WHEEL LOADER

SERVICE MANUAL

HL730-9

HYUNDAI

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Fault code (Hex)	Meaning of the fault code possible reason for fault detection	Reaction of the TCU	Possible steps to repair
C3	Overtemp converter output TCU measured a oil temperature at the converter output that is the allowed threshold	No reaction OP mode : Normal	· Cool down machine · Check oil level · Check temperature sensor
C4	S.C. to ground at joystick status indicator TCU detected a wrong voltage at the output pin, that looks like a S.C. to vehicle ground · Cable is defective and is contacted to vehicle ground · Joystick status indicator has an internal defect · Connector pin is contacted to vehicle ground	No reaction OP mode : Normal	· Check the cable from TCU to joystick status indicator · Check the connectors from joystick status indicator to TCU · Check the resistance* of joystick status indicator * See page 3-52
C5	S.C. to battery voltage at joystick status indicator TCU detected a wrong voltage at the output pin, that looks like a S.C. to battery voltage · Cable is defective and is contacted to battery voltage · Joystick status indicator has an internal defect · Connector pin is contacted to battery voltage	No reaction OP mode : Normal	· Check the cable from TCU to joystick status indicator · Check the connectors from joystick status indicator to TCU · Check the resistance* of joystick status indicator * See page 3-52
C6	O.C. at joystick status indicator TCU detected a wrong voltage at the output pin, that looks like a O.C. for this output pin · Cable is defective and has no connection to TCU · Joystick status indicator has an internal defect · Connector pin has no connection to TCU	No reaction OP mode : Normal	· Check the cable from TCU to joystick status indicator · Check the connectors from joystick status indicator to TCU · Check the resistance* of joystick status indicator * See page 3-52

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3. STEERING SYSTEM RESTRICTION TEST

- SPECIFICATION

  Oil temperature 45±5°C (113±9°F)
  Engine speed High idle
  Maximum pressure at steering unit 20 MPa (20 bar, 285 psi)

- GAUGE AND TOOL

  Gauge 0~7 MPa (0~70 bar, 0~1000 psi) 2EA

- This test will check for restrictions in the steering system which can cause overheating of hydraulic oil.

1) Install temperature reader.
   (see temperature reader installation procedure in this group).

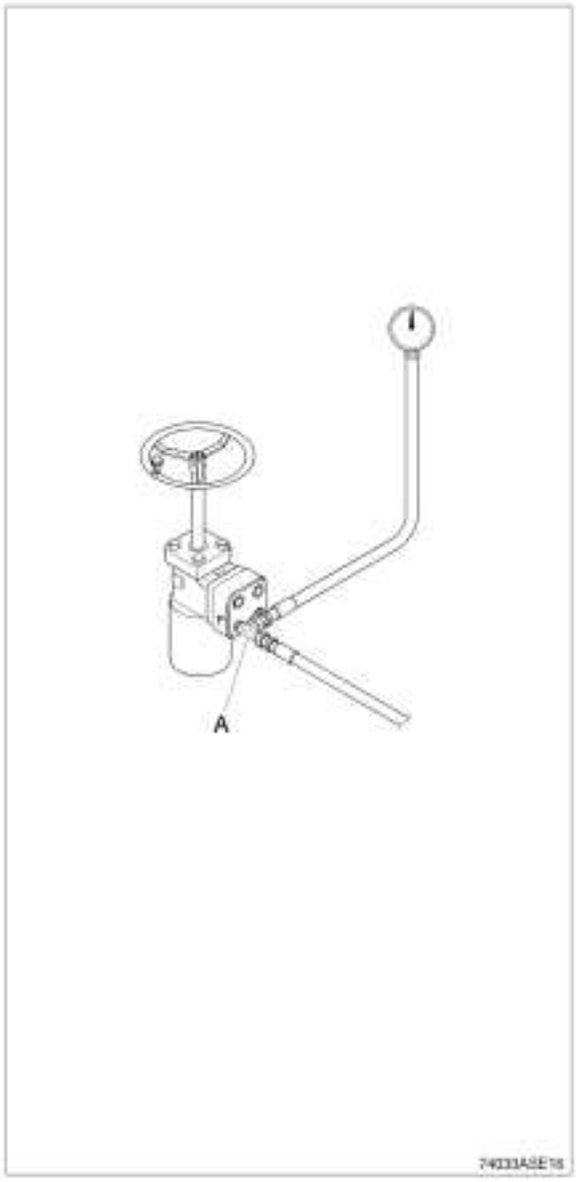
2) Heat hydraulic oil to specifications.
   (see hydraulic oil warm up procedure at page 6-54).

3) Connect fitting (A) and install gauge.

⚠ **Do not operate steering or loader functions or test gauge may be damaged.**

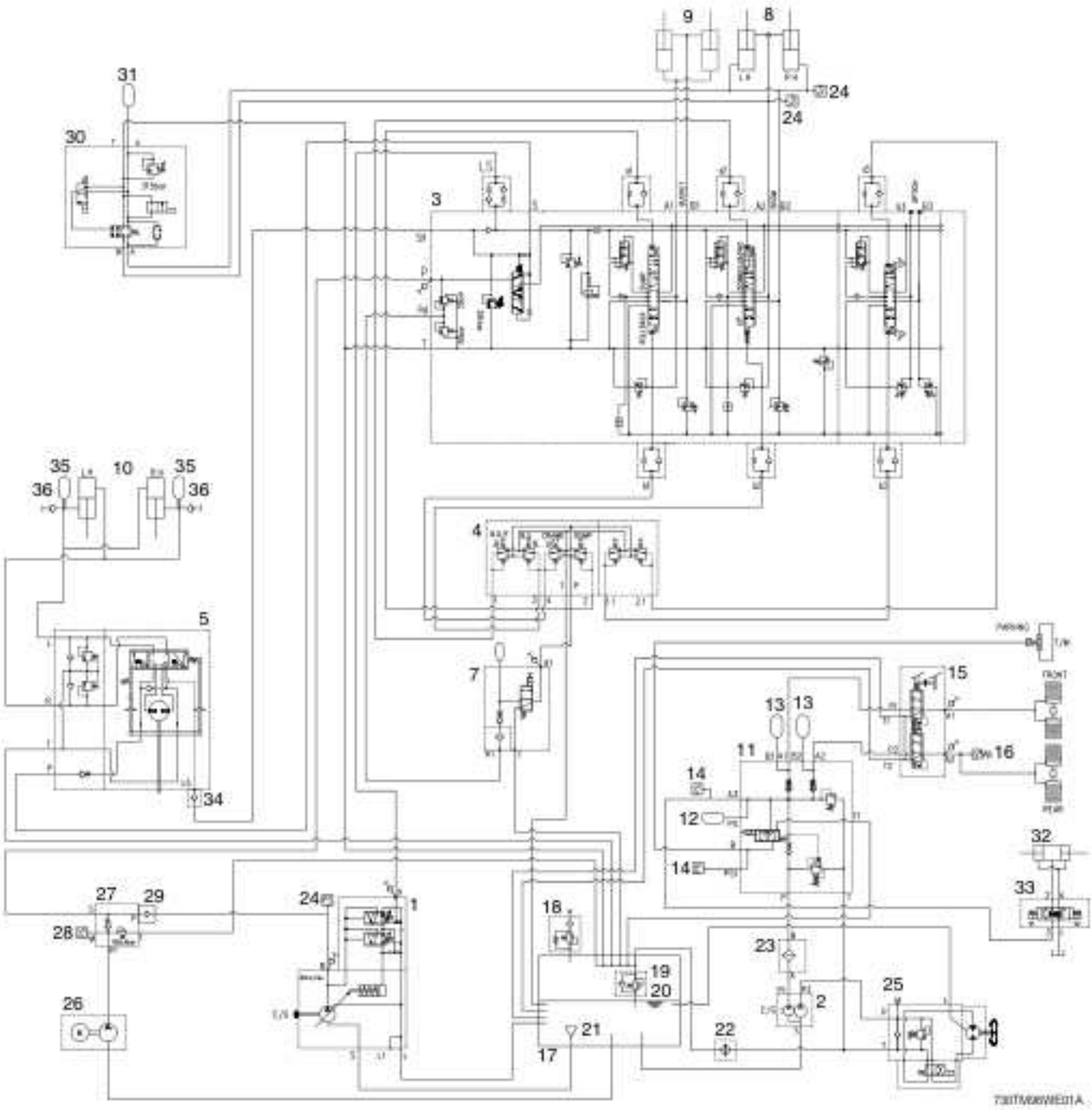
4) Run engine at specification and read pressure gauges.

   If pressure is more than specification at the steering unit, inspect priority spool in MCV for a stuck spool. Make sure orifice plugs are installed in ends of priority spool.
   Check for plugged orifice in priority spool SX port of MCV.



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HYDRAULIC CIRCUIT (HL730TM-9, #0086~)



1	Main pump	14	Pressure sensor	26	Pump motor (opt)
2	Fan & brake pump	15	Brake valve	27	Check block (opt)
3	Main control valve	16	Pressure switch	28	Pressure sensor (opt)
4	Remote control valve	17	Hydraulic tank	29	Check valve (opt)
5	Steering unit	18	Air breather	30	Ride control valve (opt)
7	Safety valve	19	Return filter	31	Accumulator (opt)
8	Boom cylinder	20	By pass valve	32	Quick coupler cylinder (opt)
9	Bucket cylinder	21	Strainer	33	Solenoid valve (opt)
10	Steering cylinder	22	Oil cooler	34	Check valve
11	Cut-off valve	23	Pressure filter	35	Accumulator
12	Accumulator	24	Pressure sensor	36	Orifice
13	Accumulator	25	Fan motor		

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5) DISASSEMBLY AND ASSEMBLY

(1) Spool

① Loosen the bolt (2EA).

- Tool : Wrench 4 mm
- Tightening torque : 0.85 kgf · m (61 lbf · ft)



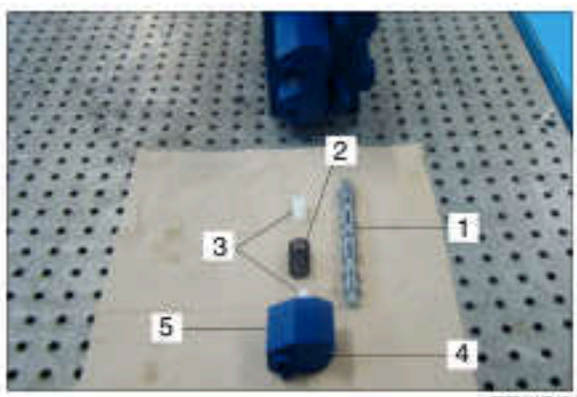
T5706WE41

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



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1 Spool
2 Spring
2 Spring ratainer
4 Bolt
5 Cover



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(2) Port relief valve

- Tool : Spanner 24 mm

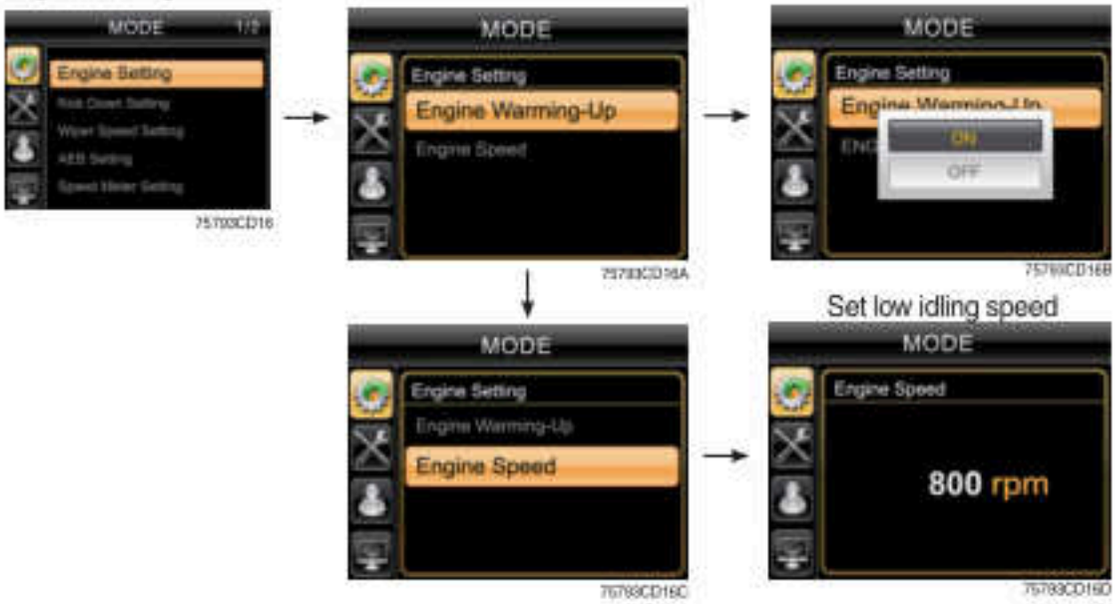


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(2) Mode

① Engine setting



② Kick down setting



- Mode 1 (down/up) : Press kick down button once, shift down and press button again, shift up.
- Mode 2 (down only) : Press kick down button every time, shift to lower gear respectively.

※ Refer to page 7-50.

③ Wiper speed setting



- Setting wipe speed 1 to 4.

④ Fan-auto mode



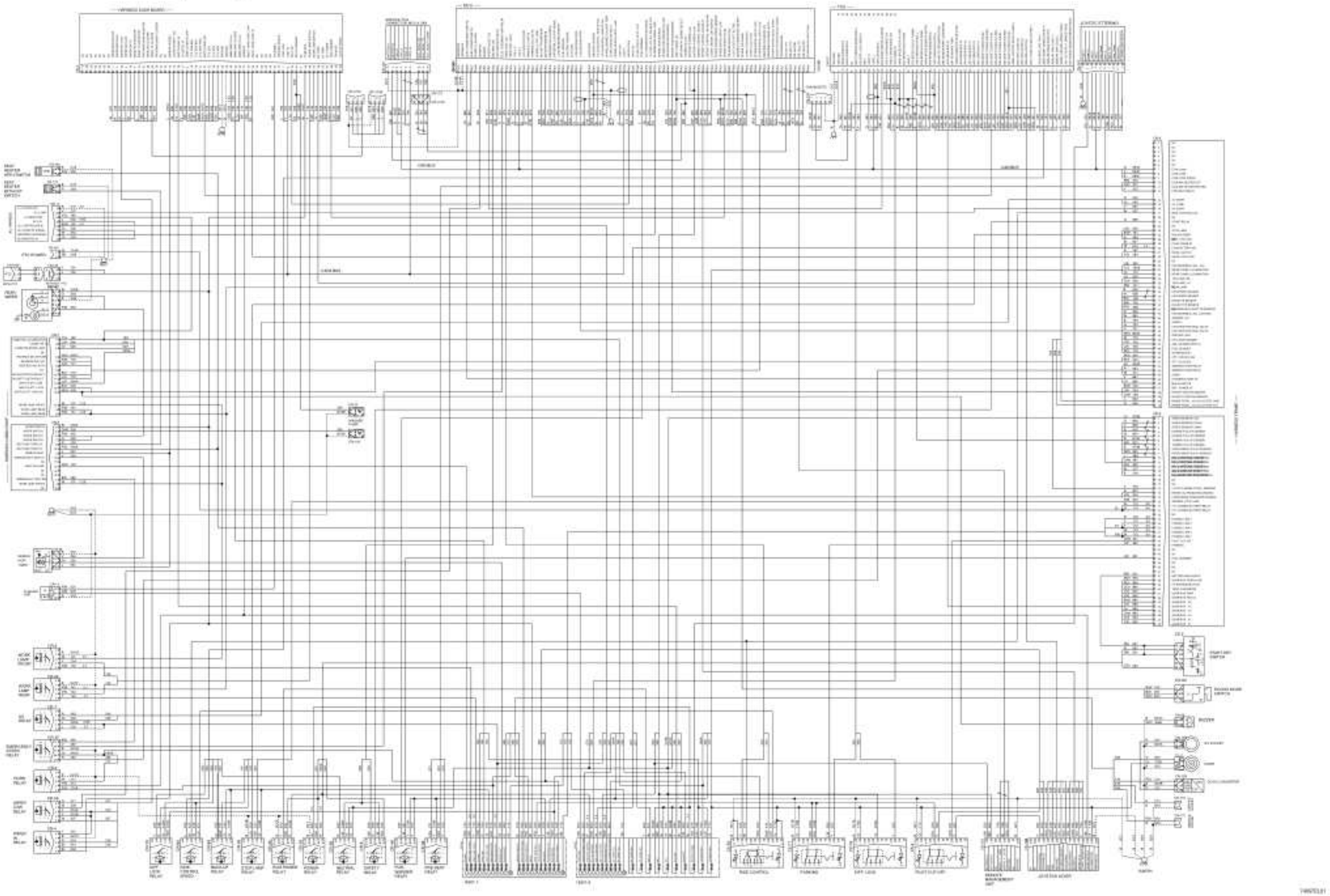
- Select reverse interval or reverse time.
- Set reverse interval (30~300 min) or reverse time (30~300 sec).

※ Default : Interval (60 min), time (120 sec)

※ Refer to page 7-46, fan control switch.

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· ELECTRICAL CIRCUIT (1/2) : Machine serial No.-#0028 (HL730-9)
Machine serial No.-#0008 (HL730TM-9)



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