
Model 2003i Parts

Manual Part # 99903668

Revised 20070927



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Revisions

DATE	LOCATION	DESCRIPTION
20050830		MODEL NUMBER CHANGE TO 2003i
20060817	PARTS	WINCH CHANGE FROM 32000244 TO 32000792, UPDATE 32000622 AND 32000633 DRAWINGS TO REFLECT WINCH CHANGES
20070524		ADDED CRANE WEIGHT TO SPECS.
20070613	CRANE DIMENSIONS	ADDED FRONT, REAR, AND MAST NOTES TO MOUNTING.
20070914	32000622, 32000633	ADDED HIGH-AMP FUSE & FUSE HOLDER.

CHAPTER 1

Introduction

This manual deals with information applicable to your IMT crane model, and is provided to assist you with ordering parts for your IMT crane. It contains additional instructions regarding your installation.

For operating instructions, refer to the IMT Electric Telescopic Crane Operation & Safety Manual (IMT part number 99903669).

It is the user's responsibility to maintain and operate this unit in a manner that will result in the safest working conditions possible.

Warranty of this crane will be void on any part of the crane subjected to misuse due to overloading, abuse, lack of maintenance and unauthorized modifications. No warranty - verbal, written or implied - other than the official, published IMT new machinery and equipment warranty will be valid with this crane. In addition, it is also the user's responsibility to be aware of existing Federal, State and Local codes and regulations governing the safe use and maintenance of this crane. This crane was designed and built to meet the standards of ANSI/ASME B30.5, Mobile & Locomotive Cranes. Contact the American Society of Mechanical Engineers (www.asme.org) for more information on ANSI/ASME B30.5.

Throughout this manual, three means are used to draw the attention of personnel. They are NOTES, CAUTIONs and WARNINGs and are defined as follows:

NOTE

A NOTE is used to either convey additional information or to provide further emphasis for a previous point.

CAUTION

A CAUTION is used when there is the very strong possibility of damage to the equipment or premature equipment failure.

WARNING

A WARNING is used when there is the potential for personal injury or death.

For a safe work environment, treat this equipment with respect and service it regularly.

CHAPTER 2

Specifications

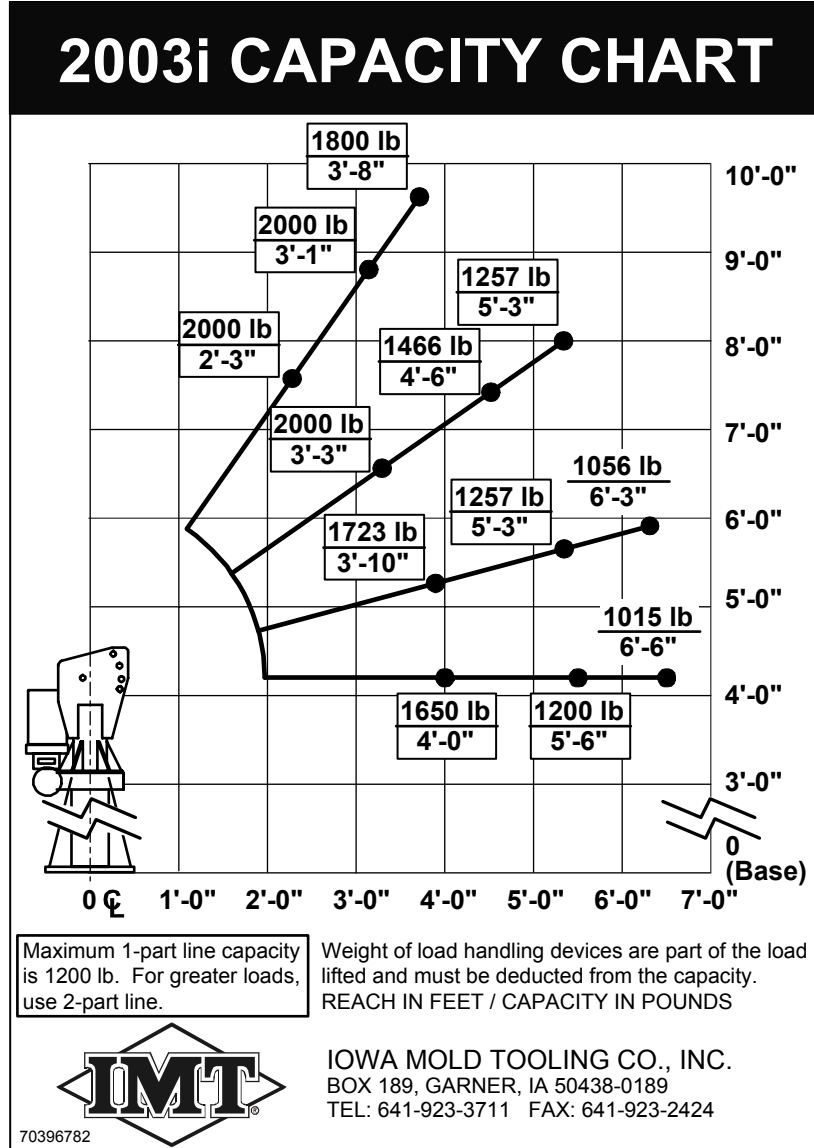
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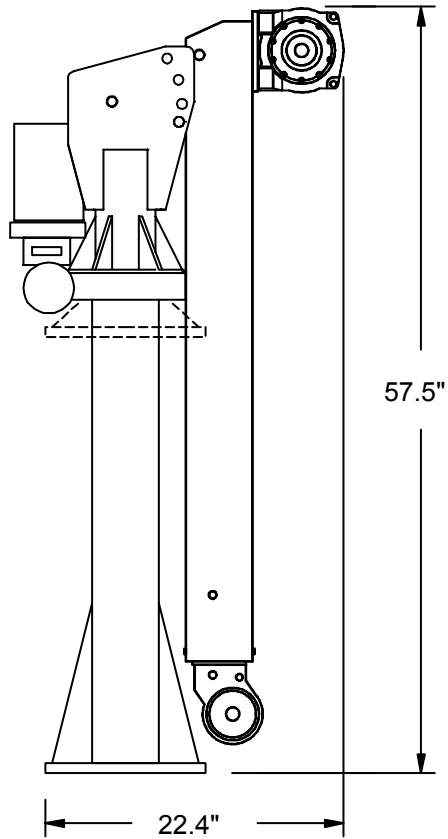
Model 2003i Specifications

Crane Rating	7,000 ft-lb
Maximum Horizontal Reach (from centerline of rotation)	7' (2.13 m)
Maximum Vertical Reach	7'-1" (2.16 m) (Shortbase) 9'-6" (2.89 m) (Pedestal)
Maximum Capacity	2000 lb (907 kg) @ 3' (0.9 m) (See Load Chart for Details.)
Maximum Capacity at Maximum Reach	1,000 lb
Crane Weight	340 lb (Shortbase) 410 lb (Pedestal)
Crane Storage Height	28.5" (72.4 cm) (Shortbase) 57.5" (146.0 cm) (Pedestal)
Mounting Space Required	12" x 12" (30.5 cm x 30.5 cm)
Tie-down Bolt Pattern	10" (top) x 9.25" (sides) x 9.5" (bottom) (25.4 cm (top) x 23.5 cm (sides) x 24.1 cm (bottom) (See tie-down bolt pattern on geometric configuration chart.)
Wire Rope	28' (8.5 m) of 3/16" (0.48 cm) (7x19 Galv.)
Remote Control Cord Length	12' (3.7 m)
Electrical System	
Motor Voltage	12 VDC
Control Voltage	12 VDC
Battery Type	Maintenance type 550 CCA, Deep Cycle type (minimum)
Alternator Requirement	65 amp minimum
Minimum Chassis Requirement	6,500 lb (2948 kg) GVWR

Model 2003i Capacity Chart



Model 2003i Stowed Dimensions



CHAPTER 3

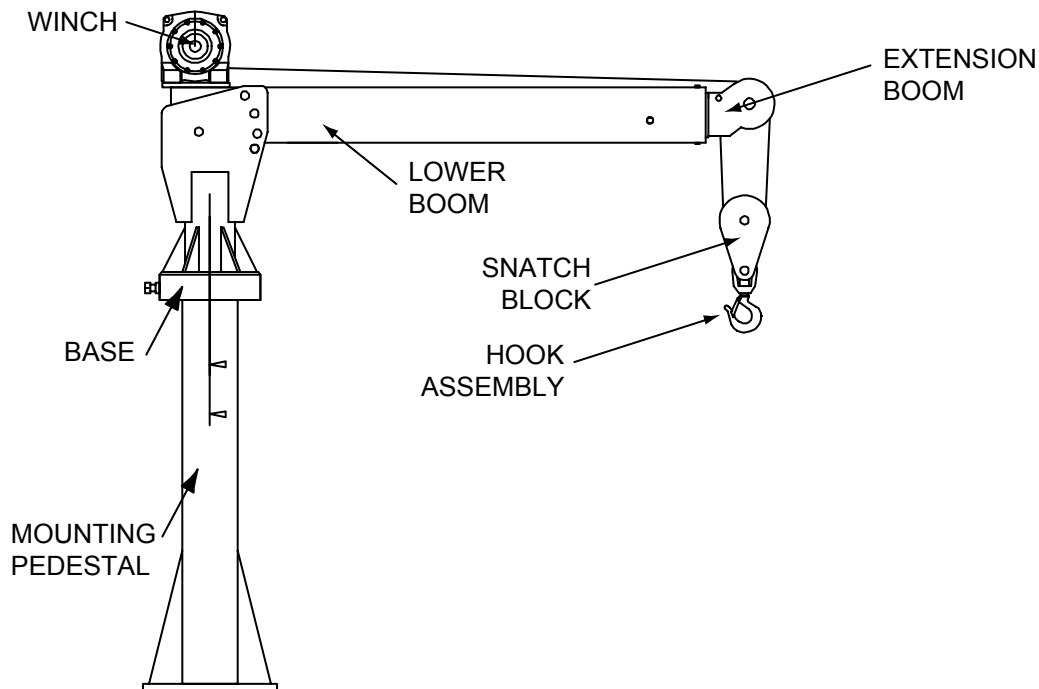
Crane Reference

In This Chapter

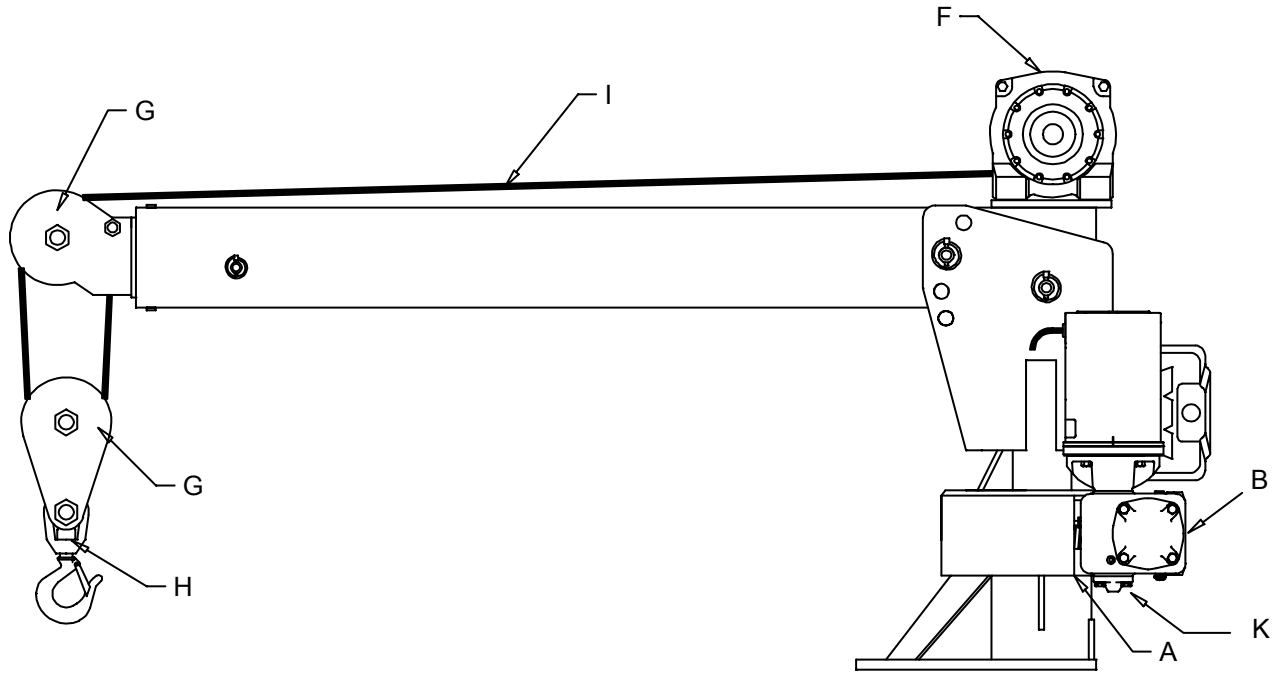
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2003i Major Assemblies

IMT electric cranes are designed to lift a variety of materials. These cranes are typically mounted on a vehicle chassis, but they can have stationary mounts. Instructions on how to operate the crane may refer to various crane components. Use the crane layout to help you identify the appropriate crane components.



Lubrication Schedule



Refer to the Lubrication Diagram for the locations of the lubrication points referred to in the following schedule.

WEEKLY	Check gear oil level at (B). Use 90 weight gear oil.
	Check rotation gear (A) for coverage and contaminants. Clean and reapply grease as necessary. Use only Moly 29 grease.
MONTHLY	Lubricate rotation bearing via zerk (K).
	Apply small amount of machine oil to hook swivel mechanism (H).
	Apply small amount of grease between polymer rope pulleys (G) and axles.
	Apply rope oil with rag or spray to wire rope (I). Wipe off excess.
YEARLY	Remove load brake from winch (F) and clean and apply a light coat of Lithium base grease to brake. Wipe interior bore of rope drum clean and inspect for damage. If no damage, apply light coat of Lithium grease and reassemble winch.
	Remove end cap from DC motor. Blow out debris and dust. Apply small amount of grease to armature bearing (J) and reassemble.

Crane Control

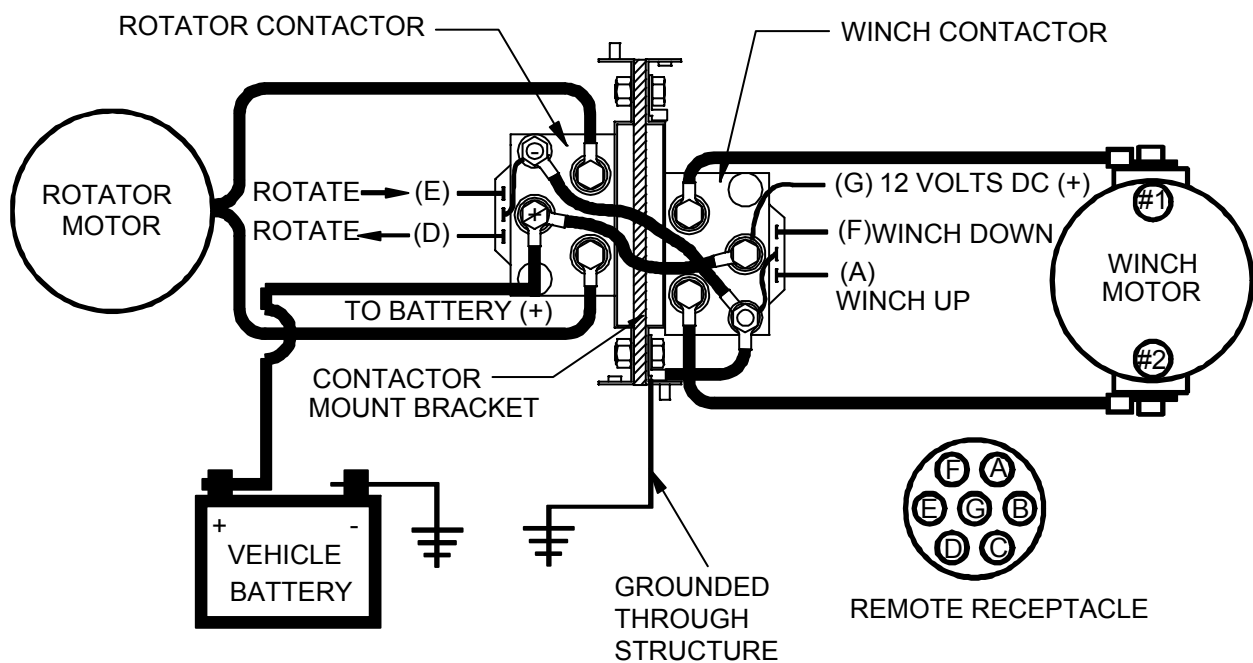
IMT's electric-hydraulic telescopic cranes are controlled by pendant remote controls. The remote plugs into an outlet-style attachment at the back of the crane. After using the crane, stow the remote pendant in an interior location. Refer to the IMT Electric-Hydraulic Telescopic Crane Manual for additional crane operation information.

Electrical Installation

Once your crane is mounted, electrically connect the crane to the vehicle.

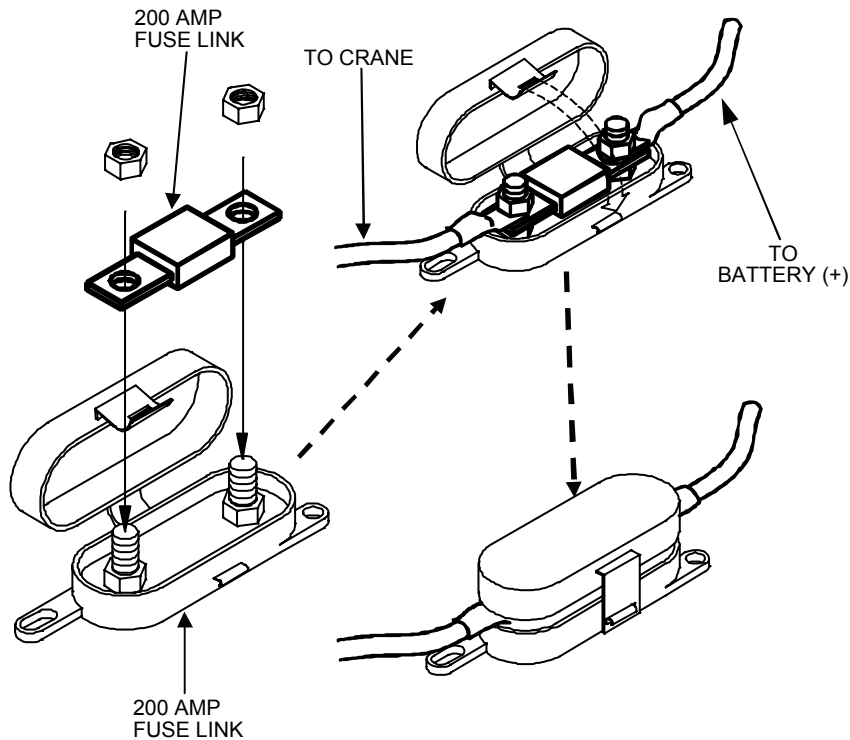
NOTE

Replace the vehicle's original equipment battery with a maintenance type, deep cycle battery in order to handle the extra power requirements of the crane. Under normal usage (up to 3 to 4 short operations per day), a single 550 CCA Deep Cycle Truck battery should provide sufficient power for the crane as long as the vehicle is running at a fast idle while the crane is in use. An alternator of at least 65 amp rating is required. If longer duty cycles are anticipated, a second battery (located as close to the crane as possible) may be needed. In this case, BE SURE to provide circuit protection from shorting of the power cable either with a circuit breaker or an inline fuse. Coat all battery and power cable connections with a corrosion protective coating.



- 1 Install the 4-foot ground cable (32000135) from the negative terminal of the battery to the vehicle frame, making sure that good metal to metal contact is made. The crane electric system's ground completes the electrical circuit through the structure of the crane to the vehicle frame. The factory ground provided in the vehicle is NOT sufficient to carry the current required by the crane. Without the addition of this extra ground cable, your crane will not operate to full rated capacity and damage to the crane's electric motors, contactors or the vehicle electrical system may occur.
- 2 Mount the 200 amp fuse holder (#32000822) as close as possible to the battery.

- 3 Connect it to the positive (+) post of the battery with the 18" power jumper cable (#32000134). The fuse holder should be easily accessible in case of fuse replacement.



- 4 Run the 25-foot power cable (#32000126) through the truck frame and up into the engine compartment.
- 5 Push the power cable connector up through the bracket clamp all the way until the upper and lower rubber insulators touch.
- 6 Tighten the clamp all the way. Protect the power cable from abrasion, flying gravel, hot exhaust pipes etc. by fastening it inside the frame channel and using protective covering (loom, conduit etc.). Be sure to use rubber grommets or other protection when running power cable through steel bulkheads, etc.

CHAPTER 4

Parts

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Parts Information

GENERAL

This section contains the exploded parts drawings and accompanying parts lists for the assemblies used on this crane. These drawings are intended to be used in conjunction with the instructions found in the maintenance and repair manuals for this crane family. For optional equipment such as winches and remote controls, refer to the appropriate service manual.

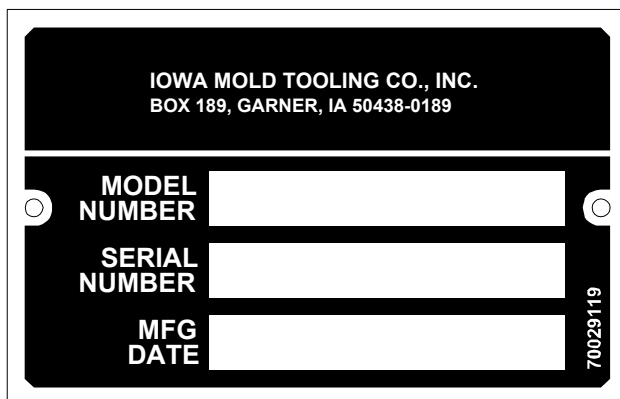
WARNING

DO NOT ATTEMPT TO REPAIR ANY COMPONENT WITHOUT READING THE INFORMATION CONTAINED IN THE REPAIR SECTION. PAY PARTICULAR ATTENTION TO STATEMENTS MARKED WARNING, CAUTION, OR NOTE IN THAT SECTION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN DAMAGE TO THE EQUIPMENT, PERSONAL INJURY, OR DEATH.

CRANE IDENTIFICATION

Every IMT crane has an identification placard (see figure) attached to the mast. When ordering parts, communicating warranty information, or referring to the unit in correspondence, always include the serial number and model numbers. All inquiries should be addressed to:

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



WELDMENT IDENTIFICATION

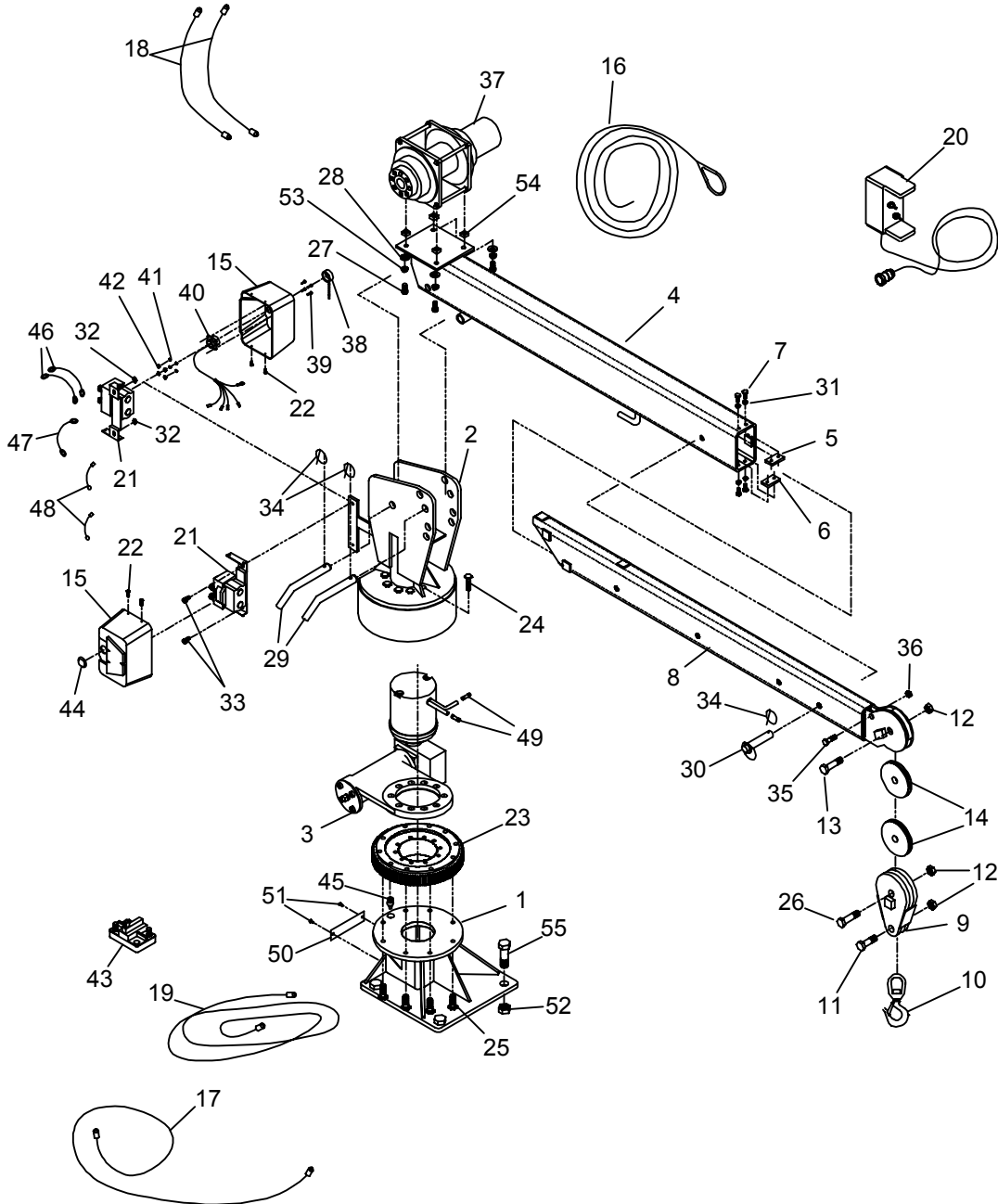
Each of the major weldments - base, mast, inner boom, outer boom, extension boom and outrigger weldments bear a stamped part number. Any time a major weldment is replaced, you must specify the complete part number as stamped on the weldment. The locations of the part numbers are shown in the Crane Reference Section.

ORDERING REPAIR PARTS

When ordering replacement parts:

- 1** Give the model number of the unit.
- 2** Give the serial number of the unit.
- 3** Specify the complete part number. When ordering cylinder parts, or one of the main weldments, always give the stamped part number.
- 4** Give a complete description of the part.
- 5** Specify the quantity required.

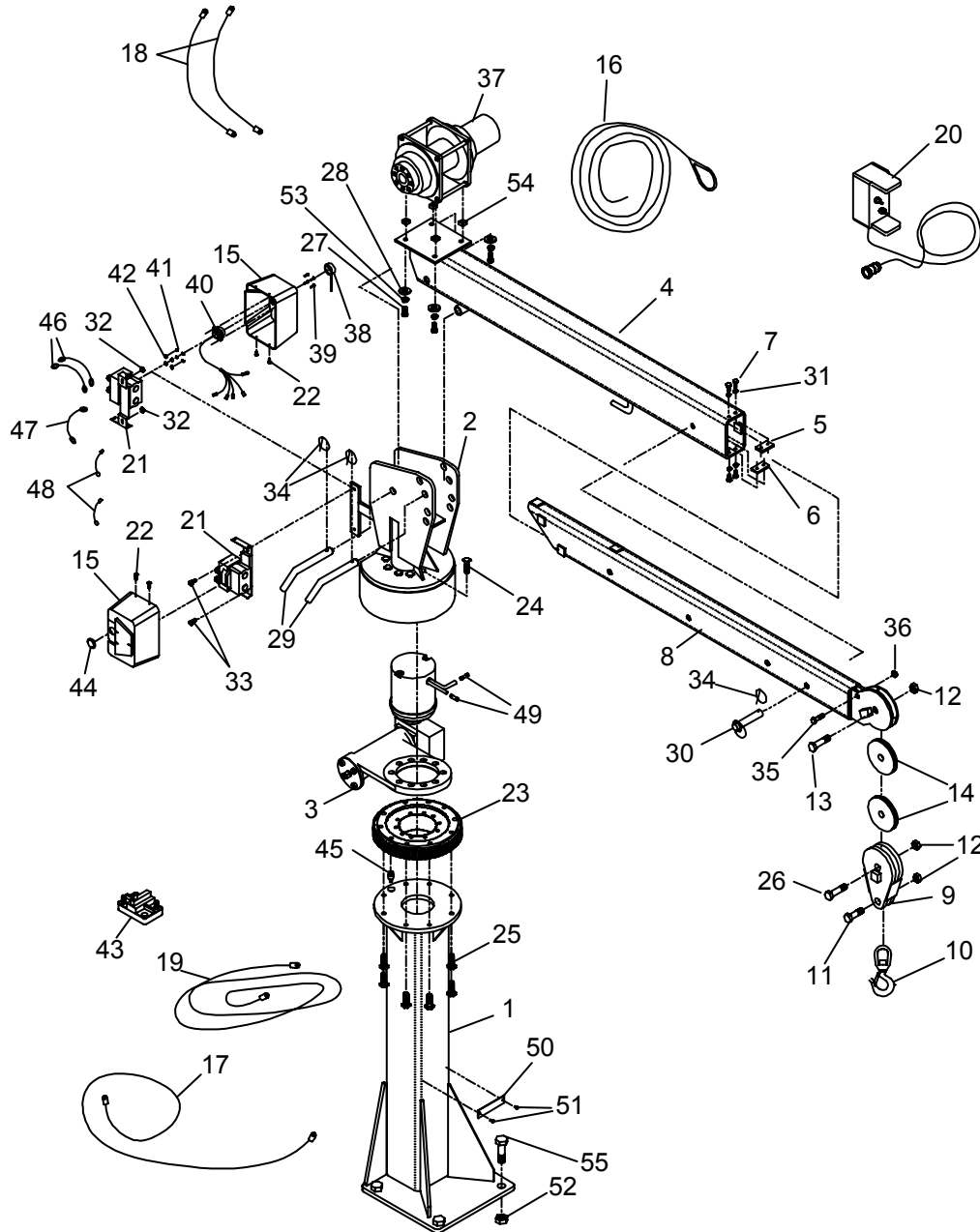
Crane Assembly, Low Profile (32000633)



32000633 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	32000316	LOW PROFILE PEDESTAL	1
2.	32000366	ROTATOR YOKE W/A	1
3.	32000364	7" ROTATOR DRIVE	1
4.	32000102	OUTER BOOM W/A	1
5.	32000419	REMOVEABLE LOWER SPACER	1
6.	32000422	REMOVEABLE UPPER SPACER	1

32000633 PARTS LIST			
7.	32000070	HEX BOLT, 1/4-20 x 1/2"	4
8.	32000451	INNER BOOM TUBE W/A	1
9.	32000448	TRAVELING BLOCK W/A	1
10.	32000245	1 TON SWIVEL HOOK W/ LATCH	1
11.	32000075	HEX BOLT, 3/4-10 x 2-1/2"	1
12.	32000291	HEX NUT, NYLON LOCK, 3/4-10	4
13.	32000609	BOLT, HEX HD, 3/4-10 x 3.00	1
14.	32000043	WIRE ROPE SHEAVE, 4"	2
15.	32000196	WINCH CONTROL COVER	2
16.	32000042	WIRE ROPE , 3/16 x 28'	1
17.	32000610	POWER CABLE, 4' #4	1
18.	32000156	WINCH CABLE	2
19.	32000795	POWER CABLE, 25' #4	1
20.	32000611	REMOTE CONTROL	1
21.	32000794	CONTACTOR - 12 V DC500	2
22.	32000796	SCREW, RD HD, 10-24 x .50	4
23.	32000612	SLEW RING	1
24.	32000379	HEX HD, 3/8-16 x 2-3/4 grd 8	10
25.	32000378	HEX HD, 3/8-16 x 1-1/2 grd 8	8
26.	32000613	BOLT, HEX HD, 3/4-10 x 3.50	1
27.	32000080	HEX BOLT, 3/8-16 x 1-1/2	4
28.	32000470	FLAT WASHER, 3/8"	4
29.	32000614	PIN, BOOM	2
30.	32000319	PIN, 1/2 x 3-1/2	1
31.	32000469	LOCK WASHER, 1/4	4
32.	32000286	NYLON LOCK NUT, 1/4-20	2
33.	32000067	HEX BOLT, 1/4-20 x 1	2
34.	32000324	LINCH PIN, 1" HANG	3
35.	32000064	HEX BOLT, 1/2-13 x 1-3/4	1
36.	32000284	HEX NUT, NYLON LOCK 1/2-13	1
37.	32000792	HOIST, 500 MF 12V	1
38.	32000161	DUST CAP	1
39.	32000381	SCREW, PHL HD 6-32 x 1/2	4
40.	32000615	RECEPTICAL PIGTAIL HARNESS	1
41.	32000472	WASHER, LOCK, #6	4
42.	32000294	NUT, HEX 6-32	4
43.	32000826	200 AMP FUSE	2
44.	32000616	PLUG, 7/8 FLUSH BUTTON	4
45.	32000617	GREASE ZERK FITTING, 1/8-27 STR	1
46.	32000618	CABLE, CONTACTOR GRD JUMPER	2
47.	32000619	CABLE, CONTACTOR PWR JUMPER	1
48.	32000620	CABLE, CONTACTOR SIGNAL GRD JUMPER	2
49.	32000797	BUTT CONNECTOR 10ga	2
50.	32000644	SERIAL NUMBER PLATE	1
51.	32000658	SCREW, DRIVE #8 x 3/8	2
52.	32000600	NUT, HEX 3/4-10 grd8	4
53.	32000476	WASHER, LOCK, 3/8	4
54.	32000798	NUT, SQUARE 3/8-16	4
55.	32000599	BOLT, HEX HD. 3/4-10 x 2-1/4" grd 8	4
56.	32000822	HIGH AMP FUSE HOLDER	1
-	32000563	OPEN GEAR COMPOUND	1
-	32000621	DECAL KIT	1
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Crane Assembly, Standard (32000622)



32000622 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	32000314	PEDESTAL MOUNT W/A	1
2.	32000366	ROTATOR YOKE W/A	1
3.	32000364	7" ROTATOR DRIVE	1
4.	32000102	OUTER BOOM W/A	1
5.	32000419	REMOVEABLE LOWER SPACER	1
6.	32000422	REMOVEABLE UPPER SPACER	1
7.	32000070	HEX BOLT, 1/4-20 x 1/2"	4
8.	32000451	INNER BOOM TUBE W/A	1
9.	32000448	TRAVELING BLOCK W/A	1
10.	32000245	1 TON SWIVEL HOOK W/ LATCH	1
11.	32000075	HEX BOLT, 3/4-10 x 2-1/2"	1
12.	32000291	HEX NUT, NYLON LOCK, 3/4-10	3
13.	32000609	BOLT, HEX HD, 3/4-10 x 3.00	1
14.	32000043	WIRE ROPE SHEAVE, 4"	2
15.	32000196	WINCH CONTOL COVER	2
16.	32000042	WIRE ROPE , 3/16 x 28'	1
17.	32000149	POWER CABLE, 6' #4	1
18.	32000156	WINCH CABLE	2
19.	32000795	POWER CABLE, 25' #4	1
20.	32000611	REMOTE CONTROL	1
21.	32000794	CONTACTOR - 12 V DC500	2
22.	32000796	SCREW, RD HD 10-24 x .50	4
23.	32000612	SLEW RING	1
24.	32000379	HEX HD, 3/8-16 x 2-3/4 grd 8	10
25.	32000378	HEX HD, 3/8-16 x 1-1/2 grd 8	8
26.	32000613	BOLT, HEX HD, 3/4-10 x 3.50	1
27.	32000080	HEX BOLT, 3/8-16 x 1-1/2	4
28.	32000470	FLAT WASHER, 3/8"	4
29.	32000614	PIN, BOOM	2
30.	32000319	PIN, 1/2 x 3-1/2	1
31.	32000469	LOCK WASHER, 1/4	4
32.	32000286	NYLON LOCK NUT, 1/4-20	2
33.	32000067	HEX BOLT, 1/4-20 x 1	2
34.	32000324	LINCH PIN, 1" HANG	3
35.	32000064	HEX BOLT, 1/2-13 x 1-3/4	1
36.	32000284	HEX NUT, NYLON LOCK 1/2-13	1
37.	32000792	HOIST, 500 MF 12V	1
38.	32000161	DUST CAP	1
39.	32000381	SCREW, PHL HD 6-32 x 1/2	4
40.	32000615	RECEPTICAL PIGTAIL HARNESS	1
41.	32000472	WASHER, LOCK, #6	4
42.	32000294	NUT, HEX 6-32	4
43.	32000826	HIGH AMP FUSE 200 AMP	2
44.	32000616	PLUG, 7/8 FLUSH BUTTON	4
45.	32000617	GREASE ZERK FITTING, 1/8-27 STR	1
46.	32000618	CABLE, CONTACTOR GRD JUMPER	2
47.	32000619	CABLE, CONTACTOR PWR JUMPER	1
48.	32000620	CABLE, CONTACTOR SIGNAL GRD JUMPER	2
49.	32000797	BUTT CONNECTOR, 10 ga	2
50.	32000644	SERIAL NUMBER PLATE	1
51.	32000658	SCREW, DRIVE #8 x 3/8	2
52.	32000600	NUT, HEX 3/4-10 grd 8	4
53.	32000476	WASHER, LOCK, 3/8	4
54.	32000798	NUT, SQUARE 3/8-16	4

32000622 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
55.	32000599	BOLT, HEX HD. 3/4-10 x 2-1/4" grd 8	4
56.	32000822	HIGH AMP FUSE HOLDER	1
-	32000563	OPEN GEAR COMPOND	1
-	32000621	DECAL KIT, 2000R	1
REV 20070914 SN 4223			

Winch (32000792)

