

INST-28910

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PARTS & INSTALLATION MANUAL 4020E/4016E

Included in this manual:

4020E

- 4,000 lbs. Electric Telescopic Service Crane.
- 10 16 20 ft Powered, Dual-Stage, Boom Extension.
- Proportional Controls & Non-Proportional Controls.

4016E

- 4,000 lbs. Electric Telescopic Service Crane.
- 8 12 ft Powered, Single-Stage, Boom Extension.
- 12 16 ft Manual, Pullout, Boom Extension
- Proportional Controls & Non-Proportional Controls.

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

VENCO VENTURO

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SECTION 100

DESCRIPTION & SPECIFICATIONS



SPECIFICATIONS

12-volt battery operated

16,000 ft-lb overturning moment (or as limited by truck stability)

Moment overload shut-off system

Electric winch - 2,000 lb single-line capacity with automatic load brake

Electric-hydraulic boom elevation

Electric-hydraulic boom extension - 10 ft stroke

Electric-hydraulic continuous power rotation

Corded remote control pendant

Radio remote control pendant (optional)

Master disconnect switch

Accessories (optional):

Stabilizers: 24962, 13500, 11822-2

Pedestal: 26027

Boom Rest: 20381-2

TELESCOPIC BOOM	10.5 - 20.5 ft
BOOM ELEVATION	-5° TO 75°
BOOM HYD EXTENSION	10 ft
BOOM MANUAL EXT	-
CAPACITY	600 lb @ 20.5 ft
CAPACITI	4000 lb @ 3 ft
WIRE ROPE	%₀" x 80 ft
PENDANT CORD LENGTH	25 ft

SECTION

C100

SPECIFICATIONS

12-volt battery operated

16,000 ft-lb overturning moment (or as limited by truck stability)

Moment overload shut-off system

Electric winch - 2,000 lb single-line capacity with automatic load brake

Electric-hydraulic boom elevation

Electric-hydraulic boom extension - 4 ft stroke

Electric-hydraulic continuous power rotation

Corded remote control pendant

Radio remote control pendant (optional)

Master disconnect switch

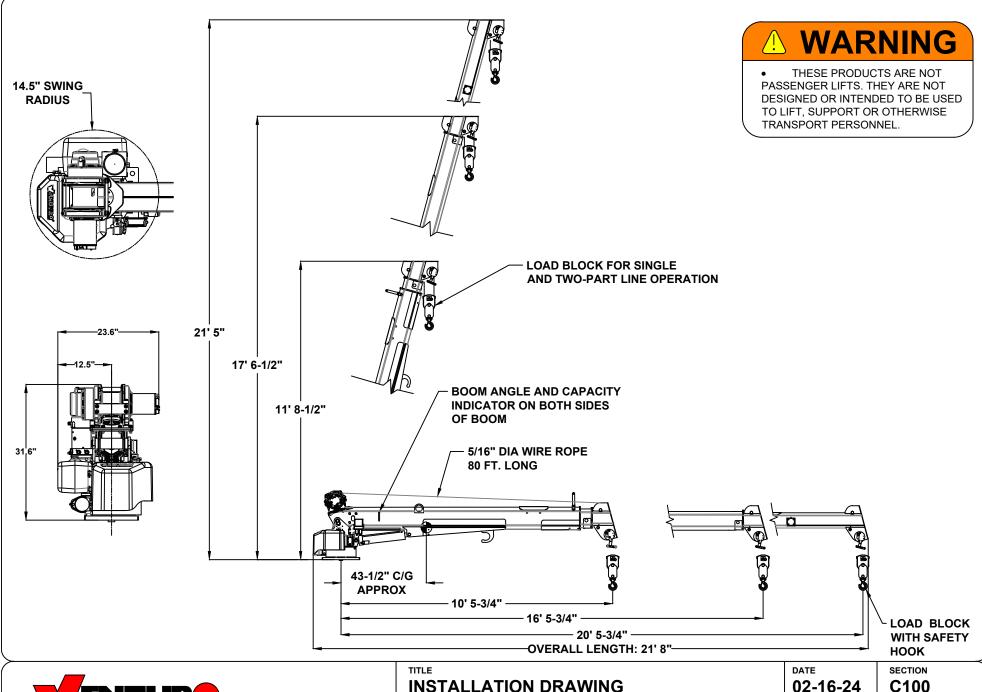
Accessories (optional):

Stabilizers: 24962, 13500, 11822-2

Pedestal: 26027

Boom Rest: 20381-2

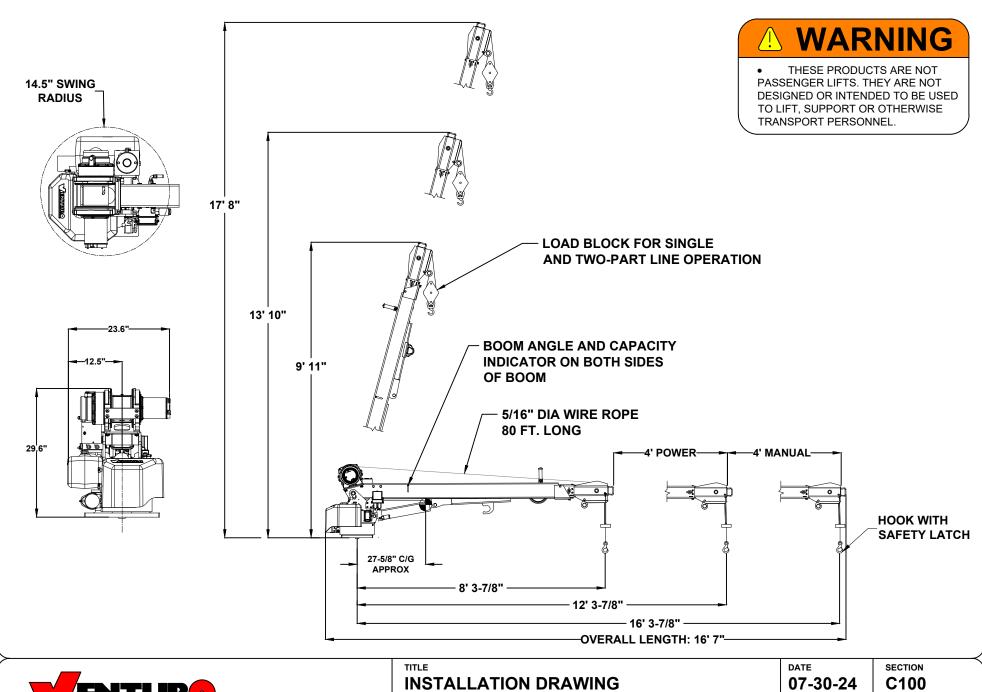
TELESCOPIC BOOM	8 - 16 ft
BOOM ELEVATION	-5° TO 75°
BOOM HYD EXTENSION	4 ft
BOOM MANUAL EXT	4 ft
CAPACITY	1000 lb @ 16 ft
CAPACITY	4000 lb @ 3 ft
WIRE ROPE	%6" x 80 ft
PENDANT CORD LENGTH	25 ft





MANUFACTURING, INC. CINCINNATI, OHIO

4020E/4520E	SUPERSEDES	28813
INSTALLATION DRAWING	02-16-24 SUPERSEDES	C100 28813

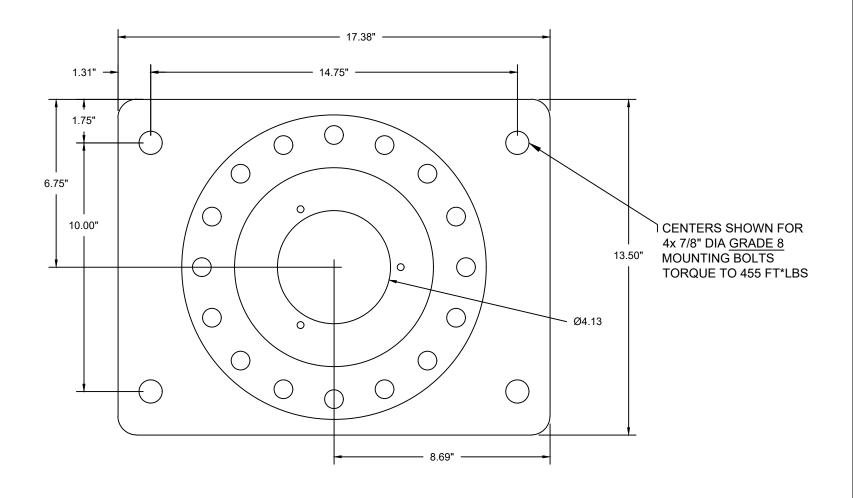




MANUFACTURING, INC. CINCINNATI, OHIO

4016E/4516E	SUPERSEDES	28892
INSTALLATION DRAWING	07-30-24	SECTION C100

21735-WRB/CRB - RECTANGULAR





IES LLC	2

CINCINNATI, OHIO

21735 BASE MOUNTING DIMENSIONS	TITLE
	21735 BASE MOUNTING DIMENSIONS

11-12-24A

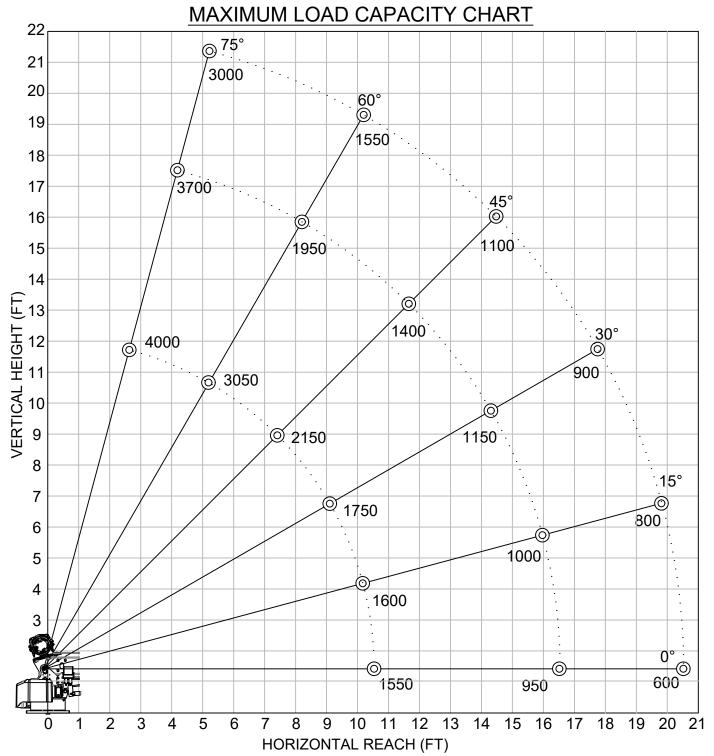
SECTION C100

3215E/351*E/40**E/45**E

SUPERSEDES 04-05-24

28814

4020E CRANE SERIAL NUMBER: _____



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 2000 LBS
2 PART LINE FOR LOADS OF 2000 LBS AND GREATER

WEIGHT OF LOAD BLOCK = 34 LBS

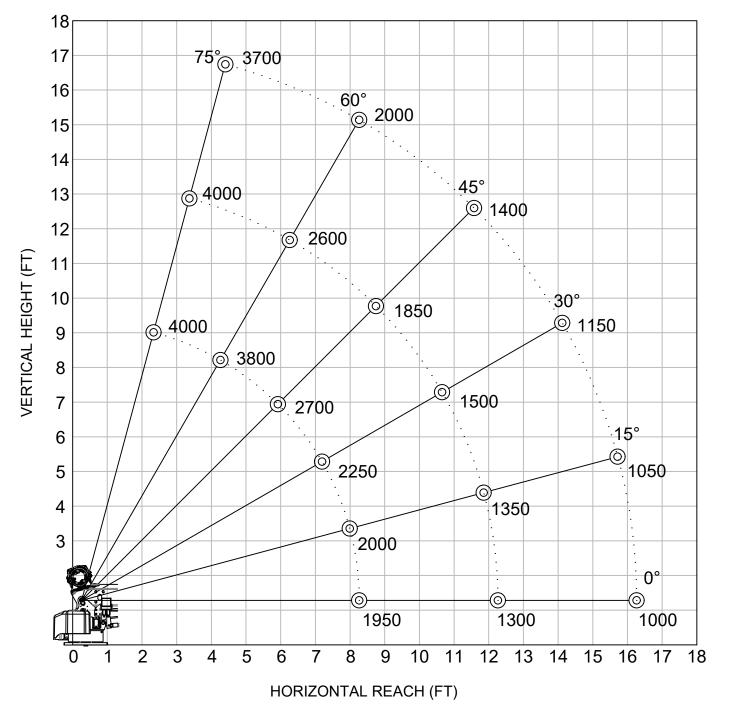


MAXIMUM LOAD CAPACITY	02-12-25A	C100
4020E	SUPERSEDES 08-26-24	28914

4016E

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 2000 LBS 2 PART LINE FOR LOADS OF 2000 LBS AND GREATER

WEIGHT OF LOAD BLOCK = 28 LBS



;	MAXIMUM LOAD CAPACITY	02-12-25A	C100
	4016E	SUPERSEDES 08-27-24	28924

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

INTENTIONALLY LEFT BLANK



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TITLE

VEHICLE & CRANE MOUNTED ELECTRICAL HAZARD SIGN APPLICATION & INFORMATION





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

UNLAWFUL TO OPERATE THIS EQUIPMENT

WITHIN 20 FEET OF HIGH-VOLTAGE LINES OF 350,000 VOLTS OR LESS.

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

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

Table A - Minimum Clearance Distances

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

Voltage (nominal, kV, alternating current)	While traveling - minimum clearance distance (feet) *			
0 - 0.75	4			
over 0.75 - 50	6			
over 50 - 345	10			
over 345 - 750	16			
over 750 - 1000	20			
Over 1000	(as established by the utility owner/operator or registered			
	professional engineer who is a qualified person with respect to			
	electrical power transmission and distribution).			

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



HAZARD APPS & INFO ET/HT CRANES

C150 02-21-14M SUPERSEDES 15394 12-20-13L

SECTION

DECAL #: 15390

DESCRIPTION: CAUTION, INSPECT VEHICLE & CRANE...

PURPOSE: TO INFORM THE OPERATOR OF KEY OPERATING REQUIREMENTS.

QUANTITY: 1

PLACEMENT: REAR COVER OR SIDE OF CRANE

1. INSPECT VEHICLE AND CRANE INCLUDING OPERATION, PRIOR TO USE DALY.

2. DO NOT USE THIS EQUIPMENT EXCEPT ON SOULD, LEVEL SURFACE 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. UNPLUG PENDANT AND SHUT OFF MASTER DISCONNECT SWITCH WHEN CRANE NOT IN USE.

6. FOR TRAVEL, BOOM MUST BE IN STOWED POSITION.

DECAL #: 15391

DESCRIPTION: DANGER, NOT A PASSENGER LIFT

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

PERSONNEL, AND TO ENSURE OPERATOR IS ADEQUATELY TRAINED.

QUANTITY: 1

PLACEMENT: REAR COVER OR SIDE OF CRANE



YOU MUST NOT OPERATE THIS CRANE UNLESS:

OPERATE THIS CRAME UNLESS:

YOU HAVE BEEN TRAINED IN THE SAFE
OPERATION OF THIS CRAME; AND
YOU KNOW AND FOLLOW THE SAFETY AND
OPERATING RECOMMENDATIONS CONTAINED IN
THE MANUFACTURERS MANUALS, YOUR
EMPLOYERS WORK RULES, AND APPLICABLE
GOVERNMENT REGULATIONS.

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

DECAL #: 15392

DESCRIPTION: DANGER, ELECTROCUTION HAZARD, MACHINE (CRANE)

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

ELECTROCUTION HAZARD SHOULD IT COME CLOSE TO OR IN CONTACT

WITH AN ELECTRICAL VOLTAGE SOURCE.

QUANTITY: 1

PLACEMENT: REAR COVER OR SIDE OF CRANE



THIS MACHINE IS NOT INSULATED ELECTROCUTION HAZARD

MAINTAIN SAFE CLEARANCES FROM ELECTRICA LINES AND APPARATUS. YOU MUST ALLOW FOR BOOM SWAY, ROCK OR SAG, AND ELECTRICAL LINE AND LOAD LINE SWAYING.

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. ONE FOOT ADDITIONAL CLEARANCE IS REQUIRED FOR EVERY ADDITIONAL 30,000 VOLTS OR LESS

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

JE. 15392-€

DECAL #: 15401

DESCRIPTION: DANGER, UNLAWFUL TO OPERATE

PURPOSE: TO INFORM OPERATOR OF PROPER OPERATION

IN VICINITY OF ELECTRICAL LINES.

QUANTITY: 1

PLACEMENT: RING COVER OR SIDE OF CRANE

A DANGER

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.

DECAL #: 15393

DESCRIPTION: DANGER, ELECTROCUTION HAZARD, VEHICLE (TRUCK)

PURPOSE: WARNS OF DANGER FROM ELECTRICALLY CHARGED

VEHICLE, CRANE, OR LOAD.

QUANTITY: 4

PLACEMENT: EACH SIDE & EACH END OF VEHICLE





SECTION



TITLE

SAFETY DECALS

DATE

04-29-16E | C150

IDO ODANICO

SUPERSEDES 10-24-13D

21353

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

VENTURO CRANES

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PART NO.: 15513

DECAL: MASTER DISCONNECT SWITCH

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

switch.

QUANTITY: 1

PLACEMENT: On master disconnect switch bracket.

PART NO.: 20927

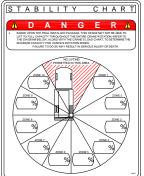
DECAL: **CRANE STABILITY**

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

QUANTITY: 1

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







TITLE	DATE	SECTION
SAFETY DECALS	06-06-14C	C150
	SUPERSEDES	04004
CRANES	04-02-13B	21384

PART NO.: 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.: 28866-1 & 28866-2 (4020E) A

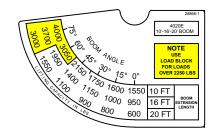
DECAL: **CRANE CAPACITY**

FUNCTION: To show the operator the operating

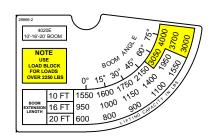
capacities of crane.

QUANTITY: 1 each

PLACEMENT: One on each side of boom.



4020E



PART NO.: 28865

DECAL: MODEL NUMBER (4020E)

FUNCTION: To show the model of the crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.

PART NO.: 28881-1 & 28881-2 (4016E) A

DECAL: CRANE CAPACITY

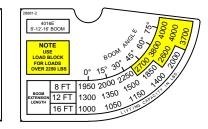
FUNCTION: To show the operator the operating

capacities of crane.

QUANTITY: 1 each

PLACEMENT: One on each side of boom.

75₀₀ 2000 1950 5. 75₀ 1350 1300 12 FT 1000 16 FT



ENTUR

PART NO.: 28880

DECAL: MODEL NUMBER (4016E)

FUNCTION: To show the model of the crane.

QUANTITY:

PLACEMENT: One on each side of boom.

4016E ENTUR®

27007-15a (4016E) & 27007-16a (4020E) PART NO.:

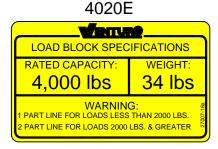
DECAL: LOAD BLOCK CAPACITY

FUNCTION: To show the capacity of the load block.

QUANTITY: 2

PLACEMENT: One on each side of load block.







MODEL/CAPCTY DECALS

C150 02-18-25A SUPERSEDES

SECTION

DATE

4016E/4020E 08-26-24 2891

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

- (ANE IS EQUIPPEU WI IF AN OVERLOAD SENSING STOLEM IF OVERLOADED. THE WINCH IP, BOOM DOWN, AND (POTIONAL) BOOM OUT FUNCTIONS WILL AUTOMATICALLY SHUT OFF TO PREVENT INCREASED OVERLOAD. ON CRANES EQUIPPED WITH AN OPTIONAL OVERLOAD ALARM, IT WILL ALSO SOULD. IF AN OVERLOAD OCCURS, USE THE WINCH DOWN, BOOM UP OR BOOM IN FUNCTIONS TO RELEVE THE OVERLOAD FRANTY IF THE BOOM ELEVATION IS AT THE BOTTOM OR TOP LIMIT OF TRAVEL TO RELIEVE THIS CONDITION, RAISE OR LOWER THE BOOM SLIGHTLY SEFORE LIFTING THE LOAD. SEE MANUAL FOR TESTING OVERLOAD SYSTEM.

NOTICE - WARRANTY VOID IF DISCONNECTED THE OVERLOAD SENSING SYSTEM HAS BEEN INSTALLED AS A SAF PROTECT THE EQUIPMENT AND THE OPERATOR

DO NOT DISCONNECT THIS SYSTEM

PART NO.: 14459 (WITH OPTIONAL ALARM)

DECAL: OVERLOAD ALARM SYSTEM DECAL

FUNCTION: To advise operator of overload alarm system.

QUANTITY: 1

PLACEMENT: Location may vary.

THIS CRANE IS EQUIPPED WITH AN OVERLOAD ALARM SYSTEM

- IF ALARM SOUNDS, RAISE BOOM OR LOWER WINCH TO REMOVE OVERLOAD.
- 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.: 28870-1 (RIGHT) & 28870-2 (LEFT)

DECAL: MANUAL OVERRIDE DECAL

FUNCTION: To show the manual override ports.

QUANTITY: 1

PLACEMENT: Inside rear cover.

28870-2

VALVE MANUAI

BOOM

OVERRIDE

IN

BOOM **DOWN**

ROTATION LEFT

28870-1

VALVE MANUAL **OVERRIDE**

BOOM OUT

BOOM

UP

ROTATION RIGHT

PART NO.: 19315-2

MANUAL OVERRIDE (PROPORTIONAL) DECAL:

FUNCTION: To show operator how to override proportional valve.

QUANTITY: 1

PLACEMENT: Location may vary.

WARNING!

KEEP VALVE IN NORMAL POSITION. **OVERRIDE POSITION IS INTENDED** FOR EMERGENCY USE ONLY.



PROPORTIONAL

ROTATE STEM



ADDITIONAL DECALS

09-03-25B

SECTION C150

ET CRANES A

SUPERSEDES 05-19-25A

28819

VENCO VENTURO INDUSTRIES LLC

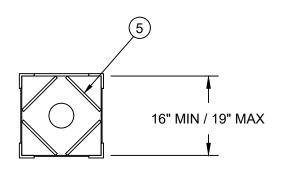
CINCINNATI, OHIO

SECTION 200

INSTALLATION



TYPICAL SERVICE BODY REINFORCEMENT

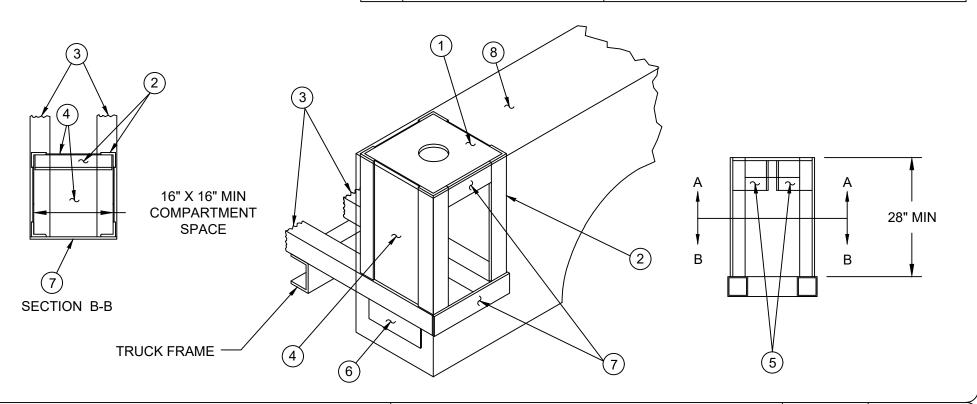


SECTION A-A

NOTE:

IT IS THE SOLE RESPONSIBILITY OF THE INSTALLER TO ENSURE THAT THE TOTAL STRUCTURE OF CRANE, TRUCK, AND STABILIZERS ARE STRUCTURALLY SOUND AND THAT THE COMPLETED VEHICLE HAS SUFFICIENT STABILITY AGAINST OVERTURNING.

ITEM	DESCRIPTION MINIMUM RECOMMENDED MATERIAL SIZE			
1	TOP PLATE	1/2" STEEL		
2	CORNER POST	3" X 3" X 1/2" STEEL ANGLE		
3	CROSS FRAME	4" X 4" X 5/16" SQUARE TUBING, SPAN FULL WIDTH		
4	SHEAR WEB	3/16" STEEL PLATE		
5	TOP PLT REINFORCEMENT	1/2" X 6" OR 3/4" X 5" STEEL BAR		
6	OUTRIGGER RNFRCMNT PLT	1/4" THICK STEEL PLATE		
7	GUSSET	1/2" X 4" H.R. STEEL		
8	BODY TOP REINFORCEMENT	10 GA SMOOTH OR DIAMOND PLATE W/ 1" LIP OVER SIDE OF BODY		





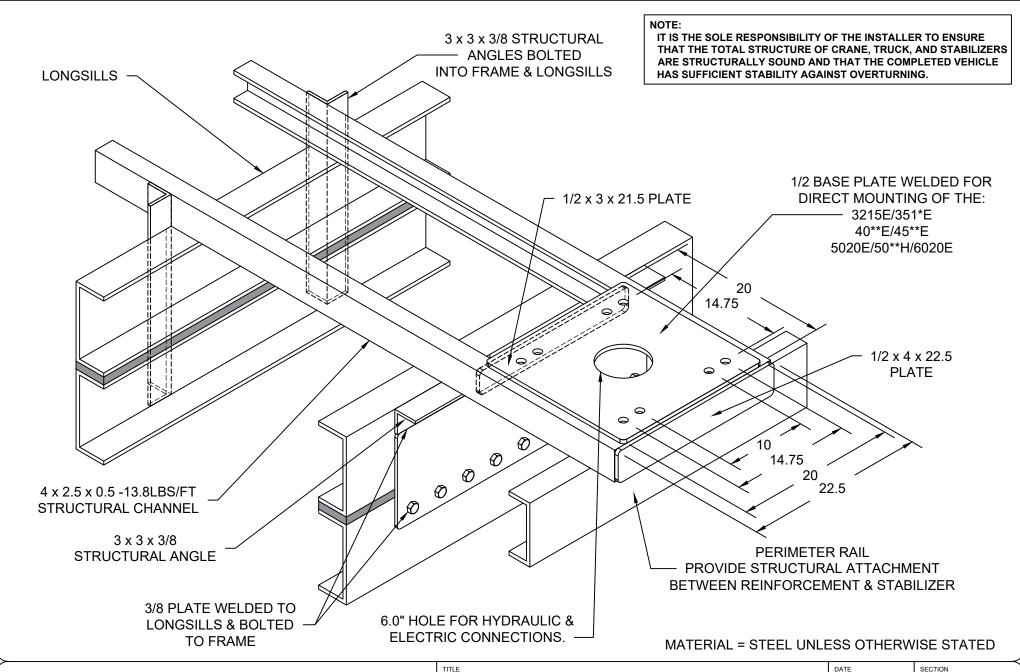
VENCO VENTURO INDUSTRIES LLC CINCINNATI. OHIO

TYPICAL SERVICE BODY REINFORCEMENT
45**E/40**E/5020E/6020E/502*H

09-03-25A C100

\$\supersed 02-16-24 \quad 28816

TYPICAL FLATBED MOUNTING REINFORCEMENT





VENCO VENTURO INDUSTRIES LLC
CINCINNATI. OHIO

22455/254*5/40**5/45**5/50205/50**11/60205	SUPE
TYPICAL FLATBED MNTNG REINFORECMENT	02
TITLE	DATE

2-16-24 C100
PERSEDES

3215E/351*E/40**E/45**E/5020E/50**H/6020E

28817

!! IMPORTANT!!

ADEQUATE WIRING IMPERATIVE FOR PROPER OPERATION

- 1. PROPER GROUND PATH SEE DWG 28821
- 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) *						TOTAL LENGTH OF CABLE (FT) * 12 VOLT AUXILIARY BATTERY REQUIREME			_
	0-20	21-25	26-30	31-40	41-50	51-60	61-70	71-80	CCA (A) **	RC (MIN) ***
2010E	#2	#2	#1	#0	#00	NOT R	ECOMN	MENDED	450	100
3215E 3515E 3516E	#2	#2	#1	#0	#00	NOT R	ECOMN	MENDED	550	150
4016E 4020E 4516E 4520E 5020E 6020E	REQUIREMENTS 16E 20E 20E				Y					

- * 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.

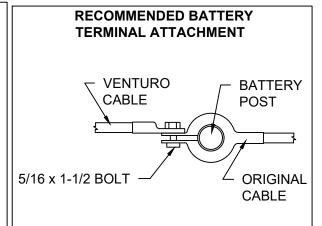
ENTUR® VENCO VENTURO INDUSTRIES LLC	CABLE & BATTERY	02-19-24	C200		
	CINCINNATI, OHIO	ELECTRIC CRANES	SUPERSEDES	28820	

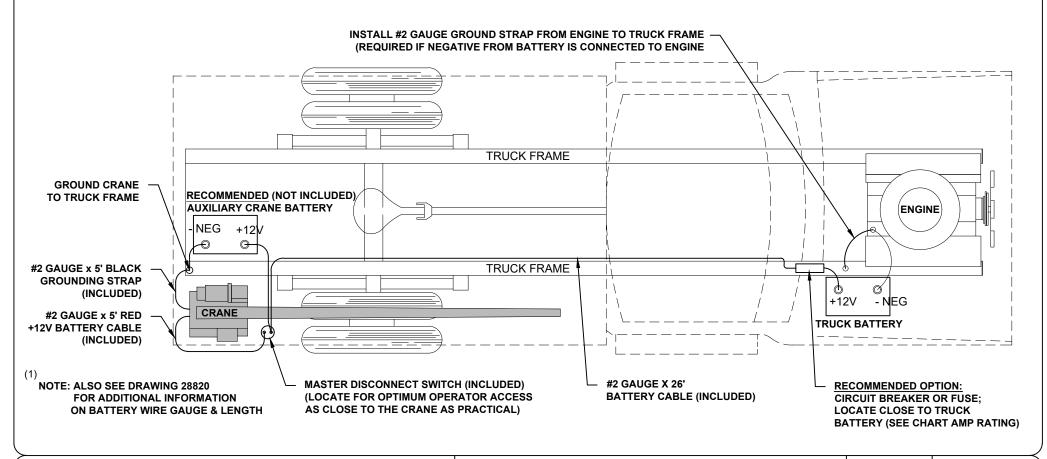
RECOMMENDED CIRCUIT BREAKER TABLE					
CRANE	DESCRIPTION	PART NO.			
2010E	300 AMP, MAN RESET	22946-300			
3215E	300 AMP, MAN RESET	22946-300			
3515E/3516E	300 AMP, MAN RESET	22946-300			
4016E/4020E	300 AMP, MAN RESET	22946-300			
4516E/4520E	300 AMP, MAN RESET	22946-300			
5020E	300 AMP, AUTO RESET	22946-300			
6020E	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 <u>NOT</u> RECOMMENDED.







BATTERY CABLE & COMPONENT INSTALL

DATE SECTION C200 SUPERSEDES

ET CRANES

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

2882

STABILITY TEST - 4020E SERIES

Overview

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

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

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

Testing Procedure

- 1. Locate the truck on firm, level ground and set parking brake.
- 2. Fully deploy stabilizers, making sure they are firmly in contact with supportive ground; use stabilizer pads as required. The tires of the truck should remain in full contact with the ground.
- 3. Inspect wire rope and other key components of crane (consult owners manual for more information).
- 4. Conduct an operational check of all crane functions.
- 5. Locate the Overload Pressure Switch at the base of the elevation cylinder
 - 5.1. Disconnect the black & white wires from the housing and then connect the black & white wires together to by-pass the Overload Pressure Switch for the stability test. Note: The black & white wires MUST be reconnected to the Overload Pressure Switch after the stability test has be completed.
- Use a *Test Weight* weighing a *minimum* of <u>950 lbs</u>, (includes load block weight of <u>34</u> lbs.) to a *maximum of 1000 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 contract with the gound
- 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
	251	

- 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	08-26-24	C200	
CINCINNATI, OHIO	4020E	SUPERSEDES -	20906-4020E	

STABILITY TEST - 4016E SERIES

Overview

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

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

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

Testing Procedure

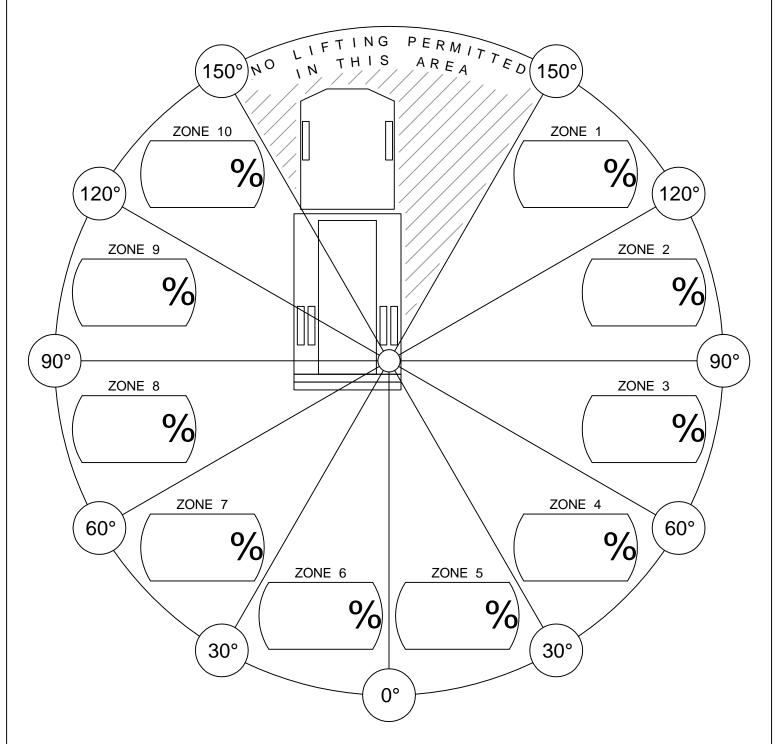
- 1. Locate the truck on firm, level ground and set parking brake.
- 2. Fully deploy stabilizers, making sure they are firmly in contact with supportive ground; use stabilizer pads as required. The tires of the truck should remain in full contact with the ground.
- 3. Inspect wire rope and other key components of crane (consult owners manual for more information).
- 4. Conduct an operational check of all crane functions.
- 5. Locate the Overload Pressure Switch at the base of the elevation cylinder
 - 5.1. Disconnect the black & white wires from the housing and then connect the black & white wires together to by-pass the Overload Pressure Switch for the stability test. Note: The black & white wires MUST be reconnected to the Overload Pressure Switch after the stability test has be completed.
- 6. Use a *Test Weight* weighing a *minimum* of <u>1175 lbs</u>, (includes load block weight of <u>28</u> lbs.) to a *maximum of* 1300 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 contract with the gound
 - 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 rotatio*n of the crane housing to the *lifting load hook.*

	"Max Stable Reach" in inches"	
% Rated Capacity =		X 100
	106	

- 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	08-27-24	C200	
CINCINNATI, OHIO	4016E	SUPERSEDES -	20906-4016E	ļ

CRANE STABILITY



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

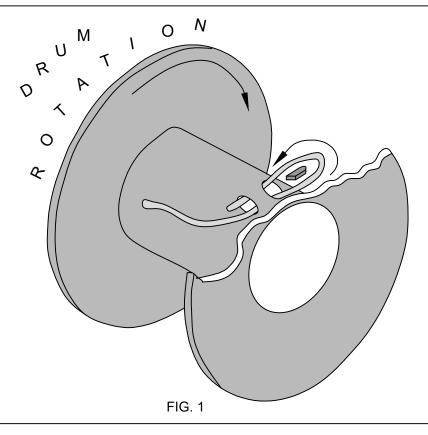
CONDITIONS:

 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) 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.

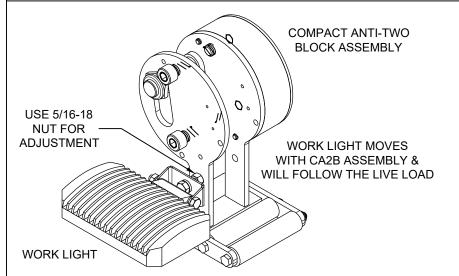
CAUTION

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

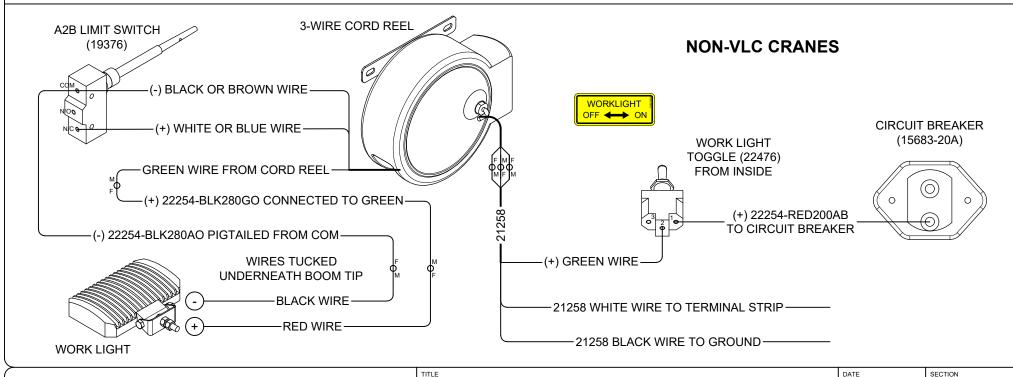
NOTE: SOME WINCHES MAY BE SUPPLIED WITH A HEX NUT IN LIEU OF A WEDGE FOR INSTALLING THE WIRE ROPE.

1	<u> </u>		TITLE	DATE	SECTION	١
		® VENCO VENTURO INDUSTRIES LLC	WIRE ROPE INSTALLTN	02-20-24	C200	
	ENION	CINCINNATI, OHIO		SUPERSEDES	20022	١
			2010E & LARGER CRANES	-	28822	

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



BILL OF MATERIALS		-1	28240
#	DESCRIPTION		PART NUMBER
1	IDWG; WORK LIGHT INSTALLATION, NON-VLC CRANES	1	28199
2	LED WORK LIGHT	1	27483
3	TERMINAL; 16G, FEMALE, QUICK-CONNECT	3	!TERM16G250QCFI
4	TERMINAL; 16G, MALE, QUICK-CONNECT	4	!TERM16G250QCM
5	WIRE ASS'Y; 16G, BLACK, 28", #6 RING - STRIPPED END	1	22254-BLK280AO
6	WIRE ASS'Y; 16G, BLACK, 28", QCF - STRIPPED END	1	22254-BLK280GO
7	TOGGLE SWITCH; ON / OFF, IP-RATED	1	22476
8	HALF-BOOT, FOR IP-RATED TOGGLE SWITCH	1	19793
9	DECAL; ON/OFF, OPTIONAL WORK LIGHT W/ TOGGLE	1	28307
10	WIRE ASS'Y; 16G, RED, 20", #6 RING - #10 RING	1	22254-RED200AB
11	TERMINAL; 16G, #6 RING, CLOSED-END	1	!TERM16G#6RG





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

WORK LIGHT INSTALLATION, 3-WIRE CORD REEL

09-13-24

C400

NON-VLC CRANES

SUPERSEDES

28855

SECTION 300

OPERATION & MAINTENANCE



SAFETY

Before operating this crane, read and understand these instructions, the "CRANE SAFETY AND HAZARDS" pages, and review all safety and instruction decals 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 the one-part line rating as shown on the "MAXIMUM LOAD CAPACITY" page in this manual *or* if reduced winch line speed for better control of loads is desired, use the load block to rig the crane for two-part line operation.

CONTROLS

This crane is operated by either a corded or radio remote control pendant. If corded, the pendant should be unplugged and stored in a compartment or the cab when the crane is not in use.

With the Master Disconnect Switch in the OFF position, inspect pendant head and switches for damage; for corded remote controls also inspect the plug, socket, and cord. Actuate all switches or buttons in both directions to verify that they all have the same feel and sound, and that they return to the center or resting position.

Plug the pendant into the socket on the right side of the crane.

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.



			_
OP &	MAINT	INSTR 1/3	
IIILE			

28852

CONTROL FUNCTIONS

<u>WINCH</u> - "WINCH UP" raises the wire rope and "WINCH DOWN" lowers the wire rope. An integrated brake holds the load in place when the winch is not in operation and controls the lowering speed of the load.

<u>ELEVATION</u> - "BOOM UP" raises the boom (increases the boom angle) and "BOOM DOWN" lowers the boom (decreases the boom angle). A counterbalance valve on the cylinder prevents the boom from coming down if a hose breaks and controls the rate at which the boom lowers.

<u>EXTENSION</u> - "BOOM OUT" extends the boom and "BOOM IN" retracts the boom. A counterbalance valve on the cylinder prevents the boom from retracting if a hose breaks and controls the rate at which the boom retracts.

<u>ROTATION</u> - "ROTATE LEFT" and "ROTATE RIGHT" control the direction of rotation. The crane can be rotated continuously. The rotation system is self-locking when not in operation.

TRIGGER (Proportional Only) - Varies the flow rate delivered to the hydraulic functions (elevation, extension, and rotation). The farther the trigger is pulled, the faster the selected hydraulic function operates.

<u>CONTROL PRIORITY SYSTEM</u> - When operating "Winch Up", all hydraulic functions (elevation, extension, and rotation) will be disabled to limit the total current (amp) draw.

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 Left" and "Rotation Right" functions also will continue to operate.

The warning system is INOPERATIVE when the elevation cylinder is fully retracted ("bottomed out"). Use "BOOM UP" to extend the elevation cylinder and ensure that the overload system is active.

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 will be 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 switch. The high in-rush current to the motor during reversal can reduce the life of electrical components.

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

Never lift or drag a load sideways ("side load") using any of the crane functions; it could cause permanent damage to the crane.



OP & MAINT INSTR 2/3

08-11-25A C300

ET CRANES SERIES *

SUPERSEDES 02-18-25

28853

SECTION

OVERLOAD ALARM (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, use "WINCH DOWN", "BOOM UP", or "BOOM IN" to remove the overload.
- 3. The warning system is INOPERATIVE when the elevation cylinder is fully retracted ("bottomed out"). Use "BOOM UP" to extend the elevation cylinder and ensure that the overload system is active.
- 4. Overload alarm can be tested by raising boom to full elevation.

MANUAL TELESCOPIC BOOM

If your crane has a manual telescoping section, use toggle pin to position the boom in either the extended or retracted position. Never operate the crane without the toggle pin secured in place.

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).
- 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.
- 2. Stow the crane boom in the boom rest.
- 3. Hook the winch line to a tie-down point on the body or pedestal and apply light tension.
- 4. Turn OFF Master Disconnect Switch.
- 5. If using corded control pendant, unplug pendant and store in body compartment or cab.



Master Disconnect Switch (power) must be turned "OFF" when the crane is not in use! If corded, the pendant must be unplugged from the crane socket. Failure to follow these steps may result in dangerous, unintentional activation of the crane functions.



OP & MAINT INSTR 3/3

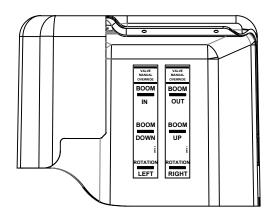
08-11-25A C300

02-18-25

28854

SECTION

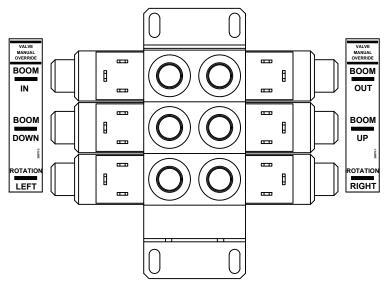
READ ALL INSTRUCTIONS BEFORE PERFORMING MANUAL OVERRIDE PROCEDURES !!

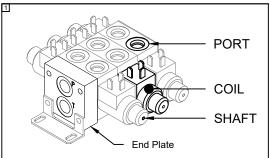


Each valve station incorporates [2] hydraulic ports and [2] coils. Manual override shafts are located in the center of the coils (see figure 1). Manual override decals are placed on each crane inside the plastic cover near the valve assembly. These decals provide a visual aid that helps the operator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

2-STATION FUNCTIONS:

Boom In **Boom Out** ВΙ = BD Boom Down BU Boom Up RLRot. Left Rot. Right





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:

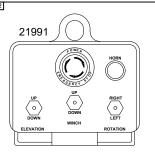
- Turn Master disconnect switch to "ON"
- Power up the pendant / radio
 - PENDANT twist EMERGENCY STOP button clockwise 2.1.
 - 2.2. RADIO - Press green ON button
- Inside the plastic cover, reference the function you wish to perform using the manual override
- Using a tool with a diameter of 1/8" or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

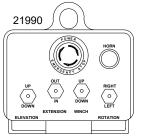
For assistance, please feel free to contact Technical Support at 800-226-2238.

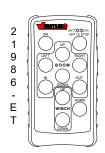
CINCINNATI, OHIO



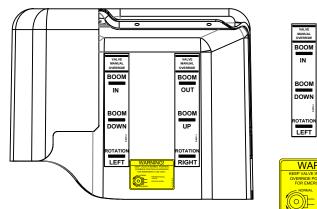
С	MAN. OVERRIDE INSTR.	08-11-25B	C200	
	ET CRANES NON-PROPORTIONAL VALVE	supersedes 04-03-25A	28826	

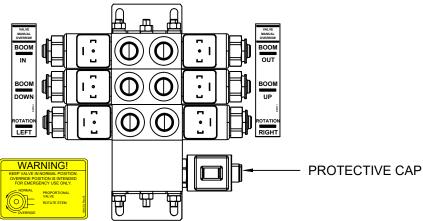






!! READ ALL INSTRUCTIONS BEFORE PERFORMING MANUAL OVERRIDE PROCEDURES !!





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 inside the plastic cover near the valve assembly. These decals provide a visual aid that helps the operator determine the function designations.

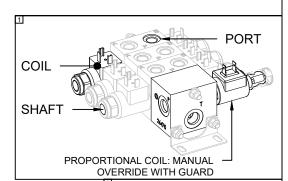
3-STATION FUNCTIONS:

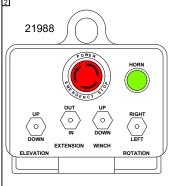
RR = Rot. Right RL = Rot. Left
BU = Boom Up BD = Boom Down
BI = Boom In BO = Boom Out

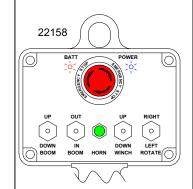
ALWAYS BE SURE TO CHECK HYDRAULIC OIL LEVEL BEFORE PROCEEDING. IT IS RECOMMENDED TO REMOVE ANY ITEM(S) THAT MAY INTERFERE WITH OPERATING THE CRANE MANUALLY. IF POSSIBLE, STRAPS AND/OR HARNESSES SHOULD BE REMOVED BEFORE OPERATING A CRANE IN MANUAL OVERRIDE!! Procedure:

- 1. Turn Master disconnect switch to "ON"
- 2. Remove Protective cap
- 3. Rotate Valve Stem Clockwise to close
- 4. Power up the pendant / radio
- 4.1. Twist EMERGENCY STOP button clockwise
- Inside the plastic cover, reference the function you wish to perform using the manual override decal
- 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 2)
- 8. Press the switch or button for the same function
- 9. If you need to change function,
- 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 800-226-2238.

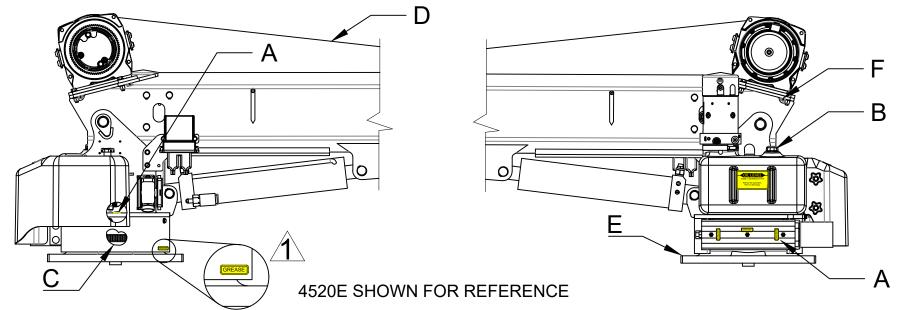








:	MAN. OVERRIDE INSTR.	08-11-25B	SECTION C200
	ET CRANES PROPORTIONAL VALVE	SUPERSEDES 04-03-25A	28827



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

^{* 32} FT-LBS FOR 3215E/351XE WITH GTD-2200 COMEUP WINCH. SEE PAGE 28928 FOR WINCH IDENTIFICATION. A

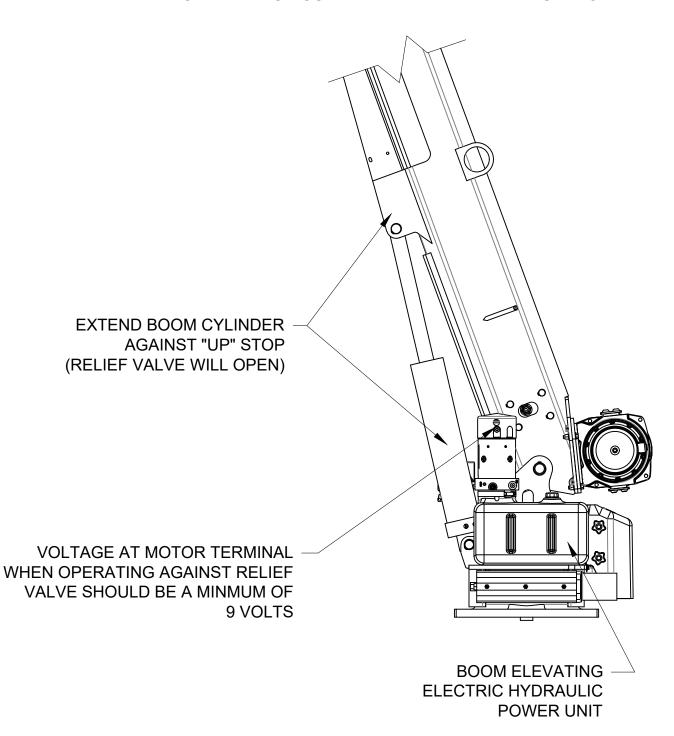
VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO



TITLE	DATE	SECTION	١
LUBRICATION & MAINTENANCE CHART	09-04-25A	C300	
	SUPERSEDES	00000	1
3215E/351*E/40**E/45**E	02-20-24	28823	J

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



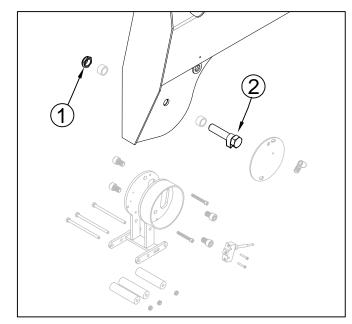


TITLE	DATE	SECTION
MINIMUM VOLTAGE TEST	02-20-24	C300
ET SERIES CRANES	SUPERSEDES	28824

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.

- 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, *but do not tighten excessively so as to prevent damage to the wire rope.*
- 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. NOTE: The point at which 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

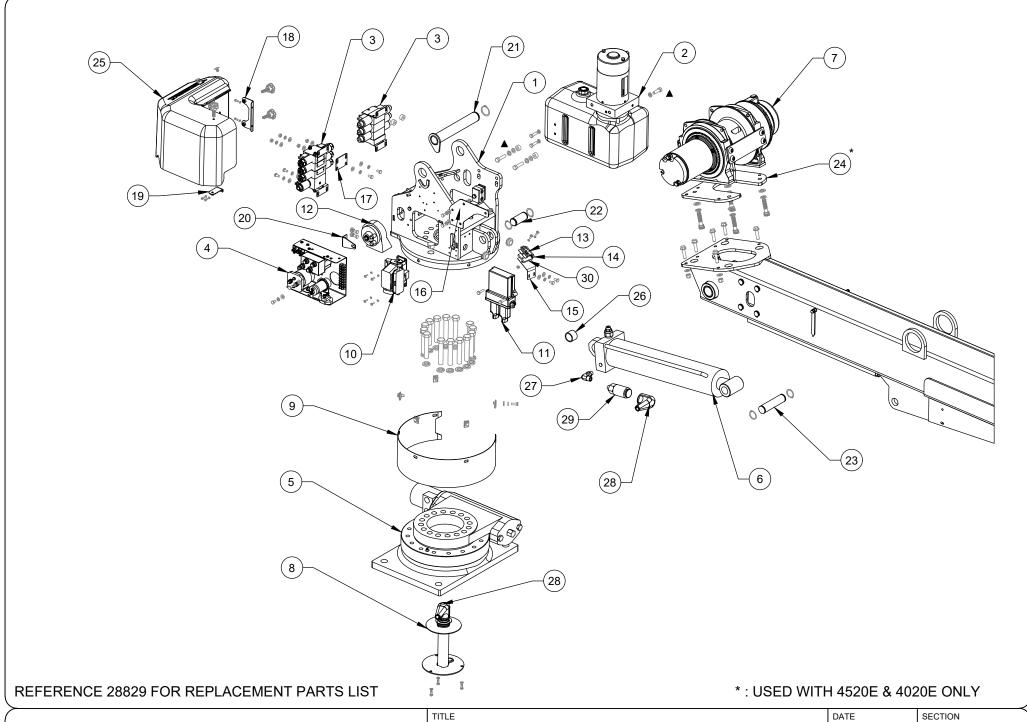


A2B Stowage Cut-out	10-04-21B	C400
ET/HT Cranes w/ Comp. A2B	SUPERSEDES 08-03-21A	28239

SECTION 400

REPLACEMENT PARTS







VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO REPLACEMENT PARTS DWG - MECH

09-22-25C C400

40**E/45**E

SUPERSEDES 06-20-25B

ITEM NO	ITEM NO. NON-PROP PROP		DART NI IMPER	DESCRIPTION	
ITEM NO.	QT	Υ.	PART NUMBER	DESCRIPTION	
1	1	1	28637	HOUSING WELDMENT ASSEMBLY	
2	1	1	28720	HYDRAULIC POWER UNIT	
	-	1	28800	VALVE BLOCK ASSY; 3-SPOOL W/ PROP VALVE.	
3	1	_	28801	VALVE BLOCK ASSY; 3-SPOOL W/ NON-PROP V.	
4	1	1	28700	ELECTRICAL COMPONENT PANEL	
5	1	1	21735-1	SLEWDRIVE W/ CAST RECTANGULAR BASE	
6	1	1	28675	ELEVATION CYLINDER	
7	1	1	21215	ELECTRIC WINCH	
8	1	1	16780-2P8	ASSY; 2-POLE SLIP-RING	
9	1	1	21185	ROTATION GEAR GUARD	
10	1	1	22480	SOCKET ASSY; 16 + 1 POLE	
4.4	-	1	22158	RADIO, ET, PROPORTIONAL	
11	1	_	21986-ET	RADIO, ET, NON-PROPORTIONAL	
12	1	1	21948	HORN	
13	1	1	19918	BOOM SHUT OFF SWITCH	
14	1	1	19917	BOOM SHUT OFF SWITCH BRACKET	
15	1	1	28641	SHUT OFF SWITCH ADJUSTABLE BRACKET	
16	1	1	28642	BRACKET; RADIO RECEIVER.	
17	-	1	28803	ADAPTER PLATE, PROP VALVE ASSY	
18	1	1	28646	PLASTIC COVER BACK BRACKET WELDMENT	
19	1	1	28647	PLASTIC COVER SIDE BRACKET WELDMENT	
20	1	1	22000	BRACKET; HORN	
21	1	1	28690	BOOM PIVOT PIN - WELDMENT	
22	1	1	21172	ELEVATION CYLINDER INBOARD PIN	
23	1	1	21127	ELEVATION CYLINDER OUTBOARD PIN	
24*	1	1	28657	WINCH SPACER	
25	1	1	28740	PLASTIC COVER	
26	1	1	21124	POLY BEARING - ELEVATION CYLINDER BASE	
27	1	1	FF6801-0606	FITTING, ADAPTER, 90°, 6MOFS-6MORB	
28	1	1	17012	BOOT: PRESSURE SWITCH	
29	1	1	SEE TABLE	PRESSURE SWITCH	
30	1	1	20896	TOP ANGLE SWITCH BLOCK	

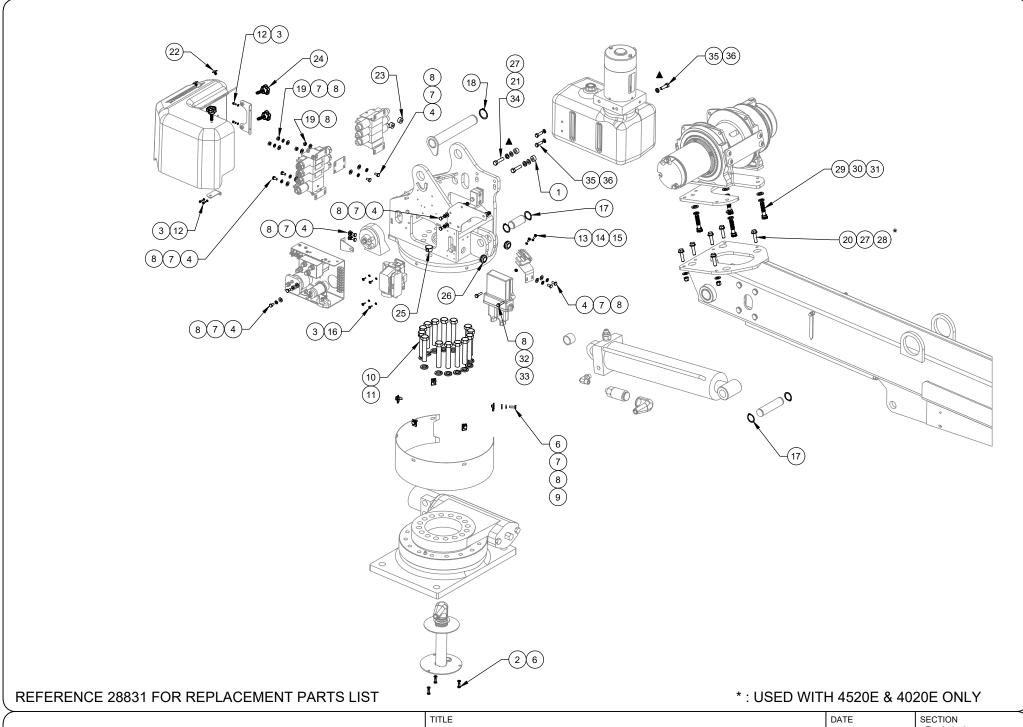
ITEM NO.	4520E	4516E	4020E	4016E	PART NUMBER
II EWINO.		QT	Y.		PARI NUMBER
	1	-	-	-	17460-2900-21
29	-	1	1	-	17460-2700-21
	-	-	-	1	17460-2200-21

REFERENCE 28828 FOR REPLACEMENT PARTS DRAWING

*: USED WITH 4520E & 4020E ONLY



REPLACEMENT PARTS LIST - MECH	06-17-25A	C400
40**E/45**E	SUPERSEDES 02-23-24	2882





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

REPLACEMENT FASTENERS DWG - MECH

09-22-25B C400 SUPERSEDES

40**E/45**E

06-20-25A 28830

	ITEM NO.	NON-PROP	PROP	PART NUMBER	DESCRIPTION	
		QTY		TART NOMBER	DESCRIPTION	
	1*	2	2	28804	ALUMINUM SPACER	
	2	3	3	!LWSH-025-STAR-SS	LOCK WASHER, 1/4 STAR, SS	
	3	8	8	!LWSH-08S	LOCK WASHER; #08, SS	
	4	10	12	!HHCS02520050S	HEX HEAD CAP SCREW 1/4-20 X 1/2, SS	
	5	-	-	-	-	
	6	8	8	!HHCS02520075S	HEX HEAD CAP SCREW 1/4-20 X 3/4, SS	
	7	16	18	!LWSH-025S	LOCK WASHER; 1/4, SS	
	8	17	21	!FWSH-025S	FLAT WASHER; 1/4, SS	
	9	5	5	!UNUT-02520-LKG	U-NUT; 1/4-20, LOCKING TYPE, ZINC	
	10	14	14	!HHCS06311350-5	!HHCS; 5/8-11 X 3-1/2, GR 5, ZINC	
	11	14	14	!LWSH-063	LOCK WSHR; 5/8, ZINC	
	12	4	4	!SHCS#0832038S	SHCS, #8-32 X 0.38, SS	
	13	2	2	!PHPMS#1024050S	PHILLIPS HEAD PAN, #10-24 X 1/2, SS	
	14	2	2	!HNUT-#1024S	HEX NUT, 10-24, SS	
	15	2	2	!LWSH-#10S	LOCK WASHER - #10, SS	
A	16	4	4	!PHPMS#0832050S	PHILIPS HEAD PAN, #8-32 X 1/2", SS	
	17	4	4	!SRNG-113	SNAP RING - 1-1/8 - PLATED	
	18	1	1	24842-138	SPIRAL RETAINING RING - 1-3/8 - STAINLESS	
	19	2	4	!HNUT-02520S	HEX NUT 1/4-20, SS	
	20	6	6	!HHCS03816150-8	HEX HEAD CAP SCREW 3/8-16 X 1-1/2 GR 8, ZINC	
	21	2	2	!LWSH-038	LOCK WASHER; 3/8, ZINC	
	22	2	2	28741	PUSH-IN RIVETS WITH RIBBED SHANK, 0.25	
	23	2	2	28802	NYLON SPACER	
	24	3	3	28742	KNOB, HAND, 5-POINT	
	25	2	2	25019	HOLE PLUG - 7/8 OD	
	26	2	2	20889	GROMMET: RUBBER, BLACK	
	27	14	14	!FWSH-038	FLAT WASHER; 3/8, ZINC	
	28	6	6	!LNUT-03816	LOCK NUT 3/8-16, ZINC	
	29	4	4	25921	SHCS M12-175x50mm Gr.12.9, ZINC	
	30	4	4	!LWSH-M12-8.8	M12 LOCK WASHER, ZINC	
	31	4	4	!FWSH-M12	M12 FLAT WASHER, ZINC	
	32	2	2	!JNUT-02520NS	JNUT, NYLON INSERT, 1/4-20, SS	
	33	2	2	!HHCS02520100S	HEX HEAD CAP SCREW 1/4-20 X 1, SS	
	34	2	2	!HHCS03816150N	HHCS 3/8-16 X 1-1/2 GR 5, ZINC, NYLON PATCH	
	35**	3	3	!LWSH-031S	LOCK WASHER; 5/16, S/S	
	36**	3	3	!HHCS3118100S	HEX HEAD CAP SCREW 5/16-18 X 1, S/S	

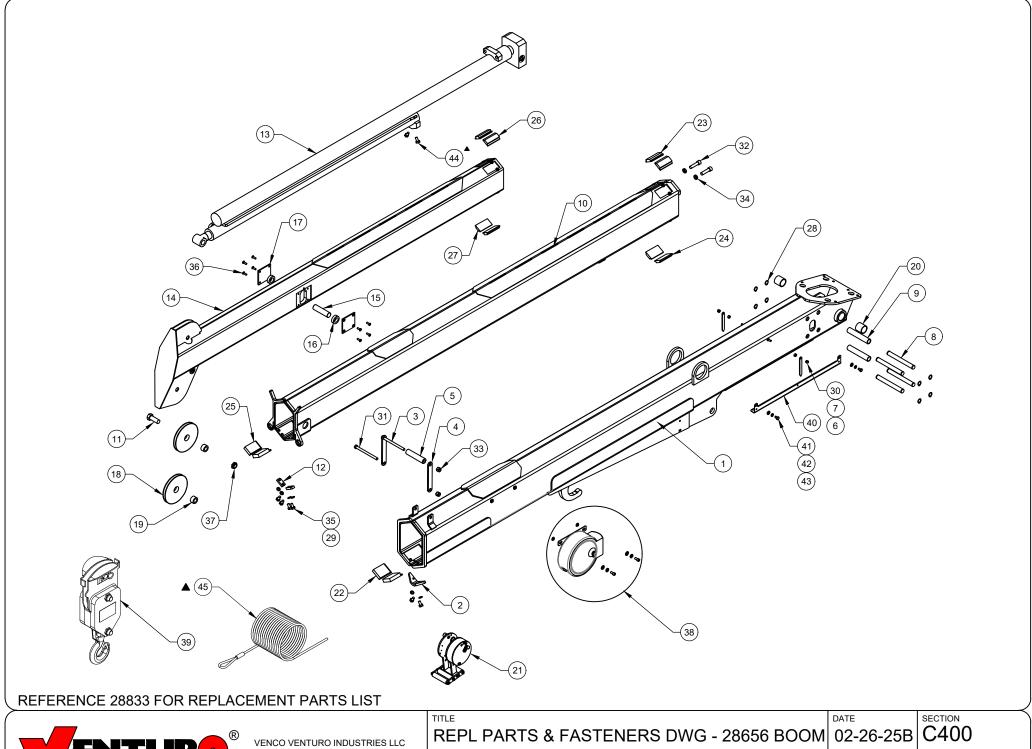
REFERENCE 28830 FOR REPLACEMENT PARTS DRAWING

CINCINNATI, OHIO

* : USED WITH KTI HPU ONLY ** : USED WITH BUCHER HPU ONLY



REPLACEMENT FASTENERS LIST - MECH	10-13-25E	C400
40**E/45**E	SUPERSEDES 09-22-25D	28831



VENCO VENTURO INDUSTRIES LLC

SUPERSEDES

4020E/4520E

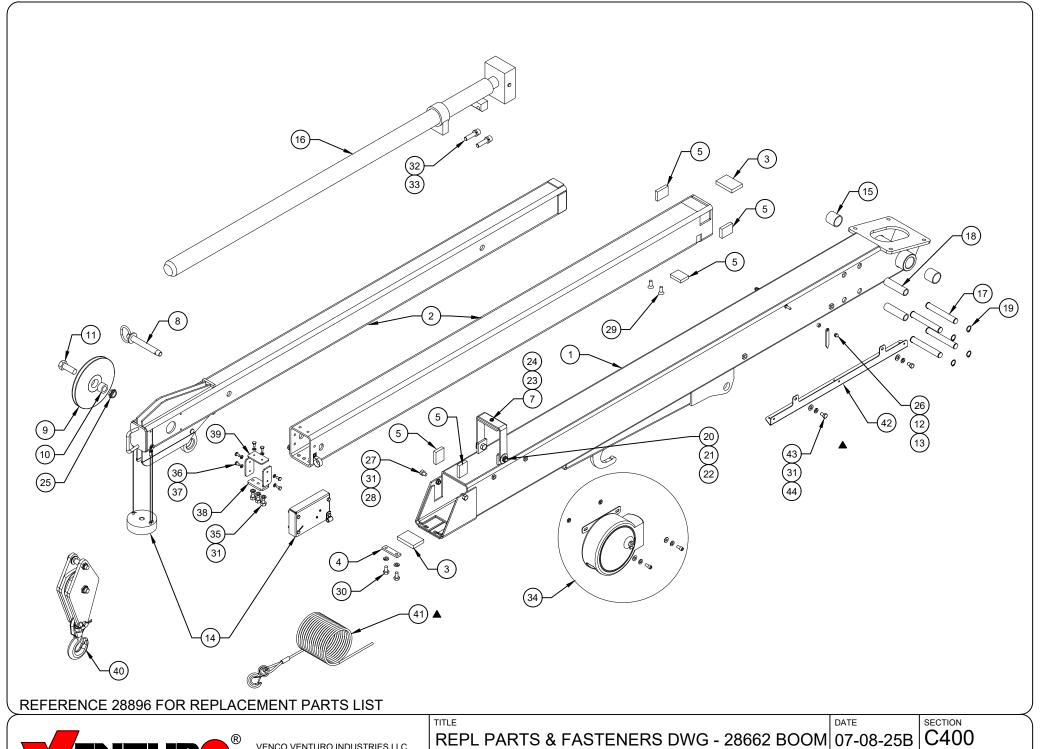
11-19-24A

REPLACEMENT PARTS & FASTENERS LIST - 28656 BOOM

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	28650	PRIMARY BOOM WELDED ASSEMBLY
2	1	23183	V-BLOCK SLIDER
3	1	21935	WIRE-ROPE GUIDE WELDED
4	1	21936	FLAT,MOUNT;WIRE ROPE GUIDE
5	1	21560	ROLLER,UHMW GUIDE
6	2	22490	SPACER, BOOM ARROW 1/2" O.D.
7	2	13459-2	BOOM ARROW 4-7/16 LONG
8	4	21497	THRUST PIN - EXTENSION CYLINDER
9	2	21498	EXTENSION CYLINDER ROLLER
10	1	27165	SECONDARY BOOM WELDED ASSEMBLY
11	1	17059-6	SHEAVE AXLE 3/4 X 2 W/ 1" SHANK
12	2	23119	BEARING RETAINING BLOCK
13	1	21753	EXTENSION CYLINDER
14	1	27167	TERTIARY BOOM WELDED ASSEMBLY
15	1	21941	EXTENSION CYLINDER PIN
16	2	21428	BUSHING
17	2	23116	PIN BLOCK REINFORCING
18	2	27001	SHEAVE - BOOM
19	2	23924	BUSHING
20	2	21206	POLY BEARING - PRIMARY BOOM PIVOT
21	1	27469-L-C-00	COMPACT A2B
22	2	23217-3	UHMW, B, 3.19, 2.13, 0.63
23	2	23217-8	UHMW, A, 3.19, 1.75, 0.50
24	2	23217-9	UHMW, A, 3.19, 1.75, 0.44
25	2	23217-10	UHMW, B, 3.19, 1.75, 0.63
26	2	23217-6	UHMW, A, 3.19, 1.50, 0.50
27	2	23217-7	UHMW, A, 3.19, 1.50, 0.44
28	8	!SRNG-075	RETAINING RING - 3/4" SHAFT DIA.
29	6	!LWSH-038	LOCK WASHER; 3/8", ZINC
30	2	!ANUT-02520S	ACORN NUT 1/4-20, SS
31	1	!HHCS04414550	HHCS - 7/16-14 X 5-1/2 LG, ZINC
32	2	!SHCS05013200	SOCKET HEAD CAP SCREW 1/2-13 X 2", ZINC
33	2	!LNUT-04414	NYLON INSERT LOCK NUT - 7/16-14, ZINC
34	2	!LWSH-050-HC	LOCK WASHER 1/2" HI COLLAR, ZINC
35	6	!HHCS03816075	HEX HEAD CAP SCREW - 3/8-16 X 3/4, ZINC
36	8	!CACS02520063-N	ALLEN HEAD CAP SCREW 1/4-20 X 5/8 LG W/ PATCH
37	1	!LNUT-07510	LOCKNUT 3/4-10, ZINC
38	1	26577-1-20	CORD REEL ASSEMBLY
39	1	27667-3	LOAD BLOCK ASSEMBLY FOR 4520E
	1	27667-4	LOAD BLOCK ASSEMBLY FOR 4020E
40	1	26940-2	HEX BOOM CABLE GUARD BRACKET
41	2	!HHCS03118050S	HEX HEAD CAP SCREW - 5/16 X 1/2 LONG S/S
42	2	!LWSH-031S	LOCK WASHER; 5/16", S/S
43	2	!FWSH-031S	FLAT WASHER; 5/16", S/S
44	2	!HHCS03816100N	HHCS; NYLON PATCH 3/8-16 X 1, GR. 5
45	1	27668-5/16-80	WIRE ROPE, 5/16" x 80'

REFERENCE 28832 FOR REPLACEMENT PARTS DRAWING





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

REPL PARTS & FASTENERS DWG - 28662 BOOM 07-08-25B SUPERSEDES

28895

4016E/4516E 02-26-25A

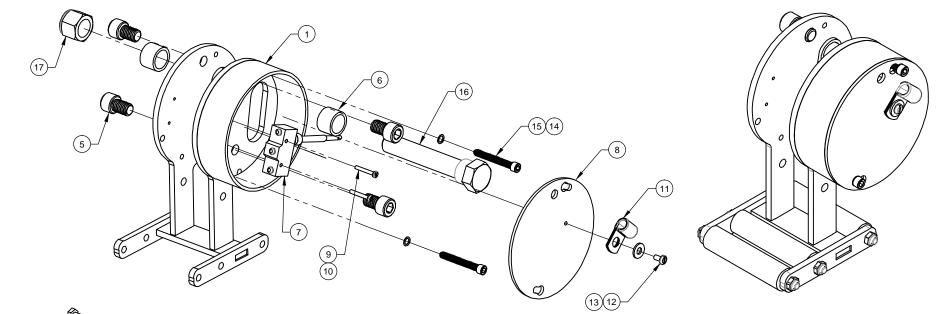
REPLACEMENT PARTS & FASTENERS LIST - 28662 BOOM

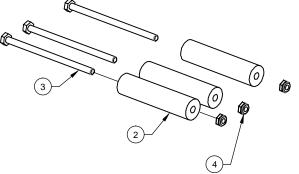
1		PART NUMBER	DESCRIPTION
1	1	28658	PRIMARY BOOM WELDED ASSEMBLY
2	1	21203	SECONDARY / TERTIARY WELDED ASSEMBLY
3	2	21208	BOOM BEARING - 2 X 3 X 1/2
4	1	21207	PRIMARY BEARING RETAINING BAR
5	5	21209	BOOM BEARING - 1-1/2 X 2 X 7/16
6	1	19880	CABLE GUIDE STRUCTURE
7	1	19881	CABLE GUIDE WEAR STRIP
8	1	23042-B-14-14	ASSY; PIN / LANYARD
9	1	23925	BOOM SHEAVE WITH BUSHING
10	1	23924	BUSHING
11	1	17059-6	SHEAVE AXLE 3/4 X 2 W/ 1" SHANK
12	2	13459-1	BOOM ARROW 3-3/16 LONG
13	2	22490	SPACER, BOOM ARROW 1/2" O.D.
14	1	28860	ANTI-TWO-BLOCK ASSEMBLY- LEFT HAND
15	2	21206	POLY BEARING - PRIMARY BOOM PIVOT
16	1	21217	EXTENSION CYLINDER
17	4	21211	THRUST PIN - EXTENSION CYLINDER
18	2	19885	EXTENSION CYLINDER ROLLER
19	8	!SRNG-075	RETAINING RING - 3/4" SHAFT DIA.
20	2		HEX HEAD CAP SCREW 1/2-13NC X 1 LG GR5
21	2	!FWSH-050	FLAT WASHER 1/2"
22	2	1900 - 200 -	1/2-13 NYLON INSERT JAM NUT
23	1		PAN HEAD CAP SCREW - 1/4-20 X 5/8 LONG
24	1	!JNUT-02520N	NYLON INSERT JAM NUT - 1/4-20
25	1	!LNUT-07510	LOCKNUT 3/4-10
26	2	!ANUT-02520S	ACORN NUT 1/4-20 SS
27	2	1 M. P.	HEX HEAD CAP SCREW 3/8-16 X 1/2" LG - GR 5
28	2	!JNUT-03816	JAM NUT - 3/8-16 GRADE 5
29	2		CNTRSNK ALLEN HEAD CAP SCREW 3/8-16 X 1" LG
30	2	!HHCS03816075	HEX HEAD CAP SCREW - 3/8-16 X 3/4 LG - GR 5
31	6	!LWSH-038	LOCK WASHER 3/8"
32	2	!SHCS05013200	SOCKET HEAD CAP SCREW - 1/2-13 X 2 LG,
33	2	!LWSH-050-HC	LOCK WASHER; 1/2", HI-COLLAR
34	1	26577-1-20	CORD REEL ASSY
35	3		HEX HEAD CAP SCREW - 3/8-24 X 1/2 LG - GR 5, ZINC
36	6	!HHCS02520050	HEX HEAD CAP SCREW - 1/4-20 X 1/2 LG - GR 5, ZINC
37	6	!LWSH-025	LOCK WASHER 1/4"
38	1	22145	LOWER STOP BLOCK
39	3	22146	SIDE SHIM
	1	23169	LOAD BLOCK ASSEMBLY FOR 4516E
40	1	23169-2	LOAD BLOCK ASSEMBLY FOR 4016E
41	1	25810-5/16-80	WIRE ROPE, 5/16" x 80'
42	1	26720	RECTANGULAR BOOM CABLE GUARD BRACKET
43	2	!LWSH-031S	LOCK WASHER; 5/16", S/S
44	2	!HHCS03118050S	HEX HEAD CAP SCREW - 5/16 X 1/2 LONG S/S

REFERENCE 28895 FOR REPLACEMENT PARTS DRAWING



COMPACT A2B - 27469-* - REPLACEMENT PARTS LIST





COMPACT A2B CONFIGURATIONS - 27469-*							
ITEM NO.	PART NUMBER	-L-C-00	-L-C-11	-L-0-22	DESCRIPTION		
1	27468	1	1	1	WLDMNT - COMPACT A2B FRAME LH		
2	27475	3	3	3	WIRE ROPE GUIDE ROLLER		
3	!HHCS02520450	3	3	3	HHCS 1/4-20 X 4-1/2 LG		
4	!JNUT-02520N	3	3	3	NYLON INSERT JAM NUT - 1/4-20		
5	27467	4	4	4	SHCS NYLON BLACK 1/2-13 X 3/4 LG		
	27476	2	-	-	SPACER/PIVOT - 0.69"		
6	27476-1	-	2	-	SPACER/PIVOT - 0.57"		
	27476-2	-	-	2	SPACER/PIVOT - 1.06"		
7	19376	1	1	1	ANTI-TWO BLOCK SWITCH		
8	27473	1	1	1	COVER PLATE		
9	!PHCS#0632100	2	2	2	PHILLIPS HEAD CAP SCREW 6-32 X 1 LONG		
10	!LWSH-#06	2	2	2	LOCK WASHER - 6		
11	19269	1	1	1	WIRE CLAMP, 3/8 ID VIBRATION DAMPING		
12	!PHCS#1032038	1	1	1	PAN HEAD CAP SCREW 10-32 X 3/8 LONG		
13	!FWSH-025	1	1	1	FLAT WASHER - 1/4		
14	!SHCS02520200SS	2	2	2	SHCS, 1/4-20 X 2.00 LONG, STAINLESS STEEL		
15	23379	2	2	2	WASHER, NYLON, BLACK, .375" O.D. X .25" I.D.		
16	28362	1	1	-	COMPACT A2B CUT-OUT CAM WELDED ASSY.		
16	!HHCS07510450	-	-	1	HHCS, 3/4-10 X 4.50 LONG, GR.5		
17	LNUT-07510	1	1	1	NYLON INSERT LOCK NUT - 3/4-10		



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO REPLACEMENT PARTS LIST

7-10-24A

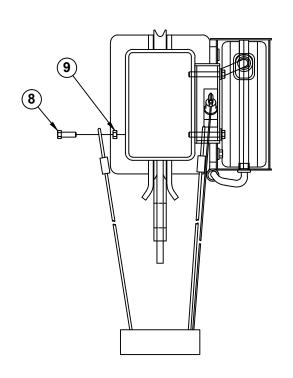
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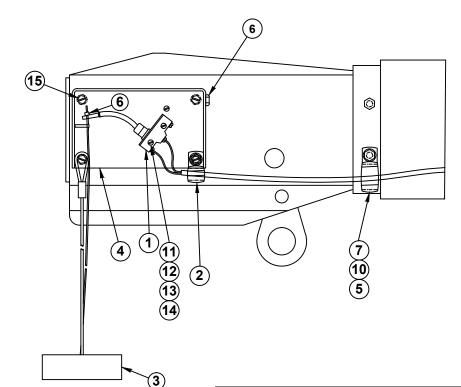
C400

COMPACT A2B - 27469-*

SUPERSEDES **06-11-24**

ANTI-TWO-BLOCK ASSY





NO DASH: 4016E & 4516E

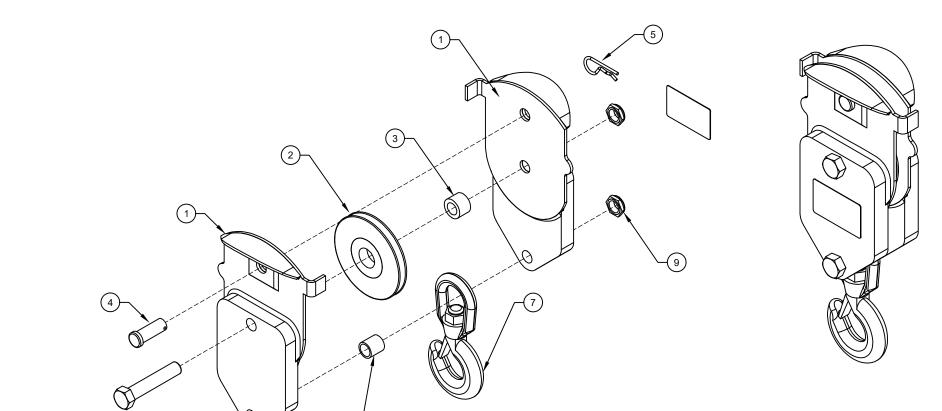
-1: 3215E & 3515E

	ITEM	QTY		PART NO.	DESCRIPTION		
	NO DASH -1		TAIN NO.	DESCRIPTION			
	1	1	1	19376	LIMIT SWITCH		
	2	1	1	19269	CABLE CLAMP - SMALL		
▲	3	1	1	19377-1	CABLE WEIGHT ASSY		
	4	1	1	21291	ANTI TWO-BLOCK HOUSING ASSEMBLY		
	5	1	-	!LWSH-025	LOCK WASHER - 1/4"		
	6	1	1	19302	SET COLLAR - 3/32"		
	7	1	-	19275	CABLE CLAMP - LARGE		
	8	1	1	!HHCS02520075-5	HEX HEAD CAP SCREW - 1/4-20 x 3/4" GR. 5		
	9	1 1		!HNUT-02520	HEX NUT - 1/4-20		
	10	1	-	!ANUT-02520	ACORN NUT - 1/4-20		
	11	2 2		!PHMS#632125	PAN HEAD MACHINE SCREW - #6-32 x 1 1/4"		
	12	2	2	!HNUT-#0632	HEX NUT - #6-32		
	13	2	2	!FWSH-#06	FLAT WASHER - #6		
	14	2	2	!LWSH-#06	LOCK WASHER - #6		
	15	4	4	!HHCS02520175	HEX HEAD CAP SCREW - 1/4-20 x 1 3/4"		
		•					



ANTI-2-BLOCK REPL PARTS DWG & LIST	08-18-25A	SECTION C400
3215E, 3515E, 4016E, 4516E	SUPERSEDES 04-16-25	28861

REPLACEMENT PARTS LIST - 27667 LOAD BLOCK



LOAD BLOCK ASSEMBLY 27667								
ITEM NO.	C	YT)				DADT NUMBER		
ITEWING.	NO DASH	-1	-2	-3	-4	PART NUMBER	DESCRIPTION	
1	2	2	2	2	2	27671	LOAD BLOCK SIDE PLATE	
2	1	1	1	1	1	23926	POLY SHEAVE W/ BUSHING	
3	1	1	1	1	1	23924-1	SHEAVE SPACER (.804" THICK)	
4	1	1	1	1	1	13401-1	CLEVIS PIN	
5	1	1	1	1	1	21-07	HAIRPIN COTTER	
6	1	1	1	1	1	27615	THRUST ROLLER	
7	1	1	1	1	1	14492	SWIVEL HOOK W/ SAFETY LATCH	
8	2	2	2	2	2	!HHCS07510400	HEX HEAD CAP SCREW; 3/4-10 X 4", GR. 5	
9	2	2	2	2	2	!JNUT-07510N	LOCK NUT; 3/4-10, GR. 5, NYLON	
10	-	-	2	-	-	27007-06a	DECAL; LOAD BLOCK, 5000 LBS MAX	
11	-	2	-	-	-	27007-07a	DECAL; LOAD BLOCK, 6000 LBS MAX	
12	-	-	-	2	-	27007-14a	DECAL; LOAD BLOCK, 4500 LBS MAX	
13					2	27007-162	DECAL: LOAD BLOCK 4000 LBS MAX	



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

REPLACEMENT PARTS LIST -27667 LOAD BLOCK

^{DATE} 09-13-24

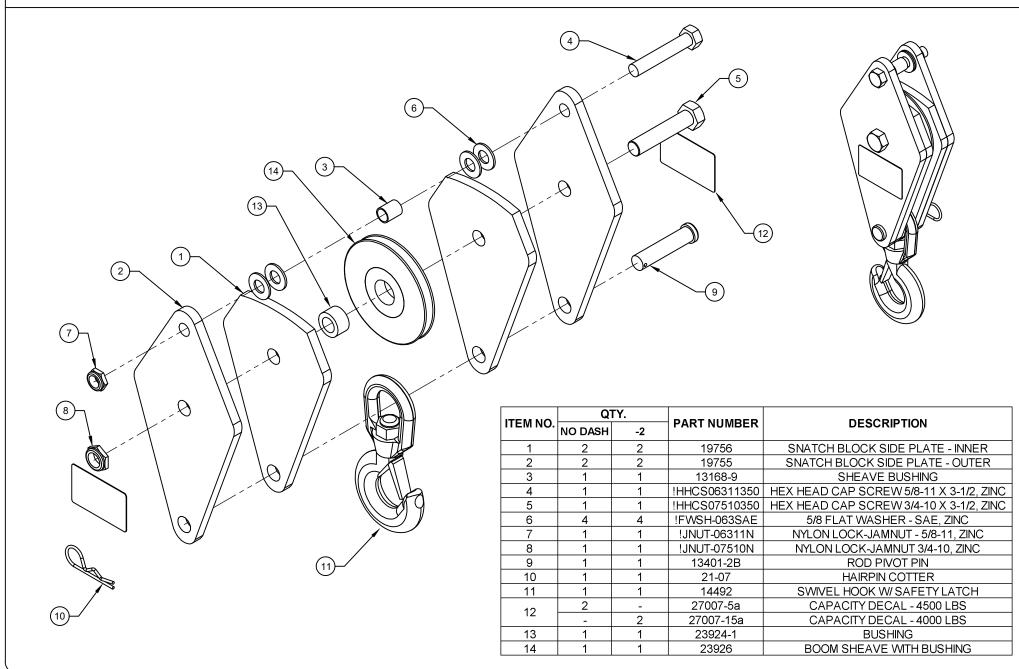
C400

SECTION

4020E/4520E/5020*/5025H/6020E

SUPERSEDES

REPLACEMENT PARTS LIST - 23169 LOAD BLOCK





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO REPLACEMENT PARTS LIST -23169 LOAD BLOCK

09-16-24

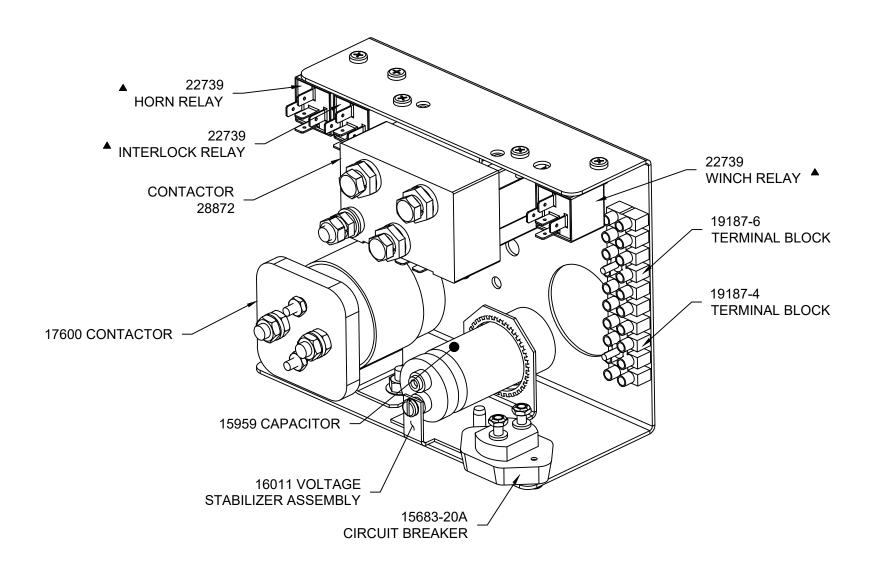
C400

4016E/4516E

SUPERSEDES

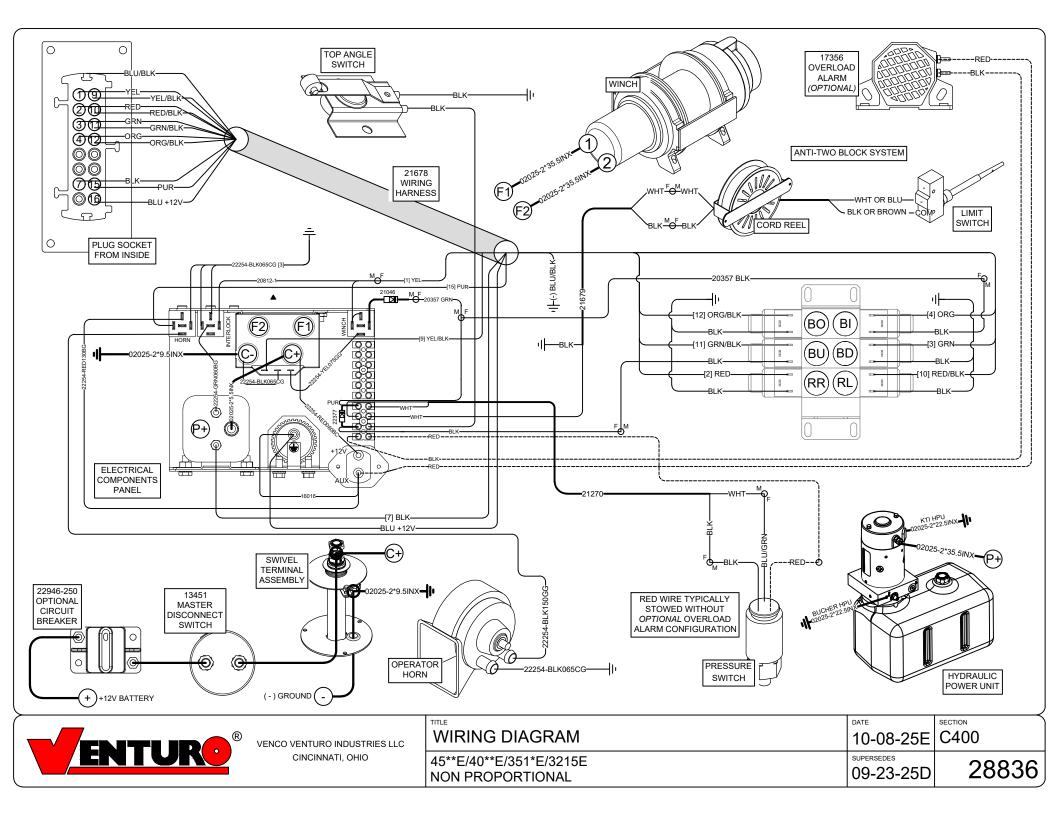
DATE

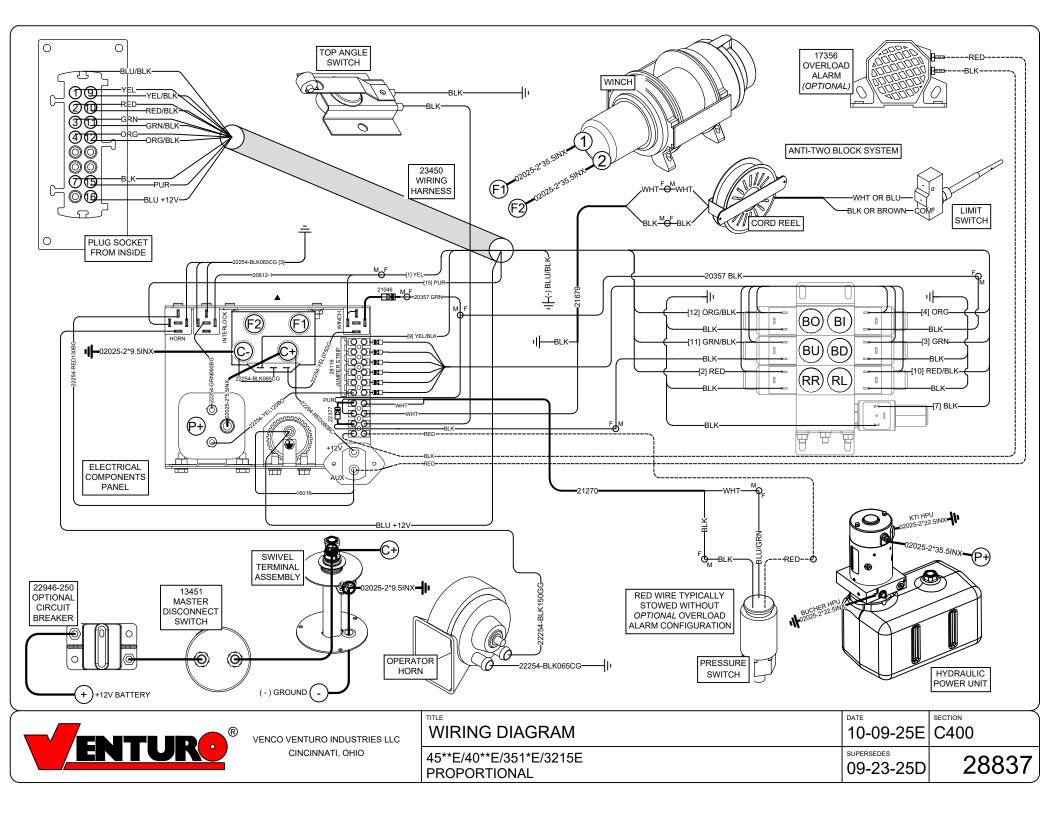
28700 ELECTRICAL COMPONENT ASSEMBLY



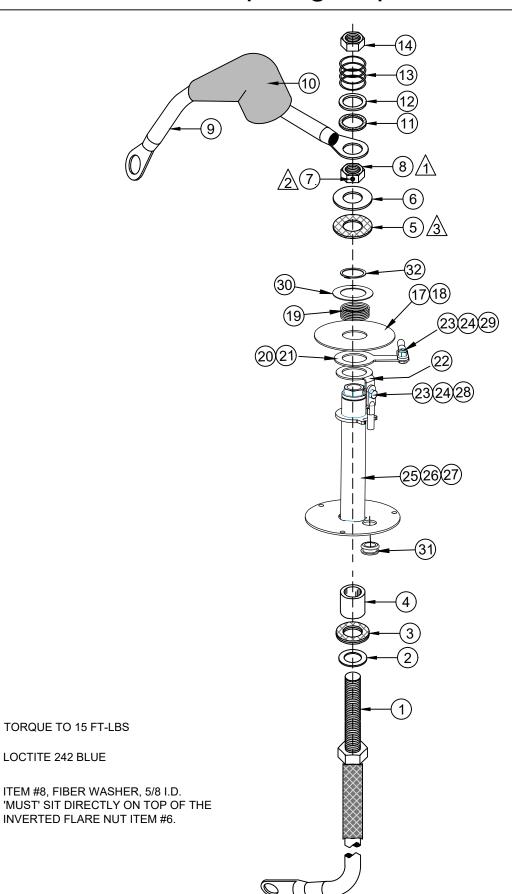


TITLE	DATE	SECTION
ELECTRICAL COMPONENT ASSEMBLY	10-07-25A	C400
	SUPERSEDES	00005
3215E/351*E/40**E/45**E	04-09-24	28835





2-Pole Slip-ring Replacement Parts





LOCTITE 242 BLUE

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

REPL. PARTS ILLUSTRATION **ET CRANES**

SECTION C400 04-23-24 SUPERSEDES

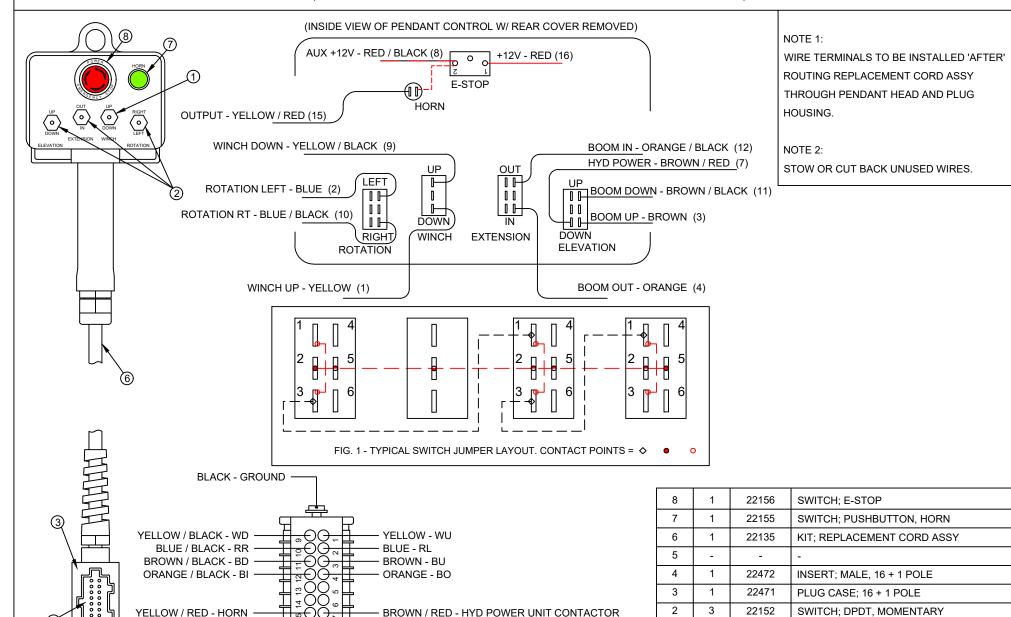
2-Pole Slip-ring Replacement Parts

16780 - 2P6 Slew Rotation 2-Pole Slip-Ring (2010E ONLY)	16780 - 2P8 (3215E/351*E/40**E/45**E)	16780 - 2P25 (5020E/6020E)	16780 - KIT ALL CRANES		16780 B	SILLS OF MATERIALS
				#	PART	DESCRIPTION
1	1	1	_	1	16783	PIGTAIL AND STUD ASSEMBLY
1	1	1	1	2	12534-5	ZINC BUSHING; 5/8" I.D. X 1" O.D. X 14 GAUGE
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	4	14233	INSULATING BUSHING; 5/8" I.D. X 7/8" O.D. X 7/8"
1		-	1	5		
	1	1	-		14357-2	FIBER WASHER; 5/8" I.D. X 1 1/4" O.D. X 1/16"
1	1	1	1	6	!FWSH-063SAE	FLAT WASHER; 5/8" SAE
1	1	1	1	7	!SHCS02528025KC	SET SCREW W/ KNURLED CUP; 1/4"-28 X 1/4"
1	1	1	1	8 21273		BRASS JAM NUT; 5/8"-11
-	-	-		9 26035-2		PIGTAIL; SWIVEL TERMINAL
-	_	-	-	10	17012	RUBBER BOOT; SWIVEL TERMINAL
1	1	1	1	11	5612-162-62	TEFLON WASHER
1	1	1	1	12	5714-113-62	BRASS WASHER
1	1	1	1	13	LC-098K-00	SPRING; 0.845" O.D. X 0.098" WIRE X 1.00 F.L.
1	1	1	1	14	!JNUT-06311N	JAM NUT; 5/8"-11, NYLON NUT
1	1	1	1	15	LOCTITE-24205	REMOVABLE THREAD LOCKER; 0.5ML
1	1	1	1	16	19368	IDWG; 16780 SWIVEL TERMINAL
1	-	-	-	17	27456	UHMW WATER SHIELD, (ET6K ONLY)
=7	1	1	1	18	27456-1	UHMW WATER SHIELD, (ET8 - ET36)
1	1	1	ı	19	27461	SPRING, (-) SLIP-RING ASSY.
-	1	1		20	27441-1	COPPER SLIP-RING, (ET8 - ET36)
1	-	-	-	21	27441	COPPER SLIP-RING, (ET6K ONLY)
1	1	1		22 27449-1		BRASS SLIP-RING (ET6 - ET36)
1	1	1	-	23 !HHCS03118075-B		BRASS HHCS BRASS NYLOC NUT
1	-	-	-	24 !HNUT-03118-B 25 23255		SLIP-RING, WELDED ASSY, ET6K
-	1	_	-	26	23255-1	SLIP-RING, WELDED ASSY, ET8 - 18K(X)
-	-	1	I	27	23255-2	SLIP-RING, WELDED ASSY, ET25 - 36K(X)
1	1	1	-	28	02025-2*96.5INX	(-) WELDING CABLE ASSY, BRASS SLIP-RING
1	1	1	-	29	02025-2*22.5INX	(-) WELDING CABLE ASSY, COPPER SLIP-RING
1	1	1	I	30	27463	SHIM, WIDE RIM, 18GA, 2-1/4 O.D. X 1-1/2 I.D.
1	1	1	ı	31	20889	RUBBER GROMMET
1	1	1	1	32	!SRNG-150	SNAP-RING, EXTERNAL, 1-1/2"



16780 REPLACEMENT PARTS 04-23-24 C400	ET CRANES	28842
THE SECTION	16780 REPLACEMENT PARTS	C400
TITLE DATE SECTION	TITLE	SECTION

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





16-PIN PLUG ASSY.

RED - 12V+

16-PIN PLUG - BACKSIDE VIEW

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

RED / BLACK - AUX 12V+

REPLACEMENT PARTS DWG & LIST

04-22-24 C400

SUPERSEDES

DESCRIPTION

SWITCH; SPDT, MOMENTARY

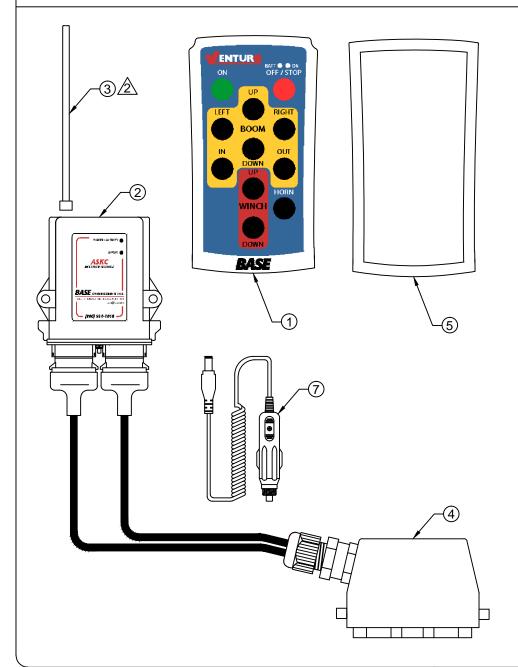
21990 PNDNT; 4 FNCTN ET CRNS, ESTP/HRN

22081

PART NO.

QTY

21986-ET/-HT RADIO; NON-PROP, NON-CAN, NO ENG CTRL, W/ HORN



	COMPONENTS								
	ITEM NO.	PART NO.	DESCRIPTION						
	1	21986-TX	TRANSMITTER						
Λ	0	21986-RX-ET	RECEIVER - ET CRANES						
<u> </u>	2	21986-RX-HT	RECEIVER - HT CRANES ANTENNA						
<u>^</u>	3	21986-ANT							
	4	21986-HN	HARNESS						
	5	21986-CASE	CASE						
	6	22910-BATT	BATTERY						
	7	22910-CHGR	CHARGER						

⚠ 21986-RX-** DOES NOT INCLUDE 21986-ANT

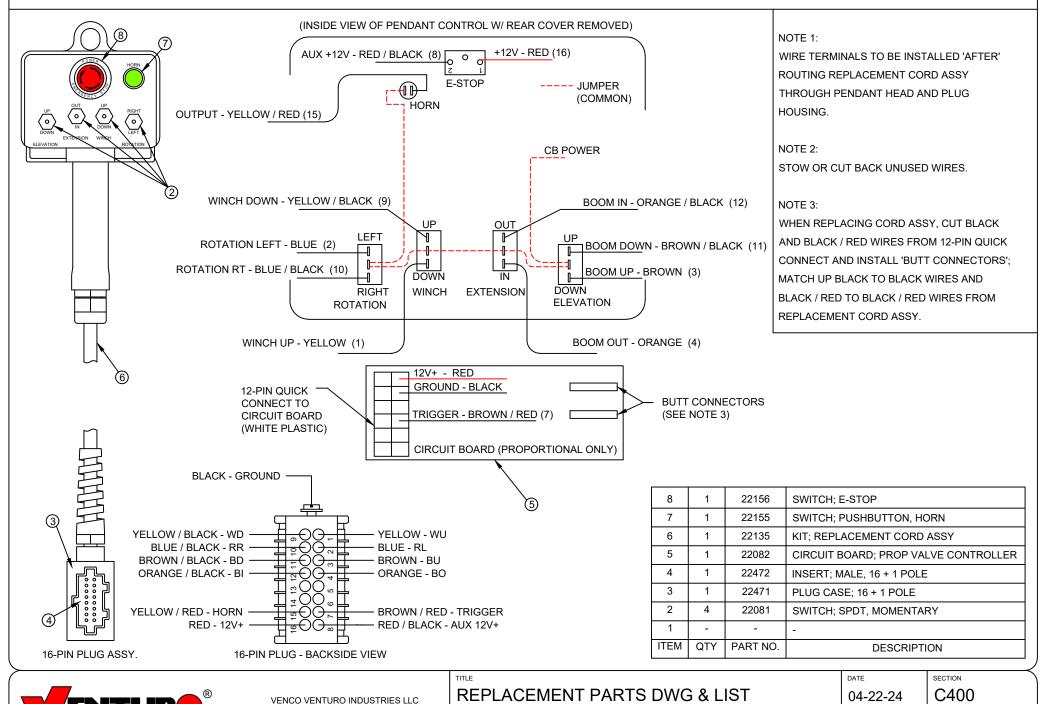
ASKCEX1200RX (INTRODUCED 07/2025) HAS PROVISION FOR EXTERNAL WHIP ANTENNA; EARLIER ASKC1100RX & ASKC1200RX CANNOT USE EXTERNAL ANTENNA

ENTURO ®

VENCO VENTURO INDUSTRIES LLC
CINCINNATI, OHIO

	08-05-25	C400
ET NON-PROPORTIONAL CRANES	SUPERSEDES -	23529

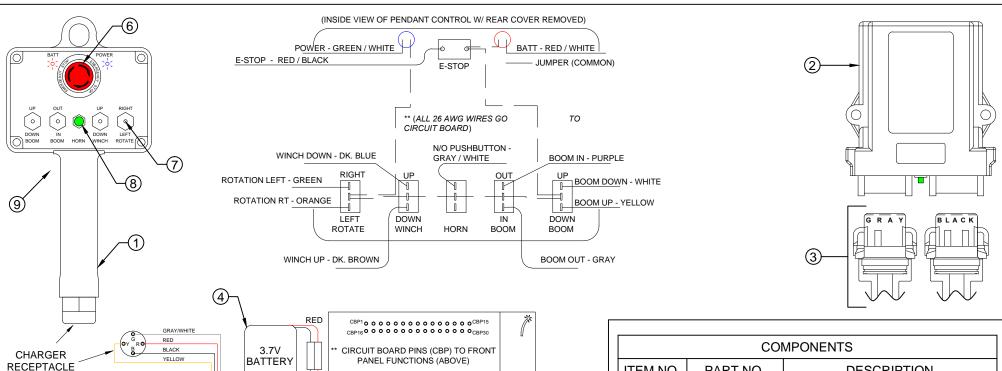
21988 PENDANT; PROP, NO ENG CNTRL, E-STOP / HORN



21988 PNDNT; PROP, NO ENG CNT, ESTP/HRN

CINCINNATI, OHIO

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



ENCASED CIRCUIT BOARD (PROPORTIONAL ONLY)

TRIGGER

CABLE 1 CABLE 2	= GRAY CON = BLACK CO		
16-PI	N PLUG - BACKSIDE \	/IEW	16-PIN PLUG ASSY.
GREEN - CABLE 2 (WD) — BLACK - CABLE 2 (RR) — WHITE / BLACK - CABLE 1 (BD) — BLUE / BLACK - CABLE 1 (BI) —	13 12 11 10 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	— (WU) BLUE / BLACK - CABLE 2 — (RL) ORANGE - CABLE 1 — (BU) BLACK / WHITE - CABLE 1 — (BO) GREEN - CBALE 1	3
GREEN / BLACK - CABLE 2 (HORN) — RED - CABLE 1 (12V+) —	4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(PROP. VALVE PWM) WHITE - CABLE	2
BLACK - CABLE	1 GND BOLT	NOTE: Pin 14 (White / Black) factory default to A If using a 2-channel THROTTLE, Pin 14	

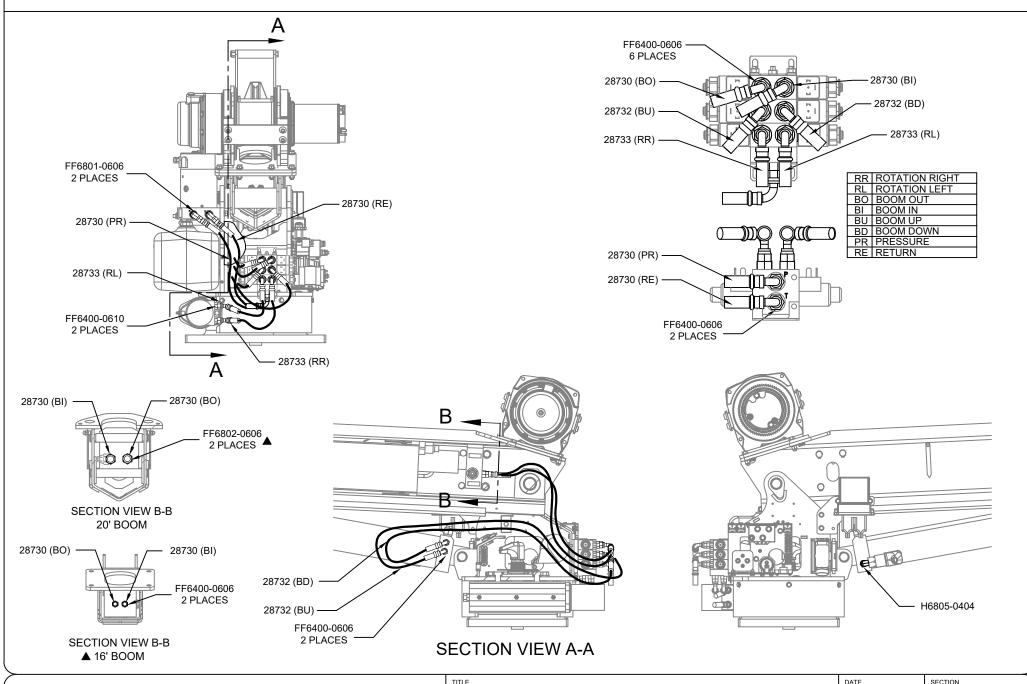
COMPONENTS				
ITEM NO. PART NO.		DESCRIPTION		
1 22158-TX		TRANSMITTER	1	
2 22158-RX		RECEIVER		
3 21983-HN		HARNESS		
4 22965-BATT		BATTERY		
5 22965-CHGR		CHARGER (NOT SHOWN)		
6	21983-STP	E-STOP BUTTON	4	
7	21983-TOG	FUNCTION TOGGLE		
8	21983-HOR	HORN BUTTON & BOOT	4	
9	23234	PROP TRIGGER (NOT SHOWN)	4	



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE	DATE	SECTION	١
REPLACEMENT PARTS DWG & LIST	09-04-25B	C400	
	SUPERSEDES	00700	İ
ET PROPORTIONAL SERIES CRANES	03-11-19A	23786 ₎	

HYDRAULIC COMPONENTS DRAWING





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO HYDRAULIC COMPONENTS DRAWING

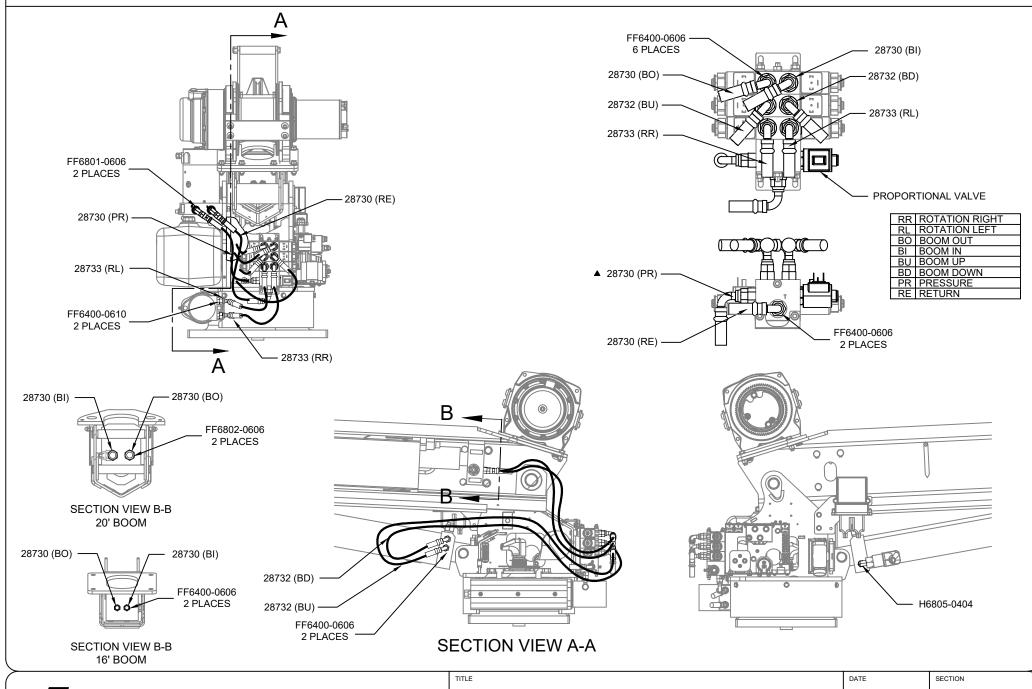
03-06-25A

C400

45**E/40**E/3516E, NON-PROPORTIONAL

04-16-24 28838

HYDRAULIC COMPONENTS DRAWING





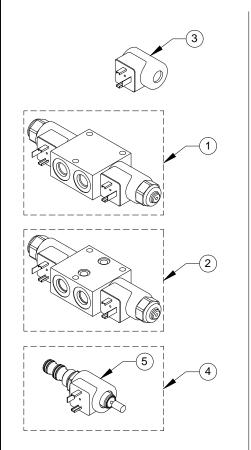
VENCO VENTURO INDUSTRIES LLC
CINCINNATI, OHIO

HYDRAULIC COMPONENTS DRAWING
45**E/40**E/3516E, PROPORTIONAL

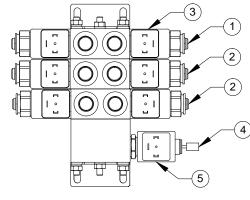
10-07-25B C400

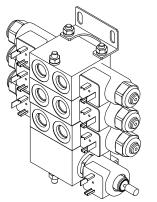
03-06-25A

28800 / 28801 / 28805 VALVE ASSY REPLACEMENT PARTS



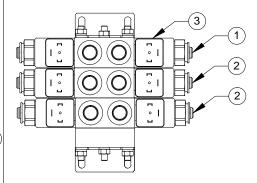
28800 3-SPOOL **PROPORTIONAL**

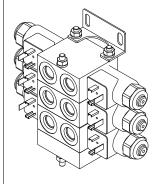




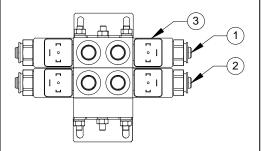
CINCINNATI, OHIO

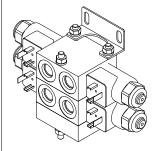
28801
3-SPOOL
NON-PROPORTIONAL





28805 2-SPOOL **NON-PROPORTIONAL**





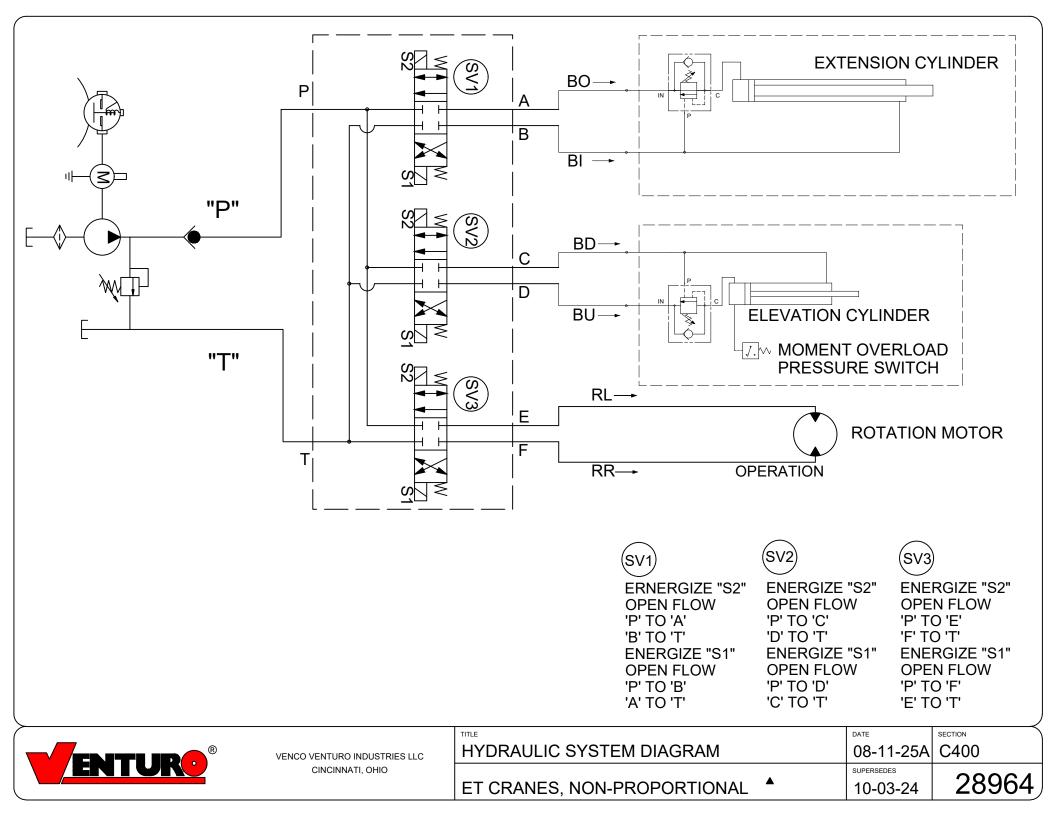
ITEM #	PART#	DESCRIPTION
1	28807	END SECTION W/ SPOOL AND COILS
2	28806	INTERMEDIATE SECTION W/ SPOOL AND COILS
3	1 21944	FUNCTION COIL (ONLY)
4	26485	PROPORTIONAL VALVE AND COIL
5	26487	PROPORTIONAL COIL (ONLY)

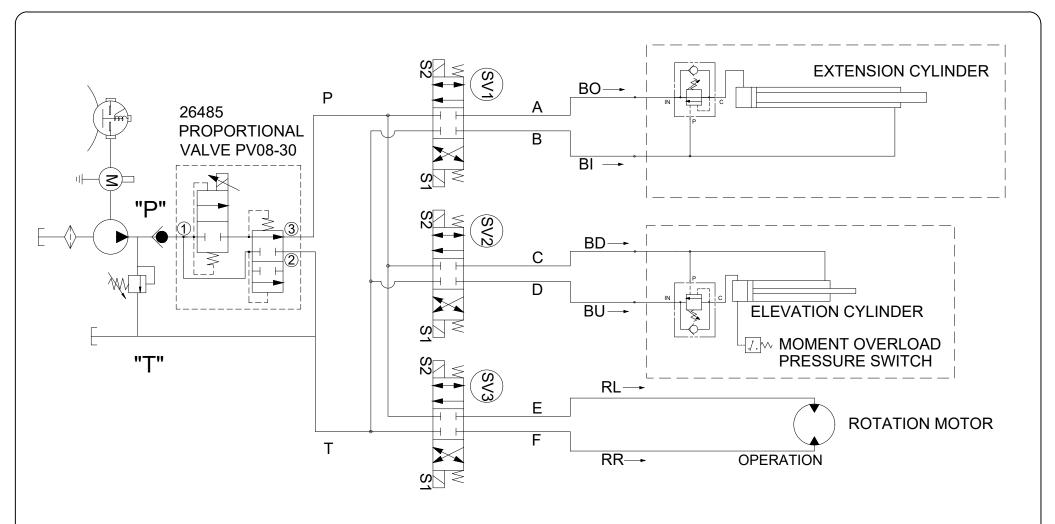


TITLE	DATE
28800/28801/28805 REPL PARTS DWG & LIST	10-09-
	SUPERSED
ET CRANES	10-08-

9-25A C400 28808 10-08-25

SECTION





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

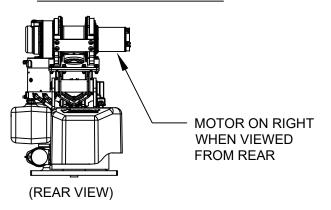


CINCINNATI. OHIO

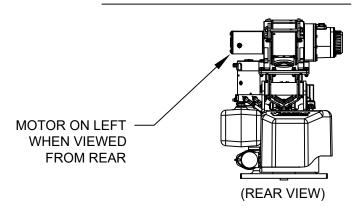
;	HYDRAULIC SYSTEM DIAGRAM	08-11-25A	SECTION C400
		SUPERSEDES	00045
	ET CRANES. PROPORTIONAL A	09-13-24	28945

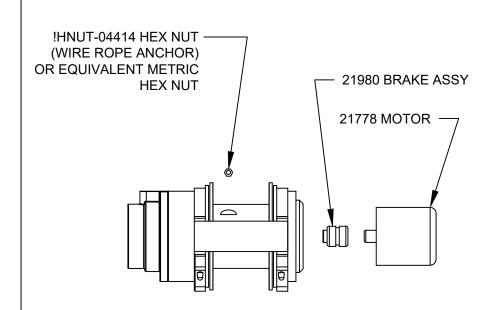
21215 WINCH REPLACEMENT PARTS

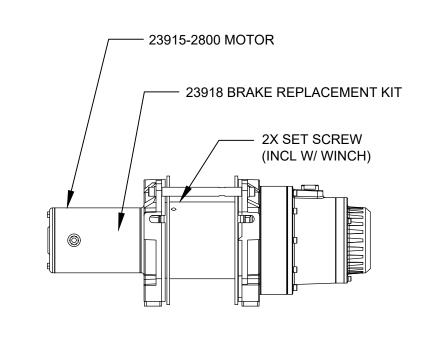
WARN DC2500



COMEUP GTD-2800





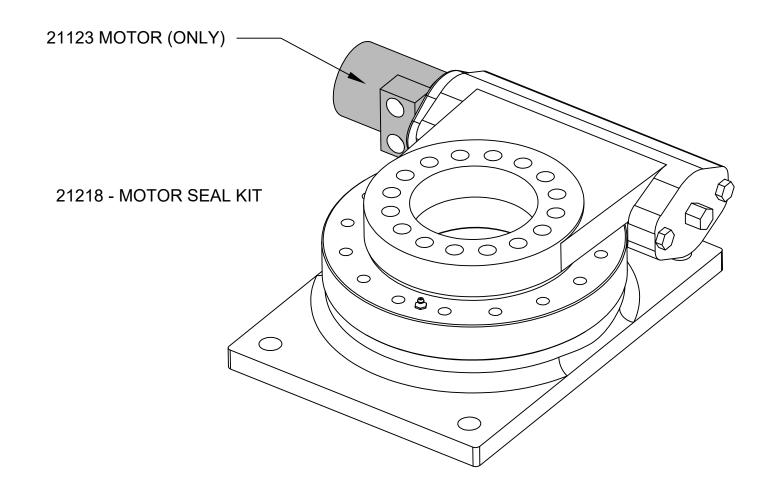




VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE	DATE	SECTION
WINCH REPLACEMENT PARTS	04-23-24	C400
40**E/45**E	SUPERSEDES	28846

21735-1 SLEWING SYSTEM REPLACEMENT PARTS

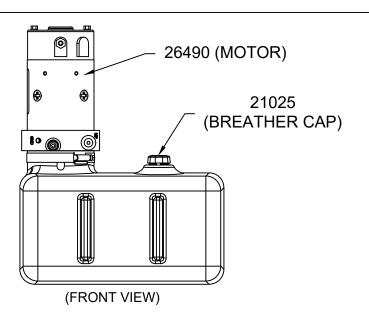




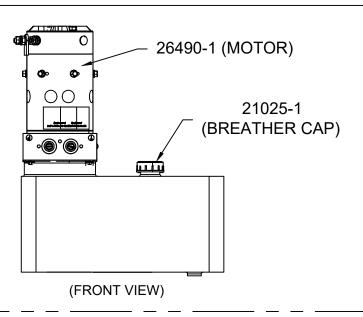
3215E/351*E/40**E/45**E	SUPERSEDES	28847
SLEWING SYSTEM REPLACEMENT PARTS	04-24-24	C400

28720 HYD. POWER UNIT REPLACEMENT PARTS

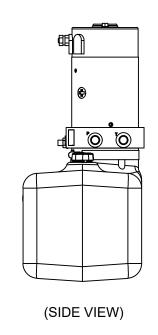
BUCHER



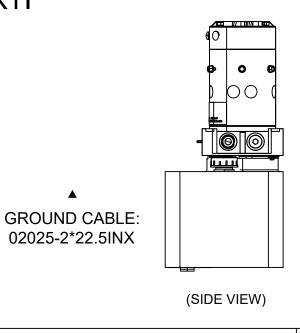
KTI



BUCHER



KTI





GROUND CABLE:

02025-2*22.5INX

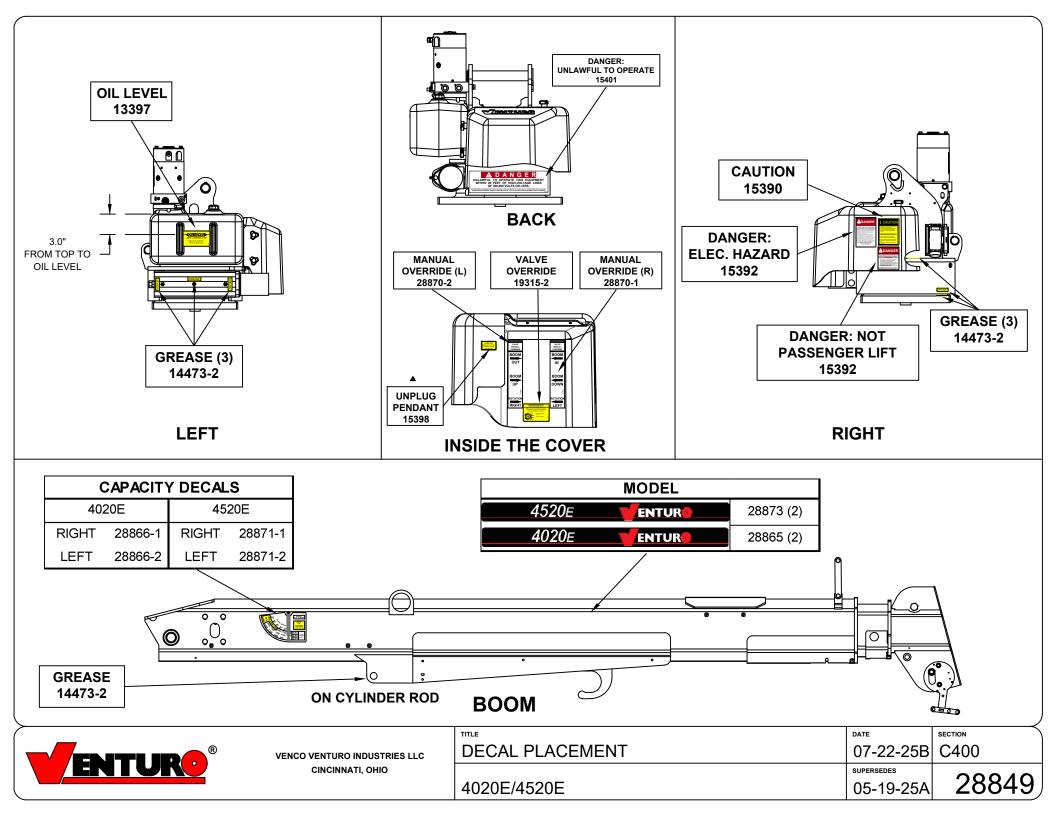
VENCO VENTURO INDUSTRIES LLC
CINCINNATI, OHIO

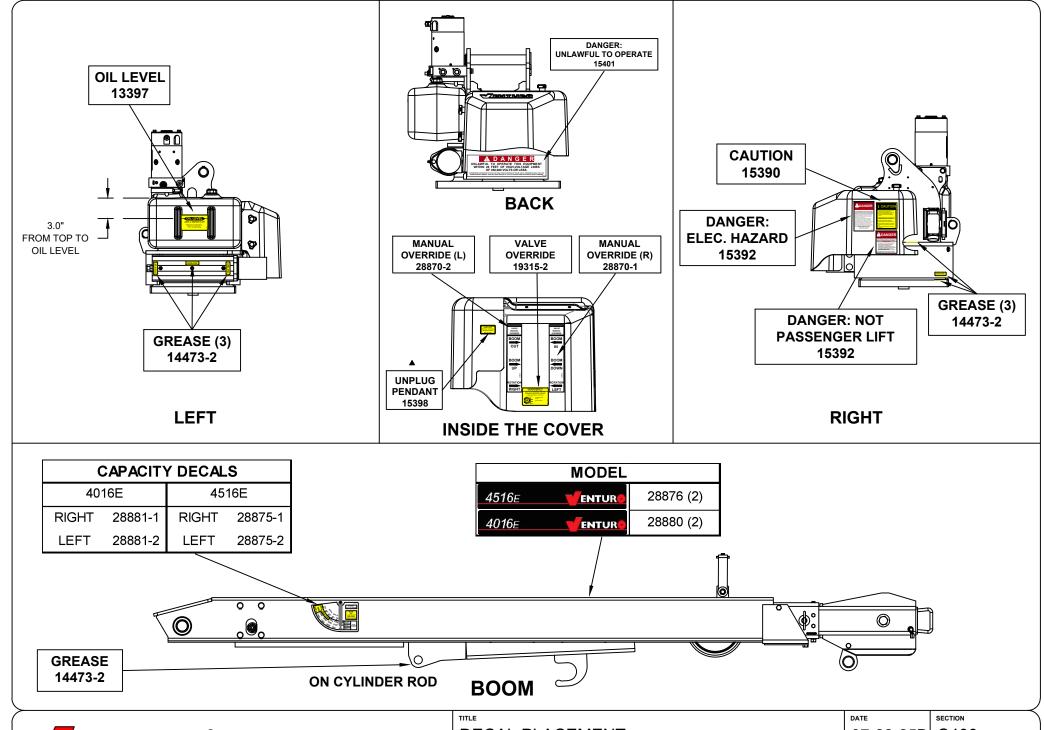
HYDRAULIC POWER UNIT REPLACEMENT PARTS
TITLE

DATE SECTION C400

28848

ET CRANES 08-11-25A







VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO DECAL PLACEMENT

4016E/4516E

07-22-25B C400

05-19-25A

4020E FIELD SERVICE LABEL KITS

28911: FSLK 4020E NON PROP

PART NUMBER	QTY.	DESCRIPTION	
14473-2	6	DECAL; GREASE	
28865	2	DECAL; MODEL 4020E	
28866-1	1	DECAL; BOOM CAPAICTY - RIGHT, 4020E	
28866-2	1	DECAL; BOOM CAPACITY - LEFT, 4020E	
13397	1	DECAL; OIL LEVEL	
28870-1	1	DECAL; MANUAL OVERRIDE, RIGHT	
28870-2	1	DECAL; MANUAL OVERRIDE, LEFT	
28912	1	IDWG; FIELD SERVICE LABEL KIT	
28849	1	IDWG; DECAL PLACEMENT	
INST-23233	1	SAFETY MANUAL, VENTURO CRANES	
16184-1	1	DECAL: HORN RELAY	
15397	1	KIT; ACCIDENT PREVENTION SIGNS	
17813	1	DECAL; OVERLOAD SENSING SYSTEM	

28911-1: FSLK 4020E PROP

PART NUMBER	QTY.	DESCRIPTION	
14473-2	6	DECAL; GREASE	
28865	2	DECAL; MODEL 4020E	
28866-1	1	DECAL; BOOM CAPAICTY - RIGHT, 4020E	
28866-2	1	DECAL; BOOM CAPACITY - LEFT, 4020E	
13397	1	DECAL; OIL LEVEL	
28870-1	1	DECAL; MANUAL OVERRIDE, RIGHT	
28870-2	1	DECAL; MANUAL OVERRIDE, LEFT	
28912	1	IDWG; FIELD SERVICE LABEL KIT	
28849	1	IDWG; DECAL PLACEMENT	
INST-23233	1	SAFETY MANUAL, VENTURO CRANES	
16184-1	1	DECAL: HORN RELAY	
15397	1	KIT; ACCIDENT PREVENTION SIGNS	
17813	1	DECAL; OVERLOAD SENSING SYSTEM	
19315-2	1	DECAL; PROP MANUAL OVERRIDE	



4020E	SUPERSEDES	28912
FIELD SERVICE LABEL KITS	08-28-24	C400

4016E FIELD SERVICE LABEL KITS

28921: FSLK 4016E NON PROP

PART NUMBER	QTY.	DESCRIPTION	
14473-2	6	DECAL; GREASE	
28880	2	DECAL; MODEL 4016E	
28881-1	1	DECAL; BOOM CAPAICTY - RIGHT, 4016E	
28881-2	1	DECAL; BOOM CAPACITY - LEFT, 4016E	
13397	1	DECAL; OIL LEVEL	
28870-1	1 DECAL; MANUAL OVERRIDE, R		
28870-2	1	DECAL; MANUAL OVERRIDE, LEFT	
28922	1	IDWG; FIELD SERVICE LABEL KIT	
28898	1	IDWG; DECAL PLACEMENT	
INST-23233	1	SAFETY MANUAL, VENTURO CRANES	
16184-1	16184-1 1 DECAL: HORN RELAY		
15397	1	KIT; ACCIDENT PREVENTION SIGNS	
17813	1	DECAL; OVERLOAD SENSING SYSTEM	

28921-1: FSLK 4016E PROP

PART NUMBER	QTY.	DESCRIPTION	
14473-2	6	DECAL; GREASE	
28880	2	DECAL; MODEL 4016E	
28881-1	1	DECAL; BOOM CAPAICTY - RIGHT, 4016E	
28881-2	28881-2 1 DECAL; BOOM CAPACITY -		
13397	1	DECAL; OIL LEVEL	
28870-1	28870-1 1 DECAL; MANUAL OVERRIDE, RIG		
28870-2 1 DECAL; MANUAL OVERRIDE,		DECAL; MANUAL OVERRIDE, LEFT	
28922	28922 1 IDWG; FIELD SERVICE LABEL		
28898 1 IDWG; DECAL		IDWG; DECAL PLACEMENT	
INST-23233	1	SAFETY MANUAL, VENTURO CRANES	
16184-1	1	DECAL: HORN RELAY	
15397 1 KIT; ACCIDENT PF		KIT; ACCIDENT PREVENTION SIGNS	
17813	1	DECAL; OVERLOAD SENSING SYSTEM	
19315-2	1	DECAL; PROP MANUAL OVERRIDE	



FIELD SERVICE LABEL KITS	08-28-24	C400
4016E	SUPERSEDES -	28922

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