WHEEL LOADER

SERVICE MANUAL

HL760-7

HYUNDAI

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CONTENTS

SECTION 1 GENERAL

Group 1 Safety Hints 1-1
Group 2 Specifications 1-10
Group 3 Operational Checkout Record Sheet 1-23

SECTION 2 ENGINE

Group 1 Structure and Function 2-1
Group 2 Fan drive circuit for cooling system 2-5

SECTION 3 POWER TRAIN SYSTEM

Group 1 Structure and Function 3-1
Group 2 Operational Checks and Troubleshooting 3-67
Group 3 Test and Adjustments 3-78
Group 4 Disassembly and Assembly 3-81

SECTION 4 BRAKE SYSTEM

Group 1 Structure and Function 4-1
Group 2 Operational Checks and Troubleshooting 4-24
Group 3 Tests and Adjustments 4-32
Group 4 Disassembly and assembly 4-34

SECTION 5 STEERING SYSTEM

Group 1 Structure and Function 5-1
Group 2 Operational Checks and Troubleshooting 5-17
Group 3 Tests and Adjustments 5-32
Group 4 Disassembly and Assembly 5-34

SECTION 6 WORK EQUIPMENT

Group 1 Structure and Function 6-1
Group 2 Operational Checks and Troubleshooting 6-31
Group 3 Tests and Adjustments 6-42
Group 4 Disassembly and Assembly 6-58

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SECTION 7 ELECTRICAL SYSTEM

Group 1 Component Location 7-1
Group 2 Electrical Circuit 7-3
Group 3 Monitoring System 7-21
Group 4 Electrical Component Specification 7-37
Group 5 Connectors 7-44
Group 6 Troubleshooting 7-58

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Group 1 Safety Hints 1-1
Group 2 Specifications 1-10
Group 3 Operational Checkout Record Sheet 1-22

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2) MAIN PUMP

Item	Specification
Type	Fixed displacement tandem gear pump
Capacity	68+63cc/rev
Maximum operating pressure	210kgf/cm²(2990psi)
Rated oil quantity	283 ℓ /min(74.8U.S.gpm / 62.0U.K.gpm)
Rated speed	2200rpm

3) FAN PUMP + BRAKE

Item	Specification	
	FAN	BRAKE
Type	Fixed displacement double helical gear pump	
Capacity	22.9cc/rev	11.9cc/rev
Maximum operating pressure	120kgf/cm²(1710psi)	150kgf/cm²(2130psi)
Rated oil quantity	48 ℓ /min(12.7U.S.gpm)	25 ℓ /min(6.6U.S.gpm)
Rated speed	2200rpm	

4) MAIN CONTROL VALVE

Item	Specification
Type	2 spool
Operating method	Hydraulic pilot assist
Main relief valve pressure	210kgf/cm²(2990psi)
Overload relief valve pressure(Boom)	240kgf/cm²(3410psi)

5) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating	Minimum	5.8kgf/cm²(82.5psi)
	Maximum	19kgf/cm²(270psi)
Single operation stroke	Lever	70mm(2.8in)

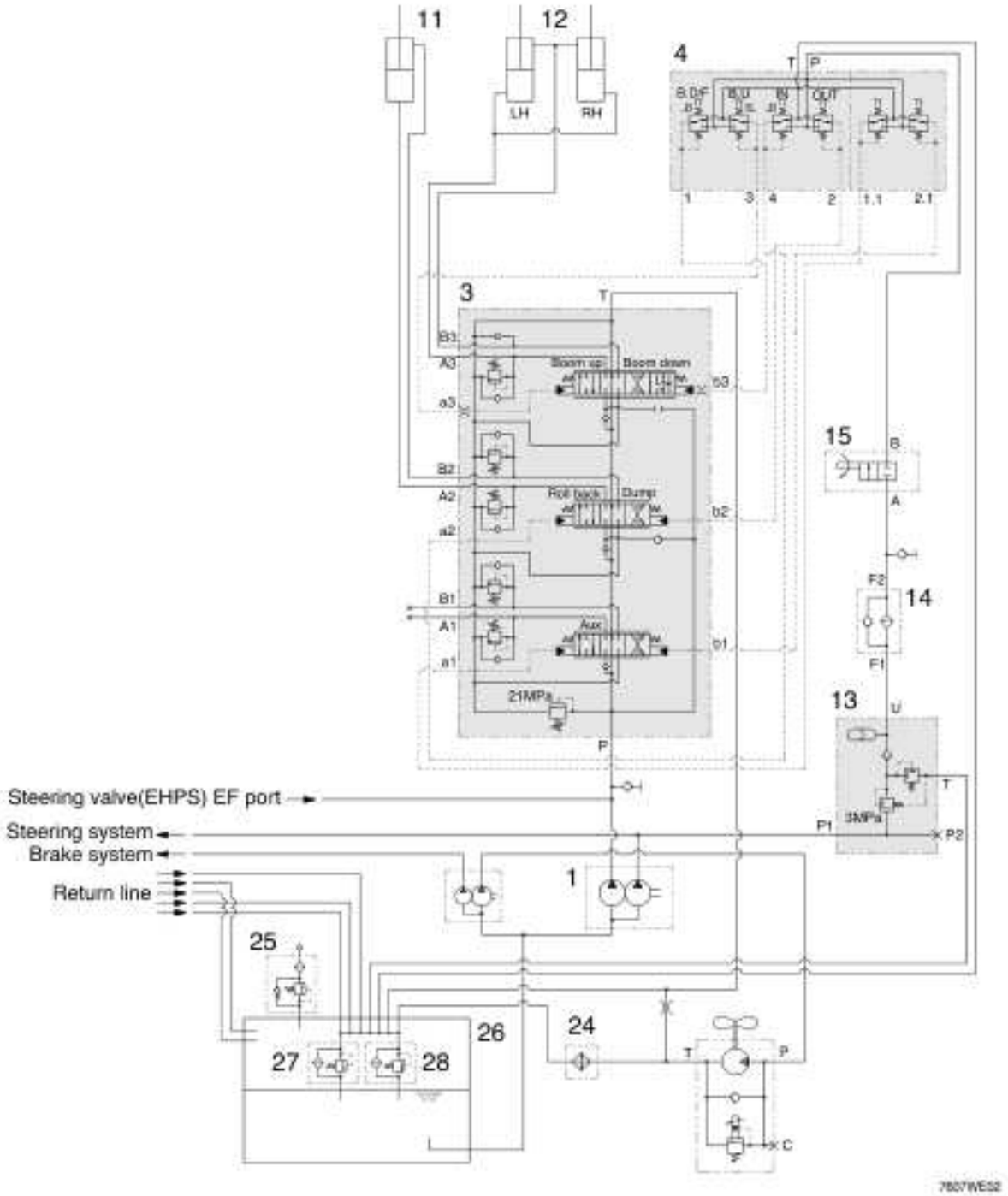
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(4) Engine fault code information

Fault code No.	Reason	Effect(only when fault code is active)
111	ECM internal hardware error.	Possible no effect or engine may run rough or not start.
115	No engine speed or position signal detected at pin 17 of the engine harness.	Engine power derate. Possible white smoke.
121	No engine speed or position signal detected at pin 9 of the engine harness	No engine speed and position backup for main speed/position sensor.
122	High voltage detected at the boost pressure sensor signal pin 45 of the engine harness.	Engine will derate to no-boost fueling.
123	Low voltage detected at boost pressure sensor signal pin 45 of the engine harness.	Engine will derate to no-boost fueling.
131	High voltage detected at throttle position signal pin 30 of the machine harness.	Engine idles when idle validation switch indicates idle and ramps up to a default set speed when the idle validation switch indicates off-idle.
132	Low voltage detected at throttle position signal pin 30 of the machine harness.	Engine idles when idle validation switch indicates idle and ramps up to a default set speed when the idle validation switch indicates off-idle.
133	High voltage detected at remote throttle position signal pin 9 of the machine harness.	Engine will **not** respond to remote throttle input.
134	Low voltage detected at remote throttle position signal pin 9 of the machine harness.	Engine will **not** respond to remote throttle input.
135	High voltage detected at oil pressure signal pin 33 of the engine harness.	Default value used for oil pressure. No engine protection for oil pressure.
141	Low voltage detected at oil pressure signal pin 33 of the engine harness.	Default value used for oil pressure. No engine protection for oil pressure.
143	Oil pressure signal indicates oil pressure below the low engine protection limit.	Power and/or speed derate and possible engine shutdown if engine protection shutdown feature is enabled.
144	High voltage detected at coolant temperature signal pin 23 of the engine harness.	Default value used for coolant temperature. No engine protection for coolant temperature.
145	Low voltage detected at coolant temperature signal pin 23 of the engine harness.	Default value used for coolant temperature. No engine protection for coolant temperature.
146	Coolant temperature signal indicates coolant temperature has exceeded the minimum engine protection limit.	Power derate and possible engine shutdown feature is enabled.
151	Coolant temperature signal indicates coolant temperature has exceeded the maximum engine protection limit.	Speed derate and possible engine shutdown if engine protection shutdown feature is enabled.
153	High voltage detected at intake manifold temperature signal pin 34 of the engine harness.	Default value used for intake manifold temperature. No engine protection for intake manifold temperature.
154	Low voltage detected at intake manifold temperature signal pin 34 of the engine harness.	Default value used for intake manifold temperature. No engine protection for intake manifold temperature.
155	Intake manifold air temperature signal indicates intake manifold air temperature is above the maximum engine protection limit.	Speed derate and possible engine shutdown if engine protection shutdown feature is enabled.
191	Air conditioner clutch driver signal indicates a short to ground when commanded on.	Air conditioner clutch will **not** operate.
211	Machine specific fault code has occurred.	No effect on engine performance.
221	High voltage detected at ambient air pressure signal pin 32 of the engine harness.	Engine power derate.
234	Engine speed signal indicates engine speed has exceeded the overspeed limit.	Fuel to injectors disabled until engine speed falls below the overspeed limit.
235	Coolant level signal at pin 37 of the engine harness indicates coolant level is low.	Power and/or speed derate and possible engine shutdown if engine protection shutdown feature is enabled.

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3. WORK EQUIPMENT HYDRAULIC CIRCUIT



1	Main pump	13	Pilot supply unit	25	Air breather
3	Main control valve	14	Line filter	26	Hydraulic tank
4	Remote control valve	15	Safety valve	27	Return filter
11	Bucket cylinder	24	Oil cooler	28	Bypass valve
12	Boom cylinder				

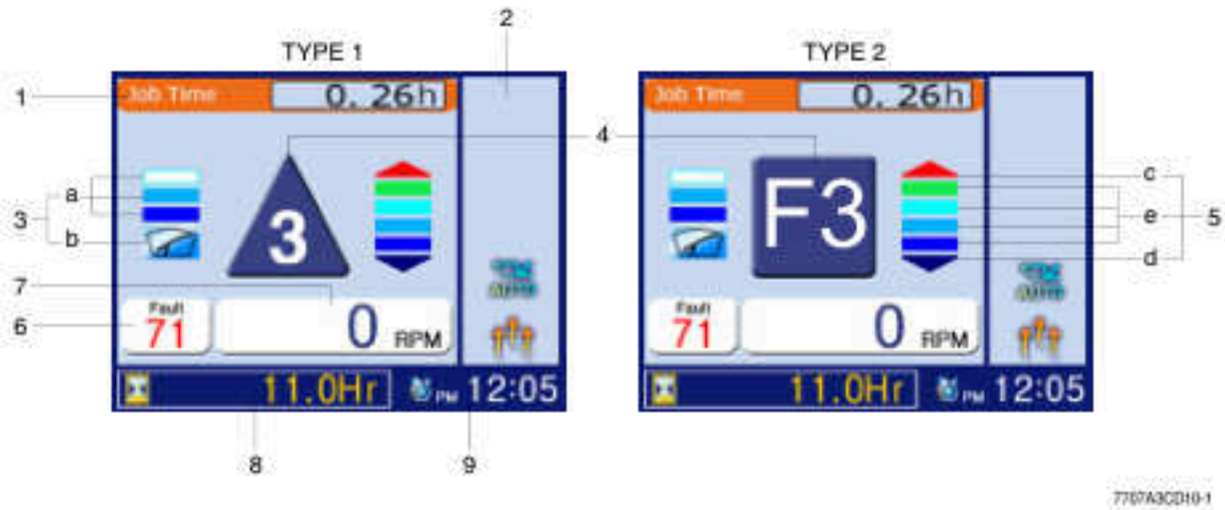
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LCD (Machine serial no. ; #1033-)



1 LCD
2 ( ) Right
Move to the next selection
3 ( ) Select(Enter)
Activate the currently chosen item
4 ( ) Escape
Return to the previous menu
5 ( ) Main, Menu
- Display menu
- Return to the main display

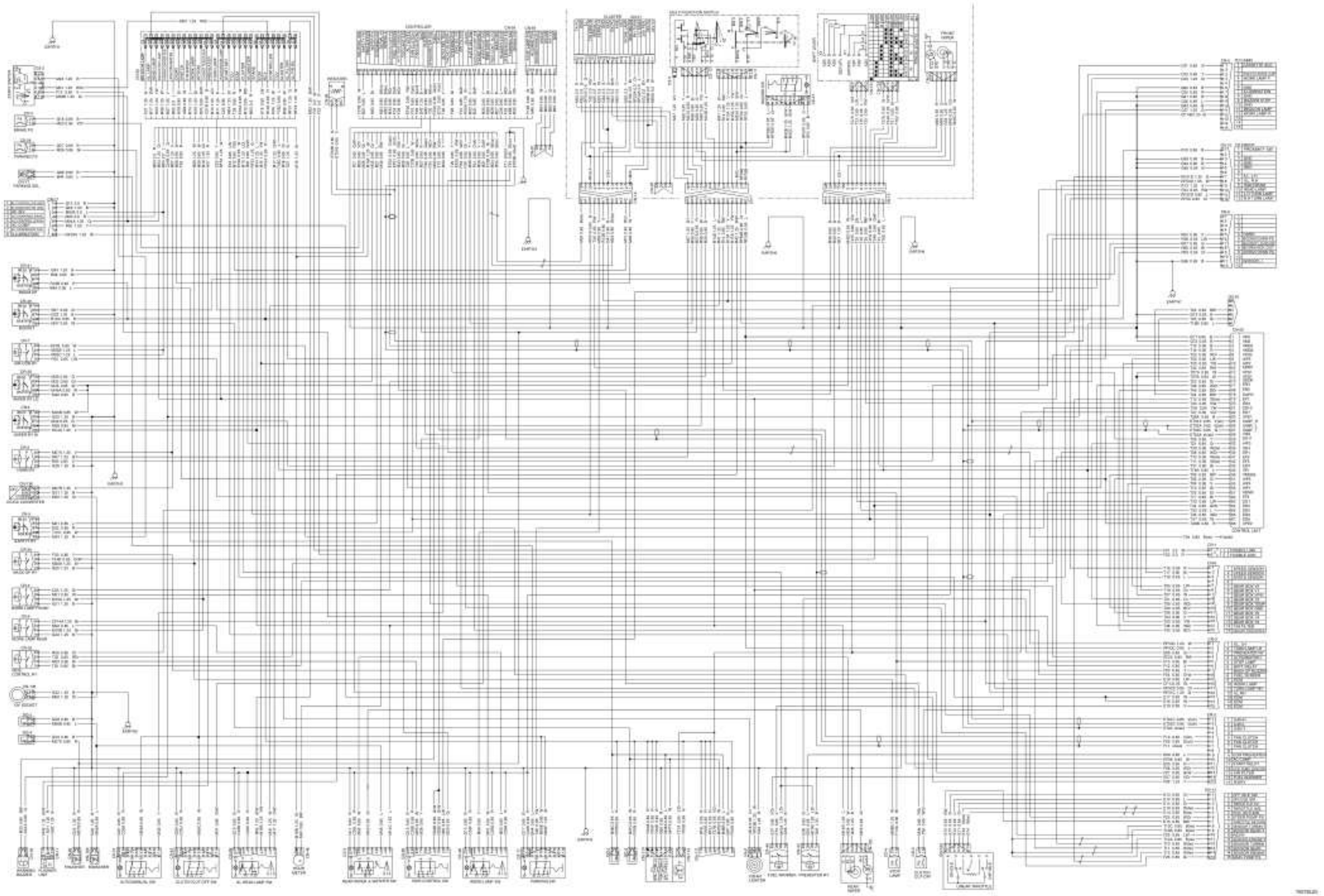
(1) Main display



No	Symbol	Meaning	Remark		
1	Job Time 1,26h	Monitoring information	Job timer, Odometer, Hydraulic temperature, Battery voltage, Coolant temperature, T/M oil temperature.		
2	AUTO	State information	Ride state(option), Warming up		
3	a	Wiper display	When operating intermittently, it shows an operating time interval		
	b		Wiper motor intermittently operating		
4	△·▽·□	Actual gear display	Forward, reverse, neutral	LCD type 1	
	F, R, N		Forward, reverse, neutral	LCD type 2	
	1, 2, 3, 4		Actual gear		
	P		Parking brake mode active		
5	c, d	Select gear display	Up and down shifting	c: Forward, d: Reverse	Automatic mode
	e		Pre-selected gear		
6	71	Fault code display	Fault code state display		
7	0 RPM	Engine rpm display	Now engine rpm state display		
8	11.0Hr	Hour meter display	Hour meter state display		
9	PM 12:05	Timer & alarm display	Now time & alarm state display		

※ Both type1 and type2 are LCD modes and they can be changed each other by operator's selection. (Adjustment/Display, see page 7-34)

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