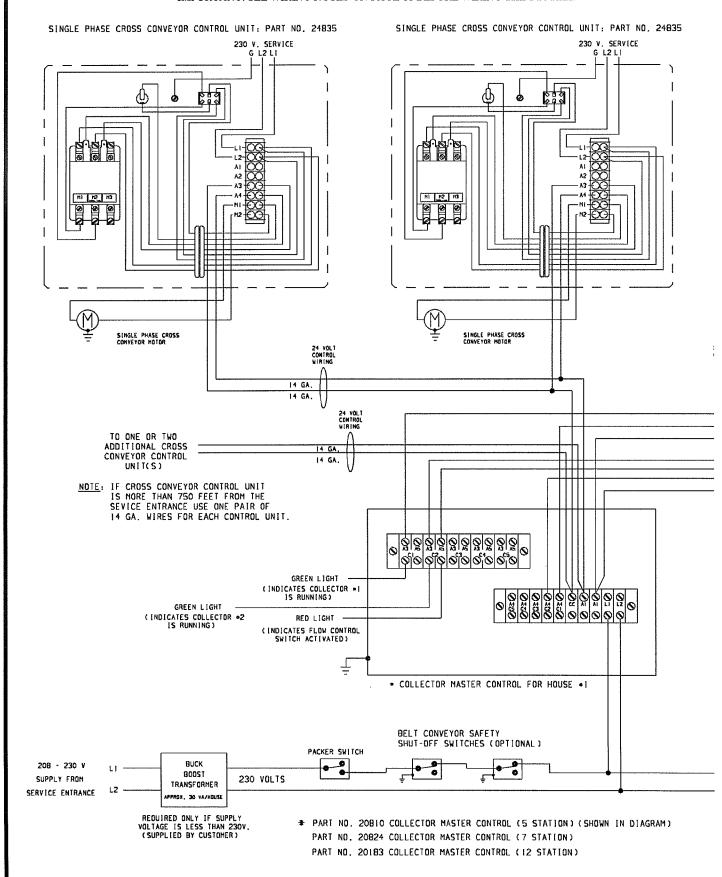
- All electrical wiring must be done by a qualified electrician in accordance with local and national electrical codes.
- 2. Ground all non-current-carrying metal parts to guard against electrical shock.
- 3. Use 14 gauge wire for all 24 volt control circuit wiring.
- If Flow Controls are NOT used, (3) 14 gauge wires (A1, A3, A4) are required between the Collector Master Control and each Collector Control Unit.
- If Flow Controls are used, (4) 14 gauge wires (A1, A3, A4, A5) are required between the Collector Master Control and each Collector Control Unit.
- 6. Two 14 gauge wires (CC, A1) are required between the Collector Master Control and the Cross Conveyor Control Units. If the Cross Conveyor Control Units are less than 750 feet (228 m) from the service entrance. If the Cross Conveyor Control Unit is more than 750 feet (228 m) from the service entrance, use one pair of 14 gauge wires for each control unit.

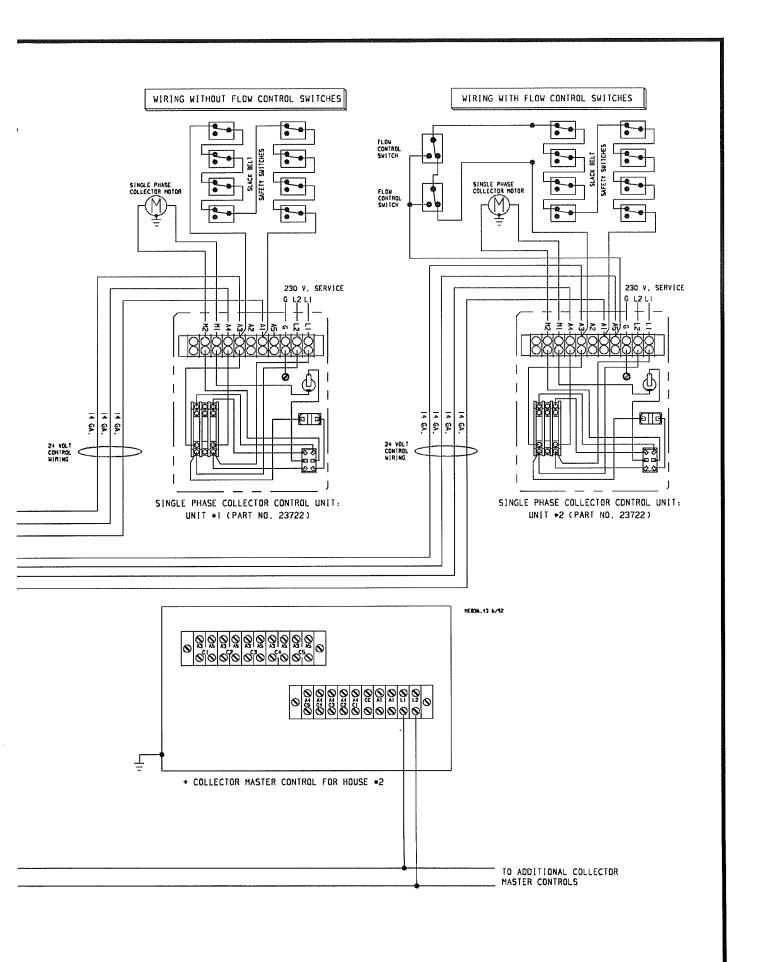


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System Wiring Diagram (Single-Phase)

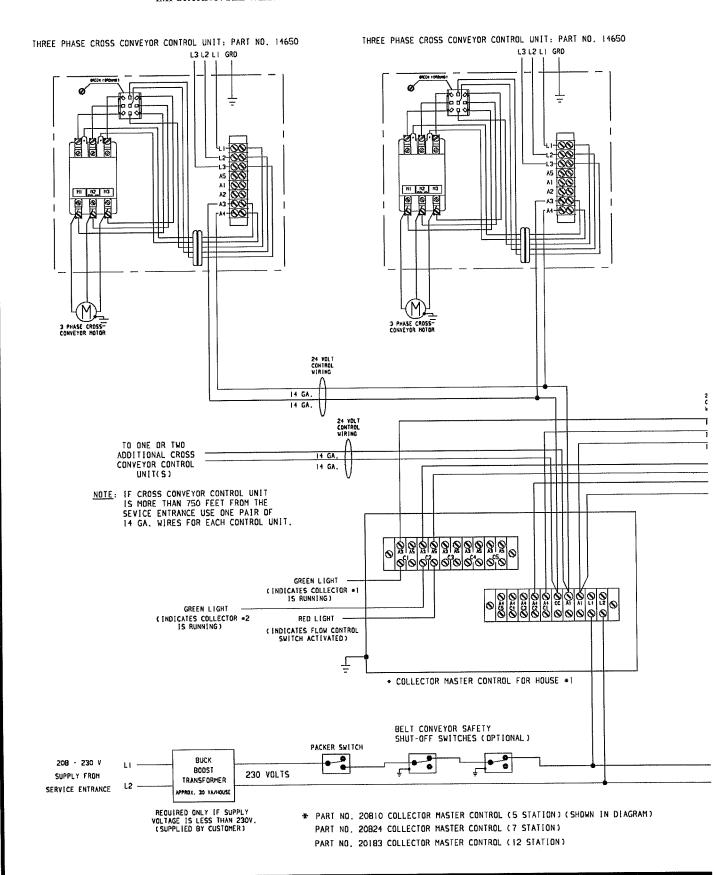
IMPORTANT: SEE WIRING NOTES ON PAGE 11 BEFORE WIRING THE SYSTEM.

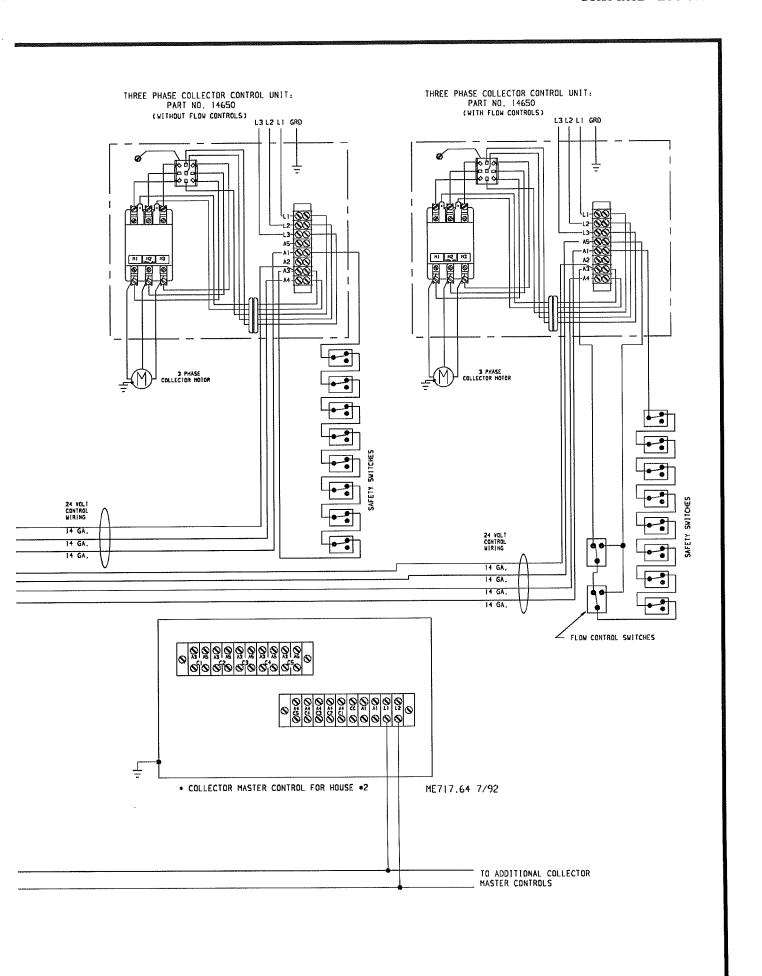


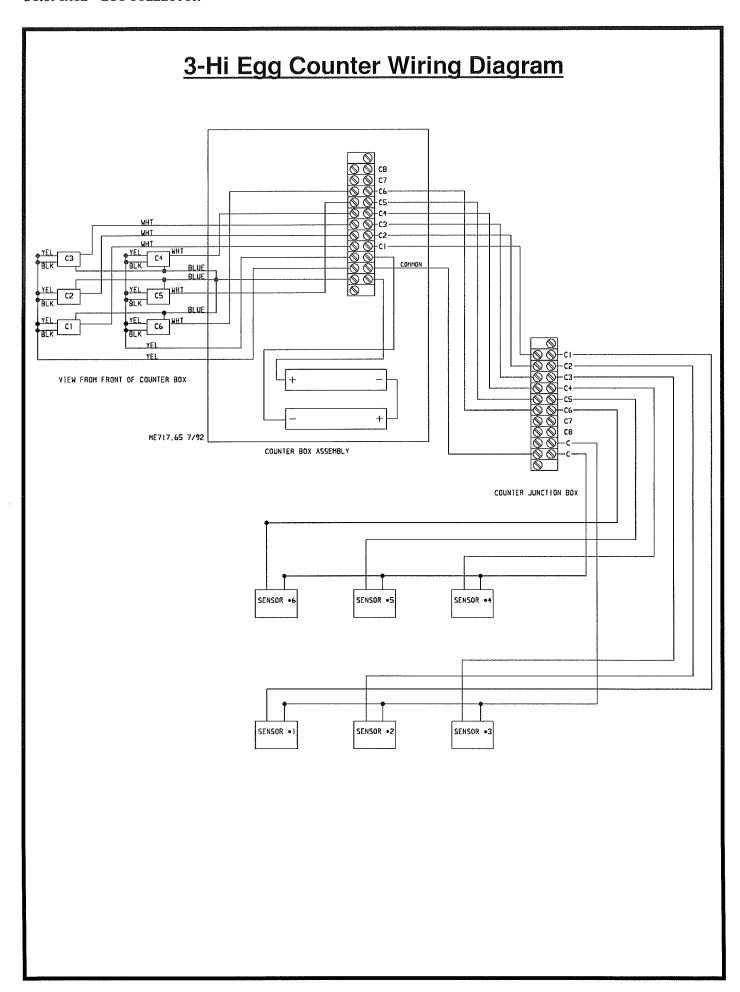


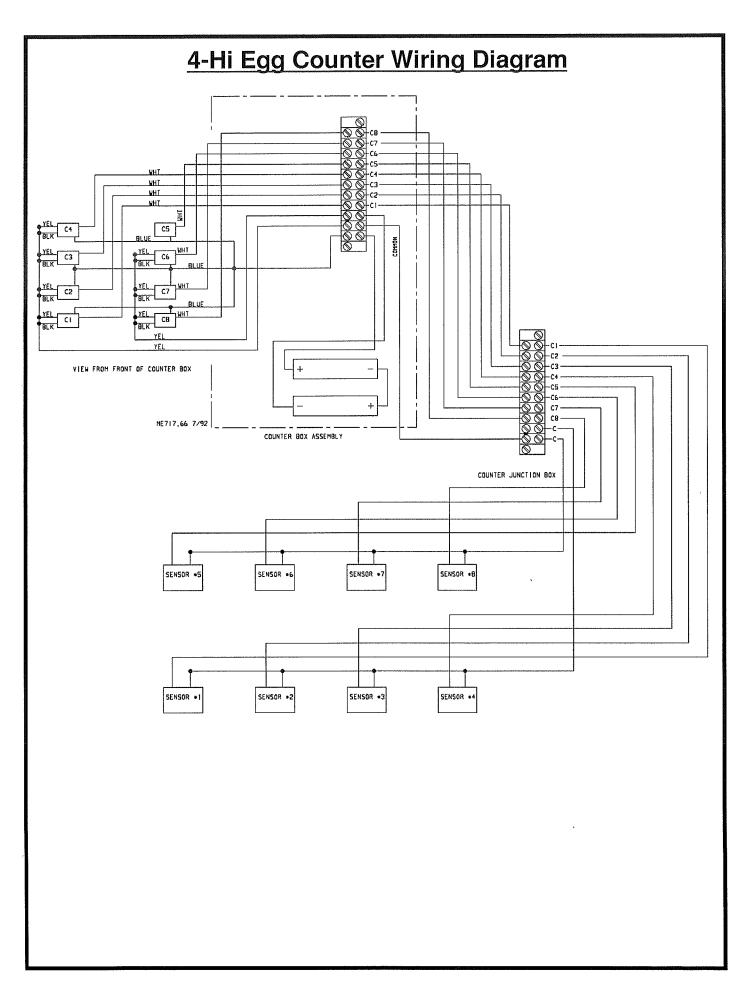
System Wiring Diagram (3-Phase)

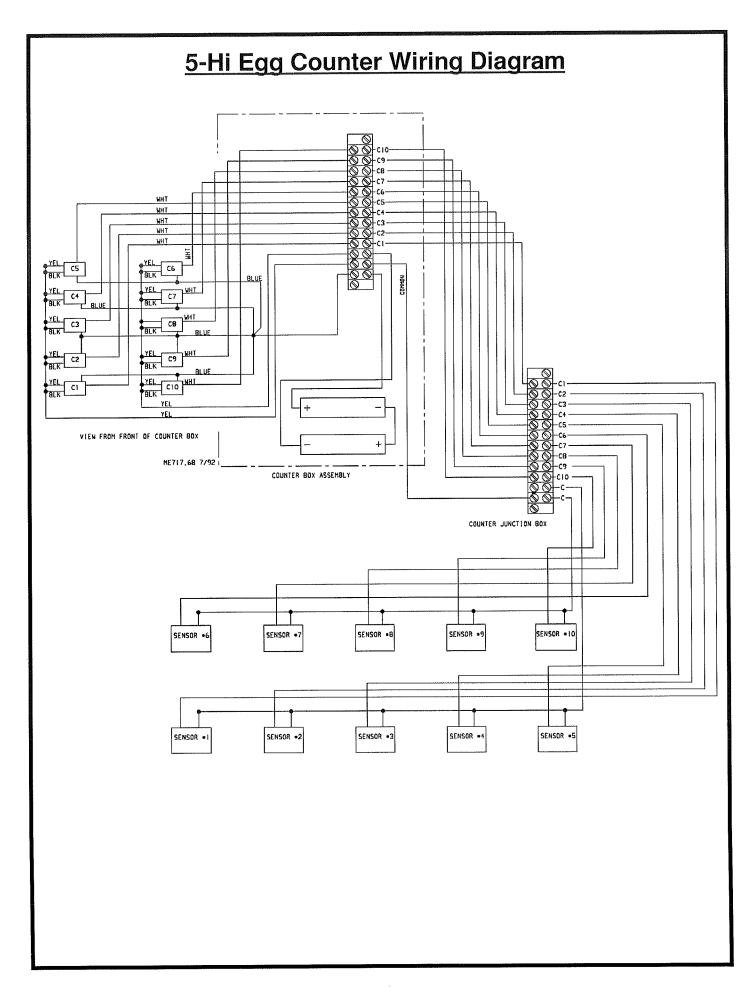
IMPORTANT: SEE WIRING NOTES ON PAGE 11 BEFORE WIRING THE SYSTEM.

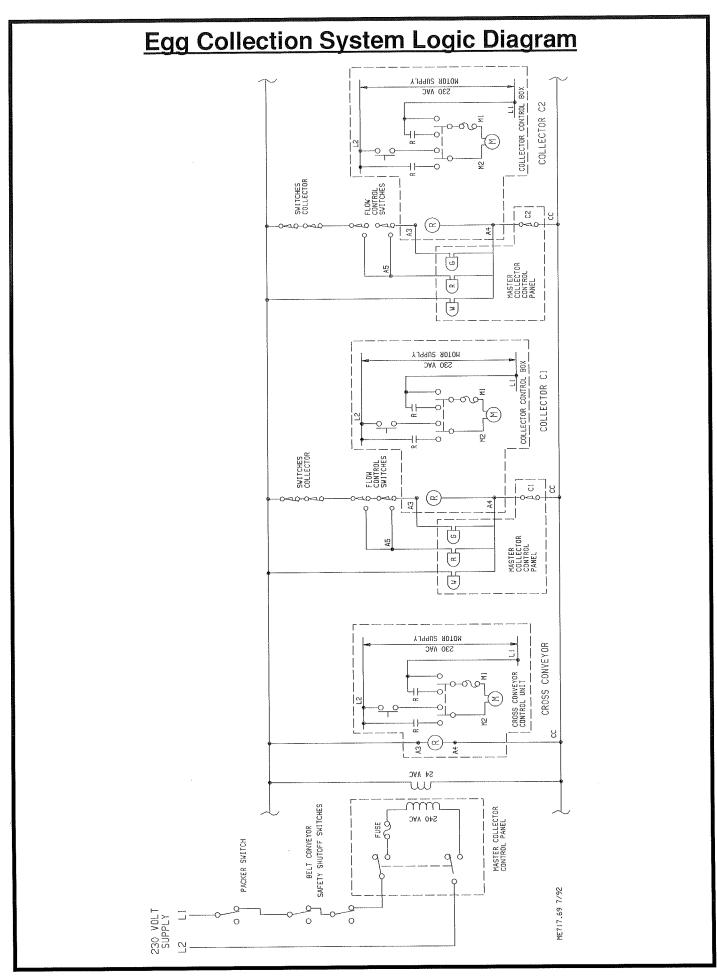


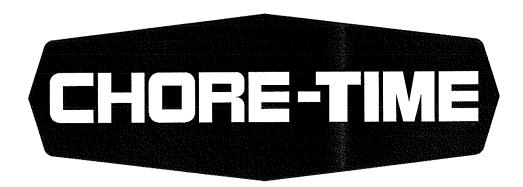












DURA-CAGE Egg Collector Parts List

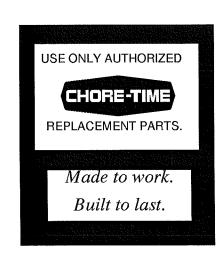
3-Hi • 4-Hi • 5-Hi

TABLE OF CONTENTS

TOPIC	PAGE NO.
Collector Assembly Part Numbers	21
Single Phase Egg Collector Control Unit	22
Three Phase Egg Collector Control Unit	22
Egg Counter	23
Collector End Framing Kit	23
Counter Box Assembly	24
Junction Box Assembly	25
Egg Collector Assembly Kit	26
Miscellaneous Components	26
Rear Return Assembly	27
24148-1 Rod Transfer Kit	27
Collector Modules	28
3-Hi Egg Collector	29-33
4-Hi Egg Collector	34-38
5-Hi Egg Collector	39-43
3-Hi Rear Return Framing	44
4-Hi Rear Return Framing	45
4-Hi Rear Return Framing	46
-	

ORDERING INFORMATION

- All parts should be ordered by PART NUMBER and DESCRIPTION as given in the PARTS LIST.
- Parts are always billed when shipped. If a returned part is defective, and within warranty period, credit will be allowed against billing.
- 3. CHECK SHIPMENT FOR DAMAGES AND SHORTAGES.
- All claims for damages or shortages resulting from shipment must be filed with the carrier.



COLLECTOR ASSEMBLY PART NUMBERS

PART NUMBER	<u>TIERS</u>	BELT	<u>MOTOR</u>	COUNTERS	<u>SHAFTS</u>
24160-1	3-Hi	4"	1-Phase	w/o Counters	Steel Shafts
24160-2	3-Hi	4"	1-Phase	w/ Counters	Steel Shafts
24160-3	3-Hi	4"	3-Phase	w/o Counters	Steel Shafts
24160-4	3-Hi	4"	3-Phase	w/ Counters	Steel Shafts
24160-5	3-Hi	4"	1-Phase	w/o Counters	Stainless Steel Shafts
24160-6	3-Hi	4"	1-Phase	w/ Counters	Stainless Steel Shafts
24160-7	3-Hi	4"	3-Phase	w/o Counters	Stainless Steel Shafts
24160-8	3-Hi	4"	3-Phase	w/ Counters	Stainless Steel Shafts
14900-1	4-Hi	4"	1-Phase	w/o Counters	Steel Shafts
14900-2	4-Hi	4"	1-Phase	w/ Counters	Steel Shafts
14900-3	4-Hi	4"	3-Phase	w/o Counters	Steel Shafts
14900-4	4-Hi	4"	3-Phase	w/ Counters	Steel Shafts
14900-5	4-Hi	4"	1-Phase	w/o Counters	Stainless Steel Shafts
14900-6	4-Hi	4"	1-Phase	w/ Counters	Stainless Steel Shafts
14900-7	4-Hi	4"	3-Phase	w/o Counters	Stainless Steel Shafts
14900-8	4-Hi	4"	3-Phase	w/ Counters	Stainless Steel Shafts

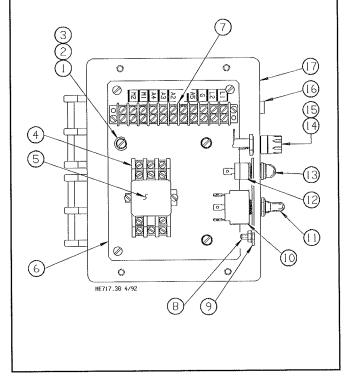
The Collectors listed above may be ordered without the motors supplied, by adding the suffix "LM" to the part number. Example: 24160-1LM DURA-CAGE 3-Hi Egg Collector without Motor.

Note: The Collector will be wired for whichever phase is specified by the part number ordered.



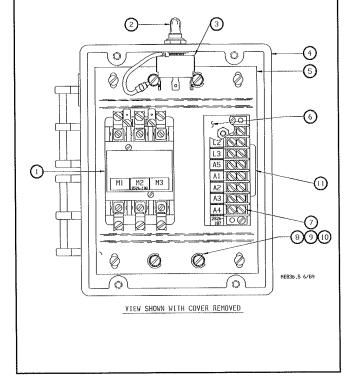
23722 Single Phase Egg Collector Control Unit

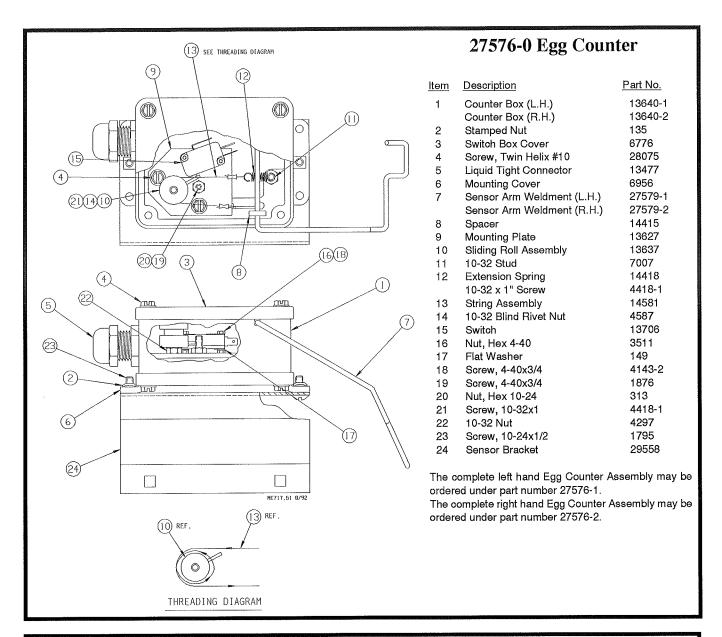
<u>ltem</u>	<u>Description</u>	<u>Part No.</u>
1	10-32 Ground Screw	4968
2	Cup Washer	5775
3	#10 Ext. Lockwasher	305
4	Relay Socket	20480
5	Control Relay	20479
6	Component Plate	24708
7	Terminal Block	7347
8	10-24 Hex Nut	4297
9	Ground Plate	24415
10	Toggle Switch	20135
11	Toggle Switch Boot	1739
12	Momentary Switch	5785
13	Push Button Boot	20784
14	Fuse Holder	24431
15	Slow Blow Fuse	20130
16	1/2" NPT Plug	24458-2

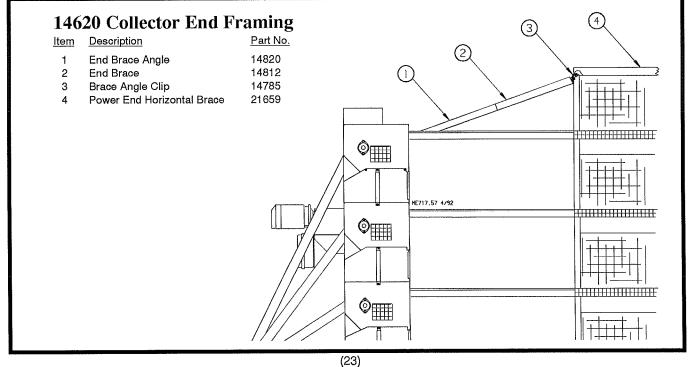


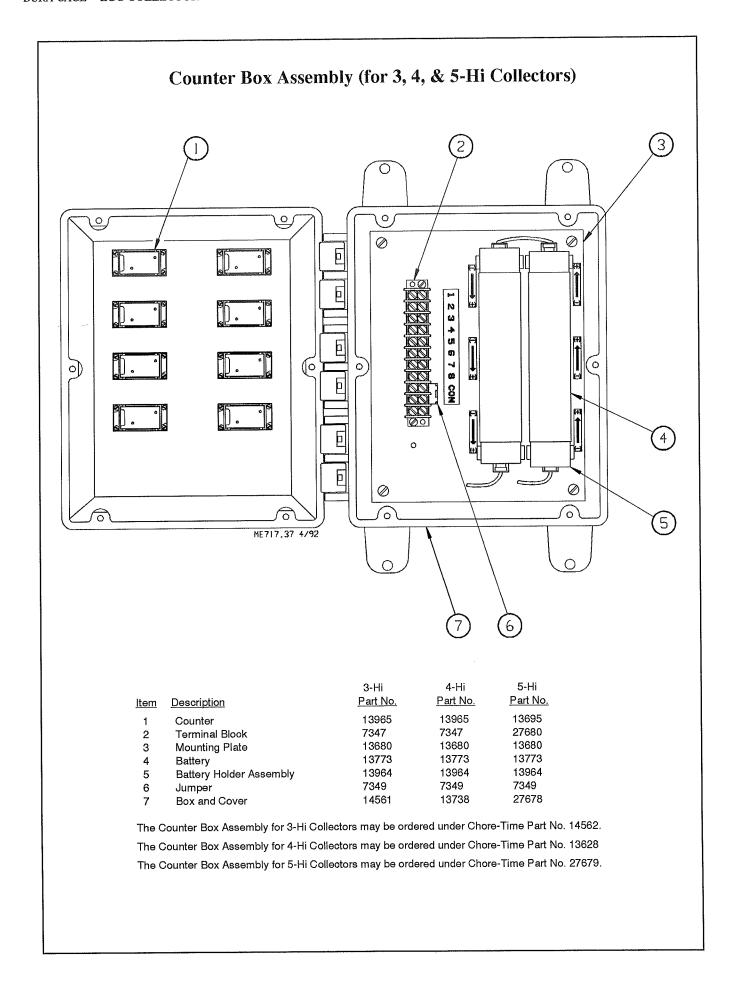
14650 Three Phase Egg Collector Control Unit

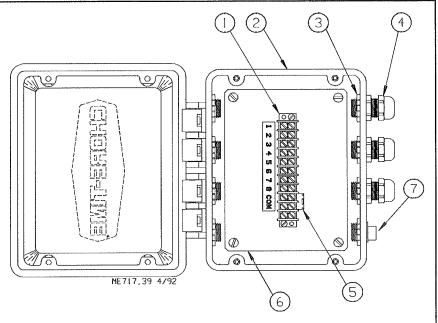
<u>Item</u>	<u>Description</u>	<u>Part No.</u>
1	Contactor	20837
2	Toggle Switch Boot	1739
3	Toggle Switch	14385
4	Control Box	14392
5	Mounting Plate Support	14391
6	Terminal Bracket	14383
7	Terminal Block	7270
8	#10-32 Ground Screw	4968
9	Cup Washer	5775
10	#10 External Lockwasher	305
11	Grommet	8514











Junction Box Assembly (3 & 4-Hi)

<u>ltem</u>	Description	<u>Part No.</u>
1	Terminal Block	7347
2	Junction Box	13971
3	1/2" Conduit Locknut	3357
4	1/2" Liquid Tight Connector	23779
5	Jumper	7349
6	Component Board	23720
7	Pipe Plug	24458-2

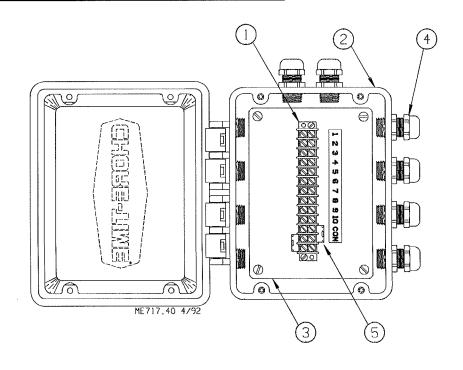
The complete 3-Hi Junction Box Assembly may be ordered under Chore-Time Part No. 14577.

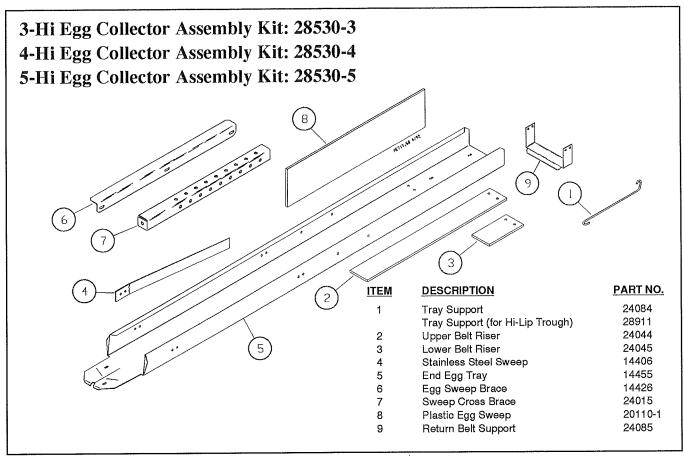
The complete 4-Hi Junction Box Assembly may be ordered under Chore-time part nO. 13973.

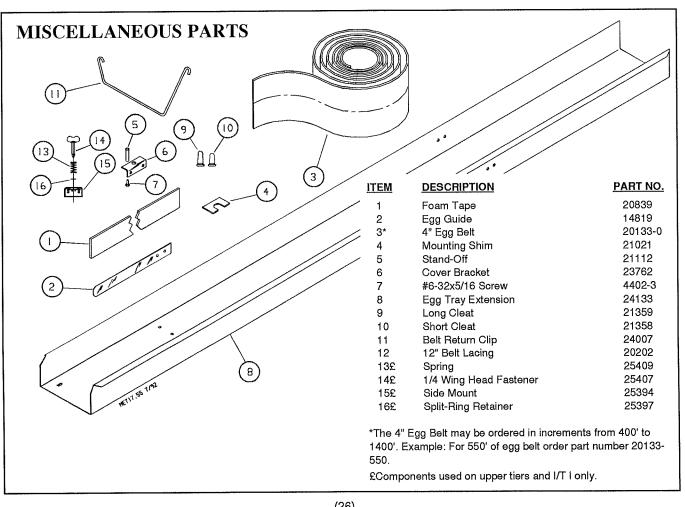
Junction Box Assembly (5-Hi)

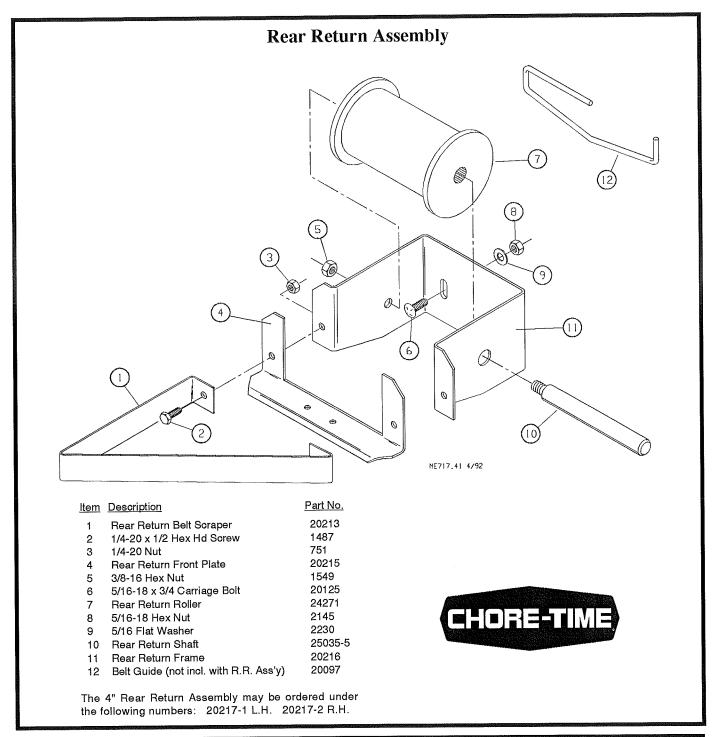
<u>ltem</u>	<u>Description</u>	<u>Part No.</u>
1	Terminal Block	27680
2	Junction Box	27166
3	Component Board	23720
4	1/2" Liquid Tight Connector	23779
5	Jumper	7349

The complete Junction Box Assembly may be ordered under Chore-Time Part No. 25910.

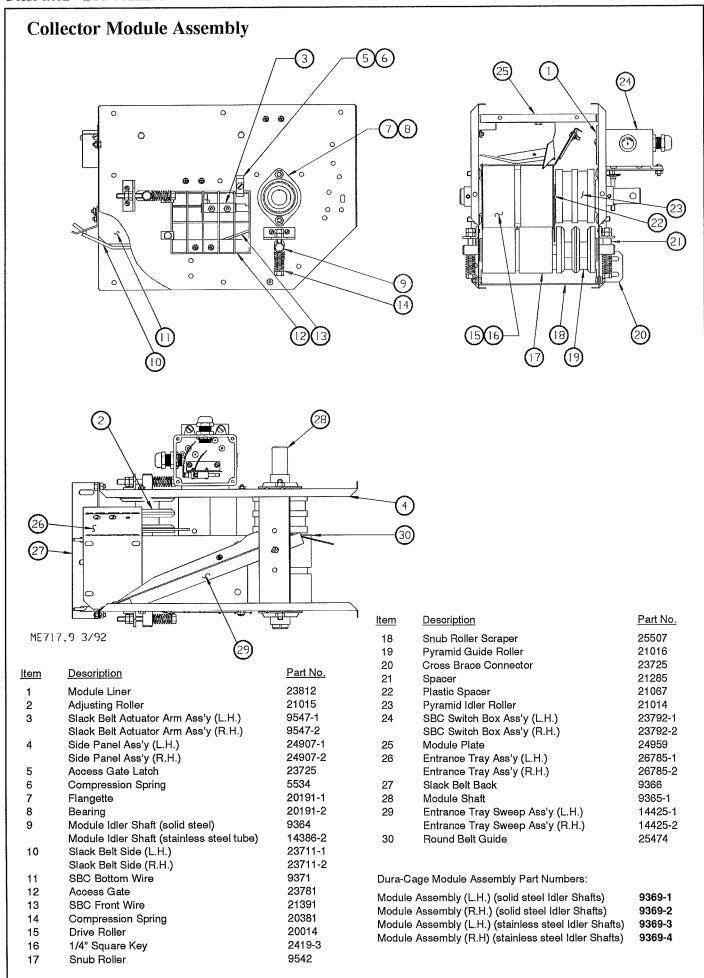


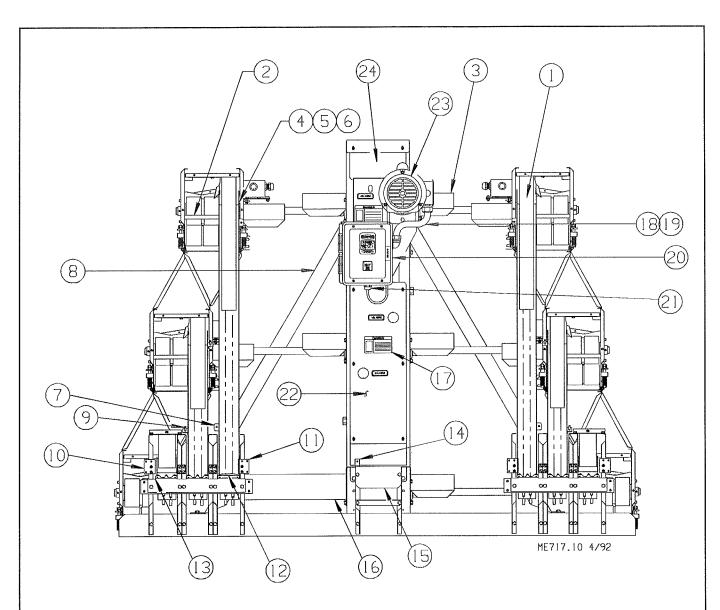






Rod Transfer Kits for 3, 4,	& 5-Hi Dura	-Cage Collectors
<u>Description</u>	Part No.	
Rod Transfer (3-Hi Dura-Cage)	14538-6	
Rod Transfer (4-Hi Dura-Cage)	14538-5	
Rod Transfer (5-Hi Dura-Cage)	14538-17	
Rod Transfer Kit (including Rod Transfer and 3-Hi DC Collector Rod Transfer Kit: 24148-6 4-Hi DC Collector Rod Transfer Kit: 24148-5 5-Hi DC Collector Rod Transfer Kit: 24148-1		WE IT 22 N 192





3-Hi Collector Assembly--Front View

<u>ltem</u>	<u>Description</u>	<u>Part No.</u>	<u>ltem</u>	<u>Description</u>	Part No.
1	Upper Egg Cushion	8850	14	Sweep Brace	13952
2	Module Chute Spacer	14043	15	Escalator Drive Cover	23746
3	Connector Cover	23773	16	Connector Cover	14789
4	Upper Module Guide	23831	17	CAUTION Decal	2527-10
5	Foam Tape	20839	18	Conduit Assembly	14654
6	Spacer	23760	19	1/2" Conduit Locknut	3357
7	Side Mount	25394	20*	Control Box Assembly (Single Phase)	23722
8	Housing Back Brace (L.H.)	24145-1		Control Box Assembly (Three Phase)	14650
	Housing Back Brace (R.H.)	24145-2	21	Liquid Tight Connector	23779
9	Standoff Bracket Assembly	27514	22	Housing Cover Weldment	23741
10	Outer Lower Chute Side	9808	23	1/4 H.P. Motor (Single Phase)	20466
11	Inner Lower Chute Side	9807		1/2 H.P. Motor (Three Phase)	25333
12	Transition Piece	21051	24	Upper Housing Cover	14814
13	Spacer	21607			

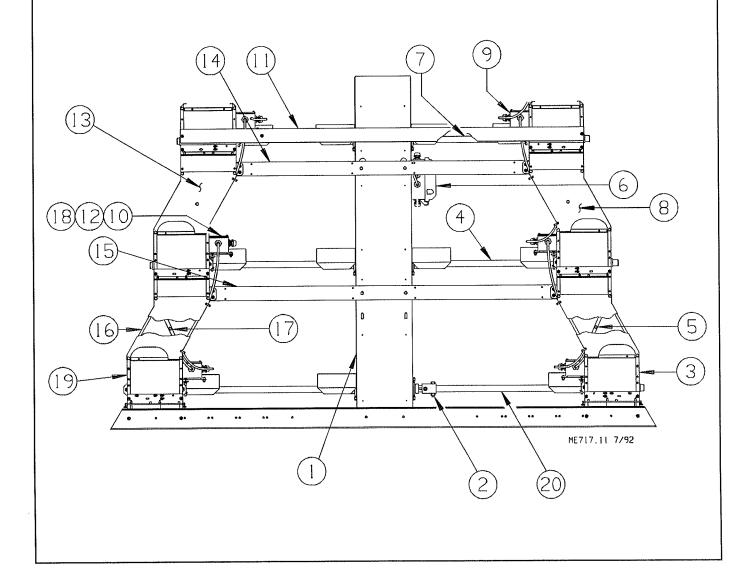
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Top Back Brace

3-Hi Collector Assembly--Back View

<u>ltem</u>	<u>Description</u>	<u>Part No.</u>	<u>ltem</u>	<u>Description</u>	<u>Part No.</u>
1	Drive Housing Assembly	24139	12	Gasket	6777
,	1" Coupling	20269	13	Module Back Brace (R.H.)	14616-2
3	Module Assembly (L.H.) (steel shafts)	9369-1	14	Top Cross Brace	14548
· ·	Module Assembly L.H.) (stainless shafts)		15	Cross Brace	14549
4	1" Connecting Shaft	21049-23	16	Module Support	14782
5	Module Brace (L.H.)	14614-1	17	Module Brace (R.H.)	14614-2
6	Junction Box	13973	18	Twin Helix Screw	6890
7	1" Connecting Shaft	21049-6	19	Module Assembly (R.H.) (steel shafts)	9369-2
8	Module Back Brace (L.H.)	14616-1		Module Assembly (R.H.) (stainless shafts)	9369-4
9	1/2" N.P.T. Hole Plug	23791	20	1" Connecting Shaft	21049-9
10	Switch Box Cover	6776			

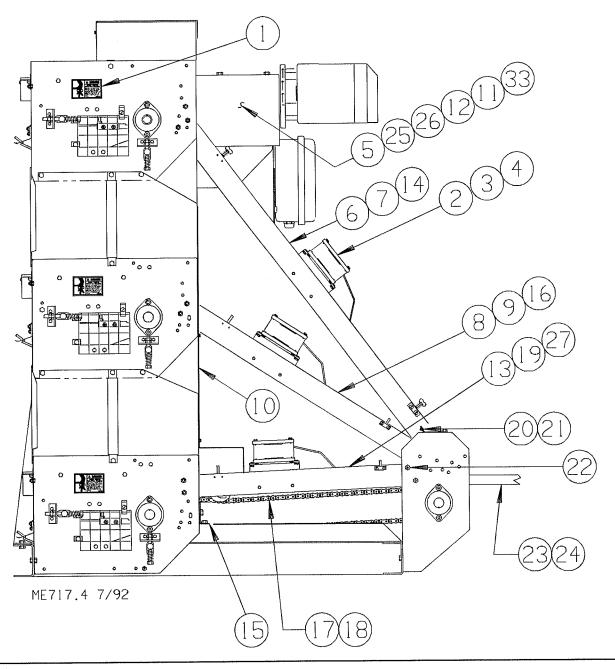
14551



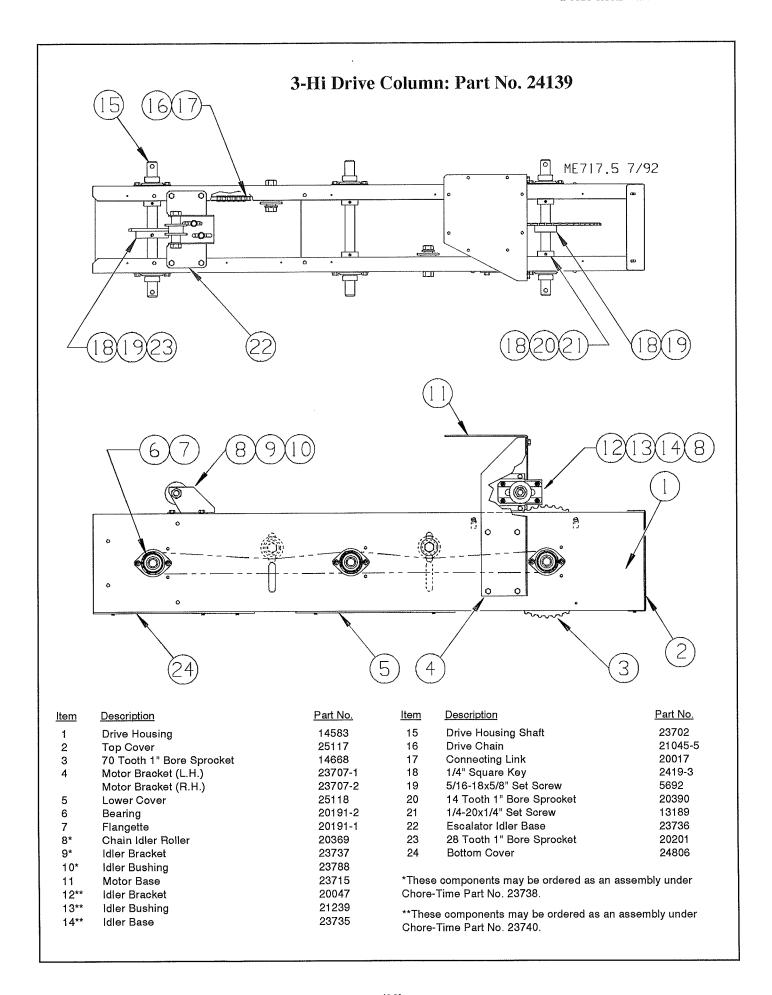
3-Hi Collector Assembly--Side View

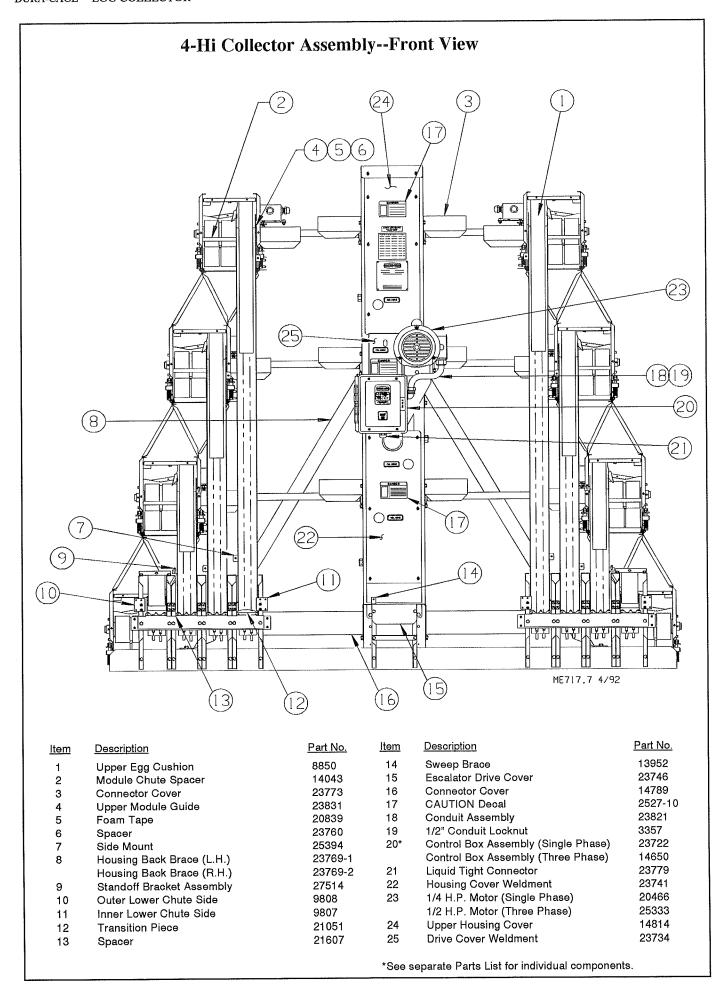
<u>ltem</u>	<u>Description</u>	Part No.	<u>ltem</u>	<u>Description</u>	Part No.
1	Danger Decal	2527-42	15	Module Cross Frame	24144
2*	Counter Box Assembly (LH.)	27576-1	16	Egg Chute Cover (IT)	14634
3*	Counter Box Assembly (R.H.)	27576-2	17	Drive Chain	21045-4
4	Steel Spacer	21470	18	Connecting Link	20017
5	Drive Cover Weldment	23734	19	Escalator Belt Assembly	21057-5
6	Escalator Belt Assembly	21057-14	20	Cushion Flap	14809
7	Inner Tier I Egg Chute	25511	21	Lower Brace	14808
8	Escalator Belt Assembly	21057-13	22	Inside Chute Spacer	23727
9	Inner Tier II Egg Chute	14541	23	Stop Sweep	14834
10	Module Shield	23864	24	Lower Egg Guide	14819
11	14 Tooth x 1" Bore Sprocket	20390	25	Speed Reducer	20235
12	1/4" Square Key	2419-3	26	Shock Pad	20053
13	Egg Chute Cover (BT)	14633	27	Bottom Tier Egg Chute	14797
14	Egg Chute Cover (UT)	14635			

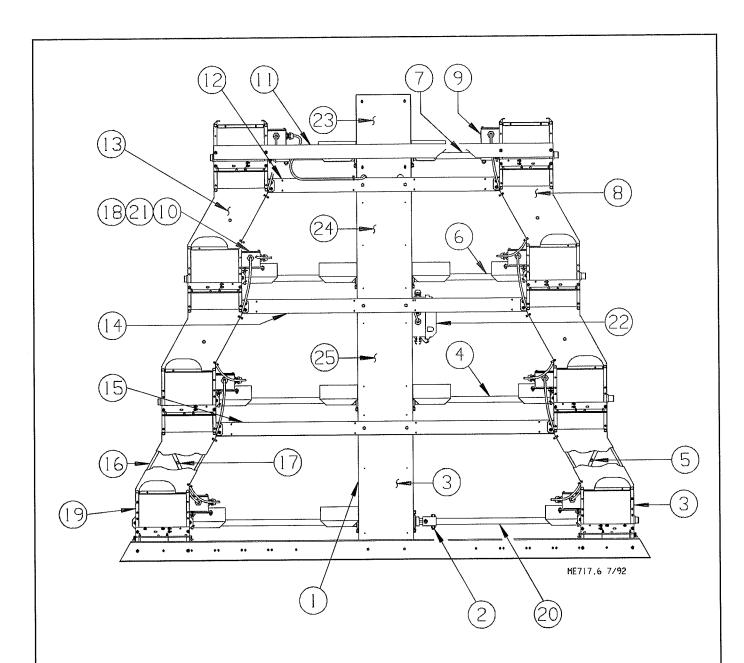
*See individual parts lists.



3-Hi Collector Assembly--Top View Part No. Description Part No. <u>ltem</u> Description <u>ltem</u> 20095 Clip On Nut 24816 14 Main Frame 1 1" Set Collar 5759 24141-2 15 Main Angle Brace R.H. 2 20191-1 1" Flangette 24813 16 3 Cross Frame 20191-2 24141-1 17 1" Bearing Main Angle Brace L.H. 4 20572-6 Belt Drive Shaft 23706 18 Inner Cross Brace 5 28973-1 Inner Side Panel L.H. Side Panel R.H. 14542-2 19 6 21028 20 Drive Roller 24142 7 Transition Holder 1/4" Square Key 2419-3 24143 21 8 Transition Spacer 28973-2 Inner Side Panel R.H. 14542-1 22 Side Panel L.H. 9 Drive Cover Bracket 9989 23 1" Connecting Shaft 21049-10 10 Front Angle Brace 20269 24 23733 1" Coupling 11 12 tooth x 1" Bore Sprocket 20086 23732-1 25 Front Drive Side Panel L.H. 12 23767 Front Drive Shaft 23732-2 Front Drive Side Panel R.H. 13 0 ò 0 0 ٥ ME717.13 4/92 0 0/ 6 (10)(1)





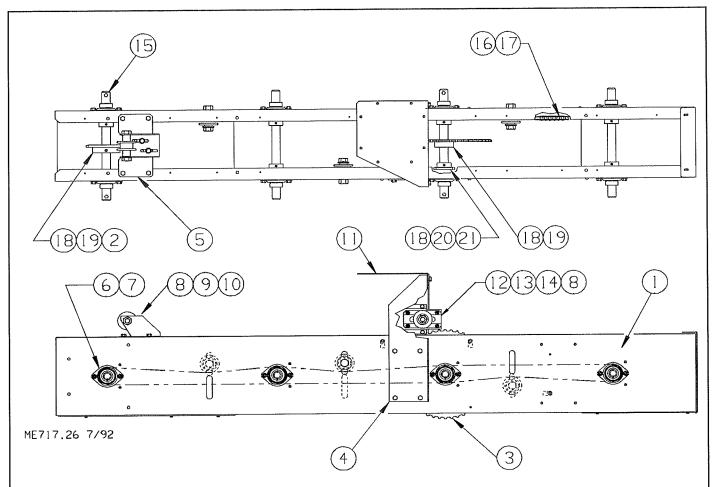


4-Hi Collector Assembly--Back View

<u>Item</u>	<u>Description</u>	Part No.	<u>Item</u>	<u>Description</u>	<u>Part No.</u>
1	Drive Housing Assembly	14638	14	Cross Brace	14549
2	1" Coupling	20269	15	Cross Brace	14547
3	Module Assembly (L.H.) (steel shafts)	9369-1	16	Module Support	14782
	Module Assembly (L.H.) (stainless shafts)	9369-3	17	Module Brace (R.H.)	14614-2
4	1" Connecting Shaft	21049-9	18	Twin Helix Screw	6980
5	Module Brace (L.H.)	14614-1	19	Module Assembly (R.H.) (steel shafts	9369-2
6	1" Connecting Shaft	21049-2		Module Assembly (R.H.) (stainless shafts)	9369-4
7	1" Connecting Shaft	21049-6	20	1" Connecting Shaft	21049-8
8	Module Back Brace (L.H.)	14616-1	21	Gasket	6777
9	1/2" N.P.T. Hole Plug	23791	22	Junction Box	13973
10	Switch Box Cover	6776	23	Top Cover	24809
11	Top Back Brace	14551	24	Sprocket Cover	24808
12	Top Cross Brace	14548	25	Lower Cover	24807
13	Module Back Brace (R.H.)	14616-2			

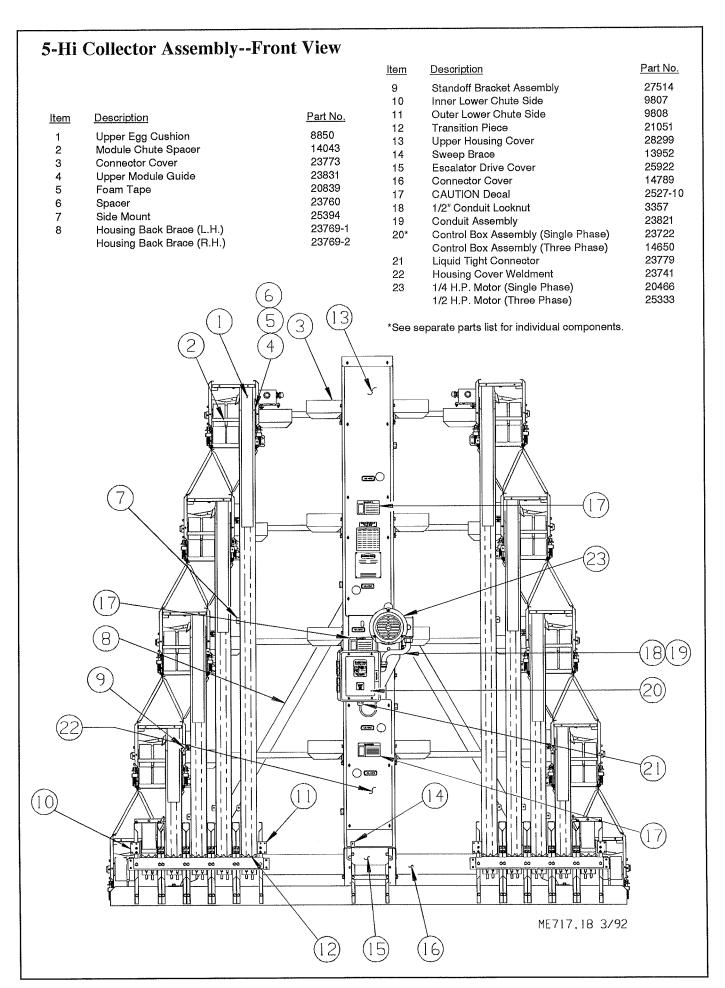
4-Hi Collector Assembly--Side View Description Part No. Description Part No. <u>ltem</u> <u>Item</u> 2527-42 Inner Tier II Egg Chute 14541 Danger Decal 11 1/4" Square Key 2419-3 2* Counter Box Assembly (L.H.) 27576-1 12 3* Counter Box Assembly (R.H.) 27576-2 13 Egg Chute Cover (Bottom Tier) 28094 Steel Spacer 21470 14 Egg Chute Cover Assembly (L.H.) 28099-1 4 Egg Chute Cover Assembly (R.H.) 28099-2 5 **Drive Cover Weldment** 23734 15 21057-15 Egg Chute Cover Assembly (L.H.) 28098-1 6 Escalator Belt Assembly 16 Egg Chute Cover Assembly (R.H.) 25513 17 28098-2 7 Upper Tier Egg Chute 21057-14 18 Egg Chute Cover (IT/II) 28095 8 Escalator Belt Assembly Inner Tier I Egg Chute 25511 19 Escalator Belt Assembly 21057-5 21057-13 20 Lower Brace 14808 10 Escalator Belt Assembly 21 Cushion Flap 14809 22 Inside Chute Spacer 23727 23 Sweep Stop 14834 24 Lower Egg Guide 14819 25 Speed Reducer 20235 Shock Pad 20053 26 27 Bottom Tier Egg Chute 14797 28 14 Tooth x 1" Bore Sprocket 20390 29 Connecting Link 20017 30 Drive Chain 21045-4 31 Module Cross Frame 14553 32 Module Shield 23864 33 21045-12 Drive Chain 0 0 ME717.28 4/92

4-Hi Collector Assembly--Top View Description Part No. <u>Item</u> **Description** Part No. <u>Item</u> 23732-1 Front Drive Side Panel L.H. 24819 12 1 Main Frame 23732-2 Front Drive Side Panel R.H. 23749-2 13 2 Main Angle Brace 20095 Clip On Nut Cross Frame 24813 14 3 15 1" Set Collar 5759 4 Main Angle Brace 23749-1 16 1" Flangette 20191-1 5 Inner Cross Brace 23706 20191-2 Side Panel R.H. 14542-2 17 1" Bearing 6 20572-4 Belt Drive Shaft 14554 18 7 Transition Holder 28973-1 19 Inner Side Panel L.H. 8 Transition Spacer 14552 20 Drive Roller 21028 14542-1 Side Panel L.H. 9 21049-10 21 1/4" Square Key 2419-3 1" Connecting Shaft 10 28973-2 Inner Side Panel R.H. 22 1" Coupling 20269 11 23 Drive Cover Bracket 9989 24 Front Angle Brace 23733 12 tooth x 1" Bore Sprocket 25 20086 Front Drive Shaft 23767 26 **V** 0 ٥ 0 ME717.8 4/92 O 6

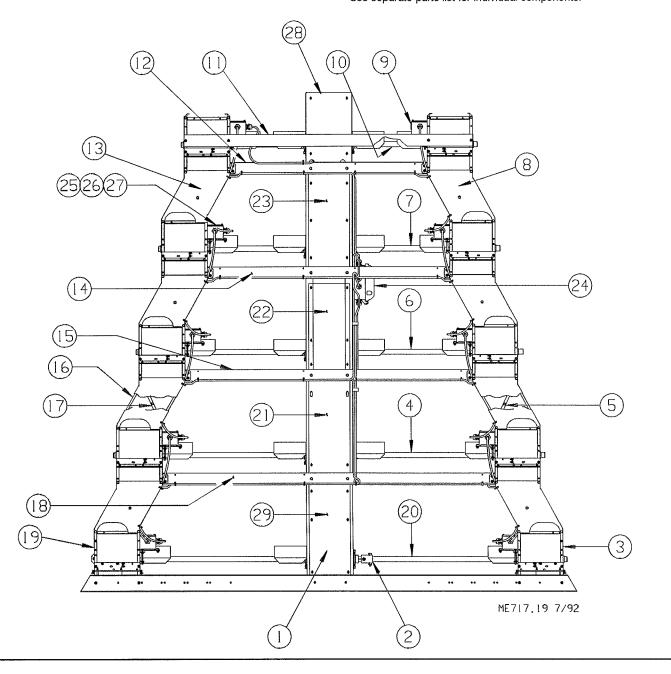


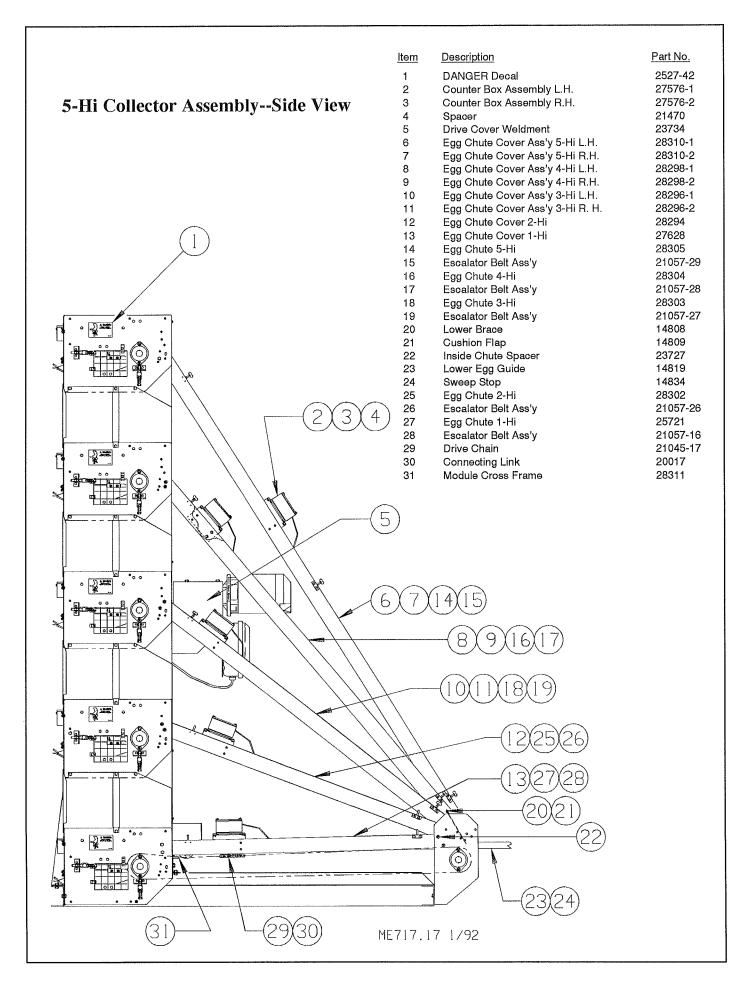
4-Hi Drive Column: 14638

<u>ltem</u>	Description	Part No.	<u>ltem</u>	Description	<u>Part No.</u>		
1	Drive Housing	14583	15	Drive Housing Shaft	23702		
2	28 Tooth 1" Bore Sprocket	20201	16	Drive Chain	21045-5		
3	70 Tooth 1" Bore Sprocket	14668	17	Connecting Link	20017		
4	Motor Bracket (L.H.)	23707-1	18	1/4" Square Key	2419-3		
•	Motor Bracket (R.H.)	23707-2	19	5/16-18x5/8" Set Screw	5692		
5	Escalator Idler Base	23736	20	14 Tooth 1" Bore Sprocket	20390		
6	Bearing	20191-2	21	1/4-20x1/4" Set Screw	13189		
7	Flangette	20191-1					
8*	Chain Idler Roller	20369					
9*	Idler Bracket	23737	*These components may be ordered as an assembly under Chore-Time Part No. 23738.				
10*	Idler Bushing	23788					
11	Motor Base	23715	**These components may be ordered as an assembly under Chore-Time Part No. 23740.				
12**	Idler Bracket	20047					
13**	Idler Bushing	21239					
14**	Idler Base	23735					
	· ·	23735					



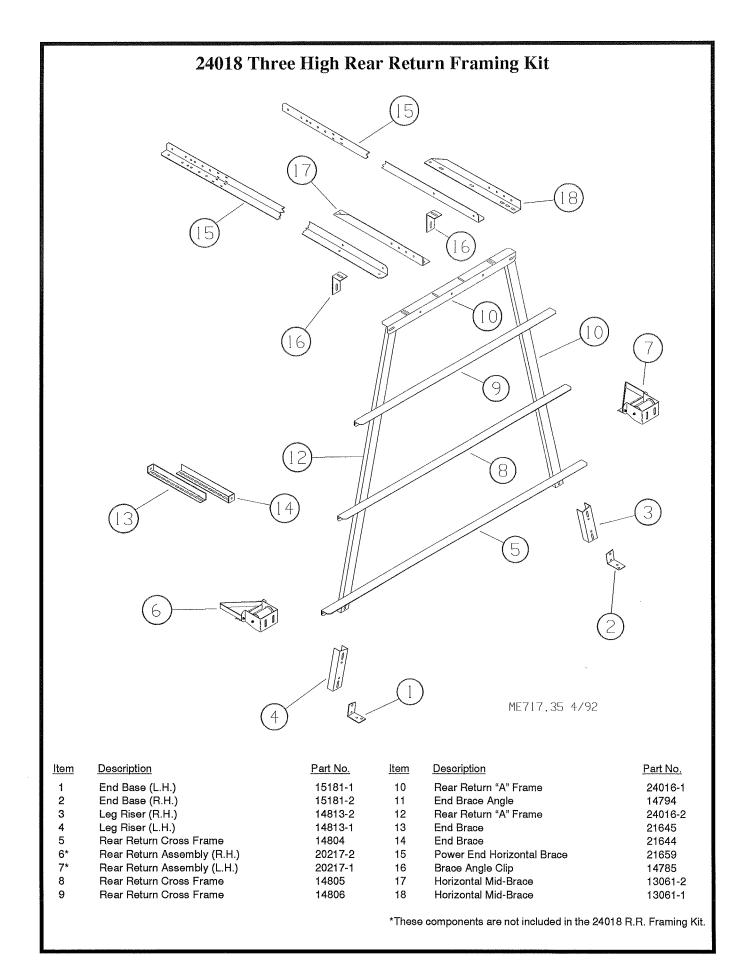
			<u>ltem</u>	<u>Description</u>	<u>Part No.</u>
5-Hi Collector AssemblyBack		View	13	Module Back Brace R.H.	14616-2
			14	Cross Brace	14549
			15	Cross Brace	14547
			16	Module Support	14782
<u>tem</u>	Description	Part No.	17	Module Brace R.H.	14614-2
1*	Drive Housing Assembly	28325	18	Cross Brace	28308
2	1" Coupling	20269	19*	Module Assembly R.H. (solid steel shafts)	9369-2
3*	Module Assembly L.H. (solid steel shafts)	9369-1		Module Assembly R.H. (stainless stl shafts)	9369-4
_	Module Assembly L.H. (stainless stl. shafts)	9369-3	20	1" Connecting Shaft	21049-2
4	1" Connecting Shaft	21049-8	21	Lower Cover	24807
5	Module Brace L.H.	14614-1	22	Sprocket Cover	24808
6	1" Connecting Shaft	21049-9	23	Upper Cover	28306
7	1" Connecting Shaft	21049-23	24*	Junction Box Assembly	25910
8	Module Back Brace L.H.	14616-1	25	Switch Box Cover	6776
9	1/2" NPT Pipe Plug	23791	26	Gasket	6777
10	1" Connecting Shaft	21049-6	27	Twin Helix Screws	6980
11	Top Back Brace	14551	28	Top Cover	24809
12	Top Cross Brace	14548	29	Bottom Cover	24806





5-Hi Collector Assembly--Top View Part No. **Description** <u>Item</u> Part No. Description <u>ltem</u> 23732-1 12 Front Drive Side Panel L.H. 28291 Main Frame 1 Front Drive Side Panel R.H. 23732-2 13 25914-2 2 Main Angle Brace 20095 Clip On Nut 14 25913 3 Cross Frame 5759 15 1" Set Collar 25914-1 Main Angle Brace 4 20191-1 1" Flangette 16 25915 5 Inner Cross Brace 1" Bearing 20191-2 17 14542-2 6 Side Panel R.H. 20572-14 18 Belt Drive Shaft 28292 7 Transition Holder 28973-1 19 Inner Side Panel L.H. 28293 8 Transition Spacer 21028 Drive Roller 20 Side Panel L.H. 14542-1 9 2419-3 1/4" Square Key 21 1" Connecting Shaft 21049-10 10 28973-2 Inner Side Panel R.H. 22 20269 1" Coupling 11 23 Drive Cover Bracket 9989 24 Front Angle Brace 23733 20086 25 12 tooth x 1" Bore Sprocket 23767 26 Front Drive Shaft 0 (6)ME717.21 1/92

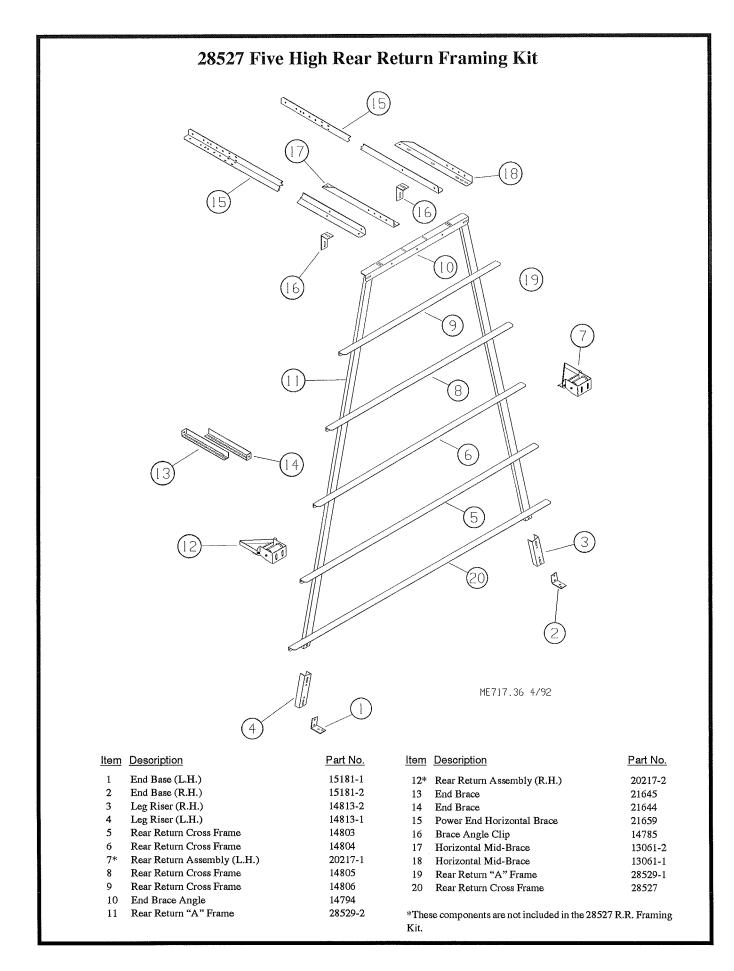
5-Hi Co	llector Drive Co	lumn		<u>Description</u> Chain Idler Roller	<u>Part No.</u> 20369
3 70 Toot 4 Motor E 5 Motor E 6 Drive H 7 Flanget 8 Bearing	ousing dler Roller h x 1" Bore Sprocket racket L.H. racket R.H. ousing Shaft te dler Roller shing acket	Part No. 28321 20369 14668 23707-1 23707-2 23702 20191-1 20191-2 20369 23788 23737 23715 20047	15** 16** 17 18 19 20 21 22 23 24 25 *Order as	Idler Bushing Idler Base Drive Chain Connecting Link 1/4" Square Key 5/16-18 Set Screw 1/4-20 Set Screw 14 Tooth x 1" Bore Sprocket Escalator Idler Base 28 Tooth x 1" Bore Sprocket Idler Bushing an assembly under Part No. 23738 s an assembly under Part No. 2384	21239 23735 20145-9 20017 2419-3 5692 13189 20390 23736 20201 21239
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14579 Four High Rear Return Framing Kit 9 8 6 ME717.34 4/92 4. <u>Description</u> <u>ltem</u> Description Part No. <u>ltem</u> Part No. End Base (L.H.) 15181-1 1 Rear Return "A" Frame 14796-2 11 2 End Base (R.H.) 15181-2 12* Rear Return Assembly (R.H.) 20217-2 Leg Riser (R.H.) 3 14813-2 13 End Brace 21645 Leg Riser (L.H.) 14813-1 14 End Brace 21644 5 Rear Return Cross Frame 14803 15 Power End Horizontal Brace 21659 6 Rear Return Cross Frame 14804 16 Brace Angle Clip 14785 Rear Return Assembly (L.H.) 7* 20217-1 17 Horizontal Mid-Brace 13061-2 8 Rear Return Cross Frame 14805 18 Horizontal Mid-Brace 13061-1 9 Rear Return Cross Frame 14806 19 Rear Return "A" Frame 14796-1 10 End Brace Angle 14794

Kit.

*These components are not included in the 14579 R.R. Framing



Trouble Shooting Guide

Symptom #1: Collector stops and will not run.

Potential problem and/or fix:

- 1. Make sure switch on Collector Control is 'ON.'
- 2. Make sure switch on Station Control is 'ON.'
- 3. Check Slack Belt Switches. Make sure egg belt is properly tracking through the module.
- 4. If the cross conveyor is equipped with Flow Controls, make sure the Flow Control Paddle is free.
- 5. Check power supply.
- 6. Check fuse in Collector Control.

Symptom #2: Collector runs on manual, but not on remote.

Potential problem and/or fix:

- 1. Check Slack Belt Switch in each module.
- 2. If the cross conveyor is equipped with Flow Controls, make sure the Flow Control Paddle is free.

Symptom #3: Egg Belt runs unevenly (jerks).

Potential problem and/or fix.

- 1. Check for dirt build-up on drive and Idler Roller in Module.
- 2. Check for dirt build-up on Idler Roller in Rear Return.
- 3. Check for bad splices catching in Module, Egg Tray, or Belt Return Wire.
- 4. Check tension on Idler Roller. Adjust if necessary.
- 5. Check chains and sprockets in Drive Housing for rust and wear.

Symptom #4: Cleated Belts don't run, but Egg Belt does.

Potential problem and/or fix.

- 1. Check Drive Chain under Escalator Drive Cover.
- 2. Bolt(s) sheared or missing in coupling(s).
- 3. Key(s) sheared or missing in Lower Drive Roller.

Symptom #5: One Cleated Belt does not run.

Potential problem and/or fix.

- 1. Check spring tension on Idler Shaft--spring compressed to 1" (25 mm) length.
- 2. Check for dirt build-up under belt.
- 3. Key sheared or missing in Lower Drive Roller.

Symptom #6: Cleated Belts run, but Egg Belts gdo not.

Potential problem and/or fix.

- 1. Check for key(s) missing or sheared in Drive Roller.
- 2. Check for sheared or missing bolt(s) in Drive Coupling(s).
- 3. Check for broken Drive Chains.

Symptom #7: Egg Belt not tracking properly.

Potential problem and/or fix.

1. Adjust main Drive Shaft Bearings to get correct tracking.

Symptom #8: Collector runs unevenly.

Potential problem and/or fix. 1.0il a

1.Oil all chains.

WARRANTY INFORMATION

Chore-Time Equipment warrants each new product manufactured by it to be free from defects in material or workmanship for one year from the date of initial installation by the original purchaser. If such a defect is found by Chore-Time to exist within the one year period, Chore-Time will, at its option, (a)repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement.

Additional extended warranties are herewith provided to the original purchaser as follows:

- 1. RLX Fans, less motors, for three years from date of installation.
- *2. Poultry feeder pans that become unusable within five years from date of installation. Warranty prorated after three years usage.
- 3. MEAL-TIME® Hog Feeder pans that become unusable within five years of installation.
- 4. Rotating centerless augers, excluding applications involving High Moisture Corn (exceeding 18%), for ten years from date of installation. Note: MULTIFLO® and applications involving High Moisture Corn are subject to a one year warranty.
- 5. Chore-Time manufactured roll-formed steel auger tubes for ten years from date of installation.
- *6. Laying cages that become unusable within ten years. Warranty prorated after three years usage.
- 7. ULTRAFLO® Auger and ULTRAFLO® Feed Trough (except ULTRAFLO® Trough Liners) are warranted for a period of five (5) years from date of original purchase against repeated breakage of the auger or wear-through of the feed trough.

Conditions and limitations:

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

Chore-Time shall not be liable for any consequential or special damage which any purchaser may suffer or claim to have suffered as a result of any defect in the product. "Consequential" or "special damages" as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.

THIS WARRANTY CONSTITUTES 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 AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Any exceptions to this warranty must be authorized in writing by an officer of the company. Chore-Time reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

*See separate 'WARRANTY ADDITION' as to these products

CHORE-TIME EQUIPMENT, A Division of CTB, Inc. P.O. Box 2000, Milford, Indiana 46542-2000 U.S.A.

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

Chore-Time Equipment, A division of CTB, Inc.

P.O. Box 2000

Milford. Indiana 46542-2000