SEBM035400

SHOP MANUAL

KOMATSU®

MX352
MX502

MACHINE MODEL	SERIAL NUMBER
MX352	**6Y6089 and up**
MX502	**6Y7038 and up**

- This shop manual may contain attachments and optional equipment that are not available in your area. Please consult your local distributor for those items you may require.
  Materials and specifications are subject to change without notice.
- MX352 mount the 3D88E-5P and MX502 mounts the 4D88E-5X engine.
- For details of the engine, see the 68E-88E Series Engine Shop Manual.

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CONTENTS

No. of page

01 GENERAL 01-1

10 STRUCTURE, FUNCTION AND MAINTENANCE STANDARD 10-1

20 TESTING AND ADJUSTING 20-1

30 DISASSEMBLY AND ASSEMBLY 30-1

90 OTHERS 90-1

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CLASSIFICATION AND PROCEDURES OF TROUBLESHOOTING

Classification of troubleshooting

Mode	Contents
E-mode	Troubleshooting for electric system
H-mode	Troubleshooting for hydraulic and mechanical system
M-mode	Troubleshooting for monitor panel
S-mode	Troubleshooting for engine unit

Procedure for troubleshooting

If a possible fault is detected in the machine, find a corresponding fault in the table of "Possible faults and troubleshooting Nos.", then go to the indicated troubleshooting section.

Possible faults and troubleshooting Nos.

No.	Possible fault		Troubleshooting			
			E-mode	H-mode	M-mode	S-mode
Possible faults related to engine						
1	Engine does not start easily (It always takes time to start)					S-1
2	Engine does not start	Engine does not crank	E-1			S-2
3		Engine cranks but exhaust smoke does not come out				S-2
4		Exhaust smoke comes out but engine does not start				S-2
5	Engine speed does not rise sharply (Follow-up performance is low)					S-3
6	Engine stops during operation					S-4
7	Engine rotation is abnormal (Engine hunts)					S-5
8	Output is insufficient or power is low					S-6
9	Exhaust gas color is bad (Incomplete combustion)					S-7
10	Oil is consumed much or exhaust gas color is bad					S-8
11	Oil becomes dirty quickly					S-9
12	Fuel is consumed much					S-10
13	Coolant contains oil , blows back, or reduces					S-11
14	Engine oil pressure caution lamp lights up (Oil pressure lowers)					S-12
15	Oil level rises (Water or fuel is mixed in oil)					S-13
16	Water temperature rises too high (Overheating)					S-14
17	Abnormal sound comes out					S-15
18	Vibration is excessive					S-16
19	Engine does not stop		E-2			
20	Engine is not preheated normally				M-6	
Possible faults related to work equipment, travel, swing, and blade						
21	Speed or power of whole work equipment, travel, swing, and blade is low			H-1		
22	Engine speed lowers extremely or engine stalls			H-2		
23	Work equipment, travel, swing, and blade systems do not work			H-3		

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Connector No.	Type	Number of pins	Location	Address of connector arrangement drawing	
				Canopy specification	Cab specification
A2	X	2	Travel pressure switch	AD-3	—
D1	SWP	2	Diode	AD-8	AP-8
F1	X	4	Intermediate connector (Between floor wiring harness and chassis wiring harness)	AE-2	AR-1
F2	YAZAKI	2	Intermediate connector (Between floor wiring harness and chassis wiring harness)	AF-1	AR-1
F3	SWP	6	Intermediate connector (Between floor wiring harness and chassis wiring harness)	AE-2	AR-1
F4	SWP	8	Intermediate connector (Between floor wiring harness and chassis wiring harness)	AE-2	AR-2
F5	DT-T	2	PPC lock switch (Left)	AJ-5	AV-4
F7	DT-T	4	Windshield wiper (Cab specification)	—	AQ-3
F8	M	2	Intermediate connector (Cigarette lighter) (Cab specification)	—	AV-8
F9	DT-T	2	Optional power supply for canopy	AI-9	—
F11	KES1	3	Heater (Cab specification)	—	AQ-3
F12	KES1	4	Heater switch (Cab specification)	—	AV-4
F13	M	2	Horn switch	AE-6	AQ-5
F14	DT-T	2	PPC lock switch (Right) (Canopy specification)	AE-5	—
F15	AMP040	16	Monitor panel	AE-7	AQ-6
F16	KES0	2	Speaker (Right) (Cab specification)	—	AV-7
F17	PA	9	Radio (Cab specification)	—	AV-6
F18	KES0	2	Speaker (Left) (Cab specification)	—	AV-6
F19	SUMITOMO	3	Room lamp (Cab specification)	—	AS-9
F20	SWP	12	Short connector (Connector for major optional wiring harnesses)	AJ-4	AV-3
F21	DT-T	2	Rotary lamp (If equipped for canopy specification)	AI-9	—
F21	M	2	Rotary lamp (If equipped for cab specification)	—	AU-9
F22	M	2	Intermediate connector (Additional working lamp)	—	AU-9
F22A	DT-T	2	Additional working lamp (If equipped for canopy specification)	—	—
F22B	DT-T	2	Additional working lamp (If equipped for canopy specification)	—	—
F23	M	3	Intermediate connector (Radio)	—	AV-7
F24	M	3	Intermediate connector (Windshield wiper)	—	AV-9
F25	Terminal	1	Cigarette lighter (Cab specification)	—	X-7
	Terminal	1	Cigarette lighter (Cab specification)	—	X-7
F26	KES1	4	Heater switch (Canopy specification)	—	—
F27	KES2	3	Heater (Canopy specification)	—	—
F28	M	2	Alarm buzzer	AE-6	AQ-4

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2) The pointer of the gauge does not move from H on the panel

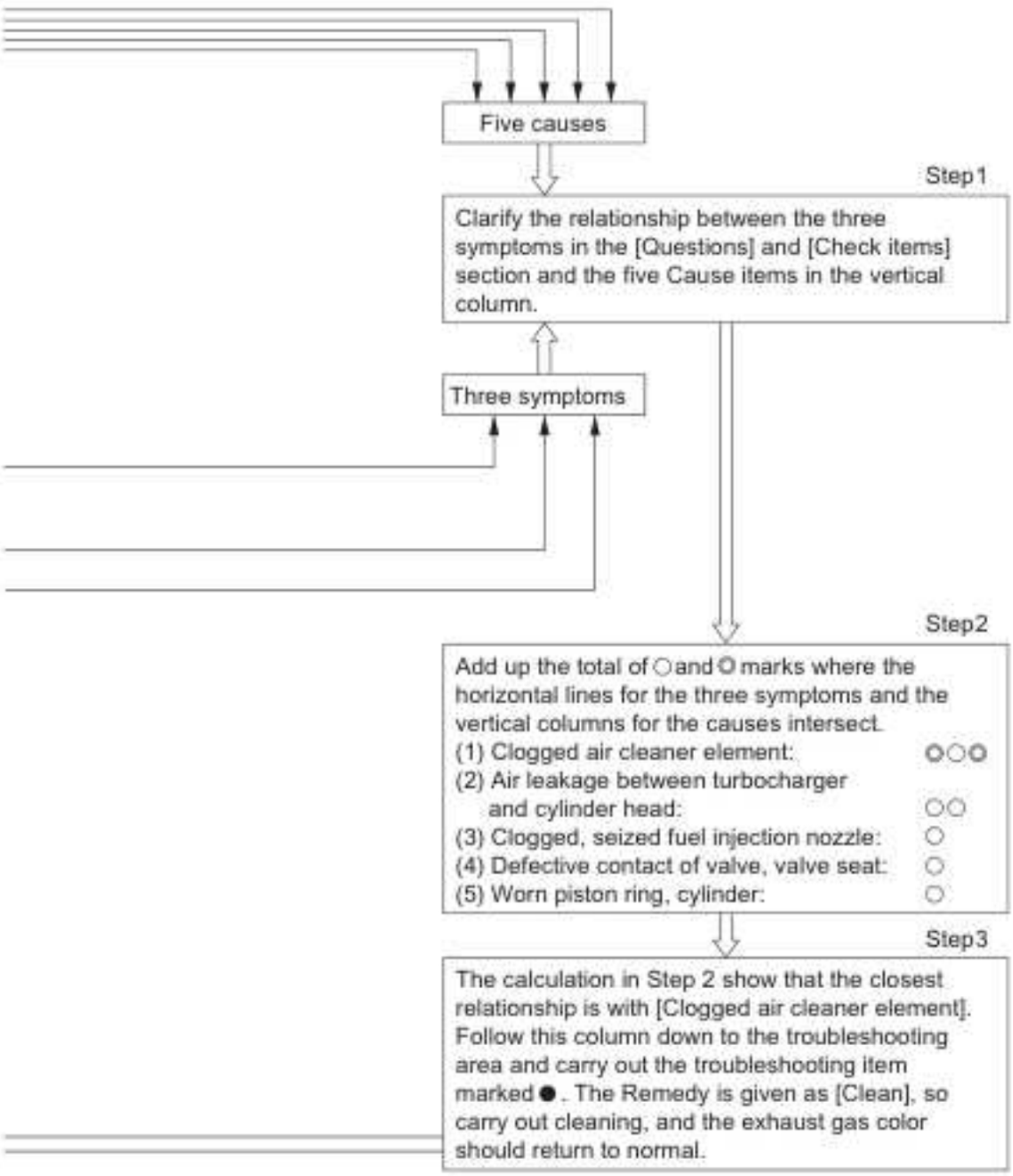
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Failure information	• When the starting switch is turned ON, the pointer of the gauge does not move from H on the panel.
Relative information	• Check that the coolant temperature is normal. • Refer to troubleshooting M-1, too.

<table>
<tr><th colspan="2" rowspan="2"></th><th colspan="2">Cause</th><th colspan="4">Standard value in normalcy and references for troubleshooting</th></tr>
<tr><td rowspan="3">Presumed cause and standard value in normalcy</td><td rowspan="2">1</td><td rowspan="2">Disconnection in wiring harness (Disconnection in wiring harness or defective contact in connector)</td><td colspan="4">1) Turn starting switch OFF.
2) Disconnect connectors M8 and F15.
3) Connect T-adapter to M8 (female) and F15 (female).</td></tr>
<tr><td>Wiring harness between F15 (female) (6) or M8 (female) (1) and ground</td><td>Resistance</td><td colspan="2">Min. 1 MΩ</td></tr>
<tr><td></td><td></td><td>Wiring harness between F15 (female) (11) or M8 (female) (2) and ground</td><td>Resistance</td><td colspan="2">Min. 1 MΩ</td></tr>
<tr><td rowspan="10"></td><td rowspan="9">2</td><td rowspan="9">Defective coolant temperature sensor</td><td colspan="4">1) Turn starting switch OFF.
2) Disconnect connector M8.
3) Connect T-adapter to M8 (male).</td></tr>
<tr><td>M8 (male)</td><td>Temperature</td><td colspan="2">Resistance</td></tr>
<tr><td rowspan="8">Between (1) and (2)</td><td>25°C</td><td colspan="2">38.18 – 47.77 kΩ</td></tr>
<tr><td>30°C</td><td colspan="2">31.59 – 39.07 kΩ</td></tr>
<tr><td>80°C</td><td colspan="2">6.199 – 6.935 kΩ</td></tr>
<tr><td>85°C</td><td colspan="2">5.386 – 5.976 kΩ</td></tr>
<tr><td>90°C</td><td colspan="2">4.469 – 5.166 kΩ</td></tr>
<tr><td>95°C</td><td colspan="2">4.107 – 4.448 kΩ</td></tr>
<tr><td>100°C</td><td colspan="2">3.604 – 3.903 kΩ</td></tr>
<tr><td>105°C</td><td colspan="2">3.157 – 3.426 kΩ</td></tr>
<tr><td>3</td><td>Defective monitor panel</td><td colspan="4">If the wiring harness and coolant temperature sensor are normal, the monitor panel is defective.</td></tr>
</table>

★ For the related circuit diagram and panel gauges, see 1).

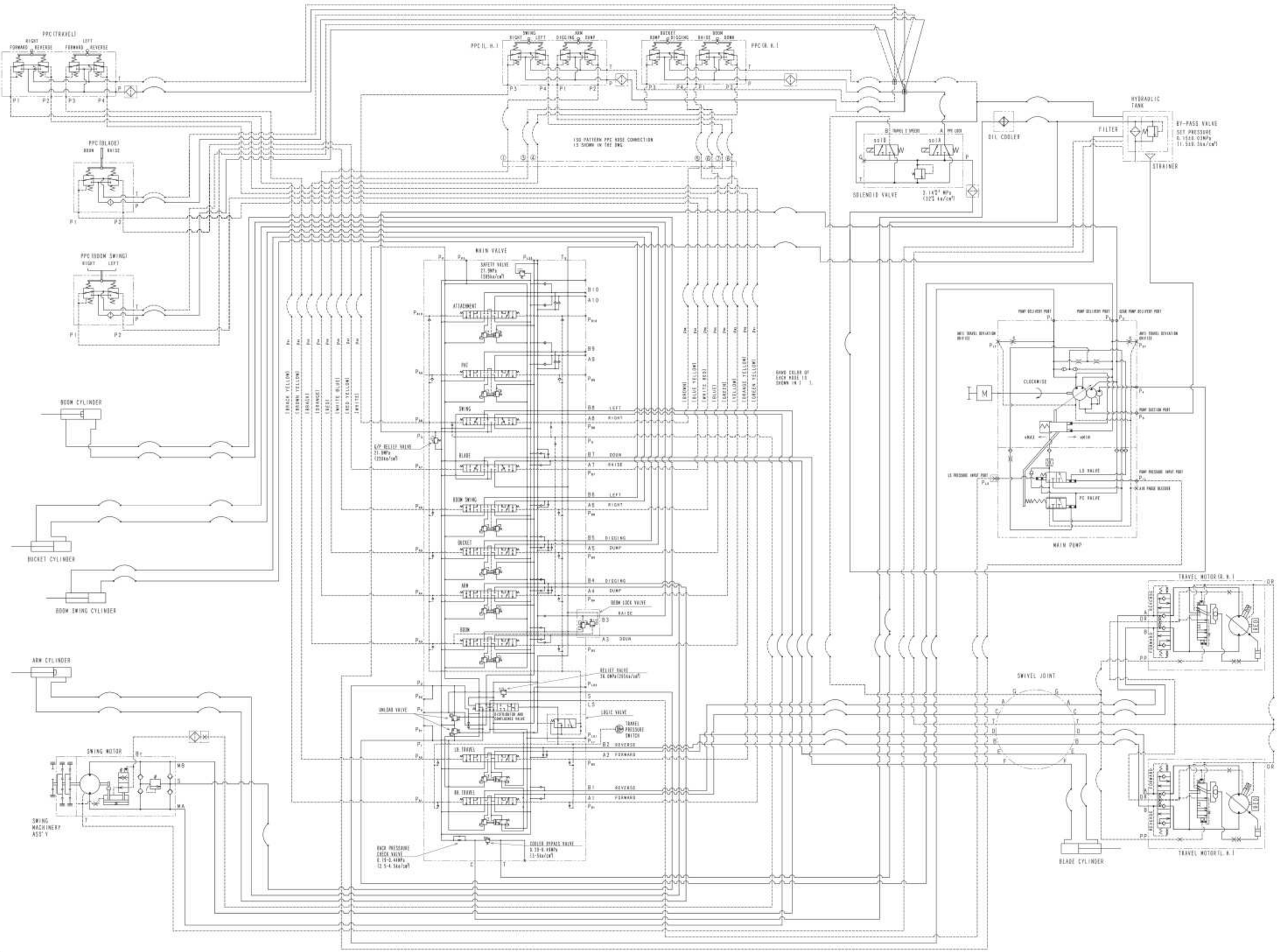
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HYDRAULIC CIRCUIT DIAGRAM

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