

TABLE OF CONTENTS

ET6KM/R INSTRUCTION MANUAL

SECTION 100 **DESCRIPTION & SPECIFICATIONS**

I19120	INSTALLATION DIMENSIONS - ET6KM
17384	13424 BASE MOUNTING DIMENSIONS - ET6KM
I19121	INSTALLATION DIMENSIONS - ET6KR
I17390	17299 BASE MOUNTING DIMENSIONS - ET6KR
I19113	CAPACITY CHART - ET6KM/R 6-10-14 FT
I19114	CAPACITY CHART - ET6KM/R 10-18 FT
I13497	TYPICAL REINFORCEMENT FOR MOUNTING CRANE ON TOP OF SERVICE BODY
16938	INSTALLATION DRAWING - ET6KR/ET10K(X)
S14930	INSTALLATION DRAWING - 14930 MOUNTING PEDESTAL - ET6KM
I14930	INSTALLATION DRAWING - 14930 MOUNTING PEDESTAL - ET6KM
S17340	INSTALLATION DRAWING - 17340 MOUNTING PEDESTAL - ET6KR
I17340	INSTALLATION DRAWING - 17340 MOUNTING PEDESTAL - ET6KR
▲ 22687	INSTALLATION DRAWING - 18500-P MANUAL OUTRIGGER
▲ 22686	INSTALLATION DRAWING - 18500-CD MANUAL OUTRIGGER
13510	INSTALLATION DIMENSIONS - 11822 MANUAL OUTRIGGER FOLD AWAY TYPE
13509	INSTALLATION DIMENSIONS - 13500 MANUAL OUTRIGGER SIDE BRACKET

SECTION 150 **SAFETY**

850711	SAFETY & HAZARDS - GENERAL
15394	VEHICLE & CRANE ELECTRICAL HAZARD INFORMATION
19567	DECAL PLACEMENT - ET6KM
19566	DECAL PLACEMENT - ET6KR

SECTION 200 **INSTALLATION**

I19115	ET6KM INSTALLATION INSTRUCTIONS
I19116	ET6KM OPERATION & MAINTENANCE INSTRUCTIONS
I19117	ET6KR INSTALLATION INSTRUCTIONS
I19118	ET6KR OPERATION & MAINTENANCE INSTRUCTIONS
711105	CABLE & BATTERY REQUIREMENTS - ET AND HT CRANES
15660	BATTERY CABLE INSTALLATION DRAWING
711006	WIRE ROPE SPECIFICATIONS
20076	ADJUSTABLE BOOM REST

SECTION 300 **MAINTENANCE & SERVICE**

800306	MINIMUM VOLTAGE TEST
--------	----------------------

SECTION 400 **REPLACEMENT PARTS**

I19109	ET6KM REPLACEMENT PARTS DRAWING
I19108	ET6KM REPLACEMENT PARTS LIST
19443	ET6KR REPLACEMENT PARTS DRAWING
19442	ET6KR REPLACEMENT PARTS LIST
20197-4	REPLACEMENT PARTS - ANTI-TWO-BLOCK
18658	ELECTRICAL SYSTEM SCHEMATIC - ET6KM
I18668	ELECTRICAL SYSTEM SCHEMATIC - ET6KR
19768	ELECTRICAL SYSTEM SCHEMATIC - ET6KM/R W/ ANTI-TWO-BLOCK
18667	HYDRAULIC SYSTEM SCHEMATIC - ET6KM/R

▲



MFG., INC.
CINCINNATI, OHIO

TITLE
TABLE OF CONTENTS

ET6KM/R

DATE
11-13-03J

SUPERCEDES
9-27-02H

SECTION
PAGE 1 OF 2

19441A

TABLE OF CONTENTS

ET6KM/R INSTRUCTION MANUAL

SECTION 400	REPLACEMENT PARTS
▲ 20141	REPLACEMENT PARTS - 2 FUNCTION PENDANT CONTROL
17142	REPLACEMENT PARTS - 2 FUNCTION PENDANT CONTROL
20150	REPLACEMENT PARTS - 3 FUNCTION PENDANT CONTROL
19791	REPLACEMENT PARTS - 3 FUNCTION CRANES
16770	16770 SWIVEL TERMINAL ASSEMBLY REPLACEMENT PARTS
I16100	16100 SERIES POWER UNIT REPLACEMENT PARTS DRAWING
811016	16100 SERIES POWER UNIT REPLACEMENT PARTS LIST
19518	17252/17253 HYDRAULIC POWER UNIT REPLACEMENT PARTS DRAWING
900309	17252/17253 HYDRAULIC POWER UNIT REPLACEMENT PARTS LIST
I19119	18671-1 ELEVATION CYLINDER REPLACEMENT PARTS
▲ 22688	REPLACEMENT PARTS - 18500-P MANUAL OUTRIGGER
▲ 22689	REPLACEMENT PARTS - 18500-CD MANUAL OUTRIGGER



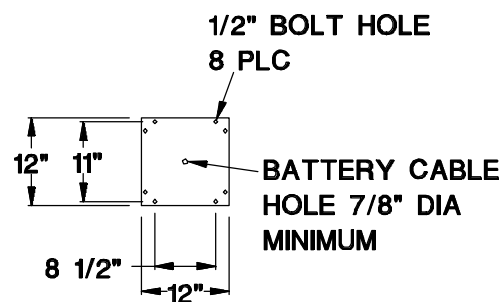
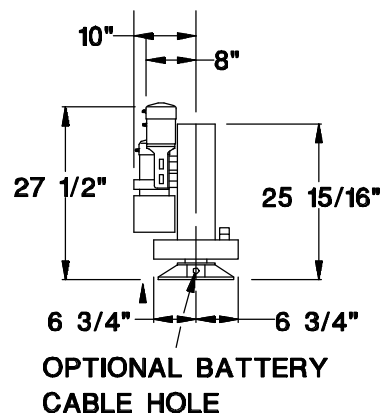
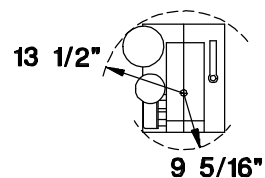
MFG., INC.
CINCINNATI, OHIO

TITLE
TABLE OF CONTENTS
ET6KM/R

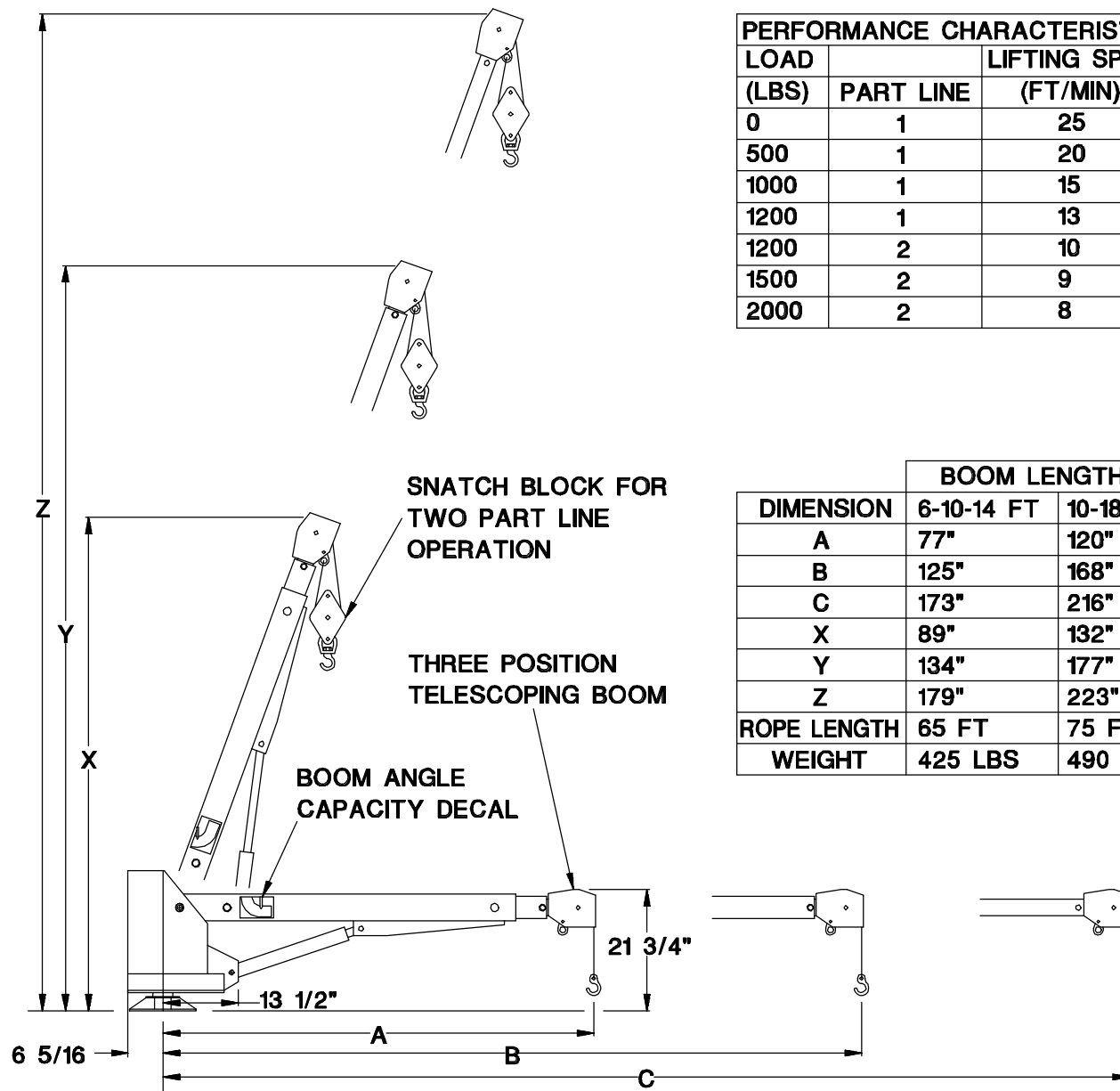
DATE
11-13-03J
SUPERCEDES
-

SECTION
PAGE 2 OF 2
19441B

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



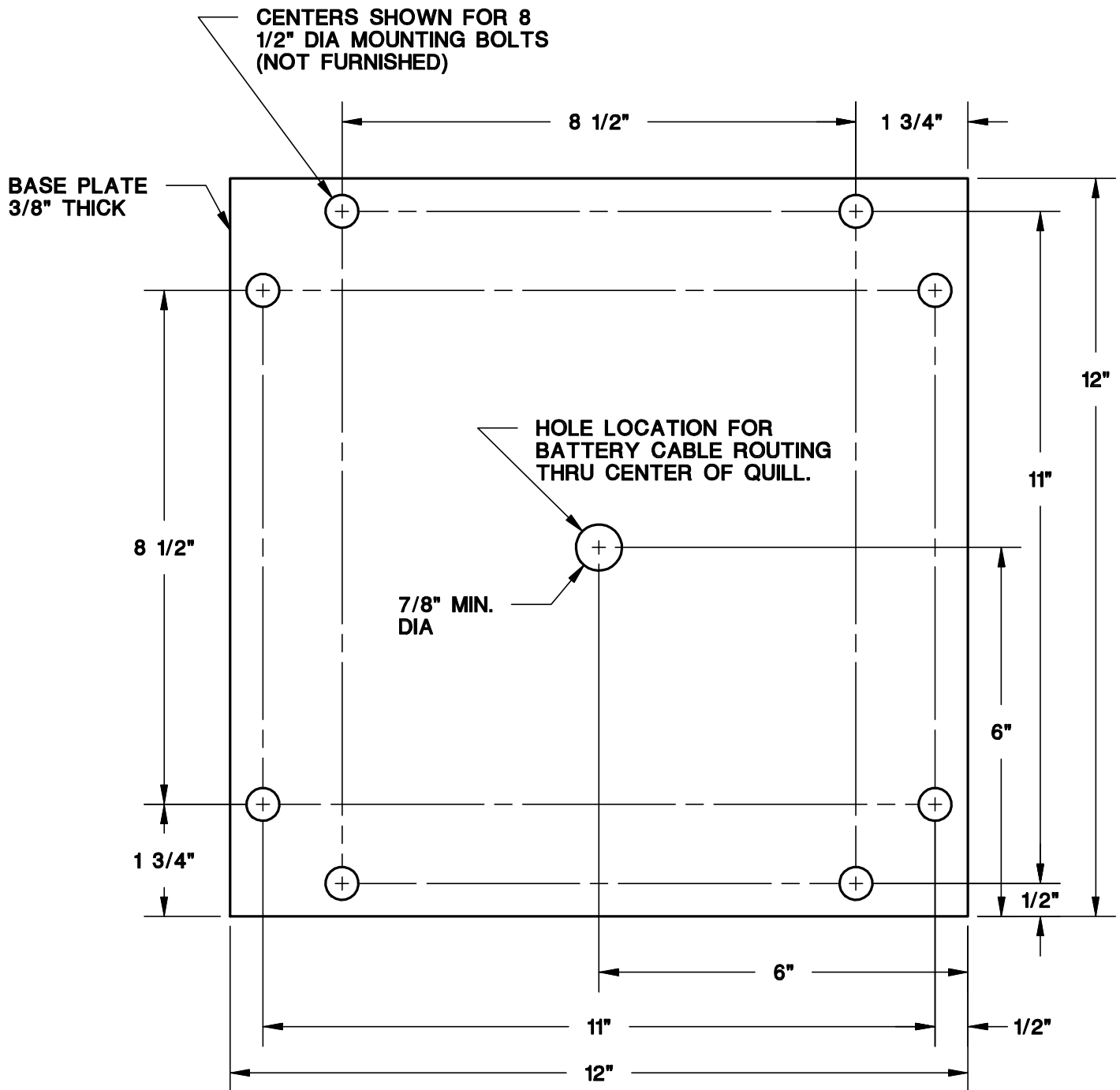
BASE MOUNTING DIMENSIONS



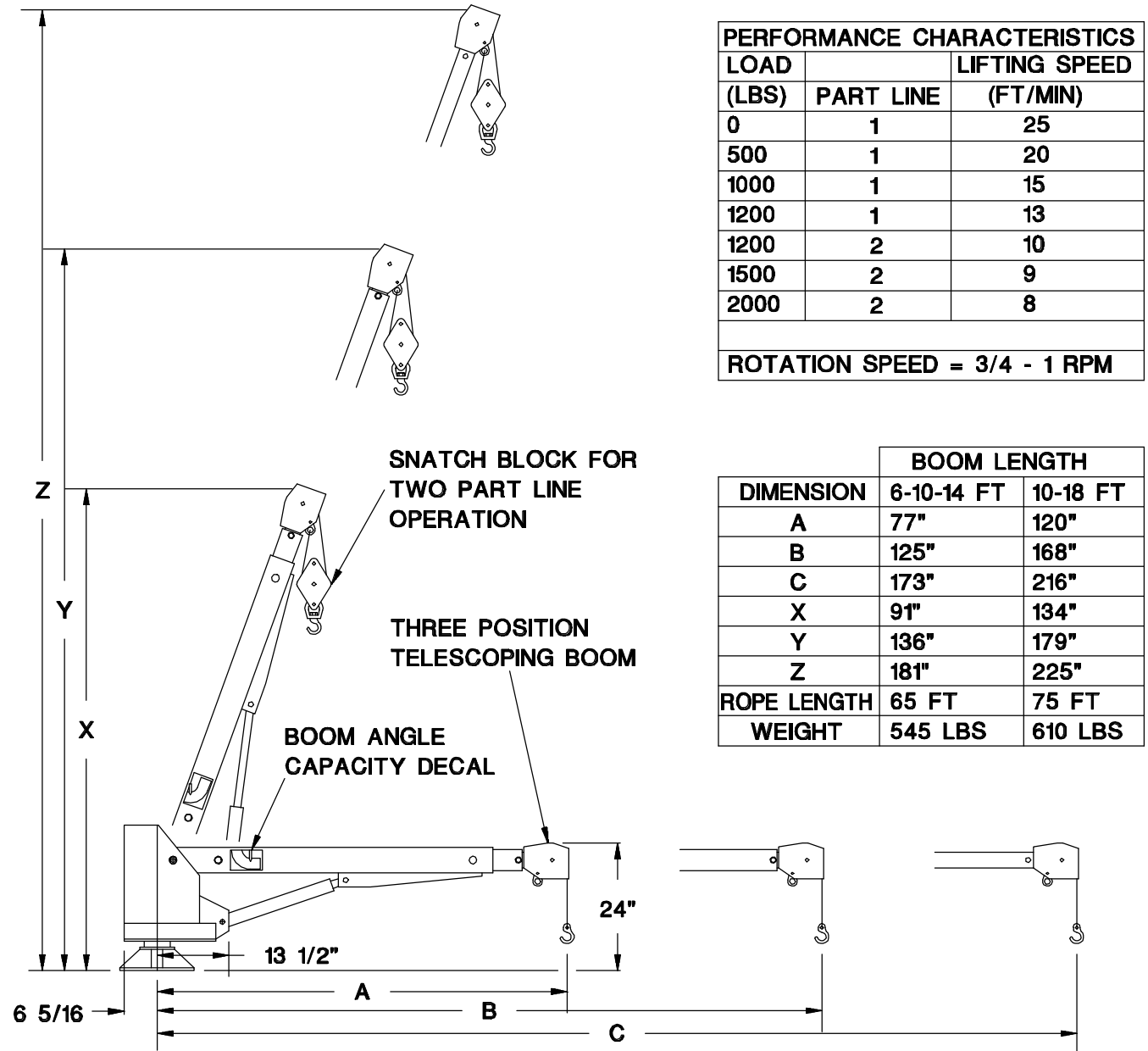
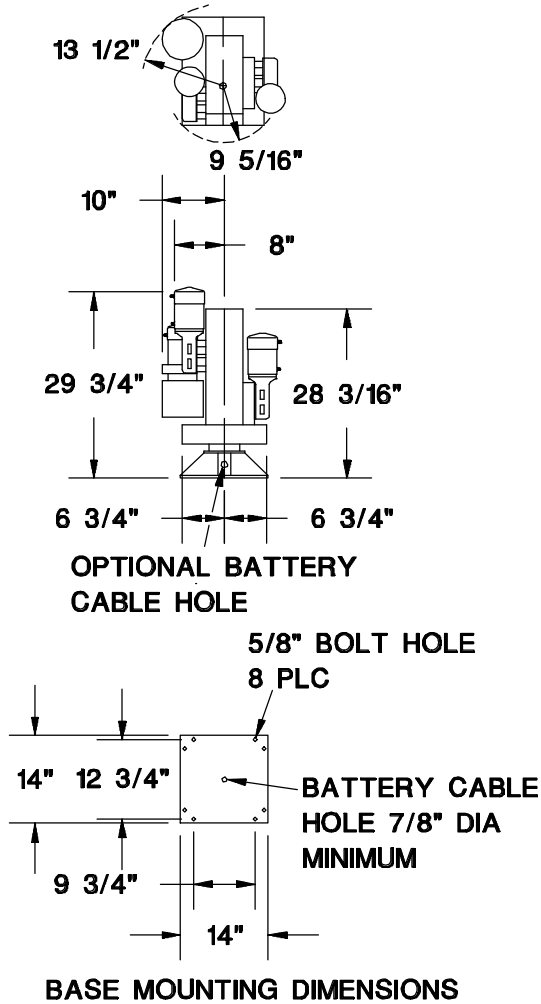
PERFORMANCE CHARACTERISTICS		
LOAD (LBS)	PART LINE	LIFTING SPEED (FT/MIN)
0	1	25
500	1	20
1000	1	15
1200	1	13
1200	2	10
1500	2	9
2000	2	8

DIMENSION	BOOM LENGTH	
	6-10-14 FT	10-18 FT
A	77"	120"
B	125"	168"
C	173"	216"
X	89"	132"
Y	134"	177"
Z	179"	223"
ROPE LENGTH	65 FT	75 FT
WEIGHT	425 LBS	490 LBS

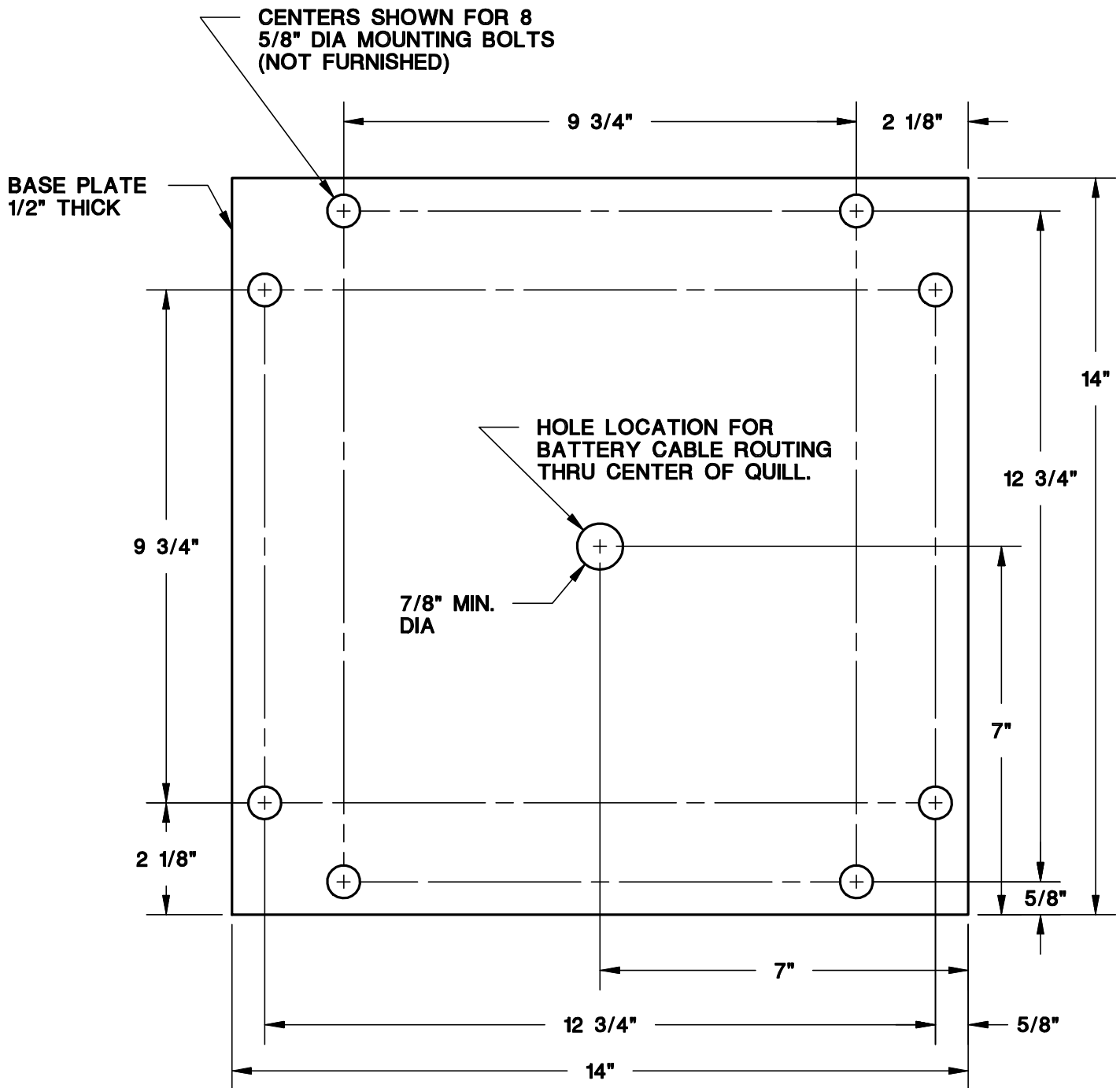
MOUNTING HOLE TEMPLATE



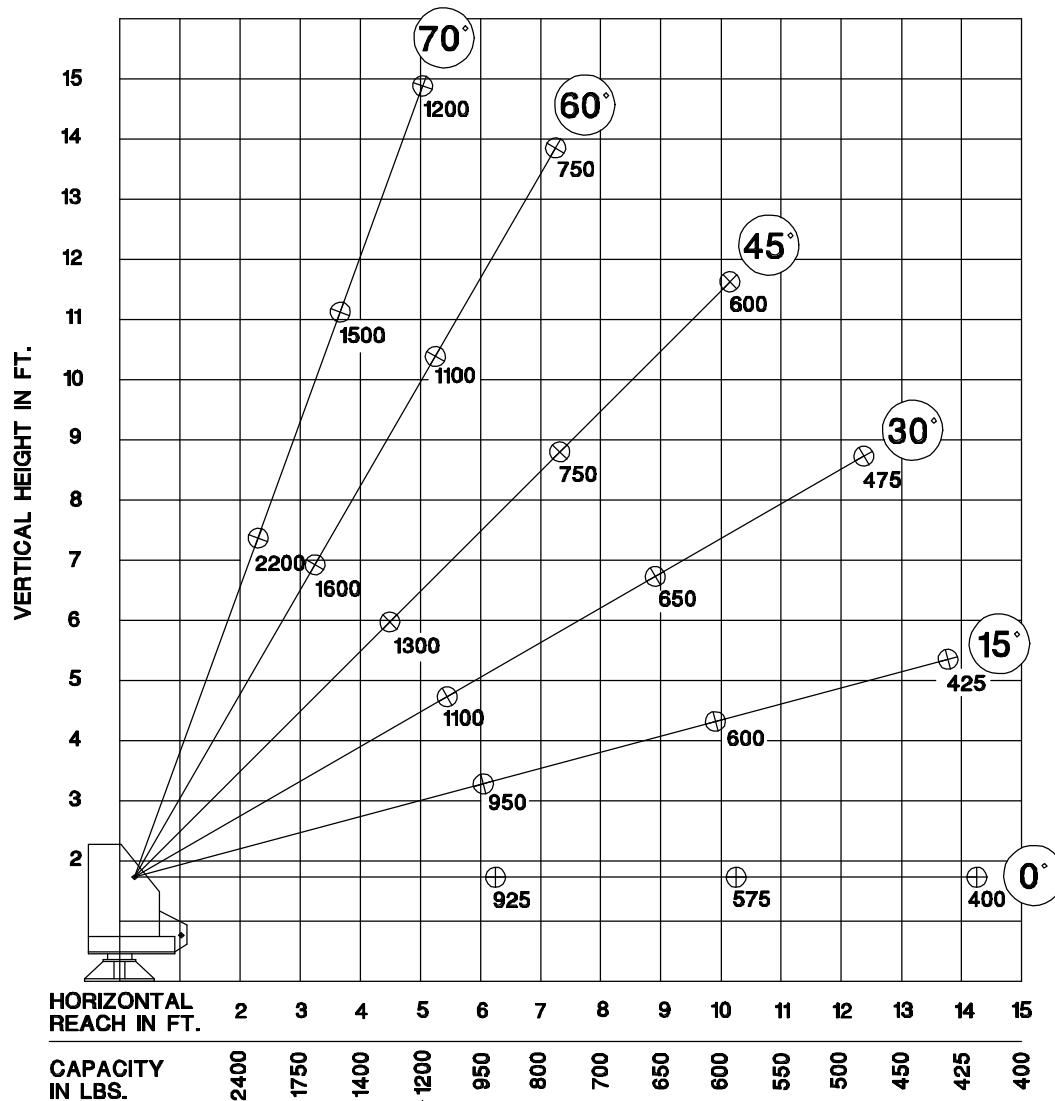
WARNING: THESE PRODUCTS ARE NOT PASSENGER LIFTS. THEY ARE NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.



MOUNTING HOLE TEMPLATE



ET6K (M/R) 6-10-14 BOOM MAXIMUM CAPACITY CHART



MUST USE SNATCH BLOCK
FOR LOADS OF 1200 LBS.
AND GREATER



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CINCINNATI, OHIO

TITLE
MAX CAPACITY CHART

ET6KM/R 6-10-14 FT

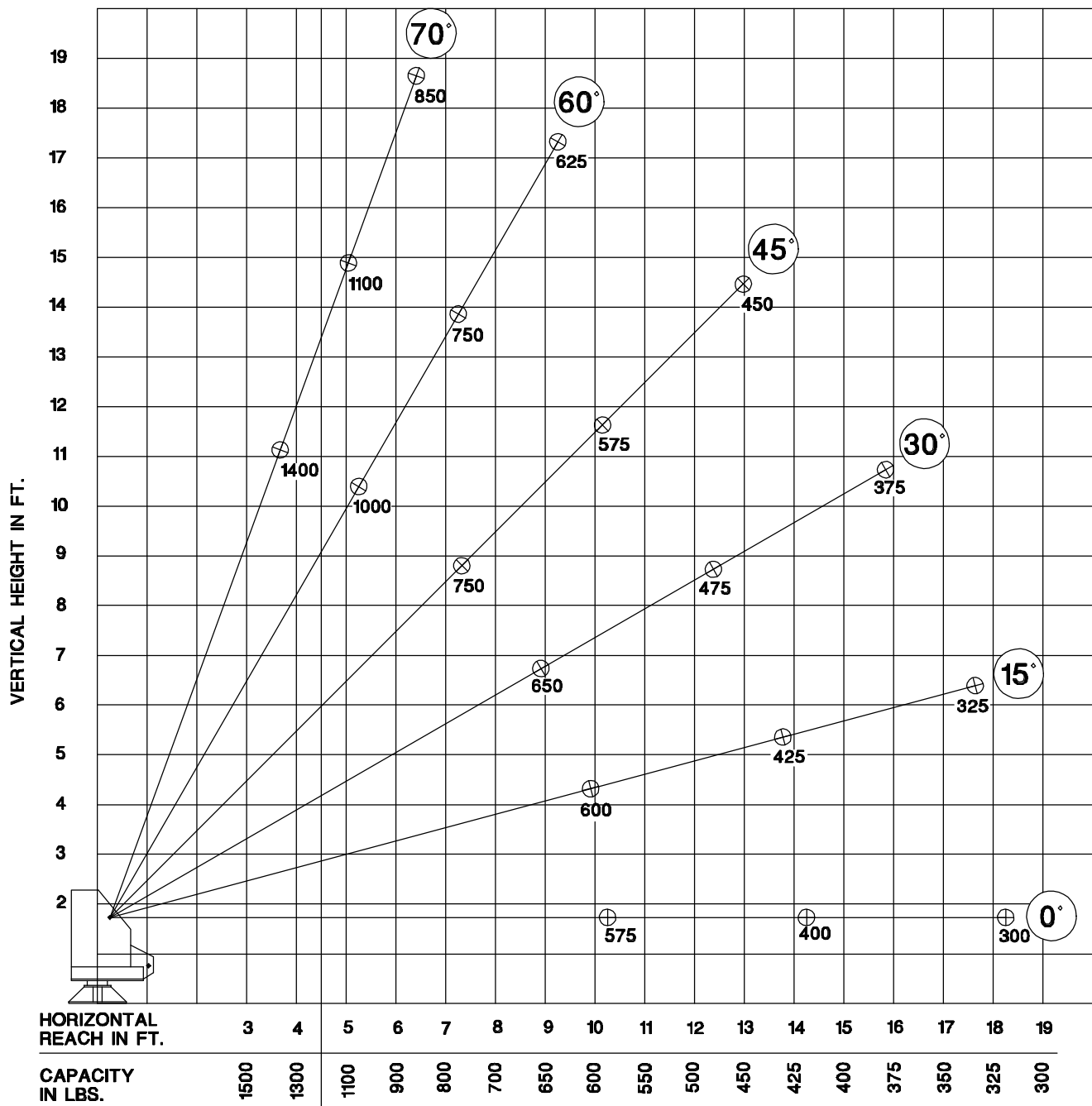
DATE
10-14-97A

SUPERSEDES
4-8-96

SECTION
C100

I19113

ET6K (M/R) 10-18 BOOM MAXIMUM CAPACITY CHART



MUST USE SNATCH BLOCK
FOR LOADS IF 1200 LBS.
AND GREATER



MFG., INC.
CINCINNATI, OHIO

TITLE
MAX CAPACITY CHART

ET6KM/R 10-18 FT

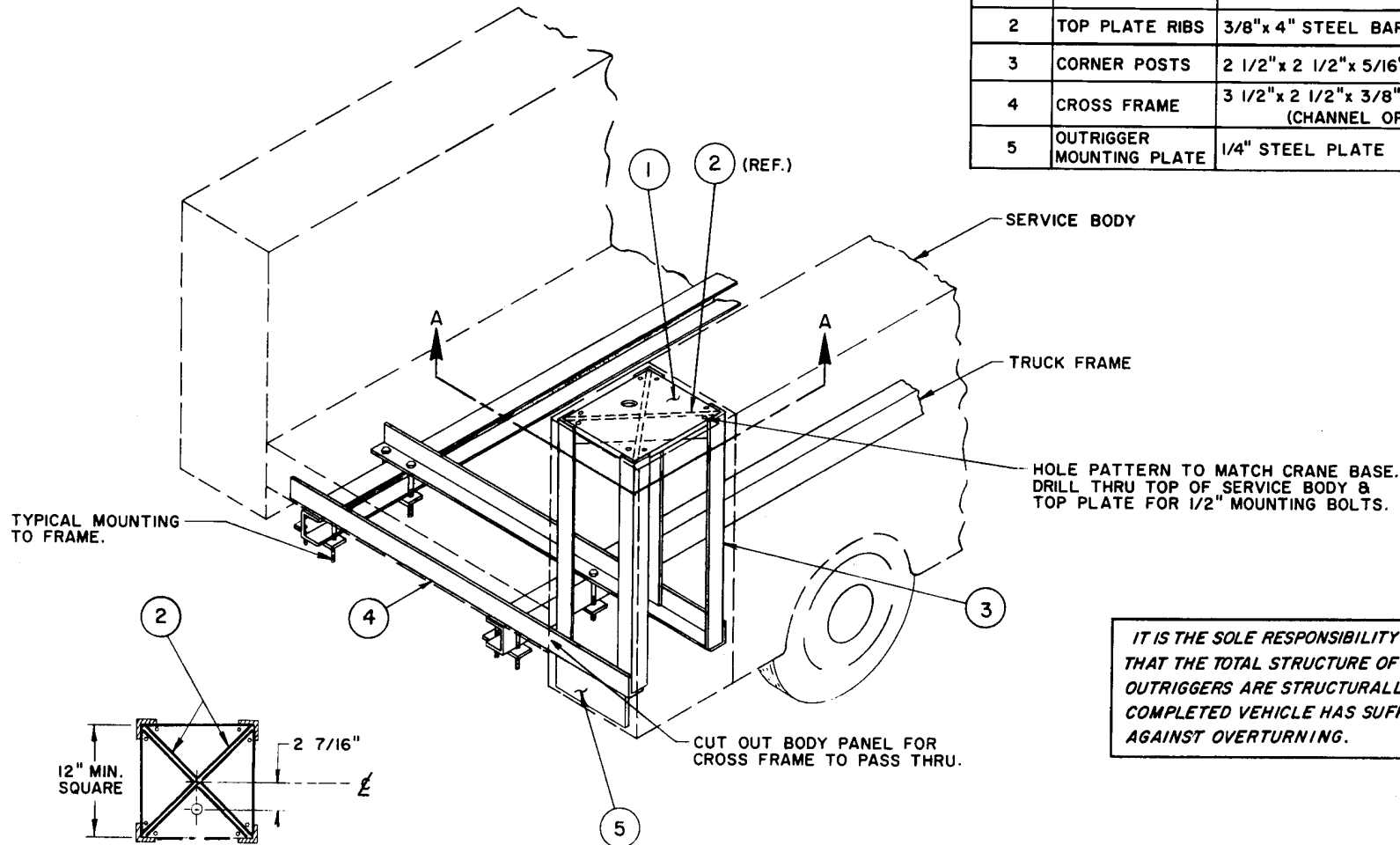
DATE
10-14-97A

SUPERSEDES
4-8-96

SECTION
C100

119114

PART	DESCRIPTION	MINIMUM RECOMMENDED MATERIAL SIZE
1	TOP PLATE	5/16" OR 3/8" STEEL PLATE
2	TOP PLATE RIBS	3/8"x 4" STEEL BAR
3	CORNER POSTS	2 1/2"x 2 1/2"x 5/16" STEEL ANGLE
4	CROSS FRAME	3 1/2"x 2 1/2"x 3/8" STEEL ANGLE (CHANNEL OPTIONAL)
5	OUTRIGGER MOUNTING PLATE	1/4" STEEL PLATE



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 REINFORCEMENT FOR MOUNTING
CRANE ON TOP OF SERVICE BODY.



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DRAWING

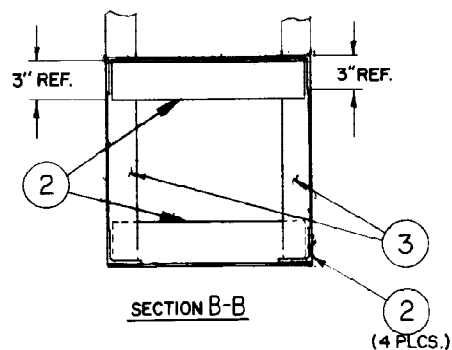
ET5500MPB, ET6KM

DATE
6-17-98E

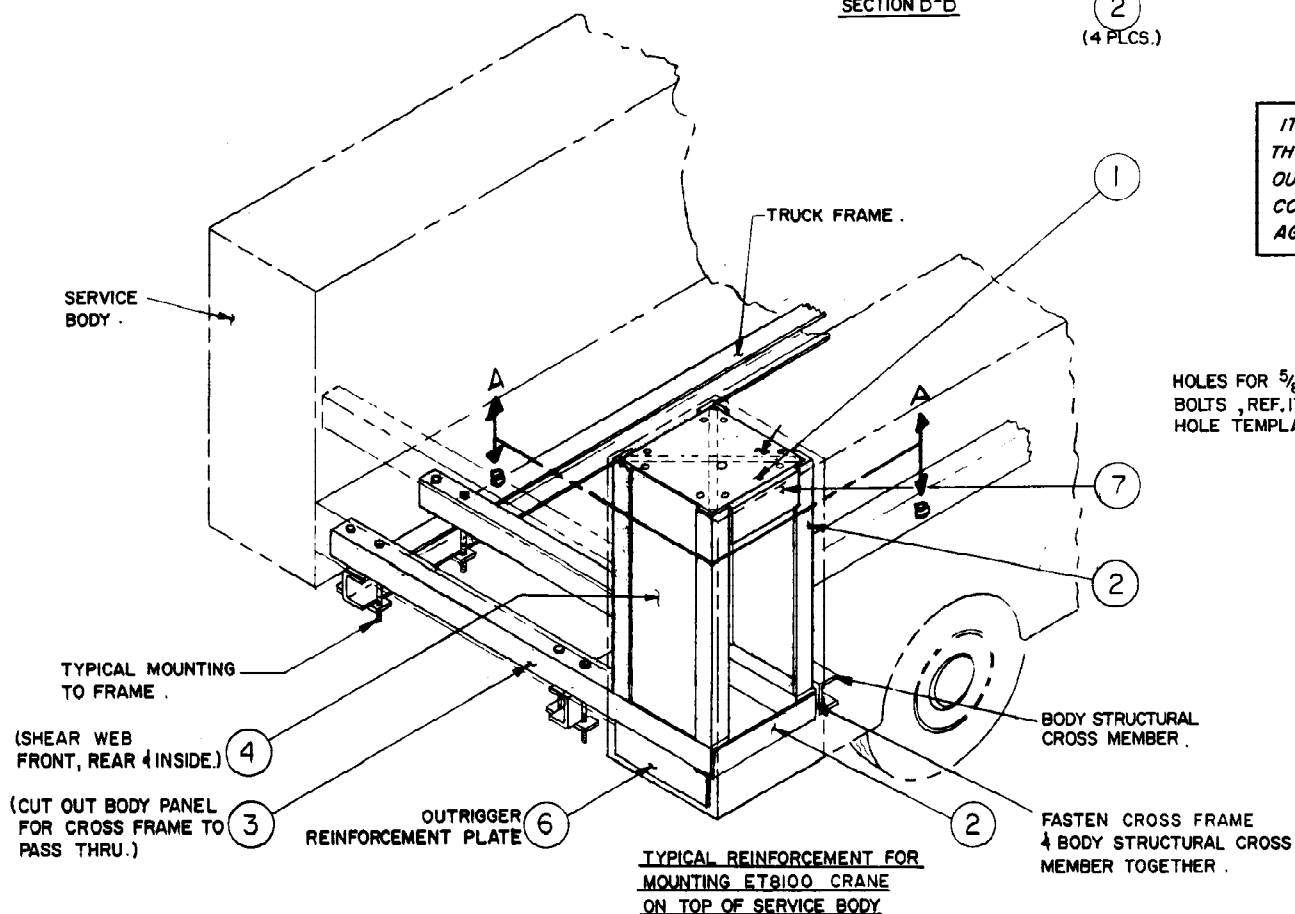
SUPERCEDES
4-1-96D

SECTION
C100

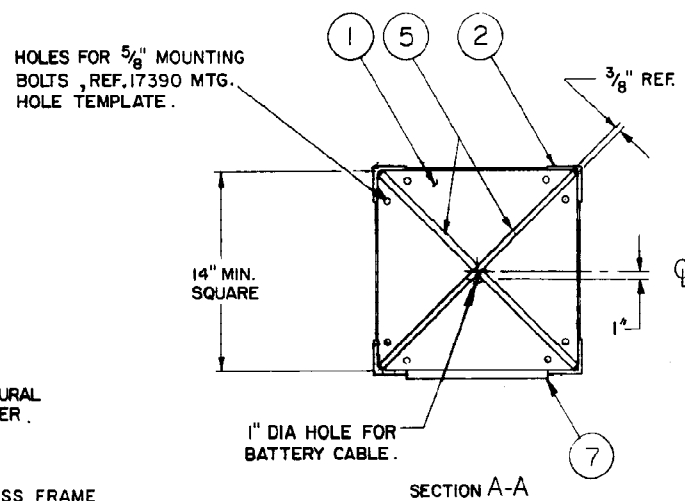
I13497



PART	DESCRIPTION	MINIMUM RECOMMENDED MATERIAL SIZE
1	TOP PLATE	$\frac{3}{8}$ " STEEL
2	CORNER POST	3" x 3" x $\frac{1}{4}$ " STEEL ANGLE
3	CROSS FRAME	2" x 4" x $\frac{1}{4}$ " W STRUCTURAL TUBING or 4" x 7.25 LB STANDARD STEEL CHANNEL
4	SHEAR WEB	12 Ga.
5	TOP PLATE REINFORCEMENT	$\frac{3}{8}$ " x 4" STEEL BAR
6	OUTRIGGER REINFORCEMENT PLATE	$\frac{3}{16}$ " THICK STEEL PLATE
7	GUSSET	$\frac{1}{4}$ " x 4" H.R. STEEL



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.



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CINCINNATI, OHIO

TITLE
INSTALLATION DRAWING

▲ ET6KR, ET10K(X) CRANES

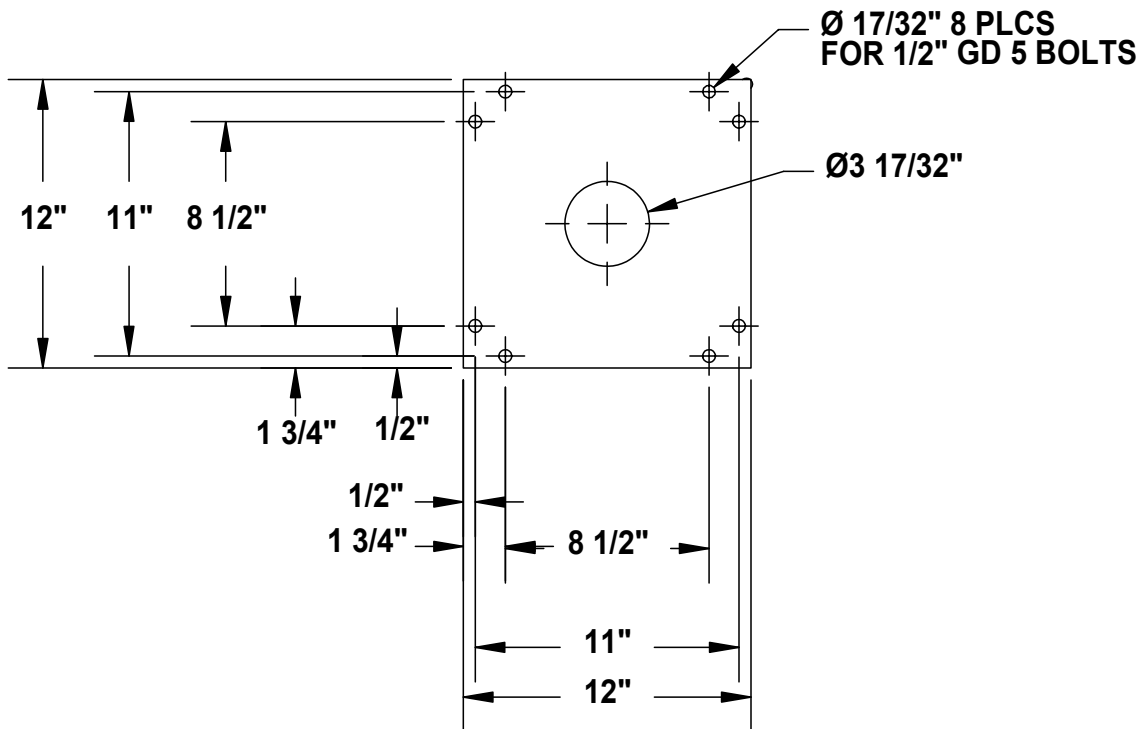
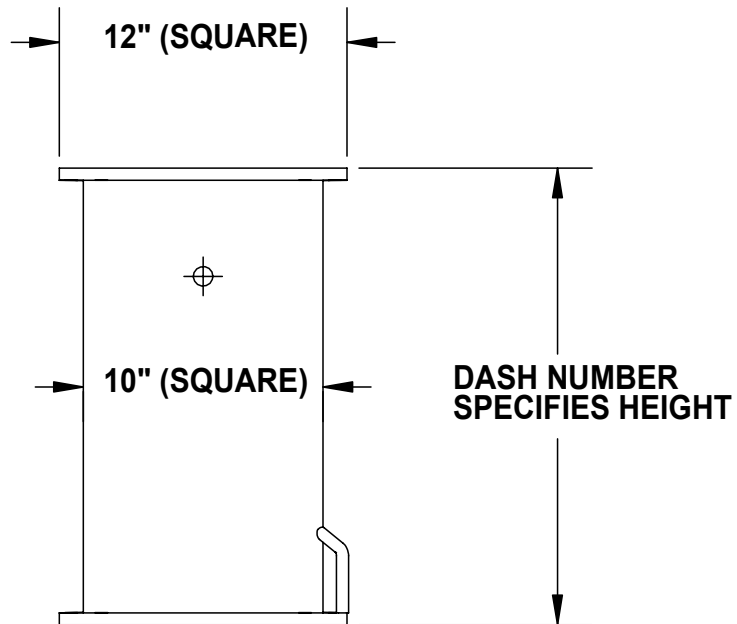
DATE
12-21-99B

SUPERCEDES
6-19-98A

SECTION
C100

16938

14930 PEDESTAL

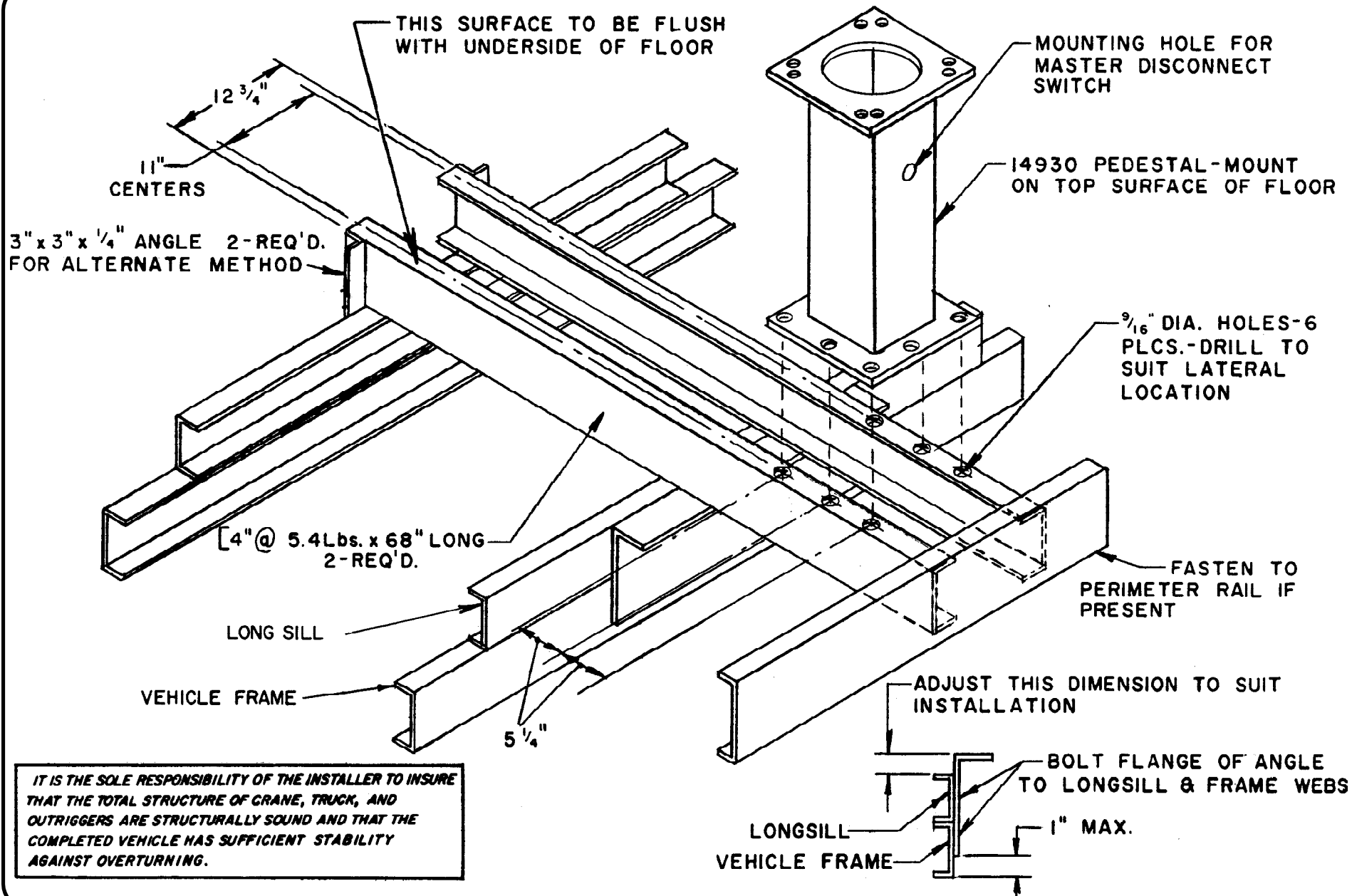


MFG., INC.
CINCINNATI, OHIO

TITLE
14930 MOUNTING PEDESTAL
ET6KM, DT7K

DATE
1-3-02H
SUPERSEDES
1-19-00G

SECTION
C100
S14930



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DRAWING

ET5500MPB, ET6KM, DT7K ▲

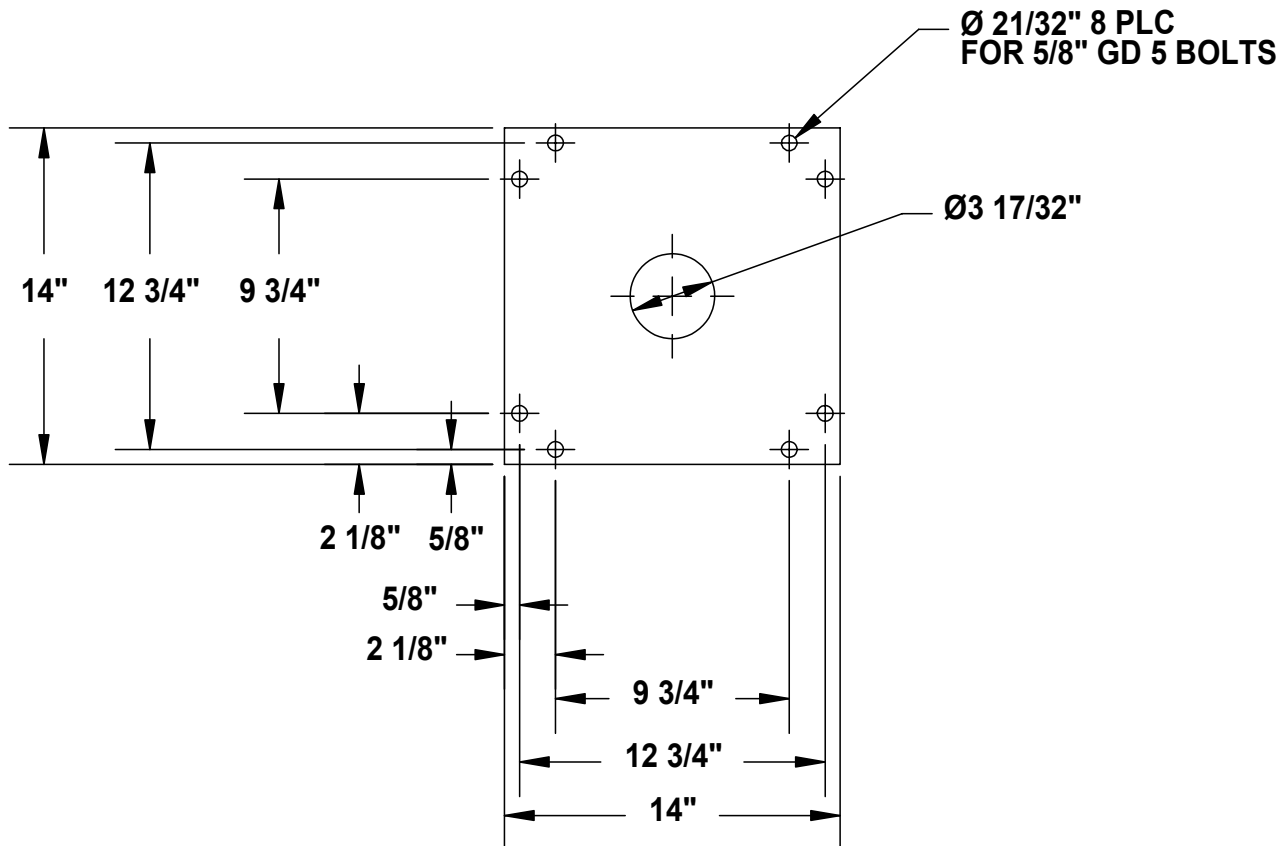
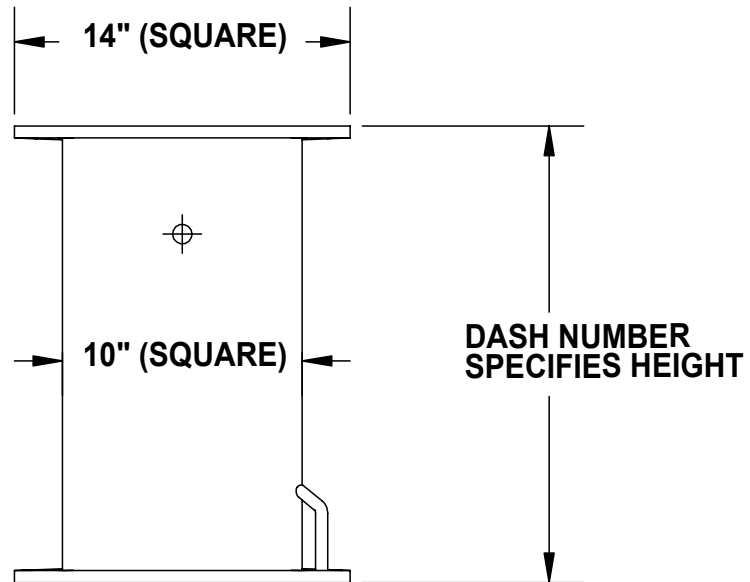
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SUPERCEDES
6-17-98E

SECTION
C100

I14930

17340 PEDESTAL

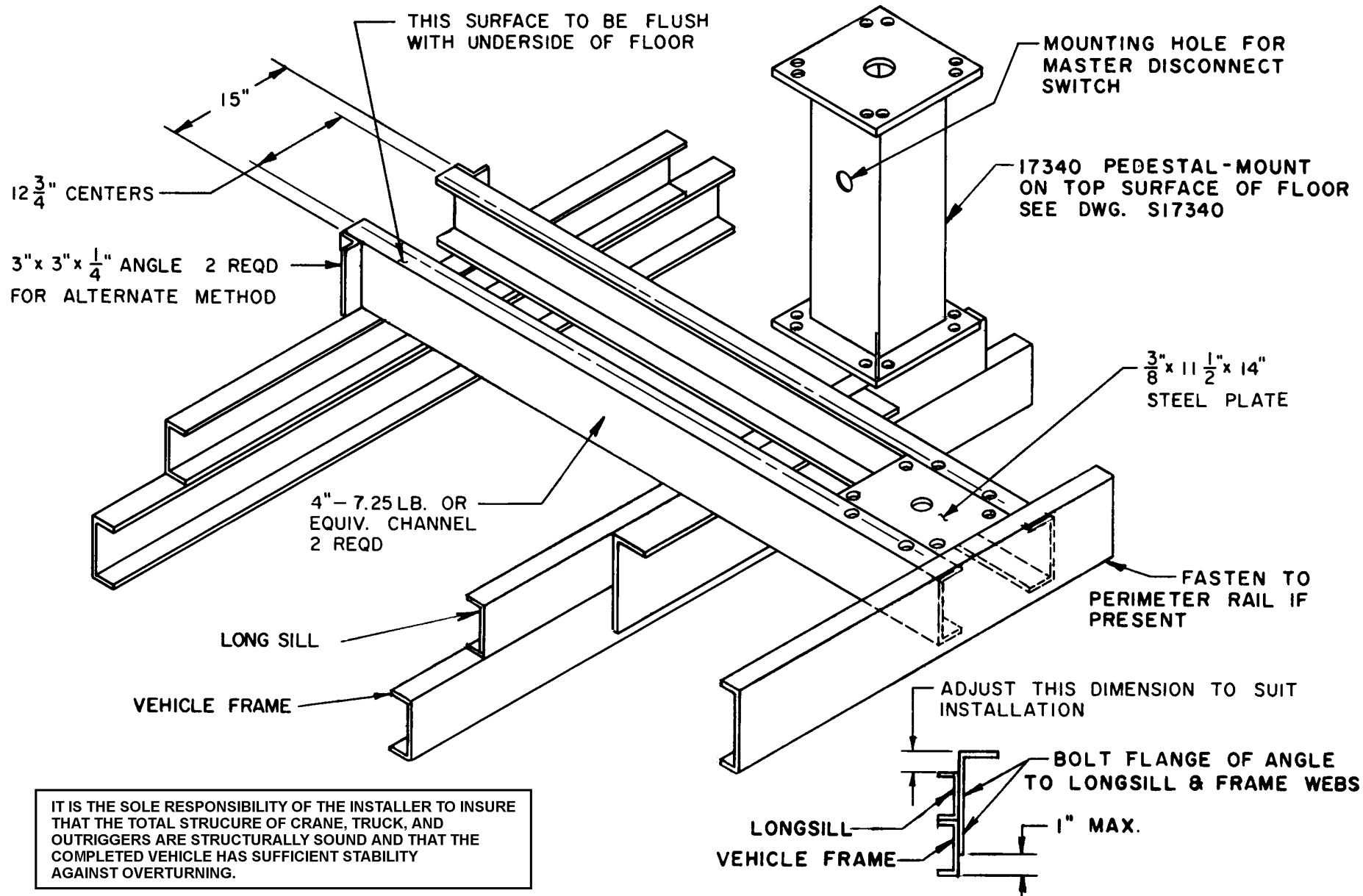


MFG., INC.
CINCINNATI, OHIO

TITLE
17340 MOUNTING PEDESTAL
ET10K(X) CRANES

DATE
1-2-03C
SUPERSEDES
6-19-98B

SECTION
C100
S17340



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE

INSTALLATION DRAWING

DATE

5-1-02C

SECTION

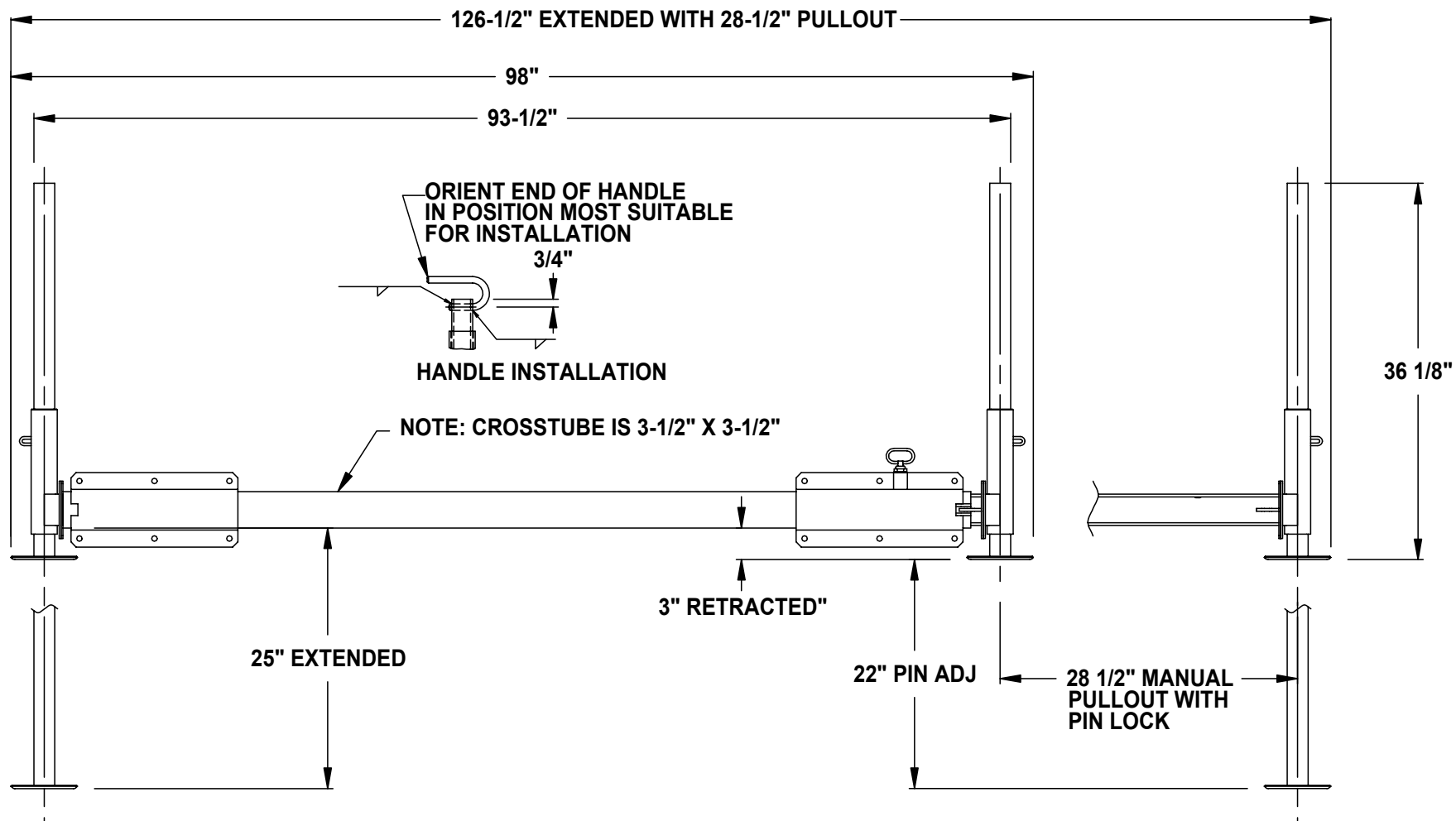
C100

ET6KR, ET8100, ET10K(X) CRANES

SUPERCEDES

6-19-98B

I17340



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE

INSTALLATION DRAWING

18500-P OUTRIGGER

DATE

11-12-03

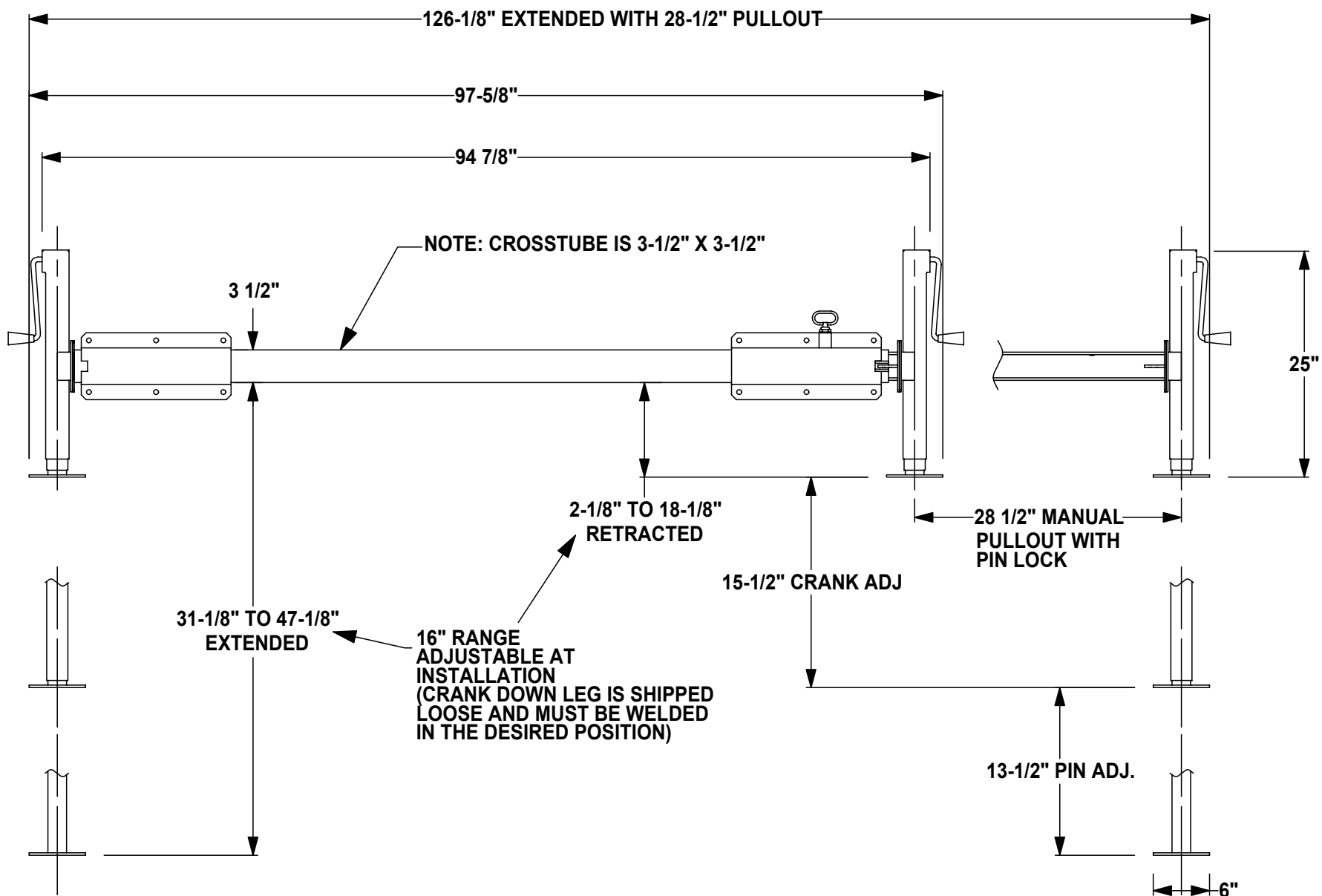
SUPERSEDES

-

SECTION

C100

22687



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE

INSTALLATION DRAWING

18500-CD OUTRIGGER

DATE

11-11-03

SUPERSEDES

-

SECTION

C100

22686

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

6 - $\frac{3}{8}$ " DIA. BOLT HOLES

SERVICE BODY

TYPICAL INSTALLATION OF
13500 MANUAL OUTRIGGER
ON TRUCK WITH SERVICE BODY

$\frac{1}{2}$ " TO 24"

$\frac{1}{2}$ " DIA. LOCKING PIN WITH HAIRPIN COTTER

OUTRIGGER EXTENDS AND RETRACTS IN INCREMENTS OF $\frac{11}{16}$ ".

$6\frac{5}{16}$ "
DIA.



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DRAWING

ET5500MPB, ET6KM/R

DATE
6-17-98C

SUPERCEDES
8-1-83B

SECTION
C100

13509

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

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



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TITLE
INSTALLATION DWG

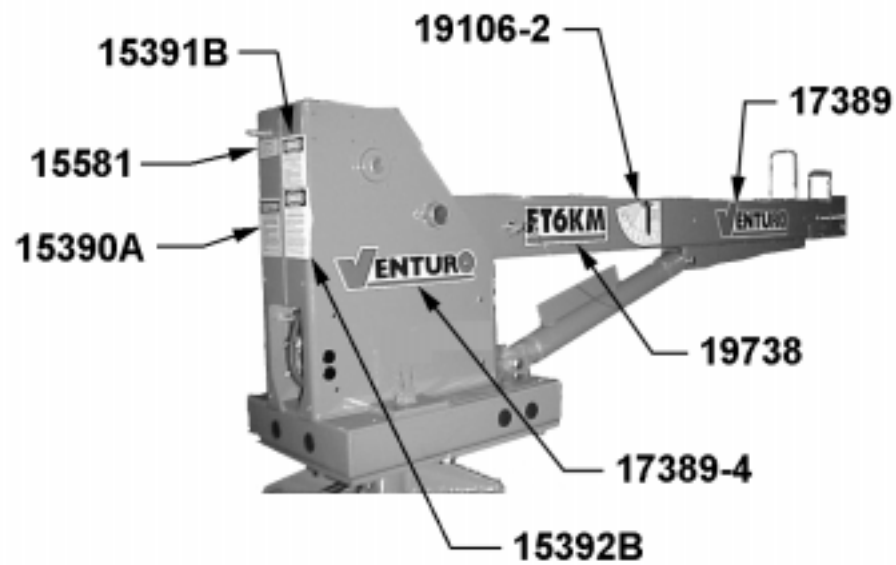
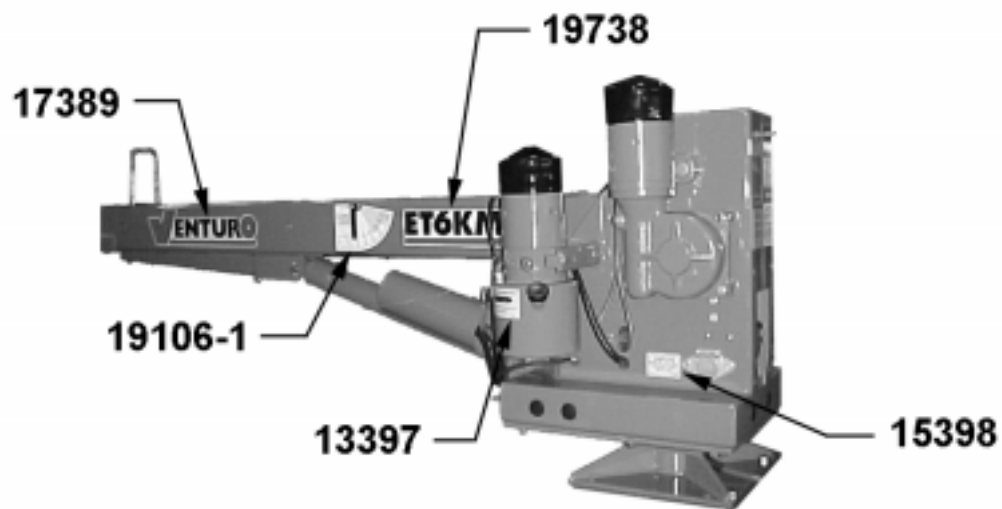
ET & HT CRANE SERIES

DATE
5-15-02H

SUPERCEDES
5-13-97G

SECTION
C150

15394



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
DECAL PLACEMENT

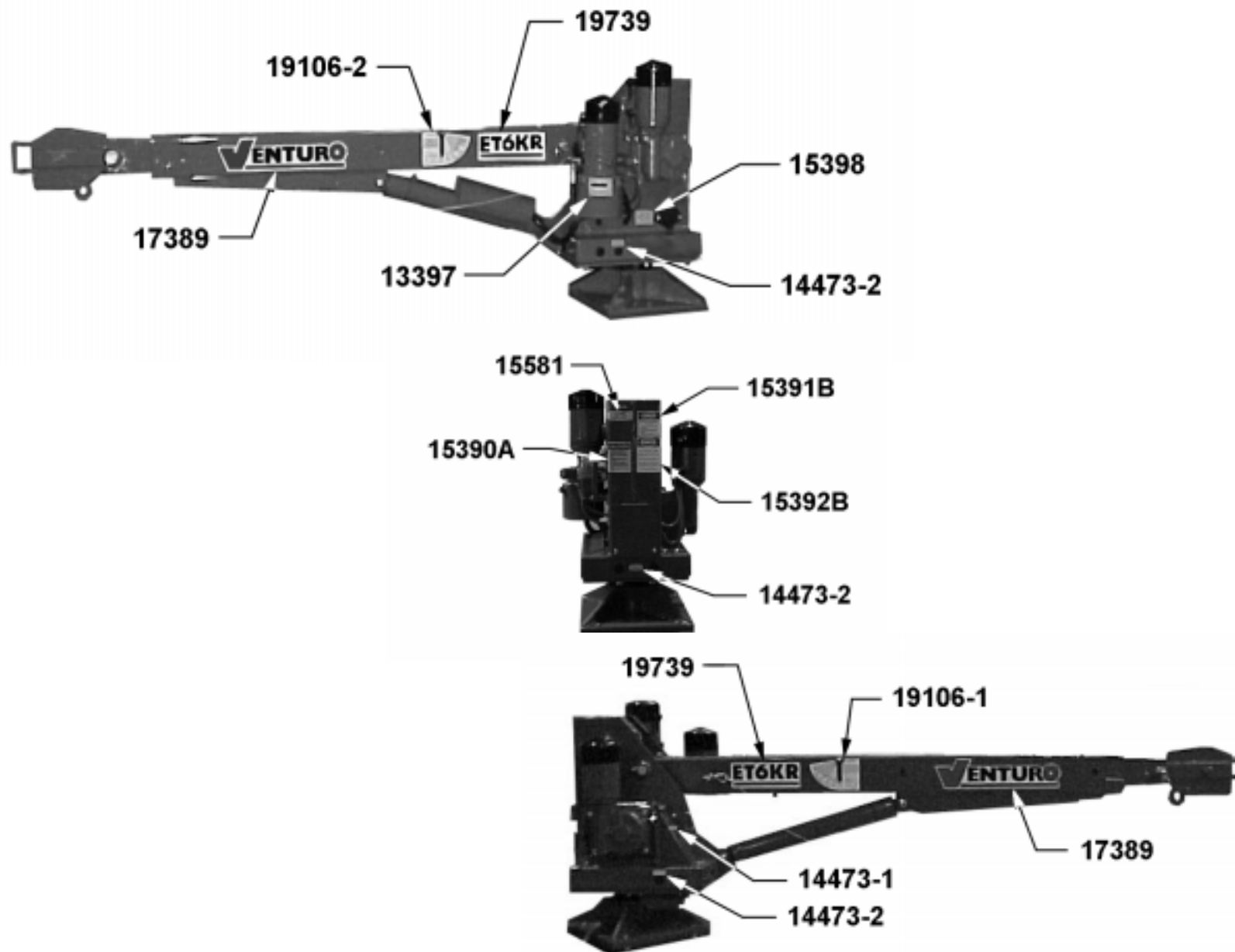
ET6KM

DATE
12-18-98

SUPERCEDES
-

SECTION
C100

19567



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
DECAL PLACEMENT

ET6KR

DATE
12-18-98

SUPERCEDES
-

SECTION
C100

19566

INSTALLATION INSTRUCTIONS

MODEL(S): ET6KM

CAPACITY - REFERENCE DRAWINGS I19113 AND I19114

6-10-14 FT BOOM - 400 LBS @ 14 FT REACH - 2200 LBS @ 2.5 FT REACH

10-18 FT BOOM - 300 LBS @ 18 FT REACH - 1400 LBS @ 3.5 FT REACH

12 VOLT ELECTRIC

STANDARD EQUIPMENT

MOMENT OVERLOAD FUNCTION SHUT-OFF SYSTEM

CABLE OVERHAUL WEIGHT

SWIVEL SNATCH BLOCK

20 FT PLUG-IN PENDANT CONTROL

MASTER DISCONNECT SWITCH

65 FT (6-10-14) AND 75 FT (10-18) 3/16" WIRE ROPE AND HOOK WITH SAFETY LATCH

25 FT. OF #2 BATTERY CABLE PLUS 4 FT FROM CRANE TO DISCONNECT SWITCH

OPTIONAL EQUIPMENT

OUTRIGGERS - RECOMMENDED WITH VEHICLES OF 10,000 GVW OR LESS

MOMENT OVERLOAD ALARM (MOMENT OVERLOAD FUNCTION SHUT-OFF SYSTEM WITHOUT ALARM IS STANDARD)

MOUNTING PEDESTAL - 36" HIGH

REFERENCE DRAWINGS	INSTALLATION INSTRUCTIONS
I19120 I13497 I14930	1. Select mounting location to clear 13 1/2" housing swing radius. Provide a strong and rigid mounting base. See installation drawings for typical construction of pedestal base for behind cab mounting and reinforcement for mounting on top of service body. Similar reinforcement is required for mounting crane on floor of truck or on 14930 pedestal.
	2. Drill eight clearance holes for 1/2" diameter mounting bolts (not provided). If battery cable is to be routed down through center of the quill and at the center of the base, underneath the floor, drill 7/8" diameter hole.
711105 15660	3. Route battery cable out center of base. Bolt base assembly in position. Assemble master disconnect switch to battery cables and mount in convenient spot. Connect long battery cable to battery. NOTE REQUIREMENTS FOR ADEQUATE WIRING & BATTERY
I19120 711006	4. Assemble boom and elevating cylinder (10-18 ft boom only) and wire rope to housing assembly. WARNING - be sure that breather cap is installed hydraulic power unit prior to operation.
18518 13509 13510	5. Install optional outriggers if required. Provide necessary reinforcement.



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION INFO

ET6KM

DATE
10-14-97A

SUPERCEDES
4-8-96

SECTION
C200

I19115

OPERATING AND MAINTENANCE INSTRUCTIONS

MODEL(S): ET6KM

OPERATING INSTRUCTIONS

1. **ELECTRIC WINCH**
Controlled by plug-in remote pendant. NOTE - Snatch block must be used for loads in excess of 1200 lbs.
2. **BOOM ELEVATION**
Controlled by plug-in remote pendant. Electric-hydraulic power unit allows full power lifting and lowering of capacity loads.
3. **MANUAL ROTATION**
Controlled by handle operated brake. Crane can be rotated continuously 360 deg or more. Depress brake handle to adjust for full 180 deg. operating range of handle.
4. **CONTROL PRIORITY SYSTEM**
As a built-in safety feature, the control priority system allows the operator to perform only one major and one minor function at any one time. Major functions are winch up and boom up. Minor functions are winch down and boom down.
WINCH UP has priority over BOOM UP
BOOM DOWN and WINCH DOWN can be operated with any other function.
5. **MOMENT OVERLOAD FUNCTION SHUT-OFF SYSTEM**
A moment overload shut-off system is also provided as a built-in safety feature. When the system detects a moment overload condition, it disables the winch up and boom down functions. The winch down and boom up functions remain operational to allow the operator to eliminate the overload condition.
6. **TELESCOPING BOOM**
The 6-10-14 ft. and 10-18 ft. booms can be manually extended. Toggle pin(s) lock the boom in the selected position.
7. **MASTER DISCONNECT SWITCH**
The master disconnect switch cuts supply current from the battery and should be turned OFF when the crane is not in use.
8. **CAPACITY INDICATOR**
Select boom reach and angle allowable for load by using the capacity indicator arrow and chart on either side of the boom.

MAINTENANCE

Crane requires only periodic lubrication. Swivel (rotation) bearings are self-lubricating.

Fill Winch Gear Box to level of plug with S.A.E. 140 Hypoid Lubricant.

Chain should be oiled lightly (DO NOT GREASE). Excess oil or grease will collect road grit and cause excessive chain wear.

NOTE: Fill electric-hydraulic power unit reservoir to oil level line with the boom down. Use Automatic Transmission Fluid Type "B" (DEXRON). Below 20 deg. F add 3/4 pt. Kerosene. Check periodically or when boom action is affected.



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION INFO

ET6KM

DATE
10-14-97A

SUPERCEDES
4-8-96

SECTION
C200

I19116

INSTALLATION INSTRUCTIONS

MODEL(S): ET6KR

CAPACITY - REFERENCE DRAWINGS I19113 AND I19114

6-10-14 FT BOOM - 400 LBS @ 14 FT REACH - 2200 LBS @ 2.5 FT REACH

10-18 FT BOOM - 300 LBS @ 18 FT REACH - 1400 LBS @ 3.5 FT REACH

12 VOLT ELECTRIC

STANDARD EQUIPMENT

MOMENT OVERLOAD FUNCTION SHUT-OFF SYSTEM

CABLE OVERHAUL WEIGHT

SWIVEL SNATCH BLOCK

20 FT PLUG-IN PENDANT CONTROL

MASTER DISCONNECT SWITCH

65 FT (6-10-14) AND 75 FT (10-18) 3/16" WIRE ROPE AND HOOK WITH SAFETY LATCH

25 FT. OF #2 BATTERY CABLE PLUS 4 FT FROM CRANE TO DISCONNECT SWITCH

OPTIONAL EQUIPMENT

OUTRIGGERS - RECOMMENDED WITH VEHICLES OF 10,000 GVW OR LESS

MOMENT OVERLOAD ALARM (MOMENT OVERLOAD FUNCTION SHUT-OFF SYSTEM WITHOUT ALARM IS STANDARD)

MOUNTING PEDESTAL - 36" HIGH

REFERENCE DRAWINGS	INSTALLATION INSTRUCTIONS
I19121 I13497 I14930	1. Select mounting location to clear 13 1/2" housing swing radius. Provide a strong and rigid mounting base. See installation drawings for typical construction of pedestal base for behind cab mounting and reinforcement for mounting on top of service body. Similar reinforcement is required for mounting crane on floor of truck or on 17340 pedestal.
	2. Drill eight clearance holes for 5/8" diameter mounting bolts (not provided). If battery cable is to be routed down through center of the quill and at the center of the base, underneath the floor, drill 7/8" diameter hole.
711105 15660	3. Route battery cable out center of base. Bolt base assembly in position. Assemble master disconnect switch to battery cables and mount in convenient spot. Connect long battery cable to battery. NOTE REQUIREMENTS FOR ADEQUATE WIRING & BATTERY
I19121 711006	4. Assemble boom and elevating cylinder (10-18 ft boom only) and wire rope to housing assembly. WARNING - be sure that breather cap is installed hydraulic power unit prior to operation.
18518 13509 13510	5. Install optional outriggers if required. Provide necessary reinforcement.



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION INFO

ET6KR

DATE
10-14-97A

SUPERCEDES
4-8-96

SECTION
C200

I19117

OPERATING AND MAINTENANCE INSTRUCTIONS

MODEL(S): ET6KR

OPERATING INSTRUCTIONS

1. ELECTRIC WINCH

Controlled by plug-in remote pendant. NOTE - Snatch block must be used for loads in excess of 1200 lbs.

2. BOOM ELEVATION

Controlled by plug-in remote pendant. Electric-hydraulic power unit allows full power lifting and lowering of capacity loads.

3. POWER ROTATION

Controlled by plug-in remote pendant. Crane can be rotated continuously 360 deg. or more under full crane loading.

4. CONTROL PRIORITY SYSTEM

As a built-in safety feature, the control priority system allows the operator to perform only one major and one minor function at any one time. Major functions are rotation right and left, winch up, and boom up. Minor functions are winch down and boom down.

WINCH UP has priority over BOOM UP and ROTATION

BOOM UP has priority over ROTATION

BOOM DOWN and WINCH DOWN can be operated with any other function.

5. MOMENT OVERLOAD FUNCTION SHUT-OFF SYSTEM

A moment overload shut-off system is also provided as a built-in safety feature. When the system detects a moment overload condition, it disables the winch up and boom down functions. The winch down, boom up, and rotation functions remain operational to allow the operator to eliminate the overload condition.

6. TELESCOPING BOOM

The 6-10-14 ft. and 10-18 ft. booms can be manually extended. Toggle pin(s) lock the boom in the selected position.

7. MASTER DISCONNECT SWITCH

The master disconnect switch cuts supply current from the battery and should be turned OFF when the crane is not in use.

8. CAPACITY INDICATOR

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

MAINTENANCE

Crane requires only periodic lubrication. Swivel (rotation) bearings are self-lubricating.

Fill Winch and Rotation Gear Boxes to level of plug with S.A.E. 140 Hypoid Lubricant.

Chains should be oiled lightly (DO NOT GREASE). Excess oil or grease will collect road grit and cause excessive chain wear.

Moly filled chassis grease should be applied by pressure grease gun to fittings on each end of rotation worm shaft and on rotation gear teeth through the provided ports in the crane housing.

NOTE: Fill electric-hydraulic power unit reservoir to oil level line with the boom down. Use Automatic Transmission Fluid Type "B" (DEXRON). Below 20 deg. F add 3/4 pt. Kerosene. Check periodically or when boom action is affected.



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION INFO

ET6KR

DATE
10-14-97A

SUPERCEDES
4-8-96

SECTION
C200

119118

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
ET25K ET25KX	SEE DRAWING I24600 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

CE, CT, DT, & ET

DATE
8-10-00R

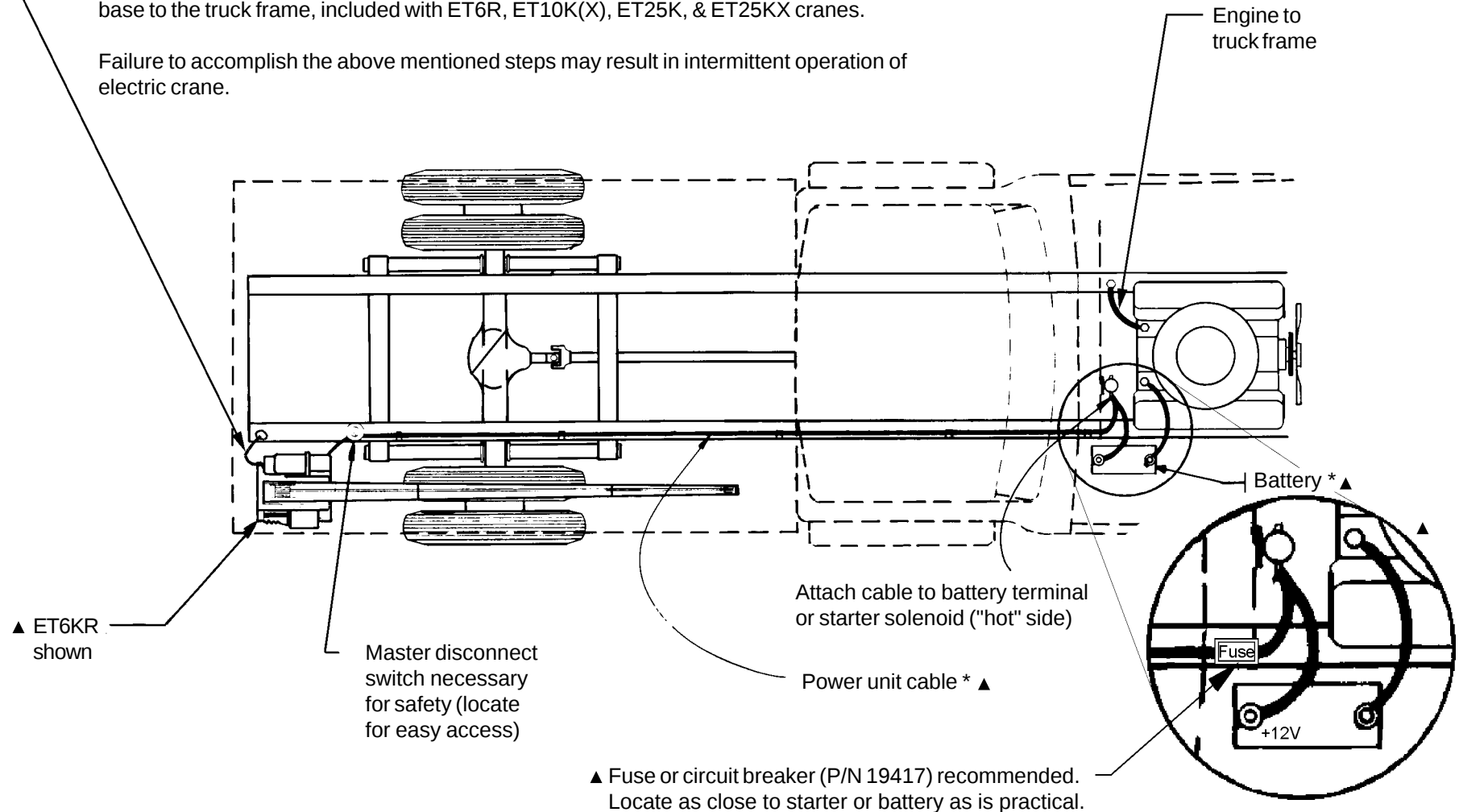
SUPERCEDES
3-3-99Q

SECTION
C200

711105

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, & ET25KX 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



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
INSTALLATION - BATTERY CABLE

WINCH & CRANE

DATE
1-15-02E

SUPERCEDES
11-7-01D

SECTION
C200

15660

SELECTION

The chart below shows the maximum working load and breaking strength of 7 X 19 Galvanized AIRCRAFT Grade Wire Rope in various diameters. The breaking strength is 3-1/2 times the maximum working load. Do not use wire rope with a Maximum Working Load rating less than the single line capacity of the crane. Use of wire rope diameter larger than the size furnished with the crane will reduce the fatigue life of the wire rope.

<u>WIRE ROPE DIAMETER</u>	<u>MAXIMUM WORKING LOAD</u>	<u>BREAKING STRENGTH</u>
1/8"	570 lbs	2000 lbs
5/32"	800 lbs	2800 lbs
3/16"	1200 lbs	4200 lbs
7/32"	1600 lbs	5600 lbs
1/4"	2000 lbs	7000 lbs
5/16"	2800 lbs	9800 lbs
3/8"	4114 lbs	14400 lbs

INSTALLATION

1. Unwind coil of rope by rolling it along floor. This will prevent kinking.
2. Most VENTURO Cranes are provided with a slot in the winch drum side plate for attaching the end of the wire rope with a stop collar. A hole in the housing allows access for the end of the wire rope when inserted thru the slot.

The ET20K(X) & ET25K(X) Cranes have a clamp built into the winch drum and do not use a stop collar.

3. THERE MUST ALWAYS BE AT LEAST (3) TURNS OF WIRE ROPE ON THE DRUM WHEN UNDER LOAD.



MFG., INC.
CINCINNATI, OHIO

TITLE
WIRE ROPE SPECS

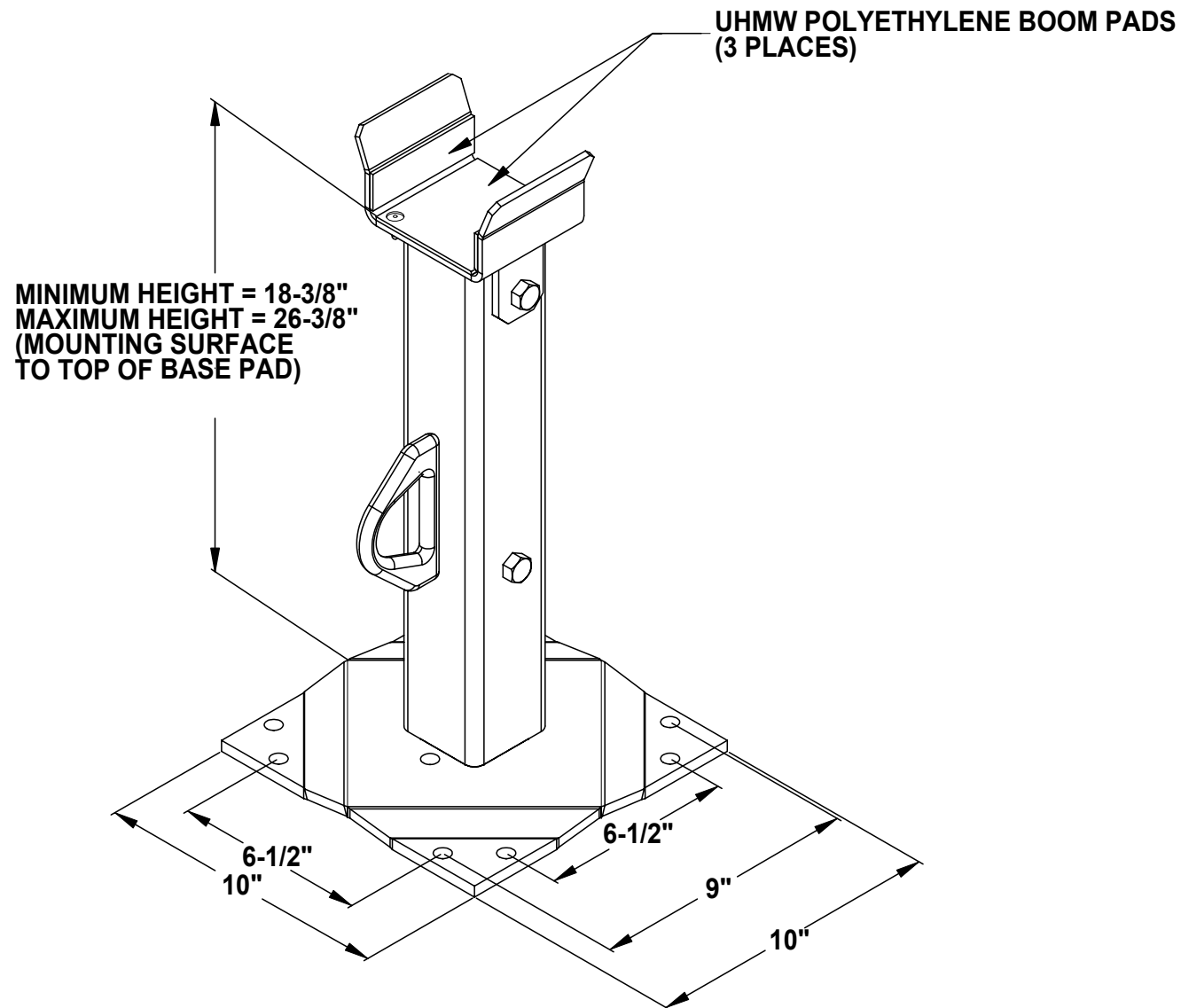
VENTURO WINCH & CRANE

DATE
10-23-97G

SUPERCEDES
4-27-92F

SECTION
WC 200

711006



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE

INSTALLATION DRAWING

DATE

5-7-01

SECTION

-

SUPERSEDES

-

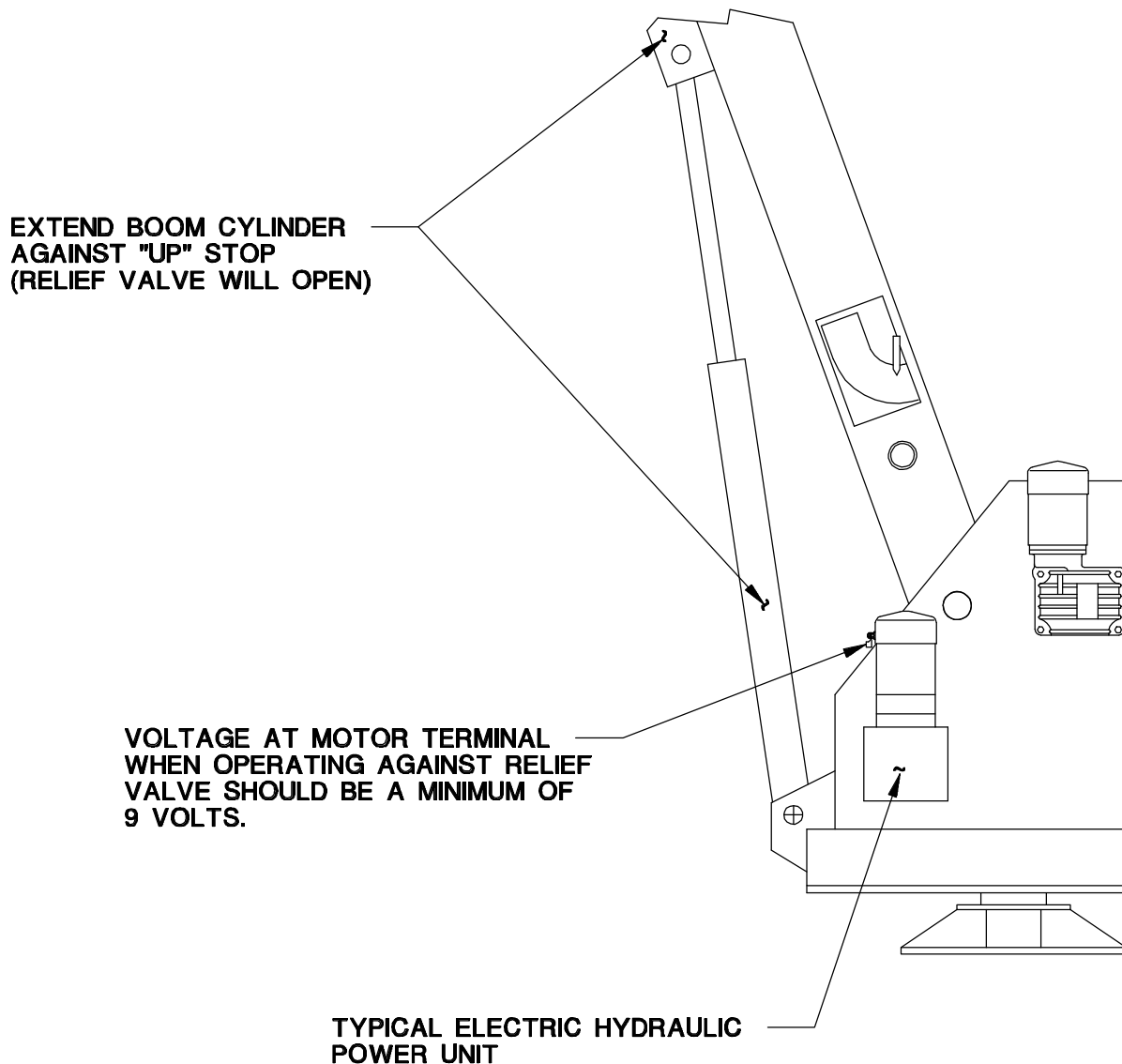
20075 ADJ BOOM REST - ET6KR, ET10K(X)

20076

MINIMUM VOTAGE TEST
ET5500, ET6K(M/R), ET8100, ET10K(X)

ONE OF THE MOST COMMON ELECRICAL PROBLEMS ENCOUNTERED ON ELECTRICAL CRANES IS INSUFFICIENT VOLTAGE AT THE MOTOR WHEN DRAWING THE LARGE CURRENT THAT EXISTS AT FULL LOAD.

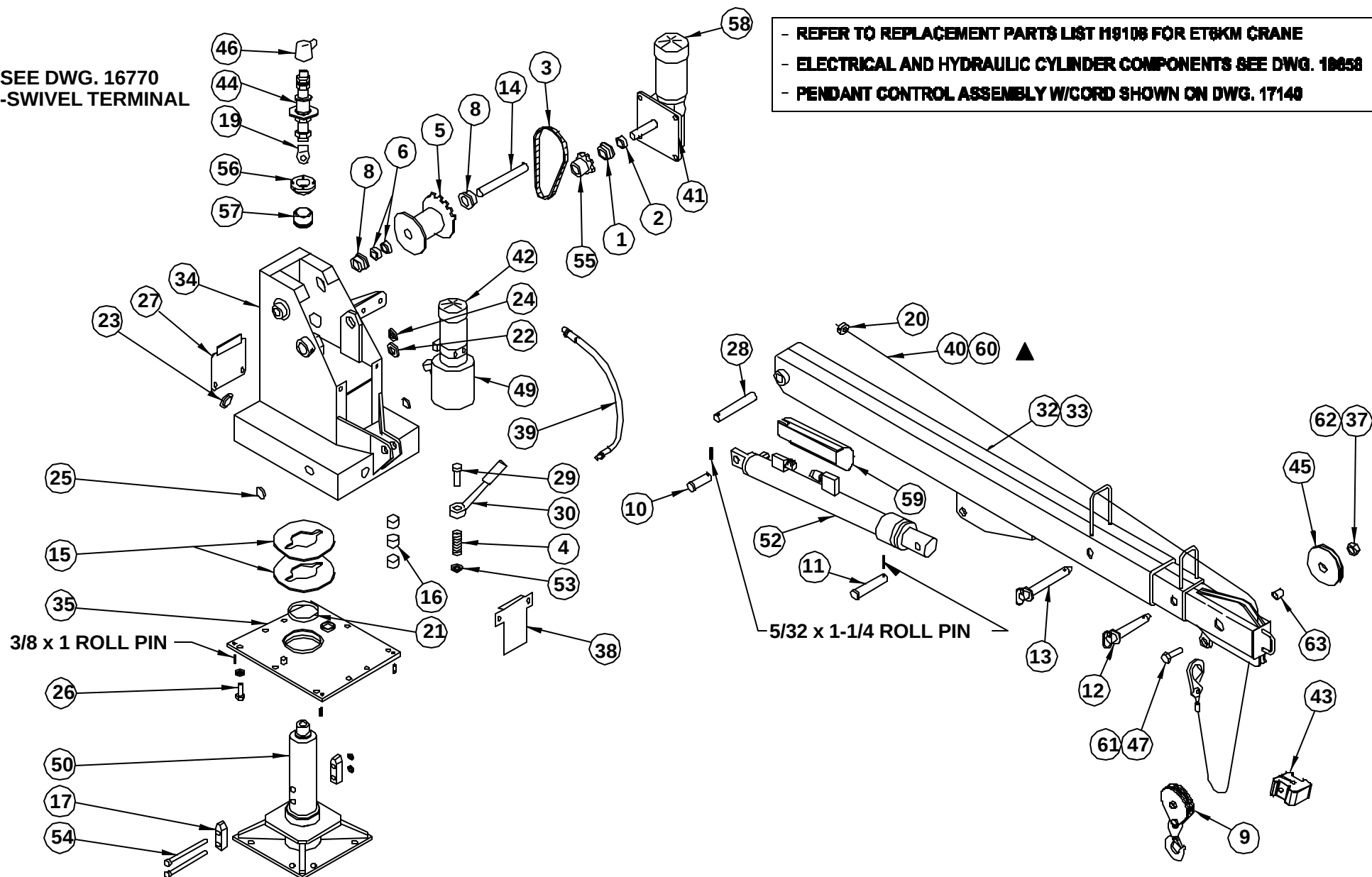
TO ISOLATE THIS PROBLEM PERFORM THE MINIMUM VOLTAGE TEST BELOW:



SEE DWG. 16770
-SWIVEL TERMINAL

3/8 x 1 ROLL PIN

- REFER TO REPLACEMENT PARTS LIST H9108 FOR ET6KM CRANE
- ELECTRICAL AND HYDRAULIC CYLINDER COMPONENTS SEE DWG. 10058
- PENDANT CONTROL ASSEMBLY W/CORD SHOWN ON DWG. 17140



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE REPLACEMENT PARTS

ET6KM

DATE
6-10-04H

SUPERSEDES
8-20-02G

SECTION
C400

I19109

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	00181-3	FLANGED BEARING - 3/4" BORE x 1-7/8" O.D.	41	16105	WINCHPOWERUNIT
2	00210	THRUST COLLAR - 3/4" BORE	42	16143-2	MOTOR COVER - BLACK
3	00867-1	WINCH DRIVE CHAIN (NO CONNECTING LINK) 50 LINKS	43	16735	HEADACHE BALL ASSEMBLY (INCLUDES HARDWARE)
4	11889	SPRING	44	16770	SWIVEL TERMINAL
5	01149	CABLE DRUM	45	20537	POLY CABLE SHEAVE - WITH BUSHING
6	01158	THRUST COLLAR - MAIN SHAFT - 1" BORE	46	17011	BOOT - SWIVEL TERMINAL
7	-	-	47	17059-4	SHEAVE AXLE - 6/14 BOOM
8	01299	FLANGED BEARING - 1" BORE x 2" O.D. - MAIN SHAFT	48	17140 ⚠	PENDANT CONTROL ASSEMBLY
9	19678	SWIVEL SNATCH BLOCK WITH SAFETY LATCH	49	17252	HYDRAULIC POWER UNIT (W/MOTOR COVER)
10	13401-1	CLEVIS PIN (3/4" O.D. x 2" LONG) - CYLINDER BASE	50	18830	QUILL ASSEMBLY
11	13401-2B	CLEVIS PIN (3/4" O.D. x 3-1/4" LONG) - CYLINDER ROD	51	18542 ⚠	BOOT - MOTOR TERMINAL
12	19258-3	BOOM PIN ASSY (SHORT LANYARD) - 6/14 & 10/18 BOOMS	52	18671-1 ⚠	ELEVATION CYLINDER ASSEMBLY
13	19258-2	BOOM PIN ASSEMBLY (LONG LANYARD) - 6/14 BOOM	53	!FWSH-075	FLAT WASHER - 3/4"
14	13407	MAIN SHAFT (1" O.D. x 7-5/16" LONG) - CABLE DRUM	54	13453	HIGH STRENGTH THRU-BOLT WITH HEX NUT
15	13413	BRAKE DISC	55	15999	DRIVE SPROCKET - 3/4" BORE 40B10
16	18834	FRICTION PUCK	56	17372	UPPER BEARING HOUSING
17	13416	KEY DISC BRAKE	57	15681	UPPER BEARING - QUILL
18	-	-	58	16143-1	MOTOR COVER - BLACK
19	13448-24	SWIVEL PIGTAIL	59	19126	COVER - ELEVATION CYLINDER
20	13463-1	STOP SLEEVE	60	▲ 15810-3/16-75	3/16" DIA WIRE ROPE & EYE HOOK ASSEMBLY 10/18 BOOM
21	20179	BEARING - LOWER BEARING PLATE	61	!HHCS06311150	HEX HEAD CAP SCREW - 5/8"-11 x 1-1/2" - 10/18 BOOM
22	14775	GROMMET (1/2" I.D.) - RUBBER	62	!JNUT-06311N	NYLON LOCK JAMNUT - 5/8"-11 - 10/18 BOOM
23	14858-2	SNAP IN PLUG - 2" DIA	63	20536	SPACER - 20537 SHEAVE
24	14883	GROMMET (3/8" I.D.) - RUBBER	64	-	-
25	RL-644	INSULATING PLUG - 1" HOLE	65	-	-
26	!HHCS05013150	HEX HEAD CAP SCREW - 1/2"-13 x 1-1/2" GR. 5	66	-	-
27	15676	BACK COVER	67	-	-
28	13406	PIVOT PIN (1-1/4" O.D. x 7" LONG) - BOOM	68	-	-
29	13454	BRAKE BOLT	69	-	-
30	13455	BRAKE HANDLE	70	-	-
31	13546-1-R ⚠	6-POLE SOCKET	71	19140-6/14 ⚠	FIELD SERVICE LABEL KIT - ET6KM - 6 - 14 FT BOOM
32	20421	BOOM ASSEMBLY - 6-10-14 FT.	72	19140-10/18 ⚠	FIELD SERVICE LABEL KIT - ET6KM - 10 - 18 FT BOOM
33	14861-1	BOOM ASSEMBLY - 10-18 FT.	73	-	-
34	18838 ⚠	HOUSING ASSEMBLY	74	-	-
35	18803 ⚠	LOWER BEARING PLATE	75	-	-
36	-	-	76	-	-
37	!JNUT-07510N	NYLON LOCK JAMNUT - 3/4"-10 - 6/14 BOOM	77	-	-
38	18677	FRONT COVER	78	-	-
39	19695	HOSE ASSEMBLY ▲	79	-	-
40	15810-3/16-65	3/16" DIA WIRE ROPE & EYE HOOK ASSEMBLY - 6/14 BOOM	80	-	-

⚠ ITEM NOT SHOWN ON DRAWING I19109

⚠ THESE PARTS ARE A MATCHED SET AND ARE NOT NORMALLY SOLD AS REPLACEMENT PARTS

⚠ HYDRAULIC CYLINDER PARTS SEE DRAWING I18658

REPLACEMENT PARTS DRAWING REF I19109



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
REPLACEMENT PARTS

ET6KM

DATE
6-10-02N

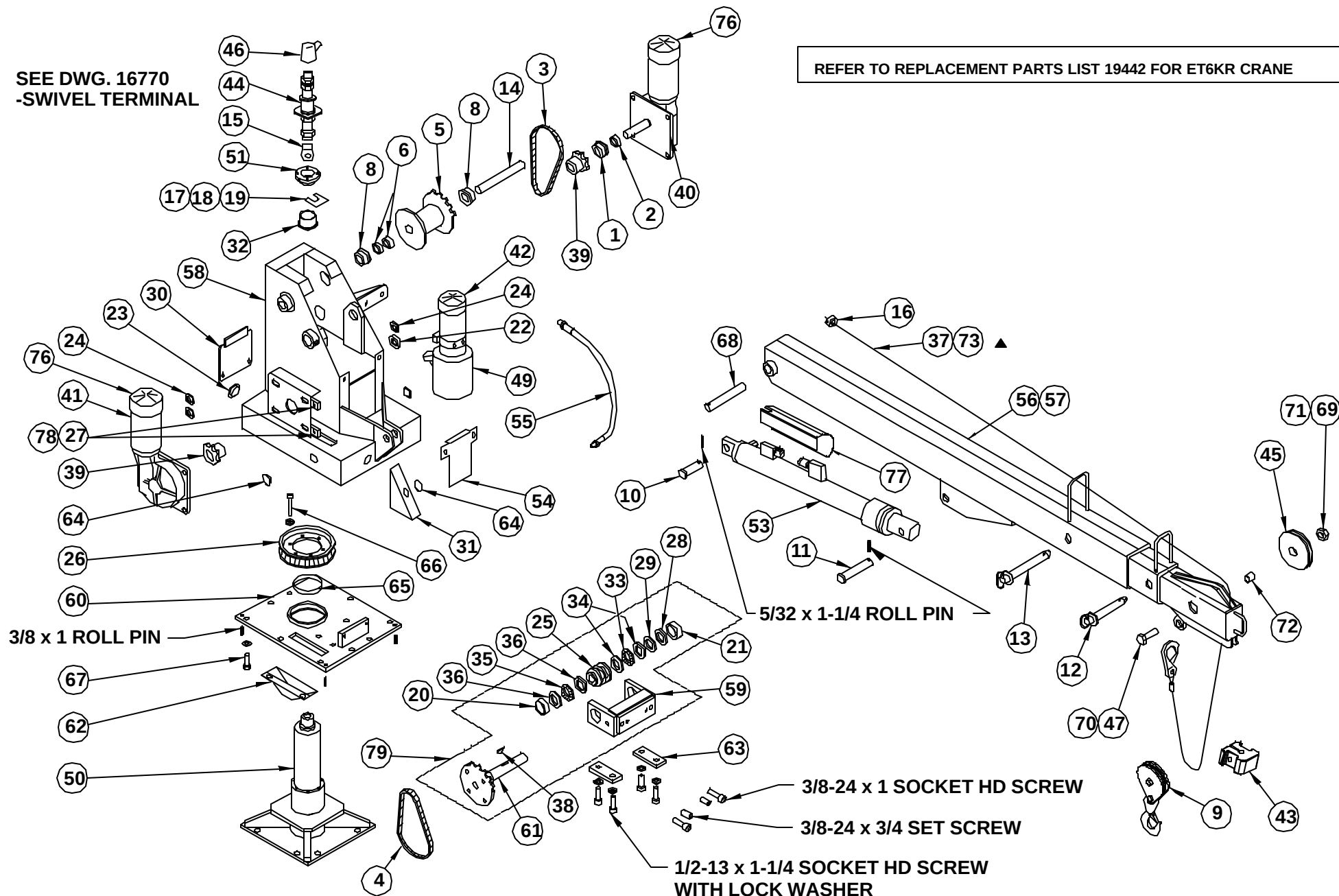
SUPERCEDES
8-20-02M

SECTION
C400

I19108

SEE DWG. 16770
-SWIVEL TERMINAL

REFER TO REPLACEMENT PARTS LIST 19442 FOR ET6KR CRANE



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
REPLACEMENT PARTS

ET6KR

DATE
6-10-04J

SUPERSEDES
1-7-03H

SECTION
C400

19443

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	00181-3	FLANGED BEARING - 3/4" BORE x 1-7/8" O.D.	41	16107	ROTATION POWER UNIT
2	00210	THRUST COLLAR - 3/4" BORE	42	16143-2	MOTOR COVER - BLACK
3	00867-1	WINCH DRIVE CHAIN (NO CONNECTING LINK) 50 LINKS	43	16735	HEADACHE BALL ASSEMBLY (INCLUDES HARDWARE)
4	00867-3	ROTATION DRIVE CHAIN (NO CONNECTING LINK) 56 LINKS	44	16770	SWIVEL TERMINAL
5	01149	CABLE DRUM	45	20537	POLY CABLE SHEAVE - WITH BUSHING
6	01158	THRUST COLLAR - MAIN SHAFT - 1" BORE	46	17011	BOOT - SWIVEL TERMINAL
7	-	-	47	17059-4	SHEAVE AXLE - 6/14 BOOM
8	01299	FLANGED BEARING - 1" BORE x 2" O.D. - MAIN SHAFT	48	17150	PENDANT CONTROL ASSEMBLY
9	19678	SWIVEL SNATCH BLOCK WITH SAFETY LATCH	49	17252	HYDRAULIC POWER UNIT (W/MOTOR COVER)
10	13401-1	CLEVIS PIN (3/4" O.D. x 2" LONG) - CYLINDER BASE	50	17295	QUILL ASSEMBLY
11	13401-2B	CLEVIS PIN (3/4" O.D. x 3-1/4" LONG) - CYLINDER ROD	51	17372	BEARING HOUSING
12	19258-3	BOOM PIN ASSEMBLY (SHORT LANYARD)	52	18542	BOOT - MOTOR TERMINAL
13	19258-2	BOOM PIN ASSEMBLY (LONG LANYARD)	53	18671-1	ELEVATION CYLINDER ASSEMBLY
14	13407	MAIN SHAFT (1" O.D. x 7-5/16" LONG) - CABLE DRUM	54	18677	FRONT COVER
15	13448-11	SWIVEL PIGTAIL	55	19695	HOSE ASSEMBLY
16	13463-1	STOP SLEEVE	56	20421	BOOM ASSEMBLY - 6-10-14 FT.
17	14159-2	SHIM - 1-1/2" SQ. x .016" THK	57	14861-1	BOOM ASSEMBLY - 10-18 FT.
18	14159-3	SHIM - 1-1/2" SQ. x .042" THK	58	18820	HOUSING ASSEMBLY
19	14159-4	SHIM - 1-1/2" SQ. x .105" THK	59	18846	WORM HOUSING ASSEMBLY (DOES NOT INCL. BUSHINGS)
20	14341-3	BEARING (1-1/2" I.D.) - WORM SHAFT	60	18856	LOWER BEARING PLATE
21	14341-5	BEARING (1-1/4" I.D.) - WORM SHAFT	61	18860	SPROCKET AND SHAFT ASSEMBLY
22	14775	GROMMET (1/2" I.D.) - RUBBER	62	18866	CHAIN COVER - BEARING PLATE
23	14858-2	SNAP IN PLUG - 2" DIA	63	18875	WASHER PLATE
24	14883	GROMMET (3/8" I.D.) - RUBBER	64	RL-644	INSULATING PLUG - 1" HOLE
25	15650	WORM	65	20189	BEARING - LOWER BEARING PLATE
26	15651	BULL GEAR	66	18873	3/8" SOCKET HEAD CAP SCREW - MODIFIED
27	15664	NUT BAR - ROTATION POWER UNIT	67	!HHCS05013150	1/2"-13 x 1-1/2" HEX HEAD CAP SCREW GR. 5
28	15675-1	SHIM WASHER - 1-1/4" I.D. x .005" THK	68	13406	PIVOT PIN (1-1/4" O.D. x 7" LONG) - BOOM
29	15675-2	SHIM WASHER - 1-1/4" I.D. x .010" THK	69	!JNUT-07510N	NYLON LOCK JAMNUT - 3/4"-10 - 6/14 BOOM
30	15676	BACK COVER	70	!HHCS06311150	HEX HEAD CAP SCREW - 5/8"-11 x 1-1/2" - 10/18 BOOM
31	19520	COVER - ROTATION CHAIN	71	!JNUT-06311N	NYLON LOCK JAMNUT - 5/8"-11 - 10/18 BOOM
32	15681	UPPER BEARING - QUILL	72	20536	SPACER - 20537 SHEAVE
33	15696	NEEDLE THRUST BEARING	73	15810-3/16-75	3/16" DIA WIRE ROPE & EYE HOOK ASSEMBLY 10/18 BOOM
34	15697	THRUST RACE - ROTATION WORM	74	19141-6/14	FIELD SERVICE LABEL KIT - ET6KR - 6/14 BOOM
35	15698	NEEDLE THRUST BEARING	75	19141-10/18	FIELD SERVICE LABEL KIT - ET6KR - 10/18 BOOM
36	15699	THRUST RACE - ROTATION WORM	76	16143-1	MOTOR COVER - BLACK
37	15810-3/16-65	3/16" DIA WIRE ROPE & EYE HOOK ASSEMBLY 6/14 BOOM	77	19126	COVER - ELEVATION CYLINDER
38	15929	WOODRUFF KEY - 1/4" x 1-1/4"	78	20083	NUT BAR - ROTATION POWER UNIT - GROUNDING
39	15999	DRIVE SPROCKET - 3/4" BORE 40B10	79	18844-FULLASSY	WORM HOUSING ASSY (INCL. INDICATED ITEMS PRE-ASSEMBLED)
40	16105	WINCH POWER UNIT	80	-	-

⚠️ ITEMS ONLY AVAILABLE AS PART OF 15828 SMALL PARTS KIT

⚠️ THESE PARTS ARE A MATCHED SET AND ARE NOT NORMALLY SOLD AS REPLACEMENT PARTS

REPLACEMENT PARTS DRAWING REF 19443

⚠️ HYDRAULIC CYLINDER PARTS SEE DRAWING 18668

⚠️ ITEM NOT SHOWN ON DRAWING 19443



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE

REPLACEMENT PARTS

DATE

6-10-04K

SECTION

C400

ET6KR

SUPERCEDES

1-9-03J

19442

NOTE: PRESSURE SWITCH TO BE CONFIGURED
PER 17460-1700-15

▲	24	2	20951-3	HANGER CABLE				
	23	1	!HHCS02520150	HEX HEAD CAP SCREW - 1/4-20 x 1 1/2"	11	1	19302	SET COLLAR
	22	1	19704	WIRE HARNESS	10	4	!LWSH-031	LOCK WASHER - 5/16"
	21	2	19269	CABLE CLAMP - 1/4"	9	4	!HHCS03118050-5	HEX HEAD CAP SCREW - 5/16-18 x 1/2"
	20	1	!LWSH-025	LOCK WASHER - 1/4"	8	1	19275	CABLE CLAMP - 3/4" x 13/32" HOLE
	19	1	!HHCS02520050	HEX HEAD CAP SCREW - 1/4"-20 x 1/2"	7	2	19270	SNAP BUSHING - 3/8" I.D.
	18	2	!HNUT-02520	HEX NUT - 1/4-20	6	1	19063	SNAP BUSHING - 1/2" I.D.
	17	1	!HHCS02520100-5	HEX HEAD CAP SCREW - 1/4-20 x 1" GR. 5	5	1	19058	COVER - CORD REEL
	16	3	!HHCS02520175	HEX HEAD CAP SCREW - 1/4-20 x 1 3/4"	4	1	19855	SWITCH BRACKET
	15	2	!LWSH-#06	LOCK WASHER - #6	3	1	19377-3	CABLE WEIGHT ASSY
	14	2	!FWSH-#06	FLAT WASHER - #6	2	1	22388-1	CORD REEL ASSY
	13	2	!HNUT-#0632	HEX NUT - #6-32	1	1	19376	LIMIT SWITCH
	12	2	!PHMS#632100	PAN HEAD MACHINE SCREW - #6-32 x 1"	ITEM	QTY	PART NO.	DESCRIPTION



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
REPLACEMENT PARTS DWG

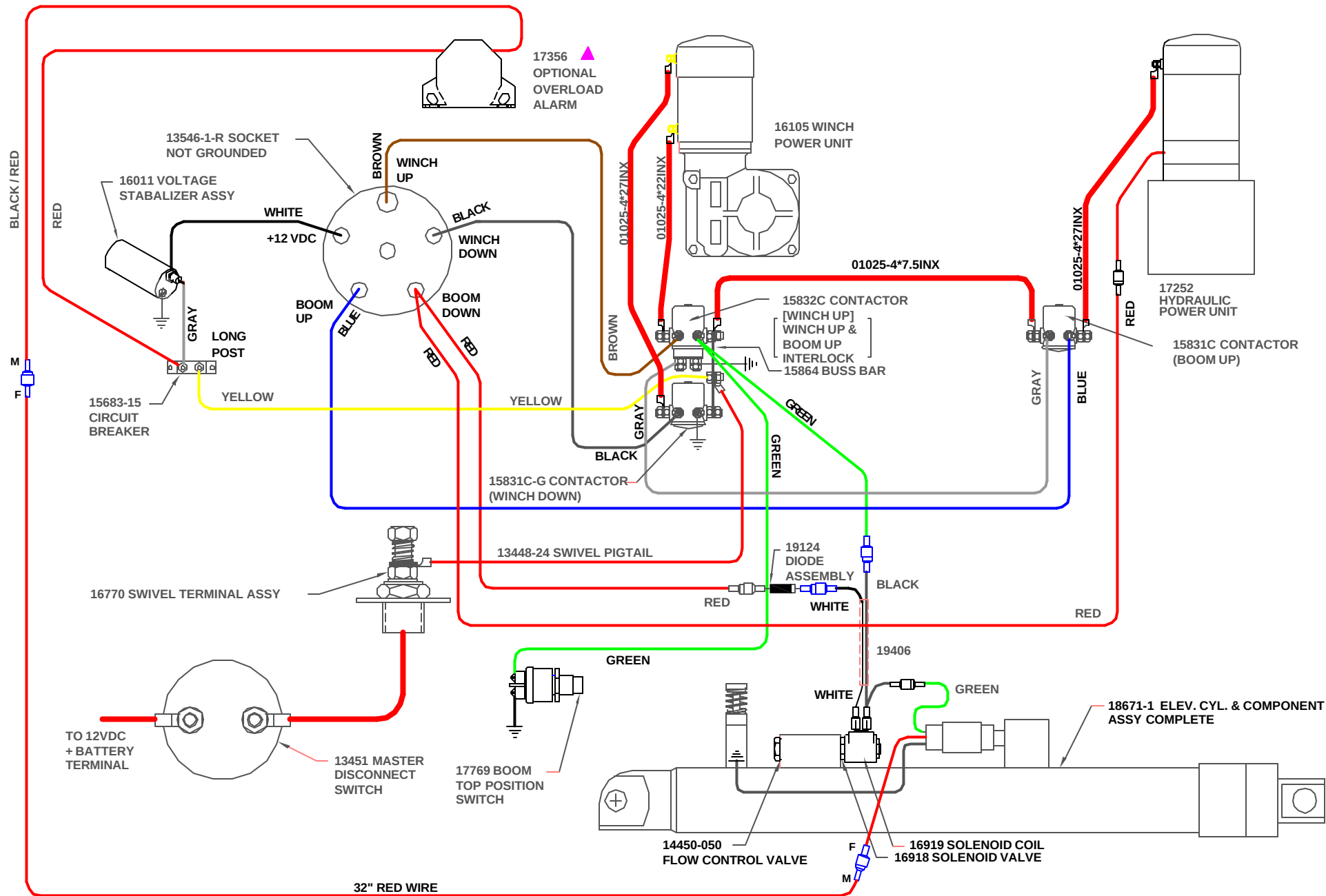
19197-4 ANTI-TWO-BLOCK SYSTEM

DATE
12-18-02C

SUPERSEDES
8-26-02B

SECTION
C400

20197-4



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE PARTS LIST & WIRING DIAGRAM

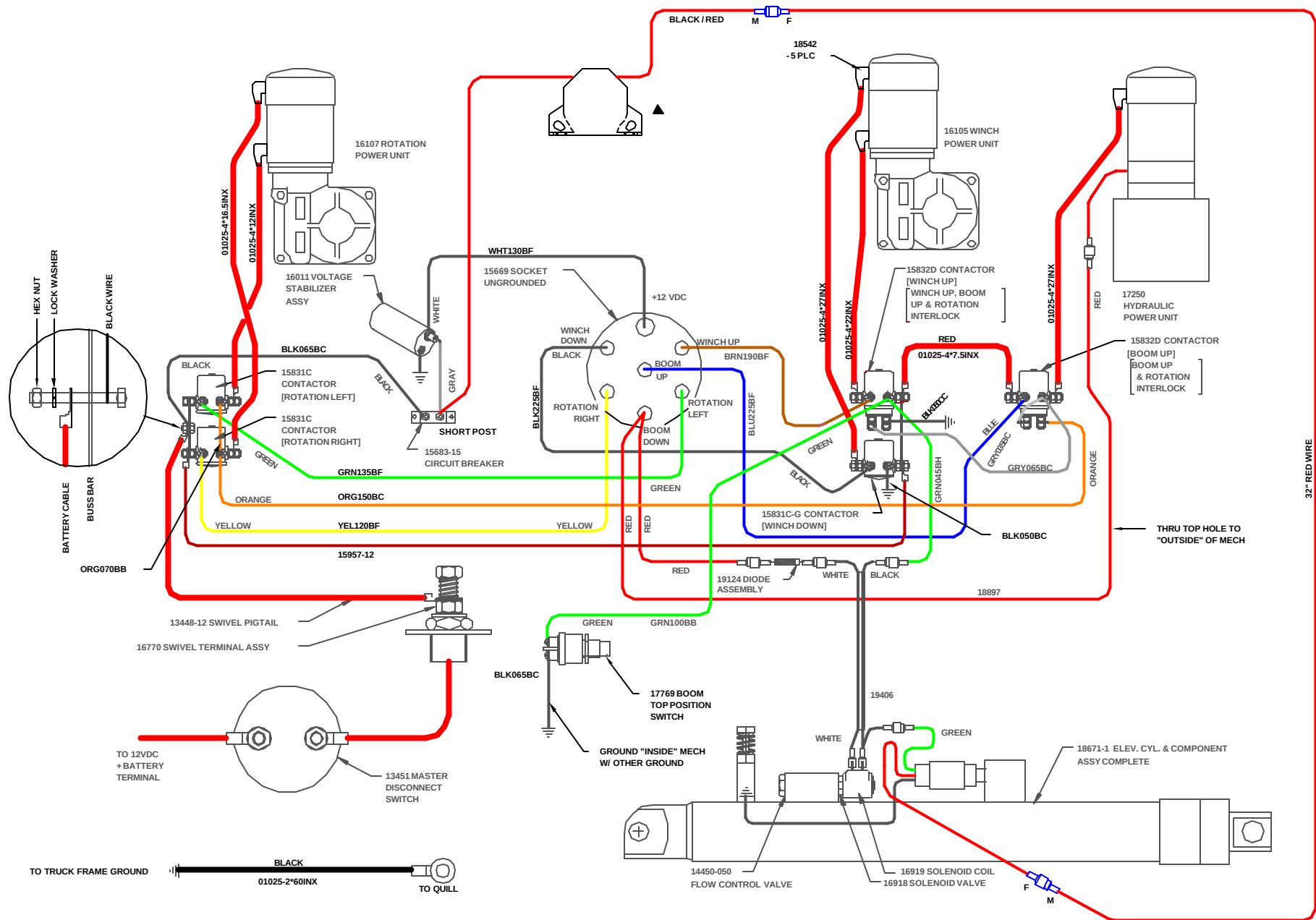
ET6KM CRANE

DATE
8-25-04H

SUPERSEDES
5-29-01G

SECTION
C400

18658



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE WIRING DIAGRAM

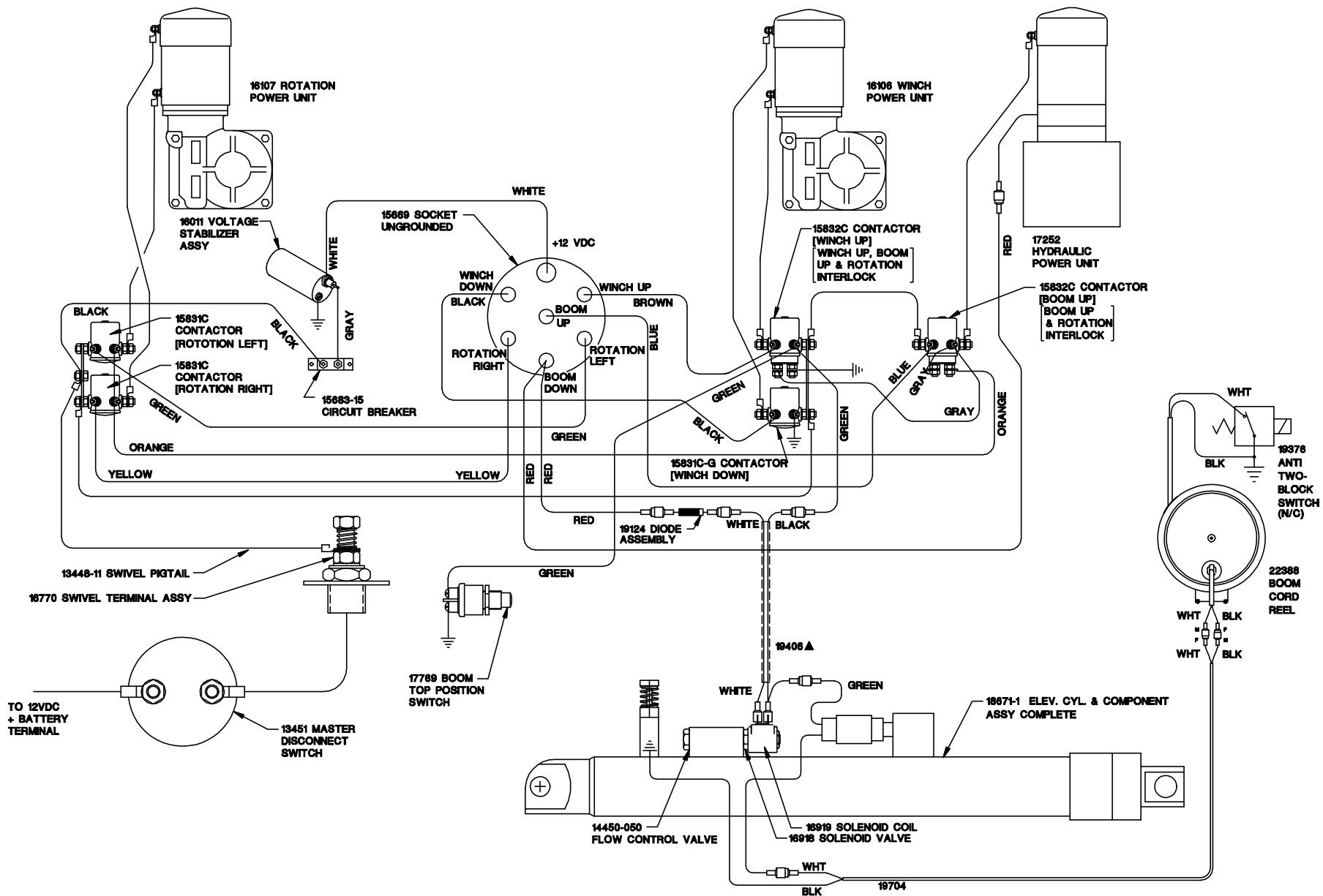
ET6KR CRANE

DATE
8-19-04G

SUPERSEDES
7-9-04F

SECTION
C400

I18668



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE WIRING DIAGRAM

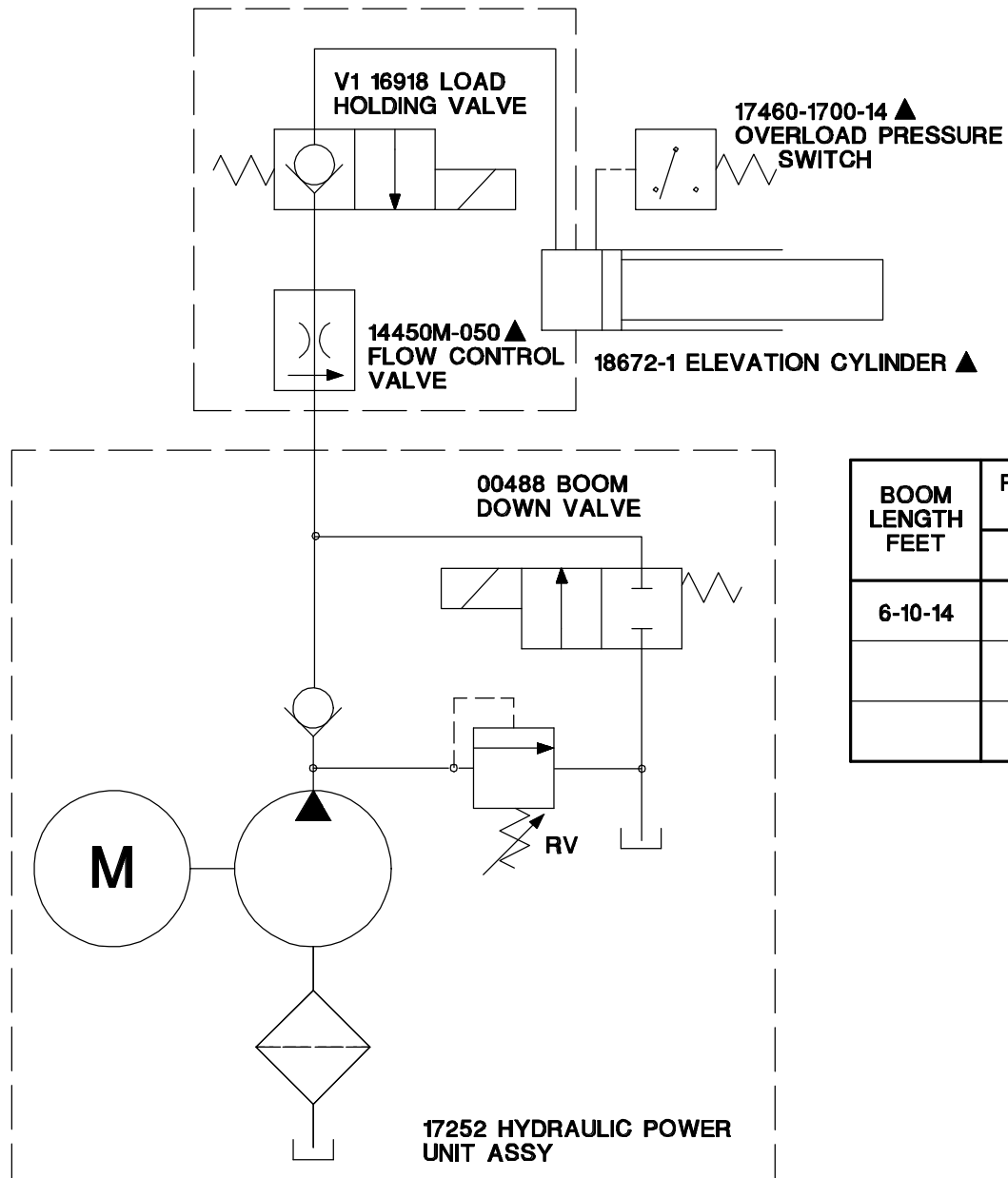
ET6KR W/ OPTIONAL A-2-B SYSTEM

DATE
5-17-99

SUPERSEDES
-

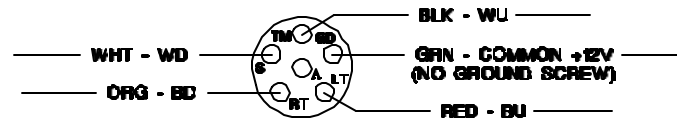
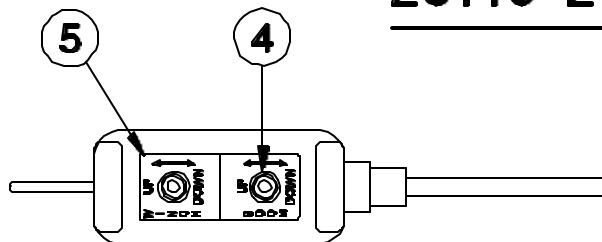
SECTION
C400

19768

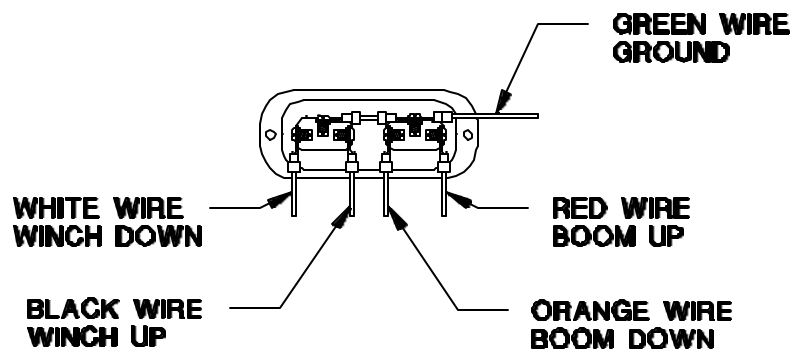
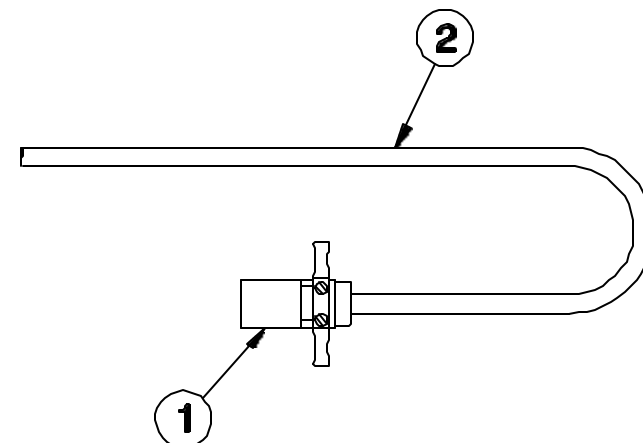
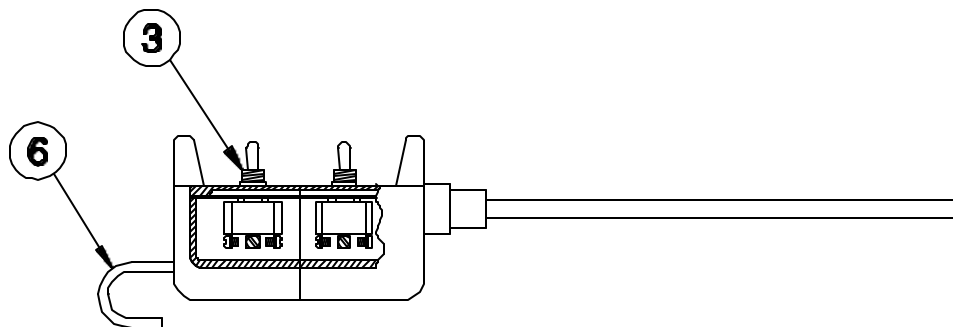


BOOM LENGTH FEET	PRESSURE SETTINGS PSI	
	RV	PS
6-10-14	2100 ▲	1700 ▲

▲ **20140 2-SWITCH PENDANT**



PLUG - BACKSIDE VIEW



FOR OLDER MODELS (PRIOR TO ET6KM)
REQUIRING A COMMON GROUND, THE
GROUND SCREW MUST BE USED

6	1	11557	PENDANT HOOK
5	1	13557	DECAL
4	3	19793	TOGGLE BOOT
3	3	13763	TOGGLE SWITCH
2	1	17141-xx	CORD ASSY (xx = LENGTH IN FT.)
1	1	13546-2	PLUG - 6 POLE
ITEM	QTY	PART NO.	DESCRIPTION



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
REPL. PARTS DWG.

2 FUNCTION CRANES

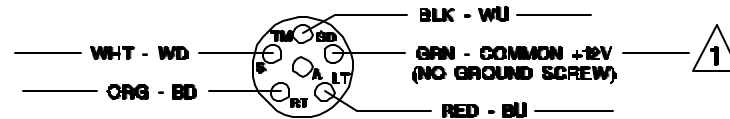
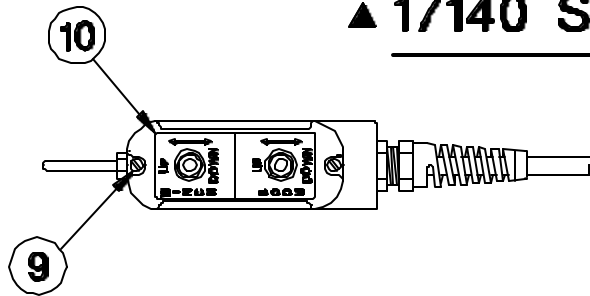
DATE
4-5-00A

SUPERSEDES
1-24-00

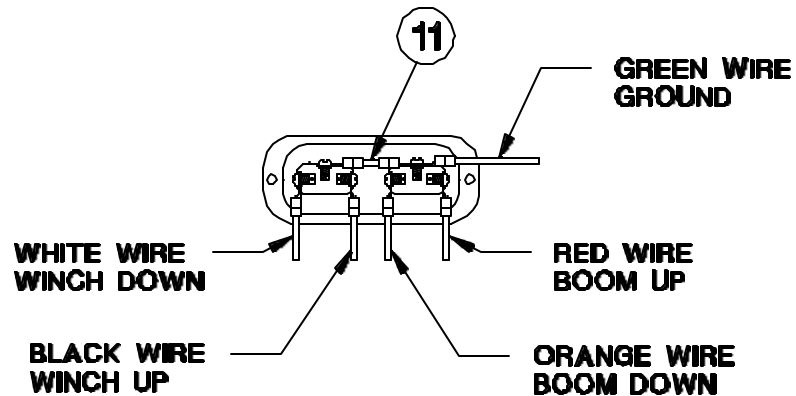
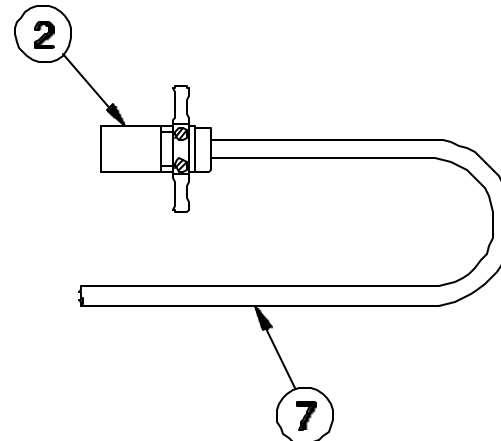
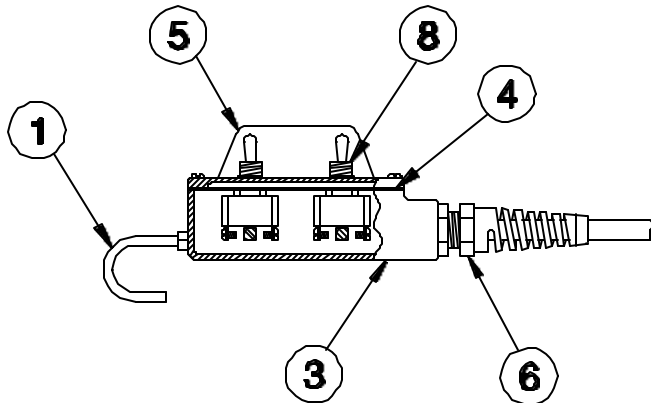
SECTION
C400

20141

▲ 17140 SERIES PENDANT CORD



PLUG - BACKSIDE VIEW



FOR OLDER MODELS (PRIOR TO ET6KM) REQUIRING A COMMON GROUND, THE GROUND SCREW MUST BE USED

11	1	19305	2SW PENDANT CORD JUMPER
10	1	13557	DECAL, CONTROL, 2S PENDANT
9	2	PHCS#0832050	PHCS 8-32 x 1/2
8	2	13763	TOGGLE SWITCH
7	1	17141-xx	CORD ASSY (xx = LENGTH IN FT.)
6	1	25534	PLASTIC 3/4" STRAIN RELIEF
5	1	15531	PENDANT COVER
4	1	14948	GASKET 3/4"
3	1	14321	ENCLOSURE 3/4"
2	1	13546-2	PLUG - 6 POLE
1	1	11557	PENDANT HOOK
ITEM	QTY	PART NO.	DESCRIPTION



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
REPL. PARTS DWG.

2 FUNCTION CRANES

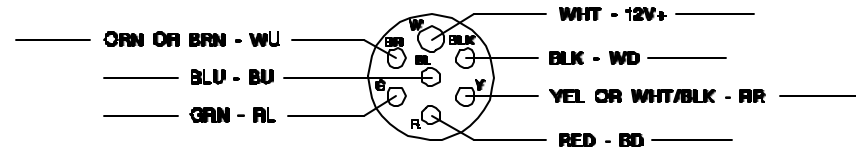
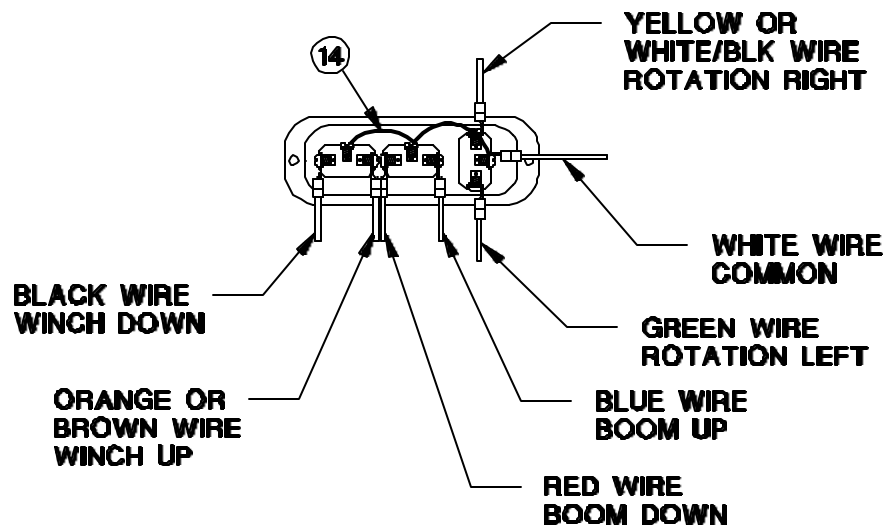
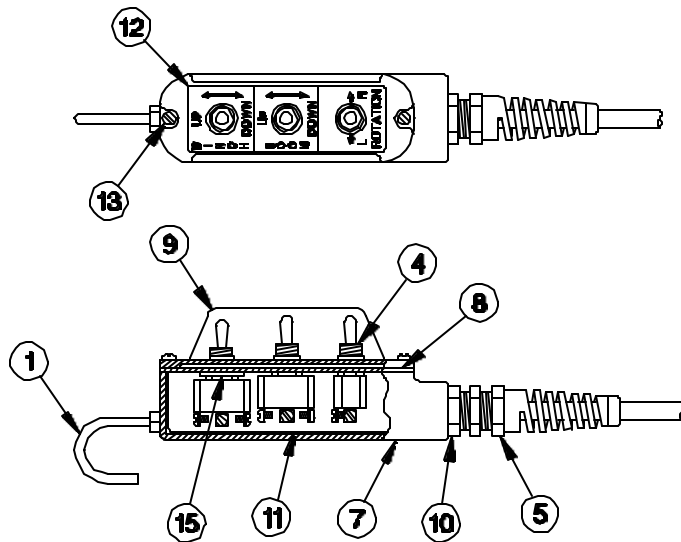
DATE
4-10-00A

SUPERSEDES
1-24-00

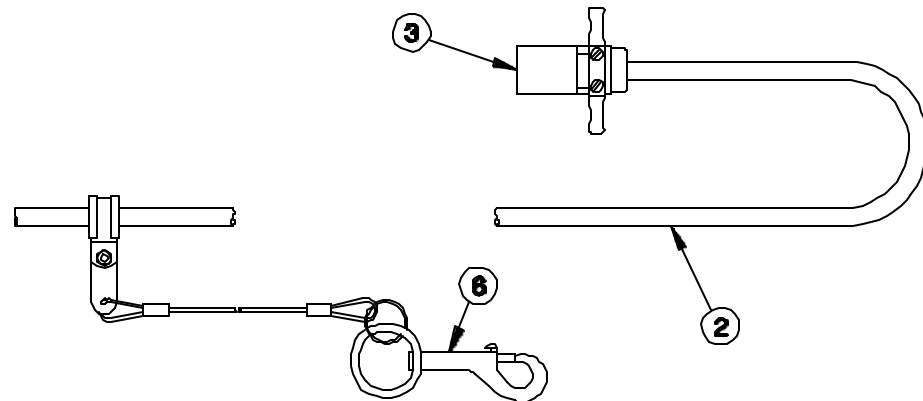
SECTION
C400

17142

▲ 17150 SERIES PENDANT CORD



PLUG - BACKSIDE VIEW



15	1	12534-4	MACHINERY BUSHING - 1/2" I.D. x 7/8" O.D. x 14 GA.
14	1	19306	3SW PENDANT CORD JUMPER
13	2	IPHCS#0832050	PHCS 8-32 x 1/2
12	1	25538	DECAL, 3SW CONTROL PENDANT
11	1	15629	INSULATOR FOR CONDULET
10	1	HRDB16MP-12FP	HYD BUSHING
9	1	15626	PENDANT COVER
8	1	25625	GASKET 1"
7	1	25624	ENCLOSURE 1"
6	1	15913-2	PHAN, CLAMP AND TETHER ASSY
5	1	25534	PLASTIC 3/4" STRAIN RELIEF
4	3	13763	TOGGLE SWITCH
3	1	24348	PLUG - 7 POLE
2	1	17151-xx	CORD ASSY (xx = LENGTH IN FT.)
1	1	11557	PENDANT HOOK
ITEM	QTY	PART NO.	DESCRIPTION



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
REPL. PARTS DWG.

3 FUNCTION CRANES

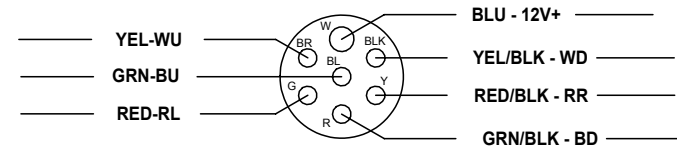
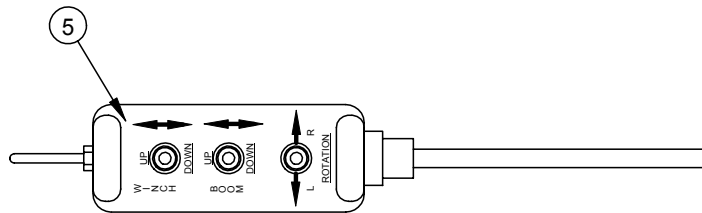
DATE
4-10-00A

SUPERSEDES
11-15-99

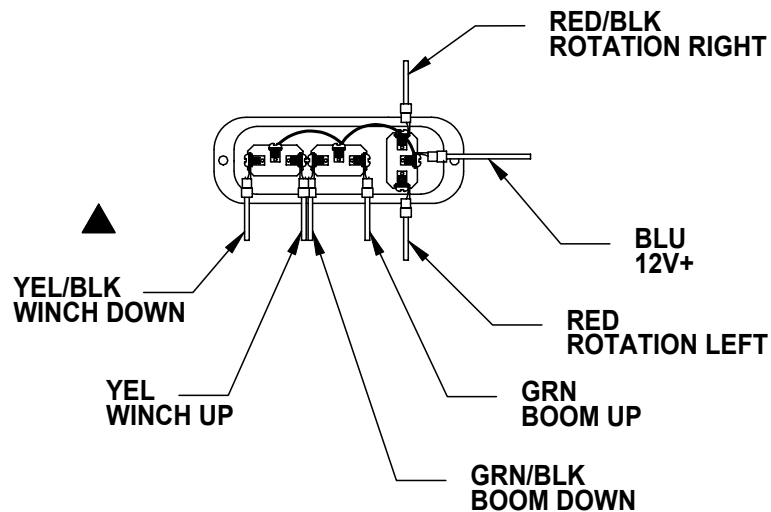
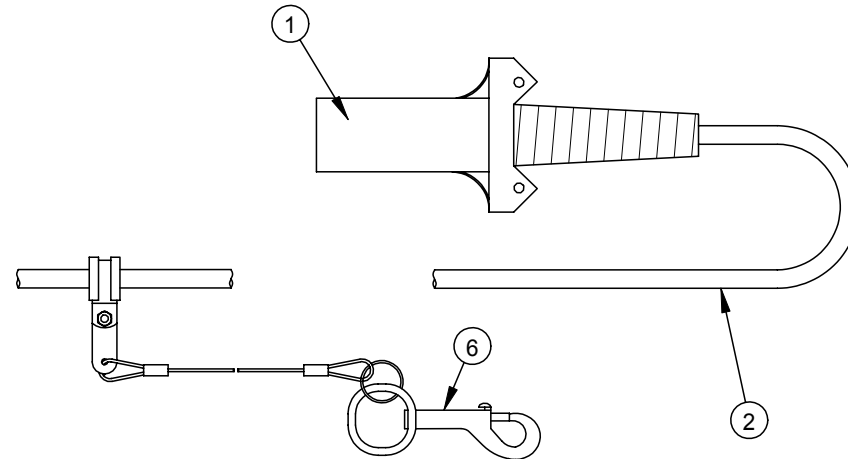
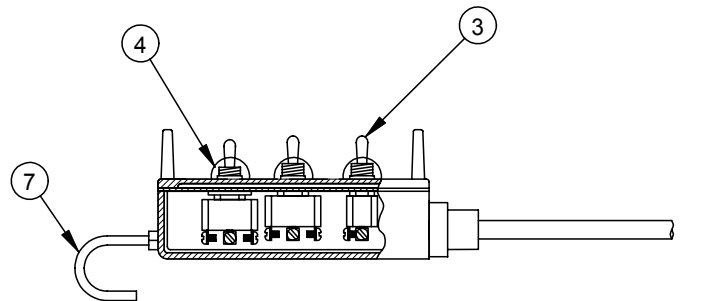
SECTION
C400

20150

19790 3-SWITCH PENDANT



PLUG - BACKSIDE VIEW



7	1	11557	PENDANT HOOK
6	1	15913-2	PHAN, CLAMP AND TETHER ASSY
5	1	25538	DECAL
4	3	19793	TOGGLE BOOT
3	3	13763	TOGGLE SWITCH
2	1	17151-xx	CORD ASSY (xx = LENGTH IN FT.)
1	1	24348	PLUG - 7 POLE
ITEM	QTY	PART NO.	DESCRIPTION



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
REPL. PARTS DWG.

3 FUNCTION CRANES

DATE
10-18-01B

SUPERSEDES
4-10-00A

SECTION
C400

19791

16770 SWIVEL TERMINAL ASSY

15666  

13450-13.5 

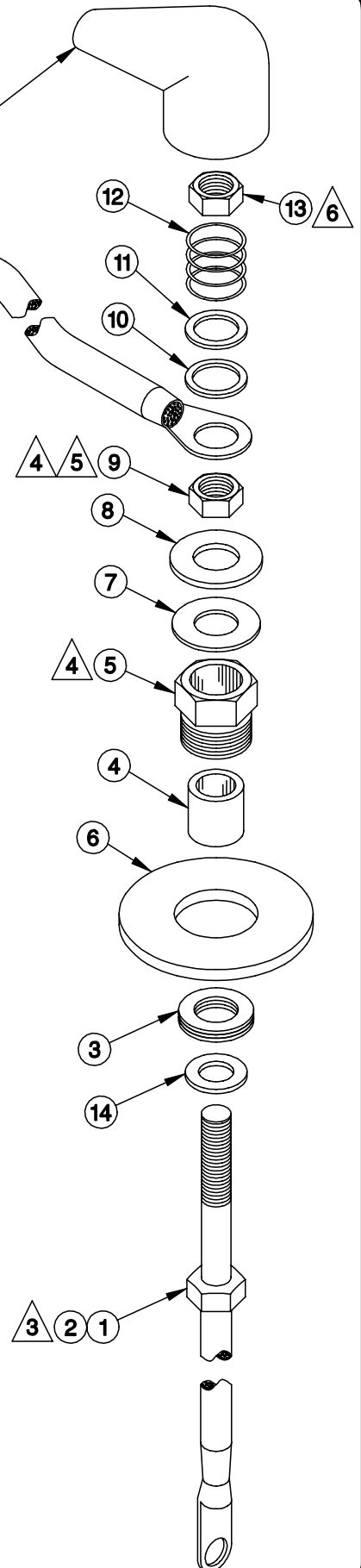
17011 RUBBER BOOT - REF

13448-XX SWIVEL PIGTAIL
(NOT INCLUDED WITH 16770)

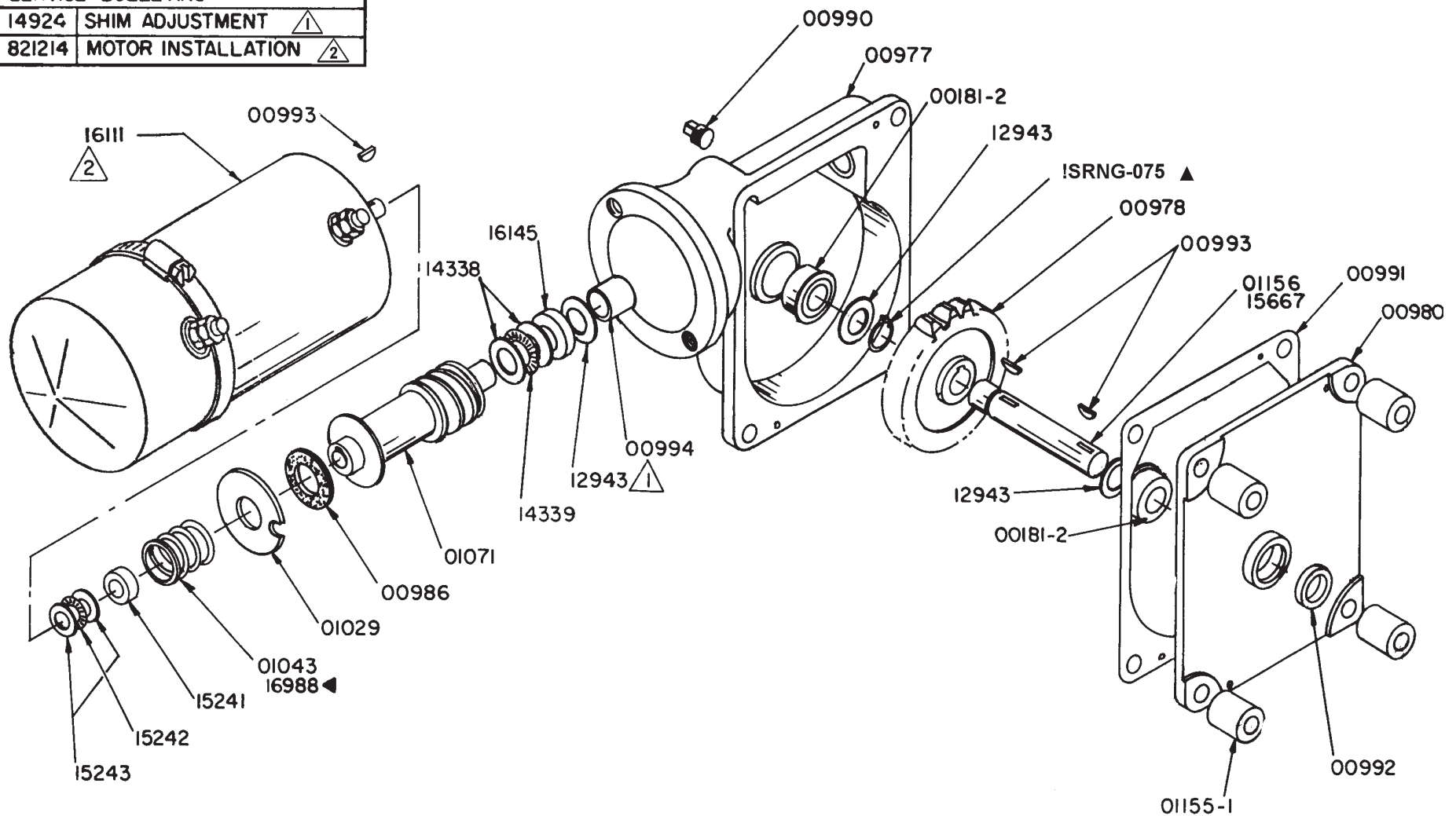
ITEM	QTY	PART NO.	DESCRIPTION
1	1	15653-60	PIGTAIL & STUD ASSY
2	1	13447-13.5	PIGTAIL & STUD ASSY
*3	3	16771-1	FIBER WASHER 1/2" I.D. x 15/16" O.D. x 1/16" THK
*4	1	13410	INSULATING BUSHING
5	1	13467	3/4" INVERTED FLARE NUT - MODIFIED
6	1	IFWSH-100SAE	FLAT WASHER 1 1/8" I.D. x 2 1/8" O.D. x 1/8" THK
*7	1	16771-2	FIBER WASHER 1/2" I.D. x 1 1/4" O.D. x 1/16" THK
*8	1	16770*7	BRASS WASHER 1/2" I.D. x 1 1/4" O.D. x 5/64" THK
*9	1	19800 	BRASS JAM NUT - 1/2"-13NC - MODIFIED 
*10	1	16770*11	TEFLON WASHER 1/2" I.D. x 3/4" O.D. x 1/32" THK
*11	1	16770*10	BRASS WASHER 1/2" I.D. x 11/16" O.D. x 1/32" THK
*12	1	LC-063HJ-1	SPRING .66" O.D. x .63" W x 5/8" F.L.
*13	1	IJNUT-05013N	NYLON INSERT-JAMNUT - 1/2"-13
*14	1	12534-4	MACHINERY BUSHING 1/2" I.D. x 7/8" O.D. x 14 GA THK
*15	1	LOCTITE-24205	LOCTITE CAPSULE GRADE 242 BLUE
*16	1	16770	REPL. PARTS DWG (THIS PAGE)

*ITEMS ARE ONLY AVAILABLE IN A 16772 SERVICE PARTS KIT

-  16772 SERVICE PARTS KIT CONVERTS 15666 TO 16770
-  16770 REPLACES & IS INTERCHANGEABLE WITH 15666
-  13447-13.5 PIGTAIL STUD ASSY REQ'D WITH 13450-13.5 ASSY USED ON EARLY MODEL ET5500M/(PB) CRANES
-  SECURE WITH LOCTITE 242 BLUE
-  TORQUE TO 30 FT-LBS, THEN TIGHTEN SET SCREW. 
-  TIGHTEN UNTIL ONE THREAD IS VISIBLE ABOVE THE NUT & ENSURE THAT SPRING IS NOT FULLY COMPRESSED



SERVICE BULLETINS		
14924	SHIM ADJUSTMENT	1
821214	MOTOR INSTALLATION	2



SEE DWG. 14924/14926 FOR SERVICE INSTRUCTION

16100 SERIES POWER UNITS



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
REPLACEMENT PARTS

WINCH & CRANE

DATE
4-14-04E

SUPERCEDES
6-17-98D

SECTION
C450

116100

REPLACEMENT PARTS LIST - 16100 ELECTRIC POWER UNIT

MODEL(S): ET5500MPB, ET6KM, ET6KR

PART NO.	DESCRIPTION
16101 16102 16105 16106 16107	POWER UNIT - LONG SHAFT - ET5500R WINCH ² POWER UNIT - SHORT SHAFT - ET5500R ROTATION POWER UNIT - LONG SHAFT - CA 2000, CT 2003, WA/SL 3000 (WITH SPACERS) POWER UNIT - LONG SHAFT - ET5500 WINCH (WITHOUT SPACERS) ³ POWER UNIT - SHORT SHAFT - ET5500R ROTATION
00181-2 00977 00978 00980 * 00986	FLANGE BEARING - 3/4" BORE x 1 3/4" O.D. GEAR CASE (INCLUDES 00994 BUSHING) WORM GEAR BASE PLATE BRAKE DISC
* ISRNG-075 00990 * 00991 * 00992 * 00993 ⁴	RETAINING RING - 3/4" ⁵ OIL PLUG - 1/4" PIPE GASKET OIL SEAL KEY - #9 WOODRUFF
00994 01029 01043 ⁴ 01071 01155-1	BUSHING BRAKE PLATE BRAKE SPRING (16102 & 16107 ROTATION POWER UNIT ONLY) WORM SHAFT SPACER (16105 ONLY)
01156 * 12943-1 ⁴ * 12943-2 ⁴ * 12943-3 ⁴ 14338	WORM GEAR SHAFT - 3/4" x 5 3/16" LONG (16105 & 16106 ONLY) SHIM WASHER - .005" THICK (AS REQUIRED) SHIM WASHER - .015" THICK (AS REQUIRED) SHIM WASHER - .030" THICK (AS REQUIRED) NEEDLE THRUST RACE 3/4" I.D.
14339 15241 15242 15243 15667	NEEDLE THRUST BEARING 3/4" I.D. SPACER (INSTALL NEXT TO BRAKE PLATE) NEEDLE THRUST BEARING 5/8" I.D. NEEDLE THRUST RACE .092" x 5/8" I.D. WORM GEAR SHAFT - 3/4" x 4 3/16" LONG (16102 & 16107 ONLY)
16111 ⁴ 16145 16988 ⁴	MOTOR - 12 VOLT 4 1/2" DIAMETER SPACER BRAKE SPRING (16101, 16105 & 16106 WINCH POWER UNITS ONLY)
14889 15290	MOTOR REPAIR KIT SMALL PARTS KIT (INCLUDES ITEMS MARKED *)

¹ AVAILABLE ONLY AS PART OF 15290 SMALL PARTS KIT

² 16101 POWER UNIT REPLACED BY 16106 POWER UNIT
16102 POWER UNIT REPLACED BY 16107 POWER UNIT

³ REPLACE 30E & 16100 POWER UNITS AS FOLLOWS:
16105 REPLACES 11497
16106 REPLACES 11497NS & 16101
16107 REPLACES 16102

⁴ 16111 MOTOR REPLACES 01024 E & F & 16112 MOTORS
ON ALL 30E & 16100 SERIES POWER UNITS

⁵ 16988 BRAKE SPRING REPLACES 01043 BRAKE SPRING ON
16101, 16105 & 16106 WINCH POWER UNITS ONLY



MFG., INC.
CINCINNATI, OHIO

TITLE
REPL. PARTS LIST

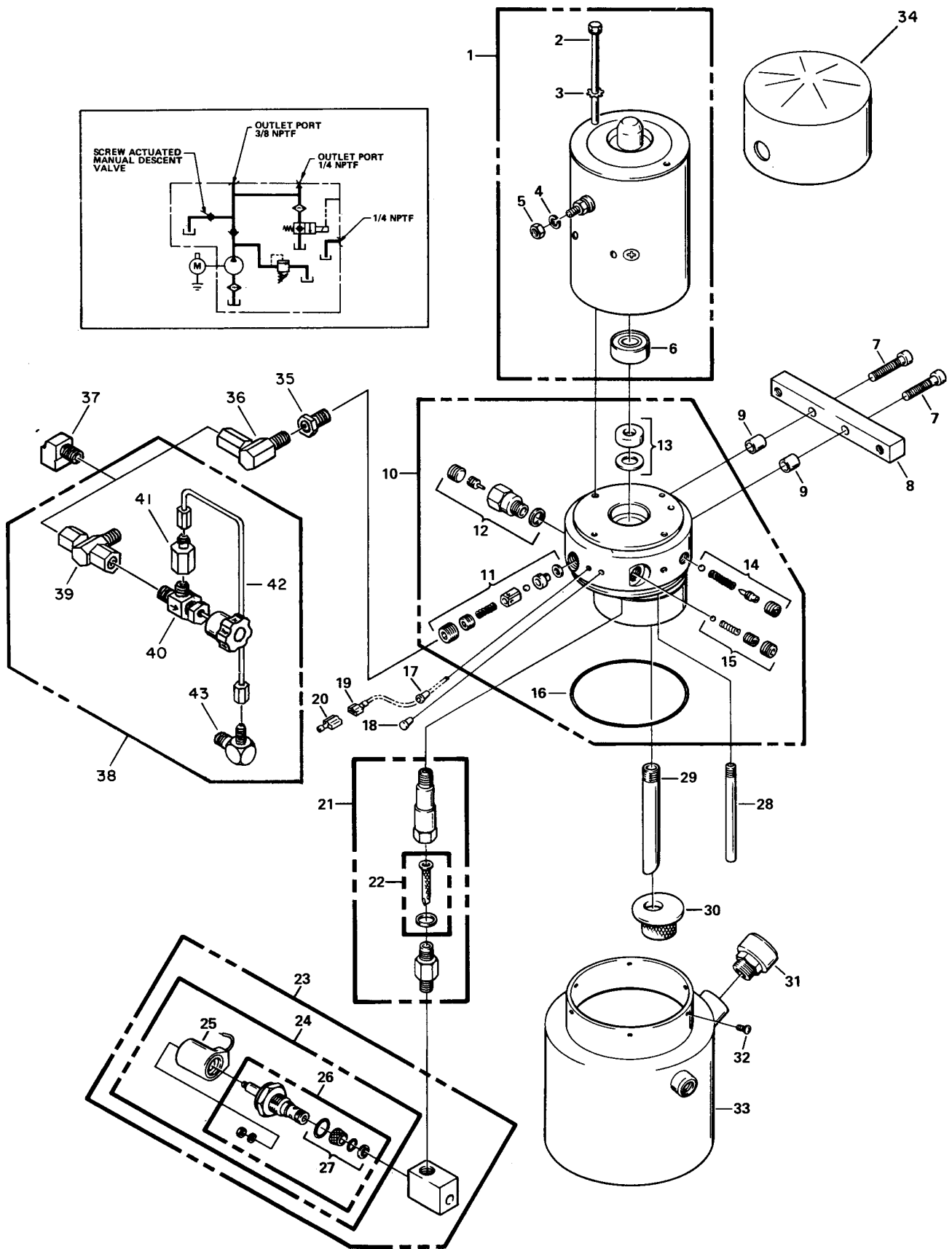
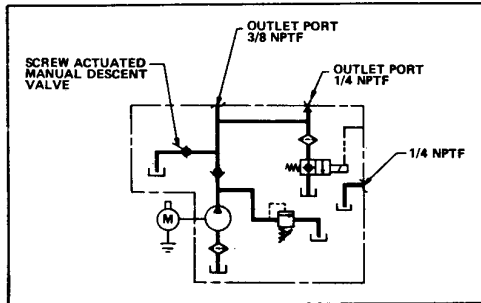
16100 ELECTRIC PU

DATE
4-14-04E

SUPERCEDES
8-10-99D

SECTION
C400

811016



MFG., INC.
CINCINNATI, OHIO

TITLE
REPL. PARTS DWG.
17252/17253 HYD PU

DATE
6/17/98
SUPERCEDES
-

SECTION
C400
19518

REPLACEMENT PARTS LIST - 17252/17253 HYDRAULIC POWER UNIT

MODEL(S): ET5500MPB, ET5500R, ET6KM, ET6KR, H20E

ITEM	PART NUMBER	DESCRIPTION
1	16940	MOTOR, ELECTRIC, 12VDC
2	07738	SCREW, HEX HEAD CAP 1/4-20 X 6-1/2"
3	07737	WASHER, STAR 1/4"
4	07781	WASHER, LOCK 5/16"
5	07625	NUT, HEX 5/16-24
6	02318	BEARING, BASE, MOTOR
7	07879	SCREW, SOCKET HEAD CAP, 5/16-18 X 1-1/2"
8	04382	BRACKET, PLATE MOUNT
9	01335	BUSHING, PUMP MOUNTED, PLATE MOUNT
10	02965	PUMP ASSEMBLY, GEAR CODE 62
11	03624	PARTS KIT, VALVE ASSEMBLY, POPPET/BALL CHECK
12	00076	PARTS KIT, MANUAL OVERRIDE
13	02970	PARTS KIT, SEAL AND GASKET
14	02222	PARTS KIT, RELIEF VALVE
15	00078	PARTS KIT, CHECK VALVE (DESCENDING)
16	02352	O-RING, INDUSTRIAL (3-5/8 X 3-7/8 X 1/8)
17	01393	STRAIN RELIEF, NYLON INSULATOR
18	04390	STRAIN RELIEF, NYLON PLUG
19	01695	TERMINAL, INSULATED, MALE (ATTACHED TO ELECTRICAL LEAD ON VALVE)
20	01694	TERMINAL, INSULATED, FEMALE (SHIP LOOSE)
21	00200	FILTER ASSEMBLY, INLINE 4-1/8" LONG
22	03692	PARTS KIT, GASKET AND FILTER
23	00506	VALVE ASSEMBLY, 12 VDC, GROUNDED
24	00488	VALVE, 2 WAY-2 POSITION, 12 VDC, GROUNDED
25	00496	COIL, 12 VDC, 2 WAY-2 POSITION, GROUNDED
26	00263	CARTRIDGE, 2 WAY-2 POSITION, 12 VDC, AND 24 VDC
27	00121	PARTS KIT, 2 WAY-2 POSITION, CARTRIDGE
28	01494	TUBE, RETURN, 1/8 NPT
29	01818	TUBE, SUCTION, 3/8 NPT
30	01134	SCREEN, FILTER (SUCTION)
31	03171	PLUG, VENT (PLASTIC)
32	07703	SCREW, THREAD FORMING 10-24 X 3/8"
33	06227	RESERVOIR, 6" DIA. X 5"
34	16143	MOTOR COVER BOOT
35	HRDB6MP-4FP	REDUCING BUSHING
36	HELB4FP-4FX-90L	SWIVEL ADAPTER - ELBOW
37	HTEL4MJ-4MP-90	TUBE ADAPTER - MALE 90 DEG.
38	13548	CREEP VALVE KIT - NOT CURRENT PRODUCTION
39	60VC - 04 X 04	SWIVEL ADAPTER - TEE - NOT CURRENT PRODUCTION
40	13548-V	CREEP VALVE ASSEMBLY - NOT CURRENT PRODUCTION
41	HTAD4MJ-4FP	TUBE ADAPTER - FEMALE STRAIGHT - NOT CURRENT PRODUCTION
42	17541	TUBE ASSEMBLY - NOT CURRENT PRODUCTION
43	HELB4MP-4FP-90	STREET ELBOW - BRASS - NOT CURRENT PRODUCTION

STANDARD RELIEF VALVE SETTINGS

ET5500 5.5-9 & 8-14 FT BOOM	2500 PSI
ET5500 10-18 FT BOOM	2700 PSI
ET6K ALL BOOMS	2300 PSI
H20E ALL BOOMS	2500 PSI

17252 POWER UNIT REPLACES AND INTERCHANGABLE WITH 16792, 16790, 16500, AND 15025 PWR UNITS ON ET5500

17253 POWER UNIT REPLACES AND INTERCHANGABLE WITH 16793, 16791, 16501, AND 15023 PWR UNITS ON H20E

17252 POWER UNIT USED ON ET5500MPB SN 17708 & UP, ET5500R SN 41079 & UP, H20E SN 12550 & UP, ET6KM SN 72100 & UP, ET6KR SN 42000 & UP



MFG., INC.
CINCINNATI, OHIO

TITLE
17252/17253 HYD PU

-

DATE
10-14-97C

SUPERCEDES
4-8-96B

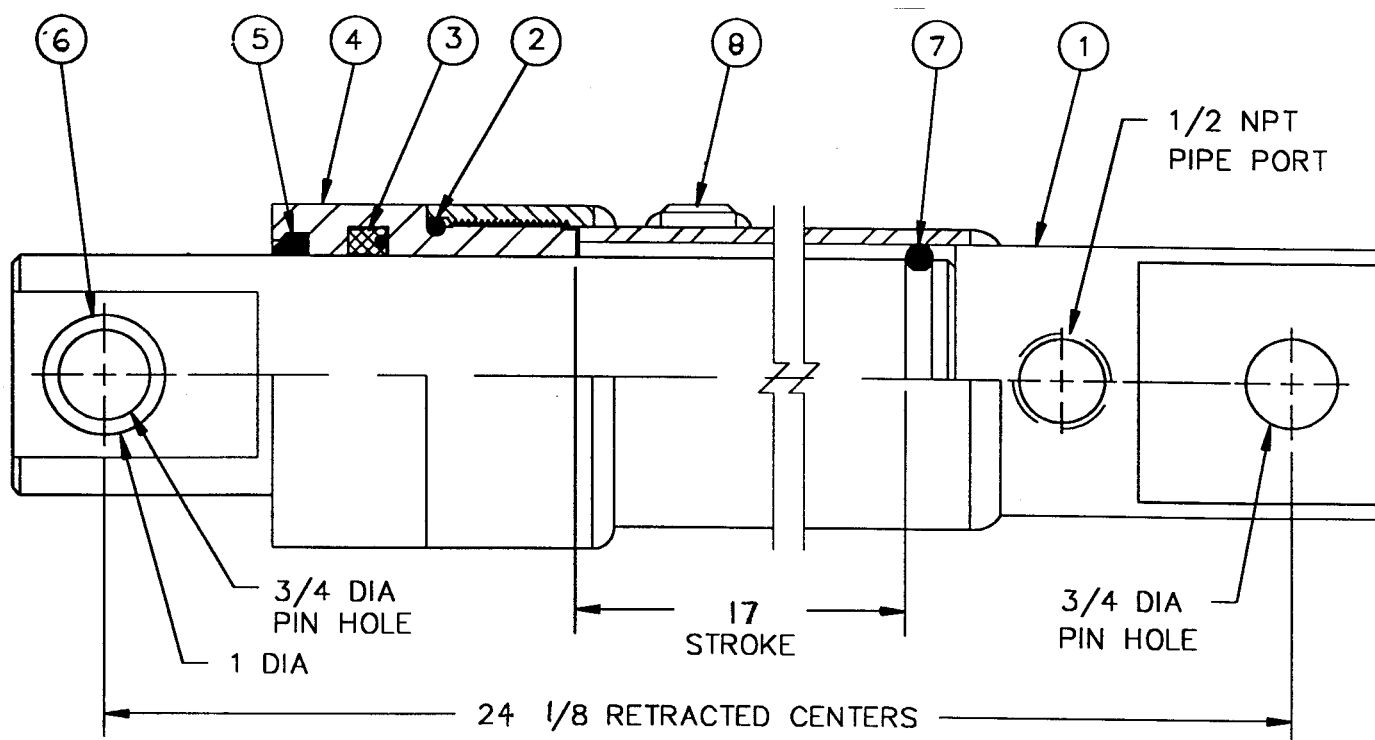
SECTION
C400

900309

REPLACEMENT PARTS LIST - 18671-1 ELEVATING CYLINDER ASSEMBLY

MODEL(S): ET6KM, ET6KR

ITEM	PART NUMBER	DESCRIPTION
	18671-1	ELEVATING CYLINDER ASSEMBLY (2" BORE X 17" STROKE)
1	18672-1	ELEVATING CLYINDER ONLY
2	*	O-RING
3	*	POLYURETHANE PACKING
4	B13622	GLAND NUT
5	*	ROD WIPER
6	13694	ROD SPACER - 2" LONG
7	B30225	WEARING RING
8	B34550	1/8 NPT LEVEL SEAL
*	18672-1-SK	PACKING KIT (INCLUDES PARTS MARKED *)



MFG., INC.
CINCINNATI, OHIO

TITLE
18671-1 ELEV CYL

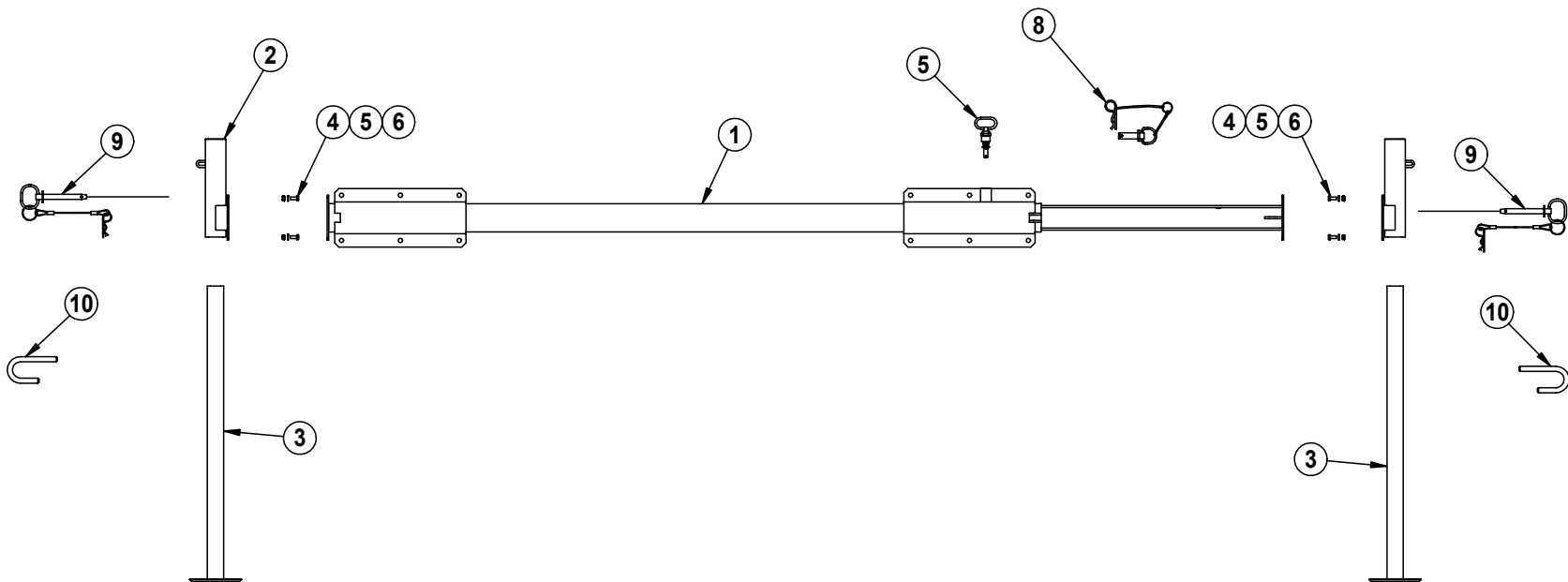
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DATE
6-17-98A

SUPERCEDES
4-8-96

SECTION
C400

119119



12	2	18506	3M BLACK / YELLOW SAFETY TAPE (NOT SHOWN)
11	2	14517	TAG, HANDLE INSTALLATION (NOT SHOWN)
10	2	23980	OUTRIGGER HANDLE
9	2	18607	HITCH PIN ASSEMBLY
8	1	24981	OUTRIGGER SECURITY PIN
7	1	18520	SPRING LOADED ASSEMBLY
6	8	!LWSH-031	LOCKWASHER - 5/16
5	8	!HNUT-03118	HEX NUT - 5/16-18
4	8	!HHCS03118075	HEX HEAD CAP SCREW - 5/16-18 X 3/4" LONG
3	2	13500-2	FIXED FOOT DROP LEG
2	2	18605	DROP LEG ADAPTER
1	1	18501	TUBE - OUTRIGGER ASSEMBLY
ITEM	QTY	PART NO	DESCRIPTION



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE REPLACEMENT PARTS DWG & LIST

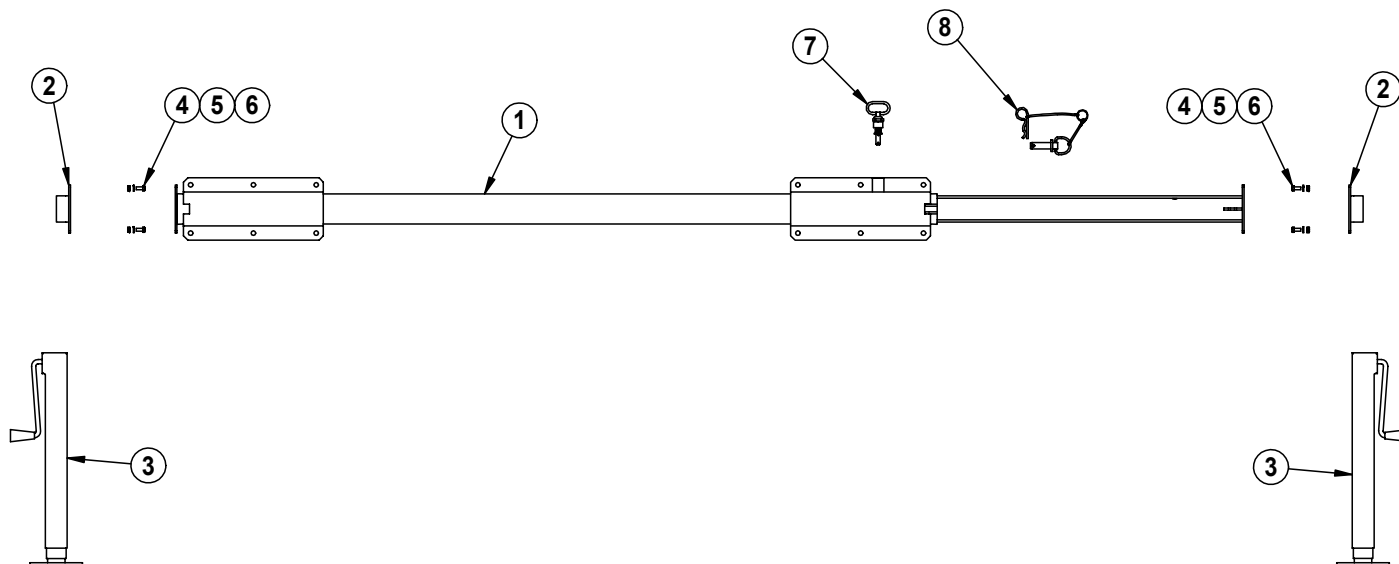
DATE
11-12-03

SECTION
C400

18500-P MANUAL OUTRIGGERS

SUPERSEDES
-

22688



9	2	18506	3M BLACK / YELLOW SAFETY TAPE (NOT SHOWN)
8	1	24981	OUTRIGGER SECURITY PIN
7	1	18520	SPRING LOADED ASSEMBLY
6	8	!LWSH-031	LOCKWASHER - 5/16
5	8	!HNUT-03118	HEX NUT - 5/16-18
4	8	!HHCS03118075	HEX HEAD CAP SCREW - 5/16-18 X 3/4" LONG
3	2	18586	CRANKDOWN LEG
2	2	18587	CRANKDOWN LEG ADAPTER
1	1	18501	TUBE - OUTRIGGER ASSEMBLY
ITEM	QTY	PART NO	DESCRIPTION



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE REPLACEMENT PARTS DWG & LIST

DATE
11-12-03

SECTION
C400

18500-CD MANUAL OUTRIGGERS

SUPERSEDES
-

22689