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## ET6KM/R INSTRUCTION MANUAL

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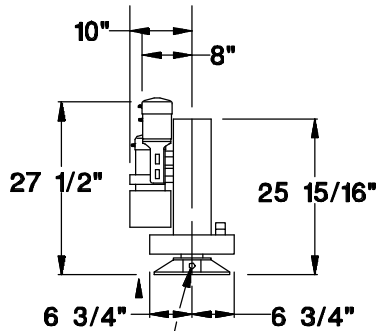
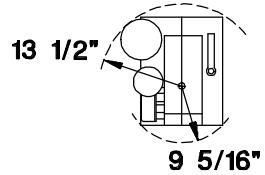
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|--------|----------------------|

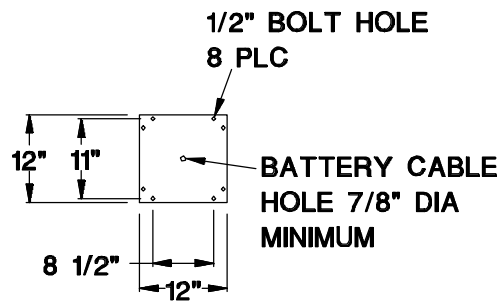
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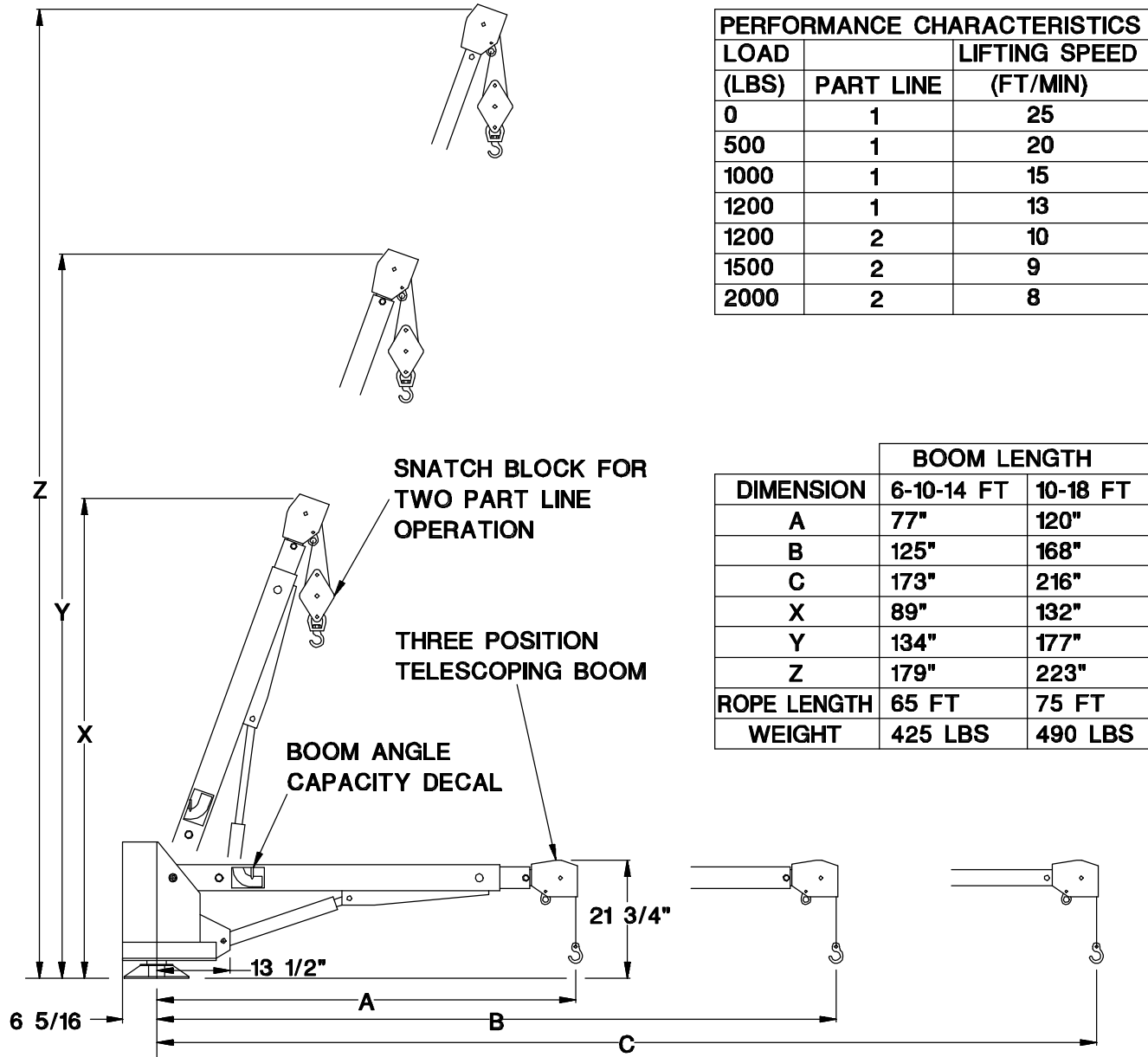
**WARNING: THESE PRODUCTS ARE NOT PASSENGER LIFTS. THEY ARE NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.**



OPTIONAL BATTERY CABLE HOLE



**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  |



TITLE  
**INSTALLATION DRAWING**

**ET6KM CRANE**

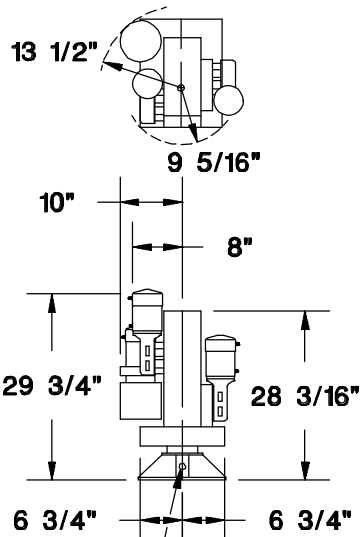
DATE  
**10-14-97A**

SUPERSEDES  
**4-8-96**

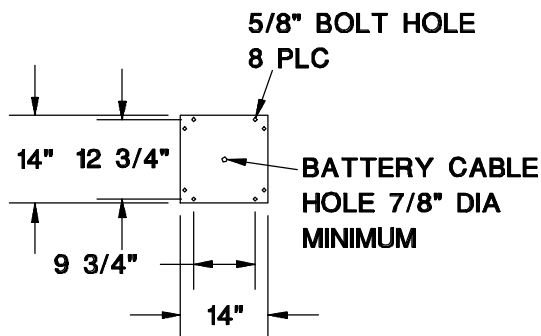
SECTION  
**C100**

**I19120**

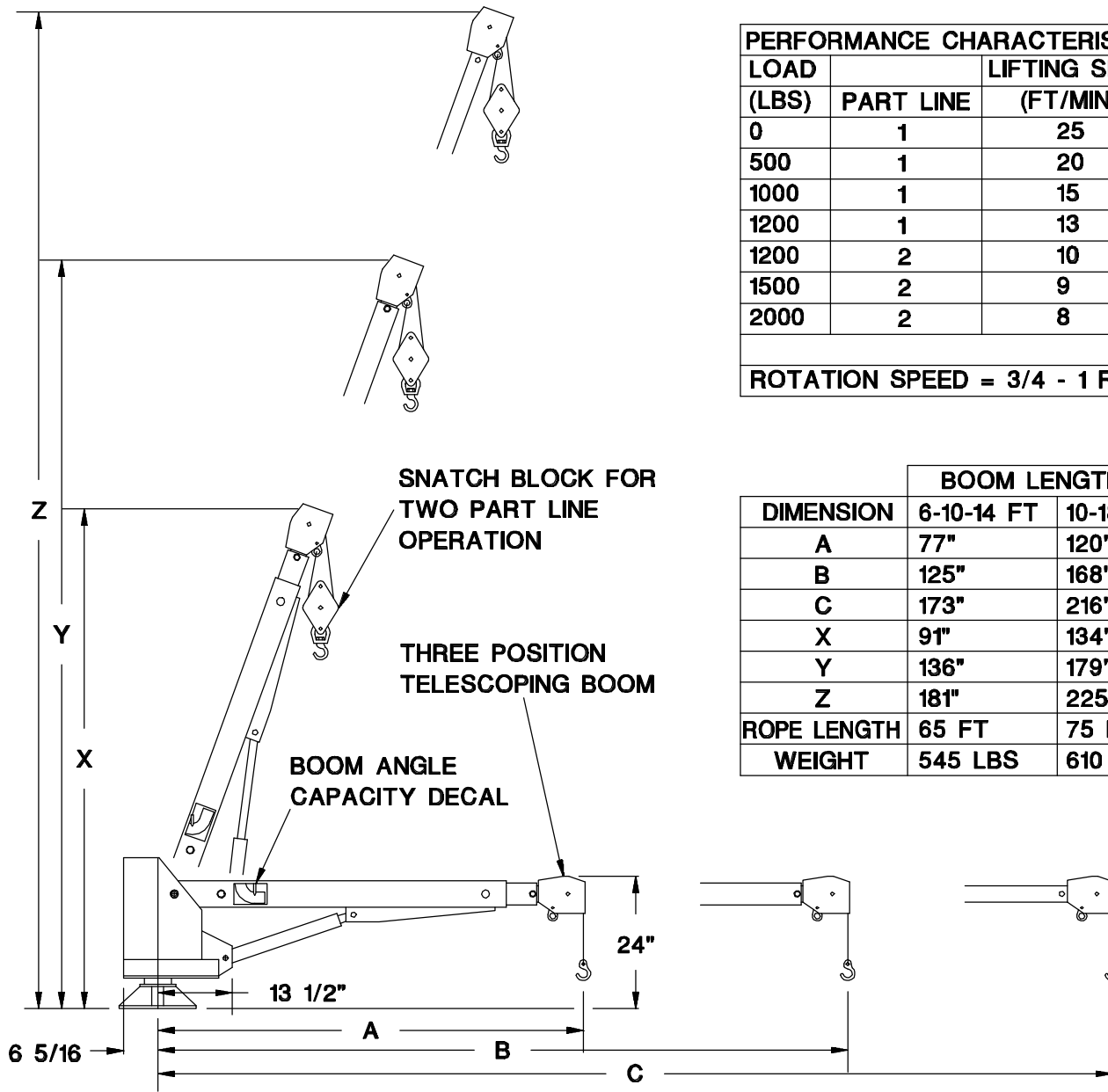
**WARNING: THESE PRODUCTS ARE NOT PASSENGER LIFTS. THEY ARE NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.**



OPTIONAL BATTERY CABLE HOLE



**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                      |
| ROTATION SPEED = 3/4 - 1 RPM |           |                        |

| DIMENSION   | BOOM LENGTH |          |
|-------------|-------------|----------|
|             | 6-10-14 FT  | 10-18 FT |
| A           | 77"         | 120"     |
| B           | 125"        | 168"     |
| C           | 173"        | 216"     |
| X           | 91"         | 134"     |
| Y           | 136"        | 179"     |
| Z           | 181"        | 225"     |
| ROPE LENGTH | 65 FT       | 75 FT    |
| WEIGHT      | 545 LBS     | 610 LBS  |



TITLE  
**INSTALLATION DRAWING**

**ET6KR CRANE**

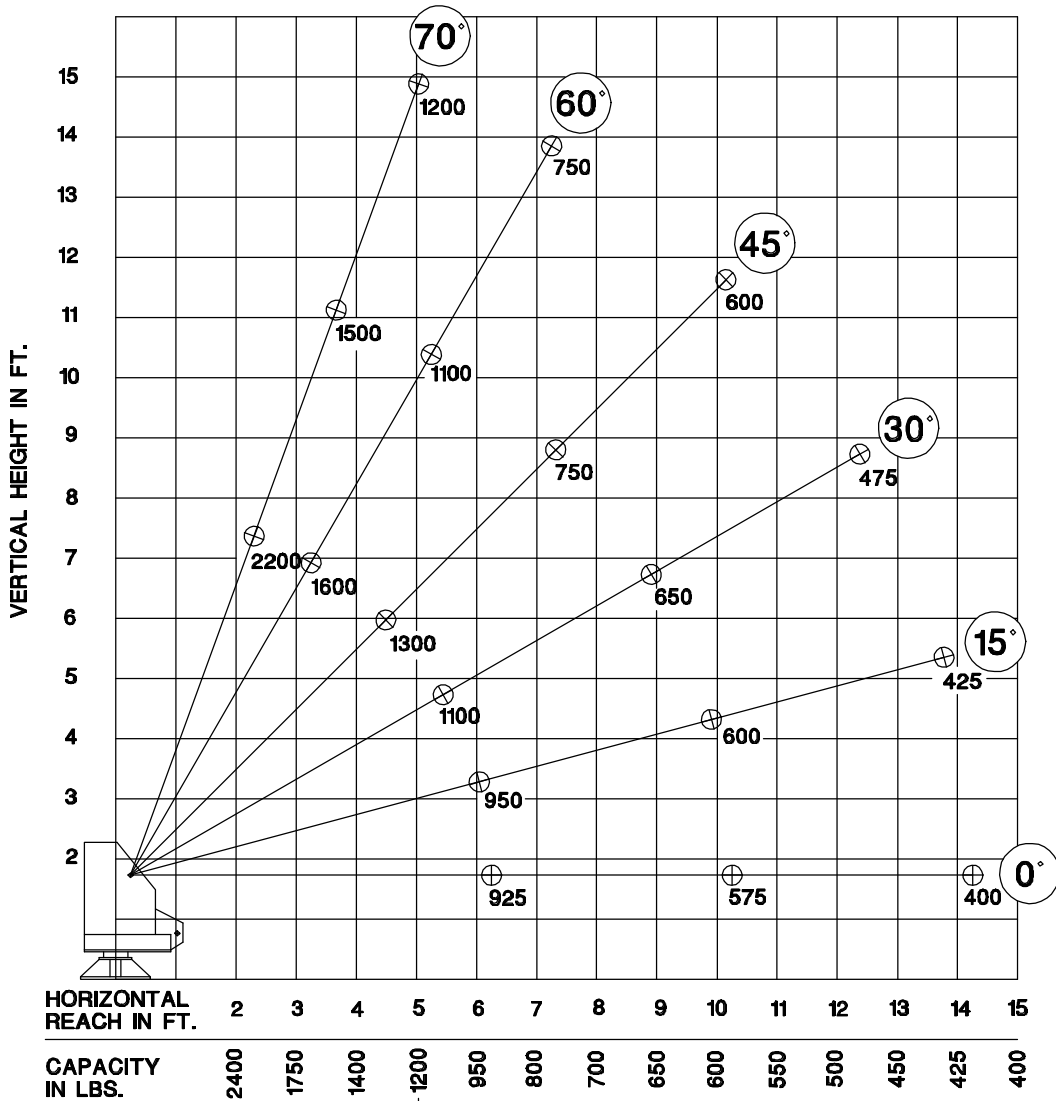
DATE  
**10-14-97A**

SUPERSEDES  
**4-8-96**

SECTION  
**C100**

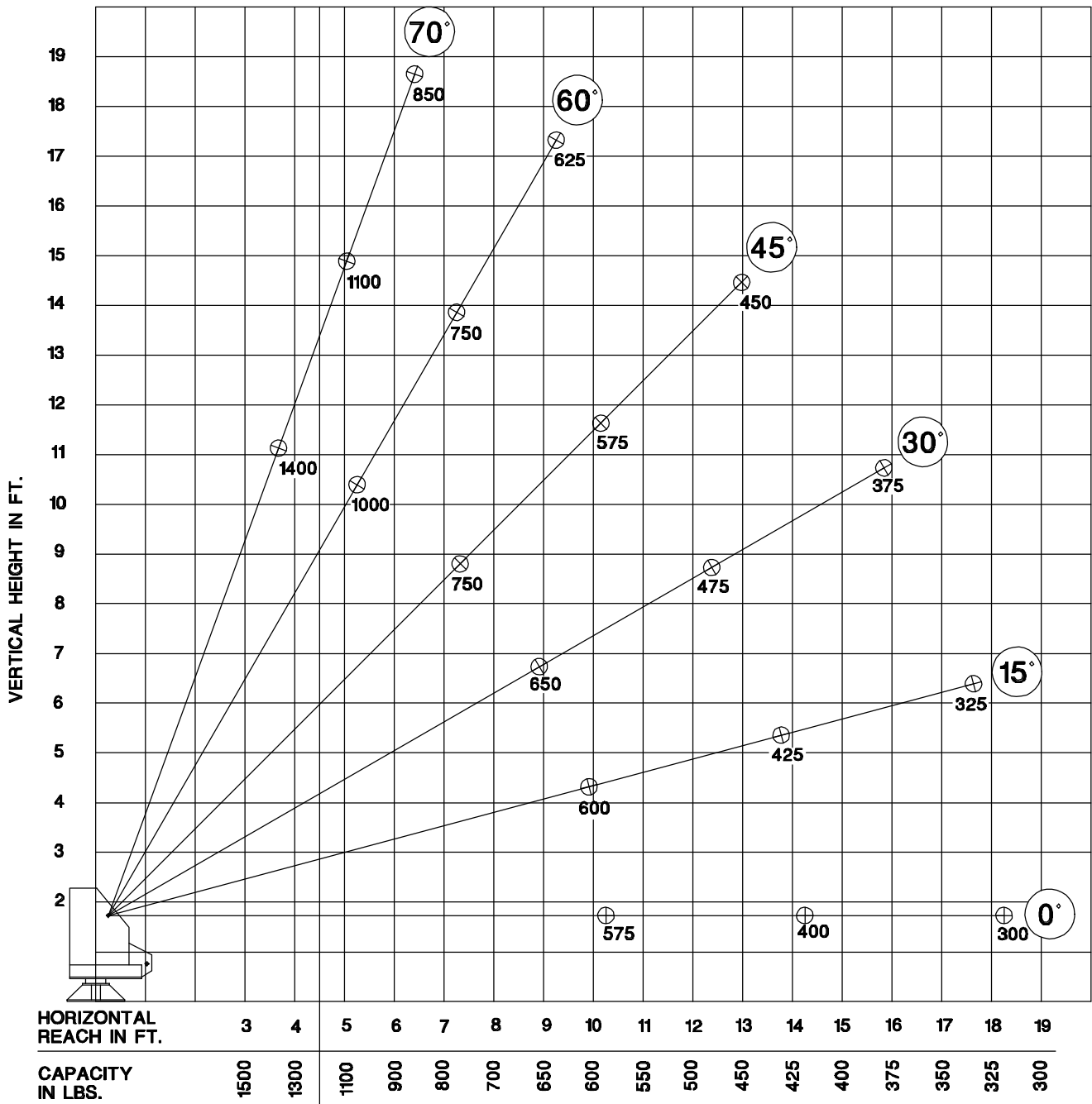
**I19121**

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



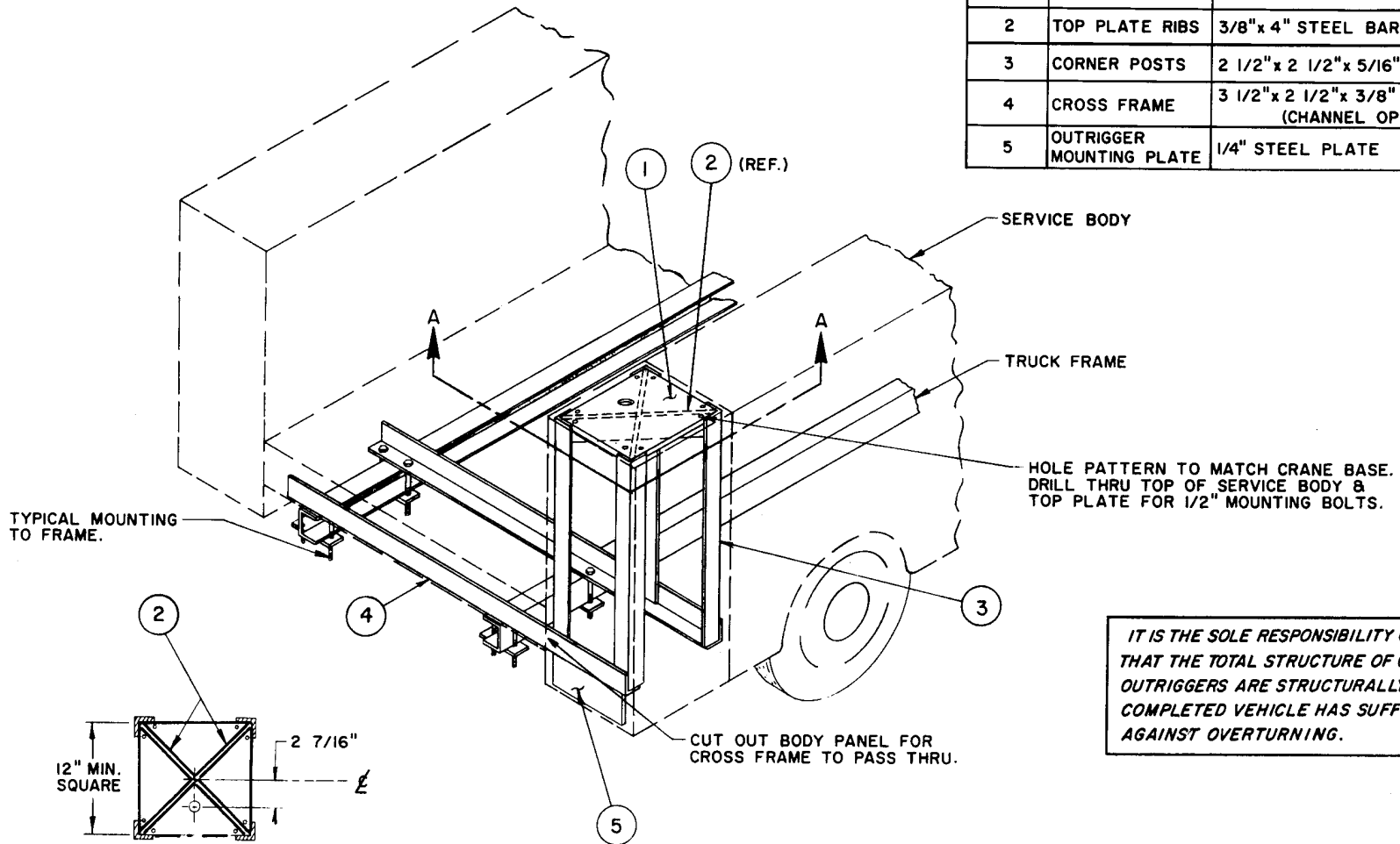
MUST USE SNATCH BLOCK  
FOR LOADS OF 1200 LBS.  
AND GREATER

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

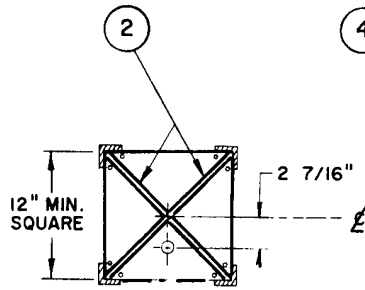


MUST USE SNATCH BLOCK  
FOR LOADS IF 1200 LBS.  
AND GREATER

| 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<br>(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.*



SECTION A-A  
SCALE: NONE

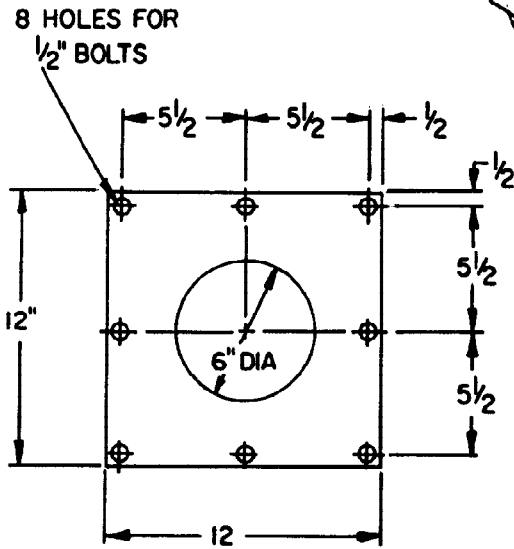
**TYPICAL REINFORCEMENT FOR MOUNTING CRANE ON TOP OF SERVICE BODY.**



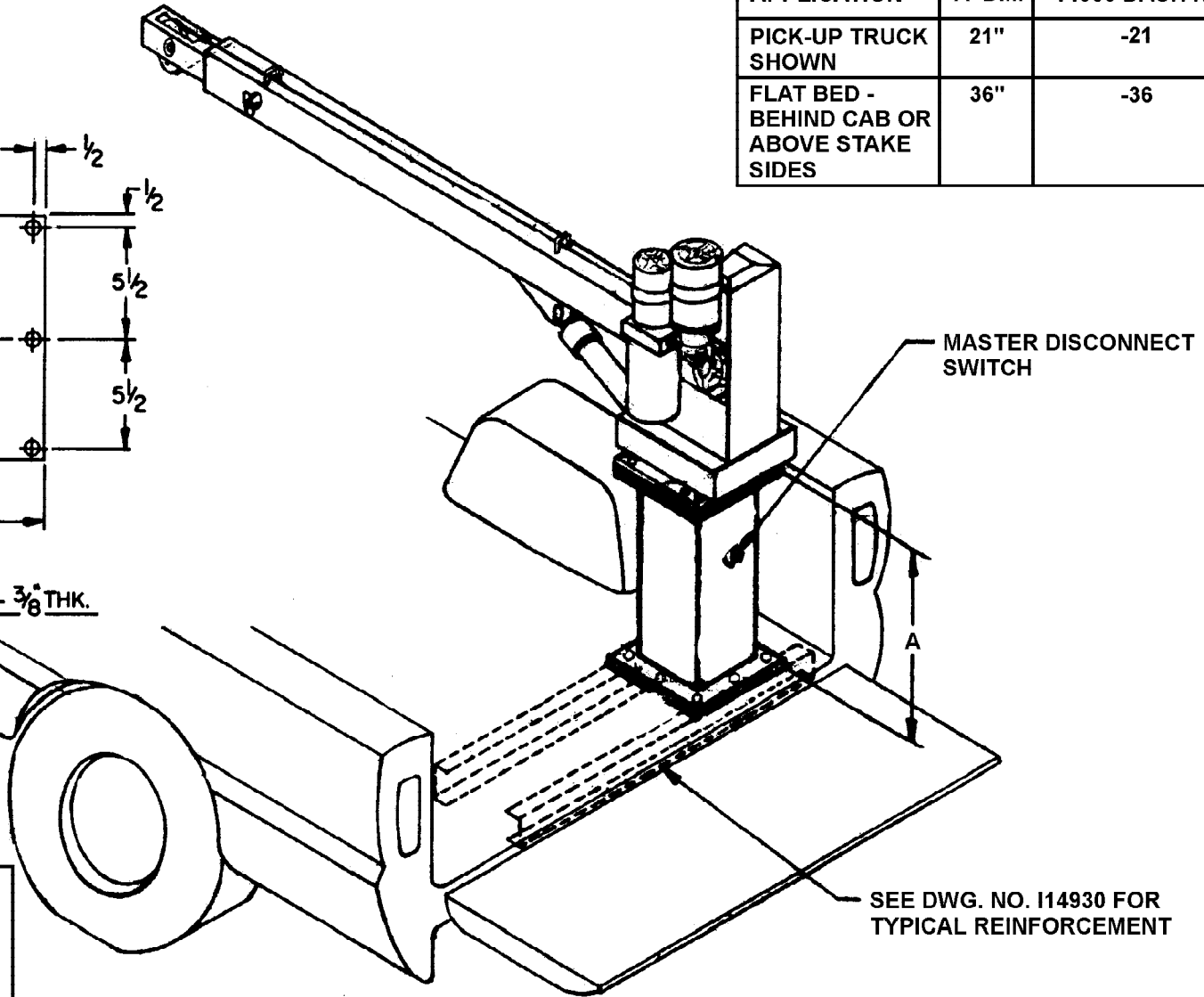
MANUFACTURING, INC.  
CINCINNATI, OHIO

|                      |                       |         |
|----------------------|-----------------------|---------|
| TITLE                | DATE                  | SECTION |
| INSTALLATION DRAWING | 6-17-98E              | C100    |
| ET5500MPB, ET6KM     | SUPERCEDES<br>4-1-96D | 113497  |

| APPLICATION                                | 'A' DIM | 14930 DASH NO |
|--|---------|---------------|
| PICK-UP TRUCK SHOWN                        | 21"     | -21           |
| FLAT BED - BEHIND CAB OR ABOVE STAKE SIDES | 36"     | -36           |



BOTTOM PLATE - 3/8" THK.



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



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
14930 MOUNTING PEDESTAL

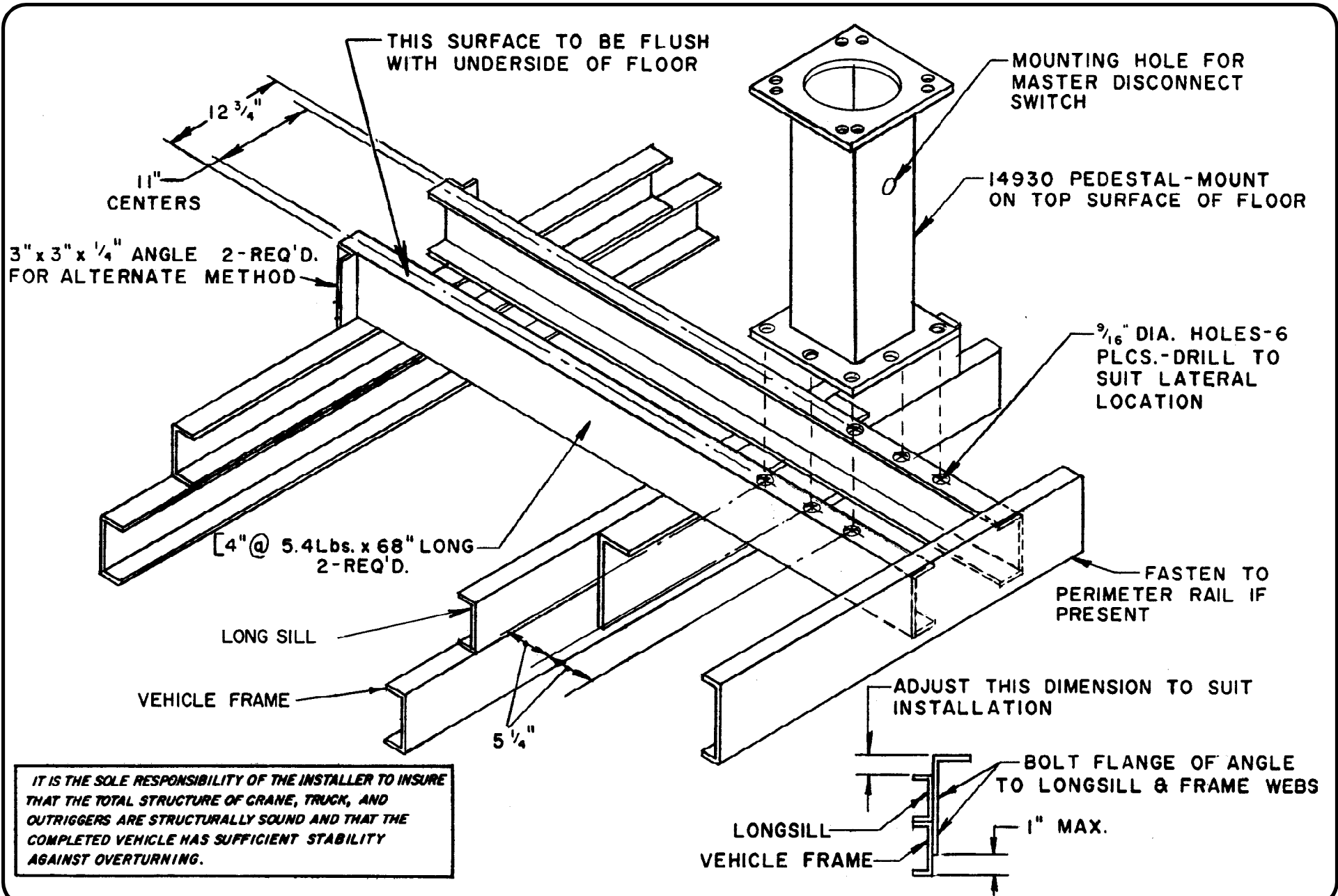
ET5500MPB, ET6KM, DT7K ▲

DATE  
1-19-00G

SUPERCEDES  
6-17-98F

SECTION  
C100

S14930



**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.**

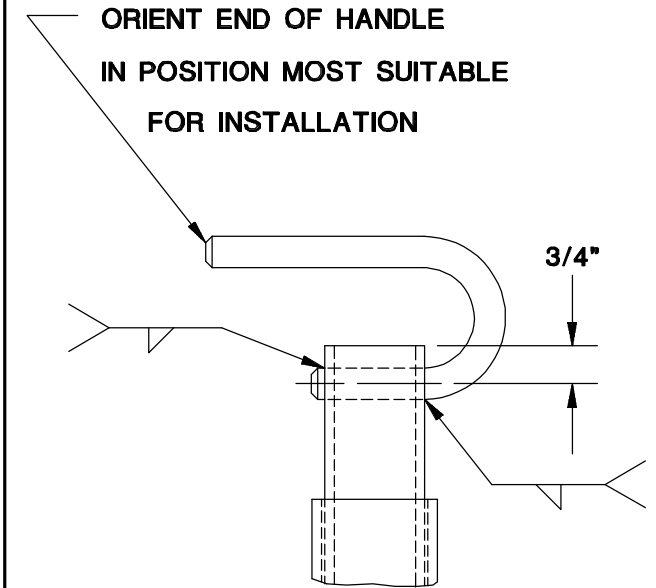
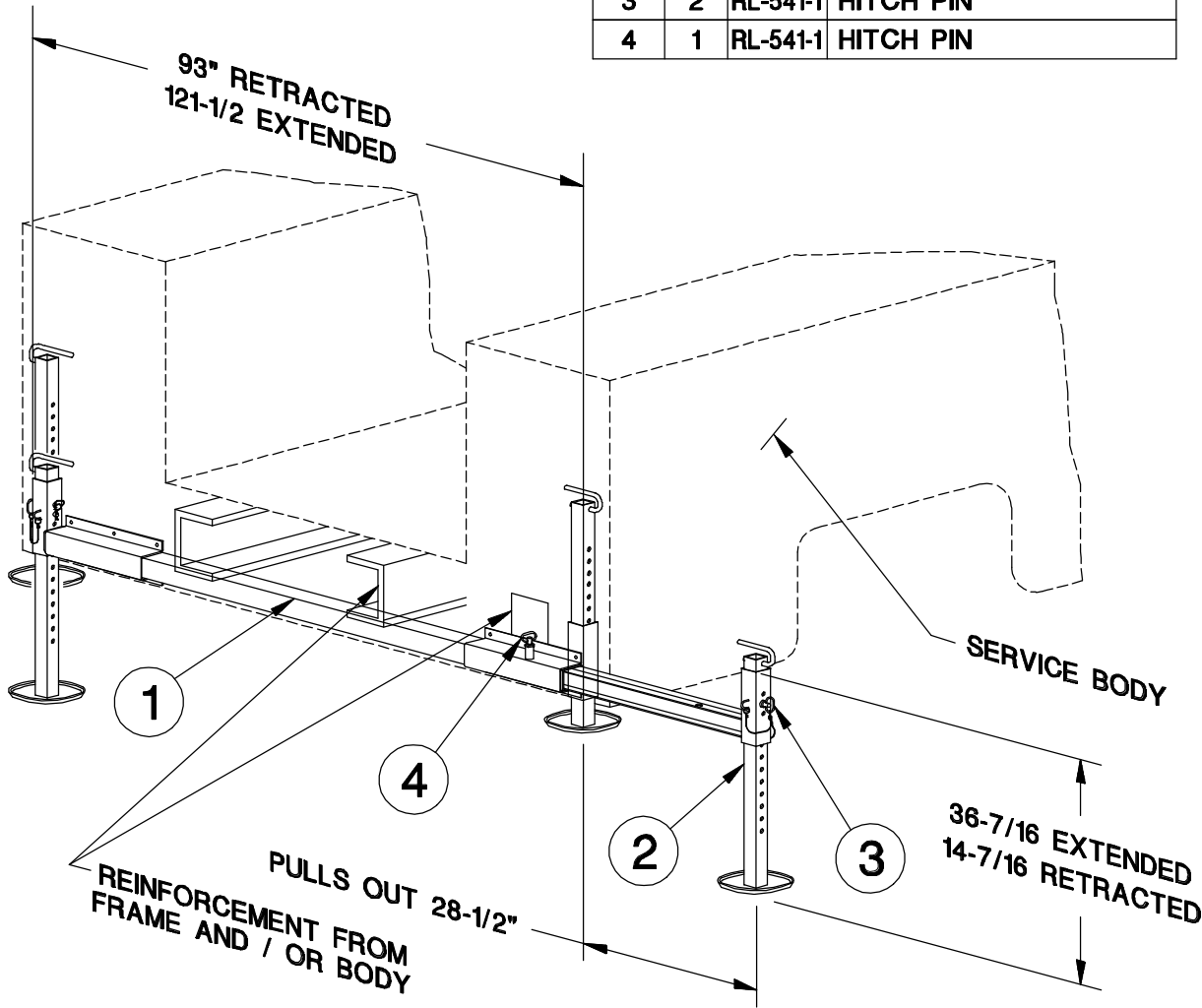


MANUFACTURING, INC.  
CINCINNATI, OHIO

|                          |                        |         |
|--------------------------|------------------------|---------|
| TITLE                    | DATE                   | SECTION |
| INSTALLATION DRAWING     | 1-19-00F               | C100    |
| ET5500MPB, ET6KM, DT7K ▲ | SUPERCEDES<br>6-17-98E | 114930  |

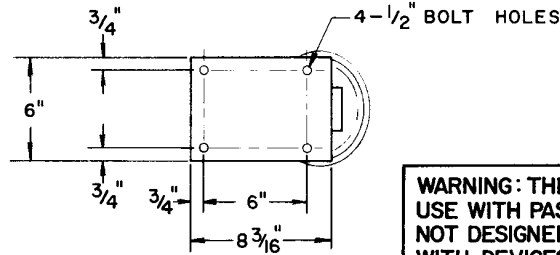


| ITEM | QTY | PART NO. | DESCRIPTION        |
|------|-----|----------|--------------------|
| 1    | 1   | 18507    | MOUNTING TUBE ASSY |
| 2    | 1   | 18508    | OUTRIGGER ASSY     |
| 3    | 2   | RL-541-1 | HITCH PIN          |
| 4    | 1   | RL-541-1 | HITCH PIN          |

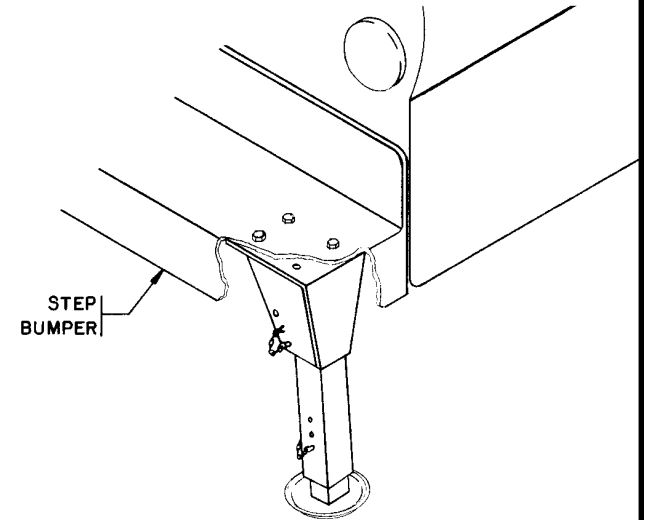
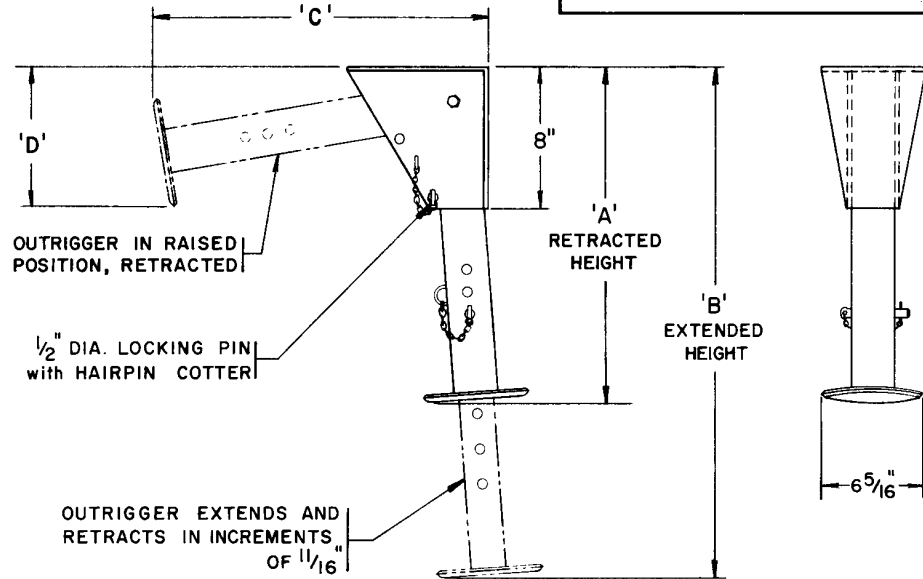


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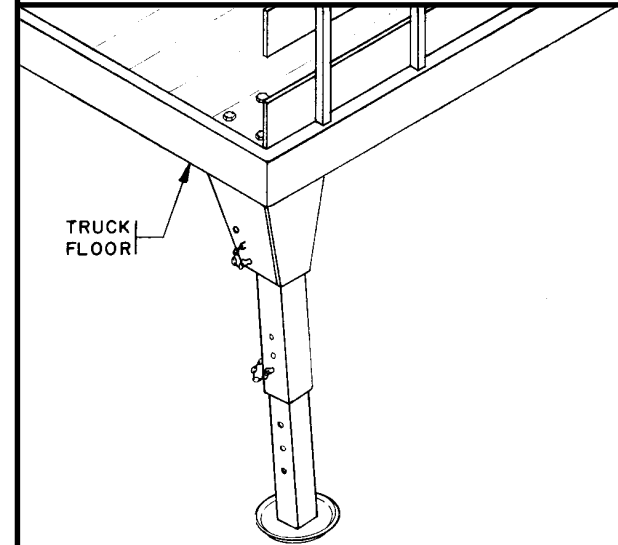
| PART No. | DESCRIPTION     | 'A' | 'B' | 'C'                              | 'D'                             |
|----------|-----------------|-----|-----|----------------------------------|---------------------------------|
| 11822-1  | SHORT OUTRIGGER | 19" | 29" | 19 <sup>3</sup> / <sub>4</sub> " | 6 <sup>1</sup> / <sub>2</sub> " |
| 11822-2  | LONG OUTRIGGER  | 27" | 45" | 27 <sup>3</sup> / <sub>4</sub> " | 9 <sup>3</sup> / <sub>4</sub> " |



**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.**



TYPICAL SHORT OUTRIGGER INSTALLATION



TYPICAL LONG OUTRIGGER INSTALLATION



MANUFACTURING, INC.  
 CINCINNATI, OHIO

TITLE  
**INSTALLATION DRAWING**

ET5500MPB, ET6KM/R

DATE  
**6-17-98C**

SUPERCEDES  
**10-12-83B**

SECTION  
**C100**

**13510**

**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 - 3/8" DIA. BOLT HOLES

SERVICE BODY

TYPICAL INSTALLATION OF  
13500 MANUAL OUTRIGGER  
ON TRUCK WITH SERVICE BODY

1/2" TO 24"

1/2" DIA. LOCKING PIN WITH HAIRPIN COTTER

OUTRIGGER EXTENDS AND RETRACTS IN INCREMENTS OF 1/16"

6 5/16" DIA.



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
INSTALLATION DRAWING

DATE  
6-17-98C

SECTION  
C100

ET5500MPB, ET6KM/R

SUPERCEDES  
8-1-83B

13509

# CRANE SAFETY AND HAZARDS

ET5500MPB/R, ET6KMPB/R, ET8100R, ET10K(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  
**10-14-97F**

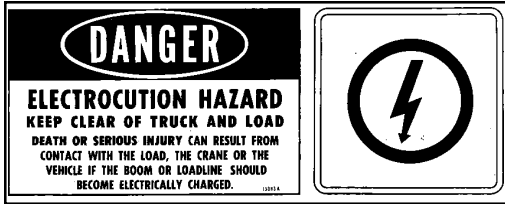
SUPERCEDES  
**5-13-97E**

SECTION  
**C150**

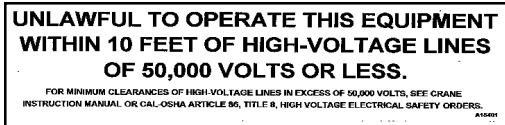
**850711**

# 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)<br>(PHASE TO PHASE) | MINIMUM REQUIRED<br>CLEARANCE (FEET) * |
|--|--|
| 0 - 50                                   | 10                                     |
| over 50 - 200                            | 15                                     |
| over 200 - 350                           | 20                                     |
| over 350 - 500                           | 25                                     |
| over 500 - 750                           | 35                                     |
| over 750 - 1000                          | 45                                     |

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

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

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



|                                  |                               |                        |
|----------------------------------|-------------------------------|------------------------|
| TITLE<br><b>INSTALLATION DWG</b> | DATE<br><b>5-13-97G</b>       | SECTION<br><b>C150</b> |
| <b>ET &amp; HT CRANE SERIES</b>  | SUPERCEDES<br><b>7-15-96F</b> | <b>15394</b>           |

# 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<br>I13497<br>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<br>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.<br>NOTE REQUIREMENTS FOR ADEQUATE WIRING & BATTERY   |
| I19120<br>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<br>13509<br>13510    | 5. Install optional outriggers if required. Provide necessary reinforcement.   |



TITLE  
**INSTALLATION INFO**

DATE  
**10-14-97A**

SECTION  
**C200**

**ET6KM**

SUPERCEDES  
**4-8-96**

**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.



|                   |                      |         |
|-------------------|----------------------|---------|
| TITLE             | DATE                 | SECTION |
| INSTALLATION INFO | 10-14-97A            | C200    |
| ET6KM             | SUPERCEDES<br>4-8-96 | 119116  |

# 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<br>I13497<br>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<br>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.<br>NOTE REQUIREMENTS FOR ADEQUATE WIRING & BATTERY   |
| I19121<br>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<br>13509<br>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

- ELECTRIC WINCH**  
Controlled by plug-in remote pendant. NOTE - Snatch block must be used for loads in excess of 1200 lbs.
- BOOM ELEVATION**  
Controlled by plug-in remote pendant. Electric-hydraulic power unit allows full power lifting and lowering of capacity loads.
- POWER ROTATION**  
Controlled by plug-in remote pendant. Crane can be rotated continuously 360 deg. or more under full crane loading.
- 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.
- 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.
- 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.
- 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.
- 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.



| TITLE             | DATE                 | SECTION |
|-------------------|----------------------|---------|
| INSTALLATION INFO | 10-14-97A            | C200    |
| ET6KR             | SUPERCEDES<br>4-8-96 | 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<br>CT2000<br>CT2003/4/5<br>DT7K              | #4  | #4    | #2    | #2    | #1    | #0             | #0    | #00   | 350                          | 100         |
| ET5500MPB<br>ET5500R<br>ET6KMPB<br>ET6KR<br>ET10K | #2  | #2    | #1    | #0    | #00   | NOTRECOMMENDED |       |       | 450                          | 100         |
| ET10KX  | #2  | #2    | #1    | #0    | #00   | NOTRECOMMENDED |       |       | 550                          | 150         |
| ET25K<br>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**

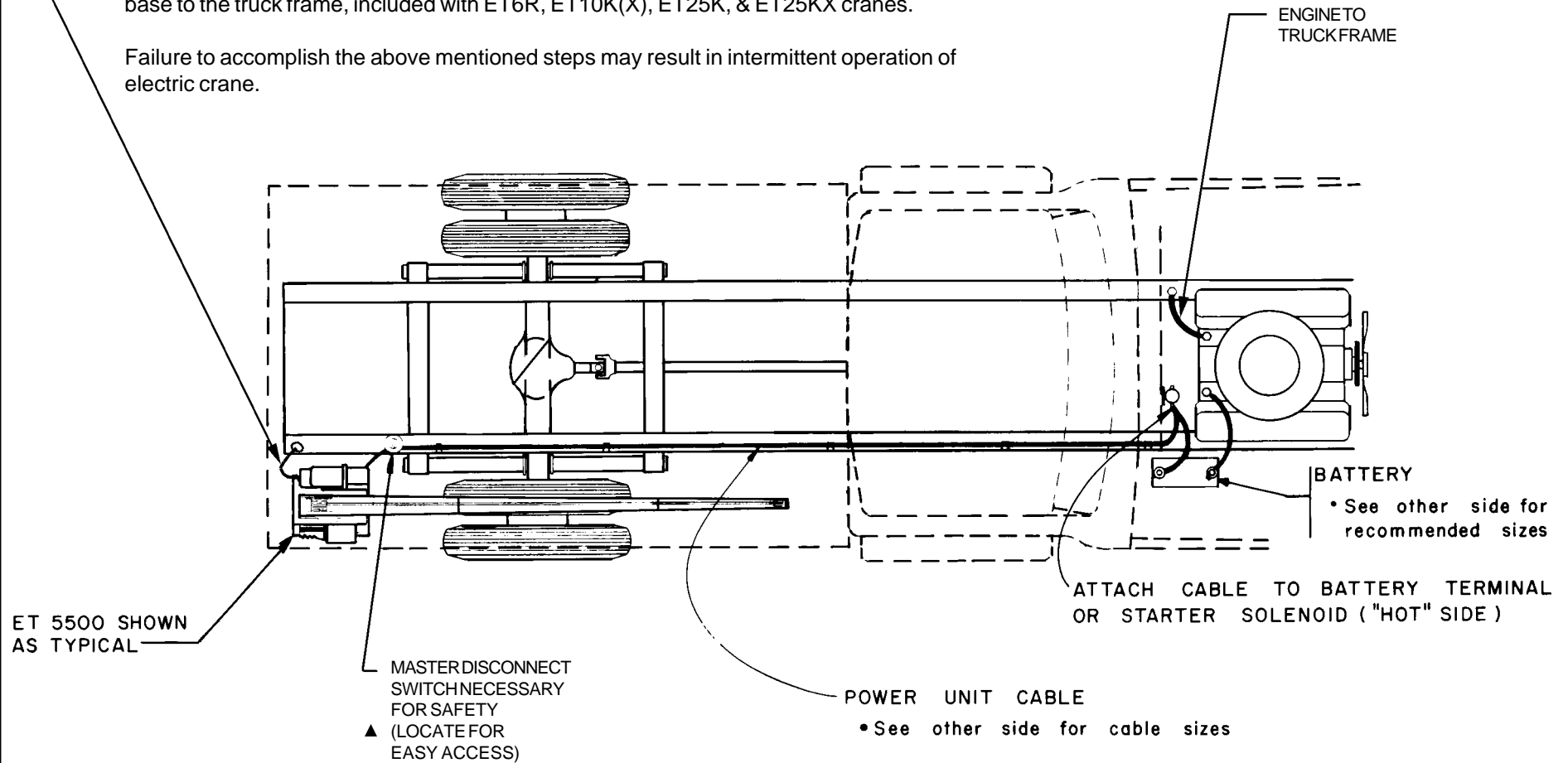
SUPERCEDES  
**3-3-99Q**

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.



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
**INSTALLATION - BATTERY CABLE**

DATE  
**11-7-01D**

SECTION  
**C200**

**WINCH & CRANE**

SUPERCEDES  
**10-10-01C**

**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**

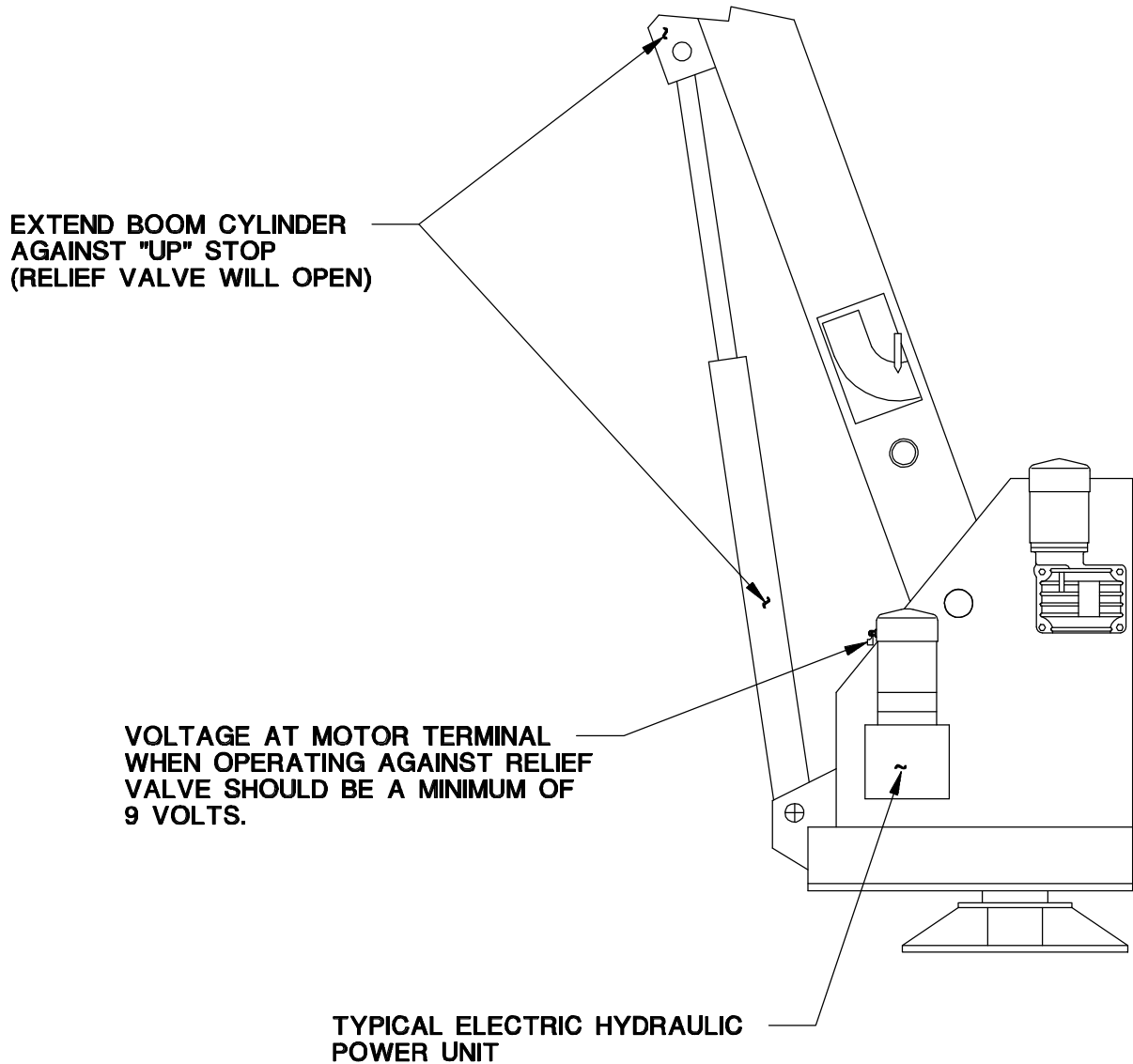
SECTION  
**WC 200**

**711006**

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

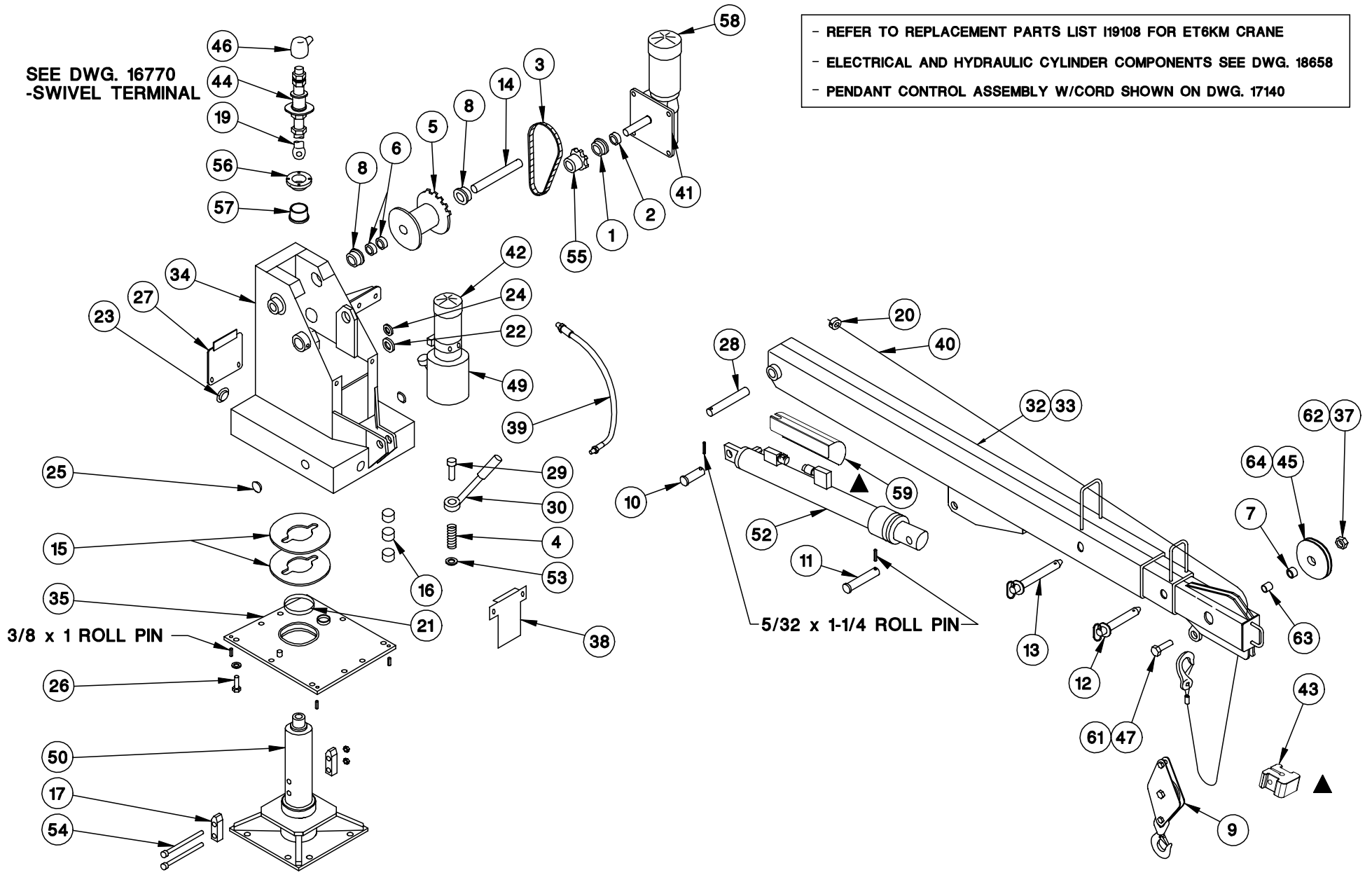
ONE OF THE MOST COMMON ELECTRICAL PROBLEMS ENCOUNTERED ON ELECTRICAL CRANES IS INSUFFICIENT VOLTAGE AT THE MOTOR WHEN DRAWING THE LARGE CURRENT THAT EXISTS AT FULL LOAD.

TO ISOLATE THIS PROBLEM PERFORM THE MINIMUM VOLTAGE TEST BELOW:



SEE DWG. 16770  
-SWIVEL TERMINAL

- REFER TO REPLACEMENT PARTS LIST I19108 FOR ET6KM CRANE
- ELECTRICAL AND HYDRAULIC CYLINDER COMPONENTS SEE DWG. 18658
- PENDANT CONTROL ASSEMBLY W/CORD SHOWN ON DWG. 17140



TITLE  
**REPLACEMENT PARTS**

DATE  
**10-30-01F**

SECTION  
**C400**

**ET6KM**

SUPERSEDES  
**7-13-01E**

**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       | WINCHDRIVE 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     | 17007         | CABLE SHEAVE - 6" DIA - 6/14 BOOM                  |
| 6      | 01158         | THRUST COLLAR - MAIN SHAFT - 1" BORE                | 46     | 17011         | BOOT - SWIVEL TERMINAL                             |
| 7      | 01272-1       | BUSHING - BOOM SHEAVE - 6/14 & 10/18 BOOMS          | 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      | 13149         | SWIVEL SNATCH BLOCK                                 | 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         | FRICITIONPUCK                                       | 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     | -             | -  |
| 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     | 13168-3       | SLEEVE - 10/18 BOOM                                |
| 24     | 14883         | GROMMET (3/8" I.D.) - RUBBER                        | 64     | 13404         | SHEAVE - 5-1/2" DIA - 10/18 BOOM                   |
| 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-XX | 3/16" DIA WIRE ROPE & EYE HOOK ASSEMBLY             | 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**

DATE  
**10-30-01L**

SECTION  
**C400**

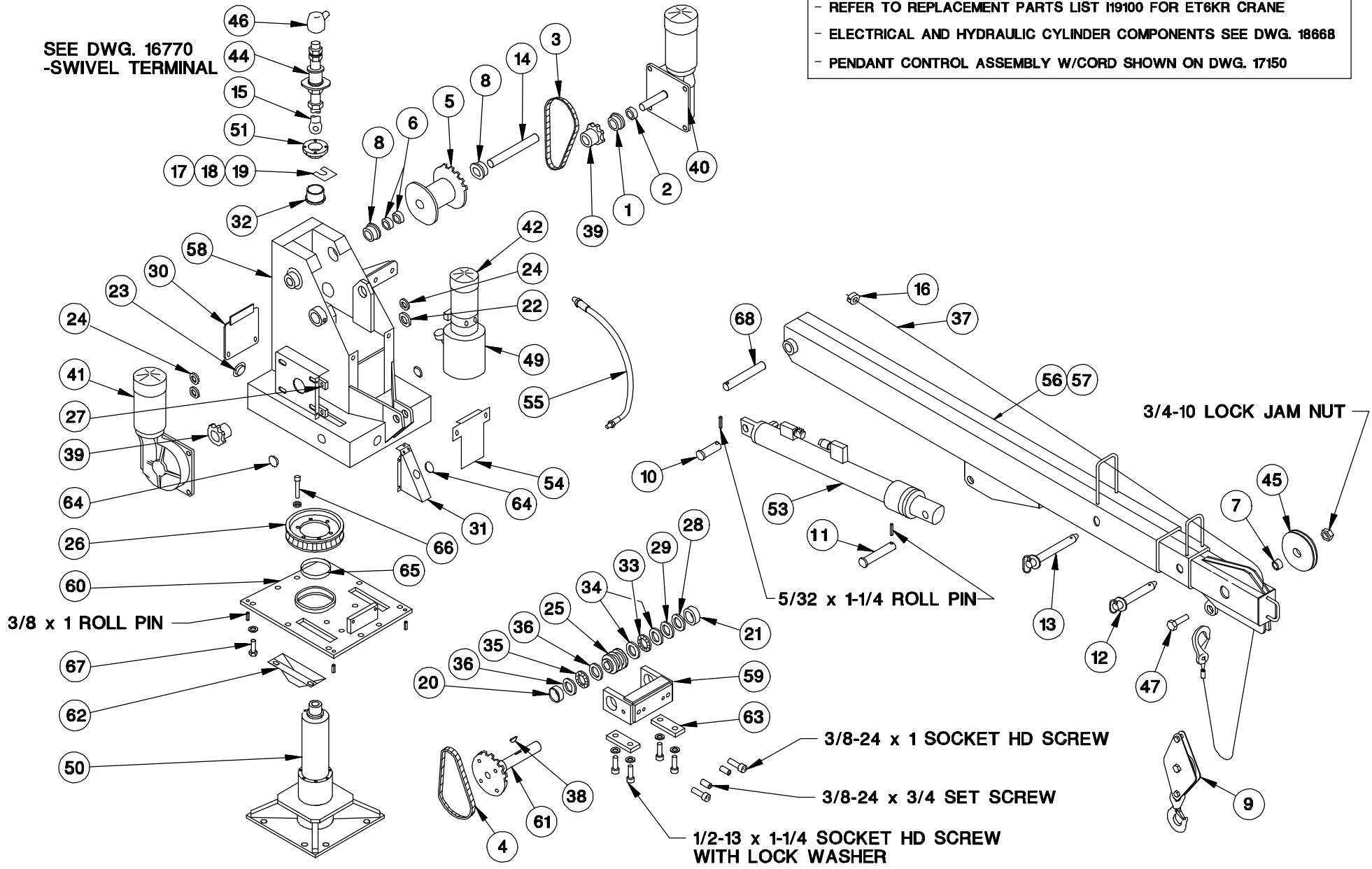
**ET6KM**

SUPERCEDES  
**7-24-01K**

**I19108**

SEE DWG. 16770  
-SWIVEL TERMINAL

- REFER TO REPLACEMENT PARTS LIST I19100 FOR ET6KR CRANE  
- ELECTRICAL AND HYDRAULIC CYLINDER COMPONENTS SEE DWG. 18668  
- PENDANT CONTROL ASSEMBLY W/CORD SHOWN ON DWG. 17150



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
REPLACEMENT PARTS

ET6KR

DATE  
12-1-98B

SUPERSEDES  
10-14-97A

SECTION  
C400

I19101



| 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         | MOTOR COVER - BLACK                       |
| 3      | 00867-1       | WINCH DRIVE CHAIN (NO CONNECTING LINK) 50 LINKS     | 43     | 16735         | HEADACHE BALL ASSEMBLY                    |
| 4      | 00867-3       | ROTATION DRIVE CHAIN (NO CONNECTING LINK) 56 LINKS  | 44     | 16770         | SWIVEL TERMINAL                           |
| 5      | 01149         | CABLE DRUM  | 45     | 17007         | CABLE SHEAVE - 6" DIA                     |
| 6      | 01158         | THRUST COLLAR - MAIN SHAFT - 1" BORE                | 46     | 17011         | BOOT - SWIVEL TERMINAL                    |
| 7      | 01272-1       | BUSHING - BOOM SHEAVE                               | 47     | 17059-4       | SHEAVE AXLE                               |
| 8      | 01299         | FLANGED BEARING - 1" BORE x 2" O.D. - MAIN SHAFT    | 48     | 17150         | PENDANT CONTROL ASSEMBLY                  |
| 9      | 13149         | SWIVEL SNATCH BLOCK                                 | 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     | 18679         | HOSE ASSEMBLY                             |
| 16     | 13463-1       | STOP SLEEVE   | 56     | 18681         | 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     | 18844         | WORM HOUSING ASSEMBLY                     |
| 20     | 14341-3       | BEARING (1-1/2" I.D.) - WORM SHAFT                  | 60     | 18855         | 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     | 15645         | 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     | IHHCS05013150 | 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     | -             | -   |
| 30     | 15676         | BACK COVER  | 70     | -             | -   |
| 31     | 15678         | COVER - ROTATION CHAIN                              | 71     | -             | -   |
| 32     | 15681         | UPPER BEARING - QUILL                               | 72     | -             | -   |
| 33     | 15696         | NEEDLE THRUST BEARING                               | 73     | -             | -   |
| 34     | 15697         | THRUST RACE - ROTATION WORM                         | 74     | -             | -   |
| 35     | 15698         | NEEDLE THRUST BEARING                               | 75     | -             | -   |
| 36     | 15699         | THRUST RACE - ROTATION WORM                         | 76     | -             | -   |
| 37     | 15810-3/16-XX | 3/16" DIA WIRE ROPE & EYE HOOK ASSEMBLY             | 77     | -             | -   |
| 38     | 15929         | WOODRUFF KEY - 1/4" x 1-1/4"                        | 78     | -             | -   |
| 39     | 15999         | DRIVE SPROCKET - 3/4" BORE 40B10                    | 79     | -             | -   |
| 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 I19101

HYDRAULIC CYLINDER PARTS SEE DRAWING 18668

**SN: 42000 & UP**

ITEM NOT SHOWN ON DRAWING I19101



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
**REPLACEMENT PARTS**

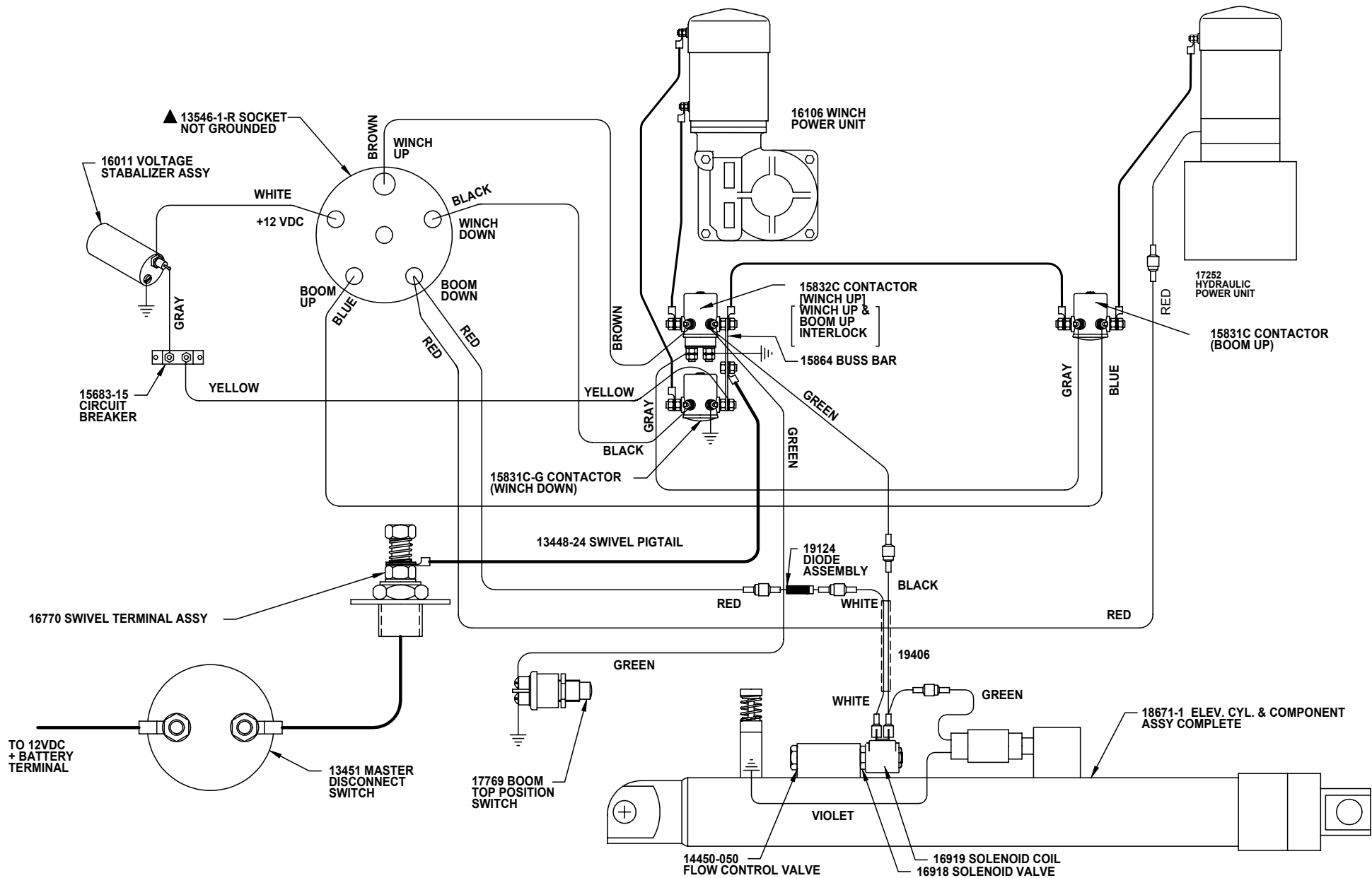
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**10-14-97B**

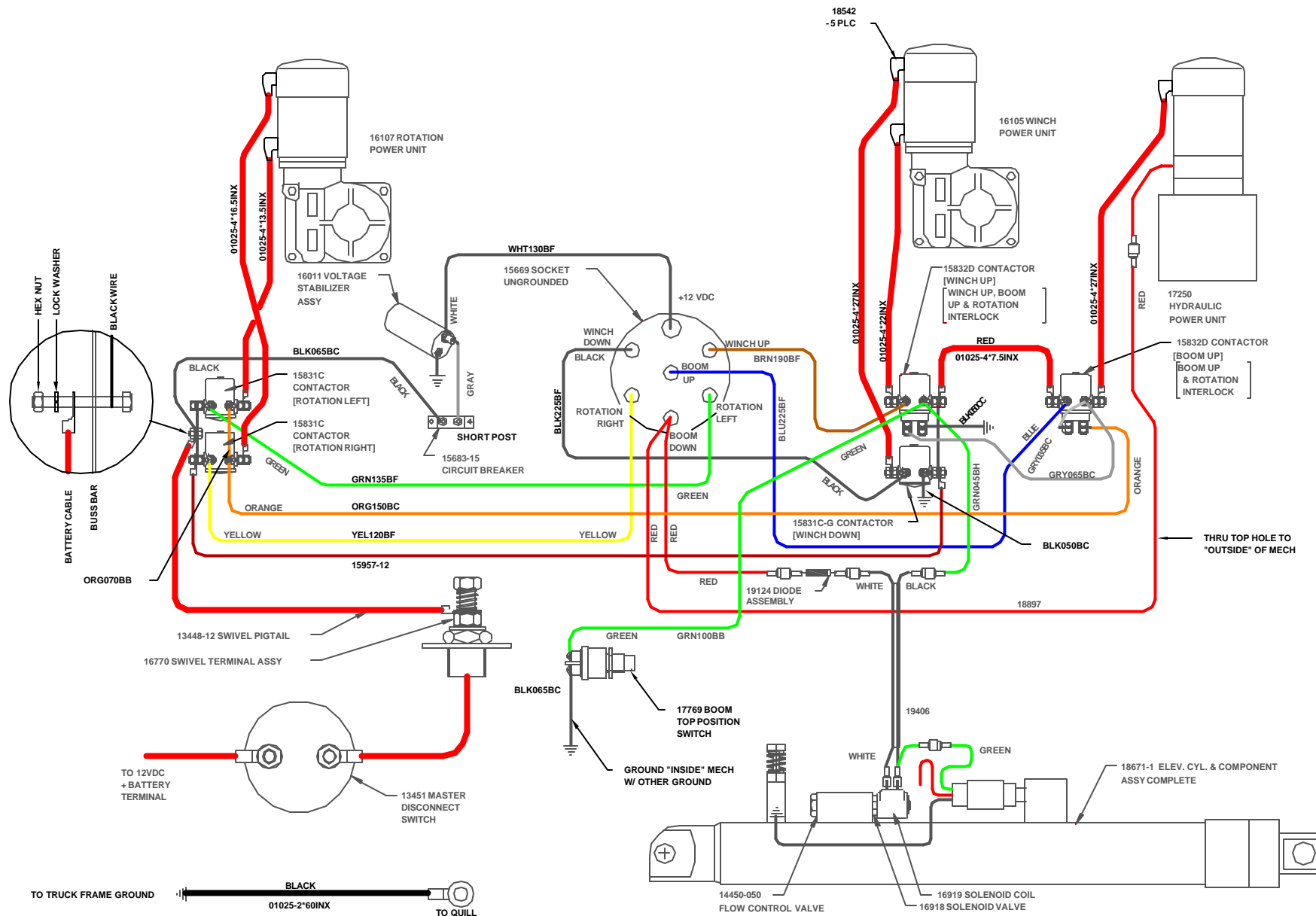
SECTION  
**C400**

**ET6KR**

SUPERCEDES  
**8-22-97A**

**119100**





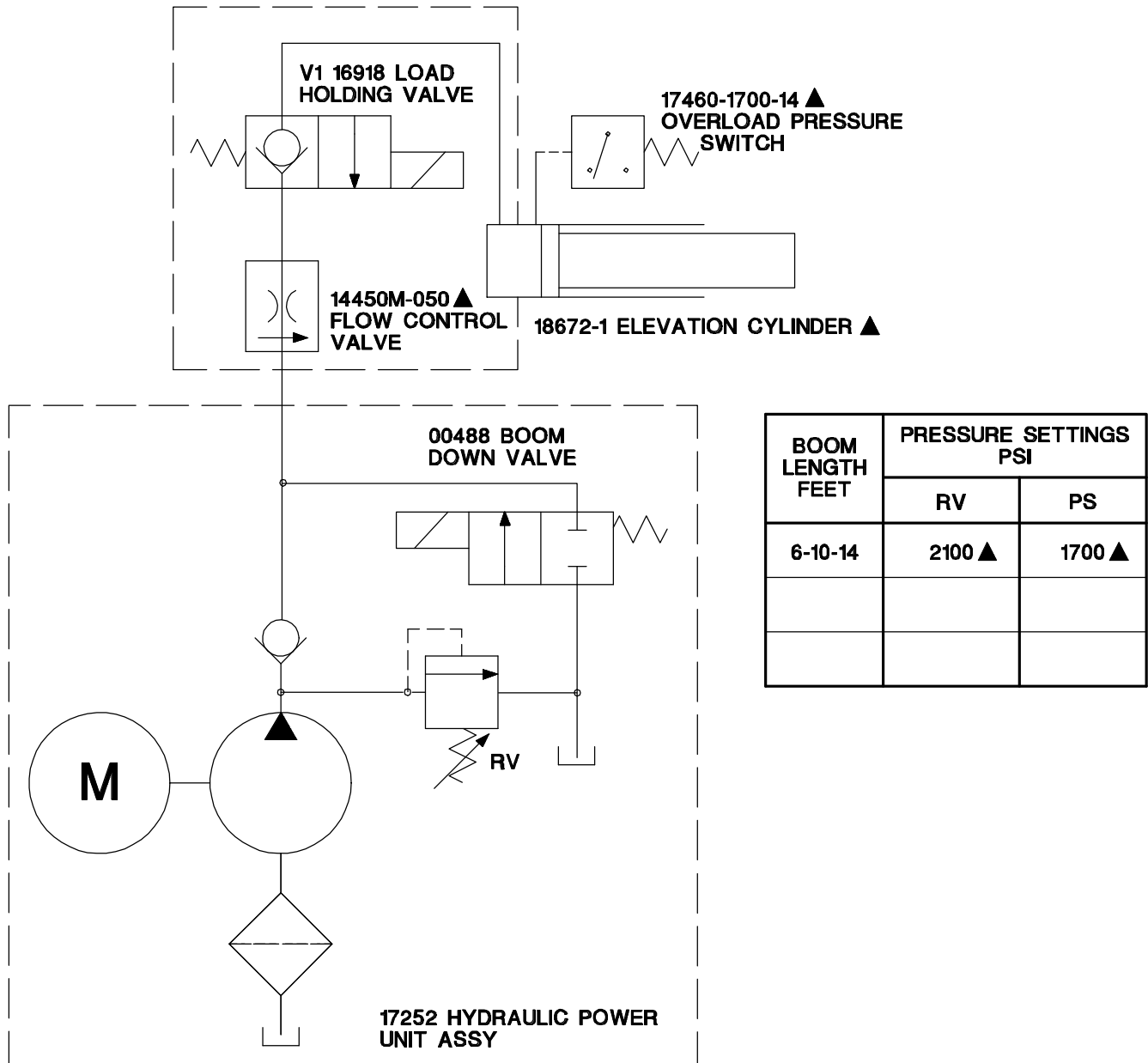
NOTE: ALL 16 GAUGE WIRES ARE P/N 22254



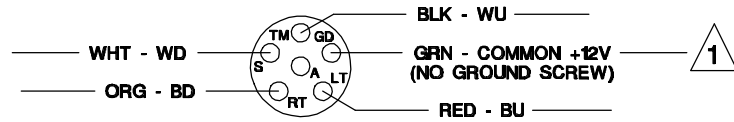
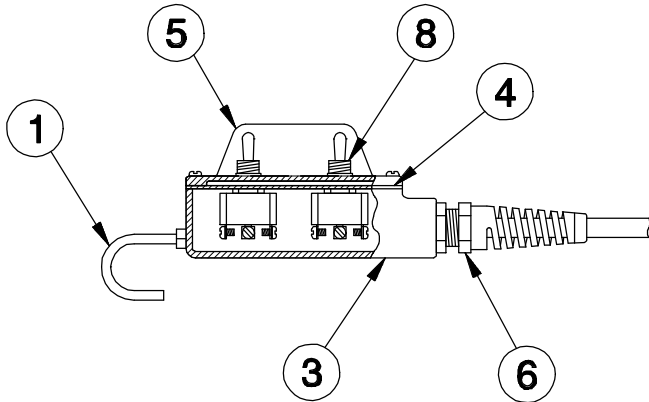
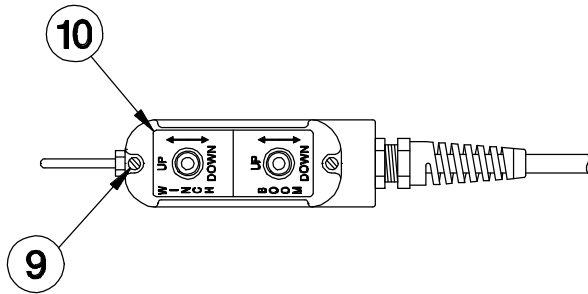
TITLE  
**WIRING DIAGRAM**  
 ET6KR CRANE

DATE  
**7-9-04F**  
 SUPERSEDES  
**4-30-98E**

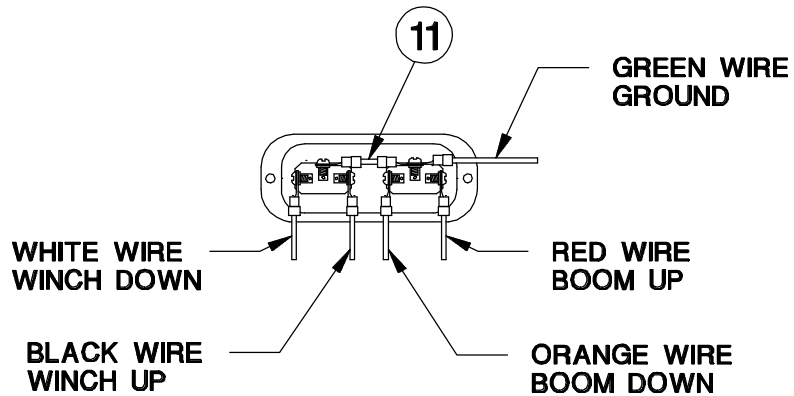
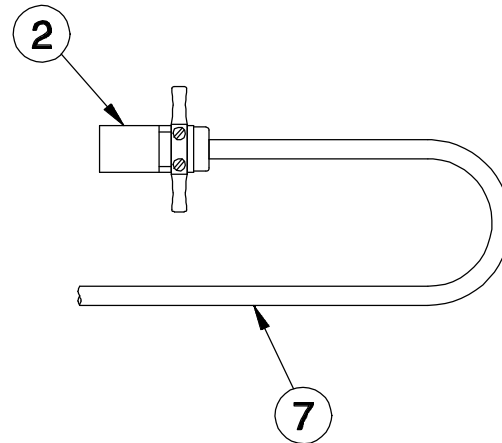
SECTION  
**C400**  
**118668**



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



**PLUG - BACKSIDE VIEW**



1 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   | IPHCS#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                    |

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

TITLE  
REPL. PARTS DWG.

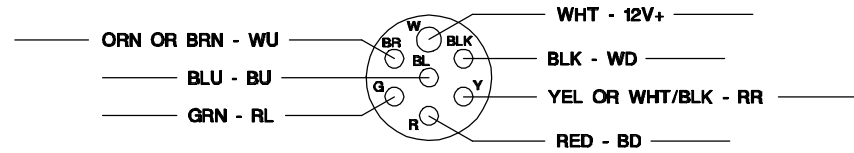
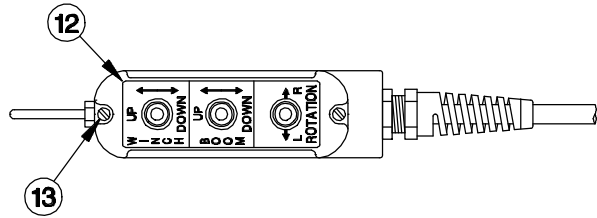
2 FUNCTION CRANES

DATE  
12-11-97B

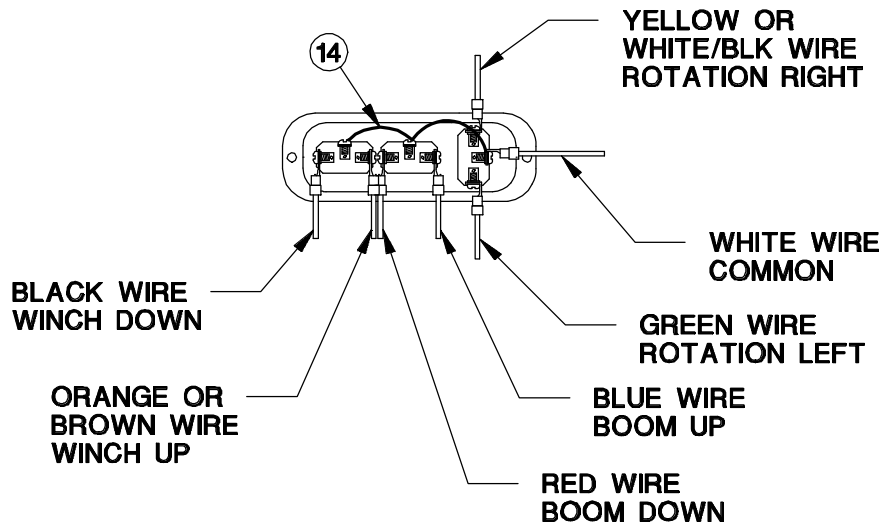
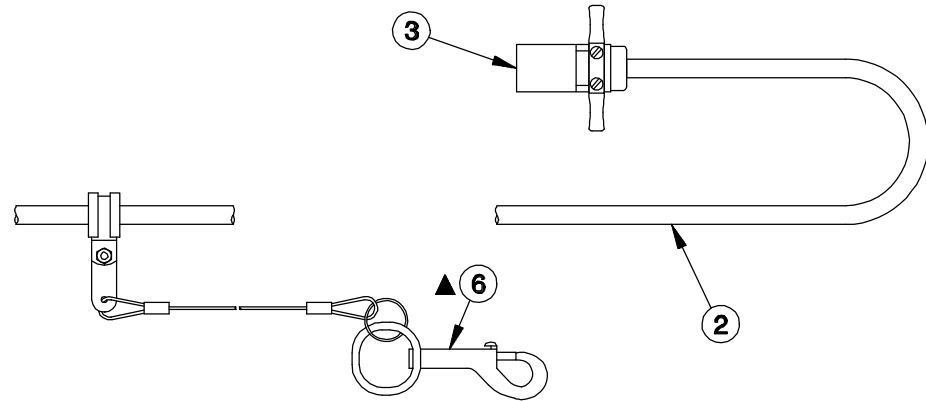
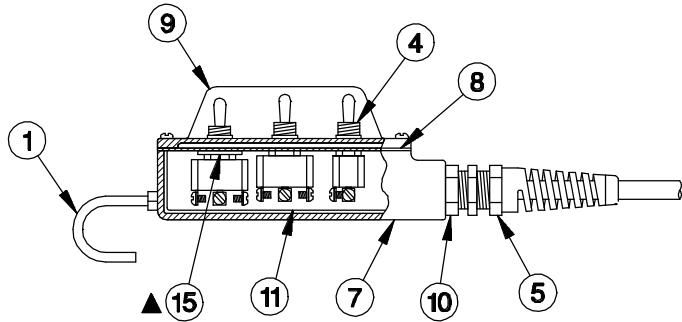
SUPERSEDES  
5-19-97A

SECTION  
C400

17140



**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  
2-6-98E


SUPERSEDES  
1-30-98D

SECTION  
C400

17150

# 16770 SWIVEL TERMINAL ASSY

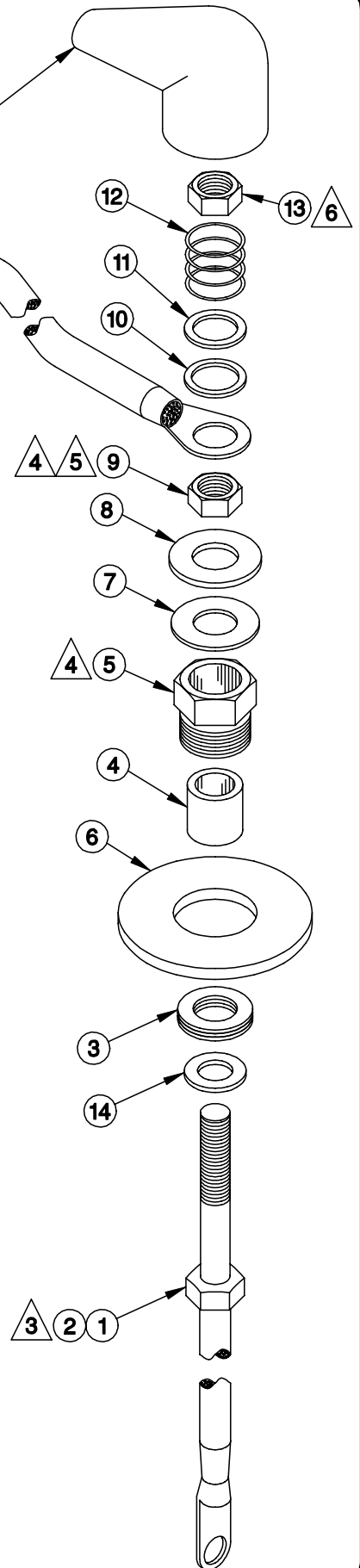
15666  

13450-13.5 







17011 RUBBER BOOT - REF



13448-XX SWIVEL PIGTAIL  
(NOT INCLUDED WITH 16770)

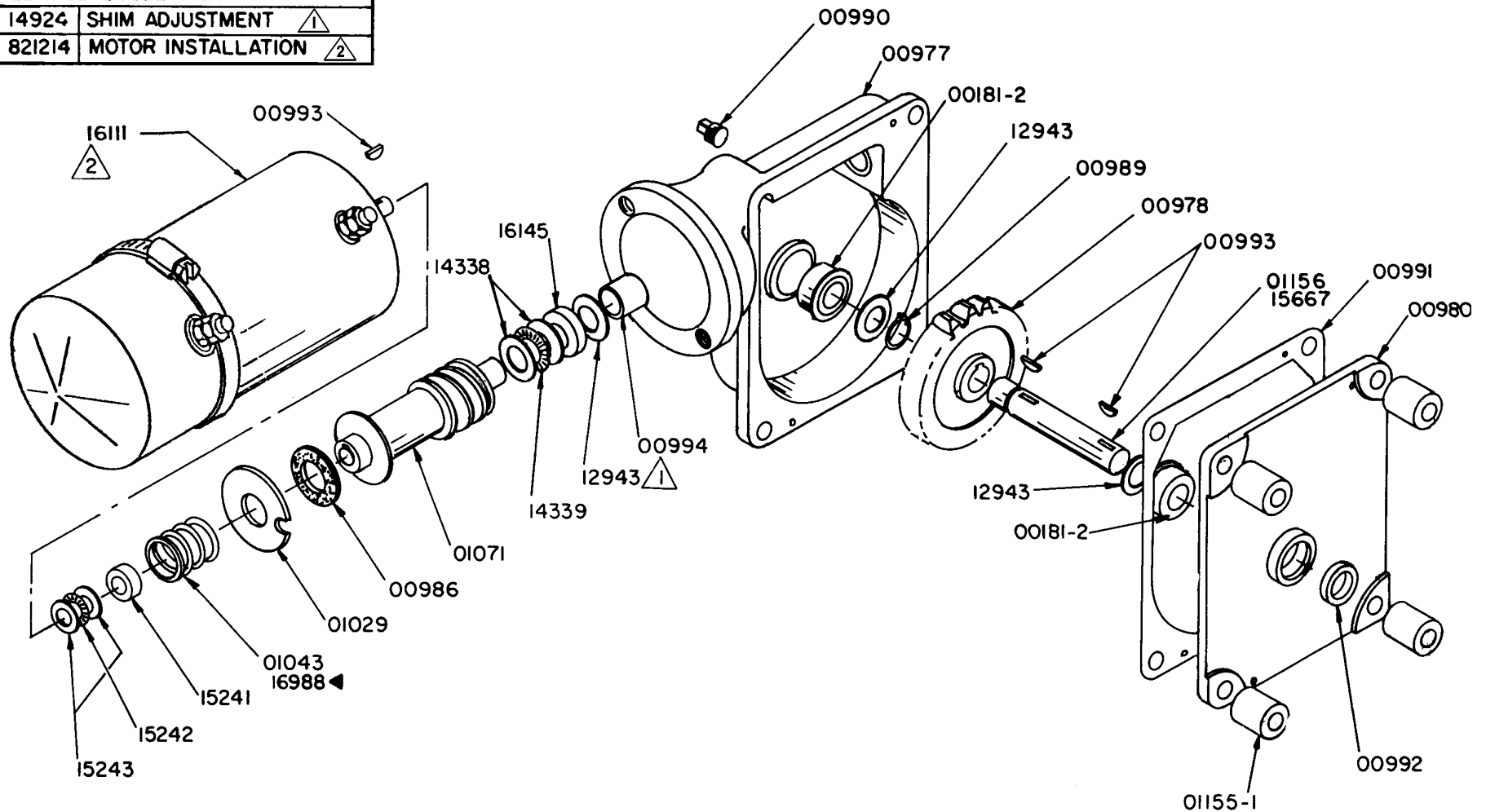
| ITEM | QTY | PART NO.      | DESCRIPTION  |
|------|-----|---------------|--|
| 1    | 1   | 15653-60      | PIGTAIL & STUD ASSY                                    |
| 2    | 1   | 13447-13.5    | PIGTAIL & STUD ASSY                                    |
| *3   | 3   | 16771-1       | FIBER WASHER<br>1/2" 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<br>1 1/8" I.D. x 2 1/8" O.D. x 1/8" THK    |
| *7   | 1   | 16771-2       | FIBER WASHER<br>1/2" I.D. x 1 1/4" O.D. x 1/16" THK    |
| *8   | 1   | 16770*7       | BRASS WASHER<br>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<br>1/2" I.D. x 3/4" O.D. x 1/32" THK     |
| *11  | 1   | 16770*10      | BRASS WASHER<br>1/2" I.D. x 11/16" O.D. x 1/32" THK    |
| *12  | 1   | LC-063HJ-1    | SPRING<br>.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<br>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     |
| 821214            | MOTOR INSTALLATION  |



SEE DWG. 14924/14926 FOR SERVICE INSTRUCTION

16100 SERIES POWER UNITS



MANUFACTURING, INC.  
CINCINNATI, OHIO

TITLE  
**REPLACEMENT PARTS**

**WINCH & CRANE**

DATE  
**6-17-98D**

SUPERCEDES  
**10-3-88C**

SECTION  
**C400**

**116100**



# REPLACEMENT PARTS LIST - 16100 ELECTRIC POWER UNIT

MODEL(S): ET5500MPB, ET6KM, ET6KR

| PART NO.   | DESCRIPTION  |
|--|--|
| 16101<br>16102<br>16105<br>16106<br>16107  | POWER UNIT - LONG SHAFT - ET5500R WINCH <sup>△</sup><br>POWER UNIT - SHORT SHAFT - ET5500R ROTATION<br>POWER UNIT - LONG SHAFT - CA 2000, CT 2003, WA/SL 3000 (WITH SPACERS)<br>POWER UNIT - LONG SHAFT - ET5500 WINCH (WITHOUT SPACERS) <sup>△</sup><br>POWER UNIT - SHORT SHAFT - ET5500R ROTATION |
| 00181-2<br>00977<br>00978<br>00980<br>* 00986  | FLANGE BEARING - 3/4" BORE x 1 3/4" O.D.<br>GEAR CASE (INCLUDES 00994 BUSHING)<br>WORM GEAR<br>BASE PLATE<br>BRAKE DISC  |
| * 00989<br>00990<br>* 00991<br>* 00992<br>* 00993 <sup>△</sup>                               | LOCK RING<br>OIL PLUG - 1/4" PIPE<br>GASKET<br>OIL SEAL<br>KEY - #9 WOODRUFF   |
| 00994<br>01029<br>01043 <sup>△</sup><br>01071<br>01155-1                                     | BUSHING<br>BRAKE PLATE<br>BRAKE SPRING (16102 & 16107 ROTATION POWER UNIT ONLY)<br>WORM SHAFT<br>SPACER (16105 ONLY)   |
| 01156<br>* 12943-1 <sup>△</sup><br>* 12943-2 <sup>△</sup><br>* 12943-3 <sup>△</sup><br>14338 | WORM GEAR SHAFT - 3/4" x 5 3/16" LONG (16105 & 16106 ONLY)<br>SHIM WASHER - .005" THICK (AS REQUIRED)<br>SHIM WASHER - .015" THICK (AS REQUIRED)<br>SHIM WASHER - .030" THICK (AS REQUIRED)<br>NEEDLE THRUST RACE 3/4" I.D.  |
| 14339<br>15241<br>15242<br>15243<br>15667  | NEEDLE THRUST BEARING 3/4" I.D.<br>SPACER (INSTALL NEXT TO BRAKE PLATE)<br>NEEDLE THRUST BEARING 5/8" I.D.<br>NEEDLE THRUST RACE .092" x 5/8" I.D.<br>WORM GEAR SHAFT - 3/4" x 4 3/16" LONG (16102 & 16107 ONLY)   |
| 16111 <sup>△</sup><br>16145<br>16988 <sup>△</sup>  | MOTOR - 12 VOLT 4 1/2" DIAMETER<br>SPACER<br>BRAKE SPRING (16101, 16105 & 16106 WINCH POWER UNITS ONLY)  |
| 14889<br>15290   | MOTOR REPAIR KIT<br>SMALL PARTS KIT (INCLUDES ITEMS MARKED *)  |

<sup>△</sup>1 AVAILABLE ONLY AS PART OF 15290 SMALL PARTS KIT

<sup>△</sup>2 16101 POWER UNIT REPLACED BY 16106 POWER UNIT  
16102 POWER UNIT REPLACED BY 16107 POWER UNIT

<sup>△</sup>3 REPLACE 30E & 16100 POWER UNITS AS FOLLOWS:  
16105 REPLACES 11497  
16106 REPLACES 11497NS & 16101  
16107 REPLACES 16102

<sup>△</sup>4 16111 MOTOR REPLACES 01024 E & F & 16112 MOTORS  
ON ALL 30E & 16100 SERIES POWER UNITS

<sup>△</sup>5 16988 BRAKE SPRING REPLACES 01043 BRAKE SPRING ON  
16101, 16105 & 16106 WINCH POWER UNITS ONLY



MFG., INC.  
CINCINNATI, OHIO

TITLE  
**REPL. PARTS LIST**

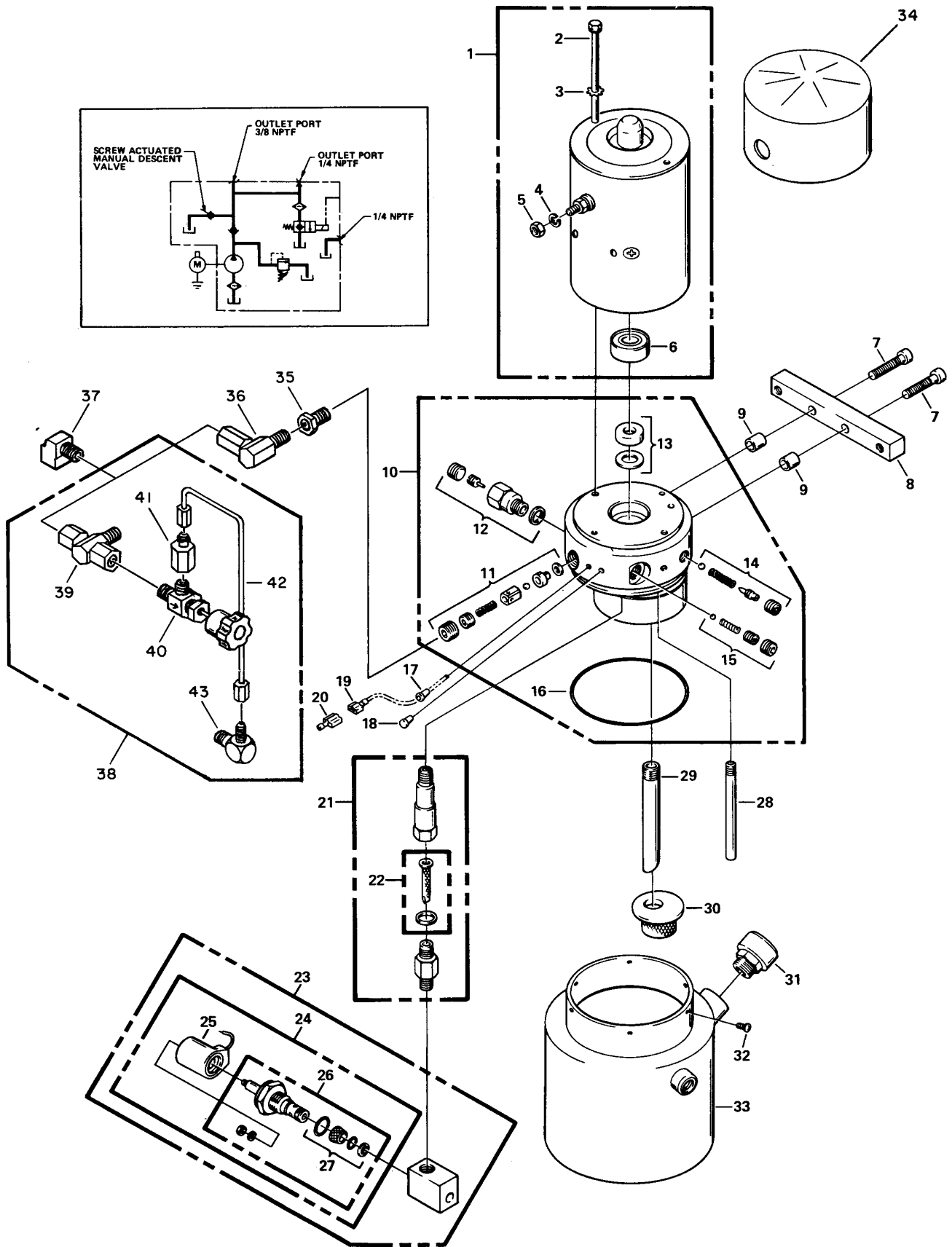
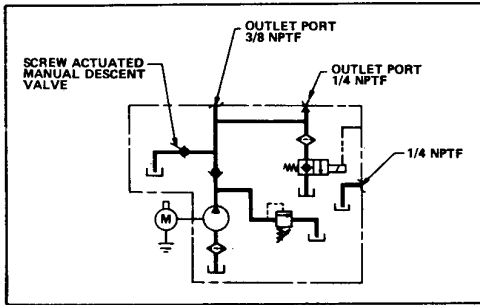
**16100 ELECTRIC PU**

DATE  
**8-10-99D**

SUPERCEDES  
**6-17-98C**

SECTION  
**C400**

**811016**



**VENTURO**

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 | PARTNUMBER      | 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

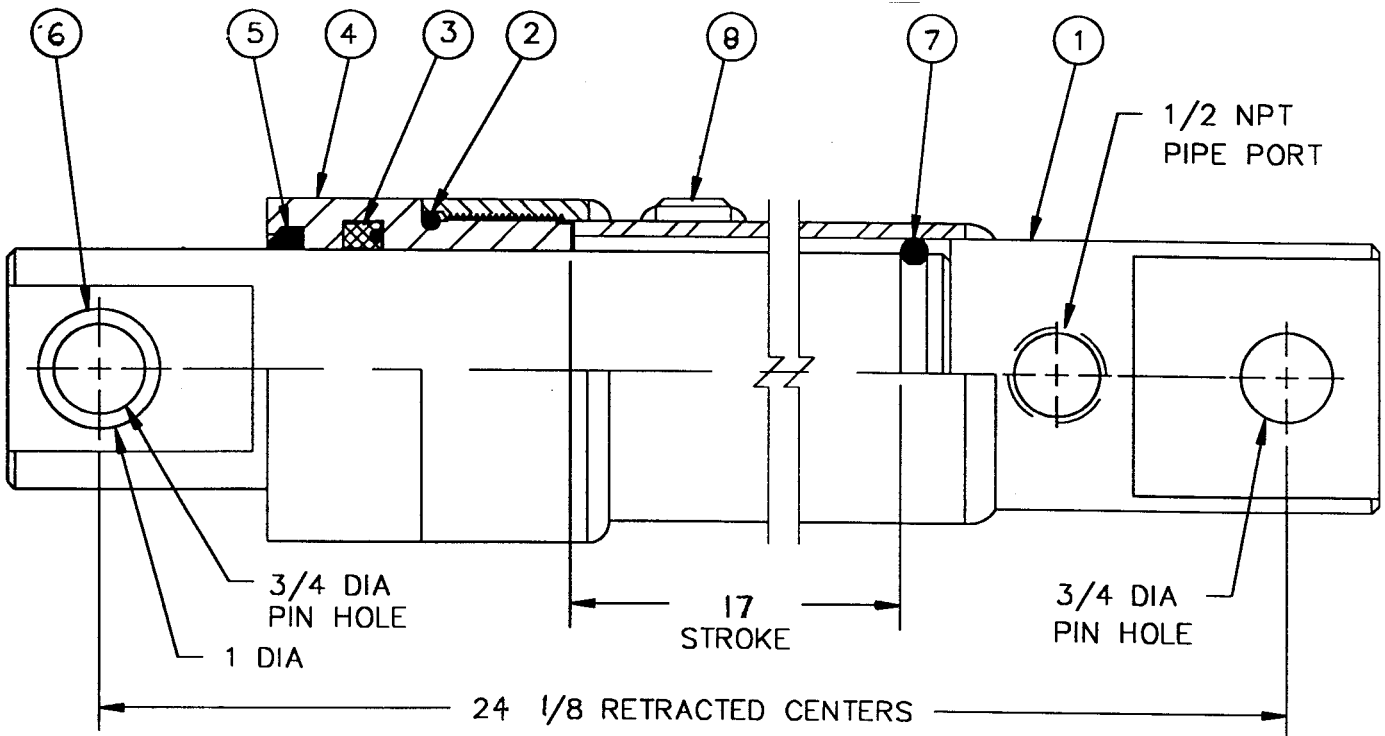


|                    |            |         |
|--------------------|------------|---------|
| TITLE              | DATE       | SECTION |
| 17252/17253 HYD PU | 10-14-97C  | C400    |
| -                  | SUPERCEDES | 900309  |
|                    | 4-8-96B    |         |

# 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

DATE  
6-17-98A

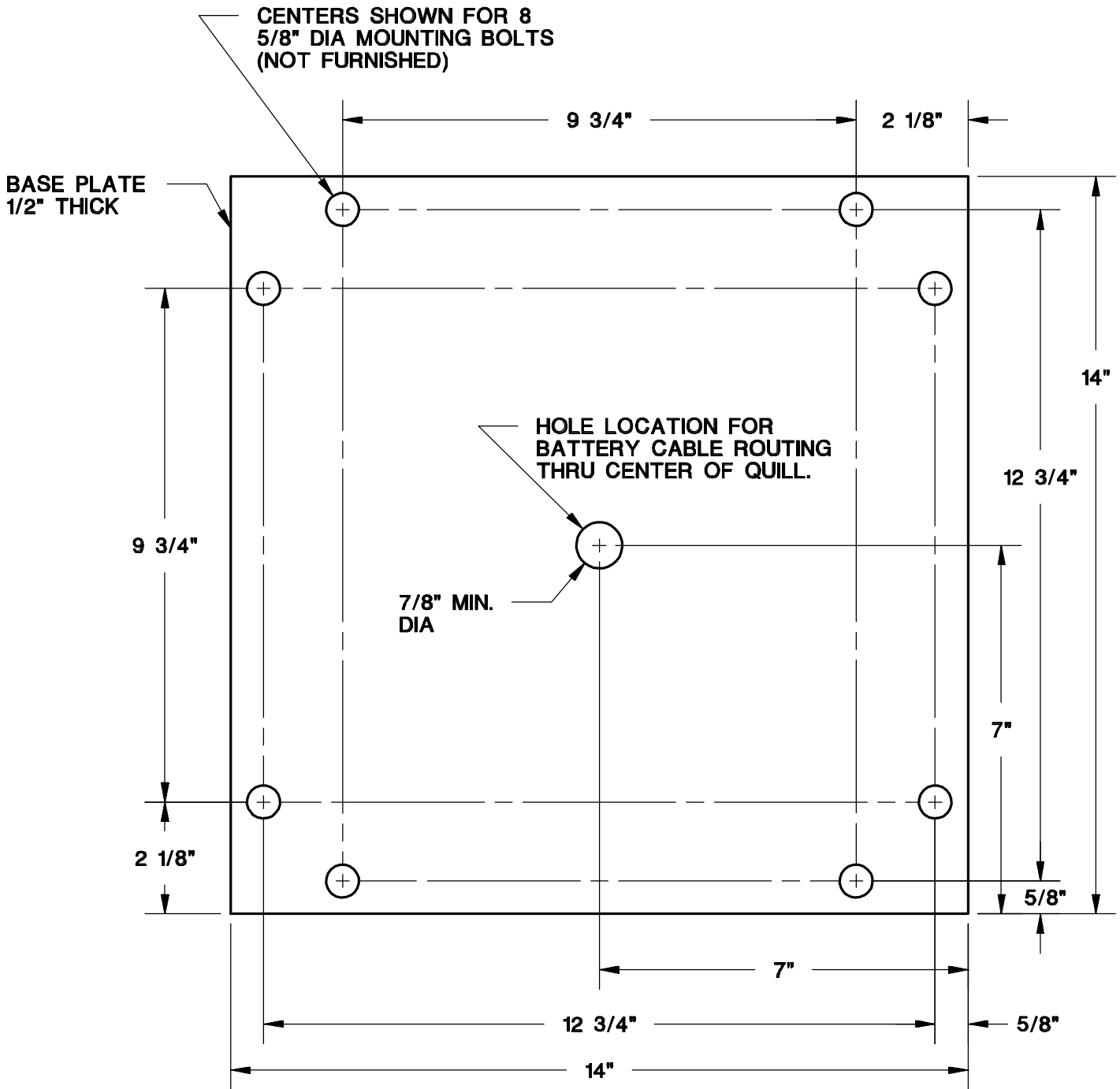
SECTION  
C400

-

SUPERCEDES  
4-8-96

119119

# MOUNTING HOLE TEMPLATE



# MOUNTING HOLE TEMPLATE

