



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

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

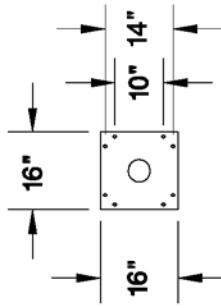
SECTION

C120

19958b

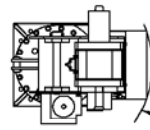
WARNING: THESE PRODUCTS ARE NOT PASSENGER LIFTS. THEY ARE NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.

TOTAL INSTALLED WEIGHT 1300 lbs.



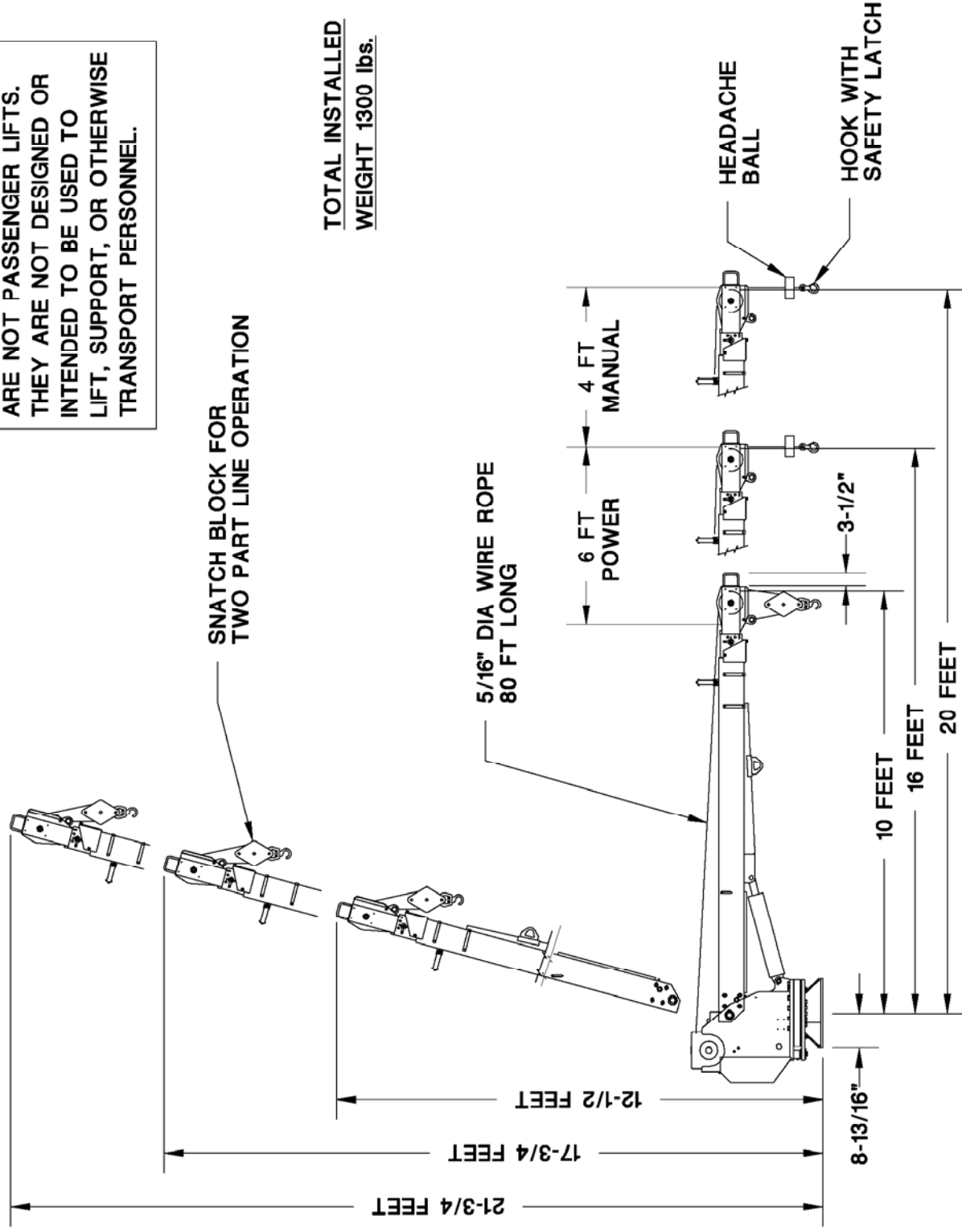
BASE MOUNTING DIMENSIONS

SNATCH BLOCK FOR TWO PART LINE OPERATION



20-1/4" SWING RADIUS

5/16" DIA WIRE ROPE 80 FT LONG



TITLE
INSTALLATION DRAWING

DATE
9-28-01

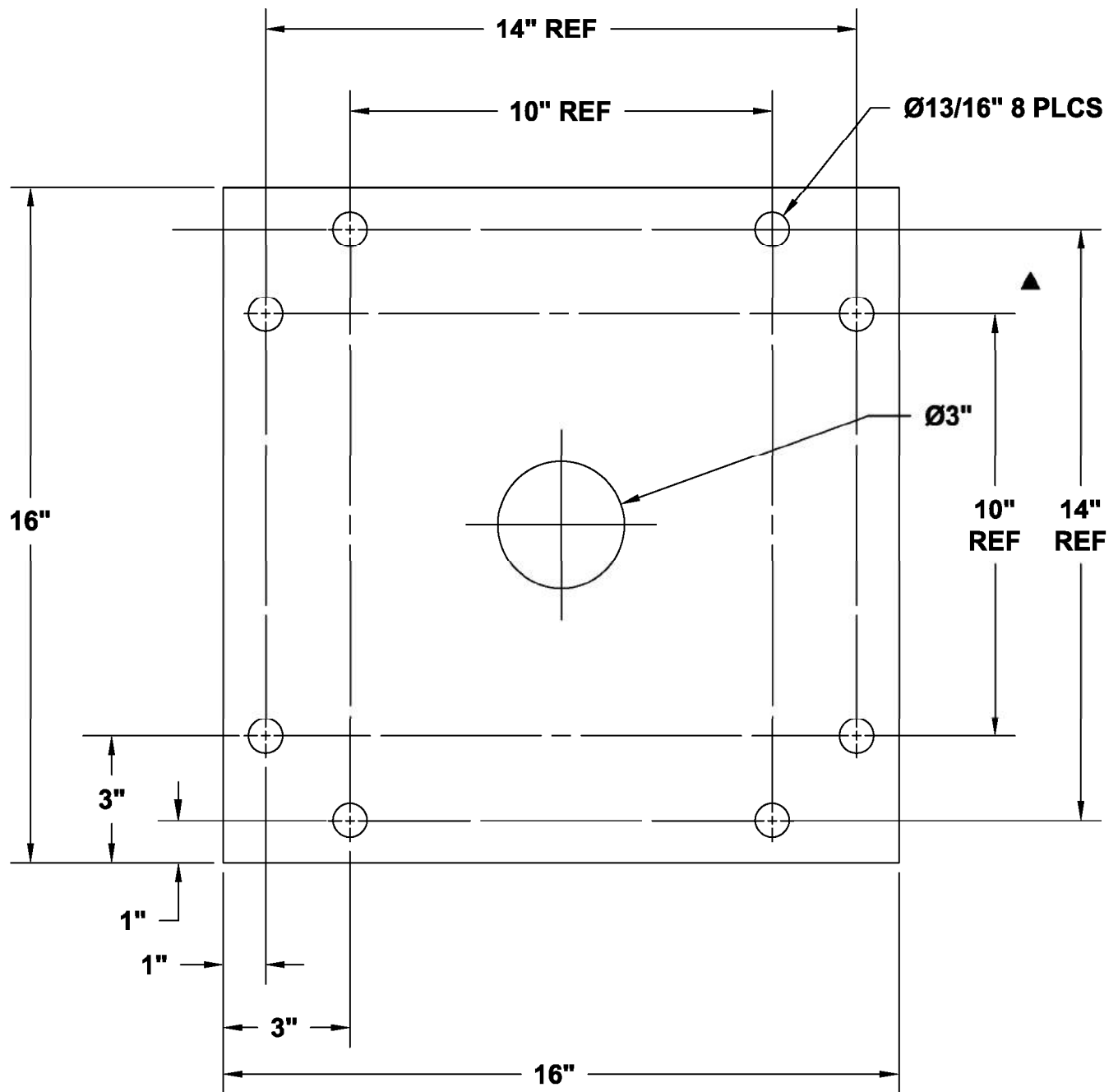
SECTION
C100

ET25KX - 10/16/20 BOOM

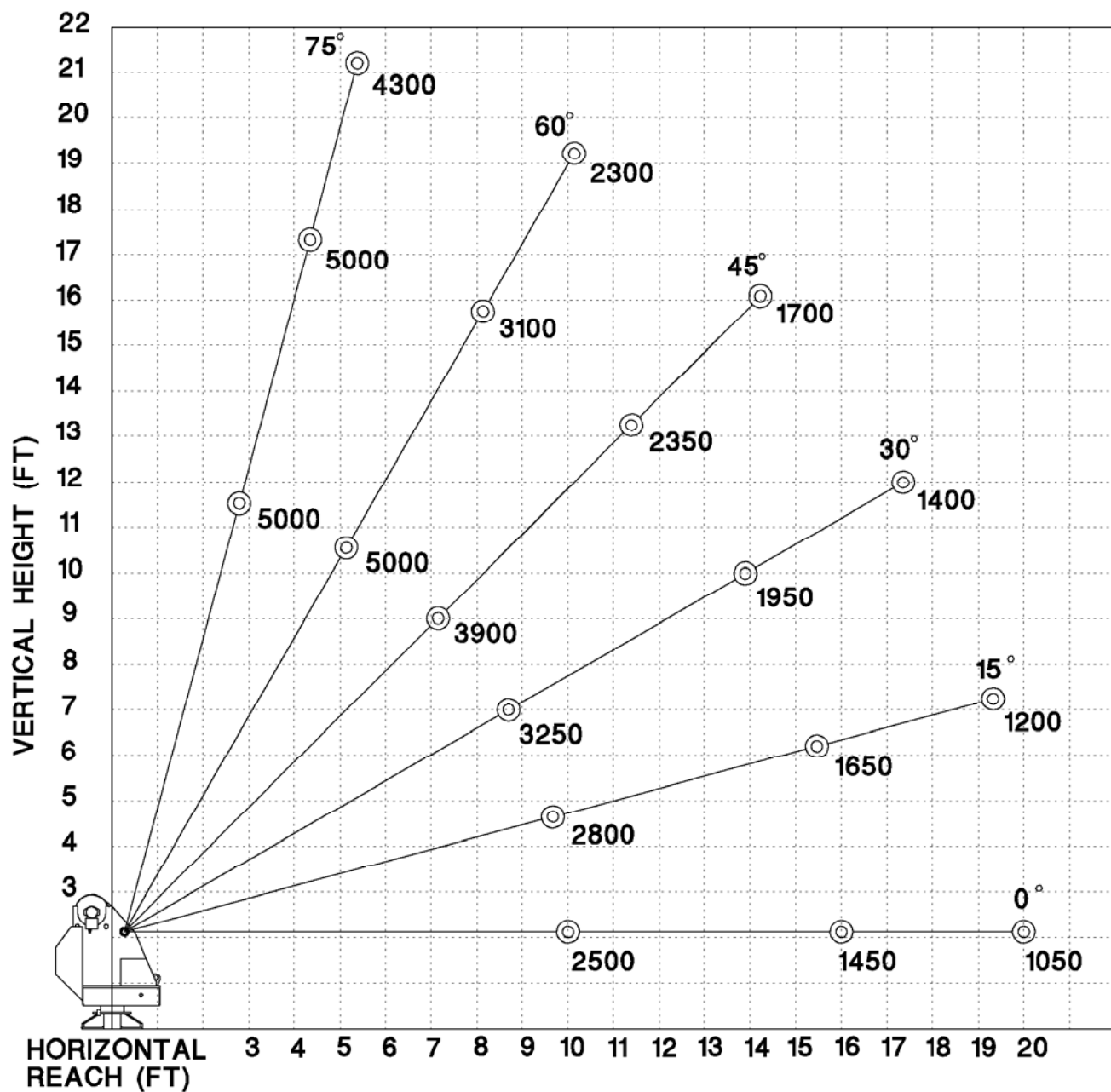
SUPERSEDES
-

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**



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TITLE
CAPACITY CHART

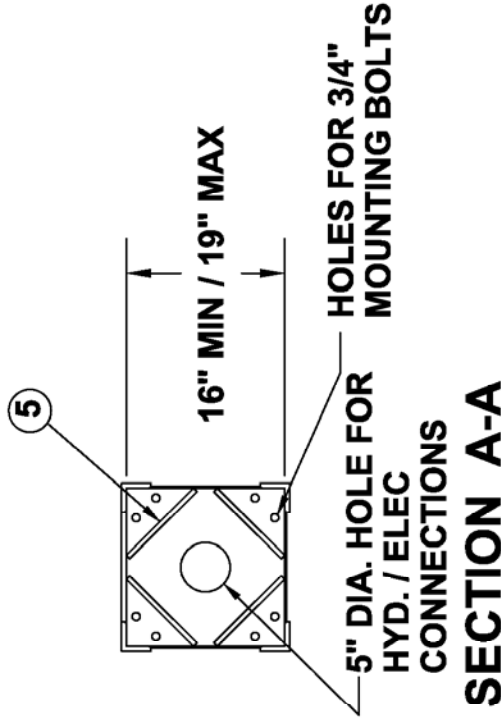
DATE
10-16-97A

SECTION
C100

ET/HT25K(X) - 10-16-20

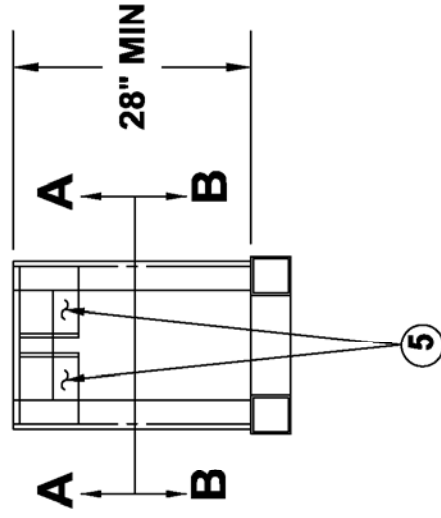
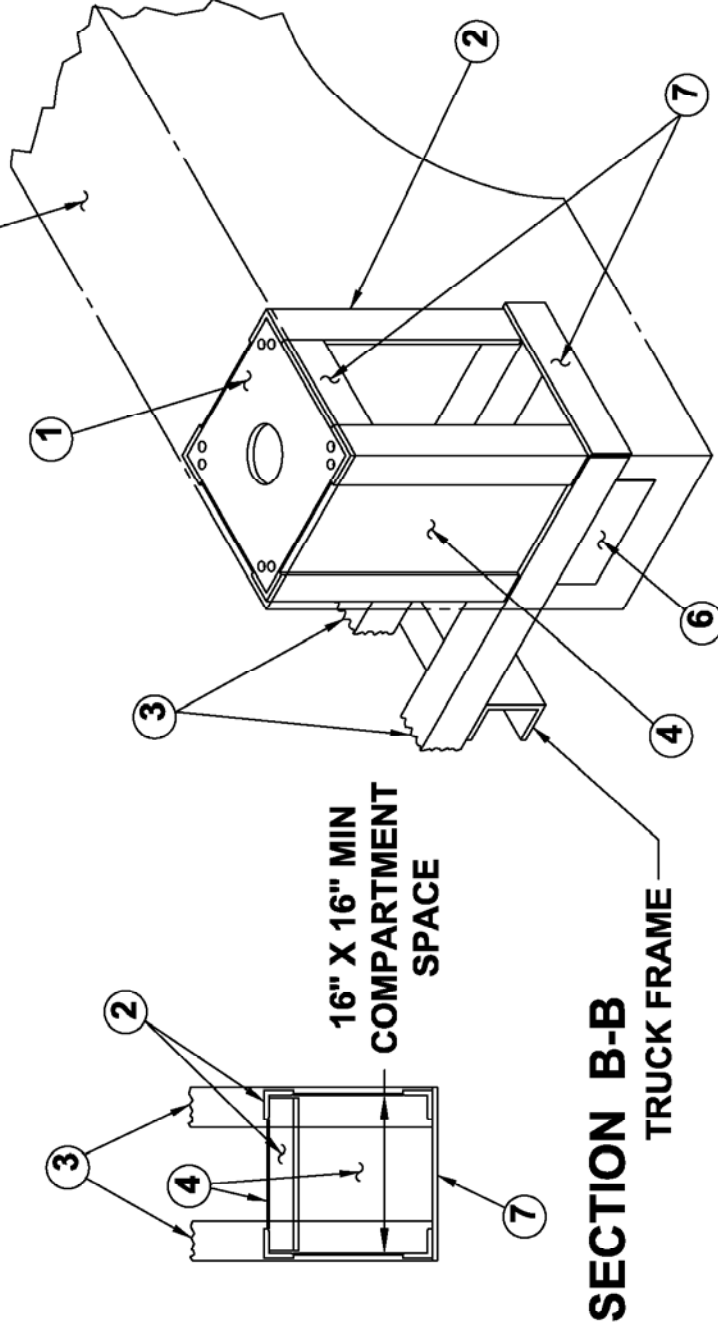
SUPERSEDES
8-17-96

119233



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.



TYPICAL SERVICE BODY REINFORCEMENT



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

DATE
1-18-05E

SECTION
C100

ET/HT25K(X) & ET/HT18K(X) ▲

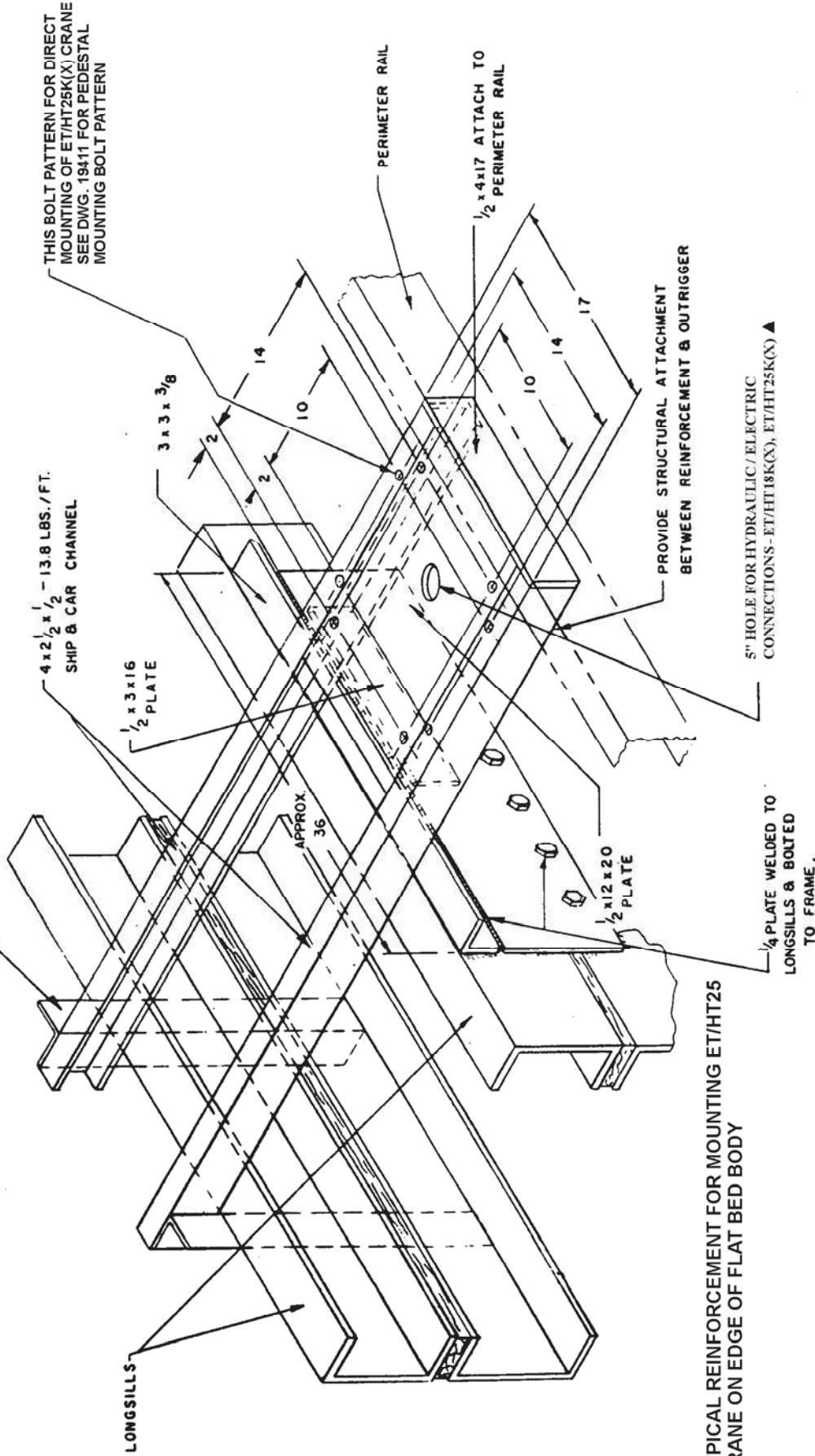
SUPERSEDES
7-29-03D

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.

ANGLES BOLTED INTO
FRAME & LONGSILLS
2 PLACES

$3 \times 3 \times \frac{3}{8}$



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

VENTURO
MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DRAWING

DATE
7-29-03M

SECTION
C100

ET/HT18K(X), ET/HT25K(X) ▲

SUPERCEDES
10-11-02L

14510

SECTION 150

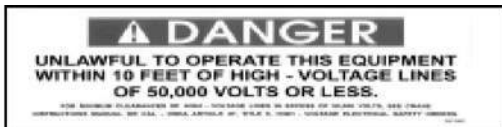
SAFETY

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) (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



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

ET & HT CRANE SERIES

DATE
5-15-02H

SUPERCEDES
5-13-97G

SECTION
C150

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.



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TITLE
INSTALLATION DWG

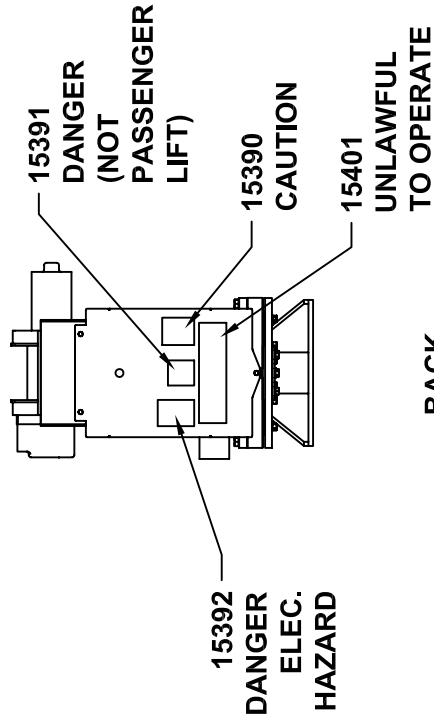
▲ **ELECTRIC CRANES**

DATE
4-18-08H

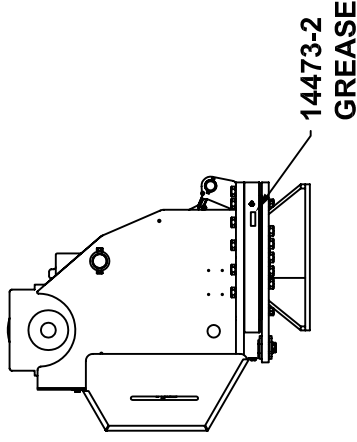
SUPERCEDES
7-29-03G

SECTION
C150

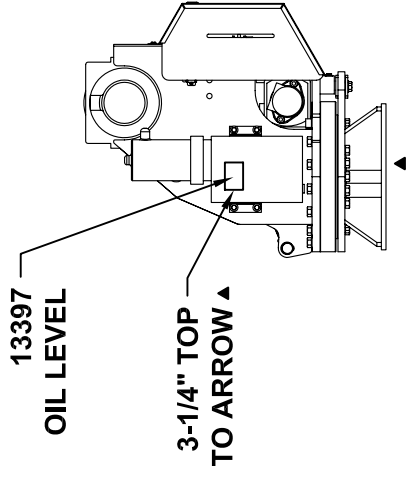
850711



BACK



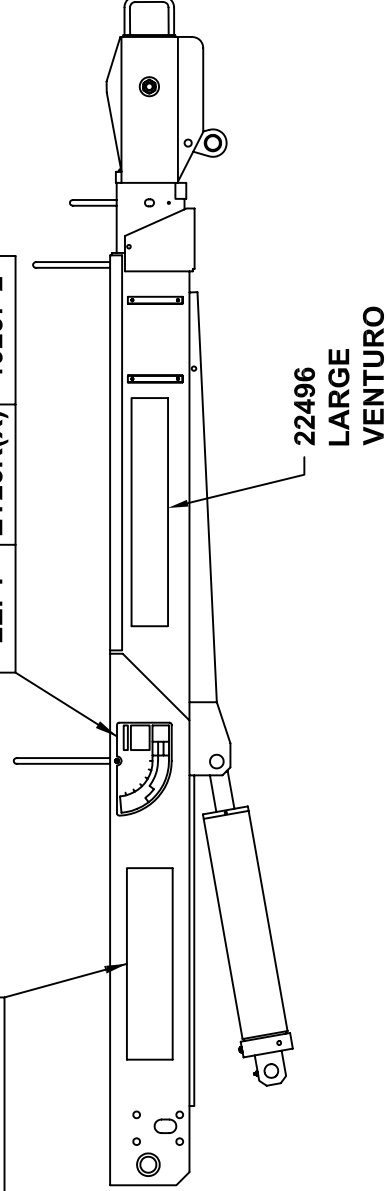
RIGHT



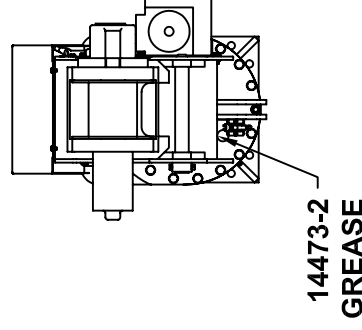
LEFT

MODEL NO.
19742 - ET25K
19743 - ET25KX

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



BOOM



TOP



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
DECAL PLACEMENT

ET25K(X)

DATE
5-10-06A

SUPERSEDES
7-31-02

SECTION
C150

20549

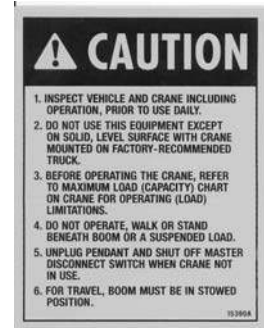
PART NO.: 15390

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.



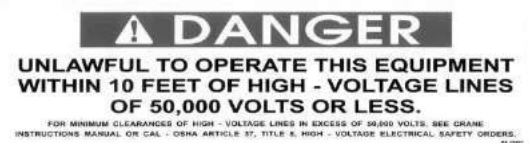
PART NO.: 15401

DECAL: UNLAWFUL TO OPERATE

FUNCTION: To inform the operator of proper operation in vicinity of power lines.

QUANTITY: 1

PLACEMENT: Right side of housing.



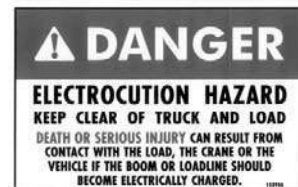
PART NO.: 15393A

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

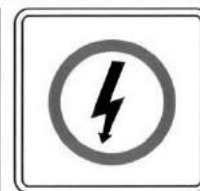
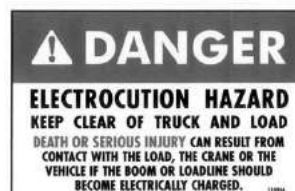
PART NO.: 15393A

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.



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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.



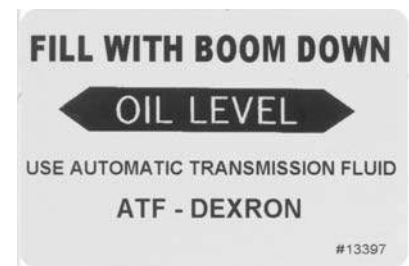
PART NO.: 13397

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.



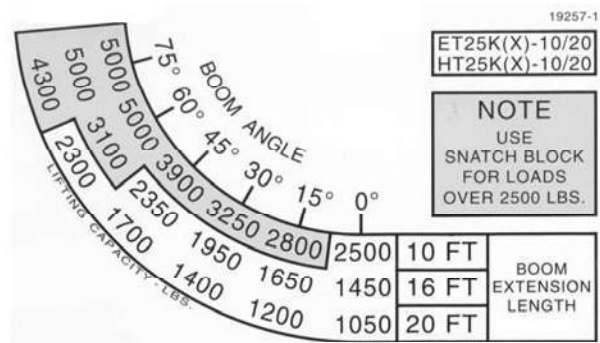
PART NO.: 19257-1 & 19257-2 (OPPOSITE)

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.: 19742

DECAL: MODEL NUMBER (ET25K)

FUNCTION: To show the model of the crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.

ET25K

PART NO.: 19743

DECAL: MODEL NUMBER (ET25KX)

FUNCTION: To show the model of the crane.

QUANTITY: 2

PLACEMENT: One on each side of boom.

ET25KX



MFG., INC.
CINCINNATI, OHIO

TITLE	DATE	SECTION
MODEL & CAPACITY DECALS	9-7-05	C150
ET25K(X)	SUPERSEDES -	21358

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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CINCINNATI, OHIO

TITLE

CABLE & BATTERY

ELECTRIC CRANES

DATE

2-9-09D

SUPERCEDES

11-24-08C

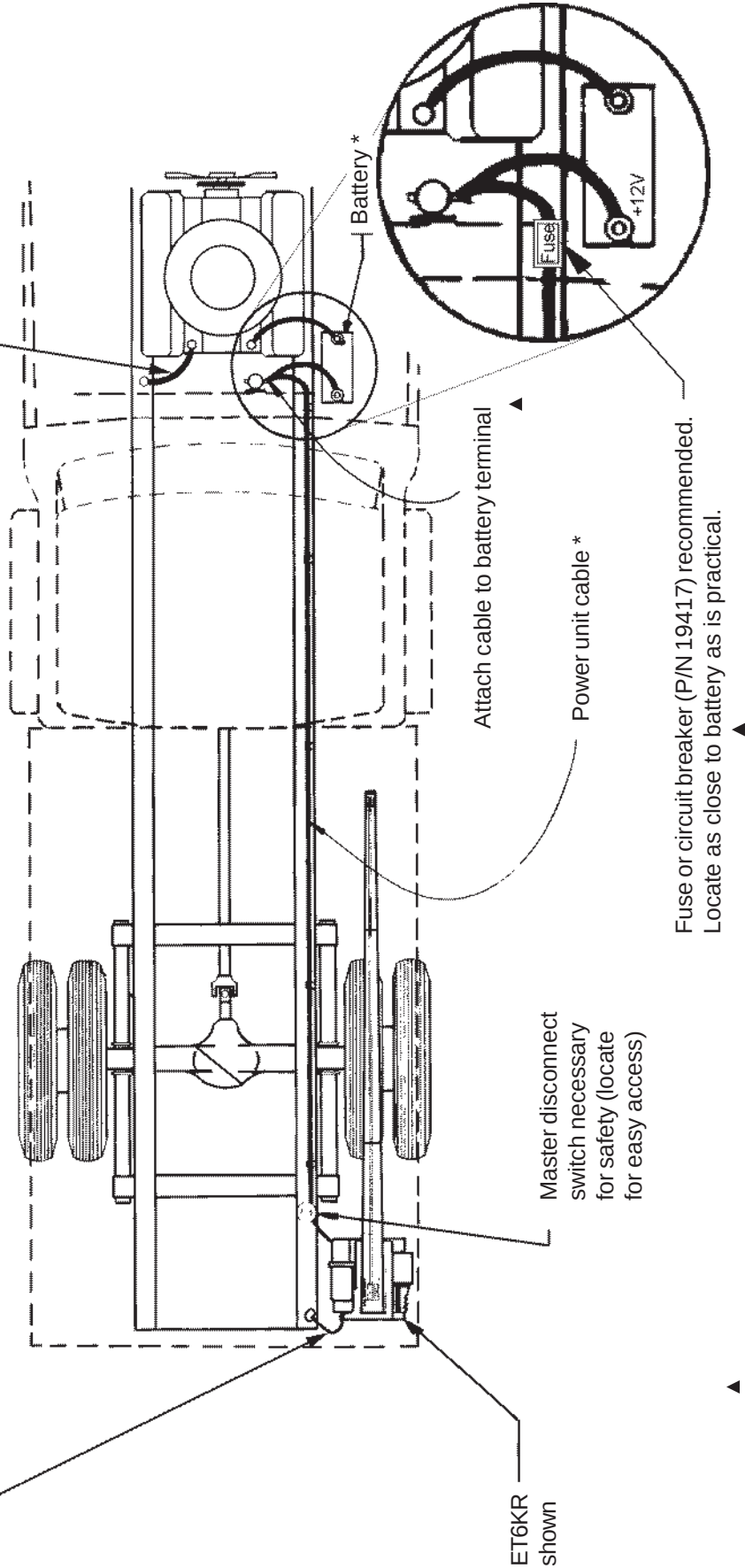
SECTION

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

MANUFACTURING, INC.
CINCINNATI, OHIO

VENTURO

TITLE
INSTALLATION - BATTERY CABLE

DATE
4-18-08G

SECTION
C200

WINCH & CRANE

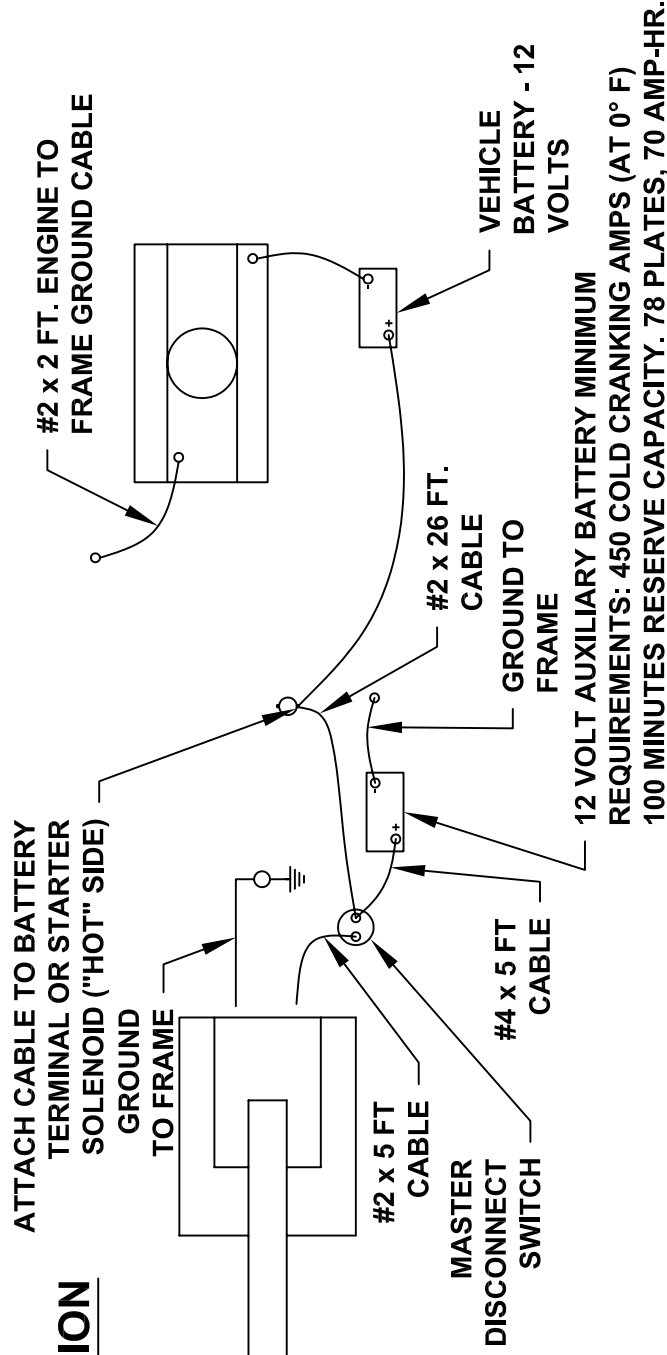
SUPERCEDES
8-2-06F

15660

RECOMMENDED INSTALLATION

W/ AUXILIARY BATTERY IN PARALLEL WITH VEHICLE BATTERY.

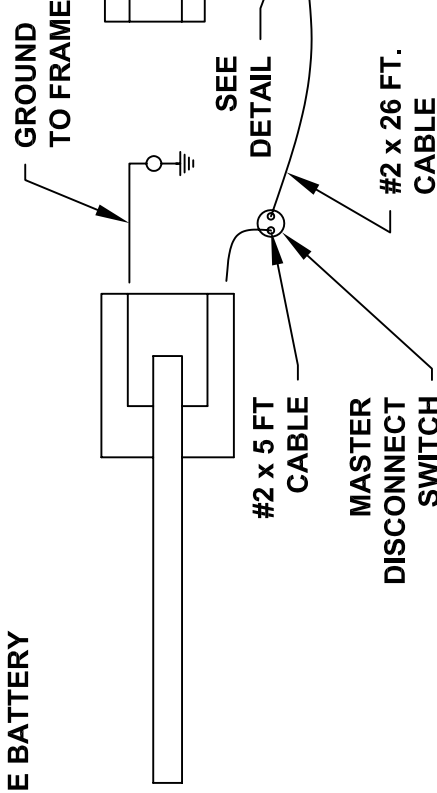
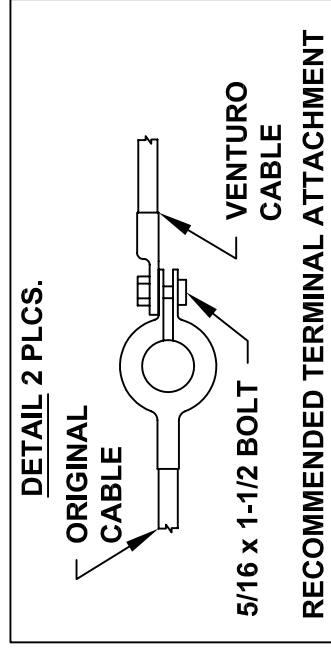
IF LONGER CABLE NECESSARY, CONSULT VENTURO ENGINEERING DEPT.



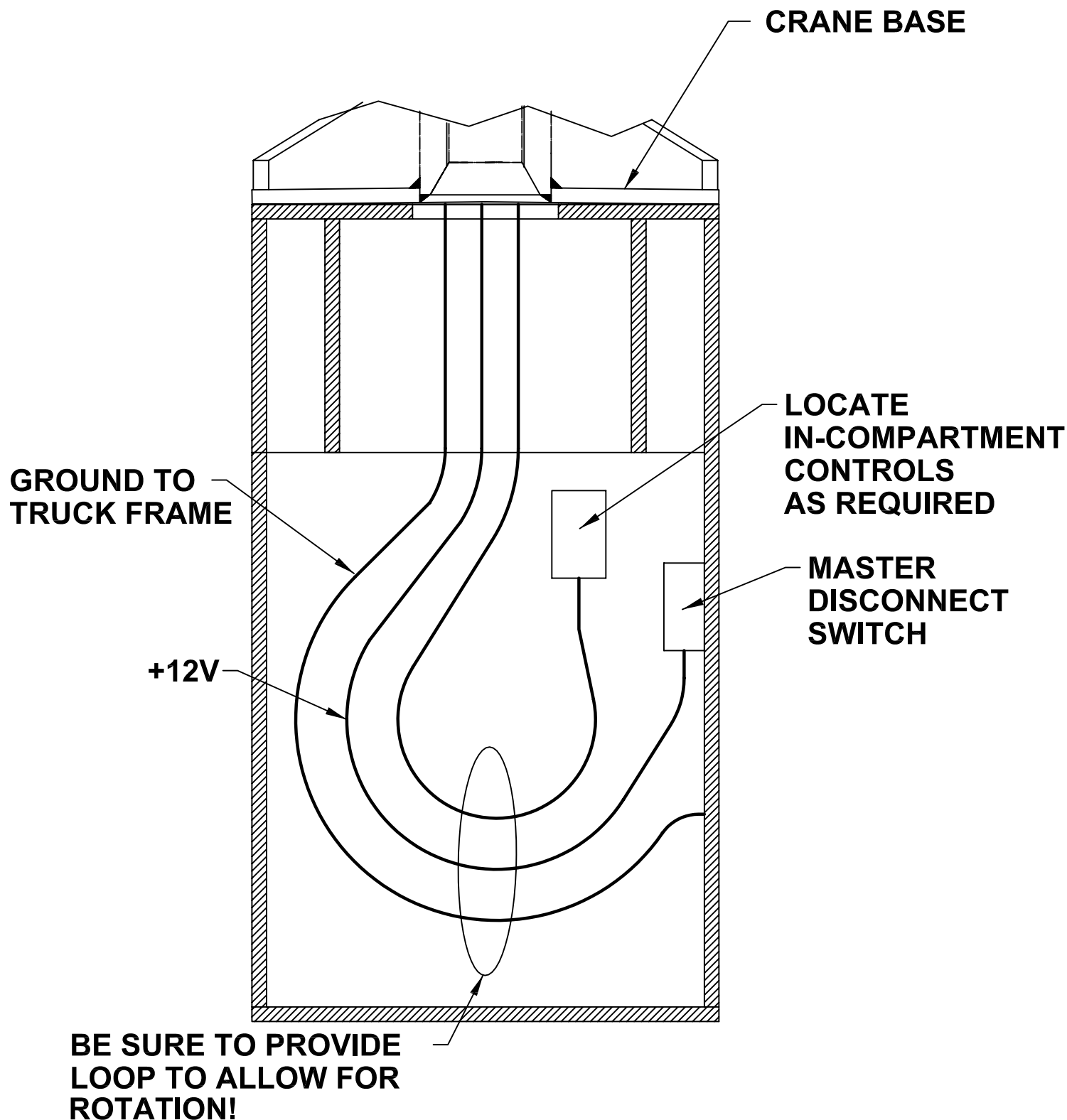
LIMITED DUTY ALTERNATE INSTALLATION (NOT RECOMMENDED)

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.



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.

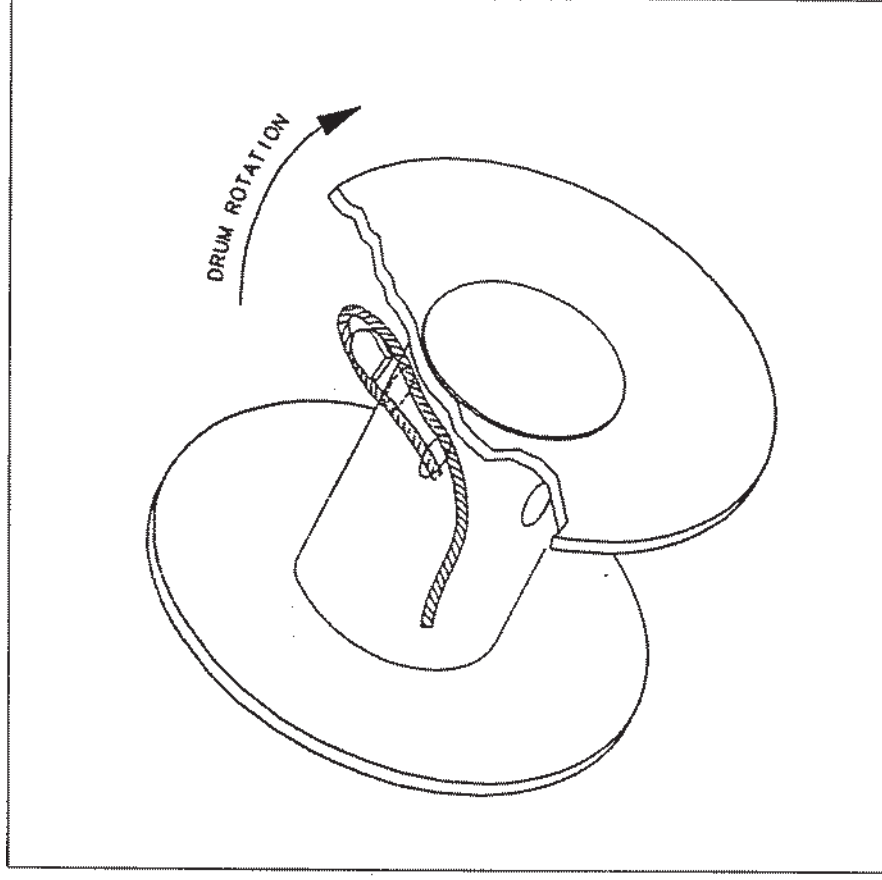


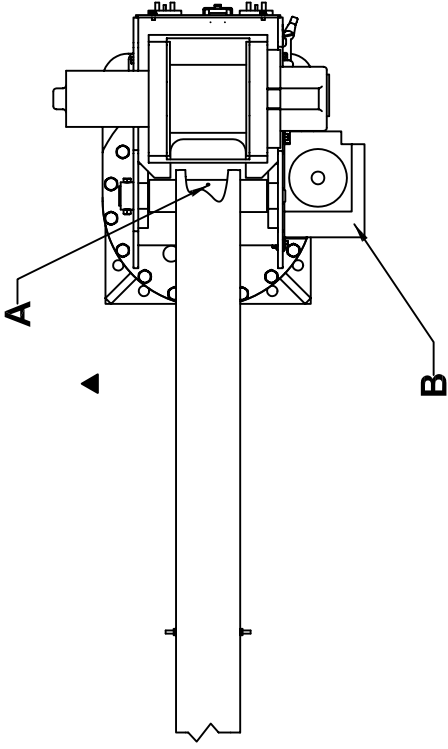
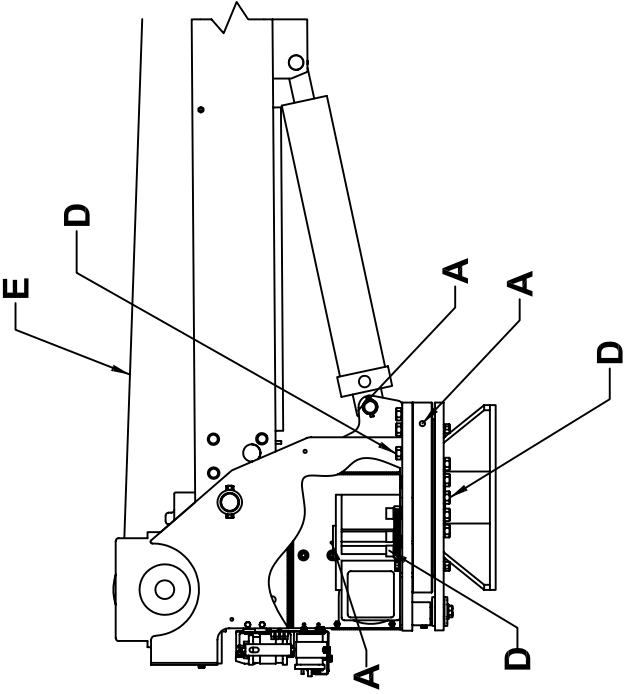
FIG 1

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 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

DATE

12-1-03C

SECTION

-

SUPERSEDES

11-18-03B

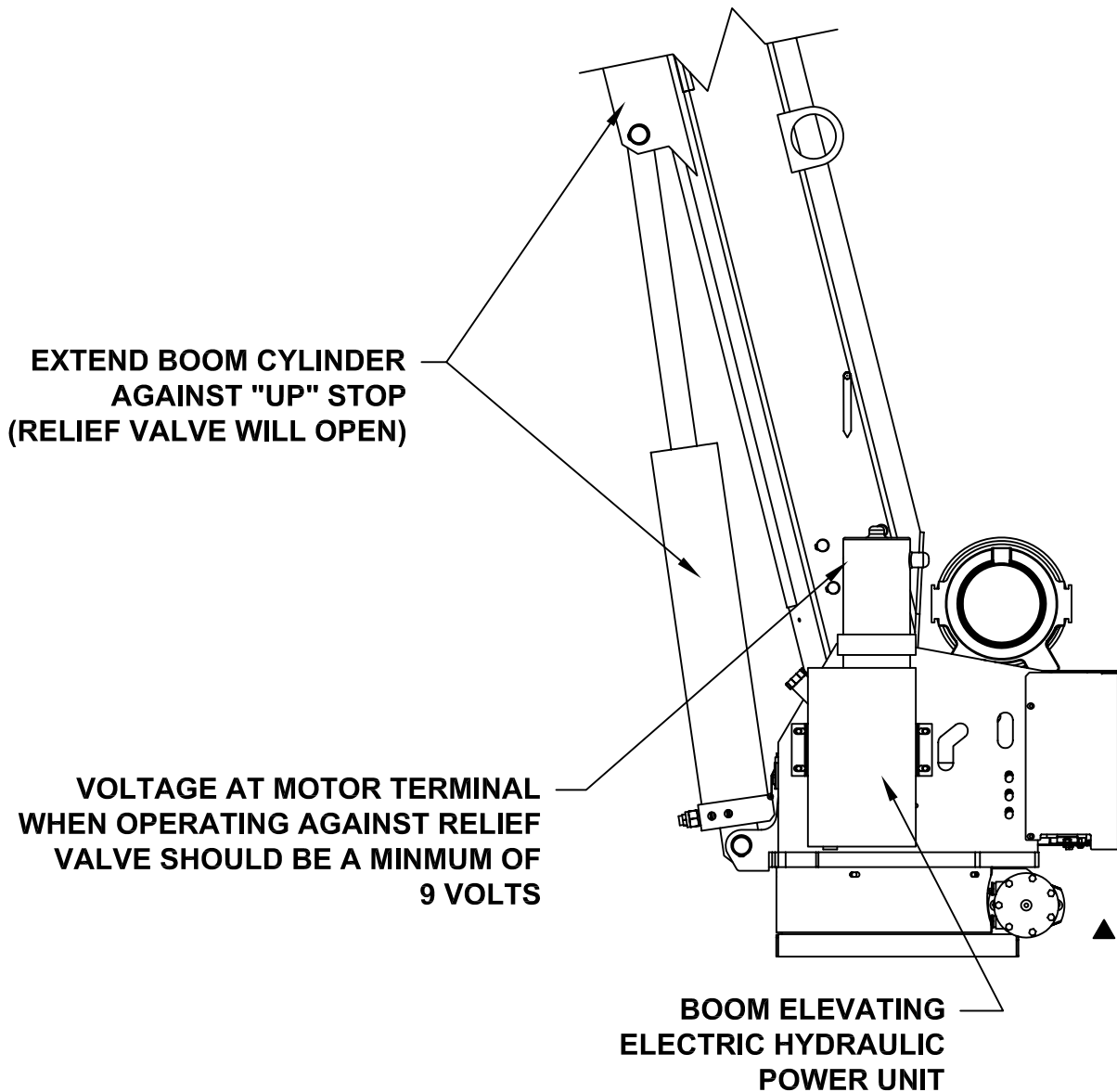
ET25/30K(X)

19962

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



MFG., INC.
CINCINNATI, OHIO

TITLE
MINIMUM VOLTAGE TEST

ET SERIES CRANES

DATE
10-5-09F

SUPERSEDES
2-9-09E

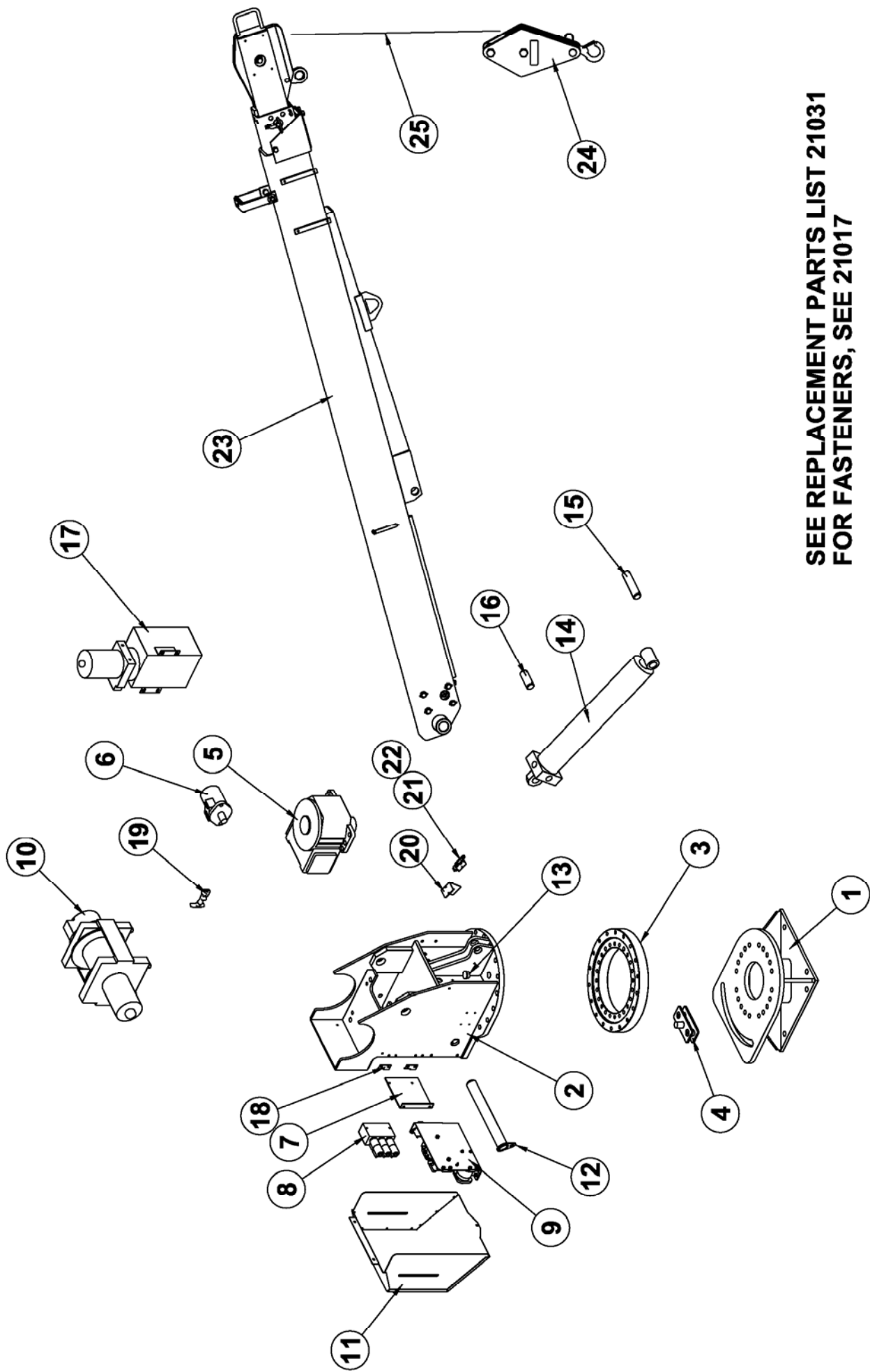
SECTION
-

19963

SECTION 400

PARTS





SEE REPLACEMENT PARTS LIST 21031
FOR FASTENERS, SEE 21017

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	21012	BOOM PIVOT PIN			
13	RL-644	PLASTIC PLUG			
14	21742	ELEVATION CYLINDER			
15	18761	PIVOT PIN - 1-1/4 DIA.			
16	18762	PIVOT PIN - 1-1/4 DIA.			
17	19820-3000	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 BRACKET			
22	19918	BOOM SHUT OFF SWITCH			
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 21030			
		REPLACEMENT PARTS LIST			
		ET25KX		DATE	SECTION
				4-2-09C	-
				SUPERCEDES	
				3-27-09B	21031



MANUFACTURING, INC.
CINCINNATI, OHIO

FASTENER LIST FOR ET25KX

PART NUMBER	DESCRIPTION	QTY	LOCATION/FUNCTION
12534	WASHER - I.D. 0.63"	38	SLEWINGRING
!HHCS06311200	HEX HEAD CAP SCREW - 5/8"-11 x 2"	35	SLEWINGRING
!SHCS06311150	SOCKET HEAD CAP SCREW-5/8-11 X 1-1/2"	3	SLEWINGRING
!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
!HHCS02520063	HEX HEAD CAP SCREW - 1/4-20 X 5/8"	1	BOOM PIVOT PIN
!LWSH-025	LOCK WASHER - 1/4"	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



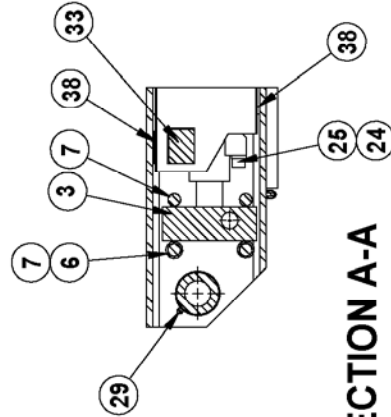
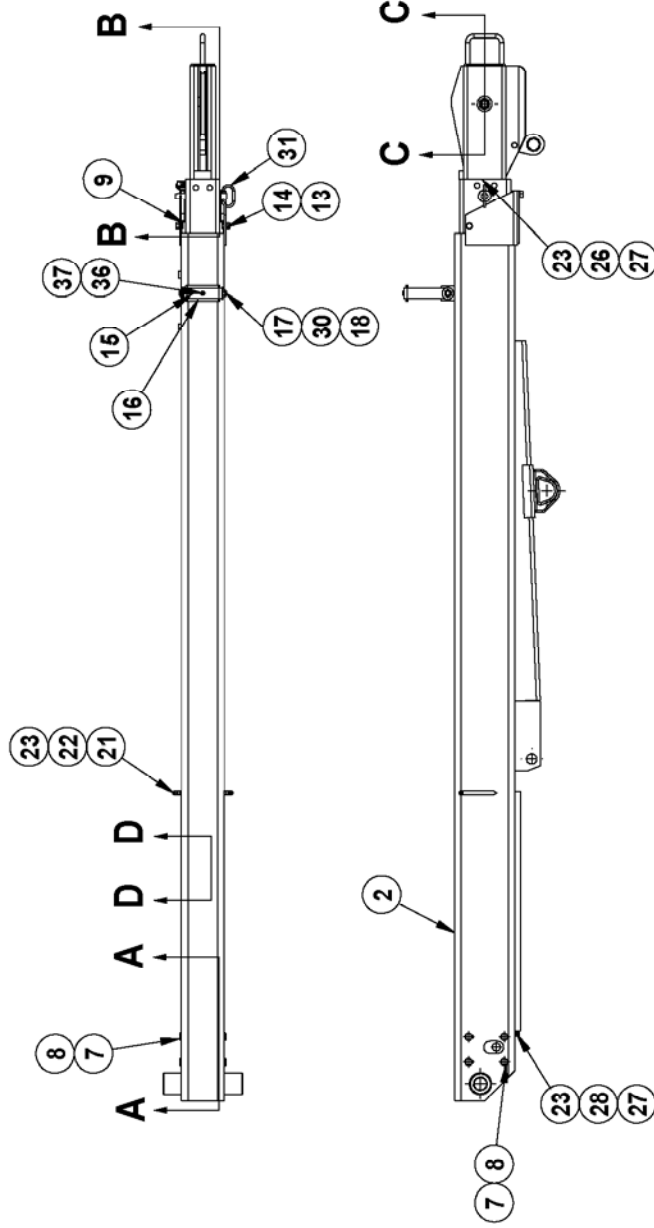
MFG., INC.
CINCINNATI, OHIO

TITLE
REPL. FASTENERS LIST
ET25K(X)

DATE
6-18-04
SUPERCEDES
-

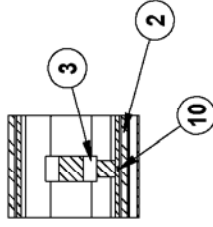
SECTION
C400
21017

19950 BOOM PARTS DRAWING

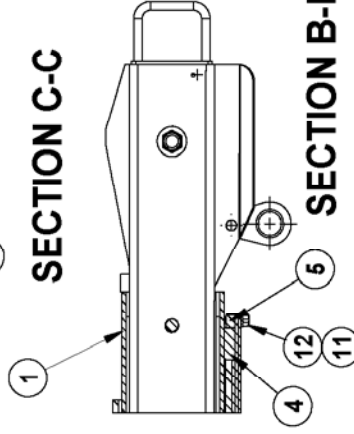


SECTION A-A

SECTION D-D



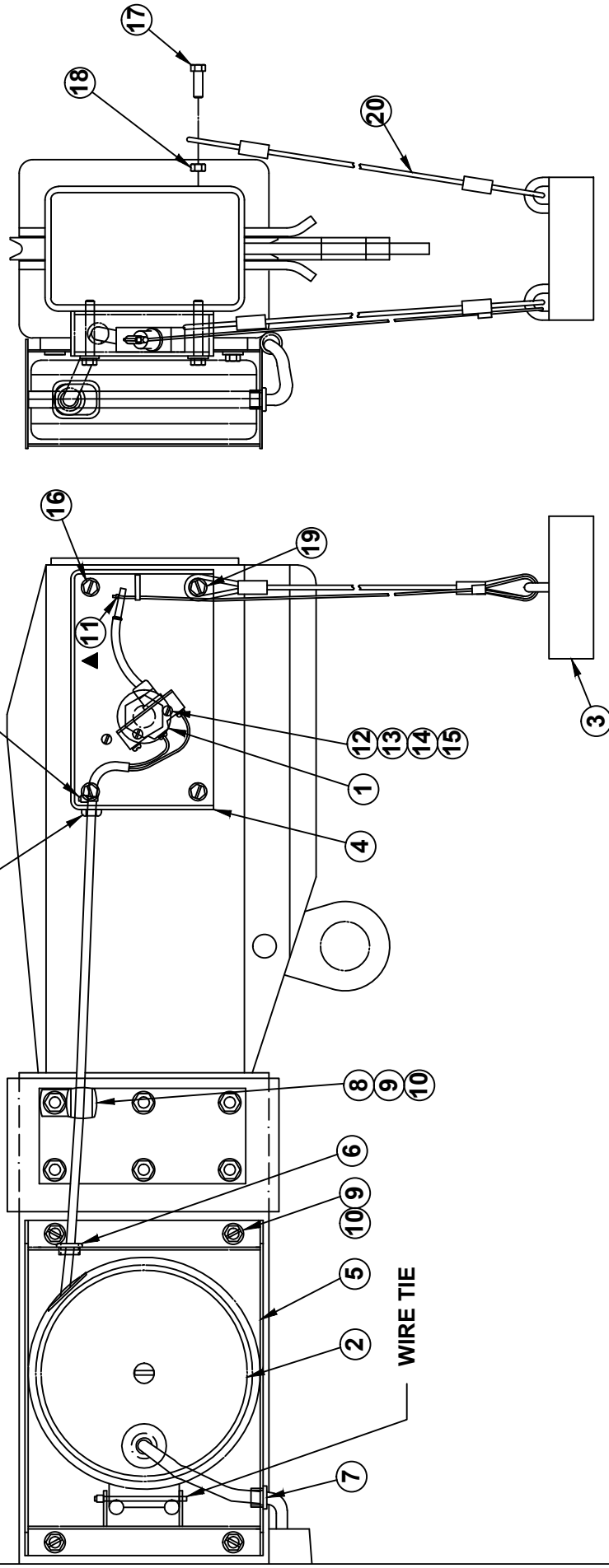
SECTION C-C



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	ILWSH-050	FLAT WASHER - 1/2"	37	1	ILNUT-02520N	NYLON INSERT JAM NUT - 1/4-20
17	2	IHCSC03013100	HEX HEAD CAP SCREW 1/2-13 X 1" LONG	36	1	IPHCSC02520063	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	IHCSC03816050	HEX HEAD CAP SCREW 3/8-16 X 1/2" LG GR 5	33	2	19888	SIDE BEARING PAD
13	2	IHCSC03816100	JAM NUT - 3/8-16 GRADE 5	32	1	21276	ANTI-TWO BLOCK ASSEMBLY - L.H.
12	2	IHCSC03816100	HEX HEAD CAP SCREW - 3/8-16 X 1" LG GR. 5	31	1	19258-1	BOOM PIN 19/57-3/4
11	4	ILWSH-038	LOCK WASHER 3/8"	30	2	ILNUT-05013N	1/2-13 NYLON INSERT JAM NUT
10	2	ICACSC03816100	CNTRSK ALLEN HEAD CAP SCREW 3/8-16 X 1" LG	29	1	IZERK-02528	ZERK FITTING - 1/4-28
9	2	18957	BEARING PAD - SIDE FRONT	28	1	19269	CABLE WASHER - 3/4"
8	8	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	19885	EXTENSION CYLINDER ROLLER	25	2	IHCSC06013200	SOCKET HEAD CAP SCREW - 1/2-13 X 2" LONG
5	1	18955	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 4-7/16" LONG
1	1	19992	TERTIARY & SECONDARY BOOM ASSEMBLY				

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
20	2	▲ 20951-2	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	HEX HEAD CAP SCREW - 1/4-20 x 3/4"
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"

TITLE

REPLACEMENT PARTS DRAWING

DATE

08-01-16G

SECTION

C400

SUPERSEDES

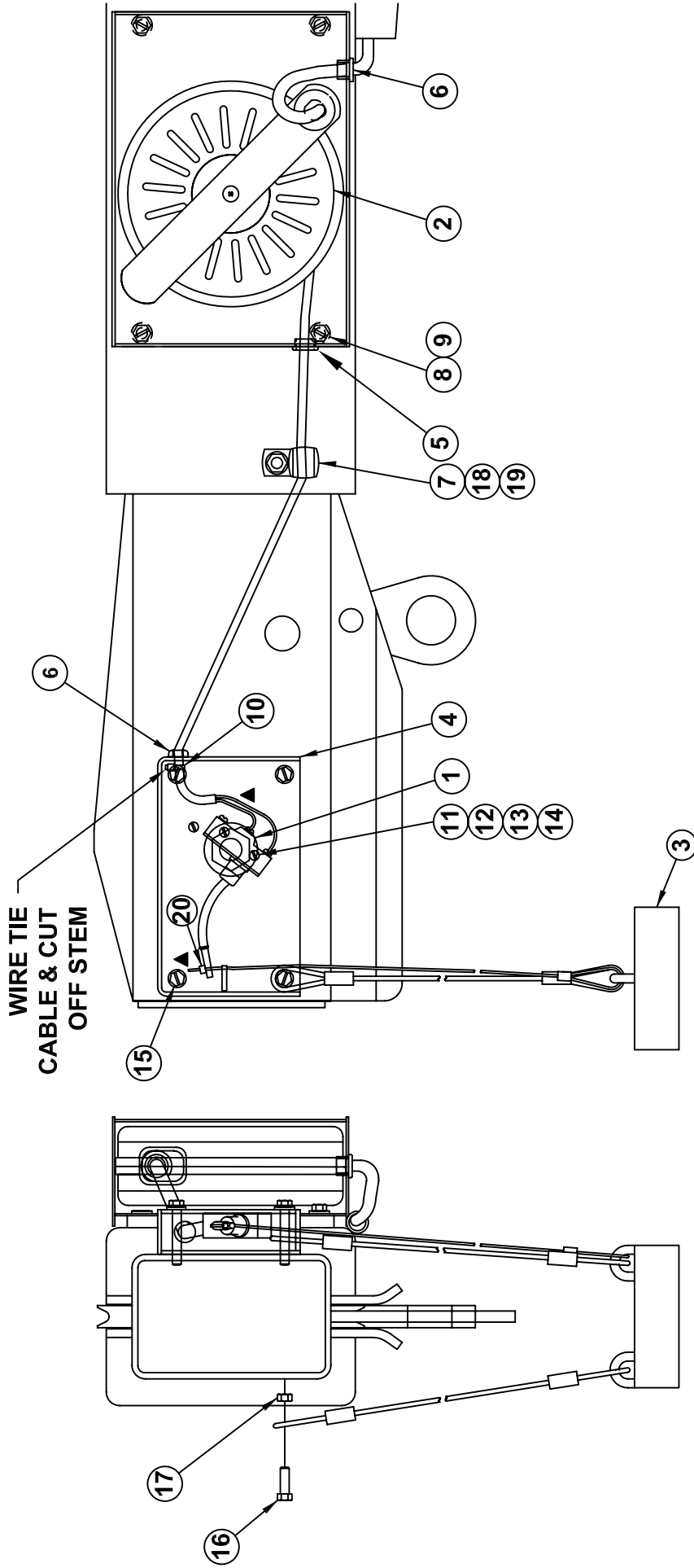
06-03-08F

19197-2 ANTI-TWO-BLOCK SYSTEM

20197-2



MANUFACTURING, INC.
CINCINNATI, OHIO



ITEM		QTY		PART NO.		DESCRIPTION	
20	1	19302	SET COLLAR - 3/32"	10	1	TIE-WRAP	9" TIE-WRAP
19	1	ILWSH-025	LOCK WASHER - 1/4"	9	4	ILWSH-031	LOCK WASHER - 5/16"
18	1	IANUT-02520	ACORN NUT - 1/4-20	8	4	ISHCS03118050-5	SOCKET HEAD CAP SCREW - 5/16-18 x 1 1/2"
17	1	!HNUT-02520	HEX NUT - 1/4-20	7	1	19275	CABLE CLAMP - 3/4" x 13/32" HOLE
16	1	!HHCS02520075-5	HEX HEAD CAP SCREW - 1/4-20 x 3/4" GR. 5	6	2	19270	SNAP BUSHING - 3/8" I.D.
15	4	!HHCS02520175	HEX HEAD CAP SCREW - 1/4-20 x 1 3/4"	5	1	19063	SNAP BUSHING - 1/2" I.D.
14	2	!LWSH-#06	LOCK WASHER - #6	4	1	21291	ANTI TWO-BLOCK HOUSING ASSEMBLY
13	2	!FWSH-#06	FLAT WASHER - #6	3	1	19377-2	CABLE WEIGHT ASSY
12	2	!HNUT-#0632	HEX NUT - #6-32	2	1	22683	CORD REEL ASSY
11	2	!PHMS#632125	PAN HEAD MACHINE SCREW - #6-32 x 1 1/4"	1	1	19376	LIMIT SWITCH

MANUFACTURING, INC.
CINCINNATI, OHIO

REPLACEMENT PARTS DWG

21276 ANTI-TWO-BLOCK SYSTEM

DATE
10-7-09D

SUPERSEDES
4-23-08C

SECTION
C400

21275

19897 ELECTRICAL COMPONENT ASSEMBLY

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

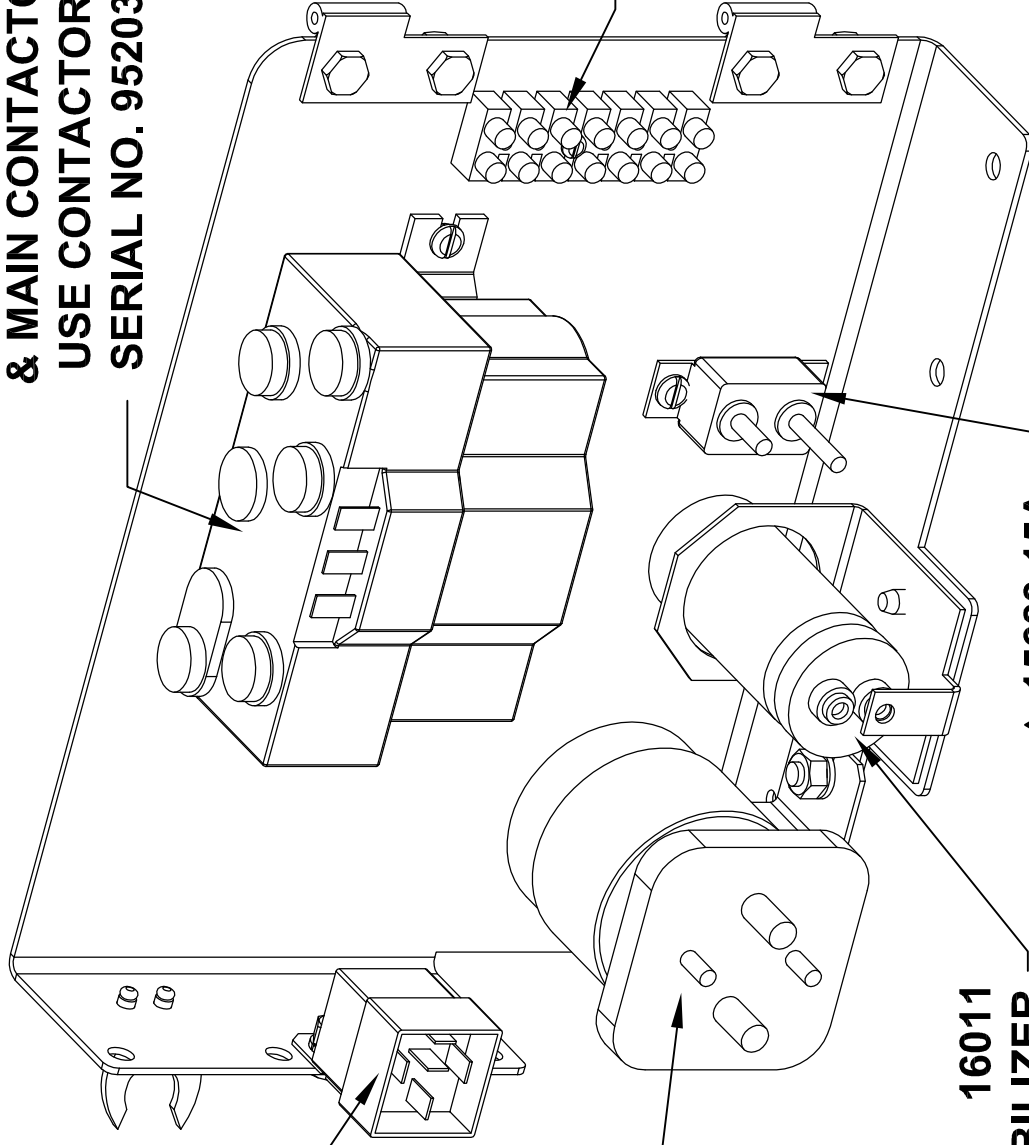
22739
RELAY
WINCH UP
(BOOM UP & DOWN
BOOM IN & OUT &
ROTATION INTERLOCK)

17600
HYD. POWER UNIT
CONTACTOR

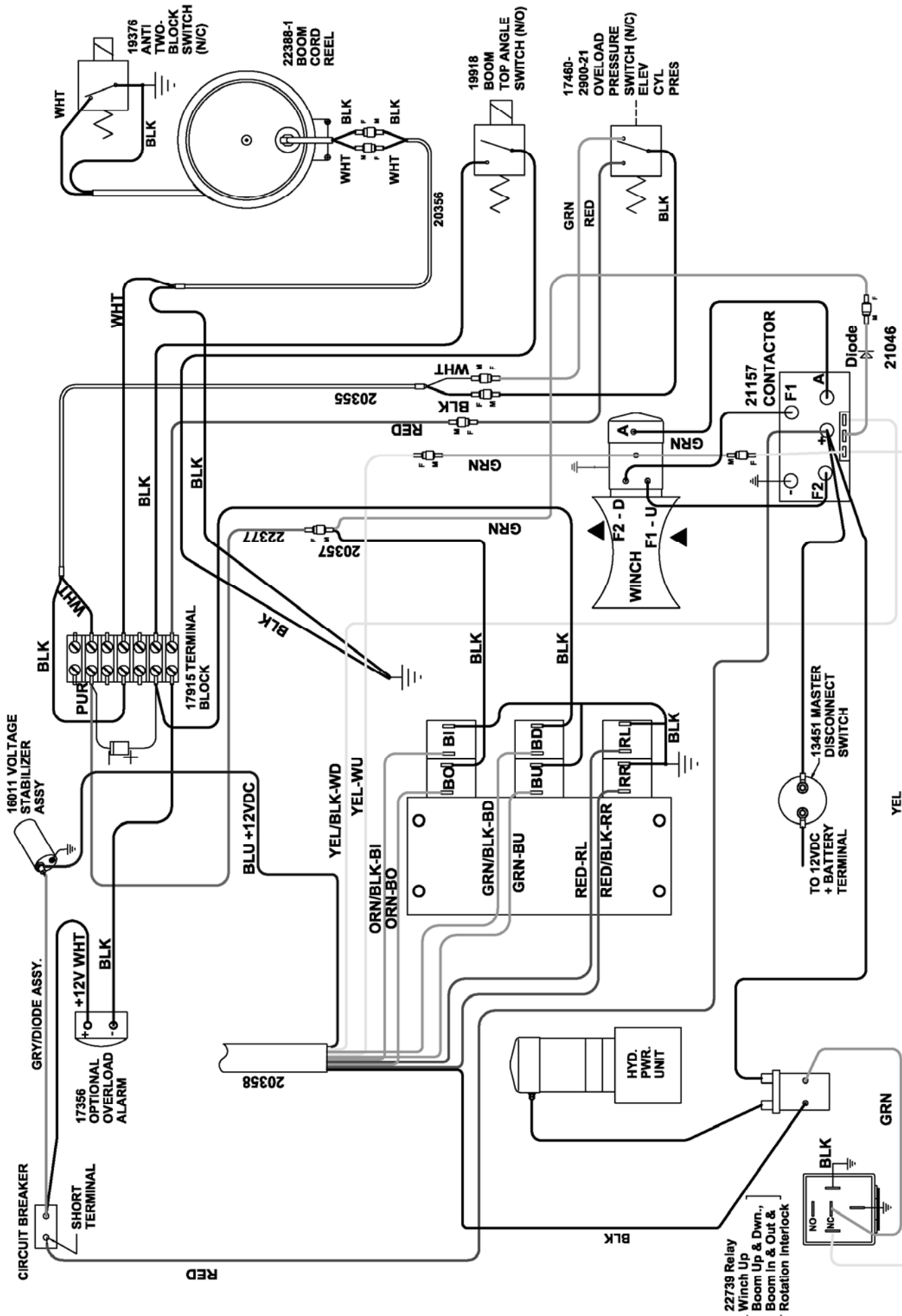
16011
VOLTAGE STABILIZER

▲ 15683-15A
CIRCUIT BREAKER

17915
TERMINAL
BLOCK



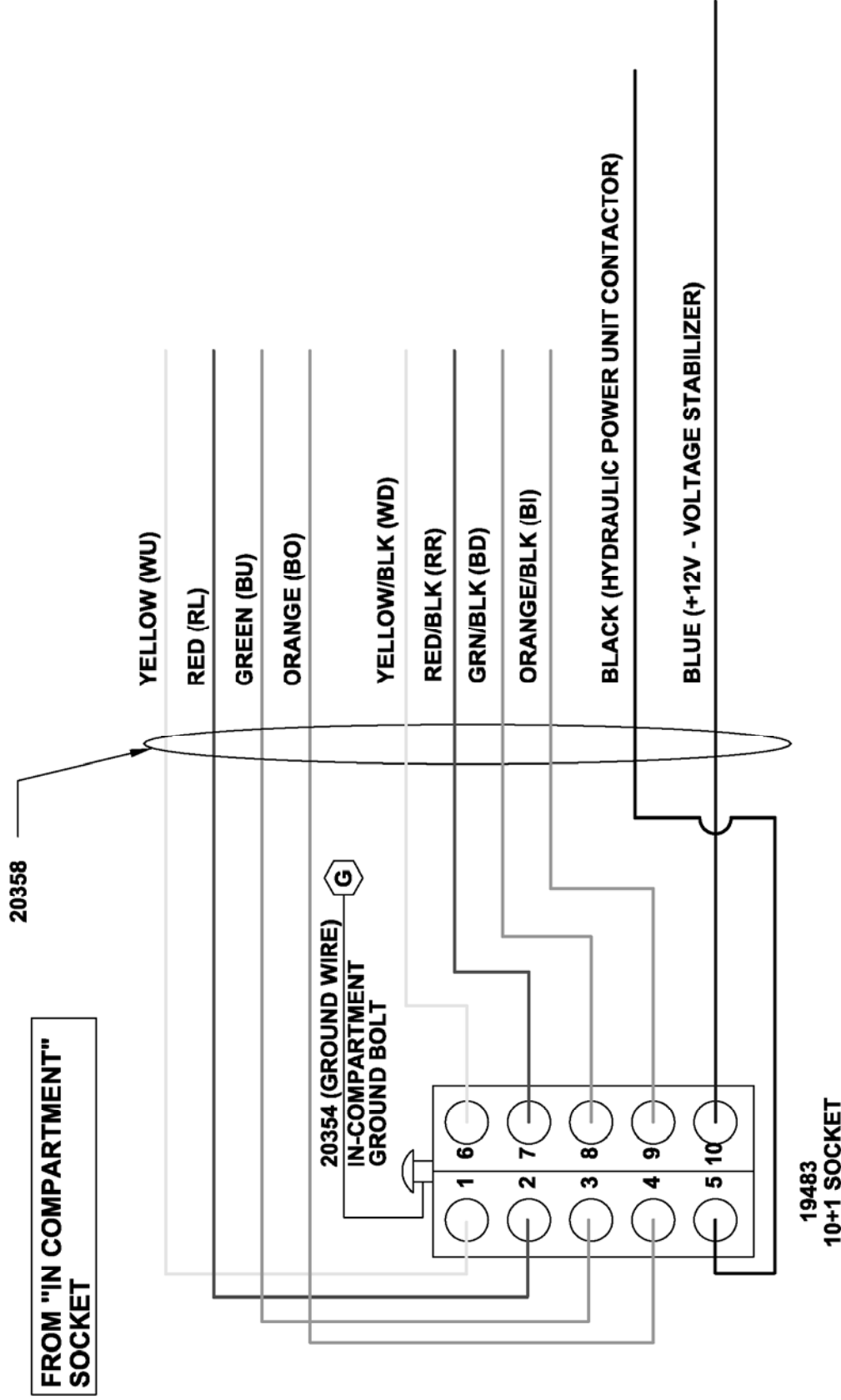
 MANUFACTURING, INC. CINCINNATI, OHIO	TITLE		DATE	SECTION
	ELECTRICAL COMPONENT ASSEMBLY		09-06-12G	-
			SUPERSEDES	19919
	ET18K(X), ET25K(X)		04-24-08F	



VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE WIRING DIAGRAM		SECTION -
	DATE 7-13-05F	SUPERSEDES 5-26-05E	20348

ET25KX

ET25KX IN-COMPARTMENT CONTROLS



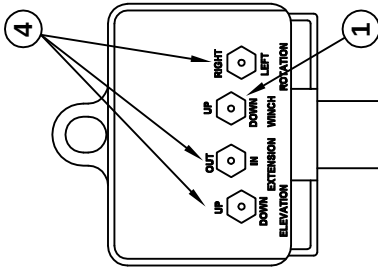
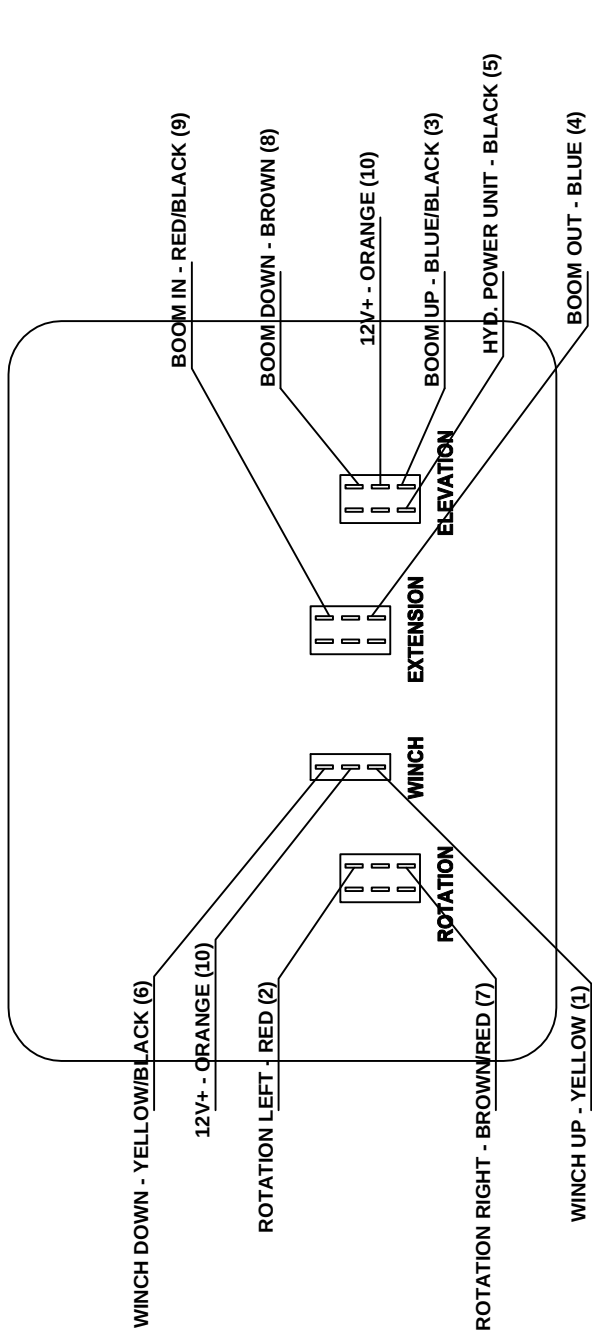
NOTE: BLUE/BLK WIRE OF
20358 HARNESS NOT USED

 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

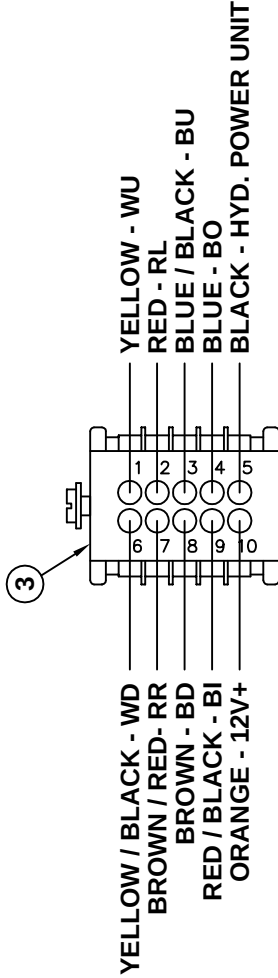
(INSIDE VIEW OF PENDANT CONTROL W/ REAR COVER REMOVED)



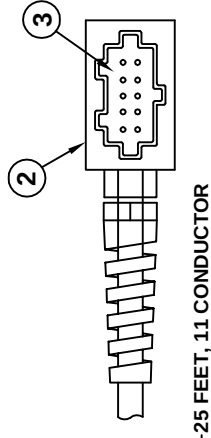
NOTE 1)
WIRE TERMINALS TO BE
INSTALLED 'AFTER' ROUTING
REPLACEMENT CORD ASSY
THROUGH PENDANT HEAD
AND PLUG HOUSING.

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

NOTE 3)
STOW OR CUT-BACK
UNUSED WIRES.



PLUG - BACKSIDE VIEW



25 FEET, 11 CONDUCTOR

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

DATE

9-28-12B

SECTION

C400

MANUFACTURING, INC.

CINCINNATI, OHIO



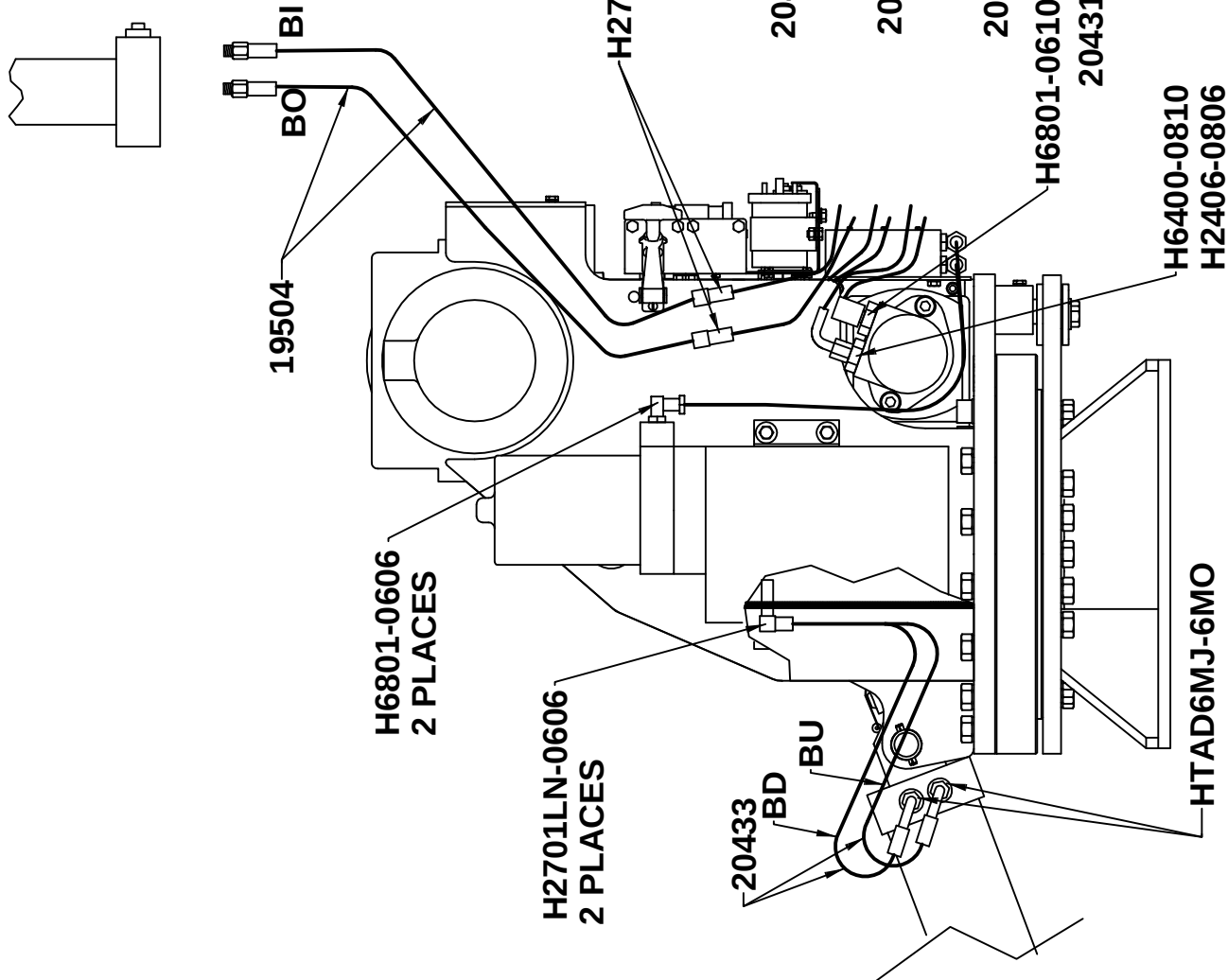
22060 PENDANT (STANDARD CTRL)

SUPERSEDES

9-6-11A

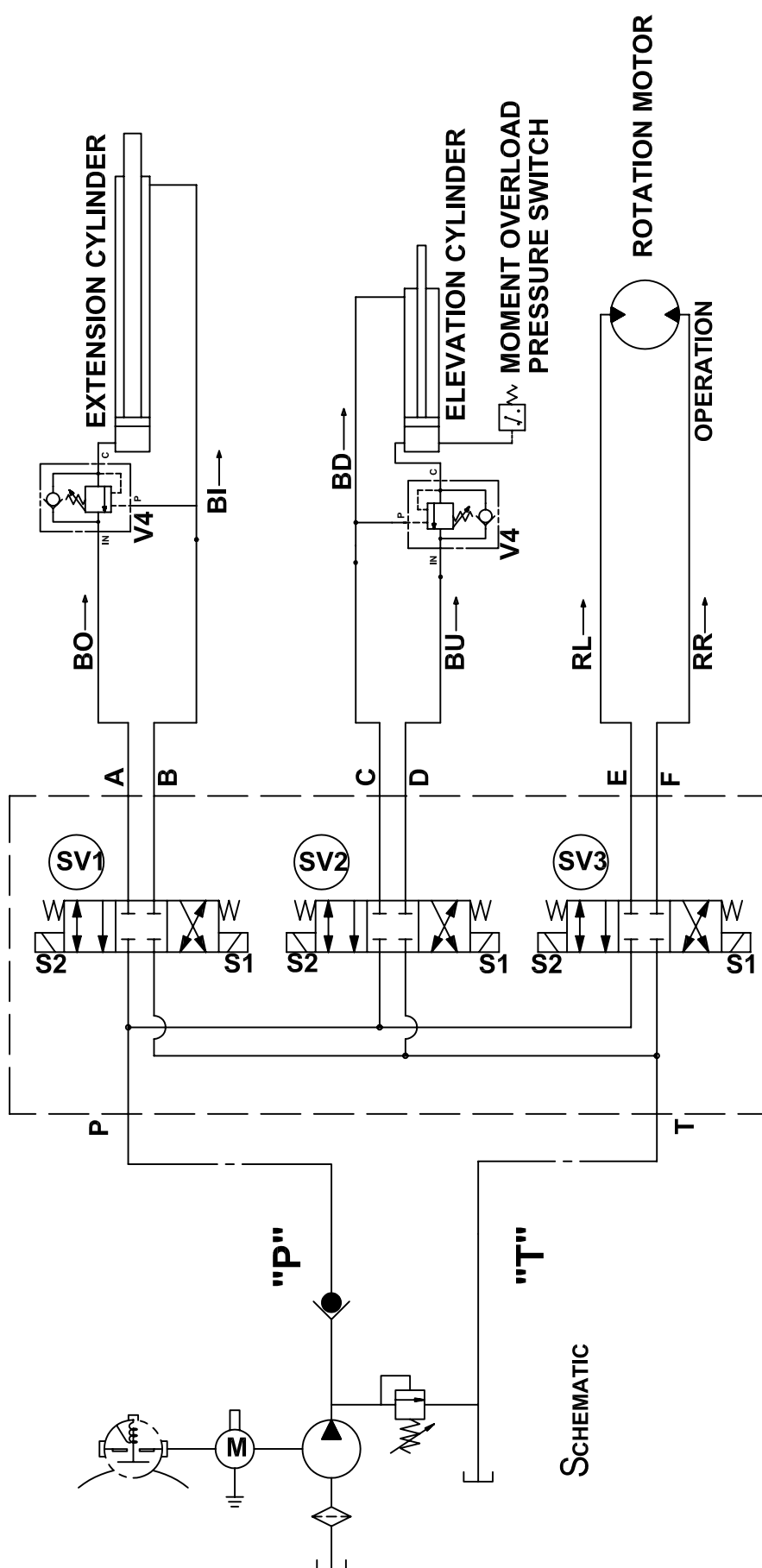
22076

RL	ROTATION RIGHT
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

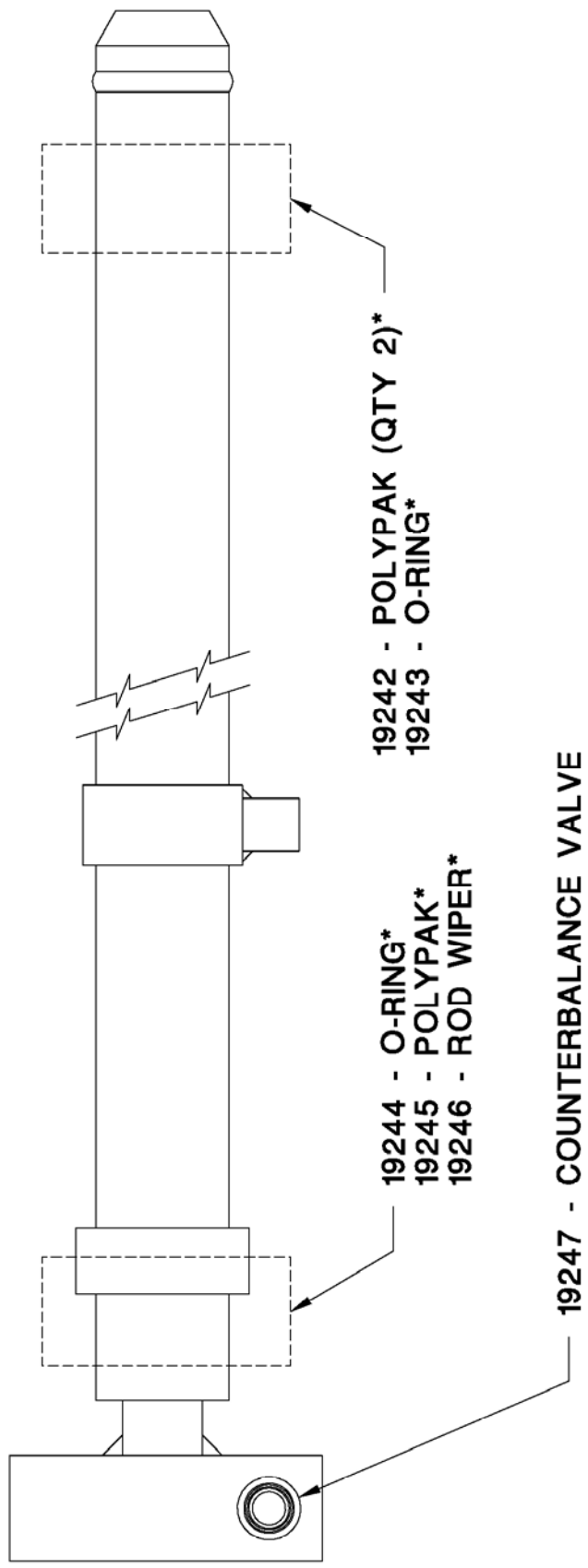
VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE	REPLACEMENT PARTS DRAWING	DATE	11-18-11C	SECTION	C400
		ET25KX HYDRAULIC COMPONENTS	SUPERSEDES	4-13-06B		19942



TITLE		DATE	SECTION
HYDRAULIC SYSTEM DIAGRAM		1-31-05C	C400
ET18KX, ET25KX, ET30KX		SUPERSEDES 7-31-03B	20156

SV1	ENERGIZE "S2" OPEN FLOW 'P' TO 'A' 'B' TO 'T'	SV2	ENERGIZE "S2" OPEN FLOW 'P' TO 'C' 'D' TO 'T'	SV3	ENERGIZE "S2" OPEN FLOW 'P' TO 'E' 'F' TO 'T'
	ENERGIZE "S1" OPEN FLOW 'P' TO 'B' 'A' TO 'T'		ENERGIZE "S1" OPEN FLOW 'P' TO 'D' 'C' TO 'T'		ENERGIZE "S1" OPEN FLOW 'P' TO 'F' 'E' TO 'T'

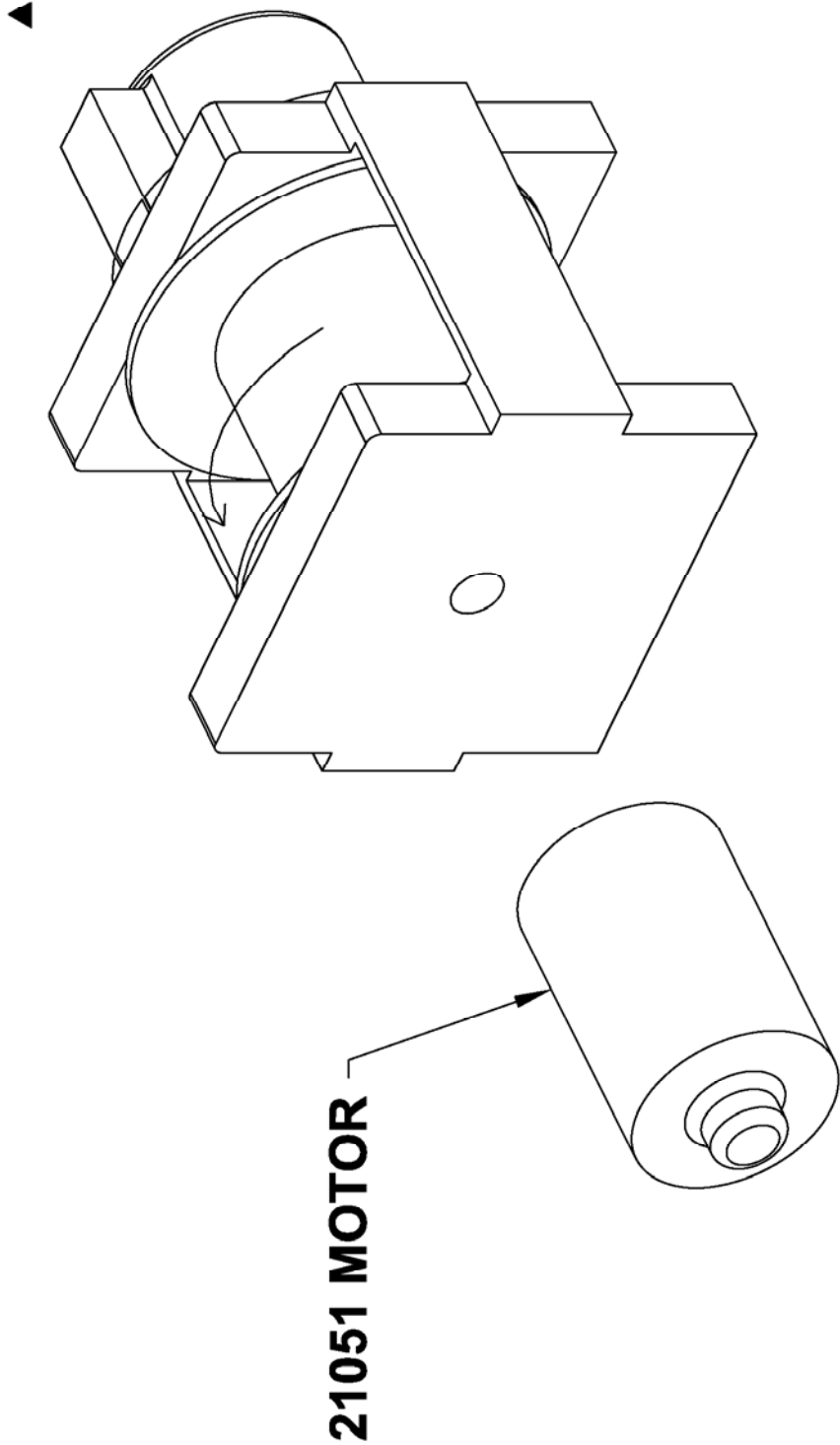
19886-1 EXTENSION CYLINDER



* ITEMS INCLUDED IN 19887 SEAL KIT

VENTURO MANUFACTURING, INC. CINCINNATI, OHIO		TITLE EXTENSION CYLINDER ET/HT25KX	DATE 7-6-01 SUPERSEDES -	SECTION C400 19908
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19813 WINCH



VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE WINCH REPLACEMENT PARTS		DATE 6-30-05A	SECTION -
	ET25K(X)		SUPSEDES 10-27-04	21053

20667 DECAL KIT

PART NO.	QTY.	DESCRIPTION
14473-2	2	DECAL, GREASE
22496	2	DECAL, VENTURO - LARGE
15401	1	DECAL, UNLAWFUL TO OPERATE
19257-1	1	DECAL, BOOM CAPACITY ET/HT25K(X) RIGHT
19257-2	1	DECAL, BOOM CAPACITY ET/HT25K(X) LEFT
19743	2	DECAL, MODEL NAME DECAL
15392	1	DECAL, DANGER ELECTROCUTION HAZARD
15391	1	DECAL, CRANE NOT PASSENGER LIFT
15390	1	DECAL, CAUTION, INSTRUCTIONS
13397	1	DECAL, OIL LEVEL
20549	1	INST. DWG DECAL PLACEMENT
20051	1	DECAL, ROTATION STOP LOCATION
20174	1	DECAL, GROUND CABLE ATTACH TO TRUCK FRAME



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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