

Vehicle-Mounted Jib Cranes

OWNER'S MANUAL

JIB CRANES MODELS WTJ-20, WTJ-E , & VAN-J

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WARNING!

Material handling is dangerous. Any person who uses or maintains this product must be familiar with the hazards associated with it.

- **Failure to read and understand this owner's manual before using or servicing the lifting jib constitutes a misuse of the product.**
- DO NOT leave suspended loads unattended. Always unload the crane before leaving it.
- DO NOT use the jib to lift, support, or move people.
- Always watch the jib and the load carefully when the jib is in use.
- Unload the jib, lower the boom and secure it to the mast before moving the vehicle.
- DO NOT move the vehicle with a load suspended from the jib.
- Keep clear of the boom while it is loaded or rotated. Never allow personnel to climb under or onto any part of a suspended load.
- Keep hands, fingers, loose clothing, etc., clear of the winch and cable.
- Do not use the jib if any damage or unusual noise is observed.
- AC-powered winches must only be plugged into a 115V, GFCI-protected, grounded supply circuit.
- Confirm that all labels are in place (see "Label placement diagram" on p. 10A-10C) and legible.
- Apply all relevant DOT, state, and federal regulations concerning the installation and use of vehicle-mounted cranes.
- DO NOT modify this jib crane in any way. Unauthorized modifications automatically void the limited warranty and might make the crane unsafe to use.

REPLACEMENT PARTS

We use quality parts and materials to manufacture this equipment. Only install manufacturer-approved replacement parts and accessories. VESTIL is not responsible for problems resulting from the use of unapproved replacement parts.

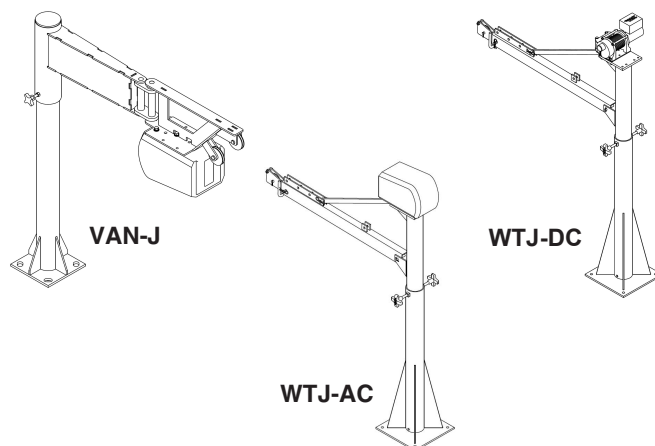
To order replacement parts or to ask questions regarding the use or operation of the product, contact VESTIL via the phone number that appears above. Be prepared to provide the serial number, which is displayed on the machine data label (see label 287 on p. 10A-10C).

RECEIVING INSTRUCTIONS

Although each unit is tested and inspected prior to shipment, it is possible that the unit was damaged during transit. Inspect the crane closely when it arrives. If you see evidence of damage or rough handling to either the packaging or the product when it is delivered, immediately make a note of it on the Bill of Lading!

To be able to make a timely claim for freight damage with the carrier, it is important that you remove the packaging upon delivery. Examine the product carefully, especially if the packaging is damaged.

Confirm that the product matches your order.



INSTALLATION INSTRUCTIONS - WTJ, VAN-J

Review this entire page before installing the jib.

Consult the factory in the event there are any questions or problems at the time of installation, or for information regarding optional features not covered by the owner's manual.

Securely mount the jib on a solid surface before use! Before mounting a jib in a vehicle, consult the vehicle manufacturer for a specific mounting location and mounting hardware recommendations. If installed in a vehicle, backing or stiffener plates might be necessary to provide sufficient support for the jib.

- Confirm that the vehicle surface where you intent to mount the jib will be mounted is adequate (i.e. strong and stable). The mounting location must be able to handle not only static loads (lifted by the jib), but also dynamic forces that occur as the vehicle moves. Always put the jib in the stowed position before moving the vehicle.
- DO NOT modify the jib in any way. Unauthorized modifications automatically void the limited warranty and might make the jib unsafe to use. Adding ancillary equipment to the jib might require that its capacity be reduced. Contact the factory to determine how optional equipment affects capacity.
- Installation should be performed by suitably trained personnel. The electrical aspects of the installation should be performed by an electrician.

To install a standard jib crane (WTJ models or the VAN-J), the following tools and equipment are required:

1. Equipment to move the jib, e.g. a forklift.
2. A smooth, level, adequately strong surface on which to mount the jib.
3. A power drill, drill bits, and mounting hardware. Consult the vehicle manufacturer to determine the best size and type of hardware to use to anchor the jib to the vehicle.
4. If the VAN-J is to be installed inside a covered vehicle, verify that there is enough clearance inside the vehicle to mount the unit and that the jib will be able to rotate appropriately. (See p. 8A-8D).
5. For units with an AC-powered winch, use of a ground-fault circuit interrupter device in the supply circuit to protect personnel from electrical shock is strongly recommended. AC winches must only be used with effectively grounded supply circuits.

To install a standard lifting jib (WTJ, WTJ-E and VAN-J): [2 people should work together to perform this installation]

1. The jib should remain completely assembled for installation. However, if the outer mast is removed during installation of a WTJ model jib, be sure that the bearing disk is still present inside it before installing the inner mast.
2. Move the jib to the desired position on/inside the vehicle. Use care to avoid causing damage to the jib, especially the winch and hydraulic components (when supplied). Select a location where the boom will be able to rotate freely.
3. Use the mounting plate as a template to mark the vehicle surface with the positions of all 4 bolt holes.
4. Move the jib out of the way and drill appropriately-sized holes where the vehicle was marked in step 3.
5. Align the mounting plate with the holes drilled into the vehicle. One person should stabilize the boom while the other person fastens the mounting plate to the vehicle using the hardware and any backing or stiffener plates recommended by the vehicle manufacturer.
6. Raise the end of the jib and secure it at the desired angle.
7. Confirm that the boom rotates freely and without obstruction throughout the desired range of motion.
8. Connect the power supply (if applicable) to the winch's power supply cord. On DC-powered units, the included power supply cord and pendant control cable must be plugged into the winch.
9. Cycle the winch down and up to confirm that it operates properly; then verify that the winch cable smoothly spools on and off of the reel.
10. Test the jib by using it to lift a load that weighs 125% of the rated capacity prior to its initial use. Afterwards, visually inspect the jib and the vehicle for evidence of deformation, cracking, fatigue, or other damage. If any of these conditions are present, correct the installation and test the unit again before clearing it for use.

LOADING INSTRUCTIONS - WTJ, WTJ-E, VAN-J

All persons involved in the operation of this jib crane must understand and apply the following instructions BEFORE using it for the first time!

Standard model jibs are designed for mounting on many pickup trucks and trailers. They are designed to load and unload static, non-hazardous loads from the vehicle to which the jib is mounted.

Always fold down the boom, secure it to the mast, and disconnect the winch from its power supply whenever the jib is not in use.

Note: The addition of ancillary equipment to the jib must be taken into account when determining the maximum working load. Reduce the capacity by the combined weight of all ancillary equipment.

LOADING:

The load rating appears on label 287 (see appropriate "Label placement diagram", p. 10A-10C). It indicates the net capacity of the jib lifting a load with center of gravity located directly below the cable pulley.

WARNING! Material handling is dangerous. Reduce the likelihood of misuse that could cause serious personal injuries by applying the following recommendations:

1. DO NOT exceed the capacity of your jib. Serious personal injury and/or permanent damage to the jib or winch could occur.
2. Only lift loads centered directly below the hook. Never use the jib to pull or drag loads. Do not use the jib in any application that creates side-loading of the winch cable or jib arm.
3. Always confirm that the safety latch of the hook is properly closed before alifting a load. The safety latch must be closed before lifting a load.
4. Only use the jib to *lift* loads. DO NOT use the jib to drag loads.
5. Do not use straps or rigging applied over the top of the boom.
6. Only connect loads to the hook with appropriate rigging (e.g. slings of matching capacity).
7. Ensure that at least three turns of cable remain on the winch reel at all times.
8. Always carefully watch any load suspended from the jib.
9. DO NOT continue to use the jib if it is damaged or if you hear unusual noises during operation. If repairs are necessary, restore the jib to normal operating condition before using it again.

OPERATION INSTRUCTIONS - WTJ, WTJ-E, VAN-J

Powered winches are not equipped with independent overload protection. Therefore, the operator should closely monitor the winch while it operates. If the cable tension increases suddenly--indicating a bind--stop the winch immediately and then return the load to the ground. Restore the winch to normal operating condition before using it again.

WARNING! Whenever the jib is used, the vehicle must be parked on even, level ground and be unable to move or tip. If the jib is mounted on a trailer, always chock the wheels before using it.

VAN-J MODELS (manual winches):

When standing on the handle side of the winch, rotate the handle counterclockwise to raise the hook. Rotate the handle clockwise to lower the hook.

VAN-J models with powered winches (AC or DC):

Battery-powered and AC-powered VAN-J's utilize a constant-pressure (dead-man style) pushbutton controller.

Connect the power cord to the appropriate power supply.

NOTE: AC-powered units must be connected to a 115V supply circuit that is effectively grounded and that provides GFCI protection.

To raise the hook, press the "UP" button which turns on the winch and retract the cable. The winch will operate only while the button is pressed. Release the button to stop the winch. The hook will maintain position.

To lower the hook, press the "DOWN" button. Again, releasing the button will stop the winch and the hook will hold its position.

VAN-J (all models):

When you are finished using the VAN-J, fully retract (raise) the hook. Rotate the outer jib arm so that it folds alongside the inner arm. Rotate the entire, folded jib arm around so that the outer arm is against the inside wall of the van. Tighten the threaded knob (see p. 8A & 8C) so that the boom cannot rotate.

WTJ models with powered winches (AC or DC):

[NOTE: The auxiliary handle provided with the AC winch is provided for emergency use only. Always remove this handle when it is not in use. Do not operate the winch or allow the winch to spin freely with the handle attached.]

- The DC-powered WTJ is furnished with a constant-pressure (dead-man style) pushbutton control.
- The AC-powered WTJ has a toggle switch located on the winch body.

Connect the power cord to the appropriate power supply. AC-powered units must be connected to a 115V supply circuit that is effectively grounded and that provides GFCI protection.

Pressing the "UP" button turns on the winch and retracts the cable causing the hook to rise. The winch will operate only while the button is pressed. Upon releasing the pushbutton, the winch will stop and hold its position.

To lower the hook, press the "DOWN" button. Releasing the button will stop the winch and the hook will maintain its position.

NOTE: Unplug the winch cords and store them in the vehicle whenever the jib is not in use.

BOOM ANGLE:

The boom angle can be fixed at any of four positions to change the maximum lifting height. To adjust the boom angle:

1) Press the "DOWN" button to lower the hook until it is a few feet below the end of the boom.

2) Raise the boom to the desired angle (refer to "Boom angle adjustment diagram" on p. 5):

- a. **(WTJ-E)** remove the hitch pin from the end of the angle adjustment pin; then remove the angle adjustment pin.

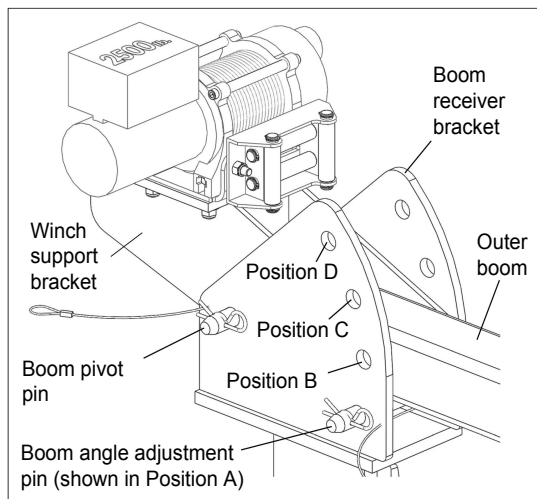
Raise the outer boom above the desired position (A-D), align the hole in the end of the lock bar with the appropriate set of pin holes in the bracket on top of the boom, and then reinsert the angle adjustment pin.

Secure the adjustment pin with the hitch pin.

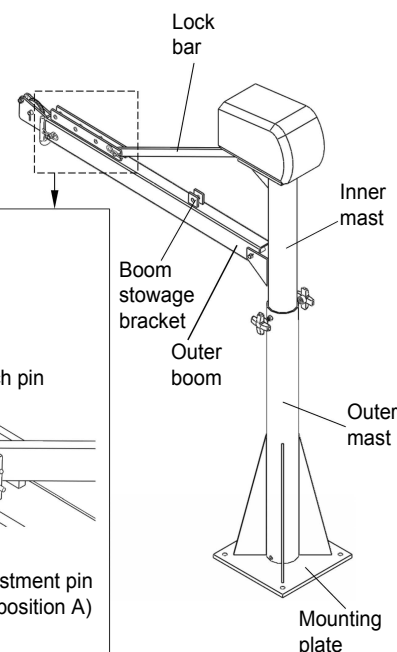
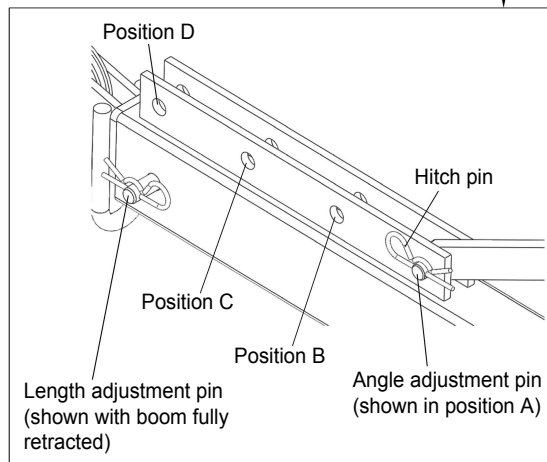
- b. **(WTJ-20)** remove the hitch pin from the end of the angle adjustment pin; then remove the angle adjustment pin from the boom receiver bracket. Raise the boom above the desired position and insert the angle adjustment pin through the holes in the receiver bracket. Lower the boom until the holes in the winch support brackets align with the appropriate holes in the receiver bracket. Reinstall the adjustment pin and secure it in place with the hitch pin.

BOOM ANGLE ADJUSTMENT DIAGRAM:

WTJ-20 models



WTJ-E models



BOOM LENGTH:

The boom can be extended to pick up loads that are farther away from the mast. To extend the boom:

- 1) Lower the hook by pressing the "DOWN" button;
- 2) Lift the boom and remove the boom length adjustment pin; then
- 3) Grasp the end of the inner boom and pull it out;
- 4) Align the appropriate pin holes in the inner boom with the pin holes at the end of the outer boom and reinstall the boom retaining pin. Confirm that the pin is fully inserted through both the inner and outer booms, and secure the length adjustment pin with the hitch pin.

WARNING! DO NOT attempt to extend the boom while the jib is loaded. Always unload the jib before adjusting the length.

LIFTING PROCEDURE:

- 1) Tighten the threaded knob against the inner mast to prevent the load from swinging as it is raised.
- 2) Lower the load hook, and secure the load/rigging to the load hook. Be sure that the safety latch is closed.
- 3) Press the "UP" button to raise the load.
 - a) Keep one hand on the underside of the boom to stabilize it while lifting a load.
 - b) Watch the load and the boom whenever the jib is used for signs.
- 4) If necessary, loosen the threaded knob and slowly rotate the boom until the load is positioned as needed; then press the "DOWN" button until the load is entirely supported by the ground or vehicle. Ensure that the load is stable before disconnecting the rigging from the hook.

PREPARING THE JIB FOR TRANSPORT:

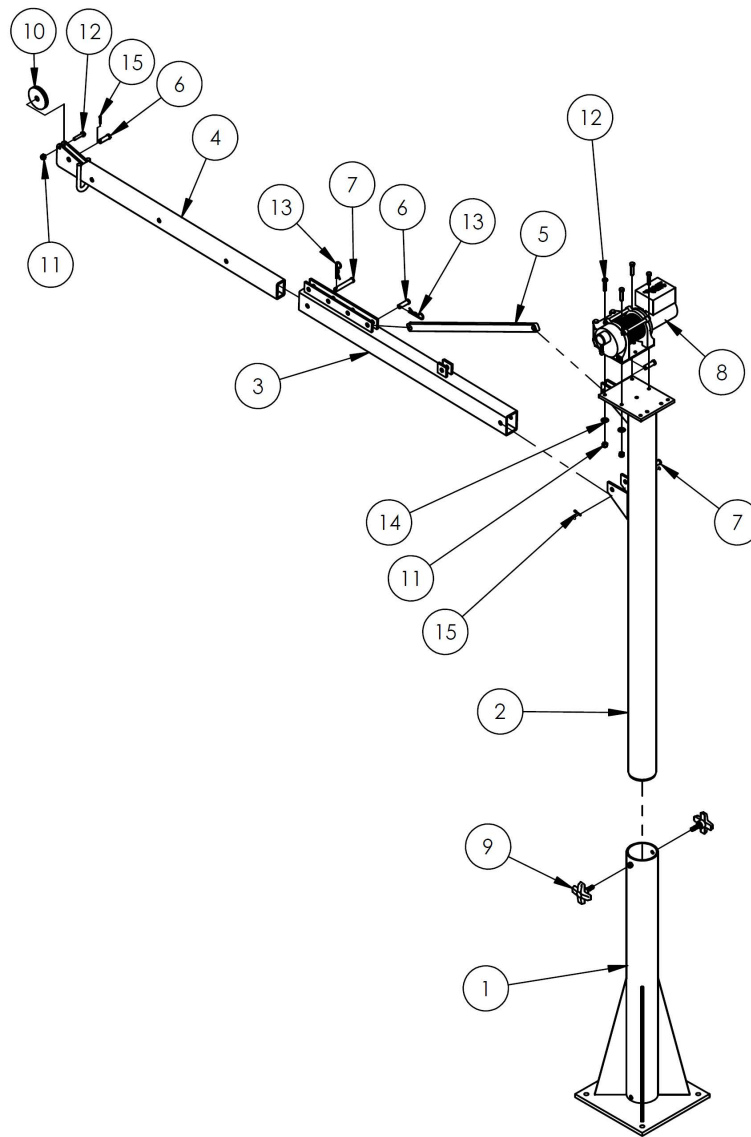
- 1) Fully retract the boom and repin it.
- 2) (WTJ-E) Unpin the boom from the lock bar and lower the boom so that it is parallel with the mast. Lower the hook, if necessary. Pin the free end of the lock arm to the boom stowage bracket.
- (WTJ-20) Remove the boom pivot pin but leave the angle adjustment pin in place. Rotate the boom until it is parallel to the mast. Secure the boom to the mast with a strap or cord to prevent it from bouncing while driving.

WINCH:

The electric winches are designed for intermittent duty. Extended use without pause to allow cooling will cause overheating which can damage the motor. The maximum continuous run time is three minutes. Monitor the motor temperature whenever the winch is operated.

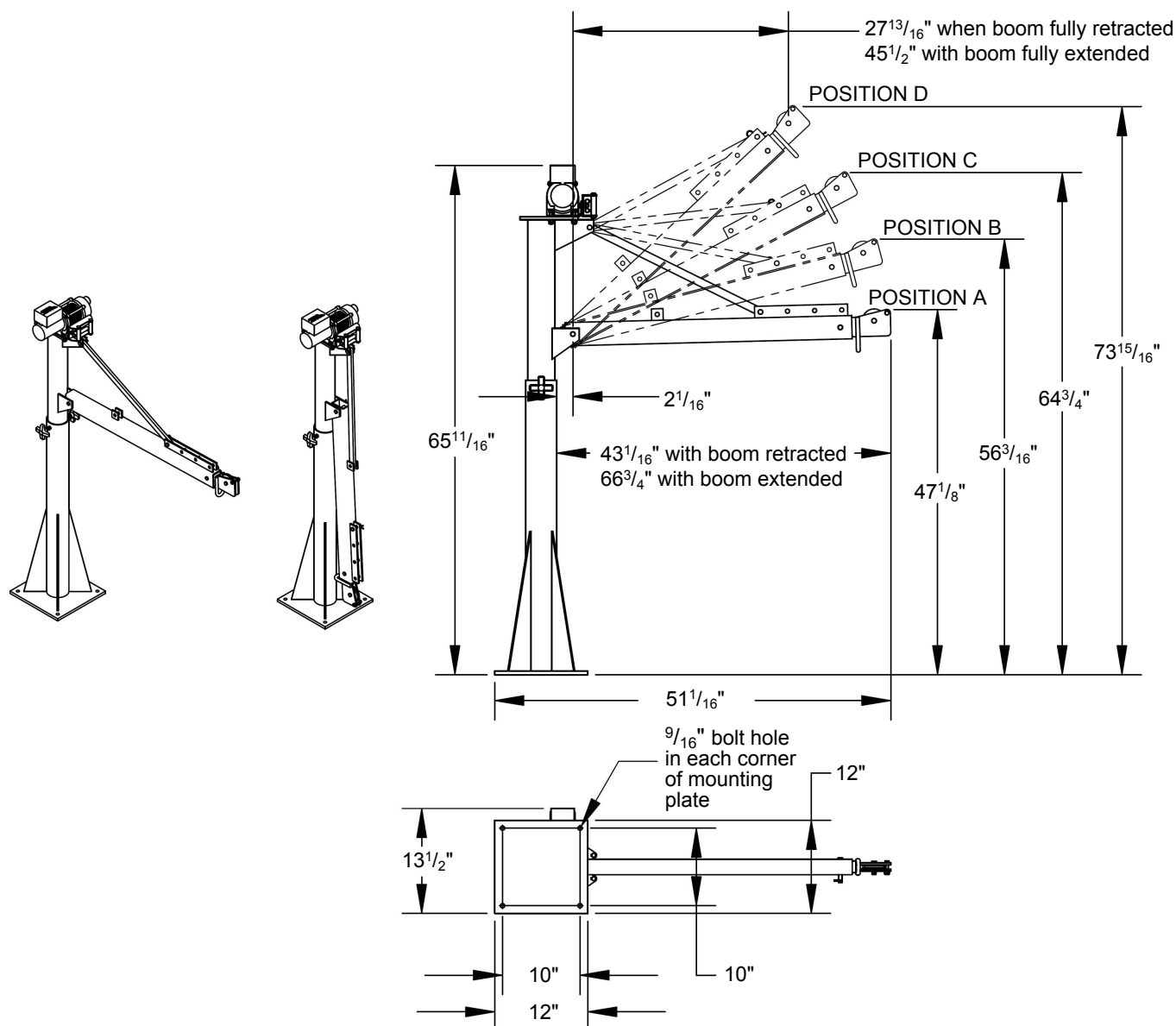
Operate and maintain the winch as directed in the owner's manual for your winch.

WTJ-E-15-3-DC Exploded Parts View and Bill of Materials



Item no.	Part no.	Description	Quantity
1	28-514-098	Frame, weldment, outer mast	1
2	28-514-097	Frame, weldment, inner mast	1
3	28-514-095	Weldment, outer boom	1
4	28-514-096	Weldment, inner boom	1
5	28-037-005	Lock bar	1
6	28-112-042	1/2 in. x 1 1/2 in. retaining clevis pin	3
7	28-112-029	1/2 in. x 3 in. retaining clevis pin, z-plated	2
8	28-158-003	12VDC winch	1
9	08-025-007	3/8 in. - 16 UNC x 1 1/4 in. threaded knob	2
10	99-027-003	1/4 in. cable pulley, 3 in. outer diameter, 1/2 in. inside diameter	1
11	37021	5/16 in. - 18 nylon lock nut, zinc-plated, #2	5
12	11059	5/16 in. - 18 UNC x 1 1/2 in. zinc-plated bolt, #2	5
13	45286	#11 hitch pin clip, 1/8 in. x 2 5/8 in.	2
14	33006	5/16 in. USS flat washer, zinc-plated	4
15	65076	1/8 in. x 1 in. cotter pin, zinc-plated	3

WTJ-E-15-3-DC Capacity information and dimensions



Boom position	Boom fully retracted	Boom extended halfway	Boom fully extended
A	650 lb. (295.5kg)	300 lb. (136.4kg)	200 lb. (90.9kg)
B	1100 lb. (500kg)	650 lb. (295.5kg)	550 lb. (250kg)
C	1250 lb. (568.2kg)	850 lb. (386.4kg)	650 lb. (295.5kg)
D	1500 lb. (681.8kg)	1150 lb. (522.7kg)	800 lb. (363.6kg)

Standard specifications:

Capacity = 1,500 pounds (681.8kg)

Overall width = 13¹/₂"

Overall length in position A and boom retracted = 51¹/₁₆"

Usable length in position A and boom retracted = 43¹/₁₆"

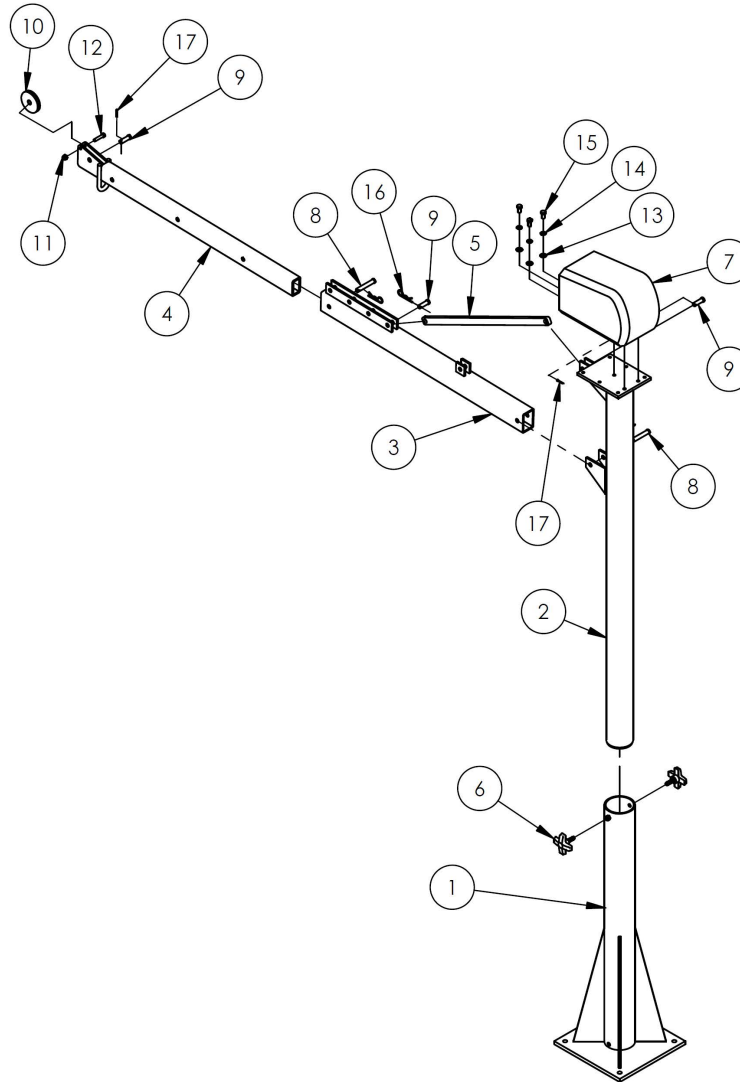
Usable length in position A and boom fully extended = 66³/₄"

Overall height = 65¹¹/₁₆"

12VDC powered winch with hand pendant control

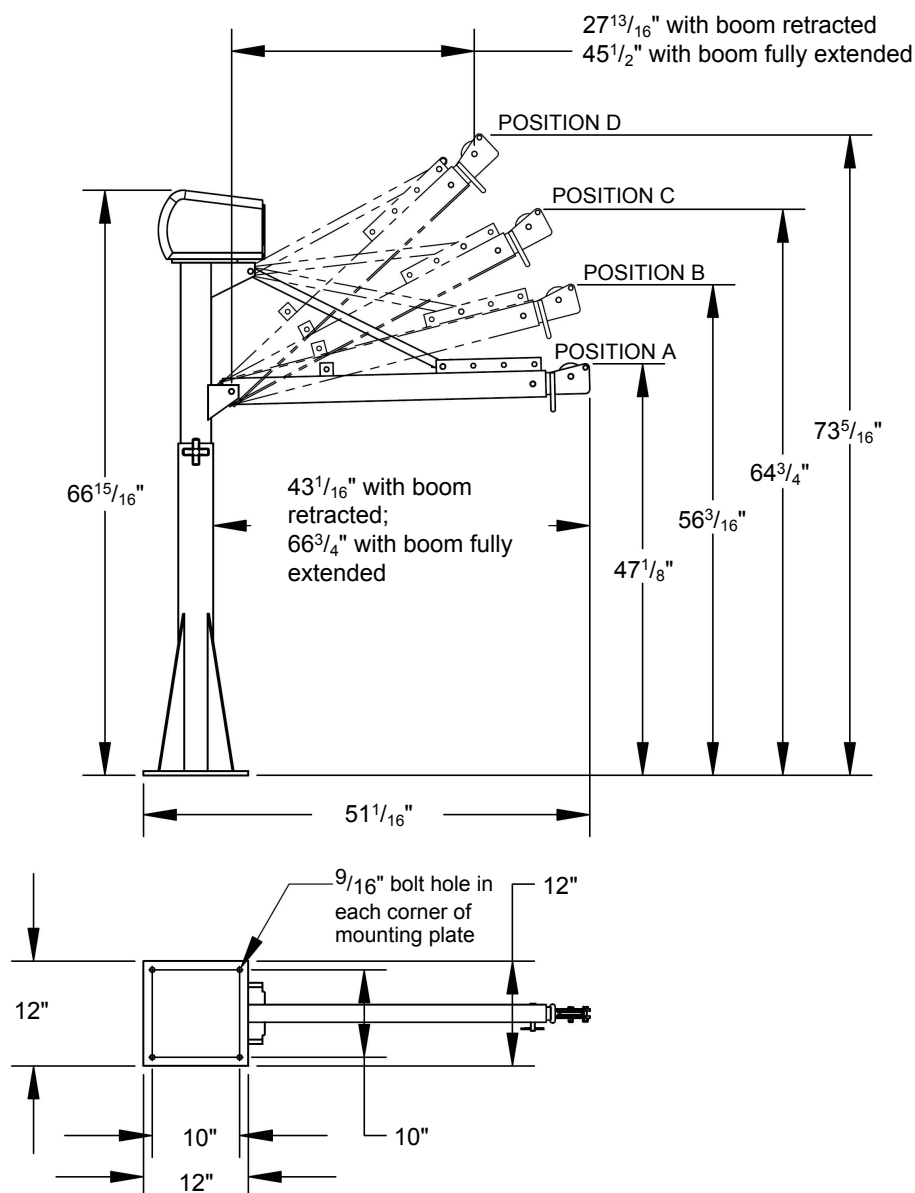
³/₁₆" x 46' long cable and hook

WTJ-E-15-3-AC Exploded Parts View and Bill of Materials



Item no.	Part no.	Description	Quantity
1	28-514-098	Frame, weldment, outer mast	1
2	28-514-097	Frame, weldment, inner mast	1
3	28-514-095	Weldment, outer boom	1
4	28-514-096	Weldment, inner boom	1
5	28-037-005	Lock bar	1
6	08-025-007	$\frac{3}{8}$ in. - 16 UNC x $1\frac{1}{4}$ in. threaded knob	2
7	28-158-001	120VAC winch	1
8	28-112-029	$\frac{1}{2}$ in. x 3in. retaining clevis pin, zinc-plated	2
9	28-112-042	$\frac{1}{2}$ in. x $1\frac{1}{2}$ in. retaining clevis pin	3
10	99-027-003	$\frac{1}{4}$ in. cable pulley, 3in. outer diameter, $\frac{1}{2}$ in. inside diameter	1
11	37021	$\frac{5}{16}$ in. - 18 nylon lock nut, zinc-plated, #2	1
12	11059	$\frac{5}{16}$ in. - 18 UNC x $1\frac{1}{2}$ in. zinc-plated, #2	1
13	33008	$\frac{3}{8}$ in. USS flat washer, zinc-plated	3
14	33622	$\frac{3}{8}$ in. lock washer, zinc-plated	3
15	11103	$\frac{3}{8}$ in. - 16 UNC x $\frac{3}{4}$ in. HHCS zinc-plated bolt, #2	3
16	45286	$\frac{1}{8}$ in. x $2\frac{5}{8}$ in. #11 hitch pin clip	2
17	65076	$\frac{1}{8}$ in. x 1 in. cotter pin, z-plated	3

WTJ-E-15-3-AC Capacity information and dimensions



Boom position	Boom fully retracted	Boom extended halfway	Boom fully extended
A	650 lb. (295.5kg)	300 lb. (136.4kg)	200 lb. (90.9kg)
B	1100 lb. (500kg)	650 lb. (295.5kg)	550 lb. (250kg)
C	1250 lb. (568.2kg)	850 lb. (386.4kg)	650 lb. (295.5kg)
D	1500 lb. (681.8kg)	1150 lb. (522.7kg)	800 lb. (363.6kg)

Standard specifications:

Capacity = 1,500 pounds (681.8kg)

Overall width = 12"

Overall length in position A and boom retracted = $51\frac{1}{16}$ "

Usable length in position A and boom retracted = $43\frac{1}{16}$ "

Usable length in position A and boom fully extended = $66\frac{3}{4}$ "

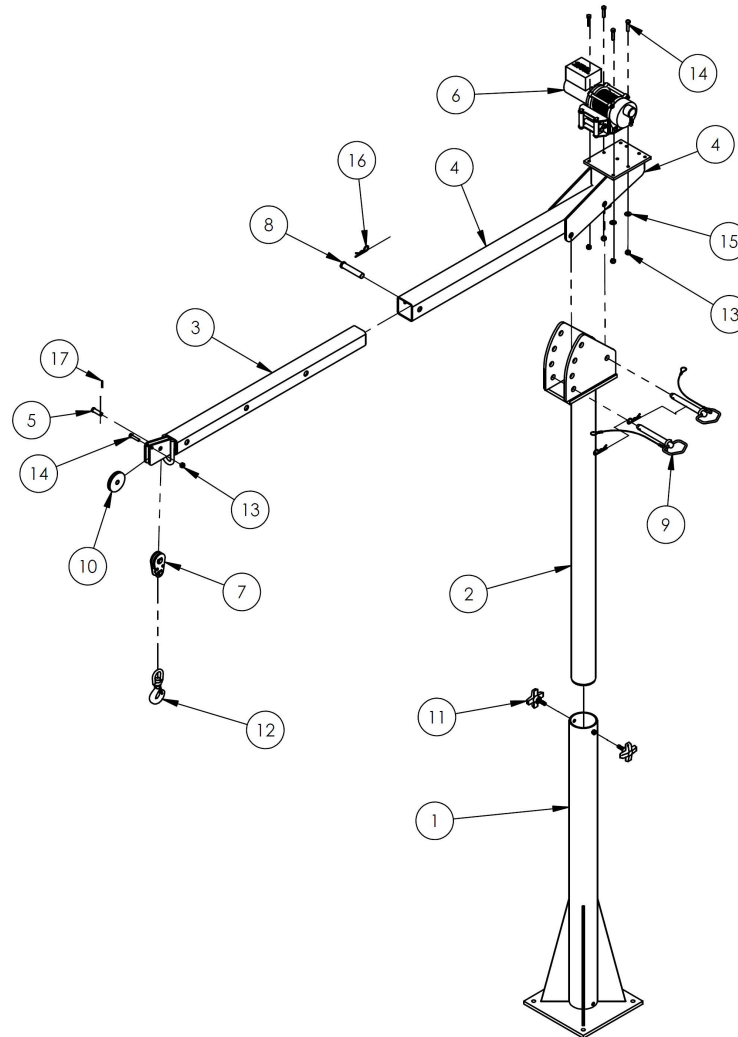
Overall height = $66\frac{15}{16}$ "

Overall height in storage configuration = 73"

115VAC powered winch with fingertip toggle switch

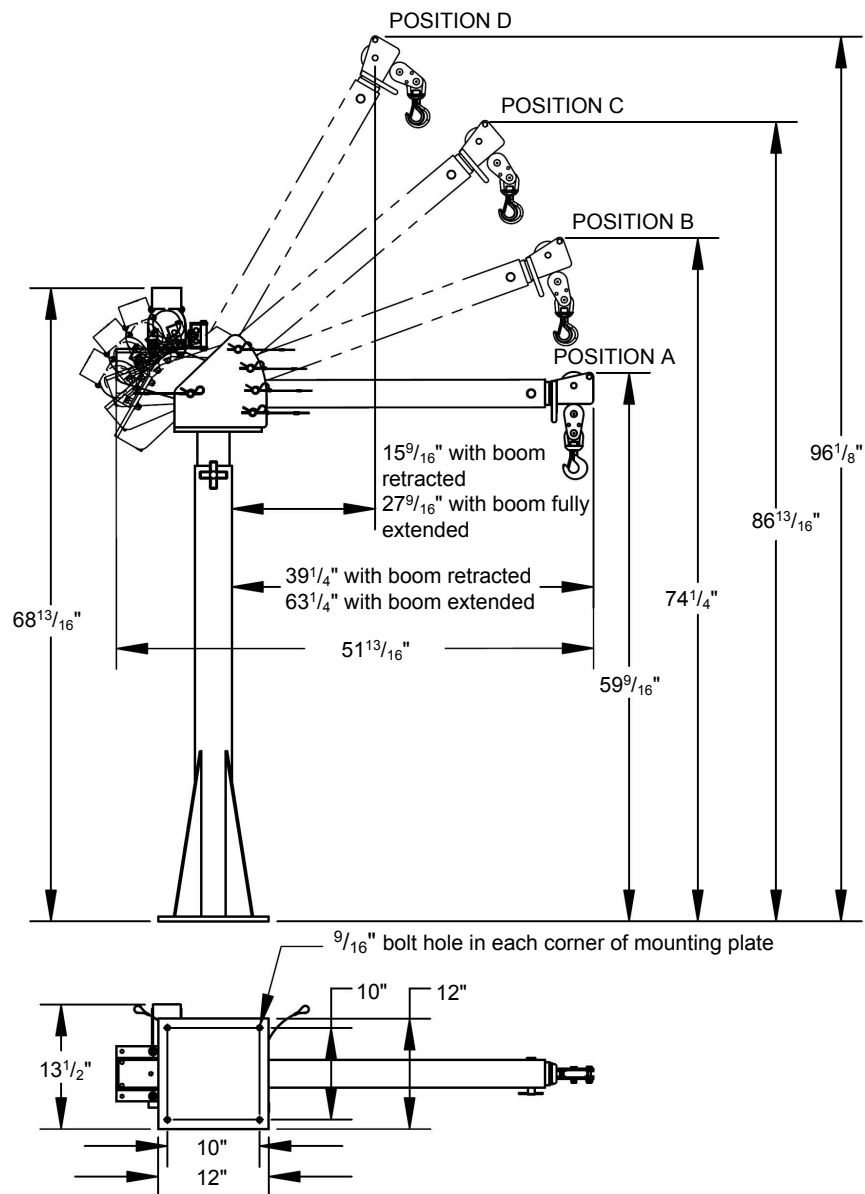
$7/32$ " x 25' long cable and hook

WTJ-20-3-DC & WTJ-20-4-DC Exploded Parts View and Bill of Materials



Item no.	Part no.	Description	Quantity
1	28-514-091	Frame, weldment, outer mast	1
2	28-514-092	Frame, weldment, inner mast	1
3	28-514-100	Weldment, inner boom: WTJ-20-3-DC; or	1
	28-514-093	WTJ-20-4-DC	1
4	28-514-099	Weldment, outer boom: WTJ-20-3-DC; or	1
	28-514-094	WTJ-20-4-DC	1
5	28-112-042	$\frac{1}{2}$ in. x $1\frac{1}{2}$ in. clevis pin	1
6	28-158-003	12VDC winch	1
7	28-027-004	Pulley, teardrop	1
8	33-112-034	$\frac{3}{4}$ in. x $3\frac{3}{4}$ in. clevis pin	1
9	38-112-003	$\frac{13}{16}$ in. height adjustment pin	2
10	99-027-003	$\frac{1}{4}$ in. cable pulley, 3in. outer diameter, $\frac{1}{2}$ in. inner diameter	1
11	08-025-007	$\frac{3}{8}$ in. - 16 UNC x $1\frac{1}{4}$ in. threaded knob	2
12	08-145-037	Hook, clevis, 1-ton capacity	1
13	37021	$\frac{5}{16}$ in. - 18 nylon lock nut, #2 z-plated	3
14	11059	$\frac{5}{16}$ in. - 18 UNC x $1\frac{1}{2}$ in. bolt, #2 z-plated	5
15	33006	$\frac{5}{16}$ in. USS z-plated flat washer	4
16	45286	#11 hitch pin clip, $\frac{1}{8}$ in. x $2\frac{5}{8}$ in.	3
17	65076	$\frac{1}{8}$ in. x 1in. z-plated cotter pin	1

WTJ-20-3-DC Capacity information and dimensions



Boom position	Boom fully retracted	Boom extended halfway	Boom fully extended
A	650 lb. (295.5kg)	400 lb. (181.8kg)	250 lb. (113.6kg)
B	1000 lb. (454.5kg)	770 lb. (350kg)	600 lb. (272.7kg)
C	1250 lb. (568.2kg)	950 lb. (431.8kg)	780 lb. (354.5kg)
D	2000 lb. (909.1kg)	1500 lb. (681.8kg)	1200 lb. (545.5kg)

Standard specifications:

Capacity = 2,000 pounds (909.1kg)

Overall width = 13¹/₂"

Overall length in position A and boom retracted = 51¹³/₁₆"

Usable length in position A and boom retracted = 39¹/₄"

Usable length in position A and boom fully extended = 63¹/₄"

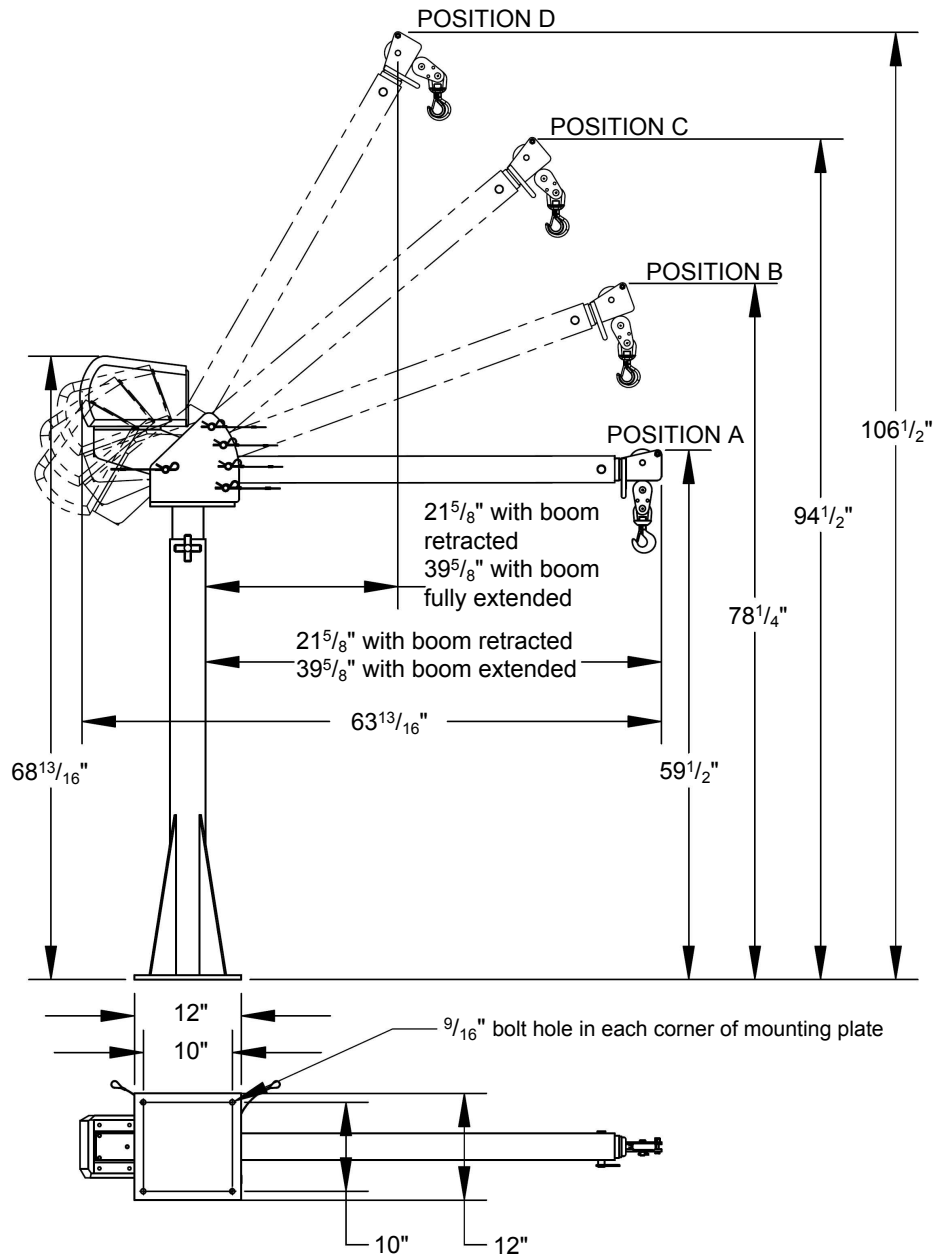
Overall height = 68¹³/₁₆"

Overall height in storage configuration = 70"

12VDC powered winch with hand pendant controller

3³/₁₆" x 46' long cable and hook

WTJ-20-4-DC Capacity information and dimensions



Boom position	Boom fully retracted	Boom in second position	Boom in third position	Boom fully extended
A	1100 lb. (500 kg)	800 lb. (363.6 kg)	600 lb. (272.7 kg)	250 lb. (113.6 kg)
B	1500 lb. (681.8 kg)	1200 lb. (545.5 kg)	1000 lb. (454.5 kg)	600 lb. (272.7 kg)
C	1850 lb. (840.9 kg)	1450 lb. (659.1 kg)	1250 lb. (568.2 kg)	780 lb. (354.5 kg)
D	2000 lb. (909.1 kg)	2000 lb. (909.1 kg)	1900 lb. (863.6 kg)	1200 lb. (545.5 kg)

Standard specifications:

Capacity = 2,000 pounds (909.1kg)

Overall width = 13¹/₂"

Overall length in position A and boom retracted = 63¹³/₁₆"

Usable length in position A and boom retracted = 51¹/₄"

Usable length in position A and boom fully extended = 87¹/₄"

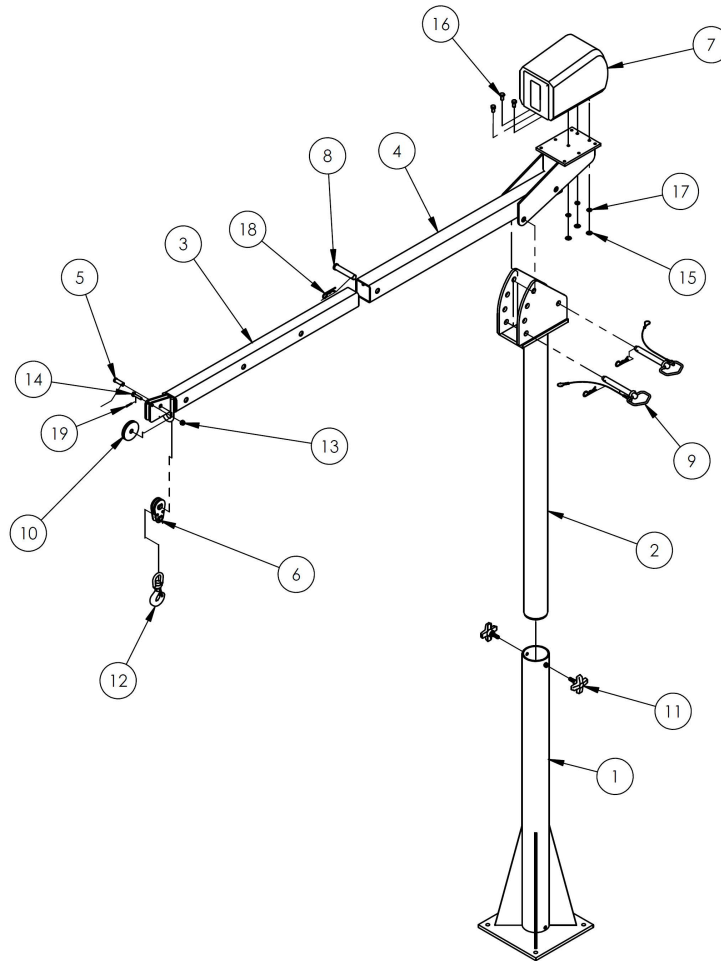
Overall height = 68¹³/₁₆"

Overall height in storage configuration = 70"

12VDC powered winch with hand pendant controller

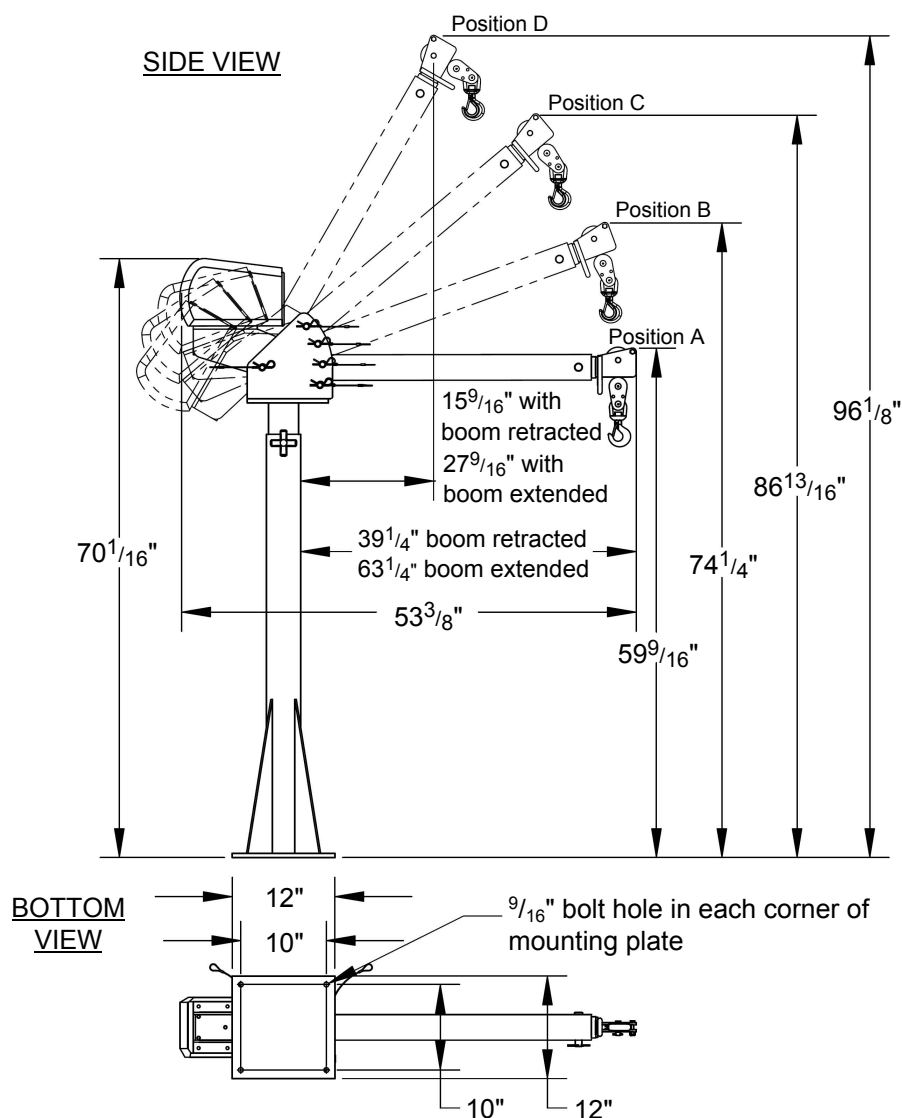
3/16" x 46' long cable and hook

WTJ-20-3-AC & WTJ-20-4-AC Exploded Parts View and Bill of Materials



Item no.	Part no.	Description	Quantity
1	28-514-091	Frame, weldment, outer mast	1
2	28-514-092	Frame, weldment, inner mast	1
3	28-514-100	<u>Weldment, inner boom:</u> WTJ-20-3-AC	1
	28-514-093	WTJ-20-4-AC	1
4	28-514-099	<u>Weldment, outer boom:</u> WTJ-20-3-AC	1
	28-514-094	WTJ-20-4-AC	1
5	28-112-042	$\frac{1}{2}$ in. x $1\frac{1}{2}$ in. clevis pin	1
6	08-025-007	Pulley, teardrop	1
7	28-158-001	120VAC winch	1
8	33-112-034	$\frac{3}{4}$ in. x $3\frac{3}{4}$ in. clevis pin	1
9	08-145-037	$\frac{13}{16}$ in. angle adjustment pin	2
10	99-027-003	$\frac{1}{4}$ in. cable pulley, 3in. outer diameter, $\frac{1}{2}$ in. inner diameter	1
11	08-025-007	$\frac{3}{8}$ in. - 16 UNC $1\frac{1}{4}$ in. threaded knob	2
12	08-145-037	Hook, clevis, 1-ton capacity	1
13	37021	$\frac{5}{16}$ in. - 18 nylon lock nut, zinc-plated #2	1
14	11059	$\frac{5}{16}$ in. - 18 UNC x $1\frac{1}{2}$ in. zinc-plated #2 bolt	1
15	33008	$\frac{3}{8}$ in. USS flat washer, zinc-plated	3
16	11103	$\frac{3}{8}$ in. - 16 UNC x $\frac{3}{4}$ in. HHCS #2 zinc-plated	3
17	33622	$\frac{3}{8}$ in. zinc-plated lock washer	3
18	45286	$\frac{1}{8}$ in. x $2\frac{5}{8}$ in. #11 hitch pin	3
19	65076	$\frac{1}{8}$ in. x 1in. z-plated cotter pin	1

WTJ-20-3-AC Capacity information and dimensions



Boom position	Boom fully retracted	Boom extended halfway	Boom fully extended
A	650 lb. (295.5kg)	400 lb. (181.8kg)	250 lb. (113.6kg)
B	1000 lb. (454.5kg)	770 lb. (350kg)	600 lb. (272.7kg)
C	1250 lb. (568.2kg)	950 lb. (431.8kg)	780 lb. (354.5kg)
D	2000 lb. (909.1kg)	1500 lb. (681.8kg)	1200 lb. (545.5kg)

Standard specifications:

Capacity = 2,000 pounds (909.1kg)

Overall width = 12"

Overall length in position A and boom retracted = $53\frac{3}{8}$ "

Usable length in position A and boom retracted = $39\frac{1}{4}$ "

Usable length in position A and boom fully extended = $63\frac{1}{4}$ "

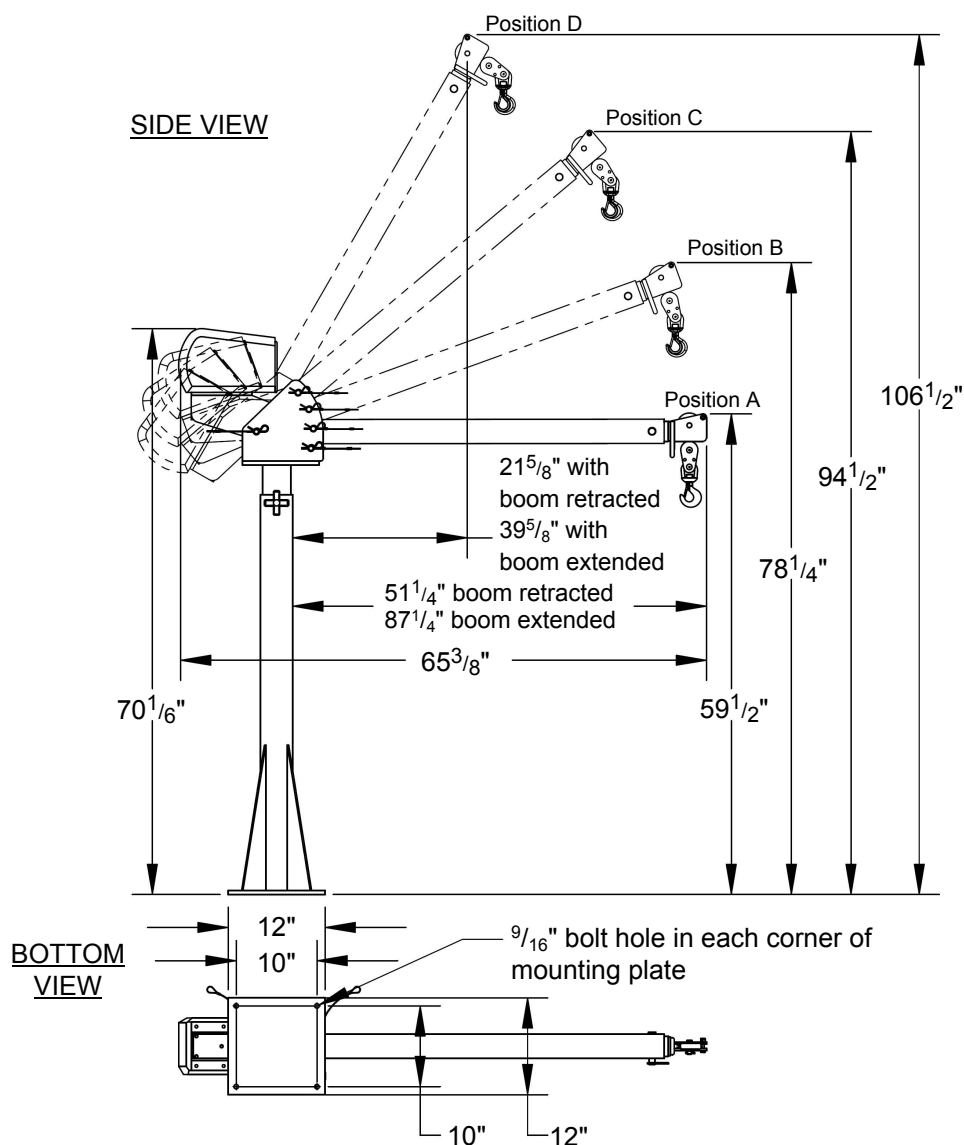
Overall height = $70\frac{1}{16}$ "

Overall height in storage configuration = 73"

115VAC powered winch with fingertip toggle switch

$\frac{7}{32}$ " x 25' long cable and hook

WTJ-20-4-AC Capacity information and dimensions



Boom position	Boom fully retracted	Boom in second position	Boom in third position	Boom fully extended
A	1100 lb. (500 kg)	800 lb. (363.6 kg)	600 lb. (272.7 kg)	250 lb. (113.6 kg)
B	1500 lb. (681.8 kg)	1200 lb. (545.5 kg)	1000 lb. (454.5 kg)	600 lb. (272.7 kg)
C	1850 lb. (840.9 kg)	1450 lb. (659.1 kg)	1250 lb. (568.2 kg)	780 lb. (354.5 kg)
D	2000 lb. (909.1 kg)	2000 lb. (909.1 kg)	1900 lb. (863.6 kg)	1200 lb. (545.5 kg)

Standard specifications:

Capacity = 2,000 pounds (909.1kg)

Overall width = 12"

Overall length in position A and boom retracted = 65³/₈"

Usable length in position A and boom retracted = 51¹/₄"

Usable length in position A and boom fully extended = 87¹/₄"

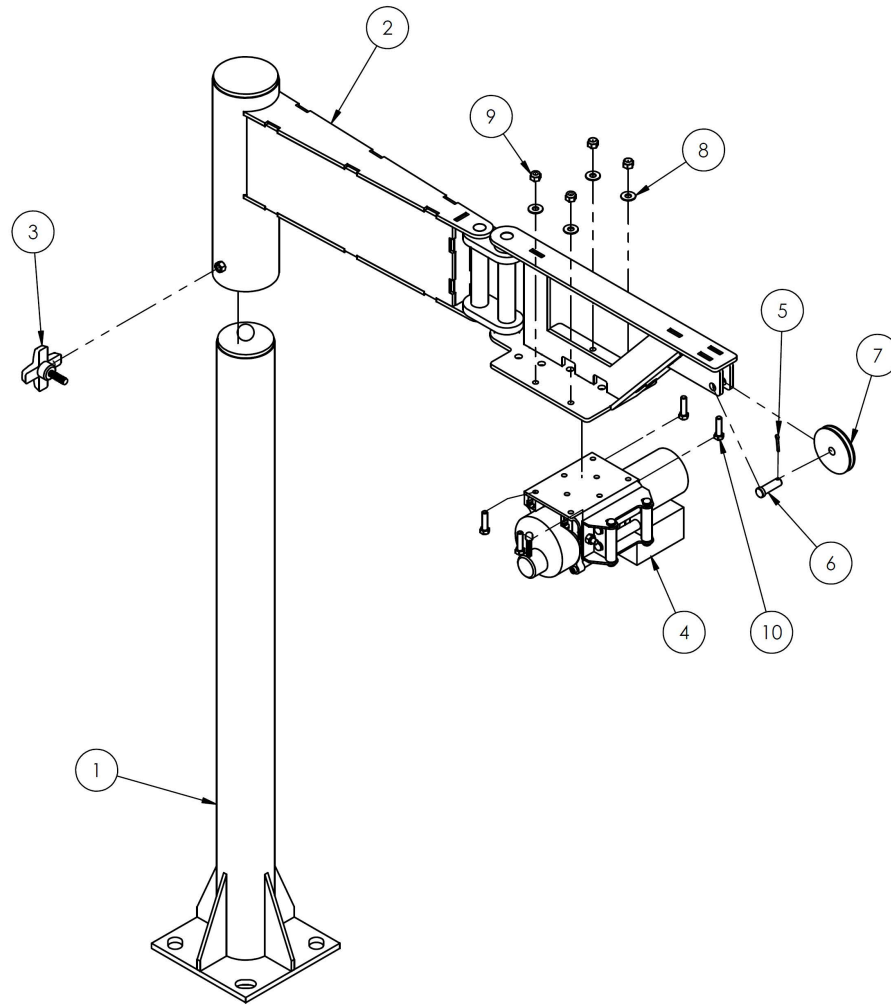
Overall height = 70¹/₁₆"

Overall height in storage configuration = 73"

115VAC powered winch with fingertip toggle switch

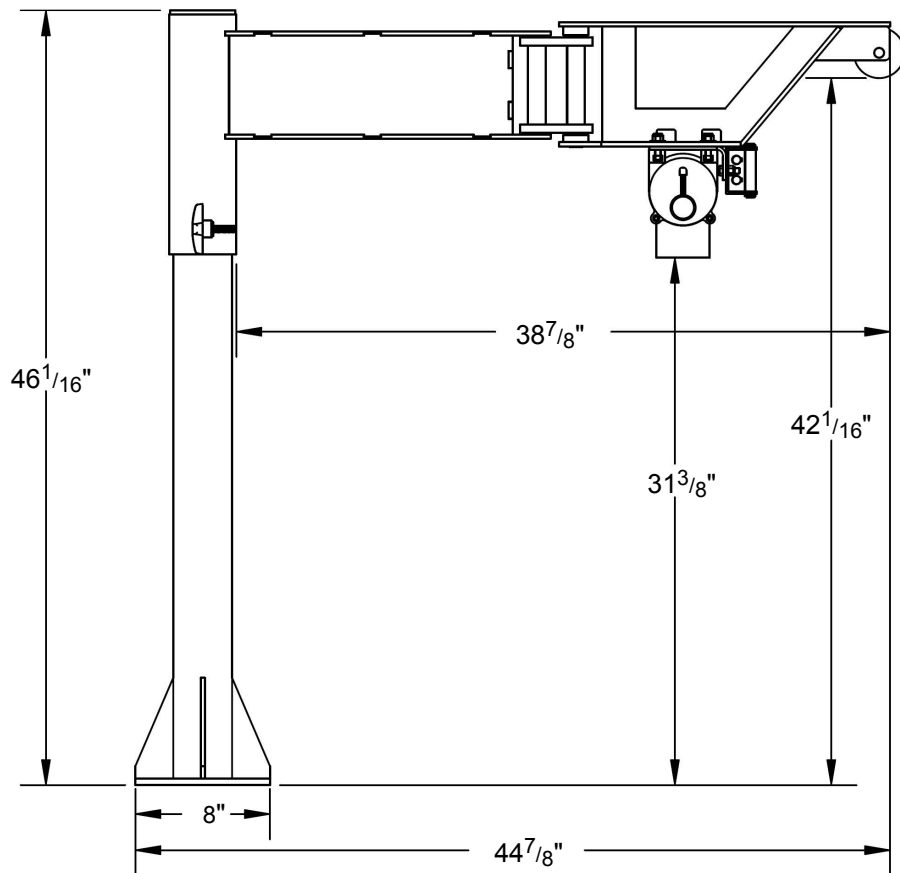
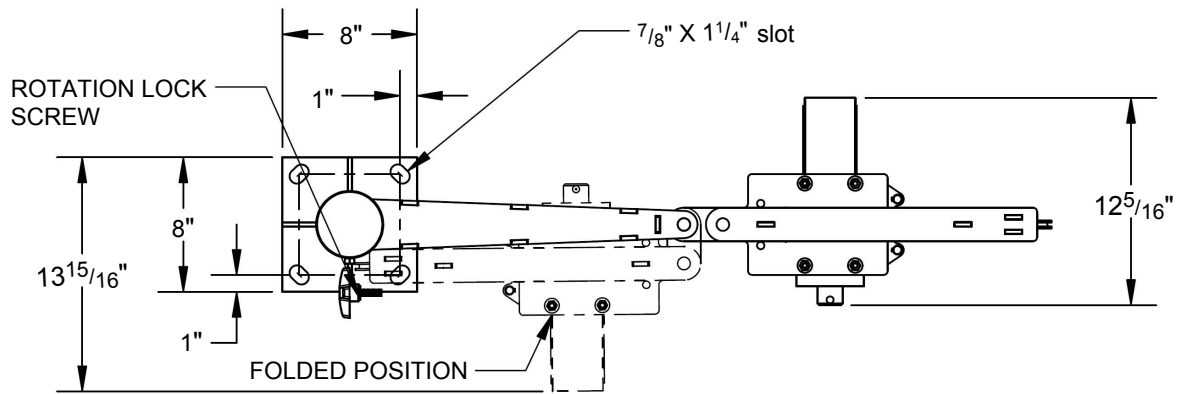
7/32" x 25' long cable and hook

VAN-J-DC Exploded Parts View and Bill of Materials



Item no.	Part no.	Description	Quantity
1	28-514-077	Frame, inner mast weldment	1
2	28-514-187	Fame, boom subassembly	1
3	08-025-007	TT-18-PED, $\frac{3}{8}$ in. – 16 UNC threaded knob	1
4	28-158-003	12VDC winch	1
5	65076	$\frac{1}{8}$ in. x 1in. cotter pin z-plated	1
6	28-112-042	$\frac{1}{2}$ in. x $1\frac{1}{2}$ in. retaining clevis pin	1
7	99-027-003	$\frac{1}{4}$ in. cable pulley, 3in. outer diameter, $\frac{1}{2}$ in. inner diameter	1
8	33006	$\frac{5}{16}$ in. USS flat washer z-plated	4
9	37021	$\frac{5}{16}$ in. – 18 nylon lock nut, z-plated #2	4
10	11057	$\frac{5}{16}$ in. – 18 x $1\frac{1}{4}$ in. HHCS #2 z-plated bolt	4

VAN-J-DC Capacity information and dimensions



Standard specifications:

Capacity = 400 pounds (181.8kg)

Overall width = 12⁵/₁₆"

Usable width = 12⁵/₁₆"

Overall length = 44⁷/₈"

Usable length = 33⁷/₈"

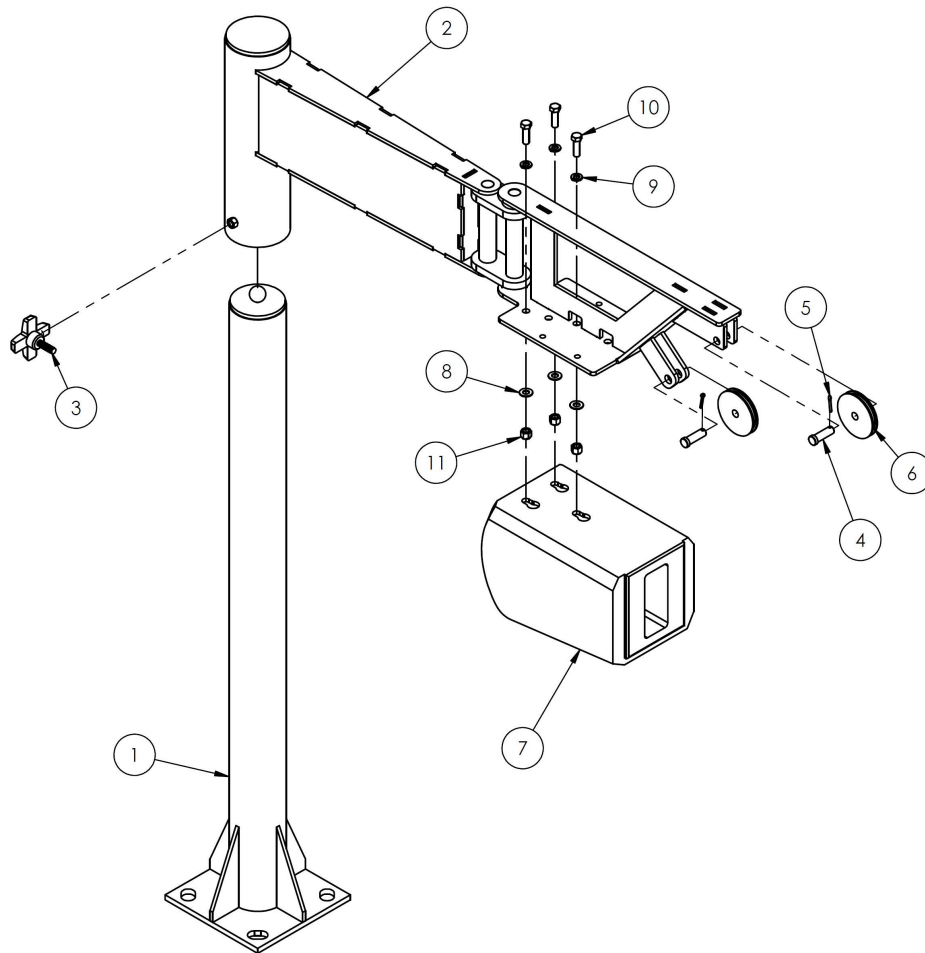
Overall height = 46¹/₁₆"

Usable height = 42¹/₁₆"

12VDC powered winch

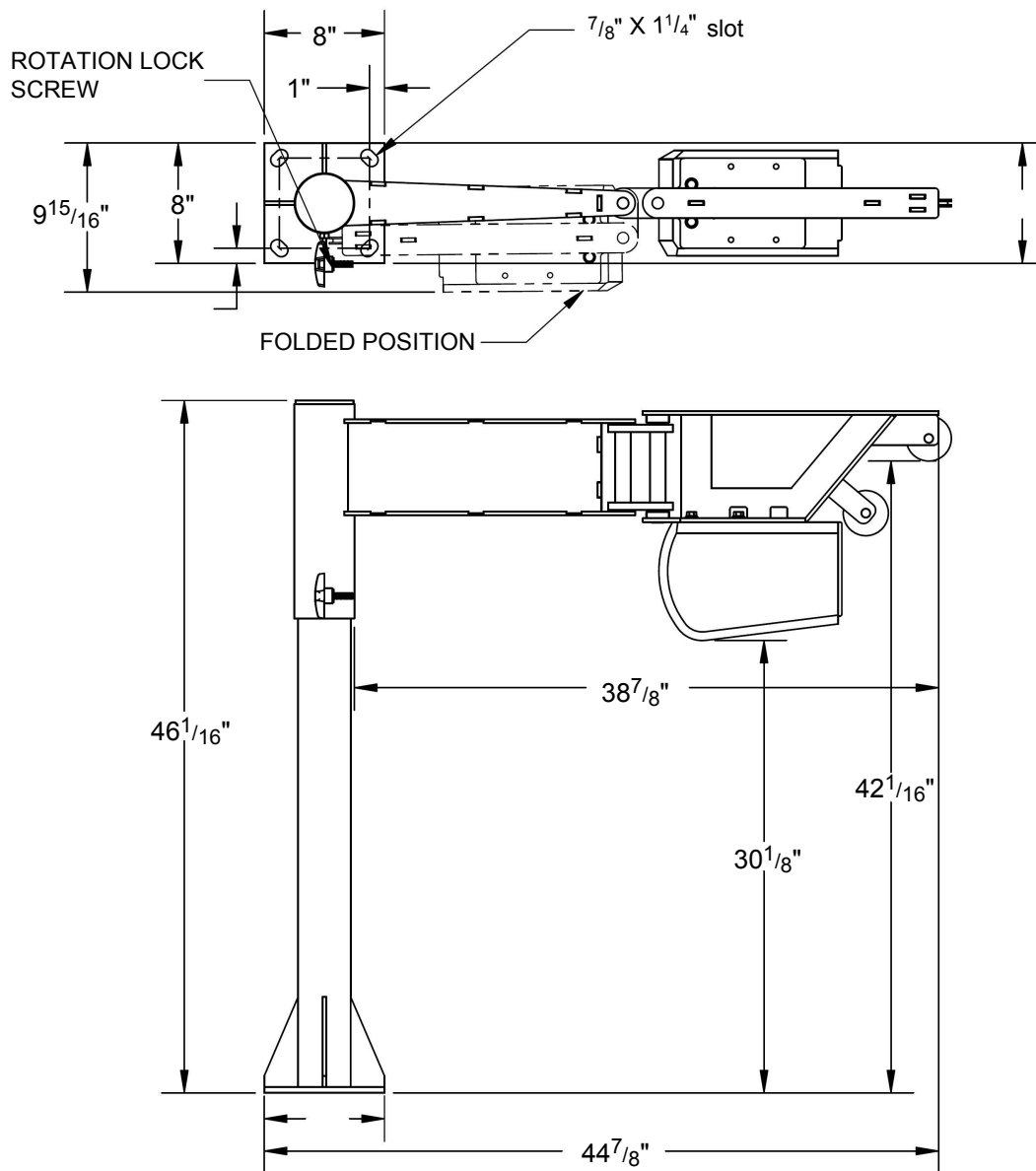
³/₁₆" x 46' long cable and hook

VAN-J-AC Exploded Parts View and Bill of Materials



Item no.	Part no.	Description	Quantity
1	28-514-077	Frame, inner mast weldment	1
2	28-514-225	Frame, beam subassembly	1
3	08-025-007	TT-18-PED, $\frac{3}{8}$ in. – 16 UNC threaded knob	1
4	28-112-042	$\frac{1}{2}$ in. x $1\frac{1}{2}$ in. retaining clevis pin	2
5	65076	$\frac{1}{8}$ in. x 1in. cotter pin z-plated	2
6	99-027-003	$\frac{1}{4}$ in. cable pulley, 3in. outer diameter, $\frac{1}{2}$ in. inner diameter	2
7	28-158-001	120VAC winch	1
8	33008	$\frac{3}{8}$ in. USS flat washer z-plated	3
9	33622	$\frac{3}{8}$ in. lock washer z-plated	3
10	11107	$\frac{3}{8}$ in. – 16 x $1\frac{1}{4}$ in. HHCS #2 z-plated bolt	3
11	37024	$\frac{3}{8}$ in. nylon insert lock nut	3

VAN-J-AC Capacity information and dimensions



Standard specifications:

Capacity = 400 pounds (181.8kg)

Overall width = 8"

Usable width = 8"

Overall length = 44 7/8"

Usable length = 33 7/8"

Overall height = 46 1/16"

Usable height = 42 1/16"

Rotates 360 degrees around base

Includes AC powered winch

7/32" x 25' long cable and hook

INSPECTIONS AND MAINTENANCE: Inspect and maintain the jib as described below to preserve normal operability. Remove the jib from service and DO NOT use the jib if it is damaged in any way that affects normal operation. If the unit cannot be restored to normal operating condition, discard it. The unit must be retested at 125% of its rated capacity after any repairs or modifications of either the lifting jib or its mounting

WARNING! ALWAYS unload the jib before inspecting or working on it.

(A) Frequently inspect the following:

- 1.) Winch and pulleys: cycle the winch down and up. confirm that the winch operates normally. Verify that the winch rotates normally in both directions and locks automatically when not rotating. The pulley should rotate freely as the cable extends and retracts and should not be loose or significantly worn.
- 2.) Winch cable: check for reeving, fraying, thinning, birdcaging, and elongating regions. If the cable is damaged, replace it.
- 3.) Winch power cord: examine the cord for damage and areas where the outer sheath has been damaged. Repair all damage before using the winch.
- 4.) Structural elements (inner and outer mast, inner and outer boom) and all fasteners: closely inspect the structure for damage, deformation, corrosion, cracked welds, pivot point wear (the boom does not rotate normally), or excessive wear. All structural members should be square, rigid, and free of rust and corrosion. remove rust with steel wool or a metal bristle brush and apply touch-up paint to the treated areas.
- 5.) Hook: visually inspect the load hook before each use. Also inspect the hook once per month and record the results of the inspection. Examine the hook for deformation or cracks. Immediately discard the hook if it is cracked or if the throat opening is more than 15 percent in excess of normal throat opening. Discard the hook if it is twisted more than 10° from the plane of the unbent hook. Confirm normal condition and operation of the safety latch.
- 6.) Vehicle: inspect the vehicle bed where the jib is mounted. Pay particular attention to the area around the mounting plate. Examine the area for rust and corrosion, signs of metal fatigue. The jib should not wobble.
- 7.) Labels: confirm that all labels are in good condition and in place as shown in the label placement diagrams on p. 10A-10C.

(B) Every six months, conduct a load test. Use the jib to lift a load weighing 125% of its rated capacity. After the test, examine the jib, winch, cable, and the region of the vehicle where the jib is mounted for evidence of deformation, cracking, fatigue, or other damage. If any damage is evident, remove the unit from service immediately. ONLY use the jib again after it is restored to normal operating condition.

TROUBLESHOOTING GUIDE:

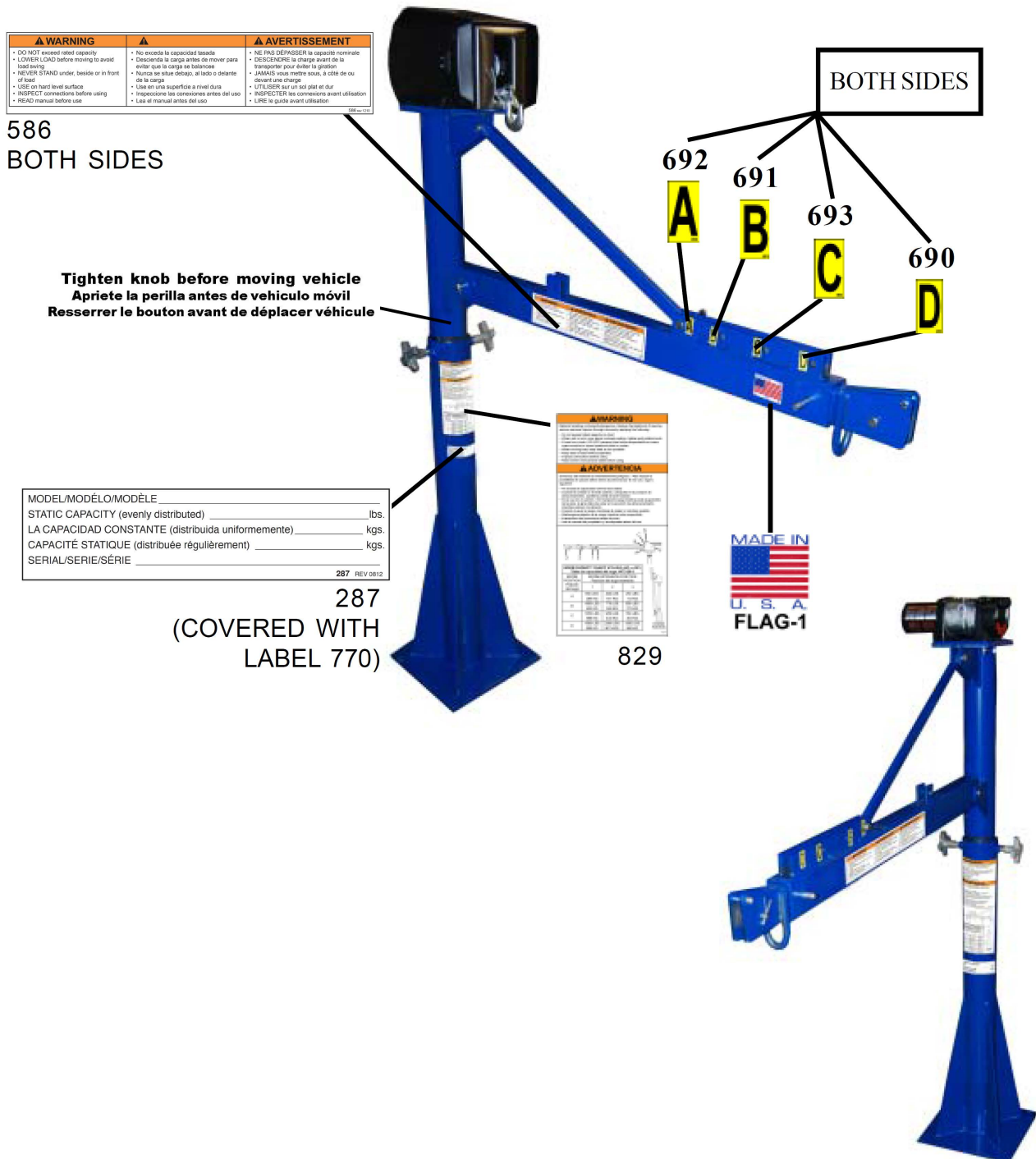
Always completely unload the jib and disconnect the power supply before troubleshooting an issue.

Contact the factory for answers to problems not addressed below.

<u>Problem:</u>	<u>Possible cause(s):</u>	<u>Solution:</u>
Winch doesn't run when button is pushed.	No supply voltage.	Test with meter. Check for any open protective devices. If circuit protection has opened, test all parts of circuit with a multimeter to determine the cause. Verify that the power supply cord and/or control cord is connected.
	Bad connection in control circuit.	Test with a multimeter.
	Battery needs to be charged (DC units)	Test with volt meter. Charge battery if low. (12.65V full charge)
Jumpy load cable operation.	Poor spooling of the cable on the winch reel.	Spool out and inspect the cable for kinks, etc. Replace if bad. Respool the cable cleanly onto the winch reel.
	Kink in the cable.	
Winch motor hums but does not turn.	Overload condition.	Reduce the load. Verify that the cable is not binding.
	Supply voltage low.	Check with meter. Charge battery (DC) or supply with a large extension cord (AC).
Upper mast does not want to rotate.	Threaded knob(s) tightened.	Loosen the bolt.
	Bearing disk under inner mast section is excessively worn.	Separate inner & outer mast and inspect. Replace if necessary.
Personnel receive an electrical shock when touching the jib or the vehicle when the winch is operated.	Operating the winch in wet conditions.	Allow the winch to dry completely before use.
	Winch wiring problem.	Have the winch circuit checked by an electrician, including the grounding circuit

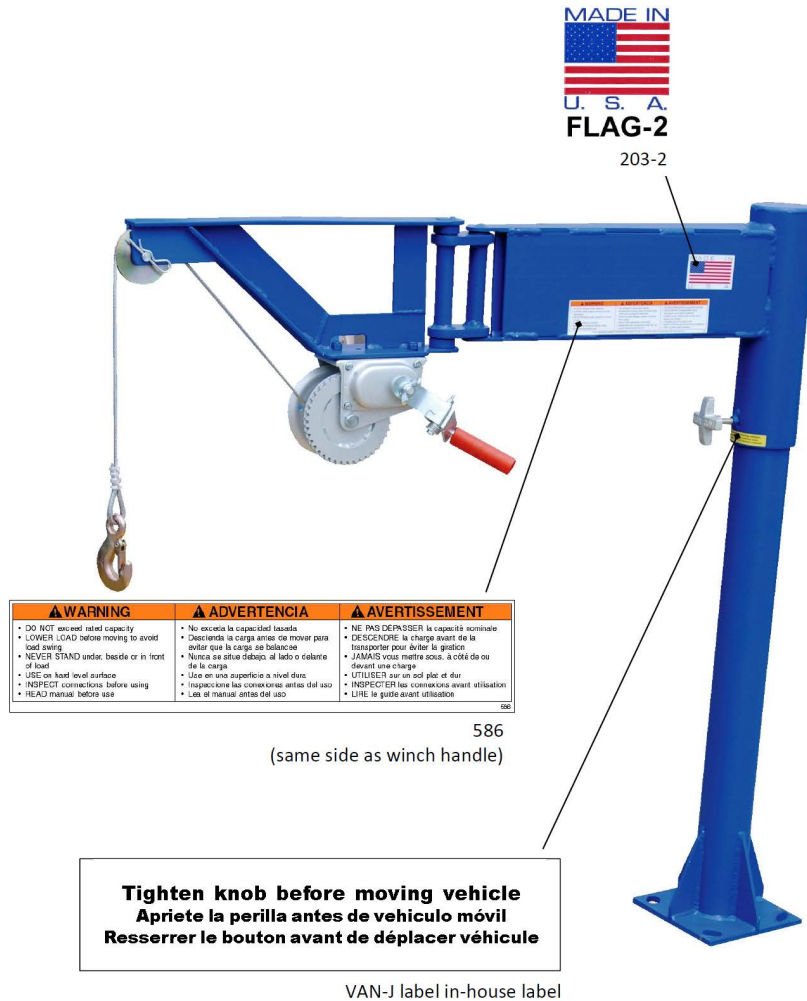
Label placement diagram: WTJ-E series jib cranes

WTJ-E series cranes should be labeled as shown below. Contact Vestil to order replacement labels when necessary.



Label placement diagram: VAN-J series jib cranes

VAN-J series cranes should be labeled as shown below. Contact Vestil to order replacement labels when necessary.



LIMITED WARRANTY:

Vestil Manufacturing Company ("Vestil") warrants this product to be free of defects in material and workmanship during the warranty period. Our warranty obligation is to provide a replacement for a defective original part if the part is covered by the warranty, after we receive a proper request from the warrantee (you) for warranty service.

Who may request service?

Only a warrantee may request service. You are a warrantee if you purchased the product from Vestil or from an authorized distributor AND Vestil has been fully paid.

What is an "original part"?

An original part is a part used to make the product as shipped to the warrantee.

What is a "proper request"?

A request for warranty service is proper if Vestil receives: 1) a photocopy of the Customer Invoice that displays the shipping date; AND 2) a written request for warranty service including your name and phone number. Send requests by any of the following methods:

Mail
Vestil Manufacturing Corporation
2999 North Wayne Street, PO Box 507
Angola, IN 46703

Fax
(260) 665-1339
Phone
(260) 665-7586

Email
sales@vestil.com

In the written request, list the parts believed to be defective and include the address where replacements should be delivered.

What is covered under the warranty?

After Vestil receives your request for warranty service, an authorized representative will contact you to determine whether your claim is covered by the warranty. Before providing warranty service, Vestil may require you to send the entire product, or just the defective part or parts, to its facility in Angola, IN. The warranty covers defects in the following original dynamic components: motors, hydraulic pumps, electronic controllers, switches and cylinders. It also covers defects in original parts that wear under normal usage conditions ("wearing parts"), such as bearings, hoses, wheels, seals, brushes, and batteries.

How long is the warranty period?

The warranty period for original components is 90 days. The warranty period begins on the date when Vestil ships the product to the warrantee. If the product was purchased from an authorized distributor, the period begins when the distributor ships the product. Vestil may extend the warranty period for products shipped from authorized distributors by up to 30 days to account for shipping time.

If a defective part is covered by the warranty, what will Vestil do to correct the problem?

Vestil will provide an appropriate replacement for any covered part. An authorized representative of Vestil will contact you to discuss your claim.

What is not covered by the warranty?

1. Labor;
2. Freight;
3. Occurrence of any of the following, which automatically voids the warranty:
 - Product misuse;
 - Negligent operation or repair;
 - Corrosion or use in corrosive conditions;
 - Inadequate or improper maintenance;
 - Damage sustained during shipping;
 - Accidents involving the product;
 - Unauthorized modifications: DO NOT modify the product IN ANY WAY without first receiving written authorization from Vestil. Modification(s) might make the product unsafe to use or might cause excessive and/or abnormal wear.

Do any other warranties apply to the product?

Vestil Manufacturing Corp. makes no other express warranties. All implied warranties are disclaimed to the extent allowed by law. Any implied warranty not disclaimed is limited in scope to the terms of this Limited Warranty.

