WSM

WORKSHOP MANUAL
TRACTOR

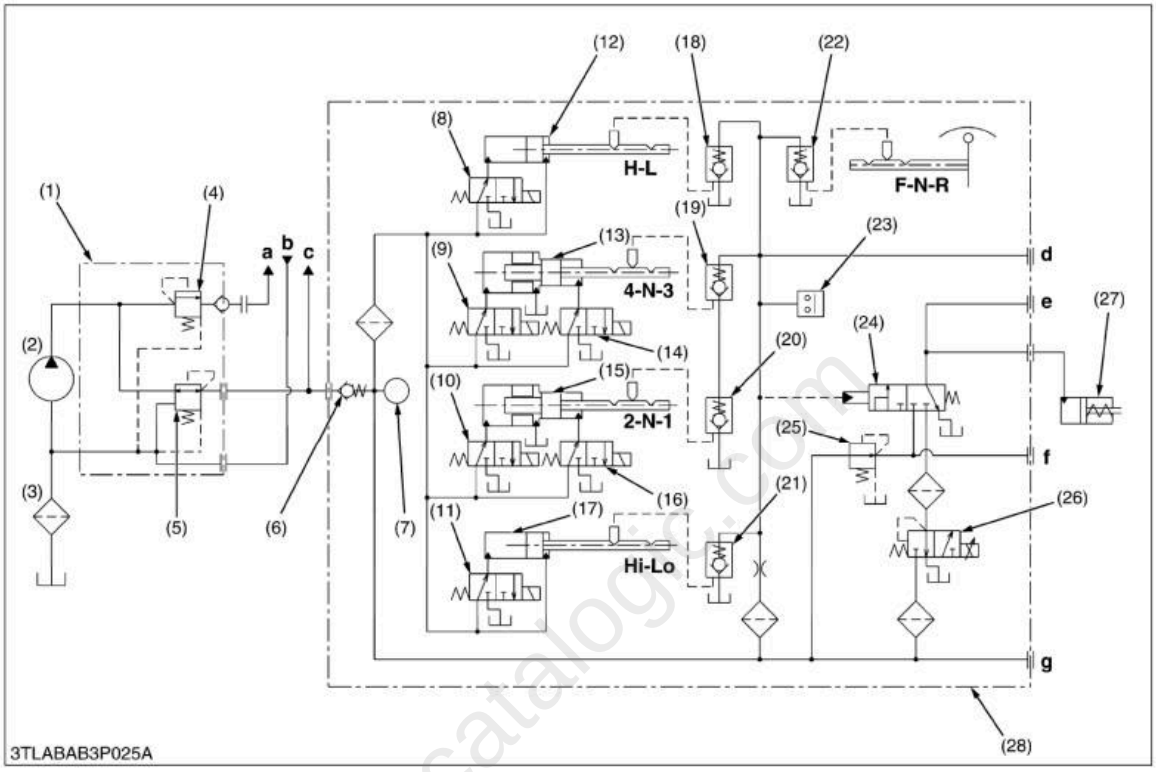
L3130 • L3430 • L3830
L4330 • L4630 • L5030

Kubota

KiSC issued 03, 2006 A

[5] HYDRAULIC CONTROL SYSTEM

(1) Hydraulic Circuit and System Outline



(1) Regulating Valve Assembly
(2) Hydraulic Pump
(3) Hydraulic Oil Filter
(4) Regulating Valve
(5) Pressure Reducing Valve
(6) Check Valve
(7) Oil Temperature Sensor
(8) Solenoid Valve 6 (Main Range Shift)
(9) Solenoid Valve 3
(10) Solenoid Valve 1
(11) Solenoid Valve 5 (Sub-range Shift)
(12) Shift Piston (Main Range Shift)
(13) 3-4 Shift Piston
(14) Solenoid Valve 4
(15) 1-2 Shift Piston
(16) Solenoid Valve 2
(17) Shift Piston (Sub-range Shift)
(18) Shift Check Valve (Main Range Shift)
(19) 3-4 Shift Check Valve
(20) 1-2 Shift Check Valve
(21) Shift Check Valve (Sub-range Shift)
(22) Shift Check Valve, Shuttle
(23) Pressure Switch
(24) Clutch Valve
(25) Low-pass Valve
(26) Proportional Reducing Valve
(27) GST Clutch
(28) GST Valve Assembly

a : To Steering Controller
b : From Steering Controller
c : To PTO Clutch Valve
d : Check port for pilot pressure
e : Check port for clutch pressure
f : Check port for Low-pass pressure
g : Check port for system pressure

Brake Case

1. Remove the creep gear shift lever and its fulcrum screw. (If equipped.)
2. Remove the brake case mounting screws and nuts.
3. Separate the brake case, tapping the brake case lever lightly.

(When reassembling)

- Apply grease to the steel ball seats. (Do not grease excessively.)
- Apply liquid gasket (Three Bond 1208D or equivalent) to joint face of the brake cae and transmission case.
- Be sure to apply liquid gasket to **A** position.
- Be sure to fix the brake cam and cam plate.
- Before installing the brake case to the transmission case, install the cam plate to the transmission case.

Tightening torque	Brake case mounting stud bolt	29.4 to 49.0 N·m 3.0 to 5.0 kgf·m 21.7 to 36.1 ft-lbs
	Brake case mounting screw and nut	77.5 to 90.2 N·m 7.9 to 9.2 kgf·m 57.1 to 66.5 ft-lbs
	Lever fulcrum screw	62.8 to 72.5 N·m 6.4 to 7.4 kgf·m 46.3 to 53.5 t-lbs

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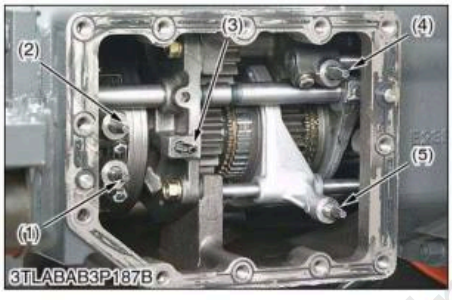

GST Valve Assembly

1. Remove the GST valve assembly with using two jack bolts.
2. Remove the shift pin (4).

NOTE

- **Do not fall down the shuttle check pin while disassembling.**

(When reassembling)

- Place the 1-2 (1) and 3-4 (2) shift pins at **neutral** position, sub-range shift pin (5) at **Hi** position (rearward) and main range shift pin (4) at **L** position (forward), and then assemble the GST valve.
- Be sure to match the each shift pin and shift piston.
- Install the GST valve by hand, and then tighten the screws. Do not use the hummer.
- Apply liquid gasket (Three Bond 1208D or equivalent) to joint face of the GST valve assembly.
- Replace the pipe (3) with new one, if damaged.

Tightening torque	GST valve mounting screw	42.2 to 48.1 N·m 4.3 to 4.9 kgf·m 31.1 to 35.4 ft-lbs
	Shift pin mounting screw	12.7 to 14.7 N·m 1.3 to 1.5 kgf·m 9.4 to 10.8 ft-lbs

(1) 1-2 Shift Pin
(2) 3-4 Shift Pin
(3) Pipe
(4) Main Range Shift Pin
(5) Sub-range Shift Pin

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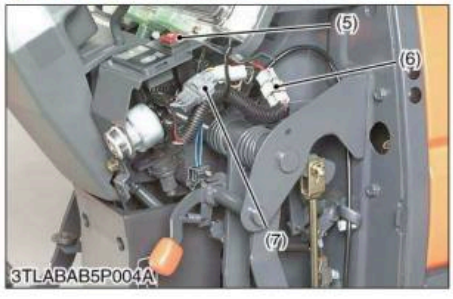

IntelliPanel (Electronic Instrument Panel)

1. Disconnect the panel connectors (3) and combination switch connector (4).
2. Disconnect the hazard connector, main switch connector (6) and mode switch connector (7).
3. Remove the electronic instrument panel (2) with panel frame (1) as a unit.

(1) Panel Frame
(2) Electronic Instrument Panel
(3) Panel Connector
(4) Combination Switch Connector
(5) Hazard Switch
(6) Main Switch Connector
(7) Mode Switch Connector

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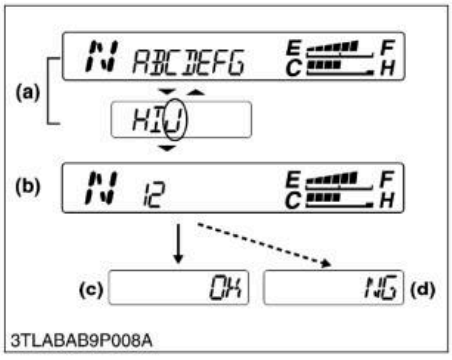

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Speed Unit Selection Mode (Mode "J")
(Input the traveling speed unit to the electronic instrument panel)

1. While holding down the both switches at once, turn on the main switch.
2. Select mode **"J"**.
3. **"12"** is displayed **(b)**, and existing number is flashing.

(Reference)

- **"1"** : Traveling speed unit is **"mph"**
  "2" : Traveling speed unit is **"km/h"**

4. To change the setting, select an appropriate number, and input to the electronic instrument panel. Each time display mode switch is pressed, the flashing number shifts. And then, hold down switch for more than 2 seconds with the number flashing.
5. **"OK"** is displayed **(c)** : The code number has been input correctly.
6. **"NG"** is displayed **(d)** : The code number has not been input correctly. Repeat the procedure.

(a) Mode Selection Display
(b) Input Display
(c) Correct Preserving Display
(d) Incorrect Preserving Display

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(2) Checking Electrical Control System

CAUTION

- **For checking of electric circuit, use the circuit tester and test function of electronic instrument panel (See page 9-S13).**
- **As for the checking of sensors, switches and solenoid, do the following order; check the battery, fuse and grounding line first, check by the test function of electronic instrument panel next, and check the connectors of panel or electronic control unit. If any defect is found there, check individual sensors, switches or solenoids to see whether the defect exists at the sensor, switch and solenoid side or at the wire harness side.**
- **When the normal function is restored as the result of replacement of the part which is suspected to see that the trouble is regenerated.**

IMPORTANT

- **When connecting or disconnecting the connector for the purpose of checking, be sure to turn OFF the main switch before hand. Moreover, pay attention not to allow the terminal to come in contact with other terminal or chassis while checking.**
- **When applying the test pin of the tester to the connector terminals, use care not to damage to the connector terminal.**

(A) Check the Fuse and Connector


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Checking Fuse

1. Check the fuse.
2. If any of the fuses is blown, replace it with the one having same capacity. (Refer to page G-36.)

IMPORTANT

- **If a fuse is blown, check the cause and be sure to replace it with the one having same capacity.**

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Full Version Available

Kubota L5030 Tractor Workshop Manual

This is a short preview. The complete manual contains all chapters, wiring diagrams, torque specifications and full service procedures.