



**CT310KX**

**MEABAB-\*\***  
**INSTALLATION & OWNER'S MANUAL**



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VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
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**CT310KX w/ ADJ. ROT.**

DATE  
**03-05-19D**

SUPERSEDES  
**04-05-18C**

SECTION  
**-**

**27399**



# **SECTION 100**

## **DESCRIPTION**

### **&**

## **SPECIFICATIONS**

# CT310KX DESCRIPTION & SPECIFICATIONS

## INTRODUCTION

This manual is prepared for the truck-mounted crane Model series CT310KX.

▲

The CT310KX crane series are electric / hydraulic powered, limited or Continuous Rotation units manufactured by Venco Venturo Industries LLC of Cincinnati, Ohio.

The boom on this crane extends 32 inches hydraulically with an additional 32 inch manual extension. In the retracted position, the boom is 4 ½ feet long. When fully extended, the boom is 9 ½ feet long.

## ABOUT THIS MANUAL

The sections included in this manual are:

### Descriptions & Specifications

The introduction section provides an overview of the use of the crane.

### Safety

Safe operating and maintenance procedures are introduced in this section. Also included is an explanation of the safety warnings and signs used on the crane.

### Installation Instructions

The installation section provides instructions for installing the crane on your truck.

### Maintenance & Service

Preventive maintenance inspections and crane lubrication schedules are listed in this section. Replacement and adjustment procedures are provided.

### Replacement Parts

Replacement part numbers and ordering procedures are provided in this section.

## LIMITS OF USE

The CT310KX crane is designed to lift loads up to the limits as shown on the capacity chart (DWG. 23054).

- Lifting of personnel is **NEVER** permitted.
- Lifting loads exceeding the capacity chart (DWG. 23054) voids the warranty agreement.

## NOTES



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE

INTRODUCTION & LIMITS

CT310KX

DATE

02-06-18C

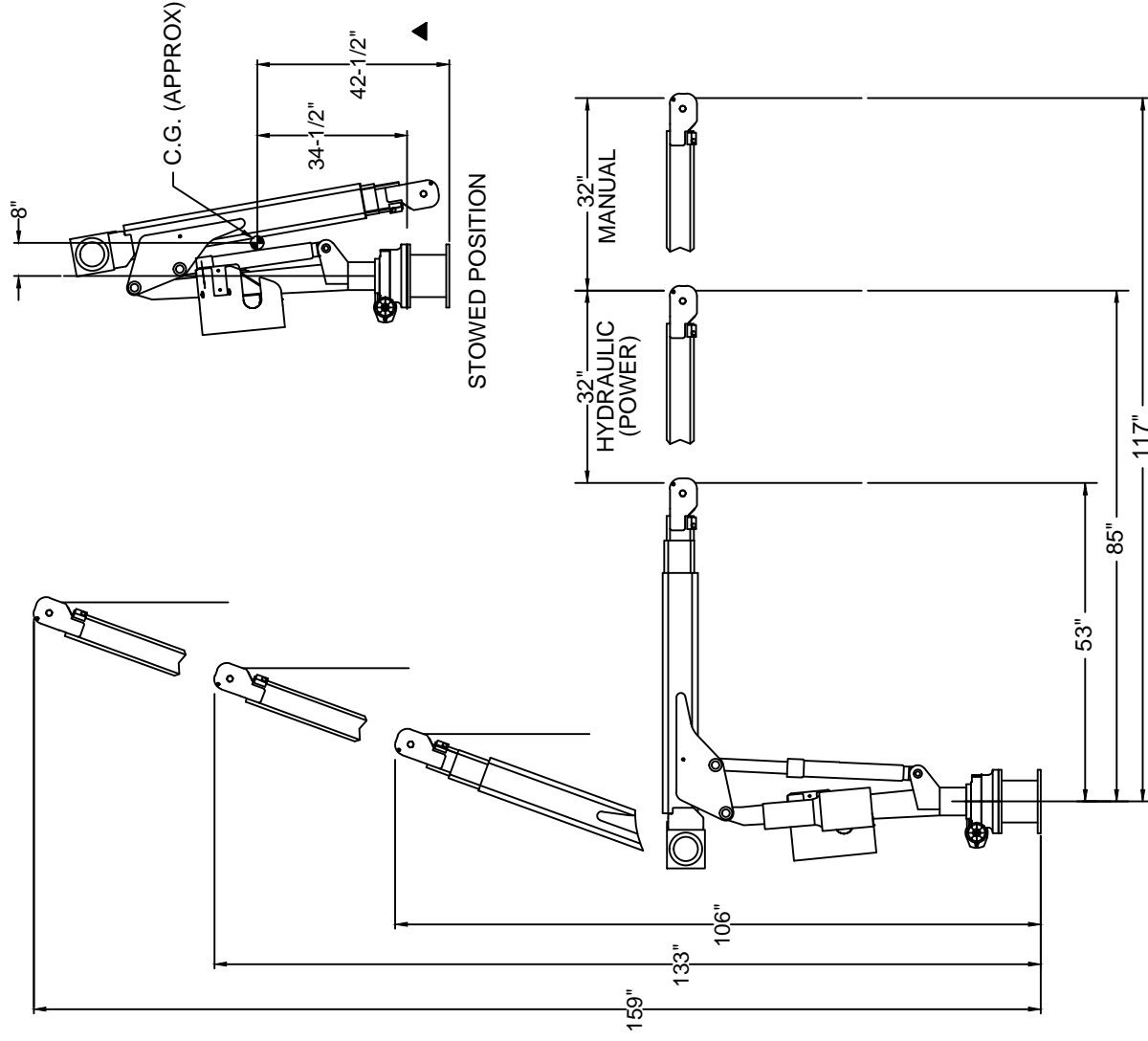
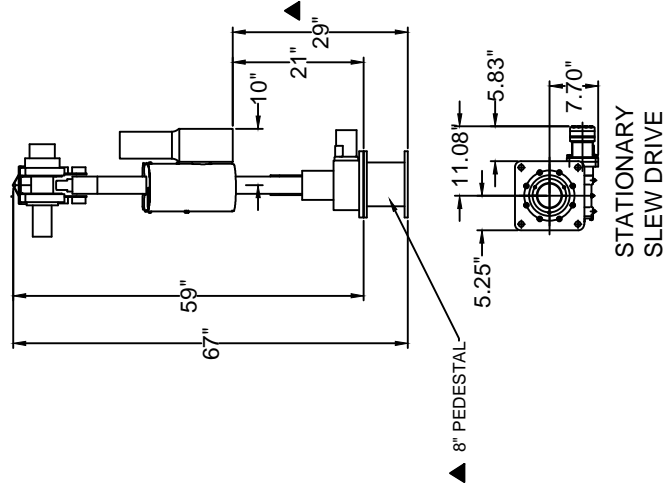
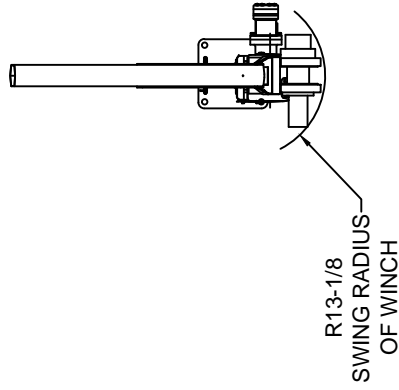
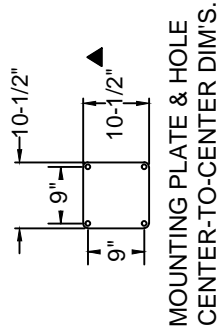
SUPERSEDES

10-24-13B

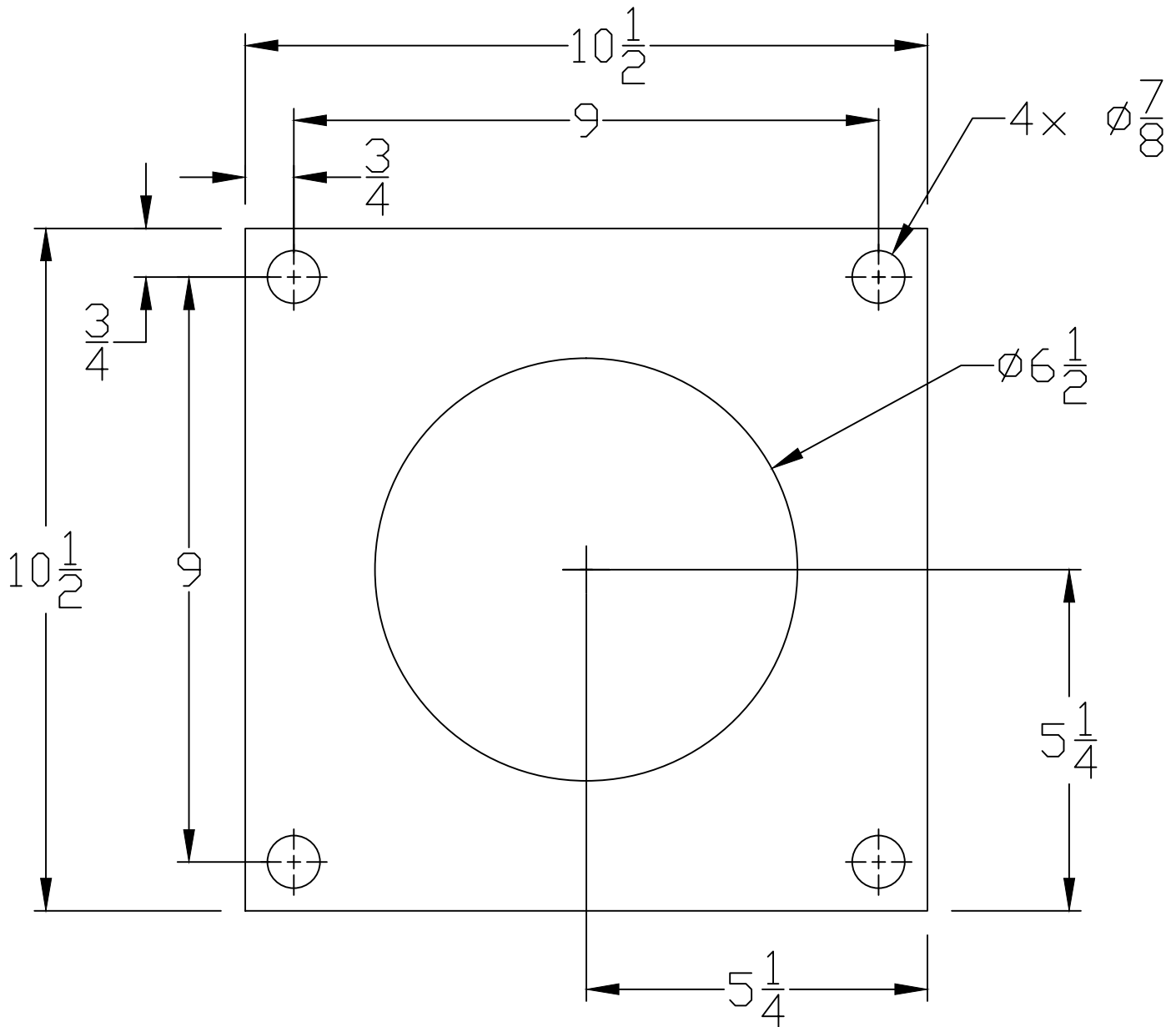
SECTION

C100

20553



REFERENCE INSTALLATION DWG 20563 FOR  
MOUNTING BOLT SIZE AND TORQUE SPECIFICATIONS.



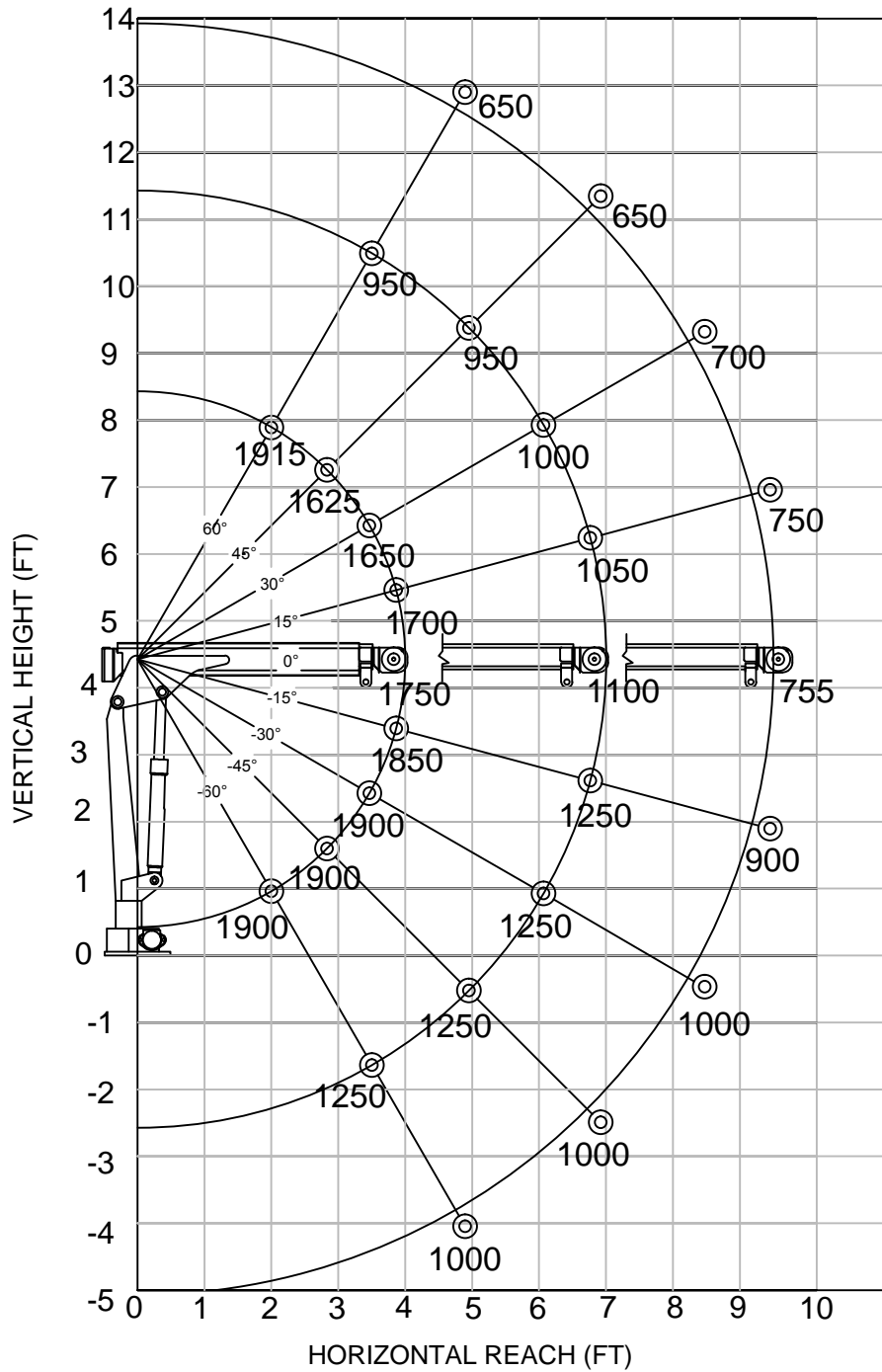
**20714**



CT310KX

▲ CRANE SERIAL NUMBER: \_\_\_\_\_

## MAXIMUM LOAD CAPACITY CHART



WEIGHT OF LOAD HANDLING DEVICES ARE PART OF THE LOAD AND MUST BE DEDUCTED FROM THE GROSS CAPACITY.

### LOAD BLOCK USAGE

- 1 PART LINE FOR LOADS LESS THAN 1000 LBS
- 2 PART LINE FOR LOADS OF 1000 LBS AND GREATER

WEIGHT OF LOAD BLOCK = 5 LBS



VENCO VENTURO INDUSTRIES LLC  
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TITLE  
MAXIMUM LOAD CAPACITY  
VENTURO CT310KX

DATE  
05-03-16A  
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10-29-13

SECTION  
C100  
23054

# CT310KX DESCRIPTIONS & SPECIFICATIONS

## CONTROL PENDANT

The control pendant is attached to the crane assembly with a 20 foot cord assembly. This plug-in cord allows for operation in all points of the crane's reach. The cord is to be removed and stored when the crane is not in use.

## Cane Operation Controls - Toggle Switches

These switches are spring loaded to the center position (or the OFF position). By pressing the switch to the desired direction, the operation will be activated. When the switch is released, it will return to the center (OFF) position and the operation will stop.

### WINCH (Up / Down)

This switch controls the up and down movement of the winch.

### BOOM (Up / Down)

This switch controls the up and down position of the boom.

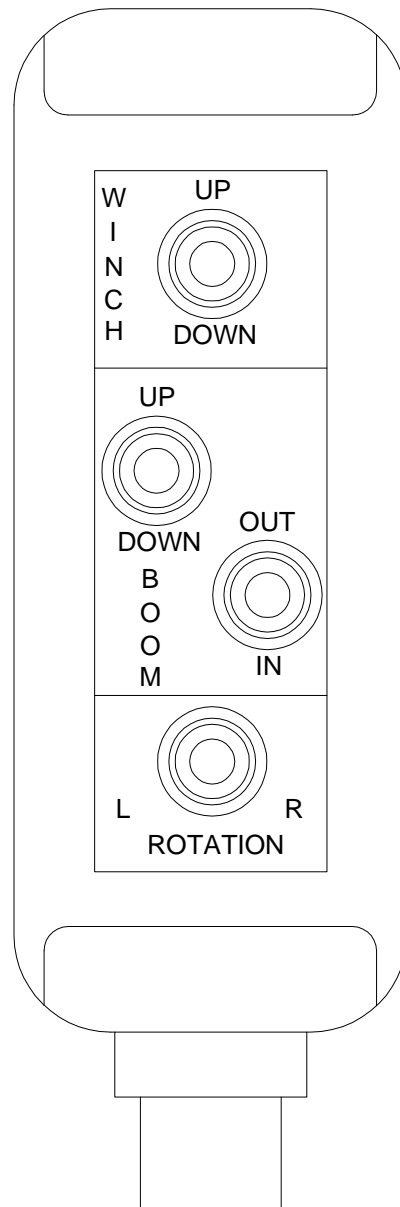
### BOOM (Out / In)

This switch controls the extension (length) of the boom.

The manual extension allows the boom to extend to its full length. To use, pull the pin from the boom, extend pull the manual extension out to its intermediate or full length. Then insert pin through the hole in the boom.

### ROTATION (Left / Right)

This switch controls the left and right rotation of the crane.



## AUTOMATIC CONTROL SYSTEMS

### Overload Sensing System

If the capacity of the crane is exceeded, the overload system will sound an alarm. Do not exceed the load capacity. When alarm is activated, reduce the load before continuing.



## WARNING

- Always follow the load chart when lifting heavy loads
- Failure to follow the load chart could result in death or serious injury.



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TITLE

PNDNT & OVRLD SNSNG

CT310KX

DATE

08-12-13A

SUPERSEDES

11-04-02

SECTION

C100

20568

# CT310KX DESCRIPTION & SPECIFICATIONS



## TRUCK SETUP FOR OPERATION

1. The truck should be parked on **firm, level ground** when using the crane.
2. The crane should be positioned close to the job so that it can operate within its capacity limits.
3. Set the truck parking brake.
4. Put the truck's transmission in Neutral (Park if it has an automatic transmission).
5. Remove the pendant from its stowed location and plug it into its socket.
6. Turn on the master disconnect switch.
7. Set the stabilizers (when provided) to help stabilize the truck to prevent rocking or overturning of the truck when using the crane.

## USING THE SWIVEL LOAD BLOCK

The swivel load block must be used for loads 1000 pounds and greater. It may be used for all loads to prevent twisting and turning of the load.

## PREPARATION FOR TRAVEL

1. Return the stabilizers (if used) to the stowed position. Install and secure all pins.
2. Run the BOOM IN to fully retract the boom.
3. Manually retract the boom's manual extension (if used).
  - 3.1. Pull the pin from the boom and push the extension into the fully retracted position.
  - 3.2. Insert the pin in the hole in the boom.
4.  Run the BOOM DOWN to lower the boom to the stowed position.
5.  Unplug the pendant control cord and stow in a body compartment or the truck cab.
6. Turn off the master disconnect switch.

## NOTES



MANUFACTURING, INC.  
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TITLE

SETUP & TRAVEL PREP

CT310KX

DATE

3-4-14C

SUPERSEDES

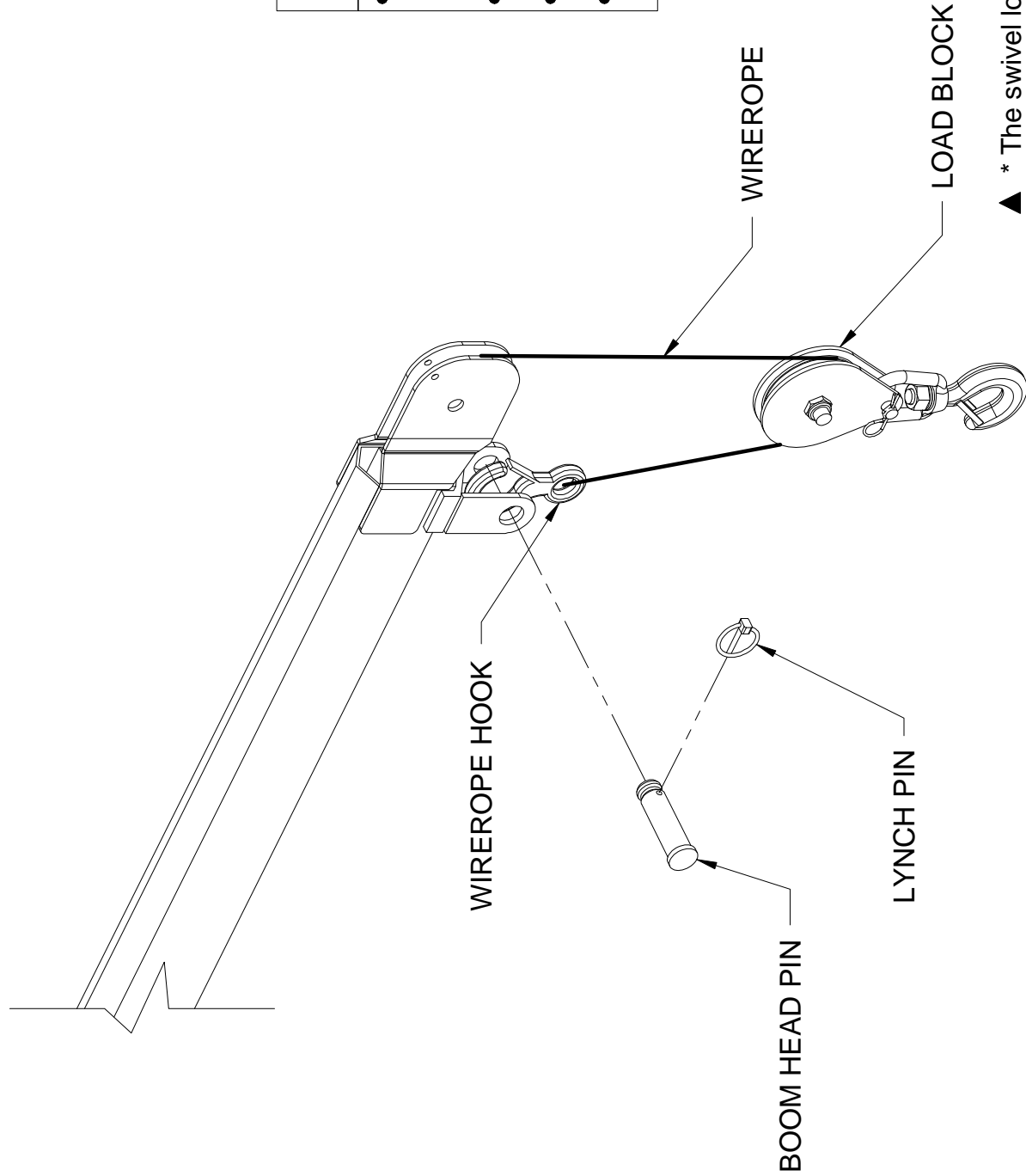
10-24-13B

SECTION

C100

20569

# TWO-PART LINE CONFIGURATION (USING LOAD BLOCK)



## TO ENABLE TWO-PART LINE CONFIGURATION

- REMOVE LYNCH PIN FROM BOOM HEAD PIN AND REMOVE BOOM HEAD PIN FROM BOOM
- ALIGN WIRE ROPE HOOK AS SHOWN
- REINSERT BOOM HEAD PIN AND LYNCH PIN
- INSTALL LOAD BLOCK ON WIRE ROPE

▲ \* The swivel load block must be used for loads 1000 pounds and greater.



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TITLE

TWO-PART LINE CONFIGURATION

DATE

10-24-13B

SECTION

C100

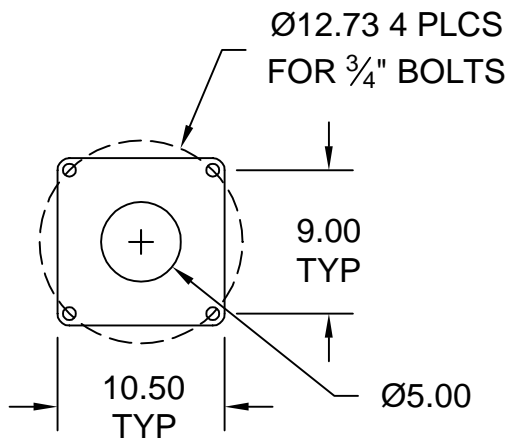
CT310KX

SUPERSEDES

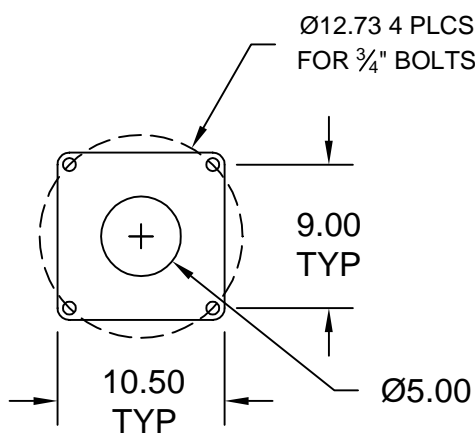
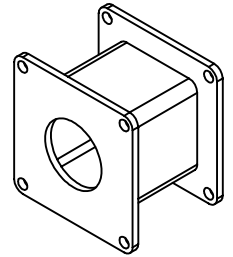
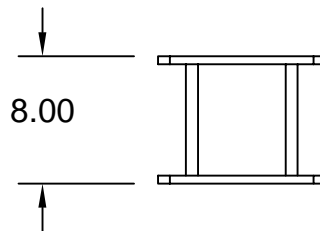
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20729

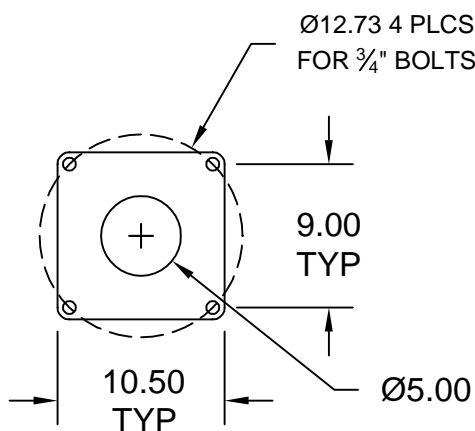
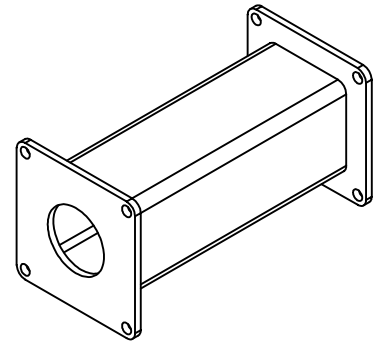
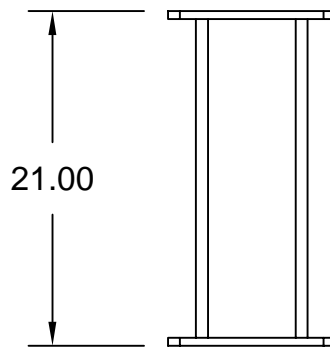
# 20480-XX MOUNTING PEDESTAL



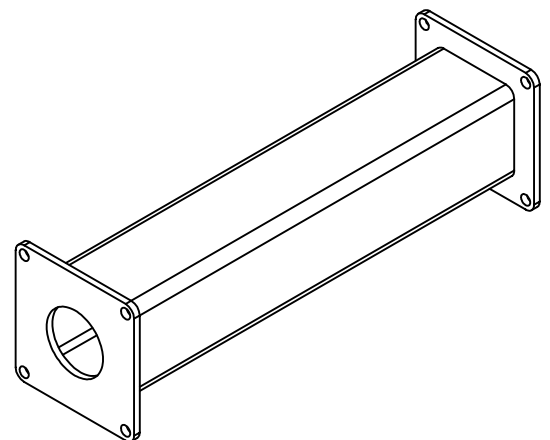
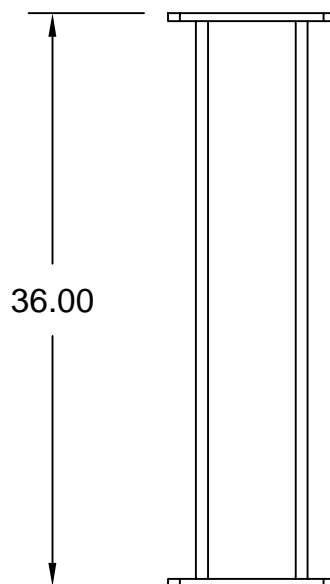
20480 (NO DASH)



20480-21



20480-36



PEDESTAL SOLD AS AN OPTION (NOT INCLUDED WITH CRANE)



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
**MOUNTING PEDESTAL**  
ET6K / CT310KX

DATE  
11-18-14  
SUPERSEDES  
-

SECTION  
C100  
**26002**



# **SECTION 150**

## **SAFETY**

# CT310KX SAFETY - GENERAL

## SAFETY - GENERAL

With the proper installation, cranes can be operated and maintained safely. By using common safety practices along with an awareness of potential hazards, the job can be done safely.

Each time a crane is used, there may be a new and different environment. Each time, there is a need to look at these situations for potential hazards. Where you park your truck is important for the work to be done, and done safely. Asking others to stop or move their activity away from your truck may be best. And, of course, there is the need to look for overhead power lines and other obstacles to avoid during the operation of the crane. Sometimes, the load itself can present a hazard; for example, loads may be damaged or broken, the load may contain hazardous material, or the load may come close to exceeding the maximum capacity of the crane.

Safety awareness is a continuing job. Below is a list of general points for safe crane operation. Read these points and add your own points. There may be unique safety needs for the use of your crane and the product or service you provide.

## CRANE SAFETY

- Always turn off the truck ignition and master disconnect switch before performing any maintenance or repairs to the crane equipment.
- Never walk or stand under the boom or a suspended load.
- Never operate the crane with a frayed cable (wire rope).
- Never allow the crane to be used to lift, support, or otherwise transport personnel.
- Training by a knowledgeable crane operator is required before operating the crane.
- Read and understand this manual before operating the crane.
- Always warn others to stand clear of your operating area.
- Always inspect the crane each day before use for safe operating condition.
- Always refer to the load capacity chart before using crane.
- Always attach pendant cord support snap to the attachment point before plugging in the pendant.
- Always unplug the pendant when the crane is not in use.
- Always turn off the master disconnect switch when the crane is not in use.
- Always place the crane in the stowed position before traveling.

## NOTES



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
**GENERAL SAFETY**  
**CT310KX**

DATE  
**08-12-13A**  
SUPERSEDES  
**11-04-02**

SECTION  
**C150**  
**20556**



# CT310KX SAFETY - GENERAL

## ELECTROCUTION HAZARD

Cranes are capable of contacting overhead obstructions. Power lines create a special hazard. In addition to direct contact, just getting close to these lines is a hazard. The higher the voltage carried by those lines, the higher the danger. This hazard has its own set of special safety rules.

### CRANE SAFETY NEAR POWER LINES

- Always remember, the truck and crane **are not** insulated!
- Always maintain a safe distance from power lines. Crane must remain at least 20' away from power lines at full extension including load and load line. Increased distance may be required due to boom deflection or windy conditions.
  - If you encroach closer than 20', voltage must be known; then follow the tables below.
  - **NEVER** make a lift under any power line.
- Failure to follow these rules can result in death or serious injury!

## NOTES

### TABLE A - MINIMUM CLEARANCE DISTANCES

Voltage (Nominal,kV, alternating current)	Minimum Clearance Distance (Feet)*
0 - 50	10
Over 50 - 200	15
Over 200 - 350	20
Over 350 - 500	25
Over 500 - 750	35
Over 750 - 1000	40
Over 1000	†

\* Environmental conditions such as fog, smoke, or precipitation may require increased clearances.

† As established by the utility owner / operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution.

### TABLE T - MINIMUM CLEARANCE DISTANCES IN TRANSIT

Voltage (Nominal,kV, alternating current)	While Traveling - Minimum Clearance Distance (Feet)*
0 - 0.75	4
Over 0.75 - 50	6
Over 50 - 345	10
Over 345 - 750	16
Over 750 - 1000	20
Over 1000	†



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TITLE

HZRDS & CLEARANCES

CT310KX

DATE

08-12-13A

SUPERSEDES

11-04-02

SECTION

C150

20557

# CT310KX SAFETY - GENERAL

## SAFETY WARNINGS

Safety warnings have been included in this manual to alert you to the need for care in specific procedures. These warnings include the use of three [3] terms; DANGER, WARNING, and CAUTION. Their uses are defined as follows:



### DANGER

- Always used to warn of hazards that could result in death or serious injury.

Any DANGER indicates that failure to follow this safe practice could result in death or serious injury.



### WARNING

- Always used to warn of hazards that could result in injury.

Any WARNING indicates that failure to follow this safe practice could result in injury.



### CAUTION

- Always used to warn of hazards that could result in equipment damage or serious injury.

Any CAUTION indicates that failure to follow this instruction could result in minor injury or damage to the equipment.

## NOTES



MANUFACTURING, INC.  
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TITLE

WARNING EXPLANATION

CT310KX

DATE

08-12-13A

SUPERSEDES

11-04-02

SECTION

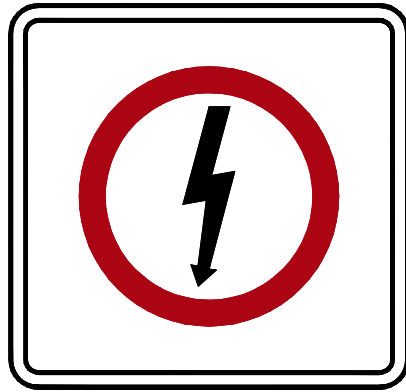
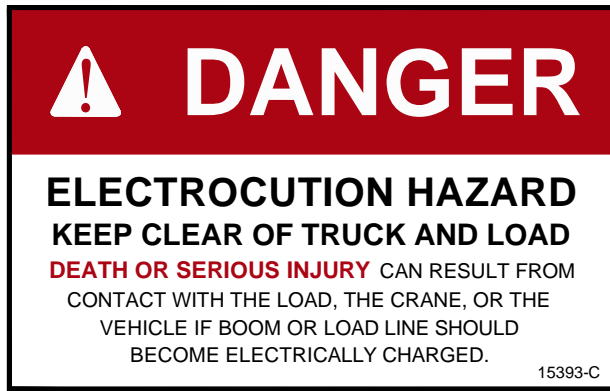
C150

20558

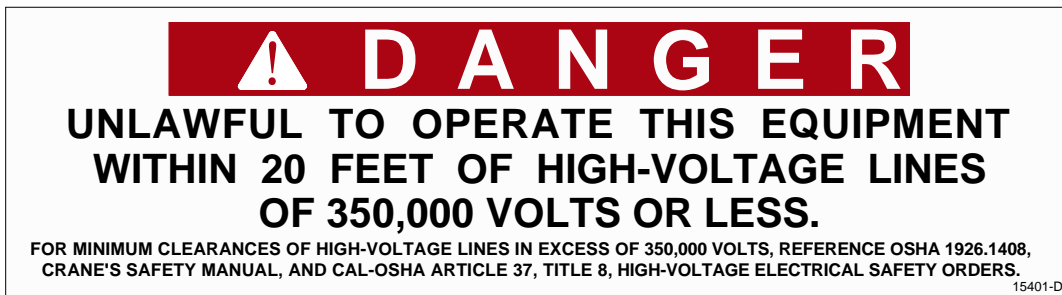
# CT310KX SAFETY - GENERAL

## ELECTROCUTION HAZARD SIGNS

Two [2] decals are provided with the crane:



This sign is to be placed on all four (4) sides of the truck. Each is to be placed in a readily visible location for all to see. This sign is provided with the crane. Additional signs are available from Venco Venturo Industries LLC. The sign part number is 15393. ▲



This sign is a reminder of the legal responsibility of any person operating the crane near high voltage lines. The sign is placed on the control pendant side of the crane. This sign is provided with the crane. Additional signs are available from Venco Venturo Industries LLC. The sign part number is 15401. ▲

Decals and signs have been placed on the crane as reminders of the care and precautions needed for safety. These items are to be inspected periodically for readability and need for replacement. The preventive maintenance information includes an inspection of these decals and signs (Reference DWG 20571). Any unreadable or missing decal or sign must ▲ be replaced. See Illustrated Parts List for ordering information.

## NOTES



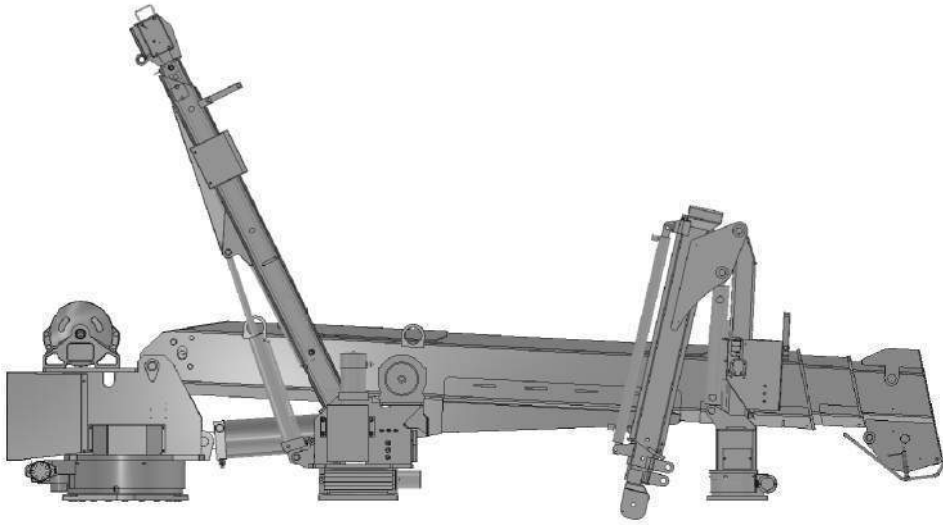
MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
ELECT. HAZARD SIGNS  
CT310KX

DATE  
10-24-13B  
SUPERSEDES  
08-12-13A

SECTION  
C150  
20559

# CT310KX SAFETY - GENERAL



SEE THE NEXT  
PAGE FOR  
ADDITIONAL  
INFORMATION!

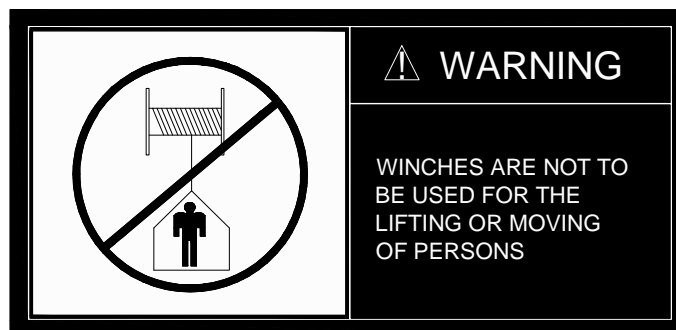
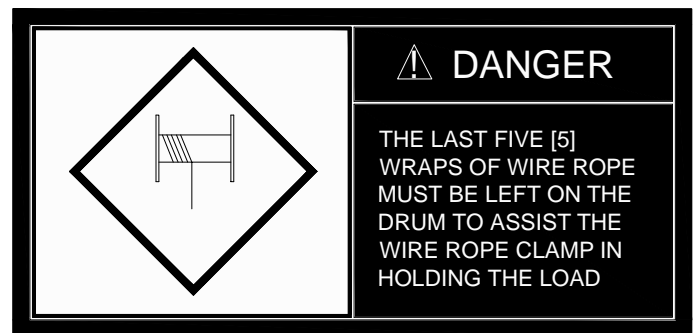
## SAFETY SIGNS & DECALS

All cranes are equipped with warning and informational signs and decals. Each sign and decal is positioned to provide reminders for safe efficient operating and maintenance procedures for the crane. Below is a description of the winch safety warnings.

Unreadable or missing signs and decals must be replaced. The next page describes the location and part number for each. Refer to the Illustrated Parts Catalog section for parts ordering information.

## WINCH SAFETY

The use of the crane involves careful use of its winch. Below are three [3] danger reminders of very important rules.



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE
SAFETY SIGNS & DECALS
CT310KX

DATE
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SUPERSEDES
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SECTION
C150
20560

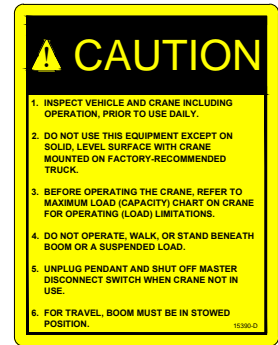
DECAL #: 15390

DESCRIPTION: CAUTION, INSPECT VEHICLE & CRANE...

PURPOSE: TO INFORM THE OPERATOR OF KEY OPERATING REQUIREMENTS.

QUANTITY: 1

PLACEMENT: REAR COVER OR SIDE OF CRANE



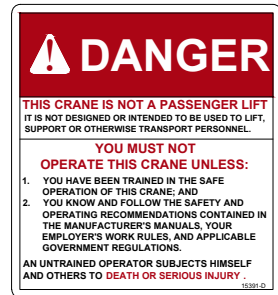
DECAL #: 15391

DESCRIPTION: DANGER, NOT A PASSENGER LIFT

PURPOSE: TO INFORM OPERATOR NOT TO LIFT, SUPPORT, OR TRANSPORT PERSONNEL, AND TO ENSURE OPERATOR IS ADEQUATELY TRAINED.

QUANTITY: 1

PLACEMENT: REAR COVER OR SIDE OF CRANE



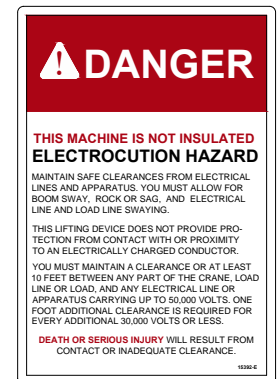
DECAL #: 15392

DESCRIPTION: DANGER, ELECTROCUTION HAZARD, MACHINE (CRANE)

PURPOSE: TO INFORM OPERATOR THAT MACHINE (CRANE) REPRESENTS AN ELECTROCUTION HAZARD SHOULD IT COME CLOSE TO OR IN CONTACT WITH AN ELECTRICAL VOLTAGE SOURCE.

QUANTITY: 1

PLACEMENT: REAR COVER OR SIDE OF CRANE



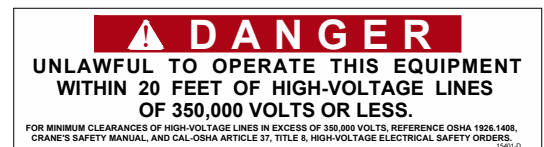
DECAL #: 15401

DESCRIPTION: DANGER, UNLAWFUL TO OPERATE

PURPOSE: TO INFORM OPERATOR OF PROPER OPERATION IN VICINITY OF ELECTRICAL LINES.

QUANTITY: 1

PLACEMENT: RING COVER OR SIDE OF CRANE



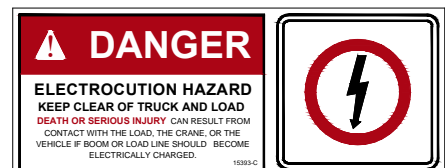
DECAL #: 15393

DESCRIPTION: DANGER, ELECTROCUTION HAZARD, VEHICLE (TRUCK)

PURPOSE: WARNS OF DANGER FROM ELECTRICALLY CHARGED VEHICLE, CRANE, OR LOAD.

QUANTITY: 4

PLACEMENT: EACH SIDE & EACH END OF VEHICLE



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

SAFETY DECALS

VENTURO CRANES

DATE

04-29-16E

SUPERSEDES

10-24-13D

SECTION

C150

21353

PART NO.: 15513

DECAL: MASTER DISCONNECT SWITCH

FUNCTION: To inform the operator of location and operation of master disconnect switch.

QUANTITY: 1

PLACEMENT: On master disconnect switch bracket.



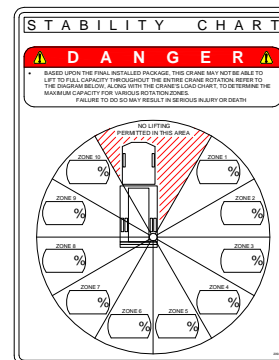
PART NO.: 20927

DECAL: CRANE STABILITY

FUNCTION: To inform the operator of the crane's lifting capacity throughout the entire rotation.

QUANTITY: 1

PLACEMENT: In prominent location, so it is easily seen and readily identifiable.



▲



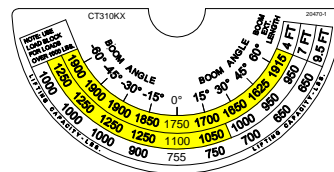
VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
SAFETY DECALS  
CRANES

DATE  
06-06-14C  
SUPERSEDES  
04-02-13B

SECTION  
C150  
21384

PART NO.: 20470-1 & 20470-2 (OPPOSITE)  
 DECAL: BOOM ANGLE  
 FUNCTION: To inform of the boom angle.  
 QUANTITY: 1 Each.  
 PLACEMENT: One on each side of boom..



PART NO.: 15398  
 DECAL: UNPLUG REMOTE CONTROL  
 FUNCTION: To inform the operator to unplug remote control when not in use.  
 QUANTITY: 1  
 PLACEMENT: Near pendant socket.



PART NO.: 573403  
 DECAL: WARNING - STOWING  
 FUNCTION: To inform the operator stay away from the boom when stowing.  
 QUANTITY: 1  
 PLACEMENT: Rear cover.



PART NO.: 573402  
 DECAL: DANGER - TWO BLOCKING HAZARD  
 FUNCTION: To inform the operator to avoid two-blocking.  
 QUANTITY: 1  
 PLACEMENT: Rear cover.



PART NO.: 16719  
 DECAL: UNLAWFUL TO OPERATE  
 FUNCTION: To inform the operator of proper operation in vicinity of power lines.  
 QUANTITY: 1  
 PLACEMENT: Left side of boom.

UNLAWFUL TO OPERATE THIS EQUIPMENT  
 WITHIN 10 FEET OF HIGH - VOLTAGE LINES



MANUFACTURING, INC.  
 CINCINNATI, OHIO

TITLE  
 DECAL DRAWING & LIST  
 VENTURO CT310KX

DATE  
 10-24-13B  
 SUPERSEDES  
 08-12-13A

SECTION  
 C150  
 21377

PART NO.: 20504

DECAL: MODEL NUMBER

FUNCTION: To show the model of the crane.

QUANTITY: 1

PLACEMENT: Left side of boom..



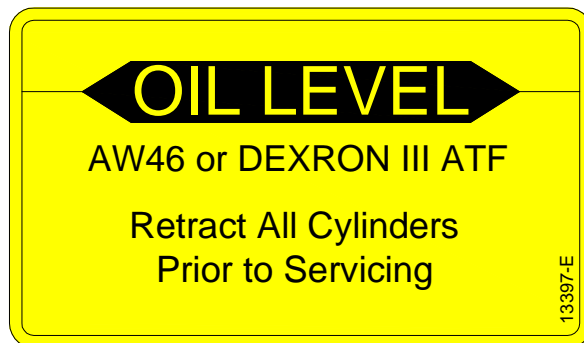
PART NO.: 13397

DECAL: OIL LEVEL

FUNCTION: To inform the operator of proper oil level to maintain.

QUANTITY: 1

PLACEMENT: Right side of power unit.



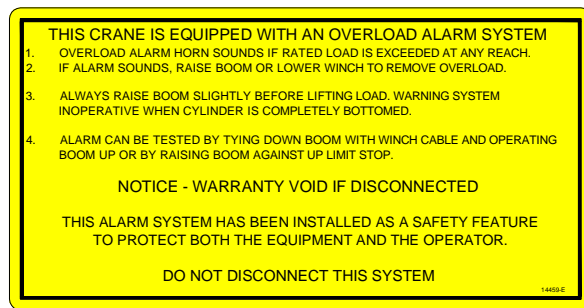
PART NO.: 14459

DECAL: OVERLOAD ALARM SYSTEM

FUNCTION: To inform the operator of the overlaod conditions & remedies.

QUANTITY: 1

PLACEMENT: Rear cover.



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE	DECAL DRAWING & LIST
	CT310KX

DATE	10-24-13D
SUPERSEDES	08-12-13C

SECTION	C150
	21378



# **SECTION 200**

## **INSTALLATION**



# CT310KX INSTALLATION INSTRUCTIONS

## INSTALLATION PROCEDURE

Your new crane is shipped in a ready-to-install condition. Follow the instructions in this section to properly install the crane onto your truck.

## INSPECT FOR SHIPPING DAMAGE

Inspect the crane immediately upon receipt, even if installation will not occur immediately.

- Remove packaging materials as needed
- Inspect for crushed, bent, or otherwise damaged conditions
- Report any damage found to the carrier

## CRANE MOUNTING ▲

Refer to drawing 27410.

Recommended Mounting Hardware:

The crane base is mounted using four [4] 3/4-10 x 2 3/4" (bolt length will vary per mounting application), zinc - plated (GR.5 or greater) hex head cap screw bolts, [8] flat washers, and [4] nylon - insert hex 'Full' lock nuts.

**Note: This hardware is NOT supplied due to the varying bolt length requirements per application.**

Torque hex nuts to standard torque value of 230 ft.-lbs.

## INSTALL BATTERY CABLES

Refer to drawing 20565

1. Install #2 gauge wiring
  - 1.1. Be sure to install a circuit breaker into the wiring from the battery (P/N 22946 recommended).
2. Install grounding straps
  - 2.1. Install #2 gauge grounding strap from crane base to truck frame.
  - 2.2. If truck battery negative terminal is connected to engine, install a #2 gauge grounding strap from the engine to truck frame.

## WIRE ROPE INSTALLATION

Refer to drawing 20574 (MAINTENANCE SECTION) for information on wire rope installation / replacement.

## NOTES



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE

INSTALL INSTRUCTIONS

CT310KX

DATE

4-25-14J

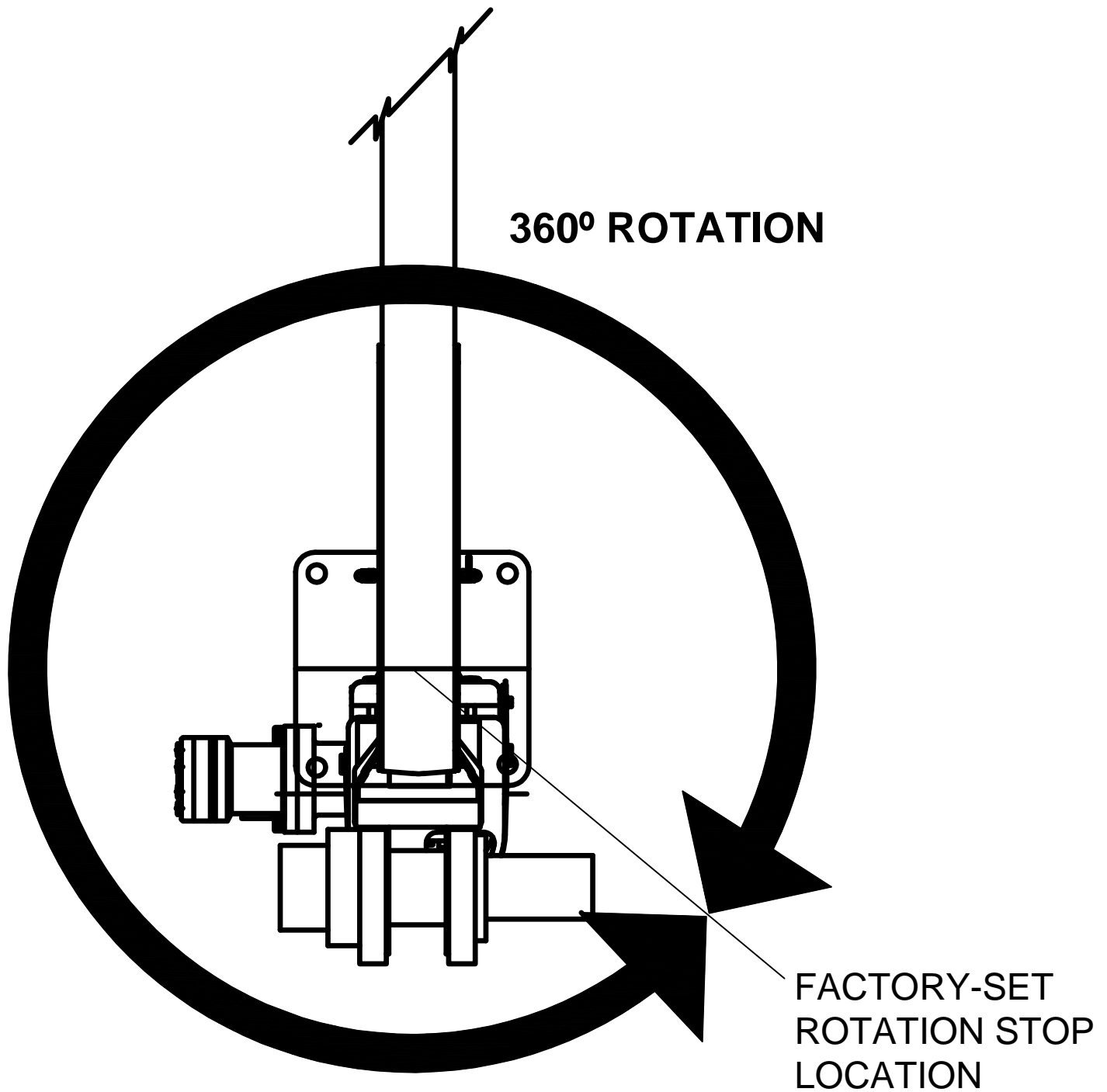
SUPERSEDES

2-18-14G

SECTION

C200

20563



This Venturo crane is shipped with the rotation orientation as shown above. However, the Rotation Stop Location is **ADJUSTABLE** and can be moved to suit your specific application. Refer to drawing 27414 in this manual for adjusting the Rotation Stop Location. ^



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE	FACTORY-SET ROT. STOP
CT310KX w/ ADJ. ROT.	

DATE	4-9-14A
SUPERSEDES	3-20-14

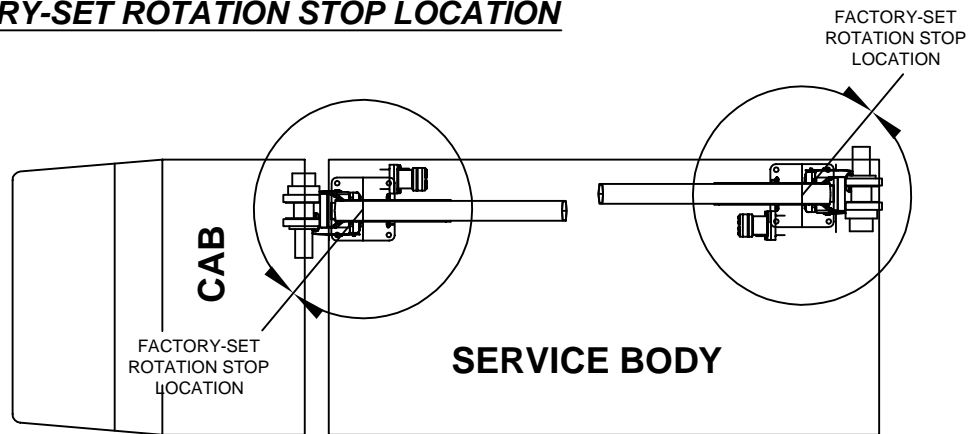
SECTION	C200
	27413

# ADJUSTING THE 360° ROTATION STOP

## FACTORY-SET ROTATION STOP LOCATION

Typical installations w/  
factory positioned rotation  
stop location.

**NOTE: The Rotation Stop  
Location is User  
Adjustable - see below.**



## REPOSITIONING THE ROTATION STOP LOCATION

To reposition the factory-set rotation stops, follow the steps below.

Step 1) Remove the two hex head cap screws and lock washers (items 46 & 47) securing the access panel (item 30) on the side of the crane base to gain access to the rotation limit switch assy. (item 58).

Step 2) Loosen the set screw on the rotation limit switch assembly (item 58).

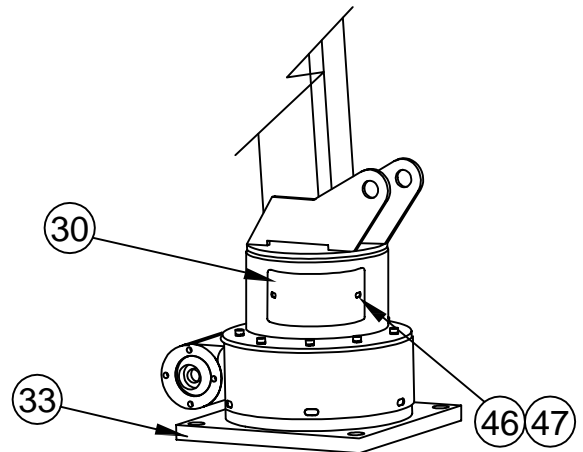
Step 3) Begin rotating the crane towards the newly desired stop location.

*Note: The crane may stop short of your desired location; in this case, manually move the rotation limit switch assembly (item 58) in increments until your newly desired stop location is reached.*

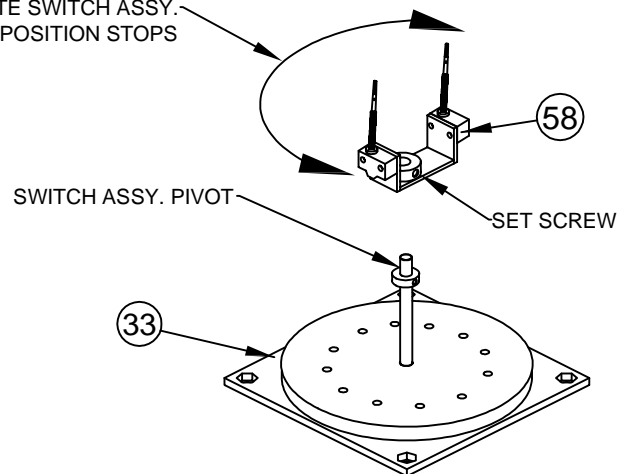
Step 4) Tighten the set screw on the rotation limit switch assembly (item 58) and rotate the crane in one direction and then the other to insure that the stops are in the newly desired location; you can expect approximately 360° of rotation.

Step 5) Reinstall the access panel (item 30) in reverse order.

**CAUTION: Insure that there is no undue strain on the rotation motor hoses and 12 volt battery supply cable throughout the 360° of rotation.**



ROTATE SWITCH ASSY.  
TO REPOSITION STOPS



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
INST. ADJ. ROT. STOPS  
CT310KX w/ ADJ. ROT.

DATE  
12-01-15A  
SUPERSEDES  
03-20-14

SECTION  
C200  
27414

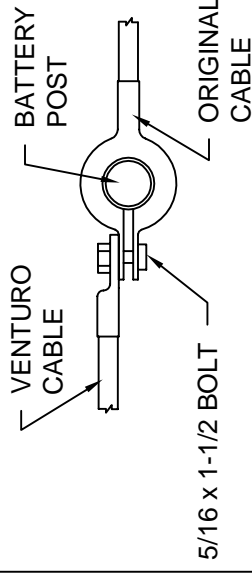
RECOMMENDED CIRCUIT BREAKER TABLE		
CRANE	DESCRIPTION	PART NO.
CT310KX	250 AMP, MAN RESET	22946-250
DT7	250 AMP, MAN RESET	22946-250
CE-1500-FB	150 AMP, MAN RESET	22946-150
CE6K	150 AMP, MAN RESET	22946-150
CT200X	250 AMP, MAN RESET	22946-250
ET6K	250 AMP, MAN RESET	22946-250
ET8/12K(X)	250 AMP, MAN RESET	22946-250
ET12KXP	250 AMP, MAN RESET	22946-250
ET16/18KX	250 AMP, MAN RESET	22946-250
ET25/30KX	300 AMP, AUTO RESET	22946-300
ET36KX	300 AMP, AUTO RESET	22946-300

## BATTERY REQUIREMENTS

- 12 VOLT VEHICLE BATTERY REQUIREMENTS
  - 625 COLD CRANKING AMPS (AT 0° F)
  - 160 MINUTES RESERVE CAPACITY
  - 102 PLATES, 105 AMP-HR
- (1) 12 VOLT AUXILIARY BATTERY REQUIREMENTS
  - SEE MINIMUM WIRE GAUGE AND BATTERY SIZE

**NOTE: OPERATING WITH THE VEHICLE BATTERY 'ONLY' IS PERMISSIBLE, BUT NOT RECOMMENDED.**

## RECOMMENDED BATTERY TERMINAL ATTACHMENT



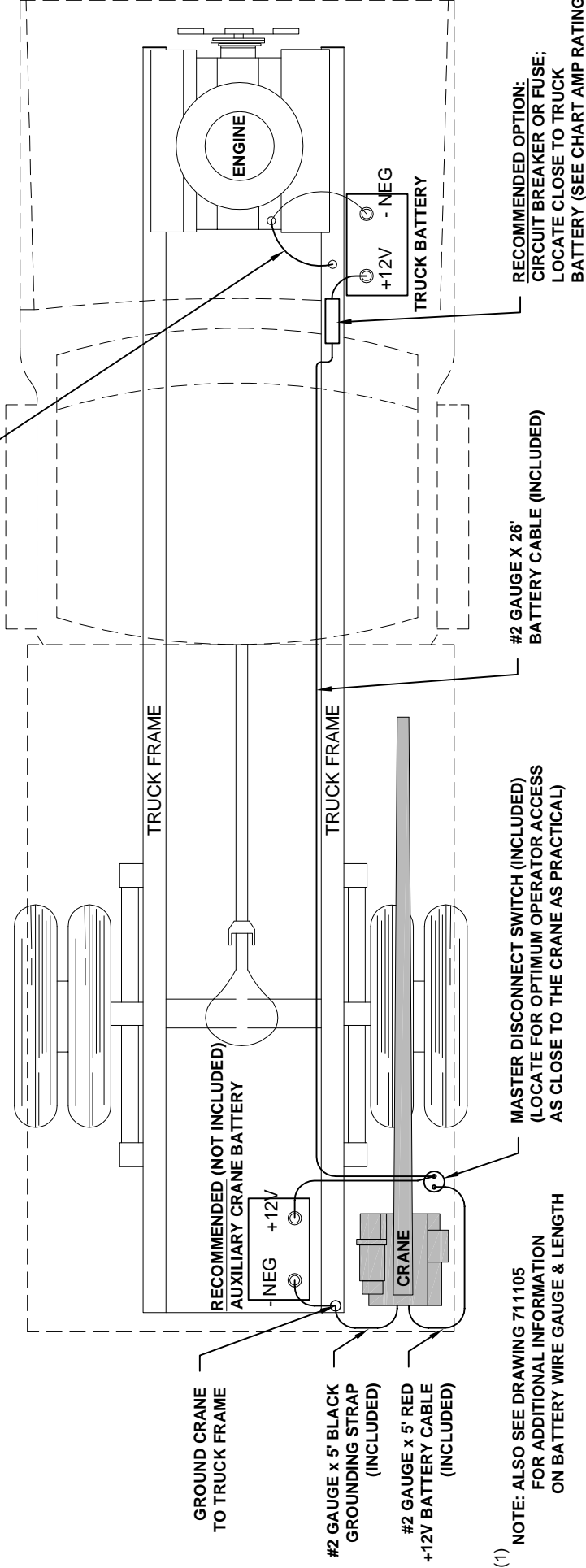
5/16 x 1-1/2 BOLT

VENTURO CABLE

BATTERY POST

ORIGINAL CABLE

INSTALL #2 GAUGE GROUND STRAP FROM ENGINE TO TRUCK FRAME  
(REQUIRED IF NEGATIVE FROM BATTERY IS CONNECTED TO ENGINE)



(1) NOTE: ALSO SEE DRAWING 711105  
FOR ADDITIONAL INFORMATION  
ON BATTERY WIRE GAUGE & LENGTH

MASTER DISCONNECT SWITCH (INCLUDED)  
(LOCATE FOR OPTIMUM OPERATOR ACCESS  
AS CLOSE TO THE CRANE AS PRACTICAL)

#2 GAUGE X 26'  
BATTERY CABLE (INCLUDED)

RECOMMENDED OPTION:  
CIRCUIT BREAKER OR FUSE;  
LOCATE CLOSE TO TRUCK  
BATTERY (SEE CHART AMP RATING)



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
BATTERY CABLE & COMPONENT INSTALL

ET CRANES

DATE  
07-30-18L

SUPERSEDES

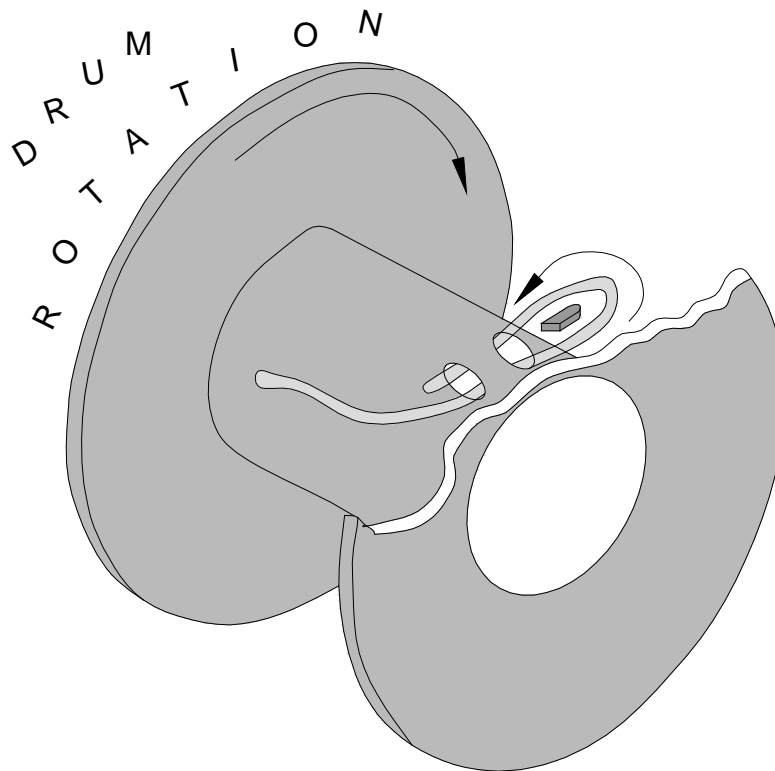
07-31-15K

SECTION

C200

15660

# CT310KX MAINTENANCE & SERVICE



## WINCH LINE (WIRE ROPE) REPLACEMENT

1. Remove the wedge from the old winch line for use with the new line.
2. Remove the old winch line and clean the winch if needed.
3. Unroll the new winch line to prevent kinking.
4. Thread the new winch line through the slot in the drum.
5. Insert the new line through the slot in the drum.
6. Form a loop and insert the end of the line into the slot.
  - 6.1. Be sure the "live", or load carrying, end of the line is against the drum flange.
  - 6.2. Be sure the end of the rope extends out of the slot.
7. Insert the wedge into the loop.
  - 7.1. Seat the wedge into the slot.
8. Turn the truck engine ON.
9. Wind the line onto the drum by pressing the Winch Up switch.
  - 9.1. Maintain tension on the line at all times.
  - 9.2. Wind the line evenly onto the drum.

# CT310KX INSTALLATION INSTRUCTIONS

## FINAL PREPARATION FOR USE

1. Check all bolts and nuts for tightness.
2. Check all electrical connections for tightness.
3. Inspect the entire crane to be sure that it is ready for use.
4. Verify that the hydraulic reservoir is filled with hydraulic fluid (with both cylinders fully retracted).
5. Check the crane operation.
  - 5.1. Put the truck's transmission in Neutral (Park if it has an automatic transmission).
  - 5.2. Remove the pendant from its stowed location and plug it into its socket.
  - 5.3. Check each of the four operations by operating each switch in both directions:
    - 5.3.1. WINCH down / up
    - 5.3.2. BOOM up / down
    - 5.3.3. BOOM out / in
    - 5.3.4. ROTATION left / right
- NOTE: The crane is now ready for operation.
6. After 10 hours of operation, repeat steps 1 through 4.

## NOTES



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE
FINAL PREP FOR USE
CT310KX

DATE
08-12-13A
SUPERSEDES
11-04-02

SECTION
C200
20566





# **SECTION 300**

**MAINTENANCE**

**&**

**SERVICE**

# CT310KX MAINTENANCE & SERVICE

## PREVENTIVE MAINTENANCE

### Overview

Your preventive maintenance program should include all of the following inspections and lubricant applications. Additional items can be added to meet your special needs. New cranes should be fully inspected and have the hydraulic fluid replaced after the first 10 hours of operation.

### Periodic Inspection

Having scheduled inspections helps ensure your crane will stay in a ready to use condition. As parts become worn, replacement parts can be ordered in advance to allow timely repair. Downtime for the crane can be limited.

Table 4-1 suggests a monthly and annual inspection, but a general inspection should be performed daily and each time the crane is used.

- Are there obvious wear or damage problems?
- Does the crane sound normal? Are there changes in the sounds of the winch motor or hydraulic pump and motor?
- Is the crane operating smoothly?

Table 4-1 Periodic Inspection Schedule

PERIODIC INSPECTION SCHEDULE		
Inspection Frequency	Inspection	Action
Monthly	Inspect all moving parts for wear or damage.	Repair or replace as needed.
	Check hydraulic hoses and fittings for leaks.	Repair or replace as needed.
	Check hydraulic cylinders for leaks.	Repair or replace as needed.
	Check all nuts and bolts for tightness.	Tighten as needed.
Annually	Check all decals and signs for readability.	Clean, repair, or replace as needed. (Refer to the decal drawing in the safety or parts section(s)).

## NOTES



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CINCINNATI, OHIO

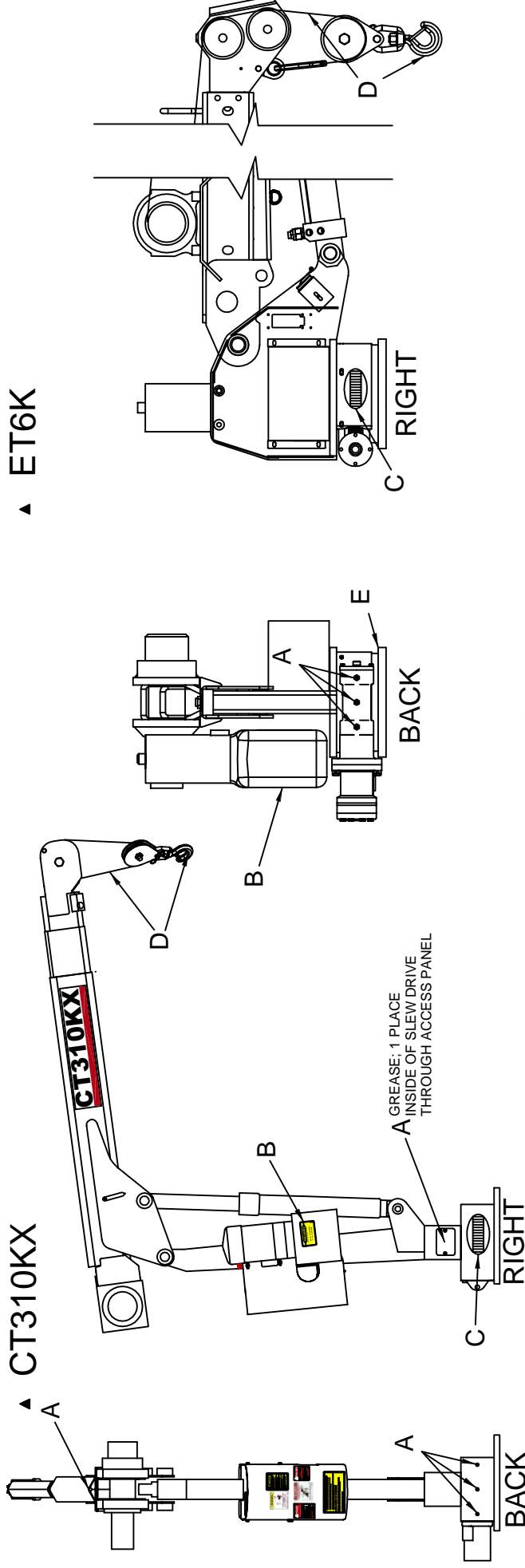
TITLE  
**PRVNTV MAINTENANCE**  
**CT310KX**

DATE  
**08-12-13A**  
SUPERSEDES  
**11-04-02**

SECTION  
**C300**  
**20571**

CT310KX

ET6K



### ATTENTION:

- NEVER WASH THIS CRANE WITH CHEMICAL PRODUCTS OR HIGH PRESSURE WATER JETS, AS THEY CAN CAUSE DETACHMENT OF DECALS OR ENTRANCE OF WATER INTO ELECTRICAL OR SLEWING RING COMPONENTS

Location	Service Required	Note	Service Interval
A	Grease fitting With Pressure Grease Gun	Use FUCHS Renolit Aluminum Complex Grease, or equivalent <b>ALIGNMENT:</b> To align hole w/ fitting, line up grease decals on lower cover and base gusset.	Time of Truck Service
B	Fill Oil Reservoir to Oil Level with Boom Down and Boom In.	Use Dextron ATF for Ambient Temperatures Between -22° F and 30° F Use ISO Viscosity Grade 68 or Equivalent for Ambient Temperatures Between 10° F and 125° F	Time of Truck Service and as required by changes in the ambient temperature range
C	Lubricate Gear Teeth	Remove Cover & Use Chassis Grease	Time of Truck Service
D	Check Wire Rope and Hook	Rope should be free of kinks and fraying	Time of Truck Service
E	Check Torque of bolts	Bolts should be torqued to 230 ft-lbs	Time of Truck Service



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

### LUBRICATION & MAINTENANCE CHART

TITLE	DATE	SECTION
ET6K & CT310KX	11-18-14B	C300
	SUPERSEDES 10-24-13A	

21982

# CT310KX MAINTENANCE & SERVICE

## MINIMUM VOLTAGE TEST

This test checks the system voltage when under a full load condition. If a minimum of nine [9] volts is not read, the battery must be changed.

To check:

1. Start the truck engine.

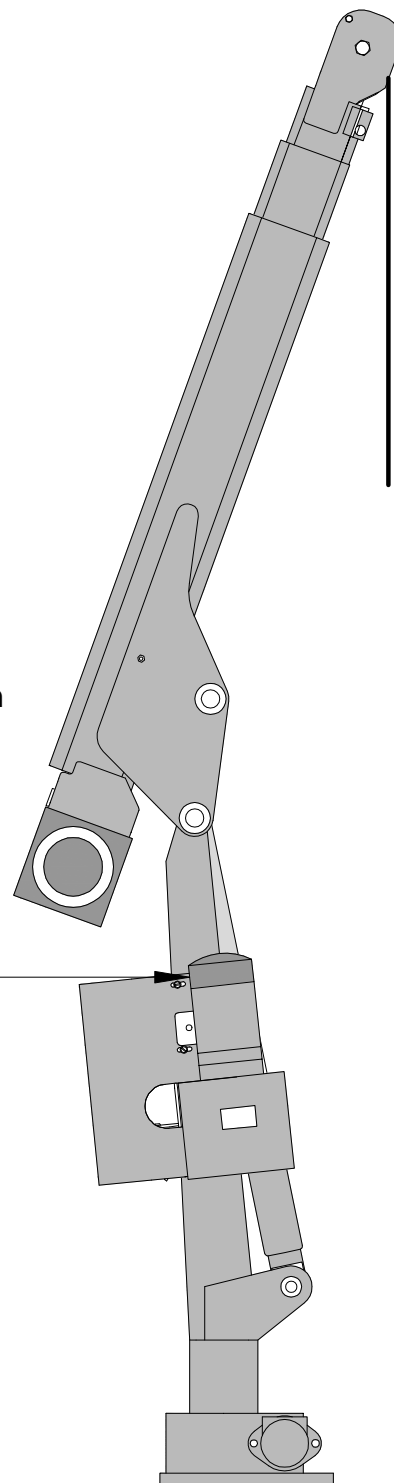


## DANGER

- Never touch moving parts
- Allow only trained personnel to perform this test.
- Failure to follow this could result in death or serious injury.

2. Operate the Boom Up switch until the boom is at full UP position.
3. Pull back the rubber boot which covers the motor terminal.
4. While holding the Boom Up switch on, measure the voltage at the HOT connection (at the hydraulic pump motor) across to ground (on the crane housing).
5. Operate the Boom Down switch to lower the boom.
6. Replace the battery if the reading is less than nine [9] volts.

Pull back rubber boot and put positive lead of multi-meter (voltmeter) here.



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
**VOLTAGE TEST**  
  
CT310KX

DATE  
10-24-13B  
  
SUPERSEDES  
08-12-13A

SECTION  
C300  
  
**20573**



# WIRE ROPE SPECIFICATIONS

## SELECTION

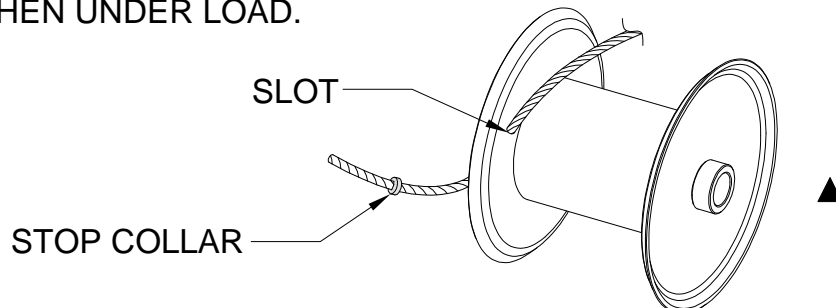
The chart below shows the maximum working load and breaking strength of 7 x 19 Galvanized AIRCRAFT Grade Wire Rope in various diameters. The breaking strength is 3 ½ times the maximum working load. Do not use wire rope with a maximum working load rating less than the single line capacity of the crane. Use wire rope diameter larger than the size furnished with the crane will reduce the fatigue life of the wire rope.



WIRE ROPE DIAMETER	MAXIMUM WORKING LOAD	BREAKING STRENGTH
1/8"	570 LBS.	2000 LBS.
5/32"	800 LBS.	2800 LBS.
3/16"	1200 LBS.	4200 LBS.
7/32"	1600 LBS.	5600 LBS.
1/4"	2000 LBS.	7000 LBS.
5/16"	2800 LBS.	9800 LBS.
3/8"	4114 LBS.	14400 LBS.

## INSTALLATION

1. Unwind coil of rope by rolling it along the floor. This will prevent kinking
2. Most VENTURO cranes are provided with a slot in the winch side plate for attaching the end of the wire rope with a stop collar. A hole in the housing allows access for the end of the wire rope when inserted thru the slot.  
The ET20K(X) & ET25K(X) cranes have a clamp built into the winch drum and do not use a stop collar.
3. THERE MUST ALWAYS BE AT LEAST THREE [3] TURNS OF WIRE ROPE ON THE DRUM WHEN UNDER LOAD.



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
**WIRE ROPE SPECS**  
**WINCH & CRANE**

DATE  
12-05-13K  
SUPERSEDES  
11-10-08J

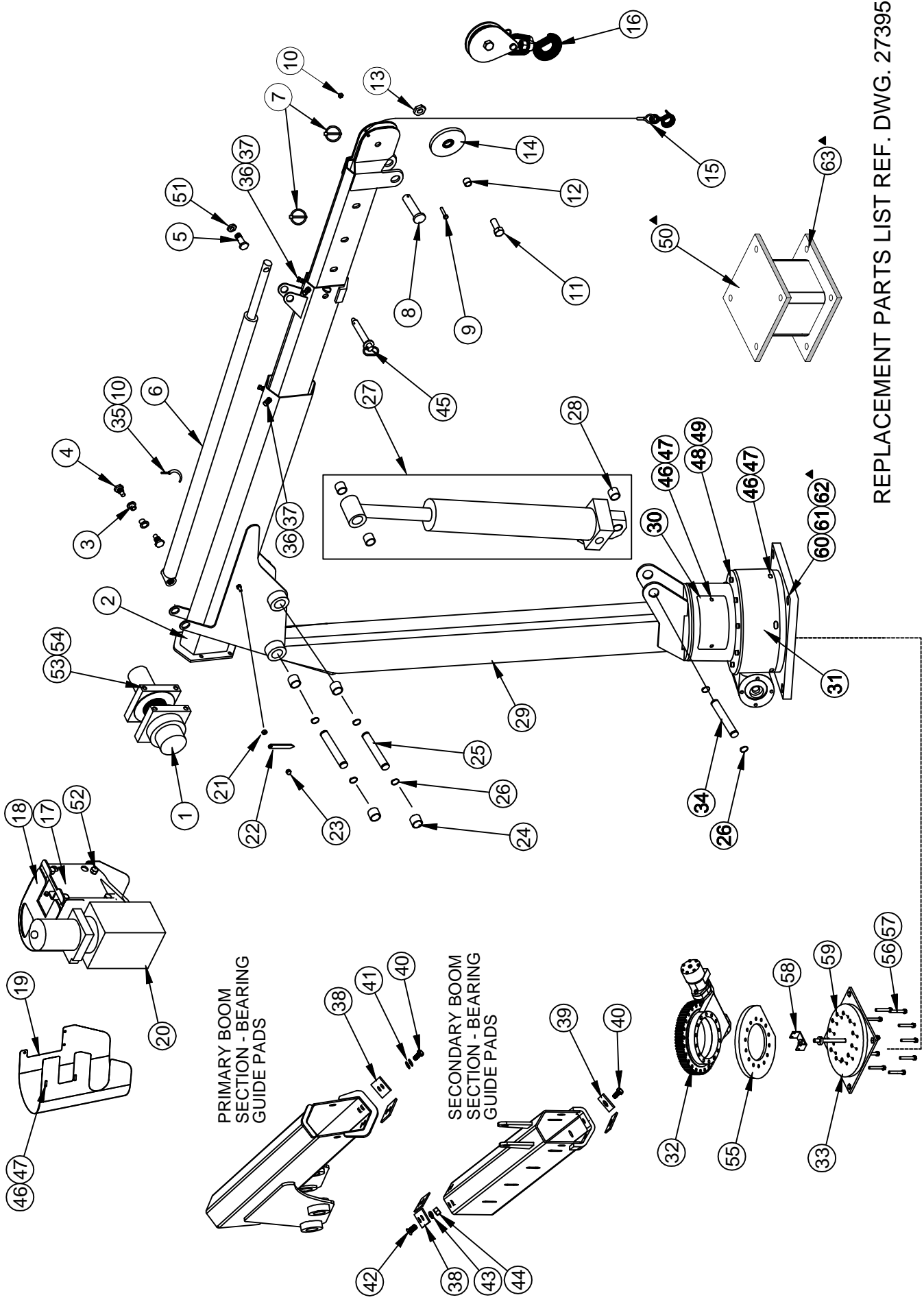
SECTION  
WC 200  
**711006**




# SECTION 400

## PARTS





REPLACEMENT PARTS LIST REF. DWG. 27395

	REPLACEMENT PARTS ILLUSTRATION		SECTION	27394
	CT310KX w/ 340° ADJUSTABLE ROTATION		DATE	
	MANUFACTURING, INC. CINCINNATI, OHIO		5-21-14C SUPERSEDES 5-9-14B	



# REPLACEMENT PARTS LIST CT310

ITEM NO	QTY	PART NO	DESCRIPTION	WHERE USED
1	1	20586	WINCH, DC, HEAVY DUTY	
2	1	27221	BOOM, FINAL ASSY.	
3	2	27370	BUSHING W/ FLANGE, NYLON	EXT CYL BASE END PIVOT
4	2	17487	ECCENTRIC BOLTS,	EXT CYL BASE END PIVOT
5	1	17059-2	PIVOT, HHCS 3/4-10, MODIFIED	EXT CYL ROD END
6	1	27238	EXTENSION CYLINDER	
7	2	27365	LINCH PIN	TWO-LINE CLEVIS PIN & BOOM EXT PIN
8	1	27364	CLEVIS PIN	TWO-LINE CONFIG.
9	1	!HHCS025020125	HEX HEAD CAP SCREW 1/4-20 x 1.25 LG	SHEAVE CABLE GUIDE
10	2	!JNUT-02520N	JAM NUT, W/ NYLON INSERT 1/4-20 PLATED	SHEAVE CABLE GUIDE & CRESCENT CLAMP
11	1	!HHCS06311150	HEX HEAD CAP SCREW 5/8-11 X 1-1/2 GR 5	SHEAVE AXLE
12	1	13168-7	SPACER, PLATED	SHEAVE
13	1	!JNUT-06311N	NUT, JAM NUT W/ NYLON INSERT 5/8-11 PLATED	AXLE, SHEAVE
14	1	19646	SHEAVE	
15	1	15810-3/16-50	WIRE ROPE ASSY, 3/16 GALV. ACFT	
16	1	19678	LOAD BLOCK ASSY.	
17	1	20463	BACK PLATE, MECHANISM	POWER PACK ASSY.
18	1	20487	MAIN FRAME, MECHANISM	POWER PACK ASSY.
19	1	20465	REAR COVER	POWER PACK ASSY.
20	1	20456	HYD PWR UNIT ASSY.	
21	2	22490	SPACER, BLACK PLASTIC	BOOM ARROW
22	2	13459-1	BOOM ARROW, BLACK PLASTIC	
23	2	!ANUT-02520S	ACRON NUT, 1/4-20, STAINLESS STEEL	BOOM ARROW
24	4	21789	COMPOSITE BEARING	PRIMARY BOOM
25	2	27515	PIVOT PIN	PRIMARY BOOM & ELEVATION CYL ROD
26	6	!SRNG-125	SNAP-RING, RETAINER	PRIMARY BOOM & ELEVATION CYL ROD
27	1	21788	ELEVATION CYLINDER, W/ COMPOSITE BEARINGS	
28	3	21789	COMPOSITE BEARINGS	ELEVATION CYLINDER
29	1	27378	MAST, WELDED ASSY	
30	1	27396	COVER PLATE	MAST WELDED ASSY
31	1	27519	LOWER COVER	SLEW DRIVE GEAR
32	1	27243	SLEW DRIVE ASSY (7")	
33	1	27397	MOUNTING PLATE, WELDED ASSY	
34	1	21547	PIVOT PIN, ELEVATION CYL BASE END	ELEVATION CYLINDER BASE PIVOT
35	1	27362	CRESCENT CLAMP, WELDED ASSY.	EXT CYL, PO CHECK VALVE
36	4	27368	SOCKET HEAD CAP SCREW, BLACK NYLON	PRIMARY & SECONDARY BOOM TUBES
37	4	!JNUT-05013	JAM NUT 1/2-13 PLATED	PRIMARY & SECONDARY BOOM TUBES
38	4	23217-15	UHMW BEARING GUIDE PAD - CONFIG 'C'	PRIMARY & SECONDARY BOOM TUBES
39	2	23217-16	UHMW BEARING GUIDE PAD - CONFIG 'D'	PRIMARY & SECONDARY BOOM TUBES
40	6	!HHCS05013050	HEX HEAD CAP SCREW 1/2-13 X 1/2 LONG, PLATED, GR5	PRIMARY & SECONDARY BOOM TUBES
41	8	12534-5	MACHINERY BUSHING 5/8 ID, 1 OD, 14GA, PLATED	PRIMARY & SECONDARY BOOM TUBES
42	4	!FHCS03816100	FLAT HEAD CAP SCREW 3/8-16 X 1.00 LONG, PLATED	PRIMARY & SECONDARY BOOM TUBES
43	6	!LWSH-038	LOCK WASHER 3/8 PLATED	PRIMARY & SECONDARY BOOM TUBES
44	6	!HNUT-03816	HEX NUT 3/8-16 PLATED	PRIMARY & SECONDARY BOOM TUBES
45	1	23042-F-09-09	HITCH PIN ASSY, 9" LANYARDS	SECONDARY & TERTIARY BOOMS
46	7	!HHCS02520063	HEX HEAD CAP SCREW, 1/4-20 X 5/8 LG GR5	SLEW GEAR COVER & SIDE PANELS
47	7	!LWSH-025	LOCK WASHER 1/4 PLATED	SLEW GEAR COVER & SIDE PANELS
48	10	!SHCS05013200	SOCKET HEAD CAP SCREW, 1/2-13 X 2.00 LG, GR5 PLATED	WELDED MAST TO SLEW DRIVE
49	10	!LWSH-050-HC	LOCK WASHER, HI COLLAR, PLATED	WELDED MAST TO SLEW DRIVE
50	4	20480	8" MOUNTING PEDESTAL	CRANE MOUNTING PEDESTAL
51	1	!JNUT-07510N	JAM NUT 3/4-10 W/ NYLON INSERT	EXT CYL ROD END PIVOT
52	4	!HHCS03816500	HEX HEAD CAP SCREW 3/8-16 X 5.00 LG, GR5, PLATED	FRAME, COMPONENT, PWR UNIT
53	4	!HHCS03816125	HEX HEAD CAP SCREW 3/8-16 X 1-1/4 LG, GR5, PLATED	WINCH
54	4	!HNUT-03816	HEX NUT 3/8-16 PLATED	WINCH
55	1	27217	SPACER PLATE, MOUNTING BASE ASSY.	
56	10	!SHCS05013300	SOCKET HEAD CAP SCREW, 1/2-13 X 3.50 LG, GR8	MOUNTING BASE TO SLEW DRIVE, BOTTOM
57	10	!LWSH-050-STAR	LOCK WASHER; 1/2", EXTERNAL STAR	MOUNTING BASE TO SLEW DRIVE, BOTTOM
58	1	27386	ROTATION LIMIT SWITCH, WELDED ASSY.	
59	10	12534-5	MACHINERY BUSHING, 5/8 O.D., 1.00 O.D., 14GA, PLATED	SPACER WASHERS, FOR DRAINAGE
60	4	!HHCS07510250-5	HEX HEAD CAP SCREW, 3/4-10 X 2.50 LG, GR5, ZINC PLATE	FASTENERS FOR CRANE BASE TO 8" PEDESTAL P/N20480

## REPLACEMENT PARTS ILLUSTRATION - 27394

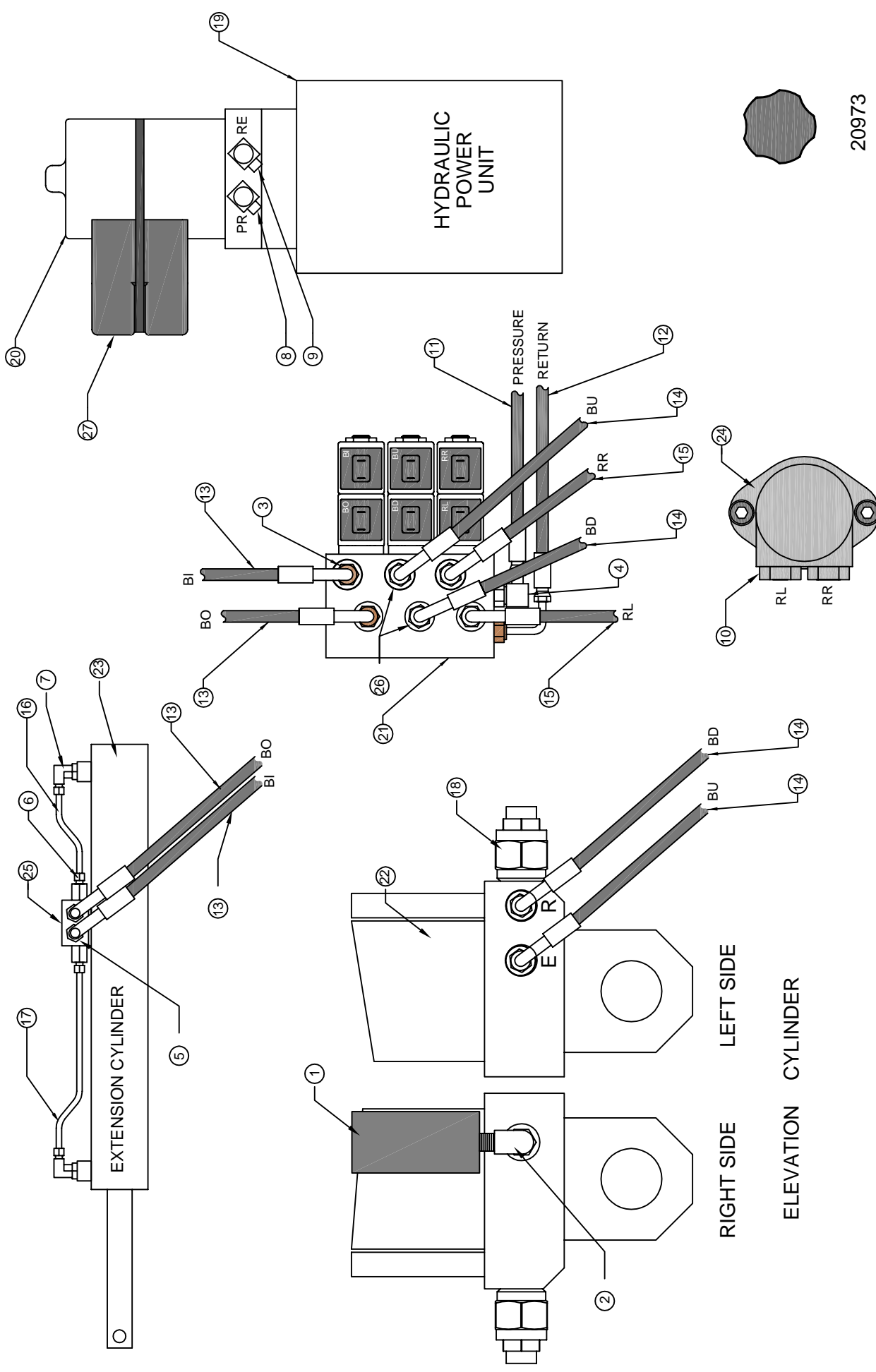


MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
**REPL PARTS LIST**  
**CT310KX w/ ADJ. ROT.**

DATE  
**08-07-19D**  
SUPERSEDES  
**5-21-14C**

SECTION  
**C400**  
**27395**



REF. HYDRAULIC ILLUSTRATED PARTS LIST DRAWING 20925

	VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO	TITLE	DATE	SECTION	
		HYDRAULIC SYSTEM PARTS DRAWING	04-12-16	C400	
		CT310KX, 360° LIMITED ROTATION			SUPERSEDES
					-
20924-1					

# HYDRAULIC SYSTEM PARTS LIST

ITEM NO	QTY	PART NO	DESCRIPTION	WHERE USED
1	1	17460-2200-02	OVERLOAD PRESSURE SWITCH	ELEVATION CYLINDER
2	1	H6901-0404	FITTING 4MO-4FPX 90°	ELEVATION CYLINDER
3	7	H6400-0604	FITTING 6MJ-4MO	VALVE MANIFOLD
4	1	H6801-0604	FITTING 6MJ-4MO 90°	VALVE MANIFOLD
5	2	H6801-L-0606	FITTING 6MJ-6MO LONG 90°	P.O. CHECK VALVE, EXT CYL.
6	2	H6400-0606	FITTING 6MJ-6MO	P.O. CHECK VALVE, EXT CYL.
7	2	H6801-0608	FITTING 6MJ-8MO 90°	EXT CYL PORTS, ROD & BASE END
8	1	H2501-0606	FITTING 6MJ-6MP 90°	HYD PWR UNIT, PRESSURE HOSE
9	1	H2501-0604	FITTING 6MJ-4MP 90°	HYD PWR UNIT, RETURN HOSE
10	2	H6801-0610	FITTING 6MO-10MO 90°	ROTATION MOTOR
11	1	20913	HOSE ASSY.	PRESSURE, VALVE TO PUMP
12	1	20912	HOSE ASSY.	RETURN, VALVE TO PUMP
13	2	27097	HOSE ASSY.	EXT CYLINDER, IN / OUT
14	2	27096	HOSE ASSY.	ELEVATION CYL., UP / DOWN
15	2	20911	HOSE ASSY.	ROTATION MOTOR, LEFT / RIGHT
16	1	27099	TUBE ASSY.	EXT CYL BASE TO PO CHECK VALVE
17	1	27100	TUBE ASSY.	EXT CYL ROD TO PO CHECK VALVE
18	1	20893	COUNTER BALANCE VALVE	ELEVATION CYLINDER
19	1	20456	HYDRAULIC PWR UNIT	-
20	1	16940	MOTOR, HYD PWR UNIT	MOTOR ONLY, HYD PWR UNIT
21	1	19815-2	VALVE BLOCK ASSY.	-
22	1	21788	ELEVATION CYLINDER	-
23	1	27238	EXTENSION CYLINDER	-
24	1	20926	ROTATION MOTOR, HYD	-
25	1	27363	P.O. CHECK VALVE	-
26	2	H6504-0606	FITTING 6MJ-6FJ	ELEVATION HOSES TO VALVE BLOCK
▲ 27	1	416705	COVER	SOLENOID, HYD PWR UNIT

NOTE: ITEMS 2 THROUGH 17 ARE INCLUDED IN THE HOSE & FITTING KIT P/N 27393.

REF. HYDRAULIC ILLUSTRATED PARTS BREAKDOWN DRAWING 20924



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
HYD SYS PARTS LIST

CT310KX w/ ADJ. ROT.

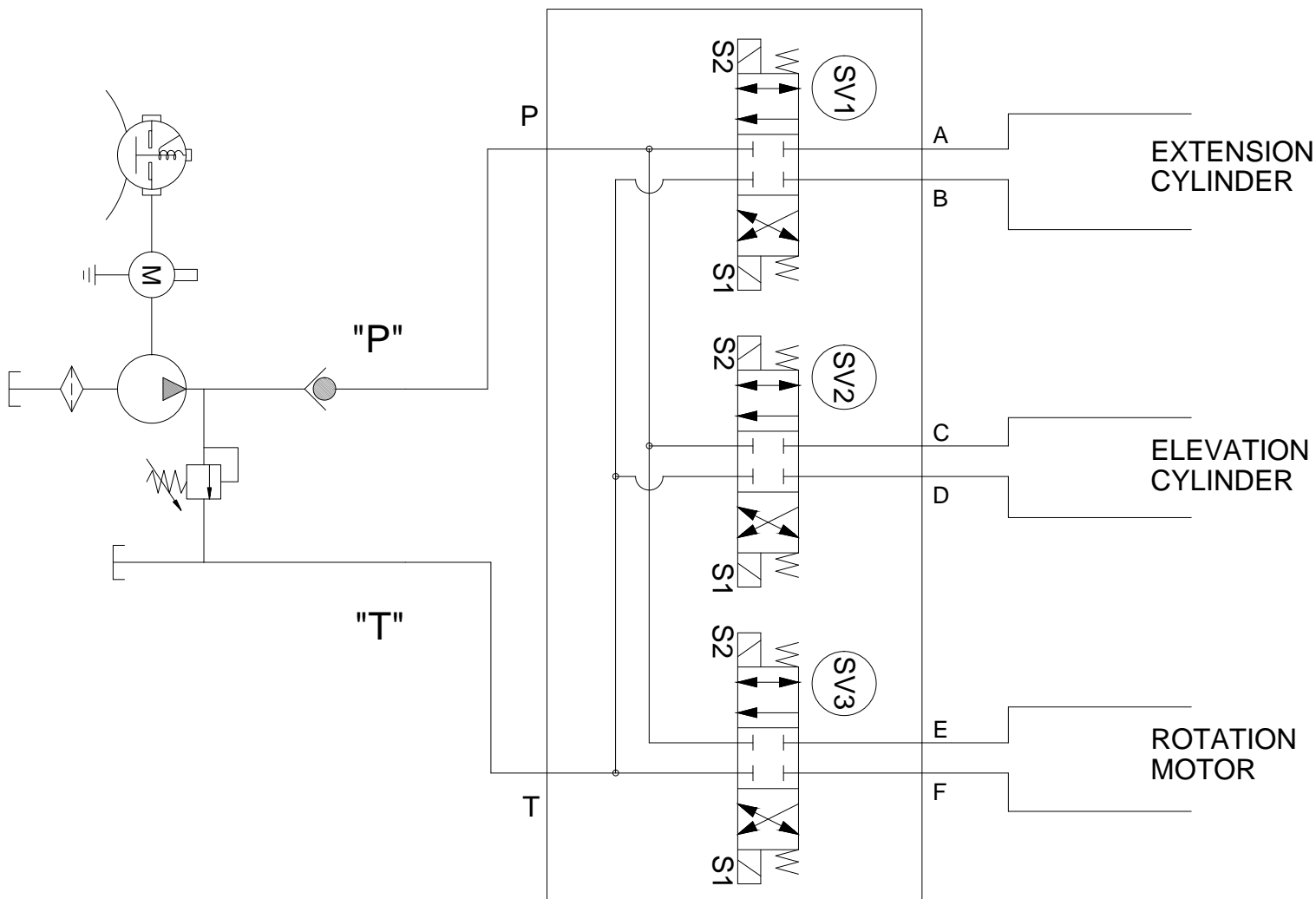
DATE  
03-20-15C

SUPERSEDES  
03-31-14B

SECTION  
C400

27411

# CT310KX MAINTENANCE & SERVICE



## OPERATION

SV1

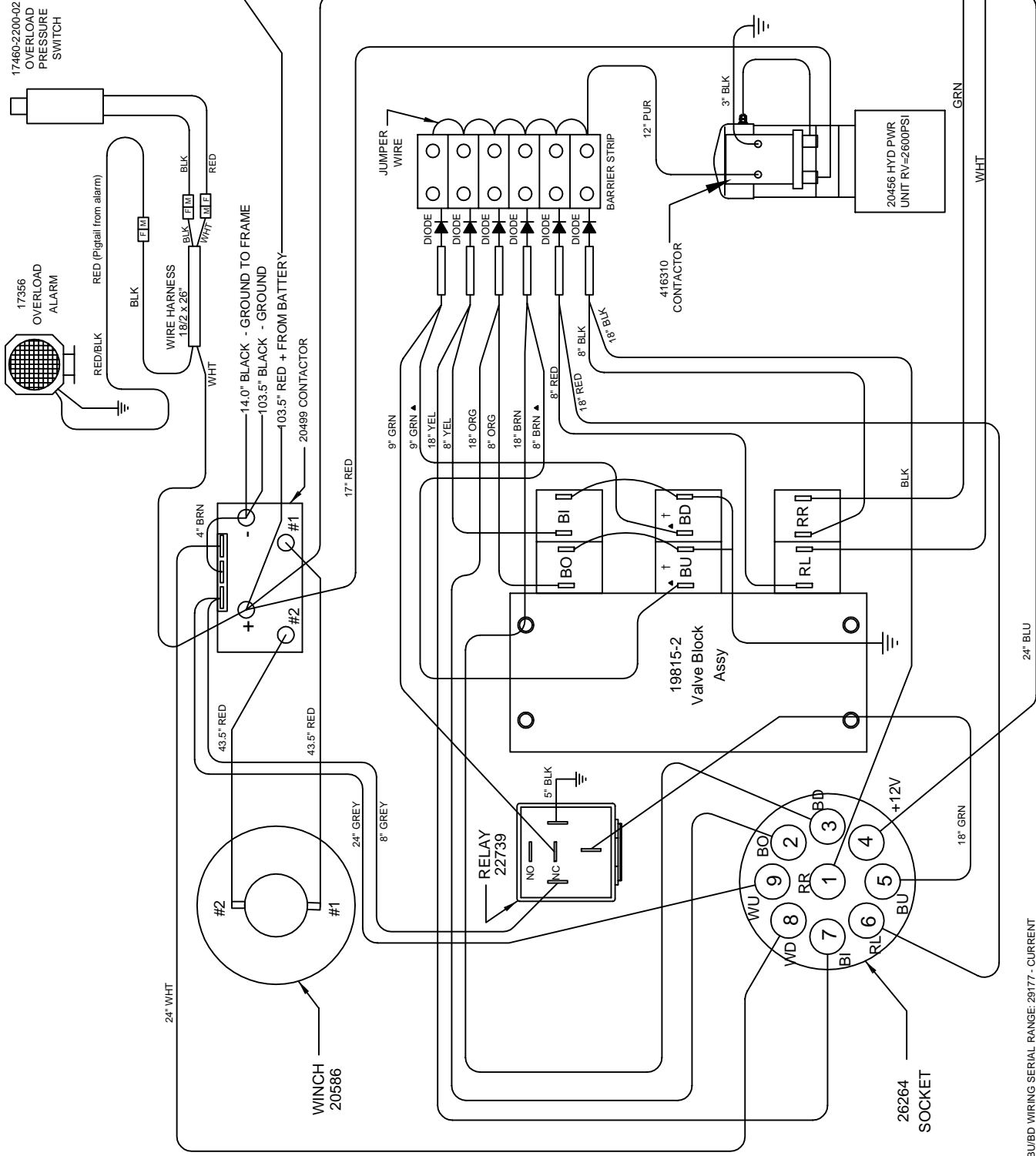
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OPEN FLOW  
'P' TO 'A'  
'B' TO 'T'  
ENERGIZE "S1"  
OPEN FLOW  
'P' TO 'B'  
'A' TO 'T'

SV2

ENERGIZE "S2"  
OPEN FLOW  
'P' TO 'C'  
'D' TO 'T'  
ENERGIZE "S1"  
OPEN FLOW  
'P' TO 'D'  
'C' TO 'T'

SV3

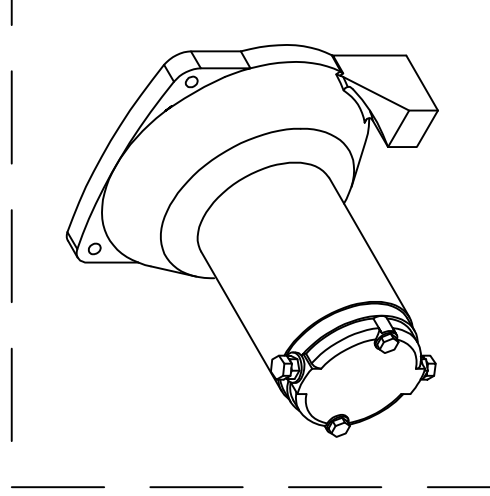
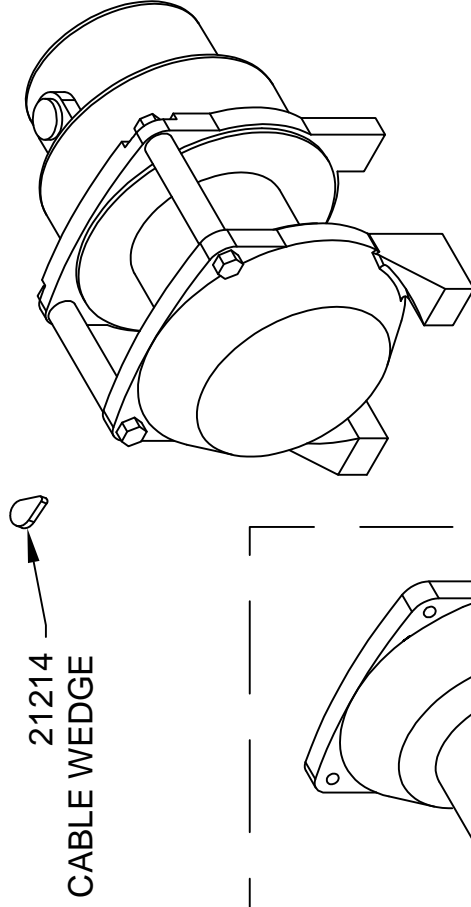
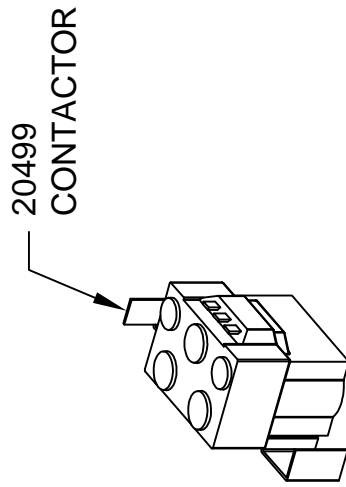
ENERGIZE "S2"  
OPEN FLOW  
'P' TO 'E'  
'F' TO 'T'  
ENERGIZE "S1"  
OPEN FLOW  
'P' TO 'F'  
'E' TO 'T'



† BU/D WIRING SERIAL RANGE: 29177- CURRENT

<b>TITLE</b> ELECTRICAL SYSTEM DRAWING	<b>SECTION</b> C400
<b>DATE</b> 04-30-18F <b>SUPERSEDES</b> 04-14-16E	<b>27389</b>
<b>VENTURO®</b> VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO	
CT310KX W/ 360° ADJ. ROT. STOP	

# 20586 WINCH REPLACEMENT PARTS



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

REPLACEMENT PARTS DRAWING

CT310KX & ET6K ▲

DATE

01-26-15D

SUPERSEDES

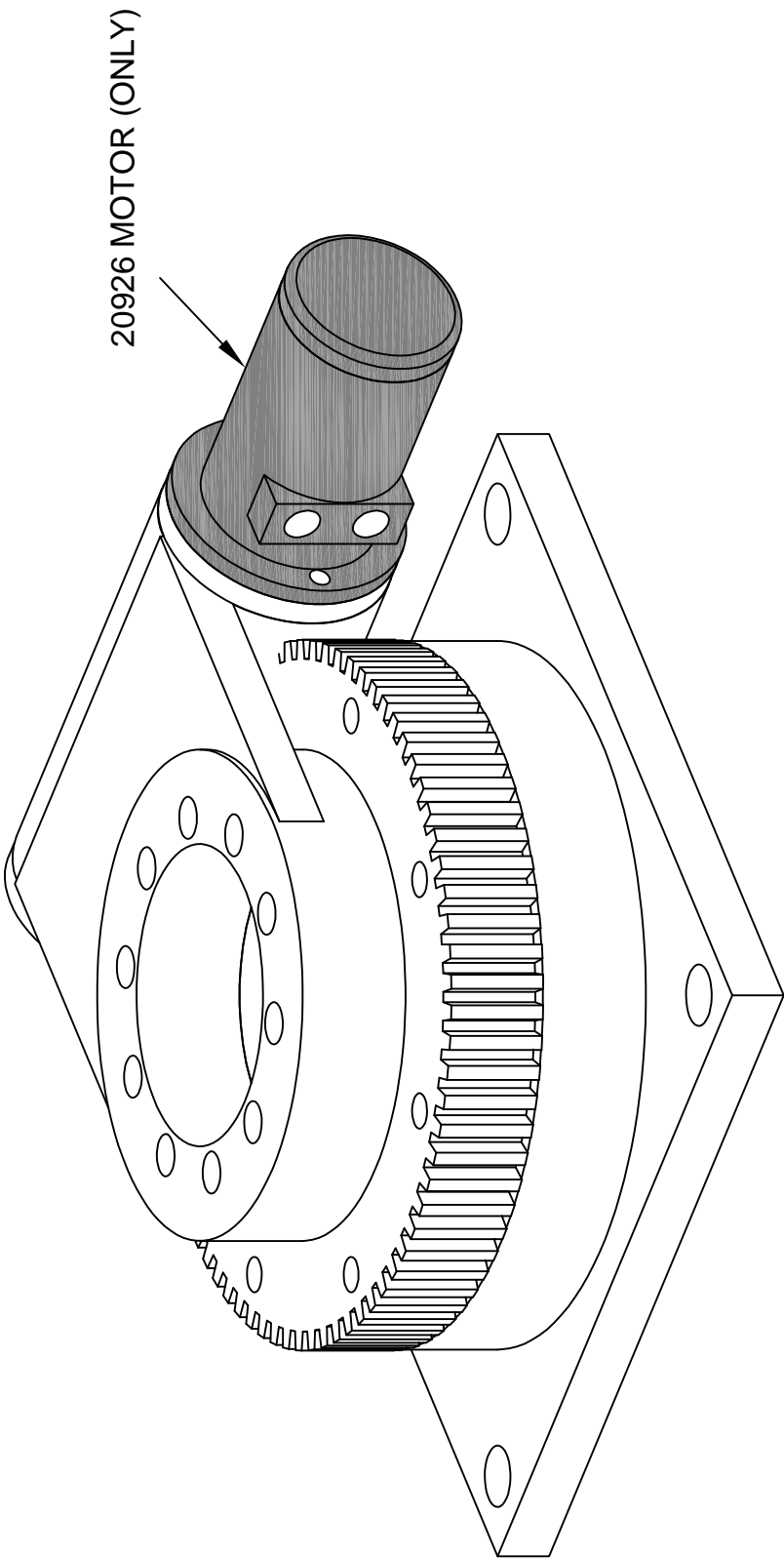
12-27-13C

SECTION

-

20837

27243 SLEWING SYSTEM REPLACEMENT PARTS



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

SLEWING SYSTEM REPLACEMENT PARTS

DATE

01-26-15A

SUPERSEDES

01-22-14

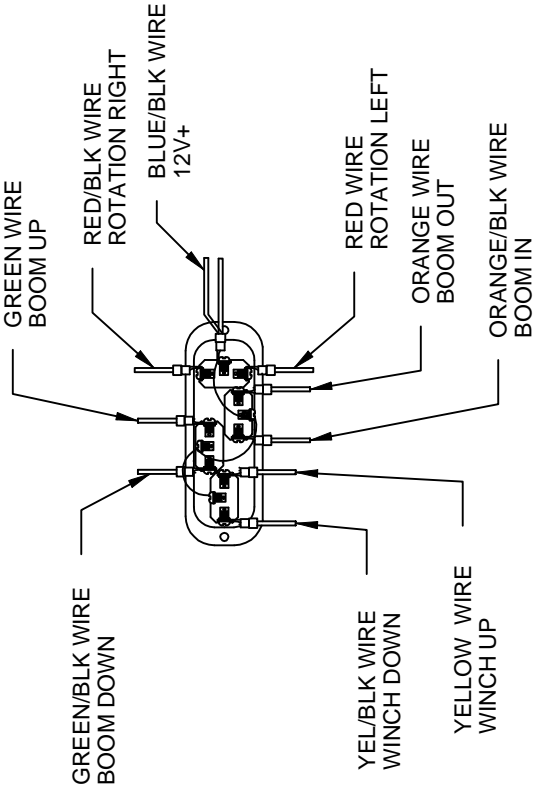
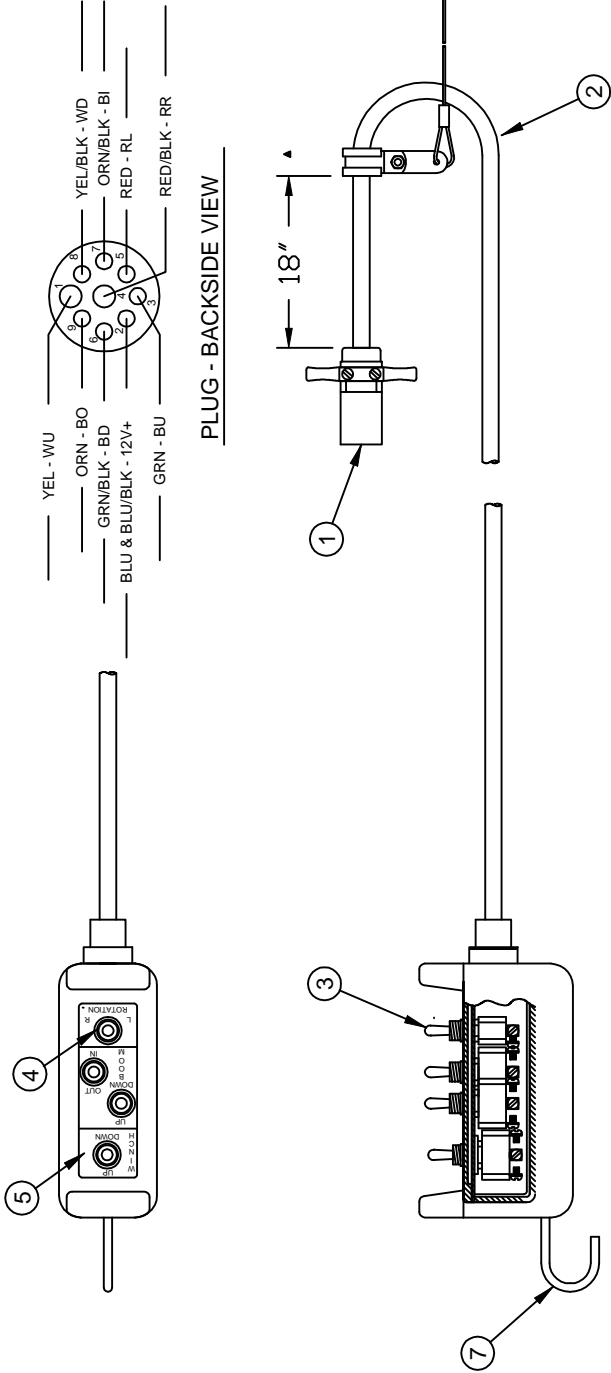
SECTION

C400

CT310KX & ET6K ▲

27041

# 20160 4-SWITCH PENDANT



NOTE: BLACK WIRE IS NOT USED

\* Reference DWG #20583

<div><div><div>VENTURO®</div><div>MANUFACTURING, INC.</div><div>CINCINNATI, OHIO</div></div></div>	TITLE			SECTION
	CONTROL PENDANT PARTS DRAWING			C400
	DATE			20582
	SUPERSEDES			
CT310KX			10-4-13B	8-12-13A



# CT310KX REPLACEMENT PARTS

ITEM NUMBER	PART NUMBER	QTY	PART DESCRIPTION
1	26263	1	PLUG, 9-HOLE
2	26262-20	1	CORD ASSEMBLY (20 FT. LONG)
3	13763	4	SWITCH, TOGGLE
4	19793	4	BOOT, TOGGLE
5	17363	1	DECAL
6	15913-2	1	ASSEMBLY, CLAMP & TETHER
7	11557	1	HOOK, PENDANT
8	20163	1	COVER, PENDANT HEAD
9	20164	1	BASE, PENDANT HEAD
10	20165	1	GASKET/CORD RESTRAINT, PENDANT HEAD

\* Reference DWG #20582



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE	DATE	SECTION
CNTRL PNDNT PRTS LIST	08-12-13A	C400
CT310KX	SUPERSEDES 11-04-02	20583



CT310KX FIELD SERVICE LABEL KIT BILL OF MATERIALS	20503 - CT310KX (Non-Prop)	25560 - CT310KXP (Prop)	
DESCRIPTION	QTY	QTY	PART #
DECAL; VENTURO LOGO, SMALL	1	1	17389-4
DECAL; MODEL NAME, CT310KX	1	1	20504
DECAL; BOOM CAPACITY, CT310KX, LEFT	1	1	20470-1
DECAL; BOOM CAPACITY, CT310KX, RIGHT	1	1	20470-2
DECAL; CONDUCTIVE GREASE	4	4	14473-2
DECAL; OVERLOAD ALARM SYSTEM	1	1	14459
DECAL; MANUAL OVERRIDE, RIGHT	1	1	23185
DECAL; MANUAL OVERRIDE, LEFT	1	1	23186
DECAL; PROPORTIONAL VALVE MANUAL OVERRIDE	-	1	19315-2
DECAL; PROPORTIONAL CONTROL	-	1	19788-1
DECAL; OIL LEVEL	1	1	13397
DECAL; DANGER, TWO BLOCKING	1	1	573402
DECAL; WARNING, STOWING & UNFOLDING	1	1	573403
DECAL; UNLAWFUL TO OPERATE, SMALL	1	1	16719
DECAL; HORN RELAY	1	1	16184-1
KIT; ACCIDENT PREVENTION SIGNS	1	1	15397
IDWG; DECAL PLACEMENT, CT310KX	1	1	20561
IDWG; FIELD SERVICE LABEL KIT, CT310KX	1	1	20585
SAFETY MANUAL, VENTURO CRANES	1	1	INST-23233

15397 ACCIDENT PREVENTION SIGNS BILL OF MATERIALS		
DESCRIPTION	QTY	PART #
DECAL; CAUTION, OPERATIONS	1	15390
DECAL; DANGER, NOT PASSENGER LIFT	1	15391
DECAL; DANGER, ELECTRICAL HAZARD SIGN	1	15392
DECAL; DANGER, ELECTRICAL HAZARD	4	15393
APPLICATION INSTRUCTIONS	1	15394
DECAL; UNPLUG PENDANT	1	15398
DECAL; UNLAWFUL TO OPERATE	1	15401
DECAL; MASTER DISCONNECT	1	15513
DECAL SHEET; VENTURO, COMPLEMENTARY	1	22317
DECAL; CRANE STABILITY	1	20927



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
FIELD SERVICE LABEL KIT

CT310KX(P), ALL CONFIG.

DATE  
08-04-20F

SUPERSEDES  
04-13-20E

SECTION  
C400

20585



# VENTURO CRANES LIMITED WARRANTY POLICY

Venturo products are built to last...we guarantee them.

As a purchaser of any new Venturo product covered by warranty, you will receive 1 year of the most complete coverage available...and, at no added cost to you.

## 1-Year Limited Warranty Policy

This limited policy warrants new products of Venturo to be free from defects in material and workmanship for a period of one (1) year from date of original installation. OEM products or accessories purchased by Venturo as part of or offered with our product will carry the OEM manufacturer's respective warranty. Our warranty covers:

- ***Repair or replacement of product***
- ***Labor to repair or replace product***
- ***Freight to return and/or replace product***

We shall not be liable for any contingent liabilities arising out of the improper function of any products. Warranty shall become void if the product is improperly installed, modified, damaged, abused or used for application other than intended use. There is no warranty of merchantability, fitness for a particular purpose, warranty arising from course of dealing or usage of trade, or any other implied or expressed warranty, except as made specifically herein. This warranty supersedes all previous warranties, written or implied.

## Warranty Claims

Venco Venturo Industries LLC will make a good faith effort for prompt correction or other adjustment with respect to any product, which proves to be defective after our inspection and within the warranty period. Before any repairs are attempted or before returning any product, your Venturo Distributor is required to obtain a warranty claim number. This number is necessary for any claim to be considered. To obtain a warranty claim number, Venturo requires the model and serial number. Only authorized Venturo Distributors can perform warranty. For the name and address of your local Venturo Distributor call the **Warranty Claim Department - 513-772-8448**.

**WARNING** - It is the responsibility of the installer to ensure the installation is completed according to the manufacturer's recommendations, ensure the ultimate user understands how to operate product in a safe manner, and understands the need for regular service and maintenance by an authorized Venturo Distributor. No modifications or alterations may be made to any Venturo product without the expressed written consent of Venco Venturo Industries LLC. Installation of any Venturo product must be done by an authorized Venturo Distributor, to the standards of the industry; including maintenance, service and affixing of all instruction, safety and warning decals. Users should be instructed as to the safe operation at time of delivery. Maintenance, service, operation and safety warning decals are available on request from Venco Venturo Industries LLC.

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