



VENTURO
TRUCK MOUNTED CRANES

ET25KX

INSTALLATION & OWNER'S MANUAL

Sold and Serviced by:

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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 OR 14 - 20 FT
BOOM MANUAL EXT	4 FT
CAPACITY	1050 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

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.

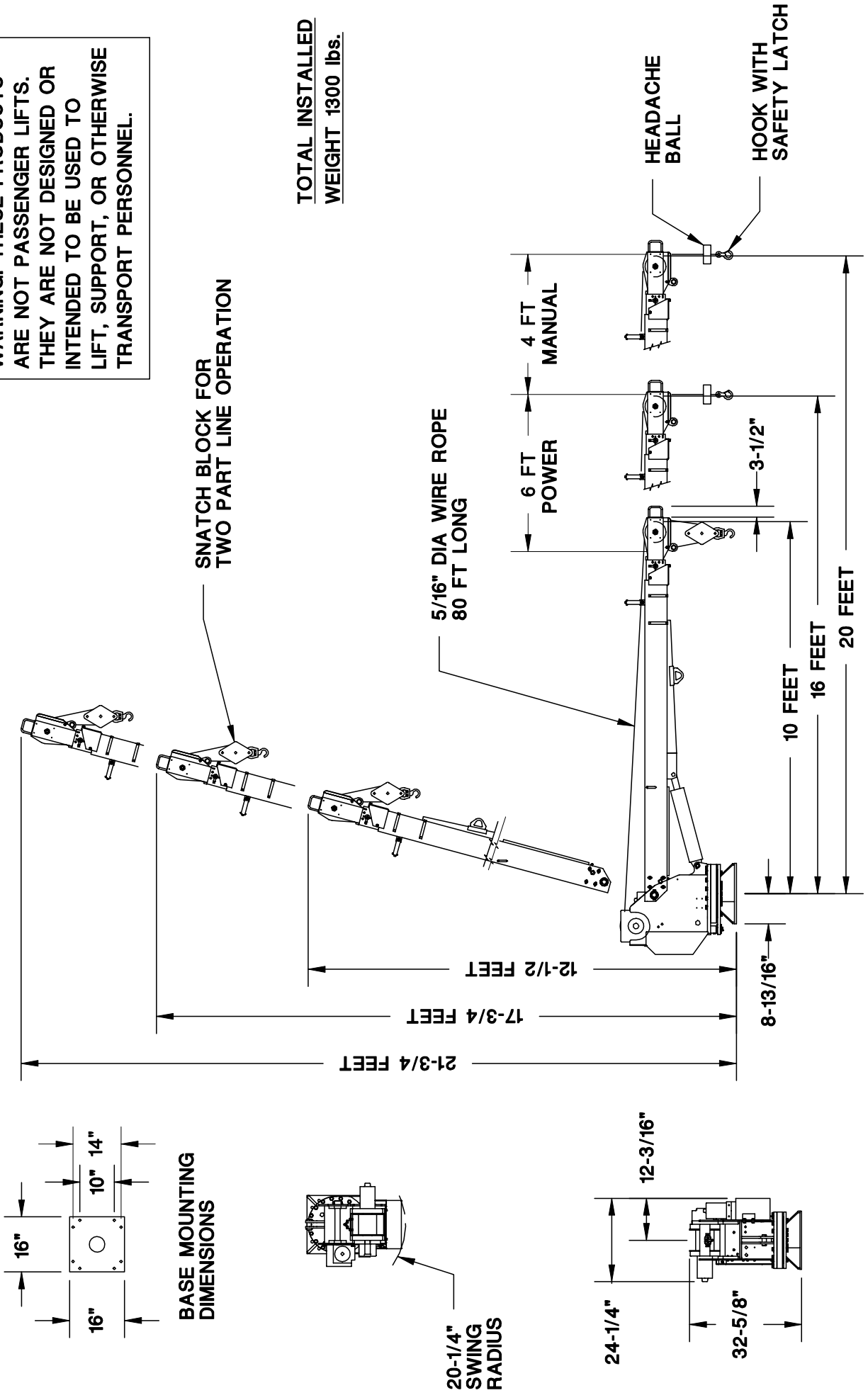
MISCELLANEOUS

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

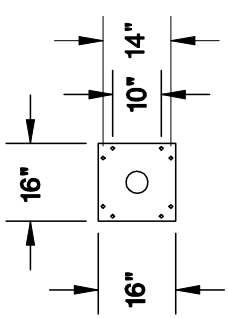


TITLE	DATE	SECTION
INSTALLATION DWG	7-10-02B	C120
ET25KX-10/20	SUPERCEDES 3-20-02A	19958b


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



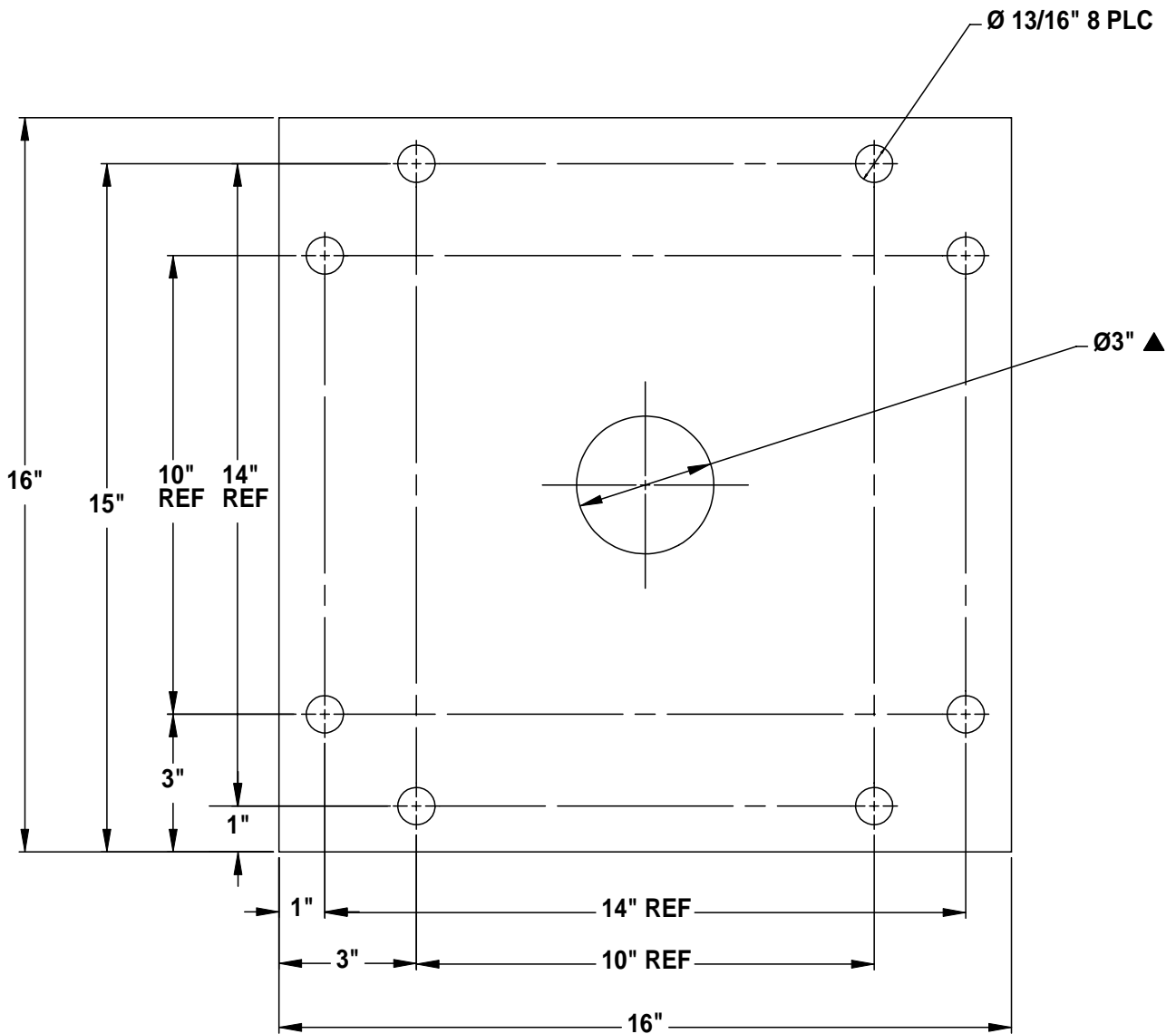
TOTAL INSTALLED WEIGHT 1300 lbs.



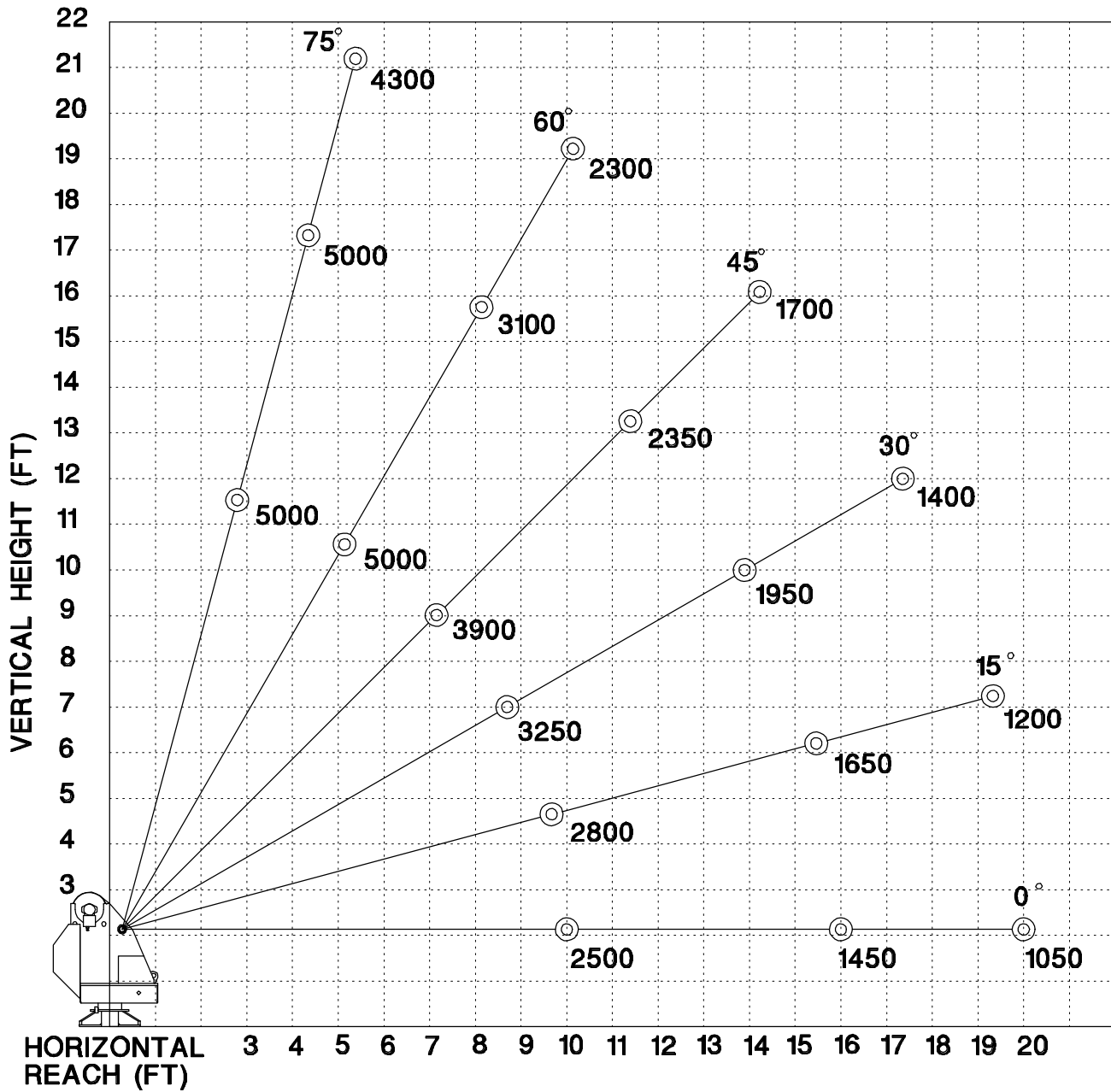
BASE MOUNTING DIMENSIONS

 VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE	DATE	SECTION
	INSTALLATION DRAWING ET25KX - 10/16/20 BOOM	9-28-01 SUPERSEDES -	C100

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



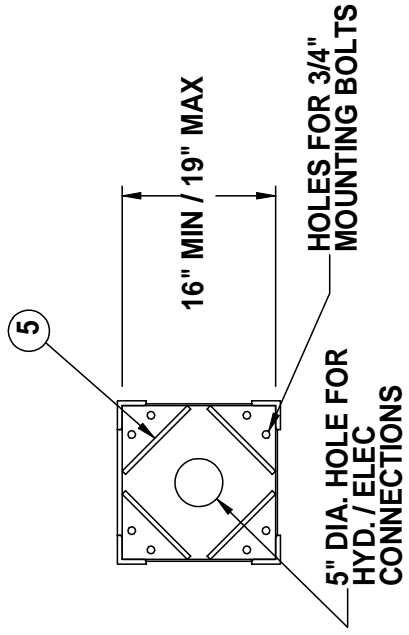
ET/HT25K(X) - 10-16-20 BOOM MAXIMUM CAPACITY CHART



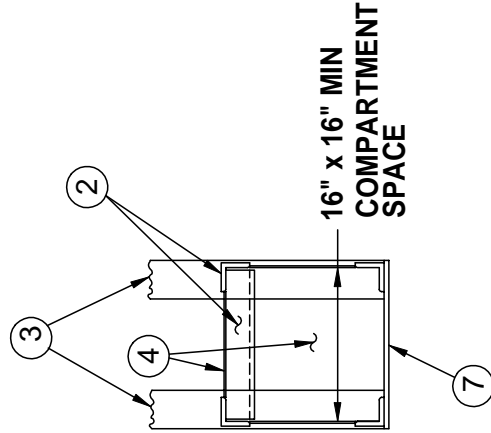
**MUST USE SNATCH BLOCK
FOR LOADS OF 2500 LBS.
AND GREATER**

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

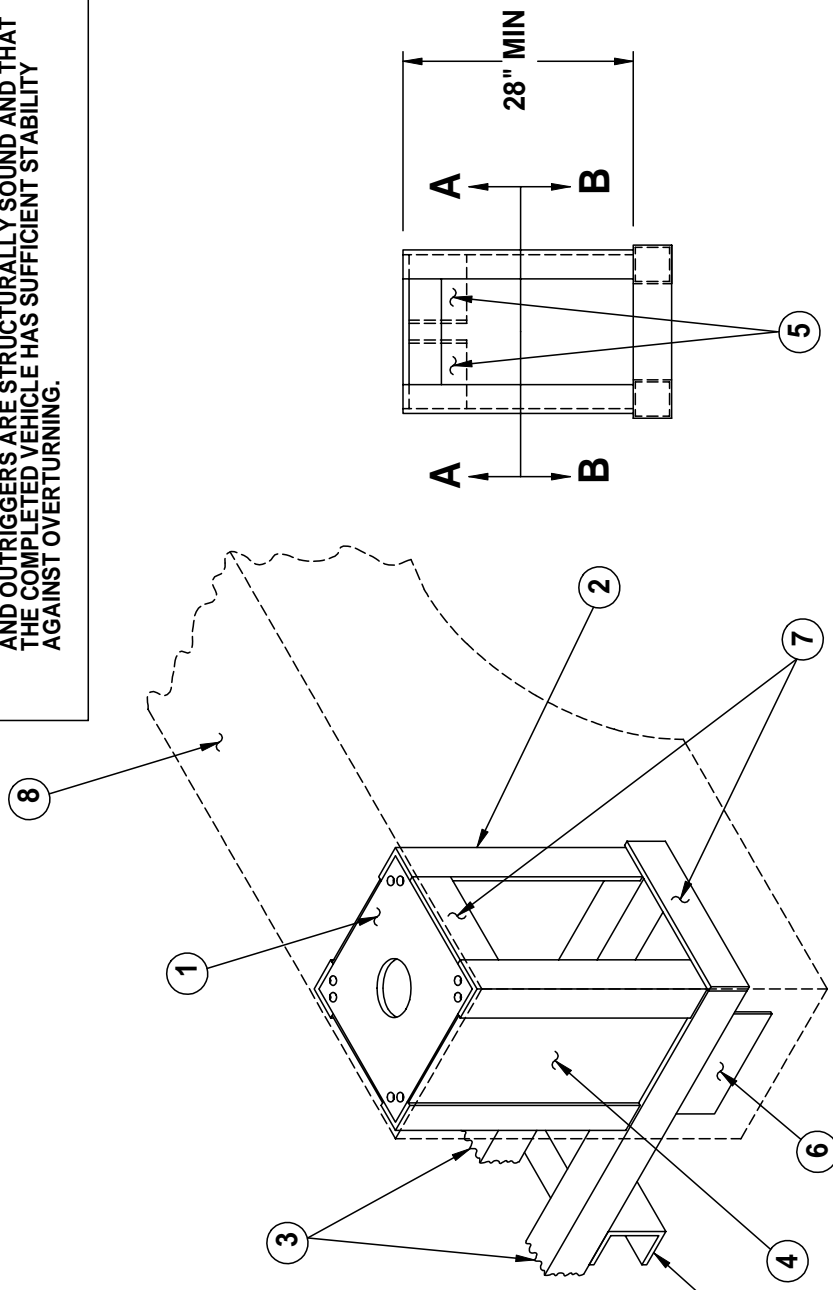
IT IS THE SOLE RESPONSIBILITY OF THE INSTALLER TO INSURE THAT THE TOTAL STRUCTURE OF CRANE, TRUCK, AND OUTRIGGERS ARE STRUCTURALLY SOUND AND THAT THE COMPLETED VEHICLE HAS SUFFICIENT STABILITY AGAINST OVERTURNING.



SECTION A-A



SECTION B-B



TYPICAL SERVICE BODY REINFORCEMENT

	TITLE	INSTALLATION DWG	DATE	7-29-03D	SECTION	C100
			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

3 x 3 x 3/8

APPROX. 36

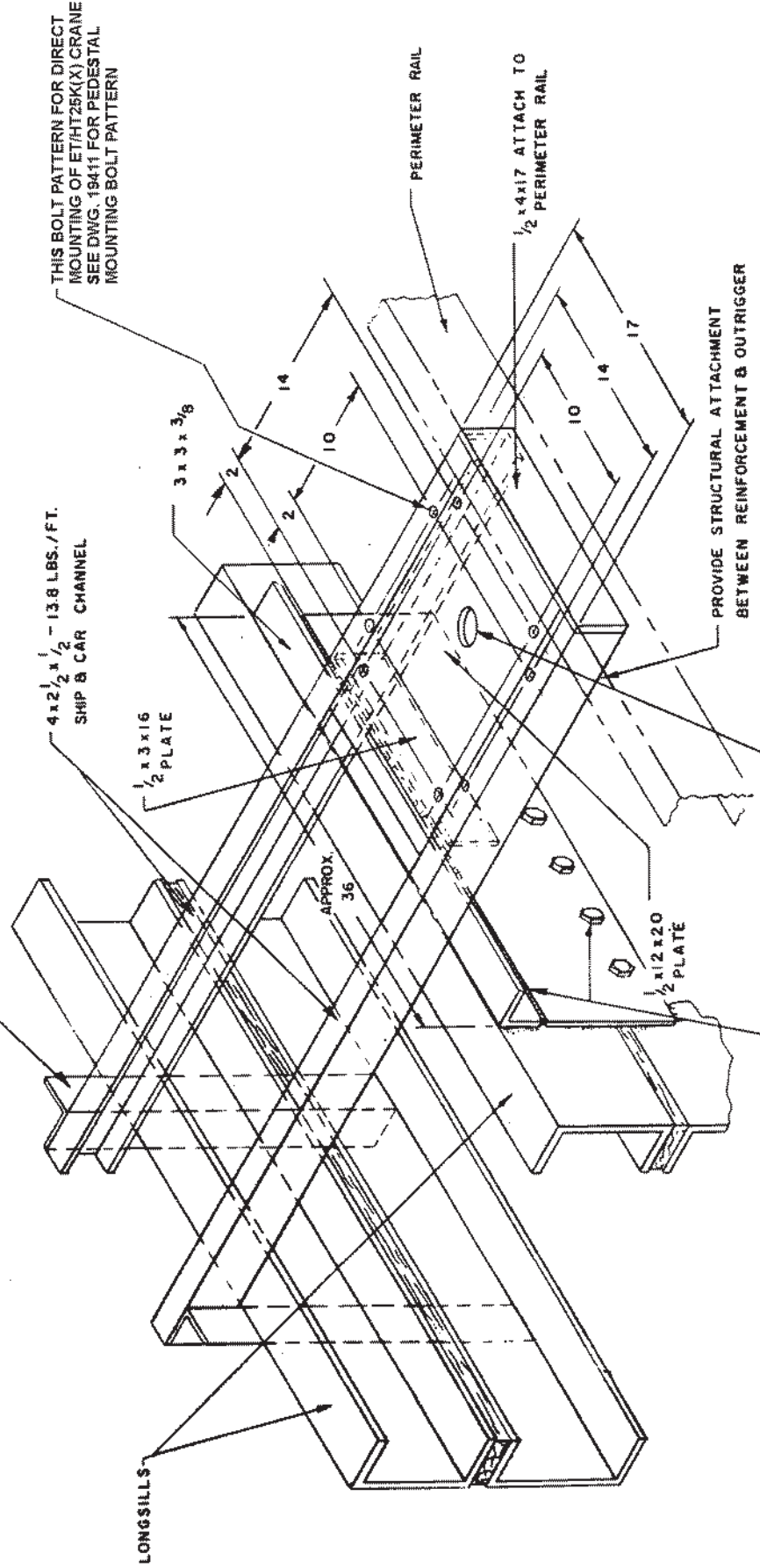
PERIMETER RAIL

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

<p>VENTURO MANUFACTURING, INC. CINCINNATI, OHIO</p>	<p>TITLE INSTALLATION DRAWING</p>		<p>DATE 7-29-03M</p>	<p>SECTION C100</p>
	<p>ET/HT18K(X), ET/HT25K(X) ▲</p>		<p>SUPERCEDES 10-11-02L</p>	<p>14510</p>

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

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.



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

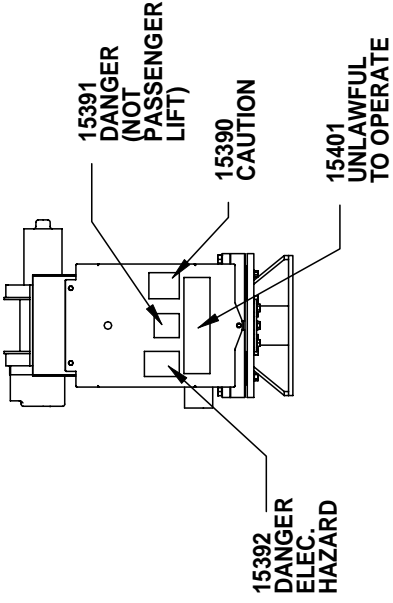
ET5500MPB-ET25KX

DATE
7-29-03G

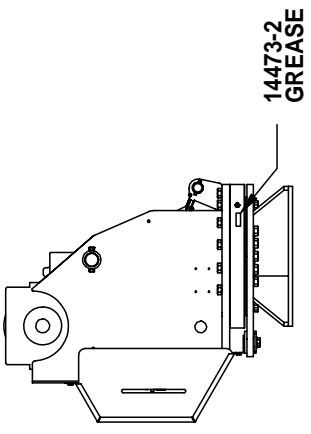
SUPERCEDES
10-14-97F

SECTION
C150

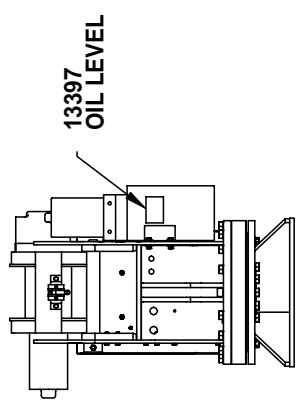
850711



BACK



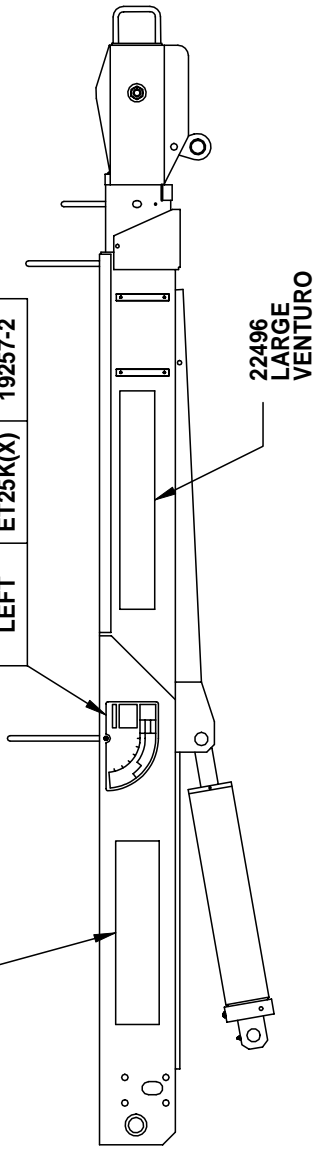
RIGHT



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

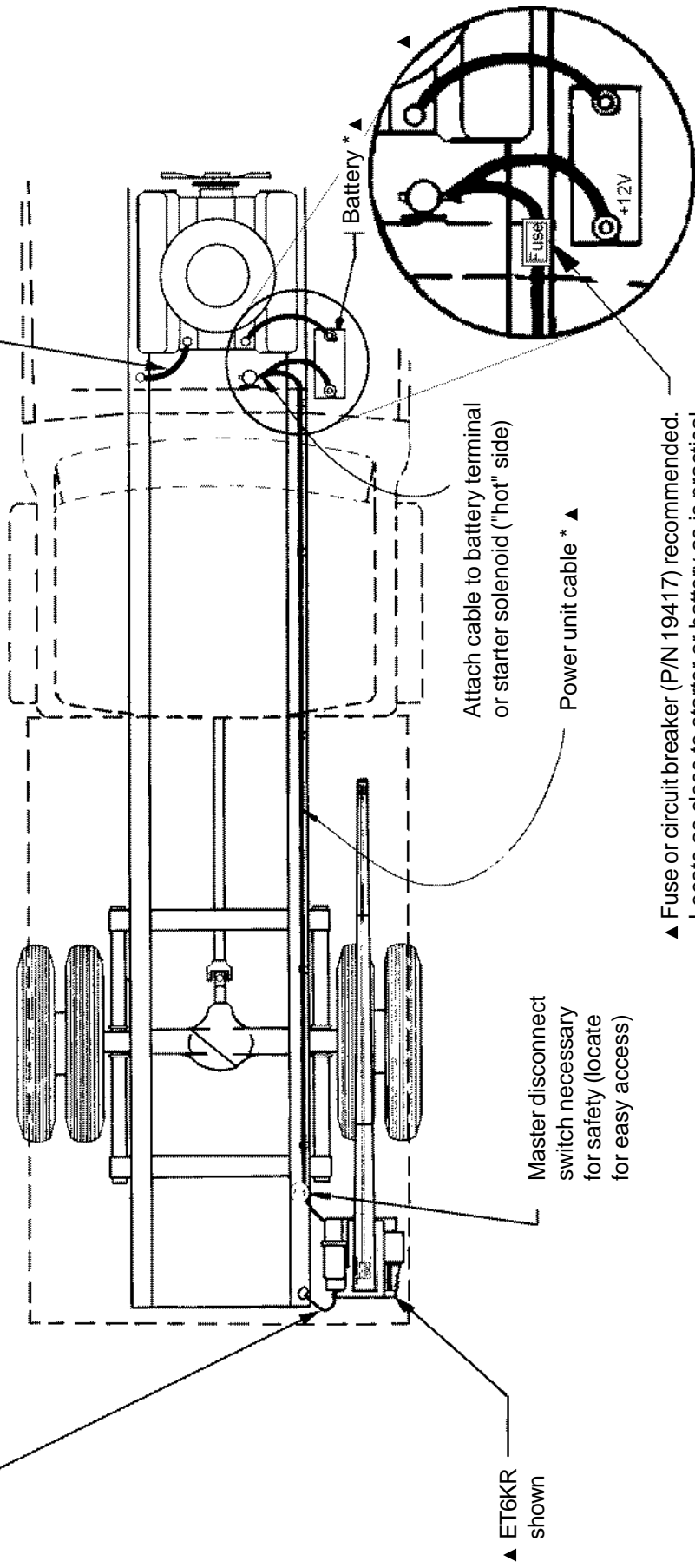
SUPERCEDES
9-4-01

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.



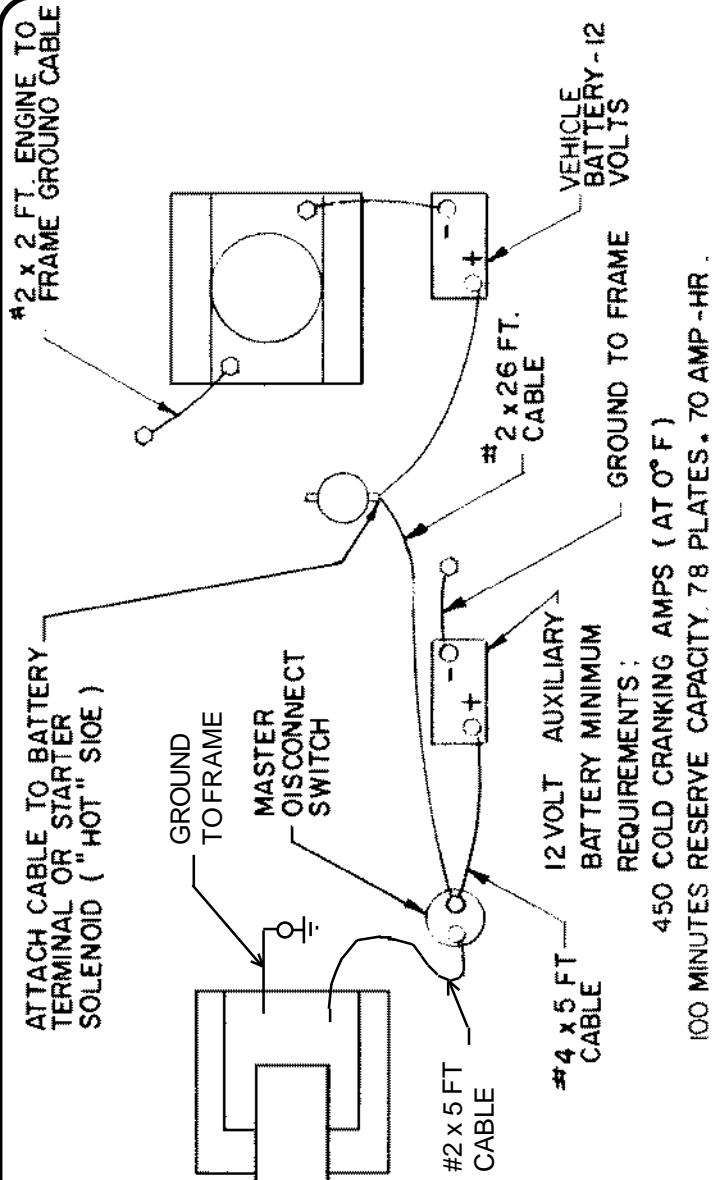
▲ ET6KR shown

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

 VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE INSTALLATION - BATTERY CABLE	DATE 1-15-02E	SECTION C200
	WINCH & CRANE	SUPERCEDES 11-7-01D	15660

RECOMMENDED INSTALLATION

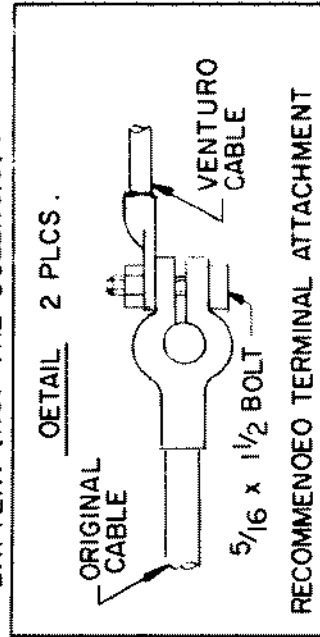
W/ AUXILIARY BATTERY IN PARALLEL WITH VEHICLE BATTERY.



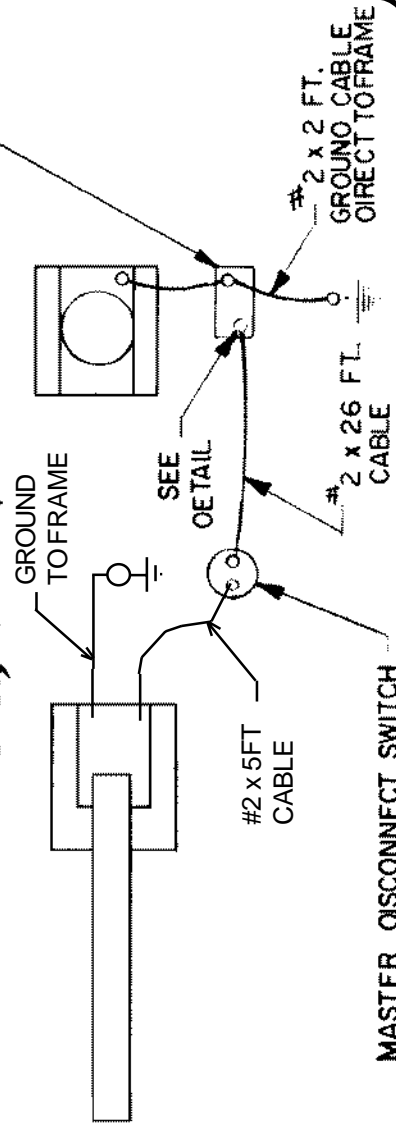
IF LONGER CABLE NECESSARY, CONSULT VENTURO ENGINEERING DEPT.

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 . .



TITLE

ELECTRICAL INSTALLATION

SECTION

DATE 9-26-01

SUPERCEDES

-

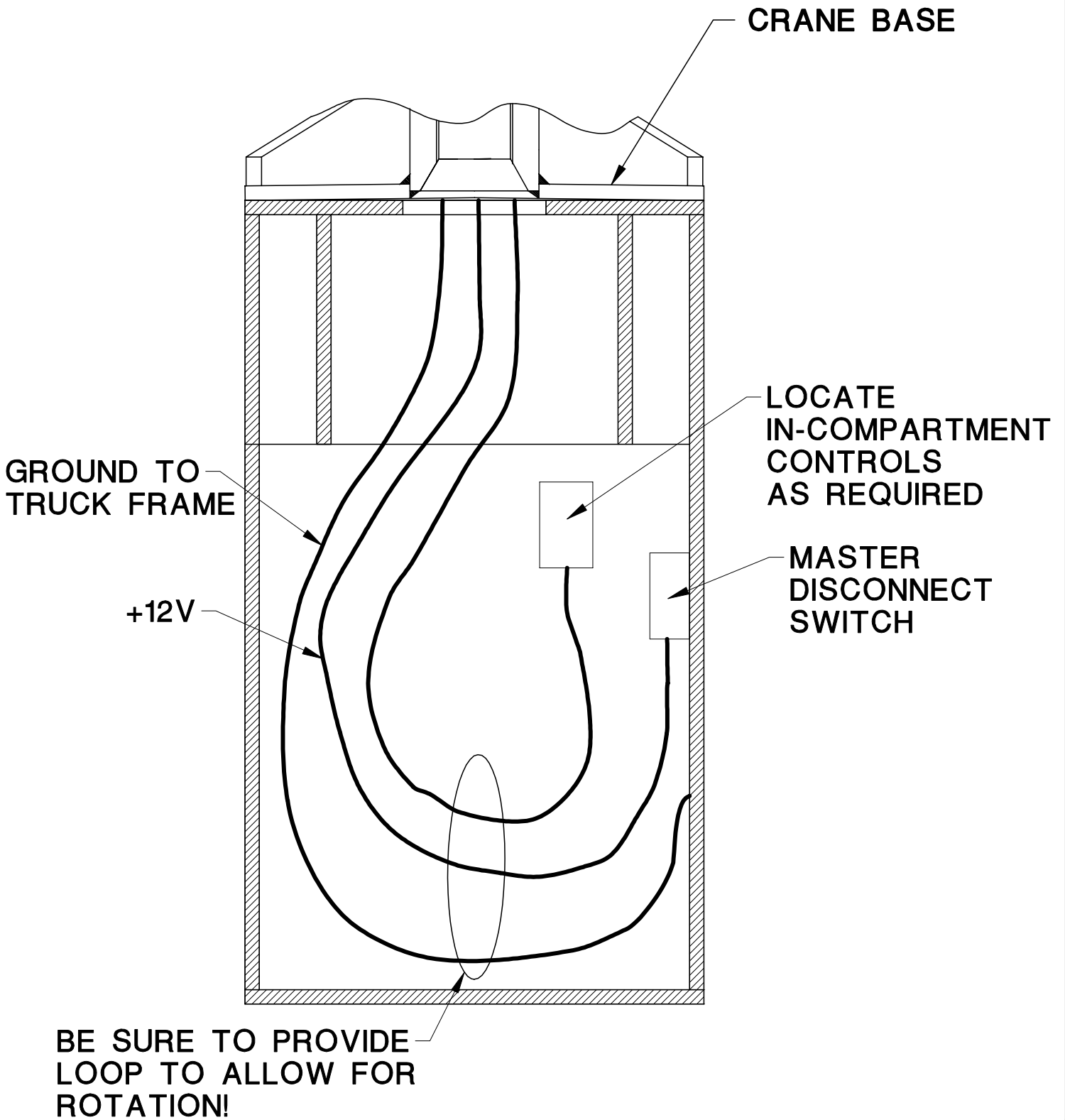
MANUFACTURING, INC.
CINCINNATI, OHIO

VENTURO

ET25KX

19947

IN-COMPARTMENT CONTROLS INSTALLATION ET25K(X)



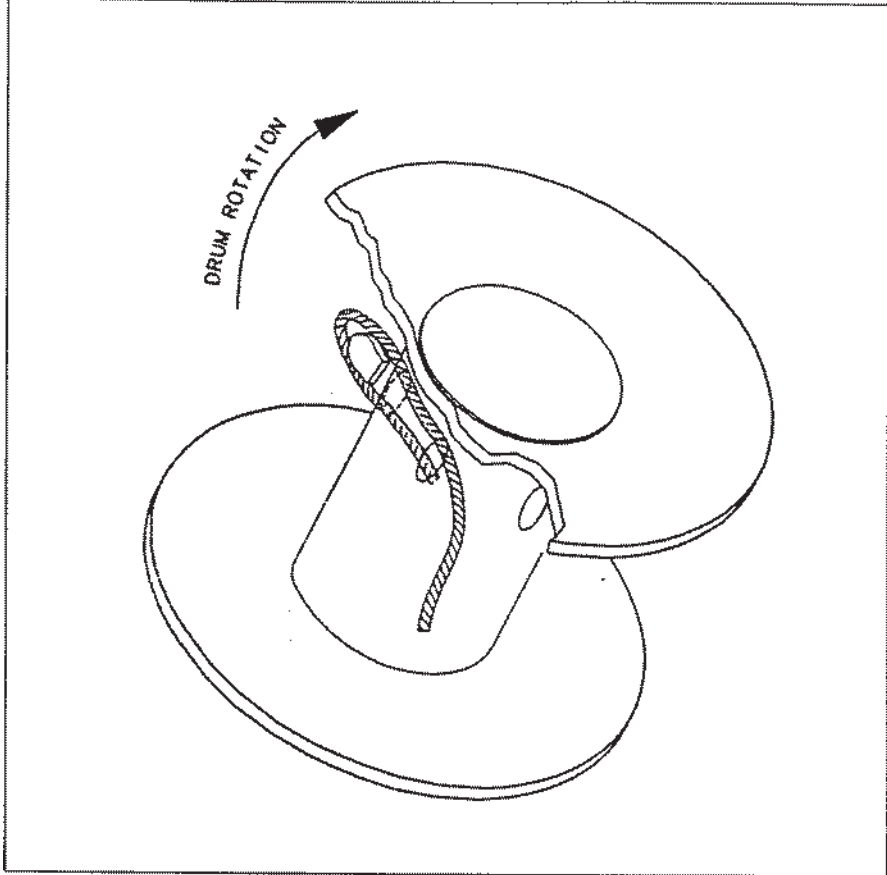
WIRE ROPE INSTALLATION

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.



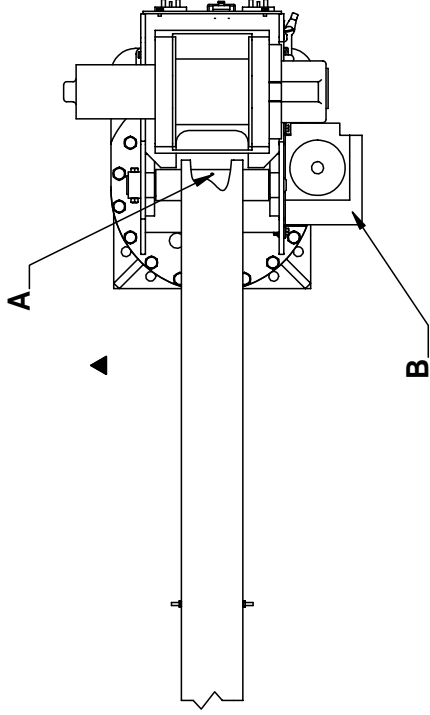
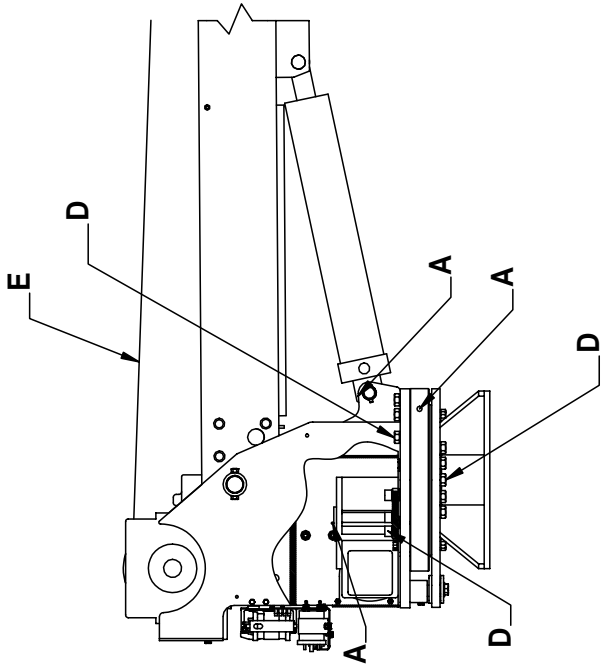
TITLE WIRE ROPE INSTALLATION DRAWING ET/HT25K(X),HT40KX, HT50KX	DATE 11-22-02D	SECTION C200
	SUPPERCEDES 4-19-02C	22245

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 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

19962

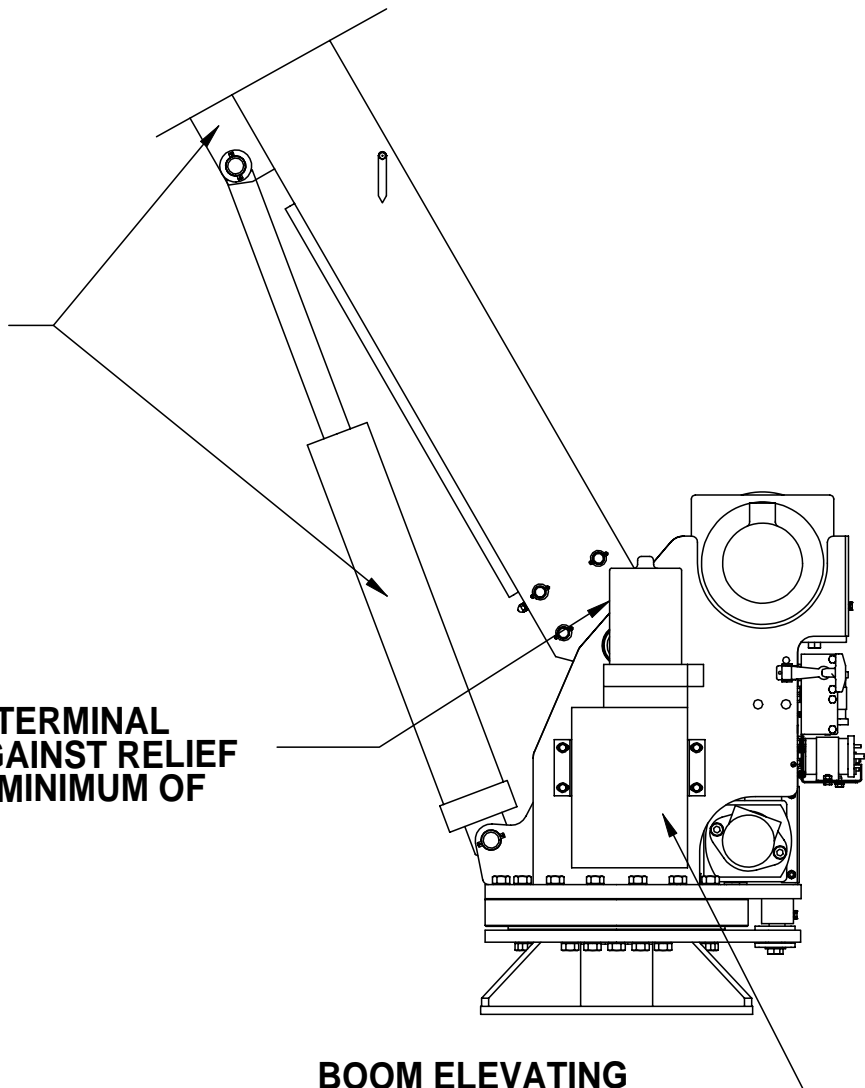
MINIMUM VOLTAGE TEST

▲ 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

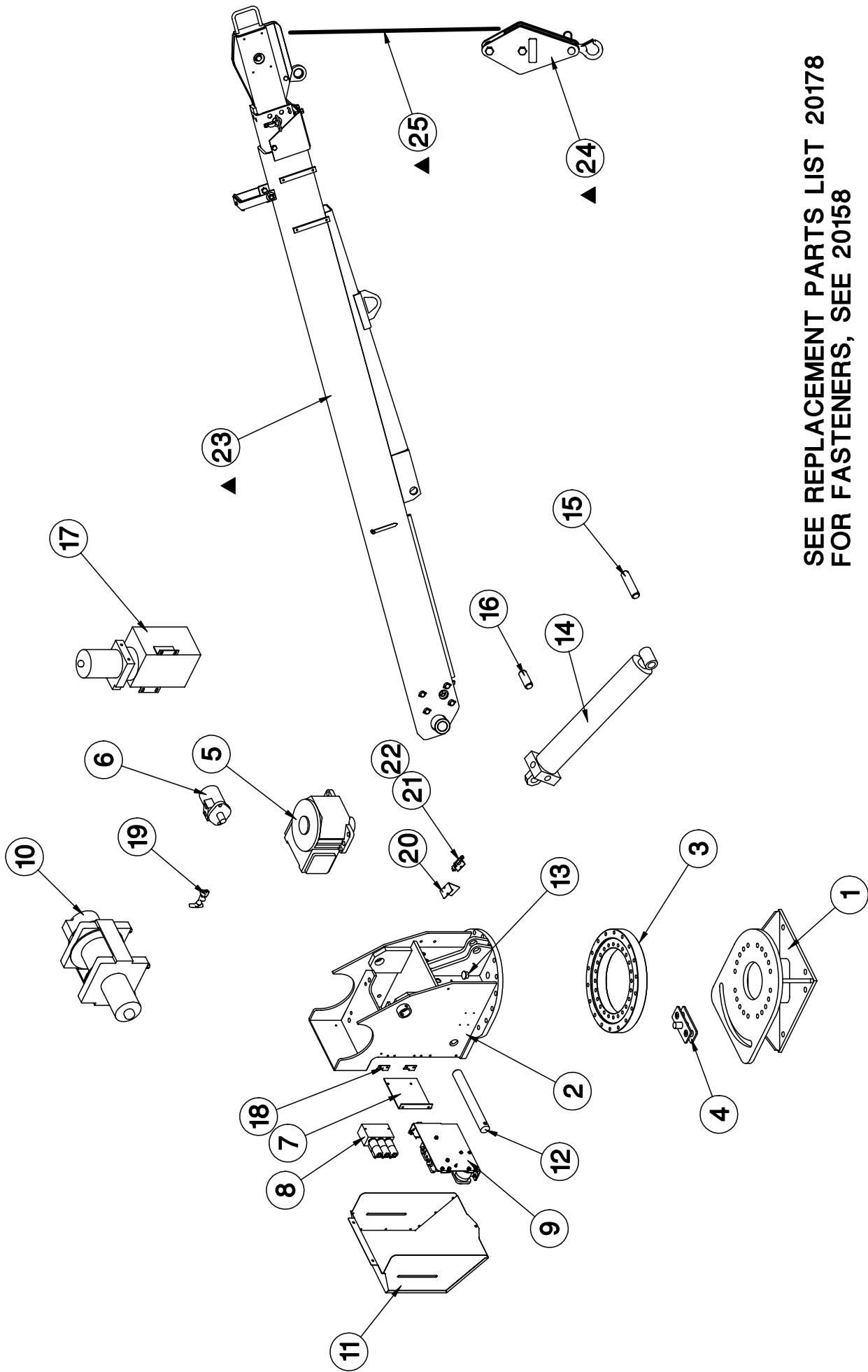


TITLE	DATE	SECTION
MINIMUM VOLTAGE TEST	7-29-03A	-
ET18K(X), ET25K(X)	SUPERSEDES 9-5-01	19963

SECTION 400

PARTS





SEE REPLACEMENT PARTS LIST 20178
FOR FASTENERS, SEE 20158

VENTURO MANUFACTURING, INC. 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			

TITLE REPLACEMENT PARTS LIST		DATE 9-16-03B	SECTION -
		SUPERCEDES 6-19-02A	20178
ET25KX			



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

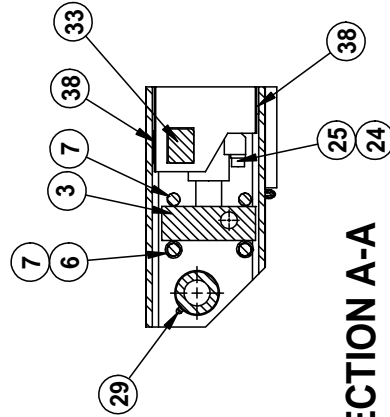
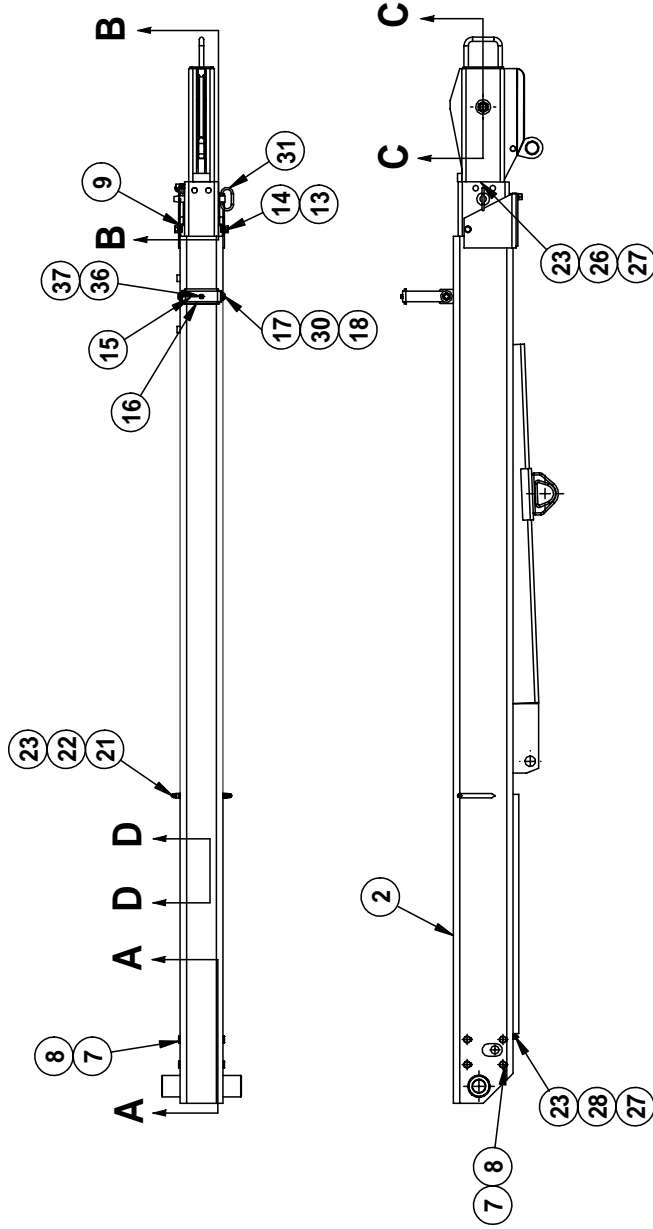
SECTION
C400

ET25K(X)

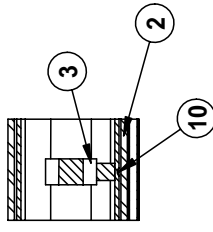
SUPERCEDES
-

20158

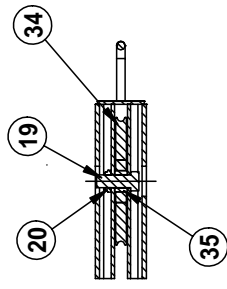
19950 BOOM PARTS DRAWING



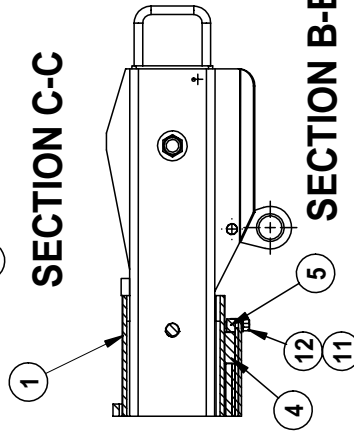
SECTION A-A



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	ISRNG-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	19865	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				

VENTURO MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE: **19950 BOOM PARTS DRAWING**

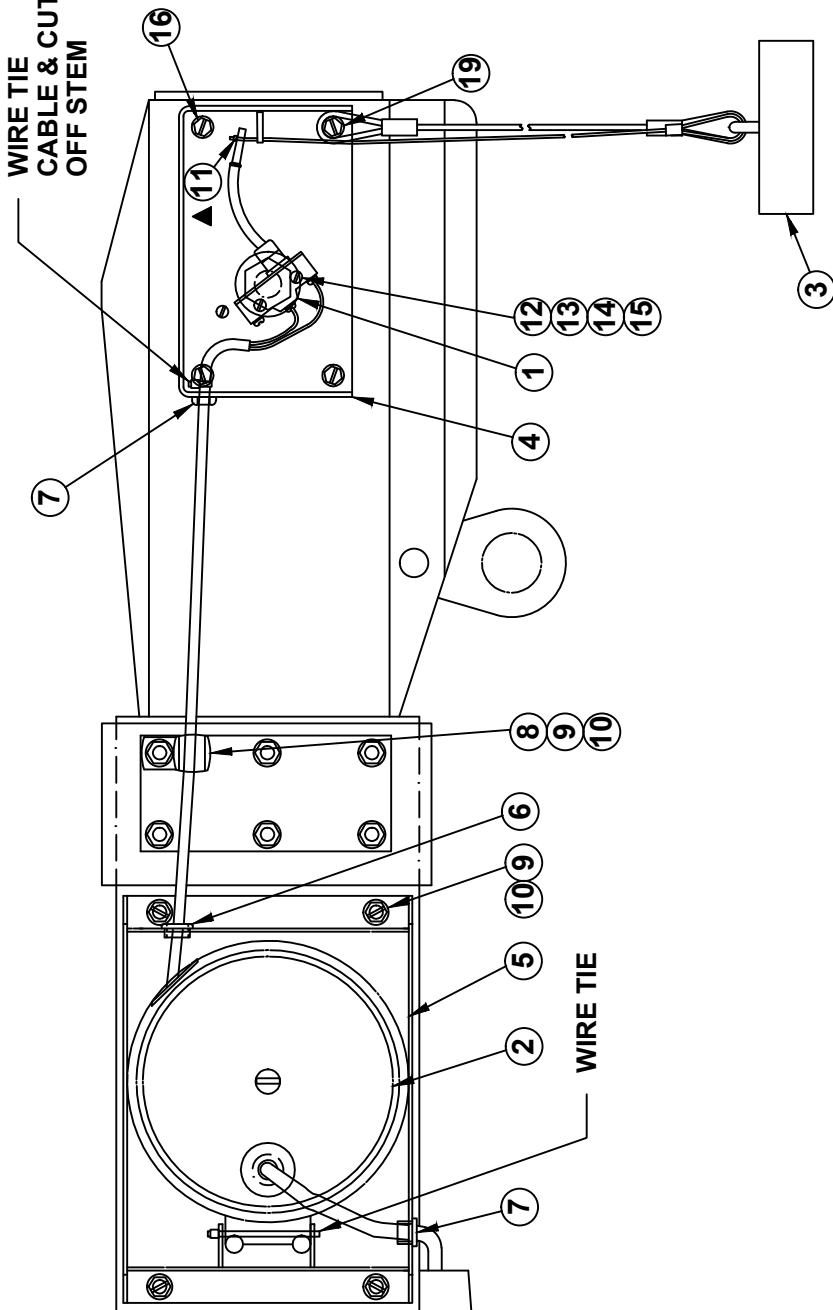
DATE: **12-4-03D**

SECTION: **-**

SUPERSEDES: **9-16-03C**

19996

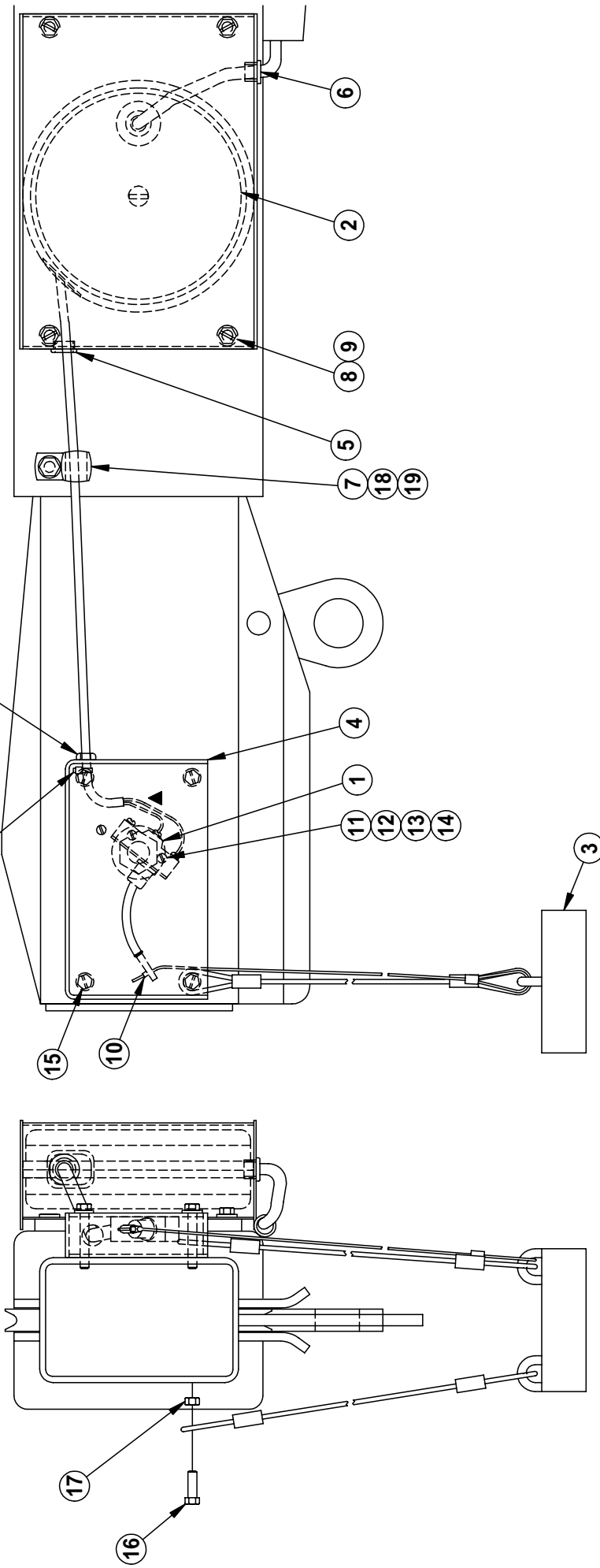
WIRE TIE
CABLE & CUT
OFF STEM



ITEM	QTY	PART NO.	DESCRIPTION
11	1	19302	SET COLLAR - 3/32"
10	5	ILWSH-031	LOCK WASHER - 5/16"
9	5	IHHCS03118050	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	20839	ANTI TWO-BLOCK HOUSING ASSEMBLY
3	1	19377-2	CABLE WEIGHT ASSY
2	1	22388-1	CORD REEL ASSY
1	1	19376	LIMIT SWITCH

 <p>MANUFACTURING, INC. CINCINNATI, OHIO</p>	<p>TITLE REPLACEMENT PARTS DRAWING</p>		<p>DATE 08-01-16G</p>	<p>SECTION C400</p>
	<p>19197-2 ANTI-TWO-BLOCK SYSTEM</p>		<p>SUPERSEDES 06-03-08F</p>	<p>20197-2</p>

WIRE TIE
CABLE & CUT
OFF STEM



ITEM	QTY	PART NO.	DESCRIPTION
10	1	19302	SET COLLAR
9	4	ILWSH-031	LOCK WASHER - 5/16"
8	4	ISHCS03118050-5	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

19	1	ILWSH-025	LOCK WASHER - 1/4"
18	1	ANUT-02520	ACORN NUT - 1/4-20
17	1	HNUT-02520	HEX NUT - 1/4-20
16	1	IHHCS02520075-5	HEX HEAD CAP SCREW - 1/4-20 x 3/4" GR. 5
15	4	IHHCS02520175	HEX HEAD CAP SCREW - 1/4-20 x 1 3/4"
14	2	ILWSH-#06	LOCK WASHER - #6
13	2	IWSH-#06	FLAT WASHER - #6
12	2	HNUT-#0632	HEX NUT - #6-32
11	2	PHMS#632125	PAN HEAD MACHINE SCREW - #6-32 x 1 1/4"

VENTURO MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
REPLACEMENT PARTS DWG

DATE
8-8-03

SECTION
C400

DATE
8-8-03

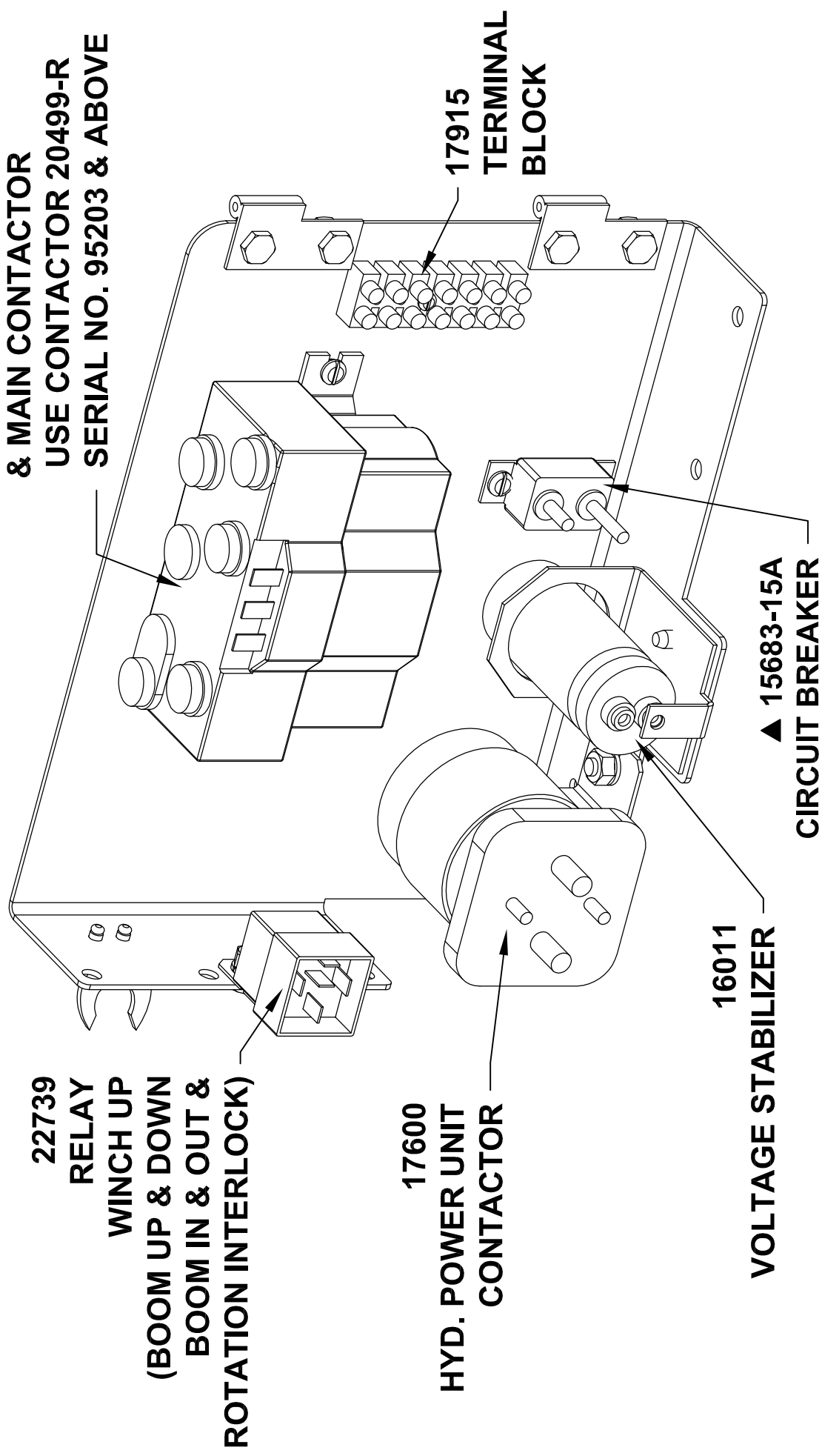
SUPERSEDES
-

21276 ANTI-TWO-BLOCK SYSTEM

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)

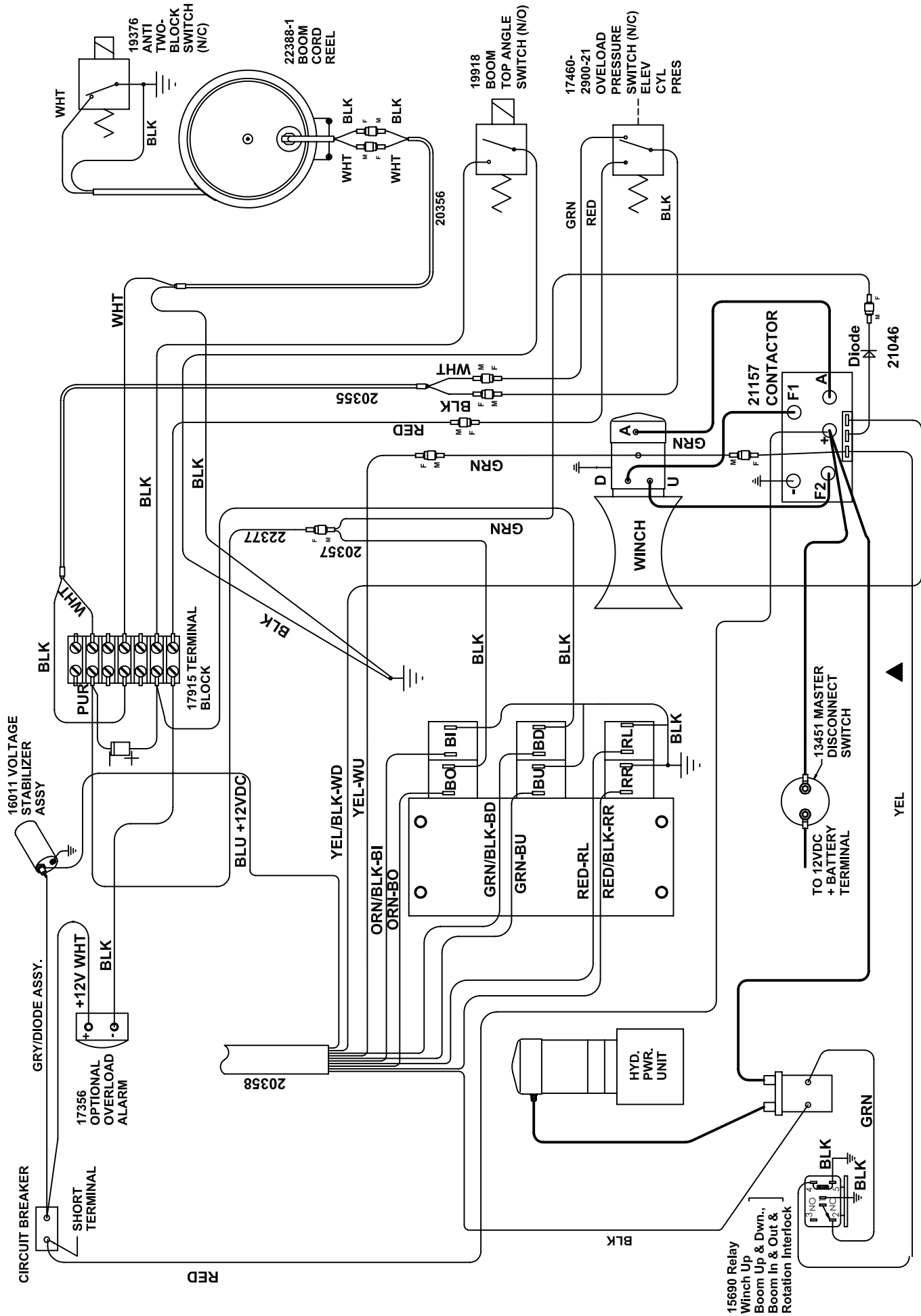
17600
HYD. POWER UNIT
CONTACTOR

16011
VOLTAGE STABILIZER

▲ 15683-15A
CIRCUIT BREAKER

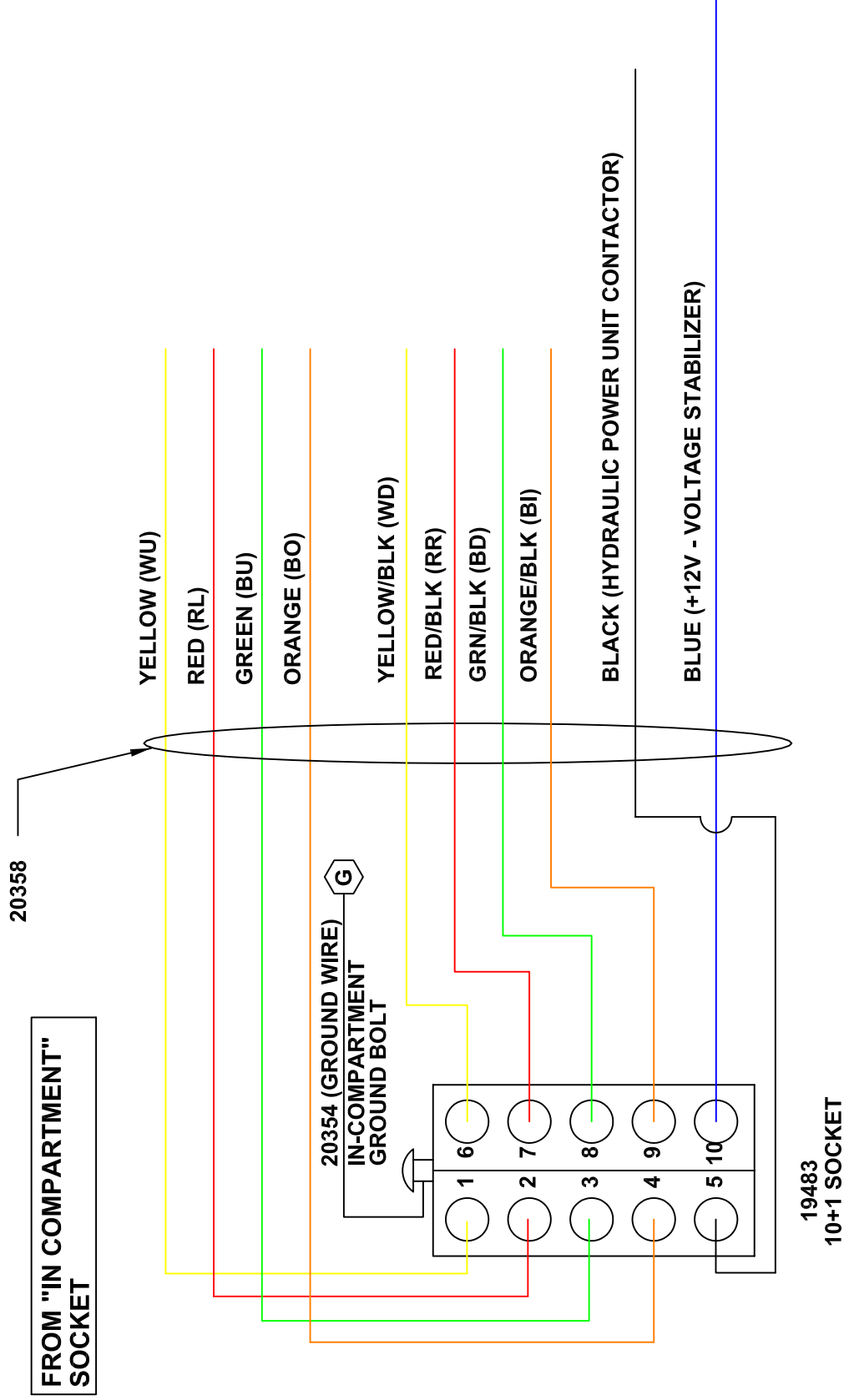
17915
TERMINAL
BLOCK

 VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE	ELECTRICAL COMPONENT ASSEMBLY	
	DATE	09-06-12G	SECTION -
	SUPERSEDES	04-24-08F	19919



VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE	WIRING DIAGRAM	
	SECTION	-	
	DATE	7-15-04D	
	SUPERSEDES	10-25-02C	
			20348
			ET25KX

ET25KX IN-COMPARTMENT CONTROLS

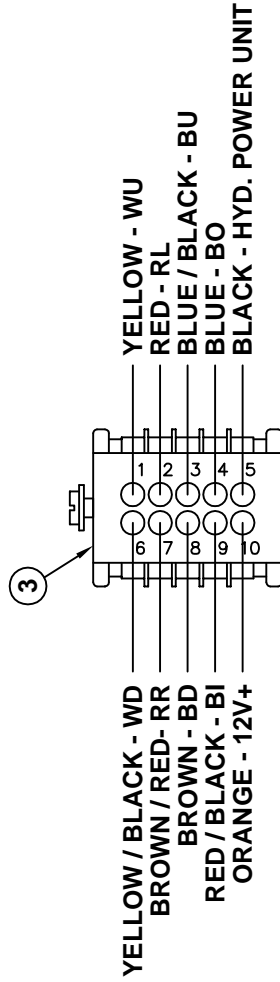
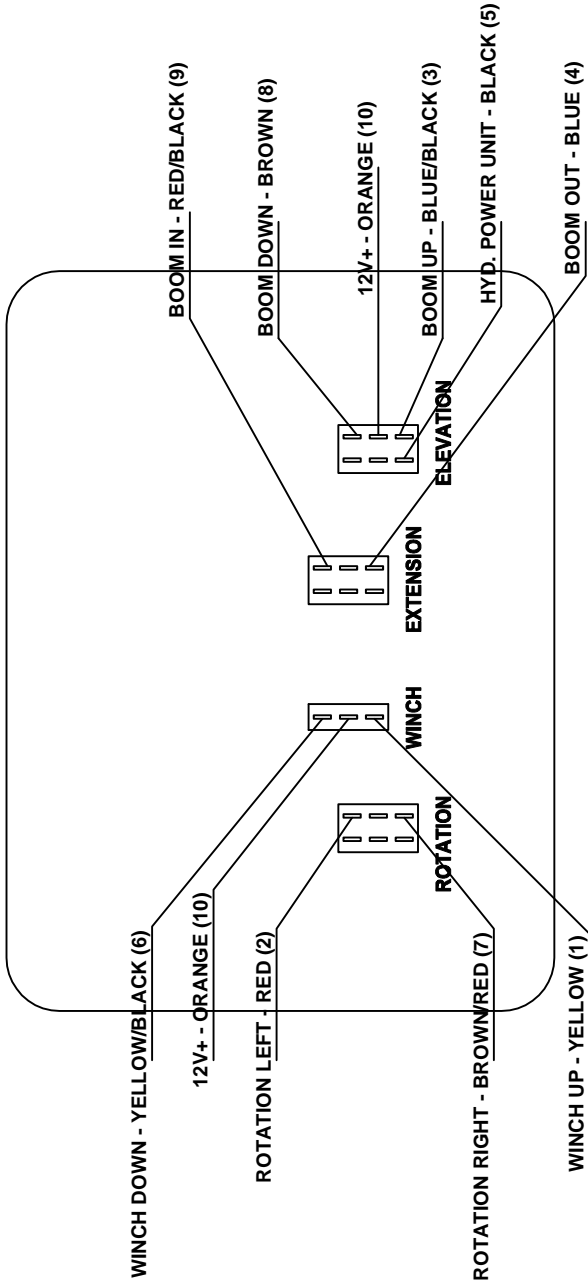


TITLE		IN-COMPARTMENT CONTROLS	
DATE		1-19-05A	
SECTION		-	
SUPERSEDES		4-12-02	
ET25KX CRANE		20359	

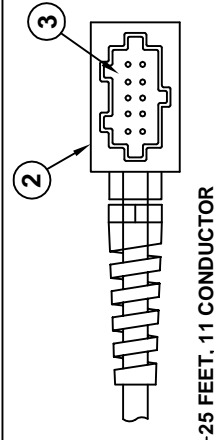
22060 PENDANT (4 - SWITCH)

CORD REPLACEMENT INSTRUCTIONS

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



PLUG - BACKSIDE VIEW



25 FEET, 11 CONDUCTOR

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

DATE

9-28-12B

SECTION

C400

SUPERSEDES

9-6-11A

22076

TITLE

REPLACEMENT PARTS DRAWING

22060 PENDANT (STANDARD CTRL)



MANUFACTURING, INC.
CINCINNATI, OHIO

22067 PENDANT (RADIO - NON-PROP) NO ENG. CTRLS FOR ET CRANES



BLACK - GROUND
FROM GRAY CONNECTOR

WHITE - WD
YELLOW - RR
GRAY - BD
PURPLE - BI
RED & WHITE & ORANGE & BROWN
12V+ FROM GRAY CONNECTOR

BLUE - WU
BROWN - RL
BLACK - BU FROM BLACK CONNECTOR
ORANGE - BO
RED - HYD. POWER UNIT

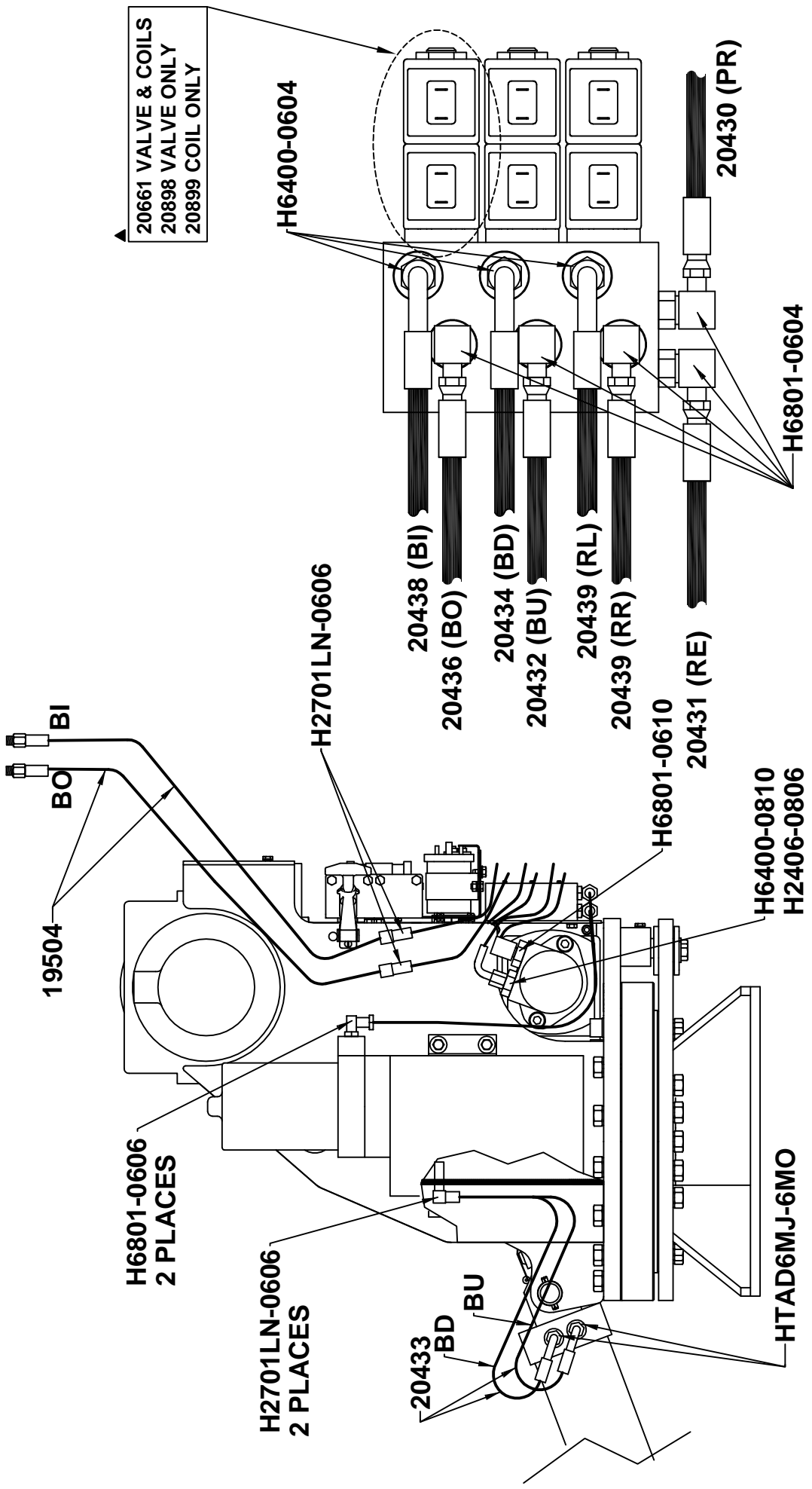
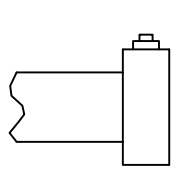
PLUG - BACKSIDE VIEW

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
	ITEM	QTY	PART NO.
			DESCRIPTION

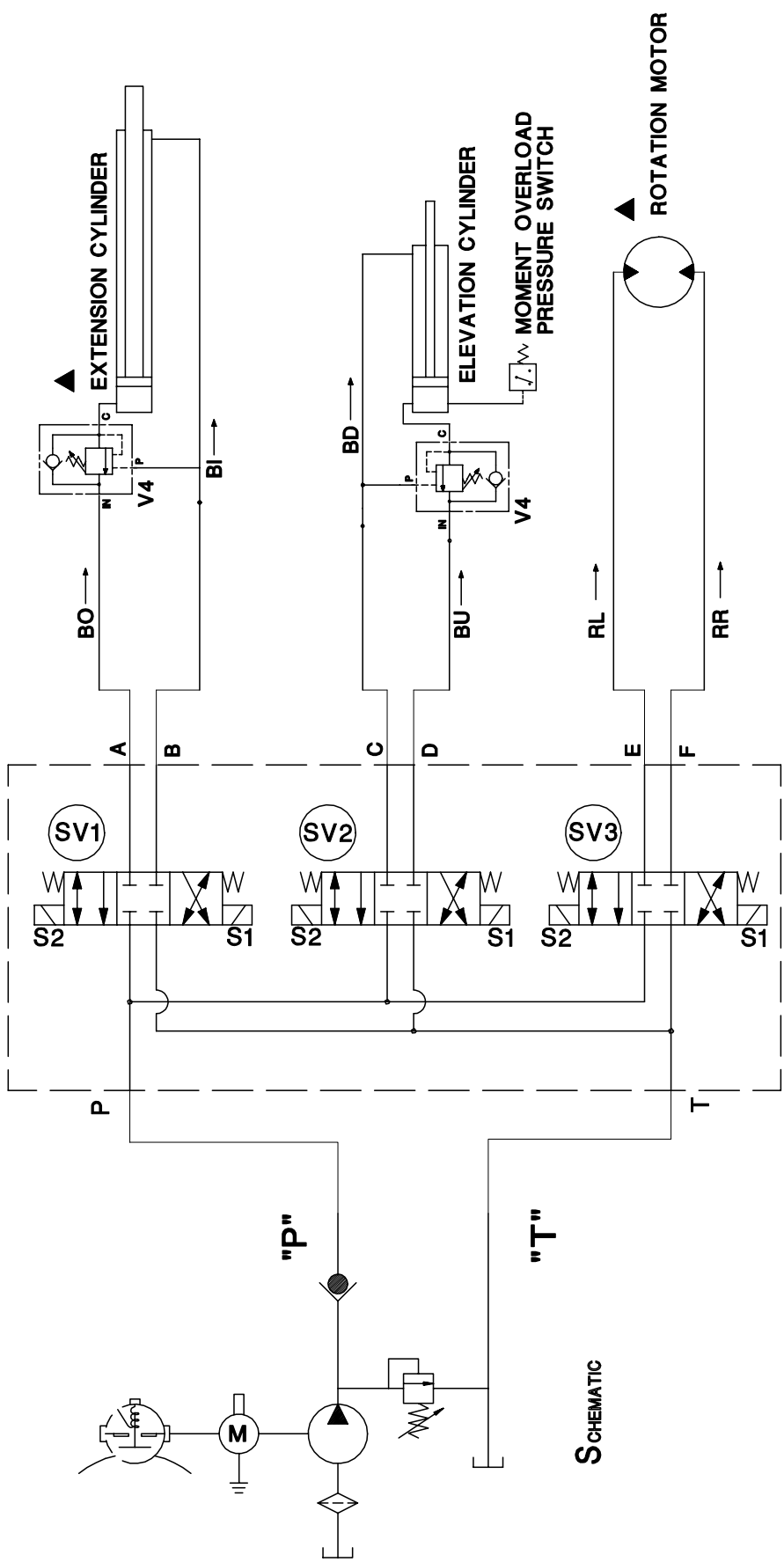
⊗ ITEM NOT SHOWN ON DRAWING

 <p>VENTURO[®] MANUFACTURING, INC. CINCINNATI, OHIO</p>	TITLE	REPLACEMENT PARTS DRAWING		
	DATE	1-17-05C	SECTION	C400
	SUPSEDES	12-6-04B		22085

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



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



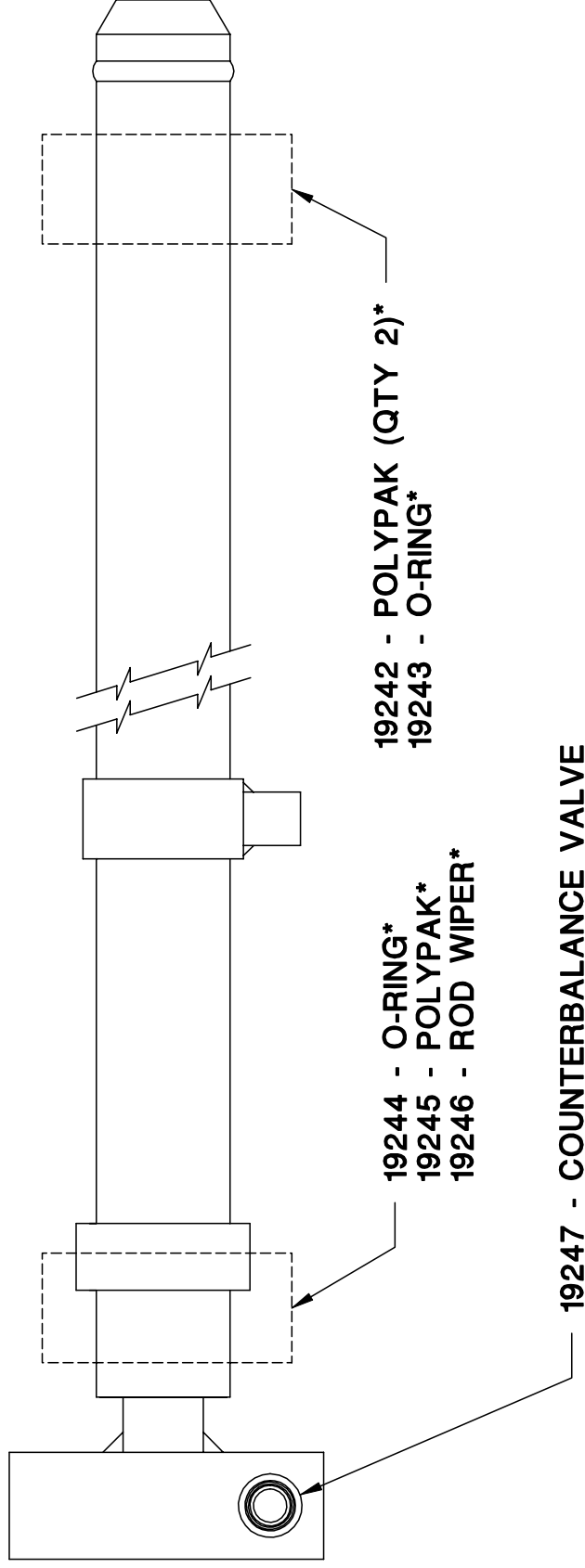
SCH**E**M**A**T**I**C

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'

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

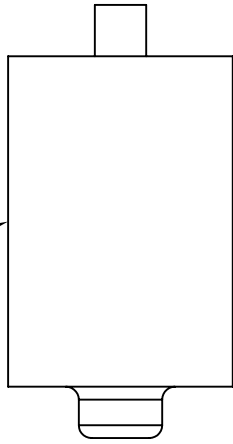
19886-1 EXTENSION CYLINDER



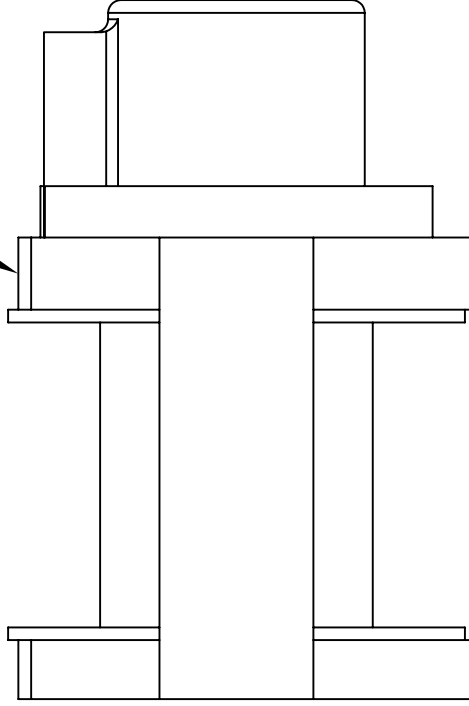
* ITEMS INCLUDED IN 19887 SEAL KIT

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

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

DIVISION OF COLLINS ASSOCIATES, INC
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513.772.8448
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