WHEEL LOADER

SERVICE MANUAL

HL980

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
A4	S.C. to ground at warning signal output 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 · Warning device has an internal defect · Connector pin is contacted to vehicle ground	No reaction OP mode : Normal	· Check the cable from TCU to the warning device · Check the connectors from warning device to TCU · Check the resistance* of warning device * See page 3-82
A5	O.C. voltage at warning signal output 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 · Warning device has an internal defect · Connector has no connection to TCU	No reaction OP mode : Normal	· Check the cable from TCU to the warning device · Check the connectors from warning device to TCU · Check the resistance* of warning device * See page 3-82
A6	S.C. to battery voltage at warning signal output TCU detected a wrong voltage at the output pin, that looks like a S.C. to battery voltage · Cable is defective and has is contacted to battery voltage · Warning device has an internal defect · Connector pin is contacted to battery voltage	No reaction OP mode : Normal	· Check the cable from TCU to the warning device · Check the connectors from warning device to TCU · Check the resistance* of warning device * See page 3-82
B1	Slippage at clutch K1 TCU calculates a differential speed at closed clutch K1. If this calculated value is out of range, TCU interprets this as slipping clutch · Low pressure at clutch K1 · Low main pressure · Wrong signal at internal speed sensor · Wrong signal at output speed sensor · Wrong size of the sensor gap · Clutch is defective	TCU shifts to neutral OP mode : Limp home If failure at another clutch is pending TCU shifts to neutral OP mode : TCU shutdown	· Check pressure at clutch K1 · Check main pressure in the system · Check sensor gap at internal speed sensor · Check sensor gap at output speed sensor · Check signal at internal speed sensor · Check signal at output speed sensor · Replace clutch
B2	Slippage at clutch K2 TCU calculates a differential speed at closed clutch K2. If this calculated value is out of range, TCU interprets this as slipping clutch · Low pressure at clutch K2 · Low main pressure · Wrong signal at internal speed sensor · Wrong signal at output speed sensor · Wrong size of the sensor gap · Clutch is defective	TCU shifts to neutral OP mode : Limp home If failure at another clutch is pending TCU shifts to neutral OP mode : TCU shutdown	· Check pressure at clutch K2 Check main pressure in the system · Check sensor gap at internal speed sensor · Check sensor gap at output speed sensor · Check signal at internal speed sensor · Check signal at output speed sensor · Replace clutch

※ Some fault codes are not applied to this machine.

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Housing dimension :

(3) Determine Dimension I, from the bearing outer ring to the mounting face.
Dimension I e.g ..... 16.13 mm



Figure 260

Cover dimension :

(4) Determine Dimension II, from the contact/ bearing outer ring to the mounting face.
Dimension II e.g ..... 17.75 mm

- Special tool
  Digital depth gauge 5870 200 072

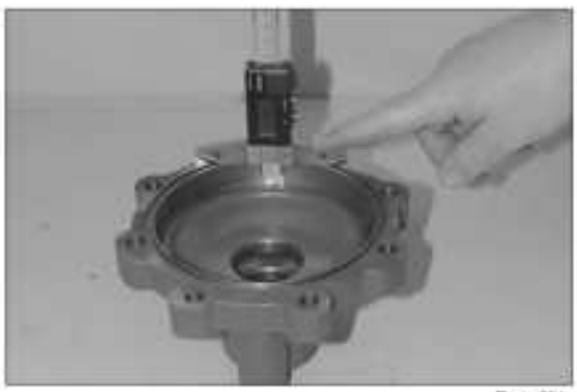


Figure 261

Example :

Dimension II	.....	17.75 mm
Dimension I	.....	- 16.13 mm
Difference	.....	= 1.62 mm
Bearing preload	..... e.g.	+ 0.03 mm
Resulting shim (s)	..... s	= 1.65 mm

(5) Fix the shim with assembly grease into the cover. Install the O-ring (arrow).



Figure 262

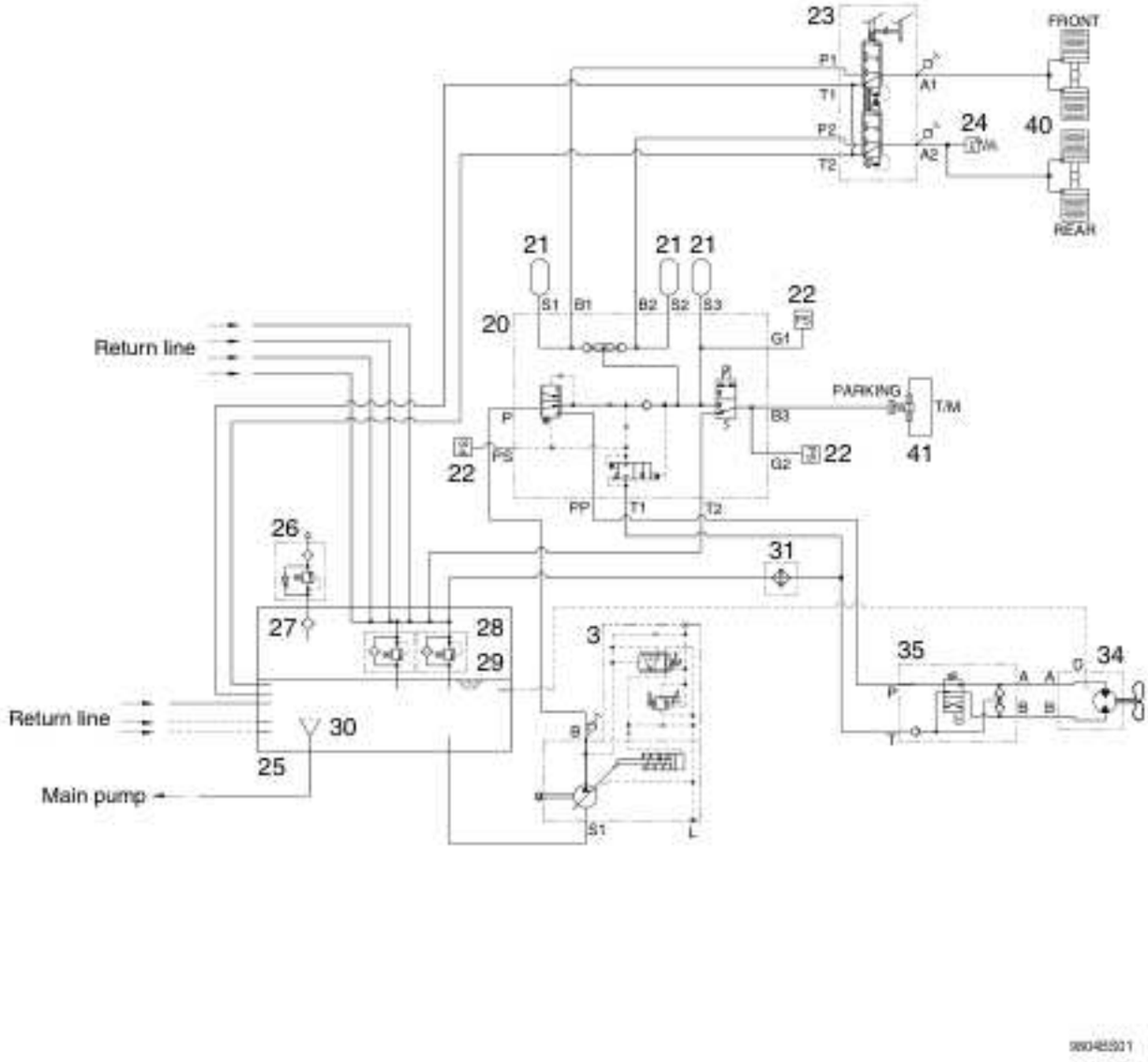
(6) Grease the rectangular rings (arrows) and centrally align them.



Figure 263

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2. HYDRAULIC CIRCUIT



3	Fan & brake pump	25	Hydraulic tank	31	Oil cooler
20	Cut-off valve	26	Air breather	34	Fan motor
21	Accumulator	27	Strainer	35	Directional valve
22	Pressure sensor	28	Return filter	40	Axle
23	Brake valve	29	Bypass valve	41	Parking brake at T/M
24	Pressure switch	30	Strainer		

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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)



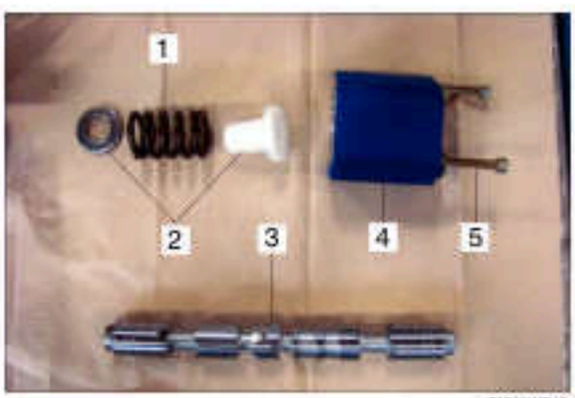
T6096WE40

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



T6096WE41

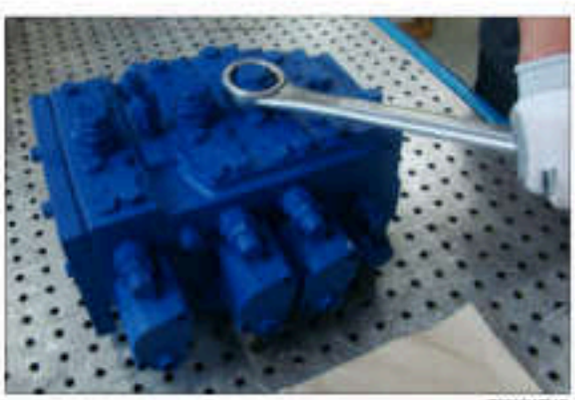
1 Spring
2 Spring ratainer
3 Spool
4 Cover
5 Bolt



T6096WE42

(2) Compensator valve

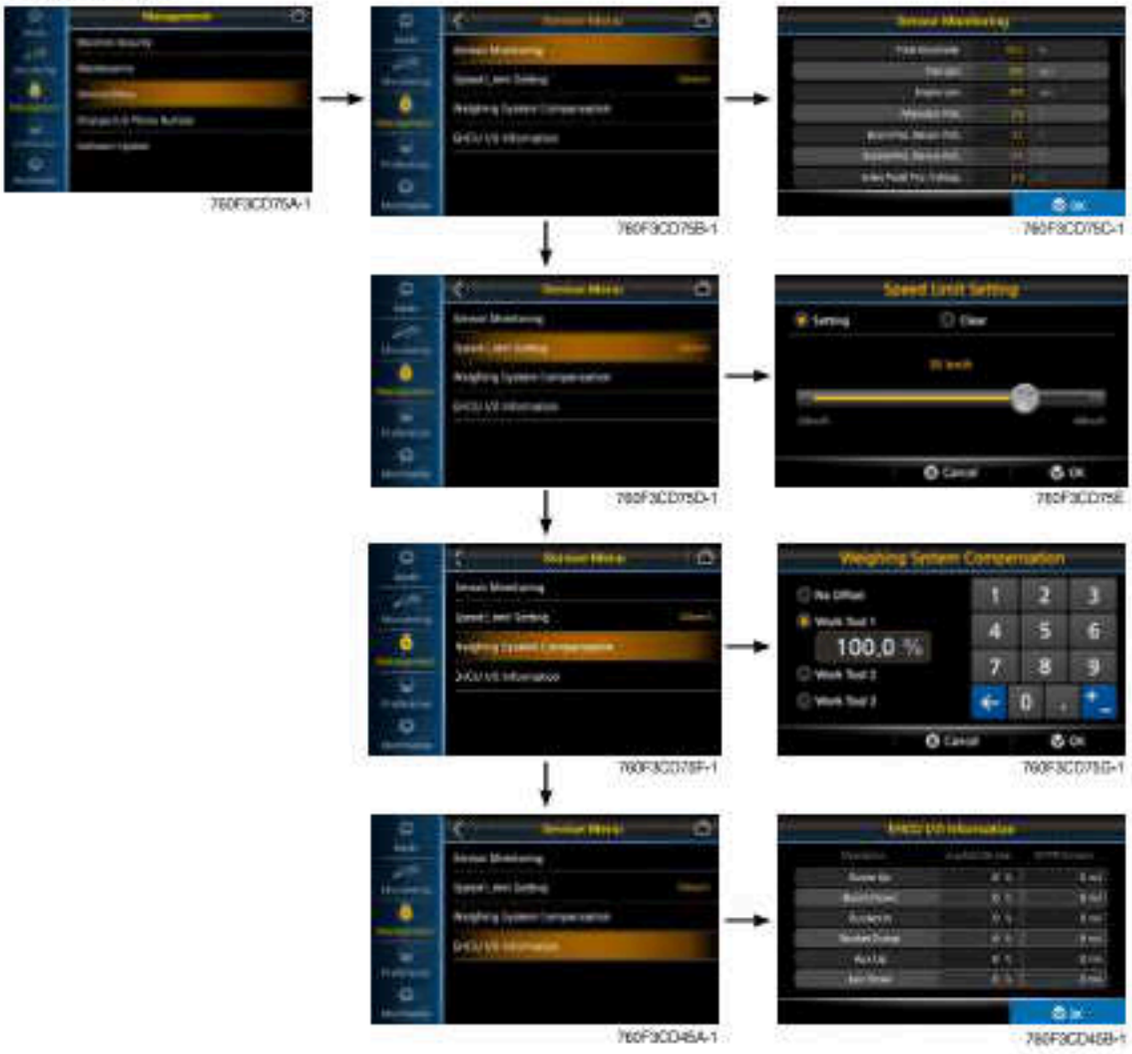
- Tool : Spanner 42 mm



T6096WE43

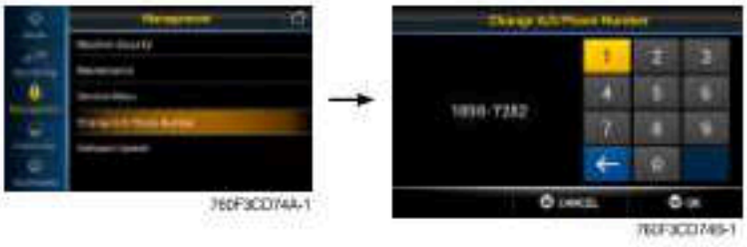
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③ Service menu



- **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



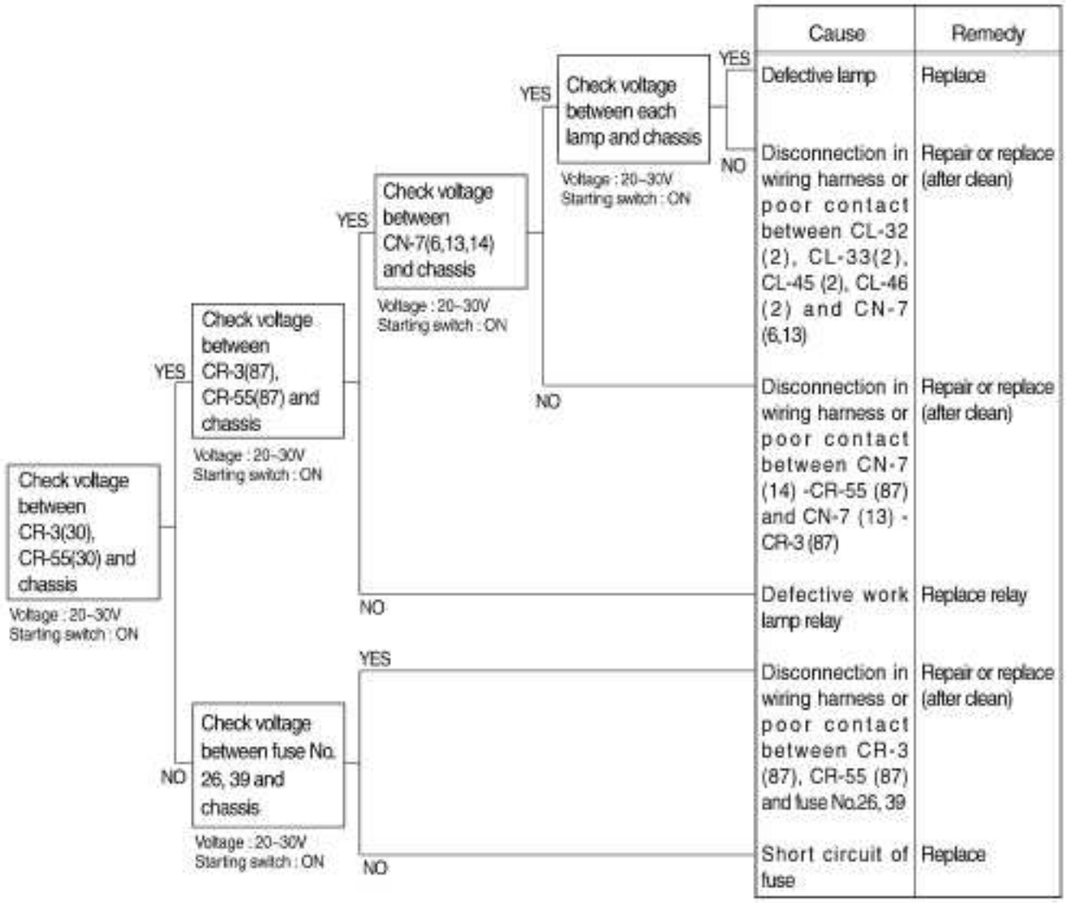
- Change A/S phone number : Check and change of contact information for customer service.
- Software update : Update file in USB memory.

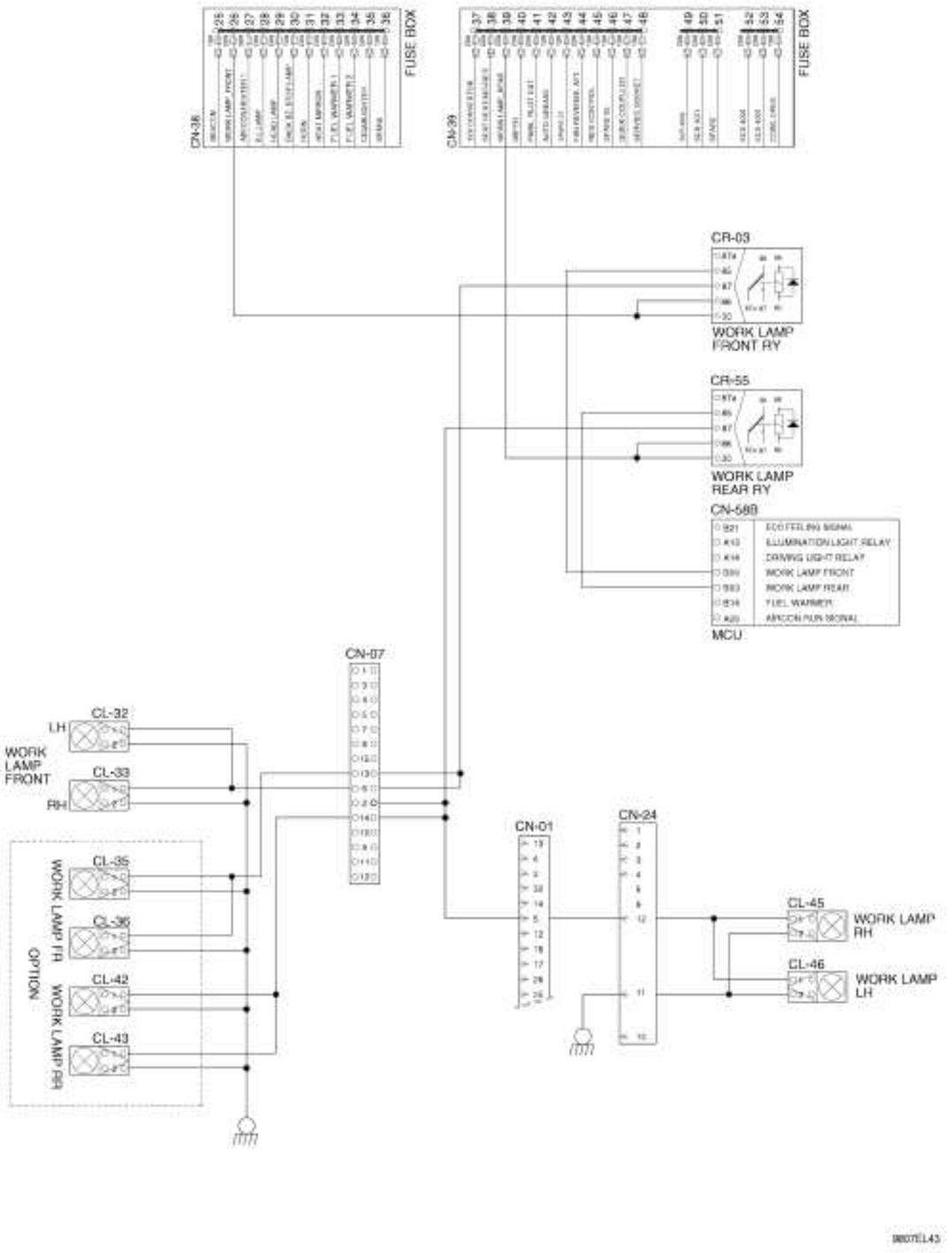
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8. WHEN STARTING SWITCH IS TURNED ON, WORK LAMP DOES NOT LIGHTS UP

·Before carrying out below procedure, check all the related connectors are properly inserted, and the fuse No.26, 39 is not blown out.

·After checking, connect the disconnected connectors again immediately unless otherwise specified.





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