CRAWLER EXCAVATOR

SERVICE MANUAL

R35Z-7

HYUNDAI

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7) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating pressure	Minimum	5kgf/cm²(71psi)
	Maximum	20kgf/cm²(284psi)
Single operation stroke	Lever	6.5/8.5mm(0.26/0.33in)

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	ø 85 × ø 45 × 540mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 80 × ø 45 × 585mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 70 × ø 45 × 510mm
	Cushion	-
Boom swing cylinder	Bore dia × Rod dia × Stroke	ø 80 × ø 45 × 400mm
	Cushion	-
Dozer cylinder	Bore dia × Rod dia × Stroke	ø 95 × ø 50 × 152mm
	Cushion	-

※ Discoloration of cylinder rod can occur when the friction reduction additive of lubrication oil spreads on the rod surface.

※ Discoloration does not cause any harmful effect on the cylinder performance.

9) SHOE (Steel track)

Item	Width	Ground pressure	Link quantity	Overall width
R35Z-7	300mm(12")	0.34kgf/cm²(4.83psi)	44	1740mm(5' 9")

10) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R35Z-7	STD	0.11m³(0.14yd³)	0.09m³(0.12yd³)	4	550mm(21.7")	610mm(24.0")

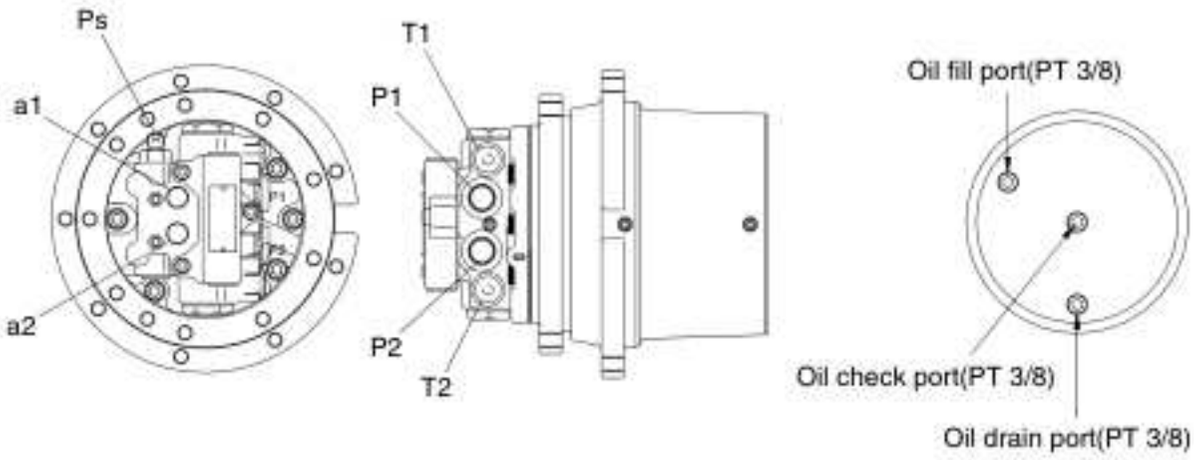
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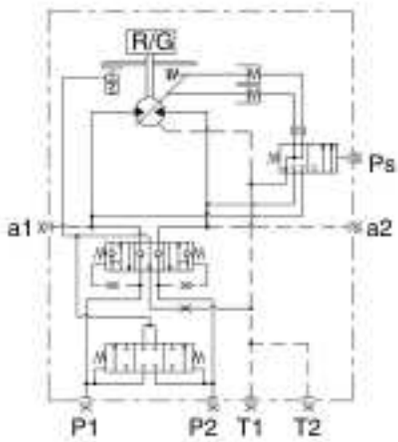
GROUP 4 TRAVEL DEVICE

1. CONSTRUCTION

Travel device consists travel motor and gear box.

Travel motor includes counterbalance valve, parking brake and high/low speed changeover mechanism.





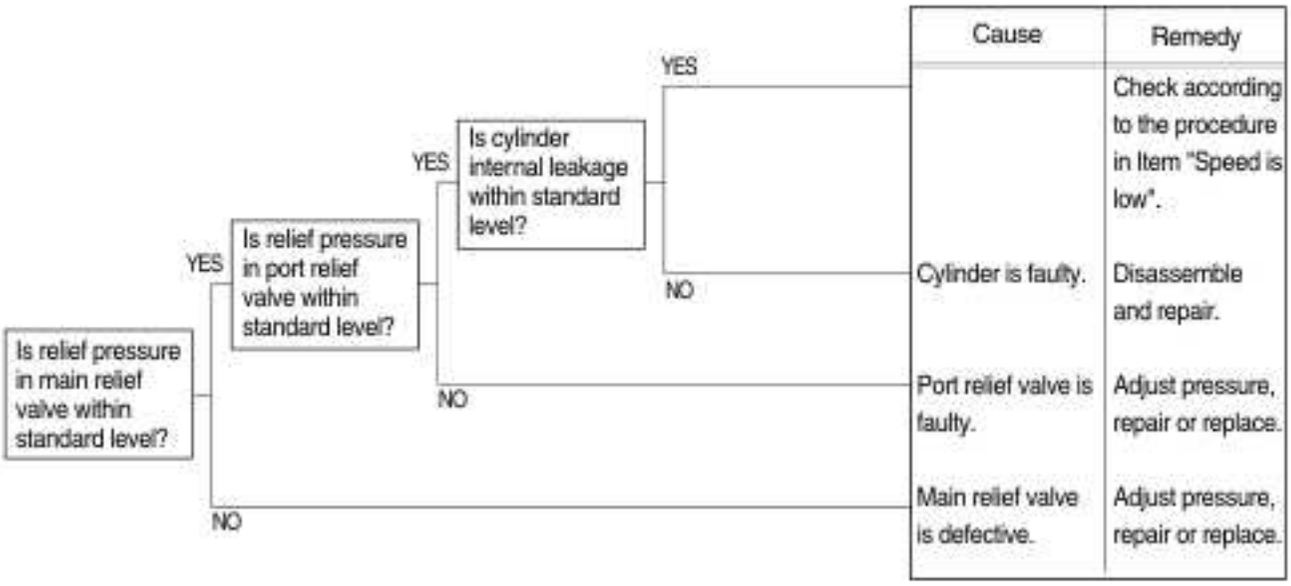
HYDRAULIC CIRCUIT

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Port	Port name	Port size
P1	Main port	PF 1/2
P2	Main port	PF 1/2
a1,a2	Gauge port	PF 1/8
T1,T2	Drain port	PF 3/8
Ps	2 speed control port	9/16-18 UNF

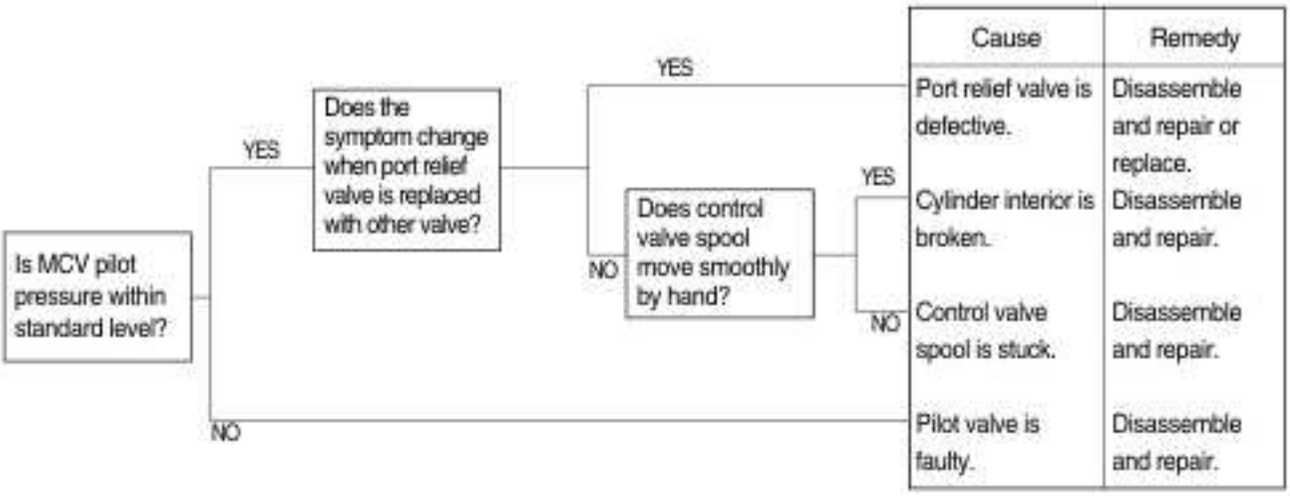
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4) BOOM, ARM OR BUCKET POWER IS WEAK



Cause	Remedy
	Check according to the procedure in Item "Speed is low".
Cylinder is faulty.	Disassemble and repair.
Port relief valve is faulty.	Adjust pressure, repair or replace.
Main relief valve is defective.	Adjust pressure, repair or replace.

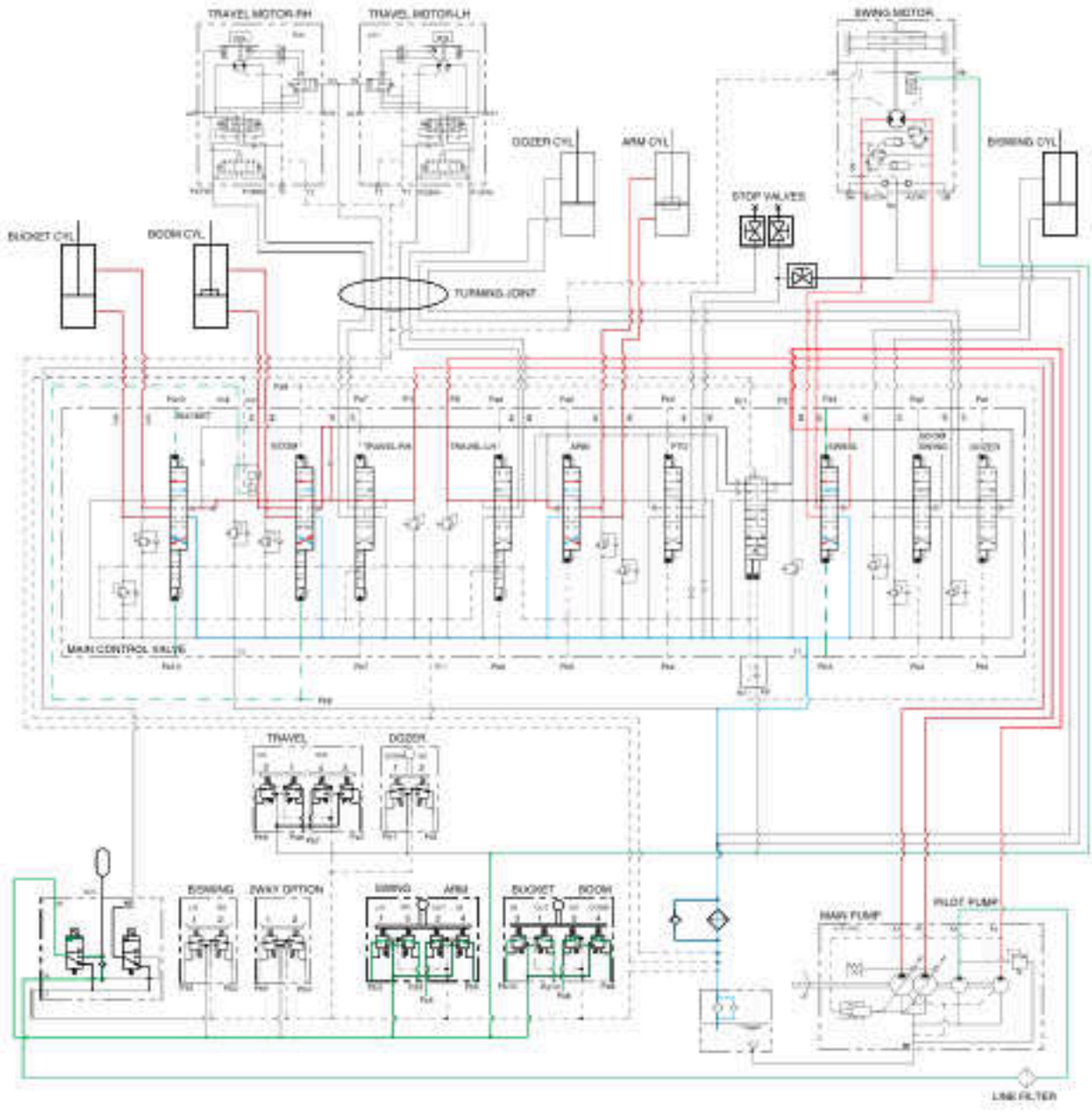
5) ONLY BUCKET OPERATION IS TOTALLY IMPOSSIBLE



Cause	Remedy
Port relief valve is defective.	Disassemble and repair or replace.
Cylinder interior is broken.	Disassemble and repair.
Control valve spool is stuck.	Disassemble and repair.
Pilot valve is faulty.	Disassemble and repair.

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5. COMBINED SWING, BOOM, ARM AND BUCKET OPERATION



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When the swing, boom, arm and bucket functions are operated, simultaneously each spool in the main control valve is moved to the functional position by the pilot oil pressure from the remote control valve.

The oil from the P2 pump flows into the arm cylinder through, arm spool.

The oil from the P1 pump flows into the boom cylinders and bucket cylinder through the boom spool, bucket spool.

The oil from the P3 pump flows into the swing motor through the swing spool.

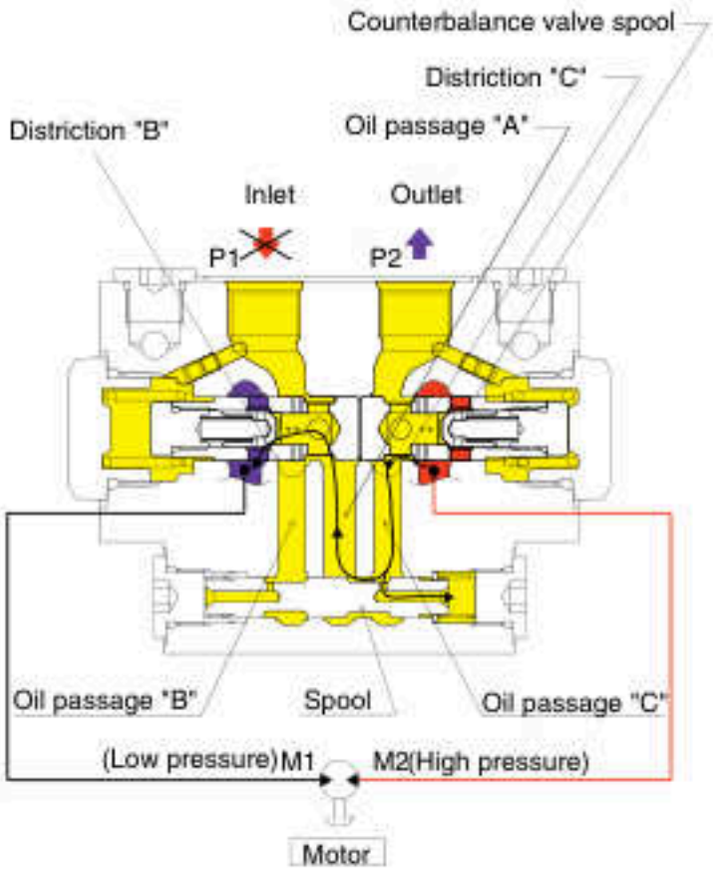
The superstructure swings and the boom, arm and bucket are operated.

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(3) From continuous rotating to deceleration

At deceleration, the motor is still rotated by inertia. The oil flows M2 port to P2 port during counterbalance valve is opened. Then, if the flow to P1 is not enough, the cavitation could be appeared in P1-M1 line.

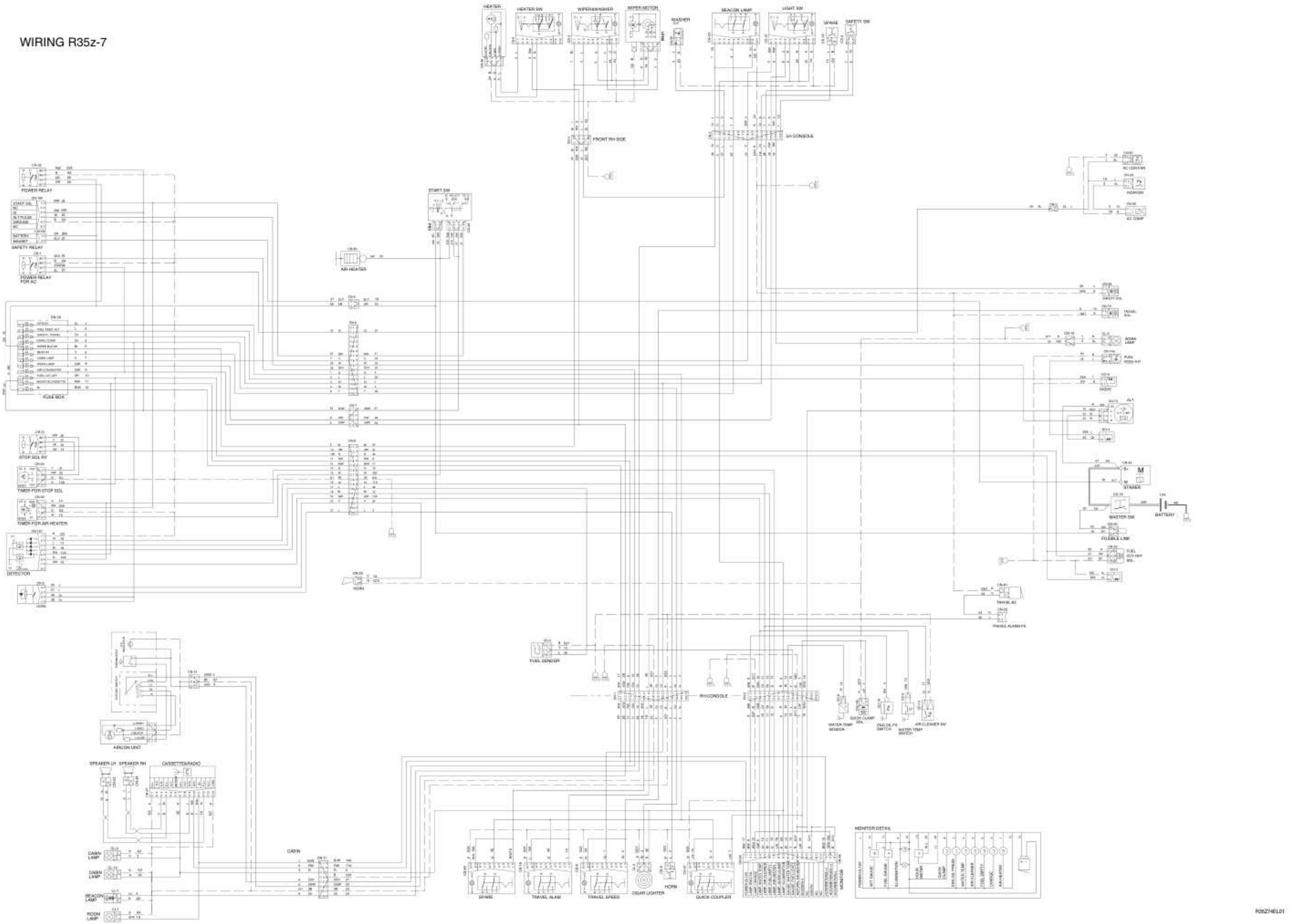
Anti cavitation valve can make a oil passage like M2 → C → spool → A → P1 → M1 and supply flow before counterbalance valve spool is returned. Consequently the cavitation is reduced by the above function.



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WIRING R35z-7



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