



**TRUCK MOUNTED CRANES**

# **ET25KX**

**INSTALLATION & OWNER'S MANUAL**

**Sold and Serviced by:**



# TABLE OF CONTENTS

## ET25KX INSTRUCTION MANUAL

|                           |   |
|---------------------------|---|
| <b><u>SECTION 100</u></b> | <b><u>DESCRIPTION &amp; SPECIFICATIONS</u></b>                  |
| 19958a                    | ET25KX SPECIFICATIONS & OPERATING FEATURES                      |
| 19958b                    | ET25KX SPECIFICATIONS & OPERATING FEATURES                      |
| 20129                     | INSTALLATION DIMENSIONS - ET25KX                                |
| 19930                     | 19825 BASE MOUNTING DIMENSIONS                                  |
| I19233                    | CAPACITY CHART - ET/HT25K(X) 10-16-20 FT                        |
| I19288                    | TYPICAL REINFORCEMENT FOR MOUNTING CRANE ON TOP OF SERVICE BODY |
| 14510                     | INSTALLATION DRAWING - 17350 MOUNTING PEDESTAL                  |
| <b><u>SECTION 150</u></b> | <b><u>SAFETY</u></b>  |
| 15394                     | VEHICLE & CRANE ELECTRICAL HAZARD INFORMATION                   |
| 850711                    | SAFETY & HAZARDS - GENERAL                                      |
| 20549                     | DECAL PLACEMENT   |
| <b><u>SECTION 200</u></b> | <b><u>INSTALLATION</u></b>                                      |
| 19959                     | CABLE & BATTERY REQUIREMENTS - ET AND HT CRANES                 |
| 15660                     | BATTERY CABLE INSTALLATION DRAWING                              |
| 19947                     | ET25K(X) ELECTRICAL INSTALLATION                                |
| 19961                     | INSTALLATION DRAWING - PENDANT CORD SUPPORT                     |
| 22245                     | WIRE ROPE INSTALLATION DRAWING                                  |
| <b><u>SECTION 300</u></b> | <b><u>MAINTENANCE &amp; SERVICE</u></b>                         |
| 19962                     | ET25K(X) LUBRICATION AND MAINTENANCE CHART                      |
| 19963                     | MINIMUM VOLTAGE TEST  |
| <b><u>SECTION 400</u></b> | <b><u>REPLACEMENT PARTS</u></b>                                 |
| 20148                     | ET25KX REPLACEMENT PARTS DRAWING                                |
| 20178                     | ET25KX REPLACEMENT PARTS LIST                                   |
| 20158                     | REPLACEMENT FASTENERS LIST                                      |
| 19996                     | 19950 - 10-20 FT BOOM ASSEMBLY                                  |
| 20197-2                   | 19197-2 ANTI-TWO-BLOCK SYSTEM REPLACEMENT PARTS                 |
| 21275                     | 21276 L.H. ANTI-TWO BLOCK SYSTEM REPLACEMENT PARTS PAGE         |
| 19919                     | 19897 ELECTRICAL COMPONENT DRAWING                              |
| 20348                     | ET25KX WIRING DIAGRAM WITH ANTI-TWO-BLOCK                       |
| 20359                     | IN COMPARTMENT CONTROLS WIRING DIAGRAM                          |
| 22076                     | 22060 REPLACEMENT PARTS - 4 FUNCTION PENDANT CONTROL            |
| 22085                     | 22067 RADIO REMOTE REPLACEMENT PARTS DRAWING                    |
| 19942                     | HYDRAULIC SYSTEM COMPONENTS REPLACEMENT PARTS DRAWING           |
| 20156                     | HYDRAULIC SYSTEM SCHEMATIC - ET25KX                             |
| 19908                     | 19886-1 EXTENSION CYLINDER                                      |
| ▲ 21053                   | WINCH REPLACEMENT PARTS DRAWING & LIST                          |



**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 OR 14 - 20 FT      |
| BOOM MANUAL EXT     | 4 FT                          |
| CAPACITY            | 1050 LBS @<br>20 FT REACH     |
|                     | 5000 LBS @<br>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

400° POWER ROTATION

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  
**9-4-01**

SUPERCEDES  
-

SECTION  
**C120**

**19958a**

## 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 5-1/4" in diameter which is 18 times the 5/16" wire rope diameter as required by ANSI B30.15 Hydraulic Crane Standards. The cable sheaves are either 16 or 18 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. I24600 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

ET25KX-10/20

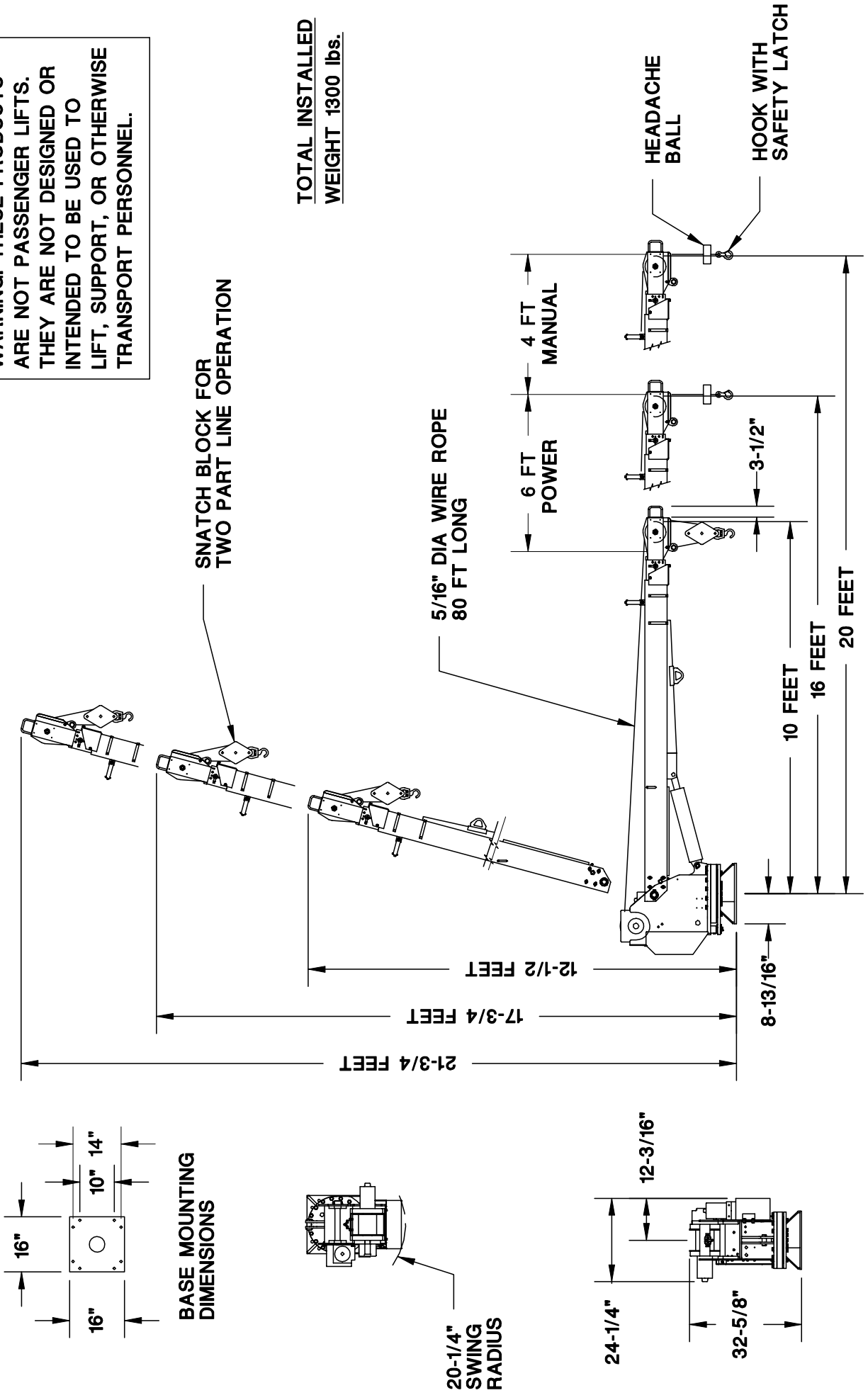
DATE  
7-10-02B

SUPERCEDES  
3-20-02A

SECTION  
C120

19958b

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



TITLE  
**INSTALLATION DRAWING**

DATE  
**9-28-01**

SECTION  
**C100**

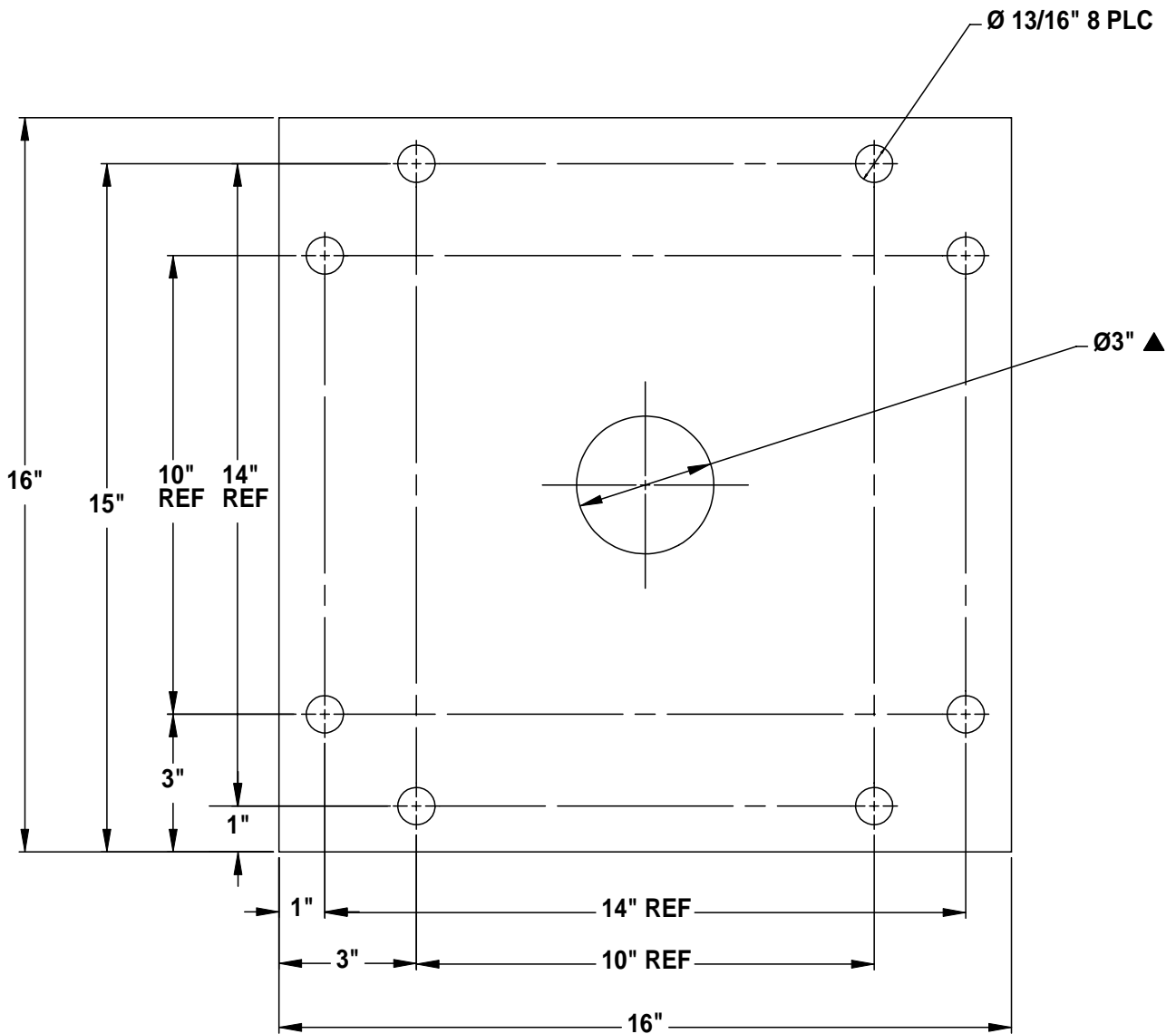
ET25KX - 10/16/20 BOOM

SUPERSEDES  
-

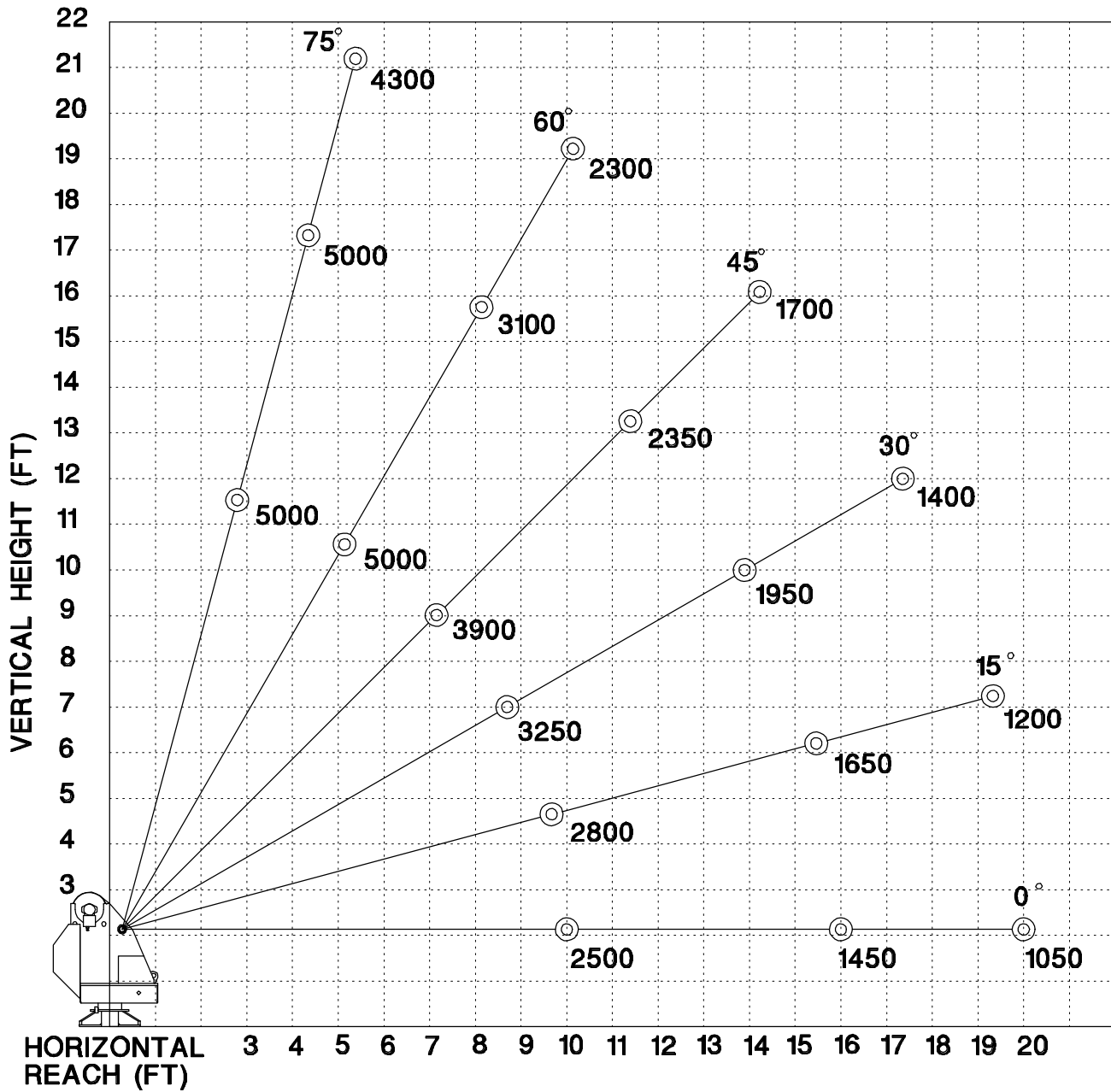
**20129**



# ▲ ET/HT18K(X) & ET/HT25K(X) BASE MOUNTING DIMENSION



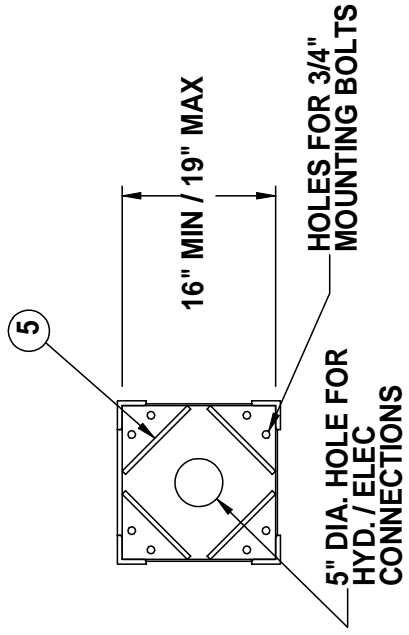
## ET/HT25K(X) - 10-16-20 BOOM MAXIMUM CAPACITY CHART



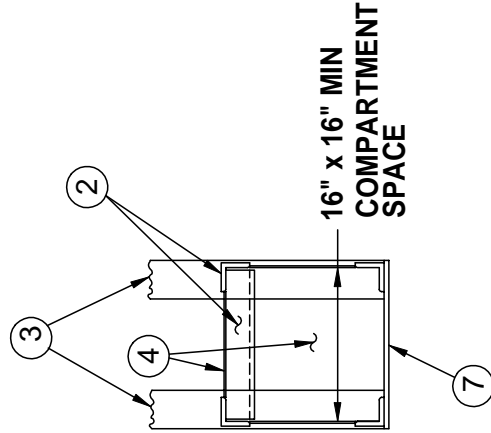
**MUST USE SNATCH BLOCK  
FOR LOADS OF 2500 LBS.  
AND GREATER**

| PART | DESCRIPTION                   | MINIMUM RECOMMENDED MATERIAL SIZE                           |
|------|-------------------------------|---|
| 1    | TOP PLATE                     | 1/2" STEEL  |
| 2    | CORNER POST                   | 3" x 3" x 1/2" STEEL ANGLE                                  |
| 3    | CROSS FRAME                   | 4" x 4" x 5/16" SQUARE TUBING                               |
| 4    | SHEAR WEB                     | 3/16" STEEL PLATE   |
| 5    | TOP PLATE REINFORCEMENT       | 1/2" x 6' OR 3/4" x 5" STEEL BAR                            |
| 6    | OUTRIGGER REINFORCEMENT PLATE | 1/4" THICK STEEL PLATE                                      |
| 7    | GUSSET                        | 1/2" x 4" H.R. STEEL  |
| 8    | BODY TOP REINFORCEMENT        | 10 GA SMOOTH OR DIAMOND PLATE WITH 1" LIP OVER SIDE OF BODY |

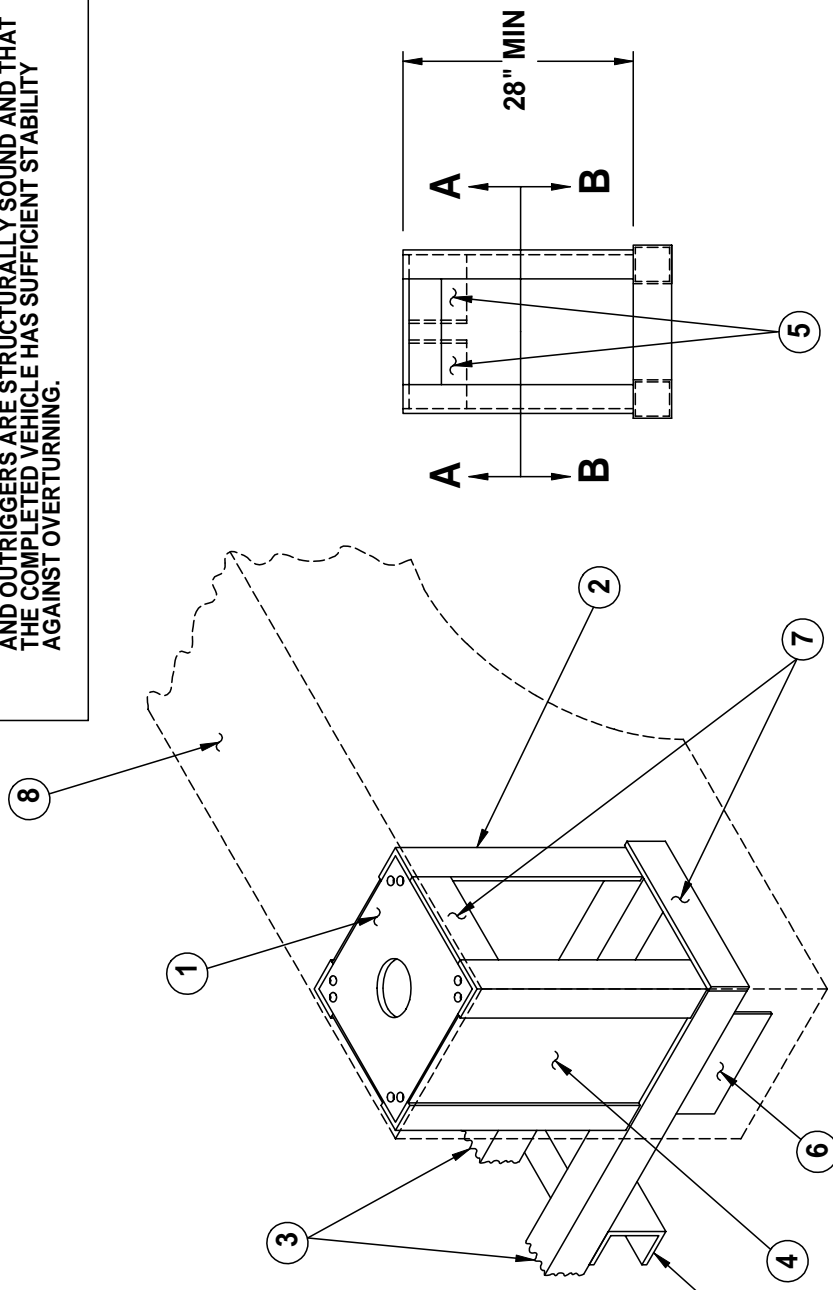
IT IS THE SOLE RESPONSIBILITY OF THE INSTALLER TO INSURE THAT THE TOTAL STRUCTURE OF CRANE, TRUCK, AND OUTRIGGERS ARE STRUCTURALLY SOUND AND THAT THE COMPLETED VEHICLE HAS SUFFICIENT STABILITY AGAINST OVERTURNING.



**SECTION A-A**



**SECTION B-B**



**TYPICAL SERVICE BODY REINFORCEMENT**

|   |                            |                  |            |           |         |      |
|---|----------------------------|------------------|------------|-----------|---------|------|
| <p>VENTURO MANUFACTURING, INC.<br/>CINCINNATI, OHIO</p> | TITLE                      | INSTALLATION DWG | DATE       | 7-29-03D  | SECTION | C100 |
|   | ET/HT25K(X) & ET/HT18K(X)▲ |                  | SUPERSEDES | 10-11-02C | 19288   |      |

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

3 x 3 x 3/8 ANGLES BOLTED INTO FRAME & LONGSILLS 2 PLACES

4 x 2 1/2 x 1/2 - 13.8 LBS./FT. SHIP & CAR CHANNEL

1/2 x 3 x 16 PLATE

APPROX. 36

LONGSILLS

THIS BOLT PATTERN FOR DIRECT MOUNTING OF ET/HT25K(X) CRANE SEE DWG. 19411 FOR PEDESTAL MOUNTING BOLT PATTERN

PERIMETER RAIL

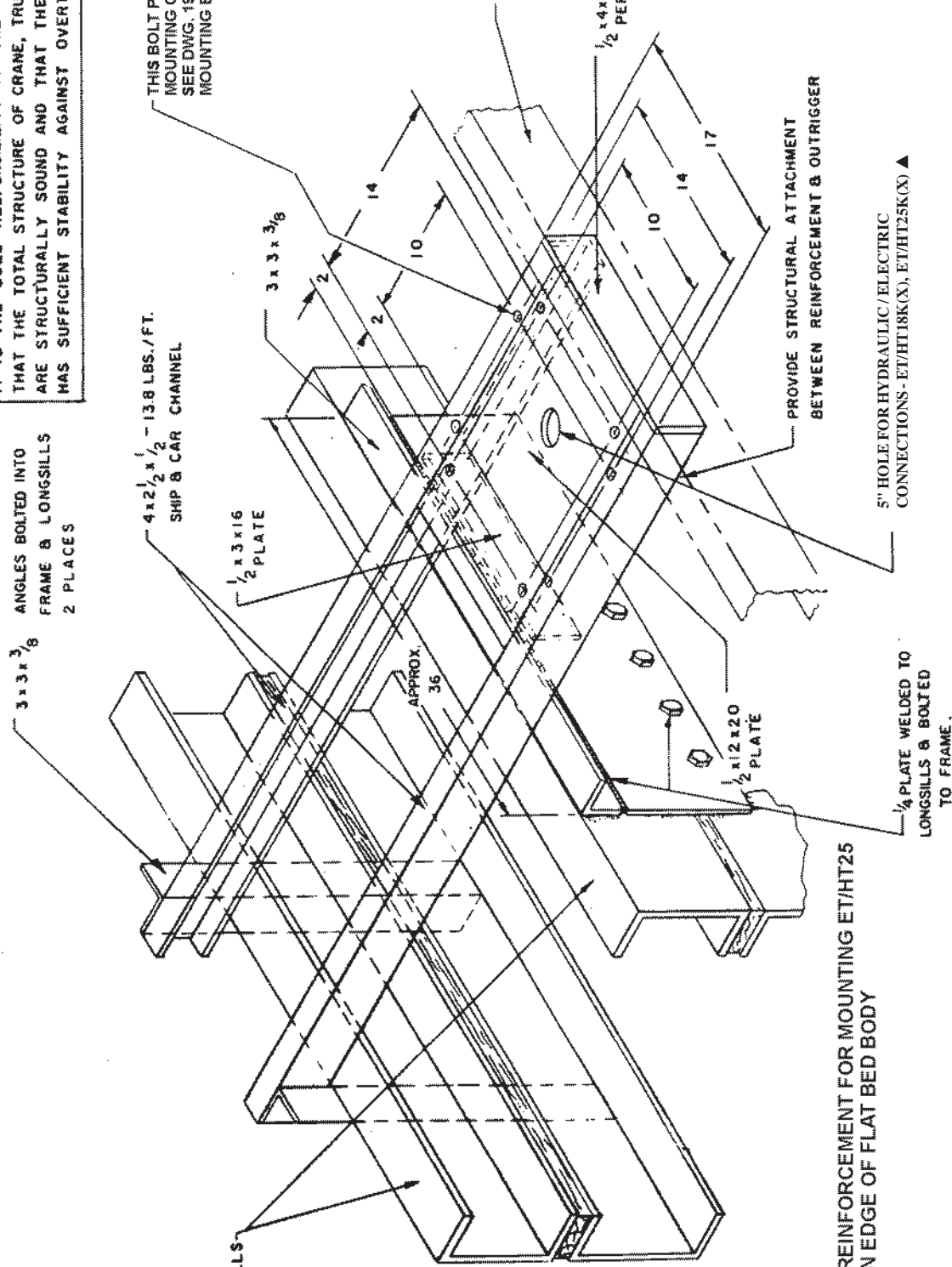
1/2 x 4 x 17 ATTACH TO PERIMETER RAIL

PROVIDE STRUCTURAL ATTACHMENT BETWEEN REINFORCEMENT & OUTRIGGER

5" HOLE FOR HYDRAULIC / ELECTRIC CONNECTIONS - ET/HT18K(X), ET/HT25K(X) ▲

1/4 PLATE WELDED TO LONGSILLS & BOLTED TO FRAME.

TYPICAL REINFORCEMENT FOR MOUNTING ET/HT25 CRANE ON EDGE OF FLAT BED BODY



VENTURO MANUFACTURING, INC. CINCINNATI, OHIO

TITLE INSTALLATION DRAWING  
ET/HT18K(X), ET/HT25K(X) ▲

DATE 7-29-03M  
SUPERCEDES 10-11-02L

SECTION C100  
14510

# 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)<br>(PHASE TO PHASE) | MINIMUM REQUIRED<br>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)<br>(PHASE TO PHASE) | MINIMUM REQUIRED<br>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

ET5500MPB/R, ET6KMPB/R, ET8100R, ET10K(X), ET18K(X), ET25K(X)

## 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.
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

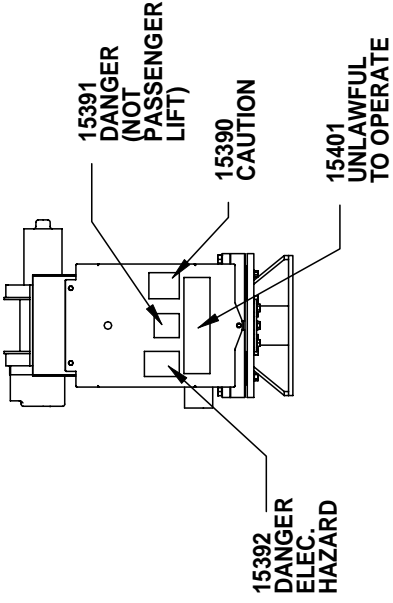
1. YOU HAVE BEEN TRAINED IN THE SAFE OPERATION OF THIS CRANE  
*AND*
2. YOU KNOW AND FOLLOW THE SAFETY AND OPERATING RECOMMENDATIONS CONTAINED IN THE MANUFACTURER'S MANUALS, YOUR EMPLOYER'S WORK RULES, AND APPLICABLE GOVERNMENT REGULATIONS. AN UNTRAINED OPERATOR SUBJECTS HIMSELF AND OTHERS TO DEATH OR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

## ELECTROCUTION HAZARD

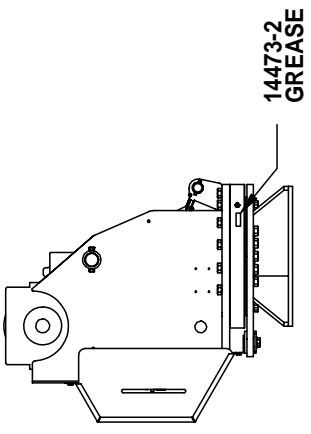
- THIS MACHINE IS NOT INSULATED.
- MAINTAIN SAFE CLEARANCES FROM ELECTRICAL LINES AND APPARATUS.
- YOU MUST ALLOW FOR BOOM SWAY, ROCK OR SAG, AND ELECTRICAL LINE AND LOADLINE SWAYING.
- THIS LIFTING DEVICE DOES NOT PROVIDE PROTECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTRICALLY CHARGED CONDUCTOR.
- 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.



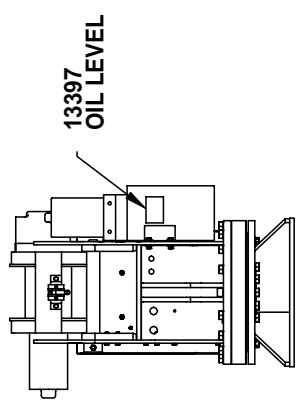
|       |                  |            |           |         |        |
|-------|------------------|------------|-----------|---------|--------|
| TITLE | INSTALLATION DWG | DATE       | 7-29-03G  | SECTION | C150   |
|       | ET5500MPB-ET25KX | SUPERCEDES | 10-14-97F |         | 850711 |



BACK



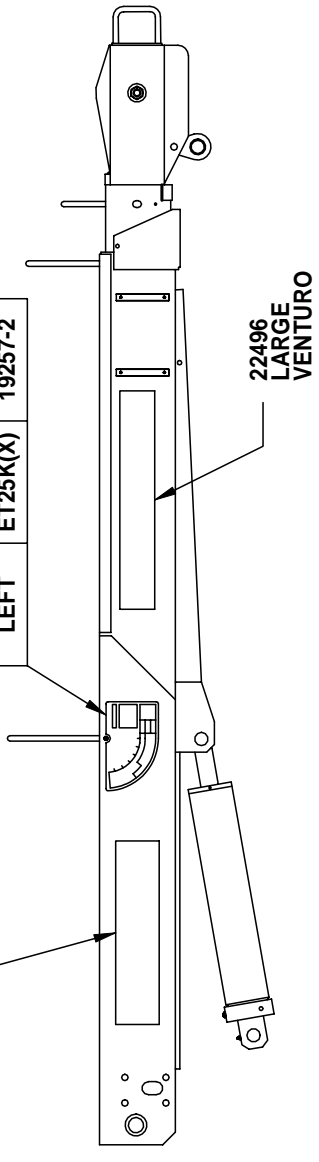
RIGHT



FRONT

| MODEL NO.      |
|----------------|
| 19742 - ET25K  |
| 19743 - ET25KX |

| CAPACITY | DECAL | MODEL    | PART NO. |
|----------|-------|----------|----------|
|          | RIGHT | ET25K(X) | 19257-1  |
|          | LEFT  | ET25K(X) | 19257-2  |



BOOM

TOP

**VENTURO** MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
**DECAL PLACEMENT**  
ET25K(X)

SECTION  
**C150**

DATE  
**7-31-02**

SUPERSEDES  
-

**20549**



# 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<br>CT2000<br>CT2003/4/5<br>DT7K              | #4   | #4    | #2    | #2    | #1    | #0             | #0    | #00   | 350                          | 100         |
| ET5500MPB<br>ET5500R<br>ET6KMPB<br>ET6KR<br>ET10K | #2   | #2    | #1    | #0    | #00   | NOTRECOMMENDED |       |       | 450                          | 100         |
| ET10KX  | #2   | #2    | #1    | #0    | #00   | NOTRECOMMENDED |       |       | 550                          | 150         |
| ET18K<br>ET18KX<br>ET25K<br>ET25KX                | 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.



MFG., INC.  
CINCINNATI, OHIO

TITLE  
**CABLE & BATTERY**

**ET18KX / ET25KX**

DATE  
**7-29-03A**

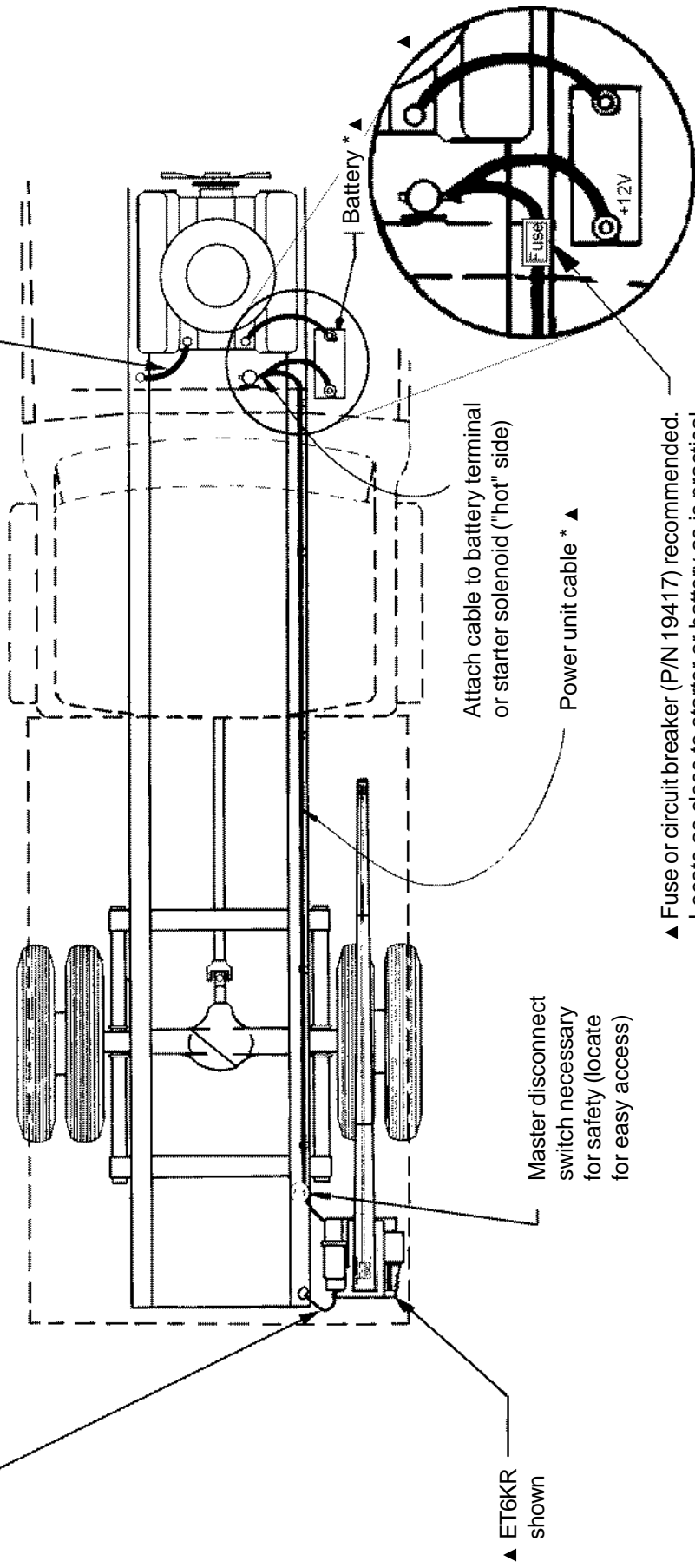
SUPERCEDES  
**9-4-01**

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 ET6R, ET10K(X), ET25K, & ET25KK cranes.

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



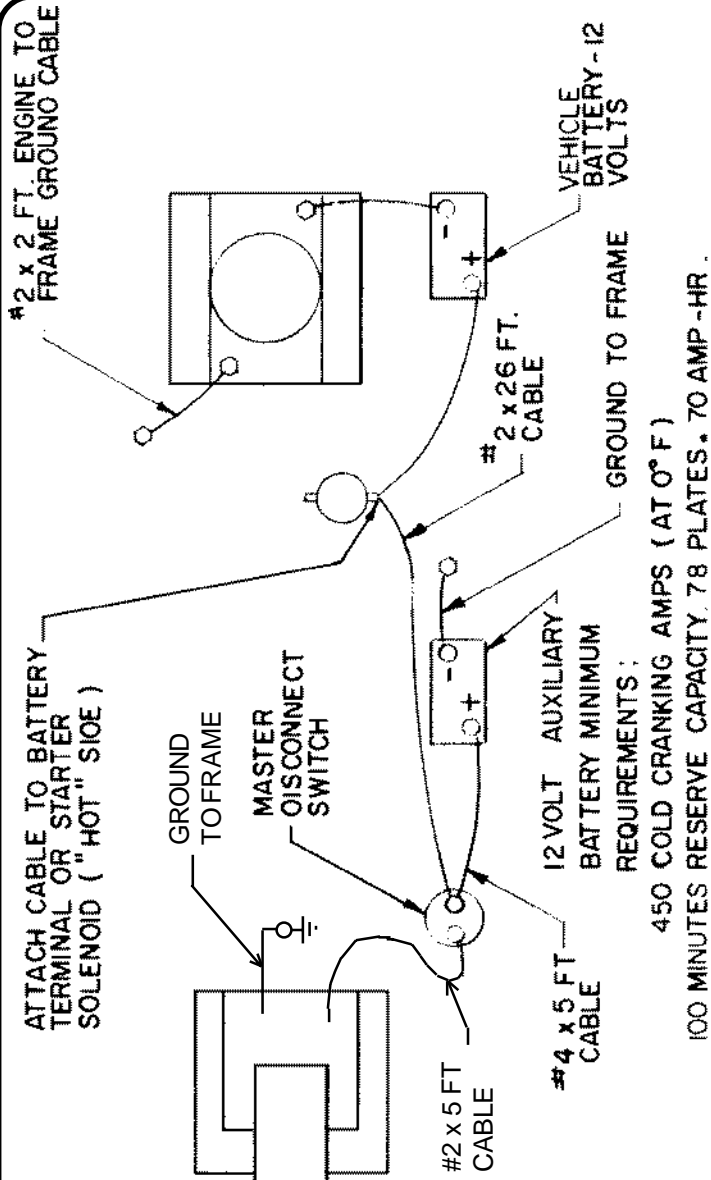
▲ Fuse or circuit breaker (P/N 19417) recommended. Locate as close to starter or battery as is practical.

▲ \* Note: See Dwg 711105 for recommended battery and cable specifications

|   |  |                               |                        |
|---|--|-------------------------------|------------------------|
| <b>VENTURO</b><br>MANUFACTURING, INC.<br>CINCINNATI, OHIO | <b>TITLE</b><br>INSTALLATION - BATTERY CABLE | <b>DATE</b><br>1-15-02E       | <b>SECTION</b><br>C200 |
|   | <b>WINCH &amp; CRANE</b>                     | <b>SUPERCEDES</b><br>11-7-01D | <b>15660</b>           |

## RECOMMENDED INSTALLATION

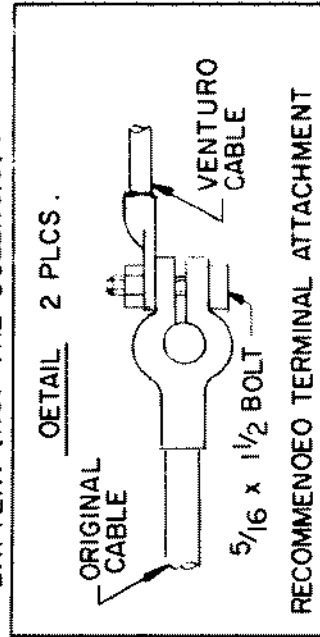
W/ AUXILIARY BATTERY IN PARALLEL WITH VEHICLE BATTERY.



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) .

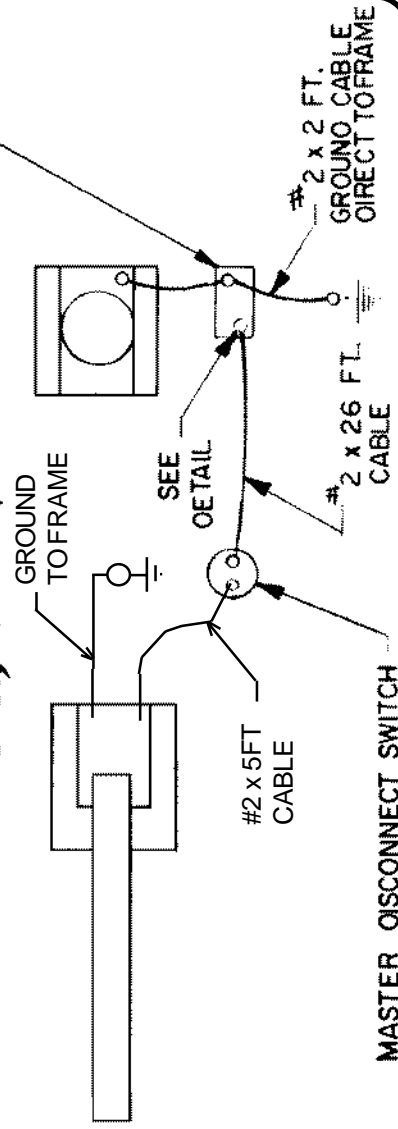


12 VOLT VEHICLE BATTERY MINIMUM REQUIREMENTS

625 COLD CRANKING AMPS ( AT 0° F ) ,

160 MINUTES RESERVE CAPACITY ,

102 PLATES , 105 AMP-HR . .



TITLE

ELECTRICAL INSTALLATION

SECTION

DATE 9-26-01

SUPERCEDES

-

-

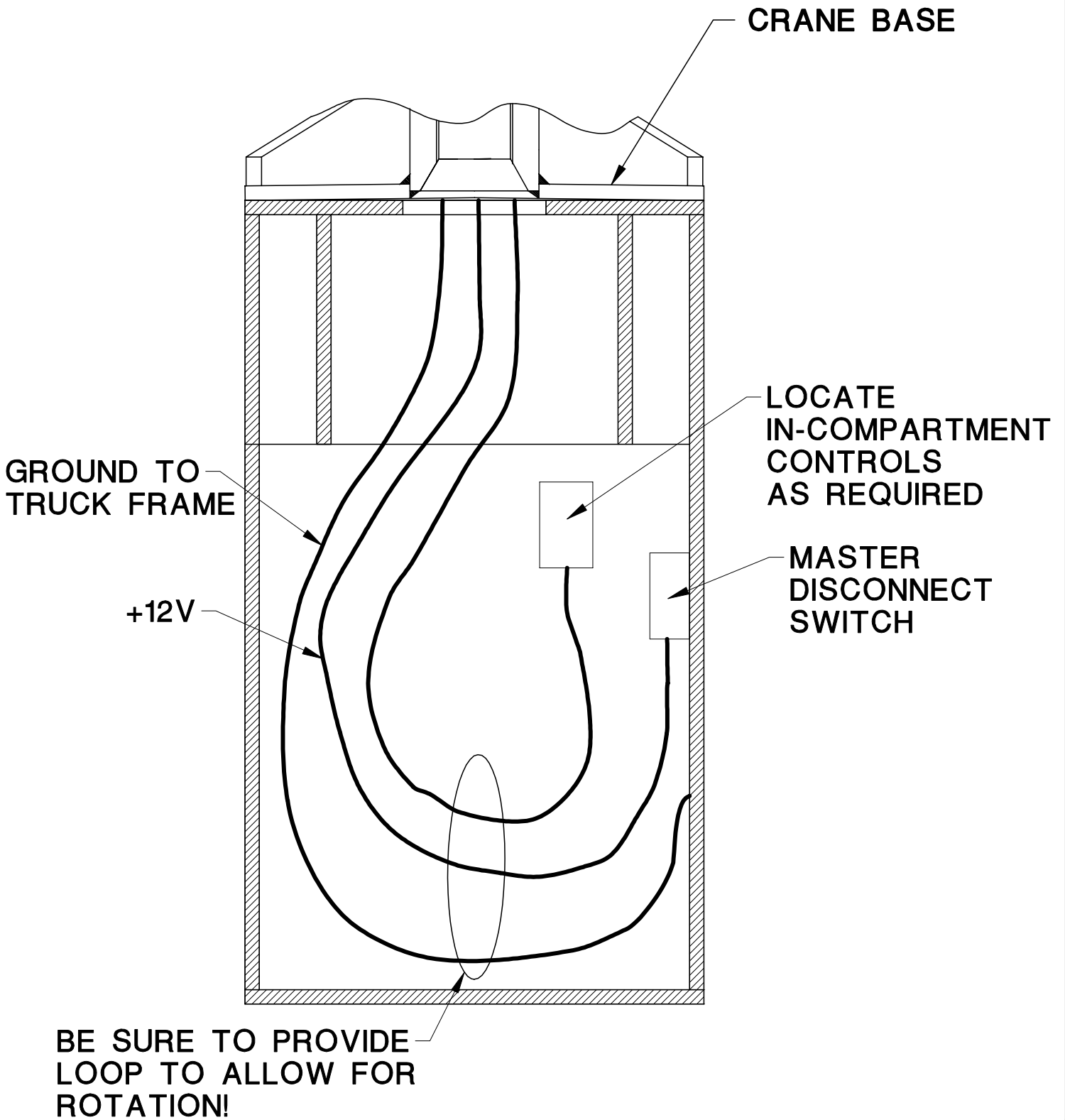
MANUFACTURING, INC.  
CINCINNATI, OHIO

**VENTURO**

ET25KX

19947

# IN-COMPARTMENT CONTROLS INSTALLATION ET25K(X)



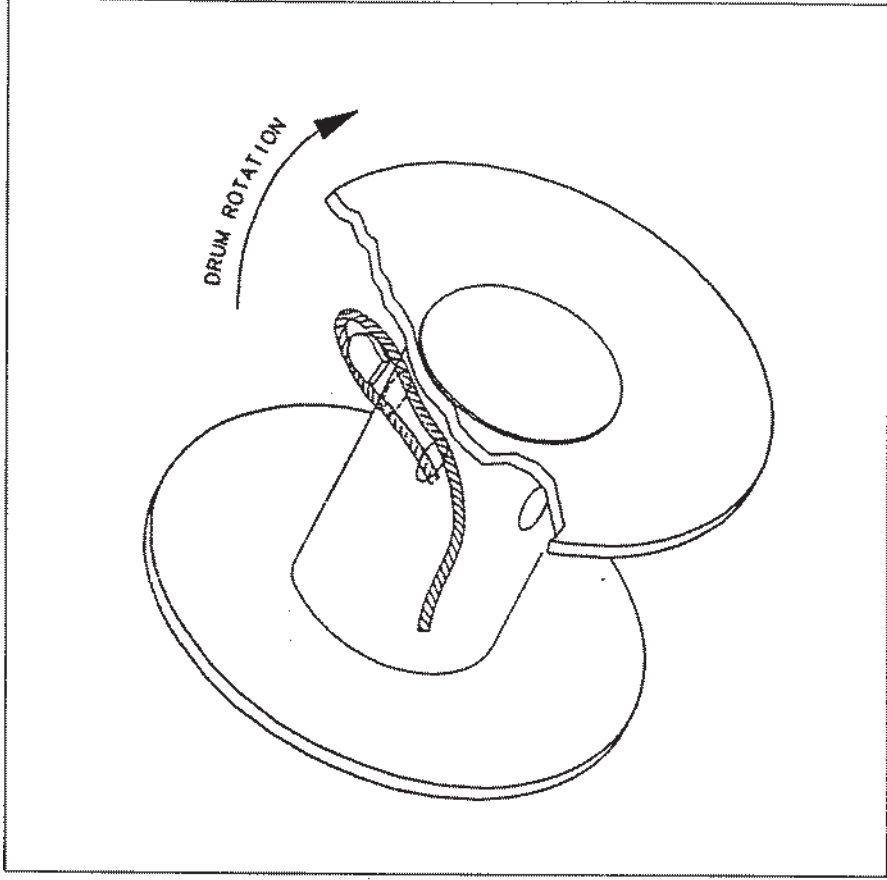
# WIRE ROPE INSTALLATION

STEP 1: INSERT WIRE ROPE END THROUGH ANTI-TWO-BLOCK WEIGHT.

STEP 2: INSERT WIRE ROPE END INTO POCKET OPENING AND THROUGH WEDGE POCKET.

CAUTION: IF THE WIRE ROPE IS NOT INSTALLED FOR THE CORRECT DRUM ROTATION, THE WINCH BRAKE VALVE WILL NOT HOLD THE LOAD.

NOTE: ON THE ET25K(X) A 7/16" HEX NUT WILL BE USED IN LIEU OF A WEDGE.



|  |                               |                        |
|--|-------------------------------|------------------------|
| <b>TITLE</b><br>WIRE ROPE INSTALLATION DRAWING<br>ET/HT25K(X),HT40KX, HT50KX | <b>DATE</b><br>11-22-02D      | <b>SECTION</b><br>C200 |
|  | <b>SUPERCEDES</b><br>4-19-02C | <b>22245</b>           |

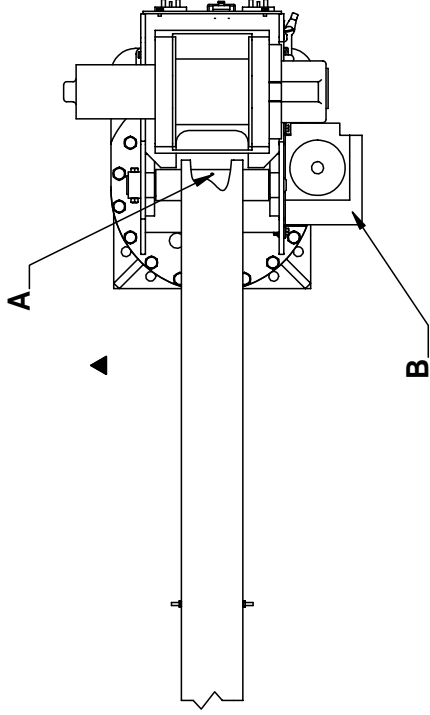
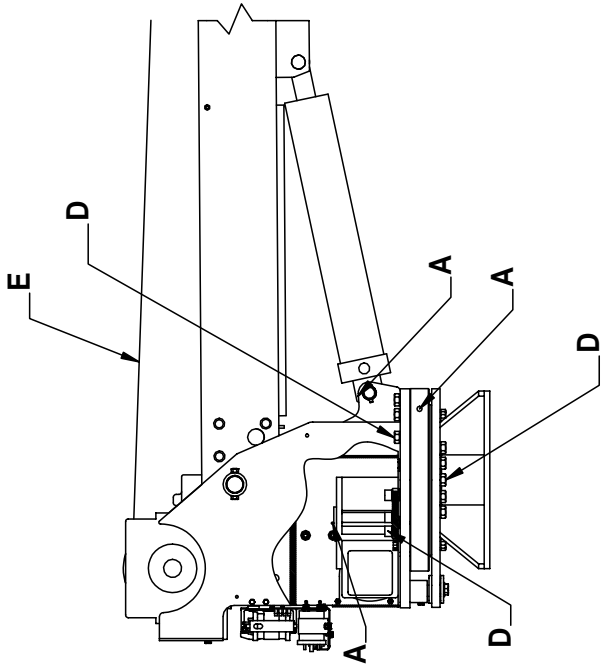
**VENTURO**  
MANUFACTURING, INC.  
CINCINNATI, OHIO

# **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 ATF for Ambient Temperatures Between -22° F and 30° F<br>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 |
| D        | Check Torque of bolts                          | Bolts should be torqued to 190 ft-lbs   | Time of Truck Service   |
| E        | Check Wire Rope and Hook                       | Rope should be free of kinks and fraying  | Time of Truck Service   |



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE

LUBRICATION & MAINTENANCE CHART

ET25K(X)

SECTION

DATE  
12-1-03C

SUPERSEDES  
11-18-03B

SECTION  
-

19962



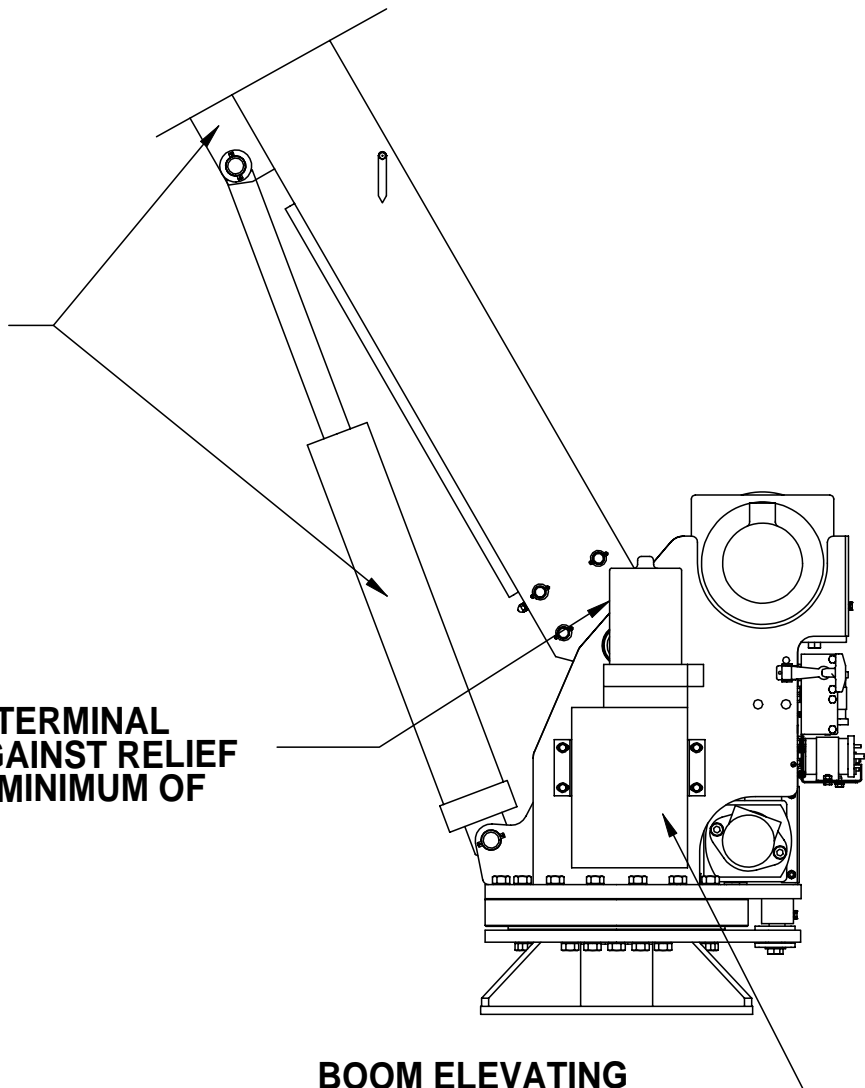
# MINIMUM VOLTAGE TEST

▲ ET18K(X) / ET25K(X)

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

EXTEND BOOM CYLINDER AGAINST "UP" STOP (RELIEF VALVE WILL OPEN)

VOLTAGE AT MOTOR TERMINAL WHEN OPERATING AGAINST RELIEF VALVE SHOULD BE A MINIMUM OF 8 VOLTS



BOOM ELEVATING  
ELECTRIC HYDRAULIC  
POWER UNIT



TITLE  
MINIMUM VOLTAGE TEST

DATE  
7-29-03A

SECTION  
-

ET18K(X), ET25K(X)

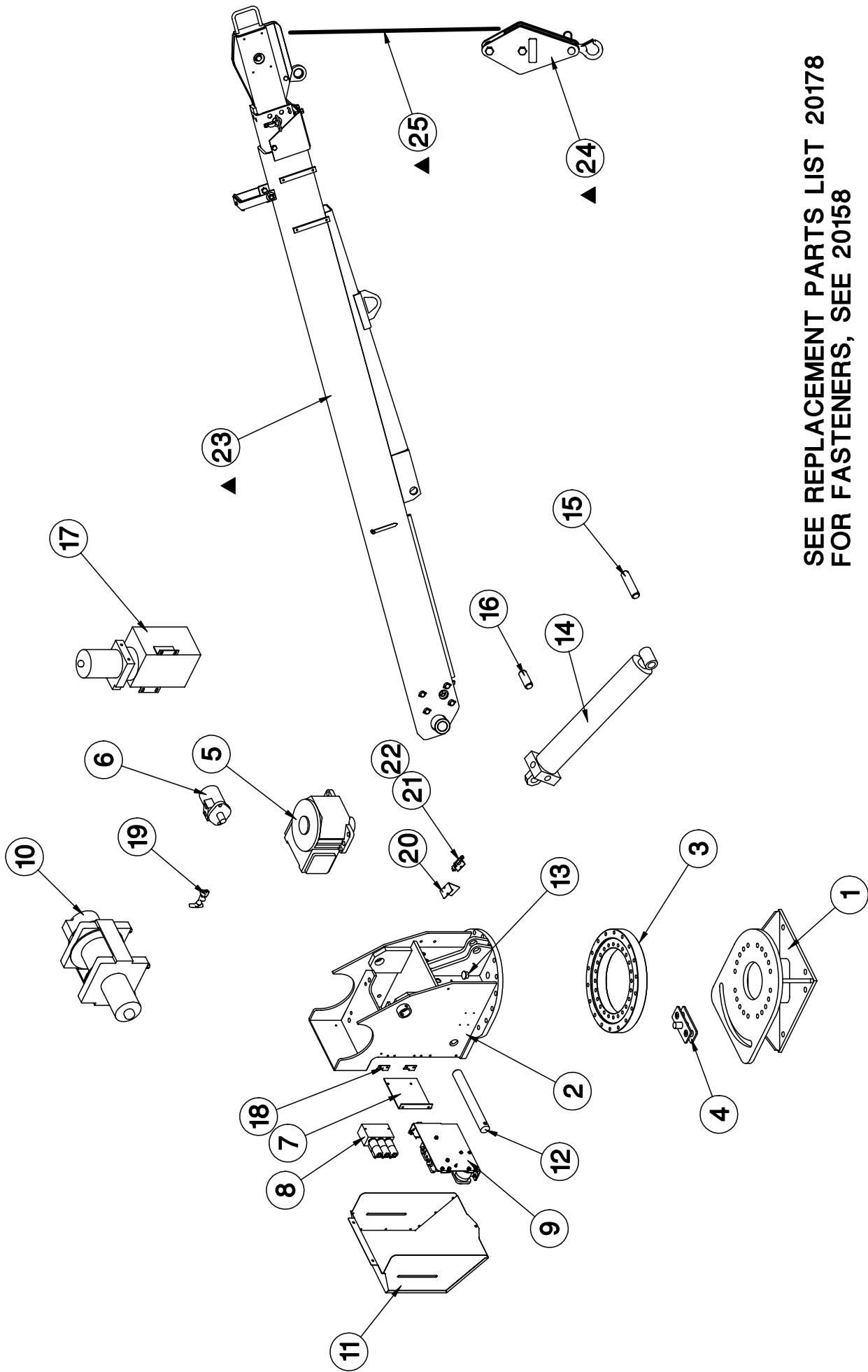
SUPERSEDES  
9-5-01

19963

# SECTION 400

## PARTS





SEE REPLACEMENT PARTS LIST 20178  
FOR FASTENERS, SEE 20158

|   |        |                           |          |       |
|---|--------|---------------------------|----------|-------|
| <b>VENTURO</b><br>MANUFACTURING, INC.<br>CINCINNATI, OHIO | TITLE  | REPLACEMENT PARTS DRAWING | SECTION  | -     |
|   | ET25KX | DATE                      | 6-19-02A |       |
|   |        | SUPSEDES                  | 9-27-01  | 20148 |

| ITEM # | PART #        | DESCRIPTION  | ITEM # | PART # | DESCRIPTION |
|--------|---------------|--|--------|--------|-------------|
| 1      | 19812         | WELDED BASE ASSEMBLY                               |        |        |             |
| 2      | 19807         | HOUSING ASSEMBLY - ET/HT25KX                       |        |        |             |
| 3      | 19808         | SWING BEARING                                      |        |        |             |
| 4      | 19810         | ROTATION LIMITING SLIDER ASSEMBLY                  |        |        |             |
| 5      | 19811         | SPEED REDUCER                                      |        |        |             |
| 6      | 19916         | HYDRAULIC ROTATION MOTOR                           |        |        |             |
| 7      | 19898         | HYDRAULIC MOUNTING PLATE                           |        |        |             |
| 8      | 19815-2       | MANIFOLD W/ VALVES / COILS                         |        |        |             |
| 9      | 19897         | ELECTRICAL COMPONENT ASSEMBLY                      |        |        |             |
| 10     | 19813         | ELECTRIC WINCH                                     |        |        |             |
| 11     | 19901         | CRANE COVER ASSEMBLY                               |        |        |             |
| 12     | 19902         | BOOM PIVOT PIN                                     |        |        |             |
| 13     | RL-644        | PLASTIC PLUG                                       |        |        |             |
| 14     | 18930-1       | ELEVATION CYLINDER                                 |        |        |             |
| 15     | 18761 ▲       | PIVOT PIN - 1-1/4 DIA.                             |        |        |             |
| 16     | 18762 ▲       | PIVOT PIN - 1-1/4 DIA.                             |        |        |             |
| 17     | 19820         | HYDRAULIC POWER UNIT ASSEMBLY                      |        |        |             |
| 18     | 19896-1       | HINGE HALF WITH PIN                                |        |        |             |
| 19     | 19913-1       | FLEXIBLE RUBBER DRAW LATCH - CLASP SIDE            |        |        |             |
| 20     | 20497         | SWITCH BRACKET                                     |        |        |             |
| 21     | 19917         | BOOM SHUT OFF SWITCH                               |        |        |             |
| 22     | 19918         | BOOM SHUT OFF SWITCH BRACKET                       |        |        |             |
| 23     | 19950         | BOOM FINAL ASSEMBLY                                |        |        |             |
| 24     | 23169         | SWIVEL SNATCH BLOCK ASSEMBLY                       |        |        |             |
| 25     | 25810-5/16-80 | WIRE ROPE ASSEMBLY - 5/16" X 80 FT (10/20 FT BOOM) |        |        |             |
|        |               | REPLACEMENT PARTS DWG REF 20148                    |        |        |             |

|  |  |                               |              |
|--|--|-------------------------------|--------------|
| <b>TITLE</b><br>REPLACEMENT PARTS LIST |  | DATE<br><b>9-16-03B</b>       | SECTION<br>- |
|  |  | SUPERCEDES<br><b>6-19-02A</b> | <b>20178</b> |
| <b>ET25KX</b>                          |  |                               |              |



MANUFACTURING, INC.  
CINCINNATI, OHIO

# FASTENER LIST FOR ET25KX

| PART NUMBER   | DESCRIPTION                           | QTY | LOCATION/FUNCTION              |
|---------------|---------------------------------------|-----|--------------------------------|
| 12534         | WASHER - I.D. 0.63"                   | 38  | SLEWING RING                   |
| !HHCS06311200 | HEX HEAD CAP SCREW - 5/8"-11 x 2"     | 35  | SLEWING RING                   |
| !SHCS06311150 | SOCKET HEAD CAP SCREW-5/8-11 X 1-1/2" | 3   | SLEWING RING                   |
| !LWSH-050-HC  | LOCK WASHER 1/2" - HI COLLAR          | 2   | HYDRAULIC ROTATION MOTOR       |
| !SHCS05013125 | SOCKET HEAD CAP SCREW 1/2-11 X 1-1/4" | 2   | HYDRAULIC ROTATION MOTOR       |
| 12534         | WASHER - I.D. 0.63"                   | 6   | SPEED REDUCER                  |
| !SHCS06311150 | SOCKET HEAD CAP SCREW 1/2-13 X 1-1/2" | 6   | SPEED REDUCER                  |
| !HHCS03118100 | HEX HEAD CAP SCREW 5/16-18 X 1"       | 4   | HYDRAULIC POWER UNIT           |
| !FWSH-031     | FLAT WASHER - 5/16"                   | 8   | HYDRAULIC POWER UNIT           |
| !LWSH-031     | LOCK WASHER - 5/16"                   | 4   | HYDRAULIC POWER UNIT           |
| !HNUT-03118   | HEX NUT - 5/16-18                     | 4   | HYDRAULIC POWER UNIT           |
| !HHCS03816250 | HEX HEAD CAP SCREW - 3/8-16 X 2-1/2"  | 1   | BOOM PIVOT PIN                 |
| !LNUT-03816   | LOCK NUT, NYLON - 3/8-16              | 1   | BOOM PIVOT PIN                 |
| !RPIN-025175  | ROLL PIN - 1/4 X 1-3/4 LONG           | 4   | ELEVATION CYLINDER CLEVIS PINS |
| !HHCS02520075 | HEX HEAD CAP SCREW 1/4-20 X 3/4"      | 4   | ELECTRICAL PANEL HINGES        |
| !HNUT-02520   | HEX NUT - 1/4-20                      | 4   | ELECTRICAL PANEL HINGES        |
| !LWSH-025     | LOCK WASHER - 1/4"                    | 4   | ELECTRICAL PANEL HINGES        |
| !HHCS02520050 | HEX HEAD CAP SCREW - 1/4-20 X 1/2"    | 1   | TOP POSITION SWITCH BRACKET    |
| !LWSH-025     | LOCK WASHER - 1/4"                    | 1   | TOP POSITION SWITCH BRACKET    |
| !HHCS02520100 | HEX HEAD CAP SCREW - 1/4-20 X 1"      | 2   | HYDRAULIC MANIFOLD BRACKET     |
| !LWSH-025     | LOCK WASHER - 1/4"                    | 2   | HYDRAULIC MANIFOLD BRACKET     |
| !HNUT-02520   | HEX NUT - 1/4-20                      | 2   | HYDRAULIC MANIFOLD BRACKET     |
| !HHCS02520063 | HEX HEAD CAP SCREW 1/4-20 X 5/8"      | 2   | HYDRAULIC VALVE BLOCK          |
| !LWSH-025     | LOCK WASHER - 1/4"                    | 2   | HYDRAULIC VALVE BLOCK          |
| !HHCS02520050 | HEX HEAD CAP SCREW - 1/4-20 X 1/2"    | 3   | REAR COVER                     |
| !LWSH-025     | LOCK WASHER - 1/4"                    | 3   | REAR COVER                     |
| !PHCS#1024038 | PAN HEAD CAP SCREW - #10-24 X 3/8"    | 2   | TOP POSITION SWITCH            |
| !LWSH-#10     | LOCK WASHER - #10                     | 2   | TOP POSITION SWITCH            |
| !HNUT-#1024   | HEX NUT - #10-24                      | 2   | TOP POSITION SWITCH            |
| !PHCS#1024075 | PAN HEAD CAP SCREW 10-24 X 3/4"       | 2   | ELECTRICAL PANEL DRAW LATCH    |
| !FWSH-#10     | FLAT WASHER - #10                     | 2   | ELECTRICAL PANEL DRAW LATCH    |
| !LWSH-#10     | LOCK WASHER - #10                     | 2   | ELECTRICAL PANEL DRAW LATCH    |
| !HNUT-#1024   | HEX NUT - #10-24                      | 2   | ELECTRICAL PANEL DRAW LATCH    |
|               |                                       |     |                                |
|               |                                       |     |                                |
|               |                                       |     |                                |
|               |                                       |     |                                |
|               |                                       |     |                                |



MFG., INC.  
CINCINNATI, OHIO

TITLE  
REPL. FASTENERS LIST

DATE  
10-15-01

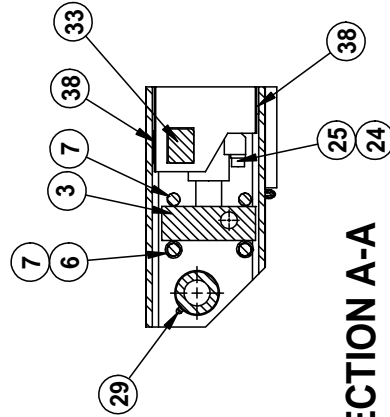
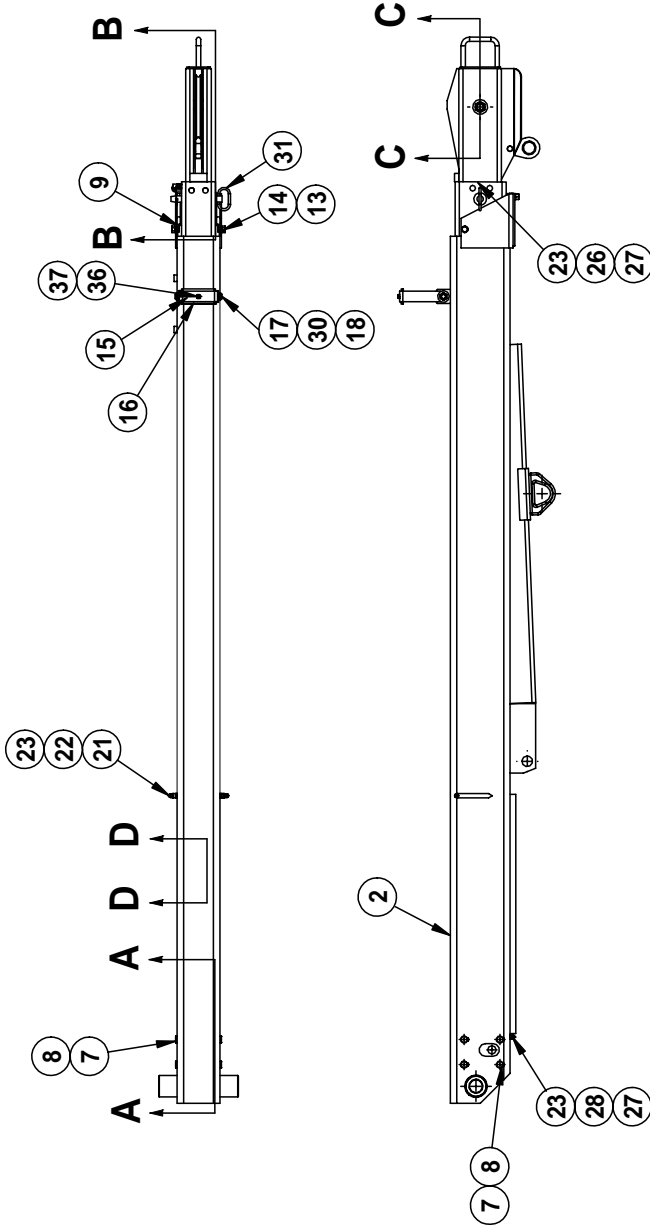
SECTION  
C400

ET25K(X)

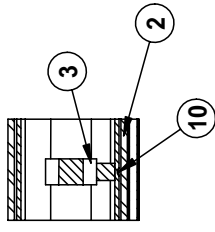
SUPERCEDES  
-

20158

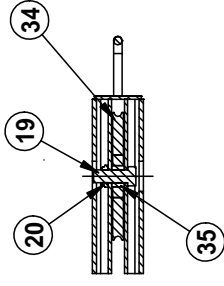
# 19950 BOOM PARTS DRAWING



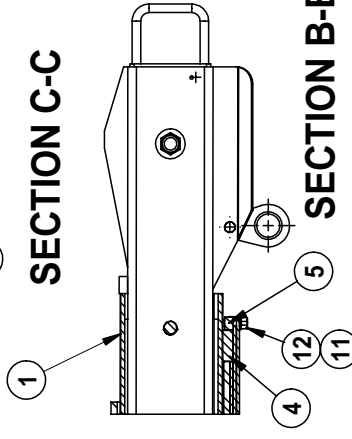
SECTION A-A



SECTION D-D




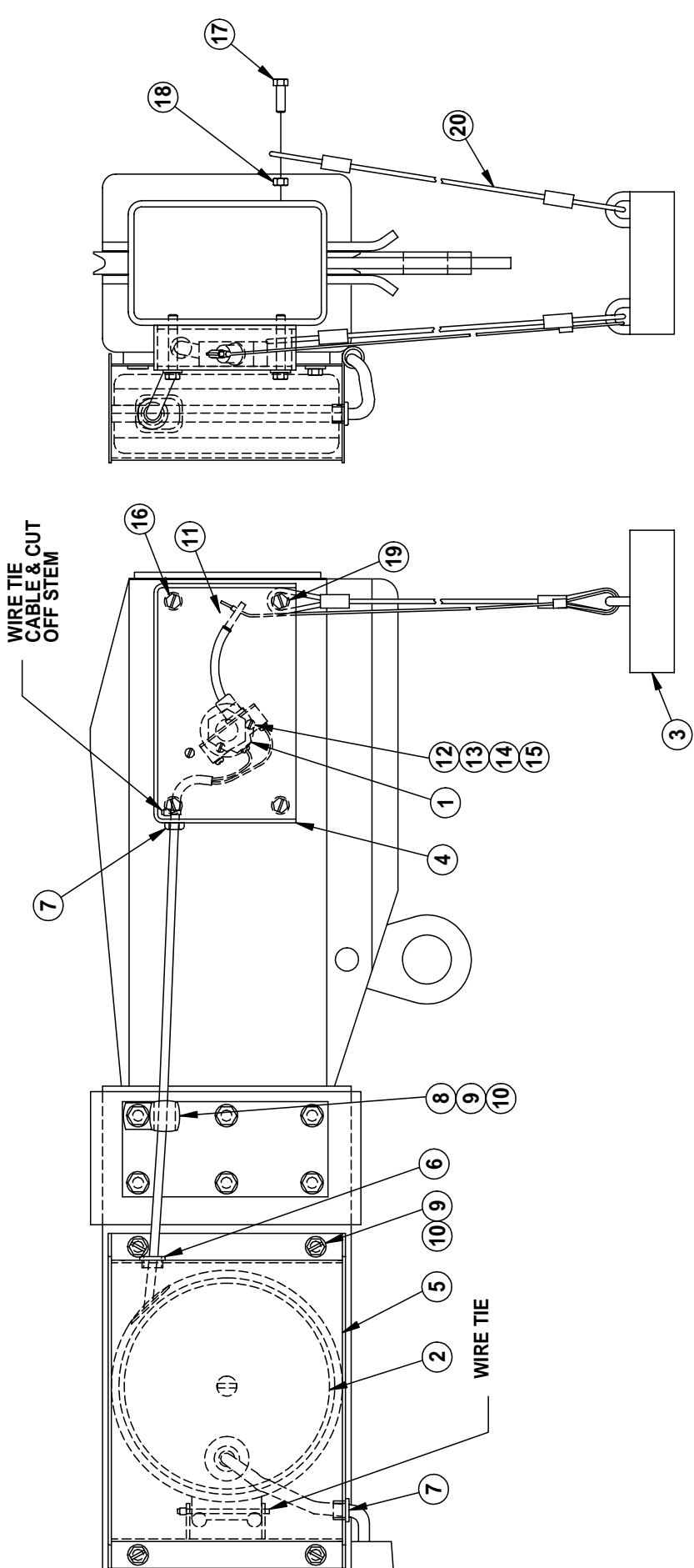
SECTION C-C



SECTION B-B

| ITEM | QTY | PART NO.      | DESCRIPTION                                 | ITEM | QTY | PART NO.      | DESCRIPTION                              |
|------|-----|---------------|---|------|-----|---------------|--|
| 20   | 1   | ILNUT-7510    | LOCKNUT 3/4-10                              | 39   | -   | -             |  |
| 19   | 1   | 17059-6       | SHEAVE AXLE 3/4 X 2 W/ 1" SHANK             | 38   | 2   | 20960         | BEARING PAD, SECONDARY                   |
| 18   | 2   | IFWSH-050     | FLAT WASHER - 1/2"                          | 37   | 1   | IJNUT-02520N  | NYLON INSERT JAM NUT - 1/4-20            |
| 17   | 2   | IHC505013100  | HEX HEAD CAP SCREW 1/2-13 X 1" LONG         | 36   | 1   | IPHC502520063 | PAN HEAD CAP SCREW - 1/4-20 X 5/8" LONG  |
| 16   | 1   | 19881         | CABLE GUIDE WEAR STRIP                      | 35   | 1   | 23924         | SPACER - 23925 SHEAVE                    |
| 15   | 1   | 19880         | CABLE GUIDE STRUCTURE                       | 34   | 1   | 23925         | BOOM SHEAVE WITH BUSHING                 |
| 14   | 2   | IHC503816050  | HEX HEAD CAP SCREW 3/8-16 X 1/2" LG GR 5    | 33   | 2   | 19888         | SIDE BEARING PAD                         |
| 13   | 2   | IHC503816100  | HEX HEAD CAP SCREW - 3/8-16 X 1" LG GR. 5   | 32   | 1   | 21276         | ANTI-TWO LOCK ASSEMBLY - L.H.            |
| 12   | 2   | IHC503816100  | HEX HEAD CAP SCREW - 3/8-16 X 1" LG GR. 5   | 31   | 1   | 19258-1       | BOOM PIN 19475-3/4                       |
| 11   | 4   | ILWSH-038     | LOCK WASHER 3/8"                            | 30   | 2   | IJNUT-05013N  | 1/2-13 NYLON INSERT JAM NUT              |
| 10   | 2   | ICAC503816100 | CNTRSNK ALLEN HEAD CAP SCREW 3/8-16 X 1" LG | 29   | 1   | IZERK-02528   | ZERK FITTING - 1/4-28                    |
| 9    | 2   | 19857         | BEARING PAD - SIDE FRONT                    | 28   | 1   | 19269         | CABLE CLAMP - 3/4"                       |
| 8    | 4   | ISRRNG-075    | SNAP RING - 3/4" DIA. PLATED                | 27   | 2   | ILWSH-025     | LOCK WASHER - 1/4"                       |
| 7    | 4   | 21211         | EXTENSION CYLINDER THRUST PIN               | 26   | 1   | 19275         | CABLE CLAMP - 3/4"                       |
| 6    | 2   | 19885         | EXTENSION CYLINDER ROLLER                   | 25   | 2   | ISHCS05013200 | SOCKET HEAD CAP SCREW - 1/2-13 X 2" LONG |
| 5    | 1   | 19855         | BEARING RETAINING BAR                       | 24   | 2   | ILWSH-050-HC  | LOCKWASHER 1/2" HI COLLAR                |
| 4    | 1   | 19865         | UPPER REAR BEARING PAD                      | 23   | 4   | IANUT-02520S  | ACORN NUT 1/4-20 STAINLESS               |
| 3    | 1   | 19886-1       | EXTENSION CYLINDER - HOLLOW ROD             | 22   | 2   | 22490         | SPACER, BOOM ARROW 1/2" O.D.             |
| 2    | 1   | 19951         | PRIMARY BOOM ASSEMBLY                       | 21   | 2   | 13459-2       | BOOM ARROW 47/16" LONG                   |
| 1    | 1   | 19892         | TERTIARY & SECONDARY BOOM ASSEMBLY          |      |     |               |  |

|   |  |  |                               |                     |
|---|--|--|-------------------------------|---------------------|
|  <b>VENTURO</b><br>MANUFACTURING, INC.<br>CINCINNATI, OHIO | <b>TITLE</b><br>19950 BOOM PARTS DRAWING |  | <b>DATE</b><br>12-4-03D       | <b>SECTION</b><br>- |
|   | <b>ET/HT25KX</b>                         |  | <b>SUPERSEDES</b><br>9-16-03C | <b>19996</b>        |



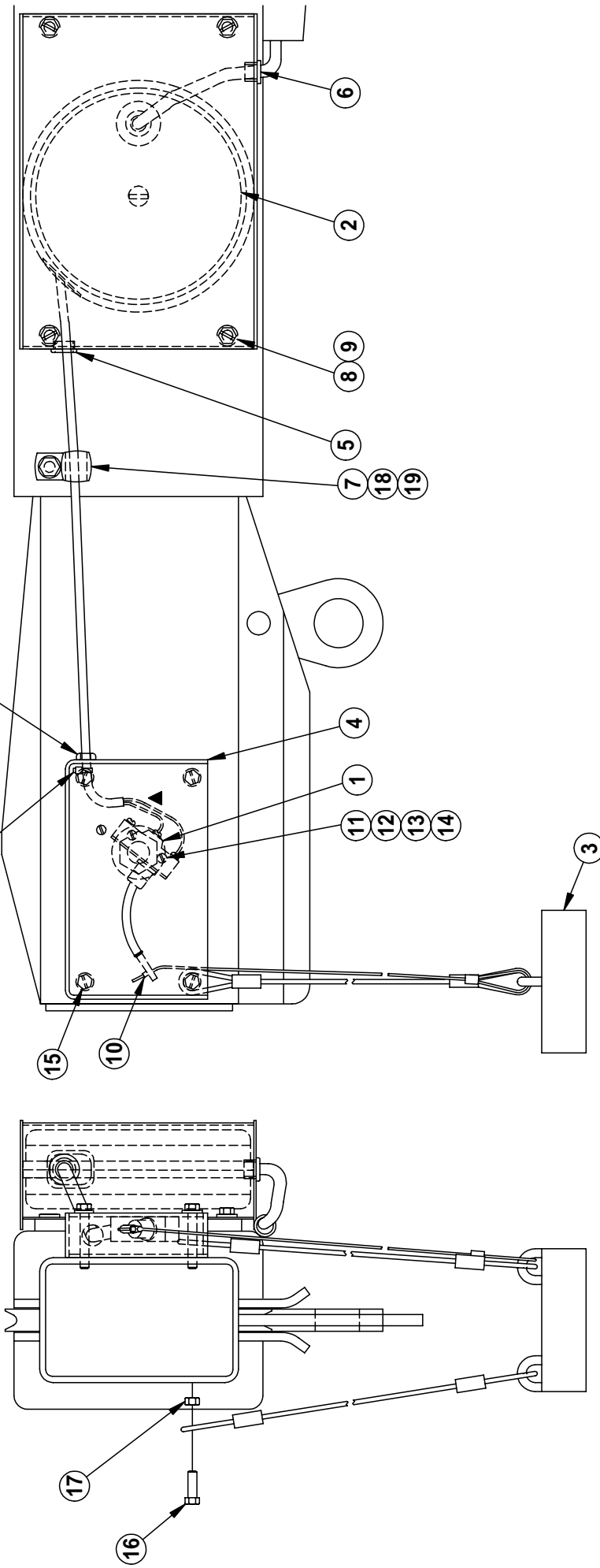
| ITEM | QTY | PART NO.        | DESCRIPTION                         |
|------|-----|-----------------|-------------------------------------|
| 11   | 1   | 19302           | SET COLLAR                          |
| 10   | 5   | ILWSH-031       | LOCK WASHER - 5/16"                 |
| 9    | 5   | IHHCS03118050-5 | HEX HEAD CAP SCREW - 5/16-18 x 1/2" |
| 8    | 1   | 19275           | CABLE CLAMP - 3/4" x 13/32" HOLE    |
| 7    | 2   | 19270           | SNAP BUSHING - 3/8" I.D.            |
| 6    | 1   | 19063           | SNAP BUSHING - 1/2" I.D.            |
| 5    | 1   | 19058           | COVER - CORD REEL                   |
| 4    | 1   | 19855           | SWITCH BRACKET                      |
| 3    | 1   | 19377-2         | CABLE WEIGHT ASSY                   |
| 2    | 1   | 22388-1         | CORD REEL ASSY                      |
| 1    | 1   | 19376           | LIMIT SWITCH                        |

| ITEM | QTY | PART NO.        | DESCRIPTION                              |
|------|-----|-----------------|--|
| 20   | 2   | 20951-1         | HANGER CABLE                             |
| 19   | 1   | IHHCS02520150   | HEX HEAD CAP SCREW - 1/4-20 x 1 1/2"     |
| 18   | 1   | IHNUT-02520     | HEX NUT - 1/4-20                         |
| 17   | 1   | IHHCS02520075-5 | HEX HEAD CAP SCREW - 1/4-20 x 3/4" GR. 5 |
| 16   | 3   | IHHCS02520175   | HEX HEAD CAP SCREW - 1/4-20 x 1 3/4"     |
| 15   | 2   | ILWSH-#06       | LOCK WASHER - #6                         |
| 14   | 2   | IFWSH-#06       | FLAT WASHER - #6                         |
| 13   | 2   | IHNUT-#0632     | HEX NUT - #6-32                          |
| 12   | 2   | IPHMS#632125    | PAN HEAD MACHINE SCREW - #6-32 x 1 1/4"  |

|  |   |                          |                               |
|--|---|--------------------------|-------------------------------|
| <br><b>VENTURO</b><br>MANUFACTURING, INC.<br>CINCINNATI, OHIO | <b>TITLE</b><br>REPLACEMENT PARTS DRAWING | <b>DATE</b><br>12-18-02D | <b>SECTION</b><br>C400        |
|  | <b>19197-2 ANTI-TWO-BLOCK SYSTEM</b>      |                          | <b>SUPERSEDES</b><br>8-26-02C |

WIRE TIE  
CABLE & CUT  
OFF STEM



| ITEM | QTY | PART NO.        | DESCRIPTION                              |
|------|-----|-----------------|--|
| 19   | 1   | 1LWSH-025       | LOCK WASHER - 1/4"                       |
| 18   | 1   | 1ANUT-02520     | ACORN NUT - 1/4-20                       |
| 17   | 1   | 1HNUT-02520     | HEX NUT - 1/4-20                         |
| 16   | 1   | 1HHCS02520075-5 | HEX HEAD CAP SCREW - 1/4-20 x 3/4" GR. 5 |
| 15   | 4   | 1HHCS02520175   | HEX HEAD CAP SCREW - 1/4-20 x 1 3/4"     |
| 14   | 2   | 1LWSH-#06       | LOCK WASHER - #6                         |
| 13   | 2   | 1FWSH-#06       | FLAT WASHER - #6                         |
| 12   | 2   | 1HNUT-#0632     | HEX NUT - #6-32                          |
| 11   | 2   | 1PHMS#632125    | PAN HEAD MACHINE SCREW - #6-32 x 1 1/4"  |
| 10   | 1   | 19302           | SET COLLAR                               |
| 9    | 4   | 1LWSH-031       | LOCK WASHER - 5/16"                      |
| 8    | 4   | 1SHCS03118050-5 | SOCKET HEAD CAP SCREW - 5/16-18 x 1/2"   |
| 7    | 1   | 19275           | CABLE CLAMP - 3/4" x 13/32" HOLE         |
| 6    | 2   | 19270           | SNAP BUSHING - 3/8" I.D.                 |
| 5    | 1   | 19063           | SNAP BUSHING - 1/2" I.D.                 |
| 4    | 1   | 21277           | SWITCH BRACKET                           |
| 3    | 1   | 19377-2         | CABLE WEIGHT ASSY                        |
| 2    | 1   | 22683           | CORD REEL ASSY                           |
| 1    | 1   | 19376           | LIMIT SWITCH                             |

**VENTURO** MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
**REPLACEMENT PARTS DWG**

DATE  
**8-8-03**

SECTION  
**C400**

21276 ANTI-TWO-BLOCK SYSTEM

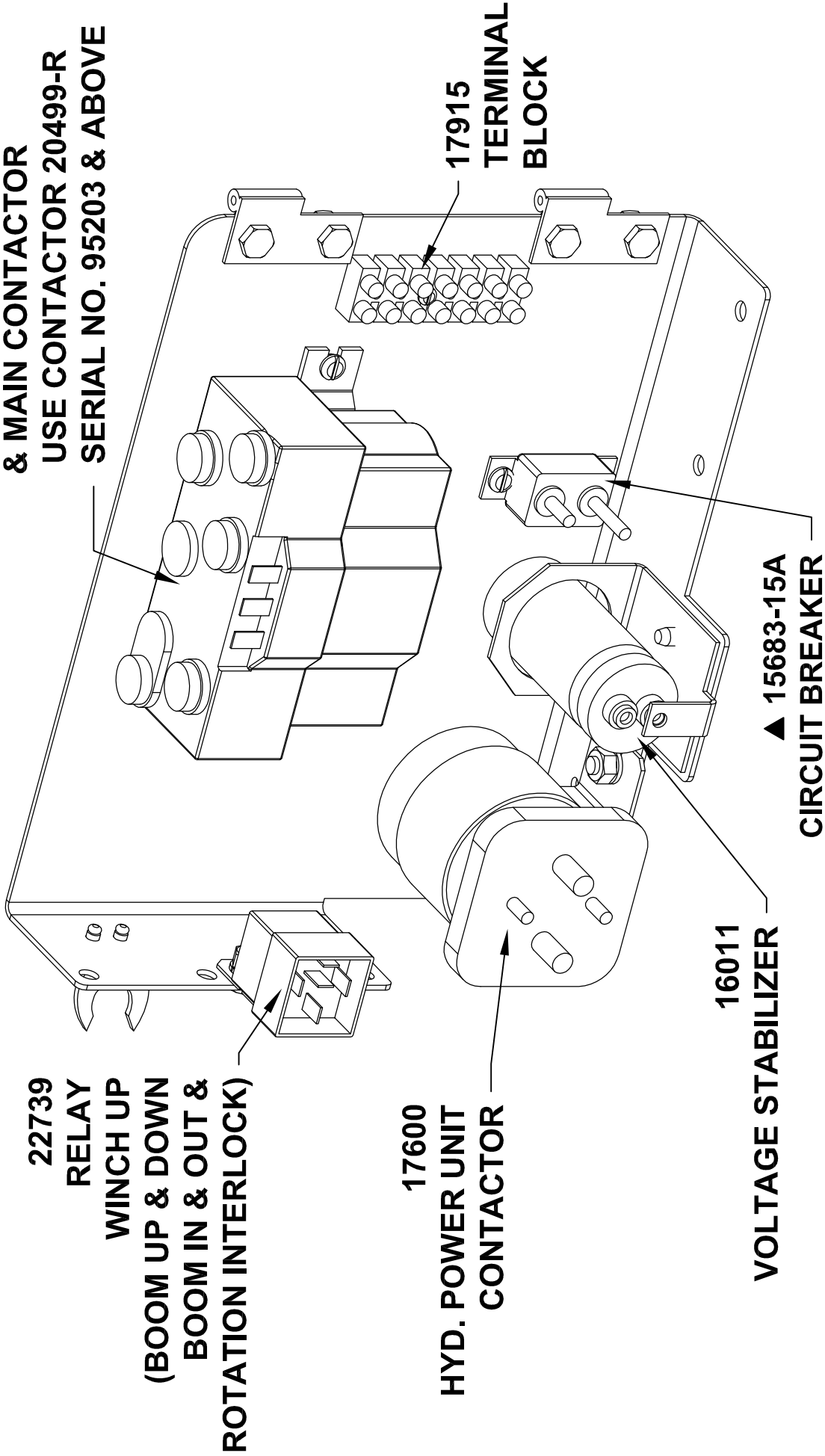
SUPERSEDES  
-

21275



# 19897 ELECTRICAL COMPONENT ASSEMBLY

21157 WINCH UP, WINCH DOWN,  
& MAIN CONTACTOR  
USE CONTACTOR 20499-R  
SERIAL NO. 95203 & ABOVE




22739  
RELAY  
WINCH UP  
(BOOM UP & DOWN  
BOOM IN & OUT &  
ROTATION INTERLOCK)

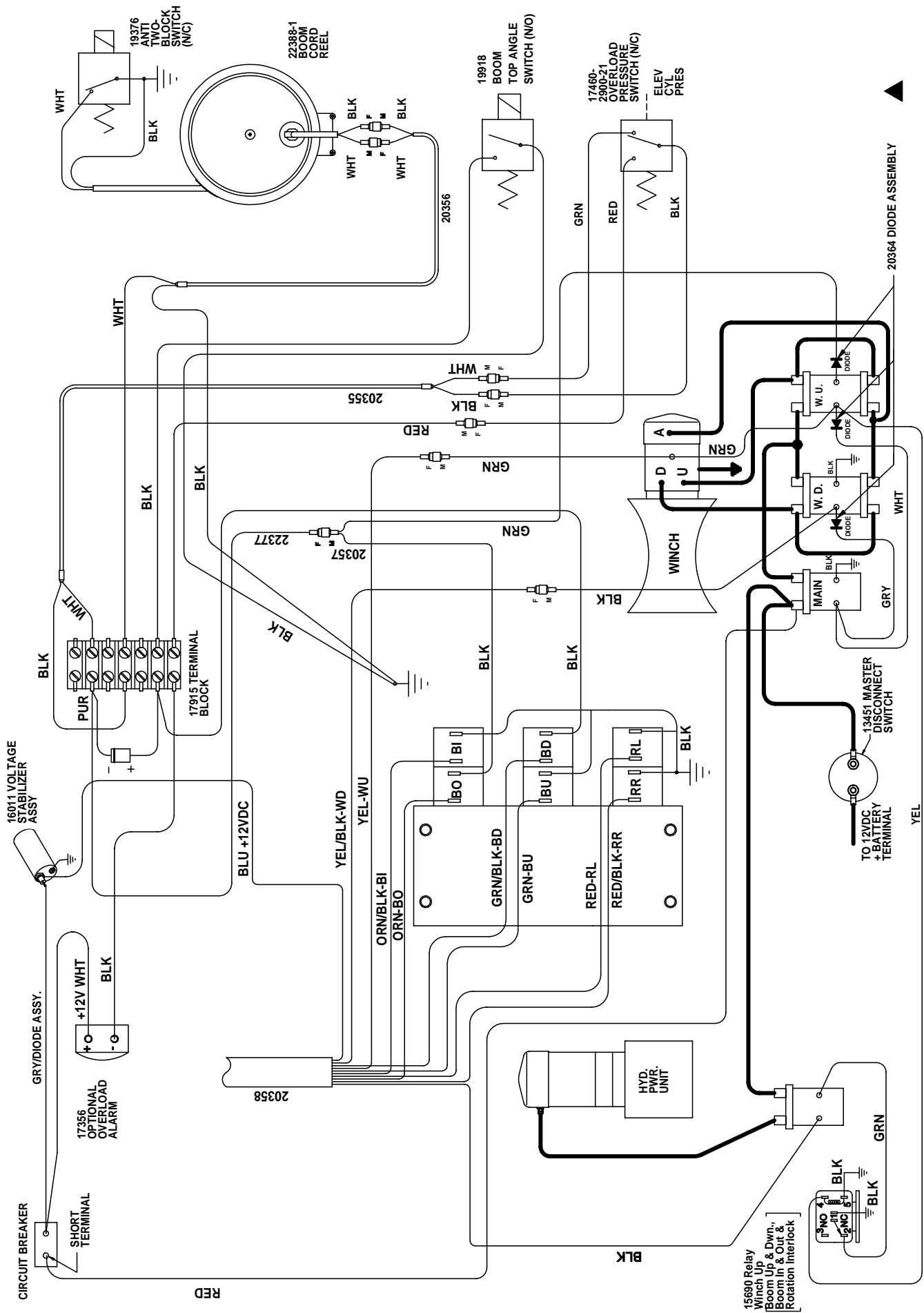
17600  
HYD. POWER UNIT  
CONTACTOR

16011  
VOLTAGE STABILIZER

▲ 15683-15A  
CIRCUIT BREAKER

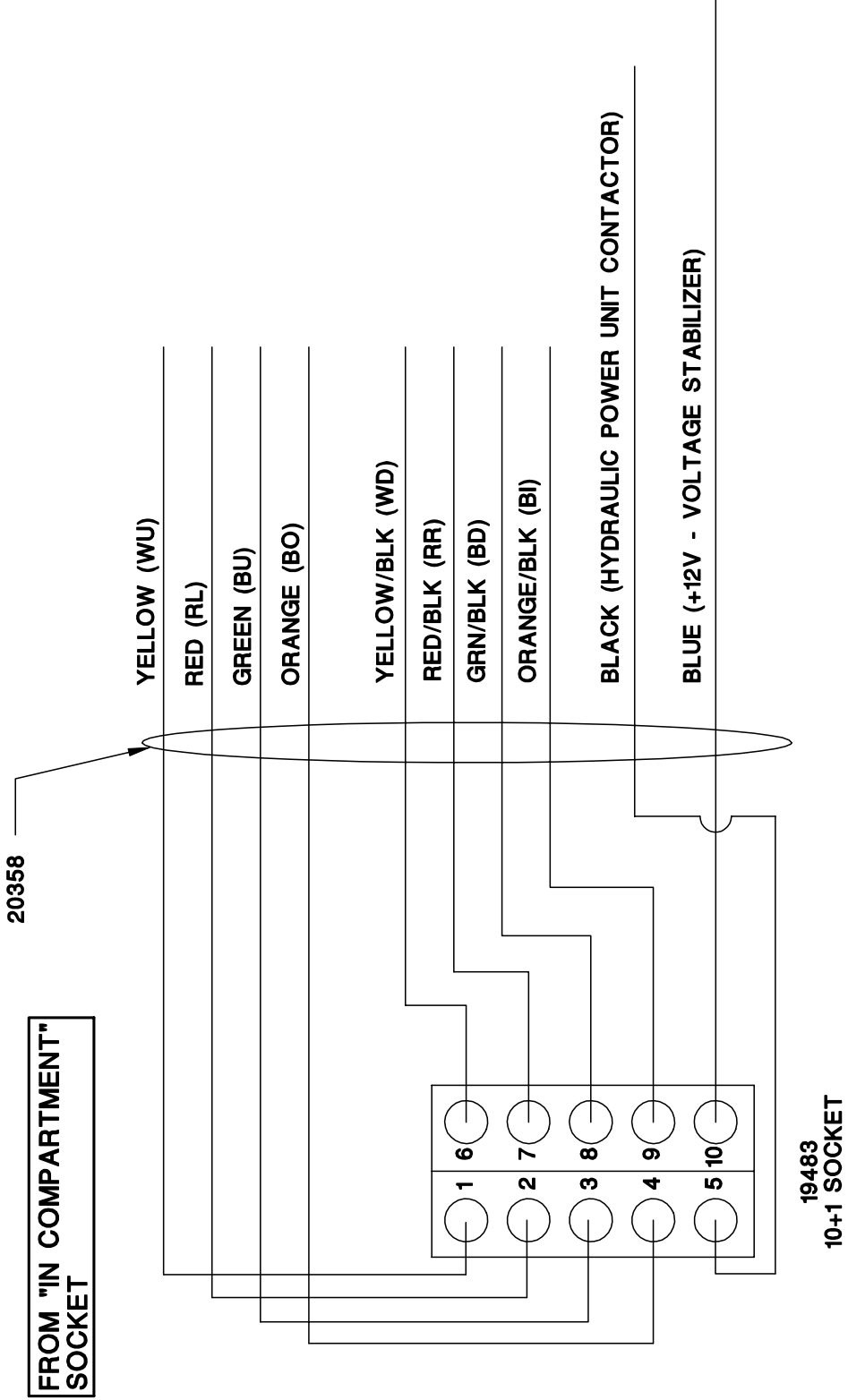
17915  
TERMINAL  
BLOCK

|   |            |                               |           |
|---|------------|-------------------------------|-----------|
|  <p>MANUFACTURING, INC.<br/>CINCINNATI, OHIO</p> | TITLE      | ELECTRICAL COMPONENT ASSEMBLY |           |
|   | DATE       | 09-06-12G                     | SECTION - |
|   | SUPERSEDES | 04-24-08F                     | 19919     |



|   |                                       |  |                               |
|---|---------------------------------------|--|-------------------------------|
| <b>VENTURO</b><br>MANUFACTURING, INC.<br>CINCINNATI, OHIO | <b>TITLE</b><br><b>WIRING DIAGRAM</b> |  | <b>SECTION</b><br>-           |
|   | <b>DATE</b><br>10-25-02C              |  | <b>SUPERSEDES</b><br>5-22-02B |
|   | <b>ET25KX</b>                         |  | <b>20348</b>                  |

# ET25KX IN-COMPARTMENT CONTROLS



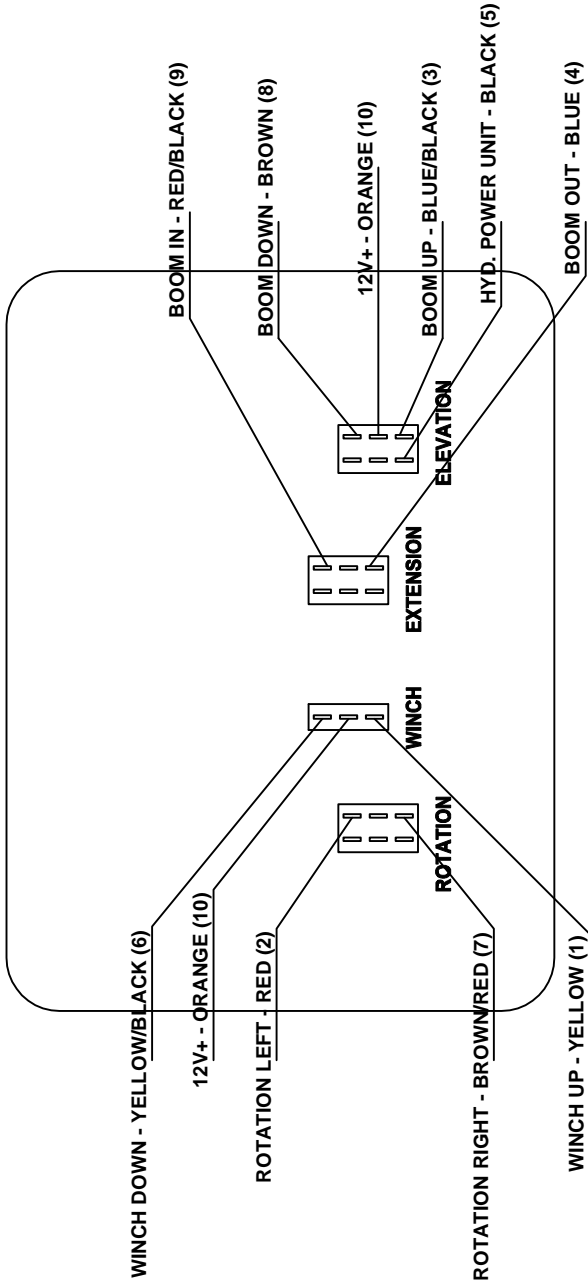
NOTE: BLUE/BLK WIRE OF 20358 HARNESS NOT USED

|  |  |  |                         |                      |
|--|--|--|-------------------------|----------------------|
| <p><b>VENTURO</b> MANUFACTURING, INC.<br/>CINCINNATI, OHIO</p> |  | <p>TITLE<br/>IN-COMPARTMENT CONTROLS</p> | <p>DATE<br/>4-12-02</p> | <p>SECTION<br/>-</p> |
|  |  | <p>ET25KX CRANE</p>                      | <p>SUPERSEDES<br/>-</p> | <p>20359</p>         |

# 22060 PENDANT (4 - SWITCH)

## CORD REPLACEMENT INSTRUCTIONS

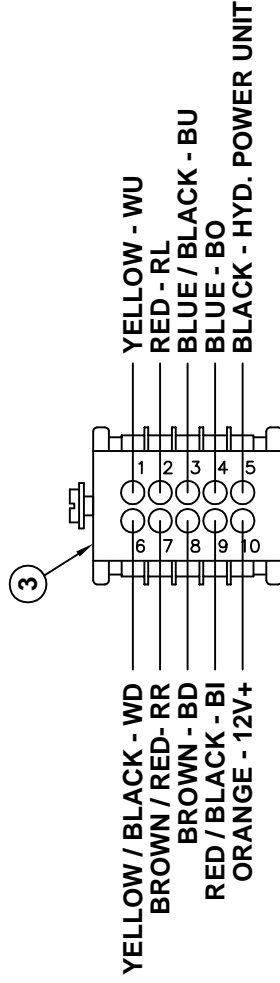
(INSIDE VIEW OF PENDANT CONTROL W/ REAR COVER REMOVED)



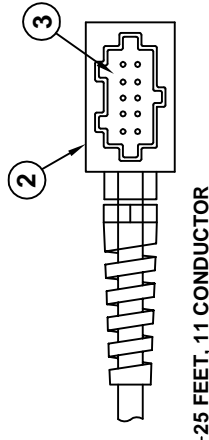
NOTE 1)  
WIRE TERMINALS TO BE  
INSTALLED 'AFTER' ROUTING  
REPLACEMENT CORD ASSY  
THROUGH PENDANT HEAD  
AND PLUG HOUSING.

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

NOTE 3)  
STOW OR CUT-BACK  
UNUSED WIRES.



PLUG - BACKSIDE VIEW



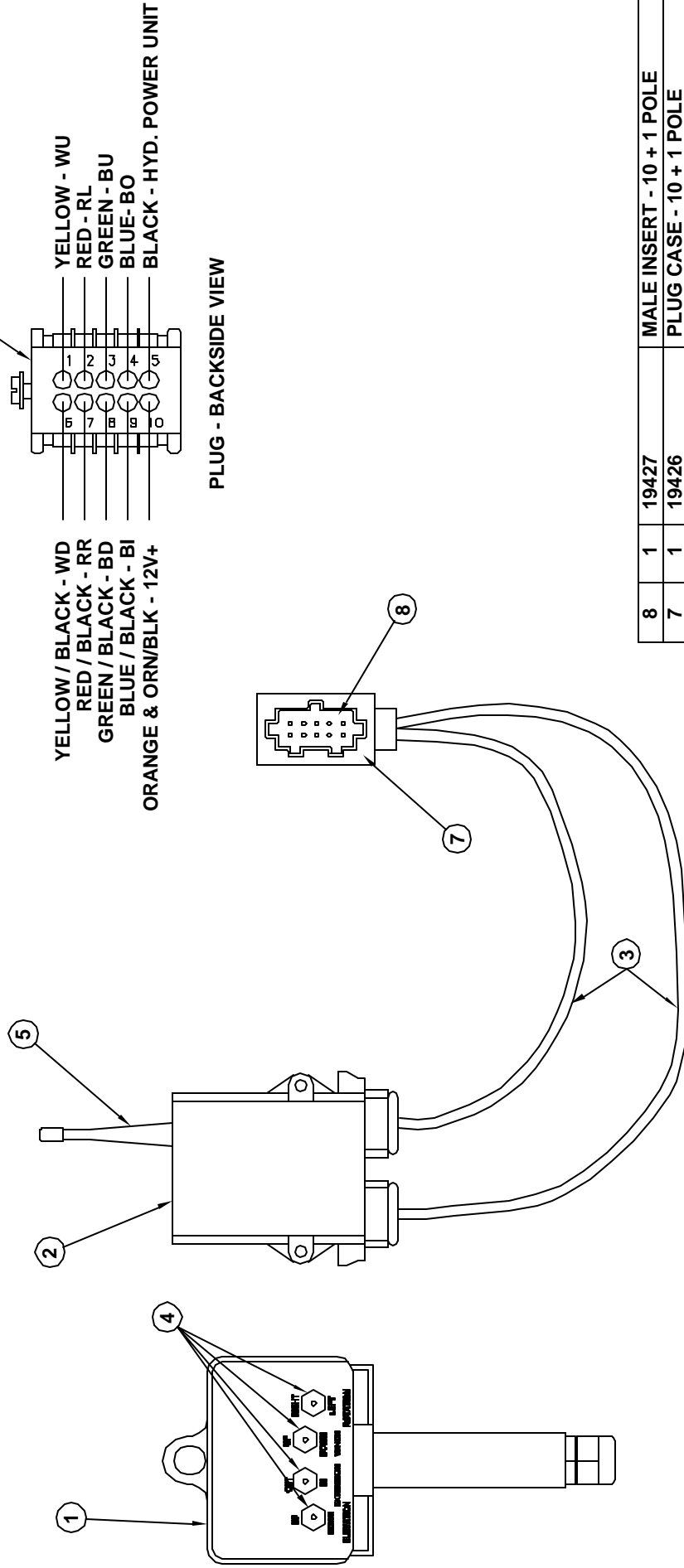
| ITEM | QTY | PART NO. | DESCRIPTION                  |
|------|-----|----------|------------------------------|
| 4    | 3   | 22152    | DPDT MOMENTARY TOGGLE SWITCH |
| 3    | 1   | 19427    | MALE INSERT - 10 + 1 POLE    |
| 2    | 1   | 19426    | PLUG CASE - 10 + 1 POLE      |
| 1    | 4   | 22081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

| DATE     | SECTION    |
|----------|------------|
| 9-28-12B | C400       |
| 9-6-11A  | SUPERSEDES |

| TITLE                         |
|-------------------------------|
| REPLACEMENT PARTS DRAWING     |
| 22060 PENDANT (STANDARD CTRL) |

**VENTURO** MANUFACTURING, INC.  
CINCINNATI, OHIO

# 22067 PENDANT (RADIO - 4 SWITCH)

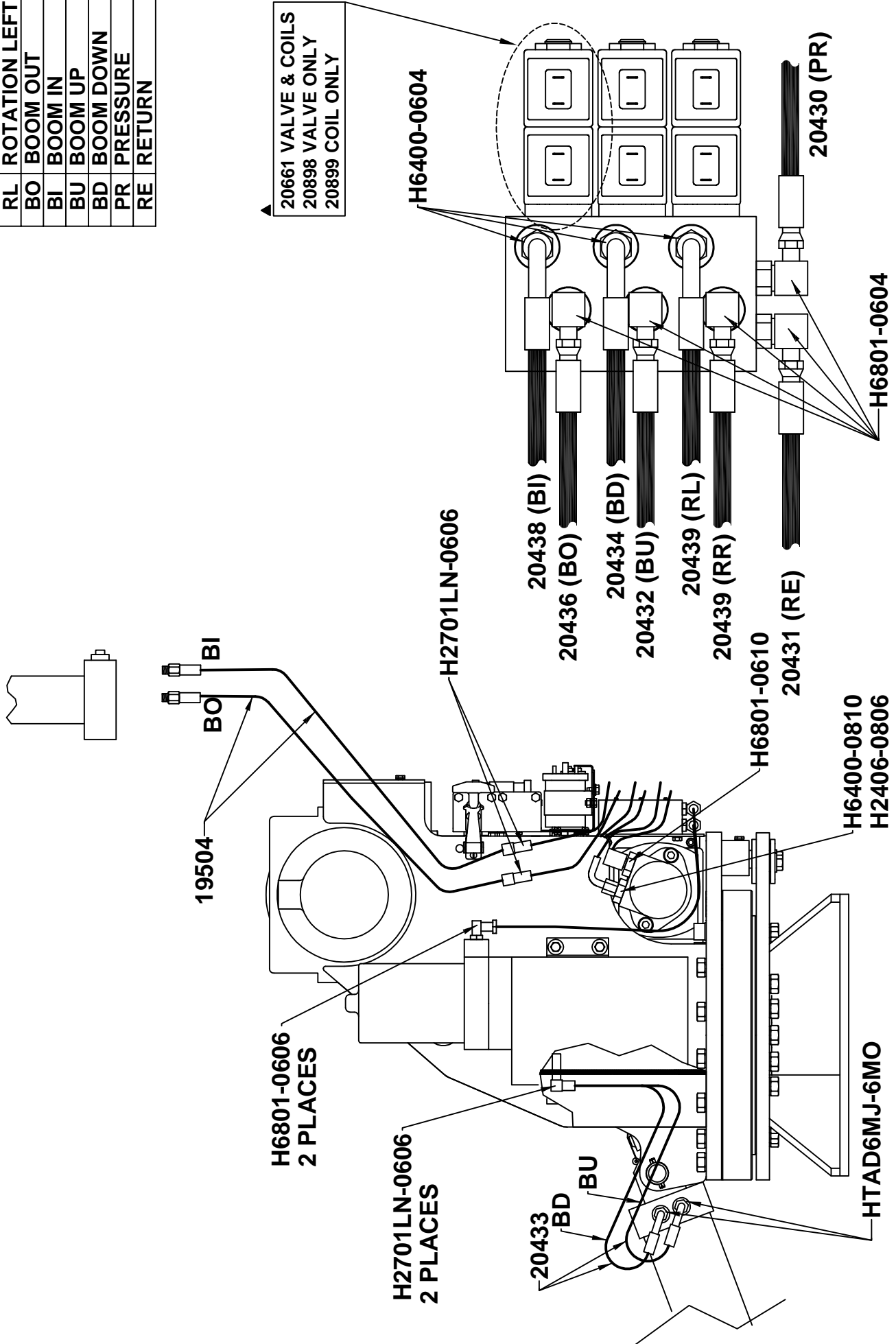


⊗ ITEM NOT SHOWN ON DRAWING

| ITEM | QTY | PART NO. | DESCRIPTION                  |
|------|-----|----------|------------------------------|
| 8    | 1   | 19427    | MALE INSERT - 10 + 1 POLE    |
| 7    | 1   | 19426    | PLUG CASE - 10 + 1 POLE      |
| 6    | 1   | 22089    | MAGNET ASSEMBLY              |
| 5    | 1   | 22088    | RECEIVER ANTENNA             |
| 4    | 4   | 22087    | TOGGLE SWITCH & SEALING BOOT |
| 3    | 1   | 22086    | RECEIVER EXTERNAL HARNESS    |
| 2    | 1   | 22067-RX | RADIO REMOTE RECEIVER        |
| 1    | 1   | 22067-TX | RADIO REMOTE TRANSMITTER     |

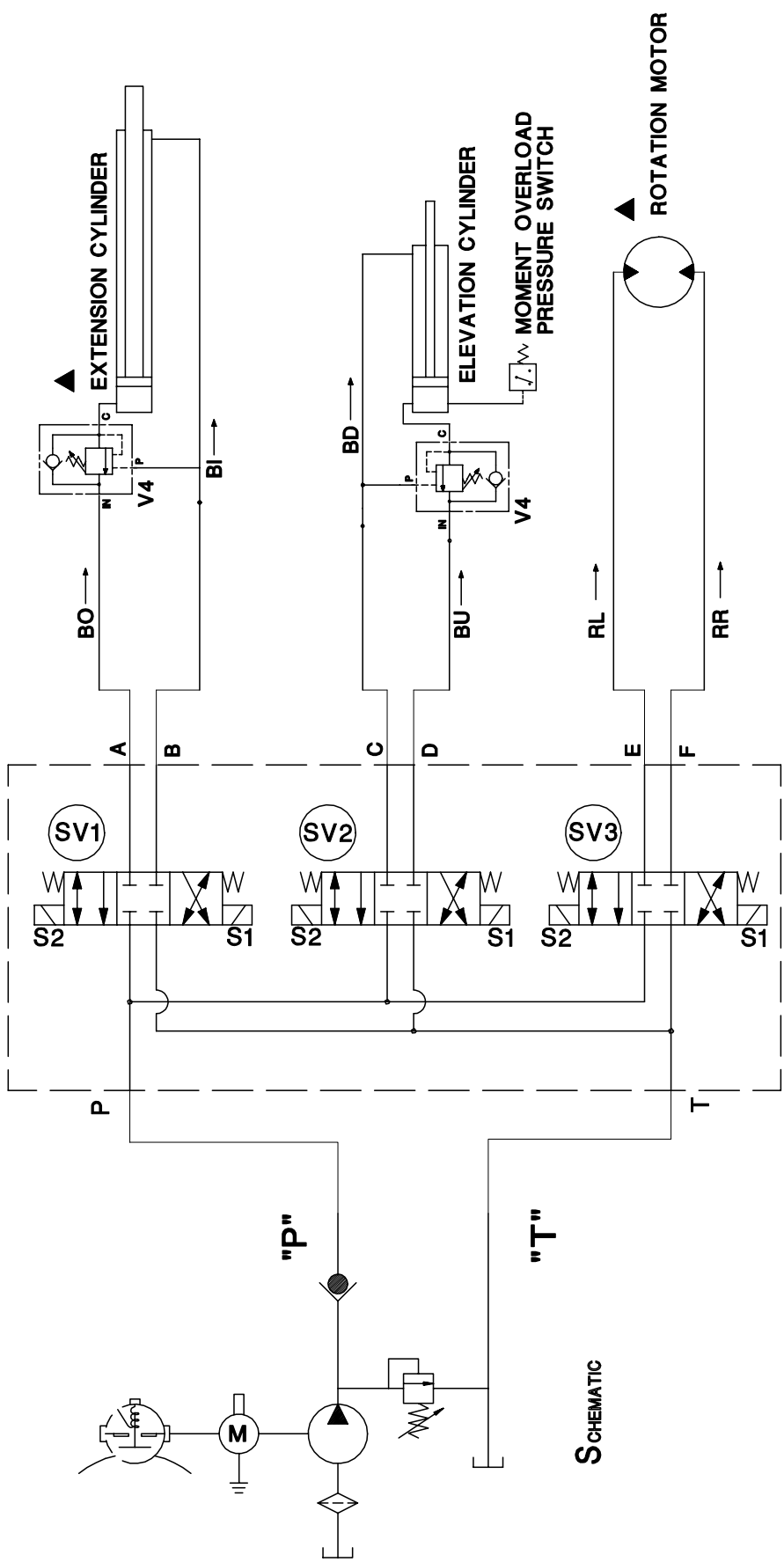
|       |                           |            |         |         |       |
|-------|---------------------------|------------|---------|---------|-------|
| TITLE | REPLACEMENT PARTS DRAWING | DATE       | 7-19-04 | SECTION | C400  |
|       | ET18/25K(X)               | SUPERSEDES | -       |         | 22085 |

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



20661 VALVE & COILS  
 20898 VALVE ONLY  
 20899 COIL ONLY

|   |                  |                                    |              |
|---|------------------|------------------------------------|--------------|
|  <b>VENTURO</b><br>MANUFACTURING, INC.<br>CINCINNATI, OHIO | TITLE            | <b>REPLACEMENT PARTS DRAWING</b>   |              |
|   |                  | <b>ET25KX HYDRAULIC COMPONENTS</b> |              |
| DATE  | <b>11-18-11C</b> | SECTION                            | <b>C400</b>  |
| SUPERSEDES  | <b>4-13-06B</b>  |                                    | <b>19942</b> |



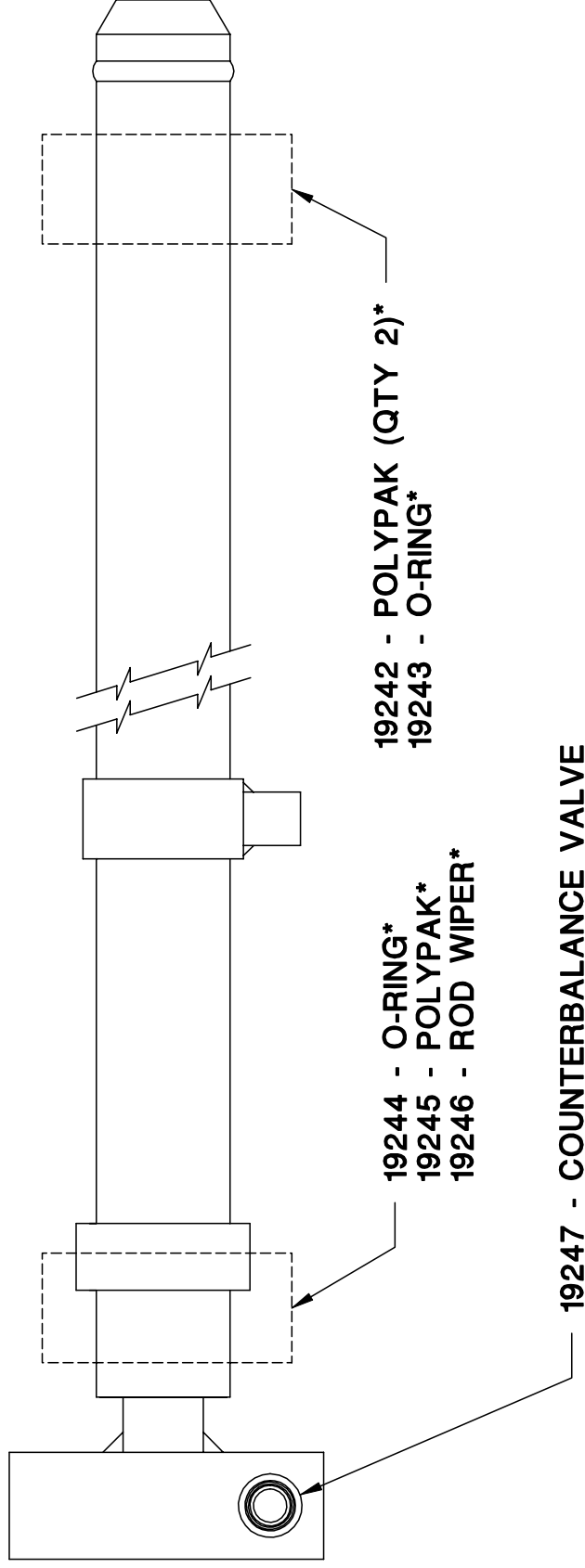
**S**CH**E**M**A**T**I**C

OPERATION

- (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'

|   |  |  |                              |                        |
|---|--|--|------------------------------|------------------------|
| <b>VENTURO</b><br>MANUFACTURING, INC.<br>CINCINNATI, OHIO | <b>TITLE</b><br>HYDRAULIC SYSTEM DIAGRAM |  | <b>DATE</b><br>4-5-02A       | <b>SECTION</b><br>C400 |
|   | ET25KX                                   |  | <b>SUPERSEDES</b><br>10-5-01 | <b>20156</b>           |

# 19886-1 EXTENSION CYLINDER

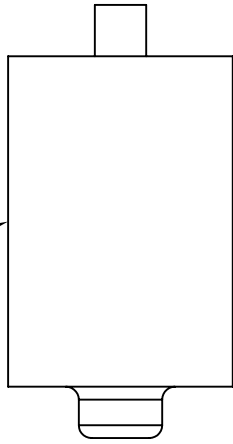


\* ITEMS INCLUDED IN 19887 SEAL KIT

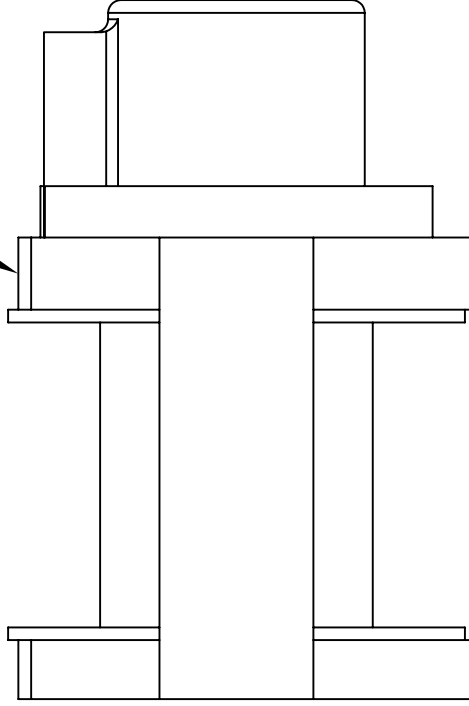
|           |                    |            |
|-----------|--------------------|------------|
|           | TITLE              | SECTION    |
|           | EXTENSION CYLINDER | C400       |
| ET/HT25KX | DATE               | SUPERSEDES |
|           | 7-6-01             | 19908      |



**21051 MOTOR**



**19813 WINCH**



TITLE

**WINCH REPLACEMENT PARTS**

**ET25K(X)**

DATE

**10-27-04**

SUPERSEDES

-

SECTION

-

**21053**







## ***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**

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