

**INST-26887** 

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# PARTS & INSTALLATION MANUAL ET8KX(P)

# Included in this manual:

# ET8KX

- 3,200 lb Hydraulic Telescopic Service Crane
- 6-10 ft Powered, Single-Stage, Boom Extension
- 10-14 ft Manual Pullout Boom Extension

# **ET8KXP**

- 3,200 lbs Electric Telescopic Service Crane
- 6 10 ft Powered, Single-Stage, Boom Extension
- 10 14 ft Manual Pullout Boom Extension
- Proportional Controls

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



**DESCRIPTION & SPECIFICATIONS** 7607100A

28056 INSTALLATION DIMENSIONS BASE MOUNTING DIMENSIONS 21592

21701 CAPACITY CHART

TYPICAL REINFORCEMENT FOR MOUNTING CRANE ON TOP OF SERVICE BODY 16941

7607150A SAFETY

850711 SAFETY & HAZARDS - GENERAL, 1/2 850712 SAFETY & HAZARDS - GENERAL, 2/2

VEHICLE & CRANE ELECTRIC HÁZARD INFORMATION 15394

21353 SAFETY DECALS

DECALS FOR ET CRANES 21354 ADDITIONAL DECALS 28545 28542 MODEL & CAPACITY DECALS

7607200A INSTALLATION

CABLE & BATTERY REQUIREMENTS - ET & HT CRANES CABLE & BATTERY INSTALLATION DRAWING 711105

15660

20906-8 STABILITY TESTING 20907 STABILITY CHART

WIRE ROPE INSTALLATION 22245

7607300A MAINTENANCE & SERVICE

OPERATION & MAINTENANCE INSTRUCTIONS OPERATION & MAINTENANCE INSTRUCTIONS 900530a 900530b **OPERATION & MAINTENANCE INSTRUCTIONS** 900530c

21306 **LUBRICATION & MAINTENANCE CHART** MINIMUM VOLTAGE TEST 19963

23225

WIRE ROPE & HOOK SPECIFICATIONS
MANUAL OVERRIDE INSTRUCTIONS, NON-PROPORTIONAL
MANUAL OVERRIDE INSTRUCTIONS, PROPORTIONAL 23084 23775

7607400A REPLACEMENT PARTS

REPLACEMENT PARTS DRAWING; MECHANISM 28063 28064

REPLACEMENT PARTS LIST; MECHANISM REPLACEMENT FASTENERS DRAWING; MECHANISM 28066 REPLACEMENT FASTENERS LIST; MECHANISM REPLACEMENT PARTS DRAWING; BOOM ASSEMBLIES REPLACEMENT PARTS LIST; BOOM ASSEMBLIES REPLACEMENT FASTENERS DRAWING; BOOM ASSEMBLIES 28067 28331 28332

28333 28334 REPLACEMENT FASTENERS LIST: BOOM ASSEMBLIES

**BOOM ROUND CORD REEL 28190-2** 24102 21600 21515 ELECTRICAL COMPONENT ASSY

WIRING DIAGRAM, ET8/12KX SERIES CRANES W/ WINCH CONTACTOR 26537 WIRING DIAGRAM, ET8/12KXP SERIES CRANES W/ WINCH CONTACTOR 26538 HYDRAULIC SYSTEM COMPONENTS REPLACEMENT PARTS DRAWING 28037

HYDRAULIC SYSTEM SCHEMATIC, NON-PROPORTIONAL HYDRAULIC SYSTEM SCHEMATIC, PROPORTIONAL REPLACEMENT PARTS LIST; SINGLE / 2-POLE SLIP-RING 21602 28077 21292 21293 REPLACEMENT PARTS DRAWING; SINGLE / 2-POLE SLIP-RING

21990 PENDANT; REPLACEMENT PARTS DRAWING / LIST (4 FUNCTION) 22158 RADIO; REPLACEMENT PARTS DRAWING/LIST 23075

23786 21556 WINCH REPLACEMENT PARTS DRAWING / LIST 21741

20873 HYDRAULIC POWER UNIT REPLACEMENT PARTS DRAWING / LIST 16942

21735 SLEWING REPLACEMENT PARTS DRAWING 21973

28543 **DECAL PLACEMENT** 

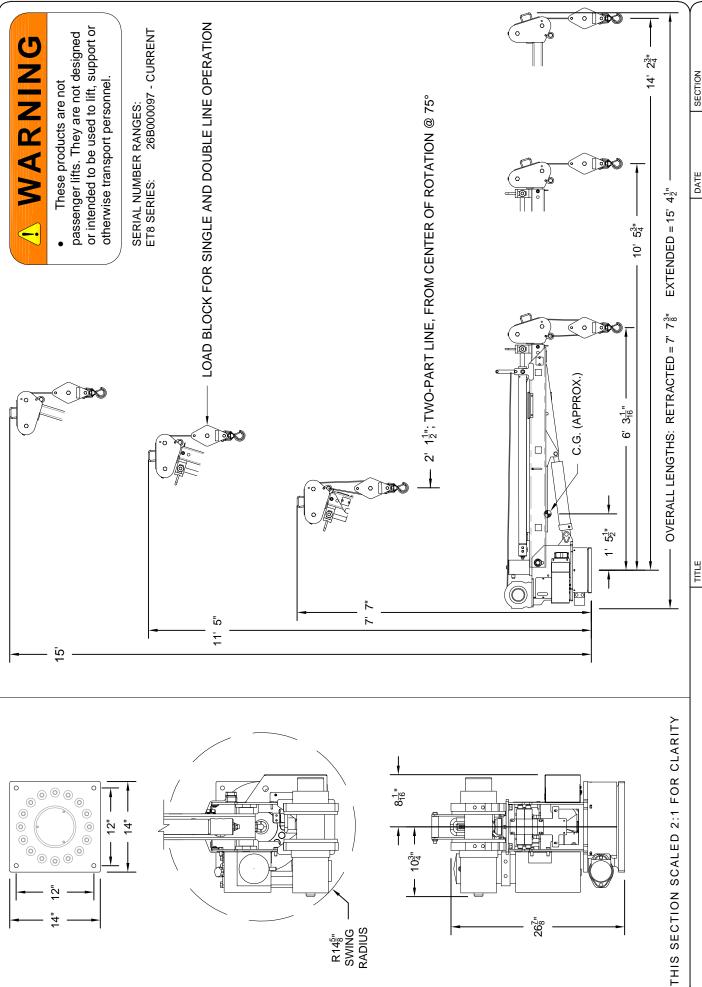
FIELD SERVICE LABEL KITS; ET8 SERIES 28544

12-00073\_VNT1 WARRANTY PAGE

# **SECTION 100**

# DESCRIPTION & SPECIFICATIONS





 $8\frac{1}{16}$ "

R14§" SWING RADIUS

 $26\frac{7}{8}$ "

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12

4

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

INSTALLATION DIMENSIONS

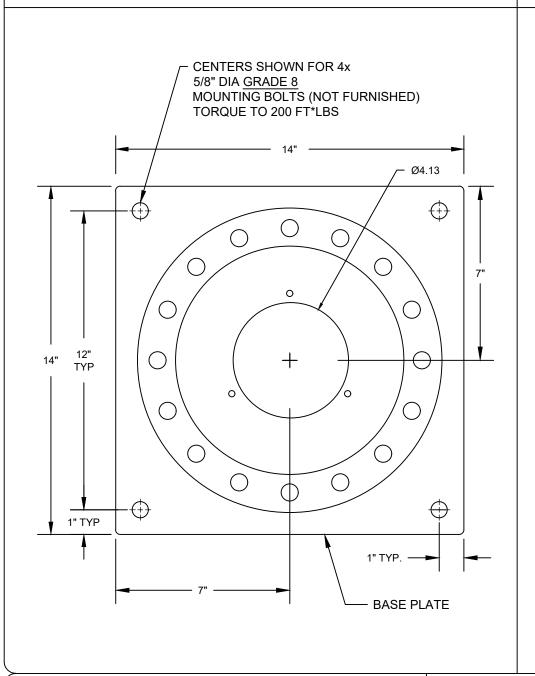
6' - 10' - 14' BOOM 'C' SERIES, ET8 GEN.

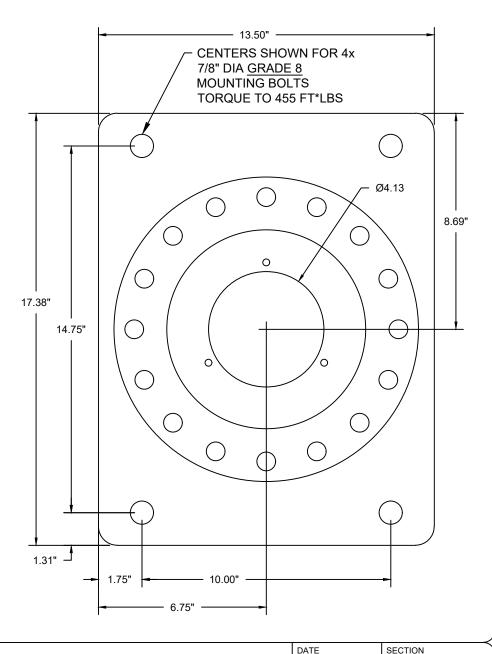
SECTION C100 03-08-19A 03-05-19 SUPERSEDES DATE

28056

# 21735 - SQUARE

# 21735-WRB/CRB - RECTANGULAR







VENCO VENTURO INDUSTRIES LLC CINCINNATI. OHIO

21735 BASE MOUNTING DIMENSIONS

11-12-24H C100

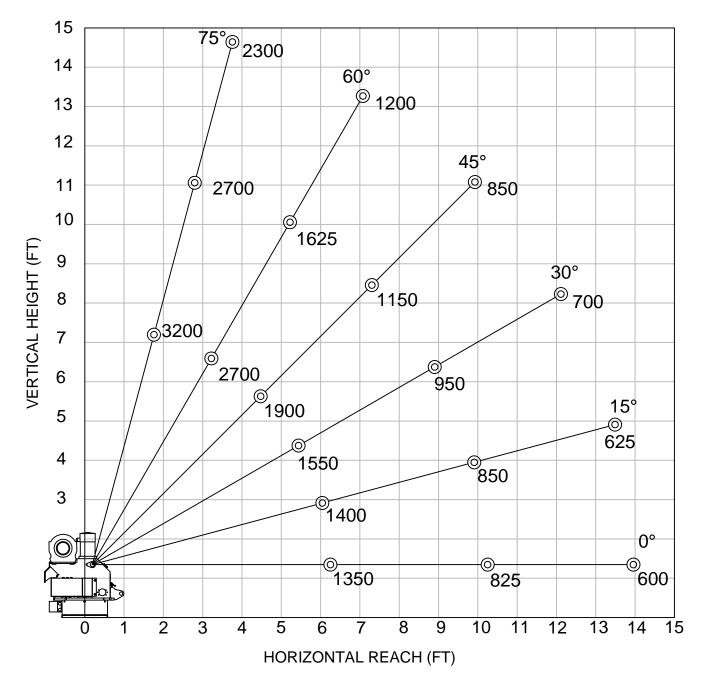
ET8/12/16/18 CRANES

SUPERSEDES 03-06-23G

21592

# ▲ ET8 SERIES CRANES, 6'-10'-14' BOOM CRANE SERIAL NUMBER:

# MAXIMUM LOAD CAPACITY CHART



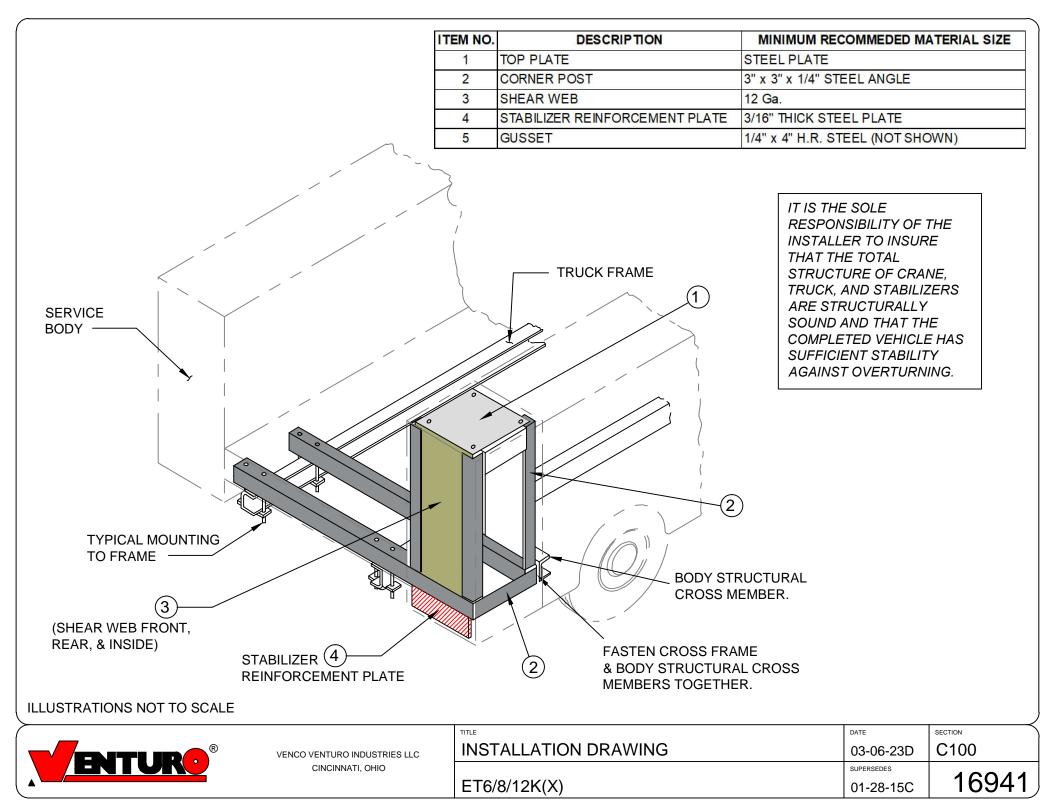
WEIGHT OF LOAD HANDLING DEVICES ARE PART OF THE LOAD AND MUST BE DEDUCTED FROM THE GROSS CAPACITY.

### LOAD BLOCK USAGE

1 PART LINE FOR LOADS LESS THAN 1600 LBS 2 PART LINE FOR LOADS OF 1600 LBS AND GREATER

WEIGHT OF LOAD BLOCK = 24 LBS





# **SECTION 150**

# SAFETY



# **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.
- 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

R VENCO VENTURO INDUSTRIES LLC	SAFETY & HAZARDS	01-29-15K	C150
CINCINNATI, OHIO	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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# 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 While traveling - minimum clearance dis (nominal, kV, alternating current) (feet) *						
0 - 0.75	(1661)					
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



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:

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

DECAL #: 15391

DESCRIPTION: DANGER, NOT A PASSENGER LIFT

PURPOSE: TO INFORM OPERATOR NOT TO LIFT, SUPPORT, OR TRANSPORT

PERSONNEL, AND TO ENSURE OPERATOR IS ADEQUATELY TRAINED.

QUANTITY:

PLACEMENT: REAR COVER OR SIDE OF CRANE



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

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

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

15392 DECAL #:

DESCRIPTION: DANGER, ELECTROCUTION HAZARD, MACHINE (CRANE)

PURPOSE: TO INFORM OPERATOR THAT MACHINE (CRANE) REPRESENTS AN

ELECTROCUTION HAZARD SHOULD IT COME CLOSE TO OR IN CONTACT

WITH AN ELECTRICAL VOLTAGE SOURCE.

QUANTITY: 1

PLACEMENT: REAR COVER OR SIDE OF CRANE



#### THIS MACHINE IS NOT INSULATED **ELECTROCUTION HAZARD**

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

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

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

DECAL #: 15401

DESCRIPTION: DANGER, UNLAWFUL TO OPERATE

PURPOSE: TO INFORM OPERATOR OF PROPER OPERATION

IN VICINITY OF ELECTRICAL LINES.

QUANTITY:

PLACEMENT: RING COVER OR SIDE OF CRANE

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

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

DECAL #: 15393

DESCRIPTION: DANGER, ELECTROCUTION HAZARD, VEHICLE (TRUCK)

WARNS OF DANGER FROM ELECTRICALLY CHARGED PURPOSE:

VEHICLE, CRANE, OR LOAD.

QUANTITY:

PLACEMENT: EACH SIDE & EACH END OF VEHICLE





SECTION



TITLE

SAFETY DECALS

DATE

C150 04-29-16E

SUPERSEDES 10-24-13D

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

**VENTURO CRANES** 

PART NO.: 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

DATE

11-12-19E

12-23-13D

SUPERSEDES



MANUFACTURING, INC.

CINCINNATI, OHIO

DECALS
ET CRANES

SECTION

PART NO.: 27007-03a (ET8) / 27007-04a (ET12)
DECAL: LOAD BLOCK CAPACITY DECAL

FUNCTION: To show the capacity of the load block.

QUANTITY: 2

PLACEMENT: Each side of load block.

27007-03a

LOAD BLOCK SPECIFICATIONS

RATED CAPACITY: WEIGHT: 3,200 lbs 24 lbs

WARNING:

1 PART LINE FOR LOADS LESS THAN 1,600 LBS. 2 PART LINE FOR LOADS 1,600 LBS. & GREATER 27007-04a

LOAD BLOCK SPECIFICATIONS

RATED CAPACITY: WEIGHT:

3,500 lbs | 24 lbs

WARNING:

1 PART LINE FOR LOADS LESS THAN 1,750 LBS. 2 PART LINE FOR LOADS 1,750 LBS. & GREATER

PART NO.: 17813

DECAL: OVERLOAD SENSING SYSTEM DECAL

FUNCTION: To advise operator of overload sensing system.

QUANTITY: 1

PLACEMENT: Location may vary.

CRANE IS EQUIPPED WITH AN OVERLOAD SENSING SYSTEM

IF OVERLOADED, THE WINCH UP, BOOM DOWN, AND (OPTIONAL) BOOM OUT FUNCTIONS WILL AUTOMATICALLY SHUT OFF TO PREVENT INCREASED OVERLOAD. ON CRANES EQUIPPED WITH AN OPTIONAL OVERLOAD ALARM, IT WILL ALSO SOUND. IF AN OVERLOAD OCCURE UP OF BOOM IN ONE FOR MINIOR OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OWNER OF THE OWNER OWNER OF THE OWNER OWNER OF THE OWNER OWNER OWNER OWNER.

FUNCTIONS TO RELIEVE THE OVERLOAD.

THE OVERLOAD SENSING SYSTEM IS INOPERATIVE IF THE BOOM ELEVATION IS

THE BOTTOM OR TOP LIMIT OF TRAVEL. TO RELIEVE THIS CONDITION, RAISE OF

NOTICE - WARRANTY VOID IF DISCONNECTED
THE OVERLOAD SENSING SYSTEM HAS BEEN INSTALLED AS A SAFETY FEATURE TO
PROTECT THE COLUMBENT AND THE OPERATOR.

DO NOT DISCONNECT THIS SYSTEM

PART NO.: 14459 (WITH OPTIONAL ALARM)

DECAL: OVERLOAD ALARM SYSTEM DECAL

FUNCTION: To advise operator of alarm system.

QUANTITY: 1

PLACEMENT: Location may vary.

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

. ALWAYS RAISE BOOM SLIGHTLY BEFORE LIFTING LOAD, WARNING SYSTE

INOPERATIVE WHEN CYLINDER IS COMPLETELY BOTTOMED.

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

NOTICE - WARRANTY VOID IF DISCONNECTED

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

DO NOT DISCONNECT THIS SYSTEM

PART NO.: 28065 (RIGHT) & 23184 (LEFT)

DECAL: MANUAL OVERRIDE DECAL ET8/12KX(P) 2

FUNCTION: To show the manual override ports.

QUANTITY: 1 23184

PLACEMENT: Right & Left side of housing.

28065

MANUAL OVERRIDE & B

MANUAL OVERRIDE

PART NO.: 19315-2

DECAL: MANUAL OVERRIDE (PROPORTIONAL)

FUNCTION: To show operator how to override proportional valve.

QUANTITY: 1

PLACEMENT: Left side of Mechanism, near valve stem.

WARNING!

KEEP VALVE IN NORMAL POSITION.

OVERRIDE POSITION IS INTENDED

FOR EMERGENCY USE ONLY.



PROPORTIONAL VALVE

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ENTURO RENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

ADDITIONAL DECALS

05-19-25B

SUPERSEDES

C150

SECTION

ET8/12KX(P)

01-03-24A

28545

PART NO.: 21702 & 21703 (OPPOSITE)

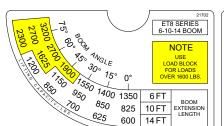
DECAL: CRANE CAPACITY

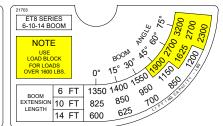
FUNCTION: To show the operator the operating

capacities of crane.

QUANTITY: 1 each

PLACEMENT: One on each side of boom.





PART NO.: 28540

DECAL: MODEL ET8KX

FUNCTION: To show model of crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.



PART NO.:

28541

DECAL: MODEL ET8KXP

FUNCTION: To show model of crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.



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MANUFACTURING, INC. CINCINNATI, OHIO

MODEL/CAPCTY DECALS

11-14-23

SECTION C150

ET8 SERIES CRANES

SUPERSEDES

28542

# **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 R	ECOMN	//ENDED	450	100
ET8KX ET10KX ET12KX  T12KX	#2	#2	#1	#0	#00	NOT R	ECOMN	MENDED	550	150
ET18K(X) ET25K(X) ET30KX ET36KX	SEE DRAWING 15660 FOR CABLE AND BATTERY REQUIREMENTS									

- \* 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	744400
		ELECTRIC CRANES	09-27-17W	711105

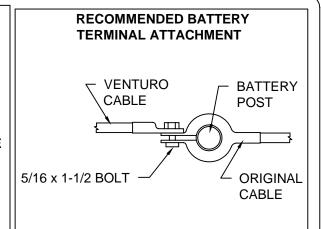
	RECOMMENDED CIRCUIT BREAKER TABLE						
	CRANE	PART NO.					
	CT310KX	250 AMP, MAN RESET	22946-250				
	DT7	22946-250					
	CE-1500-FB	150 AMP, MAN RESET	22946-150				
	CE6K	150 AMP, MAN RESET	22946-150				
	CT200X	250 AMP, MAN RESET	22946-250				
	ET6K	250 AMP, MAN RESET	22946-250				
	ET8/12K(X)	250 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				
	·	·					

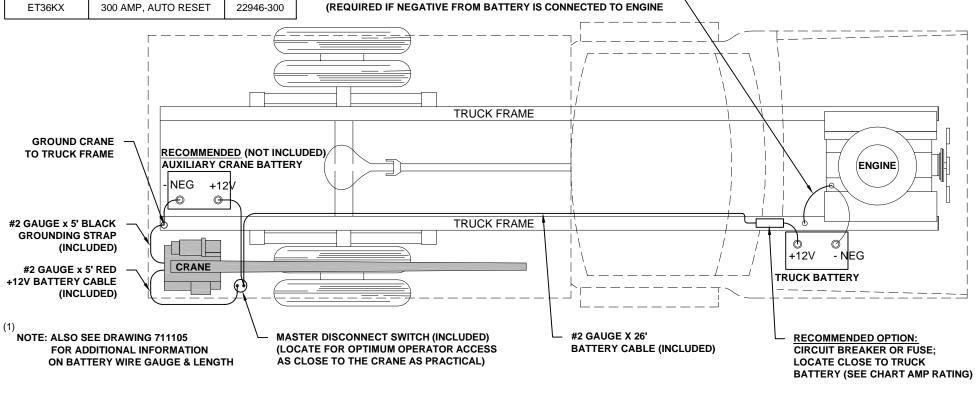
#### **BATTERY REQUIREMENTS**

- 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

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

# STABILITY TEST - ET8-14' 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**

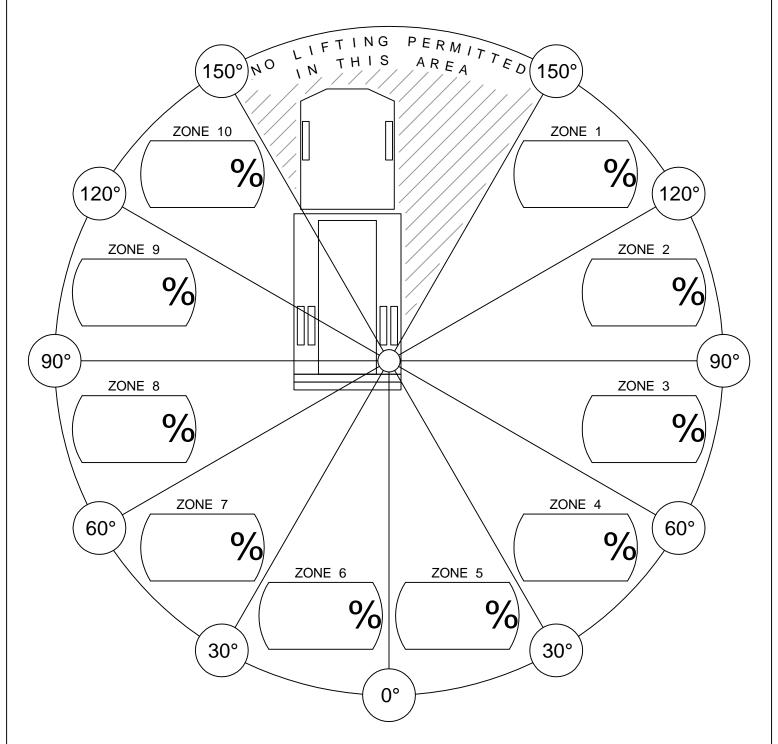
- Locate the truck on firm, level ground and set parking brake.
- 2. Fully deploy stabilizers, making sure they are firmly in contact with supportive ground; use stabilizer pads as required. The tires of the truck should remain in full contact with the ground.
- 3. Inspect wire rope and other key components 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 been completed.
- Use a Test Weight weighing a minimum of <u>706 lbs</u>, (includes load block weight of <u>24</u> lbs.) to a maximum of 750 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 the two conditions occurs:
- 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 "Max Stable Reach in inches" is measured from the center of rotation of the crane housing to the lifting load hook.

	"Max Stable Reach" in inches"	
% Rated Capacity =		X 100
	171	

- 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.

® VENCO VENTURO INDUSTRIES LLC	STABILITY TEST	03-16-23H	C200
ENTUR CINCINNATI, OHIO	ET8-14' SERIES	11-23-21G	20906-8

# **CRANE STABILITY**



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

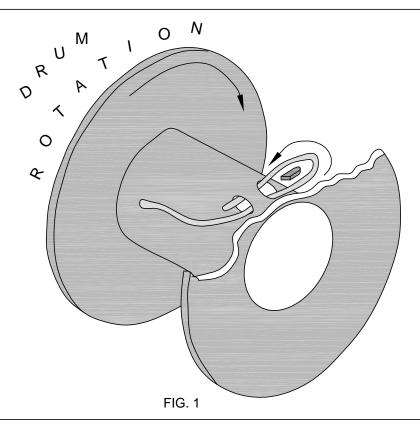
# **CONDITIONS:**

 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	ĺ
		ET6K & LARGER CRANES	12-26-13J	22245	

# **SECTION 300**

# MAINTENANCE & SERVICE



# CRANE OPERATION AND MAINTENANCE INSTRUCTIONS

# **SAFETY**

Before operating this crane, read and understand these instructions, the "CRANE SAFETY AND HAZARDS" pages, and review all safety and instruction labels on the crane.

# CRANE INSPECTION

Before operating this crane, inspect for wear, damage, and oil leakage. After the wire rope has been run out, check for wear, kinks, and broken strands. Check the hook and safety latch for damage. Correct problems before using the crane.

# **CAPACITY**

Before operating this crane, review the capacity charts on the sides of the boom to relate the load to be lifted to the boom length and angle. The boom angle is indicated by a gravity arrow.

# LOAD BLOCK

If the load exceeds:

1000 lbs. for the ET6K, or

1600 lbs. for the ET8 Series and ET10K(X), or

1750 lbs. for the ET12 Series,

or if reduced winching speed for better control of smaller loads is required, use the load block to rig the crane for two-part line operation. Refer to your crane's "MAXIMUM LOAD CAPACITY" page within this manual.

# **CONTROLS**

This crane is operated by a remote control pendant. The pendant should be unplugged and stored in a compartment or the cab when the crane is not in use.

Before plugging the pendant in, inspect the plug, socket, cord, pendant head, and switches for damage. Actuate all switches in both directions to verify that they all have the same feel and sound, and that they return to the center position.

Plug the pendant into the socket on the right side of the crane and, if applicable, snap the strain relief tether to the crane housing.

Turn on the Master Disconnect Switch. Use "WINCH DOWN" to release tension on the wire rope and unhook it from the storage tie-down position.

Use "BOOM UP" to elevate the boom from the boom rest position.

Check all control functions to see that they are working correctly.



# CRANE OPERATION AND MAINTENANCE INSTRUCTIONS

#### CONTROL FUNCTIONS

WINCH UP and WINCH DOWN - Raises and lowers the load with the wire rope.

<u>POWER EXTENSION</u> - "Up" raises the boom elevation by operating the valves and the electric hydraulic power unit. "DOWN" operates a solenoid release valve mounted on the cylinder to lower the load and/or boom by gravity at a controlled rate. A check valve on the cylinder prevents the boom from coming down if a hose breaks. A flow control valve controls the lowering rate.

<u>POWER ROTATION</u> - "L" and "R" control the direction of rotation. The ET6K, ET8K(X), ET10K(X) or ET12K(X) can be rotated continuously thru 360° or more. There are no restrictions on the number of rotations in any direction.

<u>CONTROL PRIORITY SYSTEM</u> (NON-PROPORTIONAL SYSTEMS) - As a built in safety feature, the operator can perform only one major and one minor function at any one time. Major functions include rotation, winching up of a load, and elevating, extending, and retracting the boom. Minor functions include winching down and lowering the boom.

- a. "WINCH UP" has priority over "BOOM UP", "BOOM OUT", "BOOM IN", and "ROTATION."
- b. "BOOM UP" has priority over "BOOM OUT", "BOOM IN", and "ROTATION."
- c. "BOOM OUT" and "BOOM IN" have priority over "ROTATION."
- d. "BOOM DOWN" and "WINCH DOWN" can be operated with any function.
- ▲ TRIGGER (ET12KXP Only) Varies the flow rate delivered to the crane valve. The farther the trigger is pulled, the faster the selected crane function operates.

#### 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.

#### TWO-BLOCK SENSING SYSTEM

This crane is equipped with an anti two-block device that is mounted at the tip of the boom. If the load block / overhaul weight contacts the device the "Winch Up", "Boom Down", and "Boom Out" functions are disabled. The "Winch Down",

▲ "Boom Up", and "Boom In" functions will continue to operate and can be used to relieve the two-block condition.

#### **CRANE OPERATION**

Avoid rapid reversal of the winch and rotation control switches. The high inrush current to the motors during reversal can reduce the life of the contactors, motor brushes, and commutators.

When operating "WINCH UP", "BOOM DOWN", or "BOOM OUT," always maintain clearance between the boom head and the load block or hook.

Do not lift or drag a load sideways using any of the crane funcitons. The boom has much lower bending strength sideways than in a vertical direction.



# CRANE OPERATION AND MAINTENANCE INSTRUCTIONS

# OVERLOAD ALARM SYSTEMS (OPTIONAL)

This crane may be equipped with an optional overload alarm system.

- 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 completely bottomed.
- 4. Alarm can be tested by raising boom against up limit stop.

# MANUAL TELESCOPIC BOOM

The 6'-14' and 7'- 15' booms have a 4' manual telescoping section in addition to the 4' power extension. A toggle pin locks the boom into either the extended or retracted position.

# TRUCK SETUP & STABILIZERS

- 1. The truck should be parked on firm level ground when using the crane.
- 2. The center of the crane should be positioned close enough to the job so that it can be operated at a reach that puts the load within the rated capacity of the crane.
- 3. Set the vehicle parking brake and put the vehicle transmission in "park" (automatic transmission) or low gear (manual transmission), unless the engine is to be left running.
- 4. Deploy the stabilizers to stabilize the vehicle against rocking or overturning when lifting with the crane.

# PREPARATION FOR TRAVEL

1. Return the stabilizers to the stowed position. Install and secure all pins.

MANUFACTURING, INC. CINCINNATI, OHIO

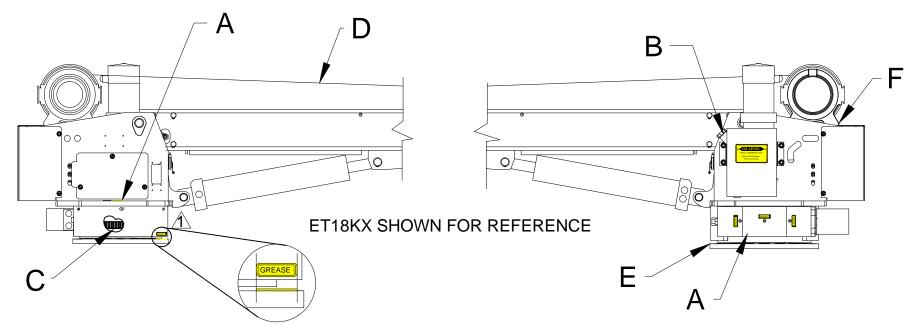
- 2. Stow the crane boom in the boom support.
- 3. Hook the winch line to a tie down point on the body or pedestal and apply tension.
- 4. TURN OFF MASTER DISCONNECT SWITCH.
- 5. Unplug the control pendant and store in a body compartment or the cab.



 The pendant (or receiver) plug must be unplugged from the crane socket and the Master Disconnect Switch (power) turned "OFF" when the crane is not in use! Leaving the pendant (or receiver) connected and power on when not in use may result in dangerous, unintentional activation of the crane functions.



ET6/8/10/12 SERIES	12-26-13E	900530C
INSTALLATION DWG	03-08-19F	C200
TITLE	DATE	SECTION



ATTENTION:

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

Location	Service Required	Note		Service Interval
Α	Grease fitting With Pressure Grease Gun	Use FUCHS Renolit Aluminum	Use FUCHS Renolit Aluminum Complex Grease, or equivalent	
		ALIGNMENT: To alig grease decals on lower		
В	Fill Oil Reservoir to Oil Level with Boom Down and Boom In.	Use Dextron ATF for Ambient Temperatures Between -22° F and 30° F	Use ISO Viscosity Grade 68 or Equivalent for Ambient Temperatures Between 10°F and 125°F	Time of Truck Service and as required by changes in the ambient temperature range
С	Lubricate Gear Teeth	Remove Cover & Use Chassis Grease		Time of Truck Service
D	Check Wire Rope and Hook	Rope should be free of kinks and fraying		Time of Truck Service
Е	Check Torque of Base Mounting Bolts	Square Base: Torqued to 200 ft-lbs		Time of Truck Service
-	Check Torque of Base Mounting Bolts	Rectangular Base: Torqued to 455 ft-lbs		Time of Truck Service
F	Check Torque of Winch Mounting Bolts	Bolts should be torqued to 35 ft-lbs*		Time of Truck Service

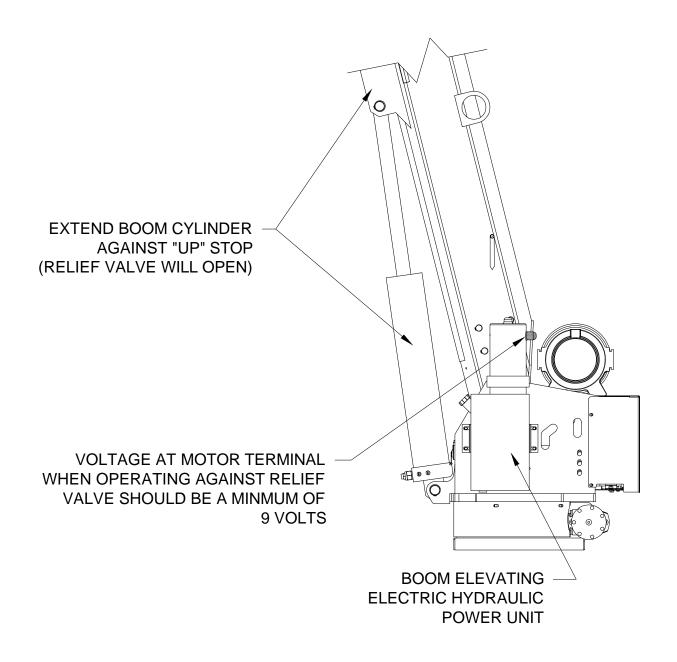
<sup>\* 32</sup> FT-LBS. FOR ET8/12 WITH GTD-2200 COMEUP WINCH. SEE PAGE 21741 FOR WINCH IDENTIFICATION.



ET8/12/16/18 SERIES CRANES	SUPERSEDES 01-30-23K	21306
LUBRICATION & MAINTENACE CHART	03-06-23L	C300

# 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
ET SERIES CRANES	supersedes 10-05-09F	19963

# WIRE ROPE ASSEMBLY

# LOAD BLOCK ASSEMBLY

ET6K WIRE ROPE:

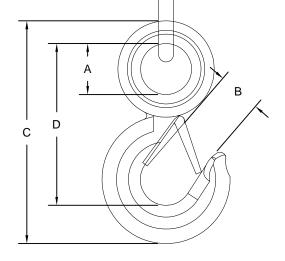
3/16" DIA, 50' LONG

GAC 7X19 LHRL-IWRC, SB 4200 LBS

▲ ET8/12 SERIES WIRE ROPE:

1/4" DIA, 65' LONG

GAC 7X19 IPS-LHRL-IWRC, SB 7000 LBS

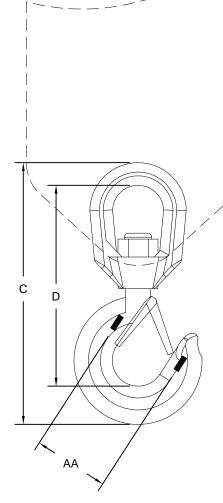


WIRE ROPE HOOK:

RATING: 1 TONNE (2205 LBS)

**DIMENSIONS:** 

Α	В	С	D
0.88"	1.06"	4.88"	3.63"



ET6K LOAD BLOCK HOOK:

RATING: 1.5 TONNE (3307 LBS)

**DIMENSIONS:** 

COLOR	BRAND	AA	С	D
GOLD	CROSBY	2.00"	7.75"	6.12"

▲ ET8/12 SERIES LOAD BLOCK HOOK:

RATING: 2 TONNE (4410 LBS)

DIMENSIONS:

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



VENCO VENTURO INDUSTRIES LLC
CINCINNATI OHIO

WIRE ROPE & HOOKS SPECIFICATIONS

O3-08-19G
C300

ET6/8/12 SERIES CRANES

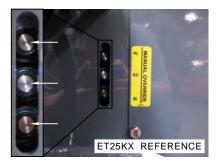
DATE
03-08-19G
C300

SUPERSEDES
05-09-16F
23225

#### 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).

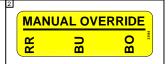


Rot. Right RL Rot. Left RR Boom Up BU BD Boom Down

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** 

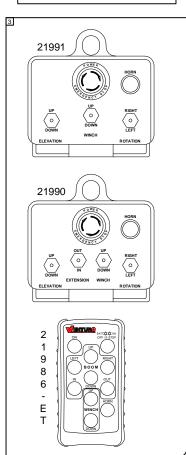
**PORT** 

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.

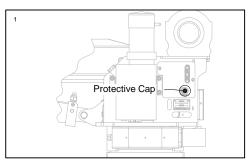
CINCINNATI, OHIO

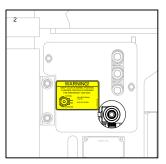


DATE SECTION C200 MAN. OVERRIDE INSTR. 03-08-19A SUPERSEDES 23084 ET NON-PROP CRANES 02-09-17

#### MANUAL OVERRIDE INSTRUCTIONS ET PROPRTIONAL SERIES CRANES

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

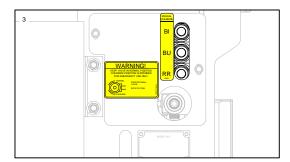


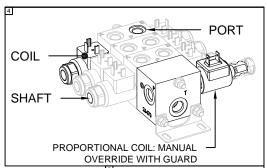


Each valve station incorporates [2] hydraulic ports and [2] coils. Manual override shafts are located in the center of the coils (see figure 4). Manual override decals are placed on each crane near the valve assembly. These decals provide a visual aid that helps the operator determine the function designations (Reference figure 3 & 5).

#### **3-STATION FUNCTIONS:**

Rot. Right RL Rot. Left BU Boom Up BD Boom Down Boom Out ΒI Boom In BO







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

21988 22158 0

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

CINCINNATI, OHIO



MAN. OVERRIDE INSTR.

TITLE

DATE 03-08-19A SECTION C200

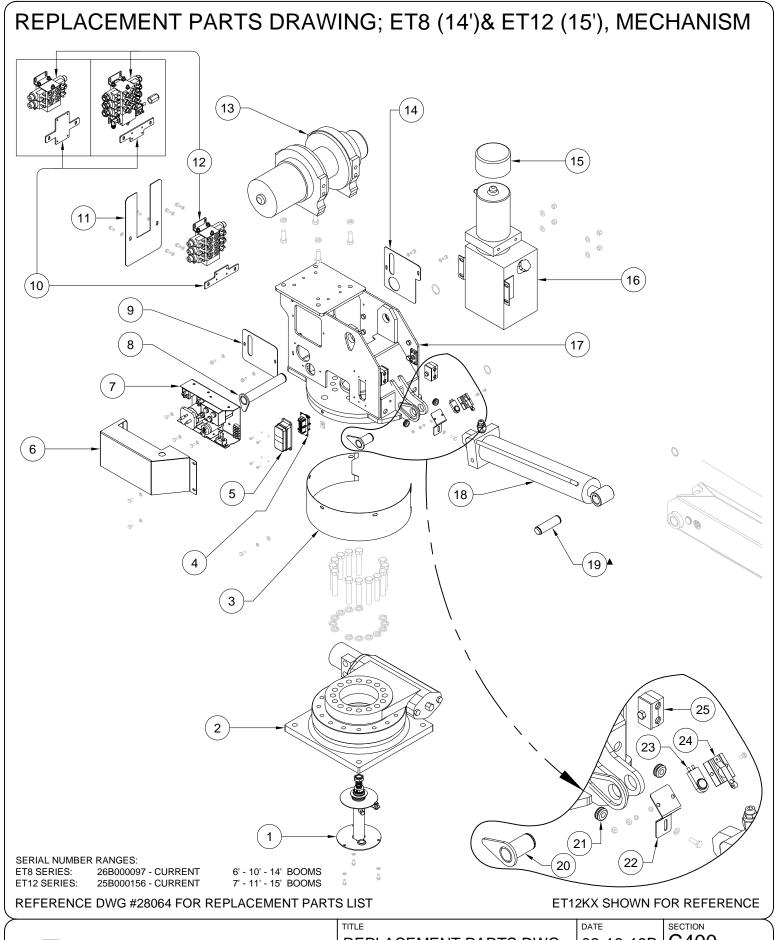
ET PROPORTIONAL CRANES

SUPERSEDES 07-30-18

# **SECTION 400**

# REPLACEMENT PARTS







VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO REPLACEMENT PARTS DWG

03-18-19B

C400

ET8 (14') & ET12 (15') SERIES

03-08-19A

28063

# REPLACEMENT PARTS LIST; ET8 (14') & ET12 (15') SERIES - MECHANISM

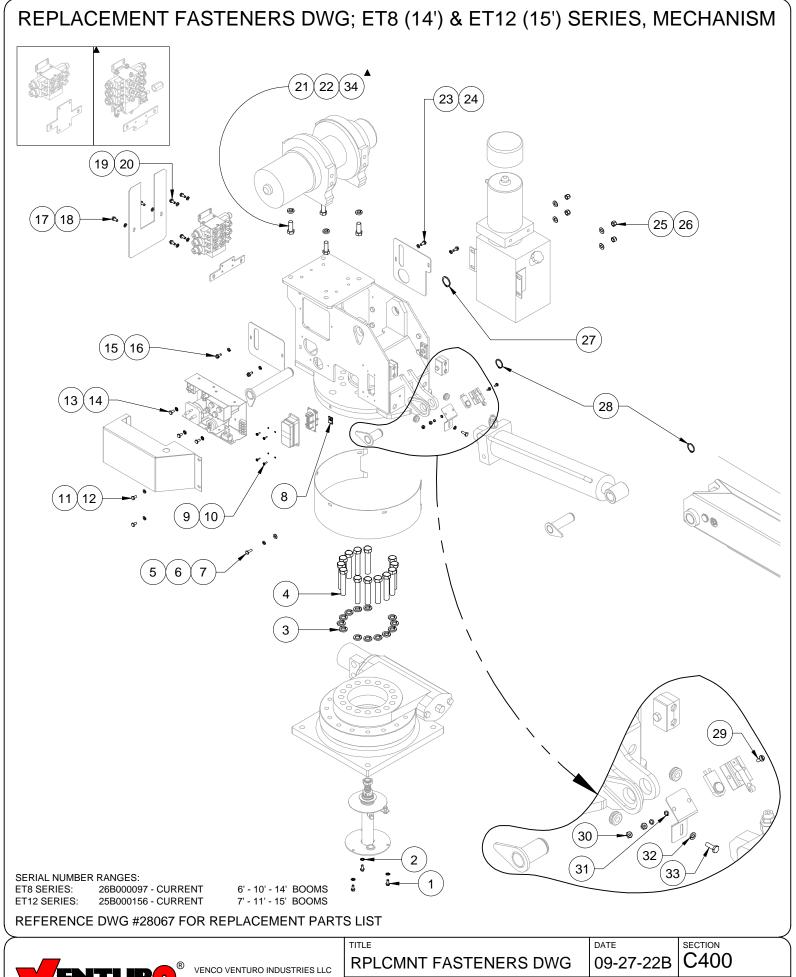
NON - PROPORTIONAL PROPORTIONAL

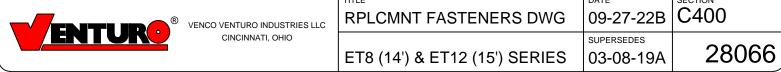
		NON -	PROPOR	TIONAL	PROPORTIONAL			
	ITEM	ET8K QTY	ET8KX QTY	ET12KX QTY	ET8KX QTY	E12KX QTY	PART NO.	DESCRIPTION
	1	1	1	1	1	1	16780-2P8	SLIP RING; 2-POLE, SWIVEL ASSY
•	0*	4	4	4	4	4	21735	SLEW DRIVE; SQUARE BASE
^	2*	1	1	1	1	1	21735-1	SLEW DRIVE; RECTANGULAR BASE
	3	1	1	1	1	1	21185	ROTATION GEAR GUARD
	4	1	1	1	1	1	22482	FEMALE INSERT; 16 + 1 POLE
	5	1	1	1	1	1	22481	SOCKET CASE W/ HOOD
	6	1	1	1	1	1	MB21621	ELECTRICAL ENCLOSURE W/ INSULATOR
	7	1	1	1	1	1	21515	ASSY; ELECTRICAL COMPONENT PANEL
	8	1	1	1	1	1	21540	PIVOT PIN; PRIMARY BOOM, MAIN
	9	1	1	1	1	1	28113	COVER PLATE; RIGHT SIDE
	40	-	1	1	1	1	28110	ADAPTER PLATE; HYD. CONTROL VALVE (ET8/12KX)
	10	1	-	-	-	-	28110-1	ADAPTER PLATE; HYD. CONTROL VALVE (ET8K ONLY)
	11	1	1	1	1	1	28112	COVER PLATE; REAR
		-	1	1	-	-	21614	ASSY; VALVE BLOCK, 3-SPOOL, NON-PROP (ET8/12KX ONLY)
	12	1	-	-	-	-	21615	ASSY; VALVE BLOCK, 2-SPOOL, NON-PROP (ET8K ONLY)
		-	-	-	1	1	26479	ASSY; VALVE BLOCK, 3-SPOOL, PROPORTIONAL
	13	1	1	1	1	1	21556	WINCH; DC1600
	14	1	1	1	1	1	28114	COVER PLATE; LEFT SIDE
	15	1	1	1	1	1	16143-3	MOTOR COVER; 2 HOLES
	16	1	1	1	1	1	20873	HYDRAULIC POWER UNIT; 2600 PSI
	17	1	1	1	1	1	28122	WELDED ASSY; UNIVERSAL UPPER HSNG
	10	-	-	1		1	23059	ASSY; ELEV. CYL., COMPOSITE BRNGS (ET12 SERIES)
	18	1	1	-	1	-	21788	ASSY; ELEV. CYL., COMPOSITE BRNGS (ET8 SERIES)
	19	1	1	1	1	1	21547	PIN; ELEVATION CYL., OUTBOARD
	20	1	1	1	1	1	23703	WELDMENT; ELEVATION CYL. PIN, INBOARD
	21	2	2	2	2	2	14883	GROMMET; 3/8" ID, 5/8" OD, 3/16" GROOVE
	22	1	1	1	1	1	21545	BRACKET; BOOM SHUT-OFF SWITCH
	23	1	1	1	1	1	19918	SWITCH; TOP POSITION
	24	1	1	1	1	1	19917	BRACKET; TOP POSITION SWITCH
	25	2	2	2	2	2	21612	ASSY; HOSE CLAMP
	26	1	1	1	1	1	23700	BOOM FINAL ASSY; ET12KXP 9.5' - 16'
	27	1	1	1	1	1	20670	ASSY; SWIVEL LOAD BLOCK, 3500 LBS.
	* FITUED 21725 OR 2175 1 DEDENDING ON CONFIGURATION							

<sup>\*</sup> EITHER 21735 OR 2175-1 DEPENDING ON CONFIGURATION ITEMS 26 & 27 NOT SHOWN ON DRAWING

REFERENCE DWG #28063 FOR REPLACEMENT PARTS DWG







### REPLACEMENT FASTENER LIST; ET8 (14') & ET12 (15') SERIES, MECHANISM

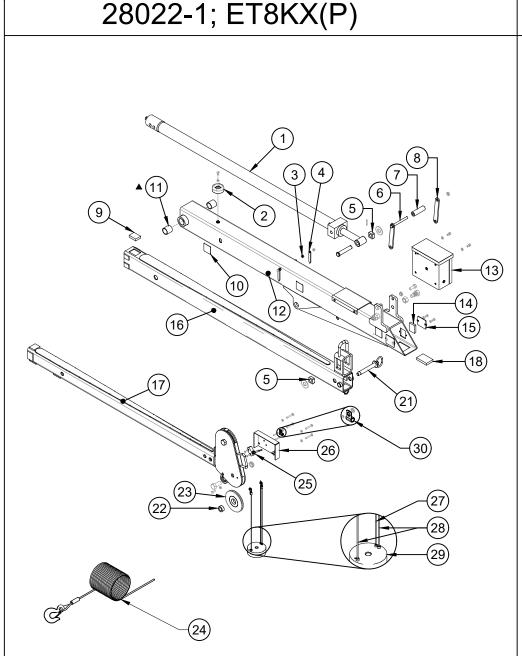
	ITEM#	PART#	DESCRIPTION		INSTALLATION / LOCATION
	1	!HHCS02520063S	HEX HEAD CAP SCREW; 1/4-20 X 5/8 S/S		CANDLESTICK TO CRANE BASE
	2	!LWSH-025-STAR-SS	LOCK WASHER; 1/4", EXTERNAL STAR, S/S		CANDLESTICK TO CRANE BASE
	3	!LWSH-063	LOCK WASHER; 5/8", GR. 5, ZINC	13	HOUSING TO SLEW RING
	4	!HHCS06311350	HEX HEAD CAP SCREW; 5/8-11 x 3-1/2, GR. 5, ZINC	13	HSNG TO SLEW RING (TORGUE 160 LBS.)
	5	!HHCS02520075S	HEX HEAD CAP SCREW; 1/4-20 X 3/4, S/S	5	ROTATION GEAR GUARD TO HOUSING
	6	!LWSH-025S	LOCK WASHER; 1/4", S/S	5	ROTATION GEAR GUARD TO HOUSING
	7	!FWSH-025S	FLAT WASHER; 1/4", S/S	5	ROTATION GEAR GUARD TO HOUSING
	8	!UNUT-02520-LKG	U-NUT; 1/4-20, LOCKING	5	LOWER GUARD MOUNTING RING (HSNG)
Ī	9	!SHPMS#0832050S	SLOT-HEAD PAN MACHINE SCREW; #8-32 X 1/2, S/S	4	SOCKET CASE W/ HOOD TO HOUSING
	10	!LWSH-#08S	LOCK WASHER; #08, S/S	4	SOCKET CASE W/ HOOD TO HOUSING
Ī	11	!HHCS02520063S	HEX HEAD CAP SCREW; 1/4-20 X 5/8, S/S	2	ELECTRIC PANEL COVER TO HOUSING
Ī	12	!LWSH-025S	LOCK WASHER; 1/4, S/S	2	ELECTRIC PANEL COVER TO HOUSING
•	13	!HHCS02520063S	HEX HEAD CAP SCREW; 1/4-20 X 5/8, S/S	3	ELECTRICAL COMPONENT PANEL TO HSNG
	14	!LWSH-025-STAR	LOCK WASHER; 1/4, EXTERNAL STAR	3	ELECTRICAL COMPONENT PANEL TO HSNG
Ī	15	!HHCS02520050S	HEX HEAD CAP SCREW; 1/4-20 X 1/2, S/S	2	RIGHT SIDE COVER PLATE TO HOUSING
	16	!LWSH-025-S	LOCK WASHER; 1/4, S/S	2	RIGHT SIDE COVER PLATE TO HOUSING
	17	!HHCS02520063S	HEX HEAD CAP SCREW; 1/4-20 X 5/8, S/S	2	REAR COVER & ADAPTER PLATE TO HOUSING
Ī	18	!LWSH-025-S	LOCK WASHER; 1/4, S/S		REAR COVER & ADAPER PLATE TO HOUSING
	19	!HHCS02520063S	HEX HEAD CAP SCREW; 1/4-20 X 5/8, S/S		VALVE BLOCK TO ADAPTER PLATE & HSNG
	20	!LWSH-025-S	LOCK WASHER; 1/4, S/S	4	VALVE BLOCK TO ADAPTER PLATE & HSNG
Ī	21°	25922	SHCS; M12-175 X 35MM, GR. 12.9		WARN WINCH TO HOUSING
	21*	25920	SHCS; M10-150 X 50MM, GR. 12.9	6	COMEUP WINCH TO HOUSING
	22°	!LWSH-M12-8.8	LOCK WASHER; M12, GRADE 8.8		WARN WINCH TO HOUSING
	22*	!LWSH-M10-18.1MM-OD	LOCK WASHER; M10, 18.1MM OD		COMEUP WINCH TO HOUSING
	23	!HHCS02520063S	HEX HEAD CA SCREW; 1/4-20 X 5/8, S/S		LEFT SIDE COVER PLATE TO HOUSING
	24	!LWSH-025-S	LOCK WASHER; 1/4, S/S	2	LEFT SIDE COVER PLATE TO HOUSING
	25	!LNUT-03816	LOCK NUT; 3/8-16, NYLON INSERT	4	HYDRAULIC POWER UNIT TO HOUSING
	26	!FWSH-038SAE	FLAT WASHER; 3/8 SAE, ZINC PLATED	4	HYDRAULIC POWER UNIT TO HOUSING
	27	!SRNG-125	SNAP RING; 1-1/4, PLATED	1	MAIN BOOM PIVOT PIN
	28	!SRNG-113	SNAP RING; 1-1/8, PLATED	2	ELEVATION CYLINDER PIVOT PINS
ſ	29	!PHPMS#1024050S	PHILLIPS HEAD PAN MACH. SCREW; 10-24 X 1/2, S/S	2	TOP POS. BRCKT TO BOOM SHUT-OFF BRCKT
	30	!LWSH-#10S	LOCK WASHER; #10, S/S	2	TOP POS. BRCKT TO BOOM SHUT-OFF BRCKT
	31	!HNUT-#1024S	HEX NUT; #10-24, S/S	2	TOP POS. BRCKT TO BOOM SHUT-OFF BRCKT
ſ	32	!LWSH-025-S	LOCK WASHER; 1/4, S/S	1	BOOM SHUT-OFF SWITCH BRACKET TO HSNG
	33	!HHCS02520075S	HEX HEAD CAP SCREW; 1/4-20 X 3/4, S/S	1	BOOM SHUT-OFF SWITCH BRACKET TO HSNG
	34°	!FWSH-M12	FLAT WASHER; M12	4	WARN WINCH TO HOUSING
	34*	!FWSH-M10-18MM-OD	FLAT WASHER; M10, 18MM OD	6	COMEUP WINCH TO HOUSING

<sup>° =</sup> WARN DC2500 WINCH MOUNTING

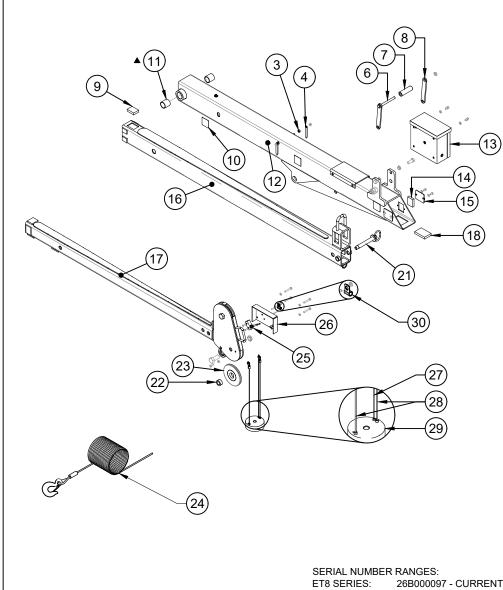
#### REFERENCE DWG #28066 FOR REPLACEMENT FASTENER DRAWING

ENTURO®	VENCO VENTURO INDUSTRIES LLC	RPLCMNT FASTENER LIST	04-08-25C	C400
ENION	CINCINNATI, OHIO	ET8 (14' & ET12 (15') SERIES	SUPERSEDES 09-27-22B	28067

<sup>\* =</sup> COMEUP GTD-2800 WINCH MOUNTING



28022; ET8K



REFERENCE #28332 FOR REPLACEMENT PARTS LIST

REPLACEMENT PARTS DWG - 28022-1 & 28022 05-27-25A C400

DATE SECTION

ET8 GEN. 'C' SERIES, 6' - 10' - 14' BOOMS

SUPERSEDES 04-19-21

REPLACEMENT PARTS LIST; 28022-1, ET8KX(P)				
ITEM#	ITEM# QTY PART#		DESCRIPTION	
1	1	21754	EXTENSION CYLINDER	
2	1	20285	BUMPER; BOOM	
3	2	22490	SPACER; BOOM ARROW	
4	2	13459-1	ARROW; 3.19" LONG	
5	2	21734	BEARING; UHMW, EXTENSION PIN	
6	1	27089	WELDED ASSY; WIRE ROPE GUIDE	
7	1	27088	ROLLER; UHMW, WIRE ROPE GUIDE	
8	1	21936	FLAT MOUNT; WIRE ROPE GUIDE	
9	1	21538	BEARING; UHMW, BOOM, 2 X 1.5 X 0.5	
10	6	28024	DECAL; BOOM, SLOT COVER	
11	2	21785	MRP COMP BEARING; BOOM, ET8/12K(X)	
12	1	28023	WELDED ASSY; PRIMARY BOOM	
13	1	22683	ASSY; CORD REEL, LEFT	
14	2	21209	BEARING; UHMW, BOOM, 2 X 1.5 X 0.44	
15	2	21528	BEARING CAP	
16	1	28012	WELDED ASSY; SECONDARY BOOM	
17	1	21716	WELDED ASSY; TERTIARY BOOM	
18	1	21208	BEARING; UHMW, BOOM, 3 X 2 X 0.5	
19	19		-	
20	-	-	-	
21	1	23042-B-14-14	ASSY; PIN / LANYARD	
22	2	20536	SPACER; SHEAVE	
23	2	21630	SHEAVE W/ BUSHING	
24	1	21639	WIRE ROPE; 1/4 X 65 FT W/ EYEHOOK	
25	1	19376	SWITCH; ANTI-2-BLOCK	
26	1	21291	HOUSING; ANTI-2-BLOCK	
27	1	20929	CABLE HANGER; ANTI-TWO BLOCK	
28	2	20951-1	CABLE HANGER; 16 ½" LG	
29	1	20950	WEIGHT; ANTI-TWO BLOCK	
30	1	19269	CLAMP; 1/4"	

ITEM# QTY		PART#	LIST; 28022-1, ET8KX(P)  DESCRIPTION
			- DESCRIPTION
<u>-</u>			
3	2	22490	SPACER; BOOM ARROW
4	2	13459-1	ARROW; 3.19" LONG
-	-	-	- ANNOW, 0.19 LONG
6	1	27089	WELDED ASSY; WIRE ROPE GUIDE
7	1 1	27088	ROLLER; UHMW, WIRE ROPE GUIDE
8	1	21936	FLAT MOUNT; WIRE ROPE GUIDE
9	1	21538	BEARING; UHMW, BOOM, 2 X 1.5 X 0.5
10	6	28024	DECAL; BOOM, SLOT COVER
11	2	21785	MRP COMP BEARING; BOOM, ET8/12K(X)
12	1	28023	WELDED ASSY; PRIMARY BOOM
13	1	22683	ASSY; CORD REEL, LEFT
14	2	21209	BEARING; UHMW, BOOM, 2 X 1.5 X 0.44
15	2	21528	BEARING CAP
16	1	28012	WELDED ASSY; SECONDARY BOOM
17	1	21716	WELDED ASSY; TERTIARY BOOM
18	18 1		BEARING; UHMW, BOOM, 3 X 2 X 0.5
19	-	-	-
20	-	-	-
21	1	23042-B-14-14	ASSY; PIN / LANYARD
22	2	20536	SPACER; SHEAVE
23	2	21630	SHEAVE W/ BUSHING
24	1	21639	WIRE ROPE; 1/4 X 65 FT W/ EYEHOOK
25	1	19376	SWITCH; ANTI-2-BLOCK
26	1	21291	HOUSING; ANTI-2-BLOCK
27	1	20929	CABLE HANGER; ANTI-TWO BLOCK
28	2	20951-1	CABLE HANGER; 16 ½" LG
29	1	20950	WEIGHT; ANTI-TWO BLOCK
30	1	19269	CLAMP; 1/4"

REFERENCE #28331 FOR REPLACEMENT PARTS DRAWING

ET8 SERIES SERIAL NUMBER RANGES: 26B000097 - CURRENT



VENCO VENTURO INDUSTRIES LLC

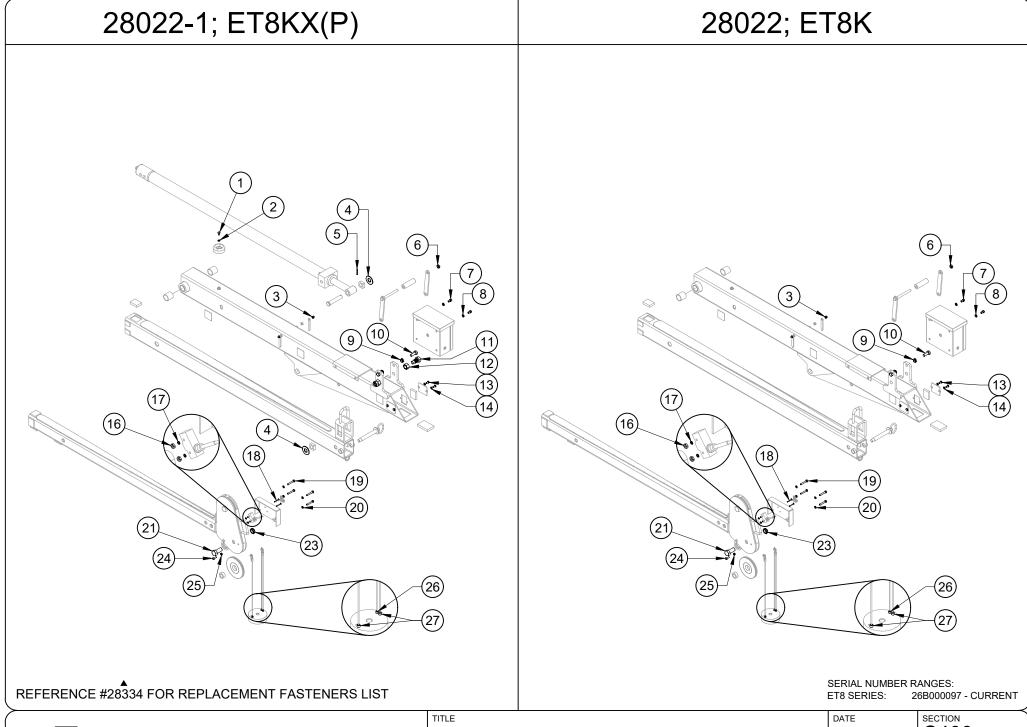
REPLACEMENT PARTS LIST - 28022-1 & 28022

05-27-25A C400

SECTION

ET8 GEN. 'C' SERIES, 6' - 10' - 14' BOOMS

SUPERSEDES 04-19-21





VENCO VENTURO INDUSTRIES LLC

RPLCMNT FASTENERS DWG - 28022-1 & 28022 05-27-25A C400

ET8 GEN. 'C' SERIES, 6' - 10' - 14' BOOMS

SUPERSEDES 04-19-21

	REPLACEMENT FASTENERS LIST; 28022-1, ET8KX(P)					
ITEM#	QTY	PART #	DESCRIPTION			
1	1	!HHCS02520063S	HEX HEAD CAP SCREW; 1/4-20 X 5/8", S/S			
2	1	!FWSH-025S	FLAT WASHER; 1/4", S/S			
3	2	!ANUT-02520S	ACORN NUT; 1/4-20, S/S			
4	2	!FWSH-075S	FLAT WASHER; 3/4", S/S			
5	1	!RPIN-016150	ROLL PIN; 5/32 X 1-1/2"			
6	1	!JNUT-04414N	JAM NUT; 7/16-14, NYLON			
7	2	!SHCS03118050-SS	SOCKET HEAD CAP SCREW; 5/16-18 X 1/2", S/S			
8	2	!LWSH-031S	LOCK WASHER; 5/16", S/S			
9	2	!JNUT-05013N	JAM NUT; 1/2-13, NYLON			
10	2	!HHCS05013125	HEX HEAD CAP SCREW; 1/2-13 X 1-1/4", ZINC			
11	2	17487	ECCENTRIC PIVOT BOLT; 3/4-16			
12	2	!HNUT-07516S	HEX NUT; 3/4-16, S/S			
13	4	!HHCS02520050S	HEX HEAD CAP SCREW; 1/4-20 X 1/2", S/S			
14	4	!LWSH-025S	LOCK WASHER; 1/4", S/S			
15	1	-	-			
16	2	!HNUT-#0632S	HEX NUT; #06-32, S/S			
17	2	!LWSH-#06S	LOCK WASHER; #06, S/S			
18	2	!PHMS#0632125	PHILIPS HEAD MACHINE SCREW; #06-32 X 1-1/4"			
19	4	!HHCS02520175S	HEX HEAD CAP SCREW; 1/4-20 X 1-3/4", S/S			
20	4	!LWSH-025S	LOCK WASHER; 1/4", S/S			
21	2	17059-4	SHEAVE AXLE; HHCS07510169, SPCL SHLDR, S/S			
22	-	-	-			
23	2	!JNUT-07510N	JAM NUT; 3/4-10, NYLON			
24	1	!HHCS02520075S	HEX HEAD CAP SCREW; 1/4-20 X 3/4", S/S			
25	1	!HNUT-025S	HEX NUT; 1/4", S/S			
26	2	19302	SET COLLAR; 3/32" DIA.			
27	2	20952	SET COLLAR; 5/32" DIA.			

		REPLACEMENT FAS	STENERS LIST; 28022-1, ET8KX(P)
ITEM#	ITEM# QTY PART#		DESCRIPTION
1	-	-	-
2	-	-	-
3	2	!ANUT-02520S	ACORN NUT; 1/4-20, S/S
4	-	-	-
5	-	-	-
6	1	!JNUT-04414N	JAM NUT; 7/16-14, NYLON
7	2	!SHCS03118050-SS	SOCKET HEAD CAP SCREW; 5/16-18 X 1/2", S/S
8	2	!LWSH-031S	LOCK WASHER; 5/16", S/S
9	2	!JNUT-05013N	JAM NUT; 1/2-13, NYLON
10	2	!HHCS05013125	HEX HEAD CAP SCREW; 1/2-13 X 1-1/4", ZINC
11	-	-	-
12	1	-	-
13	4	!HHCS02520050S	HEX HEAD CAP SCREW; 1/4-20 X 1/2", S/S
14	4	!LWSH-025S	LOCK WASHER; 1/4", S/S
15	1	-	-
16	2	!HNUT-#0632S	HEX NUT; #06-32, S/S
17	2	!LWSH-#06S	LOCK WASHER; #06, S/S
18	2	!PHMS#0632125	PHILIPS HEAD MACHINE SCREW; #06-32 X 1-1/4"
19	4	!HHCS02520175S	HEX HEAD CAP SCREW; 1/4-20 X 1-3/4", S/S
20	4	!LWSH-025S	LOCK WASHER; 1/4", S/S
21	2	17059-4	SHEAVE AXLE; HHCS07510169, SPCL SHLDR, S/S
22	-	-	-
23	2	!JNUT-07510N	JAM NUT; 3/4-10, NYLON
24	1	!HHCS02520075S	HEX HEAD CAP SCREW; 1/4-20 X 3/4", S/S
25	1	!HNUT-025S	HEX NUT; 1/4", S/S
26	2	19302	SET COLLAR; 3/32" DIA.
27	2	20952	SET COLLAR; 5/32" DIA.

REFERENCE #28333 FOR REPLACEMENT FASTENERS DRAWING

CINCINNATI, OHIO

ET8 SERIES SERIAL NUMBER RANGES: 26B000097 - CURRENT



VENCO VENTURO INDUSTRIES LLC

RPLCMNT FASTENERS LIST - 28022-1 & 28022

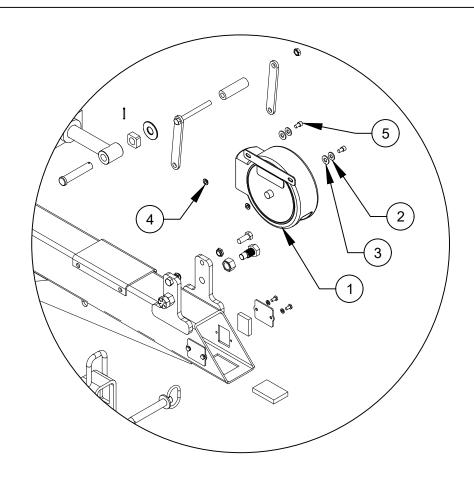
05-27-25A C400

SECTION

ET8 GEN. 'C' SERIES, 6' - 10' - 14' BOOMS

SUPERSEDES 04-19-21

### BOOM ROUND CORD REEL 28190-2

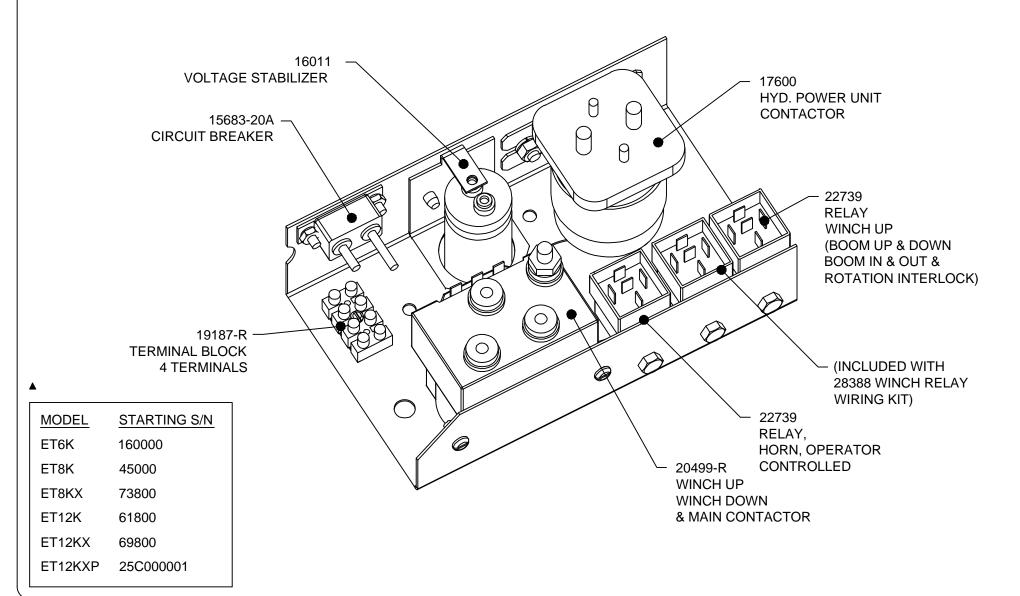


ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	28190-2	CORD REEL
2	2	!FWSH-031	WASHER FLAT; 5/16"X.75 O.D., 304 S/S
3	2	01016	FIBER WASHER
4	2	28198	INSULATING SLEEVE WASHER; 5/16"
5	2	!SHCS03118063S	SHCS; 5/16"-18X5/8"LG.S/S



BOOM ROUND CORD REEL 28190-2	02-13-24	C400
ET12KX -15', ET8KX(P)-14'	SUPERSEDES -	24102

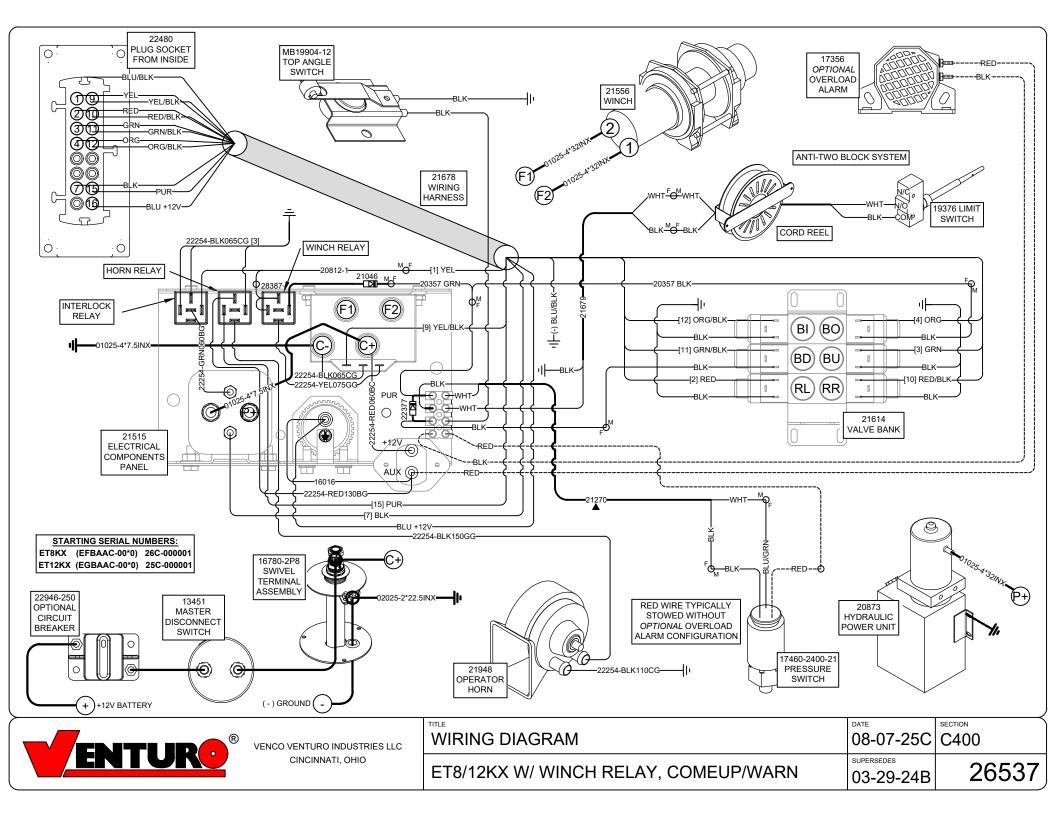
### 21515 ELECTRICAL COMPONENT ASSEMBLY

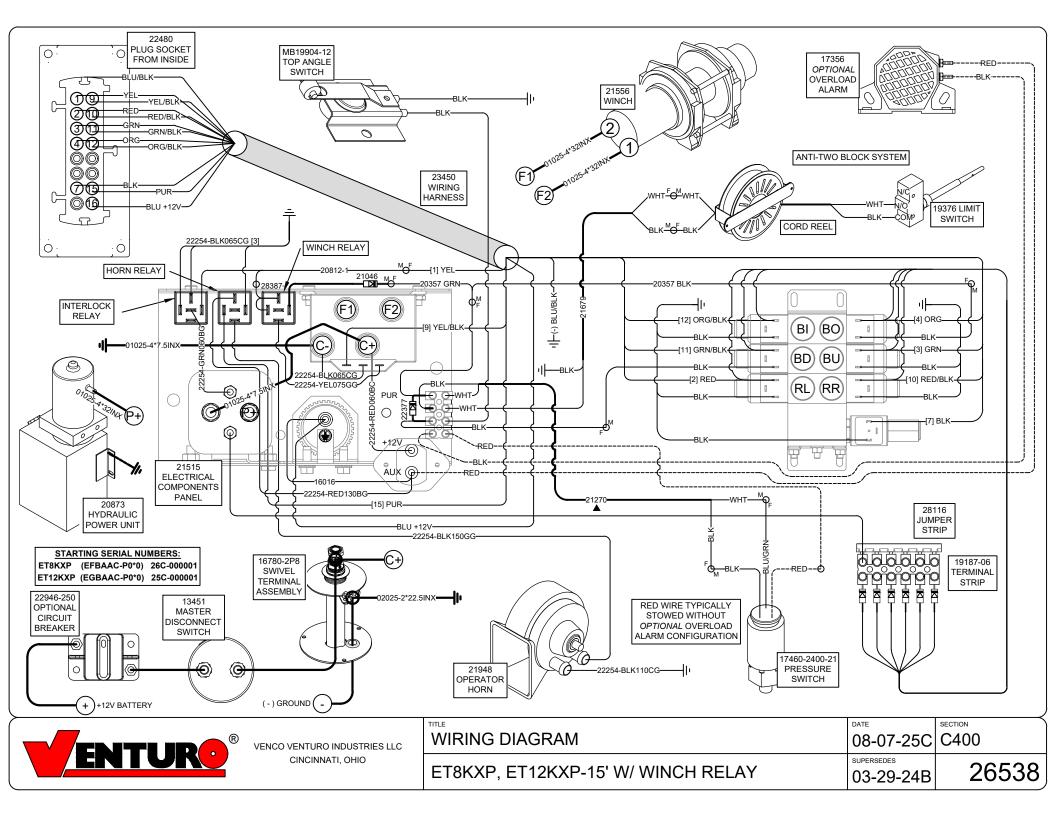




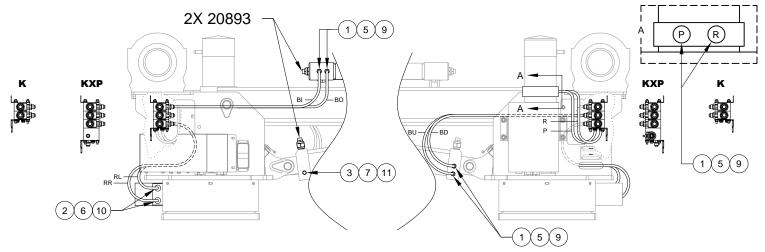
VENCO VENTURO INDUSTRIES LLC CINCINNATI. OHIO

TITLE	DATE	SECTION
ELECTRICAL COMPONENT ASSEMBLY	03-02-23G	C400
	SUPERSEDES	04000
ET6K, ET8/12K(X), ET12KXP	07-31-18F	21600





### REPLACEMENT PARTS; HYDRAULIC COMPONENTS, ET8 (6-10-14) & ET12 (7-11-15) GEN 'C' SERIES

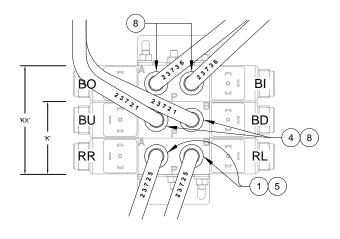


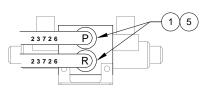
	23737 - ET8K GENERATION 'C', NON-PROPORTIONAL, 6' - 10' - 14'						
ITEM PART # QTY DESCRIPTION		DESCRIPTION					
1	FF6400-0606	8	FITTING; ADAPTER, STRAIGHT, 6OFS-6MO				
2	FF6400-0610	2	FITTING; ADAPTER, STRAIGHT, 6OFS-10MO				
3	H6805-0404	1	FITTING; ADAPTER, 90° ELBOW, 4MO-4FP				
4	FF6802-0606	2	FITTING; ADAPTER, 45° SWIVEL, 6MOFS-6MORB				

23734	23734 - ET8KX (6'-10'-14') & ET12KX (7'-11'-15') GEN. 'C', NON-PROPORTIONAL					
ITEM	PART#	QTY	DESCRIPTION			
5	FF6400-0606	10	FITTING; ADAPTER, STRAIGHT, 6OFS-6MO			
6	FF6400-0610	2	FITTING; ADAPTER, STRAIGHT, 60FS-10MO			
7	H6805-0404	1	FITTING; ADAPTER, 90° ELBOW, 4MO-4FP			
8	FF6802-0606	4	FITTING; ADAPTER, 45° SWIVEL, 6MOFS-6MORB			

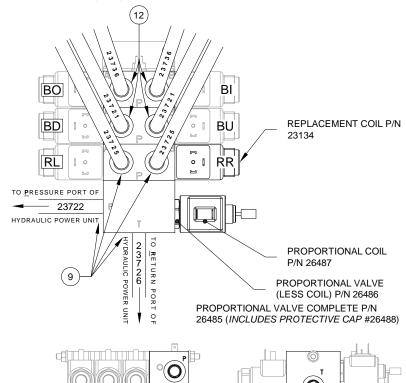
2373	35 - ET8KXP (6'-10	)'-14') & E	ET12KXP (7'-11'-15'), GEN. 'C', PROPORTIONAL
ITEM	PART#	QTY	DESCRIPTION
9	FF6400-0606	10	FITTING; ADAPTER, STRAIGHT, 6OFS-6MO
10	FF6400-0610	2	FITTING; ADAPTER, STRAIGHT, 6OFS-10MO
11	H6805-0404	1	FITTING; ADAPTER, 90° ELBOW, 4MO-4FP
12	FF6802-0606	4	FITTING; ADAPTER, 45° SWIVEL, 6MOFS-6MORB

#### 21615 (K) or 21614 (KX) NON-PROPRTIONAL VALVE BLOCK





#### 26479 (KXP) PROPORTIONAL VALVE BLOCK

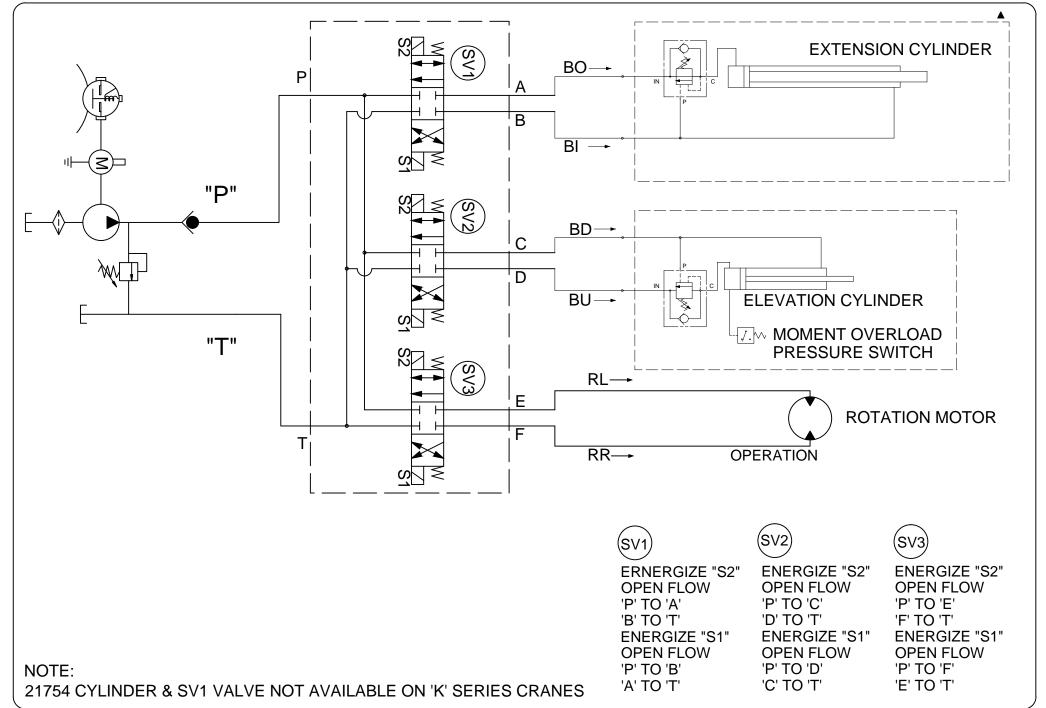




SCALE 1:13	
<b>ENTURO</b> ®	

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

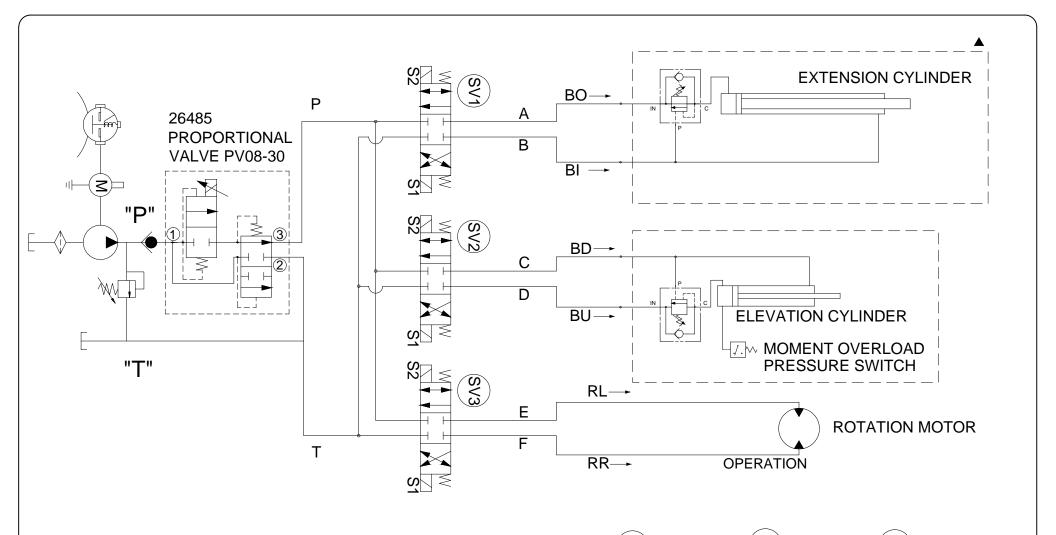
REPLACEMENT PARTS	03-08-19F	SECTION C400
ET8 (14') & ET12 (15') SERIES	12-16-16E	28037



<b>ENTURO</b> ®
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VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

HYDRAULIC SYSTEM DIAGRAM	08-26-24E	SECTION C400
ET8/12 NON-PROPORTIONAL	supersedes 03-11-19D	21602



(SV2 (SV3) SV1 **ERNERGIZE** "S2" **ENERGIZE "S2" ENERGIZE "S2" OPEN FLOW OPEN FLOW OPEN FLOW** 'P' TO 'A' 'P' TO 'C' 'P' TO 'E' 'B' TO 'T' 'D' TO 'T' 'F' TO 'T' **ENERGIZE "S1" ENERGIZE "S1" ENERGIZE "S1" OPEN FLOW OPEN FLOW OPEN FLOW** 'P' TO 'B' 'P' TO 'D' 'P' TO 'F' 'A' TO 'T' 'C' TO 'T' 'E' TO 'T'



HYDRAULIC SYSTEM DIAGRAM

DATE

08-26-24A

C400

ET8/12 PROPORTIONAL

OBATE

08-26-24A

SUPERSEDES

03-11-19

28077

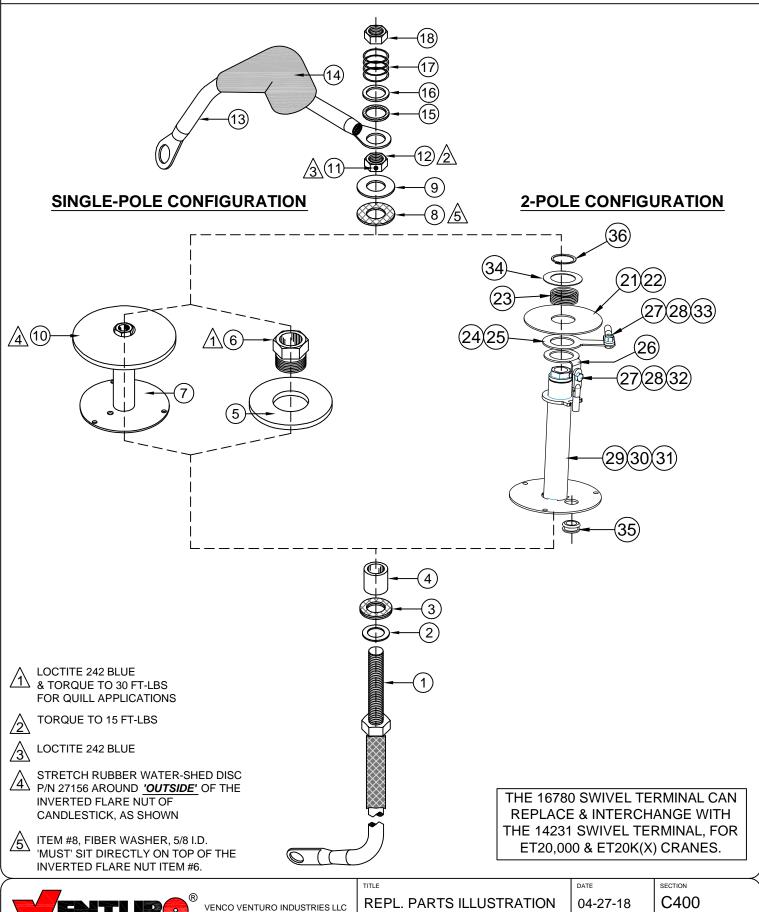
# Single & 2-Pole Slip-ring Replacement Parts (1 of 2)

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- Fing (ET25-36KX)	r ALL CRANES		16780 B	16780 BILLS OF MATERIALS		
16780	16780 - 1	16780 - 2P6	16780 - 2P8	16780 - 2P25	16780 - KIT					
		Q	TY			#	PART	DESCRIPTION		
1	1	1	1	1	0	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	-	-	12	ū	5	14318	FLAT WASHER; 1 3/16" I.D. X 2 3/4" O.D. X 3/16"		
1	=	-	-	( <b>=</b> )		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-		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	a property of the second secon		
					-			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 -	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)		
-	ij	1	=	-	1	25	27441	COPPER SLIP-RING, (ET6K ONLY)		
-	-	1	1	1	1	26	27449-1	BRASS SLIP-RING (ET6 - ET36)		
-	-	1	1	1	-	27 28	!HHCS03118075-B !HNUT-03118-B	BRASS HHCS BRASS NYLOC NUT		
=	-	1	-	-	-	29	23255	SLIP-RING, WELDED ASSY, ET6K		
-		•	1	(I <del>II</del> )		30	23255-1	SLIP-RING, WELDED ASSY, ET8 - 18K(X)		
=	H	=	=	1	I	31	23255-2	SLIP-RING, WELDED ASSY, ET25 - 36K(X)		
	-	1	1	1	=	32	02025-2*96.5INX	(-) WELDING CABLE ASSY, BRASS SLIP-RING		
-	-	1	1	1		34	02025-2*22.5INX 27463	(-) WELDING CABLE ASSY, COPPER SLIP-RING SHIM, WIDE RIM, 18GA, 2-1/4 O.D. X 1-1/2 I.D.		
-	-	1	1	1	Ė	35	20889	RUBBER GROMMET		
-	-	1	1	1	н	36	!SRNG-150	SNAP-RING, EXTERNAL, 1-1/2"		



TITLE	DATE	SECTION
16780 REPLACEMENT PARTS	03-29-19A	C400
	SUPERSEDES	21202
ET6/8/12/16/18/25/30/36K(X)	04-27-18	Z1Z9Z

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

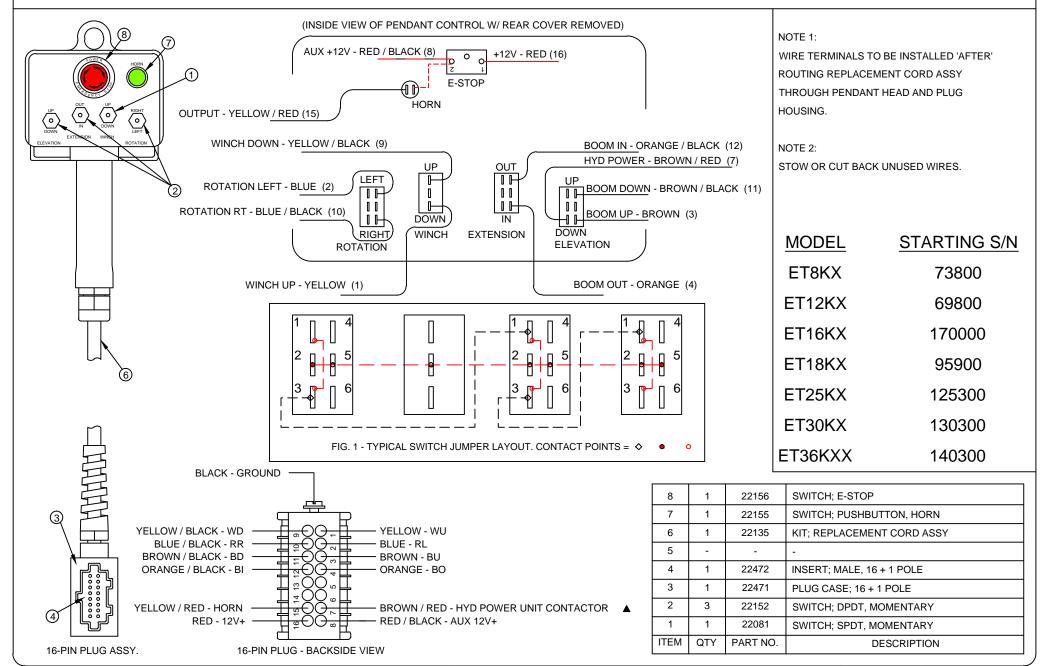


	ENTURO	)
<b>A</b>		

/ENCO VENTURO INDUSTRIES LI 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

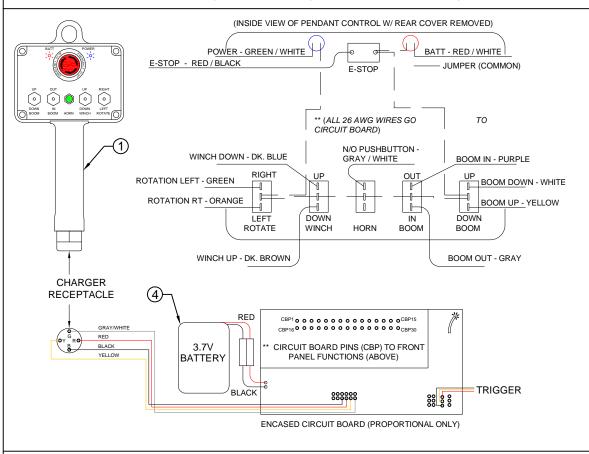
C400

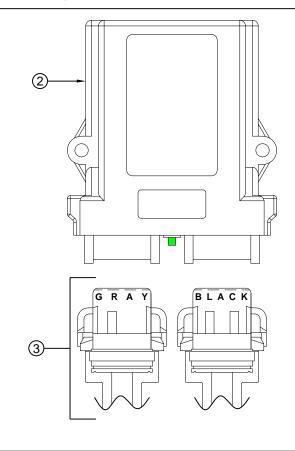
21990 PNDNT; 4 FNCTN ET CRNS, ESTP/HRN

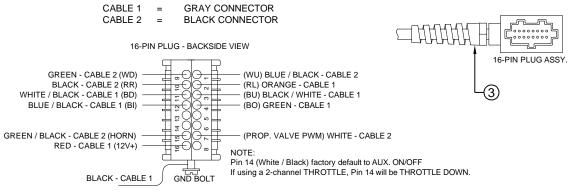
10-20-14A

23075

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







	COMPONENTS					
ITEM NO.	PART NO.	DESCRIPTION				
1	22158-TX	TRANSMITTER				
2	22158-RX	RECEIVER				
3	21983-HN	HARNESS				
4	22965-BATT	BATTERY				
5	22965-CHGR	CHARGER (NOT SHOWN)				



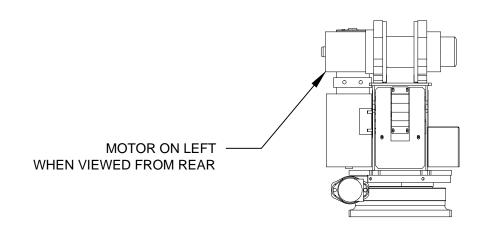
VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

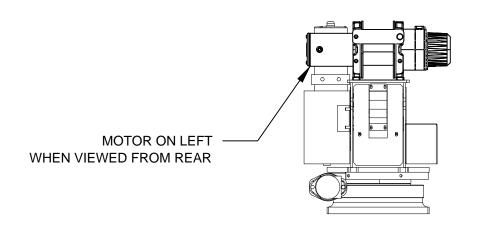
TITLE			DATE	SECTION
REPLACEMENT PARTS	DWG & LIST		03-11-19A	C400
			SUPERSEDES	00-00
ET PROPORTIONAL SE	RIES CRANES	<b>A</b>	07-31-18	23786

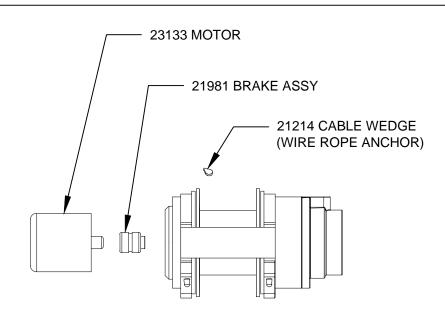
### 21556 WINCH REPLACEMENT PARTS

### WARN DC1600

## **COMEUP GTD-2200**

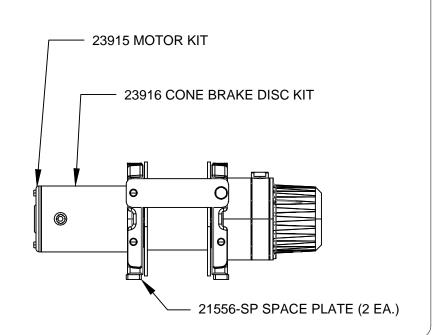






MANUFACTURING, INC.

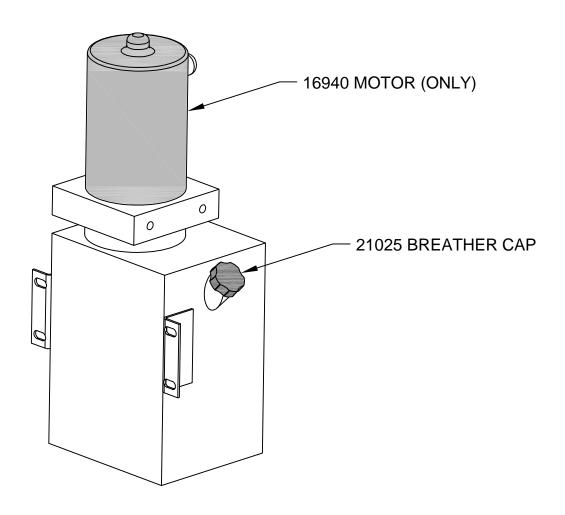
CINCINNATI, OHIO





WINCH REPLACEMENT PARTS (DC1600) C400 10-24-22E SUPERSEDES 21741 ET8/12K(X) 06-16-22D

# 20873 HYDRAULIC POWER UNIT (H.P.U.)



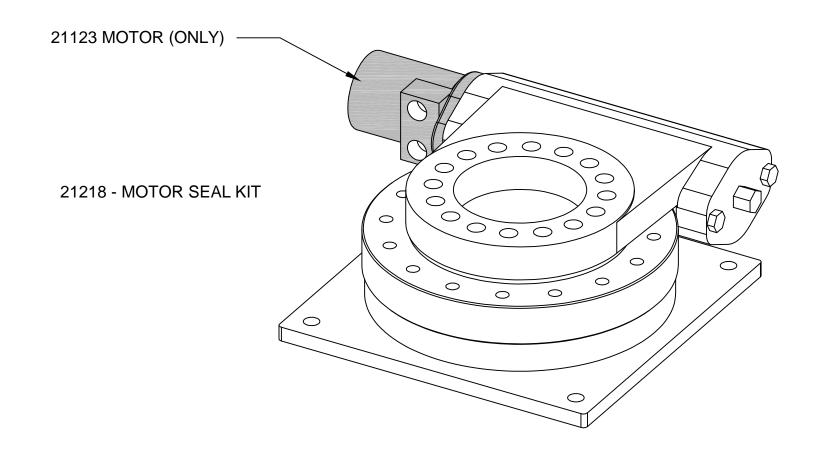
#### NOTE:

HYDRAULIC POWER UNIT SETTINGS ARE AS FOLLOWS:

▲ ET8/12K(X) PRESSURE = 2600 PSI

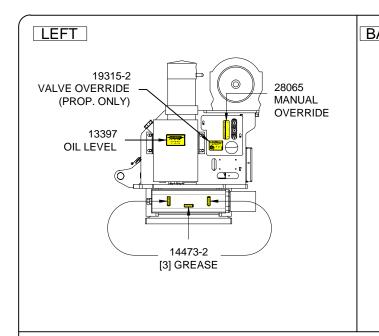
VENCO VENTURO INDUSTRIES LLC   I I.F.U. NF LOIVIN I FAN I 3   UI-20-13D	0.00	· · ·			
® HPII RPI CMNT PARTS 01-26-15R	C400	01-26-15B			

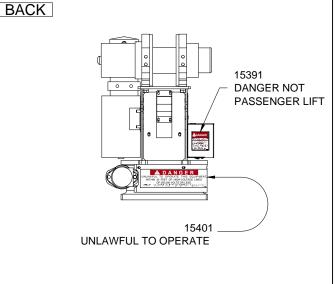
### 21735 SLEWING SYSTEM REPLACEMENT PARTS

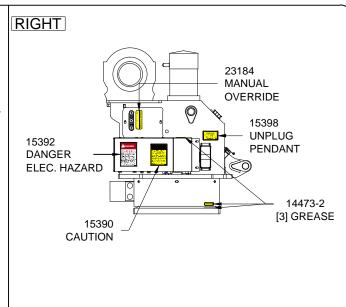


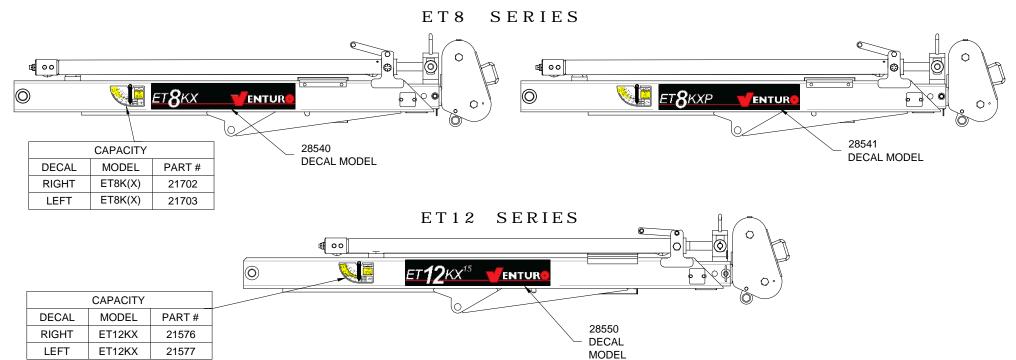


TITLE	DATE	SECTION
SLEWING SYSTEM REPLACEMENT PARTS	10-23-14B	C400
ET8/12K & ET8/12/16/18KX	SUPERSEDES 12-27-13A	21973











VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

**DECAL PLACEMENT** 

DATE SECTION C400 05-19-25A

SUPERSEDES 28543

ET8 & ET12-15' SERIES

11-14-23

## FIELD SERVICE LABEL KITS; ET8 SERIES CRANES

21832; FIELD SERVICE LABEL KIT, ET8KX				
PART #	QTY	DESCRIPTION		
14473-2	6	DECAL; GREASE		
28541	2	DECAL; VENTURO, ET8KX		
21702	1	DECAL; BOOM CAPACITY, ET8 SERIES, RIGHT		
21703 1		DECAL; BOOM CAPACITY, ET8 SERIES, LEFT		
13397	1	DECAL; OIL LEVEL		
28065	1	DECAL; MANUAL OVERRIDE, RIGHT		
23184	1	DECAL; MANUAL OVERRIDE, LEFT		
17813	1	DECAL; OVERLOAD SENSING SYSTEM		
16184-1 1		DECAL; HORN RELAY		
28544	1	IDWG; FIELD SERVICE LABEL KIT LIST		
28543	1	IDWG; DECAL PLACEMENT		
INST-23233 1		SAFETY MANUAL, VENTURO CRANES		
15397	1	KIT; ACCIDENT PREVENTION SIGNS		

28069; FIELD SERVICE LABEL KIT, ET8KXP			
PART# QTY		DESCRIPTION	
14473-2	6	DECAL; GREASE	
28541	2	DECAL; VENTURO, ET8KXP	
21702	1	DECAL; BOOM CAPACITY, ET8 SERIES, RIGHT	
21703	1	DECAL; BOOM CAPACITY, ET8 SERIES, LEFT	
13397	1	DECAL; OIL LEVEL	
28065	1	DECAL; MANUAL OVERRIDE, RIGHT	
23184	1	DECAL; MANUAL OVERRIDE, LEFT	
19315-2	1	DECAL; MANUAL OVERRIDE, PROP. VALVE	
17813	1	DECAL; OVERLOAD SENSING SYSTEM	
16184-1	1	DECAL; HORN RELAY	
28544	1	IDWG; FIELD SERVICE LABEL KIT LIST	
28543	1	IDWG; DECAL PLACEMENT	
INST-23233	1	SAFETY MANUAL, VENTURO CRANES	
15397	1	KIT; ACCIDENT PREVENTION SIGNS	



<u> </u>	FIELD SERVICE LABEL KITS	DATE 05-19-25A	SECTION C400
	ET8 SERIES CRANES	11-15-23	28544

### **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