WHEEL LOADER

SERVICE MANUAL

HL975

HYUNDAI

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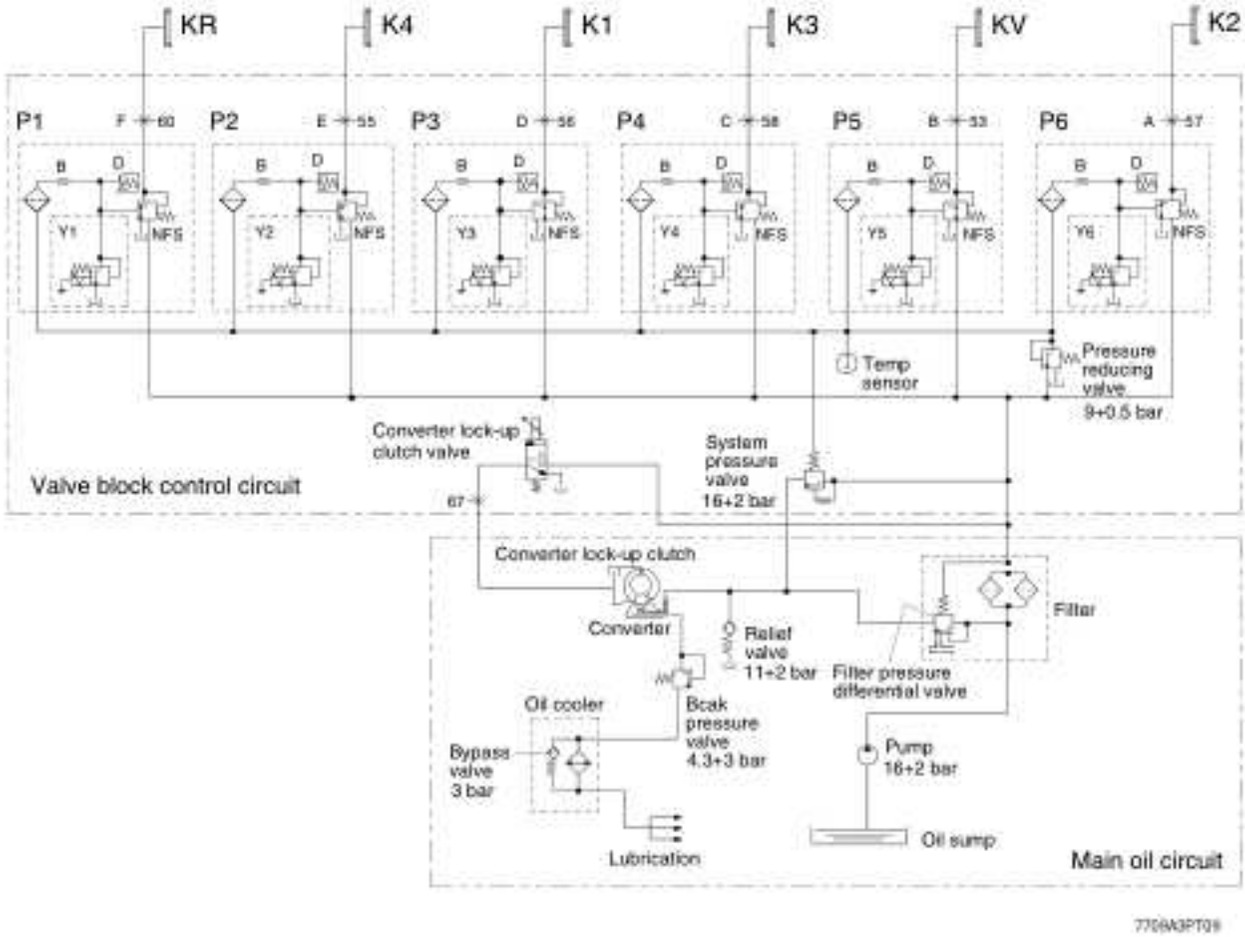
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HYDRAULIC CIRCUIT (5-speed transmission)



NFS	Follow-on slide	P3	Proportional valve clutch K1
D	Oscillation damper	P4	Proportional valve clutch K3
B	Orifice	P5	Proportional valve clutch KV
P1	Proportional valve clutch KR	P6	Proportional valve clutch K2
P2	Proportional valve clutch K4	Y1~Y6	Pressure regulator with filter

Speed	Forward					Reverse			Neutral	Engaged clutch	Positions on the valve block	Current No. of the measuring points
	1	2	3	4	5	1	2	3				
Y1						X	X	X		KR	F	55
Y2			X		X					K4	E	60
Y3	X					X				K1	D	56
Y4				X	X			X		K3	C	58
Y5	X	X		X						KV	B	53
Y6		X	X				X			K2	A	57
Engaged clutch	K1,KV	KV,K2	K2,K4	KV,K3	K3,K4	KR,K1	KR,K2	KR,K3		-	-	-

X : Pressure regulator under voltage

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GROUP 2 OPERATIONAL CHECKS AND TROUBLESHOOTING

1. OPERATIONAL CHECKS

This procedure is designed so the mechanic can make a quick check of the system using a minimum amount of diagnostic equipment. If you need additional information, read **structure and function**, Group 1.
A location will be required which is level and has adequate space to complete the checks.

The engine and all other major components must be at operating temperature for some checks.

Locate system check in the left column and read completely, following the sequence from left to right. Read each check completely before performing.

At the end of each check, if no problem is found (OK), that check is complete or an additional check is needed. If problem is indicated (NOT OK), you will be given repair required and group location.
If verification is needed, you will be given next best source of information:

Chapter 2 : Troubleshooting
Group 3 : Tests and adjustments

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5. MAIN HYDRAULIC PUMP FLOW TEST

- SPECIFICATION

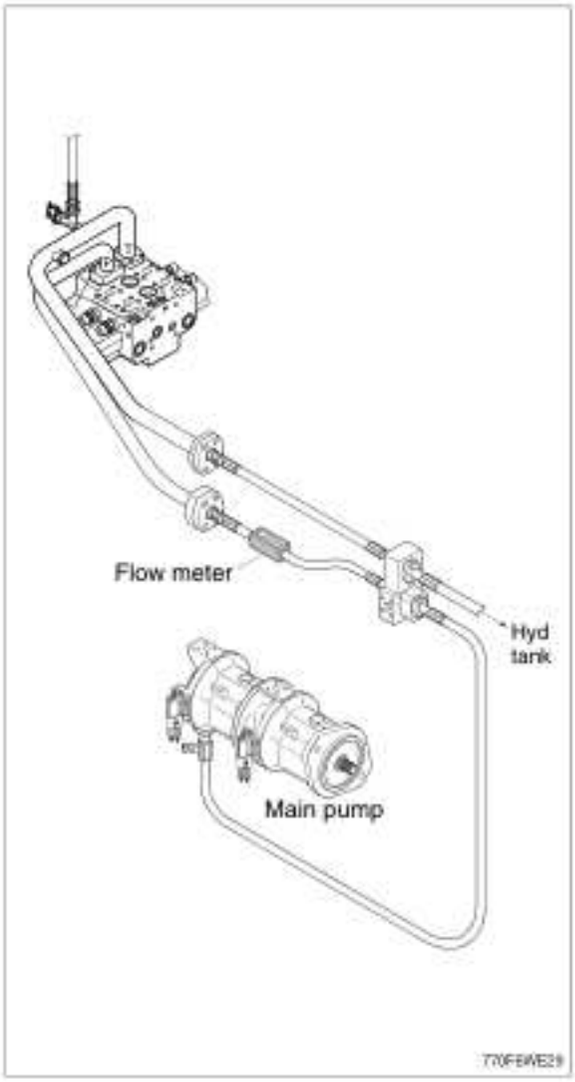
Oil temperature	45±5°C (113±9°F)
Engine speed	2130±50 rpm
Test pressure	200±5 bar (2900 psi)
Maximum pump flow	353 ℓ /min (93.3 gpm)

- FLOW METER GAUGE AND TOOL

  Gauge 0~35 MPa (0~350 bar, 0~5000 psi)

  Temperature reader

1) Make test connections.
2) Install temperature reader.
   (see temperature reader installation procedure in this group)
3) Heat hydraulic oil to specifications.
   (see hydraulic oil warm up procedure in this group)
4) Run engine at test specifications.
5) Close flow meter loading valve to increase pressure to test specifications.
6) Read flow meter.
7) If flow is below specifications, check suction line and suction pressure for abnormality before removing pump.



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5) DISASSEMBLY AND ASSEMBLY

(1) Spool

① Loosen the bolt (2EA).

- Tool : Wrench 5 mm
- Tightening torque : 0.85 kgf · m (6.1 lbf · ft)



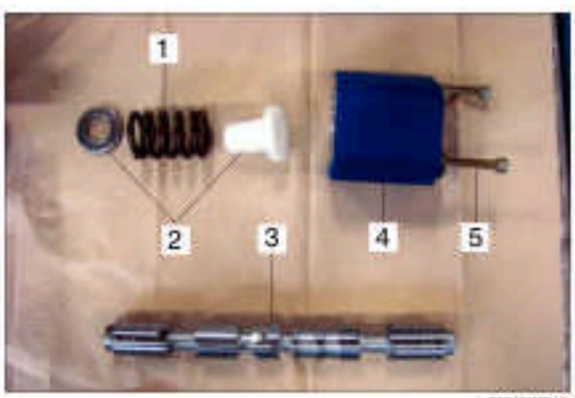
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② Remove the cover, spring retainer, spring and spool.



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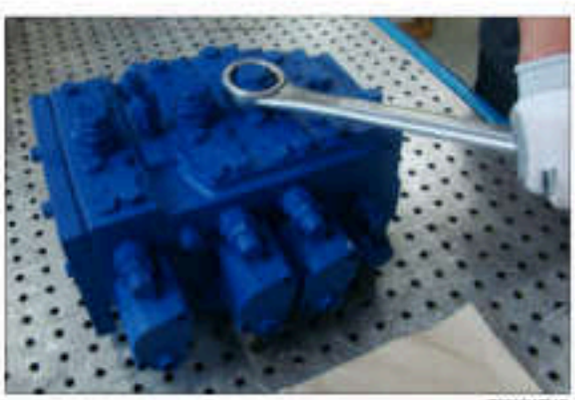
1 Spring
2 Spring ratainer
3 Spool
4 Cover
5 Bolt



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(2) Compensator valve

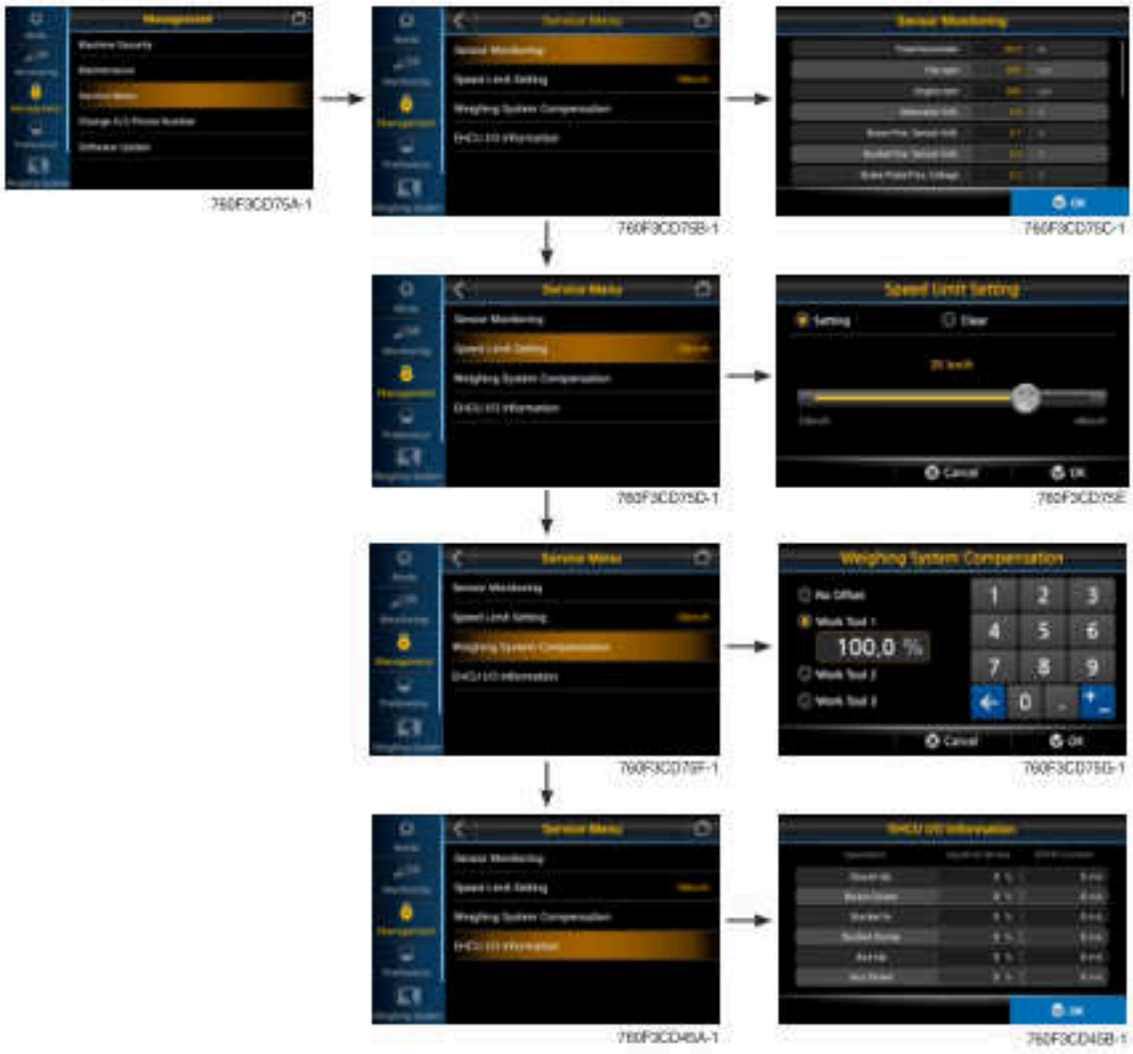
- Tool : Spanner 42 mm



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③ Service menu



- Sensor monitoring : Display information of each sensors.
- Speed limit setting : 20~40 km/h (5 km/h intervals)
- Weighing system compensation
  - Calibration workload depending on work tool.
  ※ Only for the service person. Do not adjust arbitrary.
- EHCU I/O information
  - Real time monitoring (joystick stroke, EPPR current).

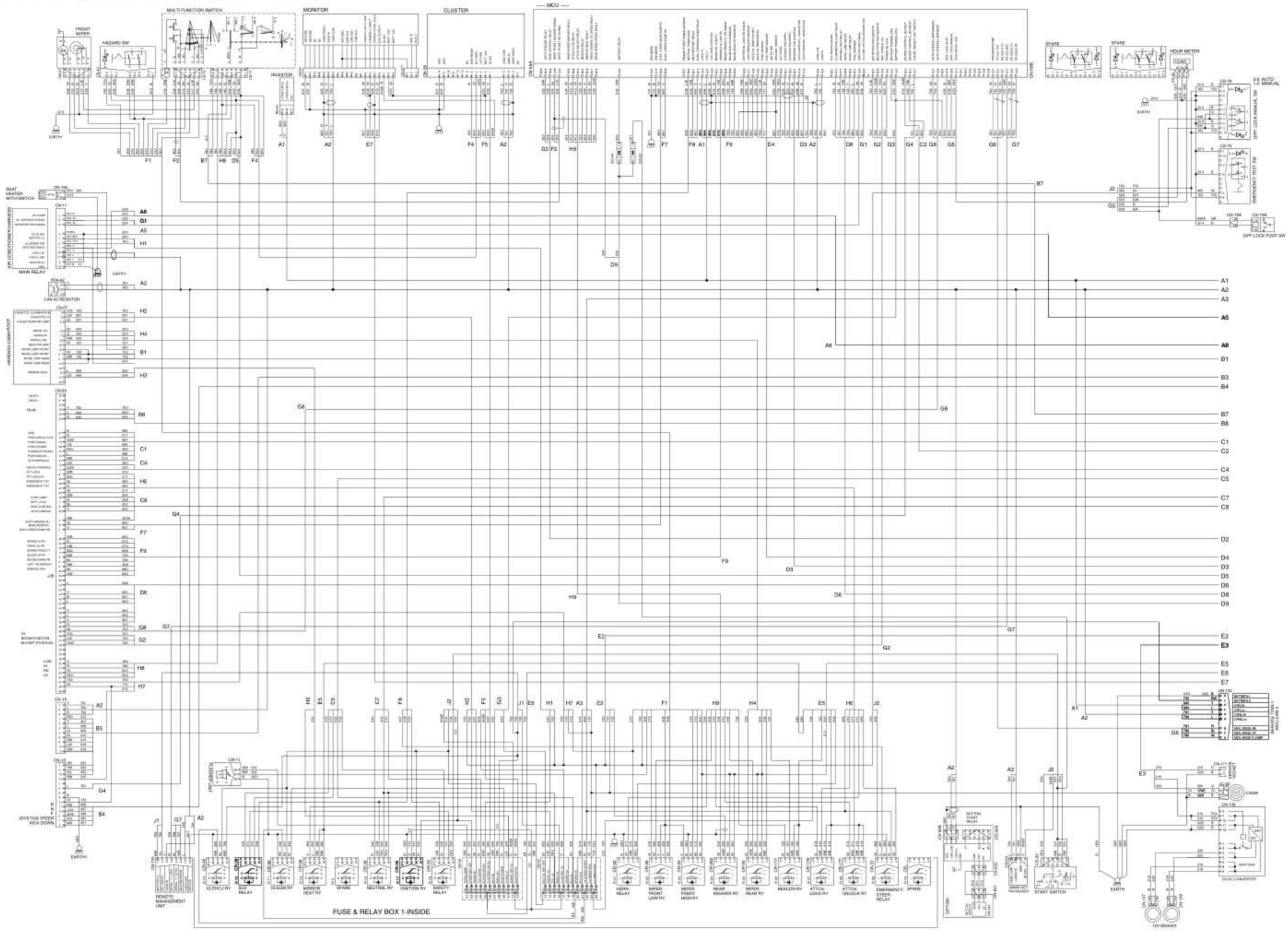
④ Change A/S phone number and software update



- Change A/S phone number : Check and change of contact information for customer service.
- Software update : Update file in USB memory.

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1. ELECTRICAL CIRCUIT (1/3, ELECTRO-HYDRAULIC RCV TYPE, ~#0047)



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