Service Manual

JS130W
JS145W
JS160W
JS175W

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Some problems which may occur in the hydraulic system are listed below, either for the system as a whole or for individual components

	Symptom		Possible Cause	Action
1	**Hydraulic System**			
a	The hydraulic system is defective or does not operate at all.	1	The pump is defective.	Check pump pressure and renew if defective.
		2	Dirt is clogging the inside of the relief valve.	Dismantle and clean the relief valve.
		3	The relief valve is defective.	Strip and check the relief valve.
		4	A ram is worn.	Repair or renew the ram.
		5	Negative pressure is low.	Check circuit pressure.
		6	A valve is cracked.	Renew the valve.
		7	A spool is not operating over its full stroke.	Check the movement of the spool or the operational linkage.
		8	The oil level in the tank is too low.	Replenish the oil.
		9	Circuit filters are clogged.	Clean or renew filters.
		10	The circuit pipes are restricted.	Check the piping.
2	**Hydraulic Pump**			
a	Oil is not discharged from the pump.	1	The tank strainer or intake pipe is blocked.	Clean the strainer and clean the intake pipe.
		2	The end of the inlet pipe is above the tank oil level.	Replenish the oil tank.
		3	One or more of the pump major components is damaged or the input shaft or coupling are defective.	Dismantle and inspect pump. Renew damaged components and reassemble the pump. Renew shaft or coupling.
b	Pump output is low. Hydraulic pressure does not increase.	1	The pressure does not increase because of problems with the hydraulic pump or control valve.	Check hydraulic pump and control valve. Renew as required.
		2	Internal leakage within the hydraulic pump with excessive fluid drain from pump drain port.	Strip and inspect the hydraulic pump, paying particular attention to sliding surfaces. Repair or renew as necessary. Reassemble the pump.
		3	Air is being drawn into the pump from the inlet side.	Check tank oil level and strainer for clogging. Correct as necessary. If OK, check tightness of pump inlet connection.
		4	Inlet resistance causing cavitation.	Check correct oil . Check pump low pressure inlet pipe for collapse. Renew as required.
c	The pump makes an abnormal noise.	1	Oil level is low and the pump is drawing in air.	Check and replenish oil level. Run the pump under no load to bleed air from the hydraulic system.

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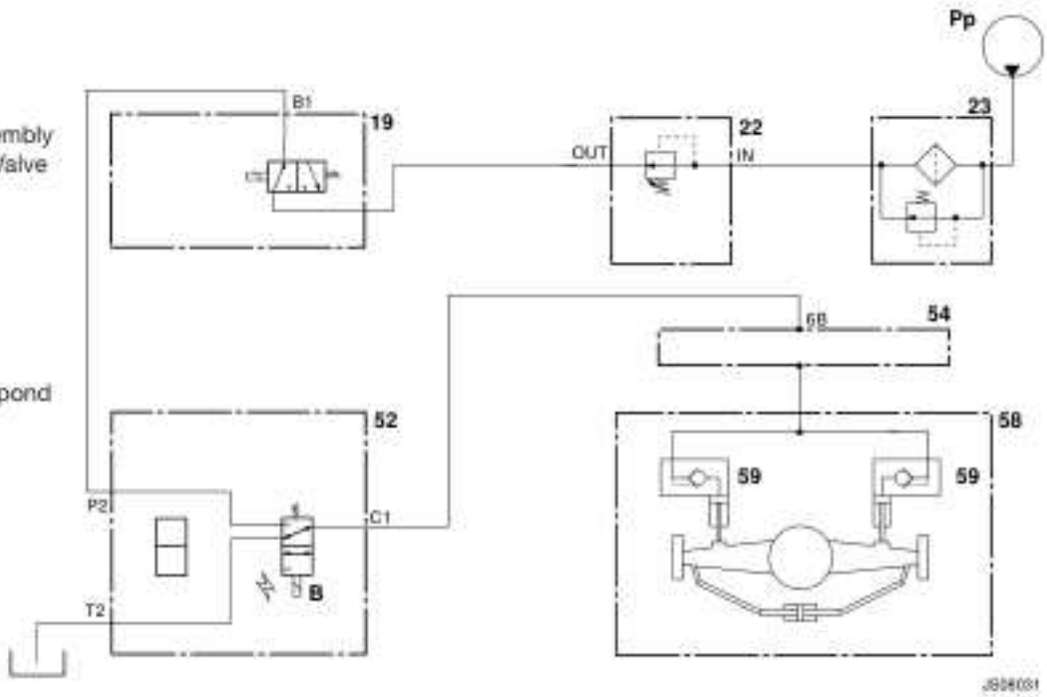
Axle Lock Circuit

Hydraulic Circuit

Key

Pp	Servo Pump
19	8 Spool Solenoid Assembly
22	Transmission Control Valve
23	Line Filter
52	Solenoid Valve
54	Rotary Coupling
58	Axle Lock Assembly
59	Axle Lock Rams
	Solenoid Energised

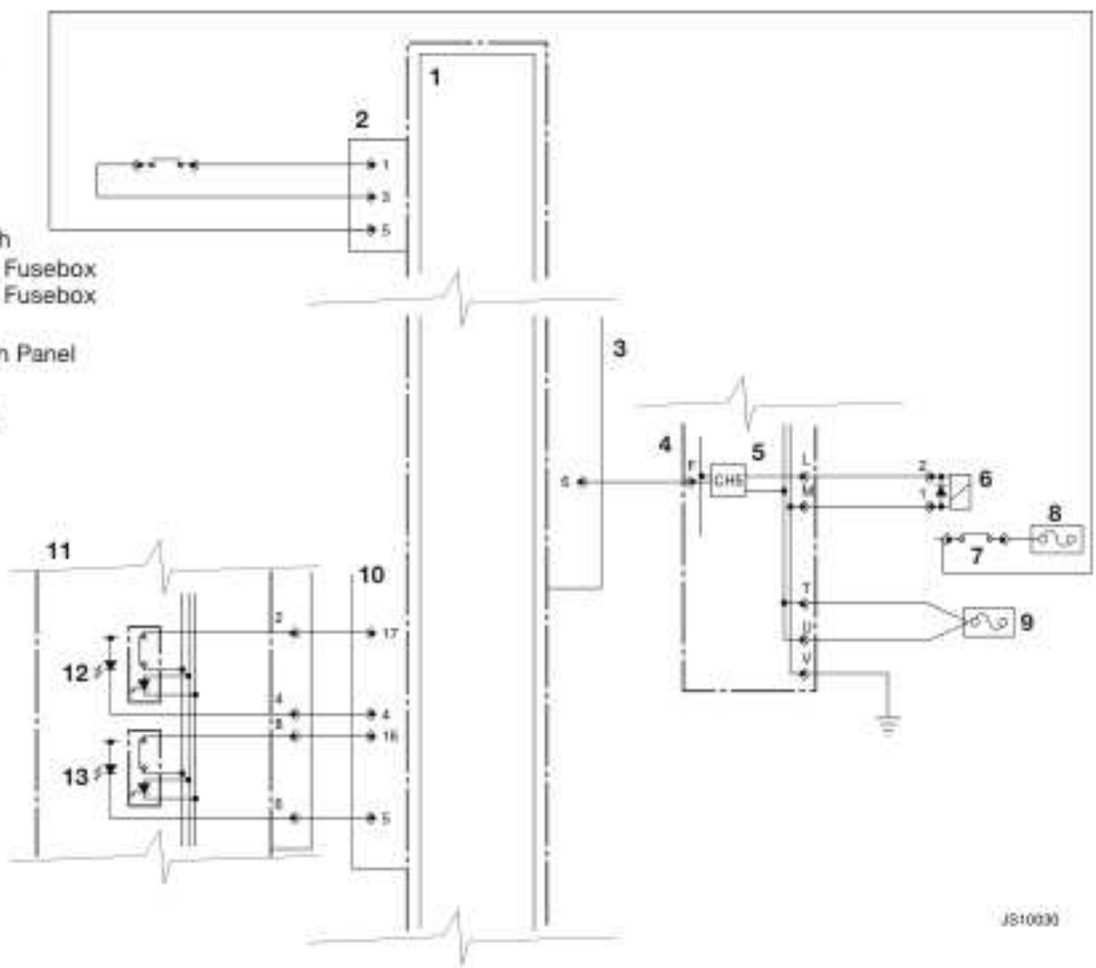
Note: Key references correspond with references on the main schematic diagram.



* **Electrical Circuit**
(CAPS II only - refer to 9803/6450 for AMS)

Component Key

1	Wheel Controller
2	Plug 4
3	Plug 2
4	Switch Box 2
5	Channel 5
6	Solenoid 52B
7	Brake Light Switch
8	Fuse 5 - Wheeled Fusebox
9	Fuse 1 - Wheeled Fusebox
10	Plug 5
11	Right Hand Switch Panel
12	Auto Axle Lock
13	Manual Axle Lock



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Specification

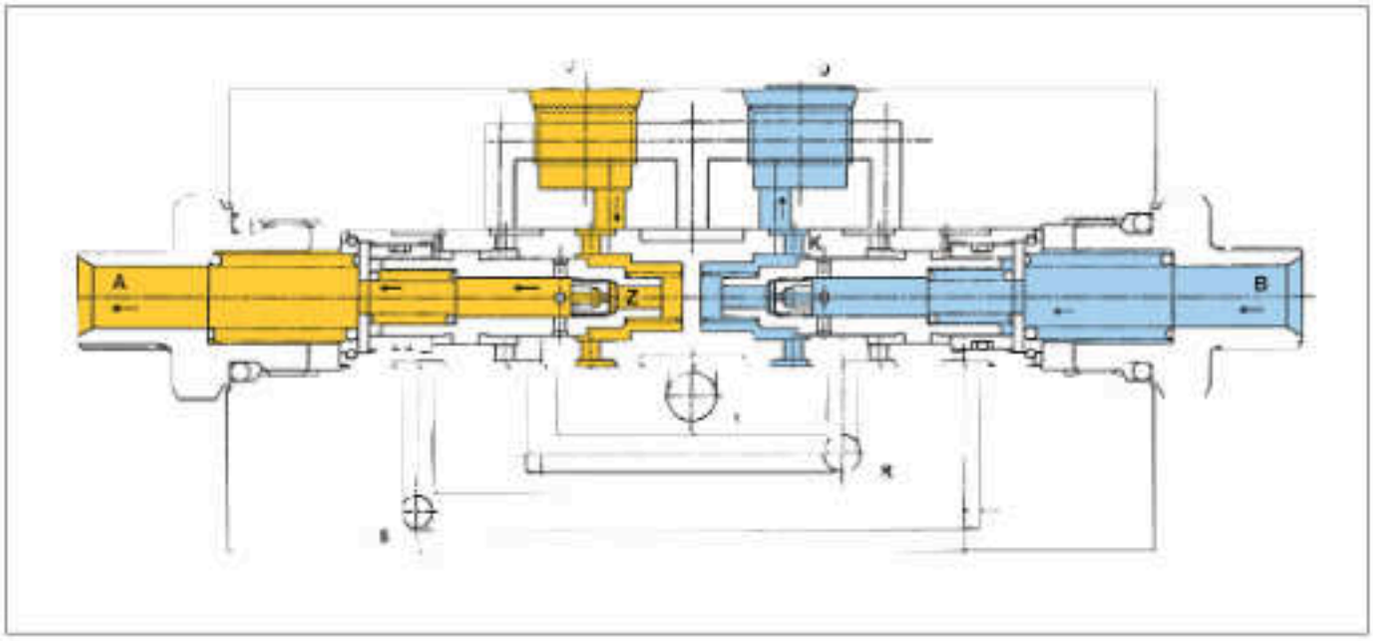
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Motor type	Fixed displacement piston motor
Reduction gear type	Planetary gear with 2 gear reduction
Slew parking brake type	Mechanical lock (slew lever and slew lock switch interlocked system)
Suction capacity	65 cm^3/rev (3.97 in^3/rev)
Working pressure	285 kgf/cm^2 (4052.7 lbf/in^2)
Normal flow	121 l/min (26.62 gal/min)
Relief pressure	285 kgf/cm^2 (4052.7 lbf/in^2) at 107 l/min (23.54 gal/min)
	278 kgf/cm^2 (3953.2 lbf/in^2) at 40 l/min (8.8 gal/min)
Gear reduction - deceleration ratio	17.03
Slew brake torque (excluding reduction gear)	More than 30 kgf m (217 lbf ft)
Brake release pressure	Min. 30 kgf/cm^2 (426.6 lbf/in^2)
Weight	99 kg (218 lb)

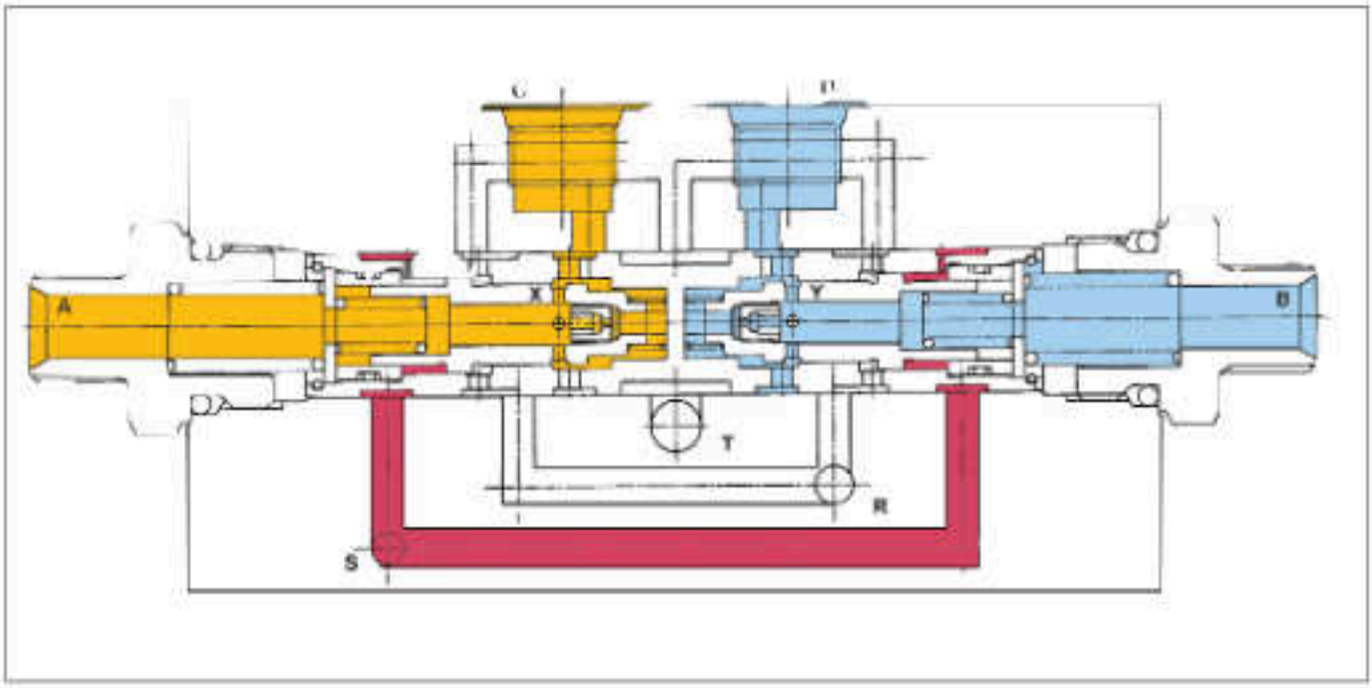
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Cushion Valves for later JS machines

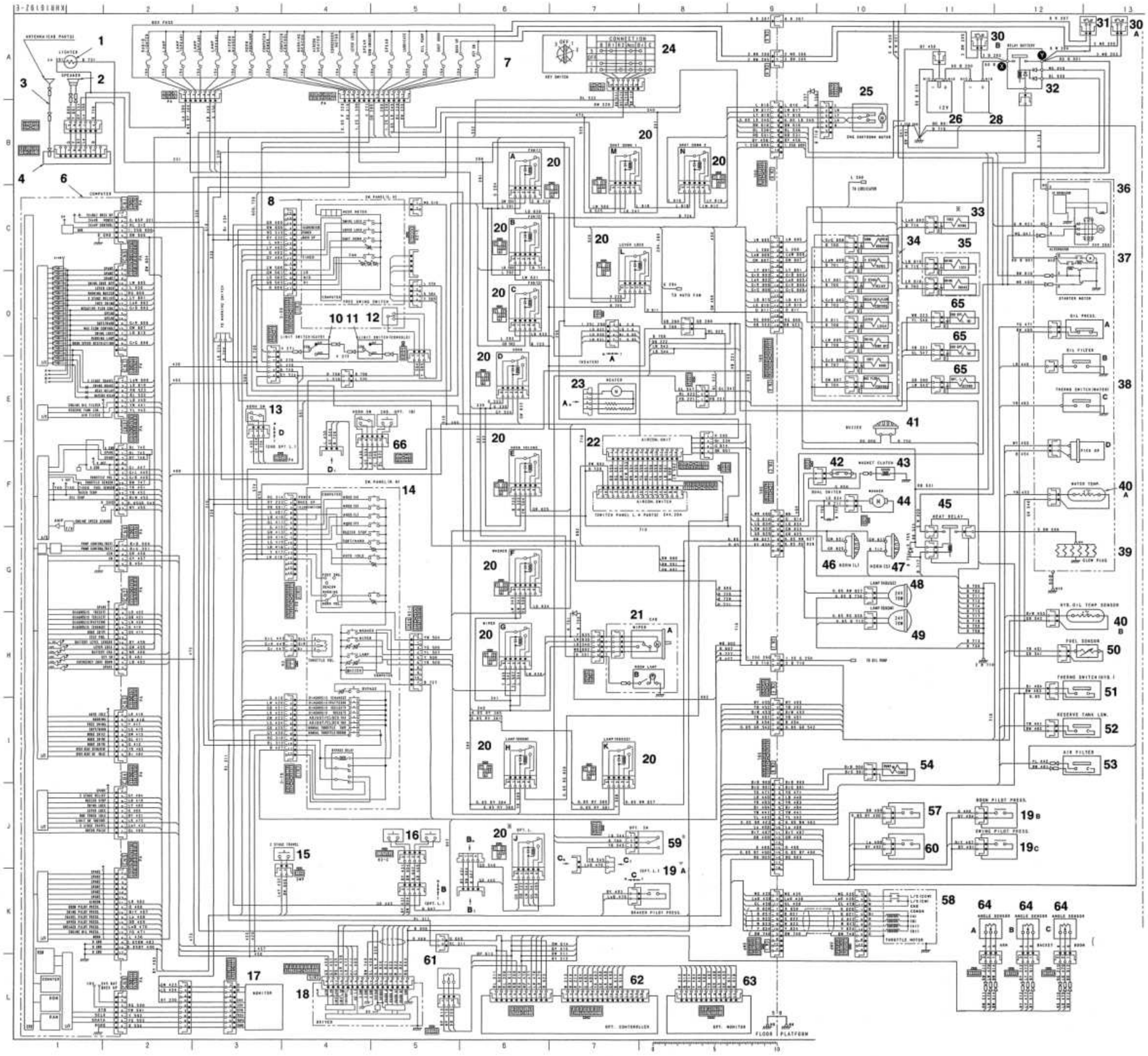
3. Cushion valve - Pressure applied to S port (Piloted Open)



4. Cushion valve - No Pressure applied



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