WSM

WORKSHOP MANUAL
FRONT LOADER

LA524AU-B, LA714AU-B, LA854AU-B

Kubota

KiSC issued 03, 2011 A

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INFORMATION

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1. SAFETY FIRST

⚠ SAFETY FIRST

- **This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully.**
- **It is essential that you read the instructions and safety regulations before you attempt to repair or use this unit.**

⚠ DANGER
- **Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.**

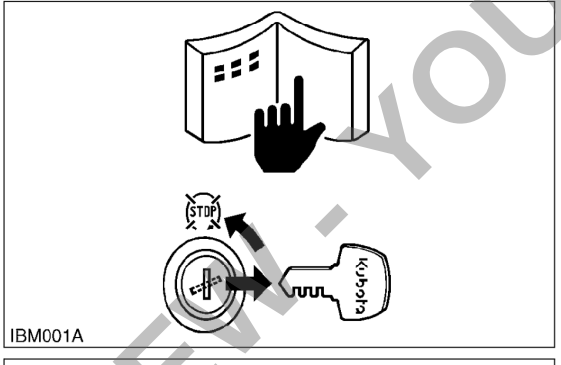
⚠ WARNING
- **Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

⚠ CAUTION
- **Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**

■ IMPORTANT
- **Indicates that equipment or property damage could result if instructions are not followed.**

■ NOTE
- **Gives helpful information.**

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IBM001A


IBM002A

BEFORE YOU START SERVICE

- Read all instructions and safety instructions in this manual and on your machine safety decals.
- Clean the work area and machine.
- Park the machine on a stable and level ground, and set the parking brake.
- Lower the implement to the ground.
- Stop the engine, then remove the key.
- Disconnect the battery negative cable.
- Hang a **"DO NOT OPERATE"** tag in the operator station.

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START SAFELY

- Do not do the procedures below when you start the engine.
  - short across starter terminals
  - bypass the safety start switch
- Do not alter or remove any part of machine safety system.
- Before you start the engine, make sure that all shift levers are in neutral positions or in disengaged positions.
- Do not start the engine when you stay on the ground. Start the engine only from operator's seat.

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4. SPECIFICATIONS

■ Suitable Tractor

Loader Model	LA524AU-B	LA714AU-B	LA854AU-B
Tractor Model	L3400	L4400	MX5100

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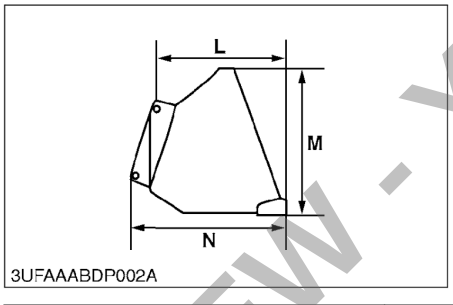
[1] LOADER SPECIFICATIONS

Loader Model		LA524AU-B	LA714AU-B	LA854AU-B
Tractor Model		L3400	L4400	MX5100
Wheel Base		1610 mm (63.39 in.)	1845 mm (72.64 in.)	1895 mm (74.61 in.)
Front Tires		7 - 16	8.3 - 16	9.5 - 16
Rear Tires		11.2 - 24	14.9 - 24	14.9 - 26
Boom Cylinder	Bore	45.0 mm (1.77 in.)	50.0 mm (1.97 in.)	60.0 mm (2.36 in.)
	Stroke	476 mm (18.7 in.)	502 mm (19.8 in.)	496 mm (19.5 in.)
Bucket Cylinder	Bore	45.0 mm (1.77 in.)	50.0 mm (1.97 in.)	55.0 mm (2.17 in.)
	Stroke	439 mm (17.3 in.)	425 mm (16.7 in.)	469 mm (18.5 in.)
Control Valve		3 position bucket control valve type, one detent float position, regenerative bucket dump, power beyond circuit		
Rated Flow		23.9 L/min. 6.31 U.S.gals/min. 5.26 Imp.gals/min.	37.0 L/min. 9.8 U.S.gals/min. 8.1 Imp.gals/min.	
Maximum Pressure		16.2 MPa 165 kgf/cm^2 2350 psi	18.1 MPa 185 kgf/cm^2 2630 psi	
Net Weight (Approximate)		*445 kg (981 lbs)	550 kg (1210 lbs)	650 kg (1430 lbs)

* Include the main frame, quick attach coupler, quick bucket 66", front guard and control valve.

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[2] BUCKET SPECIFICATIONS



3UFAAABDP002A

Loader Model		LA524AU-B	LA714AU-B	LA854AU-B
Model		Square 66"	Square 66"	Square 72"
Type		Quick attach	Quick attach	Quick attach
Width		1675 mm (65.94 in.)	1675 mm (65.94 in.)	1830 mm (72.05 in.)
Depth (**L**)		458 mm (18 in.)	458 mm (18 in.)	547 mm (21.5 in.)
Height (**M**)		562 mm (22.1 in.)	562 mm (22.1 in.)	570 mm (22.4 in.)
Length (**N**)		544 mm (21.4 in.)	544 mm (21.4 in.)	630 mm (24.8 in.)
Capacity	Struck	0.23 m^3 (8.1 cu.ft)	0.23 m^3 (8.1 cu.ft)	0.31 m^3 (10.9 cu.ft)
	Heaped	0.28 m^3 (9.9 cu.ft)	0.28 m^3 (9.9 cu.ft)	0.37 m^3 (13.1 cu.ft)
Weight		120 kg (265 lbs)	120 kg (265 lbs)	150 kg (331 lbs)

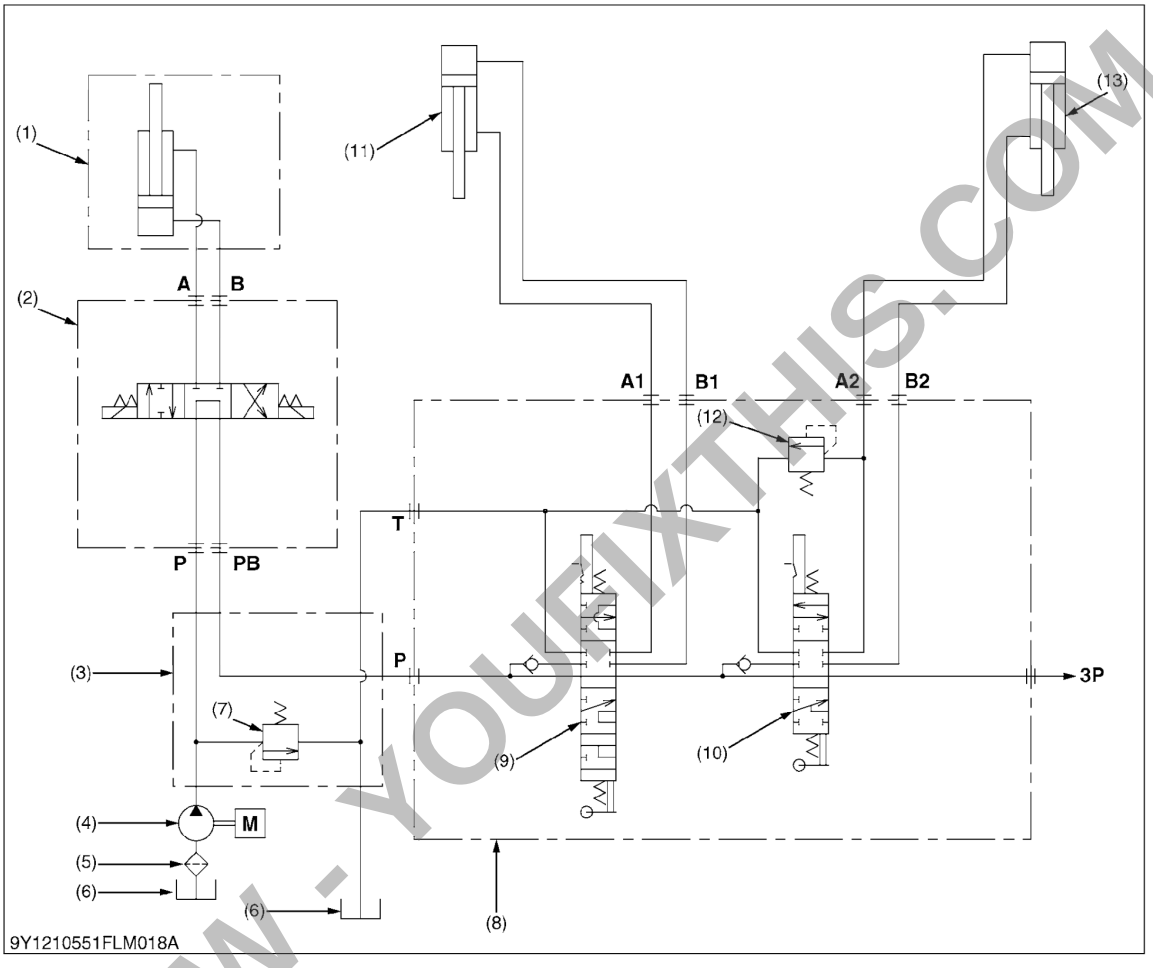
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1. HYDRAULIC CIRCUIT

LA524AU-B



(1) Hydraulic Cylinder(s) and Hydraulic Hose(s) (Pipes) (Option)
(2) Third Function Valve (Option)
(3) Hydraulic Block
(4) Hydraulic Pump
(5) Oil Filter
(6) Transmission Case
(7) Relief Valve
(8) Loader Control Valve
(9) Boom Control Valve
(10) Bucket Control Valve
(11) Boom Cylinder(s)
(12) Port Relief Valve
(13) Bucket Cylinder(s)

P : Pump Port
PB : Power Beyond Port
T : Tank Port
3P : Tractor Three Point Hydraulic Cylinder

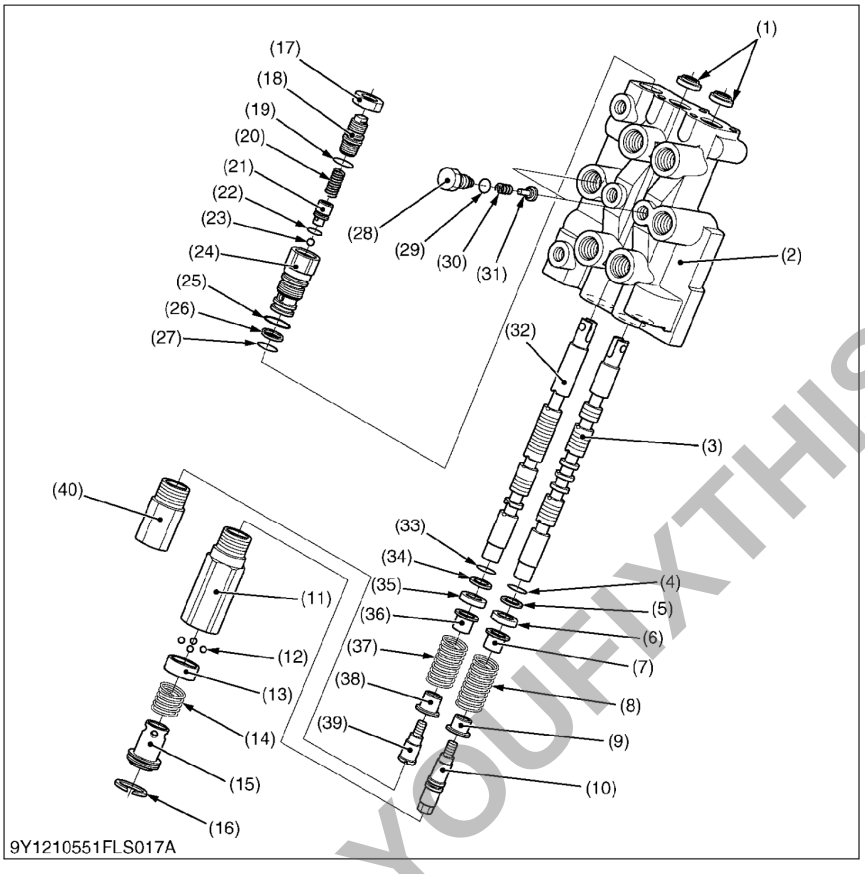
A : Third Function Cylinder A Port
B : Third Function Cylinder B Port
A1 : Boom Cylinder A1 Port
B1 : Boom Cylinder B1 Port
A2 : Bucket Cylinder A2 Port
B2 : Bucket Cylinder B2 Port

The hydraulic cylinders and the hydraulic hoses (pipes) (1), and the third function valve are option parts.
The hydraulic oil flow is controlled by the loader control valve (8).

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Disassembling Control Valve [LA524AU-B]



(1) Dust Seal
(2) Valve Body
(3) Spool for Boom
(4) O-ring
(5) Backup Ring
(6) Collar
(7) Spring Holder 1
(8) Spring
(9) Spring Holder 2
(10) Detent Bolt 1
(11) Plug
(12) Ball
(13) Detent Ring
(14) Detent Spring
(15) Stopper
(16) Ring
(17) Lock Nut
(18) Adjusting Screw
(19) O-ring
(20) Spring
(21) Poppet
(22) O-ring
(23) Ball
(24) Plug
(25) O-ring
(26) Backup Ring
(27) O-ring
(28) Plug
(29) O-ring
(30) Spring
(31) Check Valve
(32) Spool for Bucket
(33) O-ring
(34) Backup Ring
(35) Collar
(36) Spring Holder 1
(37) Spring
(38) Spring Holder 2
(39) Detent Bolt 2
(40) Plug

■ Boom Control Section and Bucket Control Section

1. Remove the plug (28) and take out the O-ring (29), the spring (30) and load check valve (31).
2. Remove the plug (11), (40) from valve body (2).
3. Remove the ring (16) and take out the stopper (15), detent spring (14), detent ring (13) and ball (12).
4. Draw out the spool (3), (32) with other component parts from valve body (2).

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4. TIGHTENING TORQUES

[1] GENERAL USE SCREWS, BOLTS AND NUTS (FOR FRONT LOADER)

Screws, bolts and nuts whose tightening torques are not specified in this Workshop Manual should be tightened according to the table below.

Indication on top of bolt	⬡ 4 No-grade or 4T						⬡ 7 8.8 7T or Property class 8.8						⬡ 9 10.9 9T or Property class 10.9		
Material of opponent part	Ordinariness			Aluminum			Ordinariness			Aluminum			Ordinariness		
Unit	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft
M6 (6 mm, 0.24 in.)	7.9 to 9.3	0.80 to 0.95	5.8 to 6.8	7.9 to 8.8	0.80 to 0.90	5.8 to 6.5	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31	7.9 to 8.8	0.80 to 0.90	5.8 to 6.5	12.3 to 14.2	1.25 to 1.45	9.05 to 10.4
M8 (8 mm, 0.31 in.)	18 to 20	1.8 to 2.1	13 to 15	17 to 19	1.7 to 2.0	13 to 14	24 to 27	2.4 to 2.8	18 to 20	18 to 20	1.8 to 2.1	13 to 15	30 to 34	3.0 to 3.5	22 to 25
M10 (10 mm, 0.39 in.)	40 to 45	4.0 to 4.6	29 to 33	32 to 34	3.2 to 3.5	24 to 25	48 to 55	4.9 to 5.7	36 to 41	40 to 44	4.0 to 4.5	29 to 32	61 to 70	6.2 to 7.2	45 to 52
M12 (12 mm, 0.47 in.)	63 to 72	6.4 to 7.4	47 to 53	–	–	–	78 to 90	7.9 to 9.2	58 to 66	63 to 72	6.4 to 7.4	47 to 53	103 to 117	10.5 to 12.0	76.0 to 86.7
M14 (14 mm, 0.55 in.)	108 to 125	11.0 to 12.8	79.6 to 92.5	–	–	–	124 to 147	12.6 to 15.0	91.2 to 108	–	–	–	167 to 196	17.0 to 20.0	123 to 144
M16 (16 mm, 0.63 in.)	167 to 191	17.0 to 19.5	123 to 141	–	–	–	197 to 225	20.0 to 23.0	145 to 166	–	–	–	260 to 304	26.5 to 31.0	192 to 224
M18 (18 mm, 0.71 in.)	246 to 284	25.0 to 29.0	181 to 209	–	–	–	275 to 318	28.0 to 32.5	203 to 235	–	–	–	344 to 402	35.0 to 41.0	254 to 296
M20 (20 mm, 0.79 in.)	334 to 392	34.0 to 40.0	246 to 289	–	–	–	368 to 431	37.5 to 44.0	272 to 318	–	–	–	491 to 568	50.0 to 58.0	362 to 419

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[2] STUD BOLTS

Material of opponent part	Ordinariness			Aluminum		
Unit	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft
M8 (8 mm, 0.31 in.)	12 to 15	1.2 to 1.6	8.7 to 11	8.9 to 11	0.90 to 1.2	6.5 to 8.6
M10 (10 mm, 0.39 in.)	25 to 31	2.5 to 3.2	18 to 23	20 to 25	2.0 to 2.6	15 to 18
M12 (12 mm, 0.47 in.)	30 to 49	3.0 to 5.0	22 to 36	31	3.2	23
M14 (14 mm, 0.55 in.)	62 to 73	6.3 to 7.5	46 to 54	–	–	–
M16 (16 mm, 0.63 in.)	98.1 to 112	10.0 to 11.5	72.4 to 83.1	–	–	–
M18 (18 mm, 0.71 in.)	172 to 201	17.5 to 20.5	127 to 148	–	–	–

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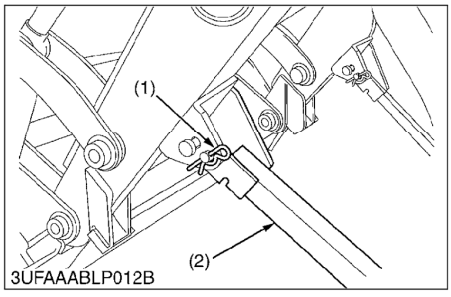
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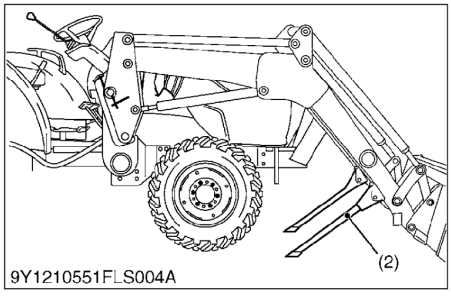
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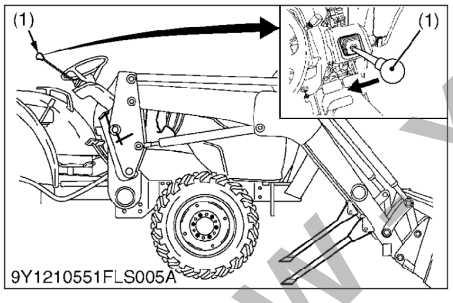
4. DISMOUNTING FRONT LOADER FROM TRACTOR

CAUTION
- **When dismounting the loader, park the tractor on flat and hard ground, apply the parking brake.**
- **When starting the engine or using the hydraulic control valve, always sit on the operator's seat.**

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Stand

1. Start the engine and run it at an idle.
2. Raise the boom until the stands (2) can be rotated to the ground.
3. Stop the engine.
4. Remove the spring pins (1) holding the stands (2) to the boom.
5. Slide the stands outward and rotate them until the hole in the stand and pin on the boom are aligned. Then slide the stands inward and insert the spring pin as shown.
6. Start the engine and run at an idle.
7. Dump the bucket approximately 0.35 rad (20 °).
8. Lower the boom and raise the front wheels slightly.

■ **IMPORTANT**
- **Lift the front wheels with the bucket. Do not attempt to lift them with the stands.**

(1) Spring Pin (2) Stand

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Side Frame

1. Remove the mounting pins from the loader main frame and hold them on the side frames.
2. Start the engine and run it at an idle.
3. Slowly move the hydraulic control lever (1) to the **"ROLL-BACK"** position to raise the loader side frames up and out of the receivers of the main frames as shown.
4. Stop the engine.

(1) Hydraulic Control Lever

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