

EJ\*AAD-\*0\*0

# PARTS & INSTALLATION MANUAL 4520E/4516E

# Included in this manual:

# 4520E

- 4,500 lbs. Electric Telescopic Service Crane.
- 10 16 20 ft Powered, Dual-Stage, Boom Extension.
- Proportional Controls & Non-Proportional Controls.

# 4516E

- 4,500 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



DESCRIPTION & SPECIFICATIONS SPECIFICATIONS & OPERATING FEATURES 7607100A 28811 SPECIFICATIONS & OPERATING FEATURES 28891 INSTALLATION DIMENSIONS 28813 INSTALLATION DIMENSIONS 28892 28814 BASE MOUNTING DIMENSIONS **CAPACITY CHART 4520E** 28815 **CAPACITY CHART 4516E** 28894 7607150A SAFETY SAFETY & HAZARDS - GENERAL SAFETY & HAZARDS - GENERAL, CONT 850711 850712 **VEHICLE & CRANE ELECTRIC HAZARD INFORMATION** 15394 21353 SAFETY DECALS SAFETY DECALS DECALS FOR ET CRANES 21384 21354 MODEL & CAPACITY DECALS 4516E/4520E 28818 28819 ADDITIONAL DECALS 7607200A INSTALLATION TYPICAL REINFORCEMENT FOR MOUNTING CRANE ON TOP OF SERVICE BODY 28816 TYPICAL REINFORCEMENT FOR MOUNTING CRANE ON FLAT BED 28817 28820 CABLE & BATTERY REQUIREMENTS - ET & HT CRANES BATTERY & CABLE INSTALLATION DRAWING STABILITY TESTING 4520E STABILITY TESTING 4516E STABILITY CHART 28821 20906-4520E 20906-4516E 20907 WIRE ROPE INSTALLATION 28822 28855 WORK LIGHT INSTALLATION INSTRUCTIONS; COMPACT A2B MOUNT 7607300B **OPERATION & MAINTENANCE** OPERATION & MAINTENANCE INSTRUCTIONS (1 OF 3) OPERATION & MAINTENANCE INSTRUCTIONS (2 OF 3) 28852 28853 28854 OPERATION & MAINTENANCE INSTRUCTIONS (3 OF 3) MANUAL OVERRIDE INSTRUCTIONS, NON-PROPORTIONAL MANUAL OVERRIDE INSTRUCTIONS, PROPORTIONAL 28826 28827 **LUBRICATION & MAINTENANCE CHART** 28823 28824 MINIMUM VOLTAGE TEST 28239 A2B STOWAGE CUT-OUT 7607400A REPLACEMENT PARTS REPLACEMENT PARTS DRAWING, MECH REPLACEMENT PARTS LIST, MECH REPLACEMENT HARDWARE DRAWING, MECH 28828 28829 28830 REPLACEMENT HARDWARE LIST, MECH 28831 REPLACEMENT PARTS DWG, 28656 BOOM ASSY (4520E) 28832 REPLACEMENT PARTS LIST, 28656 BOOM ASSY (4520E)
REPLACEMENT PARTS DWG, 28662 BOOM ASSY (4516E)
REPLACEMENT PARTS LIST, 28622 BOOM ASSY (4516E) 28833 28895 28896 26942 COMPACT A2B REPLACEMENT PARTS (4520E) REPLACEMENT PARTS LIST/DWG; A2B (4516E) REPLACEMENT PARTS LIST, 27667 LOAD BLOCK (4520E) REPLACEMENT PARTS LIST, 23169 LOAD BLOCK (4516E) 28861 28856 28950 28700 ELECTRICAL COMPONENT ASSY 28835 WIRING DIAGRAM, 45\*\*E/40\*\*E/351\*E/3215E, NON PROP 28836 WIRING DIAGRAM, 45\*\*E/40\*\*E/351\*E/3215E, PROPORTIONAL 28837 REPLACEMENT PARTS DRAWING, 16780, 2-POLE SLIP-RING REPLACEMENT PARTS LIST, 16780, 2-POLE SLIP-RING 28843 28842 28840 21990 PENDANT; REPLACEMENT PARTS DRAWING / LIST (4 FUNCTION) 21988 PENDANT, REPLACEMENT PARTS DRAWING & LIST 28841 HYDRAULIC SYSTEM COMPONENTS REPLACEMENT PARTS DRAWING HYDRAULIC SYSTEM COMPONENTS REPLACEMENT PARTS DRAWING (PROPORTIONAL) 28838 28839 HYDRAULIC SYSTEM SCHEMATIC 28844 HYDRAULIC SYSTEM SCHEMATIC (PROPORTIONAL) 21215 WINCH REPLACEMENT PARTS DRAWING & LIST 28845 28846 28847 21735-1 SLEWING REPLACEMENT PARTS 28720 HYDRAULIC POWER UNIT REPLACEMENT PARTS 28848 28849 DECAL PLACEMENT, 4520E/4020E DECAL PLACEMENT, 4516E/4016E 28898 28851 FIELD SERVICE LABEL KIT 4520E FIELD SERVICE LABEL KIT 4516E 28900

# **SECTION 100**

# DESCRIPTION & SPECIFICATIONS



# **SPECIFICATIONS**

12-volt battery operated

18,000 ft-lb overturning moment (or as limited by truck stability)

Moment overload shut-off system

Electric winch - 2,250 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	700 lb @ 20.5 ft
CAPACITY	4500 lb @ 2.5 ft
WIRE ROPE	%₀" x 80 ft
PENDANT CORD LENGTH	25 ft

1	_		TITLE	DATE	SECTION
		R) VENCO VENTURO INDUSTRIES LLC	SPECS & OP. FEATURES	02-19-25A	C100
	ENION	CINCINNATI, OHIO		SUPERSEDES	2
l			4520E	02-16-24	28

00

# **SPECIFICATIONS**

12-volt battery operated

18,000 ft-lb overturning moment (or as limited by truck stability)

Moment overload shut-off system

Electric winch - 2,250 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):

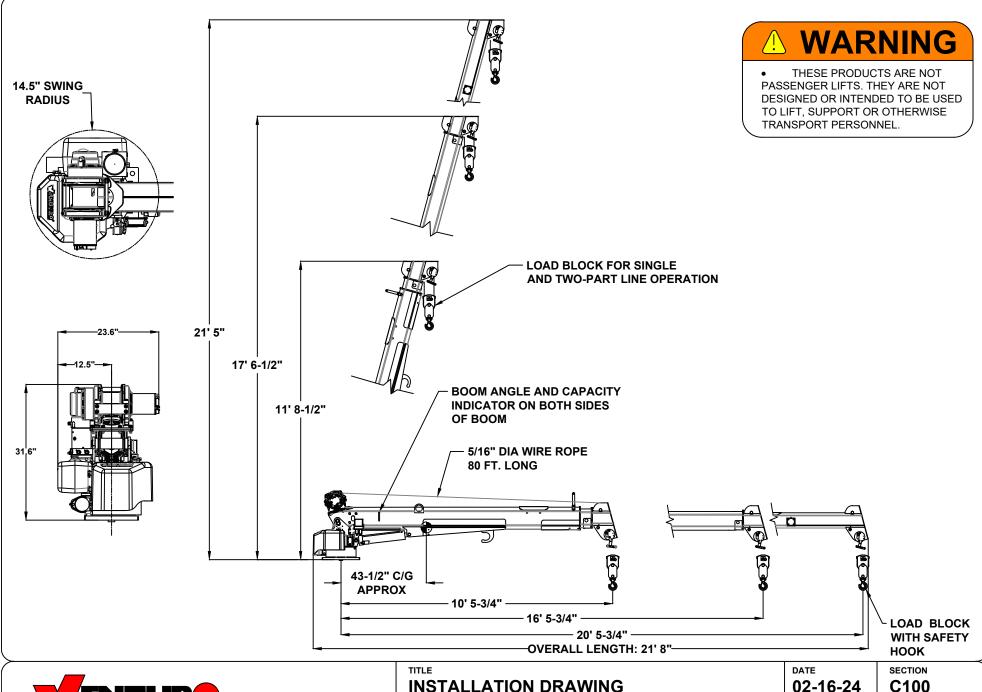
Stabilizers: 24962, 13500, 11822-2

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	1125 lb @ 16 ft
CAPACITY	4500 lb @ 4 ft
WIRE ROPE	%6" x 80 ft
PENDANT CORD LENGTH	25 ft

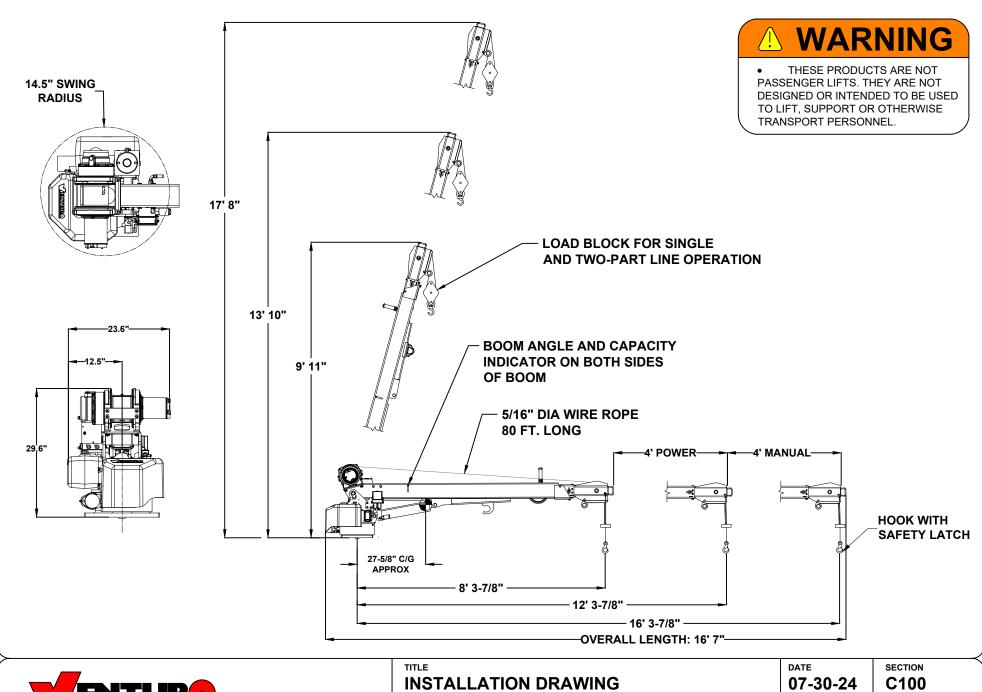
_		TITLE	DATE	SECTION
ENTIRO®	) VENCO VENTURO INDUSTRIES LLC	SPECS & OP. FEATURES	02-19-25A	C100
ENION	CINCINNATI, OHIO		SUPERSEDES	0000
		4516E	07-30-24	2889





MANUFACTURING, INC. CINCINNATI, OHIO

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

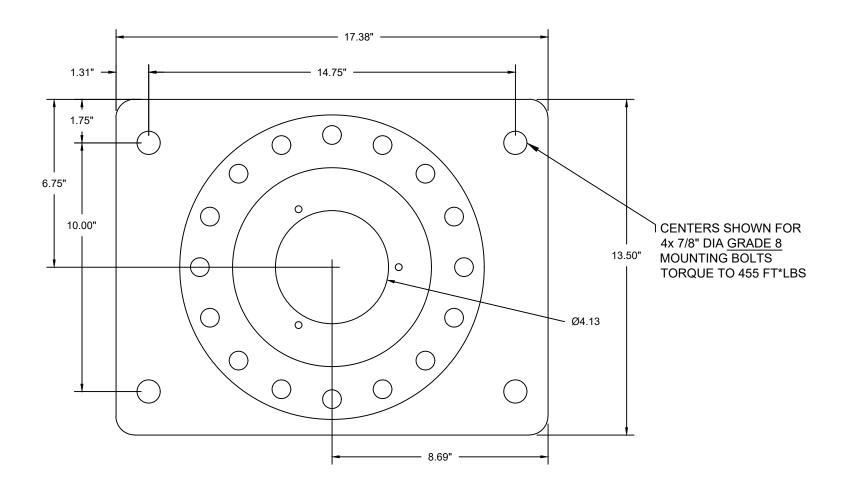




MANUFACTURING, INC. CINCINNATI, OHIO

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

# 21735-WRB/CRB - RECTANGULAR





ES LLC	21

CINCINNATI, OHIO

TITLE
21735 BASE MOUNTING DIMENSIONS

11-12-24A

SECTION C100

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

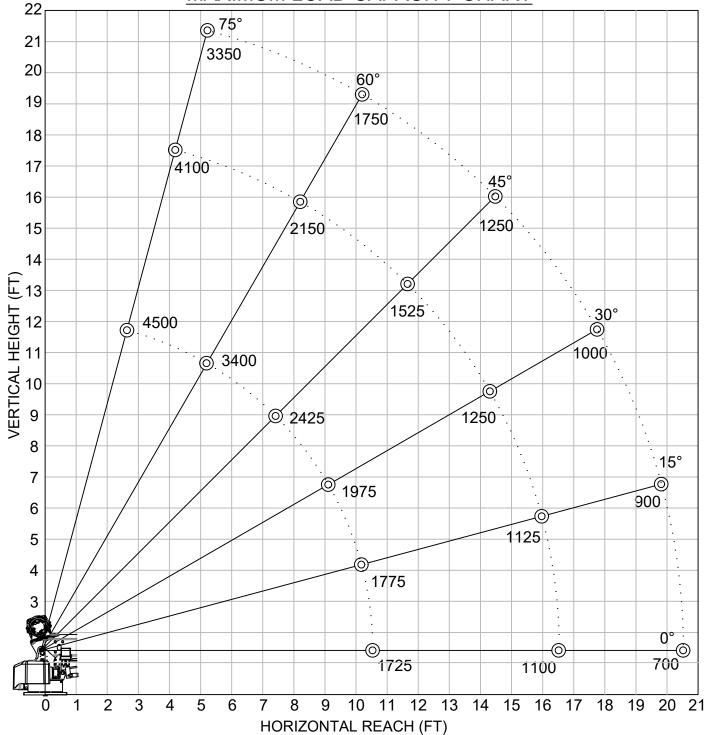
SUPERSEDES 04-05-24

28814

# 4520E

# **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 2250 LBS 2 PART LINE FOR LOADS OF 2250 LBS AND GREATER

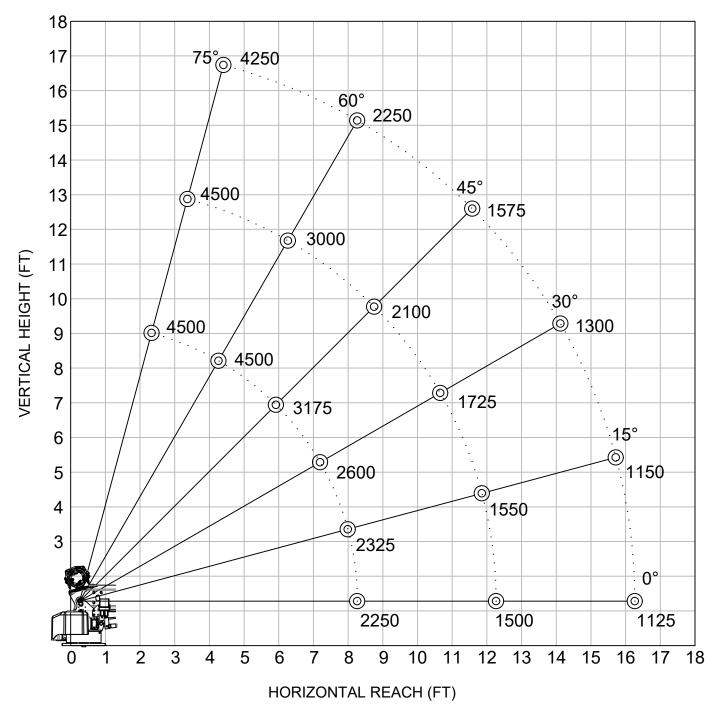
WEIGHT OF LOAD BLOCK = 34 LBS



MAXIMUM LOAD CAPACITY	02-16-24	C100
4520E	SUPERSEDES	28815

## 4516E

# 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 2250 LBS 2 PART LINE FOR LOADS OF 2250 LBS AND GREATER

WEIGHT OF LOAD BLOCK = 28 LBS



		07-10-24	C100
	4516E	SUPERSEDES -	28894

# **SECTION 150**

# SAFETY



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

# **CRANE SAFETY AND HAZARDS**

# **CAUTIONS**

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

## DANGER

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

# YOU MUST NOT OPERATE THIS CRANE, UNLESS:

- 1. YOU HAVE BEEN TRAINED IN THE SAFE OPERATION OF THIS CRANE, AND
- 2. YOU KNOW AND FOLLOW THE SAFETY AND OPERATING RECOMMENDATIONSCONTAINED IN THE MANUFACTURER'S MANUALS, YOUR EMPLOYER'S WORK RULES, AND APPLICABLE GOVERNMENT REGULATIONS. AN UNTRAINED OPERATOR SUBJECTS HIMSELF AND OTHERS TO DEATH OR SERIOUS INJURY.

# **ELECTROCUTION HAZARD**

- THIS MACHINE IS NOT INSULATED.
- MAINTAIN SAFE CLEARANCES FROM ELECTRICAL LINES AND APPARATUSES.
- YOU MUST ALLOW FOR BOOM SWAY, ROCK, OR SAG, AND ELECTRICAL LINE AND LOAD-LINE SWAYING
- THIS LIFTING DEVICE DOES NOT PROVIDE PROTECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTRICALLY CHARGED CONDUCTOR.
- YOU MUST MAINTAIN A CLEARANCE OF AT LEAST 10 FEET BETWEEN ANY PART OF THE CRANE, LOAD-LINE, OR LOAD, AND ANY ELECTRICAL LINE OR APPARATUS CARRYING UP TO 50,000 VOLTS. REFER TO DRAWING 15394 FOR ADDITIONAL INFORMATION.
- DEATH OR SERIOUS INJURY WILL RESULT FROM CONTACT OR INADEQUATE CLEARANCES.

# OVERLOAD SENSING SYSTEM - STANDARD ON ALL CRANES

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

NOTICE - WARRANTY VOID IF DISCONNECTED

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

DO NOT DISCONNECT THIS SYSTEM

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

# 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



S LLC	SA

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							
over 345 - 750							
over 750 - 1000	. 20						
Over 1000							
	professional engineer who is a qualified person with respect to						
	electrical power transmission and distribution).						

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

CINCINNATI, OHIO



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

DECAL #: 15390

CAUTION, INSPECT VEHICLE & CRANE... DESCRIPTION:

PURPOSE: TO INFORM THE OPERATOR OF KEY OPERATING REQUIREMENTS.

QUANTITY:

REAR COVER OR SIDE OF CRANE PLACEMENT:



DECAL #: 15391

DESCRIPTION: DANGER, NOT A PASSENGER LIFT

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

PERSONNEL, AND TO ENSURE OPERATOR IS ADEQUATELY TRAINED.

QUANTITY:

PLACEMENT: REAR COVER OR SIDE OF CRANE



**OPERATE THIS CRANE UNLESS:** 

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

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

15392 DECAL #:

DESCRIPTION: DANGER, ELECTROCUTION HAZARD, MACHINE (CRANE)

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

ELECTROCUTION HAZARD SHOULD IT COME CLOSE TO OR IN CONTACT

WITH AN ELECTRICAL VOLTAGE SOURCE.

QUANTITY: 1

PLACEMENT: REAR COVER OR SIDE OF CRANE



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

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

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

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

DECAL #: 15401

DESCRIPTION: DANGER, UNLAWFUL TO OPERATE

PURPOSE: TO INFORM OPERATOR OF PROPER OPERATION

IN VICINITY OF ELECTRICAL LINES.

QUANTITY:

PLACEMENT: RING COVER OR SIDE OF CRANE

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

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

DECAL #: 15393

DESCRIPTION: DANGER, ELECTROCUTION HAZARD, VEHICLE (TRUCK)

WARNS OF DANGER FROM ELECTRICALLY CHARGED PURPOSE:

VEHICLE, CRANE, OR LOAD.

QUANTITY:

PLACEMENT: EACH SIDE & EACH END OF VEHICLE







SAFETY DECALS

DATE

04-29-16E

SECTION C150

SUPERSEDES 10-24-13D

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

**VENTURO CRANES** 

TITLE

PART NO.: 15513

DECAL: MASTER DISCONNECT SWITCH

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

switch.

QUANTITY: 1

PLACEMENT: On master disconnect switch bracket.

PART NO.: 20927

DECAL: **CRANE STABILITY** 

FUNCTION: To inform the operator of the crane's lifting

capacity throughout the entire rotation.

QUANTITY: 1

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







CINCINNATI, OHIO

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

PART NO.: 14473-2

DECAL: CONDUCTIVE GREASE

FUNCTION: To show the operator where to apply grease.

QUANTITY: Varies

PLACEMENT: Near grease fittings.



PART NO.: 13397

DECAL: OIL LEVEL

FUNCTION: To inform the operator of proper oil level to

maintain.

QUANTITY: 1

PLACEMENT: Side of hydraulic power unit.

OIL LEVEL

AW46 or DEXRON III ATF

Retract All Cylinders
Prior to Servicing

3397-E

PART NO.: 15398

DECAL: UNPLUG REMOTE CONTROL

FUNCTION: To inform the operator to unplug remote

control when not in use.

QUANTITY: 1

PLACEMENT: Near pendant socket.

UNPLUG
REMOTE CONTROL
PENDANT WHEN
NOT IN USE



MANUFACTURING, INC.	
CINCINNATI, OHIO	

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

PART NO.: 28871-1 & 28871-2

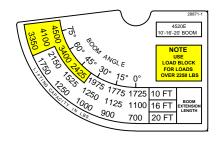
DECAL: CRANE CAPACITY (4520E) ▲

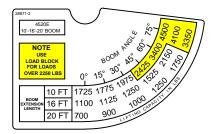
FUNCTION: To show the operator the operating

capacities of crane.

QUANTITY: 1 each

PLACEMENT: One on each side of boom.





PART NO.: 28873

DECAL: MODEL NUMBER (4520E)

FUNCTION: To show the model of the crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.

PART NO.: 28875-1 & 28875-2

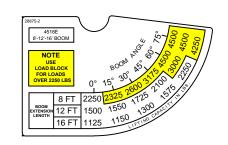
DECAL: CRANE CAPACITY (4516E) ▲

FUNCTION: To show the operator the operating

capacities of crane.

QUANTITY: 1 each

PLACEMENT: One on each side of boom.



**ENTUR** 

PART NO.: 28876

DECAL: MODEL NUMBER (4516E)

FUNCTION: To show the model of the crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.

4516E



PART NO.: 27007-05a & 27007-14a

DECAL: LOAD BLOCK CAPACITY

FUNCTION: To show the capacity of the load block.

QUANTITY: 2

PLACEMENT: One on each side of load block.

4516E ▲

LOAD BLOCK SPECIFICATIONS

RATED CAPACITY: WEIGHT:

4,500 lbs 28 lbs

WARNING:
PART LINE FOR LOADS LESS THAN 2250 LBS.
PART LINE FOR LOADS 2250 LBS. & GREATER

4520E ▲

LOAD BLOCK SPECIFICATIONS

RATED CAPACITY: WEIGHT:

4,500 lbs 34 lbs

WARNING:

PART LINE FOR LOADS LESS THAN 2250 LBS. 2 PART LINE FOR LOADS 2250 LBS. & GREATER



VENCO VENTURO INDUSTRIES LLC
CINCINNATI, OHIO

MODEL/CAPCTY DECALS

02-19-25A

C150

4516E/4520E

02-16-24 **28818** 

SECTION

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

- ON CRANES EQUIPPED WITH AN OPTIONAL OVERLOAD ALARM, IT WILL ALSO SOUN IF AN OVERLOAD OCCURS, USE THE WINCH DOWN, BOOM UP OR BOOM IN FUNCTIONS TO RELIEVE THE OVERLOAD.

  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 LIWER THE BOOM SLIGHTLY BEFORE LIFTING THE LOAD.

  SEE MANUAL FOR TESTING OVERLOAD SYSTEM.

#### NOTICE - WARRANTY VOID IF DISCONNECTED

DO NOT DISCONNECT THIS SYSTEM

PART NO.: 14459 (WITH OPTIONAL ALARM)

OVERLOAD ALARM SYSTEM DECAL DECAL:

FUNCTION: To advise operator of overload 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.
- ALARM CAN BE TESTED BY TYING DOWN BOOM WITH WINCH CABLE AND OPERATING

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

28870-1

VALVE MANUAL **OVERRIDE** BOOM

IN

BOOM DOWN

ROTATION LEFT

VAI VF MANUAL OVERRIDE

BOOM OUT

BOOM UP

ROTATION RIGHT

PART NO.: 19315-2

DECAL: MANUAL OVERRIDE (PROPORTIONAL)

FUNCTION: To show operator how to override proportional valve.

QUANTITY: 1

PLACEMENT: Location may vary.

**OVERRIDE POSITION IS INTENDED** FOR EMERGENCY USE ONLY.



**PROPORTIONAL** 

**ROTATE STEM** 



ADDITIONAL DECALS	7.001110147.L	DE OTTEO
	ADDITIONAL	<b>DECALS</b>

SUPERSEDES 28819 04-05-24

SECTION

C150

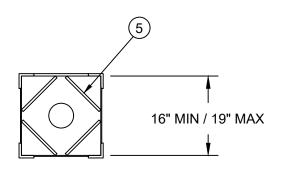
40\*\*E/45\*\*E

# **SECTION 200**

# INSTALLATION



# TYPICAL SERVICE BODY REINFORCEMENT

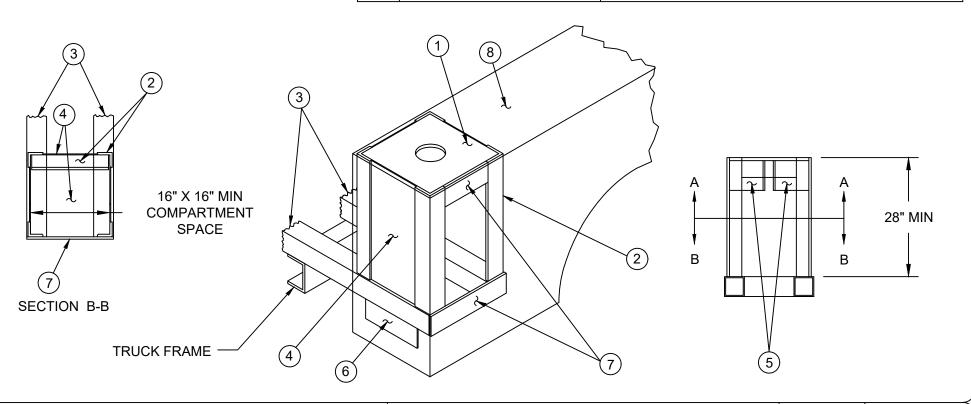


SECTION A-A

## 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				

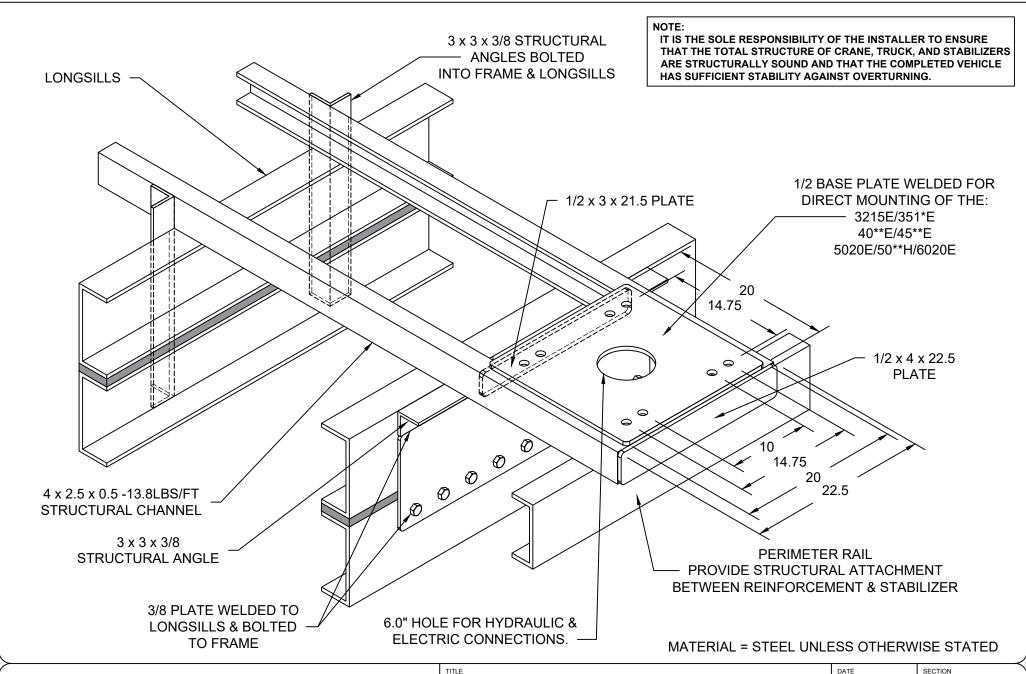




VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TYPICAL SERVICE BODY REINFORCEMENT	02-16-24	C100
45**E/40**E	SUPERSEDES	2

# TYPICAL FLATBED MOUNTING REINFORCEMENT





VENCO VENTURO INDUSTRIES LLC
CINCINNATI. OHIO

Ì	22455/254*5/40**5/45**5/50205/50**11/60205	SUPERS
	TYPICAL FLATBED MNTNG REINFORECMENT	02-1
١	TITLE	DATE

2-16-24 C100
PERSEDES 28817

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

# !! 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	EL TOTAL LENGTH OF CABLE (FT) *								12 VOLT AUXILIARY BATTERY REQUIREMENTS	
								CCA (A) **	RC (MIN) ***	
2010E	#2	#2	#1	#0	#00	NOT R	ECOMN	MENDED	450	100
3215E 3515E 3516E	3515E							550	150	
4016E 4020E 4516E 4520E 5020E 6020E										

- \* 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.

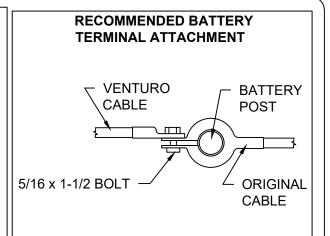
	VENCO VENTURO INDUSTRIES LLC	CABLE & BATTERY	02-19-24	C200	
ENION	CINCINNATI, OHIO	ELECTRIC CRANES	SUPERSEDES	28820	$\Big]$

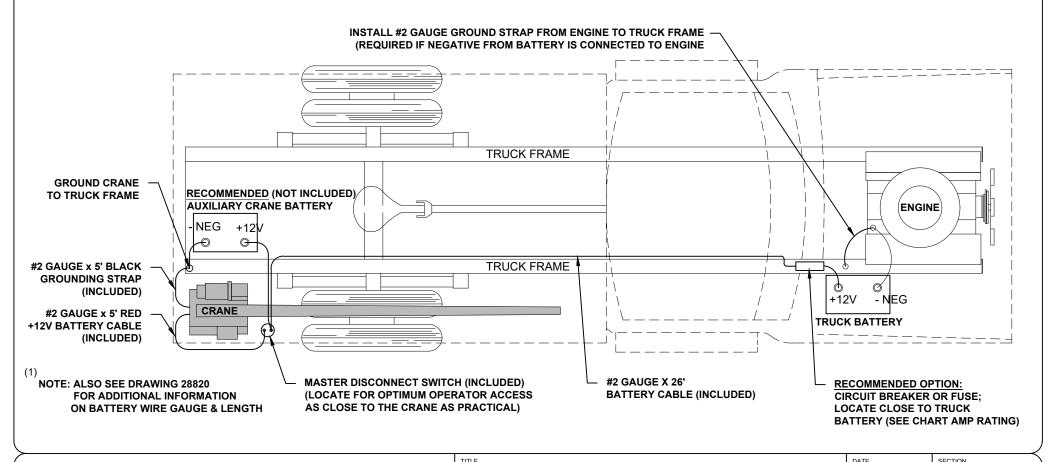
RECOMMENDED CIRCUIT BREAKER TABLE			
CRANE DESCRIPTION		PART NO.	
2010E 300 AMP, MAN RESET		22946-300	
3215E	300 AMP, MAN RESET	22946-300	
3515E/3516E 300 AMP, MAN RESET		22946-300	
4016E/4020E	300 AMP, MAN RESET	22946-300	
4516E/4520E	300 AMP, MAN RESET	22946-300	
5020E 300 AMP, AUTO RESET		22946-300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







VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

BATTERY CABLE & COMPONENT INSTALL
ET CRANES

DATE SECTION C200 SUPERSEDES SOME SECTION C200

# STABILITY TEST - 4520E 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>1000 lbs</u>, (includes load block weight of <u>34</u> lbs.) to a *maximum of* 1050 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
	2/15	

- 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	TABILITY TEST 02-19-24	C200		
CINCINNATI, OHIO	4520E	SUPERSEDES -	20906-4520E	

# STABILITY TEST - 4516E 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**

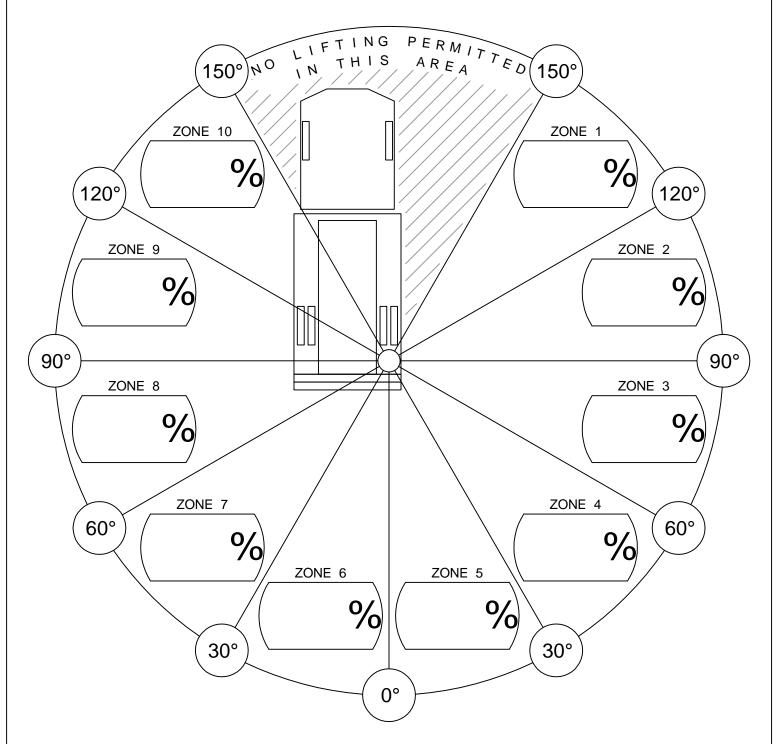
- 1. Locate the truck on firm, level ground and set parking brake.
- 2. Fully deploy stabilizers, making sure they are firmly in contact with supportive ground; use stabilizer pads as required. The tires of the truck should remain in full contact with the ground.
- 3. Inspect wire rope and other key 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>1321 lbs</u>, (includes load block weight of <u>28</u> lbs.) to a *maximum of* 1400 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
	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	08-14-24	C200	ı
CINCINNATI, OHIO	4516E	SUPERSEDES -	20906-4516E	,

# **CRANE STABILITY**



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

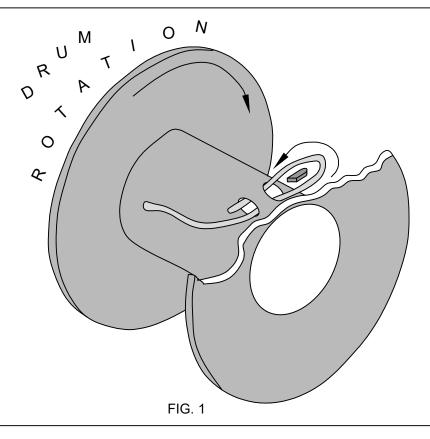
# **CONDITIONS:**

 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.

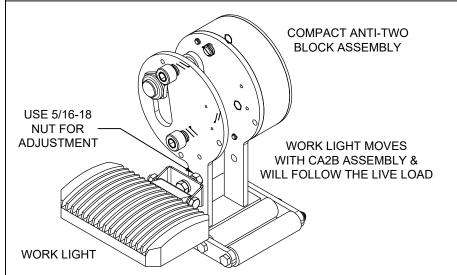
# **CAUTION**

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

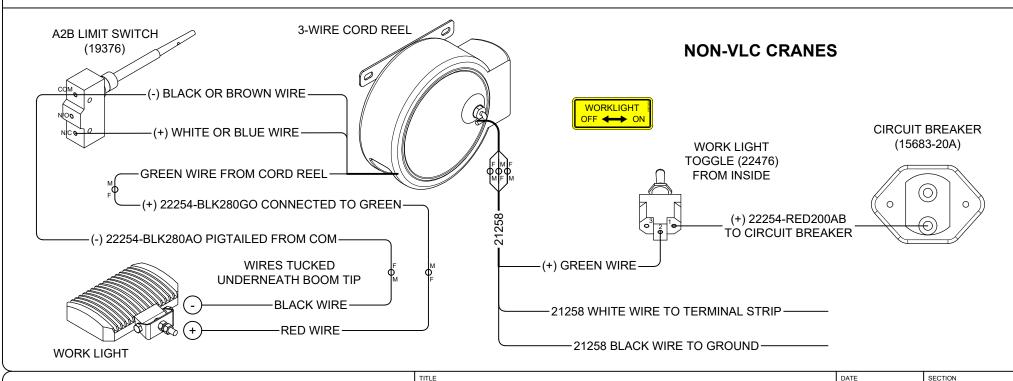
NOTE: SOME WINCHES MAY BE SUPPLIED WITH A HEX NUT IN LIEU OF A WEDGE FOR INSTALLING THE WIRE ROPE.

1	<b></b>		TITLE	DATE	SECTION	١
		R VENCO VENTURO INDUSTRIES LLC	WIRE ROPE INSTALLTN	02-20-24	C200	
	ENION	CINCINNATI, OHIO		SUPERSEDES	00000	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

13-24 C400

NON-VLC CRANES -

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.

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO
---

TITLE	DATE	SECTION
OP & MAINT INSTR 1/3	02-18-25	C300
3200E - 4500E SERIES	SUPERSEDES	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.

<u>TRIGGER</u> (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.



TITLE	DATE	SECTION
OP & MAINT INSTR 2/3	02-18-25	C300
3200E - 4500E SERIES	SUPERSEDES	28853

# **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.

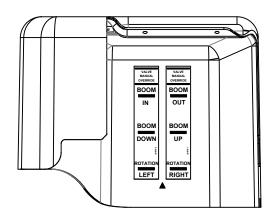


Master Disconnect Switch (power) must be turned "OFF" when the crane is not in use! If corded, the pendant must be unplugged from the crane socket. Failure to follow these steps may result in dangerous, unintentional activation of the crane functions.



OP	&	MAINT	<b>INSTR</b>	3/3
TITLE				

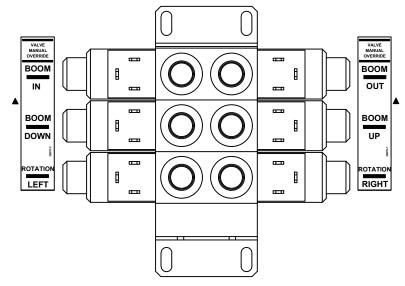
# !! READ ALL INSTRUCTIONS BEFORE PERFORMING MANUAL OVERRIDE PROCEDURES !!

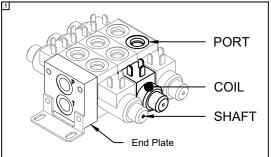


Each valve station incorporates [2] hydraulic ports and [2] coils. Manual override shafts are located in the center of the coils (see figure 1). Manual override decals are placed on each crane inside the plastic cover near the valve assembly. These decals provide a visual aid that helps the operator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

#### 2-STATION FUNCTIONS:

Boom In **Boom Out** ВΙ = BD Boom Down BU Boom Up RL Rot. Left RR 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:

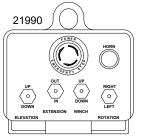
- Turn Master disconnect switch to "ON"
- 2. Power up the pendant / radio
  - PENDANT twist EMERGENCY STOP button clockwise 2.1.
  - 2.2. RADIO - Press green ON button
- Inside the plastic cover, reference the function you wish to perform using the manual override
- Using a tool with a diameter of 1/8"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

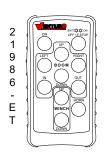
For assistance, please feel free to contact Technical Support at 800-226-2238.

CINCINNATI, OHIO

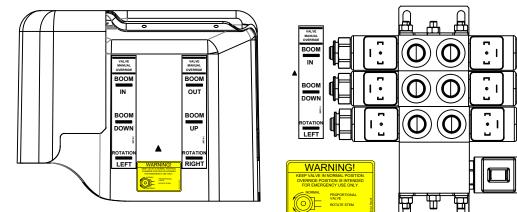


MAN. OVERRIDE INSTR.	04-03-25A	C200
3215E/351*E/40**E/45**E NON-PROPORTIONAL VALVE	SUPERSEDES 02-21-24	288





#### 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:

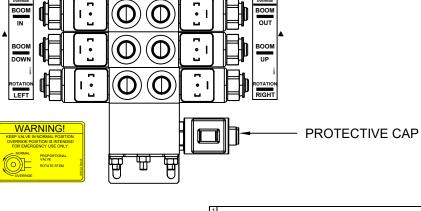
Rot. Right RL RR Rot. Left = BU Boom Up **Boom Down** BD Boom Out ΒI Boom In BO

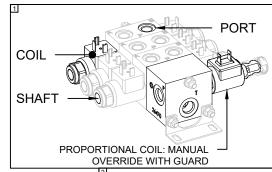
ALWAYS BE SURE TO CHECK HYDRAULIC OIL LEVEL BEFORE PROCEEDING. IT IS RECOMMENDED TO REMOVE ANY ITEM(S) THAT MAY INTERFERE WITH OPERATING THE CRANE MANUALLY. IF POSSIBLE, STRAPS AND/OR HARNESSES SHOULD BE REMOVED BEFORE OPERATING A CRANE IN MANUAL OVERRIDE!! Procedure:

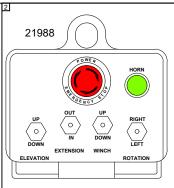
- Turn Master disconnect switch to "ON" 1.
- Remove Protective cap 2.
- 3. Rotate Valve Stem Clockwise to close
- Power up the pendant / radio
- Twist EMERGENCY STOP button clockwise 4.1.
- Inside the plastic cover, reference the function you wish to perform using the manual override decal
- Using a tool with a diameter of 1/8" or smaller, press the shaft inward and hold
- 7. 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 9.1.
- 9.2. Remove tool from shaft
- 9.3. Go to step 5

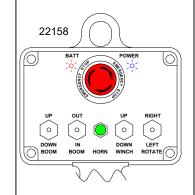
For assistance, please feel free to contact Technical Support at 800-226-2238.

CINCINNATI, OHIO



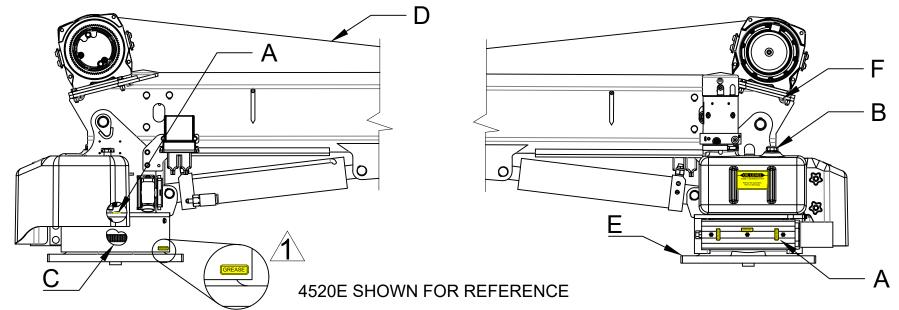








.c	MAN. OVERRIDE INSTR.	04-	_	SECTION C200
	3215E/351*E/40**E/45**E PROPORTIONAL VALVE	00	-21-24	28827



#### 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

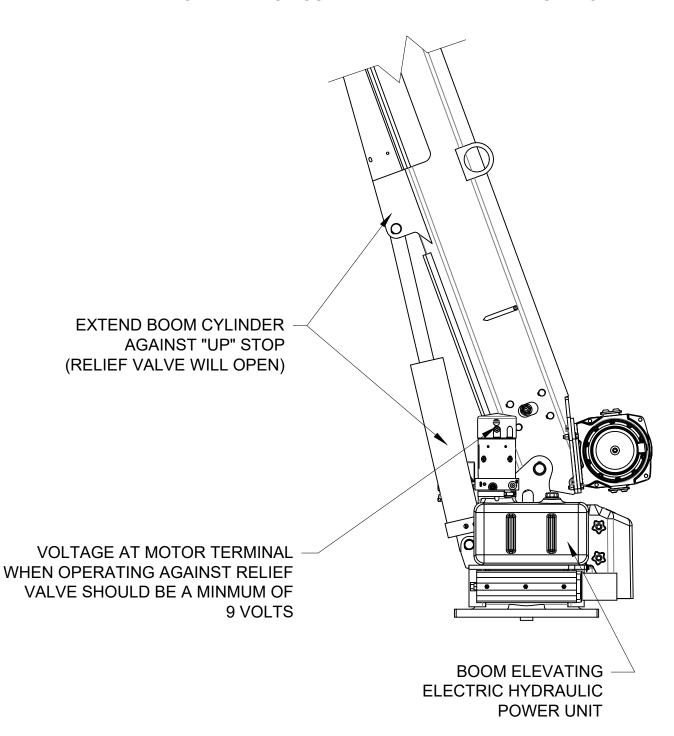
<sup>\* 32</sup> FT-LBS FOR 3215E/351XE WITH GTD-2200 COMEUP WINCH. SEE PAGE 28846 FOR WINCH IDENTIFICATION.



LUBRICATION & MAINTENANCE CHART	02-20-24 SUPERSEDES	C300
3215E/351*E/40**E/45**E	-	28823

## 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



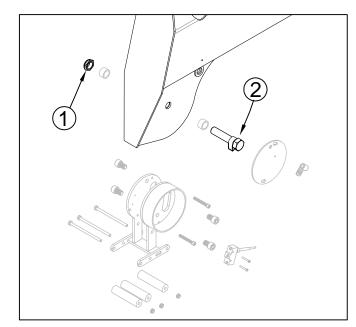


-	WIINIWOW VOLTAGE TEST	UZ-ZU-Z4 SUPERSEDES	C300
	MINIMUM VOLTAGE TEST	02-20-24	C300

## 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.
- 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

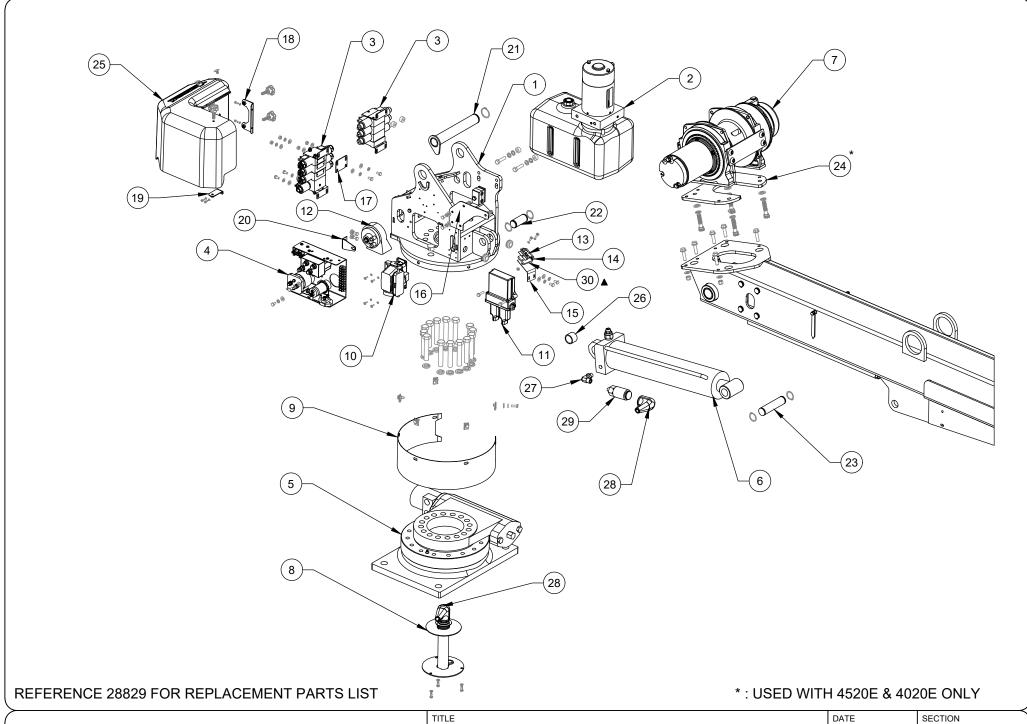


A2B Stowage Cut-out	10-04-21B	C400
ET/HT Cranes w/ Comp. A2B	SUPERSEDES 08-03-21A	28239

# **SECTION 400**

# REPLACEMENT PARTS







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

06-17-25A C400

0400

40\*\*E/45\*\*E

07-30-24

SUPERSEDES

28828

ITEM NO	NON-PROP	PROP	DADT NUMBER	DECORIDATION		
ITEM NO.	QT	Υ.	PART NUMBER	R 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		

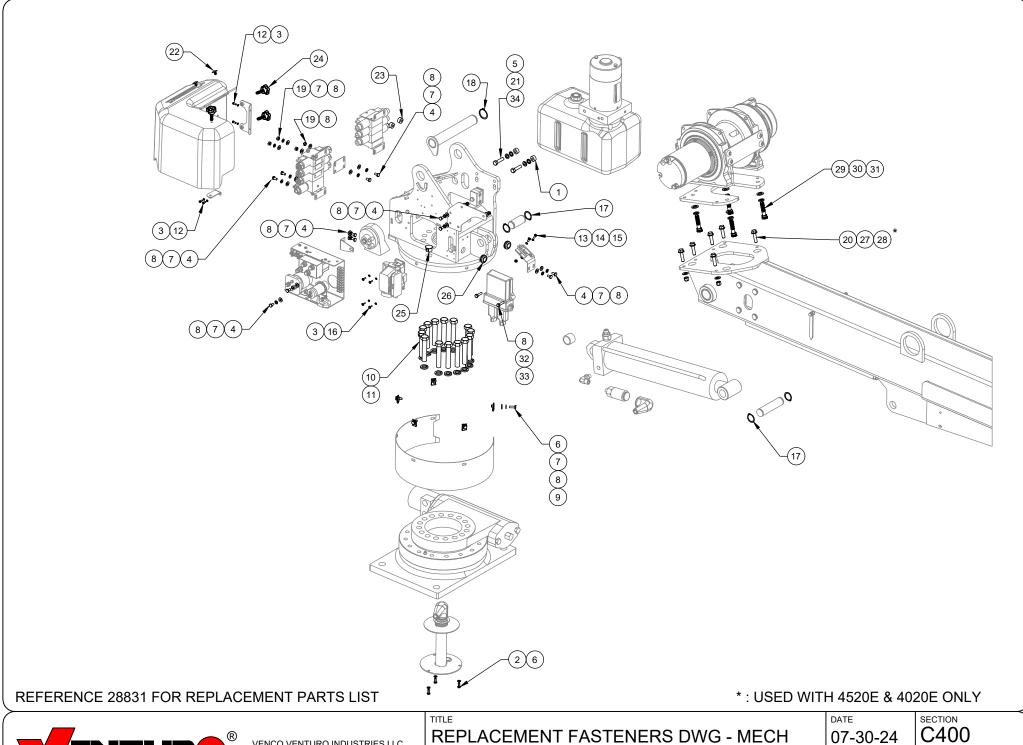
ITEM NO.	4520E	4516E	4020E	4016E	PART NUMBER		
II EW NO.		Q1	Y.		PARI NUMBER		
	1	-	-	-	17460-2900-21		
29	-	1	1	-	17460-2700-21		
	-	-	-	1	17460-2200-21		

#### 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	28829





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

REPLACEMENT FASTENERS DWG - MECH

07-30-24

SUPERSEDES

40\*\*E/45\*\*E

28830

	ITEM NO	NON-PROP	PROP		DESCRIPTION
	ITEM NO.	QTY	<b>/</b> .	PART NUMBER	DESCRIPTION
	1*	2	2	28804	ALUMINUM SPACER
	2	3	3	!LWSH-025-STAR-SS	LOCK WASHER, 1/4" STAR, SS
Ī	3	8	8	!LWSH-08S	LOCK WASHER; #08, SS
	4	10	12	!HHCS02520050S	HEX HEAD CAP SCREW 1/4-20 X 1/2 LG, SS
Ī	5	2	2	!LWSH-038-STAR	LOCK WASHER, 3/8" STAR, ZINC
	6	8	8	!HHCS02520075S	HEX HEAD CAP SCREW 1/4-20 X 3/4 LG, 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 LG, GR 5, ZINC
`	11	14	14	!LWSH-063	LOCK WSHR; 5/8, ZINC
	12	4	4	!SHCS#0832038S	SHCS, #8-32 X 0.38" LG, SS
	13	2	2	!PHPMS#1024050S	PHILLIPS HEAD PAN, #10-24 X 1/2LG, SS
	14	2	2	!HNUT-#1024S	HEX NUT, 10-24, SS
	15	2	2	!LWSH-#10S	LOCK WASHER - #10, SS
	16	4	4	!SHPMS#0832050S	SLOT HEAD, #8-32 X 1/2 LG, SS
	17	2	2	!SRNG-113	SNAP RING - 1-1/8" IN - PLATED
	18	1	1	!SRNG-138	SNAP RING - 1-3/8 IN - PLATED
	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 LG 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	12	12	!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 1.0 LG, SS
ſ	34	2	2	!HHCS03816150-8	HHCS 3/8-16 X 1-1/2 LG GR 8, ZINC (KTI HPU)
	J <del>4</del>	2	2	!HHCS03816125-8	HHCS 3/8-16 X 1-1/4 LG GR 8, ZINC (BUCHER HPU)

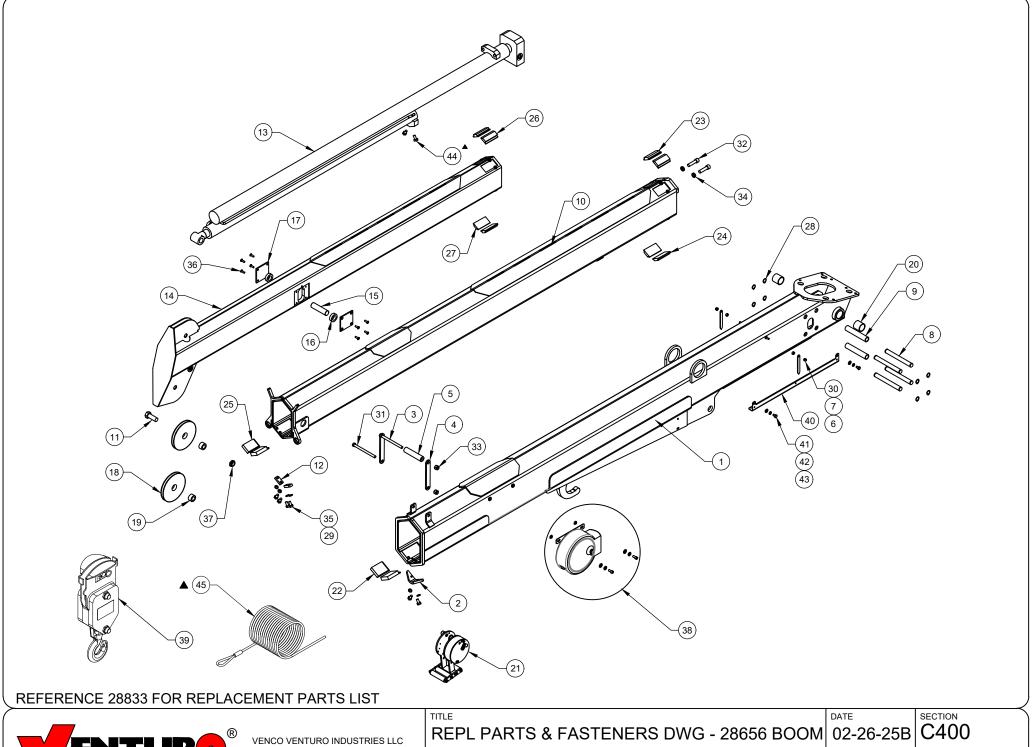
REFERENCE 28830 FOR REPLACEMENT PARTS DRAWING

CINCINNATI, OHIO

\*: USED WITH KTI HPU ONLY



REPLACEMENT FASTENERS LIST - MECH	02-25-25A	C400
40**E/45**E	SUPERSEDES 02-23-24	28831



VENCO VENTURO INDUSTRIES LLC

SUPERSEDES

4020E/4520E

11-19-24A

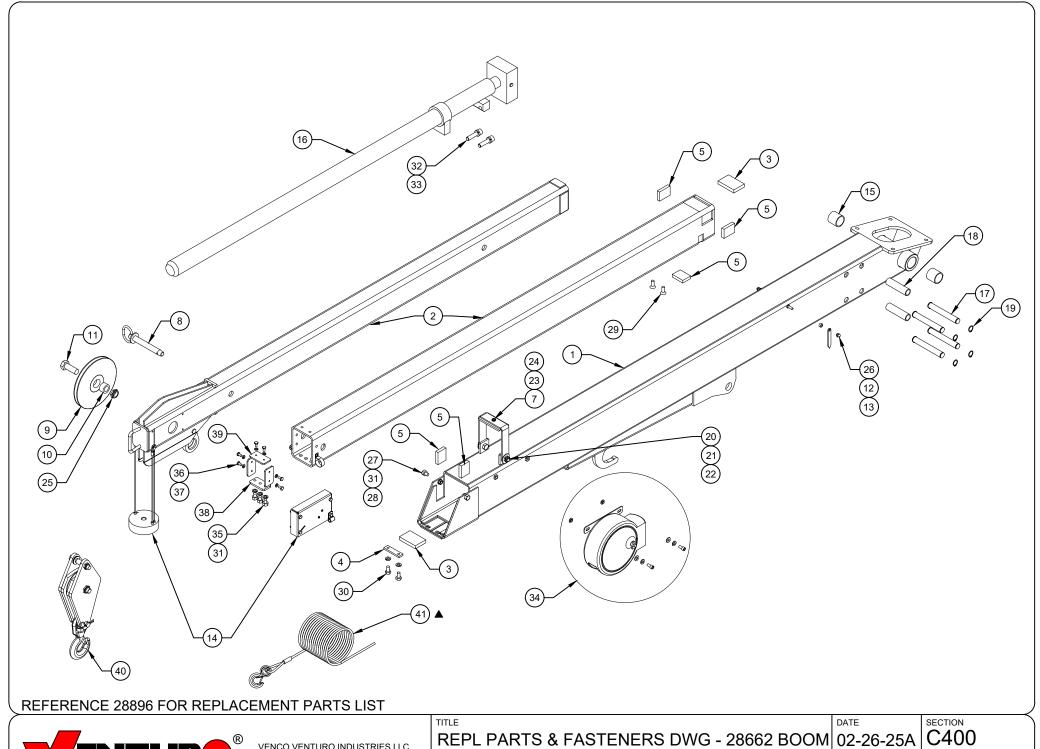
28832

## 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 02-26-25A

SUPERSEDES

4016E/4516E

08-01-24

28895

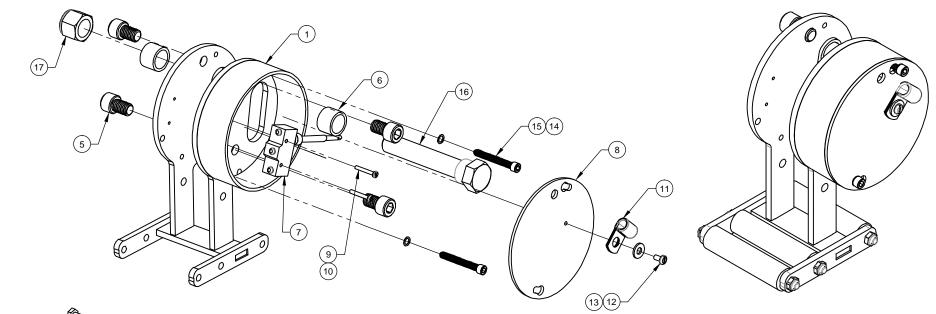
## REPLACEMENT PARTS & FASTENERS LIST - 28662 BOOM

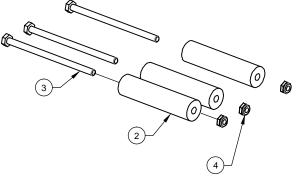
ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	28658	PRIMARY BOOM WELDED ASSEMBLY
2	1	21203	SECONDARY / TERTIARY WELDED ASSEMBLY
3	2	21208	BOOM BEARING - 2 X 3 X 1/2
4	1	21207	PRIMARY BEARING RETAINING BAR
5	5	21209	BOOM BEARING - 1-1/2 X 2 X 7/16
6	1	19880	CABLE GUIDE STRUCTURE
7	1	19881	CABLE GUIDE WEAR 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	!HHCS05013100-5	HEX HEAD CAP SCREW 1/2-13NC X 1 LG GR5
21	2	!FWSH-050	FLAT WASHER 1/2"
22	2	!JNUT-05013N	1/2-13 NYLON INSERT JAM NUT
23	1	!PHCS02520063	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	!HHCS03816050	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	!CACS03816100	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	4	!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	!HHCS03824050	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
40	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'

#### REFERENCE 28895 FOR REPLACEMENT PARTS DRAWING



## COMPACT A2B - 27469-\* - REPLACEMENT PARTS LIST





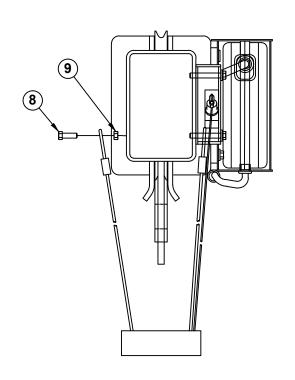
COMPACT A2B CONFIGURATIONS - 27469-*					
ITEM NO.	PART NUMBER	IUMBER -L-C-00 -L-C-11 -L-0-22 DESCRIPTION		DESCRIPTION	
1	27468	1	1	1	WLDMNT - COMPACT A2B FRAME LH
2	27475	3	3	3	WIRE ROPE GUIDE ROLLER
3	!HHCS02520450	3	3	3	HHCS 1/4-20 X 4-1/2 LG
4	!JNUT-02520N	3	3	3	NYLON INSERT JAM NUT - 1/4-20
5	27467	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

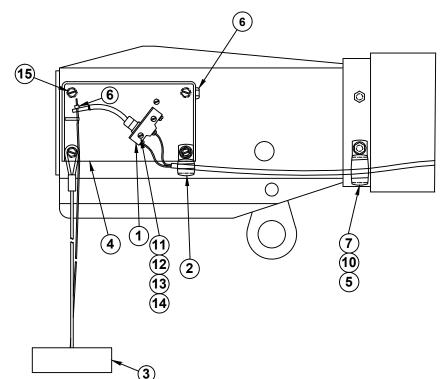


VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

REPLACEMENT PARTS LIST	7-10-24A	C400
COMPACT A2B - 27469-*	SUPERSEDES 06-11-24	26942

# **ANTI-TWO-BLOCK ASSY**





NO DASH: 4016E & 4516E

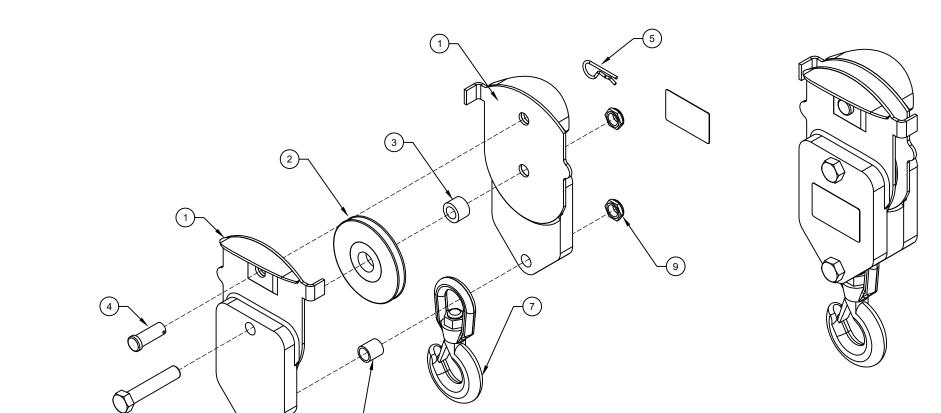
-1: 3215E & 3515E

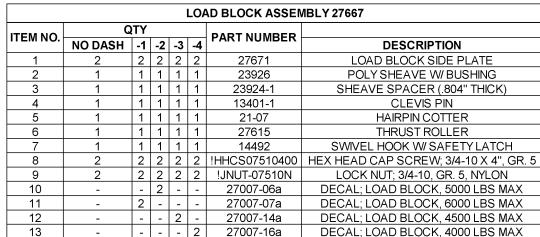
ITEM	Qī	ΓΥ	PART NO.	DESCRIPTION	
ITEIVI	NO DASH	-1	PARTNO.	DESCRIPTION	
1	1	1	19376	LIMIT SWITCH	
2	1	1	19269	CABLE CLAMP - SMALL	
3	-	1	19377-1	CABLE WEIGHT ASSY	
3	1	-	19377-2	CABLE WEIGHT ASSY	
4	1	1	21291	ANTI TWO-BLOCK HOUSING ASSEMBLY	
5	1	-	!LWSH-025	LOCK WASHER - 1/4"	
6	1	1	19302	SET COLLAR - 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	04-16-25	C400
3215E, 3515E, 4016E, 4516E	SUPERSEDES -	28861

#### REPLACEMENT PARTS LIST - 27667 LOAD BLOCK







VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

 $\left( 6\right)$ 

REPLACEMENT PARTS LIST -27667 LOAD BLOCK

09-13-24

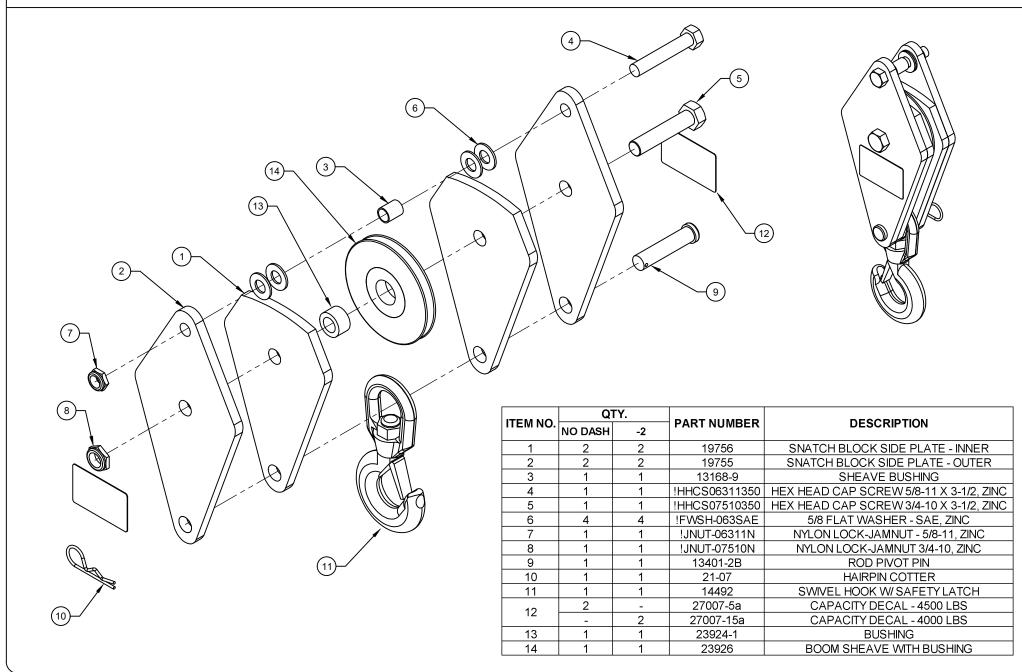
C400

SECTION

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

SUPERSEDES 28856

## REPLACEMENT PARTS LIST - 23169 LOAD BLOCK





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

REPLACEMENT PARTS LIST -23169 LOAD BLOCK

09-16-24

C400

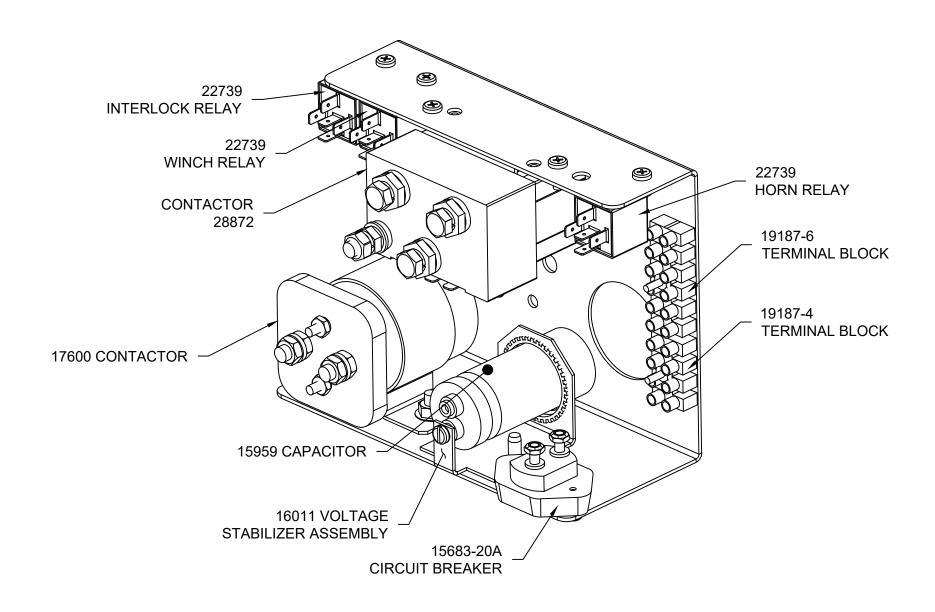
4016E/4516E

SUPERSEDES

DATE

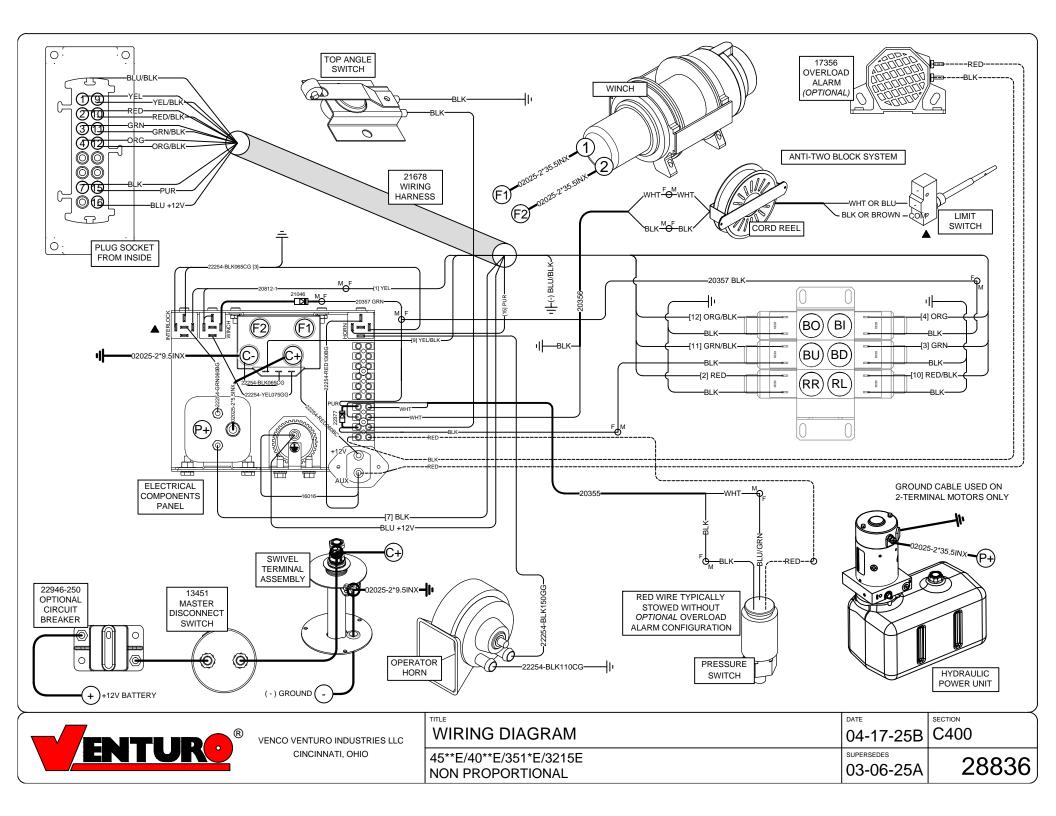
28950

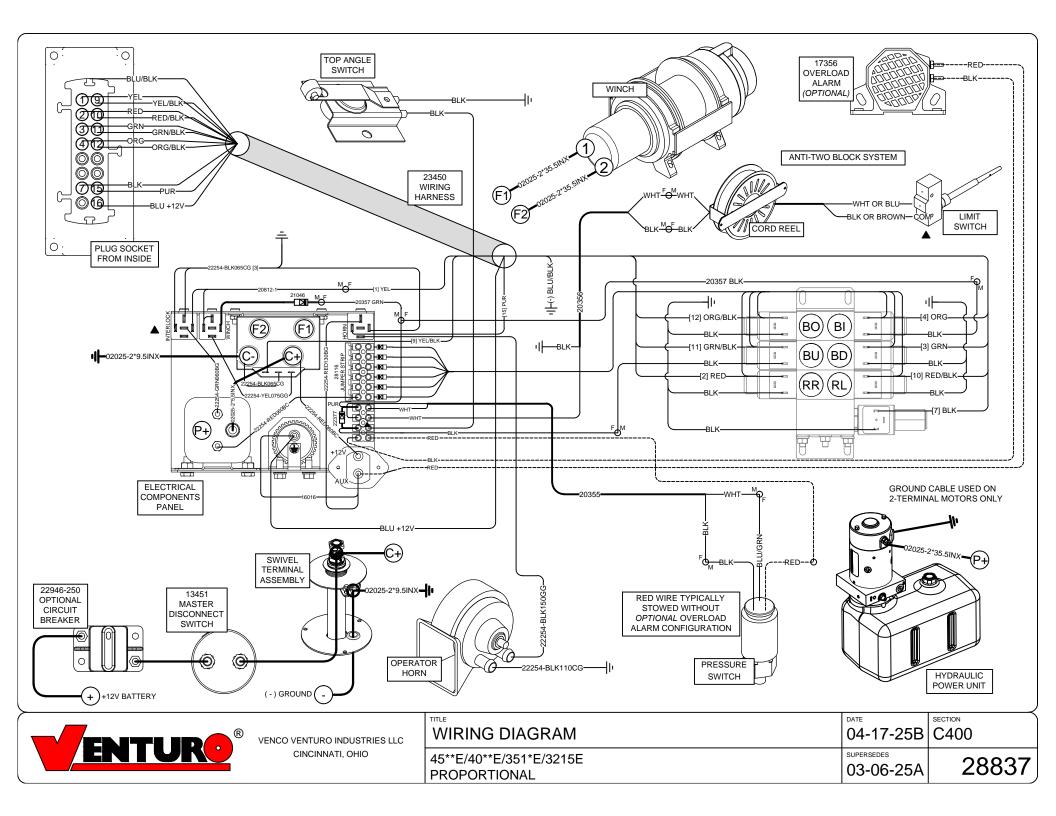
# 28700 ELECTRICAL COMPONENT ASSEMBLY



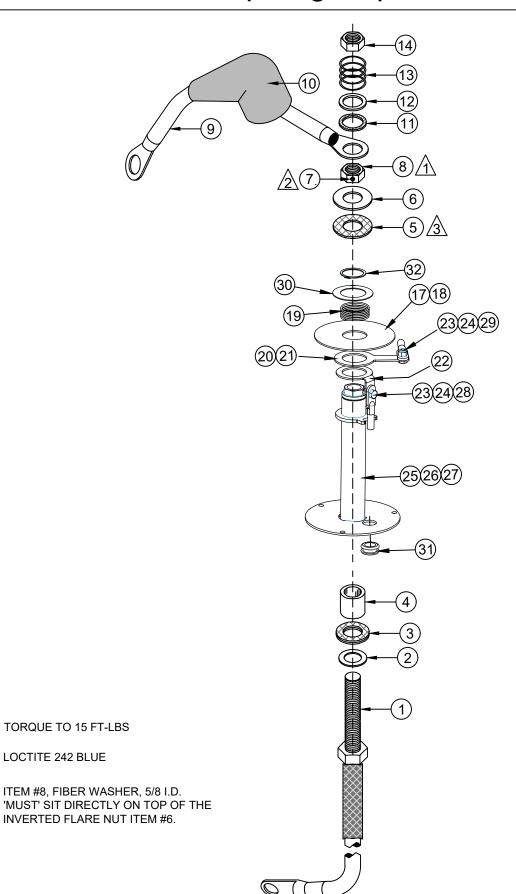


TITLE	DATE	SECTION
ELECTRICAL COMPONENT ASSEMBLY	04-09-24	C400
	SUPERSEDES	20025
3215E/351*E/40**E/45**E	-	28835





# 2-Pole Slip-ring Replacement Parts





VENCO VENTURO INDUSTRIES LLC

CINCINNATI, OHIO

REPL. PARTS ILLUSTRATION

04-23-24

C400

**ET CRANES** 

SUPERSEDES 28843

SECTION

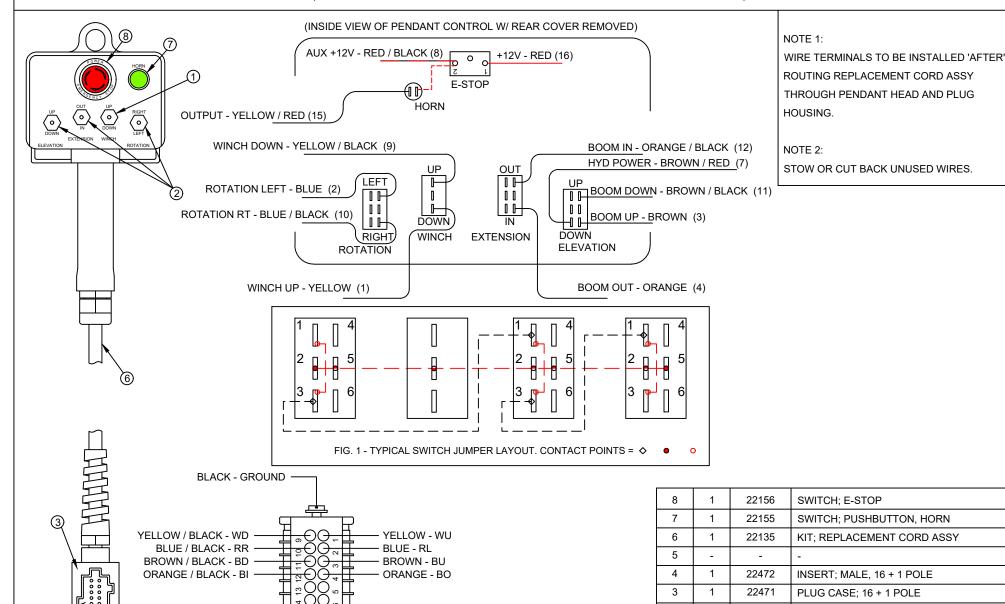
# 2-Pole Slip-ring Replacement Parts

Slew Rotation 2-Pole Slip-Ring (2010E ONLY)	Slew Rotation 2-Pole Slip-Ring (3215E/351*E/40**E/45**E)	Slew Rotation 2-Pole Slip-Ring (5020E/6020E)	T ALL CRANES	16780 BILLS OF MATERIALS			
16780 - 2P6	16780 - 2P8	16780 - 2P25	16780 - KIT				
			·	#	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"	
					14233	100100000000000000000000000000000000000	
1	1	1	1	4	00 85004 505	INSULATING BUSHING; 5/8" I.D. X 7/8" O.D. X 7/8"	
1	1	1	1	5	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	1	1	-	17 18	27456 27456-1	UHMW WATER SHIELD, (ET6K ONLY) UHMW WATER SHIELD, (ET8 - ET36)	
1	1	1	-	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	
1	1	1	-	24	!HNUT-03118-B	BRASS NYLOC NUT	
1 -	1	-	-	25 26	23255 23255-1	SLIP-RING, WELDED ASSY, ET6K SLIP-RING, WELDED ASSY, ET8 - 18K(X)	
-	-	1	-	27	23255-2	SLIP-RING, WELDED ASSY, ET05 - 16K(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	-	30	27463	SHIM, WIDE RIM, 18GA, 2-1/4 O.D. X 1-1/2 I.D.	
1	1	1	E	31	20889	RUBBER GROMMET	
1	1	1	-	32	!SRNG-150	SNAP-RING, EXTERNAL, 1-1/2"	



16780 REPLACEMENT PARTS 04-23-24 C400	SUPERSEDES -	2884
	CEMENT PARTS 04-23-24	RTS 04-23-24 C400
TITLE DATE SECTION	DATE	DATE SECTION

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



BROWN / RED - HYD POWER UNIT CONTACTOR

<b>ENTURO</b> ®
-----------------

16-PIN PLUG ASSY.

YELLOW / RED - HORN

**RED - 12V+** 

16-PIN PLUG - BACKSIDE VIEW

CINCINNATI, OHIO

VENCO VENTURO INDUSTRIES LLC

RED / BLACK - AUX 12V+

SECTION REPLACEMENT PARTS DWG & LIST C400 04-22-24 21990 PNDNT; 4 FNCTN ET CRNS, ESTP/HRN

3

QTY

22152

22081

PART NO.

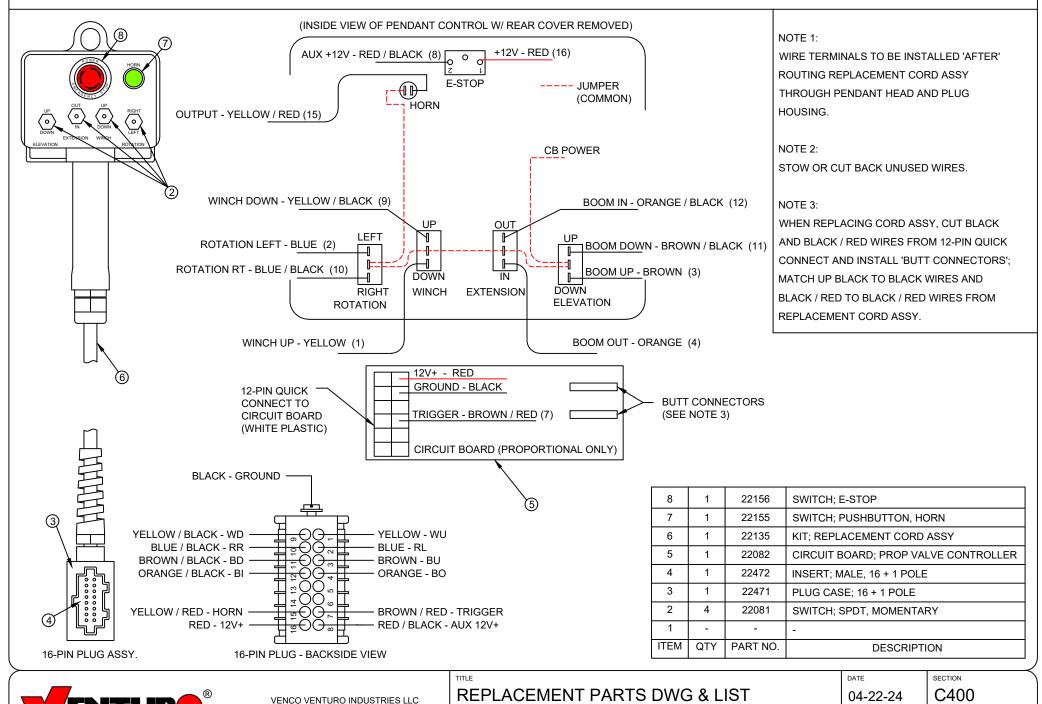
SWITCH; DPDT, MOMENTARY

SWITCH; SPDT, MOMENTARY

DESCRIPTION

2

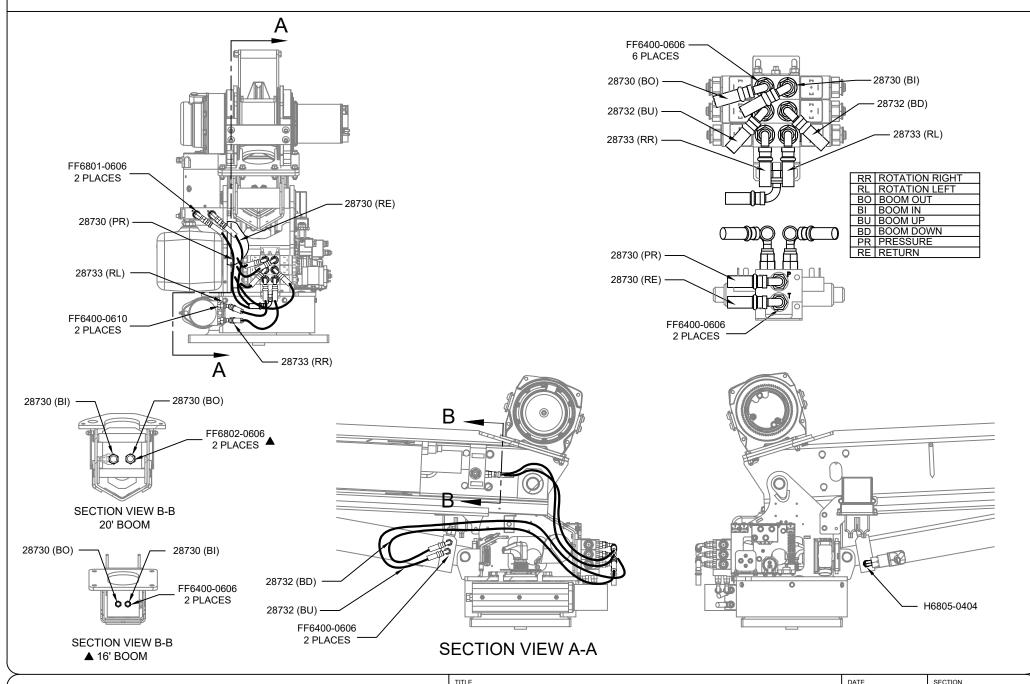
# 21988 PENDANT; PROP, NO ENG CNTRL, E-STOP / HORN



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

CINCINNATI, OHIO

# HYDRAULIC COMPONENTS DRAWING





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

HYDRAULIC COMPONENTS DRAWING

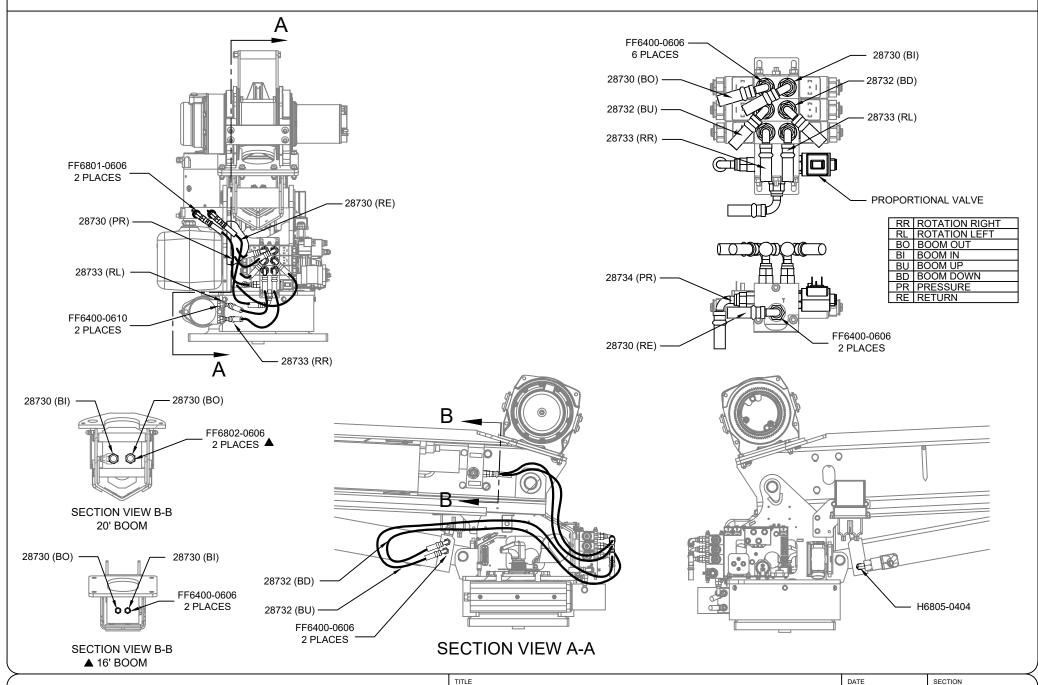
03-06-25A

C400

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

04-16-24 28838

# HYDRAULIC COMPONENTS DRAWING



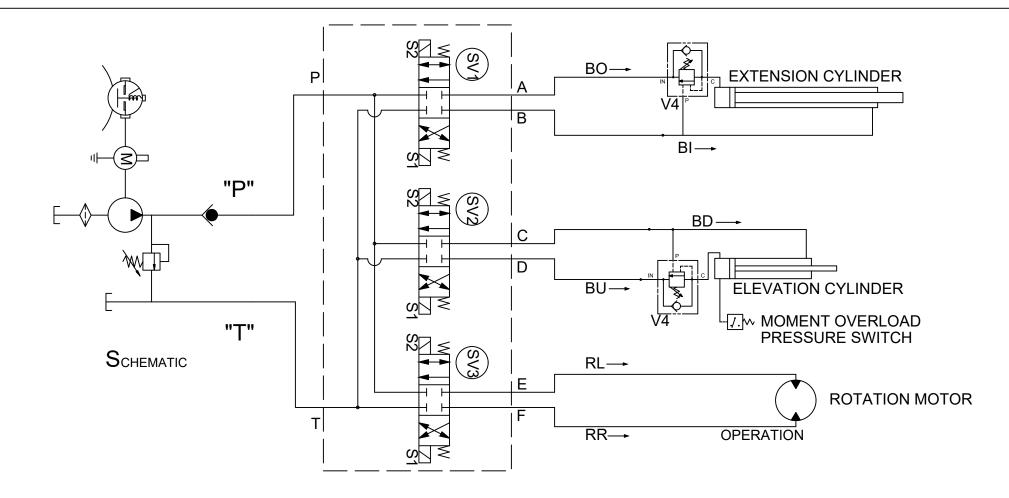


VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO HYDRAULIC COMPONENTS DRAWING
45\*\*E/40\*\*E/3516E, PROPORTIONAL

03-06-25A C400 SUPERSEDES

04-22-24 28839

# HYDRAULIC COMPONENT DIAGRAM



(SV1)

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

SV2

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

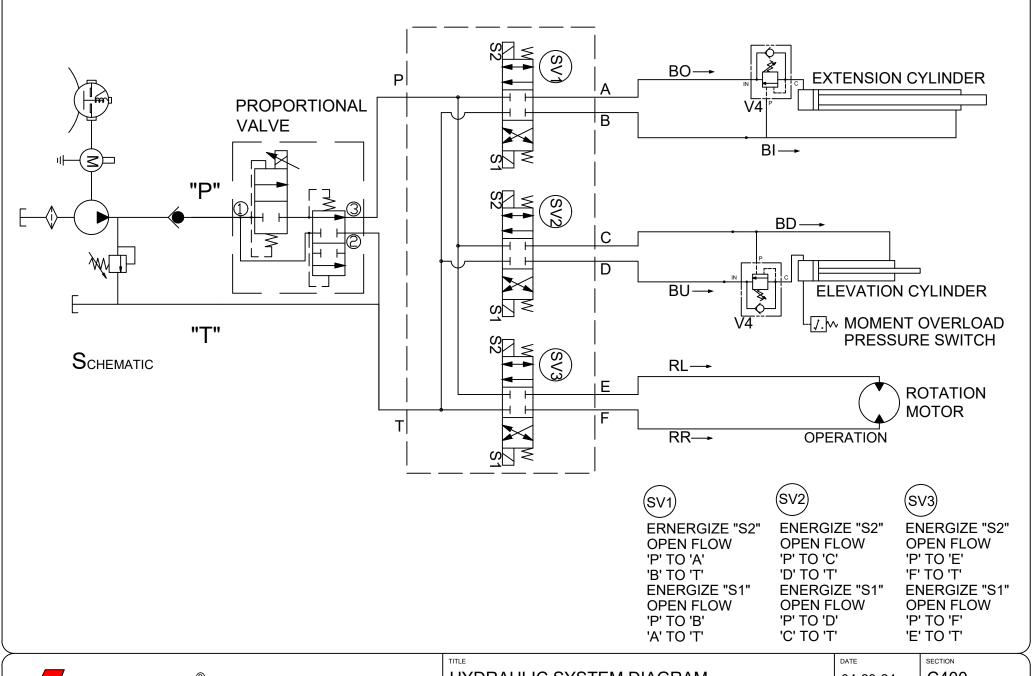
(SV3)

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



TITLE	DATE	SECTION
HYDRAULIC SYSTEM DIAGRAM	04-23-24	C400
40**E/45**E, NON PROPORTIONAL	SUPERSEDES	28844

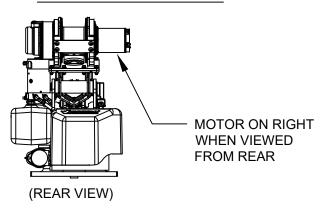
# HYDRAULIC COMPONENT DIAGRAM



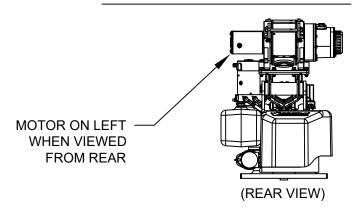


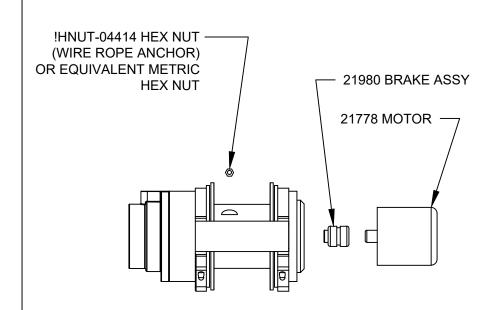
## 21215 WINCH REPLACEMENT PARTS

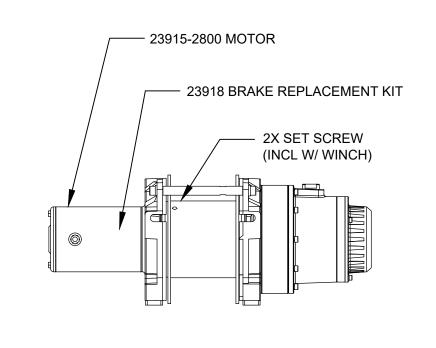
## WARN DC2500



## **COMEUP GTD-2800**





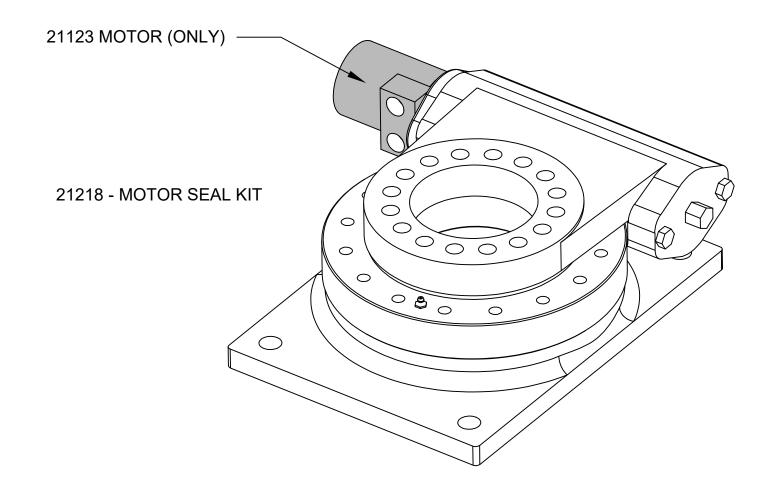




VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

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

# 21735-1 SLEWING SYSTEM REPLACEMENT PARTS

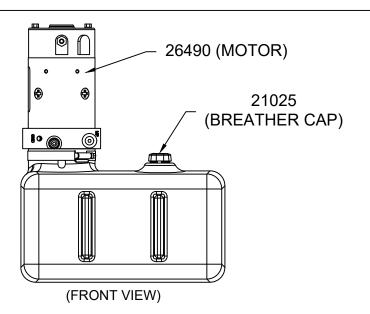




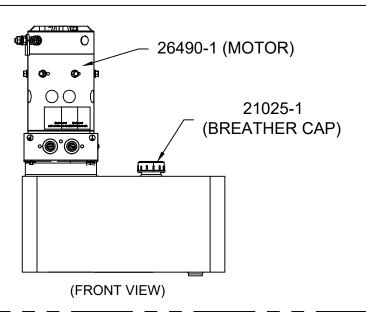
3215E/351*E/40**E/45**E	SUPERSEDES	28847	
SLEWING SYSTEM REPLACEMENT PARTS	04-24-24	C400	
TITLE	DATE	SECTION	

## 28720 HYD. POWER UNIT REPLACEMENT PARTS

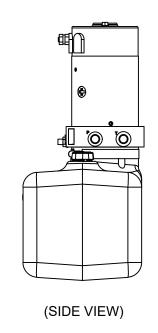
## **BUCHER**



## KTI

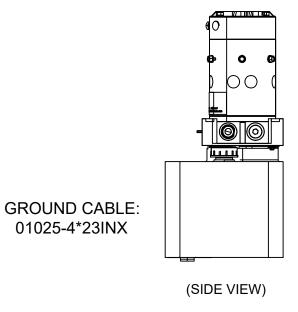


## **BUCHER**



KTI

01025-4\*23INX



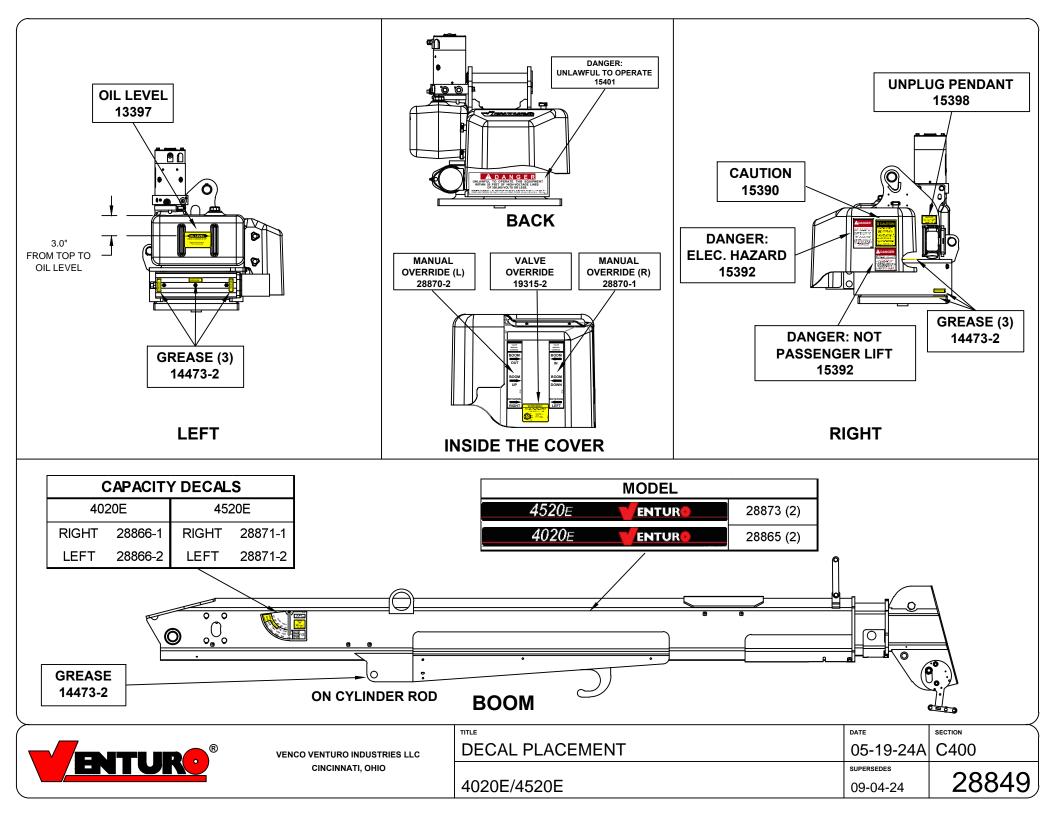


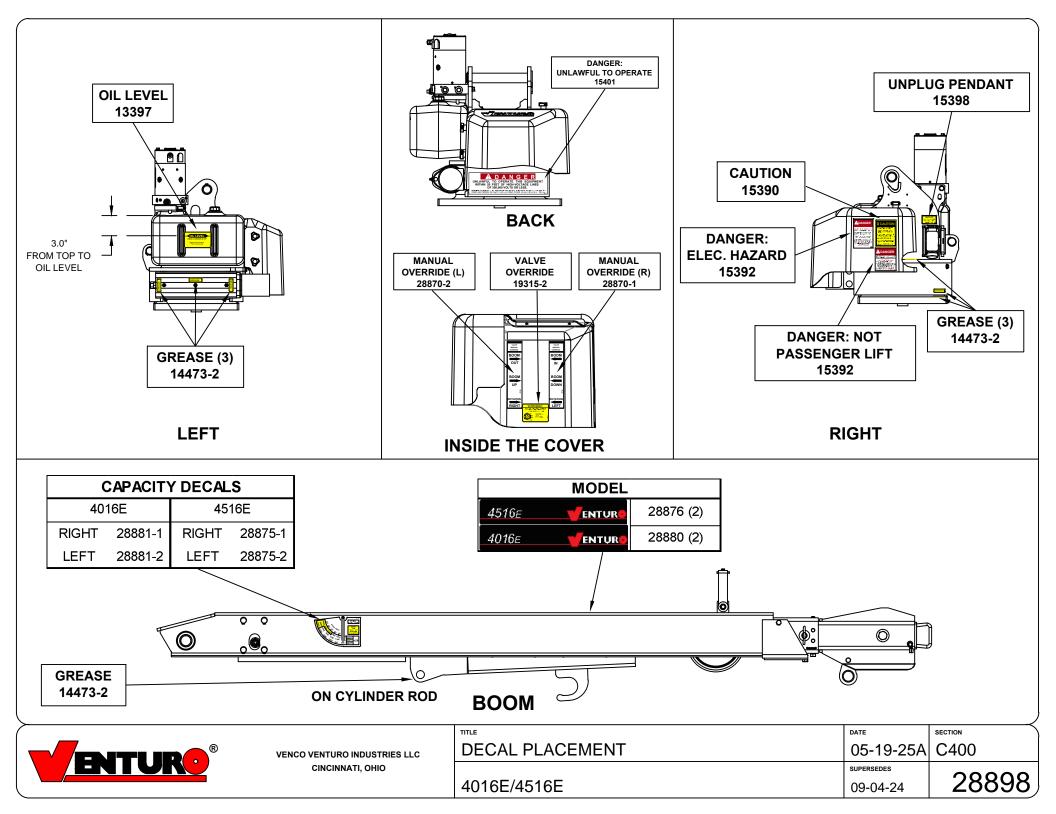
**NO GROUND** 

**CABLE NEEDED** 

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE		DATE	SECTION
HYDRAUI	LIC POWER UNIT REPLACEMENT PARTS	04-24-24	C400
3215E/3	51*E/40**E/45**E	SUPERSEDES	28848





# 4520E FIELD SERVICE LABEL KITS

#### 28850: FSLK 4520E NON PROP

PART NUMBER	QTY.	DESCRIPTION	
14473-2	6	DECAL; GREASE	
28873	2	DECAL; MODEL 4520E	
28871-1	1	DECAL; BOOM CAPAICTY - RIGHT, 4520E	
28871-2	1	DECAL; BOOM CAPACITY - LEFT, 4520E	
13397	1	DECAL; OIL LEVEL	
28870-1	1	DECAL; MANUAL OVERRIDE, RIGHT	
28870-2	1	DECAL; MANUAL OVERRIDE, LEFT	
28851	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	

#### 28850-1: FSLK 4520E PROP

PART NUMBER	QTY.	DESCRIPTION
14473-2	6	DECAL; GREASE
28873	2	DECAL; MODEL 4520E
28871-1	1	DECAL; BOOM CAPAICTY - RIGHT, 4520E
28871-2	1	DECAL; BOOM CAPACITY - LEFT, 4520E
13397	1	DECAL; OIL LEVEL
28870-1	1	DECAL; MANUAL OVERRIDE, RIGHT
28870-2	1	DECAL; MANUAL OVERRIDE, LEFT
28851	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



FIELD SERVICE LABEL KITS	08-28-24	C400
4520E	SUPERSEDES -	28851

# 4516E FIELD SERVICE LABEL KITS

#### 28899: FSLK 4516E NON PROP

PART NUMBER	QTY.	DESCRIPTION	
14473-2	6	DECAL; GREASE	
28876	2	DECAL; MODEL 4516E	
28875-1	1	DECAL; BOOM CAPAICTY - RIGHT, 4516E	
28875-2	1	DECAL; BOOM CAPACITY - LEFT, 4516E	
13397	1	DECAL; OIL LEVEL	
28870-1	1	DECAL; MANUAL OVERRIDE, RIGHT	
28870-2	1	DECAL; MANUAL OVERRIDE, LEFT	
28900	1	IDWG; FIELD SERVICE LABEL KIT	
28898	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	

#### 28899-1: FSLK 4516E PROP

PART NUMBER	QTY.	DESCRIPTION	
14473-2	6	DECAL; GREASE	
28876	2	DECAL; MODEL 4516E	
28875-1	1	DECAL; BOOM CAPAICTY - RIGHT, 4516E	
28875-2	1	DECAL; BOOM CAPACITY - LEFT, 4516E	
13397	1	DECAL; OIL LEVEL	
28870-1	1	DECAL; MANUAL OVERRIDE, RIGHT	
28870-2	1	DECAL; MANUAL OVERRIDE, LEFT	
28900	1	IDWG; FIELD SERVICE LABEL KIT	
28898	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	



FIELD SERVICE LABEL KITS	08-28-24	C400
4516E	SUPERSEDES -	28900

#### **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