



VENTURO
TRUCK MOUNTED CRANES

ET25KX

ELAAAC-00

INSTALLATION & OWNER'S MANUAL

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ET25KX (ELAAAC-00)

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SECTION 100

DESCRIPTION

&

SPECIFICATIONS

SPECIFICATIONS AND OPERATING FEATURES

ET25KX-10/20

SPECIFICATIONS

12 VOLT BATTERY OPERATED

25,000 FT-LBS OVERTURNING MOMENT (Or as limited by truck stability)

MOMENT OVERLOAD SYSTEM

| | |
|---------------------|-------------------------------|
| TELESCOPIC BOOM | 10 / 20 |
| BOOM HYD ELEVATION | -8° TO 75° |
| BOOM HYD EXT | 10 - 16 FT |
| BOOM MANUAL EXT | 4 FT |
| CAPACITY | 1250 LBS @ 20 FT REACH |
| | 5000 LBS @ 3 TO 5 FT REACH |
| WIRE ROPE | 5/16" DIA x 80 FT |
| PENDANT CORD LENGTH | 25 FT |

WINCH - 2500 LBS SINGLE LINE CAPACITY
With Automatic Load Brake

ELECTRIC HYDRAULIC BOOM ELEVATION

ELECTRIC HYDRAULIC BOOM EXTENSION & RETRACTION - 6 FT STROKE

360° CONTINUOUS

REMOTE CONTROL PENDANT

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

MASTER DISCONNECT SWITCH

OUTRIGGERS AVAILABLE

Side Bracket Type Outriggers

Fold Away Type Outriggers

Pullout Type Outrigger System



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

ET25KX-10/20

DATE
10-9-09

SUPERCEDES
-

SECTION
C120

21891a

OVERLOAD SENSING SYSTEM

This crane is equipped with an Overload Sensing System. If the capacity of the crane is exceeded, the "Winch Up", "Boom Down", and "Boom Out" functions will be shut down. The "Winch Down", "Boom Up", and "Boom In" functions will continue to operate and can be used to relieve the overload condition. The "Rotation" function also will continue to operate.

CONTROL PRIORITY SYSTEM

The design intent of the electrical and hydraulic system is such that some functions can be operated simultaneously, while others are meant to be operated individually. To summarize the control system see the explanations below.

- Winch up takes priority over all functions.
- Winch Down can be operated with any other single function.
- Hydraulic functions (Rotation Right, Rotation Left, Boom Up, Boom Down, Boom Out and Boom In) are designed to function one at a time.

CABLE DRUM AND SHEAVE DIAMETERS

The drum on the ET25KX is 5-5/16" in diameter which provides the first layer wire rope pitch diameter 18 times the rope diameter as required by ANSI B30.5 Cranes Standards. The cable sheaves are either 16 (snatch block) or 18 (boom) times the cable diameter which likewise conforms.

MISCELLANEOUS

A. CAPACITY INDICATOR

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

B. BATTERY HOOKUP

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



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

DATE
10-9-09

SECTION
C120

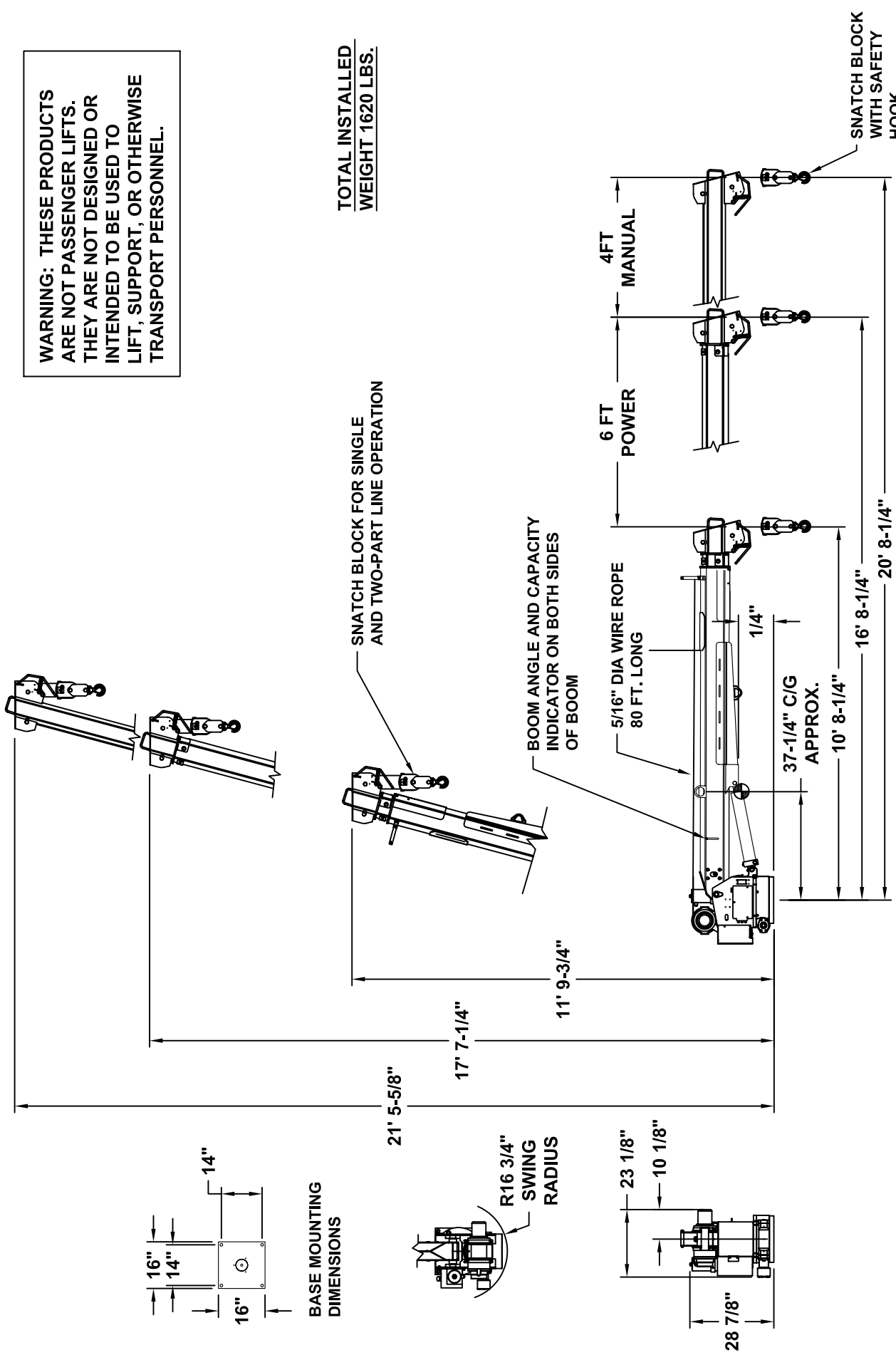
ET25KX-10/20

SUPERCEDES
-

21891b

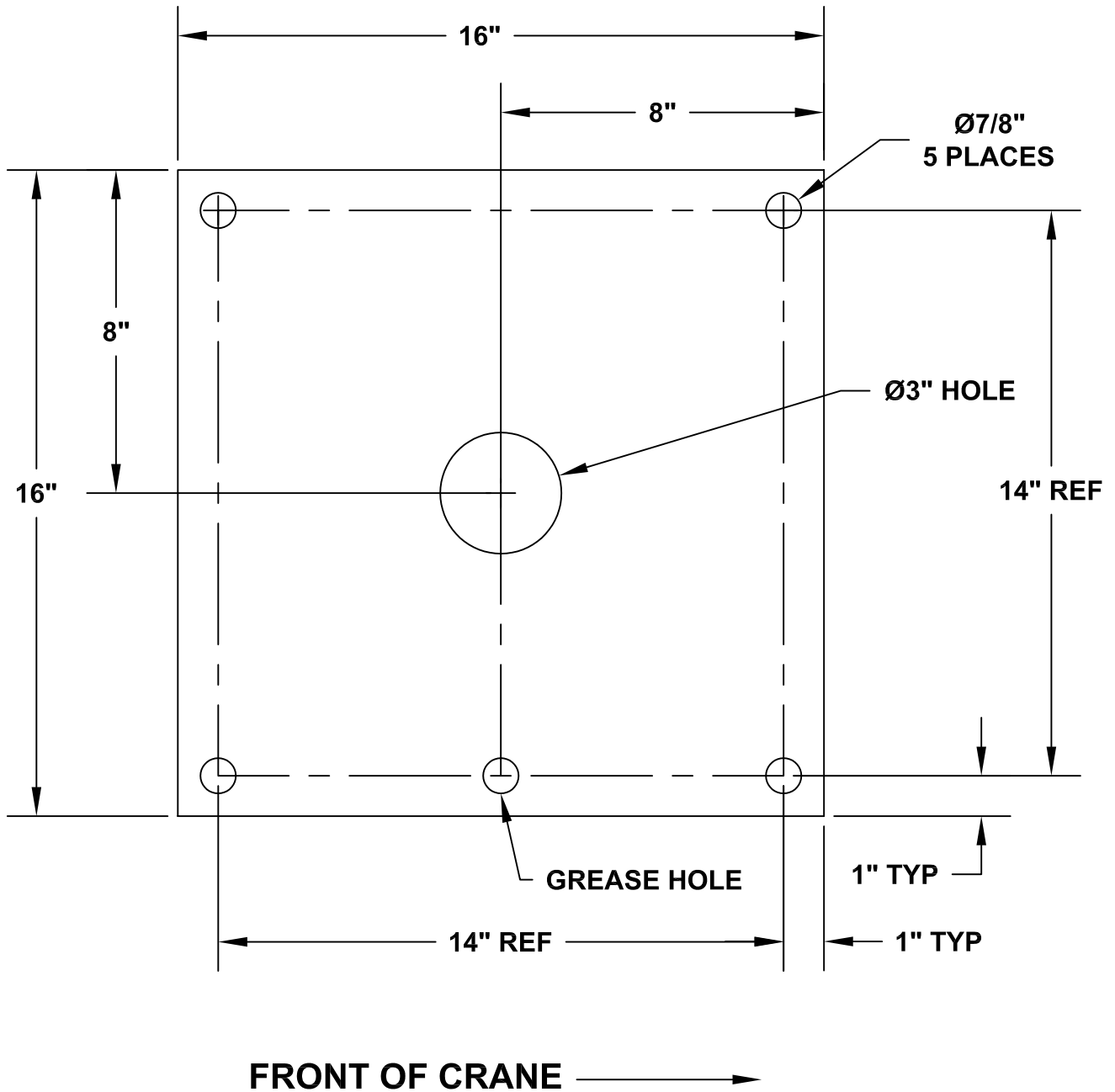
WARNING: THESE PRODUCTS ARE NOT PASSENGER LIFTS. THEY ARE NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.

TOTAL INSTALLED WEIGHT 1620 LBS.



| | | | |
|---|---------|-------------------------------|--------------|
| VENTURO MANUFACTURING, INC. CINCINNATI, OHIO | TITLE | INSTALLATION DRAWING | |
| | SECTION | DATE | SUPERSEDES |
| | | 10-9-09 | - |
| | | C100 | 21892 |
| | | ET25KX - 10/16/20 BOOM | |

ET/HT25/30/36KX(X) BASE MOUNTING DIMENSIONS



THE FIFTH GREASE HOLE IS FOR
A SINGLE BASE PLATE ONLY



MFG., INC.
CINCINNATI, OHIO

TITLE
BASE MOUNTING DIM

ET/HT25/30/36

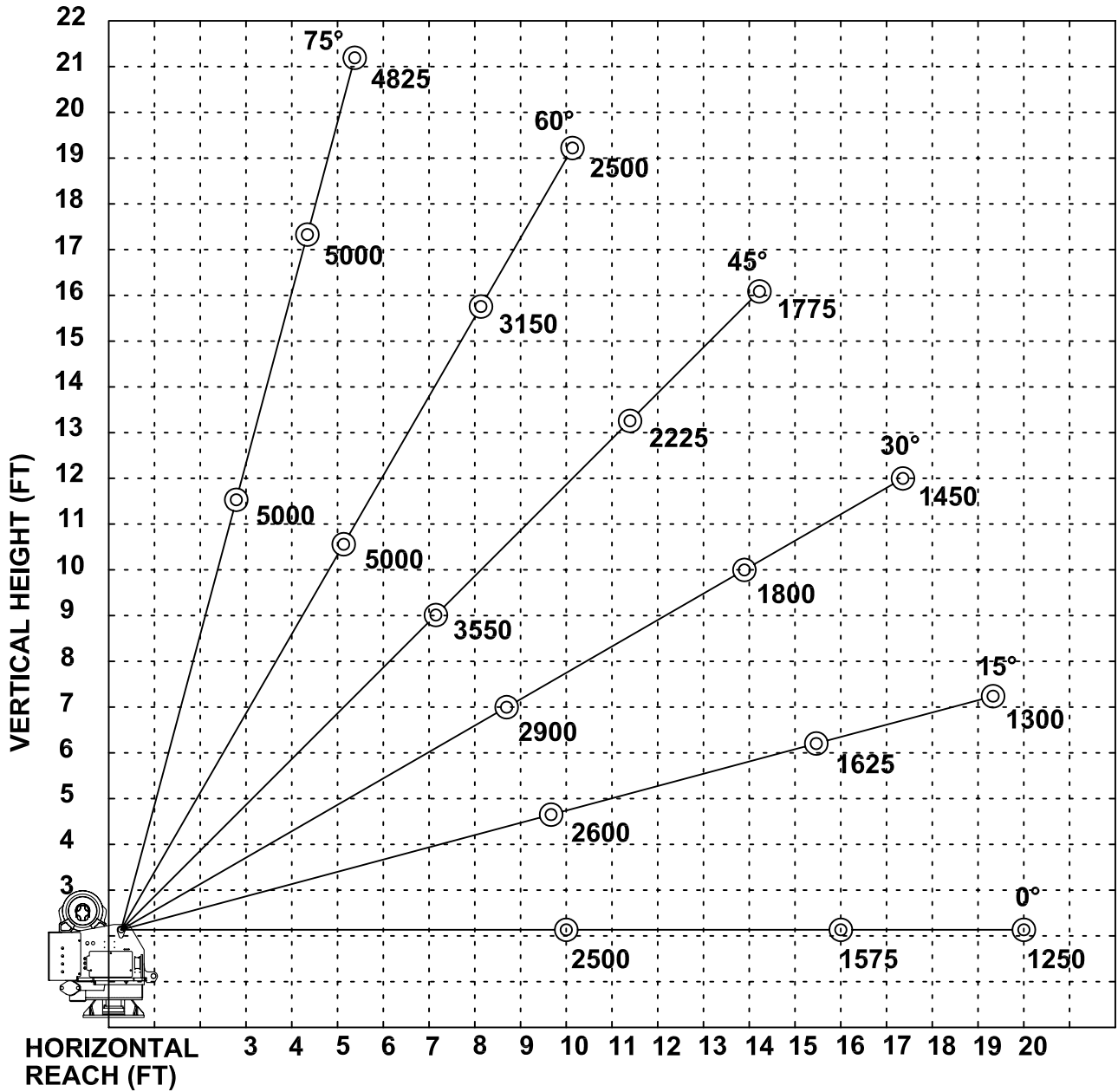
DATE
8-10-09B

SUPERSEDES
1-16-09A

SECTION
C100

21080

ET/HT25KX - 10-16-20 BOOM MAXIMUM CAPACITY CHART



**MUST USE SNATCH BLOCK
FOR LOADS OF 2500 LBS.
AND GREATER**



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
CAPACITY CHART

ET/HT25KX - 10-16-20

DATE
7-1-10A

SUPERSEDES
10-9-09

SECTION
C100

21893

SECTION 150

SAFETY

VEHICLE & CRANE MOUNTED ELECTRICAL HAZARD SIGN APPLICATION & INFORMATION

ET & HT CRANE SERIES



▲ SIGN NO. 15393A 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.

REQUIRED MINIMUM CLEARANCES REFERRED TO ON SIGN NO. 15401

REQUIRED CLEARANCES FROM OVERHEAD HIGH-VOLTAGE LINES

| NOMINAL VOLTAGE (kV) (PHASE TO PHASE) | MINIMUM REQUIRED CLEARANCE (FEET) * |
|--|--|
| 0 - 50 | 10 |
| over 50 - 200 | 15 |
| over 200 - 350 | 20 |
| over 350 - 500 | 25 |
| over 500 - 750 | 35 |
| over 750 - 1000 | 45 |

REQUIRED CLEARANCES FROM ENERGIZED HIGH-VOLTAGE CONDUCTORS (WHILE IN TRANSIT)

| NOMINAL VOLTAGE (kV) (PHASE TO PHASE) | MINIMUM REQUIRED CLEARANCE (FEET) * |
|--|--|
| 0 - 0.75 | 4 |
| over 0.75 - 50 | 6 |
| over 50 - 345 | 10 |
| over 345 - 750 | 16 |
| over 750 - 1000 | 20 |

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



TITLE
INSTALLATION DWG

DATE
5-15-02H

SECTION
C150

ET & HT CRANE SERIES

SUPPERCEDES
5-13-97G

15394

CRANE SAFETY AND HAZARDS

ET CRANES ▲

CAUTIONS

1. INSPECT VEHICLE AND CRANE, INCLUDING OPERATION, PRIOR TO USE DAILY.
2. DO NOT USE THIS EQUIPMENT EXCEPT ON SOLID, LEVEL SURFACE WITH CRANE MOUNTED ON FACTORY-RECOMMENDED TRUCK.
3. BEFORE OPERATING THE CRANE, REFER TO MAXIMUM LOAD (CAPACITY) CHART ON CRANE FOR OPERATING (LOAD) LIMITATIONS.
4. DO NOT OPERATE, WALK, OR STAND BENEATH BOOM OR A SUSPENDED LOAD.
5. 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 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 APPARATUS.
- YOU MUST ALLOW FOR BOOM SWAY, ROCK OR SAG, AND ELECTRICAL LINE AND LOADLINE 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, LOADLINE, OR LOAD, AND ANY ELECTRICAL LINE OR APPARATUS CARRYING UP TO 50,000 VOLTS. ADDITIONAL CLEARANCE IS REQUIRED FOR VOLTAGES IN EXCESS OF 50,000 VOLTS. REFER TO DRAWING 15394 FOR ADDITIONAL INFORMATION.
- **DEATH OR SERIOUS INJURY** WILL RESULT FROM CONTACT OR INADEQUATE CLEARANCE.



TITLE
INSTALLATION DWG

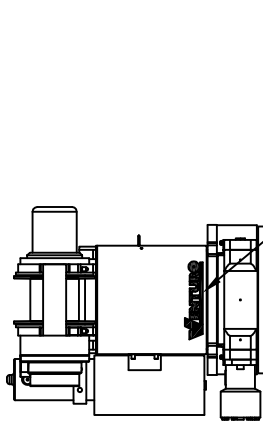
DATE
4-18-08H

SECTION
C150

▲ **ELECTRIC CRANES**

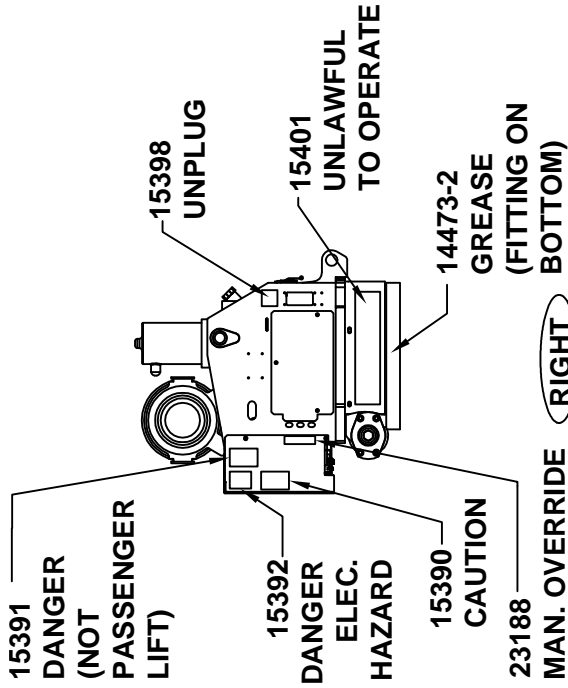
SUPERCEDES
7-29-03G

850711



17389-4
SMALL
VENTURO

BACK



15391
DANGER
(NOT
PASSENGER
LIFT)

15398
UNPLUG

15392
DANGER
ELEC.
HAZARD

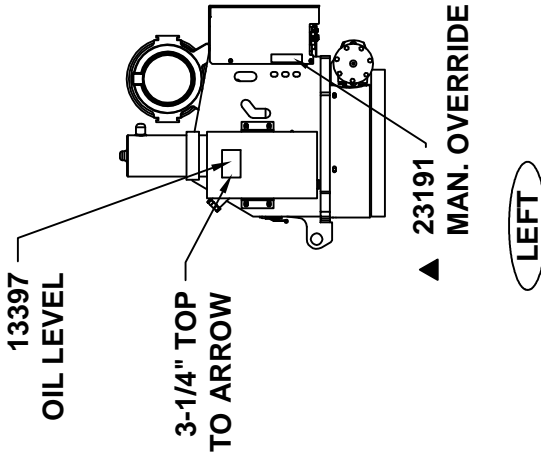
15401
UNLAWFUL
TO OPERATE

15390
CAUTION

14473-2
GREASE
(FITTING ON
BOTTOM)

23188
MAN. OVERRIDE

RIGHT



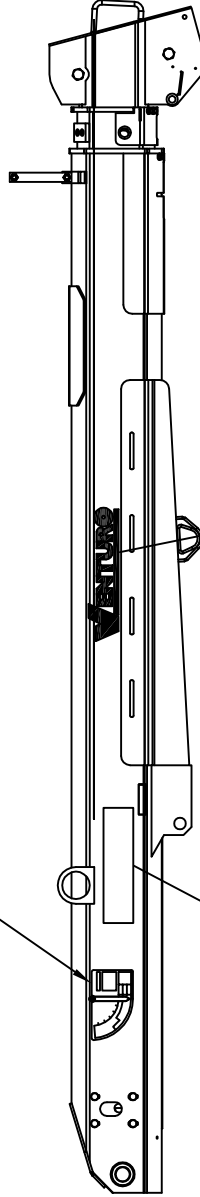
13397
OIL LEVEL

3-1/4" TOP
TO ARROW

▲ 23191
MAN. OVERRIDE

LEFT

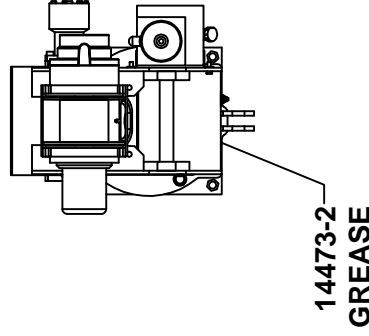
| CAPACITY | |
|----------|----------------|
| DECAL | PART NO. |
| RIGHT | ET25KX 23132-1 |
| LEFT | ET25KX 23132-2 |



| MODEL NAME | |
|------------|--------|
| DECAL | MODEL |
| 19743 | ET25KX |

17389
MEDIUM
VENTURO

BOOM



14473-2
GREASE

TOP

MANUFACTURING, INC.
CINCINNATI, OHIO



TITLE
DECAL PLACEMENT

ET25KX

DATE
07-03-12B

SUPERSEDES
3-23-12A

SECTION
C150

21894

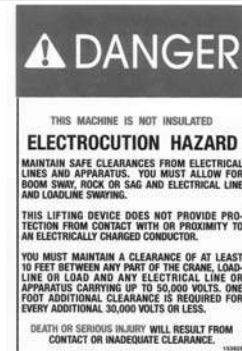
PART NO.: 15390
DECAL: CAUTION - INSPECT VEHICLE & CRANE
FUNCTION: To inform the operator of key operating requirements.
QUANTITY: 1
PLACEMENT: Rear cover.



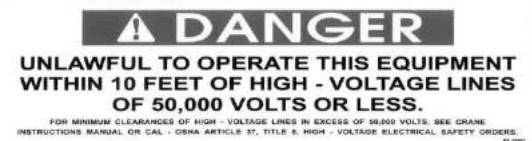
PART NO.: 15391
DECAL: DANGER - NOT PASSENGER LIFT
FUNCTION: To inform the operator not to lift, support or transport personnel, and to ensure that crane operator is adequately trained.
QUANTITY: 1
PLACEMENT: Rear cover.



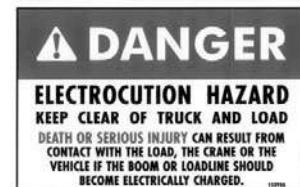
PART NO.: 15392
DECAL: DANGER - ELECTROCUTION HAZARD
FUNCTION: To inform the operator that the machine (crane) represents an electrocution hazard should it come close to or in contact with electrical voltage source.
QUANTITY: 1
PLACEMENT: Rear cover.



PART NO.: 15401
DECAL: UNLAWFUL TO OPERATE
FUNCTION: To inform the operator of proper operation in vicinity of power lines.
QUANTITY: 1
PLACEMENT: Right side of housing.



PART NO.: 15393A
DECAL: DANGER - ELECTROCUTION HAZARD
FUNCTION: Warns of danger from electrically charged vehicle, crane or lead.
QUANTITY: 4
PLACEMENT: One on each side and each end of vehicle.



MFG., INC.
 CINCINNATI, OHIO

TITLE
SAFETY DECALS
 CRANES

DATE
8-10-09B
 SUPERSEDES
5-6-08A

SECTION
C150
21353

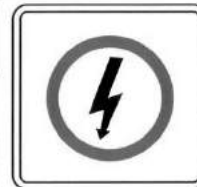
PART NO.: 15393A

DECAL: DANGER - ELECTROCUTION HAZARD

FUNCTION: Warns of danger from electrically charged vehicle, crane or lead.

QUANTITY: 4

PLACEMENT: One on each side and each end of vehicle.



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.



MFG., INC.
CINCINNATI, OHIO

TITLE
SAFETY DECALS

CRANES

DATE
8-10-09A

SUPERSEDES
4-26-06

SECTION
C150

21384

PART NO.: 14473-2

DECAL: GREASE

FUNCTION: To show the operator where to apply grease.

QUANTITY: Varies

PLACEMENT: Near grease fittings.



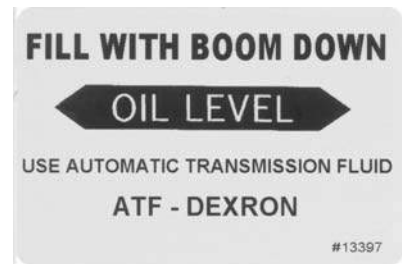
PART NO.: 13397

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.



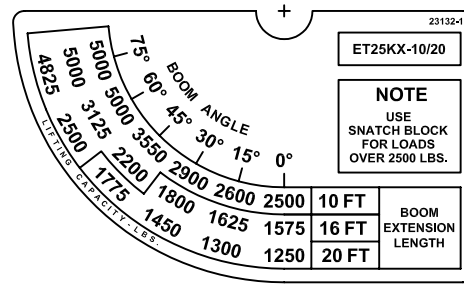
PART NO.: 23132-1 & 23132-2 (OPPOSITE)

DECAL: CRANE CAPACITY

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

QUANTITY: 1 each

PLACEMENT: One on each side of boom.



PART NO.: 19743

DECAL: MODEL NUMBER (ET25KX)

FUNCTION: To show the model of the crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.



MANUFACTURING INC.
CINCINNATI, OHIO

TITLE
MODEL & CAPACITY DECALS

DATE
10-9-09

SECTION
C150

ET25KX

SUPERSEDES
-

21895

SECTION 200

INSTALLATION



IMPORTANT

ADEQUATE WIRING IMPERATIVE FOR PROPER OPERATION

1. PROPER GROUND PATH - SEE DWG 15660

2. CURRENT DRAW IS SEVERAL HUNDRED AMPERES -
ADEQUATE WIRE SIZE AND BATTERY CAPACITY IS ABSOLUTELY
ESSENTIAL (SEE CHART BELOW.)

MINIMUM WIRE GAUGE AND BATTERY SIZE

| MODEL | TOTAL LENGTH OF CABLE (FT)* | | | | | | | | 12 VOLT BATTERY REQUIREMENTS | |
|--|--|-------|-------|-------|-------|----------------|-------|-------|------------------------------|-------------|
| | 0-20 | 21-25 | 26-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | CCA (A)** | RC (MIN)*** |
| CE6K CT2000 CT2003/4/5 DT7K | #4 | #4 | #2 | #2 | #1 | #0 | #0 | #00 | 350 | 100 |
| ET8K ET8KX ET12K ET12KX | #2 | #2 | #1 | #0 | #00 | NOTRECOMMENDED | | | 450 | 100 |
| ET18K ET18KX ET25K ET25KX ET30KX ET36KX ▲ | SEE DRAWING 19947 FOR CABLE AND BATTERY REQUIREMENTS | | | | | | | | | |

* INCLUDES GROUND CABLE

** CCA=COLD CRANKING AMPS AT 0° F.
THE CCA RATING IS A MEASURE OF THE ABILITY OF THE BATTERY TO DELIVER A HIGH CURRENT FOR A SHORT PERIOD OF TIME.

*** 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.



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TITLE
CABLE & BATTERY

ELECTRIC CRANES

DATE
2-9-09D

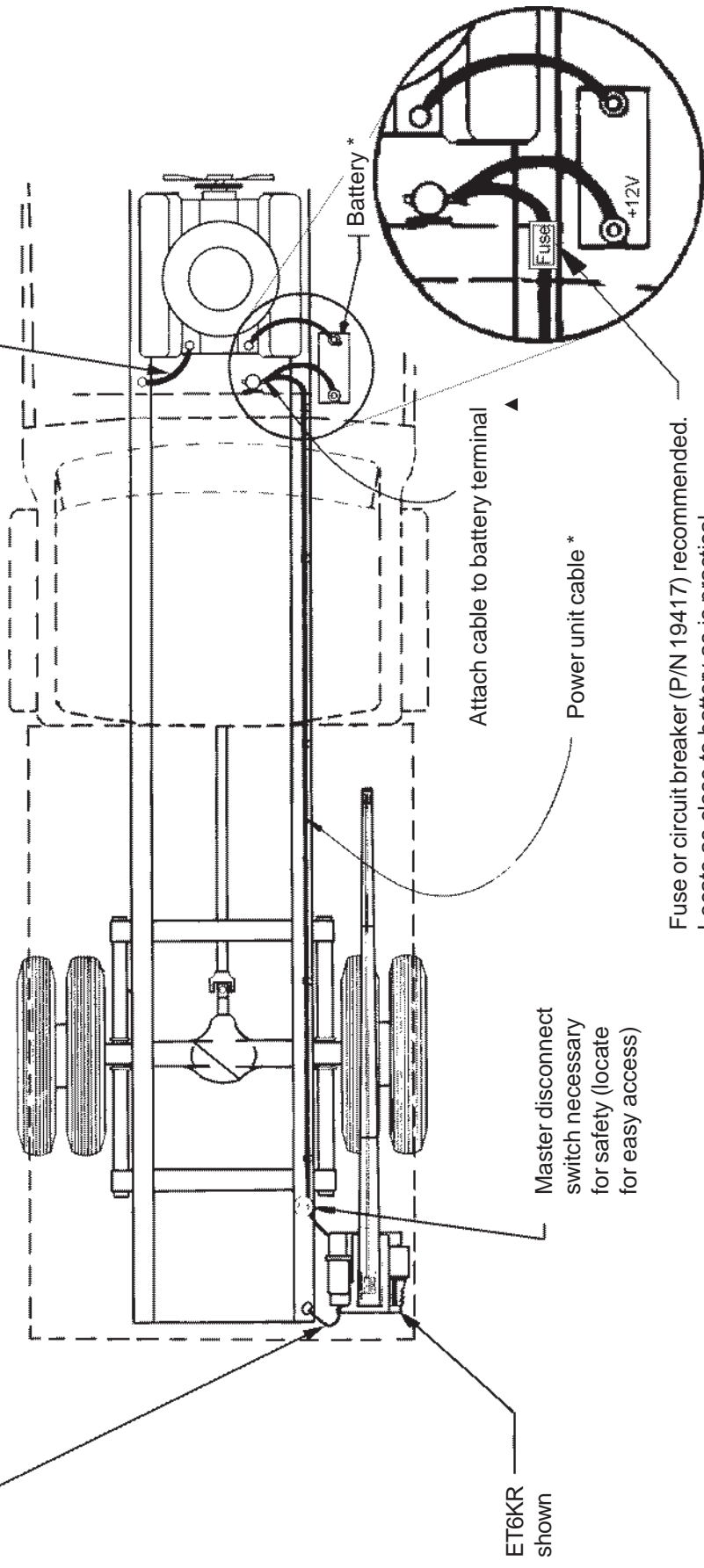
SUPERCEDES
11-24-08C

SECTION
C200

19959

Important: The crane must make connection with the negative of the battery. To insure this, install a #2 gauge grounding strap from the engine to the truck frame (required if negative from battery is connected to the engine.) Also, install a #2 gauge grounding strap from the crane base to the truck frame, included with electric cranes.

Failure to accomplish the above mentioned steps may result in intermittent operation of electric crane.

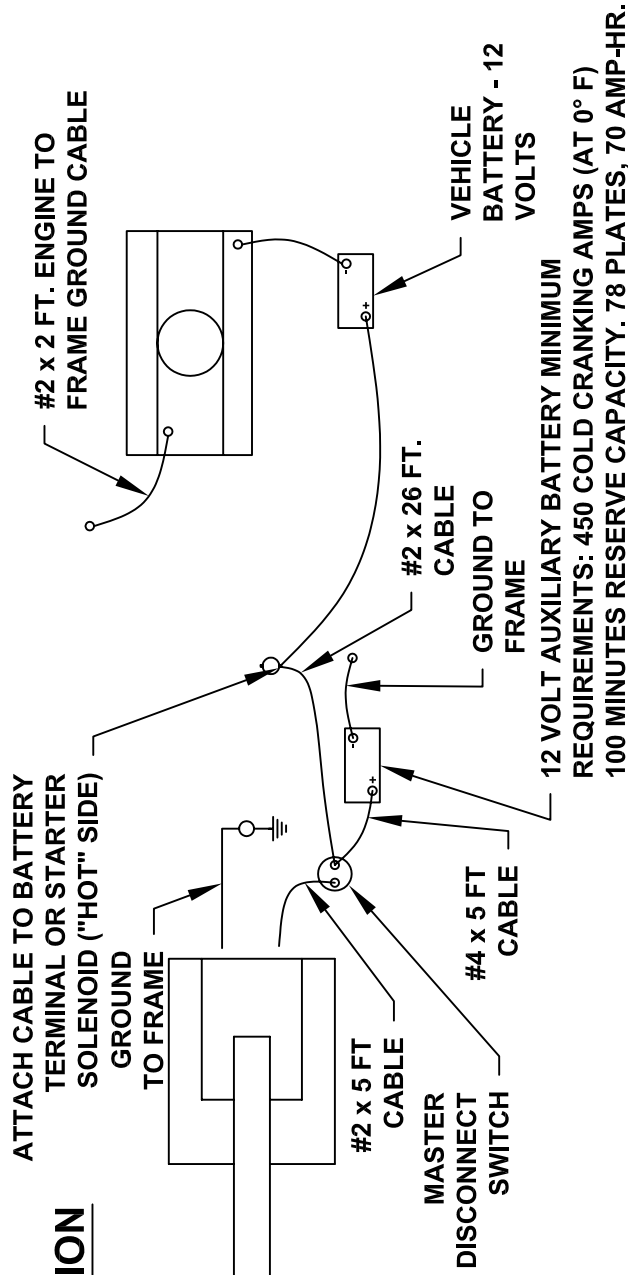


* Note: See Dwg 19959 for recommended battery and cable specifications

| | | | | |
|---|--|--|------------------------------|------------------------|
| VENTURO MANUFACTURING, INC. CINCINNATI, OHIO | TITLE INSTALLATION - BATTERY CABLE | | DATE 4-18-08G | SECTION C200 |
| | WINCH & CRANE | | SUPERCEDES 8-2-06F | 15660 |

RECOMMENDED INSTALLATION

W/ AUXILIARY BATTERY IN PARALLEL WITH VEHICLE BATTERY.

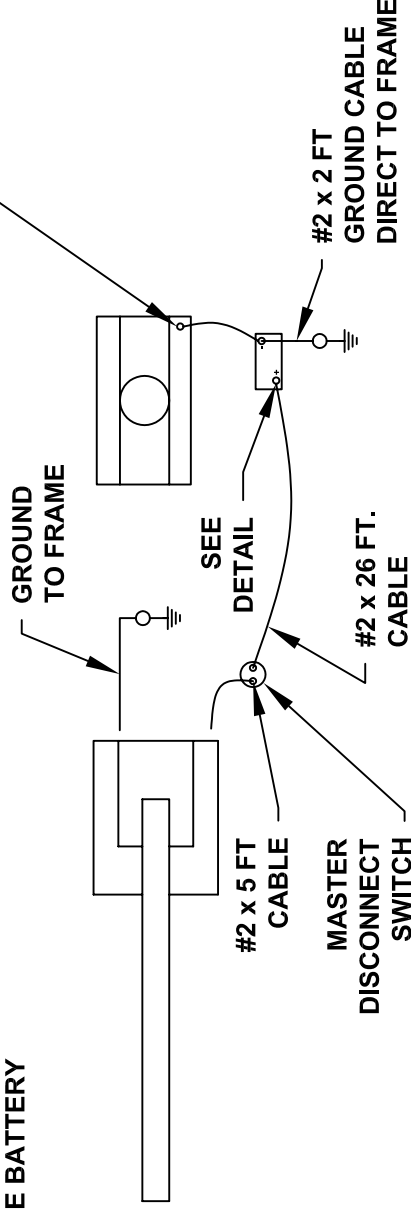


IF LONGER CABLE NECESSARY, CONSULT VENTURO ENGINEERING DEPT.

LIMITED DUTY ALTERNATE INSTALLATION (NOT RECOMMENDED)

NOTE: ALTERNATE INSTALLATION MAY BE USED ONLY IF VEHICLE BATTERY MEETS MINIMUM REQUIREMENTS AND A #2 x 26 FT CABLE WILL REACH FROM THE MASTER DISCONNECT SWITCH DIRECTLY TO THE BATTERY (NOT THE SOLENOID).

12 VOLT VEHICLE BATTERY MINIMUM REQUIREMENTS
625 COLD CRANKING AMPS (AT 0° F),
160 MINUTES RESERVE CAPACITY,
102 PLATES, 105 AMP-HR.



DETAIL 2 PLCS.

ORIGINAL CABLE

5/16 x 1-1/2 BOLT
VENTURO CABLE

RECOMMENDED TERMINAL ATTACHMENT

TITLE

ELECTRICAL INSTALLATION

DATE

11-25-08B

SECTION

-

MANUFACTURING, INC.
CINCINNATI, OHIO



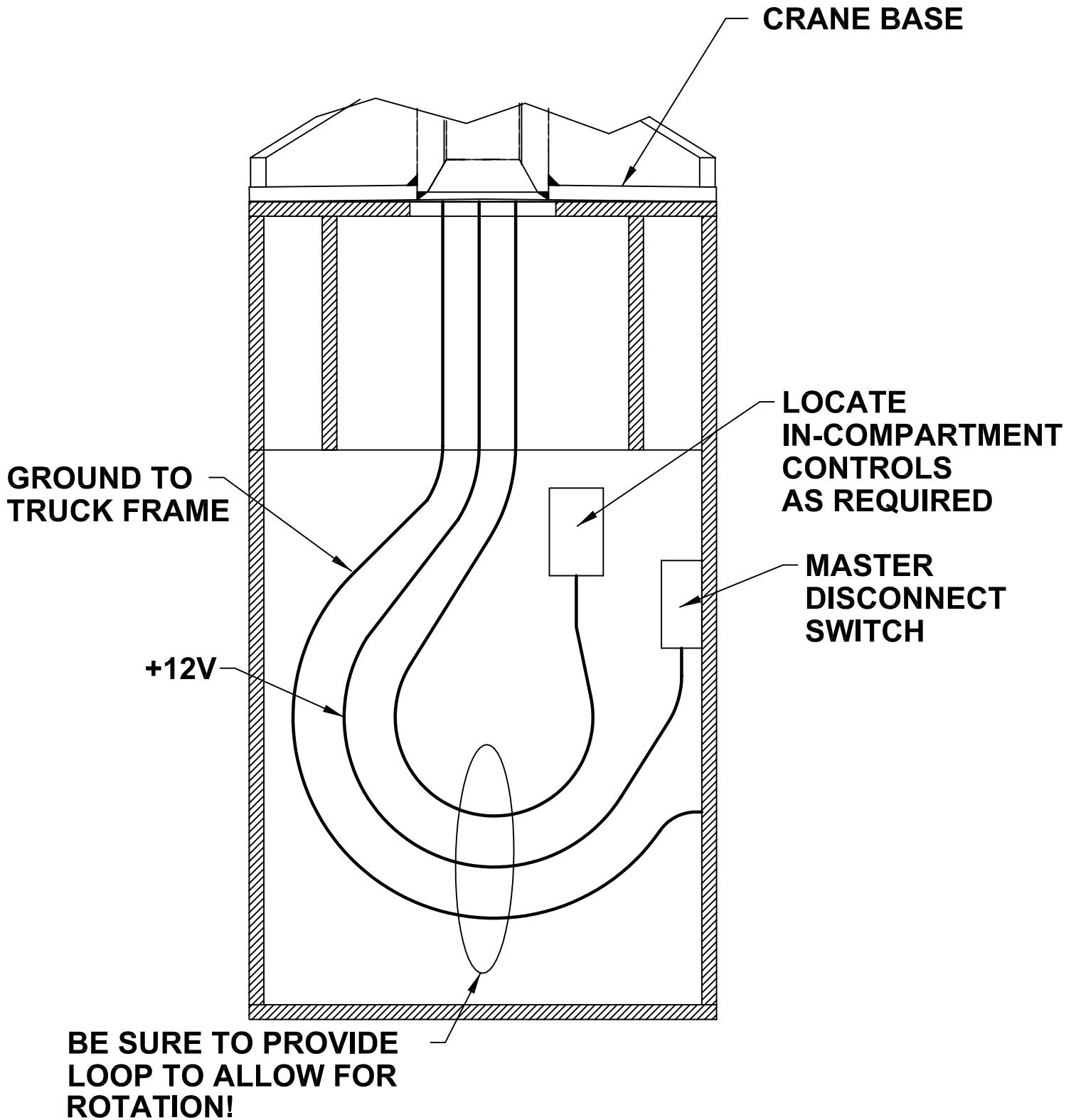
ET CRANES

SUPERSEDES

7-29-03A

19947

IN-COMPARTMENT CONTROLS INSTALLATION ET25/30/36KX(X)



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

ET25/30/36KX(X)

DATE
9-13-01

SUPERSEDES
-

SECTION
-

19961

WIRE ROPE INSTALLATION

- STEP 1: UNWIND COIL OF WIRE ROPE BY 'ROLLING' ALONG THE FLOOR. THIS WILL PREVENT 'KINKING'.
- STEP 2: INSERT WIRE ROPE END THROUGH ANTI-TWO-BLOCK WEIGHT.
- STEP 3: INSERT WIRE ROPE END INTO POCKET OPENING ON WINCH AND THROUGH WEDGE POCKET AS SHOWN IN (FIG 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 (3) TURNS OF WIRE ROPE ON THE WINCH DRUM WHILE UNDER LOAD.
- NOTE: SOME WINCHES WILL BE SUPPLIED WITH A HEX NUT IN LIEU OF A WEDGE FOR INSTALLING THE WIRE ROPE.

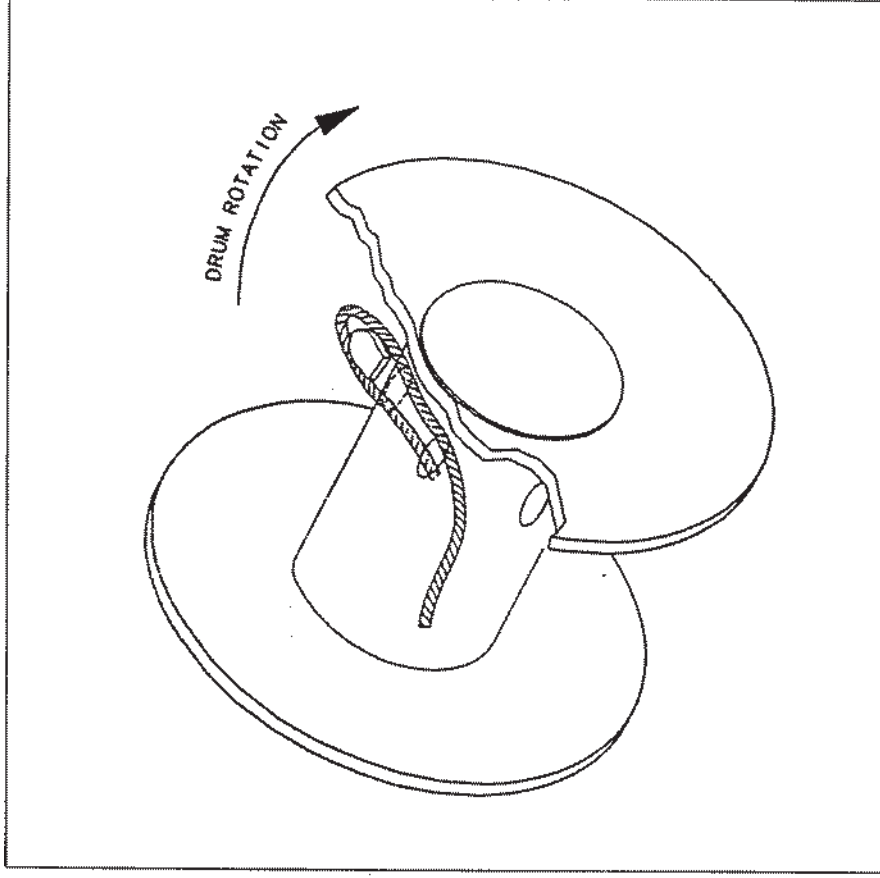


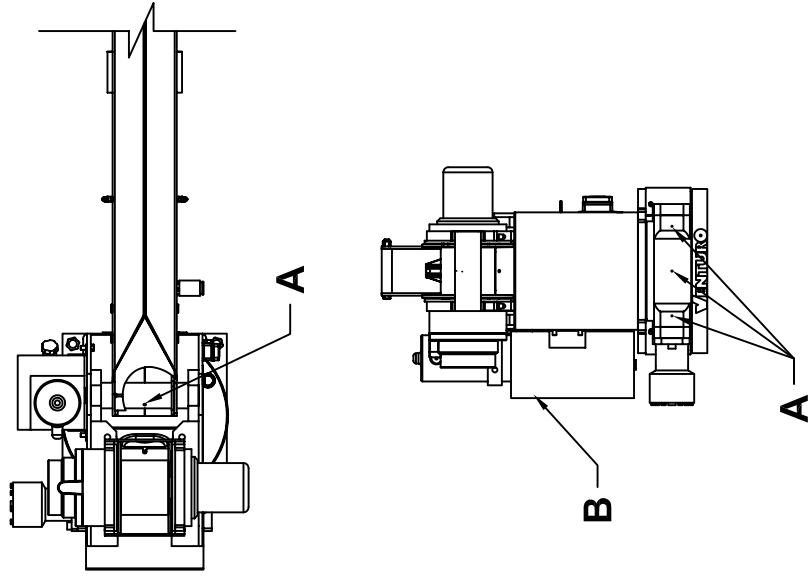
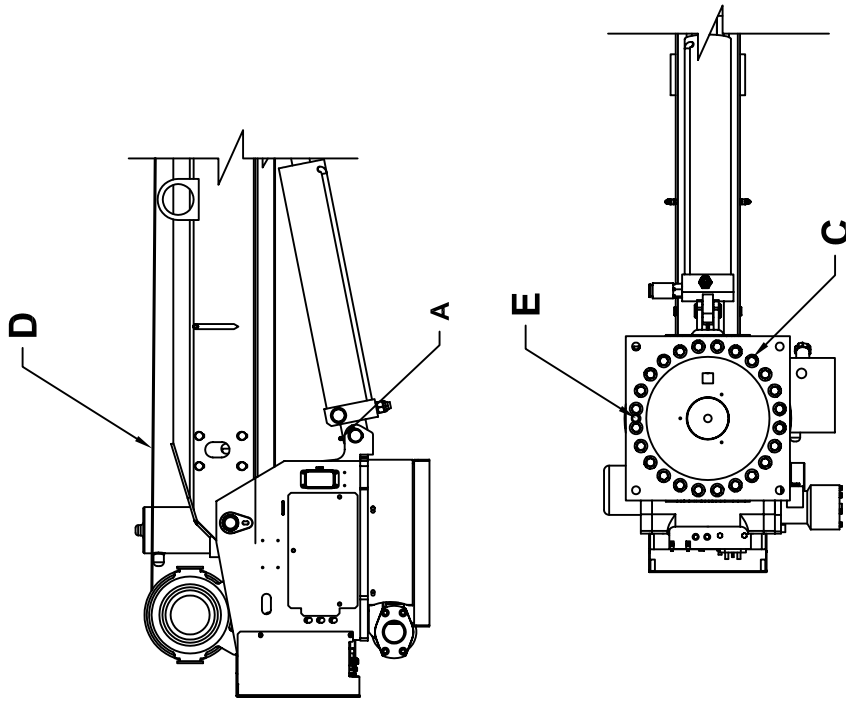
FIG 1

SECTION 300

MAINTENANCE

&

SERVICE



| Location | Service Required | Note | Service Interval |
|----------|--|--|---|
| A | Grease fitting With Pressure Grease Gun | Use Lithium Based Grease | Time of Truck Service |
| B | Fill Oil Reservoir to Oil Level with Boom Down | Use Dextron III ATF or ISO Grade AW 46 for Ambient Temperatures Between -22° F and 30° F Use ISO 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 | Check Torque of bolts | Bolts should be torqued to 60 ft-lbs | Time of Truck Service |
| D | Check Wire Rope and Hook | Rope should be free of kinks and fraying | Time of Truck Service |
| E | Grease Fitting With Pressure Grease Gun | Use Lithium Based Grease | Every 6 months |

TITLE

LUBRICATION & MAINTENANCE CHART

SECTION

DATE **8-11-09**

SUPERSEDES -

VENTURO MANUFACTURING, INC.
CINCINNATI, OHIO

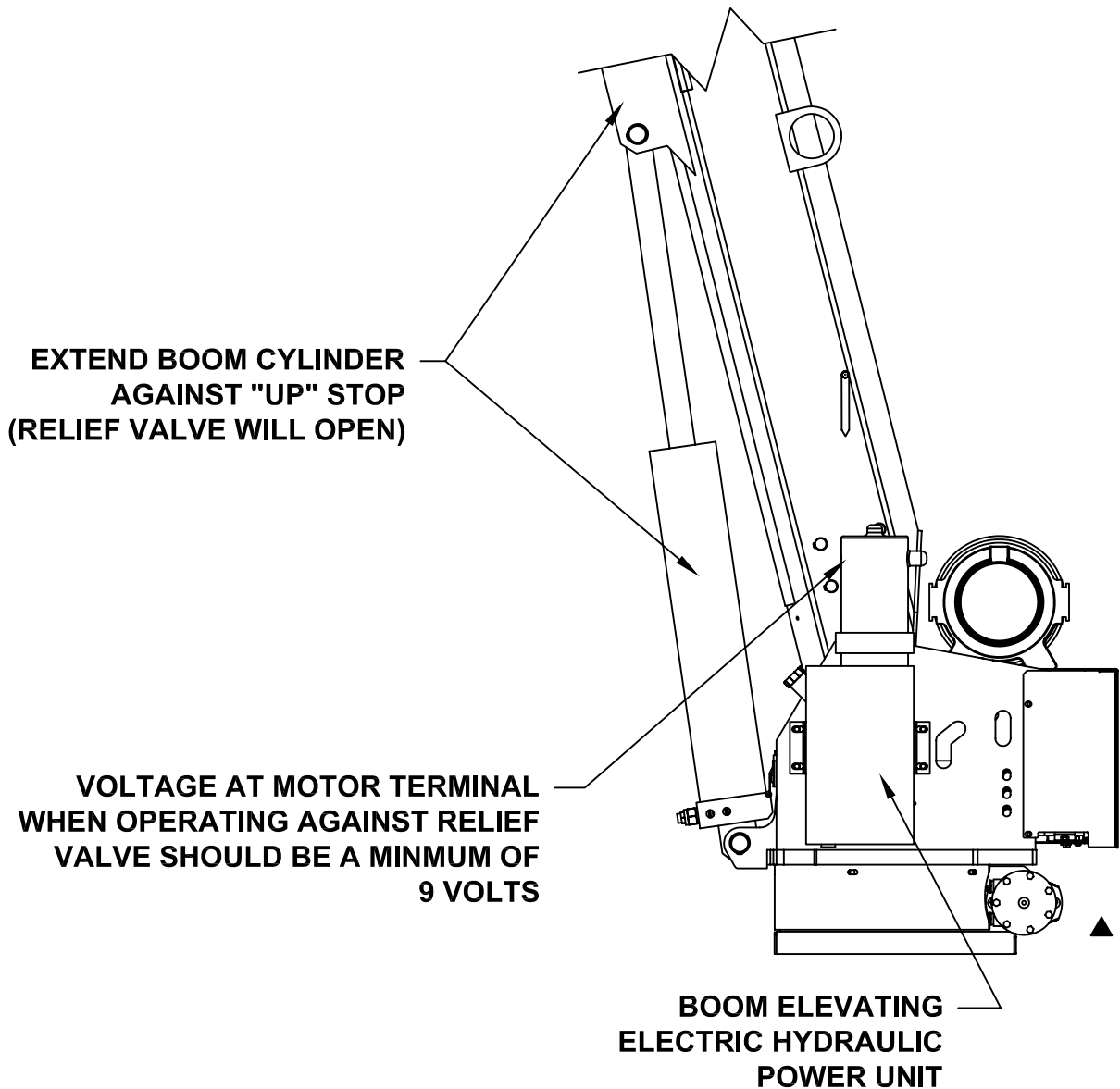
ET25/30/36KX(X)

21878

MINIMUM VOLTAGE TEST

ET SERIES CRANES

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

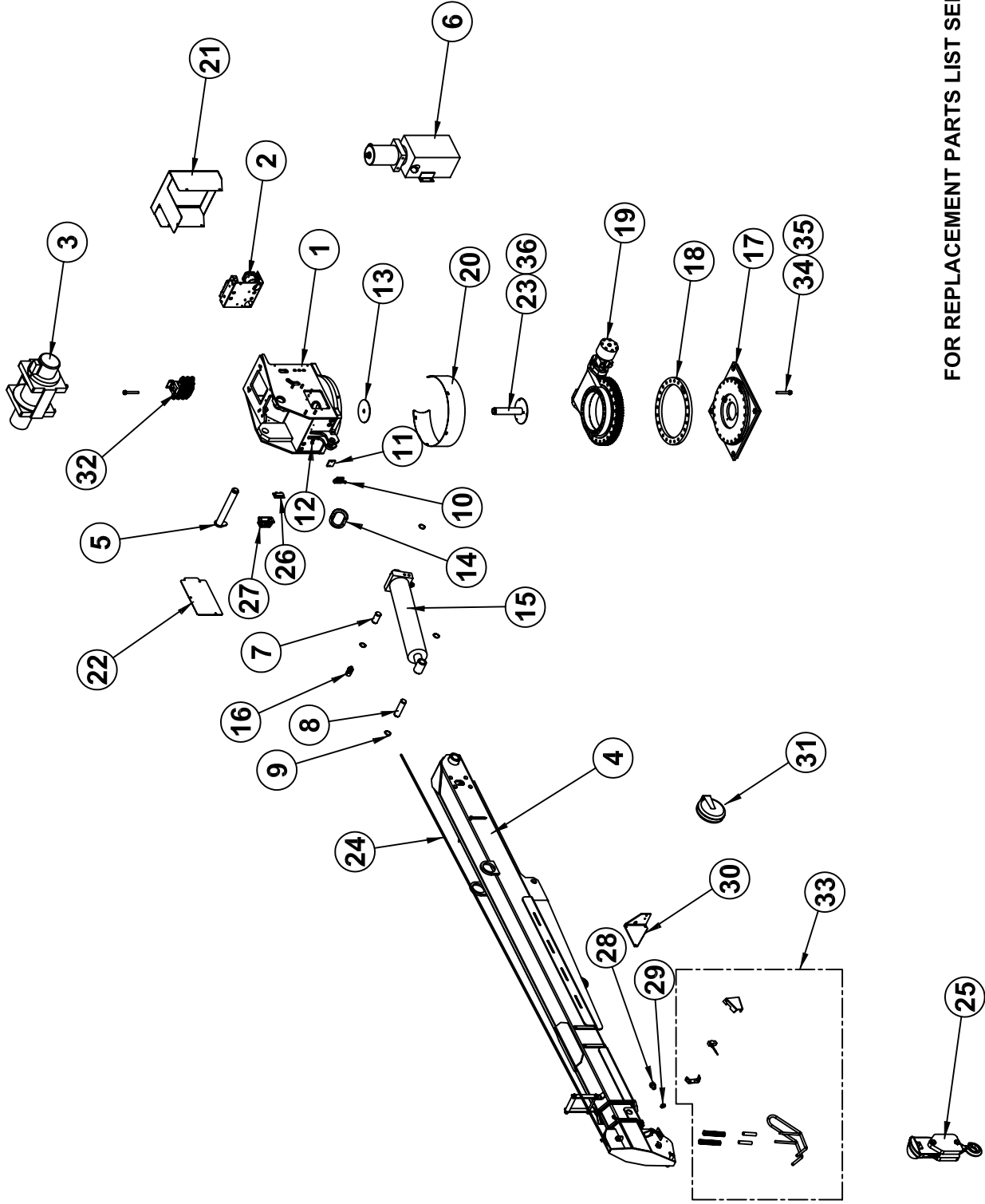


SECTION 400

PARTS



FOR REPLACEMENT PARTS LIST SEE 21897



| | | | |
|---|---------|----------------------------------|---------------|
| VENTURO MANUFACTURING, INC. CINCINNATI, OHIO | TITLE | REPLACEMENT PARTS DRAWING | |
| | SECTION | DATE | DATE |
| | | 10-21-09A | 10-12-09 |
| | | | SUPERSEDES |
| | | | 10-12-09 |
| | | | 21896 |
| | | | ET25KX |

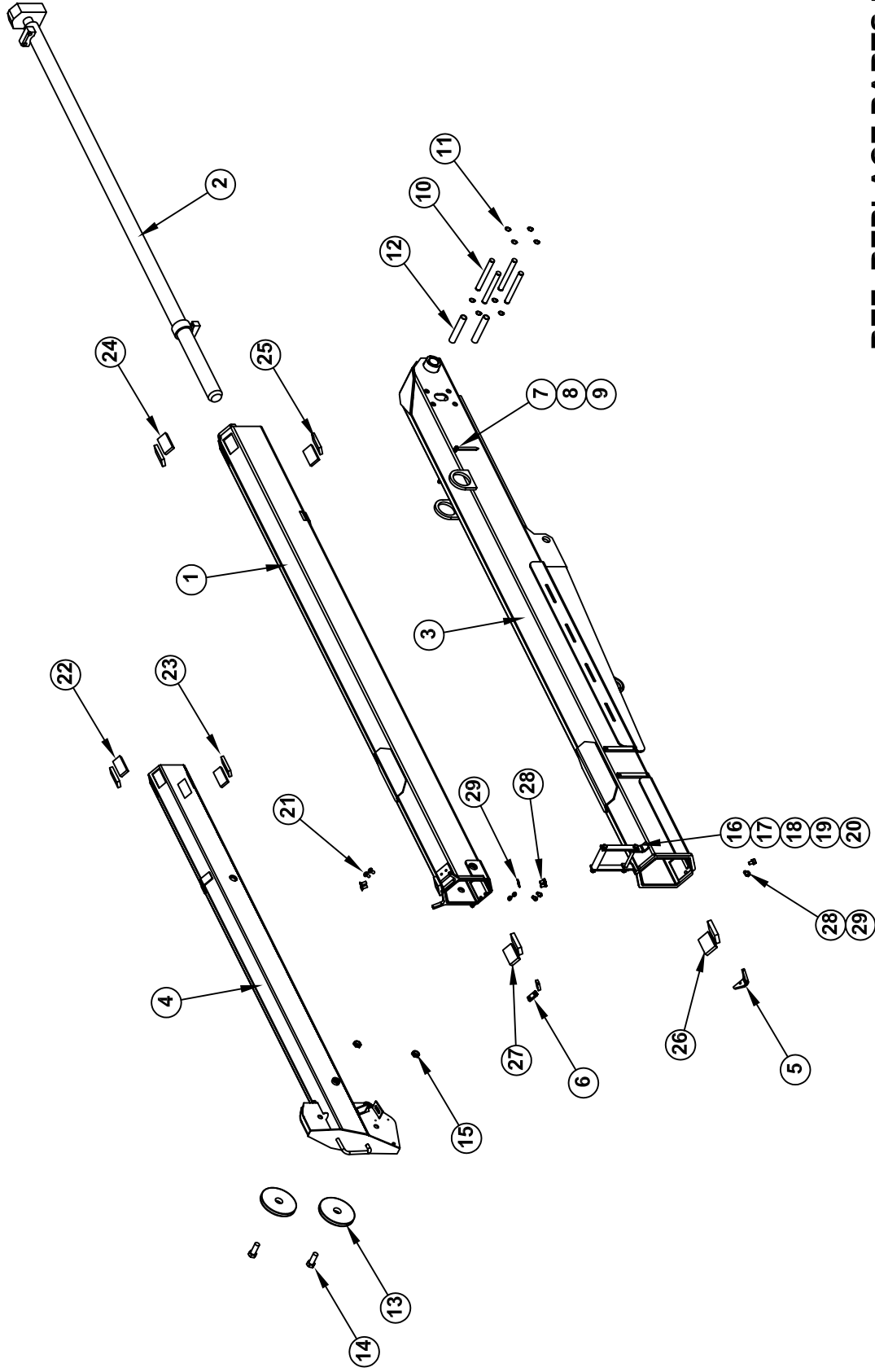
| | | | |
|----------|----------|---------------|-------------------------------------|
| 36 | 1 | 16780-1 | SWIVEL TERMINAL ASSEMBLY |
| 35 | 50 | !LWSH-050 | LOCK WASHER - 1/2-13 |
| 34 | 50 | !HHCS12MM350 | HHCS 12MM X 3-1/2" LG GR 8 |
| 33 | 1 | 27620 | A-2-B MECHANICAL ASSEMBLY |
| 32 | 1 | 21614 | VALVE BLOCK 4-3 |
| 31 | 1 | 27310 | CORD REEL ASSEMBLY |
| 30 | 1 | 27583 | CORD REEL BRACKET |
| 29 | 1 | PL-20-469 | LOCKNUT |
| 28 | 1 | 22455 | STRAIN RELIEF STRAIGHT |
| 27 | 1 | 19425 | SOCKET CASE |
| 26 | 1 | 19428 | FEMALE INSERT 10 PIN |
| 25 | 1 | 27667 | SNATCH BLOCK - 6,000 LB |
| ▲ 24 | 1 | 27668-5/16-80 | WIRE ROPE ASSEMBLY - 5/16" X 80 FT. |
| 23 | 1 | 27568 | SWIVEL PIGTAIL CANDLESTICK ASSEMBLY |
| 22 | 1 | 27000 | HOUSING SIDE COVER |
| 21 | 1 | 27600 | HOUSING REAR COVER |
| 20 | 1 | 27186 | SLEWING RING COVER |
| 19 | 1 | 21418 | SLEWING RING KINEMATICS |
| 18 | 1 | 27520s | SPACER |
| 17 | 1 | 27690 | BASE WELDED ASSEMBLY |
| 16 | 1 | 17460-2400-21 | OVERLOAD PRESSURE SWITCH |
| 15 | 1 | 21752 | ELEVATION CYLINDER |
| 14 | 1 | 27157 | ANTI-CHAFFING GASKET |
| 13 | 1 | 27156 | SHIELD, HOUSING CENTER |
| 12 | 1 | 19269 | CABLE CLAMP - 1/4" |
| 11 | 1 | 20896 | BOOM SWITCH MOUNTING BLOCK |
| 10 | 1 | 19904 | BOOM SHUTOFF SWITCH ASSEMBLY |
| 9 | 4 | !SRNG-125 | RETAINING RING - 1-1/4" SHAFT DIA. |
| 8 | 1 | 18761 | PIVOT PIN - ELEVATION CYLINDER |
| 7 | 1 | 18762 | PIVOT PIN - ELEVATION CYLINDER |
| 6 | 1 | 27009 | HYDRAULIC POWER UNIT ASSEMBLY |
| 5 | 1 | 21012 | PIVOT PIN - MAIN BOOM PIVOT |
| 4 | 1 | 21470 | BOOM FINAL ASSEMBLY |
| 3 | 1 | 19813 | ELECTRIC WINCH |
| 2 | 1 | 23154-2 | ELECTRICAL COMPONENT ASSEMBLY |
| 1 | 1 | 27184 | HOUSING WELDED ASSEMBLY |
| ITEM NO. | QUANTITY | PART NUMBER | DESCRIPTION |

FOR REPLACEMENT PARTS DRAWING SEE 21896



| | | |
|------------------------|------------------------|--------------|
| TITLE | DATE | SECTION |
| REPLACEMENT PARTS LIST | 11-16-10D | C400 |
| ET25KX | SUPERSEDES 8-20-10B | 21897 |

27198 PARTS DRAWING (POWER / MANUAL)



REF. REPLACE PARTS LIST 21858

| | | | | |
|---|-------|--------------------------|------------|--------------|
| VENTURO MANUFACTURING, INC. CINCINNATI, OHIO | TITLE | 27198 BOOM PARTS DRAWING | SECTION | C400 |
| | | ET30KX BOOM | DATE | 8-20-09A |
| | | | SUPERSEDES | 9-24-08 |
| | | | | 21857 |

| ITEM NO. | QTY. | PART NUMBER | DESCRIPTION |
|----------|------|---------------|------------------------------------|
| 29 | 6 | !LW SH-038 | LOCK WASHER 3/8" |
| 28 | 6 | IHC S03816063 | HEX HEAD CAP SCREW 3/8-16 X 5/8 LG |
| 27 | 2 | U063X1.75 | UHM W 063X1.75 |
| 26 | 2 | U063X2.13 | UHM W 063X2.13 |
| 25 | 2 | U044X1.75 | UHM W 044X1.75 |
| 24 | 2 | U050X1.75 | UHM W 050X1.75 |
| 23 | 2 | U044X1.50 | UHM W 044X1.50 |
| 22 | 2 | U050X1.50 | UHM W 050X1.50 |
| 21 | 4 | !CACS03816075 | !CACS - 3/8-16 X 3/4 LG |
| 20 | 2 | !LNUT-04414 | NYLON INSERT LOCK NUT - 7/16-14 |
| 19 | 1 | 21560 | ROLLER,UHM W GUIDE |
| 18 | 1 | 21936 | FLAT,MOUNT;WIRE ROPE GUIDE |
| 17 | 1 | IHC S04414550 | HHCS - 7/16-14 X 5-1/2 LG |
| 16 | 1 | 21935 | WIRE-ROPE GUIDE WELDED |
| 15 | 2 | !LNUT-07510 | LOCKNUT 3/4-10 |
| 14 | 2 | 17059-6 | SHEAVE AXLE 3/4 X 2 W / 1" SHANK |
| 13 | 2 | 27001 | SHEAVE - BOOM |
| 12 | 2 | 21498 | EXTENSION CYLINDER ROLLER |
| 11 | 8 | !SRNG-075 | RETAINING RING - 3/4" SHAFT DIA. |
| 10 | 4 | 21497 | THRUST PIN - EXTENSION CYLINDER |
| 9 | 2 | !ANUT-02520S | ACORN NUT 1/4-20 STAINLESS |
| 8 | 2 | 13459-2 | BOOM ARROW 4-7/16 LONG |
| 7 | 2 | 22490 | SPACER, BOOM ARROW 1/2" O.D. |
| 6 | 2 | 23119 | BEARING RETAINING BLOCK |
| 5 | 1 | 23183 | V-BLOCK SLIDER |
| 4 | 1 | 27110 | TERTIARY BOOM WELDED ASSEMBLY |
| 3 | 1 | 27201 | PRIMARY BOOM WELDED ASSEMBLY |
| 2 | 1 | 20061-1 | EXTENSION CYLINDER - HOLLOW ROD |
| 1 | 1 | 27108 | SECONDARY BOOM WELDED ASSEMBLY |
| | | | DESCRIPTION |

REF. BOOM PARTS DRAWING - 21857



TITLE
27198 BOOM PARTS LIST

ET30KX

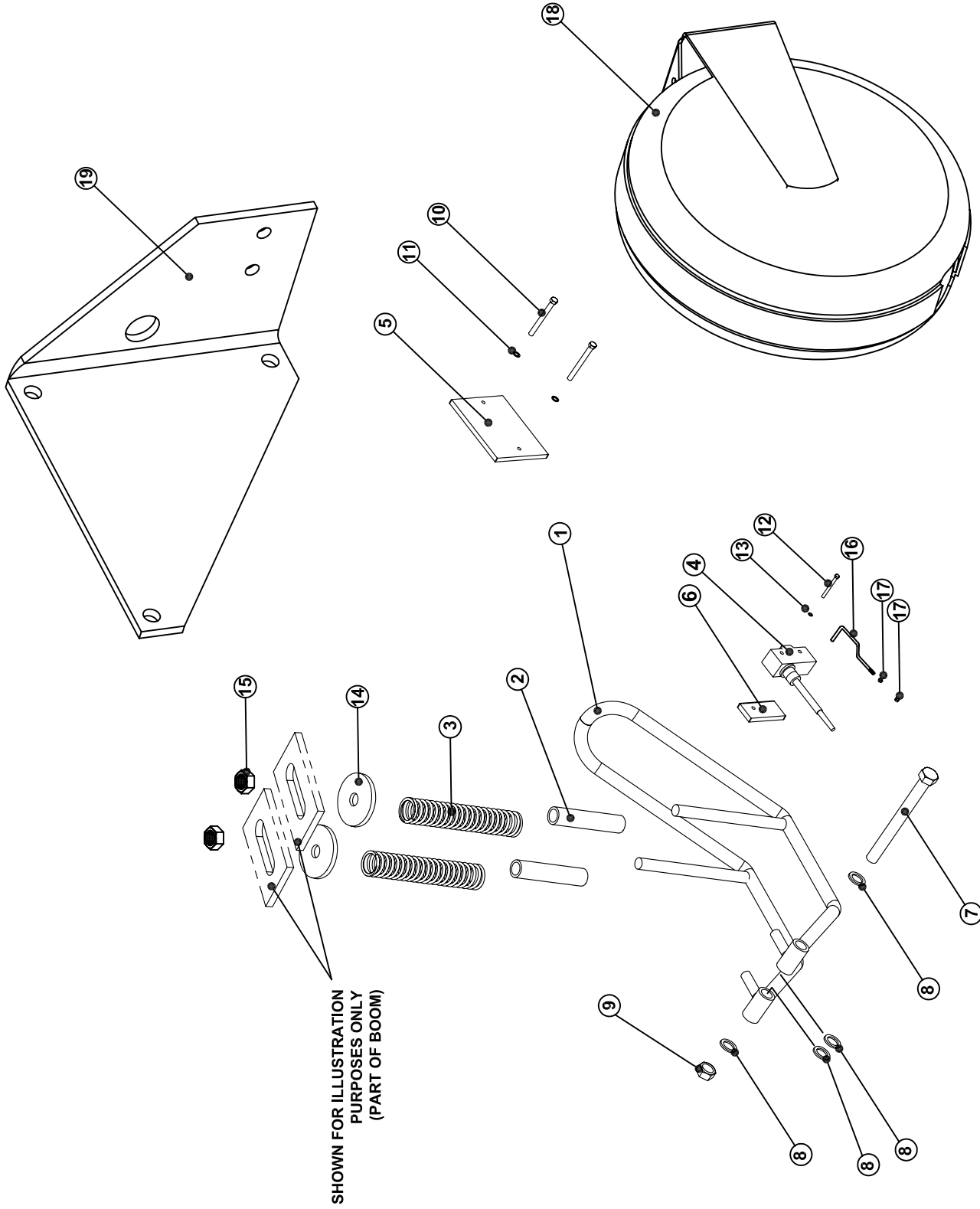
DATE
8-20-09A

SUPERSEDES
9-25-08

SECTION

C400

21858



| | | | |
|----------|---------------|----------------|------------------------------------|
| 19 | 1 | 27583 | MOUNTING BRACKET - CORD REEL |
| 18 | 1 | 27310 | CORD REEL |
| 17 | 2 | !LNUT-#0440 | LOCKNUT W/ NYLON INSERT - 4-40 |
| 16 | 1 | 27624 | ROD ASSY. ADJUSTABLE A2B |
| 15 | 2 | !LNUT-04414 | LOCKNUT W/ NYLON INSERT - 7/16-14 |
| 14 | 2 | !FWSH-050 | FLAT WASHER - 1/2" USS |
| 13 | 1 | !LWSH-#06-STAR | EXTERNAL STAR LOCK WASHER - #06 |
| 12 | 1 | !PHCS#0632100 | PAN HD CAP SCREW - #6-32 x 1 |
| 11 | 2 | !LWSH-#10 | LOCK WASHER - #10 |
| 10 | 2 | !PHCS#1024125 | PAN HD CAP SCREW - #10-24 x 1-1/4 |
| 9 | 1 | !JNUT-04414N | HEX JAM LOCKNUT - 7/16-14 |
| 8 | 4 | !FWSH-044SAE | FLAT WASHER - 7/16 SAE |
| 7 | 1 | !HHCS04414450 | HEX HD CAP SCREW - 7/16-14 x 4-1/2 |
| 6 | 1 | 27696 | BASE - NEOPRENE |
| 5 | 1 | 27698 | COVER PLATE |
| 4 | 1 | 19376 | ANTI-TWO BLOCK SWITCH |
| 3 | 2 | 27586 | SPRING |
| 2 | 2 | 27579b | SPRING LOCATING TUBE |
| 1 | 1 | 21870 | ANTI - TWO - BLOCK CAGE ASSEMBLY |
| ITEM NO. | EXPLODED/QTY. | PART NUMBER | DESCRIPTION |



TITLE
ANTI-TWO-BLOCK SYSTEM

ET25/30/36 & HT25/30

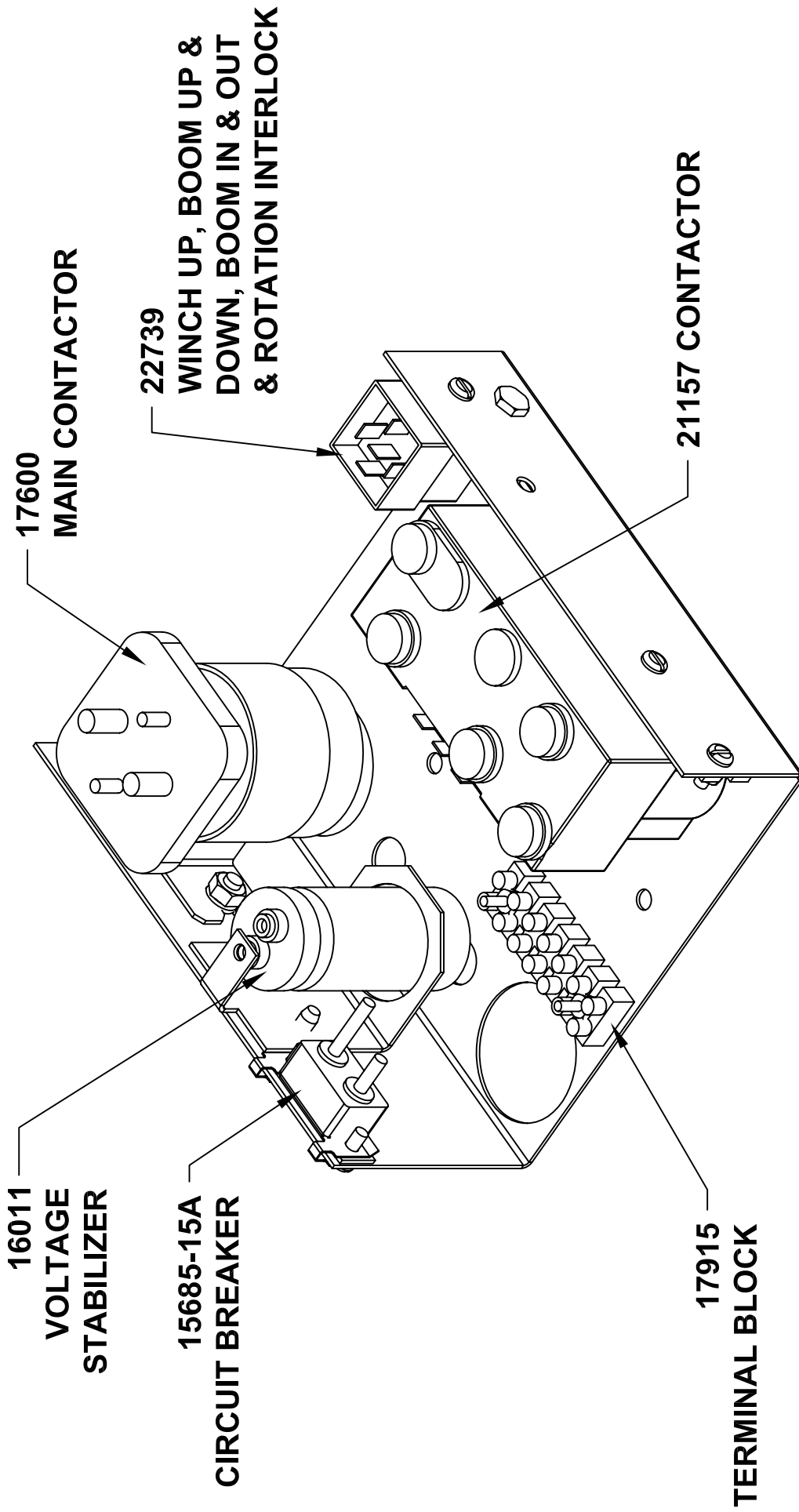
DATE
3-4-10

SUPERSEDES
-

SECTION
C400

21881

23154-2 ELECTRICAL COMPONENT ASSEMBLY



TITLE

ELECTRICAL COMPONENT ASSEMBLY

DATE

10-9-09

SECTION

-

MANUFACTURING, INC.
CINCINNATI, OHIO

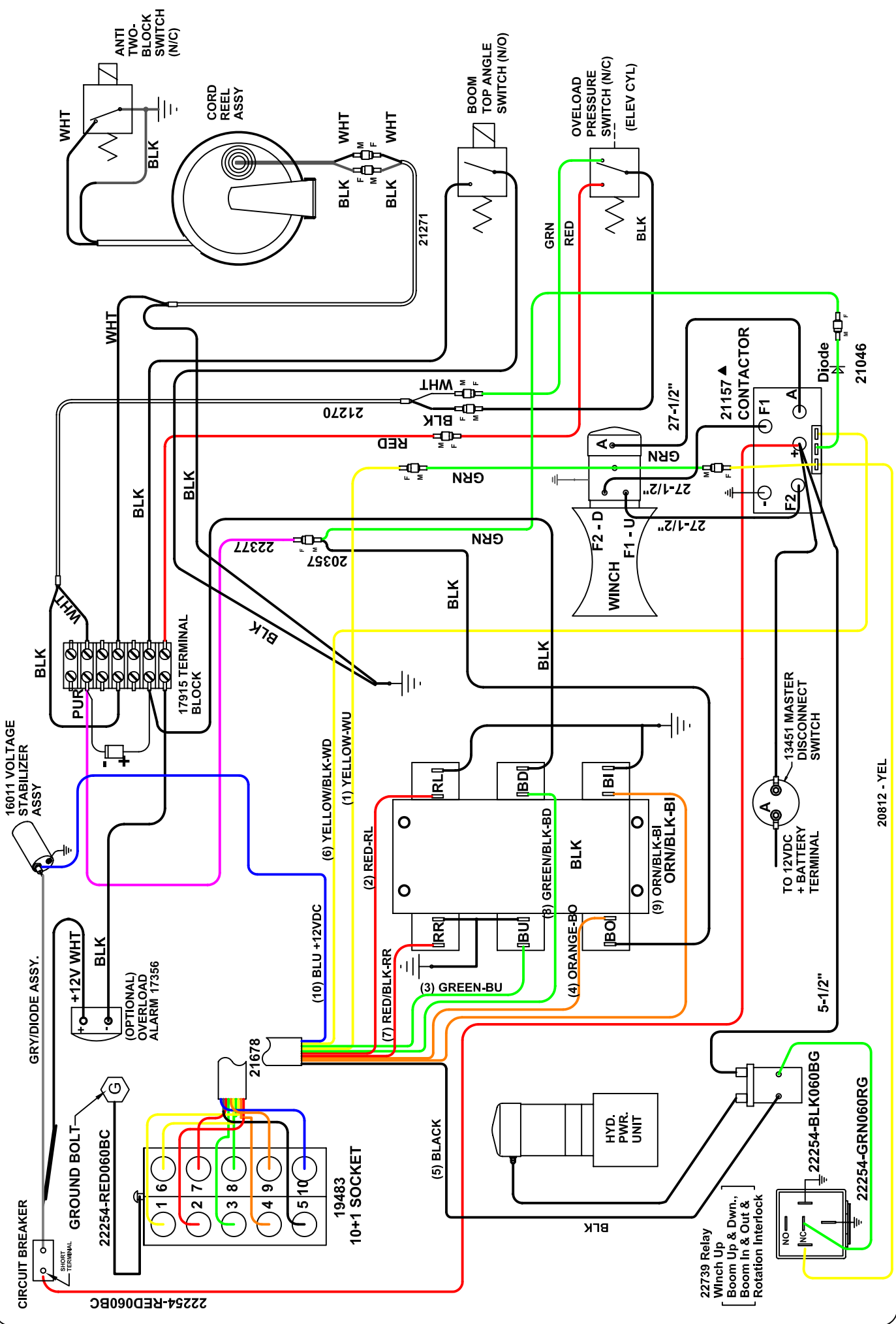


ET25/30/36KX

21776

SUPERSEDES

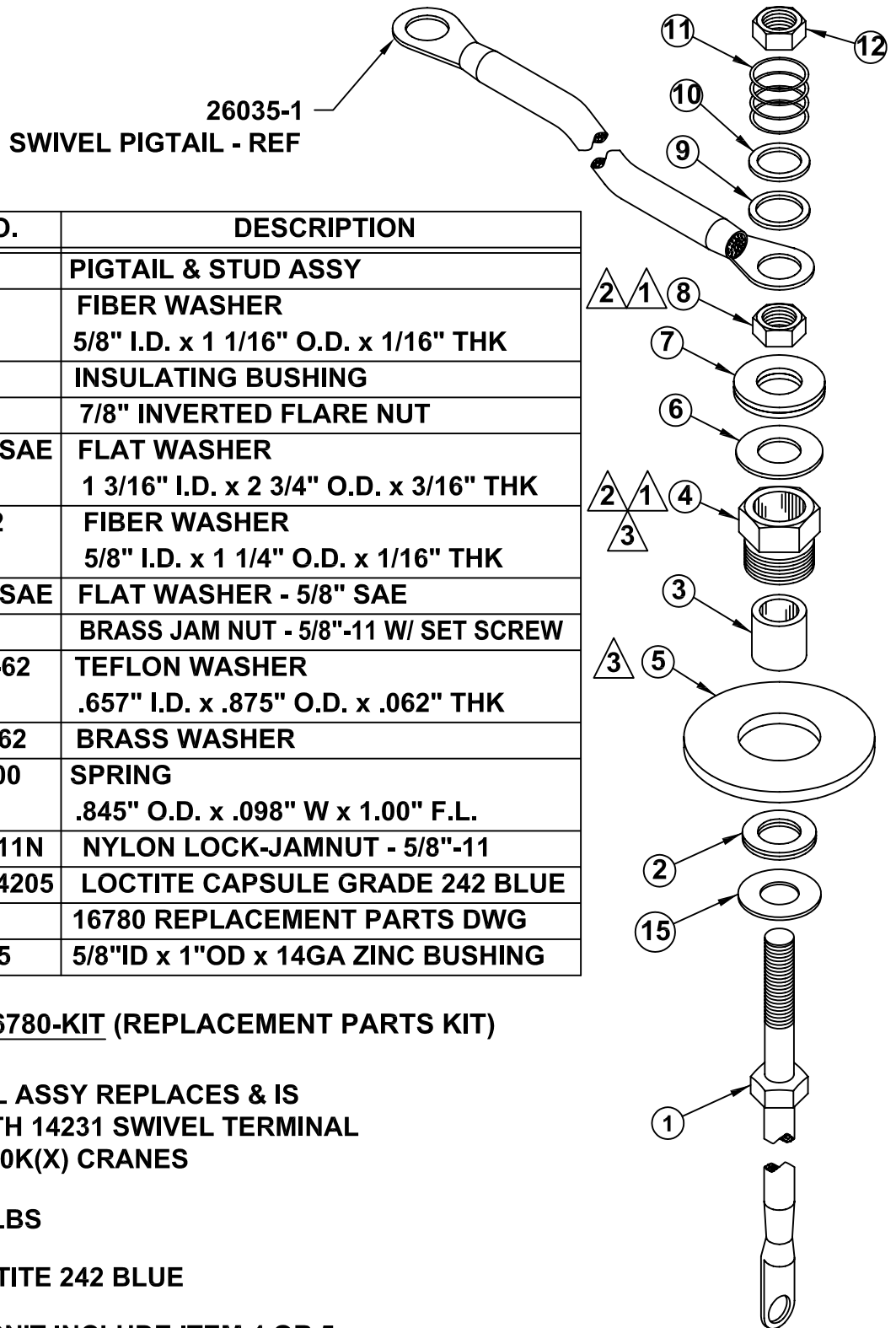
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| | | | | |
|---|--|--------------------------------|-------------------------|--------------|
| VENTURO MANUFACTURING, INC. CINCINNATI, OHIO | | TITLE WIRING DIAGRAM | DATE 3-22-12C | SECTION - |
| | | SUPERSEDES 7-21-11B | 21859 | |
| | | ET30KX, ET25KX (GEN. C) | | |

20812 - YEL

16780 AND 16780-1 SWIVEL TERMINAL ASSY.



| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|---------------|---|
| 1 | 1 | 16783 | PIGTAIL & STUD ASSY |
| * 2 | 2 | 14357-1 | FIBER WASHER 5/8" I.D. x 1 1/16" O.D. x 1/16" THK |
| * 3 | 1 | 14233 | INSULATING BUSHING |
| 4 | 1 | 14232 | 7/8" INVERTED FLARE NUT |
| 5 | 1 | !FWSH-113SAE | FLAT WASHER 1 3/16" I.D. x 2 3/4" O.D. x 3/16" THK |
| * 6 | 1 | 14357-2 | FIBER WASHER 5/8" I.D. x 1 1/4" O.D. x 1/16" THK |
| * 7 | 2 | !FWSH-063SAE | FLAT WASHER - 5/8" SAE |
| * 8 | 1 | 21273 | BRASS JAM NUT - 5/8"-11 W/ SET SCREW |
| * 9 | 1 | 5612-162-62 | TEFLON WASHER .657" I.D. x .875" O.D. x .062" THK |
| * 10 | 1 | 5714-113-62 | BRASS WASHER |
| * 11 | 1 | LC-098K-00 | SPRING .845" O.D. x .098" W x 1.00" F.L. |
| * 12 | 1 | !JNUT-06311N | NYLON LOCK-JAMNUT - 5/8"-11 |
| * 13 | 1 | LOCTITE-24205 | LOCTITE CAPSULE GRADE 242 BLUE |
| * 14 | 1 | 19368 | 16780 REPLACEMENT PARTS DWG |
| * 15 | 1 | 12534-5 | 5/8"ID x 1"OD x 14GA ZINC BUSHING |

* ITEMS INCLUDED IN 16780-KIT (REPLACEMENT PARTS KIT)

16780 SWIVEL TERMINAL ASSY REPLACES & IS
INTERCHANGEABLE WITH 14231 SWIVEL TERMINAL
ASSY ON ET20000 & ET20K(X) CRANES

- 1 TORQUE TO 30 FT-LBS
- 2 SECURE WITH LOCTITE 242 BLUE
- 3 16780-1 ASSY DOESN'T INCLUDE ITEM 4 OR 5



MFG., INC.
CINCINNATI, OHIO

TITLE
REPLACEMENT PARTS

DATE
8-12-09F

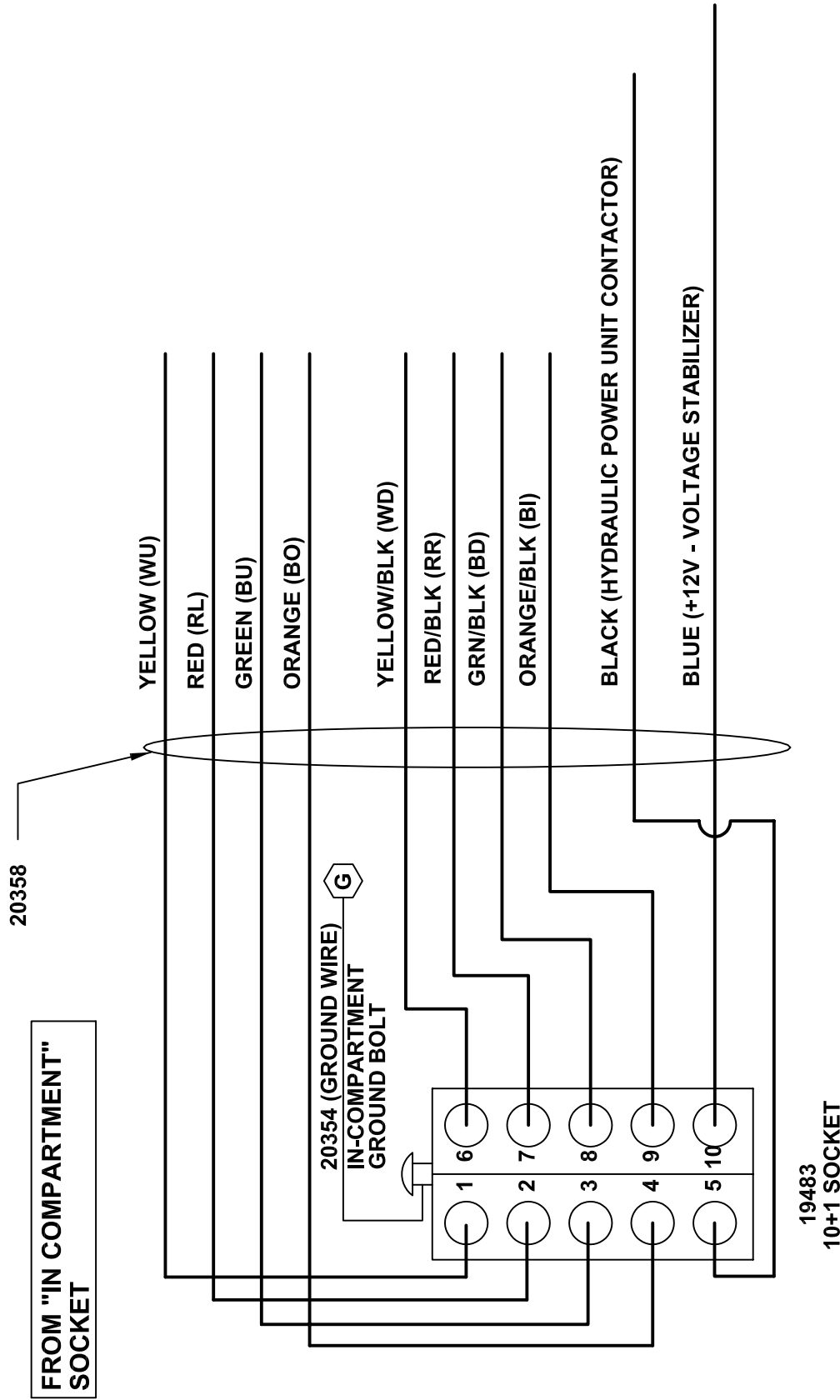
SECTION
C400

ET18/25/30/36K(X)▲

SUPERSEDES
4-28-08E

19368

ET25/30KX IN-COMPARTMENT CONTROLS



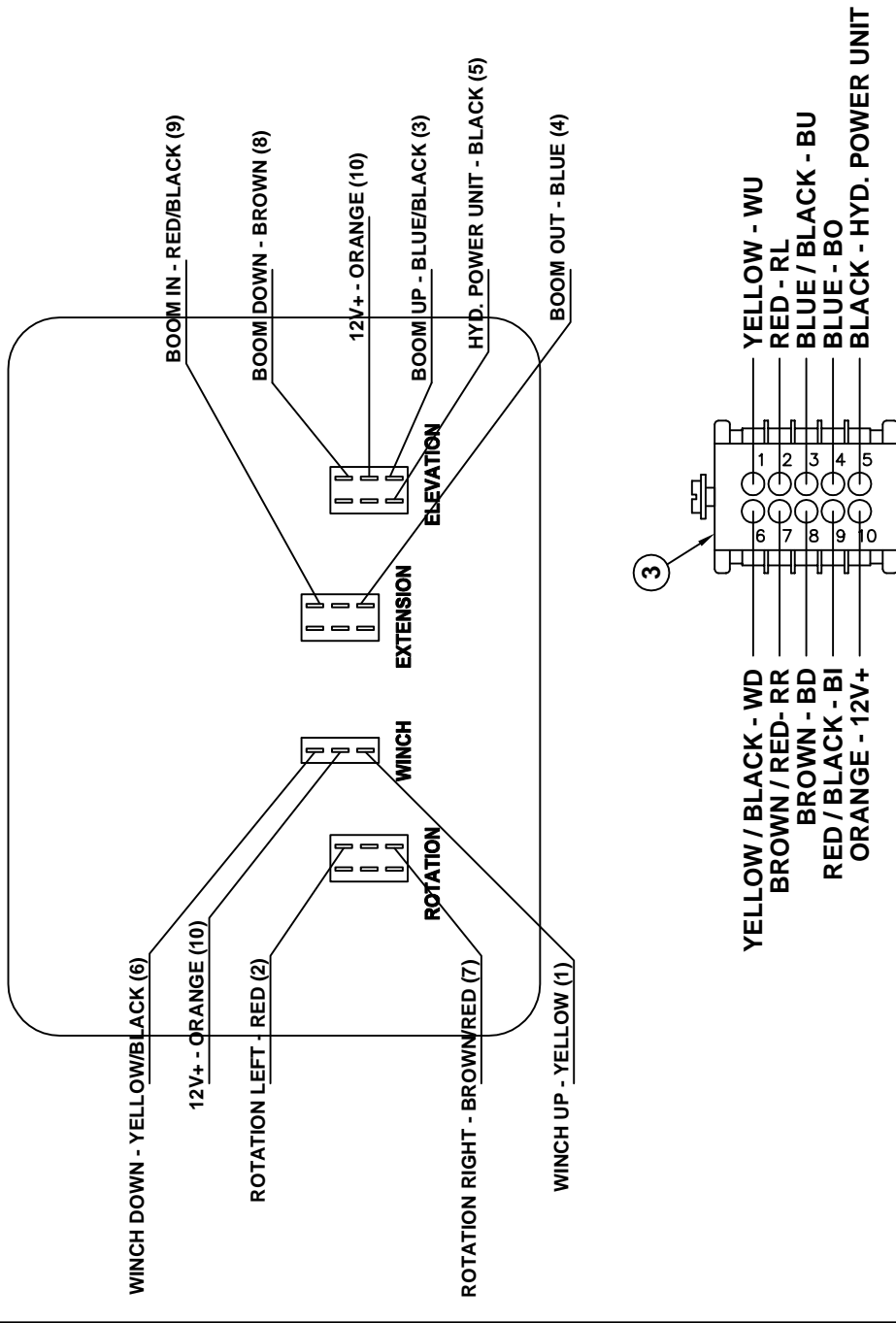
NOTE: BLUE/BLK WIRE OF
20358 HARNESS NOT USED

| | | | |
|---|------------|-------------------------|-------|
| VENTURO MANUFACTURING, INC. CINCINNATI, OHIO | TITLE | IN-COMPARTMENT CONTROLS | |
| | SECTION | - | |
| | DATE | 1-19-05A | |
| | SUPERSEDES | 4-12-02 | 20359 |

22060 PENDANT (4 - SWITCH)

CORD REPLACEMENT INSTRUCTIONS

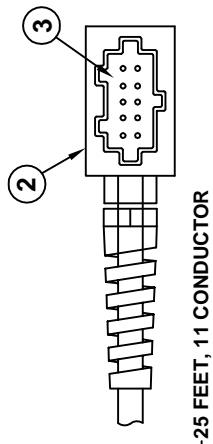
(INSIDE VIEW OF PENDANT CONTROL W/ REAR COVER REMOVED)



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

NOTE 2)
TOGGLE SWITCH JUMPER
WIRES NOT SHOWN FOR
CLARITY.

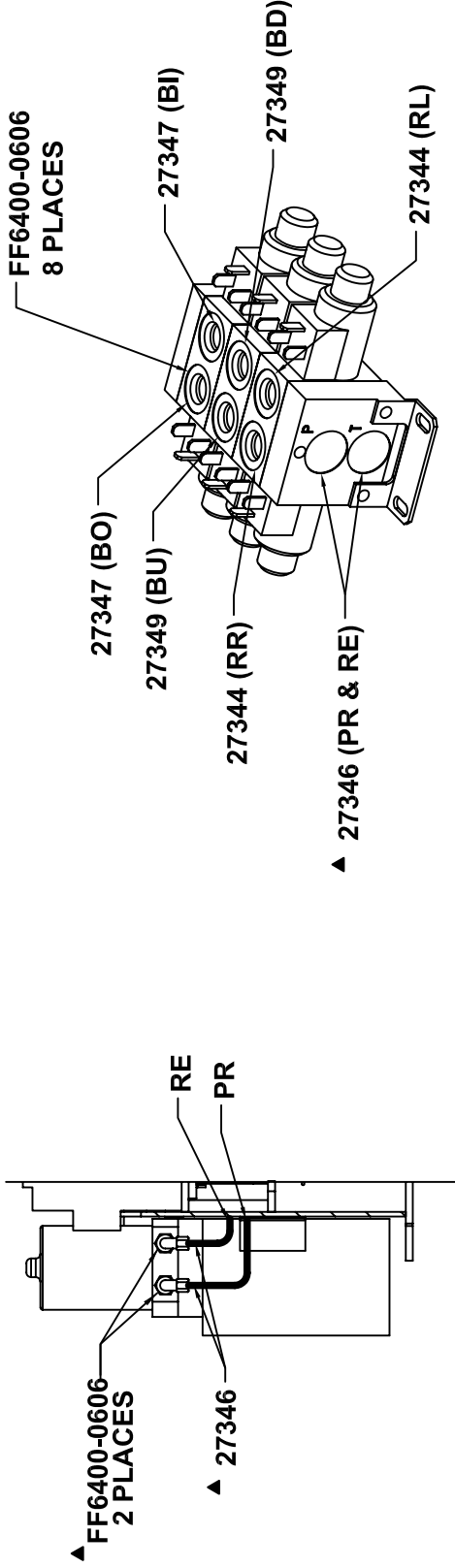
NOTE 3)
STOW OR CUT-BACK
UNUSED WIRES.



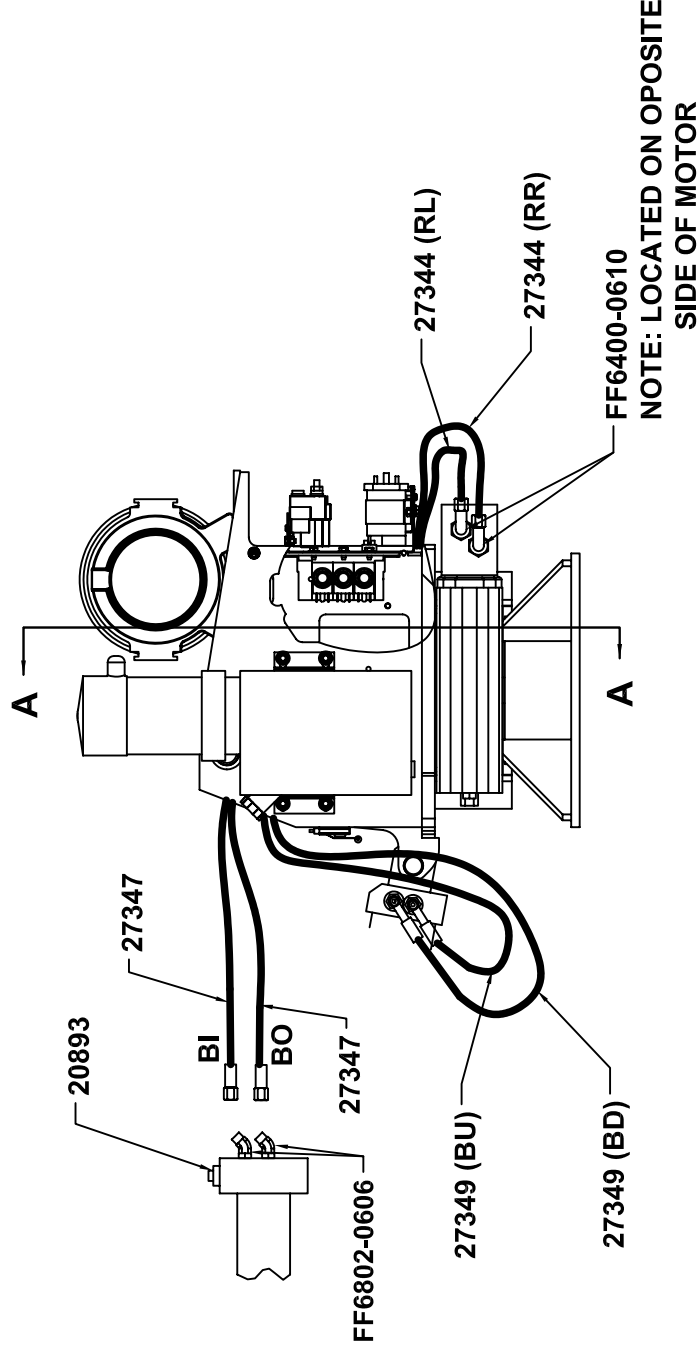
| ITEM | QTY | PART NO. | DESCRIPTION |
|------|-----|----------|------------------------------|
| 4 | 3 | 22152 | DPDT MOMENTARY TOGGLE SWITCH |
| 3 | 1 | 19427 | MALE INSERT - 10 + 1 POLE |
| 2 | 1 | 19426 | PLUG CASE - 10 + 1 POLE |
| 1 | 4 | 22081 | SPDT MOMENTARY TOGGLE SWITCH |


| | | | |
|-------------------------------|---------------------------|------------|---------|
| TITLE | REPLACEMENT PARTS DRAWING | SECTION | C400 |
| DATE | 9-28-12B | SUPERSEDES | 9-6-11A |
| 22060 PENDANT (STANDARD CTRL) | | 22076 | |

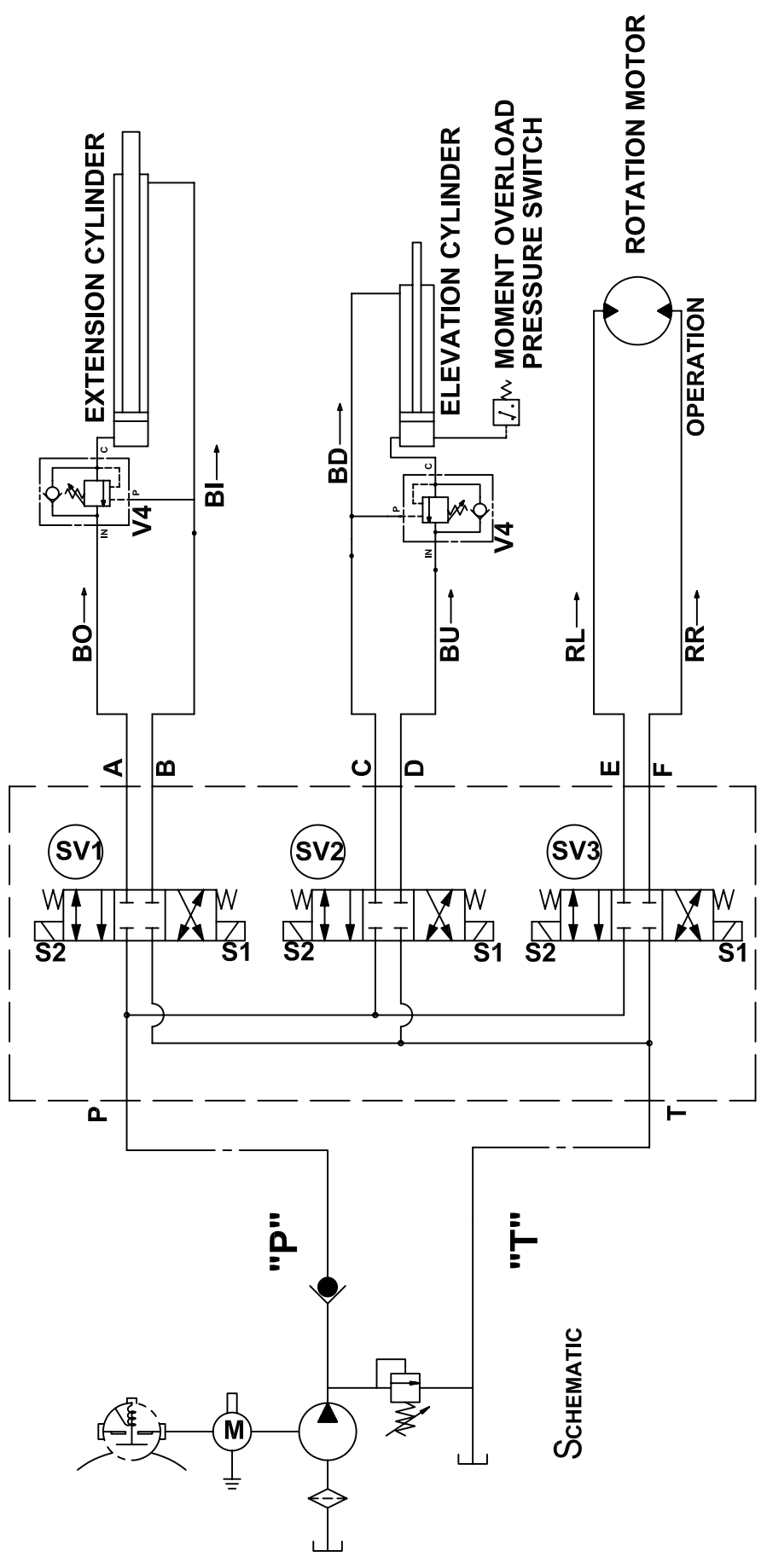
| | |
|----|----------------|
| RR | ROTATION RIGHT |
| RL | ROTATION LEFT |
| BO | BOOM OUT |
| BI | BOOM IN |
| BU | BOOM UP |
| BD | BOOM DOWN |
| PR | PRESSURE |
| RE | RETURN |



SECTION VIEW A-A



| | | | | |
|---|------------|----------------------------------|---------|--------------|
|  VENTURO MANUFACTURING, INC. CINCINNATI, OHIO | TITLE | REPLACEMENT PARTS DRAWING | | |
| | DATE | 6-8-10B | SECTION | C400 |
| | SUPERSEDES | 8-17-09A | | 21758 |



SCHEMATIC

SV1

SV2

SV3

ERNERGIZE "S2"
OPEN FLOW
'P' TO 'A'
'B' TO 'C'
'D' TO 'T'

ERNERGIZE "S2"
OPEN FLOW
'P' TO 'C'
'D' TO 'T'

ERNERGIZE "S2"
OPEN FLOW
'P' TO 'E'
'F' TO 'T'

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

ERNERGIZE "S1"
OPEN FLOW
'P' TO 'D'
'C' TO 'T'

ERNERGIZE "S1"
OPEN FLOW
'P' TO 'F'
'E' TO 'T'

TITLE

HYDRAULIC SYSTEM DIAGRAM

DATE

1-31-05C

SECTION

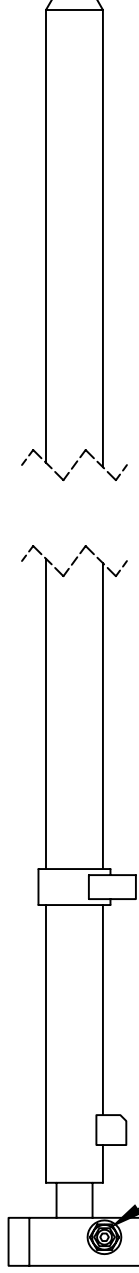
C400

SUPERSEDES

7-31-03B

20156

20061-1 EXTENSION CYLINDER



20893 COUNTERBALANCE
VALVE

SEAL KIT P/N: 19887

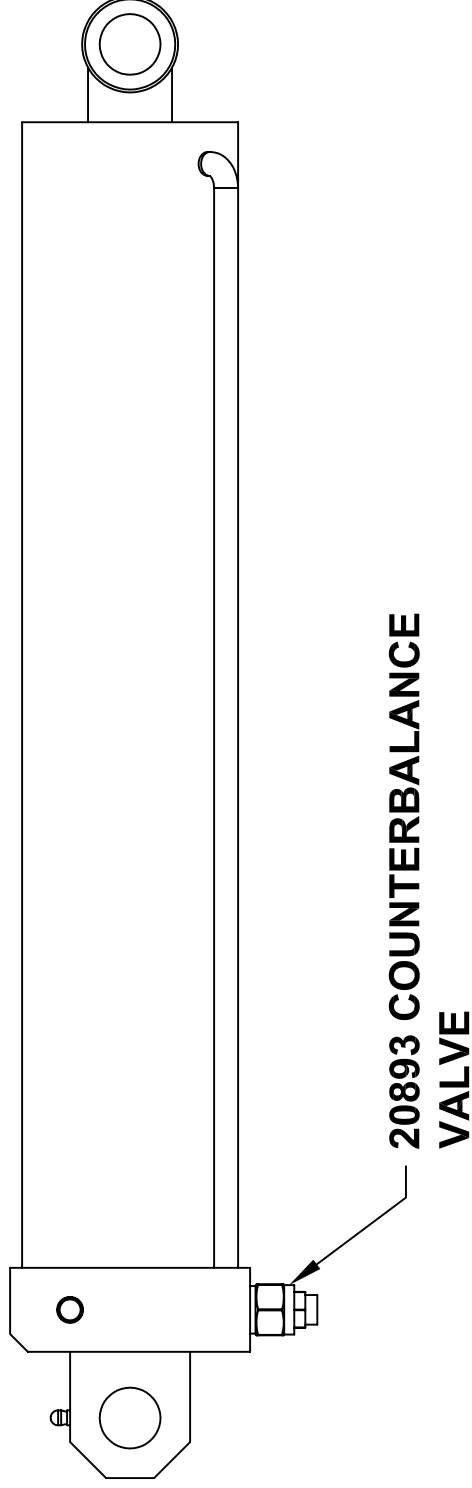


TITLE
EXTENSION CYLINDER
ET/HT25/30KX


DATE
8-20-09
SUPERSEDES
-

SECTION
C400
21879

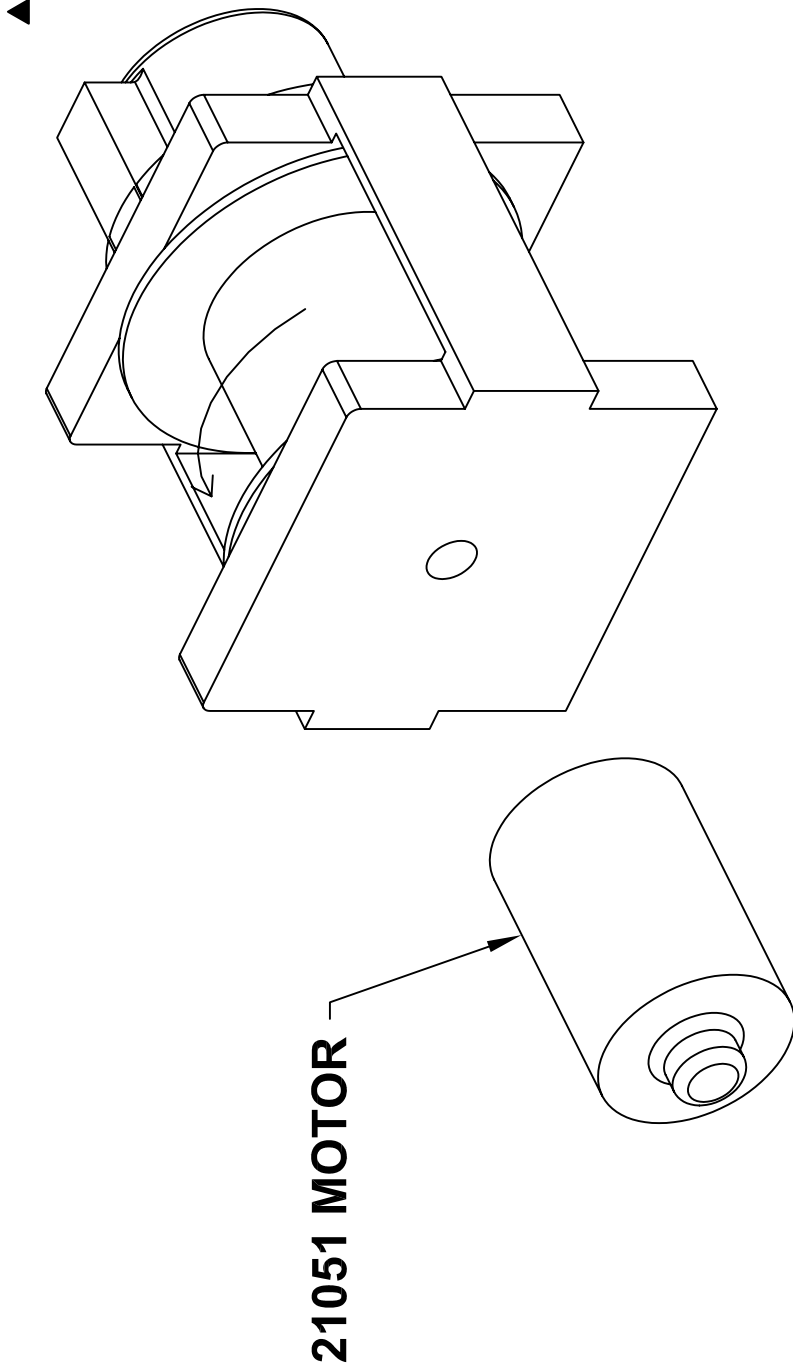
21752 ELEVATION CYLINDER



SEAL KIT P/N: 21774

| | | | |
|--|--|----------------------------|---------------|
|  MANUFACTURING, INC. CINCINNATI, OHIO | TITLE | DATE | SECTION |
| | ELEVATION CYLINDER ET/HT25/30/36KX(X) | 8-12-09 SUPERSEDES . | C400 21773 |

19813 WINCH



21051 MOTOR

TITLE

WINCH REPLACEMENT PARTS

SECTION

DATE
6-30-05A

SUPERSEDES

10-27-04

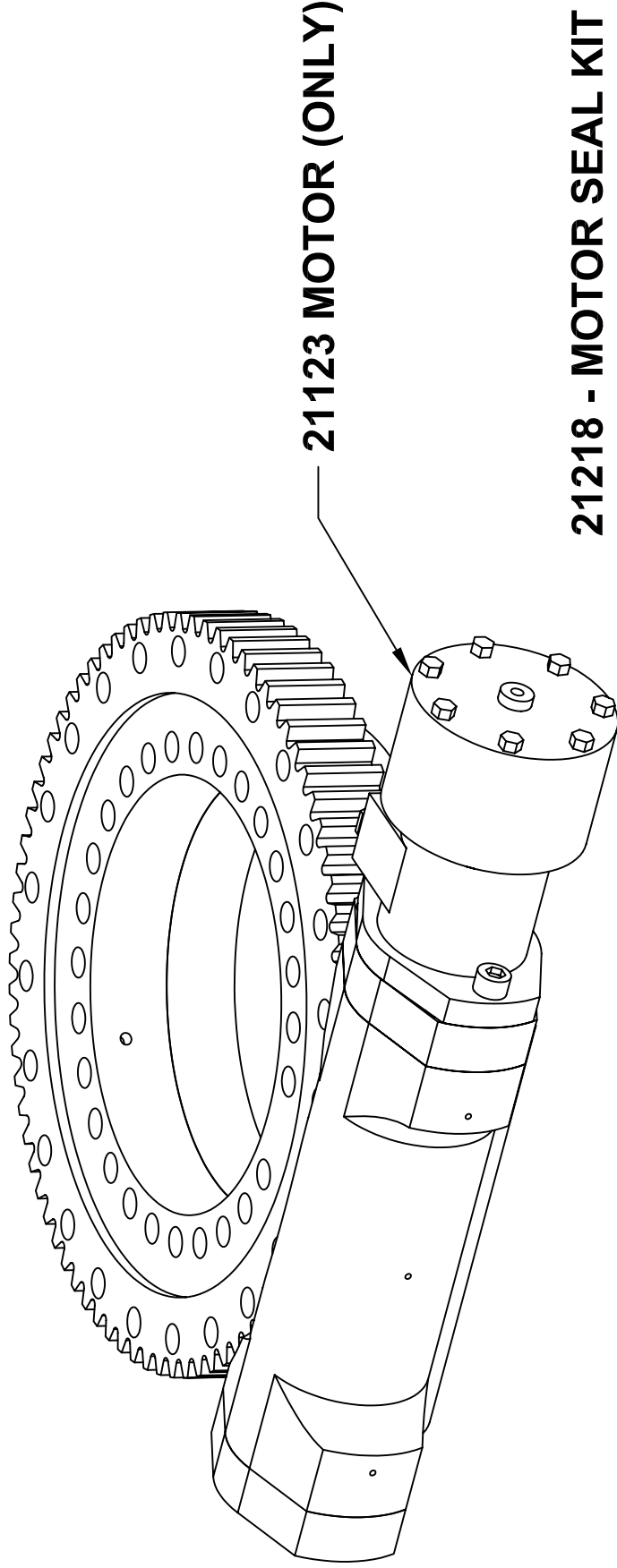
ET25/36K(X)

21053



MANUFACTURING, INC.
CINCINNATI, OHIO

21418 SLEWING SYSTEM REPLACEMENT PARTS



21218 - MOTOR SEAL KIT

| | | | | | | |
|---|-------|---------------------------|------------|----------|---------|-------|
|  VENTURO MANUFACTURING, INC. CINCINNATI, OHIO | TITLE | SLEWING REPLACEMENT PARTS | DATE | 08-24-09 | SECTION | - |
| | | ET25/30KX | SUPERSEDES | - | | 21886 |

21898 DECAL KIT

| PART NO. | QTY. | DESCRIPTION |
|----------|------|---|
| 14473-2 | 2 | DECAL, GREASE |
| 17389 | 2 | DECAL, VENTURO - MEDIUM |
| 15401 | 1 | DECAL, UNLAWFUL TO OPERATE |
| 23132-1 | 1 | DECAL, BOOM CAPACITY ET25KX RIGHT |
| 23132-2 | 1 | DECAL, BOOM CAPACITY ET25KX LEFT |
| 19743 | 2 | DECAL, MODEL NAME DECAL ET25KX |
| 15392 | 1 | DECAL, DANGER ELECTROCUTION HAZARD |
| 15391 | 1 | DECAL, CRANE NOT PASSENGER LIFT |
| 15390 | 1 | DECAL, CAUTION, INSTRUCTIONS |
| 15513 | 1 | ON / OFF PLATE DECAL |
| 13397 | 1 | DECAL, OIL LEVEL |
| 21852 | 1 | INST. DWG DECAL PLACEMENT |
| 20051 | 1 | DECAL, ROTATION STOP LOCATION |
| 20174 | 1 | DECAL, GROUND CABLE ATTACH TO TRUCK FRAME |



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE

FIELD SERVICE LABEL KIT

ET25KX

DATE

10-12-09

SUPPERSEDES

-

SECTION

C400

21899



LIMITED WARRANTY POLICY

This limited policy warrants new products of Venturo be free from defects in material and workmanship for a period of one (1) year from date of original installation. This 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.

WARRANTY CLAIMS

Venturo Manufacturing, Inc. 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 insure the installation is completed according to the manufacturer's recommendations, insure 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 products without the expressed written consent of the manufacturer. Reinstallation 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 again be instructed as to the safe operation at time of delivery. Maintenance, service, operation and safety warning decals are available on request from Venturo Manufacturing, Inc.

VENTURO MANUFACTURING, INC

DIVISION OF COLLINS ASSOCIATES, INC
12110 BEST PLACE • CINCINNATI, OHIO 45241
513.772.8448
www.venturo.com