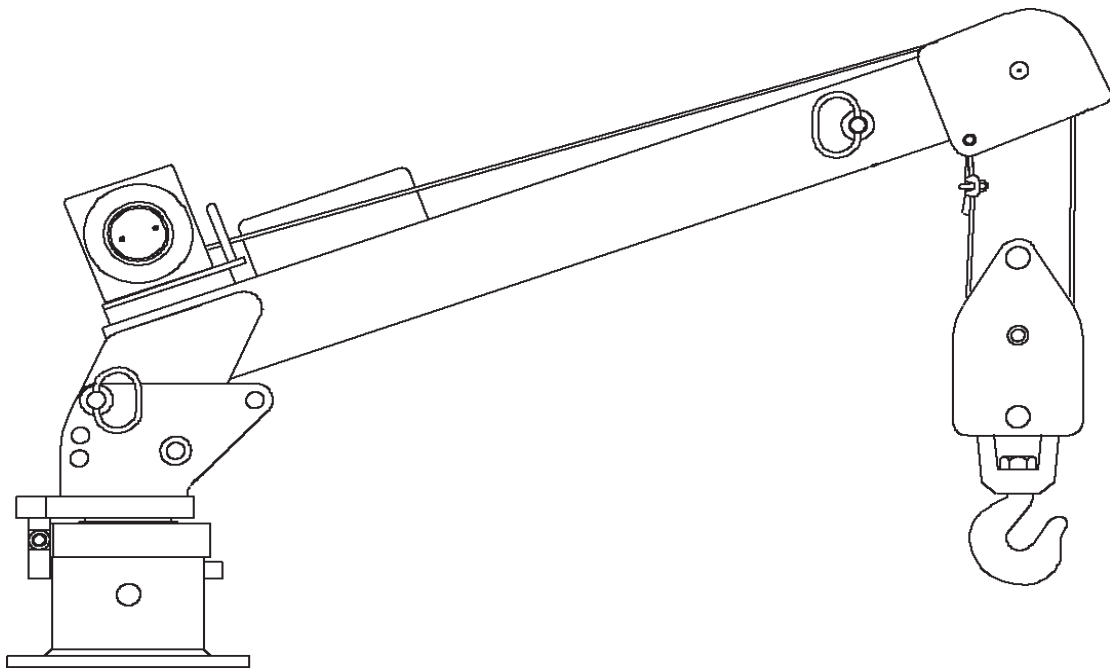




WorkSaver™ 65

Volume 2 - PARTS AND SPECIFICATIONS

| | |
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| Section 1 | SPECIFICATIONS |
| Section 2 | CRANE DESCRIPTION |
| Section 3 | INSTALLATION |
| Section 4 | OPERATION |
| Section 5 | PARTS |
| Section 6 | MAINTENANCE |



IOWA MOLD TOOLING CO., INC.

BOX 189, GARNER, IA 50438-0189
TEL: 641-923-3711

MANUAL PART NUMBER 99900663

Iowa Mold Tooling Co., Inc. is an Oshkosh Corporation company.

REVISIONS LIST

| DATE | LOCATION | DESCRIPTION OF CHANGE |
|----------|-----------------------------------|---|
| 20010213 | 5-02 | ecn9000-41710972-1/2-13 HEX NUT WAS JAM NUT |
| 20011018 | 1-2, 5-9 through 5-11 6-1, 6-3 | Removed electrically operated worm gear option from manual. Not an option. |
| 20030611 | 1-2 | Removed 1-7 - Options (included pedestal mount, worm gear.) NOTE - option no longer available after August 1995. |
| 20060321 | 5-2 | ECN 10001 - Changed mast assembly 41710972. |
| 20061106 | 1-1, 5-1 | NEW OWNERSHIP STATEMENT; UPDATED SERIAL TAG LOCATION INFO. |
| 20100925 | 5-5,6 | ECN 11289 - WINCH 71570133 REPLACED WITH 71570945 WINCH AND 70580205 CABLE EFF S/N WS65101001 AND BEYOND. ADDED WINCH SPARE PARTS FOR 71570945 WINCH. |
| 20110609 | 5-6 | ECN-11488 - UPDATED 41711170 ELECTRICAL ASSEMBLY TO SHOW NEW CONTROL INSTALLATION. UPDATED STABILIZER VERBIAGE. |
| 20120730 | 5-5 5-9 | ECN 11465 - REMOVED REMOTE CONTROL FROM WINCH KIT. DUPLICATION. UPDATED 71570945 WINCH ASSEMBLY DRAWING. |

-READ FIRST- SAFETY PRECAUTIONS

Read and understand the IMT Operator's Crane Safety Manual before operation of the crane.

DO NOT exceed crane capacity.

Before attempting full capacity lifts, practice with light loads to familiarize yourself with crane operation and controls. Also, observe tilt and effects on the carrier vehicle's body during loading.

Remove the remote control cable from the crane when the crane is left unattended, even for short time periods.

The remote control cable must be kept away from the crane to avoid entanglement. Be certain never to allow the cable to be crushed by any stabilizer or crimped between anything.

DO NOT use winch when crane is in the stored position.

When winding cable onto the winch, apply tension to the cable to keep it straight.

DO NOT wrap wire rope around the load. Use chains or hooks designed for the job.

Continuous use of the crane winch should be avoided to prevent overheating of the electric motor.

Check the crane hook for cracks and distortion, and safety latch for function, prior to work each day.

The safety latch of the hook must be closed before lifting a load.

A heavy-duty battery of 85 amperes or more is recommended.

The vehicle must be on a level surface for crane operation.

Raise load no higher than required to perform the lift.

Lubricate as required - regularly.

The vehicle's emergency brake must be set prior to crane operation.

Load ratings are based on crane capacity, not unit stability.

NEVER operate the crane near electrically charged power lines or other sources of electricity.

The path of the crane must be clear of all personnel and obstructions.

DO NOT permit cable to be totally unwrapped from drum. There should be no less than 3 wraps of cable on the drum during operation.

DO NOT weld, modify, or use unauthorized parts. This can result in crane failure, causing serious injury or death.

ALWAYS store the stabilizers and crane properly before moving the carrier vehicle.

DO NOT permit unnecessary objects to be in the vicinity of the crane during operation.

The carrier vehicle must meet minimum chassis specifications but these specifications do not guarantee unit stability.

The crane must be installed per IMT specifications. Consult your local distributor or IMT for any required information.

Stabilizers must be used to stabilize the vehicle whenever the crane is in use.

Stabilizers must be positioned correctly on a firm surface.

**Read and familiarize yourself with the
IMT OPERATOR'S CRANE SAFETY MANUAL
before operating or performing any
maintenance on your crane.**

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Section 1. SPECIFICATIONS

WorkSaver™ 65

1-1. GENERAL SPECIFICATIONS

| | 5' VERSION | 7' VERSION |
|---|--------------------------------|--------------------------------|
| CRANE RATING | 6500 ft-lbs (0.899 ton-meters) | 6500 ft-lbs (0.899 ton meters) |
| MAXIMUM HORIZONTAL REACH from centerline of rotation | 5'-2" (1.57m) | 7'-1" (2.16m) |
| MANUAL BOOM EXTENSION boom +20° (.349 rad.) above horizontal | 3'-3" to 5'-2" (.99 to 1.57m) | 4'-3" to 7'-1" (1.30 to 2.16m) |
| LIFTING HEIGHT from base of crane with tall base | 8'-10" (2.69m) | 11'-9" (3.58m) |
| CRANE WEIGHT (tall base) | 220 lbs (99.8 kg) | 260 lbs (117.9 kg) |
| CRANE WEIGHT (short base) | 160 lbs (72.6 kg) | 180 lbs (90.7 kg) |
| CRANE STORAGE HT. (tall base) | 46" (1.17m) | 59.5" (1.51m) |
| CRANE STORAGE HT. (short base) | 31" (0.79m) | 34" (0.86m) |
| MOUNTING SPACE REQUIRED FOR BASE PLATE | 10" x 10" (25.4 x 25.4cm) | 10" x 10" (25.4 x 25.4cm) |
| MOUNTING BOLT PATTERN CENTER TO CENTER | 8" x 8" (20.3 x 20.3cm) | 8" x 8" (20.3 x 20.3cm) |

1-2. LIFTING CAPACITY

from centerline of rotation with boom +20° (.35 rad.) above horizontal.

| | | |
|---------------|---------------------|---------------------|
| 3'-3" (.99m) | 2000 lbs (907.2 kg) | — |
| 4'-3" (1.30m) | 1540 lbs (698.5 kg) | 1540 lbs (698.5 kg) |
| 5'-2" (1.57m) | 1260 lbs (571.5 kg) | 1260 lbs (571.5 kg) |
| 6'-2" (1.89m) | — | 1050 lbs (476.3 kg) |
| 7'-1" (2.16m) | — | 920 lbs (417.3 kg) |

1-3. PERFORMANCE CHARACTERISTICS

| | | |
|---|--|--|
| ROTATION (manual with lock) | 346° (6.04 rad) | 346° (6.04 rad) |
| LOWER BOOM ELEVATION (4 manually pinned locations) | -90° (-1.57 rad) stowed +20° (.35 rad) +40° (.70 rad) +60° (1.05 rad) | -90° (-1.57 rad) stowed +20° (.35 rad) +40° (.70 rad) +60° (1.05 rad) |
| EXTENSION BOOM (manual pull-out) | 23" (58.4cm) | 34" (86.4cm) |

1-4. POWER SOURCE

12VDC chassis must have minimum 50-amp alternator. Chassis battery must be deep cycle with a minimum of 80 amp/hour rating and 450 cold cranking amp capacity.

1-5. WINCH

The winch is powered by 12VDC supplied by the chassis battery to a 12VDC motor through a planetary gear drive. Maximum current draw under 2000 lbs (907 kg) double-line load is 95 amps. Minimum effective double-line winch capacity is 2000 lbs (907 kg). Maximum effective single-line capacity is 1000 lbs (454 kg). Maximum single-line speed under no load is 16 feet/minute (4.88 meters/minute) at a current draw of 20 amps and 5.5 feet/minute (1.67 meters/minute) under 2000 lbs (907 kg) load.

The winch is equipped with 25 feet (7.62m) of 3/16 inch (0.48cm) 7 x 19 class extra-flexible galvanized "aircraft" cable with minimum breaking strength of 4200 lbs (190.5 kg). A snatch block with hook and safety latch are included.

1-6. CONTROLS

Remote control with a 10'-0" (3.05m) detachable control cable. The included battery cable is 25' (7.62m) in length.

IMT reserves the right to change specifications and design without notice.

IOWA MOLD TOOLING CO., INC.

BOX 189, GARNER, IA 50438-0189

TEL: 641-923-3711

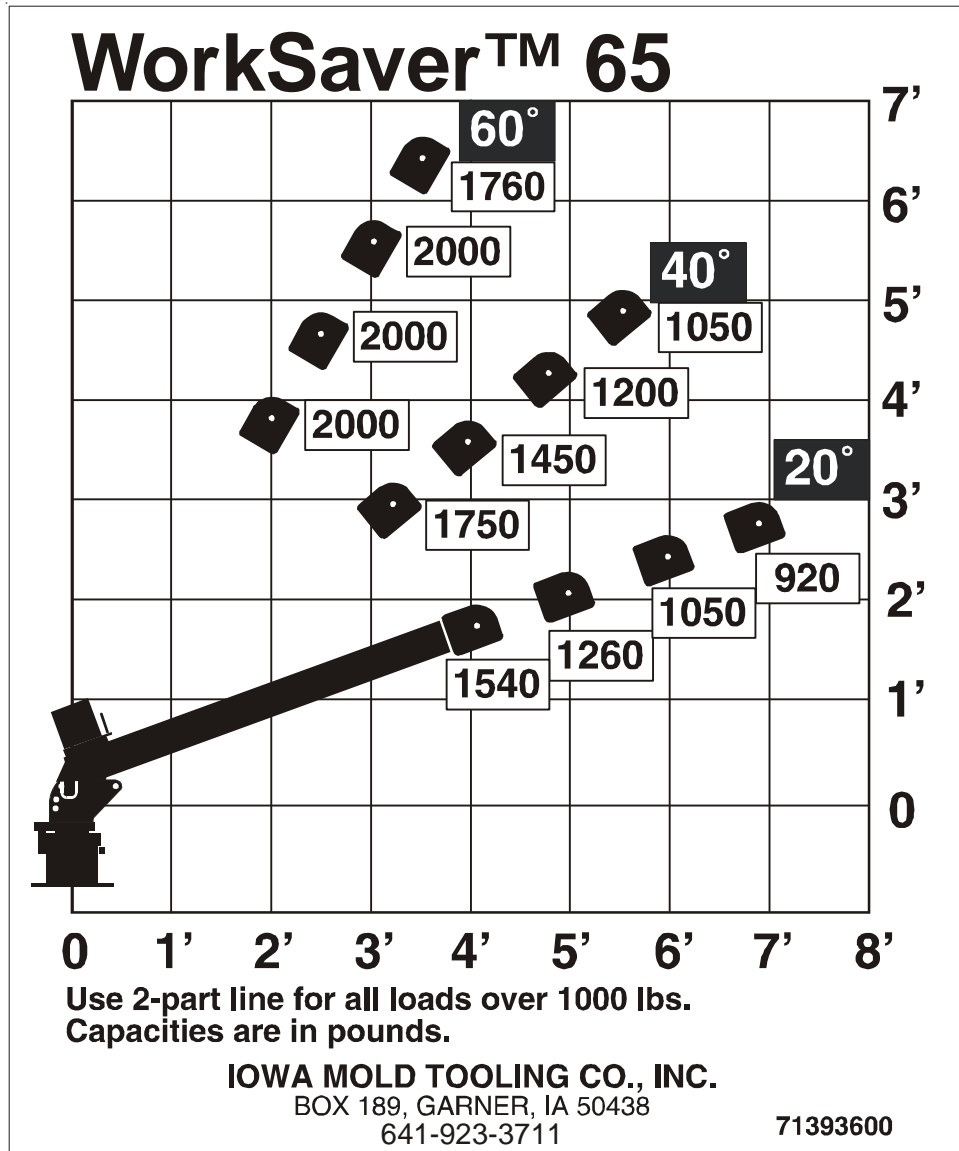


Figure A-1. CAPACITY CHART

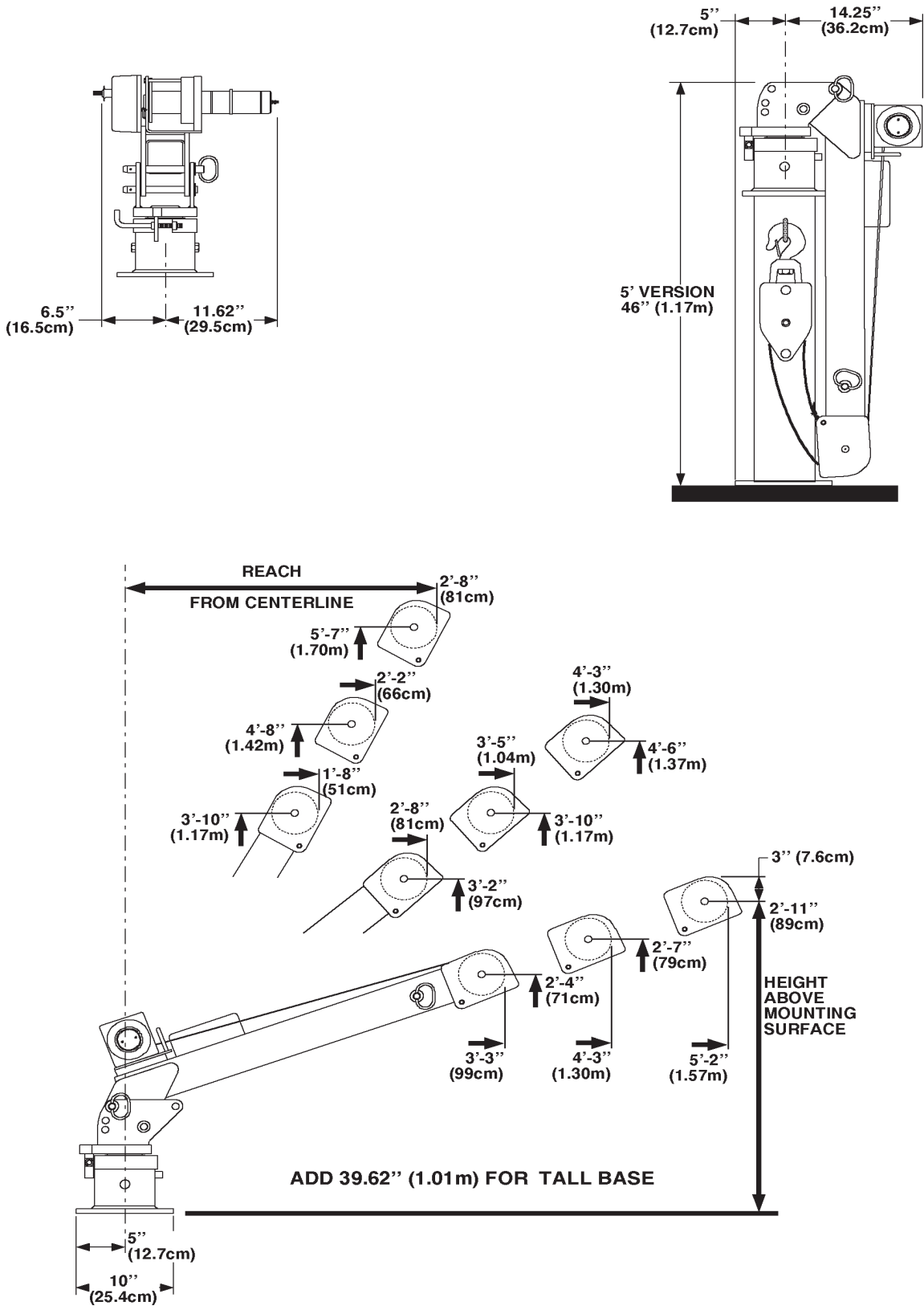


Figure A-3. GEOMETRIC CONFIGURATION-5' VERSION

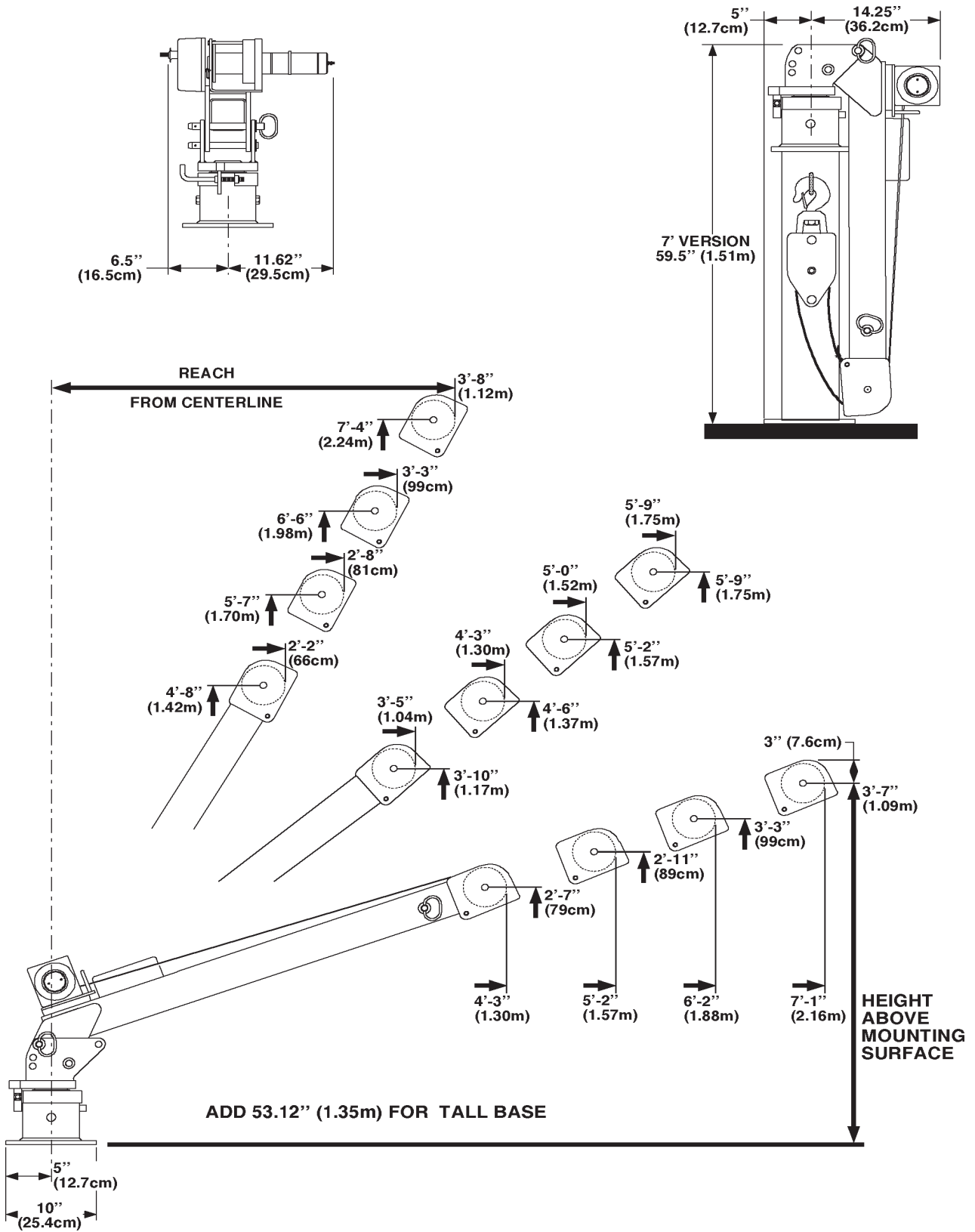


Figure A-4. GEOMETRIC CONFIGURATION-7' VERSION

Section 2. CRANE DESCRIPTION

2-1. GENERAL

This section describes the assemblies that make up the IMT WorkSaver™ 65. Figure B-1 illustrates the locations of the assemblies, as well as various other components of the crane.

2-2. BASE

The base provides the means for mounting the crane to the carrier vehicle. There are three versions which vary in height. The standard base provides for a folded storage position and is 39.62" (1.01m) high on the 5' version and 53.12" (1.35m) on the 7' version. A short pedestal base is optional and available for both 5' and 7' versions and is 6.25" (15.9cm) high.

2-3. MAST

The standard mast, for both the 5' and 7' versions, incorporates a manually operated swing and locking mechanism with rotation capabilities of 346° (6.04 rad.). An optional electrically operated worm gear rotation mechanism is available. It is controlled by a switch on the remote control handle and also provides 346° (6.04 rad.) rotation.

2-4. LOWER BOOM

The standard lower boom assembly provides for a horizontal reach from centerline of rotation of 3'-3" to 5'-2" (.99 to 1.57m). The optional lower boom assembly provides for a reach of 4'-3" to 7'-1" (1.30 to 2.16m). This is accomplished through the use of a manually operated extension boom stored within the lower boom. The lower boom also provides mounting brackets for the winch and control box, and necessary locking pins. The extension boom includes mounting location for the sheave.

2-5. WINCH ASSEMBLY

The winch assembly includes the electric winch, sheave, hook block and mounting hardware. The winch is powered by the carrier vehicle's 12VDC electrical system.

2-6. ELECTRICAL ASSEMBLY

The electrical assembly includes the necessary 12VDC controls and wiring for operation of the winch.

2-7. STABILIZERS

Various manually operated stabilizer assemblies are available, dependent on chassis selection. These assemblies are illustrated in the parts section.

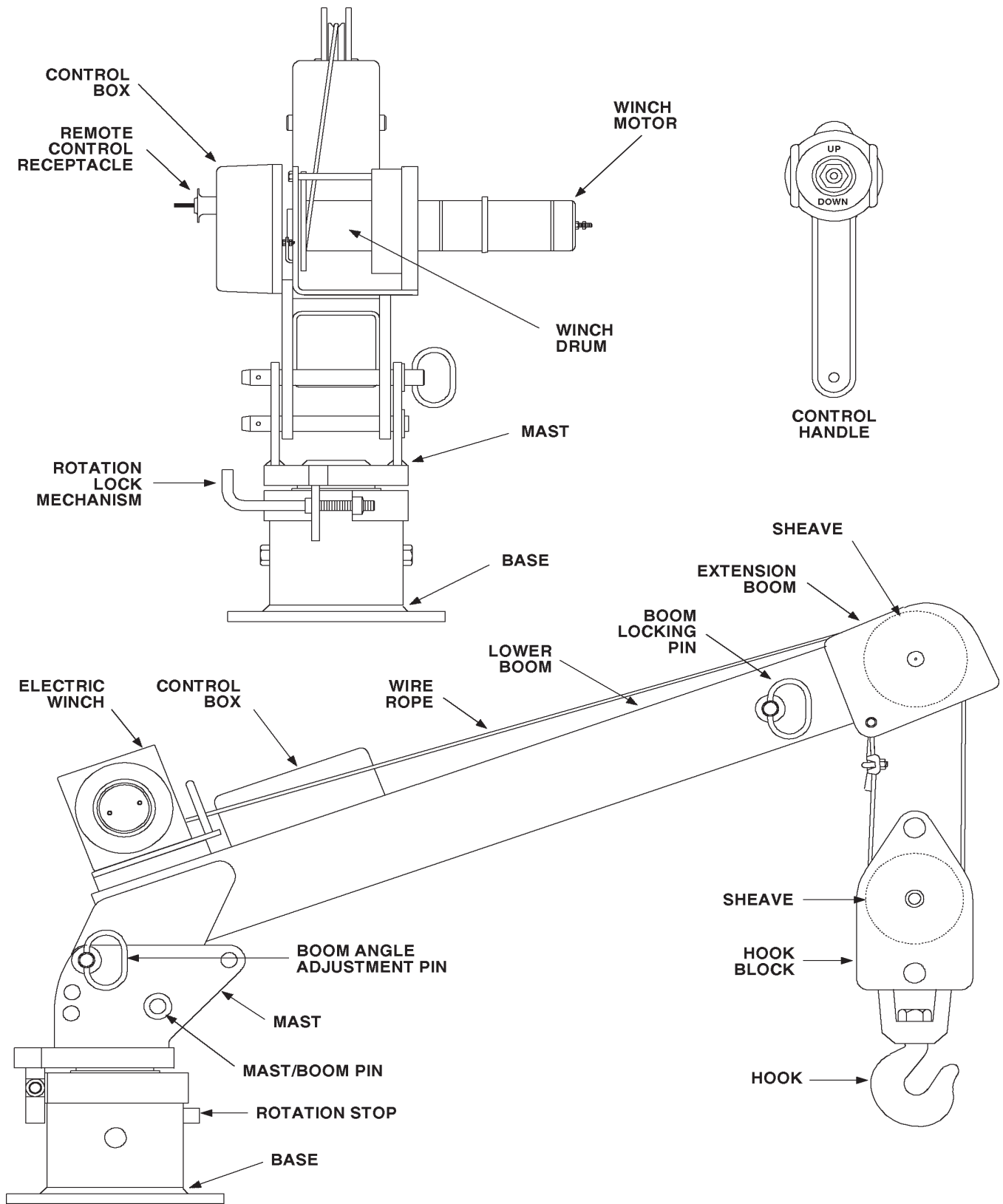


Figure B-1. CRANE COMPONENTS

Section 3. INSTALLATION

3-1. GENERAL

This section provides installation instructions for the IMT WorkSaver™ Crane. See Figure E-9 for specific winch remote control wiring for cranes with manual swing and Figure E-14 for those with power swing.

3-2. INSTALLATION

The mounting space required for the crane base is 10" x 10" (25.4 x 25.4cm) with a square bolt hole pattern measuring 8" x 8" (20.3 x 20.3cm). Before determining the location for mounting, keep in mind that the 5' version crane has a horizontal reach from centerline of rotation of 62" (1.57m) and the 7' version has a reach of 85" (2.16m). Also important is that the crane has a 346° (6.04 rad) rotation capability.

Using the holes in the base as a pattern, mark the location of the four mounting holes as well as the inside electrical access hole. Drill 11/16" diameter holes at these five (5) locations. See Figure C-1.

CAUTION

BEFORE DRILLING MOUNTING HOLES, CHECK BELOW THE MOUNTING SURFACE FOR ANY OBSTRUCTIONS, FUEL LINES, EXHAUST OR ELECTRICAL COMPONENTS.

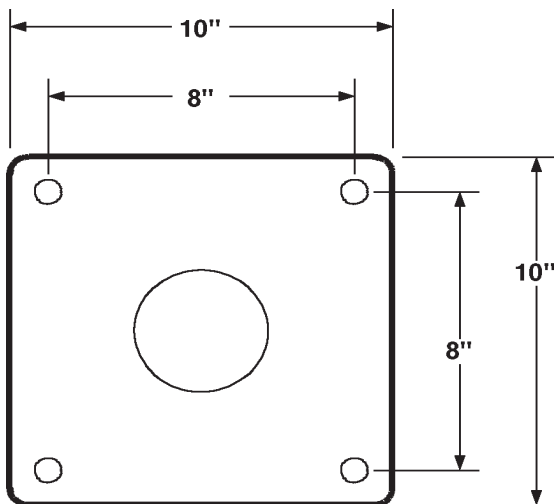


Figure C-1. MOUNTING DIMENSIONS

Locate the base with the rotation stop positioned for your particular application which is normally away from the most used working position. Secure the base to the mounting surface using four (4) 5/8-11, hex head, grade 5, cap screws; eight (8) 5/8" flat washers and four (4) 5/8-11 self-locking, hex nuts. See Figure C-2.

After securing the base in position, feed the two wires from the end of the mast through the electrical access hole. Place the mast assembly into the base, being careful not to pinch the wires.

Once the crane is in place, run the positive feed wire, with circuit breakers, along the truck frame and connect to the starter side of the starter solenoid. Secure this wire to the truck frame using cable clamps at approximately 18" (45cm) intervals. The negative lead wire must be connected to a good ground on the truck frame. Prepare the ground location by sanding all paint or rust down to bare metal for maximum ground contact. Secure this wire to the truck frame using cable clamps at 18" (45cm) intervals.

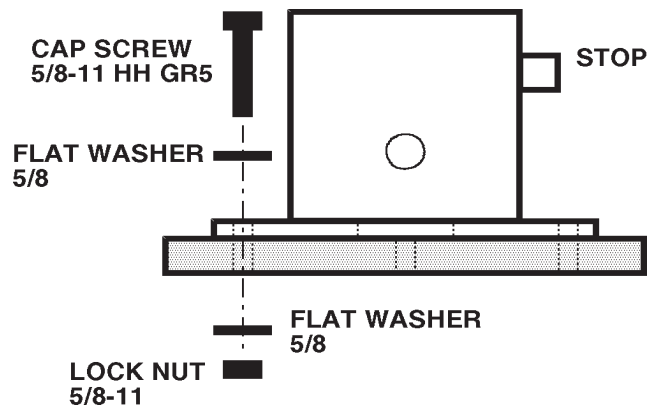


Figure C-2. MOUNTING HARDWARE

Section 4. OPERATION

4-1. GENERAL

This section describes set-up, general operation and storage procedures. It is the operator's responsibility to familiarize himself with these procedures and conform to safety standards as specified in the IMT Operator's Crane Safety Manual and any Federal, State or local codes.

4-2. INSPECTION

An inspection of the crane and vehicle should be performed daily, before the crane is used. Visually inspect the crane for:

- **STRUCTURAL DAMAGE**
- **LOOSE PARTS**
- **MOUNTING BOLT TIGHTNESS**
- **HOOK DEFORMATION/CRACKS**
- **WIRE ROPE DEFORMATIONS**
- **ELECTRICAL SYSTEM MOISTURE**
- **PROPER ELECTRICAL CONTACTS**
- **PROPER LUBRICATION**
- **SHEAVES & DRUM FOR CRACKS/WEAR**

Visually inspect the vehicle for:

- **UNDER-INFLATED TIRES**
- **WORN/UNSAFE TIRES**
- **BROKEN SPRINGS/SUSPENSION**
- **FULLY CHARGED BATTERY**
- **SECURE PARKING BRAKE**

Any defects found or suspected should be reported and corrected immediately.

4-3. JOB SET-UP

Before operation, position the crane so the load can be handled easily without obstructions and within specified range of crane. The vehicle must be parked on a firm, level surface.

WARNING

THE PRESENCE OF ANY ELECTRICALLY CHARGED POWER LINES IS TO BE AVOIDED. FAILURE TO DO SO WILL RESULT IN SERIOUS INJURY OR DEATH. CONSULT THE IMT OPERATOR'S CRANE SAFETY MANUAL FOR FURTHER INFORMATION.

Engage the emergency brake, turn the ignition OFF and place the transmission in PARK (on automatic transmissions).

With the vehicle secured, extend the stabilizers so they are positioned on a firm surface and locked into position.

Remove the control handle/cable from its storage container and plug it into the receptacle at the left side of the lower boom.

WARNING

DO NOT ALLOW PERSONNEL WITHIN 10 FEET OF ANY PORTION OF AN OPERATING CRANE.

Turn rotation locking handle on mast counterclockwise to release tension on base. Manually rotate crane to a position where the boom can be manipulated and tighten locking handle by turning clockwise. On the optional power swing model, rotate the crane by using the appropriate switch on the remote control handle.

Position the boom at either of its positions above horizontal. Physically lift the boom and insert the quick release pin into position (20°, 40° or 60°) as shown in Figure D-2 or D-3.

To extend the boom, unwind a few feet of cable from the winch and pull the extension boom out to line-up the desired extension boom pin hole with that in the lower boom. Insert the extension boom pin.

WARNING

DO NOT PULL EXTENSION BOOM COMPLETELY OUT OF LOWER BOOM AS IT CAN CAUSE SERIOUS PERSONAL INJURY IF DROPPED.

The crane is now in the work position.

4-4. PERFORMING A LIFT

First, know the weight of the load being lifted and that that load is within the capacity of the crane.

WARNING

NEVER EXCEED THE CRANE'S RATED LOAD CAPACITIES. DOING SO WILL CAUSE STRUCTURAL DAMAGE AND DAMAGE TO THE WINCH AND CABLE WHICH CAN LEAD TO SERIOUS INJURIES OR DEATH.

Position the hook block directly over the load by rotating the crane. Lower the hook block by pressing the control switch DOWN until the hook can be attached to a sling or other suitable handling device which is securely attached to the load. The sling must be captivated by the safety latch. See Figure D-1.

WARNING

DO NOT WRAP THE WINCH WIRE ROPE AROUND THE LOAD. THIS WILL DAMAGE AND WEAKEN THE WIRE ROPE, MAKING IT EXTREMELY DANGEROUS.

By pressing the control switch in the UP position, lift the load slightly off the ground to test the load and effect on the stabilizers and vehicle. If there are no indications of problems, the load can be lifted to the desired height by continuing to press UP. When the load is at the desired height, swing the crane slowly over the desired position.

To lower the load, press the switch DOWN, making certain there are no obstructions under the load. Release tension on the hook/sling and remove the sling from the hook, being careful not to let it swing out of control.

4-5. STORING THE CRANE

Before leaving the job site, it is necessary to store the crane. Retract the extension boom by removing the pin in the lower boom and positioning the extension boom in its fully retracted position. Insert the locking pin.

On short base models, the boom tip should be lowered to the deck and secured in that position. Tall masts provide a pin hole for storage of the boom at a -90° position. Remove the boom angle locking pin and gently lower the boom to a verticle position. Insert the pin as shown in Figure D-4.

Attach the hook to the hook hanger bracket as shown in Figure D-3. Be certain the winch cable is drawn up firmly and that all loose objects are stored before driving the carrier vehicle.

Disconnect the remote control handle cable and store in the truck cab or other suitable, secure location.

WARNING

NEVER DRIVE THE VEHICLE UNLESS THE CRANE IS IN THE STORED POSITION AND SECURED PROPERLY.

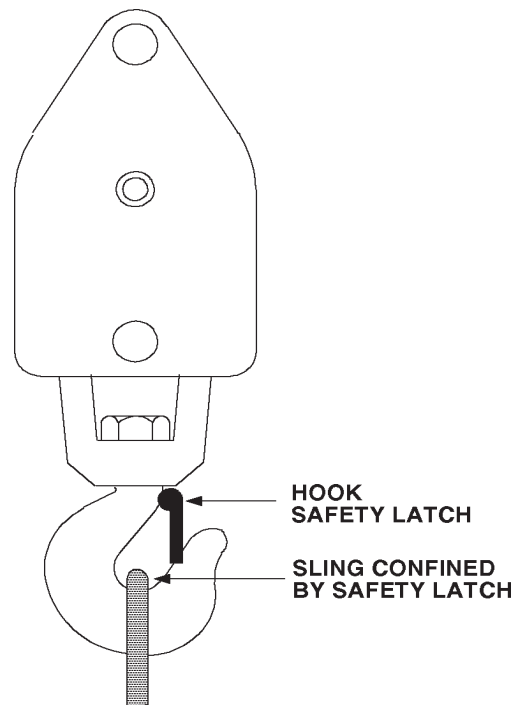


Figure D-1. HOOK SAFETY LATCH

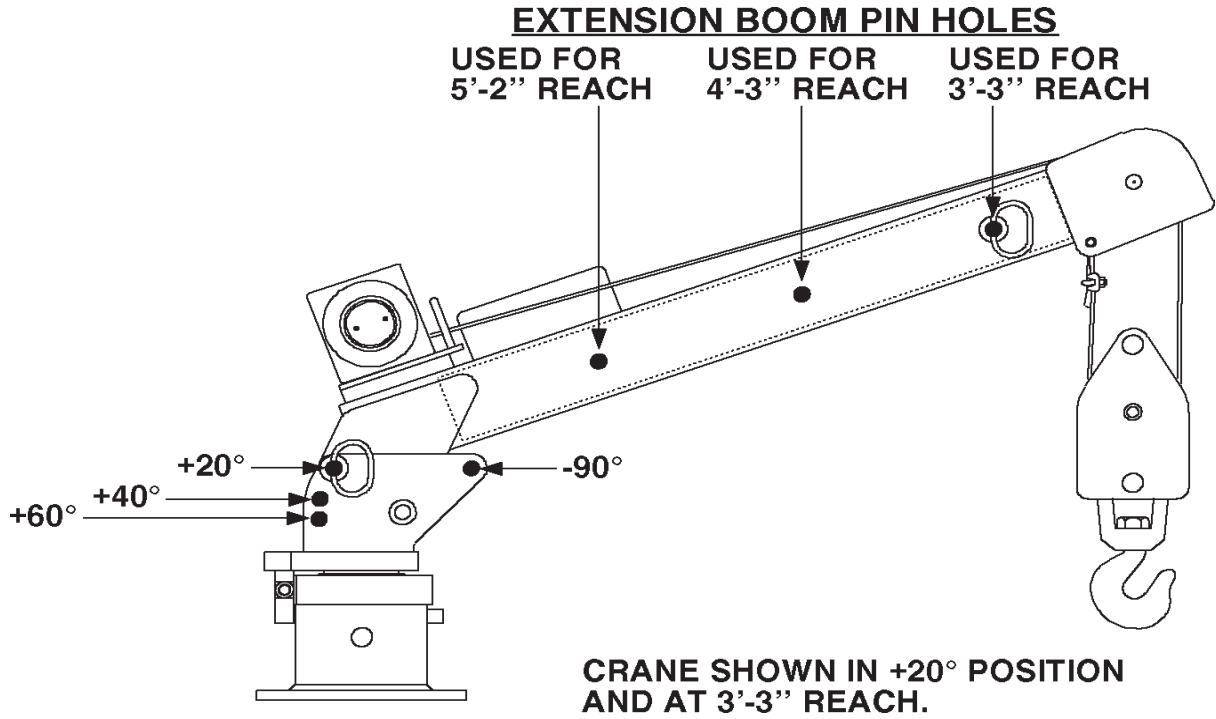


Figure D-2. BOOM POSITIONING DIAGRAM-5' VERSION

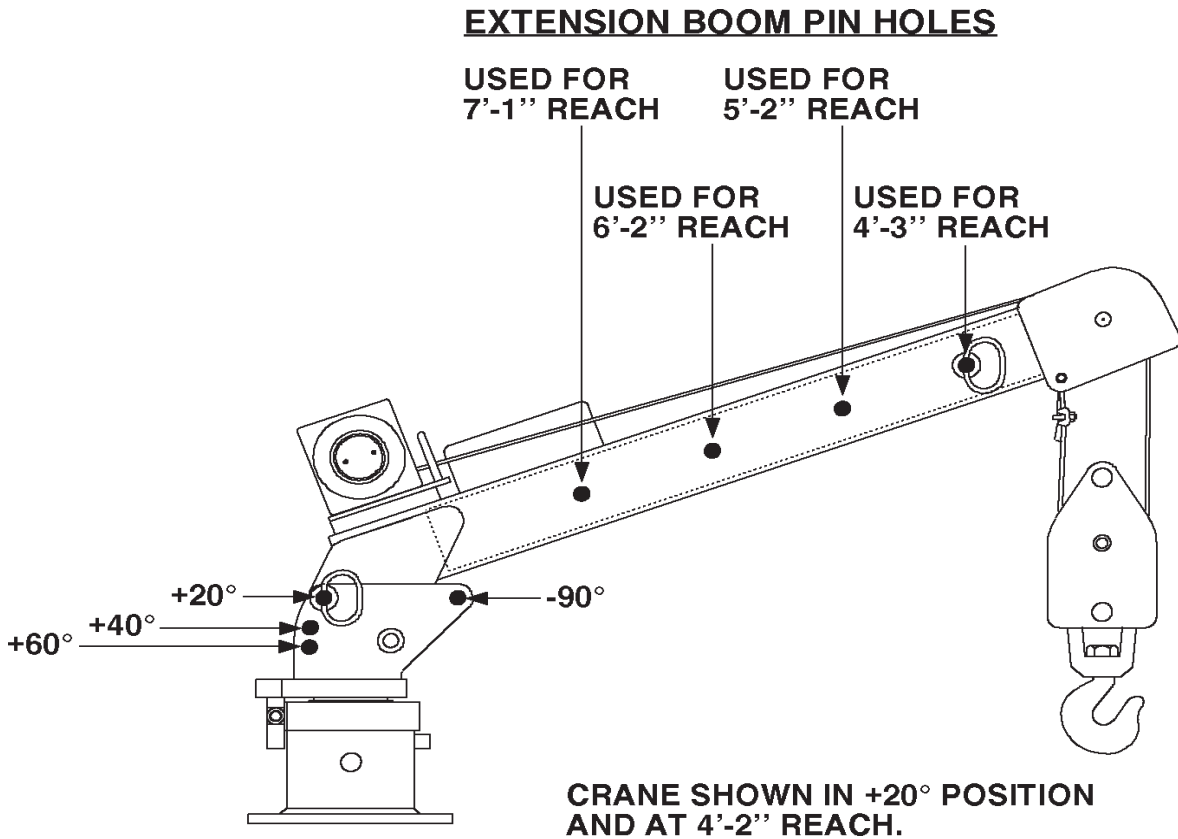


Figure D-3. BOOM POSITIONING DIAGRAM-7' VERSION

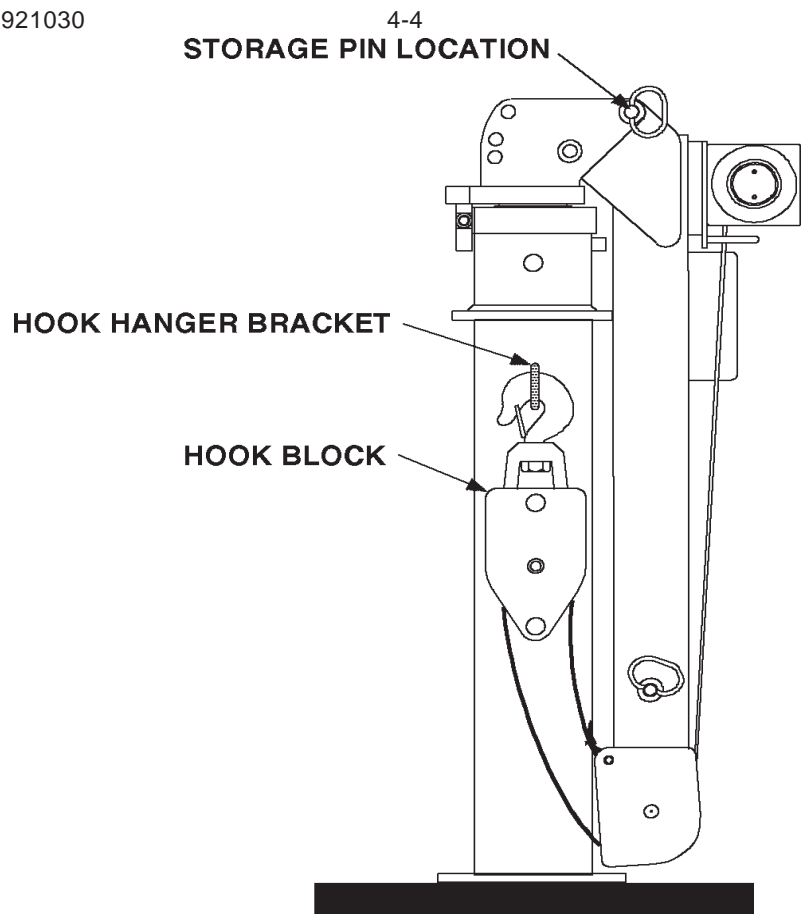


Figure D-4. STORED POSITION-TALL BASE MODELS

Section 5. PARTS

5-1. GENERAL

This section contains the parts drawings and accompanying parts lists for the assemblies used on the crane. These drawings are intended to be used for parts identification and as an aid in ordering parts.

5-2. CRANE IDENTIFICATION

Every IMT crane has an identification placard (Figure E-1) attached to the crane in a prominent location. When ordering parts, communicating warranty information, or referring to the unit in correspondence, always include the serial number and model number. Inquiries should be directed to:

Iowa Mold Tooling Co., Inc.
 Box 189, Garner, Iowa 50438-0189
 Telephone: 641-923-3711
 Technical Support Fax: 641-923-2424

5-3. WELDMENT IDENTIFICATION

Each of the major weldments; base, mast, lower boom and extension boom have a part number stamped on the weldment. The location of the part numbers are shown in Figure E-2.

5-4. ORDERING REPAIR PARTS

When ordering replacement parts it is important to follow the steps as outlined below.

1. Give the model number of the unit.
2. Give the serial number of the unit.
3. Specify the complete part number.
4. Give a complete description of the part.
5. Specify the quantity required.

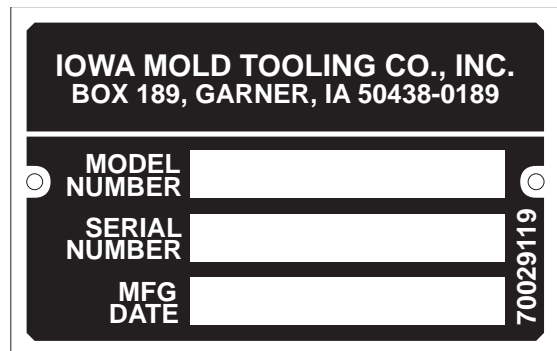


Figure E-1. SERIAL NUMBER PLACARD

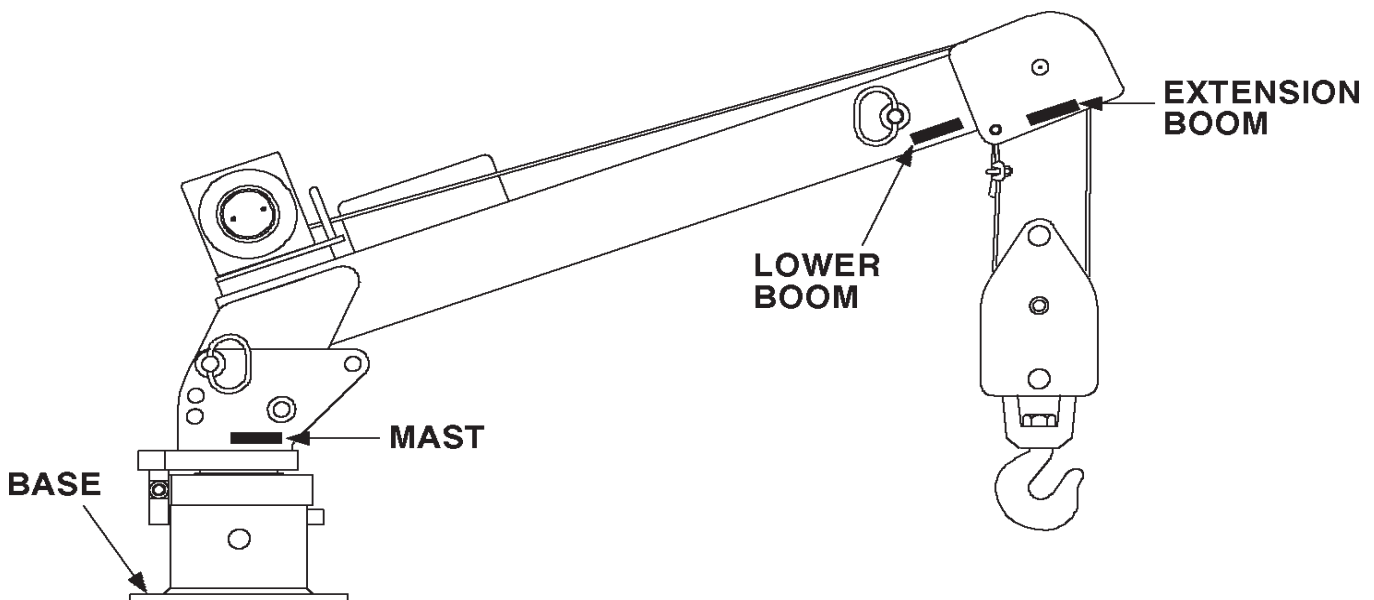


Figure E-2. WELDMENT PART NUMBER LOCATIONS

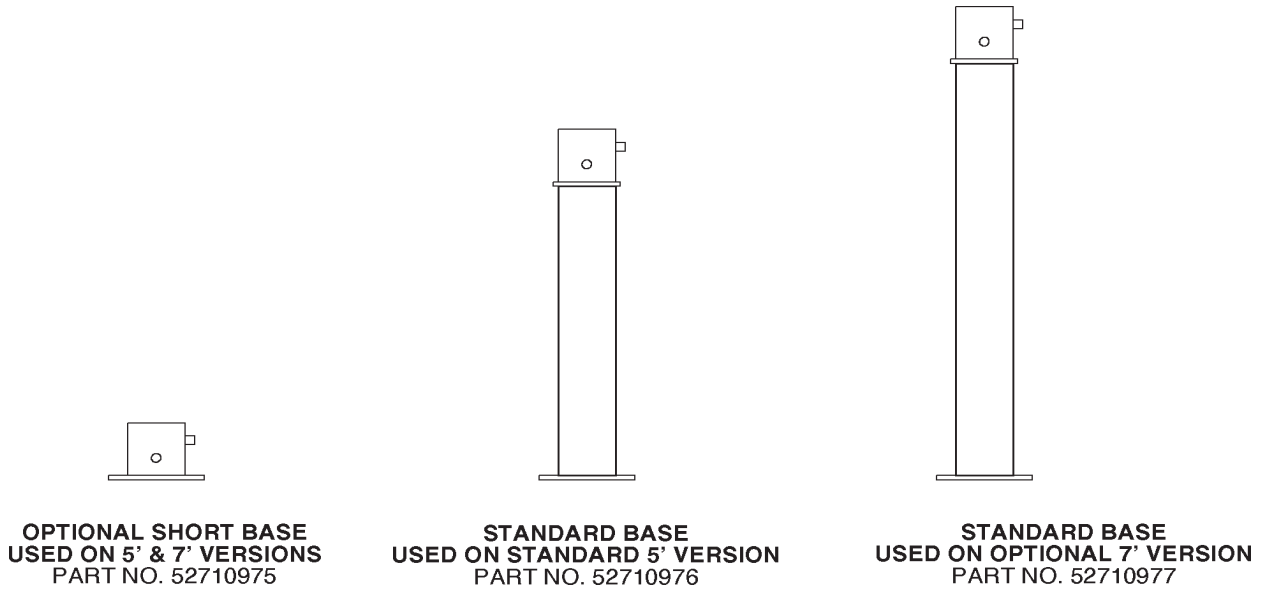
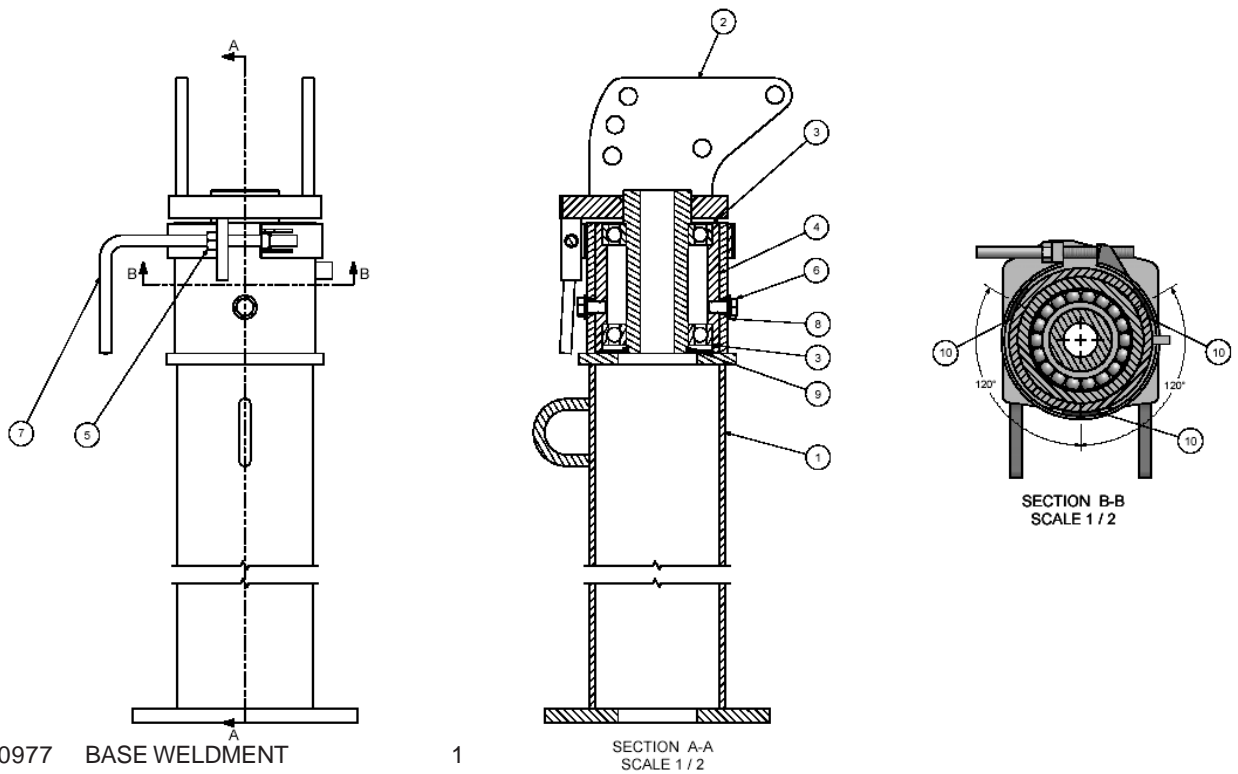
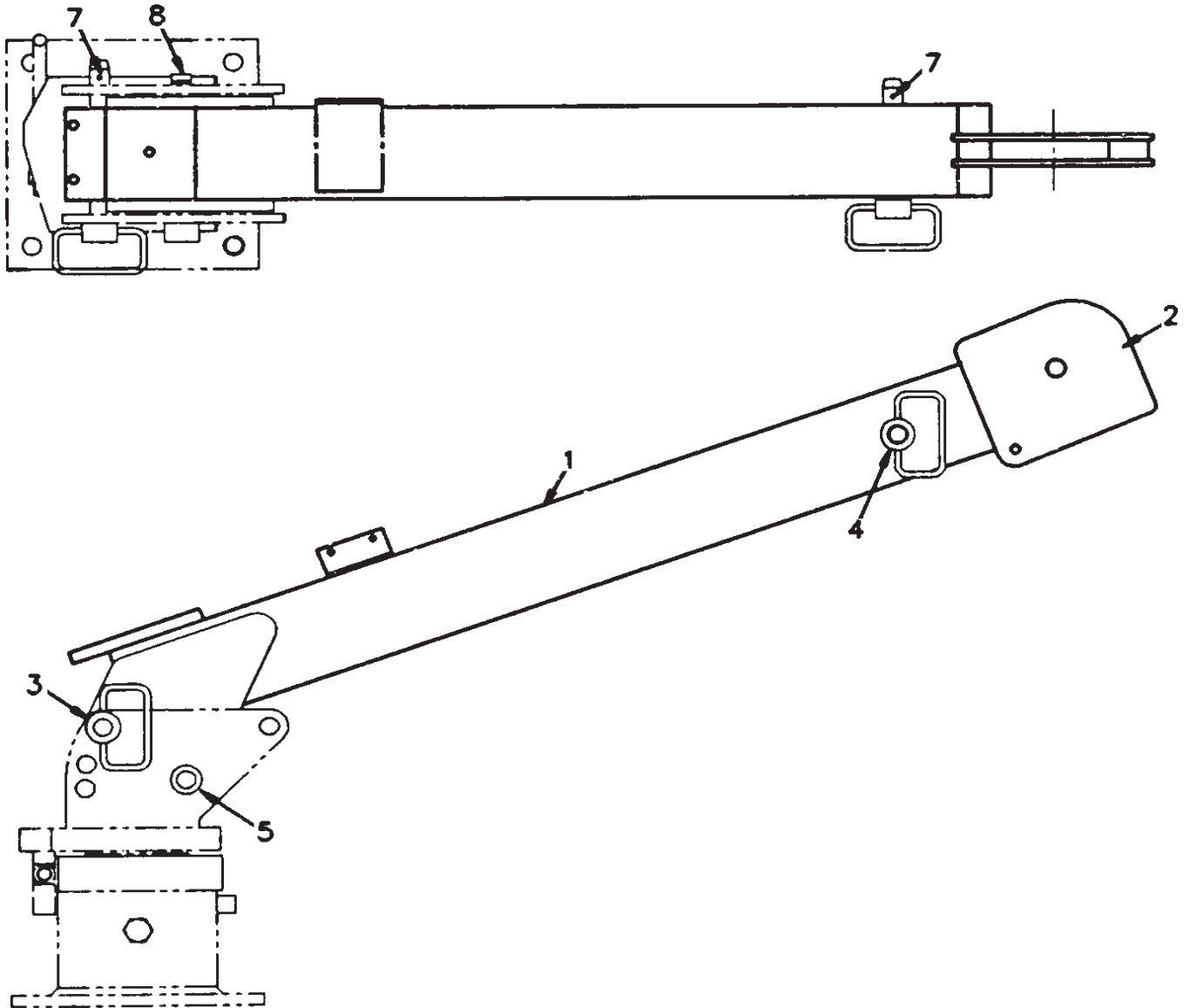


Figure E-3. BASE WELDMENTS



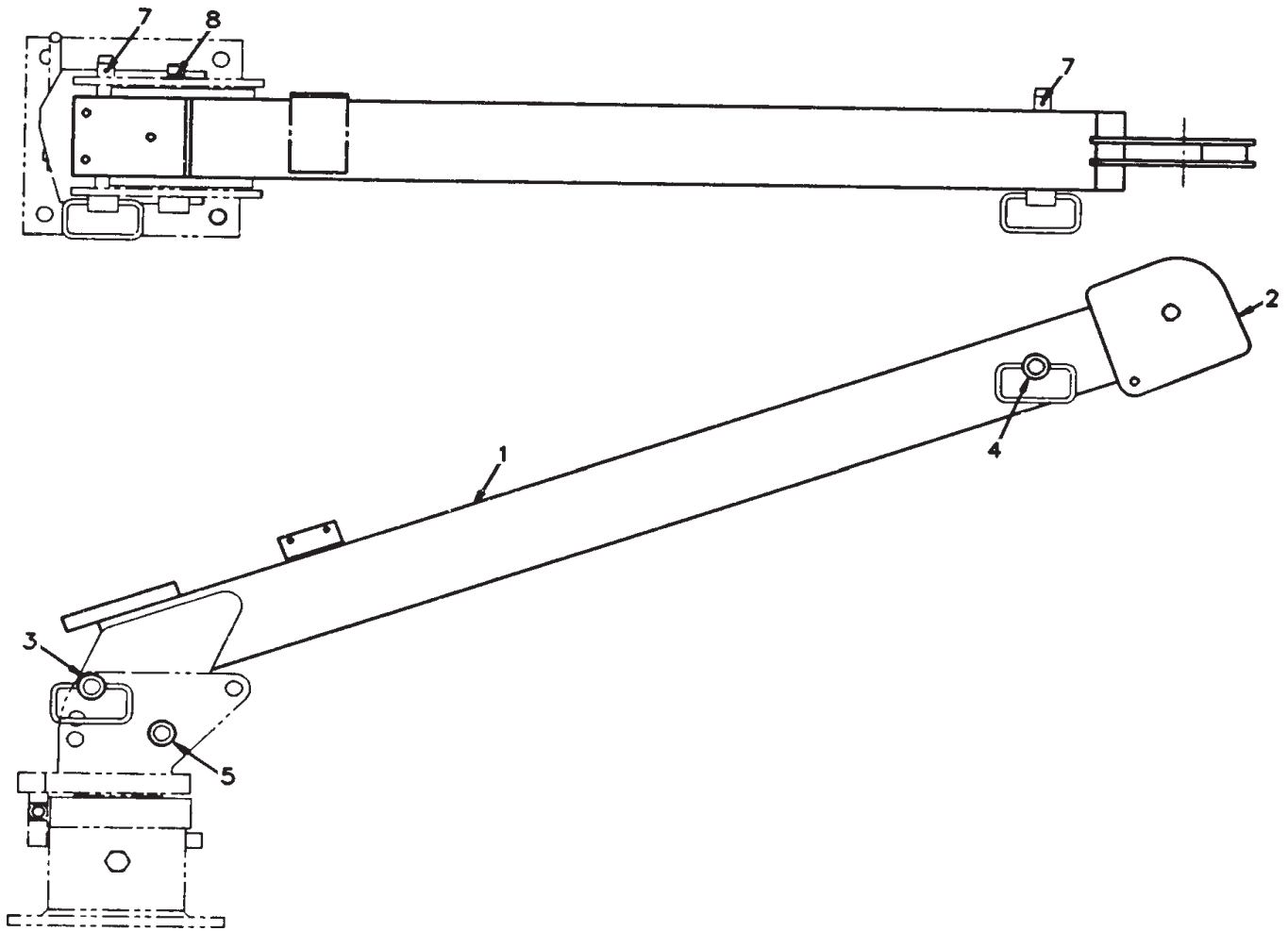
- | | | | |
|-----|----------|----------------------------------|---|
| 1. | 52710977 | BASE WELDMENT | 1 |
| 2. | 52710973 | MAST WELDMENT | 1 |
| 3. | 70055247 | BEARING-BALL | 2 |
| 4. | 60116387 | SPACER-BEARING | 1 |
| 5. | 72062004 | NUT .50-13 HEX | 1 |
| 6. | 72060091 | CAP SCR .50-13X 1.00 HHGR5Z | 2 |
| 7. | 60116683 | BOLT-ANCHOR .50-13X 8.00 | 1 |
| 8. | 72063132 | WASHER .50 FLAT ASTM F436 | 2 |
| 9. | 72066106 | RETAINING RING-EXT 2.75 STD | 1 |
| 10. | 60125865 | BRAKE-LINING 1.5" x 1.5" x .188" | 3 |

Figure E-4. MAST ASM-5' & 7' VERSION (41710972)



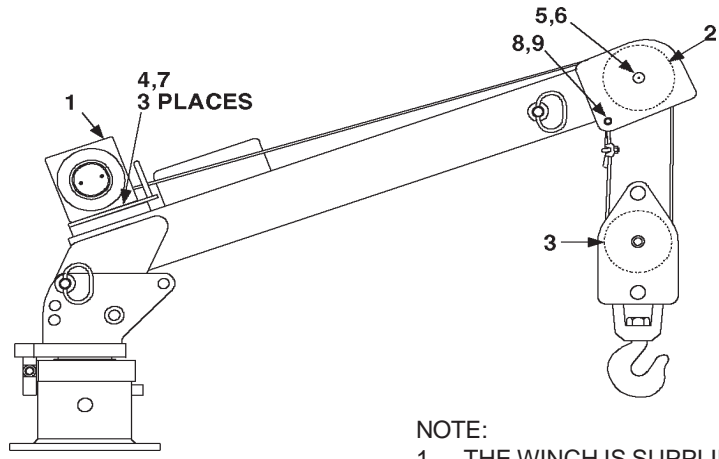
| ITEM | PART NUMBER | DESCRIPTION | QTY |
|------|-------------|----------------------------|------|
| 1. | 52710978 | LOWER BOOM | 1 |
| 2. | 52710971 | EXTENSION BOOM | 1 |
| 3. | 70144211 | PIN 3/4X6-1/4 (INCL: 7) | 1 |
| 4. | 70144209 | PIN 3/4X4-1/4 (INCL:7) | 1 |
| 5. | 70144234 | PIN 3/4X6-1/4 | 1 |
| 7. | 72066143 | HAIR PIN 1/8 (PART OF 3&4) | 2REF |
| 8. | 72066679 | ROLL PIN 5/32X1-3/8 | 1 |

Figure E-5. LOWER BOOM ASM-5' VERSION (41711029)



| ITEM | PART NUMBER | DESCRIPTION | QTY |
|------|-------------|----------------------------|------|
| 1. | 52710979 | LOWER BOOM | 1 |
| 2. | 52710970 | EXTENSION BOOM | 1 |
| 3. | 70144211 | PIN 3/4X6-1/4 (INCL: 7) | 1 |
| 4. | 70144209 | PIN 3/4X4-1/4 (INCL:7) | 1 |
| 5. | 70144234 | PIN 3/4X6-1/4 | 1 |
| 7. | 72066143 | HAIR PIN 1/8 (PART OF 3&4) | 2REF |
| 8. | 72066679 | ROLL PIN 5/32X1-3/8 | 1 |

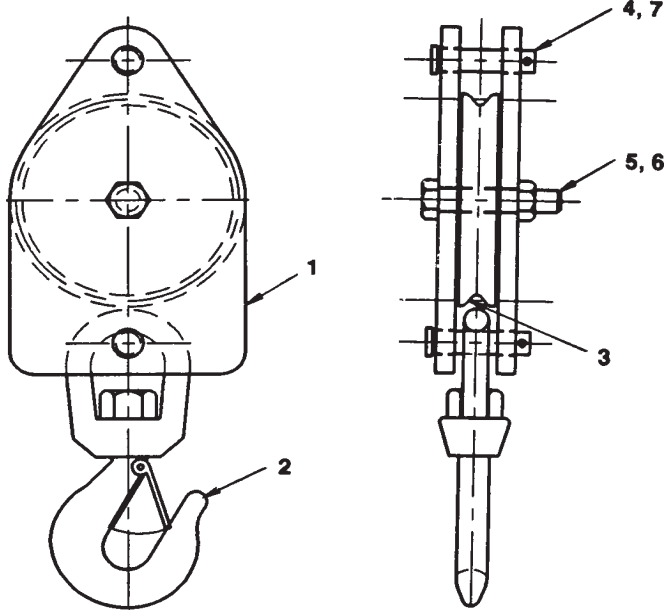
Figure E-6. LOWER BOOM ASM-7' VERSION (41711028)



| ITEM | PART NUMBER | DESCRIPTION | QTY |
|------|-------------|-------------------------------|-----|
| 1. | 71570945 | WINCH-ELECTRIC (WAS 71570133) | 1 |
| 2. | 70056480 | SHEAVE 5"PD | 1 |
| 3. | 51711010 | HOOK BLOCK ASSEMBLY | 1 |
| 4. | 72060046 | CAP SCR 3/8-16X1 HHGR5 | 3 |
| 5. | 72060096 | CAP SCR 1/2-13X2-1/2 HHGR5 | 1 |
| 6. | 72062080 | NUT 1/2-13 HEX LOCK | 1 |
| 7. | 72063003 | WASHER 3/8 WRT | 3 |
| 8. | 72661421 | CLEVIS PIN 1/2X2 | 1 |
| 9. | 72066143 | HAIR PIN 1/8 | 1 |
| 10. | 70580205 | WIRE ROPE ASM (0.18") | 1 |

- NOTE:
1. THE WINCH IS SUPPLIED WITHOUT A WIRE ROPE. 70580205 WIRE ROPE ASM (0.18" X 25') IS SUPPLIED SEPARATELY.
 2. ITEM #1, WINCH-ELECTRIC (71570945) USED ON UNITS WITH SERIAL NUMBER WS65101001 AND BEYOND.
 3. THE WINCH KIT (90734548) INCLUDES THE WINCH (71570945), CONTROL BOX (77041800), AND WIRE ROPE (70580205). ALL COMPONENTS MUST BE REPLACED WHEN A 71570133 WINCH IS REMOVED.

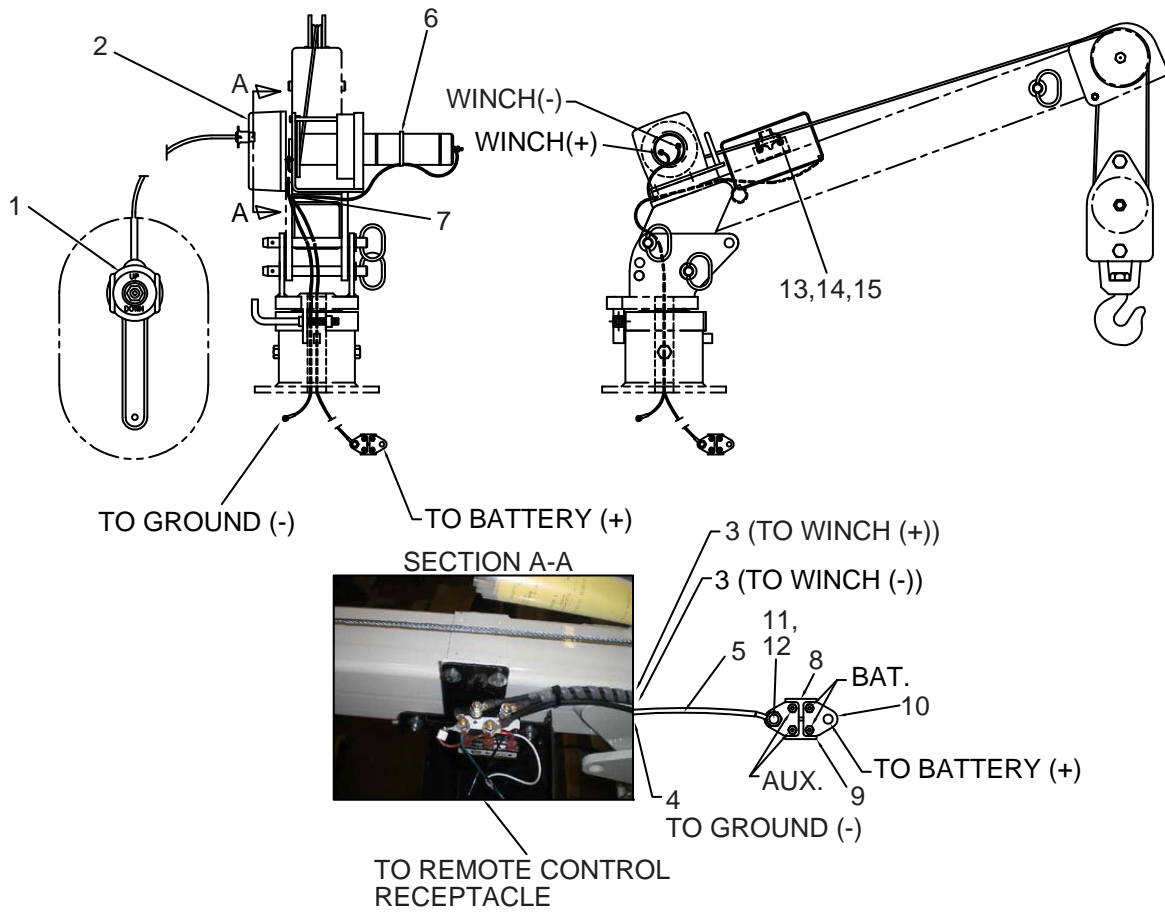
Figure E-7. WINCH ASM (31711022)



| ITEM | PART NUMBER | DESCRIPTION | QTY |
|------|-------------|-----------------------------|-----|
| 1. | 60116446 | SIDE PLATE | 2 |
| 2. | 71732760 | HOOK 1.5TON SWIVEL | 1 |
| 3. | 70056480 | SHEAVE 5" | 1 |
| 4. | 72066143 | HAIR PIN 1/8 | 2 |
| 5. | 72060928 | CAP SCR 1/2-13X2-1/4 HH GR5 | 1 |
| 6. | 72062080 | NUT 1/2-13 HEX LOCK | 1 |
| 7. | 72661421 | CLEVIS PIN 1/2X2 | 2 |

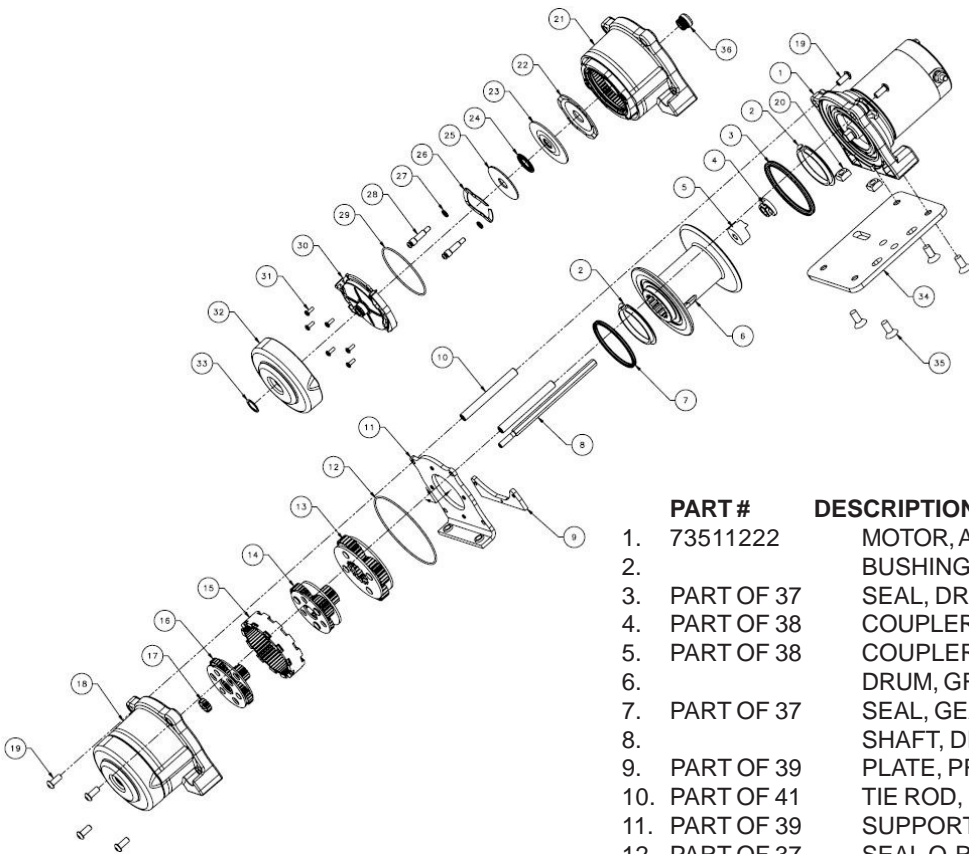
- NOTE:
1. TIGHTEN THIS CAP SCREW AND NUT TO APPROXIMATELY .06" PLAY. THE SHEAVE MUST BE FREE TO ROTATE.

Figure E-8. HOOK BLOCK ASM (51711010)



| ITEM | PART NUMBER | DESCRIPTION | QTY |
|------|-------------|----------------------------|-----|
| 1. | 77041852 | REMOTE CONTROL W/CABLE | 1 |
| 2. | 77041800 | CONTROL BOX ASM, WS65 | 1 |
| 3. | 51711025 | CABLE ASSEMBLY | 2 |
| 4. | 51711024 | CABLE ASSEMBLY | 1 |
| 5. | 51711023 | CABLE ASSEMBLY | 1 |
| 6. | 70034069 | TIE, PLASTIC 14" | 1 |
| 7. | 70034060 | TIE, PLASTIC 6.75" | 1 |
| 8. | 77041357 | 30 AMP CIRCUIT BREAKER | 1 |
| 9. | 77041320 | 40 AMP CIRCUIT BREAKER | 1 |
| 10. | 70144821 | CIRC BREAKER MTG BRACKET | 2 |
| 11. | 72062103 | NUT 3/8-16 NYLOC | 1 |
| 12. | 72060044 | CAP SCREW 3/8-16 X 3/4 HH | 1 |
| 13. | 72062104 | NUT 1/4-20 HEX NYLOC | 4 |
| 14. | 72060004 | CAP SCREW 1/4-20 X 1 HHGR5 | 4 |
| 15. | 60135903 | PLATE-ADAPTER WINCH CTRL | 1 |

Figure E-9. ELECTRICAL ASM-MNL SWING (41711170)

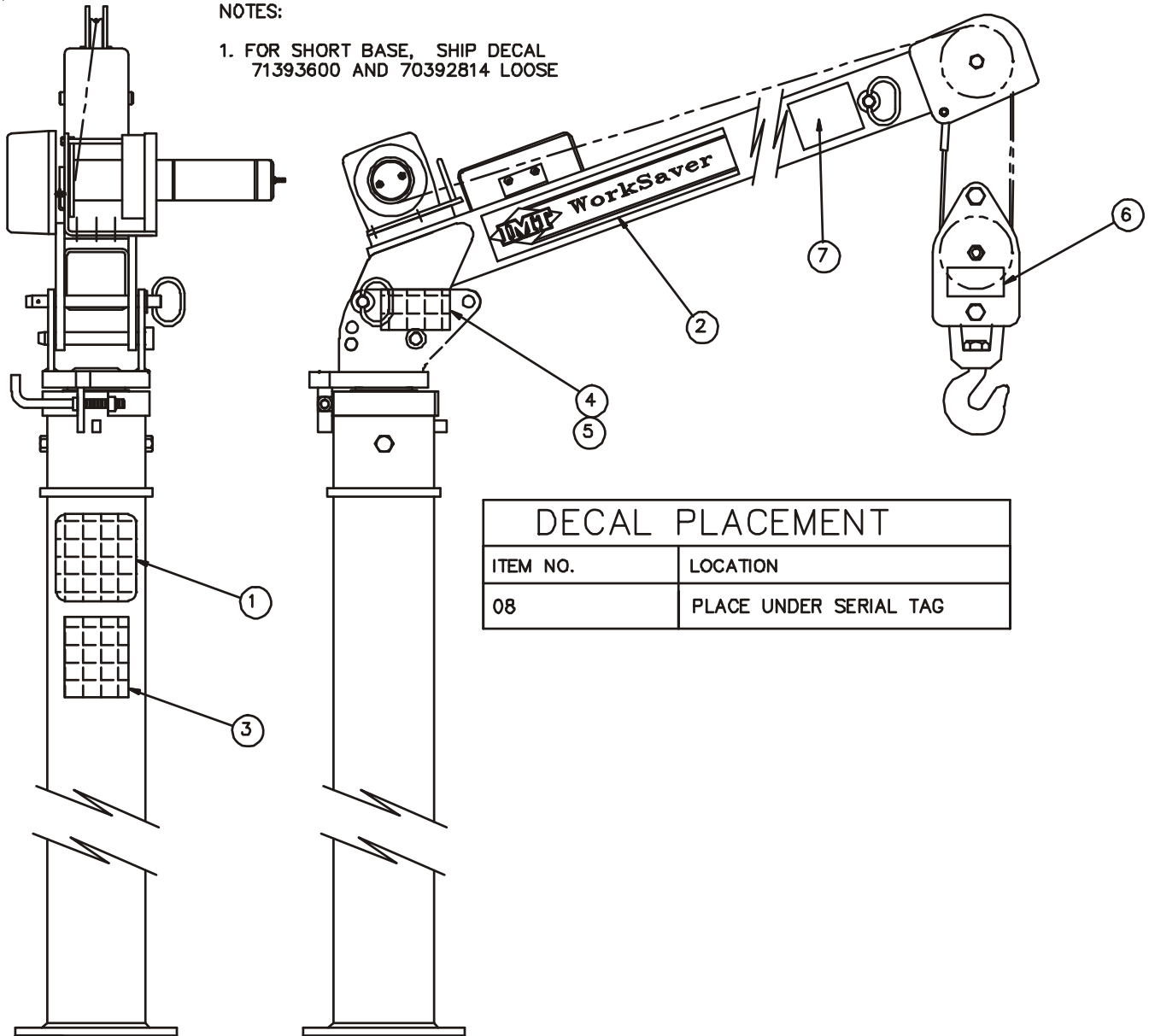


**Figure E-10. WINCH
(71570945)**

| PART # | DESCRIPTION | QTY | |
|-------------|------------------------------------|--------------------------------------|---|
| 1. 73511222 | MOTOR, ASSY, BOSCH | | |
| 2. | BUSHING, DRUM, A2000 | | |
| 3. | PART OF 37 | 1 | |
| 4. | SEAL, DRUM, FLANGE X-RING, R WN | 1 | |
| 5. | COUPLER, MOTOR, CAM, 13.2MM | 1 | |
| 6. | COUPLER, FOLLOWER, HEX, WINCH | 1 | |
| 7. | DRUM, GROOVED, ALUM, WNCH, ATV | | |
| 8. | PART OF 37 | 1 | |
| 9. | SHAFT, DRIVE, HEX, WINCH, 4000 | | |
| 10. | PLATE, PROTECTOR, WIRE ROPE | 1 | |
| 11. | TIE ROD, METRIC, TAPD, 3.5" PLATED | 2 | |
| 12. | PART OF 39 | 1 | |
| 13. | SUPPORT, DRUM, GS, 2.5 | 1 | |
| 14. | PART OF 37 | 1 | |
| 15. | SEAL O-RING 4.05IN NBR 70A YELLOW | 1 | |
| 16. | CARRIER ASSY, STAGE 3, 2.5 | | |
| 17. | CARRIER ASSY, S2, 3.1 | | |
| 18. | GEAR, RING, PM, ODC, 2.5 | | |
| 19. | CARRIER ASSY, S1, 3.1 | | |
| 20. | GEAR, SUN, 14T, S1 | | |
| 21. | 71415084 | HOUSING ASSY, RT25, CLUTCHLESS | |
| 22. | PART OF 39, 41 | CAPSCREW, BUTTONHEAD, M6-1.0X 16, ZN | 4 |
| 23. | PART OF 18 | HOUSING, GEAR, WINCH, ATV, MACHINED | 1 |
| 24. | PART OF 18 | PLATE RETAINING BRAKE RT/XT SLOTTED | 1 |
| 25. | PART OF 18 | DISC BRAKE WINCH RT/XT | 1 |
| 26. | PART OF 18 | BEARING ROLLER THRUST 15mm | 1 |
| 27. | PART OF 18 | WASHER THRUST ID 15.24mm | 1 |
| 28. | PART OF 18, 37 | SPRING BRAKE WAVE ATV WINCH | 1 |
| 29. | PART OF 18, 40 | SEAL, RING, QUAD, 1/4 IN | 2 |
| 30. | PART OF 37 | PIN, CLUTCH, SBC, WINCH | 2 |
| 31. | PART OF 18 | SEAL O-RING 2.8IN NBR 70A YELLOW | 1 |
| 32. | PART OF 18 | SEAL O-RING 2.8IN NBR 70A YELLOW | 1 |
| 33. | PART OF 18 | CAP, CLUTCH, WINCH, ATV | |
| 34. | PART OF 18 | CAP, CLUTCH, WINCH, ATV | 1 |
| 35. | PART OF 18 | CAPSCREW, 6 X 3/8, BTN HD, TORX | 6 |
| 36. | PART OF 18 | COVER END CLUTCH BLOCKED | 1 |
| 37. | PART OF 18 | (VIMS) RING, RETAINING, INVERTED | 1 |
| 38. | PART OF 18 | PLATE MTG RT30 INDUST | 1 |
| 39. | PART OF 18 | CAPSCREW-FLT HD HEX M8-1.25 X20MMZN | 4 |
| 40. | PART OF 18 | ROLLER CLUTCH ASSY WINCH RT/XT | 1 |
| 41. | | WINCH SEAL KIT | |
| REF | | WINCH MOTOR COUPLER KIT | |
| REF | | WNCH DRUM SUPPORT KIT | |
| REF | | WINCH CLUTCH GROUP KIT | |
| REF | | WINCH TIE ROD KIT | |
| REF | | LABEL DC1000 | |
| REF | | LABEL WARNING MTR END DC1000 | |

NOTES:

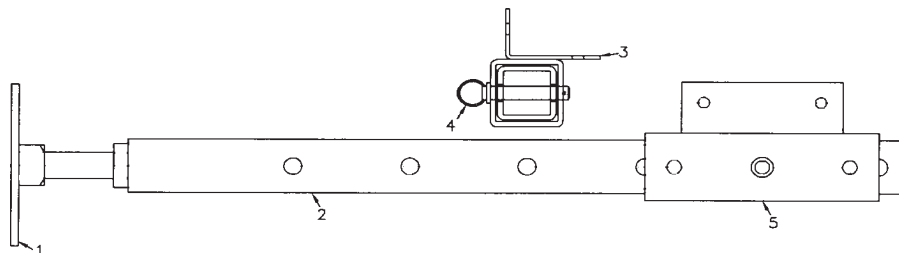
- 1. FOR SHORT BASE, SHIP DECAL 71393600 AND 70392814 LOOSE



| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|----------------------------|-----|
| 1. | 71393600 | CAPACITY PLACARD | 1 |
| 2. | 70393645 | DECAL-WORKSAVER | 2 |
| 3. | 70392814 | DECAL-DANGER OPERATOR | 1 |
| 4. | 70029119 | SERIAL NUMBER PLACARD | 1 |
| 5. | 72066340 | RIVET | 2 |
| 6. | 71394083 | DECAL-LOAD BLK RATING 2.0T | 2 |
| 7. | 70394443 | DECAL-DGR FREEFALL BOOM | 1 |
| 8. | 70395324 | DECAL-ASME/ANSI B30.5 | 1 |

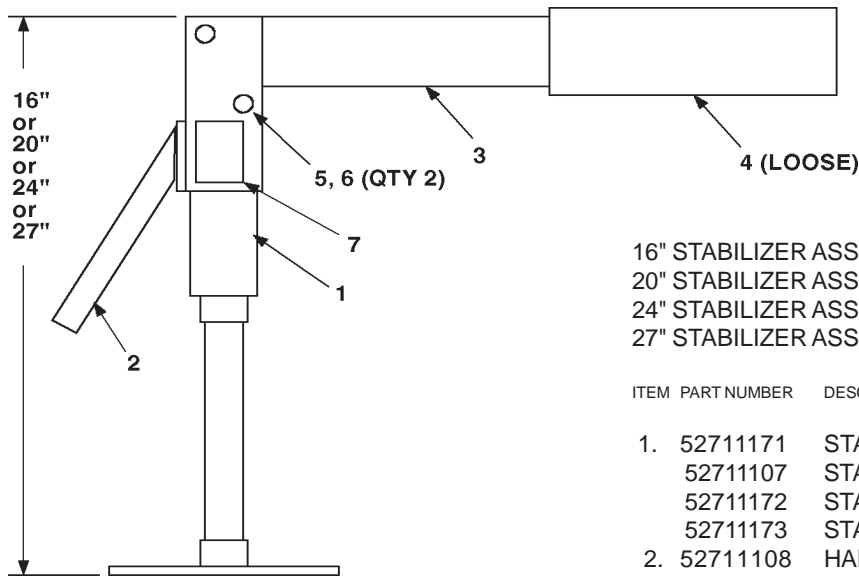
NOTE:
SHIP DECALS 71393600 & 70392814 LOOSE FOR SHORT BASE MODELS.

Figure E-11. DECAL KIT (95711049)



| ITEM | PART NUMBER | DESCRIPTION | QTY |
|------|-------------|-----------------------------|-----|
| 1. | 52711032 | STABILIZER PAD | 1 |
| 2. | 52711030 | DROP LEG STABILIZER | 1 |
| 3. | 52711031 | STABILIZERHOUSING | 1 |
| 4. | 71731711 | PIN 1/2X2-1/2 QUICK RELEASE | 1 |
| 5. | 70392864 | DECAL-DGR STAND CLEAR | 1 |
| 6. | 72060047 | CAP SCR 3/8-16X1-1/4 HHGR5 | 4 |
| 7. | 72062103 | NUT 3/8-16 LOCK | 4 |
| 8. | 72063003 | WASHER 3/8 WRT | 8 |

Figure E-12. STABILIZER ASM-DROP LEG (41711109)



- 16" STABILIZER ASSEMBLY (41711174)
- 20" STABILIZER ASSEMBLY (41711106)
- 24" STABILIZER ASSEMBLY (41711175)
- 27" STABILIZER ASSEMBLY (41711176)

| ITEM | PART NUMBER | DESCRIPTION | 16" | 20" | 24" | 27" |
|------|-------------|-------------------------|-----|-----|-----|-----|
| | | | QTY | QTY | QTY | QTY |
| 1. | 52711171 | STABILIZER WELDMENT 16" | 1 | | | |
| | 52711107 | STABILIZER WELDMENT 20" | | 1 | | |
| | 52711172 | STABILIZER WELDMENT 24" | | | 1 | |
| | 52711173 | STABILIZER WELDMENT 27" | | | | 1 |
| 2. | 52711108 | HANDLE WELDMENT | 1 | 1 | 1 | 1 |
| 3. | 60116598 | STABILIZER TUBE | 1 | 1 | 1 | 1 |
| 4. | 60116602 | STABILIZER TUBE | 1 | 1 | 1 | 1 |
| 5. | 72060054 | CAP SCR 3/8-16X3 HH GR5 | 2 | 2 | 2 | 2 |
| 6. | 72062103 | NUT 3/8-16 HEX LOCK | 2 | 2 | 2 | 2 |
| 7. | 70392864 | DECAL-DANGER STAND CLR | 1 | 1 | 1 | 1 |

Figure E-13. STABILIZER ASMS

Section 6. MAINTENANCE

6-1. GENERAL

The WorkSaver™ 65 is easy to maintain but to provide for maximum service life from this unit, a program of periodic checks and maintenance are necessary. This section describes lubrication requirements and general maintenance procedures. See Figure F-1 for a graphic representation.

6-2. LUBRICATION

Lubrication is critical to the protection of your crane. It provides for smooth operation and protection from corrosion/rust. Following are the areas which will require periodic lubrication.

ROTATION BEARINGS:

The two rotation bearings in the base were lubricated at assembly. If the crane becomes difficult to rotate or becomes noisy, inspect the bearings and grease if necessary.

STANDARD ROTATION LOCKING HANDLE THREADS:

Apply a light lubricant weekly to the threads to provide for ease of operation and rust prevention. Do not over lubricate or get oil on the handle which could cause the operator to lose his grip on the handle.

EXTENSION BOOM:

Lightly grease the sides of the extension boom to provide for easy withdrawal from the lower boom when adjusting crane reach. An extension boom which is difficult to slide in and out can be hazardous.

WIRE ROPE:

Wire rope is lubricated during its manufacture but this lubrication will not protect the rope for its service life. It is necessary to lubricate wire rope in order to prevent corrosion, friction created heat and to extend its life.

Lubricate the wire rope as follows:

1. Clean the rope of dirt, dust and any other foreign matter.
2. Apply a light lubricant which will penetrate the strands of the rope. Apply by dropping on,

spraying on or bushing on.

3. Apply lubricant heavily to portions which encounter bending such as at the sheave and winch.

6-3. WIRE ROPE REPLACEMENT

Replace the entire wire rope when any of the following conditions exist:

1. When there are either 3 broken strands or a total of six broken wires in all strands in any rope lay.
2. When flat spots on the outer wires appear and those outside wires are less than 2/3 the thickness of the unworn outer wire.
3. When there is a decrease of diameter indicating a core failure.
4. When kinking, crushing, birdcaging or other distortion occurs.
5. When there is noticeable heat damage (discoloration) of the rope by any means.
6. When the diameter is reduced from nominal size by 1/32" or more.
7. If a broken wire protrudes or loops out from the core of the rope.

See the IMT Operator's Crane Safety Manual for more information concerning wire rope.

6-4. CRANE ELECTRICAL

Inspect the winch motor and control box for secure electrical contacts and the presence of moisture. Loose contacts should be tightened and moisture should be removed to help eliminate corrosion.

Make certain that good contact is maintained at the chassis ground wire connection. If severely rusted or corroded, disassemble, clean and reassemble.

Replace any severely crimped, broken or frayed electrical wires.

6-5. VEHICLE ELECTRICAL

The vehicle's battery must be maintained and fully charged in order to provide maximum efficiency. A program of regular inspection and maintenance of the battery will help to assure a reliable power source for the crane's electrical requirements. Following is a battery maintenance checklist:

ELECTROLYTE LEVEL:

Keep the battery filled to its recommended level. If low, fill with distilled water to its recommended level.

BATTERY:

Clean all corrosion from the terminals and apply a light coating of petroleum jelly to the terminals when re-connecting.

Keep the exterior of the battery clean.

CABLE CONNECTIONS:

Remove all corrosion, sand the inside of clamps to provide maximum electrical contact and firmly tighten without damaging the battery posts.

ALTERNATOR:

Check for proper operation and repair or replace if deficient.

ALTERNATOR BELT:

Check for tightness per vehicle specification and adjust if out of specification. Also, check for cracking and replace if found to be excessively cracked.

Extremely cold conditions put extra strain on the vehicle's electrical system. Battery/electrical maintenance is extremely important when temperatures fall below 0°F.

Consult your vehicle owner's manual for specific information concerning your vehicle and its recommended maintenance procedures.

6-6. CLEANLINESS

Keep the crane clean, and the decals legible to the operator, especially the capacity placard and warning decals. Cleanliness will make inspection and maintenance easier. Also, the application of wax to the crane will help protect and prolong the life of the unit.

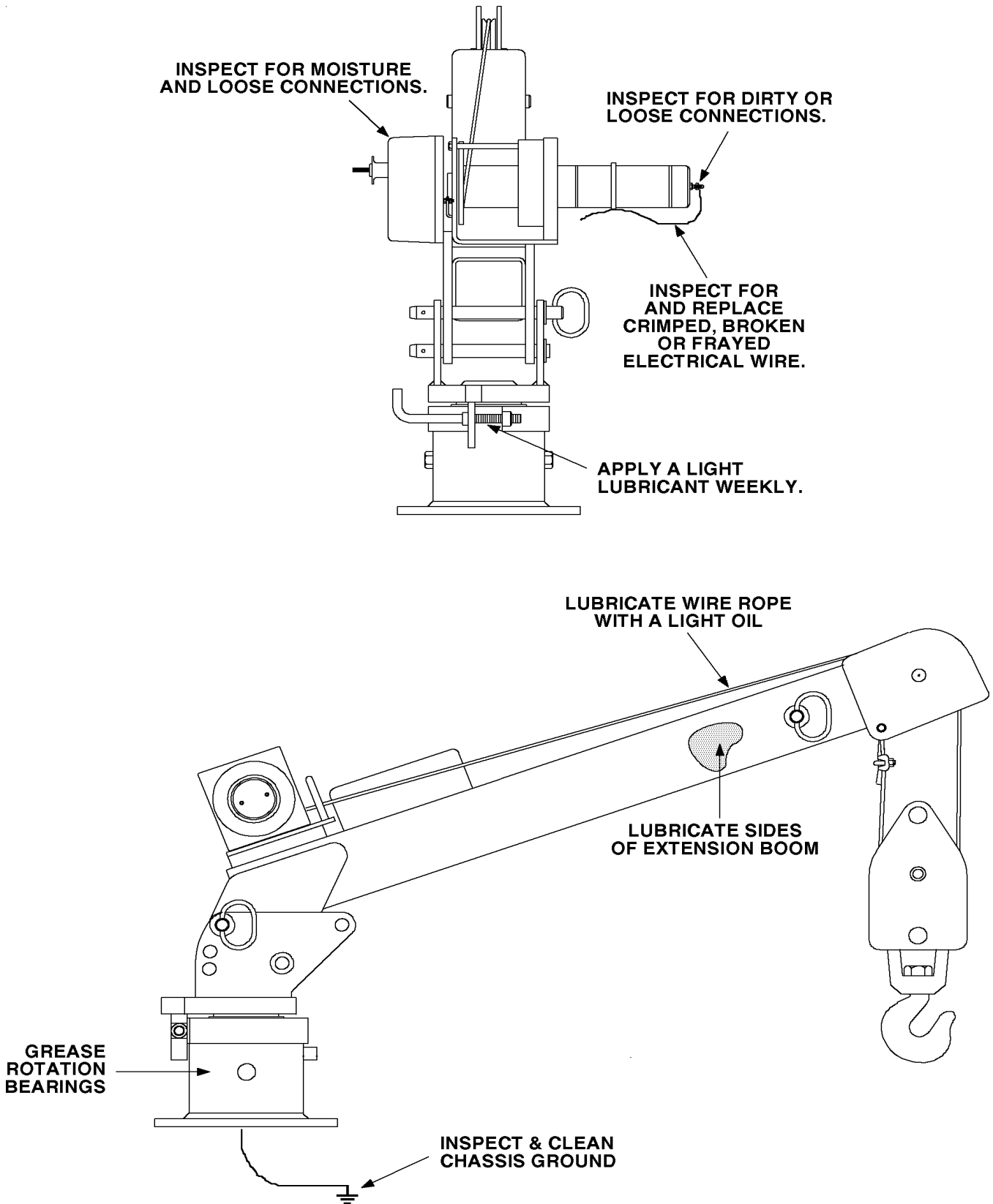






Figure F-1. MAINTENANCE POINTS

FINE THREAD BOLTS

COARSE THREAD BOLTS

| SIZE (DIA-TPI) | BOLT DIA (INCHES) | TIGHTENING TORQUE | | | |
|-------------------|----------------------|--|-------------------|--|-------------------|
| | |  SAE J429 GRADE 5 | |  SAE J429 GRADE 8 | |
| | | PLAIN (FT-LB) | PLATED (FT-LB) | PLAIN (FT-LB) | PLATED (FT-LB) |
| 5/16-24 | 0.3125 | 19 | 14 | 27 | 20 |
| 3/8-24 | 0.3750 | 35 | 26 | 49 | 35 |
| 7/16-20 | 0.4375 | 55 | 41 | 78 | 58 |
| 1/2-20 | 0.5000 | 90 | 64 | 120 | 90 |
| 9/16-18 | 0.5625 | 120 | 90 | 170 | 130 |
| 5/8-18 | 0.6250 | 170 | 130 | 240 | 180 |
| 3/4-16 | 0.7500 | 300 | 225 | 420 | 315 |
| 7/8-11 | 0.8750 | 445 | 325 | 670 | 500 |
| 1-12 | 1.0000 | 645 | 485 | 995 | 745 |
| 1 1/8-12 | 1.1250 | 890 | 670 | 1445 | 1085 |
| 1 1/4-12 | 1.2500 | 1240 | 930 | 2010 | 1510 |
| 1-3/8-12 | 1.3750 | 1675 | 1255 | 2710 | 2035 |
| 1 1/2-12 | 1.5000 | 2195 | 1645 | 3560 | 2670 |

| SIZE (DIA-TPI) | BOLT DIA (INCHES) | TIGHTENING TORQUE | | | |
|-------------------|----------------------|--|-------------------|--|-------------------|
| | |  SAE J429 GRADE 5 | |  SAE J429 GRADE 8 | |
| | | PLAIN (FT-LB) | PLATED (FT-LB) | PLAIN (FT-LB) | PLATED (FT-LB) |
| 5/16-18 | 0.3125 | 17 | 13 | 25 | 18 |
| 3/8-16 | 0.3750 | 31 | 23 | 44 | 33 |
| 7/16-14 | 0.4375 | 49 | 37 | 70 | 52 |
| 1/2-13 | 0.5000 | 75 | 57 | 105 | 80 |
| 9/16-12 | 0.5625 | 110 | 82 | 155 | 115 |
| 5/8-11 | 0.6250 | 150 | 115 | 220 | 160 |
| 3/4-10 | 0.7500 | 265 | 200 | 375 | 280 |
| 7/8-9 | 0.8750 | 395 | 295 | 605 | 455 |
| 1-8 | 1.0000 | 590 | 445 | 910 | 680 |
| 1 1/8-7 | 1.1250 | 795 | 595 | 1290 | 965 |
| 1 1/4-7 | 1.2500 | 1120 | 840 | 1815 | 1360 |
| 1-3/8-6 | 1.3750 | 1470 | 1100 | 2380 | 1780 |
| 1 1/2-6 | 1.5000 | 1950 | 1460 | 3160 | 2370 |

When using the torque data in the charts above, the following rules should be observed.

1. Bolt manufacturer’s particular specifications should be consulted when provided.
2. Flat washers of equal strength must be used.
3. All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.
4. Torque values specified are for bolts with residual oils or no special lubricants applied. If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, colloidal copper or white lead are applied, multiply the torque values in the charts by the factor .90. The use of Loctite does not affect the torque values listed above.
5. Torque values for socket-head capscrews are the same as for Grade 8 capscrews.

WARNING

Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Once a bolt has been torqued to 75% of its proof load and then removed, the torque coefficient may no longer be the same as when the bolt was new thus giving indeterminate clamp loads after torquing. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue causing serious injury or DEATH.

Figure F-2. TORQUE DATA CHART

The information within this manual has been compiled and checked but errors do occur. To provide our customers with a method of communicating those errors we have provided the Manual Change Request form below. In addition to error reporting, you are encouraged to suggest changes or additions to the manual which would be of benefit to you. We cannot guarantee that these additions will be made but we do promise to consider them. When completing the form, please write or print clearly. Submit a copy of the completed form to the address listed below.

MANUAL CHANGE REQUEST

| | | |
|------------------|-------------------|--------------------|
| DATE | PRODUCT MANUAL | MANUAL PART NO. |
| SUBMITTED BY | | |
| COMPANY | | |
| ADDRESS | | |
| CITY, STATE, ZIP | | |
| TELEPHONE | | |

ERROR FOUND

LOCATION OF ERROR (page no.): _____

DESCRIPTION OF ERROR: _____

REQUEST FOR ADDITION TO MANUAL

DESCRIPTION OF ADDITION: _____

REASON FOR ADDITION: _____

MAIL TO: IOWA MOLD TOOLING Co., Inc.
Box 189,
Garner IA 50438-0189
ATTN: Technical Publications

LIMITED WARRANTY

WARRANTY COVERAGE - Products manufactured by Iowa Mold Tooling Co., Inc. (IMT) are warranted to be free from defects in material and workmanship, under proper use, application and maintenance in accordance with IMT's written recommendations, instructions and specifications as follows:

1. Ninety (90) days; labor on IMT workmanship from the date of shipment to the end user.
2. One (1) year; original IMT parts from the date of shipment to the end user.

IMT's obligation under this warranty is limited to, and the sole remedy for any such defect shall be the repair or replacement (at IMT's option) of unaltered parts returned to IMT, freight prepaid, and proven to have such defect, provided such defect occurs within the above stated warranty period and is reported within fourteen (14) days of its occurrence.

IMPLIED WARRANTY EXCLUDED - This is the only authorized IMT warranty and is in lieu of all other express or implied warranties or representations, including any implied warranties of merchantability or fitness for any particular purpose or of any other obligations on the part of IMT.

ITEMS EXCLUDED - The manufacturer gives no warranty on any components purchased by the manufacturer, and such components as are covered only by the warranties of their respective manufacturers.

WARRANTY CLAIMS - Warranty claims must be submitted and shall be processed in accordance with IMT's established warranty claim procedure.

WARRANTY SERVICE - Warranty service will be performed by any IMT distributor authorized to sell new IMT products of the type involved or by any IMT Service Center authorized to service the type of product involved or by IMT in the event of direct sales made by IMT. At the time of requesting warranty service, the purchaser must present evidence of the date of delivery of the product. The purchaser shall pay any premium for overtime labor requested by the purchaser, any charge for making service calls and for transporting the equipment to the place where warranty work is performed.

WARRANTY VOIDED - All obligations of IMT under this warranty shall be terminated:(1) if service other than normal maintenance or normal replacement of service items is performed by someone other than an authorized IMT dealer, (2) if product is modified or altered in ways not approved by IMT.

PURCHASER'S RESPONSIBILITY - This warranty covers only defective material and workmanship. It does not cover depreciation or damage caused by normal wear, accident, improper protection in storage, or improper use. The purchaser has the obligation of performing the care and maintenance duties discussed in IMT's written recommendations, instructions and specifications. Any damage which results because of purchaser's failure to perform such duties shall not be covered by this warranty. The cost of normal maintenance and normal replacement of service items such as filters, belts, etc. shall be paid by the purchaser.

CONSEQUENTIAL DAMAGES - The only remedies the purchaser has in connection with the breach or performance of any warranty on IMT products are those set forth above. In no event will the dealer, IMT or any company affiliated with IMT, be liable for business interruptions, loss of sales and/or profits, rental or substitute equipment, costs of delay or for any other special, indirect, incidental or consequential losses, costs or damages.

REPRESENTATIONS EXCLUDED - IMT products are subject to no expressed, implied or statutory warranty other than herein set forth, and no agent, representative or distributor of the manufacturer has any authority to alter the terms of this warranty in any way whatsoever or to make any representations or promises, express or implied, as to the quality or performance of IMT products other than those set forth above.

CHANGE IN DESIGN - IMT reserves the right to make changes in design or improvements upon its products without imposing any obligation upon itself to install the same upon its products theretofore manufactured.

Effective January, 1985

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