INST-24413



EQBAAB-\*0\*0

# PARTS & INSTALLATION MANUAL ET36KX(P)

Included in this manual:

### ET36KX(P)

- 6,000 lbs Electric Telescopic Service Crane
- 10 16 20 ft Powered, Dual-Stage, Boom Extension
- Optional Proportional Controls

VENCO VENTURO INDUSTRIES LLC 12110 BEST PLACE | CINCINNATI, OHIO 45241 800-226-2238



This manual also available online at www.venturo.com.

### ET36KX(P) INST-24413 - 1/29/2025 (Rev: H3)

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12-00073\_VNT1 WARRANTY PAGE

# DESCRIPTION & SPECIFICATIONS



### SPECIFICATIONS AND OPERATING FEATURES

ET36KX-10/20

### **SPECIFICATIONS**

12 VOLT BATTERY OPERATED

36,000 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 - 20 FT
	1800 LBS @
	20 FT REACH
CAPACITY	6000 LBS @ 3 TO 5 FT REACH
WIRE ROPE	5/16" DIA x 80 FT
	EXTRA HIGH STRENGTH
PENDANTCORDLENGTH	25 FT

WINCH - 3000 LBS SINGLE LINE CAPACITY With Automatic Load Brake

ELECTRIC HYDRAULIC BOOM ELEVATION

ELECTRIC HYDRAULIC BOOM EXTENSION & RETRACTION - 10 FT STROKE

360° CONTINUOUS POWER ROTATION

REMOTE CONTROL PENDANT

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

MASTER DISCONNECT SWITCH

OUTRIGGERSAVAILABLE

Side Bracket Type Outriggers

Fold Away Type Outriggers

Pullout Type Outrigger System

MFG., INC. CINCINNATI, OHIO		DATE 9-30-09A	section C120
	ET36KX-10/20	supercedes 3-18-08	21077

### 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 electrical 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 ET36KX 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 Hydraulic Crane Standards. The cable sheaves are either 16 (snatch block) or 18 (boom) times the cable diameter which likewise conforms.

### **MISCELLANEOUS**

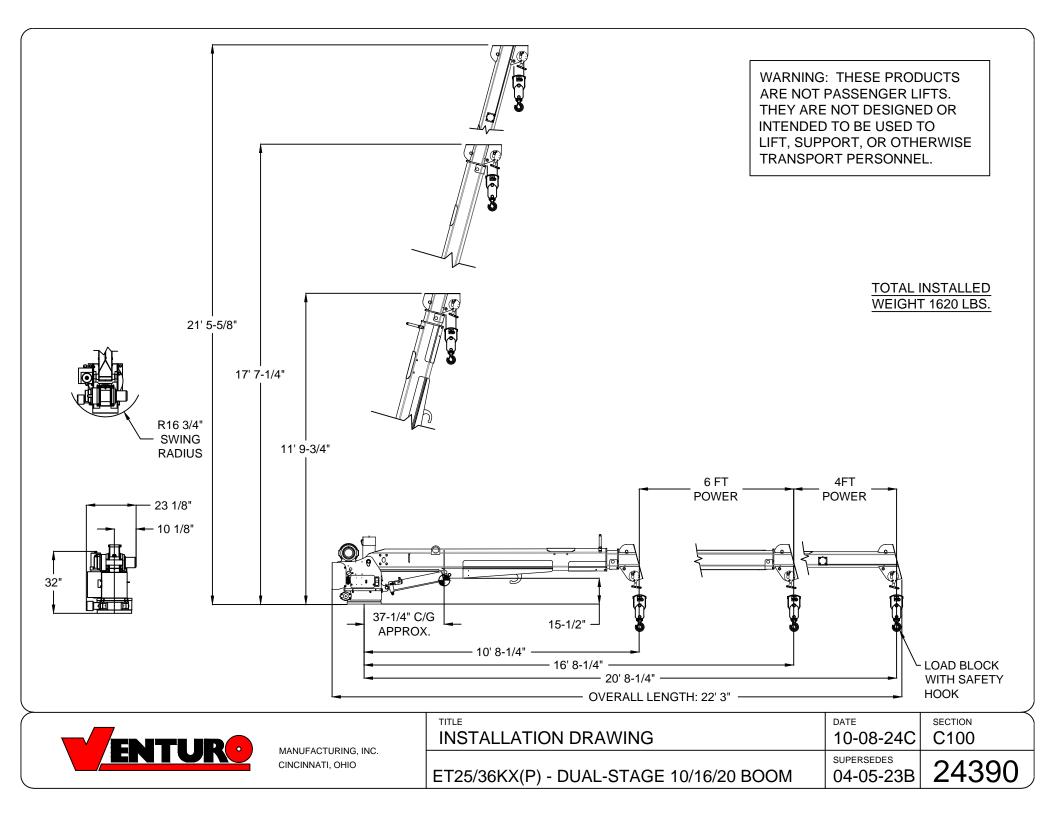
A. CAPACITY INDICATOR

Select boom reach and angle allowable for load by using capacity indicator arrow and chart on either side of boom.

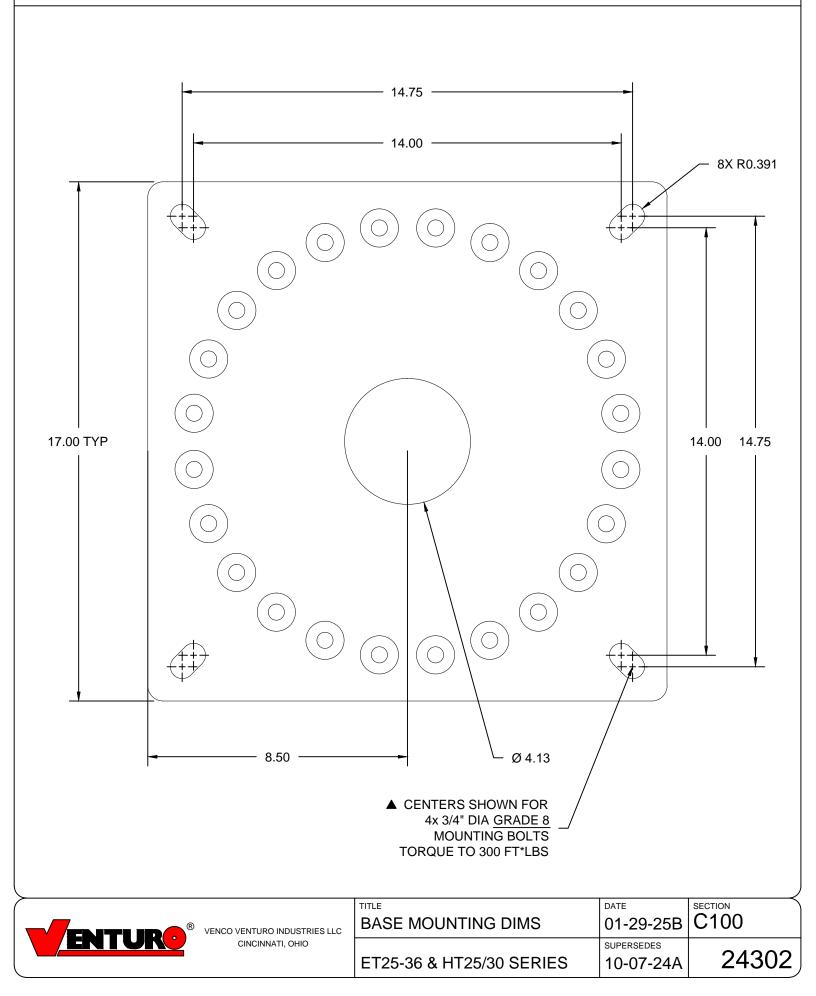
B. BATTERY HOOKUP

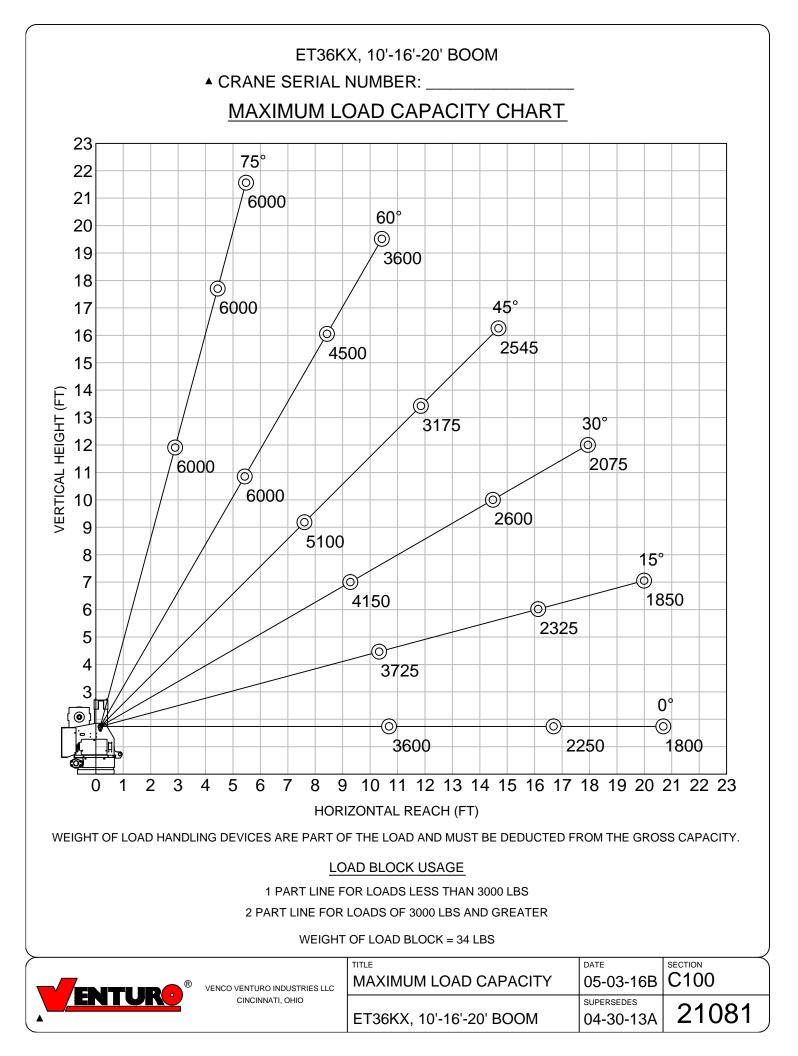
A parallel auxiliary battery should be installed near the crane as shown on Dwg. 19947 under "RECOMMENDED INSTALLATION". The parallel auxiliary battery minimum rating should be 450 Cold Cranking Amps (at 0° F) and 100 reserve capacity, or 78 plates and 70 amp hours.

MFG., INC. CINCINNATI, OHIO		DATE 3-18-08	SECTION C120
	<sup>IO</sup> ET36KX-10/20	SUPERCEDES	21078



### BASE MOUNTING DIMENSIONS; ET25-36 & HT25/30 SERIES





## SAFETY



### CRANE SAFETY AND HAZARDS

### CAUTIONS

- 1. INSPECT VEHICLE AND CRANE, INCLUDING OPERATION, PRIOR TO USE DAILY.
- 2. DO NOT USE THIS EQUIPMENT EXCEPT ON FIRM LEVEL GROUND WITH CRANE MOUNTED ON FACTORY-RECOMMENDED TRUCK.
- 3. BEFORE OPERATING THE CRANE, REFER TO MAXIMUM LOAD (CAPACITY) CHART ON CRANE FOR OPERATING (LOAD) LIMITATIONS.
- 4. 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

ENTUR® VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO	™ SAFETY & HAZARDS	<sup>date</sup> 01-29-15K	section C150
	ELECTRIC CRANES	supersedes 12-20-13J	850711

## **CRANE SAFETY AND HAZARDS - CONT'D**

### **OVERLOAD ALARM SYSTEM - OPTIONAL**

1. OVERLOAD ALARM HORN SOUNDS IF RATED LOAD IS EXCEEDED AT ANY REACH.

- 2. 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 COMPLETED BOTTOMED.
- 4. 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

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TITLE	
SAFETY & HZRDS, CONT.	
ELECTRIC CRANES	

DATE	SECTION
01-29-15	C15
SUPERSEDES	_

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### 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.

**A DANGER** UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN 20 FEET OF HIGH-VOLTAGE LINES OF 350,000 VOLTS OR LESS. 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 - Minimun	n Clearance Distances

Voltage	Minimum clearance distance
(nominal, kV, alternating current)	(feet) *
Up to 50 over 50 - 200 over 200 - 350 over 350 - 500 over 500 - 750 over 750 - 1000 Over 1000	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	While traveling - minimum clearance distance
(nominal, kV, alternating current)	(feet) *
0 - 0.75 over 0.75 - 50 over 50 - 345 over 345 - 750 over 750 - 1000 Over 1000	4 6 10 16 20 (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

O VENTURO INDUSTRIES LLC	HAZARD APPS & INFO	<sup>DATE</sup> 02-21-14M	section C150
CINCINNATI, OHIO	ET/HT CRANES	SUPERSEDES	15394

DECAL #: DESCRIPTION: PURPOSE: QUANTITY: PLACEMENT:	15390 CAUTION, INSPECT VEHICLE & CRANE TO INFORM THE OPERATOR OF KEY OPERATING REQUIREMENTS. 1 REAR COVER OR SIDE OF CRANE	CAUTION  ADD CRAME INCLUDING  OPERATION, PRIOR TO USE DAILY.  ADD CRAME INCLUDING  OPERATION, PRIOR TO USE DAILY.  ADD COMPLEX TRANSPORT  SOLD, LEVEL SURFACE WITH CRAME  MOUTED ON FACTOR/MECOMMENCED  TRUCK.  ADD CRAME CRAME REFER TO  MAXIMUM LOAD (CAPACITY) CHART ON CRAME  PORTONIC DAIL (CAPACITY) CHART ON CRAME  DO NOT OPERATING LOAD. LIMITATIONS.  DO NOT OPERATE, WALK, OR STAND BENEATH  BOOM OR A SUSFENDED LOAD.  UNSUE OPENATION CLANS DHUT OFF MASTER  DISCOMECT SWITCH WHEN CRAME NOT IN  USE.  FOR TRAVEL, BOOM MUST BE IN STOWED  POSITION.
DECAL #:	15391	
DESCRIPTION:	DANGER, NOT A PASSENGER LIFT	<b>A</b> DANGER
PURPOSE:	TO INFORM OPERATOR NOT TO LIFT, SUPPORT, OR TRANSPORT	THIS CRANE IS NOT A PASSENGER LIFT IT IS NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT OR OTHERWISE TRANSPORT PERSONNEL.
	PERSONNEL, AND TO ENSURE OPERATOR IS ADEQUATELY TRAINED	D. YOU MUST NOT OPERATE THIS CRANE UNLESS: 1. YOU HAVE BEEN TRAINED IN THE SAFE
QUANTITY:	1	OPERATION OF THIS CRANE; AND 2. YOU KNOW AND FOLLOW THE SAFETY AND OPERATING RECOMMENDATIONS CONTAINED IN THE MANUFACTURER'S MANUALS, YOUR
PLACEMENT:	REAR COVER OR SIDE OF CRANE	EMPLOYER'S WORK RULES, AND APPLCABLE GOVERNMENT REGULATIONS. AN UNTRAINED OPERATOR SUBJECTS HIMSELF AND OTHERS TO DEATH OR SERIOUS INJURY. 1591.0
DECAL #:	15392	
DESCRIPTION:	DANGER, ELECTROCUTION HAZARD, MACHINE (CRANE)	
PURPOSE:	TO INFORM OPERATOR THAT MACHINE (CRANE) REPRESENTS AN	THIS MACHINE IS NOT INSULATED ELECTROCUTION HAZARD
	ELECTROCUTION HAZARD SHOULD IT COME CLOSE TO OR IN CONT	ACT MAINTAIN SAFE CLEARANCES FROM ELECTRICAL LINES AND APPARTUS. YOU MUST ALLOW FOR BOOM SWAY, ROCK OR SAG, AND ELECTRICAL LINE AND LOAD LINE SWAYING.
	WITH AN ELECTRICAL VOLTAGE SOURCE.	THIS LIFTING DEVICE DOES NOT PROVIDE PRO- TECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTICALLY CHARGED CONDUCTOR.
QUANTITY:		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 YOLTS, ONE
PLACEMENT:	REAR COVER OR SIDE OF CRANE	FOOT ADDITIONAL CLEARANCE IS REQUIRED FOR EVERY ADDITIONAL 3000 VOLTS OR LESS. DEATH OR SERIOUS INJURY WILL RESULT FROM CONTACT OR INADEQUATE CLEARANCE. 1980 E
DECAL #:	15401	
DESCRIPTION:	DANGER, UNLAWFUL TO OPERATE	ADANGER
PURPOSE:	WITHIN	IL TO OPERATE THIS EQUIPMENT 20 FEET OF HIGH-VOLTAGE LINES
	FOR MINIMUM CLEARANCE CRANES SAFETY MANUA	OF 350,000 VOLTS OR LESS. ES OF HIGH-VOLTAGE LINES IN EXCESS OF 350,000 VOLTS, REFERENCE OSHA 1926.1408, AL, AND CAL-OSHA ARTICLE 37, TITLE 8, HIGH-VOLTAGE ELECTRICAL SAFETY ORDERS
QUANTITY: PLACEMENT:	1 RING COVER OR SIDE OF CRANE	
DECAL #:	15393	
DESCRIPTION:	DANGER, ELECTROCUTION HAZARD, VEHICLE (TRUCK)	DANGER
PURPOSE:	WARNS OF DANGER FROM ELECTRICALLY CHARGED	
	VEHICLE, CRANE, OR LOAD.	P CLEAR OF TRUCK AND LOAD 4 OR SERIOUS INJURY CAN RESULT FROM TACT WITH THE LOAD, THE CRUNE, OR THE
	VEHICLE	
QUANTITY:	4 EACH SIDE & EACH END OF VEHICLE	E IF BOOM OR LOAD LINE SHOULD BECOME ELECTRICALLY CHARGED.

	ENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO
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VENTURO CRANES

SAFETY DECALS

04-29-16E	C150
SUPERSEDES 10-24-13D	21353

PART NO.:	15513		DISCONNECT
DECAL:	MASTER DISCONNECT SWITCH		NUST OF FUE
FUNCTION:	To inform the operator of location and operation of master disconnect switch.	(	
QUANTITY:	1		CHAN OLE WHELE
PLACEMEN	: On master disconnect switch bracket.		MANE NOT IN US
PART NO.:	20927		IS T A B I L I T Y C H A R T
DECAL:	CRANE STABILITY		A D A N G E R
FUNCTION:	To inform the operator of the crane's lifti capacity throughout the entire rotation.	ng	NOLITING ART TRAITING IN BE ART 200 11 200 11 200 12 200 12 20000000 200 12 200 10 10 200 10 200 1000 10
QUANTITY:	1		
	: In prominent location, so it is easily see readily identifiable.	en and	

D VEN CIN
) VE CI

O VENTURO INDUSTRIES LLC		DATE 06-06-14C	C150	
CINCINNATI, OHIO	CRANES	supersedes 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.

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.



CONDUCTIVE GREASE

Retract All Cylinders Prior to Servicing





MANUFACTURING, INC. CINCINNATI, OHIO

	TITLE	DATE	SECTION
).	DECALS	11-12-19E	C150
		SUPERSEDES	
	ET CRANES	12-23-13D	21354

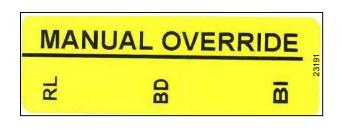
PART NO.: 23191

DECAL: MANUAL OVERRIDE DECAL

FUNCTION: To show the manual override ports.

QUANTITY: 1 each

PLACEMENT: Left side of housing.



**MANUAL OVERRIDE** 

BC

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PART NO.: 23188

- DECAL: MANUAL OVERRIDE DECAL
- FUNCTION: To show the manual override ports.
- QUANTITY: 1 each

PLACEMENT: Right side of housing.

PART NO.: 19315-2

DECAL: MANUAL OVERRIDE (PROPORTIONAL)

FUNCTION: To show operator how to override proportional valve.

QUANTITY: 1

PLACEMENT: Right side of Mechanism, near valve stem.



	TITLE	<sup>DATE</sup>	SECTION
	ADDITIONAL DECALS	09-16-19	C150
ENTURO Vendo industries LLC cincinnati, ohio	ET25/30/36KX(P)	SUPERSEDES	24414

PART NO.:	27199-1 & 27199-2	27199-1 27199-1	2	
DECAL:	CRANE CAPACITY	66 66	136KX-10/20	<sup>4</sup> <sup>4</sup> / <sub>6</sub> ( <i>E</i> 000 − 75° 6000 6000
FUNCTION:	To show the operator the operating capacities of the crane.	USE LOAD BLOCK 50° 4750 3725 3600 10 ET	USE OAD BLOCK FOR LOADS /ER 3000 LBS. 140 ET 2500 3725	M 45 500 450 00 10 5100 115 500 14 500 2115 50 14 500 155
QUANTITY:	1 each	2075 2325 2250 16 FT EXTENSION EXT	BOOM TENSION ENGTH      10 FT      3600 37        16 FT      2250 232        20 FT      1800 18	5 2015 et
PLACEMENT:	One on each side of boom.			
PART NO.:	28533			
DECAL:	MODEL DECAL (ET36KX)			
FUNCTION:	To show the model of the crane.	<i>ЕТ.</i> <b>36</b> КХ		•
QUANTITY:	2			
PLACEMENT	: One on each side of boom.			
PART NO.:	19788-1			
DECAL:	PROPORTIONAL DECAL			
FUNCTION:	To show the crane has proportional feature.	PROPORTIONA	L CONT	ROL
FUNCTION: QUANTITY:		PROPORTIONA	L CONT	ROL
QUANTITY:	feature.	PROPORTIONA	L CONT	ROL
QUANTITY: PLACEMENT: PART NO.: 1	feature. 2 : One on each side of boom. 17389-4 VENTURO (2.8" x 11") Branding.			ROL
QUANTITY: PLACEMENT: PART NO.: 1 DECAL: N PURPOSE: E QUANTITY:	feature. 2 : One on each side of boom. 17389-4 VENTURO (2.8" x 11") Branding. 1 : Rear cover			

ET36KX(P)

24451

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## INSTALLATION



### **!! IMPORTANT !!**

### ADEQUATE WIRING IMPERATIVE FOR PROPER OPERATION

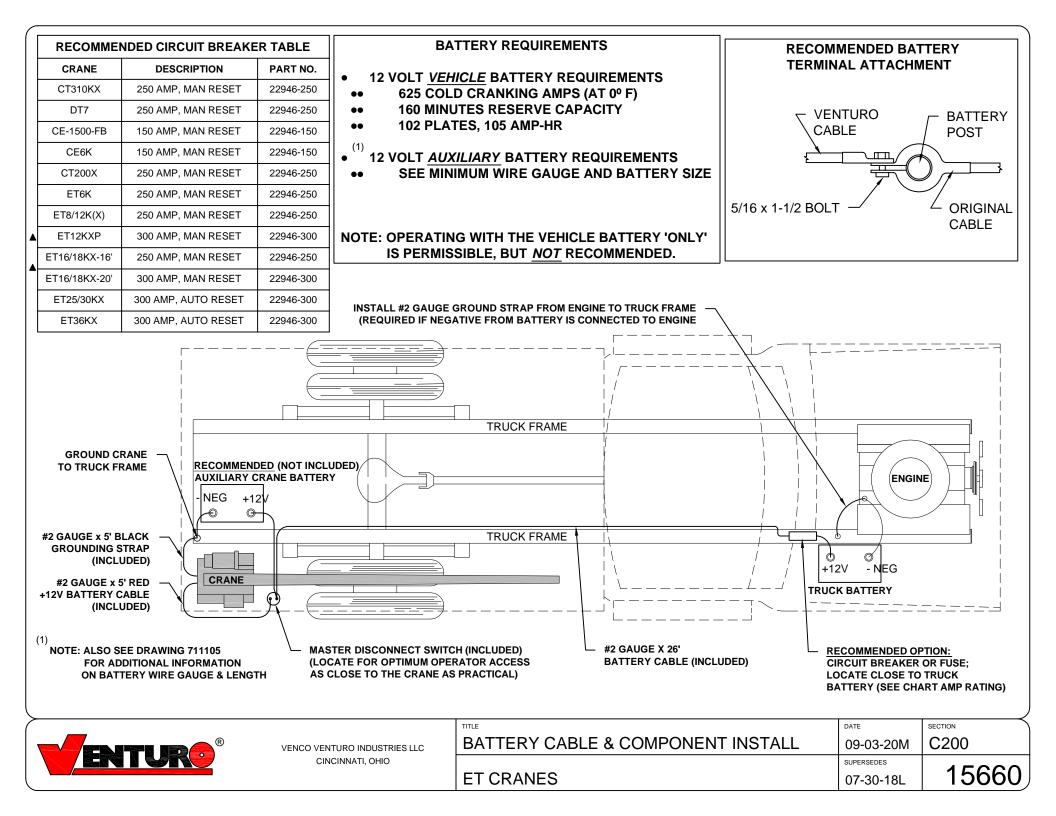
- 1. PROPER GROUND PATH SEE DWG 15660
- 2. CURRENT DRAW IS SEVERAL HUNDRED AMPERES -ADEQUATE WIRE SIZE AND BATTERY CAPACITY IS ABSOLUTELY ESSENTIAL (SEE CHART BELOW).

### ▲ MINIMUM WIRE GAUGE AND AUXILIARY BATTERY SIZE

MODEL		TOTAL LENGTH OF CABLE (FT) *							▲ 12 VOLT A BATTERY RE	AUXILIARY QUIREMENTS
	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 R	ECOMN	IENDED	450	100
ET8KX ET10KX ET12KX ▲ ET12KXP	#2	#2	#1	#0	#00	NOT R	ECOMN	IENDED	550	150
ET18K(X) ET25K(X) ET30KX ET36KX		SEE DRAWING 15660 FOR CABLE AND BATTERY REQUIREMENTS								

- \*\* 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.

VENCO VENTURO INDUSTRIES LLC	CABLE & BATTERY	<sup>DATE</sup> 07-30-18X	section C200
CINCINNATI, OHIO	ELECTRIC CRANES	supersedes 09-27-17W	711105



### STABILITY TEST - ET36-20' 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. <u>Note: The black & white wires MUST be</u> reconnected to the Overload Pressure Switch after the stability test has be completed.
- 6. Use a **Test Weight** weighing a **minimum** of <u>2118 lbs</u>, (includes load block weight of <u>34</u> lbs.) to a **maximum of 2200 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 the test weight, 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 truck becomes unstable i.e. a tire lifts off the ground
  - 10.2.1. Retract the boom until at least one tire on each corner of the truck is making contact with the ground
  - 10.2.2. Use the formula below to determine the allowable % of Rated Capacity for the ZONE in question
- 11. Note: The "<u>Max Stable Reach in inches"</u> is measured (horizontally) from the center of rotation of the crane housing to the *lifting load hook.*

"Max Stable Reach" in inches"

X 100

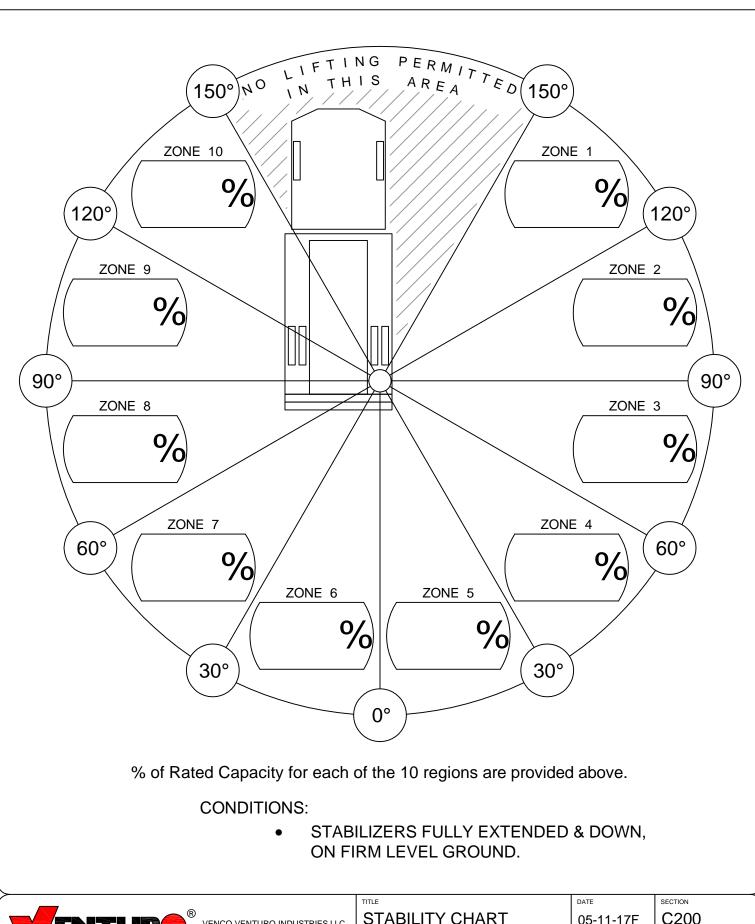
248

- 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.

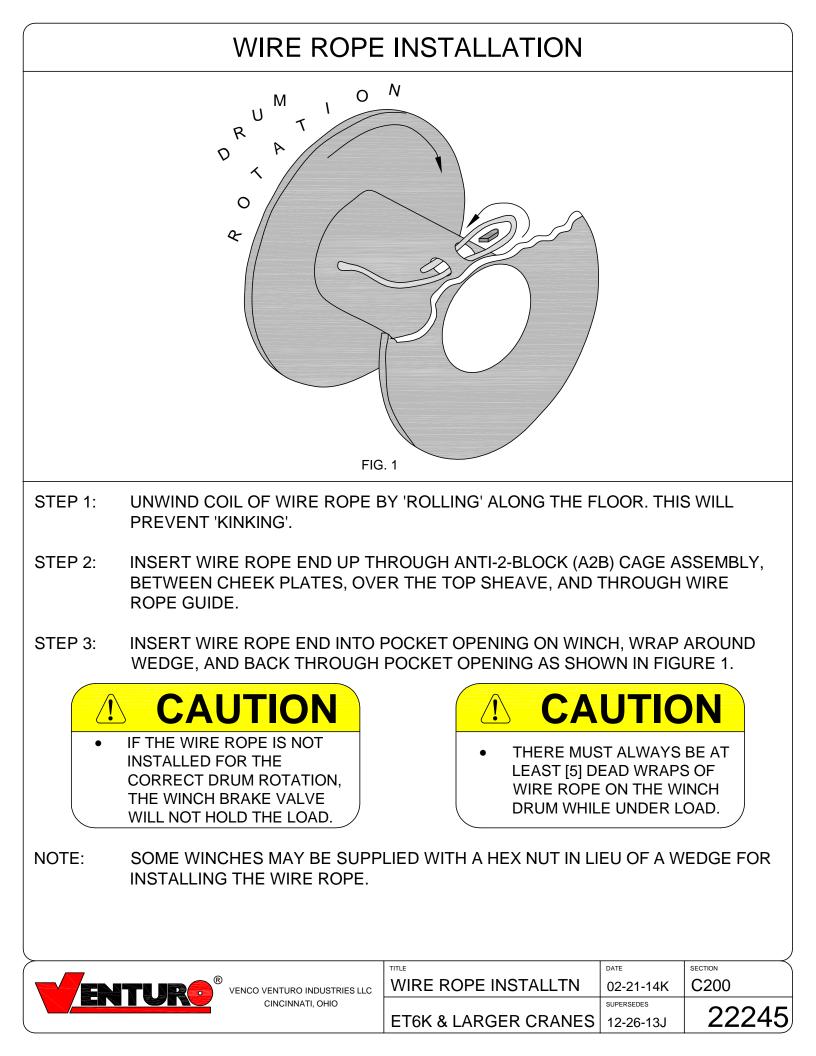
% Rated Capacity =

	TITLE	<sup>DATE</sup>	SECTION
	STABILITY TEST	03-17-23E	C200
ENTUR: CINCINNATI, OHIO	ET36-20' SERIES	SUPERSEDES	20906-36

### CRANE STABILITY



VENCO VENTURO INDUSTRIES LLC	STABILITY CHART	05-11-17F	C200
CINCINNATI, OHIO	VENTURO CRANES	SUPERSEDES	20907
	VENTURO CRAINES	02-21-14E	20001

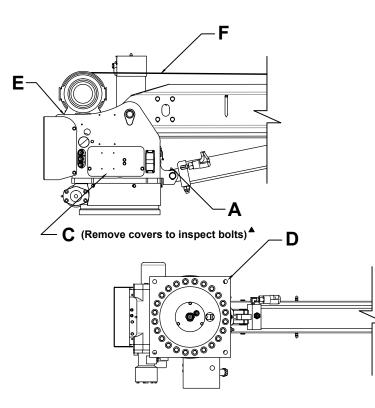


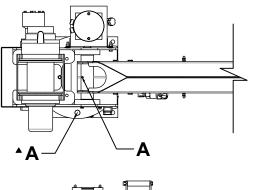
## MAINTENANCE

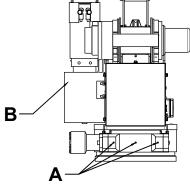
### &

## SERVICE



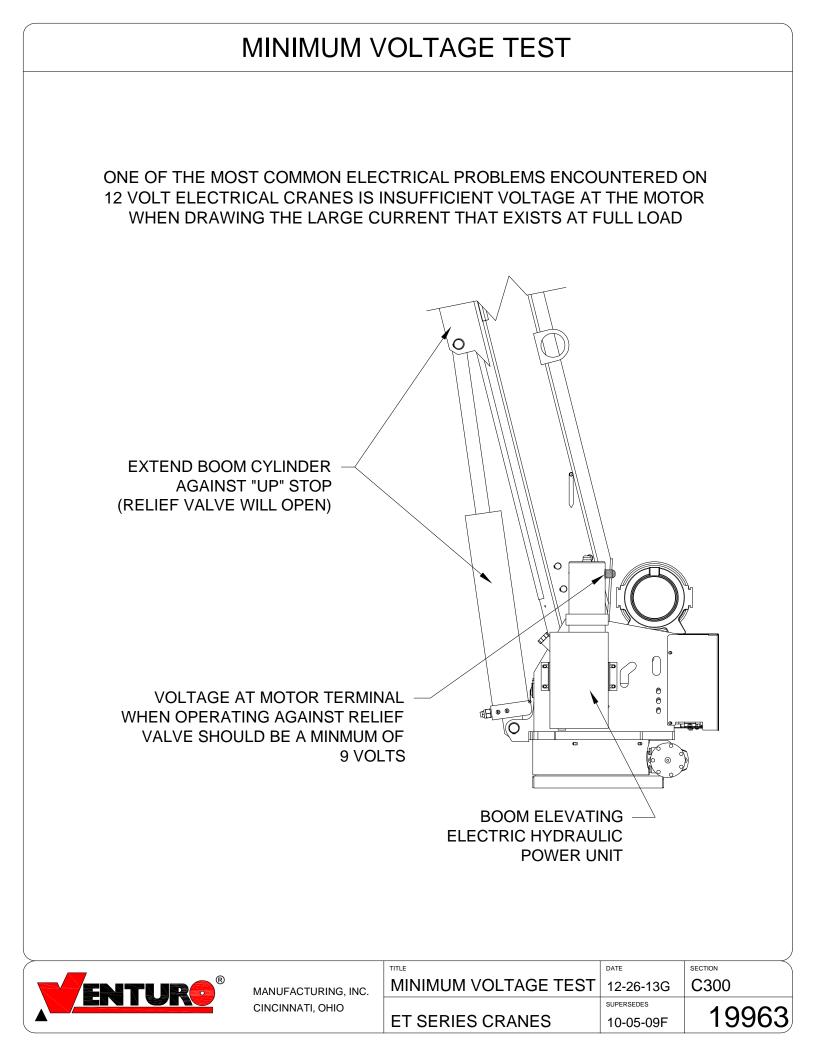


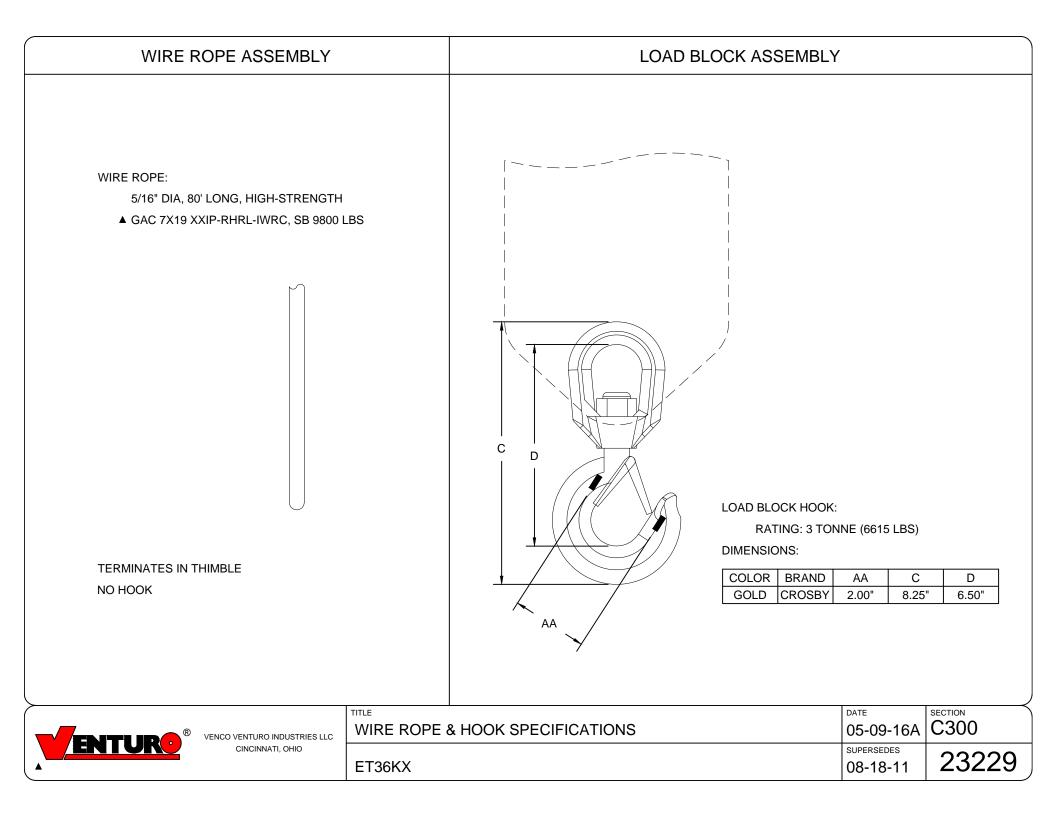




Location	Service Required	Note	Service Interval
A	Grease fitting with pressure grease gun	USE ELECTRICALLY CONDUCTIVE GREASE Failure to use electrically conductive grease may result in intermittent operation of the crane. Example: Fuch's Renolit Aluminum Complex Grease P/N 155250-2 (or equivalent).	Time of Truck Service
В	Fill oil reservoir to "Oil Level" mark with boom down (elevation cylinder retracted)	Use Dextron III ATF or ISO Grade AW 46 for ambient temperatures between -22°F and 30°F	Time of Truck Service and as requried by changes in the ambient temperature range
▲ <u>C</u>	Check torque of upper slew-drive bolts	Bolts should be torqued to 60 ft-lbs	Time of Truck Service
D	Check torque of base mounting bolts	Bolts should be torqued to 300 ft-lbs	Time of Truck Service
E	Check torque of winch mounting bolts	Bolts should be torqued to 35 ft-lbs	Time of Truck Service
F	Check wire rope and hook	Rope should be free of kinks and fraying	Prior to Use (Daily)

<b>ENTURO</b> MANUFACTURING, INC. CINCINNATI, OHIO		DATE 01-29-25B	section C300
	ET25/30/36KX	supersedes 01-30-23B	24407





#### MANUAL OVERRIDE INSTRUCTIONS ET NON-PROPRTIONAL SERIES CRANES

#### **!! 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:

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

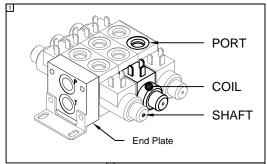
3-STATION FUNCTIONS include previous functions, plus: BI = Boom In BO = Boom Out

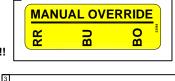
ALWAYS BE SURE TO CHECK HYDRAULIC OIL LEVEL BEFORE PROCEEDING. IT IS RECOMMENDED TO REMOVE ANY ITEM(S) THAT MAY INTERFERE WITH OPERATING THE CRANE MANUALLY. IF POSSIBLE, STRAPS AND/OR HARNESSES SHOULD BE REMOVED BEFORE OPERATING A CRANE IN MANUAL OVERRIDE !!

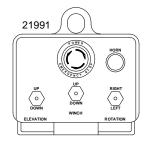
Procedure:

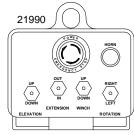
- 1. Turn Master disconnect switch to "ON"
- 2. Power up the pendant / radio
- 2.1. PENDANT twist EMERGENCY STOP button clockwise
- 2.2. RADIO Press green ON button
- 3. On the crane, reference the function you wish to perform using the manual override decal
- 4. Using a tool with a diameter of 1/8"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













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



R VEN	VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO	TITLE MAN. OVERRIDE INSTR.	DATE 03-08-19A	C200
		ET NON-PROP CRANES	SUPERSEDES 02-09-17	23084

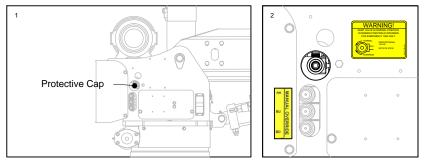
#### MANUAL OVERRIDE INSTRUCTIONS ET PROPRTIONAL SERIES CRANES

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

4

COIL

SHAFT



Each valve station incorporates [2] hydraulic ports and [2] coils. Manual override shafts are located in the center of the coils (see figure 4). 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 3 & 5).

**3-STATION FUNCTIONS:** 

RR	=	Rot. Right	RL	=	Rot. Left
ΒU	=	Boom Up	BD	=	Boom Down
BI	=	Boom In	BO	=	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 !!

Procedure:

- Turn Master disconnect switch to "ON" 1.
- 2. Remove Protective cap (see figure 1)
- Rotate Valve Stem Clockwise to close (see figure 2) 3.
- 4. Power up the pendant / radio
- Twist EMERGENCY STOP button clockwise 4.1.
- 5. On the crane, reference the function you wish to perform using the manual override decal (see figure 3)
- 6. Using a tool with a diameter of 1/8" or smaller, press the shaft inward and hold
- 7. Reference the functions listed on your pendant or radio (see figure 6)
- Press the switch or button for the same function 8.
- If you need to change function, 9.
- 9.1. Release switch or button
- 9.2. Remove tool from shaft
- 9.3. Go to step 5

For assistance, please feel free to contact Technical Support at 800-226-223



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE

MAN. OVERRIDE INSTR.

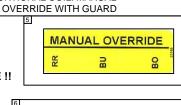
ET25/30/36KXP

	UP OUT UP RIGHT O O O O O DOWN IN DOWN LEFT BOOM BOOM HORN WINCH ROTATE	
38.		

09-16-19

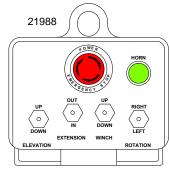
SUPERSEDES

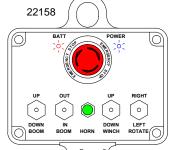
DATE



PROPORTIONAL COIL: MANUAL

PORT



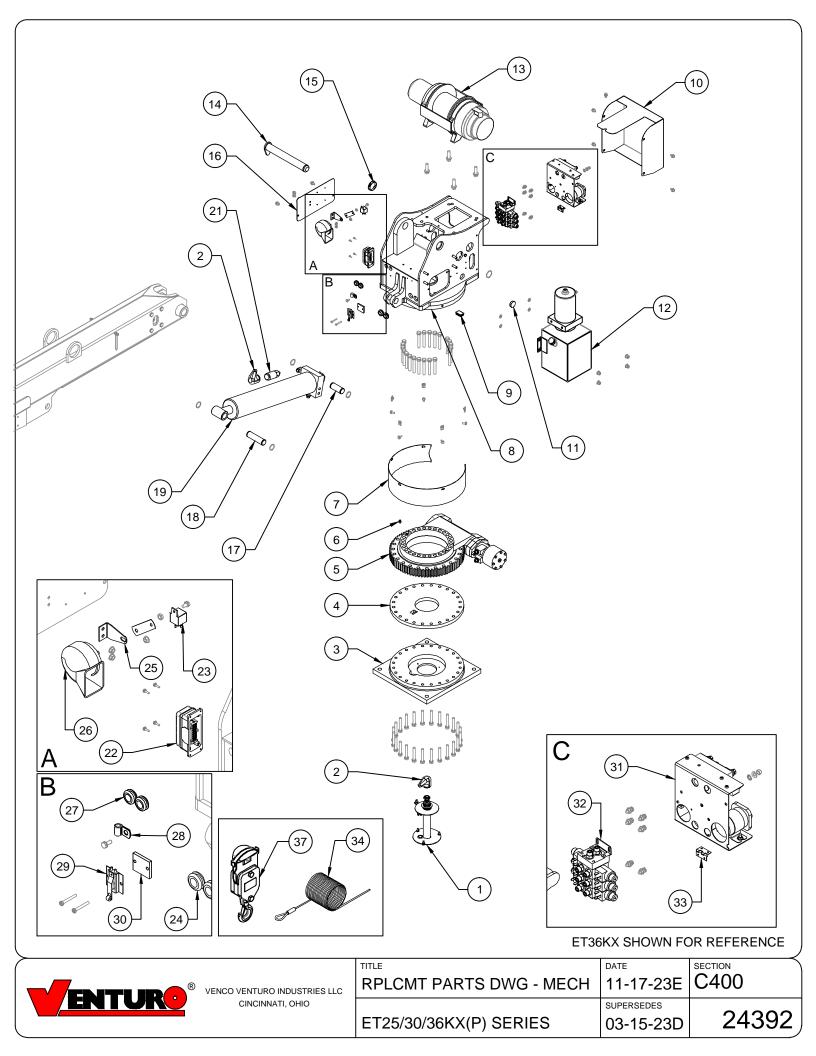


SECTION C200

2441

# REPLACEMENT PARTS

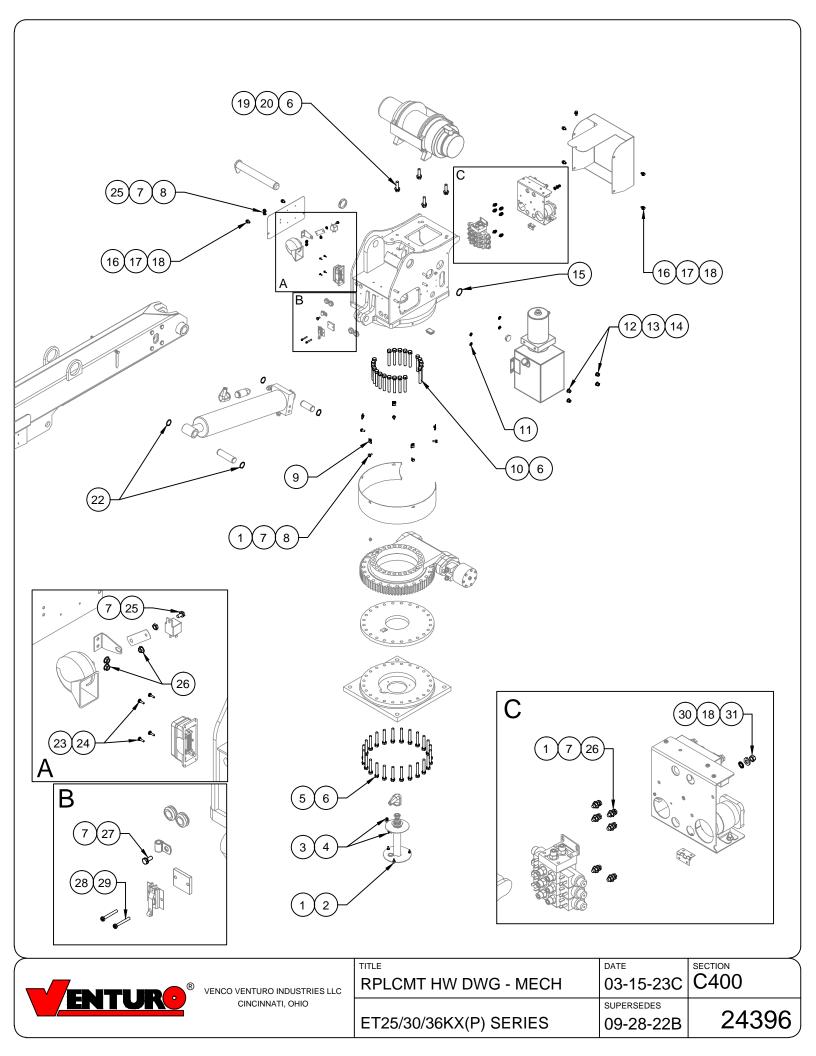




### REPLACEMENT PARTS LIST - ET36KX(P) MECH

	ET36KX	ET36KXP		
ITEM NO.	QTY.	QTY.	PART NO.	DESCRIPTION
1	1	1	16780-2P25	SWIVEL TERMINAL ASS'Y.
2	2	2	17012	BOOT COVER
3	1	1	27520m	WELDED ASS'Y.: BASE
4	1	1	27520h	SPACER
5	1	1	21418	SLEWING RING
6	1	1	01327NPT	GREASE FITTING, 1/8-27 NPT
7	1	1	27186	COVER; SLEWING RING
8	1	1	21435	WELDED ASS'Y.: HOUSING
9	1	1	28005	PLUG; RECTANGULAR, HOUSING BASE PLATE
10	1	1	27600	COVER; REAR, MECHANISM
11	1	1	19122	HOLE PLUG; 1-1/4"
12	1	1	26489	HYDRAULIC POWER UNIT
13	1	1	19813	ELECTRIC WINCH
14	1	1	21012	PIVOT PIN, MAIN BOOM PIVOT
15	1	1	26492	PLUG; Ø2", LOCKING
16	1	1	27000	PLATE, SIDE COVER
17	1	1	18768	PIVOT PIN, ELEVATION CYLINDER
18	1	1	18761	PIVOT PIN, ELEVATION CYLINDER
19	1	1	21752	ELEVATION CYLINDER
20	-	-	-	-
21	1	1	17460-2900	PRESSURE SWITCH, 2900 PSI
22	1	1	22480	SOCKET ASS'Y.
23	1	1	22739	RELAY, 12V
24	2	2	20890	GROMMET; RUBBER, Ø1" X 1/4" X 11/16"
25	1	1	22000	BRACKET; HORN
26	1	1	21948	HORN
27	2	2	20889	GROMMET; RUBBER, Ø7/8" X 1/4" X 5/8"
28	1	1	19269	CLAMP, CABLE, 1/4"
29	1	1	19904	BOOM SHUT OFF SWITCH ASS'Y.
30	1	1	20896	UHMW SPACER - TOP POSIT SWITCH
31	1	1	23154-4	SUB-ASSY; ELECTRICAL CMPNNT
	1	-	21614	VALVE BLOCK; 4-3, 3-SPOOL
32	-	1	26479	VALVE BLK ASSY, 3-SPOOL W/ PROP VALVE
33	1	1	23826	HINGE
34	1	1		WIRE ROPE; 5/16 X 80 FT HIGH-STRENGTH
35	1	1	27609-3/10-80	WELDED ASS'Y; MOTOR COVER
36	2	2	28380	SPACER; STAND-OFF, 1/4-20 X 1", 1/2" HEX
37	1	1	27667-1	ASS'Y; LOAD BLOCK, 6000 LBS MAX RATING

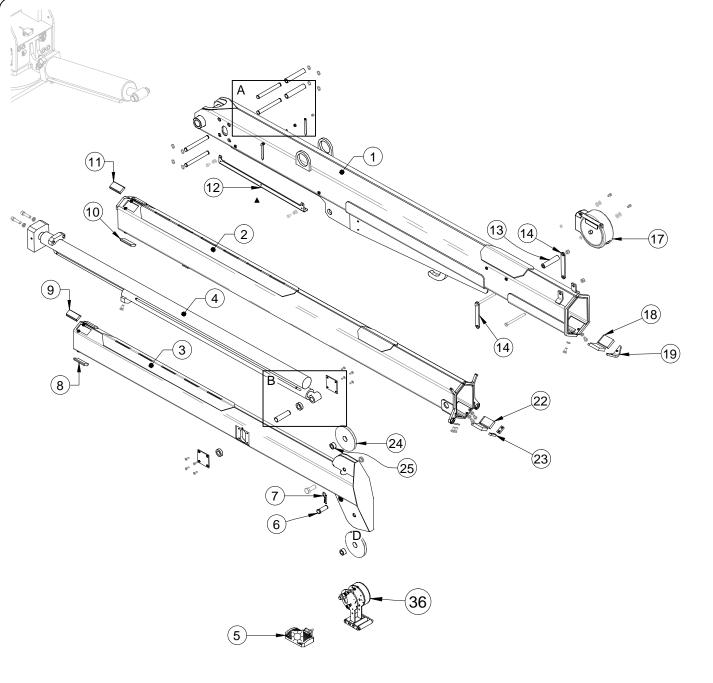


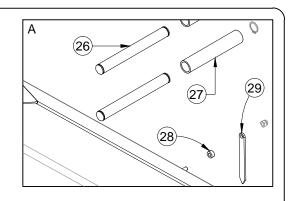


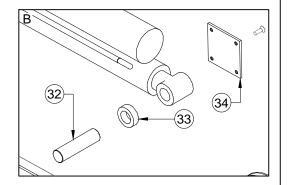
### REPLACEMENT H/W LIST - ET25/30/36KX(P) MECH

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	14	!HHCS02520075S	HEX HEAD CAP SCREW, 1/4-20 X .75 LG, STAINLESS
2	6	!LWSH-025-STAR-SS	LOCK WSHR, 1/4, EXT STAR , STAINLESS STEEL
3	2	!HHCS03118075-B	HHCS; 5/16-18 X 3/4, BRASS
4	2	!HNUT-03118-B	HEX NUT; 5/16-18, BRASS
5	24	!HHCSM12175080-8.8	HEX HEAD CAP SCREW; 12MM-1.75MM X 80MM LG, GR. 8.8
6	45	!LWSH-M12-8.8	LOCK WASHER; M12, GRADE 8.8
7	15	!LWSH-025S	LOCK WASHER 1/4 S/S
8	7	!FWSH-025S	FLAT WASHER 1/4 S/S
9	5	!UNUT-02520-LKG	U-NUT; 1/4-20, LCKNG TYPE
10	21	!HHCSM12175090-8.8	HHCS; 12MM-1.75 X 90MM GR. 8.8, ZINC
11	4	!LWSH-038-STAR	LOCK WSHR; 3/8, GR. 5, ZINC, X-TOOTH
12	4	!FWSH-038SAE	WASHER; FLAT, 3/8 SAE, ZNC PLTD
13	4	!LWSH-038	LOCK WSHR; 3/8, GR. 5, ZINC
14	4	!LNUT-03816	LOCK NUT; 3/8-16, GR. 5, ZINC, NYL-NSRT
15	1	!SRNG-150	SNAP RING FOR 1.5 SHAFT, ZINC PLATED
16	7	!HHCS03118063S	HEX HEAD CAP SCREW, 5/16-18 X 5/8 LG, STAINLESS
17	7	!LWSH-031S	LOCK WASHER 5/16 S/S
18	7	!FWSH-031S	FLAT WASHER 5/16 S/S
19	4	25921	SHCS; M12-175 X 50MM, GR. 12.9
20	4	!FWSH-M12	WASHER; FLAT, M12
21	-	-	-
22	4	!SRNG-125	SNAP RING 1-1/4 IN - PLATED
23	4	!SHPMS#0832050S	SLOT HEAD, PAN, MACH SCREW #8-32 X 1/2 LG STAINLESS
24	4	!LWSH-#08S	LOCK WASHER, #8 STAINLESS
25	1	!HHCS02520050S	HEX HEAD CAP SCREW, 1/4-20 X 1/2 LG, STAINLESS
26	9	!FNUT-02520-SS	FLANGE NUT; 1/4-20, STAINLESS STEEL
27	7	!HHCS02520063S	HEX HEAD CAP SCREW, 1/4-20 X 5/8LG, STAINLESS
28	2	!PHPMS#1024150S	PHILLIPS HEAD PAN, MACH SCREW, # 10-24 X 1-1/2LG, S/S
29	2	!LWSH-#10S	LOCK WASHER, #10, STAINLESS
30	1	!LWSH-031-STAR-SS	LOCK WSHR, 5/16 EXT STAR , STAINLESS STEEL
31	1	!HNUT-03118S	HEX NUT 5/16-18 STAINLES S









REFERENCE #26972 FOR REPLACEMENT PARTS LIST

☆ ITEM #5 IS OPTIONAL, AND IS NOT INCLUDED WITH STANDARD EQUIPMENT



REPLACEMENT PARTS DWG; 26570 BOOM	DATE 12-05-24B	SECTION C400
HT25, ET25/36 SERIES CRANES	supersedes 07-19-24A	26971

### **REPLACEMENT PARTS LIST; 26570 BOOM**

ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO	QTY	DESCRIPTION
1	26571	1	WELDED ASSY; PRIMARY BOOM	22	23217-10	2	BOOM PAD; UHMW, 'B', 3.19 x 1.75 x 0.63
2	27165	1	WELDED ASSY; SECONDARY BOOM	23	23119	2	RETAINING BLOCK; BEARING
3	27167	1	WELDED ASSY; TERTIARY BOOM	24	27001	2	SHEAVE; POLY CABLE
4	21753	1	EXTENSION CYLINDER	25	23924-1	2	SPACER; 27001 SHEAVE
☆ 5	27483	1	ASSY; WORK LIGHT, LED	26	21497	4	THRUST PIN; EXTENSION CYLINDER
6	13401-1	1	CLEVIS PIN	27	21498	2	ROLLER; EXTENSION CYLINDER
7	21-07	1	HAIRPIN COTTER	28	22490	2	SPACER; BOOM ARROW
8	23217-7	2	BOOM PAD; UHMW, 'A', 3.19 x 1.50 x 0.44	29	13459-2	2	BOOM ARROW; 4" LONG
9	23217-6	2	BOOM PAD; UHMW, 'A', 3.19 x 1.50 x 0.50	30	-	-	-
10	23217-9	2	BOOM PAD; UHMW, 'A', 3.19 x 1.75 x 0.44	31	-	-	-
11	23217-8	2	BOOM PAD; UHMW, 'A', 3.19 x 1.75 x 0.50	32	21941	1	PIN; EXTENSION CYLINDER
12	26940-1	1	HEX BOOM CABLE GUIDE	33	21428	2	BUSHING; 1" BORE x 1-5/8" OD, 1/2"
13	21560	1	ROLLER; UHMW, WIRE ROPE GUIDE	34	23116	2	PIN BLOCK; REINFORCING
14	21936	2	FLAT MOUNT; WIRE ROPE GUIDE	35	-	-	-
-	-	-	-	36	27469-L-C-00	1	COMPACT A2B ASS'Y
-	-	-	-	37	-	-	-
17	26577-1-20	1	COMPLETE CORD REEL	38	-	-	-
18	23217-3	2	BOOM PAD; UHMW, 'B', 3.19 x 2.13 x 0.63	39	-	-	-
19	23183	1	V-BLOCK SLIDER; W/ CHAMFER	40	-	-	-
-	-	-	-	41	-	-	-
-	-	-	-	42	-	-	-

\* DOES NOT INCLUDE VLC-SPECIFIC COMPONENTS. PLEASE REFERENCE VLC MANUAL.

REFERENCE #26971 FOR REPLACEMENT PARTS DRAWING

COPTIONAL: NOT INCLUDED WITH STANDARD EQUIPMENT

DATE

SUPERSEDES

07-03-24

SECTION

26972

12-05-24A C400



TITLE

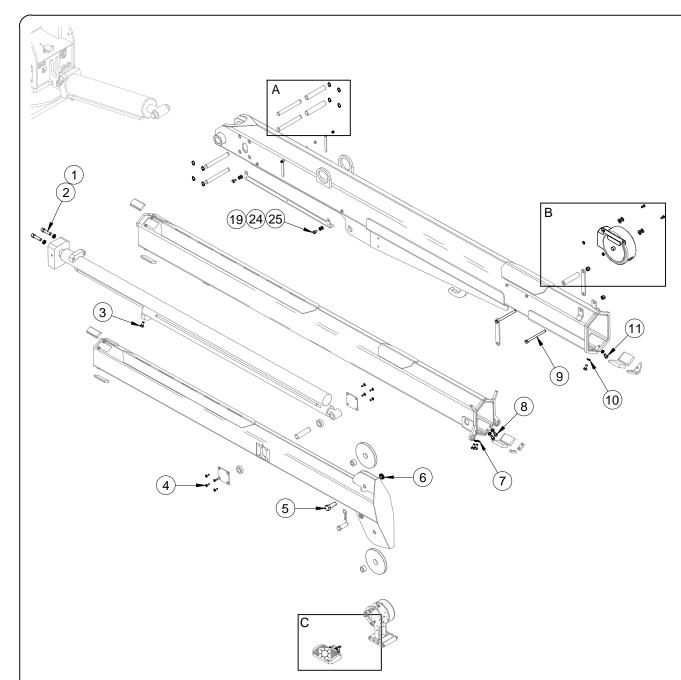
**REPLACEMENT PARTS LIST; 26570 BOOM** 

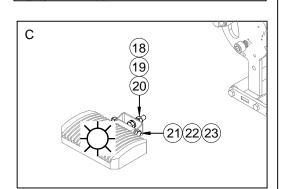
HT25, ET25/36 SERIES CRANES

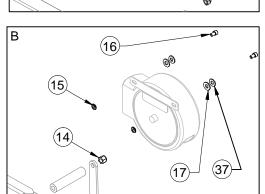
	VENCO VENTURO INDUSTRIES LLC	RPLCMNT FASTENERS DWG; 26570 BOOM		section C400
ENTUR	CINCINNATI, OHIO	HT25, ET25/36 SERIES CRANES	SUPERSEDES	26973

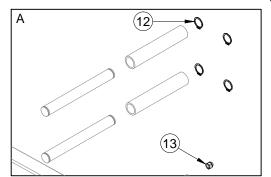


### OPTIONAL: NOT INCLUDED WITH STANDARD EQUIPMENT









### REPLACEMENT FASTENERS LIST; 26570 BOOM, HT25/30 VLC CRANES

ITEM #	PART #	QTY	DESCRIPTION	WHERE-USED
1	!SHCS05013200	2	SHCS; 1/2-13 X 2", GR. 5 ZINC	EXTENSION CYLINDER
2	!LWSH-050-HC	2	LOCK WASHER; 1/2", HI-COLLAR	EXTENSION CYLINDER
3	!HHCS03816100N	2	HHCS; NYLON PATCH 3/8-16 X 1", GR. 5 ZINC	EXTENSION CYLINDER V-BLOCK
4	!CACS02520063-N	8	CACS; 1/4-20 X 5/8", NYLON PATCH	PIN BLOCK, REINFORCING
5	17059-6	1	SHEAVE AXLE; 1" SHOULDER, S/S	TOP SHEAVE
6	!LNUT-07510	1	LOCK NUT; NYLOC, 3/4-10, GR. 5 ZINC	TOP SHEAVE
7	!LWSH-038	4	LOCK WASHER; 3/8", GR. 5 ZINC	SECONDARY BOOM, PAD BLOCKS
8	!HHCS03816075-5	4	HHCS; 3/8-16 X 3/4", GR. 5 ZINC	SECONDARY BOOM, PAD BLOCKS
9	!HHCS04414550	2	HHCS; 7/16-14 X 5-1/2", GR. 5 ZINC	WIRE ROPE GUIDE
10	!LWSH-038	2	LOCK WASHER; 3/8", GR. 5 ZINC	PRIMARY BOOM, V-BLOCK
11	!HHCS03816075-5	2	HHCS; 3/8-16 X 3/4", GR. 5 ZINC	PRIMARY BOOM, V-BLOCK
12	!SRNG-075	8	SNAP RING; 3/4", PLATED	EXTENSION CYL. THRUST PINS
13	!ANUT02520S	2	ACORN NUT; 1/4-20, S/S	PRIMARY BOOM ARROWS
14	!LNUT-04414	2	LOCK NUT; 7/16-14, NYLON, GR. 5 ZINC	WIRE ROPE GUIDE
15	28198	2	INSULATING SLEEVE WASHER - 5/16"	CORD REEL TO PRIMARY BOOM
16	!SHCS03118063S	2	SHCS; 5/16-18 X 5/8" LG, S/S	CORD REEL TO PRIMARY BOOM
17	01016	2	FIBER WASHER	CORD REEL TO PRIMARY BOOM
☆ 18	!HHCS03118125S	1	HHCS; 5/16-18 X 1-1/4", S/S	LED WORK LIGHT
☆ 19	!LWSH-031S	3	LOCK WASHER; 5/16", S/S	LED WORK LIGHT & CABLE GUIDE
☆ 20	!HNUT-03118S	2	HEX NUT; 5/16-18, S/S	LED WORK LIGHT
<b>☆ 21</b>	!HHCS02520250S	1	HHCS; 1/4-20 X 2-1/2", S/S	LED WORK LIGHT
☆ 22	!LWSH-025S	1	LOCK WASHER; 1/2", S/S	LED WORK LIGHT
☆ 23	!HNUT-02520S	1	HEX NUT; 1/4-20, S/S	LED WORK LIGHT
24	!FWSH-031S	4	FLAT WASHER; 5/16", S/S	CORD REEL & CABLE GUIDE
25	!HHCS003118050S	-	HHCS; 5/16-18 X1/2", S/S	CABLE GUIDE

\* DOES NOT INCLUDE VLC-SPECIFIC COMPONENTS. PLEASE REFERENCE VLC MANUAL.

🌣 ITEMS #23-28 ARE FOR OPTIONAL COMPONENTS - NOT INCLUDED WITH STANDARD EQUIPMENT

REFERENCE #26973 FOR REPLACEMENT FASTENERS DRAWING

HHCS =HEX HEAD CAP SCREW, PHPMS = PHILIPS-HEAD PAN MACHINE SCREW, SHPMS = SLOT-HEAD PAN MACHINE SCREW, S/S = STAINLESS STEEL

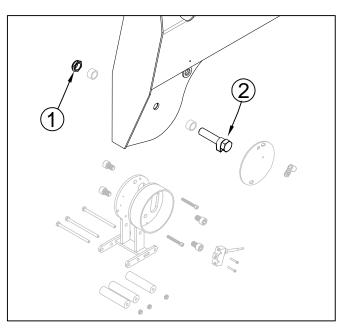


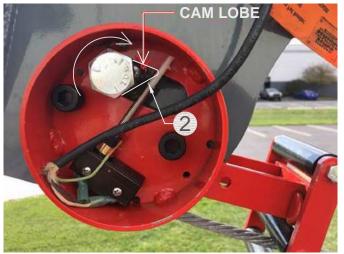
### Compact A2B with Stowage Cut-out, Install/Adjustment Instructions (Kit: 28375)

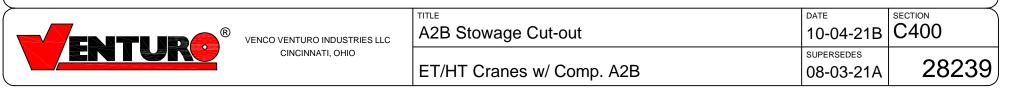
The purpose of the Stowage Cut-out system is to prevent a situation whereby the wire rope is over-tensioned when the load block / wire rope is attached to the stowage hook on the bottom of the primary boom assembly. *However, the OPERATOR is ultimately responsible for ensuring that the wire rope is not over-tensioned when stowing the wire rope and boom assembly into the boom rest.* 

- 1. Initially, apply a light torque to the nyloc full nut Item #1 (P/N !LNUT-07510), such that the axle bolt & cam welded assembly can be rotated / adjusted in the steps below.
- 2. Position the cam *lobe* Item #2 (P/N 28362) so that it is pointing towards the housing / mechanism
- 3. Hang the load block on the open stowage hook under the primary boom.
- 4. Thread the wire rope through the load block in a two-line configuration; the wire rope end / eyelet is pinned in the standard position on the tertiary boom tip
- 5. Actuate the Winch Up function until the load block and wire rope are *taut* enough to prevent the load block from bouncing during transit, <u>but do not</u> <u>tighten excessively so as to prevent damage to the wire rope.</u>
- 6. Rotate the axle bolt & cam welded assembly towards the housing (clockwise in standard configuration) until the cam lobe makes contact with and trips the wobble micro switch and actuates the A2B function.
- 7. Once adjusted, torque the nyloc full nut (Item #1) to 100 ft\*lbs to prevent further rotational movement of the axle bolt & cam welded assembly.
- 8. Test the A2B trip-point by slackening and tightening the wire rope / load block assembly by actuating Winch Up/Down. <u>NOTE: The point at which</u> the A2B trips WILL vary to some degree, depending upon the winch up speed. It is recommended to actuate the winch up function slowly, which will yield a consistent and repeatable result, in terms of wire rope tension when stowed.

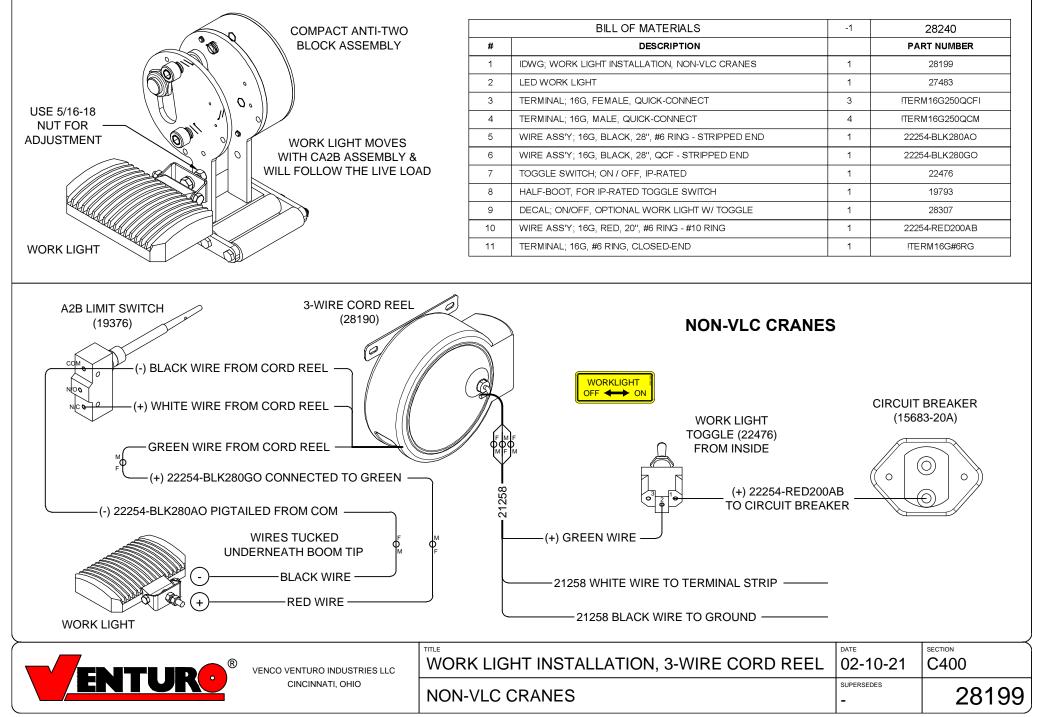
Contact Venturo Tech Support for assistance. 1-800-226-2238 ext. 124



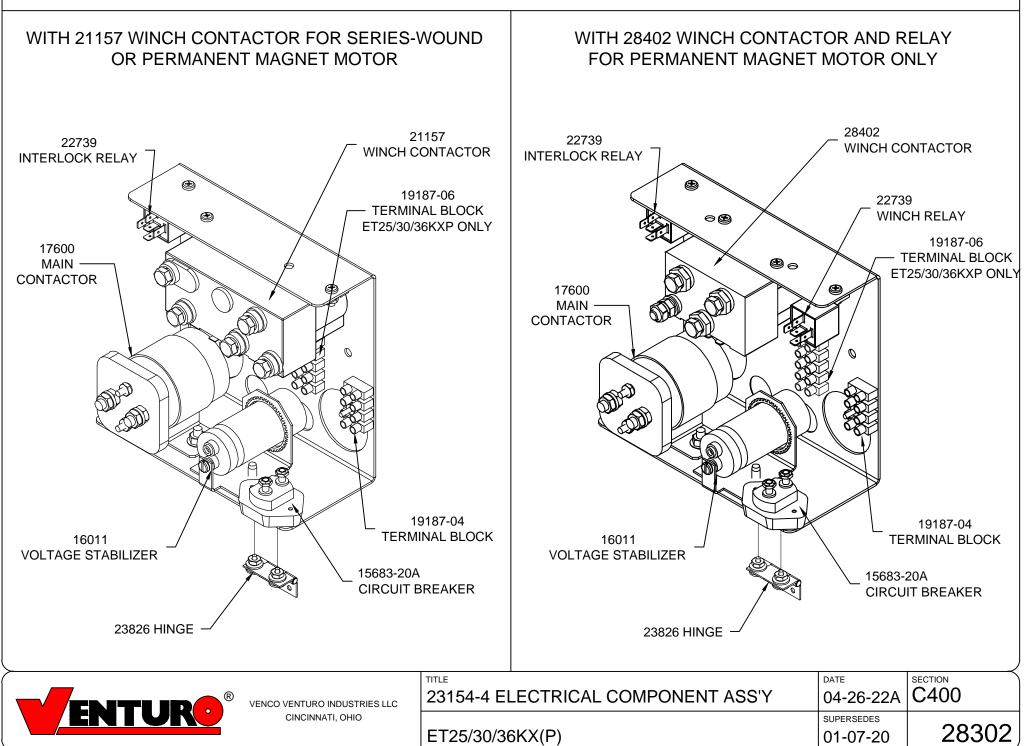


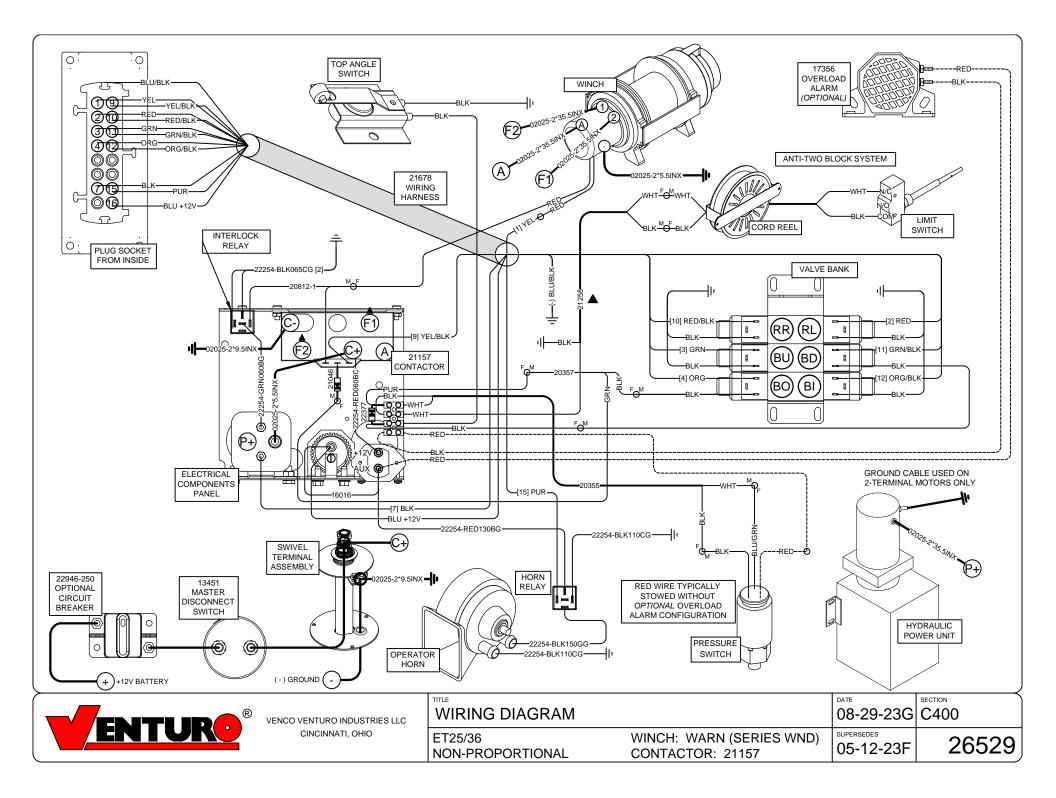


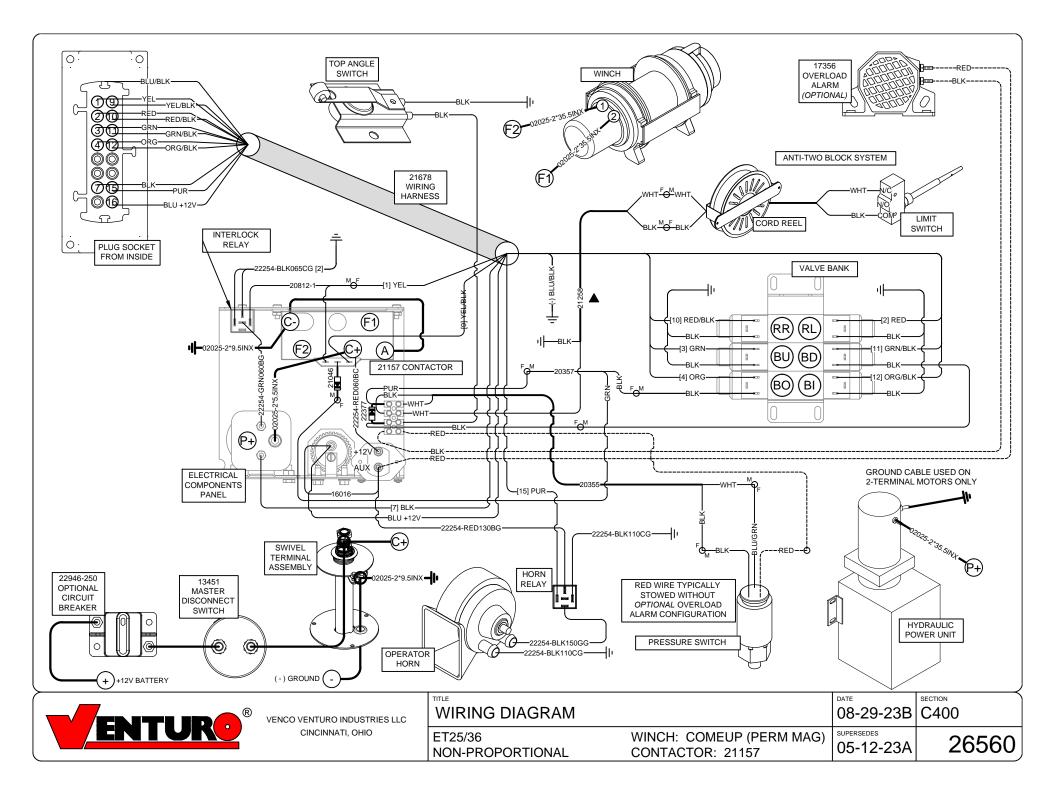
### WORK LIGHT INSTALLATION: 28240-1 (3-WIRE CORD REEL ON NON-VLC CRANES)

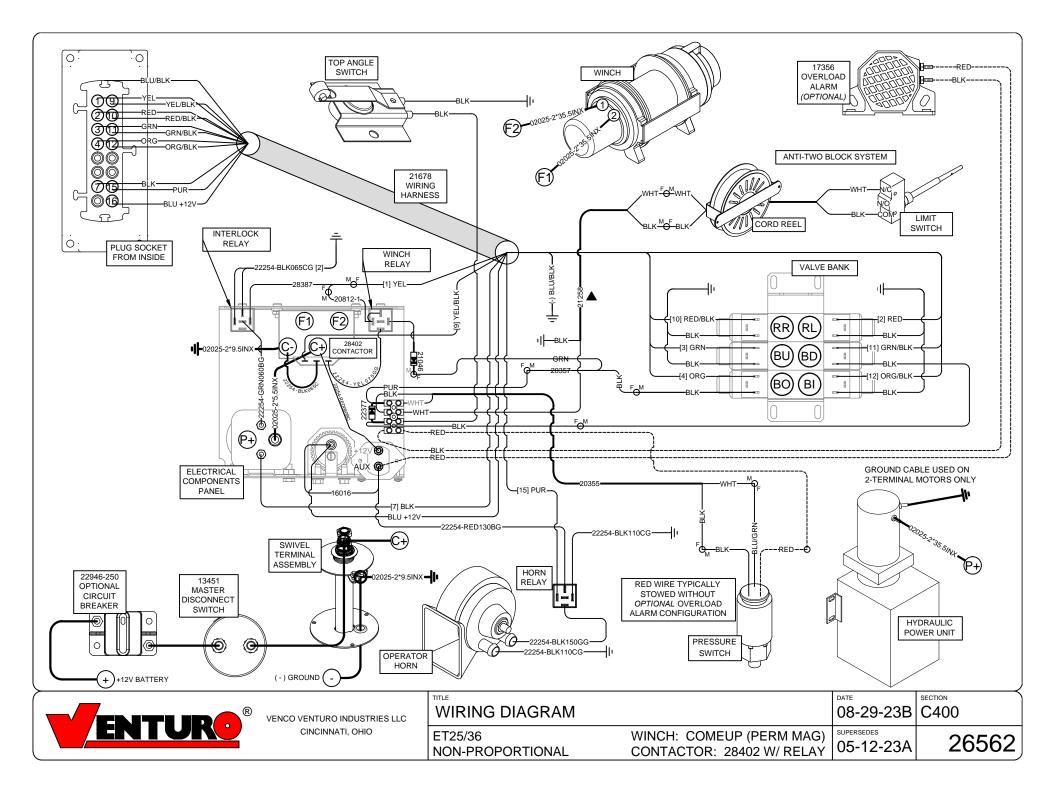


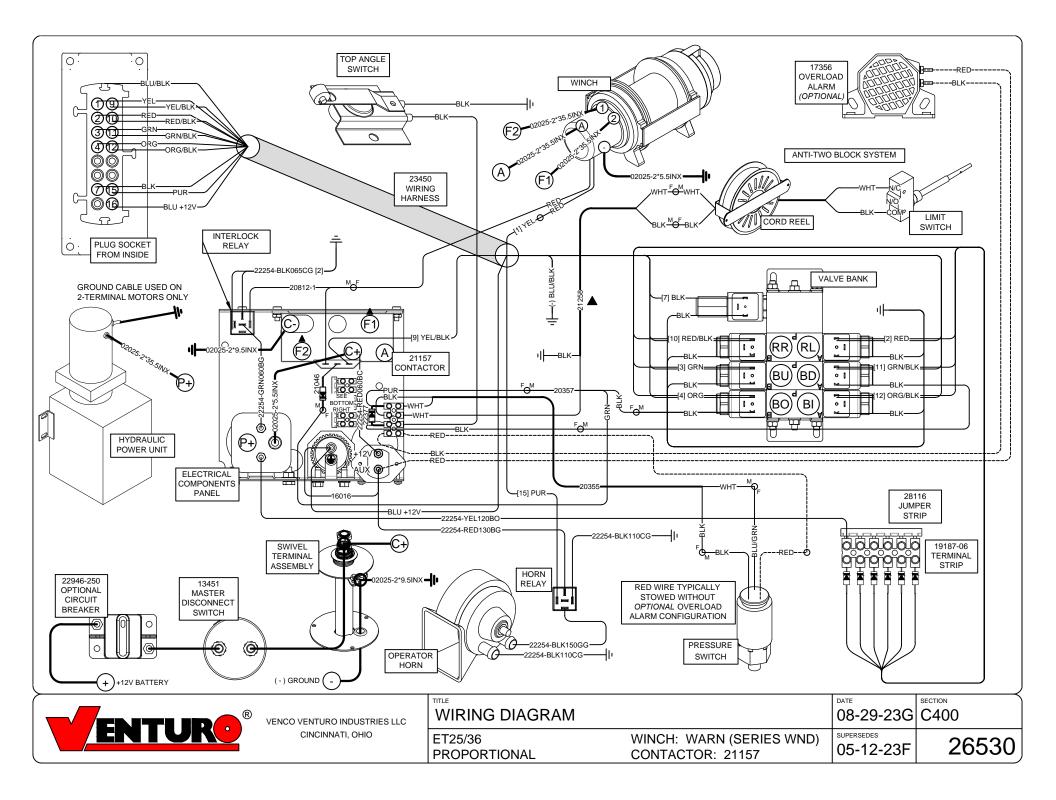
### 23154-4 ELECTRICAL COMPONENT ASSEMBLY

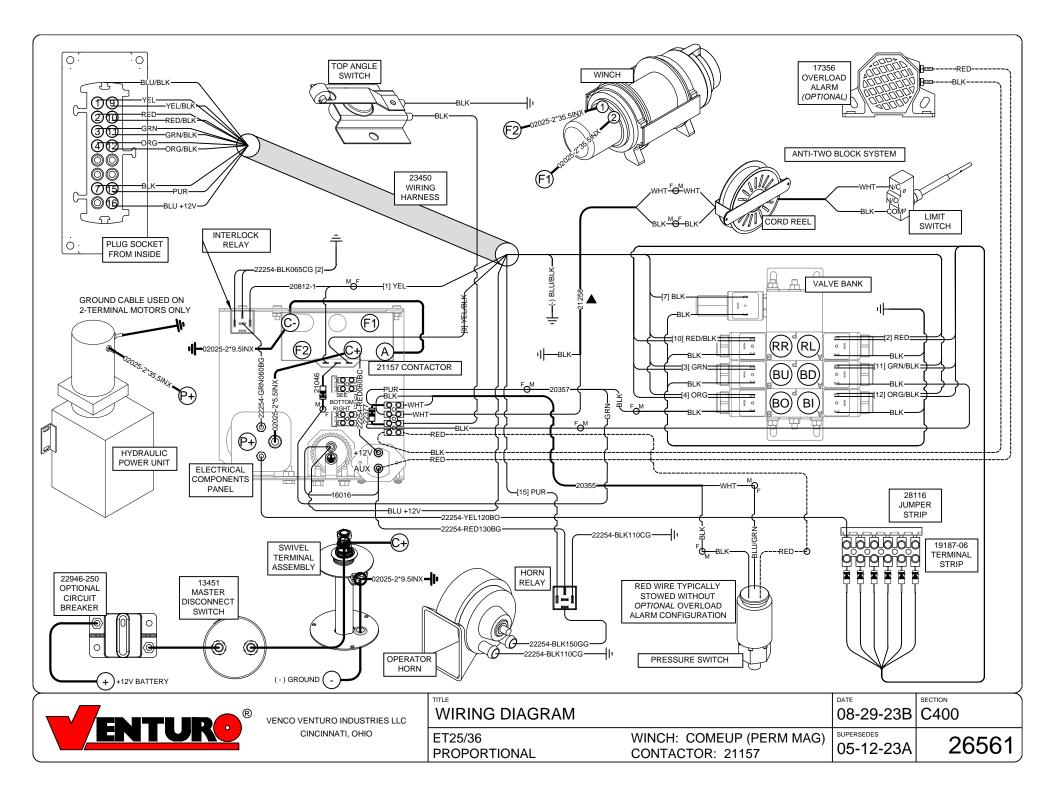


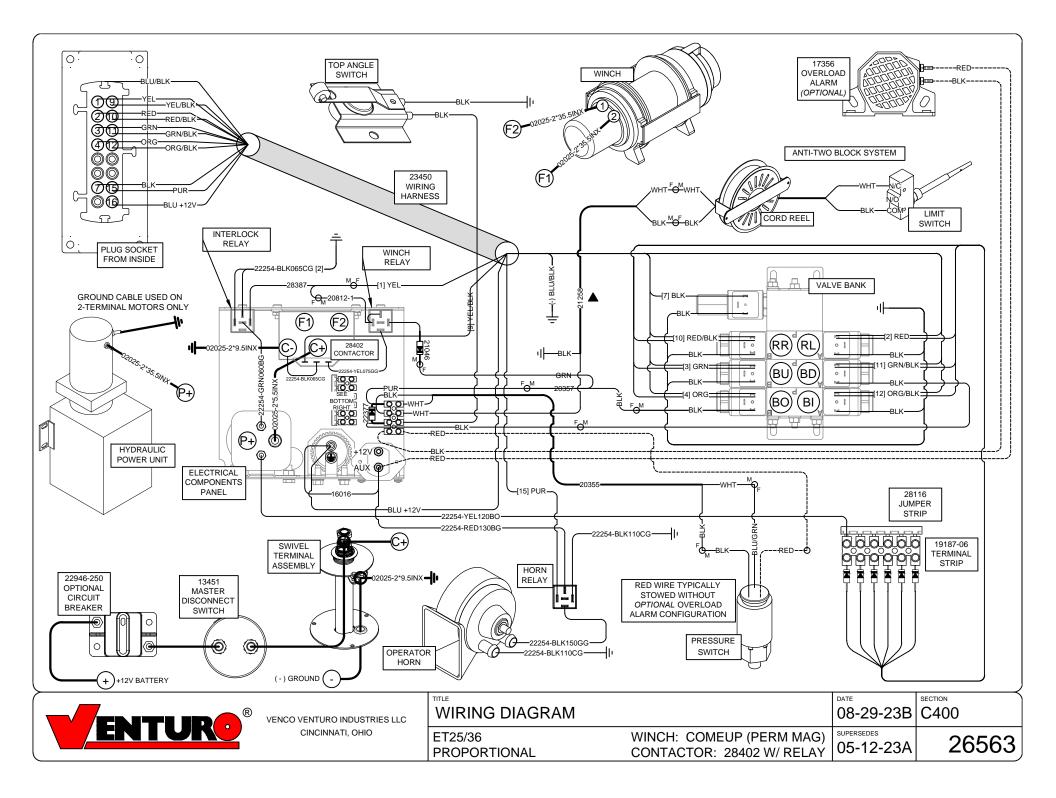










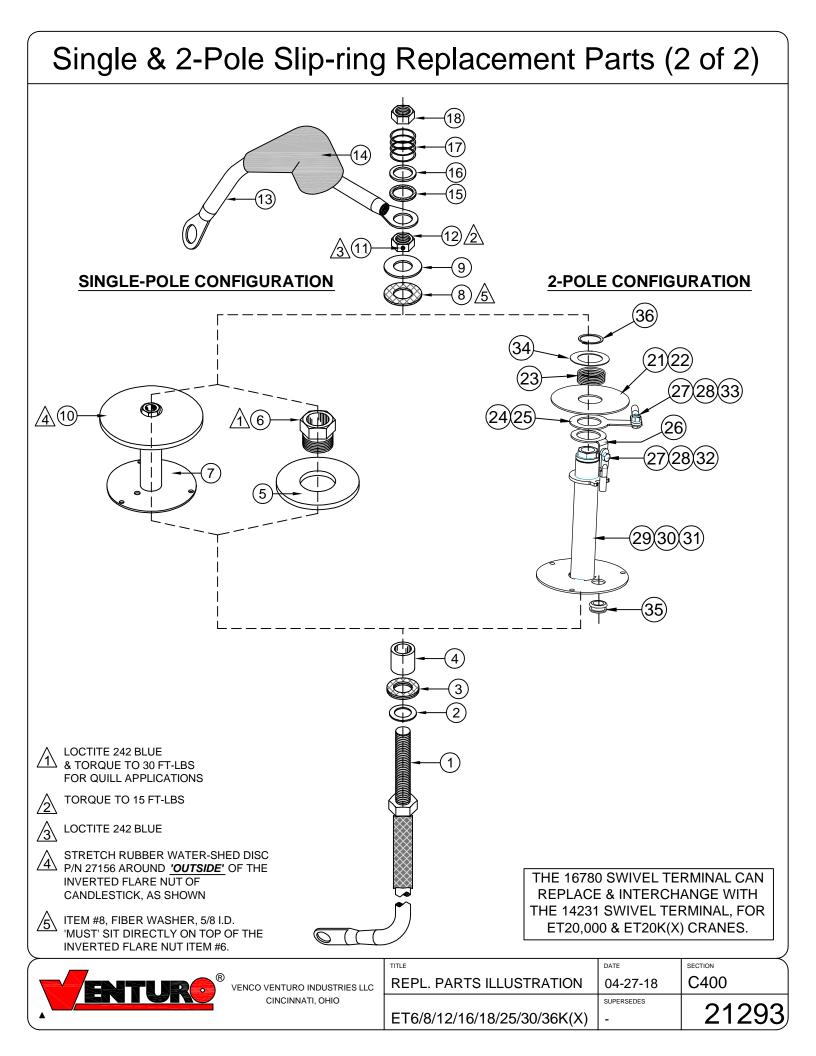


# Single & 2-Pole Slip-ring Replacement Parts (1 of 2)

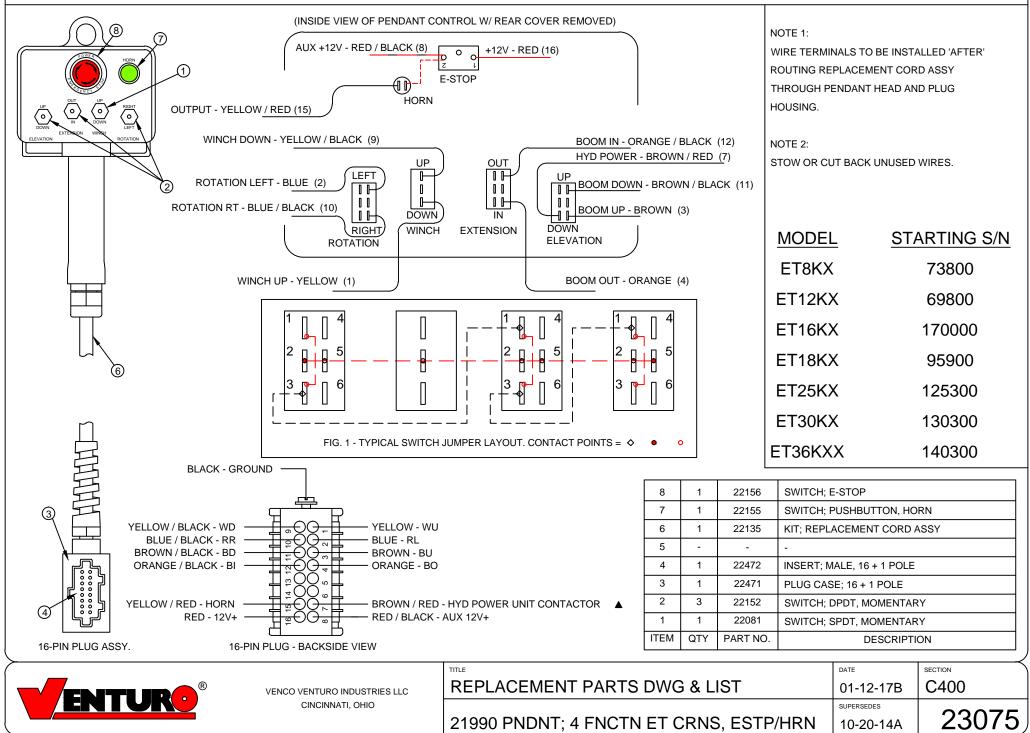
Quill Rotation	Slew Rotation Single Pole Slip-Ring	Slew Rotation 2-Pole Slip- Ring (ET6K ONLY)	Slew Rotation 2-Pole Slip- Ring (ET8-18KX)	Slew Rotation 2-Pole Slip- Ring (ET25-36KX)	ALL CRANES		16780 BILLS OF MATERIALS		
16780	16780 - 1	16780 - 2 <mark>P</mark> 6	16780 - 2P8	16780 - 2P25	16780 - KIT				
		Q	TY			#	PART	DESCRIPTION	
1	1	1	1	1	-	1	<mark>1</mark> 6783	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	-		-	1	-	5	14318	FLAT WASHER; 1 3/16" I.D. X 2 3/4" O.D. X 3/16"	
1	-	-	-		-	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	-	-	-	-	10	27156	RUBBER WATER SHIELD; 1/8" THICK	
1	1	1	1	1	1	11	ISHCS02528025KC 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	
-	-	-	-	5 <u>-</u> 5	2	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	JAM NUT; 5/8"-11, NYLON NUT	
1	1	1	1	1	1	19	LOCTITE-24205	REMOVABLE THREAD LOCKER: 0.5ML	
1	1	1	1	1	1	20	19368	IDWG: 16780 SWIVEL TERMINAL	
-	-	1	-	-	-	21	27456	UHMW WATER SHIELD, (ET6K ONLY)	
-	-	-	1	1	-	22	27456-1	UHMW WATER SHIELD, (ET8 - ET36)	
e	-	1	1	1	-	23	27461	SPRING, (-) SLIP-RING ASSY.	
-	-	-	1	1	-	24	27441-1		
-	5	1	-	-	-	25 26	27441 27449-1	COPPER SLIP-RING, (ET6K ONLY) BRASS SLIP-RING (ET6 - ET36)	
2	2	1	1	1	2	27	!HHCS03118075-B	BRASS HHCS	
-	-	1	1	1	-	28	!HNUT-03118-B	BRASS NYLOC NUT	
-	÷	1	-	<b>.</b> .	-	29	23255	SLIP-RING, WELDED ASSY, ET6K	
		-	1	- 1		30		23255-1 SLIP-RING, WELDED ASSY, ET8 - 18K(X)	
-	-	- 1	-	1	-	31 32	23255-2 02025-2*96.5INX	SLIP-RING, WELDED ASSY, ET25 - 36K(X) (-) WELDING CABLE ASSY, BRASS SLIP-RING	
-	-	1	1	1	-	33	02025-2*22.5INX		
5	-	1	1	1	-	34	27463	SHIM, WIDE RIM, 18GA, 2-1/4 O.D. X 1-1/2 I.D.	
	=	1	1	1	-	35	20889	RUBBER GROMMET	
-	Ξ.	1	1	1	-	36	!SRNG-150	NG-150 SNAP-RING, EXTERNAL, 1-1/2"	

<b>ENTUR</b>	/ENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO
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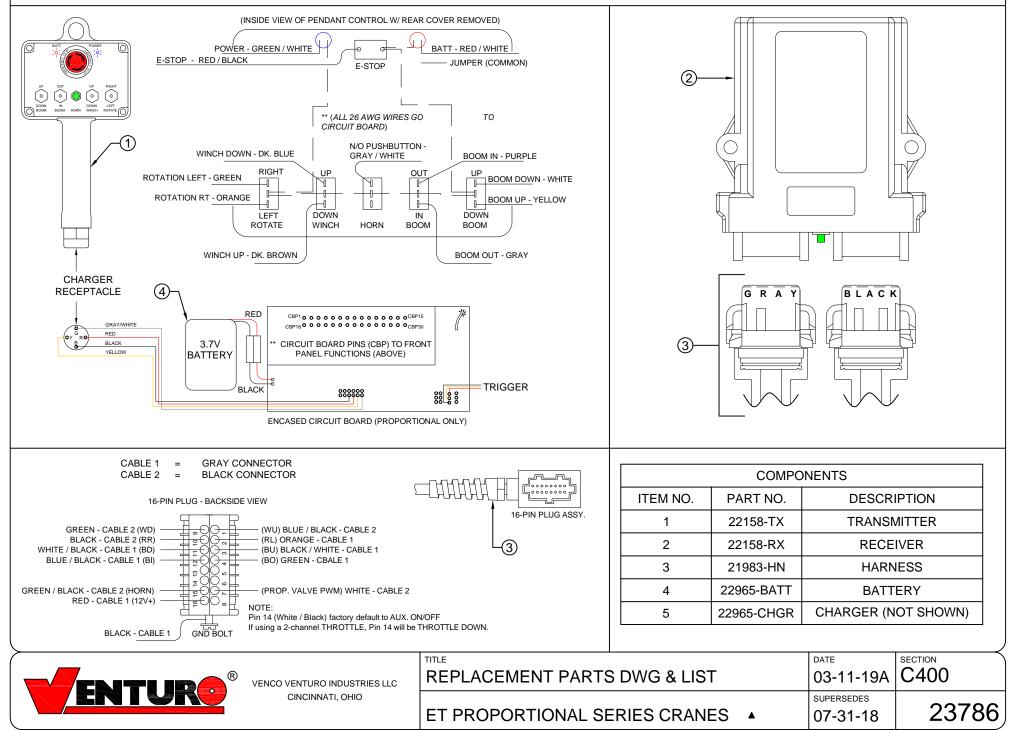
TITLE	DATE	SECTION
16780 REPLACEMENT PARTS	03-29-19A	C400
	SUPERSEDES	04000
ET6/8/12/16/18/25/30/36K(X)	04-27-18	21292



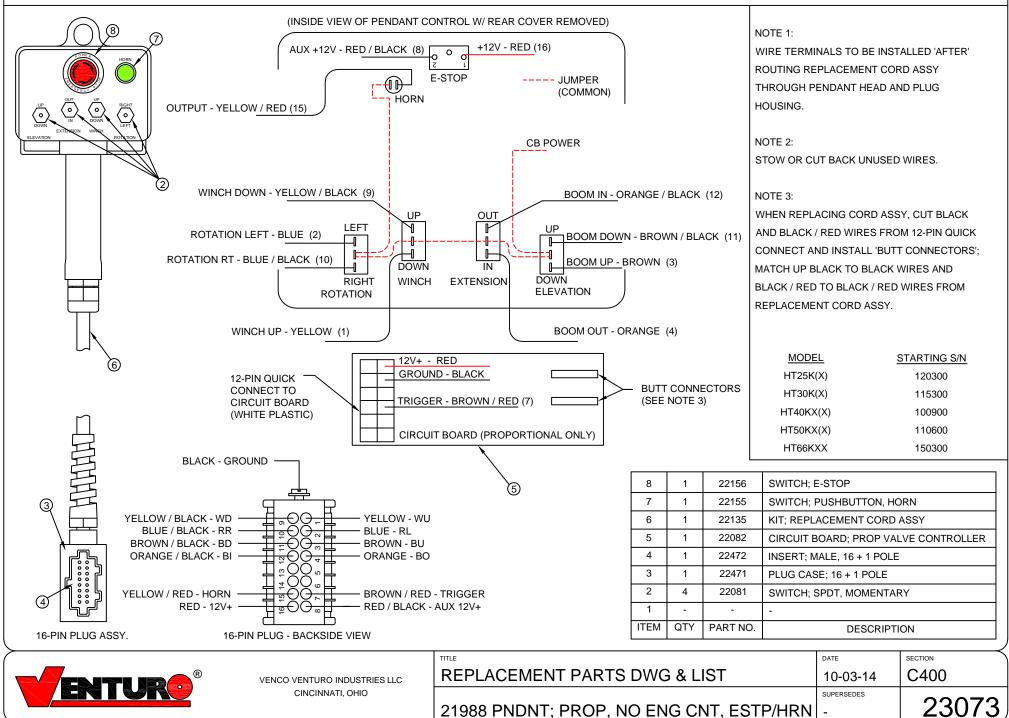
# 21990 PENDANT; 4 FUNCTION ET CRANES, E-STOP / HORN

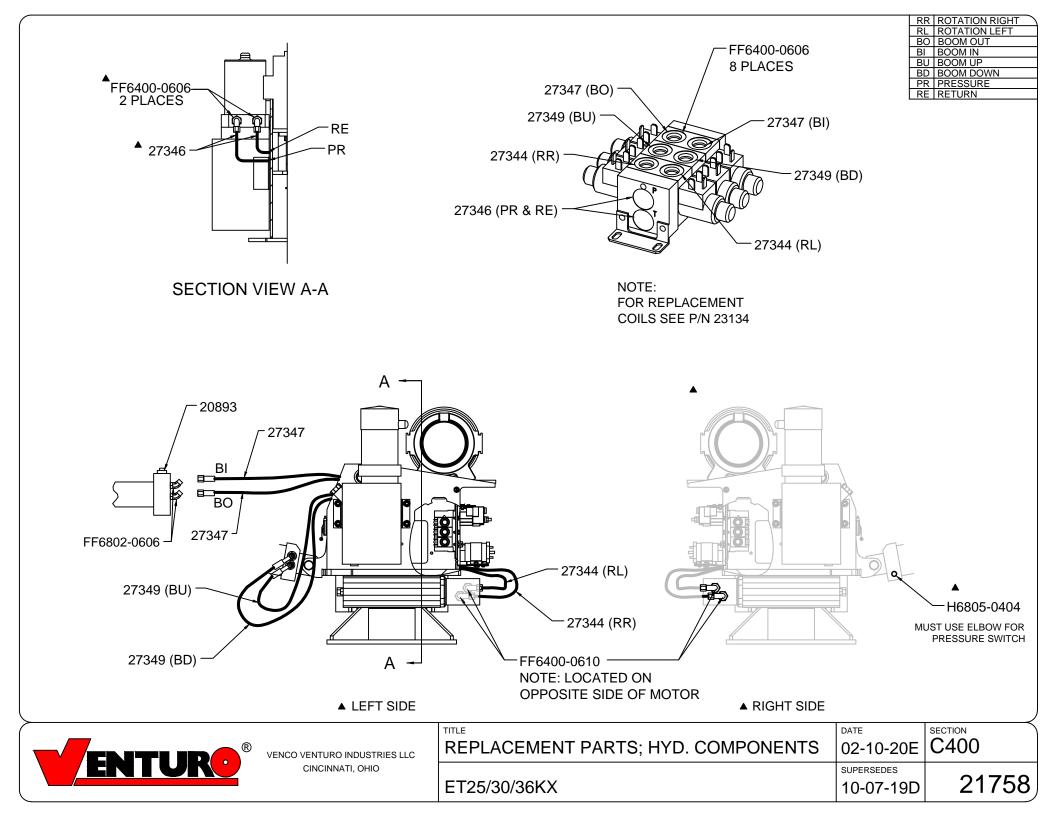


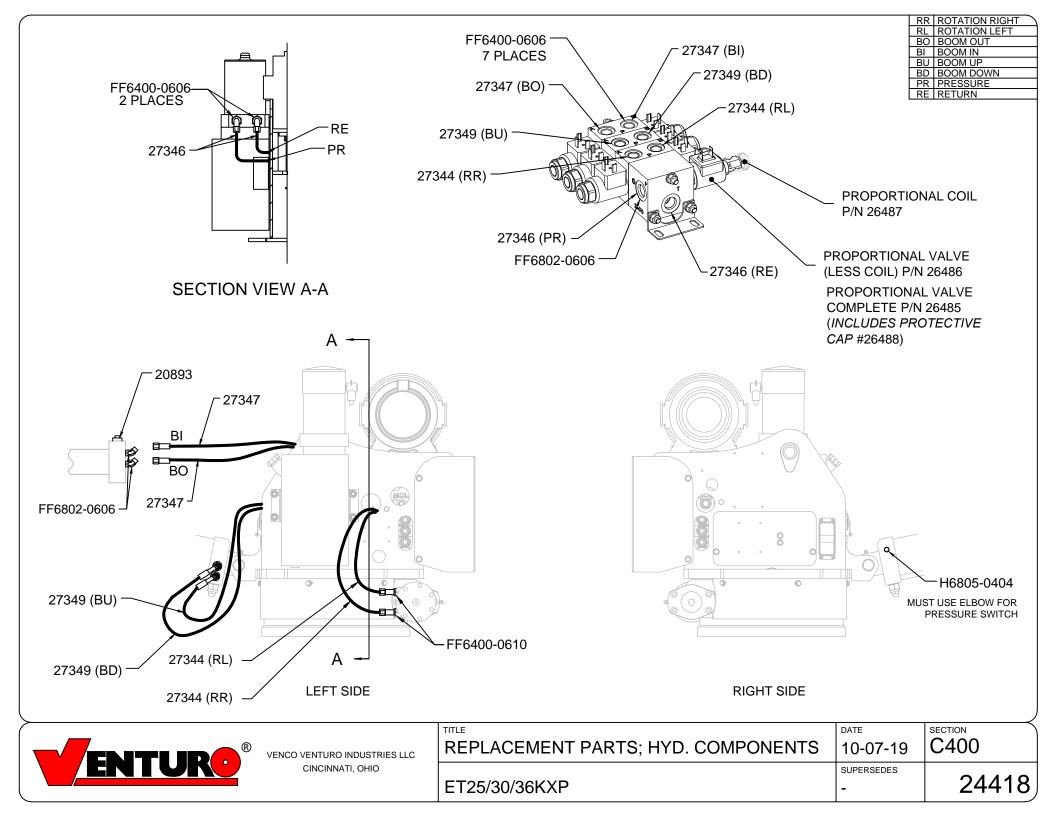
### 22158 RADIO; PROP, NON-CAN, NO ENG CNTRLS, E-STOP/HORN

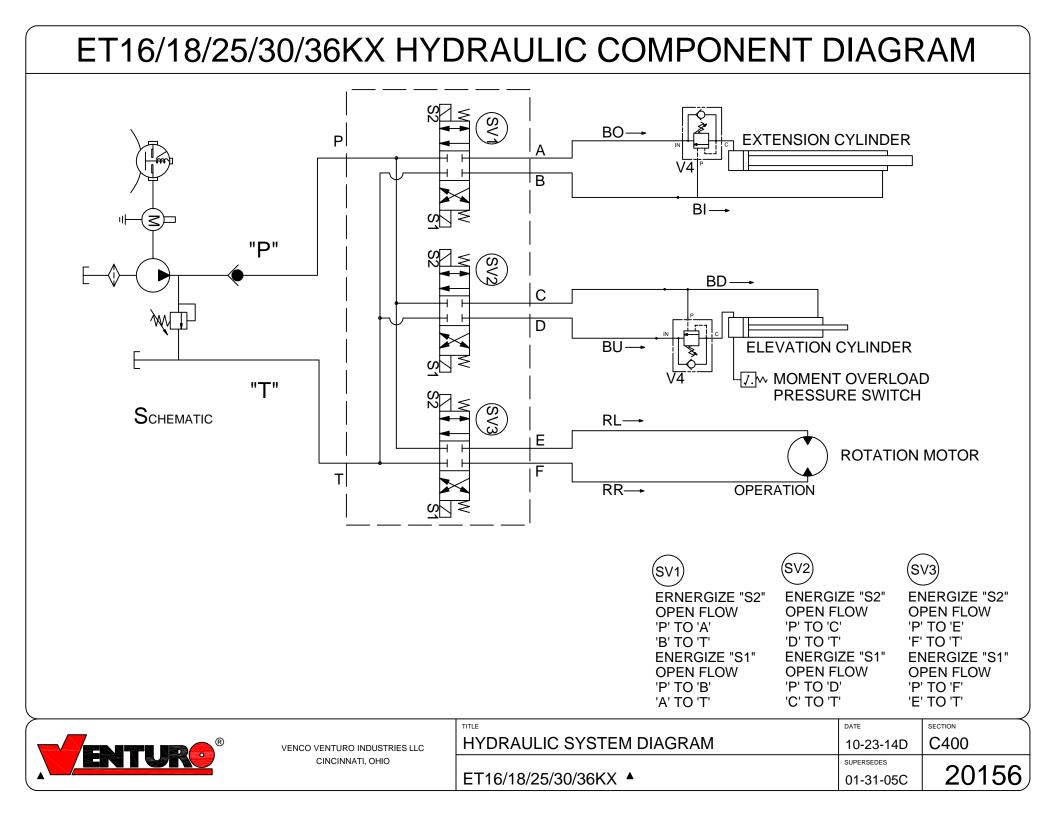


# 21988 PENDANT; PROP, NO ENG CNTRL, E-STOP / HORN

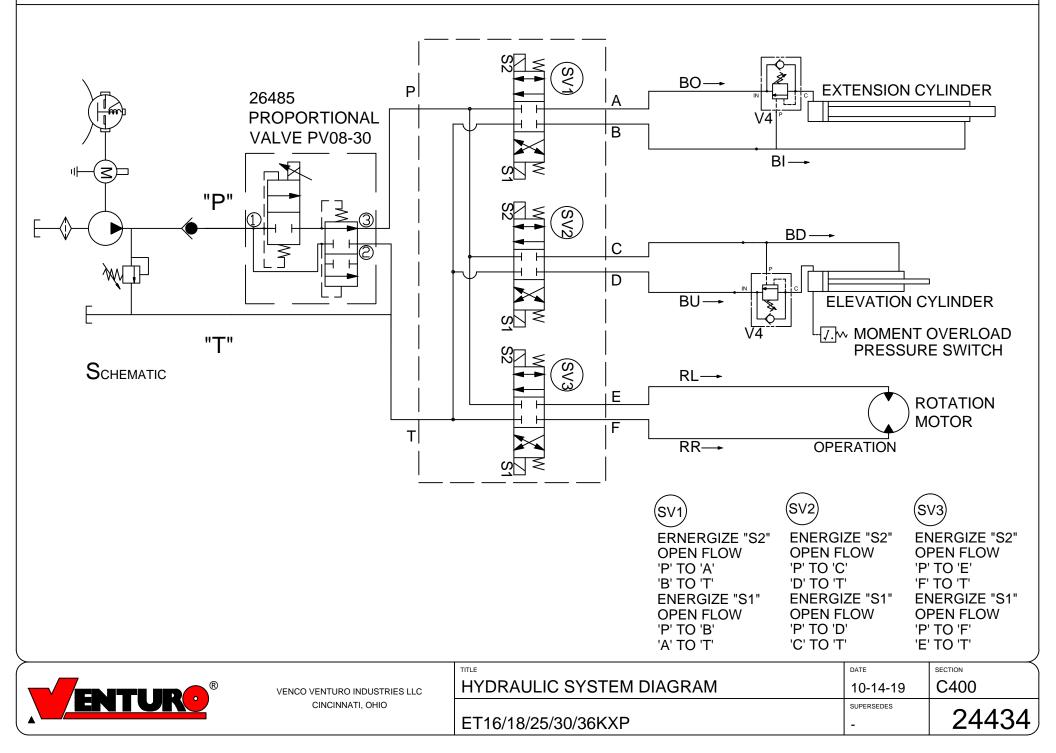


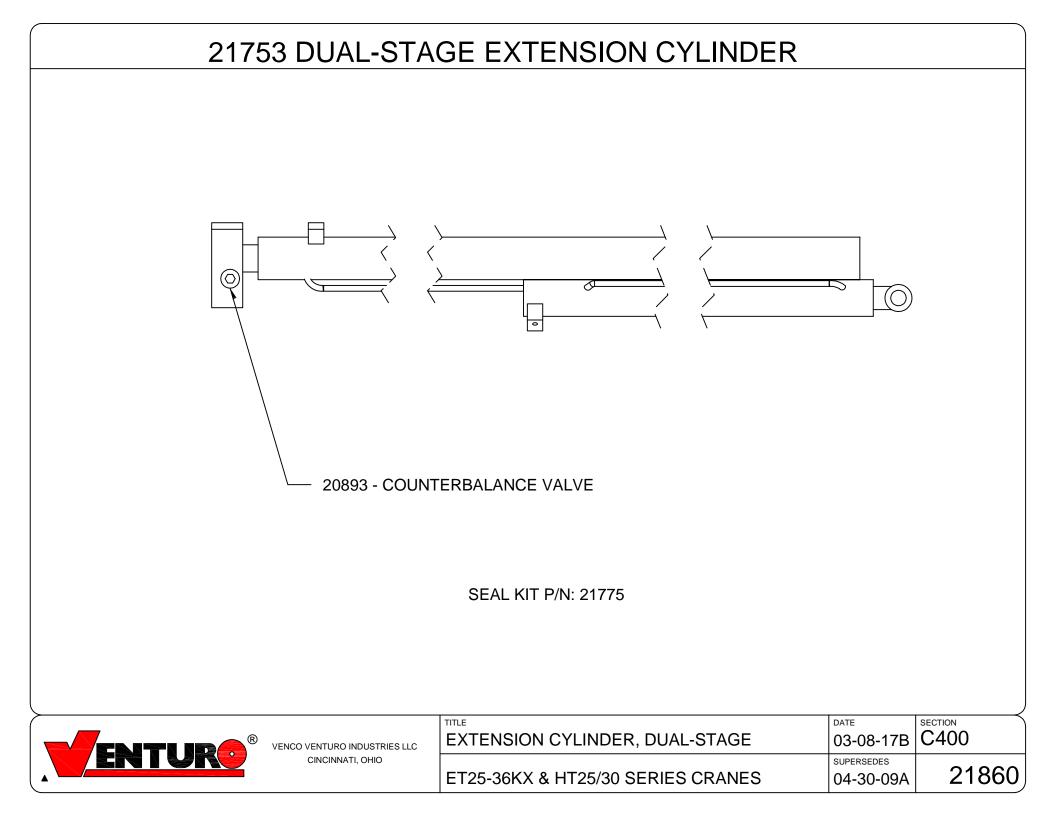


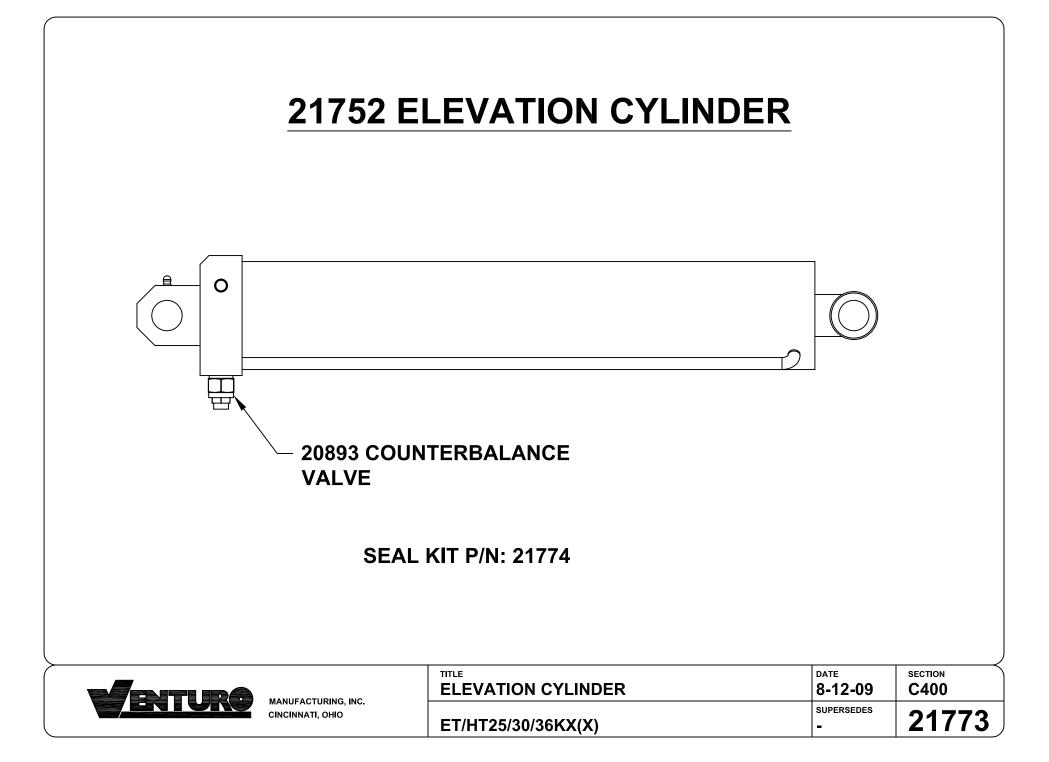




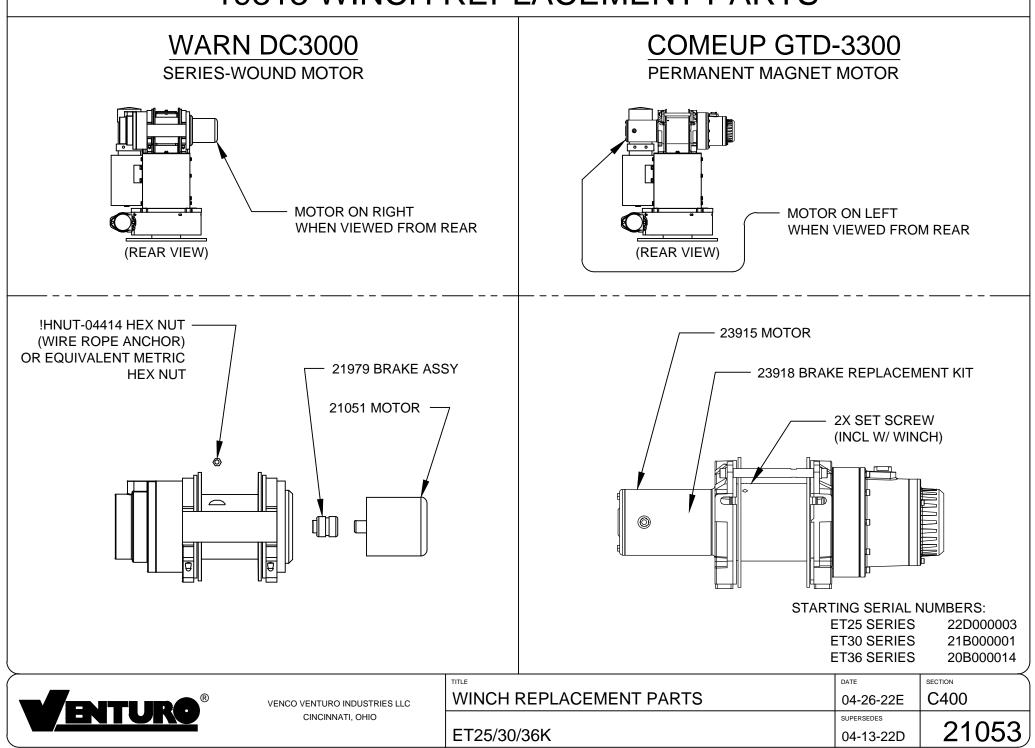
## ET16/18/25/30/36KXP HYDRAULIC COMPONENT DIAGRAM

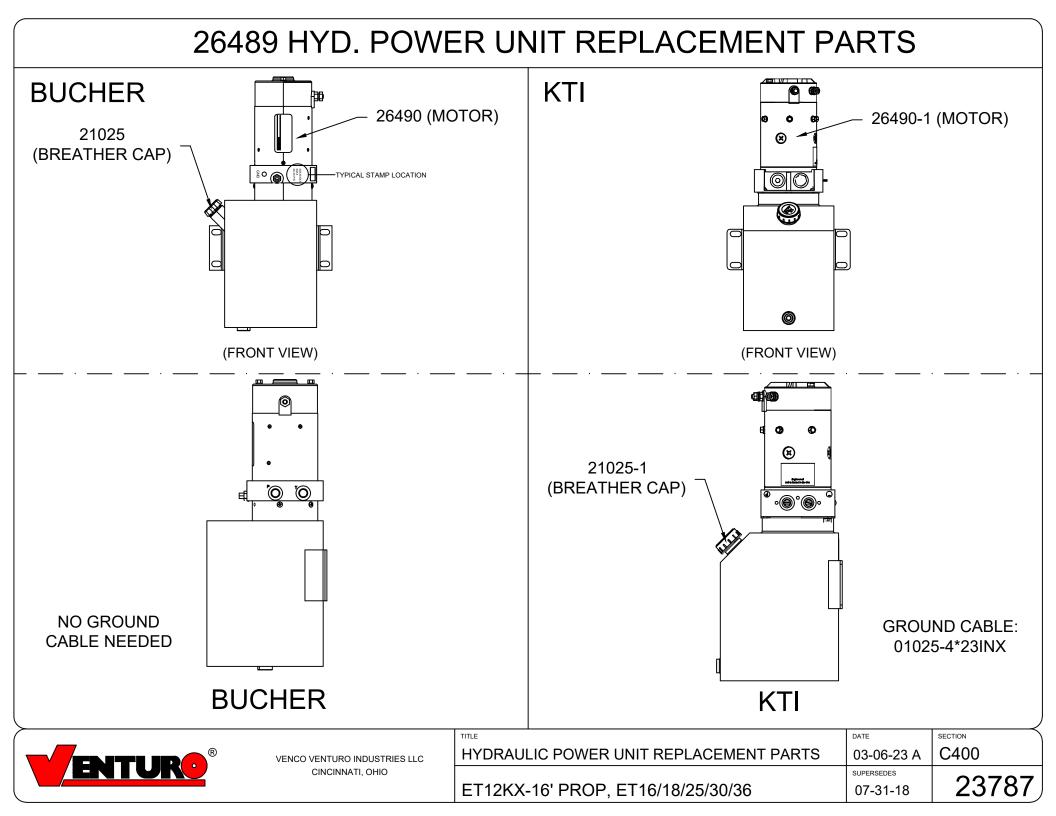


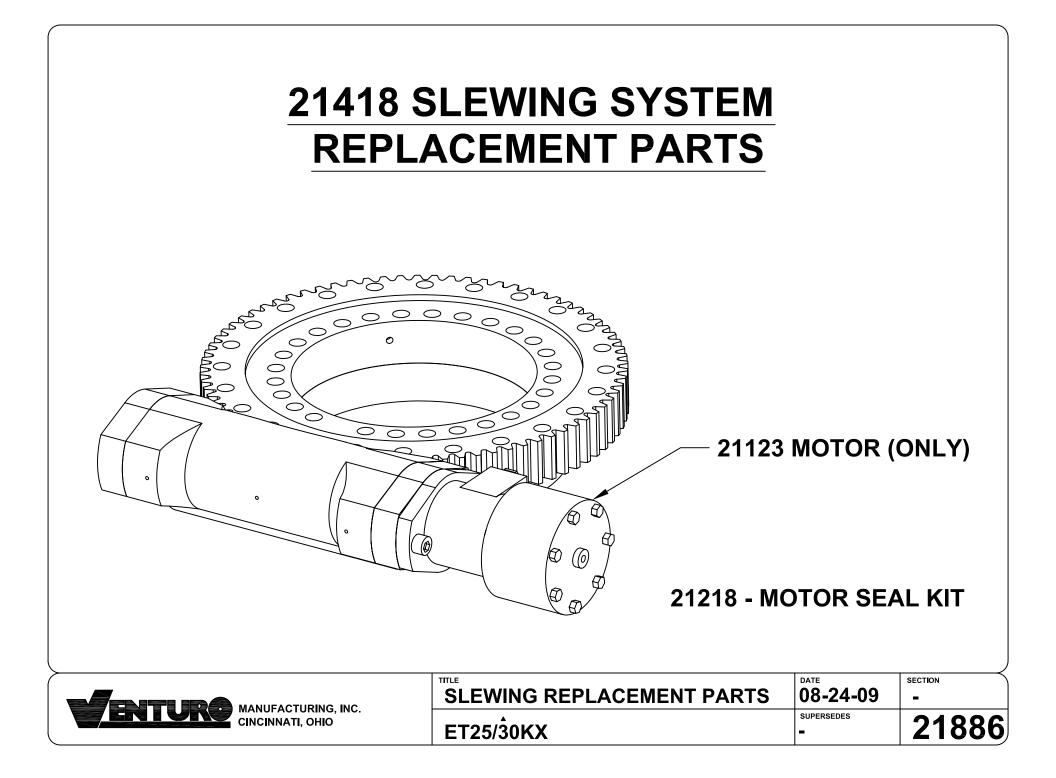


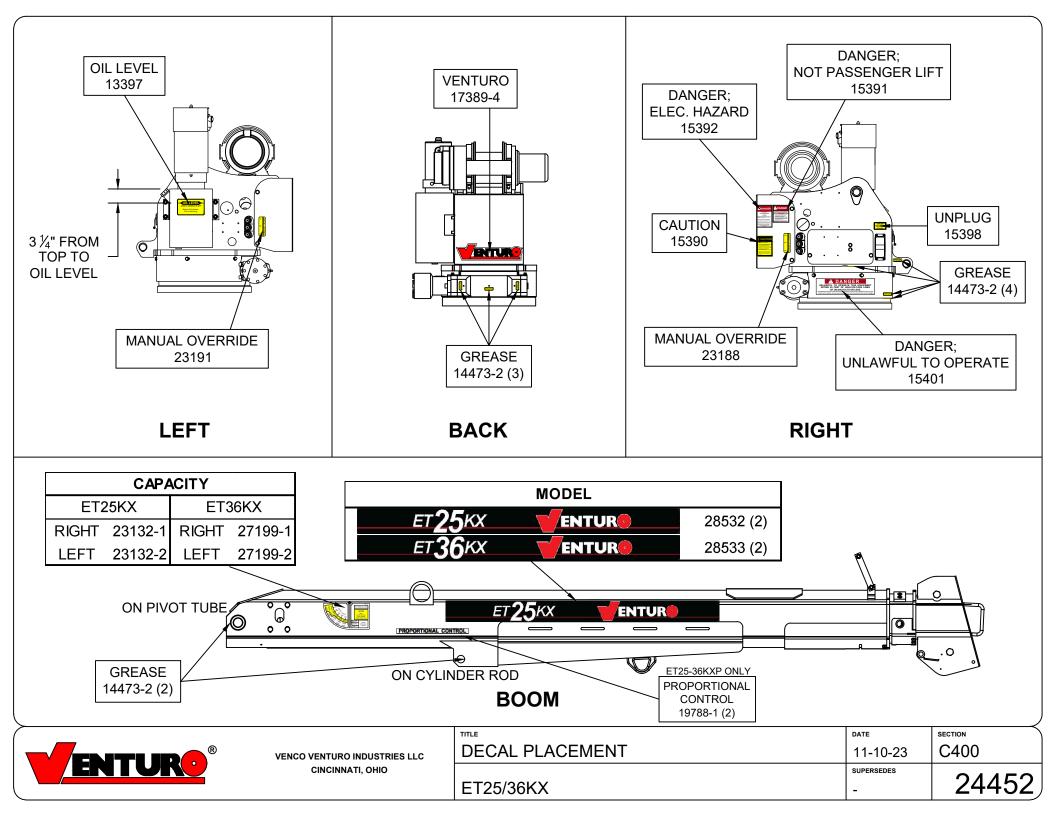


# **19813 WINCH REPLACEMENT PARTS**









# ET25/36KX FIELD SERVICE LABEL KITS

PART NO.	QTY.	DESCRIPTION
14473-2	9	DECAL; GREASE
28532	2	MODEL DECAL; ET25KX
17389-4	1	DECAL; VENTURO, SMALL
23132-1	1	DECAL; BOOM CAPACITY, RIGHT, ET/HT25KX
23132-2	1	DECAL; BOOM CAPACITY, LEFT, ET/HT25KX
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
24453	1	IDWG; FIELD SERVICE LABEL KIT
24452	1	IDWG; DECAL PLACEMENT
INST-23233	1	SAFETY MANUAL, VENTURO CRANES
15397	1	KIT; ACCIDENT PREVENTION SIGNS

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

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

PART NO.	QTY.	DESCRIPTION
14473-2	9	DECAL; GREASE
28533	2	MODEL DECAL; ET36KX
17389-4	1	DECAL; VENTURO LOGO, SMALL
27199-1	1	DECAL; BOOM CAPACITY, RIGHT, ET36KX
27199-2	1	DECAL; BOOM CAPACITY, LEFT, 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
24453	1	IDWG; FIELD SERVICE LABEL KIT LIST
24452	1	IDWG; DECAL PLACEMENT
INST-23233	1	SAFETY MANUAL, VENTURO CRANES
15397	1	KIT; ACCIDENT PREVENTION SIGNS



# ET25/36KXP FIELD SERVICE LABEL KITS

PART NO.	QTY.	DESCRIPTION
14473-2	9	DECAL; GREASE
28532	2	MODEL DECAL; ET25KXP
17389-4	1	DECAL; VENTURO, SMALL
23132-1	1	DECAL; BOOM CAPACITY, RIGHT, ET/HT25KX
23132-2	1	DECAL; BOOM CAPACITY, LEFT, ET/HT25KX
19788	2	DECAL; 'PROPORTIONAL CONTROL'
13397	1	DECAL; OIL LEVEL
23188	1	DECAL; MANUAL OVERRIDE, RIGHT
23191	1	DECAL; MANUAL OVERRIDE, LEFT
19315-2	1	DECAL; PROP. VALVE MANUAL OVERRIDE
17813	1	DECAL; OVERLOAD SENSING SYSTEM
16184-1	1	DECAL; HORN RELAY
24454	1	IDWG; FIELD SERVICE LABEL KIT
24452	1	IDWG; DECAL PLACEMENT
INST-23233	1	SAFETY MANUAL, VENTURO CRANES
15397	1	KIT; ACCIDENT PREVENTION SIGNS

#### 24440; FIELD SERVICE LABEL KIT, ET25KXP

#### 24442; FIELD SERVICE LABEL KIT, ET36KXP

PART NO.	QTY.	DESCRIPTION
14473-2	9	DECAL; GREASE
28533	2	MODEL DECAL; ET36KXP
17389-4	1	DECAL; VENTURO LOGO, SMALL
27199-1	1	DECAL; BOOM CAPACITY, RIGHT, ET36KX
27199-2	1	DECAL; BOOM CAPACITY, LEFT, ET36KX
19788	2	DECAL; 'PROPORTIONAL CONTROL'
13397	1	DECAL; OIL LEVEL
23188	1	DECAL; MANUAL OVERRIDE, RIGHT
23191	1	DECAL; MANUAL OVERRIDE, LEFT
19315-2	1	DECAL; PROP. VALVE MANUAL OVERRIDE
17813	1	DECAL; OVERLOAD SENSING SYSTEM
16184-1	1	DECAL; HORN RELAY
24454	1	IDWG; FIELD SERVICE LABEL KIT LIST
24452	1	IDWG; DECAL PLACEMENT
INST-23233	1	SAFETY MANUAL, VENTURO CRANES
15397	1	KIT; ACCIDENT PREVENTION SIGNS



CINCINNATI, OHIO	ET25/36KXP	SUPERSEDES	24454
VENTURO INDUSTRIES LLC	FIELD SERVICE LABEL KIT	11-10-23	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.

### **<u>1-Year Limited Warranty Policy</u>**

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

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