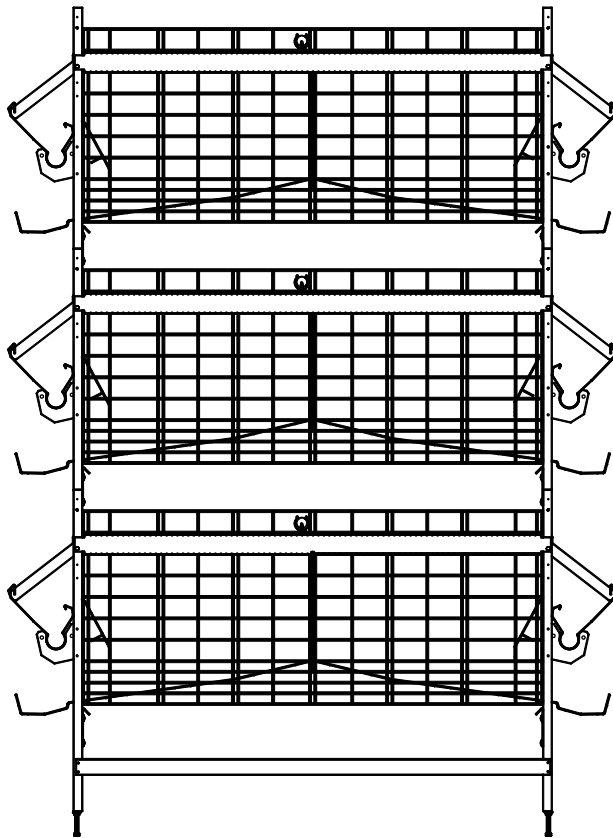


Modular Layer Manure Belt Cage Installation & Operator's Instruction Manual



Chore-Time Warranty

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

Conditions and Limitations

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

The **Manufacturer** shall not be liable for any **Consequential or Special Damage** which any purchaser may suffer or claim to suffer as a result of any defect in the product. **“Consequential” or “Special Damages” as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.**

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

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

Effective: **November 2006**

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About This Manual

The intent of this manual is to help you in two ways. One is to follow step-by-step in the order of assembly of your product. The other way is for easy reference if you have questions in a particular area.

Important ! Read ALL instructions carefully before starting construction.

Important ! Pay particular attention to all SAFETY information.

- *Metric measurements are shown in millimeters and in brackets, unless otherwise specified. “ ” equals inches and “ ’ ” equals feet in English measurements.*

Examples:

1" [25.4]

4' [1 219]

- Optional equipment contains necessary instructions for assembly or operation.
- Major changes from the last printing will be listed on the back cover.
- This Planning Symbol is used in areas where planning needs to take place before construction continues.
- Very small numbers near an illustration (*i.e.*, 1257-48) are identification of the graphic, not a part number.



Safety Information

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

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



Safety–Alert Symbol

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

Understanding Signal Words

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



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



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



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

Safety Information

Follow Safety Instructions

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

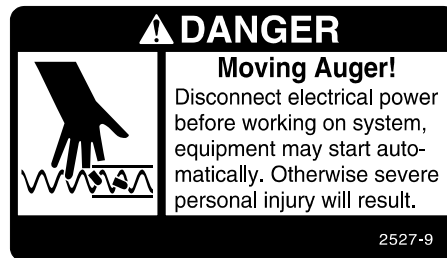
Keep safety signs in good condition. Replace missing or damaged safety signs.

Decal Descriptions

DANGER: Moving Auger

This decal is placed on the Panel Weldment.

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



DANGER: Electrical Hazard

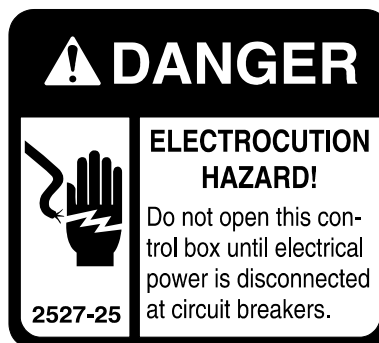
Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

Ground all electrical equipment for safety.

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

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

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



Cage Layout

Placement of Drive Unit

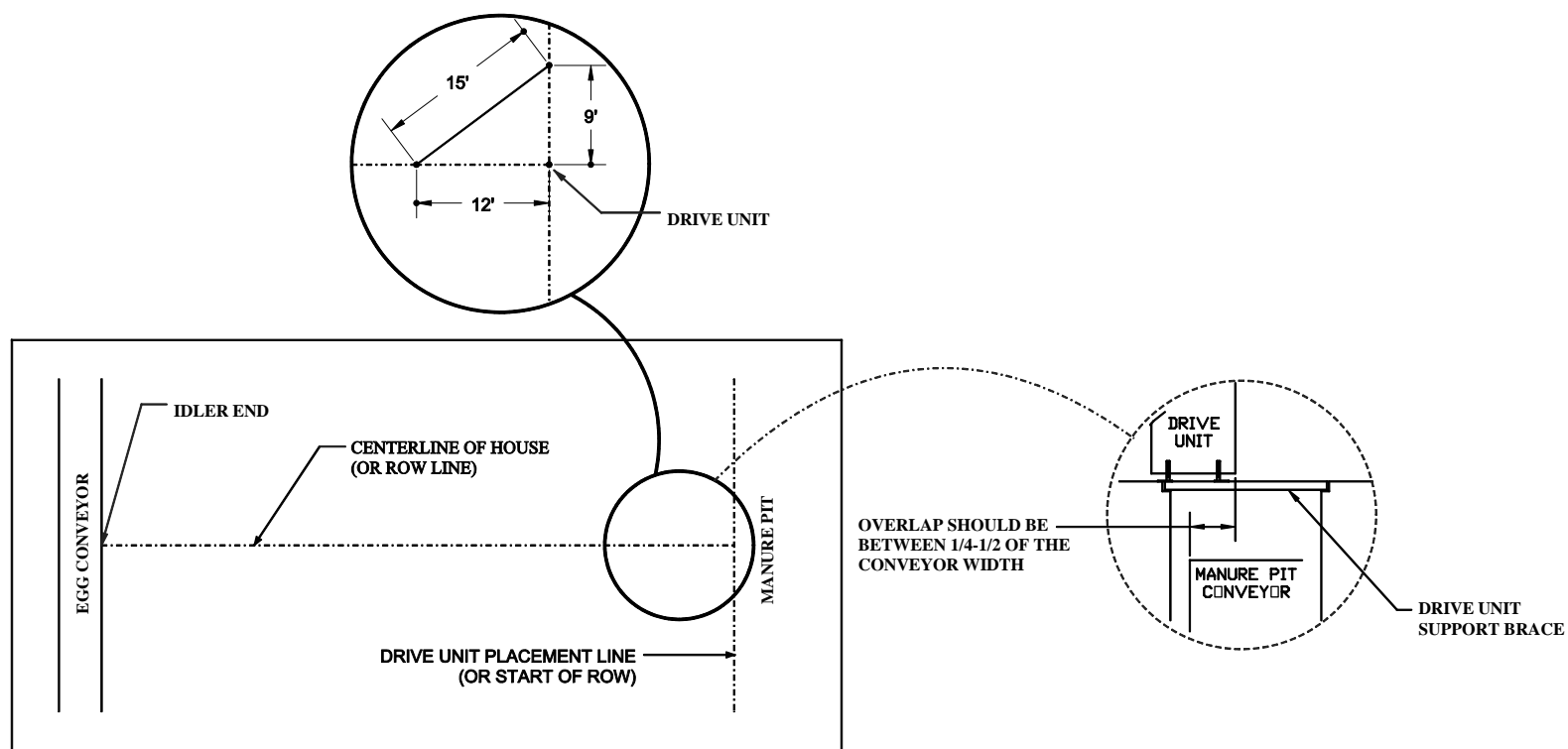


Figure 1. Drive Unit Placement

Attaching End Rails

Thread a 1/2 HX Nut (**Item 1, Figure 5**) onto a 5/16-18 x 5.00 HH Bolt (**Item 2**) and attach it to the bottom of the Bottom Drive Unit (**Item 3**) as shown. Attach each of the Drive Units together with 3/8 x .75 Cap Screws (**Item 4**) and 3/8-16 Hex Nuts (**Item 5**). Attach a Rail Brace (**Item 6**) to the Bottom Drive Unit with 5/16-16 Cap Screws (**Item 7**) and Flange Nuts (**Items 8**). Attach the MMB Drive End Rail (**Item 9**) to the **Bottom** Rail Brace with 1/4-20 Hardware as shown.

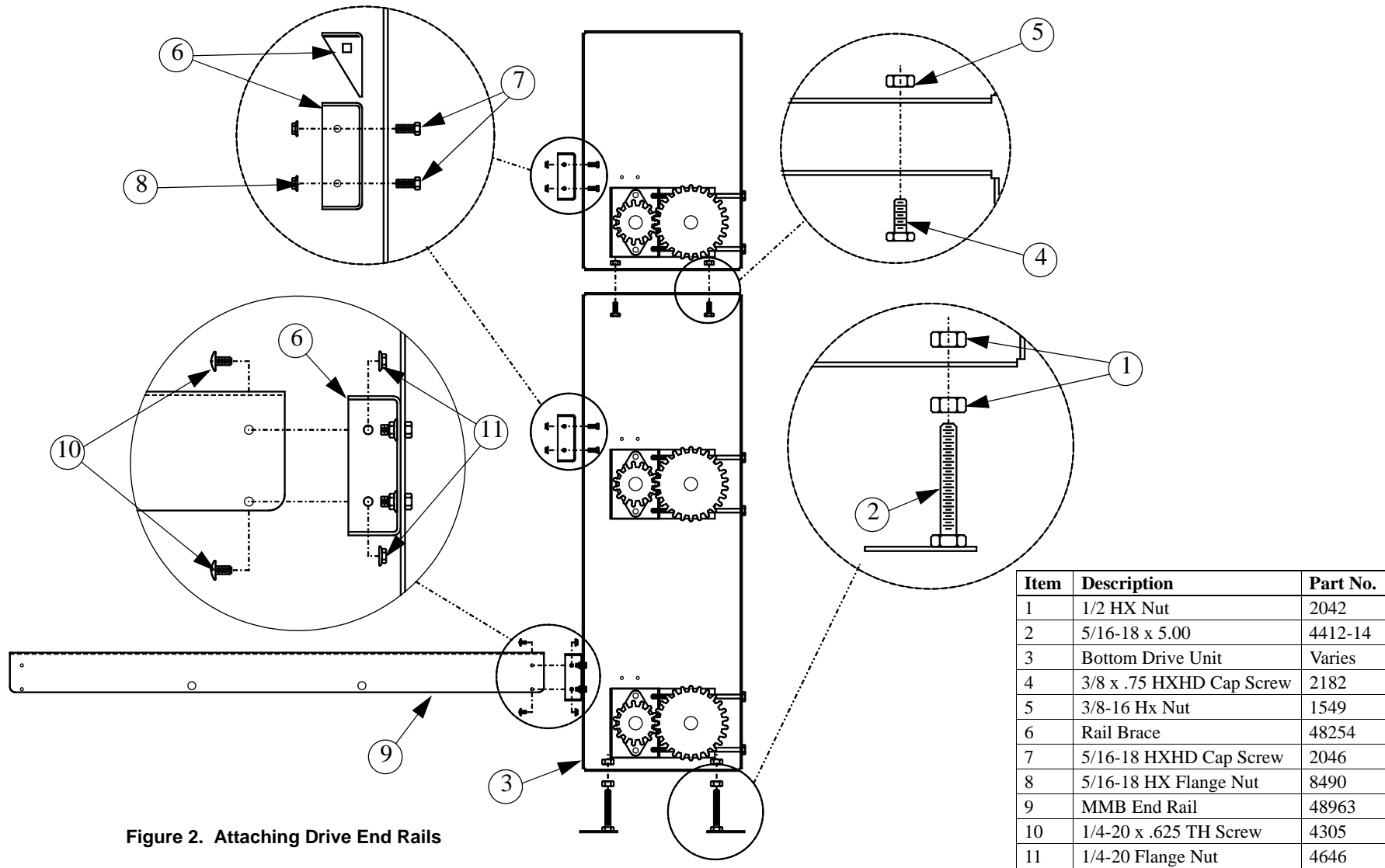
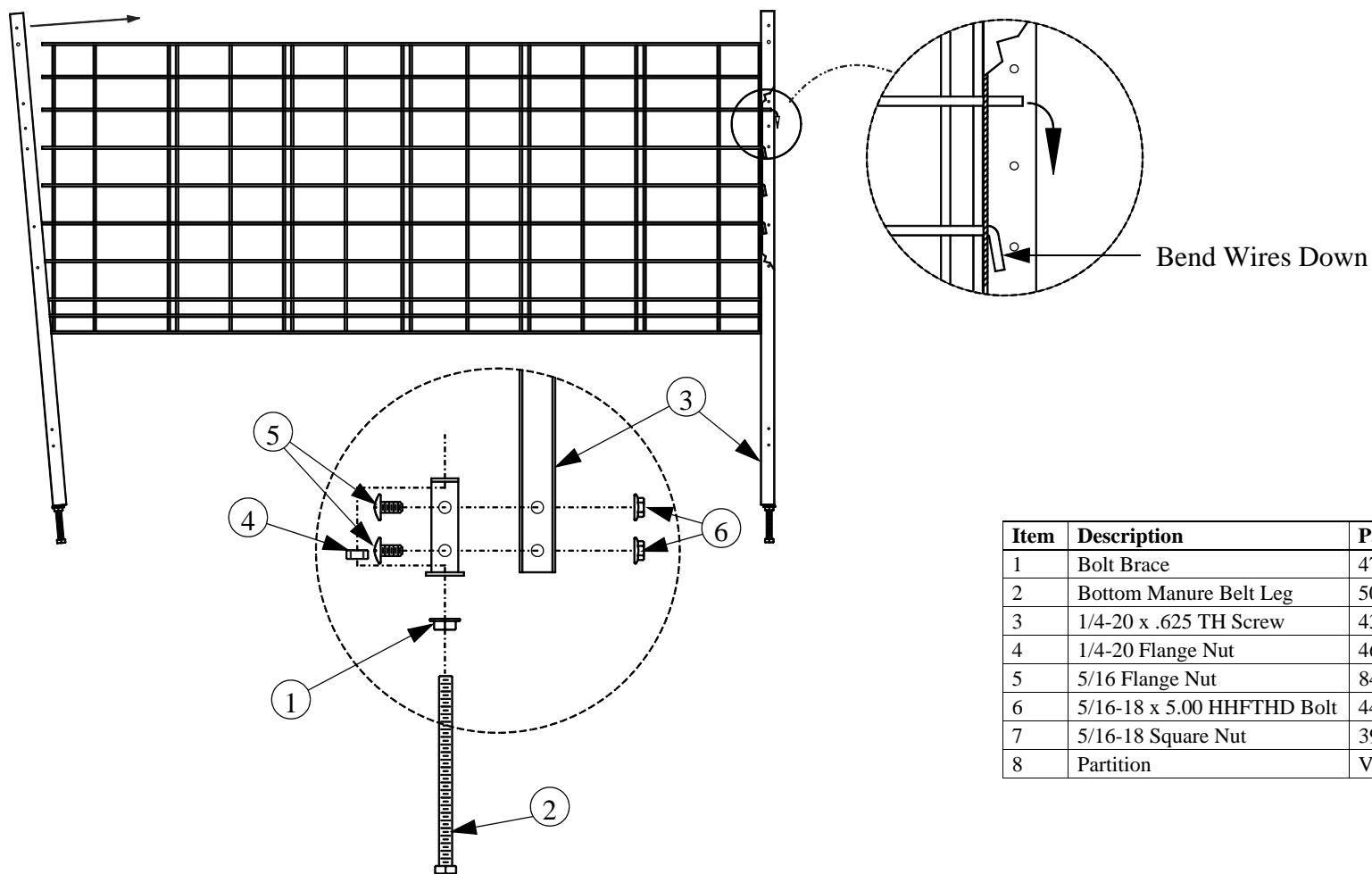


Figure 2. Attaching Drive End Rails

Bottom Tier Partition Assembly

Fasten Bolt Braces (**Item 1, Figure 3**) to each of the Bottom Manure Belt Legs (**Item 2**) using 1/4-20 TH Screws (**Item 3**) and 1/4-20 Flange Nuts (**Item 4**) as shown. Thread 5/16" Flange Nuts (**Item 5**) onto 5/16-18 x 5.00 HH Bolts (**Item 6**). Insert the Bolts into each of the Bolt Braces and secure with 5/16-18 Square Nuts (**Item 7**) as shown. These Bolts will be used to level the Cage Row. Attach a Leg to each end of a Partition (**Item 8**) by inserting the partition wires into the Legs and bending the wires down as shown.



Item	Description	Part No.
1	Bolt Brace	47587
2	Bottom Manure Belt Leg	50069
3	1/4-20 x .625 TH Screw	4305
4	1/4-20 Flange Nut	46460
5	5/16 Flange Nut	8490
6	5/16-18 x 5.00 HHFTHD Bolt	4412-14
7	5/16-18 Square Nut	39-20244
8	Partition	Varies

Figure 3. Bottom Partition Assembly

Assembling the Bottom Tier

Attaching Partitions at the end of Each Manure Belt Rail

Orient a Bottom Partition (**Item 1, Figure 4**) with the Horizontal wires toward the Drive Unit (**See Figure**). Obtain a Manure Belt Rail (**Item 2**) and line up the holes in the end of it with the holes in the End Rail (**Item 3**) making sure to keep the Manure Belt Rail toward the *inside* of the End Rail as **shown**. Line up the holes in the Leg of a Partition with the same holes, and while keeping the Leg *outside* of the End Rail, Fasten them all together with 1/4-20 hardware; **Do not tighten down hardware at this time.** (**See Figure**). Attach only the Partitions at the end of each Manure Belt Rail at this time. The Mid Rail Partitions will be added in the next step. Use the 5/16-18 x 5.00 Threaded Bolts (**Item 4**) in the Legs to level the Rails. as you go. Once the 2nd Tier has been assembled, come back and tighten all of the hardware on the bottom Tier.

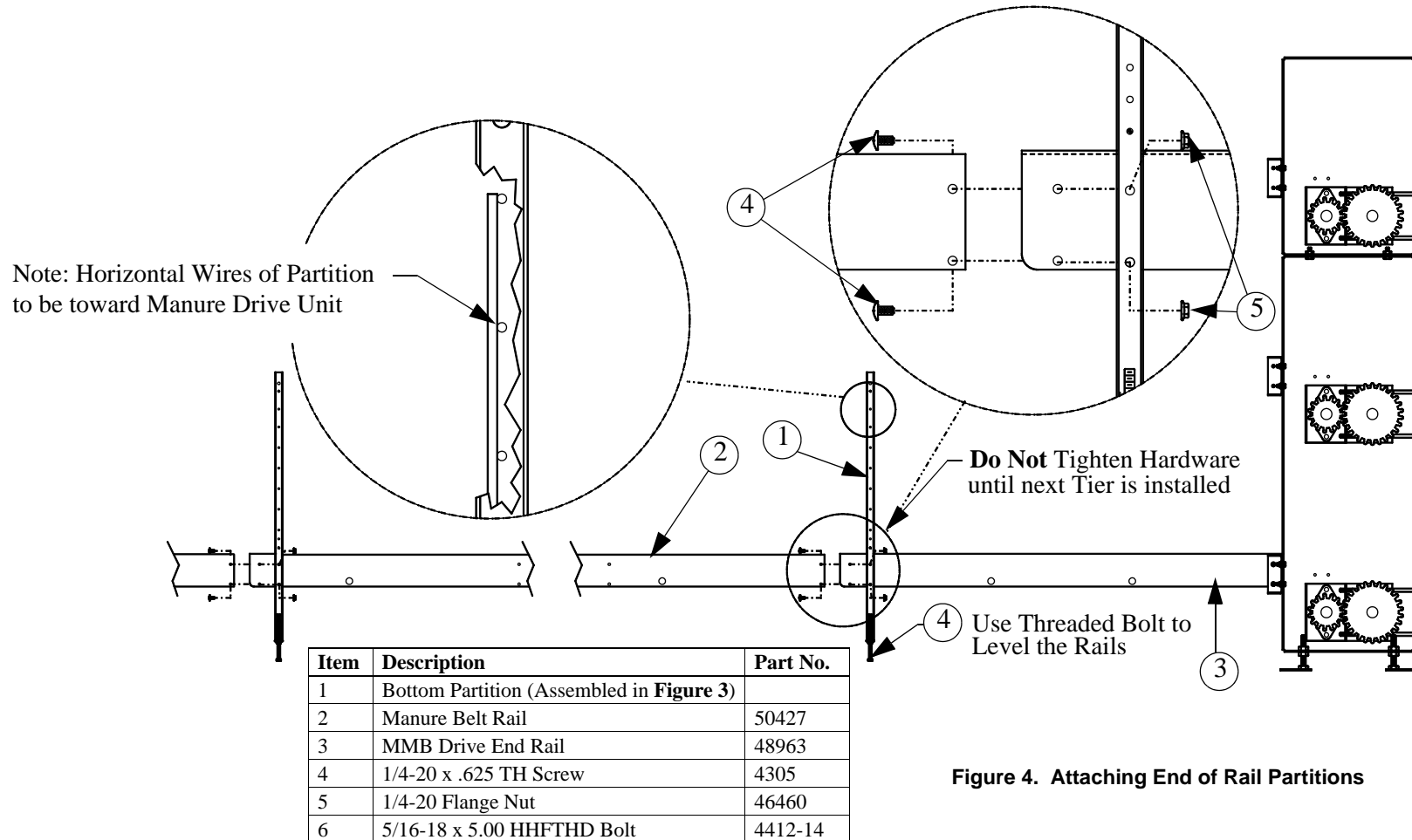


Figure 4. Attaching End of Rail Partitions

Mid Rail Partitions

Once a Partition is attached at the end of a Rail, use 1/4-20 hardware to attach the remaining Partitions to that Rail every 24" **as shown below**. Adjust each Leg adjustment bolt until it makes full contact with the floor to assure proper leveling. In order to get the exact Cage Row length that you need, it may be necessary to cut the last Manure Belt Rail. (See next Page).

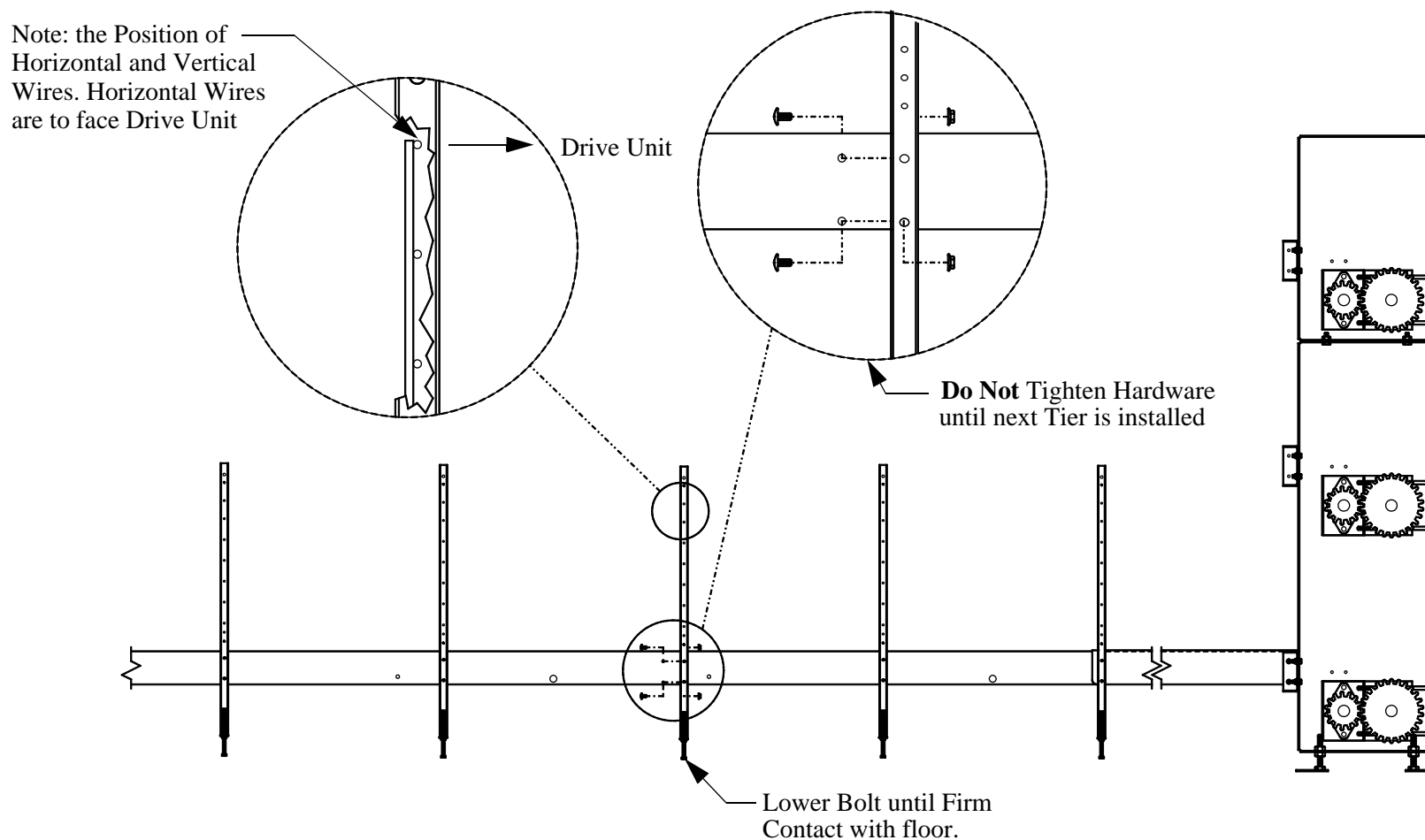
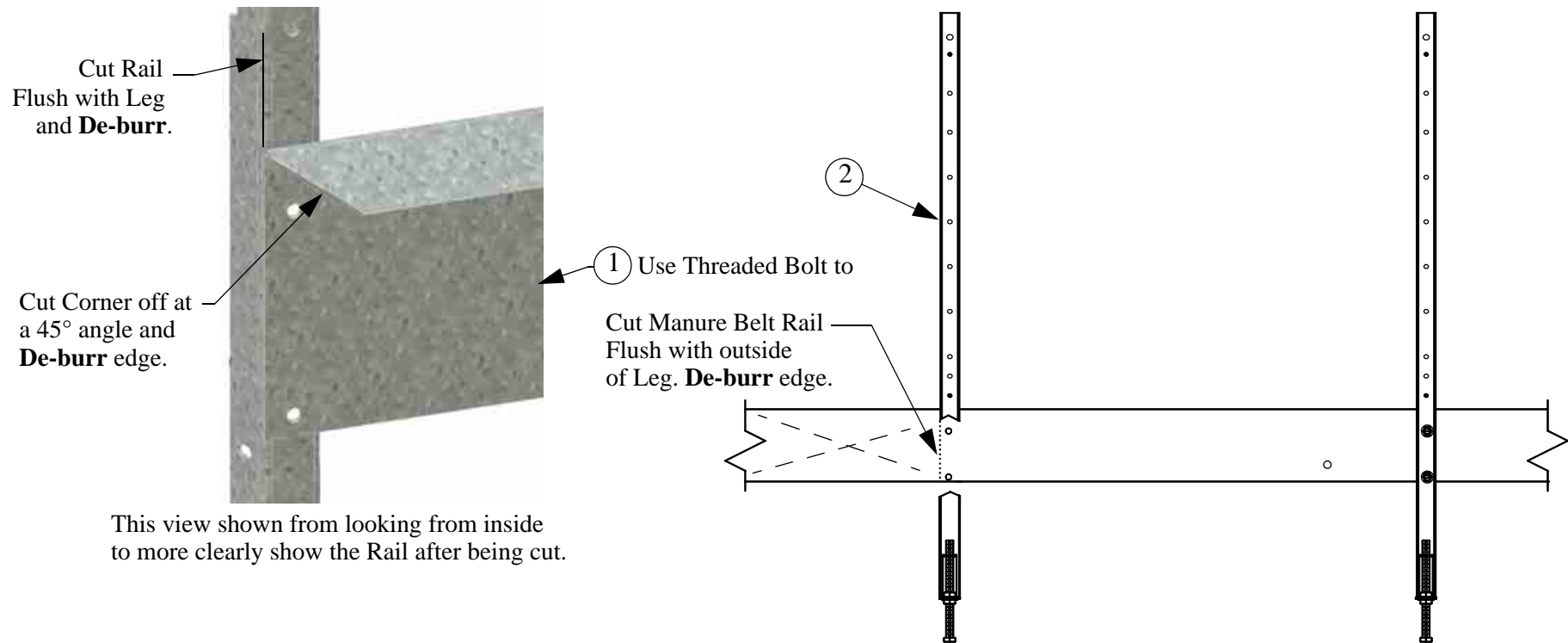


Figure 5. Attaching Mid-Rail Partitions

Cutting Rails at Idler end

Once the last Partition is installed, cut the last Manure Belt Rail (**Item 1, Figure 6**) Flush with the Bottom Leg (**Item 2**) as shown. De-burr the Rail edge because it could come in contact with the belt. Cut the sharp corner off of the end of the Manure Belt Rail. De-burr the cut edge to avoid cutting the Belt when it is installed. Repeat this procedure for each Manure Belt Rail on the other Tiers as they are assembled.



Item	Description	Part No.
1	Manure Belt Rail	50427
2	Manure Belt Bottom Leg	50069

Figure 6. Cutting Rails at Idler end

Attaching the Idler

Use 1/4-20 hardware to attach the Idler End Rail (**Item 1, Figure 7**) to the last Manure Belt Rail (**Item 2**) and the last Partition **as shown**. **Note** that the Bolt Heads are toward the center of the Cage so when the Belt is installed it does not get caught up in the long end of the Bolts. Repeat the same steps to attach the Idler End Rail on the other side. Choose the set of holes in the Idler Leg (**Item 4**) that best levels the Idler End Rail and attach it to the Idler End Rail with 1/4-20 Hardware. Repeat for the other Cage side. The Idler Legs used will vary per the number of Tiers in Cage system (**See in parts list**). Attach the Idler Back (**Item 5**) and Extension Leg (**Item 6**) to each Idler Leg with 5/16-18 Hardware **as shown**.

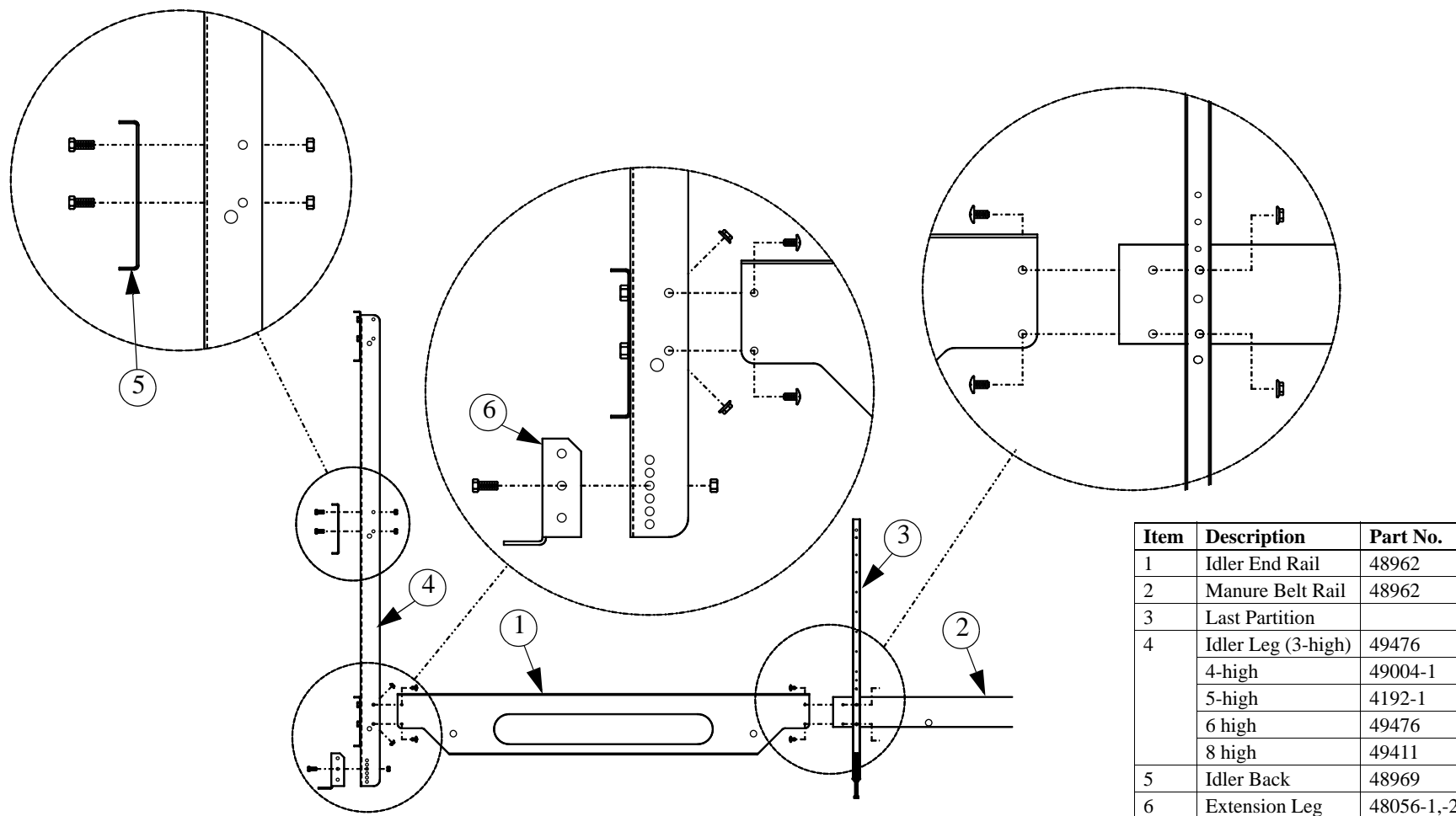


Figure 7. Cutting Rails at Idler end

Installing Manure Belt Backs

Obtain a Manure Belt Back (**Item 1, Figure 8**) and, using the hooks (**Item 2**) at both ends, hang it at the exact center of two Partitions (**Item 3**) with the top most wire resting on the third wire from the top of the Partitions (**See Figure**). Install the remaining Manure Belt Backs alternating the way in which they overlap from left and right as **shown**.

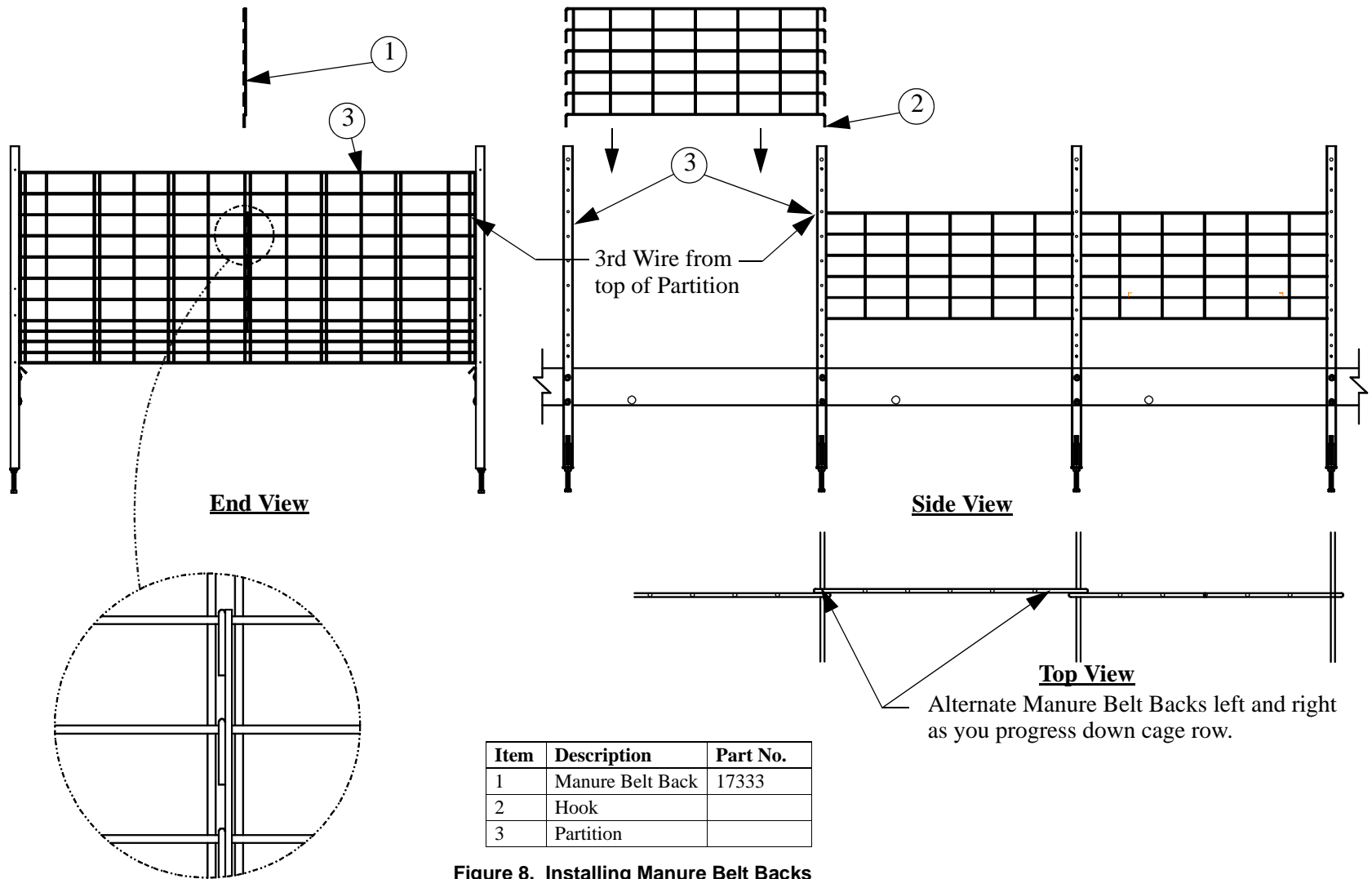


Figure 8. Installing Manure Belt Backs

Installing Water Lines

Feed a Nipple Pipe Assembly (**Item 1, Figure 9**) through the wire square that is one right of the center wire, and at the top of each Partition (**See Figure**). The Locator Block (**Item 2**) on the Nipple Pipe must be located such that it will lie on a horizontal Partition wire. Obtain a Locator Block Support (**Item 3**) and snap the Locator Block into it. With the Locator Block snapped in place, attach it onto the Partition wire. Attach the pipe to all of the remaining Partitions with Non-Locator Block Supports (**Item 4**) (**See Figure**). Feed a second Nipple Pipe Assembly through the Partitions and insert it into the 1st Nipple Pipe at least 2". Attach it to the Partitions just as you did the 1st pipe. Continue with Pipe as needed to the end of the cage row. Be sure to completely assemble all of the Pipe in a Tier before starting to assemble the next Tier. It is difficult to feed Pipe through the Partitions if the Tier above is in the way.

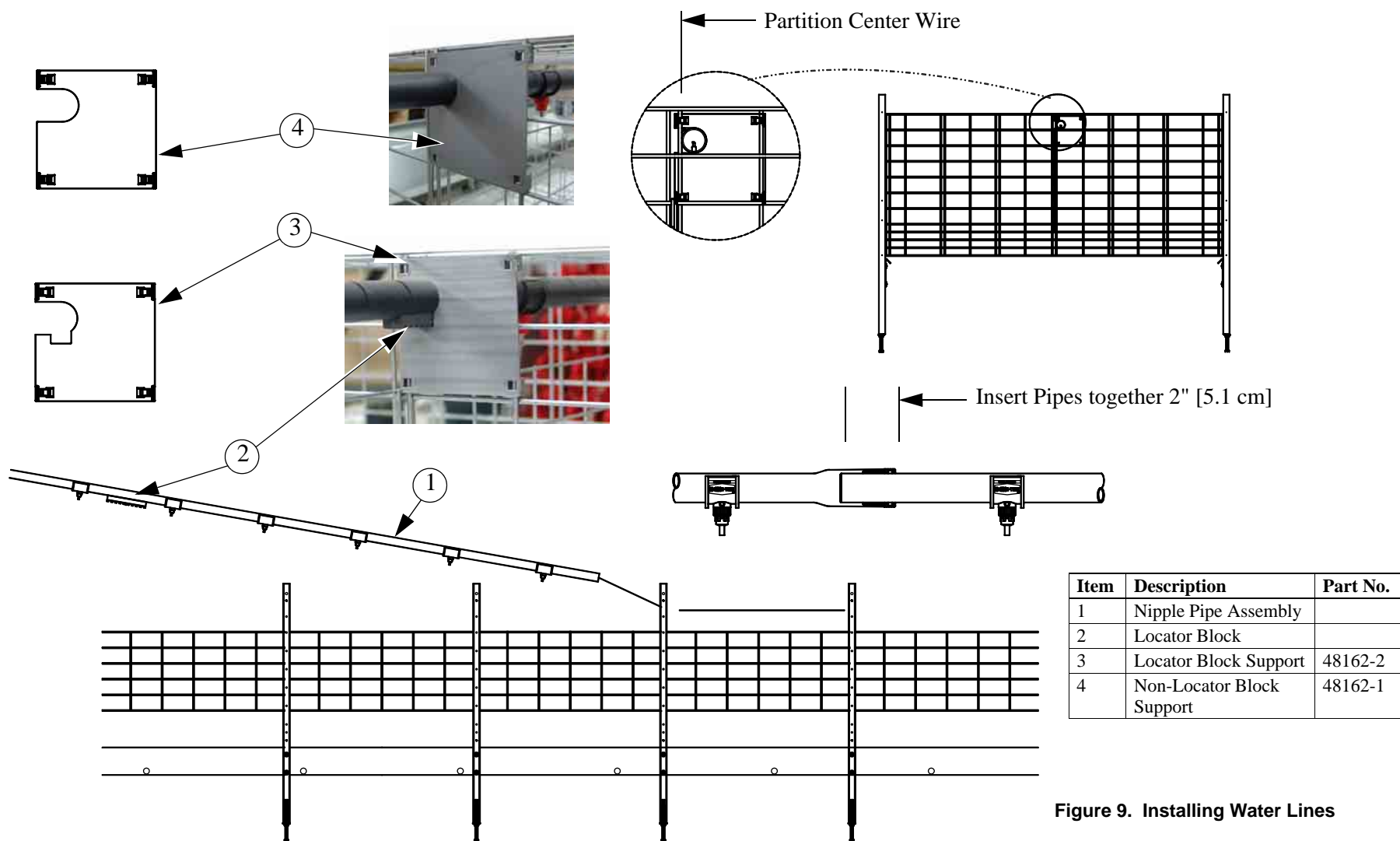
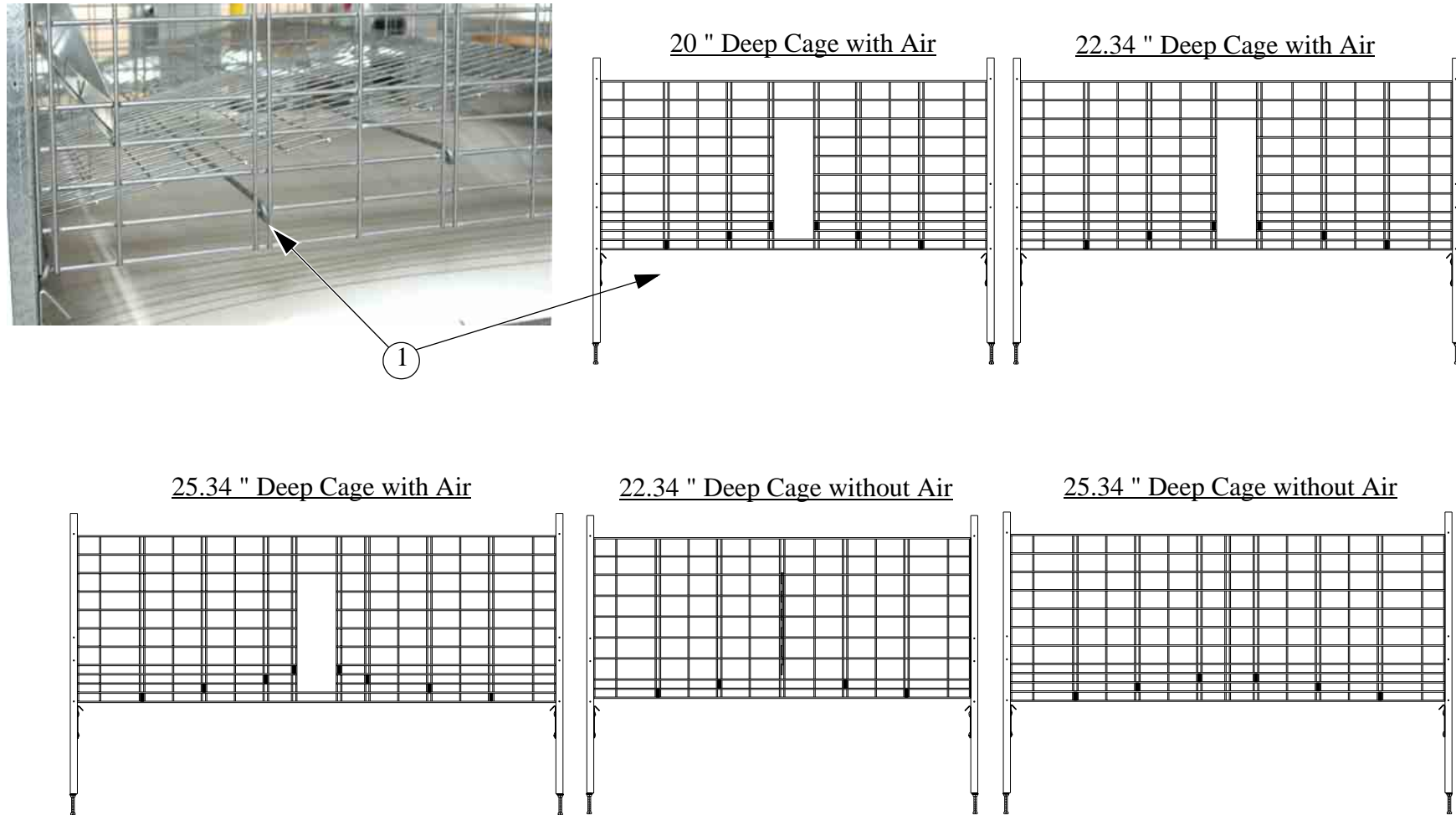


Figure 9. Installing Water Lines

Installing Floor Supports

The location of the Floor Supports (**Item 1, Figure 10**) depends on the Cage type. The correct locations of the Floor Supports for each Cage type is **shown below**. Insert the Floor Supports into the proper Partition square, slide it through to the corresponding square on the second Partition, and hook the end on the horizontal partition wire as shown. *The Floor is shown in the Figure, but is not actually installed at this time.*



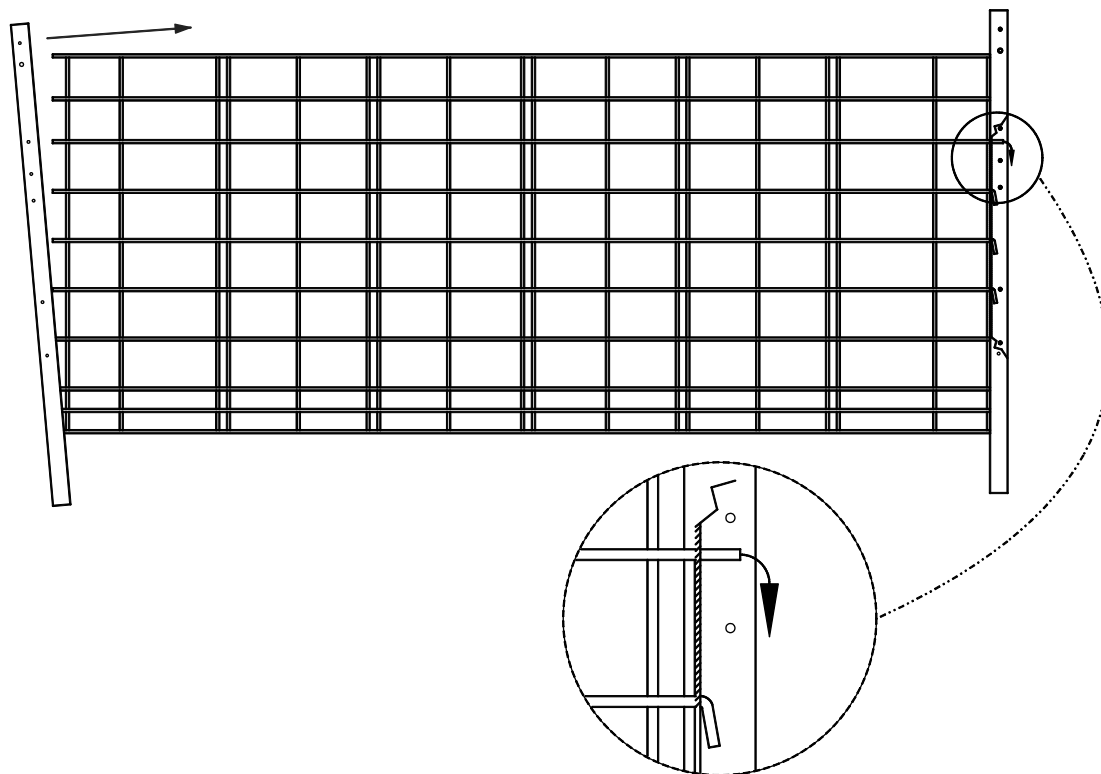
Item	Description	Part No.
1	Floor Support	P4037-122

Figure 10. Installing Floor Supports

Assembling Even numbered Tiers (2,4,6,etc.)

Assembling upper Partitions (Tier 2 and above)

Attach a Manure Belt Top Leg (Item 1, Figure 11) to both ends of a Partition (Item 2) by inserting the partition wires into the Legs and bending them down as shown.



Item	Description	Part No.
1	Manure Belt Top Leg	50068
2	Partition	4412-14

Figure 11. Upper Partition Assembly

Installing Even Tier Manure Belt Rails

Attach the 2nd Tier End Rail (**Item 1, Figure 12**) to the Drive Unit just like you did on the 1st Tier. In order to maintain a level cage row, the ends of the Manure Belt Rails need to be staggered between each Tier. To achieve this, cut 47.9" [121.7cm] off the end of the 1st Manure Belt Rail (**Item 2**) on all of the even numbered Tiers (Tier 2,4,6, etc.). Attach the newly cut Manure Belt Rail and a Manure Belt Top Leg (**Item 3**) to the End Rail using a Leg Splice (**Item 4**) and 1/4-20 hardware **as shown**. Do not tighten the hardware at this time; once the tier that you are working on is completed, tighten the hardware on the tier directly under it. Attach loosely the remaining Manure Belt Rails and Legs using leg splices and 1/4-20 hardware as shown. *Note: Manure Belt Rail must be toward the inside of the End Rail (See Figure).*

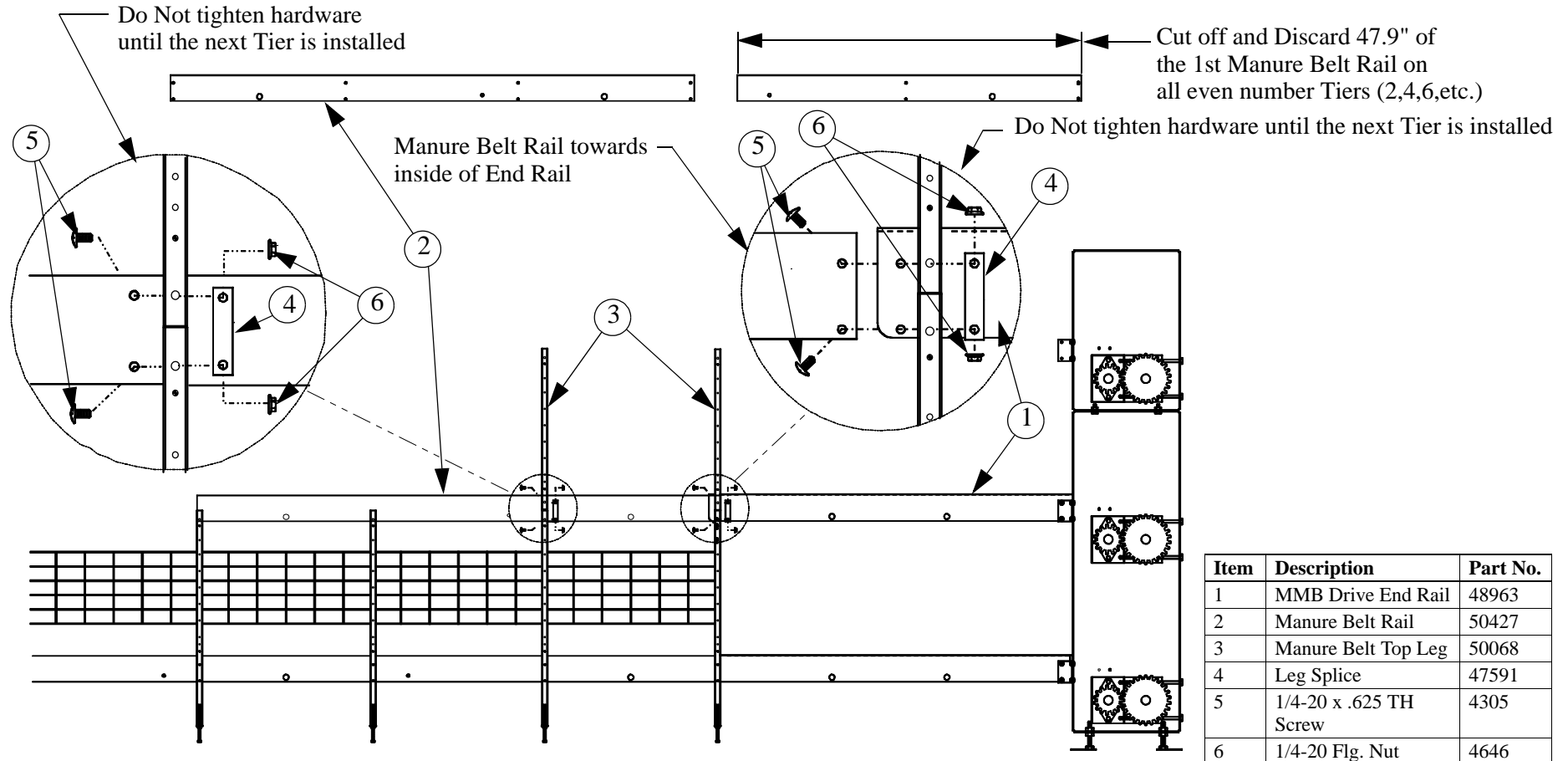


Figure 12. Installing Even Tiers

Assembling Odd numbered Tiers (3,5,7,etc.)

Installing Odd Tier Manure Belt Rails

Attach the odd tier End Rails (Tier 3,5,7,etc.) (**Item 1, Figure 13**) to the Drive Unit just like you did the other tiers. Attach a Manure Belt Rail (**Item 2**) and a Manure Belt Top Leg (**Item 3**) to the End Rail using a Leg Splice (**Item 4**) and 1/4-20 hardware **as shown**. Do not tighten the hardware at this time; once the tier that you are working on is completed, tighten the hardware on the tier directly under it. **Note: Manure Belt Rail must be toward the inside of the End Rail (See Figure)**. Attach loosely the remaining Manure Belt Rails and Legs using leg splices and 1/4-20 hardware as shown.

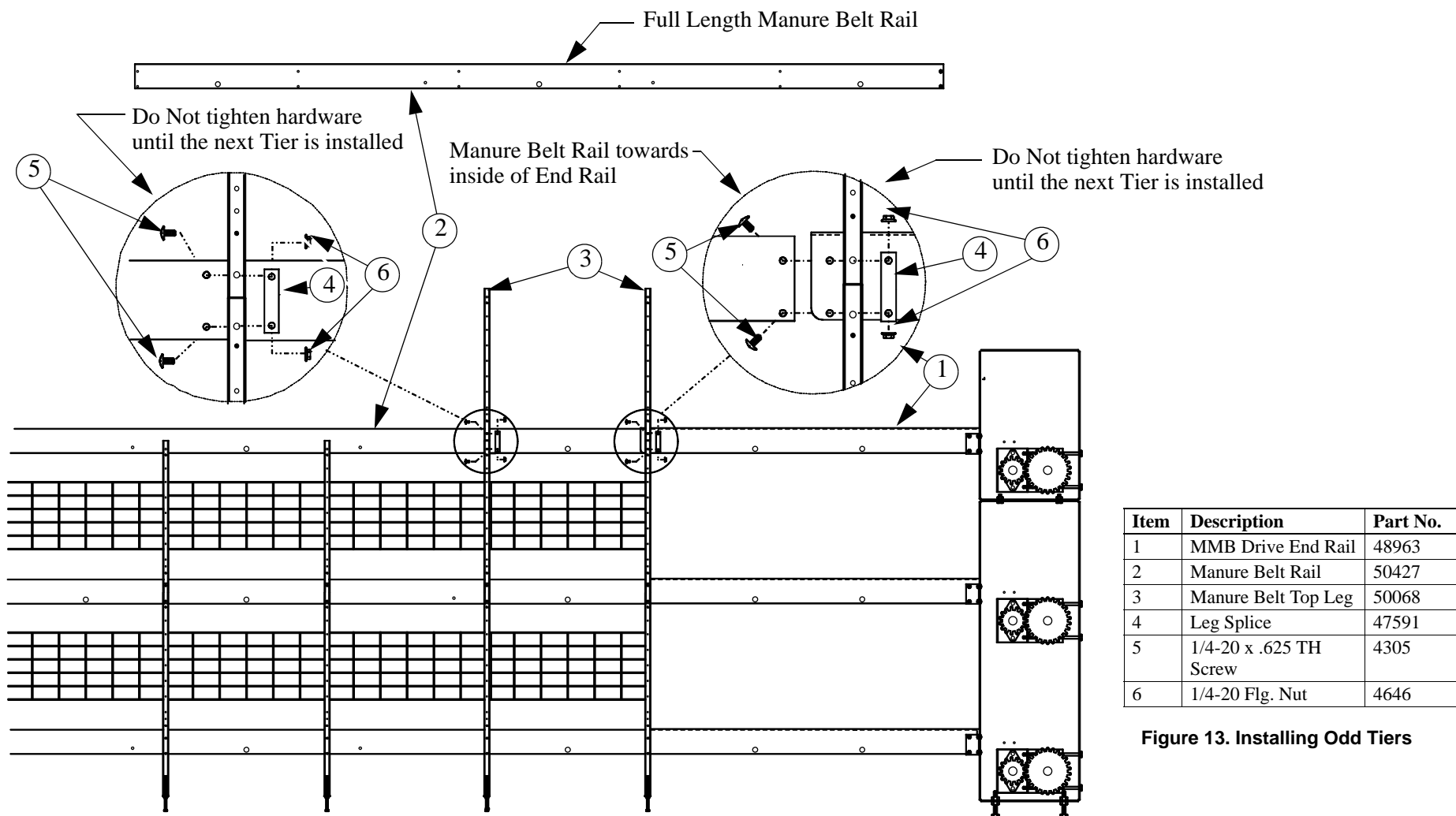


Figure 13. Installing Odd Tiers

Installing Floor

Insert Floor Bottoms (**Item 1, Figure 14**) from each side of the Cage on top of the Floor Supports **as shown**. Attach the two Floor Bottoms together at the middle using a ring gun and Wire Rings (**Item 2**). Capture the end wires of the Floor Bottoms (**Item 3**) as well as the bottom wire of the Cage Back (**Item 4**). Use 9 rings per Partition; one on every 3rd wire section of the Floor Bottoms. Install Edge Guard (**Item 5**) onto Cage Bottoms using Wire Rings as shown.

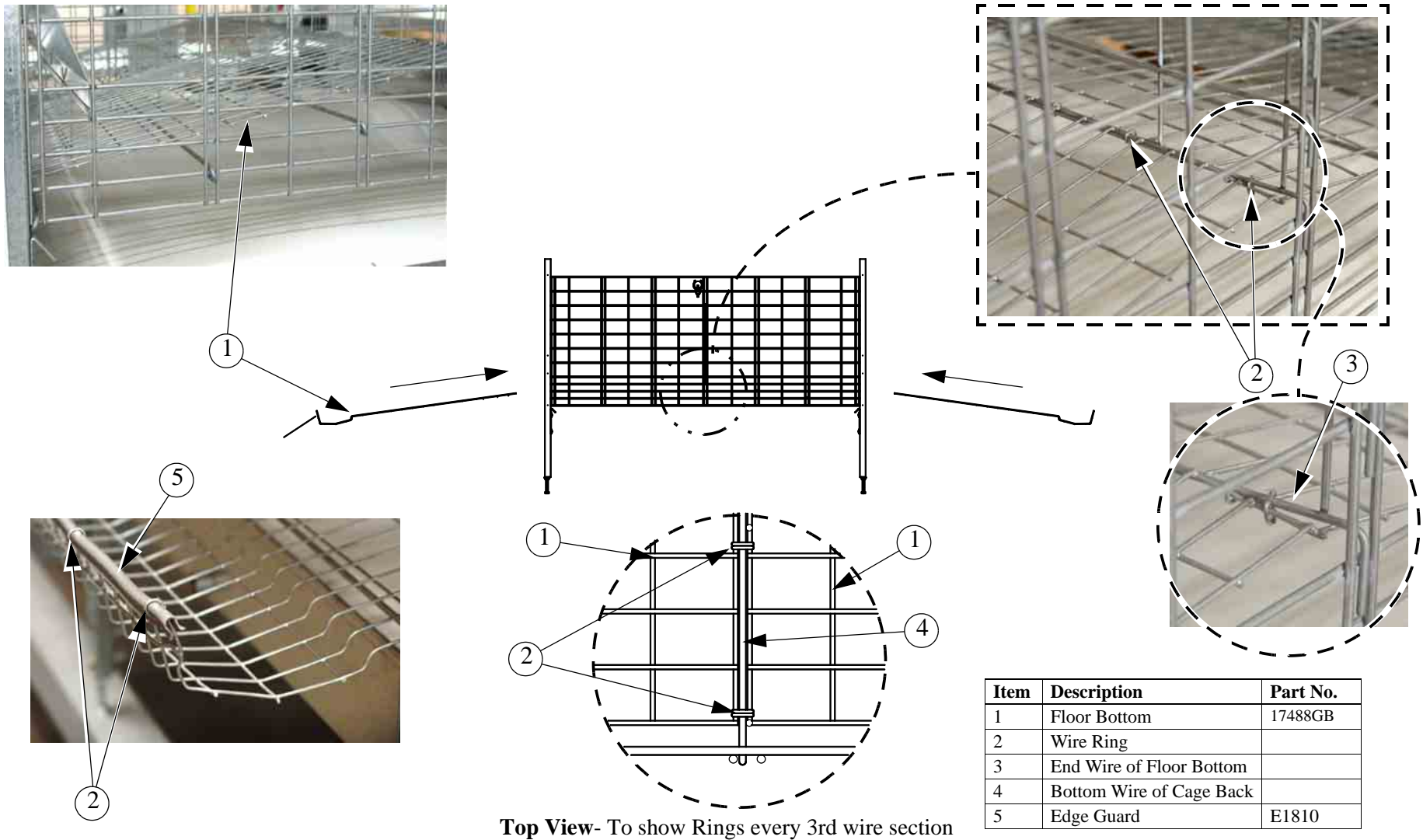


Figure 14. Installing Floor

Installing the Cage Tops

On the Top Tier use a ring gun and Cage Rings to attach a Top (**Item 1, Figure 15**) per cage section. Use 10 Cage Rings (**Item 2**) per Partition approximately 4" [10.2 cm] apart.

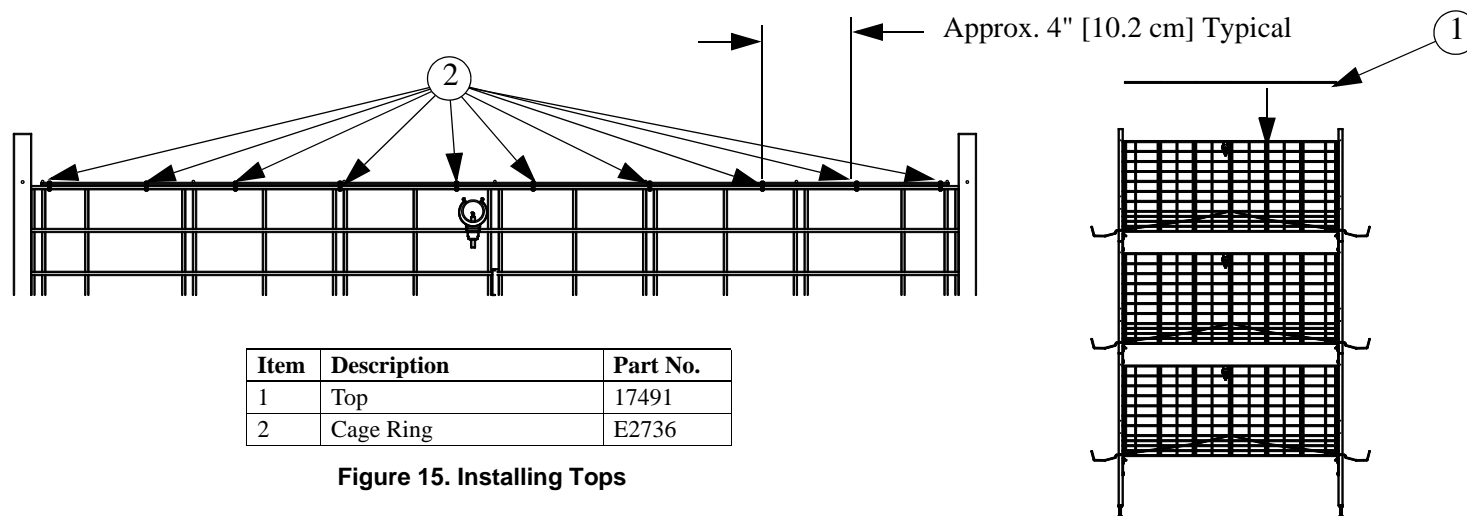
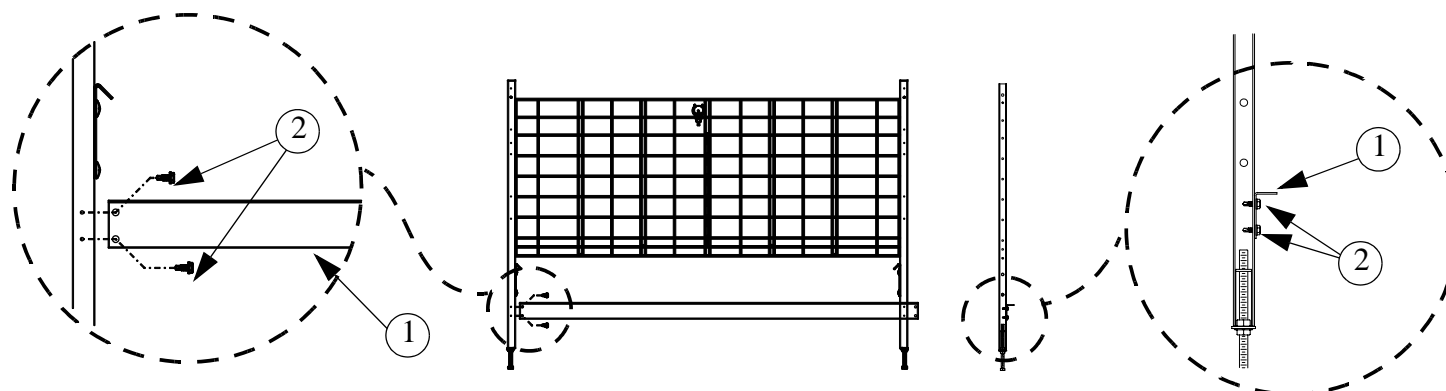


Figure 15. Installing Tops

Installing Idler end Return Cross Brace

At the Idler end of the cage row attach a Return Cross Brace (**Item 1, Figure 16**) to the Bottom Manure Belt Legs (**Item 2**) with #10 Self Drilling Screws (**Item 3**) as shown



Item	Description	Part No.
1	Return Cross Brace	47670-X
2	#10 Self Drilling Screw	3037

Figure 16. Installing Return Cross Brace

Installing the Partition Braces

Partition Braces (**Item 1, Figure 17**) are installed on both End Partitions, and on Partitions every 40' throughout the cage row (See **Figure**). Attach each Partition Brace to the Top (**Item 2**) and Bottom (**Item 3**) Legs with #10 Self-Drilling Screws (**Item 4**) using the **2nd hole from the top of four holes** (See **Figure**) pre-drilled near the top of the each Leg.

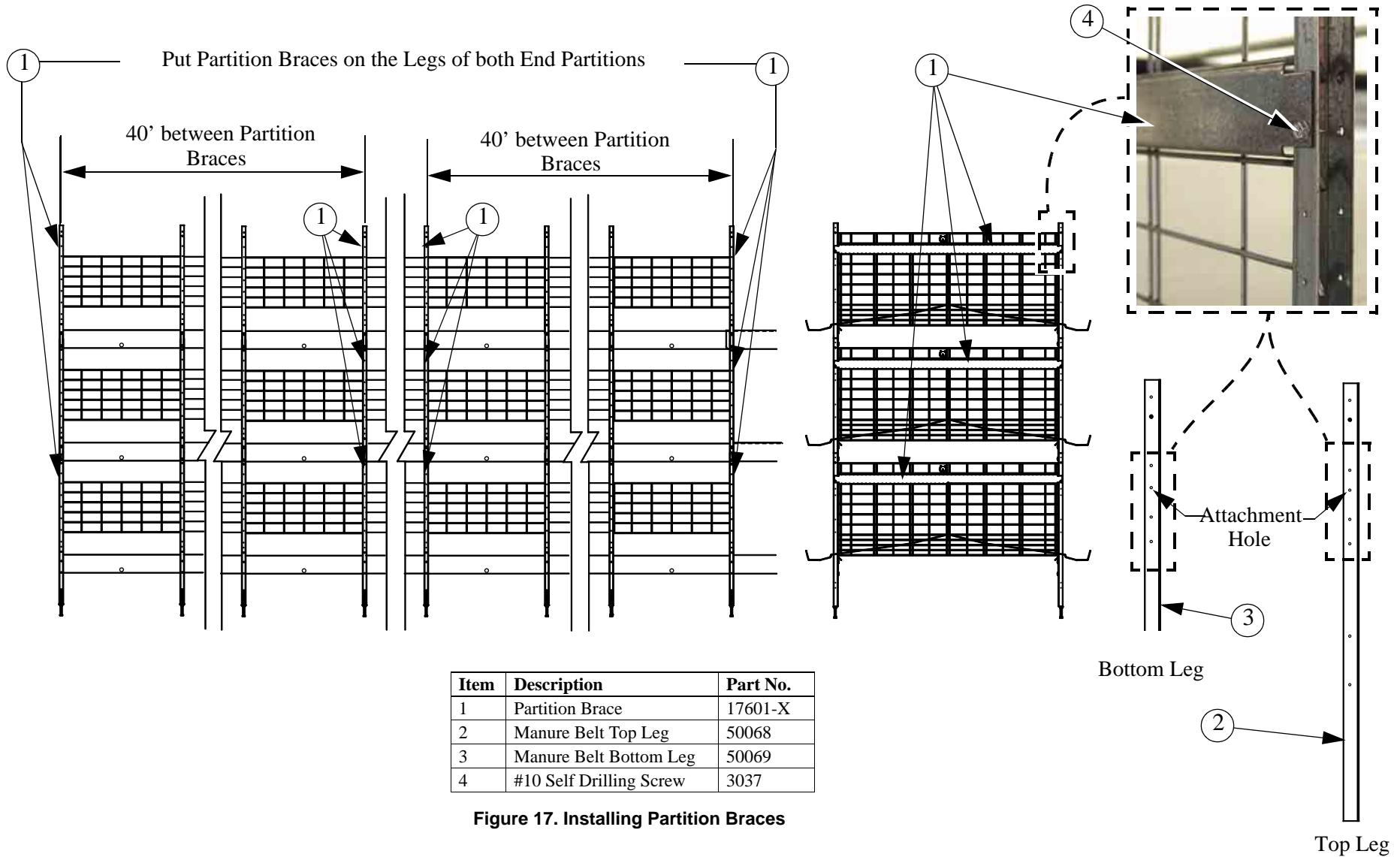


Figure 17. Installing Partition Braces

Installing Cable for Doors

The Doors Cage Doors hang from a Cable (**Item 1, Figure 18**) stretched from end to end of the cage row and kept tight by a Spring (**Item 2**). Thread the Cable through the holes immediately below the Leg Splices (**Item 3**) the entire length of the Cage Row. Use a Cable Clamp (**Item 4**) to secure the Cable at one end. The Spring must be located such that it is between the same two Partitions as the Ultra-Flow Motor (**Item 5**). Make a loop in the Cable using a Cable Clamp as shown. Allowing some extra Cable for later adjustment, use a second Cable Clamp to make a 2nd loop (**See Figure**). Hook the Spring on the loops. Pull the Cable until it is stretched to approximately 10" in length and use a Cable Clamp to secure the Cable at the end of the Cage Row.

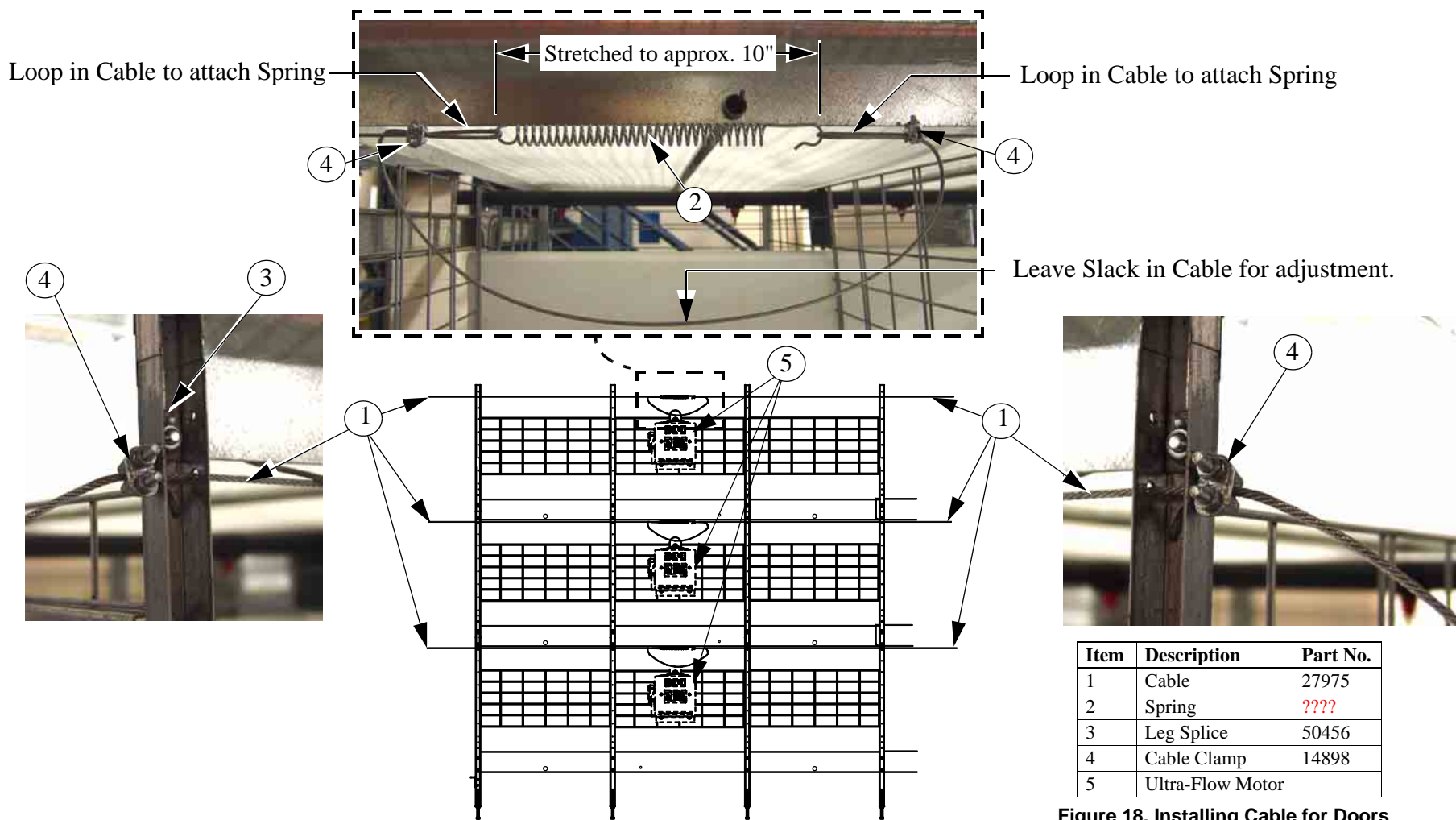
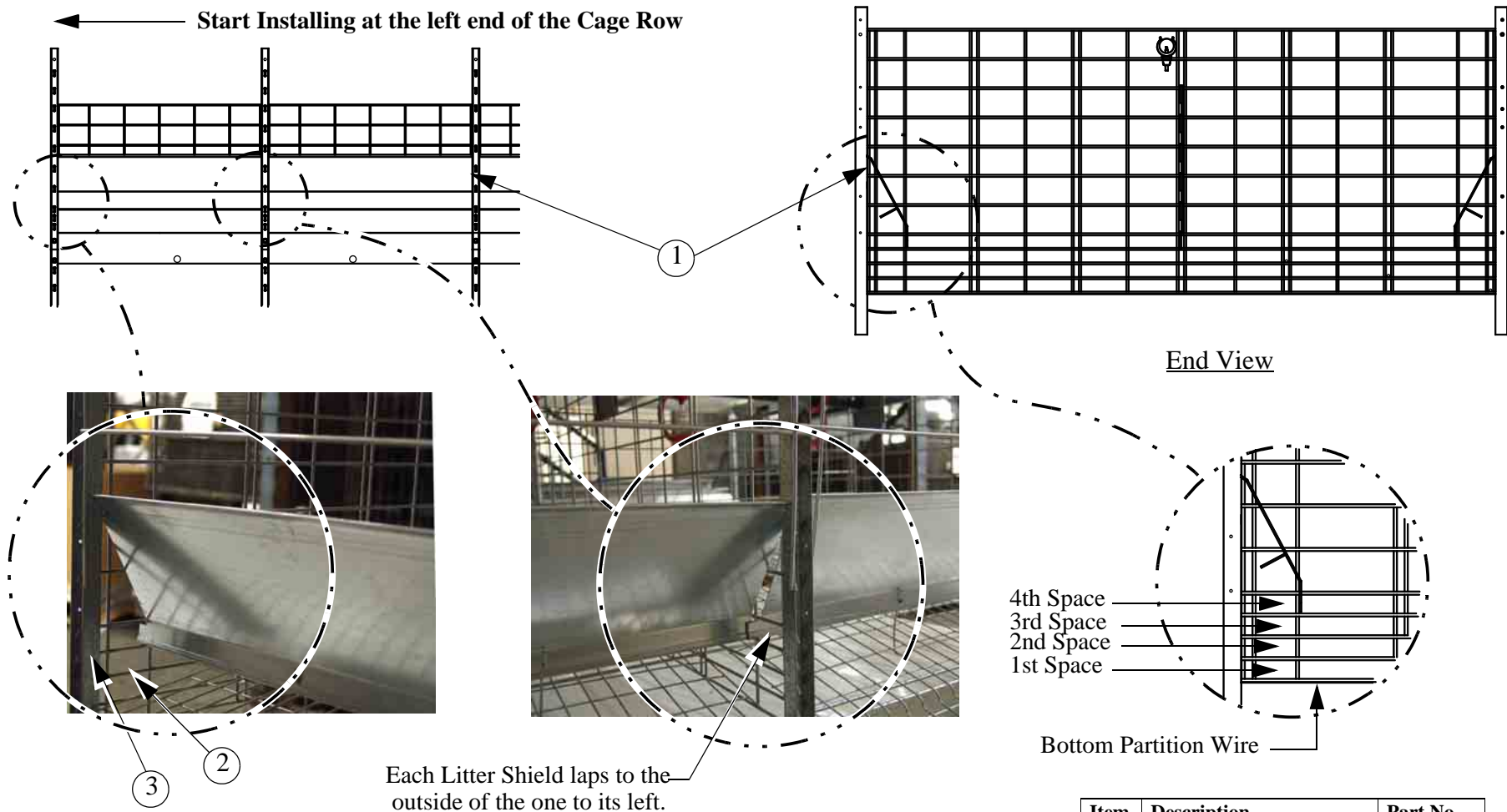


Figure 18. Installing Cable for Doors

Installing the Litter Shield

When looking at the side of a cage row, install Litter Shields (**Item 1, Figure 19**) starting at the left end. The Litter Shields are designed to lock into the Partition wire (**Item 2**) and the backside of the Legs (**Item 3**). Snap the Litter Shields into the 4th space from the bottom of each Partition (**See Figure**). Each Litter Shield should lap to the outside of the one preceding it working from left to right **as shown**.



Item	Description	Part No.
1	Litter Shield	50072
2	Partition Wire	
3	Leg	

Figure 19. Installing Litter Shield

Installing Doors

When installing the Doors (**Item 1, Figure 20**) start on any Tier at the left end of the cage row. Hang the 1st Door on the Cable (**Item 2**) with the Hooks on the **right** side of the Legs (**Item 3**) as shown. Crimp the hooks on the Doors closed. The Door should be able to slide along the Cable. Attach a Door Lock (**Item 4**) to the left Leg with a #10 Self-Drilling Screw (**Item 5**) as shown. Hang the Second Door (**Item 6**) on the Cable with the hooks on the **left** side of the 2nd and 3rd legs as shown. The Second Door should lap to the outside of the 1st as shown. The Door to the right should always lap to the outside of the Door to its left. Crimp the hooks on the Second Door closed. The Second Door should slide along the Cable. Attach a Door Lock to the 3rd Leg with a #10 Self-Drilling Screw. Install the next Door on the Cable with the hooks on the right side of the 3rd and 4th Legs. Repeat the previous to the end of the cage row.

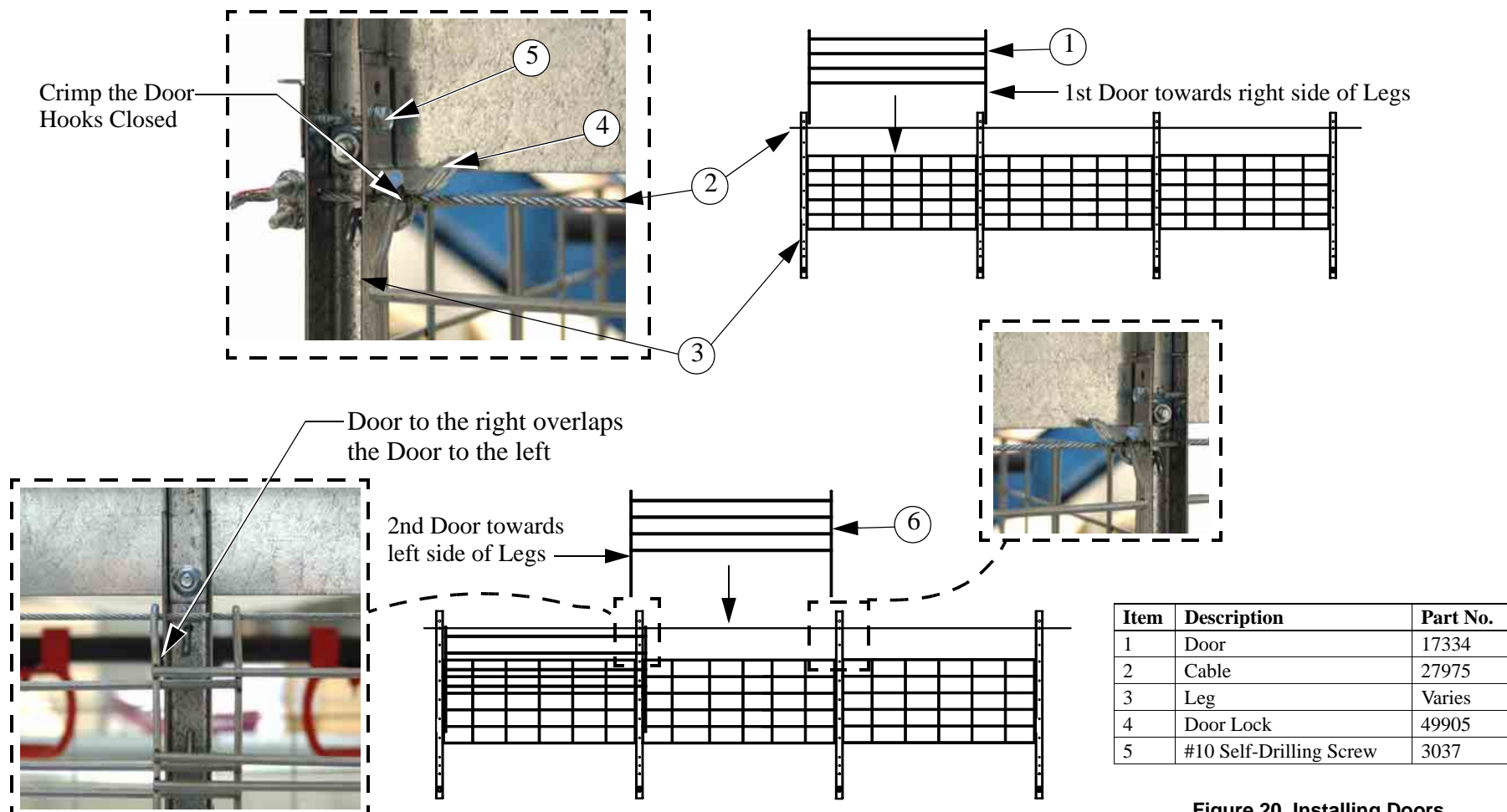
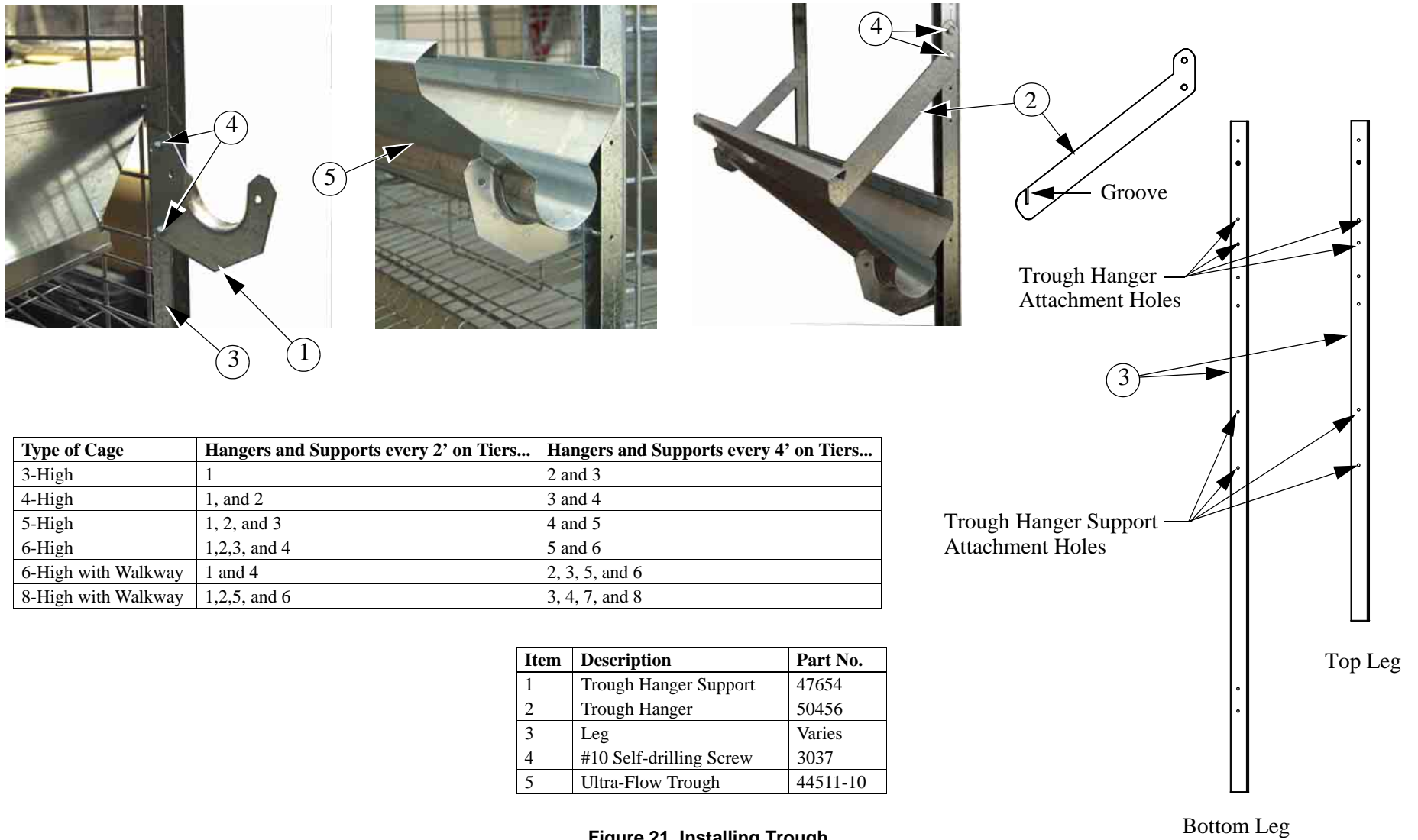


Figure 20. Installing Doors

Installing Trough

The number of Tiers and whether or not your style of Cage has walkways determines how many Trough Hanger Supports (**Item 1, Figure 21**) and Trough Hangers (**Item 2**) are required. See the **Chart below** for quantity used and frequency. Attach Trough Hangers to the Legs (**Item 3**), using the top two of four holes located towards the top of the Legs **as shown in the figure** with #10 Self Drilling Screws (**Item 4**). Set the Trough (**Item 5**) on the Trough Supports. Locate the Groove in the Trough Hangers and slip it onto the Trough. Fasten the Trough Hangers to the Legs with #10 Screws (**See Figure**).



Type of Cage	Hangers and Supports every 2' on Tiers...	Hangers and Supports every 4' on Tiers...
3-High	1	2 and 3
4-High	1, and 2	3 and 4
5-High	1, 2, and 3	4 and 5
6-High	1,2,3, and 4	5 and 6
6-High with Walkway	1 and 4	2, 3, 5, and 6
8-High with Walkway	1,2,5, and 6	3, 4, 7, and 8

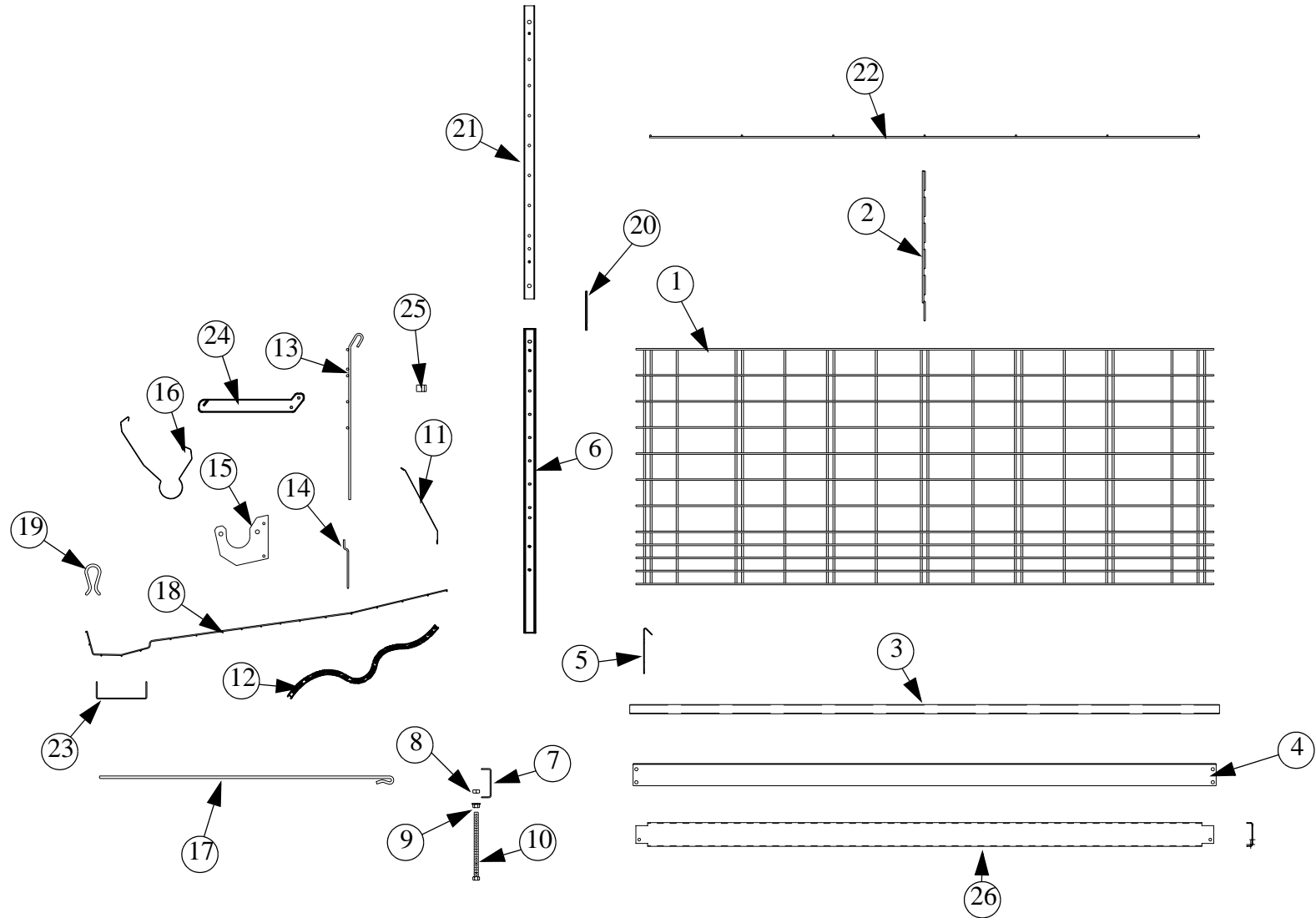
Item	Description	Part No.
1	Trough Hanger Support	47654
2	Trough Hanger	50456
3	Leg	Varies
4	#10 Self-drilling Screw	3037
5	Ultra-Flow Trough	44511-10

Figure 21. Installing Trough

Bottom Leg

Top Leg

Part Numbers



Itemized Parts

Item	Description	Cage Type Part Number				
		25.34 w/o air	22.34 w/o air	25.34 w/air	22.34 w/air	20 w/air
1	Partition	17487	P4088	17490	17659	17330
2	Back	17332	17332	--	--	--
3*	Belt Support Tube	50313-3	50313-1	50313-4	50313-2	
4	Return Cross Brace	47670-2	47670-1	47670-3	47670-4	47670-1
5	Manure Belt Rail	50427	50427	50427	50427	50427
6	Bottom Manure Belt Leg	50069	50069	50069	50069	50069
7	Bolt Brace	47587	47587	47587	47587	47587
8	5/16-18 Square Nut	39-20244	39-20244	39-20244	39-20244	39-20244
9	5/16-18 Hx. Fl. Nut	8490	8490	8490	8490	8490
10	5/16-18 x 5 Hx. Fl. Nut	4412-14	4412-14	4412-14	4412-14	4412-14
11	Litter MMB Shield	50072	50072	50072	50072	50072
12	1/8 Galv. Cable	27975	27975	27975	27975	27975
13	Door	--	--	17334	17334	17334
14	42.65 Manure Belt w/air	48037-XX	48037-XX	48037-XX	48037-XX	48037-XX
15	Trough Hanger Support	47654	47654	47654	47654	47654
16	10' Ultra-Flow Trough	44511-10	44511-10	44511-10	44511-10	44511-10
17	Floor Support Wires	P4037-122	P4037-122	P4037-122	P4037-122	P4037-122
18	Bottom W/Egg Tray	17488GB	17488GB	17488GB	17488GB	17488GB
19	Edgeguard	E1810	E1810	E1810	E1810	E1810
20	Leg Splice	47591	47591	47591	47591	47591
21	Top Manure Belt Leg	50068	50068	50068	50068	50068
22	Cage Top 10'	17491	17491	17491	17491	17491
23	Belt Return Clip	29455	29455	29455	29455	29455
24	Trough Hanger	50456	50456	50456	50456	50456
25	Cable Clamp	14898	14898	14898	14898	14898
26	Partition Brace	17601-2	17601-1	17601-3	17601-4	17601-1
27	Spring	7551	7551	7551	7551	7551
28	Door Lock	49905	49905	49905	49905	49905



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Revisions to this Manual

Page No.	Description of Change
	New Manual

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