

Product: Kubota LA844 Service Manual

Full Download: <https://www.arepairmanual.com/downloads/kubota-la844-service-manual/>

WSM

WORKSHOP MANUAL
FRONT LOADER

LA844

Kubota

KiSC issued 03, 2008 A

Sample of manual. Download All 51 pages at:

<https://www.arepairmanual.com/downloads/kubota-la844-service-manual/>

Product: Kubota LA844 Service Manual

Full Download: <https://www.arepairmanual.com/downloads/kubota-la844-service-manual/>

TO THE READER

This Workshop Manual has been prepared to provide servicing personnel with information on the mechanism, service and maintenance of KUBOTA Front Loader LA844. It is divided into three parts, "General", "Mechanism" and "Servicing".

General

Information on the tractor identification, the general precautions, maintenance check list, check and maintenance and special tools are described.

Mechanism

Information on the construction and function are included. This part should be understood before proceeding with troubleshooting, disassembling and servicing.

Refer to Front Loader Mechanism Workshop Manual (Code No. 9Y021-18210) for the one which has not been described in this workshop manual.

Servicing

Information on the troubleshooting, servicing specification lists, tightening torque, checking and adjusting, disassembling and assembling, and servicing which cover procedures, precautions, factory specifications and allowable limits.

All information illustrations and specifications contained in this manual are based on the latest product information available at the time of publication.

The right is reserved to make changes in all information at any time without notice.

February 2008

© KUBOTA Corporation 2008

KiSC issued 03, 2008 A

Sample of manual. Download All 51 pages at:

<https://www.arepairmanual.com/downloads/kubota-la844-service-manual/>



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

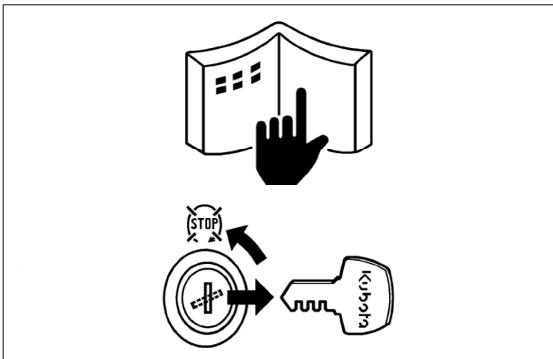
: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

IMPORTANT

: Indicates that equipment or property damage could result if instructions are not followed.

NOTE

: Gives helpful information.



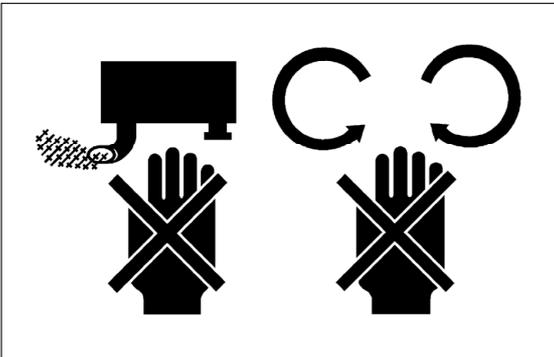
BEFORE SERVICING AND REPAIRING

- Read all instructions and safety instructions in this manual and on your engine safety decals.
- Clean the work area and engine.
- Park the machine on a firm and level ground.
- Allow the engine to cool before proceeding.
- Stop the engine, and remove the key.
- Disconnect the battery negative cable.
- Hang a "DO NOT OPERATE" tag in operator station.



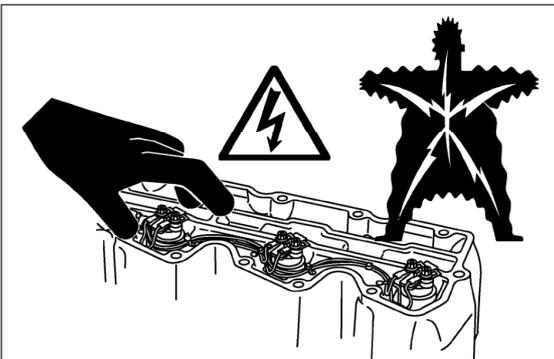
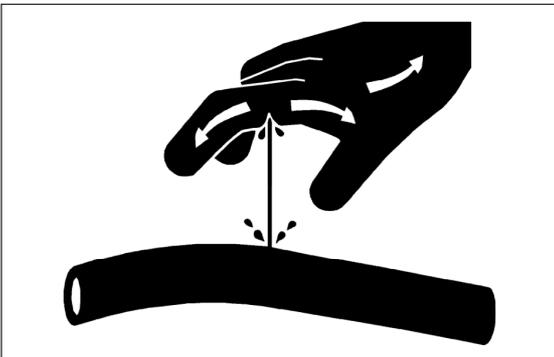
SAFETY STARTING

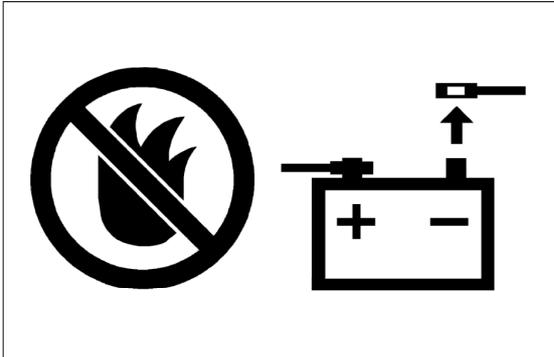
- Do not start the engine by shorting across starter terminals or bypassing the safety start switch.
- Unauthorized modifications to the engine may impair the function and / or safety and affect engine life.



SAFETY WORKING

- Do not work on the machine while under the influence of alcohol, medication, or other substances or while fatigued.
- Wear close fitting clothing and safety equipment appropriate to the job.
- Use tools appropriate to the work. Makeshift tools, parts, and procedures are not recommended.
- When servicing is performed together by two or more persons, take care to perform all work safely.
- Do not touch the rotating or hot parts while the engine is running.
- Never remove the radiator cap while the engine is running, or immediately after stopping. Otherwise, hot water will spout out from radiator. Only remove radiator cap when cool enough to touch with bare hands. Slowly loosen the cap to first stop to relieve pressure before removing completely.
- Escaping fluid (fuel or hydraulic oil) under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or fuel lines. Tighten all connections before applying pressure.
- Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.
- Do not open high-pressure fuel system. High-pressure fluid remaining in fuel lines can cause serious injury. Do not disconnect or attempt to repair fuel lines, sensors, or any other components between the high-pressure fuel pump and injectors on engines with high pressure common rail fuel system.
- High voltage exceeding 100 V is generated in the ECU, and is applied to the injector. Pay sufficient caution to electric shock when performing work activities.





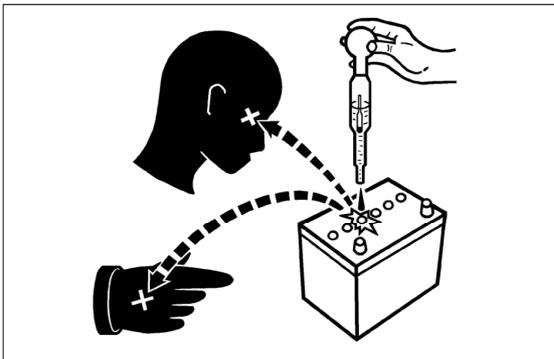
AVOID FIRES

- Fuel is extremely flammable and explosive under certain conditions. Do not smoke or allow flames or sparks in your working area.
- To avoid sparks from an accidental short circuit, always disconnect the battery negative cable first and connect it last.
- Battery gas can explode. Keep sparks and open flame away from the top of battery, especially when charging the battery.
- Make sure that no fuel has been spilled on the engine.



VENTILATE WORK AREA

- If the engine must be running to do some work, make sure the area is well ventilated. Never run the engine in a closed area. The exhaust gas contains poisonous carbon monoxide.



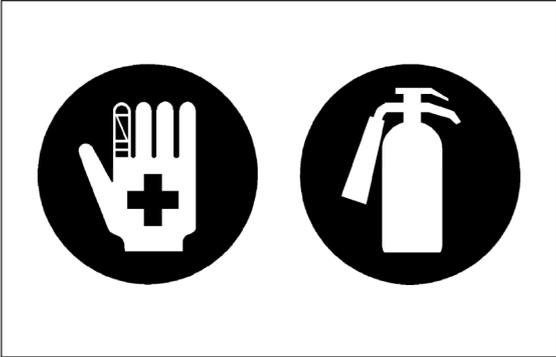
PREVENT ACID BURNS

- Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, clothing and cause blindness if splashed into eyes. Keep electrolyte away from eyes, hands and clothing. If you spill electrolyte on yourself, flush with water, and get medical attention immediately.



DISPOSE OF FLUIDS PROPERLY

- Do not pour fluids into the ground, down a drain, or into a stream, pond, or lake. Observe relevant environmental protection regulations when disposing of oil, fuel, coolant, electrolyte and other harmful waste.



PREPARE FOR EMERGENCIES

- Keep a first aid kit and fire extinguisher handy at all times.
- Keep emergency numbers for doctors, ambulance service, hospital and fire department near your telephone.

SAFETY DECALS

The following safety decals are installed on the machine.

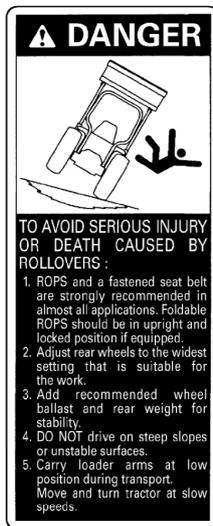
If a decal becomes damaged, illegible or is not on the machine, replace it. The decal part number is listed in the parts list.

(1) Part No. 7J246-5643-1



1A1ABAHAP016A

(2) Part No. 7J246-5641-1



1A1ABAHAP017A

(3) Part No. 7J266-5649-2



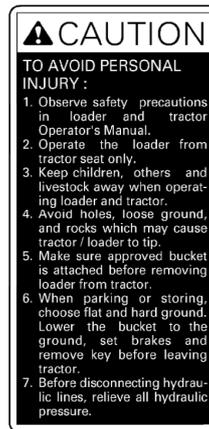
1A1ABACAP077A

(4) Part No. 7J246-5642-1



1A1ABAHAP018A

(5) Part No. 7J246-5645-1

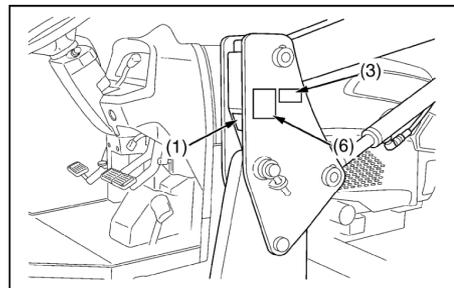
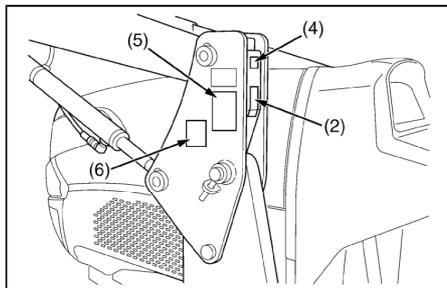


1A1ABAHAP019A

(6) Part No. 7J246-5644-2 (Both sides)

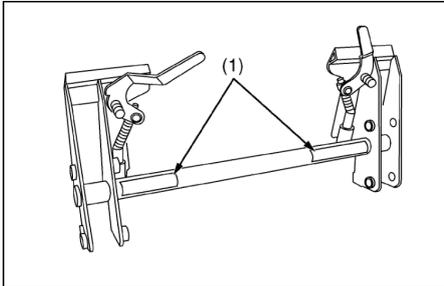


1A1ABAHAP020A



3UFAAAPCP001A

If quick hitch is equipped:

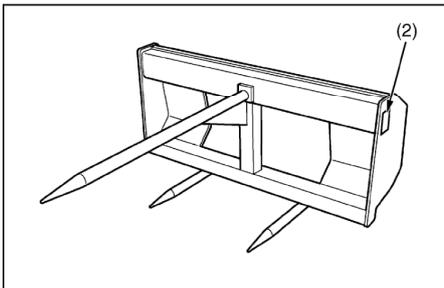


(1) Part No. 7J802-3648-4

⚠ DANGER			
TO AVOID PERSONAL INJURY OR DEATH			
1. Make sure both handles (LH, RH) contact the ear plates at the bottom and are all the way down.	2. Make sure both lock pins (LH, RH) protrude through the pin slots.	Kubota recommends the use of Kubota attachments on Kubota loaders. Non-Kubota attachments, if used, must comply with SAE J2513, published June 2000.	Use of a non-Kubota attachment that does not comply with SAE J2513 or the improper positioning of handle(s) or non-protrusion of pin(s) may result in detachment of the attachment or deformation, causing loss of performance, personal injury or death.
Ⓛ HANDLE Ⓜ EAR PLATE Ⓨ LOCK PIN Ⓩ PIN SLOT		For information, contact your Kubota Dealer	

1A1ABAAAP118A

If bale spear or pallet fork is equipped:



(2) Part No. 7J246-5643-1

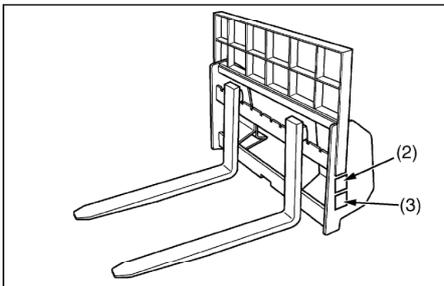
⚠ DANGER
TO AVOID SERIOUS INJURY OR DEATH CAUSED BY FALLING LOADS:
1. Load on raised bucket or fork can fall or roll back onto operator, causing serious injury or death. 2. Use approved clamping and / or guard attachments for handling large, loose or shiftable loads such as bales, posts, sheets of plywood etc. 3. Carry loads as low as possible.

1A1ABACAP075A

(3) Part No. 7J266-3923-2

⚠ DANGER
PALLET FORK RATED CAPACITY LA853, LA854 1300 LBS. LA723, LA724 1000 LBS. LA513, LA514, TL500 800 LBS.
TO AVOID PERSONAL INJURY OR DEATH CAUSED BY ROLLOVER
<ul style="list-style-type: none"> • Do not exceed rated load listed above. • Use rear implement and tire ballast recommended in loader operator's manual. • Operate tractor slowly taking special care when turning.

1A1ABACAP076B

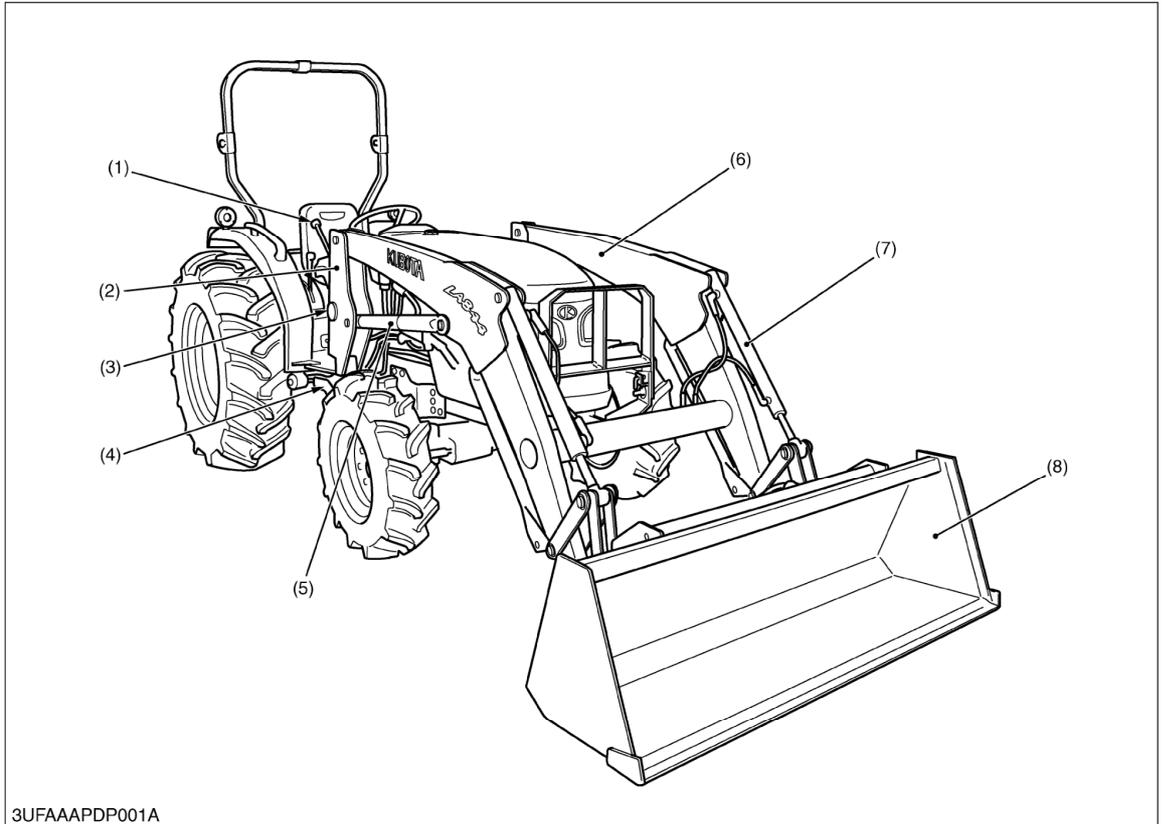


CARE OF DANGER, WARNING AND CAUTION LABELS

1. Keep danger, warning and caution labels clean and free from obstructing material.
2. Clean danger, warning and caution labels with soap and water, dry with a soft cloth.
3. Replace damaged or missing danger, warning and caution labels with new.
4. If a component with danger, warning and caution label(s) is replaced with new part, make sure new label(s) is (are) attached in the same location(s) as the replaced component.
5. Mount new danger, warning and caution labels by applying on a clean dry surface and pressing any bubbles to outside edge.

3UFAAAPCP002A

LOADER TERMINOLOGY



3UFAAAPDP001A

(1) Hydraulic Control Lever
(2) Side Frame

(3) Mounting Pin
(4) Main Frame

(5) Boom Cylinder
(6) Boom

(7) Bucket Cylinder
(8) Bucket

SPECIFICATIONS

Suitable Tractor

Loader Model	LA844
Tractor Model	MX5100

W1029088

[1] LOADER SPECIFICATIONS

Loader Model		LA844
Tractor Model		MX5100
Wheel Base		1895 mm (74.6 in.)
Front Tires		9.5 - 16
Rear Tires		14.9 - 26
Boom Cylinder	Bore	60.0 mm (2.36 in.)
	Stroke	496 mm (19.5 in.)
Bucket Cylinder	Bore	55.0 mm (2.17 in.)
	Stroke	469 mm (18.5 in.)
Control Valve	3-position bucket control type	One Detent Float Position, Regenerative Bucket Dump, Power Beyond Circuit
Rated Flow		35.8 L/min. 9.5 U.S.gals/min. 7.87 Imp.gals/min.
Maximum Pressure		18.1 MPa 185 kgf/cm ² 2630 psi
Net Weight (Approximate)		600 kg (1322 lbs)

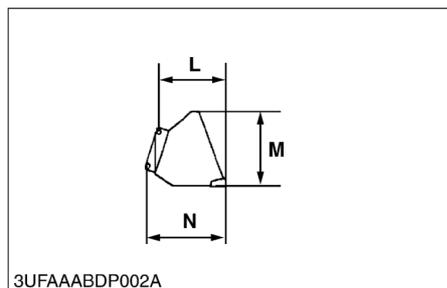
[2] BUCKET SPECIFICATIONS

Loader Model		LA844	
Model		Square 72"	Round 72" HD
Type		Rigid	Rigid
Width		1830 mm (72 in.)	
Depth (L)		547 mm (21.5 in.)	477 mm (18.8 in.)
Height (M)		570 mm (22.4 in.)	608 mm (23.9 in.)
Length (N)		652 mm (25.7 in.)	630 mm (24.8 in.)
Capacity	Struck	0.31 m ³ (10.9 cu.ft)	
	Heaped	0.37 m ³ (13.1 cu.ft)	
Weight		146 kg (322 lbs)	164 kg (362 lbs)

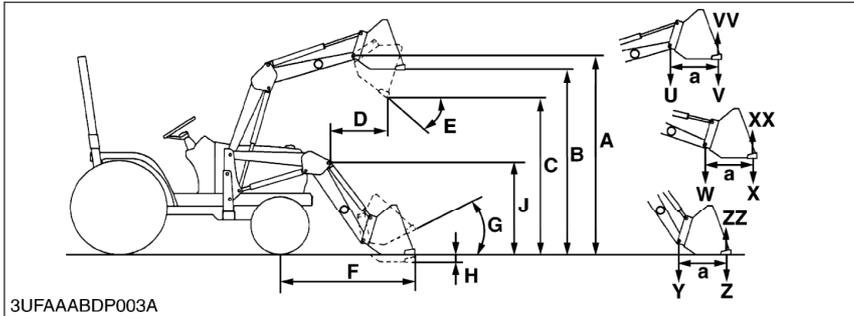
W1013973

Loader Model		LA844		
Model		Square 72"	Round 72" HD	Square 72" Light Material
Type		Quick attach		
Width		1830 mm (72 in.)		
Depth (L)		547 mm (21.5 in.)	477 mm (18.8 in.)	607 mm (23.9 in.)
Height (M)		570 mm (22.4 in.)	608 mm (23.9 in.)	570 mm (22.4 in.)
Length (N)		630 mm (24.8 in.)	610 mm (24 in.)	691 mm (27.2 in.)
Capacity	Struck	0.31 m ³ (10.9 cu.ft)		0.36 m ³ (12.7 cu.ft)
	Heaped	0.37 m ³ (13.1 cu.ft)		0.45 m ³ (16.0 cu.ft)
Weight		150 kg (331 lbs)	180 kg (397 lbs)	136 kg (300 lbs)

W1030480



[3] DIMENSIONAL AND OPERATIONAL SPECIFICATIONS



a : 500 mm (19.7 in.)

Dimensional Specifications

Loader Model		LA844
Tractor Model		MX5100
A	Maximum lift height (To bucket pivot pin)	2813 mm (110.7 in.)
B	Maximum lift height under level bucket	2609 mm (102.7 in.)
C	Clearance with bucket dumped	2208 mm (86.9 in.)
D	Reach at maximum lift height (Dumping reach)	664 mm (26.1 in.)
E	Maximum dump angle	47 deg.
F	Reach with bucket on ground	1937 mm (76.3 in.)
G	Bucket roll-back angle	43 deg.
H	Digging depth	228 mm (9.0 in.)
J	Overall height in carry position	1405 mm (55.3 in.)

W1013874

Operational Specifications

Loader Model		LA844
Tractor Model		MX5100
Lift capacity to maximum height (Bucket bottom mid point)		850 kg (1874 lbs)
U	Lift capacity to maximum height at bucket pivot pin	1108 kg (2443 lbs)
V	Lift capacity to maximum height at 500 mm (19.7 in.) forward	840 kg (1852 lbs)
W	Lift capacity to 1.5 m (59 in.) height at bucket pivot pin	1388 kg (3060 lbs)
X	Lift capacity to 1.5 m (59 in.) height at 500 mm (19.7 in.) forward	1124 kg (2478 lbs)
Y	Breakout force at bucket pivot pin	18584 N (4178 lbf)
Z	Breakout force at 500 mm (19.7 in.) forward	14504 N (3261 lbf)
VV	Bucket roll-back force at Maximum height	12415 N (2791 lbf)
XX	Bucket roll-back force at 1.5 m (59 in.) lift height	18897 N (4248 lbf)
ZZ	Bucket roll-back force at ground level	19554 N (4396 lbf)
Raising time		4.4 sec.
Lowering time		3.0 sec.
Bucket dumping time		1.9 sec.
Bucket roll-back time		2.4 sec.

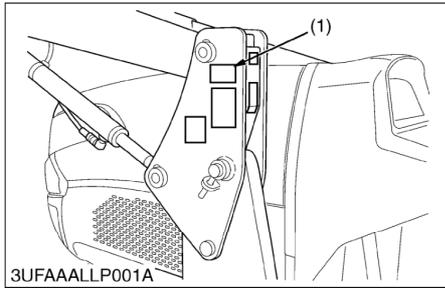
W1034685

GENERAL

CONTENTS

1. LOADER IDENTIFICATION	G-1
2. GENERAL PRECAUTIONS	G-2
3. LUBRICANTS	G-3
4. TIGHTENING TORQUES	G-4
[1] GENERAL USE SCREWS, BOLTS AND NUTS (FOR FRONT LOADER AND BACKHOE)	G-4
[2] STUD BOLTS	G-4
[3] AMERICAN STANDARD SCREWS, BOLTS AND NUTS WITH UNC OR UNF THREADS	G-5
[4] PLUGS	G-5
[5] HYDRAULIC FITTINGS	G-6
5. MAINTENANCE CHECK LIST	G-7
6. CHECK AND MAINTENANCE	G-8
[1] CHECK POINTS OF EACH USE OR DAILY	G-8
[2] CHECK POINTS OF EVERY 10 HOURS	G-9
[3] CHECK POINTS OF EVERY 50 HOURS	G-9

1. LOADER IDENTIFICATION

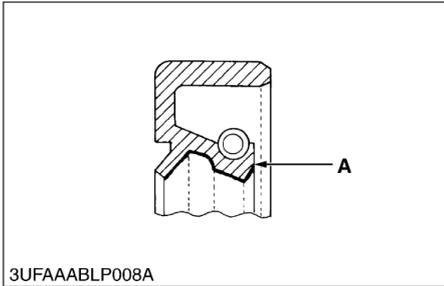


When contacting your local KUBOTA distributor, always specify front loader serial number (1).

(1) Serial Number

W1010477

2. GENERAL PRECAUTIONS



- During disassembly, carefully arrange removed parts in a clean area to prevent later confusion. Screws, bolts and nuts should be replaced in their original positions to prevent reassembly errors.
- When special tools are required, use genuine KUBOTA tools. Special tools which are not used frequently should be made according to the drawings provided.
- Clean parts before measuring them.
- Use only genuine KUBOTA parts for parts replacement to maintain backhoe performance and to assure safety.
- O-rings and oil seals must be replaced during reassembly. Apply grease to new O-rings or oil seals before reassembling.
- Nipples must be tightened to the specified torque. Excessive torque may cause damages hydraulic units or nipples, and insufficient torque will result in oil leaks.
- When using a new hose or pipe, tighten nuts to the specified torque once, then loosen them (approx. by 45 °) to allow hose or pipe to settle before retightening to the specified torque (except seal taped parts).
- When removing both ends of a pipe, remove the lower end first.
- Use two pliers in removal and reinstallation; one to hold the static side, and the other to turn the side being removed to avoid twisting.
- Check to see that sleeves of flareless connectors and tapered sections of hoses are free of dust and scratches.
- After tightening nipples, clean the joint and apply the maximum working pressure 2 to 3 times to check for oil leak.

A : Grease

W1010572

3. LUBRICANTS

To prevent serious damage to hydraulic systems, use only specified fluid or its equivalent.

Place	Capacity	Lubricants, type of grease
	MX5100	
Transmission case	44.0 L 11.6 U.S.gals 9.68 Imp.gals	KUBOTA UDT or SUPER UDT fluid*
Grease nipples	Until grease overflows.	Moly Ep type grease**

* KUBOTA original transmission hydraulic fluid

** "Extreme pressure" and containing Molybdenum disulfide is recommended. This grease may specify "Moly Ep" on it's label.

4. TIGHTENING TORQUES

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

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	  No-grade or 4T						  7T or Property class 8.8						  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

W1034542

[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	0.9 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.)	29.5 to 49.0	3.0 to 5.0	21.7 to 36.1	31.4	3.2	23.1
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	-	-	-

W1048139

[3] AMERICAN STANDARD SCREWS, BOLTS AND NUTS WITH UNC OR UNF THREADS

Grade	SAE GR.5 			SAE GR.8 			
	Unit	N-m	kgf-m	lbf-ft	N-m	kgf-m	lbf-ft
Nominal Diameter							
1/4		11.7 to 15.7	1.19 to 1.61	8.61 to 11.6	16.3 to 19.7	1.66 to 2.01	12.0 to 14.6
5/16		23.1 to 27.7	2.35 to 2.83	17.0 to 20.5	33 to 39	3.4 to 4.0	24 to 29
3/8		48 to 56	4.9 to 5.8	35.0 to 42.0	61 to 73	6.3 to 7.4	45 to 54
1/2		110 to 130	11 to 13	80 to 96	150 to 178	15.2 to 18.2	110 to 132
9/16		150 to 178	15.2 to 18.2	110 to 132	217 to 260	22.2 to 26.5	160 to 192
5/8		204 to 244	20.8 to 24.8	150 to 180	299 to 357	30.5 to 36.4	220 to 264

W1022485

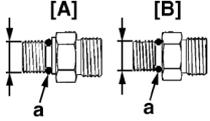
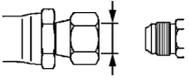
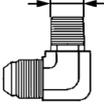
[4] PLUGS

Shape	Size	Material of opponent part					
		Ordinariness			Aluminum		
		N-m	kgf-m	lbf-ft	N-m	kgf-m	lbf-ft
 Tapered screw	R1/8	13 to 21	1.3 to 2.2	9.4 to 15	13 to 21	1.3 to 2.0	9.4 to 15
	R1/4	25 to 44	2.5 to 4.5	18 to 32	25 to 34	2.5 to 3.5	18 to 25
	R3/8	49 to 88	5.0 to 9.0	37 to 65	49 to 58	5.0 to 6.0	37 to 43
	R1/2	58.9 to 107	6.00 to 11.0	43.4 to 79.5	59 to 78	6.0 to 8.0	44 to 57
 Straight screw	G1/4	25 to 34	2.5 to 3.5	18 to 25	–	–	–
	G3/8	62 to 82	6.3 to 8.4	46 to 60	–	–	–
	G1/2	49 to 88	5.0 to 9.0	37 to 65	–	–	–

000001666E

[5] HYDRAULIC FITTINGS

Adapters, Elbows and Others

Item	Shape	Thread size	Tightening torque		
			N·m	kgf·m	lbf·ft
Adjustable elbow, Adapter (O-ring port) (UNF)	 <p>[A] Nut Type [B] No Nut Type a : O-ring</p>	9/16	37 to 44	3.8 to 4.5	27 to 33
		3/4	48 to 54	4.9 to 5.5	35 to 40
		7/8	77 to 85	7.9 to 8.6	57 to 62
Hose fitting, Flare nut (UNF)		9/16	22 to 25	2.3 to 2.6	16 to 19
		3/4	36 to 40	3.6 to 4.1	26 to 30
		7/8	43 to 50	4.4 to 5.0	32 to 36
Adapter (NPT)		1/4	30 to 50	3.1 to 5.0	23 to 36
		3/8	39 to 60	4.0 to 6.1	29 to 44
		1/2	49 to 58	5.0 to 5.9	36 to 43

NOTE

- When connecting a hose with flare nut, after tightening the nut with specified torque, return it approximately 45 degrees (0.79 rad) and re-tighten it to specified torque.

W1015484

5. MAINTENANCE CHECK 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-8
	Check the hydraulic hoses	G-8
Every 10 hours	Grease all grease nipples	G-9
	Lubricate joints of control level linkage	G-9
Every 50 hours	Check the main frame mounting bolts	G-9

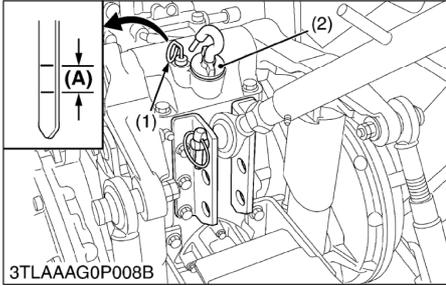
W1013874

6. CHECK AND MAINTENANCE

⚠ CAUTION

- When checking and repairing, park the tractor on flat ground and apply the parking brake.
- When checking and repairing, lower the bucket and stop the engine.

[1] CHECK POINTS OF EACH USE OR DAILY



Checking Transmission Fluid Level

1. Check the oil level at the gauge (1).
2. If the level is too low, add new oil to the prescribed level at the oil.

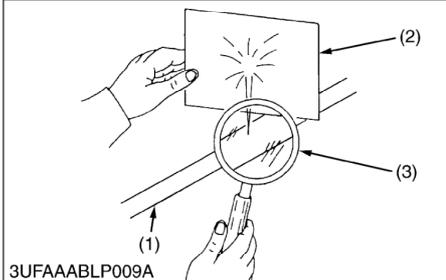
IMPORTANT

- **Use only KUBOTA UDT or SUPER UDT fluid.**
Use of other oils may damage the transmission or hydraulic system. Refer to "3. LUBRICANTS".

- (1) Gauge
(2) Oil Filling Plug

(A) Oil level is acceptable within this range.

W1010960



Checking Hydraulic Hoses

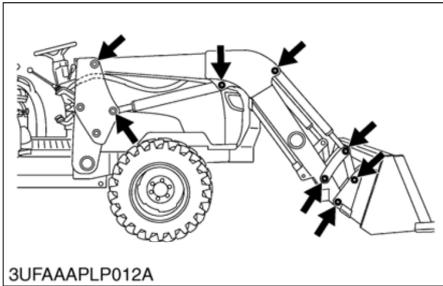
1. With the engine off and bucket on the ground, check all hydraulic hoses (1) for cuts or wear.
2. Check for signs of leaks and make sure all fittings are tight.
3. If defects are found, replace them.

- (1) Hydraulic Hose
(2) Cardboard

(3) Magnifying Glass

W1011064

[2] CHECK POINTS OF EVERY 10 HOURS



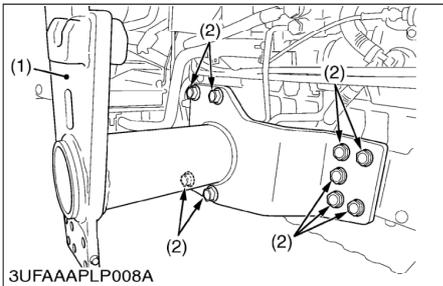
Greasing

1. Inject grease in all grease fitting with a hand grease gun. W1011132

Lubricating

1. Lubricate joints of control lever linkage. W1011274

[3] CHECK POINTS OF EVERY 50 HOURS



Checking Main Frame Mounting Bolts

CAUTION

- Never operate front loader with a loose main frame.
 - Any time bolts are loosened, retighten to specified torque.
 - Check all bolts frequently and keep them tight.
1. Check the main frame bolts and nuts regularly especially when new. If they are loose, tighten them as follows.

Tightening torque	Main frame mounting bolt	226 N·m 23.0 kgf·m 166 lbf·ft
-------------------	--------------------------	-------------------------------------

- (1) Main Frame (2) Bolt

W1013969

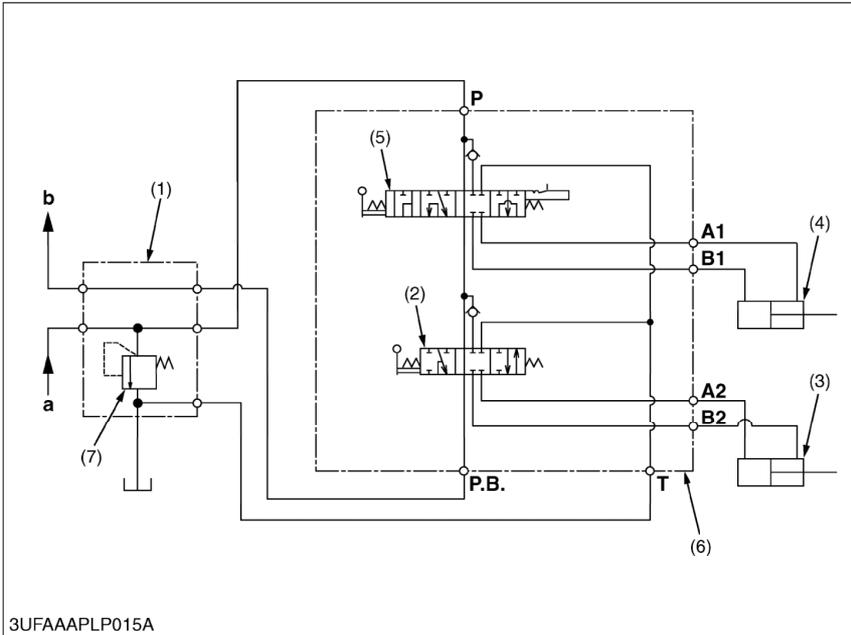
MECHANISM

CONTENTS

1. CONTROL VALVE ASSEMBLY.....	M-1
[1] HYDRAULIC CIRCUIT.....	M-1
[2] HYDRAULIC BLOCK.....	M-2
[3] STRUCTURE.....	M-3
[4] OPERATION.....	M-4

1. CONTROL VALVE ASSEMBLY

[1] HYDRAULIC CIRCUIT



- (1) Hydraulic Block
- (2) Bucket Control Valve
- (3) Bucket Cylinder
- (4) Boom Cylinder
- (5) Boom Control Valve
- (6) Control Valve Assembly
- (7) Relief Valve

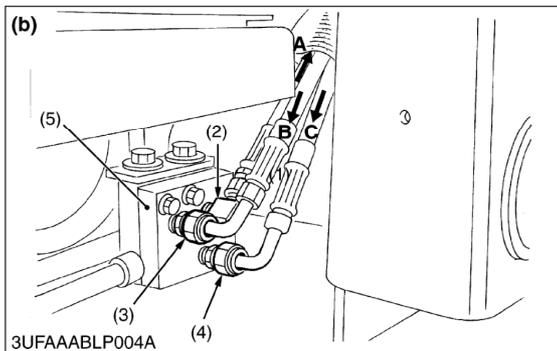
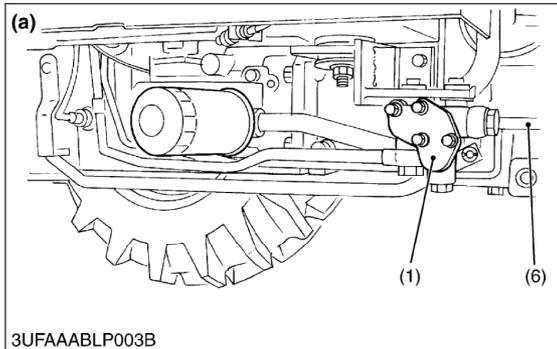
- P** : P Port
- T** : T Port
- A1** : A1 Port
- B1** : B1 Port
- A2** : A2 Port
- B2** : B2 Port
- P.B.** : Power Beyond Port

- a** : From Pump
- b** : To 3-Point Hydraulic System

W1016476

3UFAAAPLP015A

[2] HYDRAULIC BLOCK



Filtered oil is forced out by the hydraulic pump to the hydraulic block (5) through the delivery pipe (6).

There is a relief valve in hydraulic block.

(a) When Front Loader is not Attached

1. Oil from the hydraulic pump is delivered into the hydraulic block (1).

(b) When Front Loader is Attached

1. Oil from the hydraulic pump is delivered into the **P** port of hydraulic block (5) through the pump port (2).

2. Oil returning from the **PB** (power beyond) port of loader control valve is delivered into the three point hydraulic system through the power beyond port (3) of the hydraulic block (5).

3. Oil returning from the **T** (tank) port of the loader control valve is delivered into the transmission case through the tank port (4).

- (1) Hydraulic Block
- (2) Pump Port
- (3) Power Beyond Port
- (4) Tank Port
- (5) Hydraulic Block
- (6) Delivery Pipe

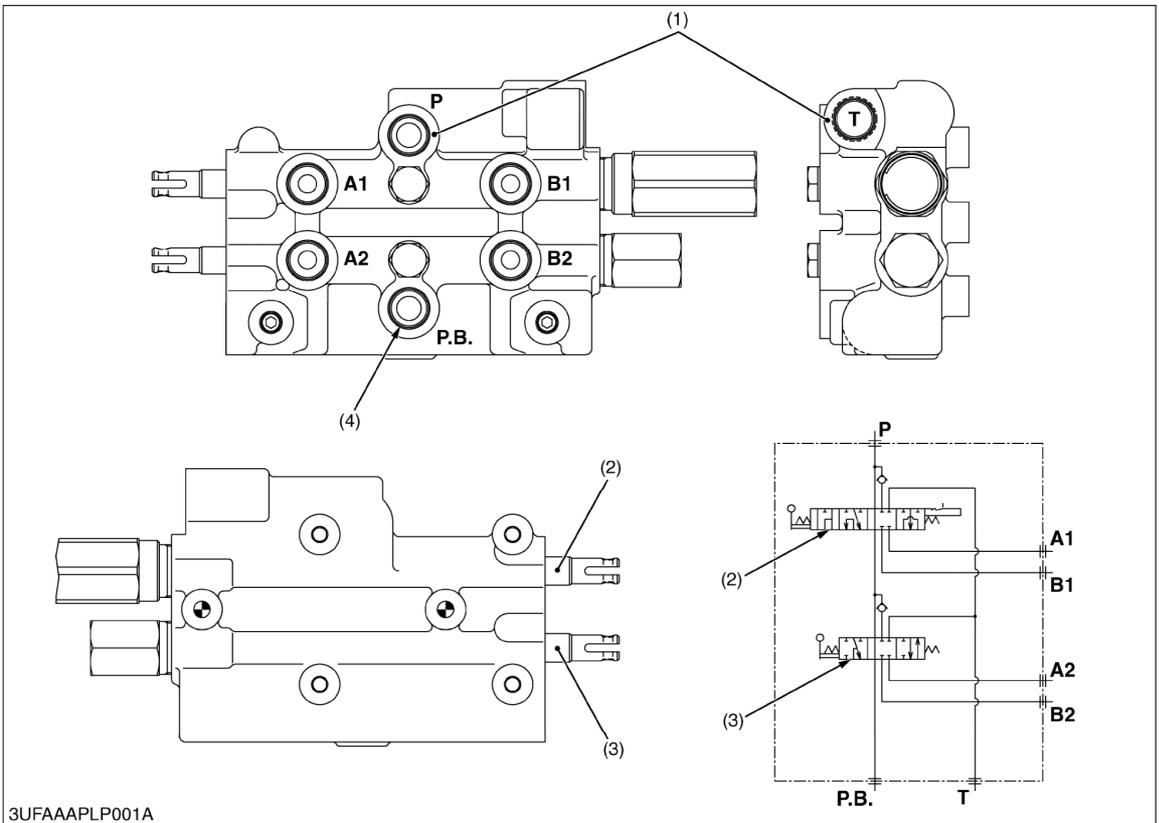
A : To Front Loader (P Port)

B : From Front Loader (PB Port)

C : From Front Loader (T Port)

W1016762

[3] STRUCTURE



3UFAAAPLP001A

- (1) Inlet and Outlet Section
- (2) Boom Control Valve
- (3) Bucket Control Valve
- (4) Power Beyond

P : P Port
T : T Port

A1 : A1 Port
A2 : A2 Port

B1 : B1 Port
B2 : B2 Port
P.B. : P.B. Port

The control valve assembly is composed of one casting block and four major sections as shown above.

(1) Inlet and Outlet Section

There are **P** port and **T** port in this section.

The **P** port is connected to the **OUTLET** port of hydraulic block by the hydraulic hose.

The **T** port is connected to the **TANK** port of hydraulic block by the hydraulic hose.

(2) Boom Control Section

The boom control valve consists of 4-position, 6-connection, detent, spring center type spool, a mono block valve housing, load check valve, etc. This valve connects to **A1** and **B1** ports and controls oil flow to the boom cylinder.

(3) Bucket Control Section

The bucket control valve consists of 3-position, 6-connection, no detent, spring center type spool consisting of a mono block valve housing, load check valve, etc. This valve connects to **A2** and **B2** ports and controls oil flow to the bucket cylinder.

(4) Power Beyond

This section includes **P.B.** port which is connected to the **INLET** port of hydraulic block by the hydraulic hose, and feeds oil to the 3-P hydraulic control valve.