

TRUSS KITS FOR SPOUTING

Installation Manual



LAMBTON CONVEYOR LIMITED

102 Arnold Street
Wallaceburg, ON N8A 3P4
Canada

Telephone: (519) 627-8228
Toll free: (888) 239-9713 (North America)
Fax: (519) 627-0250
www.lambtonconveyor.com



ONE SOURCE • ONE SOLUTION

Contents

- Warranty 3
- Section 1. Safety Precautions..... 4
- Section 2. 6,8,10” Truss Kit Assembly..... 8
 - Parts List 8
 - Single Truss: 40’ to 60’ of spouting 8
 - Triple Truss: 60’ to 80’ of spouting..... 8
 - Five Truss: 80’ to 100’ of spouting..... 8
 - Assembly Instructions..... 9
 - Step #1 9
 - Step #2a..... 9
 - Step #2b 10
 - Step #3 10
 - Step #4 11
 - Truss Clamp Spacing 12
- Section 3. 12”&14” Truss Kit Assembly 13
 - Parts List 13
 - Single Truss (40’ - 60’)..... 13
 - Triple Truss..... 13
 - Five Truss (12” Spouting Only)..... 13
 - Assembly Instructions..... 14
 - Step #1 14
 - Step #2 15
 - Step #3 16
 - Step #4 16
 - Step #5 17
 - Spouting 17
 - Truss Clamp Spacing 18
- Section 4. Employer/Employee Training Sign-off 19
- Section 5. Quality Analysis Report..... 20

Warranty

LAMBTON CONVEYOR LIMITED WARRANTS ALL PRODUCTS MANUFACTURED BY LAMBTON CONVEYOR TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USAGE AND CONDITIONS FOR A PERIOD OF 2 YEARS AFTER RETAIL SALE TO THE ORIGINAL END USER OF SUCH PRODUCTS. LAMBTON CONVEYOR'S ONLY OBLIGATION IS, AND PURCHASER'S SOLE REMEDY SHALL BE FOR LAMBTON CONVEYOR, TO REPAIR OR REPLACE, AT LAMBTON CONVEYOR'S OPTION AND EXPENSE, PRODUCTS THAT, IN LAMBTON CONVEYOR'S SOLE JUDGMENT, CONTAIN A MATERIAL DEFECT DUE TO MATERIALS OR WORKMANSHIP. ALL DELIVERY AND SHIPMENT CHARGES TO AND FROM LAMBTON CONVEYOR FACTORY WILL BE PURCHASER'S RESPONSIBILITY. EXPENSES INCURRED BY OR ON BEHALF OF THE PURCHASER WITHOUT PRIOR WRITTEN AUTHORIZATION FROM AN EMPLOYEE OF LAMBTON CONVEYOR LIMITED SHALL BE THE SOLE RESPONSIBILITY OF THE PURCHASER.

EXCEPT FOR THE ABOVE STATED EXPRESS LIMITED WARRANTIES, LAMBTON CONVEYOR LIMITED MAKES NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH (i) PRODUCT MANUFACTURED OR SOLD BY LAMBTON CONVEYOR LIMITED OR (ii) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF LAMBTON CONVEYOR LIMITED REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCT OR PRODUCTS.

IN NO EVENT SHALL LAMBTON CONVEYOR LIMITED BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOSS OF ANTICIPATED PROFITS OR BENEFITS. PURCHASER'S SOLE AND EXCLUSIVE REMEDY SHALL BE LIMITED TO THAT STATED ABOVE, WHICH SHALL NOT EXCEED THE AMOUNT PAID FOR THE PRODUCT PURCHASED. THIS WARRANTY IS NOT TRANSFERABLE AND APPLIES ONLY TO THE ORIGINAL PURCHASER. LAMBTON CONVEYOR LIMITED SHALL HAVE NO OBLIGATION OR RESPONSIBILITY FOR ANY REPRESENTATIVE OR WARRANTIES MADE BY OR ON BEHALF OF ANY DEALER, AGENT OR DISTRIBUTION OF LAMBTON CONVEYOR LIMITED.

LAMBTON CONVEYOR ASSUMES NO RESPONSIBILITY FOR FIELD MODIFICATIONS OR ERECTION DEFECTS, WHICH CREATE STRUCTURAL OR STORAGE QUALITY PROBLEMS. MODIFICATIONS TO THE PRODUCT NOT SPECIFICALLY COVERED BY THE CONTENTS OF THIS MANUAL WILL NULLIFY ANY PRODUCT WARRANTY THAT MIGHT HAVE BEEN OTHERWISE AVAILABLE.

THE FOREGOING WARRANTY SHALL NOT COVER PRODUCTS OR PARTS, WHICH HAVE BEEN DAMAGED BY NEGLIGENT USE, MISUSE, ALTERNATION OR ACCIDENT. THIS WARRANTY COVERS ONLY PRODUCTS MANUFACTURED BY LAMBTON CONVEYOR LIMITED. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. LAMBTON CONVEYOR LIMITED RESERVES THE RIGHT TO MAKE DESIGN OR SPECIFICATION CHANGES AT ANY TIME.

PRIOR TO INSTALLATION, PURCHASER HAS THE RESPONSIBILITY TO RESEARCH AND COMPLY WITH ALL FEDERAL, PROVINCIAL/STATE AND LOCAL CODES WHICH MAY APPLY TO THE LOCATION AND INSTALLATION.

Section I. Safety Precautions

This manual contains information that is important for you, the Owner/operator, to know and understand. This information relates to protecting personal safety and preventing equipment problems. It is the responsibility of the owner/operator to inform anyone operating or working in the area of this equipment of these safety guidelines. To help you recognize this information, we use the symbols that are defined below. Please read the manual and pay attention to these sections. Failure to read this manual and its safety instructions is a misuse of the equipment and may lead to serious injury or death.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



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



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



CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTE indicates information about the equipment that you should pay special attention.



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

Safety Instructions

Our foremost concern is your safety and the safety of others associated with this equipment. We want to keep you as a customer. This manual is to help you understand safe operating procedures and some problems which may be encountered by the operator and other personnel. As owner and/or operator, it is your responsibility to know what requirements, hazards and precautions exist, and to inform all personnel associated with the equipment or in the area. Safety precautions may be required from the personnel. Avoid any alterations to the equipment. Such alterations may produce a very dangerous situation where SERIOUS INJURY or DEATH may occur. This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.

Follow Safety Instructions

Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer. Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction. Keep your machinery in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life. If you do not understand any part of this manual or need assistance, contact your dealer.



Read and Understand the Manual

Operate Motor Properly

In an emergency, shut down the power source. Turn OFF and lock out all power sources before performing any maintenance. Do not operate electric motor equipped units until motors are properly grounded. Disconnect power on electrical driven units before resetting motor overloads. Do not repetitively stop and start the drive in order to free a plugged condition. Jogging the drive in this manner can damage the equipment and/or drive components.



Electric Shock Hazard

Stay Clear of Moving Parts

Entanglement in rotating impeller arms will cause serious injury or death.

Keep all shields and covers in place at all times.

Wear close fitting clothing. Stop and lock out power source before making adjustments, cleaning, or maintaining equipment.



Stay Clear

Practice Safe Maintenance

Understand service procedures before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is in operation.

Keep hands, feet and clothing away from rotating parts.

Keep all parts in good condition and properly installed. Fix damage immediately.

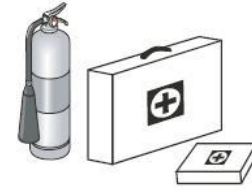
Replace worn or broken parts.

Remove any built up grease oil and debris.



Maintain Equipment and Work Area

Prepare for Emergencies
Be prepared if fire starts.
Keep a first aid kit and fire extinguisher handy.
Keep emergency numbers for doctors, ambulance service, hospital
and fire department near your telephone.



**Keep Emergency Equipment
Quickly Accessible**

Wear Protective Clothing

- Wear close fitting clothing and safety equipment appropriate to the job.
 - Remove all jewelry.
- Long hair should be tied up and back.
- Safety glasses should be worn at all times to protect eyes from debris.
- Wear gloves to protect your hands from sharp edges on plastic or steel parts.
- Wear steel toe boots to help protect your feet from falling debris.
- Tuck in any loose or dangling shoe strings.
- A respirator may be needed to prevent breathing potentially toxic fumes and dust.
- Wear hard hat to help protect your head.
- Wear appropriate fall protection equipment when working at elevations greater than six feet (6').

Eye Protection



Gloves



Steel Toe Boots



Respirator



Hard Hat





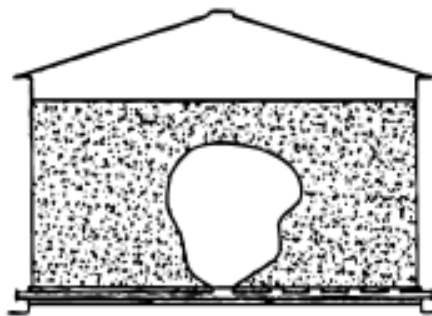
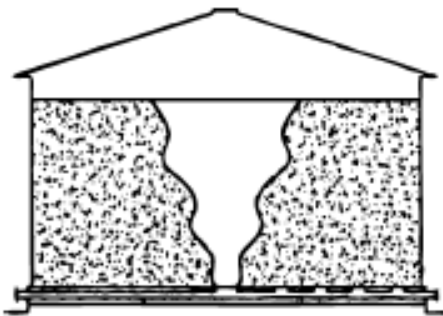
DO NOT ENTER A GRAIN BIN UNLESS POWER IS LOCKED OUT TO ALL BIN EQUIPMENT.



DO NOT ENTER A GRAIN BIN WHILE GRAIN IS BEING REMOVED. FLOWING GRAIN CAN TRAP, BURY AND CAUSE SUFFOCATION.



DO NOT ENTER A GRAIN BIN IF THE GRAIN HAS BRIDGED OR STOPPED FLOWING NORMALLY. THE GRAIN CAN COLLAPSE WITHOUT WARNING AND CAN TRAP, BURY AND CAUSE SUFFOCATION.



Section 2. 6,8,10" Truss Kit Assembly

Parts List

Single Truss: 40' to 60' of spouling

Part	Letter	Part #			Length	Quantity
		6"	8"	10"		
Cable Diameters		3/8"	3/8"	3/8"		
Rabbit Eared Tube Clamp (1/2's)	A	FSA-TRUS-06-RE	FSA-TRUS-08-RE	FSA-TRUS-10-RE		4
Spider Leg Tube Clamp (1/2's)	B	FSA-TRUS-06-SCT	FSA-TRUS-08-SCT	FSA-TRUS-10-SCT		2
Spider Legs	C	DIS-0738			36"	4
Support Angles	D	TRUSS.02			48"	4
Eye Bolts & nuts						4
Cable Clamps						16
Wire rope thimbles						12
5/16" bolts & nuts					1"	26

Triple Truss: 60' to 80' of spouling

Part	Letter	Part #			Length	Quantity
		6"	8"	10"		
Cable Diameters		3/8"	3/8"	3/8"		
Rabbit Eared Tube Clamp	A	fsa-trus-06-re	fsa-trus-08-re	fsa-trus-10-re	NA	2
Spider Leg Tube Clamp	B	fsa-trus-06-sct	fsa-trus-06-sct	fsa-trus-06-sct	NA	3
Spider Legs	C	trussco.00			36"	8
Support Angles	D	trussco.02			48"	12
Extended Spider Legs	E	trussn.00			48"	4
Extended Support Angles	F	truss.01			71 1/2"	4
Eye Bolts & nuts					NA	4
Cable Clamps					NA	16
5/16" bolts & nuts					1"	78

Five Truss: 80' to 100' of spouling

Part	Letter	Part #			Length	Quantity
		6"	8"	10"		
Cable Diameters		3/8"	3/8"	3/8"		
Rabbit Eared Tube Clamp	A	fsa-trus-06-re	fsa-trus-08-re	fsa-trus-10-re	NA	2
Spider Leg Tube Clamp	B	fsa-trus-06-sct	fsa-trus-06-sct	fsa-trus-06-sct	NA	5
Spider Legs	C	trussco.00			36"	8
Support Angles	D	trussco.02			48"	16
Extended Spider Legs	E	trussn.00			48"	8
Extended Support Angles	F	truss.01			71 1/2"	16
Super Extended Spider Legs						4
Super Extended Support Angles						4
Eye Bolts & nuts					NA	4

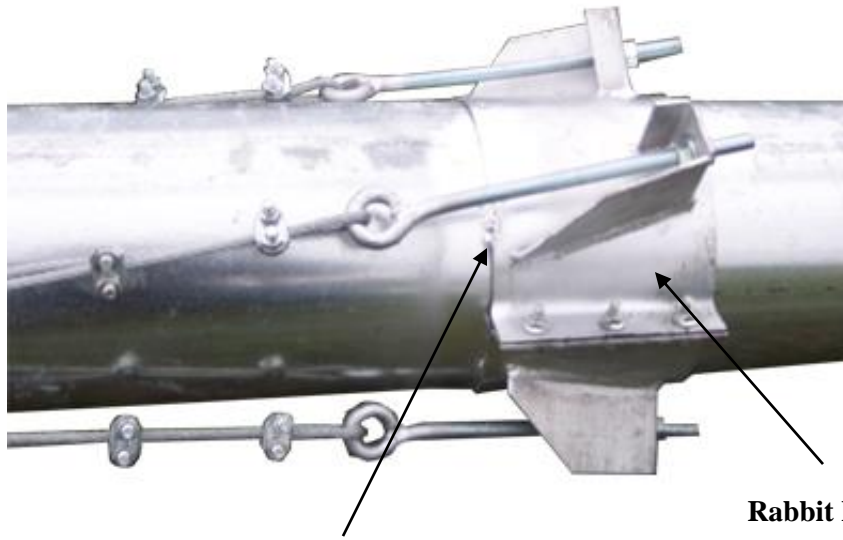
Cable Clamps			NA	16
5/16" bolts & nuts			1"	130

Assembly Instructions

The following outlines the assembly of a 6", 8", or 10" truss kit using, Single, Triple, and Five Truss setups. Refer to the parts list to locate the parts that are required for your application. The most important factor when erecting a truss kit is cable tension at all points. In order to function properly the cable must be exerting a force on all spider arms.

Step # 1

Start by attaching (2) Rabbit Eared Tube Clamps to the ends of the spouting. For information on distances see pg. 5. Tighten bolts firmly, and tack weld to prevent slipping. Note: clamp shown has eyebolts and cables installed ignore this.



Tack Weld

Rabbit Eared Tube Clamp

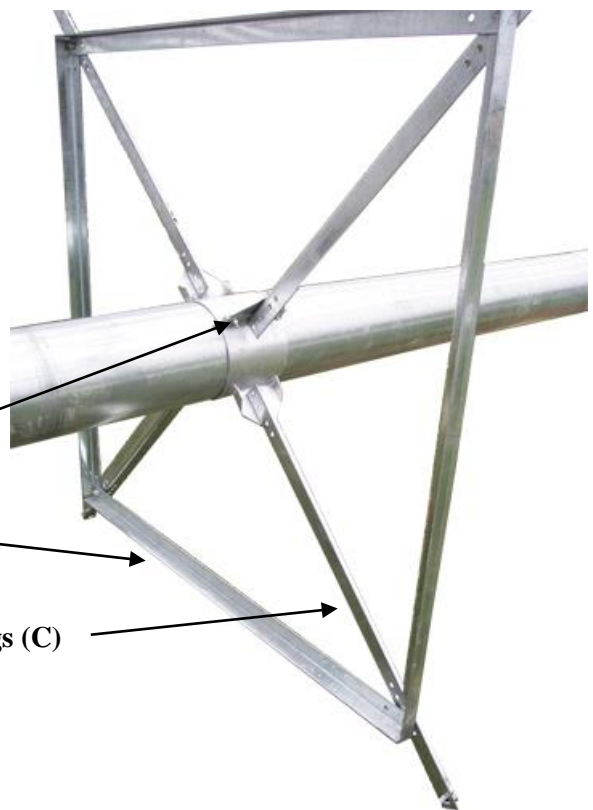
Step #2a

Locate Spider Leg Tube Clamps (B) and attach according to pg. 5, bolt tightly to prevent slipping. The Spider Legs and Support Angles can also be mounted during this step. Fasten the spider legs so each are evenly spaced apart on the clamp, then attach the spider support angles to the spider legs using the inner holes for 10", middle for 8", and outer for 6" spouting. **Note:** unevenly spaced spider legs will prevent the hookup of the support angles.

Spider Leg Tube Clamp (B)

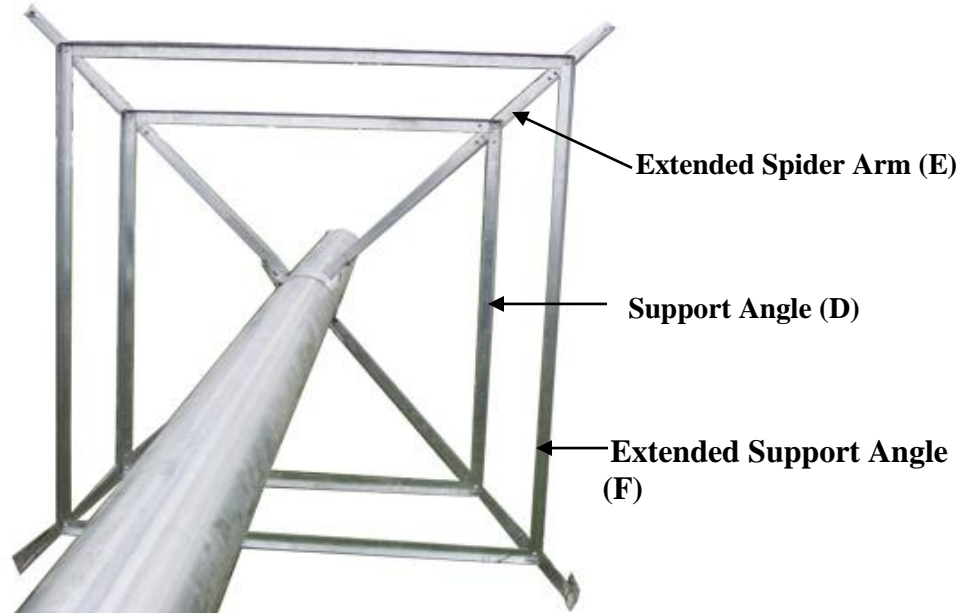
Support Angles (D)

Spider Legs (C)



Step #2b

For an extended spider attach the Spider Arm to the spider leg tube clamp followed by the Support Angles and the Extended Support Angles. For a Super Extended Spider (not shown) the super extended arm would be attached instead of the extended arm, along with the extended support angles and super extended support angles. **Note:** this step only applies to extended, and super extended spiders.



Step #3

Now attach the eyebolts to the rabbit ears at one end of the spouting only. At the opposite end of the spouting loop a cable through a rabbit ear and clamp with the supplied hardware as shown. Now cross the cable over to the opposite side of the spout and loop it through the top hole on the spider arm. To finish switch sides again looping the cable through the eyebolt on the other end of spouting. Repeat this procedure for all cables. For clarity on routing the cable refer to pg. 12.



Cable clamp must be fastened with looped end over free end of cable otherwise slipping will occur.



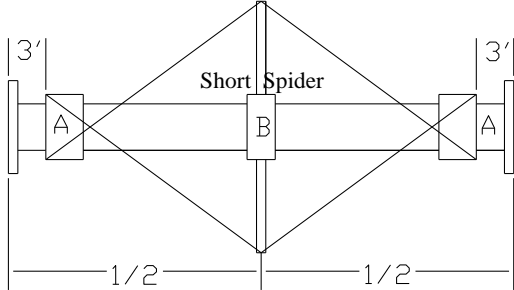
Step #4

To tighten the eyebolts loosen the front nut then tighten the back nut until cable is tight. When cable tension is good the front nut can be tightened again to lock the eyebolt in place. If tension is not distributed evenly the spider clamps can be adjusted slightly.

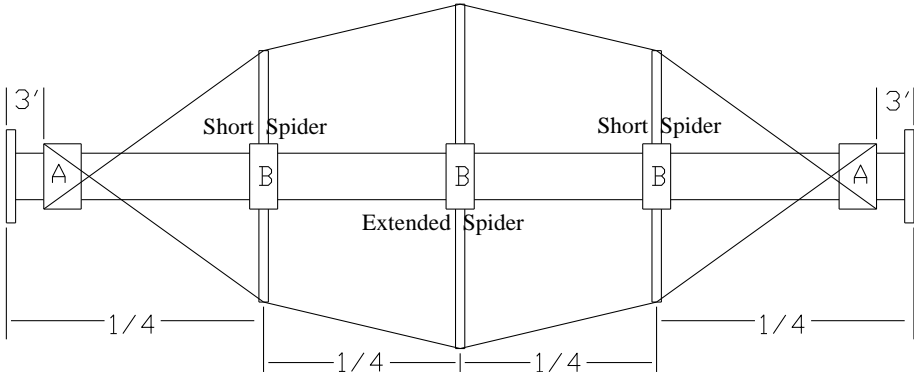


Truss Clamp Spacing

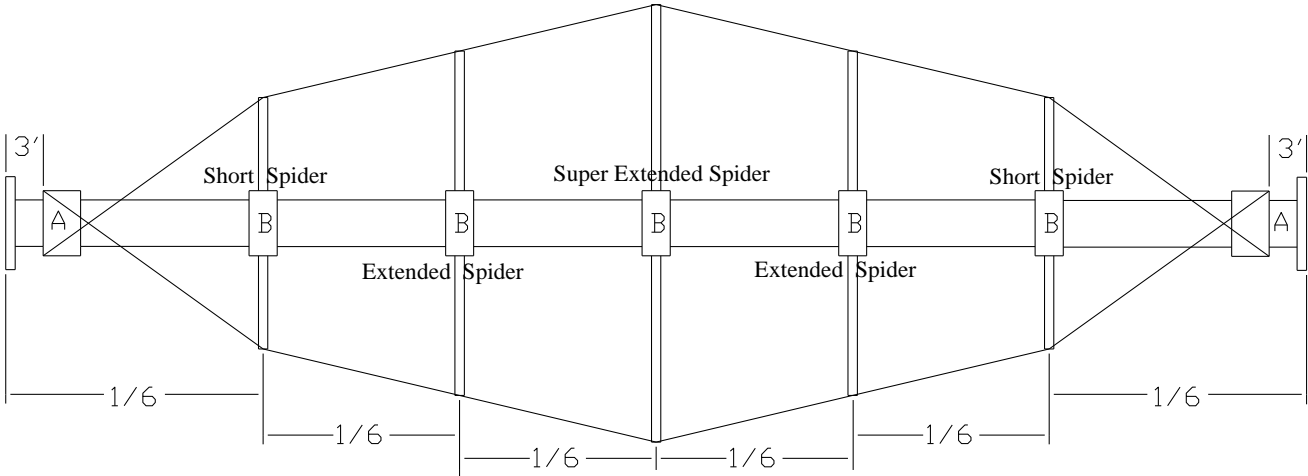
Single Truss



Triple Truss



Five Truss



Section 3. 12" & 14" Truss Kit Assembly

Parts List

Single Truss (40' - 60')

Part	Letter	Part#		Length	Quantity
		12"	14"		
Rabbit Eared Tube Clamp	A			NA	2
Spider Leg Tube Clamp	B			NA	1
Main Spider Channel	C	truss12.001	trusshd.001	60"	4
Main Spider Star Angles	D	truss12.003	trusshd.003	82 ½"	4
½" Eye bolts		3/8" aircraft quality cable required			4
½" Flange Nut					8
3/8" Cable Clamps					16
5/16" bolts & nuts					43

Triple Truss

Part	Letter	Part#		Length	Quantity
		12"	14"		
Rabbit Eared Tube Clamp	A			NA	2
Spider Leg Tube Clamp	B			NA	3
Main Spider Channel	C	truss12.001	trusshd.001	60"	4
Main Spider Star Angles	D	truss12.003	trusshd.003	82 ½"	4
End Spider Channel	E	truss12.006	truss12.006	48"	8
End Spider Star Angles	F	truss12.007	truss12.007	64 ¾"	8
Main Spider Weld in Supports				85"	8
½" Eye Bolts		3/8" aircraft quality cable required			4
½" Flange Nuts					8
3/8" Cable Clamps					16
5/16" bolts & nuts					110

Five Truss (12" Spouling Only)

Part	Letter	Part#		Length	Quantity
		12"			
Rabbit Eared Tube Clamp	A			NA	2
Spider Leg Tube Clamp	B			NA	5
Main Spider Channel	C	truss12.001		60"	8
Main Spider Star Angles	D	truss12.003		82 ½"	8
End Spider Channel	G	truss12.008		36"	8
End Spider Star Angles	H	truss12.009		51"	8
Centre Spider Channel	I	truss12.010		72"	4
Centre Spider Star Angles	J	truss12.011		85"	4
Main Spider Weld in Supports				85"	16
Centre Spider Weld in Supports				102"	8
½" Eye bolts		3/8" aircraft quality cable required			4
½" Flange Nut					8
3/8" Cable Clamps					16
5/16" bolts & nuts					200

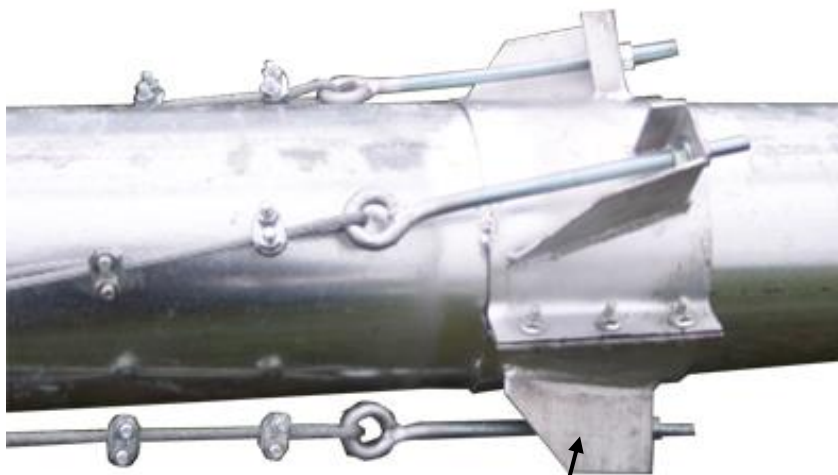
Assembly Instructions

The following outlines the assembly of a 12” or 14” truss kit using single triple and five truss setups. Refer to the parts list to locate the parts that are required for your application. The most important factor when erecting a truss kit is cable tension at all points. In order to function properly the cable must be exerting a force on all spider arms.

The truss diagrams shown on page 6 refer to short, extended, and super extended spiders. These are used to determine the layout of each truss in the triple, and five way setups. Refer to your specific parts list to clarify the layout of your truss kit.

Step # 1

Start by attaching (2) Rabbit Eared Tube Clamps (A) to the ends of the spouting. For information on location see pg. 6. Tighten bolts firmly, and tack weld to prevent movement. Note: disregard attached cables and eyebolts at this step of installation.

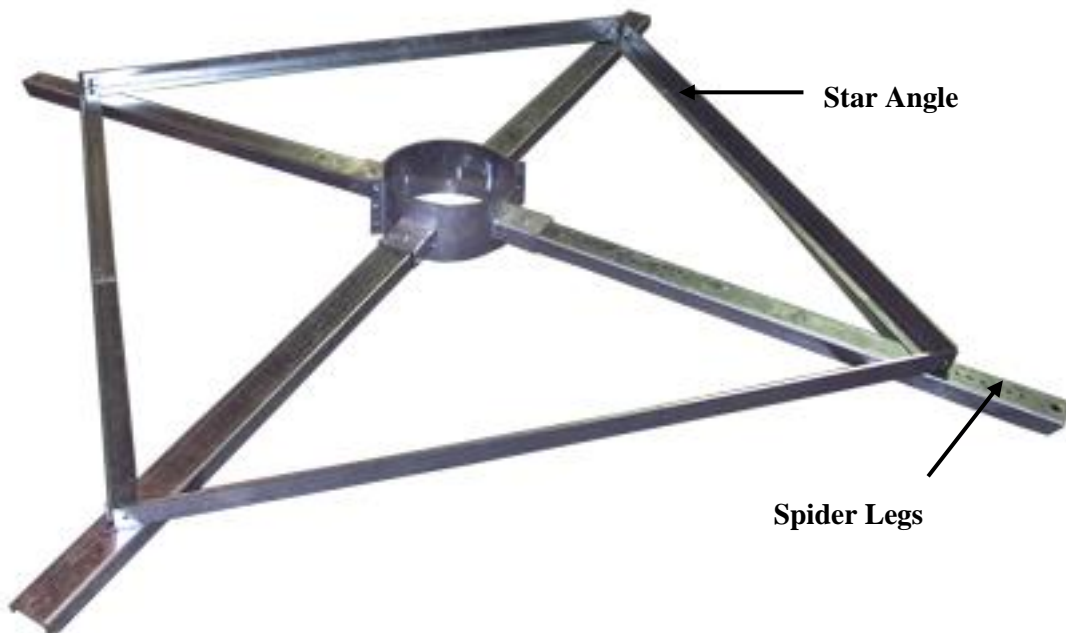
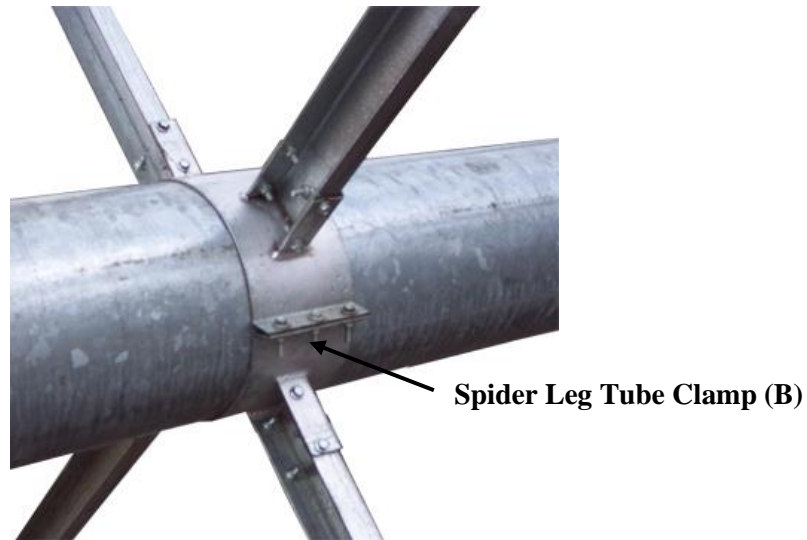


Rabbit Eared Tube Clamp (A)

Step #2

The Spider Leg Tube Clamps (B) can now be bolted loosely on the spouting, refer to page 6 for the arrangement of the tube clamps for single, triple, and five truss setups. The Spider Legs and Support Angles can also be mounted during this stage. Bolt the Spider legs as shown loosely followed by the support angles. Once all components are in place the bolts can be tightened.

Note: be sure to arrange your spiders in the specific order shown on pg. 6 depending on whether a single, triple, or five-truss setup is being assembled.



Step #3

Now attach the eyebolts to the rabbit ears at one end of the spouting only. At the opposite end of the spouting loop a cable through a rabbit ear and clamp with the supplied hardware as shown. Now cross the cable over to the opposite side of the spout and loop it through the top hole on the spider arm. To finish switch sides again looping the cable through the eyebolt on the other end of spouting. Repeat this procedure for all cables. For clarity on routing the cable refer to pg. 6.



Cable clamp must be fastened with looped end over free end of cable otherwise slipping will occur.



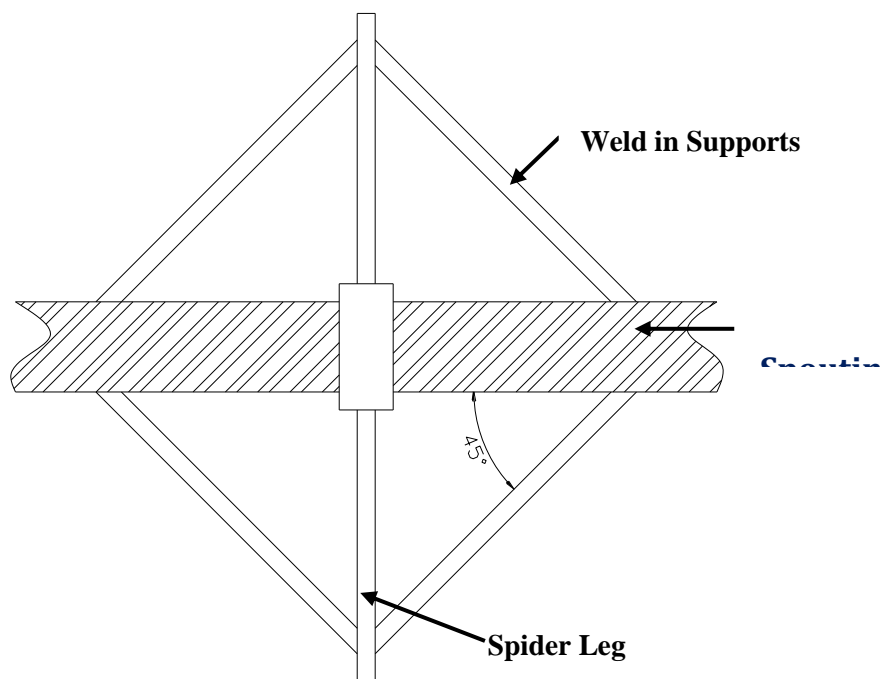
Step #4

To tighten the eyebolts loosen the front nut then tighten the back nut until cable is tight. When cable tension is good the front nut can be tightened again to lock the eyebolt in place. If tension is not distributed evenly the spider clamps can be adjusted slightly.



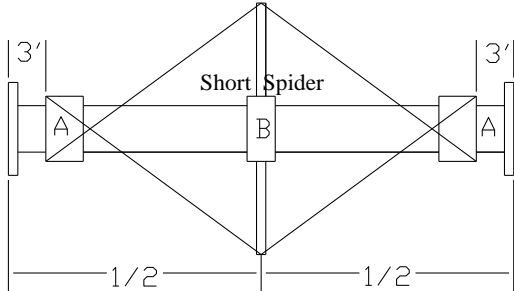
Step #5

For triple and five truss setups only additional supports need to be welded into place from the spouting to the spider leg on extended and super extended trusses only. Supports should be located on each side of the four spider legs and welded at approximately a 45-degree angle for maximum strength (8/spider). These should be installed only after you are satisfied with the setup of the truss kit.

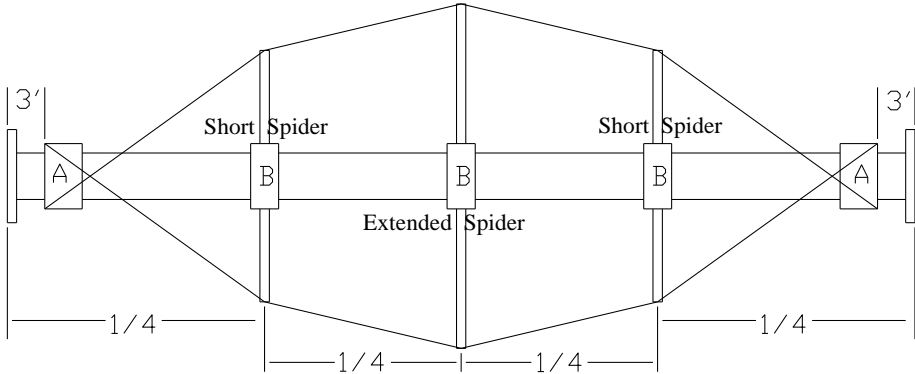


Truss Clamp Spacing

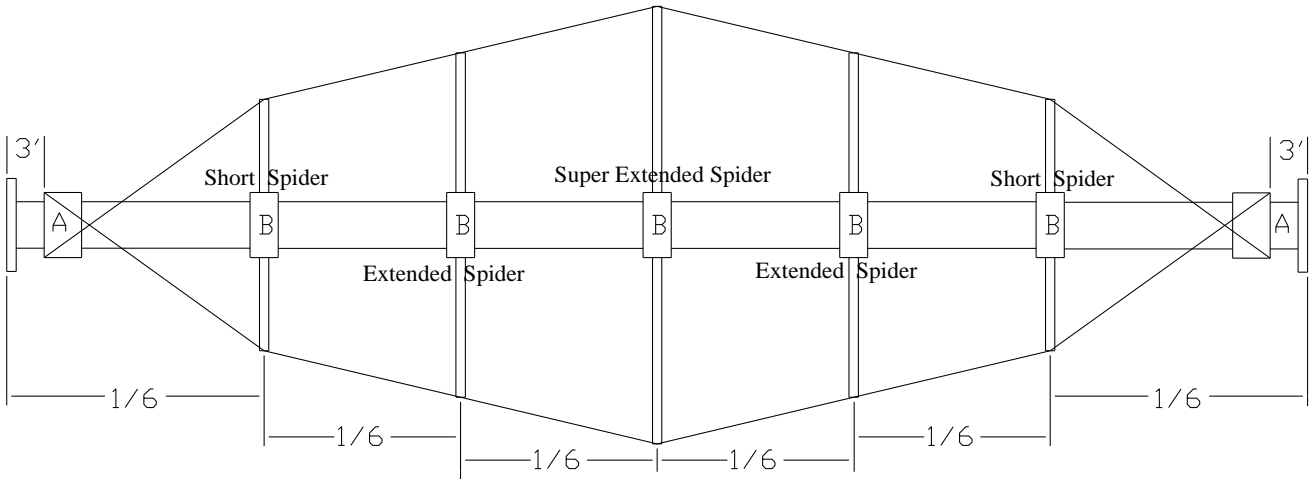
Single Truss



Triple Truss



Five Truss



Section 4. Employer/Employee Training Sign-off

Lambton Conveyor has included this training sign-off sheet for the owner/operator to make use of in the training, installation, and operation processes of the equipment described in this manual. Read the entire manual, sign-off and date the chart below.

Date	Employee Signature	Employee Name Printed

Section 5. Quality Analysis Report

RA#: _____ Date: _____ Originator: _____

Distributor: Lambton Conveyor Phone #: 519-627-8228 Fax #: 519-627-0250

Account #: _____ Contact: _____ Salesman: _____

Sales Order #: _____ Invoice #: _____ Purchase Order #: _____

Qty.	Part #	Reason for Return

FOR WARRANTY EVALUATION, THE FOLLOWING APPLICATION INFORMATION MUST BE COMPLETED

Application Information:

Type of Application: _____ Input RPM: _____ Output RPM: _____

HP: _____ Ratio: _____ Environment (wet, dusty, etc.): _____

Lubrication Type: _____ Type of Loading (shock, constant, etc.): _____

Type of Drive: _____ Operating Temperature: _____ Length of Service: _____

Probable Cause or Comments: _____

