

MEABAC-****

PARTS & INSTALLATION MANUAL CT310KX(P)

Included in this manual:

CT310KX(P)

- 1,900 lb Electric Hydraulic Telescopic Service Crane
- Optional Proportional Control
- 32-inch Hydraulic Extension
- 32-Inch Manual Pullout Extension

VENCO VENTURO INDUSTRIES LLC 12110 BEST PLACE | CINCINNATI, OHIO 45241

VENCO VENTURO (INDUSTRIES LLC)

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CINCINNATI, OHIO

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	SUPERSEDES	05504
CT310KX(P)	05-13-20A	25561

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 $4\frac{1}{2}$ feet long. When fully extended, the boom is $9\frac{1}{2}$ 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).

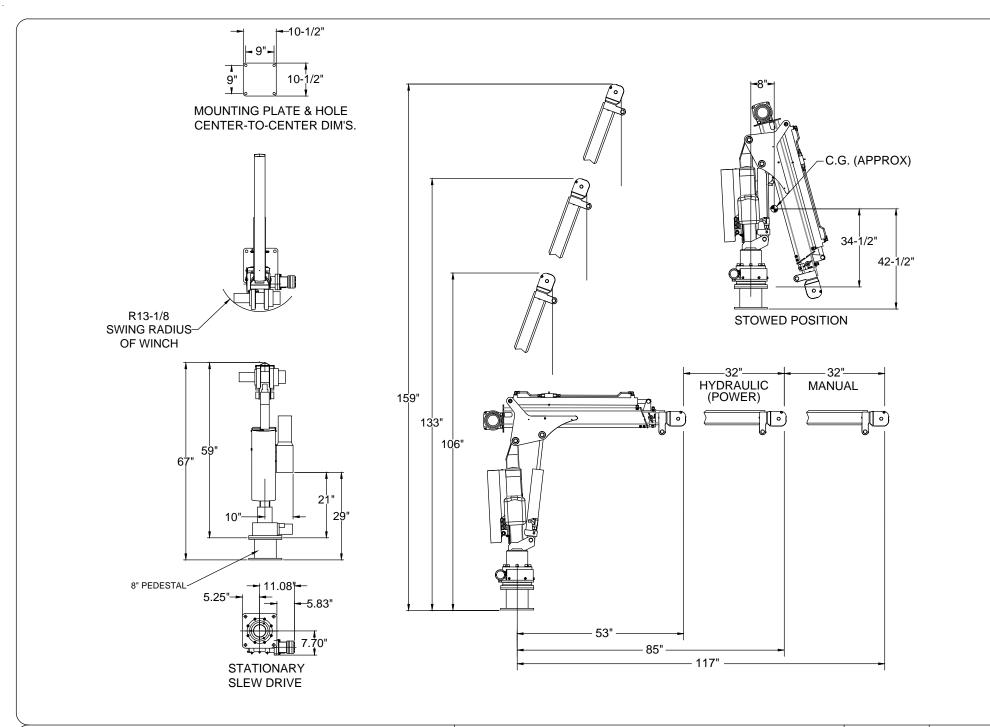
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- Lifting of personnel is NEVER permitted.
- Lifting loads exceeding the capacity chart (DWG. 23054) voids the warranty agreement.



CT310KX	SUPERSEDES 10-24-13B	20553
INTRODUCTION & LIMITS	02-06-18C	C100

NOTES

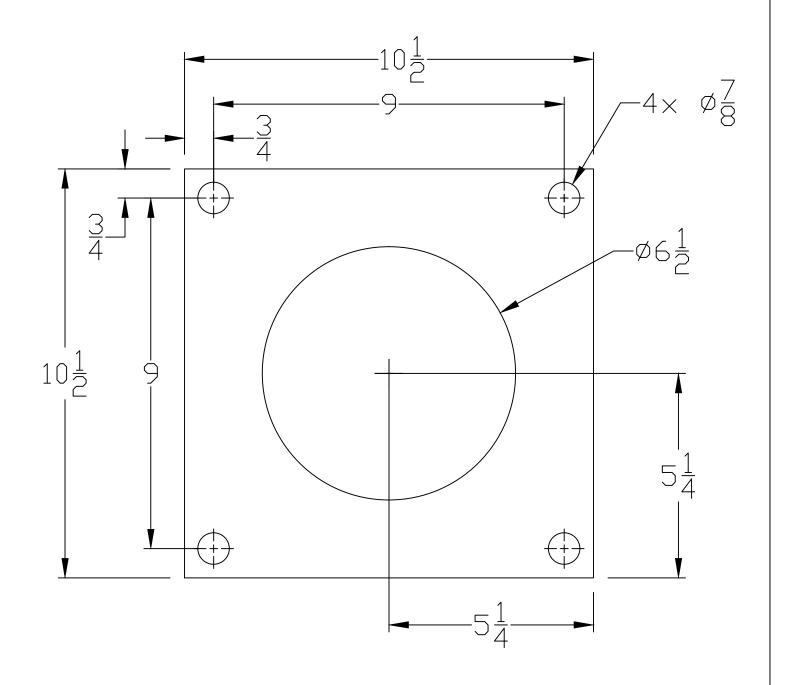




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DIMENSION DRAWING	03-30-20B SUPERSEDES	C200
CT310KX(P) W/ ADJ. LIMITED ROTATION	12-4-14A	27410

CT310KX MOUNTING DIMENSION



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



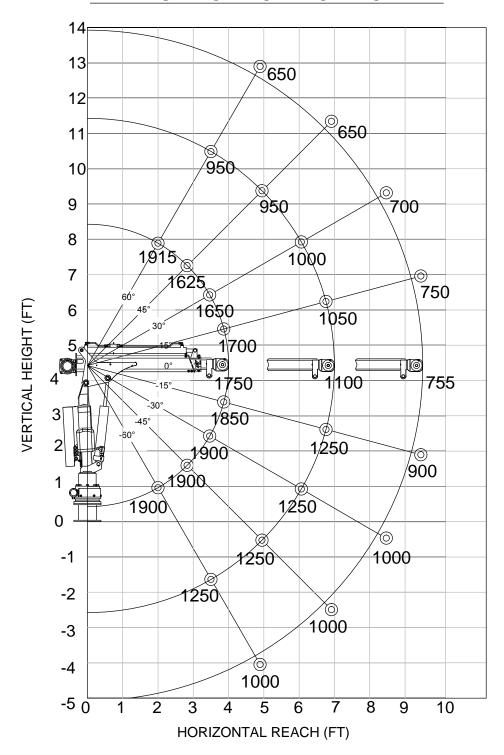
MANUFACTURING, INC.
CINCINNATI, OHIO

CT310KX	supersedes 03-20-14D	207
BASE MOUNTING DIM		C100
TITLE	DATE	SECTION

CT310KX(P)

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

CINCINNATI, OHIO



MAXIMUM LOAD CAPACITY	03-30-20B	C100
VENTURO CT310KX(P)	SUPERSEDES 05-03-16A	23054

CT310KX(P) DESCRIPTION & SPECIFICATIONS

TRUCK SETUP FOR OPERATION

- 1. The truck should be parked on **firm**, **level ground** when using the crane.
- The crane should be positioned close to the job so that it can operate within its capacity limits. 2.
- 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).
 - Pull the pin from the boom and push the extension into the fully retracted position. 3.1.
 - 3.2. Insert the pin in the hole in the boom.
- 4. Run the BOOM DOWN to lower the boom to the stowed position.

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- Unplug the pendant control cord and stow in a body compartment or the truck cab. 5.
- Turn off the master disconnect switch. 6.

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.

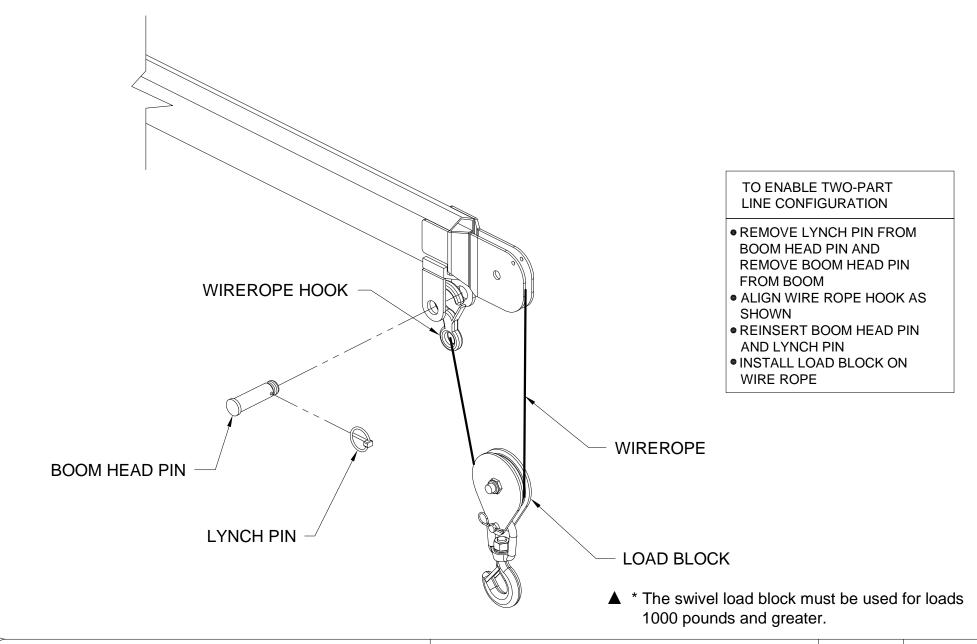
- Always follow the load chart when lifting heavy loads
- Failure to follow the load chart could result in death or serious injury.



TITLE	DATE
SETUP & TRAVEL PREP	03-24-20D
	SUPERSEDES
CT310KX(P)	03-04-14C

SECTION C100

TWO-PART LINE CONFIGURATION (USING LOAD BLOCK)





TWO-PART LINE CONFIGURATION

10-24-13B

CT310KX

DATE

10-24-13B

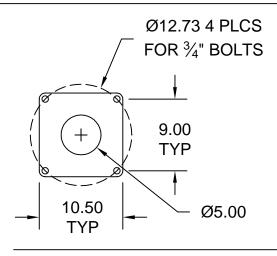
C100

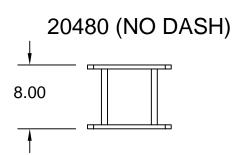
SUPERSEDES

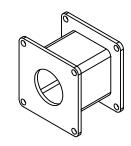
08-12-13A

20729

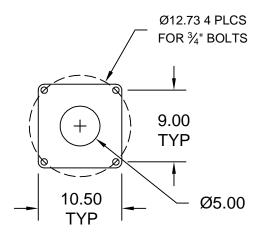
20480-XX MOUNTING PEDESTAL

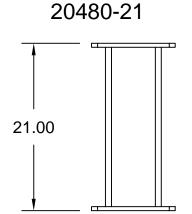


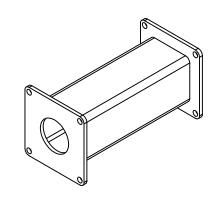


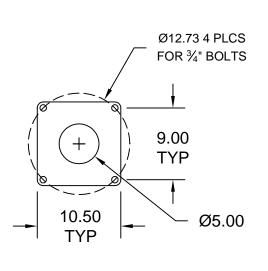


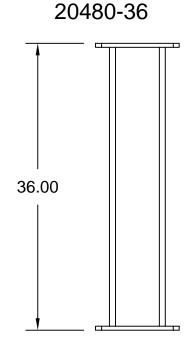
NOTE: INCLUDED WITH CT310KX CRANES

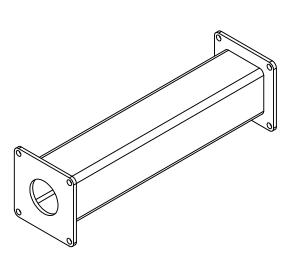












VENCO VENTURO INDUSTRIES LLC	
CINCINNATI, OHIO	

ET6K / CT310KX	SUPERSEDES 11-18-14	26002
MOUNTING PEDESTAL OPTIONS	06-16-21A	section C100

SECTION 150

SAFETY



SAFETY - GENERAL

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

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

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

CRANE SAFETY

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



	INATI, OHIO	ACTURING, INC.	
CT310KX		GENERAL SAFETY	TITLE
11-04-02	SUPERSEDES	08-12-13A	DATE
205))]	C150	SECTION

ELECTROCUTION HAZARD

NOTES

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

CRANE SAFETY NEAR POWER LINES

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

TABLE A - MINIMUM CLEARANCE DISTANCES

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

TABLE T - MINIMUM CLEARANCE DISTANCES IN TRANSIT

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

- may require increased conditions such as fog Environmental smoke, or precipitation clearances
- † As established by the person with respect to utility owner / operator distribution. electrical power professional engineer or registered transmission and who is a qualified



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HZRDS Qο **CLEARANCES**

CT310KX

11-04-02 08-12-13A SECTION C150

20557

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:

NOTES

A 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.



TITL

WARNING EXPLANATION

DATE

08-12-13A

SECTION C150

CT310KX

11-04-02

20558

ELECTROCUTION HAZARD SIGNS

Two [2] decals are provided with the crane:

A DANGER

ELECTROCUTION HAZARD KEEP CLEAR OF TRUCK AND LOAD

DEATH OR SERIOUS INJURY CAN RESULT FROM CONTACT WITH THE LOAD, THE CRANE, OR THE VEHICLE IF BOOM OR LOAD LINE SHOULD BECOME ELECTRICALLY CHARGED.



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.

UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN 20 FEET OF HIGH-VOLTAGE LINES OF 350,000 VOLTS OR LESS.

FOR MINIMUM CLEARANCES OF HIGH-VOLTAGE LINES IN EXCESS OF 350,000 VOLTS, REFERENCE OSHA 1926.1408, OR MINIMUM CLEARANCES OF HIGH-VOLTAGE LINES IN EAGES OF 300,000 FOLTS). ISLEED TO CRANE'S SAFETY MANUAL, AND CAL-OSHA ARTICLE 37, TITLE 8, HIGH-VOLTAGE ELECTRICAL SAFETY ORDERS.

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.



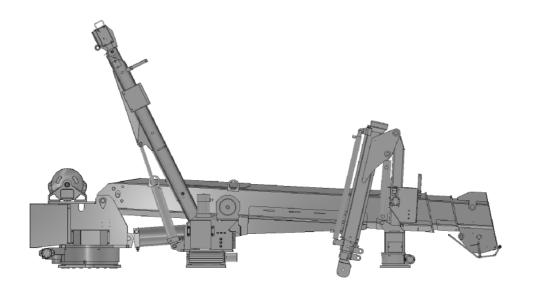
ELECT.	HAZARD	SIGNS
TITLE		

NOTES

CT310KX

08-12-13A

SUPERSEDES



SEE THE NEXT PAGE FOR **ADDITIONAL INFORMATION!**

SAFETY SIGNS & DECALS

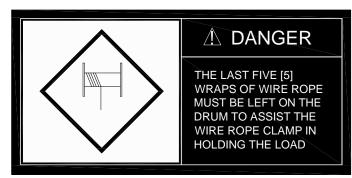
All cranes are equipped with warning and informational signs and decals. Each sign and decal is positioned to provide reminders for safe efficient operating and maintenance procedures for the crane. Below is a description of the winch safety warnings.

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.









SAFETY SIGNS & DECALS 10-24-13B

SUPERSEDES

C150

SECTION

CT310KX

08-12-13A

20560

DECAL #: 15390

CAUTION, INSPECT VEHICLE & CRANE... DESCRIPTION:

PURPOSE: TO INFORM THE OPERATOR OF KEY OPERATING REQUIREMENTS.

QUANTITY:

REAR COVER OR SIDE OF CRANE PLACEMENT:

CAUTION MOUNTED ON FACTORY-RECOMMENDED TRUCK. FOR OPERATING (LOAD) LIMITATION DO NOT OPERATE, WALK, OR STAND BENEATH BOOM OR A SUSPENDED LOAD. OR TRAVEL, BOOM MUST BE IN STOWED

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:

PLACEMENT: REAR COVER OR SIDE OF CRANE



YOU MUST NOT **OPERATE THIS CRANE UNLESS:**

OPERATE THIS CRANE UNLESS:
YOU HAVE BEEN TRAINED IN THE SAFE
OPERATION OF THIS CRANE; AND
YOU KNOW AND FOLLOW THE SAFETY AND
OPERATING RECOMMENDATIONS CONTAINED I
THE MANUFACTURER'S MANUALS, YOUR
EMPLOYER'S WORK RULES, AND APPLICABLE
GOVERNMENT REGULATIONS

AN UNTRAINED OPERATOR SUBJECTS HIMSELF AND OTHERS TO DEATH OR SERIOUS INJURY.

15392 DECAL #:

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



THIS MACHINE IS NOT INSULATED **ELECTROCUTION HAZARD**

THIS LIFTING DEVICE DOES NOT PROVIDE PRO-TECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTRICALLY CHARGED CONDUCTOR.

TO AN ELECTRICALLY CHARGED CONDUCTOR. YOU MUST MAINTAIN A CLEARANCE OR AT LEAST 10 FEET BETWEEN ANY PART OF THE CRANE, LOAD LINE OR LOAD, AND ANY ELECTRICAL LINE OR APPARATUS CARRYING UP TO 50,000 VOLTS. ON EFOOT ADDITIONAL CLEARANCE IS REQUIRED FOR EVERY ADDITIONAL 30,000 VOLTS OR LESS.

DEATH OR SERIOUS INJURY WILL RESULT FROM CONTACT OR INADEQUATE CLEARANCE.

DECAL #: 15401

DESCRIPTION: DANGER, UNLAWFUL TO OPERATE

PURPOSE: TO INFORM OPERATOR OF PROPER OPERATION

IN VICINITY OF ELECTRICAL LINES.

QUANTITY:

PLACEMENT: RING COVER OR SIDE OF CRANE

UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN 20 FEET OF HIGH-VOLTAGE LINES OF 350,000 VOLTS OR LESS.

FOR MINIMUM CLEARANCES OF HIGH-VOLTAGE LINES IN EXCESS OF 350,000 VOLTS, REFERENCE OSHA 1926.140 CRANE'S SAFETY MANUAL, AND CAL-OSHA ARTICLE 37, TITLE 8, HIGH-VOLTAGE ELECTRICAL SAFETY ORDERS

DECAL #: 15393

DESCRIPTION: DANGER, ELECTROCUTION HAZARD, VEHICLE (TRUCK)

WARNS OF DANGER FROM ELECTRICALLY CHARGED PURPOSE:

VEHICLE, CRANE, OR LOAD.

QUANTITY:

PLACEMENT: EACH SIDE & EACH END OF VEHICLE





SECTION



TITLE

SAFETY DECALS

DATE

C150 04-29-16E

SUPERSEDES 10-24-13D

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

VENTURO CRANES

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

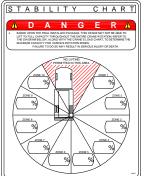
DECAL: **CRANE STABILITY**

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.







TITLE	DATE	SECTION
SAFETY DECALS	06-06-14C	C150
	SUPERSEDES	04004
CRANES	04-02-13B	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

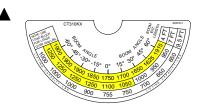
DECAL: UNLAWFUL TO OPERATE

FUNCTION: To inform the operator of proper

operation in vicinity of power lines.

QUANTITY: 1

PLACEMENT: Left side of boom.



UNPLUG
REMOTE CONTROL
PENDANT WHEN
NOT IN USE





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



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DECAL DRAWING & LIST

10-24-13B
SUPERSEDES

2137

VENTURO CT310KX

08-12-13A

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.



AW46 or DEXRON III ATF

Retract All Cylinders
Prior to Servicing

3397-E

PART NO.: 14459

DECAL: OVERLOAD ALARM SYSTEM

FUNCTION: To inform the operator of the

overlaod conditions & remedies.

QUANTITY: 1

PLACEMENT: Rear cover.

THIS CRANE IS EQUIPPED WITH AN OVERLOAD ALARM SYSTEM OVERLOAD ALARM HORN SOUNDS IF RATED LOAD IS EXCEEDED AT ANY REACH. IF ALARM SOUNDS, RAISE BOOM OR LOWER WINCH TO REMOVE OVERLOAD.

3. ALWAYS RAISE BOOM SLIGHTLY BEFORE LIFTING LOAD. WARNING SYSTEM INOPERATIVE WHEN CYLINDER IS COMPLETELY BOTTOMED.

ALARM CAN BE TESTED BY TYING DOWN BOOM WITH WINCH CABLE AND OPERATING BOOM UP OR BY RAISING BOOM AGAINST UP LIMIT STOP.

NOTICE - WARRANTY VOID IF DISCONNECTED

THIS ALARM SYSTEM HAS BEEN INSTALLED AS A SAFETY FEATURE TO PROTECT BOTH THE EQUIPMENT AND THE OPERATOR.

DO NOT DISCONNECT THIS SYSTEM



ıc

DECAL DRAWING & LIST

10-24-13D

C150

CT310KX

SUPERSEDES 08-12-13C

21378

PART NO.: 19788-1

DECAL: PROPORTIONAL Decal (ET12KXP)

FUNCTION: To show the crane has proportional

feature.

QUANTITY: 2

PLACEMENT: One on each side of boom.

PART NO.: 19315-2

DECAL: MANUAL OVERRIDE (PROPORTIONAL)

FUNCTION: To show operator how to override

proportional valve.

QUANTITY:

PLACEMENT: Right side of Mechanism, near valve stem.

PART NO.: 19315-2

DECAL: MANUAL OVERRIDE (PROPORTIONAL)

FUNCTION: To show operator how to override

proportional valve.

QUANTITY:

PLACEMENT: Right side of Mechanism, near valve stem.

PROPORTIONAL CONTROL



28065

MANUAL OVERRIDE

MANUAL OVERRIDE 23184



MANUFACTURING, INC. CINCINNATI, OHIO

DECAL DRAWING & LIST

DATE 3-24-20 SECTION C150

CT310KXP

SUPERSEDES

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 tp 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 A

Refer to drawing 27410.

Recommended Mounting Hardware:

The crane base is mounted using four [4] $3/4-10 \times 2^{3}/4$ " (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 toque 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 rane 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.



INSTALL INSTRUCTIONS
TITLE

SUPERSEDES

NOTES

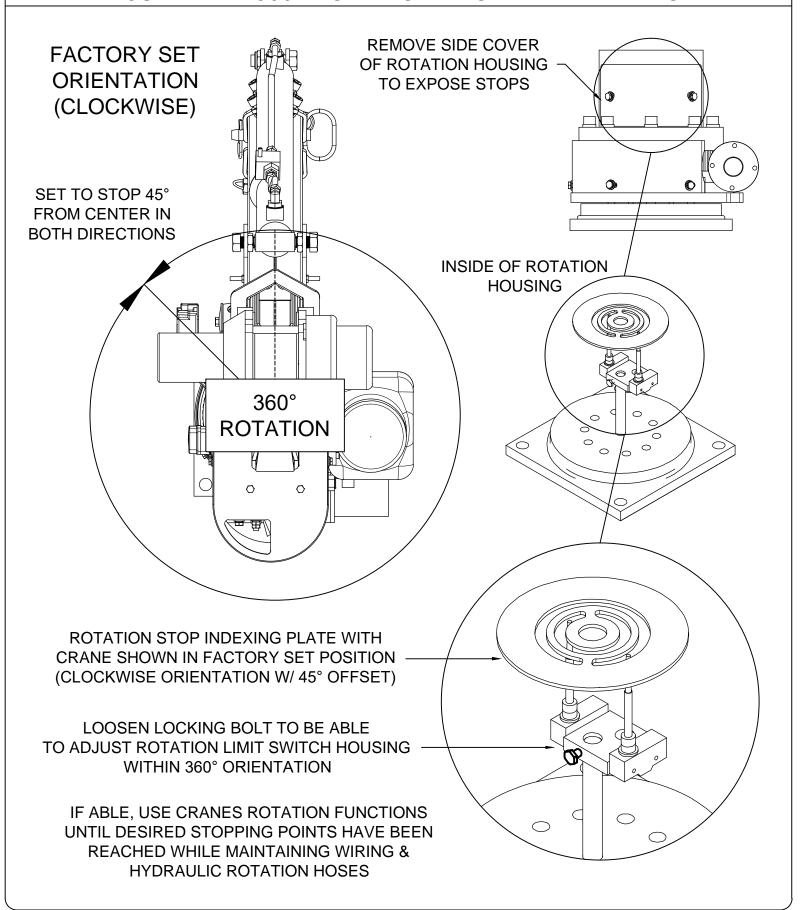
CT310KX

2-18-14G

20563

MANUFACTURING, INC.
CINCINNATI, OHIO

ADJUSTABLE 360° ROTATION STOPS INSTALLATION



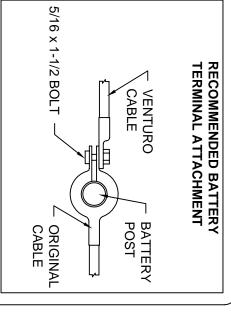
®	VENCO VENTURO INDUSTRIES LLC	ADJUSTABLE ROTATION	04-06-21	C200	
ENTURO	CINCINNATI, OHIO	CT310KX(P), GEN 'C'	SUPERSEDES	28263	

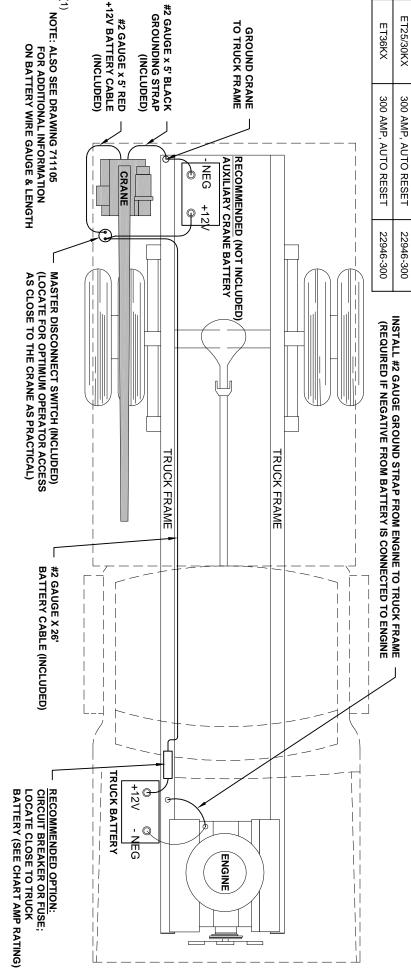
ET16/18KX-20' ET16/18KX-16' ET25/30KX ET8/12K(X) CE-1500-FB ET12KXP RECOMMENDED CIRCUIT BREAKER TABLE ET36KX CT310KX CT200X CRANE ET6K DT7 300 AMP, AUTO RESET 300 AMP, AUTO RESET 300 AMP, MAN RESET 250 AMP, MAN RESET 300 AMP, MAN RESET 250 AMP, MAN RESET 150 AMP, MAN RESET 150 AMP, MAN RESET DESCRIPTION PART NO. 22946-300 22946-300 22946-250 22946-300 22946-300 22946-250 22946-250 22946-250 22946-150 22946-250 22946-150 22946-250

BATTERY REQUIREMENTS

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

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







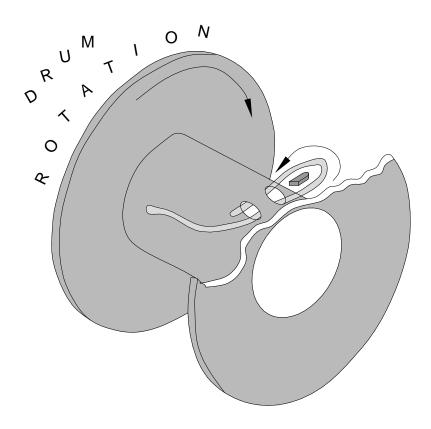
3

VENCO VENTURO INDUSTRIES LLC

BATTERY CABLE & COMPONENT INSTALL ET CRANES

07-30-18L 09-03-20M C200 SECTION

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.

MANUFACTURING, INC. CINCINNATI, OHIO

- 9.1. Maintain tension on the line at all times.
- 9.2. Wind the line evenly onto the drum.



CT310KX	03-05-19B SUPERSEDES 08-12-13A	20574
WIRE ROPE REPLCMNT	03-05-19B	C200
TITLE	DATE	SECTION

CT310KX INSTALLATION INSTRUCTIONS

FINAL PREPARATION FOR USE

NOTES

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

NOTE: The crane is now ready for operation.

<u>ე</u> After 10 hours of operation, repeat steps 1 through 4.



	CINCINNATI, OHIO	MANUFACTURING, INC.	
CT310KX		FINAL PREP FOR USE	TITLE
11-04-02	SUPERSEDES	08-12-13A	DATE
00CU	2000	C200	SECTION

SECTION 300

MAINTENANCE & SERVICE



CT310KX MAINTENANCE & SERVICE

PREVENTIVE MAINTENANCE

NOTES

Overview

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

Periodic Inspection

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

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

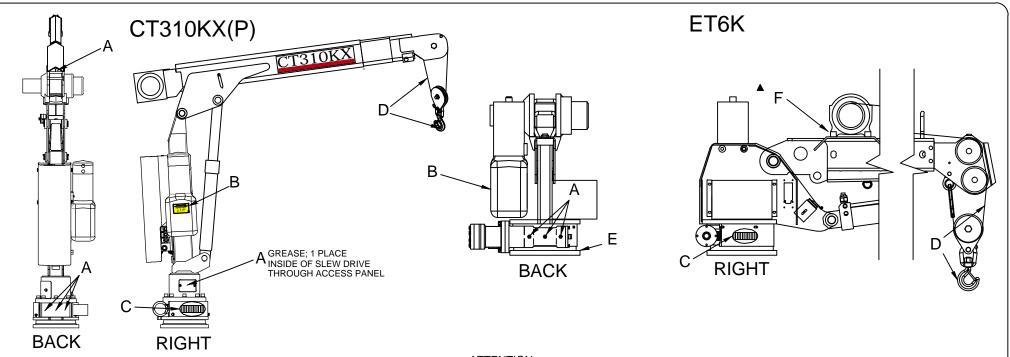
- Are there obvious wear or damage problems?
- sounds of the winch motor or hydraulic pump and motor? Does the crane sound normal? Are there changes in the
- Is the crane operating smoothly?

Table 4-1 Periodic Inspection Schedule

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



CINCINNATI, OHIO	MANUFACTURING, INC.	
CT310KX	PRVNTV MAINTENANCE	пте
11-04-02	08-12-13A	DATE
2057	C300	SECTION



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	No	ote	Service Interval	
Α	Grease fitting With Pressure Grease Gun	Use FUCHS Renolit Aluminum	Complex Grease, or equivalent	Time of Truck Service	
			ALIGNMENT: To align hole w/ fitting, line up grease decals on lower cover and base gusset.		
В	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	
С	Lubricate Gear Teeth	Remove Cover & l	Remove Cover & Use Chassis Grease		
О	Check Wire Rope and Hook	Rope should be free	Rope should be free of kinks and fraying		
Е	Check Torque of Base Mounting Bolts	Square base: torqued to 230 ft-lbs		Time of Truck Service	
-	Check Torque of Base Mounting Bolts	Rectangular base: torqued to 455 ft-lbs		Time of Truck Service	
F	Check Torque of Winch Mounting Bolts	Bolts should be t	orqued to 32 ft-lbs	Time of Truck Service	



TITLE	DATE	SECTION
LUBRICATION & MAINTENACE CHART	03-06-23E	C300
	SUPERSEDES	04000
ET6K & CT310KX(P)	01-30-23D	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.

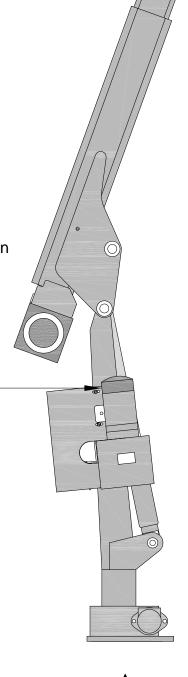
To check:

1. Start the truck engine.

A 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.





VOLTAGE TEST	10-24-13B SUPERSEDES	C300
CT310KX	08-12-13A	20573

WIRE ROPE SPECIFICATIONS

SELECTION

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

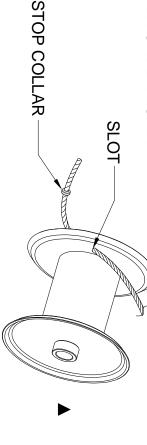
3/8"	5/16"	1/4"	7/32"	3/16"	5/32"	1/8"	WIRE ROPE DIAMETER
4114 LBS.	2800 LBS.	2000 LBS.	1600 LBS.	1200 LBS.	800 LBS.	570 LBS.	MAXIMUM WORKING LOAD
14400 LBS.	9800 LBS.	7000 LBS.	5600 LBS.	4200 LBS.	2800 LBS.	2000 LBS.	BREAKING STRENGTH

INSTALLATION

- . ` Unwind coil of rope by rolling it along the floor. This will prevent kinking
- 2 rope when inserted thru the slot. the wire rope with a stop collar. A hole in the housing allows access for the end of the wire Most VENTURO cranes are provided with a slot in the winch side plate for attaching the end of

use a stop collar. The ET20K(X) & ET25K(X) cranes have a clamp built into the winch drum and do not

ယ WHEN UNDER LOAD. THERE MUST ALWAYS BE AT LEAST THREE [3] TURNS OF WIRE ROPE ON THE DRUM





MANUFACTURING, INC. CINCINNATI, OHIO

WIRE ROPE SPECS

WINCH & CRANE

2S 12-05-13K supersedes 11-10-08J

74

711006

SECTION 400

REPLACEMENT PARTS



CT310KX(P), REPLACEMENT PARTS DWG, MECHANISM 2 (14)(28)18 -(25)



VENCO VENTURO INDUSTRIES LLC

CT310KX(P)

တ

(15)

REPLACEMENT PARTS DWG, MECHANISM

02-16-22A SUPERSEDES 03-31-20

C400

25552

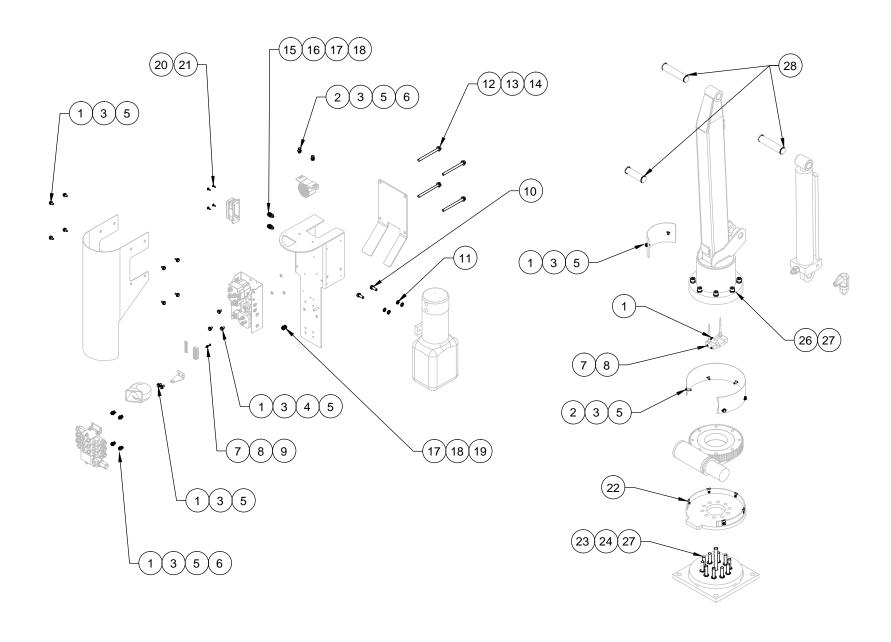
REPLACEMENT PARTS LIST, CT310KX(P)

ITEM NO.	NON-PROP	PROP	PART NO.	DESCRIPTION
1	1	1	26512	PANEL, ELECTRICAL COMPONENTS
2	1	1	21515-1	ELECTRICAL COMPONENTS PANEL ASSY.
3	1	1	17356	OVERLOAD ALARM
4	1	1	28116	JUMPER STRIP (6-PIN)
5	1	1	17187-06	TERMINAL STRIP (6-SECTION)
6	1	1	21948	OPERATOR HORN
7	1	1	22000	HORN BRACKET
8	1	-	21614	VALVE MANIFOLD; 3-SPOOL, NON-PROP
9	-	1	26479	VALVE MANIFOLD; 3-SPOOL, PROPORTIONAL
10	1	1	22481	SOCKET CASE HOOD (16+1 POLE)
11	1	1	24056	HYDRAULIC POWER UNIT (STANDARD)
▲ 12	1	1	20406	HYDRAULIC POWER UNIT (MIL-SPEC LOW FLOW)
13	1	1	26508	REAR COVER
14	1	1	26507	MOUNTING PLATE
15	1	1	27397	WELDED BASE ASSY.
16	1	1	27398	SPACER PLATE W/ MOUNTING RING
17	1	1	27243	SLEWING RING ASSY
18	1	1	27519	SLEWING RING SLIP-ROLLED COVER
19	1	1	26510	WELDED MAST ASSY.
20	1	1	26509	LIMIT SWITCH HOUSING
21	2	2	19376	LIMIT SWITCH
22	1	1	27396	ROTATION COVER
23	1	1	21788	ELEVATION CYLINDER
24	1	1	21547	PIVOT PIN; INBOARD
25	2	2	27515	PIVOT PIN; MAIN PIVOT & OUTBOARD
26	1	1	17460-2200	OVERLOAD PRESSURE SWITCH
27	1	1	17012	BOOT COVER SWIVEL ASSY.
28	1	1	16143-3	COVER, MOTOR, HYD POWER UNIT



-		SUPERSEDES	
	REPL PARTS LIST, MECH	02-16-22A	C400

CT310KX(P), REPLACEMENT HARDWARE DWG, MECHANISM





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO REPLACEMENT HARDWARE DWG, MECH.

DATE
07-23-20A
SUPERSEDES

C400

CT310KX(P)

03-31-20

25554

REPLACEMENT HARDWARE LIST, CT310KX(P)

ITEM NO	QTY	PART NO	DESCRIPTION
1	20	!HHCS02520063S	HEX HEAD CAP SCREW; 1/4-20 X 5/8", SS
2	7	!HHCS02520075S	HEX HEAD CAP SCREW; 1/4-20 X 3/4", SS
3	26	!LWSH-025S	LOCK WASHER; 1/4", SS
4	4	!LWSH-025-STAR-SS	LOCK WASHER; 1/4", EXTERNAL STAR, SS
5	26	!FWSH-025S	FLAT WASHER; 1/4", SS
6	6	!HNUT-02520S	HEX NUT; 1/4-20. SS
7	5	!PHPMS#0632100S	PHILLIPS MACHINE SCREW; #6-32 X 1", SS
8	5	!LWSH-#06S	LOCK WASHER; #6, SS
9	1	!HNUT-#0632S	HEX NUT; #6-32, SS
10	2	!HHCS03816100	HEX HEAD CAP SCREW; 3/8-16 X 1", GR. 5
11	4	!LWSH-038-STAR	LOCK WASHER; 3/8", EXTERNAL STAR, GR. 5
12	4	!HHCS03816500	HEX HEAD CAP SCREW; 3/8-16 X 5", GR. 5
13	4	!LWSH-038	LOCK WASHER; 3/8", GR. 5
14	4	!FWSH-038SAE	FLAT WASHER; 3/8" SAE, GR. 5
15	2	!HHCS03118100S	HEX HEAD CAP SCREW; 5/16-18 X 1", SS
16	2	!LWSH-031S	LOCK WASHER; 5/16", SS
17	3	!FWSH-031S	FLAT WASHER; 5/16", SS
18	3	!HNUT-03118S	HEX NUT; 5/16-18, SS
19	1	!LWSH-031-STAR-SS	LOCK WASHER; 5/16", EXTERNAL STAR, SS
20	4	!SHPMS#0832050S	SLOT HEAD MACHINE SCREW; #08-32 X 1/2", SS
21	4	!LWSH-#08S	LOCK WASHER; #8, SS
22	5	!UNUT-02520-LKG	U-NUT; 1/4-20, LCKNG TYPE
23	10	!SHCS05013350	SHCS 1/2-13 * 3-1/2"
24	10	12534-4	BUSHING,1/2 ID 7/8 OD 14G W/PLATING
25	-	-	-
26	8	!SHCS05013200	SHCS 1/2-13 * 2"
27	18	!LWSH-050-HC	LOCK WSHR; 1/2, GR. 5, ZINC, HI-COLLAR
28	6	!SRNG-113	EXT. RET. RING, 1-1/8 ZINC PLATED

® VENCO VENTURO INDUSTRIES LLC	REPL HW LIST, MECH	DATE 07-23-20A	SECTION C400
CINCINNATI, OHIO	CT310KX(P)	03-31-20	25556

CT310KX(P) REPLACEMENT PARTS DRAWING; 27221 BOOM (15)6 6



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

REPLACEMENT PARTS DWG, 27221 BOOM

CT310KX(P)

DATE SECTION C400 SUPERSEDES 07-15-20A 25

25544

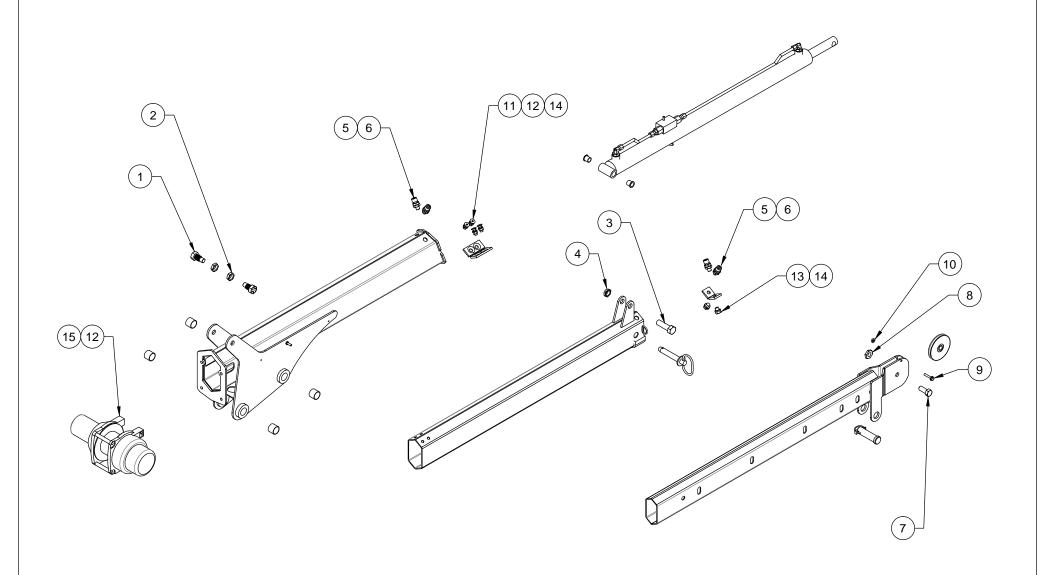
REPLACEMENT PARTS LIST, 27221 BOOM

ITEM NO.	QTY	PART NO.	DESCRIPTION
1	1	20586	WINCH; DC1200 (WARN)
2	1	27223	WELDED ASSY; PRIMARY BOOM
3	1	27225	WELDED ASSY; SECONDARY BOOM
4	1	27227	WELDED ASSY; TERITARY BOOM
5	1	27238	EXTENSION CYLINDER
6	2	27370	BUSHING; NYLON, EXTENSION CYLINDER BASE END
7	1	19646	SHEAVE
8	1	13168-7	SPACER; AXLE, SHEAVE
9	1	27364	CLEVIS PIN; TWO-LINE CONFIGURATION
10	1	27365	LYNCH PIN; TWO-LINE CONFIGURATION
11	1	23042-F-09-09	ASSY; HITCH PIN, 9" LANYARD, SECONDARY & TERTIARY BOOM EXTENSION
12	4	23217-16	UHMW PAD; SQUARE, SECONDARY BOOM
13	4	23217-15	UHMW PAD; RECTANGLE, PRIMARY & SECONDARY BOOMS
14	4	21789	COMPOSITE BEARING; PRIMARY BOOM
15	1	15810-3/16-50	WIRE ROPE ASS'Y, 3/16" X 50'
16	1	24130-1	WINCH; GTD-1200 (COMEUP)

|--|

RPLCMNT PART LIST, BOOM	02-17-22B SUPERSEDES	
CT310KX(P)	07-15-20A	25545

CT310KX(P) REPLACEMENT HARDWARE DRAWING; 27221 BOOM





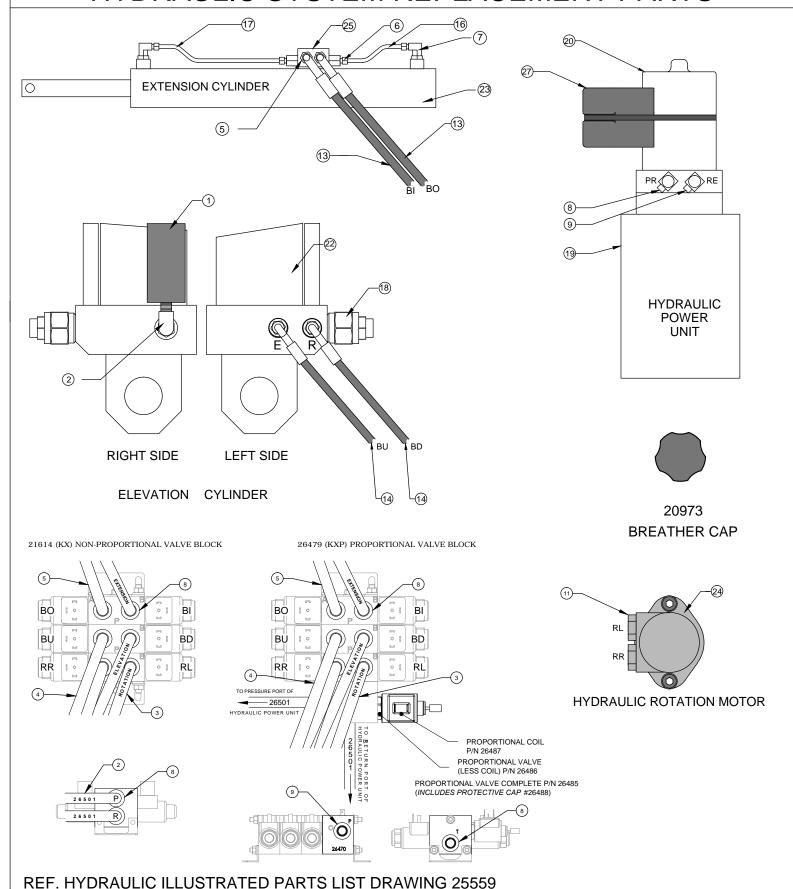
REPLACEMENT H/W DWG, 27221 BOOM	03-31-20	C400
CT310KX(P)	SUPERSEDES	2554

REPLACEMENT HARDWARE LIST, 27221 BOOM

ITEM NO.	QTY	PART NO.	DESCRIPTION
1	2	17487	PIVOT BOLT, EXT CYLINDER
2	2	!JNUT-07516	3/4-16 FIN HEX JAM NUT; ZINC
3	1	17059-2	SHEAVE AXLE
4	1	!JNUT-07510N	JAM NUT; 3/4-10, GR. 5, ZINC, THIN NYL-NSRT
5	4	27368	SOCKET HEAD CAP SCREW; 1/2-13 X 1 1/4" LG, BLACK NYLON
6	8	!JNUT-05013	JAM NUT; 1/2-13, GR. 5, ZINC
7	1	!HHCS06311150	HHCS; 5/8-11 X 1-1/2, GR. 5, ZINC
8	1	!JNUT-06311N	JAM NUT; 5/8-11, GR. 5, ZINC, THIN NYL-NSRT
9	1	!HHCS02520150S	HEX HEAD CAP SCREW 1/4-20 X 1.50LG, STAINLESS
10	1	!JNUT-02520NS	JAM NUT, NYLON INSERT, 1/4-20, STAINLESS
11	4	!FHCS03816100	FLAT HEAD CAP SCREW 3/8-16 X 1.00 LONG PLATED
12	8	!HNUT-03816	HEX NUT; 3/8-16, GR. 5, ZINC
13	2	!HHCS05013050	HHCS 1/2-13 X 1/2 GR.5
14	6	!LWSH-050	LOCK WSHR; 1/2, GR. 5, ZINC
15	4	!HHCS03816125	HEX HEAD CAP SCREW 3/8-16 X 1-1/4 LG, GR5, PLATED

	CT310KX(P)	SUPERSEDES	25547
	RPLCMNT H/W LIST, BOOM	03-31-20	C400
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HYDRAULIC SYSTEM REPLACEMENT PARTS



	VENCO VENTURO INDUSTRIES LLC	HYD. SYSTEM REPL PARTS	04-08-20	C400	
ENTUR	CINCINNATI, OHIO	CT310KX(P)	SUPERSEDES -	25558	

HYDRAULIC SYSTEM PARTS LIST

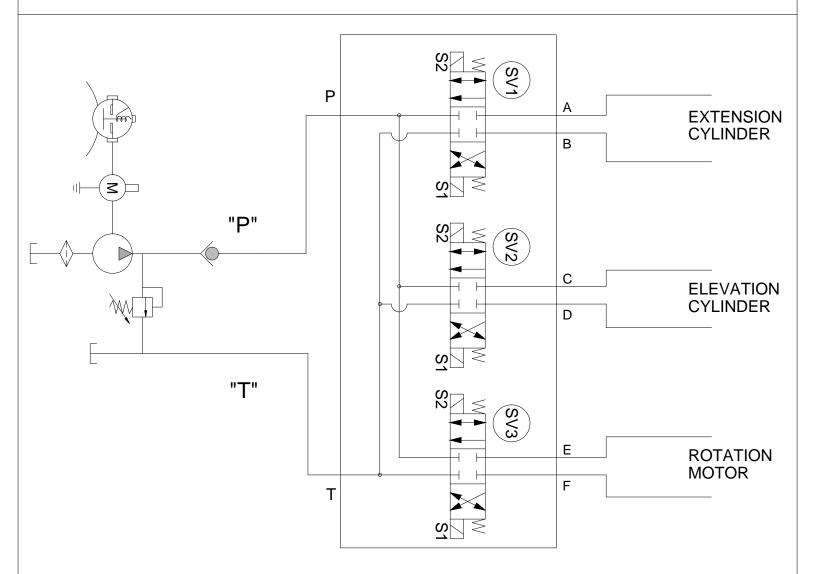
ITEM NO	Non-Prop	Prop	PART NO	DESCRIPTION
1	1	1	17460-2200-02	OVERLOAD PRESSURE SWITCH
2	2	2	26501	HOSE ASS'Y; PRESSURE & RETURN
3	2	2	26502	HOSE ASS'Y; ROTATION RIGHT & LEFT
4	2	2	26503	HOSE ASS'Y; BOOM UP & DOWN
5	2	2	26504	HOSE ASS'Y; BOOM IN & OUT
6	1	1	27099	HYD. TUBE ASS'Y; BOOM OUT, EXT. CYL.
7	1	1	27100	HYD. TUBE ASS'Y; BOOM IN, EXT. CYL.
8	12	12	FF6400-0606	ADAPTER FITTING; STRAIGHT, 60FS-6MO
9	1	1	FF2501-0606	ADAPTER FITTING; 90° ELBOW, 60FS-6MP
10	1	1	FF2501-0604	ADAPTER FITTING; 90° ELBOW, 60FS-4MP
11	2	2	FF6801-0610	ADAPTER FITTING; 90° ELBOW, 60FS-10MO
12	2	2	H6801-0608	ADAPTER FITTING; 90° ELBOW, 6MJ-8MO
13	2	2	H6400-0606	ADAPTER FITTING; STRAIGHT, 6MJ-6MO
14	1	1	H6805-0404	ADAPTER FITTING; 90° ELBOW, 4MO-4FP
15	1	1	FF6801-0606	ADAPTER FITTING; 90° ELBOW; 60FS-6MO
16	1	1	27099	TUBE ASSY.
17	1	1	27100	TUBE ASSY.
18	1	1	20893	COUNTER BALANCE VALVE
19	1	1	20456	HYDRAULIC PWR UNIT
20	1	1	16940	MOTOR, HYD PWR UNIT
21	1	ı	21614	VALVE MANIFOLD; 3-SPOOL, NON-PROP
21	-	1	26479	VALVE MANIFOLD; 3-SPOOL, PROPORTIONAL
22	1	1	21788	ELEVATION CYLINDER
23	1	1	27238	EXTENSION CYLINDER
24	1	1	20926	ROTATION MOTOR, HYD
25	1	1	27363	P.O. CHECK VALVE
26	1	1	416705	COVER

NOTE: ITEMS 2 THROUGH 15 ARE INCLUDED IN THE HOSE & FITTING KIT P/N 26500.

REF. HYDRAULIC ILLUSTRATED PARTS BREAKDOWN DRAWING 25558



CT310KX MAINTENANCE & SERVICE



OPERATION

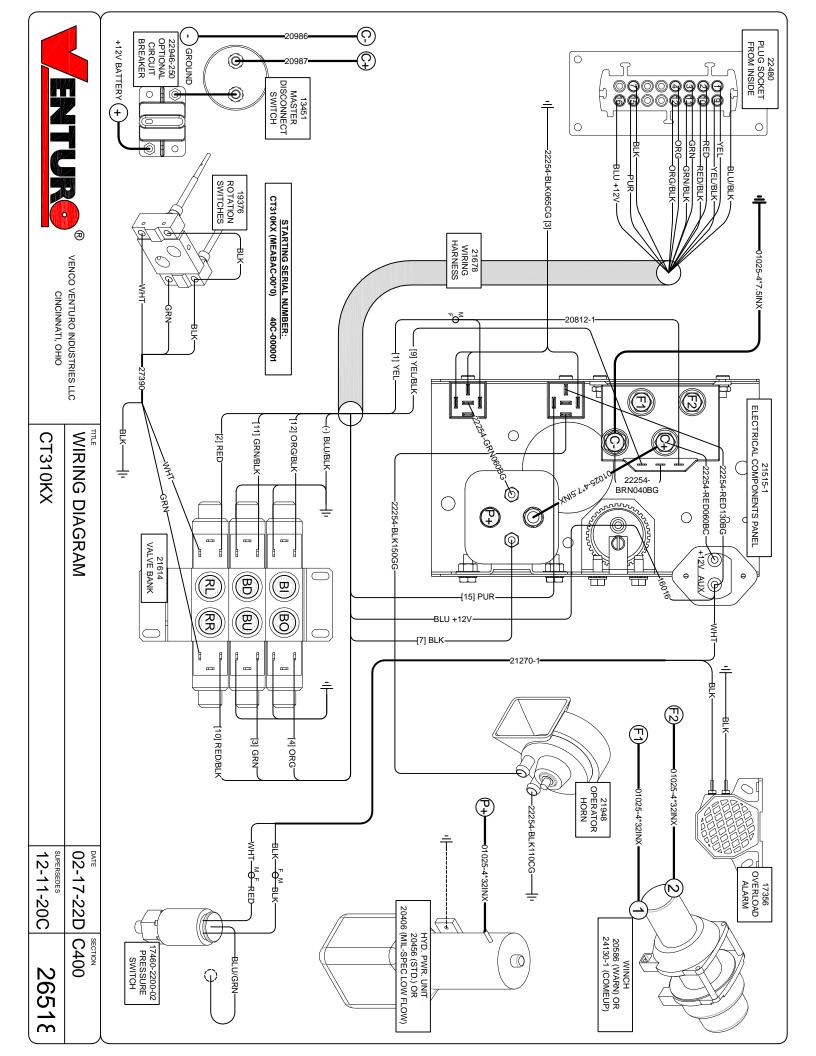
ENERGIZE "S2"
OPEN FLOW
'P' TO 'A'
'B' TO 'T'
ENERGIZE "S1"
OPEN FLOW
'P' TO 'B'
'A' TO 'T'

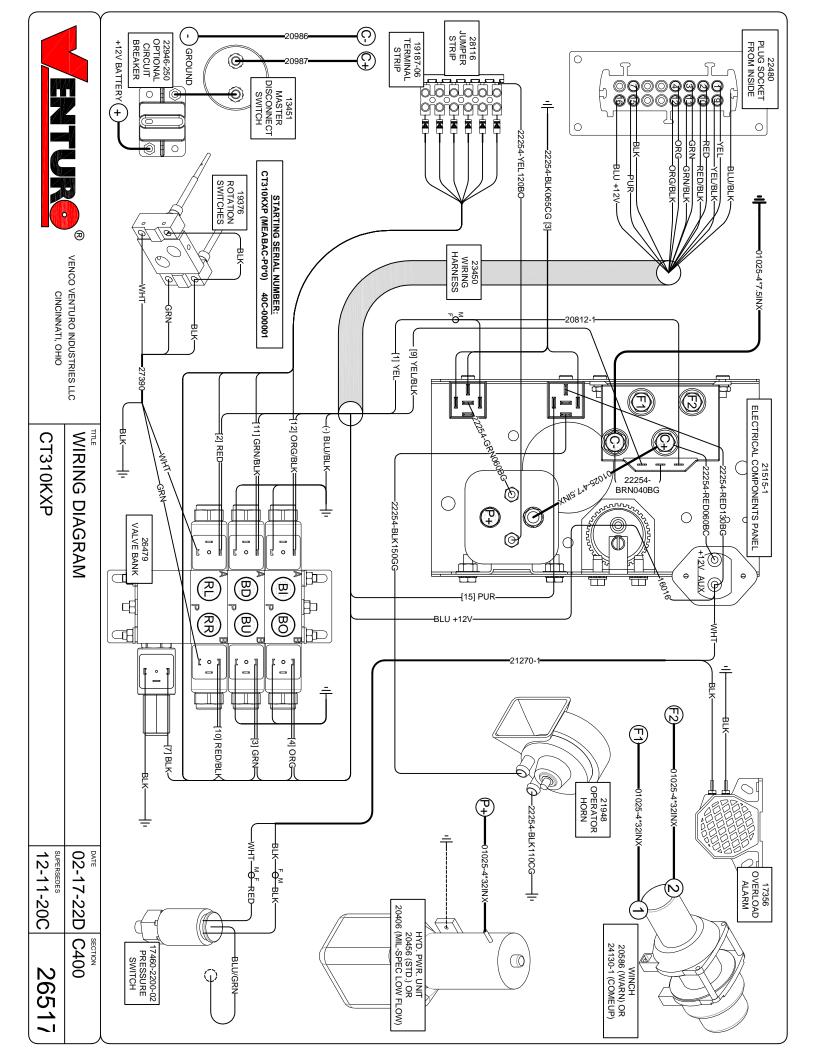
ENERGIZE "S2"
OPEN FLOW
'P' TO 'C'
'D' TO 'T'
ENERGIZE "S1"
OPEN FLOW
'P' TO 'D'
'C' TO 'T'

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



CT310KX	supersedes 08-12-13A	20575
HYDRAULIC SCHEMATIC	03-05-19B	section C400





WINCH REPLACEMENT PARTS

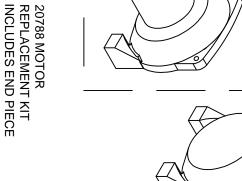
WINCH P/N 20586 WARN DC1200

WINCH P/N 24130-1

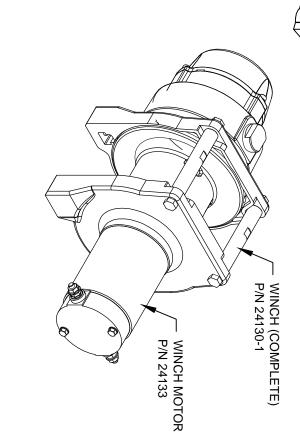
COMEUP GTD-1200

CONTACTOR WARN P/N 20499 COMEUP P/N 28402





- CONTACTOR WARN P/N 20499 COMEUP P/N 28402





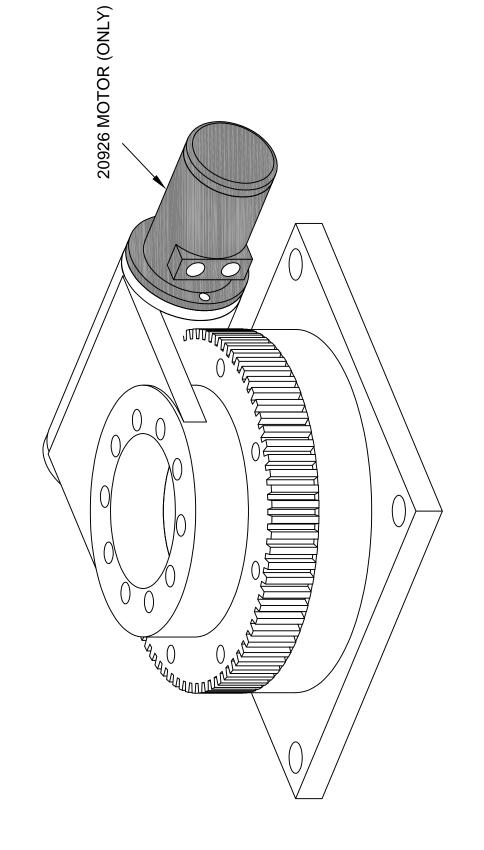
VENCO VENTURO INDUSTRIES LLC

REPLACEMENT PARTS DRAWING

01-26-15D 02-17-22-E

CT310KX & ET6K

27243 SLEWING SYSTEM REPLACEMENT PARTS



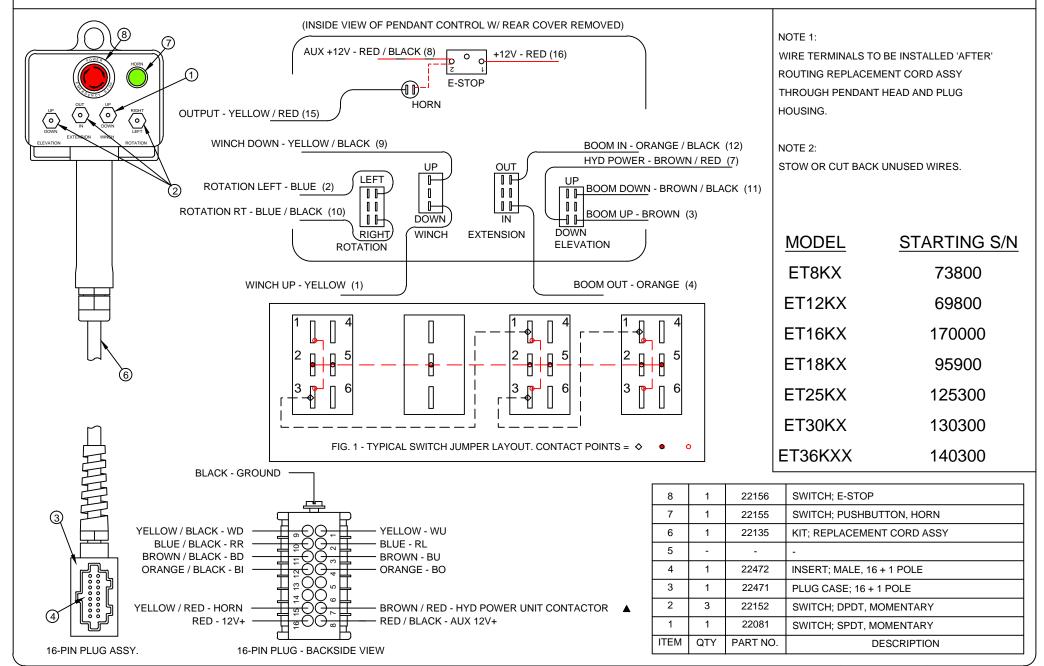


		H
VENCO VENTURO INDUSTRIES LLC	CINCINNATI, OHIO	

тпе	DATE
SLEWING SYSTEM REPLACEMENT PARTS	01-26-15A
	SUPERSEDES
CT310KX & FT6K ▲	01-22-14

SECTION C400

21990 PENDANT; 4 FUNCTION ET CRANES, E-STOP / HORN





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO REPLACEMENT PARTS DWG & LIST

01-12-17B

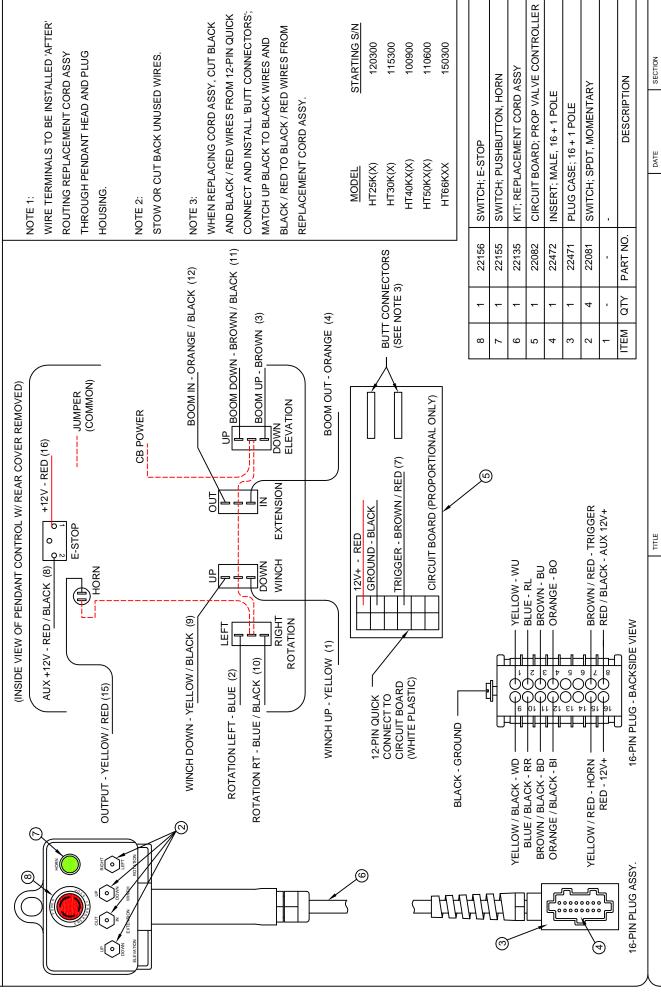
C400

21990 PNDNT; 4 FNCTN ET CRNS, ESTP/HRN

10-20-14A

23075

21988 PENDANT; PROP, NO ENG CNTRL, E-STOP / HORN



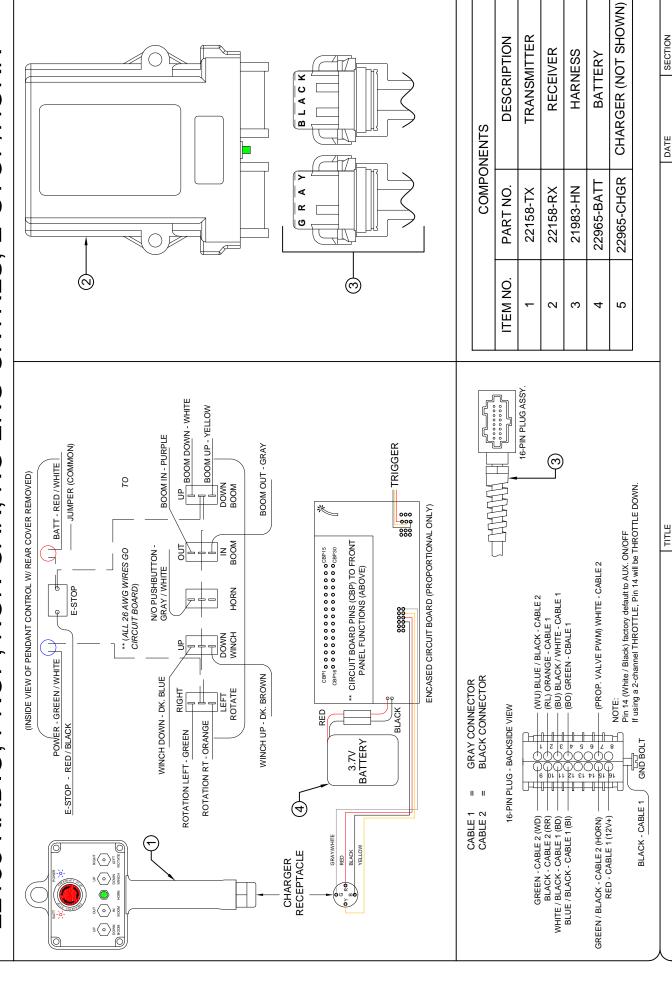
VENCO VENTURO INDUSTRIES LLC

CINCINNATI, OHIO

	10-03-14	C400
21988 PNDNT; PROP, NO ENG CNT, ESTP/HRN	SUPERSEDES	23

23073

22158 RADIO; PROP, NON-CAN, NO ENG CNTRLS, E-STOP/HORN



23786

SUPERSEDES 07-31-18

ET PROPORTIONAL SERIES CRANES

REPLACEMENT PARTS DWG & LIST

VENCO VENTURO INDUSTRIES LLC

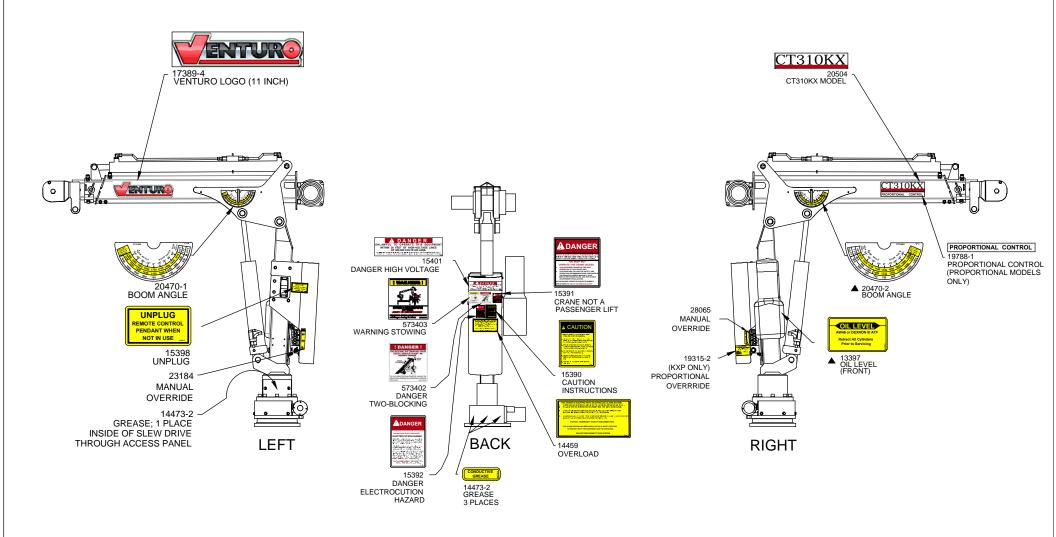
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CINCINNATI, OHIO

C400

03-11-19A

DECAL PLACEMENT, CT310KX(P)



DECAL LOCATIONS	10-01-20F	C400
CT310KX(P)	04-13-20E	20561

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 A LARM 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



CT310KX(P), ALL CONFIG.	SUPERSEDES 08-04-20F	20585
FIELD SERVICE LABEL KIT	03-13-23G	C400
TITLE	DATE	SECTION

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.

VENCO VENTURO INDUSTRIES LLC

12110 BEST PLACE | CINCINNATI, OHIO 45241 P: 800-226-2238 | F: 513-326-5427 www.venturo.com

Revised: January 2015 12-00073_VNT1-D