WSM

WORKSHOP MANUAL

UTILITY VEHICLE

RTV-X1100C

Kubota

KiSC issued 10, 2021 A

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MECHANISM

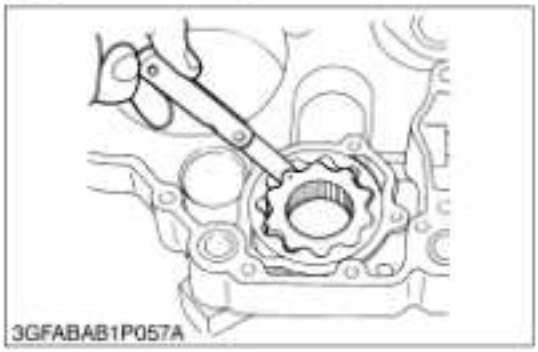
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[6] Oil Pump

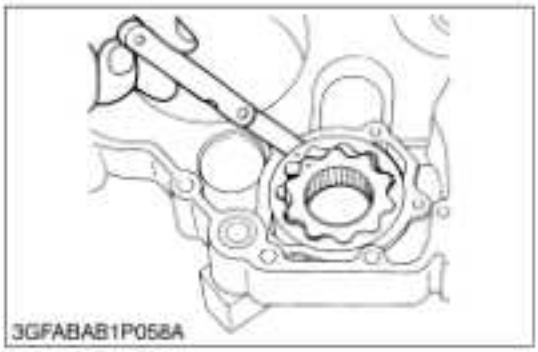

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Rotor Lobe Clearance

1. Measure the clearance between lobes of the inner rotor and the outer rotor with a feeler gauge.
2. If the clearance exceeds the factory specifications, replace the oil pump rotor assembly.

Rotor lobe clearance	Factory specification	0.060 to 0.18 mm 0.0024 to 0.0071 in.

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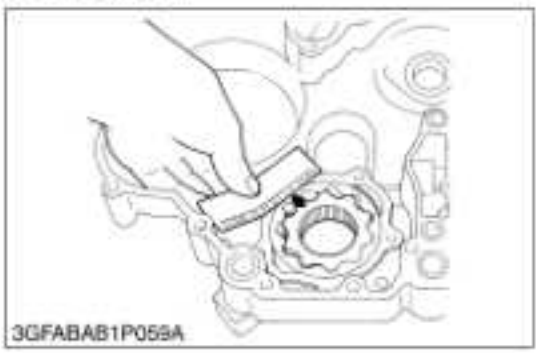

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Clearance between Outer Rotor and Pump Body

1. Measure the clearance between the outer rotor and the pump body with a feeler gauge.
2. If the clearance exceeds the factory specifications, replace the oil pump rotor assembly.

Clearance between outer rotor and pump body	Factory specification	0.100 to 0.180 mm 0.00394 to 0.00708 in.

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Clearance between Rotor and Cover

1. Put a strip of plastigage onto the rotor face with grease.
2. Install the cover and tighten the screws.
3. Remove the cover carefully, and measure the amount of the flattening with the scale and get the clearance.
4. If the clearance exceeds the factory specifications, replace the oil pump rotor assembly.

Clearance between rotor and cover	Factory specification	0.025 to 0.075 mm 0.00099 to 0.0029 in.

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Wiring Harness LH

1. Disconnect the starter connectors (3).
2. Disconnect the engine oil pressure switch connector (2).
3. Disconnect the ground cables (4).
4. Disconnect the alternator connectors (1).
5. Disconnect the thermometer switch connector (5).
6. Disconnect the speed sensor connector (6).
7. Disconnect the safety switch connector (7).

(1) Alternator Connector
(2) Engine Oil Pressure Switch Connector
(3) Starter Connector
(4) Ground Cable
(5) Thermometer Switch Connector
(6) Speed Sensor Connector
(7) Safety Switch Connector

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Wiring Harness RH and Speed Control Panel Cable

1. Disconnect the glow connector (1).
2. Disconnect the thermo sensor connector (2).
3. Disconnect the engine stop solenoid connector (4).
4. Disconnect the speed control pedal cable (3).

(When reassembling)

- Adjust the length of speed control pedal cable. (See page 2-S12.)

(1) Glow Connector
(2) Thermo Sensor Connector
(3) Speed Control Pedal Cable
(4) Engine Stop Solenoid Connector

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1. TROUBLESHOOTING

Symptom	Probable Cause	Solution	Reference Page
All Electrical Equipments Does Not Operate	Battery discharged or damaged	Recharge or replace	G-35, 8-S8
	Battery positive cable disconnected or improperly connected	Repair or replace	8-S7
	Battery negative cable disconnected or improperly connected	Repair or replace	8-S7
	Slow blow fuse blown	Replace	G-60
Fuse Blown Frequently	Short-circuited	Repair or replace	G-58

BATTERY

Symptom	Probable Cause	Solution	Reference Page
Battery Discharges Too Quickly	Battery damaged	Replace	8-S8
	IC Regulator damaged	Replace	8-S28
	Wiring harness disconnected or improperly connected	Repair or replace	–
	Alternator fan belt slipping	Adjust tension	G-37

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Fuse Box and Oil Cooler

1. Remove the fuse box mounting screws.
2. Remove the oil cooler stay mounting screws.
3. Move to the front side of the fuse box (1).
4. Disconnect the oil cooler hoses.
5. Remove the front oil cooler shield (2).
6. Remove the oil cooler (3).

(1) Fuse Box
(2) Front Oil Cooler Shield
(3) Oil Cooler

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Heater Hoses

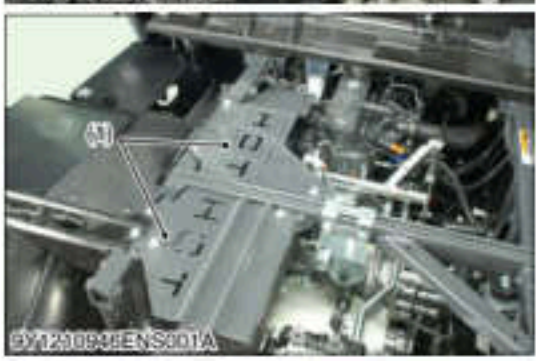
■ **NOTE**

- **Before disconnecting the heater hoses, be sure to note their position.**

1. Disconnect the heater hoses (1).

(1) Heater Hose

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Muffler Cover

1. Remove the muffler cover (1).

(1) Muffler Cover

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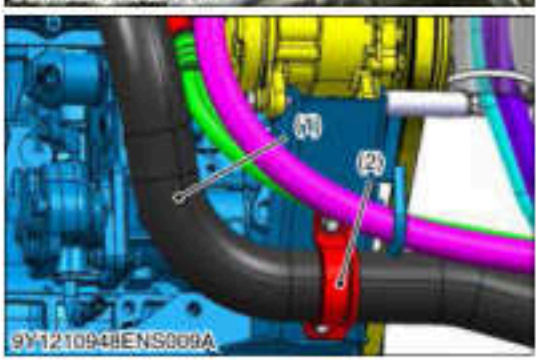


Intake Air Hose

1. Disconnect the intake air hose (1).
2. Disconnect the intake hose clamp (2) from the frame.

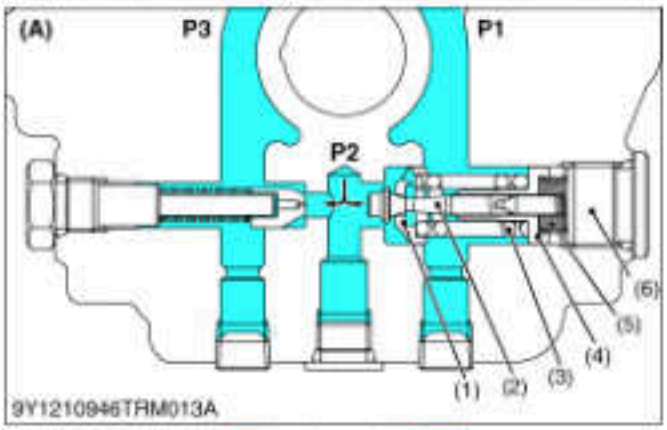
(1) Intake Air Hose
(2) Clamp

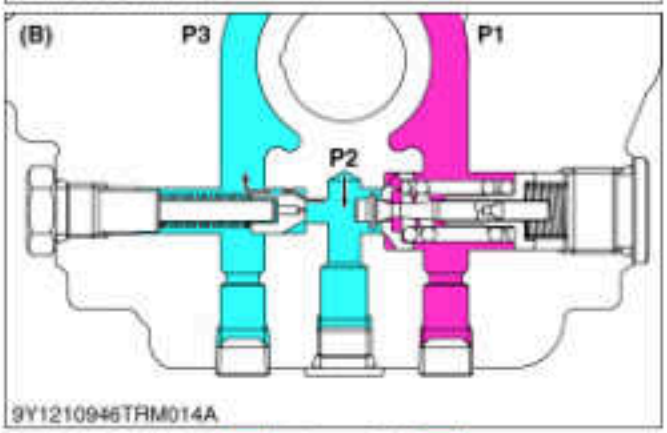
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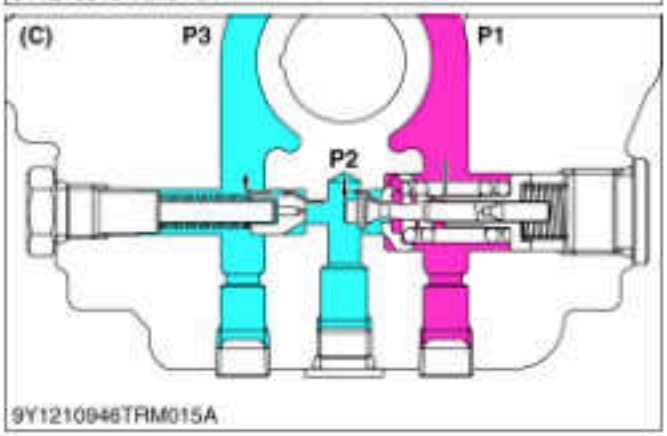


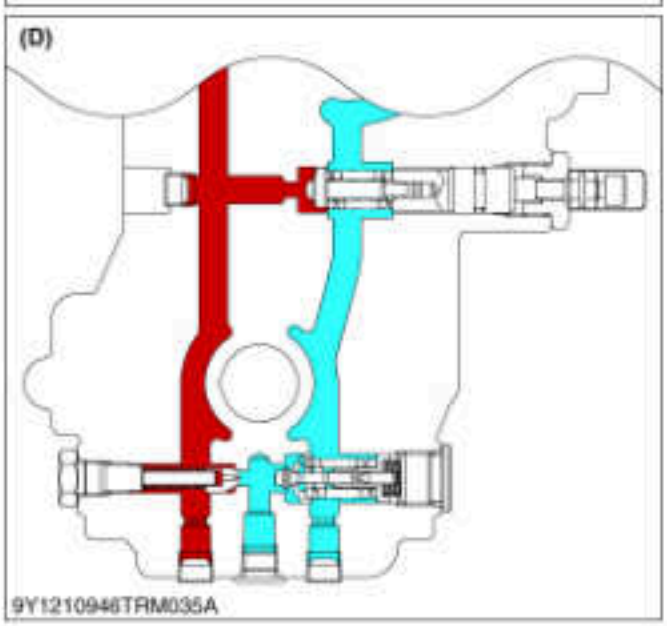
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[D] Check and High Pressure Relief Valve









The cartridge-type check and high-pressure relief valve consists of pressure poppet (2), check valve seat (1), relief valve spring (3), spring guide (4) and check valve spring (5). The spring guide (4) is provided with an anti-rotation, which keeps the threads tight after a pressure has been set.

The valve is used to prevent an overload that would happen at a quick start, sudden stop or even during usual operation. This valve doubles as a check valve.

The check and high-pressure relief valves are laid out facing each other as shown in the figure.

When the pressure of both main oil circuit are below the pressure of **P2**, both valves are open and charging oil enters into the main oil circuit through the valves.

At normal operation, the check valve in the high-pressure side is closed and it pushes and opens the another one. An excessive charge flow goes through the charge relief valve into HST housing.

The check and high-pressure relief valve along the high-pressure line serves as a high-pressure relief valve. If the pressure exceeds a high-pressure limit level, the spring (3) force and opens the valve seat that is located between the check valve seat (1) and the pressure poppet (2). Now the flow goes from **P1** to **P2** and **P3**.

If the **P1** pressure drops, the relief valve spring forces the valve seat closed against the pressure. The high-pressure oil at **P1** does not flow to **P2** any longer.

As discussed above, the check and high-pressure relief valve protects engines, pumps, motors, gears and even the machine itself from overload.

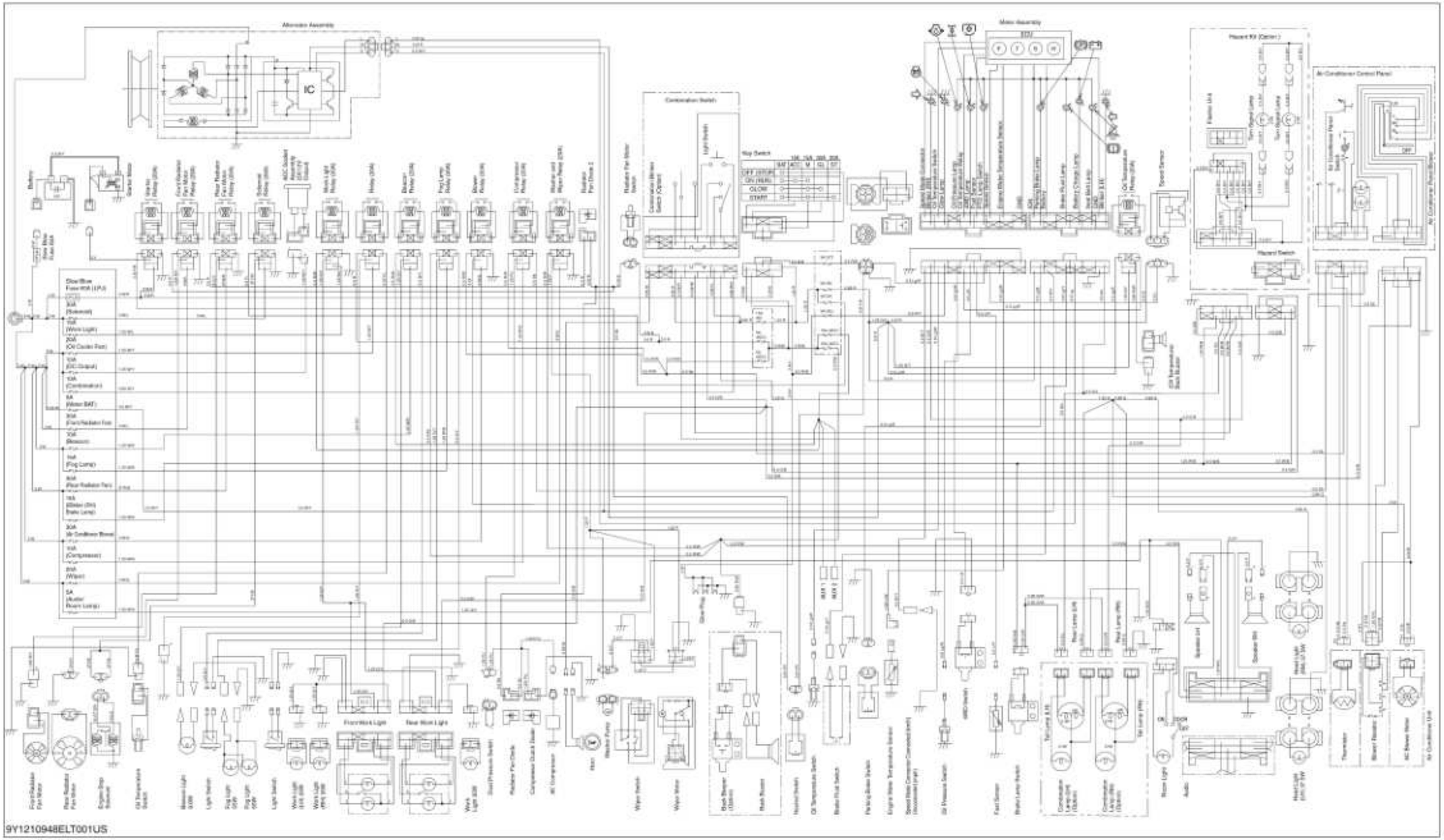
(1) Check Valve Seat
(2) Pressure Poppet
(3) Relief Valve Spring
(4) Spring Guide
(5) Check Valve Spring
(6) Valve Plug

(A) When both Check Valve Activating.
(B) When Check Valve Activating.
(C) When High Pressure Relief Valve Activating. (Travelling Side)
(D) When High Pressure Relief Valve Activating. (Dynamic Brake side)

(To be continued)

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1. WIRING DIAGRAM



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