WSM

WORKSHOP MANUAL
TRACTOR

L2350
L2650(GST) L2950(GST)
L3450(GST) L3650(GST)

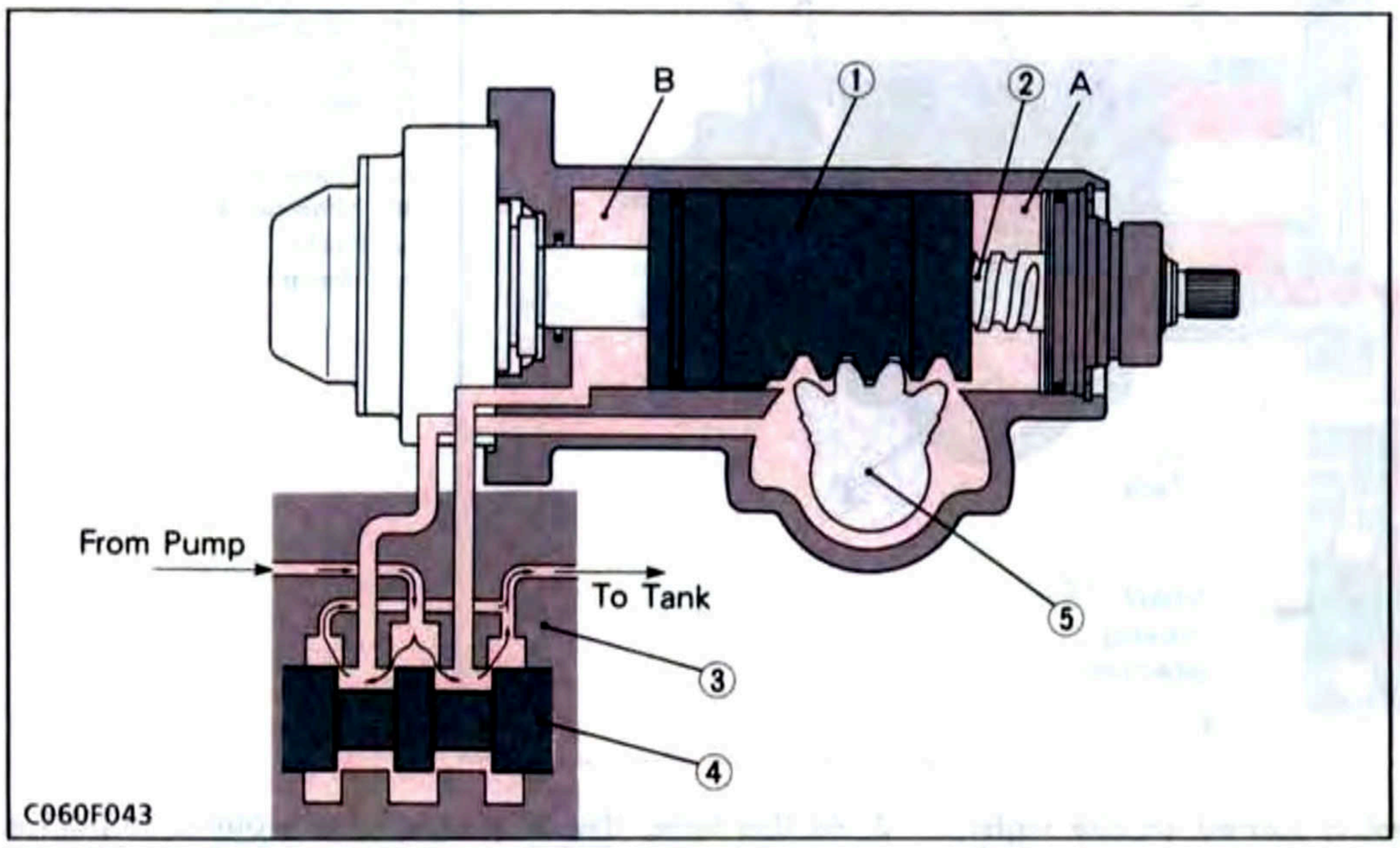
Kubota

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(2)-2 Oil Flow

■ Neutral Position

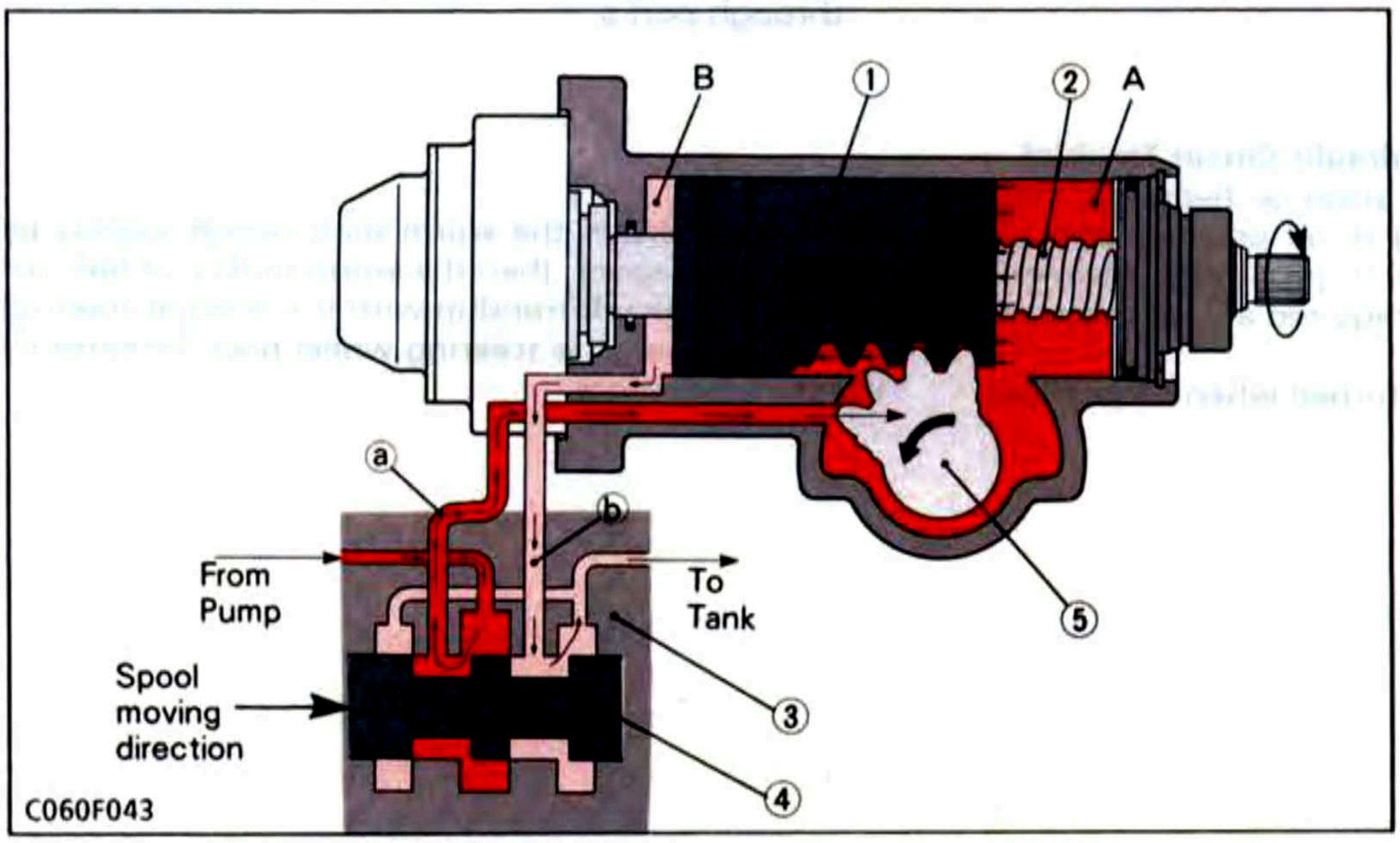


(1) Ball Nut
(2) Worm Shaft
(3) Valve Housing
(4) Spool
(5) Sector Shaft

When the steering wheel is not turned, the valve is placed in the neutral position by the centering spring, and the pressure-fed oil from pump returns to the tank.

Therefore, there is no difference between pressures on the right and left cylinder chambers.

■ Left Turning



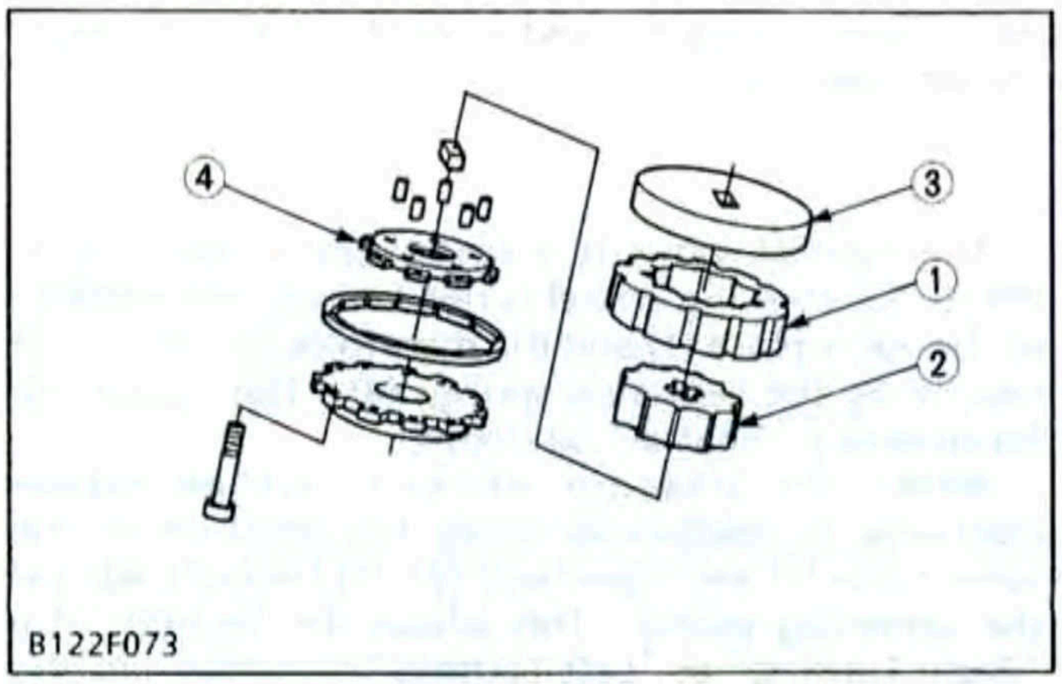
(1) Ball Nut
(2) Worm Shaft
(3) Valve Housing
(4) Spool
(5) Sector Shaft

A: Chamber **A**
B: Chamber **B**
a: Port **a**
b: Port **b**

1. When the steering wheel is turned to the left, the worm shaft (2) attempts to turn to the right. However, front wheel load stops sector shaft (5) and ball nut (piston) (1) from moving, and only worm shaft (2) turns to the right.
   Therefore, the spool (4) is moved to the direction of the arrow, deflecting the centering spring.
2. At this time, the oil passage from pump to port **b** and oil passage from port **a** to oil tank are closed. Therefore, the pressure-fed oil from pump flows to the chamber **A** through port **a**. Thus, the ball nut (piston) (1) is pushed to the left, and the sector shaft (5) is rotated in the direction of the arrow. Oil in chamber **B** returns to the tank through port **b**.

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(2)-2 Metering Device (Gerotor)

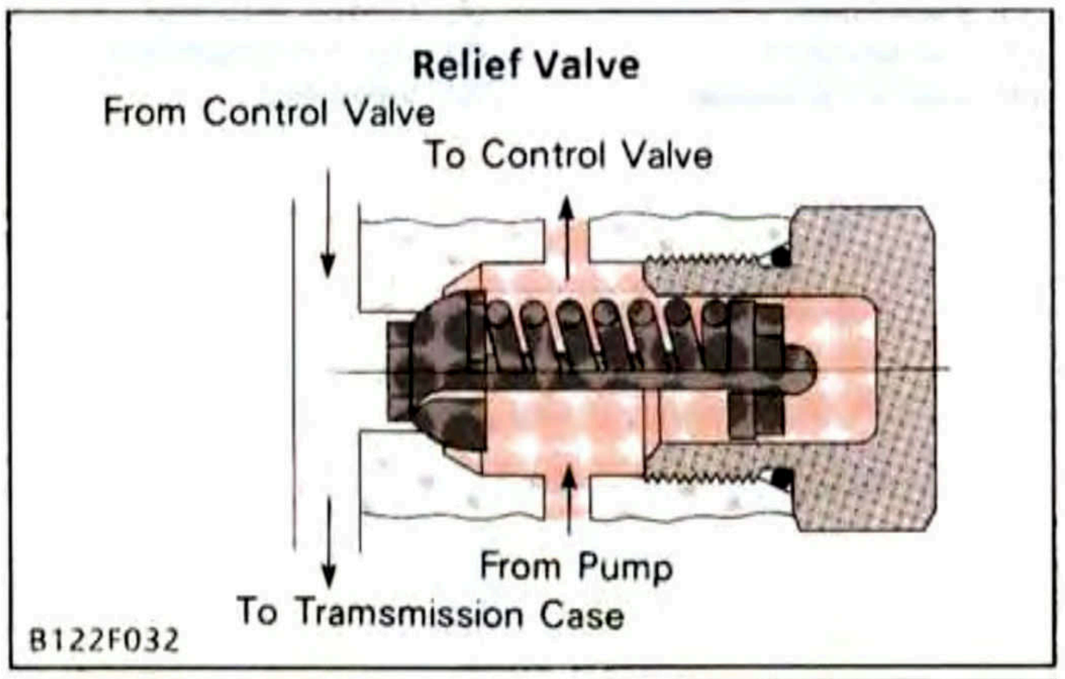


(1) Stator
(2) Rotor
(3) Drive Plate
(4) Commutator

All oil directed from the hydraulic pump to the steering cylinder passes through the metering device (gerotor) on its way. This metering device is a trochoid pump. As the steering wheel is turned, the action is transmitted directly to stator (1) through drive plate (3). Thus, the gerotor sends the amount of oil corresponding to the turn of the steering wheel to the hydraulic cylinder, and the front wheels are moved through the angle corresponding to the turn of the steering wheel.

When the engine is not operating or the hydraulic pump fails. The gerotor serves as a manual pump, and thus the machine can be steered manually.

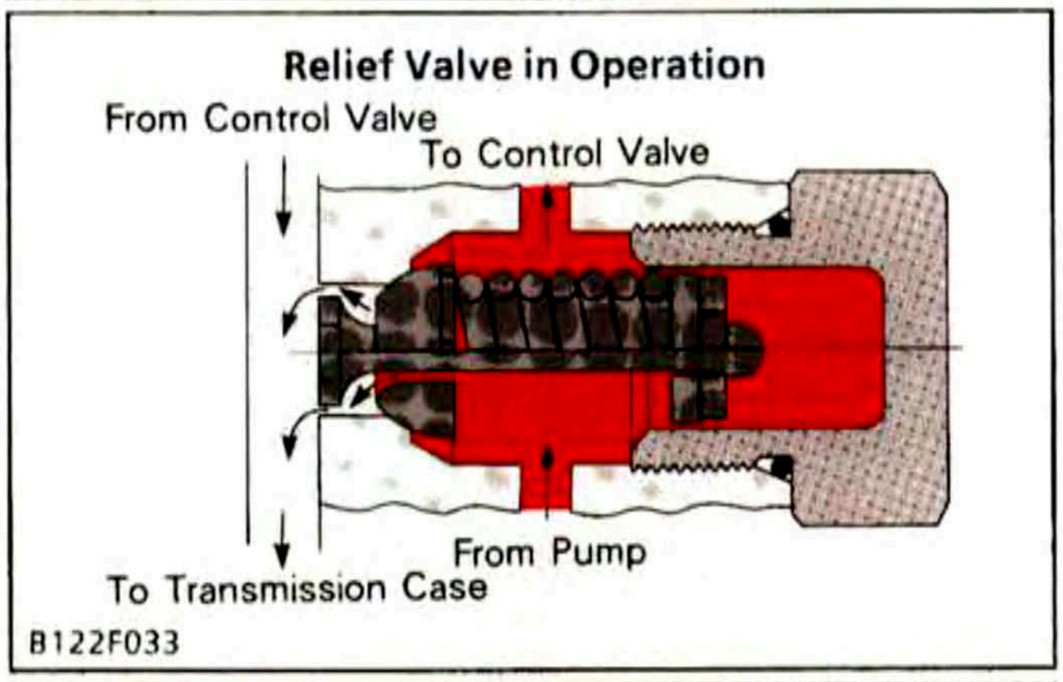
(2)-3 Relief Valve (with Check Valve)

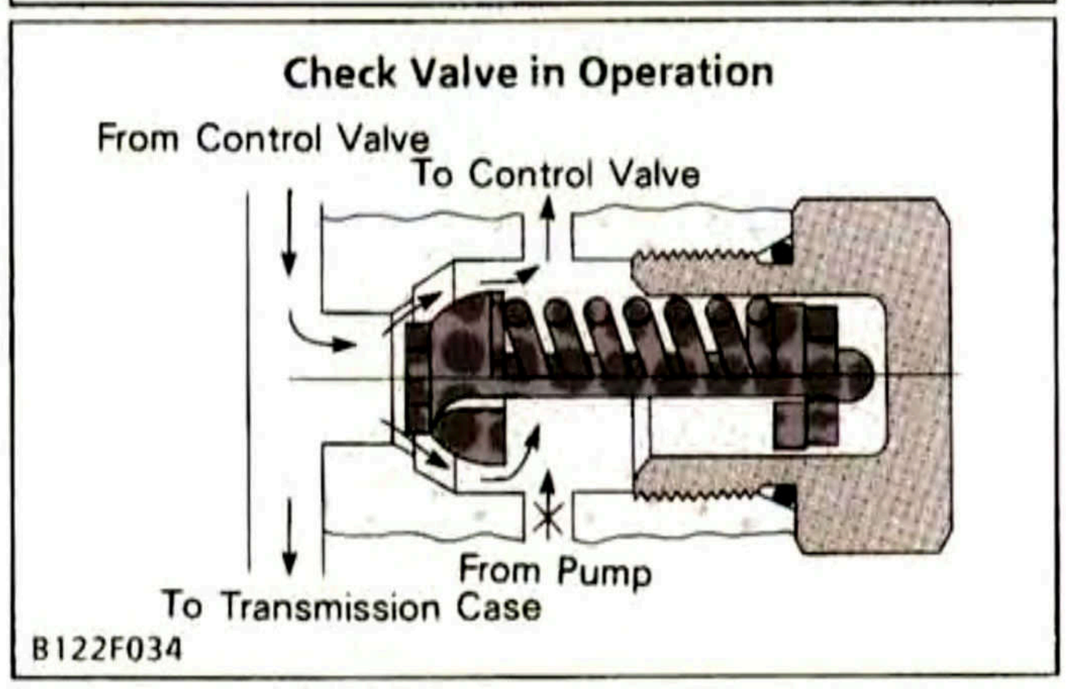


If the pressure in the hydraulic circuit rises above the set pressure of the relief valve, the relief valve will actuate to prevent the pressure from rising further and protect the hydraulic system. Also, if no oil is supplied from the hydraulic pump, the relief valve will act as a check valve and help draw oil from the return oil line to the transmission case, thus making it possible to steer the machine manually.

(Reference)

- Relief valve setting pressure: 10.30 to 11.28 MPa
  105 to 115 kgf/cm²
  1493 to 1636 psi
  Engine speed: Maximum
  Oil temperature: 45 to 55°C
  (113 to 131°F)





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[2] ELECTRICAL CIRCUIT

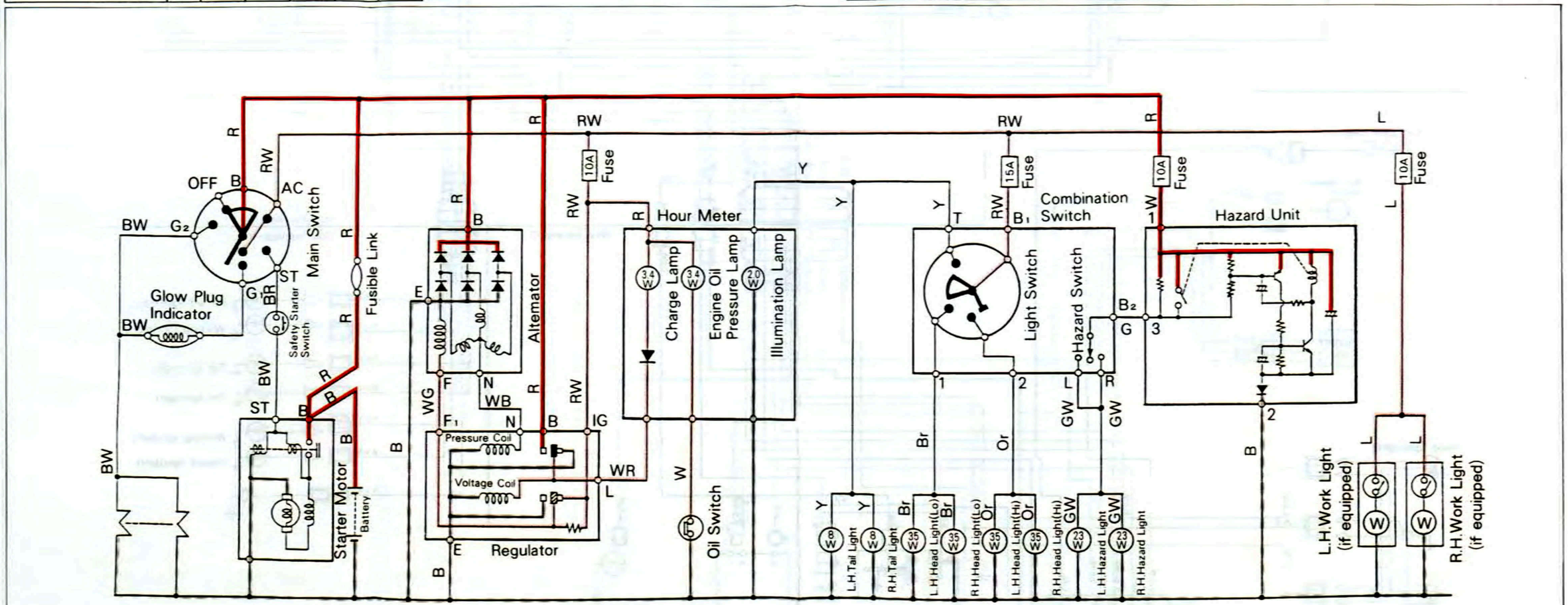
[2]-1 L2350 2WD TYPE

- **Main Switch Table**

Key Position \ Terminal	B	AC	G1	G2	ST	OFF
OFF	●					●
ON	●	●				
HEAT	●	●	●			
START	●	●		●	●	

- **Combination Switch**

Head light switch					Hazard light switch			
Color	RW	Y	Br	OR	Color	G	GW	GW
	B1	T	1	2		B2	R	L
OFF					1	●	●	
1	●	●	●		OFF			
2	●	●		●	2	●		●



B122F046

Denotes battery voltage at any position of main switch
Denotes battery voltage when turning on main switch **"ON"** position from **"OFF"** position.
Denotes ground line.