WSM

WORKSHOP MANUAL
FRONT LOADER

LA1953AU, LA2253AU

Kubota

KiSC issued 07, 2010 A

PREVIEW YOUFIXTHIS.COM

Download full manual at youfixthis.com

INFORMATION

CONTENTS

1. SAFETY FIRST I-1
2. SAFETY DECALS I-4
3. LOADER TERMINOLOGY I-7
4. SPECIFICATIONS I-8
   [1] LOADER SPECIFICATIONS I-8
   [2] BUCKET SPECIFICATIONS I-8
   [3] DIMENSIONAL AND OPERATIONAL SPECIFICATIONS I-9

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

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.**

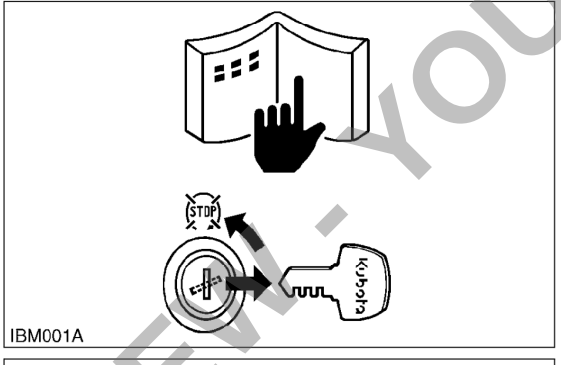
⚠ WARNING
- **Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

⚠ 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.**

WSM000001INI0001US1



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.

WSM000001INI0010US1

START SAFELY

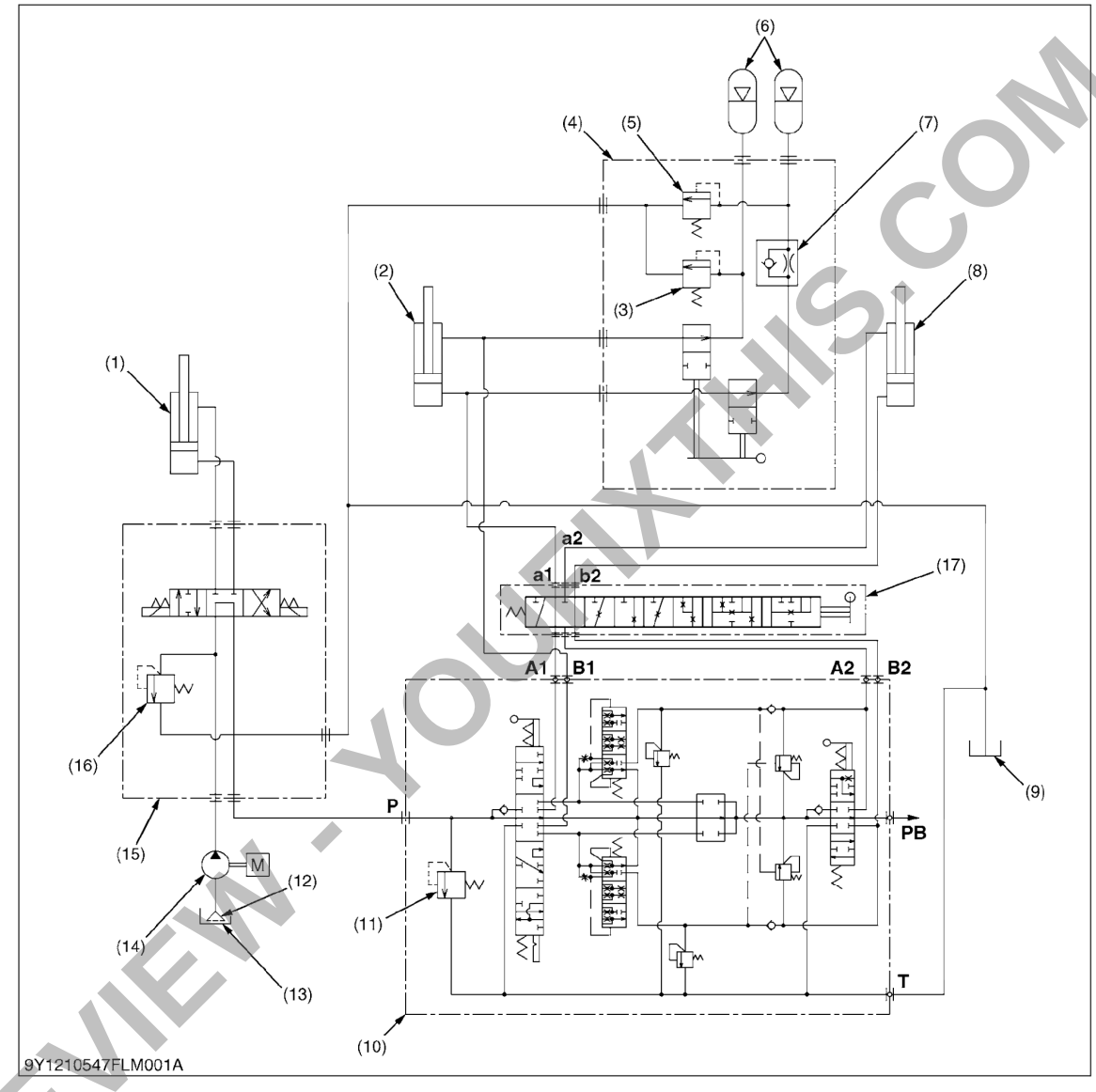
- Do not do the procedures below when you start the engine.
  - short across starter terminals
  - bypass the safety start switch
- Do not alter or remove any part of machine safety system.
- Before you start the engine, make sure that all shift levers are in neutral positions or in disengaged positions.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

WSM000001INI0015US0

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

1. HYDRAULIC CIRCUIT

[1] LA1953AU



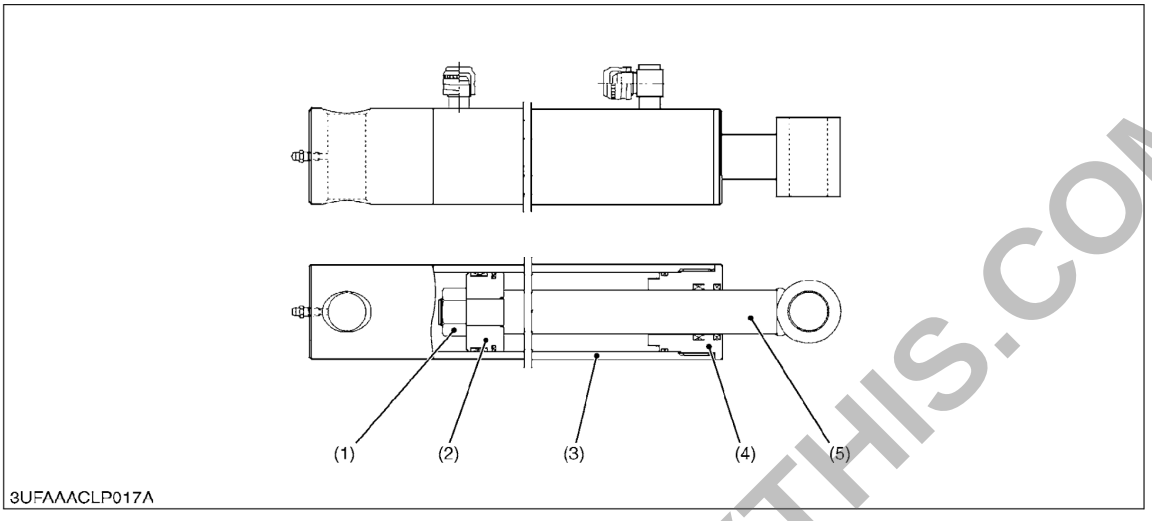
(1) 3rd Function Cylinder (Option)
(2) Boom Cylinder
(3) Relief Valve
(4) Accumulator Valve Assembly (Option)
(5) Relief Valve
(6) Accumulator (Option)
(7) Orifice
(8) Bucket Cylinder
(9) Tank
(10) Control Valve Assembly
(11) Relief Valve
(12) Oil Filter
(13) Tank
(14) Hydraulic Pump
(15) 3rd Function Valve (Option)
(16) Relief Valve
(17) Spill Guard Valve

PB : To 3-Point Hydraulic System
P : From Pump
T : To Tank
A1 : A1 Port
A2 : A2 Port
B1 : B1 Port
B2 : B2 Port
a1 : a1 Port
a2 : a2 Port
b2 : b2 Port

9Y1210547FLM0008US0

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

4. BOOM CYLINDER AND BUCKET CYLINDER



(1) Nut
(2) Piston
(3) Cylinder Tube
(4) Head
(5) Piston Rod

Both boom cylinder and bucket cylinder consist of head (4), cylinder tube (3), piston rod (5), piston (2), and other parts as shown in the figure above. They are single-rod double acting cylinder in which the reciprocating motion of the piston is controlled by hydraulic force applied to both of its ends.

Cylinder Specifications

		LA1953AU	LA2253AU
Boom Cylinder	Cylinder I.D.	70 mm (2.76 in.)	75 mm (2.95 in.)
	Rod O.D.	40 mm (1.57 in.)	45 mm (1.77 in.)
	Stroke	606 mm (23.9 in.)	680 mm (26.8 in.)
Bucket Cylinder	Cylinder I.D.	65 mm (2.56 in.)	75 mm (2.95 in.)
	Rod O.D.	40 mm (1.57 in.)	45 mm (1.77 in.)
	Stroke	516 mm (20.31 in.)	610 mm (24.0 in.)

9Y1210547FLM0002US0

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

3. TIGHTENING TORQUES

Tightening torques of screws, bolts and nuts on the table below are especially specified.
(For general use screws, bolts and nuts : Refer to "4. TIGHTENING TORQUES" at "G. GENERAL" section.)

Item	N·m	kgf·m	lbf·ft
Control valve mounting bolt (M10)	48 to 55	4.9 to 5.7	36 to 41
Lock nut	5.4 to 7.8	0.55 to 0.79	4.0 to 5.7
Adaptor and elbow 3/4-16 UNF	48 to 54	4.9 to 5.5	35 to 40
Spill guard valve mounting screw (M8)	24 to 27	2.5 to 2.7	18 to 20
Port relief valve (LA2253AU)	19.6 to 23.6	2.00 to 2.40	14.5 to 17.4
Hydraulic tube and hose	44 to 50	4.5 to 5.1	32 to 37
M16 lock nut	51 to 58	5.2 to 5.9	37 to 43
Boom and bucket cylinder head (LA1953AU)	250 to 280	25.5 to 28.5	185 to 206
Boom and bucket cylinder head (LA2253AU)	500 to 550	51.0 to 56.0	369 to 405
Boom and bucket cylinder piston mounting nut (LA1953AU)	160 to 200	16.4 to 20.3	119 to 147
Boom and bucket cylinder piston mounting nut (LA2253AU)	520 to 550	53.1 to 56.0	384 to 405
Front guard mounting screw (M16)	197 to 225	20.0 to 23.0	145 to 166
Main frame mounting screw (M18)	319	32.5	235
Main frame mounting screw (M20)	368	37.5	271
3rd function valve hydraulic hose (Option)	40 to 59	4.0 to 6.0	29 to 44
3rd function valve hydraulic hose coupler (Option)	49 to 58	5.0 to 5.9	36 to 43

9Y1210547FLS0003US0

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

1. TROUBLESHOOTING

Symptom	Probable Cause	Solution	Reference Page
Boom Does Not Rise	Control valve malfunctioning	Repair or replace	1-S15 1-S16
	Boom cylinder defective	Repair or replace	1-S21
	Control lever cable defective	Repair or replace	1-S18
	Hydraulic pump malfunctioning	Repair or replace	–
	Oil filter clogged	Clean or replace	–
	Relief valve spring damaged	Replace	1-S9 1-S10
	Hydraulic hose damaged	Replace	1-S15
	Relief valve dirty or stuck	Clean	1-S9 1-S10
Boom Does Not Lower	Control valve malfunctioning	Repair or replace	1-S15
Insufficient Boom Speed	Boom cylinder tube worn or damaged	Replace	1-S21
	Boom cylinder piston ring (piston seal and O-ring) worn or damaged	Replace	1-S23
	Oil leaks from tube joints	Repair	–
	Relief valve setting pressure too low	Adjust	1-S9 1-S10
	Insufficient transmission fluid	Refill	G-7
	Dirty relief valve	Clean	1-S9 1-S10
Bucket Does Not Move	Control valve malfunctioning	Repair or replace	1-S15
	Bucket cylinder defective	Repair or replace	1-S21
	Control lever cable defective	Repair or replace	1-S18
	Hydraulic pump malfunctioning	Repair or replace	–
	Oil filter clogged	Clean or replace	–
	Relief valve spring damage	Replace	1-S9 1-S10
	Hydraulic hose damage	Replace	1-S15
	Dirty relief valve	Clean	1-S9 1-S10
Insufficient Bucket Speed	Bucket cylinder tube worn or damaged	Replace	1-S21
	Bucket cylinder piston ring (piston seal and O-ring) worn or damaged	Replace	1-S23
	Oil leaks from tube joints	Repair	–
	Relief valve setting pressure too low	Adjust	1-S9 1-S10
	Insufficient transmission fluid	Refill	G-7
	Dirty relief valve	Clean	1-S9 1-S10

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

4. SPECIFICATIONS

Suitable Tractor

LA1953AU: M100X, M110X
LA2253AU: M126X, M135X

9Y1210547INI0001US0

[1] LOADER SPECIFICATIONS

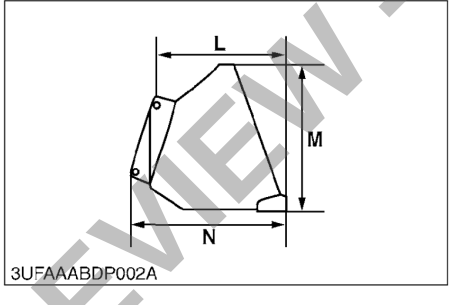
Loader Model		**LA1953AU**	**LA2253AU**
Tractor Model		**M100X, M110X**	**M126X, M135X**
Wheel Base		2435 mm (95.9 in.)	2690 mm (105.9 in.)
Front Tires		13.6R24	14.9R24
Rear Tires		18.4R34	18.4R38
Boom Cylinder	Bore	70 mm (2.76 in.)	75 mm (2.95 in.)
	Stroke	606 mm (23.9 in.)	680 mm (26.8 in.)
Bucket Cylinder	Bore	70 mm (2.76 in.)	75 mm (2.95 in.)
	Stroke	516.5 mm (20.3 in.)	610 mm (24 in.)
Control Valve		One Detent Float Position, Power Beyond Circuit	
Rated Flow		68.0 L/min. (18.0 U.S.gals/min., 15.0 Imp.gals/min.)	77.0 L/min. (20.3 U.S.gals/min., 16.9 Imp.gals/min.)
Maximum Pressure		20.7 MPa (211 kgf/cm^2, 3002 psi)	
Net Weight (Approximate)		898 kg (1980 lbs)	1070 kg (2359 lbs)

9Y1210547INI0002US0

[2] BUCKET SPECIFICATIONS

Loader Model		**LA1953AU, LA2253AU**			
Bucket Size		ROUND 84 in.	LIGHT MATERIAL 84 in.	SQUARE 96 in.	LIGHT MATERIAL 96 in.
Type		Quick Attach			
Width		2135 mm (84.0 in.)		2440 mm (96.0 in.)	
Depth (**L**)		650 mm (25.59 in.)	750 mm (29.53 in.)	665 mm (26.2 in.)	800 mm (31.5 in.)
Height (**M**)		665 mm (26.18 in.)	715 mm (28.15 in.)	750 mm (29.5 in.)	764 mm (30.1 in.)
Length (**N**)		900 mm (35.43 in.)	1000 mm (39.37 in.)	770 mm (30.3 in.)	910 mm (35.8 in.)
Capacity	Struck	0.52 m^3 (18.4 cu.ft.)	0.63 m^3 (22.3 cu.ft.)	0.66 m^3 (23.3 cu.ft.)	0.80 m^3 (28.3 cu.ft.)
	Heaped	0.64 m^3 (22.6 cu.ft.)	0.79 m^3 (27.9 cu.ft.)	0.75 m^3 (26.5 cu.ft.)	0.98 m^3 (34.6 cu.ft.)
Weight		235 kg (518 lbs)	255 kg (562 lbs)	275 kg (606 lbs)	316 kg (697 lbs)

9Y1210547INI0003US0



3UFAAABDP002A

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

5. MAINTENANCE CHEK LIST

To keep the machine working in good condition as well as to avoid any accident and trouble, carry out periodic inspection and maintenance. Check the following points before use.

Service Interval	Check Points	Reference page
Daily (Each use)	Check the transmission fluid level	G-7
	Check the hydraulic hoses	G-7
Every 10 hours	Grease all grease nipples	G-7
	Lubricate joints of control level linkage	G-7
Every 50 hours	Check the main frame mounting screws	G-8

9Y1210547GEG0001US0

PREVIEW - YOUFIXTHIS.COM

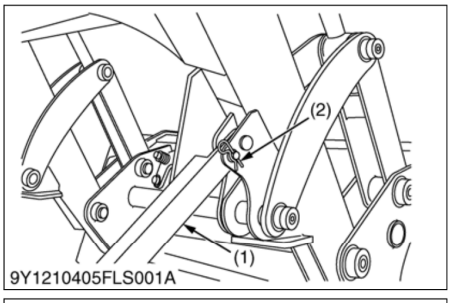
Download full manual at youfixthis.com

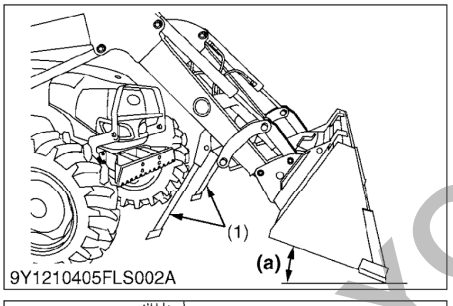
4. DISMOUNTING FRONT LOADER FROM TRACTOR

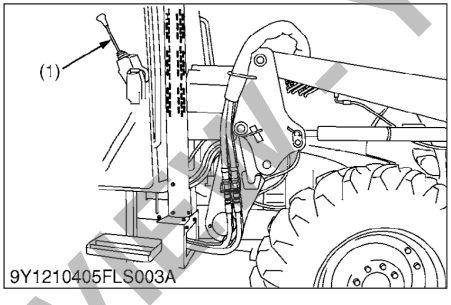
CAUTION
- **Make sure an approved bucket is attached before removing the loader from the tractor.**
- **For removing the loader, choose flat and hard ground, preferably concrete.**
- **If the ground surface is soft, place suitable planks on the ground for the bucket and stands.**
- **When starting the engine or using the hydraulic control valve, always sit in the operator's seat.**
- **Make sure the bucket and stands are at ground level.**

9Y1210407FLS0004US0

[1] STAND AND SIDE FRAME







Stand

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

■ **IMPORTANT**
- **Lift the weight off the front wheels with the bucket. Do not attempt to lift them with the stands (1).**

8. Stop the engine.

(1) Stand
(2) Spring Pin
(a) 0.35 rad (20 °)

9Y1210547FLS0022US0

Side Frame

1. Remove the mounting pins from the loader main frame and hold them on the boom.
2. Start the engine and run at idle.
3. Slowly move the hydraulic control lever (1) to **"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.

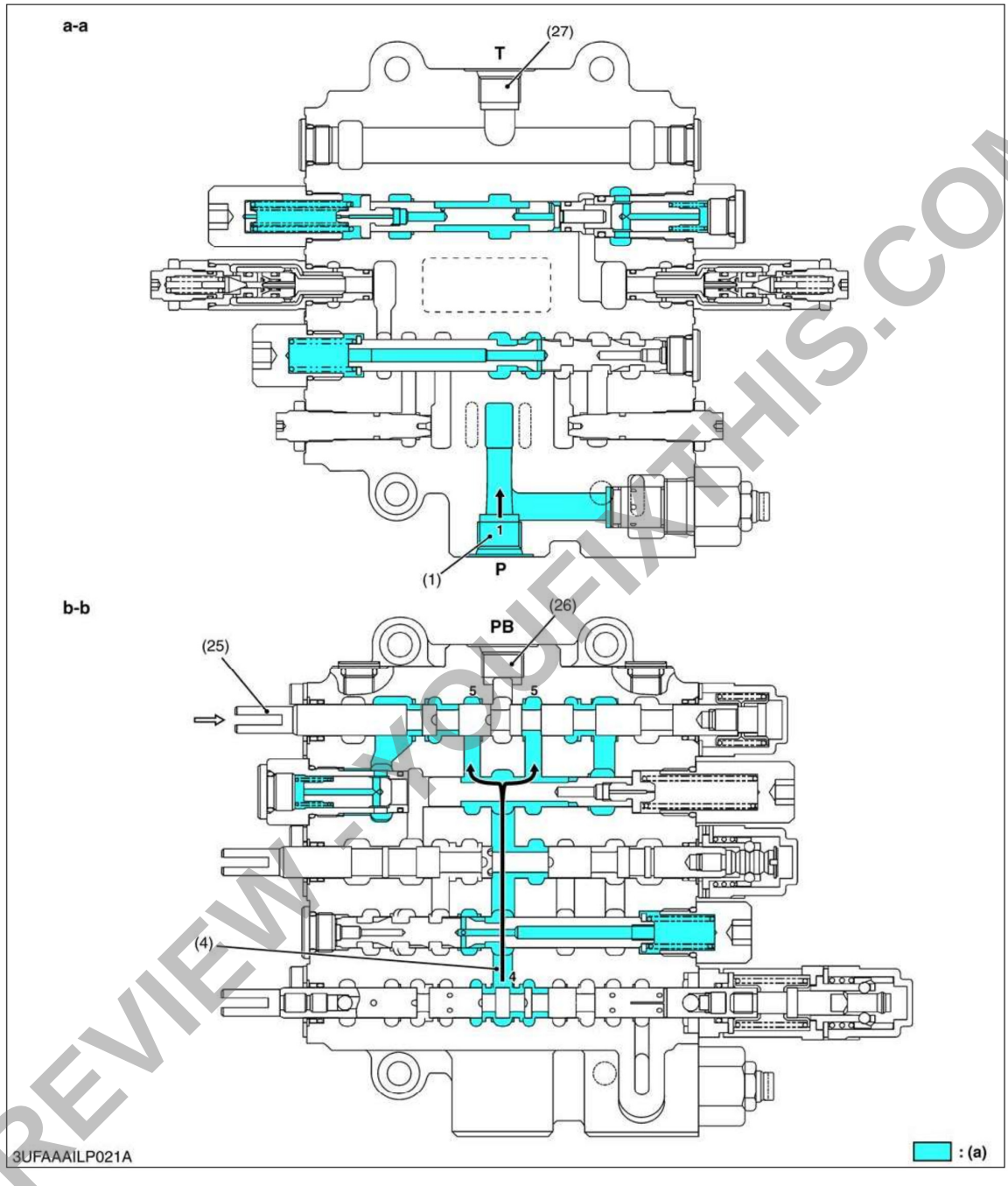
(1) Hydraulic Control Lever

9Y1210547FLS0023US0

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Bucket (Dump) (Figure 2)



(1) **P** Port
(4) Center By-pass Passage
(25) Bucket Spool
(26) **PB** Port
(27) **T** Port

P : P Port (Pump Port)
T : T Port (Tank Port)
PB : PB Port (Power Beyond Port)

a-a : Section a-a
b-b : Section b-b
(a) Low Pressure
1 to 10 : Oil Flow

9Y1210547FLM0040US0

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 11 of 122 pages

The full manual includes:

- All 122 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Kubota LA1953AU, LA2253AU Workshop Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual