

**INST-23033** 

EM\*AAA-\*\*

## PARTS & INSTALLATION MANUAL ET30KX

#### Included in this manual:

#### ET30KX

- 5,000 lbs Electric Telescopic Service Crane
- 10-16 ft Powered w/ 16-20 ft Manual, Single-Stage Boom Extension
- 10-20 ft Powered, Dual-Stage Boom Extension

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

VENCO VENTURO O INDUSTRIES LLC

INST-23033 - 7/1/2025 (Rev: NEW0)

DESCRIPTION & SPECIFICATIONS SPECIFICATIONS & OPERATING FEATURES SPECIFICATIONS & OPERATING FEATURES 7607100A 21851a 21851b INSTALLATION DIMENSIONS; ET30KX MOUNTING DIMENSIONS; BASE PLATE 21092 21080

CAPACITY CHART; ET30KX W/ 10-16-20 FT. BOOM 21091

7607150A

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12-00073 VNT1 WARRANTY PAGE

## **SECTION 100**

# DESCRIPTION & SPECIFICATIONS



#### SPECIFICATIONS AND OPERATING FEATURES

ET30KX-10/20

#### **SPECIFICATIONS**

12 VOLT BATTERY OPERATED

30,000 FT-LBS OVERTURNING MOMENT (Or as limited by truck stability)

MOMENT OVERLOAD SYSTEM

TELESCOPIC BOOM	10 / 20	
BOOM HYD ELEVATION	-8° TO 75°	
BOOMHYDEXT	10 - 16 FT	
BOOMMANUALEXT	4 FT	
CAPACITY	1500 LBS @ 20 FT REACH	
CAPACITY	5000 LBS @ 3 TO 5 FT REACH	
WIRE ROPE	5/16" DIA x 80 FT	
PENDANT CORD LENGTH	25 FT	

WINCH - 2500 LBS SINGLE LINE CAPACITY

With Automatic Load Brake

**ELECTRIC HYDRAULIC BOOM ELEVATION** 

ELECTRIC HYDRAULIC BOOM EXTENSION & RETRACTION - 6 FT STROKE

360° CONTINUOUS

REMOTE CONTROL PENDANT

25 ft Straight Cord with Four Environmentally Sealed Toggle Switches Protected by a Guard

MASTER DISCONNECT SWITCH

**OUTRIGGERS AVAILABLE** 

Side Bracket Type Outriggers

Fold Away Type Outriggers

Pullout Type Outrigger System

<b>VENTURO</b>	MFG., INC. CINCINNATI, OHIO
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INSTALLATION DWG	8-7-09A	C120
ET30KX-10/20	9-19-08	21851a

#### **OVERLOAD SENSING SYSTEM**

This crane is equipped with an Overload Sensing System. If the capacity of the crane is exceeded, the "Winch Up", "Boom Down", and "Boom Out" functions will be shut down. The "Winch Down", "Boom Up", and "Boom In" functions will continue to operate and can be used to relieve the overload condition. The "Rotation" function also will continue to operate.

#### **CONTROL PRIORITY SYSTEM**

The design intent of the electrcal and hydraulic system is such that some functions can be operated simultaneously, while others are meant to be operated individually. To summarize the control system see the explanations below.

- Winch up takes priority over all functions.
- Winch Down can be operated with any other single function.
- Hydraulic functions (Rotation Right, Rotation Left, Boom Up, Boom Down, Boom Out and Boom In) are designed to function one at a time.

#### CABLE DRUM AND SHEAVE DIAMETERS

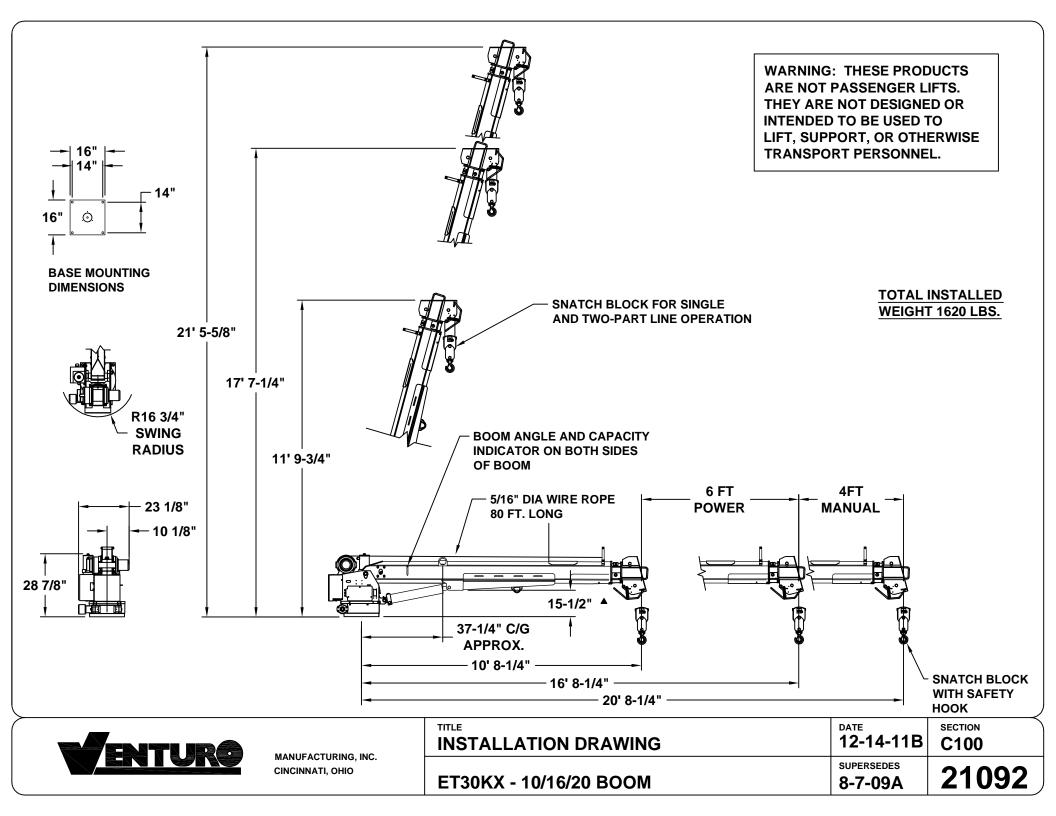
The drum on the ET30KX is 5-5/16" in diameter which provides the first layer wire rope pitch diameter 18 times the rope diameter as required by ANSI B30.5 Cranes Standards. The cable sheaves are either 16 (snatch block) or 18 (boom) times the cable diameter which likewise conforms.

#### **MISCELLANEOUS**

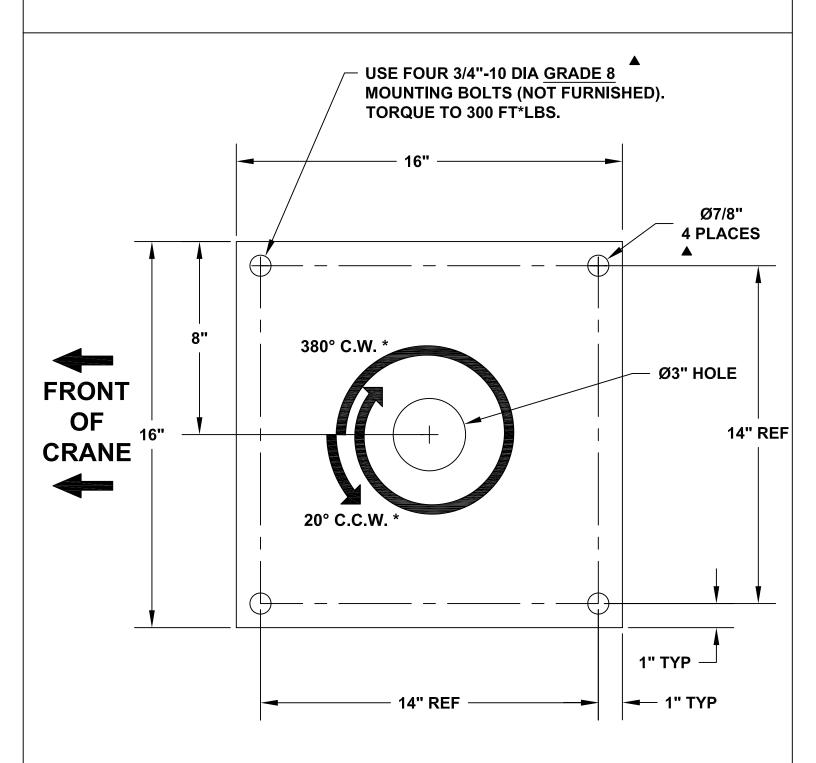
- A. CAPACITY INDICATOR
  - Select boom reach and angle allowable for load by using capacity indicator arrow and chart on either side of boom.
- B. BATTERY HOOKUP
  - A parallel auxiliary battery should be installed near the crane as shown on Dwg. 19947 under "RECOMMENDED INSTALLATION". The parallel auxiliary battery minimum rating should be 450 Cold Cranking Amps (at 0° F) and 100 reserve capacity, or 78 plates and 70 amp hours.



ET30KX-10/20	9-19-08	21851b
INSTALLATION DWG	8-10-09A	C120
TITLE	DATE	SECTION



#### ET/HT25/30/36KX BASE MOUNTING DIMENSIONS



\* Rotation limits typically apply to HT cranes only. ET cranes generally have continuous rotation.

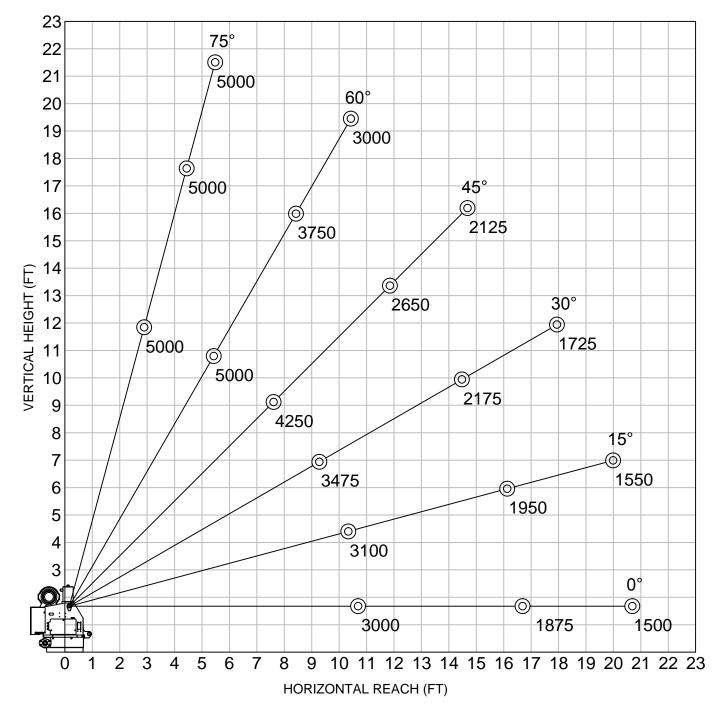


ET/HT25/30/36	12-14-11D	21080
BASE MOUNTING	02-13-12E	C100
TITLE	DATE	SECTION

#### ET/HT30KX, 10'-16'-20' BOOM

▲ 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 2500 LBS 2 PART LINE FOR LOADS OF 2500 LBS AND GREATER

WEIGHT OF LOAD BLOCK = 34 LBS



f	SUPERSEDES		_
	05-03-16C	C100	

## **SECTION 150**

## SAFETY



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

## **CRANE SAFETY AND HAZARDS**

#### **CAUTIONS**

- 1. INSPECT VEHICLE AND CRANE, INCLUDING OPERATION, PRIOR TO USE DAILY.
- DO NOT USE THIS EQUIPMENT EXCEPT ON FIRM LEVEL GROUND WITH CRANE MOUNTED ON FACTORY-RECOMMENDED TRUCK.
- BEFORE OPERATING THE CRANE, REFER TO MAXIMUM LOAD (CAPACITY) CHART ON CRANE FOR OPERATING (LOAD) LIMITATIONS.
- DO NOT OPERATE, WALK, OR STAND BENEATH BOOM OR A SUSPENDED LOAD.
- 5. ATTACH PENDANT CORD SUPPORT SNAP TO ATTACHMENT POINT BEFORE PLUGGING IN PENDANT, IF SO EQUIPPED.
- 6. UNPLUG PENDANT AND SHUT OFF MASTER DISCONNECT SWITCH WHEN CRANE IS NOT IN USE.
- 7. FOR TRAVEL, BOOM MUST BE IN STOWED POSITION.

#### DANGER

- THIS CRANE IS NOT A PASSENGER LIFT.
- IT IS NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.

#### YOU MUST NOT OPERATE THIS CRANE, UNLESS:

- 1. YOU HAVE BEEN TRAINED IN THE SAFE OPERATION OF THIS CRANE, AND
- 2. YOU KNOW AND FOLLOW THE SAFETY AND OPERATING RECOMMENDATIONSCONTAINED IN 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.

#### **ELECTROCUTION HAZARD**

- THIS MACHINE IS NOT INSULATED.
- MAINTAIN SAFE CLEARANCES FROM ELECTRICAL LINES AND APPARATUSES.
- YOU MUST ALLOW FOR BOOM SWAY, ROCK, OR SAG, AND ELECTRICAL LINE AND LOAD-LINE SWAYING
- THIS LIFTING DEVICE DOES NOT PROVIDE PROTECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTRICALLY CHARGED CONDUCTOR.
- YOU MUST MAINTAIN A CLEARANCE OF 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. REFER TO DRAWING 15394 FOR ADDITIONAL INFORMATION.
- DEATH OR SERIOUS INJURY WILL RESULT FROM CONTACT OR INADEQUATE CLEARANCES.

#### OVERLOAD SENSING SYSTEM - STANDARD ON ALL CRANES

- 1. IF OVERLOADED, THE WINCH UP, BOOM DOWN, AND (OPTIONAL) BOOM OUT FUNCTIONS WILL AUTOMATICALLY, SHUT OFF TO PREVENT INCREASED OVERLOAD.
- 2. ON CRANES EQUIPPED WITH AN OPTIONAL OVERLOAD ALARM, IT WILL ALSO SOUND.
- 3. IF AN OVERLOAD OCCURS, USE THE WINCH DOWN, BOOM UP OR BOOM IN FUNCTIONS TO RELIEVE THE OVERLOAD.
- 4. THE OVERLOAD SENSING SYSTEM IS INOPERATIVE IF THE BOOM ELEVATION IS AT THE BOTTOM OR TOP LIMIT OF TRAVEL. TO RELIEVE THIS CONDITION, RAISE OR LOWER THE BOOM SLIGHTLY BEFORE LIFTING THE LOAD.
- 5. SEE MANUAL FOR TESTING THE OVERLOAD SYSTEM.

NOTICE - WARRANTY VOID IF DISCONNECTED

THE OVERLOAD SENSING SYSTEM HAS BEEN INSTALLED AS A SAFETY FEATURE TO PROTECT THE EQUIPMENT AND THE OPERATOR.

DO NOT DISCONNECT THIS SYSTEM

® VENCO VENTURO INDUSTRIES LLC	SAFETY & HAZARDS	01-29-15K	C150
CINCINNATI, OHIO	ELECTRIC CRANES	12-20-13J	850711

## VEHICLE & CRANE MOUNTED ELECTRICAL HAZARD SIGN APPLICATION & INFORMATION





SIGN NO. 15393 DISPLAYS THE INTERNATIONAL SYMBOL FOR ELECTRICITY AND WARNS OF DANGER FROM AN ELECTRICALLY CHARGED VEHICLE, CRANE, OR LOAD. FOUR ARE RECOMMENDED (ONE FOR EACH SIDE AND ONE FOR EACH END OF VEHICLE) TO BE APPLIED IN LOCATIONS WHICH ARE READILY VISIBLE TO GROUND PERSONNEL.

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. CRANE'S SAFETY MANUAL, AND CAL-OSHA ARTICLE 37, TITLE 8, HIGH-VOLTAGE ELECTRICAL SAFETY ORDERS.

SIGN NO. 15401 PROVIDES ADDITIONAL WARNING OF LEGAL REQUIREMENTS WHEN OPERATING NEAR HIGH VOLTAGE LINES. THIS SIGN IS PLACED ON THE CONTROL PENDANT SIDE OF BOOM.

#### Table A - Minimum Clearance Distances

Voltage (nominal, kV, alternating current)	Minimum clearance distance (feet) *
Up to 50	10 15 20 25 35 45  (as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

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

NOTE: ENVIRONMENTAL CONDITIONS SUCH AS FOG, SMOKE, OR PRECIPITATION MAY REQUIRE INCREASED CLEARANCES

CINCINNATI, OHIO



SECTION HAZARD APPS & INFO C150 02-21-14M SUPERSEDES 15394 ET/HT CRANES 12-20-13L

DECAL #: 15390

CAUTION, INSPECT VEHICLE & CRANE... DESCRIPTION:

PURPOSE: TO INFORM THE OPERATOR OF KEY OPERATING REQUIREMENTS.

QUANTITY:

REAR COVER OR SIDE OF CRANE PLACEMENT:



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



**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







SAFETY DECALS

DATE

04-29-16E

SECTION C150

SUPERSEDES 10-24-13D

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

**VENTURO CRANES** 

TITLE

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.







CINCINNATI, OHIO

SAFETY DECALS	06-06-14C	C150
CRANES	04-02-13B	21384

PART NO.: 14473-2

DECAL: CONDUCTIVE GREASE

FUNCTION: To show the operator where to apply grease.

QUANTITY: Varies

PLACEMENT: Near grease fittings.



PART NO.: 13397

DECAL: OIL LEVEL

FUNCTION: To inform the operator of proper oil level to

maintain.

QUANTITY: 1

PLACEMENT: Side of hydraulic power unit.

OIL LEVEL

AW46 or DEXRON III ATF

Retract All Cylinders
Prior to Servicing

3397-E

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.

UNPLUG
REMOTE CONTROL
PENDANT WHEN
NOT IN USE



MANUFACTURING, INC.	
CINCINNATI, OHIO	

TITLE	DATE	SECTION
DECALS	11-12-19E	C150
	SUPERSEDES	21251
ET CRANES	12-23-13D	Z1354

PART NO.: 23167-1 & 23167-2

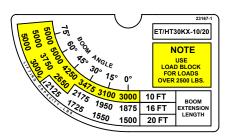
DECAL: **CRANE CAPACITY** 

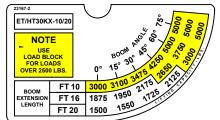
FUNCTION: To show the operator the operating

capacities of the crane.

QUANTITY: 1 each

PLACEMENT: One on each side of boom.





PART NO.: 23168

DECAL: MODEL NUMBER (ET30KX)

FUNCTION: To show the model of the crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.



PART NO.: 19788

DECAL: PROPORTIONAL DECAL-1

To show the crane has proportional FUNCTION:

feature.

QUANTITY:

PLACEMENT: One on each side of boom.

PROPORTIONAL CONTROL



VENTURO INDUSTRIES LLC	
CINCINNATI, OHIO	

TITLE
MODEL/CAPACITY DECALS

## **SECTION 200**

## INSTALLATION



#### !! IMPORTANT!!

#### ADEQUATE WIRING IMPERATIVE FOR PROPER OPERATION

- 1. PROPER GROUND PATH SEE DWG 15660
- 2. CURRENT DRAW IS SEVERAL HUNDRED AMPERES ADEQUATE WIRE SIZE AND BATTERY CAPACITY IS ABSOLUTELY ESSENTIAL (SEE CHART BELOW).

▲ MINIMUM WIRE GAUGE AND AUXILIARY BATTERY SIZE										
MODEL		TOTAL LENGTH OF CABLE (FT) *					▲ 12 VOLT AUXILIARY BATTERY REQUIREMENTS			
	0-20	21-25	26-30	31-40	41-50	51-60	61-70	71-80	CCA (A) **	RC (MIN) ***
▲ CE1500 CE6K CT2000 CT2003/4/5 DT7K	#4	#4	#2	#2	#1	#0	#0	#00	350	100
ET5500MPB ET5500R ET6KMPB ET6KR ET6K ET8K ET10K ET12K	#2	#2	#1	#0	#00	NOT RECOMMENDED		//ENDED	450	100
ET8KX ET10KX ET12KX  • ET12KXP	#2	#2	#1	#0	#00	NOT R	ECOMN	MENDED	550	150
ET18K(X) ET25K(X) ET30KX ET36KX ET36KX										

- \* INCLUDES GROUND CABLE
- \*\* CCA = COLD CRANKING AMPS AT 0° (F).
- \*\*\* RC = RESERVE CAPACITY IN MINUTES AT 25 AMPS AND 80° (F).

  THE RC RATING IS A MEASURE OF THE PERIOD OF TIME THE BATTERY CAN SUPPLY A GIVEN CURRENT WITHOUT RECHARGING.

	TITLE	DATE	SECTION
VENCO VENTURO INDUSTRIES LLC	CABLE & BATTERY	07-30-18X	C200
CINCINNATI, OHIO		SUPERSEDES	744405
	ELECTRIC CRANES	09-27-17W	711105

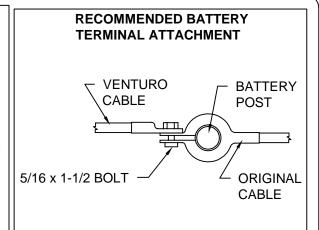
	RECOMMENDED CIRCUIT BREAKER TABLE						
	CRANE	DESCRIPTION	PART NO.				
	CT310KX	250 AMP, MAN RESET	22946-250				
	DT7	250 AMP, MAN RESET	22946-250				
	CE-1500-FB	150 AMP, MAN RESET	22946-150				
	CE6K	150 AMP, MAN RESET	22946-150				
	CT200X	250 AMP, MAN RESET	22946-250				
	ET6K	250 AMP, MAN RESET	22946-250				
	ET8/12K(X)	250 AMP, MAN RESET	22946-250				
▲	ET12KXP	300 AMP, MAN RESET	22946-300				
	ET16/18KX-16'	250 AMP, MAN RESET	22946-250				
_	ET16/18KX-20'	300 AMP, MAN RESET	22946-300				
	ET25/30KX	300 AMP, AUTO RESET	22946-300				
	ET36KX	300 AMP, AUTO RESET	22946-300				
	·	·					

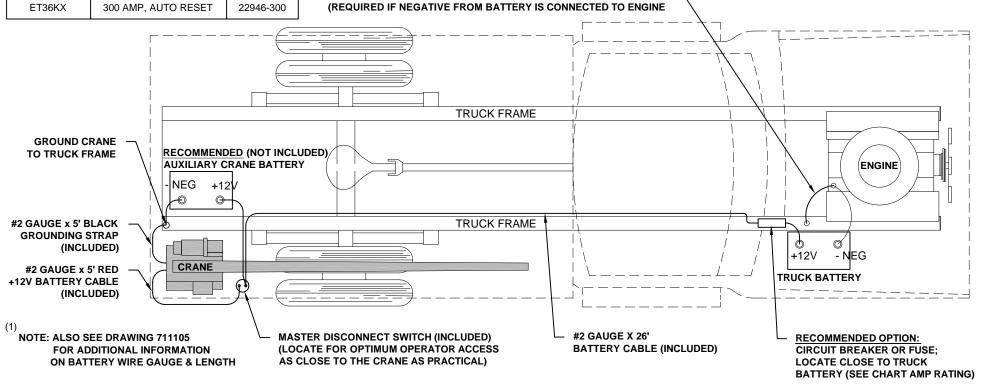
#### **BATTERY REQUIREMENTS**

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

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

INSTALL #2 GAUGE GROUND STRAP FROM ENGINE TO TRUCK FRAME







VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE	DATE	SECTION
BATTERY CABLE & COMPONENT INSTALL	09-03-20M	C200
	SUPERSEDES	45000
ET CRANES	07-30-18L	15660

#### STABILITY TEST - ET/HT30-20' SERIES

#### Overview

Venturo follows the guidelines of ANSI B30.5 in defining stability. Generally speaking, a truck is considered stable as long as it is not on the verge of tipping - i.e. with the truck level, at least one tire on each corner of the truck must remain in contact with the ground.

It is important to note that nearly every installation is unique and will, therefore, typically require stability testing.

The procedure outlined below follows ANSI's (B30.5 - 5-1.1.1) specified "maximum load rating" of 85% of truck stability.

#### **Testing Procedure**

- 1. Locate the truck on firm, level ground and set parking brake.
- 2. Fully deploy stabilizers, making sure they are firmly in contact with supportive ground; use stabilizer pads as required. The tires of the truck should remain in full contact with the ground.
- 3. Inspect wire rope and other key components of crane (consult owners manual for more information).
- 4. Conduct an operational check of all crane functions.
- 5. Locate the Overload Pressure Switch at the base of the elevation cylinder
- 5.1. Disconnect the black & white wires from the housing and then connect the black & white wires together to by-pass the Overload Pressure Switch for the stability test. Note: The black & white wires MUST be reconnected to the Overload Pressure Switch after the stability test has be completed.
- 6. Use a **Test Weight** weighing a **minimum** of <u>1765 lbs</u>, (includes load block weight of <u>34</u> lbs.) to a **maximum of 1825 lbs**.
- 7. Position the boom level and fully retracted.
- 8. Referring to the Stability Chart (drawing 20907) rotate the crane to a position between 1 and 2 o'clock (truck cab is facing 12 o'clock) to begin testing.
- 9. Use the winch to lift the Test Weight; DO NOT allow the weight to be more than 6" off the ground at any time during testing (for safety).
- 10. Using a weight weighing between 1765 to 1825 lbs., extend the boom slowly, until one of two conditions occur:
  - 10.1. Full extension is reached Mark the ZONE in question 100%
  - 10.2. The VLC system stops the boom extension Mark the ZONE in question 100%
  - 10.3. The truck becomes unstable i.e. a tire lifts off the ground
  - 10.3.1. Retract the boom until at least one tire on each corner of the truck is making contact with the ground
  - 10.3.2. Use the formula below to determine the allowable % *of Rated Capacity* for the ZONE in question.
- 11. Note: The "Max Stable Reach in inches" is measured from the center of rotation of the crane housing to the lifting load hook.

% Rated Capacity = 

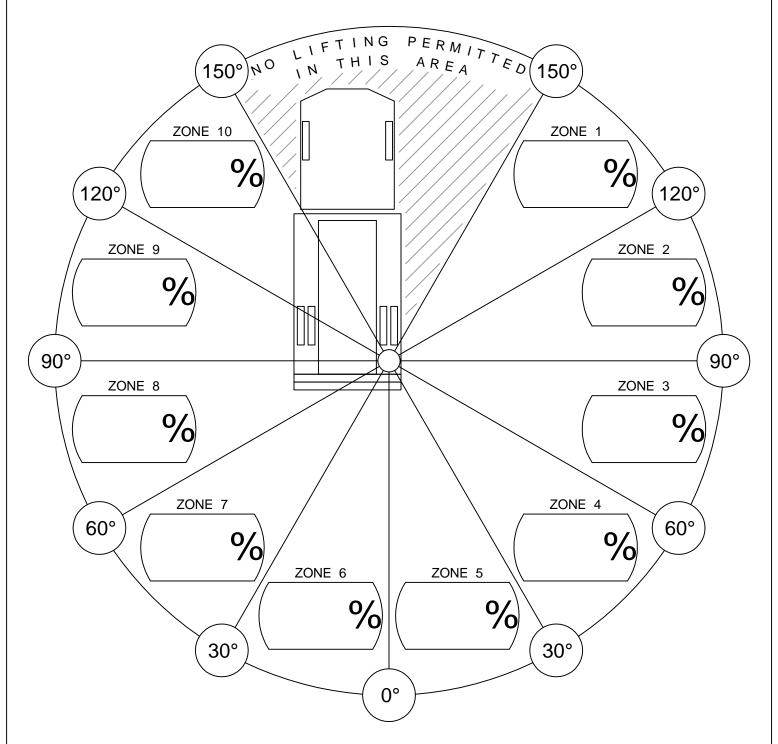
"Max Stable Reach" in inches

X 100

- 12. Record the <u>% of Rated Capacity</u> in the appropriate blank (region) on the Crane Stability page (ref. 20907) and decal.
- 13. Repeat Steps 7 through 12 for each ZONE on the stability page.

ENTURO®	VENCO VENTURO INDUSTRIES LLC	STABILITY TEST	11-23-21D	C200	
	CINCINNATI, OHIO	ET/HT30-20' SERIES	SUPERSEDES 02-26-21C	20906-30	

### **CRANE STABILITY**



% of Rated Capacity for each of the 10 regions are provided above.

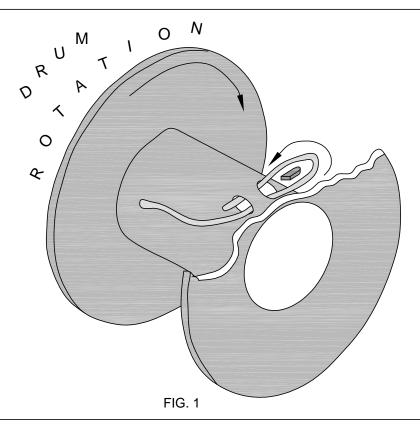
#### **CONDITIONS:**

 STABILIZERS FULLY EXTENDED & DOWN, ON FIRM LEVEL GROUND.



TITLE	DATE	SECTION
STABILITY CHART	05-11-17F	C200
	SUPERSEDES	00007
VENTURO CRANES	02-21-14E	20907

#### WIRE ROPE INSTALLATION



STEP 1: UNWIND COIL OF WIRE ROPE BY 'ROLLING' ALONG THE FLOOR. THIS WILL PREVENT 'KINKING'.

STEP 2: INSERT WIRE ROPE END UP THROUGH ANTI-2-BLOCK (A2B) CAGE ASSEMBLY, BETWEEN CHEEK PLATES, OVER THE TOP SHEAVE, AND THROUGH WIRE ROPE GUIDE.

STEP 3: INSERT WIRE ROPE END INTO POCKET OPENING ON WINCH, WRAP AROUND WEDGE, AND BACK THROUGH POCKET OPENING AS SHOWN IN FIGURE 1.

## **CAUTION**

 IF THE WIRE ROPE IS NOT INSTALLED FOR THE CORRECT DRUM ROTATION, THE WINCH BRAKE VALVE WILL NOT HOLD THE LOAD.

## **CAUTION**

 THERE MUST ALWAYS BE AT LEAST [5] DEAD WRAPS OF WIRE ROPE ON THE WINCH DRUM WHILE UNDER LOAD.

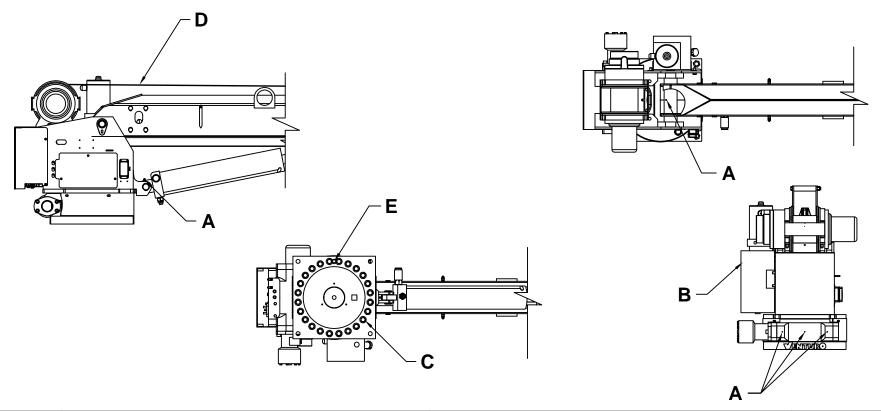
NOTE: SOME WINCHES MAY BE SUPPLIED WITH A HEX NUT IN LIEU OF A WEDGE FOR INSTALLING THE WIRE ROPE.

1		TITLE	DATE	SECTION	١
	VENCO VENTURO INDUSTRIES LLC	WIRE ROPE INSTALLTN	02-21-14K	C200	
	CINCINNATI, OHIO		SUPERSEDES	00045	1
		ET6K & LARGER CRANES	12-26-13J	22245	

## **SECTION 300**

## MAINTENANCE & SERVICE





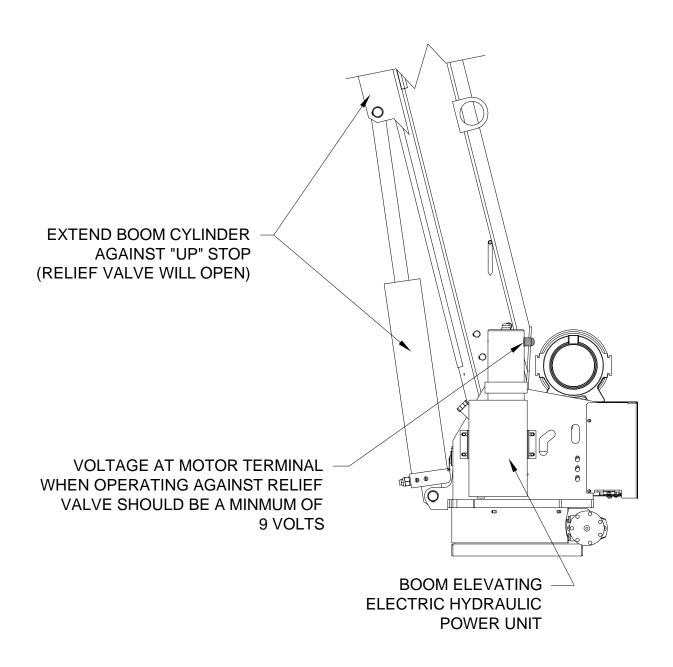
Location	Service Required	Note	Service Interval
Α	<b>Grease fitting With Pressure Grease Gun</b>	USE ELECTRICALLY CONDUCTIVE GREASE Example: Fuch's Renolit Aluminum Complex Grease P/N 155250-2 (or equivalent).	Time of Truck Service
В	Fill Oil Reservoir to Oil Level with Boom Down	Use Dextron III ATF or ISO Grade AW 46 for Ambient Temperatures Between -22° F and 30°F  Use ISO Grade 68 or Equivalent for Ambient Temperatures Between 10° F and 125° F	Time of Truck Service and as requried by changes in the ambient temperature range
С	Check Torque of bolts	Bolts should be torqued to 60 ft-lbs	Time of Truck Service
D	Check Wire Rope and Hook	Rope should be free of kinks and fraying	Time of Truck Service
E	Grease Fitting With Pressure Grease Gun	USE ELECTRICALLY CONDUCTIVE GREASE Example: Fuch's Renolit Aluminum Complex Grease P/N 155250-2 (or equivalent).	Every 6 months



LUBRICATION & MAINTENANCE CHART	07-29-19A	SECTION
ET25/30/36KX(X)	SUPERSEDES <b>08-11-09</b>	21878

#### MINIMUM VOLTAGE TEST

ONE OF THE MOST COMMON ELECTRICAL PROBLEMS ENCOUNTERED ON 12 VOLT ELECTRICAL CRANES IS INSUFFICIENT VOLTAGE AT THE MOTOR WHEN DRAWING THE LARGE CURRENT THAT EXISTS AT FULL LOAD





TITLE	DATE	SECTION
MINIMUM VOLTAGE TEST	12-26-13G	C300
	SUPERSEDES	40000
ET SERIES CRANES	10-05-09F	19963

#### WIRE ROPE ASSEMBLY

#### LOAD BLOCK ASSEMBLY

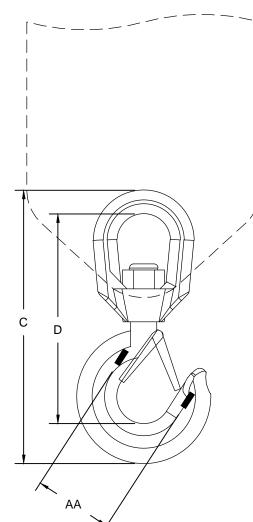
WIRE ROPE:

5/16" DIA, 80' LONG

GAC 7X19 XIP-RHRL-IWRC, SB 9800 LBS

P/N: 27668-5/16-80

TERMINATES IN THIMBLE NO HOOK



LOAD BLOCK HOOK:

RATING: 3 TONNE (6615 LBS)

**DIMENSIONS:** 

COLOR	BRAND	AA	С	D
GOLD	CROSBY	2.00"	8.25"	6.50"



TITLE WIRE ROPE & HOOK SPECIFICATIONS

DATE 11-17-23D

C300

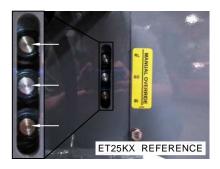
ET16/18KXX-20, ET/HT25/30KX

SUPERSEDES 03-12-20C

#### READ ALL INSTRUCTIONS BEFORE PERFORMING MANUAL OVERRIDE PROCEDURES !!







Each valve station incorporates [2] hydraulic ports and [2] coils. Manual override shafts are located in the center of the coils (see figure 1). Manual override decals are placed on each crane near the valve assembly. These decals provide a visual aid that helps the operator determine the function designations (Reference figure 2).

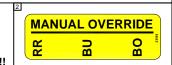
#### 2-STATION FUNCTIONS:

Rot. Right RL Rot. Left RR Boom Up BU BD Boom Down

3-STATION FUNCTIONS include previous functions, plus:

Boom In ВО **Boom Out** 

ALWAYS BE SURE TO CHECK HYDRAULIC OIL LEVEL BEFORE PROCEEDING. IT IS RECOMMENDED TO REMOVE ANY ITEM(S) THAT MAY INTERFERE WITH OPERATING THE CRANE MANUALLY. IF POSSIBLE, STRAPS AND/OR HARNESSES SHOULD BE REMOVED BEFORE OPERATING A CRANE IN MANUAL OVERRIDE!!



**End Plate** 

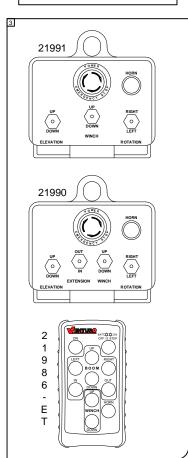
**PORT** 

COIL

SHAFT

#### Procedure:

- Turn Master disconnect switch to "ON"
- Power up the pendant / radio
- 2.1. PENDANT - twist EMERGENCY STOP button clockwise
- 2.2. RADIO - Press green ON button
- 3. On the crane, reference the function you wish to perform using the manual override decal
- Using a tool with a diameter of 1/8" or smaller, press the shaft inward and hold 4.
- 5. Reference the functions listed on your pendant or radio (see figure 3)
- Press the switch or button for the same function
- 7. If you need to change function,
  - Release switch or button 7.1.
  - Remove tool from shaft 7.2.
  - 7.3. Go to step 3



For assistance, please feel free to contact Technical Support at 800-226-2238.

CINCINNATI, OHIO

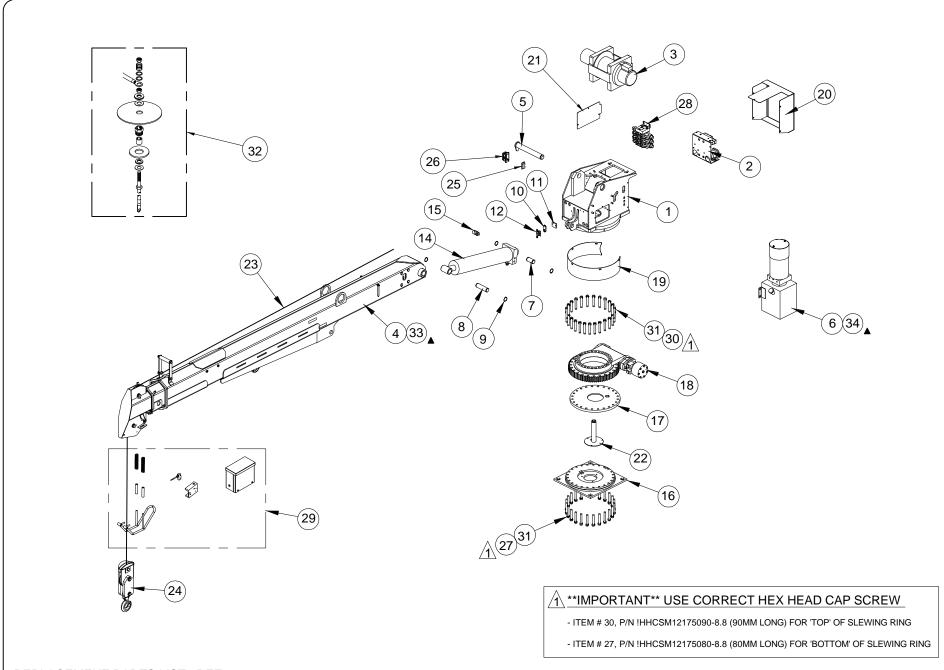


DATE SECTION C200 MAN. OVERRIDE INSTR. 03-08-19A SUPERSEDES 23084 ET NON-PROP CRANES 02-09-17

## **SECTION 400**

## REPLACEMENT PARTS





**REPLACEMENT PARTS LIST - REF 21855** 



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

REPLACEMENT PARTS DRAWING	03-08-17F	C400
ET30KX SERIES CRANES	SUPERSEDES 01-29-13E	21854

	1		
34	1	27512	HYDRAULIC POWER UNIT; DUAL-STAGE BOOM
33	1	27197	BOOM FINAL ASS'Y (DUAL-STAGE)
32	1	16780-1	SWIVEL TERMINAL ASS'Y.
31	50	!LWSH-050	LOCK WASHER; 1/2"
30	26	!HHCSM12175090-8.8	HHCS; 12MM-1.75MM X 90MM LG, GR. 8.8
29	1	27738	ANTI-2-BLOCK; MECHANICAL ASS'Y.
28	1	28801	VALVE BLOCK - 3-SPOOL
27	24	!HHCSM12175080-8.8	HHCS; 12MM-1.75MM X 80MM LG, GR. 8.8
26	1	19425	SOCKET CASE
25	1	19428	INSERT; 10 PIN FEMALE
24	1	27667	LOAD BLOCK; 6000 LBS.
23	1	27668-5/16-80	WIRE ROPE; 5/16" X 80 FT.
22	1	27568	CANDLESTICK ASS'Y.; SWIVEL PIGTAIL
21	1	27000	SIDE COVER; HOUSING
20	1	27600	REAR COVER; HOUSING
19	1	27186	COVER; SLEWING RING
18	1	21418	SLEWING RING
17	1	27520H	SPACER
16	1	27520M-2-R	WELDED ASS'Y.; BASE
15	1	17460-2700-21	OVERLOAD PRESSURE SWITCH
14	1	21752	ELEVATION CYLINDER
13	1	19269	CABLE CLAMP; 1/4"
12	1	19917	SWITCH BRACKET; BOOM SHUT-OFF
11	1	20896	MOUNTING BLOCK; BOOM SWITCH
* 10	1	19918	SWITCH; BOOM SHUT-OFF
9	4	!SRNG-125	RETAINING RING; 1/4" SHAFT DIA.
8	1	18761	PIVOT PIN; ELEVATION CYLINDER
7	1	18762	PIVOT PIN; ELEVATION CYLINDER
6	1	27009	HYDRAULIC POWER UNIT; SINGLE-STAGE BOOM
5	1	27003	PIVOT PIN; MAIN BOOM PIVOT
4	1	27198	BOOM FINAL ASS'Y (SINGLE-STAGE)
3	1	19813	ELECTRIC WINCH
2	1	23154-2	ELECTRICAL COMPONENT ASS'Y.
1	1	27184	WELDED ASS'Y.; HOUSING
ITEM NO.	QTY.	PART NO.	DESCRIPTION
L	I		L

(\*) NOT ILLUSTRATED

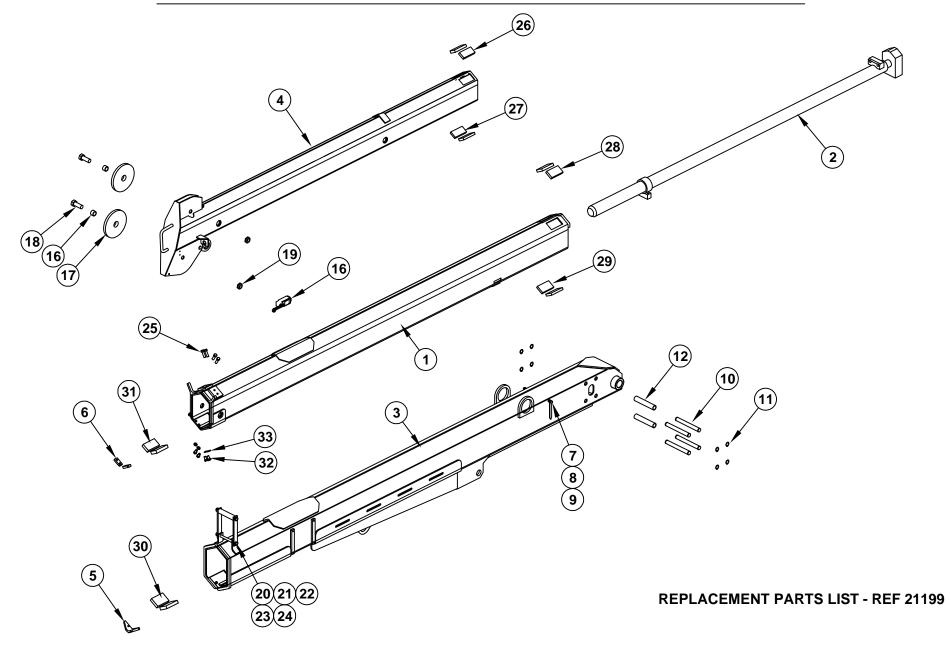
REFERENCE REPLACEMENT PARTS DRAWING 21854

CINCINNATI, OHIO



С	REPLACEMENT PARTS LIST	06-26-25J	C400
	ET30KX SERIES CRANES	SUPERSEDES 03-08-17H	21855

## **27198 BOOM REPLACEMENT PARTS**





27198 BOOM REPL. PARTS DWG	12-19-11B	C400
ET/HT25/30KX	3-3-10A	21198

33	6	!LW SH-038	LOCK WASHER 3/8"
32	6	!HHC\$03816063	HEX HEAD CAP SCREW 3/8-16 X 5/8 LG
31	2	23217-10	UHMW PAD
30	2	23217-3	UHMW PAD
29	2	23217-9	UHMW PAD
28	2	23217-8	UHMW PAD
27	2	23217-7	UHMW PAD
26	2	23217-6	UHMW PAD
25	4	!CAC\$03816075	C-SINK CAP SCREW 3/8-16 X 3/4 LG
24	2	!LNUT-04414	NYLON INSERT LOCK NUT - 7/16-14
23	1	21560	ROLLER,UHMW GUIDE
22	1	21936	FLAT,MOUNT;WIRE ROPE GUIDE
21	1	!HHC\$04414550	HHCS - 7/16-14 X 5-1/2 LG
20	1	21935	WIRE-ROPE GUIDE WELDED
19	2	!LNUT-07510	LOCKNUT 3/4-10
18	2	17059-6	SHEAVE AXLE 3/4 X 2 W / 1" SHANK
17	2	27001	SHEAVE - BOOM
16	2	23924	SPACER - SHEAVE
15	-	-	-
14	-	-	-
13	-	-	-
12	2	21498	EXTENSION CYLINDER ROLLER
11	8	!SRNG-075	RETAINING RING - 3/4" SHAFT DIA.
10	4	21497	THRUST PIN - EXTENSION CYLINDER
9	2	!ANUT-02520S	ACORN NUT 1/4-20 STAINLESS
	2	13459-2	BOOM ARROW 4-7/16 LONG
7	2	22490	SPACER, BOOM ARROW 1/2" O.D.
6	2	23119	BEARING RETAINING BLOCK
5	1	23183	V-BLOCK SLIDER
4	1	27110	TERTIARY BOOM WELDED ASSEMBLY
	1	21472	PRIMARY BOOM WELDED ASSEMBLY
2	1	20061	EXTENSION CYLINDER - HOLLOW ROD
1	1	27108	SECONDARY BOOM WELDED ASSEMBLY
ITEM NO.	EXPLODE/QTY.	PART NUMBER	DESCRIPTION
	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	32     6       31     2       30     2       29     2       28     2       27     2       26     2       25     4       24     2       23     1       22     1       21     1       20     1       19     2       18     2       17     2       16     2       15     -       14     -       13     -       12     2       11     8       10     4       9     2       8     2       7     2       6     2       5     1       4     1       3     1       2     1       1     1	32 6 !HHCS03816063 31 2 23217-10 30 2 23217-3 29 2 23217-9 28 2 23217-8 27 2 23217-7 26 2 23217-6 25 4 !CACS03816075 24 2 !LNUT-04414 23 1 21560 22 1 21936 21 1 !HHCS04414550 20 1 21935 19 2 !LNUT-07510 18 2 17059-6 17 2 27001 16 2 23924 15 14 13 12 2 21498 11 8 !SRNG-075 10 4 21497 9 2 !ANUT-02520S 8 2 13459-2 7 2 22490 6 2 23119 5 1 23183 4 1 27110 3 1 21472 2 1 20061 1 1 27108

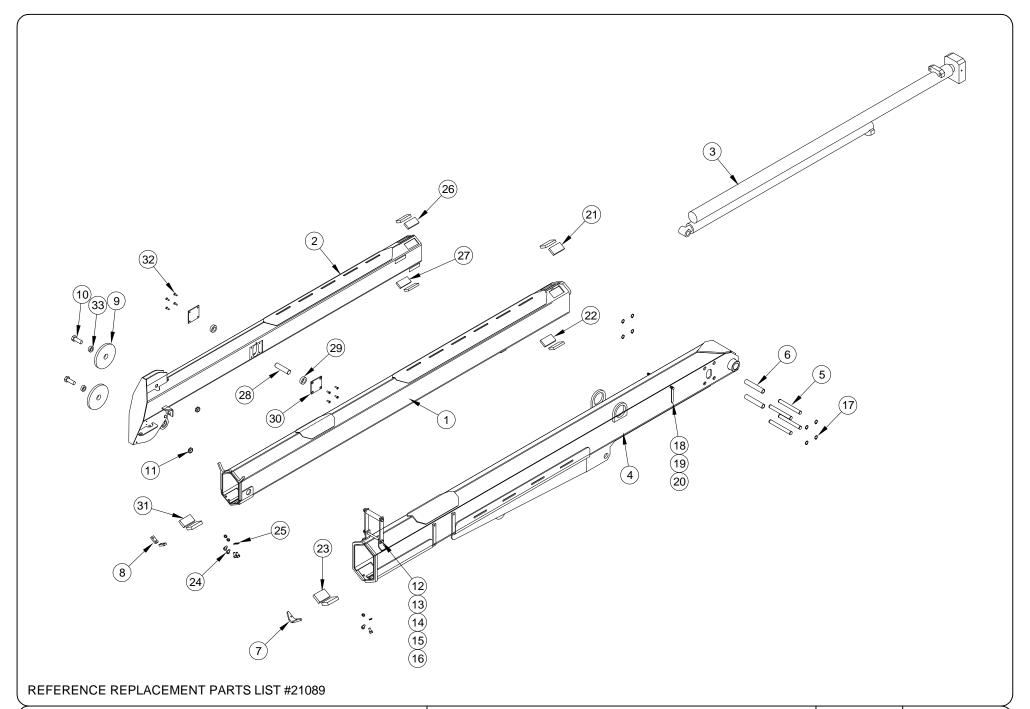
REPLACEMENT PARTS DRAWING - REF 21198



	27198 BOOM REPL. PARTS LIST
•	· · · · · · · · · · · · · · · · · · ·
	ET/HT25/30KX

12-19-11C SECTION C400

T-12-11B 21199



**ENTURO**®

VENCO VENTURO INDUSTRIES LLC
CINCINNATI, OHIO

REPLACEMENT PARTS DWG, 27197 BOOM

SUPERSEDES
12-20-11A

DATE
03-08-17B
C400

SUPERSEDES
12-20-11A

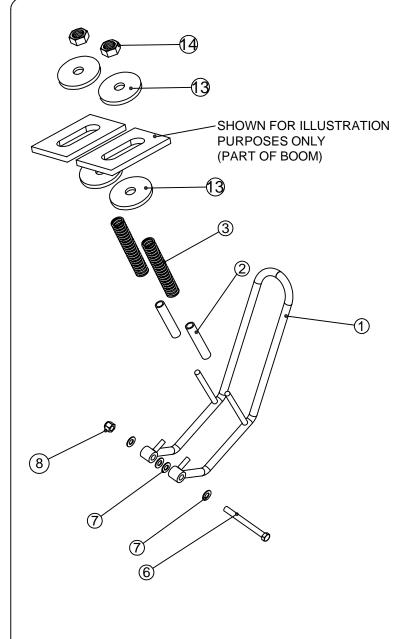
21088

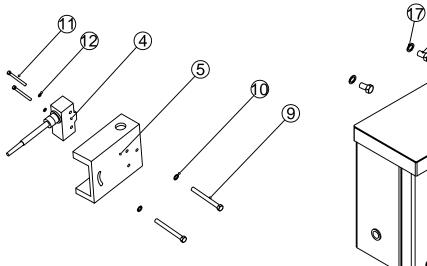
### REPLACEMENT PARTS LIST, 27197 BOOM ET25-36KX SERIES CRANES

33	2	23924	SPACER; SHEAVES
32	8	!CACS02520063-N	CNTR SNK ALLEN HEAD CAP SCREW; 1/4-20 X 5/8" LONG W/ PATCH
31	2	23217-10	UHMW PAD; CONFIG. 'B', 3.19" X 1.75" X 0.63" THICK, 0.26" STEP
30	2	23116	PIN BLOCK, REINFORCING
29	2	21428	BUSHING
28	1	21941	PIN; EXTENSION CYLINDER
27	2	23217-7	UHMW PAD; CONFIG. 'A', 3.19" X 1.50" X 0.44" THICK, 0.20" STEP
26	2	23217-6	UHMW PAD; CONFIG. 'A', 3.19" X 1.50" X 0.50" THICK, 0.20" STEP
25	6	!LWSH-038	LOCK WASHER; 3/8"
24	6	!HHCS03816075	HEX HEAD CAP SCREW; 3/8-16 X 3/4" LONG, GR. 5 ZINC-PLTD
23	2	23217-3	UHMW PAD; CONFIG. 'B', 3.19" X 2.13" X 0.44" THICK, 0.26" STEP
22	2	23217-9	UHMW PAD; CONFIG. 'A', 3.19" X 1.75" X 0.44" THICK, 0.26" STEP
21	2	23217-8	UHMW PAD; CONFIG. 'A', 3.19" X 1.75" X 0.50" THICK, 0.26" STEP
20	2	!ANUT-02520S	ACORN NUT; 1/4-20
19	2	13459-2	BOOM ARROW; 4-7/16" LONG
18	2	22490	SPACER; BOOM ARROW, 1/2" O.D.
17	8	!SRNG-075	RETAINING RING; 3/4" SHAFT DIAMETER
16	1	!HHCS04414550	HEX HEAD CAP SCREW; 7/16-14 X 5-1/2" LONG, GR. 5 ZINC-PLTD
15	2	!LNUT-04414	LOCK NUT; 7/16-14, NYLON INSERT
14	1	21560	ROLLER; UHMW GUIDE
13	1	21936	FLAT MOUNT; WIRE ROPE GUIDE
12	1	21935	WELDED ASS'Y; WIRE ROPE GUIDE
11	2	!LNUT-07510	LOCK NUT; 3/4-10
10	2	17059-6	SHEAVE AXLE; 3/4" X 2" W/ SHANK
9	2	27001	SHEAVE; BOOM
8	2	23119	BEARING RETAINING BLOCK
7	1	23183	V-BLOCK SLIDER
6	2	21498	ROLLER; EXTENSION CYLINDER
5	4	21497	THRUST PIN; EXTENSION CYLINDER
4	1	21472	WELDED ASS'Y; PRIMARY BOOM
3	1	21753	EXTENSION CYLINDER
2	1	27167	WELDED ASS'Y; TERTIARY BOOM
1	1	27165	WELDED ASS'Y; SECONDARY BOOM
ITEM	QTY	PART NO.	DESCRIPTION

#### REFERENCE REPLACEMENT PARTS DRAWING #21088

® VENCO VENTURO INDUSTRIES LLC	RPLCMNT PRTS LIST, 27197		C400
CINCINNATI, OHIO	ET25-36KX SERIES CRANES	12-20-11B	21089





#### ⚠ FOR RT-HAND MNGT. USE CORD REEL P/N 27034-1

	17	2	!LWSH-031	LOCK WASHER 5/16 SPLIT
	16	2	!HHCS03118050-5	HEX HEAD CAP SCREW 5/16-18 X 1/2"
	15	1	22683	CORD REEL W/MOUNTING BRACKET
	14	2	!LNUT-04414	LOCKNUT W/NYLON INSERT - 7/16-14
	13	4	!FWSH-050	FLAT WASHER -1/2 USS
•	12	2	!LWSH-#06-STAR	EXTERNAL STAR LOCK - #6
•	11	2	!PHCS#0632100	PAN CAP SCREW - #6-32 X 1
	10	2	!LWSH-#10	LOCK WASHER - #10
	9	2	!PHCS#1024125	PAN HD CAP SCREW - #10-24 X 1-1/2"
	8	1	!LNUTM12X175	NYLOK NUT12MM-1.75
	7	4	!FWSH-044SAE	FLAT WASHER - 7/16 SAE
	6	1	!HHCSM12M120	HEX HEAD CAP SCREW 12MM X 120MM LONG
	5	1	21237	SWITCH HOUSING (BLACK CAST NYLON)
	4	1	19376	ANTI-TWO BLOCK SWITCH
	3	2	27586	SPRING
	2	2	27579b	SPRING LOCATING TUBE
	1	1	21870	ANTI TWO BLOCK CAGE ASSEMBLY
	ITEM NO.	QTY.	PART NUMBER	DESCRIPTION

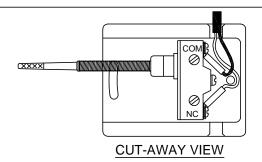


TITLE	DATE	SECTION
RPLCMNT PARTS - LH CORD REEL (STNDRD)	02-03-15A	C400
	SUPERSEDES	00000
ET/HT25/30 & ET36 ANTI-2-BLOCK SYSTEM	04-28-11	23026

#### STEP 1

#### ANTI-TWO BLOCK (A2B) SWITCH WIRING

Connect the Black wire to the 'COM' (Common) terminal and the White wire to the 'NC' (Normally Closed) terminal. The center terminal is not used.



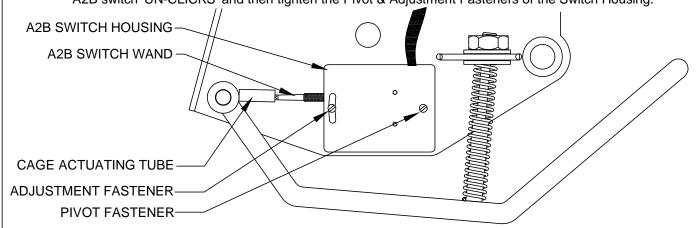
#### STEP 2

#### ANTI-TWO BLOCK (A2B) SWITCH ADJUSTMENT

The A2B switch is adjusted by loosing the Pivot & Adjustment Fasteners of the A2B switch housing.

Once loosened the A2B switch and housing move freely piviting on the 'Pivot Fastener' allowing the 'Switch Wand' to be adjusted to the 'Cage Actuating Tube'.

With the A2B Switch Wand inserted into the Cage Actuating Tube rotate the A2B switch housing Counter-Clockwise until you hear the 'click' of the A2B switch then rotate Clockwise 'just until' the A2B switch 'UN-CLICKS' and then tighten the Pivot & Adjustment Fasteners of the Switch Housing.

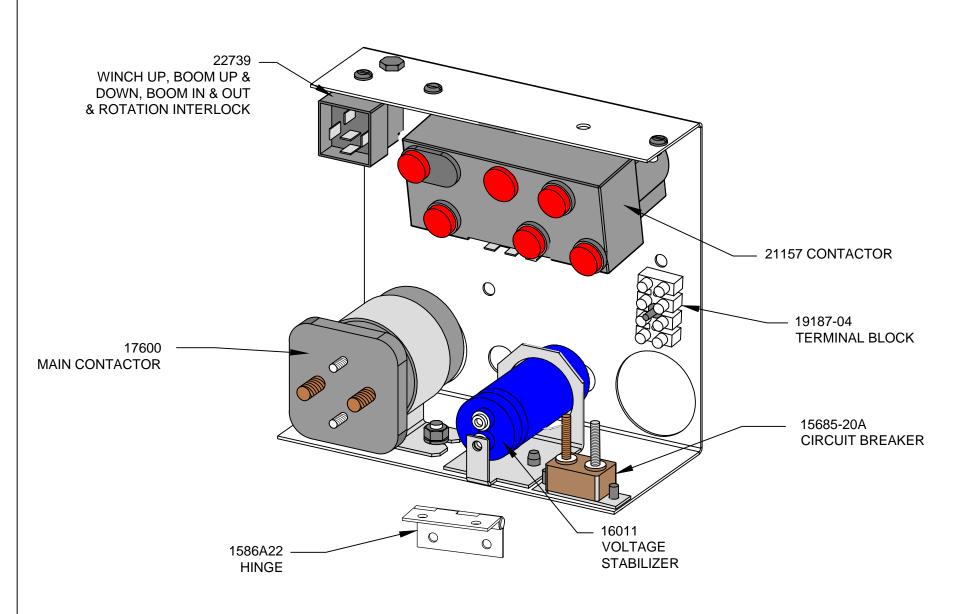


#### STEP 3 **TESTING ADJUSTMENT** Lift up on the A2B Cage Assy. until the A2B switch 'clicks' and note the SPRING HANGER NUT distance under the spring hanger nut; the distance should be approximately 1/2 of an inch. Note: If the distance under the nut is greater APPROX. 1/2 " than 3/4 of an inch repeat STEP 2 above. 0 LIFT UP HERE A2B CAGE WELDED ASSY.

<b>NTURO</b> ®

VENCO VENTURO INDUSTRIES LLC	
CINCINNATI, OHIO	

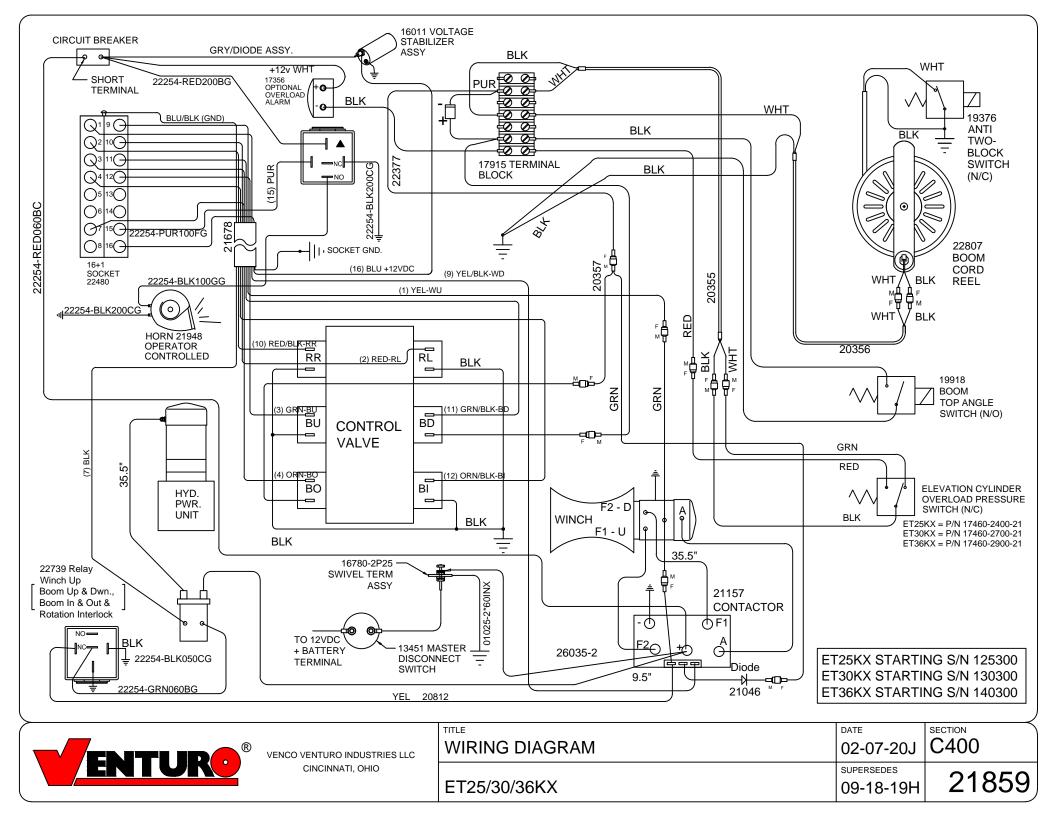
## 23154-2 ELECTRICAL COMPONENT ASSEMBLY





VENCO VENTURO INDUSTRIES LLC
CINCINNATI, OHIO

TITLE	DATE	SECTION
23154-2 ELECTRICAL COMPONENT ASSY	02-19-20E	C400
	SUPERSEDES	04770
ET25/30/36KX	02-10-20D	21//6



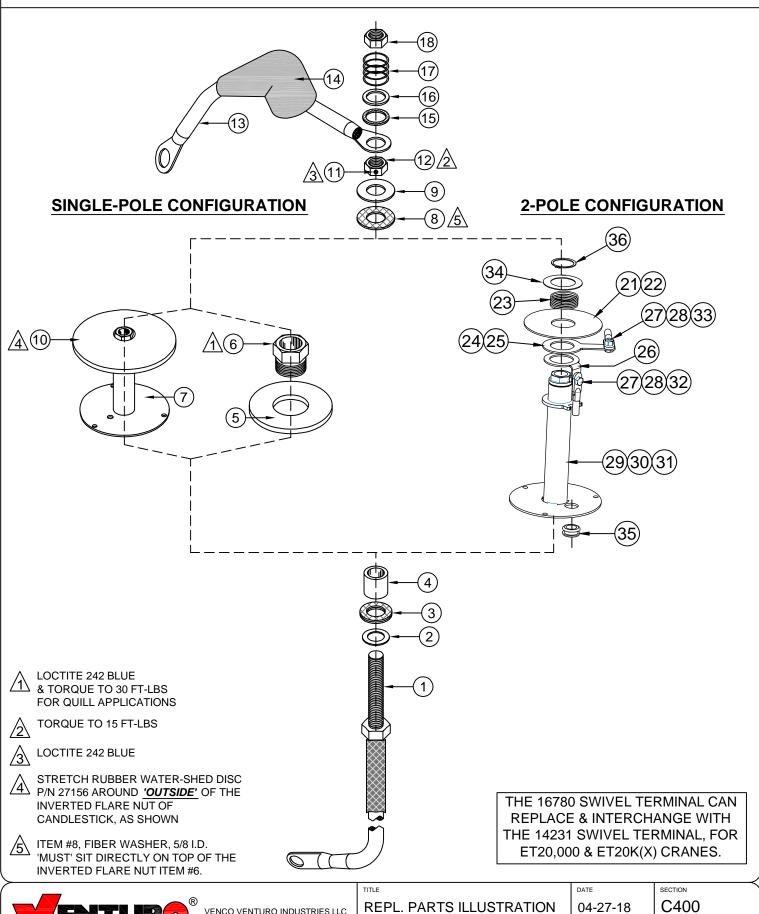
# Single & 2-Pole Slip-ring Replacement Parts (1 of 2)

Quill Rotation	Slew Rotation Single Pole Slip-Ring	Slew Rotation 2-Pole Slip- Ring (ET6K ONLY)	Slew Rotation 2-Pole Slip- Ring (ET8-18KX)	Slew Rotation 2-Pole Slip- Ring (ET25-36KX)	ALL CRANES		16780 BILLS OF MATERIALS		
16780	16780 - 1	16780 - 2P6	16780 - 2P8	16780 - 2P25	16780 - KIT				
		Q	TY			#	PART	DESCRIPTION	
1	1	1	1	1	-	1	16783	PIGTAIL AND STUD ASSEMBLY	
1	1	1	1	1	1	2	12534-5	ZINC BUSHING; 5/8" I.D. X 1" O.D. X 14 GAUGE	
2	2	2	2	2	2	3	14357-1	FIBER WASHER; 5/8" I.D. X 1 1/16" O.D. X 1/16"	
1	1	1	1	1	1	4	14233	INSULATING BUSHING; 5/8" I.D. X 7/8" O.D. X 7/8"	
1	2	-	-	152	-	5	14318	FLAT WASHER; 1 3/16" I.D. X 2 3/4" O.D. X 3/16"	
1	H		-	-		6	14232	INVERTED FLARE NUT; 1 3/16"-16	
-	-	-	-		-	7	27568	WELDED ASSY. CANDLESTICK	
1	1	1	1	1	1	8	14357-2	FIBER WASHER; 5/8" I.D. X 1 1/4" O.D. X 1/16"	
1	1	1	1	1	1	9	!FWSH-063SAE	FLAT WASHER; 5/8" SAE	
_	1	-	-	1 -	-	10	27156	RUBBER WATER SHIELD; 1/8" THICK	
1	1	1	1	1	1	11	!SHCS02528025KC	SET SCREW W/ KNURLED CUP; 1/4"-28 X 1/4"	
1	1	1	1	1	1	12	21273	BRASS JAM NUT; 5/8"-11	
_	-	-	-	-	-	13	26035-2	PIGTAIL; SWIVEL TERMINAL	
_	_	-	_	152		14	17012	RUBBER BOOT; SWIVEL TERMINAL	
1	1	1	1	1	1	15	5612-162-62	TEFLON WASHER	
1	1	1	1	1	1	16	5714-113-62	BRASS WASHER	
1	1	1	1	1	1	17	LC-098K-00	SPRING; 0.845" O.D. X 0.098" WIRE X 1.00 F.L.	
1	1	1	1	1	1	18	!JNUT-06311N	CONTRACTOR AND AND ADDRESS OF THE PROPERTY OF	
- 11	1	1	10001	-	1			JAM NUT; 5/8"-11, NYLON NUT REMOVABLE THREAD LOCKER: 0.5ML	
1	1		1	1		19	LOCTITE-24205		
1	1	1	1	1	1	20	19368	IDWG; 16780 SWIVEL TERMINAL	
-	-	1 -	1	1	-	21	27456 27456-1	UHMW WATER SHIELD, (ET6K ONLY) UHMW WATER SHIELD, (ET8 - ET36)	
-	-	1	1	1	-	23	27461	SPRING, (-) SLIP-RING ASSY.	
-	-		1	1	·	24	27441-1	COPPER SLIP-RING, (ET8 - ET36)	
-	-	1	-	-	-	25	27441	COPPER SLIP-RING, (ET6K ONLY)	
_	-	1	1	1		26 27	27449-1 !HHCS03118075-B	BRASS SLIP-RING (ET6 - ET36) BRASS HHCS	
-	-	1	1	1	Ē	28	!HNUT-03118-B	BRASS NYLOC NUT	
-	-	1	-	11-	-	29	23255	SLIP-RING, WELDED ASSY, ET6K	
•	-		1	(II <del>II</del> )	=			SLIP-RING, WELDED ASSY, ET8 - 18K(X)	
-	-	-	-	1		31	23255-2	SLIP-RING, WELDED ASSY, ET25 - 36K(X)	
-	-	1	1	1	-	32	02025-2*96.5INX 02025-2*22.5INX	(-) WELDING CABLE ASSY, BRASS SLIP-RING (-) WELDING CABLE ASSY, COPPER SLIP-RING	
-	-	1	1	1	Ē	34	27463	SHIM, WIDE RIM, 18GA, 2-1/4 O.D. X 1-1/2 I.D.	
-	-	1	1	1	-	35	20889	RUBBER GROMMET	
-	-	1	1	1		36	!SRNG-150	SNAP-RING, EXTERNAL, 1-1/2"	



TITLE	DATE	SECTION
16780 REPLACEMENT PARTS	03-29-19A	C400
	SUPERSEDES	04000
ET6/8/12/16/18/25/30/36K(X)	04-27-18	21292

## Single & 2-Pole Slip-ring Replacement Parts (2 of 2)

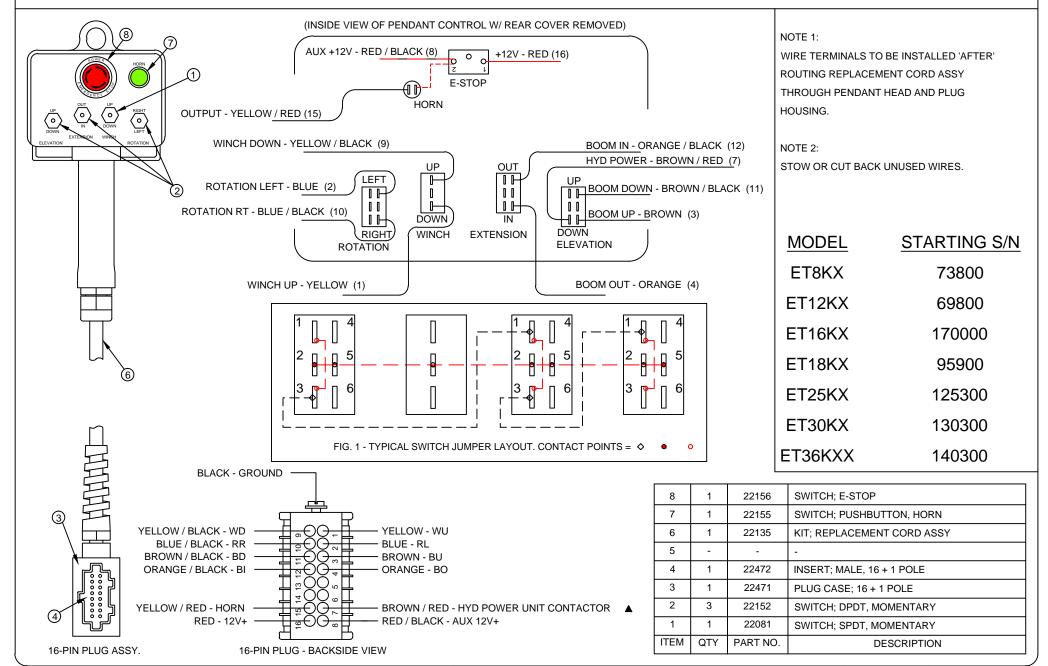


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<b>A</b>	

'ENCO VENTURO INDUSTRIES LL CINCINNATI, OHIO

ET6/8/12/16/18/25/30/36K(X)	SUPERSEDES	21293
REPL. PARTS ILLUSTRATION	04-27-18	C400
TITLE	DATE	SECTION

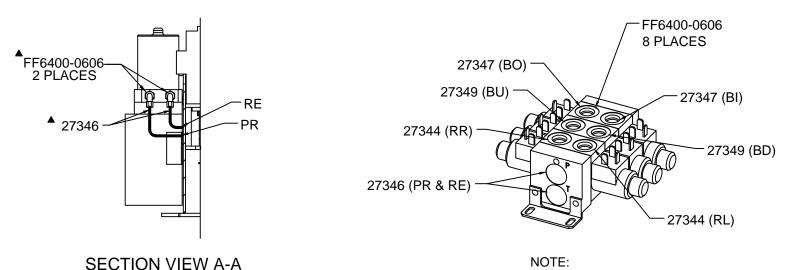
# 21990 PENDANT; 4 FUNCTION ET CRANES, E-STOP / HORN



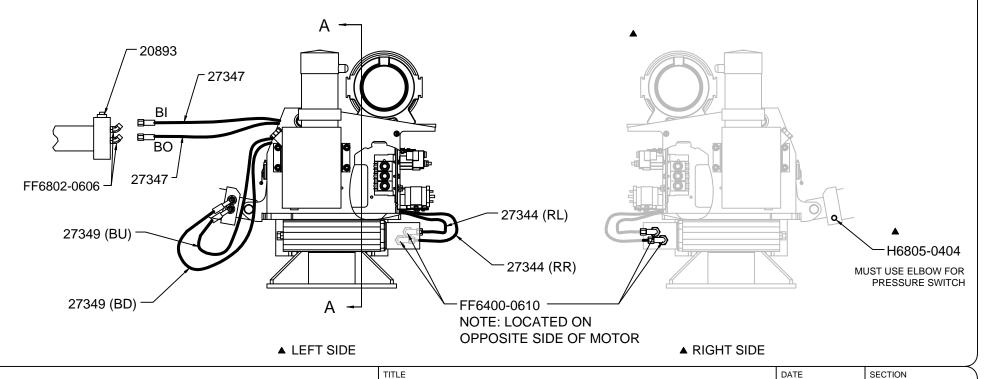


VENCO VENTURO INDUSTRIES LLC CINCINNATI. OHIO

REPLACEMENT PARTS DWG & LIST	01-12-17B	C400
	SUPERSEDES	22075
21990 PNDNT; 4 FNCTN ET CRNS, ESTP/HRN	10-20-14A	23075



NOTE: FOR REPLACEMENT COILS SEE P/N 23134





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

REPLACEMENT PARTS; HYD. COMPONENTS

02-10-20E C

C400

RR ROTATION RIGHT RL ROTATION LEFT

BI BOOM IN

RE RETURN

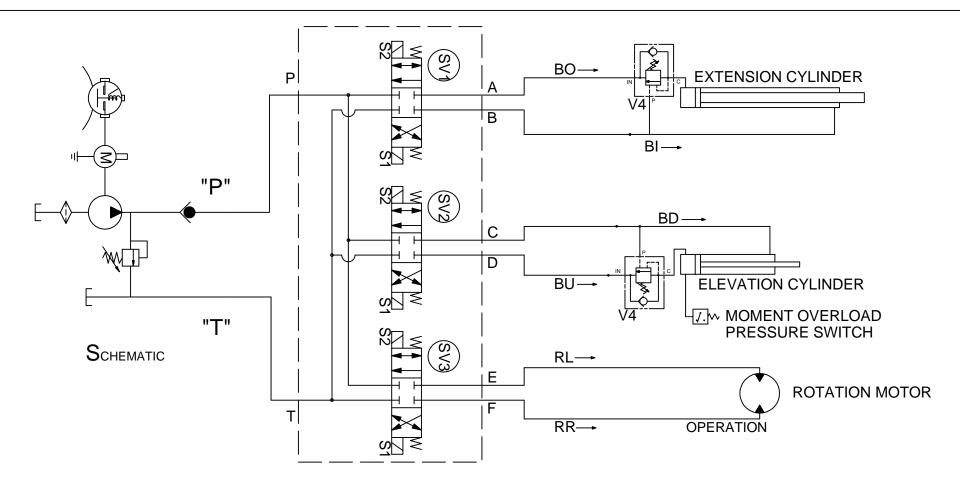
BD BOOM DOWN PR PRESSURE

ET25/30/36KX

10-07-19D

21758

## ET16/18/25/30/36KX HYDRAULIC COMPONENT DIAGRAM



ERNERGIZE "S2"
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'

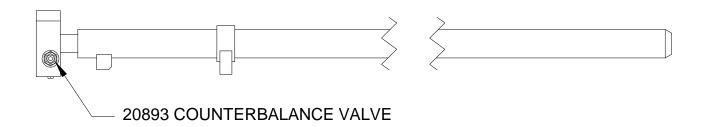
(SV3)

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



TITLE	DATE	SECTION
HYDRAULIC SYSTEM DIAGRAM	10-23-14D	C400
	SUPERSEDES	00450
ET16/18/25/30/36KX A	01-31-05C	20156

## 20061 EXTENSION CYLINDER



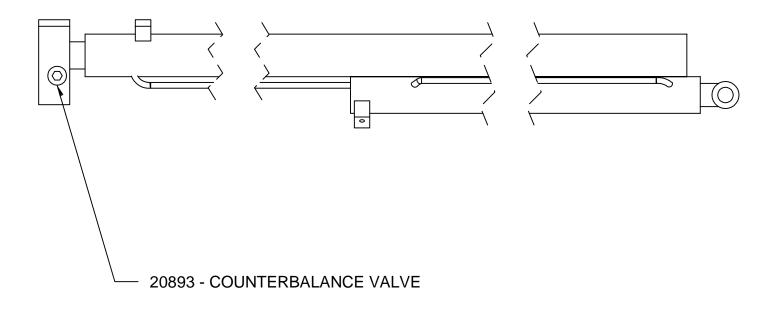
**SEAL KIT P/N: 19887** 



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE	DATE	SECTION
EXTENSION CYLINDER	01-07-14A	C400
	SUPERSEDES	04070
ET/HT25/30KX	08-20-09	21879

## 21753 DUAL-STAGE EXTENSION CYLINDER



**SEAL KIT P/N: 21775** 



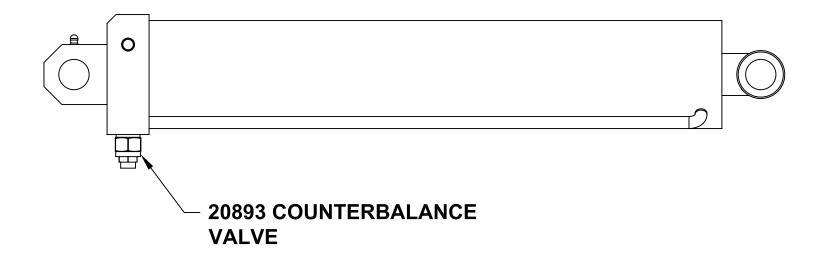
EXTENSION CYLINDER, DUAL-STAGE

DATE SECTION 03-08-17B | C400 SUPERSEDES

ET25-36KX & HT25/30 SERIES CRANES

21860 04-30-09A

# **21752 ELEVATION CYLINDER**



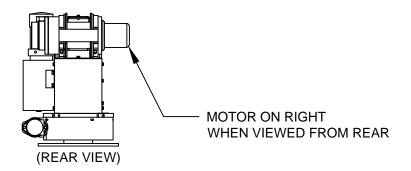
**SEAL KIT P/N: 21774** 

ET/HT25/30/36KX(X)	SUPERSEDES	21773
ELEVATION CYLINDER	8-12-09	SECTION C400

## 19813 WINCH REPLACEMENT PARTS

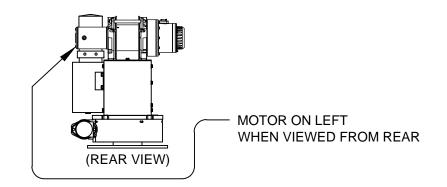
## WARN DC3000

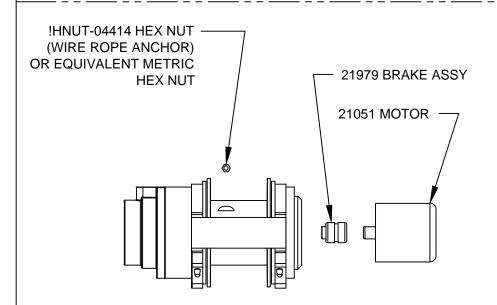
**SERIES-WOUND MOTOR** 

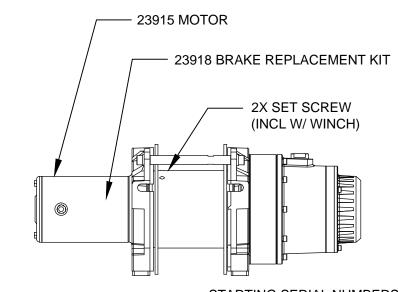


## COMEUP GTD-3300

PERMANENT MAGNET MOTOR







#### STARTING SERIAL NUMBERS:

ET25 SERIES 22D000003 ET30 SERIES 21B000001

ET36 SERIES

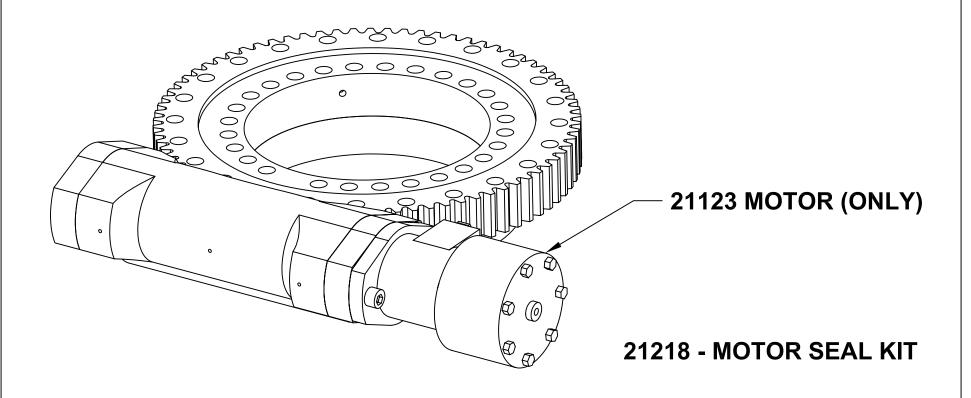
20B000014

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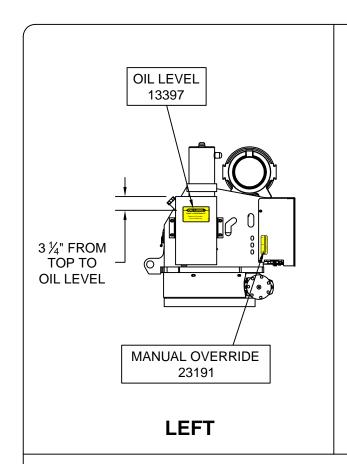
TITLE	DATE	SECTION
WINCH REPLACEMENT PARTS	04-26-22E	C400
	SUPERSEDES	04050
ET25/30/36K	04-13-22D	21053

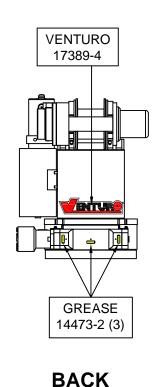
# 21418 SLEWING SYSTEM REPLACEMENT PARTS

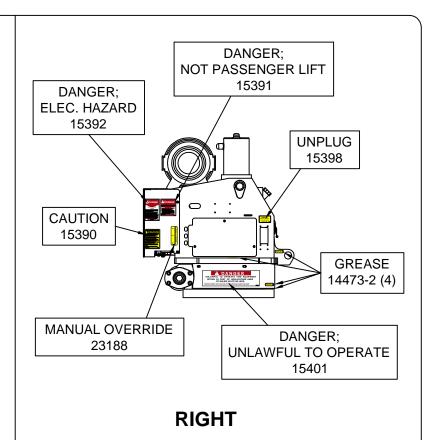


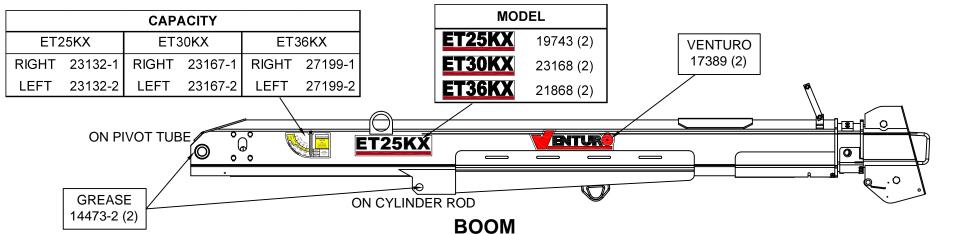


SLEWING REPLACEMENT PARTS	08-24-09	SECTION
ET25/30KX	SUPERSEDES	21886











VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE	DATE	SECTION
DECAL PLACEMENT	05-19-15D	C400
	SUPERSEDES	04004
ET25/30/36KX	08-08-12C	21894

# ET25/30/36KX FIELD SERVICE LABEL KITS

#### 21898; FIELD SERVICE LABEL KIT, ET25KX

PART NO.	QTY.	DESCRIPTION
14473-2	9	DECAL; GREASE
17389	2	DECAL; VENTURO, MEDIUM
17389-4	1	DECAL; VENTURO, SMALL
23132-1	1	DECAL; BOOM CAPACITY, RIGHT, ET/HT25KX
23132-2	1	DECAL; BOOM CAPACITY, LEFT, ET/HT25KX
19743	2	DECAL; MODEL NAME, ET25KX
13397	1	DECAL; OIL LEVEL
23188	1	DECAL; MANUAL OVERRIDE, RIGHT
23191	1	DECAL; MANUAL OVERRIDE, LEFT
17813	1	DECAL; OVERLOAD SENSING SYSTEM
16184-1	1	DECAL; HORN RELAY
21899	1	IDWG; FIELD SERVICE LABEL KIT
21894	1	IDWG; DECAL PLACEMENT
INST-23233	1	SAFETY MANUAL, VENTURO CRANES
15397	1	KIT; ACCIDENT PREVENTION SIGNS

#### 21863: FIELD SERVICE LABEL KIT, ET30KX

PART NO. QTY. DESCRIPTION			
14473-2	9	DECAL; GREASE	
17389	2	DECAL; VENTURO LOGO, MEDIUM	
17389-4	1	DECAL; VENTURO LOGO, SMALL	
23167-1	1	DECAL; BOOM CAPACITY, RIGHT, ET30KX	
23167-2	1	DECAL; BOOM CAPACITY, LEFT, ET30KX	
23168	2	DECAL; MODEL NAME, ET30KX	
13397	1	DECAL; OIL LEVEL	
23188	1	DECAL; MANUAL OVERRIDE, RIGHT	
23191	1	DECAL; MANUAL OVERRIDE, LEFT	
17813	1	DECAL; OVERLOAD SENSING SYSTEM	
16184-1	1	DECAL; HORN RELAY	
21899	1	IDWG; FIELD SERVICE LABEL KIT LIST	
21894	1	IDWG; DECAL PLACEMENT	
INST-23233	1	SAFETY MANUAL, VENTURO CRANES	
15397	1	KIT; ACCIDENT PREVENTION SIGNS	

#### 21866; FIELD SERVICE LABEL KIT, ET36KX

PART NO.	QTY.	DESCRIPTION
14473-2	9	DECAL; GREASE
17389	2	DECAL; VENTURO LOGO, MEDIUM
17389-4	1	DECAL; VENTURO LOGO, SMALL
27199-1	1	DECAL; BOOM CAPACITY, RIGHT, ET36KX
27199-2	1	DECAL; BOOM CAPACITY, LEFT, ET36KX
21868	2	DECAL; MODEL NAME, ET36KX
13397	1	DECAL; OIL LEVEL
23188	1	DECAL; MANUAL OVERRIDE, RIGHT
23191	1	DECAL; MANUAL OVERRIDE, LEFT
17813	1	DECAL; OVERLOAD SENSING SYSTEM
16184-1	1	DECAL; HORN RELAY
21899	1	IDWG; FIELD SERVICE LABEL KIT LIST
21894	1	IDWG; DECAL PLACEMENT
INST-23233	1	SAFETY MANUAL, VENTURO CRANES
15397	1	KIT; ACCIDENT PREVENTION SIGNS

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TITLE	DATE	SECTION
FIELD SERVICE LABEL KIT	03-13-23F	C400
	SUPERSEDES	
ET25/30/36KX	08-04-20E	2

#### **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