CRAWLER EXCAVATOR

SERVICE MANUAL

R305LC-7

HYUNDAI

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2) DESCRIPTION OF MONITORING DISPLAY

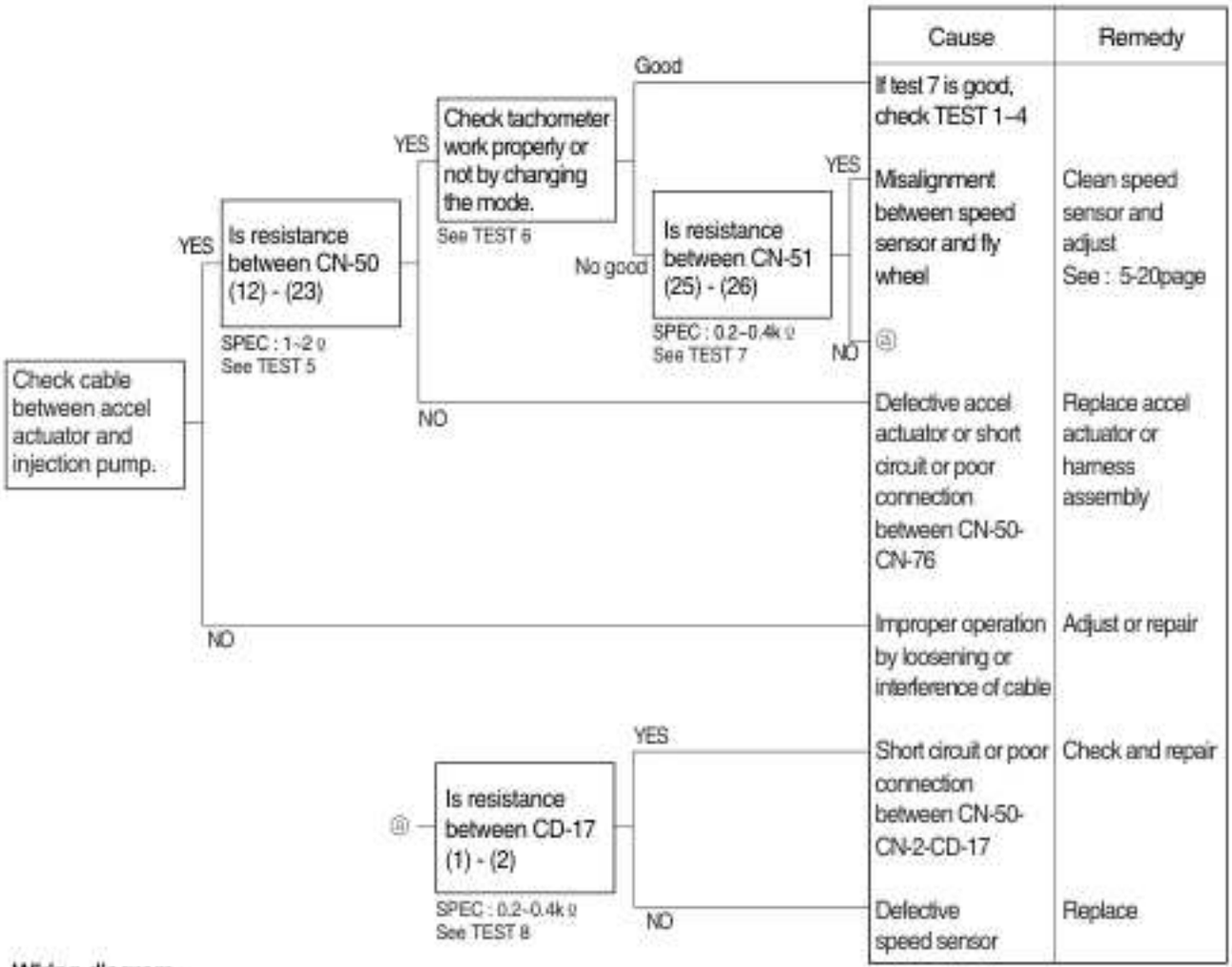
Group	Display	Name	Description
Group 0	2250 rpm	Engine speed	It displays current engine speed detected by engine speed sensor from 500 to 3000rpm. Range : 500~3000rpm by 10rpm
	TIME 12 : 30	Time	It displays current time(12 is hour and 30 is minute) Range : Hour(1~12), minute(00~59)
	EP : 10bar	Power shift pressure of EPPR valve	It shows that pump power shift pressure of EPPR valve being controlled by the CPU controller is 10bar. Range : 00~50bar by 1bar
	30 : C1.4	Model and CPU program version	It shows that machine model(R305LC-7) and the program version of the CPU controller is 1.4. Version display range : 0.0~9.9 by 0.1
	P1 : 100bar (Option)	Front pump pressure	It displays front pump pressure of 100bar which is detected by pressure sensor. Range : 000~500bar by 10bar
	P2 : 200bar (Option)	Rear pump pressure	It displays rear pump pressure of 200bar which is detected by pressure sensor. Range : 000~500bar by 10bar
	P3 : 30bar (Option)	Pilot pump pressure	It displays pilot pump pressure of 30bar which is detected by pressure sensor. Range : 00~50bar by 1bar
Group 1	b : 24.8V	Battery voltage	It shows that battery power of 24.8V is supplied into CPU controller. Range : 00.0~48.0V by 0.1V
	Po : 2.5V	Potentiometer voltage	It shows that potentiometer signal voltage is 2.5V. Range : 0.0~5.0V by 0.1V
	dL : 3.8V	Accel dial voltage	It shows that accel dial signal voltage is 3.8V. Range : 0.0~5.0V by 0.1V
	Hd : 50°C	Hydraulic oil temperature	It shows that hydraulic oil temperature detected by temperature sensor is 50°C. Range : 0~150°C by 1°C
	Ct : 85°C	Coolant temperature	It shows that coolant oil temperature detected by temperature sensor is 50°C. Range : 0~150°C by 1°C
	AP : 100	Ambient pressure	It shows that ambient pressure detected by ECM is 100 kpascal. Range : 0 ~ 125 kpa by 1kpa.

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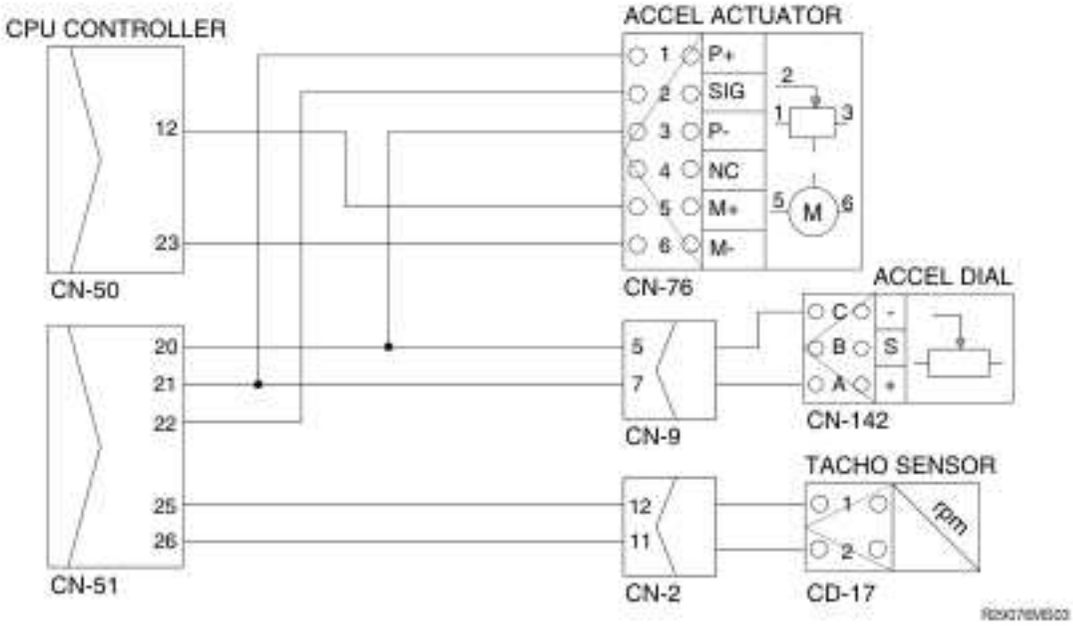
2. ENGINE SPEED IS SLOW AT ALL MODE

※ Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE

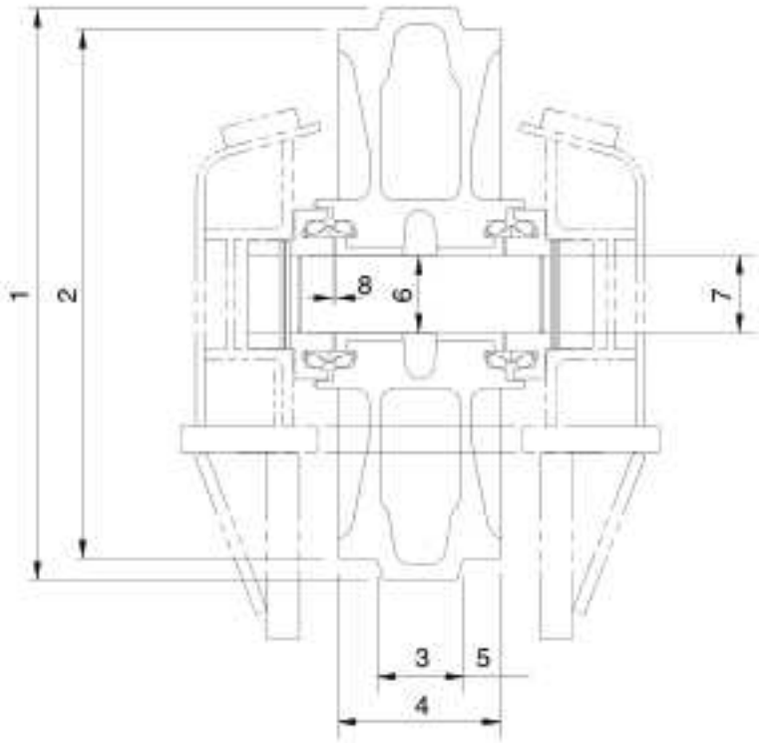


Wiring diagram



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3) IDLER



Unit : mm

No.	Check item	Criteria				Remedy
1	Outside diameter of protrusion	Standard size		Repair limit		Rebuild or replace
		ø 646		-		
2	Outside diameter of tread	ø 594		ø 588		
3	Width of protrusion	102		-		
4	Total width	203		-		
5	Width of tread	50.5		56.5		
6	Clearance between shaft and bushing	Standard size & tolerance		Standard clearance	Clearance limit	Replace bushing
		Shaft	Hole			
		ø 90 $^{0}_{-0.035}$	ø 90.35 $^{+0.05}_{0}$	0.35 to 0.435	2.0	
7	Clearance between shaft and support	ø 90 $^{0}_{-0.035}$	ø 90 $^{+0.09}_{+0.036}$	0.036 to 0.125	1.2	Replace
8	Side clearance of idler (Both side)	Standard clearance		Clearance limit		Replace
		0.4 to 1.2		2.0		

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(28)Assemble piston ring(30), piston ring 252(30) and 278(31) into brake piston(29).



(29)Assemble brake piston into shaft casing.

※ Be careful of the direction of assembling brake piston.



(30)Assemble brake spring(32).

※ Quantity : Spring-10pieces, Holes-11pieces

※ Do not assemble on the top of brake piston.



(31)Insert O-ring(69), after fastening orifice screw(4) with standard torque.

- Quantity and size : (4)2 pieces-ø 1.0
  (56)1pieces-ø 1.5
- Tightening torque : 7kgf · m (50.63lbf · ft)



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(8) Negative control relief valve

① Remove plug(551).

· Hexagon wrench : 12mm



21078MC15

② Remove poppet(611), spring(621) and damping rod(631).



21078MC16

(9) Swing logic valve and check valve

① Loosen hexagon socket head bolts(251) and remove logic valve(251) and take check valve(254).

② Remove plug(551) or (552) and take out poppet(511) or (515, 516) and spring (521) or (523).

· Hexagon wrench : 6, 12mm



21078MC17

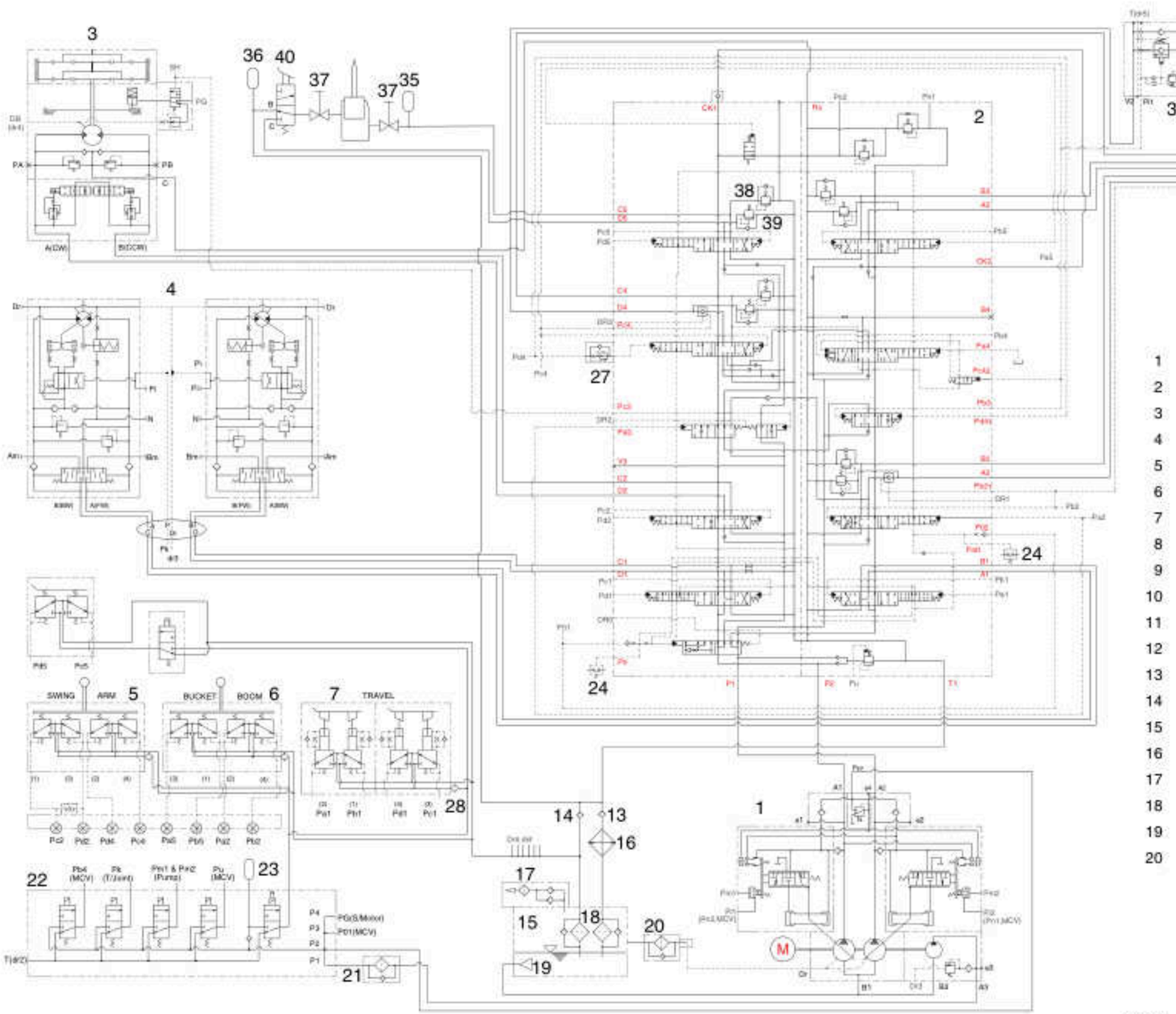
(10) Boom priority valve

Loosen hexagon socket head bolts(104) and remove boom priority valve(104).

· Hexagon wrench : 10mm

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GROUP 1 HYDRAULIC CIRCUIT(#0120-)



1	Main pump	21	Line filter
2	Main control valve	22	Solenoid valve
3	Swing motor	23	Accumulator
4	Travel motor	24	Pressure switch
5	RCV lever(LH)	25	Shuttle valve
6	RCV lever(RH)	26	Last guard filter
7	Rcv pedal	27	Rcv pedal
8	Boom cylinder(LH)	28	Shockless valve
9	Boom cylinder(RH)	29	Solenoid valve
10	Arm cylinder	30	Safety valve
11	Bucket cylinder	31	Safety valve
12	Turning joint	32	Press switch
13	Check valve	33	Shut off valve
14	Check valve	34	Pedal
15	Hydraulic tank	35	Accumulator
16	Oil cooler	36	Accumulator
17	Air breather	37	Stop valve
18	Bypass valve	38	Port relief valve
19	Return element	39	Port relief valve
20	Strainer	40	Selector valve

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