SECTION 1 GENERAL

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

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.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

SECTION 3 POWER TRAIN SYSTEM

Group 1 Structure and Function ---- 3-1
Group 2 Operational Checks and Troubleshooting ---- 3-66
Group 3 Test and Adjustments ---- 3-77
Group 4 Disassembly and Assembly ---- 3-80

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 ---- 5-15
Group 3 Tests and Adjustments ---- 5-23
Group 4 Disassembly and Assembly ---- 5-30

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

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

GROUP 1 SAFETY HINTS

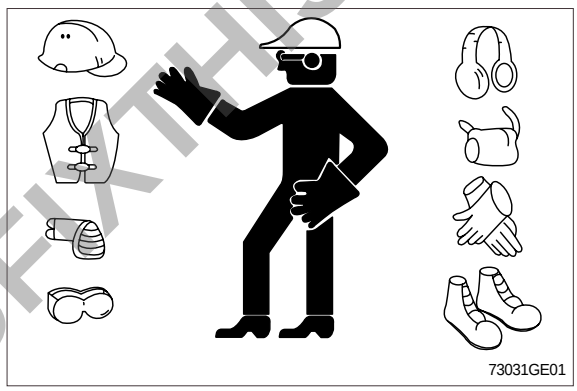
FOLLOW SAFE PROCEDURE

Unsafe work practices are dangerous. Understand service procedure before doing work; Do not attempt shortcuts.



WEAR PROTECTIVE CLOTHING

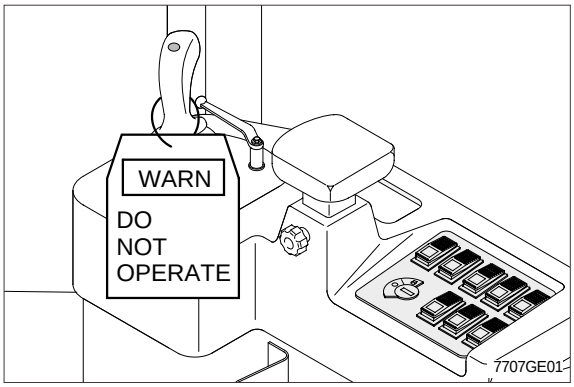
Wear close fitting clothing and safety equipment appropriate to the job.



WARN OTHERS OF SERVICE WORK

Unexpected machine movement can cause serious injury.

Before performing any work on the wheel loader, attach a 「**Do Not Operate**」 tag on the right side controller lever.

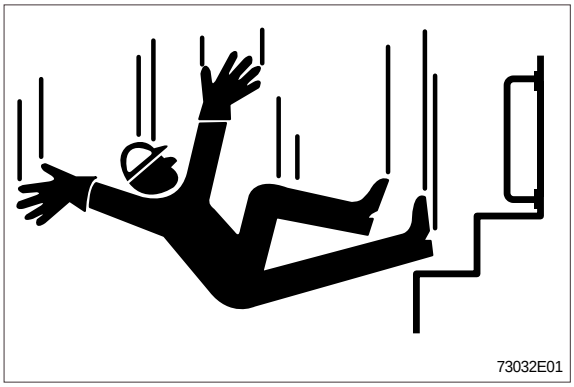


USE HANDHOLDS AND STEPS

Falling is one of the major causes of personal injury. When you get on and off the machine, always maintain a three point contact with the steps and handrails and face the machine. Do not use any controls as handholds.

Never jump on or off the machine. Never mount or dismount a moving machine.

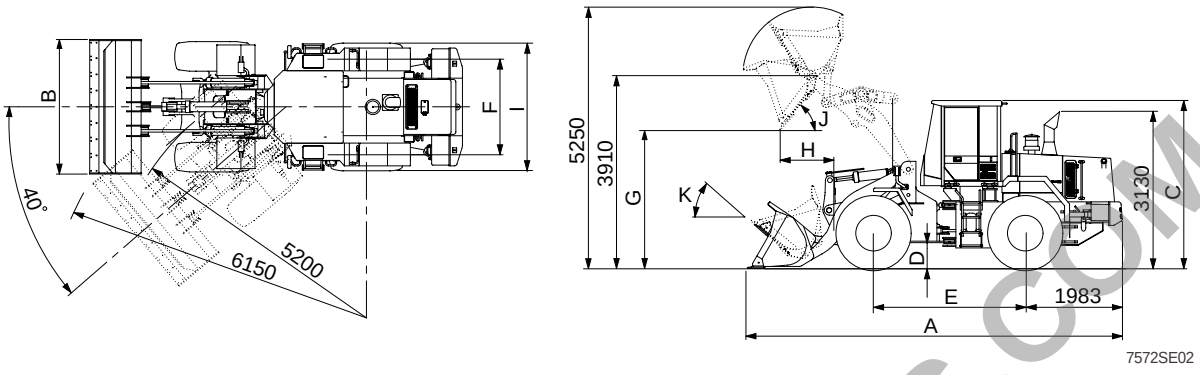
Be careful of slippery conditions on platforms, steps, and handrails when leaving the machine.



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

2. SPECIFICATIONS

1) WITHOUT TOOTH AND CUTTING EDGE TYPE BUCKET

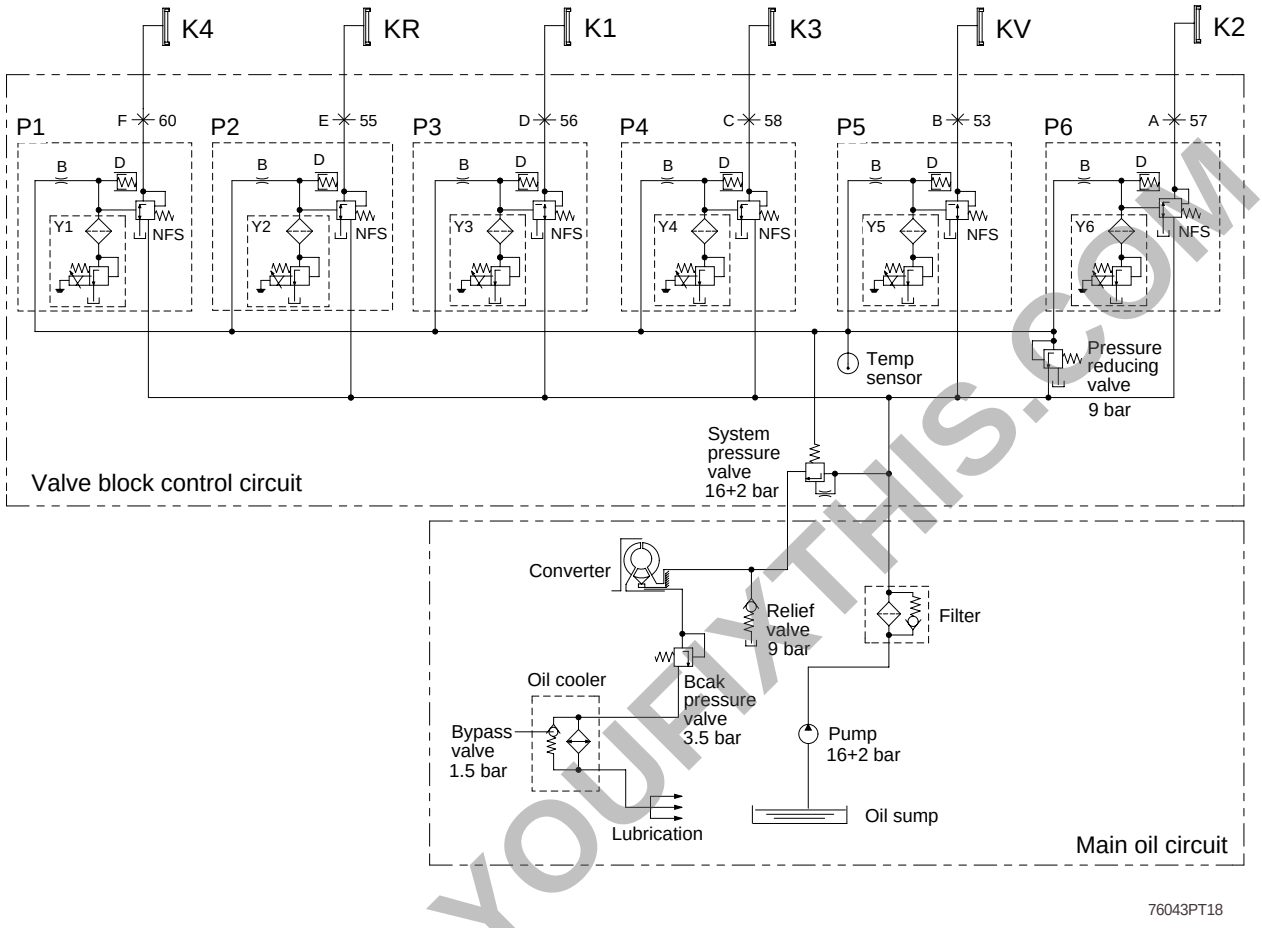


Description			Unit	Specification
Operating weight			kg(lb)	13800(30420)
Bucket capacity		Struck	$m^3(yd^3)$	2.3(3.0)
		Heaped		2.7(3.5)
Overall length		A	mm(ft-in)	7350(24' 1")
Overall width		B		2740(9' 0")
Overall height		C		3300(10'10")
Ground clearance		D		410(1' 4")
Wheelbase		E		3030(9'11")
Tread		F		2050(6' 9")
Dump clearance at 45°		G		2930(9' 7")
Dump reach(Full lift)		H		1005(3' 4")
Width over tires		I		2580(8' 6")
Dump angle		J	Degree (°)	47
Roll back angle(Carry position)		K		46
Cycle time		Lift(With load)	sec	5.9
		Dump(With load)		1.2
		Lower(Empty)		3.2
Maximum travel speed			km/hr(mph)	37.0(23.0)
Braking distance			m(ft-in)	12(39' 4")
Minimum turning radius(Center of outside tire)				5.2(17' 1")
Gradability			Degree (°)	30
Travel speed	Forward	First gear	km/hr(mph)	7.4(4.6)
		Second gear		12.1(7.5)
		Third gear		23.7(14.7)
		Fourth gear		37.0(23.0)
	Reverse	First gear		7.8(4.9)
		Second gear		12.8(8.0)
		Third gear		25(15.6)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

HYDRAULIC CIRCUIT



NFS	Follow-on slide	P3	Proportional valve clutch K1
D	Oscillation damper	P4	Proportional valve clutch K3
B	Orifice	P5	Proportional valve clutch KV
P1	Proportional valve clutch K4	P6	Proportional valve clutch K2
P2	Proportional valve clutch KR	Y1~Y6	Pressure regulator

Speed	Forward				Reverse			Neutral	Engaged clutch	Positions on the valve block	Current No. of the measuring points
	1	2	3	4	1	2	3				
Y1				X					K4	F	60
Y2					X	X	X		KR	E	55
Y3	X				X				K1	D	56
Y4			X	X			X		K3	C	58
Y5	X	X	X						KV	B	53
Y6		X				X			K2	A	57
Engaged clutch	K1,KV	KV,K2	K3,KV	K4,K3	KR,K1	KR,K2	KR, K3		-	-	-

X : Pressure regulator under voltage

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2. TROUBLESHOOTING

1) TRANSMISSION

ど Diagnose malfunction charts are arranged from most probable and simplest to verify, to least likely, more difficult to verify. Remember the following steps when troubleshooting a problem :

Step 1. Operational check out procedure(See group 3 in section 1.)
Step 2. Operational checks(In this group.)
Step 3. Troubleshooting
Step 4. Tests and/or adjustments(See group 3.)

Problem	Cause	Remedy
Transmission slippage	Low oil level.	Add oil.
	Wrong oil grade.	Change oil.
	Restricted transmission pump suction screen.	Remove and clean screen.
	Leak in transmission control valve or gasket.	Remove valve and inspect gaskets.
	Low transmission pump flow due to worn pump.	Do transmission pump flow test.
	Weak or broken pressure regulating valve spring.	Do transmission system pressure test.
Error code on display	Something wrong in transmission.	Go to transmission error code group at page 3-25~3-53.

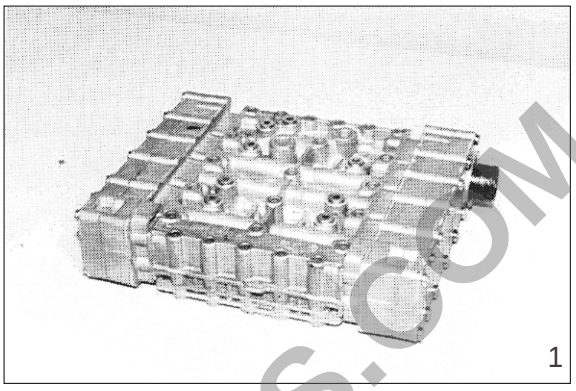
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

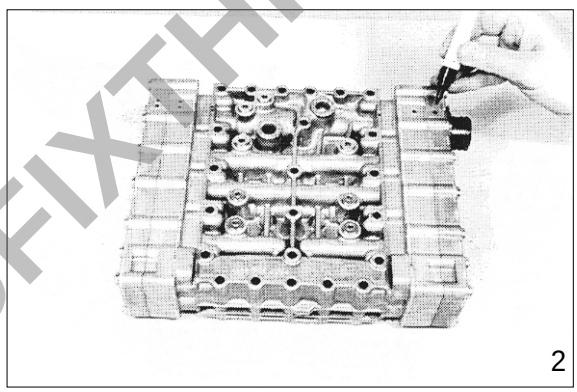
1. CONTROL VALVE

1) DISASSEMBLY

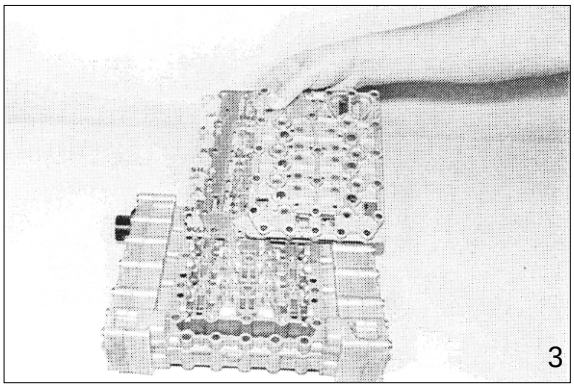
(1) Illustration on the right shows the complete control unit.


1

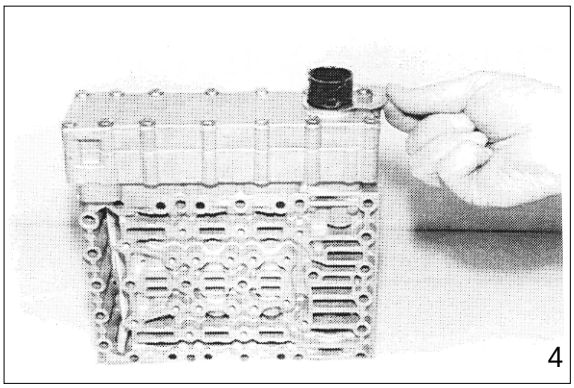
(2) Mark the installation position of the different covers, the housing and cable harness with the valve housing.


2

(3) Loosen socket head screws.
Separate duct plate, 1st gasket, intermediate plate and 2nd gasket from the valve housing.
Box spanner 5873 042 002

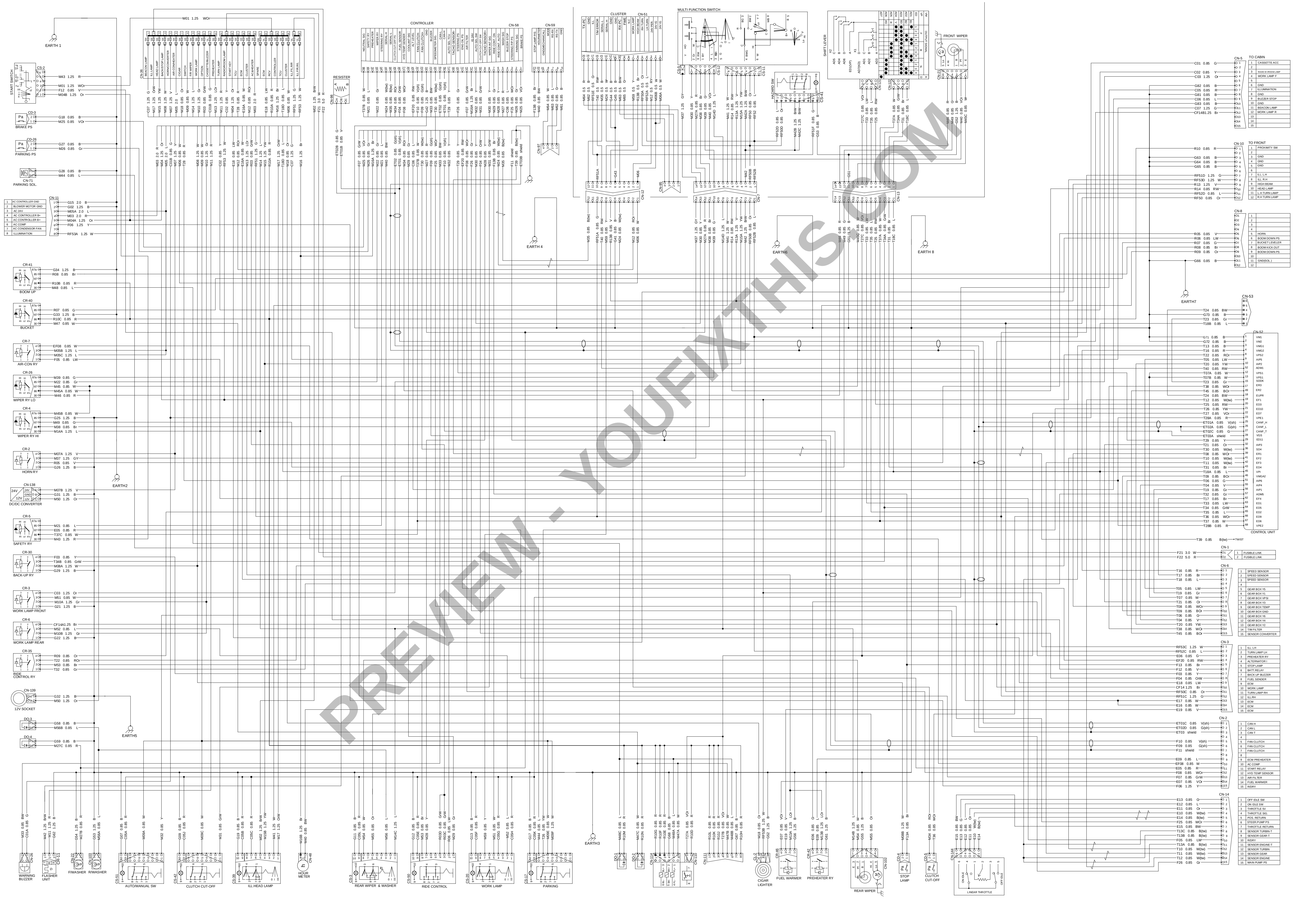

3

(4) Remove retaining clip.


4

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



7577EL03

Download full manual at youfixthis.com

5. TIGHTENING TORQUE OF MAJOR COMPONENT

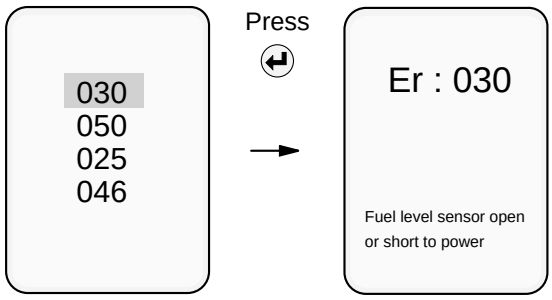
No	Items		Size	kgf・m	lbf・ft
1	Engine	Engine mounting bolt(2EA)	M20×2.5	57.9~8.7	419~62.9
2		Engine mounting bolt(Bracket)	M12×1.75	10.7~1.6	77.4~11.6
3		Radiator mounting bolt	M16×2.0	29.7~4.5	215~32.5
4		Fuel tank mounting bolt	M16×2.0	29.7~4.5	215~32.5
5		Air cleaner mounting bolt	M 8×1.25	2.5~0.5	18.1~3.6
6	Hydraulic system	Main pump housing mounting bolt	M12×1.75	12.8~3.0	92.6~21.7
7		Main control valve mounting bolt	M12×1.75	12.8~3.0	92.6~21.7
8		Steering unit mounting bolt	M10×1.5	6.9~1.4	49.9~10.1
9		Steering valve mounting bolt	M 8×1.25	2.5~0.5	18.1~3.6
10		Brake valve mounting bolt	M 8×1.25	2.5~0.5	18.1~3.6
11		Fan and brake pump mounting bolt	M10×1.5	6.9~1.4	49.9~10.1
12		Cut-off valve mounting bolt	M12×1.75	12.8~3.0	92.6~21.7
13		Remote control lever mounting bolt	M 6×1.0	1.1~0.2	8.0~1.4
14		Pilot supply unit mounting bolt	M 8×1.25	2.5~0.5	18.1~3.6
15		Safety valve	M 8×1.25	2.5~0.5	18.1~3.6
16		Hydraulic oil tank mounting bolt	M16×2.0	29.7~4.5	215~32.5
17	Power train system	Transmission mounting bolt	M24×3.0	100~15	723~109
18		Transmission mounting bolt(Bracket)	M20×2.5	46.3~7.0	335~50.6
19		Torque converter housing mounting bolt	M10×1.5	4.6~0.7	33.3~5.1
20		Front axle mounting bolt, nut	M24×2.0	100~15	723~109
21		Rear axle support mounting bolt, nut	M27×2.0	135~15	976~108
22		Tire mounting nut	M22×1.5	79~2.5	571~18
23		Drive shaft joint mounting bolt	3/8-24UNF-48	5.95~0.85	43.0~6.1
24	Others	Counterweight mounting bolt	M30×2.0	199~29.9	1439~216
25		Operator's seat mounting bolt	M 8×1.25	3.4~0.8	24.6~5
26		ROPS Cab mounting bolt(4EA)	M27×2.0	124	900

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

(3) Fault code

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



77073CD60

- 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.

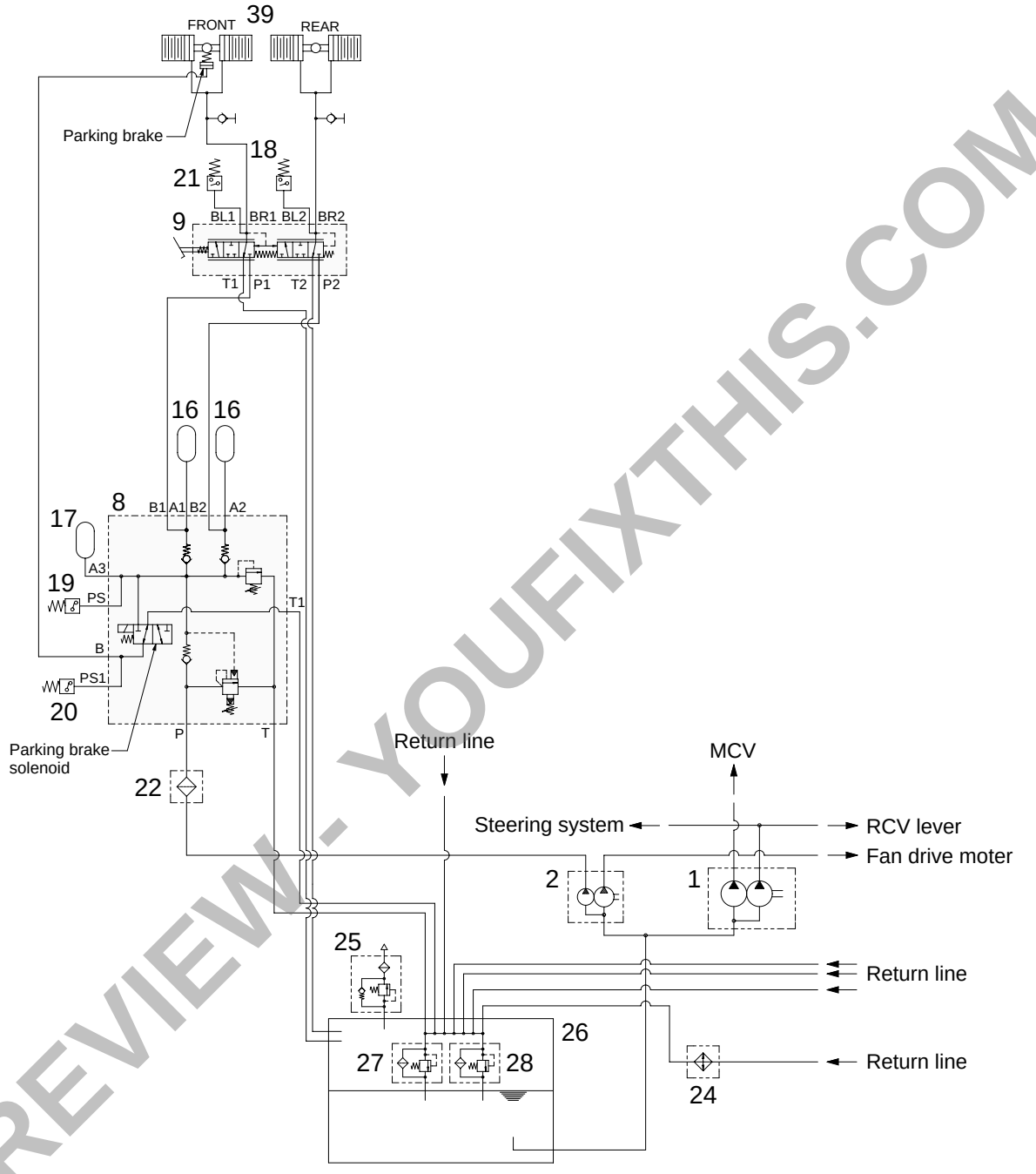
Description	Code	Meaning	Remark
Electrical system	010	Power input voltage low	Below 18V
	011	Power input voltage high	Above 38V
	012	Alternator voltage low	Below 5V
	013	Alternator voltage high	Above 36V
	014	Buzzer circuit open or short to ground	
	015	Buzzer circuit short to power	
	016	Wiper relay open or short to ground	
	017	Wiper relay 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	
	032	Safety relay open or short to ground	Restarting prevention
	033	Safety relay short to power	Restarting prevention
	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	
Others	080	Speedometer output signal(from TCU) bad	
	081	MCU memory error	
	082	MCU clock error	
	083	MCU clock battery error	
	084	Monitor memory error	

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

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2. HYDRAULIC CIRCUIT



2	Brake & fan pump	19	Pressure switch	25	Air breather
8	Cut off valve	20	Pressure switch	26	Hydraulic tank
9	Brake valve	21	Pressure switch	27	Return filter
16	Accumulator	22	Line filter	28	Bypass valve
17	Accumulator	24	Oil cooler	39	Axle
18	Pressure switch				

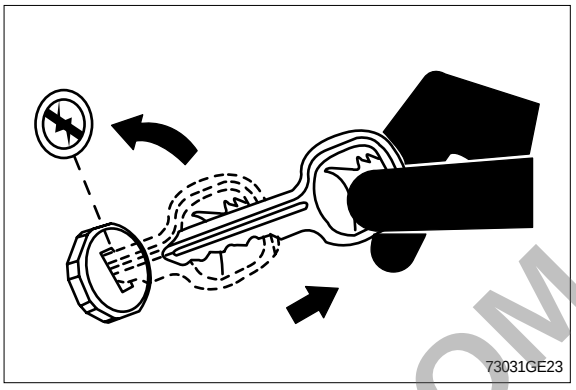
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PARK MACHINE SAFELY

Before working on the machine:

- Park machine on a level surface.
- Lower bucket to the ground.
- Turn key switch to OFF to stop engine. Remove key from switch.
- Move pilot control shutoff lever to locked position.
- Allow engine to cool.

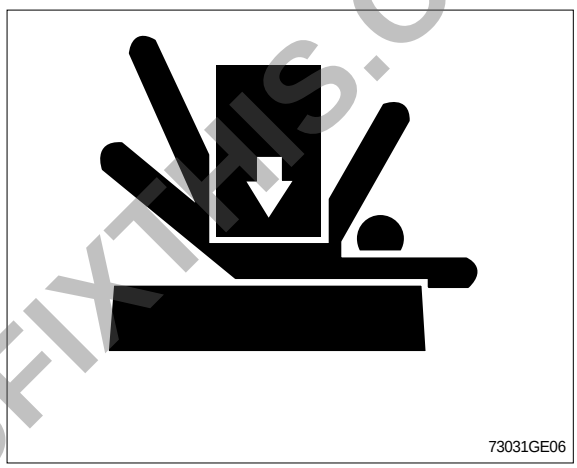


SUPPORT MACHINE PROPERLY

Always lower the attachment or implement to the ground before you work on the machine. If you must work on a lifted machine or attachment, securely support the machine or attachment.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load.

Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.



SERVICE COOLING SYSTEM SAFELY

Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off engine. Only remove filler cap when cool enough to touch with bare hands.



HANDLE FLUIDS SAFELY-AVOID FIRES

Handle fuel with care; It is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks. Always stop engine before refueling machine.

Fill fuel tank outdoors.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.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
85	14	**S.C. to ground at clutch KV** The measured resistance value of the valve is out of limit, the voltage at K4 valve is too low - Cable/connector is defective and has contact to vehicle ground - Regulator has an internal defect	TCU shifts to neutral OP mode : Limp home If failure at another clutch is pending TCU shifts to neutral OP mode : TCU shutdown	- Check the cable from TCU to the gearbox - Check the connectors from gearbox to TCU - Check the regulator resistance* - Check internal wire harness of the gearbox	* See Chapter (9)
86	20	**O.C. at clutch KV** The measured resistance value of the valve is out of limit - Cable/connector is defective and has contact to TCU - Regulator has an internal defect	TCU shifts to neutral OP mode : Limp home If failure at another clutch is pending TCU shifts to neutral OP mode : TCU shutdown	- Check the cable from TCU to the gearbox - Check the connectors from gearbox to TCU - Check the regulator resistance* - Check internal wire harness of the gearbox	* See Chapter (9)
87	27	**S.C. to battery voltage at clutch KR** The measured resistance value of the valve is out of limit, the voltage at KR valve is too high - Cable/connector is defective and has contact to battery voltage - Cable/connector is defective and has contact to another regulator output of the TCU - Regulator has an internal defect	TCU shifts to neutral OP mode : Limp home If failure at another clutch is pending TCU shifts to neutral OP mode : TCU shutdown	- Check the cable from TCU to the gearbox - Check the connectors from gearbox to TCU - Check the regulator resistance* - Check internal wire harness of the gearbox	* See Chapter (9)
88	15	**S.C. to ground at clutch KR** The measured resistance value of the valve is out of limit, the voltage at KR valve is too low - Cable/connector is defective and has contact to vehicle ground - Regulator has an internal defect	TCU shifts to neutral OP mode : Limp home If failure at another clutch is pending TCU shifts to neutral OP mode : TCU shutdown	- Check the cable from TCU to the gearbox - Check the connectors from gearbox to TCU - Check the regulator resistance* - Check internal wire harness of the gearbox	* See Chapter (9)
89	21	**O.C. at clutch KR** The measured resistance value of the valve is out of limit - Cable/connector is defective and has no contact to TCU - Regulator has an internal defect	TCU shifts to neutral OP mode : Limp home If failure at another clutch is pending TCU shifts to neutral OP mode : TCU shutdown	- Check the cable from TCU to the gearbox - Check the connectors from gearbox to TCU - Check the regulator resistance* - Check internal wire harness of the gearbox	* See Chapter (9)

PREVIEW - YOUFIXTHIS.COM

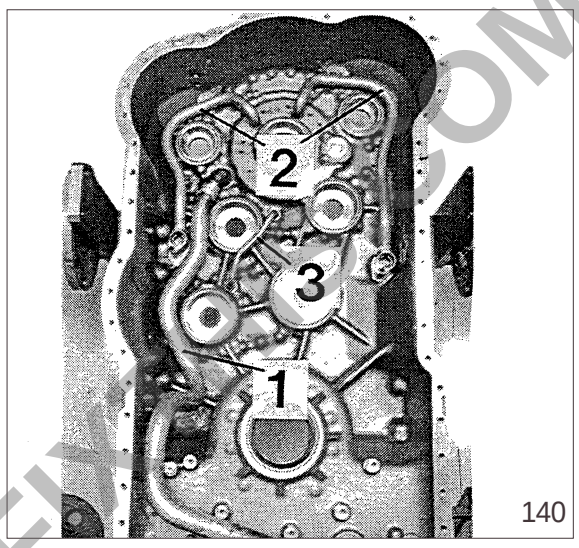
Download full manual at youfixthis.com

2) REASSEMBLY

(1) Install oil tubes

ど To ensure the correct installation of the oil tubes, the use of the indicated special tool is imperative.

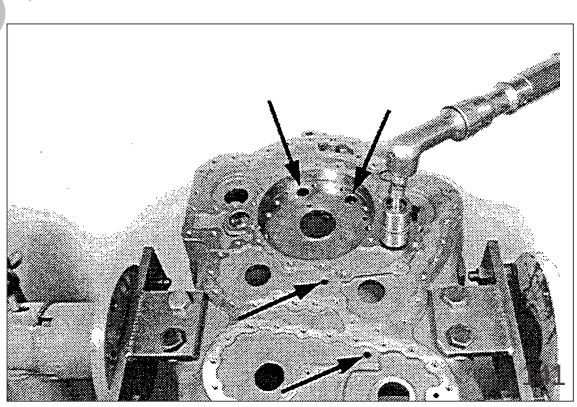
罰 Insert suction pipe(1), pressure pipes(2) and pressure pipelubrication(3) into the housing bores.
Fasten suction and pressure pipes by means of socket head screws.
・Torque limit : 2.3kgf・m(17.0lbf・ft)



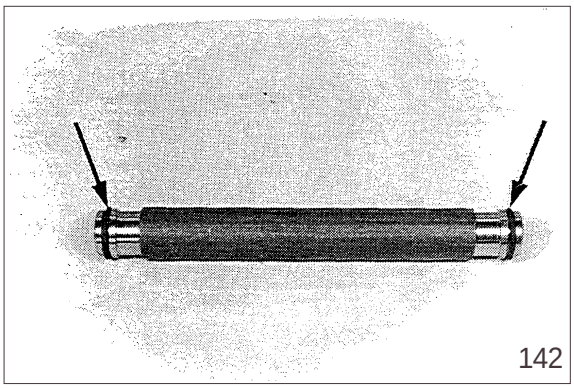
140

刹 Tilt housing 180勉
Roll suction as well as pressure pipes(Arrows) into the housing bores, using special tool.
The pipe end must be maximally plane with the housing face.
If necessary, equalize projection of pipe.

Rolling tool	5870 600 003
Rolling tool	5870 600 005
Rolling tool	5870 600 007



嵜 Insert O-rings(2EA/pipe) into the annular grooves of the two oil tubes and oil them.


142

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

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

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

3. STEERING SYSTEM RESTRICTION TEST

- **SPECIFICATION**

  Oil temperature 45～50℃(113～122℉)
  Engine speed High idle
  Maximum pressure at flow amplifier 2.1MPa(21bar,300psi)

- **GAUGE AND TOOL**

  Gauge 0~7MPa(0~70bar, 0~1000psi) 2EA

- This test will check for restrictions in the steering system which can cause overheating of hydraulic oil.

1) Install temperature reader.
   (See temperature reader installation procedure in this group).

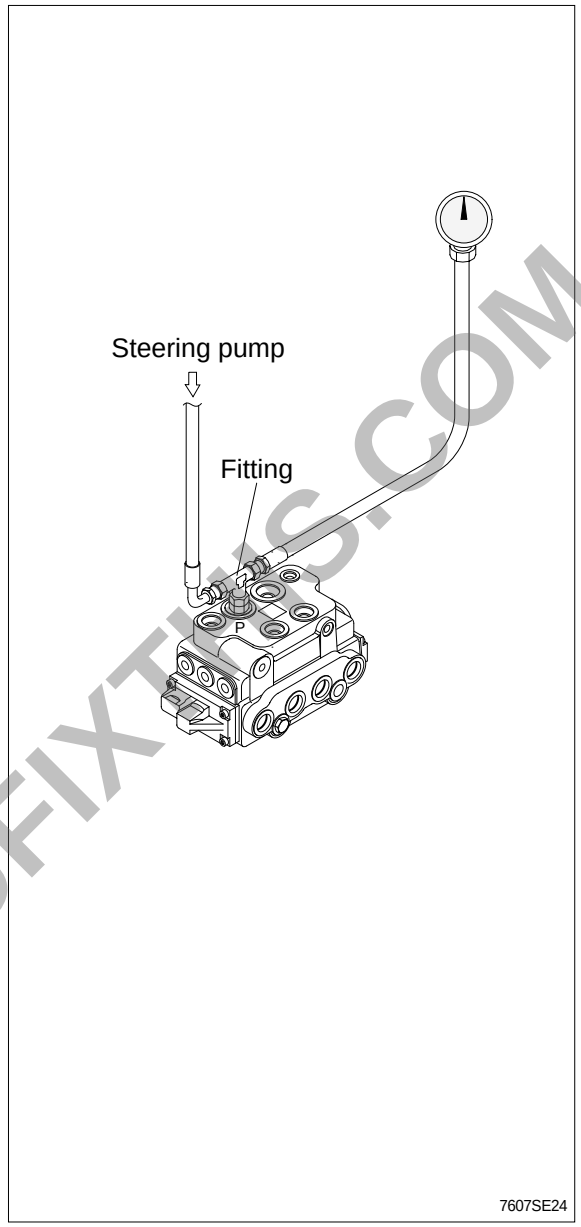
2) Heat hydraulic oil to specifications.
   (See hydraulic oil warm up procedure at page 6-50).

3) Connect fitting and install gauge.

⚠ **Do not operate steering or loader functions or test gauge may be damaged.**

4) Run engine at specification and read pressure gauges.

   If pressure is more than specification at the steering valve, inspect steering valve for a priority valve spool. Make sure orifice plugs installed in ends of priority valve spool.
   Check for plugged orifice in steering valve LS port.



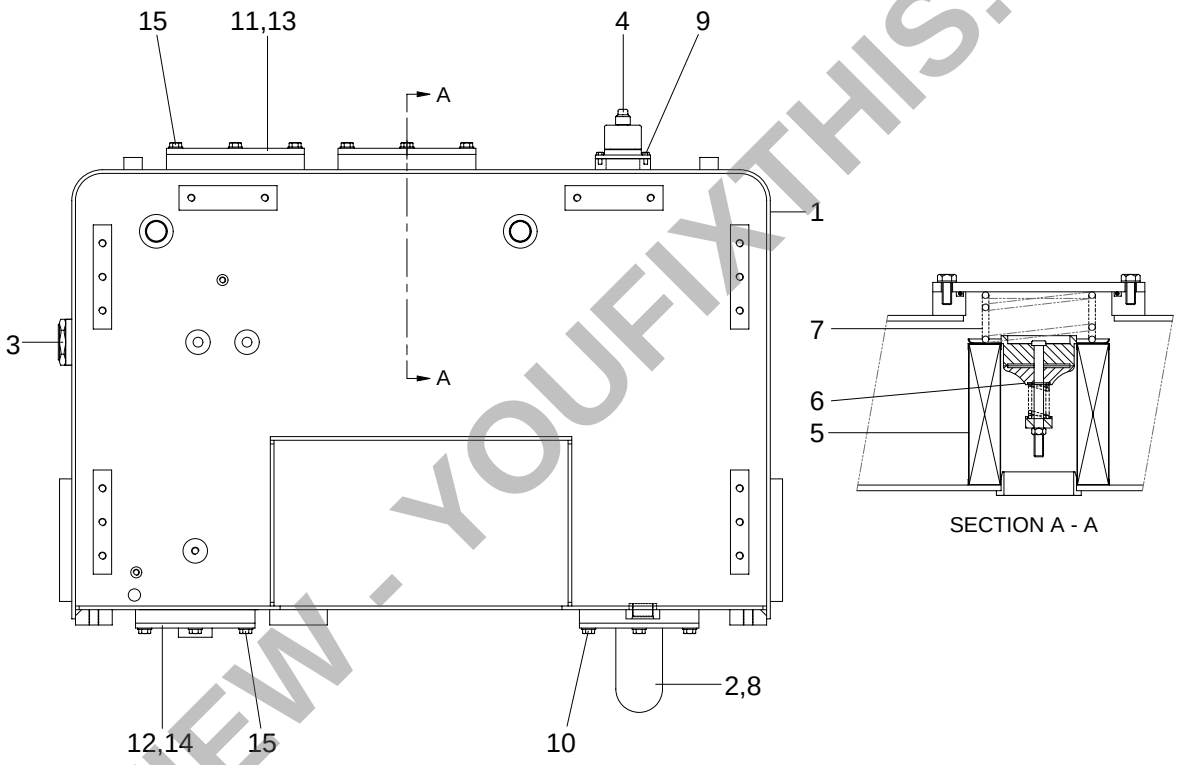
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

9. HYDRAULIC OIL TANK

1) STRUCTURE

- The oil from the hydraulic tank is sent from the pump through main control valve to the cylinders. In the return circuit, the oil from various parts merges.
- A part of oil is cooled in the oil cooler, passes through the hydraulic filter and returns to the hydraulic tank(1).
- If the hydraulic return oil filter becomes clogged, return filter bypass valve(6) acts to allow the oil to return directly to the hydraulic tank(1). This prevents damage to the hydraulic filter(5). The bypass valve(6) is also actuated when negative pressure is generated in the circuit.



7607WE28

1	Hydraulic tank wa	9	Socket bolt
2	Pipe wa	10	Bolt
3	Sight gauge	11	Cover
4	Air breather	12	Cover
5	Element assembly	13	O-ring
6	Bypass valve	14	O-ring
7	Spring	15	Bolt
8	O-ring		

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

6. ELECTRIC PARKING, DECLUTCH CIRCUIT

1) OPERATING FLOW

(1) Parking OFF

Fuse box (No.8) → Parking switch OFF [CS-17(6)咯(8)] → Parking solenoid ON (Activated) → Parking brake released (By hydraulic pressure)

(2) Parking ON

Fuse box (No.8) → Parking switch ON → Parking solenoid [CN-71] OFF → Parking brake applied [By spring force]

Parking switch ON → [CS-17(5)咯(7)] → T/M control unit [CN-52(21)] → T/M declutch

(3) Declutch ON

Fuse box (No.8) → Clutch cut-off switch ON → Clutch cut-off switch [CS-42(5) 咯(1)] → → Controller [CN-58(10)咯(29)] → Service brake applied → Service brake pressure switch ON [CD-5] → T/M control unit [CN-52(66)] → Declutch

2) CHECK POINT

Engine	Key switch	Check point	Voltage
Running	ON	罰 - GND (Parking switch input) 刻 - GND (Parking switch output) 剴 - GND (Parking switch input) 劘 - GND (Parking switch output) 刻 - GND (Parking solenoid) 剔 - GND (Pressure switch clutch cut-off)	20~25V

ど GND : Ground

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 18 of 468 pages

The full manual includes:

- All 468 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Hyundai HL757-7 Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual