



Illustrated Parts Manual

Models
**E/M400A/
AJPnarrow**

Prior to SN 0300189901

E/M450A/AJ

Prior to SN 0300189898

P/N
3121128

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ANSI



An Oshkosh Corporation Company

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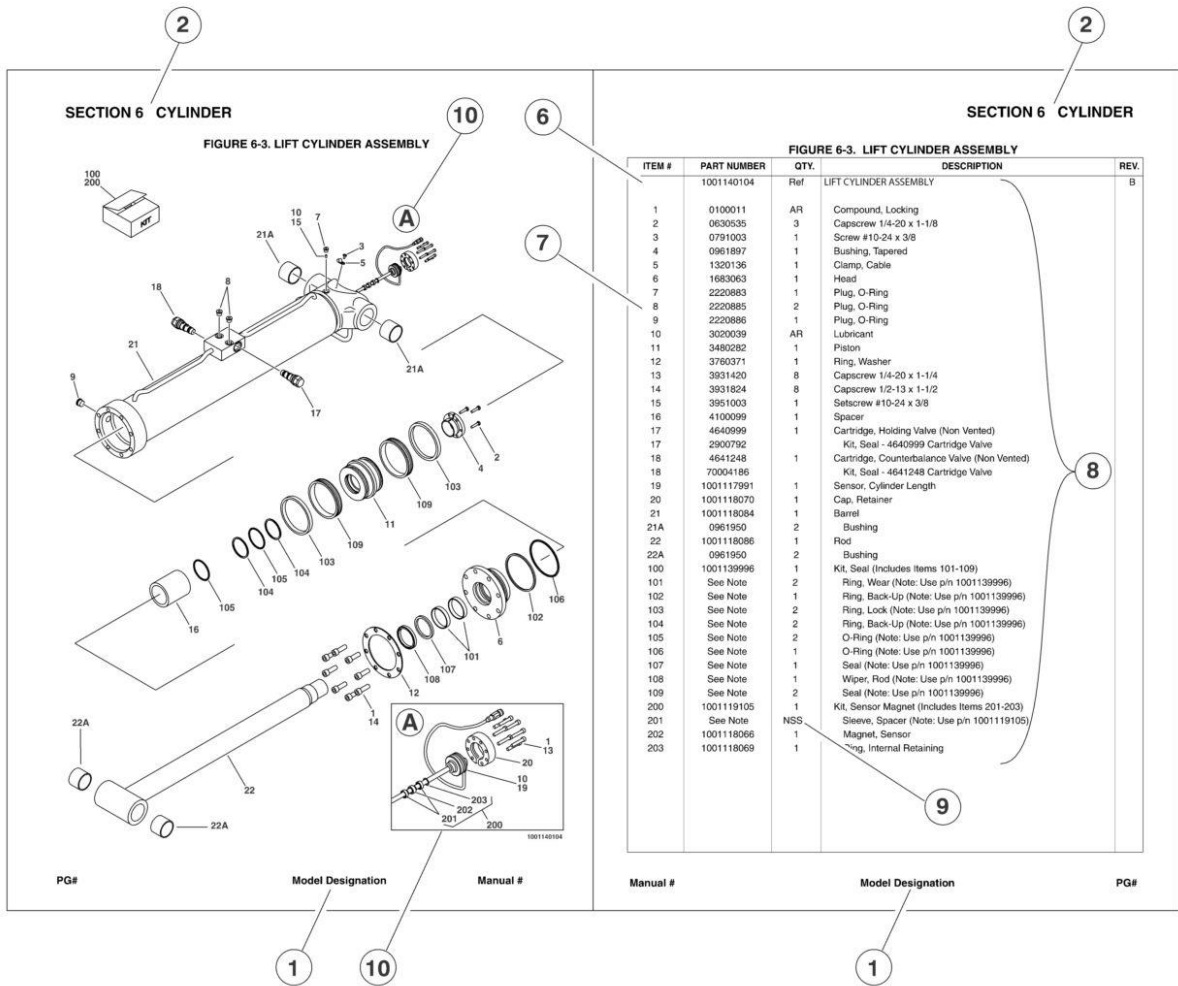
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GENERAL INFORMATION



1) MACHINE IDENTIFICATION

Machines are identified by model and in some cases a combination of models, serial number (SN) or regional standard (i.e ANSI, CE, CSA). Components may also be identified by SN or manufacturer. Common components that may be identified by these characteristics are engines and hydraulic components.

2) PARTS MANUAL ORGANIZATION

Product information in this manual is organized under section titles. Frame, Cylinder, Hydraulic and Electrical are a few examples. Each section is organized by figure and page number. The information within the Figure is then organized by item number, part number, description and corresponding illustration (s).

3) TABLE OF CONTENTS

A table of contents is found toward the beginning of the manual. Figure number, description and page number are provided for quick reference to the page containing the related information.

4) RECOMMENDED SPARE PARTS

The Recommended Spare Parts, located near the end of the manual, reference most frequently used maintenance parts.

5) PART NUMBER INDEX

A numerical index listing all part numbers and the corresponding page number(s) appears at the back of the manual.

GENERAL INFORMATION

6) NON-SERVICED PARTS

In some instances, it is necessary to display non-serviced parts, assemblies or installations. In the case of assemblies and installations there will be a Ref in the Qty column. In case of parts that are not available for service within assemblies or components, there will be a NSS (Not Sold Separately) or NLA (No Longer Available) listed in the Qty. column of the manual.

7) PARTS LIST ITEM NUMBERS

Numbers shown in the item# column correspond to numbers used in the associated illustration (s). Item numbers which are missing from the sequence in the parts list are not used on that page

8) INDENTED PARTS DESCRIPTION

An indented part description is included in the item under which it is indented.

9) ABB REVIATION AND SYMBOLS

AC.....	.. Alternating Current	LCD .....	.. Liquid Crystal Display
ADE. ....	..Advanced Design Electronics	LED .....	.. Light Emitting Diodes
ANSI .....	..American National Standards Institute	LH... .....	.. Left Hand
AR. ....	..As Required	LSS .....	..Load Sensing System
ASSY .....	.. Assembly	M(m)...	.. Metric/Meter
AUX... .....	..Auxiliary	MM (mm) .....	..Milimeter
AWG.....	..American WireGauge	mA.....	.. Milliamps
B/M.....	.. Bill of Material	NLA.....	..No Longer Available
CE.....	..European Conformity	NPT .....	.. National Pipe T threads
CCW .....	..Counter Clockwise	NSS .....	..Not Sold Separately
cm.....	.. Centimeter	OD.....	..Outside Diameter
CW .....	..Clockwise	OR B.....	.. O-Ring Bos s
CSA. ....	..Canadian Standards Association	ORFS.....	.. O-Ring Face Seal
CYL... .....	..Cylinder	OZ (oz). ....	..Ounces
DIA. ....	..Diameter	PG .....	..Page
DC .....	..Direct Current	P/N.....	..Part Number
EMS .....	.. Emergency Stop	qt.....	..Quarts
ENG .....	..Engine	QTY.....	..Quantity
FT (ft).....	.. Feet	REF .....	..Reference
GA(Ga).. .....	..Gauge	REV .....	..Revision Level
HYD .....	..Hydraulic	RH... .....	.. Right Hand
Hz. ....	..Hertz	SAE.....	.. Society of Automotive Engineers
ID.....	..Inside Diameter	SN. ....	..Serial Number
in.....	.. inches	SPEC(S).....	..Specifications
ISO .....	..International Organization for Standards	T/T.....	..Turntable
JIC.....	..Joint Industry Council	UGM .....	..Universal Ground Module
KG .....	..Kilogram	V.....	.. Volts
L.....	..Liter	W.....	.. Watts
LB .....	..Pounds	#.....	.. Number

10) ILLUSTRATION REFERENCE LETTERS

When necessary, illustrations may contain reference letters that are intended to track information (i. e. hoses, harnesses) from one point to another or to track visual enlargement of components to show details that may be located in another area on the illustration.

Note: Due to continuous product improvements, JLG Industries, Inc. reserves the right to make specification changes without prior notification. Contact JLG Industries, Inc. for updated information.

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SECTION 1 - FRAME

SECTION 1 - FRAME

FIGURE 1-1. STEERING INSTALLATION

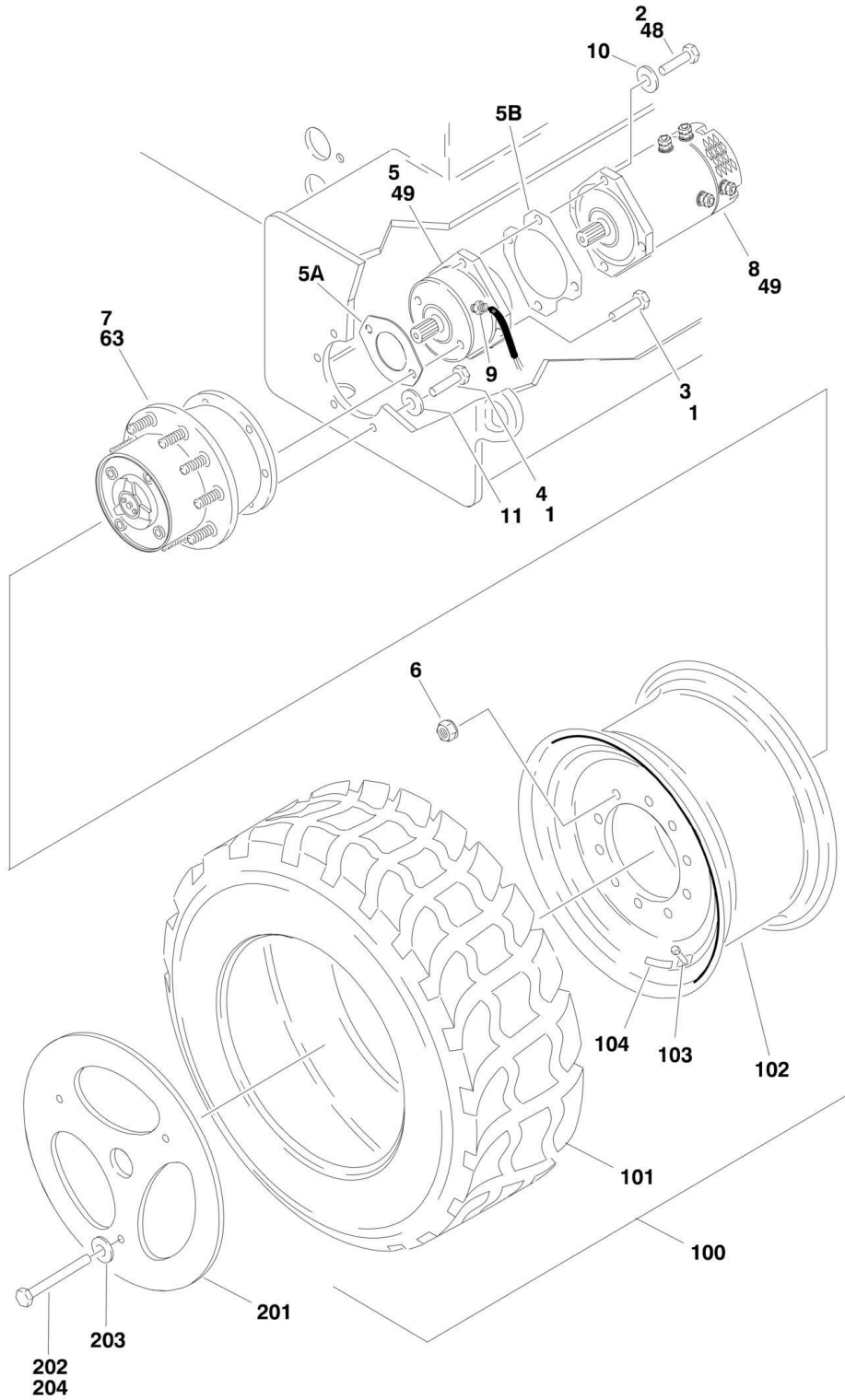
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	STEER INSTALLATION OPTIONS:	
	0257817	Ref	Standard Width E450A/E450AJ/M450A/M450AJ & E400A/E400AJP/M400A/M400AJP Models	F
	0270010	Ref	Narrow Width E400Anarrow/E400AJPnarrow/M400Anarrow/M400AJPnarrow Models	F
1		Ref	Hub/Spindle Assembly Options (Left Side) (See Items 101-115 for Breakdown):	
1	2780242	1	Hub/Spindle Assembly (Left Side) Standard Width Models	
1	2780250	1	Hub/Spindle Assembly (Left Side) Narrow Width Models	
2		Ref	Hub/Spindle Assembly Options (Right Side) (See Items 101-115 for Breakdown):	
2	2780241	1	Hub/Spindle Assembly (Right Side) Standard Models	
2	2780251	1	Hub/Spindle Assembly (Right Side) Narrow Models	
3	3300426	18	Lugnut 5/8in-18NF	
4	3422692	2	Kingpin	
5		Ref	Steering Link Options:	
5	3010119	NLA	Steering Link -Standard Width Models (Use p/n 1001153021) (Prior to SN 0300187085)	
5	1001153021	2	Steering Link -Standard Width Models (SN 0300187085 through 0300189898)	
5	3010121	NLA	Steering Link - Narrow Width Models (Use p/n 1001153023) (Prior to SN 0300187090)	
5	1001153023	2	Steering Link Narrow Width Models (SN 0300187090 through 0300189898)	
6	1683591	1	Steer Cylinder Assembly (See CYLINDER SECTION for Breakdown)	
7		Ref	End, Rod Options:	
7	3841367	2	End, Rod (Prior to SN 0300058200)	
7	3841517	2	End, Rod (SN 0300058200 through 0300189898)	
8	0440162	AR	Washer, Thrust	
10	3312008	4	Nut, Serrated 5/8in-11NC	
11	0641606	4	Bolt 3/8in-16NC x 3/4in	
12	3450810	2	Pin, Cotter 1/4in x 2-1/2in	
13	3323003	2	Nut, Castle 1-1/4in-12NF	
14	3900109	4	Screw, Socket Head Shoulder 3/4in-16NF x 1-3/4in	
15	3322202	2	Nut, Jam 3/4in-16NF	
16	0681810	4	Bolt 1/2in-13NC x 1-1/4in (Grade 8)	
17	0100011	AR	Compound, Locking	
18	4891800	4	Washer, Hardened 1/2in	
19	4740156	2	Washer, Thrust Only (SN 0300058200 through 0300189898)	
20	1001151395	AR	Shim, Plate (SN 0300176717 through 0300189898)	
21	1001151428	AR	Shim, Plate (SN 0300176717 through 0300189898)	
		Ref	HUB/SPINDLE ASSEMBLY OPTIONS:	
	2780242	Ref	Standard Width E450A/E450AJ/M450A/M450AJ & E400A/E400AJP/M400A/M400AJP Models (Left Side)	C
	2780241	Ref	Standard Width E450A/E450AJ/M450A/M450AJ & E400A/E400AJP/M400A/M400AJP Models (Right Side)	C
	2780250	Ref	Narrow Width E400Anarrow/E400AJPnarrow/M400Anarrow/M400AJPnarrow Models (Left Side)	C
	2780251	Ref	Narrow Width E400Anarrow/E400AJPnarrow/M400Anarrow/M400AJPnarrow Models (Right Side)	C

SECTION 1 - FRAME

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
			Models (Right Side)	
101		Ref	Spindle Options:	
101	4130350	AR	Spindle - Standard Width Models (Left Side)	
101	4130351	AR	Spindle - Standard Width Models (Right Side)	
101	7023216	AR	Spindle - Narrow Width Models (Left Side)	
101	7023217	AR	Spindle - Narrow Width Models (Right Side)	
102	0962140	2	Bushing (1 per Assembly)	
103	0961951	4	Bushing (2 per Assembly)	
104	7020035	2	Hub Assy (1 per Assembly)	
105	7020036	2	Cup, Bearing - Inner (1 per Assembly)	
106	7020038	2	Cup, Bearing - Outer (1 per Assembly)	
107	7020041	18	Stud (9 per Assembly)	
108	7020037	2	Cone, Bearing - Inner (1 per Assembly)	
109	7020039	2	Cone, Bearing - Outer (1 per Assembly)	
110	7020040	2	Seal, Lip (1 per Assembly)	
111	7020137	2	Dust Cap (1 per Assembly)	
112	3300426	18	Lugnut 5/8in-18NF (9 per Assembly)	
113	7020055	2	Washer, Tanged (1 per Assembly)	
114	7020054	2	Nut, Castle (1 per Assembly)	
115	7020140	2	Pin, Cotter (1 per Assembly)	
201		Ref	FRAME WELDMENTS	
201	2360505	Ref	Frame Weldments (E450A/M450A) (Prior to SN 0300059390)	
201	2360532	Ref	Frame Weldments (E450A/M450A) (SN 0300059390 through 0300189898)	
201	2360510	Ref	Frame Weldments (E450AJ/M450AJ) (Prior to SN 0300059390)	
201	2360538	Ref	Frame Weldments (E450AJ/M450AJ) (SN 0300059390 through 0300189898)	
201	2360532	Ref	Frame Weldments (E400AJP/M400AJP & E400A/M400A)	
201	2360531	Ref	Frame Weldments (E400AJPnarrow/M400AJPnarrow)	
201	2360548	Ref	Frame Weldments (E400Anarrow/M400Anarrow)	

SECTION 1 - FRAME

FIGURE 1-2. TIRE AND WHEEL INSTALLATIONS



SECTION 1 - FRAME

FIGURE 1-2. TIRE AND WHEEL INSTALLATIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	WHEEL DRIVE INSTALLATION OPTIONS:	
	0259069	Ref	Wheel Drive Installation (Standard Spec E/M450 Models) (Prior to SN 0300059390)	7
	0270103	Ref	Wheel Drive Installation (Standard Spec E/M450 Models) (SN 0300059390 through 0300189898)	K
	0270103	Ref	Wheel Drive Installation (Standard Spec E/M400 Models)	K
	0270377	Ref	UL/EE Rated Spec Models	H
1	0100019	AR	Compound, Locking	
2	0641609	8	Bolt 3/8in-16NC x 1-1/8in	
3	0641826	4	Bolt 1/2in-13NC x 3-1/4in	
4		Ref	Bolt (Grade 8) Options:	
4	0682010	12	Bolt 5/8in-11NC x 1-1/4in (Prior to SN 0300154191)	
4	0682012	12	Bolt 5/8in-11NC x 1-1/2in (E/M400) (SN 0300154191 through 0300189901)	
4	0682012	12	Bolt 5/8in-11NC x 1-1/2in (E/M450) (SN 0300154191 through 0300189898)	
5	0920113	2	Drive Brake Assembly	
5	See Note	NLA	Ring, Sensor (1 Per Assembly) (was p/n 7027275 which is no longer available.) (Note: Use p/n 0920113)	
5	7007977	2	Ring, Bearing Retaining (Large) (1 per Assembly)	
5	7011716	2	Ring, Bearing Retaining (Small) (1 per Assembly)	
5	7007913	4	Bolt	
5	7011757	2	Complete Repair Kit (Includes Case and Oil Seals, O-Rings, Back-up Rings, Stator and Rotor Discs, Return Plate, Springs, Bearing and Brake to Hub Gasket (1 per Assembly)	
5	2900768	2	Bearing Kit (1 per Assembly)	
5	7007900	2	Seal, Oil - Front (1 per Assembly)	
5A	7007933	2	Gasket, Brake to Hub (1 Per Assembly)	
5B	70002408	2	Gasket, Brake to Motor (1 Per Assembly) (Not Included in Repair Kit)	
6	3300426	18	Lugnut	
7		Ref	Drive Hub Assembly Options:	
7	2780236	2	Drive Hub Assembly (See DRIVE HUB ASSEMBLY for Breakdown) (Prior to SN 0300154191)	
7	2780282	2	Drive Hub Assembly (See DRIVE HUB ASSEMBLY for Breakdown) (E/M400) (SN 0300154191 through 0300189901)	
7	2780282	2	Drive Hub Assembly (See DRIVE HUB ASSEMBLY for Breakdown) (E/M450) (SN 0300154191 through 0300189898)	
8	3160239	2	Drive Motor Assembly	
8	7020138	2	Brush Kit for 3160239 (1 per Assembly)	
8	7020150	2	Holder for 3160239 (1 per Assembly)	
9	3990105	2	Sensor, Speed	
10	4711600	8	Flatwasher 3/8in Narrow	
11	4892000	12	Washer, Hardened 5/8in	
48	0100011	AR	Compound, Locking	
49	3020037	AR	Lube, Coupling Grease	
63	3020008	0.4gal	Lube, Grease Oil	
		Ref	TIRE AND WHEEL INSTALLATIONS	
	0258995	Ref	IN240/55-17.5 Pneumatic (Tire with JLG Pattern in Tread)	1
	0270416	Ref	IN240/55-17.5 Pneumatic (Non-Marking Tire with JLG Pattern in Tread) (Prior to SN 0300075100)	2
	0273683	Ref	IN240/55-17.5 Pneumatic (Non-Marking Tire with Lightning	A

SECTION 1 - FRAME

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0273683	Ref	Tread Pattern) (E/M400) (SN 0300075100 through 0300189901)	A
	0272314	Ref	IN240/55-17.5 Pneumatic (Non-Marking Tire with Lightning Tread Pattern) (E/M450) (SN 0300075100 through 0300189898)	2
	0273272	Ref	IN240/55-17.5 Pneumatic (Non-Marking Tire with JLG Pattern in Tread and Tire Sealant)	2
	0273686	Ref	IN240/55-17.5 Pneumatic (Non-Marking Tire with JLG Pattern in Tread and Tire Sealant) (Prior to SN 0300075100)	A
	0273686	Ref	IN240/55-17.5 Pneumatic (Non-Marking Tire with JLG Pattern in Tread and Tire Sealant) (E/M400) (SN 0300075100 through 0300189901)	A
	0258996	Ref	IN240/55-17.5 Pneumatic (Non-Marking Tire with JLG Pattern in Tread and Tire Sealant) (E/M450) (SN 0300075100 through 0300189898)	B
	0270418	Ref	IN240/55-17.5 Foam-Filled (Tire with JLG Pattern in Tread)	2
	0273684	Ref	IN240/55-17.5 Foam-Filled (Non-Marking Tire with JLG Pattern in Tread) (Prior to SN 0300075100)	A
	0273684	Ref	IN240/55-17.5 Pneumatic (Non-Marking Tire with Lightning Tread Pattern) (E/M400) (SN 0300075100 through 0300189901)	A
	0273684	Ref	IN240/55-17.5 Pneumatic (Non-Marking Tire with Lightning Tread Pattern) (E/M450) (SN 0300075100 through 0300189898)	A
	0259679	Ref	LT215/8R16 Pneumatic	1
	0270037	Ref	26in x 7in x 20in Solid (Non-Marking)	2/A
	0270028	Ref	Solid (Non-Marking) (Narrow Machines Only)	B
100		Ref	Tire Assembly Options:	
100		Ref	Standard Width E/M450 & E/M400 Models:	
		Ref	Note: Assemblies may require ballast/foam filling to manufacturer's specifications prior to installing on a machine. Refer to Operation and Safety or Service and Maintenance Manuals. Purchase individual tire and/or rim only if able to foam fill tire and wheel assembly, otherwise, purchase complete assembly.	
100	0258688	4	OTR IN240/55-17.5 Pneumatic (Tire with JLG Pattern in Tread)	2-A
100	0270415	4	OTR IN240/55-17.5 Pneumatic (Non-Marking Tire with JLG Pattern in Tread) (Prior to SN 0300075100)	3-B
100	4520279	4	OTR IN240/55-17.5 Pneumatic (Non-Marking Tire with Lightning Tread Pattern) (E/M400) (SN 0300075100 through 0300189901)	A
100	4520279	4	OTR IN240/55-17.5 Pneumatic (Non-Marking Tire with Lightning Tread Pattern) (E/M450) (SN 0300075100 through 0300189898)	A
100	0272335	4	OTR IN240/55-17.5 Pneumatic (Tire with JLG Pattern in Tread and Tire Sealant)	2-B
100	0273273	4	OTR IN240/55-17.5 Pneumatic (Non-Marking Tire with JLG Pattern in Tread and Tire Sealant) (Prior to SN 0300075100)	2-B
100	4520282	4	OTR IN240/55-17.5 Pneumatic (Non-Marking Tire with Lightning Tread Pattern and Tire Sealant) (E/M400) (SN 0300075100 through 0300189901)	A
100	4520282	4	OTR IN240/55-17.5 Pneumatic (Non-Marking Tire with Lightning Tread Pattern and Tire Sealant) (E/M450) (SN 0300075100 through 0300189898)	A
100	0258997	4	OTR IN240/55-17.5 Foam-Filled (Tire with JLG Pattern in Tread)	1-A
100	0270417	4	OTR IN240/55-17.5 Foam-Filled (Non-Marking Tire with JLG Pattern in Tread) (use p/n 0273468) (Prior to SN 0300154685)	2-B
100	0273468	4	OTR IN240/55-17.5 Foam-Filled (Non-Marking Tire with Lightning Tread Pattern) (E/M400) (SN 0300154685 through	E

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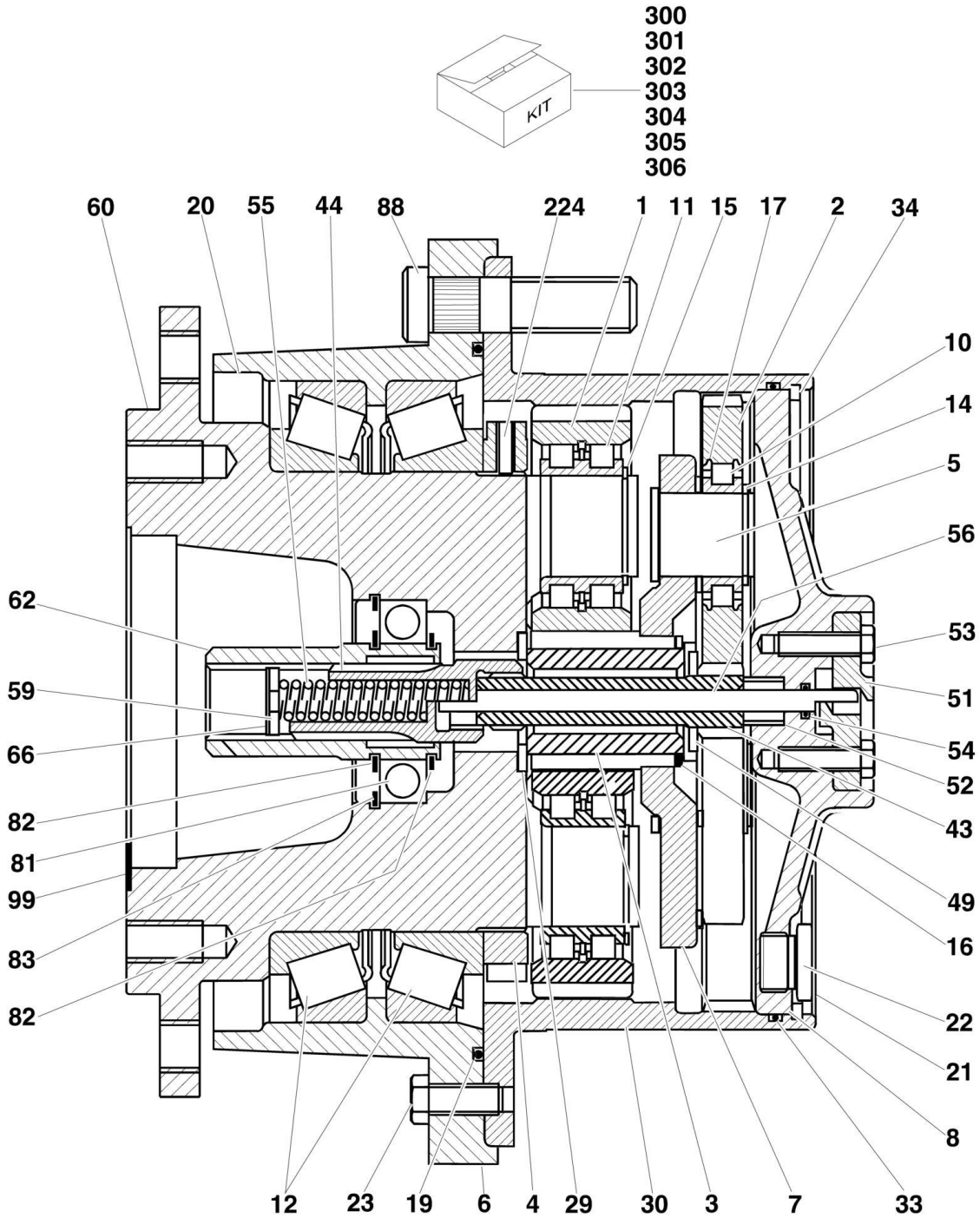
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
100	0273468	4	0300189901 OTR IN240/55-17.5 Foam-Filled (Non-Marking Tire with Lightning Tread Pattern) (E/M450) (SN 0300154685 through 0300189898)	E
100	0258037	4	Goodyear LT215/8R16 Pneumatic	1-A
100		Ref	Solid Non-Marking Tire and Wheel Assembly Options	
100		Ref	Note: Must replace Tire and Wheel Assemblies in pairs per axle.	
100	4520232	AR	Monarch 26in x 7in x 20in Solid Non-Marking (Steer Axle Tire) (use p/n 1001110775) (Prior to SN 0300142352)	
100	1001110775	AR	Solideal 26in x 7in x 20in Solid Non-Marking (Steer Axle Tire) (E/M400) (SN 0300142352 through 0300189901)	
100	1001110775	AR	Solideal 26in x 7in x 20in Solid Non-Marking (Steer Axle Tire) (E/M450) (SN 0300142352 through 0300189898)	
100		Ref	Narrow Width E/M400 Models:	
100		Ref	Note: Must replace Tire and Wheel Assemblies in pairs per axle.	
100		Ref	22in x 6in x 17.75in Solid Non-Marking Tire and Wheel Assembly (Steer Axle Tire)	
100	4520231	2	Trelleborg Tire and Wheel Assembly (Steer Axle Tire) (use p/n 1001110774) (Prior to SN 0300141858)	
100	1001110774	2	Solideal Tire and Wheel Assembly (Steer Axle Tire) (E/M400) (SN 0300141858 through 0300189901)	
100	1001110774	2	Solideal Tire and Wheel Assembly (Steer Axle Tire) (E/M450) (SN 0300141858 through 0300189898)	
100		Ref	25in x 7in x 16in Solid Non-Marking Tire and Wheel Assembly (Drive Axle Tire) Options:	
100	4520208	2	Trelleborg Tire and Wheel Assembly (Drive Axle Tire) (use p/n 1001110772) (Prior to SN 0300141858)	
100	1001110772	2	Solideal Tire and Wheel Assembly (Drive Axle Tire) (E/M400) (SN 0300141858 through 0300189901)	
100	1001110772	2	Solideal Tire and Wheel Assembly (Drive Axle Tire) (E/M450) (SN 0300141858 through 0300189898)	
100		Ref	Note: Assemblies may require ballast/foam filling to manufacturer's specifications prior to installing on a machine. Refer to Operation and Safety or Service and Maintenance Manuals. Purchase individual tire and/or rim only if able to foam fill tire and wheel assembly, otherwise, purchase complete assembly.	
101		Ref	Tire Options:	
101	4520209	1	IN240/55-17.5 Tire with JLG Pattern in Tread	
101	4520247	1	IN240/55-17.5 Non-Marking Tire with JLG Pattern in Tread	
101	4520269	1	IN240/55-17.5 Non-Marking Tire with Lightning Tread Pattern	
101	4520206		LT215/8R16	
102		Ref	Rim, Wheel Options:	
102	4860191	1	Use with IN240/55-17.5 Tires	
102	4860181	1	Use with LT215/8R16 Tires	
102	See Note	1	Other Tire/Wheel Assemblies (Note: Purchase Complete Assembly)	
103		Ref	Valve, Air Options:	
103	4641167	1	Pneumatic Tires	
103	4640392	1	Foam-Filled Tires	
103	1120552	1	Cap, Green (Used on Tires with Sealant)	
104		Ref	Decal - Tire Air Pressure Options:	
104	1702740	1	90PSI	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
104	1702701	1	95PSI	
105	1300019	AR	Sealant, Tire (Not Shown)	
106	1705364	1	Decal - Tire Sealant (Not Shown - Used on Tires with Sealant)	
	0259302	Ref	WHEEL COVER INSTALLATION (IN240/55-17.5 TIRES ONLY)	1-A
201	1670887	4	Cover, Wheel	
202	0641542	12	Bolt 5/16in-18NC x 5-1/4in	
203	4711500	12	Flatwasher 5/16in Narrow	
204	0100011	AR	Compound, Locking	

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FIGURE 1-3. DRIVE HUB ASSEMBLY (Prior to SN 0300154191)



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FIGURE 1-3. DRIVE HUB ASSEMBLY (Prior to SN 0300154191)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2780236	Ref	DRIVE HUB ASSEMBLY	E
1	7021323	4	Gear, Planet	
2	7021324	3	Gear, Planet	
3	7021325	1	Gear, Sun	
4	7023803	1	Nut, Shaft	
		Ref	NOTE: Unless there is capability to torque shaft nut (item 4) to 625 ft/lbs. (850Nm) Repair beyond this level is NOT advised.	
5	7021326	3	Bolt, Planet	
6	7021327	1	Ring, Support	
7	7021328	1	Carrier, Planet	
8	70003711	1	Cover	
10	70003712	3	Bearing, Roller	
11	70003713	4	Bearing, Roller	
12	70003714	2	Bearing, Roller	
14	70003715	3	Ring, Retaining	
15	70003716	4	Ring, Retaining	
16	7021341	1	Ring, Retaining	
17	70003717	3	Disk, Support	
19	See Note	1	O-Ring (Note: Use Items 300 or 303)	
20	See Note	1	Seal, Ring (Note: Use Items 300 or 303)	
21	See Note	3	Plug (Note: Use Items 300 or 304)	
22	See Note	3	Seal, Ring (Note: Use Items 300 or 304)	
23	7021342	3	Bolt	
29	7024049	1	Washer, Housing	
30	7021335	1	Gear, Ring	
33	See Note	1	O-Ring (Note: Use Items 300, 303 or 304)	
34	70003718	1	Ring, Retaining	
43	7021336	1	Shaft, Sun Gear	
44	7021337	1	Shaft, Input	
49	7024051	1	Washer, Thrust	
51	70003719	1	Cover	
52	70003720	1	Disk	
53	70003721	2	Bolt	
54	See Note	1	O-Ring (Note: Use Items 300, 304, 305 or 306)	
55	7024053	1	Spring, Pressure	
56	70003722	1	Rod, Shaft	
59	70003723	1	Disk, Rotor	
60	7021339	1	Spindle	
62	7021340	1	Coupler	
66	70003724	1	Ring, Retaining	
81	7024983	1	Bearing, Ball	
82	7021341	2	Ring, Retaining	
83	7024931	1	Ring, Retaining	
88	7021344	9	Stud, Wheel (was p/n 7024984)	
99	7024985	1	Plug	
224		Ref	Component Options:	
224	See Note	2	Ball (Note: Not Available - Use Slotted Pin in Kit 303) (Prior to SN 0300089390)	
224	See Note	2	Expander (Note: Not Available - Use Slotted Pin in Kit 303) (Prior to SN 0300089390)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
224	See Note	2	Plug (Note: Not Available - Use Slotted Pin in Kit 303) (Prior to SN 0300089390)	
224	70003725	2	Pin, Slotted (E/M400) (SN 0300089390 through 0300189901)	
224	70003725	2	Pin, Slotted (E/M450) (SN 0300089390 through 0300189898)	
		Ref	SEAL/REPAIR KIT OPTIONS:	
300	7021333	1	Seal Kit (Includes Items 19-22, 33 & 54)	
301	7024981	1	Planet Gear Kit 1 (Includes Items 1, 11 & 15)	
302	7024986	1	Planet Gear Kit 2 (Includes Items 2, 10,14 & 17)	
303	7024047	1	Bearing Kit (Includes Items 4, 12, 19, 20, 23, 33 & 224)	
		Ref	NOTE: Unless there is capability to torque shaft nut (item 4) to 625 ft/lbs. (850Nm) Repair beyond this level is NOT advised.	
304	7021329	1	Cover Kit (Includes Items 8, 21, 22, 33, 34 & 51-54)	
305	7021338	1	Mechanical Disconnect Kit 1(Includes Items 54-56, 59 & 66)	
306	7024054	1	Mechanical Disconnect Kit 2 (Includes Items 51, 53, 54 & 56)	

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FIGURE 1-4. DRIVE HUB ASSEMBLY

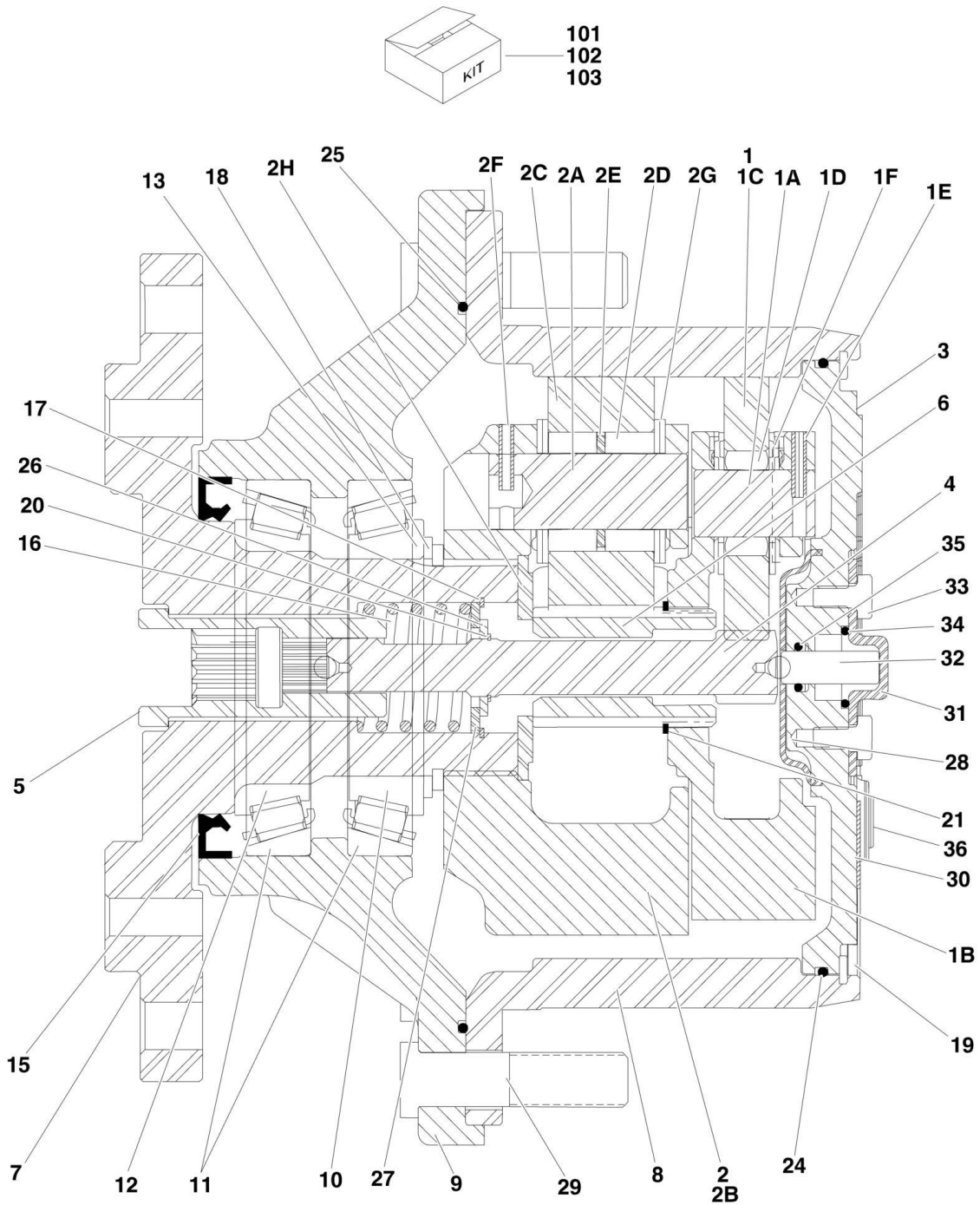


FIGURE 1-4. DRIVE HUB ASSEMBLY

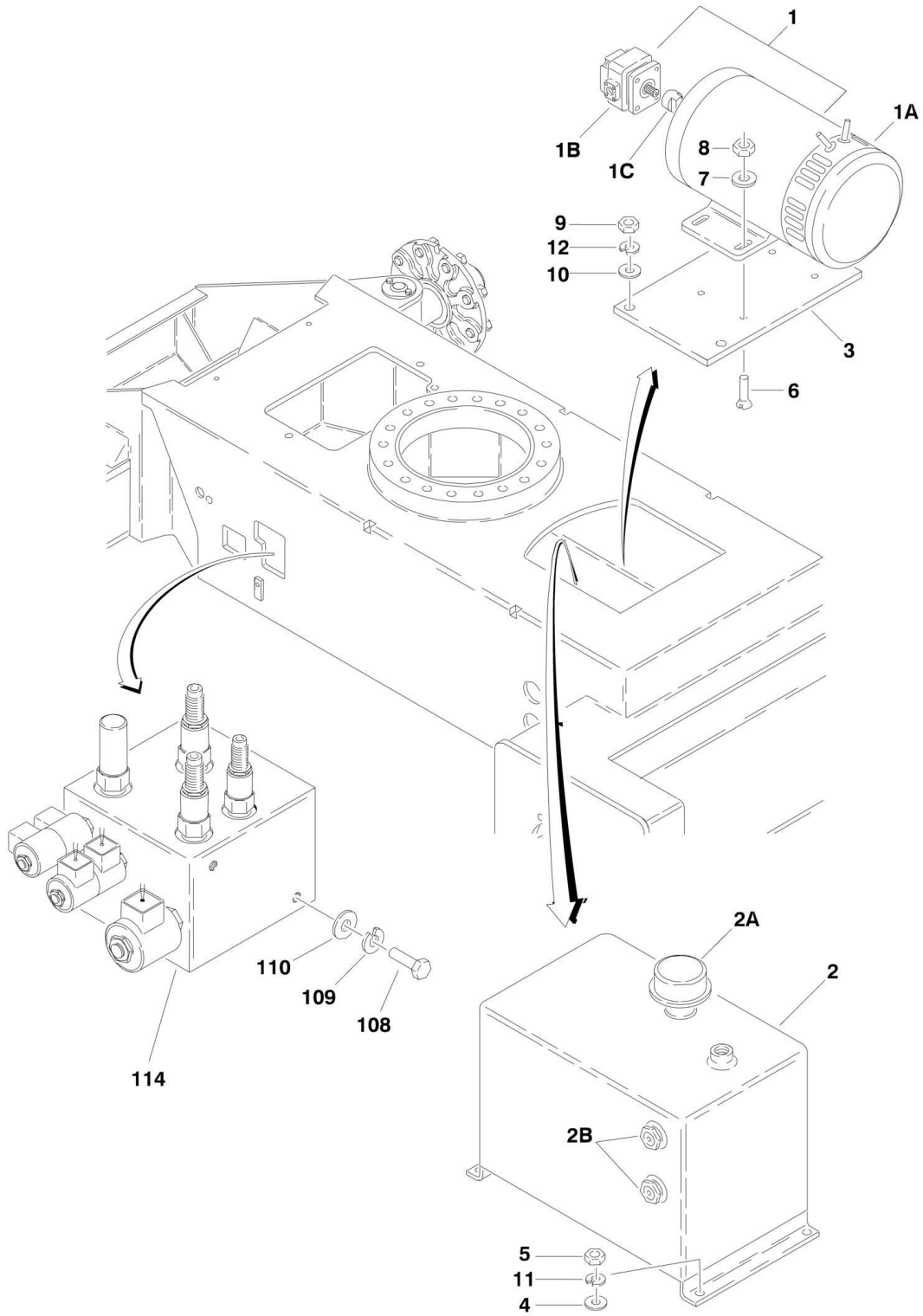
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2780282	Ref	DRIVE HUB ASSEMBLY	B
1	70001366	1	Carrier, Sub Assembly (Includes Items 1A-1F)	
1A	See Note	NSS	Shaft, Planet (Note: Use Item 1)	
1B	See Note	NSS	Carrier (Note: Use Item 1)	
1C	See Note	NSS	Gear, Planet (Note: Use Item 1)	
1D	See Note	NSS	Bearing, Needle (Note: Use Item 1)	
1E	See Note	NSS	Pin, Roll (Note: Use Item 1)	
1F	See Note	NSS	Washer, Thrust (Note: Use Item 1)	
2	70001367	1	Carrier, Input (Includes Items 2A-2H)	
2A	See Note	NSS	Shaft, Planet (Note: Use Item 2)	
2B	See Note	NSS	Carrier (Note: Use Item 2)	
2C	See Note	NSS	Gear, Planet (Note: Use Item 2)	
2D	See Note	NSS	Bearing, Needle (Note: Use Item 2)	
2E	See Note	NSS	Spacer, Thrust (Note: Use Item 2)	
2F	See Note	NSS	Pin, Roll (Note: Use Item 2)	
2G	See Note	NSS	Washer, Thrust (Note: Use Item 2)	
2H	See Note	NSS	Washer, Thrust (Note: Use Item 2)	
3	70001368	1	Cover	
4	70001369	1	Shaft, Input	
5	70001370	1	Coupling	
6	70001371	1	Shaft, Sun Gear	
7	70001372	1	Spindle	
8	70001373	1	Gear, Ring	
9	2780282	1	Housing	
10	See Note	NSS	Bearing, Tapered-Cone (Note: Use Item 101)	
11	See Note	NSS	Bearing, Tapered-Cup (Note: Use Item 101)	
12	See Note	NSS	Bearing, Tapered-Cone (Note: Use Item 101)	
13	7017009	1	Washer, Thrust	
15	See Note	NSS	Seal, Lip (Note: Use Item 102)	
16	70001374	1	Spring	
17	70001375	1	Ring, Retaining (Internal)	
18	See Note	NSS	Ring, Retaining (External) (Note: Use Item 102)	
19	7024738	1	Ring, Retaining (Internal)	
20	70001376	1	Ring, Retaining (External)	
21	70001377	1	Ring, Retaining (External)	
22	7000281	4	Screw (Not Shown - ID plate screws)	
23	7017022	3	Bolt, Flathead (Not Shown - Located on front of hub)	
24	See Note	NSS	O-Ring (Note: Use Item 102)	
25	See Note	NSS	O-Ring (Note: Use Item 102)	
26	70001378	1	Spacer, Thrust	
27	70001379	1	Washer, Thrust	
28	7024741	1	Spacer, Thrust	
29	7007640	9	Stud, Wheel	
30	See Note	NSS	Flange, Plate (Note: Use Item 103)	
31	See Note	NSS	Cap, Disengage (Note: Use Item 103)	
32	See Note	NSS	Pin, Dowel (Note: Use Item 103)	
33	See Note	NSS	Bolt (Note: Use Item 103)	
34	See Note	NSS	O-Ring (Note: Use Item 103)	
35	See Note	NSS	O-Ring (Note: Use Item 103)	
36	See Note	NSS	Plug (Note: Use Item 103)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Kit Options	
101	7017007	1	Planet Gear Bearing Kit (Includes Items 10-12)	
102	70001380	1	Planet Gear Seal Kit (Includes Items 15, 18, 24 & 25)	
103	70001368	1	Cap/Disengage Kit (Includes Items 30-36)	

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FIGURE 1-5. HYDRAULIC COMPONENTS INSTALLATION



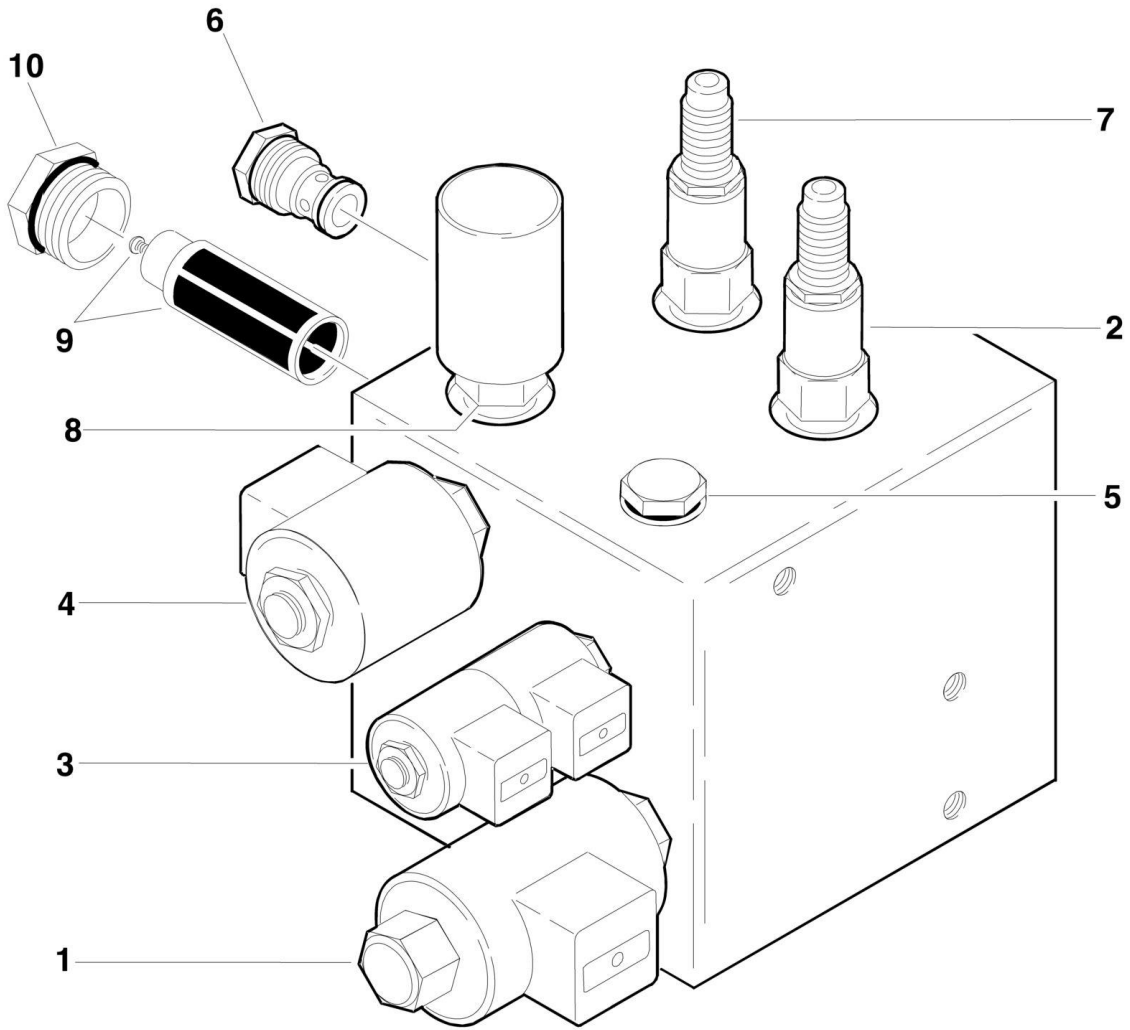
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FIGURE 1-5. HYDRAULIC COMPONENTS INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	HYDRAULIC MOTOR/PUMP/TANK INSTALLATION	
	0257816	Ref	Standard Spec Machines	4-C
	0270376	Ref	UL/EE Rated Spec Machines	1-A
1	3600289	1	Motor/Pump Assembly	
1A	7021318	1	Motor Assembly	
1A	7021361	1	Brush Kit (was p/n 7021368)	
1A	70003171	4	Spring, Brush	
1A	70001961	1	Seal, Oil	
1B	7021319	1	Pump Assembly	
1B	7021377	1	Seal Kit (Note: Not available for purchase)	
1C	7021367	1	Coupling	
2	4400416	1	Hydraulic Tank Assembly	
2A	7021320	1	Cap	
2B	7021369	2	Gauge, Oil Level Sight	
2B	2220886	1	Plug, Non-magnetic Drain	
3	3571160	1	Plate, Mounting	
4	4711400	4	Flatwasher 1/4in Narrow	
5	3311405	4	Locknut 1/4in-20NC	
6	0741506	4	Screw, Flathead Countersink 5/16in-18NC x 3/4in	
7	4751500	4	Flatwasher 5/16in	
8	3311505	4	Locknut 5/16in-18NC	
9	3311605	2	Locknut 3/8in-16NC	
10	4751600	2	Flatwasher 3/8in	
11	4761400	4	Lockwasher 1/4in	
12	4761600	2	Lockwasher 3/8in	
13	0340048	1	Band, Motor (Not Shown - UL/EE Rated Machines)	
		Ref	VALVES INSTALLATIONS	
	0258034	Ref	Valves Installations (All E/M450A Models)	E
	0259399	Ref	Valves Installations (All E/M450AJ Models)	E
	0258034	Ref	Valves Installations (All E/M400A Models)	E
	0259951	Ref	Valves Installations (All E/M400AJP Models)	C
108	0641608	AR	Bolt 3/8in-16NC x 1in	
109	4711600	AR	Flatwasher 3/8in	
110	4761600	AR	Lockwasher 3/8in	
114		Ref	Brake/Steer Control Valve Assembly Options:	
114	4641149	1	Brake/Steer Control Valve Assembly (use p/n 1001097506) (Prior to SN 0300129142)	
114	1001097506	1	Brake/Steer Control Valve Assembly (E/M400) (SN 0300129142 through 0300189901)	
114	1001097506	1	Brake/Steer Control Valve Assembly (E/M450) (SN 0300129142 through 0300189898)	
120	4922328	1	Harness Assembly - Brake/Steer Control Valve (Not Shown -See ELECTRICAL SECTION for Breakdown)	

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FIGURE 1-6. BRAKE/STEER VALVE ASSEMBLY



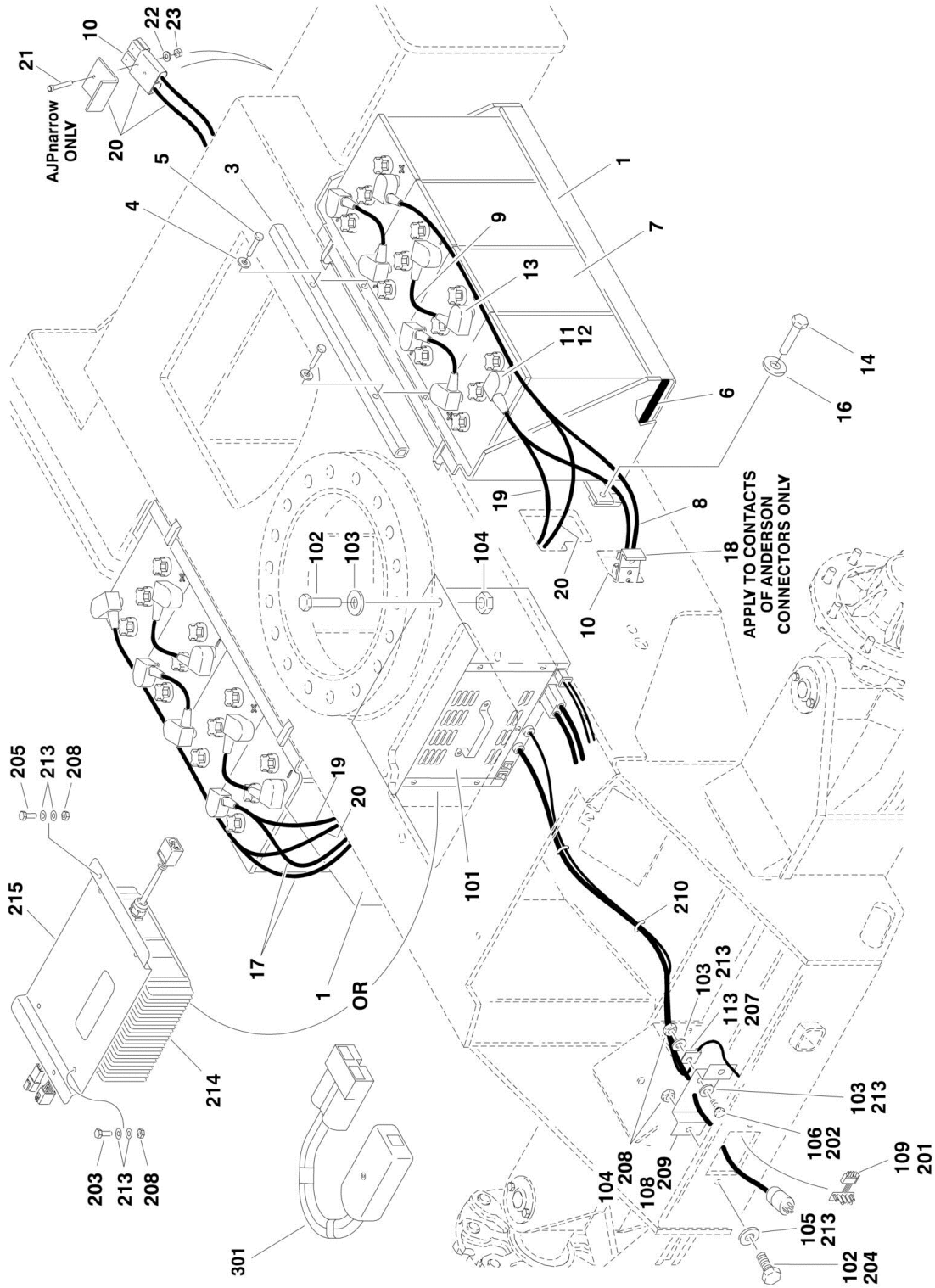
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FIGURE 1-6. BRAKE/STEER VALVE ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	BRAKE/STEER VALVE ASSEMBLIES	
	4641149	Ref	Hydro Air Brand (Prior to SN 0300129142)	G
	1001097506	Ref	Hydraforce Brand (E/M400) (SN 0300129142 through 0300189901)	B
	1001097506	Ref	Hydraforce Brand (E/M450) (SN 0300129142 through 0300189898)	B
1		Ref	Cartridge, Proportional without Coil Options: (Flow Control)	
1	7017450	1	Cartridge, Proportional without Coil (Prior to SN 0300062645)	
1	7021611	1	Cartridge, Proportional without Coil (E/M400) (SN 0300062645 through 0300189901)	
1	7021611	1	Cartridge, Proportional without Coil (E/M450) (SN 0300062645 through 0300189898)	
1	7012518	1	Seal Kit - 7017450/7021611 Cartridges	
1	7021618	1	Coil	
2	7021659	1	Cartridge, Relief (Main)	
2	7012972	1	Seal Kit - 7021659 Cartridge	
3	7017433	1	Cartridge (Steer)	
3	7017402	1	Seal Kit - 7017433 Cartridge	
3	7021609	2	Coil	
4	7012941	1	Cartridge without Coil (Brake Release)	
4	7010543	1	Seal Kit - 7012941 Cartridge	
4	7021609	1	Coil	
5	7022391	1	Cartridge, Check (was p/n 7017412)	
5	7012967	1	Seal Kit - 7022391 Cartridge	
6	7010542	1	Cartridge, Shuttle	
6	7010543	1	Seal Kit - 7010542 Cartridge	
7	7017488	1	Cartridge, Relief (Steer) (was p/n 7017428)	
7	7012998	1	Seal Kit - 7017488 Cartridge	
8	7021619	1	Switch, Pressure	
9	7021616	1	Cartridge, Filter	
10	7024832	1	Plug	

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FIGURE 1-7. BATTERIES AND CHARGER INSTALLATIONS



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FIGURE 1-7. BATTERIES AND CHARGER INSTALLATIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	BATTERIES INSTALLATION	
	0258689	Ref	Batteries Installation (E/M450 Models Built) (Prior to SN 0300059390)	2-C
	0259763	Ref	Batteries Installation (E/M450 Models Built) (SN 0300059390 through 0300189898)	B
	0259763	Ref	Batteries Installation (E/M400 Models)	B
	1001150161	Ref	Batteries Installation (E/M400 & E/M450 Models) (AGM Batteries)	A
1		Ref	Battery Box Weldment Options:	
1	4845846	2	Battery Box Weldment (Both Sides - E/M450 Models) (Prior to SN 0300059390)	
1	4846106	1	Battery Box Weldment (Left Side - E/M450 Models) (SN 0300059390 through 0300189898)	
1	4846107	1	Battery Box Weldment (Right Side - E/M450 Models) (SN 0300059390 through 0300189898)	
1	4846106	1	Battery Box Weldment (Left Side - E/M400 Models)	
1	4846107	1	Battery Box Weldment (Right Side - E/M400 Models)	
1	1001150514	1	Battery Box Weldment (Left Side - E/M400 & E/M450 Models) (AGM Batteries)	
1	1001150513	1	Right Side - E/M400 & E/M450 Models (AGM Batteries)	
3		Ref	Battery Hold Down Options:	
3	4567679	2	Battery Hold Down (E/M450 Models) (Prior to SN 0300059390)	
3	0182010	2	Battery Hold Down (E/M450 Models) (SN 0300059390 through 0300189898)	
3	0182010	2	Battery Hold Down (E/M400 Models)	
3	1001150181	2	Battery Hold Down (E/M400 & E/M450 Models) (AGM Batteries)	
4	4711500	4	Flatwasher 5/16in Narrow	
5	0641514	4	Bolt 5/16in-18NC x 1-3/4in	
5	0641504	4	Bolt 5/16in-18NC x 1/2in	
5	0641506	4	Bolt 5/16in-18NC x 3/4in	
6	3000003	2	Liner, Battery Box	
7		Ref	Battery Options:	
7	0400055	8	Wet	
7	7016177	8	Dry	
7	1001114782	8	Wet (AGM Battery)	
8		Ref	Cable, Battery (Left)	
8	1060760	1	Cable, Battery (Left) (E/M450 Models Built) (Prior to SN 0300059390)	
8	See Note	1	Cable, Battery (Left) (E/M450 Models Built) (Note: See Item 19 & 20) (SN 0300059390 through 0300189898)	
8	See Note	1	Cable, Battery (E/M400 Models) (Note: See Item 19 & 20)	
8	See Note	1	Cable, Battery (E/M400 & E/M450 Models) (AGM Batteries) (Note: See Item 19 & 20)	
9	1060092	6	Cable, Battery	
10	0100048	AR	Adhesive, Silicone	
11	0100051	AR	Grease, Terminal	
12	0840031	8	Boot, Terminal ("d" shape)	
13	0840032	8	Boot, Terminal ("b" shape)	
14	0641808	4	Bolt 1/2in-13NC x 1in	
14	0641813	8	Bolt 1/2in-13NC x 1- 5/8in	
16	4711800	8	Flatwasher 1/2in Narrow	

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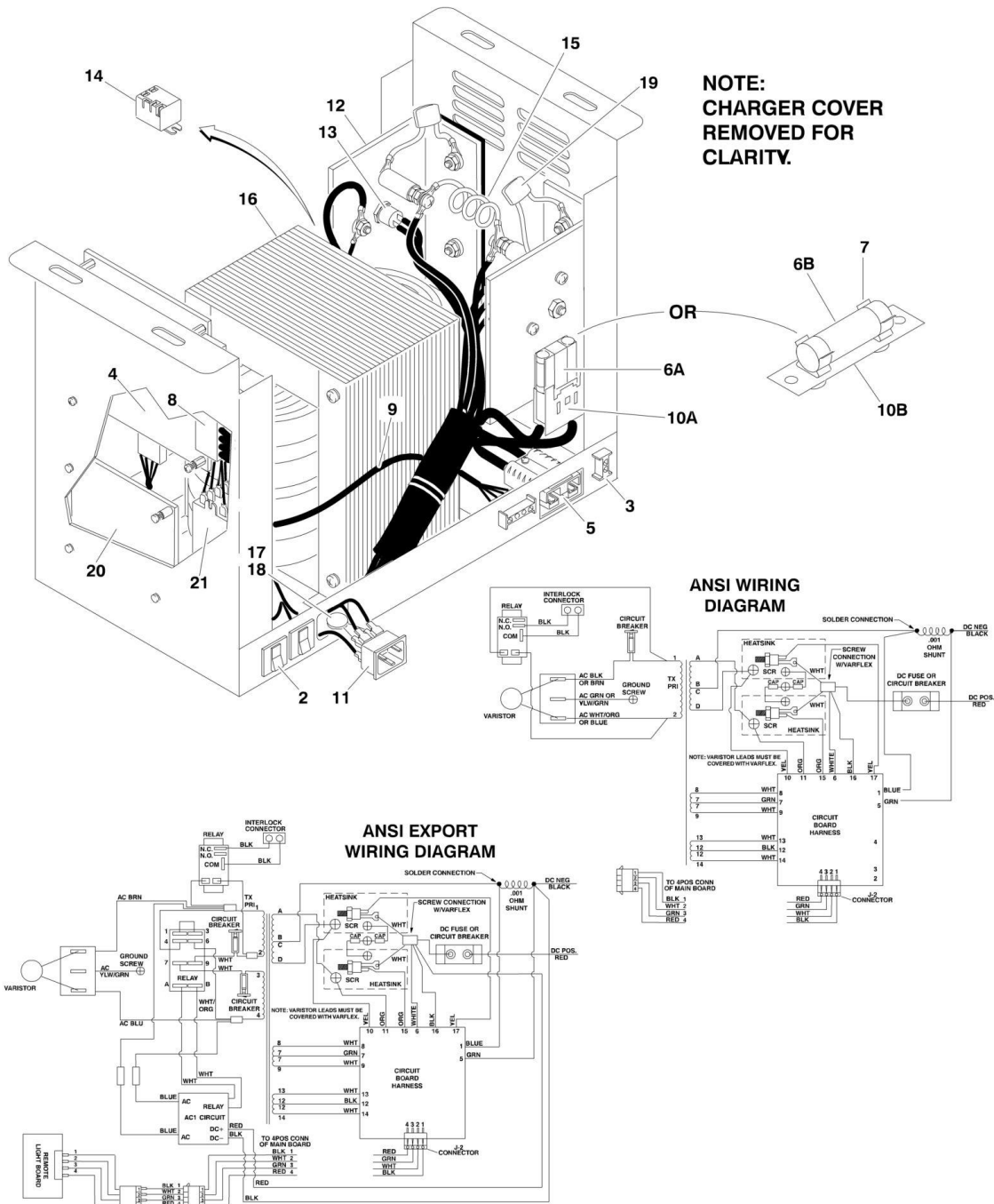
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
16	4751800	8	Flatwasher 1/2in Wide	
17		Ref	Cable, Battery (Right)	
17	1060761	1	Cable, Battery (Right) (E/M450 Models Built) (Prior to SN 0300059390)	
17	See Note	1	Cable, Battery (Right) (E/M450 Models Built) (Note: See Item 19 & 20) (SN 0300059390 through 0300189898)	
17	See Note	1	Cable, Battery (Right) (E/M400 Models) (Note: See Item 19 & 20)	
17	See Note	1	Cable, Battery (Right) (E/M400 & E/M450 Models) (AGM Batteries) (Note: See Item 19 & 20)	
18	1320172	2	Clamp, Cable	
19		Ref	Cable, Battery (Battery to Battery)	
19	See Note	1	Cable, Battery (Battery to Battery) (E/M450 Models) (Note: See Item 8 & 17) (Prior to SN 0300059390)	
19	1060811	1	Cable, Battery (Battery to Battery) (E/M450 Models) (SN 0300059390 through 0300189898)	
19	1060811	1	Cable, Battery (Battery to Battery) (E/M400 Models)	
19	1060811	1	Cable, Battery (Battery to Battery) (E/M400 & E/M450 Models) (AGM Batteries)	
20		Ref	Cable, Battery (Battery to Clamp)	
20	See Note	1	Cable, Battery (Battery to Clamp) (E/M450 Models) (Note: See Item 8 & 17) (Prior to SN 0300059390)	
20	1060809	1	Cable, Battery (Battery to Clamp) (E/M450 Models) (SN 0300059390 through 0300189898)	
20	1060809	1	Cable, Battery (Battery to Clamp) (E/M400 Models)	
20	1060809	1	Cable, Battery (Battery to Clamp) (E/M400 & E/M450 Models) (AGM Batteries)	
21	3311405	2	Locknut 1/4in-20NC	
22	3931430	2	Capscrew, Socket Head 1/4in-20NC x 1-7/8in	
23	4711400	2	Flatwasher 1/4in Narrow	
		Ref	MAC BATTERY CHARGER INSTALLATIONS (Prior to SN 0300144567)	
	0259825	Ref	ANSI Spec (105V/132V - Auto Seeking Hz)	4
	0259826	Ref	ANSI Export Spec (110V/220V - Auto Seeking Hz)	3
	0259693	Ref	ANSI Export Spec (250V - Auto Seeking Hz)	3
	0259692	Ref	Japanese Spec (100V - Auto Seeking Hz)	2
	1001092890	Ref	UL Spec (110V/220V - Auto Seeking Hz) (E/M450A & E/M450AJ Only)	1
101		Ref	MAC Battery Charger Assembly Options	
		Ref	Note: See MAC BATTERY CHARGER ASSEMBLY for Replacement Parts for MAC Chargers. To replace complete charger use kit p/n 1001123046. Kit includes Items 214, 215, mounting hardware and connecting harnesses.	
101	0400196	1	ANSI Spec (105V/132V Auto Seeking Hz) (Use p/n 1001123046)	
101	0400197	1	ANSI Export/UL Spec (110V/220V - Auto Seeking Hz) (Use p/n 1001123046)	
101	0400195	1	ANSI Export Spec (250V - Auto Seeking Hz) (Use p/n 1001123046)	
101	0400194	1	Japanese Spec (100V - Auto Seeking Hz) (Use p/n 1001123046)	
102	0641408	4	Bolt 1/4in-20NC x 1in	
103	4711400	6	Flatwasher 1/4in Thin	
104	3311405	5	Locknut 1/4in-20NC	
105	4711400	2	Flatwasher 1/4in Thin	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
106	0641404	1	Bolt 1/4in-20NC x 1/2in	
108	3571834	1	Plate, Panel	
109	0610131	1	Charger LED Assembly	
113	1320136	1	Clamp, Insulated	
		Ref	DELTA-Q BATTERY CHARGER INSTALLATIONS (E/M400) (SN 0300144567 through 0300189901)	
		Ref	DELTA-Q BATTERY CHARGER INSTALLATIONS (E/M450) (SN 0300144567 through 0300189898)	
	1001123054	Ref	Machines with 110V Plug (ANSI, ANSI Export and CSA Specs)	B
	1001107780	Ref	Machines with Locally Supplied Plug (ANSI Export Spec)	B
201	0610131	1	Charger LED Assembly	
202	0641404	1	Bolt 1/4in-20NC x 1/2in	
203	0641405	4	Bolt 1/4in-20NC x 5/8in	
204	0641406	2	Bolt 1/4in-20NC x 3/4in	
205	0641408	2	Bolt 1/4in-20NC x 1in	
207	1320136	1	Clamp, Insulated	
208	3311405	9	Locknut 1/4in-20NC	
209	3571834	1	Plate, Panel	
210	4240033	4	Tie-Strap	
213	4711400	16	Flatwasher 1/4in Thin	
214	1001103105	1	Battery Charger Assembly (See ELECTRICAL SECTION for Breakdown)	
215	1001107779	1	Plate, Battery Charger Mounting	
301	1600466	1	BATTERY CHARGER REPROGRAM CONTROLLER KIT (Use p/n 2915230)	

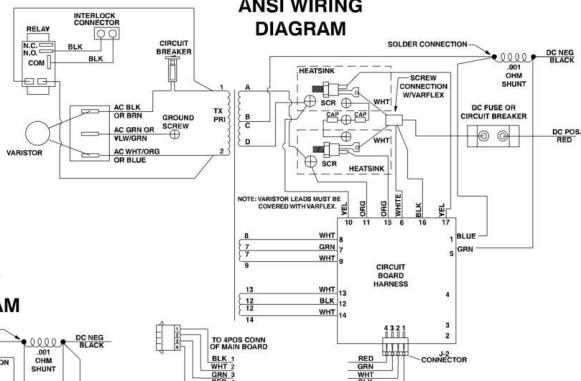
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FIGURE 1-8. MAC BATTERY CHARGER ASSEMBLY

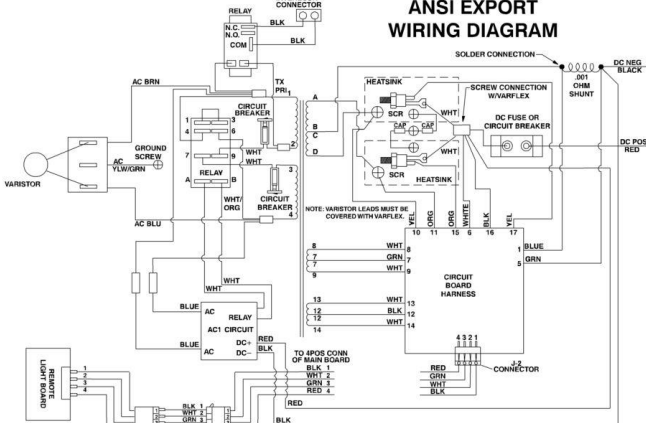


**NOTE:
CHARGER COVER
REMOVED FOR
CLARITY.**

ANSI WIRING DIAGRAM



ANSI EXPORT WIRING DIAGRAM



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FIGURE 1-8. MAC BATTERY CHARGER ASSEMBLY

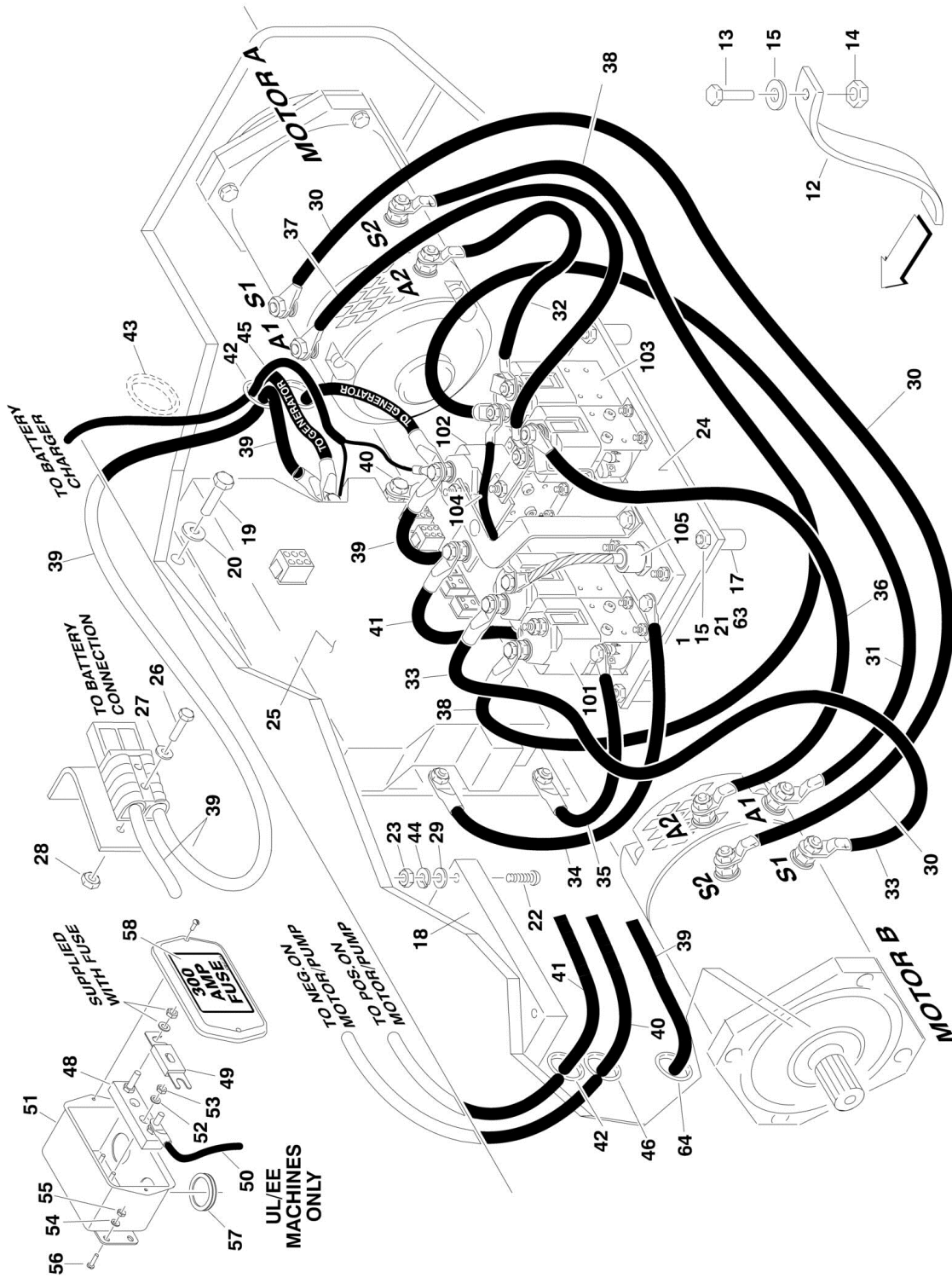
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Note: Refer to battery charger serial number nameplate for build date. Example: BA515 (Spec) 9631 (Date Code). First and second digits in the date code indicate year. Third and fourth digits indicate the week of manufacture.	
		Ref	Note: When replacing complete charger use kit p/n 1001123046.	
		Ref	BATTERY CHARGER ASSEMBLIES	
	0400196	Ref	ANSI Spec (105/132V - Auto Seeking Hz)	B
	0400197	Ref	ANSI Export/UL Spec (110/220V - Auto Seeking Hz)	B
	0400195	Ref	ANSI Export Spec (250V - Auto Seeking Hz)	B
	0400194	Ref	Japanese Spec (100V - Auto Seeking Hz)	B
2		Ref	Breaker, Circuit Options:	
2	7020642	1	0400196 Charger	
2	7020653	2	0400197 Charger	
2	7018525	1	0400195 Charger	
2	7020642	1	0400194 Charger	
3	7011621	1	Connector, Enable Switch	
4		Ref	Circuit, Control Options:	
4	7022906	1	0400196 Charger	
4	7022908	1	0400197 Charger Prior to Date Code 0143 (was p/n 7022902)	
4	7022925	1	0400197 Charger Date Code 0143 to Present	
4	7020685	1	0400195 Charger	
4	7020696	1	0400194 Charger	
5		Ref	DC Cord Assembly	
5	7020644	1	Charger with Automotive Fuse	
5	7022909	1	Charger with Bussman Fuse	
6		Ref	Fuse Options:	
6A	7020690	1	Automotive Fuse Assembly	
6A	7020691	1	Automotive Fuse	
6B	7011593	1	Bussman Fuse	
7	7011577	2	Clip, Fuse	
8	7020697	1	Harness	
9	7020693	1	Harness	
10		Ref	Holder, Fuse	
10A	7018571	1	Automotive Fuse	
10B	7011594	1	Bussman Fuse	
11	7020648	1	Plug, AC Inlet	
12	7020649	2	Rectifier Assembly	
13	7020650	1	Rectifier, SCR 40-Amp	
14		Ref	Relay (Black) Options:	
14	7018506	1	0400196 Charger	
14	7018564	1	0400197 Charger	
14	7018563	1	0400195 Charger (240V) (Used Prior to MAC Charger S/N 06416736)	
14	7018564	1	0400195 Charger (120V) (Used MAC Charger) (E/M400) (SN 06416736 through 0300189901)	
14	7018564	1	0400195 Charger (120V) (Used MAC Charger) (E/M450) (SN 06416736 through 0300189898)	
14	7018506	1	0400194 Charger	
15	7020651	1	Shunt Assembly	
16		Ref	Transformer, Main Options:	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
16	7022900	1	0400196 Charger	
16	7022905	1	0400197 Charger	
16	7020699	1	0400195 Charger	
16	7020698	1	0400194 Charger	
17		Ref	Varistor Assembly Options:	
17	7020603	1	0400196 Charger	
17	7018537	1	0400197 Charger	
17	7018537	1	0400195 Charger	
17	7018537	1	0400194 Charger	
18		Ref	Varistor Options:	
18	7011596	1	0400196 Charger	
18	7020663	1	0400197 Charger	
18	7020663	1	0400195 Charger	
18	7020663	1	0400194 Charger	
19		Ref	Capacitor Assembly Options:	
19	Not Required	0	0400196 Charger	
19	7018577	2	0400197 Charger	
19	Not Required	0	0400195 Charger	
19	Not Required	0	0400194 Charger	
20		Ref	Control, AC1-48V Options:	
20	Not Required	0	0400196 Charger	
20	7022903	1	0400197 Charger	
20	Not Required	0	0400195 Charger	
20	Not Required	0	0400194 Charger	
21		Ref	Relay, 24VDC-30A (Clear) Options:	
21	Not Required	0	0400196 Charger	
21	7020654	2	0400197 Charger	A
21	Not Required	0	0400195 Charger	
21	Not Required	0	0400194 Charger	

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FIGURE 1-9. ELECTRICAL COMPONENTS INSTALLATION (FRAME MOUNTED)



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FIGURE 1-9. ELECTRICAL COMPONENTS INSTALLATION (FRAME MOUNTED)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CONTACTOR INSTALLATION OPTIONS:	
	0259069	Ref	Contactor Installation (Standard Spec E/M450 Models) (Prior to SN 0300059390)	7
	0270103	Ref	Contactor Installation (Standard Spec E/M450 Models) (SN 0300059390 through 0300189898)	K
	0270103	Ref	Contactor Installation (Standard Spec E/M400 Models)	K
	0270377	Ref	Contactor Installation (UL/EE Rated Spec Models)	H
1	0100019	AR	Compound, Locking (Prior to SN 0300078578)	
12	4240084	1	Strap, Static	
13	0641508	1	Bolt 5/16in-18NC x 1in	
14	3311505	1	Locknut 5/16in-15NC	
15	4751500	10	Flatwasher 5/16in	
17		Ref	Hardware Options:	
17	4300135	4	Stud, Stand-Off (Prior to SN 0300078578)	
17	4568114	4	Spacer, Tube (E/M400) (SN 0300078578 through 0300189901)	
17	4568114	4	Spacer, Tube (E/M450) (SN 0300078578 through 0300189898)	
18	1600293	1	Module (Positrac/Tilt) (Note: Re-calibration Required when Replaced)	
19	0641406	6	Bolt 1/4in-20NC x 3/4in	
20	4761400	6	Lockwasher 1/4in	
21	3311505	AR	Nut 5/16in-18NC	
22	3910636	4	Screw #6-32NC x 2-1/4in	
23	3310601	4	Nut #10-24NC	
24		Ref	Contactors Plate Assembly Options:	
24	1600294	1	Standard Spec (See Items 101-105 for Breakdown)	
24	1600300	1	UL/EE Spec (See Items 201-205 for Breakdown)	
25	1600292	1	Module, Power	
26	3931430	AR	Capscrew, Socket Head 1/4in-20NC x 2in	
27	4711400	AR	Flatwasher 1/4in	
28	3311405	AR	Locknut 1/4in-20NC	
29	4750600	4	Flatwasher #6	
30		Ref	Cable, Electrical (Motor B S1 to Motor A S2)	
30	1060717	1	Standard Spec Machines	
30	1060835	1	UL/EE Rated Spec Machines	
31		Ref	Cable, Electrical (Motor B A1 to Contactor Plate MB1)	
31	1060718	1	Standard Spec Machines	
31	1060836	1	UL/EE Rated Spec Machines	
32		Ref	Cable, Electrical (Motor A A2 to Contactor Plate MA2)	
32	1060719	1	Standard Spec Machines	
32	1060837	1	UL/EE Rated Spec Machines	
33		Ref	Cable, Electrical (Motor B A2 to Contactor Plate SB1)	
33	1060720	1	Standard Spec Machines	
33	1060838	1	UL/EE Rated Spec Machines	
34		Ref	Cable, Electrical (Power Module A to Contactor Plate)	
34	1060721	1	Standard Spec Machines	
34	1060839	1	UL/EE Rated Spec Machines	
35		Ref	Cable, Electrical (Power Module B+ to Contactor Plate)	
35	1060722	1	Standard Spec Machines	
35	1060840	1	UL/EE Rated Spec Machines	

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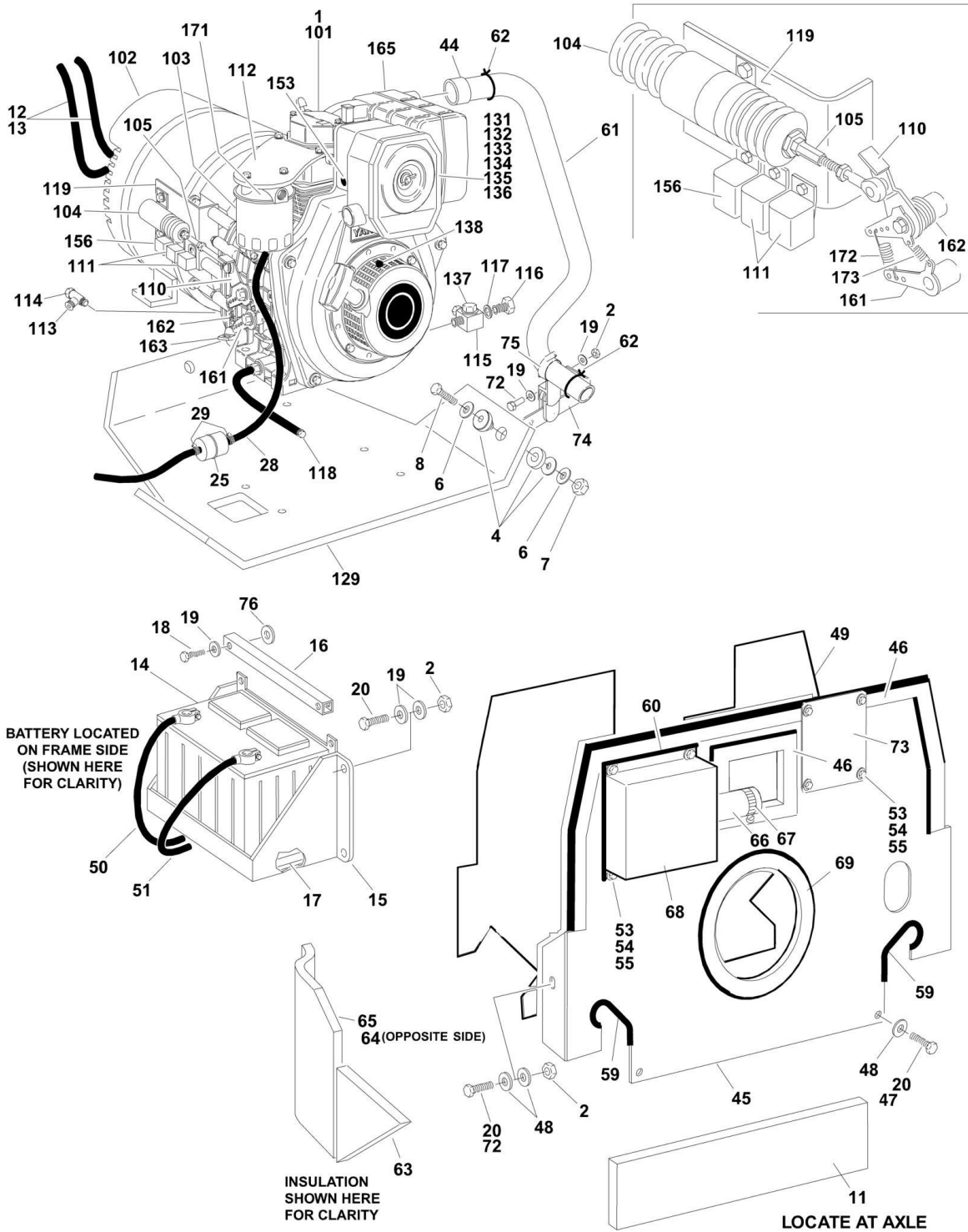
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
36		Ref	Cable, Electrical (Motor B S2 to Contactor Plate MB2)	
36	1060723	1	Standard Spec Machines	
36	1060841	1	UL/EE Rated Spec Machines	
37		Ref	Cable, Electrical (Motor A A1 to Contactor Plate MA1)	
37	1060724	1	Standard Spec Machines	
37	1060842	1	UL/EE Rated Spec Machines	
38		Ref	Cable, Electrical (Motor A S1 to Contactor Plate SA1)	
38	1060725	1	Standard Spec Machines	
38	1060843	1	UL/EE Rated Spec Machines	
39		Ref	Cable, Electrical Options: (Contactor Plate to Batteries)	
39	1060726	1	Cable, Electrical (Standard Spec E/M450 Machines) (Prior to SN 0300059390)	
39	1060810	1	Cable, Electrical (Standard Spec E/M450 Machines) (SN 0300059390 through 0300189898)	
39	1060810	1	Cable, Electrical (Standard Spec E/M400 Machines)	
39	1060835	1	Cable, Electrical (UL/EE Rated Spec E/M450 & E/M400 Machines)	
40		Ref	Cable, Electrical (Module to Hydraulic Pump Motor -)	
40	1060727	1	Standard Spec Machines	
40	1060844	1	UL/EE Rated Spec Machines	
41		Ref	Cable, Electrical (Contactor Plate to Hydraulic Pump Motor +)	
41	1060728	1	Standard Spec Machines	
41	1060845	1	UL/EE Rated Spec Machines	
42	2540019	4	Grommet	
43	2540021	1	Grommet	
44	4760600	4	Lockwasher #6	
45	4922103	1	Cable, Electrical (Contactor/Module to Charger)	
45	4460444	1	Connector, DC	
46	2540020	2	Grommet	
47		Ref	Clamp, Cable Options (Not Shown - Located on Item 39):	
47	Not Required	0	Clamp, Cable (E/M450 Models Built) (Prior to SN 0300059390)	
47	1320172	1	Clamp, Cable (E/M450 Models Built) (SN 0300059390 through 0300189898)	
47	1320172	1	Clamp, Cable (E/M400 Models)	
48	2400044	1	Block, Fuse Mounting (UL/EE Rated Machines Only)	
49	2400062	1	Fuse - 300 Amp (UL/EE Rated Machines Only)	
50	1060847	1	Jumper, Fuse (UL/EE Rated Machines Only)	
51	0861375	1	Box, Fuse (UL/EE Rated Machines Only)	
52	4711500	AR	Flatwasher 5/16in Narrow	
53	3311501	AR	Nut 5/16in-18NC	
54	4751000	AR	Flatwasher #10	
55	3311001	AR	Nut #10-24NC	
56	0721005	AR	Screw, Machine #10-24NC x 5/8in	
57	2540037	2	Grommet (UL/EE Rated Machines Only)	
58	1704712	1	Decal - 300 Amp Fuse (UL/EE Rated Machines Only)	
59	4060807	2 ft/.6m	Trim (Not Shown - Located at Battery Boxes) (UL/EE Rated Machines Only)	
60	0340047	2	Band, Motor (Not Shown) (UL/EE Rated Machines Only)	
63	0641524	4	Bolt 5/16in-18NC x 3in (E/M400) (SN 0300078578 through 0300189901)	
63	0641524	4	Bolt 5/16in-18NC x 3in (E/M450) (SN 0300078578 through 0300189898)	
64	2540020	1	Grommet (E/M400) (SN 0300101253 through 0300189901)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
64	2540020	1	Grommet (E/M450) (SN 0300101253 through 0300189898)	
65		Ref	Electrical Cable Kit Options (Not Shown):	
65	2902048	1	Standard Spec E/M450 Models (Includes Items 30-38 & 40-41) (Prior to SN 0300059390)	
65	2902046	1	Standard Spec E/M450 Models (Includes Items 30-41) (SN 0300059390 through 0300189898)	
65	2902046	1	Standard Spec E/M400 Models (Includes Items 30-41)	
65	2902047	1	UL/EE Rated Spec E/M450 & E/M400 Models (Includes Items 30-41)	
		Ref	CONTACTOR PLATE ASSEMBLIES	
	1600294	Ref	Standard Spec	E
	1600300	Ref	UL/EE Spec	B
98		Ref	Harness, Contactor Options (Not Shown) (See ELECTRICAL SECTION for Breakdown):	
98	7022003	1	Standard Spec	
98	7022008	1	UL/EE Spec	
99		Ref	Harness, Posi-Track Contactor Options (Not Shown) (See ELECTRICAL SECTION for Breakdown):	
99	7022004	1	Standard Spec	
99	Not Required	0	UL/EE Spec	
100	7022005	1	Harness, Shunt (Not Shown) (See ELECTRICAL SECTION for Breakdown)	
101		Ref	Contactor (Forward/Reverse) Options:	
101	7022002	1	Standard Spec	
101	7022007	1	UL/EE Spec	
102		Ref	Contactor (Main) Options:	
102	7022001	1	Standard Spec	
102	7022009	1	UL/EE Spec	
103		Ref	Contactor (Posi-Track) Options:	
103	7022000	1	Standard Spec	
103	7022010	1	UL/EE Spec	
104		Ref	Cable, Power Options:	
104	7022012	1	Standard Spec	
104	Not Required	1	UL/EE Spec	
105		Ref	Diode, Power Options:	
105	7022011	1	Standard Spec	
105	Not Required	1	UL/EE Spec	

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FIGURE 1-10. YANMAR MOTOR/GENERATOR INSTALLATION (M400 & M450 ONLY)



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FIGURE 1-10. YANMAR MOTOR/GENERATOR INSTALLATION (M400 & M450 ONLY)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	MOTOR/GENERATOR INSTALLATION (YANMAR DIESEL)	
	0257824	Ref	Motor/Generator Installation (Yanmar Diesel) (All M450 Models Built) (Prior to SN 0300059390)	11
	0270344	Ref	Motor/Generator Installation (Yanmar Diesel) (All M450 Models Built) (SN 0300059390 through 0300079057)	5-B
	0270344	Ref	Motor/Generator Installation (Yanmar Diesel) (All M400 Models) (Prior to SN 0300079057)	5-B
	0273573	Ref	Motor/Generator Installation (Yanmar Diesel) (All M450/M400 Models) (SN 0300079057 through 0300088539)	C
1		Ref	Motor/Generator Assembly Options: (See Items 101 to 173 for Breakdown)	
1	0257858	1	Motor/Generator Assembly (Prior to SN 0300063771)	
1	0271641	1	Motor/Generator Assembly (SN 0300063771 through 0300088539)	
2	3311505	AR	Locknut 5/16in-18NC	
4	3200404	3	Mount, Insolation	
6	4751600	6	Flatwasher 3/8in	
7	3311605	3	Locknut 3/8in-16NC	
8	0641618	3	Bolt 3/8in-16NC x 2-1/4in	
11	2820117	1	Foam, Sound (Steer Axle)	
12	1060755	1	Cable, Battery (Includes Terminal Boot) (+ Generator)	
13	1060754	1	Cable, Battery (Includes Terminal Boot) (- Generator)	
14	0400201	1	Battery	
15		Ref	Starter Battery Tray Options:	
15	4845642	1	Starter Battery Tray (M450 Models Built) (Prior to SN 0300059390)	
15	Not Required	1	Starter Battery Tray (M450 Models Built) (Welded-In Part of Battery Tray) (SN 0300059390 through 0300088539)	
15	Not Required	1	Starter Battery Tray (M400 Models) (Welded-In Part of Battery Tray)	
16		Ref	Battery Hold Down Options:	
16	4220179	1	Battery Hold Down (M450 Models Built) (Prior to SN 0300056547)	
16	0362966	1	Battery Hold Down (M450 Models Built) (SN 0300056547 through 0300059389)	
16	4220179	1	Battery Hold Down (M450 Models Built) (SN 0300059390 through 0300079057)	
16	4220179	1	Battery Hold Down (M400 Models) (Prior to SN 0300079057)	
16	0362966	1	Battery Hold Down (M450/M400 Models Built) (SN 0300079057 through 0300088539)	
17	3980035	1	Battery Seat	
18		Ref	Bolt Options:	
18	0641518	2	Bolt 5/16in-18NC x 1-5/8in (Prior to SN 0300079057)	
18	0641512	2	Bolt 5/16in-18NC x 1-1/2in (SN 0300079057 through 0300088539)	
19	4711500	6	Flatwasher 5/16in Narrow	
20	0641505	AR	Bolt 5/16in-18NC x 5/8in	
25	2120042	1	Filter, In-Line Fuel	
28	2720058	12 ft/3.7m	Hose	
29	1320022	7	Clamp, Hose	
33	4240033	8	Strap, Tie	
44	4567845	1	Tube, Exhaust	
45		Ref	Shield, Heat Options:	

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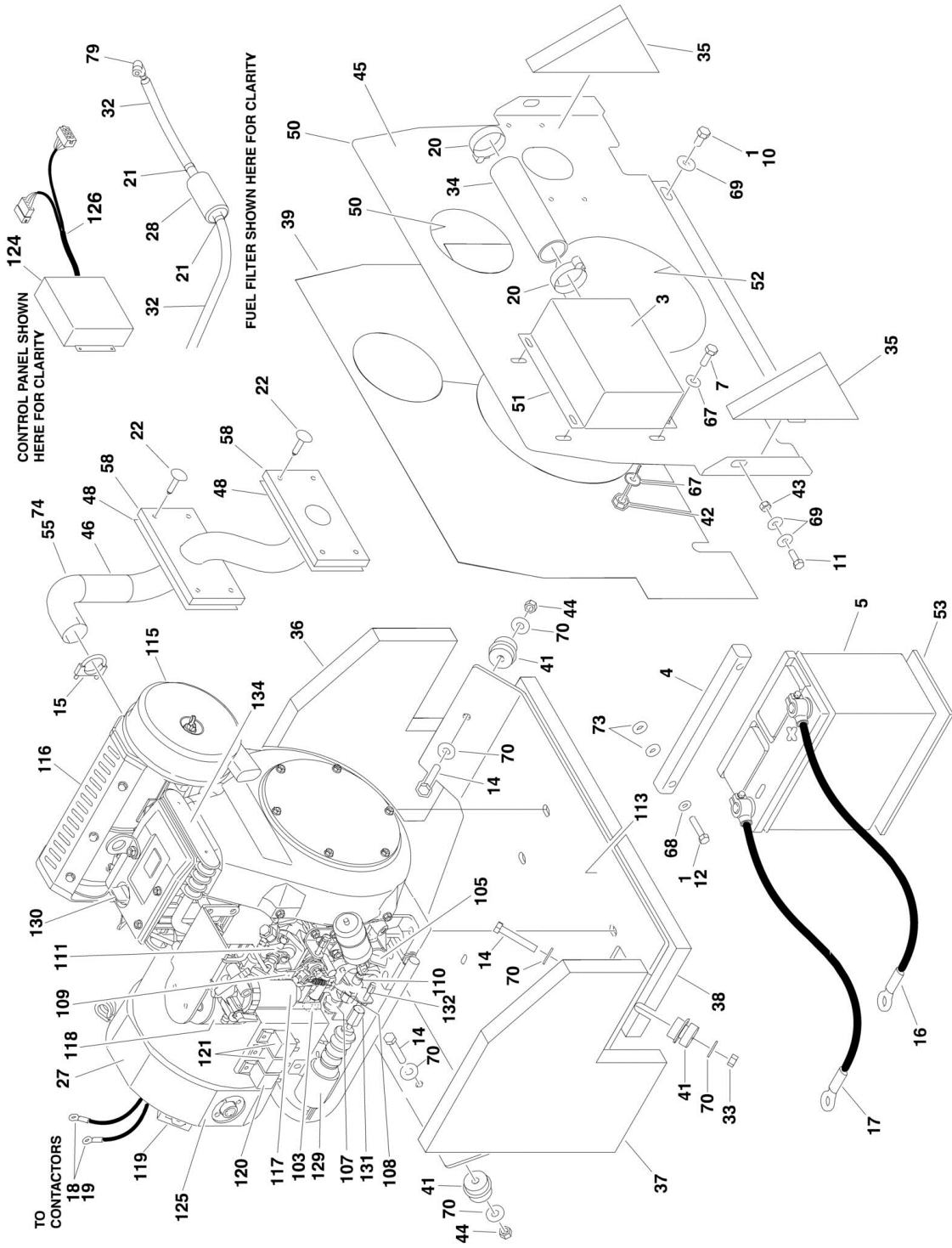
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
45	3571401	1	Shield, Heat (Prior to SN 0300079057)	
45	3380510	1	Shield, Heat (SN 0300079057 through 0300088539)	
46	3960389	5 ft/1.5m	Seal	
47	0100011	AR	Compound, Locking	
48	4751500	6	Flatwasher 5/16in	
49		Ref	Insulation Options:	
49	2820107	1	Insulation (Prior to SN 0300079057)	
49	2820165	1	Insulation (SN 0300079057 through 0300088539)	
50	1060731	1	Cable, Battery (Includes Terminal Boot) (- Battery to Ground)	
51	1060730	1	Cable, Battery (Includes Terminal Boot) (+ Battery to Starter)	
53	0641406	AR	Bolt 1/4in-20NC x 3/4in	
54	4711400	AR	Flatwasher 1/4in Narrow	
55	3311405	AR	Locknut 1/4in-20NC	
59	4060803	Ref	Flex-Trim	
59	4060803	16 in/4.9cm	Flex-Trim (Prior to SN 0300079057)	
59	4060803	27 in/69cm	Flex-Trim (SN 0300079057 through 0300088539)	
60	3960417	28 in/71cm	Seal	
61	4100025	Ref	Sleeve, Fiberglass	
61	4100025	26 in/66cm	Sleeve, Fiberglass (Prior to SN 0300079057)	
61	4100025	12 in/30cm	Sleeve, Fiberglass (SN 0300079057 through 0300088539)	
62	4920385	7 in/18cm	Wire, Safety	
63	2820111	2	Insulation	
64	2820112	1	Insulation (Right Side)	
65	2820116	1	Insulation (Left Side)	
66	2720455	1	Hose	
67	1320012	2	Clamp	
68	0259481	1	Plenum Box Assembly	
69	3960418	3 ft/.9m	Seal	
70	4922319	1	Harness, Generator (Not Shown - See ELECTRICAL SRCTION for Breakdown)	
71	4460267	1	Socket, Female (Not Shown - See ELECTRICAL SECTION for Call-Out)	
72	0641507	2	Bolt 5/16in-18NC x 7/8in Only (SN 0300061430 through 0300088539)	
73	3380511	1	Shield, Heat (SN 0300079057 through 0300088539)	
74	0903099	1	Bracket, Exhaust Hanger (SN 0300079057 through 0300088539)	
75		Ref	Clamp Options:	
75	1320033	1	Clamp (SN 0300079057 through 0300079826)	
75	1320135	1	Clamp (SN 0300079827 through 0300088539)	
76	4891600	2	Flatwasher Hardened 3/8in (SN 0300079057 through 0300088539)	
		Ref	Motor/generator assembly	
	0257858	Ref	Motor/generator assembly (Prior to SN 0300063771)	E
	0271641	Ref	Motor/generator assembly (SN 0300063771 through 0300088539)	C
101	7018126	1	Motor, Yanmar	
102		Ref	Alternator Options:	
102	7020203	1	Alternator (Prior to SN 0300063771)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
102	7023485	1	Alternator (SN 0300063771 through 0300088539)	
103	See Note	1	Filter, Oil with Element (Note: Not available for purchase)	
103	7020215	1	Element, Oil	
104	7020167	1	Solenoid, Throttle	
105	7020166	1	Swivel, In-line	
110	7018125	1	Handle, Regulator	
111	70000323	2	Relay, Bosch (was p/n 7020207)	
112	3571412	1	Plate, Mounting, Oil Filter	
113	7018127	1	Switch, Pressure	
114	7020164	1	Fitting, Adapter	
115	7020163	1	Adapter, Oil Drain	
116	7020162	1	Bolt, Banjo	
117	See Note	1	Washer, Rubber (Note: Not available for purchase)	
118	7020204	1	Drain Line Assembly	
119	7020161	1	Bracket	
129	3570581	1	Baseplate	
131	7020160	1	Flange, Air Intake	
132	7020159	1	Flange, Air Intake	
133	7020165	1	Plate, Air Intake Adapter	
134	7018123	2	Gasket, Air Cleaner	
135	7018122	2	Gasket, Air Adapter	
136	7018124	1	Cover, Air Filter	
137	7020158	1	Probe, Temperature	
138	70000901	1	Recoil Assembly	
138	70001758	NSS	Starter, Pulley (Us	
138	7020157	1	Bracket, Magnetic Pick-Up (Not Shown - Located Behind Starter Pulley)	
153	7020206	1	Sensor, Hall Effect Zero Speed	
156	7023274	1	Relay, Sealed 14VDC/40Amp	
161	7020197	1	Lever	
162	7020198	1	Spring	
163	7020199	1	Dipstick	
164	7020200	1	Regulator, Voltage (Not Shown - Located Below Starter)	
165	7020201	1	Muffler	
166	7020202	1	Starter (Not Shown - Located Below Muffler)	
167	7020217	1	Element, Air Cleaner (Washable)	
168	7018142	1	Pump, Fuel (Not Shown - Located on Top of Cylinder Block)	
169	7023349	1	Fuse, Control - 15 Amp (Not Shown - Located on Right Side of Engine)	
170	7023350	1	Fuse, Dynamo Output - 20 Amp (Not Shown - Located on Left Side of Engine)	
171	7023489	1	Head, Filter	
172	7026669	1	Spring, Governor	
173	7026670	1	Spring, Return	

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FIGURE 1-11. KUBOTA MOTOR/GENERATOR INSTALLATION (M400 & M450 ONLY)



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FIGURE 1-11. KUBOTA MOTOR/GENERATOR INSTALLATION (M400 & M450 ONLY)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	MOTOR/GENERATOR INSTALLATION (KUBOTA DIESEL)	
	0274617	Ref	Motor/Generator Installation (Kubota Diesel) (All M400 & M450 Models Built) (Prior to SN 0300182839)	G
	1001159362	Ref	Motor/Generator Installation (Kubota Diesel) (All M400 Models Built) (SN 0300182839 through 0300189901)	A
	1001159362	Ref	Motor/Generator Installation (Kubota Diesel) (All M450 Models Built) (SN 0300182839 through 0300189898)	A
1	0100011	AR	Compound, Locking	
3	0259481	1	Plenum Box Assembly	
4	0362966	1	Tube, Battery Hold-Down	
5	0400201	1	Battery	
7	0641406	4	Bolt 1/4in-20NC x 3/4in	
10	0641505	2	Bolt 5/16in-18NC x 5/8in	
11	0641507	2	Bolt 5/16in-18NC x 7/8in	
12	0641512	2	Bolt 5/16in-18NC x 1-1/2in	
14	0641618	3	Bolt 3/8in-16NC x 2-1/4in	
15	1320135	1	Clamp	
16	1060730	1	Cable, Battery (Battery +)	
17	1060731	1	Cable, Battery (Battery -)	
18	1060754	1	Cable, Battery (Includes Terminal Boot) (- Generator)	
19	1060755	1	Cable, Battery (Includes Terminal Boot) (+ Generator)	
20	1320012	2	Clamp	
21	1320022	AR	Clamp	
22	1380164	8	Clip	
27	2000320	Ref	Motor/Generator Assembly (Use p/n 1001159361) (Prior to SN 0300182839)	
27	1001159361	1	Motor/Generator Assembly (M400) (SN 0300182839 through 0300189901)	
27	1001159361	1	Motor/Generator Assembly (M450) (SN 0300182839 through 0300189898)	
28	2120042	1	Filter, In-Line Fuel (SN 0300088539 through 0300093848)	
32	2720058	1 ft/.3m	Hose	
34	2720559	1	Hose, Air Intake	
35	2820111	2	Insulation	
36	2820112	1	Insulation (Right Side)	
37	2820116	1	Insulation (Left Side)	
38	2820117	1	Foam, Sound (Steer Axle)	
39	2820218	2	Insulation, Acoustic Barrier	
41		Ref	Mount, Insolated Engine Options:	
41	3200404	3	Mount, Insolated Engine (Prior to SN 0300145130)	
41	1001125248	3	Mount, Insolated Engine (M400) (SN 0300145130 through 0300189901)	
41	1001125248	3	Mount, Insolated Engine (M450) (SN 0300145130 through 0300189898)	
42	3311405	4	Locknut 1/4in-20NC	
43	3311505	2	Locknut 5/16in-18NC	
44	3311605	3	Locknut 3/8in-16NC	
45	3380602	1	Shield, Heat	
46	3460457	1	Pipe, Exhaust	
48	3575961	1	Plate, Exhaust Mounting	
50	3960389	5 ft/1.5m	Seal	

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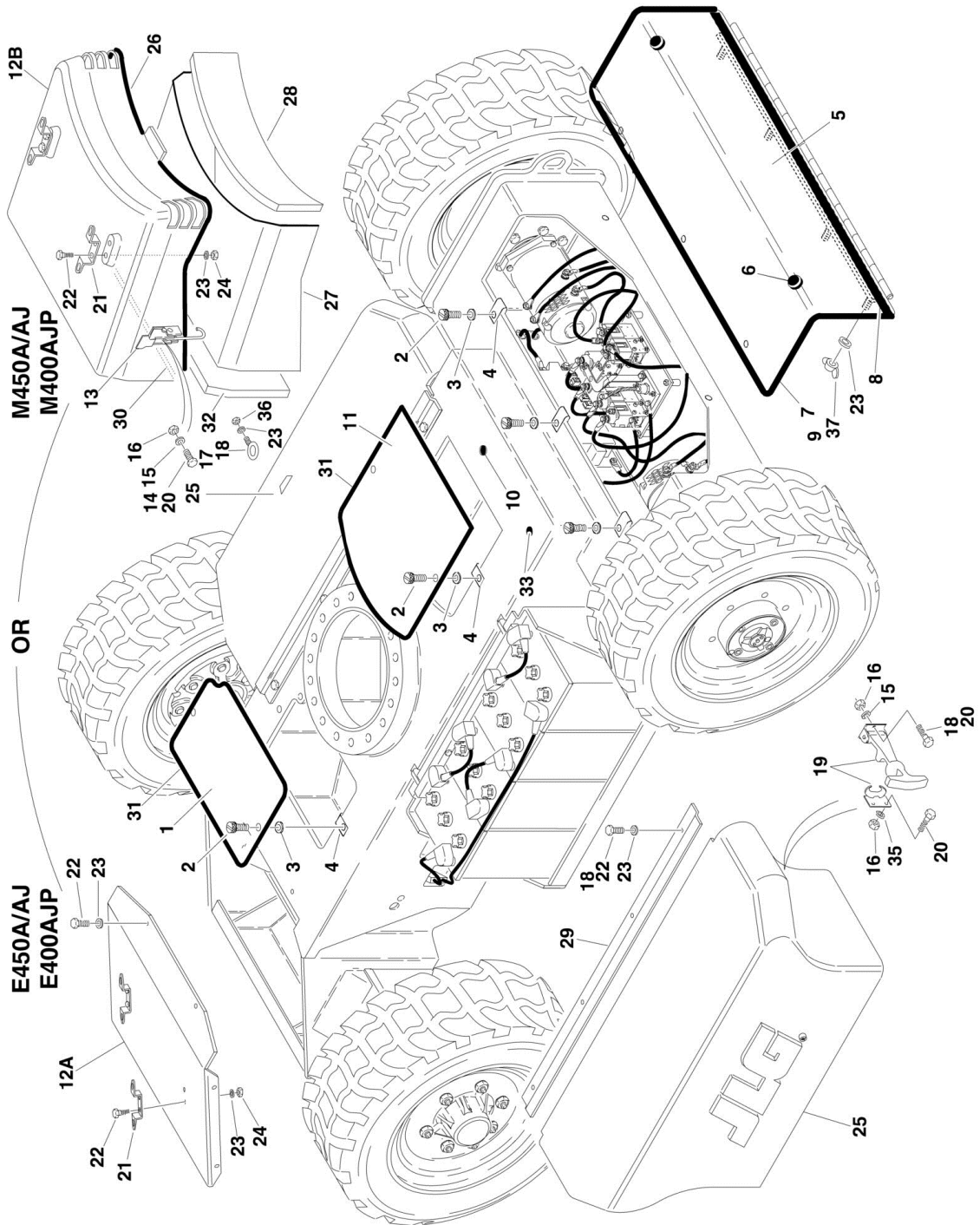
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
51	3960417	28 in/71cm	Seal	
52	3960418	3 ft/.9m	Seal	
53	3980035	1	Battery Seat	
55	4100025	22 in/55cm	Sleeve, Fiberglass	
58	4341072	2	Support, Exhaust Mount	
67	4711400	8	Flatwasher 1/4in Narrow	
68	4711500	6	Flatwasher 5/16in Narrow	
69	4751500	6	Flatwasher 5/16in Wide	
70	4751600	AR	Flatwasher 3/8in Wide	
73	4891600	2	Flatwasher 3/8in Hardened	
74	4920385	6 in/15cm	Wire, Safety	
79	2220805	1	Fitting, Coupling (Not shown)	
		Ref	MOTOR/GENERATOR ASSEMBLY	
	2000320	Ref	Motor/Generator Assembly (Use p/n 1001159361) (Prior to SN 0300182839)	F
	1001159361	1	Motor/Generator Assembly (M400) (SN 0300182839 through 0300189901)	B
	1001159361	1	Motor/Generator Assembly (M450) (SN 0300182839 through 0300189898)	B
101	70003557	1	Regulator, Voltage (Not Shown - Located on Opposite Side of Engine) (was p/n 70000289)	
102	70000290	1	Glow Plug (Not Shown)	
102	70000291	1	Harness, Glow Plug (Not Shown)	
103	70000292	1	Screen, Oil Sump (Includes O-Ring)	
104	70000293	1	Cap, Oil Filler (Includes O-Ring) (Not Shown - Located on the Engine Block - See Item 130 for Fill Cap on Top of Head)	
105	70000294	1	Dipstick	
106	70000295	1	Pump, Oil Rotor (Not Shown - Located Beside Item 107)	
106	70000296	1	O-Ring, Oil Rotor Pump (Not Shown)	
107	70000297	1	Switch, Oil	
108	70000298	1	Lever, Governor	
108	70000299	1	Pin, Governor Lever	
108	70000300	1	Spring, Governor Lever	
109	70000301	1	Spring, Idling	
109	70000304	1	Lever, Spring Control	
109	70000305	1	Spring, Stop (Speed Control Lever)	
110	70000302	1	Valve, Fuel Limit (Not Shown)	
110	70000303	1	Gasket, Fuel Limit Valve (Not Shown)	
111	70000306	1	Pump, Injection	
111	70000307	1	Kit, Pump Adjustment Shim	
112	70000308	1	Flywheel/Ring Gear Assembly (Not Shown - Located Behind Front Cover)	
112	70000309	1	Ring Gear (Not Shown)	
112	70001121	1	Stator, Engine (Not Shown - Located Behind Flywheel) (Includes Coil and Grommet)	
113	3575952	1	Tray, Engine	
114	70000311	1	Solenoid, Starter (Not Shown - Located on Opposite Side of Engine)	
115	70000312	1	Air Cleaner Assembly	
115	70000313	1	Element, Air Cleaner	
115	70000314	1	Gasket, Air Cleaner	
116	70000315	1	Muffler Assembly	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
116	70000316	1	Gasket, Muffler	
117	70000317	1	Inline Fuel Check Valve Assembly (Not Shown)	
117	70000967	1	Fuel Filter Assembly	
117	70000318	1	Element, Fuel Filter	
118	70000319	1	Element, Oil Filter	
118	70001144	1	Head, Oil Filter Head (Note: Does not Include element)	
119	70000320	1	Pump, Fuel	
120	70000322	1	Relay	
121	70000323	2	Relay	
122	70000324	1	Sensor, Speed (Not Shown - Located Inside Front Cover)	
122	70004265	1	Bracket, Speed Sensor (Not Shown - Located Inside Front Cover)	
123	70000325	1	Sensor, Oil Temperature (Not Shown - Located on Opposite Side of Engine on Base)	
124	70000326	1	Module, Engine Control	
125	70000327	1	Alternator	
125	70000382	1	Stator, Alternator	
126	70000328	1	Harness, Engine	
127	70000329	1	Fuse 15Amp (Not Shown)	
128	70000330	1	Fuse 20Amp (Not Shown)	
129	70000321	1	Solenoid, Fuel	
130	70002244	1	Cap, Oil Filler (Includes O-Ring) (See Item 104 for Fill Cap on Engine Block)	
131	70003618	1	Adapter, Solenoid	
132	70000321	1	Rod, Adapter	
133	70000310	1	Starter (Not Shown - Located on Opposite Side of Engine)	
134	70004785	1	Cooler, Oil	

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FIGURE 1-12. FRAME COVER INSTALLATION



SECTION 1 - FRAME

FIGURE 1-12. FRAME COVER INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	FRAME COVERS INSTALLATIONS	
	0258974	Ref	Frame Covers Installations (Standard E450A & E450AJ Built) (Prior to SN 0300059390)	4
	0270510	Ref	Standard E450A & E450AJ Built (SN 0300059390 through 0300189898)	E
	0258035	Ref	Standard M450A & M450AJ Built (Prior to SN 0300059390)	7
	0270509	Ref	Standard M450A & M450AJ Built (SN 0300059390 through 0300189898)	F
	0270510	Ref	Standard E400A & E400AJP	E
	0270509	Ref	Standard M400A & M400AJP	F
	0270101	Ref	Standard E400Anarrow & E400AJPnarrow	E
	0270100	Ref	Standard M400Anarrow & M400AJPnarrow	F
	0270101	Ref	UL/EE Rated E400AJP, E450A & E450AJ	E
	0270540	Ref	UL/EE Rated E400AJPnarrow	E
1	3570572	1	Cover, Charger	
2	3900174	7	Screw, Special	
3	3760308	7	Retainer	
4	1380138	1	Cup, Receptacle	
5		Ref	Axle Cover Options:	
5	4844603	1	Standard Width E/M450 & E/M400 Models	
5	4846223	1	Narrow Width E/M400 Models	
6	0940036	2	Bumper	
7	3960447	AR	Seal	
8	3960433	AR	Seal	
9		Ref	Hardware Options:	
9	3300371	AR	Wingnut (Prior to SN 0300104964)	
9	3311401	AR	Nut 1/4in-20NC (E/M400) (SN 0300104964 through 0300189901)	
9	3311401	AR	Nut 1/4in-20NC (E/M450) (SN 0300104964 through 0300189898)	
10	3520026	2	Plug, Hole	
11	3570573	1	Cover, Pump	
12		Ref	Cover Options:	
12A	3571094	1	Cover (E450 & E400 Models)	
12B	1670880	1	Cover (M450 & M400 Models)	
13		Ref	Latch Options:	
13	Not Required	0	Latch (E450 & E400 Models)	
13	2940115	2	Latch (M450 & M400 Models)	
14	0721006	AR	Screw, Machine #10-24NC x 3/4in (Prior to SN 0300070080)	
15	4751000	AR	Flatwasher #10	
16	3311005	12	Locknut #10-24NC	
17	0630440	AR	Eyebolt	
18	0100011	AR	Compound, Locking	
19	2940095	4	Latch	
20	0721004	AR	Screw, Machine #10-24NC x 1/2in	
21	2700093	2	Hook	
22	0641406	AR	Bolt 1/4in-20NC x 3/4in	
23	4751400	AR	Flatwasher 1/4in	
24	3311405	4	Locknut 1/4in-20NC	
25		Ref	Battery Cover Options:	
25		Ref	Standard Spec Machines:	

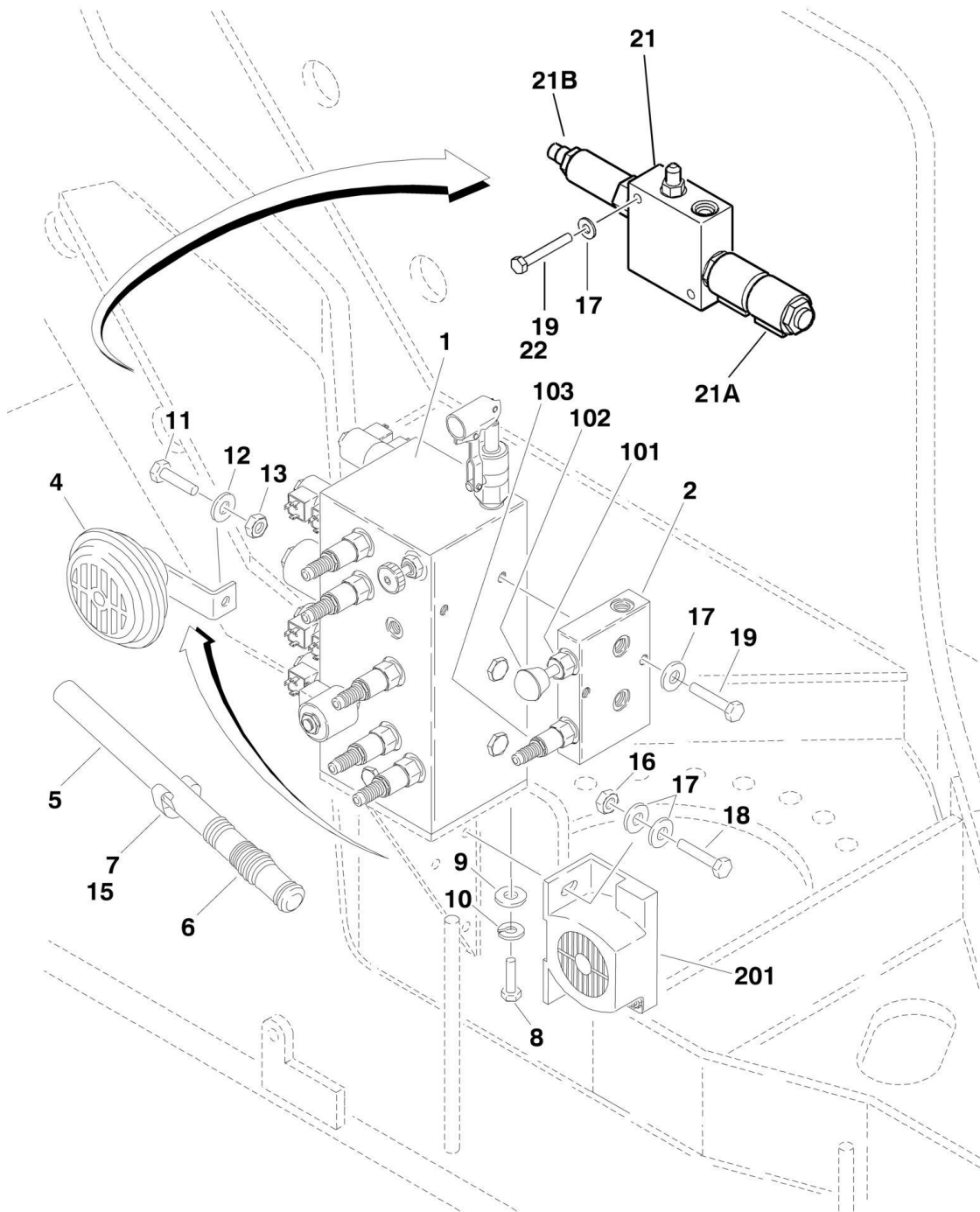
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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
25	1670879	2	Cover (E/M450 Models Built) (Prior to SN 0300059390)	
25	1670951	2	Cover (E/M450 Models Built) (SN 0300059390 through 0300189898)	
25	1670951	2	Cover (E/M400 Models)	
25		Ref	UL/EE Rated Spec Machines:	
25	1670963	2	Cover (All UL/EE Rated Spec Machines)	
25	0902645	2	Bracket (Not Shown - UL/EE Rated Only)	
25	2560126	4	Handle, Pocket (Not Shown - UL/EE Rated Only)	
26		Ref	Flex-Trim Options:	
26	Not Required	0	Flex-Trim (Standard Spec E450 & E400 Models)	
26	4060804	6 ft/1.8m	Flex-Trim (Standard Spec M450 & M400 Models)	
26	Not Required	0	UL/EE Rated Spec Models	
27		Ref	Flex-Trim Options:	
27	Not Required	0	Flex-Trim (Standard Spec E450 & E400 Models)	
27	2820105	1	Flex-Trim (Standard Spec M450 & M400 Models)	
27	Not Required	0	UL/EE Rated Spec Models	
28		Ref	Flex-Trim Options:	
28	Not Required	0	Flex-Trim (Standard Spec E450 & E400 Models)	
28	2820106	1	Flex-Trim (Standard Spec M450 & M400 Models)	
28	Not Required	0	UL/EE Rated Spec Models	
29		Ref	Strip, Mounting Options:	
29	0902543	2	Standard Spec E/M450 Models (Prior to SN 0300059390)	
29	0902681	2	Standard Spec E/M450 Models (SN 0300059390 through 0300189898)	
29	0902681	2	Standard Spec E/M400 Models	
29	Not Required	0	UL/EE Rated Spec Models	
30		Ref	Seal Options:	
30	Not Required	0	Seal (E450 & E400 Models)	
30	3960389	2.5 ft/7.6m	Seal (M450 & M400 Models)	
31		Ref	Seal Options:	
31	Not Required	0	Seal (E450 & E400 Models)	
31	3960417	10 ft/3m	Seal (M450 & M400 Models)	
32		Ref	Insulation Options:	
32	Not Required	0	Insulation (E450 & E400 Models)	
32	2820110	1	Insulation (M450 & M400 Models)	
33	3520082	1	Plug	
34	2820121	2	Cover, Phenolic (Not Shown - Located over Batteries inside cover) (UL/EE Rated Machines Only)	
35	4750800	AR	Flatwasher #8 (Wide)	
36	3311401	AR	Nut 1/4in-20NC	
37	0100035	AR	Compound, Locking	

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SECTION 2 - TURNTABLE

FIGURE 2-1. VALVES AND HORN INSTALLATIONS



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FIGURE 2-1. VALVES AND HORN INSTALLATIONS

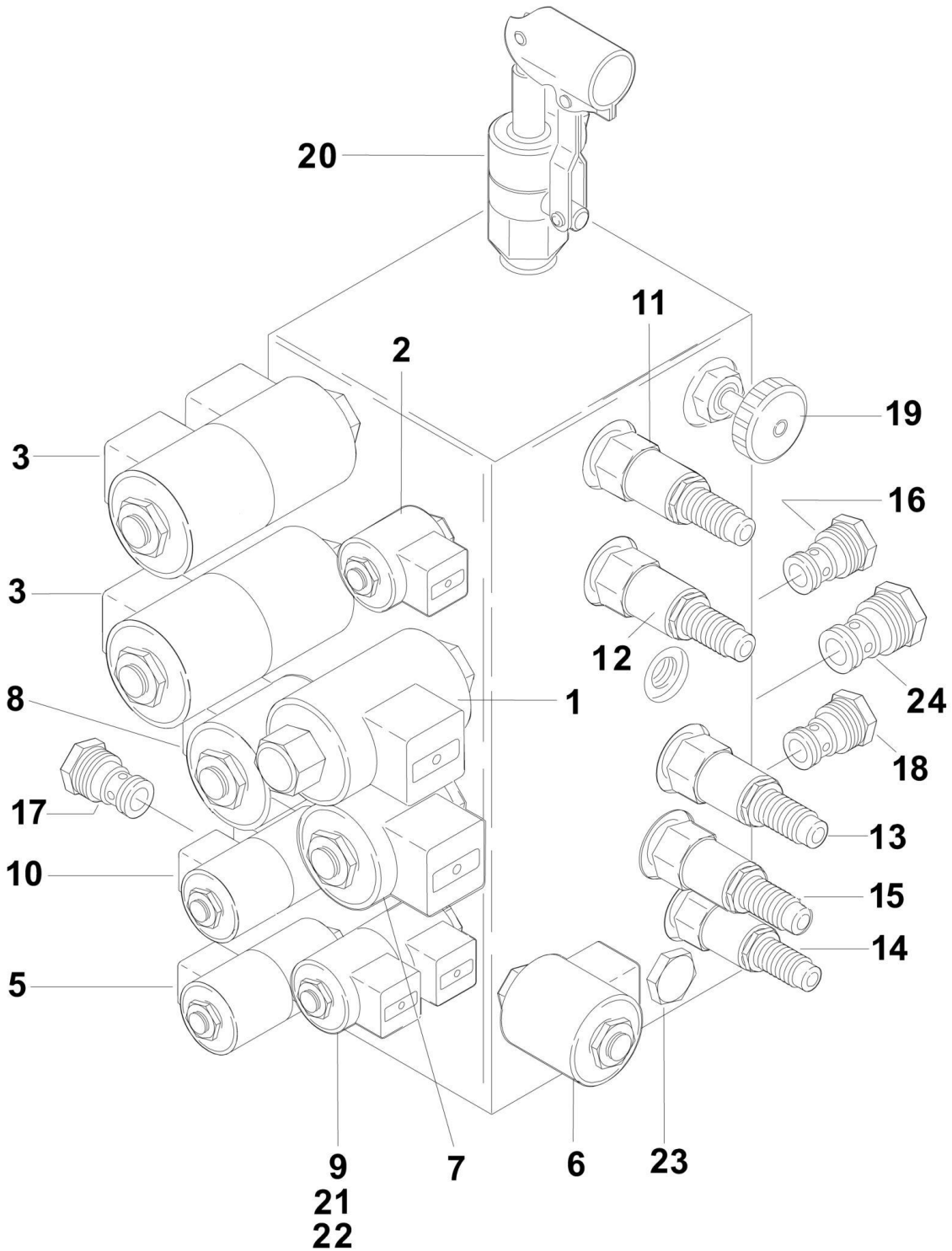
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	VALVE AND HORN INSTALLATIONS	
	0258034	Ref	Valve and Horn Installations (E/M450A Models)	E
	0259399	Ref	Valve and Horn Installations (E/M450AJ Models)	E
	0258034	Ref	Valve and Horn Installations (E/M400A Models)	E
	0259951	Ref	Valve and Horn Installations (E/M400AJP Models)	C
1		Ref	Main Control Valve Assembly (See MAIN CONTROL VALVE ASSEMBLY for Breakdown)	
1	4641070	1	Main Control Valve Assembly (Prior to SN 0300062642)	
1	4641195	NLA	Main Control Valve Assembly (Use p/ns 1001097507 & 1001104864 as Replacement) (SN 0300062642 through 0300129141)	
1	1001097507	1	Valve, Main Control (E/M400) (SN 0300129142 through 0300189901)	
1	1001097507	1	Valve, Main Control (E/M450) (SN 0300129142 through 0300189898)	
2		Ref	Releveling Valve Assembly Options (See Items 101-103 for Breakdown):	
2	4641394	NLA	Releveling Valve Assembly (Use p/n 1001097777) (SN 0300091053 through 0300129141)	
2	4641394	NLA	Releveling Valve Assembly (450AJ) (Use p/n 1001097777) (SN 0300086022 through 0300129141)	
2	1001097777	1	Releveling Valve Assembly (450AJ) (SN 0300129142 through 0300189898)	
2	4641029	1	Releveling Valve Assembly (400A) (Prior to SN 0300086022)	
2	4641394	NLA	Releveling Valve Assembly (400A) (Use p/n 1001097777) (SN 0300086022 through 0300129141)	
2	1001097777	1	Releveling Valve Assembly (400A) (SN 0300129142 through 0300189901)	
2	4641029	1	Releveling Valve Assembly (400AJP) (Prior to SN 0300091053)	
2	4641394	NLA	Releveling Valve Assembly (400AJP) (Use p/n 1001097777) (SN 0300091053 through 0300129141)	
2	1001097777	1	Releveling Valve Assembly (400AJP) (SN 0300129142 through 0300189901)	
4	0140028	1	Horn	
5	2560122	1	Handle	
6	2560123	1	Grip, Handle	
7	1380136	1	Clip	
8	0641608	4	Bolt 3/8in-16NC x 1in	
9	4711400	4	Flatwasher 3/8in Narrow	
10	4761400	4	Lockwasher 3/8in	
11	0641508	1	Bolt 5/16in-18NC x 1in	
12	4711500	2	Flatwasher 5/16in Narrow	
13	3311505	1	Locknut 5/16in-18NC	
15	4300106	1	Stud	
16	3311405	AR	Locknut 1/4in-20NC	
17	4711400	AR	Flatwasher 1/4in Narrow	
18	0641408	AR	Bolt 1/4in-20NC x 1in	
19		Ref	Bolt Options:	
19	0641413	AR	Bolt 1/4in-20NC x 1-5/8in	
19	0641426	AR	Bolt 1/4in-20NC x 3-1/4in	
21		Ref	Jib Valve Assembly Options:	
21	Not Required	0	Jib Valve Assembly (E/M450A & E/M400A Models)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
21	4641102	NLA	Jib Valve Assembly (E/M450AJ Models) (Use p/n 1001097775) (Prior to SN 0300129142)	
21	1001097775	1	Jib Valve Assembly (E/M450AJ Models) (Shown) (SN 0300129142 through 0300189898)	
21	4641119	NLA	Jib Valve Assembly (E/M400AJP Models) (Use p/n 1001097505) (Prior to SN 0300129142)	
21	1001097505	1	Jib Valve Assembly (E/M400AJP Models) (SN 0300129142 through 0300189901)	
21A	7017452	1	Cartridge without Coils	
21A	7017402	1	Seal Kit - 7017452 Cartridge	
21A	7021609	2	Coil	
21B		Ref	Cartridge, Relief Valve Options:	
21B	70002807	1	Port RV1(was p/n 7017460)	
21B	70002808	1	Port RV2 - E/M400AJP Models Only (was p/ns 7021623 & 7017460)	
21B	7021653	AR	Seal Kit - 70002807 & 70002808 Cartridges	
22	0100011	AR	Compound, Locking	
		Ref	RELEVELING VALVE ASSEMBLIES	
		Ref	Note: Refer to Item 2 for Usage.	
	4641029	Ref	Releveling Valve	
	4641394	Ref	Releveling Valve	
	1001097777	Ref	Releveling Valve	
101	7017466	1	Cartridge	
101	2900708	1	Seal Kit - 7017466 Cartridge	
102	7012959	1	Knob	
103		Ref	Cartridge Options:	
103	7012981		Cartridge - 4641029 Valve	
103	7012998	1	Seal Kit - 7012981 Cartridge	
103	7024891		Cartridge - 4641394 & 1001097777 Valves	
103	7012953	1	Seal Kit - 7024891 Cartridge	
	0259064	Ref	ALARM INSTALLATIONS	1
201	0140031	1	Alarm, Motion (Remove ground strap before installation)	
201	3311405	2	Locknut 1/4in-20NC	
201	4711400	4	Flatwasher 1/4in Narrow	
201	0641408	2	Bolt 1/4in-20NC	
201	4460685	2	Terminal, Stud Mounted Tab	

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FIGURE 2-2. MAIN CONTROL VALVE ASSEMBLY



SECTION 2 - TURNTABLE

FIGURE 2-2. MAIN CONTROL VALVE ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Main Control Valve Assembly Options:	
	4641070	Ref	Main Control Valve Assembly (Prior to SN 0300062642)	G
	4641195	Ref	Main Control Valve Assembly (Use p/ns 1001097507 & 001104864 as Replacement) (SN 0300062642 through 0300129141)	
	1001097507	Ref	Main Control Valve Assembly (E/M400) (SN 0300129142 through 0300189901)	C
	1001097507	Ref	Main Control Valve Assembly (E/M450) (SN 0300129142 through 0300189898)	C
1		Ref	Cartridge without Coil Options (Flow Regulator):	
1	7021611	1	Cartridge without Coil - 4641070 Valve (was p/n 7017450)	
1	7021611	1	Cartridge without Coil - 4641195 & 001097507 Valves	
1	7012518	1	Seal Kit - 7017450/7021611 Cartridge	
1	7021618	1	Coil	
2	7017410	1	Cartridge without Coil (Bypass Unloading)	
2	7012998	1	Seal Kit - 7017410 Cartridge (was p/n 7012967)	
2	7021609	2	Coil	
3	7021603	2	Cartridge without Coil (Lower and Upper Lift)	
3	7012903	2	Seal Kit - 7021603 Cartridge (1 Per Cartridge)	
3	7021610	4	Coil (2 Per Valve)	
5	7017433	1	Cartridge without Coil (Swing)	
5	7017402	1	Seal Kit - 7017433 Cartridge	
5	7021609	1	Coil	
6	7021604	1	Cartridge without Coil (Swing Restrictor)	
6	7012953	1	Seal Kit - 7021604 Cartridge	
6	7021609	1	Coil	
7		Ref	Cartridge without Coil Options (Telescope Out):	
7	7017479	1	Cartridge without Coil - 4641070 & 4641195 Valves	
7	7012995	1	Cartridge without Coil - 1001097507 Valve	
7	7012518	1	Seal Kit - 7017479 & 7012995 Cartridges	
7	7021610	1	Coil	
8		Ref	Cartridge without Coil Options (Telescope In):	
8	7017479	1	Cartridge without Coil - 4641070 & 4641195 Valves	
8	7022394	1	Cartridge without Coil - 1001097507 Valve	
8	7012518	1	Seal Kit - 7017479 & 7022394 Cartridges	
8	7021610	1	Coil	
9	7017452	1	Cartridge without Coil (Platform Level)	
9	7017402	1	Seal Kit - 7017452 Cartridge	
9	7021609	2	Coil	
10	7017452	1	Cartridge without Coil (Rotator)	
10	7017402	1	Seal Kit - 7017452 Cartridge	
10	7021609	2	Coil	
11		Ref	Cartridge Options:	
		Ref	(Note: Before ordering parts, refer to p/n stamped on hose side of valve block to determine if valve has been replaced.)	
11		Ref	Cartridge - 4641070 Valve Components: (Prior to SN 0300062642)	
11	70001876	1	Cartridge, (Lower Lift Down) (was p/n 7017423)	
11	7012998	1	Seal Kit - 7017423 & 70001876 Cartridge	
11		Ref	Cartridge - 4641195 & 1001097507 Valve Components	

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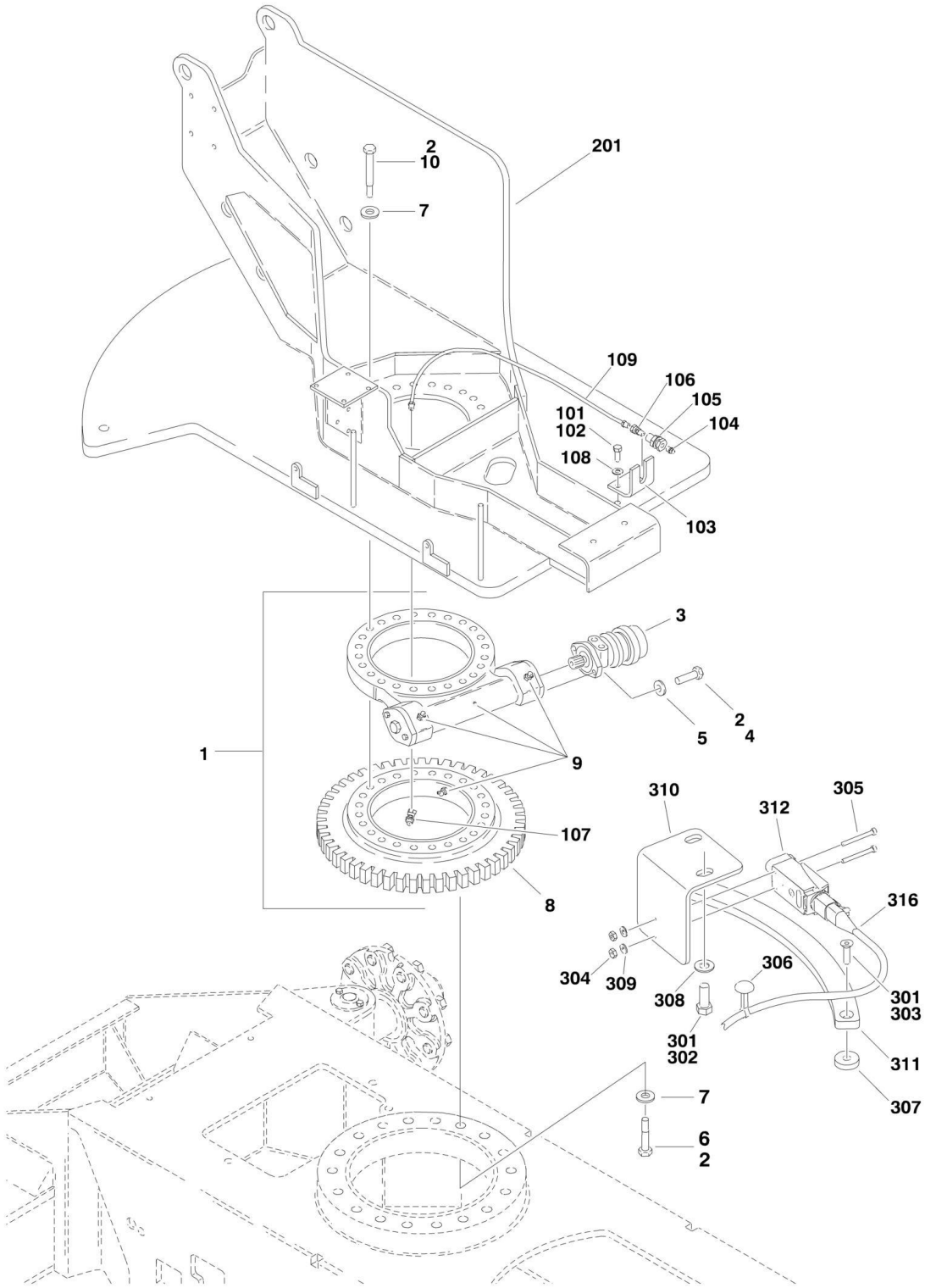
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
11		Ref	(E/M400) (SN 0300062642 through 0300189901) Cartridge - 4641195 & 1001097507 Valve Components	
11	70002806	1	(E/M450) (SN 0300062642 through 0300189898) Cartridge, (Upper Lift Down)	
11	7012998	1	Seal Kit - 70002806 Cartridge	
12		Ref	Cartridge Options:	
		Ref	(Note: Before ordering parts, refer to p/n stamped on hose side of valve block to determine if valve has been replaced.)	
12		Ref	Cartridge - 4641070 Valve Components (Prior to SN 0300062642)	
12	7021606	1	Cartridge, (Upper Lift Down)	
12	7012998	1	Seal Kit - 7021606 Cartridge	
12		Ref	Cartridge - 4641195 Components (SN 0300062642 through 0300129141)	
12	7017423	1	Cartridge, (Lower Lift Down) (E/M450AJ & E/M400A) (use p/n 70001876) (SN 0300062642 through 0300086021)	
12	70001876	1	Cartridge, (Lower Lift Down) (E/M450AJ & E/M400A) (SN 0300086022 through 0300129141)	
12	7017423	1	Cartridge, (Lower Lift Down) (E/M450A & E/M400AJP) (use p/n 70001876) (SN 0300062642 through 0300091052)	
12	70001876	1	Cartridge, (Lower Lift Down) (E/M450A & E/M400AJP) (SN 0300091053 through 0300129141)	
12	7012998	1	Seal Kit - 7017423 & 70001876 Cartridge	
12		Ref	Cartridge - 1001097507 Valve Components (E/M400) (SN 0300129142 through 0300189901)	
12		Ref	Cartridge - 1001097507 Valve Components (E/M450) (SN 0300129142 through 0300189898)	
12	70001876	1	Cartridge, (Lower Lift Down)	
12	7012998	1	Seal Kit - 70001876 Cartridge	
13		Ref	Cartridge (Telescope) Options:	
13	7021607	1	Cartridge - 4641070 & 4641195 Valves	
13	7017418	1	Cartridge - 1001097507 Valve	
13	7012998	1	Seal Kit - 7021607 & 7017418 Cartridges	
14		Ref	Cartridge Options:	
14		Ref	Cartridge - 4641070 Valve Components:	
14	7017421	1	Cartridge (Platform Level Backward Piston End)	
14	7012998	1	Seal Kit - 7017421 Cartridge	
14		Ref	Cartridge - 4641195 & 1001097507 Valve Components	
14	7017418	1	Cartridge (Platform Level Forward Rod End) (was p/n 7017422)	
14	7012998	1	Seal Kit - 7017418 Cartridge	
15		Ref	Cartridge Options:	
15		Ref	Cartridge - 4641070 Valve Components	
15	7017418	1	Cartridge (Platform Level Forward Rod End) (was p/n 7017422)	
15	7012998	1	Seal Kit - 7017418 Cartridge	
15		Ref	Cartridge - 4641195 & 1001097507 Valve Components	
15	7017421	1	Cartridge (Platform Level Backward Piston End)	
15	7012998	1	Seal Kit - 7017421 Cartridge	
16	10837580	1	Cartridge (Telescope)	
16	7010543	1	Seal Kit - 10837580 Cartridge	
17	7012914	1	Cartridge (Platform Level Piston Side)	
17	7021653	1	Seal Kit - 7012914 Cartridge (was p/n 7012918)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
18	7012914	1	Cartridge (Platform Level Rod Side)	
18	7021653	1	Seal Kit - 7012914 Cartridge (was p/n 7012918)	
19	7012947	1	Cartridge, (Emergency Descent)	
19	7012518	1	Seal Kit - 7012947 Cartridge	
19		Ref	Knob Options:	
19	7012949	1	Knob - 4641070 & 4641195 Valves	
19	7012961	1	Knob - 1001097507 Valve	
20	70004019	1	Pump, Manual (was p/n 7012694)	
20	7017496	1	Seal Kit - 7012694 Cartridge	
21	See Note	1	Plug, Orifice (.031in) (Note: Not available for purchase)	
22	7021624	1	Disc, Orifice (.028in)	
23	70000381	1	Cartridge, Plug	
24	7012975	1	Valve, Check (4641195 & 1001097507 Valves Only)	
24	7012540	1	Seal Kit - 7012975 Cartridge	

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FIGURE 2-3. TURNTABLE AND SWING DRIVE INSTALLATION



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FIGURE 2-3. TURNTABLE AND SWING DRIVE INSTALLATION

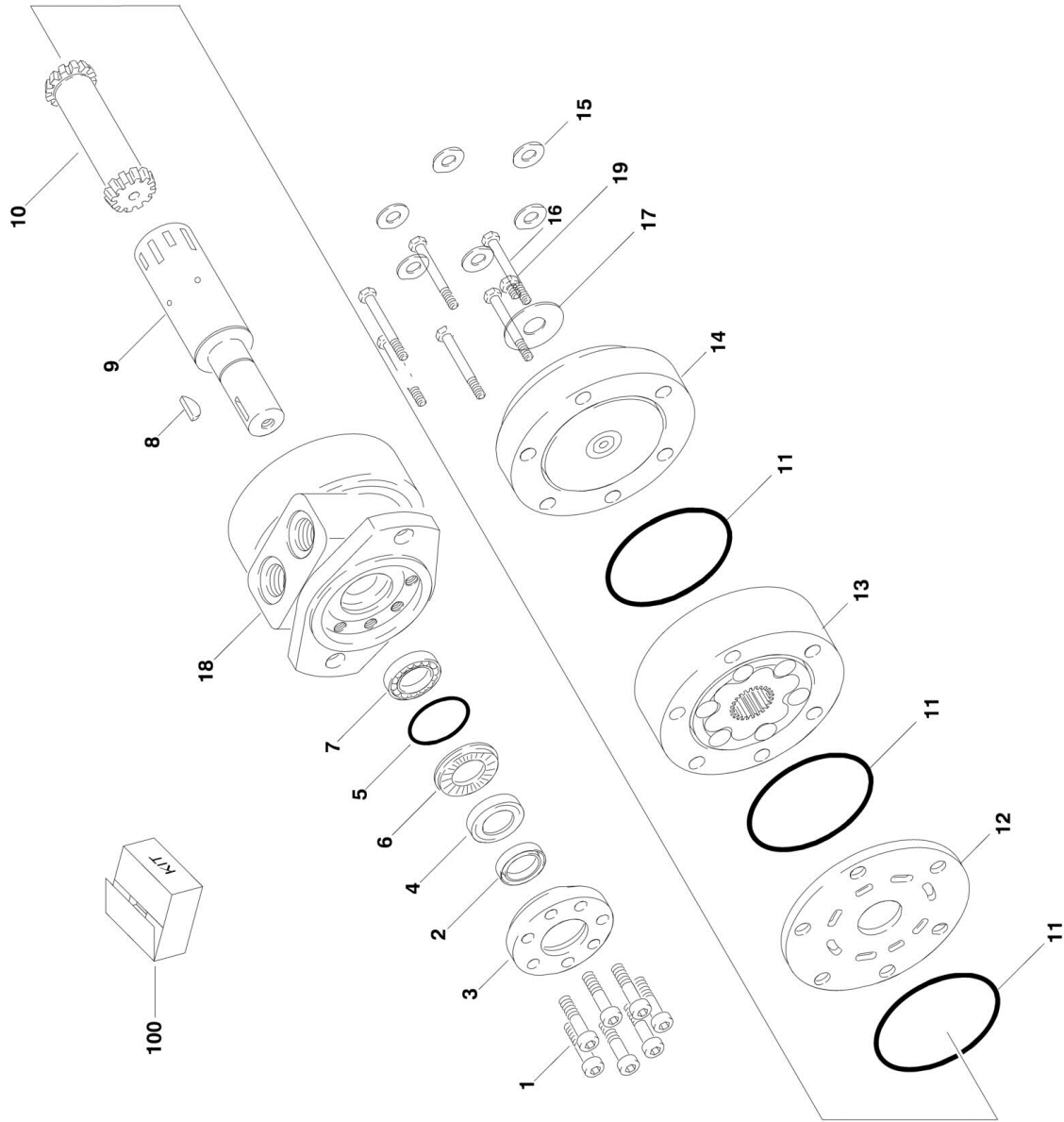
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	TURNTABLE BEARING AND SWING DRIVE INSTALLATIONS	
	0258653	Ref	Turntable Bearing and Swing Drive (DOHI)	5
	1001153366	Ref	Turntable Bearing and Swing Drive (JING WEI)	A
1		Ref	Turntable Bearing and Rotation Box Assembly Options (See SWING BEARING ASSEMBLY for Breakdown):	
1	0440203	NLA	Dohi (Use p/n 0440339) (Prior to SN 0300097888)	
1	0440339	1	Dohi (E/M400) (SN 0300097888 through 0300189901)	
1	0440339	1	Dohi (E/M450) (SN 0300097888 through 0300189898)	
1	1001153017	1	JING WEI	
2	0100019	AR	Compound, Locking	
3		Ref	Swing Motor Assembly Options:	
3	3160233	NLA	Swing Motor Assembly (See SWING MOTOR ASSEMBLY for Breakdown) (Use p/n 1001105455) (Prior to SN 0300135649)	
3	1001104850	1	Swing Motor Assembly (See SWING MOTOR ASSEMBLY for Breakdown) (E/M400) (SN 0300135649 through 0300189901)	
3	1001104850	1	Swing Motor Assembly (See SWING MOTOR ASSEMBLY for Breakdown) (E/M450) (SN 0300135649 through 0300189898)	
4		Ref	Bolt Options:	
4	0681814	2	Bolt 1/2in-13NC x 1-3/4in (Grade 8) (Prior to SN 0300099082)	
4	0681816	2	Bolt 1/2in-13NC x 2in (Grade 8) (SN 0300099082 through 0300135648)	
4	3931832	2	Capscrew 1/2in-13NC x 2in (Grade 8) (E/M400) (SN 0300135649 through 0300189901)	
4	3931832	2	Capscrew 1/2in-13NC x 2in (Grade 8) (E/M450) (SN 0300135649 through 0300189898)	
5	4740171	2	Washer, Hardened	
6	0682026	18	Bolt 5/8in-11NC x 3-1/4in (Grade 8)	
7	4892000	42	Washer, Hardened (Early Jing Wei Brand & All DOHI Brand Bearings)	
7	4892000	41	Washer, Hardened (Jing Wei Brand Bearings)	
8	3020027	AR	Lube (5 gal bucket)	
8	70010724	AR	Lube (14 oz. tube)	
9	3020029	AR	Grease, Bearing	
10	0682028	24	Bolt 5/8in-11NC x 3-1/2in (Grade 8) (Early Jing Wei Brand & All DOHI Brand Bearings)	
10	0682028	23	Bolt 5/8in-11NC x 3-1/2in (Grade 8) (Jing Wei Brand Bearings)	
	1001103732	Ref	REMOTE BEARING LUBE INSTALLATION (OPTIONAL)	A
101	0100011	AR	Compound, Locking	
102	0641608	1	Bolt 3/8in-16NC x 1in	
103	0902520	1	Bracket	
104	2160002	1	Fitting, Straight	
105	2180344	1	Fitting, Bulkhead	
106	2220001		Fitting, Straight	
107	2220124	1	Fitting, Elbow	
108	4711600	1	Flatwasher 3/8in (Narrow)	
109	2751095	1	Hose	
201		Ref	TURNTABLE WELDMENTS	
201	4620118	Ref	Turntable Weldments (E/M450A Models)	
201	4620124	Ref	Turntable Weldments (E/M450AJ Models)	
201	4620118	Ref	Turntable Weldments (E/M400A Models)	
201	4620124	Ref	Turntable Weldments (E/M400AJP Models)	
	1001116193	Ref	DRIVE ORIENTATION INSTALLATION ONLY (E/M400) (SN	B

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001116193	Ref	0300141884 through 0300189901) DRIVE ORIENTATION INSTALLATION ONLY (E/M450) (SN 0300141884 through 0300189898)	B
301	0100011	AR	Compound, Locking	
302	0641608	2	Bolt 3/8in-16NC x 1in	
303	0741408	2	Capscrew, Countersunk 1/4in-20NC x1in	
304	3310805	2	Locknut #8-32NC	
305	3930824	2	Capscrew #8-32NC x 1-1/2in	
306	4240175	2	Tie - Strap	
307	4564417	2	Tube, Spacer	
308	4711600	2	Flatwasher 3/8in Narrow	
309	4750800	2	Flatwasher #8 Wide	
310	1001116130	1	Bracket, Mounting	
311	1001116195	1	Cam	
312	1001116232	1	Switch, Limit	
316	1001116522	1	Harness, Drive Orientation (See ELECTRICAL SECTION for Breakdown)	

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FIGURE 2-4. SWING MOTOR ASSEMBLY (Prior to SN 0300135649)



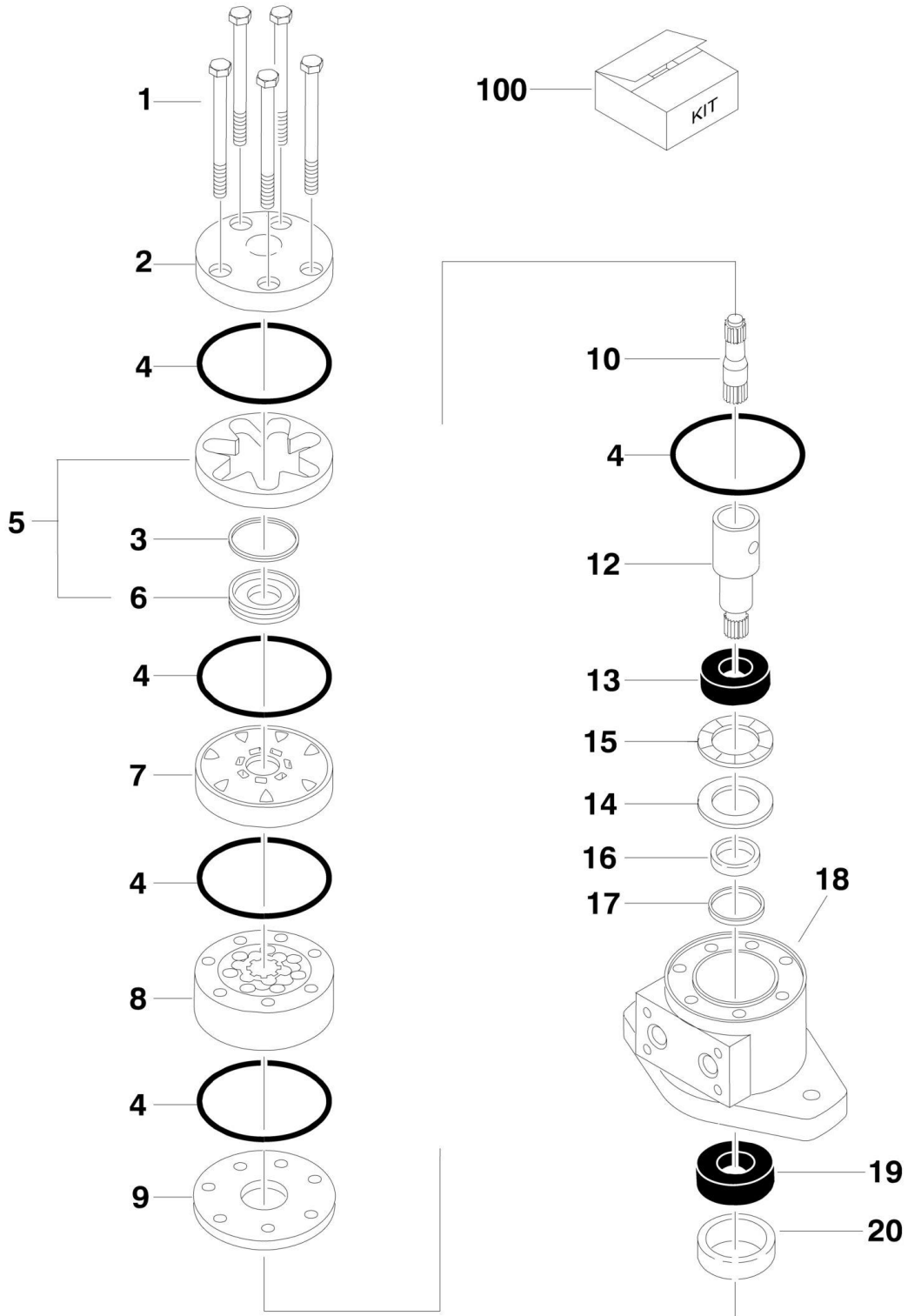
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FIGURE 2-4. SWING MOTOR ASSEMBLY (Prior to SN 0300135649)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	3160233	Ref	SWING MOTOR ASSEMBLY	D
		Ref		
			Note: Identify motor before ordering parts. Original Equipment Motors up to SN 0300135649 use 6 bolts in motor cover. Service Replacement Motor from SN 0300135649 to present use 5 bolts in motor cover. Make sure the motor has not been replaced with a Service Replacement Motor before ordering parts. See next illustration for Service Replacement Motor components.	
1	See Note	6	Screw, Metric M6 x 20mm (Note: Not Available - Purchase Locally)	
2	See Note	1	Ring, Dust (Note: Not Available - Purchase Locally)	
3	3160233	1	Flange, Spigot (Note: Not Available for Purchase)	
4	See Note	NSS	Seal, Shaft (Note: Use Item 100)	
5	See Note	NSS	O-Ring (Note: Use Item 100)	
6	7020128	1	Race, Bearing	
7	7020129	1	Bearing, Needle	
8	7020126	1	Key, Woodruff	
9	3160233	1	Shaft, Output (Note: Not Available for Purchase)	
10	7020130	1	Shaft	
11	See Note	NSS	O-Ring (Note: Use Item 100)	
12	See Note	1	Plate, Distributor (Note: Not Available - Purchase Complete Assembly)	
13	7020131	1	Gear Set	
14	See Note	1	Cover, End (Note: Not Available - Purchase Complete Assembly)	
15	See Note	6	Washer (Note: Not Available - Purchase Locally)	
16	See Note	6	Screw, Metric M8 x 35mm (Note: Not Available - Purchase Locally)	
17	See Note	1	Nameplate (Note: Not Available for Purchase)	
18	3160233	1	Housing (Note: Not Available for Purchase)	
19	See Note	1	Plug, Drain 7/16in-20NF (Note: Not Available - Purchase Locally)	
100	7020127	1	Seal Kit (Includes Items 4, 5 & 11)	

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FIGURE 2-5. SWING MOTOR ASSEMBLY



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FIGURE 2-5. SWING MOTOR ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001104850	Ref	SWING MOTOR ASSEMBLY	A
1	See Note	5	Bolt, Special (Note: Not Available for Purchase)	
2	7004035	1	Cover, End	
3	7023318	1	Seal, Commutator	
4	7004036	5	O-Ring	
5	7024453	1	Commutator and Ring Assembly	
6	7024453	1	Ring	
7	7024379	1	Manifold	
8	70002206	1	Rotor Set	
9	7024380	1	Plate, Ware	
10	70002207	1	Link, Drive	
12	70000088	1	Shaft, Coupling	
12A	70000089	1	Key, Woodruff	
13	7024381	1	Bearing, Inner	
14	7004043	1	Washer, Thrust	
15	7004044	1	Bearing, Thrust	
16	7004049	1	Seal, Inner	
17	7004045	1	Washer, Back-up	
18	See Note	NSS	Housing (Note: Use p/n 1001104850)	
19	7024390	1	Bearing, Outer	
20	7004047	1	Seal	
100	7024389	1	Seal Kit (Includes Items 3, 4, 16, 17 & 20)	

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FIGURE 2-6. SWING BEARING ASSEMBLY

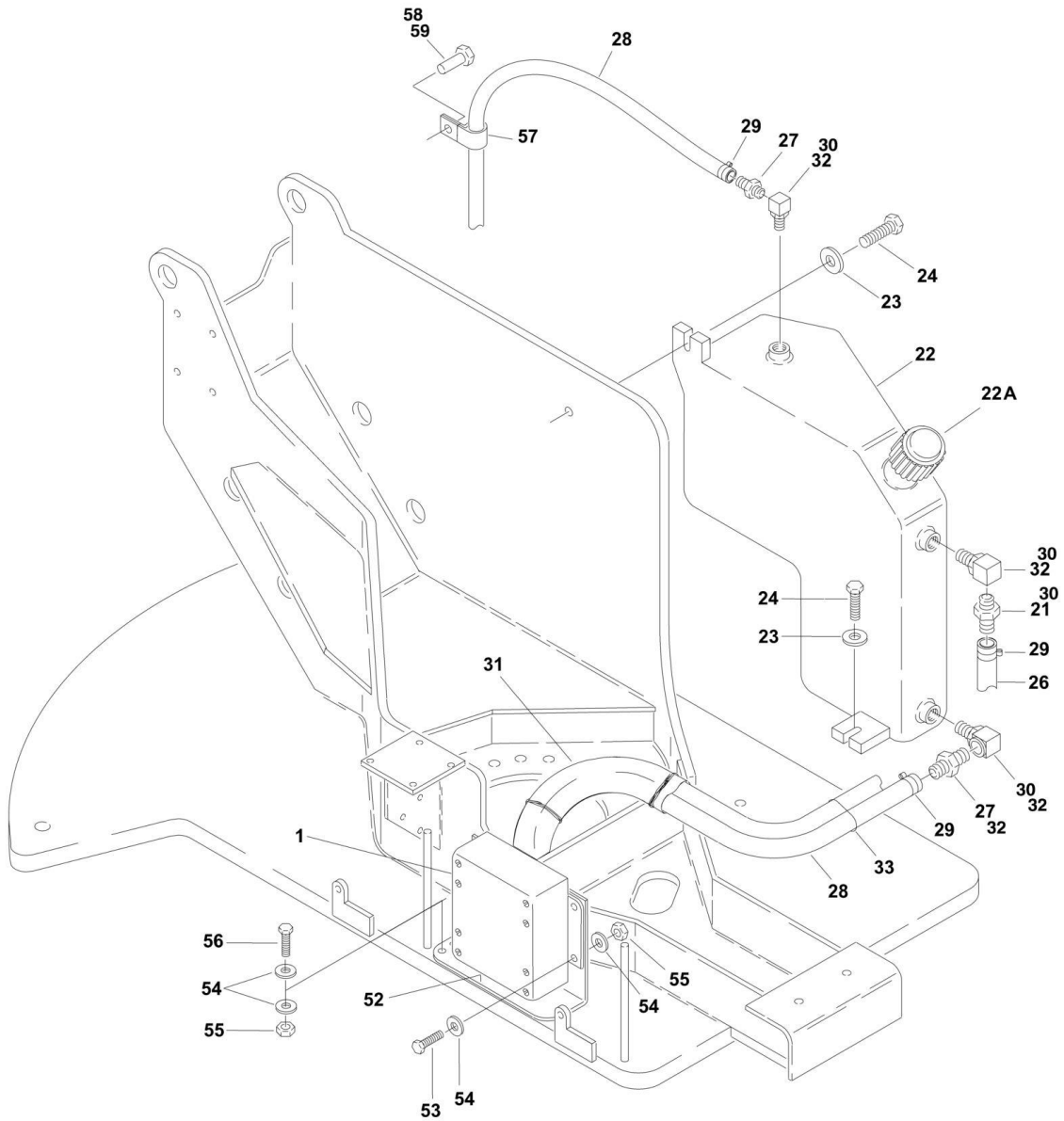
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Note: For Machines Built Prior to SN 0300097888, visually identify the brand before ordering replacement parts.	
		Ref	SWING BEARING ASSEMBLIES (PERFECTION GEAR) (E/M400A) (SN 0300097888 through 0300189901)	
		Ref	SWING BEARING ASSEMBLIES (PERFECTION GEAR) (E/M450A/J) (SN 0300097888 through 0300189898)	
	0440339	Ref	Turntable Bearing (DOHI)	D
	1001153017	Ref	Turntable Bearing (JING WEI)	A
1	7026042	2	Bearing, Cup	
1	7026043	2	Bearing, Cone	
2	7027356	1	Adapter, Motor	
3	7027361	2	Seal	
4	7027354	1	Cap, End	
5	0641510	2	Bolt 5/16in-18NC x 1-1/4in	
6	0641812	2	Bolt 1/2in-13NC x 1-1/2in	
7	70000865	1	Plug	
8	7027360	1	Seal	
9	7027359	2	Straight Fitting, Grease	
9	2160003	2	Fitting, Grease - Elbow	
10	7027358	2	Fitting, Grease - Elbow	
11	See Note	1	Housing (Note: Not Available - Purchase Complete Assembly)	
12	4891500	2	Flatwasher 5/16in (Hardened)	
13	7027363	1	Gear, Worm	
14		Ref	Ring Gear Options:	
14	70000868	1	DOHI (Ring Gear Kit Includes Ring Gear and Mounting Hardware)	
14	70004159	1	JING WEI (Ring Gear Only)	
15	7027352	AR	Gasket (.010 - Brown)	
16	7027351	AR	Gasket (.0075 - Clear)	
17	7027350	AR	Gasket (.005 - Blue)	
18	7027353	1	Gasket (.020 - Yellow)	
	0440203	Ref	SWING BEARING ASSEMBLY (KAYDON) (Prior to SN 0300097888)	G
		Ref	Note: When replacing major components, consider replacing with p/n 0440339 Complete Bearing Assembly.	
101	7012597	1	Swing Rotation Box Assembly	
102	7023484	1	Cap, End	
103	See Note	2	Bolt 1/2in-13NC x 1-1/2in Grade 8 (Note: Not Available - Purchase Locally)	
104	See Note	1	Gear, Worm (Note: Not Available - Purchase Complete Assembly)	
105	7012654	1	Seal, Outer - Capped End (1.75 O.D.)	
106	7016682	1	Shims Kit (Includes Qty 3 each of .005, .0075 & .010 Shims)	
107	70001677	2	Cup, Bearing	
108	90206369	2	Cone, Bearing	
109	7016676	2	Seal, Outer - Capped End (2.063 O.D.)	
110	See Note	1	Ring, Retaining (Note: Not Available for Purchase)	
111	7012655	1	Seal, Outer - Motor End	
112	2160001	2	Fitting, Grease - Elbow	
113	See Note	2	Lockwasher 1/2in (Note: Not Available - Purchase Locally)	
114		Ref	Component Options:	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
114	See Note	1	Plug, Pipe (Note: Not Available - Purchase Locally)	
114	2160001	1	Fitting, Grease - Elbow	
115	7012596	1	Ring Gear Kit (use p/n 2915104) (Kit Includes Ring Gear and Mounting Hardware)	
116	2160003	2	Fitting, Grease - Elbow	
117	See Note	4	Capscrew, Socket Head 5/16in-18NC (Note: Not Available - Purchase Locally)	
117	See Note	4	Washer 5/16in (Not Shown) (Note: Not Available - Purchase Locally)	

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FIGURE 2-7. FUEL TANK AND MOTOR CONTROL MODULE INSTALLATION (M450 & M400 ONLY)



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FIGURE 2-7. FUEL TANK AND MOTOR CONTROL MODULE INSTALLATION (M450 & M400 ONLY)

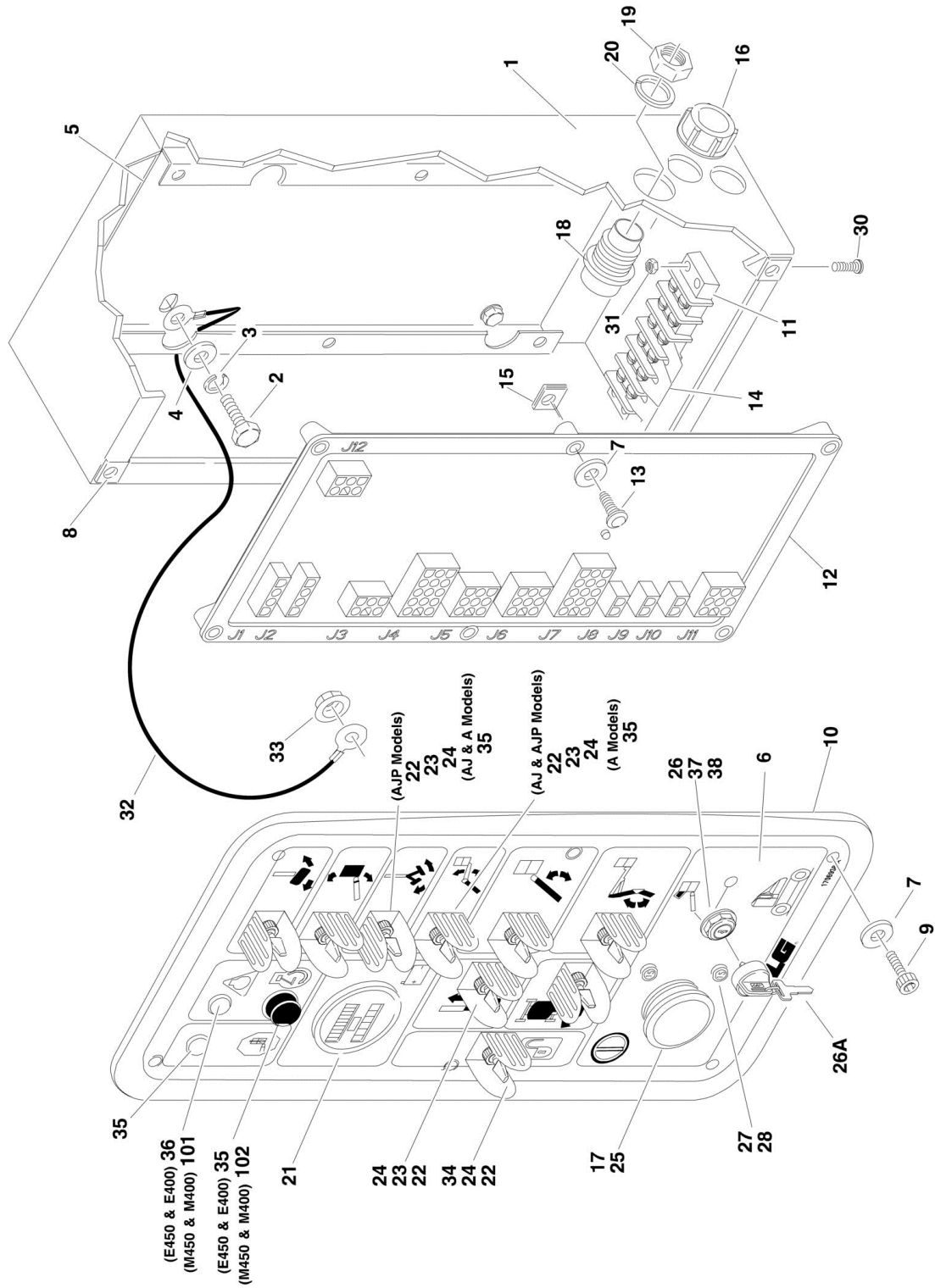
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	TANK AND MOTOR/GENERATOR COMPONENTS INSTALLATION (TURNTABLE MOUNTED)	
	0257824	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M450 Models Built) (Prior to SN 0300059390)	11
	0270344	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M450 Models Built) (SN 0300059390 through 0300079056)	5-B
	0270344	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M400 Models) (Prior to SN 0300079057)	5-B
	0273573	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M450/M400 Models) (SN 0300079057 through 0300088538)	B
	0274617	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M450/M400 Models) (Use p/n 1001159362) (Prior to SN 0300182839)	G
	1001159362	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M400 Models) (SN 0300182839 through 0300189901)	A
	1001159362	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M450 Models) (SN 0300182839 through 0300189898)	A
1		Ref	Module, Control Options:	
		Ref	Note: Re-calibration Required when Replaced.	
1	7020156	1	Module, Control (Prior to SN 0300088539)	
1	70000326	1	Module, Control (M400) (SN 0300088539 through 0300189901)	
1	70000326	1	Module, Control (M450) (SN 0300088539 through 0300189898)	
2		Ref	Harness, Wiring (Not Shown - See ELECTRICAL SECTION for Breakdown)	
2	7020155	1	Harness, Wiring (Prior to SN 0300063771)	
2	7023486	1	Harness, Wiring (SN 0300063771 through 0300088538)	
2	70000328	1	Harness, Wiring (M400) (SN 0300088539 through 0300189901)	
2	70000328	1	Harness, Wiring (M450) (SN 0300088539 through 0300189898)	
21		Ref	Fitting Options:	
21	2180536	2	Fitting, Barbed (Prior to SN 0300098816)	
21	2221047	2	Fitting, Elbow (M400) (SN 0300098816 through 0300189901)	
21	2221047	2	Fitting, Elbow (M450) (SN 0300098816 through 0300189898)	
22	4400417	1	Tank, Gas	
22A	7016314	1	Cap (Standard)	
22A	1120487	1	Lockable Cap (Blue) (Optional)	
23	4751600	2	Flatwasher 3/8in	
24	0641616	2	Bolt 3/8in-16NC x 2in	
26	2720271	10 ft/3m	Hose	
27		Ref	Fitting Options:	
27	2220315	2	Fitting, Barbed (Prior to SN 0300098816)	
27	2221046	2	Fitting, Elbow (M400) (SN 0300098816 through 0300189901)	
27	2221046	2	Fitting, Elbow (M450) (SN 0300098816 through 0300189898)	
28	2720058	16 ft/4.9m	Hose	
29	1320022	AR	Clamp, Hose	
30	0100020	AR	Sealant	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
31	4100026	3 ft/1m	Sleeve, Hose	
32	2220459	3	Fitting, Elbow (Prior to SN 0300098816)	
33	4240033	10	Strap, Tie	
52	3571157	1	Plate	
53	0641406	4	Bolt 1/4in-20NC x 3/4in	
54	4711400	16	Flatwasher 1/4in Narrow	
55	3311405	8	Locknut 1/4in-20NC	
56	0641413	4	Bolt 1/4in-20NC x 1-1/2in	
57	1320041	1	Clamp	
58	0641408	1	Bolt 1/4in-20NC x 1in	
59	0100011	AR	Compound, Locking	

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FIGURE 2-8. GROUND CONTROL BOX ASSEMBLY



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FIGURE 2-8. GROUND CONTROL BOX ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	GROUND CONTROL BOX ASSEMBLY	
		Ref	Ground Control Box Assembly (Prior to SN 0300100540)	
	0861177	Ref	Ground Control Box Assembly (E/M450A Models)	8-E
	0861400	Ref	Ground Control Box Assembly (E/M450AJ Models)	5-E
	0861177	Ref	Ground Control Box Assembly (E/M400A Models)	7-C
	0861351	Ref	Ground Control Box Assembly (E/M400AJP Models)	7-E
		Ref	Ground Control Box Assembly (E/M400) (SN 0300100540 through 0300189901)	
		Ref	Ground Control Box Assembly (E/M450) (SN 0300100540 through 0300189898)	
	1810136	Ref	Ground Control Box Assembly (E/M450A Models)	D
	1810138	Ref	Ground Control Box Assembly (E/M450AJ Models)	D
	1810136	Ref	Ground Control Box Assembly (E/M400A Models)	D
	1810134	Ref	Ground Control Box Assembly (E/M400AJP Models)	D
1	0861152	1	Box Weldment	
2	0641605	4	Bolt 3/8in-16NC x 5/8in	
3	4761600	4	Lockwasher 3/8in	
4	4751600	4	Flatwasher 3/8in	
5	0902406	1	Bracket, Module Mounting	
6		Ref	Nameplate Options:	
6	3252632	NLA	Nameplate (use p/n 3252812) (Prior to SN 0300057535)	
6	3252669	NLA	Nameplate (use p/n 3252812) (SN 0300057535 through 0300074683)	
6	3252812	1	Nameplate (SN 0300074684 through 0300100539)	
6	1706938	1	Nameplate (E/M400) (SN 0300100540 through 0300189901)	
6	1706938	1	Nameplate (E/M450) (SN 0300100540 through 0300189898)	
7	4740120	12	Washer, Nylon	
8	3300365	6	Nut, Retainer	
9	0630518	6	Screw #10-24 x 3/4in	
10	3960438	50	Seal	
		in/1.26m		
11	4460007	1	Strip, Terminal - 6 Position	
12		Ref	Module Options:	
		Ref	Note: Re-calibration Required when Replaced.	
12	0610129	NLA	Module (use p/n 1001109497) (Prior to SN 0300059841)	
12	0610139	NLA	Module (use p/n 1001109497) (SN 0300059841 through 0300072453)	
12	0610166	NLA	Module (use p/n 1001109497) (E/M400) (SN 0300072454 through 0300189901)	
12	0610166	NLA	Module (use p/n 1001109497) (E/M450) (SN 0300072454 through 0300189898)	
13	0750808	6	Screw #8 x 1in	
14	4460264	3	Buss, Terminal	
15	3300188	6	Nut, Tinnerman	
16	4460425	1	Connector, Strain Relief	
17	4360476	1	Block, Contact	
18	4460495	1	Connector 14 Position	
19	4460497	1	Nut, Conduit	
20	4460496	1	Lockwasher	
21	2420106	1	Gauge, Hourmeter/Battery Capacity	
22	4740397	AR	Spacer	

SECTION 2 - TURNTABLE

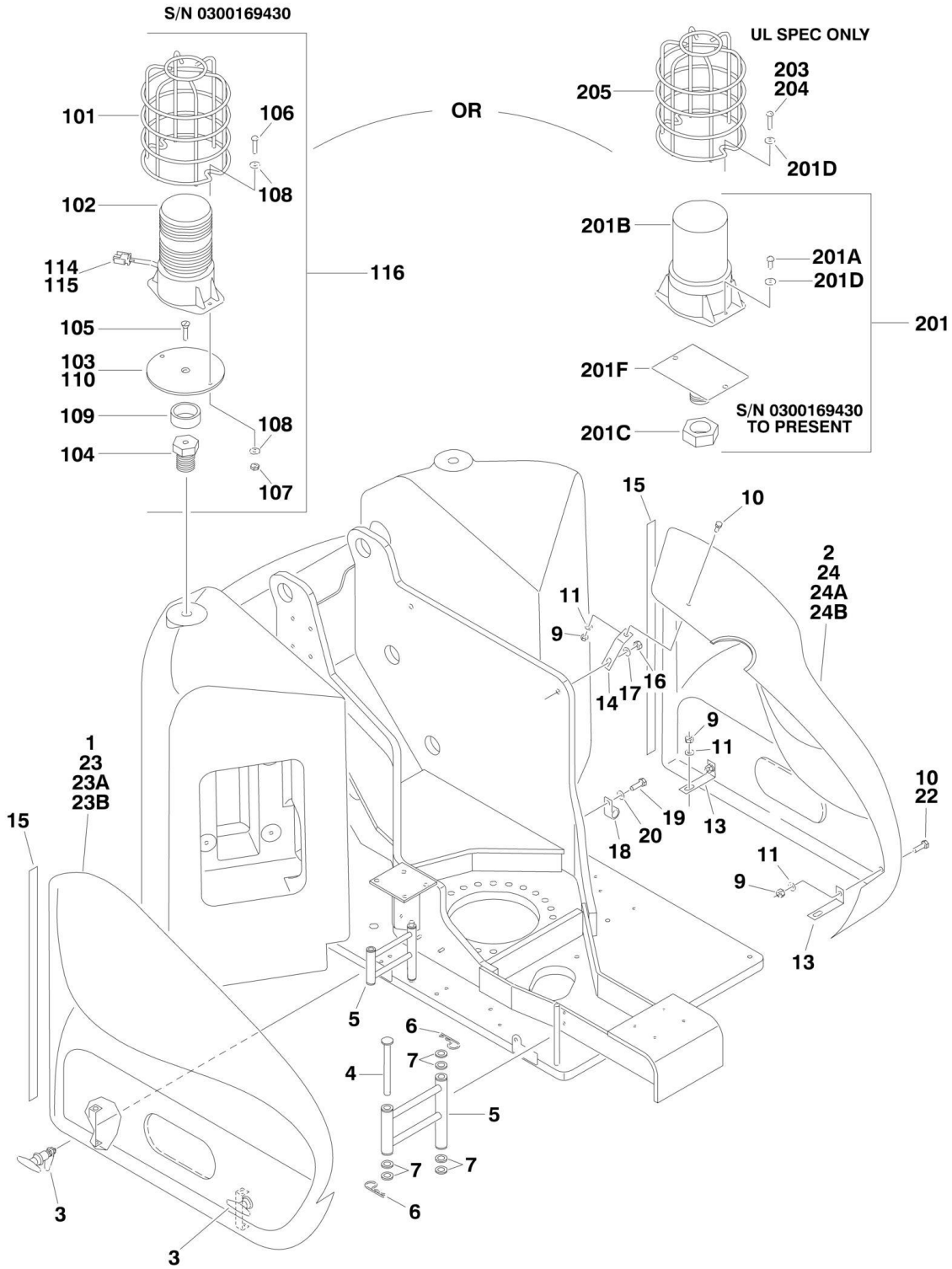
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
23	4360328	AR	Switch, Toggle	
24		Ref	Guard, Switch Options:	
24	4060906	AR	Guard, Switch (Prior to SN 0300079931)	
24	4060802	AR	Guard, Switch (E/M400) (SN 0300079931 through 0300189901)	
24	4060802	AR	Guard, Switch (E/M450) (SN 0300079931 through 0300189898)	
25	4360475	1	Switch, Emergency Stop	
25	7020175	1	Mushroom Head	
25	7020176	1	Block, Contact	
26	4360469	1	Keypad	
26A	2860030	AR	Key, Replacement (Set of 2)	
27	4360070	2	Breaker, Circuit - 15Amp	
28	3300396	2	Nut, Special	
30	0721005	2	Screw #10-24NC x 5/8in	
31	3311005	2	Locknut #10-24NC	
32	1060584	1	Cable, Lanyard	
33	3311011	1	Nut, Push #10	
34	4360330	1	Switch, Toggle (E/M400) (SN 0300100540 through 0300189901)	
34	4360330	1	Switch, Toggle (E/M450) (SN 0300100540 through 0300189898)	
35	3520028	AR	Plug, Hole 1/2in	
36		Ref	Plug, Hole Options:	
36	3520054	1	Plug, Hole 7/16in (Prior to SN 0300108951)	
36	3520026	1	Plug, Hole 5/8in (E/M400) (SN 0300108951 through 0300189901)	
36	3520026	1	Plug, Hole 5/8in (E/M450) (SN 0300108951 through 0300189898)	
37		Ref	Shim, Nylon Options:	
37	4070987	5	Shim, Nylon (Prior to SN 0300175721)	
37	1001151393	1	Shim, Nylon (E/M400) (SN 0300175721 through 0300189901)	
37	1001151393	1	Shim, Nylon (E/M450) (SN 0300175721 through 0300189898)	
38	3910804	6	Screw #8-32NC x 1/4in	
		Ref	MOTOR CONTROLS INSTALLATION (M450 & M400 ONLY)	
	0257824	Ref	Motor Controls Installation (All M450 Models Built) (Prior to SN 0300059390)	11
	0270344	Ref	Motor Controls Installation (All M450 Models Built) (SN 0300059390 through 0300079056)	5-B
	0270344	Ref	Motor Controls Installation (All M400 Models) (Prior to SN 0300079057)	5-B
	0273573	Ref	Motor Controls Installation (All M450/M400 Models) (SN 0300079057 through 0300088538)	B
	0274617	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M450/M400 Models) (Use p/n 1001159362) (Prior to SN 0300182839)	G
	1001159362	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M400 Models) (SN 0300182839 through 0300189901)	A
	1001159362	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M450 Models) (SN 0300182839 through 0300189898)	A
101	2920151	1	Led (Red)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
101	4460248	2	Terminal, Button Splice	
101	4922319	1	Harness Generator (See ELECTRICAL SECTION for Breakdown)	
101	4460267	1	Pin, Male	
102	4360274	1	Switch, Push Button	
102	4460259	2	Terminal, Posi-Lock	
102	4460260	2	Terminal, Housing	

SECTION 2 - TURNTABLE

FIGURE 2-9. HOODS AND BEACON LIGHT INSTALLATIONS



SECTION 2 - TURNTABLE

FIGURE 2-9. HOODS AND BEACON LIGHT INSTALLATIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	HOODS INSTALLATION	
	0258953	Ref	Hoods Installation (M450 & M400 Models)	5-C
	0253709	Ref	Hoods Installation (E450 & E400 Models) (Prior to SN 0300075499)	7-G
	0258953	Ref	Hoods Installation (E/M400) (SN 0300075499 through 0300189901)	5-C
	0258953	Ref	Hoods Installation (E/M450) (SN 0300075499 through 0300189898)	5-C
1	See Note	1	Hood, LH (was p/n 2680473) (Note: Use Items 23A or 23B)	
2		Ref	Hood Options:	
2	See Note	1	Hood (M450 & M400 Models) (was p/n 2680474) (Note: Use Items 24A or 24B)	
2	See Note	1	Hood (E450 & E400 Models) (was p/n 2680475) (Note: Use Items 24A or 24B)	
3	2940071	2	Latch	
4	3430840	2	Pin, Clevis	
5	0253687	2	Hinge, Swing	
5	0961749	4	Bushing	
6	3420156	4	Pin, Hair Cotter	
7	4751800	AR	Flatwasher 1/2in	
9	3311501	AR	Nut 5/16in-18NC	
10	0630468	3	Bolt 5/16in-18NC x 1in	
11	4751500	5	Flatwasher 5/16in	
12		Ref	Shield, Flex Trim Options:	
12	4060803	AR	Shield, Flex Trim (Prior to SN 0300134967)	
12	4060805	AR	Shield, Flex Trim (E/M400) (SN 0300134967 through 0300189901)	
12	4060805	AR	Shield, Flex Trim (E/M450) (SN 0300134967 through 0300189898)	
13	0901923	2	Bracket, Hood Mounting	
14	0901921	1	Bracket, Hood Mounting	
15	3960453	5 ft/1.5m	Seal, Door	
16	3311601	AR	Nut 3/8in-16NC	
17	4751600	AR	Flatwasher 3/8in	
18		Ref	Clamp Options:	
18	1320043	1	Clamp, Insulated Cable 3/8in (Prior to SN 0300093848)	
18	1320041	1	Clamp, Insulated Cable 1/2in (E/M400) (SN 0300093848 through 0300189901)	
18	1320041	1	Clamp, Insulated Cable 1/2in (E/M450) (SN 0300093848 through 0300189898)	
19	0641510	AR	Bolt 5/16in-18NC x 1-1/4in	
20	4751400	1	Flatwasher 1/4in	
21	3311401	1	Nut 1/4in-20NC	
22	0100011	AR	Compound, Locking	
23		Ref	LH Side Hood Kit Options:	
		Ref	Note: Replacement Decals Must be Ordered Separately - See DECAL SECTION.	
23A	2901482	1	LH Side Hood Kit - E400 & E450 Models (Includes Items 1, 3-6 & 15)	
23B	2901778	1	LH Side Hood Kit - M400 & M450 Models (Includes Items 1, 3-6 & 15) (Use p/n 2901482)	
24		Ref	RH Side Hood Kit Options:	

SECTION 2 - TURNTABLE

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Note: Replacement Decals Must be Ordered Separately - See DECAL SECTION.	
24A	2901486	1	RH Side Hood Kit - E400 & E450 Models (Includes Items 7-10, 13-15 & #2 - 2680475 Hood) (Use p/n 2901777)	
24B	2901777	1	RH Side Hood Kit - M400 & M450 Models (Includes Items 7, 10, 13-15 & #2 - 2680474 Hood)	
	0259305	Ref	STROBE LIGHT INSTALLATION (AMBER) (OPTIONAL) (Prior to SN 0300169430)	2
		Ref	Note: If machine is equipped with BLUE Strobe Light, see SPECIAL OPTIONS SECTION SkyGuard Kit.	
101	4060865	1	Guard, Light	
102	2920146	1	Light, Strobe (Amber) (Use p/n 0272529)	
102	7016319	1	Bulb, Light	
102	7016372	1	Amber Lens	
103	0630491	1	Bolt, Special (Prior to SN 0300069568)	
104		Ref	Plate, Mounting Options:	
104	3537903	1	Plate, Mounting (Prior to SN 0300069568)	
104	4846698	1	Plate, Mounting (E/M400) (SN 0300069568 through 0300189901)	
104	4846698	1	Plate, Mounting (E/M450) (SN 0300069568 through 0300189898)	
105	0741606	1	Screw, Flathead 3/8in-16NC x 3/4in (Prior to SN 0300069568)	
106		Ref	Hardware Options:	
106	0721008	2	Bolt #10-24NC x 1in (Prior to SN 0300069568)	
106	3911014	2	Screw (E/M400) (SN 0300069568 through 0300189901)	
106	3911014	2	Screw (E/M450) (SN 0300069568 through 0300189898)	
107		Ref	Nut Options:	
107	3311005	2	Locknut #10-24NC (Prior to SN 0300069568)	
107	3311001	2	Nut #10-24NC (E/M400) (SN 0300069568 through 0300189901)	
107	3311001	2	Nut #10-24NC (E/M450) (SN 0300069568 through 0300189898)	
108	4751000	4	Flatwasher #10	
109	4220162	1	Spacer	
110	0100011	AR	Compound, Locking	
111	4240032	1	Tie-Strap	
112	4460234	1	Clamp	
113		Ref	Loom Options (Not Shown):	
113	2820036	16	Loom (Prior to SN 0300069568)	
		in/41cm		
113	2820035	16	Loom (E/M400) (SN 0300069568 through 0300189901)	
		in/41cm		
113	2820035	16	Loom (E/M450) (SN 0300069568 through 0300189898)	
		in/41cm		
114	4460267	2	Pin, Male (E/M400) (SN 0300069568 through 0300189901)	
114	4460267	2	Pin, Male (E/M450) (SN 0300069568 through 0300189898)	
115	4460320	1	Plug, Male, 2 Position (E/M400) (SN 0300069568 through 0300189901)	
115	4460320	1	Plug, Male, 2 Position (E/M450) (SN 0300069568 through 0300189898)	
116	0272529	1	Kit Light, Strobe Assembly (Includes Items 101, 102, 104, 106, 107, 108, 109, 110, 113, 114 & 115) (E/M400) (SN 0300069568 through 0300189901)	A
116	0272529	1	Kit Light, Strobe Assembly (Includes Items 101, 102, 104, 106, 107, 108, 109, 110, 113, 114 & 115) (E/M450) (SN 0300069568)	A

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	through 0300189898) STROBE LIGHT INSTALLATIONS (AMBER) (OPTIONAL) (E/M400) (SN 0300169430 through 0300189901)	
		Ref	STROBE LIGHT INSTALLATIONS (AMBER) (OPTIONAL) (E/M450) (SN 0300169430 through 0300189898)	
	1001149955	Ref	Standard Spec	A
	1001158612	Ref	UL Spec	A
		Ref	Note: If machine is equipped with BLUE Strobe Light, see SPECIAL OPTIONS Section SkyGuard Kit.	
201	1001150406	1	Strobe Light Assembly	
201A	0100035	AR	Compound, Locking	
201B	2920161	1	Light, Strobe (Amber)	
201B	7016319	1	Bulb, Light	
201B	7016372	1	Amber Lens	
201C	3312602	1	Nut, Jam 1in-8NC	
201D	3900085	2	Screw #10-32NC X 1/2in	
201E	4751000	2	Flatwasher #10 (Wide)	
201F	1001149994	1	Plate, Mounting	
202	1001149818	1	Harness, Strobe Light (Not Shown - See ELECTRICAL SECTION for Breakdown)	
203	0100035	AR	Compound, Locking (UL Spec Only)	
204	3900128	2	Screw #10-32NC X 7/8in (UL Spec Only)	
205	4060865	1	Guard (UL Spec Only)	

SECTION 3 - BOOM

FIGURE 3-1. BOOMS AND CYLINDERS INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	BOOMS INSTALLATIONS	
	0258691	Ref	Booms Installations (E/M450A Models)	B
	0259366	Ref	Booms Installations (E/M450AJ Models)	I
	0270724	Ref	Booms Installations (E/M400A Models)	F
	0259939	Ref	Booms Installations (E/M400AJP Models) (Prior to SN 0300064958)	4-E
	0271647	Ref	Booms Installations (E/M400AJP Models) (SN 0300064958 through 0300189901)	D
1		Ref	Boom Assembly -Tower Options:	
1	0800852	2	Boom Assembly -Tower (E/M450 Models) (Prior to SN 0300056571)	
1	0801264	2	Boom Assembly -Tower (E/M450 Models) (SN 0300056571 through 0300189898)	
1	0801262	2	Boom Assembly -Tower (E/M400A Models)	
1	0801227	2	Boom Assembly -Tower (E/M400AJP Models)	
2		Ref	Level Link Options:	
2	4844541	2	Level Link (E/M450 Models) (Prior to SN 0300056571)	
2	4846307	2	Level Link (E/M450 Models) (SN 0300056571 through 0300189898)	
2	4846209	2	Level Link (E/M400 Models)	
3		Ref	Upright Weldment (Lower)	
3	4844427	1	Upright Weldment (Lower) (E/M450 Models)	
3	4844303	1	Upright Weldment (Lower) (E/M400A Models)	
3	4844427	1	Upright Weldment (Lower) (E/M400AJP Models)	
4		Ref	Upright Weldment (Upper) Options:	
4	4844304	1	Upright Weldment (Upper) (E/M450A & E/M400A Models)	
4	4846026	1	Upright Weldment (Upper) (E/M450AJ & E/M400AJP Models)	
5		Ref	Boom Assembly - Main Options:	
5	0801169	1	Boom Assembly - Main (E/M450A Models) (See E/M450A & E/M400A MAIN BOOM ASSEMBLY AND PLATFORM SUPPORT INSTALLATION for Breakdown)	
5	0801197	1	Boom Assembly - Main (E/M450AJ Models) (See E/M450AJ MAIN BOOM ASSEMBLY for Breakdown)	
5	0270725	1	Boom Assembly - Main (E/M400A Models) (See E/M450A & E/M400A MAIN BOOM ASSEMBLY AND PLATFORM SUPPORT INSTALLATION for Breakdown)	
5	0801225	1	Boom Assembly - Main (E/M400AJP Models) (See E/M400AJP MAIN BOOM ASSEMBLY for Breakdown)	
6		Ref	Hose Guard Plate Options:	
6	3537045	1	Hose Guard Plate (E/M450 Models) (Prior to SN 0300093848)	
6	3536491	1	Hose Guard Plate (E/M400 Models)	
7		Ref	Lift Cylinder Assy - Lower (See CYLINDER SECTION for Breakdown):	
7	1683711	1	Lift Cylinder Assy - Lower (E/M450A Models) (Prior to SN 0300058843)	
7	1684058	1	Lift Cylinder Assy - Lower (E/M450A Models) (SN 0300058843 through 0300091052)	
7	1684492	NLA	Lift Cylinder Assy - Lower (E/M450A Models) (Use p/n 1001228039) (Original Equipment) (SN 0300091053 through 0300189898)	
7	1001228039	1	Lift Cylinder Assy - Lower (E/M450A Models) (Service Replacement)	
7	1683826	1	Lift Cylinder Assy - Lower (E/M450AJ Models) (Prior to SN	

SECTION 3 - BOOM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
7	1683939	1	0300056571 Lift Cylinder Assy - Lower (E/M450AJ Models) (SN 0300056571 through 0300086021)	
7	1684451	NLA	Lift Cylinder Assy - Lower (E/M450AJ Models) (Use p/n 1001228035) (Original Equipment) (SN 0300086022 through 0300189898)	
7	1001228035	1	Lift Cylinder Assy - Lower (E/M450AJ Models) (Service Replacement)	
7	1684024	1	Lift Cylinder Assy - Lower (E/M400A Models) (Prior to SN 0300086022)	
7	1684453	NLA	Lift Cylinder Assy - Lower (E/M400A Models) (Use p/n 1001228037) (Original Equipment) (SN 0300086022 through 0300189901)	
7	1001228037	1	Lift Cylinder Assy - Lower (E/M400A Models) (Service Replacement)	
7	1683939	1	Lift Cylinder Assy - Lower (E/M400AJP Models) (Prior to SN 0300091053)	
7	1684451	NLA	Lift Cylinder Assy - Lower (E/M400AJP Models) (Use p/n 1001228035) (Original Equipment) (SN 0300091053 through 0300189901)	
7	1001228035	1	Lift Cylinder Assy - Lower (E/M400AJP Models) (Service Replacement)	
8		Ref	Lift Cylinder Assy - Mid Options (See CYLINDER SECTION for Breakdown):	
8	1683713	1	Lift Cylinder Assy - Mid (E/M450A Models) (Prior to SN 0300058843)	
8	1684057	1	Lift Cylinder Assy - Mid (E/M450A Models) (SN 0300058843 through 0300091052)	
8	1684493	NLA	Lift Cylinder Assy - Mid (E/M450A Models) (use p/n 1001237443) (Original Equipment) (SN 0300091053 through 0300189898)	
8	1001237443	1	Lift Cylinder Assy - Mid (E/M450A Models) (Service Replacement)	
8	1683825	1	Lift Cylinder Assy - Mid (E/M450AJ Models) (Prior to SN 0300056571)	
8	1683942	1	Lift Cylinder Assy - Mid (E/M450AJ Models) (SN 0300056571 through 0300086021)	
8	1684452	NLA	Lift Cylinder Assy - Mid (E/M450AJ Models) (use p/n 1001228036) (Original Equipment) (SN 0300086022 through 0300189898)	
8	1001228036	1	Lift Cylinder Assy - Mid (E/M450AJ Models) (Service Replacement)	
8	1684027	NLA	Lift Cylinder Assy - Mid (E/M400A Models) (use p/n 1684447) (Prior to SN 0300080496)	
8	1684447	1	Lift Cylinder Assy - Mid (E/M400A Models) (SN 0300080496 through 0300086021)	
8	1684454	NLA	Lift Cylinder Assy - Mid (E/M400A Models) (use p/n 1001228038) (Original Equipment) (SN 0300086022 through 0300189901)	
8	1001228038	1	Lift Cylinder Assy - Mid (E/M400A Models) (Service Replacement)	
8	1683942	1	Lift Cylinder Assy - Mid (E/M400AJP Models) (Prior to SN 0300091053)	
8	1684452	NLA	Lift Cylinder Assy - Mid (E/M400AJP Models) (use p/n 1001228036) (Original Equipment) (SN 0300091053 through 0300189901)	
8	1001228036	1	Lift Cylinder Assy - Mid (E/M400AJP Models) (Service Replacement)	

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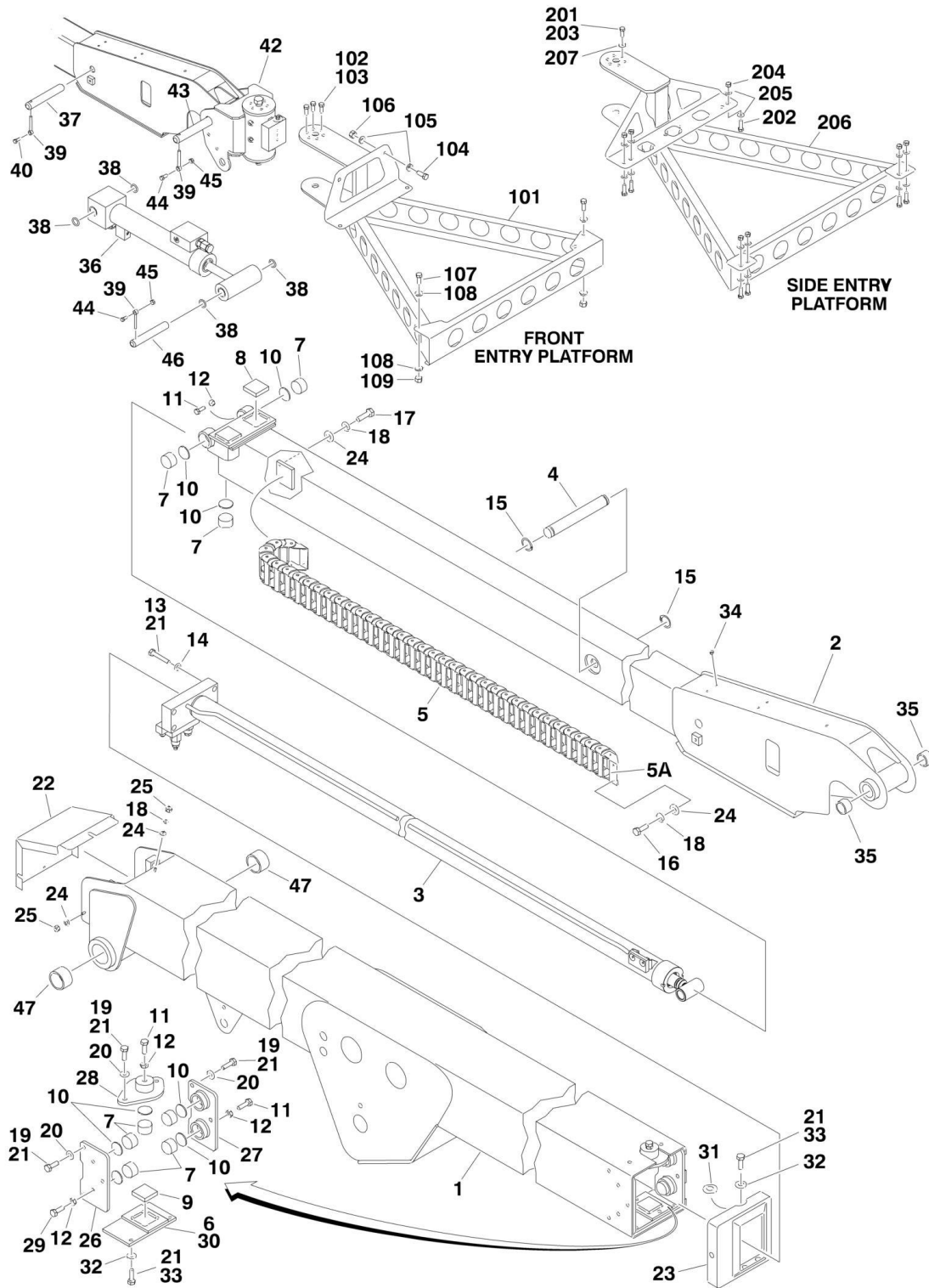
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
9		Ref	Lift Cylinder Assembly - Upper Options (See CYLINDER SECTION for Breakdown):	
9	1683708	1	Lift Cylinder Assembly - Upper (E/M450A Models) (Prior to SN 0300058843)	
9	1684061	NLA	Lift Cylinder Assembly - Upper (E/M450A Models) (use p/n 1001228018) (Original Equipment) (SN 0300058843 through 0300189898)	
9	1001228018	1	Lift Cylinder Assembly - Upper (E/M450A Models) (Service Replacement)	
9	1683813	1	Lift Cylinder Assembly - Upper (E/M450AJ Models) (Prior to SN 0300056571)	
9	1683945	NLA	Lift Cylinder Assembly - Upper (E/M450AJ Models) (use p/n 1001228016) (Original Equipment) (SN 0300056571 through 0300189898)	
9	1001228016	1	Lift Cylinder Assembly - Upper (E/M450AJ Models) (Service Replacement)	
9	1684033	1	Lift Cylinder Assembly - Upper (E/M400A Models) (Prior to SN 0300073768)	
9	1684061	NLA	Lift Cylinder Assembly - Upper (E/M400A Models) (use p/n 1001228018) (Original Equipment) (SN 0300073768 through 0300189901)	
9	1001228018	1	Lift Cylinder Assembly - Upper (E/M400A Models) (Service Replacement)	
9	1683945	NLA	Lift Cylinder Assembly - Upper (E/M400AJP Models) (use p/n 1001228016) (Original Equipment)	
9	1001228016	1	Lift Cylinder Assembly - Upper (E/M400AJP Models) (Service Replacement)	
10		Ref	Master Cylinder Assembly Options (See CYLINDER SECTION for Breakdown):	
10		Ref	Master Cylinder Assembly (E/M450A Models) Options:	
10	1683325	1	Master Cylinder Assembly (Prior to SN 0300056894)	
10	1683932	NLA	Master Cylinder Assembly (use p/n 1001140597) (SN 0300056894 through 0300165127)	
10	1001140597	1	Master Cylinder Assembly (SN 0300165128 through 0300189898)	
10		Ref	Master Cylinder Assembly (E/M450AJ Models) Options:	
10	1683923	NLA	Master Cylinder Assembly (use p/n 1001140278) (Prior to SN 0300163453)	
10	1001140278	1	Master Cylinder Assembly (SN 0300163453 through 0300189898)	
10		Ref	Master Cylinder Assembly (E/M400A Models) Options:	
10	1683932	NLA	Master Cylinder Assembly (use p/n 1001140597) (Prior to SN 0300165128)	
10	1001140597	1	Master Cylinder Assembly (SN 0300165128 through 0300189901)	
10		Ref	Master Cylinder Assembly (E/M400AJP Models) Options:	
10	1683923	NLA	Master Cylinder Assembly (use p/n 1001140278) (Prior to SN 0300163453)	
10	1001140278	1	Master Cylinder Assembly (SN 0300163453 through 0300189901)	
11		Ref	Pin Options:	
11	3422175	3	Pin (E/M450 Models)	
11	3422175	3	Pin (E/M400A Models)	
11	3422481	3	Pin (E/M400AJP Models)	
12		Ref	Pin Options:	
12	3422176	2	Pin (E/M450 Models)	
12	3422176	2	Pin (E/M400A Models)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
12	3422845	2	Pin (E/M400AJP Models)	
13		Ref	Pin Options:	
13	3422177	9	Pin (E/M450 Models)	
13	3422177	9	Pin (E/M400A Models)	
13	3422177	9	Pin (E/M400AJP Models) (Prior to SN 0300064627)	
13	3422480	9	Pin (E/M400AJP Models) (SN 0300064627 through 0300189901)	
14		Ref	Pin Options:	
14	3422178	1	Pin (E/M450 Models)	
14	3422178	1	Pin (E/M400A Models)	
14	3422844	1	Pin (E/M400AJP Models)	
15		Ref	Pin Options:	
15	3422179	1	Pin (E/M450A Models)	
15	3422179	1	Pin (E/M400A Models)	
15	3422806	1	Pin (E/M450AJ & E/M400AJP Models)	
16		Ref	Pin Options:	
16	3422180	1	Pin (E/M450A Models)	
16	3422180	1	Pin (E/M400A Models)	
16	3422582	1	Pin (E/M450AJ & E/M400AJP Models)	
17	4844467	1	Boom Rest Weldment	
18	0561076	1	Block, Boom Rest	
19	3841203	AR	Keeper, Pin - 1/2in	
20	3841143	AR	Keeper, Pin - 3/8in	
21	3780184	30	O-Ring - 2in (E450, M450, E450AJ & M450AJ Only) (Prior to SN 0300058843)	
22	3780181	4	O-Ring - 1in (E450 & M450 Only) (Prior to SN 0300058843)	
23	3020022	AR	Grease Only (Prior to SN 0300058843)	
24	0641506	4	Bolt 5/16in-18NC x 3/4in (Prior to SN 0300093848)	
25	3311505	4	Locknut 5/16in-18NC (Prior to SN 0300093848)	
26	0641608	AR	Bolt 3/8in-16NC x 1in	
27	0641610	AR	Bolt 3/8in-16NC x 1-1/4in	
28	4751600	AR	Flatwasher 5/16in	
30	3311605	3	Locknut 3/8in-16NC	
31	0641812	3	Bolt 1/2in-13NC x 1-1/2in	
32	0940048	1	Bumper	
33	0641806	AR	Bolt 1/2in-13NC x 3/4in	
35	3311805	AR	Locknut 1/2in-13NC	
40		Ref	Tube	
40	4566356	AR	Tube (E450 & M450)	
40	4566427	AR	Tube (E400 & M400)	
42	4751500	AR	Flatwasher 5/16in	
44	0100011	AR	Compound, Locking	
45	0641810	12	Bolt 1/2in-13NC x 1-1/4in	
46	4846091	1	Rest, Boom (450AJ & 400AJP Models Only) (Prior to SN 0300084057)	
47		Ref	Teflon Bushing Options:	
47	0961726	16	Teflon Bushing (E/M450 Models) (Prior to SN 0300056571)	
47	0961950	16	Teflon Bushing (E/M450 Models) (SN 0300056571 through 0300189898)	
47	0961950	16	Teflon Bushing (E/M400 Models)	

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FIGURE 3-2. E/M450A AND E/M400A MAIN BOOM ASSEMBLY AND PLATFORM SUPPORT INSTALLATION



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FIGURE 3-2. E/M450A AND E/M400A MAIN BOOM ASSEMBLY AND PLATFORM SUPPORT INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	MAIN BOOM ASSEMBLY	
	0801169	Ref	Main Boom Assembly (E/M450A Models)	D
	0270725	Ref	MAIN BOOM ASSEMBLY (E/M400A Models)	D
1		Ref	Base Weldment Options:	
1	0800584	1	Base Weldment (E/M450A Models) (Prior to SN 0300056571)	
1	0801261	1	Base Weldment (E/M450A Models) (SN 0300056571 through 0300189898)	
1	0801263	1	Base Weldment (E/M400A Models)	
2		Ref	Fly Weldment Options:	
2	0801154	1	Fly Weldment (E/M450A Models)	
2	0801267	1	Fly Weldment (E/M400A Models)	
3		Ref	Telescope Cylinder Assembly Options (See CYLINDER SECTION for Breakdown):	
3		Ref	Telescope Cylinder Assembly (E/M450A Models) Options:	
3	1683704	NLA	Telescope Cylinder Assembly (use p/n 1001228062) (Original Equipment) (Prior to SN 0300175016)	
3	1001151414	NLA	Telescope Cylinder Assembly (use p/n 1001228062) (Original Equipment) (SN 0300175016 through 0300189898)	
3	1001228062	1	Telescope Cylinder Assembly (Service Replacement)	
3		Ref	Telescope Cylinder Assembly (E/M400A Models) Options:	
3	1684030	NLA	Telescope Cylinder Assembly (use p/n 1001228063) (Original Equipment) (Prior to SN 0300175016)	
3	1001151497	NLA	Telescope Cylinder Assembly (use p/n 1001228063) (Original Equipment) (SN 0300175016 through 0300189901)	
3	1001228063	1	Telescope Cylinder Assembly (Service Replacement)	
4		Ref	Pin Options:	
4	3422185	1	Pin (Prior to SN 0300067313)	
4	3422901	1	Pin (E/M400A) (SN 0300067313 through 0300189901)	
4	3422901	1	Pin (E/M450A) (SN 0300067313 through 0300189898)	
5	1180302	1	Powertrack Assembly	
5	7019698	1	Link, Repair	
5A	7019699	1	Feet, Mounting	
6	4844579	1	Holder, Wear Pad	
7	3340663	8	Pad, Wear (Base Front Top and Sides/Fly Rear Sides and Bottom)	
8	3340820	2	Pad, Wear (Fly Rear Top)	
9	3340682	1	Pad, Wear (Base Front Bottom)	
10	1760160	8	Disc	
11	0630487	6	Bolt, Special	
12	3311602	8	Nut, Jam 3/8in-16NC	
13	0641818	4	Bolt 1/2in-13NC x 2-1/4in	
14	4761800	4	Lockwasher 1/2in	
15	3760115	2	Ring, Snap	
16	0641405	2	Bolt 1/4in-20NC x 5/8in	
17	0641404	2	Bolt 1/4in-20NC x 1/2in	
18	4761400	7	Lockwasher 1/4in	
19	0641606	7	Bolt 3/8in-16NC x 3/4in	
20	4761600	7	Lockwasher 3/8in	
21	0100011	AR	Compound, Locking	
22	1670678	1	Cover, Boom (Use p/n 1670679) (Prior to SN 0300137414)	

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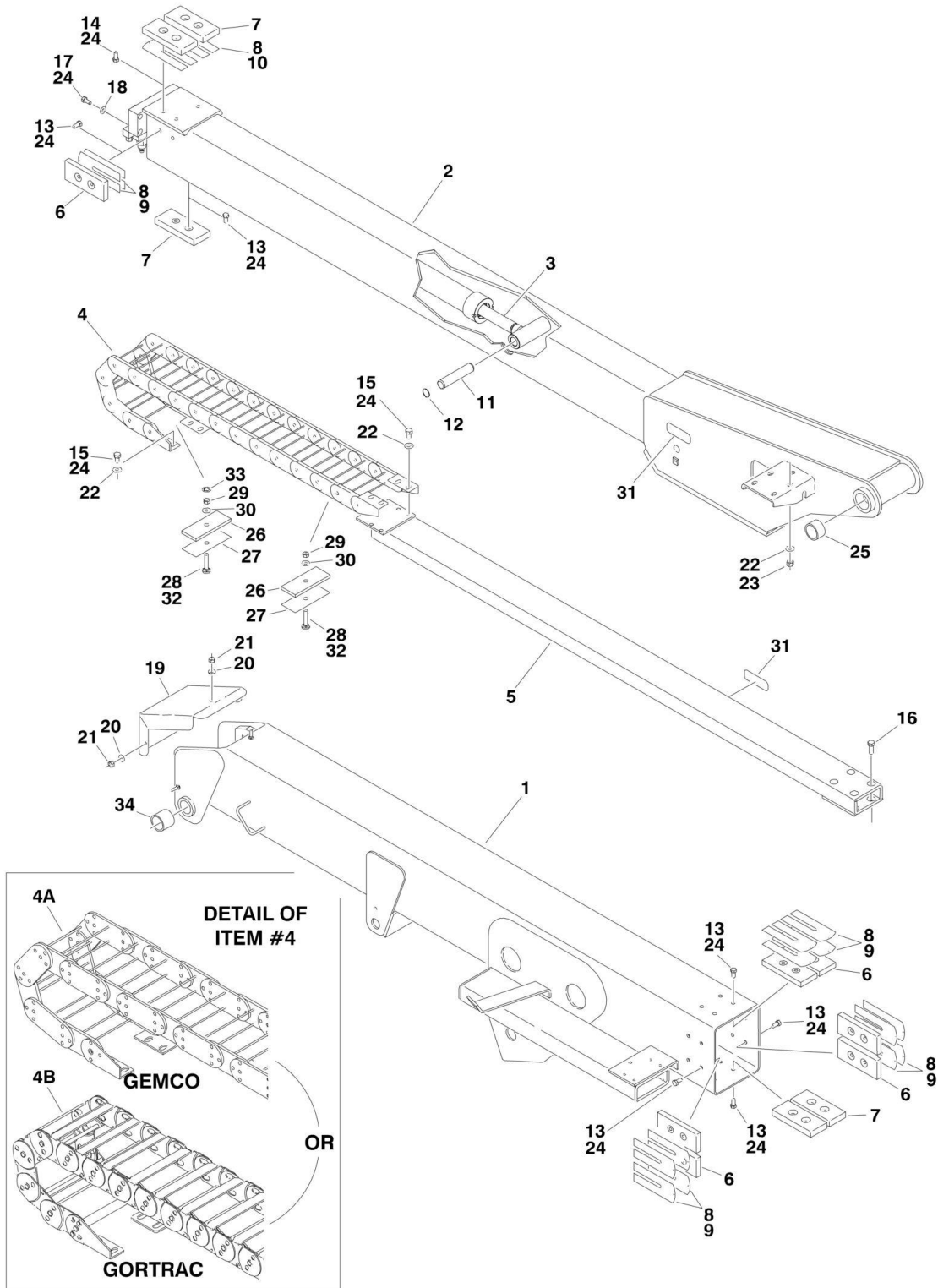
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
23	1670698	1	Cover, Boom	
24	4751400	7	Flatwasher 1/4in	
25	3311401	3	Nut 1/4in-20NC	
26	1220038	1	Holder, Wear Pad (Base Front Left Sides)	
27	1220039	1	Holder, Wear Pad (Base Front Right Side)	
28	1220040	1	Holder, Wear Pad (Base Front Top)	
29	0630399	2	Bolt, Special	
30	0100009	AR	Silicone	
31	4740413	5	Washer, Spacer	
32	4751600	5	Flatwasher 3/8in	
33	0641608	5	Bolt 3/8in-16NC x 1in	
34	3520034	4	Plug, Hole	
35	0961951	2	Bearing, Garmax	
36		Ref	Cylinder Assembly Options (See CYLINDER SECTION for Breakdown):	
36		Ref	Cylinder Assembly (E/M450A Models) Options:	
36	1683285	1	Cylinder Assembly (Prior to SN 0300056894)	
36	1683933	NLA	Cylinder Assembly (use p/n 1001140598) (SN 0300056894 through 0300165127)	
36	1001140598	1	Cylinder Assembly (SN 0300165128 through 0300189898)	
36		Ref	Cylinder Assembly (E/M400A Models) Options:	
36	1683933	NLA	Cylinder Assembly (use p/n 1001140598) (Prior to SN 0300165128)	
36	1001140598	1	Cylinder Assembly (SN 0300165128 through 0300189901)	
37	3422181	1	Shaft, Pin	
38	3780181	4	O-Ring (1in) (Prior to SN 0300103057)	
39	3841143	3	Keeper	
40	0641607	1	Bolt 3/8in-16NC x 7/8in	
42	0060052	1	Rotator Assembly (See ROTATOR ASSEMBLY for Breakdown)	
43	3422709	1	Shaft, Pin	
44	0641608	2	Bolt 3/8in-16NC x 1in	
45	3311605	2	Locknut 3/8in-16NC	
46	3422180	1	Shaft, Pin	
47	0961950	2	Bearing	
		Ref	PLATFORM ROTATOR AND SUPPORT INSTALLATION (FRONT ENTRY PLATFORM)	
	0259439	Ref	Platform Rotator and Support Installation (Front Entry Platform) (E/M400A & E/M450A Models)	E
101		Ref	Weldment, Support Options:	
101	4846050	1	Weldment, Support (Prior to SN 0300069152)	
101	4846322	1	Weldment, Support (E/M400A) (SN 0300069152 through 0300189901)	
101	4846322	1	Weldment, Support (E/M450A) (SN 0300069152 through 0300189898)	
102	0681608	6	Bolt 3/8in-16NC x 1in (Grade 8)	
103	0100011	AR	Compound, Locking	
104	0641407	2	Bolt 1/4in-20NC x 7/8in	
105	4740362	4	Washer, Fender	
106	3311405	2	Nut 1/4in-20NC	
107	0641610	6	Bolt 3/8in-16NC x 1-1/4in	
108	4711600	18	Flatwasher	
109	3311605	6	Locknut 3/8in-16NC	
		Ref	PLATFORM ROTATOR AND SUPPORT INSTALLATION (SIDE	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0272976	Ref	ENTRY PLATFORM) Platform Rotator and Support Installation (Side Entry Platform) (E450A & M450A) without Load Sensing	A
	See Note	Ref	Platform Rotator and Support Installation (Side Entry Platform) (E450A & M450A) with Load Sensing (Note: See Separate Breakdown in this Section)	
201	0100011	AR	Compound, Locking	
202	0641610	8	Bolt 3/8in-16NC x 1-1/4in	
203	0681608	6	Bolt 3/8in-16NC x 1in (Grade 8)	
204	3311605	8	Locknut 3/8in-16NC	
205	4711600	16	Flatwasher 3/8in	
206		Ref	Weldment, Support Options:	
206	4846608	1	E450A & M450A without Load Sensing	
206	See Note Above	1	E450A & M450A with Load Sensing	
207	4891600	6	Flatwasher 3/8in (Hardened)	

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FIGURE 3-3. E/M450AJ MAIN BOOM ASSEMBLY



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FIGURE 3-3. E/M450AJ MAIN BOOM ASSEMBLY

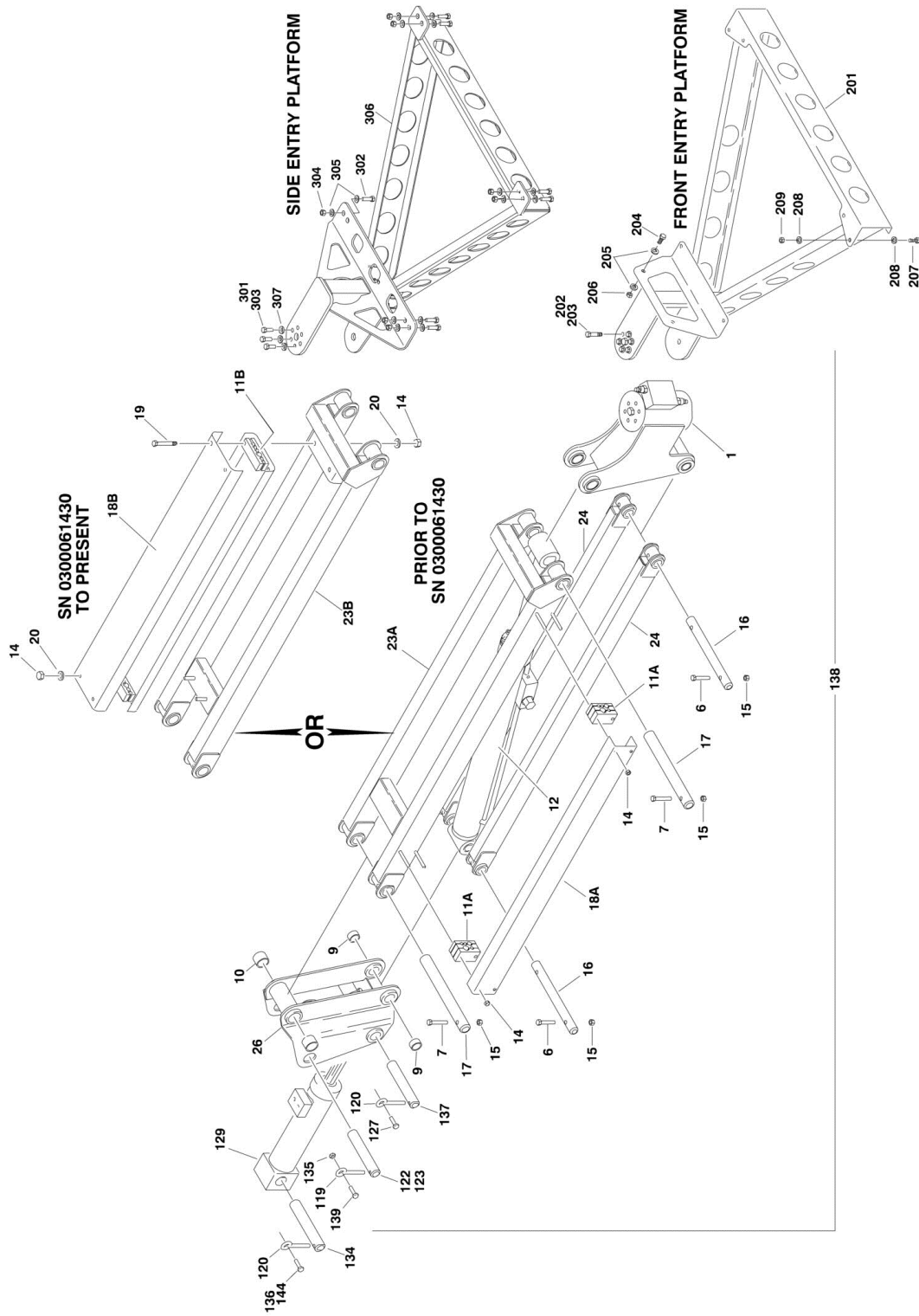
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0801197	Ref	MAIN BOOM ASSEMBLY	J
1		Ref	Base Weldment Options:	
1	0801198	1	Base Weldment (Prior to SN 0300056571)	
1	0801260	1	Base Weldment (SN 0300056571 through 0300189898)	
2	0801192	1	Fly Weldment	
3		Ref	Telescope Cylinder Assembly Options (See CYLINDER SECTION for Breakdown):	
3	1683798	NLA	Telescope Cylinder Assembly (use p/n 1001228061) (Original Equipment) (Prior to SN 0300175016)	
3	1001151368	NLA	Telescope Cylinder Assembly (use p/n 1001228061) (Original Equipment) (SN 0300175016 through 0300189898)	
3	1001228061	1	Telescope Cylinder Assembly (Service Replacement)	
4		Ref	Powertrack Assembly Options:	
		Ref	Note: Various Power Tracks use on this model. Identify brand before ordering parts.	
4A	1180352	NLA	Powertrack (Gemco) (Use p/n 1001099833) (Prior to SN 0300135622)	
4A	7006139	AR	Repair Section (Includes Repair Section, 4 Rod Carriers, Pins and Mounting Slugs)	
4A	7006151	AR	Feet, Mounting (Includes Left and Right Mounting Feet and 2 Round Spacers)	
4A	7006152	AR	Pin Kit (Includes 1 Pin, 4 Washers and 1 Retaining Ring)	
4B	1001099833	1	Powertrack (Gortrac) (SN 0300135622 through 0300189898)	
4B	70001996	1	Repair Section (Includes 4 links, 10 pins, 10 washers, 10 snap rings, 2 Rod Carriers and 4 self-tapping screws)	
4B	70001998	1	Bracket Kit (Includes 2 Left and 2 Right Mounting Feet, 4 center pins, 4 center pin snap rings, 8 pins for bracket lockout, 8 washers and 8 snap rings)	
5	4846033	1	Pushtube Weldment	
6	3340756	8	Pad, Wear (Base Front Top and Sides/Fly Rear Sides) (Use p/n 3340881)	
7	3340837	5	Pad, Wear (Base Bottom/Fly Rear Top and Bottom)	
8	4070897	10	Shim 18 Gauge	
9	4070898	8	Shim 16 Gauge	
10	4070982	2	Shim 11 Gauge	
11	3422804	1	Pin	
12	3760115	2	Ring, Snap	
13	0641606	22	Bolt 3/8in-16NC x 3/4in	
14	0641607	4	Bolt 3/8in-16NC x 7/8in	
15	0641605	8	Bolt 3/8in-16NC x 5/8in	
16	0641608	4	Bolt 3/8in-16NC x 1in	
17	0641818	4	Bolt 1/2in-13NC x 2-1/4in	
18	4761800	4	Lockwasher 1/2in	
6	1670678	1	Cover, Boom (Use p/n 1670679) (Prior to SN 0300137414)	
20	4761400	3	Lockwasher 1/4in	
21	3311401	3	Nut 1/4in-20NC	
22	4711600	12	Flatwasher 3/8in	
23	3311605	4	Locknut 3/8in-16NC	
24	0100011	AR	Compound, Locking	
25	0961948	AR	Bearing, Garmax	
26		Ref	Plate, Clamp Options:	
26	3570958	3	Plate, Clamp (SN 0300057118 through 0300135621)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
26	1001106757	3	Plate, Clamp (SN 0300135622 through 0300189898)	
27		Ref	Pad, Rubber Options:	
27	Not Required	0	Pad, Rubber (Prior to SN 0300057118)	
27	3340859	2	Pad, Rubber (SN 0300057118 through 0300074607)	
27	3340940	2	Pad, Rubber (SN 0300074608 through 0300135621)	
27	3340939	2	Pad, Rubber (SN 0300135622 through 0300189898)	
28	0630401	2	Bolt, Carriage 5/16in-18NC x 2in (SN 0300057118 through 0300189898)	
29	3311505	2	Locknut 5/16in-18in (SN 0300057118 through 0300189898)	
30	4711500	2	Flatwasher 5/16in Narrow (SN 0300057118 through 0300189898)	
31	4060804	15	Flex-Trim	
		in/38cm		
32	0100081	AR	Adhesive	
33	1001119228	1	Push Nut, M8 (SN 0300175016 through 0300189898)	
34	0961726	2	Bearing (Prior to SN 0300056571)	
	0961950	2	Bearing (SN 0300056571 through 0300189898)	

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FIGURE 3-4. E/M450AJ JIB AND PLATFORM SUPPORT AND ROTATOR INSTALLATION



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FIGURE 3-4. E/M450AJ JIB AND PLATFORM SUPPORT AND ROTATOR INSTALLATION

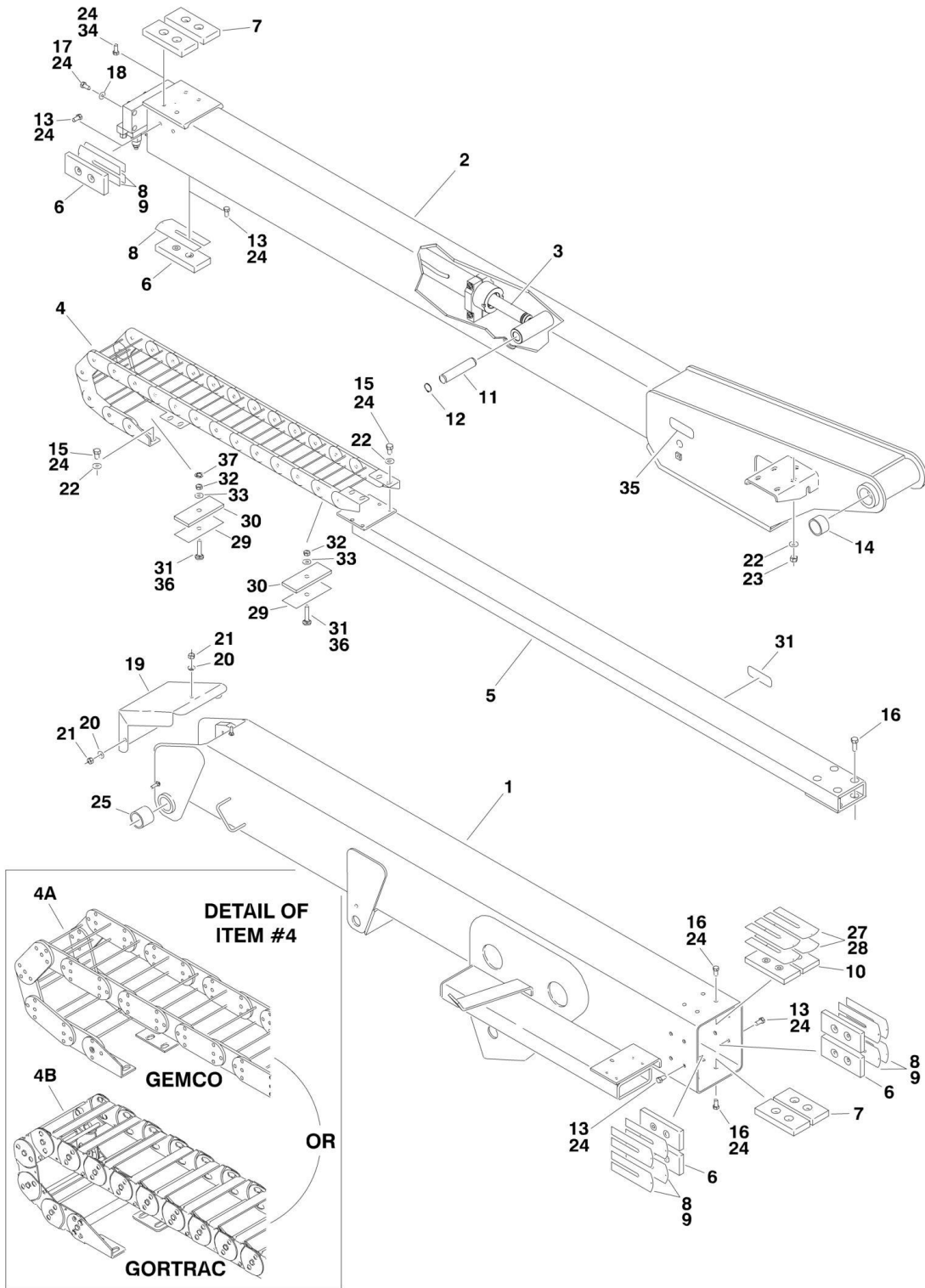
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	JIB ASSEMBLIES	
	0259440	Ref	Jib Assemblies (E/M450AJ) (Prior to SN 0300061430)	D
	0270400	Ref	Jib Assemblies (E/M450AJ) (SN 0300061430 through 0300189898)	F
1	0060044	1	Rotator Assembly (See ROTATOR ASSEMBLY for Breakdown)	
6	0641616	4	Bolt 3/8in-16NC x 2in	
7	0641618	2	Bolt 3/8in-16NC x 2-1/4in	
8	0641810	AR	Bolt 1/2in-13NC x 1 1/4in	
9		Ref	Bushing, Garmax Options:	
9	0961947	AR	Bushing, Garmax (Prior to SN 0300144003)	
9	0962292	AR	Bushing, Garmax (SN 0300144003 through 0300189898)	
10	0961951	2	Bushing, Garmax	
11		Ref	Clamp, Block Options:	
11A	1320259	2	Clamp, Block (Prior to SN 0300061430)	
11B	3340860	4	Clamp, Block (SN 0300061430 through 0300189898)	
12		Ref	Jib Cylinder Assembly Options (See CYLINDER SECTION for Breakdown):	
12	1683779	NLA	Jib Cylinder Assembly (Use p/n 1001140280) (Prior to SN 0300164333)	
12	1001140280	1	Jib Cylinder Assembly (SN 0300164333 through 0300189898)	
14	3311501	AR	Nut 5/16in-18NC	
15	3311605	12	Locknut 3/8in-16NC	
16	3422791	2	Pin	
17	3422794	2	Pin	
18		Ref	Plate, Jib Cover Options:	
18A	3571406	1	Plate, Jib Cover (Prior to SN 0300061430)	
18B	3572551	2	Plate, Jib Cover (SN 0300061430 through 0300189898)	
19	0641516	2	Bolt 5/16in-18NC x 2in Only (SN 0300061430 through 0300189898)	
20	4751500	4	Flatwasher 5/16in (Wide Only) (SN 0300061430 through 0300189898)	
23		Ref	Link Options: (Upper)	
23A	4845926	1	Link (Upper) (Prior to SN 0300061430)	
23B	4846278	1	Link (Upper) (SN 0300061430 through 0300189898)	
24	4845927	2	Link (Lower) (Use p/n 1001094670)	
26	4845925	1	Pivot	
		Ref	SUPPORT AND ROTATOR ASSEMBLY	
	0259366	Ref	Support and Rotator Assembly (E/M450AJ)	H
119	3841203	1	Keeper, Pin	
120	3841143	2	Keeper, Pin	
122	3422793	1	Pin	
123	3020022	AR	Grease	
127	0641610	1	Bolt 3/8in-16NC x 1-1/4in	
129		Ref	Platform Level Cylinder Assembly Options (See CYLINDER SECTION for Breakdown):	
129	1683760	NLA	Platform Level Cylinder Assembly (E/M450AJ) (use p/n 1001140279) (Prior to SN 0300056571)	
129	1683924	NLA	Platform Level Cylinder Assembly (E/M450AJ) (use p/n 1001140279) (SN 0300056571 through 0300163452)	
129	1001140279	1	Platform Level Cylinder Assembly (E/M450AJ) (SN 0300163453 through 0300189898)	
134	3422669	1	Pin	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
135	3311805	1	Locknut 1/2in-13NC	
136	0641607	1	Bolt 3/8in-16NC x 7/8in	
137	3422792	1	Pin	
138		Ref	Jib Assembly Options (Includes Items 1-27):	
138	0259440	1	Jib Assembly (E/M450AJ) (Prior to SN 0300061430)	
138	0270400	1	Jib Assembly (E/M450AJ) (SN 0300061430 through 0300189898)	
139	0641809	1	Bolt 1/2in-13NC x 1-1/8in	
144	0100011	AR	Compound, Locking	
		Ref	PLATFORM ROTATOR AND SUPPORT INSTALLATION (FRONT ENTRY PLATFORM)	
	0259439	Ref	Platform Rotator and Support Installation (Front Entry Platform) (E/M450AJ Models)	E
201	4846322	1	Weldment, Support	
202	0681608	6	Bolt 3/8in-16NC x 1in (Grade 8)	
203	0100011	AR	Compound, Locking	
204	0641407	2	Bolt 1/4in-20NC x 7/8in	
205	4740362	4	Washer, Fender	
206	3311405	2	Nut 1/4in-20NC	
207	0641610	6	Bolt 3/8in-16NC x 1-1/4in	
208	4711600	18	Flatwasher	
209	3311605	6	Locknut 3/8in-16NC	
		Ref	PLATFORM ROTATOR AND SUPPORT INSTALLATION (SIDE ENTRY PLATFORM)	
	0272976	Ref	Platform Rotator and Support Installation (Side Entry Platform) (E/M450AJ without Load Sensing)	A
	See Note	Ref	Platform Rotator and Support Installation (Side Entry Platform) (E/M450AJ with Load Sensing) (Note: See Separate Breakdown in this Section)	
301	0100011	AR	Compound, Locking	
302	0641610	8	Bolt 3/8in-16NC x 1-1/4in	
303	0681608	6	Bolt 3/8in-16NC x 1in (Grade 8)	
304	3311605	8	Locknut 3/8in-16NC	
305	4711600	16	Flatwasher 3/8in	
306		Ref	Weldment, Support Options:	
306	4846608	1	Weldment, Support (E/M450AJ without Load Sensing)	
306	See Note Above	1	Weldment, Support (E/M450AJ with Load Sensing)	
307	4891600	6	Flatwasher 3/8in Hardened	

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FIGURE 3-5. E/M400AJP MAIN BOOM ASSEMBLY



SECTION 3 - BOOM

FIGURE 3-5. E/M400AJP MAIN BOOM ASSEMBLY

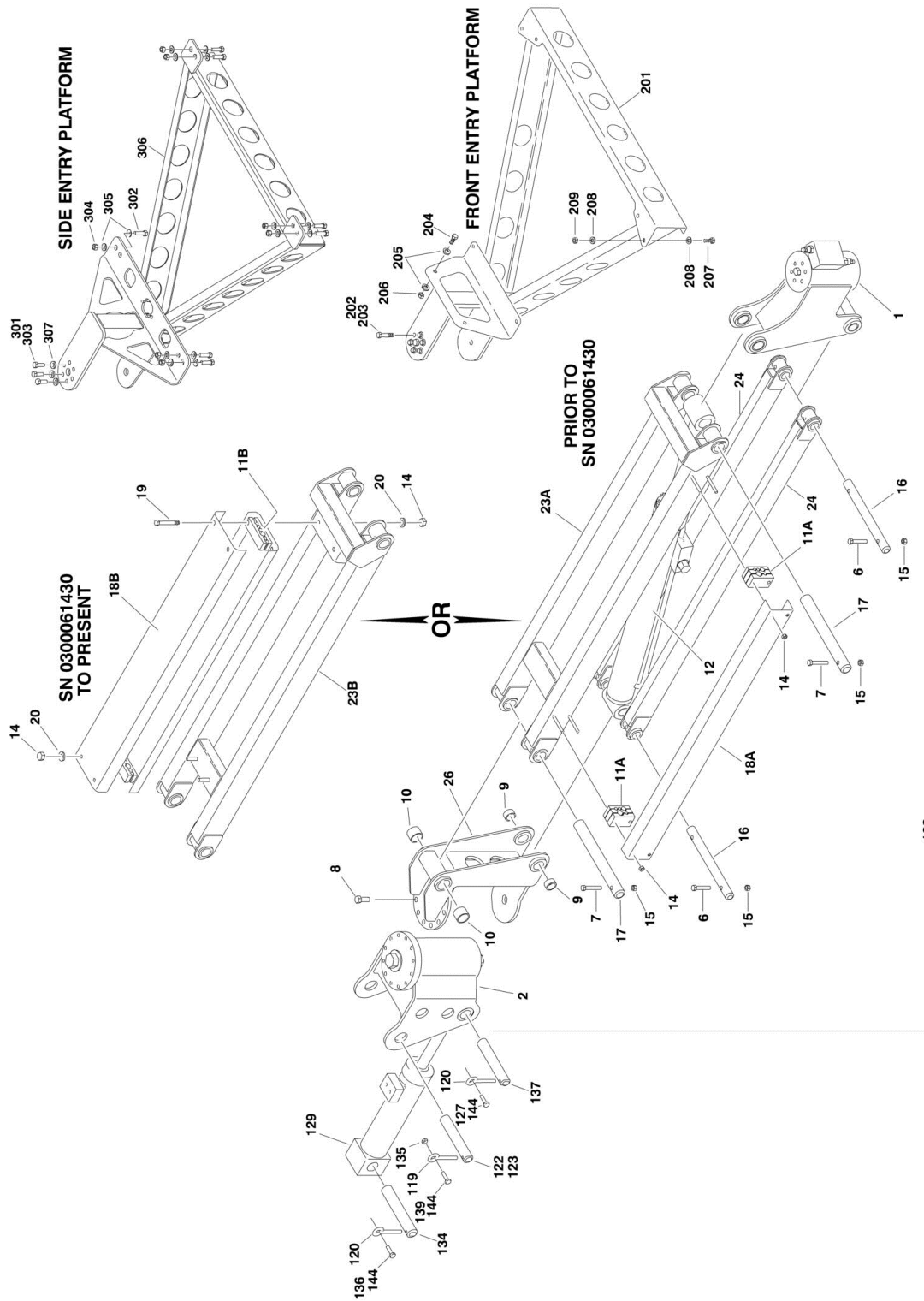
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0801225	Ref	MAIN BOOM ASSEMBLY	I
1	0801224	1	Base, Boom	
2	0801226	1	Fly, Boom	
		Ref	Cylinder, Telescope Assembly (See CYLINDER SECTION for Breakdown)	
3	1683911	NLA	Cylinder, Telescope Assembly (Use p/n 1001228015) (Original Equipment)	
3	1001228015	1	Cylinder, Telescope Assembly (Service Replacement)	
4		Ref	Carrier, Power Track Options:	
		Ref	Note: Various Power Tracks use on this model. Identify brand before ordering parts.	
4A	1180353	NLA	Powertrack (Gemco) (Use p/n 1001099834) (Prior to SN 0300135622)	
4A	7006139	AR	Repair Section (Includes Repair Section, 4 Rod Carriers, Pins and Mounting Slugs)	
4A	7006151	AR	Feet, Mounting (Includes Left and Right Mounting Feet and 2 Round Spacers)	
4A	7006152	AR	Pin Kit (Includes 1 Pin, 4 Washers and 1 Retaining Ring)	
4B	1001099834	1	Powertrack (Gortrac) (SN 0300135622 through 0300189901)	
4B	70001996	1	Repair Section (Includes 4 links, 10 pins, 10 washers, 10 snap rings, 2 Rod Carriers and 4 self-tapping screws)	
4B	70001998	1	Bracket Kit (Includes 2 Left and 2 Right Mounting Feet, 4 center pins, 4 center pin snap rings, 8 pins for bracket lockout, 8 washers and 8 snap rings)	
5	4846180	1	Weldment, Push Tube	
6	3340878	10	Pad, Wear	
7	3340884	4	Pad, Wear	
8	4070864	12	Shim 18 Gauge	
9	4070863	8	Shim 11 Gauge	
10	3340886	2	Pad, Wear	
11	3422804	1	Pin	
12	3760115	2	Ring, Retaining	
13	0641606	30	Bolt 3/8in-16NC x 3/4in	
14	0961948	2	Bearing	
15	0641605	8	Bolt 3/8in-16NC x 5/8in	
16	0641608	16	Bolt 3/8in-16NC x 1in	
17	0641818	4	Bolt 1/2in-13NC x 2-1/4in	
18	4761800	4	Lockwasher 1/2in	
19	1670959	1	Cover	
20	4761400	3	Lockwasher 1/4in	
21	3311401	3	Nut 1/4in-20NC	
22	4711600	12	Flatwasher 3/8in	
23	3311605	4	Locknut 3/8in-16NC	
24	0100011	AR	Compound, Locking	
25	0961950	2	Bearing	
26	3520082	2	Plug (Not Shown)	
27	4070997	2	Shim 16 Gauge	
28	4070998	2	Shim 18 Gauge	
29		Ref	Plate, Clamp Options:	
29	3570958	3	Plate, Clamp (SN 0300057118 through 0300135621)	
29	1001106757	3	Plate, Clamp (SN 0300135622 through 0300189901)	
30		Ref	Pad, Rubber Options:	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
30	Not Required	0	Pad, Rubber (Prior to SN 0300057118)	
30	3340859	2	Pad, Rubber (SN 0300057118 through 0300074607)	
30	3340940	2	Pad, Rubber (SN 0300074608 through 0300135622)	
30	3340939	2	Pad, Rubber (SN 0300135622 through 0300189901)	
31	0630401	2	Bolt, Carriage 5/16in-18NC x 2in (SN 0300057118 through 0300189901)	
32	3311505	2	Locknut 5/16in-18NC (SN 0300057118 through 0300189901)	
33	4711500	2	Flatwasher 5/16in Narrow (SN 0300057118 through 0300189901)	
34		Ref	Screw, Countersunk 3/8in-16NC Options:	
34	0741608	6	Screw, Countersunk 3/8in-16NC x 1in	
34	0741606	6	Screw, Countersunk 3/8in-16NC x 3/4in	
35	4060804	15 in/38cm	Flex-Trim	
36	0100081	AR	Adhesive	
37	1001119228	1	Push Nut, M8 (SN 0300175016 through 0300189901)	

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FIGURE 3-6. E/M400AJP JIB AND PLATFORM SUPPORT AND ROTATOR INSTALLATION



SECTION 3 - BOOM

FIGURE 3-6. E/M400AJP JIB AND PLATFORM SUPPORT AND ROTATOR INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	JIB ASSEMBLIES	
	0259441	Ref	Jib Assemblies (E/M400AJP) (Prior to SN 0300061430)	E
	0270402	Ref	Jib Assemblies (E/M400AJP) (SN 0300061430 through 0300064957)	C
	0271649	Ref	Jib Assemblies (E/M400AJP) (SN 0300064958 through 0300189901)	D
1	0060044	1	Rotator Assembly (Jib to Platform Support) (See ROTATOR ASSEMBLY for Breakdown)	
2		Ref	Rotator Assembly (Main Boom to Jib) Options (See ROTATOR ASSEMBLY for Breakdown):	
2	0060046	1	Rotator Assembly (Main Boom to Jib) (E/M400AJP) (Prior to SN 0300064958)	
2	0060065	1	Rotator Assembly (Main Boom to Jib) (E/M400AJP) (SN 0300064958 through 0300189901)	
6	0641616	4	Bolt 3/8in-16NC x 2in	
7	0641618	2	Bolt 3/8in-16NC x 2-1/4in	
8		Ref	Bolt 1/2in Options:	
8	0641810	AR	Bolt 1/2in (E/M400AJP) (Prior to SN 0300064958)	
8	3931816	AR	Bolt 1/2in (E/M400AJP) (SN 0300064958 through 0300189901)	
9		Ref	Bushing, Garmax Options:	
9	0961947	AR	Bushing, Garmax (Prior to SN 0300144003)	
9	0962292	AR	Bushing, Garmax (SN 0300144003 through 0300189901)	
10	0961951	2	Bushing, Garmax	
11		Ref	Clamp, Block Options:	
11A	1320259	2	Clamp, Block (Prior to SN 0300061430)	
11B	3340860	4	Clamp, Block (SN 0300061430 through 0300189901)	
12		Ref	Jib Cylinder Assembly Options (See CYLINDER SECTION for Breakdown):	
12	1683779	NLA	Jib Cylinder Assembly (use p/n 1001140280) (Prior to SN 0300163453)	
12	1001140280	1	Jib Cylinder Assembly (SN 0300163453 through 0300189901)	
14	3311501	AR	Nut 5/16in-18NC	
15	3311605	12	Locknut 3/8in-16NC	
16	3422791	2	Pin	
17	3422794	2	Pin	
18		Ref	Plate, Jib Cover Options:	
18A	3571406	1	Plate, Jib Cover (Prior to SN 0300061430)	
18B	3572551	2	Plate, Jib Cover (SN 0300061430 through 0300189901)	
19	0641516	2	Bolt 5/16in-18NC x 2in Only (SN 0300061430 through 0300189901)	
20	4751500	4	Flatwasher 3/8in Wide Only (SN 0300061430 through 0300189901)	
23		Ref	Link Options: (Upper)	
23A	4845926	1	Link (Upper) (Prior to SN 0300061430)	
23B	4846278	1	Link (Upper) (SN 0300061430 through 0300189901)	
24	4845927	NLA	Link (Lower) (Use p/n 1001094670)	
26		Ref	Pivot Options:	
26	4846073	1	Pivot (E/M400AJP) (Prior to SN 0300064958)	
26	4846502	1	Pivot (E/M400AJP) (SN 0300064958 through 0300189901)	
		Ref	SUPPORT AND ROTATOR ASSEMBLY	
	0259939	Ref	Support and Rotator Assembly (E/M400AJP) (Prior to SN	4

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0271647	Ref	0300064958) Support and Rotator Assembly (E/M400AJP) (SN 0300064958 through 0300189901)	D
119	3841203	1	Keeper, Pin	
120	3841143	2	Keeper, Pin	
122	3422814	1	Pin	
123	3020022	AR	Grease	
127	0641610	1	Bolt 3/8in-16NC x 1-1/4in	
129		Ref	Platform Level Cylinder Assembly Options (See CYLINDER SECTION for Breakdown):	
129	1683924	NLA	Platform Level Cylinder Assembly (use p/n 1001140279) (Prior to SN 0300163453)	
129	1001140279	1	Platform Level Cylinder Assembly (SN 0300163453 through 0300189901)	
134	3422669	1	Pin	
135	3311805	1	Locknut 1/2in-13NC	
136	0641607	1	Bolt 3/8in-16NC x 7/8in	
137	3422792	1	Pin	
138		Ref	Jib Assembly Options (Includes Items 1-27):	
138	0259441	1	Jib Assembly (E/M400AJP) (Prior to SN 0300061430)	
138	0270402	1	Jib Assembly (E/M400AJP) (SN 0300061430 through 0300064957)	
138	0271649	1	Jib Assembly (E/M400AJP) (SN 0300064958 through 0300189901)	
139		Ref	Bolt Options:	
139	0641809	1	Bolt 1/2in-13NC x 1-1/8in (Prior to SN 0300093848)	
139	0641810	1	Bolt 1/2in-13NC x 1-1/4in (SN 0300093848 through 0300189901)	
144	0100011	AR	Compound, Locking	
		Ref	PLATFORM ROTATOR AND SUPPORT INSTALLATION (FRONT ENTRY PLATFORM)	
	0259439	Ref	Platform Rotator and Support Installation (E/M400AJP Models)	D
201	4846050	1	Weldment, Support	
202	0681608	6	Bolt 3/8in-16NC x 1in (Grade 8)	
203	0100011	AR	Compound, Locking	
204	0641407	2	Bolt 1/4in-20NC x 7/8in	
205	4740362	4	Washer, Fender	
206	3311405	2	Nut 1/4in-20NC	
207	0641610	6	Bolt 3/8in-16NC x 1-1/4in	
208	4711600	18	Flatwasher	
209	3311605	6	Locknut 3/8in-16NC	
		Ref	PLATFORM ROTATOR AND SUPPORT INSTALLATION (SIDE ENTRY PLATFORM)	
	0272976	Ref	Platform Rotator and Support Installation (Side Entry Platform) (E/M400AJP without Load Sensing)	A
	See Note	Ref	Platform Rotator and Support Installation (Side Entry Platform) (E/M400AJP with Load Sensing) (Note: See Separate Breakdown in this Section)	
301	0100011	AR	Compound, Locking	
302	0641610	8	Bolt 3/8in-16NC x 1-1/4in	
303	0681608	6	Bolt 3/8in-16NC x 1in (Grade 8)	
304	3311605	8	Locknut 3/8in-16NC	
305	4711600	16	Flatwasher 3/8in	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
306		Ref	Weldment, Support Options:	
306	4846608	1	Weldment, Support (E/M400AJP without Load Sensing)	
306	See Note Above	1	Weldment, Support (E/M400AJP with Load Sensing)	
307	4891600	6	Flatwasher 3/8in Hardened	

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FIGURE 3-7. ROTATOR ASSEMBLY

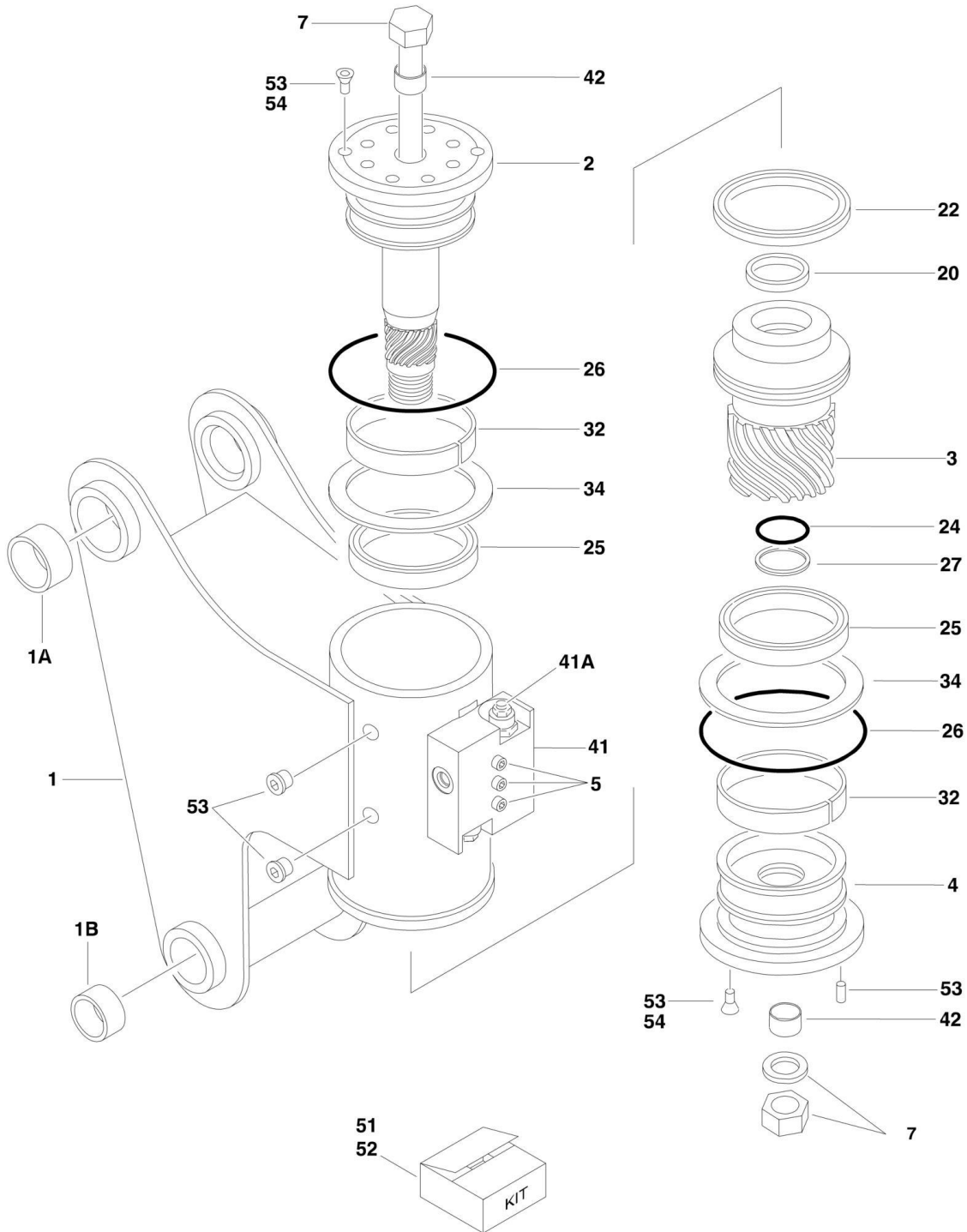


FIGURE 3-7. ROTATOR ASSEMBLY

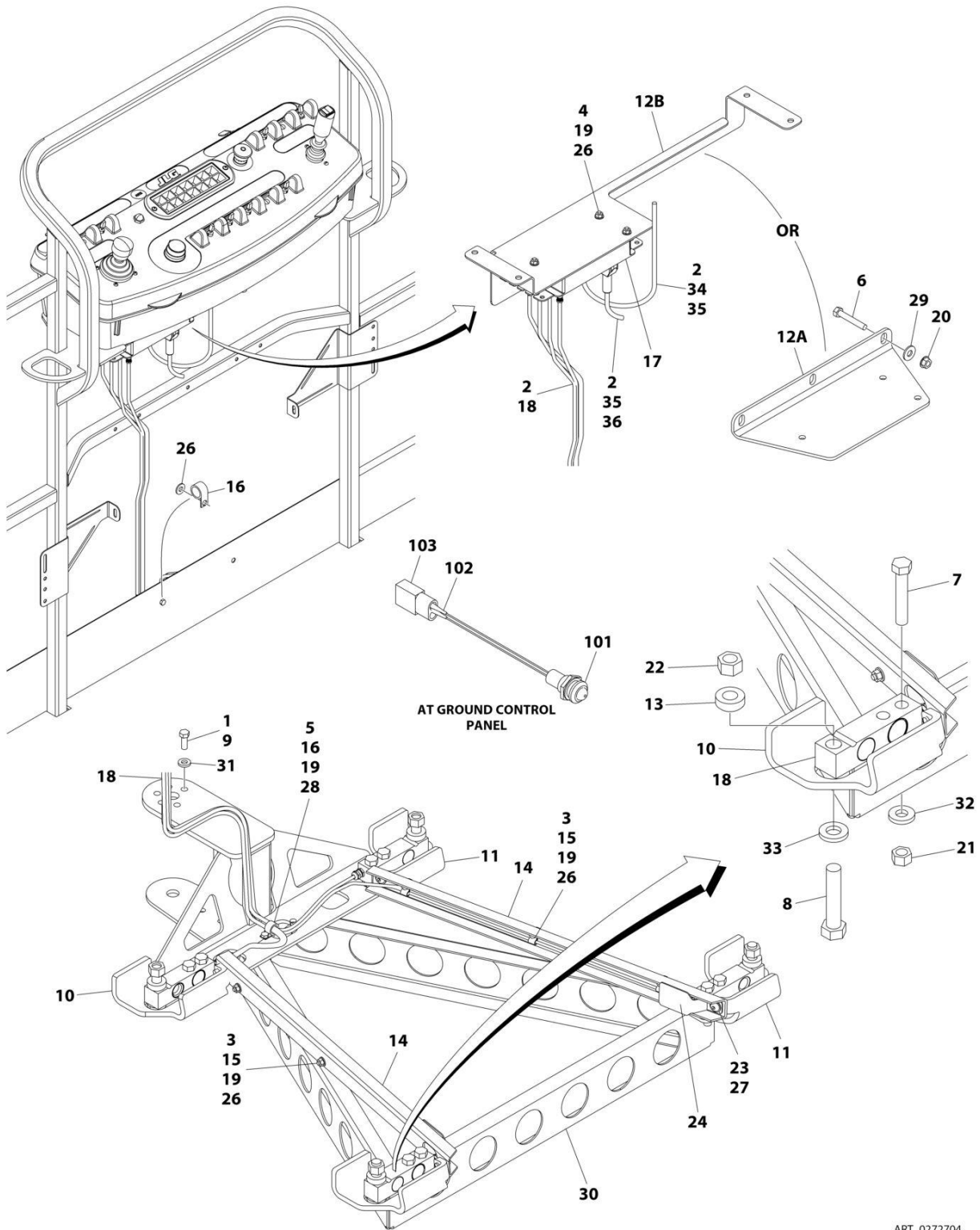
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	ROTATOR ASSEMBLIES	
	0060052	Ref	Rotator Assemblies (E/M450A & E/M400A)	F
	0060044	Ref	Rotator Assemblies (E/M450AJ)	D
	0060044	Ref	Rotator Assemblies (E/M400AJP) (Platform Support to Jib)	D
	0060046	Ref	Rotator Assemblies (E/M400AJP) (Main Boom to Jib) (Prior to SN 0300064958)	C
	0060065	Ref	Rotator Assemblies (E/M400AJP) (Main Boom to Jib) (SN 0300064958 through 0300189901)	C
		Ref	Note: There are 2 different versions each of Rotators p/n 0060044 & 0060052. No SN break exists. Order parts by the Helac Control #.	
1	See Note	1	Case/Bracket Weldment (Note: Not Available - Purchase Complete Assembly)	
1A	0962257	2	Bushing, Garmax (0060044 Rotator Only)	
1B	0961947	2	Bushing, Garmax (0060044 Rotator Only)	
2		Ref	Shaft Options:	
2	7017120	1	0060052 Rotators with Helac Control #26409	
2	7017196	1	0060052 Rotators with Helac Control #26966	
2	7017120	1	0060044 Rotators with Helac Control #25928	
2	7017196	1	0060044 Rotators with Helac Control #26962	
2	7017130	1	0060046 Rotator	
2	7017167	1	0060065 Rotator	
3		Ref	Piston Sleeve Options:	
3	7017121	1	0060052 Rotators with Helac Control #26409	
3	7027900	1	0060052 Rotators with Helac Control #26966	
3	7017121	1	0060044 Rotators with Helac Control #25928	
3	7027900	1	0060044 Rotators with Helac Control #26962	
3	7017131	1	0060046 Rotator	
3	7017168	1	0060065 Rotator	
4		Ref	Cap, End Options:	
4	7017153	1	0060052 Rotators with Helac Control #26409	
4	7027901	1	0060052 Rotators with Helac Control #26966	
4	0060044	1	0060044 Rotators with Helac Control #25928 (Note: Not available for purchase)	
4	7027901	1	0060044 Rotators with Helac Control #26962	
4	0060046	1	0060046 Rotator (Note: Not available for purchase)	
4	7017169	1	0060065 Rotator	
5	See Note	3	Capscrew 1/4in-20NC (Grade 8) (Note: Not Available - Purchase Locally)	
7		Ref	Tie Rod Assembly Options:	
7	7017126	1	0060044 & 0060052 Rotators	
7	7017135	1	0060046 Rotator	
7	7017173	1	0060065 Rotator	
20	See Note	1	Seal, Rod (Note: Use Items 100A-102B)	
22	See Note	1	Seal, Piston (Note: Use Items 100A-102B)	
24	See Note	1	Seal, Cap (Note: Use Items 100A-102B)	
25	See Note	2	Packing, Bearing (Note: Use Items 100A-102B)	
26	See Note	2	Seal (Note: Use Items 100A-102B)	
27	See Note	1	Ring, Back-Up Cap (Note: Use Items 100A-102B)	
32	See Note	2	Bearing, Shaft (Note: See Item 51)	
34	See Note	2	Washer, Thrust (Note: See Item 51)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
41		Ref	Counterbalance Valve Assembly Options:	
41	7017172	1	Helac p/n 24327 Stamped beside Mounting Screws (was p/n 7017125)	
41	7017172	1	Helac p/n 26553 or 26554 Stamped beside Mounting Screws	
41A		Ref	Valve, Cartridge Options:	
41A	7011323	2	Valve, Cartridge for Helac p/n 24327 Valve	
41A	2900770	2	Seal Kit - 7011323 Cartridge (1 Per Assembly)	
41A	7017192	2	Valve, Cartridge Helac p/n 26553 & 26554 (No Seal Kit Available)	
42	See Note	2	Bushing, Shaft (Note: Not available for purchase)	
51		Ref	Bearing Kit Options (Includes Items 32 - 34):	
51	7017122	1	0060044 & 0060052 Rotators	
51	7017134	1	0060046 Rotator	
51	7017178	1	0060065 Rotator	
52		Ref	Seal Kit Options (Includes Items 20, 22, 24, 25, 26 & 27):	
52		Ref	0060044 & 0060052 Rotators Options:	
52	7017127	1	Standard	
52	70000341	1	Low Temperature	
52		Ref	0060046 Rotator Options:	
52	7017165	1	Standard (was p/n 7017133)	
52	See Note	1	Low Temperature (Note: Not available for purchase)	
52		Ref	0060065 Rotator Options:	
52	7017165	1	Standard	
52	70000340	1	Low Temperature	
53		Ref	Hardware Kit Options:	
53	7017123	1	0060044 & 0060052 Rotators	
53	7017132	1	0060046 Rotator	
53	7017179	1	0060065 Rotator	
54	70001697	4	Screw 1/4 x 3/8 Grade 8	

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FIGURE 3-8. PLATFORM SUPPORT INSTALLATION - WITH LSS



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FIGURE 3-8. PLATFORM SUPPORT INSTALLATION - WITH LSS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM SUPPORT INSTALLATION - WITH LSS	
	0272704	Ref	Platform Support Installation - E/M400AJP/E/M400AJPn/E/M450AJ	K
	1001108604	Ref	Platform Support Installation - E/M400A/ /E/M450A	C
1	0100011	AR	Compound, Locking	
2	0100048	AR	Grease, Dielectric	
3		Ref	Bolt Options:	
3	0630407	6	Capscrew 1/4 x 5/8	
3	0641405	6	Bolt 1/4 x 5/8	
4		Ref	Bolt Options:	
4	0641405	3	Bolt 1/4 x 5/8	
4	0641406	3	Bolt 1/4 x 3/4	
4	0641416	3	Bolt 1/4 x 2	
5	0641407	1	Bolt 1/4 x 7/8	
6	0641516	3	Bolt 5/16 x 2	
7	0641822	8	Bolt 1/2 x 2-3/4	
8	0642024	4	Bolt 5/8 x 3	
9	0681608	6	Bolt 3/8 x 1	
10	0902919	2	Bracket, Cell Guard	
11	0902920	1	Bracket, Cell Guard	
12		Ref	Bracket, Module Mounting Options:	
12A	0902894	1	Design A (Prior to SN 0300138471)	
12B	1001113483	1	Design B (SN 0300138471 to Present)	
13	0962450	4	Bushing, Spacer	
14	1271538	2	Channel	
15	1320136	6	Clamp	
16	1320224	2	Clamp	
17		Ref	Electronic Interface Module Options (Note: Re-calibration Required when Replaced):	
17	1600350	1	Electronic Interface Module (Prior to SN 0300076525)	
17	1600387	1	Electronic Interface Module	
18	2420202	4	Load Cell Assembly	
19	3311405	10	Nut 1/4	
20	3311508	3	Nut 5/16	
21	3311805	8	Nut 1/2	
22	3312005	4	Nut 5/8	
23	3900283	4	Screw 3/8 x 3/4	
24	4061054	2	Shield	
25	4240033	AR	Tie-Strap (Not Shown)	
26	4711400	13	Washer 1/4	
27	4711600	4	Washer 3/8	
28	4751400	1	Washer 1/4	
29	4751500	3	Washer 5/16	
30	4846608	1	Platform Support	
31	4891600	6	Washer 3/8	
32	4891800	8	Washer 1/2	
33	4892000	4	Washer 5/8	
34	4922916	1	Harness, LSS System	
34	4460933	1	Connector - 12 Position (Grey) (J1)	
34	4460465	3	Socket, Female	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
34	4460466	9	Plug, Terminal	
34	0840055	1	Boot	
34	4460313	3	Terminal, Ring	
35	4933289	1	EIM Load Cell to Platform Console Box Wiring (See Separate Breakdown in ELECTRICAL SECTION)	
36	4922917	1	Harness, Analyzer	
36	4460836	1	Connector - 12 Position (Black) (J2)	
36	4460465	4	Socket, Female	
36	4460466	8	Plug, Terminal	
36	0840055	1	Boot	
36	4460761	1	Connector - 4 Position	
36	4460227	4	Pin, Male	
37	4460225	1	Connector - 6 Position (Not Shown – Located in Platform Console Box (J8) (E/M400A/ /E/M450A Only)	
	0273104	Ref	INDICATOR LIGHT INSTALLATION (LSS)	A/1
101	2920151	1	Light (Located on Ground Control Box)	
102	4460226	2	Socket, Female	
103	4460424	1	Connector - 2 Position	
104	4922926	1	Harness, Indicator Lamp (Not Shown - Located at Ground Control Box)	
104	4460265	1	Plug, Male - 9 Position	
104	4460320	1	Plug, Male - 2 Position	
104	4460226	3	Socket, Female	
104	4460227	2	Pin, Male	
104	4460042	1	Terminal, Ring	
104	4460313	1	Terminal, Ring	

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FIGURE 3-9. CABLES/CLAMPS AND LIMIT SWITCHES INSTALLATIONS

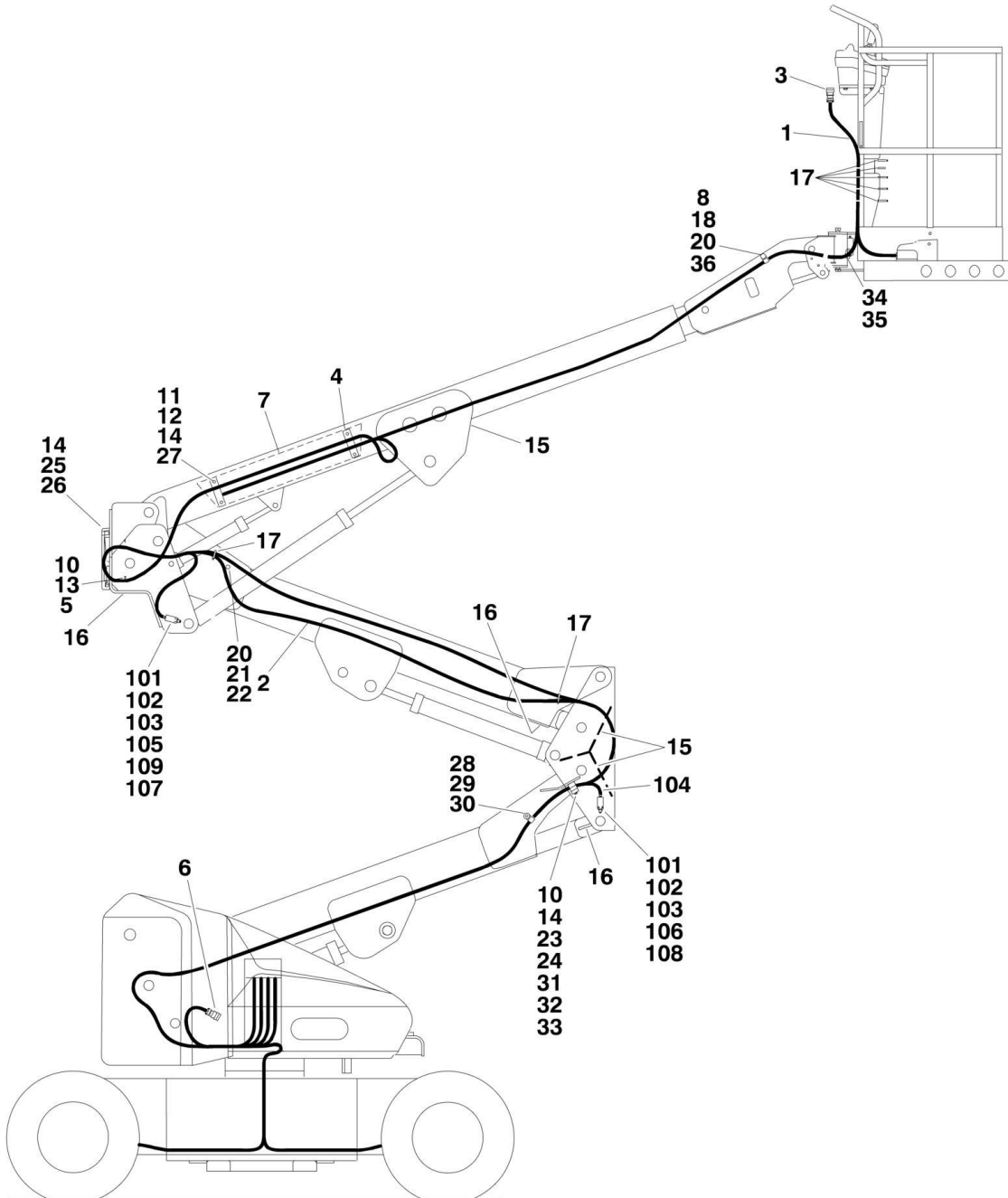


FIGURE 3-9. CABLES/CLAMPS AND LIMIT SWITCHES INSTALLATIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CABLES AND CLAMPS INSTALLATION	
	0257735	Ref	Cables and Clamps Installation (E/M450A)	H
	0259367	Ref	Cables and Clamps Installation (E/M450AJ)	E
	0270817	Ref	Cables and Clamps Installation (E/M400A)	C
	0259970	Ref	Cables and Clamps Installation (E/M400AJP)	D
1		Ref	Harness Assembly - Upper Boom Options (See ELECTRICAL SECTION for Breakdown):	
1	4922178	1	Harness Assembly - Upper Boom (E/M450A Models)	
1	4922552	1	Harness Assembly - Upper Boom (E/M450AJ Models)	
1	4922496	1	Harness Assembly - Upper Boom (E/M400A Models)	
1	4922364	1	Harness Assembly - Upper Boom (E/M400AJP Models) (Prior to SN 0300071419)	
1	4922496	1	Harness Assembly - Upper Boom (E/M400AJP Models) (SN 0300071419 through 0300189901)	
2		Ref	Harness Assembly - Lower Boom Options (See ELECTRICAL SECTION for Breakdown):	
2	4922179	1	Harness Assembly - Lower Boom (E/M450 Models)	
2	4922495	1	Harness Assembly - Lower Boom (E/M400A Models) (Prior to SN 0300071418)	
2	4922363	1	Harness Assembly - Lower Boom (E/M400A Models) (SN 0300071418 through 0300189901)	
2	4922363	1	Harness Assembly - Lower Boom (E/M400AJP Models)	
3	4460754	1	Connector	
4	1320260	2	Block, Hose Clamp	
5	0561317	1	Block, Hose Clamp	
6	4460753	1	Connector	
7		Ref	Shield Options:	
7	3536999	1	Shield (E/M450A & E/M400A Models)	
7	3571462	1	Shield (E/M450AJ & E/M400AJP Models)	
8		Ref	Cover, Clamp Options:	
8	1320195	1	Cover, Clamp (E/M450A Models) (Prior to SN 0300060132)	
8	Not Required	0	Cover, Clamp (E/M450A Models) (SN 0300060132 through 0300189898)	
8	Not Required	0	Cover, Clamp (E/M400A, E/M450AJ & E/M400AJP Models)	
10	4751500	5	Flatwasher 5/16in	
11	4751400	12	Flatwasher 1/4in	
12	3311401	6	Nut 1/4in-20NC	
13	0641514	3	Bolt 5/16in-18NC x 1 3/4in	
14	0100011	AR	Compound, Locking	
15	4060805	AR	Trim	
16	4060808	8 ft/2.4m	Trim 1/2in	
17	4240099	26	Tie-Strap	
18	0641516	AR	Bolt 5/16in-18NC x 2in	
20	3311505	2	Locknut 5/16in-18NC	
21	4566243	1	Roller	
22	0641560	1	Bolt 5/16in-18NC x 7-1/2in	
23	4300140	2	Stud, Weld 5/16in-18NC x 3-5/8in	
24		Ref	Hose Clamp Block Options:	
24	0561384	1	Hose Clamp Block (E/M450A Models)	
24	0561359	1	Hose Clamp Block (E/M450AJ Models)	
24	0561384	1	Hose Clamp Block (E/M400A & E/M400AJP Models)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
25	1670697	1	Cover, Hose	
26	0630467	4	Capscrew, Button 5/16in-18NC x 1/2in	
27	3300151	6	Nut, Acorn 1/4in - 20NC	
28		Ref	Clamp, Cable Options:	
28	1320040	1	Clamp, Cable (Prior to SN 0300177913)	
28	1320043	1	Clamp, Cable (E/M400) (SN 0300177913 through 0300189901)	
28	1320043	1	Clamp, Cable (E/M450) (SN 0300177913 through 0300189898)	
29	0641410	1	Bolt 1/4in-20NC x 1-1/4in	
30	3311405	1	Locknut 1/4in-20NC	
31		Ref	Hose Clamp Block Options:	
31	0561360	1	Hose Clamp Block (E/M450 Models)	
31	0561385	1	Hose Clamp Block (E/M400 Models)	
32		Ref	Hose Clamp Block Options:	
32	0561361	1	Hose Clamp Block (E/M450 Models)	
32	0561386	1	Hose Clamp Block (E/M400 Models)	
33	0100019	AR	Compound, Locking	
34		Ref	Clamp Options:	
34	Not Required	0	Clamp (E/M450A Models)	
34	1320095	1	Clamp (E/M450AJ Models)	
34	Not Required	0	Clamp (E/M400 Models)	
35		Ref	Sleeve Options:	
35	4100065	1	Sleeve (E/M400AJP Models)	
35	4100065	1	Sleeve (E/M450A & E/M400A Models) (Prior to SN 0300070932)	
35	4100067	1	Sleeve (E/M400AJP Models)	
35	4100067	1	Sleeve (E/M450AJ Models)	
36		Ref	Clamp Options:	
36	1320199	1	Clamp (E/M450A Models) (Prior to SN 0300060132)	
36	0561424	1	Clamp (E/M450A Models) (SN 0300060132 through 0300189898)	
36	Not Required	0	Clamp (E/M450AJ & E/M400AJP Models)	
36	0561424	1	Clamp (E/M400A Models)	
		Ref	LIMIT SWITCHES INSTALLATION	
	0254875	Ref	Limit Switches Installation (E/M450 Models) (Prior to SN 0300063768)	5
	0271493	Ref	Limit Switches Installation (E/M450 Models) (SN 0300063768 through 0300189898)	2
	0254875	Ref	Limit Switches Installation (E/M400A Models) (Prior to SN 0300063768)	5
	0253704	Ref	Limit Switches Installation (E/M400AJP Models) (Prior to SN 0300063768)	6
	0271494	Ref	Limit Switches Installation (All E/M400 Models) (SN 0300063768 through 0300189901)	2
101		Ref	Switch, Limit Options:	
101	4360321	2	Switch, Limit (Prior to SN 0300074300)	
101	4360548	2	Switch, Limit (SN 0300074300 through 0300189901)	
102		Ref	Connector, Strain Relief Options:	
102	4460428	2	Use with 4360321 Limit Switch	
102	4460968	2	Use with 4360548 Limit Switch	
103	3311005	4	Locknut #10-24NC	
104		Ref	Harness (Lower) Options:	

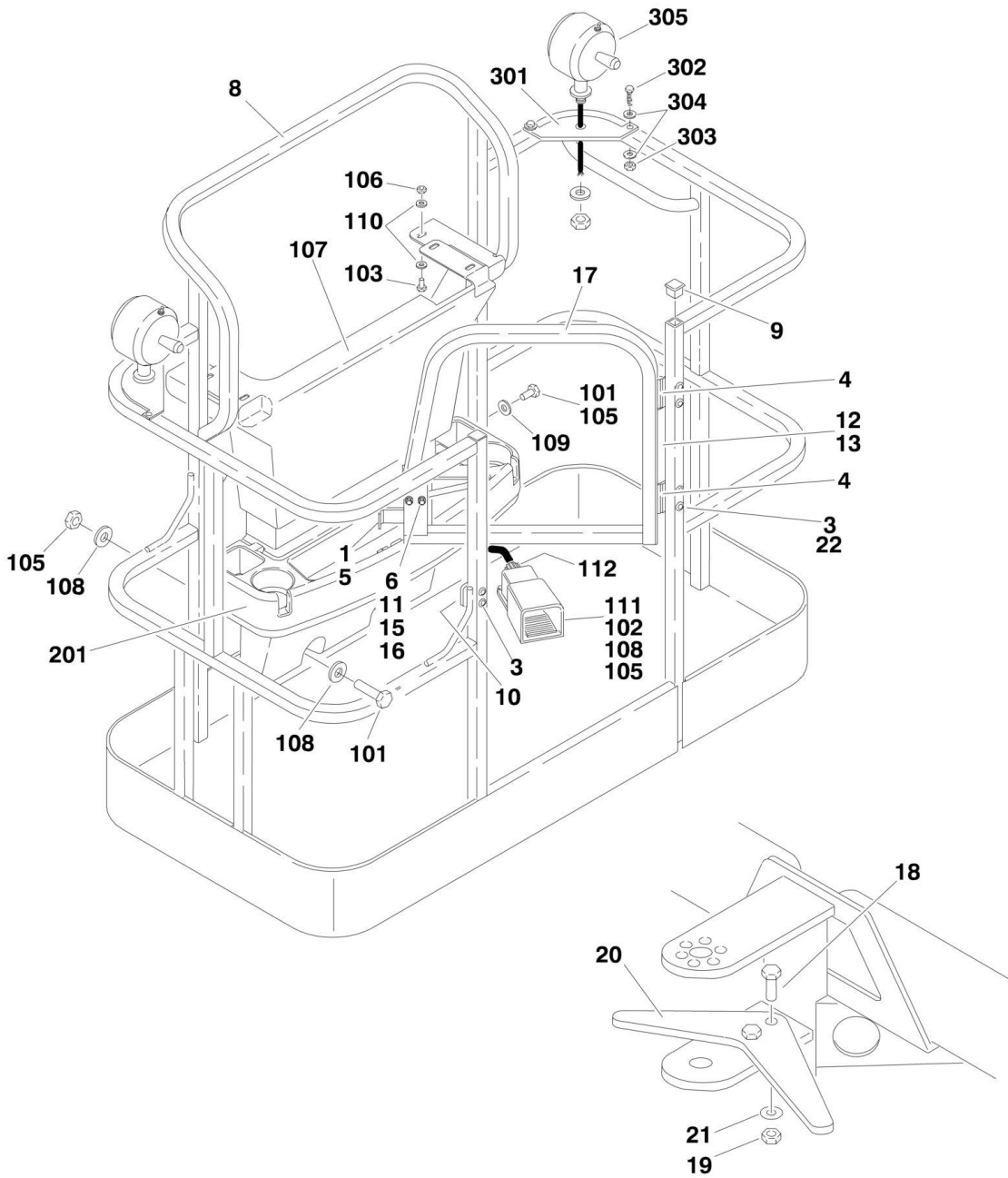
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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
104	1060341	AR	Harness (Lower) (Prior to SN 0300063768)	
104	4922614	1	Harness (Lower) (SN 0300063768 through 0300189901)	
105		Ref	Screw Options:	
105	3900246	2	Screw, Filister Head #10-24NC x 1-3/4in (Prior to SN 0300070080)	
105	3931028	2	Screw #10-24NC x 1-3/4in (SN 0300070080 through 0300189901)	
106	3900104	2	Screw, Filister Head #10-24NC x 2-1/4in	
107		Ref	Harness (Upper) Options:	
107	1060341	AR	Harness (Upper) (Prior to SN 0300063768)	
107	4922613	1	Harness (Upper) (E/M450 Models) (SN 0300063768 through 0300189898)	
107	4922615	1	Harness (Upper) (E/M400 Models) (SN 0300063768 through 0300189901)	
108	1670832	1	Cover, Switch Lower	
109	1670833	1	Cover, Switch Upper	

SECTION 4 - PLATFORM

SECTION 4 - PLATFORM

FIGURE 4-1. PLATFORM COMPONENTS INSTALLATION (FRONT ENTRY PLATFORM)



SECTION 4 - PLATFORM

FIGURE 4-1. PLATFORM COMPONENTS INSTALLATION (FRONT ENTRY PLATFORM)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM INSTALLATIONS WITH SWING GATE	
	3510694	Ref	4ft/1.22m Width without Mesh	D
	3510725	Ref	4ft/1.22m Width with Mesh to Top Rail/Self Closing Gate	C
	3510714	Ref	4ft/1.22m Width with Self Closing Gate	C
	3510693	Ref	5ft/1.52m Width without Mesh (Without Stop)	D
	0270407	Ref	5ft/1.52m Width without Mesh (With Stop)	C
	3510735	Ref	5ft/1.52m Width with Mesh to Top Rail/Self Closing Gate (Without Stop)	C
	0270409	Ref	5ft/1.52m Width with Mesh to Top Rail/Self Closing Gate (With Stop)	C
	3510810	Ref	5ft/1.52m Width with Self Closing Gate (Without Stop)	B
		Ref	Note: Replacement Decals Must be Ordered Separately - See DECAL SECTION.	
1	0100040	AR	Adhesive, Sealant	
3	2080040	13	Fastener, Huck	
4		Ref	Hinge Options:	
4	2600216	2	Standard Gates	
4	2600219	2	Self Closing Gates (Prior to SN 0300068512)	
4	2600287	2	Self Closing Gates (E/M400) (SN 0300068512 through 0300189901)	
4	2600287	2	Self Closing Gates (E/M450) (SN 0300068512 through 0300189898)	
5	2940074	1	Latch	
6	3311001	4	Nut #10-24NC (Standard Gates)	
6	3311005	4	Nut #10-24NC (Self Closing Gates) (Prior to SN 0300068512)	
8		Ref	Platform Weldment Options (Purchase Complete Platform):	
8	3510694	1	4ft/1.22m Width without Mesh	
8	3510725	1	4ft/1.22m Width with Mesh to Top Rail/Self Closing Gate	
8	3510690	1	4ft/1.22m Width with Self Closing Gate	
8	3510693	1	5ft/1.52m Width without Mesh (Without Stop)	
8	0270407	1	5ft/1.52m Width without Mesh (With Stop)	
8	3510735	1	5ft/1.52m Width with Mesh to Top Rail/Self Closing Gate (Without Stop)	
8	0270409	1	5ft/1.52m Width with Mesh to Top Rail/Self Closing Gate (With Stop)	
8	3510689	1	5ft/1.52m Width with Self Closing Gate (Without Stop)	
9	3520072	3	Cap-Plug	
10	3539685	1	Plate, Latch	
11	3911008	4	Screw #10-24NC x 1in	
12	4060803	AR	Trimlock	
13	4220165	1	Stop, Gate	
15	4751000	4	Flatwasher #10	
16	4761000	4	Lockwasher #10 (Standard Gates)	
16	4761000	4	Lockwasher #10 (Self Closing Gates) (Prior to SN 0300068512)	
17		Ref	Gate Weldment Options:	
17	4845327	1	Without Mesh	
17	4845426	1	Without Mesh/Self Closing	
17	4845951	1	With Mesh to Top Rail	
18	0641610	2	Bolt 3/8in-16NC x 1-1/4in (Platform with Stop Only)	
19	3311605	2	Locknut 3/8in-16NC (Platform with Stop Only)	
20		Ref	Stop Options (Platform with Stop Only):	

SECTION 4 - PLATFORM

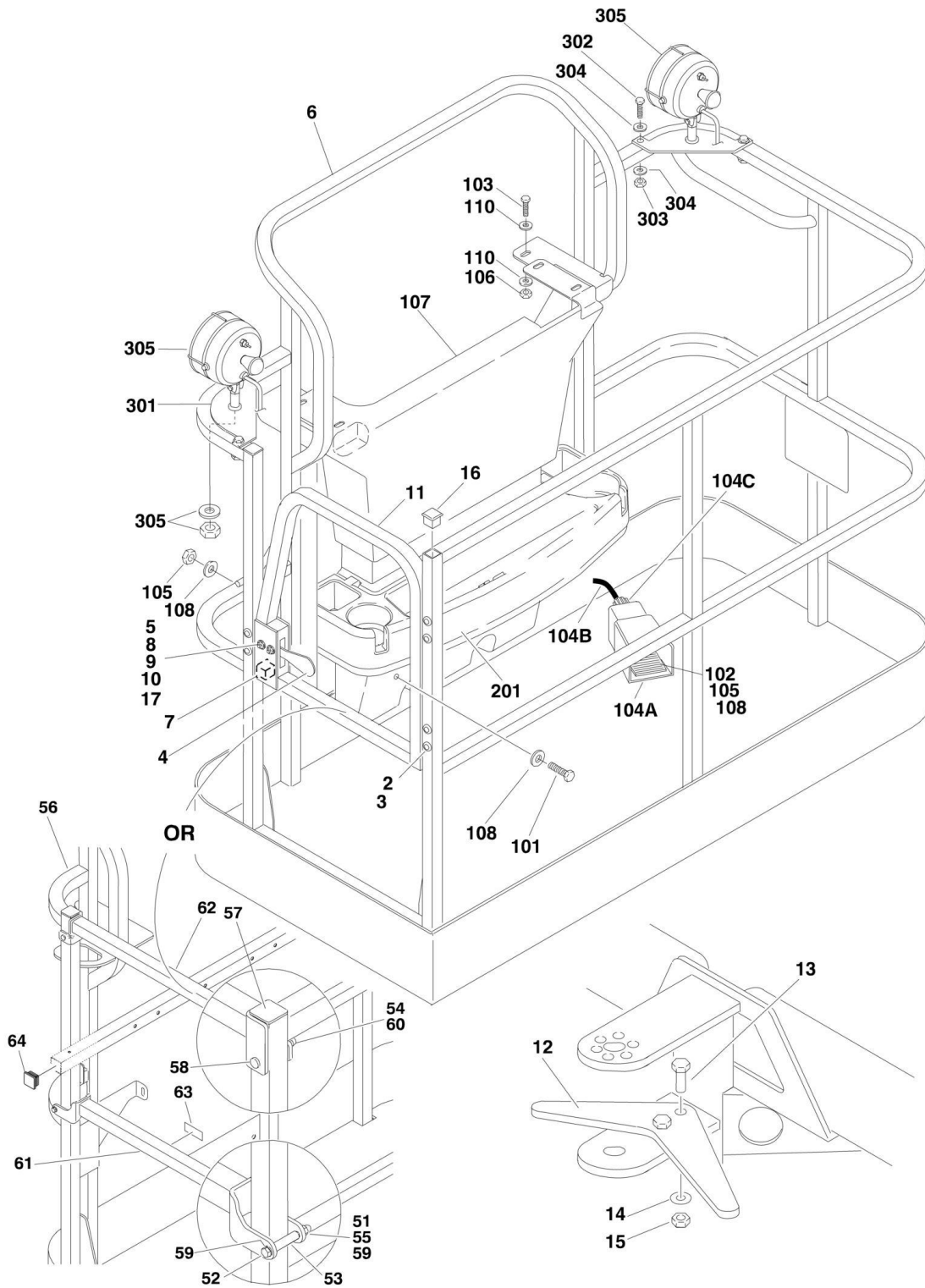
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
20	4846276	1	Weldment, Stop (Prior to SN 0300072144)	
20	3572413	1	Weldment, Stop (E/M400) (SN 0300072144 through 0300189901)	
20	3572413	1	Weldment, Stop (E/M450) (SN 0300072144 through 0300189898)	
21	4711600	4	Flatwasher 3/8in Narrow (Platform with Stop Only)	
22	7016652	13	Huck Fastener Kit (Replaces Huck Fasteners with Bolts)	
		Ref	CONSOLE BOX INSTALLATIONS AND ASSEMBLIES	
	0861176	Ref	Standard Spec E/M450 Models (Prior to SN 0300068945)	10-G
	0272082	Ref	Standard Spec E/M450 Models (SN 0300068945 through 0300189898)	B
	0861452	Ref	U/L Rated Spec E/M450 Models (Prior to SN 0300068945)	1-A
	0272105	Ref	U/L Rated Spec E/M450 Models (SN 0300068945 through 0300189898)	A
	0861176	Ref	Standard Spec E/M400A Models (Prior to SN 0300068945)	10-G
	0272082	Ref	Standard Spec E/M400A Models (SN 0300068945 through 0300189901)	A
	0861452	Ref	U/L Rated Spec E/M400A Models (Prior to SN 0300068945)	1-A
	0272105	Ref	U/L Rated Spec E/M400A Models (SN 0300068945 through 0300189901)	A
	0861314	Ref	Standard Spec E/M400AJP Models (Prior to SN 0300068945)	4-D
	0272106	Ref	Standard Spec E/M400AJP Models (SN 0300068945 through 0300189901)	A
	0861449	Ref	U/L Rated Spec E/M400AJP Models (Prior to SN 0300068945)	1-A
	0272104	Ref	U/L Rated Spec E/M400AJP Models (SN 0300068945 through 0300189901)	A
101	0641406	4	Bolt 1/4in-20NC x 3/4in	
102	0641408	3	Bolt 1/4in-20NC x 1in	
103	0641610	4	Bolt 3/8in-16NC x 1-1/4in	
104		Ref	Console Box Assembly Options: (Not Shown - See PLATFORM CONSOLE ASSEMBLY for Breakdown)	
104	0861529	1	Standard Spec E/M450	
104	0861531	1	U/L Spec E/M450	
104	0861529	1	Standard Spec E/M400A	
104	0861531	1	U/L Spec E/M400A	
104	0861532	1	Standard Spec E/M400AJP	
104	0861530	1	U/L Spec E/M400AJP	
105	3311405	7	Locknut 1/4in-20NC	
106	3311605	4	Locknut 3/8in-16NC	
107	3380434	1	Panel, Pedestal	
108	4740362	7	Washer, Fender 1/4in	
109	4751400	4	Flatwasher 1/4in (Wide)	
110	4751600	8	Flatwasher 3/8in (Wide)	
111	4360031	1	Footswitch	
111	7000625	2	Block, Contact	
111	3252347	1	Nameplate (Note: See DECAL SECTION for Other Languages)	
112	4460071	1	Connector, Strain Relief	
		Ref	TRAY INSTALLATIONS (OPTIONAL)	
201	1580012	1	Tray, Storage (Center)	
202	1580013	1	Tray, Storage (Rail Mounted - Not Shown)	
		Ref	WORKLIGHTS INSTALLATION (optional)	
	0259338	Ref	Standard Spec	2-B
	0271301	Ref	U/L Rated Spec	2-B

SECTION 4 - PLATFORM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
301	3536089	2	Plate, Mounting	
302	0641414	4	Bolt 1/4in-20NC x 1-3/4in	
303	3311405	4	Locknut 1/4in-20NC	
304	4711400	8	Flatwasher 1/4in Narrow	
305	2920095	2	Worklight	
305	7016356	2	Bulb, Replacement (1 Per Assembly)	
306	4240099	10	Tie-Strap (Not Shown)	
307	2820035	9	Loom, Vinyl (Not Shown)	
309	4460428	1	Connector, Strain Relief (Not Shown - Located at Console Box)	
312	4923061	1	Harness, Platform Work Lights (Not Shown)	
312	4460464	1	Pin, Male	

SECTION 4 - PLATFORM

FIGURE 4-2. PLATFORM COMPONENTS INSTALLATION (SIDE ENTRY PLATFORM)



SECTION 4 - PLATFORM

FIGURE 4-2. PLATFORM COMPONENTS INSTALLATION (SIDE ENTRY PLATFORM)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM ASSEMBLY WITH GATE	
		Ref	Platform Assembly With Gate (Prior to SN 0300163749)	
	3510832	Ref	6ft (1.83m) with No Mesh and No Stop (E/M450A Only) (Use p/n 1001144025)	L
	3510831	Ref	5ft (1.52m) with No Mesh and No Stop (E/M400A & E/M450A/AJ) (Use p/n 1001144026)	L
	3510844	Ref	5ft (1.52m) with No Mesh and With Stop (E/M400AJP Only)	D
	3510830	Ref	4ft (1.22m) with No Mesh and No Stop (Use p/n 1001144027)	M
		Ref	Platform Assembly With Gate (E/M400) (SN 0300163749 through 0300189901)	
		Ref	Platform Assembly With Gate (E/M450) (SN 0300163749 through 0300189898)	
	1001144025	Ref	6ft (1.83m) with No Mesh and No Stop (E/M450A Only)	C
	1001144026	Ref	5ft (1.52m) with No Mesh and No Stop (E/M400A & E/M450A/AJ)	C
	3510844	Ref	5ft (1.52m) with No Mesh and With Stop (E/M400AJP Only)	E
	1001144027	Ref	4ft (1.22m) with No Mesh and No Stop	C
		Ref	Note: Platform and Mesh must be ordered separately for Platforms with Mesh. See Section 10 for Mesh Installations.	
		Ref	Note: Replacement Decals Must be Ordered Separately - See DECAL SECTION.	
1	0100040	AR	Sealant, Adhesive (Not Shown) (Prior to SN 0300103057)	
2	2080040	16	Fastener, Huck	
3	2600281	2	Hinge, Self-Closing	
4	2940074	1	Latch	
5	3311001	4	Nut #10-24NC - Platform with No Stop Only (Prior to SN 0300077390)	
6	See Note	1	Platform Weldment (Note: Not Available - Purchase Platform Assembly)	
7	3520072	1	Cap-Plug	
8		Ref	Hardware Options:	
8		Ref	Platform with No Stop:	
8	3911008	4	Screw #10-24NC x 1in (Prior to SN 0300077390)	
8	3820020	4	Pop Rivet (E/M400) (SN 0300077390 through 0300189901)	
8	3820020	4	Pop Rivet (E/M450) (SN 0300077390 through 0300189898)	
8		Ref	Platform with Stop:	
8	3911008	4	Screw #10-24NC x 1in	
9	4751000	AR	Flatwasher #10 - Platform with No Stop Only (Prior to SN 0300077390)	
10	4761000	AR	Lockwasher #10 - Platform with No Stop Only (Prior to SN 0300077390)	
11		Ref	Gate Weldment Options:	
11	4846452	1	Gate Weldment (Prior to SN 0300163749)	
11	1001144629	1	Gate Weldment (E/M400) (SN 0300163749 through 0300189901)	
11	1001144629	1	Gate Weldment (E/M450) (SN 0300163749 through 0300189898)	
12	3572413	1	Stop (Platform with Stop Only)	
13	0641610	2	Bolt 3/8in-16NC x 1-1/4in (Platform with Stop Only)	
14	4711600	4	Flatwasher 3/8in Narrow (Platform with Stop Only)	
15	3311605	2	Locknut 3/8in-16NC (Platform with Stop Only)	
16	3520198	2	Cap-Plug	

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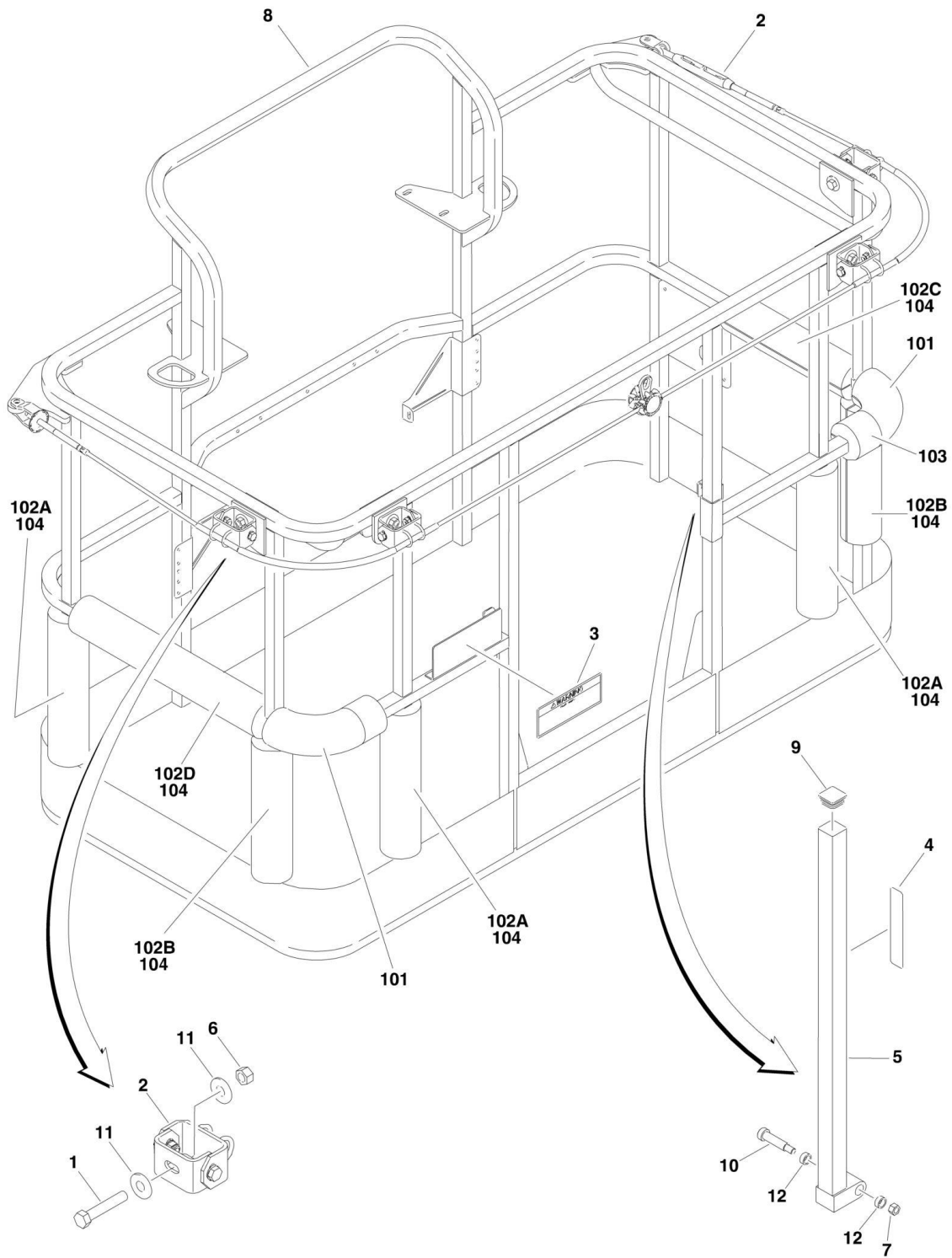
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
17	0100011	AR	Compound, Locking - Platform with No Stop Only (Prior to SN 0300077390)	
		Ref	PLATFORM ASSEMBLY WITH DROP-BAR	
		Ref	Platform Assembly With Drop-Bar (Prior to SN 0300163749)	
	1001138431	Ref	4ft x 2.5ft (1.2m x .76m) (Use p/n 1001144018)	B
	1001138432	Ref	5ft x 2.5ft (1.5m x .76m) (E/M400A & E/M450A/AJ) (Use p/n 1001144019)	B
	1001138433	Ref	6ft x 2.5ft (1.8m x .76m) (E/M450A Only) (Use p/n 1001144020)	B
		Ref	Platform Assembly With Drop-Bar (E/M400) (SN 0300163749 through 0300189901)	
		Ref	Platform Assembly With Drop-Bar (E/M450) (SN 0300163749 through 0300189898)	
	1001144018	Ref	4ft x 2.5ft (1.2m x .76m)	C
	1001144019	Ref	5ft x 2.5ft (1.5m x .76m) (E/M400A & E/M450A/AJ)	C
	1001144020	Ref	6ft x 2.5ft (1.8m x .76m) (E/M450A Only)	C
51	0100011	AR	Compound, Locking	
52	0641418	2	Bolt 1/4in-20NC x 2-1/4in	
53	0961845	2	Bushing	
54	3290606	2	Nut M6	
55	3300151	2	Nut, Acorn	
56	See Note	1	Platform Weldment (Note: Purchase Platform Assembly.)	
57	3520198	2	Cap-Plug	
58	4010618	2	Screw M6 x 50mm	
59	4711400	4	Flatwasher 1/4in	
60	4811700	2	Flatwasher M6	
61	1001138494	1	Bar, Drop	
62	1001138514	1	Rail (Top)	
63	1001140429	1	Decal - Drop-Bar	
64	3520072	2	Cap-Plug (E/M400) (SN 0300185894 through 0300189901)	
64	3520072	2	Cap-Plug (E/M450) (SN 0300185894 through 0300189898)	
		Ref	CONSOLE BOX INSTALLATIONS AND ASSEMBLIES	
	1001146082	Ref	Standard Spec E/M450 Models (was p/n 0272082)	A-B
	1001145800	Ref	U/L Rated Spec E/M450 Models (was p/n 0272105)	A-B
	1001146082	Ref	Standard Spec E/M400A Models (was p/n 027282)	A-B
	1001145800	Ref	U/L Rated Spec E/M400A Models (was p/n 0272105)	A-B
	1001145801	Ref	Standard Spec E/M400AJP Models (was p/n 0272106)	A-B
	1001145796	Ref	U/L Rated Spec E/M400AJP Models (was p/n 0272104)	A-B
101	0641406	4	Bolt 1/4in-20NC x 3/4in	
102	0641408	3	Bolt 1/4in-20NC x 1in	
103	0641610	4	Bolt 3/8in-16NC x 1-1/4in	
104		Ref	Console Box Assembly Options: (Not Shown - See PLATFORM CONSOLE ASSEMBLY for Breakdown)	
104	0861529	NLA	Standard Spec E/M450 (Use p/n 1001146083)	
104	0861531	NLA	U/L Spec E/M450 (Use p/n 1001145798)	
104	0861529	NLA	Standard Spec E/M400A (Use p/n 1001146083)	
104	0861531	NLA	U/L Spec E/M400A (Use p/n 1001145798)	
104	0861532	NLA	Standard Spec E/M400AJP (Use p/n 1001145799)	
104	0861530	NLA	U/L Spec E/M400AJP (Use p/n 1001145797)	
104A		Ref	Footswitch Assembly Options:	
104A	0272971	1	Footswitch Assembly (Prior to SN 0300167691)	
104A	1001136889	1	Footswitch Assembly (E/M400) (SN 0300167691 through 0300189901)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
104A	1001136889	1	Footswitch Assembly (E/M450) (SN 0300167691 through 0300189898)	
104A		Ref	Footswitch Options:	
104A	4360031	1	Footswitch (Prior to SN 0300143940)	
104A	7000625	2	Block, Contact for 4360031 Footswitch	
104A	1001117320	1	Footswitch (SN 0300143940 through 0300167691)	
104A	70003483	1	Block, Contact for 1001117320 Footswitch	
104A	1001117172	1	Footswitch (E/M400) (SN 0300167691 through 0300189901)	
104A	1001117172	1	Footswitch (E/M450) (SN 0300167691 through 0300189898)	
104A	70002902	1	Block, Contact for 1001117172 Footswitch	
104A	70002903	1	Gasket for 1001117172 Footswitch	
104A	70002905	1	Cover for 1001117172 Footswitch	
104A	70002904	1	Bolt Replacement Kit for 1001117172 Footswitch	
104B	1060330	7 ft/2.14m	Cable, Electrical - 16/3	
104C	4460071	1	Connector, Strain Relief	
105	3311405	7	Locknut 1/4in-20NC	
106	3311605	4	Locknut 3/8in-16NC	
107	3380434	1	Panel, Pedestal	
108	4740362	7	Washer, Fender 1/4in	
109	4751400	4	Flatwasher 1/4in (Wide)	
110	4751600	8	Flatwasher 3/8in (Wide)	
		Ref	TRAY INSTALLATIONS (OPTIONAL)	
201	1580012	1	Tray, Storage (Center)	
202	1580013	1	Tray, Storage (Rail Mounted - Not Shown)	
		Ref	WORKLIGHTS INSTALLATION (optional)	
	0259338	Ref	Standard Spec	C
	0271301	Ref	U/L Rated Spec	C
301	3536089	2	Plate, Mounting	
302	0641414	4	Bolt 1/4in-20NC x 1-3/4in	
303	3311405	4	Locknut 1/4in-20NC	
304	4711400	8	Flatwasher 1/4in Narrow	
305	2920095	2	Worklight	
305	7016356	2	Bulb, Replacement (1 Per Assembly)	
306	4240099	10	Tie-Strap (Not Shown)	
307	2820035	9	Loom, Vinyl (Not Shown)	
309	4460428	1	Connector, Strain Relief (Not Shown - Located at Console Box)	
312	4923061	1	Harness, Platform Work Lights (Not Shown)	
312	4460464	1	Pin, Male	

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FIGURE 4-3. PLATFORM COMPONENTS INSTALLATION (FALL ARREST PLATFORM) (OPTIONAL)



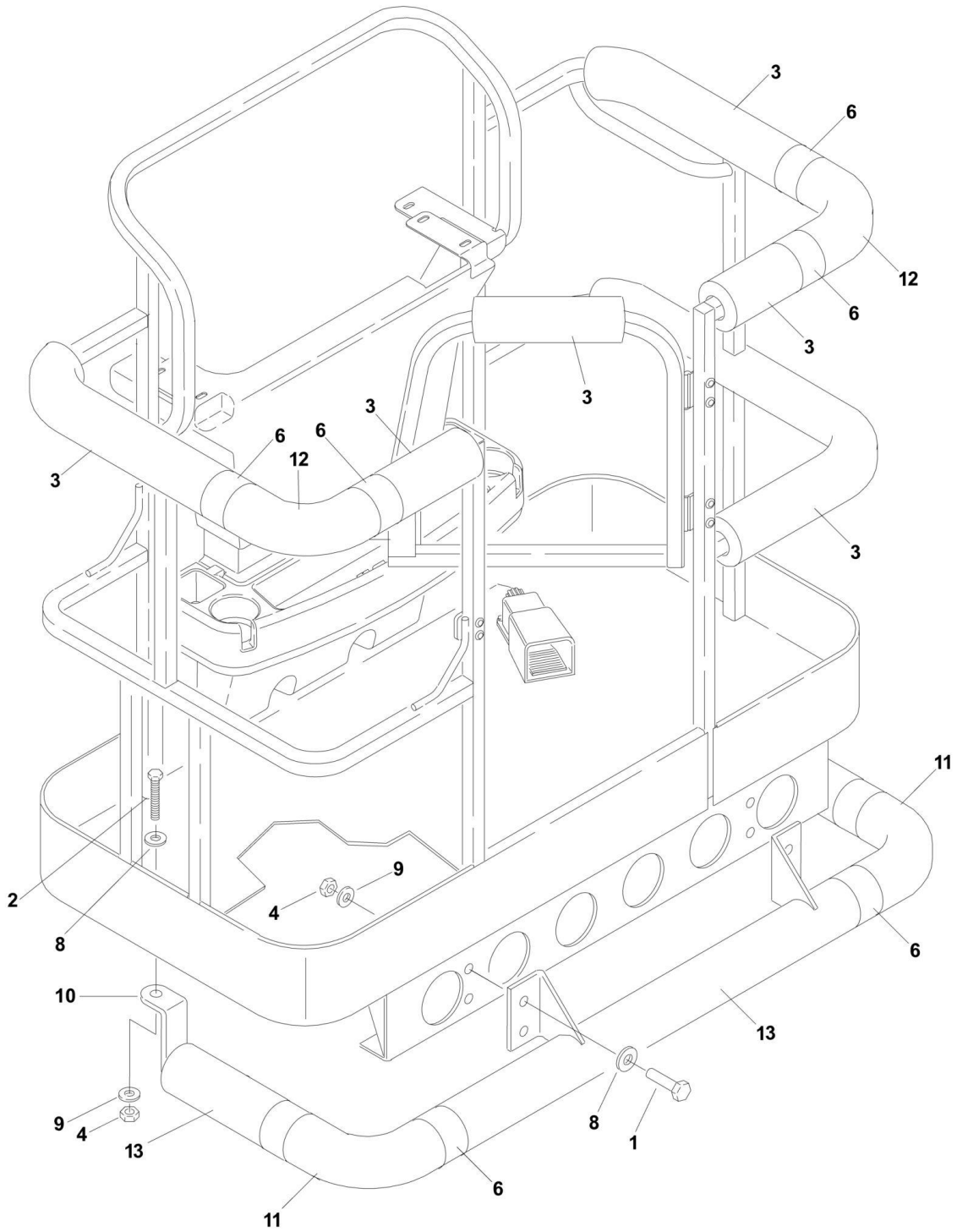
SECTION 4 - PLATFORM

FIGURE 4-3. PLATFORM COMPONENTS INSTALLATION (FALL ARREST PLATFORM) (OPTIONAL)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	3510884	Ref	PLATFORM ASSEMBLY (FALL ARREST) (OPTIONAL) (E/M450A/AJ ONLY)	B
		Ref	Note: Replacement Decals Must be Ordered Separately - See DECAL SECTION.	
1	0681822	4	Bolt 1/2in-13NC x 2-3/4in	
2	1060919	1	Cable, Fall Arrest	
3	1705014	1	Decal - Safety	
4	1706385	1	Decal - Drop Bar	
5	2410014	1	Gate Weldment	
6	3271805	4	Locknut 1/2in-13NC	
7	3311605	1	Locknut 3/8in-16NC	
8	3510884	1	Platform Weldment (Note: Not available for purchase)	
9	3520072	1	Cap-Plug	
10	3900054	1	Bolt 1/2in-13NC x 1-3/4in	
11	4751800	8	Flatwasher 1/2in (Wide)	
12	0962270	2	Bearing, Oilite	
		Ref	PLATFORM PADDING INSTALLATION (OPTIONAL)	
	0275698	Ref	Platform Padding Installation 36in x 72in Platform	A
101	0940092	2	Pad, Corner Bumper	
102	0940094	AR	Pad, Bumper Options:	
102A		Ref	Pad, Bumper 14.875in	
102B		Ref	Pad, Bumper 13.750in	
102C		Ref	Pad, Bumper 14.500in	
102D		Ref	Pad, Bumper 22.000in	
103	4420068	AR	Tape, Yellow Safety	
104	0940198	1	Kit, Pre-Cut Bumper	

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FIGURE 4-4. PLATFORM PADDING INSTALLATION (FRONT ENTRY PLATFORM)



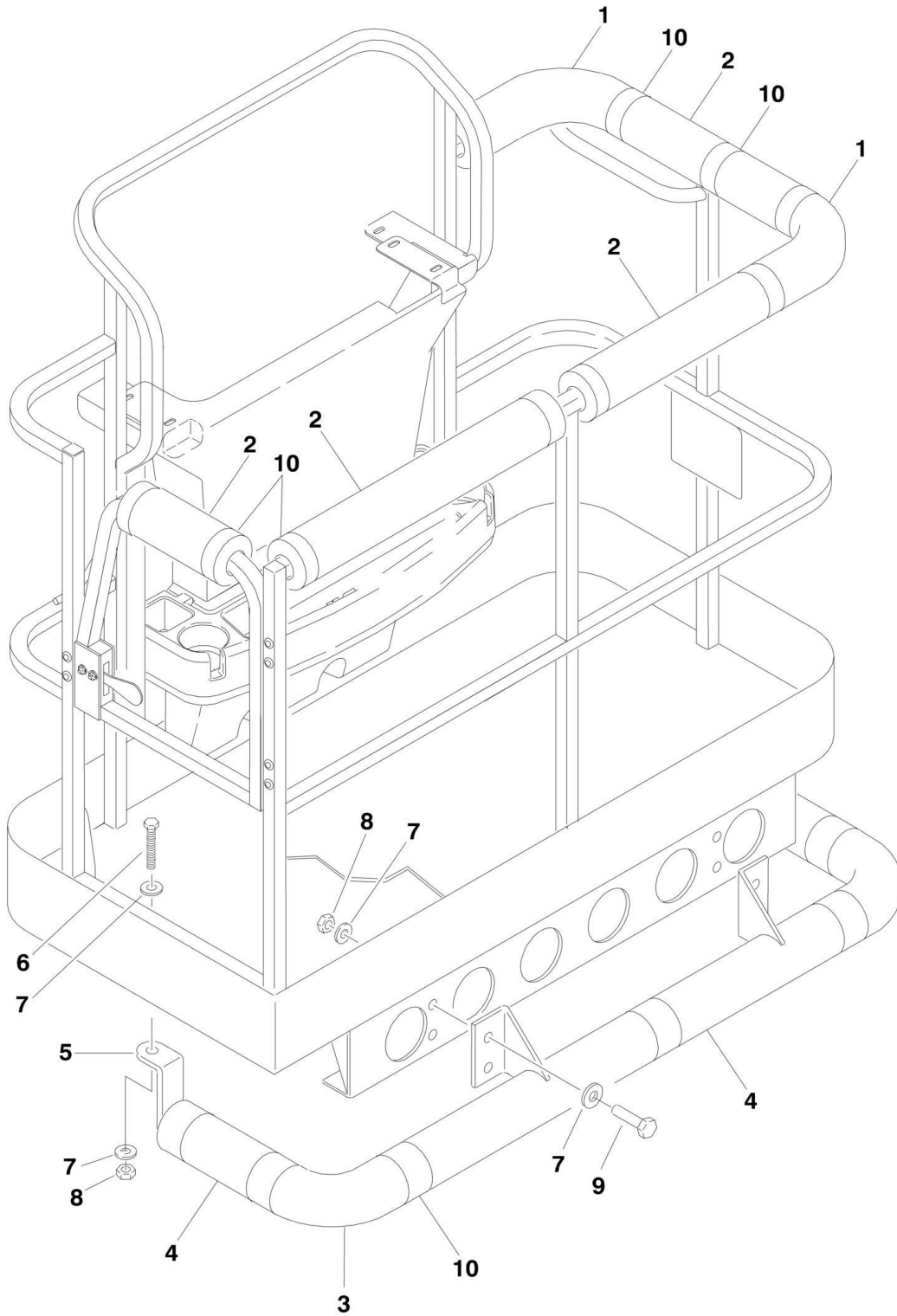
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FIGURE 4-4. PLATFORM PADDING INSTALLATION (FRONT ENTRY PLATFORM)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM PADDING INSTALLATION OPTIONS:	
	0270338	Ref	30in x 48in	B
	0271937	Ref	Platform Padding Installation (30in x 60in)	1-A
1		Ref	Bolt Options:	
1	0641508	4	30in x 48in Assemblies (Bolt 5/16in-18NC x 1in)	
1	0641506	4	30in x 60in Assemblies (Bolt 5/16in-18NC x 3/4in)	
2	0641516	2	Bolt 5/16in-18NC x 2in	
3	0940094	AR	Padding	
4		Ref	Nut Options:	
4	3311501	6	30in x 48in Assemblies (Nut 5/16in-18NC)	
4	3311505	6	30in x 60in Assemblies (Locknut 5/16in-18NC)	
6	4420068	36 ft/11m	Tape, Yellow Adhesive	
8	4751500	6	Flatwasher 5/16in (Wide)	
9	4761500	6	Lockwasher 5/16in	
10		Ref	Bumper Rail Options:	
10	4844917	1	30in x 48in Assemblies	
10	4845346	1	30in x 60in Assemblies	
11	0940091	2	Corner, Padded	
12	0940092	2	Corner, Padded	
13	0940093	AR	Padding (Bottom)	

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FIGURE 4-5. PLATFORM PADDING INSTALLATION (SIDE ENTRY PLATFORM)



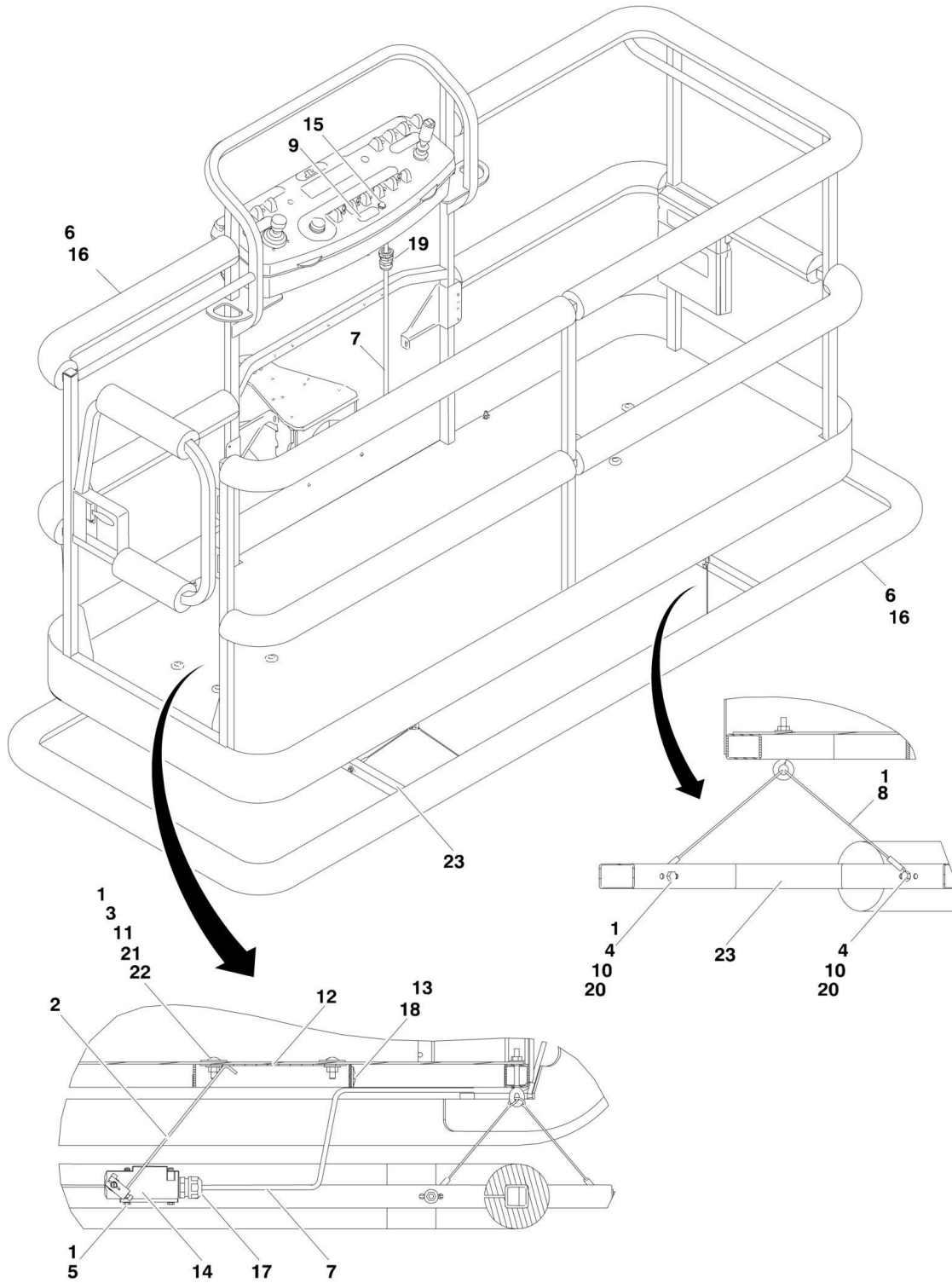
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FIGURE 4-5. PLATFORM PADDING INSTALLATION (SIDE ENTRY PLATFORM)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM PADDING INSTALLATION	
	0273381	Ref	30in x 48in Platform	2-A
	0273382	Ref	30in x 60in Platform	2-A
1	0940092	Ref	Pad, Corner Bumper Options:	
1	0940092	2	30in x 48in Platform	
1	0940092	3	30in x 60in Platform	
2	0940094	1	Pad, Bumper Options:	
2	0940094	63 in	30in x 48in Platform	
2	0940094	87 in	30in x 60in Platform	
3	0940091	2	Pad, Corner Bumper	
4	0940093	1	Pad, Bumper Options:	
4	0940093	51 in	30in x 48in Platform	
4	0940093	66 in	30in x 60in Platform	
5		Ref	Rail, Bumper Options:	
5	4846936	1	30in x 48in Platform	
5	4846937	1	30in x 60in Platform	
6	0641516	2	Bolt 5/16in-18NC x 2in	
7	4751500	6	Flatwasher 5/16in Wide	
8	3311501	6	Nut 5/16in-18NC	
9	0641506	4	Bolt 5/16in-18NC x 3/4in	
10	4420068	Ref	Tape, Yellow Safety Options:	
10	4420068	30 ft	Tape, Yellow Safety 30in x 48in Platform	
10	4420068	34 ft	Tape, Yellow Safety 30in x 60in Platform	

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FIGURE 4-6. SOFT-TOUCH INSTALLATION (OPTIONAL)



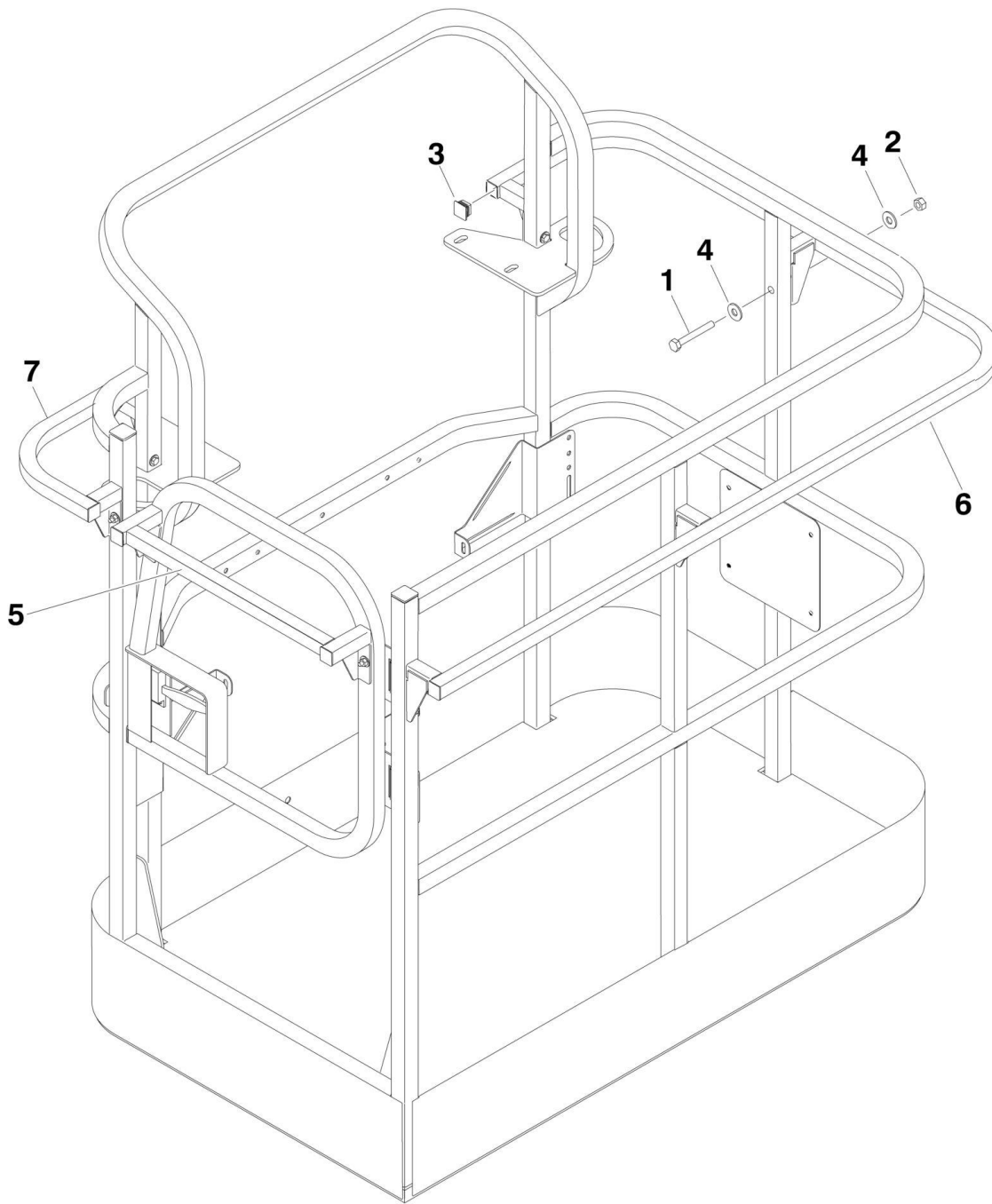
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FIGURE 4-6. SOFT-TOUCH INSTALLATION (OPTIONAL)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	SOFT-TOUCH INSTALLATION (OPTIONAL)	
	0274323	Ref	36in x 72in Platform	A
1	0100011	AR	Compound, Locking	
2	0200048	2	Arm, Switch Activator	
3	0630462	8	Bolt, Carriage	
4	0641414	8	Bolt 1/4in-20NC x 1-3/4in	
5	0721005	4	Screw #10-32NF x 5/8in	
6	0940167		Bumper Kit (Includes Corners and Enough Straight Material for One Platform)	
7	1060494	15 ft/4.6m	Cable, Control - 12/3	
8	1060903	4	Wire Rope and Eyebolt Assembly	
9	1702938	1	Decal, Soft Touch Override	
10	3311401	8	Nut 1/4in-20NC	
11	3311501	8	Nut 5/16in-18NC	
12	3575705	2	Plate, Switch Strike	
13	4240099	1	Tie, Wire	
14	4360057	2	Switch, Limit	
15	4360387	1	Switch, Yellow Push Button	
16	4420068	1	Tape, Yellow Adhesive	
17	4460049	2	Connector, Strain Relief	
18	4460234	2	Terminal, Mount Cable Tie	
19	4460425	1	Terminal, Strain Relief (Not Shown)	
20	4751400	16	Flatwasher 1/4in (Wide)	
21	4751500	8	Flatwasher 5/16in (Wide)	
22	4751800	8	Flatwasher 1/2in (Wide)	
23	4846370	1	Rail, Soft Touch	

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FIGURE 4-7. PLATFORM TOP RAIL EXTENSION INSTALLATION (SIDE ENTRY PLATFORM)



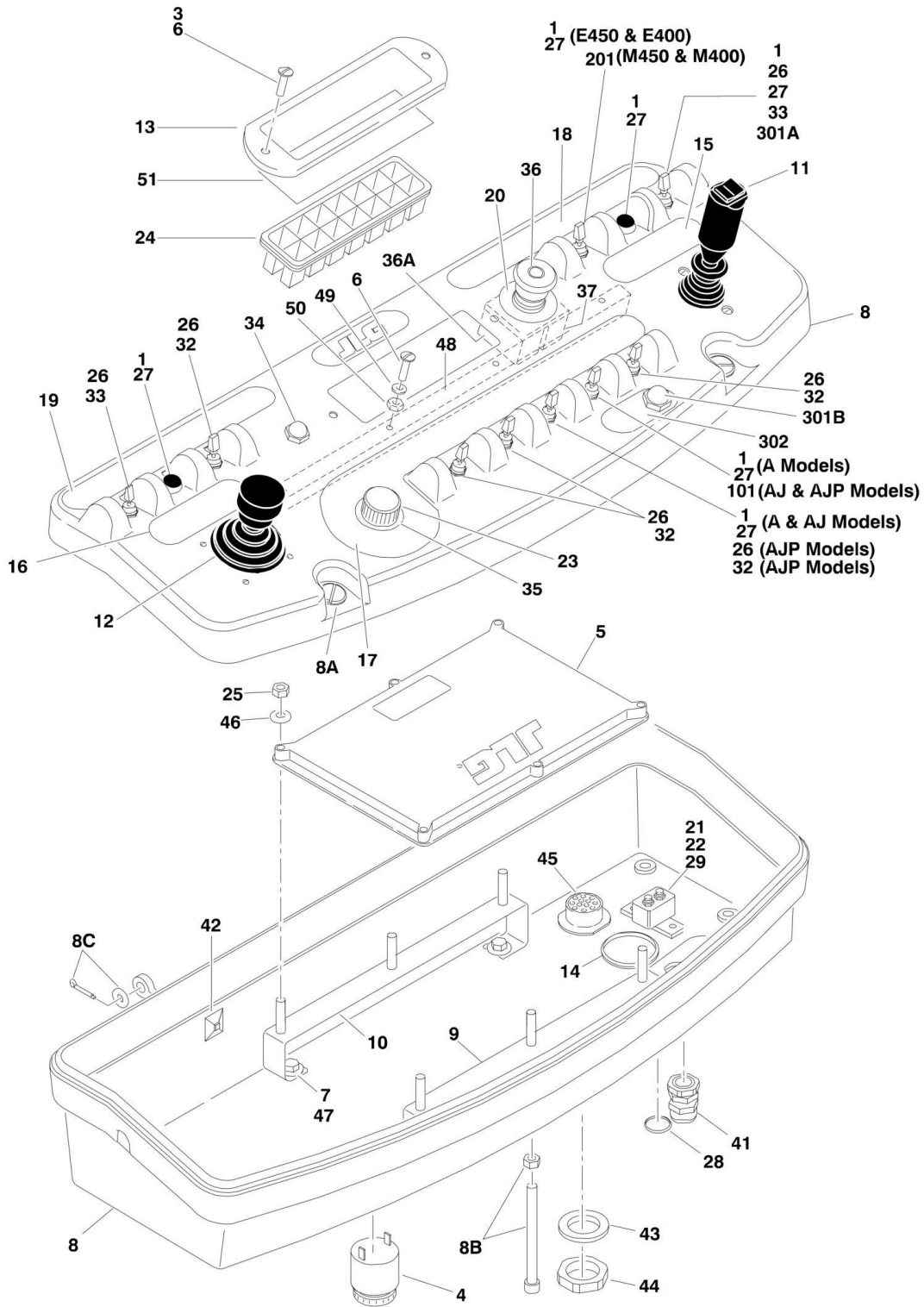
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FIGURE 4-7. PLATFORM TOP RAIL EXTENSION INSTALLATION (SIDE ENTRY PLATFORM)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM TOP RAIL EXTENSION INSTALLATION	
	1001103617	Ref	30in x 48in Platform	A
	1001103558	Ref	30in x 60in Platform	A
1	0641416	8	Bolt 1/4in-20NC x 2in	
2	3311405	8	Locknut 1/4in-20NC	
3	3520182	6	Plug	
4	4751400	16	Flatwasher 1/4in	
5	4846759	1	Rail, Extension Gate	
6		Ref	Rail, Rear Extension Options:	
6	1001103614	1	30in x 48in Platform	
6	1001103559	1	30in x 60in Platform	
7		Ref	Rail, Extension Options:	
7	1001103616	1	30in x 48in Platform	
7	1001103560	1	30in x 60in Platform	

SECTION 4 - PLATFORM

FIGURE 4-8. PLATFORM CONSOLE ASSEMBLY



SECTION 4 - PLATFORM

FIGURE 4-8. PLATFORM CONSOLE ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CONSOLE BOX ASSEMBLIES	
	0861176	Ref	Standard Spec E/M450 Models (Prior to SN 0300068945)	10-G
	0861529	Ref	Standard Spec E/M450 Models (SN 0300068945 through 0300189898)	A-O
	0861452	Ref	U/L Rated Spec E/M450 Models (Prior to SN 0300068945)	1-A
	0861531	Ref	U/L Rated Spec E/M450 Models (SN 0300068945 through 0300189898)	A-J
	0861176	Ref	Standard Spec E/M400A Models (Prior to SN 0300068945)	10-G
	0861529	Ref	Standard Spec E/M400A Models (SN 0300068945 through 0300189901)	A-O
	0861452	Ref	U/L Rated Spec E/M400A Models (Prior to SN 0300068945)	1-A
	0861531	Ref	U/L Rated Spec E/M400A Models (SN 0300068945 through 0300189901)	A-J
	0861314	Ref	Standard Spec E/M400AJP Models (Prior to SN 0300068945)	4-D
	0861532	Ref	Standard Spec E/M400AJP Models (SN 0300068945 through 0300189901)	A-L
	0861449	Ref	U/L Rated Spec E/M400AJP Models (Prior to SN 0300068945)	1-A
	0861530	Ref	U/L Rated Spec E/M400AJP Models (SN 0300068945 through 0300189901)	A-K
	0273089	Ref	Light Panel Installation	B
1	0100009	AR	Sealant	
3	0100035	AR	Compound, Locking	
4	0140011	1	Alarm	
5		Ref	Module, PC Options:	
		Ref	Note: Re-calibration Required when Replaced.	
5	0610128	NLA	Module (Use p/n 1001109498) (Prior to SN 0300139889)	
5	1001109498	1	Module (E/M400) (SN 0300139889 through 0300189901)	
5	1001109498	1	Module (E/M450) (SN 0300139889 through 0300189898)	
6	0630464	2	Bolt #10-24 x 1/2in	
7	0720804	AR	Bolt #8-32 x 1/2in	
8		Ref	Console Box Assembly Options:	
8	0861215	1	Console Assembly (Prior to SN 0300068945)	
8A	7020099	2	Screw	
8A	3760308	2	Retainer, Screw	
8A	7020100	2	Receptacle, Clip-on Screw	
8A	0861537	1	Console Assembly (E/M400) (SN 0300068945 through 0300189901)	
8A	0861537	1	Console Assembly (E/M450) (SN 0300068945 through 0300189898)	
8A	0861537	1	Casting, Console (Bottom) (Note: Not available for purchase)	
8A	0861537	1	Casting, Console (Top) (Note: Not available for purchase)	
8B	0630568	1	Capscrew, Socket Head 3/8in-16NC x 4-1/2in	
8B	3311601	1	Nut 3/8in-16NC	
8C	3420156	2	Pin, Cotter	
8C	4711500	2	Flatwasher 5/16in Narrow	
9	0902575	1	Bracket, Platform Module	
10	0902588	1	Bracket, Platform Module	
11		Ref	Controller Assembly (Drive and Steer) (See CONTROLLER ASSEMBLY (DRIVE AND STEER) for Breakdown)	
11	1600273	NLA	Controller Assembly (use p/n 1001118418) (Prior to SN 0300145789)	
11	1001118418	1	Control, Drive/Steer (E/M400) (SN 0300145789 through	

SECTION 4 - PLATFORM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
11	1001118418	1	0300189901) Control, Drive/Steer (E/M450) (SN 0300145789 through 0300189898)	
12		Ref	Controller Assembly (Lift and Swing) (See CONTROLLER ASSEMBLY (LIFT AND SWING) for Breakdown)	
12	1600274	NLA	Controller Assembly (use p/n 1001118419) (Prior to SN 0300145789)	
12	1001118419	1	Control, Lift/Swing (E/M400) (SN 0300145789 through 0300189901)	
12	1001118419	1	Control, Lift/Swing (E/M450) (SN 0300145789 through 0300189898)	
13	1670829	1	Bezel	
14		Ref	Cover Options:	
14	Not Required	0	Cover (Prior to SN 0300068945)	
14	1671037	1	Cover (SN 0300068945 through 0300139524)	
14	1001110435	1	Cover(E/M400) (SN 0300139525 through 0300189901)	
14	1001110435	1	Cover (E/M450) (SN 0300139525 through 0300189898)	
15	1702565	1	Decal - Drive and Steer	
16	1702566	1	Decal - Lift and Swing	
17		Ref	Decal - Function Speed Options:	
17	1702567	1	Decal - Function Speed (E/M450 Models)	
17	1702567	1	Decal - Function Speed (E/M400A Models)	
17	1704422	1	Decal - Function Speed (E/M400AJP Models)	
18		Ref	Decal - Stop Options:	
18	1704192	1	Decal - Stop (Prior to SN 0300139889)	
18	1001107677	NLA	Decal - Stop (use p/n 1001132175) (SN 0300139889 through 0300150083)	
18	1001132175	1	Decal - Stop (E/M400) (SN 0300150084 through 0300189901)	
18	1001132175	1	Decal - Stop (E/M450) (SN 0300150084 through 0300189898)	
19	1704240	1	Decal - Horn	
20	1704260	1	Decal - EMS	
21		Ref	Holder, Fuse Options:	
21	Not Required	0	Standard Spec	
21	2400067	1	U/L Rated Spec	
22		Ref	Hardware Options:	
22	4360448	1	Standard Spec (Circuit Breaker - 10 Amp)	
22	2400068	1	U/L Rated Spec (Fuse - 10 Amp)	
23	2560136	1	Handle, Knob	
24	2760105	1	Fixture, Light	
25	3310601	6	Nut #6-32	
26	3790012	AR	Ring	
27		Ref	Plug, Hole Options:	
27	3520028	AR	Plug, Hole (Prior to SN 0300077413)	
27	3520054	AR	Plug, Hole (E/M400) (SN 0300077413 through 0300189901)	
27	3520054	AR	Plug, Hole (E/M450) (SN 0300077413 through 0300189898)	
28	3520030	2	Plug, Hole	
29	3910808	1	Screw	
30	4240032	2	Tie, Wire (Not Shown)	
32	4360328	AR	Switch, Toggle	
33	4360330	AR	Switch, Toggle Options	
34	4360387	1	Switch, Push Button	
35	4360462	1	Switch, Potentiometer	
36	4360475	1	Switch, Emergency Stop	

SECTION 4 - PLATFORM

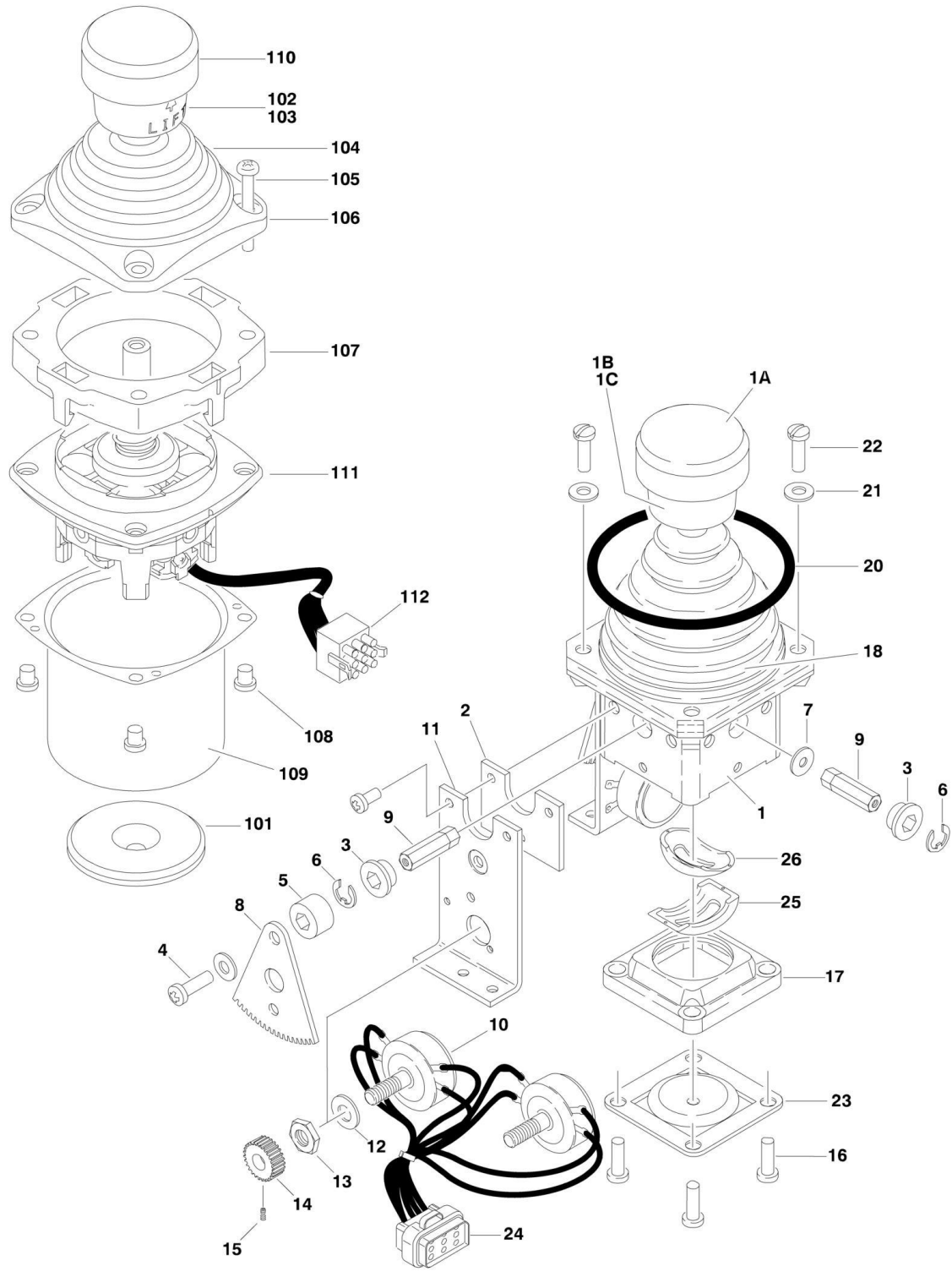
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
36	7020175	1	Cap, Mushroom with Sealing Ring	
36A	7020176	1	Block, Contact	
37	4360476	1	Block, Contact	
40	4460234	3	Tie, Wire (Not Shown)	
41	4460428	1	Connector, Strain Relief	
42	4460488	1	Base, Terminal Mounting	
43	4460496	1	Lockwasher, Receptacle	
44	4460497	1	Nut, Terminal	
45	4460752	1	Connector - 14 Position	
46	4750600	6	Flatwasher #6	
47	4750800	4	Flatwasher #8	
48	3571222	1	Angle, Relay Mounting Only (Prior to SN 0300068945)	
49	4740120	4	Washer, Nylon Only (Prior to SN 0300068945)	
50	3311005	4	Locknut #10-24NC Only (Prior to SN 0300068945)	
51		Ref	Display - Light Panel Options:	
51	1704239	1	Display (Prior to SN 0300139889)	
51	1001110226	1	Display (E/M400) (SN 0300139889 through 0300189901)	
51	1001110226	1	Display (E/M450) (SN 0300139889 through 0300189898)	
	0259102	Ref	JIB CONSOLE SWITCH (E/M450AJ & E/M400AJP ONLY)	2-B
101	4360328	1	Switch, Toggle	
101	3790012	1	O-Ring	
101	4922294	1	Harness, Jib Function (See ELECTRICAL SECTION for Breakdown)	
101	4240032	6	Tie-Strap	
		Ref	MOTOR CONTROLS INSTALLATION OPTIONS: (M450 & M400 ONLY)	
	0257824	Ref	All M450 Models Built (Prior to SN 0300059390)	11
	0270344	Ref	All M450 Models Built (SN 0300059390 through 0300079056)	5-B
	0270344	Ref	All M400 Models (Prior to SN 0300079057)	5-B
	0273573	Ref	All M450/M400 Models (SN 0300079057 through 0300088538)	B
	0274617	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M450/M400 Models) (Prior to SN 0300182839)	G
	1001159362	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M400 Models) (SN 0300182839 through 0300189901)	A
	1001159362	Ref	Tank and Motor/Generator Components Installation (Turntable Mounted) (All M450 Models) (SN 0300182839 through 0300189898)	A
201	4360336	1	Switch, Toggle	
201	3790012	1	O-Ring	
201	4922222	1	Harness (See ELECTRICAL SECTION for Breakdown)	
201	4922223	1	Harness (See ELECTRICAL SECTION for Breakdown)	
		Ref	WORKLIGHTS INSTALLATION (optional)	
	0259338	Ref	Standard Spec	C
	0271301	Ref	U/L Rated Spec	C
301		Ref	Switch Options:	
301A	4360336	1	Switch, Toggle (Prior to SN 0300161792)	
301B	4360522	1	Switch, Push Button (E/M400) (SN 0300161792 through 0300189901)	
301B	4360522	1	Switch, Push Button (E/M450) (SN 0300161792 through 0300189898)	
302	1705170	1	Decal, Lights (E/M400) (SN 0300161792 through 0300189901)	
302	1705170	1	Decal, Lights (E/M450) (SN 0300161792 through 0300189898)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0270732	Ref	SEALED ENCLOSURES INSTALLATION OPTIONS: (UL/EE RATED MACHINES ONLY) (NOT SHOWN) (Prior to SN 0300064627)	A
	0272111	Ref	SEALED ENCLOSURES INSTALLATION OPTIONS: (UL/EE RATED MACHINES ONLY) (NOT SHOWN) (E/M400) (SN 0300064627 through 0300189901)	A
	0272111	Ref	SEALED ENCLOSURES INSTALLATION OPTIONS: (UL/EE RATED MACHINES ONLY) (NOT SHOWN) (E/M450) (SN 0300064627 through 0300189898)	A
	0100009	AR	Sealant (Seal Around Analyzer Port)	
	3520173	4	Plug (Located in Bottom of Console Box)	

SECTION 4 - PLATFORM

FIGURE 4-9. CONTROLLER ASSEMBLY (SWING AND LIFT)



SECTION 4 - PLATFORM

FIGURE 4-9. CONTROLLER ASSEMBLY (SWING AND LIFT)

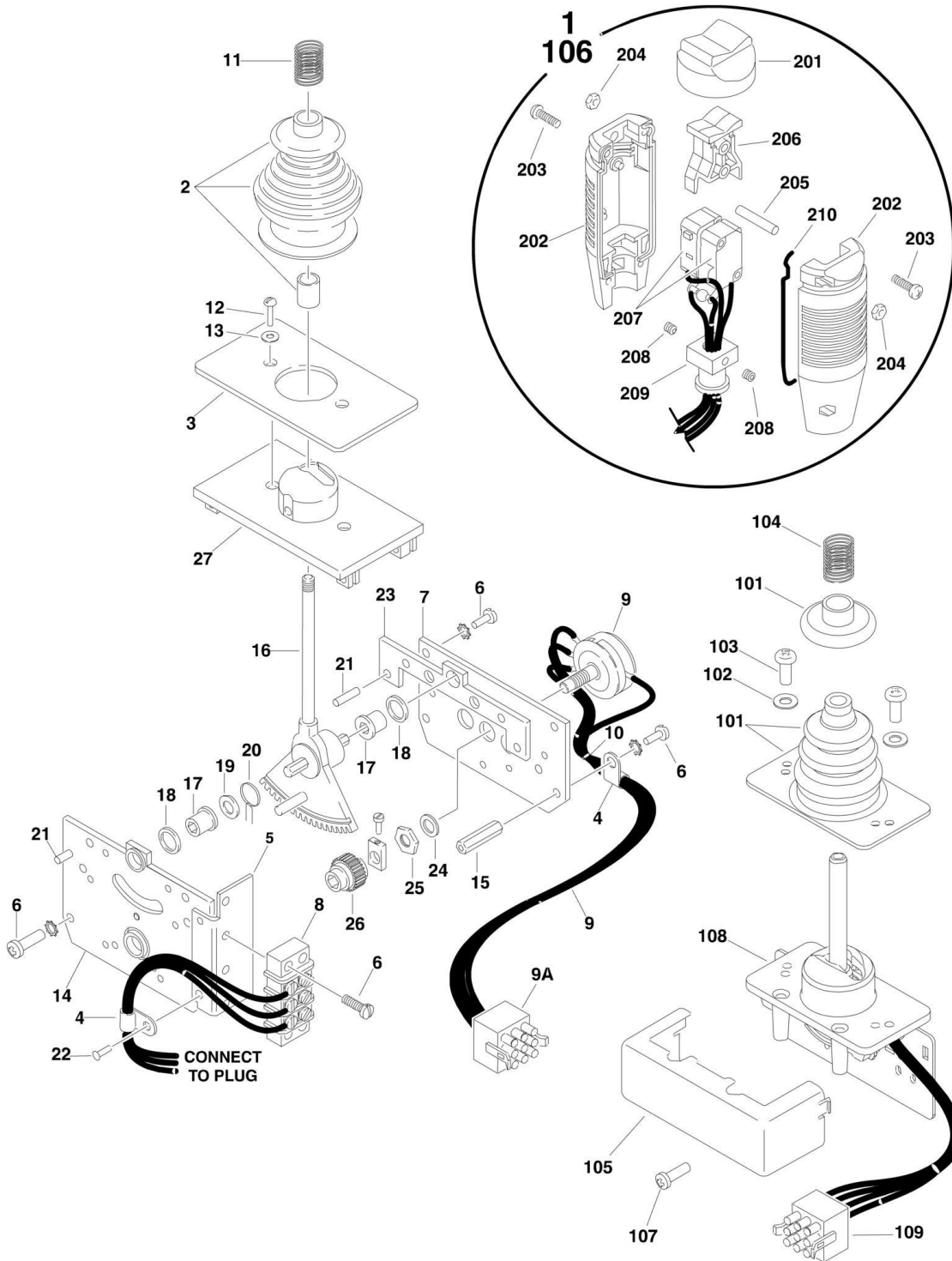
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CONTROLLER ASSEMBLY	
	1600274	Ref	Controller Assy (Original Equipment) (Prior to SN 0300145789)	F
1	7019141	1	Mechanical Assembly (Includes Base, Handle Stem and Items 18, 1A, 1B & 1C)	
1A	7019197	1	Handle Cap and Rod	
1B	7003928	1	Spring	
1C	7022808	1	Cap, Lift	
2	7019142	2	Plate	
3	7019111	4	Bearing, Gear	
4	7019143	2	Screw	
5	7019144	2	Spacer	
6	7019145	4	E-Clip	
7	7019174	2	Spacer, Cam	
8	7003977	2	Gear, Drive	
9	7019147	4	Shaft	
10	7019195	2	Potentiometer Assembly	
10	7003974	1	Potentiometer	
11	7019142	2	Plate	
12	7003992	2	Washer	
13	7003993	2	Nut	
14	7003976	2	Gear, Slave	
15	7019149	2	Setscrew	
16	7003952	4	Screw	
17	7019150	1	Gate	
18	7022813	1	Boot (was p/n 7003955)	
19	7022813	1	Plate, Plastic (was p/n 7003954)	
20	7003956	1	O-Ring	
21	7003953	4	Washer	
22	7019137	4	Screw	
23	7019170	1	Center, Detent	
24	4460265	1	Plug, Male - 9 Position	
24	4460226	8	Socket, Female	
25	7019122	1	Gimble, Outer	
26	7019123	1	Gimble, Inner	
	1001118419	Ref	Controller Assembly (Service Replacement) (Prior to SN 0300145789)	B
	1001118419	Ref	Controller Assembly (Original Equipment) (E/M400) (SN 0300145789 through 0300189901)	B
	1001118419	Ref	Controller Assembly (Original Equipment) (E/M450) (SN 0300145789 through 0300189898)	B
101	70002730	1	Gasket	
102	7003928	1	Spring	
103	7022808	1	Cap, Lift	
104	70002731	1	Boot	
105	70002732	4	Screw	
106	7022815	1	Bezel	
107	70002733	1	Adapter	
108	70002734	4	Screw	
109	70002735	1	Can, Enclosure	
110	70002906	1	CAP	

SECTION 4 - PLATFORM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
111	1001118419	1	Mechanical Assembly (Note: Not available for purchase)	
112	4460265	1	Plug, Male - 9 Position	
112	4460226	8	Socket, Female	

SECTION 4 - PLATFORM

FIGURE 4-10. CONTROLLER ASSEMBLY (DRIVE AND STEER)



SECTION 4 - PLATFORM

FIGURE 4-10. CONTROLLER ASSEMBLY (DRIVE AND STEER)

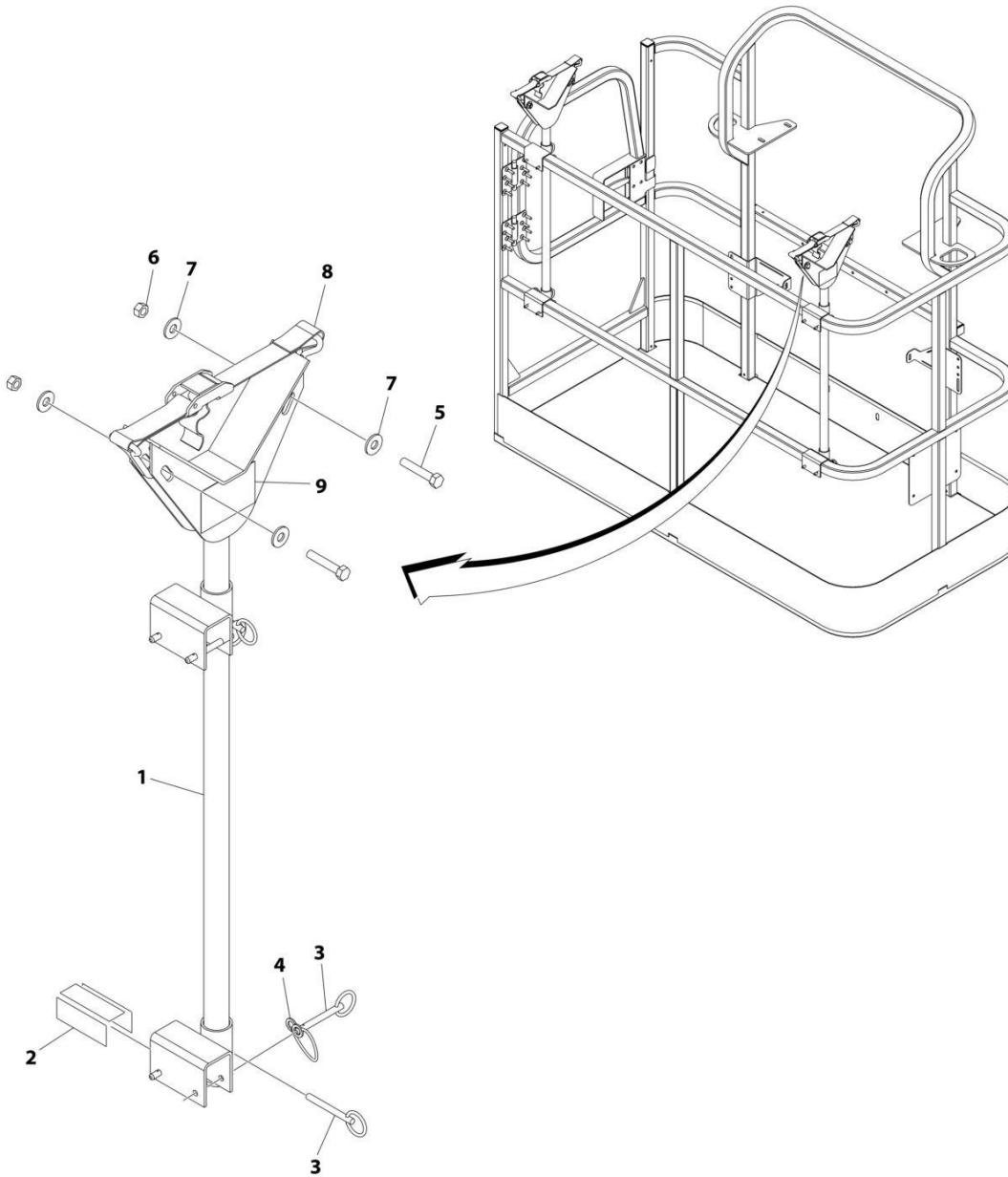
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CONTROLLER ASSEMBLY	
	1600273	Ref	Controller Assembly (Original Equipment) (Prior to SN 0300145789)	G
1	7022812	1	Handle Assembly (See Items 201-210 for Breakdown)	
2	7019161	1	Boot and Sleeve	
3	7003933	1	Gasket	
4	7019154	2	Clamp, Wire	
5	7019159	1	Bracket, Mounting	
6	7003994	10	Screw	
7	7019157	1	Plate, Pot Mounting	
8	7003986	1	Strip, Terminal - 3 Position	
9	7019191	1	Electric Assembly	
9	7003974	1	Potentiometer	
9A	4460265	1	Plug, Male - 9 Position	
9A	4460226	7	Socket, Female	
10	7019151	AR	Tie-Strap	
11	7019162	1	Spring	
12	7003940	2	Screw (was p/n 7003969)	
13	7003941	2	Washer	
14	7019158	1	Plate, Mounting (Left Side)	
15	7019115	2	Stand-Off	
16	1600273	1	Shaft 8mm (Note: Not available for purchase)	
17	7019111	2	Bearing	
18	7019110	2	Spacer, Head Gear	
19	7019112	1	Washer	
20	7003946	1	Spring, Return	
21	7019103	4	Pin	
22	See Note	1	Rivet (Note: Not available for purchase)	
23	7019168	1	Plate, Mounting (Right Side)	
24	7003992	1	Washer	
25	7003993	1	Nut	
26	7003935	1	Gear, Slave	
27	7019160	1	Base	
	1001118418	Ref	Controller Assembly (Service Replacement) (Prior to SN 0300145789)	B
	1001118418	Ref	Controller Assembly (Original Equipment) (E/M400) (SN 0300145789 through 0300189901)	B
	1001118418	Ref	Controller Assembly (Original Equipment) (E/M450) (SN 0300145789 through 0300189898)	B
101	70002724	1	Boot and Control Lock Assembly	
102	7003941	2	Washer	
103	70002725	2	Screw	
104	7019162	1	Spring	
105	70002726	1	Enclosure	
106	70002736	1	Handle Assembly (See Items 201-210 for Breakdown)	
107	70002728	1	Screw	
108	1001118418	1	Mechanical Assembly (Note: Not available for purchase)	
109	4460265	1	Plug, Male - 9 Position	
109	4460226	7	Socket, Female	
		Ref	HANDLE ASSEMBLIES	

SECTION 4 - PLATFORM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	7022812	Ref	Controller Assembly p/n 1600273	
	70002736	Ref	Controller Assembly p/n 1001118418	
201	7003972	1	Boot, Switch	
202	7003973	2	Half, Handle	
203	7003980	4	Screw	
204	7019167	4	Nut	
205	7019164	1	Axle	
206	7019165	1	Rocker	
207		Ref	Wiring Assembly Options:	
207	7019196	1	Controller Assembly p/n 1600273	
207	7003982	2	Switch, Micro	
207	70002737	1	Controller Assembly p/n 1001118418	
207	7003982	2	Switch, Micro	
208	7003983	2	Setscrew	
209	7019194	1	Coupling	
210	7003989	2	Gasket	

SECTION 4 - PLATFORM

FIGURE 4-11. PIPE RACKS INSTALLATION



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SECTION 4 - PLATFORM

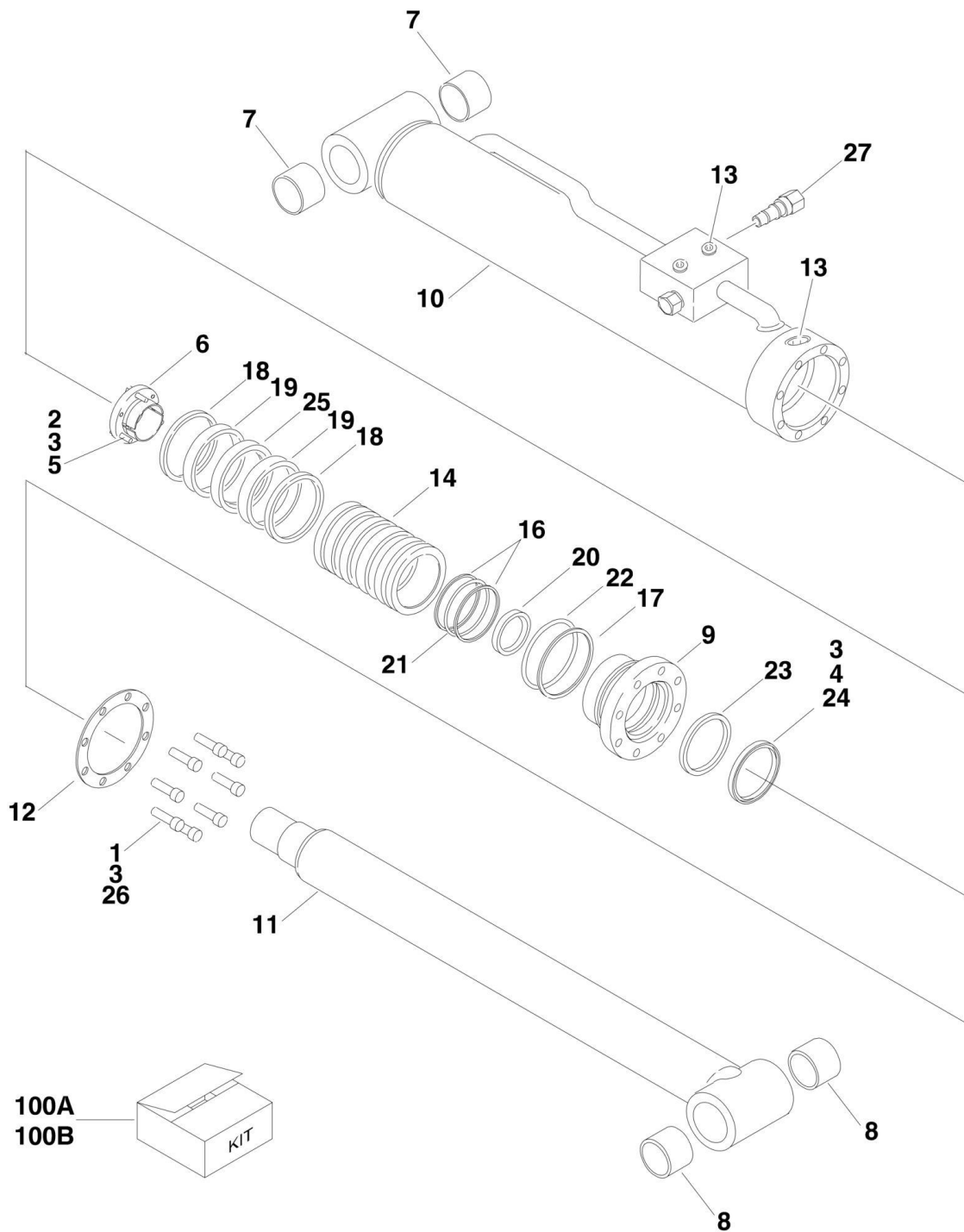
FIGURE 4-11. PIPE RACKS INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0257728	Ref	PIPE RACKS INSTALLATION	2/C
1	4845582	2	Rack, Pipe	
2	4420062	AR	Tape	
3	3422661	10	Pin	
4	1060379	4	Lanyard	
5	0641514	4	Bolt 5/16 x 1-3/4	
6	3311505	4	Nut 5/16	
7	4751500	8	Washer 5/16	
8	0480100	2	Tie-Down	
9	1703683	2	Decal - Capacity	

SECTION 5 - CYLINDER

SECTION 5 - CYLINDER

FIGURE 5-1. JIB CYLINDER ASSEMBLY (E/M450AJ & E/M400AJP) (M450AJ Prior to SN 0300164333)



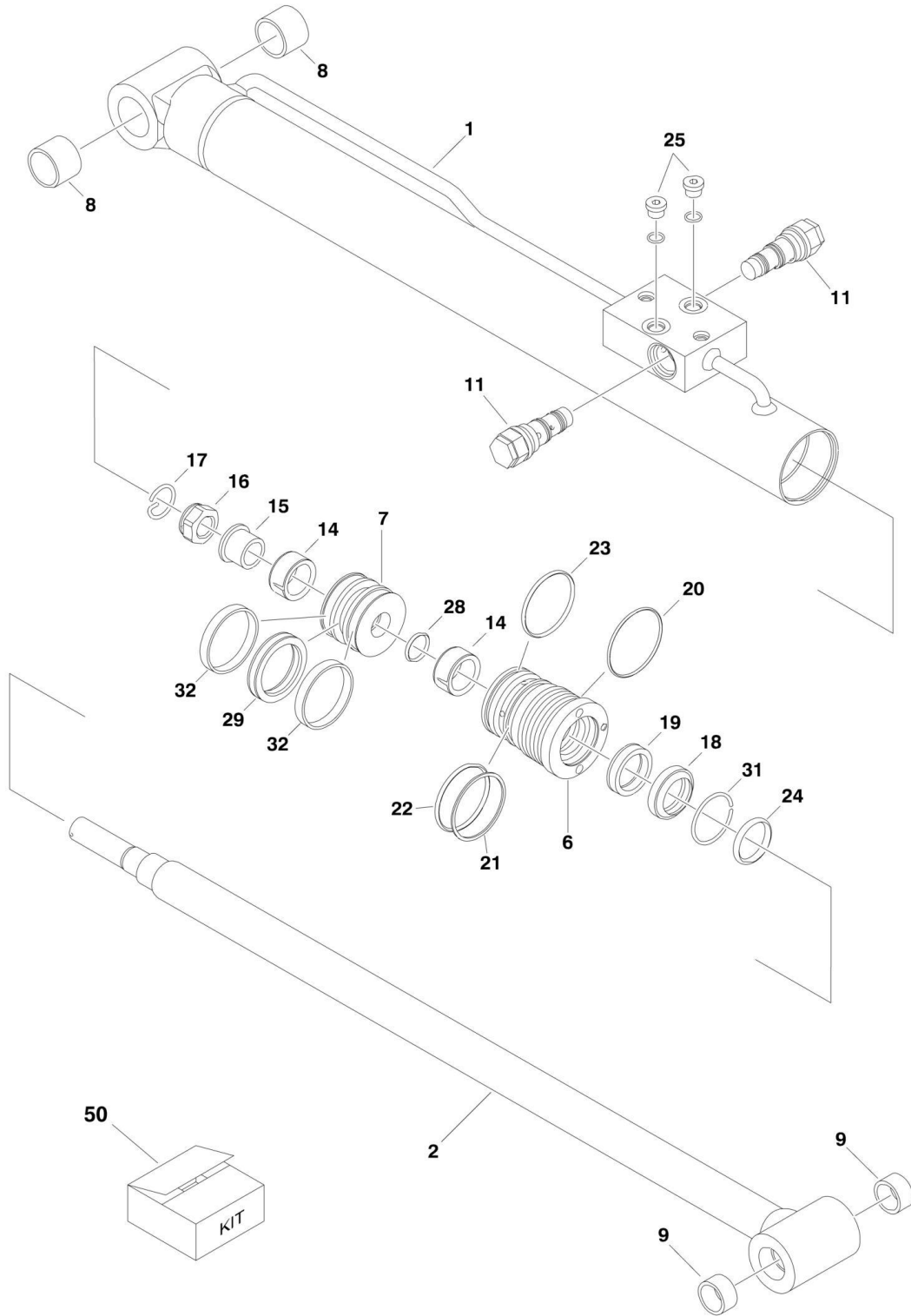
SECTION 5 - CYLINDER

FIGURE 5-1. JIB CYLINDER ASSEMBLY (E/M450AJ & E/M400AJP) (M450AJ Prior to SN 0300164333)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1683779	Ref	JIB CYLINDER ASSEMBLY	H
		Ref			Note: Original Equipment components may have been replaced with Service Replacement components part. Identify p/n stamped on cylinder before ordering parts.
1	0100011	AR	Compound, Locking	
2	0100035	AR	Compound, Locking (Prior to SN 0300052727)	
3	0100038	AR	Primer, Locking	
4	0100063	AR	Adhesive (Prior to SN 0300106518)	
5	0630534	3	Bolt #10-24NC x 1in	
6	0961893	1	Bushing, Tapered	
7	0961947	2	Bearing, Garmax	
8	0961951	2	Bushing, Garmax	
9	1683051	1	Head, Cylinder	
10	1683780	1	Barrel	
11	1683783	1	Rod	
12	3760367	1	Ring, Washer	
13	2220885	3	O-Ring Plug	
14	3480249	1	Piston, Head	
16	See Note	2	Back-Up (Note: Use Items 100A or 100B)	
17	See Note	1	Back-Up (Note: Use Items 100A or 100B)	
18	See Note	2	Ring, Seal (Note: Use Items 100A or 100B)	
19	See Note	2	Ring, Wear (Note: Use Items 100A or 100B)	
20	See Note	1	Ring, Wear (Note: Use Items 100A or 100B)	
21	See Note	1	O-Ring (Note: Use Items 100A or 100B)	
22	See Note	1	O-Ring (Note: Use Items 100A or 100B)	
23	See Note	1	Seal (Note: Use Items 100A or 100B)	
24	See Note	1	Wiper (Note: Use Items 100A or 100B)	
25	See Note	1	Seal (Note: Use Items 100A or 100B)	
26	3931516	8	Bolt 5/16in-18NC x 1in	
27	4640509	2	Cartridge, Valve	
27	2900792	2	Seal Kit- 4640509 Valve (1 Per Cartridge)	
100		Ref	Seal Kit Options (Includes Items 16-25):	
100A	2901810	1	Seal Kit (Prior to SN 0300068111)	
100B	2902209	1	Seal Kit (E/M400AJP) (SN 0300068111 through 0300189901)	
100B	2902209	1	Seal Kit (E/M450AJ) (SN 0300068111 through 0300189898)	

SECTION 5 - CYLINDER

FIGURE 5-2. JIB CYLINDER ASSEMBLY (E/M450AJ & E/M400AJP)



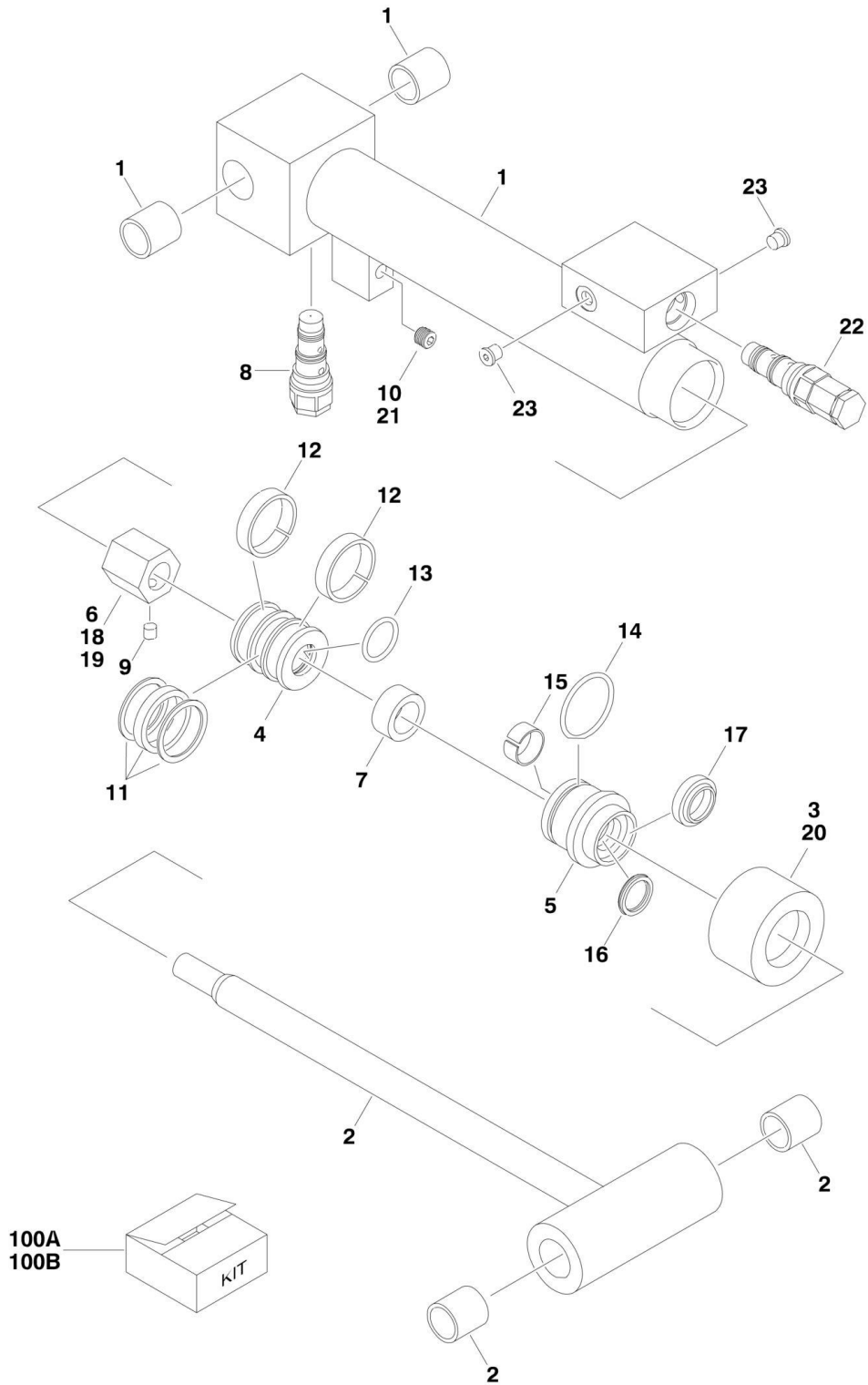
SECTION 5 - CYLINDER

FIGURE 5-2. JIB CYLINDER ASSEMBLY (E/M450AJ & E/M400AJP)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001140280	Ref	JIB CYLINDER ASSEMBLY Note: Original Equipment components may have been replaced with Service Replacement components part. Identify p/n stamped on cylinder before ordering parts.	A
		Ref		
1	70003863	1	Barrel	
2	70003864	1	Rod	
6	7026088	1	Head	
7	70003833	1	Piston	
8	0961951	2	Bushing	
9	0961947	2	Bushing	
11	4640509	1	Cartridge, Counterbalance Valve	
11	2900792	2	Seal Kit - 4640509 Valve	
14	7026090	2	Bushing	
15	7026091	1	Sleeve	
16	7026092	1	Nut	
17	70002223	1	Retainer	
18	See Note	1	Wiper (Note: Use Item 50)	
19	See Note	1	Seal (Note: Use Item 50)	
20	See Note	1	O-Ring (Note: Use Item 50)	
21	See Note	1	Ring, Backup (Note: Use Item 50)	
22	See Note	1	O-Ring (Note: Use Item 50)	
23	See Note	1	O-Ring (Note: Use Item 50)	
24	7026068	1	O-Ring	
25	7024844	2	Plug	
28	See Note	1	O-Ring (Note: Use Item 50)	
29	See Note	1	Seal (Note: Use Item 50)	
31	70002220	1	Ring, Retaining	
32	See Note	1	Ring, Wear (Note: Use Item 50)	
50	70003836	1	Seal Kit - 1001140280 Cylinder (Includes Items 18-23, 28, 29 & 32)	

SECTION 5 - CYLINDER

FIGURE 5-3. PLATFORM LEVEL CYLINDER ASSEMBLY (E/M450A & E/M400A) (Prior to SN 0300165128)



SECTION 5 - CYLINDER

FIGURE 5-3. PLATFORM LEVEL CYLINDER ASSEMBLY (E/M450A & E/M400A) (Prior to SN 0300165128)

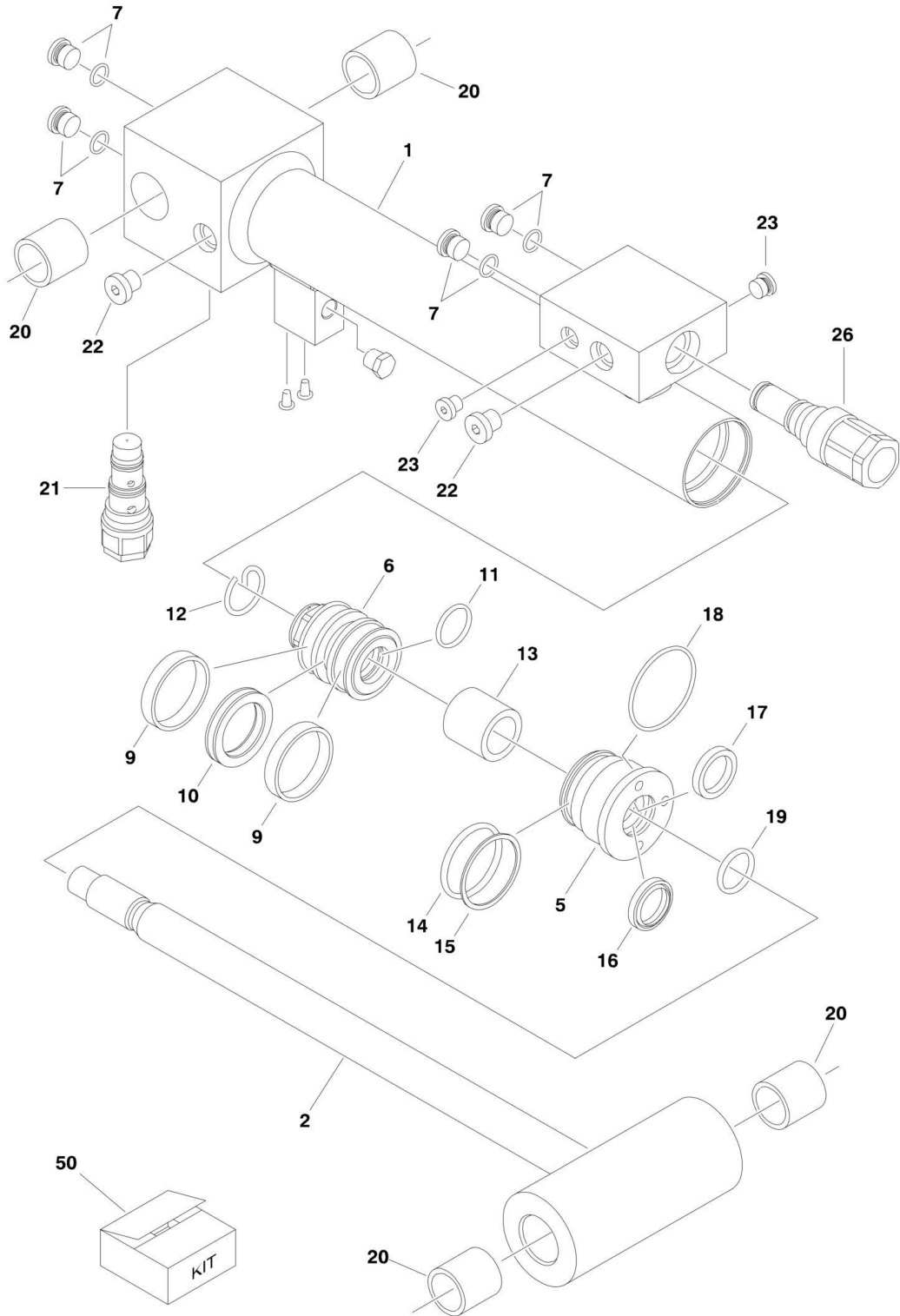
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM LEVEL CYLINDER ASSEMBLY	
	1683285	Ref	Platform Level Cylinder Assembly (E/M450A Models) (Prior to SN 0300056894)	A
	1683933	Ref	Platform Level Cylinder Assembly (E/M450A Models) (SN 0300056894 through 0300189898)	G
	1683933	Ref	Platform Level Cylinder Assembly (E/M400A Models)	G
		Ref	Note: Original Equipment components may have been replaced with Service Replacement components part. Identify p/n stamped on cylinder before ordering parts.	
1		Ref	Barrel Weldment Options:	
1	1682878	1	Barrel Weldment (Prior to SN 0300056894)	
1	1683995	1	Barrel Weldment (E/M400A) (SN 0300056894 through 0300189901)	
1	1683995	1	Barrel Weldment (E/M450A) (SN 0300056894 through 0300189898)	
1		Ref	Bushing Options:	
1	0961608	2	Bushing (Prior to SN 0300056894)	
1	0962356	2	Bushing (E/M400A) (SN 0300056894 through 0300189901)	
1	0962356	2	Bushing (E/M450A) (SN 0300056894 through 0300189898)	
2		Ref	Rod Weldment Options:	
2	1683286	1	Rod Weldment (Prior to SN 0300056894)	
2	1684007	1	Rod Weldment (E/M400A) (SN 0300056894 through 0300189901)	
2	1684007	1	Rod Weldment (E/M450A) (SN 0300056894 through 0300189898)	
2		Ref	Bushing Options:	
2	0961608	2	Bushing (Prior to SN 0300056894)	
2	0962356	2	Bushing (E/M400A) (SN 0300056894 through 0300189901)	
2	0962356	2	Bushing (E/M450A) (SN 0300056894 through 0300189898)	
3	1120110	1	Retainer	
4		Ref	Piston Options:	
4	3480217	1	Piston (Prior to SN 0300056894)	
4	3480261	1	Piston (E/M400A) (SN 0300056894 through 0300189901)	
4	3480261	1	Piston (E/M450A) (SN 0300056894 through 0300189898)	
5		Ref	Head Options:	
5	1682154	1	Head (Prior to SN 0300056894)	
5	1683934	1	Head (E/M400A) (SN 0300056894 through 0300189901)	
5	1683934	1	Head (E/M450A) (SN 0300056894 through 0300189898)	
6	3300308	1	Nut, Hex	
7		Ref	Spacer, Tube Options:	
7	4566023	1	Spacer, Tube (Prior to SN 0300056894)	
7	4568136	1	Spacer, Tube (E/M400A) (SN 0300056894 through 0300189901)	
7	4568136	1	Spacer, Tube (E/M450A) (SN 0300056894 through 0300189898)	
8	4640509	1	Valve, Holding	
8	2900792	1	Seal Kit - 4640509 Valve	
9	3900170	1	Setscrew 3/8in-16NC x 3/8in	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
10	2200222	1	Plug, Pipe	
11	See Note	1	T-Seal (Note: Use Items 100A or 100B)	
12	See Note	AR	Ring, Wear (Note: Use Items 100A or 100B)	
12		Ref	Ring, Wear (Prior to SN 0300056894)	
12		Ref	Ring, Wear (E/M400A) (SN 0300056894 through 0300189901)	
12		Ref	Ring, Wear (E/M450A) (SN 0300056894 through 0300189898)	
13	See Note	1	O-Ring (Note: Use Items 100A or 100B)	
14	See Note	1	O-Ring (Note: Use Items 100A or 100B)	
15	See Note	1	Ring, Wear (Note: Use Items 100A or 100B)	
16	See Note	1	Seal, Rod (Note: Use Items 100A or 100B)	
17	See Note	1	Wiper, Rod (Note: Use Items 100A or 100B)	
18	0100038	AR	Primer, Locking	
19	0100011	AR	Compound, Locking	
20	0100035	AR	Compound, Locking	
21	0100020	AR	Sealant, Pipe	
22	4640932	1	Cartridge, Holding Valve	
22	7011112	1	Seal Kit - 4640932 Valve	
23	2220883	2	Plug, Socket Hex	
100		Ref	Seal Kit Options (Includes Items 11-17):	
100A	2901147	1	Level Cylinder p/n 1683285	
100B	2901902	1	Level Cylinder p/n 1683933	

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FIGURE 5-4. PLATFORM LEVEL CYLINDER ASSEMBLY (E/M450A & E/M400A)



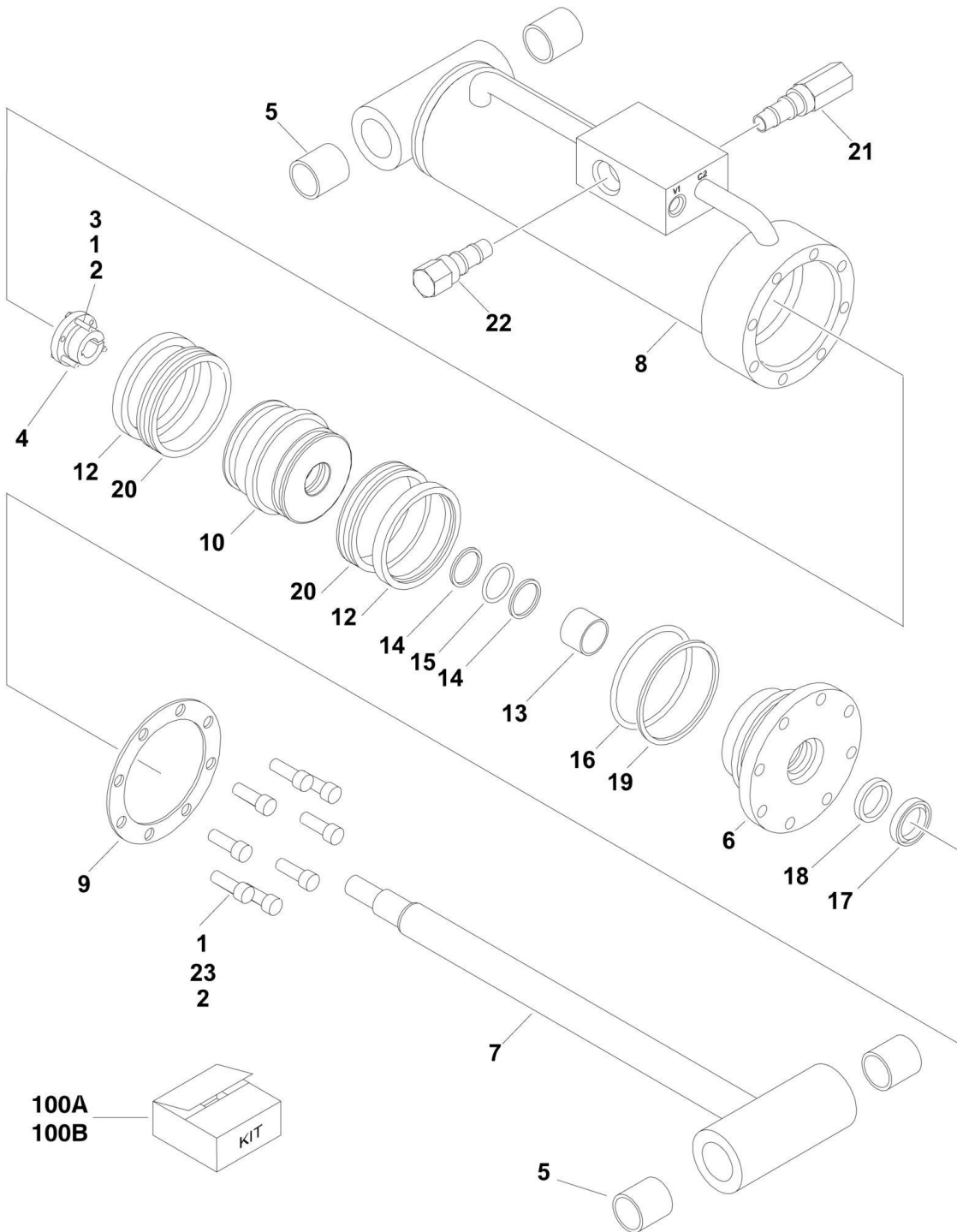
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FIGURE 5-4. PLATFORM LEVEL CYLINDER ASSEMBLY (E/M450A & E/M400A)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001140598	Ref	PLATFORM LEVEL CYLINDER ASSEMBLY Note: Original Equipment components may have been replaced with Service Replacement components part. Identify p/n stamped on cylinder before ordering parts.	A
		Ref		
1	70004146	1	Barrel	
2	70004147	1	Rod	
5	70000739	1	Head	
6	70004141	1	Piston	
7	See Note	4	Plug (Note: Not available for purchase)	
9	See Note	2	Ring, Wear (Note: Use Item 50)	
10	See Note	1	Seal (Note: Use Item 50)	
11	70023094	1	O-Ring (Note: Use Item 50)	
12	70004142	1	Retainer	
13	70004143	1	Spacer	
14	See Note	1	O-Ring (Note: Use Item 50)	
15	See Note	1	Ring, Back-up (Note: Use Item 50)	
16	See Note	1	Wiper (Note: Use Item 50)	
17	See Note	1	Seal (Note: Use Item 50)	
18	See Note	1	O-Ring (Note: Use Item 50)	
19	70000740	1	O-Ring	
20	0962356	4	Bushing	
21	4640509	1	Cartridge, Counterbalance Valve	
21	2900792	1	Seal Kit - 4640509 Valve	
22	70024262	2	Plug	
23	See Note	2	Plug (Note: Not available for purchase)	
26	4640932	1	Cartridge, Counterbalance Valve	
26	7011112	1	Seal Kit - 4640832 Valve	
50	70004131	1	Seal Kit (Includes Items 9-11 & 14-18)	

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FIGURE 5-5. PLATFORM LEVEL CYLINDER ASSEMBLY - JIB (E/M450AJ & E/M400AJP) (Prior to SN 0300163453)



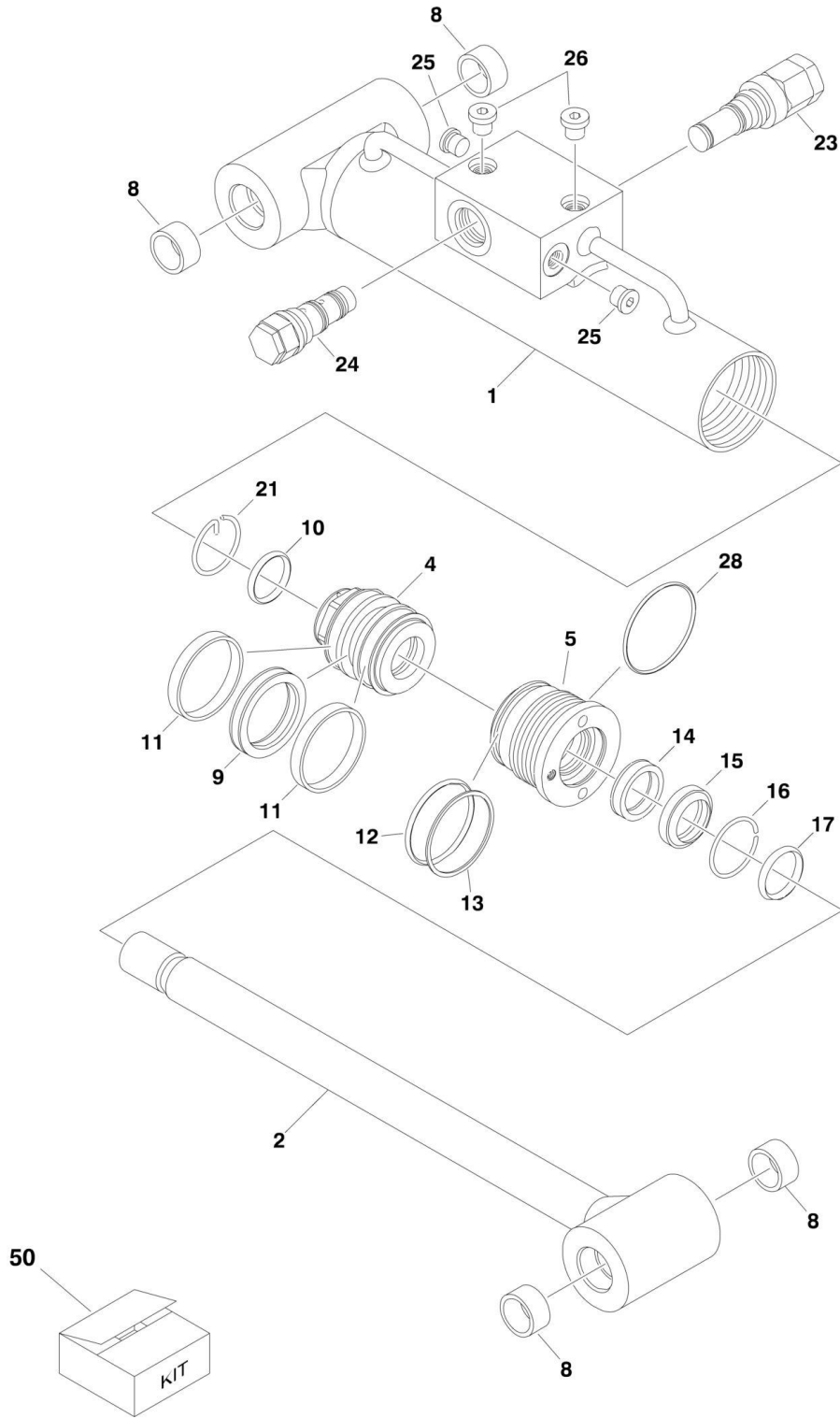
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FIGURE 5-5. PLATFORM LEVEL CYLINDER ASSEMBLY - JIB (E/M450AJ & E/M400AJP) (Prior to SN 0300163453)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM LEVEL CYLINDER ASSEMBLY	
	1683760	Ref	Platform Level Cylinder Assembly (E450AJ & M450AJ) (Prior to SN 0300056571)	B
	1683924	Ref	Platform Level Cylinder Assembly (E450AJ & M450AJ) (SN 0300056571 through 0300189898)	H
	1683924	Ref	Platform Level Cylinder Assembly (E400AJP & M400AJP)	H
		Ref	Note: Original Equipment components may have been replaced with Service Replacement components part. Identify p/n stamped on cylinder before ordering parts.	
1	0100011	AR	Compound, Locking	
2	0100038	AR	Primer, Locking	
3	3931016	3	Bolt, Socket Head #10-24NC x 1in	
4		Ref	Tapered Bushing Options:	
4	0961900	1	1683760 Cylinder	
4	0962185	1	1683924 Cylinder	
5	0961951	4	Bushing, Garmax	
6		Ref	Head Options:	
6	1683052	1	1683760 Cylinder	
6	1683925	1	1683924 Cylinder	
7	1683759	1	Rod	
8	1683761	1	Barrel	
9	3760368	1	Washer, Ring	
10		Ref	Piston Options:	
10	3480247	1	1683760 Cylinder	
10	3480259	1	1683924 Cylinder	
12	See Note	2	Ring, Lock (Note: Use Items 100A or 100B)	
13	See Note	1	Ring, Wear (Note: Use Items 100A or 100B)	
14	See Note	2	Ring, Back-up (Note: Use Items 100A or 100B)	
15	See Note	1	O-Ring (Note: Use Items 100A or 100B)	
16	See Note	1	O-Ring (Note: Use Items 100A or 100B)	
17	See Note	1	Wiper (Note: Use Items 100A or 100B)	
18	See Note	1	Seal (Note: Use Items 100A or 100B)	
19	See Note	1	Ring, Back-up (Note: Use Items 100A or 100B)	
20	See Note	2	Seal (Note: Use Items 100A or 100B)	
21	4640932	1	Cartridge, Valve (Counterbalance Vented)	
21	7011112	1	Seal Kit-4640932 Valve	
22	4641086	1	Cartridge, Valve (Counterbalance Non vented)	
22	2900792	1	Seal Kit-4641086 Valve	
23	3931516	8	Bolt, Socket Head 5/16in-18NC x 1in	
100		Ref	Seal Kit Options (Includes Items 12-20):	
100A	2901776	1	1683760 Cylinder	
100B	2901898	1	1683924 Cylinder	

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FIGURE 5-6. PLATFORM LEVEL CYLINDER ASSEMBLY - JIB (E/M450AJ & E/M400AJP)



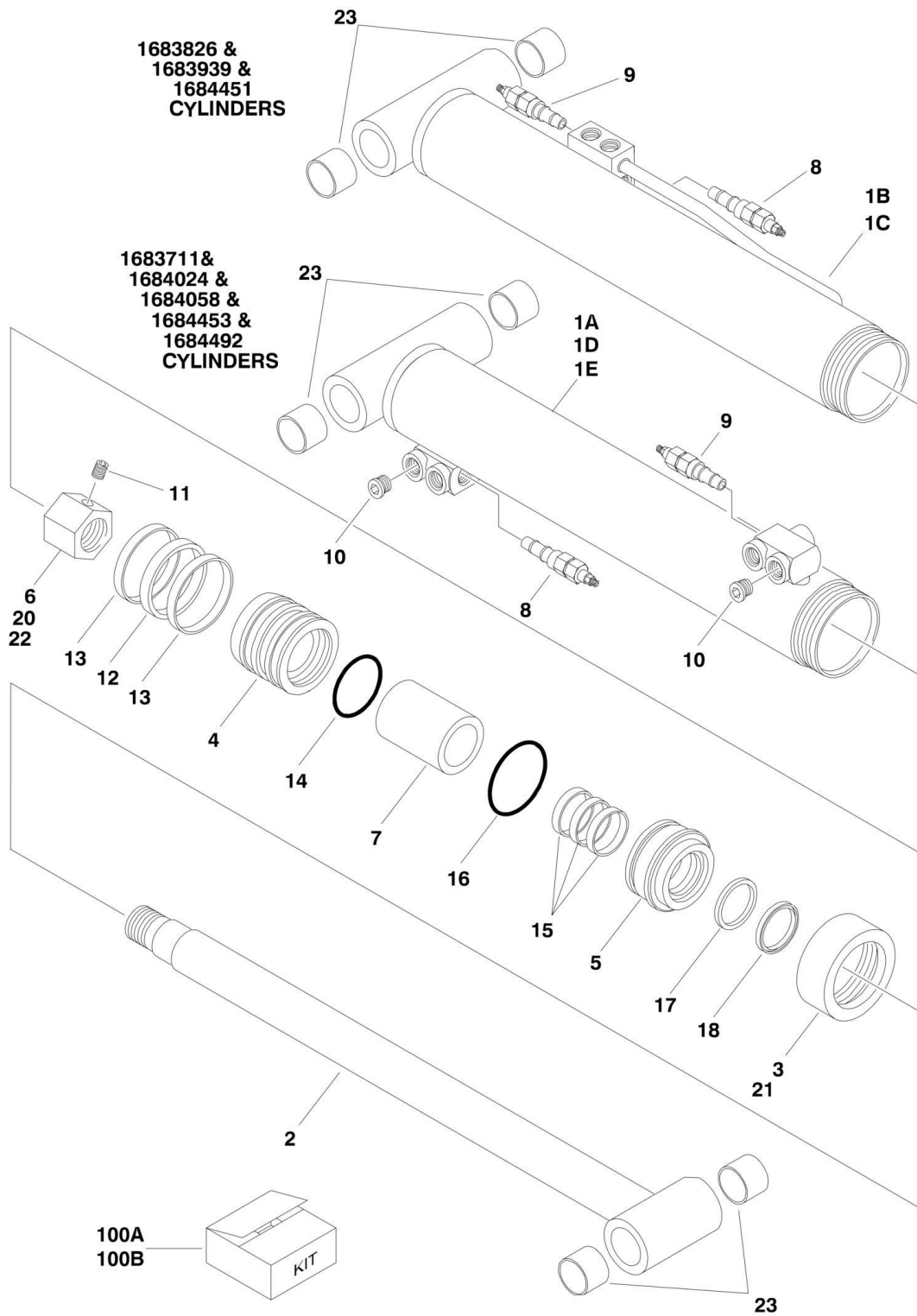
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FIGURE 5-6. PLATFORM LEVEL CYLINDER ASSEMBLY - JIB (E/M450AJ & E/M400AJP)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001140279	Ref	PLATFORM LEVEL CYLINDER ASSEMBLY Note: Original Equipment components may have been replaced with Service Replacement components part. Identify p/n stamped on cylinder before ordering parts.	A
		Ref		
1	70003846	1	Barrel	
2	70003847	1	Rod	
4	70003819	1	Piston	
5	7026082	1	Head	
8	0961951	4	Bushing	
9	See Note	1	Seal (Note: Use Item 50)	
10	See Note	1	O-Ring (Note: Use Item 50)	
11	See Note	2	Ring, Wear (Note: Use Item 50)	
12	See Note	1	O-Ring (Note: Use Item 50)	
13	See Note	1	Ring, Back-up (Note: Use Item 50)	
14	See Note	1	Seal (Note: Use Item 50)	
15	See Note	1	Wiper (Note: Use Item 50)	
16	70002217	1	Ring, Retaining	
17	7026084	1	O-Ring	
21	70002216	1	Retainer	
23	4640932	1	Cartridge, Counterbalance Valve	
23	7011112	1	Seal Kit - 4640932 Valve	
24	4641086	1	Cartridge, Counterbalance Valve	
24	2900792	1	Seal Kit - 4641086 Valve	
25	7024844	2	Plug	
26	See Note	2	Plug (Note: Not available for purchase)	
28	See Note	1	O-Ring (Note: Use Item 50)	
50	70003845	1	Seal Kit (Includes Items 9-15 & 28)	

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FIGURE 5-7. LIFT CYLINDER ASSEMBLY - LOWER



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FIGURE 5-7. LIFT CYLINDER ASSEMBLY - LOWER

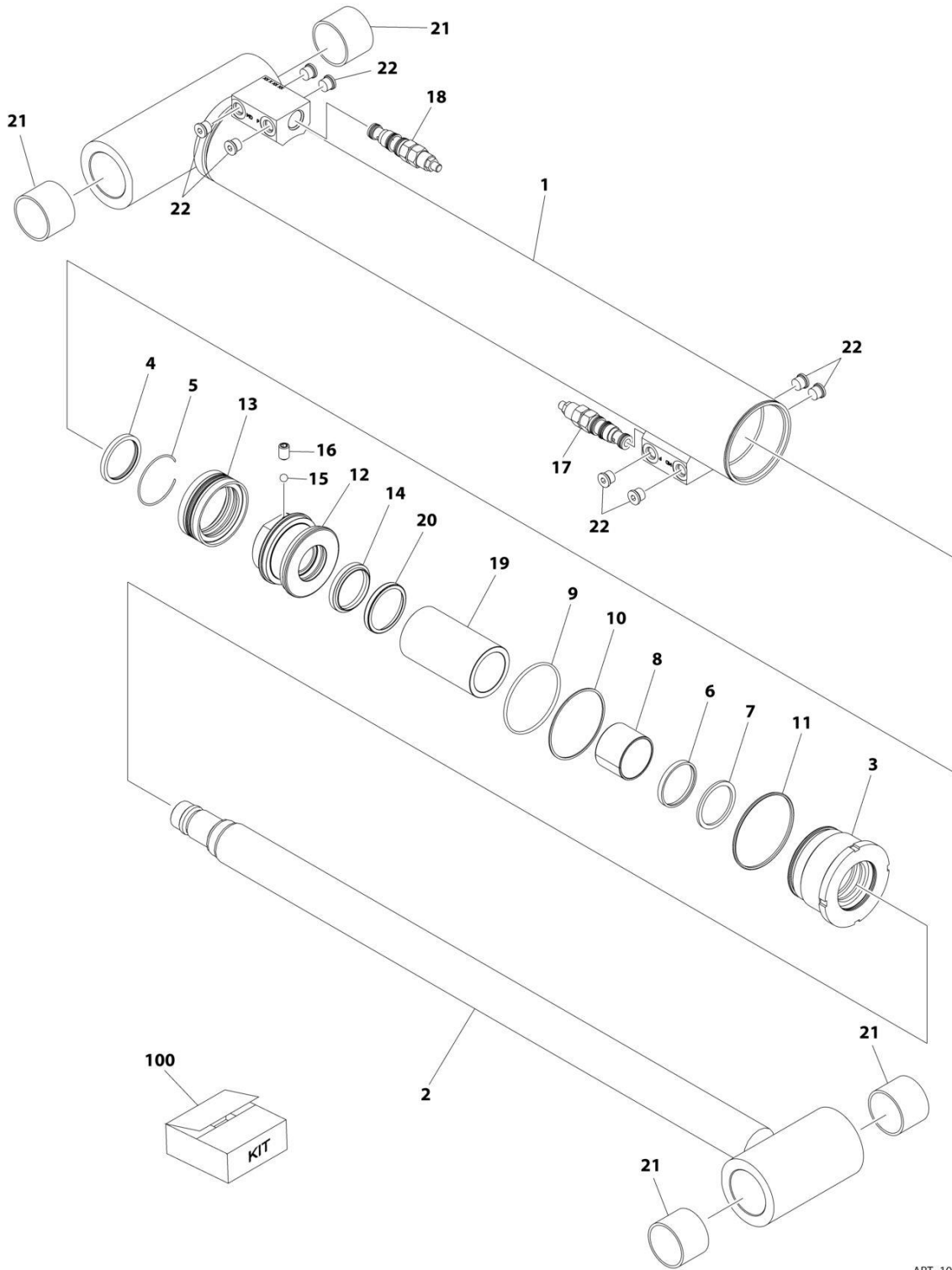
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	LOWER LIFT CYLINDER ASSEMBLIES	
	1683711	Ref	Lower Lift Cylinder Assemblies (E/M450A) (Prior to SN 0300058843)	1-A
	1684058	Ref	Lower Lift Cylinder Assemblies (E/M450A) (SN 0300058843 through 0300091052)	3-B
	1684492	Ref	Lower Lift Cylinder Assemblies (E/M450A) (Original Equipment) (SN 0300091053 through 0300189898)	B
	1683826	Ref	Lower Lift Cylinder Assemblies (E/M450AJ) (Prior to SN 0300056571)	1-A
	1683939	Ref	Lower Lift Cylinder Assemblies (E/M450AJ) (SN 0300056571 through 0300086021)	3-B
	1684451	Ref	Lower Lift Cylinder Assemblies (E/M450AJ) (Original Equipment) (SN 0300086022 through 0300189898)	D
	1684024	Ref	Lower Lift Cylinder Assemblies (E/M400A) (Prior to SN 0300086022)	3-B
	1684453	Ref	Lower Lift Cylinder Assemblies (E/M400A) (Original Equipment) (SN 0300086022 through 0300189901)	C
	1683939	Ref	Lower Lift Cylinder Assemblies (E/M400AJ) (Prior to SN 0300091053)	3-B
	1684451	Ref	Lower Lift Cylinder Assemblies (E/M400AJ) (Original Equipment) (SN 0300091053 through 0300189901)	C
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1		Ref	Barrel Weldment Options:	
1A	1683515	1	1683711 Cylinder (Note: Includes Item #23)	
1B	1683827	1	1683826 Cylinder (Note: Includes Item #23)	
1C	1683940	1	1683939 & 1684451 Cylinders	
1D	1684022	1	1684024 & 1684453 Cylinder	
1E	1684055	1	1684058 & 1684492 Cylinder	
2		Ref	Rod Weldment Options:	
2	1683016	1	1683711 & 1683826 Cylinders (Note: Includes Item #23)	
2	1683941	1	1683939, 1683941, 1684451 & 1684492 Cylinders	
2	1684023	1	1684024 & 1684453 Cylinder	
3		Ref	Retainer Options:	
3	1120094	1	1683711, 1683826, 1683939, 1684024, 1684451 & 1684058 Cylinders	
3	1120305	1	1684024 & 1684453 Cylinder	
3	1120407	1	1684492 Cylinder	
4		Ref	Piston Options:	
4	3480241	1	1683711, 1683826, 1683939, 1684024, 1684492, 1684451 & 1684058 Cylinders	
4	3480242	1	1684024 & 1684453 Cylinder	
5		Ref	Head Options:	
5	1683710	1	1683711, 1683826, 1683939, 1684024, 1684492, 1684451 & 1684058 Cylinders	
5	1683712	1	1684024 & 1684453 Cylinder	
6	3300281	1	Nut, Hex	
7		Ref	Spacer Options:	
7	4566432	1	1683711, 1683826, 1683939, 1684024, 1684492, 1684451 & 1684058 Cylinders	
7	4565992	1	1684024 & 1684453 Cylinder (Spacer)	
7	4740207	1	1684024 & 1684453 Cylinder (Washer)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
8		Ref	Cartridge, Holding Valve Options:	
8	4640816	1	Cartridge, Holding Valve For 1683711, 1683826, 1683939, 1684024 & 1684058 Cylinder	
8	2900770	1	Seal Kit - 4640816 Valve	
8	4641386	1	Cartridge, Holding Valve For 1684451, 1684453 & 1684492 Cylinder	
8	7011376	1	Seal Kit - 4641386 Valve	
9	4640634	1	Cartridge, Holding Valve	
9	2900770	1	Seal Kit - 4640634 Valve	
10		Ref	Plug Options:	
10	2220885	2	1683711, 1684024, 1684058, 1684453 & 1684492 Cylinders	
10	Not Required	0	1683826, 1683939 & 1684451 Cylinders	
11	3900170	1	Setscrew	
12	See Note	1	Seal, Piston (Note: Use Items 100A or 100B)	
13	See Note	2	Ring, Wear (Note: Use Items 100A or 100B)	
14	See Note	1	O-Ring (Note: Use Items 100A or 100B)	
15	See Note	3	Ring, Wear (Note: Use Items 100A or 100B)	
16	See Note	1	O-Ring (Note: Use Items 100A or 100B)	
16	See Note	1	Ring, Back-up (1684024 Cylinder Only) (Note: Use Item 100B)	
17	See Note	1	Seal, Rod (Note: Use Items 100A or 100B)	
18	See Note	1	Wiper, Rod (Note: Use Items 100A or 100B)	
20	0100011	AR	Compound, Locking	
21	0100035	AR	Compound, Locking	
22	0100038	AR	Primer, Locking	
23		Ref	Bushing Options:	
23	0961726	4	1683711 & 1683826 Cylinders	
23	0961950	4	1683939, 1684024, 1684058, 1684551, 1684453 & 1684492 Cylinders	
100		Ref	Seal Kit Options (Includes Items 12-18):	
100A	2901806	1	1683711, 1683826, 1683939, 1684492, 1684451 & 1684058 Cylinders	
100B	2901805	1	1684024 & 1684453 Cylinders	

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FIGURE 5-8. LIFT CYLINDER ASSEMBLY - LOWER - E/M400A (SERVICE REPLACEMENT)



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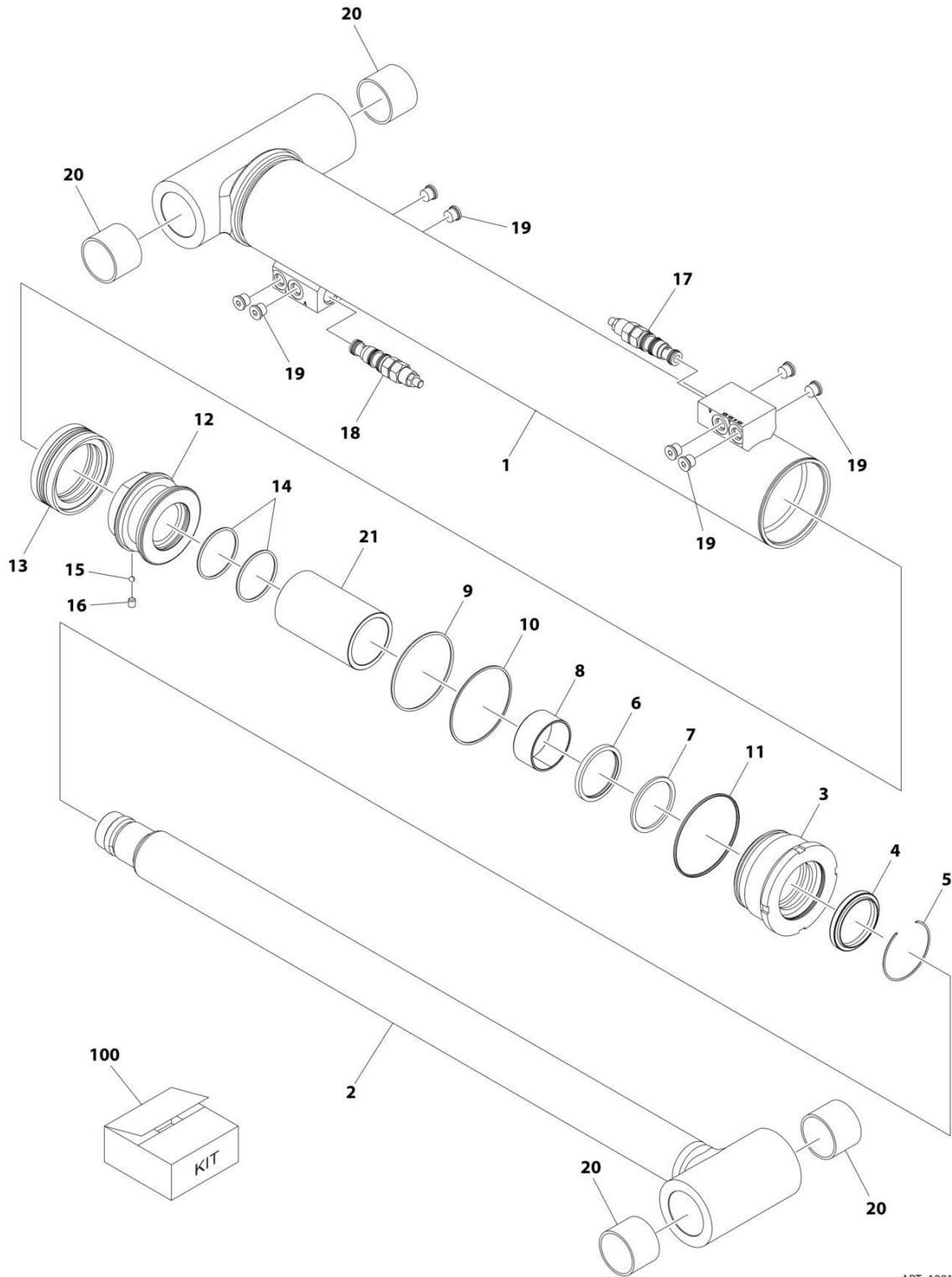
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FIGURE 5-8. LIFT CYLINDER ASSEMBLY - LOWER - EM400A (SERVICE REPLACEMENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228037	Ref	LIFT CYLINDER ASSEMBLY - LOWER	A
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	See Note	NSS	Barrel (Note: Not Available for Purchase)	
2	70006593	1	Rod	
3	70006592	1	Head	
4	See Note	NSS	Wiper (Note: Use Item 100)	
5	70002412	1	Retainer	
6	See Note	NSS	Seal, Rod (Note: Use Item 100)	
7	See Note	NSS	Ring, Back-up (Note: Use Item 100)	
8	70006591	1	Bearing	
9	See Note	NSS	O-Ring (Note: Use Item 100)	
10	See Note	NSS	Ring, Back-up (Note: Use Item 100)	
11	70050801	1	O-Ring	
12	70006590	1	Piston	
13	See Note	NSS	Seal (Note: Use Item 100)	
14	See Note	NSS	O-Ring (Note: Use Item 100)	
15	70022564	1	Ball, Steel	
16	70006601	1	Setscrew	
17	4640634	1	Cartridge, Holding Valve	
17	2900770	1	Seal Kit - 4640634 Valve	
18	4641386	1	Cartridge, Holding Valve	
18	7011376	1	Seal Kit - 4641386 Valve	
19	70006589	1	Spacer	
20	70006588	1	O-Ring	
21	0961950	4	Bushing	
22	2220883	8	Plug, O-Ring	
100	70006587	1	Seal Kit (Includes Items 4, 6, 7, 9, 10, 13 & 14)	

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FIGURE 5-9. LIFT CYLINDER ASSEMBLY - LOWER - E/M450A (SERVICE REPLACEMENT)



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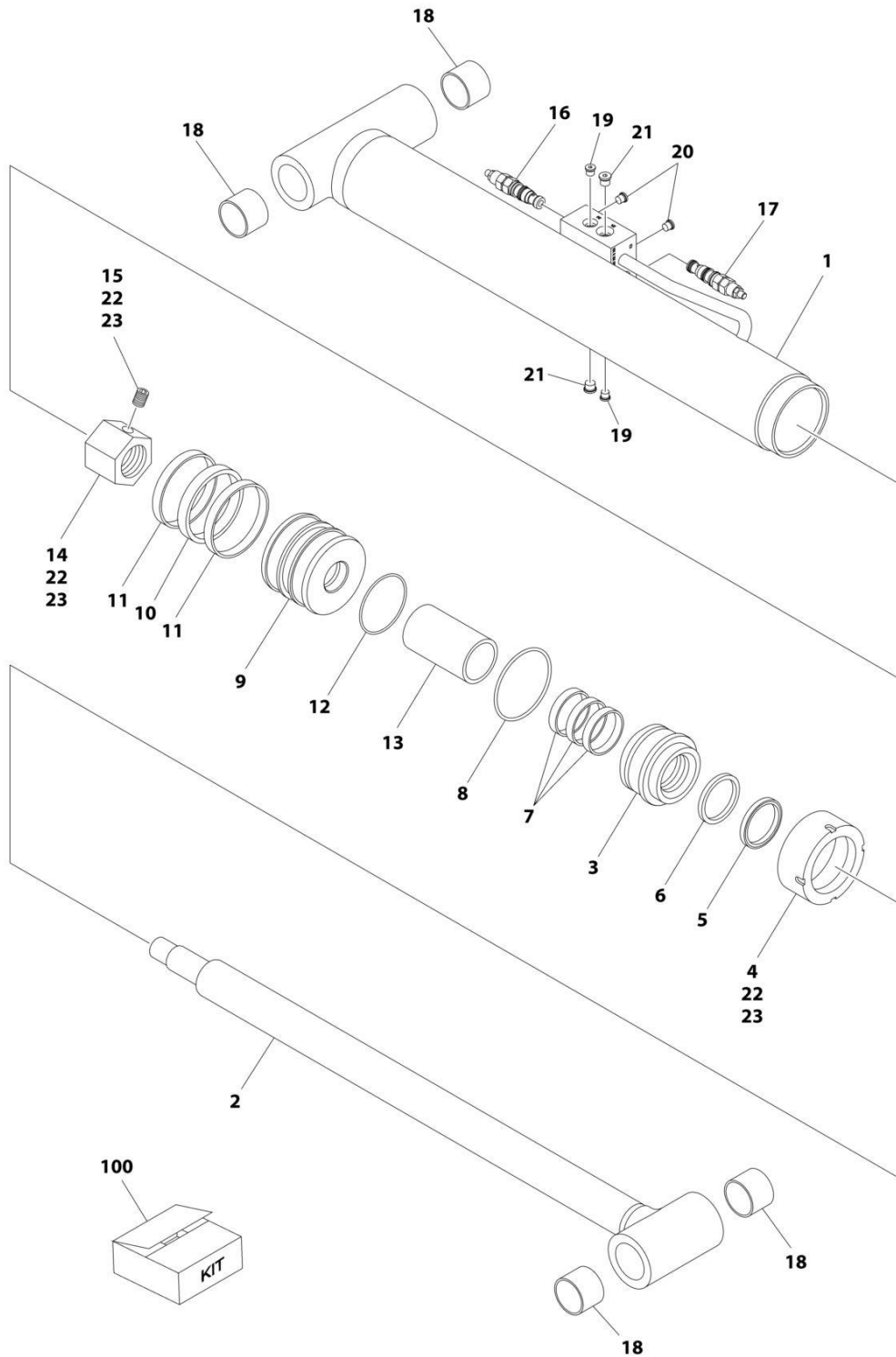
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FIGURE 5-9. LIFT CYLINDER ASSEMBLY - LOWER - E/M450A (SERVICE REPLACEMENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228039	Ref	LIFT CYLINDER ASSEMBLY - LOWER	B
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	See Note	NSS	Barrel (Note: Not Available for Purchase)	
2	70006602	1	Rod	
3	70006603	1	Head	
4	See Note	NSS	Wiper (Note: Use Item 100)	
5	70027244	1	Retainer	
6	See Note	NSS	Seal, Rod (Note: Use Item 100)	
7	See Note	NSS	Ring, Back-up (Note: Use Item 100)	
8	70004637	1	Bearing	
9	See Note	NSS	O-Ring (Note: Use Item 100)	
10	See Note	NSS	Ring, Back-up (Note: Use Item 100)	
11	See Note	NSS	O-Ring	
12	70006607	1	Piston	
13	See Note	NSS	Seal (Note: Use Item 100)	
14	See Note	NSS	O-Ring (Note: Use Item 100)	
15	70022564	1	Ball, Steel	
16	70023369	1	Setscrew	
17	4640634	1	Cartridge, Holding Valve	
17	2900770	1	Seal Kit - 4640634 Valve	
18	4641386	1	Cartridge, Holding Valve	
18	7011376	1	Seal Kit - 4641386 Valve	
19	2220883	8	Plug, O-Ring	
20	0961950	4	Bushing	
21	70006608	1	Spacer	
100	70006609	1	Seal Kit (Includes Items 4, 6, 7, 9-11, 13 & 14)	

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FIGURE 5-10. LIFT CYLINDER ASSEMBLY - LOWER - E400AJP/M400AJP & E450AJ/M450AJ (SERVICE REPLACEMENT)



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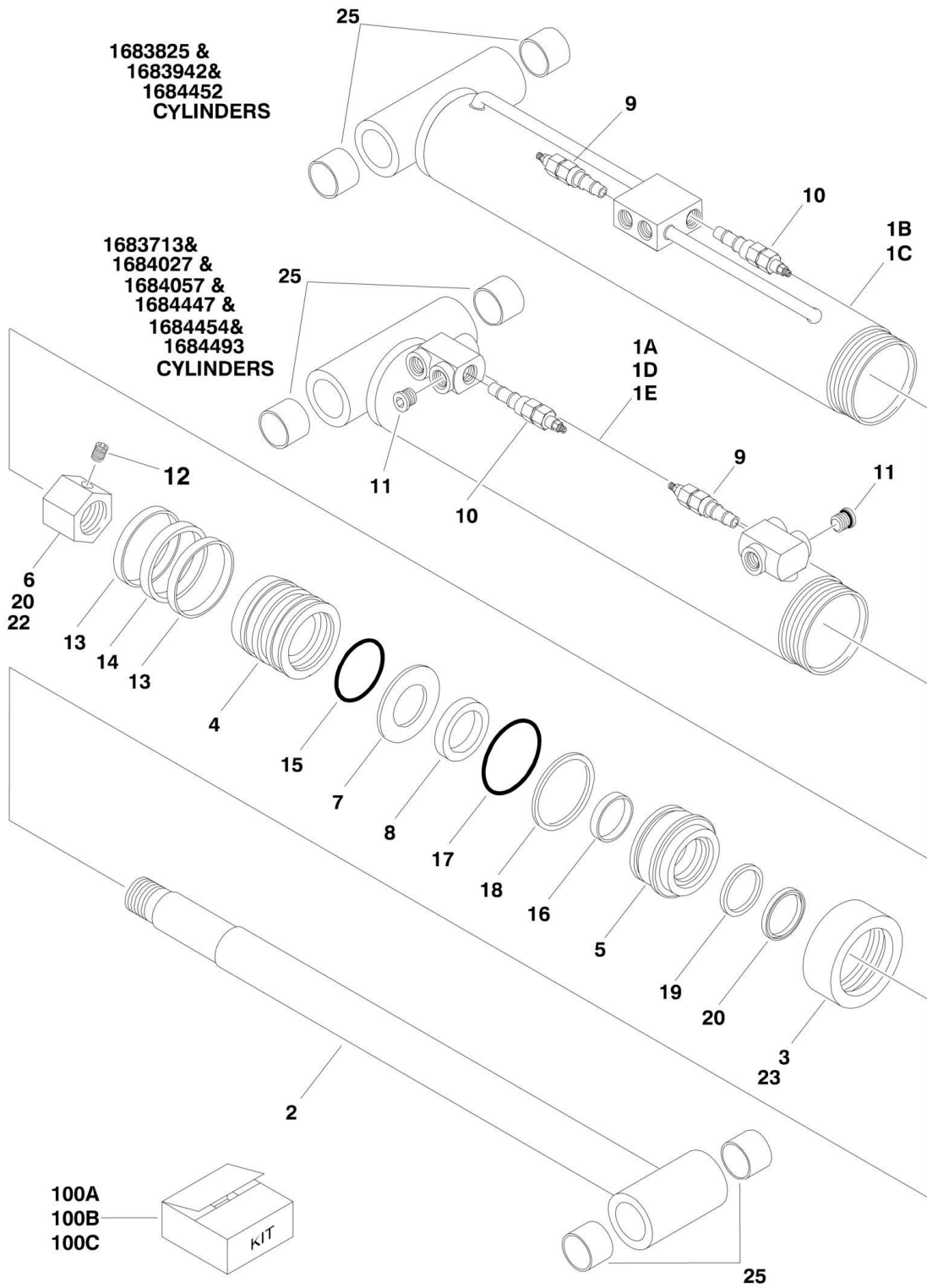
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**FIGURE 5-10. LIFT CYLINDER ASSEMBLY - LOWER - E400AJP/M400AJP & E450AJ/M450AJ
(SERVICE REPLACEMENT)**

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228035	Ref	LIFT CYLINDER ASSEMBLY - LOWER	B
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	See Note	NSS	Barrel Weldment (Note: Not Available for Purchase)	
2	70006535	1	Rod Weldment	
3	70006533	1	Head	
4	70006533	1	Retainer	
5	See Note	NSS	Wiper (Note: Use Item 100)	
6	See Note	NSS	Seal, Rod (Note: Use Item 100)	
7	See Note	NSS	Ring, Wear (Note: Use Item 100)	
8	See Note	NSS	O-Ring (Note: Use Item 100)	
9	70006532	1	Piston	
10	See Note	NSS	Seal (Note: Use Item 100)	
11	See Note	NSS	Ring, Wear (Note: Use Item 100)	
12	See Note	NSS	O-Ring (Note: Use Item 100)	
13	70006531	1	Spacer	
14	3300281	1	Nut	
15	3900170	1	Setscrew	
16	4640634	1	Cartridge, Holding Valve	
16	2900770	1	Seal Kit - 4640634 Valve	
17	4641386	1	Cartridge, Holding Valve	
17	7011376	1	Seal Kit - 4641386 Valve	
18	0961950	4	Bushing	
19	2220883	2	Plug, O-Ring	
20	2220883	2	Plug, O-Ring	
21	2220885	2	Plug, O-Ring	
22	0100011	AR	Compound, Locking	
23	0100038	AR	Primer, Locking	
100	2901806	1	Seal Kit (Includes Items 5-8 & 10-12)	

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FIGURE 5-11. LIFT CYLINDER ASSEMBLY - MID



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FIGURE 5-11. LIFT CYLINDER ASSEMBLY - MID

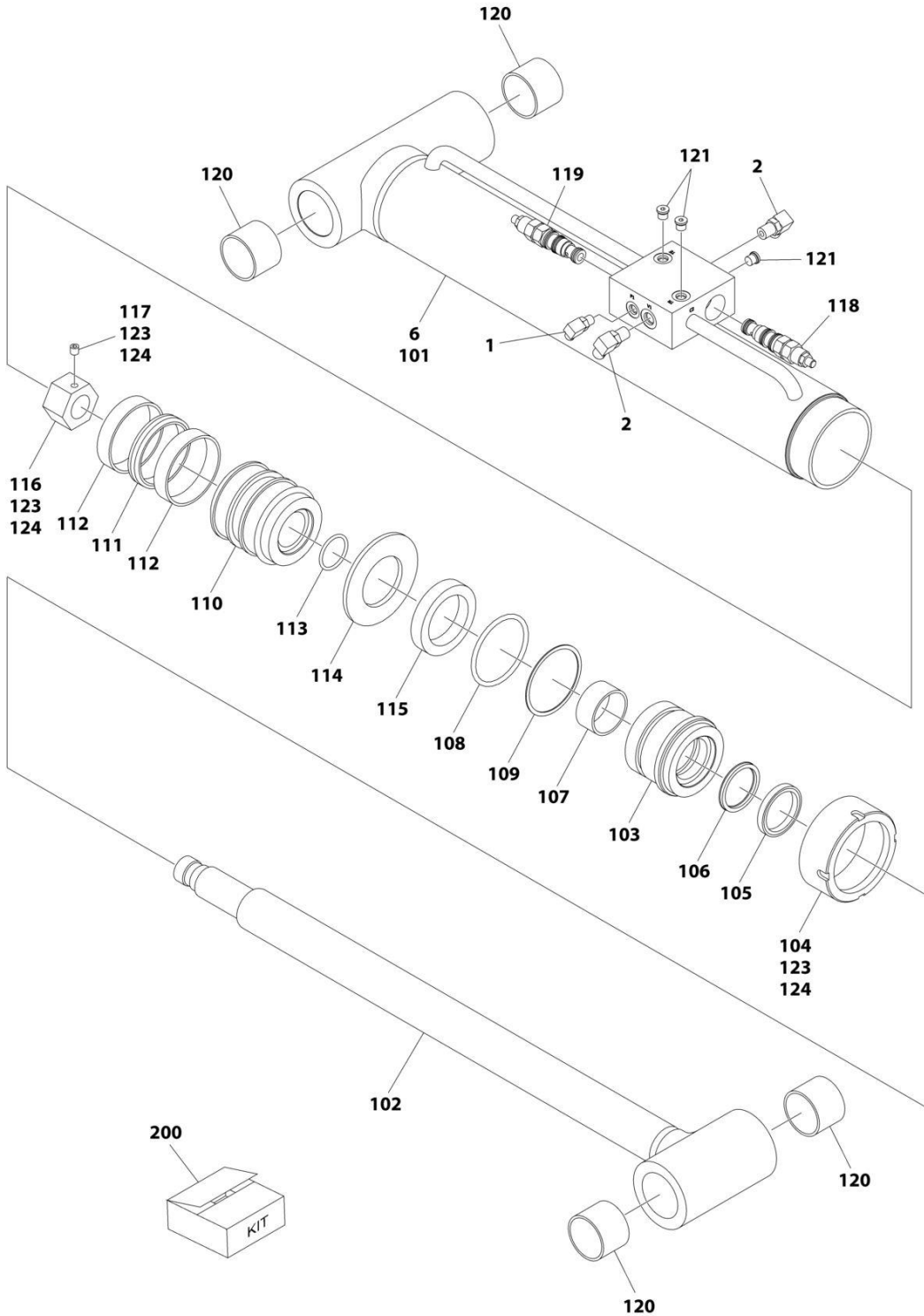
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	MID LIFT CYLINDER ASSEMBLY	
	1683713	Ref	Mid Lift Cylinder Assembly (E/M450A) (Prior to SN 0300058843)	1A
	1684057	Ref	Mid Lift Cylinder Assembly (E/M450A) (SN 0300058843 through 0300091052)	3-B
	1684493	Ref	Mid Lift Cylinder Assembly (E/M450A) (Original Equipment) (SN 0300091053 through 0300189898)	B
	1683825	Ref	Mid Lift Cylinder Assembly (E/M450AJ) (Prior to SN 0300056571)	1-A
	1683942	Ref	Mid Lift Cylinder Assembly (E/M450AJ) (SN 0300056571 through 0300086021)	3-C
	1684452	Ref	Mid Lift Cylinder Assembly (E/M450AJ) (Original Equipment) (SN 0300086022 through 0300189898)	C
	1684027	Ref	Mid Lift Cylinder Assembly (E/M400A) (Original Equipment) (Prior to SN 0300080496)	1-A
	1684447	Ref	Mid Lift Cylinder Assembly (E/M400A) (SN 0300080496 through 0300086021)	B
	1684454	Ref	Mid Lift Cylinder Assembly (E/M400A) (Original Equipment) (SN 0300086022 through 0300189901)	A
	1683942	Ref	Mid Lift Cylinder Assembly (E/M400AJ) (Prior to SN 0300091053)	3-C
	1684452	Ref	Mid Lift Cylinder Assembly (E/M400AJ) (Original Equipment) (SN 0300091053 through 0300189901)	C
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1		Ref	Barrel Weldment Options:	
1A	1683516	1	1683713 Cylinder (Note: Includes Item #25)	
1B	1683829	1	1683825 Cylinder (Note: Includes Item #25)	
1C	1683943	1	1683942 & 1684452 Cylinders	
1D	1684025	1	1684027 & 1684447 & 1684454 Cylinders	
1E	1684056	1	1684057 & 1684493 Cylinder	
2		Ref	Rod Weldment Options:	
2	1683021	1	1683713 & 1683825 Cylinders (Note: Includes Item #25)	
2	1683944	1	1683942, 1684057, 1684452 & 1684493 Cylinders	
2	1684026	1	1684027 & 1684447 & 1684454 Cylinders	
3		Ref	Retainer Options:	
3	1120305	1	1683713, 1684057, 1683825, 1683942 & 1684452 Cylinders	
3	1120108	1	1684027, 1684447 & 1684454 Cylinder	
3	1120375	1	1684493 Cylinder	
4		Ref	Piston Options:	
4	3480242	1	1683713, 1684057, 1683825, 1683942, 1684452 & 1684493 Cylinders	
4	3480115	1	1684027 Cylinder (Not Shown) (Use p/n 3480240) Note: When replacing the piston you must order seal kit p/n 2902419 separate from piston.	
4	3480240	1	1684447 & 1684454 Cylinder (Not Shown)	
5		Ref	Head Options:	
5	1683712	1	1683713, 1684057, 1683825, 1683942, 1684452 & 1684493 Cylinders	
5	1681344	1	1684027, 1684447 & 1684454 Cylinder	
6		Ref	Nut, Hex Options:	
6	3300281	1	1683713, 1684057, 1683825, 1683942, 1684452 & 1684493	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
6	3300279	1	Cylinders 1684027, 1684447 & 1684454 Cylinder	
7		Ref	Washer Options:	
7	4740207	1	1683713, 1684057, 1683825, 1683942, 1684452 & 1684493 Cylinders	
7	4740394	1	1684027, 1684447 & 1684454 Cylinder	
8		Ref	Spacer Options:	
8	4566435	1	1683713, 1684057, 1683825, 1683942, 1684452 & 1684493 Cylinders	
8	4565994	1	1684027, 1684447 & 1684454 Cylinders	
8	3951402	1	Setscrew 1/4in-20NC x 1/4in (1684027, 1684447 & 1684454 Cylinder Only)	
9	4640634	1	Cartridge, Holding Valve	
9	2900770	1	Seal Kit - 4640634 Valve	
10		Ref	Cartridge, Holding Valve Options:	
10	4640816	1	Cartridge, Holding Valve For 1683713, 1683825, 1683942, 1684027, 1684056 & 1684447 Cylinders	
10	2900770	1	Seal Kit - 4640816 Valve	
10	4641386	1	Cartridge, Holding Valve For 1684452, 1684454 & 1684493 Cylinder	
10	7011376	1	Seal Kit - 464136 Valve	
11		Ref	Plug Options:	
11	2220885	2	1683713, 1684027, 1684057, 1684447, 1684454 & 1684493 Cylinders	
11	Not Required	0	1683825, 1683942 & 1684452 Cylinders	
12	3900170	2	Setscrew	
13	See Note		Ring (Note: Use Items 100A, 100B or 100C)	
14	See Note	AR	Seal, Piston (Note: Use Items 100A, 100B or 100C)	
15	See Note	1	O-Ring (Note: Use Items 100A, 100B or 100C)	
16	See Note	1	Ring, Wear (Note: Use Items 100A, 100B or 100C)	
17	See Note	1	O-Ring (Note: Use Items 100A, 100B or 100C)	
18	See Note	1	Ring, Back-up (All except 1684027, 1684447 & 1684454 Cylinders) (Note: Use Items 100B or 100C)	
19	See Note	1	Seal, Rod (Note: Use Items 100A, 100B or 100C)	
20	See Note	1	Wiper, Rod (Note: Use Items 100A, 100B or 100C)	
21	0100011	AR	Compound, Locking	
22	0100035	AR	Compound, Locking	
23	0100038	AR	Primer, Locking	
25		Ref	Bushing Options:	
25	0961726	4	1683713 & 1683825 Cylinders	
25	0961950	4	1683942, 1684027, 1684057, 1684447, 1684452, 1684454 & 1684493 Cylinders	
100		Ref	Seal Kit Options (Includes Items 13-20):	
100A	2901805	1	All Cylinders except 1684027, 16844447 & 1684454	
100B	2900371	1	1684027 Cylinder (Use p/n 2902419) Note: If piston has not been replaced before, order piston p/n 3480240 also. Old style piston and seal kit must be replaced.	
100C	2902419	1	1684447 & 1684454 Cylinders	

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FIGURE 5-12. LIFT CYLINDER ASSEMBLY - MID - E/M450A (SERVICE REPLACEMENT)



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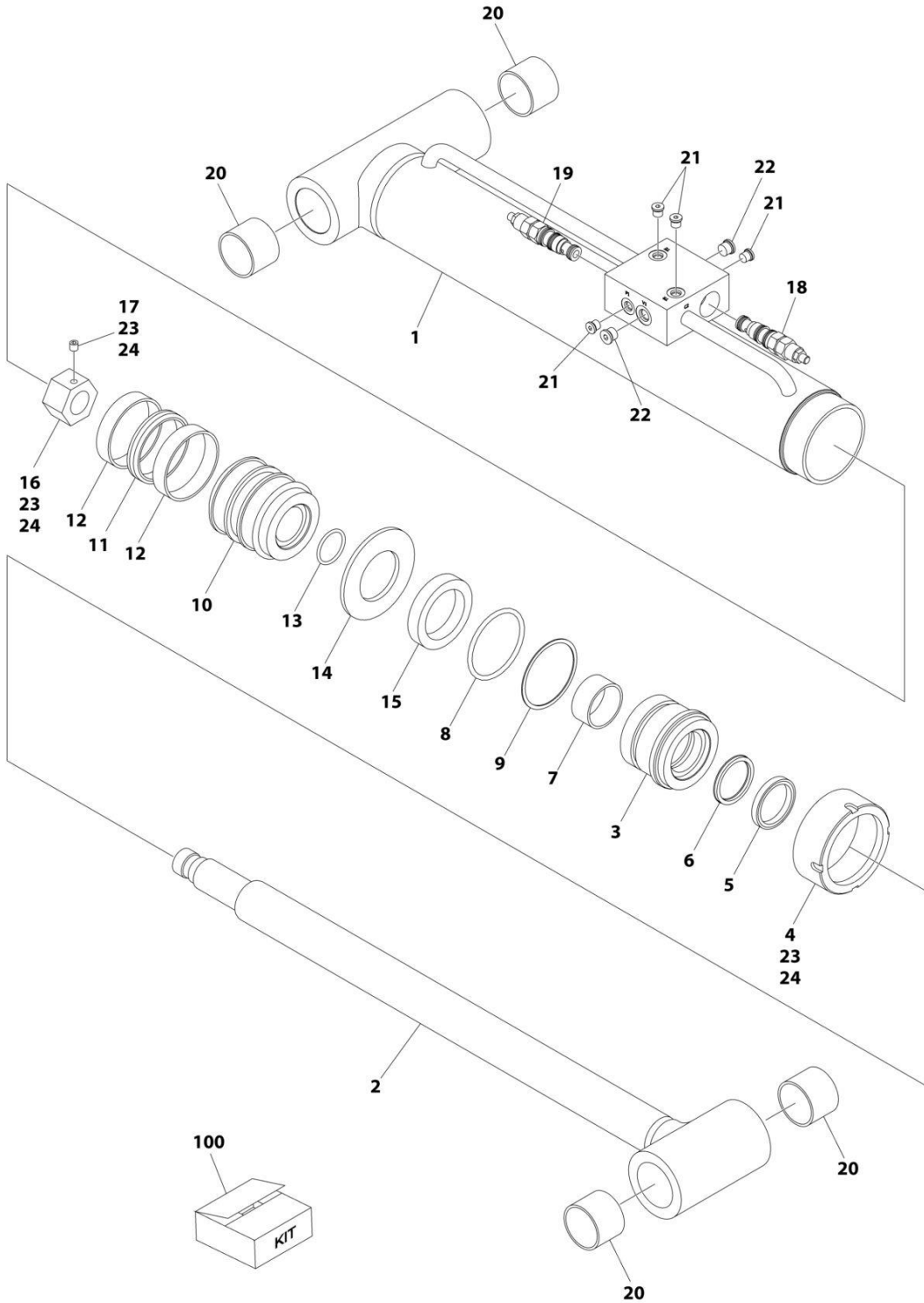
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FIGURE 5-12. LIFT CYLINDER ASSEMBLY - MID - E/M450A (SERVICE REPLACEMENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001237443	Ref	LIFT CYLINDER ASSEMBLY - MID	A
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	2220446	1	Fitting, 90 JIC/ORB	
2	2220473	2	Fitting, 90 JIC/ORB	
	See Note	Ref	Note: See Hydraulic Diagram p/n 1001178385 for item 3 hose replaces hose p/n 2751126 & item 4 hose replaces p/n 2751127.	
3	2751009	1	Hose (Not Shown)	
4	2753301	1	Hose (Not Shown)	
6	1001228036	1	Lift Cylinder Assembly - Mid (See Items 101-124 for Breakdown)	
101	See Note	NSS	Barrel Weldment (Note: Not Available for Purchase)	
102	70006543	1	Rod Weldment	
103	70006542	1	Head	
104	70006533	1	Retainer	
105	See Note	NSS	Wiper (Note: Use Item 200)	
106	See Note	NSS	Seal, Rod (Note: Use Item 200)	
107	See Note	NSS	Ring, Wear (Note: Use Item 200)	
108	See Note	NSS	O-Ring (Note: Use Item 200)	
109	See Note	NSS	Ring, Back-up (Note: Use Item 200)	
110	70006532	1	Piston	
111	See Note	NSS	Seal (Note: Use Item 200)	
112	See Note	NSS	Ring, Wear (Note: Use Item 200)	
113	See Note	NSS	O-Ring (Note: Use Item 200)	
114	4740207	1	Washer	
115	70006539	1	Spacer	
116	3300281	1	Nut	
117	3900170	1	Setscrew	
118	4640634	1	Cartridge, Holding Valve	
118	2900770	1	Seal Kit - 4640634 Valve	
119	4641386	1	Cartridge, Holding Valve	
119	7011376	1	Seal Kit - 4641386 Valve	
120	0961950	4	Bushing	
121	2220883	3	Plug, O-Ring	
123	0100011	AR	Compound, Locking	
124	0100038	AR	Primer, Locking	
200	2901806	1	Seal Kit (Includes Items 105-109 & 111-113)	

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FIGURE 5-13. MID LIFT CYLINDER ASSEMBLY (E/M450AJ & E/M400AJP (SERVICE REPLACEMENT))



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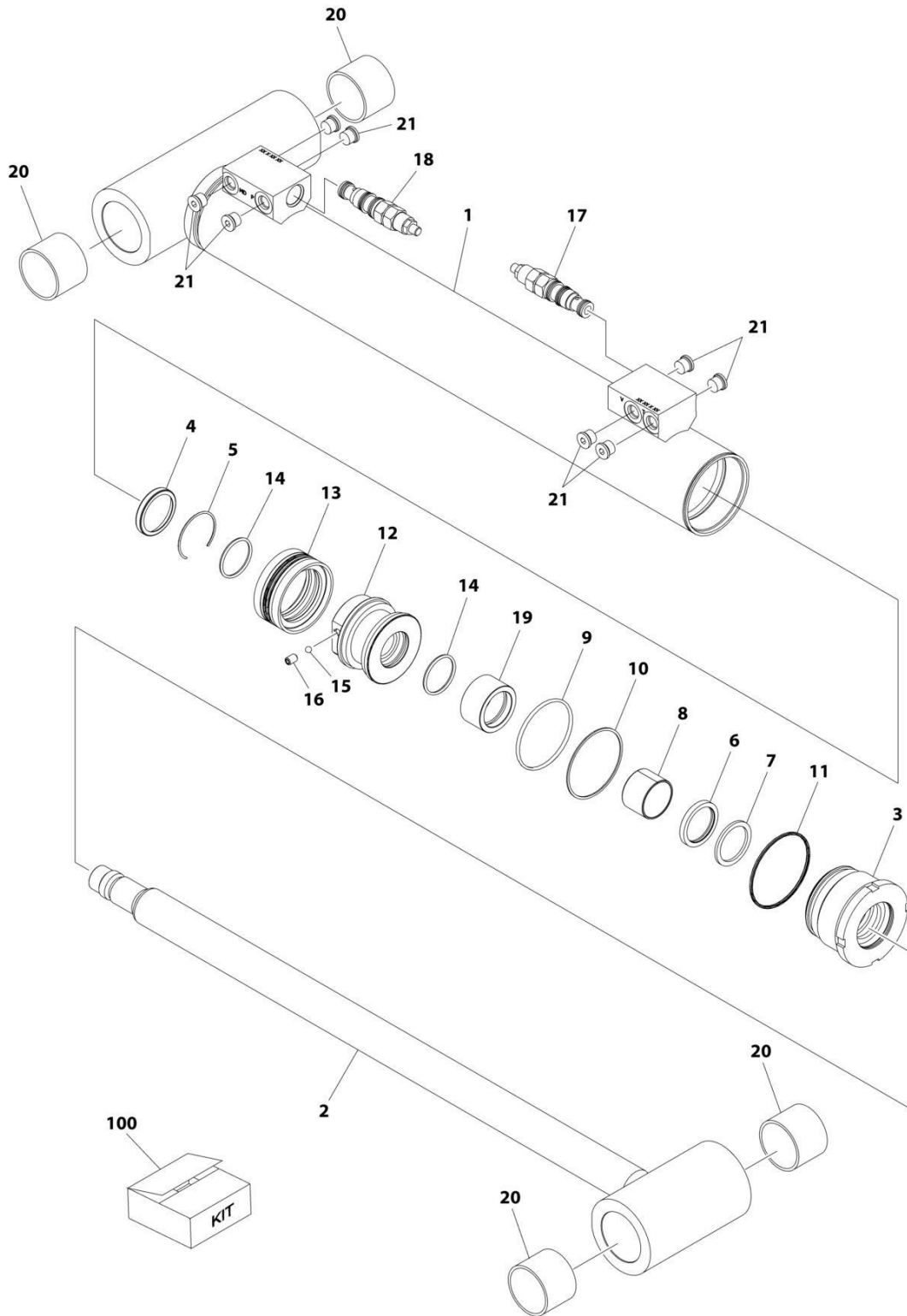
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FIGURE 5-13. MID LIFT CYLINDER ASSEMBLY (E/M450AJ & E/M400AJP (SERVICE REPLACEMENT))

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228036	Ref	LIFT CYLINDER ASSEMBLY - MID	E
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	See Note	NSS	Barrel Weldment (Note: Not Available for Purchase)	
2	70006543	1	Rod Weldment	
3	70006542	1	Head	
4	70006533	1	Retainer	
5	See Note	NSS	Wiper (Note: Use Item 100)	
6	See Note	NSS	Seal, Rod (Note: Use Item 100)	
7	See Note	NSS	Ring, Wear (Note: Use Item 100)	
8	See Note	NSS	O-Ring (Note: Use Item 100)	
9	See Note	NSS	Ring, Back-up (Note: Use Item 100)	
10	70006532	1	Piston	
11	See Note	NSS	Seal (Note: Use Item 100)	
12	See Note	NSS	Ring, Wear (Note: Use Item 100)	
13	See Note	NSS	O-Ring (Note: Use Item 100)	
14	4740207	1	Washer	
15	70006539	1	Spacer	
16	3300281	1	Nut	
17	3900170	1	Setscrew	
18	4640634	1	Cartridge, Holding Valve	
18	2900770	1	Seal Kit - 4640634 Valve	
19	4641386	1	Cartridge, Holding Valve	
19	7011376	1	Seal Kit - 4641386 Valve	
20	0961950	4	Bushing	
21	2220883	4	Plug, O-Ring	
22	2220885	2	Plug, O-Ring	
23	0100011	AR	Compound, Locking	
24	0100038	AR	Primer, Locking	
100	2901806	1	Seal Kit (Includes Items 5-9 & 11-13)	

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FIGURE 5-14. MID LIFT CYLINDER ASSEMBLY (E/M400A) (SERVICE REPLACEMENT)



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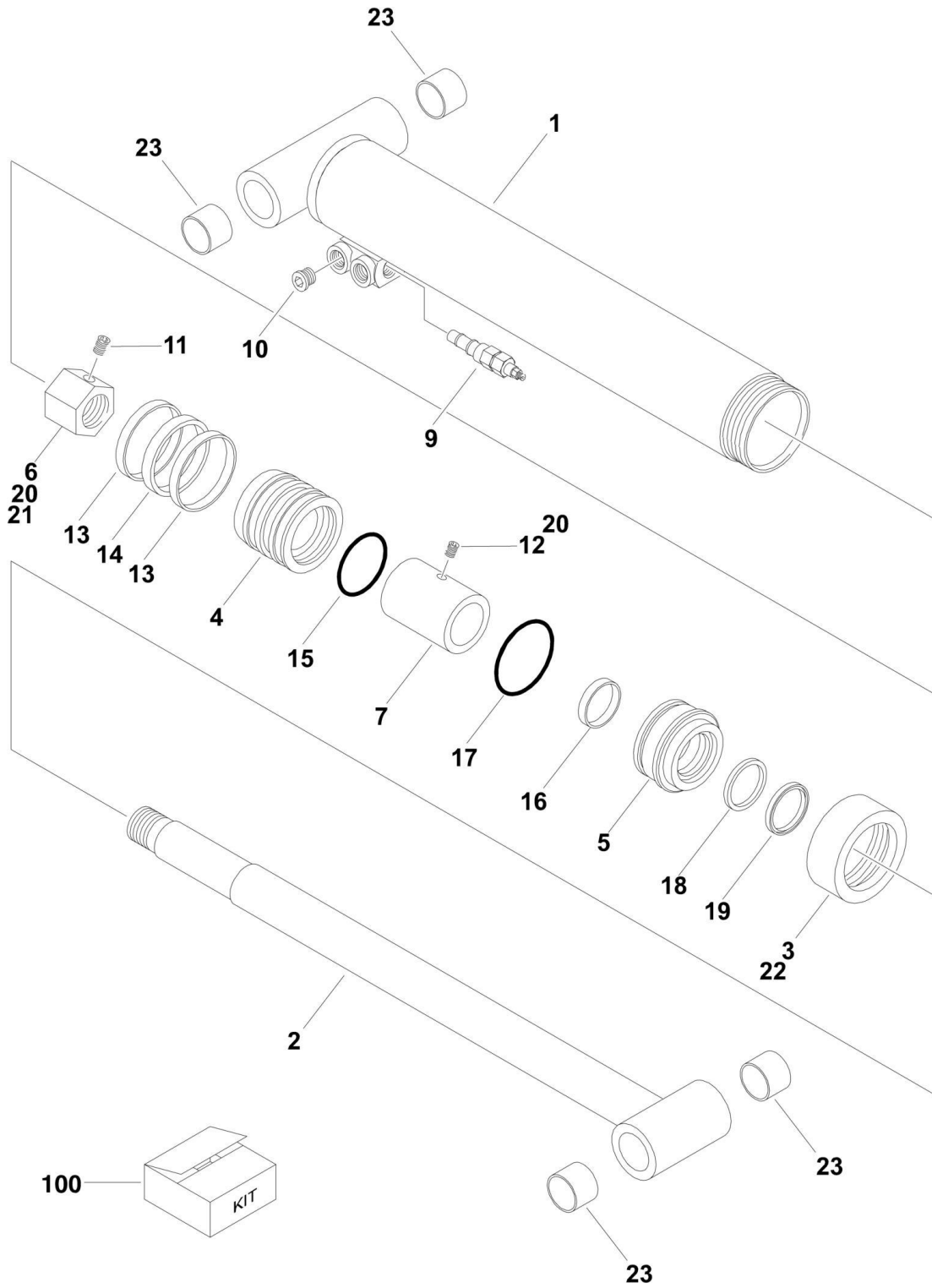
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FIGURE 5-14. MID LIFT CYLINDER ASSEMBLY (E/M400A) (SERVICE REPLACEMENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228038	Ref	LIFT CYLINDER ASSEMBLY - MID - E400An	A
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	See Note	NSS	Barrel Weldment (Note: Not Available for Purchase)	
2	70006600	1	Rod Weldment	
3	70006599	1	Head	
4	See Note	1	Wiper (Note: Use Item 100)	
5	70002373	1	Retainer	
6	See Note	NSS	Seal, Rod (Note: Use Item 100)	
7	See Note	NSS	Ring, Back-up (Note: Use Item 100)	
8	70005143	1	Bearing	
9	See Note	NSS	O-Ring (Note: Use Item 100)	
10	See Note	NSS	Ring, Back-up (Note: Use Item 100)	
11	70006598	1	O-Ring	
12	70006597	1	Piston	
13	See Note	NSS	Seal (Note: Use Item 100)	
14	See Note	NSS	O-Ring (Note: Use Item 100)	
15	70022564	1	Ball, Steel	
16	70006596	1	Setscrew	
17	4640634	1	Cartridge, Holding Valve	
17	2900770	1	Seal Kit - 4640634 Valve	
18	4641386	1	Cartridge, Holding Valve	
18	7011376	1	Seal Kit - 4641386 Valve	
19	70006595	1	Spacer	
20	0961950	4	Bushing	
21	2220885	8	Plug, O-Ring	
100	70006594	1	Seal Kit (Includes 4, 6, 7, 9, 10, 13 & 14)	

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FIGURE 5-15. LIFT CYLINDER ASSEMBLY - UPPER



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FIGURE 5-15. LIFT CYLINDER ASSEMBLY - UPPER

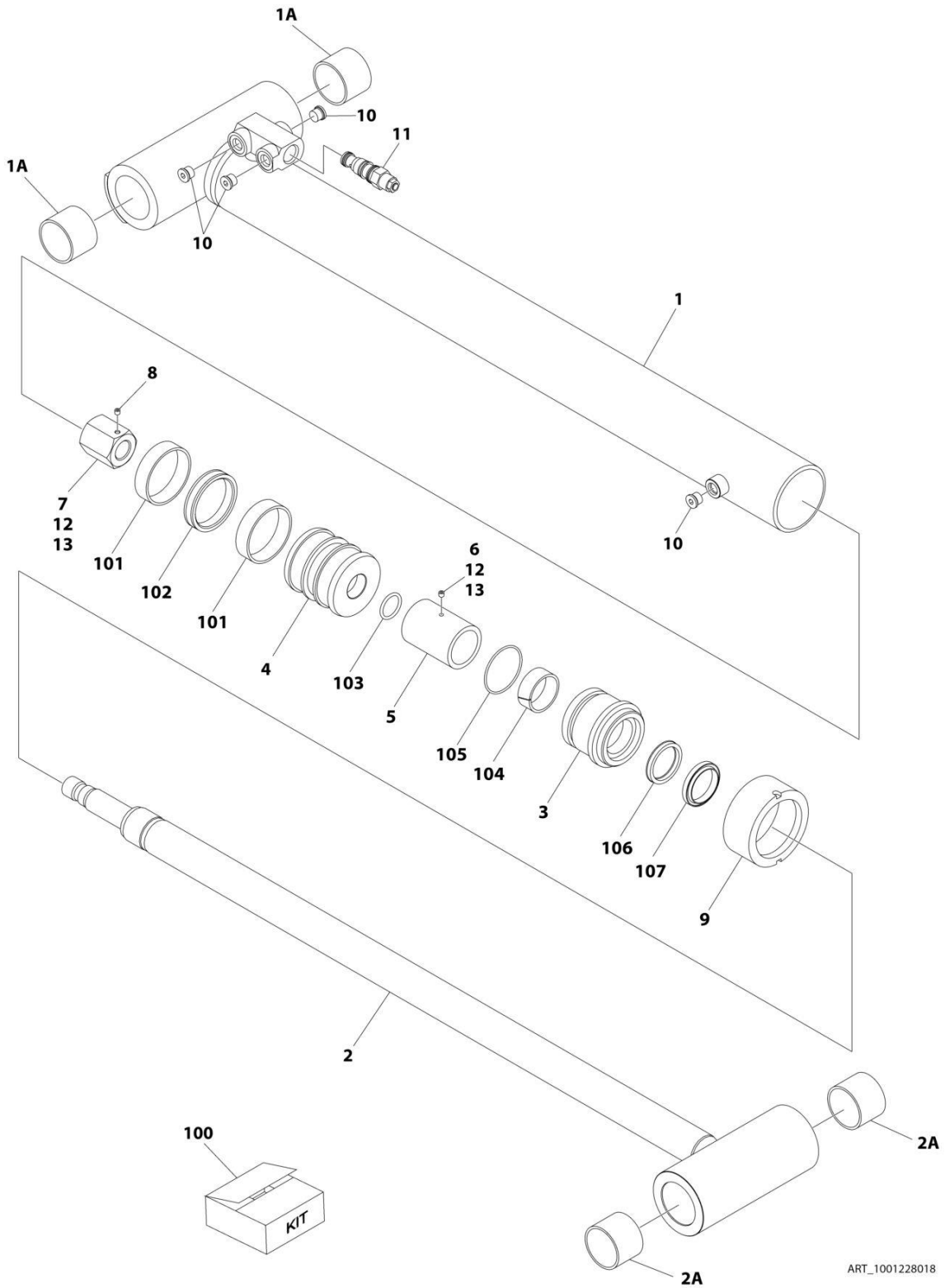
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	UPPER LIFT CYLINDER ASSEMBLIES	
	1683708	Ref	Upper Lift Cylinder Assemblies (E/M450A) (Prior to SN 0300058843)	2-B
	1684061	Ref	Upper Lift Cylinder Assemblies (E/M450A) (Original Equipment) (SN 0300058843 through 0300189898)	5-F
	1683813	Ref	Upper Lift Cylinder Assemblies (E/M450AJ) (Prior to SN 0300056571)	1-A
	1683945	Ref	Upper Lift Cylinder Assemblies (E/M450AJ) (Original Equipment) (SN 0300056571 through 0300189898)	4-F
	1684033	Ref	Upper Lift Cylinder Assemblies (E/M400A) (Original Equipment) (Prior to SN 0300073768)	1-A
	1684061	Ref	Upper Lift Cylinder Assemblies (E/M400A) (Original Equipment) (SN 0300073768 through 0300189901)	5-F
	1683945	Ref	Upper Lift Cylinder Assemblies (E/M400AJ) (Original Equipment)	4-F
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1		Ref	Barrel Weldment Options:	
1	1683514	1	1683708 Cylinder (Note: Includes Item #23)	
1	1683815	1	1683713 Cylinder (Note: Includes Item #23)	
1	1683946	1	1683945 Cylinder	
1	1684031	1	1684033 Cylinder	
1	1684060	1	1684061 Cylinder	
2		Ref	Rod Weldment Options:	
2	1683505	1	1683708 Cylinder (Note: Includes Item #23)	
2	1683817	1	1683713 Cylinder (Note: Includes Item #23)	
2	1683947	1	1683945 Cylinder	
2	1684032	1	1684033 Cylinder	
2	1684059	1	1684061 Cylinder	
3	1120108	1	Cap, End	
4	3480240	1	Piston	
5	1683709	1	Head	
6		Ref	Nut, Hex Options:	
6	3300315	1	1683708, 1684033 & 1684061 Cylinders	
6	3300279	1	1683713 & 1683945 Cylinder	
7		Ref	Spacer, Tube Options:	
7	4567177	1	1683708, 1684033 & 1684061 Cylinders	
7	4567908	1	1683713 & 1683945 Cylinders	
9	4640936	1	Cartridge, Valve	
9	2900770	1	Seal Kit - 4640936 Valve	
10	2220885	4	Plug, O-Ring	
11	3900170	1	Setscrew	
12		Ref	Setscrew Options:	
12	3951402	1	1683708, 1684033 & 1684061 Cylinders	
12	3900142	1	1683713 & 1683945 Cylinders	
13	See Note	2	Ring, Wear (Note: Use Item 100)	
14	See Note	1	Seal (Note: Use Item 100)	
15	See Note	1	O-Ring (Note: Use Item 100)	
16	See Note	1	Ring, Wear (Note: Use Item 100)	
17	See Note	1	O-Ring (Note: Use Item 100)	
18	See Note	1	Seal (Note: Use Item 100)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
19	See Note	1	Wiper (Note: Use Item 100)	
20	0100011	AR	Compound, Locking	
21	0100038	AR	Primer, Locking	
22	0100035	AR	Compound, Locking	
23		Ref	Bushing Options:	
23	0961726	4	1683708, 1683813 & 1684061 Cylinders	
23	0961950	4	1683945 & 1684033 Cylinders	
100	2901804	1	Seal Kit (Includes Items 13-19)	

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FIGURE 5-16. LIFT CYLINDER ASSEMBLY - UPPER - E/M450A & E/M400A (SERVICE REPLACEMENT)



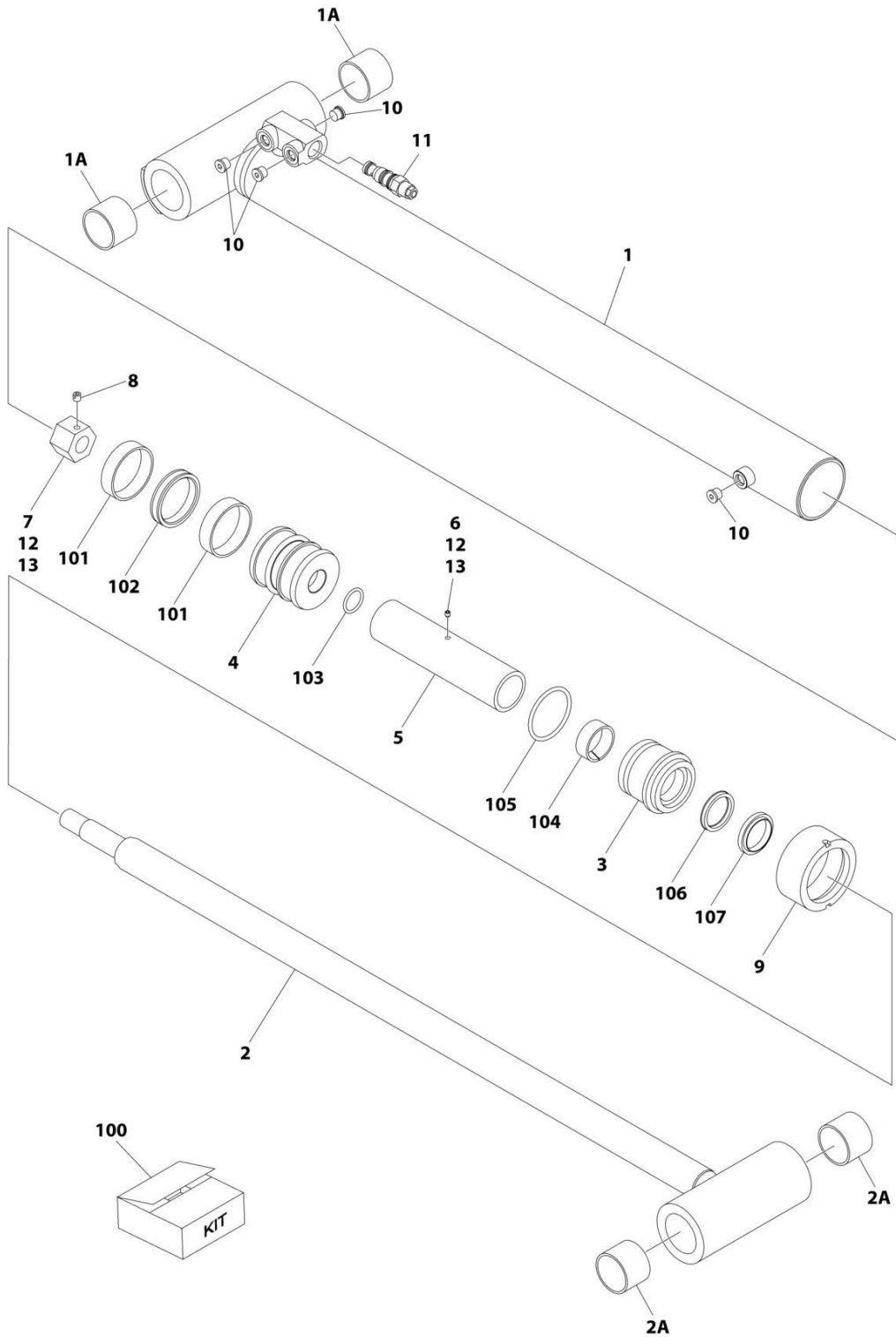
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FIGURE 5-16. LIFT CYLINDER ASSEMBLY - UPPER - E/M450A & E/M400A (SERVICE REPLACEMENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228018	Ref	LIFT CYLINDER ASSEMBLY - UPPER	B
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	See Note	NSS	Barrel Weldment (Note: Not Available for Purchase)	
1A	0961950	2	Bushing	
2	70006415	1	Rod Weldment	
2A	0961950	2	Bushing	
3	70006401	1	Head	
4	70006400	1	Piston	
5	70006414	1	Spacer	
6	70006413	1	Setscrew	
7	70006412	1	Nut	
8	70023915	1	Setscrew	
9	70006411	4	Retainer	
10	2220885	1	Plug, O-Ring	
11	4640936	1	Cartridge, Holding Valve	
11	2900770	1	Seal Kit - 4640936 Valve	
12	0100011	AR	Compound, Locking	
13	0100038	AR	Primer, Locking	
100	2901804	1	Seal Kit (Includes Items 101-107)	
101	See Note	NSS	Ring, Wear (Note: Use Item 100)	
102	See Note	NSS	Seal, Piston (Note: Use Item 100)	
103	See Note	NSS	O-Ring (Note: Use Item 100)	
104	See Note	NSS	Ring, Wear (Note: Use Item 100)	
105	See Note	NSS	O-Ring (Note: Use Item 100)	
106	See Note	NSS	Seal, Rod (Note: Use Item 100)	
107	See Note	NSS	Wiper, Rod (Note: Use Item 100)	

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FIGURE 5-17. LIFT CYLINDER ASSEMBLY - UPPER - E400AJP/M400AJP & E450AJ/M450AJ
(SERVICE REPLACEMENT)



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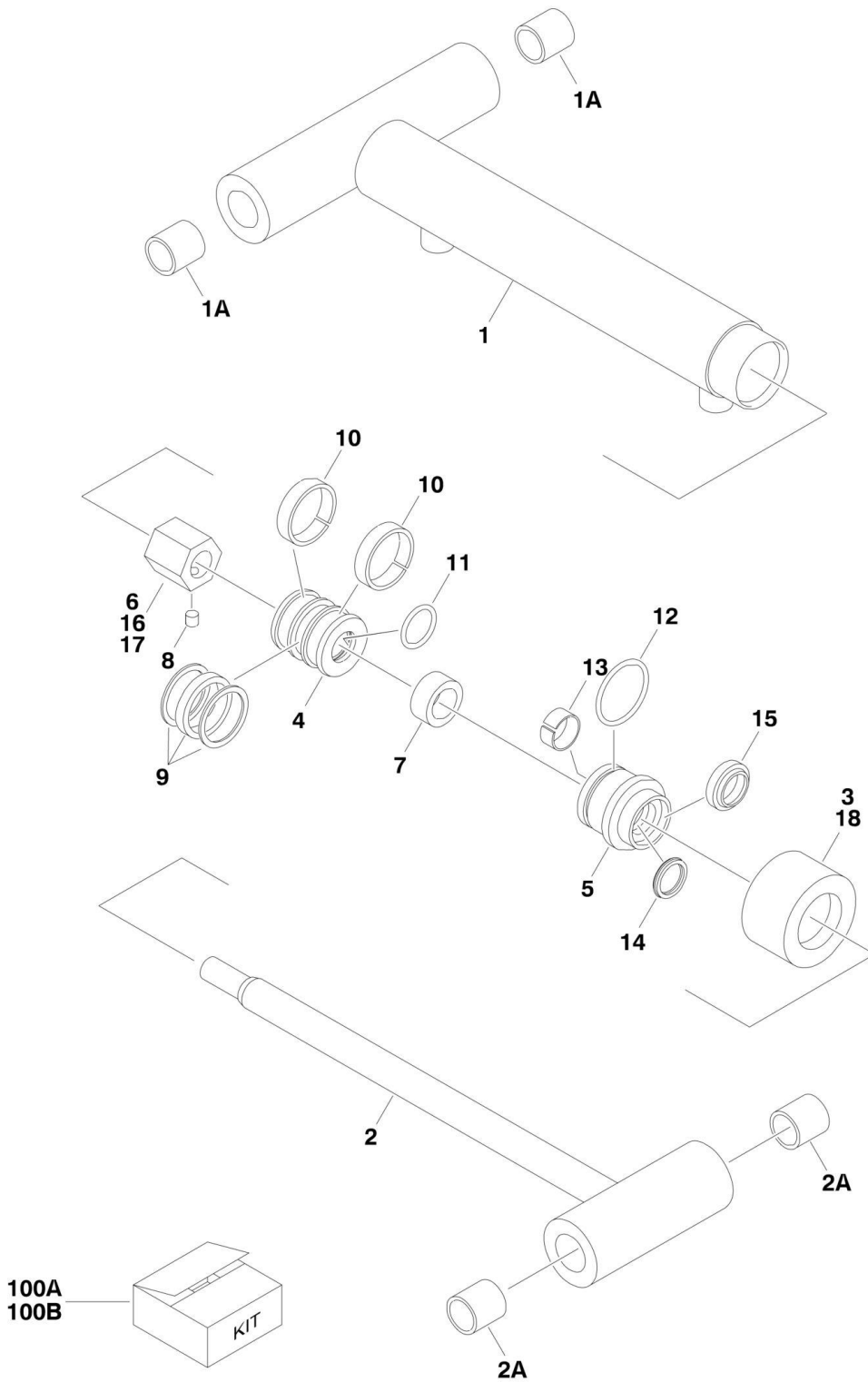
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**FIGURE 5-17. LIFT CYLINDER ASSEMBLY - UPPER - E400AJP/M400AJP & E450AJ/M450AJ
(SERVICE REPLACEMENT)**

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228016	Ref	LIFT CYLINDER ASSEMBLY - UPPER	B
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	See Note	NSS	Barrel Weldment (Note: Not Available for Purchase)	
1A	0961950	2	Bushing	
2	70006402	1	Rod Weldment	
2A	0961950	2	Bushing	
3	70006401	1	Head	
4	70006400	1	Piston	
5	70006399	1	Spacer	
6	70006398	1	Setscrew	
7	70006397	1	Nut	
8	70023915	1	Setscrew	
9	70006396	1	Retainer	
10	2220885	4	Plug, O-Ring	
11	4640936	1	Cartridge, Holding Valve	
11	2900770	1	Seal Kit - 4640936 Valve	
12	0100011	AR	Compound, Locking	
13	0100038	AR	Primer, Locking	
100	2901804	1	Seal Kit (Includes Items 101-107)	
101	See Note	NSS	Ring, Wear (Note: Use Item 100)	
102	See Note	NSS	Seal, Piston (Note: Use Item 100)	
103	See Note	NSS	O-Ring (Note: Use Item 100)	
104	See Note	NSS	Ring, Wear (Note: Use Item 100)	
105	See Note	NSS	O-Ring (Note: Use Item 100)	
106	See Note	NSS	Seal, Rod (Note: Use Item 100)	
107	See Note	NSS	Wiper, Rod (Note: Use Item 100)	

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FIGURE 5-18. MASTER CYLINDER ASSEMBLY (E/M450A & E/M400A) (Prior to SN 0300165128)



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FIGURE 5-18. MASTER CYLINDER ASSEMBLY (E/M450A & E/M400A) (Prior to SN 0300165128)

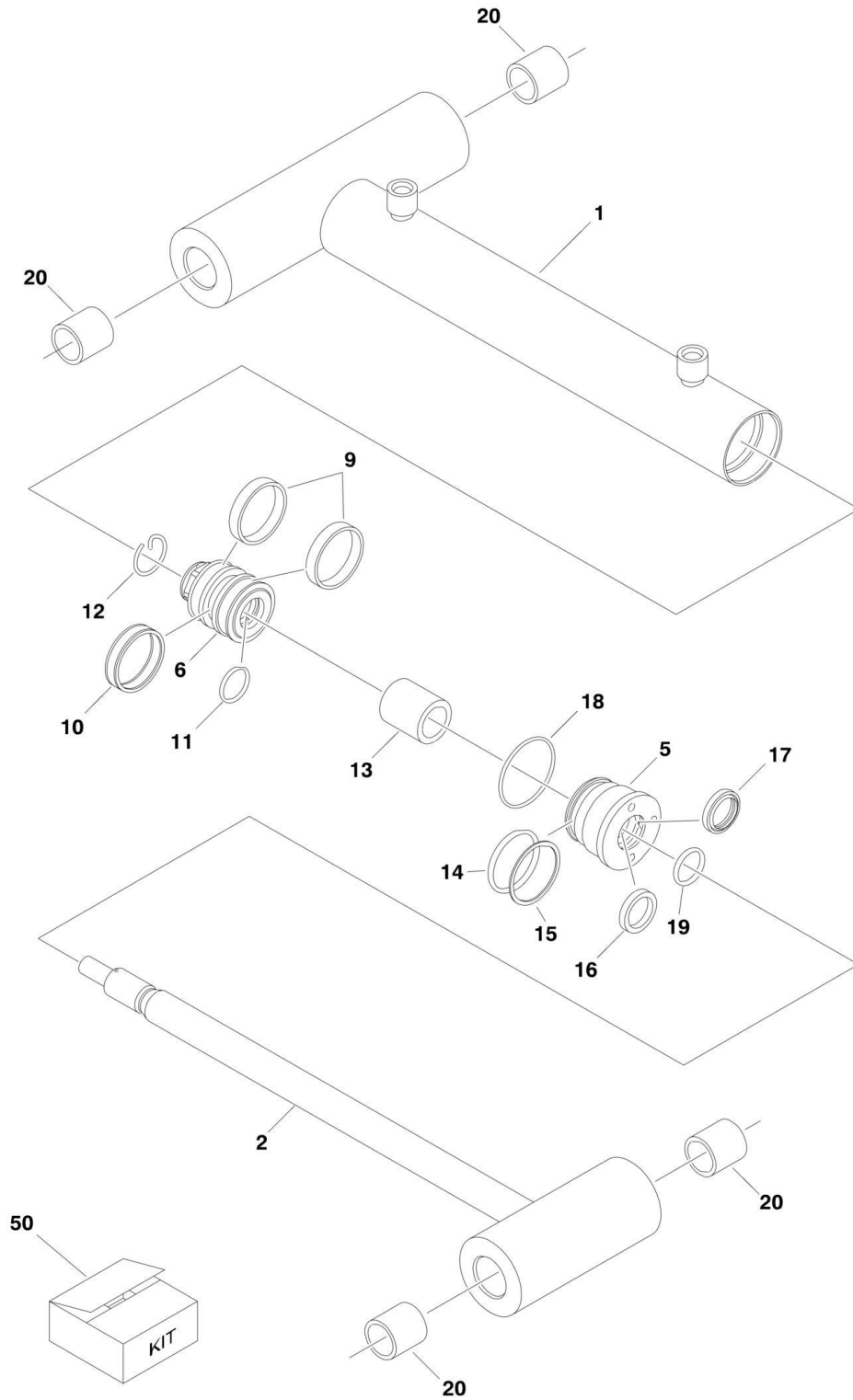
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	MASTER CYLINDER ASSEMBLY	
	1683325	Ref	Master Cylinder Assembly (Prior to SN 0300056894)	1/A
	1683932	Ref	Master Cylinder Assembly (E/M400A) (SN 0300056894 through 0300189901)	G
	1683932	Ref	Master Cylinder Assembly (E/M450A) (SN 0300056894 through 0300189898)	G
		Ref	Note: Original Equipment components may have been replaced with Service Replacement components part. Identify p/n stamped on cylinder before ordering parts.	
1		Ref	Barrel Weldment Options:	
1	1682879	1	Barrel Weldment (Prior to SN 0300056894)	
1	1684002	1	Barrel Weldment (E/M400A) (SN 0300056894 through 0300189901)	
1	1684002	1	Barrel Weldment (E/M450A) (SN 0300056894 through 0300189898)	
1A		Ref	Bushing Option:	
1A	0961608	2	Bushing (Prior to SN 0300056894)	
1A	0962356	2	Bushing (E/M400A) (SN 0300056894 through 0300189901)	
1A	0962356	2	Bushing (E/M450A) (SN 0300056894 through 0300189898)	
2		Ref	Rod Weldment Options:	
2	1682886	1	Rod Weldment (Prior to SN 0300056894)	
2	1684007	1	Rod Weldment (E/M400A) (SN 0300056894 through 0300189901)	
2	1684007	1	Rod Weldment (E/M450A) (SN 0300056894 through 0300189898)	
2A		Ref	Bushing Options:	
2A	0961608	2	Bushing (Prior to SN 0300056894)	
2A	0962356	2	Bushing (E/M400A) (SN 0300056894 through 0300189901)	
2A	0962356	2	Bushing (E/M450A) (SN 0300056894 through 0300189898)	
3	1120110	1	Retainer	
4		Ref	Piston Options:	
4	3480217	1	Piston (Prior to SN 0300056894)	
4	3480261	1	Piston (E/M400A) (SN 0300056894 through 0300189901)	
4	3480261	1	Piston (E/M450A) (SN 0300056894 through 0300189898)	
5		Ref	Head Options:	
5	1682154	1	Head (Prior to SN 0300056894)	
5	1683934	1	Head (E/M400A) (SN 0300056894 through 0300189901)	
5	1683934	1	Head (E/M450A) (SN 0300056894 through 0300189898)	
6	3300308	1	Nut, Hex	
7		Ref	Spacer, Tube Options:	
7	4566023	1	Spacer, Tube (Prior to SN 0300056894)	
7	4568136	1	Spacer, Tube (E/M400A) (SN 0300056894 through 0300189901)	
7	4568136	1	Spacer, Tube (E/M450A) (SN 0300056894 through 0300189898)	
8	3900170	1	Setscrew 3/8in-16NC x 3/8in	
9	See Note	1	T-Seal (Note: Use Items 100A or 100B)	
10	See Note	AR	Ring, Wear (Note: Use Items 100A or 100B)	
10		Ref	Ring, Wear (Prior to SN 0300056894)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
10		Ref	Ring, Wear (E/M400A) (SN 0300056894 through 0300189901)	
10		Ref	Ring, Wear (E/M450A) (SN 0300056894 through 0300189898)	
11	See Note	1	O-Ring (Note: Use Items 100A or 100B)	
12	See Note	1	O-Ring (Note: Use Items 100A or 100B)	
13	See Note	1	Ring, Wear (Note: Use Items 100A or 100B)	
14	See Note	1	Seal, Rod (Note: Use Items 100A or 100B)	
15	See Note	1	Wiper, Rod (Note: Use Items 100A or 100B)	
16	0100038	AR	Primer, Locking	
17	0100011	AR	Compound, Locking	
18	0100035	AR	Compound, Locking	
100		Ref	Seal Kit - Cylinder Options (Includes Items 9-15):	
100A	2901147	1	Level Cylinder p/n 1683325	
100B	2901902	1	Level Cylinder p/n 1683932	

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FIGURE 5-19. MASTER CYLINDER ASSEMBLY (E/M450A & E/M400A)



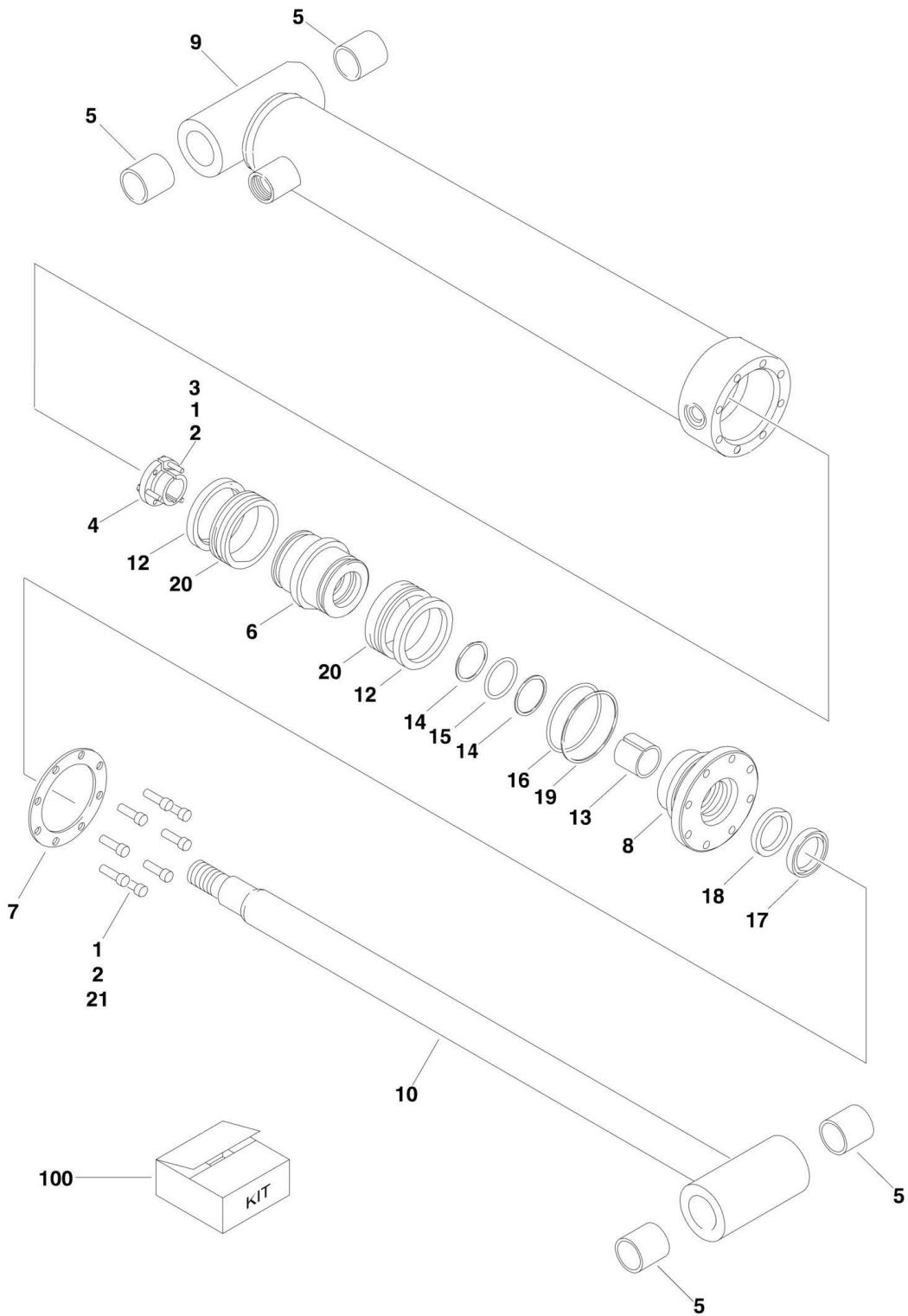
SECTION 5 - CYLINDER

FIGURE 5-19. MASTER CYLINDER ASSEMBLY (E/M450A & E/M400A)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001140597	Ref	MASTER CYLINDER ASSEMBLY Note: Original Equipment components may have been replaced with Service Replacement components part. Identify p/n stamped on cylinder before ordering parts.	A
		Ref		
1	70004144	1	Barrel	
2	70004145	1	Rod	
5	70000739	1	Head	
6	70004141	1	Piston	
9	See Note	2	Ring, Wear (Note: Use Item 50)	
10	See Note	1	Seal (Note: Use Item 50)	
11	70023094	1	O-Ring (Note: Use Item 50)	
12	70004142	1	Retainer	
13	70004143	1	Spacer	
14	See Note	1	O-Ring (Note: Use Item 50)	
15	See Note	1	Ring, Back-up (Note: Use Item 50)	
16	See Note	1	Seal (Note: Use Item 50)	
17	See Note	1	Wiper (Note: Use Item 50)	
18	See Note	1	O-Ring (Note: Use Item 50)	
19	70000740	1	O-Ring	
20	0962356	4	Bushing	
50	70004130	1	Seal Kit (Includes Items 9-11 & 14-18)	

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FIGURE 5-20. MASTER CYLINDER ASSEMBLY (E/M450AJ & E/M400AJP) (Prior to SN 0300163453)



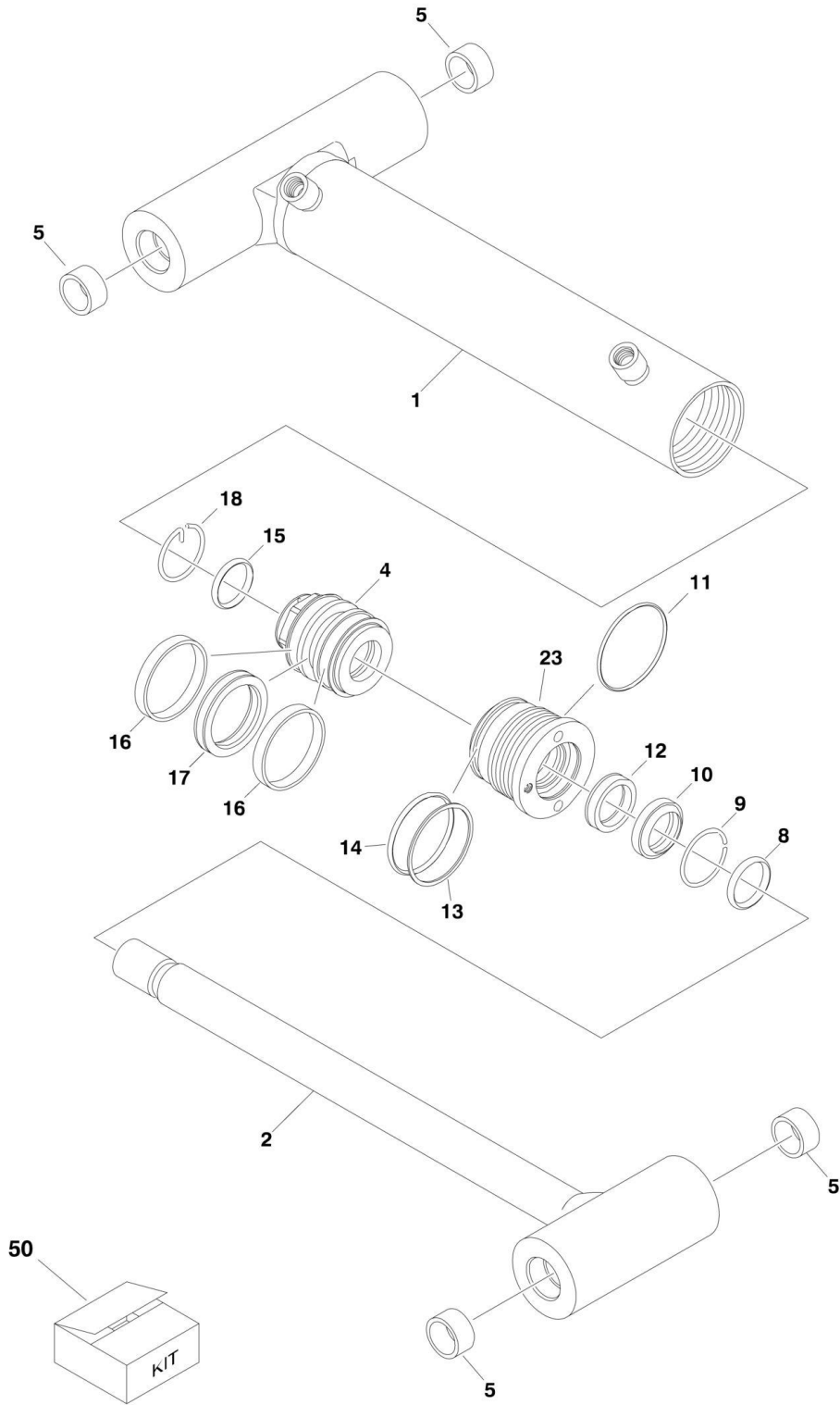
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FIGURE 5-20. MASTER CYLINDER ASSEMBLY (E/M450AJ & E/M400AJP) (Prior to SN 0300163453)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1683923	Ref	MASTER CYLINDER ASSEMBLIES	F
		Ref			Note: Original Equipment components may have been replaced with Service Replacement components part. Identify p/n stamped on cylinder before ordering parts.
1	0100011	AR	Compound, Locking	
2	0100038	AR	Primer, Locking	
3	3931016	3	Bolt Socket Head #10-24NC x 1in	
4	0962185	1	Tapered Bushing	
5	0961951	4	Bushing, Garmax	
6	3480259	1	Piston	
7	3760368	1	Washer, Ring	
8	1683925	1	Head	
9	1683756	1	Barrel	
10	1683772		Rod	
12	See Note	2	Ring, Lock (Note: Use Item 100)	
13	See Note	1	Ring, Wear (Note: Use Item 100)	
14	See Note	2	Ring Back-up (Note: Use Item 100)	
15	See Note	1	O-Ring (Note: Use Item 100)	
16	See Note	1	O-Ring (Note: Use Item 100)	
17	See Note	1	Wiper (Note: Use Item 100)	
18	See Note	1	Seal (Note: Use Item 100)	
19	See Note	1	Ring, Back-up (Note: Use Item 100)	
20	See Note	2	Seal (Note: Use Item 100)	
21	3931516	8	Bolt Socket Head 5/16in-18NC x 1in	
100	2901898	1	Seal Kit (Includes Items 12-20)	

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FIGURE 5-21. MASTER CYLINDER ASSEMBLY (E/M450AJ & E/M400AJP)



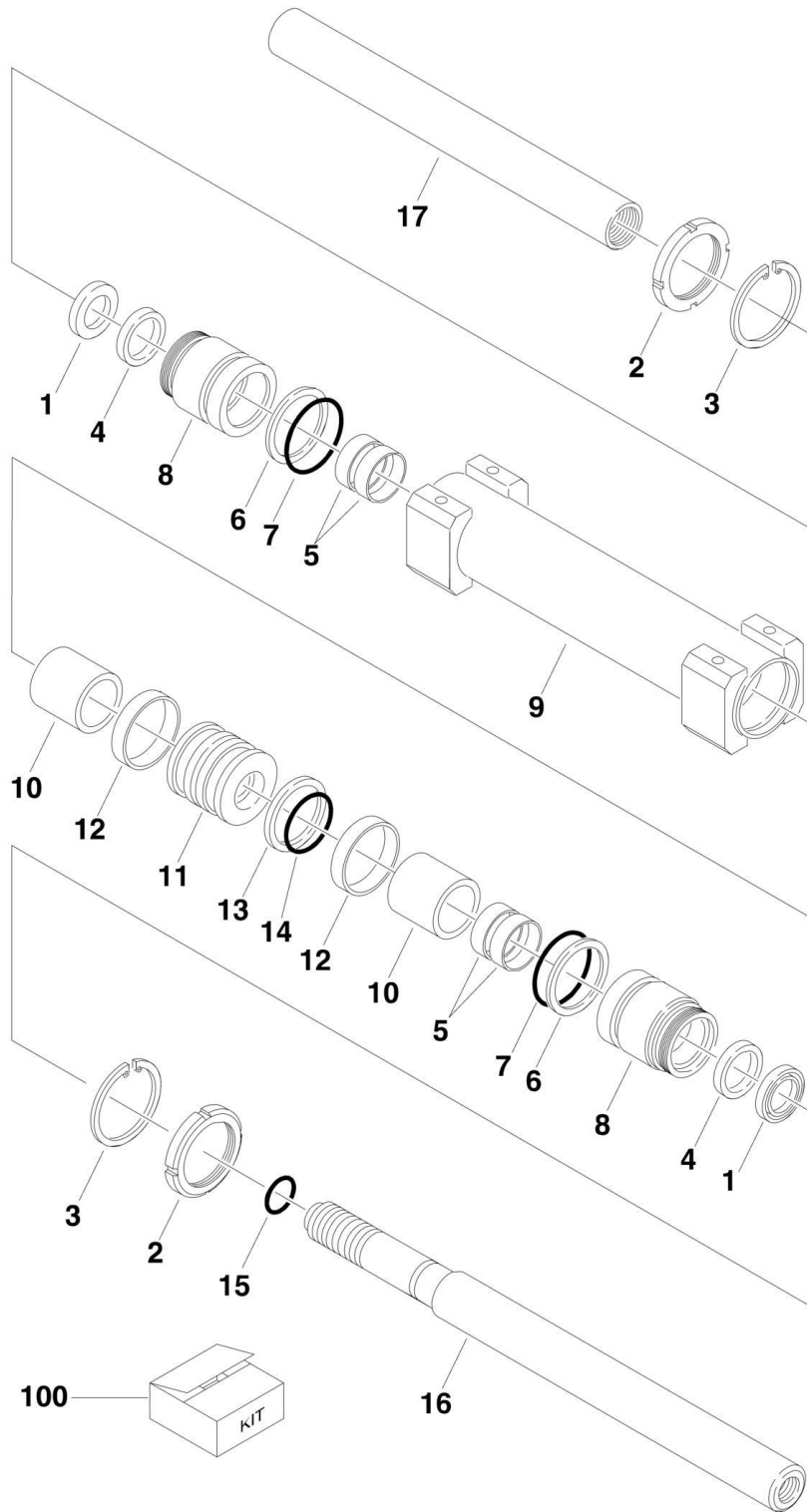
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FIGURE 5-21. MASTER CYLINDER ASSEMBLY (E/M450AJ & E/M400AJP)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001140278	Ref	MASTER CYLINDER ASSEMBLIES Note: Original Equipment components may have been replaced with Service Replacement components part. Identify p/n stamped on cylinder before ordering parts.	A
		Ref		
1	70003843	1	Barrel	
2	70003844	1	Rod	
4	70003819	1	Piston	
5	0961951	4	Bushing	
8	7026084	1	O-Ring	
9	70002217	1	Ring, Retaining	
10	See Note	1	Wiper (Note: Use Item 50)	
11	See Note	1	O-Ring (Note: Use Item 50)	
12	See Note	1	Seal (Note: Use Item 50)	
13	See Note	1	Ring, Back-up (Note: Use Item 50)	
14	See Note	1	O-Ring (Note: Use Item 50)	
15	See Note	1	O-Ring (Note: Use Item 50)	
16	See Note	2	Ring, Wear (Note: Use Item 50)	
17	See Note	1	Seal (Note: Use Item 50)	
18	70002216	1	Retainer	
23	7026082	1	Head	
50	70003845	1	Seal Kit (Includes Items 10-17)	

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FIGURE 5-22. STEER CYLINDER ASSEMBLY



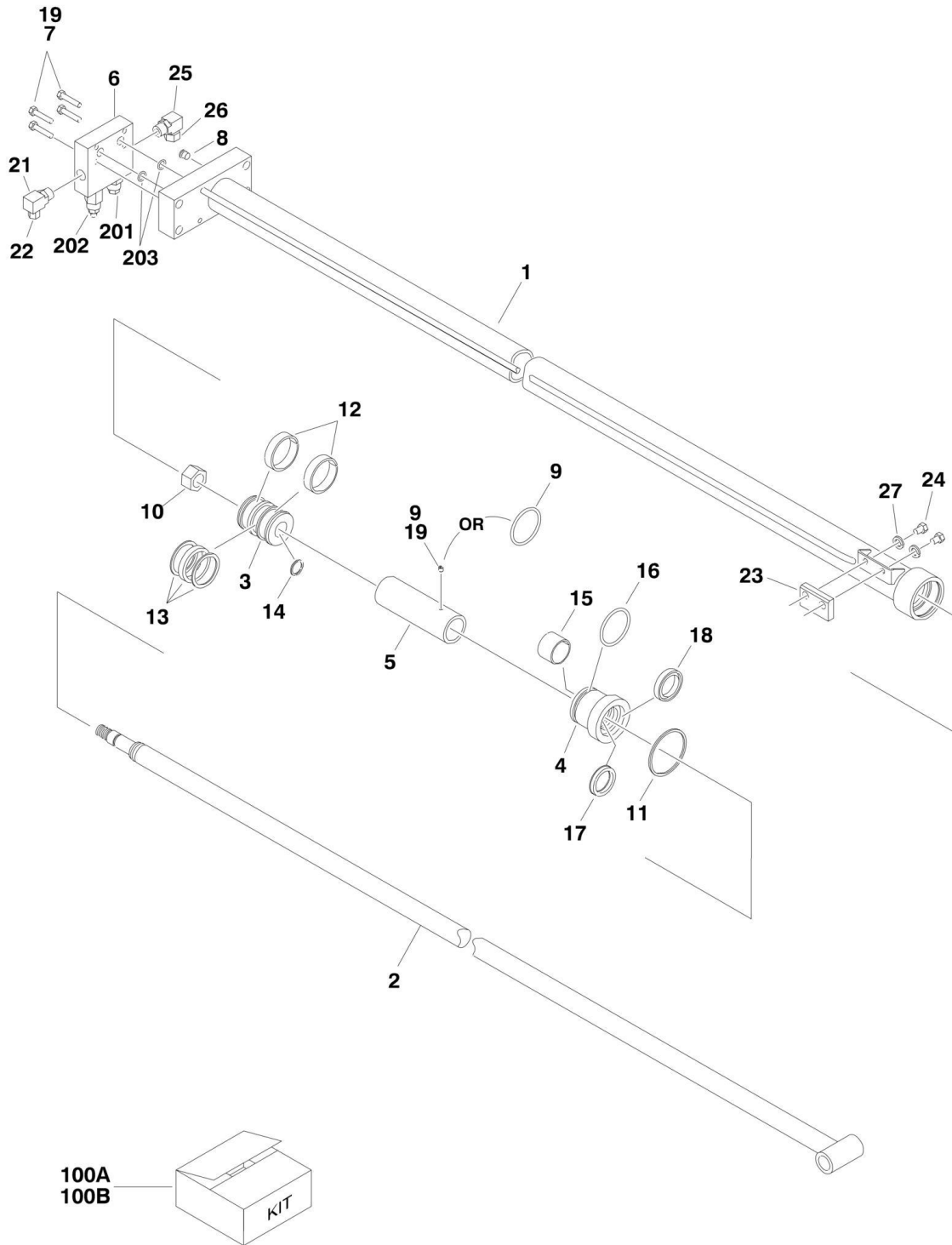
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FIGURE 5-22. STEER CYLINDER ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1683591	Ref	STEER CYLINDER ASSEMBLY	B
1	See Note	2	Wiper (Note: Use Item 100)	
2	7001630	2	Nut, Spanner	
3	7017247	2	Ring, Retaining	
4	See Note	2	Seal, Lip (Note: Use Item 100)	
5	See Note	4	Ring, Wear (Note: Use Item 100)	
6	See Note	2	Ring, Back-up (Note: Use Item 100)	
7	See Note	2	O-Ring (Note: Use Item 100)	
8	7017248	2	Guide	
9	70003341	1	Barrel Weldment	
10	7017249	2	Tube	
11	7017250	1	Piston	
12	See Note	2	Ring, Wear (Note: Use Item 100)	
13	See Note	1	Seal (Note: Use Item 100)	
14	See Note	1	O-Ring (Note: Use Item 100)	
15	See Note	1	O-Ring (Note: Use Item 100)	
16	7017251	1	Rod (Male End)	
17	7017252	1	Rod (Female End)	
100	7017246	1	Seal Kit (Includes Items 1, 4-7 & 12-15)	

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FIGURE 5-23. TELESCOPE CYLINDER ASSEMBLY (E/M400A & E/M450A & E/M450AJ) (ORIGINAL EQUIPMENT) (Prior to SN 0300175016)



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FIGURE 5-23. TELESCOPE CYLINDER ASSEMBLY (E/M400A & E/M450A & E/M450AJ) (ORIGINAL EQUIPMENT) (Prior to SN 0300175016)

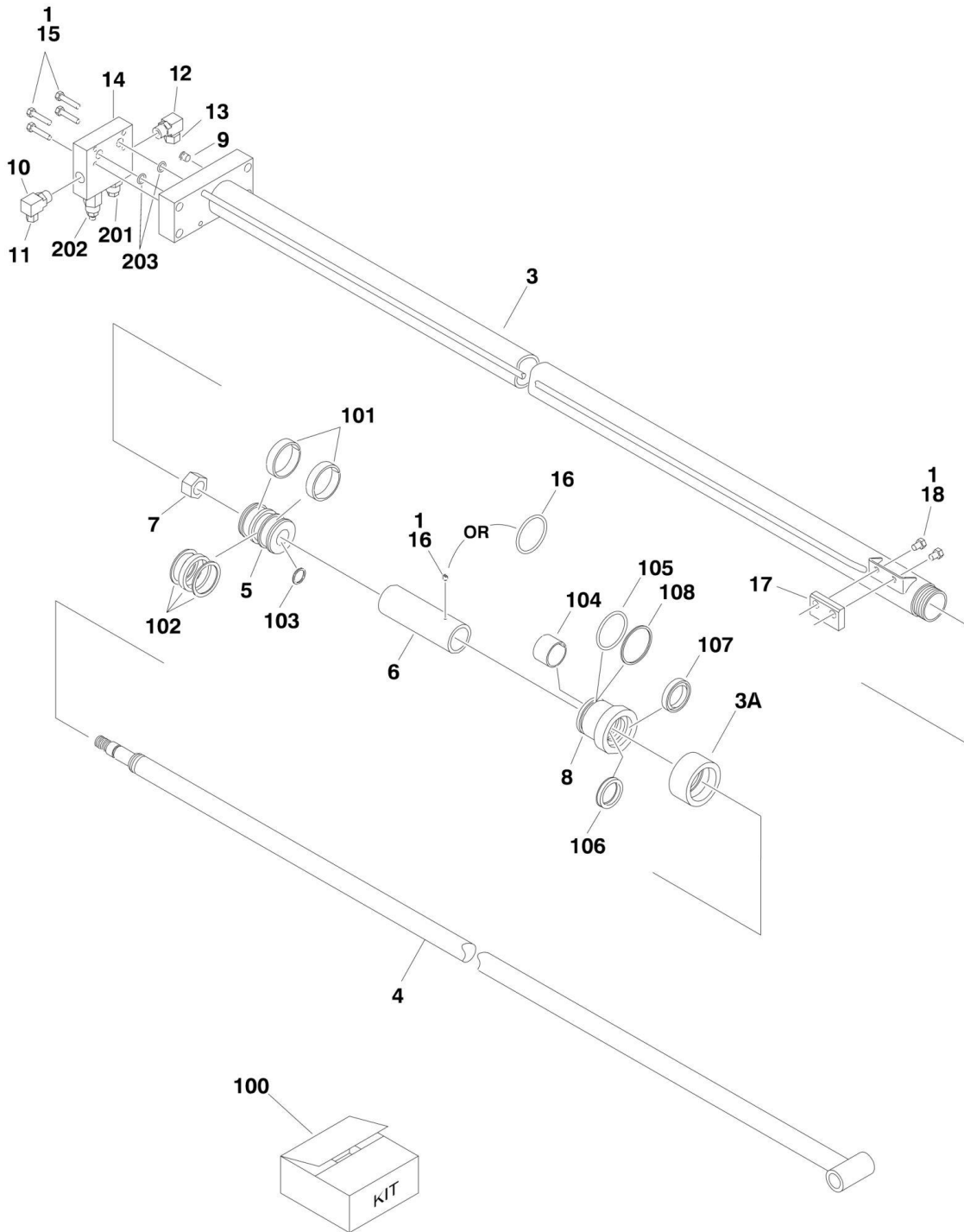
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	TELESCOPE CYLINDER ASSEMBLY	
	1683704	Ref	Telescope Cylinder Assembly (E/M450A)	D
	1683798	Ref	Telescope Cylinder Assembly (E/M450AJ)	E
	1684030	Ref	Telescope Cylinder Assembly (E/M400A)	B
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1		Ref	Barrel Weldment Options:	
1	1682948	1	Barrel Weldment (E/M450A)	
1	1683800	1	Barrel Weldment (E/M450AJ)	
1	1682888	1	Barrel Weldment (E/M400A)	
2		Ref	Rod Weldment Options:	
2	1683706	1	Rod Weldment (E450A & M450A)	
2	1683802	1	Rod Weldment (E450AJ & M450AJ)	
2	1684029	1	Rod Weldment (E/M400A)	
3	3480239	1	Piston	
4	1683705	1	Head	
5		Ref	Spacer, Tube Options:	
5	4567704	1	Spacer, Tube (E/M450A & E/M400A)	
5	4566027	1	Spacer, Tube (E/M450AJ)	
6	4640807	1	Counterbalance Valve Assy (See Items 201-203 for Breakdown)	
7	0641512	4	Bolt 5/16in-18NC x 1-1/2in	
8	2220883	2	Plug, O-Ring	
9	3951402	1	Setscrew 1/4in-20NC x 1/4in	
9	See Note	1	O-Ring (Note: Use Item 100B)	
10	3322205	1	Locknut	
11	3760318	1	Ring, Retaining	
12	See Note	2	Ring, Wear (Note: Use Item 100A or 100B)	
13	See Note	1	Seal, Cap (Note: Use Item 100A or 100B)	
14	See Note	1	O-Ring (Note: Use Item 100A or 100B)	
15	See Note	1	Ring, Wear (Note: Use Item 100A or 100B)	
16	See Note	1	O-Ring (Note: Use Item 100A or 100B)	
17	See Note	1	Seal, Rod (Note: Use Item 100A or 100B)	
18	See Note	1	Wiper (Note: Use Item 100A or 100B)	
19	0100011	AR	Compound, Locking	
19	0100038	AR	Primer, Locking	
21	2220628	1	Fitting, Elbow	
22	2220516	1	Fitting, Cap	
23	3340679	1	Wear Pad Assembly	
24	0641604	2	Bolt 3/8in-16NC x 1/2in	
25	2220596	1	Fitting, Elbow	
26	2220517	1	Fitting, Cap	
27	4761600	2	Lockwasher 3/8in	
100		Ref	Seal Kit Options:	
100A	2901807	1	Seal Kit (Includes Items 12-18) (Telescope Cylinder p/n 1683704 & p/n 1684030)	
100B	1001141760	1	Seal Kit (Includes Items 12-18 & 9) (Telescope Cylinder p/n 1683798)	
	4640807	Ref	COUNTERBALANCE VALVE ASSEMBLY	D

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
201	4640771	1	Cartridge, Counterbalance	
201	2900770	1	Seal Kit - 4640771 Cartridge	
202	4640709	1	Cartridge, Vented Counterbalance	
202	2900770	1	Seal Kit - 4640709 Cartridge	
203	3790113	2	O-Ring (Between Valve and Cylinder Block)	

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FIGURE 5-24. TELESCOPE CYLINDER ASSEMBLY (E/M400A & E/M450A & E/M450AJ) (ORIGINAL EQUIPMENT)



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FIGURE 5-24. TELESCOPE CYLINDER ASSEMBLY (E/M400A & E/M450A & E/M450AJ) (ORIGINAL EQUIPMENT)

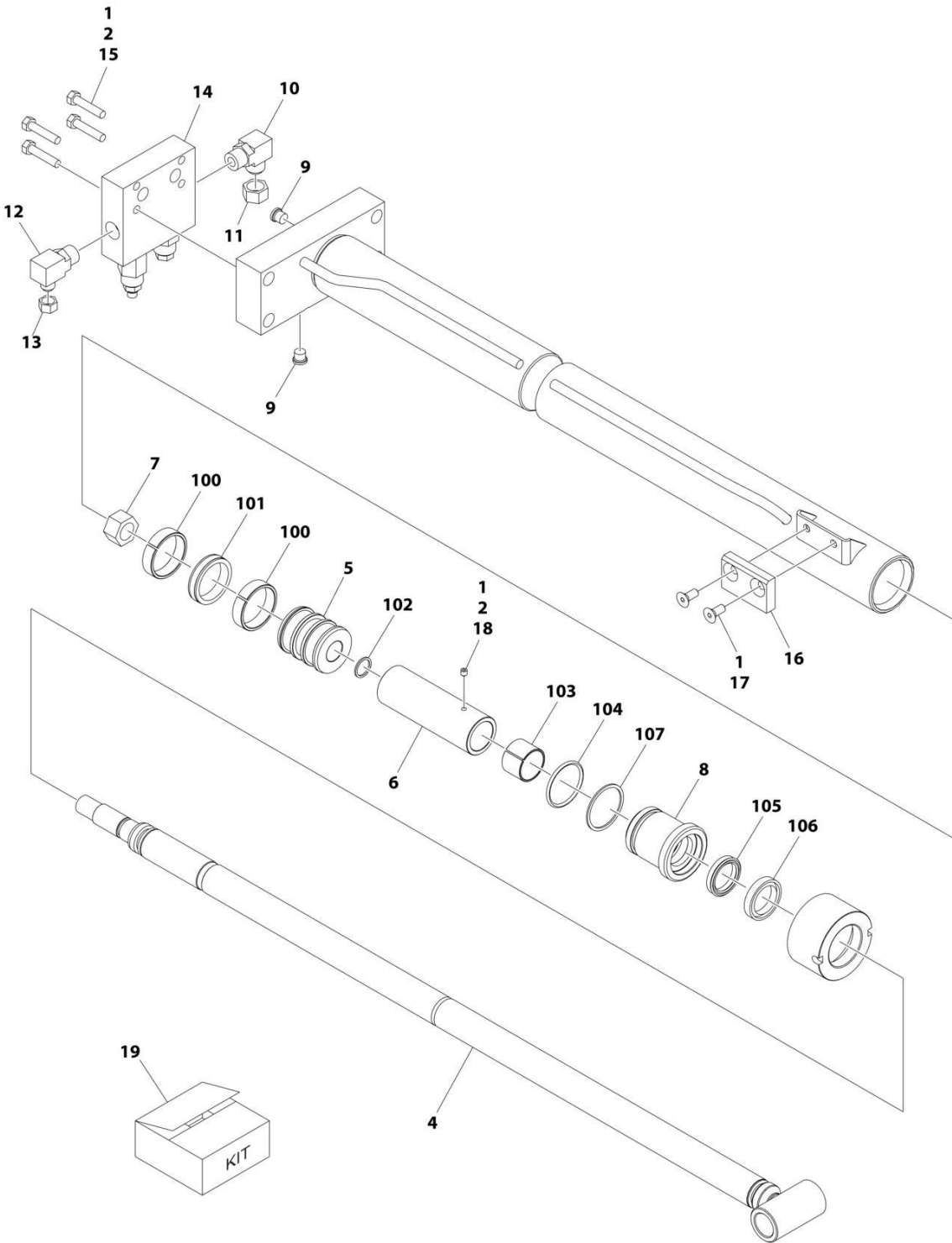
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	TELESCOPE CYLINDER ASSEMBLY	
	1001151414	Ref	Telescope Cylinder Assembly (E/M450A)	A
	1001151368	Ref	Telescope Cylinder Assembly (E/M450AJ)	B
	1001151497	Ref	Telescope Cylinder Assembly (E/M400A)	A
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	0100011	AR	Compound, Locking	
1	0100038	AR	Primer, Locking	
3		Ref	Barrel Weldment Options:	
3	1001151413	1	Barrel Weldment (E/M450A)	
3	1001151386	1	Barrel Weldment (E/M450AJ)	
3	1001151496	1	Barrel Weldment (E/M400A)	
3A	1120110	1	Cap, End	
4		Ref	Rod Weldment Options:	
4	1683706	1	Rod Weldment (E450A & M450A)	
4	1683802	1	Rod Weldment (E450AJ & M450AJ)	
4	1684029	1	Rod Weldment (E/M400A)	
5	3480239	1	Piston	
6		Ref	Spacer, Tube Options:	
6	4567704	1	Spacer, Tube (E/M450A & E/M400A)	
6	4566027	1	Spacer, Tube (E/M450AJ)	
7	3322205	1	Locknut	
8	1683584	1	Head	
9	2220883	1	Plug, O-Ring	
10	2220596	1	Fitting, Elbow	
11	2220517	1	Fitting, Cap	
12	2220628	1	Fitting, Elbow	
13	2220516	1	Fitting, Cap	
14	4640807	1	Counterbalance Valve Assy (See Items 201-203 for Breakdown)	
15	0641512	4	Bolt 5/16in-18NC x 1-1/2in	
16	3951402	1	Setscrew 1/4in-20NC x 1/4in	
16	See Note	1	O-Ring (Note: Use Item 100)	
17	3340679	1	Wear Pad Assembly	
18	0641604	2	Bolt 3/8in-16NC x 1/2in	
100	1001152230	1	Seal Kit Options (Includes Items 101-108):	
101	See Note	2	Ring, Wear (Note: Use Item 100)	
102	See Note	1	Seal, Cap (Note: Use Item 100)	
103	See Note	1	O-Ring (Note: Use Item 100)	
104	See Note	1	Ring, Wear (Note: Use Item 100)	
105	See Note	1	O-Ring (Note: Use Item 100)	
106	See Note	1	Seal, Rod (Note: Use Item 100)	
107	See Note	1	Wiper (Note: Use Item 100)	
108	See Note	1	Ring, Back-up (Note: Use Item 100)	
	4640807	Ref	COUNTERBALANCE VALVE ASSEMBLY	D
201	4640771	1	Cartridge, Counterbalance	
201	2900770	1	Seal Kit - 4640771 Cartridge	
202	4640709	1	Cartridge, Vented Counterbalance	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
202	2900770	1	Seal Kit - 4640709 Cartridge	
203	3790113	2	O-Ring (Between Valve and Cylinder Block)	

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FIGURE 5-25. TELESCOPE CYLINDER ASSEMBLY (E/M400A) (SERVICE REPLACEMENT)



ART_1001228063

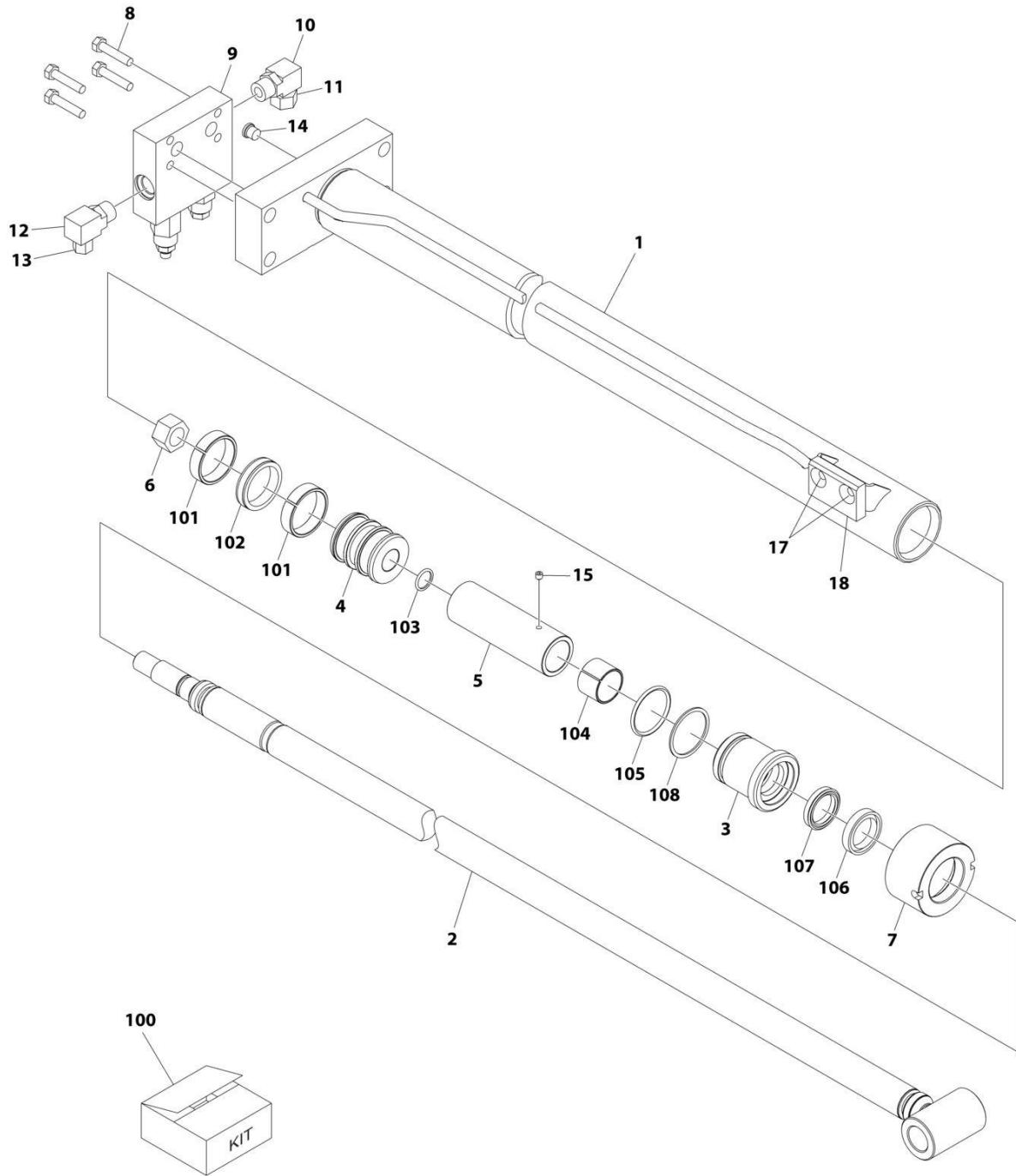
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FIGURE 5-25. TELESCOPE CYLINDER ASSEMBLY (E/M400A) (SERVICE REPLACEMENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228063	Ref	TELESCOPE CYLINDER ASSEMBLY	E
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	0100011	AR	Compound, Locking	
2	0100038	AR	Primer, Locking	
4	70006566	1	Rod	
5	70006564	1	Piston	
6	70006563	1	Spacer	
7	70006971	1	Nut	
8	70006565	1	Head	
9	2220883	1	Plug	
10	2220596	1	Fitting, 90 JIC/ORB	
11	2220517	1	Fitting, Cap	
12	2220628	1	Fitting, 90 JIC/ORB	
13	2220516	1	Fitting, Cap	
14	4640807	1	Counterbalance Valve Assembly (See COUNTERBALANCE VALVE ASSEMBLY for Breakdown)	
15	0641512	4	Bolt, 5/16 x 1-1/2	
16	3340679	1	Pad, Wear	
17	70006976	2	Screw	
18	70023915	1	Setscrew, M6 x 8	
19	1001152230	1	Seal Kit (Includes Items 100-107)	
100	See Note	NSS	Ring, Wear (Note: Use p/n 1001152230)	
101	See Note	NSS	Seal, Piston (Note: Use p/n 1001152230)	
102	See Note	NSS	O-Ring (Note: Use p/n 1001152230)	
103	See Note	NSS	Ring, Wear (Note: Use p/n 1001152230)	
104	See Note	NSS	O-Ring (Note: Use p/n 1001152230)	
105	See Note	NSS	Seal, Rod (Note: Use p/n 1001152230)	
106	See Note	NSS	Seal, Rod (Note: Use p/n 1001152230)	
107	See Note	NSS	Ring, Back-Up (Note: Use p/n 1001152230)	

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FIGURE 5-26. TELESCOPE CYLINDER ASSEMBLY - E/M450A (SERVICE REPLACEMENT)



ART_1001228062

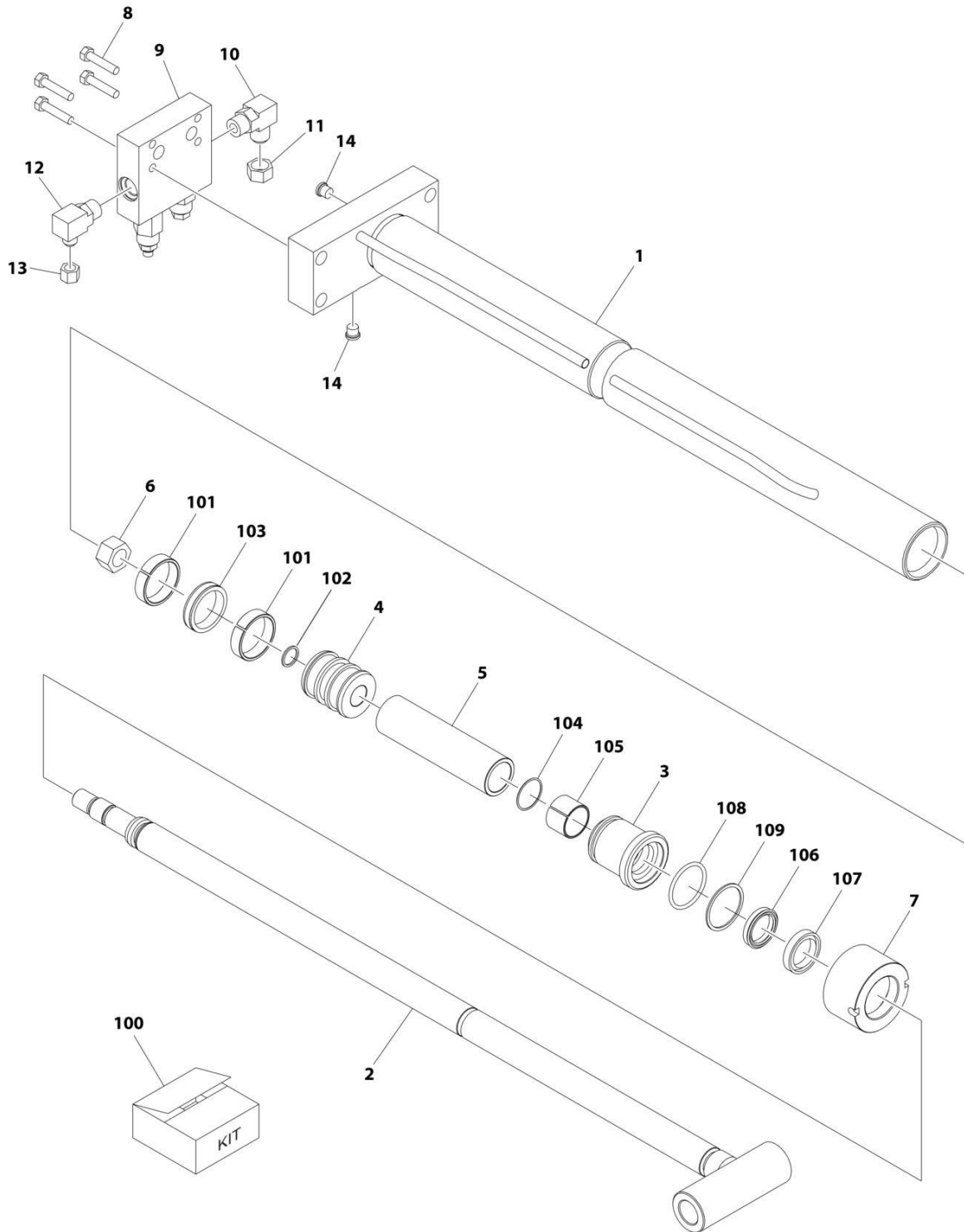
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FIGURE 5-26. TELESCOPE CYLINDER ASSEMBLY - E/M450A (SERVICE REPLACEMENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228062	Ref	TELESCOPE CYLINDER ASSEMBLY	A
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	See Note	NSS	Barrel (Note: Not Available for Purchase)	
2	70006567	1	Rod	
3	70006565	1	Head	
4	70006564	1	Piston	
5	70006563	1	Spacer	
6	70006971	1	Nut	
7	70006561	1	Cap, End	
8	0641512	4	Bolt, 5/16 X 1-1/2	
9	4640807	1	Counterbalance Valve Assembly (See COUNTERBALANCE VALVE ASSEMBLY for Breakdown)	
10	2220596	1	Fitting, 90 JIC/ORB	
11	2220517	1	Fitting, Cap	
12	2220628	1	Fitting, 90 JIC/ORB	
13	2220516	1	Fitting, Cap	
14	2220883	2	Plug	
15	70023915	1	Setscrew M6 x 8	
17	70006976	2	Screw	
18	3340679	1	Pad, Wear	
100	1001152230	1	Seal Kit (Includes Items 101-108)	
101	See Note	NSS	Ring, Wear (Note: Use p/n 1001152230)	
102	See Note	NSS	Seal, Cap (Note: Use p/n 1001152230)	
103	See Note	NSS	O-Ring (Note: Use p/n 1001152230)	
104	See Note	NSS	Ring, Wear (Note: Use p/n 1001152230)	
105	See Note	NSS	O-Ring (Note: Use p/n 1001152230)	
106	See Note	NSS	Seal, Rod (Note: Use p/n 1001152230)	
107	See Note	NSS	Wiper, Rod (Note: Use p/n 1001152230)	
108	See Note	NSS	Ring, Back-Up (Note: Use p/n 1001152230)	

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FIGURE 5-27. TELESCOPE CYLINDER ASSEMBLY - E450AJ/M450AJ (SERVICE REPLACEMENT)



ART_1001228061

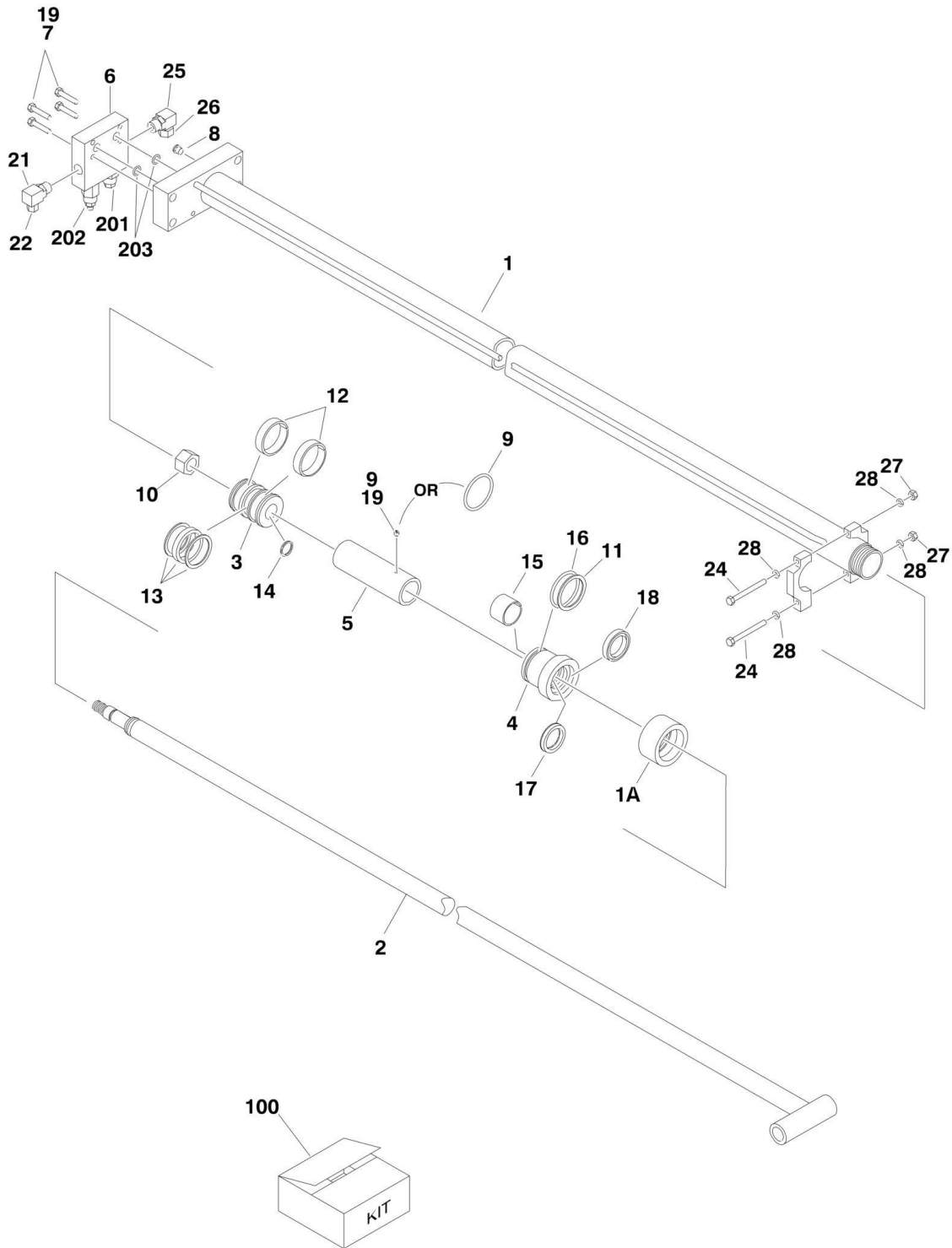
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FIGURE 5-27. TELESCOPE CYLINDER ASSEMBLY - E450AJ/M450AJ (SERVICE REPLACEMENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228061	Ref	TELESCOPE CYLINDER ASSEMBLY	A
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	See Note	NSS	Barrel Weldment (Note: Not Available for Purchase)	
2	70006973	1	Rod	
3	70006565	1	Head	
4	70006564	1	Piston	
5	70006972	1	Spacer	
6	70006971	1	Nut, Lock	
7	70006561	1	Cap, End	
8	0641512	4	Bolt, 5/16 X 1-1/2	
9	4640807	1	Counterbalance Valve Assembly (See COUNTERBALANCE VALVE ASSEMBLY for Breakdown)	
10	2220596	1	Fitting, 90 JIC/ORB	
11	2220517	1	Fitting, Cap	
12	2220628	1	Fitting, 90 JIC/ORB	
13	2220516	1	Fitting, Cap	
14	2220883	2	Plug	
100	1001152230	1	Seal Kit (Includes Items 101-108)	
101	See Note	NSS	Ring, Wear (Note: Use p/n 1001152230)	
102	See Note	NSS	O-Ring (Note: Use p/n 1001152230)	
103	See Note	NSS	Seal, Piston (Note: Use p/n 1001152230)	
104	See Note	NSS	O-Ring (Note: Use p/n 1001152230)	
105	See Note	NSS	Ring, Wear (Note: Use p/n 1001152230)	
106	See Note	NSS	Seal, Rod (Note: Use p/n 1001152230)	
107	See Note	NSS	Wiper, Rod (Note: Use p/n 1001152230)	
108	See Note	NSS	O-Ring (Note: Use p/n 1001152230)	
109	See Note	NSS	Ring, Back-Up (Note: Use p/n 1001152230)	

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FIGURE 5-28. TELESCOPE CYLINDER ASSEMBLY (E/M400AJP) (ORIGINAL EQUIPMENT)



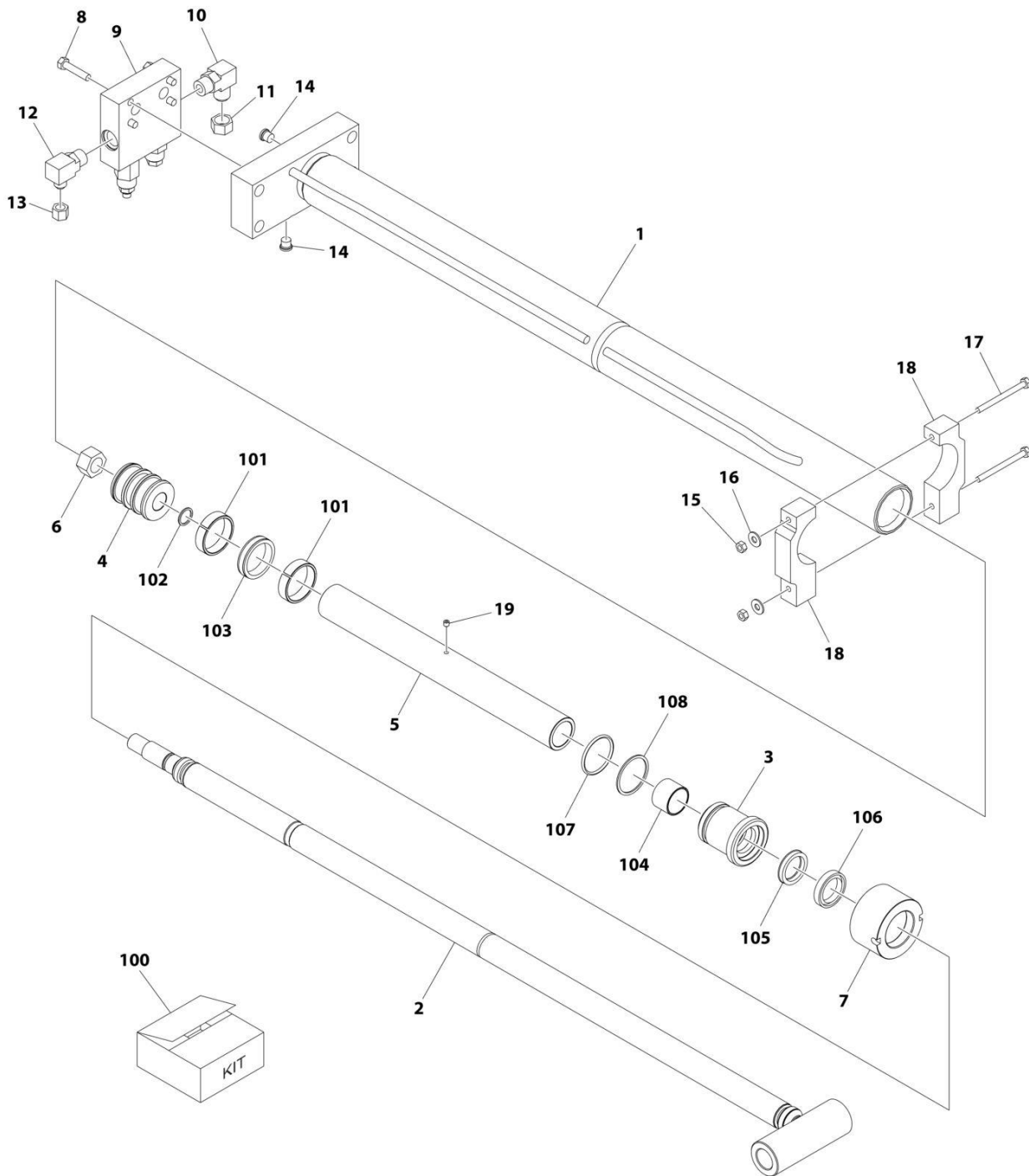
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FIGURE 5-28. TELESCOPE CYLINDER ASSEMBLY (E/M400AJP) (ORIGINAL EQUIPMENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1683911	Ref	TELESCOPE CYLINDER ASSEMBLY	4/C
		Ref			Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.
1	1683912	1	Barrel	
1A	1120110	1	Cap, End	
1A	0100035	AR	Compound, Locking (Note: Not Included with Barrel Weldment)	
2	1683980	1	Rod	
3	3480239	1	Piston	
4		Ref	Head	
4	1683863	1	Head (use p/n 1683584) (Prior to SN 03001122425)	
4	1683584	1	Head (SN 03001122425 through 0300189901)	
5	4567963	1	Spacer, Tube	
6	4640807	1	Counterbalance Valve Assembly (See Items 201-203for Breakdown)	
7	0641512	4	Bolt 5/16 x 1-1/2	
8	2220883	2	Plug, O-Ring	
9	3951402	1	Setscrew 1/4 x 1/4	
10	3322205	1	Locknut	
11	3760318	1	Ring, Retaining	
12	See Note	2	Ring, Wear (Note: Use Item 100)	
13	See Note	1	Seal, Cap (Note: Use Item 100)	
14	See Note	1	O-Ring (Note: Use Item 100)	
15	See Note	1	Ring, Wear (Note: Use Item 100)	
16	See Note	1	O-Ring (Note: Use Item 100)	
17	See Note	1	Seal, Rod (Note: Use Item 100)	
18	See Note	1	Wiper (Note: Use Item 100)	
19	0100011	AR	Compound, Locking	
19	0100038	AR	Primer, Locking	
21	2220628	1	Fitting, Elbow	
22	2220516	1	Fitting, Cap	
23	3340882	1	Wear Pad Assembly	
24	0641424	2	Bolt 1/4in-20NC x 3in	
25	2220596	1	Fitting, Elbow	
26	2220517	1	Fitting, Cap	
27	3311405	2	Nut 1/4inx20NC	
28	4751400	4	Flatwasher 1/4in	
100	2901903	1	Seal Kit (Includes Items 12-18)	
	4640807	Ref	COUNTERBALANCE VALVE ASSEMBLY	D
201	4640771	1	Cartridge, Counterbalance	
201	2900770	1	Seal Kit - 4640771 Cartridge	
202	4640709	1	Cartridge, Vented Counterbalance	
202	2900770	1	Seal Kit - 4640709 Cartridge	
203	3790113	2	O-Ring (Between Valve and Cylinder Block)	

SECTION 5 - CYLINDER

FIGURE 5-29. TELESCOPE CYLINDER ASSEMBLY - E450AJ/M450AJ (SERVICE REPLACEMENT)



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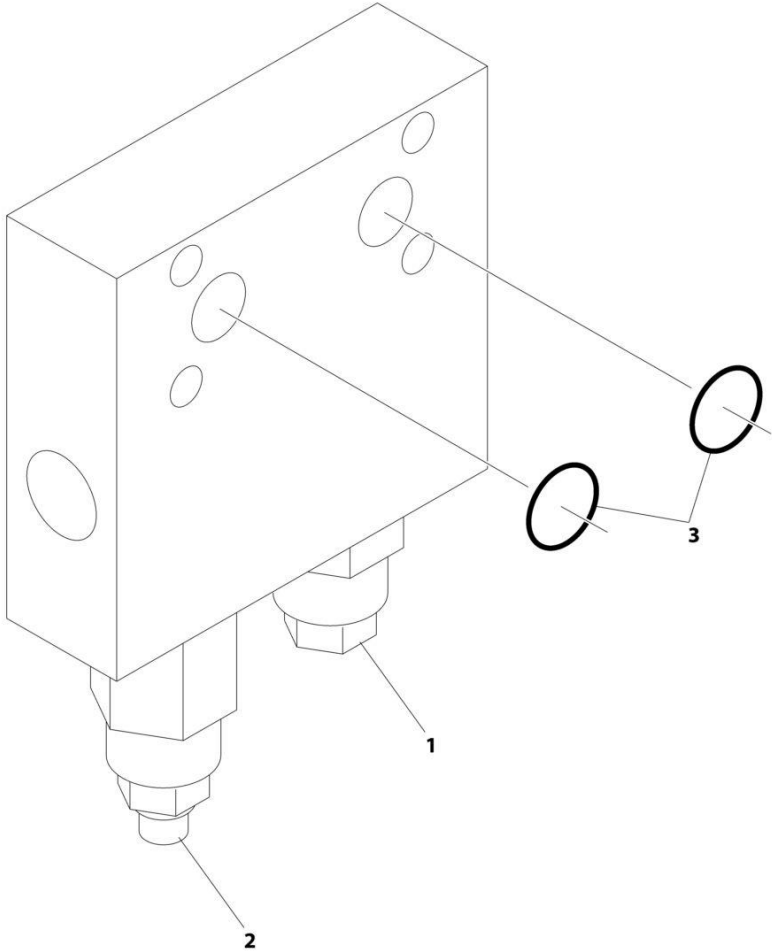
SECTION 5 - CYLINDER

FIGURE 5-29. TELESCOPE CYLINDER ASSEMBLY - E450AJ/M450AJ (SERVICE REPLACEMENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001228015	Ref	TELESCOPE CYLINDER ASSEMBLY	B
		Ref	Note: Original Cylinder may have been replaced with Service Replacement. Identify PN Stamped on Cylinder Before Ordering Parts.	
1	See Note	NSS	Barrel Weldment (Note: Not Available for Purchase)	
2	70006975	1	Rod	
3	70006565	1	Head	
4	70006564	1	Piston	
5	70006974	1	Spacer	
6	70006971	1	Nut, Lock	
7	70006561	1	Cap, End	
8	0641512	4	Bolt, 5/16 x 1-1/2	
9	4640807	1	Counterbalance Valve Assembly (See COUNTERBALANCE VALVE ASSEMBLY for Breakdown)	
10	2220596	1	Fitting, 90 JIC/ORB	
11	2220517	1	Fitting, Cap	
12	2220628	1	Fitting, 90 JIC/ORB	
13	2220516	1	Fitting, Cap	
14	2220883	2	Plug	
15	3311405	2	Nut 1/4 x 20	
16	4751400	4	Flatwasher 1/4	
17	0641424	2	Bolt 1/4 x 3	
18	3340882	2	Wear Pad Assembly	
19	70006413	1	Setscrew	
100	2901903	1	Seal Kit (Includes Items 101-108)	
101	See Note	NSS	Ring, Wear (Note: Use p/n 2901903)	
102	See Note	NSS	O-Ring (Note: Use p/n 2901903)	
103	See Note	NSS	Seal, Piston (Note: Use p/n 2901903)	
104	See Note	NSS	Ring, Wear (Note: Use p/n 2901903)	
105	See Note	NSS	Seal, Rod (Note: Use p/n 2901903)	
106	See Note	NSS	Wiper, Rod (Note: Use p/n 2901903)	
107	See Note	NSS	O-Ring (Note: Use p/n 2901903)	
108	See Note	NSS	Ring, Back-Up (Note: Use p/n 2901903)	

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FIGURE 5-30. COUNTERBALANCE VALVE ASSEMBLY



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SECTION 5 - CYLINDER

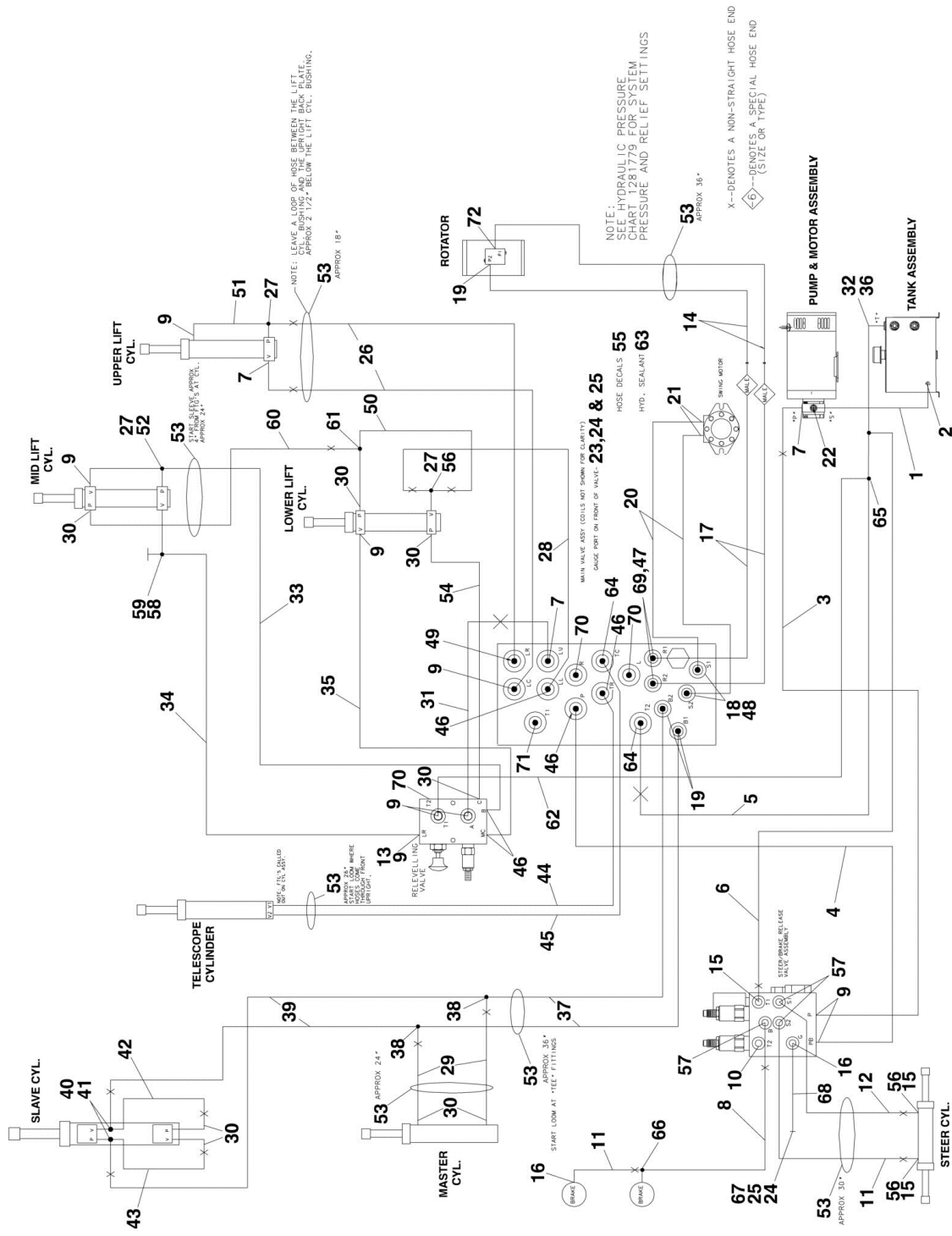
FIGURE 5-30. COUNTERBALANCE VALVE ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	4640807	Ref	COUNTERBALANCE VALVE ASSEMBLY	D
1	4640771	1	Cartridge, Counterbalance	
1	2900770	1	Seal Kit - 4640771 Cartridge	
2	4640709	1	Cartridge, Vented Counterbalance	
2	2900770	1	Seal Kit - 4640709 Cartridge	
3	3790113	2	O-Ring (Between Valve and Cylinder Block)	

SECTION 6 - HYDRAULIC

SECTION 6 - HYDRAULIC

FIGURE 6-1. STANDARD HYDRAULIC DIAGRAM (E/M400A & E/M450A)



SECTION 6 - HYDRAULIC

FIGURE 6-1. STANDARD HYDRAULIC DIAGRAM (E/M400A & E/M450A)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	STANDARD HYDRAULIC DIAGRAM	
	2792506	Ref	Standard Hydraulic Diagram (E/M450A)	8-H
	2792510	Ref	Standard Hydraulic Diagram (E/M400A)	9-H
1	2752675	1	Hose	
2	1320033	1	Clamp	
3	2752487	1	Hose	
4	2752488	1	Hose	
5	2751498	1	Hose	
6	2752476	1	Hose	
7	2220371	AR	Fitting, Straight	
8	2752600	1	Hose	
9	2220473	AR	Fitting, Elbow	
10	2220885	5	Plug	
11	2752595	2	Hose	
12	2752446	1	Hose	
13	2220507	AR	Fitting, Elbow	
14		Ref	Hose Options:	
14	2753337	2	Hose (E/M400A)	
14	2753326	2	Hose (E/M450A)	
15	2220998	3	Fitting, Straight	
16	2220466	AR	Fitting, Elbow	
17		Ref	Hose Options:	
17	2753332	2	Hose (E/M400A)	
17	2752795	2	Hose (E/M450A)	
18	2220415	2	Fitting, Straight	
19	2220502	AR	Fitting, Elbow	
20	2752459	2	Hose	
21	2221033	2	Fitting, Straight	
22	2220593	1	Fitting, Straight	
23	2220873	1	Fitting, Straight	
24	2220428	2	Fitting, Quick Coupling	
25	2220429	2	Dust Cap	
26		Ref	Hose Options:	
26	2753519	2	Hose (E/M400A)	
26	2753050	2	Hose (E/M450A)	
27	2220899	3	Fitting, Tee	
28	2752620	1	Hose	
29		Ref	Hose Options:	
29	2752437	2	Hose (E/M400A)	
29	2752580	2	Hose (E/M450A)	
30	2220472	8	Fitting, Elbow	
31	2750910	1	Hose	
32	2220999	1	Fitting, Tee	
33		Ref	Hose Options:	
33	2753335	1	Hose (E/M400A)	
33	2751127	1	Hose (E/M450A)	
34		Ref	Hose Options:	
34	2753334	1	Hose (E/M400A)	
34	2751126	1	Hose (E/M450A)	
35	2752475	1	Hose	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
36	2220386	1	Fitting, Elbow	
37		Ref	Hose Options:	
37	2753520	2	Hose (E/M400A)	
37	2752585	2	Hose(E/M450A)	
38	2220504	2	Fitting, Tee	
39		Ref	Hose Options:	
39	2753535	2	Hose (E/M400A)	
39	2752572	2	Hose (E/M450A)	
40	2220727	2	Fitting, Straight	
41	2220684	2	Fitting, Tee	
42	2752435	1	Hose	
43	2752573	1	Hose	
44		Ref	Hose Options:	
44	2753474	1	Hose (E/M400A)	
44	2750996	1	Hose (E/M450A)	
45		Ref	Hose Options:	
45	2753475	1	Hose (E/M400A)	
45	2751508	1	Hose (E/M450A)	
46	2220501	AR	Fitting, Elbow	
47	2220502	2	Fitting, Elbow	
48	2220677	2	Fitting, Adapter	
49		Ref	Fitting, Long Options:	
49	2220819	AR	Fitting, Long (Prior to SN 0300067501)	
49	2221147	AR	Fitting, Long (E/M400A) (SN 0300067501 through 0300189901)	
49	2221147	AR	Fitting, Long (E/M450A) (SN 0300067501 through 0300189898)	
50	2752581	1	Hose	
51	4566188	1	Tube	
52		Ref	Tube Options:	
52	4566187	1	Tube (E/M400A)	
52	4566623	1	Tube (E/M450A)	
53	4100026	AR	Nylon, Sleeve	
54	2752983	1	Hose	
55	1702124	1	Hose, Tags	
56	2220609	3	Fitting, Reducer	
57	2220923	3	Fitting, Adapter	
58	2220934	1	Fitting, Tee	
59	4640861	1	Bleeder, Kit	
60	2752440	1	Hose	
61	2220605	1	Fitting, Tee	
62	2752611	1	Hose	
63	0100020	AR	Sealant	
64	2220600	2	Fitting, Straight	
65	2221054	1	Fitting, Tee	
66	2220711	1	Fitting, Tee	
67	2220414	1	Fitting, Straight	
68	2790900	1	Hose	
69	2220909	2	Fitting, Restrictor	
70	2220237	3	Fitting, Plug	
71	2220239	1	Fitting, Plug	
72		Ref	Fitting Options:	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
72	2220466	1	Fitting, Elbow (Prior to SN 0300114239)	
72	2220502	1	Fitting, Elbow (E/M400A) (SN 0300114239 through 0300189901)	
72	2220502	1	Fitting, Elbow (E/M450A) (SN 0300114239 through 0300189898)	

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FIGURE 6-2. STANDARD HYDRAULIC DIAGRAM (E/M450AJ)

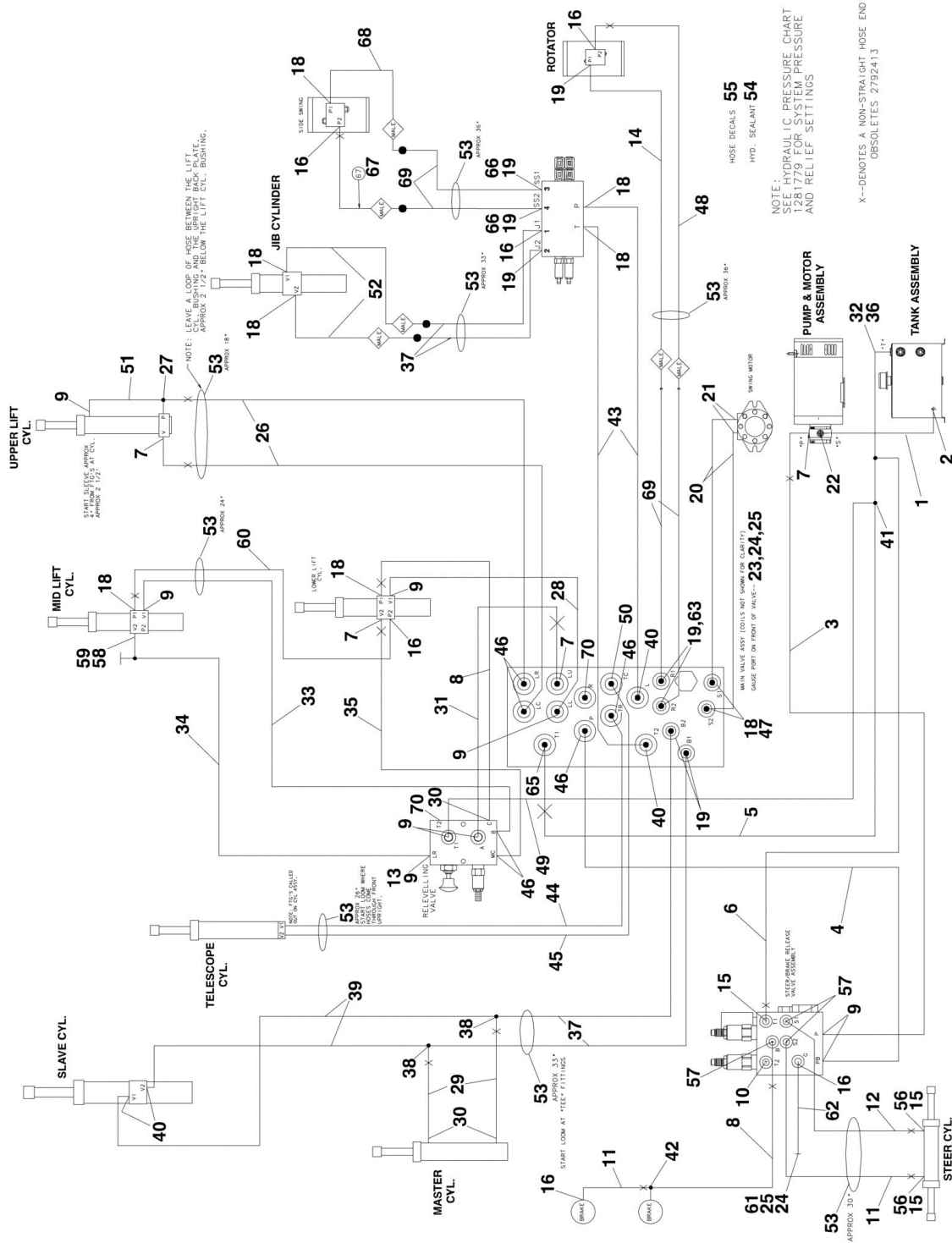
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2792507	Ref	STANDARD HYDRAULIC DIAGRAM	F
1	2752675	1	Hose	
2	1320017	1	Clamp (Use p/n 1320033)	
3	2752487	1	Hose	
4	2752488	1	Hose	
5	2751498	1	Hose	
6	2752476	1	Hose	
7	2220371	4	Fitting, Straight	
8	2752600	2	Hose	
9	2220473	7	Fitting, Elbow	
10	2220885	6	Plug	
11	2752595	2	Hose	
12	2752446	1	Hose	
13	2220507	1	Fitting, Elbow	
14	2753304	1	Hose	
15	2220998	3	Fitting, Straight	
16	2220466	5	Fitting, Elbow	
17	2752795	2	Hose	
18	2220415	9	Fitting, Straight	
19	2220502	5	Fitting, Elbow	
20	2752459	2	Hose	
21	2221033	2	Fitting, Straight	
22	2220593	1	Fitting, Straight	
23	2220873	1	Fitting, Straight	
24	2220428	2	Fitting, Quick Coupling	
25	2220429	2	Dust Cap	
26	2753050	2	Hose	
27	2220899	1	Fitting, Tee	
28	2752466	1	Hose	
29	2752437	2	Hose	
30	2220472	3	Fitting, Elbow	
31	2750910	1	Hose	
32	2220999	1	Fitting, Tee	
33	2753301	1	Hose	
34	2751009	1	Hose	
35	2752611	1	Hose	
36	2220386	1	Fitting, Elbow	
37	2752585	4	Hose	
38		Ref	Fitting, Tee Options:	
38	2220605	2	Fitting, Tee (Prior to SN 0300168138)	
38	2220504	2	Fitting, Tee (SN 0300168138 through 0300189898)	
39	2753302	2	Hose	
40	2220582	4	Fitting, Straight	
41	2221054	1	Fitting, Tee	
42	2220711	1	Fitting, Tee	
43	2752430	2	Hose	
44	2750996	1	Hose	
45	2751508	1	Hose	
46	2220501	8	Fitting, Elbow	
47	2220677	2	Fitting, Elbow	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
48	2753305	1	Hose	
49	2752611	1	Hose	
50	2220600	2	Fitting, Straight	
51	4567946	1	Tube	
52	2753303	2	Hose	
53	4100026	AR	Nylon, Sleeve	
54	0100020	AR	Sealant (Not Shown)	
55	1702124	1	Hose, Tags (Not Shown)	
56	2220609	2	Fitting, Reducer	
57	2220923	3	Fitting, Adapter	
58	2220934	1	Fitting, Tee	
59	4640861	1	Bleeder, Kit	
60	2751414	1	Hose	
61	2220414	1	Fitting, Straight	
62	2750900	1	Hose	
63	2220909	2	Orifice (.015)	
64	2220654	1	Fitting, Straight	
65	2220374	1	Fitting, Straight	
66	2220237	2	Fitting, Plug	

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FIGURE 6-3. STANDARD HYDRAULIC DIAGRAM (E/M400AJP)



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FIGURE 6-3. STANDARD HYDRAULIC DIAGRAM (E/M400AJP)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2792509	Ref	STANDARD HYDRAULIC DIAGRAM	G
1	2752675	1	Hose	
2	1320033	1	Clamp	
3	2752487	1	Hose	
4	2752488	1	Hose	
5	2751498	1	Hose	
6	2752476	1	Hose	
7	2220371	4	Fitting, Straight	
8	2752600	2	Hose	
9	2220473	8	Fitting, Elbow	
10	2220885	1	Plug	
11	2752595	2	Hose	
12	2752446	1	Hose	
13	2220507	1	Fitting, Elbow	
14	2753337	1	Hose	
15	2220998	3	Fitting, Straight	
16	2220466	6	Fitting, Elbow	
18	2220415	9	Fitting, Straight	
19	2220502	8	Fitting, Elbow	
20	2752459	2	Hose	
21	2221033	2	Fitting, Straight	
22	2220593	1	Fitting, Straight	
23	2220873	1	Fitting, Straight	
24	2220428	2	Fitting, Quick Coupling	
25	2220429	2	Dust Cap	
26	2752619	2	Hose	
27	2220899	1	Fitting, Tee	
28	2752466	1	Hose	
29	2752437	2	Hose	
30	2220472	3	Fitting, Elbow	
31	2750910	1	Hose	
32	2220999	1	Fitting, Tee	
33	2753335	1	Hose	
34	2753334	1	Hose	
35	2752611	1	Hose	
36	2220386	1	Fitting, Elbow	
37	2752571	4	Hose	
38		Ref	Fitting, Tee Options:	
38	2220605	2	Fitting, Tee (Prior to SN 0300168138)	
38	2220504	2	Fitting, Tee (SN 0300168138 through 0300189901)	
39	2753333	2	Hose	
40	2220582	4	Fitting, Straight	
41	2221054	1	Fitting, Tee	
42	2220711	1	Fitting, Tee	
43	2752430	2	Hose	
44	2753474	1	Hose	
45	2753475	1	Hose	
46	2220501	7	Fitting, Elbow	
47	2220677	2	Fitting, Elbow	
48	2753336	1	Hose	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
49	2752611	1	Hose	
50	2220600	2	Fitting, Straight	
51	4567946	1	Tube	
52	2753329	2	Hose	
53	4100026	AR	Nylon, Sleeve	
54	0100020	AR	Sealant (Not Shown)	
55	1702124	1	Hose, Tags (Not Shown)	
56	2220609	2	Fitting, Reducer	
57	2220923	3	Fitting, Adapter	
58	2220934	1	Fitting, Tee	
59	4640861	1	Bleeder, Kit	
60	2751890	1	Hose	
61	2220414	1	Fitting, Straight	
62	2750900	1	Hose	
63	2220909	2	Orifice (.015)	
65	2220374	1	Fitting, Straight	
66	2221039	2	Orifice (.022)	
67	2753330	1	Hose	
68	2753331	1	Hose	
69	2753332	4	Hose	
70	2220237	2	Fitting, Plug	

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FIGURE 6-4. HYDRAULIC DIAGRAM LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Note: Diagrams not shown in manual are available from JLG Service/Parts Department.	
	2792334	Ref	Standard Hydraulic Diagram Options:	
	2792506	Ref	Standard Hydraulic Diagram (E/M450A) (Prior to SN 0300062857)	
	2792395	Ref	Standard Hydraulic Diagram (E/M450A) (SN 0300062857 through 0300189898)	
	2792507	Ref	Standard Hydraulic Diagram (E/M450AJ) (Prior to SN 0300062857)	
	2792458	Ref	Standard Hydraulic Diagram (E/M450AJ) (SN 0300062857 through 0300189898)	
	2792510	Ref	Standard Hydraulic Diagram (E/M400A) (Prior to SN 0300062857)	
	2792413	Ref	Standard Hydraulic Diagram (E/M400A) (SN 62857 through 0300189901)	
	2792509	Ref	Standard Hydraulic Diagram (E/M400AJP) (Prior to SN 0300062857)	
		Ref	Standard Hydraulic Diagram (E/M400AJP) (SN 0300062857 through 0300189901)	
		Ref	Standard Hydraulic Schematic Options:	
	2792337	Ref	Standard Hydraulic Schematic (Prior to SN 0300062857)	
	2792505	Ref	Standard Hydraulic Schematic (E/M400) (SN 0300062857 through 0300189901)	
	2792505	Ref	Standard Hydraulic Schematic (E/M450) (SN 0300062857 through 0300189898)	

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FIGURE 7-1. ELECTRICAL DIAGRAM LIST

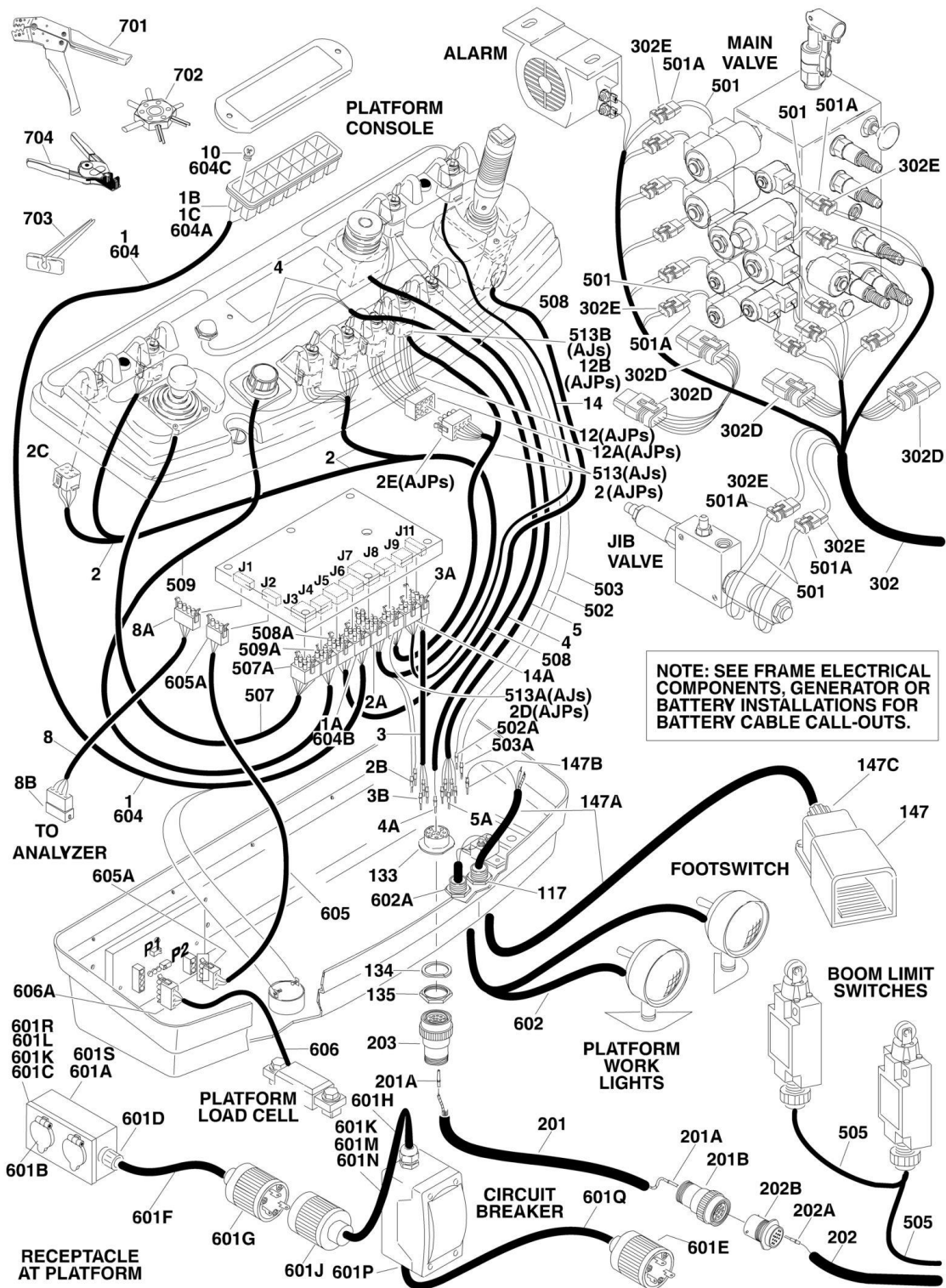
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	Note	Ref	Note: Diagrams not shown in manual are available from JLG Service/Parts Department.	
		Ref	LIGHTS ELECTRICAL DIAGRAMS	
		Ref	Headlights and Taillights	
	4933102	Ref		
	4360336	1	Switch, Toggle (Located on Platform Console Box)	
	3740087	1	Relay (Located in Ground Control Box)	
	4120027	1	Socket, Relay (Located in Ground Control Box)	
	3740063	1	Spring (Located in Ground Control Box)	
	4360448	1	Breaker, Circuit 10 Amp (Located in Ground Control Box)	
		Ref	STROBE LIGHT OPTIONS:	
	0259305	Ref	Strobe Light (Prior to SN 0300169430)	
	1283055	Ref	Strobe Light (Prior to SN 0300169430)	
		Ref	Strobe Light (E/M400) (SN 0300169430 through 0300189901)	
		Ref	Strobe Light (E/M450) (SN 0300169430 through 0300189898)	
	1001149955	Ref	Standard Spec	
	1001158612	Ref	UL Spec	
	4933289	Ref	LSS PLATFORM MODULE ELECTRICAL DIAGRAM	
	0259064	Ref	MOTION ALARM ELECTRICAL DIAGRAM	
	1283055	Ref	MOTION ALARM ELECTRICAL DIAGRAM	
		Ref	PLATFORM ELECTRICAL DIAGRAM	
	4933060	Ref	Platform Electrical Diagram (E/M450A & E/M450AJ)	
	4933181	Ref	Platform Electrical Diagram (E450A & E450AJ) (UL Spec)	
	4933105	Ref	Platform Electrical Diagram (E/M400A & E/M400AJPnarrow)	
	4933060	Ref	Platform Electrical Diagram (E/M400A & E/M400AJPnarrow)	
	4933182	Ref	Platform Electrical Diagram (E400A & E400AJPnarrow) (UL Spec)	
	4933181	Ref	Platform Electrical Diagram (E400A & E400AJPnarrow) (UL Spec)	
	4933317	Ref	SOFT-TOUCH ELECTRICAL DIAGRAM	
		Ref	STANDARD ELECTRICAL DIAGRAMS	
	4933059	Ref	Standard Electrical Diagrams (E/M450A) (Prior to SN 0300057534)	
	4933128	Ref	Standard Electrical Diagrams (E/M450A) (SN 0300057534 through 0300100539)	
	4933388	Ref	Standard Electrical Diagrams (E/M450A) (SN 0300100540 through 0300189898)	
	4933128	Ref	Standard Electrical Diagrams (E/M450AJ) (Prior to SN 0300100540)	
	4933388	Ref	Standard Electrical Diagrams (E/M450AJ) (SN 0300100540 through 0300189898)	
	4933059	Ref	Standard Electrical Diagrams (E/M400A) (Prior to SN 0300057534)	
	4933128	Ref	Standard Electrical Diagrams (E/M400A) (SN 0300057534 through 0300100539)	
	4933388	Ref	Standard Electrical Diagrams (E/M400A) (SN 0300100540 through 0300189901)	
	4933128	Ref	Standard Electrical Diagrams (E/M400AJP) (Prior to SN 0300100540)	
	4933388	Ref	Standard Electrical Diagrams (E/M400AJP) (SN 0300100540 through 0300189901)	

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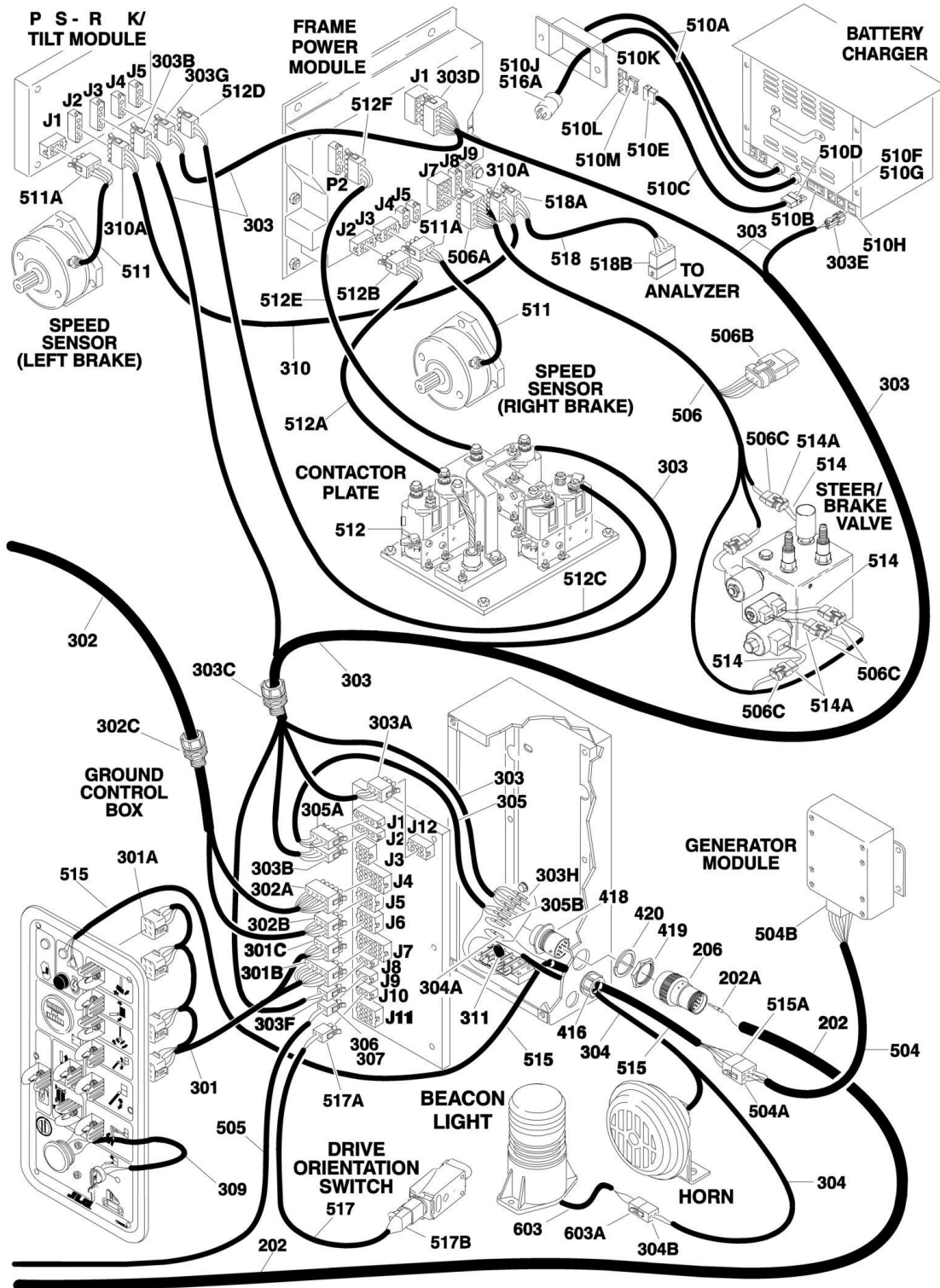
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	STANDARD ELECTRICAL SCHEMATIC	
	1870072	Ref	Standard Electrical Schematic (E/M450A & E/M450AJ) (Prior to SN 0300100540)	
	1870227	Ref	Standard Electrical Schematic (E/M450A & E/M450AJ) (SN 0300100540 through 0300189898)	
	1870072	Ref	Standard Electrical Schematic (E/M400A) (Prior to SN 0300100540)	
	1870227	Ref	Standard Electrical Schematic (E/M400A) (SN 0300100540 through 0300189901)	
	1870126	Ref	Standard Electrical Schematic (E/M400AJP) (Prior to SN 0300100540)	
	1870227	Ref	Standard Electrical Schematic (E/M400AJP) (SN 0300100540 through 0300189901)	

SECTION 7 - ELECTRICAL

FIGURE 7-2. HARNESS COMPONENTS INSTALLATION (WITH MAC CHARGER)



SECTION 7 - ELECTRICAL



SECTION 7 - ELECTRICAL

FIGURE 7-2. HARNESS COMPONENTS INSTALLATION (WITH MAC CHARGER)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	HARNESS COMPONENTS INSTALLATION	
		Ref	PLATFORM BOX ELECTRICAL DIAGRAM	
	4933060	Ref	Standard Spec A and AJ Models	7-L
	4933181	Ref	U/L Rated Spec A and AJ Models	5-G
	4933105	Ref	Standard Spec AJP Models	5-G
	4933182	Ref	U/L Rated Spec AJP Models	5-G
1		Ref	Harness, Indicator Lamp	
1	4922074	1	Harness (Prior to SN 0300141884)	5-H
1	1001109860	1	Harness (E/M400) (SN 0300141884 through 0300189901)	B
1	1001109860	1	Harness (E/M450) (SN 0300141884 through 0300189898)	B
1A	4460265	1	Connector - 9 Position	
1A	4460227	AR	Pin, Male	
1B	4120035	AR	Socket, Lamp	
1C	4460634	AR	Socket (Single Wire)	
1C	4460635	AR	Socket (Two Wire)	
2		Ref	Harness, Function Switch	
2	4922060	1	A and AJ Models	2-C
2	4922303	1	AJP Models	5-D
2A	4460434	1	Connector - 15 Position	
2A	4460226	12	Pin, Male	
2B	4460464	2	Pin, Male	
2C	4460418	4	Connector, Female	
2C	4460419	12	Terminal	
2D	4460225	1	Connector - 6 Position (AJP Models Only)	
2D	4460227	5	Socket, Female	
2E	4460343	1	Connector - 12 Position (AJP Models Only)	
2E	4460227	10	Socket, Female	
3	4922071	1	Harness, Can Bus	2/B
3A	4460321	1	Connector - 4 Position	
3A	4460227	2	Pin, Male	
3A	4460267	1	Pin, Male	
3B	4460464	3	Pin, Male	
4		Ref	Harness, Box Horn Options:	
4	4922118	1	Standard Spec	2-B
4	4922555	1	U/L Rated Spec	1-A
4A	4460464	1	Pin, Male	
5		Ref	Harness, Miscellaneous	
5	4922157	1	Standard Spec	4-D
5	4922556	1	U/L Rated Spec	B
5A	4460464	AR	Pin, Male	
8	4922160	1	Harness, Analyzer	3-C
8A	4460321	1	Connector - 4 Position	
8A	4460226	4	Socket, Female	
8B	4460761	1	Connector, Female - 4 Position	
8B	4460227	4	Pin, Male	
10	2920129	AR	Bulb, Light	
12	4922307	1	Jib Harness (AJP Models Only)	3-C
12A	4460367	1	Connector, Female - 12 Position	
12A	4460226	10	Socket, Female	
12B	4460260	6	Connector, Female	

SECTION 7 - ELECTRICAL

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
12B	4460259	6	Terminal	
14	1001116368	1	Harness, Drive Orientation Override Switch (E/M400) (SN 0300141884 through 0300189901)	A
14	1001116368	1	Harness, Drive Orientation Override Switch (E/M450) (SN 0300141884 through 0300189898)	A
14A	4460225	1	Connector - 6 Position	
14A	4460227	2	Socket, Female	
		Ref	PLATFORM BOX ASSEMBLY COMPONENTS	
117	4460428	1	Connector, Strain Relief	
133	4460752	1	Connector, 14 Position	
134	4460497	1	Nut, Conduit	
135	4460496	1	Lockwasher, Conduit	
147	0272971	1	Footswitch Assembly	B
147A	1060330	7 ft/2.2m	Cable, Electrical - 16/3	
147B	4460464	AR	Pin, Male	
147C	4460071	2	Connector, Strain Relief	
		Ref	BOOM CABLES INSTALLATION	
	0257735	Ref	Boom Cables Installation (E/M450A)	8-G
	0259367	Ref	Boom Cables Installation (E/M450AJ)	4-D
	0270817	Ref	Boom Cables Installation (E/M400A)	4-B
	0259970	Ref	Boom Cables Installation (E/M400AJP)	5-C
201		Ref	Main Boom Harness Assembly Options:	
201	4922178	1	Main Boom Harness Assembly (E/M450A Models)	3
201	4922178	1	Main Boom Harness Assembly (E/M450AJ Models) (Use p/n 4922552)	1
201	4922496	1	Main Boom Harness Assembly (E/M400A Models)	2
201	1060677	26.5 ft/8.1m	Cable, Electrical (E/M450A Models)	
201	1060677	28 ft/8.53m	Cable, Electrical (E/M450AJ Models)	
201	1060677	25.25 ft/7.7m	Cable, Electrical (E/M400A Models)	
201	4922364	1	Main Boom Harness Assembly (E/M400AJP Models) (Prior to SN 0300071419)	1
201	1060780	25.25 ft/7.7m	Cable, Electrical - 18/6 (E400 & M400 Models)	
201	1060781	25.25 ft/7.7m	Cable, Electrical - 18/5 (E400 & M400 Models)	
201	4922496	1	Main Boom Harness Assembly (E/M400AJP Models) (SN 0300071419 through 0300189901)	2
201	1060677	25.25 ft/7.7m	Cable, Electrical (E400 & M400 Models)	
201A	4460465	28	Socket, Female	
201B	4460754	1	Connector - 14 Position	
202		Ref	Tower Boom Harness Assembly Options:	
202	4922179	1	Tower Boom Harness Assembly (E/M450A & E/M450AJ Models)	3
202	4922363	1	Tower Boom Harness Assembly (E/M400AJP Models)	3
202	4922495	1	Tower Boom Harness Assembly (E/M400A Models) (Prior to SN 0300071418)	2
202	4922363	1	Tower Boom Harness Assembly (E/M400A Models) (SN 0300071418 through 0300189901)	3
202	1060677	Ref	Cable, Electrical Options: - 10/4-18/16	
202	1060677	35.5 ft/11m	Cable, Electrical E/M450A & E/M450AJ Models	

SECTION 7 - ELECTRICAL

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
202	1060677	32 ft/9.8m	Cable, Electrical E/M400A & E/M400AJP Models	
202A	4460464	28	Pin, Male	
202B		Ref	Connector - 14 Position Options:	
202B	4460495	1	Terminal, Connector (Prior to SN 0300077939)	
202B	4460752	1	Deutsch Receptacles (E/M400) (SN 0300077939 through 0300189901)	
202B	4460752	1	Deutsch Receptacles (E/M450) (SN 0300077939 through 0300189898)	
203	4460754	1	Connector - 14 Position	
206	4460753	1	Connector - 14 Position	
		Ref	GROUND CONTROL BOX DIAGRAM	
	4933059	Ref	Ground Control Box Diagram E/M450A (Prior to SN 0300057534)	3-G
	4933128	Ref	Ground Control Box Diagram E/M450A (SN 0300057534 through 0300100539)	2-C
	4933388	Ref	Ground Control Box Diagram E/M450A (SN 0300100540 through 0300189898)	2-C
	4933128	Ref	Ground Control Box Diagram E/M450AJ, E/M400A & E/M400AJP (Prior to SN 0300100540)	2-C
	4933388	Ref	Ground Control Box Diagram E/M450AJ, E/M400A & E/M400AJP (SN 0300100540 through 0300189898)	2-C
301		Ref	Function Switch Harness Assembly Options:	
301	4922058	1	Function Switch Harness Assembly E/M450A (Prior to SN 0300057534)	4-D
301	4922366	1	Function Switch Harness Assembly E/M450A (SN 0300057534 through 0300100539)	2-B
301	4923625	1	Function Switch Harness Assembly E/M450A (SN 0300100540 through 0300189898)	1-C
301	4922366	1	Function Switch Harness Assembly E/M450AJ, E/M400A & E/M400AJP (Prior to SN 0300100540)	2-B
301	4923625	1	Function Switch Harness Assembly E/M450AJ, E/M400A & E/M400AJP (SN 0300100540 through 0300189898)	1-B
301A	4460418	AR	Connector - 6 Position	
301A	4460419	AR	Terminal, Female	
301B	4460434	1	Connector - 15 Position	
301B	4460226	15	Socket, Female	
301C	4460265	1	Connector - 9 Position	
301C	4460227	3	Pin, Male	
302		Ref	Harness Assembly - Valve	
302	4922057	1	Harness Assembly - Valve E/M450A (Prior to SN 0300057534)	4-C
302	4922367	1	Harness Assembly - Valve E/M450A (SN 0300057534 through 0300189898)	2-C
302	4922367	1	Harness Assembly - Valve E/M450AJ, E/M400A & E/M400AJP	2-C
302A	4460434	1	Connector - 15 Position	
302A	4460227	14	Pin, Male	
302B	4460265	1	Connector - 9 Position	
302B	4460226	4	Socket, Female	
302C	4460425	1	Connector, Strain Relief	
302D		Ref	Components Options:	
302D		Ref	Components E/M450A (Prior to SN 0300057534)	
302D	4460744	6	Connector, 6 Position	
302D	4460746	24	Socket, Female	
302D	4460745	4	Lock, Secondary	

SECTION 7 - ELECTRICAL

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
302D	4460749	4	Cap, Shell	
302D	4460750	4	Bar, Buss - 6 Position	
302D	4460458	24	Seal	
302D	4460751	4	Clip, Mounting	
302D		Ref	Components (E/M400) (SN 0300057534 through 0300189901)	
302D		Ref	Components (E/M450) (SN 0300057534 through 0300189898)	
302D	4460836	2	Connector, 12 Position	
302D	4460837	2	Housing, Terminal - 12 Position	
302D	4460465	22	Pin, Terminal	
302E	4460742	17	Connector - 2 Position	
302E	4460743	34	Terminal, Female	
302E	4460458	34	Seal	
303	4922104	1	Harness Assembly - Turntable/Frame (Includes Item 304 Also)	7-G
303A	4460225	1	Connector - 6 Position	
303A	4460268	6	Socket, Female	
303B	4460321	2	Connector - 4 Position	
303B	4460227	2	Pin, Male	
303B	4460267	8	Pin, Male	
303C	4460425	1	Connector, Strain Relief	
303D	4460343	1	Connector, 12 Position	
303D	4460268	12	Socket, Female	
303E	4460320	1	Connector, 2 Position	
303E	4460268	2	Socket, Female	
303F	4460320	1	Connector, 2 Position	
303F	4460267	2	Pin, Male	
303G	4460326	1	Connector, 3 Position	
303G	4460267	3	Pin, Male	
303H	4460465	6	Socket, Female	
304	4922073	1	Harness Assembly - Horn/Beacon (A Models Only)	5-E
304	3990001	1	Diode (Not Shown)	
304A	4460465	1	Socket, Female	
304B	4460424	1	Connector, 2 Position	
304B	4460268	2	Socket, Female	
305	4922117	1	Harness Assembly - Ground Control Can	3-B
305A	4460321	1	Connector - 4 Position	
305A	4460227	2	Pin, Male	
305A	4460267	1	Pin, Male	
305B	4460465	1	Socket, Female	
306	4460320	1	Connector, 2 Position	
307	4460268	2	Socket, Female	
309	4922267	1	Harness Assembly - Power Supply	3-C
310	4922263	1	Harness Assembly - Posi-Track Module Can	2-A
310A	4460321	2	Connector - 4 Position	
310A	4460227	4	Pin, Male	
310A	4460267	2	Pin, Male	
311	3990106	1	Limiters, Inrush	
		Ref	GROUND CONTROL BOX ASSY COMPONENTS	
416	4460425	1	Connector, Strain Relief	
418	4460495	1	Connector, Male - 14 Position	
419	4460497	1	Nut, Conduit	

SECTION 7 - ELECTRICAL

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
420	4460496	1	Lockwasher	
		Ref	STANDARD HARNESS COMPONENTS	
501	See Note	17	Solenoid Harness (Note: Not Available - Purchase Complete Solenoid)	
501A	4460867	17	Connector, Female - 2 Position	
501A	4460979	34	Terminal, Male	
501A	4460458	34	Seal	
502	4922222	1	Generator Enable Harness (Yellow/Red) (M450 & M400 Only)	2-B
502A	4460464	1	Pin, Male	
503	4922223	1	Generator Enable Harness (White/Yellow) (M450A & M400 Only)	1-A
503A	4460464	1	Pin, Male	
504		Ref	Generator Harness Options: (M450 & M400 Only)	
504	7020155	1	Generator Harness (Prior to SN 0300063771)	
504	7023486	1	Generator Harness (SN 0300063771 through 0300088538)	
504	70000328	1	Generator Harness (M400) (SN 0300088539 through 0300189901)	
504	70000328	1	Generator Harness (M450) (SN 0300088539 through 0300189898)	
504A	4460224	1	Connector, Female - 6 Position	
504A	4460809	1	Plug, Seal	
504A	4460268	5	Socket, Female	
504B	7023337	1	Receptacle - 35 Position	
504B	7023338	35	Pin, Male	
505	See Note	1	Boom Limit Switches Harness (Note: Not Available - Purchase Complete Limit Switch)	
505	1060341	58 ft/17.7m	Cable, Electrical - 16/2 (Prior to SN 0300063768)	
505	4922614	1	Cable, Electrical (Lower) (Includes Limit Switch) (E/M400) (SN 0300063768 through 0300189901)	
505	4922614	1	Cable, Electrical (Lower) (Includes Limit Switch) (E/M450) (SN 0300063768 through 0300189898)	
505	4922613	1	Cable, Electrical (Upper) (Includes Limit Switch) (E/M400) (SN 0300063768 through 0300189901)	
505	4922613	1	Cable, Electrical (Upper) (Includes Limit Switch) (E/M450) (SN 0300063768 through 0300189898)	
506	4922328	1	Harness Assembly - Valve	
506A	4460434	1	Connector - 15 Position	
506A	4460226	7	Socket, Female	
506B	4460749	1	Cap, Shell	
506B	4460750	1	Bar, Buss - 6 Position	
506B	4460744	1	Connector, 6 Position	
506B	4460745	1	Lock, Secondary	
506B	4460746	5	Socket, Female	
506B	4460458	6	Seal	
506B	4460748	1	Plug, Cavity	
506B	4460751	1	Clip, Mounting	
506C	4460742	5	Connector - 2 Position	
506C	4460743	10	Terminal, Female	
506C	4460458	10	Seal	
507	See Note	1	Controller Harness Assembly (Lift and Swing) (Note: Not Available - Refer to PLATFORM SECTION for Parts Breakdown)	
507A	4460265	1	Connector - 9 Position	
507A	4460226	8	Socket, Female	
508	See Note	1	Controller Harness/Circuit Board Assembly (Drive and Steer)	

SECTION 7 - ELECTRICAL

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
			(Note: Not Available - Refer to PLATFORM SECTION for Parts Breakdown)	
508A	4460265	1	Connector - 9 Position	
508A	4460226	7	Socket, Female	
509	See Note	1	Controller Harness Assembly (Speed) (Note: Not Available - Refer to PLATFORM SECTION for Parts Breakdown)	
509A	4460225	1	Connector - 6 Position	
509A	4460226	4	Socket, Female	
509A	4460226	4	Socket, Female	
510		Ref	Battery Charger Components	
510A		Ref	AC Cord Options:	
510A	1060777	1	AC Cord (ANSI Export Spec) (Prior to SN 0300082279)	
510A	1060759	1	AC Cord (ANSI Export Spec) (E/M400) (SN 0300082279 through 0300189901)	
510A	1060759	1	AC Cord (ANSI Export Spec) (E/M450) (SN 0300082279 through 0300189898)	
510A	1060776	1	AC Cord (ANSI Spec and Japanese Spec) (Prior to SN 0300082279)	
510A	1060751	1	AC Cord (ANSI Spec and Japanese Spec) (E/M400) (SN 0300082279 through 0300189901)	
510A	1060751	1	AC Cord (ANSI Spec and Japanese Spec) (E/M450) (SN 0300082279 through 0300189898)	
510B	7020693	1	LED Internal Harness	
510B	4460761	1	Connector, Female - 4 Position	
510B	4460227	4	Male Pin	
510C	1060778	1	LED Remote Harness	
510D	4460321	1	Connector - 4 Position	
510D	4460226	4	Socket, Female	
510E	4460761	1	Connector, Female - 4 Position	
510E	4460226	4	Socket, Female	
510F		Ref	DC Cord Options:	
510F	7020644	1	Charger with Automotive Fuse	
510F	7022909	1	Charger with Bussman Fuse	
510G	7011590	1	Connector, DC	
510H	7011621	1	Connector, Enable Switch	
510J		Ref	Plug, Connector (Not Supplied with Charger)	
510J	4460138	1	ANSI Spec	
510J	See Note	1	ANSI Export Spec (Note: Not Available - Purchase Locally)	
510J	4460138	1	Japanese Spec	
510K	4460428	1	Connector, Strain Relief (Not Supplied with Charger)	
510L	0610131	1	LED Assembly (Not Supplied with Charger)	
510M	4460321	1	Connector - 4 Position	
510M	4460227	4	Male Pin	
511	3990105	2	Speed Sensor Harness (P/N 3990105 Includes Sensor)	
511A	4460225	1	Connector - 6 Position	
511A	4460226	4	Socket, Female	
512		Ref	Contactora Plate Assembly Options:	
512	1600294	1	Standard Spec	
512	1600300	1	UL/EE Spec	
512A		Ref	Contactora Harness Options:	
512A	7022003	1	Standard Spec	
512A	7022008	1	UL/EE Spec	
512B	4460225	1	Connector - 6 Position	

SECTION 7 - ELECTRICAL

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
512B	4460226	6	Socket, Female	
512C		Ref	Posi-Track Harness	
512C	7022004	1	Standard Spec	
512C	Not Required	0	UL/EE Spec	
512D	4460326	1	Connector - 3 Position	
512D	4460227	3	Pin, Male	
512E	7022005	1	Shunt Harness	
512F	4460321	1	Connector - 4 Position	
512F	4460227	4	Pin, Male	
513	4922294	1	Jib Harness (AJ Models Only)	1-B
513A	4460225	1	Connector - 6 Position	
513A	4460227	3	Pin, Male	
513B	4460418	1	Connector, Female	
513B	4460419	3	Terminal	
514	See Note	5	Solenoid Harnesses - Steer/Brake Valve (Note: Not Available - Refer to PLATFORM SECTION for Parts Breakdown)	
514A	4460867	5	Connector, Female - 2 Position	
514A	4460979	10	Terminal, Male	
514A	4460458	10	Seal	
515	4922319	1	Harness, Generator to Ground Control Box	1-A
515A	4460225	1	Connector - 6 Position	
515A	4460807	1	Seal, Terminal	
515A	4460808	1	Seal, Terminal	
515A	4460809	1	Pin, Terminal	
515A	4460267	5	Pin, Terminal	
516	Not Required	0	Not Required	
517	1001116522	1	Harness, Drive Orientation Limit Switch (E/M400) (SN 0300141884 through 0300189901)	B
517	1001116522	1	Harness, Drive Orientation Limit Switch (E/M450) (SN 0300141884 through 0300189898)	B
517A	4460320	1	Connector - 2 Position	
517A	4460227	2	Pin, Male	
517B	4460884	1	Connector - 4 Position	
517B	4460465	2	Socket, Female	
517B	4460466	2	Seal	
518	4922160	1	Harness, Analyzer	3-C
518A	4460321	1	Connector - 4 Position	
518A	4460226	4	Socket, Female	
518B	4460761	1	Connector, Female - 4 Position	
518B	4460227	4	Pin, Male	
		Ref	OPTIONAL HARNESS COMPONENTS	
601		Ref	AC to Platform Receptacle Components Options:	
601	0259123	Ref	110V Receptacle (E/M450 ANSI)	5
601	0270013	Ref	110V Receptacle (E/M400 ANSI and ANSI Export)	5
601	0259125	Ref	220V Receptacle (E/M450 ANSI)	4
601	0270012	Ref	220V Receptacle (E/M400 ANSI)	4
601	0253717	Ref	220V Receptacle (E/M400 ANSI Export) (Prior to SN 0300062642)	1
601	0271464	Ref	220V Receptacle (E/M400 ANSI and ANSI Export) (SN 0300062642 through 0300189901)	2
601	0259127	Ref	220V Receptacle (E/M450 ANSI Export)	2
601A	0860038	1	Box, Switch	

SECTION 7 - ELECTRICAL

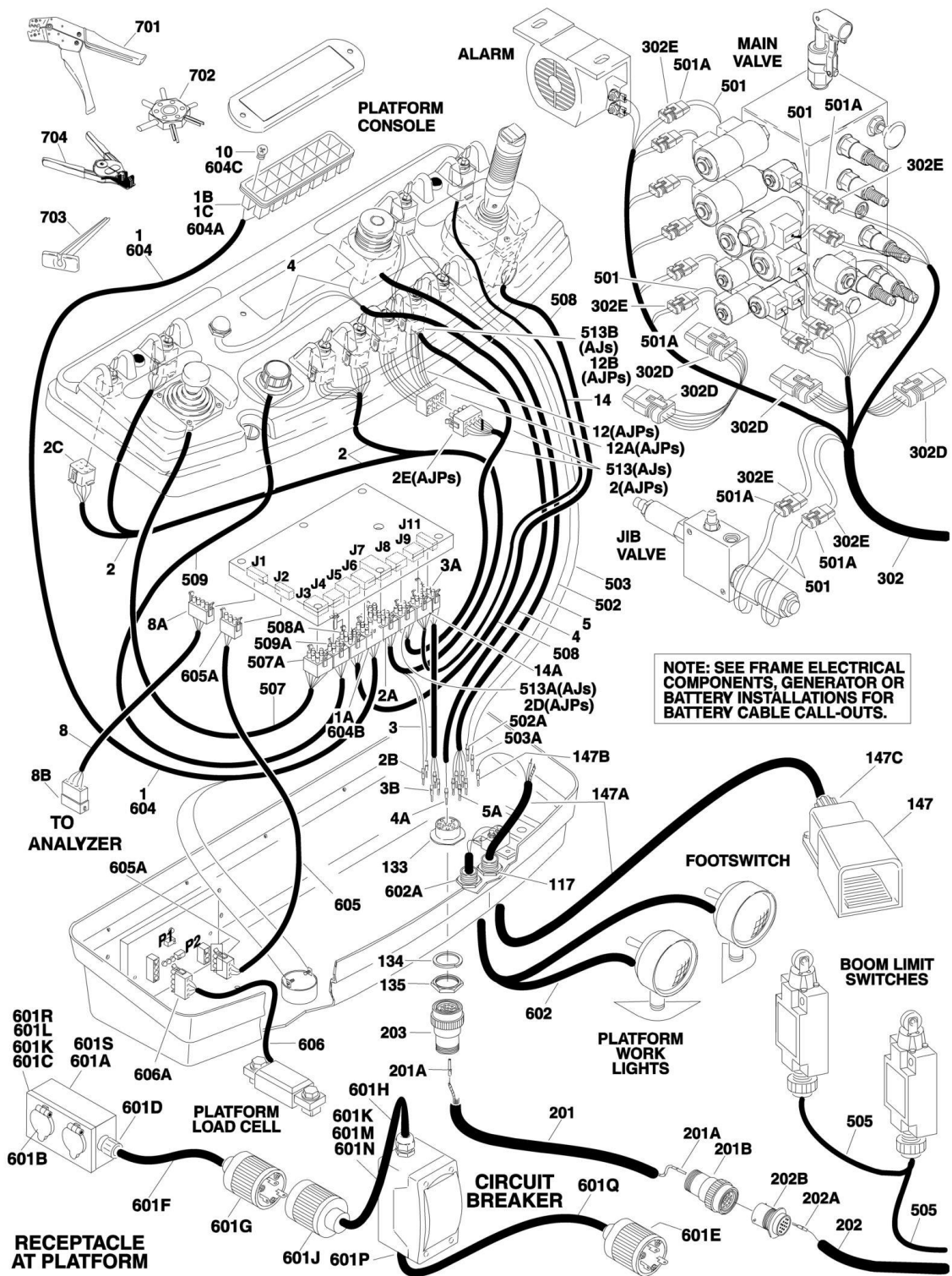
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
601B		Ref	Receptacle Options:	
601B	4460346	1	110V GFI (ANSI)	
601B	4460125	1	220V GFI (ANSI)	
601B	See Note	1	220V GFI (ANSI Export) (Note: Not Available - Purchase Locally)	
601C		Ref	Shield, Cover Options:	
601C	4060700	1	110V GFI (ANSI) (Side Hinged Cover)	
601C	1001110873	1	110V GFI (ANSI) (Top Hinged Cover)	
601C	4060092	1	220V GFI (ANSI)	
601C	See Note	1	220V GFI (ANSI Export) (Note: Not Available - Purchase Locally)	
601D		Ref	Connector, Strain Relief Options:	
601D	4460071	1	110V GFI (ANSI)	
601D	4460071	1	220V GFI (ANSI)	
601D	See Note	1	220V GFI (ANSI Export) (Note: Not Available - Purchase Locally)	
601E		Ref	Plug, Male Options:	
601E	4460205	1	110V GFI (ANSI)	
601E	4460233	1	220V GFI (ANSI)	
601E	See Note	1	220V GFI (ANSI Export) (Note: Not Available - Purchase Locally)	
601F		Ref	Harness (Main Boom) Options:	
601F	4921593	1	Harness (E/M450 ANSI) (Prior to SN 0300063775)	1-A
601F	4922608	1	Harness (E/M450 ANSI) (SN 0300063775 through 0300189898)	1-A
601F	4921569	1	Harness (E/M400 ANSI) (Prior to SN 0300063775)	1-A
601F	4922608	1	Harness (E/M400 ANSI) (SN 0300063775 through 0300189901)	4-A
601F	4921595	1	Harness (E/M450 ANSI Export) (Prior to SN 0300063775)	2-A
601F	4922610	1	Harness (E/M450 ANSI Export) (SN 0300063775 through 0300189898)	1-A
601F	4921571	1	Harness (E/M400 ANSI Export) (Prior to SN 0300062642)	2-A
601F	4922610	1	Harness (E/M400 ANSI Export) (SN 0300062642 through 0300189901)	1-A
601F		Ref	Electrical Cable Options:	
601F	1060494	AR	Electrical Cable E/M450 ANSI (12/3)	
601F	1060494	AR	Electrical Cable E/M400 ANSI (12/3)	
601F	1060461	AR	Electrical Cable E/M450 ANSI Export (12/3)	
601F	1060461	AR	Electrical Cable E/M400 ANSI Export (12/3)	
601G		Ref	Plug, Male Options:	
601G	4460205	1	ANSI Spec	
601G	4460709	1	ANSI Export Spec	
601H		Ref	Harness (Tower Boom) Options:	
601H	4921592	1	Harness (M/E450 ANSI) (Prior to SN 0300063775)	1-A
601H	4922607	1	Harness (M/E450 ANSI) (SN 0300063775 through 0300189898)	1-A
601H	4921568	1	Harness (M/E400 ANSI) (Prior to SN 0300063775)	1-A
601H	4922611	1	Harness (M/E400 ANSI) (SN 0300063775 through 0300189901)	1-A
601H	4921594	1	Harness (M/E450 ANSI Export) (Prior to SN 0300063775)	1-A
601H	4922609	1	Harness (M/E450 ANSI Export) (SN 0300063775 through 0300189898)	2-A
601H	4921570	1	Harness (M/E400 ANSI Export) (Prior to SN 0300062642)	2-A
601H	4922612	1	Harness (M/E400 ANSI Export) (SN 0300062642 through	1-A

SECTION 7 - ELECTRICAL

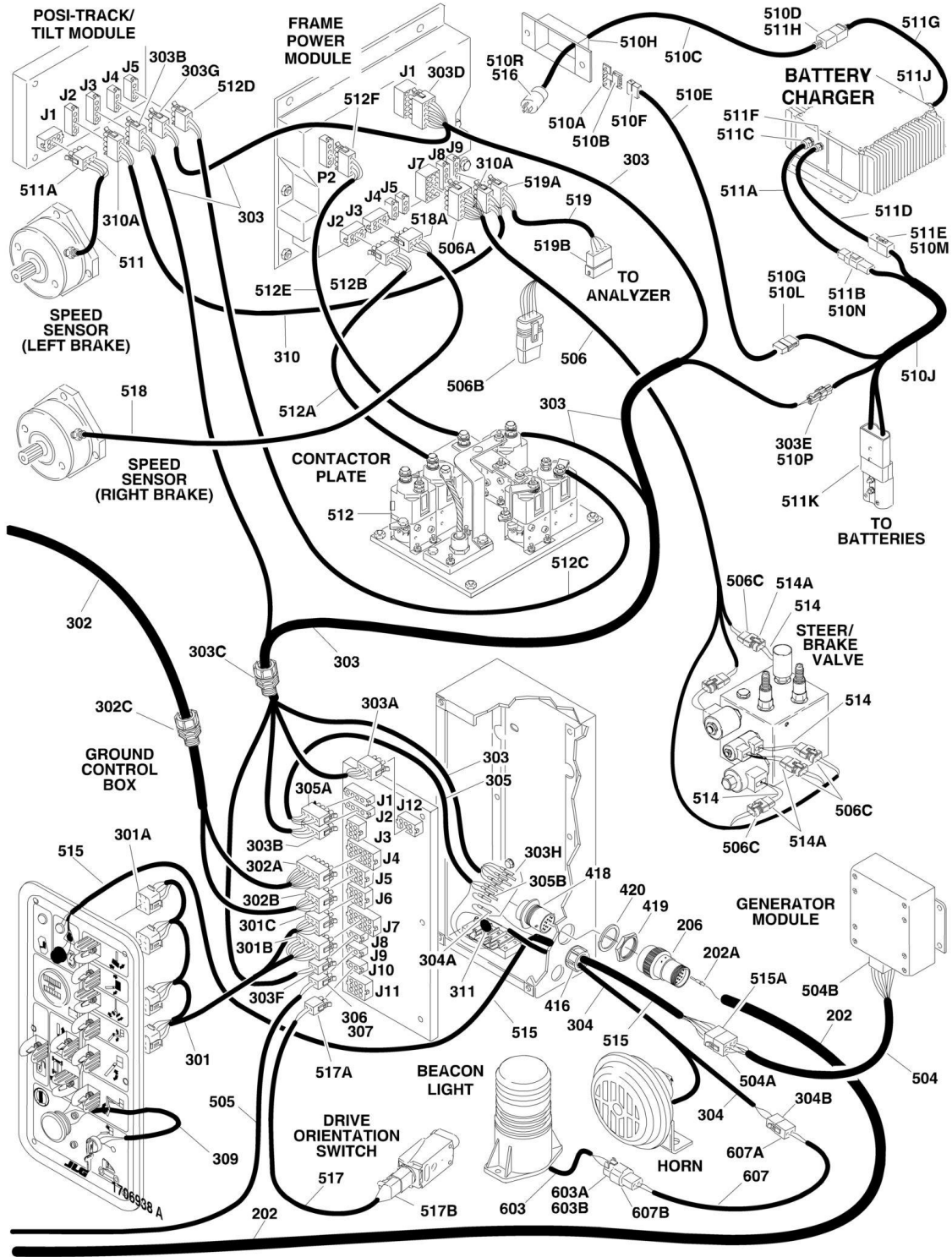
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
			0300189901)	
601H		Ref	Electrical Cable Options:	
601H	1060494	AR	Electrical Cable E/M450 ANSI (12/3)	
601H	1060494	AR	Electrical Cable E/M400 ANSI (12/3)	
601H	1060461	AR	Electrical Cable E/M450 ANSI Export (12/3)	
601H	1060461	AR	Electrical Cable E/M400 ANSI Export (12/3)	
601J		Ref	Connector, Female	
601J	4460134	1	ANSI Spec	
601J	4460710	1	ANSI Export Spec	
601 Kto 601	Not Required	0	Not Required	
601Q	See Note	AR	Cable (Note: Part of Item 601H)	
601 Rto 601	Not Required	0	Not Required	
602	2920095	2	Platform Worklights Harness (Includes Light and Wire Only)	
602A	4460428	1	Connector, Strain Relief	
603	See Note	1	Strobe Light Harness (Note: Not Available - Purchase Complete Strobe Light)	
603A	4460320	1	Plug, Male, 2 Position	
603A	4460268	2	Socket, Female	
604 to 606	Not Required	0	Not Required	
		Ref	TOOLS	
701	7002821	1	Crimper (For Wire to Pin/Socket Connections)	
702	7002823	1	Extractor (For Removal of Pin/Socket from Connectors)	
703	4460467	1	Extractor, Pin (Blue 16-18 Gauge) (For Removal of Pin/Socket from Connectors)	
703	4460510	1	Extractor, Pin (Yellow 12-14 Gauge) (For Removal of Pin/Socket from Connectors)	
704	7002828	1	Stripper, Wire	
705	2901443	1	Analyzer, Machine (Not Shown)	

SECTION 7 - ELECTRICAL

FIGURE 7-3. HARNESS COMPONENTS INSTALLATION (WITH DELTA-Q CHARGER)



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FIGURE 7-3. HARNESS COMPONENTS INSTALLATION (WITH DELTA-Q CHARGER)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM BOX ELECTRICAL DIAGRAM	
	4933060	Ref	Standard Spec A and AJ Models	7-L
	4933181	Ref	U/L Rated Spec A and AJ Models	5-G
	4933105	Ref	Standard Spec AJP Models	5-G
	4933182	Ref	U/L Rated Spec AJP Models	5-G
1	1001109860	1	Harness, Indicator Lamp	B
1A	4460265	1	Connector - 9 Position	
1A	4460227	AR	Pin, Male	
1B	4120035	AR	Socket, Lamp	
1C	4460634	AR	Socket (Single Wire)	
1C	4460635	AR	Socket (Two Wire)	
2		Ref	Harness, Function Switch	
2	4922060	1	A and AJ Models	2-C
2	4922303	1	AJP Models	5-D
2A	4460434	1	Connector - 15 Position	
2A	4460226	12	Pin, Male	
2B	4460464	2	Pin, Male	
2C	4460418	4	Connector, Female	
2C	4460419	12	Terminal	
2D	4460225	1	Connector - 6 Position (AJP Models Only)	
2D	4460227	5	Socket, Female	
2E	4460343	1	Connector - 12 Position (AJP Models Only)	
2E	4460227	10	Socket, Female	
3	4922071	1	Harness, Can Bus	2-B
3A	4460321	1	Connector - 4 Position	
3A	4460227	2	Pin, Male	
3A	4460267	1	Pin, Male	
3B	4460464	3	Pin, Male	
4		Ref	Harness, Box Horn Options:	
4	4922118	1	Standard Spec	2-B
4	4922555	1	U/L Rated Spec	1-A
4A	4460464	1	Pin, Male	
5		Ref	Harness, Miscellaneous	
5	4922157	1	Standard Spec	4-D
5	4922556	1	U/L Rated Spec	B
5A	4460464	AR	Pin, Male	
8	4922160	1	Harness, Analyzer	3-C
8A	4460321	1	Connector - 4 Position	
8A	4460226	4	Socket, Female	
8B	4460761	1	Connector, Female - 4 Position	
8B	4460227	4	Pin, Male	
10	2920129	AR	Bulb, Light	
12	4922307	1	Jib Harness (AJP Models Only)	3-C
12A	4460367	1	Connector, Female - 12 Position	
12A	4460226	10	Socket, Female	
12B	4460260	6	Connector, Female	
12B	4460259	6	Terminal	
14	1001116368	1	Harness, Drive Orientation Override Switch	A
14A	4460225	1	Connector - 6 Position	
14A	4460227	2	Socket, Female	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM BOX ASSEMBLY COMPONENTS	
117	4460428	1	Connector, Strain Relief	
133	4460752	1	Connector, 14 Position	
134	4460497	1	Nut, Conduit	
135	4460496	1	Lockwasher, Conduit	
147	0272971	1	Footswitch Assembly	B
147A	1060330	7 ft/2.2m	Cable, Electrical - 16/3	
147B	4460464	AR	Pin, Male	
147C	4460071	2	Connector, Strain Relief	
		Ref	BOOM CABLES INSTALLATION	
	0257735	Ref	Boom Cables Installation (E/M450A)	8-G
	0259367	Ref	Boom Cables Installation (E/M450AJ)	4-D
	0270817	Ref	Boom Cables Installation (E/M400A)	4-B
	0259970	Ref	Boom Cables Installation (E/M400AJP)	5-C
201		Ref	Main Boom Harness Assembly Options:	
201	4922178	1	Main Boom Harness Assembly (E/M450A Models)	3
201	4922552	1	Main Boom Harness Assembly (E/M450AJ Models)	1
201	4922496	1	Main Boom Harness Assembly (E/M400A Models)	2
201	1060677	26.5 ft/8.1m	Cable, Electrical (E/M450A Models)	
201	1060677	28 ft/8.53m	Cable, Electrical (E/M450AJ Models)	
201	1060677	25.25 ft/7.7m	Cable, Electrical (E/M400A Models)	
201	4922496	1	Cable, Electrical E/M400AJP Models	2
201	1060677	25.25 ft/7.7m	Cable, Electrical (E400 & M400 Models)	
201A	4460465	28	Socket, Female	
201B	4460754	1	Connector - 14 Position	
202		Ref	Tower Boom Harness Assembly Options:	
202	4922179	1	Tower Boom Harness Assembly (E/M450A & E/M450AJ Models)	3
202	4922363	1	Tower Boom Harness Assembly (E/M400AJP Models)	3
202	4922363	1	Tower Boom Harness Assembly (E/M400A Models)	3
202	1060677	Ref	Cable, Electrical Options: - 10/4-18/16	
202	1060677	35.5 ft/11m	Cable, Electrical E/M450A & E/M450AJ Models	
202	1060677	32 ft/9.8m	Cable, Electrical E/M400A & E/M400AJP Models	
202A	4460464	28	Pin, Male	
202B	4460752	1	Connector - 14 Position	
203	4460754	1	Connector - 14 Position	
206	4460753	1	Connector - 14 Position	
		Ref	GROUND CONTROL BOX DIAGRAM	
	4933388	Ref	Ground Control Box (E/M450A)	2-C
	4933388	Ref	Ground Control Box (E/M450AJ, E/M400A & E/M400AJP)	
301		Ref	Function Switch Harness Assembly Options:	
301	4923625	1	Function Switch Harness Assembly (E/M450A)	1-C
301	4923625	1	Function Switch Harness Assembly (E/M450AJ, E/M400A & E/M400AJP)	1-B
301A	4460418	AR	Connector - 6 Position	
301A	4460419	AR	Terminal, Female	
301B	4460434	1	Connector - 15 Position	
301B	4460226	15	Socket, Female	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
301C	4460265	1	Connector- 9 Position	
301C	4460227	3	Pin, Male	
302		Ref	Harness Assembly - Valve	
302	4922367	1	Harness Assembly (E/M450A)	2-C
302	4922367	1	Harness Assembly (E/M450AJ, E/M400A & E/M400AJP)	2-C
302A	4460434	1	Connector - 15 Position	
302A	4460227	14	Pin, Male	
302B	4460265	1	Connector - 9 Position	
302B	4460226	4	Socket, Female	
302C	4460425	1	Connector, Strain Relief	
302D	4460836	2	Connector, 12 Position	
302D	4460837	2	Housing, Terminal - 12 Position	
302D	4460465	22	Pin, Terminal	
302E	4460742	17	Connector - 2 Position	
302E	4460743	34	Terminal, Female	
302E	4460458	34	Seal	
303	4922104	1	Harness Assembly - Turntable/Frame (Includes Item 304 Also)	7-G
303A	4460225	1	Connector - 6 Position	
303A	4460268	6	Socket, Female	
303B	4460321	2	Connector - 4 Position	
303B	4460227	2	Pin, Male	
303B	4460267	8	Pin, Male	
303C	4460425	1	Connector, Strain Relief	
303D	4460343	1	Connector, 12 Position	
303D	4460268	12	Socket, Female	
303E	4460320	1	Connector, 2 Position	
303E	4460268	2	Socket, Female	
303F	4460320	1	Connector, 2 Position	
303F	4460267	2	Pin, Male	
303G	4460326	1	Connector, 3 Position	
303G	4460267	3	Pin, Male	
303H	4460465	6	Socket, Female	
304	4922073	1	Harness Assembly - Horn/Beacon (A Models Only)	5-E
304	3990001	1	Diode (Not Shown)	
304A	4460465	1	Socket, Female	
304B	4460424	1	Connector, 2 Position	
304B	4460268	2	Socket, Female	
305	4922117	1	Harness Assembly - Ground Control Can	3-B
305A	4460321	1	Connector - 4 Position	
305A	4460227	2	Pin, Male	
305A	4460267	1	Pin, Male	
305B	4460465	1	Socket, Female	
306	4460320	1	Connector, 2 Position	
307	4460268	2	Socket, Female	
309	4922267	1	Harness Assembly - Power Supply	3-C
310	4922263	1	Harness Assembly - Posi-Track Module Can	2-A
310A	4460321	2	Connector - 4 Position	
310A	4460227	4	Pin, Male	
310A	4460267	2	Pin, Male	
311	3990106	1	Limiters, Inrush	
		Ref	GROUND CONTROL BOX ASSY COMPONENTS	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
416	4460425	1	Connector, Strain Relief	
418	4460495	1	Connector, Male - 14 Position	
419	4460497	1	Nut, Conduit	
420	4460496	1	Lockwasher	
		Ref	STANDARD HARNESS COMPONENTS	
501	See Note	17	Solenoid Harness (Note: Not Available - Purchase Complete Solenoid)	
501A	4460867	17	Connector, Female - 2 Position	
501A	4460979	34	Terminal, Male	
501A	4460458	34	Seal	
502	4922222	1	Generator Enable Harness (Yellow/Red) (M450 & M400 Only)	2-B
502A	4460464	1	Pin, Male	
503	4922223	1	Generator Enable Harness (White/Yellow) (M450A & M400 Only)	1-A
503A	4460464	1	Pin, Male	
504	70000328	1	Generator Harness Options (M450 & M400 Only):	
504A	4460224	1	Connector, Female - 6 Position	
504A	4460809	1	Plug, Seal	
504A	4460268	5	Socket, Female	
504B	7023337	1	Receptacle - 35 Position	
504B	7023338	35	Pin, Male	
505		Ref	Boom Limit Switches Harness	
505	4922614	1	Cable, Electrical (Lower) (Includes Limit Switch)	
505	4922613	1	Cable, Electrical (Upper) (Includes Limit Switch)	
506	4922328	1	Harness Assembly - Valve	
506A	4460434	1	Connector - 15 Position	
506A	4460226	7	Socket, Female	
506B	4460749	1	Cap, Shell	
506B	4460750	1	Bar, Buss - 6 Position	
506B	4460744	1	Connector, 6 Position	
506B	4460745	1	Lock, Secondary	
506B	4460746	5	Socket, Female	
506B	4460458	6	Seal	
506B	4460748	1	Plug, Cavity	
506B	4460751	1	Clip, Mounting	
506C	4460742	5	Connector - 2 Position	
506C	4460743	10	Terminal, Female	
506C	4460458	10	Seal	
507	See Note	1	Controller Harness Assembly (Lift and Swing) (Note: Not Available - Purchase Complete Controller)	
507A	4460265	1	Connector - 9 Position	
507A	4460226	8	Socket, Female	
508	See Note	1	Controller Harness/Circuit Board Assembly (Drive and Steer) (Note: Not Available - Purchase Complete Controller)	
508A	4460265	1	Connector - 9 Position	
508A	4460226	7	Socket, Female	
509	See Note	1	Controller Harness Assembly (Speed) (Note: Not Available - Purchase Complete Controller)	
509A	4460225	1	Connector - 6 Position	
509A	4460226	4	Socket, Female	
510		Ref	Battery Charger Installation Components	
510	1001123054	Ref	ANSI, ANSI Export and CSA Specs	B
510	1001107780	Ref	ANSI Export Specs	B

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
510A	0610131	1	LED Assembly (Not Supplied with Charger)	
510B	4460321	1	Connector - 4 Position	
510B	4460227	4	Male Pin	
510C	1060689	1	AC Cord	
510D	1060689	1	End, Plug (Note: Not available for purchase)	
510E	1060778	1	LED Remote Harness	
510F	4460321	1	Connector - 4 Position	
510F	4460226	4	Socket, Female	
510G	4460761	1	Connector, Female - 4 Position	
510G	4460226	4	Socket, Female	
510H	4460428	1	Connector, Strain Relief	
510J	1001113045	1	Harness, Connecting (MAC to Delta-Q)	B
510K	4460444	1	Connector, Anderson	
510L	4460761	1	Connector - 4 Position	
510L	4460227	4	Pin, Male	
510M	4460931	1	Connector - 8 Position	
510M	4460464	6	Pin, Male	
510M	4460466	2	Plug, Seal	
510N	1001096188	1	Connector - 4 Position	
510N	4460509	2	Socket, Female	
510N	4460466	2	Plug, Seal	
510P	4460424	1	Connector - 2 Position	
510P	4460227	2	Pin, Male	
510R		Ref	Plug, AC Options:	
510R	4460138	1	ANSI, ANSI Export and CSA Specs	
510R	See Note	1	ANSI Export Specs (Note: Not Available - Purchase Locally)	
511		Ref	Battery Charger Components	
511A	See Note	1	Harness, Battery Charger Power (Note: Not Available - Purchase Complete Charger)	
511B	1001116811	1	Connector - 4 Position	
511B	4460508	4	Pin, Male	
511C	See Note	1	Connector, Strain Relief (Note: Not Available - Purchase Locally)	
511D	See Note	1	Harness, Battery Charger Signal (Note: Not available for purchase)	
511E	4460930	1	Connector - 8 Position	
511E	4460464	7	Socket, Female	
511F	See Note	1	Connector, Strain Relief (Note: Not available for purchase)	
511G	See Note	1	Harness, Battery Charger AC Plug (Note: Not available for purchase)	
511H	See Note	1	Connector, Plug (Note: Not available for purchase)	
511J	See Note	1	Connector, Strain Relief (Note: Not available for purchase)	
512		Ref	Contacting Plate Assembly Options:	
512	1600294	1	Standard Spec	
512	1600300	1	UL/EE Spec	
512A		Ref	Contacting Harness Options:	
512A	7022003	1	Standard Spec	
	7022008		UL/EE Spec	
512B	4460225	1	Connector - 6 Position	
512B	4460226	6	Socket, Female	
512C		Ref	Posi-Track Harness	
512C	7022004	1	Standard Spec	
	Not Required	0	UL/EE Spec	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
512D	4460326	1	Connector - 3 Position	
512D	4460227	3	Pin, Male	
512E	7022005	1	Shunt Harness	
512F	4460321	1	Connector - 4 Position	
512F	4460227	4	Pin, Male	
513	4922294	1	Jib Harness (AJ Models Only)	1-B
513A	4460225	1	Connector - 6 Position	
513A	4460227	3	Pin, Male	
513B	4460418	1	Connector, Female	
513B	4460419	3	Terminal	
514	See Note	5	Solenoid Harnesses - Steer/Brake Valve (Note: Not Available - Purchase Complete Solenoid)	
514A	4460867	5	Connector, Female - 2 Position	
514A	4460979	10	Terminal, Male	
514A	4460458	10	Seal	
515	4922319	1	Harness, Generator to Ground Control Box	1-A
515A	4460225	1	Connector - 6 Position	
515A	4460807	1	Seal, Terminal	
515A	4460808	1	Seal, Terminal	
515A	4460809	1	Pin, Terminal	
515A	4460267	5	Pin, Terminal	
516	Not Required	0	Not Required	
517	1001116522	1	Harness, Drive Orientation Limit Switch	B
517A	4460320	1	Connector - 2 Position	
517A	4460227	2	Pin, Male	
517B	4460884	1	Connector - 4 Position	
517B	4460465	2	Socket, Female	
517B	4460466	2	Seal	
518	3990105	2	Speed Sensor Harness (P/N 3990105 Includes Sensor)	
518A	4460225	1	Connector - 6 Position	
518A	4460226	4	Socket, Female	
519	4922160	1	Harness, Analyzer	3-C
519A	4460321	1	Connector - 4 Position	
519A	4460226	4	Socket, Female	
519B	4460761	1	Connector, Female - 4 Position	
519B	4460227	4	Pin, Male	
		Ref	OPTIONAL HARNESS COMPONENTS	
601		Ref	AC to Platform Receptacle Components Options:	
601	0259123	Ref	110V Receptacle (E/M450 ANSI)	5
601	0270013	Ref	110V Receptacle (E/M400 ANSI and ANSI Export)	5
601	0259125	Ref	220V Receptacle (E/M450 ANSI)	4
601	0270012	Ref	220V Receptacle (E/M400 ANSI)	4
601	0271464	Ref	220V Receptacle (E/M400 ANSI and ANSI Export)	2
601	0259127	Ref	220V Receptacle (E/M450 ANSI Export)	2
601A	0860038	1	Box, Switch	
601B		Ref	Receptacle Options:	
601B	4460346	1	110V GFI (ANSI)	
601B	4460125	1	220V GFI (ANSI)	
601B	See Note	1	220V GFI (ANSI Export) (Note: Not Available - Purchase Locally)	
601C		Ref	Shield, Cover Options:	
601C	4060700	1	110V GFI (ANSI) (Side Hinged Cover)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
601C	1001110873	1	110V GFI (ANSI) (Top Hinged Cover)	
601C	4060092	1	220V GFI (ANSI)	
601C	See Note	1	220V GFI (ANSI Export) (Note: Not Available - Purchase Locally)	
601D		Ref	Connector, Strain Relief Options:	
601D	4460071	1	110V GFI (ANSI)	
601D	4460071	1	220V GFI (ANSI)	
601D	See Note	1	220V GFI (ANSI Export) (Note: Not Available - Purchase Locally)	
601E		Ref	Plug, Male Options:	
601E	4460205	1	110V GFI (ANSI)	
601E	4460233	1	220V GFI (ANSI)	
601E	See Note	1	220V GFI (ANSI Export) (Note: Not Available - Purchase Locally)	
601F		Ref	Harness (Main Boom) Options:	
601F	4922608	1	Harness (E/M450 ANSI)	1-A
601F	4922608	1	Harness (E/M400 ANSI)	4-A
601F	4922610	1	Harness (E/M450 ANSI Export)	1-A
601F	4922610	1	Harness (E/M400 ANSI Export)	1-A
601F		Ref	Electrical Cable Options:	
601F	1060494	AR	Electrical Cable E/M450 ANSI (12/3)	
601F	1060494	AR	Electrical Cable E/M400 ANSI (12/3)	
601F	1060461	AR	Electrical Cable E/M450 ANSI Export (12/3)	
601F	1060461	AR	Electrical Cable E/M400 ANSI Export (12/3)	
601G		Ref	Plug, Male Options:	
601G	4460205	1	ANSI Spec	
601G	4460709	1	ANSI Export Spec	
601H		Ref	Harness (Tower Boom) Options:	
601H	4921592	1	Harness (M/E450 ANSI) (Prior to SN 0300063775)	1-A
601H	4922607	1	Harness (M/E450 ANSI) (SN 0300063775 through 0300189898)	1-A
601H	4921568	1	Harness (M/E400 ANSI) (Prior to SN 0300063775)	1-A
601H	4922611	1	Harness (M/E400 ANSI) (SN 0300063775 through 0300189901)	1-A
601H	4921594	1	Harness (M/E450 ANSI Export) (Prior to SN 0300063775)	2-A
601H	4922609	1	Harness (M/E450 ANSI Export) (SN 0300063775 through 0300189898)	2-A
601H	4921570	1	Harness (M/E400 ANSI Export) (Prior to SN 0300062642)	2-A
601H	4922612	1	Harness (E/M400 ANSI Export) (SN 0300062642 through 0300189901)	1-A
601H		Ref	Electrical Cable Options:	
601H	1060494	AR	Electrical Cable E/M450 ANSI (12/3)	
601H	1060494	AR	Electrical Cable E/M400 ANSI (12/3)	
601H	1060461	AR	Electrical Cable E/M450 ANSI Export (12/3)	
601H	1060461	AR	Electrical Cable E/M400 ANSI Export (12/3)	
601J		Ref	Connector, Female	
601J	4460134	1	ANSI Spec	
601J	4460710	1	ANSI Export Spec	
601 Kto 601	Not Required	0	Not Required	
601Q	See Note	AR	Cable (Note: Part of Item 601H)	
601 Rto 601	Not Required	0	Not Required	
602	2920095	2	Platform Worklights Harness (Includes Light and Wire Only)	

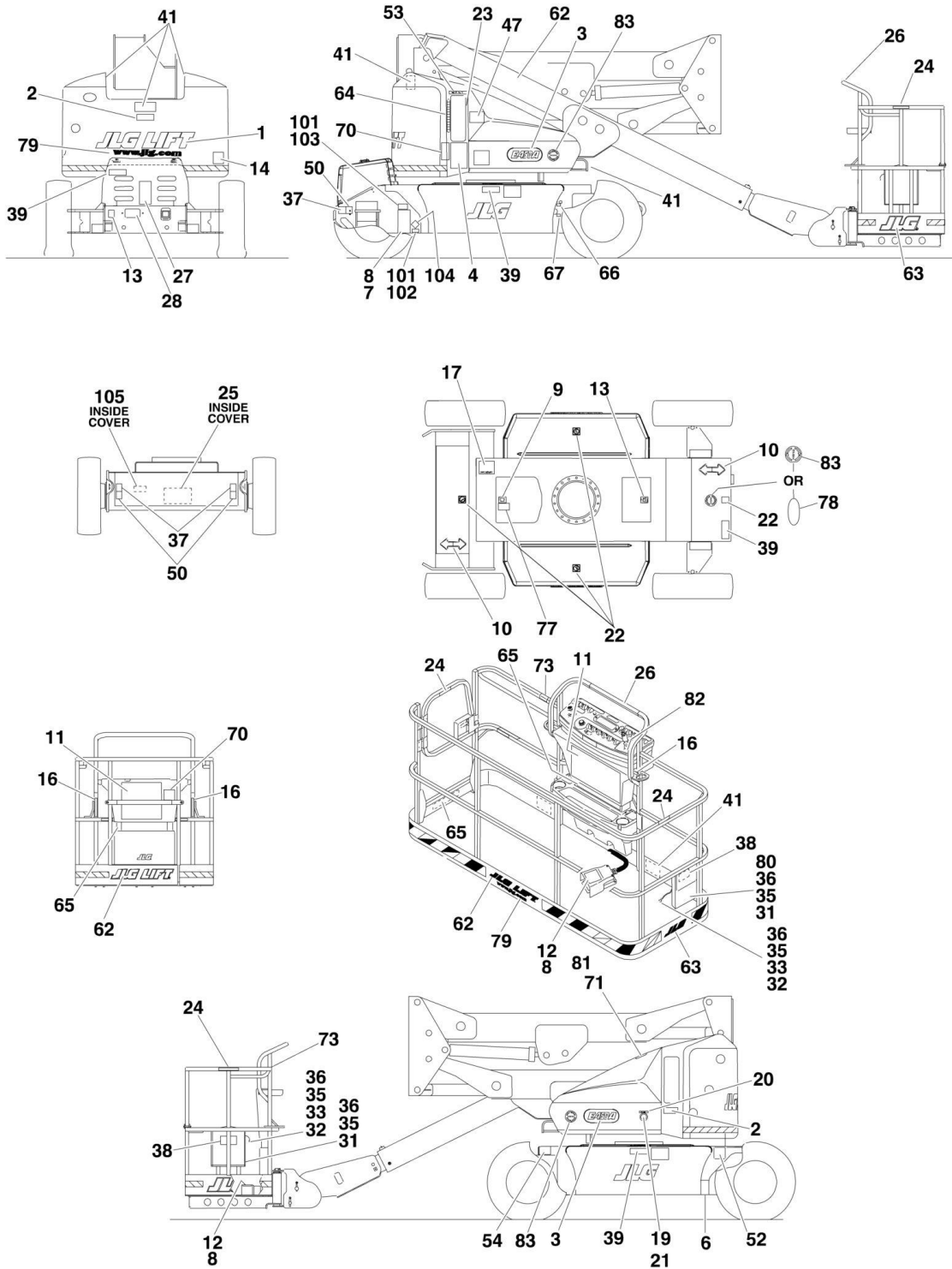
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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
602A	4460428	1	Connector, Strain Relief	
603	See Note	1	Strobe Light Harness (Note: Not Available - Purchase Complete Strobe Light)	
603A	4460320	1	Plug, Male - 2 Position (Prior to SN 0300169430)	
603A	4460268	2	Socket, Female	
603B	4460891	1	Plug, Male - 2 Position (E/M400) (SN 0300169430 through 0300189901)	
603B	4460891	1	Plug, Male - 2 Position, (E/M450) (SN 0300169430 through 0300189898)	
603B	4460465	2	Socket, Female	
604 to 606	Not Required	0	Not Required	
607	1001149818	1	Strobe Light Harness (E/M400) (SN 0300169430 through 0300189901)	A
607	1001149818	1	Strobe Light Harness (E/M450) (SN 0300169430 through 0300189898)	A
607A	4460320	1	Connector, Female - 2 Position	
607A	4460267	2	Pin, Male	
607B	4460897	1	Connector, Female - 2 Position	
607B	4460464	2	Pin, Male	
		Ref	TOOLS	
701	7002821	1	Crimper (For Wire to Pin/Socket Connections)	
702	7002823	1	Extractor (For Removal of Pin/Socket from Connectors)	
703	4460467	1	Extractor, Pin (Blue 16-18 Gauge) (For Removal of Pin/Socket from Connectors)	
703	4460510	1	Extractor, Pin (Yellow 12-14 Gauge) (For Removal of Pin/Socket from Connectors)	
704	7002828	1	Stripper, Wire	
705	2901443	1	Analyzer, Machine (Not Shown)	

SECTION 8 - DECALS

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FIGURE 8-1. DECAL INSTALLATION - ANSI SPEC



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FIGURE 8-1. DECAL INSTALLATION - ANSI SPEC

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	STANDARD DECAL INSTALLATIONS	
	0259301	Ref	Standard Decal Installations (E450 & E400)	B
	0258973	Ref	Standard Decal Installations (M450 & M400)	B
	0270273	Ref	Standard Decal Installations (A & AJ Model Lift Decals)	3
	0270274	Ref	Standard Decal Installations (AJP Model Lift Decals)	3
1	1702860	AR	Decal - JLG Lift	
2	1703805	2	Decal - Electrocutation	
3		Ref	Decal - Model Designation Options:	
3	1704787	2	Decal - Model Designation (E450A)	
3	1704789	2	Decal - Model Designation (E450AJ)	
3	1704788	2	Decal - Model Designation (M450A)	
3	1704790	2	Decal - Model Designation (M450AJ)	
3	1704958	2	Decal - Model Designation (E400A)	
3	1704900	2	Decal - Model Designation (E400AJPnarrow)	
3	1704959	2	Decal - Model Designation (M400A)	
3	1704901	2	Decal - Model Designation (M400AJPnarrow)	
3	1704791	2	Decal - Model Designation (E400AJP)	
3	1704792	2	Decal - Model Designation (E400AJPnarrow)	
3	1704793	2	Decal - Model Designation (M400AJP)	
3	1704794	2	Decal - Model Designation (M400AJPnarrow)	
4	1703798	1	Decal - Crushing	
6		Ref	Decal - Patent Options:	
6	1700584	1	Decal - Patent (Prior to SN 0300161264)	
6	1001131269	1	Decal - Patent (E/M400) (SN 0300161264 through 0300189901)	
6	1001131269	1	Decal - Patent (E/M450) (SN 0300161264 through 0300189898)	
7	See Note	1	Nameplate - Serial Number (Note: Not Available for Purchase)	
8	3820001	AR	Rivet	
9	1701504	1	Decal - Hydraulic Oil	
10	1701642	2	Decal - Arrow	
11	1703797	1	Decal - Caution/Danger	
12	3252347	1	Nameplate - Footswitch	
13	1701644	2	Decal - Charger	
14	3251813	1	Decal - USA	
16	1704277	AR	Decal - Attach Lanyard	
17	1702153	1	Decal - Inspection Only (Prior to SN 0300138403)	
19	0961127	1	Bushing, Snap	
20		Ref	Nameplate Options:	
20	3251243	1	120V/60HZ	
20	3252507	1	220V/50-60HZ	
21	0100010	AR	Adhesive	
22	1701691	4	Decal - No Step	
23		Ref	Decal - Manual Descent Options:	
23		Ref	Note: Refer to p/n stamped on hose side of valve.	
23	1704262	1	4641170 Valve	
23	1705085	1	4641195 Valve	
23	1001104864	1	1001097507 Valve	
24	1702868	2	Decal - No Hands	
25	1704254	1	Decal - Cable Routing	

SECTION 8 - DECALS

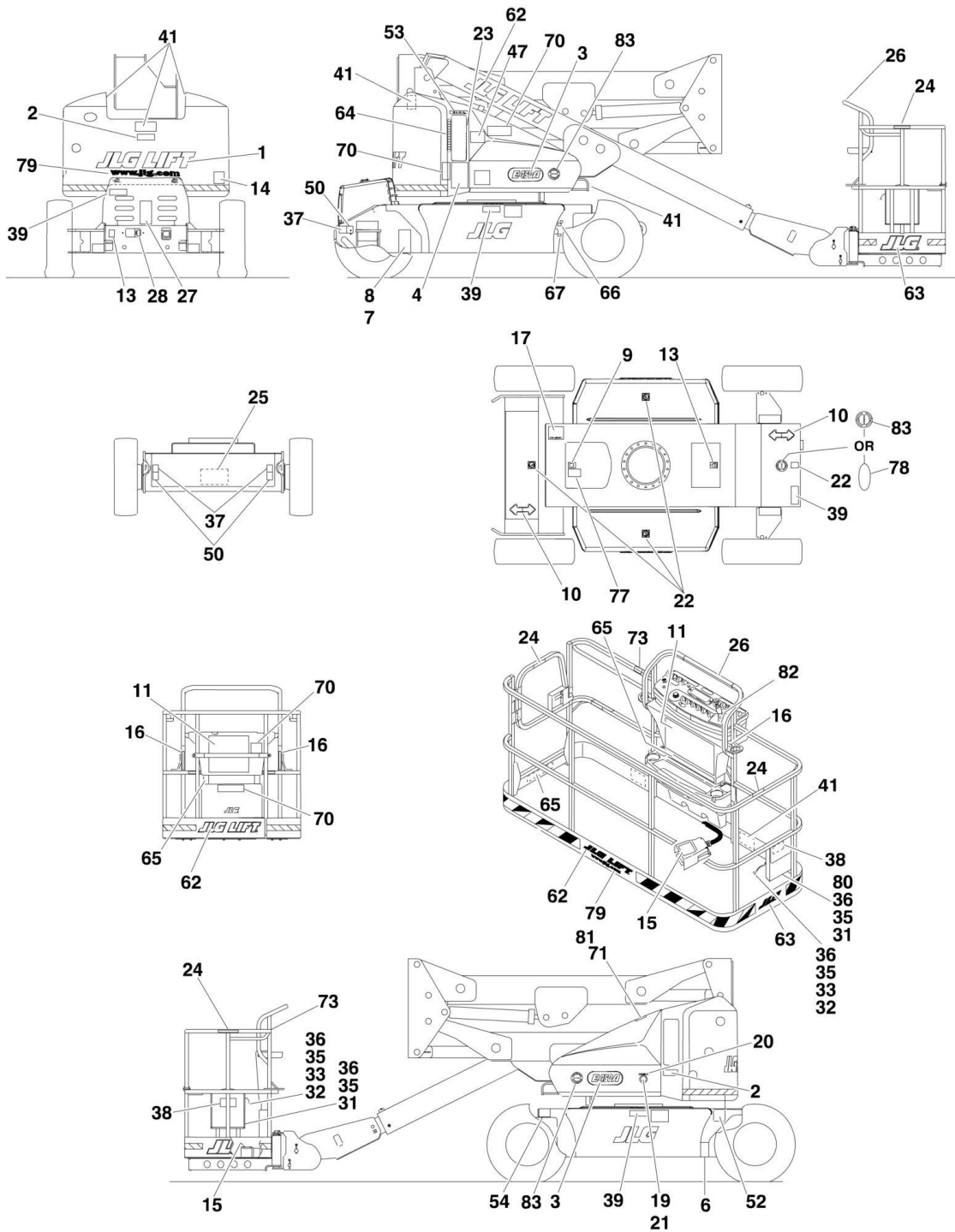
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
26	1704253	1	Decal - Key Platform	
27	1704446	1	Decal - Charger	
28	1704431	1	Decal - Battery Charger LED Indicator	1
31	0860520	1	Box, Manual Storage	
32	1060279	1	Lanyard (Prior to SN 0300143940)	
33	0641408	1	Bolt 1/4in-20NC x 1in (Prior to SN 0300143940)	
35	4711400	AR	Flatwasher	
36	3311405	AR	Locknut 1/4in-20NC	
37	1701500	4	Decal - Lift	
38	1701509	1	Decal - Manual	
39	1703813	1	Decal - Danger	
41	1703804	6	Decal - Crushing Hazard	
47	1702265	1	Decal	
50	1702300	4	Decal - Tie Down	
52	See Note	1	Decal - Bar Code (Note: Not available for purchase)	
53		Ref	Decal - 500 LBS. Max Capacity Options:	
53	1702688	1	Decal - 500 LBS. Max Capacity (Prior to SN 0300100540)	
53	1707013	1	Decal - 500 LBS. Max Capacity (SN 0300100540 through 0300142588)	
53	1001121814	1	Decal - 500 LBS. Max Capacity (E/M400) (SN 0300142589 through 0300189901)	
53	1001121814	1	Decal - 500 LBS. Max Capacity (E/M450) (SN 0300142589 through 0300189898)	
54		Ref	Decal - Tire Load Options:	
54	1703488	4	Decal - Tire Load (E/M450A)	
54	1704445	4	Decal - Tire Load (E/M450AJ)	
54	1703247	4	Decal - Tire Load (E/M400A)	
54	1703488	4	Decal - Tire Load (E/M400AJPnarrow)	
54	1704727	4	Decal - Tire Load (E/M400AJP)	
54	1704752	4	Decal - Tire Load (E/M400AJPnarrow)	
62	1702774	AR	Decal - JLG Lift	
62		Ref	Front Entry Platform	
62		Ref	Side Entry Platform	
63		Ref	Decal Options:	
63	1702773	2	A and AJ Models (JLG) with Front Entry Platform	
63	1702773	1	A and AJ Models (JLG) with Side Entry Platform	
63	1704200	2	AJP Models (Jib Plus) with Front Entry Platform	
63	1704200	1	AJP Models (Jib Plus) with Side Entry Platform	
64		Ref	Decal - Key, Main Terminal Box Options:	
64	1704252	1	Decal - Key, Main Terminal Box (Prior to SN 0300100540)	
64	1706950	1	Decal - Key, Main Terminal Box (E/M400) (SN 030010540 through 0300189901)	
64	1706950	1	Decal - Key, Main Terminal Box (E/M450) (SN 030010540 through 0300189898)	
65		Ref	Decal - 500 LBS. Max Capacity Options:	
65	1701645	2	Decal - 500 LBS. Max Capacity (Prior to SN 0300142589)	
65	1001121801	2	Decal - 500 LBS. Max Capacity (E/M400) (SN 0300142589 through 0300189901)	
65	1001121801	2	Decal - 500 LBS. Max Capacity (E/M450) (SN 0300142589 through 0300189898)	
66	1701502	1	Decal - Hydraulic Oil Level High	
67	1701503	1	Decal - Hydraulic Oil Level Low	
70		Ref	Decal - Generator Danger Options:	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
70	Not Required	0	Decal - Generator Danger (E450 & E400)	
70	1704286	2	Decal - Generator Danger (M450 & M400)	
71		Ref	Decal - Fuel Options:	
71	Not Required	0	Decal - Fuel (E450 & E400)	
71	1701505	1	Decal - Fuel (M450 & M400)	
73		Ref	Decal - Fuel Warning Options:	
73	Not Required	0	Decal - Fuel Warning (E450 & E400)	
73	1702962	1	Decal - Fuel Warning (M450 & M400)	
77	1704412	1	Decal - Oil Type	
78	1704830	1	Decal - QuikCharge GenSet (Prior to SN 0300143328)	
79	1704885	2	Decal - Website	
80	0641406	4	Bolt 1/4in-20NC x 3/4in	
81	1001108923	1	Decal - EPA/CARB Fuel Specification	
82	1705351	1	Decal - Drive/Steer Instruction (E/M400) (SN 0300141884 through 0300189901)	
82	1705351	1	Decal - Drive/Steer Instruction (E/M450) (SN 0300141884 through 0300189898)	
83	1001121510	3	Decal - Hybrid (E/M400) (SN 0300143328 through 0300189901)	
83	1001121510	3	Decal - Hybrid (E/M450) (SN 0300143328 through 0300189898)	
	0270433	Ref	UL/EE RATED MACHINES DECALS INSTALLATIONS	3
101	3820001	8	Rivet	
102	3252331	1	Nameplate - Battery Information	
103		Ref	Nameplate Options: - UL Certificate	
103	3251921	1	Nameplate (Prior to SN 0300062857)	
103	3252780	1	Nameplate (E/M400) (SN 0300062857 through 0300189901)	
103	3252780	1	Nameplate (E/M450) (SN 0300062857 through 0300189898)	
104	1702251	2	Nameplate - EE	
105	1704720	1	Decal - Replacement Fure	

SECTION 8 - DECALS

FIGURE 8-2. DECAL INSTALLATION - COUNTRY SPECS



SECTION 8 - DECALS

FIGURE 8-2. DECAL INSTALLATION - COUNTRY SPECS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	COUNTRY SPEC DECAL INSTALLATIONS	
	0270273	Ref	Country Spec Decal Installations (A and AJ Model Lift Decals)	3
	0270274	Ref	Country Spec Decal Installations (AJP Model Lift Decals)	3
		Ref	Country Spec Decal Installations (E450 & E400)	
	0259495	Ref	Canadian French/English Dual Language	17
	0259540	Ref	Chinese/English Dual Language	14
	0259536	Ref	Japanese Language	B
	0259538	Ref	Korean Language	14
	0259497	Ref	Spanish/English Dual Language	17
	0259499	Ref	Spanish/Portuguese Dual Language	16
		Ref	Country Spec Decal Installations (M450 & M400)	
	0259494	Ref	Canadian French/English Dual Language	21
	0259539	Ref	Chinese/English Dual Language	17
	0259535	Ref	Japanese Language	17
	0259537	Ref	Korean Language	B
	0259496	Ref	Spanish/English Dual Language	21
	0259498	Ref	Spanish/Portuguese Dual Language	19
1	1702860	AR	Decal - JLG Lift	
2		Ref	Decal - Electrocutation Options:	
2	1703936	2	Canadian French/English Dual Language	
2	1703937	2	Chinese/English Dual Language	
2	1703938	2	Japanese Language	
2	1703939	2	Korean Language	
2	1703935	2	Spanish/English Dual Language	
2	1703940	2	Spanish/Portuguese Dual Language	
3		Ref	Decal - Model Designation Options:	
3	1704787	2	Decal - Model Designation (E450A)	
3	1704789	2	Decal - Model Designation (E450AJ)	
3	1704788	2	Decal - Model Designation (M450A)	
3	1704790	2	Decal - Model Designation (M450AJ)	
3	1704958	2	Decal - Model Designation (E400A)	
3	1704900	2	Decal - Model Designation (E400AJPnarrow)	
3	1704959	2	Decal - Model Designation (M400A)	
3	1704901	2	Decal - Model Designation (M400AJPnarrow)	
3	1704791	2	Decal - Model Designation (E400AJP)	
3	1704792	2	Decal - Model Designation (E400AJPnarrow)	
3	1704793	2	Decal - Model Designation (M400AJP)	
3	1704794	2	Decal - Model Designation (M400AJPnarrow)	
4		Ref	Decal - Danger/Caution Options:	
4	1703930	1	Canadian French/English Dual Language	
4	1703931	1	Chinese/English Dual Language	
4	1703932	1	Japanese Language	
4	1703933	1	Korean Language	
4	1703929	1	Spanish/English Dual Language	
4	1703934	1	Spanish/Portuguese Dual Language	
6	1700584	1	Decal - Patent (Prior to SN 0300161264)	
7	See Note	1	Nameplate - Serial Number (Note: Not available for purchase)	
8	3820001	AR	Rivet	
9	1701504	1	Decal - Hydraulic Oil	
10	1701642	2	Decal - Arrow	

SECTION 8 - DECALS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
11		Ref	Decal - Caution/Danger Options:	
11	1703924	1	Canadian French/English Dual Language	
11	1703925	1	Chinese/English Dual Language	
11	1703926	1	Japanese Language	
11	1703927	1	Korean Language	
11	1703923	1	Spanish/English Dual Language	
11	1703928	1	Spanish/Portuguese Dual Language	
13	1701644	2	Decal - Charger	
14		Ref	Decal - USA Options:	
14	3251813	1	Canadian French/English Dual Language	
14	Not Required	0	Chinese/English Dual Language	
14	Not Required	0	Japanese Language	
14	Not Required	0	Korean Language	
14	3251813	1	Spanish/English Dual Language	
14	3251813	1	Spanish/Portuguese Dual Language	
15		Ref	Decal - Footswitch Options:	
15	1703984	1	Canadian French/English Dual Language	
15	1703982	1	Chinese/English Dual Language	
15	1703980	1	Japanese Language	
15	1703981	1	Korean Language	
15	1703983	1	Spanish/English Dual Language	
15	1703985	1	Spanish/Portuguese Dual Language	
16	1704277	AR	Decal - Attach Lanyard	
17		Ref	Decal - Inspection Options:	
17	1704006	1	Canadian French/English Dual Language (Prior to SN 0300161264)	
17	Not Required	0	Chinese/English Dual Language	
17	Not Required	0	Japanese Language	
17	Not Required	0	Korean Language	
17	1704007	1	Spanish/English Dual Language (Prior to SN 0300161264)	
17	1704008	1	Spanish/Portuguese Dual Language	
19	0961127	1	Bushing, Snap	
20		Ref	Nameplate Options:	
20	3251243	1	120V/60HZ	
20	3252507	1	220V/50-60HZ	
21	0100010	AR	Adhesive	
22	1701691	4	Decal - No Step	
23		Ref	Decal - Manual Descent Options:	
		Ref	Note: Refer to p/n stamped on hose side of valve.	
23	1704262	1	4641170 Valve	
23	1705085	1	4641195 Valve	
23	1001104864	1	1001097507 Valve	
24		Ref	Decal - No Hands Options:	
24	1704000	2	Canadian French/English Dual Language	
24	Not Required	0	Chinese/English Dual Language	
24	Not Required	0	Japanese Language	
24	Not Required	0	Korean Language	
24	1704001	2	Spanish/English Dual Language	
24	1704002	2	Spanish/Portuguese Dual Language	
25	1704254	1	Decal - Cable Routing	
26		Ref	Decal - Key Platform Options:	
26	1704253	1	Canadian French/English Dual Language	

SECTION 8 - DECALS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
26	Not Required	0	Chinese/English Dual Language	
26		Ref	Japanese Language Options:	
26	1704253	1	Japanese Language (E450 & E400)	
26	Not Required	0	Japanese Language (M450 & M400)	
26	Not Required	0	Korean Language	
26	1704253	1	Spanish/English Dual Language	
26	1704253	1	Spanish/Portuguese Dual Language	
27		Ref	Decal - Charger Options:	
27	1704452	1	Canadian French/English Dual Language	
27	1704419	1	Chinese/English Dual Language	
27	1704417	1	Japanese Language	
27	1704418	1	Korean Language	
27	1704454	1	Spanish/English Dual Language	
27	1704453	1	Spanish/Portuguese Dual Language	
28	1704431	1	Decal - Battery Charger LED Indicator	
31	0860520	1	Box, Manual Storage	
32	1060279	1	Lanyard	
33	0641408	1	Bolt 1/4in-20NC x 1in	
35	4751400	6	Flatwasher 1/4in	
36	3311405	5	Locknut 1/4in-20NC	
37	1701500	4	Decal - Lift	
38	1701509	1	Decal - Manual	
39		Ref	Decal - Explosion Warning Options:	
39	1704340	3	Canadian French/English Dual Language	
39	1704344	3	Chinese/English Dual Language	
39	1704342	3	Japanese Language	
39	1704343	3	Korean Language	
39	1704339	3	Spanish/English Dual Language	
39	1704341	3	Spanish/Portuguese Dual Language	
41		Ref	Decal - Crushing Hazard Options:	
41	1703948	6	Canadian French/English Dual Language	
41	1703950	6	Japanese Language	
41	1703951	6	Korean Language	
41	1703947	6	Spanish/English Dual Language	
41	1703952	6	Spanish/Portuguese Dual Language	
47		Ref	Decal Options:	
47	1702265	1	Canadian French/English Dual Language	
47	1703988	1	Chinese/English Dual Language	
47	1702271	1	Japanese Language	
47	1703987	1	Korean Language	
47	1702265	1	Spanish/English Dual Language	
47	1703991	1	Spanish/Portuguese Dual Language	
50	1702300	4	Decal - Tie Down	
52	See Note	1	Decal - Bar Code (Note: Not Available for Purchase)	
53		Ref	Decal - 500 LBS. Max Capacity Options:	
53	1702688	1	Canadian French/English Dual Language (Use p/n 1704112) (Prior to SN 0300100540)	
53	1707047	1	Canadian French/English Dual Language (SN 0300100540 through 0300142588)	
53	1001121816	1	Canadian French/English Dual Language (E/M400) (SN 0300142589 through 0300189901)	
53	1001121816	1	Canadian French/English Dual Language (E/M450) (SN	

SECTION 8 - DECALS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
			0300142589 through 0300189898)	
53	1704112	1	Chinese/English Dual Language (Prior to SN 0300100540)	
53	1707044	1	Chinese/English Dual Language (SN 0300100540 through 0300142588)	
53	1001121823	1	Chinese/English Dual Language (E/M400) (SN 0300142589 through 0300189901)	
53	1001121823	1	Chinese/English Dual Language (E/M450) (SN 0300142589 through 0300189898)	
53	1707054	1	Japanese Language (Prior to SN 0300142589)	
53	1001121821	1	Japanese Language (E/M400) (SN 0300142589 through 0300189901)	
53	1001121821	1	Japanese Language (E/M450) (SN 0300142589 through 0300189898)	
53	1704112	1	Korean Language (Prior to SN 0300100540)	
53	1707042	1	Korean Language (SN 0300100540 through 0300142588)	
53	1001121921	1	Korean Language (E/M400) (SN 0300142589 through 0300189901)	
53	1001121921	1	Korean Language (E/M450) (SN 0300142589 through 0300189898)	
53	1702688	1	Spanish/English Dual Language (Use p/n 1704112) (Prior to SN 0300100540)	
53	1707049	1	Spanish/English Dual Language (SN 0300100540 through 0300142588)	
53	1001121818	1	Spanish/English Dual Language (E/M400) (SN 0300142589 through 0300189901)	
53	1001121818	1	Spanish/English Dual Language (E/M450) (SN 0300142589 through 0300189898)	
53	1702688	1	Spanish/Portuguese Dual Language (Use p/n 1704112) (Prior to SN 0300100540)	
53	1702688	1	Spanish/Portuguese Dual Language (Use p/n 1707133) (SN 0300100540 through 0300142588)	
53	1702688	1	Spanish/Portuguese Dual Language (E/M400) (Use p/n 1001121923) (SN 0300142589 through 0300189901)	
53	1702688	1	Spanish/Portuguese Dual Language (E/M450) (Use p/n 1001121923) (SN 0300142589 through 0300189901)	
54		Ref	Decal - Tire Load Options:	
54	1703488	4	Decal - Tire Load (E/M450A)	
54	1704445	4	Decal - Tire Load (E/M450AJ)	
54	1703247	4	Decal - Tire Load (E/M400A)	
54	1703488	4	Decal - Tire Load (E/M400AJPnarrow)	
54	1704727	4	Decal - Tire Load (E/M400AJP)	
54	1704752	4	Decal - Tire Load (E/M400AJPnarrow)	
62	1702774	AR	Decal - JLG Lift	
62		Ref	Front Entry Platform	
62		Ref	Side Entry Platform	
63		Ref	Decal Options:	
63	1702773	2	A and AJ Models (JLG) with Front Entry Platform	
63	1702773	1	A and AJ Models (JLG) with Side Entry Platform	
63	1704200	2	AJP Models (Jib Plus) with Front Entry Platform	
63	1704200	1	AJP Models (Jib Plus) with Side Entry Platform	
64		Ref	Decal - Key, Main Terminal Box Options:	
64	1704252	1	Canadian French/English Dual Language (Prior to SN 0300100540)	
64	17046950	1	Canadian French/English Dual Language (E/M400) (SN 0300100540 through 0300189901)	

SECTION 8 - DECALS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
64	17046950	1	Canadian French/English Dual Language (E/M450) (SN 0300100540 through 0300189898)	
64	Not Required	0	Chinese/English Dual Language	
64		Ref	Decal - Key, Main Terminal Box Options:	
64	Not Required	0	Japanese Language	
64	Not Required	0	Korean Language	
64	1704252	1	Spanish/English Dual Language (Prior to SN 0300100540)	
64	17046950	1	Spanish/English Dual Language (E/M400) (SN 0300100540 through 0300189901)	
64	17046950	1	Spanish/English Dual Language (E/M450) (SN 0300100540 through 0300189898)	
64	1704252	1	Spanish/Portuguese Dual Language (Prior to SN 0300100540)	
64	1706950	1	Spanish/Portuguese Dual Language (E/M400) (SN 0300100540 through 0300189901)	
64	1706950	1	Spanish/Portuguese Dual Language (E/M450) (SN 0300100540 through 0300189898)	
65		Ref	Decal - 500 LBS. Max Capacity Options:	
65	1703996	2	Canadian French/English Dual Language (Prior to SN 0300100540)	
65	1707055	2	Canadian French/English Dual Language (SN 0300100540 through 0300142588)	
65	1001121803	2	Canadian French/English Dual Language (E/M400) (SN 0300142589 through 0300189901)	
65	1001121803	2	Canadian French/English Dual Language (E/M450) (SN 0300142589 through 0300189898)	
65	1703996	1	Chinese/English Dual Language (Prior to SN 0300100540)	
65	1707060	1	Chinese/English Dual Language (SN 0300100540 through 0300142588)	
65	1001121810	1	Chinese/English Dual Language (E/M400) (SN 0300142589 through 0300189901)	
65	1001121810	1	Chinese/English Dual Language (E/M450) (SN 0300142589 through 0300189898)	
65	1703996	2	Japanese Language (Prior to SN 0300100540)	
65	1707059	2	Japanese Language (SN 0300100540 through 0300142588)	
65	1001121808	2	Japanese Language (E/M400) (SN 0300142589 through 0300189901)	
65	1001121808	2	Japanese Language (E/M450) (SN 0300142589 through 0300189898)	
65	1703996	2	Korean Language (Prior to SN 0300100540)	
65	1707058	2	Korean Language (SN 0300100540 through 0300142588)	
65	1001121918	2	Korean Language (E/M400) (SN 0300142589 through 0300189901)	
65	1001121918	2	Korean Language (E/M450) (SN 0300142589 through 0300189898)	
65	1703996	2	Spanish/English Dual Language (Prior to SN 0300100540)	
65	1707056	2	Spanish/English Dual Language (SN 0300100540 through 0300142588)	
65	1001121805	2	Spanish/English Dual Language (E/M400) (SN 0300142589 through 0300189901)	
65	1001121805	2	Spanish/English Dual Language (E/M450) (SN 0300142589 through 0300189898)	
65	1703996	2	Spanish/Portuguese Dual Language (Prior to SN 0300100540)	
65	1707134	2	Spanish/Portuguese Dual Language (SN 0300100540 through 0300142588)	

SECTION 8 - DECALS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
65	1001121920	2	Spanish/Portuguese Dual Language (E/M400) (SN 0300142589 through 0300189901)	
65	1001121920	1	Spanish/Portuguese Dual Language (E/M450) (SN 0300142589 through 0300189898)	
66	1701502	1	Decal - Hydraulic Oil Level High	
67	1701503	1	Decal - Hydraulic Oil Level Low	
70		Ref	Decal - Generator Danger Options:	
70	Not Required	0	Decal - Generator Danger (E450 & E400 All Specs)	
70	1704286	2	Decal - Generator Danger (M450 & M400) - English Language	
70	1704368	2	Decal - Generator Danger (M450 & M400) - Canadian French/English Dual Language	
70	1001116297	2	Decal - Generator Danger (M450 & M400) - Chinese/English Dual Language (Use p/n 1704372)	
70	1001093687	2	Decal - Generator Danger (M450 & M400) - Chinese/English Dual Language (Use p/n 1704372)	
70	1001116297	2	Decal - Generator Danger (M450 & M400) - Japanese Language (Use p/n 1704369)	
70	1001093687	2	Decal - Generator Danger (M450 & M400) - Japanese Language (Use p/n 1704369)	
70	1001116297	2	Decal - Generator Danger (M450 & M400) - Korean Language (Use p/n 1704370)	
70	1001093687	2	Decal - Generator Danger (M450 & M400) - Korean Language (Use p/n 1704370)	
70	1704371	2	Decal - Generator Danger (M450 & M400) - Spanish/English Dual Language	
70	1704373	2	Decal - Generator Danger (M450 & M400) - Spanish/Portuguese Dual Language	
71		Ref	Decal - Fuel Options:	
71	Not Required	0	Decal - Fuel (E450 & E400)	
71	1701505	1	Decal - Fuel (M450 & M400)	
73		Ref	Decal - Fuel Warning Options:	
73	Not Required	0	Decal - Fuel Warning (E450 & E400)	
73	1702962	1	Decal - Fuel Warning (M450 & M400)	
77	1704412	1	Decal - Oil Type	
78		Ref	Decal - Quikcharge Genset Option:	
78	Not Required	0	Decal - Quikcharge Genset (E450/E400 Models)	
78	1704830	1	Decal - Quikcharge Genset (M450/M400 Models) (Prior to SN 0300143328)	
79	1704885	2	Decal - Website	
80	0641406	4	Bolt 1/4in-20NC x 3/4in	
81	1001108923	1	Decal - EPA/CARB Fuel Specification (Canadian French/English Dual Language Only)	
82		Ref	Decal - Drive/Steer Instruction Options (E/M400): (SN 0300141884 through 0300189901)	
82		Ref	Decal - Drive/Steer Instruction Options (E/M450): (SN 0300141884 through 0300189898)	
82	1705429	1	Canadian French/English Dual Language	
82	1705430	1	Chinese/English Dual Language	
82	1705426	1	Japanese Language	
82	1705427	1	Korean Language	
82	1705910	1	Spanish/English Dual Language	
82	1001113680	1	Spanish/Portuguese Dual Language	
83		Ref	Decal - Hybrid Options (E/M400): (SN 0300143328 through 0300189901)	

SECTION 8 - DECALS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
83		Ref	Decal - Hybrid Options (E/M450): (SN 0300143328 through 0300189898)	
83	Not Required	0	Decal - Hybrid (E450 & E400)	
83	1001121510	3	Decal - Hybrid (M450 & M400)	

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK

FIGURE 9-1. MODEL E/M400A/AJPNARROW AND E/M450A/AJ STANDARD PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	Note	Ref	Note: The following list will service one machine (built to current production per date on the front cover) with emergency repair parts which can be installed in the field. Parts from the list should be replaced when inventory is depleted to keep service parts stock supplied. For further information, contact your JLG dealer or the JLG Industries Parts Department.	
		Ref	STANDARD PARTS	
	7021320	1	Cap, Breather	
	7021618	1	Coil	
	7021609	1	Coil	
	7021616	4	Filter Cartridge	
	7011593	2	Fuse, DC	
	7021610	1	Coil	
	4360328	1	Switch, Toggle	
	4360330	1	Switch, Toggle	
	4360475	1	Switch, Mushroom	
	4360476	1	Contact, Switch	
	4360469	1	Switch, Key	
	2860030	1	Key, Replacement	
	4360070	1	Breaker, Circuit	
	2940074	1	Latch	
	4360387	1	Switch, Push Button	
	4360448	1	Breaker, Circuit	
	1001118419	1	Controller (Lift and Swing)	
	1001118418	1	Controller (Drive and Steer)	
	3990001	2	Diode	

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK

FIGURE 9-2. MODEL E/M400A/AJPNARROW AND E/M450A/AJ VARIABLE PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	Note	Ref	Note: The following list will service one machine (built to current production per date on the front cover) with emergency repair parts which can be installed in the field. Parts from the list should be replaced when inventory is depleted to keep service parts stock supplied. For further information, contact your JLG dealer or the JLG Industries Parts Department.	
		Ref	VARIABLE PARTS	
	7020642	1	Breaker, Circuit (ANSI Spec 105/132V-60Hz and Japanese Spec 100V - 60Hz Chargers)	
	7020653	1	Breaker, Circuit (ANSI Export Spec 110/220V-50Hz Charger)	
	7018525	1	Breaker, Circuit (ANSI Export Spec 250V-50Hz Charger)	
	7018506	1	Relay (Black) (ANSI Spec 105/132V-60Hz and Japanese Spec 100V - 60Hz Chargers)	
	7018564	1	Relay (Black) (ANSI Export Spec 110/220V-50Hz Charger)	
	7018563	1	Relay (Black) (ANSI Export Spec 250V-50Hz Charger)	
	7020654	1	Relay (Clear) (ANSI Export Spec 110/220V-50Hz Charger)	
	1600293	1	Module (Posi-Trac)	
	1600292	1	Module (Frame Power)	
	2400062	2	Fuse - 300Amp (UL/EE Rated Machines Only)	
	70000318	4	Filter, Fuel (M450 & M400 Only)	
	70000319	1 Dozen	Filter, Oil (M450 & M400 Only)	
	70000323	1	Relay, Bosch (M450 & M400 Only)	
	70000329	2	Fuse 15 Amp (M450 & M400 Only)	
	70000330	2	Fuse 20 Amp (M450 & M400 Only)	
	70000322	1	Relay, 12Votl 60Amp (M450 & M400 Only)	
	70000313	4	Element, Air Cleaner (M450 & M400 Only)	
	1001116522	1	Switch, Limit	
	70000326	1	Module (Engine Control) (M450 & M400 Only)	
	1001109497	1	Module (Ground Control)	
	4360274	1	Switch, Push Button (M450 & M400 Only)	
	7019698	2	Power Track - 1 Link (E/M450A & E/M400A Only)	
	70001996	2	Power Track - 2ft Section (E/M450AJ & E/M400AJP Only)	
	70001998	1	Power Track - Bracket Kit (E/M450AJ & E/M400AJP Only)	
	4360548	1	Switch, Limit	
	1001109498	1	Module (Platform Control)	
	1600387	1	Module, Control (LSS System)	
	4360336	1	Switch, Toggle (M450 & M400 Only)	
	2400068	1	Fuse, 10Amp (UL/EE Spec)	

SECTION 10 - SPECIAL OPTIONS

SECTION 10 - SPECIAL OPTIONS

FIGURE 10-1. SPECIAL OPTIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	Note	Ref	Note: This list is to accommodate machines ordered with special equipment. Options may not be applicable to all models. For more specific parts information contact JLG Parts Department.	
		Ref	MISCELLANEOUS SPECIAL OPTIONS	
		Ref	Airline Installations - 1/2in	
	0259877	Ref	Miscellaneous Special Options (E/M450A Models)	
	0271801	Ref	Miscellaneous Special Options (E/M400A Models)	
	0275650	Ref	Miscellaneous Special Options (E/M450AJ Models)	
	See Note	Ref	Miscellaneous Special Options (E/M400AJP Models) (Note: Not Available for Purchase)	
	0270723	Ref	Beacon Installation Mounted Under Platform	
	0256789	Ref	Camera Mounting Installation	
		Ref	ClearSky Telematics Add-on Kit Options:	
	1001230504	Ref	ClearSky Telematics Add-on Kit - 3 Wire (ANSI Specs)	
	1001234102	Ref	ClearSky Telematics Add-on Kit - 3 Wire (ANSI Export Specs)	
	1001236405	Ref	ClearSky Telematics Add-on Kit - Canbus (ANSI Specs)	
	1001237110	Ref	ClearSky Telematics Add-on Kit - Canbus (ANSI Export Specs)	
	0258703	Ref	Console Cover	
		Ref	Cylinder Bellows Installations	
	0259397	Ref	Cylinder Bellows Installations (E/M400A & E/M450A)	
	0271251	Ref	Cylinder Bellows Installations (E/M400AJP & E/M450AJ)	
		Ref	Bellows - Platform Level and Master Cylinders Options:	
	0460110	2	Bellows - Platform Level and Master Cylinders (E/M400A & E/M450A)	
	0460194	2	Bellows - Platform Level and Master Cylinders (E/M400AJP & E/M450AJ)	
	0460115	1	Bellows - Main Lift Cylinder	
	0460113	1	Bellows - Mid Lift Cylinder	
	0460114	1	Bellows - Tower Lift Cylinder	
	0460196	1	Bellows - Jib Cylinder (E/M400AJP & E/M450AJ)	
	1320037	6	Clamp	
	1001237443	Ref	Cylinder Service Kit (Mid Lift) (E/M400A & E/M450A)	
		Ref	Decal Installations Options:	
	1702788	1	Decal - Biodegradable Hydraulic Fluid (All except German Spec)	
	1703479	1	Decal - Biodegradable Hydraulic Fluid (German Spec Only)	
	3252221	1	Decal - CSA (CSA Spec)	
	0257195	Ref	Decal Installation - Government Warranty	
	1702868	2	Decal - No Hands (English) (ANSI Spec) (Used with Platform Padding or Mesh to Top Rail on Side Entry Platforms)	
	1704000	2	Decal - No Hands (English and French) (CSA Spec) (Used with Platform Padding or Mesh to Top Rail on Side Entry Platforms)	
	1705968	2	Decal - No Hands (English/Simplified Chinese) (ANSI Export Spec) (Used with Platform Padding or Mesh to Top Rail on Side Entry Platforms)	
	1001116846	2	Decal - No Hands (English and Traditional Chinese) (ANSI Export Spec) (Used with Platform Padding or Mesh to Top Rail on Side Entry Platforms)	
	1703175	1	Decal - Lanyard Attach (GM K-1 Spec)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0256487	Ref	Decal - Prop 65 Warning Installation (Diesel Machines) (California Spec)	
	0256488	Ref	Decal - Prop 65 Warning Installation (Gas Machines) (California Spec)	
	0259550	Ref	Decal - Warning Stripes Installation	
	1283014	1	Decal - Warning Stripes Installation	
	1001108727	Ref	Decal Kit - Platform	
	1001119566	Ref	Decal Kit - Platform Console	
	1001198647	Ref	Decal Kit - (E/M400 / E/M450)	
		Ref	Decal Kit Options:	
	2910866	1	Decal Kit - Platform Box (Prior to SN 0300139889)	
	1001119566	1	Decal Kit - Platform Box (E/M400) (SN 0300139889 through 0300189901)	
	1001119566	1	Decal Kit - Platform Box (E/M450) (SN 0300139889 through 0300189898)	
		Ref	Electrical Connector Kits	
	1001148902	Ref	Amp Connector Kit	
	1001148903	Ref	Deutsch DT Connector Kit	
	1001148904	Ref	Deutsch HD Connector Kit	
	1001148905	Ref	Packard Connector Kit	
	1001148906	Ref	Various Connector Kit	
		Ref	Filter Kits: (M400 & M450 Only)	
		Ref	Kubota Engines	
	1001111013	1	Combined Filter Kit (E/M400) (SN 0300088539 through 0300189901)	
	1001111013	1	Combined Filter Kit (E/M450) (SN 0300088539 through 0300189898)	
	1001110140	1	Engine Oil and Fuel Filter Kit (E/M400) (SN 0300088539 through 0300189901)	
	1001110140	1	Engine Oil and Fuel Filter Kit (E/M450) (SN 0300088539 through 0300189898)	
	1001109716	1	Hydraulic and Air Filter Kit (E/M400) (SN 0300088539 through 0300189901)	
	1001109716	1	Hydraulic and Air Filter Kit (E/M450) (SN 0300088539 through 0300189898)	
		Ref	Yanmar Engines	
	1001111012	1	Combined Filter Kit (Use p/n 1001111012) (Prior to SN 0300088539)	
	1001110142	1	Engine Oil and Fuel Filter Kit (Prior to SN 0300088539)	
	1001109715	1	Hydraulic and Air Filter Kit (Prior to SN 0300088539)	
	1001152523	Ref	Fire Extinguisher installation (Platform Mounted)	
	4060959	Ref	Footswitch Shield (Note: Move Decal to Shield)	
	0259398	Ref	Headlight and Taillights Installation	
	2920150	2	Headlight	
	7016356	2	Lamp, Seal Beam (1 Per Headlight)	
	2920118	2	Taillight	
	7016623	2	Bulb - Brake (1 Per Taillight)	
	7016624	1	Bulb - Tail (1 Per Taillight)	
		Ref	Hose Kit Options:	
		Ref	E/M400	
	1001239570	Ref	Hose Kit - Platform Valve	
	1001198659	Ref	Hose Kit - Power Track (Upper) (E/M400AJ)	
	1001198657	Ref	Hose Kit - Power Track (Upper) (E/M400AJP)	
	1001198658	Ref	Hose Kit - Power Track (Upper) (E/M400AJPn)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	E/M450	
	1001198660	Ref	Hose Kit - Power Track (Upper) (E/M450AJ)	
		Ref	Hydraulic Fluids	
	2300028	Ref	Mobil DTE 10 Excel 15	
	70010346	1 gal/3.8l	Mobil DTE 10 Excel 15	
	2300042	Ref	SYN Biodegradable	
	2300027	Ref	Mobil EAL 224H - Biodegradable	
	0271687	Ref	Inverter Installation (E Models Only)	
	1001148971	Ref	Lanyard Kit (Platform Bolt-on)	
	1001222307	Ref	LSS Override Kit	
	2902423	Ref	Mechron Service Kit (For the addition of separate fuse for engine generator controller)	
	2915225	Ref	Platform Conversion Kit (Converts Front to Side Entry) (E/M450A)	
		Ref	Platform Entry Kits	
	1001142504	Ref	Drop Bar (Replacing Swing Gate with Drop Bar)	
	1001142505	Ref	Swing Gate (Replacing Drop Bar with Swing Gate)	
		Ref	Platform Installation - (Lift Gate) (Japanese Spec)	
	0270408	Ref	30in x 60in (E/M400A & E/M400AJP Only)	
	3510695	Ref	30in x 60in (E/M450A & E/M450AJ Only)	
		Ref	Platform Mesh to Mid Rail Installations (Side Entry Platforms) (ANSI, ANSI Export and AUS specs)	
	1001140318	Ref	30in X 4ft (76cm x 1.22m)	
	1001140315	Ref	30in X 5ft (76cm x 1.52m)	
	1001145985	Ref	30in X 6ft (76cm x 1.82m)	
		Ref	Platform Mesh to Top Rail Installations (Side Entry Platforms) (ANSI, CSA & UL Specs)	
	0273146	Ref	30in X 5ft (76cm x 1.52m)	
	0273147	Ref	30in X 4ft (76cm x 1.22m)	
	1001212202	Ref	Rotary Actuator Protection Add-on Kit	
	1001149561	Ref	SkyGuard Installation Kit (Factory Installed)	
	1001149563	Ref	Platform Sensor Kit	
	1001149564	Ref	Optional (Blue) Beacon Light Kit	
		Ref	SkyGuard Kits (Dealer Add-on Kit):	
	1001206996	Ref	SkyGuard Kit (Dealer Add-on Kit) (Blue Beacon Light)	
	1001210033	Ref	SkyGuard Kit (Dealer Add-on Kit) (Red Beacon Light)	
	1001205501	Ref	Blue Light Kit (Dealer Add-on Kit)	
	1001210032	Ref	Red Light Kit (Dealer Add-on Kit)	
	1001149563	Ref	Platform Sensor Kit	
		Ref	Strobe Light Installations (Amber)	
	1001152965	Ref	Platform Mounted	
	1001154231	Ref	Platform/Ground Mounted	
	0272315	Ref	Tire Sealant (IN240/55-17.5)	
	0272341	Ref	Tire Sealant Decal Installation	
	1705363	1	Decal - Tire Sealant (Located on Hood)	
		Ref	Tools for Service	
	7002828	1	Wire Stripper	
	7002821	1	Wire Crimper (To install wire ends to wires)	
	7002823	1	Pin/Socket Extractor - Universal (To Remove Pins/Sockets from Connectors)	
	4460467	1	Extractor - 16-18 Gauge (For Removal of Pins/Sockets for Deutsch Connectors)	
	4460510	1	Extractor - 12-14 Gauge (For Removal of Pins/Sockets for	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	7002822	1	Deutsch Connectors)	
	7016654	1	Screwdriver, Potentiometer (To Adjust Drive Controllers)	
	7004275	1	Screwdriver, Magnetic	
	7004276	1	Seal Installation Tool - 1in	
	7002826	1	Seal Installation Tool - 1-1/2in	
	2901443	1	Seal Installation Tool - 2in	
	2915230	1	Analyzer, Machine	
	1001137005	1	Battery Charger Reprogram Controller Kit	
	1001160527	Ref	USB to RS232 Drive Installation (Service Kit)	
	1001241269	Ref	Turntable Bearing Kit	
		Ref	Wear Pad Kit (E/M400AJP Only)	

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