SERVICE MANUAL

Boomer™ 40 ROPS / Boomer™ 50 ROPS

Compact Tractor

Boomer™ 40 - From PIN 0 to 2103012735; From PIN 2103012736 to 2106014859; PIN 2106014860 and above;
Boomer™ 50 - From PIN 0 to 2105012137; From PIN 2105012138 to 2105013791; PIN 2105013792 and above

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NEW HOLLAND AGRICULTURE

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Steering knuckle and king pin - Install

⚠ WARNING

Heavy objects!
Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders.
Failure to comply could result in death or serious injury.

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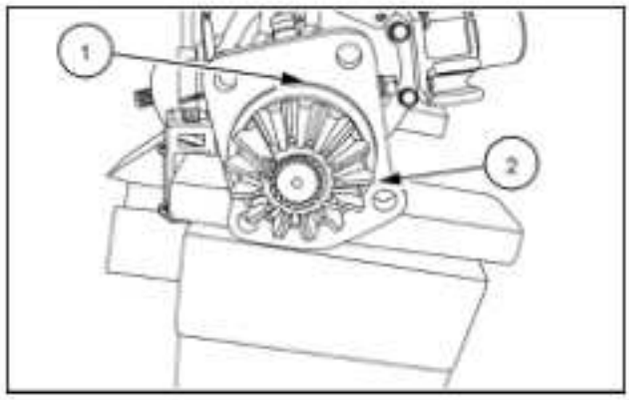
⚠ WARNING

Avoid injury!
Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.
Failure to comply could result in death or serious injury.

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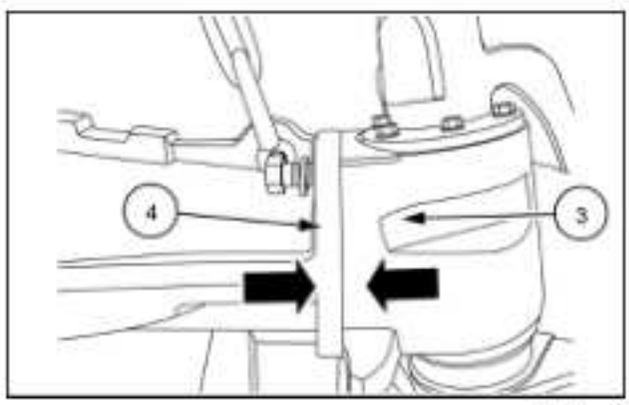
1. Inspect the O-ring **(1)** and replace if necessary.

NOTE: *Note bevel gear **(2)** on differential axle shaft has 14 teeth*



1

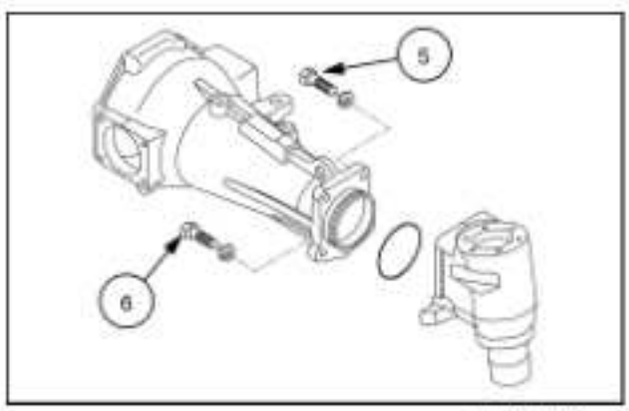
2. Align the steering knuckle and king pin housing **(3)** to the differential housing **(4)**.



2

NOTICE: *Note location of longer bolt **(5)***

3. Install one M14 x 50mm bolt **(5)**.
4. Install four M14 x 40mm bolts **(6)**.
5. Torque the five M14 bolts to **147 - 167 N·m (108 - 123 lb ft)**.



3

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Electrical system - Electrical schematic sheet 01 - Complete tractor schematic - HST

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Problem	Possible Cause	Correction
	Faulty fuel shut off relay	Test relay, replace if necessary
	Fuel filter sensor closing ground circuit to fuel shutoff relay	Drain water from fuel filter
	Fuel filter sensor closing ground circuit to fuel shutoff relay	Check sensor and wiring for proper function or short circuit to ground.

Fuel shutoff solenoid - Troubleshooting - Safe operation circuit (operator not present) gear transmission

Boomer™ 40	WE
Boomer™ 50	WE

NOTE: *See* ***Electrical system - Electrical schematic sheet 07 - Safe operation, operator not present; gear transmission (55.000)***

Problem	Possible Cause	Correction
Tractor will not remain running with operator present in seat	Faulty seat switch	Test switch, replace if necessary
	Blown #1 10-amp fuse	Replace 10-amp fuse
	Faulty safety controller	Test controller, replace if necessary
	Faulty fuel shut off solenoid	Test solenoid, replace if necessary
	Improper ground	Check ground location, for clean contact area
	Faulty fuel shut off relay	Test relay, replace if necessary
	Fuel filter sensor closing ground circuit to fuel shutoff relay	Drain water from fuel filter
	Fuel filter sensor closing ground circuit to fuel shutoff relay	Check sensor and wiring for proper function or short circuit to ground.

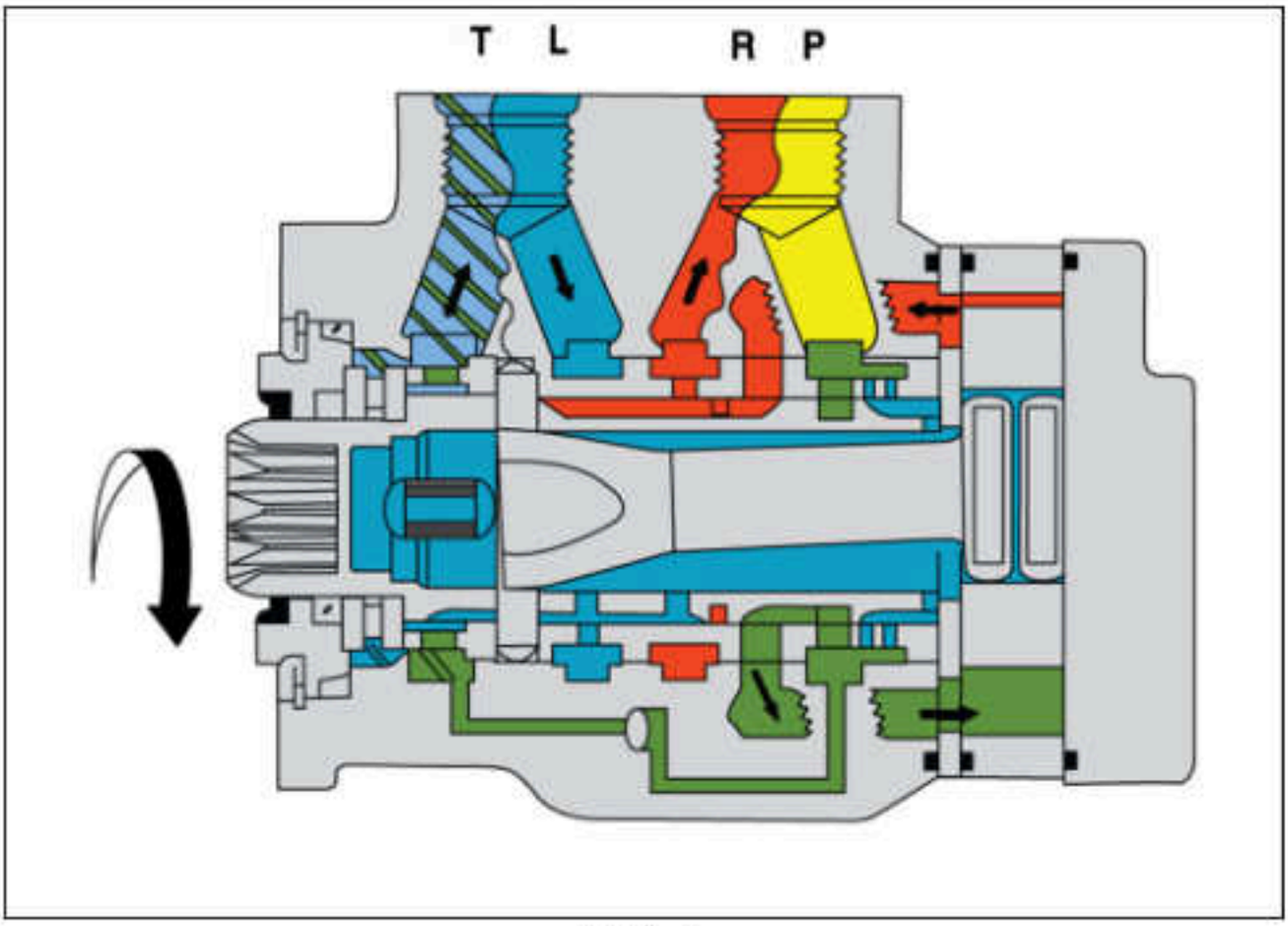
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Emergency operation

⚠WARNING

Loss of control hazard!
Because of the slow responsiveness of the steering in this condition, you should not travel at high speeds or on downhill roads.
Failure to comply could result in death or serious injury.

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Emergency mode steering manually

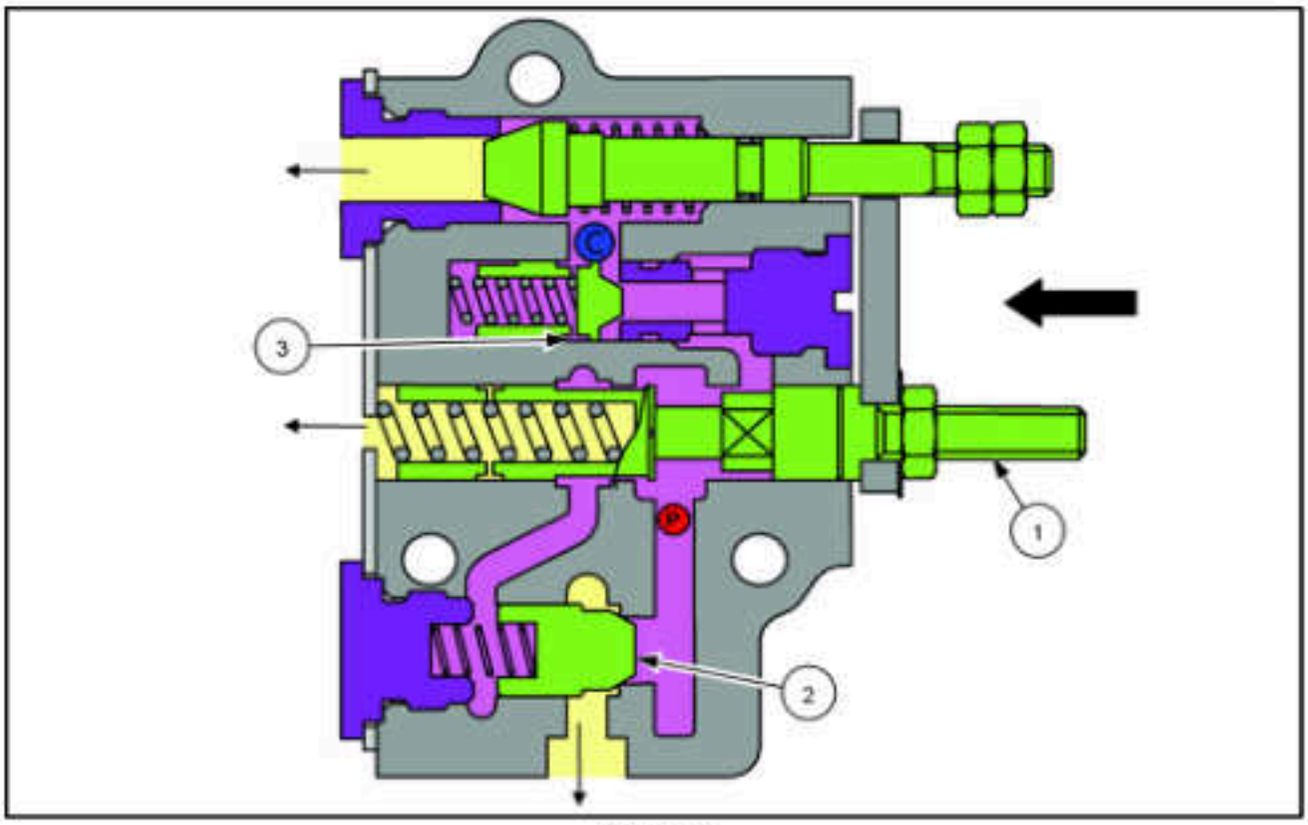
(T) - Tank
(L) - Left steer port
(R) - Right steer port
(P) - Pump discharge

- Pressurized oil from pump
- Oil from rotor
- Discharge
- Suction
- Suction or discharge
- Neutral

NOTICE: *In the EMERGENCY manual steering mode, if steering becomes difficult to do, STOP and transport the tractor by trailer.*

If hydraulic pressure is not generated by the hydraulic pump, the "Rocker" inside the valve serves as a hand pump, and allows the steering cylinder to operate.
The oil returning to the port **(T)** is sent to the rotor **(1)** through the check valve and the rotor sends oil to the cylinder. At this time, the oil in the opposite side returns to the port **(T)** again and repeats the procedure previously described.

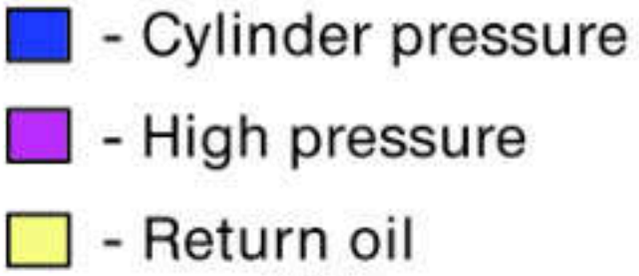
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Raise position

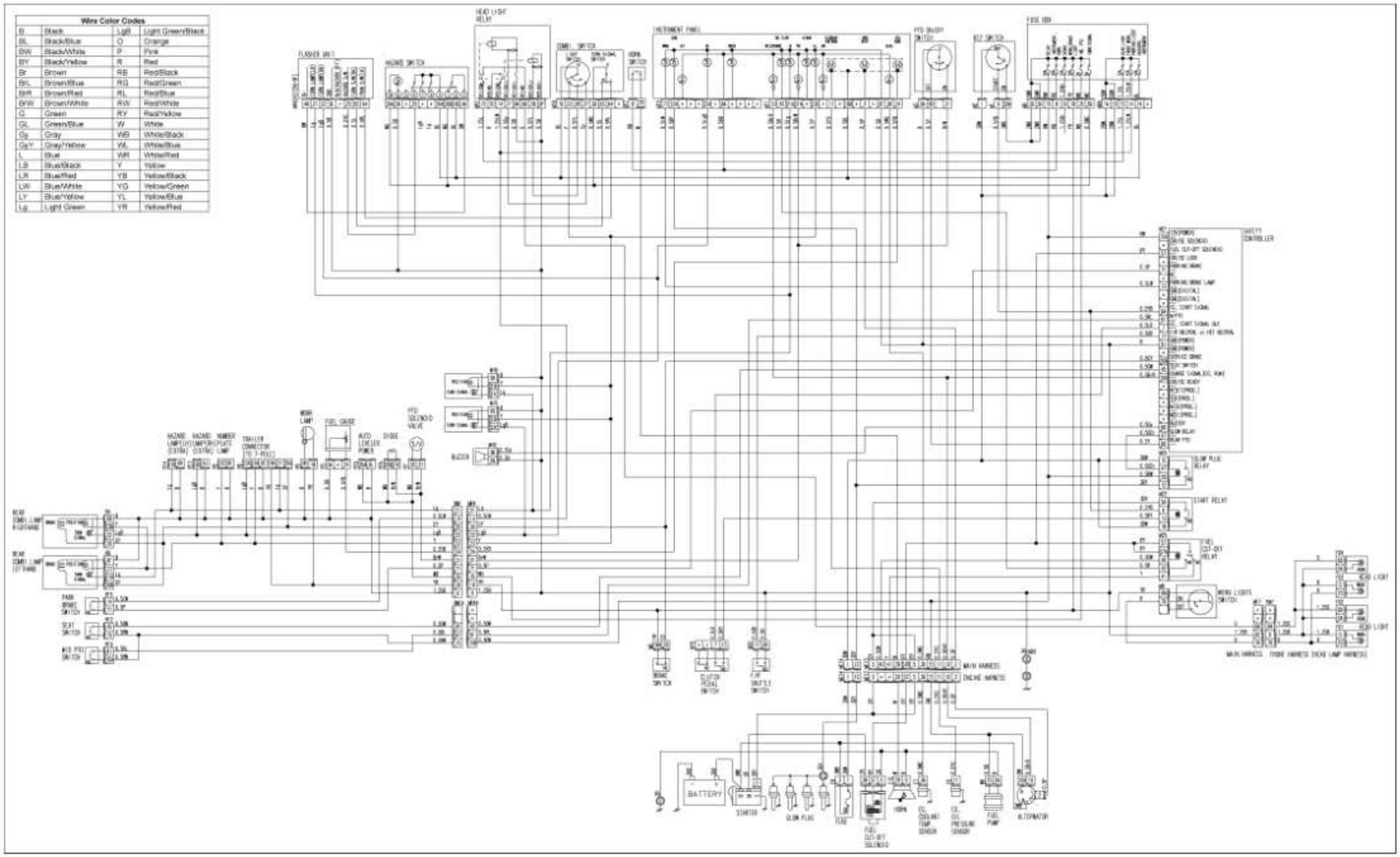
When the valve spool **(1)** moves inward in the "RAISE" position, oil flow being supplied by the pump is route around the valve spool to the backside of the unload valve **(2)** allowing the unload valve to remain seated. When the unload valve remains seated, pressure increases in the valve passage until the pressure on the front side of the check valve **(3)** is greater than the pressure on the backside of the valve, allowing the check valve to open. When the check valve opens, the oil supplied by the pump is routed to the HPL lift cylinder and the 3pt hitch raises.



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Wire Color Codes			
B	Black	Lg/B	Light Green/Black
BL	Black/Blue	O	Orange
BW	Black/White	P	Pink
BY	Black/Yellow	R	Red
Br	Brown	RB	Red/Black
BrL	Brown/Blue	RG	Red/Green
BrR	Brown/Red	RL	Red/Blue
BrW	Brown/White	RW	Red/White
G	Green	RY	Red/Yellow
GL	Green/Blue	W	White
Gy	Gray	WB	White/Black
Gy/Y	Gray/Yellow	WL	White/Blue
L	Blue	WR	White/Red
LB	Blue/Black	Y	Yellow
LR	Blue/Red	YB	Yellow/Black
LW	Blue/White	YG	Yellow/Green
LY	Blue/Yellow	YL	Yellow/Blue
Lg	Light Green	YR	Yellow/Red



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