WSM

WORKSHOP MANUAL
FRONT LOADER

LA525,LA765

Kubota

KiSC issued 06, 2017 A

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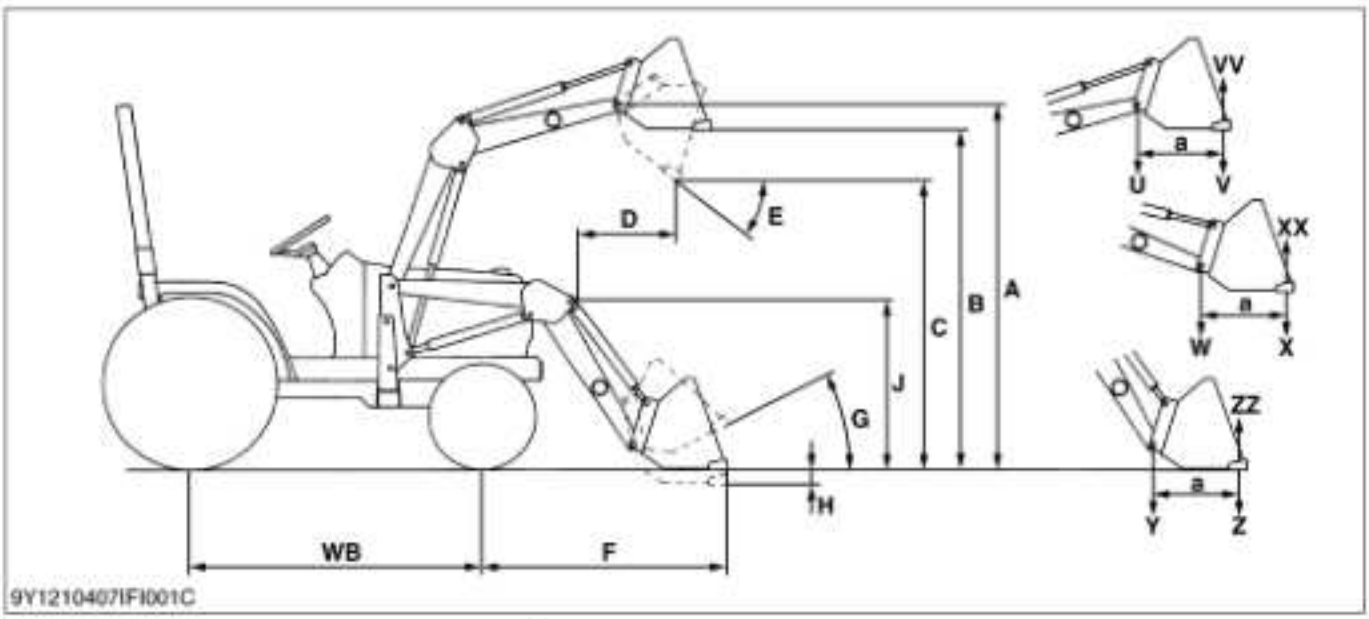
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[4] OPERATIONAL SPECIFICATIONS

(1) Specifications Table

[A] LA525



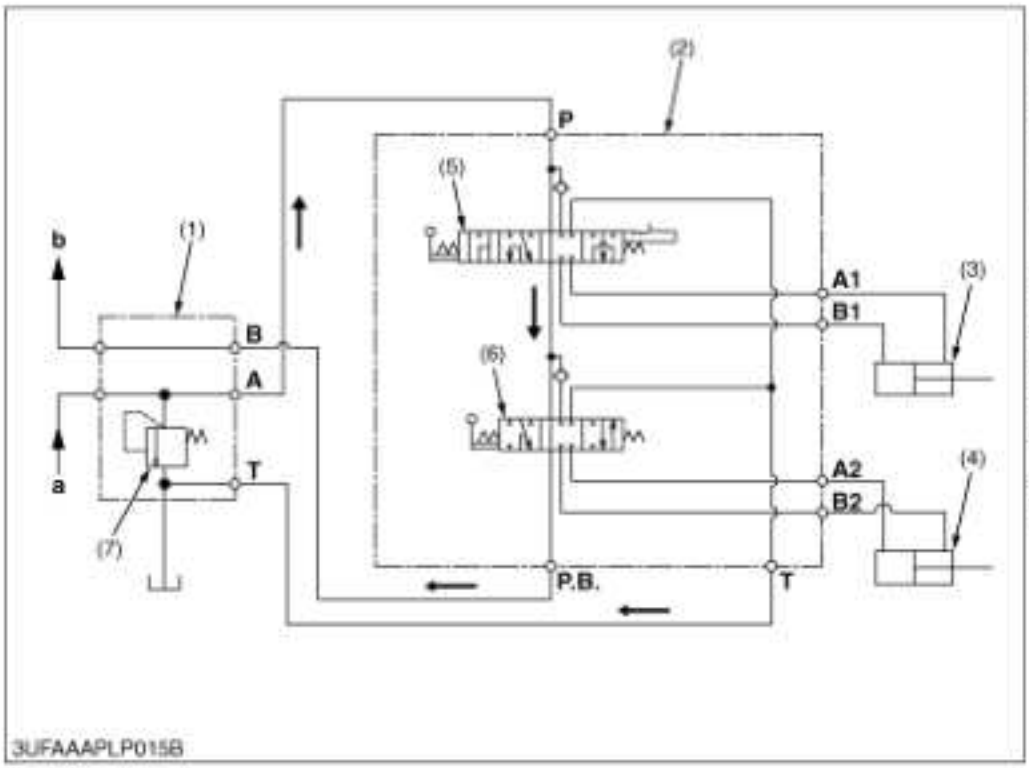
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Loader Model		LA525	
Tractor Model		L2501	L3301, L3901
Bucket Type		Rigid	
U	Lift capacity (Bucket pivot pin, max. height)	491 kg (1082 lbs)	513 kg (1131 lbs)
V	Lift capacity (500 mm forward, max. height)	372 kg (820 lbs)	388 kg (855 lbs)
W	Lift capacity (Bucket pivot pin, 1500 mm height)	649 kg (1431 lbs)	676 kg (1490 lbs)
X	Lift capacity (500 mm forward, 1500 mm height)	515 kg (1135 lbs)	536 kg (1182 lbs)
Y	Breakout force (Bucket pivot pin)	10554 N (2373 lbf)	10951 N (2462 lbf)
Z	Breakout force (500 mm forward)	8033 N (1806 lbf)	8335 N (1874 lbf)
VV	Bucket roll-back force at maximum height	9403 N (2114 lbf)	9685 N (2177 lbf)
XX	Bucket roll-back force at 1500 mm	11646 N (2618 lbf)	11998 N (2697 lbf)
ZZ	Bucket roll-back force at ground level	9545 N (2146 lbf)	9855 N (2215 lbf)
Raising time (Rated flow)		4.1 sec.	3.5 sec.
Lowering time (Rated flow)		2.4 sec.	2.3 sec.
Bucket dumping time (Rated flow)		2.0 sec.	1.7 sec.
Bucket roll-back time (Rated flow)		2.6 sec.	2.2 sec.

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1. HYDRAULIC CIRCUIT



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(1) Hydraulic Block
(2) Control Valve Assembly
(3) Boom Cylinder
(4) Bucket Cylinder
(5) Boom Control Valve
(6) Bucket Control Valve (3 Position Type)
(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

To operate the front loader, the hydraulic oil pressurized by the hydraulic pump flows from **P** port through the boom control valve (5) and the bucket control valve (6) to **P.B.** port.

Specification of Hydraulic Parts

(7)	L2501: 15.2 to 16.2 MPa (155 to 165 kgf/cm^2, 2210 to 2340 psi)
	L3301/L3901: 15.7 to 16.6 MPa (160 to 170 kgf/cm^2, 2280 to 2410 psi)
	L4701: 17.1 to 18.1 MPa (174 to 185 kgf/cm^2, 2480 to 2630 psi)

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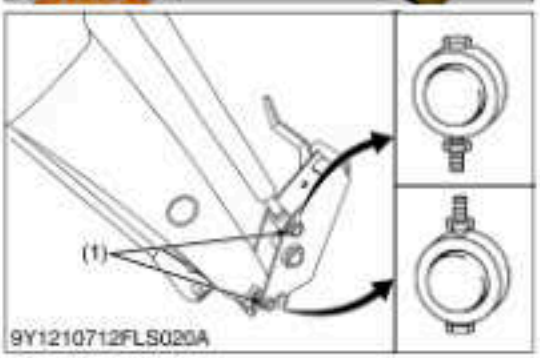
1. TROUBLESHOOTING

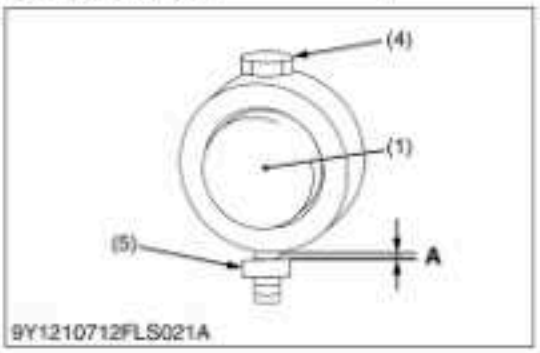
Symptom	Probable Cause and Checking Procedure	Solution	Reference Page
Boom Does Not Rise	1. Transmission fluid is low	Fill the oil to proper level	G-8
	2. Oil is leaking from the hydraulic hose	Solution order 1. Check the connecting parts of the hose	G-9
		2. Check the hose is not worn or damaged	G-9
		3. Replace the hydraulic hose	1-S28, 1-S31
	3. Oil is leaking from the boom cylinder	Solution order 1. Check the piston ring and o-ring are not worn or damaged	1-S25
		2. Check the piston rod is not bent or scratched	1-S32
		3. Replace the piston ring and/or o-ring	1-S25
		4. Replace the piston rod	1-S24
		5. Replace the boom cylinder assembly	1-S23
	4. Control lever linkage is damaged	Solution order 1. Check the length of the control lever linkages	1-S18
		2. Adjust the length of the control lever linkages	1-S18
		3. Replace the control lever linkages	1-S18

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Quick Attach Coupler Frame

1. Remove the pins (1) and remove the quick attach coupler frame (2).

DANGER

- **If you install or sell aftermarket implements to the customer, these implements must meet the ISO 24410 (SAE standard of J2513). Failure to meet this standard could result in injury or death.**

(When reassembling)

CAUTION

To avoid personal injury:

- **Do not operate or mount loader without quick attach installed to loader. Damage may occur to bucket cylinders without these conditions being set.**

1. Attach the quick attach coupler frame to the boom and bucket links as shown.

IMPORTANT

- **Install M6 bolt and nut as shown in the figure to prevent damage to the bolt threads.**
- **When fixing the pin with the bolt and nut, do not tighten the nut completely.**
  The clearance between the boss and the nut should be 2 to 3 mm (0.08 to 0.12 in.).

(Reference)

Length **"a"** of spring	Reference	71 mm 2.8 in.
Length **"b"** of spring	Reference	35 mm 1.4 in.

(1) Pin
(2) Quick Attach Coupler Frame
(3) Quick Attach Coupler Handle
(4) Bolt
(5) Nut
A: 2 to 3 mm (0.08 to 0.12 in.)

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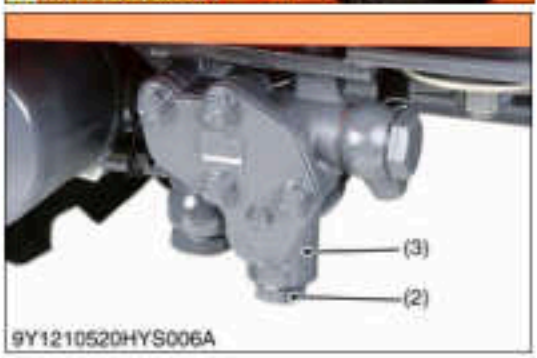
5. CHECKING, DISASSEMBLING AND SERVICING

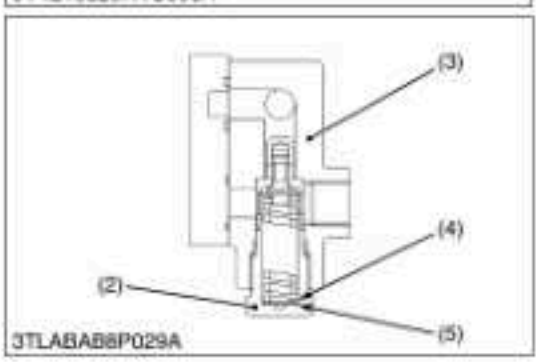
[1] CHECKING AND ADJUSTING

(1) Relief Valve









Relief Valve Setting Pressure

■ **IMPORTANT**

- **When removing the plug from hydraulic cylinder, be sure to lower the three point hitch.**

1. Remove the plug from hydraulic cylinder.
2. Connect the cable and pressure gauge to hydraulic cylinder (thread size : G1/4).
3. Remove the position control lever stopper (1).
4. Start the engine and set at maximum speed.
5. Move the position control lever all way up to operate the relief valve and read the gauge.
6. If the pressure is not within the factory specifications, remove the relief plug (2) of front hydraulic block (3) and adjust with the adjusting shims (4).
7. After the relief valve setting pressure test, reset the position control lever stopper firmly.

Relief Valve Setting Pressure	Factory specification	L2501	15.2 to 16.2 MPa 155 to 165 kgf/cm^2 2210 to 2340 psi
		L3301/ L3901	15.7 to 16.6 MPa 160 to 170 kgf/cm^2 2280 to 2410 psi
		L4701	17.1 to 18.1 MPa 174 to 185 kgf/cm^2 2480 to 2630 psi

Condition

- Engine speed:
  Maximum
- Oil temperature:
  40 to 60 °C (104 to 140 °F)

(Reference)

- Thickness of shims (4):
  0.1 mm (0.004 in.)
  0.2 mm (0.008 in.)
  0.4 mm (0.02 in.)
- Pressure change per 0.1 mm (0.004 in.) shim:
  Approx. 260 kPa (2.7 kgf/cm^2, 38 psi)
- When shims are added, the pressure increases.

Tightening torque	Relief plug	49 to 68 N·m 5.0 to 7.0 kgf·m 37 to 50 lbf·ft

(1) Stopper
(2) Relief Plug
(3) Front Hydraulic Block
(4) Adjusting Shim
(5) Washer

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