WHEEL LOADER

SERVICE MANUAL

HL780-7A

HYUNDAI

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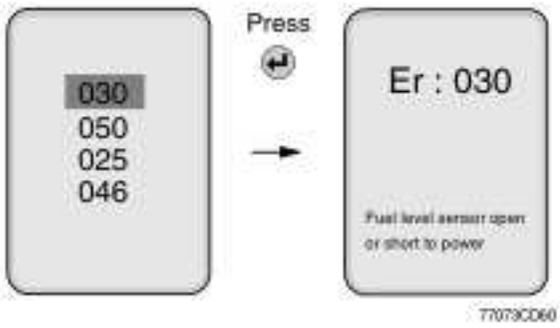
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(3) Machine fault code

When selecting the fault code menu, it shows all of the fault codes which mean abnormal conditions of present time.



※ To go out from fault explanation window, press ▲ button.
(Press ↵ , M to go out to first menu.)

※ **No error** will be indicated in case that there's no fault.

Description	Code	Meaning	Remark
Electrical system	010	Power input voltage low	Below 18V
	011	Power input voltage high	Above 38V
	012	Alternator voltage low	Below 5V
	013	Alternator voltage high	Above 36V
	014	Buzzer circuit open or short to ground	
	015	Buzzer circuit short to power	
Hydraulic system	020	Hydraulic oil temperature sensor open or short to power	
	021	Hydraulic oil temperature sensor short to ground	
Engine system	030	Fuel level sensor open or short to power	
	031	Fuel level sensor short to ground	
	034	Cooling fan driving valve open or short to ground	
	035	Cooling fan driving valve short to power	
T/M system	050	Auto select switch supply power open or short to power	
	051	Auto select switch supply power short to ground	
	052	Clutch cutoff supply power open or short to power	
	053	Clutch cutoff supply power short to ground	
Steering system	060	Emergency steering relay open or short to ground	Option
	061	Emergency steering relay short to power	Option
Communication	070	MCU communication error	
	071	TCU communication error	
	072	ECM communication error	

MCU : Machine control unit TCU : Transmission control unit ECM : Engine control module

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(19) Determine Dimension I from the shim to the bearing inner race.

Dimension I e.g. 25.20 mm



Figure 91

(20) Determine Dimension II from the locating face (ball bearing) to the contact face (shim).

Dimension II e.g. 25.05 mm

EXAMPLE B1 :

Dimension II - Dimension I =	Dimension X
25.05 mm - 25.20 mm =	-0.15 mm

※ Minus dimension(X= -0.15 mm) corresponds with the pressure.

EXAMPLE B2 :

Required play -Dimension X =	Shim
0.15 - (-0.15) =	0.30 mm

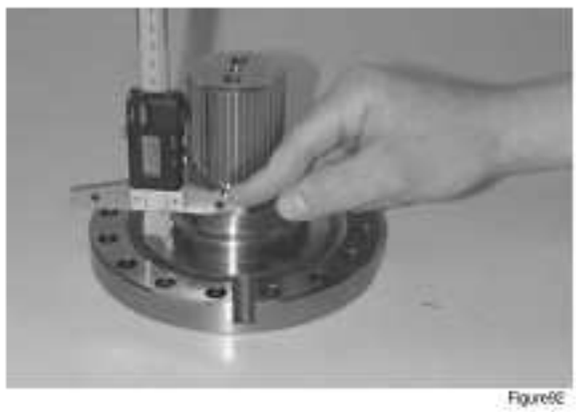


Figure92

(21) Mount shim s = 0.3 mm(see **Example B2**) with grease.



Figure 93

(22) Heat bearing inner race.

※ Special tool

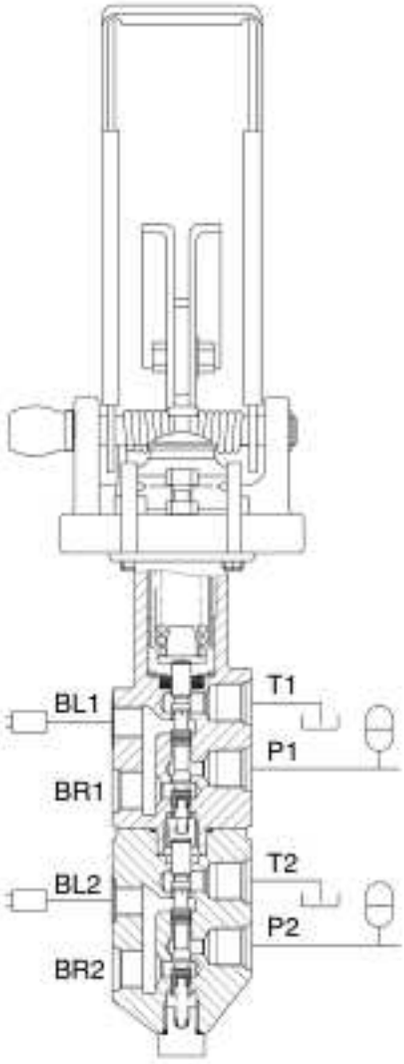
Hot-air blower 230V	5870 221 500
Hot-air blower 115V	5870 221 501

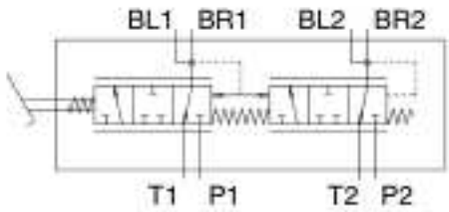


Figure 94

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2) OPERATION





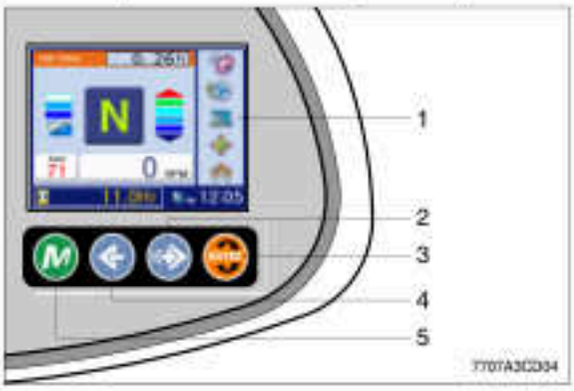
Hydraulic circuit

Porte	Port name	Port size
P1, P2	Port	PF3/8
T1, T2	Drain port	PF3/8
BR1, BR2	Brake cylinder port	PF3/8
BL1	Pressure switch port	PF1/4
BL2	Pressure switch port	M12 × 1.5

7607ABS22

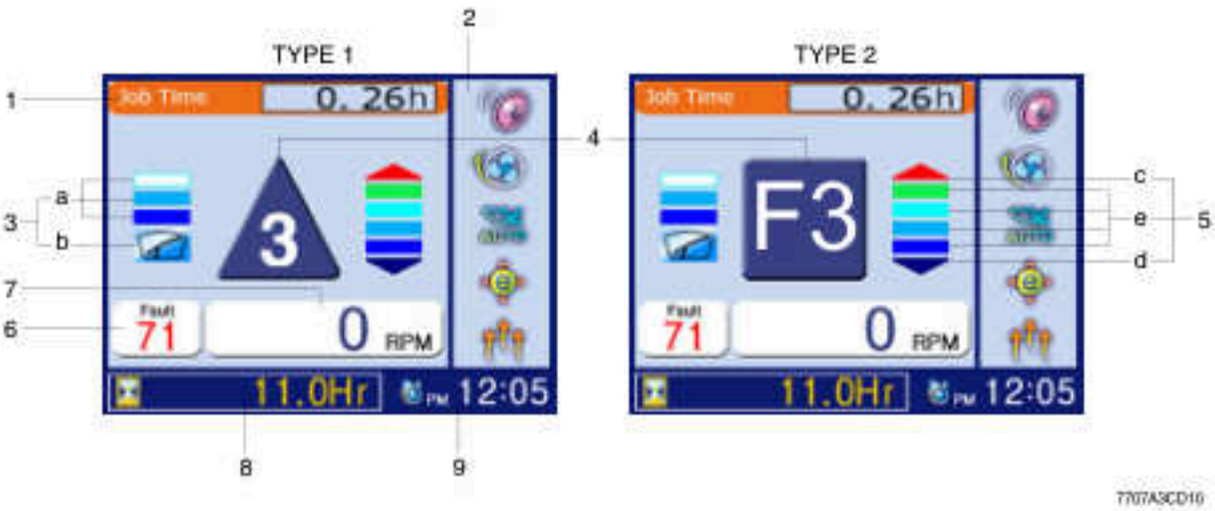
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LCD(Machine serial no. ; #0071-)



1 LCD
2 ( ) Right, Buzzer stop
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

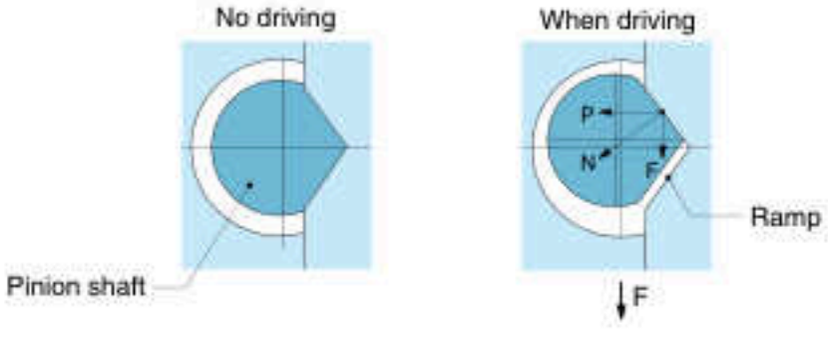


No	Symbol	Meaning	Remark		
1	Job Time 1.26h	Monitoring information	Job timer, Odometer, Hydraulic temperature, Battery voltage, Coolant temperature, T/M oil temperature.		
2		State information	Buzzer, Fan state, Ride state(option), Steering joystic(option), Warming up		
3	a	Wiper display	When operating 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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(2) Operation

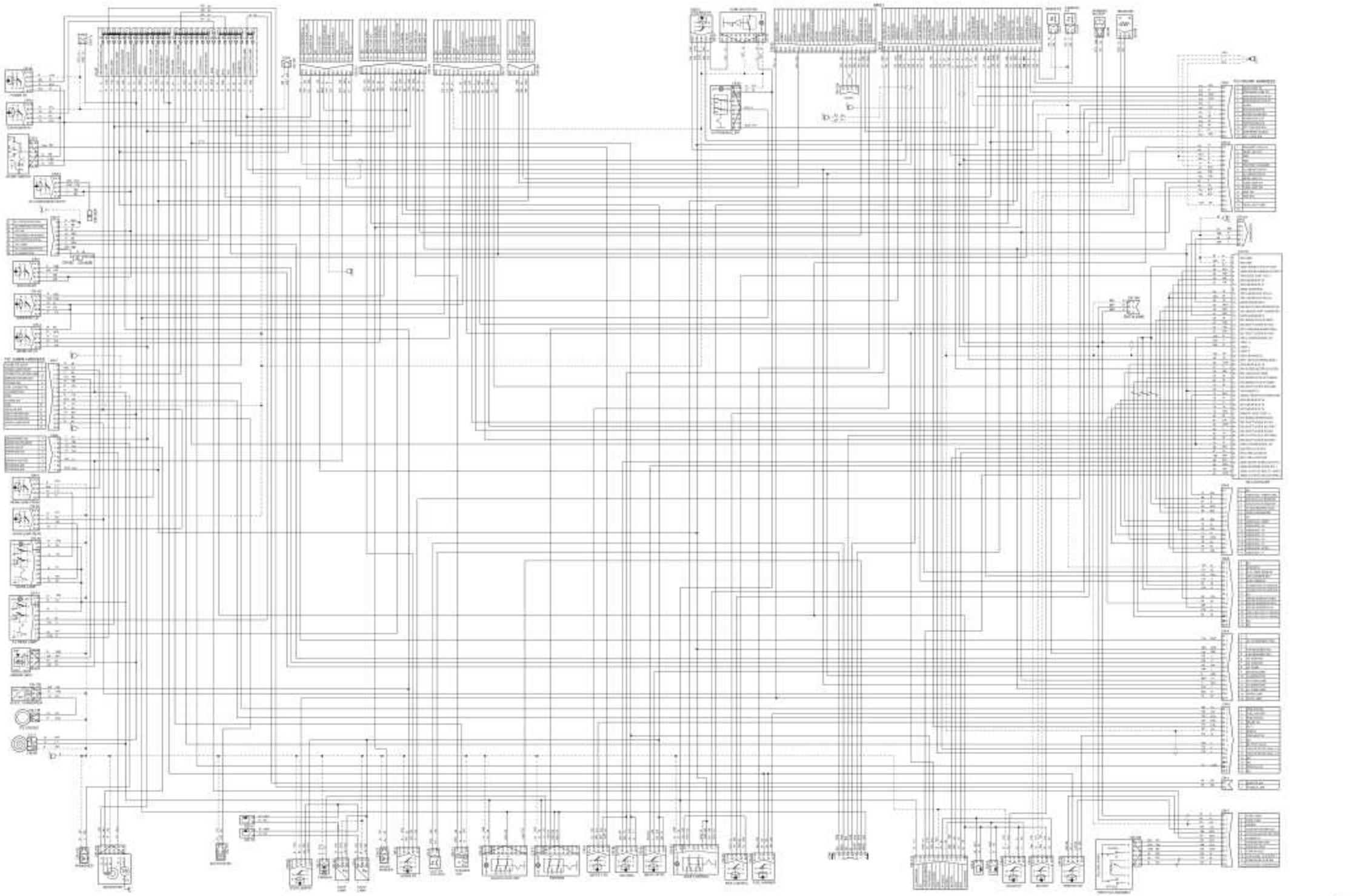


When the differential case is rotated, pinion shaft is moved up on the ramp by the resistance force of tires as the figure, and then force P is generated. This force P becomes the engaging force of clutch.

① When travelling straight(equal resistance from road surface to left and right tires). Under this condition, both clutch are engaged and the left and right side gears are driveb wutg tge sane firce.

② When travelling on soft ground(Resistance from road surface to right tire is smaller). At rotating speed of right tire becomes faster than left due to the smaller resistance of right tive, right clutch is engaged and torque of faster rotating right axle shaft is added to left axle shaft through diffenenting gear case.

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