Illustrated Parts Manual

Models

600S

600SJ

660SJ

SN 0300068000
THROUGH 0300087000

P/N
3121178

September 14, 2018 - Rev AJ

ANSI

An Oshkosh Corporation Company

Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

SECTION 1 - FRAME 11

FIGURE 1-1. 2WD FRONT AXLE AND STEERING INSTALLATION (SN 0300068000 through 0300075605) 12
FIGURE 1-2. 2WD FRONT AXLE AND STEERING INSTALLATION (SN 0300075606 through 0300087000) 16
FIGURE 1-3. 4WD FRONT AXLE AND STEERING INSTALLATION (SN 0300068000 through 0300075605) 20
FIGURE 1-4. 4WD FRONT AXLE AND STEERING INSTALLATION (SN 0300075606 through 0300087000) 24
FIGURE 1-5. 4WS REAR STEERING INSTALLATION (SN 0300068000 through 0300075605) 28
FIGURE 1-6. 4WS REAR STEERING INSTALLATION (SN 0300075606 through 0300087000) 30
FIGURE 1-7. TIRE AND WHEEL DRIVE INSTALLATIONS 32
FIGURE 1-8. DRIVE HUB ASSEMBLY (SN 0300068000 through 0300075605) 36
FIGURE 1-9. DRIVE HUB ASSEMBLY (SN 0300075606 through 0300087000) 38
FIGURE 1-10. DRIVE MOTOR ASSEMBLY (SN 0300068000 through 0300075605) 42
FIGURE 1-11. DRIVE MOTOR ASSEMBLY (ORIGINAL EQUIPMENT) (SN 0300075606 through 0300087000) 44
FIGURE 1-12. DRIVE MOTOR ASSEMBLY (SERVICE REPLACEMENT) 48
FIGURE 1-13. DRIVE VALVES AND SHIELDS INSTALLATION (FRAME MOUNTED) (SN 0300068000 through 0300075605) . 50
FIGURE 1-14. DRIVE VALVES AND SHIELDS INSTALLATION (FRAME MOUNTED) (SN 0300075606 through 0300087000) . 52
FIGURE 1-15. TOW PACKAGE INSTALLATION (OPTIONAL) (SN 0300068000 through 0300075605) 56
FIGURE 1-16. TOW PACKAGE INSTALLATION (OPTIONAL) (SN 0300075606 through 0300087000) 60

SECTION 2 - TURNTABLE 63

FIGURE 2-1. CONTROL VALVES INSTALLATIONS 64
FIGURE 2-2. MAIN CONTROL VALVE ASSEMBLY 68
FIGURE 2-3. ACCESSORY VALVE ASSEMBLY 72
FIGURE 2-4. SWING DRIVE, TURNTABLE BEARING AND LOCK INSTALLATIONS 74
FIGURE 2-5. SWING HUB ASSEMBLY 76
FIGURE 2-6. SWING MOTOR ASSEMBLY 78
FIGURE 2-7. CATERPILLAR ENGINE INSTALLATION 82
FIGURE 2-8. DEUTZ ENGINE INSTALLATION (SN 0300068000 through 0300077489) 90
FIGURE 2-9. DEUTZ ENGINE INSTALLATION (SN 0300077490 through 0300087000) 96
FIGURE 2-10. FORD ENGINE INSTALLATION (SN 0300068000 through 0300079618) 104
FIGURE 2-11. DUAL FUEL INSTALLATIONS (FORD MACHINE OPTION) 112
FIGURE 2-12. FORD ENGINE INSTALLATION (SN 0300079619 through 0300087000) 114
FIGURE 2-13. PISTON PUMP ASSEMBLY (SN 0300068000 through 0300075605) 120
FIGURE 2-14. PISTON PUMP ASSEMBLY (SN 0300075606 through 0300087000) 124
FIGURE 2-15. GEAR PUMP ASSEMBLY 130
FIGURE 2-16. TANK INSTALLATIONS 132
FIGURE 2-17. ROTARY COUPLING INSTALLATION (SN 0300068000 through 0300075605) 136
FIGURE 2-18. ROTARY COUPLING INSTALLATION (SN 0300075606 through 0300087000) 138
FIGURE 2-19. GROUND CONTROL BOX ASSEMBLY 142
FIGURE 2-20. ELECTRICAL OPTIONS INSTALLATION (TURNTABLE MOUNTED) 146
FIGURE 2-21. ENGINE TRAY JACK INSTALLATION (OPTIONAL) 150
FIGURE 2-22. HOODS AND LIFTING PLATE INSTALLATIONS 152
FIGURE 2-23. 2500W GENERATOR INSTALLATION - CATERPILLAR MACHINES (OPTIONAL) 156
FIGURE 2-24. 2500W GENERATOR INSTALLATION - DEUTZ MACHINES (OPTIONAL) 160
FIGURE 2-25. 2500W GENERATOR INSTALLATION - FORD MACHINES (OPTIONAL) (SN 0300068000 through 0300079618) 164
FIGURE 2-26. 2500W GENERATOR INSTALLATION - FORD MACHINES (OPTIONAL) (SN 0300079619 through 0300087000) 168
FIGURE 2-27. 7500W SKYPOWER GENERATOR INSTALLATION - CATERPILLAR AND DEUTZ ENGINES (OPTIONAL) 172
FIGURE 2-28. 7500W SKYPOWER GENERATOR INSTALLATION - FORD ENGINES (OPTIONAL) 178
FIGURE 2-29. SKYAIR COMPRESSOR INSTALLATION 182
FIGURE 2-30. AIR COMPRESSOR ASSEMBLY 184

SECTION 3 - BOOM 187

FIGURE 3-1. BOOM INSTALLATION - 600S 188
FIGURE 3-2. BOOM INSTALLATION - 600SJ & 660SJ 192
FIGURE 3-3. MAIN BOOM ASSEMBLIES 198
FIGURE 3-4. ROTATOR ASSEMBLIES (FRONT ENTRY PLATFORM) 202
FIGURE 3-5. ROTATOR ASSEMBLIES (SIDE ENTRY PLATFORM) 206
FIGURE 3-6. POWER TRACK INSTALLATIONS 208

SECTION 4 - PLATFORM 211

FIGURE 4-1. PLATFORM COMPONENTS INSTALLATION (FRONT ENTRY PLATFORM) 212

MidWestTech | JLG 600S, 600SJ, 660S Boom Lift Parts Manual | Publication 3121178 Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

FIGURE 4-2. PLATFORM COMPONENTS INSTALLATION (SIDE ENTRY PLATFORM) 216
FIGURE 4-3. PLATFORM COMPONENTS INSTALLATION (FALL ARREST PLATFORM) 220
FIGURE 4-4. PLATFORM CONSOLE ASSEMBLY 222
FIGURE 4-5. CONTROLLER ASSEMBLY (LIFT AND SWING) (ORIGINAL EQUIPMENT) 228
FIGURE 4-6. CONTROLLER ASSEMBLY (LIFT AND SWING) (SERVICE REPLACEMENT) 230
FIGURE 4-7. CONTROLLER ASSEMBLY (LIFT AND SWING) (SERVICE REPLACEMENT) 232
FIGURE 4-8. CONTROLLER ASSEMBLY (DRIVE AND STEER) (ORIGINAL EQUIPMENT) 236
FIGURE 4-9. CONTROLLER ASSEMBLY (DRIVE AND STEER) (SERVICE REPLACEMENT) 238
FIGURE 4-10. CONTROLLER ASSEMBLY (DRIVE AND STEER) (SERVICE REPLACEMENT) 240
FIGURE 4-11. SOFT TOUCH SYSTEM INSTALLATION (OPTIONAL) 242
FIGURE 4-12. PLATFORM PADDING INSTALLATION (OPTIONAL) (SIDE ENTRY PLATFORM) 244
FIGURE 4-13. SKYGLAZIER INSTALLATION (600S ONLY) 246
FIGURE 4-14. SKYWELDER/SKYCUTTER COMBO INSTALLATION (60HZ) 248
FIGURE 4-15. SKYWELDER INSTALLATION (50HZ) 252
FIGURE 4-16. SKYWELDER INSTALLATION (60HZ) 254
FIGURE 4-17. SKYCUTTER INSTALLATION 256
FIGURE 4-18. PLASMA CUTTER ASSEMBLY 258
FIGURE 4-19. PIPE RACKS INSTALLATION (ANSI & CSA SPECS) 260
FIGURE 4-20. WELDER ASSEMBLY 262

SECTION 5 - CYLINDER 265

FIGURE 5-1. AXLE LOCKOUT CYLINDER ASSEMBLY (SN 0300068000 through 0300075605) 266
FIGURE 5-2. AXLE LOCKOUT CYLINDER ASSEMBLY (SN 0300075606 through 0300087000) 268
FIGURE 5-3. LEVEL CYLINDER ASSEMBLY (PLATFORM SLAVE) - 600S (ORIGINAL EQUIPMENT) 270
FIGURE 5-4. LEVEL CYLINDER ASSEMBLY (PLATFORM SLAVE) - 600S (SERVICE REPLACEMENT) 272
FIGURE 5-5. LEVEL CYLINDER ASSEMBLY (PLATFORM SLAVE) - 600S (SERVICE REPLACEMENT) 274
FIGURE 5-6. LEVEL CYLINDER ASSEMBLY (PLATFORM SLAVE) - 600SJ & 660SJ (ORIGINAL EQUIPMENT) 276
FIGURE 5-7. LEVEL CYLINDER ASSEMBLY (PLATFORM SLAVE) - 600SJ & 660SJ (SERVICE REPLACEMENT) 278
FIGURE 5-8. LEVEL CYLINDER ASSEMBLY (PLATFORM SLAVE) - 600SJ & 660SJ (SERVICE REPLACEMENT) 280
FIGURE 5-9. LIFT CYLINDER ASSEMBLY (BOOM) 282
FIGURE 5-10. LIFT CYLINDER ASSEMBLY (JIB) - 600SJ & 660SJ (ORIGINAL EQUIPMENT) 286
FIGURE 5-11. LIFT CYLINDER ASSEMBLY (JIB) - 600SJ & 660SJ (SERVICE REPLACEMENT) 288
FIGURE 5-12. LIFT CYLINDER ASSEMBLY (JIB) - 600SJ & 660SJ (SERVICE REPLACEMENT) 290
FIGURE 5-13. MASTER CYLINDER ASSEMBLY (ORIGINAL EQUIPMENT) 292
FIGURE 5-14. MASTER CYLINDER ASSEMBLY - 600S (SERVICE REPLACEMENT) 296
FIGURE 5-15. MASTER CYLINDER ASSEMBLY - 600SJ/660SJ (SERVICE REPACEMENT) 298
FIGURE 5-16. STEER CYLINDER ASSEMBLY 300
FIGURE 5-17. TELESCOPE CYLINDER ASSEMBLY 302
FIGURE 5-18. CYLINDER BELLOWS INSTALLATION (OPTIONAL) 304

SECTION 6 - HYDRAULIC 307

FIGURE 6-1. HYDRAULIC DIAGRAM - DRIVE AND STEER (2WD/2WS) 308
FIGURE 6-2. HYDRAULIC DIAGRAM - DRIVE AND STEER (4WD/2WS) (SN 0300068000 through 0300075605) 312
FIGURE 6-3. HYDRAULIC DIAGRAM - DRIVE AND STEER (4WD/2WS) (SN 0300075606 through 0300087000) 316
FIGURE 6-4. HYDRAULIC DIAGRAM - OSCILLATING AXLE 318
FIGURE 6-5. HYDRAULIC DIAGRAM - STANDARD (SN 0300068000 through 0300075605) 320
FIGURE 6-6. HYDRAULIC DIAGRAM - STANDARD (SN 0300075606 through 0300087000) 324
FIGURE 6-7. HYDRAULIC DIAGRAM LIST 328

SECTION 7 - ELECTRICAL 331

FIGURE 7-1. ELECTRICAL DIAGRAM LIST 332
FIGURE 7-2. HARNESS COMPONENTS INSTALLATION 334

SECTION 8 - DECALS 347

FIGURE 8-1. DECAL INSTALLATION (ANSI SPEC) 348
FIGURE 8-2. DECAL INSTALLATION (COUNTRY SPEC) 352

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK 357

FIGURE 9-1. MODEL 600S/600SJ/660SJ STANDARD PARTS 358
FIGURE 9-2. MODEL 600S/600SJ/660SJ VARIABLE PARTS 360

SECTION 10 - SPECIAL OPTIONS 361

MidWestTech | JLG 600S, 600SJ, 660S Boom Lift Parts Manual | Publication 3121178 Order the manual at mid-west-tech.com >

FIGURE 10-1. SPECIAL OPTIONS 362

PART NUMBER INDEX 367

MidWestTech | JLG 600S, 600SJ, 660S Boom Lift Parts Manual | Publication 3121178 Order the manual at mid-west-tech.com >

FIGURE 2-16. TANK INSTALLATIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	**TANKS INSTALLATIONS - NON U/L MACHINES**	
	0254849	Ref	**Diesel Machines**	9
	0271250	Ref	**Gas/Dual Fuel Machines**	3
1	4400449	1	Hydraulic Tank Assembly (See Items 101-108 for Breakdown)	
2	4400400	1	Tank, Fuel	
2A		Ref	Cap Options:	
2A	7016314	1	Standard Black Cap	
2A	1120484	1	Optional Red Cap (Gas/Dual Fuel Machines) (Not Included with Tank)	
2A	1120487	1	Optional Blue Cap (Diesel Machines) (Not Included with Tank)	
2B	7019658	1	Tube, Fuel Pick-up (With Fitting)	
3	4360436	1	Switch, Fuel Level	
4	4845393	1	Hydraulic Tray Weldment	
6	4240113	1	Strap, Tank	
7	4751600	12	Flatwasher 3/8in Regular	
8	3311601	AR	Nut 3/8in-16NC	
9	0641614	6	Bolt 3/8in-16NC x 1-3/4in	
10	0100011	AR	Compound, Locking	
11	0100079	AR	Sealant, Pipe	
12	2200233	1	Fitting	
13	4280295	25 in /44cm	Strip, Protective	
14	4420038	70 in /1.78m	Tape, Rubber	
		Ref	**Note: Items 15-24 Used on Gas Machines Only**	
15	4641022	1	Valve, Needle	
16	4568116	1	Tube, Fuel	
17	0100020	AR	Sealant	
18	0100062	AR	Retaining Compound #680	
19	4568119	1	Tube, Fuel	
20	1320245	1	Clamp	
21	3572423	1	Plate, Valve, Needle	
22	0641508	2	Bolt 5/16in-18NC x 1in	
23	4711500	4	Flatwasher 5/16in Thin	
24	3311505	2	Locknut 5/16in-18NC	
25	0641412	1	Bolt 1/4in-20NC x 1-1/2in	
26	3311405	1	Locknut 1/4in-20NC x 1-1/2in	
27	0641608	4	Bolt 3/8in-16NC x 1in	
		Ref	**TANKS INSTALLATION - U/L MACHINES**	
	0257705	Ref	**Gas/Diesel**	3
	0258607	Ref	**LP Gas Only**	2
51	4400449	1	Hydraulic Tank Assembly (See Items 101-108 for Breakdown)	D
52	4400407	1	Tank, Fuel (Not Required on LP Gas Only Machines)	
52A	7016314	1	Cap, Black Fuel (Not Required on LP Gas Only Machines)	
53	4360436	1	Switch, Fuel Level (Not Required on LP Gas Only Machines)	
54	4845393	1	Tray, Hydraulic	
56	4751600	AR	Flatwasher 3/8in Regular	
57	3311601	AR	Nut 3/8in-16NC	
58	0641614	6	Bolt 3/8in-16NC x 1-3/4in	
59	0100011	AR	Compound, Locking	

MidWestTech | JLG 600S, 600SJ, 660S Boom Lift Parts Manual | Publication 3121178 Order the manual at mid-west-tech.com >

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	4933291	Ref	Caterpillar Engine	2-B
	4933222	Ref	Deutz Engine (SN 0300068000 through 0300084826)	4-D
	4933318	Ref	Deutz Engine (SN 0300084827 through 0300087000)	D
	4933221	Ref	Ford EFI Engine (SN 0300068000 through 0300084826)	3-C
	4933327	Ref	Ford EFI Engine (SN 0300084827 through 0300087000)	1-A
		Ref	STANDARD ELECTRICAL SCHEMATIC	
	1870132	Ref	Caterpillar and Ford Engine Machines	G
	1870132	Ref	Deutz Engine Machines (SN 0300069000 through 0300084826)	G
	1870191	Ref	Deutz Engine Machines (SN 0300084827 through 0300087000)	A
	0270805	Ref	STROBE LIGHT ELECTRICAL DIAGRAM	2
	1283235	Ref	STROBE LIGHT ELECTRICAL DIAGRAM	E

MidWestTech | JLG 600S, 600SJ, 660S Boom Lift Parts Manual | Publication 3121178 Order the manual at mid-west-tech.com >

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2900970	Ref	Decal Kit - Complete (660SJ)	
	2900937	Ref	Decal Kit - Country Spec (Brazil and Japanese Spec) (600S)	
	2910045	Ref	Decal Kit - Country Spec (Brazil Spec) (600SJ & 660SJ)	
	1001193633	Ref	Decal Kit - Machine	
	1001108718	Ref	Decal Kit - Platform (600S)	
	1001238725	Ref	Decal Kit - Platform (600SJ/660SJ)	
	1001119562	Ref	Decal Kit - Platform Console Box	
	2902394	Ref	**Drive/Steer Cutout Kit**	
		Ref	**Electrical Connector Kits**	
	1001148902	Ref	Amp/Tyco Electrical Connector Kit	
	1001148903	Ref	Deutsch DT Electrical Connector Kit	
	1001148904	Ref	Deutsch HD Electrical Connector Kit	
	1001148905	Ref	Packard Electrical Connector Kit	
	1001148906	Ref	Various Electrical Connectors Kit	
	0274196	Ref	**Engine Installations - UL**	
		Ref	**Engine Block Heater Installations:**	
	2580055	Ref	**Caterpillar Engine Machines**	
	0274227	Ref	**Deutz Engine Machines**	
	0258696	Ref	**Ford Engine Machines**	
	0257157	Ref	**Ether Start Installation (Deutz Engine Machines)**	
		Ref	**Filter Kits:**	
		Ref	Combined Filter Kit (Hydraulic/Air and Fuel/Engine Oil)	
		Ref	Caterpillar Engines	
	2915137	NLA	Caterpillar Engines (Use p/n 1001110994) **(SN 0300068000 through 0300084826)**	
	1001114031	NLA	Caterpillar Engines (Use p/n 1001110994) **(SN 0300068000 through 0300084826)**	
	1001110994	1	Caterpillar Engines **(SN 0300068000 through 0300084826)**	
	1001114123	NLA	Caterpillar Engines (Use p/n 1001110991) **(SN 0300084827 through 0300087000)**	
	1001114124	NLA	Caterpillar Engines (Use p/n 1001110991) **(SN 0300084827 through 0300087000)**	
	1001110991	1	Caterpillar Engines **(SN 0300084827 through 0300087000)**	
		Ref	Deutz Engines	
	2910463	NLA	Deutz Engines (Use p/n 1001110993) **(SN 0300068000 through 0300084826)**	
	1001110993	1	Deutz Engines **(SN 0300068000 through 0300084827)**	
	1001114036	NLA	Deutz Engines (Use p/n 1001110990) **(SN 0300084827 through 0300087000)**	
	1001110990	1	Deutz Engines **(SN 0300084827 through 0300087000)**	
		Ref	Ford Engines	
	1001114041	NLA	Ford LRG-425 (Use p/n 1001114042) **(SN 0300068000 through 0300084827)**	
	1001114042	1	Ford LRG-425 **(SN 0300084827 through 0300087000)**	
	2910460	NLA	Ford LRG-425 with EFI (Use p/n 1001114039) **(SN 0300068000 through 0300084827)**	
	1001114039	1	Ford LRG-425 with EFI **(SN 0300068000 through 0300084827)**	
		Ref	Hydraulic/Air Filter	
	2910924	NLA	Caterpillar, Deutz and Ford - 300 Hour (Use p/n 1001109692) **(SN 0300068000 through 0300084826)**	
	1001109692	1	Caterpillar, Deutz and Ford - 300 Hour	
	1001114132	NLA	Deutz Engines - 300 Hour (Use p/n 1001109684) **(SN 0300084827 through 0300087000)**	

MidWestTech | JLG 600S, 600SJ, 660S Boom Lift Parts Manual | Publication 3121178 Order the manual at mid-west-tech.com >