

Product: Kubota LA524AU-B LA714AU-B LA854AU-B Service Manual
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WSM

WORKSHOP MANUAL FRONT LOADER

LA524AU-B, LA714AU-B,
LA854AU-B

Kubota

KiSC issued 03, 2011 A

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<https://www.arepairmanual.com/downloads/kubota-la524au-b-la714au-b-la854au-b-service-manual/>

TO THE READER

This Workshop Manual tells the servicing personnel about the mechanism, servicing and maintenance of KUBOTA Front Loaders LA524AU-B, LA714AU-B and LA854AU-B. It contains 4 parts: "**Information**", "**General**", "**Mechanism**" and "**Servicing**".

■ **Information**

This section primarily contains information below.

- Safety First
- Safety Decal
- Specifications
- Dimension

■ **General**

This section primarily contains information below.

- Loader Identification
- General Precautions
- Maintenance Check List
- Check and Maintenance

■ **Mechanism**

This section contains information on the structure and the function of the unit. Before you continue with the subsequent sections, make sure that you read this section.

■ **Servicing**

This section primarily contains information below.

- Troubleshooting
- Servicing Specifications
- Tightening Torques
- Checking, Disassembling and Servicing

All illustrations, photographs and specifications contained in this manual are of the newest information available at the time of publication.

KUBOTA reserves the right to change all information at any time without notice.

Since this manual includes many models, information or illustrations and photographs can show more than one model.

March, 2011

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I INFORMATION

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.

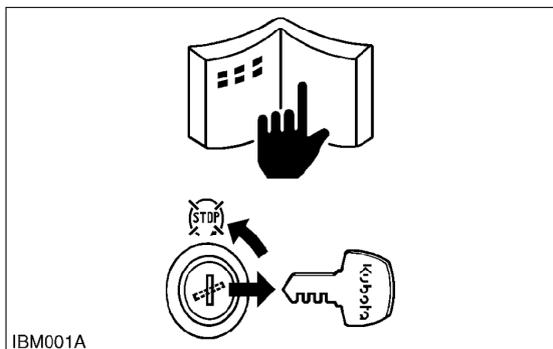
■ IMPORTANT

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

■ NOTE

- Gives helpful information.

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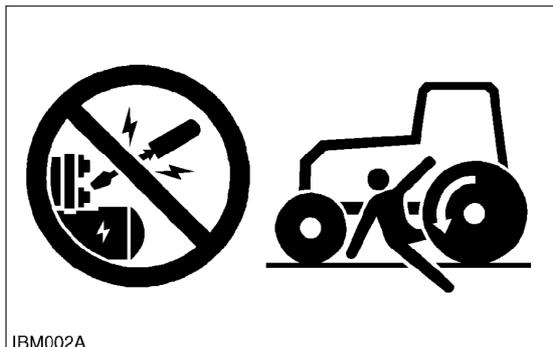


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BEFORE YOU START SERVICE

- 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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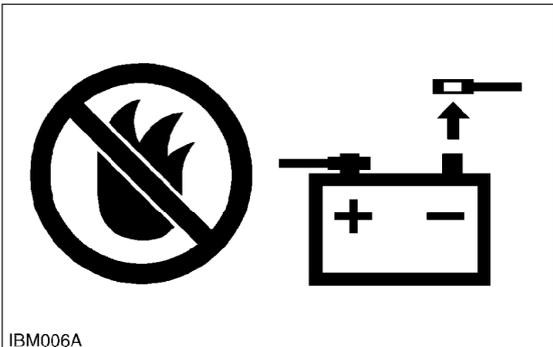
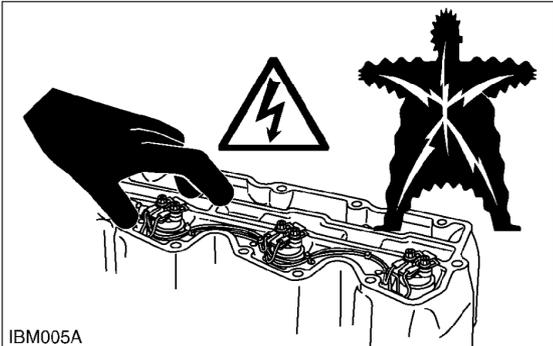
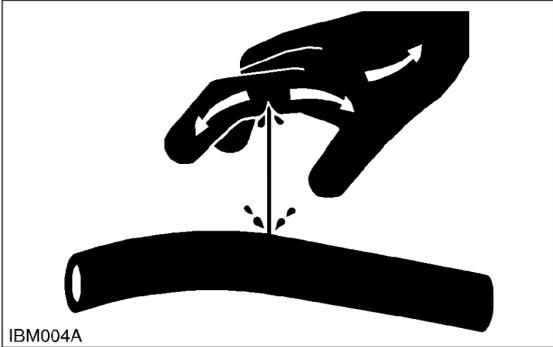
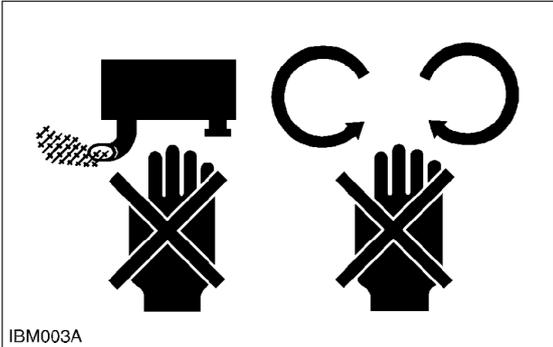


IBM002A

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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OPERATE SAFELY

- Do not use the machine after you consume alcohol or medication or when you are tired.
- Put on applicable clothing and safety equipment.
- Use applicable tools only. Do not use alternative tools or parts.
- When 2 or more persons do servicing, make sure that you do it safely.
- Do not operate below the machine that only a jack holds. Always use a safety stand to hold the machine.
- Do not touch the hot parts or parts that turn when the engine operates.
- Do not remove the radiator cap when the engine operates, or immediately after it stops. If not, hot water can spout out from the radiator. Only remove the radiator cap when it is at a sufficiently low temperature to touch with bare hands. Slowly loosen the cap to release the pressure before you remove it fully.
- Released fluid (fuel or hydraulic oil) under pressure can cause damage to the skin and cause serious injury. Release the pressure before you disconnect hydraulic or fuel lines. Tighten all connections before you apply the pressure.
- Do not open a fuel system under high pressure. The fluid under high pressure that stays in fuel lines can cause serious injury. Do not disconnect or repair the fuel lines, sensors, or any other components between the fuel pump and injectors on engines with a common rail fuel system under high pressure.
- Put on an applicable ear protective device (earmuffs or earplugs) to prevent injury against loud noises.
- Be careful about electric shock. The engine generates a high voltage of more than DC100 V in the ECU and is applied to the injector.

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PREVENT A FIRE

- Fuel is very flammable and explosive under some conditions. Do not smoke or let flames or sparks in your work area.
- To prevent sparks from an accidental short circuit, always disconnect the battery negative cable first and connect it last.
- The battery gas can cause an explosion. Keep the sparks and open flame away from the top of battery, especially when you charge the battery.
- Make sure that you do not spill fuel on the engine.

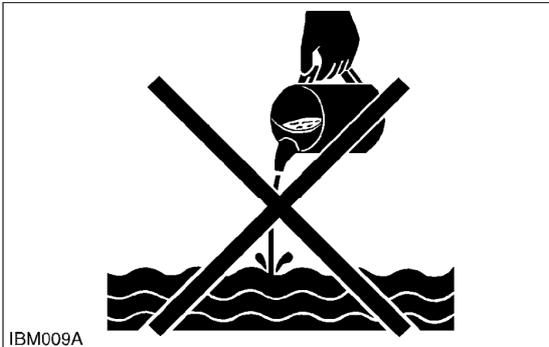
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KEEP A GOOD AIRFLOW IN THE WORK AREA

- If the engine is in operation, make sure that the area has good airflow. Do not operate the engine in a closed area. The exhaust gas contains poisonous carbon monoxide.

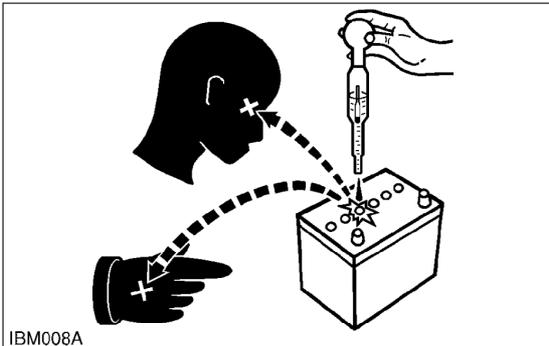
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DISCARD FLUIDS CORRECTLY

- Do not discard fluids on the ground, down the drain, into a stream, pond, or lake. Obey related environmental protection regulations when you discard oil, fuel, coolant, electrolyte and other dangerous waste.

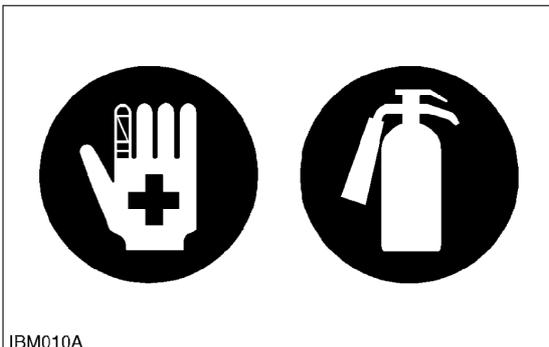
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PREVENT ACID BURNS

- Keep electrolyte away from your eyes, hands and clothing. Sulfuric acid in battery electrolyte is poisonous and it can burn your skin and clothing and cause blindness. If you spill electrolyte on yourself, clean yourself with water, and get medical aid immediately.

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PREPARE FOR EMERGENCIES

- Keep a first aid kit and fire extinguisher ready at all times.
- Keep the emergency contact telephone numbers near your telephone at all times.

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2. 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.

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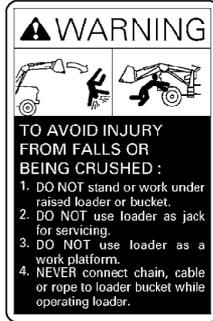
LA524AU-B

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



1A1ABAHAP015A

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

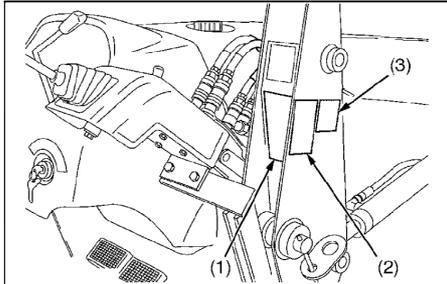


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(3) Part No. 7J266-5649-2



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(1) Part No. 7J246-5644-2



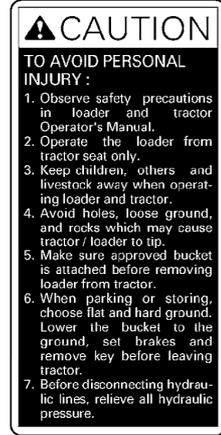
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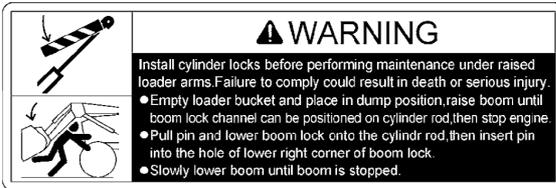
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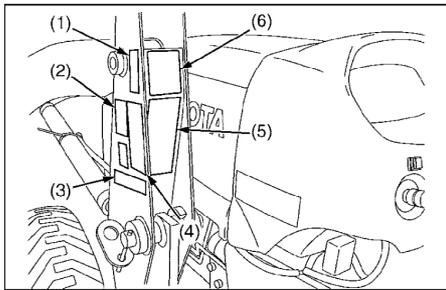


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(3) Part No. 7J802-5848-1



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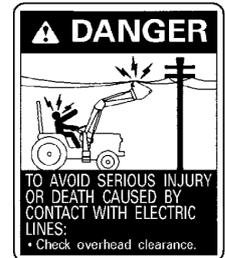
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(5) Part No. 7J246-5641-1



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



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(1) Part No. 7J802-3648-5 (If the loader equipped with quick attach coupler)

⚠ DANGER			
TO AVOID PERSONAL INJURY OR DEATH			
1. Make sure both handles (LH, RH) (A) contact the ear plates (B) at the X points and are all the way down.		2. Make sure both lock pins (LH, RH) (C) protrude through the pin slots (D).	
(A) HANDLE (B) EAR PLATE (C) LOCK PIN (D) PIN SLOT		Kubota recommends the use of Kubota attachments on Kubota loaders. Non-Kubota attachments, if used, must comply with ISO 24410, first edition 2005-04-15.	
Use of a non-Kubota attachment that does not comply with ISO 24410 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.			
For information contact your Kubota Dealer			

1A1ABAAAP119A

(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.

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(3) Part No. 7J266-3923-6

⚠ DANGER

PALLET FORK SPECIFICATION

- Rated capacity

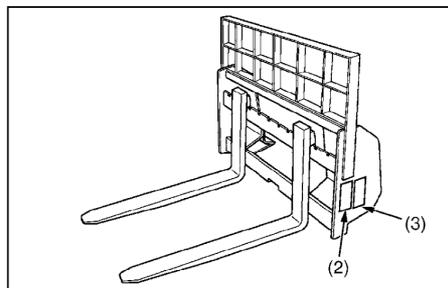
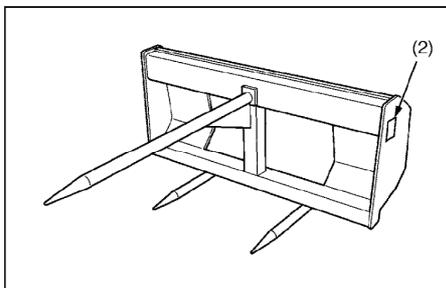
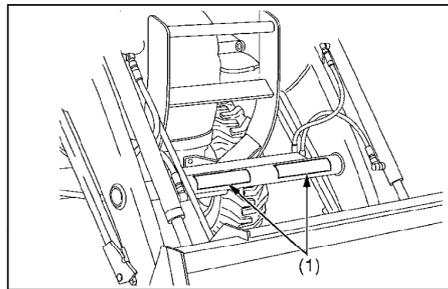
LA853, LA854, LA844	: 1300 LBS (590 kg)
LA703A, LA723, LA724, LA714, LA754N, LA513, LA514, TL500, LA463, LA524	: 925 LBS (420 kg)
LA513, LA514, TL500	: 800 LBS (363 kg)
LA463, LA524	: 710 LBS (322 kg)
- The distance to its center of gravity from the attachment face

LA853, LA854, LA844	: 22.6in(575 mm)
LA703A, LA723, LA724, LA714, LA754N, LA513, LA514, TL500, LA463, LA524	: 19.6in(498 mm)
- The weight of the attachment : 203 LBS (92 kg)

TO AVOID PERSONAL INJURY OR DEATH CAUSED BY ROLLOVER

- 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.

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LA714AU-B, LA854AU-B

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



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



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



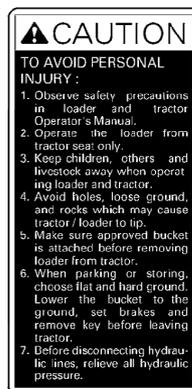
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(4) Part No. 7J246-5642-1



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

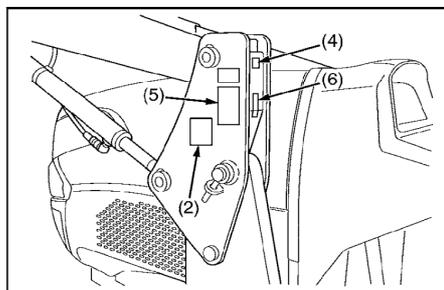
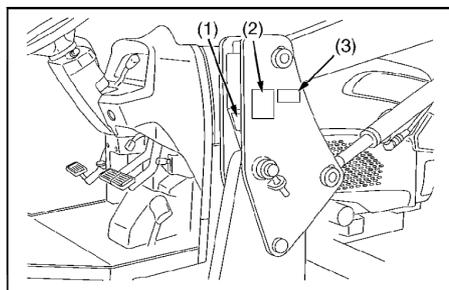


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(6) Part No. 7J246-5641-1



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(1) Part No. 7J802-3648-5

⚠ DANGER

TO AVOID PERSONAL INJURY OR DEATH

<p>1. Make sure both handles (LH, RH) contact the ear plates at the points and are all the way down.</p>	<p>2. Make sure both lock pins (LH, RH) protrude through the pin slots .</p>	<p>Kubota recommends the use of Kubota attachments on Kubota loaders. Non-Kubota attachments, if used, must comply with ISO 24410, first edition 2005-04-15.</p>
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Use of a non-Kubota attachment that does not comply with ISO 24410 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

1A1ABAAA119A

(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.

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(3) Part No. 7J266-3923-6

⚠ DANGER

PALLET FORK SPECIFICATION

- Rated capacity

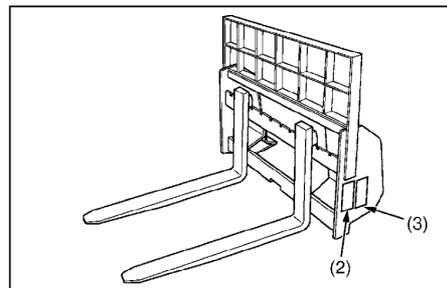
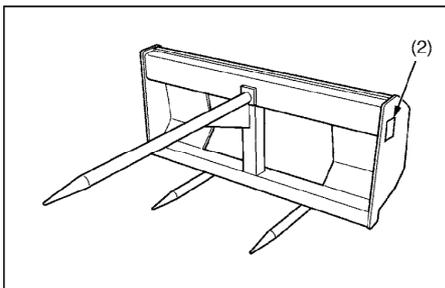
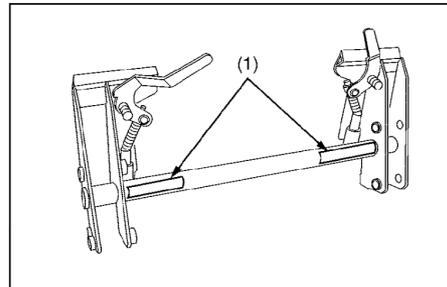
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LA703A, LA723, LA724, LA714, LA754N, LA513, LA514, TL500, LA463, LA524	: 1000 LBS. (454 kg)
LA754N	: 925 LBS. (420 kg)
LA513, LA514, TL500	: 800 LBS. (363 kg)
LA463, LA524	: 710 LBS. (322 kg)
- The distance to its center of gravity from the attachment face

LA853, LA854, LA844	: 22.6in(575 mm)
LA703A, LA723, LA724, LA714, LA754N, LA513, LA514, TL500, LA463, LA524	: 19.6in(498 mm)
- The weight of the attachment : 203 LBS. (92 kg)

TO AVOID PERSONAL INJURY OR DEATH CAUSED BY ROLLOVER

- 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.

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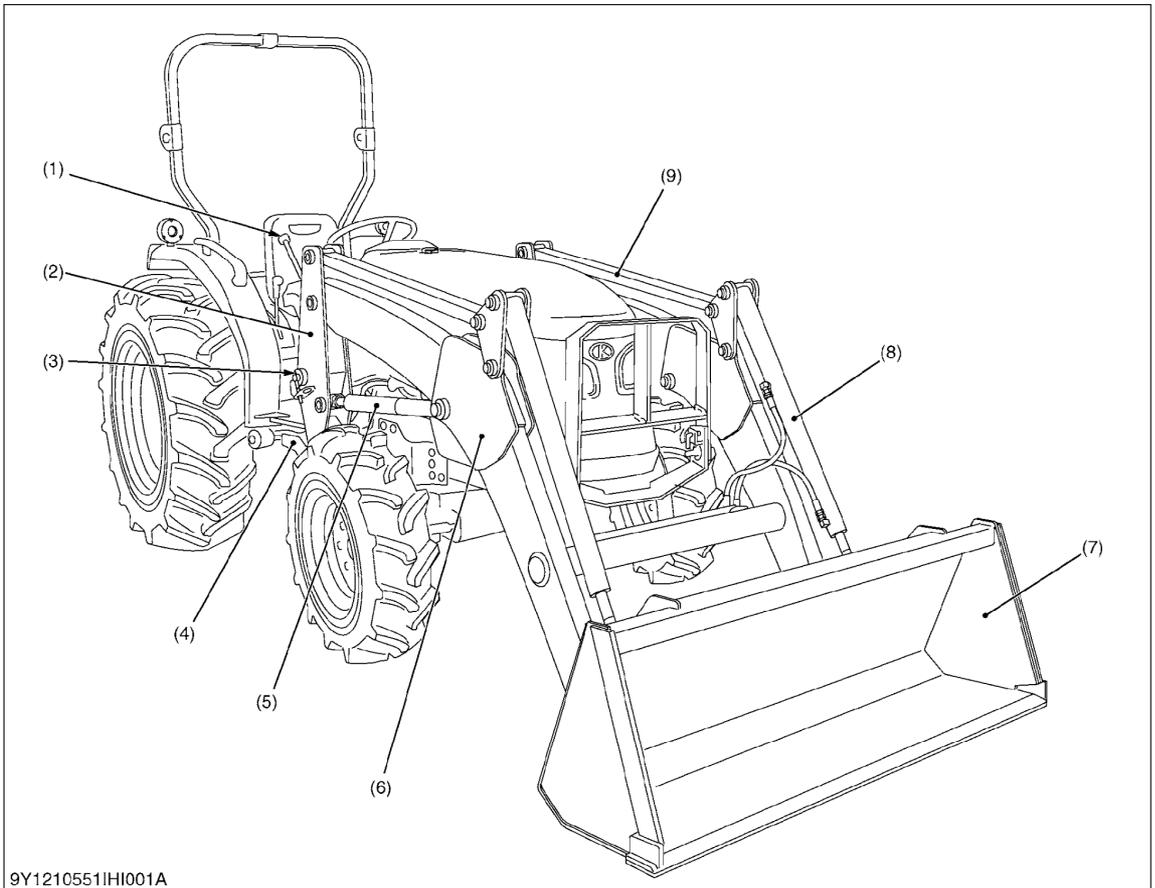
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CARE OF DANGER, WARNING AND CAUTION LABELS

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 labels.
4. If a component with danger, warning and caution label(s) affixed 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 pressure any bubbles to outside edge.

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3. LOADER TERMINOLOGY



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- | | | | |
|-----------------------------|-------------------|------------|---------------------|
| (1) Hydraulic Control Lever | (4) Main Frame | (6) Boom | (8) Bucket Cylinder |
| (2) Side Frame | (5) Boom Cylinder | (7) Bucket | (9) Parallel Link |
| (3) Mounting Pin | | | |

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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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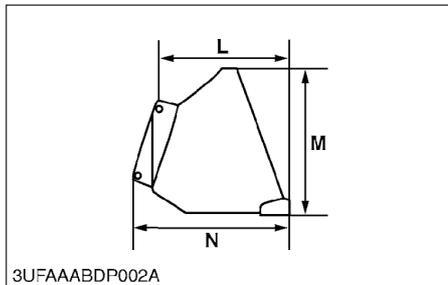
[1] LOADER SPECIFICATIONS

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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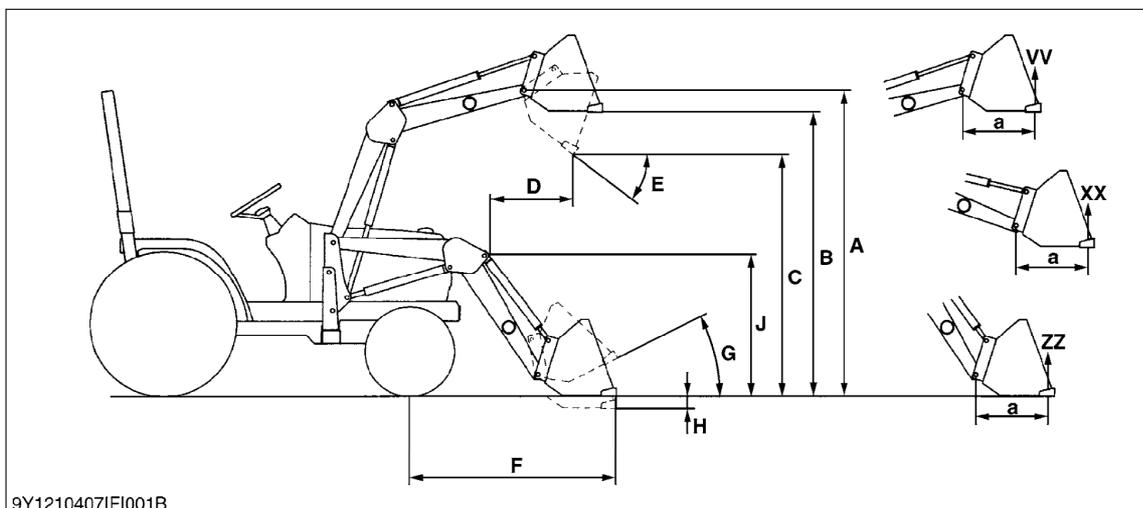
[2] BUCKET SPECIFICATIONS



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)	0.31 m ³ (10.9 cu.ft)
	Heaped	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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[3] DIMENSIONAL AND OPERATIONAL SPECIFICATIONS



9Y1210407IFI001B

■ Dimensional Specifications

Loader Model		LA524AU-B	LA714AU-B	LA854AU-B
Tractor Model		L3400	L4400	MX5100
A	Maximum lift height (To bucket pivot pin)	2394 mm (94.25 in.)	2597 mm (102.2 in.)	2863 mm (112.7 in.)
B	Maximum lift height under level bucket	2113 mm (83.19 in.)	2395 mm (94.3 in.)	2659 mm (104.7 in.)
C	Clearance with bucket dumped	1795 mm (70.67 in.)	1995 mm (78.5 in.)	2255 mm (88.8 in.)
D	Reach at maximum lift height (Dumping reach)	589 mm (23.2 in.)	561 mm (22.1 in.)	570 mm (22.4 in.)
E	Maximum dump angle	38 deg. (0.66 rad)	45 deg. (0.79 rad)	45 deg. (0.79 rad)
F	Reach with bucket on ground	1796 mm (70.71 in.)	1763 mm (69.4 in.)	1919 mm (75.6 in.)
G	Bucket roll-back angle	45 deg. (0.46 rad)	43 deg. (0.75 rad)	43 deg. (0.75 rad)
H	Digging depth	288 mm (11.3 in.)	122 mm (4.8 in.)	177 mm (7.0 in.)
J	Overall height in carry position	1427 mm (56.18 in.)	1380 mm (54.3 in.)	1410 mm (55.5 in.)
a	Length	500 mm (19.7 in.)	500 mm (19.7 in.)	500 mm (19.7 in.)

■ Operational Specifications

Loader Model		LA524AU-B	LA714AU-B	LA854AU-B
Tractor Model		L3400	L4400	MX5100
Lift capacity to maximum height (Bucket bottom mid point)		400 kg (882 lbs)	600 kg (1320 lbs)	800 kg (1760 lbs)
VV	Bucket roll-back force at Maximum height	5259 N (1182 lbf)	8686 N (1953 lbf)	14041 N (3156.5 lbf)
XX	Bucket roll-back force at 1.5 m (59 in.) lift height	7903 N (1777 lbf)	12435 N (2795.5 lbf)	17021 N (3826.5 lbf)
ZZ	Bucket roll-back force at ground level	9084 N (2042 lbf)	12551 N (2821.6 lbf)	14014 N (3150.5 lbf)
Raising time		3.3 sec.	3.4 sec.	4.4 sec.
Lowering time		2.1 sec.	2.1 sec.	2.8 sec.
Bucket dumping time		1.4 sec.	1.2 sec.	1.5 sec.
Bucket roll-back time		1.7 sec.	1.6 sec.	1.9 sec.

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G GENERAL

GENERAL

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1. LOADER IDENTIFICATION

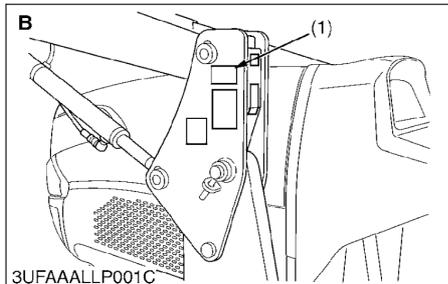
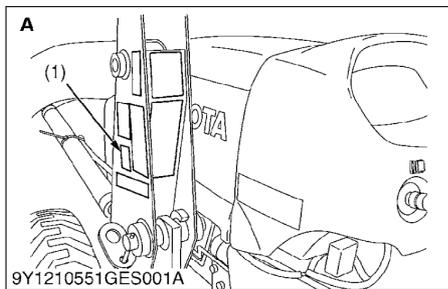
When contacting your local KUBOTA distributor, always specify front loader's serial number (1).

(1) Serial Number

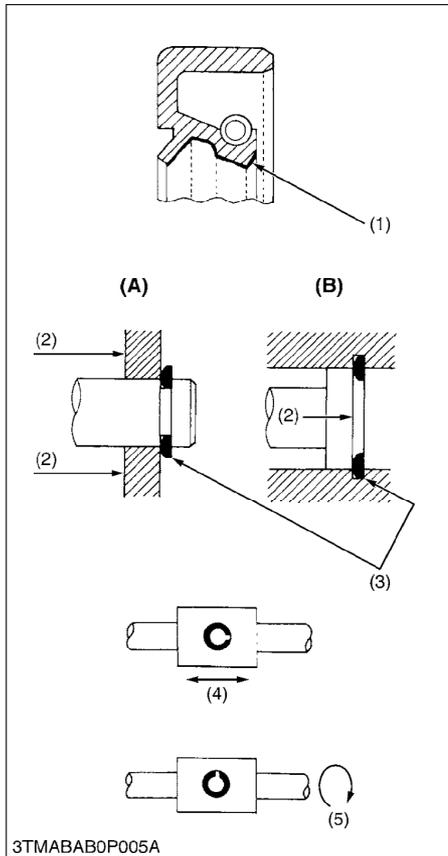
A : LA524AU-B

B : LA714AU-B, LA854AU-B

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2. GENERAL PRECAUTIONS



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- When you disassemble, carefully put the parts in a clean area to make it easy to find the parts. You must install the screws, bolts and nuts in their initial position to prevent the reassembly errors.
- When it is necessary to use special tools, use KUBOTA special tools. Refer to the drawings when you make special tools that you do not use frequently.
- Before you disassemble or repair machine, make sure that you always disconnect the ground cable from the battery first.
- Remove oil and dirt from parts before you measure.
- Use only KUBOTA genuine parts for replacement to keep the machine performance and to make sure of safety.
- You must replace the gaskets and O-rings when you assemble again. Apply grease (1) to new O-rings or oil seals before you assemble.
- When you assemble the external or internal snap rings, make sure that the sharp edge (3) faces against the direction from which force (2) is applied.
- When inserting spring pins, their splits must face the direction from which a force is applied. See the figure left side.
- To prevent damage to the hydraulic system, use only specified fluid or equivalent.
- Clean the parts before you measure them.
- Tighten the nipples to the specified torque. Too much torque can cause damage to the hydraulic units or the nipples. Not sufficient torque can cause oil leakage.
- When you use a new hose or pipe, tighten the nuts to the specified torque. Then loosen (approx. by 45 °) and let them be stable before you tighten to the specified torque (This is not applied to the parts with seal tape).
- When you remove the two ends of a pipe, remove the lower end first.
- Use two pliers in removal and installation. One to hold the stable side, and the other to turn the side you remove to prevent twists.
- Make sure that the sleeves of flared connectors and taper s of hoses are free of dust and scratches.
- After you tighten the nipples, clean the joint and apply the maximum operation pressure 2 to 3 times to examine oil leakage.

- (1) Grease
- (2) Force
- (3) Sharp Edge
- (4) Axial Force
- (5) Rotating Movement

- (A) External Snap Ring
- (B) Internal Snap Ring

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3. LUBRICANTS

Place	Capacity					Lubricants, type of grease
	L3400		L4400		MX5100	
	4WD	HST	4WD	HST	4WD HST	
Transmission case	27.5 L 7.26 U.S.gals 6.05 Imp.gals	23.5 L 6.21 U.S.gals 5.17 Imp.gals	40.0 L 10.6 U.S.gals 8.80 Imp.gals	45.0 L 11.9 U.S.gals 9.90 Imp.gals	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**

■ **NOTE**

- *KUBOTA original transmission hydraulic fluid.
- ** "Extreme pressure" and containing Molybdenum disulfide is recommended. This grease may specify "Moly Ep" on its label.

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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		
	Ordinariness			Aluminum			Ordinariness			Aluminum			Ordinariness		
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	0.80	5.8	7.9	0.80	5.8	9.81	1.00	7.24	7.9	0.80	5.8	12.3	1.25	9.05
	to 9.3	to 0.95	to 6.8	to 8.8	to 0.90	to 6.5	to 11.2	to 1.15	to 8.31	to 8.8	to 0.90	to 6.5	to 14.2	to 1.45	to 10.4
M8 (8 mm, 0.31 in.)	18	1.8	13	17	1.7	13	24	2.4	18	18	1.8	13	30	3.0	22
	to 20	to 2.1	to 15	to 19	to 2.0	to 14	to 27	to 2.8	to 20	to 20	to 2.1	to 15	to 34	to 3.5	to 25
M10 (10 mm, 0.39 in.)	40	4.0	29	32	3.2	24	48	4.9	36	40	4.0	29	61	6.2	45
	to 45	to 4.6	to 33	to 34	to 3.5	to 25	to 55	to 5.7	to 41	to 44	to 4.5	to 32	to 70	to 7.2	to 52
M12 (12 mm, 0.47 in.)	63	6.4	47	-	-	-	78	7.9	58	63	6.4	47	103	10.5	76.0
	to 72	to 7.4	to 53	-	-	-	to 90	to 9.2	to 66	to 72	to 7.4	to 53	to 117	to 12.0	to 86.7
M14 (14 mm, 0.55 in.)	108	11.0	79.6	-	-	-	124	12.6	91.2	-	-	-	167	17.0	123
	to 125	to 12.8	to 92.5	-	-	-	to 147	to 15.0	to 108	-	-	-	to 196	to 20.0	to 144
M16 (16 mm, 0.63 in.)	167	17.0	123	-	-	-	197	20.0	145	-	-	-	260	26.5	192
	to 191	to 19.5	to 141	-	-	-	to 225	to 23.0	to 166	-	-	-	to 304	to 31.0	to 224
M18 (18 mm, 0.71 in.)	246	25.0	181	-	-	-	275	28.0	203	-	-	-	344	35.0	254
	to 284	to 29.0	to 209	-	-	-	to 318	to 32.5	to 235	-	-	-	to 402	to 41.0	to 296
M20 (20 mm, 0.79 in.)	334	34.0	246	-	-	-	368	37.5	272	-	-	-	491	50.0	362
	to 392	to 40.0	to 289	-	-	-	to 431	to 44.0	to 318	-	-	-	to 568	to 58.0	to 419

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[2] STUD BOLTS

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

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[3] METRIC SCREWS, BOLTS AND NUTS

Grade	8.8 Property class 8.8			10.9 Property class 10.9		
	Unit	N-m	kgf-m	lbf-ft	N-m	kgf-m
M8	24 to 27	2.4 to 2.8	18 to 20	30 to 34	3.0 to 3.5	22 to 25
M10	48 to 55	4.9 to 5.7	36 to 41	61 to 70	6.2 to 7.2	45 to 52
M12	78 to 90	7.9 to 9.2	58 to 66	103 to 117	10.5 to 12.0	76.0 to 86.7
M14	124 to 147	12.6 to 15.0	91.2 to 108	167 to 196	17.0 to 20.0	123 to 144
M16	197 to 225	20.0 to 23.0	145 to 166	260 to 304	26.5 to 31.0	192 to 224

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[4] 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
1/4	11.7 to 15.7	1.20 to 1.60	8.63 to 11.5	16.3 to 19.7	1.67 to 2.00	12.0 to 14.6
5/16	23.1 to 27.7	2.36 to 2.82	17.0 to 20.5	33 to 39	3.4 to 3.9	25 to 28
3/8	48 to 56	4.9 to 5.7	36 to 41	61 to 73	6.3 to 7.4	45 to 53
1/2	110 to 130	11.3 to 13.2	81.2 to 95.8	150 to 178	15.3 to 18.1	111 to 131
9/16	150 to 178	15.3 to 18.1	111 to 131	217 to 260	22.2 to 26.5	160 to 191
5/8	204 to 244	20.8 to 24.8	151 to 179	299 to 357	30.5 to 36.4	221 to 263

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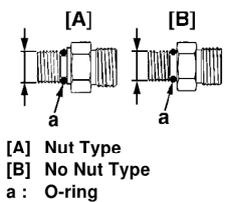
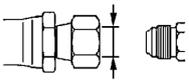
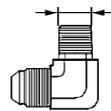
[5] PLUGS

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 19	1.3 to 2.0	9.4 to 14
	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	–	–	–

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[6] HYDRAULIC FITTINGS

(1) 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 4.4	28 to 32
		3/4	48 to 54	4.9 to 5.5	36 to 39
		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 2.5	17 to 18
		3/4	36 to 40	3.7 to 4.0	27 to 29
		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	37 to 42

■ 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.

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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 lever linkage	G-9
Every 50 hours	Check main frame bolt torque	G-9

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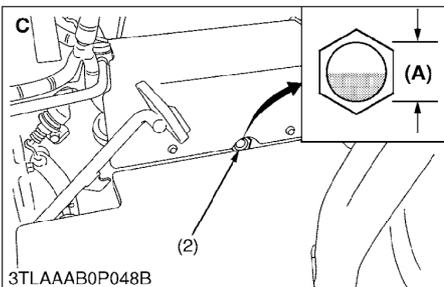
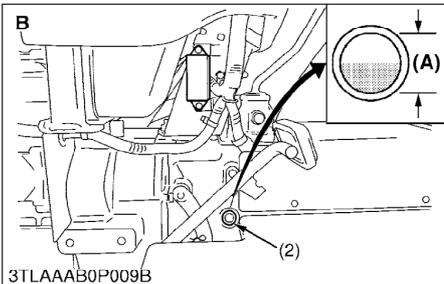
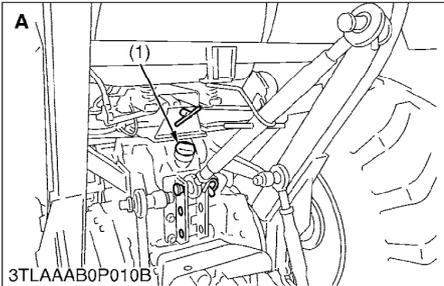
6. CHECK AND MAINTENANCE

⚠ 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.

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[1] CHECK POINTS OF EACH USE OR DAILY

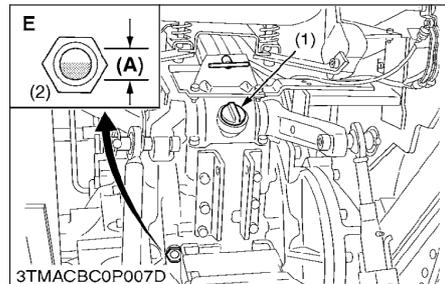
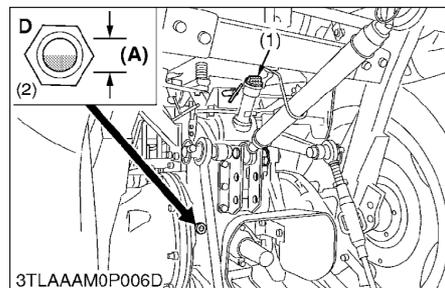


Checking Transmission Fluid Level

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. (See page G-3.)



- (1) Oil Filling Plug
(2) Gauge

(A) Oil level is acceptable within this range.

- A : L3400 (4WD, HST)
 B : L3400 (4WD)
 C : L3400 (HST)
 D : L4400 (4WD, HST)
 E : MX5100 (4WD, HST)

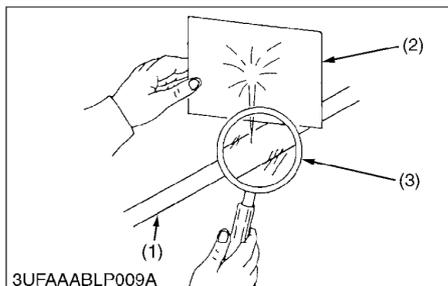
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Checking Hydraulic Hoses

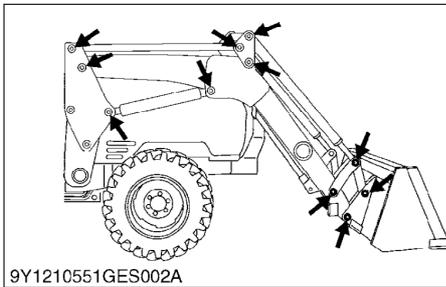
1. With the engine off and bucket on the ground, check all hydraulic hoses (1) for cuts or wear.
2. Check for signs of leaks and make sure all fittings are tight.
3. If defects are found, replace them.

- (1) Hydraulic Hose (3) Magnifying Glass
(2) Cardboard

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[2] CHECK POINTS OF EVERY 10 HOURS



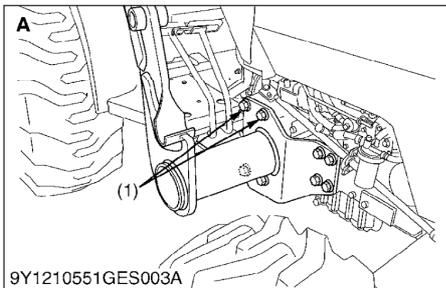
Greasing

1. Inject grease in all grease fitting with a hand grease gun. 9Y1210551GEG0007US0

Lubricating

1. Lubricate joints of control lever linkage. 9Y1210551GEG0008US0

[3] CHECK POINTS OF EVERY 50 HOURS



Checking Main Frame Bolt Torque

1. Check main frame bolt torque.
2. If they are loose, tighten them.

■ IMPORTANT

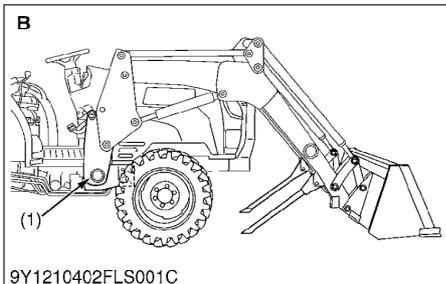
- Never operate front loader with a loose main frame.

Tightening torque	Main frame bolt	226 N·m 23.0 kgf·m 167 lbf·ft
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(1) Main Frame Bolt

A : LA524AU-B
B : LA714AU-B, LA854AU-B

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1 FRONT LOADER

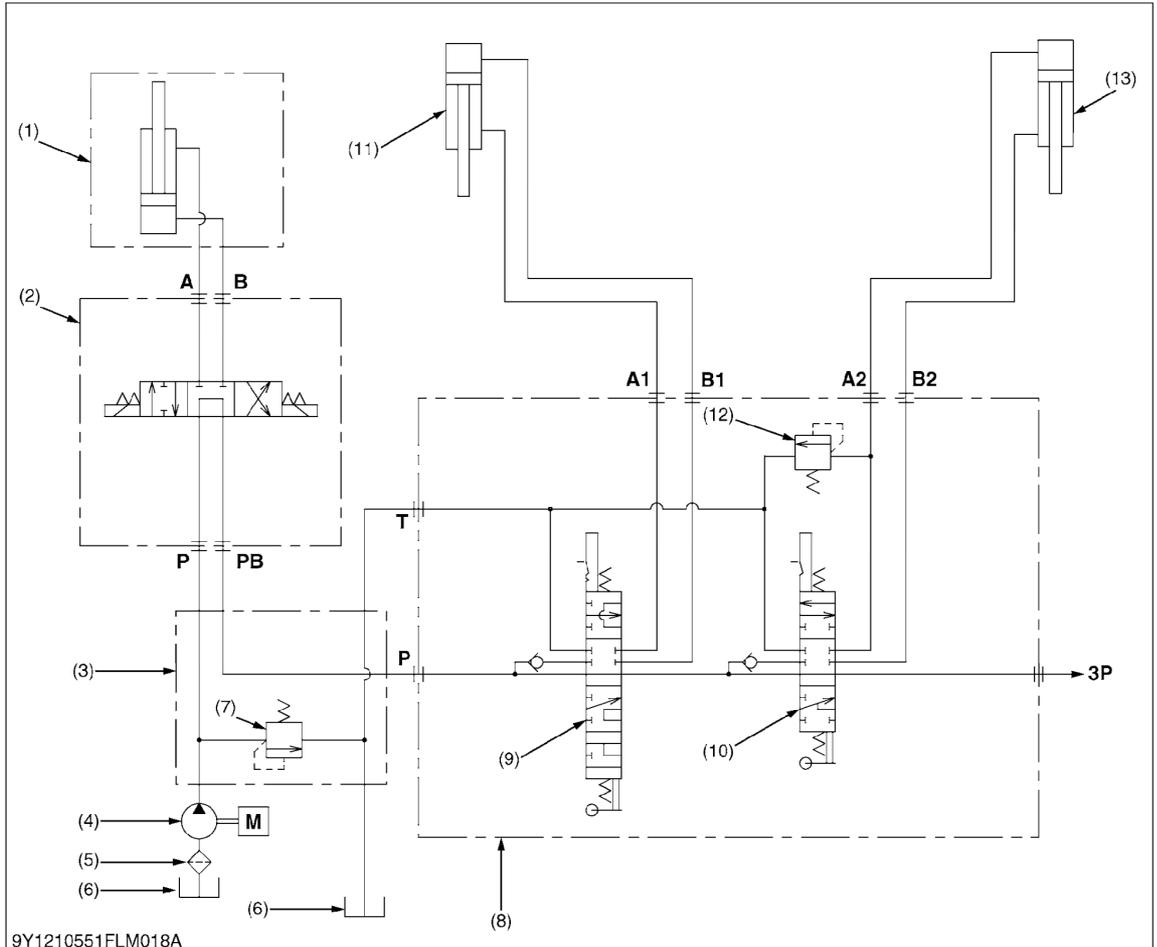
MECHANISM

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1. HYDRAULIC CIRCUIT

LA524AU-B

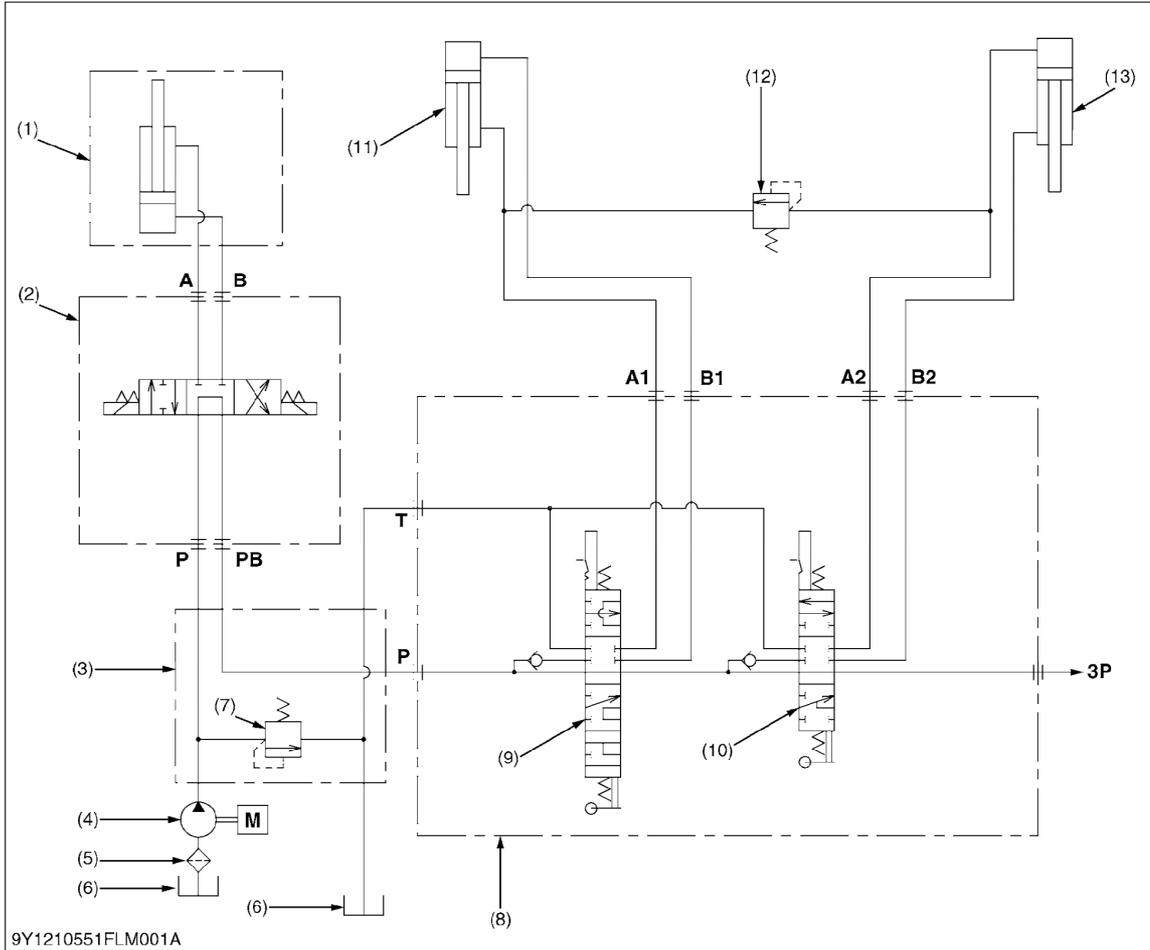


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|--|---------------------------|--|---|
| (1) Hydraulic Cylinder(s) and Hydraulic Hose(s) (Pipes) (Option) | (7) Relief Valve | P : Pump Port | A : Third Function Cylinder A Port |
| (2) Third Function Valve (Option) | (8) Loader Control Valve | PB : Power Beyond Port | B : Third Function Cylinder B Port |
| (3) Hydraulic Block | (9) Boom Control Valve | T : Tank Port | A1 : Boom Cylinder A1 Port |
| (4) Hydraulic Pump | (10) Bucket Control Valve | 3P : Tractor Three Point Hydraulic Cylinder | B1 : Boom Cylinder B1 Port |
| (5) Oil Filter | (11) Boom Cylinder(s) | | A2 : Bucket Cylinder A2 Port |
| (6) Transmission Case | (12) Port Relief Valve | | B2 : Bucket Cylinder B2 Port |
| | (13) Bucket Cylinder(s) | | |

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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- | | | | |
|--|---------------------------|--|---|
| (1) Hydraulic Cylinder(s) and Hydraulic Hose(s) (Pipes) (Option) | (7) Relief Valve | P : Pump Port | A : Third Function Cylinder A Port |
| (2) Third Function Valve (Option) | (8) Loader Control Valve | PB : Power Beyond Port | B : Third Function Cylinder B Port |
| (3) Hydraulic Block | (9) Boom Control Valve | T : Tank Port | A1 : Boom Cylinder A1 Port |
| (4) Hydraulic Pump | (10) Bucket Control Valve | 3P : Tractor Three Point Hydraulic Cylinder | B1 : Boom Cylinder B1 Port |
| (5) Oil Filter | (11) Boom Cylinder(s) | | A2 : Bucket Cylinder A2 Port |
| (6) Transmission Case | (12) Port Relief Valve | | B2 : Bucket Cylinder B2 Port |
| | (13) Bucket Cylinder(s) | | |

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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