Illustrated Parts Manual

Model
740AJ

With ADE or UGM
CONTROL MODULE
PRIOR TO
SN 0300185827

P/N
3121161

July 31, 2018 - Rev Z

ANSI

An Oshkosh Corporation Company

MidWestTech | JLG 740AJ Boom Lift Parts Manual | Publication 3121161

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

TABLE OF CONTENTS

SECTION 1 - FRAME 9

FIGURE 1-1. AXLE AND STEERING INSTALLATION 10
FIGURE 1-2. TIRE AND WHEEL INSTALLATIONS 14
FIGURE 1-3. DRIVE HUB ASSEMBLY (Prior to SN 0300138447) 16
FIGURE 1-4. DRIVE HUB ASSEMBLY (SN 0300138447 through 0300185827) 20
FIGURE 1-5. DRIVE MOTOR ASSEMBLY (Prior to SN 0300138447) 24
FIGURE 1-6. DRIVE MOTOR ASSEMBLY (SN 0300138447 through 0300185827) 26
FIGURE 1-7. DRIVE VALVES AND SHIELDS INSTALLATIONS 28
FIGURE 1-8. TOW PACKAGE INSTALLATION 30

SECTION 2 - TURNTABLE 33

FIGURE 2-1. CONTROL VALVES AND HORN INSTALLATIONS 34
FIGURE 2-2. MAIN CONTROL VALVE ASSEMBLY 38
FIGURE 2-3. ACCESSORY VALVE ASSEMBLY 42
FIGURE 2-4. AUXILIARY PUMP ASSEMBLY (SN 0300109067 through 0300185827) 44
FIGURE 2-5. TURNTABLE BEARING AND SWING DRIVE INSTALLATION 48
FIGURE 2-6. SWING MOTOR/HUB ASSEMBLY (Prior to SN 0300134353) 50
FIGURE 2-7. SWING MOTOR/HUB ASSEMBLY (SN 0300134353 through 0300185827) 56
FIGURE 2-8. DEUTZ ENGINE INSTALLATION (Prior to SN 0300077500) 60
FIGURE 2-9. DEUTZ ENGINE INSTALLATION (SN 0300077500 through 0300185827) 66
FIGURE 2-10. FORD ENGINE INSTALLATION (Prior to SN 0300077500) 78
FIGURE 2-11. FORD ENGINE INSTALLATION (SN 0300077500 through 0300185827) 84
FIGURE 2-12. DUAL FUEL INSTALLATION (GAS MACHINES OPTIONS) 90
FIGURE 2-13. GM ENGINE INSTALLATION (Prior to SN 0300140592) 94
FIGURE 2-14. GM ENGINE INSTALLATION (SN 0300140592 through 0300185827) 100
FIGURE 2-15. PISTON PUMP ASSEMBLY (SAUER DANFOSS) 106
FIGURE 2-16. PISTON PUMP ASSEMBLY (EATON) 110
FIGURE 2-17. TANK INSTALLATIONS 114
FIGURE 2-18. ROTARY COUPLING INSTALLATION (Prior to SN 0300138447) 118
FIGURE 2-19. ROTARY COUPLING INSTALLATION (SN 0300138447 through 0300185827) 120
FIGURE 2-20. GROUND CONTROL BOX ASSEMBLY (Prior to SN 0300139070) 122
FIGURE 2-21. GROUND CONTROL BOX ASSEMBLY (SN 0300139070 through 0300185827) 126
FIGURE 2-22. ELECTRICAL OPTIONS INSTALLATION (TURNTABLE MOUNTED) 130
FIGURE 2-23. HOODS INSTALLATION (Prior to SN 0300089982) 134
FIGURE 2-24. HOODS INSTALLATION (ABS) (SN 0300089982 through 0300185827) 138
FIGURE 2-25. HOODS INSTALLATION (STEEL) 144
FIGURE 2-26. ENGINE TRAY JACK INSTALLATION (OPTIONAL) 150
FIGURE 2-27. 2500W GENERATOR INSTALLATION - DEUTZ MACHINES (ANSI AND CSA SPEC ONLY) (OPTIONAL) 152
FIGURE 2-28. 2500W GENERATOR INSTALLATION - FORD MACHINES (ANSI AND CSA SPEC ONLY) (OPTIONAL) (Prior to SN 0300077500) 156
FIGURE 2-29. 2500W GENERATOR INSTALLATION - FORD MACHINES (ANSI AND CSA SPEC ONLY) (OPTIONAL) (SN 0300077500 through 0300185827) 160
FIGURE 2-30. 2500W GENERATOR INSTALLATION - GM MACHINES (OPTIONAL) 164

SECTION 3 - BOOM 167

FIGURE 3-1. BOOM AND CYLINDERS INSTALLATION 168
FIGURE 3-2. MAIN BOOM ASSEMBLIES 172
FIGURE 3-3. ROTATOR ASSEMBLY (Prior to SN 0300130881) 176
FIGURE 3-4. ROTATOR ASSEMBLY (SN 0300130881 through 0300185827) 180
FIGURE 3-5. VALVE AND LIMIT SWITCH INSTALLATIONS (BOOM MOUNTED) 182

SECTION 4 - PLATFORM 185

FIGURE 4-1. PLATFORM COMPONENTS INSTALLATION (Prior to SN 0300130881) 186
FIGURE 4-2. PLATFORM COMPONENTS INSTALLATION (SN 0300130881 through 0300185827) 190
FIGURE 4-3. PLATFORM CONSOLE ASSEMBLY (Prior to SN 0300138447) 194
FIGURE 4-4. PLATFORM CONSOLE ASSEMBLY (SN 0300138447 through 0300185827) 198
FIGURE 4-5. CONTROLLER ASSEMBLY (SWING AND LIFT) 202
FIGURE 4-6. CONTROLLER ASSEMBLY (DRIVE AND STEER) 206
FIGURE 4-7. SOFT TOUCH SYSTEM INSTALLATION (OPTIONAL) (Prior to SN 0300137666) 210
FIGURE 4-8. SOFT TOUCH SYSTEM INSTALLATION (OPTIONAL) (SN 0300137666 through 0300185827) 212

SECTION 5 - CYLINDER 215

MidWestTech | JLG 740AJ Boom Lift Parts Manual | Publication 3121161 Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

FIGURE 5-1. UPRIGHT LEVEL CYLINDER ASSEMBLY 216
FIGURE 5-2. UPRIGHT LEVEL CYLINDER ASSEMBLY (SERVICE REPLACEMENT) 218
FIGURE 5-3. LIFT CYLINDER ASSEMBLY - JIB (ORIGINAL EQUIPMENT) 220
FIGURE 5-4. LIFT CYLINDER ASSEMBLY - JIB (SERVICE REPLACEMENT) 222
FIGURE 5-5. LIFT CYLINDER ASSEMBLY - MAIN BOOM (ORIGINAL EQUIPEMNT) 224
FIGURE 5-6. LIFT CYLINDER ASSEMBLY - MAIN BOOM (SERVICE REPLACEMENT) 226
FIGURE 5-7. LIFT CYLINDER ASSEMBLY - TOWER BOOM (ORIGINAL EQUIPMENT) 228
FIGURE 5-8. LIFT CYLINDER ASSEMBLY - TOWER BOOM (SERVICE REPLACEMENT) 230
FIGURE 5-9. MASTER CYLINDER ASSEMBLY (ORIGINAL EQUIPMENT) 232
FIGURE 5-10. MASTER CYLINDER ASSEMBLY (SERVICE REPLACEMENT) 234
FIGURE 5-11. SLAVE CYLINDER ASSEMBLY (ORIGINAL EQUIPMENT) 236
FIGURE 5-12. SLAVE CYLINDER ASSEMBLY (SERVICE REPLACEMENT) 238
FIGURE 5-13. STEER CYLINDER ASSEMBLY (Prior to SN 0300142664) 240
FIGURE 5-14. STEER CYLINDER ASSEMBLY (SN 0300142664 through 0300185827) 242
FIGURE 5-15. TELESCOPE CYLINDER ASSEMBLY - MAIN 244
FIGURE 5-16. TELESCOPE CYLINDER ASSEMBLY - MAIN (SERVICE REPLACEMENT) 246

SECTION 6 - HYDRAULIC 249

FIGURE 6-1. DRIVE HYDRAULIC DIAGRAM (Prior to SN 0300137975) 250
FIGURE 6-2. DRIVE HYDRAULIC DIAGRAM (SN 0300137975 through 0300185827) 254
FIGURE 6-3. STANDARD HYDRAULIC DIAGRAM (WITH FENNER AND HALDEX BRAND AUXILIARY PUMP) 258
FIGURE 6-4. STANDARD HYDRAULIC DIAGRAM (WITH BUCHER BRAND AUXILIARY PUMP) 262
FIGURE 6-5. HYDRAULIC DIAGRAM LIST 266

SECTION 7 - ELECTRICAL 267

FIGURE 7-1. ELECTRICAL DIAGRAM LIST 268
FIGURE 7-2. HARNESS COMPONENTS INSTALLATION WITHOUT UGM 270
FIGURE 7-3. HARNESS COMPONENTS INSTALLATION WITH UGM 284

SECTION 8 - DECALS 295

FIGURE 8-1. DECAL INSTALLATION (ANSI AND CSA SPEC) (Prior to SN 0300089982) 296
FIGURE 8-2. DECAL INSTALLATION (ANSI AND CSA SPEC) (SN 0300089982 through 0300185827) 300
FIGURE 8-3. DECAL INSTALLATION (COUNTRY SPEC) (Prior to SN 0300089982) 304
FIGURE 8-4. DECAL INSTALLATION (COUNTRY SPEC) (SN 0300089982 through 0300185827) 308

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK 311

FIGURE 9-1. MODEL 740AJ STANDARD PARTS 312
FIGURE 9-2. MODEL 740AJ VARIABLE PARTS 314

SECTION 10 - SPECIAL OPTIONS 315

FIGURE 10-1. SPECIAL OPTIONS 316

PART NUMBER INDEX 321

MidWestTech | JLG 740AJ Boom Lift Parts Manual | Publication 3121161 Order the manual at mid-west-tech.com >

FIGURE 2-25. HOODS INSTALLATION (STEEL)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	**HOODS INSTALLATION**	
		Ref	**Deutz Engine Machines:**	
	1001117209	Ref	**Standard Hood without Compressor**	D
	1001118055	Ref	**Optional Hood with Compressor**	C
		Ref	**GM Engine Machines:**	
	1001117503	Ref	**Standard Hood without Compressor**	C
	1001118056	Ref	**Optional Hood with Compressor**	C
1	0100011	AR	Compound, Locking	
2	0630507	8	Bolt, Carriage 1/2in-13NC x 1-1/4in	
3	0630485	16	Bolt, Carriage 3/8in-16NC x 1in	
4	0641408	AR	Bolt 1/4in-20NC x 1in	
5	0641506	AR	Bolt 5/16in-18NC x 3/4in	
5	0641508	AR	Bolt 5/16in-18NC x 1in	
6	0641607	10	Bolt 3/8in-16NC x 7/8in	
7	0641609	7	Bolt 3/8in-16NC x 1-1/8in	
9	0641818	2	Bolt 1/2in-13NC x 2-1/4in	
10	0940049	2	Stopper, Hood	
11	1321384	8	Hold Down	
12	1670842	1	Cover, Turntable End	
14	2080040	AR	Fastener	
15	2600280	4	Hinge	
16	2940045	1	Latch, Paddle	
17	2940173	2	Latch, Rotary	
18	3311405	AR	Locknut 1/4in-20NC	
19	3311501	4	Nut 5/16in-18NC	
20	3300364	3	Nut 5/16in-18NC (Tinnerman)	
21	3311601	1	Nut 3/8in-16NC	
22	3311605	40	Locknut 3/8in-16NC	
23	3311805	10	Locknut 1/2in-13NC	
24	3520030	1	Plug, Hole	
25	3900210	3	Screw 5/16in-18NC x 3/4in	
26	3900316	AR	Screw 3/8in-16NC x 1in	
27	3960389	4.5 ft /1.4m	Seal	
28	3960462	9 ft/2.7m	Seal	
29	4160194	4	Spring, Compression	
30	4240018	4	Strap, Cable Tie	
31	4751400	AR	Flatwasher 1/4in	
32	4751500	15	Flatwasher 5/16in	
33	4751600	AR	Flatwasher 3/8in	
34	4751800	12	Flatwasher 1/2in	
35	1001110166	7 ft/2.1m	Seal	
36	1001113047	6.5 ft/2m	Seal (Adhesive Back)	
37		Ref	Pipe, Exhaust Options:	
37	1001116457	1	Caterpillar and GM Engines	
37	1001116456	1	Deutz Engines	
38	1001116562	1	Support, Substructure	
39	1001116618	1	Support, Substructure	
40		Ref	Hood, Engine Side (Fixed) Options:	
40	1001117219	1	Standard Hood without Compressor	

MidWestTech | JLG 740AJ Boom Lift Parts Manual | Publication 3121161 Order the manual at mid-west-tech.com >

FIGURE 6-5. HYDRAULIC DIAGRAM LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Note: Diagrams not shown is available from JLG Service/Parts Departments.	
	2792589	Ref	Air Compressor Hydraulic Diagram	
		Ref	Tow Package Hydraulic Diagram Options:	
	2792571	Ref	Tow Package Hydraulic Diagram (Prior to SN 0300136124)	
	1001107290	Ref	Tow Package Hydraulic Diagram (SN 0300136124 through 0300183033)	
		Ref	Drive Hydraulic Diagram	
	2792364	Ref	Drive Hydraulic Diagram (Prior to SN 0300137975)	
	2792710	Ref	Drive Hydraulic Diagram (SN 030037975 through 0300185827)	
		Ref	Oil Cooler Hydraulic Schematic	
		Ref	Deutz Engine	
	1282665	Ref	Deutz Engine (Prior to SN 0300137666)	
	Not Required	0	Deutz Engine (SN 0300137666 through 0300185827)	
	1283309	Ref	Ford and GM Engine	
		Ref	Standard Hydraulic Diagram	
	2792528	Ref	Fenner and Haldex Brand Auxiliary Pump	
	1001143189	Ref	Bucher Brand Auxiliary Pump	
		Ref	Standard Hydraulic Schematic	
	2792535	Ref	Standard Hydraulic Schematic (Prior to SN 0300137975)	
	1001108855	Ref	Standard Hydraulic Schematic (SN 0300137975 through 0300185827)	
		Ref	Tilt Sensor Installation Options:	
	1001093187	Ref	Tilt Sensor Installation (Prior to SN 0300112885)	
	1001094557	Ref	Adapter, Pressure Tap	

MidWestTech | JLG 740AJ Boom Lift Parts Manual | Publication 3121161 Order the manual at mid-west-tech.com >

FIGURE 8-2. DECAL INSTALLATION (ANSI AND CSA SPEC) (SN 0300089982 through 0300185827)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	**DECALS INSTALLATIONS**	
	0274519	Ref	**JLG Logo**	B
	0274483	Ref	**Decals Installations 740AJ Decals - ANSI Spec**	B
	0274488	Ref	**Decals Installations 740AJ Decals - CSA Spec**	B
		Ref	**Note: All Machines should have been updated to new Tilt Sensor Upright Installation p/n 0275733.**	
2	1701499	2	Decal - No Tie Down/Lift	
3	1701502	1	Decal - High Oil Level **(SN 0300089982 through 0300134564)**	
4	1701503	1	Decal - Low Oil Level **(SN 0300089982 through 0300134564)**	
5	1701509	1	Decal - Manual	
7	1703811	4	Decal - Tie Down/Lift	
8	1703814	6	Decal - Tie Down	
9	1704277	3	Decal - Attach Lanyard Here	
10	1704412	1	Decal - Hydraulic Oil Chart	
12	1705514	1	Decal - CSA (CSA Machines Only)	
13	3251243	1	Nameplate - 120V-60Hz	
17		Ref	Decal - Inspection Options:	
17		Ref	ANSI Spec	
17	1702153	1	Decal - Inspection **(SN 0300089982 through 0300134563)**	
17	Not Required	0	Decal - Inspection **(SN 0300134564 through 0300185827)**	
17	1704006	1	CSA Spec **(SN 0300089982 through 0300151569)**	
18		Ref	Decal - Warning/Crushing Options:	
18	1703953	4	ANSI Spec	
18	1703942	4	CSA Spec	
20		Ref	Decal - No Hands Options:	
20	1702868	2	ANSI Spec	
20	1704000	2	CSA Spec	
21		Ref	Decal Options:	
21	1703797	1	Decal - Warning/Danger (ANSI Spec)	
21	1703924	1	Decal - Danger/Warning (CSA Spec)	
22		Ref	Decal - Warning Inspection (MTB) Options:	
22	1705336	1	ANSI Spec	
22	1705347	1	CSA Spec	
23		Ref	Decal - Crushing Options:	
23	1703804	6	ANSI Spec	
23	1703948	6	CSA Spec	
24		Ref	Decal - Danger/Electrocution Options:	
24	1703805	4	ANSI Spec	
24	1703936	4	CSA Spec	
25		Ref	Decal - Footswitch Options:	
25	3252347	1	ANSI Spec	
25	1703984	1	CSA Spec	
26	3251813	1	Decal - USA	
29	2902358	1	Kit, Decal Max Tire Load (Includes Qty 4 of p/n 1703477)	1
29	1703477	4	Decal - Max Tire Load	
30	See Note	1	Decal - Bar Code (Note: Not Available for Purchase)	
31	1703808	2	Decal - 740AJ	
32	1701501	4	Decal - Arrow	
33		Ref	Decal - Capacity Options:	
33	1701645	2	ANSI Spec (500LBS Maximum Capacity) **(Prior to SN**	

MidWestTech | JLG 740AJ Boom Lift Parts Manual | Publication 3121161 Order the manual at mid-west-tech.com >