SKYJACK

PARTS MANUAL

SJ46AJ, SJ51AJ

ARTICULATING BOOMS



170947AL
June 2024
ANSI/CSA,CE, AS

MidWestTech | Skyjack SJ46AJ, SJ51AJ Articulating Boom Lift Parts Manual | Publication... Order the manual at mid-west-tech.com >

Table of Contents

Foreword 9

General 9
Parts Ordering Information 9
Method of Listing 9
Quantities 9
How To Order Repair Parts 9
Recommended Service Parts 10

Section 1 – Platform 15

1.1 Platform 16
1.2 Railings & Base 18
1.3 Swing Gate 20
1.4 Drop Bar 21
1.5 Load Cell - CE & AS 22
1.6 Footswitch 23
1.7 Platform Control Box 24
1.8 Boom / Turret Controller 28
1.9 Drive / Steer Controller 30
1.10 Riser Controller 32
1.11 Platform Terminal Strip 33

Section 2 – Boom 35

2.1 Main & Fly Boom Assembly 36
2.2 Boom Limit Switches 40
2.3 Fly Boom 42
2.4 Riser 44
2.5 Cable Track 48
2.6 Jib 50
2.7 Jib Manifold 52
2.8 Rotary Actuator 54

Section 3 – Cylinders 55

3.1 Extension Cylinder 56
3.2 Lift Cylinder 58
3.3 Riser Cylinder Mounting 59
3.4 Riser Cylinder 60
3.5 Master Cylinder 61
3.6 Slave Cylinder 62
3.7 Jib Cylinder 63

MidWestTech | Skyjack SJ46AJ, SJ51AJ Articulating Boom Lift Parts Manual | Publication... Order the manual at mid-west-tech.com >

Index No.	Skyjack Part No.	Qty.	Description
-	167645	1	JIB BOOM ASSEMBLY
1	(Ref.)	1	• JIB CYLINDER (For components, refer to 3.7 Jib Cylinder)
2	148876	1	• BRACKET, Jib mount
3	148881	1	• WELDMENT, Lower arm
4	167648	1	• WELDMENT, Upper arm
5	148891	1	• COVER, Hose
6	167659	1	• BRACKET, Platform mount
7	146897	6	• KEEPER PIN (3/8")
8	148890	6	• PIN (1 1/4" diameter x 10 3/16")
9	143987	2	• CLAMP (2 1/2")
10	148847	8	• BUSHING (1 1/4" ID x 1")
11	125262	8	• BUSHING (1 1/4" ID x 1 1/2")
12	148920	2	• SPACER
13	148936	1	• PAD, Wear
14	148943	6	• BOLT, Hex head patch (5/16"-18 x 1" Grade 8)
15	103996	8	• WASHER, Flat (5/16")
16	300064	2	• SCREW, Button head cap (5/16"-18 x 3/4")
17	103984	2	• NUT, Hex lock (5/16"-18 Grade 5, nylon)
18	103856	4	• BOLT, Hex head (1/4"-20 x 3/4" Grade 5)
19	103995	4	• WASHER, Flat (1/4")

MidWestTech | Skyjack SJ46AJ, SJ51AJ Articulating Boom Lift Parts Manual | Publication... Order the manual at mid-west-tech.com >

Index No.	Skyjack Part No.	Qty.	Description
	104003	4	• • • NUT, (#10-32)
	152185	4	• • • SCREW, Slot head (#10-32 x 3/4")
	152187	1	• • • STICKER, Radiator PGS
3	(Ref.)	1	• • CATALYST MUFFLER ASSEMBLY
	152189	1	• • • FLANGE, Exhaust
	152190	1	• • • GASKET, Exhaust
	159091	1	• • • MUFFLER, Catalyst (3.0L)
	152192	1	• • • FLANGE, Hi-temp exhaust (2.5"OD)
	152193	1	• • • FLANGE, Hi-temp exhaust (2.0"OD)
	152194	1	• • • SEAL, Hi-temp exhaust (2.5"OD)
	152195	1	• • • SEAL, Hi-temp exhaust (2"ID)
	152196	1	• • • BRACKET, Catalyst muffler
	152197	2	• • • BRACKET, Side Catalyst muffler
	152198	1	• • • TUBE, Exhaust
	152210	2	• • • BOLT, Hex head (5/16"-18 x 1", Grade 5)
	103473	10	• • • BOLT, Hex head (3/8"-16 x 1" Grade 5)
	103870	7	• • • BOLT, Hex head (3/8"-16 x 1 1/2" Grade 5)
	103404	2	• • • WASHER, Lock (5/16")
	103999	10	• • • WASHER, Lock (3/8")
	103996	2	• • • WASHER, Flat (5/16")
	103472	7	• • • WASHER, Flat (3/8")
	152200	10	• • • WASHER, Flat (3/8", USS)
	103978	10	• • • NUT (3/8"-16)
4	149496	9	• NUT, Speed clip (1/4"-20 x 1/5" depth)
5	103995	17	• WASHER, Flat (1/4")
6	103892	9	• BOLT, Hex head (1/4"-20 x 5/8" Grade 5)
7	104379	13	• WASHER, Flat hardened (1/2")
8	103470	1	• WASHER, Lock (1/2", Grade 5)
9	116997	1	• BOLT, Hex head (1/2"-13 x 1 3/4" Grade 5)
10	103909	4	• BOLT, Hex head (1/2"-13 x 1 1/4" Grade 5)
11	103471	4	• NUT, Hex head (1/2"-13, Grade 5)
12	149198	1	• PLATE, Baffle
13	149357	75"	• SEAL, Bulb
14	115649	4	• NUT, Hex lock (1/4"-20 Grade 5, nylon)
15	125959	1	• WASHER, Flat hardened (3/8")
16	138464	1	• BOLT, Hex head (3/8"-16 x 5/8" Grade 5)
17	152556	1	• SHROUD, Under radiator (GM)
18	152416	2	• WASHER, Rubber (1x 3/7 x 1/8 TK)
19	104606	2	• NUT, Hex lock (3/8"-16 Grade 5, nylon)
20	101297	2	• BOLT, Hex head (3/8"-16 x 1 1/4" Grade 5)
21	103472	2	• WASHER, Flat (3/8")
22	103999	1	• WASHER, Lock (3/8")

MidWestTech | Skyjack SJ46AJ, SJ51AJ Articulating Boom Lift Parts Manual | Publication... Order the manual at mid-west-tech.com >

9.15 Generator & Oil Cooler - 3.5kW - SJ46AJ

Index No.	Skyjack Part No.	Qty.	Description
A	166730	1	GENERATOR & OIL COOLER ASSEMBLY - 3.5kW - *SJ46AJ ANSI/CSA*
B	166731	1	GENERATOR & OIL COOLER ASSEMBLY - 3.5kW - *SJ46AJ CE*
1	(Ref.)	1	• OIL COOLER WIRING (not shown) (For components, refer to 9.14 Oil Cooler Wiring)
2	(Ref.)	1	• GENERATOR WIRING - 3.5kW (not shown) (For components, refer to 9.19 Generator Wiring - 3.5kW)
3	(Ref.)	1	• GENERATOR HOSE KIT (For components, refer to 9.18 Hydraulic Hoses - 3.5 kW Generator & Oil Cooler)
-	166736	1	• OIL COOLER ASSEMBLY
4	162962	1	• • BRACKET, Mount
5	162967	1	• • BRACKET, Mount
6	162964	1	• • BRACKET, Oil cooler mount RH
7	162963	1	• • BRACKET, Oil cooler mount LH
8	160800	1	• • OIL COOLER, 12V DC
	169245	1	• • • THERMOSTAT, Oil cooler
9	103472	26	• • WASHER, Flat (0.375")
0	103870	4	• • BOLT, Hex head (0.375"-16 x 1.50" Grade 5)
11	104606	12	• • NUT, Hex head nylon lock (0.375"-16 Grade 5)
12	103871	2	• • BOLT, Hex head (0.375"-16 x 1.75" Grade 5)
13	103596	2	• • BOLT, Hex head (0.375"-16 x 2.00" Grade 5)
14	101297	6	• • BOLT, Hex head (0.375"-16 x 1.25" Grade 5)
15	152593	1	• PAD, Wear (5.00" X 4.00" X 3.329")
16	(Ref.)	1	• DRIVE/SYSTEM PUMP (For components, refer to 7.11 Drive and System Pump)
17	(Ref.)	1	• UPPER CONTRL BOX WIRING - 3.5kW generator (not shown) (For components, refer to 9.19 Generator Wiring - 3.5kW)
18	103870	4	• BOLT, Hex head (0.375"-16 x 1.50" Grade 5)
19	106049	2	• BOLT, Carriage (0.313"-18 x 1.25" Grade 5)
20	702856	1	• FITTING, Elbow 90° (08 JICM - 08 JICFSW)
21	703284	1	• FITTING, Elbow 90° (12 JICM -12 JICFSW)
22	105445	1	• FITTING, Elbow 90° (12 JICM - 12 ORBM)
23	135061	1	• FITTING, Branch tee (08 JICM - 08 JICM - 08 ORBM)
24	707277	1	• FITTING, Branch tee (12 JICM - 12 JICM - 12 ORBM)
25	110498	1	• FITTING, Straight (08 JICM - 06 ORBM)
26	703412	1	• FITTING, Straight (12 JICF - 08 JICM)
27	(Ref.)	1	• GENERATOR (3.5kW - 60Hz AC) (For components, refer to 9.17 Generator - 3.5 kW)
28	103984	2	• NUT, Hex head nylon lock (0.313"-18 Grade 5)
29	166735	1	• PLATE, Generator mount
30	103996	2	• WASHER, Flat (0.312")
31	103472	9	• WASHER, Flat (0.375")
32	112366	1	• FITTING, Elbow 90° (08 JICM - 12 ORBM)
33	103596	4	• BOLT, Hex head (0.375"-16 x 2.00" Grade 5)

MidWestTech | Skyjack SJ46AJ, SJ51AJ Articulating Boom Lift Parts Manual | Publication... Order the manual at mid-west-tech.com >

4.20 Base Control Box - Deutz D2011, GM & Kubota

Index No.	Skyjack Part No.	Qty.	Description
A	163571	1	BASE CONTROLS - SJ46AJ ANSI/CSA - Deutz D2011
B	195416	1	BASE CONTROLS - SJ46AJ ANSI/CSA - Deutz D2011 with Positive Air Shut-Off
C	163581	1	BASE CONTROLS - SJ46AJ/SJ51AJ CE - Deutz D2011
D	163611	1	BASE CONTROLS - SJ46AJ/SJ51AJ AS - Deutz D2011
E	163578	1	BASE CONTROLS - SJ46AJ ANSI/CSA - GM
F	170412	1	BASE CONTROLS - SJ46AJ ANSI/CSA - Kubota
1	149278	1	• CONTROL BOX, A, C, D, E, F
	195371	1	• CONTROL BOX, B
	149279	1	• • BODY, Control box
	149281	1	• • HINGE, Steel
	149280	1	• • DOOR, Control box
	149282	1	• • WEATHER STRIP
	149437	2	• • FASTENER, Door
	149320	2	• • RETAINER, 1/4 Turn
	149321	2	• • RECEPTACLE, 1/4 Turn
2	(Ref.)	1	• TERMINAL STRIP, Base (For components, refer to 4.21 Base Terminal Strip - ANSI/CSA & AS) (For components, refer to 4.22 Base Terminal Strip - CE)
3	127131	12	• RELAY, (12V 40 AMP), A, C
	127131	13	• RELAY, (12V 40 AMP), B, D
	127131	8	• RELAY, (12V 40 AMP), E
	127131	9	• RELAY, (12V 40 AMP), F
4	138749	15	• SOCKET, Automotive relay, A, B, D
	138749	14	• SOCKET, Automotive relay, C
	138749	11	• SOCKET, Automotive relay, E
	138749	12	• SOCKET, Automotive relay, F
5	104003	6	• NUT, Hex head (#10-32)
6	104694	6	• WASHER, Flat (#10)
7	149426	1	• ANGLE TRANSDUCER
8	103957	14	• SCREW, Round head machine (#8-32 x 1/2"), A, B, D, E, F
	103957	16	• SCREW, Round head machine (#8-32 x 1/2"), C
9	138765	16	• NUT, Hex lock (#8-32 Grade 5, nylon)
10	138751	3	• HOUSING, Open bottom 24 pin levered
11	138756	2	• SOCKET, 24 Pin spring (16A)
12	138755	1	• PLUG, 24 Pin spring (16A)
13	103056	1	• BEEPER (7.5 - 16 VDC), A, B, D, E, F
14	116266	5	• CONNECTOR, Heyco liquid tight, A, B, D, F
	116266	4	• CONNECTOR, Heyco liquid tight, C, E
15	131938	1	• PLUG (1 1/8")
16	117325	3	• CIRCUIT BREAKER (15 AMP)
17	102853	6	• SWITCH, Toggle, A, B, C, D
	102853	5	• SWITCH, Toggle, E, F

MidWestTech | Skyjack SJ46AJ, SJ51AJ Articulating Boom Lift Parts Manual | Publication... Order the manual at mid-west-tech.com >

9.42 Elevate Telematics

Index No.	Skyjack Part No.	Qty.	Description
			NOTE *A subscription is required to use the Elevate Telematics option. Refer to "Elevate Telematics Subscription" on page 330.*
A	223028	1	ELEVATE TELEMATICS WITH KEYPAD INSTALLATION KIT
B	223029	1	ELEVATE TELEMATICS WITHOUT KEYPAD INSTALLATION KIT
C	223022	1	ELEVATE TELEMATICS WITH KEYPAD REWORK KIT - ***Deutz D2011***
D	223023	1	ELEVATE TELEMATICS WITHOUT KEYPAD REWORK KIT - ***Deutz D2011***
E	223026	1	ELEVATE TELEMATICS WITH KEYPAD REWORK KIT - ***Deutz T/D2.9L & Perkins 2.2T***
F	223027	1	ELEVATE TELEMATICS WITHOUT KEYPAD REWORK KIT - ***Deutz T/D2.9L & Perkins 2.2T***
G	223024	1	ELEVATE TELEMATICS WITH KEYPAD REWORK KIT - ***Kubota WG2503***
H	223025	1	ELEVATE TELEMATICS WITHOUT KEYPAD REWORK KIT - ***Kubota WG2503***
			NOTE: Use kits A and B for machines which already have a telematics harness connection plug. Use kits C through H for machines without a telematics plug.
-	221993	1	• ELEVATE TELEMATICS INSTALLATION KIT
1	211143	1	• • BRACKET, Elevate keypad/GPS mounting
2	211134	2	• • SPACER, Keypad offset
3	300450	2	• • NUT, Lock (10-32 gr 5 nylon)
4	104694	2	• • WASHER, Flat (#10)
5	104698	2	• • SCREW, Round head machine (10-32 x 0.75")
6	191833	4	• • WASHER, Flat (#6)
7	196306	4	• • NUT, Lock (6-32 gr 5 nylon)
8	114678	4	• • SCREW, Round head machine (6-32 x 0.50")
9	152294	2	• • SCREW, Round head machine (8-32 x 1.25")
10	103991	2	• • WASHER, Flat (#8)
11	103986	2	• • NUT, Hex (8-32)
12	221149	1	• • WIRE ASSEMBLY, B+
13	220577	1	• • WIRE ASSEMBLY, B+
14	173002	1	• • LABEL, Equipped with Elevate keypad
15	102892	20	• • TIE, Cable (5-3/8") (not shown)
16	213099	1	• TELEMATICS, Elevate keypad, ***A***
17	213098	1	• TELEMATICS, Elevate GPS ME501-4
	199295	1	• • COVER
	199296	1	• • BRACKET
	199297	1	• • BATTERY
	199298	1	• • CABLE, Control
	199299	1	• • FUSE KIT, 1 amp fuse and holder
18	221920	1	• INSTRUCTIONS, Elevate telematics ready installation (not shown), ***A, B***
	221919	1	• INSTRUCTIONS, Elevate telematics rework - Deutz D2011 (not shown), ***C, D***
	221892	1	• INSTRUCTIONS, Elevate telematics rework - Deutz D/TD2.9L & Perkins 2.2T (ns), ***E, F***
	221893	1	• INSTRUCTIONS, Elevate telematics rework - Kubota WG2503 (not shown), ***G, H***
19	221111	1	• INSTRUCTION, Operating - Elevate telematics (not shown), ***A, C, E, G***
			The parts list for kits C through H are continued on the following pages.

MidWestTech | Skyjack SJ46AJ, SJ51AJ Articulating Boom Lift Parts Manual | Publication... Order the manual at mid-west-tech.com >