



**OWNER'S MANUAL**

INST-28930

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# PARTS & INSTALLATION MANUAL

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## 3516E/3515E

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Included in this manual:

### 3516E

- 3,500 lbs Electric Telescopic Service Crane
- 9 – 16 ft Powered, Single-Stage, Boom Extension
- Proportional Controls

### 3515E

- 3,500 lbs Electric Telescopic Service Crane
- 7 – 11 ft Powered, Single-Stage, Boom Extension
- 11 – 15 ft Manual Pullout Boom Extension
- Non-Proportional Controls

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



This manual also available online at [www.venturo.com](http://www.venturo.com).

|                 |                                                                      |
|-----------------|----------------------------------------------------------------------|
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# **SECTION 100**

## **DESCRIPTION**

**&**

## **SPECIFICATIONS**



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

## SPECIFICATIONS

12-volt battery operated

12,000 ft-lb overturning moment (or as limited by truck stability)

Moment overload shut-off system

Electric winch - 1,750 lb single-line capacity with automatic load brake

Electric-hydraulic boom elevation

Electric-hydraulic boom extension - 7 ft stroke

Electric-hydraulic continuous power rotation

Corded remote control pendant

Radio remote control pendant (optional)

Master disconnect switch

Accessories (optional):

Stabilizers: 18500, 13500, 11822-2

Pedestal: 26027

Boom Rest: 21440

|                     |                |
|---------------------|----------------|
| TELESCOPIC BOOM     | 9 - 16 ft      |
| BOOM ELEVATION      | -5° TO 75°     |
| BOOM HYD EXTENSION  | 7 ft           |
| BOOM MANUAL EXT     | -              |
| CAPACITY            | 750 lb @ 16 ft |
|                     | 3500 lb @ 3 ft |
| WIRE ROPE           | 1/4" x 65 ft   |
| PENDANT CORD LENGTH | 25 ft          |



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

SPECS & OP. FEATURES

3516E

DATE

02-25-25

SUPERSEDES

-

SECTION

C100

25950

## SPECIFICATIONS

12-volt battery operated

12,000 ft-lb overturning moment (or as limited by truck stability)

Moment overload shut-off system

Electric winch - 1,750 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: 18500, 13500, 11822-2

Pedestal: 26027

Boom Rest: 21440

|                     |                |
|---------------------|----------------|
| TELESCOPIC BOOM     | 7 - 15 ft      |
| BOOM ELEVATION      | -5° TO 75°     |
| BOOM HYD EXTENSION  | 4 ft           |
| BOOM MANUAL EXT     | 4 ft           |
| CAPACITY            | 800 lb @ 15 ft |
|                     | 3500 lb @ 3 ft |
| WIRE ROPE           | 1/4" x 65 ft   |
| PENDANT CORD LENGTH | 25 ft          |



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

SPECS & OP. FEATURES

3515E

DATE

02-25-25

SUPERSEDES

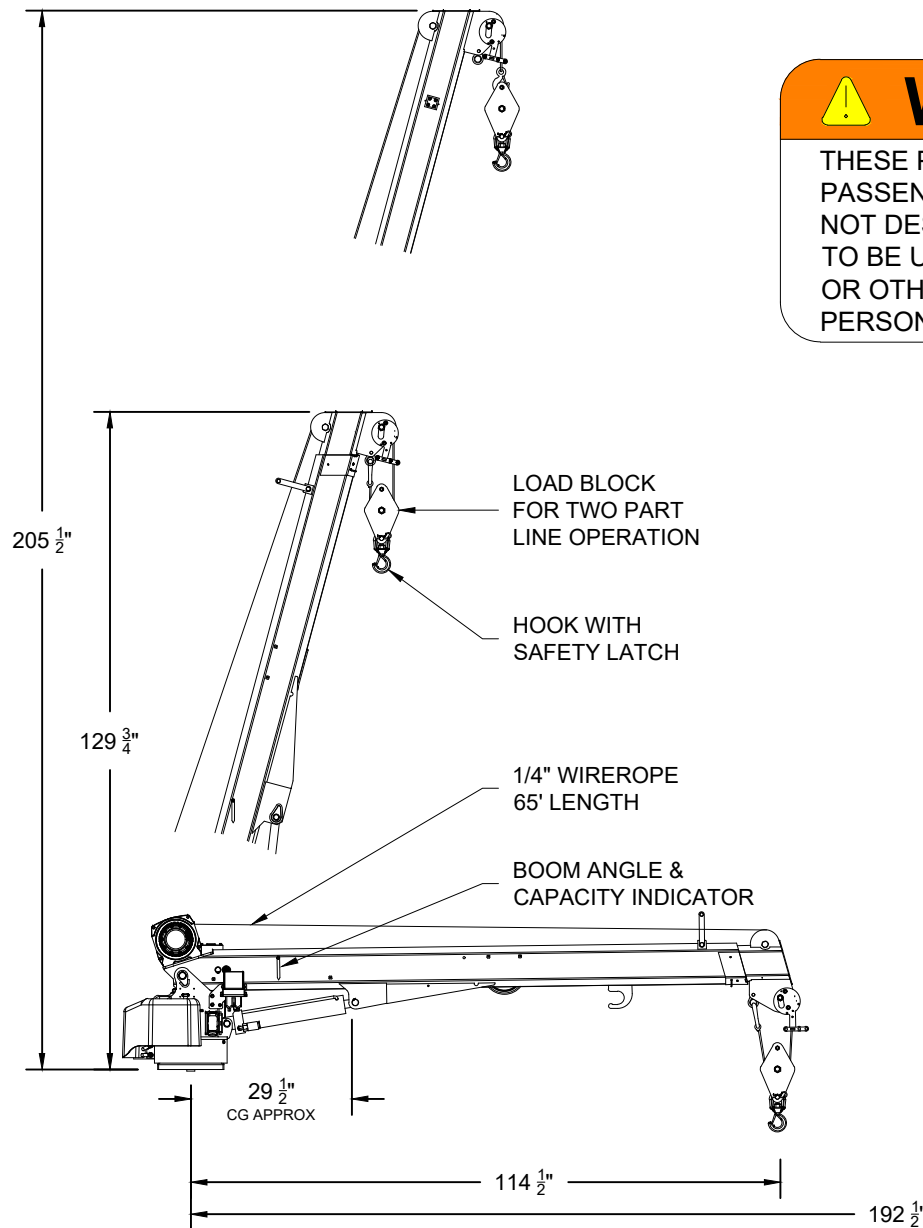
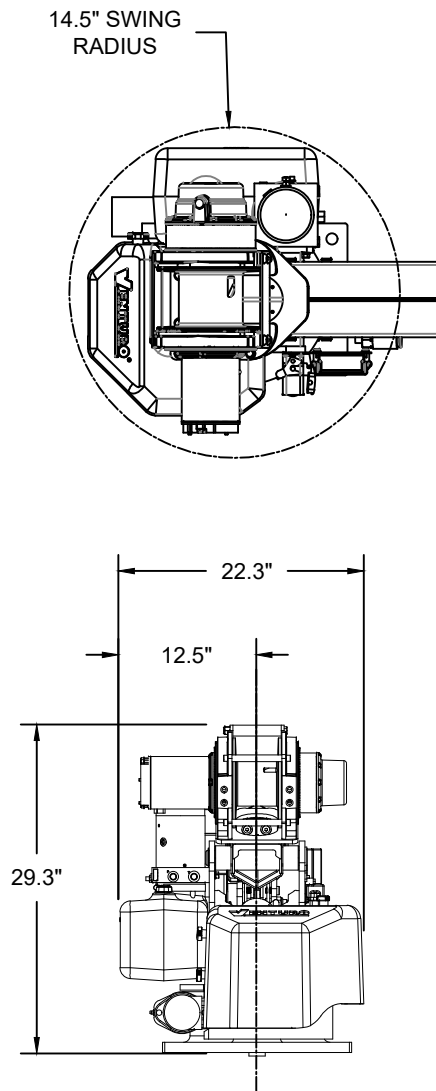
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SECTION

C100

25951

# INSTALLATION DIMENSIONS; 3516E



## WARNING

THESE PRODUCTS ARE NOT PASSENGER LIFTS. THEY ARE NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT OR OTHERWISE TRANSPORT PERSONNEL.



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
INSTALLATION DIMENSIONS

3516E

DATE  
09-09-24

SUPERSEDES  
-

SECTION  
C100

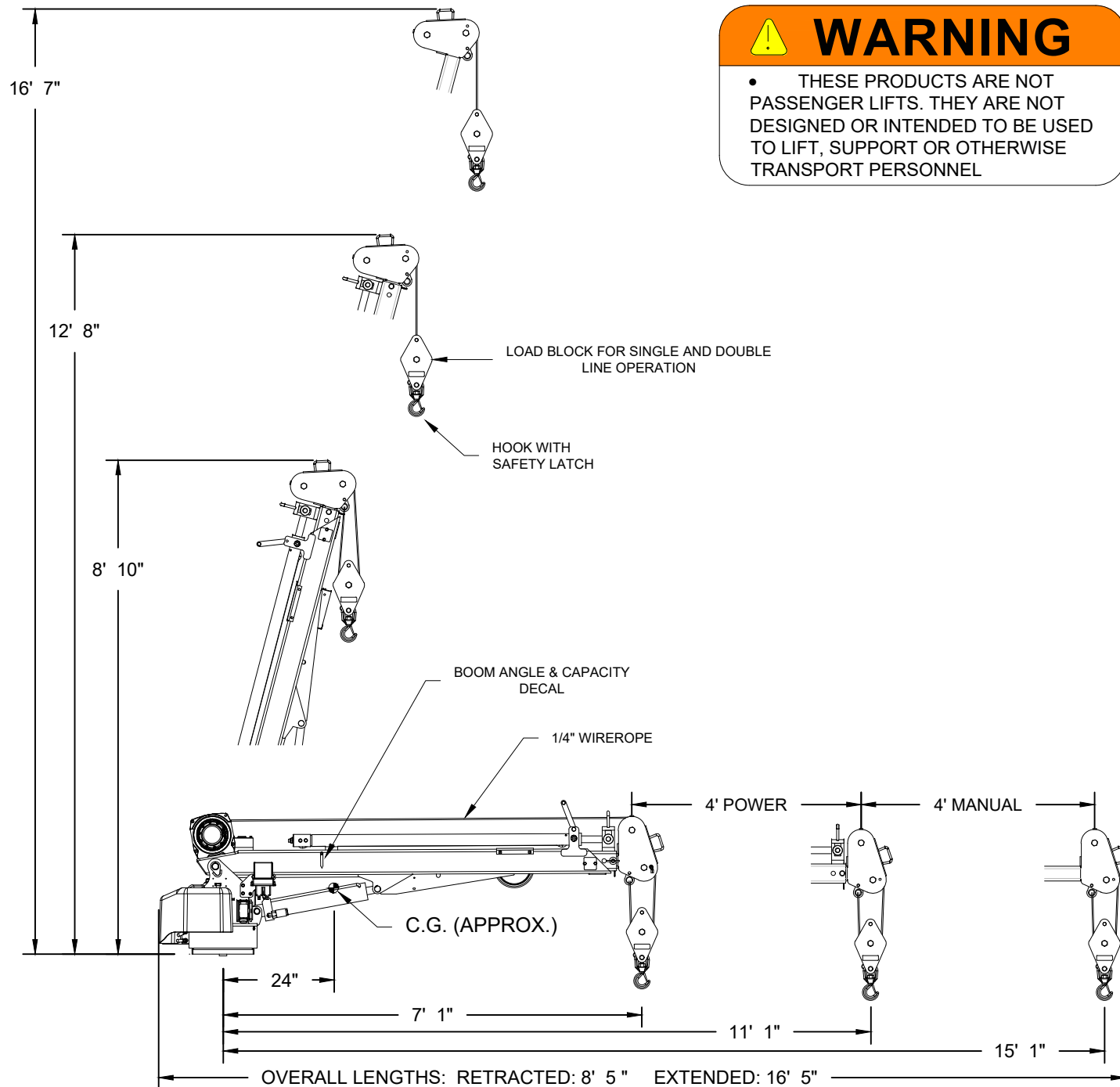
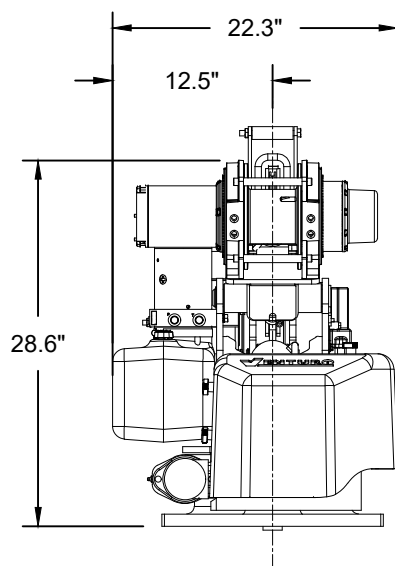
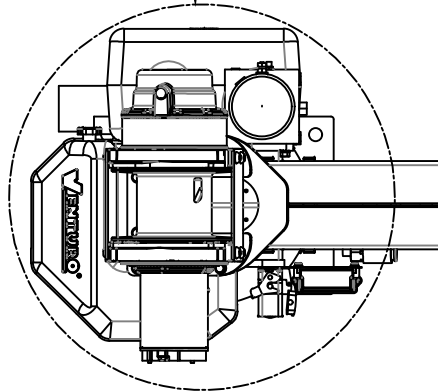
28931



## WARNING

- THESE PRODUCTS ARE NOT PASSENGER LIFTS. THEY ARE NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT OR OTHERWISE TRANSPORT PERSONNEL

14.5" SWING  
RADIUS



VENCO VENTURO INDUSTRIES LLC  
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TITLE  
INSTALLATION DIMENSIONS

3215E/3515E

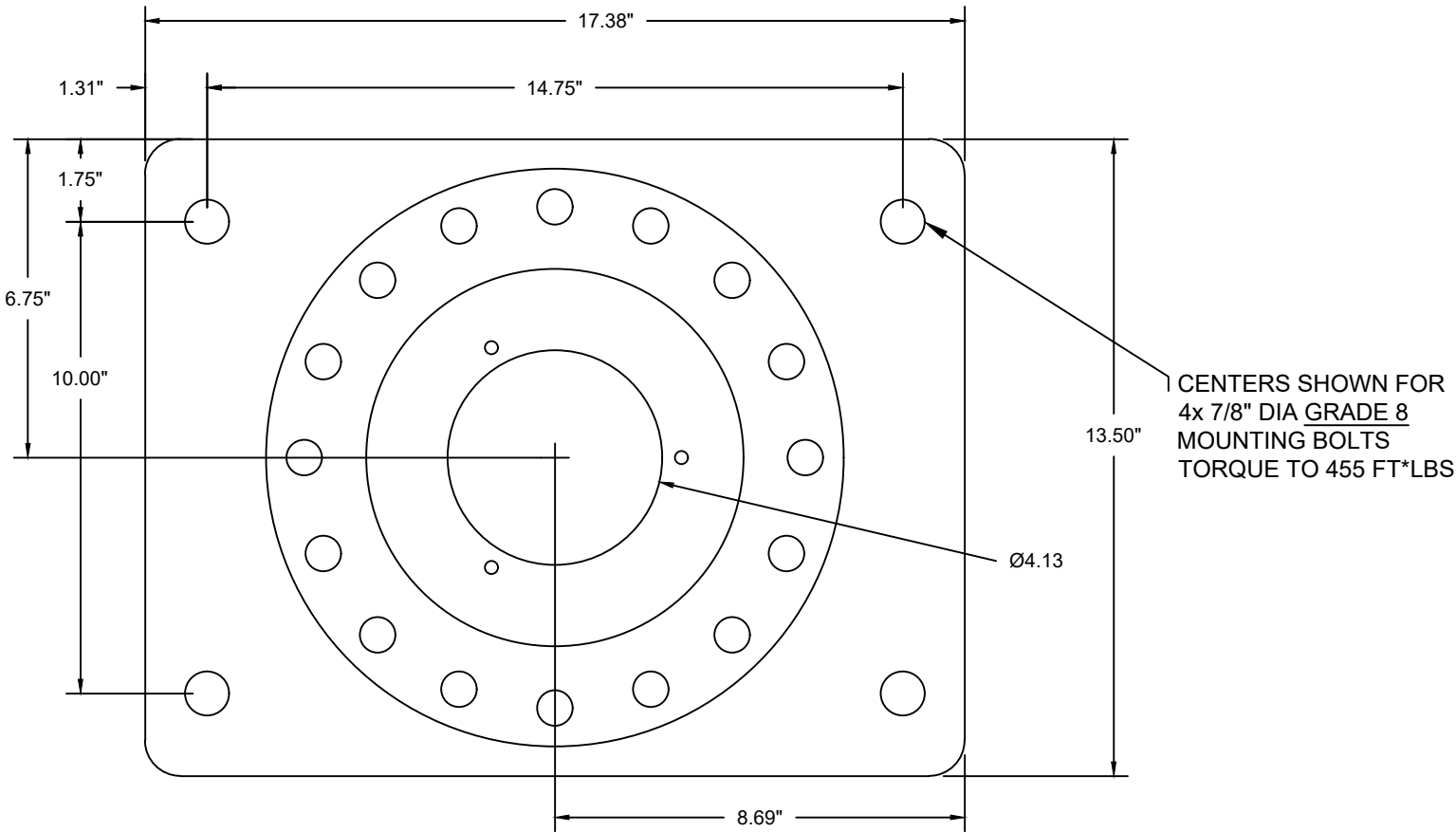
DATE  
10-02-24

SUPERSEDES  
-

SECTION  
C100

28960

21735-WRB/CRB - RECTANGULAR

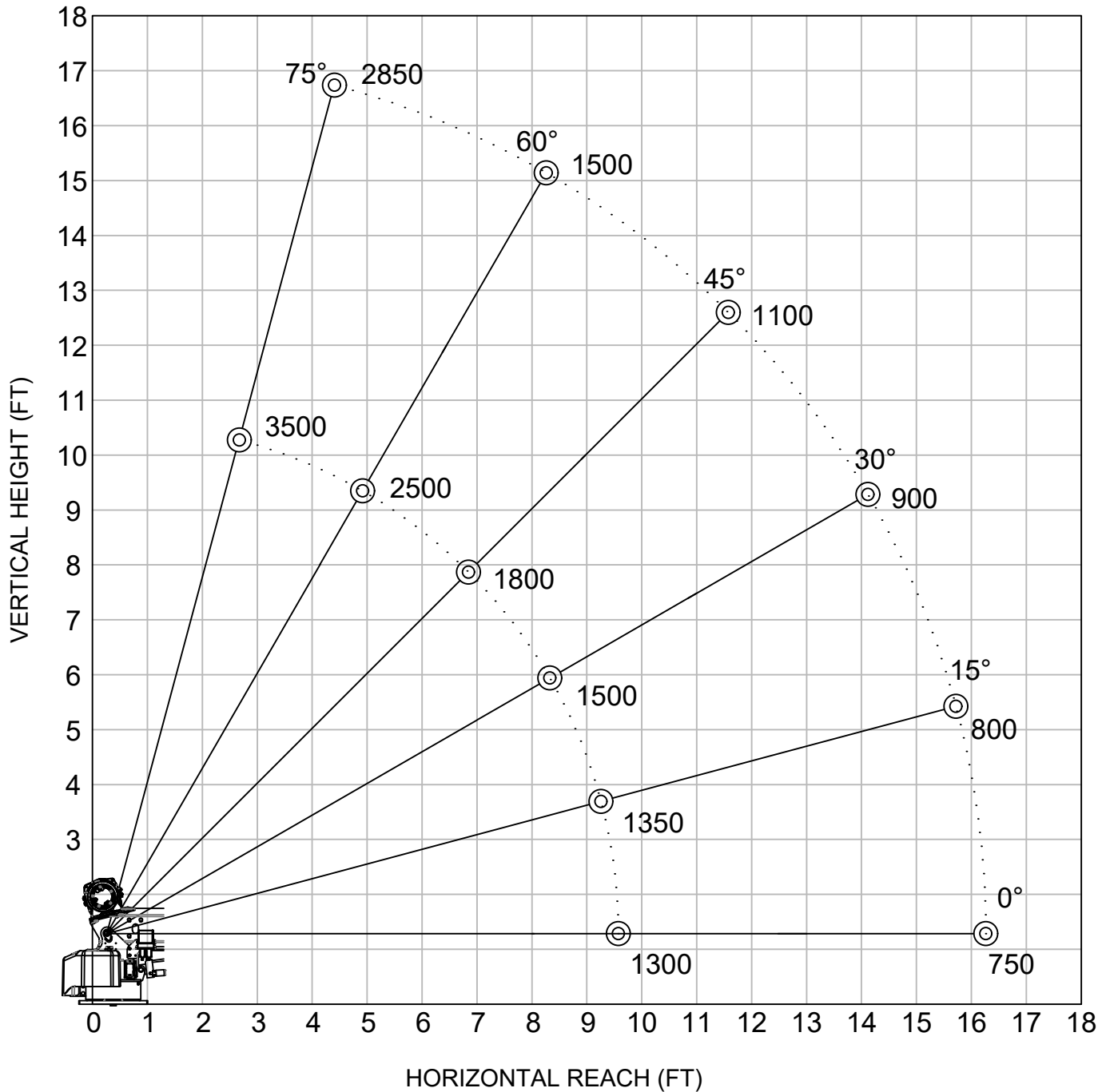


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CINCINNATI, OHIO

| TITLE                          | DATE                   | SECTION |
|--------------------------------|------------------------|---------|
| 21735 BASE MOUNTING DIMENSIONS | 11-12-24A              | C100    |
| 3215E/351*E/40**E/45**E        | SUPERSEDES<br>04-05-24 | 28814   |

# 3516E

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 1750 LBS

2 PART LINE FOR LOADS OF 1750 LBS AND GREATER

WEIGHT OF LOAD BLOCK = 24 LBS



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

|       |                       |
|-------|-----------------------|
| TITLE | MAXIMUM LOAD CAPACITY |
| 3516E |                       |

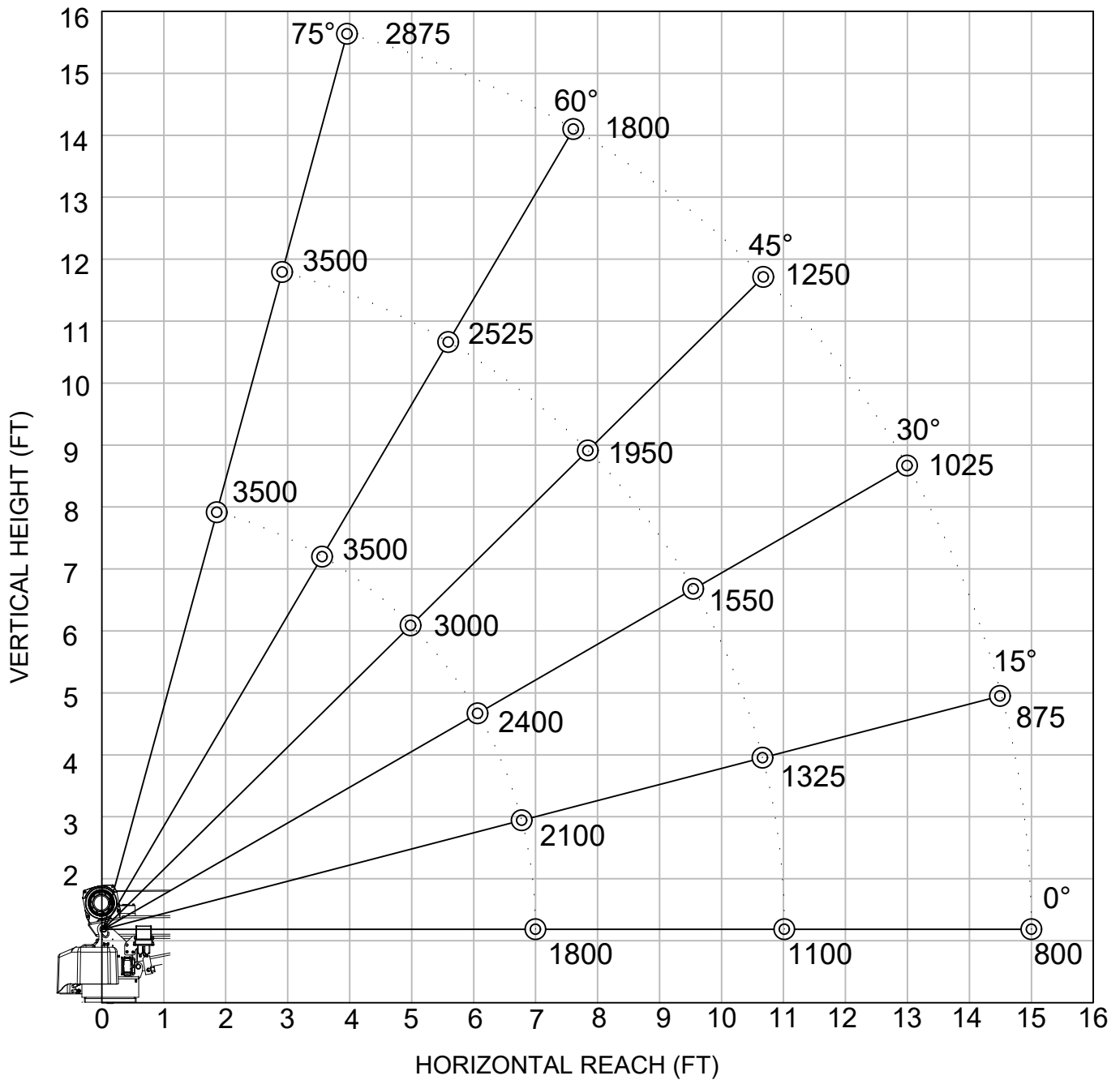
|            |          |
|------------|----------|
| DATE       | 09-10-24 |
| SUPERSEDES | -        |

|         |      |
|---------|------|
| SECTION | C100 |
| 28932   |      |

3515E

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 1750 LBS

2 PART LINE FOR LOADS OF 1750 LBS AND GREATER

WEIGHT OF LOAD BLOCK = 24 LBS



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
**MAXIMUM LOAD CAPACITY**

3515E

DATE  
11-21-24A

SUPERSEDES  
10-02-24

SECTION  
**C100**

**28961**

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

## DANGER

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

## YOU MUST NOT OPERATE THIS CRANE, UNLESS:

1. YOU HAVE BEEN TRAINED IN THE SAFE OPERATION OF THIS CRANE, AND
2. YOU KNOW AND FOLLOW THE SAFETY AND OPERATING RECOMMENDATIONS CONTAINED 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  
CINCINNATI, OHIO

TITLE

SAFETY & HAZARDS

DATE

01-29-15K

SECTION

C150

ELECTRIC CRANES

SUPERSEDES

12-20-13J

850711

# CRANE SAFETY AND HAZARDS - CONT'D

## OVERLOAD ALARM SYSTEM - OPTIONAL

1. OVERLOAD ALARM HORN SOUNDS IF RATED LOAD IS EXCEEDED AT ANY REACH.
2. IF ALARM SOUNDS, RAISE BOOM OR LOWER WINCH TO REMOVE OVERLOAD.
3. ALWAYS RAISE BOOM SLIGHTLY BEFORE LIFTING LOAD. WARNING SYSTEM INOPERATIVE WHEN CYLINDER IS COMPLETED BOTTOMED.
4. ALARM CAN BE TESTED BY TYING DOWN BOOM WITH WINCH CABLE AND OPERATING BOOM UP OR BY RAISING BOOM AGAINST UP LIMIT STOP.

NOTICE - WARRANTY VOID IF DISCONNECTED

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

DO NOT DISCONNECT THIS SYSTEM

INTENTIONALLY LEFT BLANK



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

SAFETY & HZRDS, CONT.

DATE

01-29-15

SECTION

C150

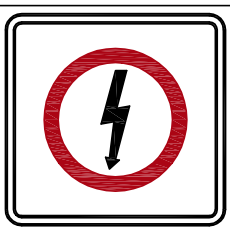
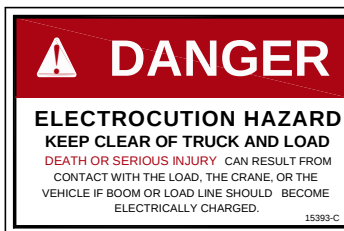
ELECTRIC CRANES

SUPERSEDES

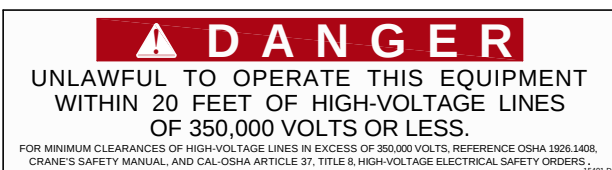
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850712

# 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.



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<br>(nominal, kV, alternating current) | Minimum clearance distance<br>(feet) *                                                                                                                                       |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Up to 50.....                                 | 10                                                                                                                                                                           |
| over 50 - 200.....                            | 15                                                                                                                                                                           |
| over 200 - 350.....                           | 20                                                                                                                                                                           |
| over 350 - 500.....                           | 25                                                                                                                                                                           |
| over 500 - 750.....                           | 35                                                                                                                                                                           |
| over 750 - 1000.....                          | 45                                                                                                                                                                           |
| 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). |

Table T - Minimum Clearance Distances While Traveling With No Load

| Voltage<br>(nominal, kV, alternating current) | While traveling - minimum clearance distance<br>(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



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
HAZARD APPS & INFO  
ET/HT CRANES

DATE  
02-21-14M  
SUPERSEDES  
12-20-13L

SECTION  
C150  
15394

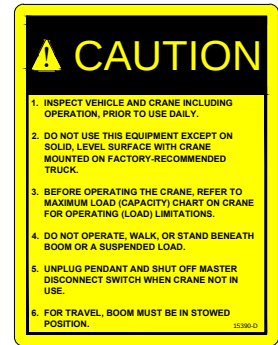
DECAL #: 15390

DESCRIPTION: CAUTION, INSPECT VEHICLE & CRANE...

PURPOSE: TO INFORM THE OPERATOR OF KEY OPERATING REQUIREMENTS.

QUANTITY: 1

PLACEMENT: REAR COVER OR SIDE OF CRANE



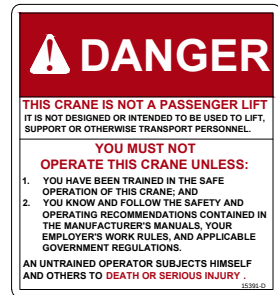
DECAL #: 15391

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



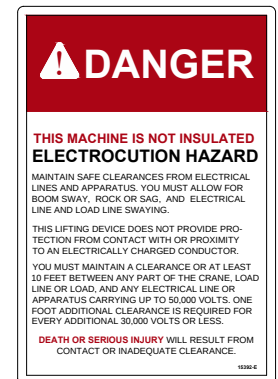
DECAL #: 15392

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



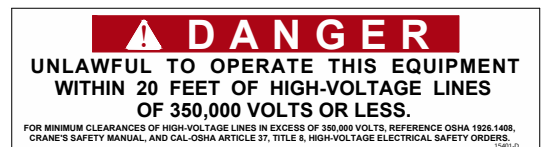
DECAL #: 15401

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



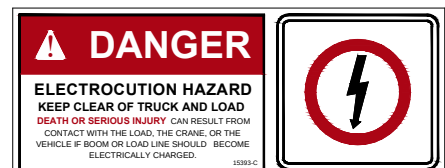
DECAL #: 15393

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



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
SAFETY DECALS  
VENTURO CRANES

DATE  
04-29-16E  
SUPERSEDES  
10-24-13D

SECTION  
C150  
21353

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.



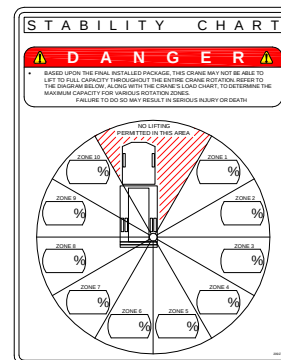
PART NO.: 20927

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.



▲



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
SAFETY DECALS  
CRANES

DATE  
06-06-14C  
SUPERSEDES  
04-02-13B

SECTION  
C150  
21384

PART NO.: 14473-2

DECAL: CONDUCTIVE GREASE

FUNCTION: To show the operator where to apply grease.

QUANTITY: Varies

PLACEMENT: Near grease fittings.



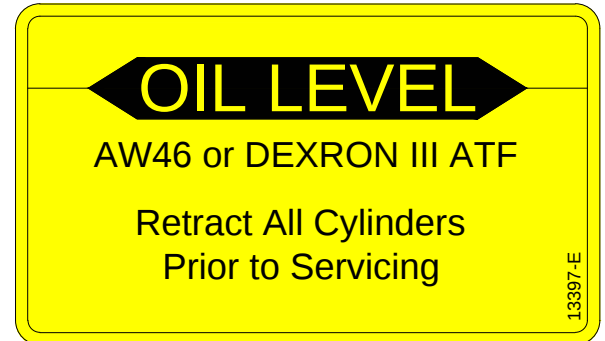
PART NO.: 13397

DECAL: OIL LEVEL

FUNCTION: To inform the operator of proper oil level to maintain.

QUANTITY: 1

PLACEMENT: Side of hydraulic power unit.



PART NO.: 15398

DECAL: UNPLUG REMOTE CONTROL

FUNCTION: To inform the operator to unplug remote control when not in use.

QUANTITY: 1

PLACEMENT: Near pendant socket.



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
DECALS

ET CRANES

DATE  
11-12-19E

SUPERSEDES  
12-23-13D

SECTION  
C150

21354

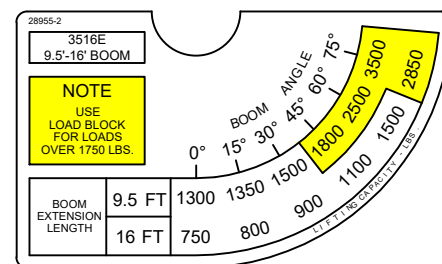
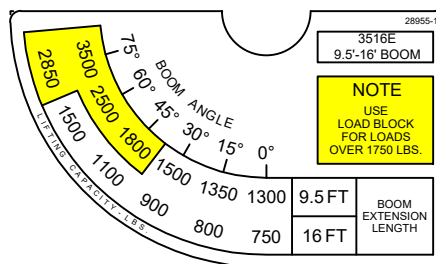
PART NO.: 28955-1 & 28955-2

DECAL: CRANE CAPACITY 3516E

FUNCTION: To show the operator the operating capacities of crane.

QUANTITY: 1

PLACEMENT: One each side of boom.



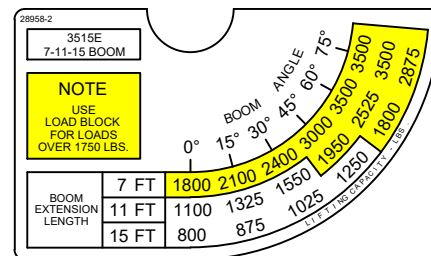
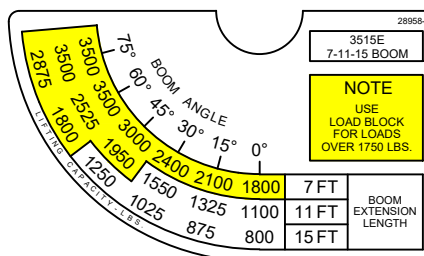
PART NO.: 28958-1 & 28958-2

DECAL: CRANE CAPACITY 3515E

FUNCTION: To show the operator the operating capacities of crane.

QUANTITY: 1

PLACEMENT: One on each side of boom.



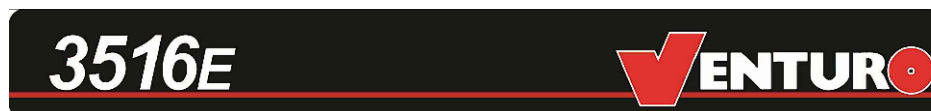
PART NO.: 28956

DECAL: MODEL 3516E

FUNCTION: To show the model of the crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.



PART NO.: 28957

DECAL: MODEL 3515E

FUNCTION: To show the model of the crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.



INTENTIONALLY LEFT BLANK



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
MODEL/CAPCTY DECALS

3515E/3516E

DATE  
09-16-24

SUPERSEDES  
-

SECTION  
C150

28937

PART NO.: 27007-04a

DECAL: LOAD BLOCK CAPACITY DECAL

FUNCTION: To show the capacity of load block.

QUANTITY: 2

PLACEMENT: Each side of load block.

**VENTURO**

LOAD BLOCK SPECIFICATIONS

|                 |         |
|-----------------|---------|
| RATED CAPACITY: | WEIGHT: |
| 3,500 lbs       | 24 lbs  |

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

27007-04a

PART NO.: 19315-2

DECAL: MANUAL OVERRIDE (PROPORTIONAL)

FUNCTION: To show operator how to override proportional valve

QUANTITY: 1

PLACEMENT: Inside rear cover

**WARNING!**

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

NORMAL

PROPORTIONAL VALVE

ROTATE STEM

OVERRIDE

19315-2 Rev B

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

VALVE  
MANUAL  
OVERRIDE

BOOM  
→  
OUT

BOOM  
→  
UP

ROTATION  
→  
RIGHT

28870-2

28870-1

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

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 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

17813-A

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

1. OVERLOAD ALARM HORN SOUNDS IF RATED LOAD IS EXCEEDED AT ANY REACH.  
2. IF ALARM SOUNDS, RAISE BOOM OR LOWER WINCH TO REMOVE OVERLOAD.  
3. ALWAYS RAISE BOOM SLIGHTLY BEFORE LIFTING LOAD. WARNING SYSTEM INOPERATIVE WHEN CYLINDER IS COMPLETELY BOTTOMED.  
4. ALARM CAN BE TESTED BY 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

14459-E

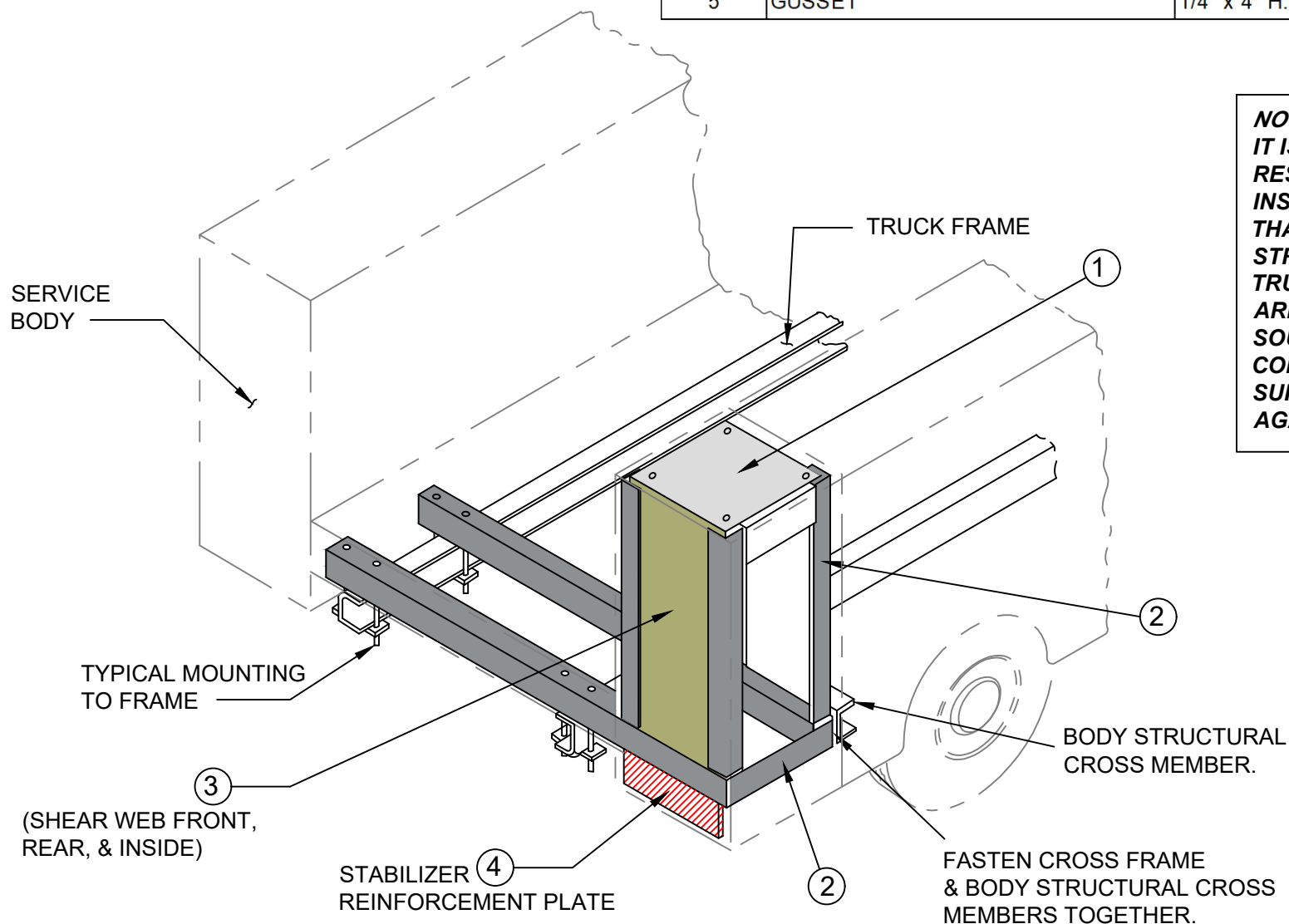
# SECTION 200

# INSTALLATION



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

| ITEM NO. | DESCRIPTION                    | MINIMUM RECOMMENDED MATERIAL SIZE |
|----------|--------------------------------|-----------------------------------|
| 1        | TOP PLATE                      | STEEL PLATE                       |
| 2        | CORNER POST                    | 3" x 3" x 1/4" STEEL ANGLE        |
| 3        | SHEAR WEB                      | 12 Ga.                            |
| 4        | STABILIZER REINFORCEMENT PLATE | 3/16" THICK STEEL PLATE           |
| 5        | GUSSET                         | 1/4" x 4" H.R. STEEL (NOT SHOWN)  |



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

ILLUSTRATIONS NOT TO SCALE



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
INSTALLATION DRAWING

3215E/351\*E

DATE  
09-10-24

SUPSEDES  
-

SECTION  
C100

28933

# !! 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

| MINIMUM WIRE GAUGE AND AUXILIARY BATTERY SIZE      |                                                      |       |       |       |       |                 |       |       |                                        |              |
|----------------------------------------------------|------------------------------------------------------|-------|-------|-------|-------|-----------------|-------|-------|----------------------------------------|--------------|
| MODEL                                              | TOTAL LENGTH OF CABLE (FT) *                         |       |       |       |       |                 |       |       | 12 VOLT AUXILIARY BATTERY REQUIREMENTS |              |
|                                                    | 0-20                                                 | 21-25 | 26-30 | 31-40 | 41-50 | 51-60           | 61-70 | 71-80 | CCA (A) **                             | RC (MIN) *** |
| 2010E                                              | #2                                                   | #2    | #1    | #0    | #00   | NOT RECOMMENDED |       |       | 450                                    | 100          |
| 3215E<br>3515E<br>3516E                            | #2                                                   | #2    | #1    | #0    | #00   | NOT RECOMMENDED |       |       | 550                                    | 150          |
| 4016E<br>4020E<br>4516E<br>4520E<br>5020E<br>6020E | SEE DRAWING 28821 FOR CABLE AND BATTERY REQUIREMENTS |       |       |       |       |                 |       |       |                                        |              |

\* INCLUDES GROUND CABLE

\*\* CCA = COLD CRANKING AMPS AT 0° (F).

\*\*\* RC = RESERVE CAPACITY IN MINUTES AT 25 AMPS AND 80° (F).  
THE RC RATING IS A MEASURE OF THE PERIOD OF TIME THE BATTERY CAN  
SUPPLY A GIVEN CURRENT WITHOUT RECHARGING.



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
CABLE & BATTERY  
ELECTRIC CRANES

DATE  
02-19-24  
SUPERSEDES  
-

SECTION  
C200

28820

# RECOMMENDED CIRCUIT BREAKER TABLE

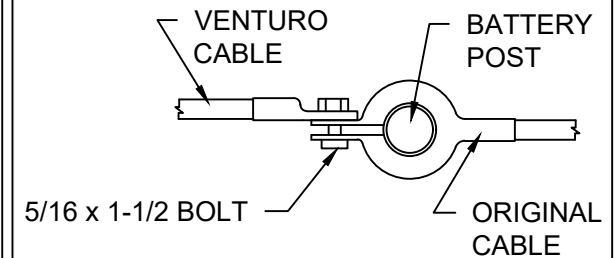
| CRANE       | DESCRIPTION         | PART NO.  |
|-------------|---------------------|-----------|
| 2010E       | 300 AMP, MAN RESET  | 22946-300 |
| 3215E       | 300 AMP, MAN RESET  | 22946-300 |
| 3515E/3516E | 300 AMP, MAN RESET  | 22946-300 |
| 4016E/4020E | 300 AMP, MAN RESET  | 22946-300 |
| 4516E/4520E | 300 AMP, MAN RESET  | 22946-300 |
| 5020E       | 300 AMP, AUTO RESET | 22946-300 |
| 6020E       | 300 AMP, AUTO RESET | 22946-300 |

# BATTERY REQUIREMENTS

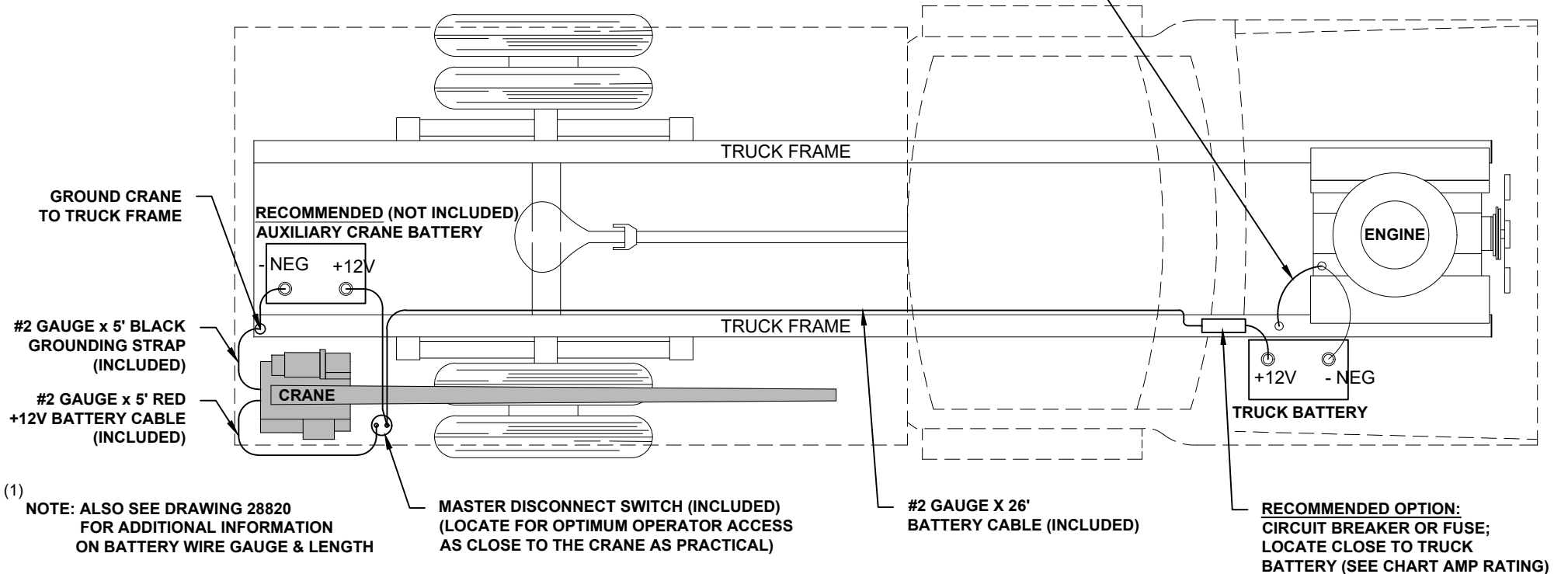
- 12 VOLT VEHICLE BATTERY REQUIREMENTS
  - 625 COLD CRANKING AMPS (AT 0° F)
  - 160 MINUTES RESERVE CAPACITY
  - 102 PLATES, 105 AMP-HR
- (1) 12 VOLT AUXILIARY BATTERY REQUIREMENTS
  - SEE MINIMUM WIRE GAUGE AND BATTERY SIZE

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

# RECOMMENDED BATTERY TERMINAL ATTACHMENT



INSTALL #2 GAUGE GROUND STRAP FROM ENGINE TO TRUCK FRAME  
(REQUIRED IF NEGATIVE FROM BATTERY IS CONNECTED TO ENGINE)



(1) NOTE: ALSO SEE DRAWING 28820 FOR ADDITIONAL INFORMATION ON BATTERY WIRE GAUGE & LENGTH



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

BATTERY CABLE & COMPONENT INSTALL

ET CRANES

DATE

02-19-24

SUPERSEDES

-

SECTION

C200

28821

# STABILITY TEST - 3516E

## 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 been completed.***
6. Use a **Test Weight** weighing a **minimum** of **882 lbs**, (includes load block weight of **24 lbs.**) to a **maximum of 925 lbs**.
7. Position the boom level and fully retracted.
8. Referring to the Stability Chart (drawing 20907) rotate the crane to a position between 1 and 2 o'clock (truck cab is facing 12 o'clock) to begin testing.
9. Use the winch to lift the Test Weight; DO NOT allow the weight to be more than 6" off the ground at any time during testing (for safety).
10. Using the test weight, extend the boom slowly, until one of the two conditions occur:
  - 10.1. Full boom extension is reached - Mark the ZONE in question **100%**
  - 10.2. The truck becomes unstable i.e., a tire lifts off the ground
    - 10.2.1. Retract the boom until at least one tire on each corner of the truck is making contact with the ground
    - 10.2.2. Use the formula below to determine the allowable **% of Rated Capacity** for the ZONE in question.
11. Note: The "**Max Stable Reach in inches**" is measured from the **center of rotation** of the crane housing to the **lifting load hook**.

$$\% \text{ Rated Capacity} = \frac{\text{"Max Stable Reach" in inches}}{192} \times 100$$

12. Record the **% of Rated Capacity** 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.



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CINCINNATI, OHIO

TITLE  
**STABILITY TEST**  
  
**3516E**

DATE  
**09-11-24**  
  
SUPERSEDES  
**-**

SECTION  
**C200**  
  
**20906-3516E**

# STABILITY TEST - 3515E

## 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 been completed.**
6. Use a **Test Weight** weighing a **minimum** of **941 lbs**, (includes load block weight of 24 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 ground
    - 10.2.2. Use the formula below to determine the allowable **% of Rated Capacity** for the ZONE in question:
11. Note: The **"Max Stable Reach in inches"** is measured (horizontally) from the **center of rotation** of the crane housing to the **lifting load hook**.
$$\% \text{ Rated Capacity} = \frac{\text{"Max Stable Reach" in inches}}{181} \times 100$$
12. Record the **% of Rated Capacity** 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.



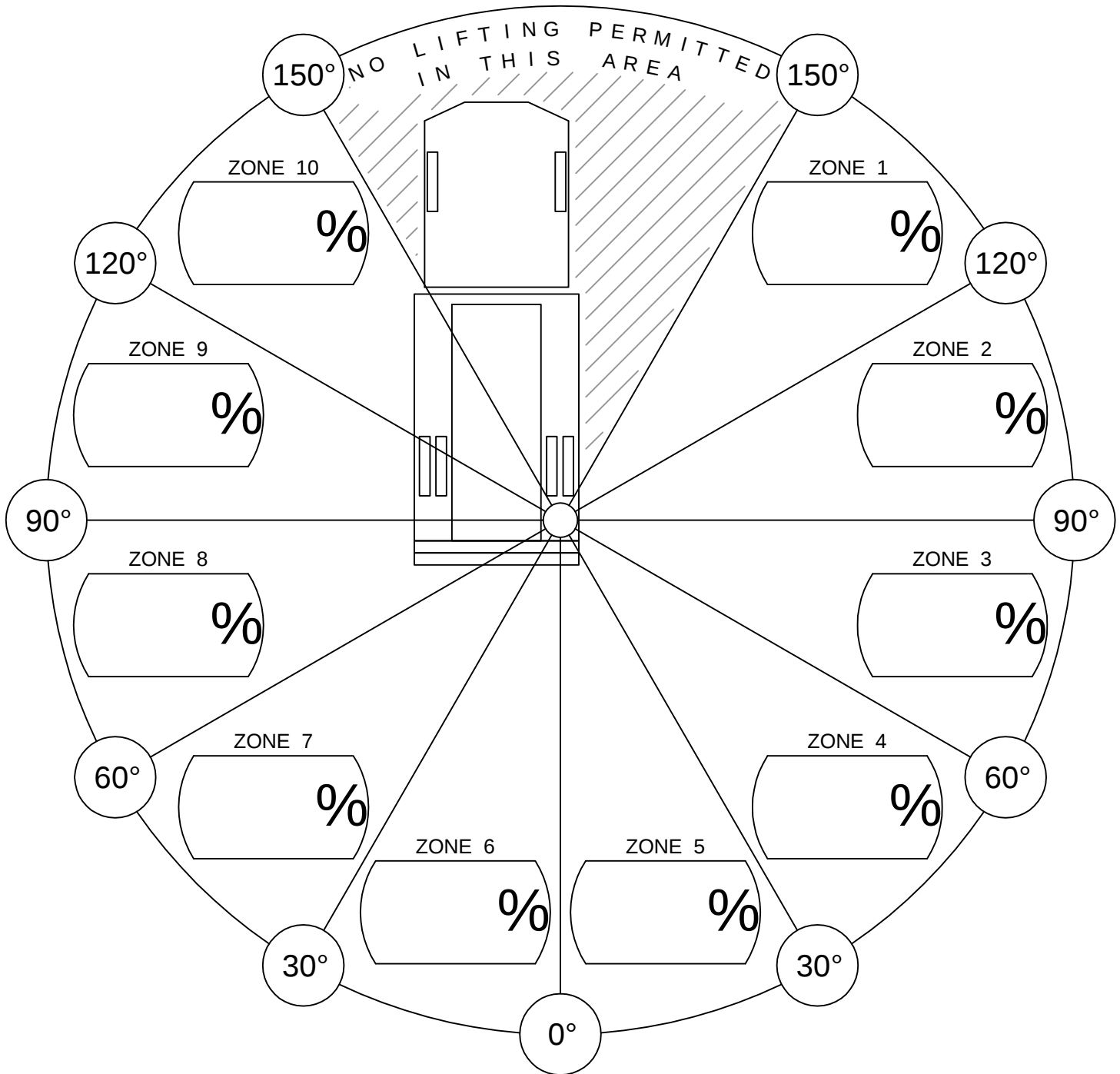
VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
**STABILITY TEST**  
  
**3515E**

DATE  
**10-03-24**  
  
SUPERSEDES  
-

SECTION  
**C200**  
  
**20906-3515E**

# CRANE STABILITY



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

## CONDITIONS:

- STABILIZERS FULLY EXTENDED & DOWN, ON FIRM LEVEL GROUND.



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
STABILITY CHART

VENTURO CRANES

DATE  
05-11-17F

SUPERSEDES  
02-21-14E

SECTION  
C200

20907

# WIRE ROPE INSTALLATION

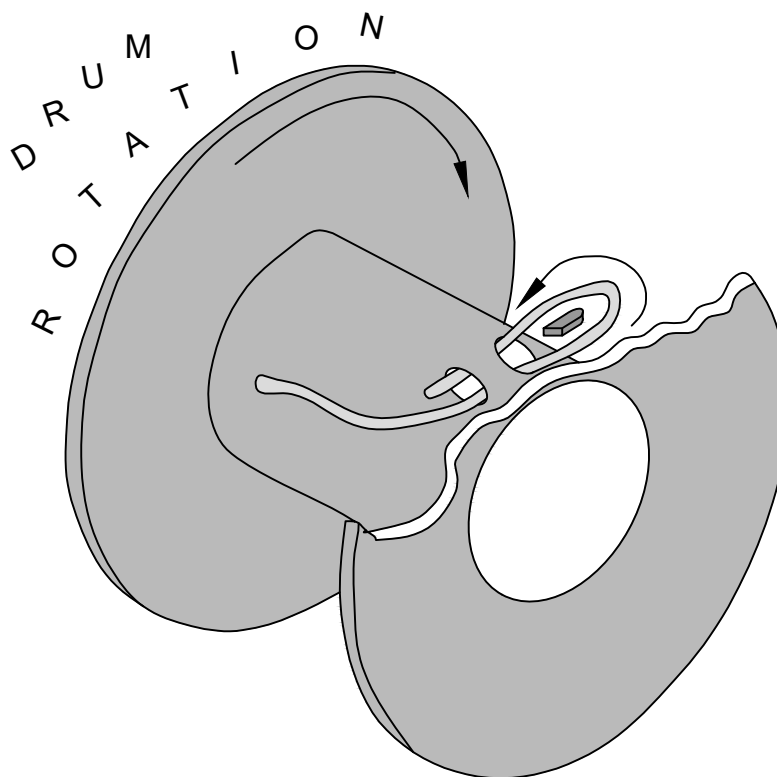


FIG. 1

- 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.



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CINCINNATI, OHIO

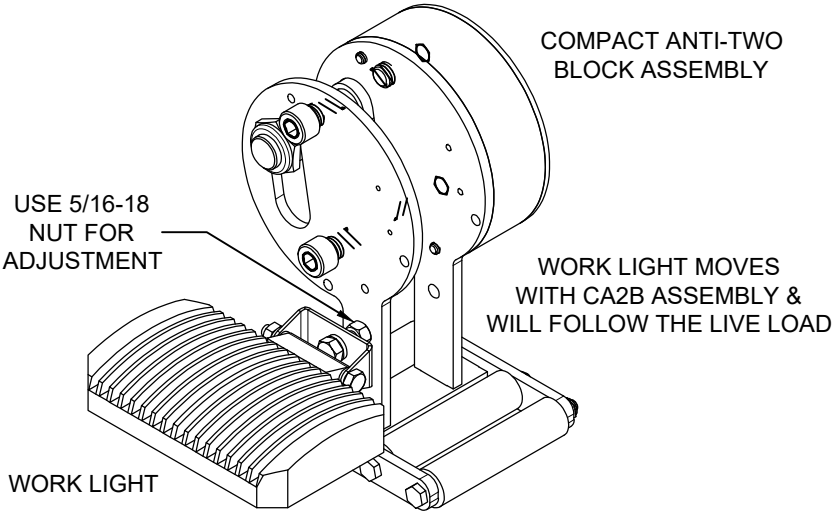
TITLE  
WIRE ROPE INSTALLTN  
2010E & LARGER CRANES

DATE  
02-20-24  
SUPERSEDES  
-

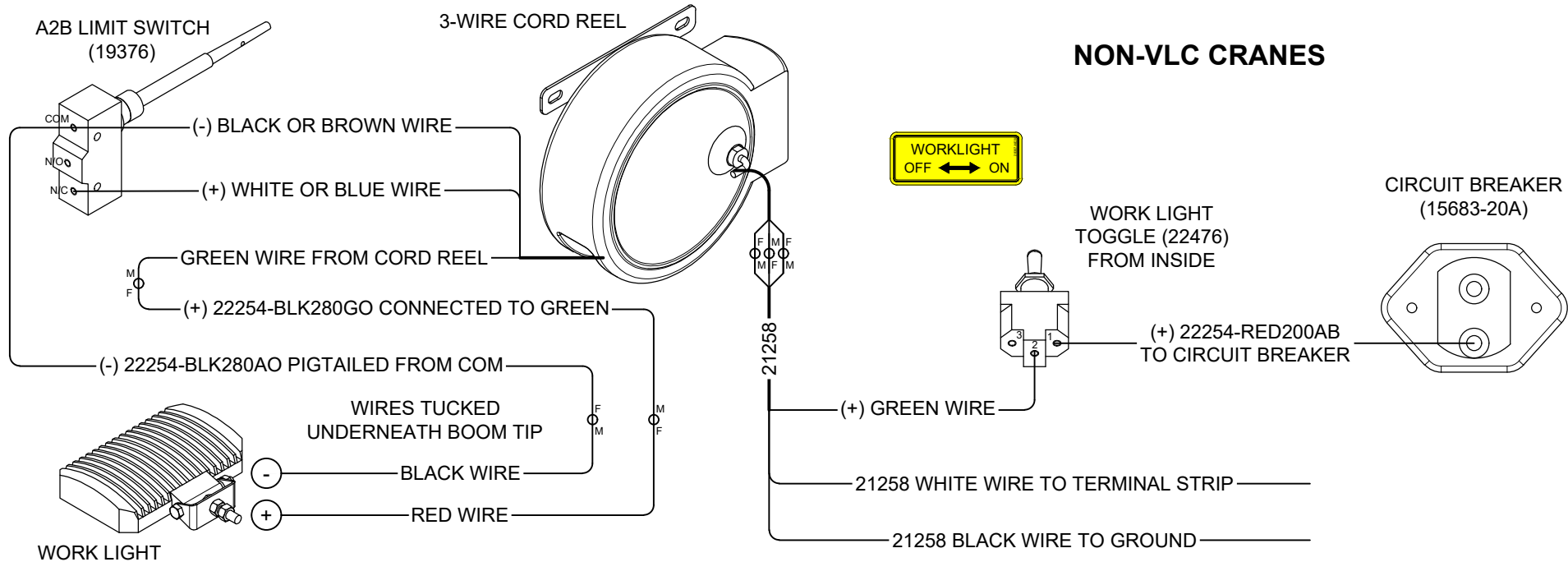
SECTION  
C200

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

TITLE  
WORK LIGHT INSTALLATION, 3-WIRE CORD REEL  
NON-VLC CRANES

DATE  
09-13-24  
SUPERSEDES  
-

SECTION  
C400  
28855

# **SECTION 300**

## **OPERATION**

### **&**

## **MAINTENANCE**



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

## 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

OP & MAINT INSTR 1/3

ET CRANES SERIES ▲

DATE

08-11-25A

SUPERSEDES

02-18-25

SECTION

C300

28852

## CONTROL FUNCTIONS

WINCH - "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.

ELEVATION - "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.

EXTENSION - "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.

ROTATION - "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.

CONTROL PRIORITY SYSTEM - 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.



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

OP & MAINT INSTR 2/3

ET CRANES SERIES ▲

DATE

08-11-25A

SUPERSEDES

02-18-25

SECTION

C300

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.



### WARNING

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.



MANUFACTURING, INC.  
CINCINNATI, OHIO

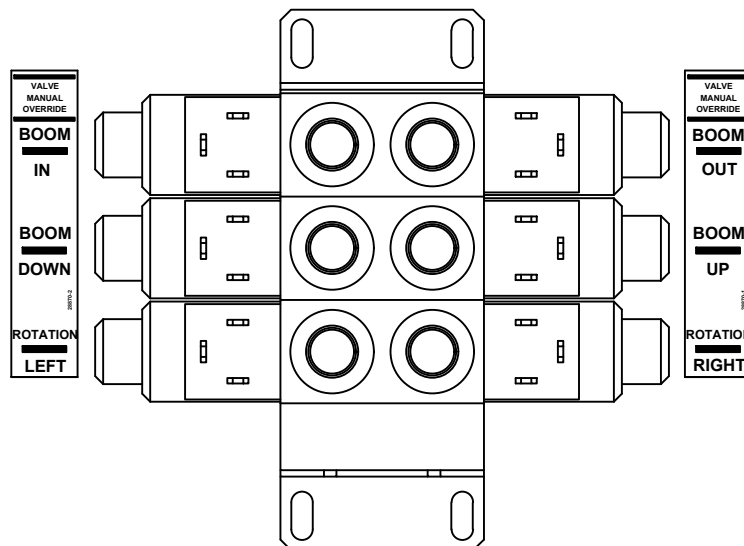
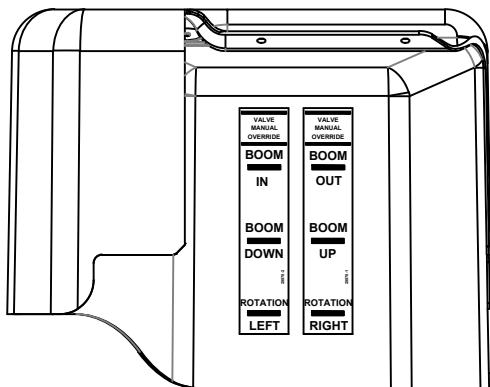
TITLE  
OP & MAINT INSTR 3/3  
ET CRANES SERIES ▲

DATE  
08-11-25A  
SUPERSEDES  
02-18-25

SECTION  
C300  
28854

MANUAL OVERRIDE INSTRUCTIONS  
ET CRANES, NON-PROPORTIONAL SERIES CRANES ▲

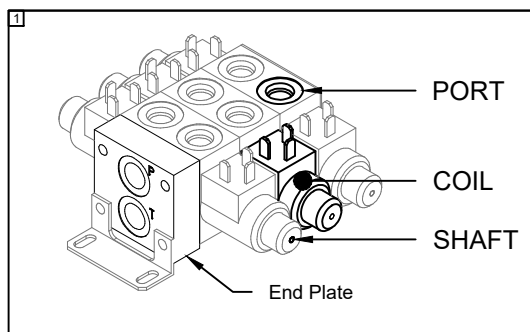
!! READ ALL INSTRUCTIONS BEFORE PERFORMING MANUAL OVERRIDE PROCEDURES !!



Each valve station incorporates [2] hydraulic ports and [2] coils. Manual override shafts are located in the center of the coils (see figure 1). Manual override decals are placed on each crane 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:

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

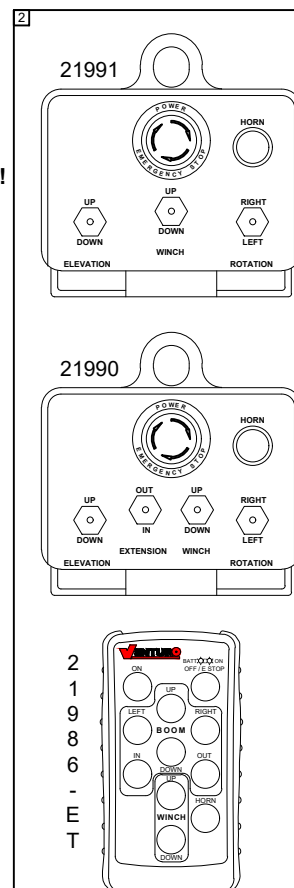


**ALWAYS BE SURE TO CHECK HYDRAULIC OIL LEVEL BEFORE PROCEEDING. IT IS RECOMMENDED TO REMOVE ANY ITEM(S) THAT MAY INTERFERE WITH OPERATING THE CRANE MANUALLY. IF POSSIBLE, STRAPS AND/OR HARNESSSES SHOULD BE REMOVED BEFORE OPERATING A CRANE IN MANUAL OVERRIDE !!**

Procedure:

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

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



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CINCINNATI, OHIO

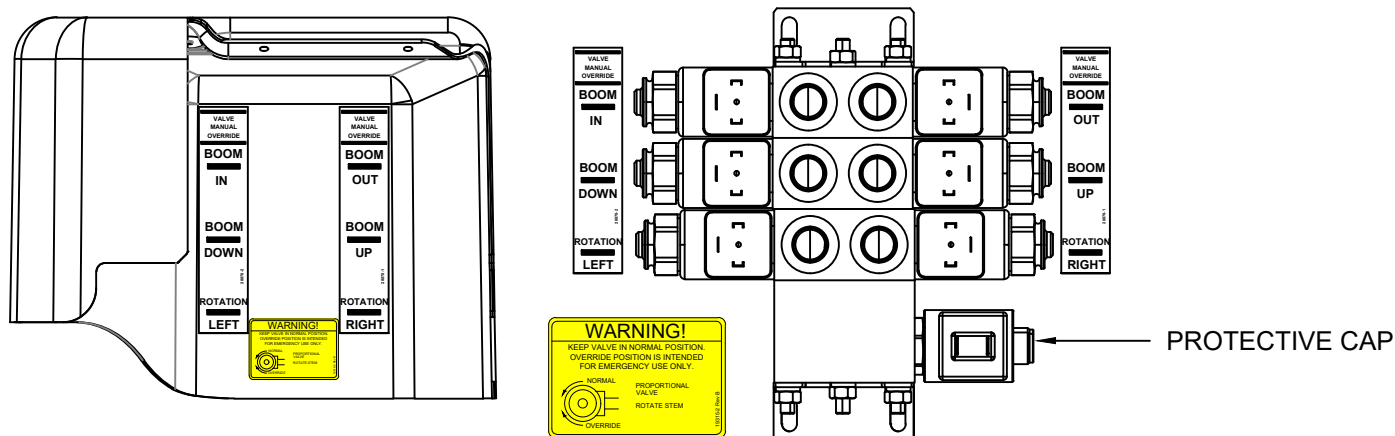
TITLE  
**MAN. OVERRIDE INSTR.**  
ET CRANES  
NON-PROPORTIONAL VALVE ▲

DATE  
**08-11-25B**  
SUPERSEDES  
**04-03-25A**

SECTION  
**C200**  
**28826**

# MANUAL OVERRIDE INSTRUCTIONS ET CRANES, PROPORTIONAL SERIES CRANES ▲

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



Each valve station incorporates [2] hydraulic ports and [2] coils. Manual override shafts are located in the center of the coils (see figure 1). Manual override decals are placed on each crane 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:

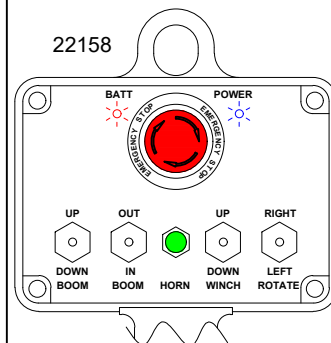
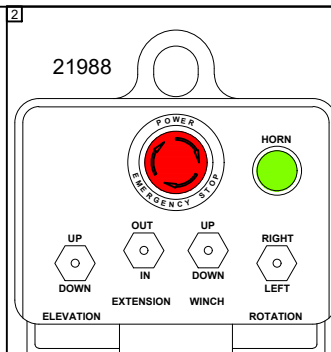
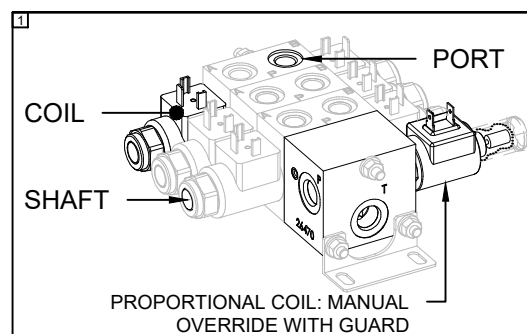
RR = Rot. Right    RL = Rot. Left  
BU = Boom Up    BD = Boom Down  
BI = Boom In    BO = Boom Out

**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 HARNESES 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
5. 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.



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
**MAN. OVERRIDE INSTR.**

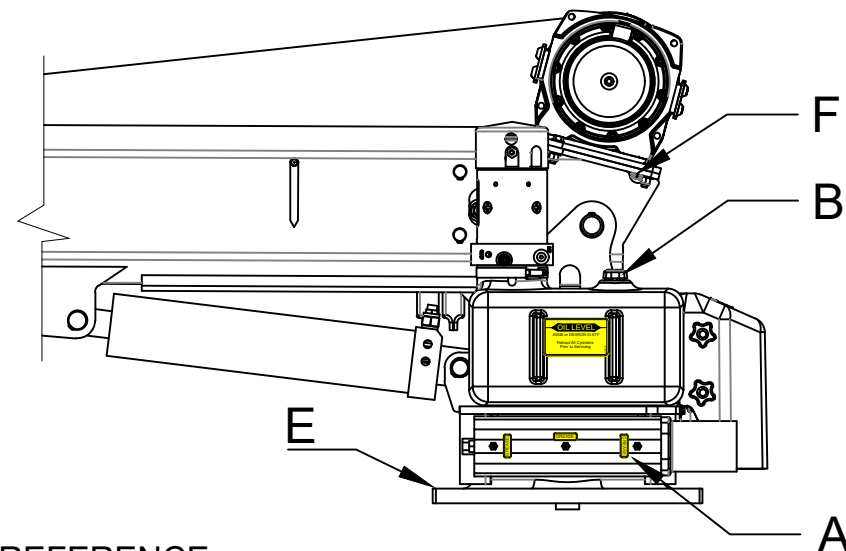
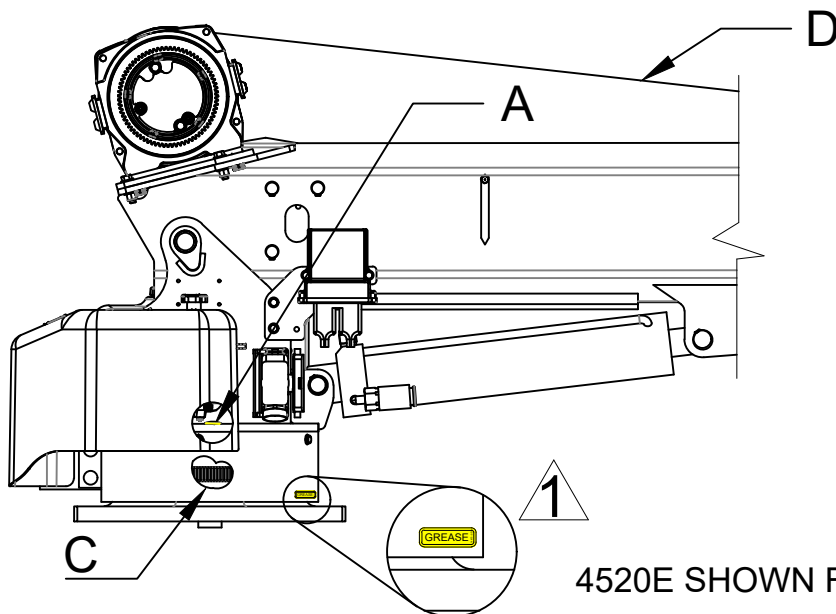
ET CRANES  
PROPORTIONAL VALVE ▲

DATE  
**08-11-25B**

SUPERSEDES  
**04-03-25A**

SECTION  
**C200**

**28827**



4520E SHOWN FOR REFERENCE

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                                                                  |
|----------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| A        | Grease fitting With Pressure Grease Gun                     | Use FUCHS Renolit Aluminum Complex Grease, or equivalent<br>⚠️ ALIGNMENT: To align hole w/ fitting, remove Cover, line up grease decals on lower cover and base gusset. |                                                                                          | Time of Truck Service                                                             |
| B        | 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 |
| C        | 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 28846 FOR WINCH IDENTIFICATION.



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

LUBRICATION & MAINTENANCE CHART

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

DATE

02-20-24

SUPERSEDES

-

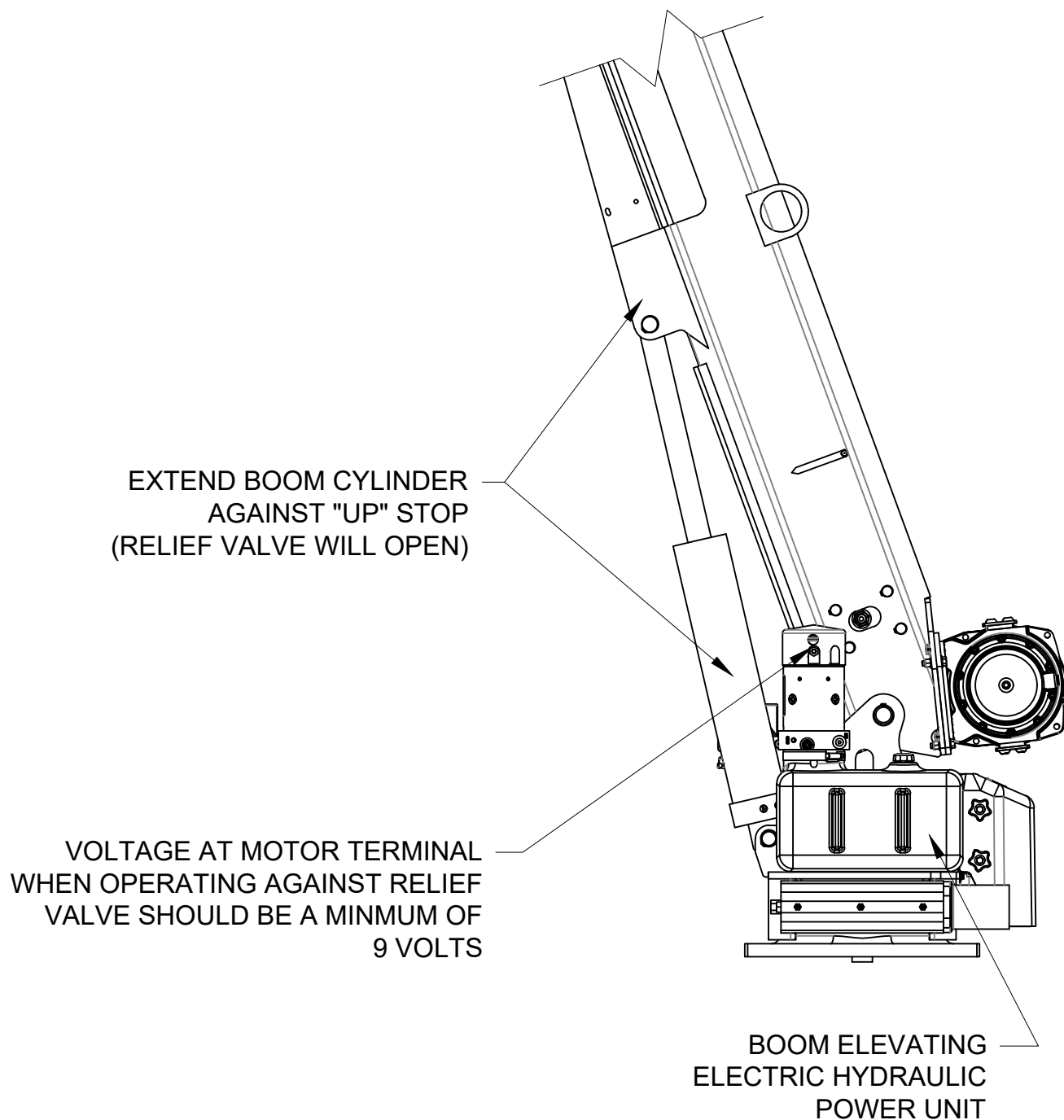
SECTION

C300

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



MANUFACTURING, INC.  
CINCINNATI, OHIO

|                  |                      |
|------------------|----------------------|
| TITLE            | MINIMUM VOLTAGE TEST |
| ET SERIES CRANES |                      |

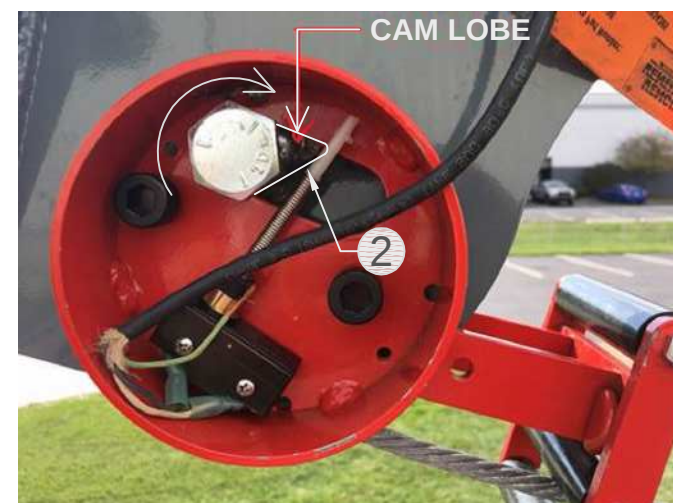
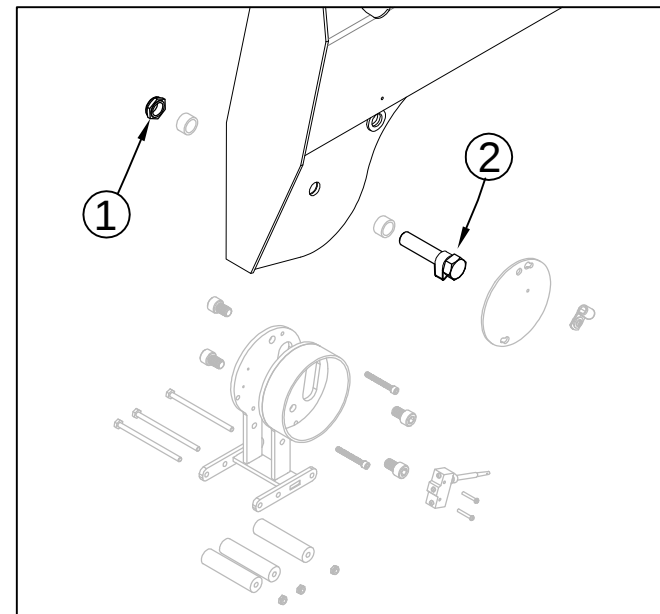
|            |          |
|------------|----------|
| DATE       | 02-20-24 |
| SUPERSEDES | -        |

|         |       |
|---------|-------|
| SECTION | C300  |
|         | 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.**

1. Initially, apply a light torque to the nyloc full nut Item #1 (P/N !LNUT-07510), such that the axle bolt & cam welded assembly can be rotated / adjusted in the steps below.
2. Position the cam **lobe** Item #2 (P/N 28362) so that it is pointing towards the housing / mechanism
3. Hang the load block on the open stowage hook under the primary boom.
4. Thread the wire rope through the load block in a two-line configuration; the wire rope end / eyelet is pinned in the standard position on the tertiary boom tip
5. Actuate the Winch Up function until the load block and wire rope are **taut** enough to prevent the load block from bouncing during transit, **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 Ventura Tech Support for assistance. 1-800-226-2238 ext. 124



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

A2B Stowage Cut-out

ET/HT Cranes w/ Comp. A2B

DATE

10-04-21B

SUPERSEDES

08-03-21A

SECTION

C400

28239

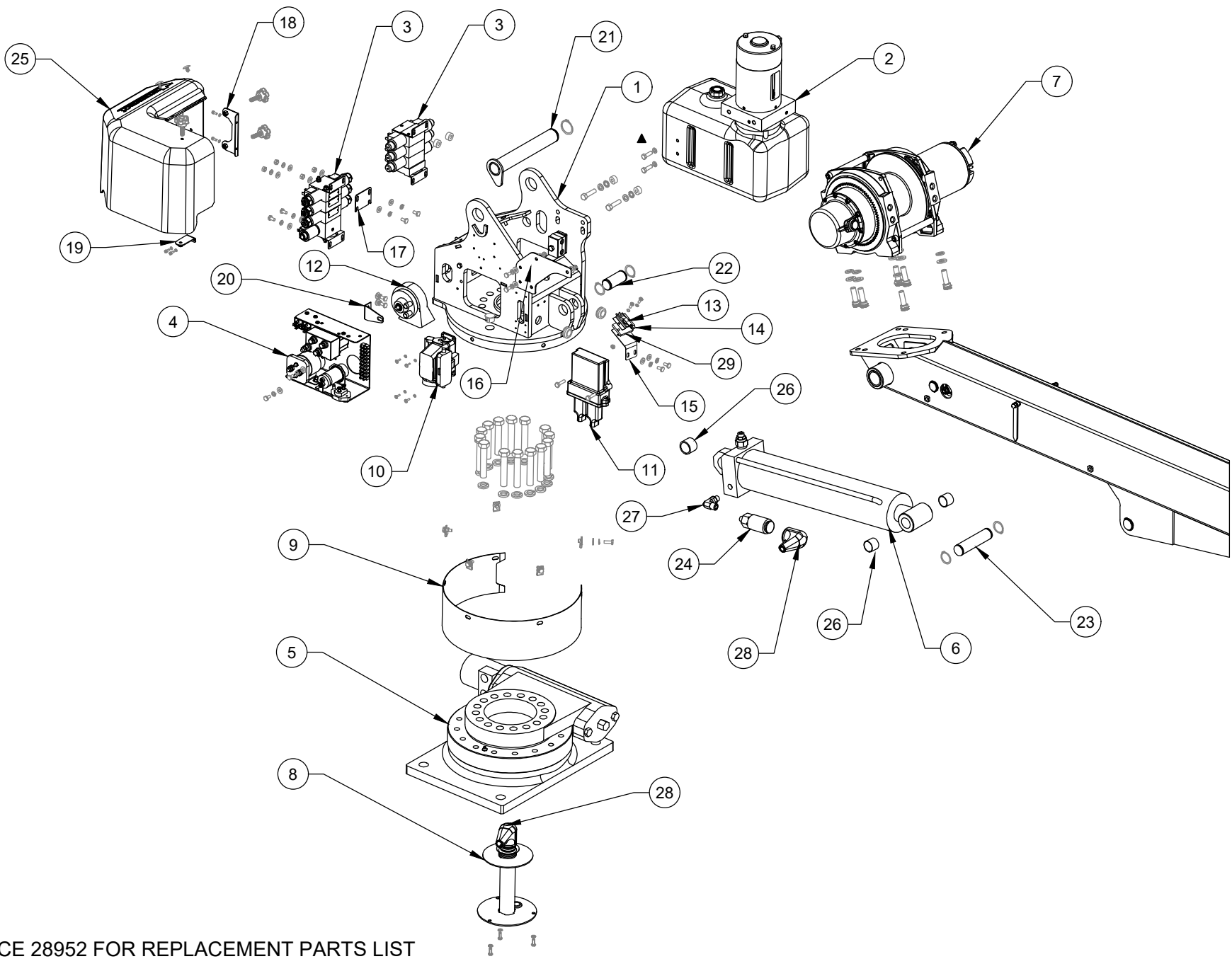


# SECTION 400

## REPLACEMENT PARTS



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO



REFERENCE 28952 FOR REPLACEMENT PARTS LIST



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
REPLACEMENT PARTS DWG - MECH  
3215E/3515E/3516E

DATE  
06-20-25B  
SUPERSEDES  
06-17-25A

SECTION  
C400  
28951

| ITEM NO. | NON-PROP | PROP | PART NUMBER | DESCRIPTION                              |
|----------|----------|------|-------------|------------------------------------------|
|          | QTY.     |      |             |                                          |
| 1        | 1        | 1    | 28637       | HOUSING WELDMENT ASSEMBLY                |
| 2        | 1        | 1    | 28720       | HYDRAULIC POWER UNIT                     |
| 3        | -        | 1    | 28800       | VALVE BLOCK ASSY; 3-SPOOL W/ PROP VALVE. |
|          | 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    | 23059       | ELEVATION CYLINDER                       |
| 7        | 1        | 1    | 21556       | 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                 |
| 11       | -        | 1    | 22158       | RADIO, ET, PROPORTIONAL                  |
|          | 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    | 21547       | ELEVATION CYLINDER OUTBOARD PIN          |
| 24       | 1        | 1    | SEE TABLE   | PRESSURE SWITCH                          |
| 25       | 1        | 1    | 28740       | PLASTIC COVER                            |
| 26       | 3        | 3    | 21789       | POLY BEARING - ELEVATION CYLINDER        |
| 27       | 1        | 1    | FF6801-0606 | FITTING, ADAPTER, 90°, 6MOFS-6MORB       |
| 28       | 1        | 1    | 17012       | BOOT: PRESSURE SWITCH                    |
| 29       | 1        | 1    | 20896       | TOP ANGLE SWITCH BLOCK                   |

| ITEM NO. | 3215E | 3515E | 3516E | PART NUMBER   |
|----------|-------|-------|-------|---------------|
|          | QTY.  |       |       |               |
| 24       | 1     | -     | -     | 17460-2200-21 |
|          | -     | 1     | 1     | 17460-2400-21 |

REFERENCE 28951 FOR REPLACEMENT PARTS DRAWING



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
**REPLACEMENT PARTS LIST - MECH**

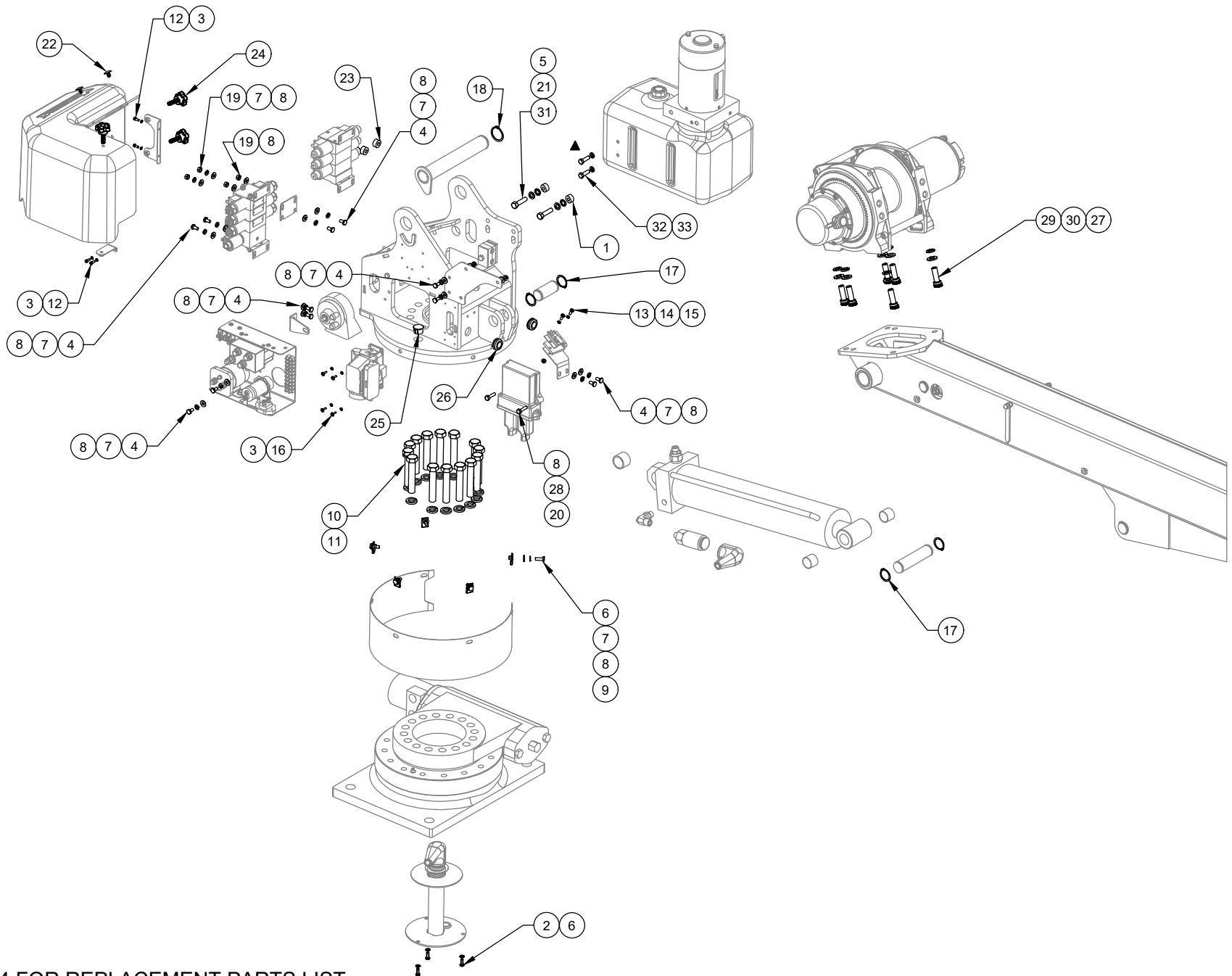
3215E/3515E/3516E

DATE  
06-17-25A

SECTION  
C400

SUPERSEDES  
10-14-24

**28952**



REFERENCE 28954 FOR REPLACEMENT PARTS LIST



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
REPLACEMENT FASTENERS DWG - MECH  
3215E/3515E/3516E

DATE  
06-20-25A  
SUPERSEDES  
10-14-24

SECTION  
C400  
28953

| ITEM NO. | NON-PROP | PROP | PART NUMBER       | DESCRIPTION                                    |
|----------|----------|------|-------------------|------------------------------------------------|
|          | QTY.     |      |                   |                                                |
| 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 LG, SS         |
| 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       | 2        | 2    | !HHCS02520100S    | HEX HEAD CAP SCREW 1/4-20 X 1.0 LG, SS         |
| 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       | 4        | 4    | !FWSH-M12         | M12 FLAT WASHER, ZINC                          |
| 28       | 2        | 2    | !JNUT-02520NS     | JNUT, NYLON INSERT, 1/4-20, SS                 |
| 29       | 4        | 4    | 25922             | SHCS M12-175x35mm Gr.12.9, ZINC                |
| 30       | 4        | 4    | !LWSH-M12-8.8     | M12 LOCK WASHER, ZINC                          |
| 31       | 2        | 2    | !HHCS03816150-8   | HHCS 3/8-16 X 1-1/2 LG GR 8, ZINC (KTI HPU)    |
|          | 2        | 2    | !HHCS03816125-8   | HHCS 3/8-16 X 1-1/4 LG GR 8, ZINC (BUCHER HPU) |
| 32**     | 2        | 2    | !LWSH-031S        | LOCK WASHER; 5/16", S/S                        |
| 33**     | 2        | 2    | !HHCS3118100S     | HEX HEAD CAP SCREW 5/16-18 X 1.0 LG, S/S       |

\* : USED WITH KTI HPU ONLY

\*\* : USED WITH BUCHER HPU ONLY

REFERENCE 28953 FOR REPLACEMENT PARTS DRAWING



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

REPLACEMENT FASTENERS LIST - MECH

DATE

06-20-25B

SECTION

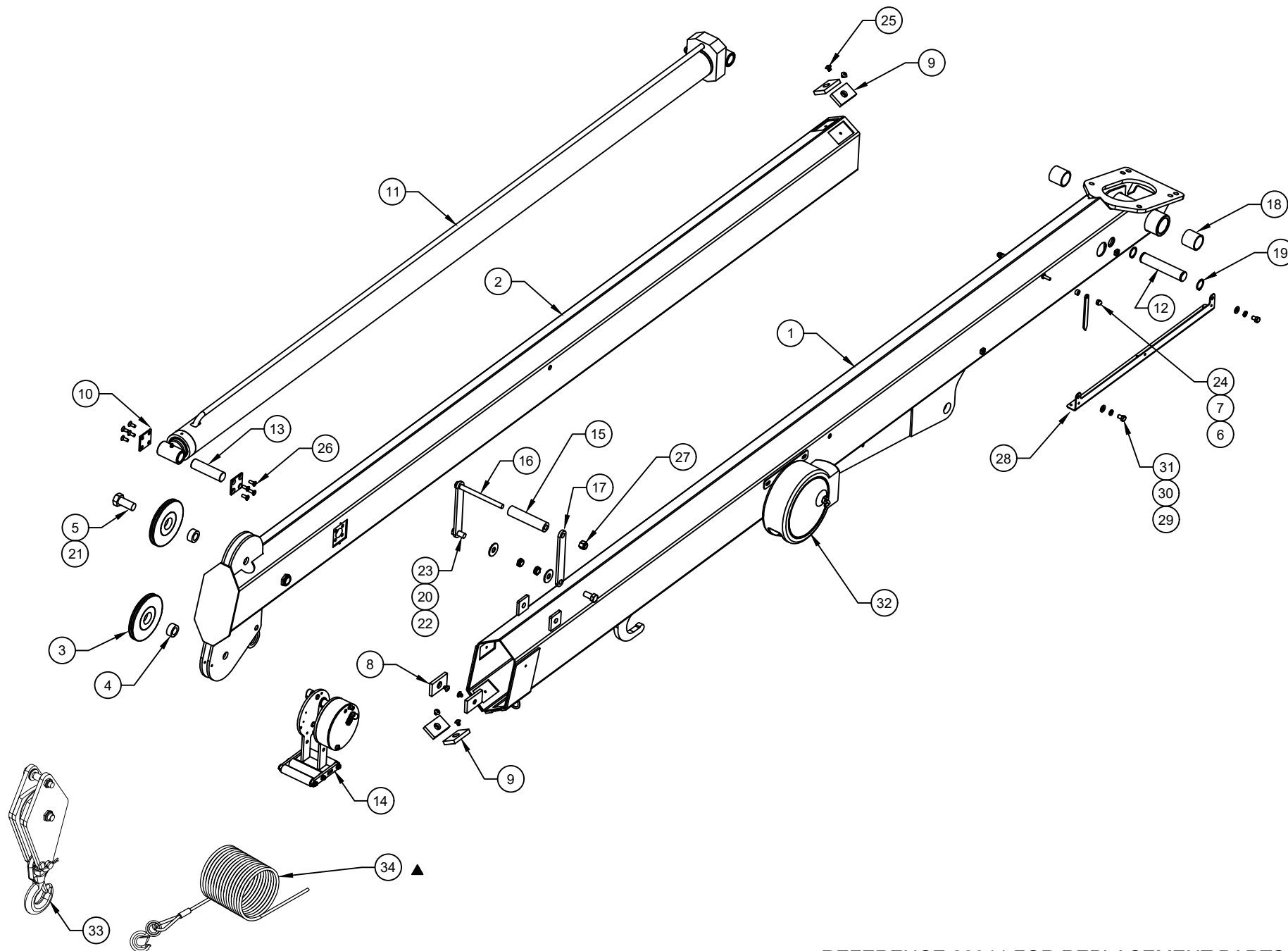
C400

3215E/3515E/3516E

SUPERSEDES

02-25-25A

28954



REFERENCE 28944 FOR REPLACEMENT PARTS LIST



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

REPL PARTS & FASTENERS DWG - 28673 BOOM

3516E

DATE

02-26-25A

SUPERSEDES

09-12-24

SECTION

C400

28943

| ITEM NO. | QTY. | PART NUMBER     | DESCRIPTION                                   |
|----------|------|-----------------|-----------------------------------------------|
| 1        | 1    | 28665           | PRIMARY BOOM WELDMENT                         |
| 2        | 1    | 23702           | SECONDARY BOOM WLDMNT                         |
| 3        | 2    | 21630           | CABLE SHEAVE - PLASTIC                        |
| 4        | 2    | 20536           | SPACER - 20537 SHEAVE                         |
| 5        | 1    | 17059-4         | SHEAVE AXLE                                   |
| 6        | 2    | 22490           | SPACER, BOOM ARROW 1/2" O.D.                  |
| 7        | 2    | 13459-2         | BOOM ARROW 4-7/16 LONG                        |
| 8        | 2    | 23710-2         | BOOM PAD 1.5 X 2.5 - .31 THK                  |
| 9        | 4    | 23710-3         | BOOM PAD 1.5 X 2.5 - .38 THK                  |
| 10       | 2    | 23706           | CYLINDER PIN RETAINING PLATE                  |
| 11       | 1    | 23692           | EXTNSION CYL 2.50" BORE X 78" STROKE          |
| 12       | 1    | 23708           | INBOARD EXT CYL PIN                           |
| 13       | 1    | 23709           | OUTBOARD EXT CYL PIN                          |
| 14       | 1    | 27469-L-C-00    | ASSY; COMPACT A2B                             |
| 15       | 1    | 21560           | ROLLER,UHMW GUIDE                             |
| 16       | 1    | !HHCS04414550   | HEX HEAD CAP SCREW - 7/16-14 X 5-1/2", ZINC   |
| 17       | 2    | 21936           | FLAT,MOUNT;WIRE ROPE GUIDE                    |
| 18       | 2    | 21206           | POLY BEARING - PRIMARY BOOM PIVOT             |
| 19       | 2    | !SRNG-100       | RETAINING RING - 1" SHAFT DIA.                |
| 20       | 2    | !FWSH-050       | FLAT WASHER 1/2", ZINC                        |
| 21       | 1    | !LNUT-07510     | LOCKNUT 3/4-10, ZINC                          |
| 22       | 2    | !JNUT-05013N    | 1/2-13 NYLON INSERT JAM NUT, ZINC             |
| 23       | 2    | !HHCS05013100-5 | HEX HEAD CAP SCREW 1/2-13 X 1 LG GR5, ZINC    |
| 24       | 2    | !ANUT-02520S    | ACORN NUT 1/4-20 S/S                          |
| 25       | 6    | !THCS02520038S  | TRUSS HEAD PHILLIPS SCREW 1/4-20 X 3/8" S/S   |
| 26       | 8    | !CACS02520050S  | CACS; 1/4-20 X 1/2", S/S                      |
| 27       | 1    | !LNUT-04414     | NYLON INSERT LOCK NUT - 7/16-14, ZINC         |
| 28       | 1    | 26940-2         | HEX BOOM CABLE GUARD BRACKET                  |
| 29       | 2    | !FWSH-031S      | FLAT WASHER; 5/16", S/S                       |
| 30       | 2    | !LWSH-031S      | LOCK WASHER; 5/16", S/S                       |
| 31       | 2    | !HHCS03118050S  | HEX HEAD CAP SCREW - 5/16 X 1/2" S/S          |
| 32       | 1    | 26577-1-20      | COMPLETE CORD REEL REELCRAFT ALL MODELS       |
| 33       | 1    | 20670           | LOAD BLOCK ASSEMBLY                           |
| 34       | 1    | 21639           | WIREROPE; 1/4 X 65' W/ EYEHOOK & SAFETY LATCH |

REFERENCE 28943 FOR REPLACEMENT PARTS DRAWING



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

REPLACEMENT PARTS LIST - BOOM 28673

3516E

DATE

09-12-24

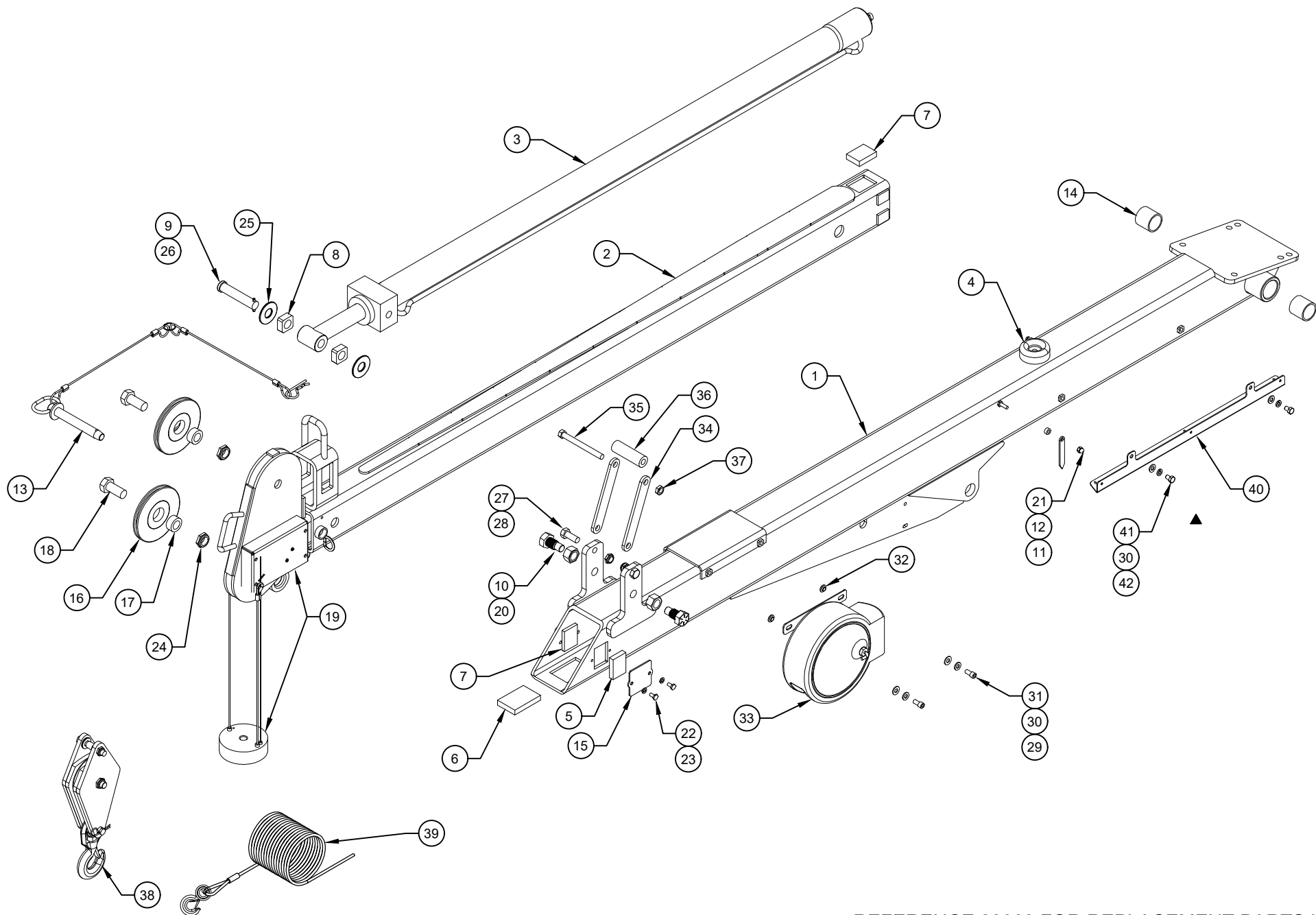
SUPERSEDES

-

SECTION

C400

28944



REFERENCE 28963 FOR REPLACEMENT PARTS LIST



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
REPL PARTS & FASTENERS DWG - 28684 BOOM  
3215E/3515E

DATE  
03-10-25B  
SUPERSEDES  
02-26-25A

SECTION  
C400  
28962

# REPLACEMENT PARTS LIST; 28684 BOOM

| ITEM NO. | QTY. | PART NUMBER     | DESCRIPTION                                   |
|----------|------|-----------------|-----------------------------------------------|
| 1        | 1    | 28680           | PRIMARY BOOM WELDED ASSEMBLY                  |
| 2        | 1    | 28015           | TERTIARY & SECONDARY BOOM ASSEMBLY            |
| 3        | 1    | 21754           | BOOM EXTENSION CYLINDER                       |
| 4        | 1    | 20285           | BUMPER - BOOM                                 |
| 5        | 1    | 21209           | BOOM PAD - 1-1/2 X 2 X 7/16                   |
| 6        | 1    | 21208           | BOOM PAD - 2 X 3 X 1/2                        |
| 7        | 2    | 21538           | BOOM PAD - 1-1/2 X 2 X 1/2                    |
| 8        | 2    | 21734           | THRUST ROLLER                                 |
| 9        | 1    | 13401-2A        | ROD PIVOT PIN - 3/4 x 3-3/4                   |
| 10       | 2    | 17487           | PIVOT BOLT                                    |
| 11       | 2    | 22490           | SPACER, BOOM ARROW 1/2" O.D.                  |
| 12       | 2    | 13459-1         | BOOM ARROW 3-3/16 LONG                        |
| 13       | 1    | 23042-B-14-14   | ASSY; PIN / LANYARD                           |
| 14       | 2    | 21206           | POLY BEARING - PRIMARY BOOM PIVOT             |
| 15       | 2    | 21528           | BOOM PAD CAP                                  |
| 16       | 2    | 21630           | CABLE SHEAVE                                  |
| 17       | 2    | 20536           | SPACER - 20537 SHEAVE                         |
| 18       | 2    | 17059-4         | SHEAVE AXLE                                   |
| 19       | 1    | 28860-1         | ANTI-TWO-BLOCK HOUSING ASSEMBLY               |
| 20       | 2    | !HNUT07516      | HEX NUT; 3/4-16, ZINC                         |
| 21       | 2    | !ANUT-02520S    | ACORN NUT 1/4-20 SS                           |
| 22       | 4    | !HHCS02520050   | HEX HEAD CAP SCREW 1/4-20 X 1/2 LG, ZINC      |
| 23       | 4    | !LWSH-025       | LOCKWASHER, 1/4", ZINC                        |
| 24       | 2    | !LNUT-07510     | LOCKNUT 3/4-10, ZINC                          |
| 25       | 2    | !FWSH-075       | FLAT WASHER 1/4", ZINC                        |
| 26       | 1    | !RPIN-016125    | ROLL PIN, 5/32 X 1-1/4                        |
| 27       | 2    | !HHCS05013125-5 | HEX HEAD CAP SCREW 1/2-13NC X 1-1/4 LG, ZINC  |
| 28       | 2    | !JNUT-05013N    | 1/2-13 NYLON INSERT JAM NUT, ZINC             |
| 29       | 2    | 01016           | FIBER WASHER                                  |
| 30       | 4    | !FWSH-031S      | FLAT WASHER; 5/16", SS                        |
| 31       | 2    | !SHCS03118063S  | SHCS 5/16-18 X 1/2 LONG, SS                   |
| 32       | 2    | 28198           | INSULATING SLEEVE WASHER - 5/16"              |
| 33       | 1    | 26577-1-20      | CORD REEL ASSEMBLY                            |
| 34       | 2    | 21936           | FLAT,MOUNT;WIRE ROPE GUIDE                    |
| 35       | 1    | !HHCS04414450   | HEX HEAD CAP SCREW 7/16-14 X 4-1/2 LG, ZINC   |
| 36       | 1    | 27088           | ROLLER, UHMW GUIDE                            |
| 37       | 1    | !JNUT-04414N    | NYLON LOCK-JAM NUT - 7/16-14, ZINC            |
| 38       | 1    | 20670-2         | LOAD BLOCK ASSEMBLY FOR 3215E                 |
|          | 1    | 20670           | LOAD BLOCK ASSEMBLY FOR 3515E                 |
| 39       | 1    | 21639           | WIREROPE; 1/4 X 62' W/ EYEHOOK & SAFETY LATCH |
| 40       | 1    | 26720           | RECTANGULAR BOOM CABLE GUARD BRACKET          |
| 41       | 2    | !LWSH-031S      | LOCK WASHER; 5/16", S/S                       |
| 42       | 2    | !HHCS03118050S  | HEX HEAD CAP SCREW - 5/16 X 1/2 LONG S/S      |

REFERENCE DWG #28962 FOR REPLACEMENT PARTS DRAWING



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
RPLCMNT PARTS & FAST LIST

DATE  
03-10-25A

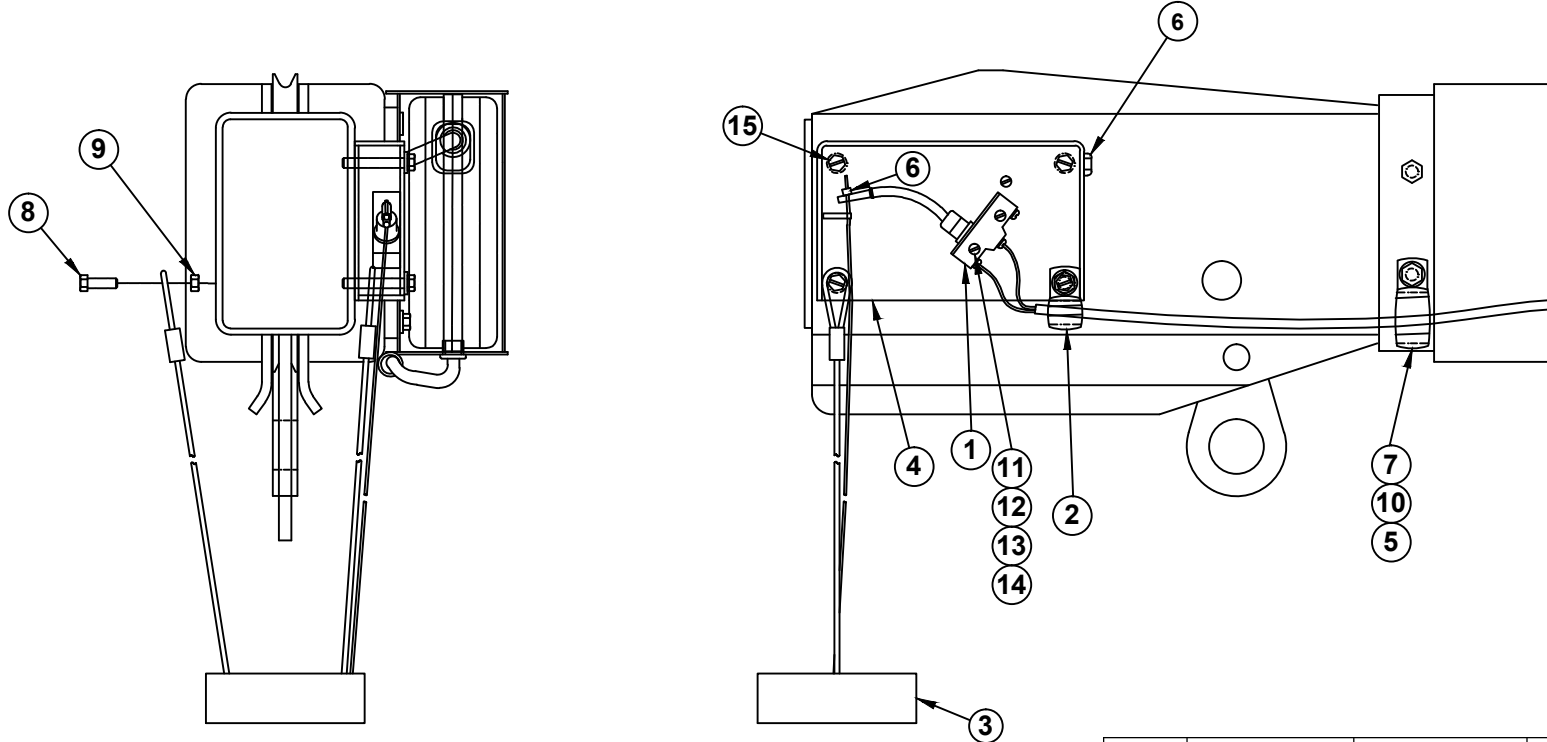
SECTION  
C400

3215E/3515E

SUPERSEDES  
10-03-24

28963

# ANTI-TWO-BLOCK ASSY



NO DASH: 4016E & 4516E

-1: 3215E & 3515E

| ITEM | QTY     |    | PART NO.        | DESCRIPTION                              |
|------|---------|----|-----------------|------------------------------------------|
|      | NO DASH | -1 |                 |                                          |
| 1    | 1       | 1  | 19376           | LIMIT SWITCH                             |
| 2    | 1       | 1  | 19269           | CABLE CLAMP - SMALL                      |
| 3    | -       | 1  | 19377-1         | CABLE WEIGHT ASSY                        |
|      | 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"     |



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

ANTI-2-BLOCK REPL PARTS DWG & LIST

3215E, 3515E, 4016E, 4516E

DATE

04-16-25

SUPERSEDES

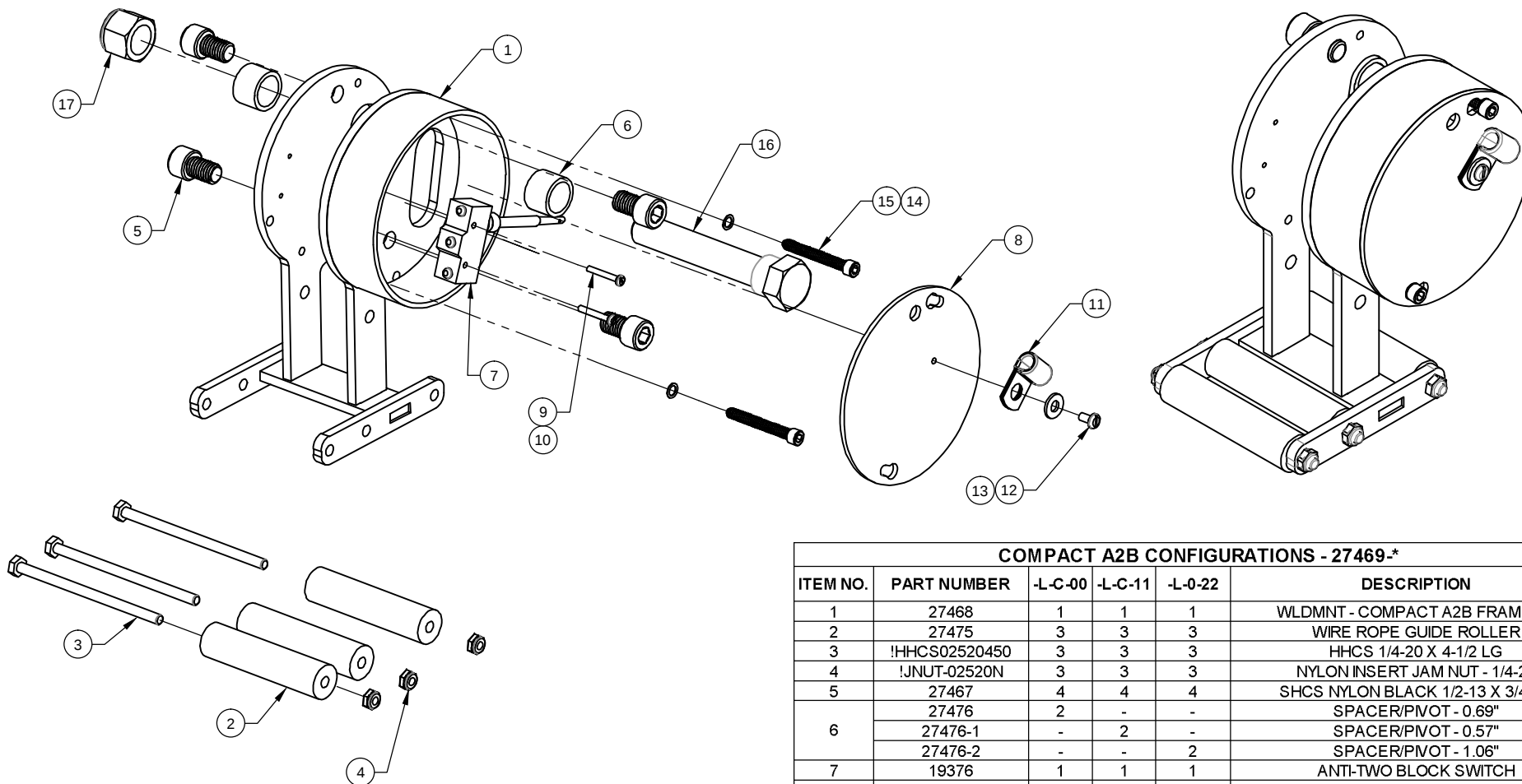
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SECTION

C400

28861

# 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             |
| 6        | 27476           | 2       | -       | -       | SPACER/PIVOT - 0.69"                         |
|          | 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.         |
|          | !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

TITLE  
REPLACEMENT PARTS LIST

COMPACT A2B - 27469-\*

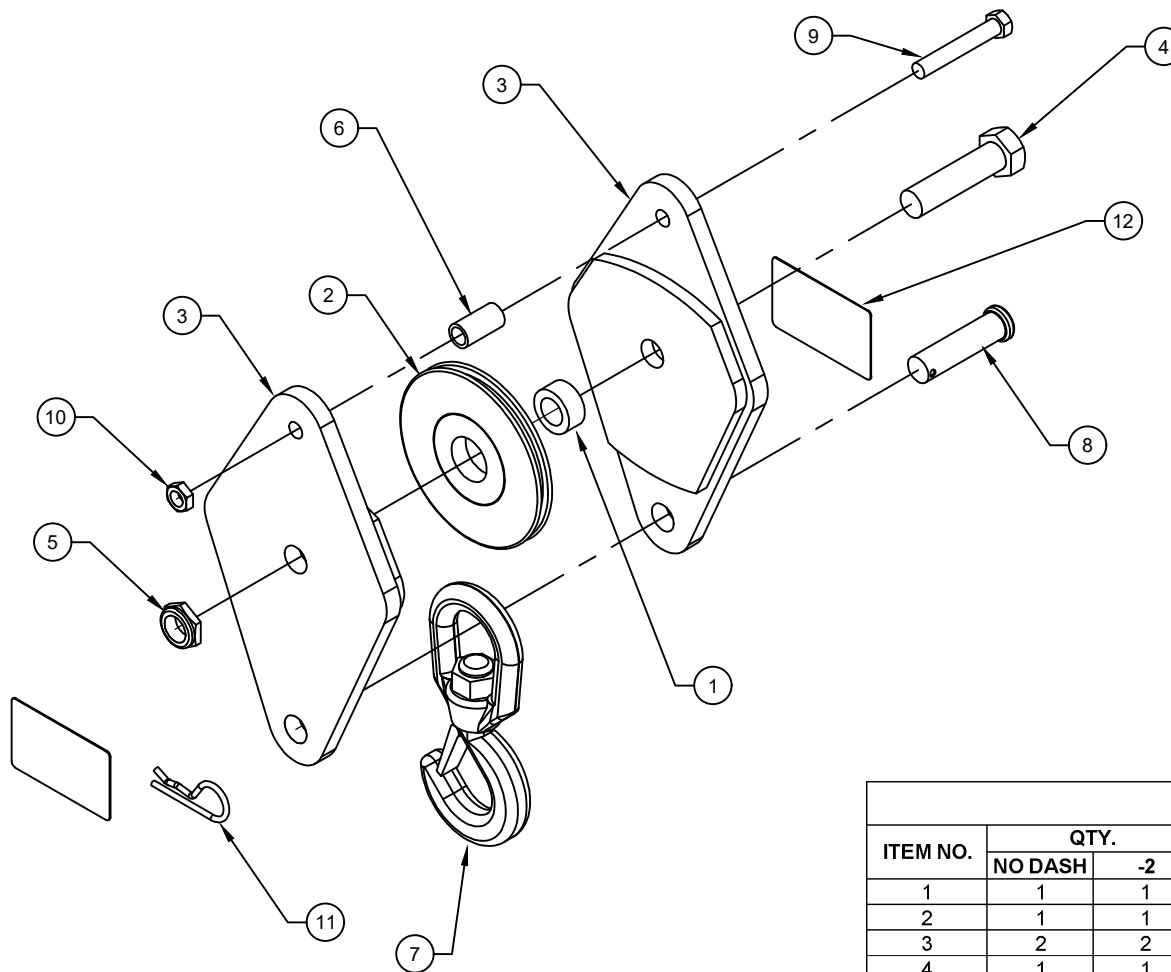
DATE  
7-10-24A

SUPERSEDES  
06-11-24

SECTION  
C400

26942

# REPLACEMENT PARTS LIST - 20670 LOAD BLOCK



LOAD BLOCK ASSEMBLY 20670

| ITEM NO. | QTY.    |    | PART NUMBER   | DESCRIPTION                               |
|----------|---------|----|---------------|-------------------------------------------|
|          | NO DASH | -2 |               |                                           |
| 1        | 1       | 1  | 20536         | SPACER - 20537 SHEAVE                     |
| 2        | 1       | 1  | 21630         | CABLE SHEAVE - PLASTIC                    |
| 3        | 2       | 2  | 20671         | SIDE PLATE WELDED ASSEMBLY                |
| 4        | 1       | 1  | !HHCS07510300 | HEX HEAD CAP SCREW 3/4-10 X 3" ZINC       |
| 5        | 1       | 1  | !JNUT-07510N  | NYLON LOCK-JAMNUT 3/4-10, ZINC            |
| 6        | 1       | 1  | 20674         | SPACER                                    |
| 7        | 1       | 1  | 17291         | SWIVEL HOOK W/ SAFETY LATCH               |
| 8        | 1       | 1  | 20675         | CLEVIS PIN - 3/4" X 2-3/4"                |
| 9        | 1       | 1  | !HHCS04414275 | HEX HEAD CAP SCREW 7/16-14 X 2-3/4", ZINC |
| 10       | 1       | 1  | !JNUT-04414N  | NYLON LOCK-JAM NUT - 7/16-14, ZINC        |
| 11       | 1       | 1  | 21-07         | HAIRPIN COTTER                            |
| 12       | -       | 2  | 27007-03a     | DECAL LOAD BLOCK, 3200 LBS.               |
|          | 2       | -  | 27007-04a     | DECAL LOAD BLOCK, 3500 LBS.               |



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

REPLACEMENT PARTS LIST -20670 LOAD BLOCK

3215E/351\*E

DATE

09-13-24

SUPERSEDES

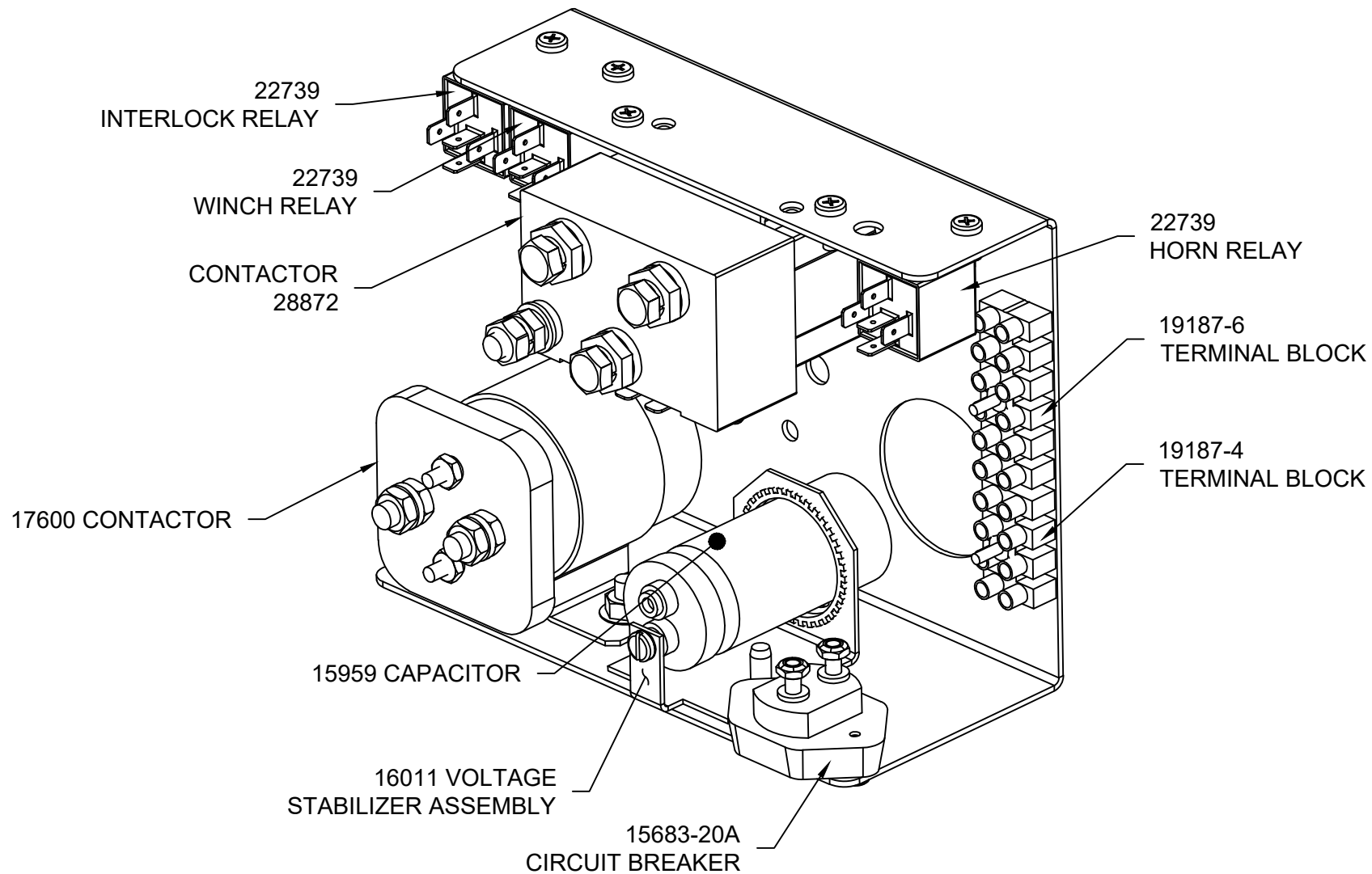
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SECTION

C400

28946

# 28700 ELECTRICAL COMPONENT ASSEMBLY



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

ELECTRICAL COMPONENT ASSEMBLY

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

DATE

04-09-24

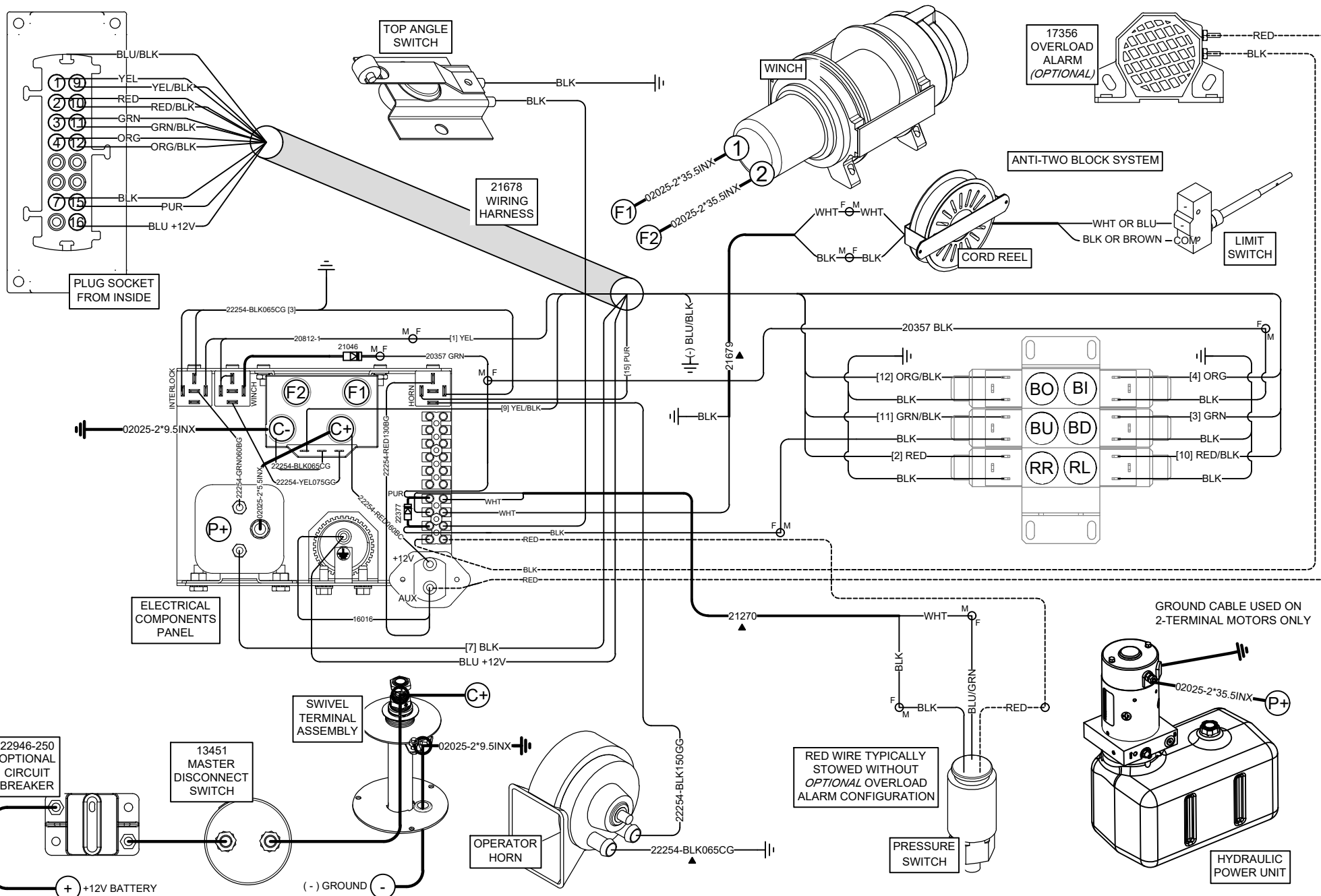
SUPERSEDES

-

SECTION

C400

28835



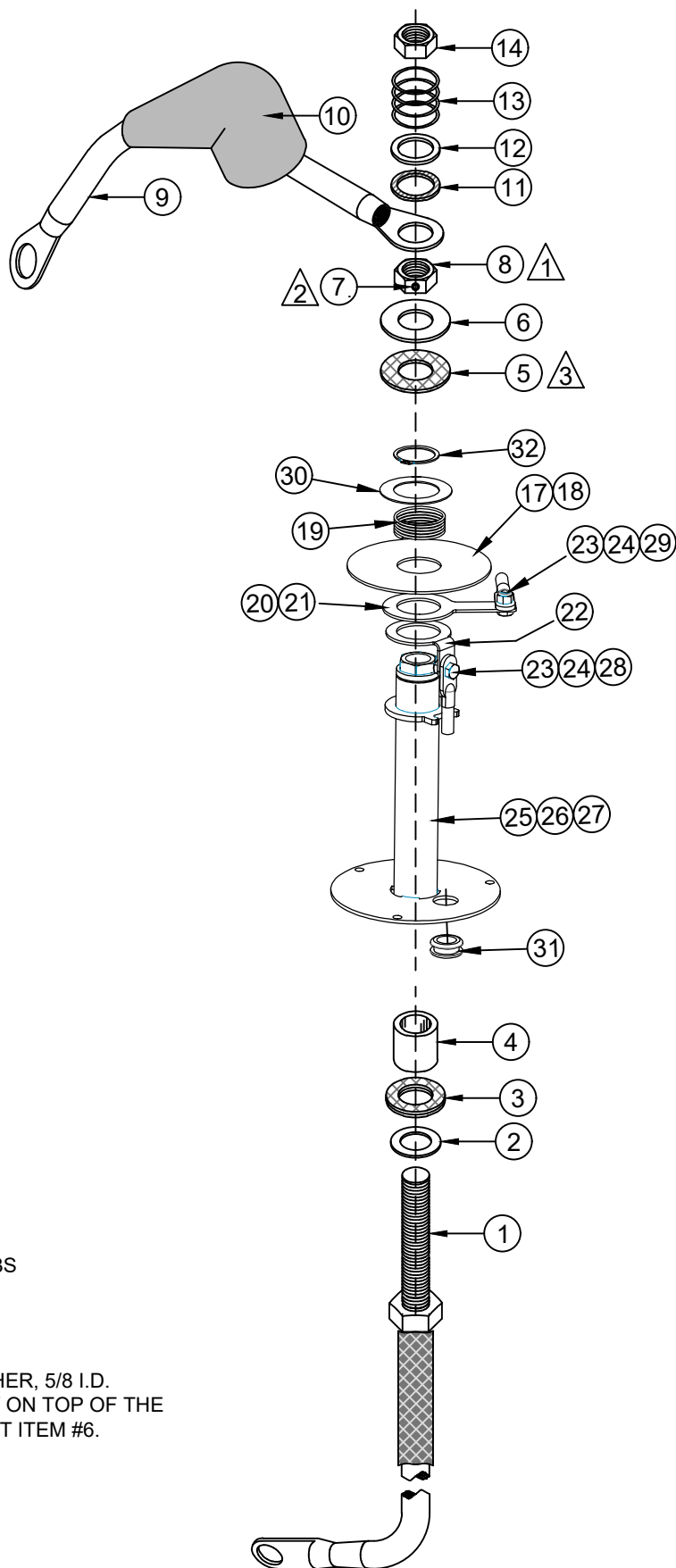
VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
**WIRING DIAGRAM**  
45\*\*E/40\*\*E/351\*E/3215E  
NON PROPORTIONAL

|                         |                 |
|-------------------------|-----------------|
| DATE<br>07-18-25C       | SECTION<br>C400 |
| SUPERSEDES<br>04-17-25B | 28836           |



# 2-Pole Slip-ring Replacement Parts



TORQUE TO 15 FT-LBS



LOCTITE 242 BLUE



ITEM #8, FIBER WASHER, 5/8 I.D.  
'MUST' SIT DIRECTLY ON TOP OF THE  
INVERTED FLARE NUT ITEM #6.



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

REPL. PARTS ILLUSTRATION

ET CRANES

DATE

04-23-24

SUPERSEDES

-

SECTION

C400

28843

# 2-Pole Slip-ring Replacement Parts

| Slew Rotation 2-Pole Slip-Ring<br>(2010E ONLY) | Slew Rotation 2-Pole Slip-Ring<br>(3215E/351*E/40**E/45**E) | Slew Rotation 2-Pole Slip-Ring<br>(5020E/6020E) | 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"   |
| 1                                              | 1                                                           | 1                                               | 1           | 4                        | 14233           | 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/ KNULED 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)                   |
| -                                              | 1                                                           | 1                                               | -           | 18                       | 27456-1         | 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                                              | -                                                           | -                                               | -           | 25                       | 23255           | SLIP-RING, WELDED ASSY, ET6K                     |
| -                                              | 1                                                           | -                                               | -           | 26                       | 23255-1         | SLIP-RING, WELDED ASSY, ET8 - 18K(X)             |
| -                                              | -                                                           | 1                                               | -           | 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                                               | -           | 30                       | 27463           | SHIM, WIDE RIM, 18GA, 2-1/4 O.D. X 1-1/2 I.D.    |
| 1                                              | 1                                                           | 1                                               | -           | 31                       | 20889           | RUBBER GROMMET                                   |
| 1                                              | 1                                                           | 1                                               | -           | 32                       | !SRNG-150       | SNAP-RING, EXTERNAL, 1-1/2"                      |



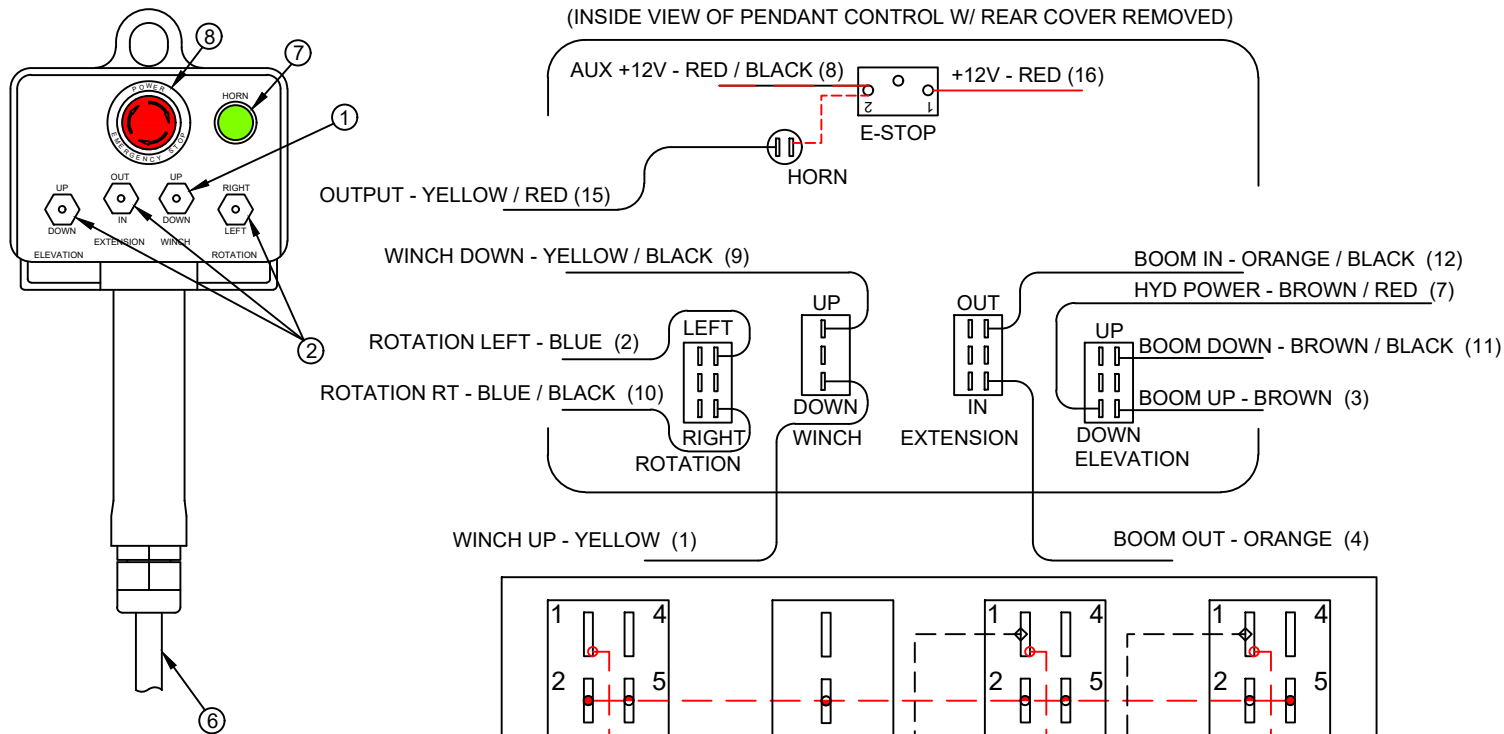
VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
16780 REPLACEMENT PARTS  
ET CRANES

DATE  
04-23-24  
SUPERSEDES  
-

SECTION  
C400  
28842

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



WIRE TERMINALS TO BE INSTALLED 'AFTER'  
ROUTING REPLACEMENT CORD ASSY  
THROUGH PENDANT HEAD AND PLUG  
HOUSING.

STOW OR CUT BACK UNUSED WIRES.

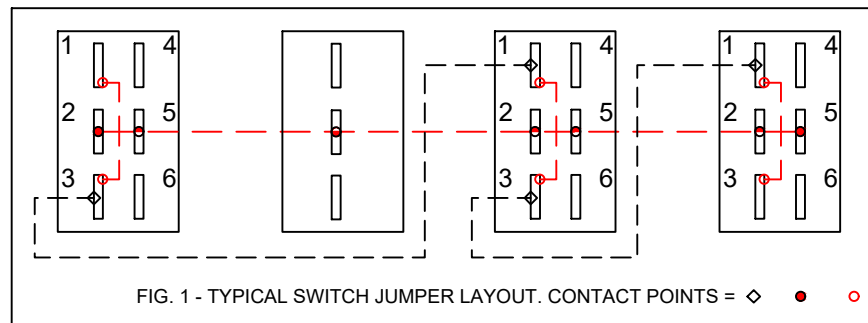
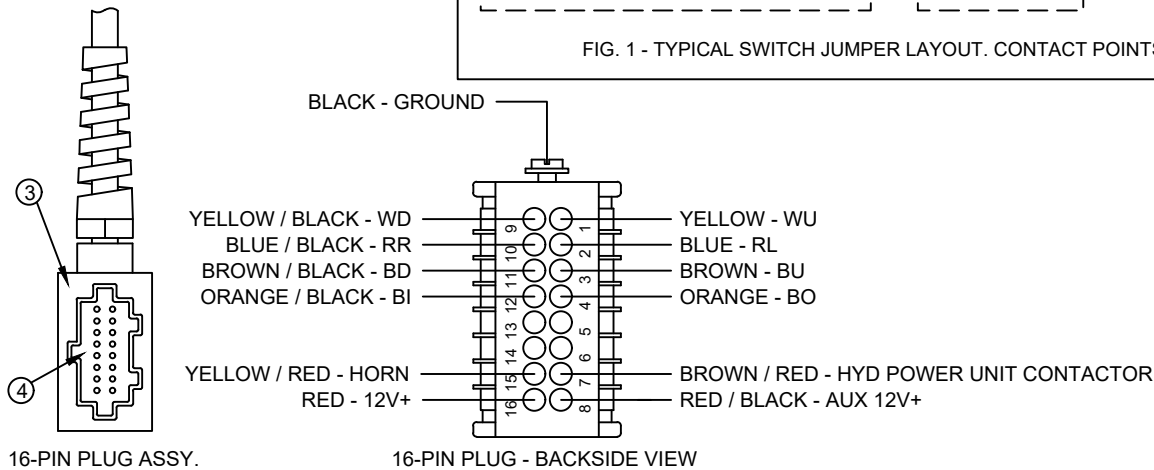
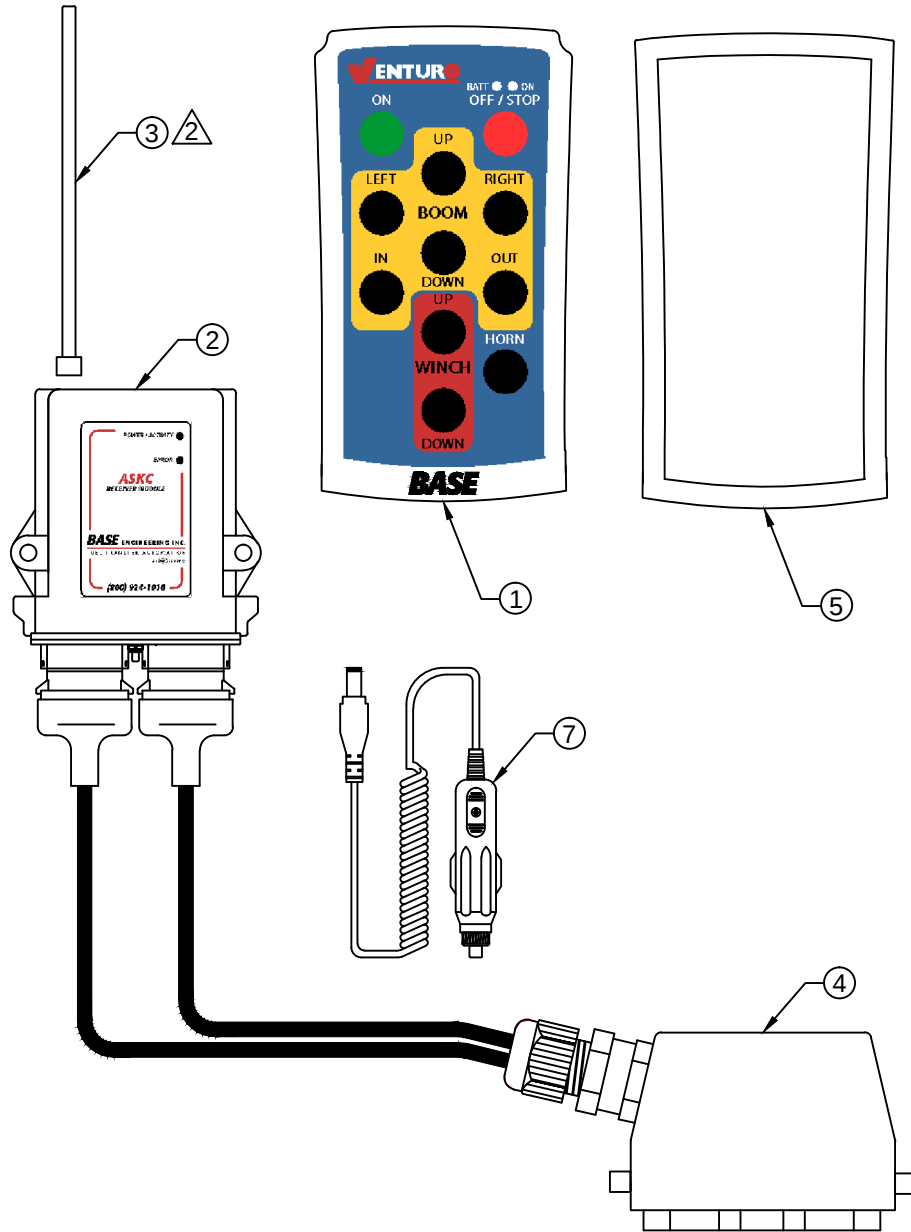


FIG. 1 - TYPICAL SWITCH JUMPER LAYOUT. CONTACT POINTS = ◇ ●



|      |     |          |                            |
|------|-----|----------|----------------------------|
| 8    | 1   | 22156    | SWITCH; E-STOP             |
| 7    | 1   | 22155    | SWITCH; PUSHBUTTON, HORN   |
| 6    | 1   | 22135    | KIT; REPLACEMENT CORD ASSY |
| 5    | -   | -        | -                          |
| 4    | 1   | 22472    | INSERT; MALE, 16 + 1 POLE  |
| 3    | 1   | 22471    | PLUG CASE; 16 + 1 POLE     |
| 2    | 3   | 22152    | SWITCH; DPDT, MOMENTARY    |
| 1    | 1   | 22081    | SWITCH; SPDT, MOMENTARY    |
| ITEM | QTY | PART NO. | DESCRIPTION                |

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



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

1 21986-RX-\*\* DOES NOT INCLUDE 21986-ANT

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



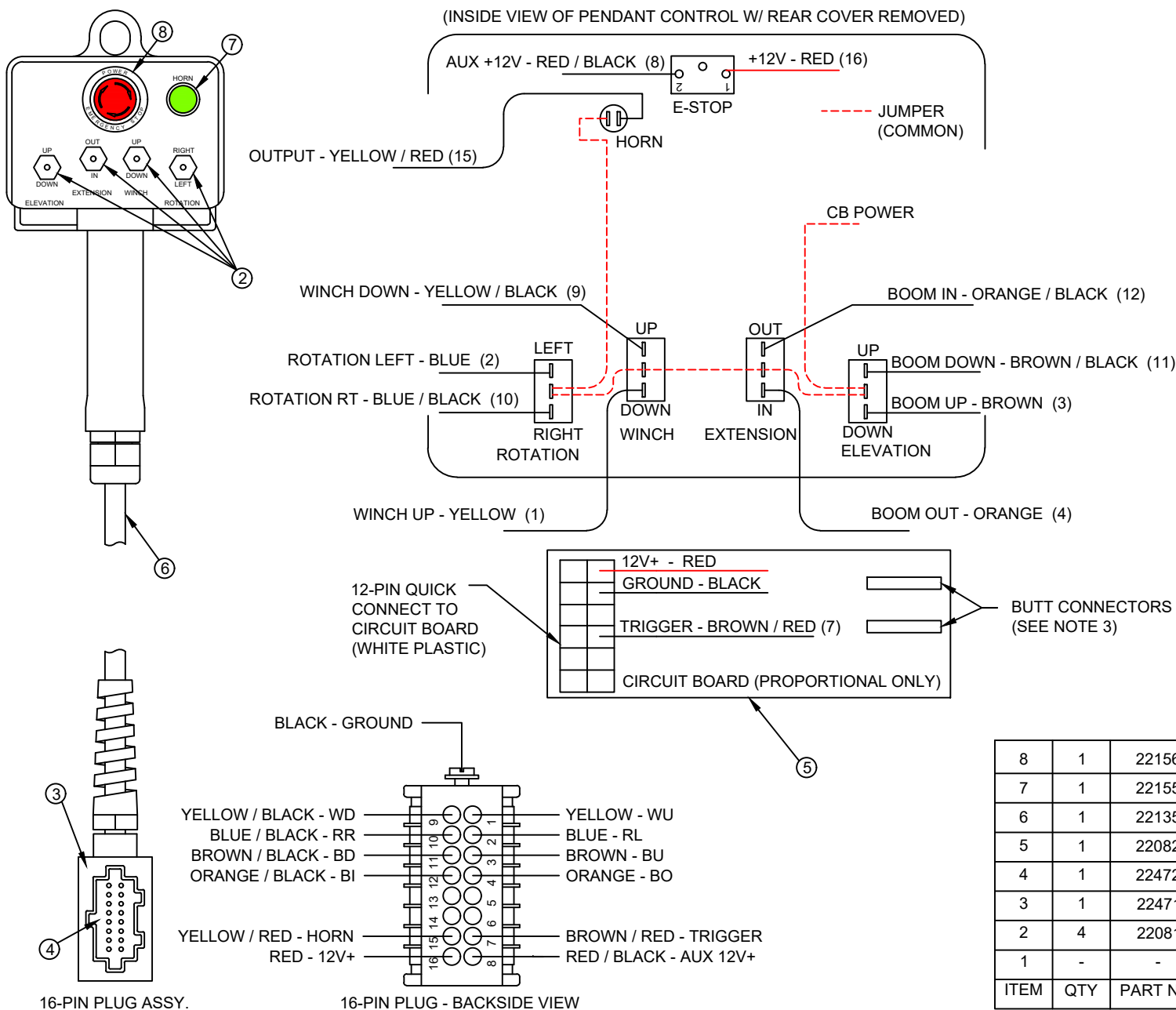
VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
REPLACEMENT PARTS DWG & LIST  
ET NON-PROPORTIONAL CRANES

DATE  
08-05-25  
SUPERSEDES  
-

SECTION  
C400  
23529

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



NOTE 1:  
WIRE TERMINALS TO BE INSTALLED 'AFTER'  
ROUTING REPLACEMENT CORD ASSY  
THROUGH PENDANT HEAD AND PLUG  
HOUSING.

NOTE 2:  
STOW OR CUT BACK UNUSED WIRES.

NOTE 3:  
WHEN REPLACING CORD ASSY, CUT BLACK  
AND BLACK / RED WIRES FROM 12-PIN QUICK  
CONNECT AND INSTALL 'BUTT CONNECTORS';  
MATCH UP BLACK TO BLACK WIRES AND  
BLACK / RED TO BLACK / RED WIRES FROM  
REPLACEMENT CORD ASSY.

| 8    | 1   | 22156    | SWITCH; E-STOP                       |
|------|-----|----------|--------------------------------------|
| 7    | 1   | 22155    | SWITCH; PUSHBUTTON, HORN             |
| 6    | 1   | 22135    | KIT; REPLACEMENT CORD ASSY           |
| 5    | 1   | 22082    | CIRCUIT BOARD; PROP VALVE CONTROLLER |
| 4    | 1   | 22472    | INSERT; MALE, 16 + 1 POLE            |
| 3    | 1   | 22471    | PLUG CASE; 16 + 1 POLE               |
| 2    | 4   | 22081    | SWITCH; SPDT, MOMENTARY              |
| 1    | -   | -        | -                                    |
| ITEM | QTY | PART NO. | DESCRIPTION                          |



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
REPLACEMENT PARTS DWG & LIST

DATE  
04-22-24

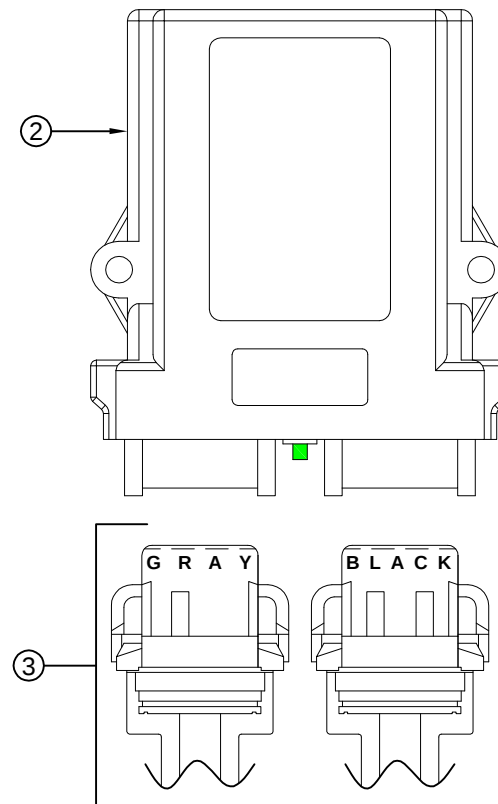
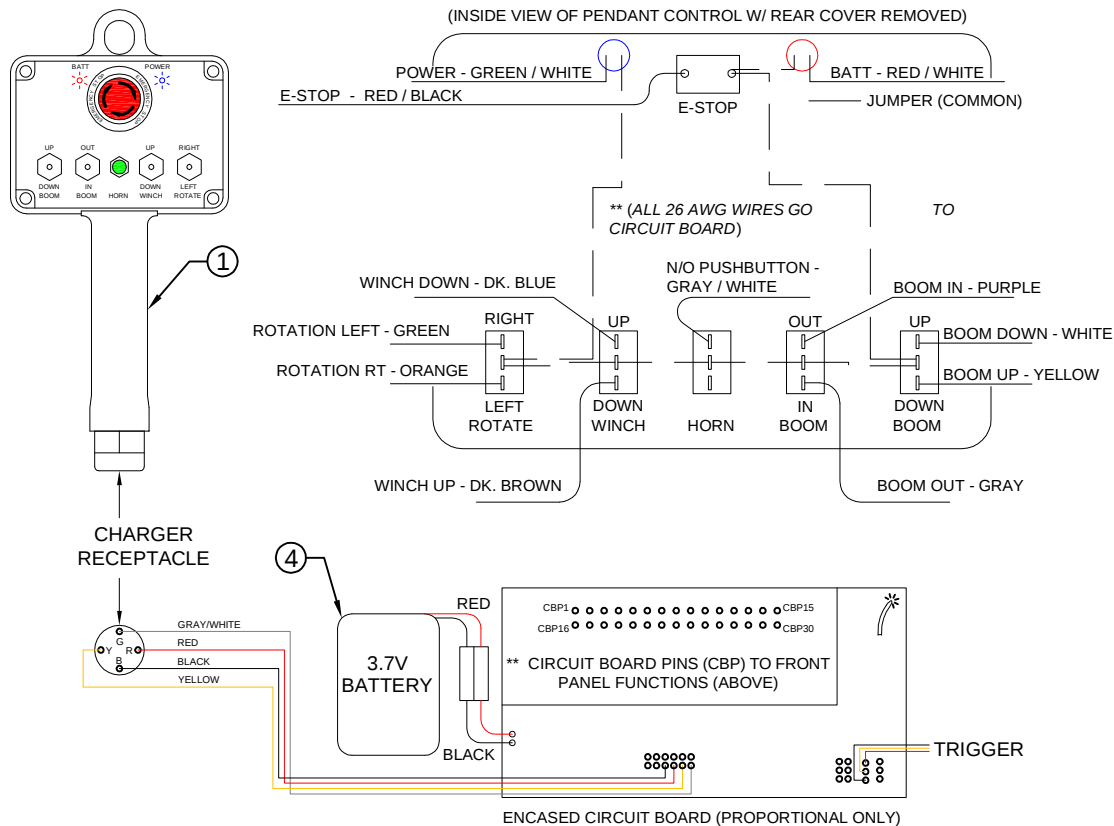
SECTION  
C400

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

SUPERSEDES

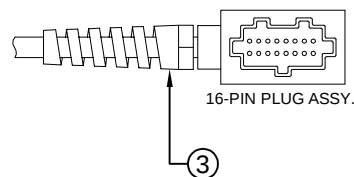
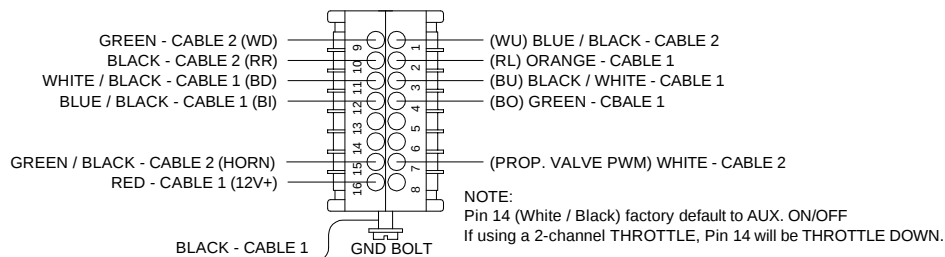
28841

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



CABLE 1 = GRAY CONNECTOR  
CABLE 2 = BLACK CONNECTOR

16-PIN PLUG - BACKSIDE VIEW



## COMPONENTS

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



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

REPLACEMENT PARTS DWG & LIST

ET PROPORTIONAL SERIES CRANES ▲

DATE

03-11-19A

SUPERSEDES

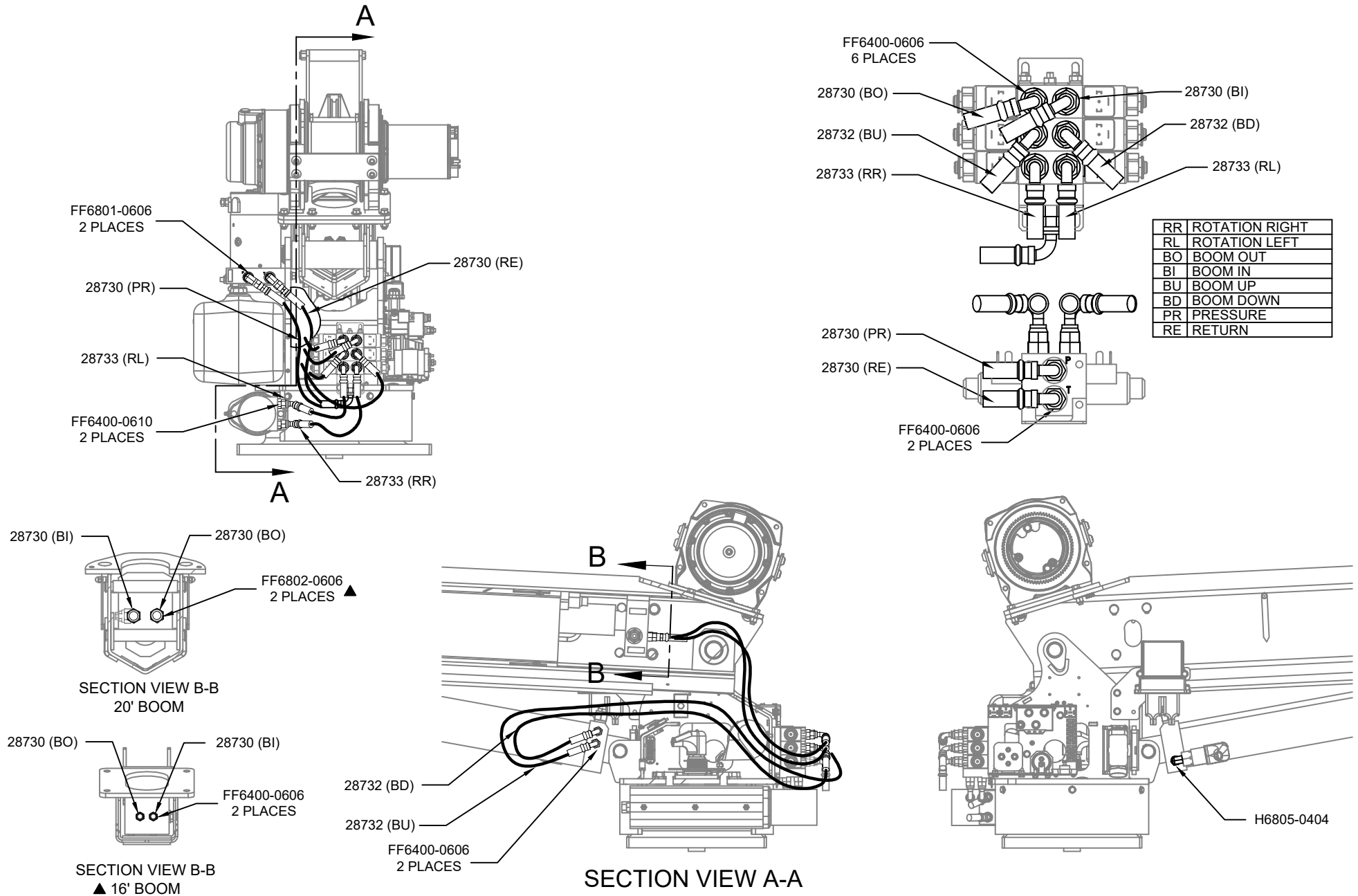
07-31-18

SECTION

C400

23786

# HYDRAULIC COMPONENTS DRAWING



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

HYDRAULIC COMPONENTS DRAWING

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

DATE

03-06-25A

SUPERSEDES

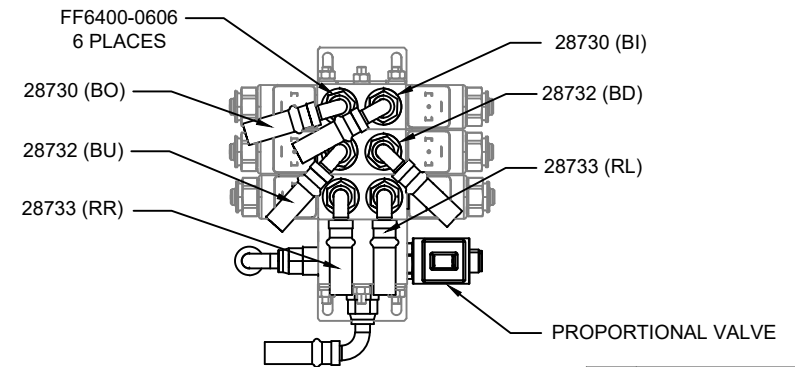
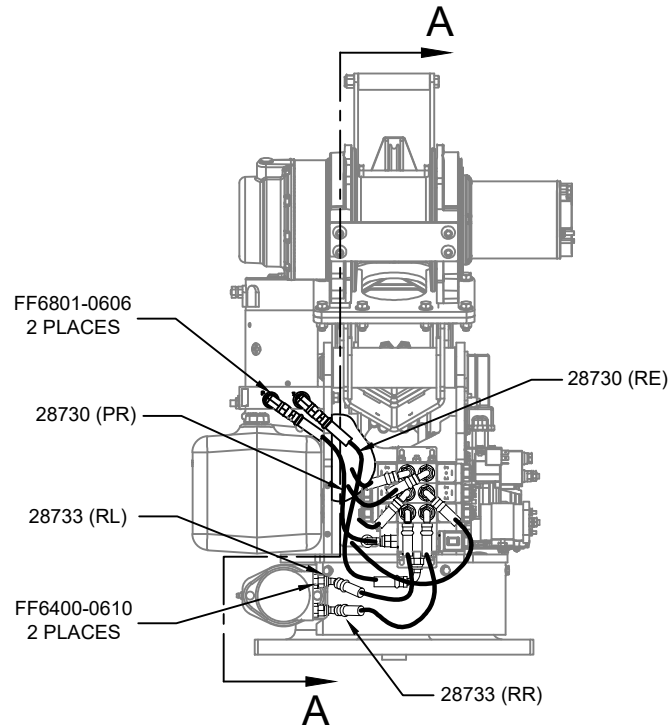
04-16-24

SECTION

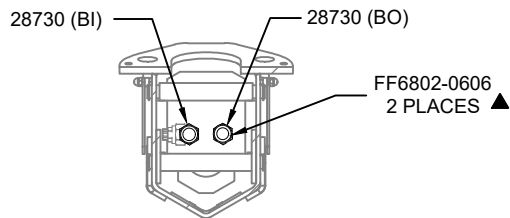
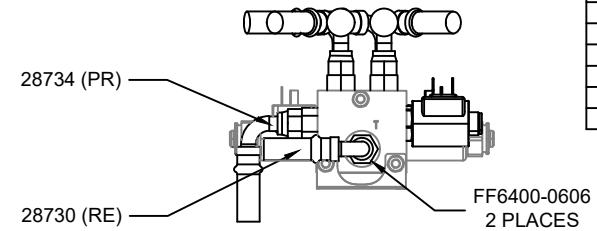
C400

28838

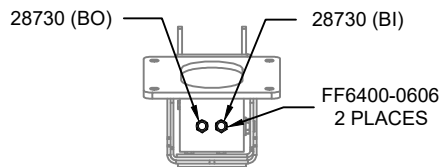
# HYDRAULIC COMPONENTS DRAWING



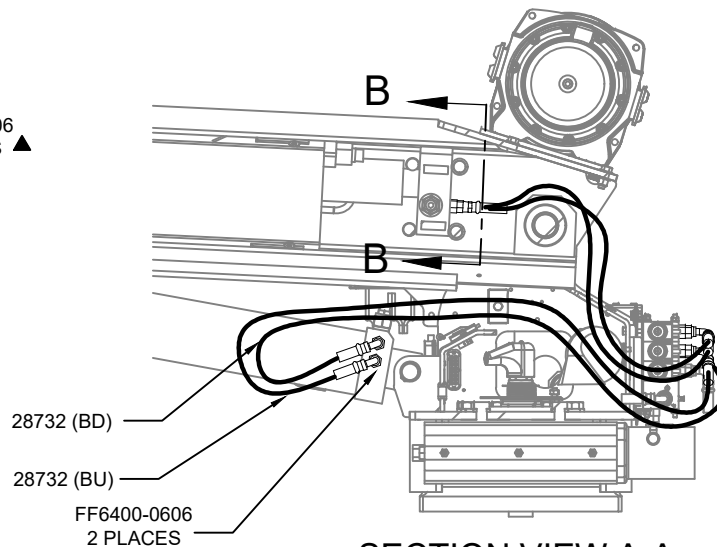
|    |                |
|----|----------------|
| RR | ROTATION RIGHT |
| RL | ROTATION LEFT  |
| BO | BOOM OUT       |
| BI | BOOM IN        |
| BU | BOOM UP        |
| BD | BOOM DOWN      |
| PR | PRESSURE       |
| RE | RETURN         |



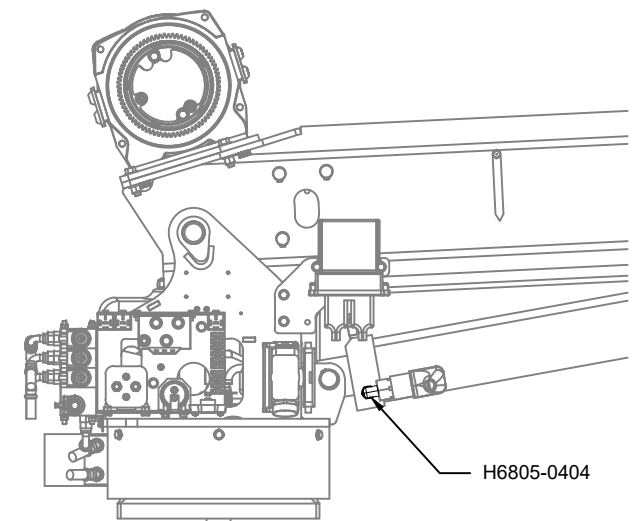
SECTION VIEW B-B  
20' BOOM



SECTION VIEW B-B  
▲ 16' BOOM



SECTION VIEW A-A



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

HYDRAULIC COMPONENTS DRAWING

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

DATE

03-06-25A

SUPERSEDES

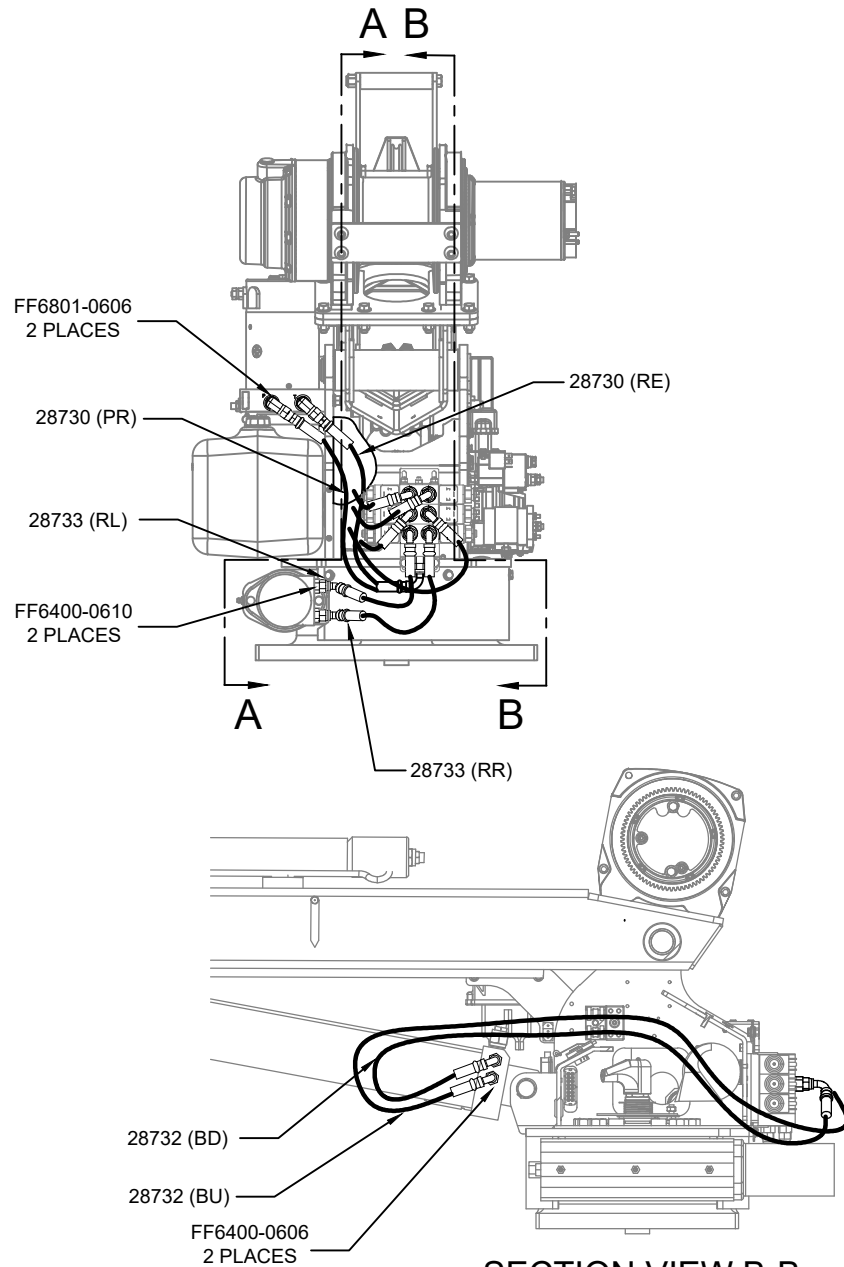
04-22-24

SECTION

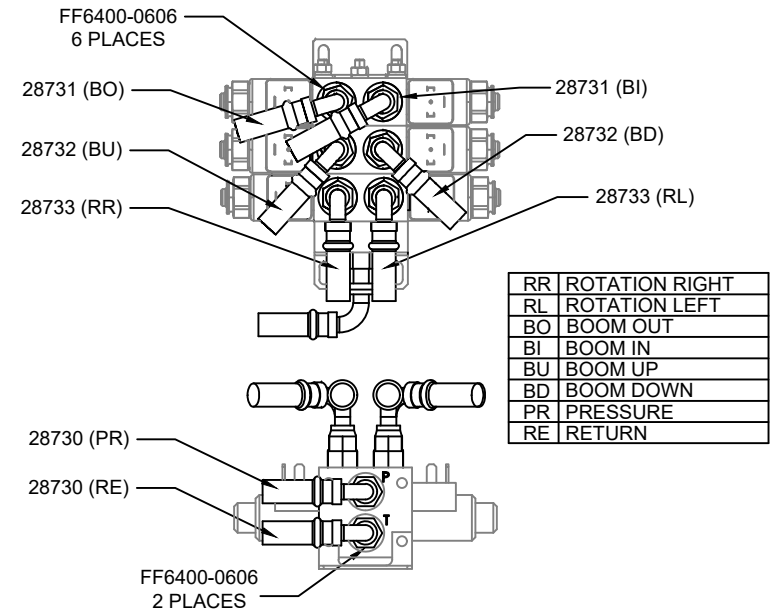
C400

28839

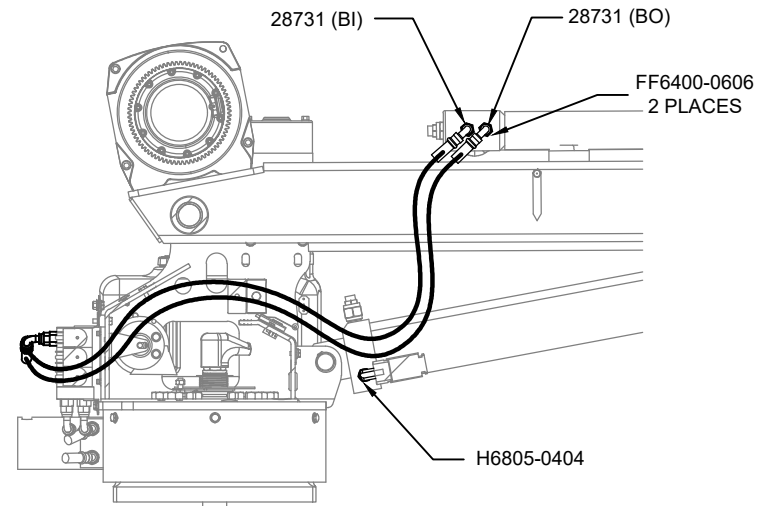
# HYDRAULIC COMPONENTS DRAWING



SECTION VIEW B-B



SECTION VIEW A-A



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

HYDRAULIC COMPONENTS DRAWING

3215E/3515E, NON-PROPORTIONAL

DATE

10-17-24

SUPERSEDES

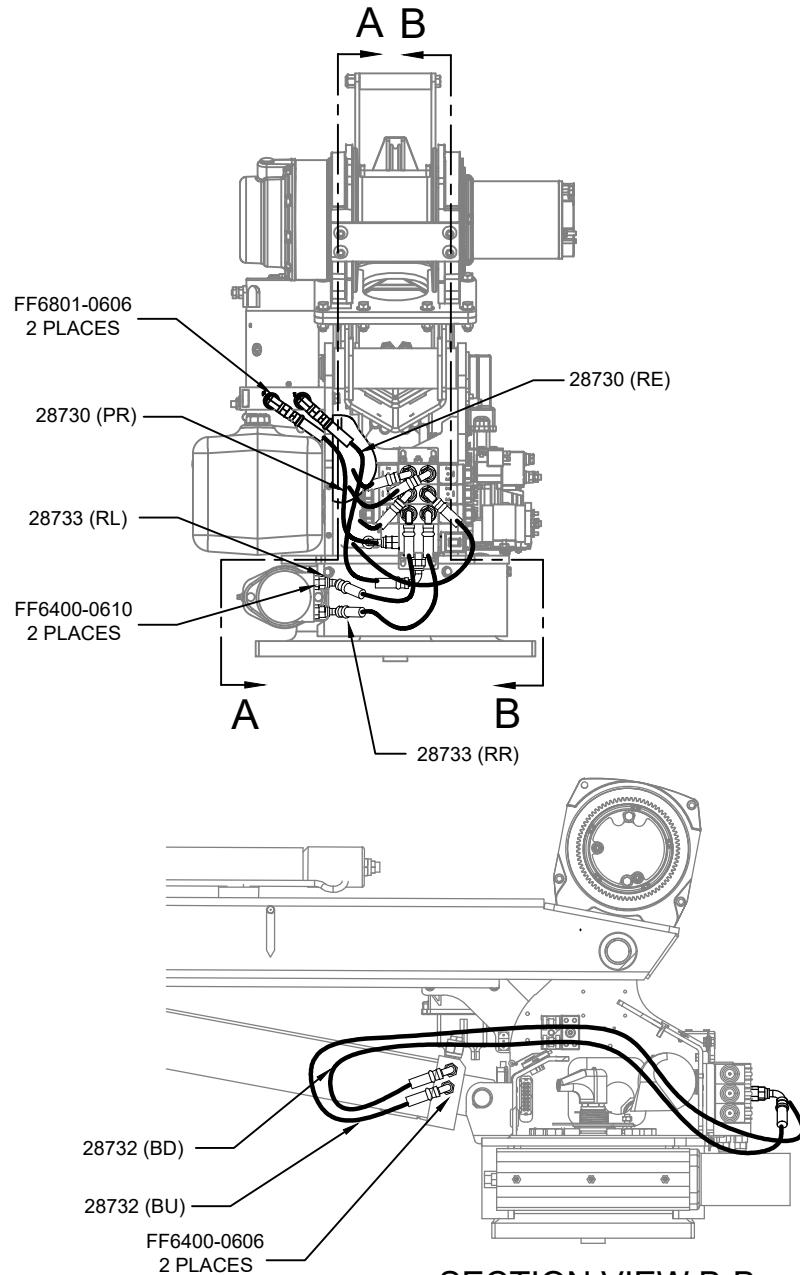
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SECTION

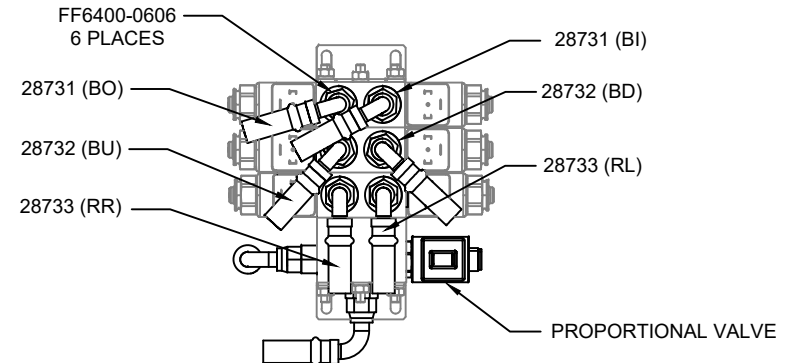
C400

28980

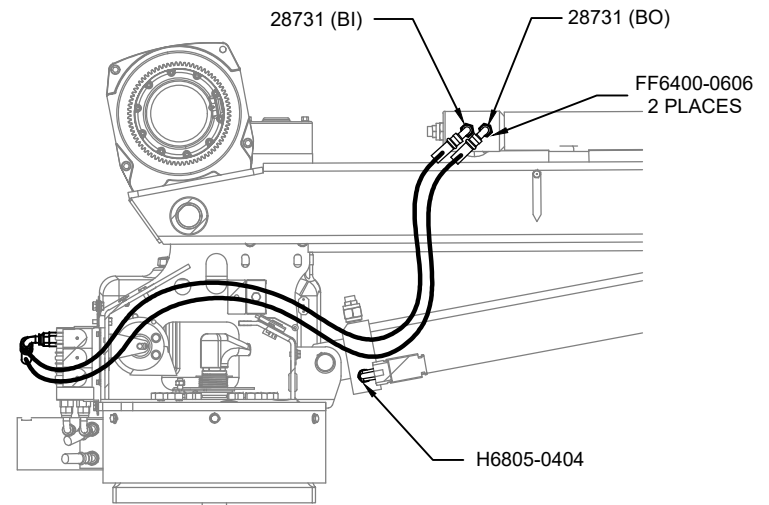
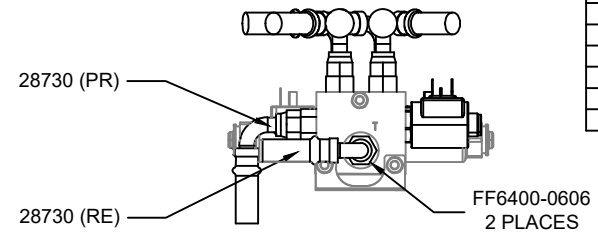
# HYDRAULIC COMPONENTS DRAWING



SECTION VIEW B-B



|    |                |
|----|----------------|
| RR | ROTATION RIGHT |
| RL | ROTATION LEFT  |
| BO | BOOM OUT       |
| BI | BOOM IN        |
| BU | BOOM UP        |
| BD | BOOM DOWN      |
| PR | PRESSURE       |
| RE | RETURN         |



SECTION VIEW A-A



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

HYDRAULIC COMPONENTS DRAWING

3215E/3515E, PROPORTIONAL

DATE

10-18-24

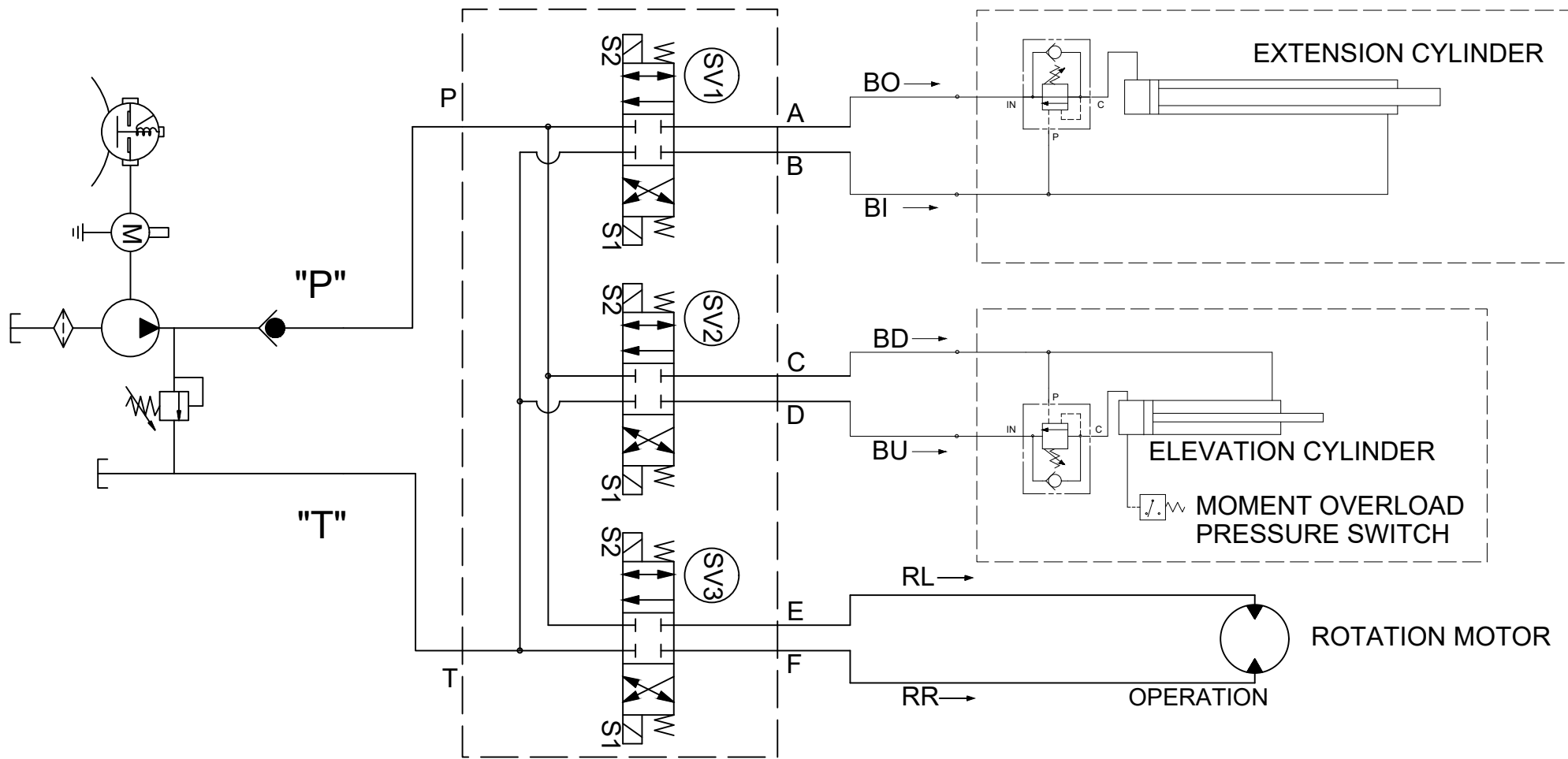
SUPERSEDES

-

SECTION

C400

28981



SV1

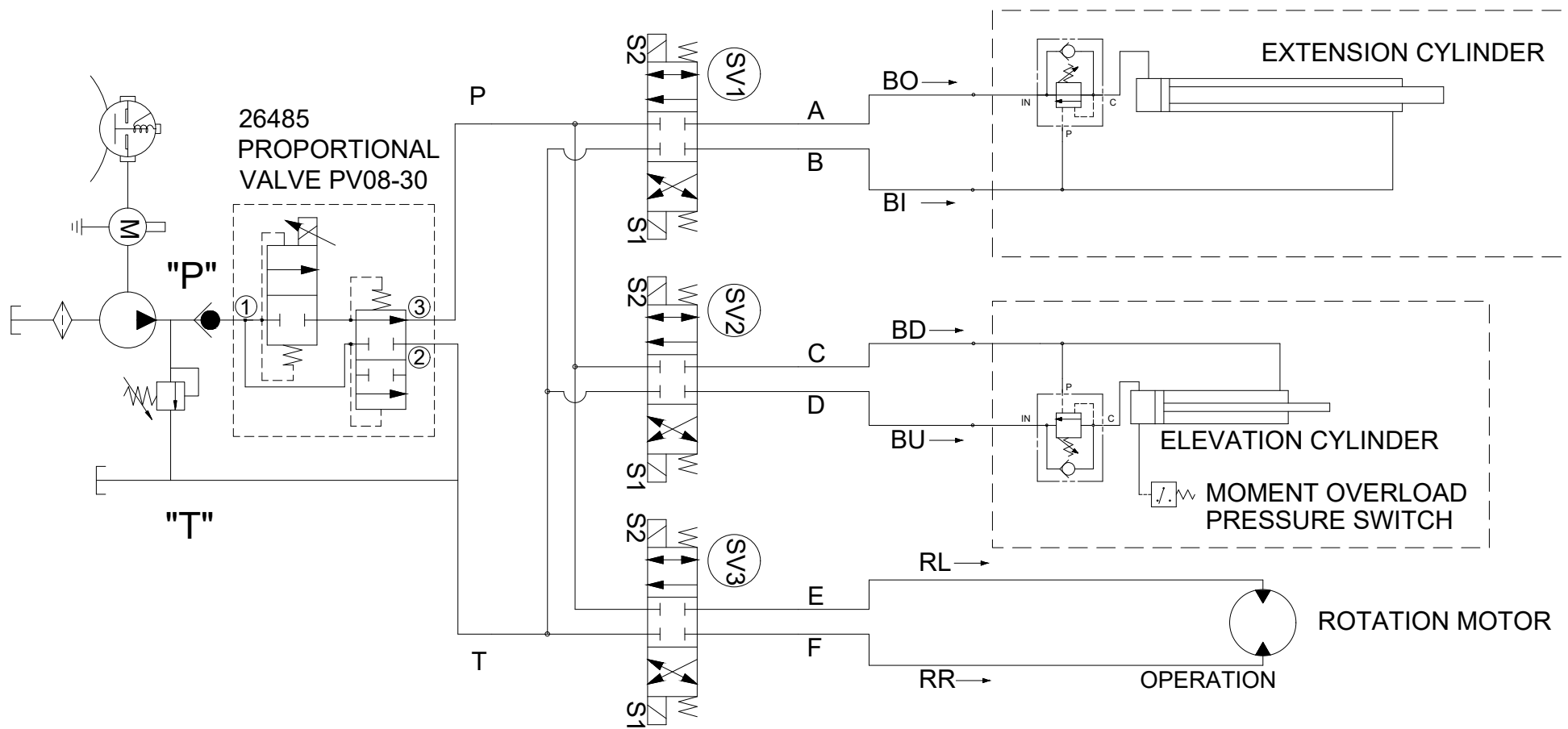
ENERGIZE "S2"  
OPEN FLOW  
'P' TO 'A'  
'B' TO 'T'  
ENERGIZE "S1"  
OPEN FLOW  
'P' TO 'B'  
'A' TO 'T'

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'



SV1

ENERGIZE "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'



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

HYDRAULIC SYSTEM DIAGRAM

ET CRANES, PROPORTIONAL ▲

DATE

08-11-25A

SUPERSEDES

09-13-24

SECTION

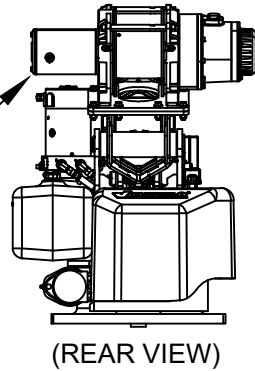
C400

28945

# 21556 WINCH REPLACEMENT PARTS

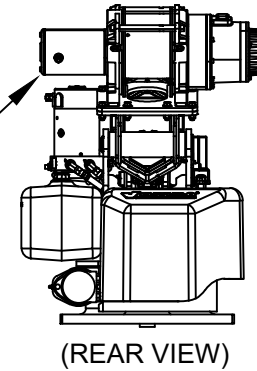
## WARN DC1600

MOTOR ON LEFT  
WHEN VIEWED  
FROM REAR



## COMEUP GTD-2200

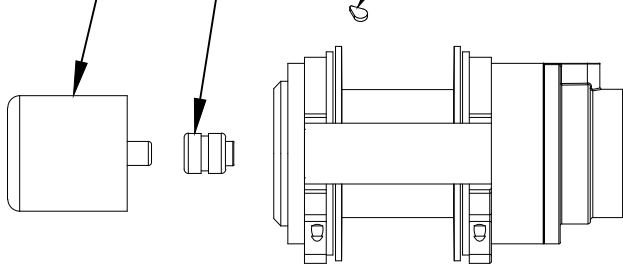
MOTOR ON LEFT  
WHEN VIEWED  
FROM REAR



23133 MOTOR

21981 BRAKE ASSY

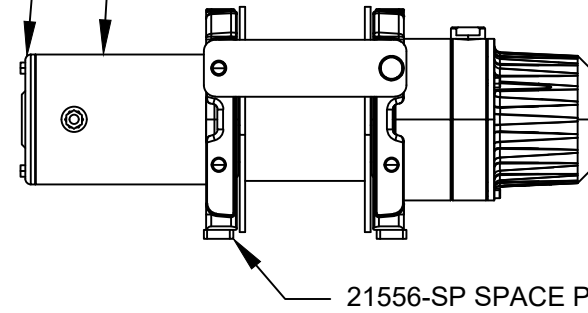
21214 CABLE WEDGE  
(WIRE ROPE ANCHOR)



23915-2200 MOTOR KIT

23916 CONE BRAKE DISC KIT

21556-SP SPACE PLATE (2 EA.)



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

WINCH REPLACEMENT PARTS

3215E/3515E/3516E

DATE

10-15-24

SUPERSEDES

-

SECTION

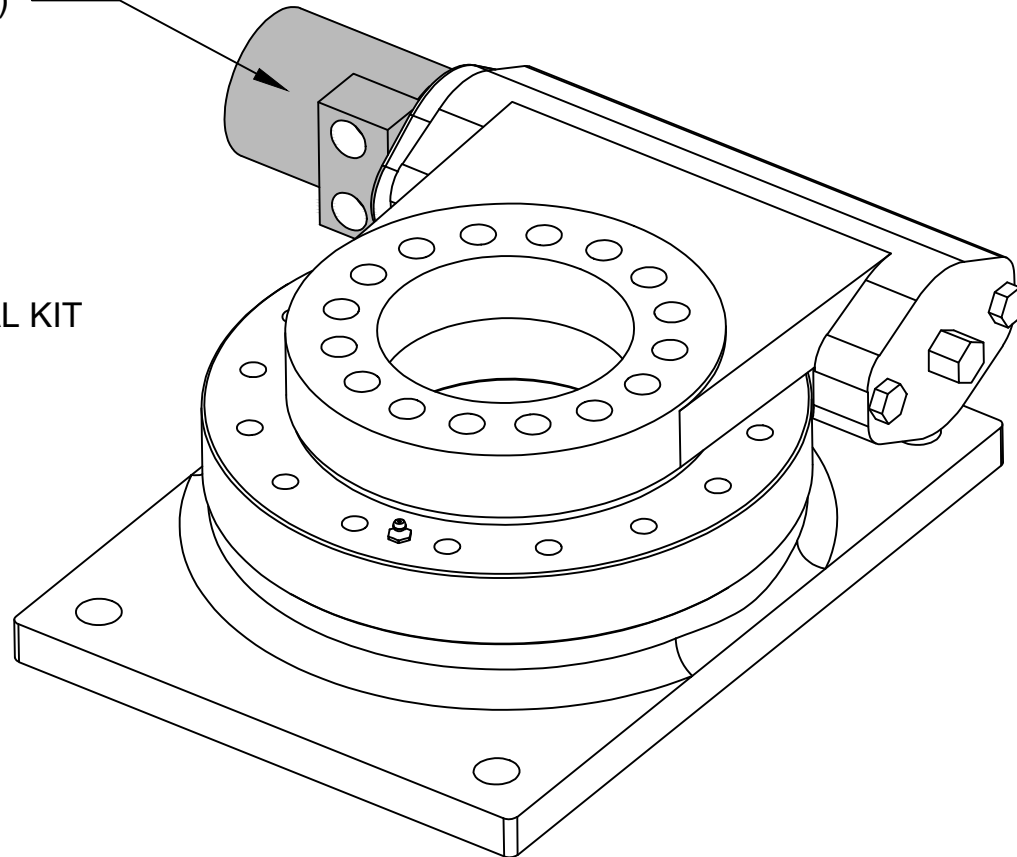
C400

28928

# 21735-1 SLEWING SYSTEM REPLACEMENT PARTS

21123 MOTOR (ONLY)

21218 - MOTOR SEAL KIT



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

SLEWING SYSTEM REPLACEMENT PARTS

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

DATE

04-24-24

SUPERSEDES

-

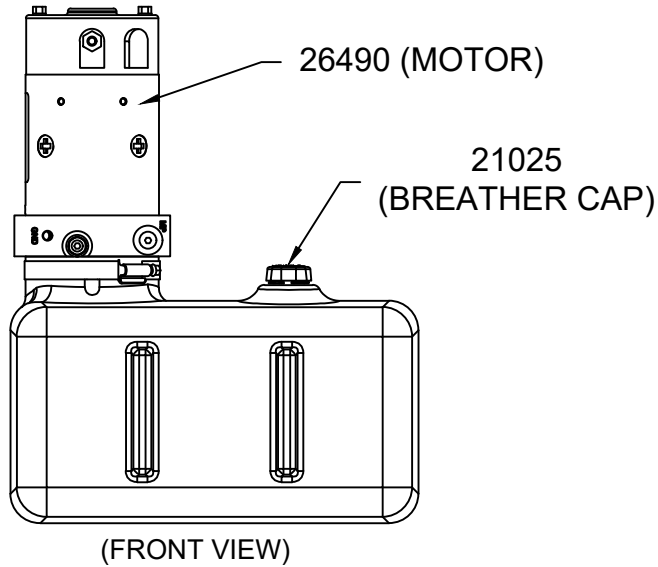
SECTION

C400

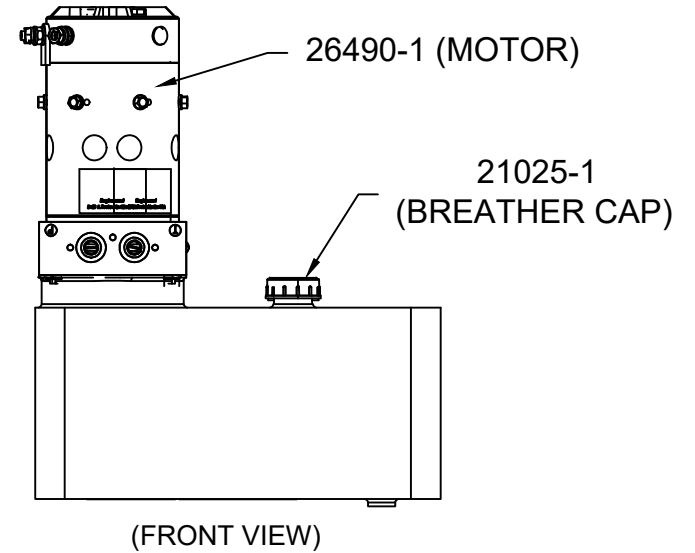
28847

# 28720 HYD. POWER UNIT REPLACEMENT PARTS

BUCHER

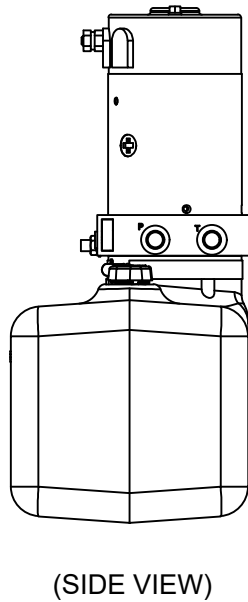


KTI



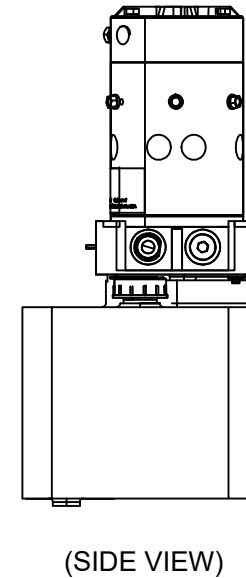
BUCHER

NO GROUND  
CABLE NEEDED



KTI

GROUND CABLE:  
01025-4\*23INX



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE

HYDRAULIC POWER UNIT REPLACEMENT PARTS

ET CRANES

DATE

08-11-25A

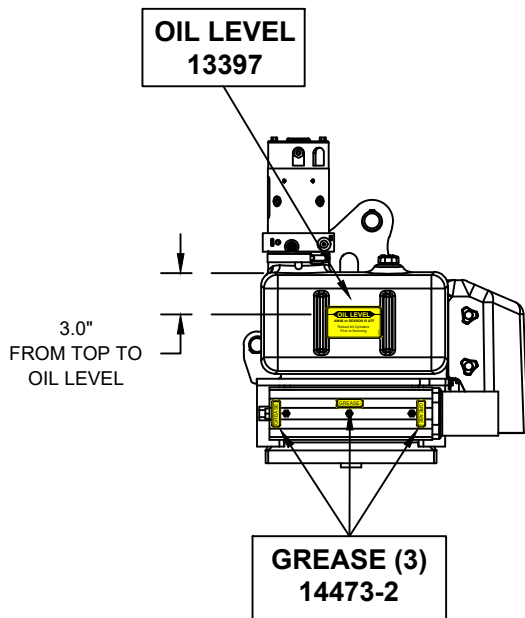
SUPERSEDES

04-24-24

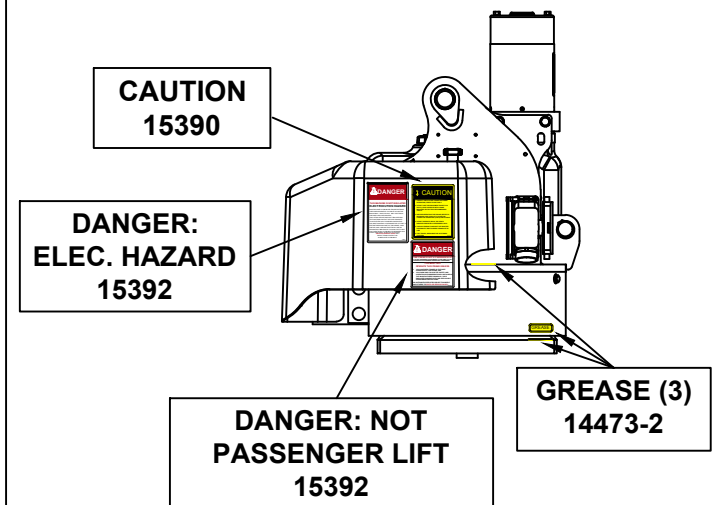
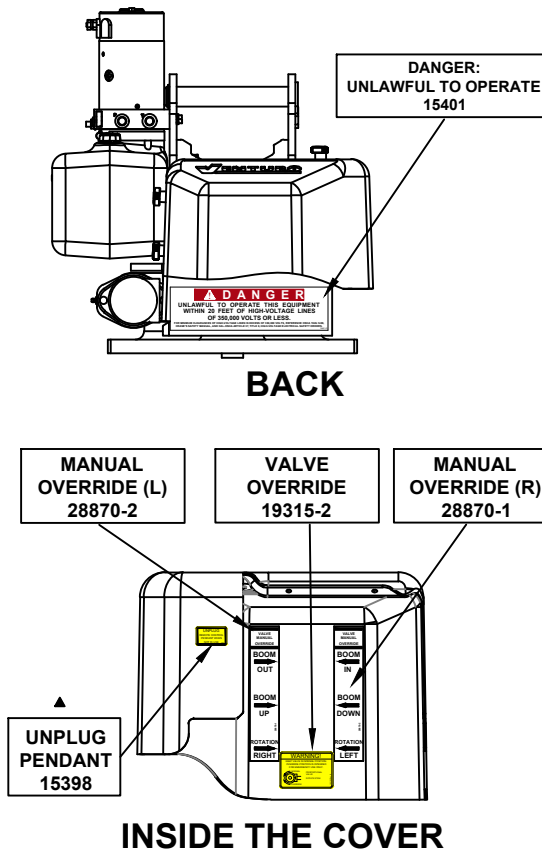
SECTION

C400

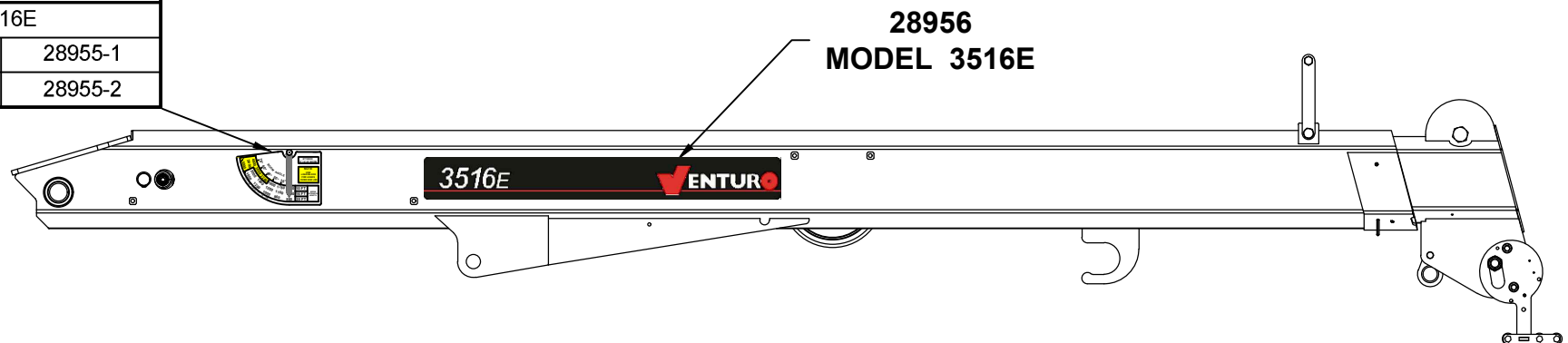
28848



**LEFT**



| CAPACITY DECALS |         |
|-----------------|---------|
| 3516E           |         |
| RIGHT           | 28955-1 |
| LEFT            | 28955-2 |



**BOOM**



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
**DECAL PLACEMENT**

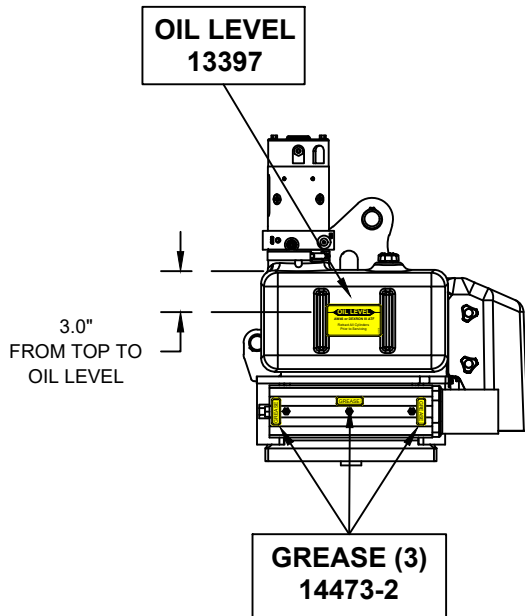
3516E

DATE  
07-22-25A

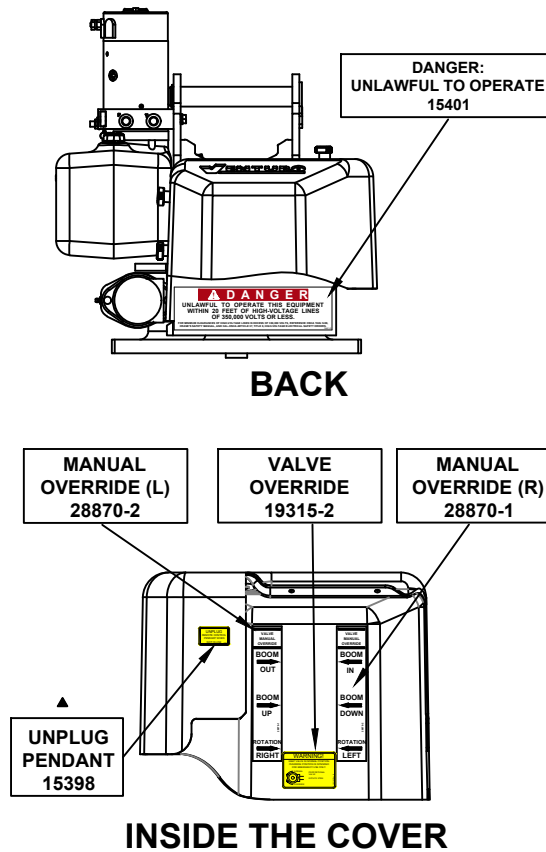
SECTION  
C400

SUPERSEDES  
09-17-24

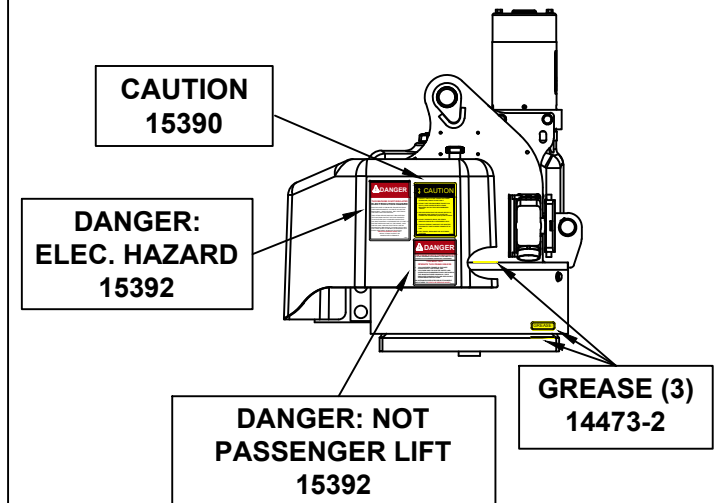
**28947**



**LEFT**



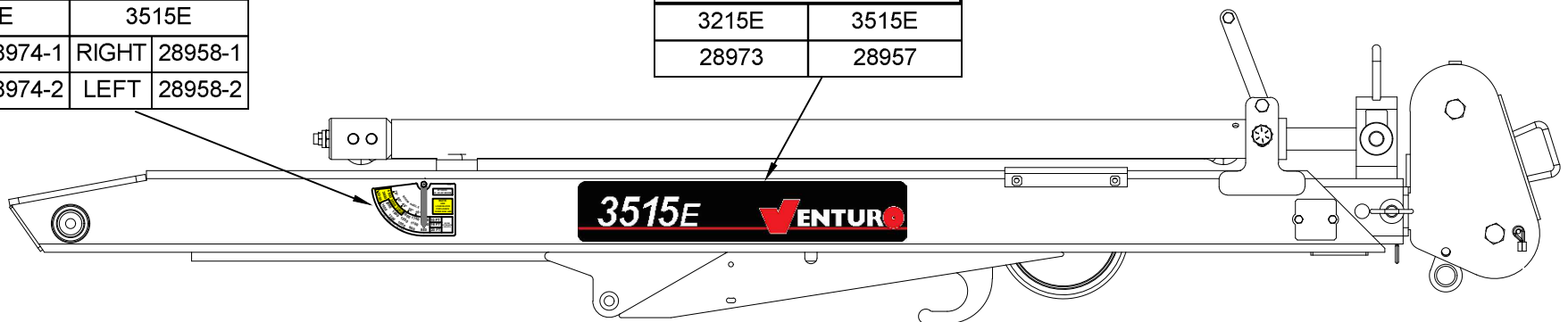
**INSIDE THE COVER**



**RIGHT**

| CAPACITY DECALS |         |       |         |
|-----------------|---------|-------|---------|
| 3215E           |         | 3515E |         |
| RIGHT           | 28974-1 | RIGHT | 28958-1 |
| LEFT            | 28974-2 | LEFT  | 28958-2 |

| MODEL DECALS |       |
|--------------|-------|
| 3215E        | 3515E |
| 28973        | 28957 |



**BOOM**



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
**DECAL PLACEMENT**

3215E/3515E

DATE  
07-22-25B

SUPERSEDES  
05-19-25A

SECTION  
C400

**28965**

# 28948 FIELD SERVICE LABEL KIT

| PART NO.   | QTY | DESCRIPTION                                      |
|------------|-----|--------------------------------------------------|
| 16184-1    | 1   | DECAL; HORN RELAY                                |
| 14473-2    | 6   | DECAL; GREASE                                    |
| 28956      | 2   | DECAL; MODEL 3516E                               |
| 28955-1    | 1   | DECAL; BOOM CAPACITY, RIGHT, 3516E BOOM          |
| 28955-2    | 1   | DECAL; BOOM CAPACITY, LEFT, 3516E BOOM           |
| 13397      | 1   | DECAL; OIL LEVEL                                 |
| 28870-1    | 1   | DECAL; DIRECTIONAL VALVE, MANUAL OVERRIDE, RIGHT |
| 28870-2    | 1   | DECAL; DIRECTIONAL VALVE, MANUAL OVERRIDE, LEFT  |
| 19315-2    | 1   | DECAL; PROPORTIONAL VALVE MANUAL OVERRIDE        |
| 28949      | 1   | IDWG; FIELD SERVICE LABEL KIT                    |
| 28947      | 1   | IDWG; DECAL PLACEMENT                            |
| INST-23233 | 1   | SAFETY MANUAL; VENTURO CRANES                    |
| 15397      | 1   | KIT; ACCIDENT PREVENTION SIGNS                   |



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
FIELD SERVICE LABEL KIT

3516E

DATE  
09-17-24

SUPERSEDES  
-

SECTION  
C400

28949

# FIELD SERVICE LABEL KIT; 3515E

| PART NO.   | QTY. | DESCRIPTION                        |
|------------|------|------------------------------------|
| 16184-1    | 1    | DECAL; HORN RELAY                  |
| 14473-2    | 6    | DECAL; GREASE                      |
| 28957      | 2    | DECAL; VENTURO, 3515E              |
| 28958-1    | 1    | DECAL; BOOM CAPACITY, RIGHT, 3515E |
| 28958-2    | 1    | DECAL; BOOM CAPACITY, LEFT, 3515E  |
| 13397      | 1    | DECAL; OIL LEVEL                   |
| 28870-1    | 1    | DECAL; MANUAL OVERRIDE, RIGHT      |
| 28870-2    | 1    | DECAL; MANUAL OVERRIDE, LEFT       |
| 17813      | 1    | DECAL; OVERLOAD SENSING SYSTEM     |
| 28967      | 1    | IDWG; FIELD SERVICE LABEL KIT LIST |
| 28965      | 1    | IDWG; DECAL PLACEMENT              |
| INST-23233 | 1    | SAFETY MANUAL, VENTURO CRANES      |
| 15397      | 1    | KIT; FIELD SERVICE LABELS          |



VENCO VENTURO INDUSTRIES LLC  
CINCINNATI, OHIO

TITLE  
FIELD SERVICE LABEL KIT

3515E

DATE  
10-04-24

SUPERSEDES  
-

SECTION  
C400

28967







# 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](http://www.venturo.com)