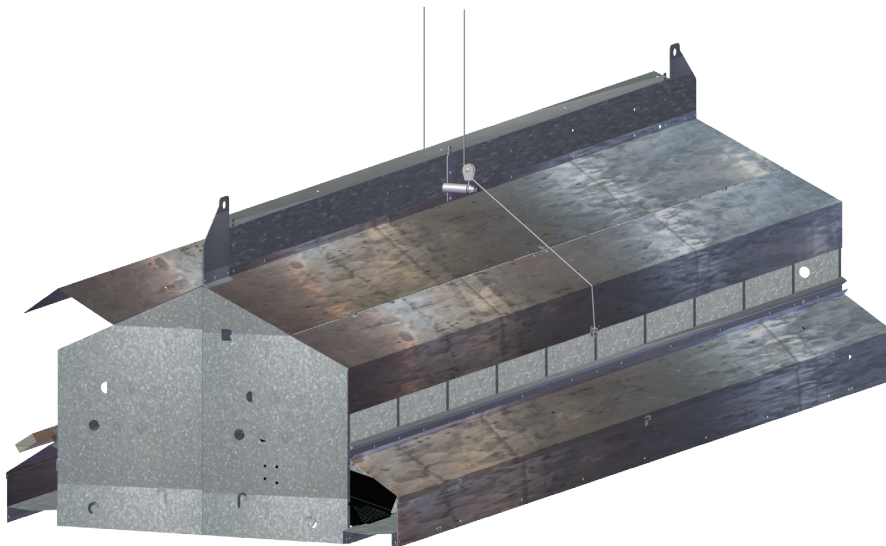
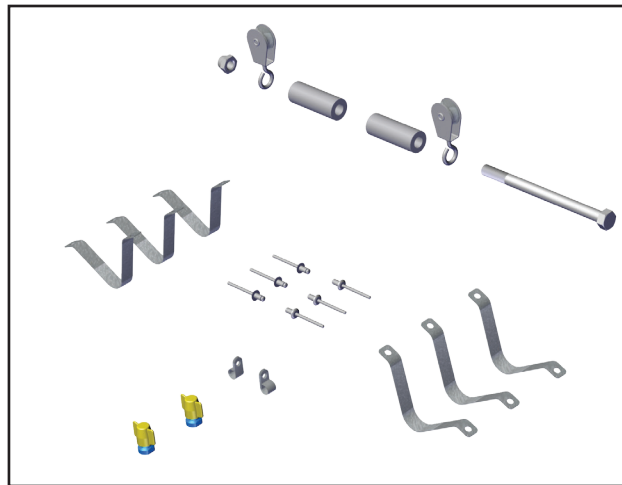




SIDE BELT NEST LID CLOSER HARDWARE KIT AND CABLE INSTRUCTIONS 412267

INSTRUCTIONS FOR RETROFIT INCLUDED



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WARRANTY

VAL-CO® MANUFACTURED PRODUCTS OTHER THAN EXTENDED WARRANTY PRODUCTS

Val Products, Inc. (Val Products) warrants to the original purchaser that Val Products' manufactured products (other than the products subject to an extended warranty set forth below) will be free of defects in material and workmanship for a period of one (1) year from and after the date of original purchase and when used in a usual and customary fashion. If Val Products is notified that such a defect exists within one year of the original purchase date and, upon inspection, agrees that the product is defective, Val Products will, at its option, (a) repair or replace (FOB Val Products' plant) the defective product, or (b) refund to the original purchaser the original purchase price paid for the defective product less any installation, shipping, or other charges associated with the original purchase. All defective products must be returned to a Val Products designated location for evaluation. Val Products' determination as to whether the product is defective is final. See the General Conditions and Limitations set forth below.

<u>VAL-CO Standard Plus Extended Warranties</u>				
<u>Product</u>	<u>Normal Warranty</u>		<u>Extended Limited Warranty</u>	<u>Total Warranty Coverage</u>
	<u>Coverage Period(1)</u>		<u>Coverage Period(2)</u>	<u>Period(3)</u>
VR & VBL Series Drinkers	5 Years	+	5 Years	10 Years
VQ & VB-BN Series Drinkers	2 Years	+	3 Years	5 Years
Roll Formed Tube	3 Years	+	7 Years	10 Years
Coreless Auger (Moisture Content less than 18%)	3 Years	+	7 Years	10 Years
Fuze® ProLine Feeder Pans	2 Years	+	3 Years	5 Years
Fiberglass Fan Housings	Lifetime(4)		N/A	Lifetime(4)
Aluminum Fan Blades	Lifetime(4)		N/A	Lifetime(4)
Fan Motors	2 Years(5)		N/A	2 Years(5)

Explanations/Conditions of above listed footnotes for VAL-CO warranties:

"Normal warranty coverage period" is subject to the conditions of VAL-CO's standard one year warranty policy.

"Extended limited warranty coverage" will be provided at a charge rate of 50% off the VAL-CO List Price for an item at the time the warranty claim is made known to the company in writing, and is subject to VAL-CO's standard warranty policy conditions and limitations.

"Total warranty coverage period" is the sum of periods for the "normal warranty coverage period" plus the length of the "extended limited warranty coverage period", and is subject to VAL-CO's standard warranty policy conditions and limitations.

The "Lifetime" warranty for fiberglass fan housings manufactured by Val Products is limited to PMC Power Miser 12", 16", 21", 24", 36", 48", and 50" Fiberglass Fans that prove to be defective in workmanship or material and become unusable over the life of the structure where the VAL-CO Fiberglass Fan was originally installed after original purchase, provided that the fan has remained undisturbed in its original installation location, will be repaired or replaced, at Val Products' option, at no charge (excluding labor of removal and installation and shipping), FOB Val Products' plant. All defective fan housings must be returned to a Val Products' designated location for evaluation. Val Products' determination as to whether the product is defective and unusable is final. See the General Conditions and Limitations set forth below.

This fan motor warranty is limited to the motors used in with respect to the fiberglass fan motors included as original equipment on VAL-CO PMC Power Miser 12", 16", 21", and 24" Fiberglass Fans manufactured by Val Products that prove to be defective in workmanship or material and become unusable within a period of two (2) years from and after the date of original purchase will be repaired or replaced, at Val Products' option, at no charge (excluding labor of removal and installation and shipping), FOB Val Products' plant. All defective fan motors must be returned to a Val Products' designated location for evaluation. Val Products' determination as to whether the product is defective and unusable is final. See the General Conditions and Limitations set forth below.



General Conditions and Limitations Applicable to All Val Products, Inc. (Val Products) Warranties, Including Extended Warranties

1. The Product must be installed and operated in accordance with instructions published by Val Products or the warranty will be void.
2. Warranty will be void if all components of the product or system are not original equipment supplied by the manufacturer.
3. Products not manufactured by Val Products and supplied by outside manufacturers (such as, but not limited to, certain electrical motors, certain controls, gas valves, etc.) are warranted separately by the respective manufacturer and only to the extent of the manufacturer's warranty.
4. Warranty applies only to products used in applications as originally intended by Val Products – other applications in industry or commerce are not covered by the Warranty. Val Products' products are expressly not designed or authorized for use in any applications where intended to sustain or support human life or any other application where the failure of the product could result in personal injury or death.
5. Malfunctions resulting from misuse, abuse, mismanagement, negligence, alteration, accident, lack of proper maintenance, lightning strikes, electrical power surges, or electrical power interruption shall not be considered defects under the Warranty. Corrosion, material deterioration and/or equipment malfunction caused by or consistent with the excessive additions of chemicals, minerals, sediments or other foreign elements with the product shall not be considered defects under the Warranty.
6. VAL PRODUCTS WILL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR ANY KIND OF SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR CONTINGENT DAMAGES INCLUDING, BUT NOT LIMITED TO, LOST OR DAMAGED PRODUCT, GOODS OR LIVESTOCK, COSTS OF TRANSPORTATION, LOST SALES, LOST ORDERS, LOST INCOME, INCREASED OVERHEAD, LABOR AND INCIDENTAL COSTS AND OPERATIONAL INEFFICIENCIES. IN NO EVENT SHALL THE WARRANTY LIABILITY EXCEED THE INVOICED PRICE OF THE PRODUCT TO THE ORIGINAL PURCHASER.
7. THE WARRANTIES SET FORTH ABOVE CONSTITUTE VAL PRODUCTS' ENTIRE AND SOLE WARRANTY. VAL PRODUCTS EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES AS TO THE MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, DESCRIPTION OF QUALITY OF THE PRODUCT FURNISHED, AND ANY OTHER WARRANTY ARISING BY OPERATION OF LAW, CUSTOM OR USAGE.

Val Products denies any authorization of any distributor, dealer, agent, or employee to modify, extend, or otherwise alter the conditions of any warranty in addition to, or in lieu of, those conditions and terms expressly stated above. Any exceptions not noted in the body of the Warranty must be authorized in writing by an officer of Val Products. Val Products reserves the right to change or delete models, or change specifications at any time without notice or obligation to improve previous products.

INTRODUCTION

VAL-CO® recommends that you read the entire instruction manual before you begin assembling any parts. The order and method of assembly can greatly affect the quality and effectiveness of this product. Call customer service 800-998-2526 Monday-Friday from 8:00am to 5:00pm EST with questions.

Features of the Lid Closer

- quality hardware
- easy to assembly
- replaceable parts

SAFETY SYMBOLS

Our concern is for your safety. The safety warnings are included in this manual as a guide to help and encourage the safe operation of your feeding equipment. It is your responsibility to evaluate the hazards of each operation and implement the safest method of protecting yourself as owner and/or operator.



= NOTE - take notice this may help you!



= IMPORTANT INFORMATION - be sure to read!



= CHECK - the details of all requirements, processes or procedures of instructions listed.

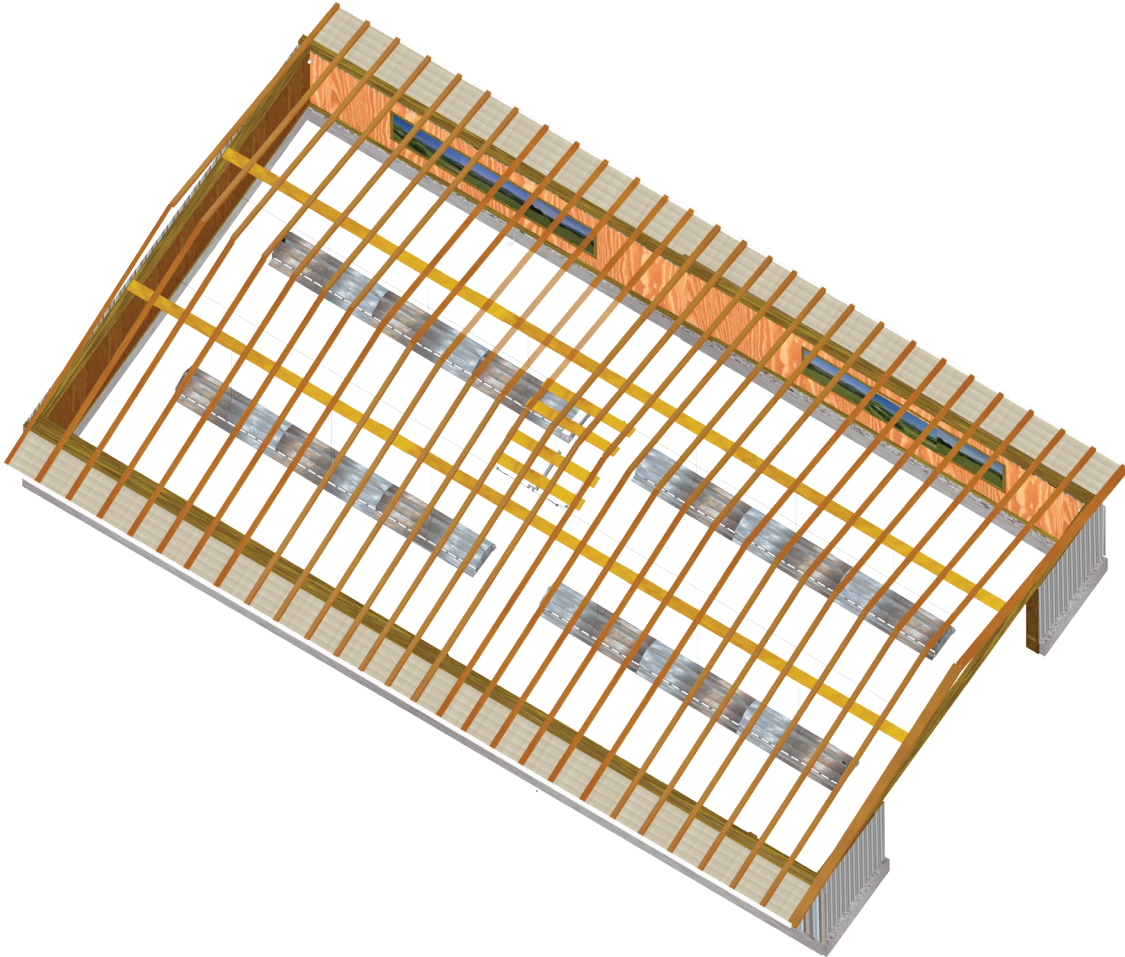


= WARNING - The safety alert symbol is always used on warning signs that involve your safety. Anytime you see this symbol heed the warning it identifies. This symbol may be used in conjunction with other symbols.



OVERVIEW OF LID CLOSER SYSTEM

CENTERED - CURTAIN MACHINE MOUNTS



INTRODUCTION - HARDWARE



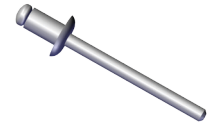
It is the desire of VAL-CO® to deliver to you high quality products and satisfactory shipments. Please check your shipment for its' condition and product quality upon arrival and contact the Customer Service Department immediately if you have any concerns. *Customer Service contact information is on the last page of this manual.*



412256
SPRING, CLOSER, LID, NEST, SB



VEN91104
PULLEY, SWIVEL, 7/8" NYLON



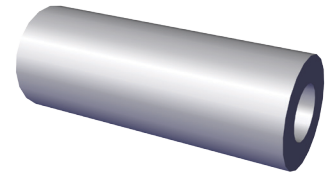
012802
RIVET, POP #62X3/16" ALL-ALUM



HCLAMP
AZUMA BOLT BLUE &
CLAMP NUT YELLOW



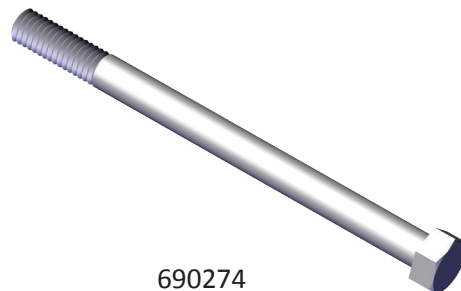
412266
CLAMP, CABLE, 5/16, NYLON



412257
SPACER, PULLEY, 3/4"X2"



012481
NUT, HEX, NYLOCK 3/8-16 GR8



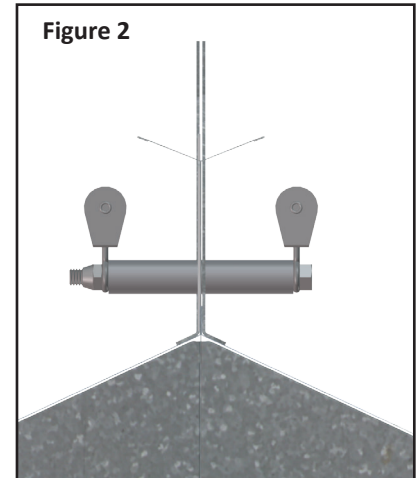
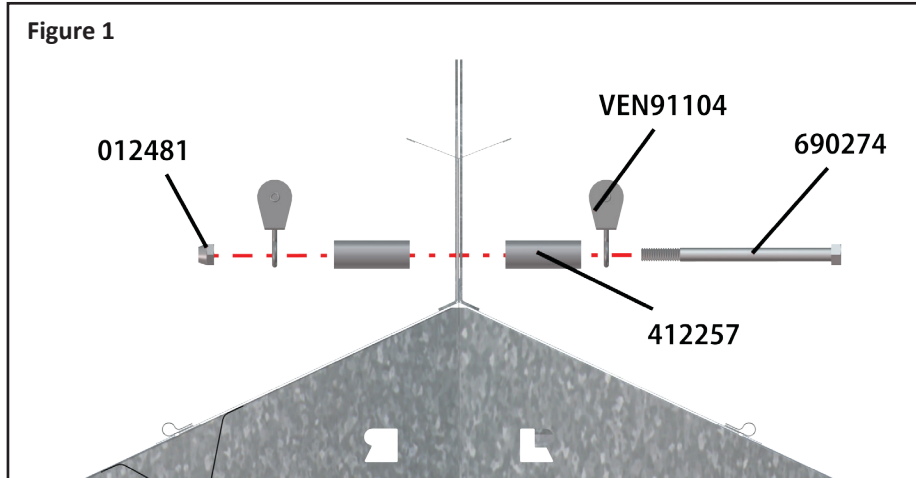
690274
BOLT, 3/8-16X5, HEX



LID CLOSER HARDWARE ASSEMBLY & INSTALLATION

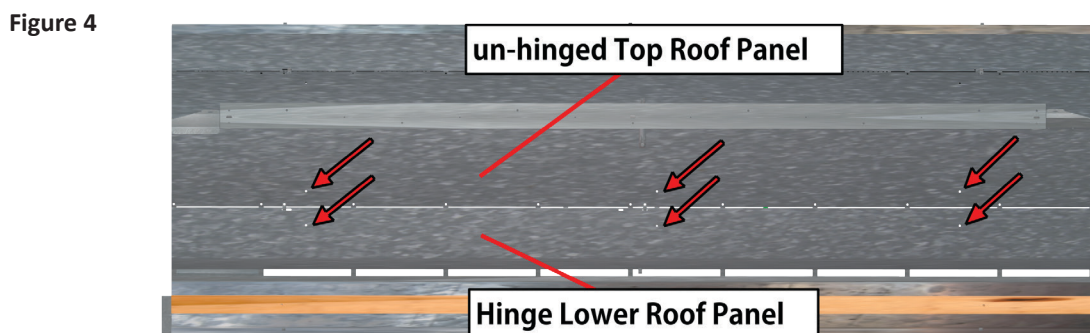
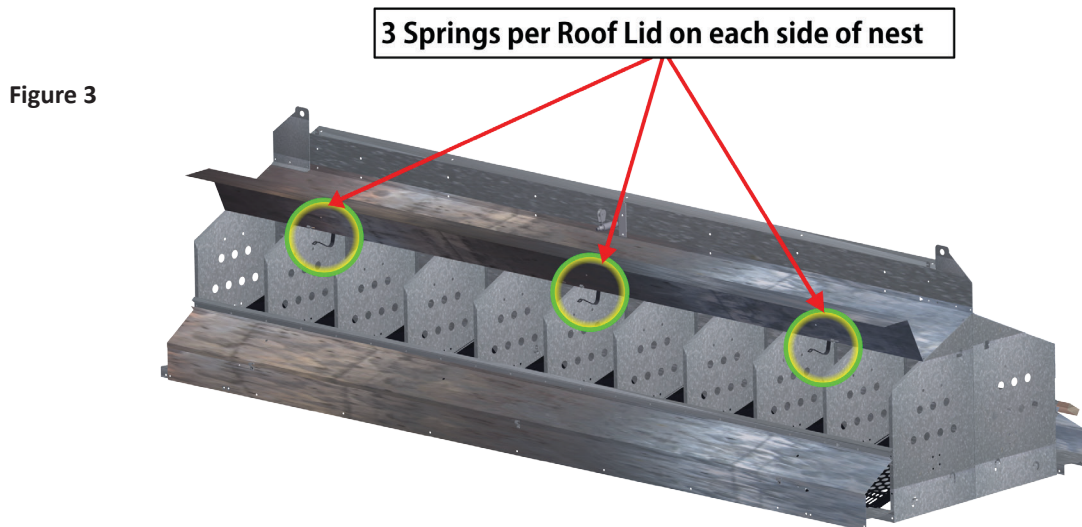
Pulley and Spacer

1. Attach VEN91104 Pulleys (1) one to each side of the middle panel. (Holes are pre-drilled.) Use 690274 Hex Bolt, 412257 Spacer, and secure with 012481 Hex Nylock Nut, as shown in Figure 1, un-assembled, below and assembled in Figure 2.



Lid Spring Position and Attachment

Below, in Figure 3 and 4, are (2) two views showing the positions and pre-drilled holes for attaching the lid Springs. There are (6) six Springs to each nest, (3) three springs for each side of the nest, positioned as shown. More detailed instructions for attaching the Springs are on the next page. **INSTRUCTIONS FOR RETROFITTING AN EXISTING NEST ARE ON PAGE 16.**



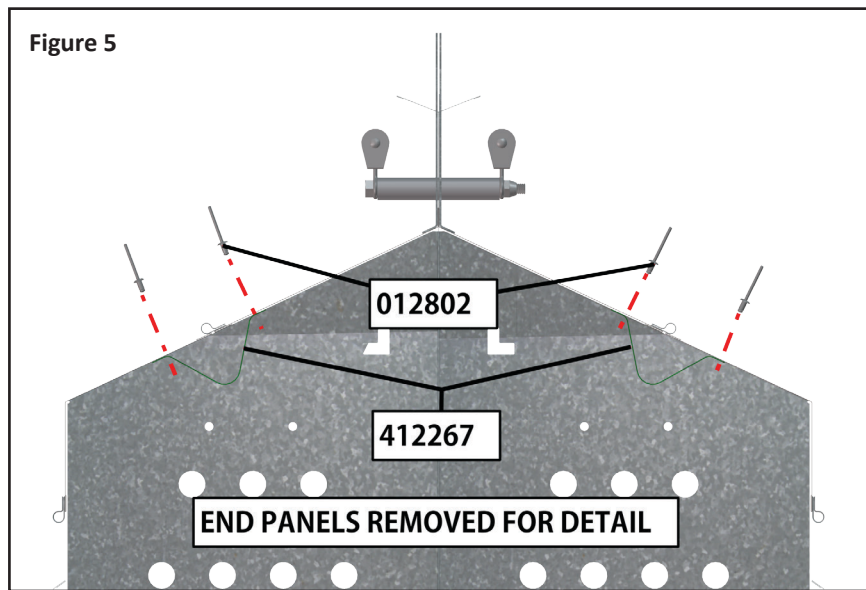
ASSEMBLY & INSTALLATION - CONTINUED

Lid Spring Attachment - continued

2. Attach (3) 412256 Lid Closer Springs from UNDER-SIDE of Roof Panels, (hinged and un-hinged), using 012802 Pop-Rivets, as shown in Figure 5 below. (Holes are pre-drilled.)



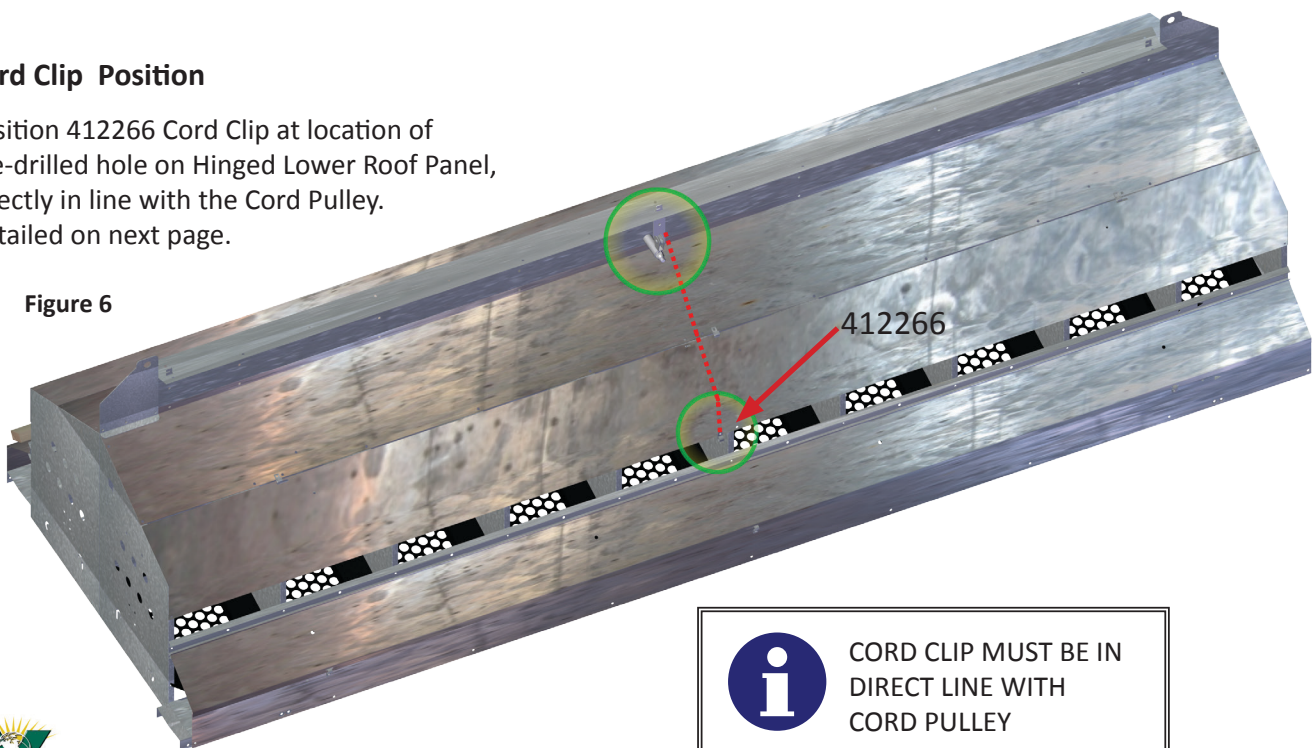
To do this you will need to lift the hinged Roof Panel to align the holes on the Spring ends with the pre-drilled holes on the panels. Attach one hole of each Spring to the Top Roof Panel. When all (3) three are securely attached, then **partially lower** the hinged panel and slightly compress springs to align the second hole of each Spring to the designated hole (shown in Figure 4 of the previous page) in the hinged Roof Panel and attach with the 012802 Pop-Rivets.



Cord Clip Position

Position 412266 Cord Clip at location of pre-drilled hole on Hinged Lower Roof Panel, directly in line with the Cord Pulley. Detailed on next page.

Figure 6



CORD CLIP MUST BE IN
DIRECT LINE WITH
CORD PULLEY

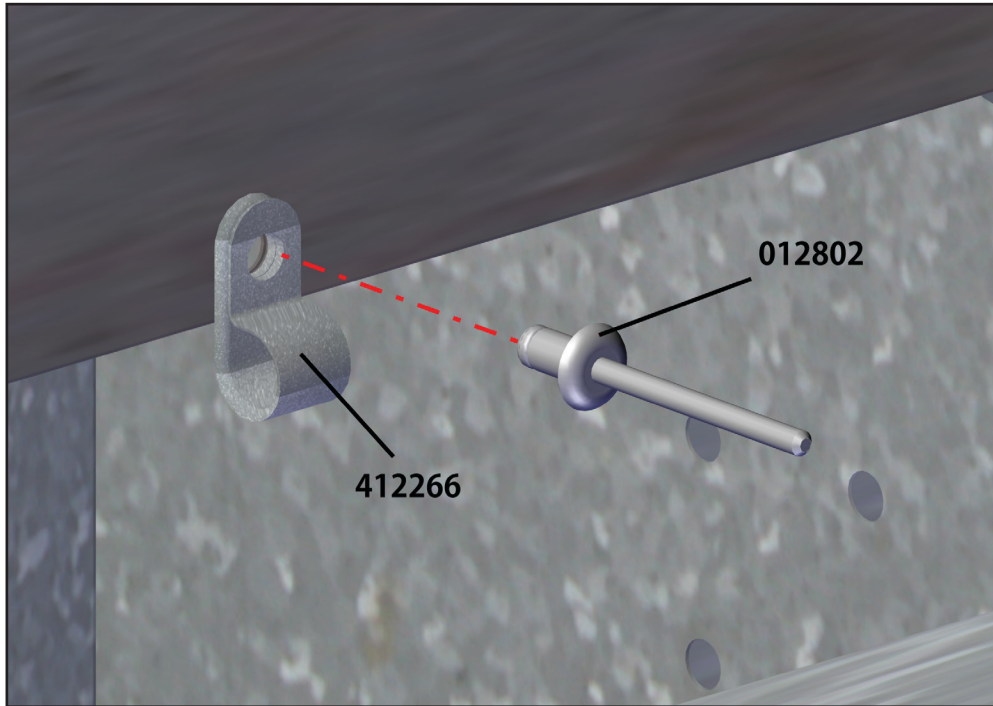


ASSEMBLY & INSTALLATION - CONTINUED

Cord Clip Attachment

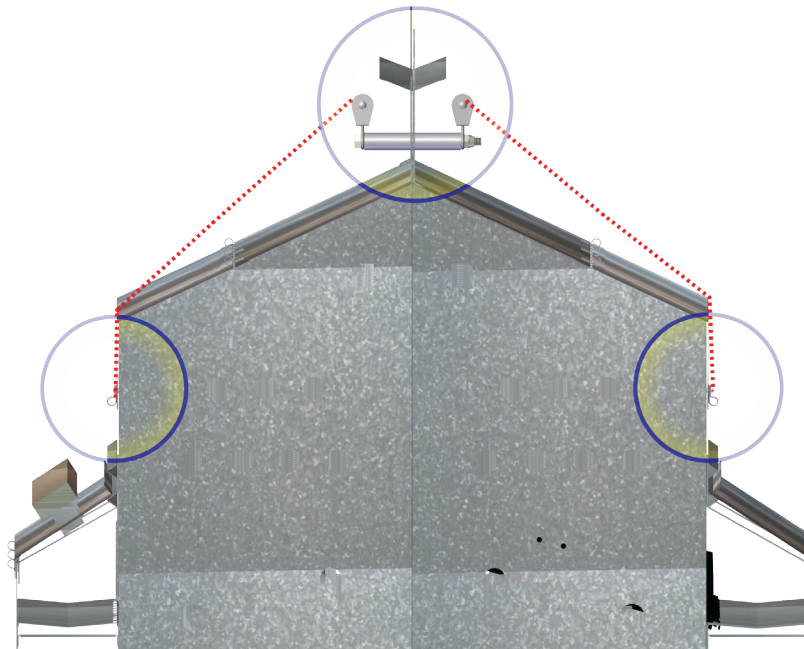
3. Attach 412266 Cord Clip to outside surface of Hinged Lower Roof Panel , (in the position shown in Figure 6 of the previous page), using 012802 Pop Rivet, as shown in detail in Figure 7 below.

Figure 7



4. Repeat the process of Cord Clip attachment for BOTH SIDES OF THE NEST!

Figure 8



CABLE ASSEMBLY & INSTALLATION

Begin by choosing the best location for the Curtain Machine(s) with consideration to each machine's load capacity. On the following pages this manual an overview of possible winching configurations; end wall, side wall, end truss and centered configurations are shown. The detail is given for the **centered truss position setup** for the Homerun Lines, as this is typical of many house setups. Each double nest will require a combined pull force of 24 lbs per nest to close and 16" travel to fully open lids. VAL-CO® does not recommend one particular setup. Each Building should have its' own design plans and those design plans should be followed.



BE SURE NOT TO EXCEED LOAD CAPACITY ON EACH CURTAIN MACHINE!

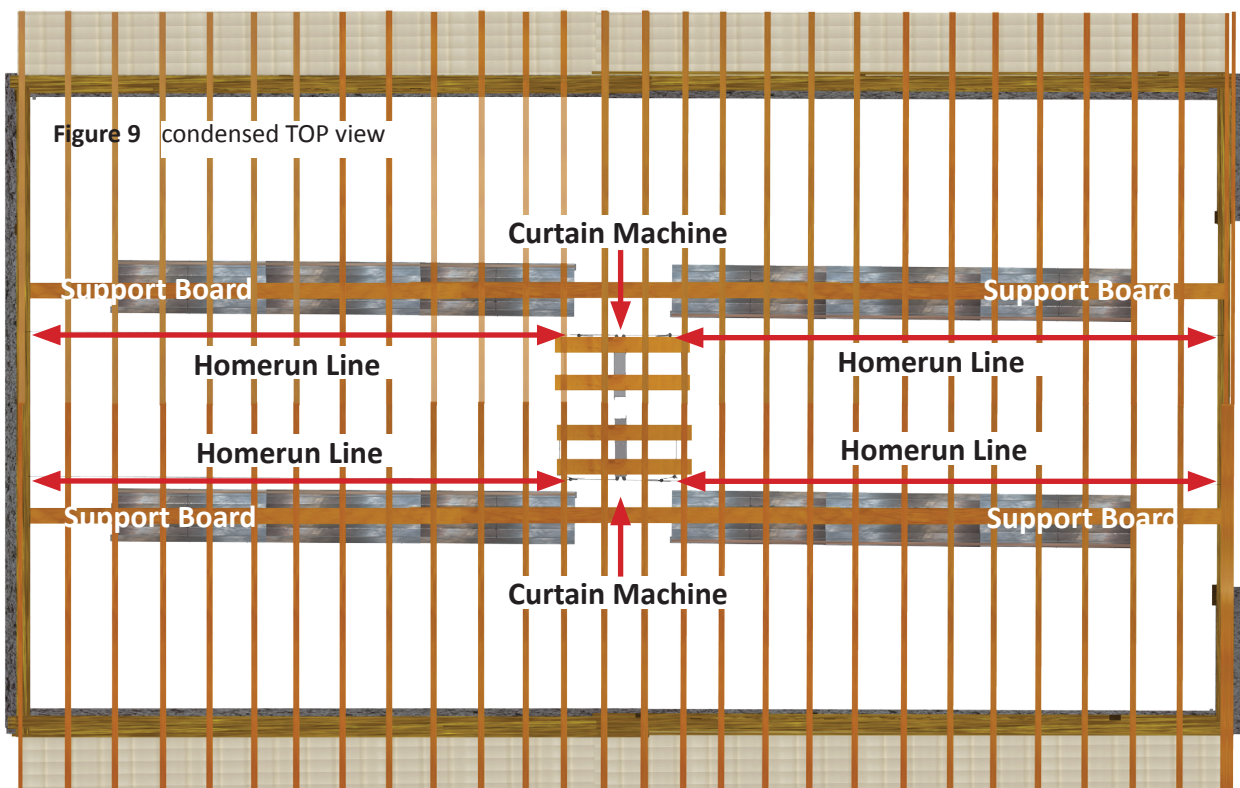


DISCONNECTED POWER TO CURTAIN MACHINE WHILE WORKING ON THE WINCHING SYSTEM!

BE SURE TO FOLLOW LOCK OUT TAG OUT PROCEDURES!



Homerun Line/Curtain Machine - Centered truss position (most commonly used)



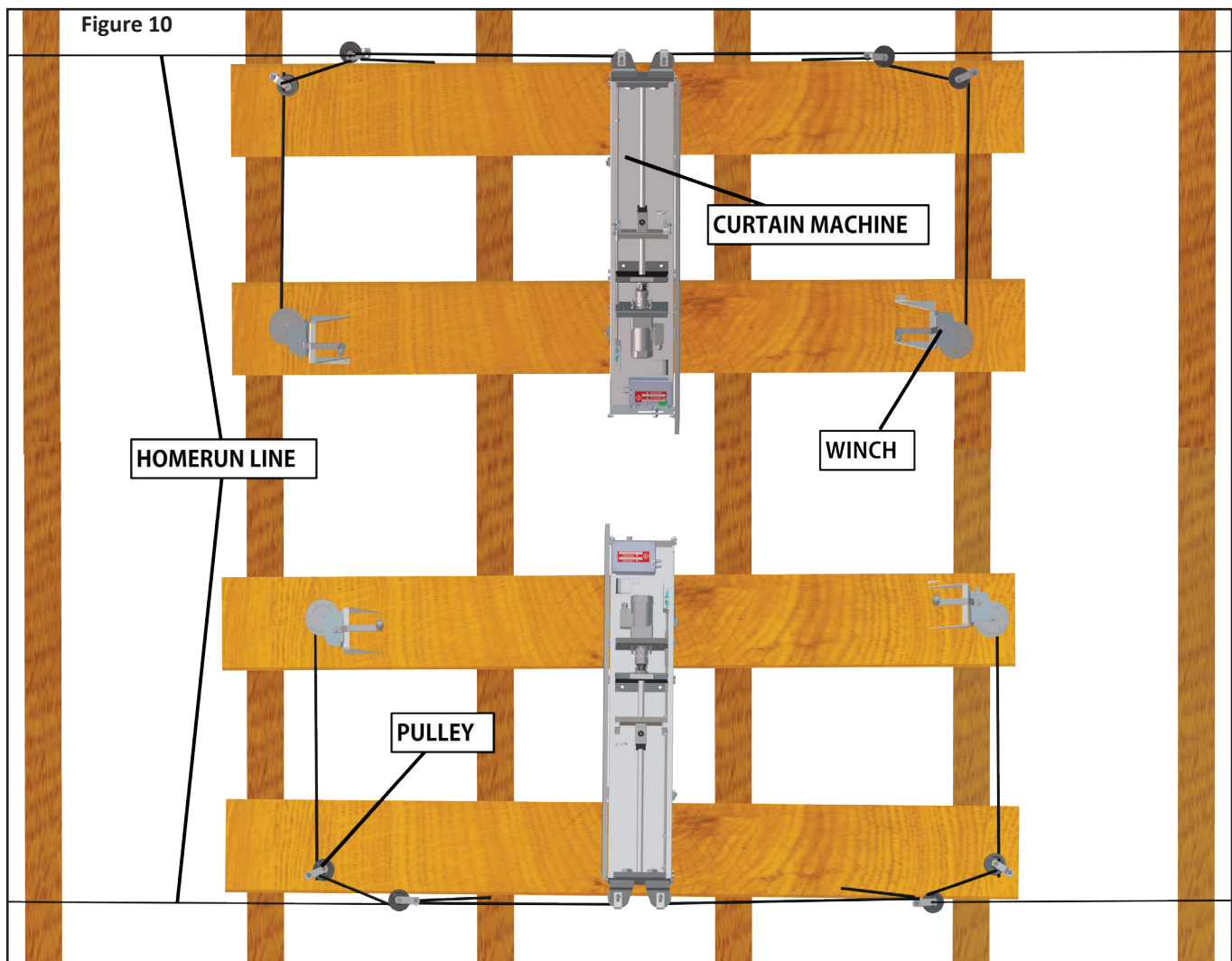
CABLE ASSEMBLY & INSTALLATION - CONTINUED

Centered Position - Homerun Line/Curtain Machine Cable Detail



Using the design plans provided for your site and the instructions provided with the Curtain Machine for correct configuration and load capacities; follow the steps provided on the following pages.

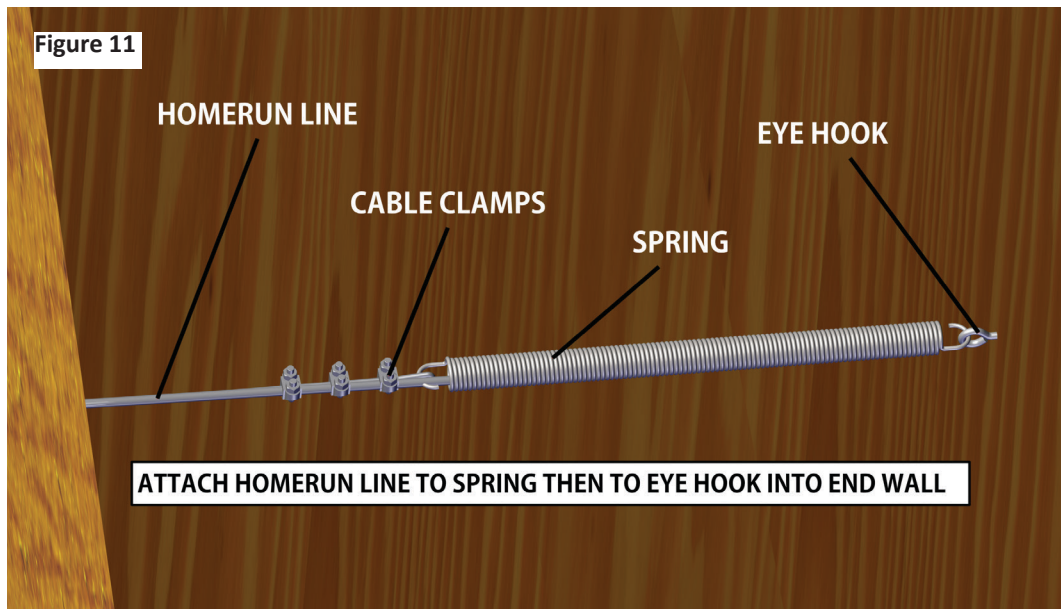
1. After the nests are installed attach a support board over the center of each row of nests running the length of the barn. Attach pulleys for cabling over nest rows directly above the nest cabling. Make sure the HOMERUN LINE is off set from the Lid Closer cabling (overhead the center of nest row as shown in Figure 9), to avoid interference with nest row suspension system.
2. Figure 10 below shows the cable configuration for a centered position. (Cable, pulleys, mounting hooks and clamps are NOT INCLUDED with this Lid Closer Kit.)



CABLE ASSEMBLY & INSTALLATION - CONTINUED

Installing the Extension Spring on Homerun Line

3. The Extension Spring (not supplied) is required at the end of each Homerun Line to provide back-tension to avoid slack and to maintain lid adjustment as shown in Figure 11. Screw the Eye Hook into the end wall.

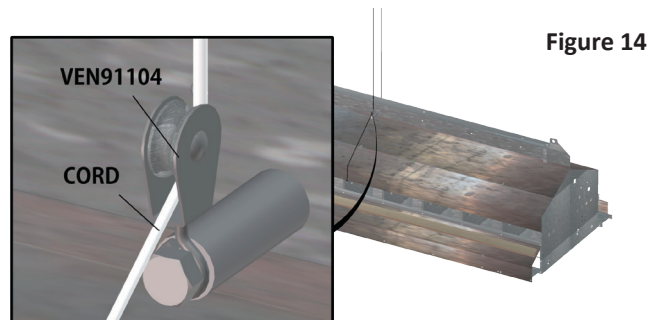
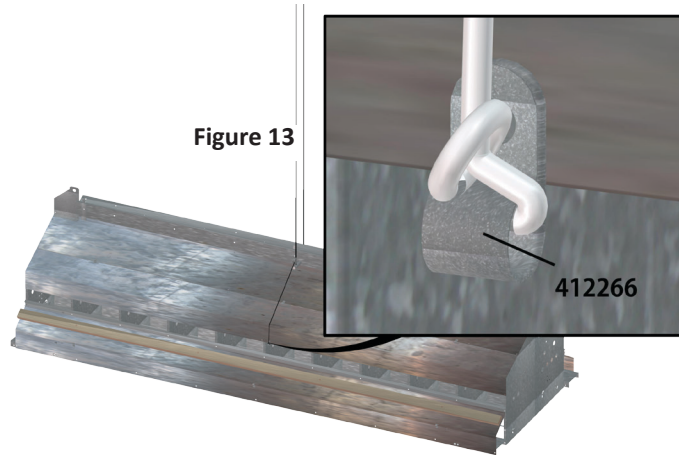
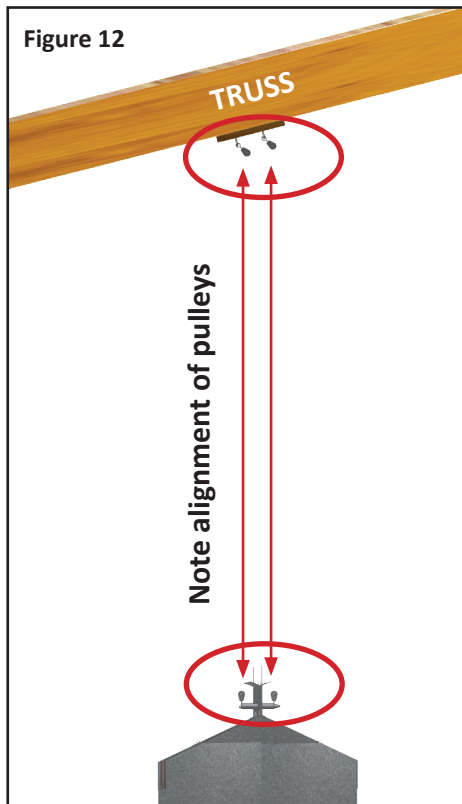


Extension Springs are wound to oppose the extension to achieve the load requirement, therefore the Eye Hook must be screwed into sufficient support. If there is not a stud or post behind the plywood or surface, **BE SURE TO MOUNT A SUPPORT BOARD** to secure the Eye Hook properly.

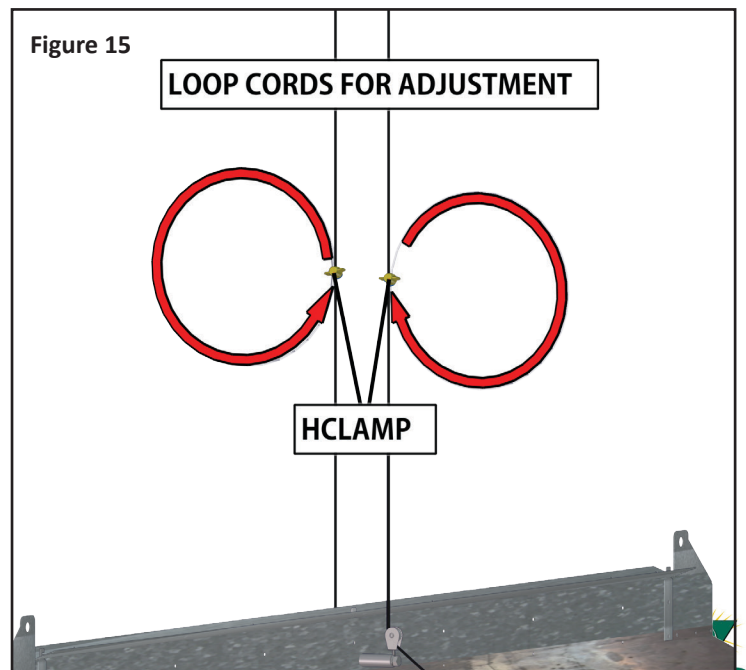
CABLE ASSEMBLY & INSTALLATION - CONTINUED

Lid Cord and Homerun line attachment

3. Insert eye hooks so that the VEN91104 Swivel Pulley for each Lid Closer cable is aligned directly above the VEN91104 Swivel Pulley at the nest lid, as shown in Figure 12.
4. Attach cord to the cable clip on front of Lower Roof Lid by tying a knot, as shown in Figure 13.



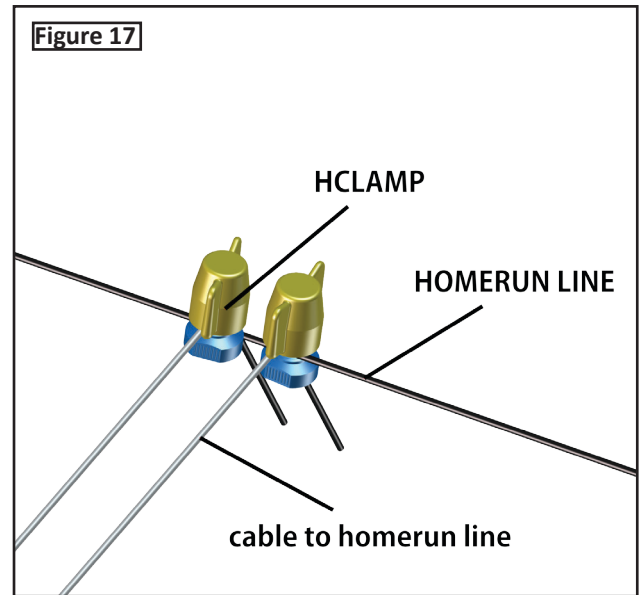
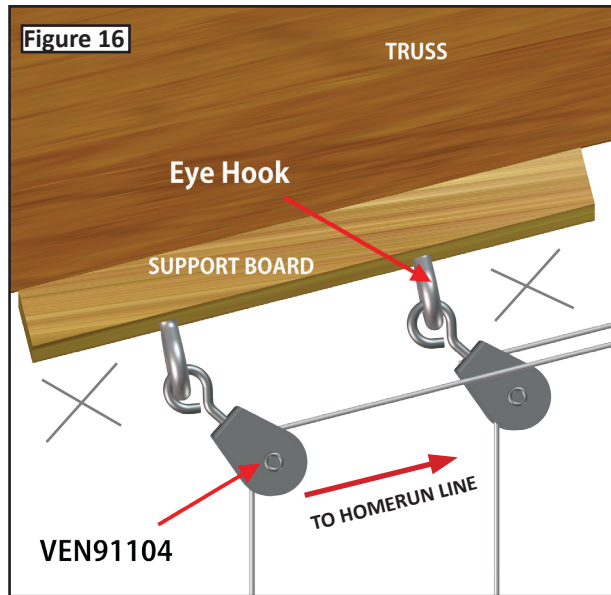
5. After running cord thru pulley just above Top Roof Lid use a HCCLAMP on each making a loop in the cord for easy lid adjustment, as shown in Figure 15.



CABLE ASSEMBLY & INSTALLATION - continued

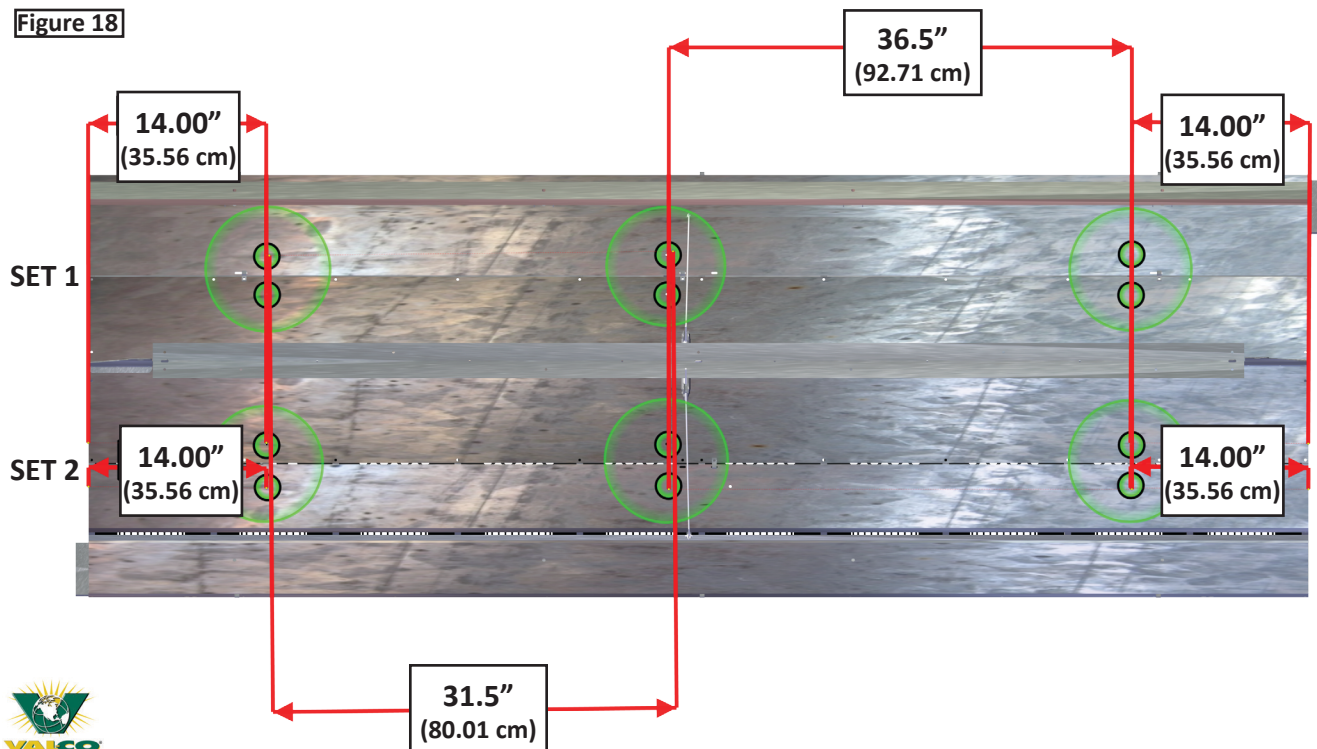
Lid Cord and Homerun line attachment - continued

- Run cord thru both sets of pulleys (at the lid and at the truss) to Homerun Line and connect using the HCCLAMP included with the hardware, as shown in Figure 16 and 17.



RETROFITTING AN EXISTING NEST WITH LID CLOSER

- Adding the Lid Closer Kit to an existing system is quite simple. Two sets of (6) holes will need to be drilled into the lids of each nest for the 412256 Springs to be attached. The approximate locations are shown in Figure 18. Springs should be spaced to distribute the load as evenly as possible, keeping the center set of holes close to the center of the nest but not interfering with the Lid Cord. For additional information, refer to Figures 6, 7, & 8 on pages 10 and 11.



RETROFITTING AN EXISTING NEST WITH LID CLOSER - CONTINUED

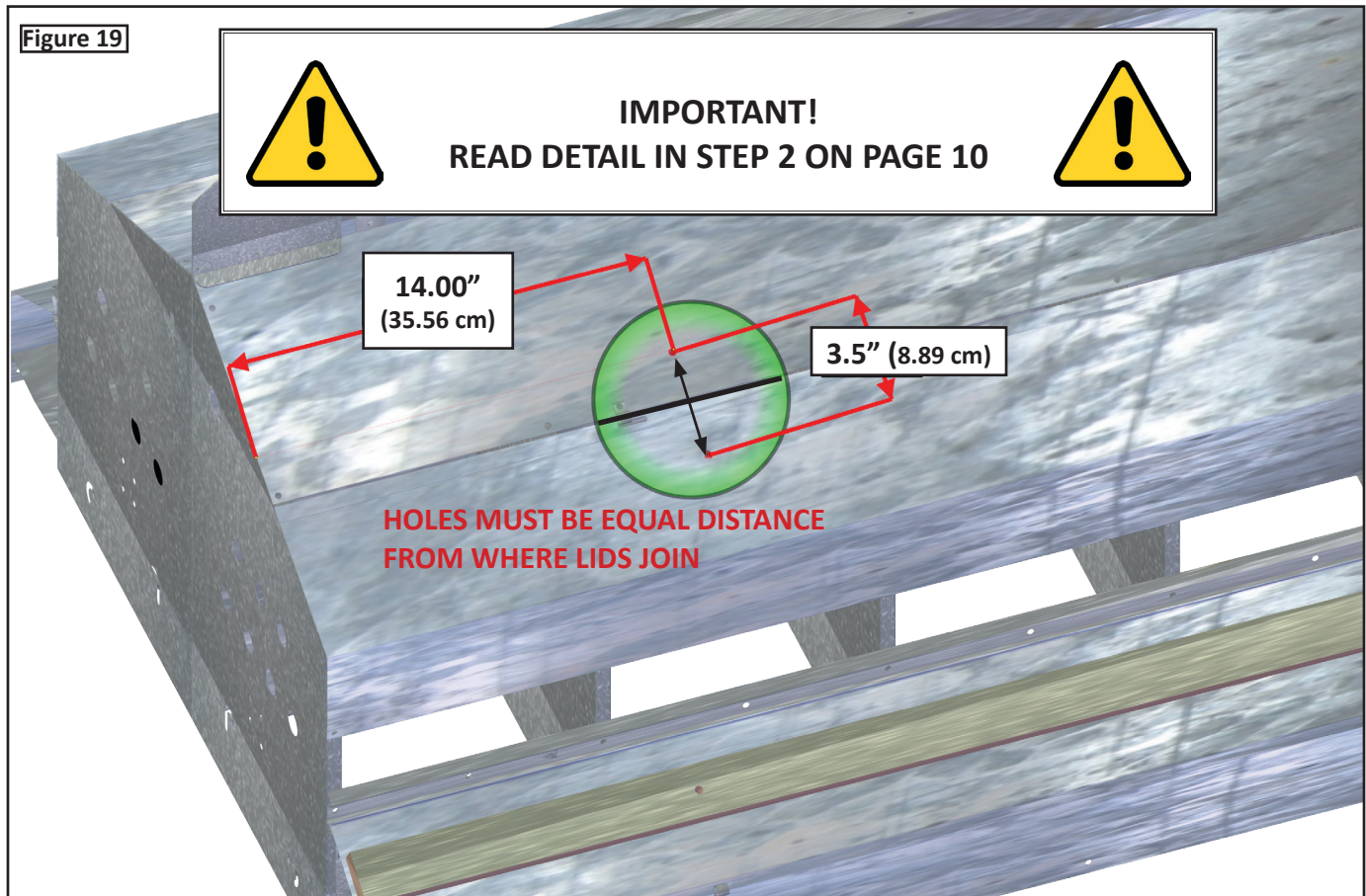
2. Mark the locations for the holes as discussed in Step 1. **BE SURE THAT THE HOLES FOR THE SPRING ARE EQUAL DISTANCE FROM THE JOINING OF THE (2) TWO LIDS, AS SHOWN IN FIGURE 19. IF THE HOLES ARE NOT DRILLED EQUAL DISTANCE IT WILL RESULT IN FAILURE TO OPERATE CORRECTLY.**
3. Attach (3) 412256 Lid Closer Springs from **UNDER-SIDE OF ROOF PANELS**, (hinged and un-hinged), using 012802 Pop-Rivets, as shown in Figure 5 on page 10. **BE SURE TO READ ALL THE INSTRUCTIONS IN STEP 2 OF PAGE 10 FOR LID SPRING ATTACHMENT.**



THE MEASUREMENTS TO LOCATE SPRING PLACEMENT ARE APPROXIMATE.
YOU SHOULD DRILL THE HOLES FOR THE SPRING 3.5" (8.89 cm) ON CENTER.
Check the Spring compression before drilling all holes.

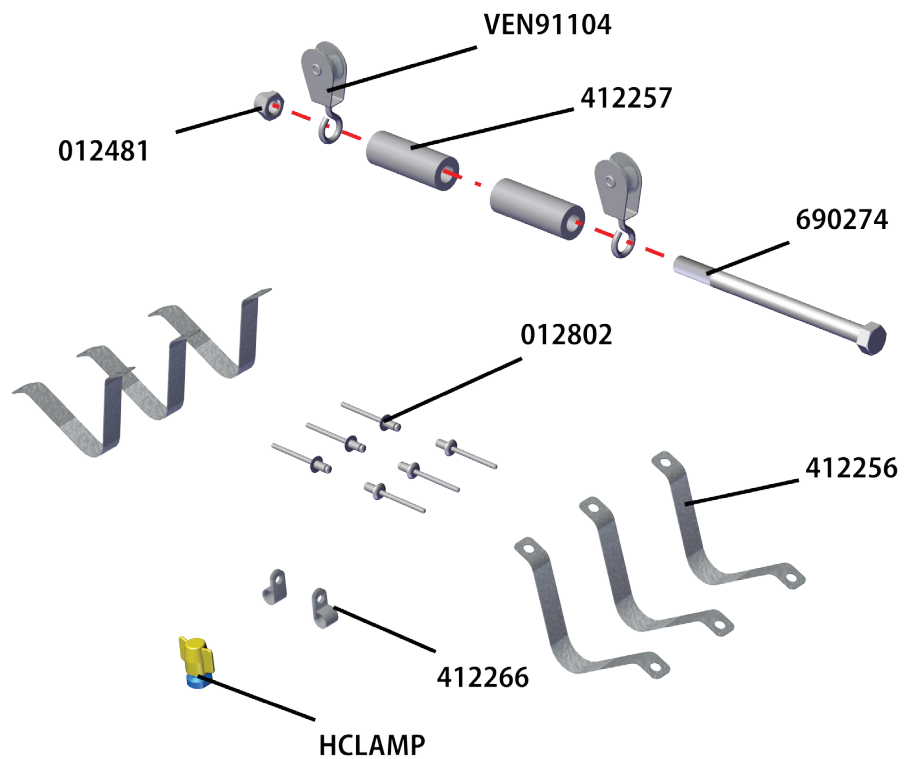


Figure 19



4. To complete the installation of the Lid Closer refer the "LID CLOSER HARDWARE ASSEMBLY & INSTALLATION" instructions beginning on page 9.

PARTS LIST



PART #	DESCRIPTION	QTY
012481	NUT, HEX, NYLOCK 3/8-16 GR8	1
012802	RIVET, POP #62X3/16" ALL-ALUM	14
412256	SPRING, CLOSER, LID, NEST, SB	6
412257	SPACER, PULLEY, 3/4"X2"	2
412266	CLAMP, CABLE, 5/16, NYLON	2
690274	BOLT, 3/8-16X5, HEX	1
VEN91104	PULLEY, SWIVEL, 7/8" NYLON	2
HCLAMP	AZUMA BOLT BLUE & CLAMP NUT YELLOW-Not for ceiling Inlet	2



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Coldwater, OH 45828
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