WSM

WORKSHOP MANUAL
UTILITY VEHICLE

RTV500

Kubota

KiSC issued 08, 2021 A

Symptom	Probable Cause	Solution	Reference Page
Insufficient Output	Damaged spark plug	Repair or replace	6-S11
	Improper valve clearance	Adjust	1-S11
	Improper intake or exhaust valve sealing	Repair or replace	1-S23
	Worn piston, piston ring or cylinder	Replace	1-S27
Abnormal Combustion Occur	Improper valve clearance	Adjust	1-S11
	Improper spark plug (Wrong plug type, knocking)	Replace	6-S11
Engine Overheated	Insufficient coolant	Replace	G-10
	Timing belt broken or elongated	Adjust or replace	1-S13
	Radiator net and radiator fin clogged with dust	Clean	G-39
	Radiator cap damaged	Replace	1-S14
	Thermostat damaged	Replace	1-S14
	Head gasket damaged	Replace	1-S23
	Overload running	Check the load	–
Either White or Blue Exhaust Gas is Observed	Excessive engine oil	Reduce to specified level	G-10
	Piston ring and liner worn or stuck	Replace	1-S27
	Valve stem seal damaged	Replace	–
Excessive Lubricant Oil Consumption	Oil leaking from oil seal, gasket, etc.	Replace	–
	Valve stem seal damaged	Replace	–
	Piston ring gap facing the same direction	Shift ring gap	1-S26
	Cylinder and piston ring worn	Replace	1-S27
Water Mixed into Lubricant Oil	Head gasket damaged	Replace	1-S23
	Packing between the gear case and the crankcase is damaged	Replace	1-S24
	Bowl-shaped plug of the cylinder head and crankcase is damaged	Replace	–
	Cylinder head cracked	Replace	1-S22
Low Oil Pressure	Engine oil insufficient	Replenish	G-10
	Excessive oil clearance of each metal	Replace the metal / shaft	1-S37, 1-S38
	Relief valve damaged	Repair or replace	1-S24
	Oil pump damaged	Repair or replace	1-S24, 1-S39
Fuel Tank Damage	Fuel hose blocked	Check or replace	G-35
	Check valve damaged	Replace	–
	Carbon canister damaged	Replace	–

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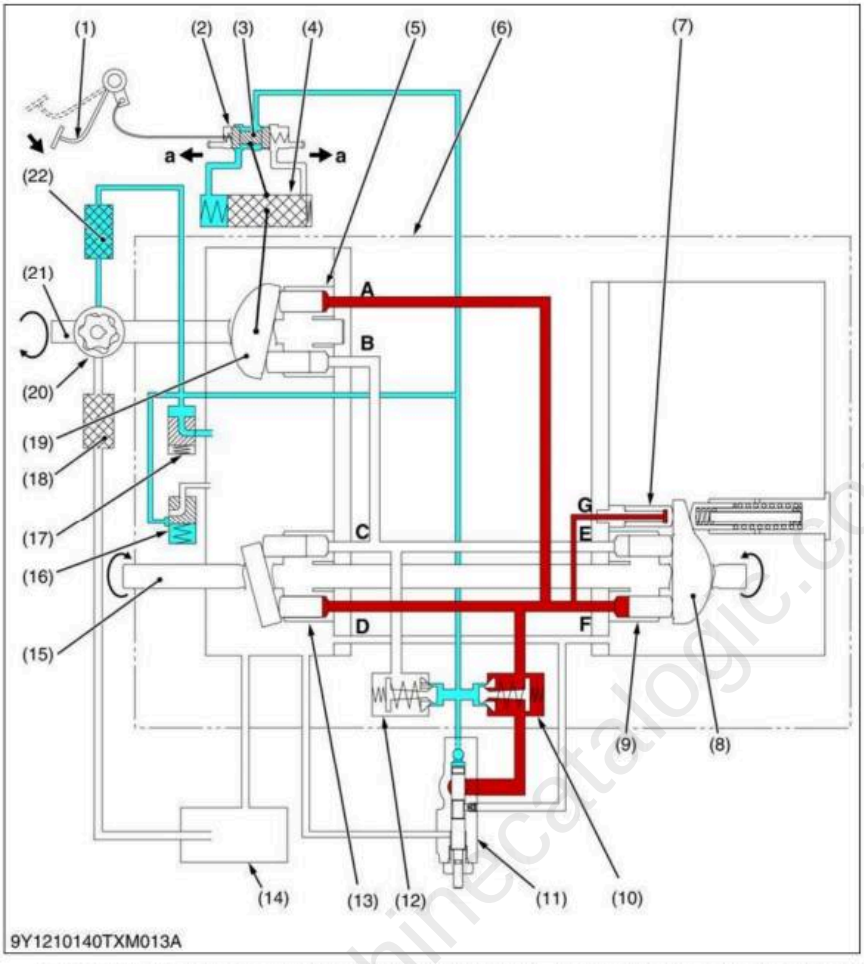
Pedal Depressed Fully and Under Light Load



(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) Check and High Pressure Relief Valve (Forward)
(11) Bypass Valve
(12) Check and High Pressure Relief Valve
(13) Cylinder Block (Stationary Motor)
(14) Transmission Case
(15) Output Shaft
(16) Anti-cavitation Valve
(17) Charge Relief Valve
(18) Oil Filter Cartridge (Suction)
(19) Variable Swashplate (HST Pump)
(20) Charge Pump
(21) Input Shaft
(22) Oil Filter Cartridge

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

Let's suppose that the pedal (1) is fully depressed. The control lever is activated by the pedal (1) to switch the regulator valve (2) hydraulic circuit. The servo piston (4) is then actuated to tilt the pump variable swashplate (8) to maximum.

The pump cylinder block (5) is driven by the input shaft (21) to put the oil under high pressure and to feed it at the highest rate out of the pump port **A**. The pressure-fed oil flows into the motor port **D** along the circuit. The pressure of the oil from the HST pump (19) is not high enough to get the assist motor (8) started. In this way, the output shaft (15) achieves the maximum rpm with the assist motor (8) off, as shown in the figure above.

Then the motor oil drops to a low pressure and returns through the motor port **C** to the pump port **B**.

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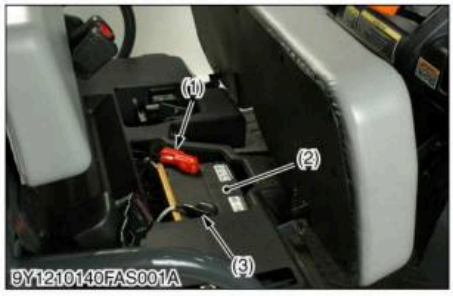

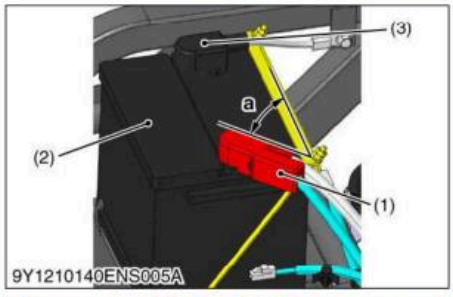

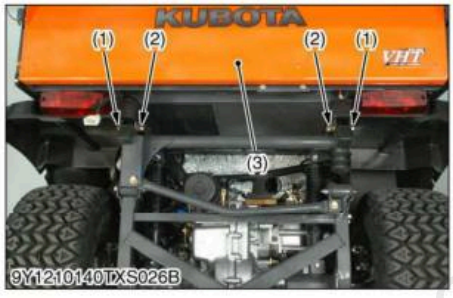

Battery Cable

CAUTION

- **When disconnecting the battery cables, disconnect the negative cable from the battery first. When connecting, connect the positive cable to the battery first.**

1. Disconnect the negative cable (3) from the battery.
2. Disconnect the positive cable (1) from the battery.

(When reassembling)

- Connect the positive terminal avoiding the battery holder. As shown in figure.

(1) Positive Cable **a: 45°**
(2) Battery
(3) Negative Cable

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Cargo Bed

1. Disconnect the connector from main harness, then separate the harness for the tail lamps.
2. Loosen the lock nut (2) and remove the hinge bolt (1) and nut.
3. Remove the cargo bed (3).

(1) Hinge Bolt (3) Cargo Bed
(2) Lock Nut

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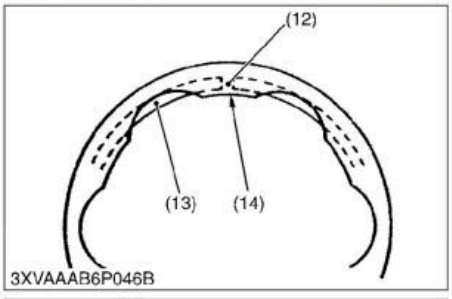

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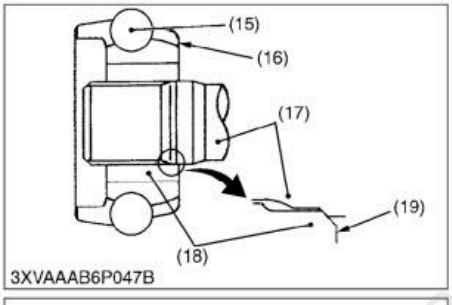

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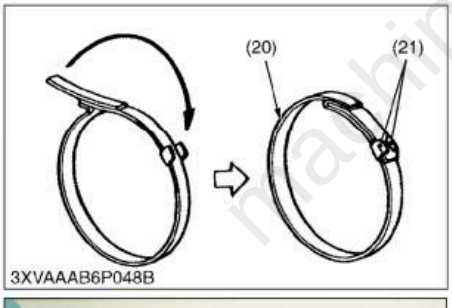

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(When reassembling)

- Check the each joints, if any joint does not work smoothly without rattling or sticking, the joint bearing is damaged. Replace the drive shaft with new one.
- Visually check the splines on the each shafts, if they are badly worn or chipped, replace the drive shaft with new one.
- Replace the internal cir-clip, boot and boot band with new ones.
- Be sure to use the special grease is the boot kit.
- When install the internal cir-clip (13) so that the opening (12) is aligned with one of the projections (14) as shown in the figure left.
- Install the steel ball retainer (16) as shown in the figure left.
- Install the steel ball base (18), face the chamfered side (19) of the steel ball base (18) to the boot as shown in the figure left.
- Clamp the boot bands and bend the tangs (21) securely to hold down the end of the band (20).

(12) Opening
(13) Internal Cir-clip
(14) Projection Part
(15) Steel Ball
(16) Steel Ball Retainer
(17) Drive Shaft
(18) Steel Ball Base
(19) Chamfered Side
(20) Boot Band
(21) Tang

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