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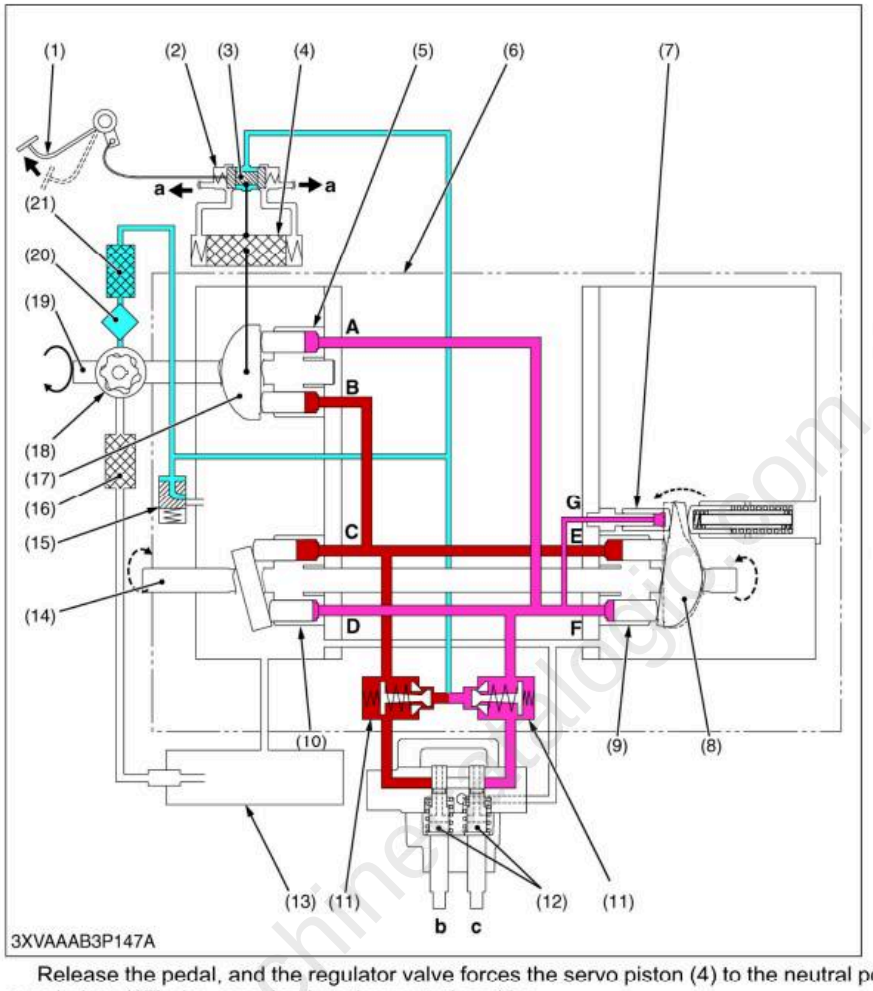
WORKSHOP MANUAL
UTILITY VEHICLE

RTV1100

Kubota

KiSC issued 05, 2014 A

■ Dynamic Brake



(1) Pedal
(2) Regulator Valve Assembly
(3) Regulator Spool
(4) Servo Piston
(5) Cylinder Block
(6) HST Housing
(7) Control Piston
(8) Variable Swashplate (Assist Motor)
(9) Cylinder Block (Assist Motor)
(10) Cylinder Block (Stationary Motor)
(11) Check and High Pressure Relief Valve
(12) Bypass Valve
(13) Transmission Case
(14) Output Shaft
(15) Charge Relief Valve
(16) Oil Filter Cartridge (Suction)
(17) Variable Swashplate (HST Pump)
(18) Charge Pump
(19) Input Shaft
(20) Oil Cooler
(21) Oil Filter Cartridge

a: To HST Housing
b: Connects with Cable for VHT Pressure Release Knob
c: Connects with Brake Cam Lever

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Release the pedal, and the regulator valve forces the servo piston (4) to the neutral position. The pump's variable swashplate (17) also goes back to the neutral position.

Still the machine tends to keep running by inertia force, but no oil is pressure-fed because the pump's variable swashplate is in the neutral position. (There is no oil flow from the HST pump (5).)

The output shaft (14), however, is rotated in the same direction as before releasing the pedal.

Now the stationary motor (10) works like a pump to suck the oil from port **D** and pressure-feed it from port **C**.

The oil coming from port **C** pushing open the high pressure relief valve and flows through the check valve back to port **D**.

The dynamic brake force is determined by the force that is exerted to push open the backward travel high-pressure relief valve.

When the dynamic brake is applied, the pressure at port **D** drops below the charge pressure level. If the oil from port **C** is not enough to make up for the shortage, the charge oil too is supplied together.

5. BRAKE OIL

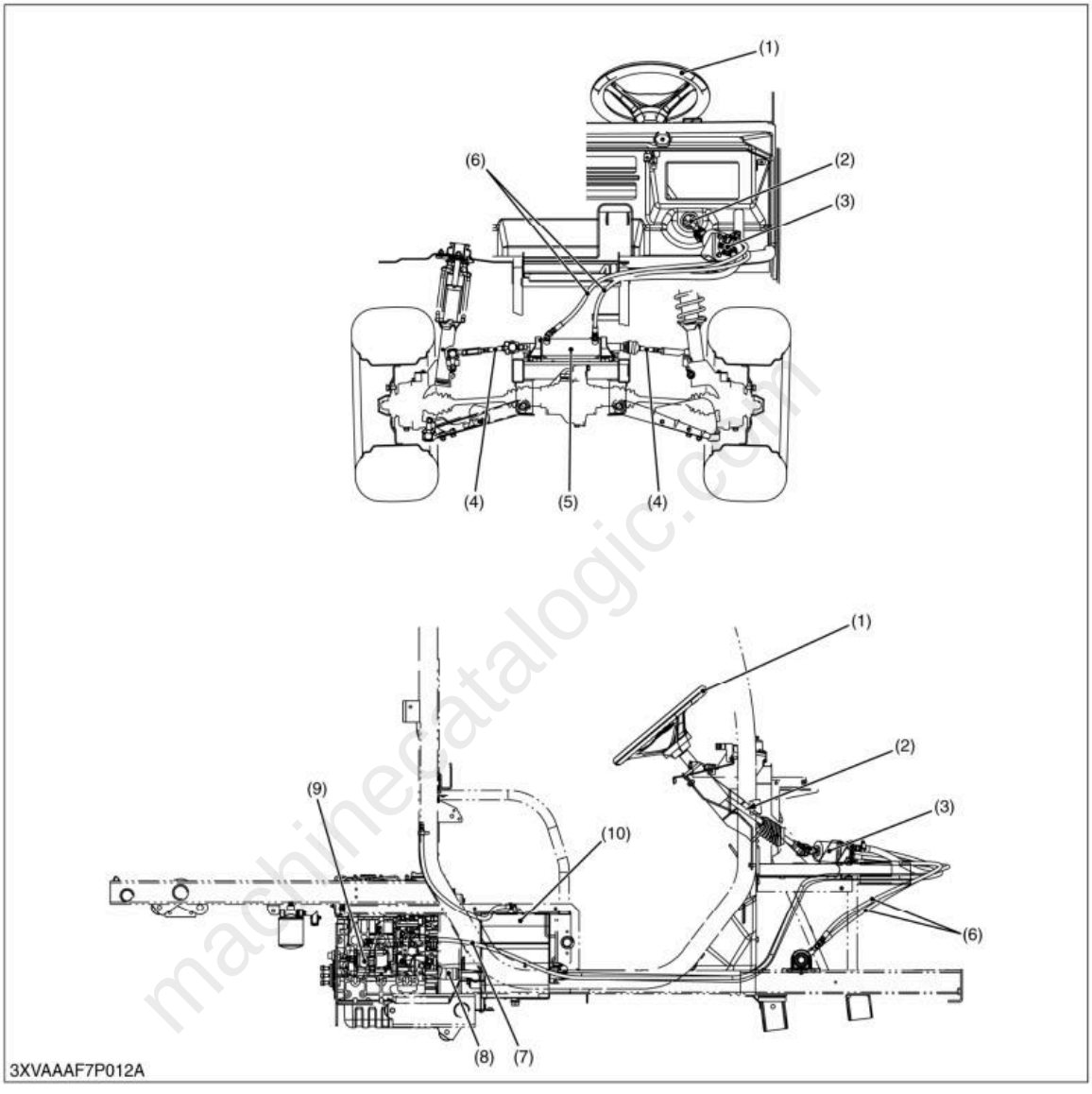
Non-mineral oil is used for the brake oil.

The brake oil for the machine is a brand of vegetable oil, that is basically the same as the DOT3 (FMVSS No. 116 Brake Fluid Standard) used on automotives and motorcycles.

keep in mind that the UDT oil used for Kubota tractors so far cannot be applied as the brake oil.

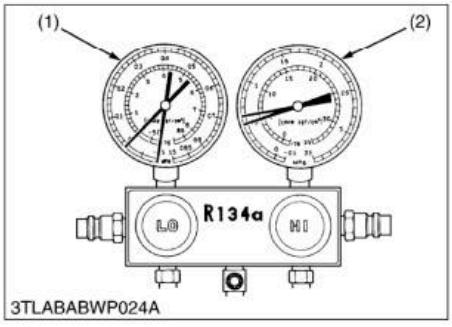
If a coated surface gets stained with the brake oil, the paint becomes degraded. Immediately wipe off the oil just in case. Also immediately wipe the oil off the power steering hose if any.

1. STRUCTURE



(1) Steering Wheel
(2) Steering Joint
(3) Steering Controller
(4) Tie-rod
(5) Steering Cylinder
(6) Cylinder Hose
(7) Delivery Hose
(8) Suction Hose
(9) Hydraulic Pump
(10) Hydraulic Oil Tank

The full hydrostatic type power steering is used on RTV1100. This steering system is composed of steering wheel, steering controller, steering cylinder and other components shown in the figure.



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Refrigerant Fails to Circulate

1. Symptoms seen in refrigerating cycle
   - **LO** pressure side (1) pressure is vacuum and, **HI** pressure side (2) is low pressure.
     LO pressure side (1): Vacuum
     HI pressure side (2): 0.49 to 0.58 MPa
     (5.0 to 6.0 kgf/cm^2, 72 to 85 psi)
2. Probable cause
   - Refrigerant flow obstructed by moisture or dirt in the refrigerating cycle freezing or sticking on the expansion valve orifice.
3. Solution
   Allow to stand for same time and then resume operation to decide whether the plugging is due to moisture or dirt.
   - If caused by moisture, correct by referring to instructions in previous.
   - If caused by dirt, remove the expansion valve and blow out the dirt with compressed air.
   - If unable to remove the dirt, replace the expansion valve. Replace the receiver. Evacuate and charge in proper amount of new refrigerant. (Refer to "**(3) Charging the Refrigerant**" in this section.)
   - If caused by gas leakage in heat sensitizing tube, replace the expansion valve.

(1) **LO** Pressure Side (2) **HI** Pressure Side

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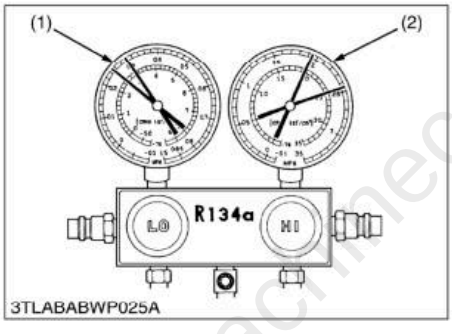

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Expansion Valve Opens Too Far or Improper Installation of Heat Sensitizing Tube

1. Symptoms seen in refrigerating cycle
   - Both **LO** and **HI** pressure side (1), (2) pressures too high.
     LO pressure side (1): 0.30 to 0.39 MPa
     (3.0 to 4.0 kgf/cm^2, 43 to 56 psi)
     HI pressure side (2): 2.0 to 2.4 MPa
     (20 to 25 kgf/cm^2, 290 to 350 psi)
   - Frost or heavy dew on low pressure side piping.
2. Probable cause
   - Expansion valve trouble or heat sensitizing tube improperly installed.
   - Flow adjustment not properly done.
3. Solution
   - Check installed condition of heat sensitizing tube.
   - If installation of heat sensitizing tube is correct, replace the expansion valve.

(1) **LO** Pressure Side (2) **HI** Pressure Side

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Full Version Available

Kubota RTV1100 Utility Vehicle Workshop Manual

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