WHEEL LOADER

SERVICE MANUAL

HL770-7

HYUNDAI

MidWestTech | Hyundai HL770-7 Wheel Loader Service Manual | Publication HL770-7

Order the manual at mid-west-tech.com >

CONTENTS

SECTION 1 GENERAL

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

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 3-59
Group 3 Test and Adjustments 3-71
Group 4 Disassembly and Assembly 3-74

SECTION 4 BRAKE SYSTEM

Group 1 Structure and Function 4-1
Group 2 Operational Checks and Troubleshooting 4-29
Group 3 Tests and Adjustments 4-37
Group 4 Disassembly and Assembly 4-39

SECTION 5 STEERING SYSTEM

Group 1 Structure and Function 5-1
Group 2 Operational Checks and Troubleshooting 5-18
Group 3 Tests and Adjustments 5-28
Group 4 Disassembly and Assembly 5-36

SECTION 6 WORK EQUIPMENT

Group 1 Structure and Function 6-1
Group 2 Operational Checks and Troubleshooting 6-35
Group 3 Tests and Adjustments 6-46
Group 4 Disassembly and Assembly 6-62

MidWestTech | Hyundai HL770-7 Wheel Loader Service Manual | Publication HL770-7 Order the manual at mid-west-tech.com >

SECTION 7 ELECTRICAL SYSTEM

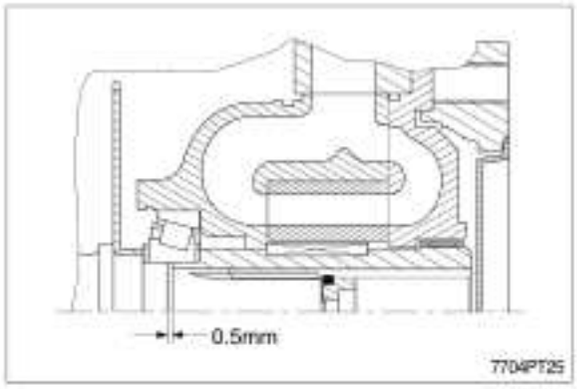
Group 1 Component Location 7-1
Group 2 Electrical Circuit 7-3
Group 3 Monitoring System 7-23
Group 4 Electrical Component Specification 7-35
Group 5 Connectors 7-44
Group 6 Troubleshooting 7-61

MidWestTech | Hyundai HL770-7 Wheel Loader Service Manual | Publication HL770-7 Order the manual at mid-west-tech.com >

Fault code (Hex)	Int. code (Dec)	Meaning of the fault code possible reason for fault detection	Reaction of the TCU	Possible steps to repair	Remarks
B7	87	**Overtemp sump** TCU measured a temperature in the oil sump that is over the allowed threshold.	No reaction OP mode : Normal	Cool down machine Check oil level Check temperature sensor	
B8	88	**Overtemp retarder** TCU measured a temperature in the retarder oil that is over the allowed threshold	TCU disables retarder OP mode : Normal	Cool down machine Check oil level Check temperature sensor	
B9	89	**Overspend engine**	Retarder applies OP mode : Normal	-	
BA	90	**Differential pressure oil filter** TCU measured a voltage at differential pressure switch out of the allowed range Oil filter is polluted Cable/connector is broken or cable/ connector is contacted to battery voltage or vehicle ground Differential pressure switch is defective	No reaction OP mode : Normal	Check oil filter Check wiring from TCU to differential pressure switch Check differential pressure switch(Measure resistance)	
BB	172	**Slippage at converter lockup clutch** TCU calculates a differential speed at closed converter lockup clutch. If this calculated value is out of range, TCU interprets this as slipping clutch Low pressure at converter lockup clutch Low main pressure Wrong signal at engine speed sensor Wrong signal at turbine speed sensor Wrong size of the sensor gap Clutch is defective		Check pressure at converter lockup clutch Check main pressure in the system Check sensor gap at engine speed sensor Check sensor gap at turbine speed sensor Check signal at engine speed sensor Check signal at turbine speed sensor Replace clutch	

MidWestTech | Hyundai HL770-7 Wheel Loader Service Manual | Publication HL770-7 Order the manual at mid-west-tech.com >

(2) Adjust gap = 0.5mm(Driver - Drive shaft) (Figure (2)~(6)).

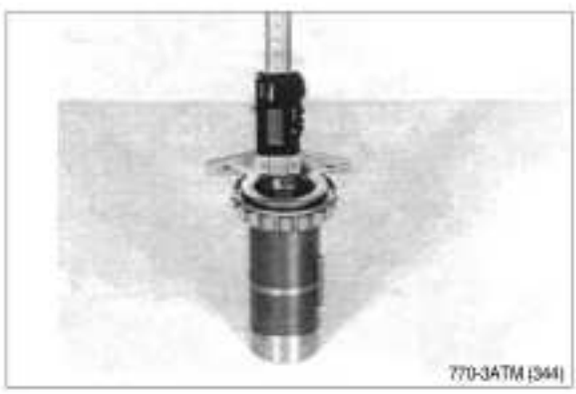


(3) Assemble disk s=1.90mm and place bearing inner race against shoulder.



(4) Determine dimension Ⅰ from the bearing inner race to the end face/driver.

· Dimension Ⅰ e.g. 9.60mm

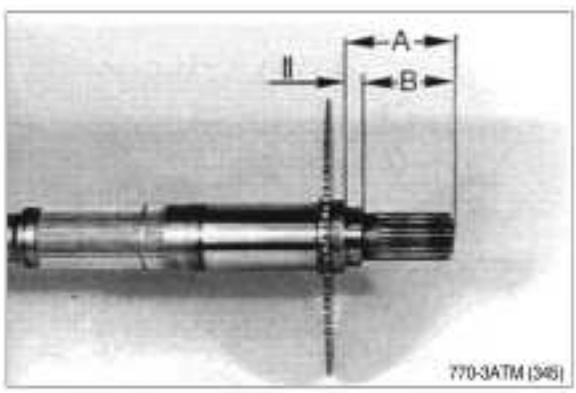


(5) Determine dimension Ⅱ (A-B).

· Dimension Ⅱ e.g. 10.60mm

Example H

Dimension Ⅱ	10.60mm
Dimension Ⅰ	- 9.60mm
Difference	1.00mm
Required gap	+ 0.50mm
Gives shim(s)	s = 1.50mm



MidWestTech | Hyundai HL770-7 Wheel Loader Service Manual | Publication HL770-7 Order the manual at mid-west-tech.com >

GROUP 5 CONNECTORS

1. CONNECTOR DESTINATION

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-1	58	2	I/conn(Frame harness-Main harness)	S813-030200	S813-130200
CN-2	AMP	15	I/conn(Frame harness-Main harness)	2-85262-1	368301-1
CN-3	AMP	15	I/conn(Frame harness-Main harness)	2-85262-1	368301-1
CN-4	SWP	12	I/conn(Frame harness-Engine harness)	S816-012002	S816-112002
CN-5	AMP	15	I/conn(Cab harness-Main harness)	2-85262-1	368301-1
CN-6	AMP	15	I/conn(Frame harness-Main harness)	2-85262-1	368301-1
CN-8	SWP	12	I/conn(Front harness-Main harness)	S816-012002	S816-112002
CN-10	SWP	12	I/conn(Front harness-Main harness)	S816-012002	S816-112002
CN-11	DEUTSCH	8	I/conn(Main harness-Aircon harness)	DT06-8S	-
CN-12	AMP	15	I/conn(Frame harness-Engine harness)	2-85262-1	368301-1
CN-14	AMP	15	I/conn(Frame harness-Main harness)	2-85262-1	368301-1
CN-20	Molex	2	Horn	36825-0212	-
CN-21	HW090 sealed	6	Front wiper motor	6189-01330	-
CN-22	SWP	2	Front washer tank	S814-002000	-
CN-23	YAZAK1	2	Speaker(LH)	7123-1520	-
CN-24	YAZAK1	2	Speaker(RH)	7123-1520	-
CN-25	Molex	2	Horn	36825-0212	-
CN-26	250	2	Warning buzzer	S810-002202	-
CN-27	PA	9	Cassette and radio	S811-009003	-
CN-28	-	1	Comp(Air-con)	NMWP01F-B	-
CN-29	KET	2	Receiver drier	MG640795	-
CN-36	-	-	Fuse box	24L1-04100	-
CN-45	Ring term	-	Starter	S820-414000	-
CN-51	-	13	Cluster	172498-1	-
CN-52	AMP	68	T/M Control unit	962175	-
CN-53	-	6	Diagnostic	-	1-408705-0
CN-58	Econo seal III	36	Controller	344111-1	-
CN-60	58	2	Fusible link	-	S813-130200
CN-65	Shur	1	Back up buzzer	S822-014000	-
CN-71	J	2	Parking solenoid	DT06-2S	-
CN-74	Ring term	-	Alternator	S820-105000	-
CN-75	AMP	2	Fan clutch	85202-1	-
CN-83	MWP	2	Aircon fan	PH805-02028	-
CN-96	PACKARD	2	Fuel heater	1530-0027	-

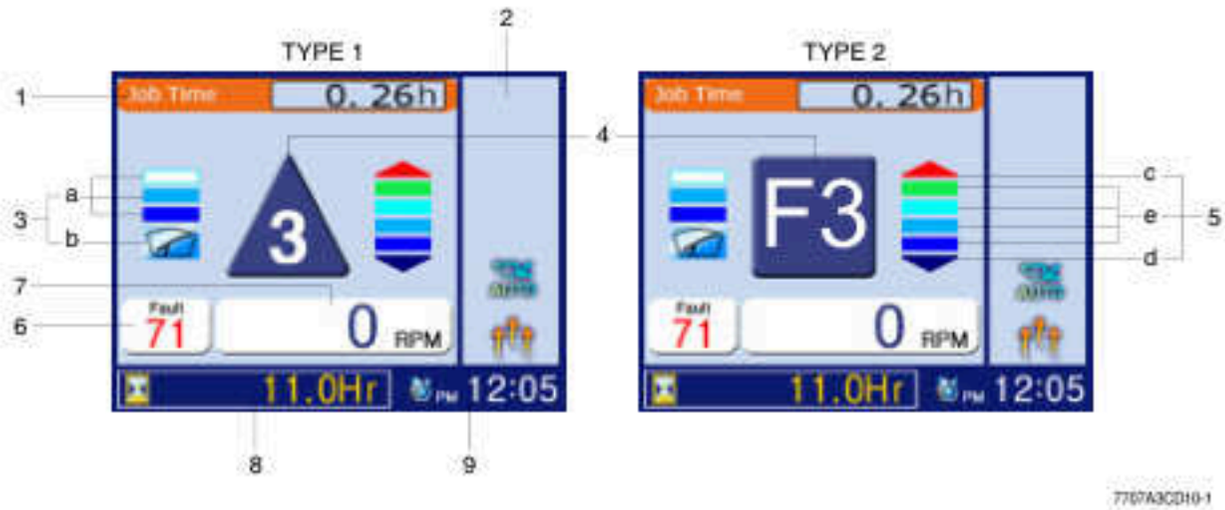
MidWestTech | Hyundai HL770-7 Wheel Loader Service Manual | Publication HL770-7 Order the manual at mid-west-tech.com >

LCD(Machine serial no. ; #0817-)



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

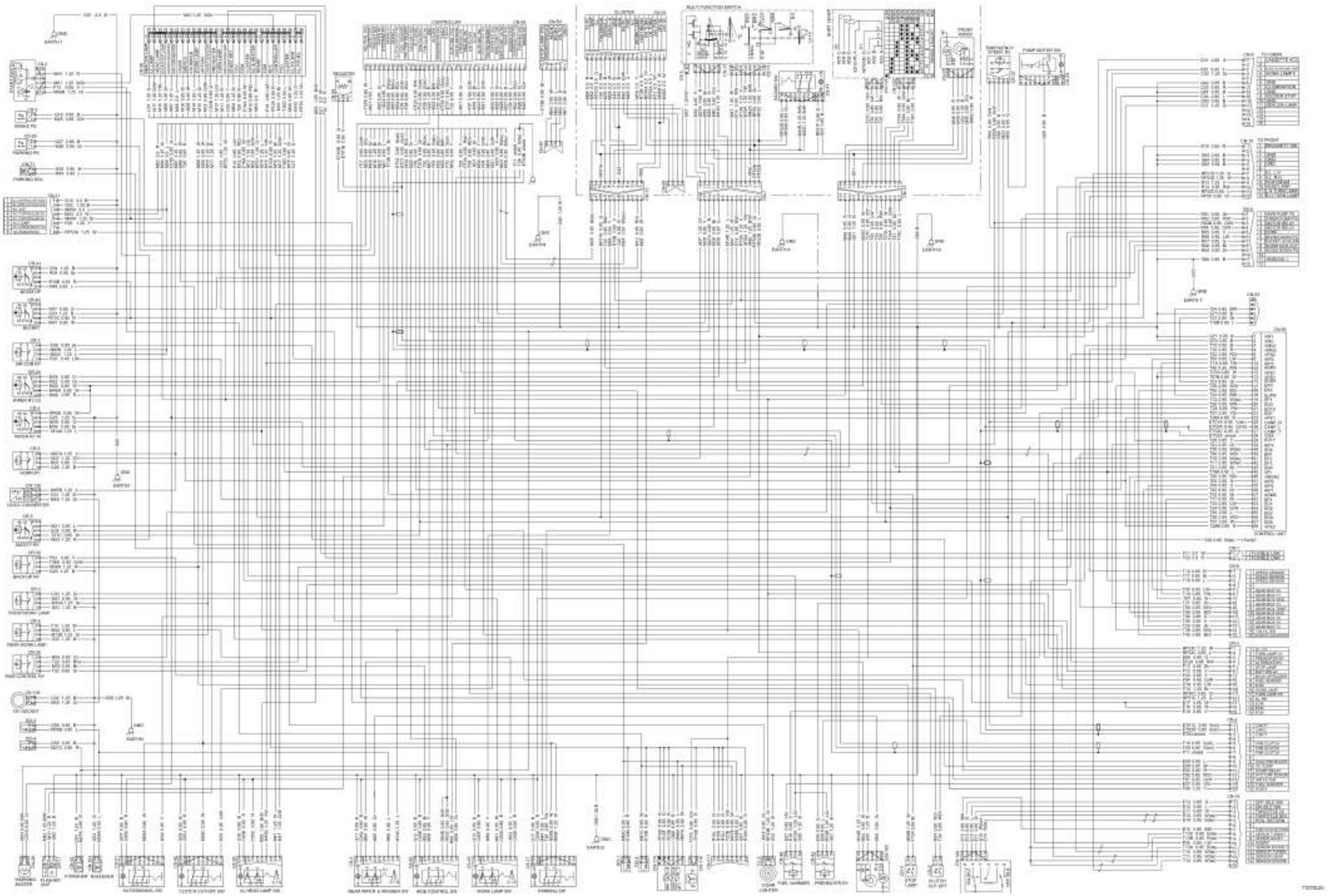
(1) Main display



No	Symbol	Meaning	Remark		
1	Job Time 1,257h	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)

MidWestTech | Hyundai HL770-7 Wheel Loader Service Manual | Publication HL770-7 Order the manual at mid-west-tech.com >



MidWestTech | Hyundai HL770-7 Wheel Loader Service Manual | Publication HL770-7

Order the manual at mid-west-tech.com >