

A-SERIES ALUMINUM GANTRY CRANE

Assembly and Maintenance Instruction Manual





WARNING

SPANCO GANTRY CRANE CONDITIONS OF USE AND WARNINGS STATEMENT

1. Read, understand, and follow the manual, assembly drawings, and warnings provided with your system **before** beginning installation, use, or disassembly. Follow all instructions carefully.
2. This manual, and any other instructions, must be provided to the user(s) of this equipment. The user(s) must understand the equipment's proper use and limitations.
3. This crane is engineered to accommodate a standard hoist and a standard hoist weight. The standard hoist weight is calculated at 15 percent of the crane's rated capacity. Please inform Spanco if hoist weight exceeds 15 percent of the crane's rated capacity, or if the lifting speed exceeds 50 FPM.
4. Motorized trolley travel is available for PF-Series and T-Series Gantry Cranes.
5. "Sidewinder" hoists or low headroom hoists with motors that are parallel to the beam can potentially impart large torques (twisting moments) to the beam that can cause beam twisting and oscillations. Hoist inverter controls are heavily recommended for all "sidewinder" hoists or low headroom hoists with motors that are parallel to the beam installed on beam lengths over 12 feet.
NOTE: To eliminate any form of beam oscillation, use only an inverter controlled hoist of this type.
6. Power Drive options for motorized gantry travel are available for PF-Series Gantry Cranes only. Review Power Drive installation instructions in the separate Power Drive instruction manual.
7. Each component and system must be employed and maintained in accordance with all OSHA and ANSI standards.
8. Use a hoist with the same or lower capacity rating as the gantry crane. Do not lift more than the rated crane capacity.
9. The rated capacity is displayed on a label on the Spanco system. Exceeding the capacities displayed on this label can result in serious injury or death.
10. There should never be any type of loading past the end stops for any reason.
11. Never apply an off-plumb load to the system.
12. Always check for overhead hazards, such as power lines, trees, equipment, overhead structures, or walls, before using or moving a portable system.
13. Never use this system as fall protection or for lifting, hoisting, or carrying personnel.
14. When moving the gantry under load, keep the load in the center of the beam and as close to the ground as possible.
15. Before moving the gantry under load, remove any obstacles and ensure that the load is not attached to the floor.
16. Spanco Gantry Cranes are designed to be moved manually. Do not push or pull the gantry with a lift truck or other vehicle.
17. When moving a gantry crane under load, push the gantry; do not push or pull the suspended load.
18. Never exceed two people pushing an Aluminum gantry crane.
19. Do not disassemble the gantry or adjust the height, span, or caster frame spread (if applicable) when the gantry is under load.



WARNING

SPANCO GANTRY CRANE CONDITIONS OF USE AND WARNINGS STATEMENT

20. Do not stand under the gantry when it is being adjusted in height, span, or caster frame spread.
21. Do not stand or walk under a suspended load.
22. Caster frame spread must be a minimum of 40 percent of the overall height (T-Series only).
23. Adjustments and repairs must be made in an area that does not interfere with operation.
24. Do not load the gantry on an incline or move a loaded gantry onto an inclined surface.
25. Do not allow the load to swing or roll against the gantry support members.
26. Do not allow the hoist trolley to strike the end stops or gantry supports at any time.
27. The system must be tied down if exposed to winds exceeding 30 miles per hour. Spanco considers it an unsafe practice to operate cranes in winds over 15 miles per hour. Although the drive may work in speeds exceeding 15 miles per hour, Spanco does not recommend using any crane in winds over 15 miles per hour for safety reasons. If quoted for a pre-defined wind speed, the drive components have been designed for an approximate wind speed. It is the responsibility of others to generate a risk assessment of wind conditions and part stability, and to generate a lifting plan that accounts for the sail effect of the part being lifted and the length of the cable the part is suspended on. Notify Spanco if the system will be subjected to constant buffeting winds.
28. Although Spanco may provide components that are intended for service in a specific environment, it is the customer's responsibility to confirm that the provided Spanco system and components will work in and are acceptable for their specific application and environment.
29. **Before each use**, inspect the system for bent, broken, cracked, or missing components.
30. Thoroughly inspect the system **annually** per OSHA law.
31. Per OSHA law, load testing must be performed before the system can be placed into service.
32. Engineering of any attachment points must be done by others.
33. Component appearances and dimensions shown are approximate and subject to change without notice. All literature dimensions are developed using standard components for the spans and capacities. Substitution of optional trolleys or other components will affect certain dimensions.
34. Never deviate from the above unless you have written permission and authorization from Spanco.



WARNING

Follow the Inspection Checklists in this manual: review the Before Each Use Inspection Checklist on page 17 before each use and review the Annual Inspection Checklist on page 18 annually.

SYSTEM APPLICATIONS

The Spanco System is used for material handling applications. This material handling system is labeled with a maximum rated capacity and is designated for Class C service as defined by the CMAA; follow all limitations as noted on system labels.

STANDARDS AND COMPLIANCE

Please refer to local, state, and federal (OSHA) requirements governing occupational safety for additional information regarding material handling. The Spanco system meets or exceeds the requirements set forth in OSHA 1910.179, ANSI B30.11, and MMA MH27.2 or CMAA 70.

REQUIRED TRAINING

This system is intended to be used by people who are trained in its correct application and use. It is the responsibility of the users and the users' management to ensure that they are familiar with OSHA law and these instructions, and that they are trained in the correct use and care of this equipment. Authorized users must also be aware of the operating characteristics, application limits, and the consequences of improper use, which can result in serious injury or death. All users must read and understand *CMAA 79 Crane Operator's Manual*.

Every material handling application must be OSHA compliant. Safety and training measures may include, but are not limited to:

- Operator certification training
- Operator evaluation program
- Hand signal protocols if required
- Lock-out/Tag-out training

The above list is not a comprehensive list. Specific applications may need to include additional protocols. For more information on how to create a comprehensive lift plan within your facility, follow *CMAA 79 Crane Operator's Manual*.

TABLE OF CONTENTS

CONDITIONS OF USE AND WARNINGS STATEMENT	i-iii
SYSTEM APPLICATIONS	iii
STANDARDS AND COMPLIANCE	iii
REQUIRED TRAINING	iii
ASSEMBLY INSTRUCTIONS	2
1. Equipment Needed for Assembly	2
2. Inventory	2
3. Attaching the Swivel Locks to the Caster Assemblies	3
4. A-Frame Assembly	3
5. Attaching the Caster Assemblies to the A-Frame Assemblies	3-4
6. Beam Assembly	4-5
FINAL ASSEMBLY	6
ADJUSTING THE GANTRY HEIGHT	6
ADJUSTING THE GANTRY SPAN	7
MINIMUM CLEAR SPAN CHART	8
OPTIONAL ACCESSORIES	9
1. Tagline Assembly	9-10
2. Top Lock Wheel Brake Assembly	10-11
3. V-Groove Track Installation	11-12
MAINTENANCE	13
LOAD TEST	13
DESIGN FACTORS	13
SERVICE FACTOR	13
DISASSEMBLY	14-15
LABELING	16
INSPECTION CHECKLISTS	17
Before Each Use Inspection Checklist	17
Annual Inspection Checklist	18
PRODUCT WARRANTY COVERAGE	19
ABOUT SPANCO	BACK COVER

ASSEMBLY INSTRUCTIONS

1. Equipment Needed for Assembly

- a) This manual
- b) Applicable safety equipment for workers' use during assembly, such as hard hats, safety shoes, etc.
- c) Measuring tape
- d) Torque wrench
- e) Long carpenter's level or laser level
- f) Wrench/socket sets up to 7/8 inches.
- g) A spacious, level area for assembly (e.g., parking lot)
- h) A way to mark locations, such as a permanent marker
- i) *A-SERIES-ALU-ASSEMBLY SHEET 1 OF 2*, hereafter referred to as *A-Series Aluminum Gantry Crane Assembly Drawing*, included as a separate document.
- j) *A-SERIES-ALU-ASSEMBLY SHEET 2 OF 2*, hereafter referred to as *A-Series Aluminum Gantry Crane Label Placement Drawing*, included as a separate document.

2. Inventory

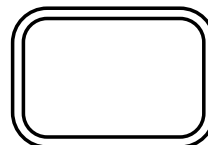
- a) Open all bundles and confirm that all components are accounted for: see *Building Materials Description* located in the top right corner of the A-Series Aluminum Gantry Crane Assembly Drawing. Note that the quantity of components in an assembly are multiplied by the number of the assemblies.
- b) Check for damage to components that may have occurred during shipping.
- c) Your A-Series Gantry Crane consists of the following components:
 - 1) One Beam
 - 2) One Beam Hardware Kit
 - 3) Two A-Frame Assemblies
 - 4) Two Upright Tubes
 - 5) Two Top Plate Assemblies
 - 6) Four Casters
 - 7) One Caster Mounting Hardware Kit

NOTE: Your system may also include optional accessories, such as a Height Adjustment Kit, extension tubes, wheel brakes, and other optional components.

NOTE: One half- and one-ton models are manufactured with with square edge tubing. Two- and three-ton models are manufactured with rounded edge aluminum tubing.



One half- and one-ton model tubing profile.



Two- and three-ton model tubing profile.

3. Attaching the Swivel Locks to the Caster Assemblies

Refer to A-Series Aluminum Gantry Crane Assembly Drawing for Steps A Through F

- a) The swivel lock ships zip tied to the caster assembly for polyurethane casters.
- b) Insert the pin on the swivel lock into the groove beneath the caster plate on the caster assembly.
- c) Open the pin on the swivel lock by pulling and spinning the ring to fit into the groove at the end of the swivel lock.
- d) Using two bolts, washers, and nuts, bolt the swivel lock to the caster plate.
- e) Using a wrench and a socket and ratchet, tighten the swivel lock bolts to 257 foot-pounds.
- f) Repeat steps b) through e) to install the remaining swivel locks.

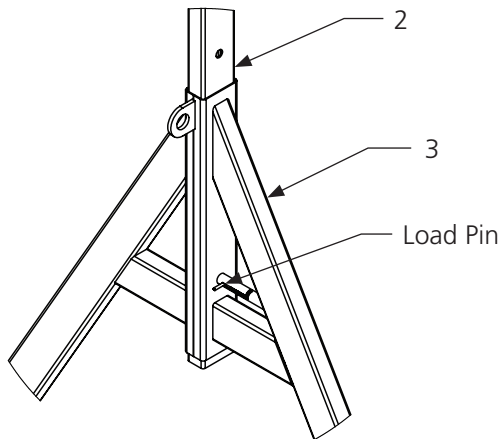
4. A-Frame Assembly

Refer to A-Series Aluminum Gantry Crane Assembly Drawing for Steps A Through C

WARNING: Crane parts are heavy. Exercise caution when handling all parts during assembly, adjustment, and disassembly processes.

- a) Select an area under an overhead hoist, or where a lift truck can be used to raise the beam. Be sure there is no machinery or clutter nearby that will obstruct free movement. All personnel should be wearing applicable safety gear, such as hard hats, steel toe shoes, and safety glasses.
- b) Lay both A-frames (3) flat on the floor. Slide an upright tube (2) into the top of the center tube of each A-frame.
- c) Engage the load pin to secure each upright tube in its lowest position. Ensure that the load pin is fully engaged.

Detail "A"



ITEM	DESCRIPTION
2	Upright Tube
3	A-Frame

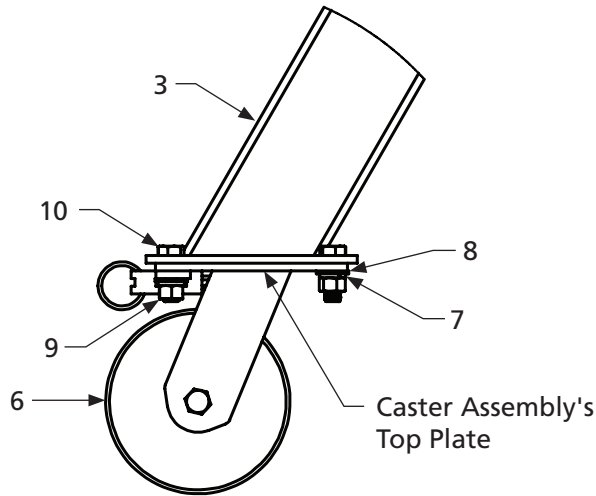
5. Attaching the Caster Assemblies to the A-Frame Assemblies

Refer to A-Series Aluminum Gantry Crane Assembly Drawing for steps A through F

- a) Align the holes in the A-frame assembly with the holes in the caster assembly's top plate.
- b) Per **Detail "B,"** insert a bolt (10) through the aligned holes in the A-frame and the caster assembly so that the bolts (10) extend from the A-frame through the caster assembly's top plate.
- c) Per **Detail "B,"** place a flat washer (8), lock washer (7), and hex nut (9) on each bolt (10) so that the lock washer (7) is between the flat washer (8) and hex nut (9). Torque all nuts (9) to 23 foot-pounds.
- d) Repeat steps e) through g) to attach the remaining caster assemblies to the caster frame assemblies.

- e) Test the caster brakes and swivel locks to ensure they function properly.
- f) Lock the caster wheels in position parallel to the A-frame to prevent the frame assembly from rolling away when lifted to the upright position.

Detail "B"



ITEM	DESCRIPTION
3	A-Frame
6	Caster
7	Lock Washer
8	Flat Washer
9	Hex Nut
10	Hex Bolt

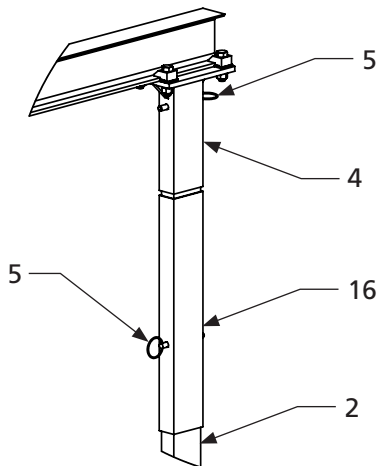
NOTE: Torque all wheel stud nuts to 23 foot-pounds only.

6. Beam Assembly

Refer to A-Series Aluminum Gantry Crane Assembly Drawing for Steps A Through K

- a) Per **Detail "E,"** place the optional two-foot extensions (16) onto the upright tubes (2), if required, and secure with one pair of hitch pins (5).

Detail "E"

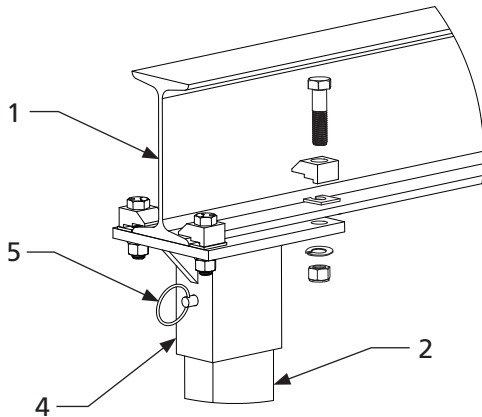


ITEM	DESCRIPTION
2	Upright Tube
3	A-Frame
4	Top Plate
5	Hitch Pin
16	Optional Two-Foot Extension

- b) Per **Detail "D,"** place one top plate (4) onto each upright tube (2) or two-foot extension (16). Secure each top plate with a hitch pin (5).
- c) Lift the beam to the gantry's minimum height. Light aluminum beams may be raised by hand. Use appropriate lifting equipment and secure rigging to lift larger, heavier beams. Be sure that the holes in the beam flange are on the bottom, and that the capacity label is right-side-up and legible.

- d) Install the hoist trolley according to the manufacturer's recommendations onto the lower flange of the beam and secure it in the middle of the span.
- e) Lift one A-frame assembly (3) into position under one end of the beam, ensuring that the lifting lug is on the outside of the A-frame, not facing the beam.

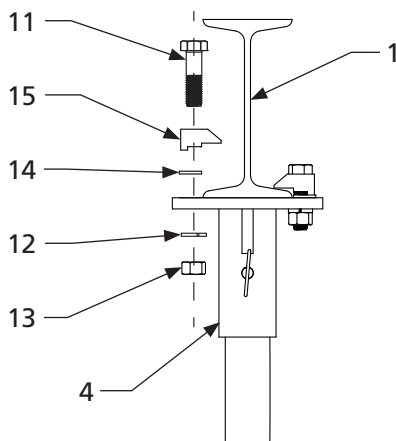
Detail "D"



ITEM	DESCRIPTION
1	Beam
2	Upright Tube
4	Top Plate
5	Hitch Pin

- f) Per **Detail "C,"** insert a bolt (11) through a beam clamp (15) and a clipped washer (14). Ensure that the flat edge of the clipped washer (14) will face away from the beam.
- g) Per **Detail "C,"** insert the bolt (11) with the attached beam clamp (15) and clipped washer (14) through the holes in the top plate (4) and position the beam clamp so it holds onto the lower flange of the beam (1).
- h) Per **Detail "C,"** securely tighten a lock washer (12) and a hex nut (13) onto the hex bolt (11).
- i) Repeat steps **f)** through **h)** for all four holes in the top plate (4). Adjust the beam clamps (15) as needed by tightening or loosening the nuts (13) until the beam clamps sit properly on the lower flange of the beam (1).
- j) Repeat steps **e)** through **i)** to attach the second top plate (4).
- k) Ensure that all beam clamps (15) are installed horizontally and level within plus or minus five degrees. Tighten all hex nuts (13) to the correct torque value.

Detail "C"



ITEM	DESCRIPTION
1	Beam
4	Top Plate
11	Hex Bolt
12	Lock Washer
13	Hex Nut
14	Clipped Washer
15	Beam Clamp

NOTE: Item 14 quantity varies with gantry model.

NOTE: Torque 5/8-inch bolts to 108 foot-pounds. Torque 3/4-inch bolts to 210 foot-pounds.

FINAL ASSEMBLY

- a) Ensure that the beam is secured properly to the support legs, and that the caster assemblies are secured properly to the support legs.
- b) Confirm that all of the caster nuts (9) and bolts (10) and the beam clamp nuts (13) and bolts (11) are torqued to the required specifications prior to removing support rigging.

ADJUSTING THE GANTRY HEIGHT

WARNING: Crane parts are heavy. Exercise caution when handling all parts during assembly, adjustment, and disassembly processes. **Never** stand under the system when adjusting the system height or span or while disassembling the system. **Never** adjust the gantry height while it is supporting a load.

- a) Secure the trolley and hoist in the center of the beam span.
- b) Slightly lift the beam to relieve the weight from the spring-loaded load pin using the optional Lug-All winch kit (if included) or any other type of come along with sufficient lifting capacity attached to the lifting lug at the top of the A-frame and the bottom of the upright tube on both legs, or an existing overhead crane or lift truck and lifting straps.

NOTE: Make sure that the “winch hoist” or “come-along” has a combined capacity rating equal to the weight of the beam and any hoist trolley that is suspended from the beam.

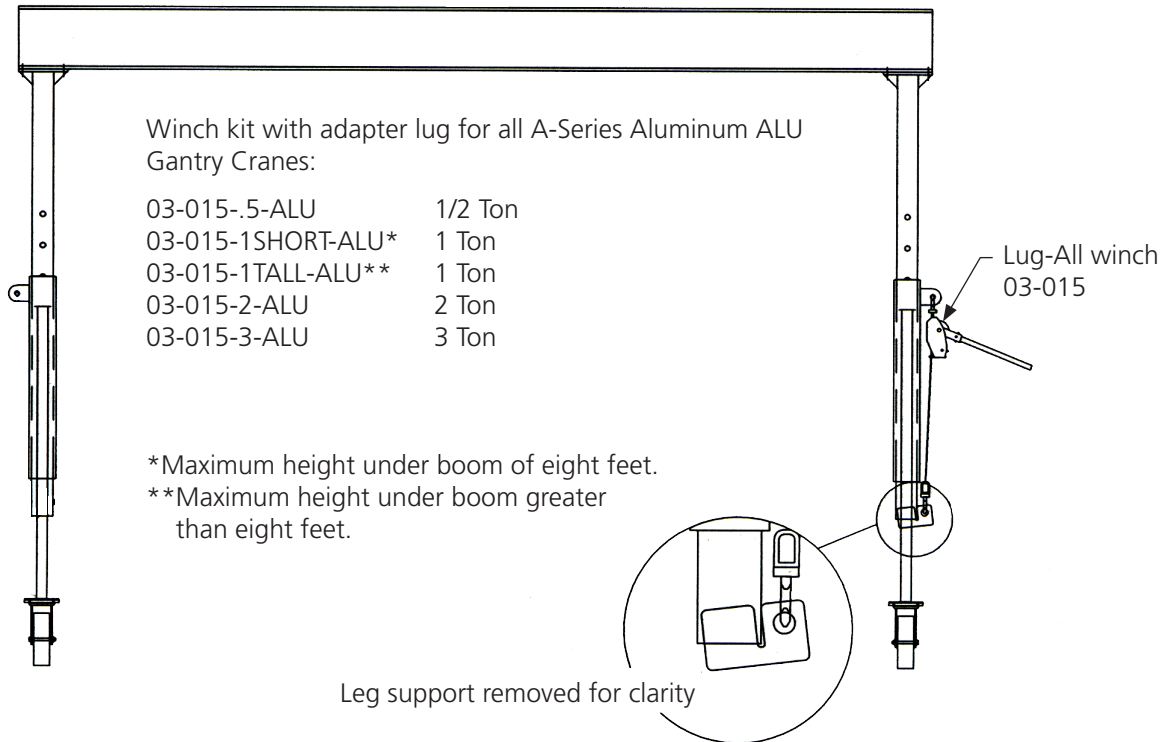
- c) Pull back the load pin and secure it in the lockout position.
- d) Operate the Lug-All hoist, other come along, overhead crane, or lift truck to raise or lower the height of the gantry.

NOTE: Both ends must be raised or lowered at the same time.

- e) When the gantry reaches the desired height, release the load pin. The load pin will self locate the hole in the upright. Be sure the load pin is in the full lock-in position.
- f) Ensure that each support leg has the same number of holes visible in the upright tube.
- g) After you have secured the load pin and have ensured that each support leg has the same number of holes visible in the upright tube, you can lower the beam and remove the crane or lift truck and lifting straps.

NOTE: Before removing the Lug-All hoist or other lifting equipment, ensure that the load pin is fully engaged.

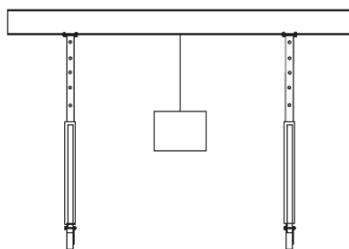
Lug-All Winch Kit with Adapter Lug



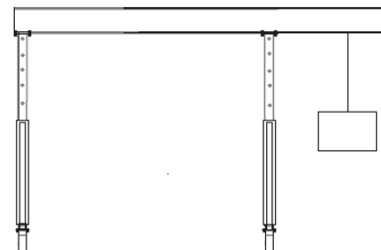
ADJUSTING THE GANTRY SPAN

- a) Adjust the gantry to its lowest position. The beam is clamped in place at each end with four beam clamps (15). Using an overhead hoist or lift truck, attach lifting straps to the beam to support the crane. Loosen the bolts which hold the clamps and move the legs to the desired position.
- b) Do not move the legs (A-frames) inward more than the minimum clear span. The minimum clear span is equal to the distance between the casters (tread width) or one-half the overall beam length—whichever dimension is greater. See the minimum clear span chart on page eight for the minimum clear span dimensions for standard Spanco Aluminum Gantry Crane models.
- c) After adjusting the span as desired, re-tighten all eight bolts (11) securely. Move both legs when adjusting the span so one end of the beam does not hang over more than the other end. Do not suspend a trolley or load from the cantilevered ends of the beam.

Correct



Incorrect





Capacity	Overall Span	Model Number	Minimum Clear Span (Feet)	Maximum Clear Span (Feet)	
0.5 TON	8 ft.	0.5ALU0809	4' 2"	6' 11"	
		0.5ALU0811	4' 2"	6' 11"	
	10 ft.	0.5ALU1009	5' 0"	8' 11"	
		0.5ALU1011	5' 0"	8' 11"	
	12 ft.	0.5ALU1209	6' 0"	10' 11"	
		0.5ALU1211	6' 0"	10' 11"	
	15 ft.	0.5ALU1509	7' 6"	13' 11"	
		0.5ALU1511	7' 6"	13' 11"	
1 TON	8 ft.	1ALU0808	4' 6"	6' 10"	
		1ALU0810	4' 6"	6' 10"	
		1ALU0812	4' 6"	6' 10"	
	10 ft.	1ALU1008	5' 0"	8' 10"	
		1ALU1010	5' 0"	8' 10"	
		1ALU1012	5' 0"	8' 10"	
	12 ft.	1ALU1208	6' 0"	10' 10"	
		1ALU1210	6' 0"	10' 10"	
		1ALU1212	6' 0"	10' 10"	
	15 ft.	1ALU1508	7' 6"	13' 10"	
		1ALU1510	7' 6"	13' 10"	
		1ALU1512	7' 6"	13' 10"	
	18 ft.	1ALU1808	8' 0"	16' 9"	
		1ALU1810	8' 0"	16' 9"	
		1ALU1812	8' 0"	16' 9"	
		20 ft.	1ALU2008	10' 0"	18' 9"
			1ALU2010	10' 0"	18' 9"
			1ALU2012	10' 0"	18' 9"
2 TON	8 ft.	2ALU0808	4' 4"	6' 9"	
		2ALU0810	4' 4"	6' 9"	
		2ALU0812	4' 4"	6' 9"	
	10 ft.	2ALU1008	5' 0"	8' 9"	
		2ALU1010	5' 0"	8' 9"	
		2ALU1012	5' 0"	8' 9"	
	12 ft.	2ALU1208	6' 0"	10' 9"	
		2ALU1210	6' 0"	10' 9"	
		2ALU1212	6' 0"	10' 9"	
	15 ft.	2ALU1508	7' 6"	13' 9"	
		2ALU1510	7' 6"	13' 9"	
		2ALU1512	7' 6"	13' 9"	
3 TON	8 ft.	3ALU0808	4' 8"	6' 8"	
		3ALU0810	4' 8"	6' 8"	
		3ALU0812	4' 8"	6' 8"	
	10 ft.	3ALU1008	5' 0"	8' 8"	
		3ALU1010	5' 0"	8' 8"	
		3ALU1012	5' 0"	8' 8"	
	12 ft.	3ALU1208	6' 0"	10' 8"	
		3ALU1210	6' 0"	10' 8"	
		3ALU1212	6' 0"	10' 8"	
	15 ft.	3ALU1508	7' 6"	13' 8"	
		3ALU1510	7' 6"	13' 8"	
		3ALU1512	7' 6"	13' 8"	

OPTIONAL ACCESSORIES

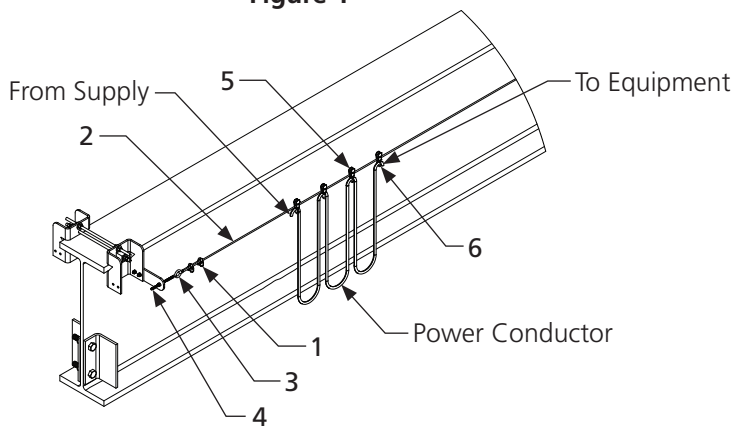
1. Tagline Assembly

Spanco clamp-on tagline assemblies are designed for universal installation. Clamp-on tagline assemblies include universal weldments, applicable hardware, tagline cable, cable clamps, eyebolts, and pulleys with cable ties. One pulley and cable tie is provided for every five feet of tagline length. Power conductor is supplied by others.

Installation

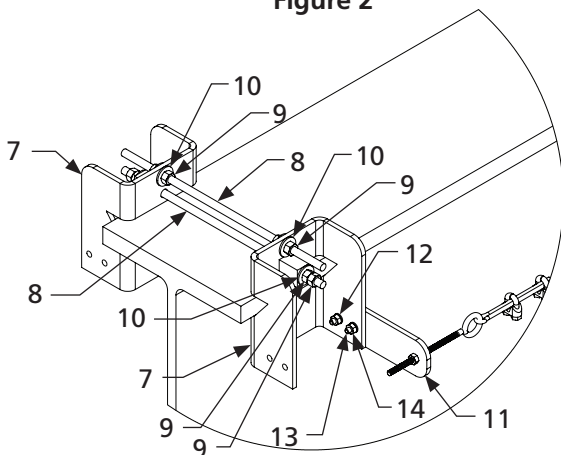
- a) Trim excess rod length to fit socket (if desired).
NOTE: Align each rod so only one end requires trimming.
- b) Torque the inner lower rod nuts (9) to 33 foot-pounds. Adjust the inner upper rod nuts (9) to keep the weldments plumb.
- c) Holding the inner lower rod nuts in place with a wrench, torque the outer lower rod nuts (9) to 33 foot-pounds.
- d) Holding the inner upper rod nuts in place with a wrench, torque the outer upper rod nuts (9) to 33 foot-pounds.
- e) Align the correct holes in the arm plate (11) with the holes in the tagline weldment (7) and insert two hex head bolts (13) through the holes. Align the arm plate to keep the tagline approximately 10 inches from the face of the beam.
- f) Place a lock washer (12) and nut (14) on each bolt (13). Torque the nuts (14) to 10 foot-pounds.

Figure 1



ITEM	DESCRIPTION	QUANTITY
1	Cable Clamp	2
2	Tagline Cable	1
3	Eye Bolt	2
4	1/4-Inch Hex Nut	4
5	Pulley	X
6	Cable Tie	X

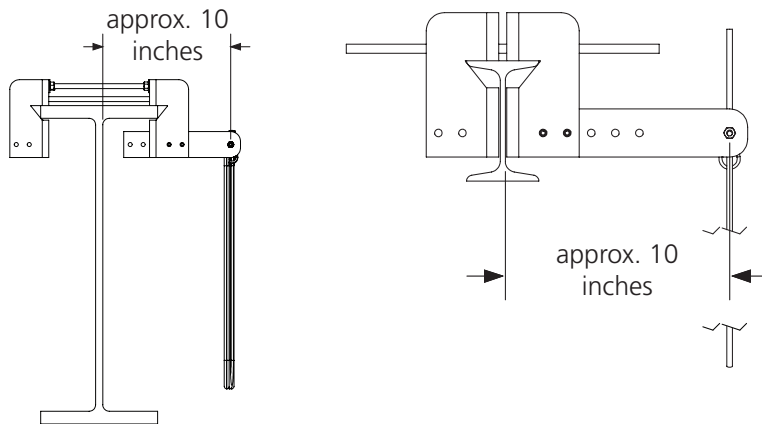
Figure 2



ITEM	DESCRIPTION	QUANTITY
7	Tagline Weldment	2
8	3/8-Inch Threaded Rod	2
9	3/8-Inch Hex Nut	8
10	3/8-Inch Flat Washer	6
11	Arm Plate	1
12	1/4-Inch Lock Washer	2
13	1/4-Inch Hex Head Bolt	2
14	1/4-Inch Hex Nut	2

Note: Only one end of the beam is shown. Total quantities are doubled.

Figure 3



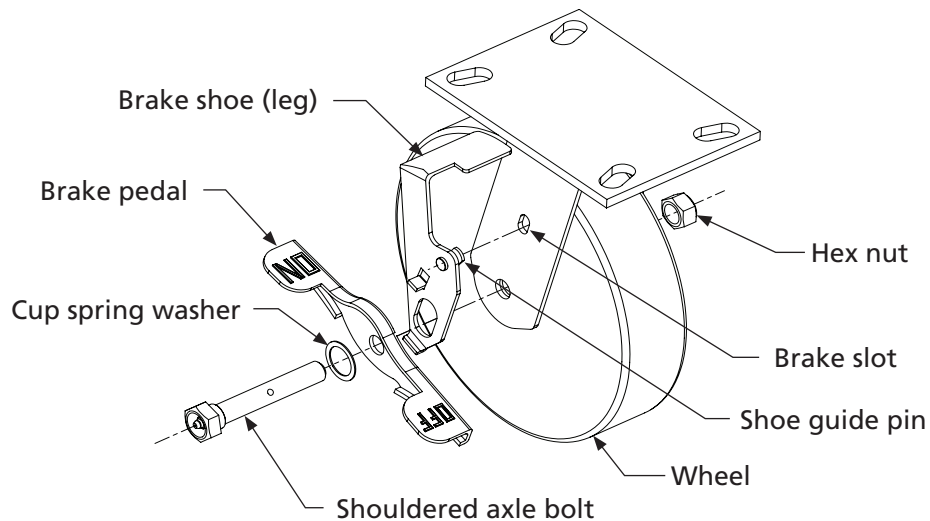
NOTE: Position the Arm Plate so that the tagline is approximately 10 inches from the face of the beam.

2. Top-Lock Wheel Brake Assembly

Some polyurethane casters ship with their wheel brakes already attached. If your wheel brakes were shipped loose, follow steps **a)** through **h)** to attach the wheel brakes.

Refer to the **Wheel Brake Assembly Drawing** for Steps A Through H

Wheel Brake Assembly Drawing

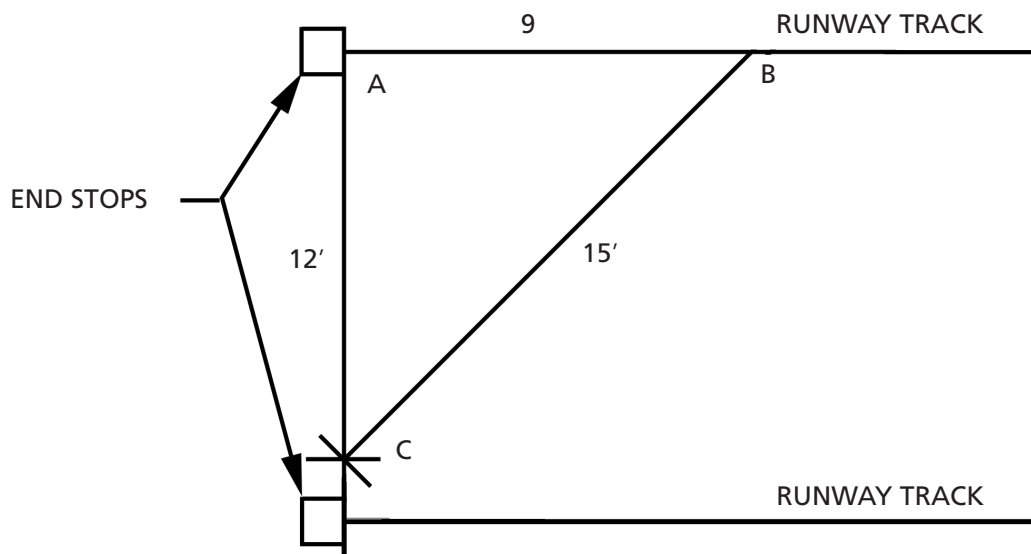


- a)** Using a 3/4-inch wrench and 3/4-inch socket and ratchet, unbolt the caster stud and remove the nut, bolt, washer, and caster.
NOTE: If the spacers fall out of the caster, reinsert them into the caster holes.
- b)** With the top of the brake shoe facing towards the caster assembly, insert the guide pin on the brake shoe into the brake slot on the caster assembly.
- c)** Using a screwdriver, slightly bend the brake shoe tab so that the brake shoe guide pin and brake shoe tab fit properly.
- d)** With the brake pedal tabs pointed away from the caster assembly, line up the hole on the brake pedal with the hole on the brake shoe. "On" and "Off" on the brake pedal tabs should be visible when the caster is mounted to the system.

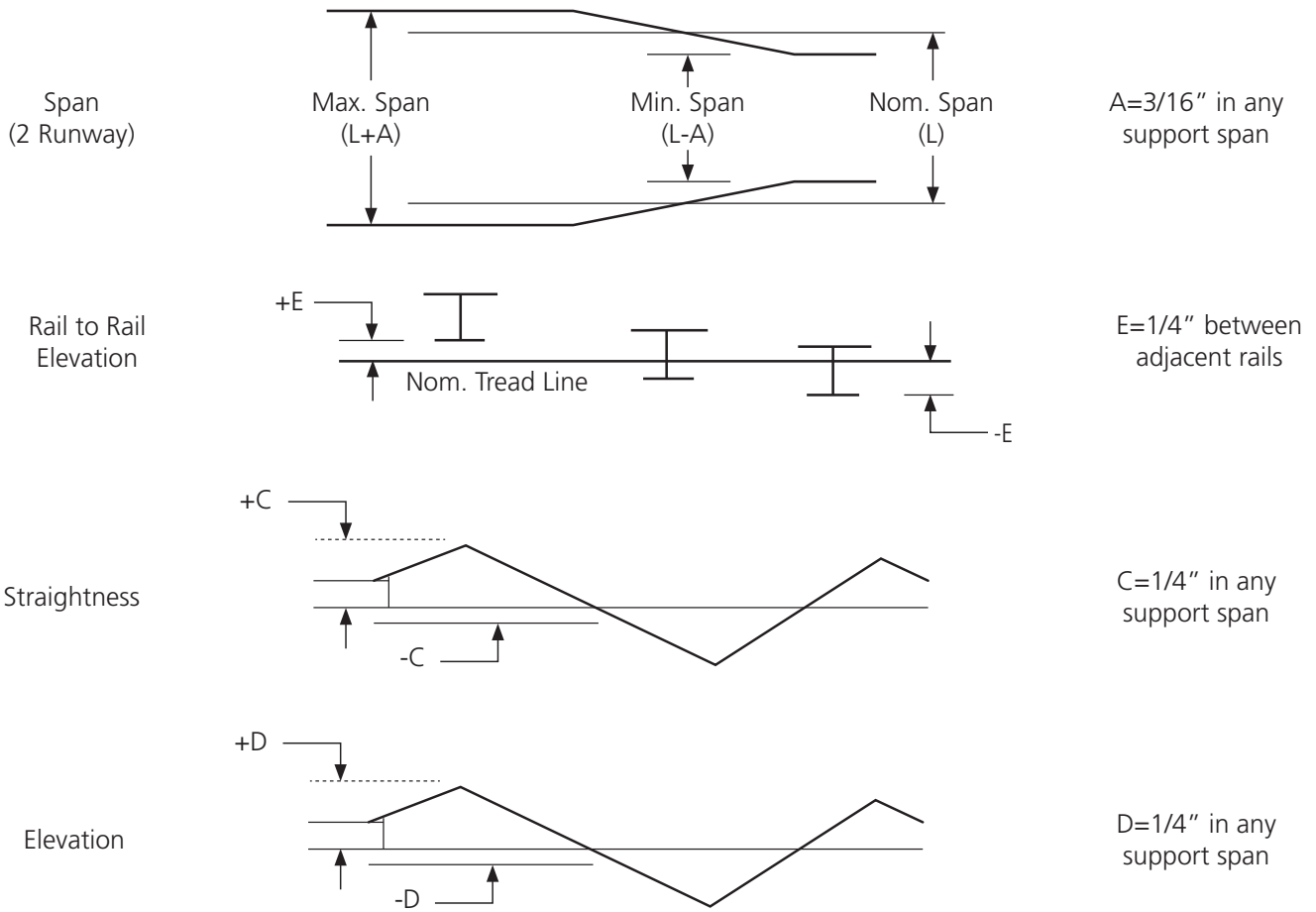
- e) Line up the caster holes with the brake shoe hole and brake pedal hole.
- f) With the washer on the bolt-side of the caster assembly, reinsert the longer axle bolt through the brake pedal, brake shoe, and caster. Reapply the axle nut at this time.
- g) Using a 3/4-inch wrench and 3/4-inch socket and ratchet, securely tighten the caster nut.
- h) Repeat steps a) through g) to install the remaining caster brakes.

3. V-Groove Track Installation

- a) The exact span of the crane may vary from the design span. Install the full length of the track on one side, making sure that the track is straight and level. Fasten V-groove track to the floor using 3/8-inch lag bolts and suitable anchors. (For track supplied by Spanco, use a bolt in each hole. Otherwise, space bolts approximately three feet apart on each side of the track in a staggered arrangement.) Use shims or grouting as required to keep the track level and alignment pins at joints to keep the track true. End stops are required at each end of both tracks.
- b) Lay one or two sections of the opposite side of the track at the design span, assemble the crane on the tracks following the assembly instructions, and operate the crane back and forth a few times, being careful not to run the crane off the tracks. The loose sections of track will float and set the track to the exact crane span.
- c) After the operating span is determined, attach all the other sections of track to the floor making sure the track is straight, level, parallel, and at the same elevation as the first track. The end stops should be set square with a 3-4-5 right triangle. The sides and the hypotenuse can be multiplied by any convenient number, such as three, used in the example.
- d) Set one end stop at point A and measure along the runway track nine feet from point A to point B. With point B as a center and fifteen feet as a radius, draw a circular arc on the floor. With point A as a center and 12 feet as a radius, draw a circular arc on the floor intersecting the other arc at point C. A line running through points A and C is perpendicular, or square, with the runway track.
- e) Extend this line to the other runway track to locate the end stop on that runway. Repeat the process at the other end of the runway, or measure along each runway the same distance from these end stops for locating the stops at the other end of the runways.



RUNWAY ALIGNMENT TOLERANCE FOR V-GROOVE TRACK



MAINTENANCE

1. A system inspection should be performed 30 days after installation. All nuts, bolts, and screws should be checked for tightness. All end stops, cotter pins, and hoist trolleys should be checked for abnormal wear or breakage.
2. A complete inspection of all fasteners and connections should be performed annually or every two thousand (2,000) hours. Heavy conditions of use may require more frequent inspections.
3. Operators should visually inspect the system before each use to note any unusual or abnormal system operations.
4. **If the system fails ANY inspection point on any of the inspection checklists, immediately remove the system from service and call Spanco at 800-869-2080 for instructions.**
5. Download and print additional blank inspection checklists from the literature tab at Spanco.com.

LOAD TEST

After the A-Series Aluminum Gantry Crane has been installed, OSHA requires a load test before operating and after any modifications. This equipment is designed and manufactured to the rated capacity marked on the equipment with due allowances for safety factors. Prior to initial use of the Gantry Crane, a person appointed by the owner, under the direction of a qualified technical person, must perform a load test at 125 percent of the rated capacity using certified test weights. See CMAA 78 for periodic load testing requirements. Under no conditions shall the rated capacity be exceeded during regular use or during annual or semi-annual load tests.

DESIGN FACTORS

Nameplate capacities represent the rated load on the hoist hook. The load rating of a hoist shall not exceed the nameplate capacity. Spanco's design includes an allowance of 15 percent of nameplate capacity for trolley and hoist deadweight and 25 percent of the nameplate capacity for impact. This design provides a margin to allow for variations in material properties, operating conditions, and design assumptions. **No crane should ever be loaded beyond its rated capacity.**

SERVICE FACTOR

All Spanco gantry cranes are designed for moderate usage (Class C Normal/Industrial service) as defined by CMAA 70:

- System or equipment is used where lifted loads average 50 percent of the rated capacity with five to 10 lifts per hour, averaging 15 feet, not over 50 percent of the lifts at rated capacity.

Applications involving vacuums, magnets, or other high-impact lifters are considered severe usage and require special design considerations. Contact Spanco for special design pricing.

Consult Spanco for usage other than moderate and all instances of high cycle rates or high-impact applications, such as high-speed air or electric hoists, vacuum lifters, or magnets.

DISASSEMBLY

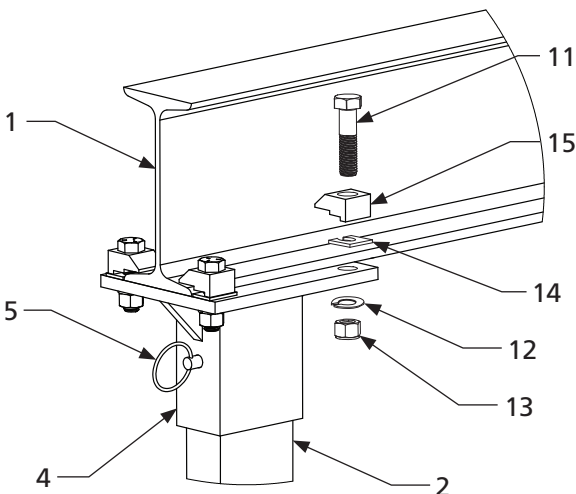
1. Disassembling the Beam

Refer to A-Series Aluminum Gantry Crane Assembly Drawing for Steps A Through K

WARNING: Crane parts are heavy. Exercise caution when handling all parts during assembly, adjustment, and disassembly processes.

- a) Move the assembled A-Series Aluminum Gantry Crane to an area under an overhead hoist, or where a lift truck can be used to raise the beam. Be sure there is no machinery or clutter nearby that will hamper free movement. All personnel should be wearing applicable safety gear, such as hard hats, steel toe shoes, and safety glasses.
- b) Adjust the gantry height to its lowest position.
- c) Secure the hoist trolley in the center of the beam
- d) Ensure that the load pin on each A-frame assembly is fully engaged and secure.
- e) Using an overhead hoist or lift truck, attach the lifting straps to the beam to support the crane during disassembly.
- f) Lock the caster wheels in position parallel to the A-frame to prevent the frame assembly from rolling during disassembly. Secure the gantry legs to prevent falling.
- g) Using a wrench and socket, remove the hex nuts (13) and lock washers (12) from the hex bolts (11) that secure the beam from one A-frame assembly.
- h) Remove the hex bolts (11) with the attached beam clamps (15) and clipped washers (14).
- i) Remove the A-frame assembly and carefully lower it to the ground.
- j) Repeat steps **g)** through **i)** to remove the second A-frame assembly.
- k) Clear the area below the beam, then safely lower the beam to the ground and remove the lifting straps.

Detail "D"



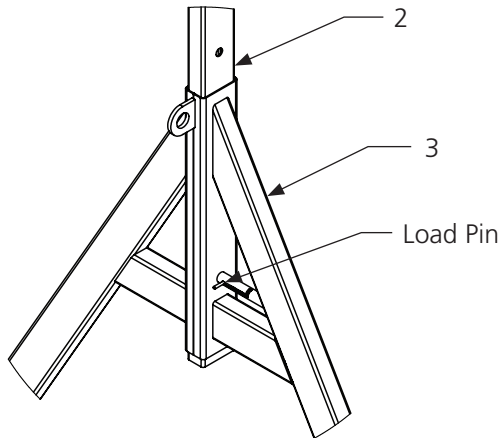
ITEM	DESCRIPTION
1	Beam
2	Upright Tube
4	Top Plate
5	Hitch Pin
11	Hex Bolt
12	Lock Washer
13	Hex Nut
14	Clipped Washer
15	Beam Clamp

2. A-Frame Disassembly

Refer to A-Series Gantry Crane Assembly Drawing Steps A through B

- a) Disengage the load pin in the A-frame assembly from the upright tube of each A-frame.
- b) Slide the upright tube out of the center tube of each A-frame.

Detail "A"



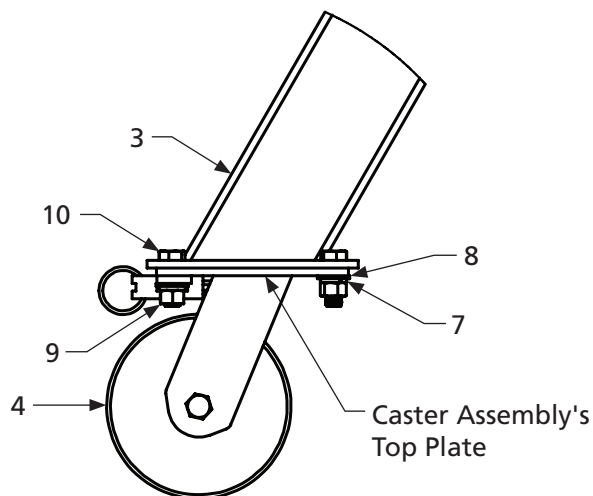
ITEM	DESCRIPTION
2	Upright Tube
3	A-Frame

3. Removing the Caster Assemblies from the A-Frame Assemblies

Refer to Detail "B" for Steps A Through C

- a) The casters may be removed from the A-frames if desired. To remove the casters, lay each A-frame on the ground.
- b) Remove the hex nut (9), lock washer (7), and flat washer (8) from each bolt (10) and remove the bolts from the caster assembly's top plate and the aligned holes in the A-frame assembly.

Detail "B"



ITEM	DESCRIPTION
3	A-Frame Assembly
4	Caster
7	Lock Washer
8	Flat Washer
9	Hex Nut
10	Hex Bolt

LABELING

The letters correspond to the accompanying labels. All labeling must be legible and attached to the system. If at any time these labels are lost, stolen, removed, or become illegible, contact Spanco. Labels can be ordered by part number as listed below.

If the system is shipped unpainted or without properly secured labels, proper label placement is the sole responsibility of the end user. Spanco cannot be held liable for any damage or injury resulting from omitted or improper label placement.

"A"

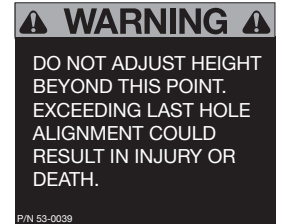


P/N 53-0001

"B"

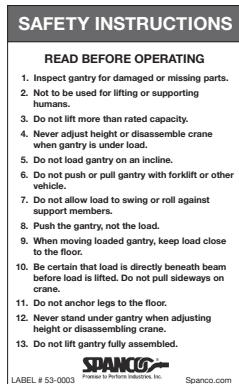


"C"



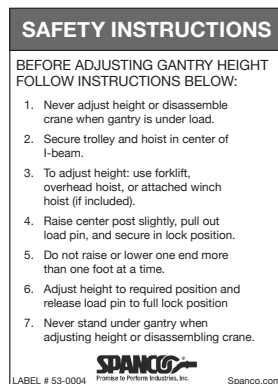
P/N 53-0039

"D"



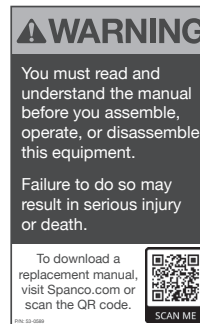
P/N 53-0003

"E"



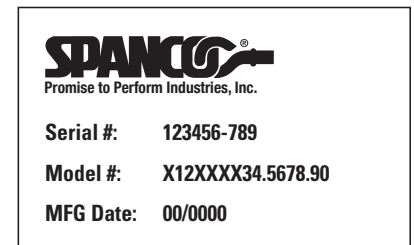
P/N 53-0004

"F"



P/N 53-0589

"G"



Notes on Label Placement Drawing

- Label **53-0001 "A"** should be centered on both sides of the beam.
- Label **"B"** should be placed on Label **"A"** and is P/N **53-0009** for one-half-ton capacity systems, **53-0010** for one-ton capacity systems, **53-0011** for two-ton capacity systems, and **53-0012** for three-ton capacity systems.
- Label **53-0039 "C"** should be placed on both upright tubes above the lowest hole.
- Label **53-0003 "D"** should be placed on both support legs.
- Label **53-0004 "E"** should be placed on both support legs.
- Label **53-0589 "F"** should be placed on both A-frames or upright tubes at eye level (approximately 62 inches from the ground).
- Label **"G"** should be placed on each A-frame and on label **"A"** inside the outlined area.

BEFORE EACH USE A-SERIES ALUMINUM GANTRY CRANE SYSTEM INSPECTION CHECKLIST

Inspector Name: _____

Date: _____

System Number: _____

Model: _____

INSPECTION POINTS	Inspection Result (✓)	
	PASS	FAIL
1. Inspect hoist per manufacturer's instructions.		
2. Verify that the trolley can easily and smoothly roll the full length of the beam.		
3. Verify that the caster wheels can easily and smoothly roll along the full length of the surface the gantry operates on.		
4. Check all system welds for cracks.		
5. Check system components for corrosion.		
6. Check system components for bent or damaged areas.		
7. Visually check all bolted assemblies for proper connections and properly secured bolts and nuts.		
Caster Inspection		
1. Inspect casters for visible signs of damage or excessive wear.		
2. Check each caster unit for potentially concealed damage.		
3. Visually check that all caster studs are present and tight.		
4. Ensure that the caster's axles are properly secured.		
5. Ensure that the casters' brakes and swivel locks perform properly.		
6. Ensure that the caster brakes make contact with the caster material for maximum effectiveness.		

©2022. All Rights Reserved. All specifications and product designs subject to change without prior notice.



ANNUAL GANTRY CRANE SYSTEM INSPECTION CHECKLIST

Inspector Name: _____

Date: _____

System Number: _____

Model: _____

INSPECTION POINTS	Inspection Result (✓)	
	PASS	FAIL
1. Using a torque wrench, check that all bolts are present and torqued to values shown in the system manual.		
2. Verify that capacity labels are present, attached, and legible.		
3. Check the beam flanges. Track flanges cannot be bent downward.		
4. Check the beam flange thickness. Beam flange thickness cannot be worn more than 10 percent.		
5. Check all system welds for cracks.		
6. Check system components for corrosion and bent or damaged areas.		
7. Verify that the hoist can traverse the entire length of the beam without snags.		
8. Inspect the hoist per the manufacturer's instructions.		
9. Check system components for loose components.		
10. Check that all wheel studs, if supplied, are torqued to the value shown in the system manual. Note that these 1/2-inch wheel studs have a different torque value than other 1/2-inch bolts.		
11. Check motorization components, if supplied, for improper performance or noncompliance with applicable safety requirements.		
12. Check drive chain sprockets, if supplied, for excessive wear and excessive chain stretch.		
13. Check the electrical apparatus, if supplied, for any deterioration of the controller contactors, limit switches, and push button stations.		
14. Check system for unauthorized modifications. Only Spanco can authorize modifications. Remove system from service if it is modified in anyway.		

©2022. All Rights Reserved. All specifications and product designs subject to change without prior notice.

PRODUCT WARRANTY COVERAGE

Spanco warrants its products to be free from defects in material and workmanship as follows:

- **Manual Systems & Equipment:** Ten Years
- **Motorized Systems & Equipment and Paint and Finishes for Non-Aluminum Components:** Two Years

Ten-Year Warranty Coverage:

- Defects in equipment material and workmanship of manual systems and equipment
- Only applies to the wearable wheels on workstation bridge crane end trucks and hoist trolley

Spanco warrants its manual workstation bridge crane, jib crane, and gantry crane products to be free from defects in material and workmanship for a period of ten (10) years or 20,000 hours, commencing on the date of shipment to the first retail purchaser. This warranty extends to non-wearable parts only, with the exception of the wheels supplied on manually operated workstation end trucks and hoist trolleys.

Two-Year Warranty Coverage:

- Defects in equipment material and workmanship of motorized systems and equipment
- Paint coatings and finishes for non-aluminum components

Spanco warrants motorized equipment to be free from defects in material and workmanship for a period of two (2) years or 4,000 hours, commencing on the date of shipment to the first retail purchaser. Spanco warrants its paint and finishes for a period of two (2) years. Warranty claims related to coatings must be accompanied by documentation of the product's application and environmental conditions from time of delivery to time of claim.

WARRANTY TERMS & CONDITIONS

All warranty claims must be approved by Spanco before any work is performed. Spanco's obligation under this warranty is limited to the replacement or repair of Spanco products at the factory or separate location approved by Spanco. Other than the above mentioned warranty, Spanco will not honor any other warranties—whether expressed, implied, or statutory—and disclaims any warranties of merchantability or fitness for a particular purpose. Spanco has the right to reject any warranty claim due to harsh and/or inappropriate environmental conditions.

Spanco Is Not Liable for:

- Indirect, incidental, or consequential damages including lost profits, operating costs, loss of production, or travel expenses
- Components or accessories not manufactured by Spanco
- Defective equipment or system failure caused by misuse, negligence, and improper installation or maintenance
- Equipment that has been used in excess of its rated capacity or beyond its service factors
- Rework and modification of any equipment that has been altered without Spanco's written authorization
- Freight charges and damage incurred by freight carriers
- Any loss, injury, or damage to persons or property resulting from failure or defective operation of material or equipment
- Any damage to paint coatings and finishes caused by negligence and improper storage, such as temporarily storing an indoor system outdoors

Reimbursement Disclaimer:

- Written notice of any claimed system defect must be given to Spanco within ninety (90) days of shipment.
- All requests for reimbursement must be accompanied by proper documentation.
- Reimbursement is provided in the form of a credit unless otherwise approved by Spanco management.
- Reimbursement for labor will be provided at a maximum rate of \$75 per hour.
- All reimbursement is subject to approval by Spanco management.



ABOUT SPANCO®

Our Commitment

Spanco professionals are dedicated to designing and manufacturing a variety of material handling solutions that meet all applicable CMAA, ANSI, OSHA, and MMA guidelines and standards. Our team of engineers and industry experts combine many years of experience in the material handling industry to manufacture material handling solutions that are backed by the best warranty in the industry.

Spanco production facilities are certified under the ISO 9001:2015 Quality Management System to provide superior quality products. And every welder at Spanco is certified to handle steel (D1.1) and aluminum (D1.2) in accordance with the rigorous requirements and lab testing established by the American Welders Society (AWS).

Spanco professionals welcome challenging projects that require custom crane engineering. Spanco also offers hundreds of pre-engineered lifting solutions, including Workstation Bridge Cranes, Jib Cranes, Gantry Cranes, Monorails, and Tractor Drives.

Our Production:

All of our systems are designed and manufactured in the United States of America. We have production facilities in Las Vegas, Nevada, and at our headquarters in Morgantown, Pennsylvania.



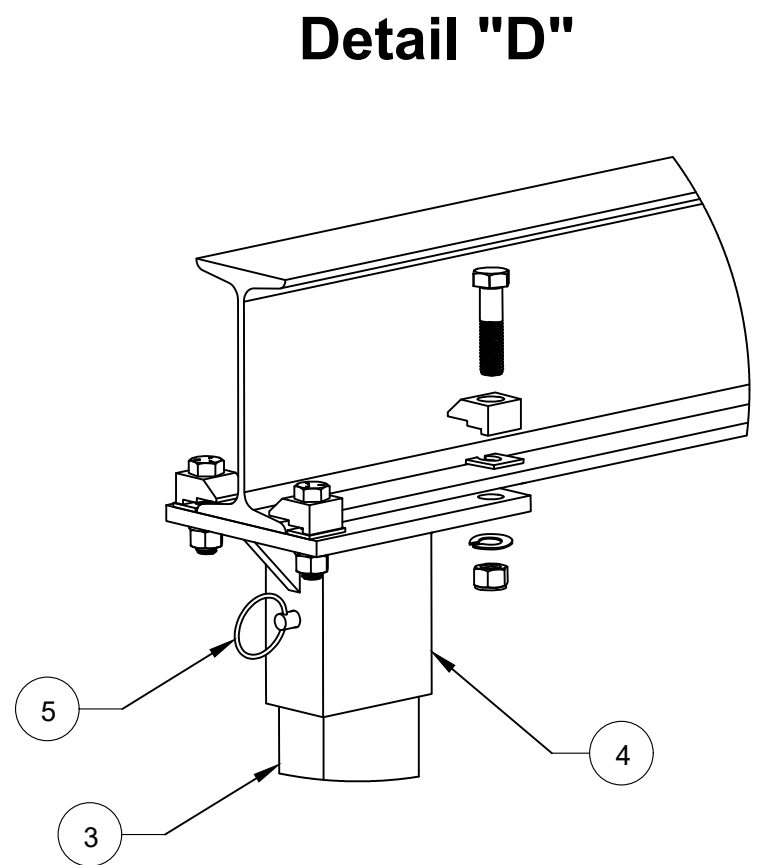
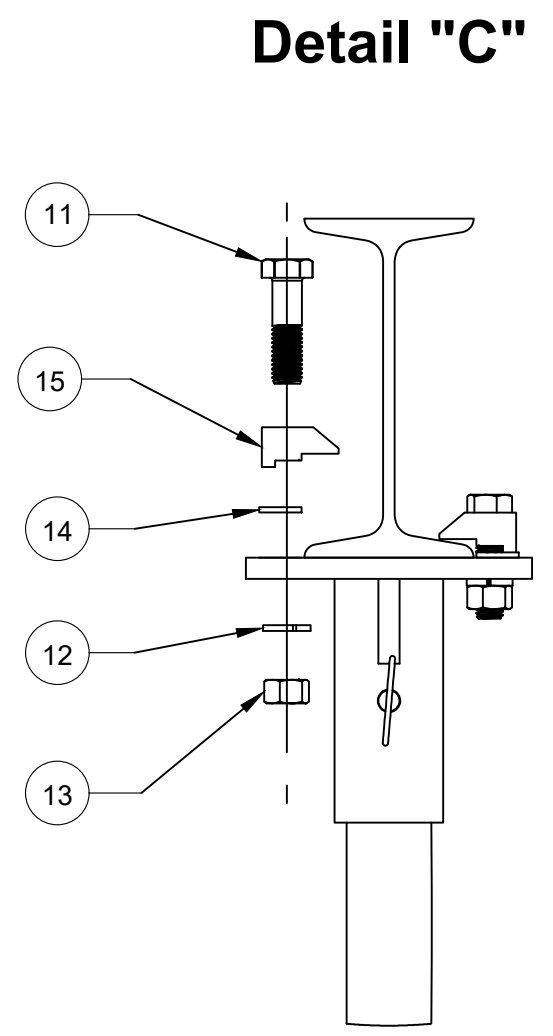
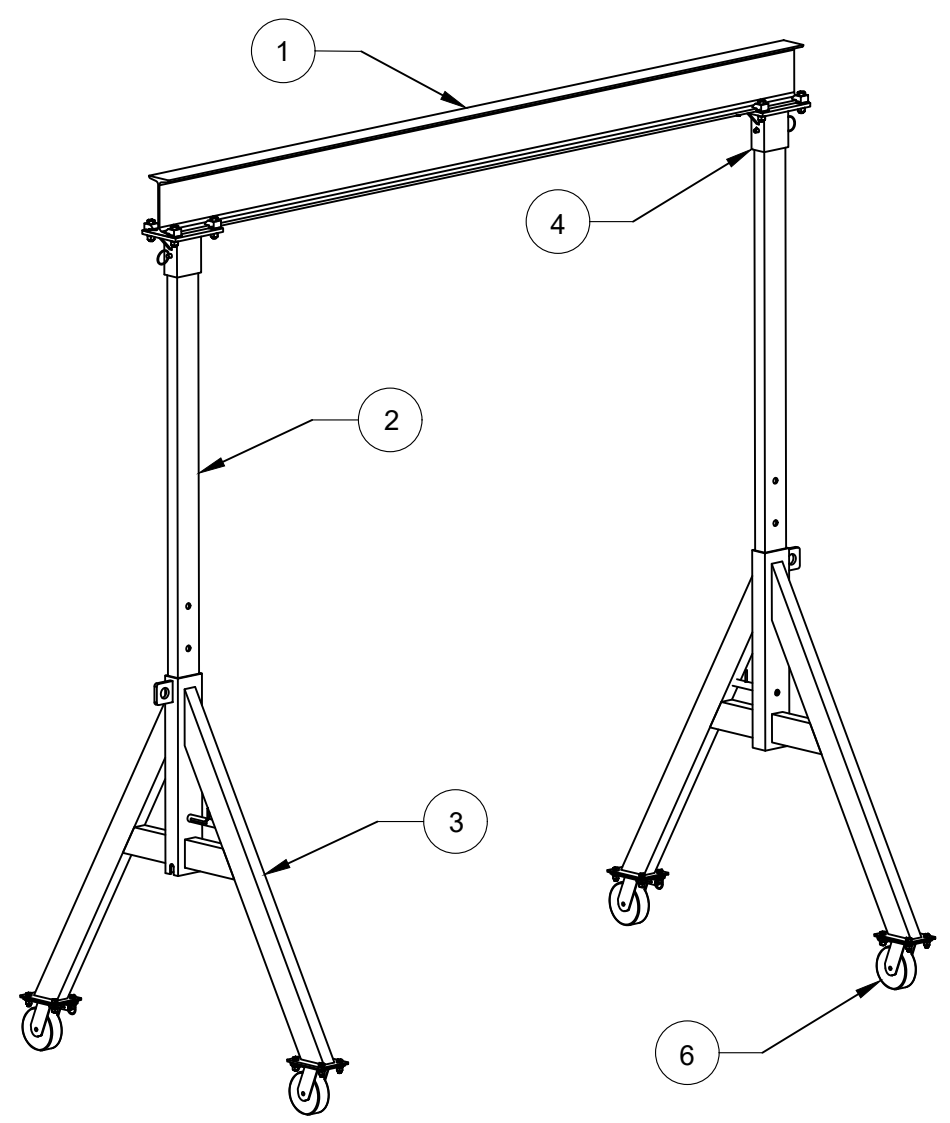
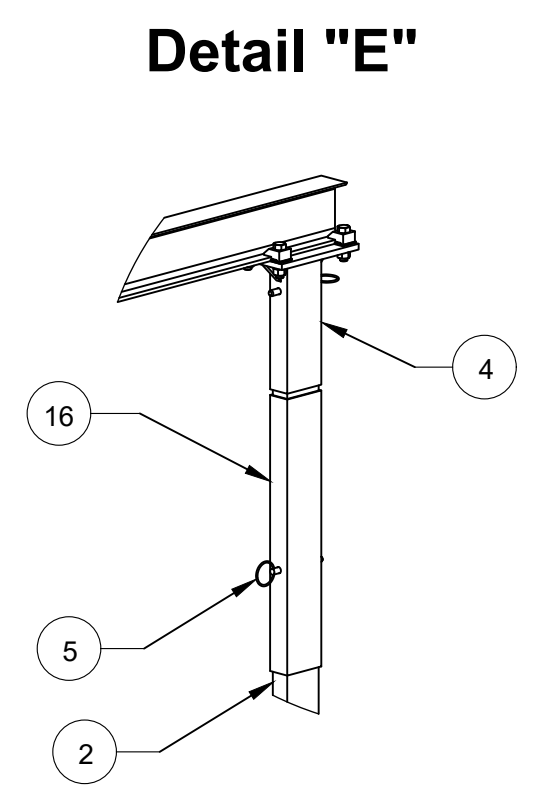
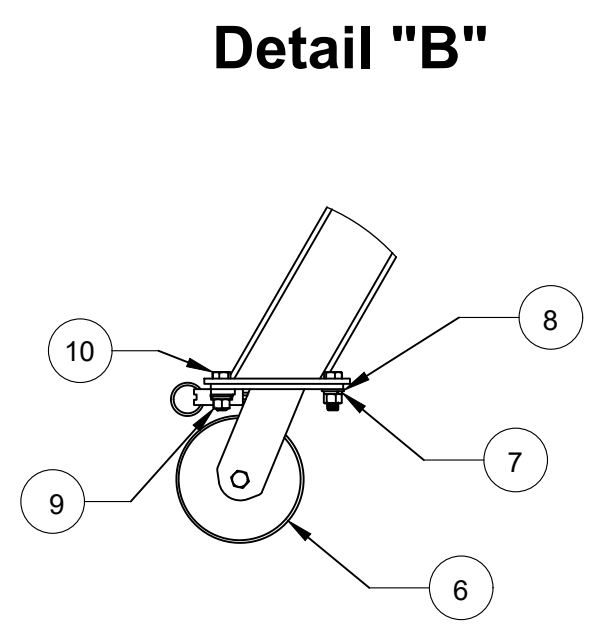
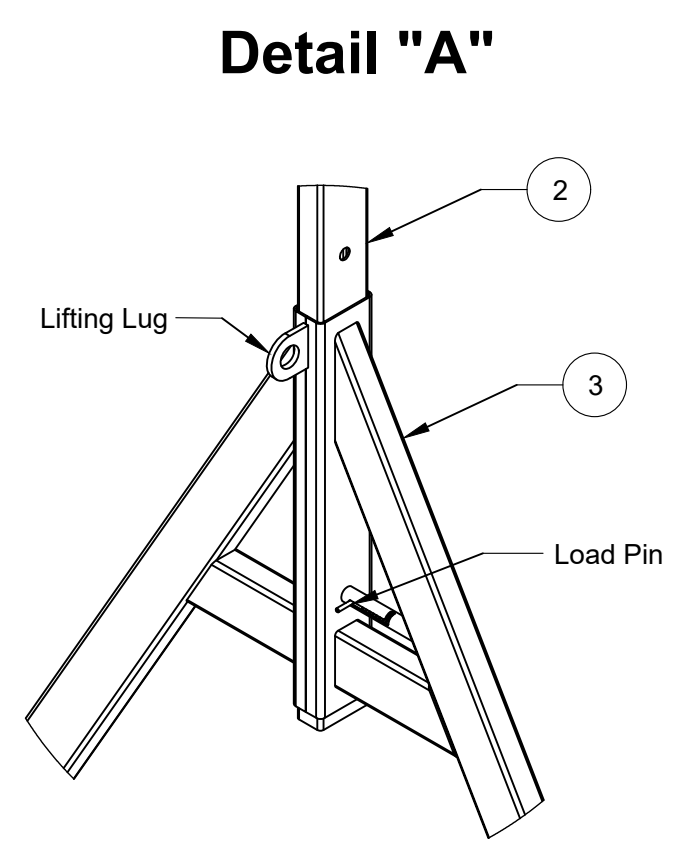
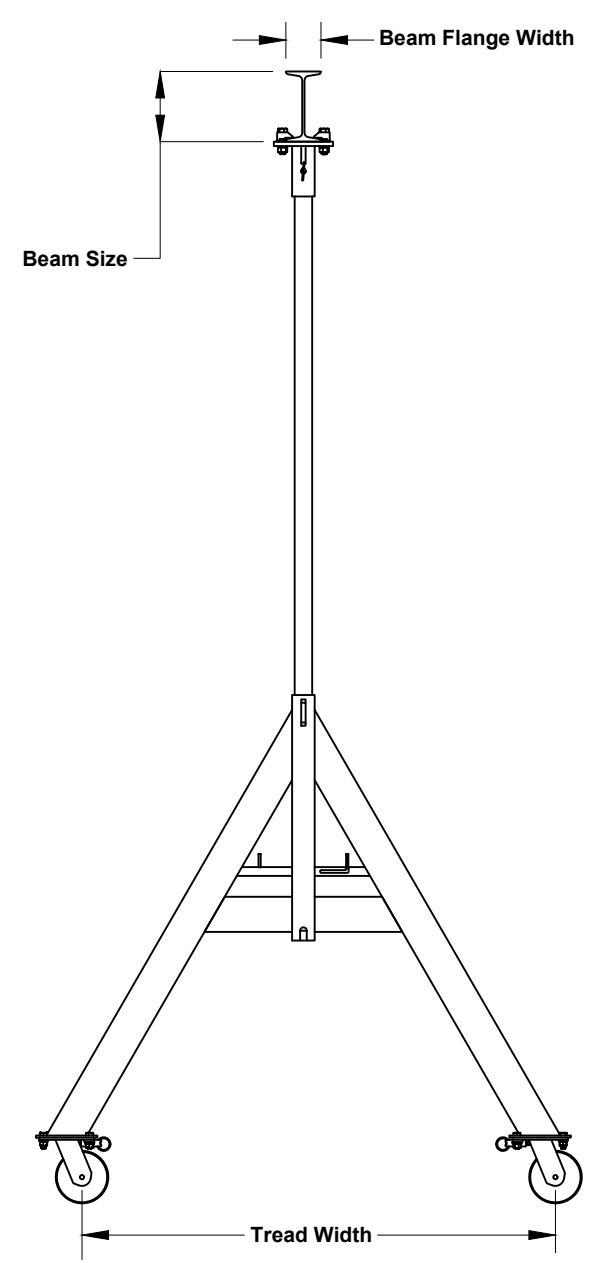
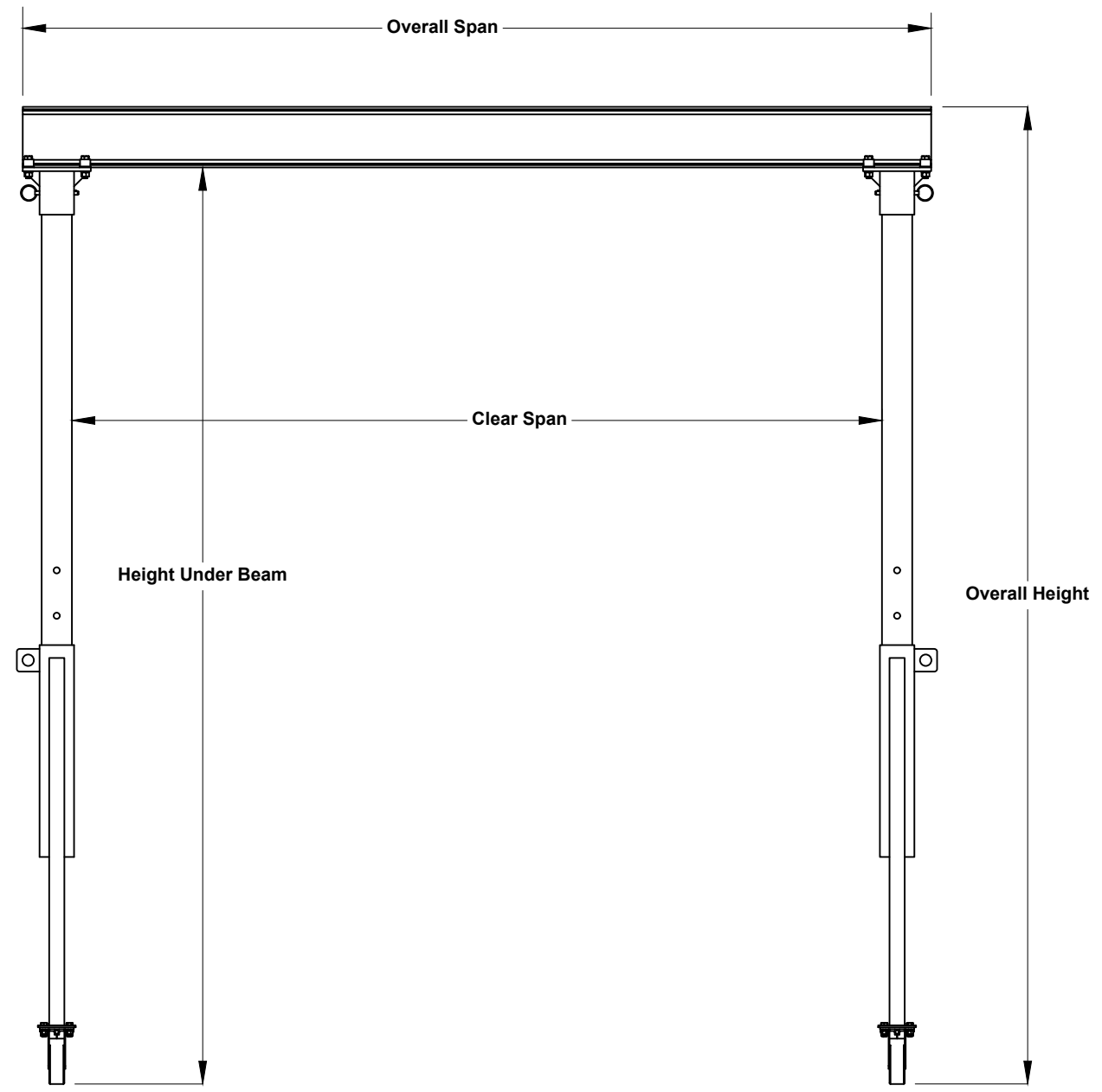
Morgantown, PA | Las Vegas, NV
Toll Free: (800) 869-2080 | Local: (610) 286-7200 | Outside US: 1-610-286-7200 | Fax: (610) 286-0085
Spanco.com | info@Spanco.com



THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SPANCO INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF SPANCO IS PROHIBITED.

Item	Quantity	Building Materials Description
1	1	Beam
2	2	Upright Tube
3	2	A-Frame
4	2	Top Plate
5	2*	Hitch Pin
6	4	Caster
7	16	Lock Washer
8	16	Flat Washer
9	16	Hex Nut
10	16	Hex Bolt
11	8	Hex Bolt
12	8	Lock Washer
13	8	Hex Nut
14	Quantity Varies	Clipped Washer
15	8	Beam Clamp
16	2	Optional Two-Foot Extension

*4 for systems with the optional two-foot extension.
Refer to the A-Series Aluminum Gantry Assembly and Maintenance Instruction Manual for all necessary torque specifications.



SHEET 1 OF 2

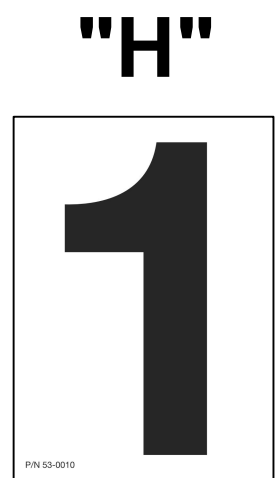
REV.	DATE	NAME	REVISION DESCRIPTION	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE. DO NOT SCALE DRAWING	
TOLERANCES ARE:			APPROVALS	
FRACTIONS	DECIMALS	ANGLES	DRAWN	DATE
±1/16"	.XX ±.05	±1°	JRM	01/31/22
	.XXX ±.005		CHECKED	
	.XXXX ±.0005			
MATERIAL:			APPVD: JRG 07/01/22	
FINISH:			PLOT DATE: WY. -	
STATUS:			PROJECT NO.: SCALE:	
			SIZE/DWG. NO. C	REV. -
			CAD FILE:	A-SERIES-ALU-ASSEMBLY SHEET 1 OF 2



MATERIAL HANDLING
A-SERIES ALUMINUM GANTRY CRANE
ASSEMBLY DRAWING



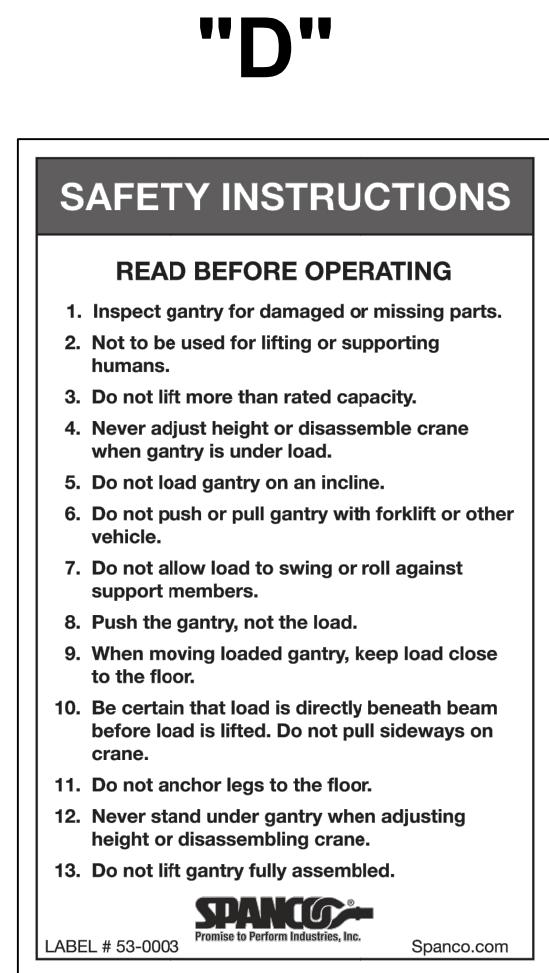
P/N 53-0001
SEE NOTE 1 FOR MORE INFO.



SEE NOTE 2 FOR MORE INFO.



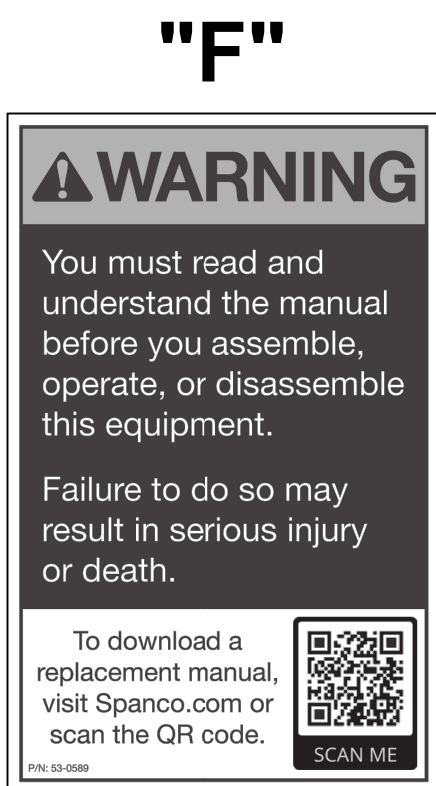
P/N 53-0039
SEE NOTE 1 FOR MORE INFO.



P/N 53-0003
SEE NOTE 1 FOR MORE INFO.



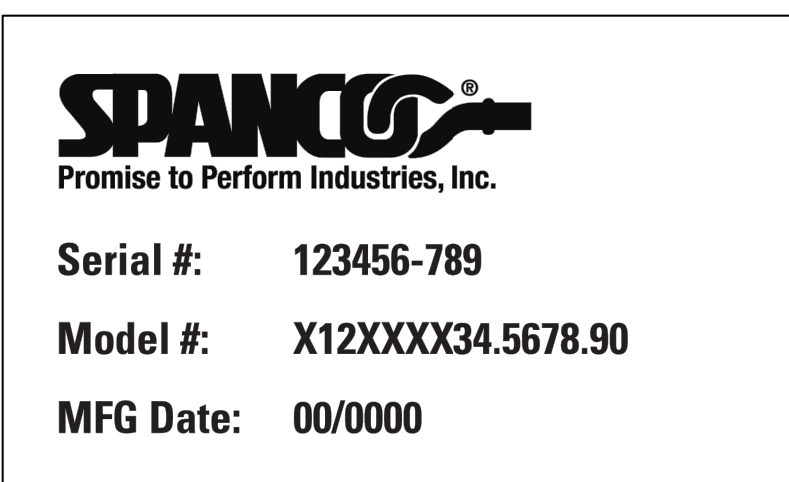
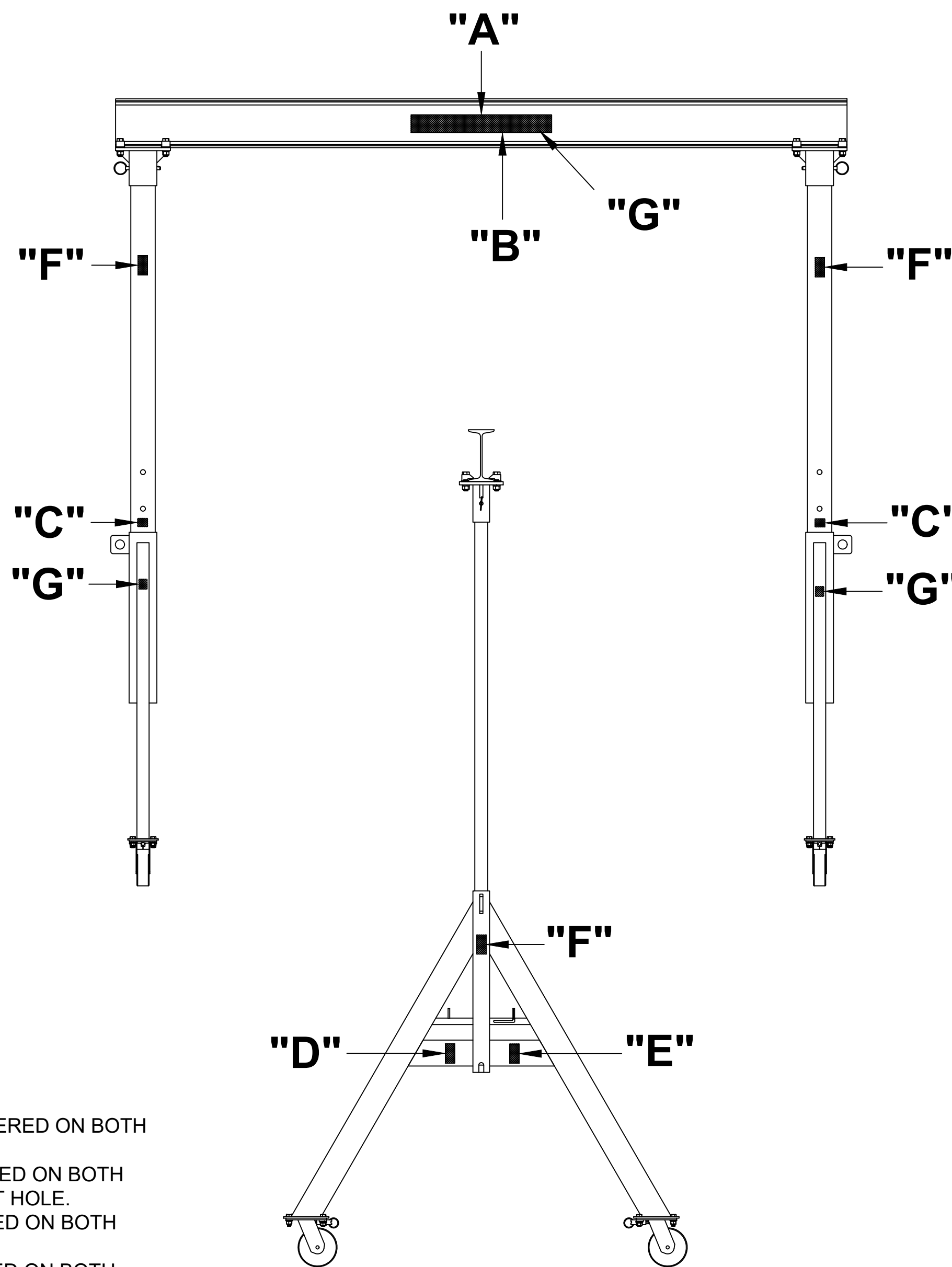
P/N 53-0004
SEE NOTE 1 FOR MORE INFO.



P/N 53-0589
SEE NOTE 1 FOR MORE INFO.

NOTE 1:
LABEL 53-0001 "A" SHOULD BE CENTERED ON BOTH SIDES OF THE BEAM.
LABEL 53-0039 "C" SHOULD BE PLACED ON BOTH UPRIGHT TUBES ABOVE THE LOWEST HOLE.
LABEL 53-0003 "D" SHOULD BE PLACED ON BOTH SUPPORT LEGS.
LABEL 53-0004 "E" SHOULD BE PLACED ON BOTH SUPPORT LEGS.
LABEL 53-0589 "F" SHOULD BE PLACED ON BOTH A-FRAMES OR UPRIGHT TUBES AT EYE LEVEL (APPROXIMATELY 62 INCHES).
LABEL "G" SHOULD BE PLACED ON EACH A-FRAME AND ON LABEL "A" INSIDE THE OUTLINED AREA.

NOTE 2:
LABEL "B" SHOULD BE PLACED ON LABEL "A" AND IS P/N 53-0009 FOR ONE-HALF-TON CAPACITY SYSTEMS, 53-0010 FOR ONE-TON CAPACITY SYSTEMS, 53-0011 FOR TWO-TON CAPACITY SYSTEMS, AND 53-0012 FOR THREE-TON SYSTEMS.



SEE NOTE 1 FOR MORE INFO.

SHEET 2 OF 2

REV.	DATE	NAME	REVISION DESCRIPTION
CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE. DO NOT SCALE DRAWING.			 Promise to Perform Industries, Inc.
APPROVALS	DATE		
DRAWN: JRM	01/31/22		MATERIAL HANDLING A-SERIES ALUMINUM GANTRY CRANE LABEL PLACEMENT DRAWING
CHECKED:			
APPVD: JRG	07/01/22		
PLOT DATE:	WT.	SIZE	DWG. NO.
PROJECT NO.:	SCALE:	C	A-SERIES-ALU-ASSEMBLY
CAD FILE:			REV. -
			SHEET 2 OF 2