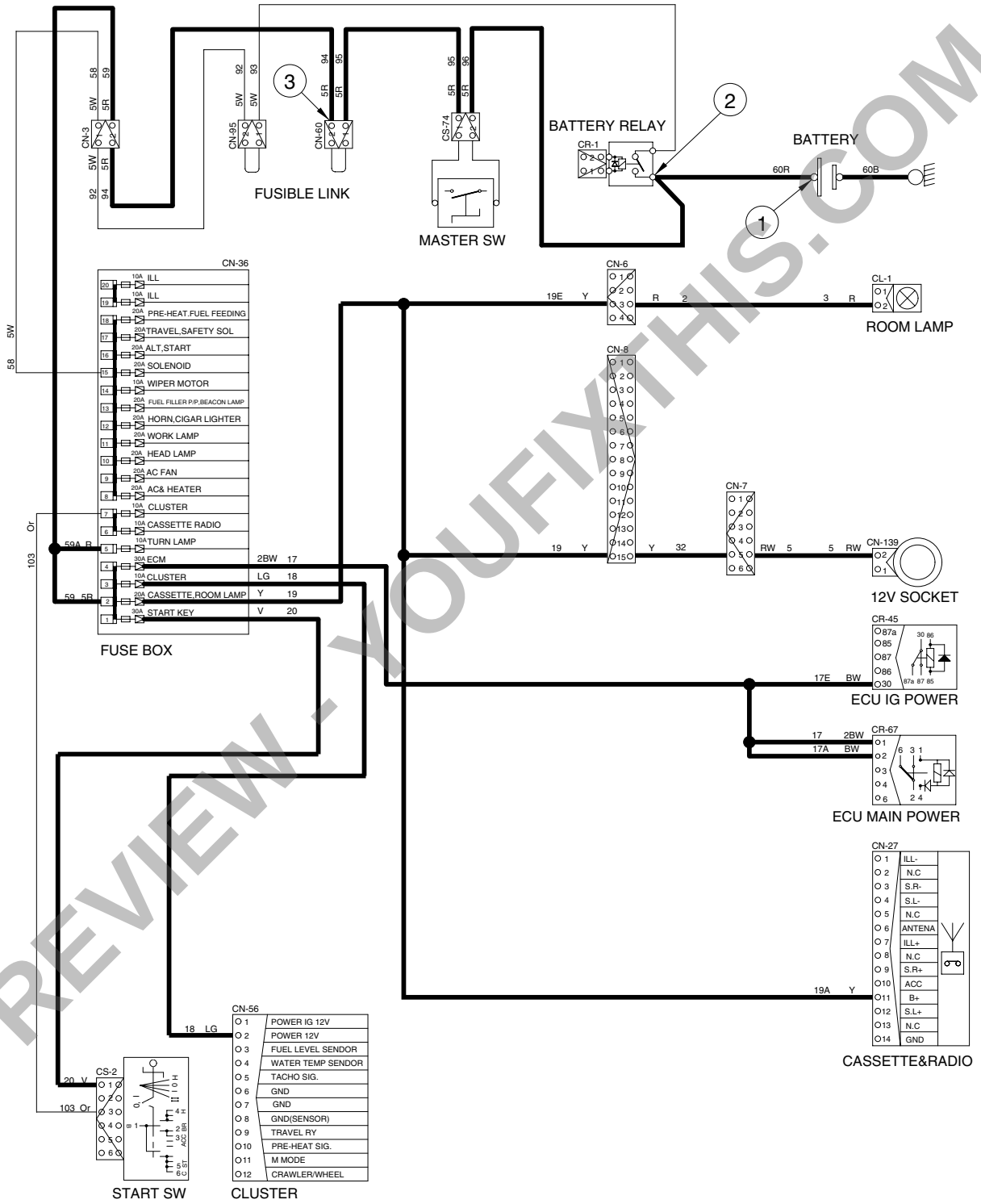
POWER CIRCUIT

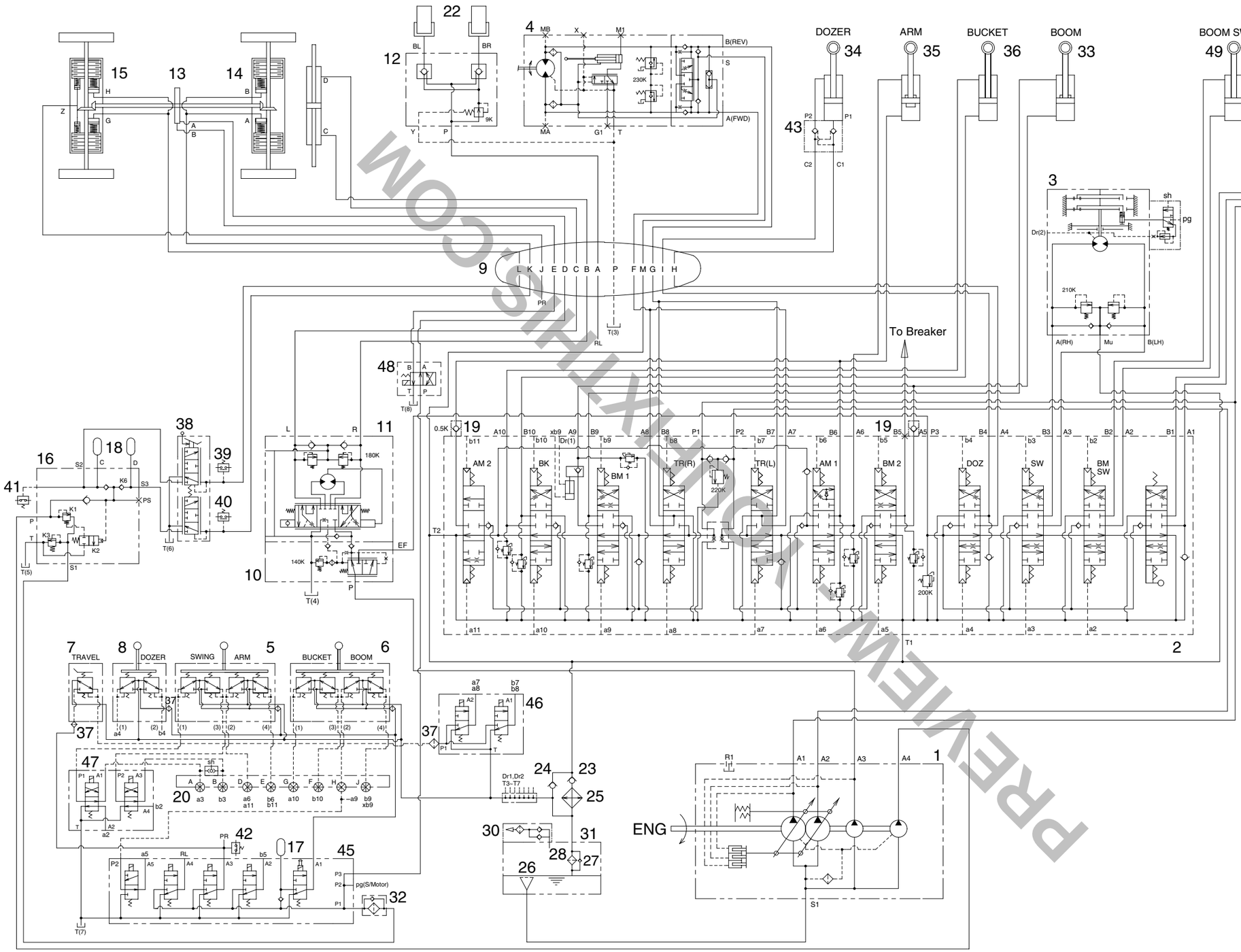


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GROUP 1 HYDRAULIC CIRCUIT

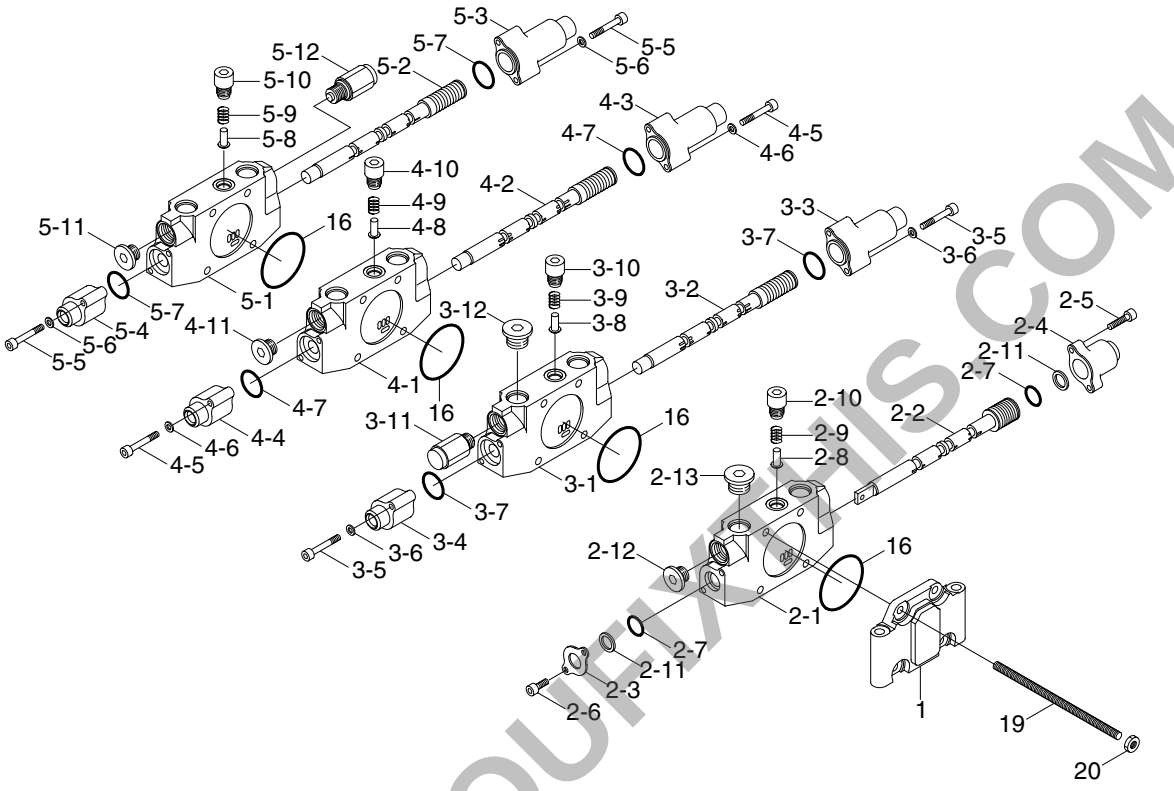


1 Main pump
2 Main control valve
3 Swing motor
4 Travel motor
5 RCV lever(LH)
6 RCV lever(RH)
7 RCV pedal
8 RCV dozer
9 Turning joint
10 Priority valve
11 Steering valve
12 Locking valve
13 Gear box
14 Front axle
15 Rear axle
16 Cut off valve
17 Accumulator
18 Accumulator
19 Check valve
20 Terminal assy
22 Oscillating cylinder
23 Check valve
24 Check valve
25 Oil cooler
26 Strainer assy
27 Bypass check valve
28 Return filter
30 Air breather
31 Hydraulic tank
32 Line filter
33 Boom cylinder
34 Dozer cylinder
35 Arm cylinder
36 Bucket cylinder
37 Last guard filter
38 Brake valve
39 Pressure switch
40 Pressure switch
41 Pressure switch
42 Pressure switch
43 Double pilot check valve
44 Stop valve
45 5 solenoid valve
46 2 solenoid valve
47 2 solenoid valve
48 1 solenoid valve
49 Boom swing cylinder
50 Quick clamp

55W73HC01

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2. STRUCTURE(1/4)



55W72MC02

1	End cover	3-4	Pilot cap(B1)	4-10	Plug assy
2	Option block	3-5	Wrench bolt	4-11	Plug assy
2-1	Work block assy	3-6	Plain washer	5	Dozer block assy
2-2	Option spool assy	3-7	O-ring	5-1	Work block
2-3	Seal plate	3-8	Check poppet	5-2	Dozer spool assy
2-4	Return cap	3-9	Check spring	5-3	Pilot cap(A)
2-5	Wrench bolt	3-10	Plug assy	5-4	Pilot cap(B1)
2-6	Wrench bolt	3-11	Anti cavitation valve	5-5	Wrench bolt
2-7	O-ring	3-12	Plug assy	5-6	Plain washer
2-8	Check poppet	4	Swing block assy	5-7	O-ring
2-9	Check spring	4-1	Work block	5-8	Check poppet
2-10	Plug assy	4-2	Swing spool assy	5-9	Check spring
2-11	Dust wiper	4-3	Pilot cap(A)	5-10	Plug assy
2-12	Plug assy	4-4	Pilot cap(B1)	5-11	Plug assy
2-13	Plug assy	4-5	Wrench bolt	5-12	Anti-cavitation valve
3	Boom swing block assy	4-6	Plain washer	16	O-ring
3-1	Work block	4-7	O-ring	19	Tie bolt
3-2	Boom swing spool assy	4-8	Check poppet	20	Nut
3-3	Pilot cap(A)	4-9	Check spring		

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GROUP 2 TIGHTENING TORQUE

1. MAJOR COMPONENTS

No.	Descriptions		Bolt size	Torque	
				kgf · m	lbf · ft
1	Engine	Engine mounting bolt(Engine-Bracket)	M10 × 1.5	6.9±1.4	49.9±10.1
2		Engine mounting bolt(Bracket-Frame)	M16 × 2.0	25±2.5	181±18.1
3		Radiator mounting bolt, nut	M10 × 1.5	6.9±1.4	49.9±10.1
4		Coupling mounting bolt	M10 × 1.5	6.0	43.4
5	Hydraulic system	Main pump mounting bolt	M12 × 1.75	14.7±2.2	106±15.9
6		Main control valve mounting bolt	M12 × 1.75	12.8±3.0	92.6±21.7
7		Travel motor mounting bolt	M12 × 1.75	14.7±2.2	106±15.9
8		Fuel tank mounting bolt	M12 × 1.75	12.8±3.0	92.6±21.7
9		Hydraulic oil tank mounting bolt	M12 × 1.75	12.8±3.0	92.6±21.7
10		Turning joint mounting bolt, nut	M12 × 1.75	14.7±2.2	106±15.9
11	Power train system	Swing motor mounting bolt	M16 × 2.0	29.7±4.5	215±32.5
12		Swing bearing upper mounting bolt	M16 × 2.0	29.7±4.5	215±32.5
13		Swing bearing lower mounting bolt	M16 × 2.0	29.7±4.5	215±32.5
15		Front axle mounting bolt, nut	M16 × 2.0	29.7±4.5	215±32.5
16		Rear axle mounting bolt, nut	M16 × 2.0	29.7±4.5	215±32.5
17		Gear box mounting bolt	M14 × 2.0	19.6±2.9	142±21.0
18		Oscillating cylinder mounting bolt	M16 × 2.0	29.7±4.5	215±32.5
19		Oscillating cylinder support bolt	M12 × 1.75	12.8±3.0	92.6±21.7
20		Wheel nut	M18 × 1.5	46±3.0	333±21.7
21		Front drive shaft mounting bolt, nut	M10 × 1.25	7.4±1.5	53.5±10.8
22		Rear drive shaft mounting bolt, nut	M10 × 1.25	7.4±1.5	53.5±10.8
23	Others	Counterweight mounting bolt	M20 × 2.5	57.9±8.7	419±62.9
24		Cab mounting bolt, nut	M12 × 1.75	12.8±3.0	92.6±21.7
25		Operator's seat mounting bolt	M 8 × 1.25	1.17±0.1	8.5±0.7

※ For tightening torque of engine and hydraulic components, see each component disassembly and assembly.

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3. DISASSEMBLY PROCEDURE

1) DISASSEMBLING THE GEARED PUMP

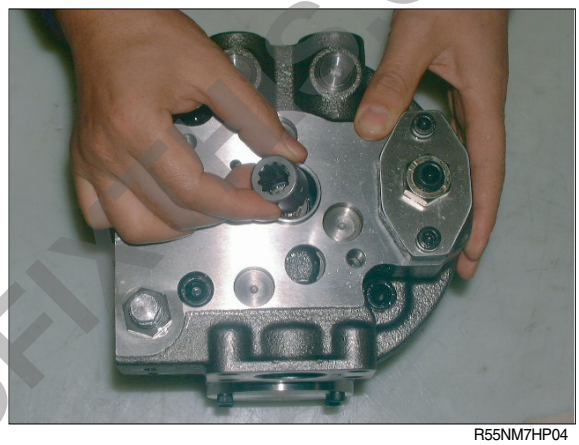
① Remove the hexagonal socket headed bolts (M10 × 25, 2 pieces).
Hexagonal bar spanner
(Hex. side distance : 8)

※ Be careful because the O-ring and filter are provided to the match surface of the geared pump.



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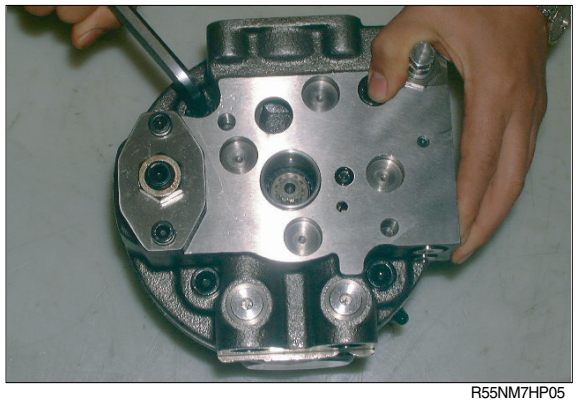
② Remove the coupling.



R55NM7HP04

2) DISASSEMBLING THE MAIN PUMP

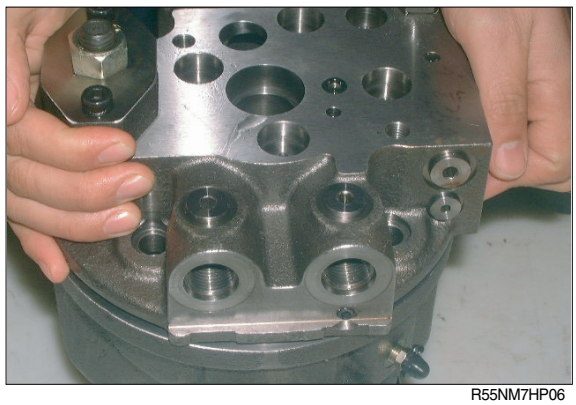
① Remove the cover.
Remove the hexagonal socket headed bolts. (M12 × 30, 3pieces) and (M12× 55, 1piece).
Hexagonal bar spanner
(Hex. side distance : 10)



R55NM7HP05

② Remove the cover in a horizontal condition.
Connect motor to work table.

※ Be careful because the control plate is provided to the backside.
When the cover is difficult to remove, knock lightly with a plastic hammer.

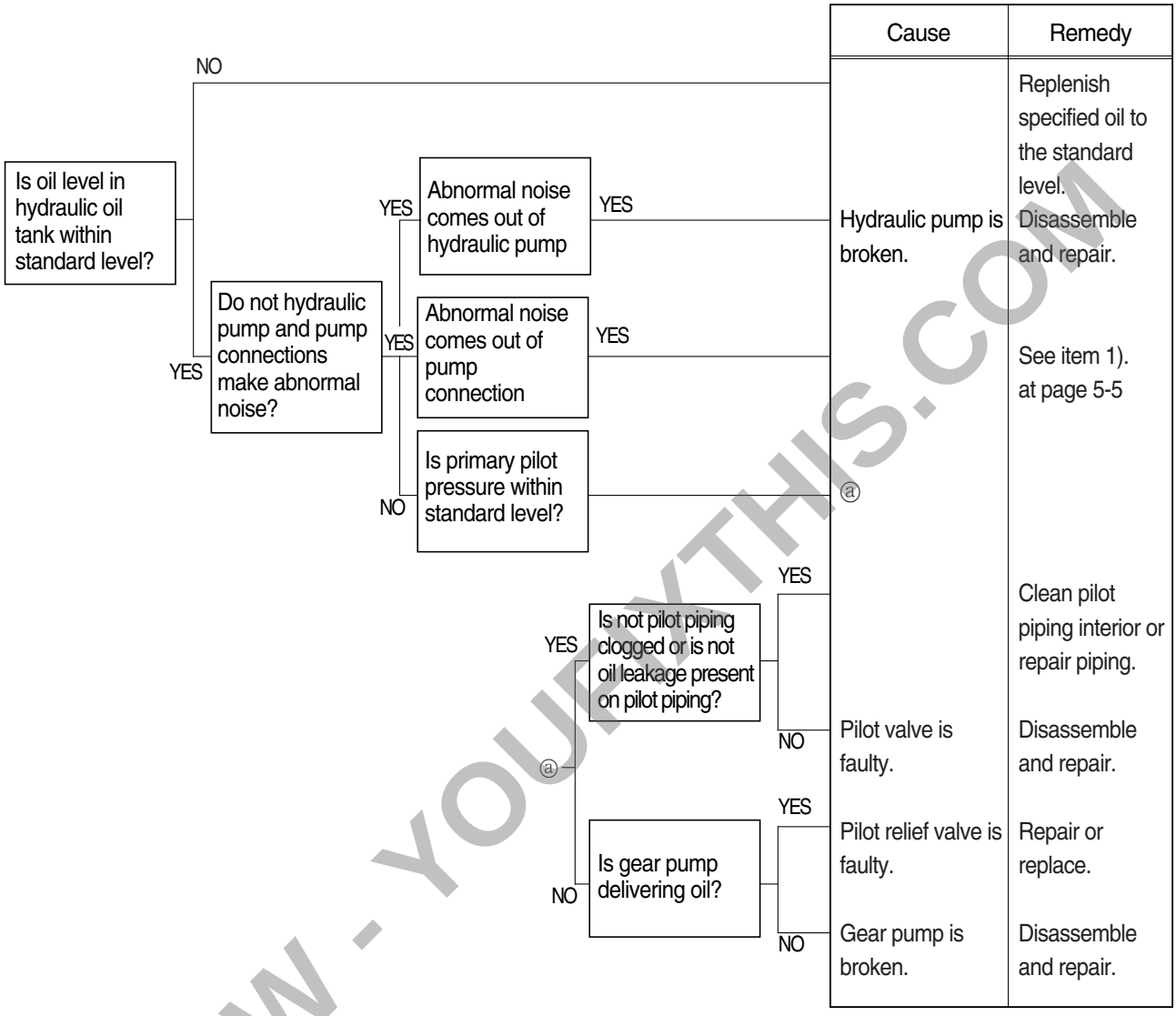


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2) ENGINE STARTS BUT MACHINE DOES NOT OPERATE AT ALL

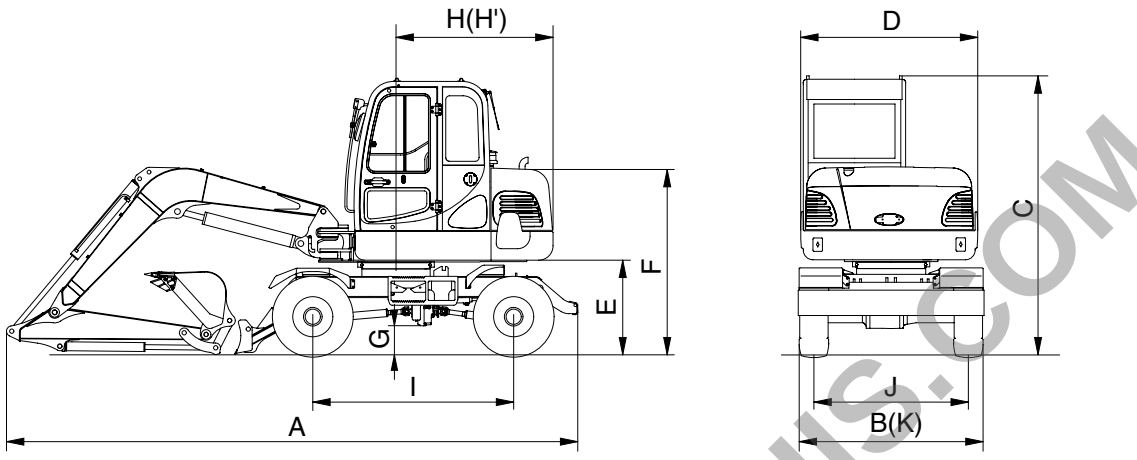


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2. SPECIFICATIONS

1) 3.0m(9'10") ONE PIECE BOOM, 1.6m(5' 3") ARM WITH BOOM SWING POST



55W7A2SP02

Description		Unit	Specification
Operating weight		kg(lb)	5600(12350)
Bucket capacity(SAE heaped), standard		$m^3(yd^3)$	0.18(0.24)
Overall length	A	mm(ft-in)	5970(19' 6")
Overall width	B		1925(6' 4")
Overall height	C		2850(9' 4")
Upperstructure width	D		1830(6' 0")
Ground clearance of counterweight	E		986(3' 3")
Engine cover height	F		1930(6' 4")
Minimum ground clearance	G		290(11.4")
Rear-end distance	H		1650(5' 5")
Rear-end swing radius	H'		1650(5' 5")
Wheel base	I		2100(6'11")
Tread	J		1600(5' 3")
Dozer blade width	K		1925(6' 4")
Travel speed	Low	km/hr(mph)	11.0(6.8)
	High		27(16.8)
Swing speed		rpm	9.3
Gradeability		Degree(%)	35(70)

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GROUP 1 OPERATIONAL PERFORMANCE TEST

1. PURPOSE

Performance tests are used to check:

1) OPERATIONAL PERFORMANCE OF A NEW MACHINE

Whenever a new machine is delivered in parts and reassembled at a customer's site, it must be tested to confirm that the operational performance of the machine meets **Hyundai spec**.

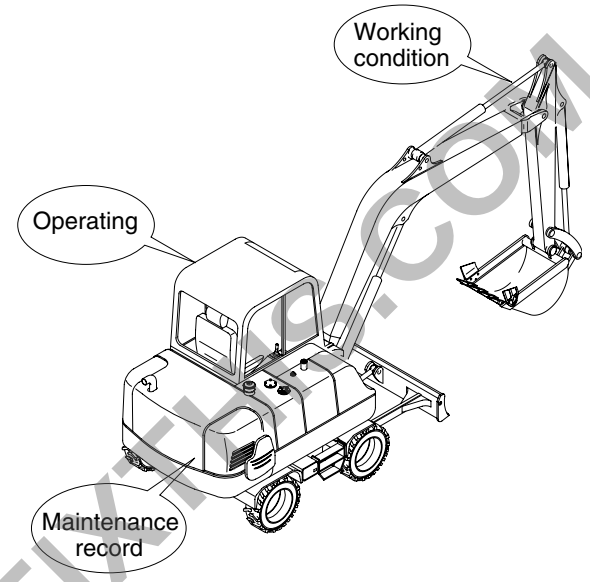
2) OPERATIONAL PERFORMANCE OF A WORKING MACHINE

With the passage of time, the machine's operational performance deteriorates, so that the machine needs to be serviced periodically to restore it to its original performance level.

Before servicing the machine, conduct performance tests to check the extent of deterioration, and to decide what kind of service needs to be done(by referring to the "Service Limits" in this manual).

3) OPERATIONAL PERFORMANCE OF A REPAIRED MACHINE

After the machine is repaired or serviced, it must be tested to confirm that its operational performance was restored by the repair and/or service work done.



55W76MS01

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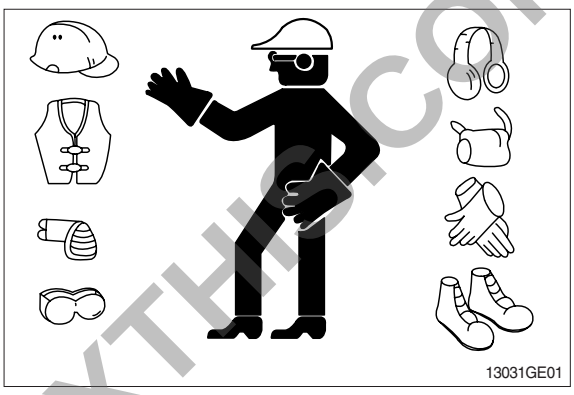
GROUP 1 SAFETY

FOLLOW SAFE PROCEDURE

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

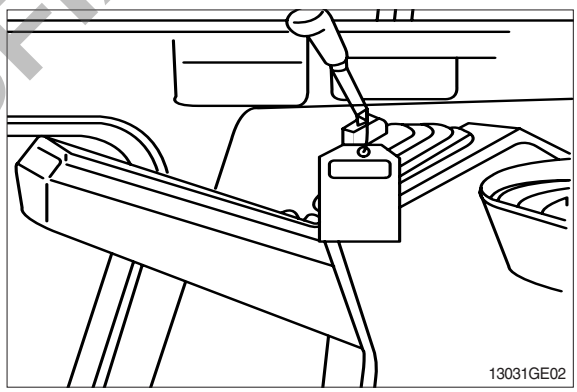
WEAR PROTECTIVE CLOTHING

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



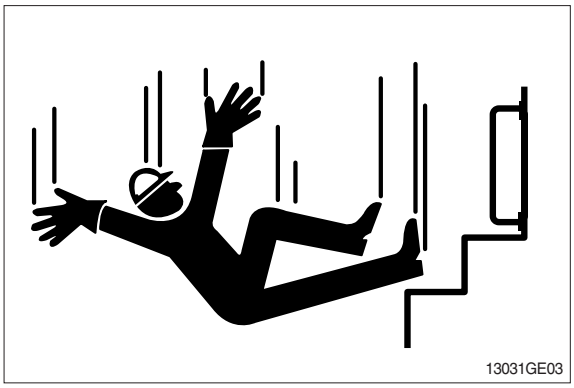
WARN OTHERS OF SERVICE WORK

Unexpected machine movement can cause serious injury.
Before performing any work on the excavator, attach a 「**Do Not Operate**」 tag on the right side control 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.



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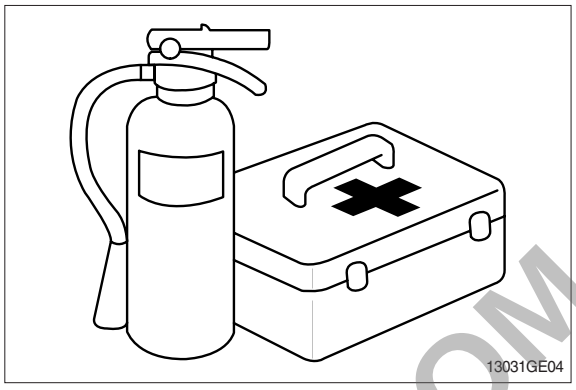
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PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

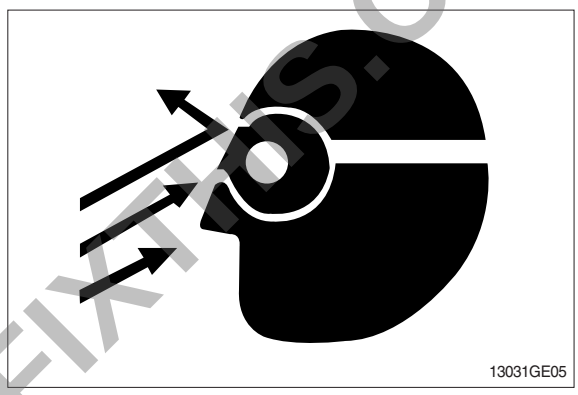
Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.


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PROTECT AGAINST FLYING DEBRIS

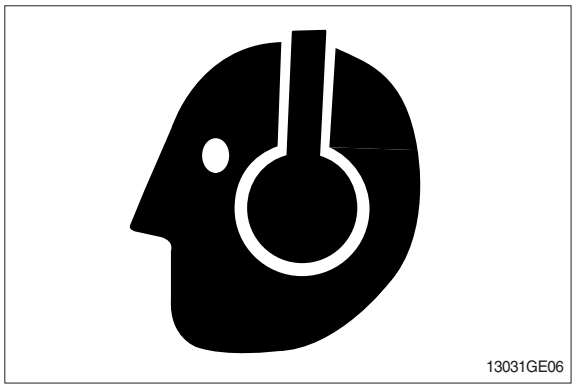
Guard against injury from flying pieces of metal or debris; wear goggles or safety glasses.


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PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing.

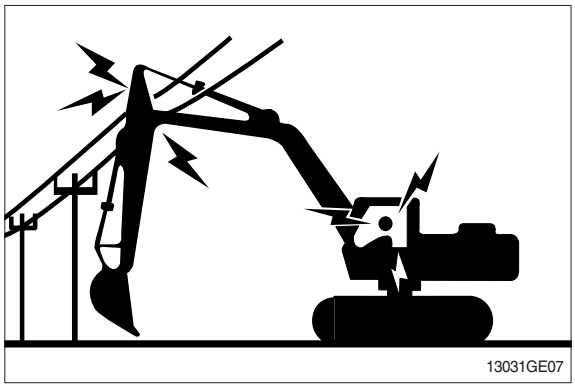
Wear a suitable hearing protective device such as ear-
muffs or earplugs to protect against objectionable or uncomfortable loud noises.


13031GE06

AVOID POWER LINES

Serious injury or death can result from contact with electric lines.

Never move any part of the machine or load closer to electric line than 3m(10ft) plus twice the line insulator length.


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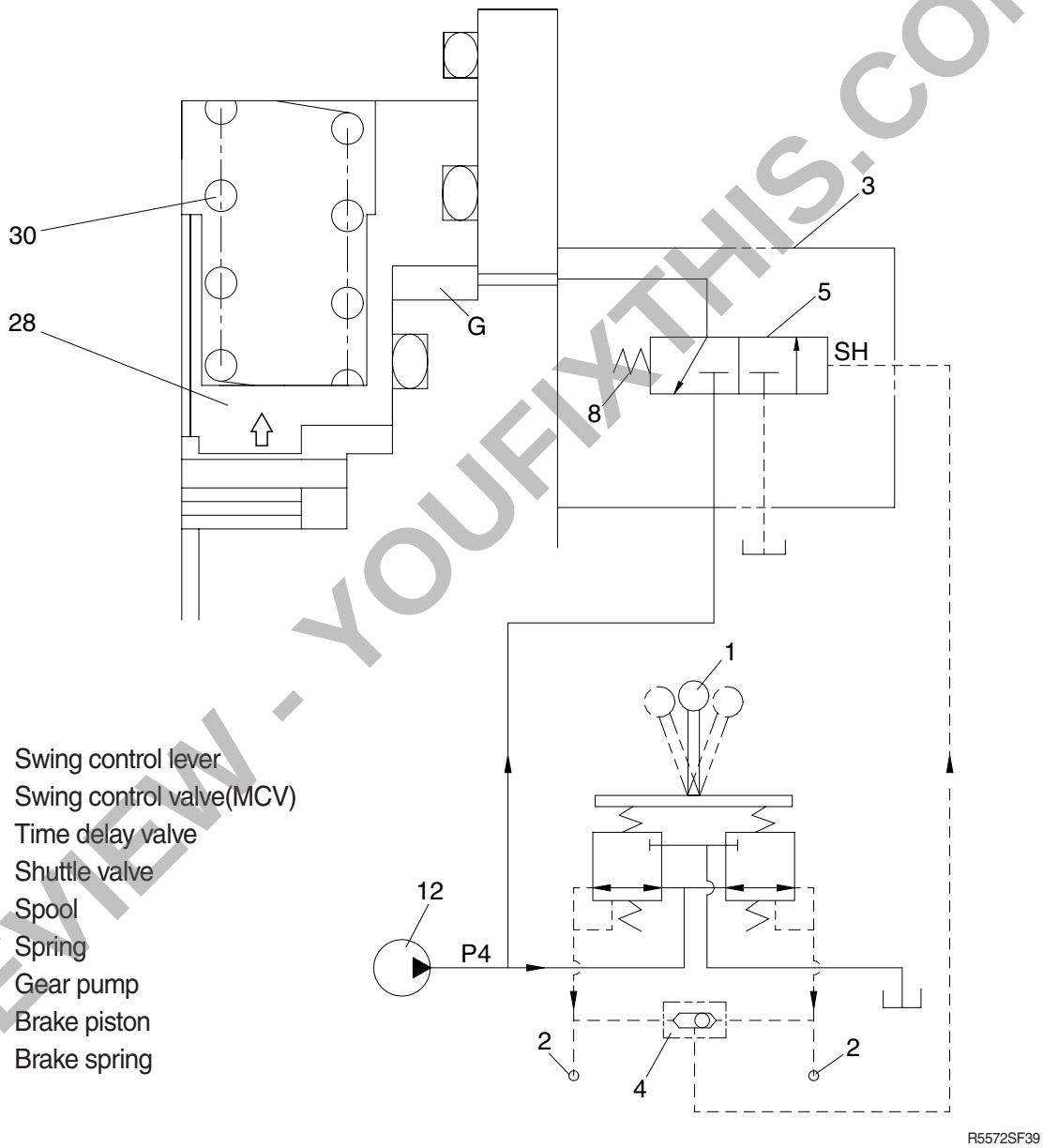
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② Operating principle

a. When the swing control lever(1) is set to the swing position, the pilot oil go to the swing control valve(2) and to SH of the time delay valve(3) via the shuttle valve(4), this pressure move spool(5) to the leftward against the force of the spring(8), so pilot pump charged oil(P4) goes to the chamber G.

This pressure is applied to move the piston(28) to the upward against the force of the spring(30). Thus, it releases the brake force.

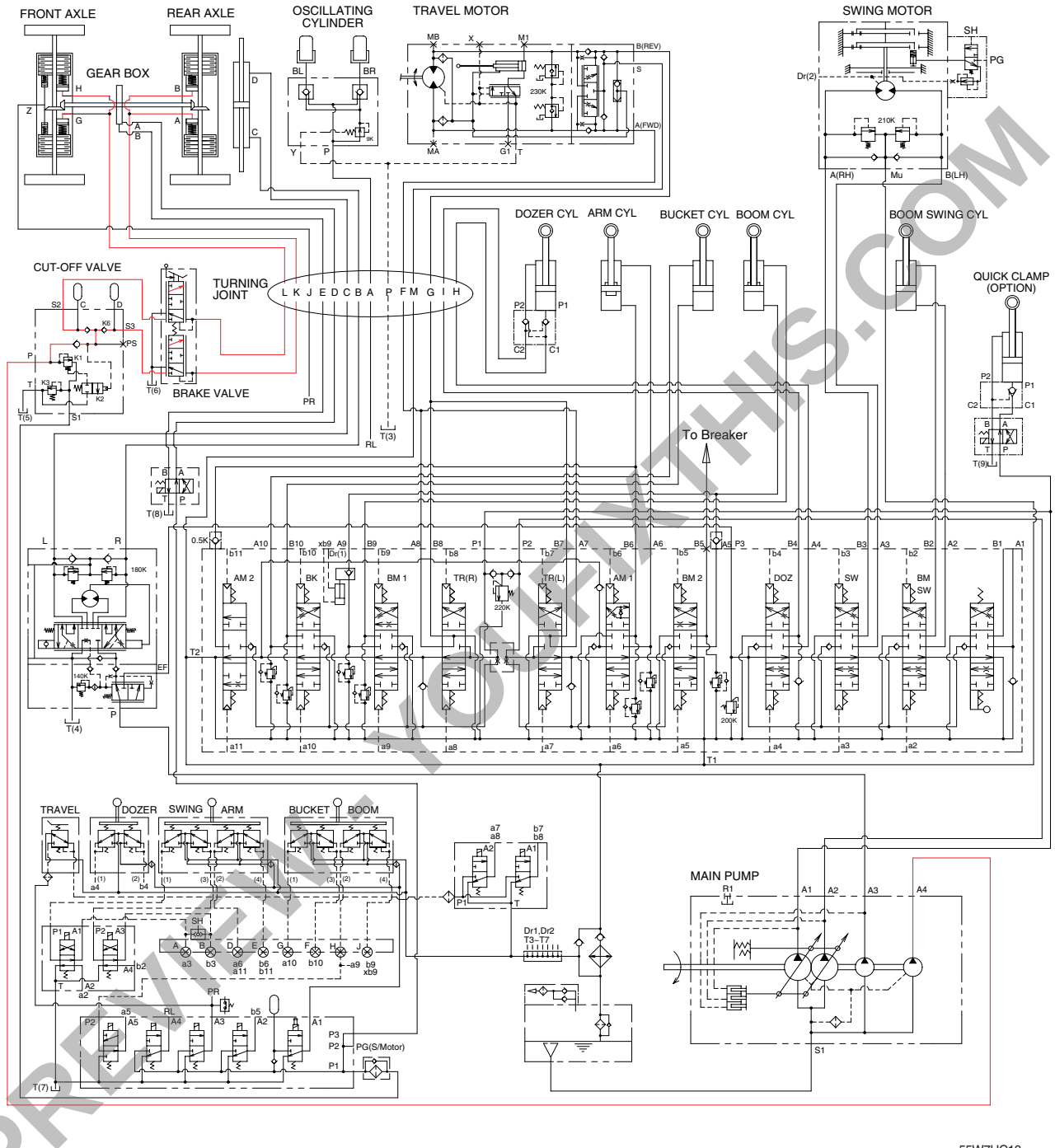


1 Swing control lever
2 Swing control valve(MCV)
3 Time delay valve
4 Shuttle valve
5 Spool
8 Spring
12 Gear pump
28 Brake piston
30 Brake spring

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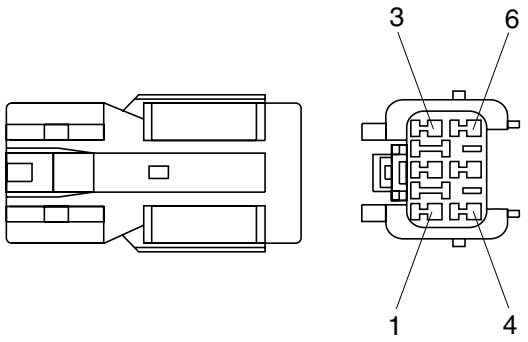
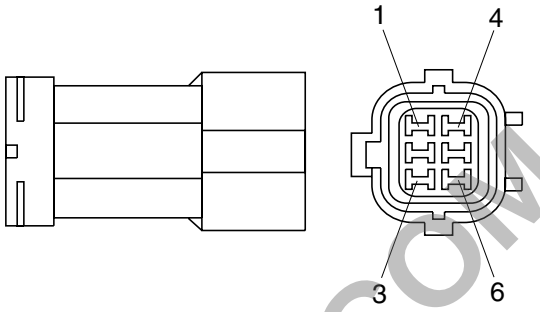
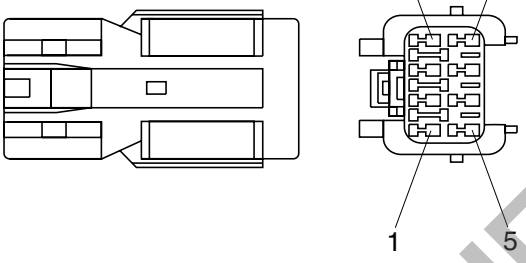
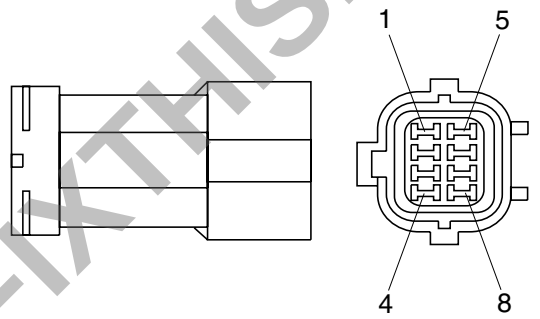
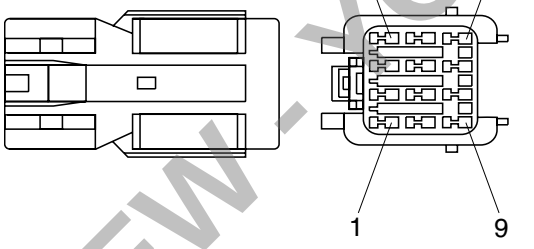
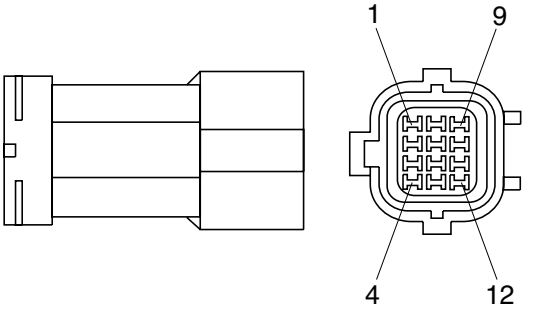
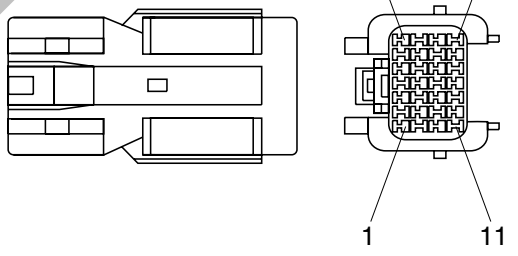
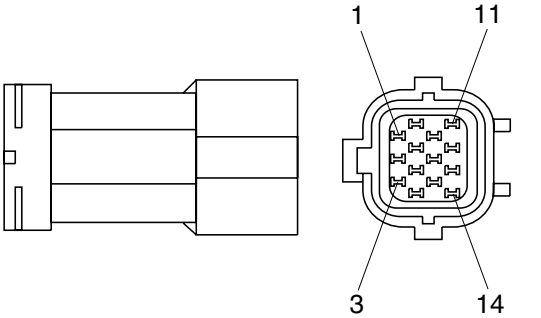
11. FRONT AND REAR AXLE BRAKE SYSTEM(SERVICE BRAKE)



When the brake pedal(Valve) is pushed, the discharged oil from the pilot pump(P4) flows into the front and rear axle brake disc through the solenoid valve of cut-off valve.
This pressure is applied to axle brake disc, thus the brake is applied.

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No. of pin	Connector(Female)	Connector(Male)
6	 S814-006000	 S814-106000
8	 S814-008000	 S814-108000
12	 S814-012000	 S814-112000
14	 S814-014000	 S814-114000

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2) ENGINE SPEED

(1) Measure the engine speed at the maximum RPM.

※ The engine speed must meet standard RPM; if not, all other operational performance data will be unreliable. It is essential to perform this test first.

(2) Preparation and measurement

① Warm up the machine, until the engine coolant temperature reaches 50°C or more, and the hydraulic oil is 50±5°C.

② Set the M mode at the cluster.

③ Measure the engine RPM.

(3) Evaluation

The measured speeds should meet the following specifications.

Unit : t / rpm

Model	Engine speed	Standard	Remark
R55W-7A	Low idle	1050±100	
	High idle	2260±50	M mode

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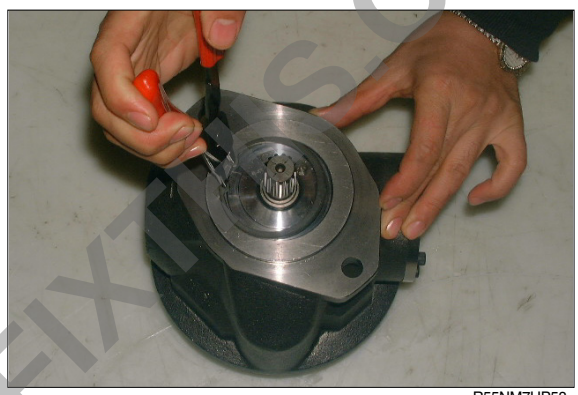
(7) Install the case with oil seal vertically without tilting.

※ Apply grease to the oil seal lip beforehand.



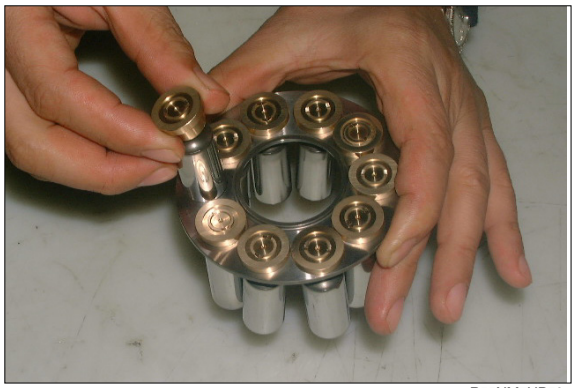
R55NM7HP57

(8) Install the C-type stop ring to fix the shaft.



R55NM7HP58

(9) Assembling the rotary group.
Install 10(ten) pistons into the retainer.



R55NM7HP59

(10) Apply grease to 3 parallel pins and assemble them to the cylinder block.

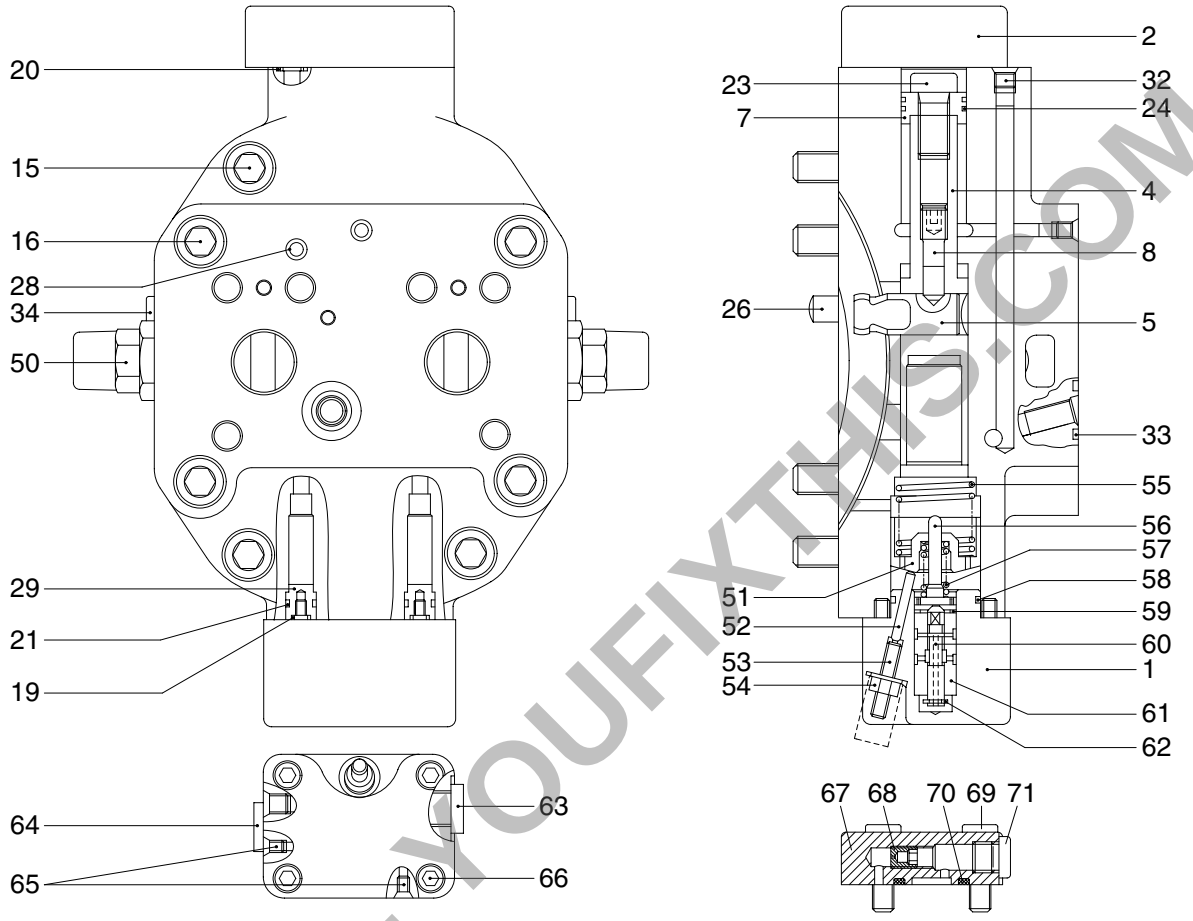


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2) CONTROL UNIT



55W72TM03

1	Control housing	28	Double break off pin	59	Retaining ring
2	Cover	29	Plug	60	Control piston
4	Positioning piston	32	Double break off pin	61	Control bushing
5	Positioning trunnion	33	O-ring	62	Retaining disc
7	Piston	34	Locking screw	63	Locking screw
8	Threaded pin	50	Relief valve	64	Locking screw
15	Socket head screw	51	Adjusting bushing	65	Double break off pin
16	Socket head screw	52	Cylinder pin	66	Socket head screw
19	O-ring	53	Threaded pin	67	Cover
20	O-ring	54	Seal lock nut	68	Throttle screw
21	O-ring	55	Pressure spring	69	Socket head screw
23	Socket head screw	56	Spring collar	70	O-ring
24	Square ring	57	Pressure spring	71	Locking screw
26	Cylinder pin	58	O-ring		

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(17) Cleaning of parts

① Put all parts in rough cleaning vessel filled with kerosene and clean them (Rough cleaning).

※ If dirty part is cleaned with kerosene just after putting it in vessel, it may be damaged. Leave it in kerosene for a while to loosen dust and dirty oil.

※ If this kerosene is polluted, parts will be damaged and functions of reassembled valve will be degraded.
Therefore, control cleanliness of kerosene fully.

② Put parts in final cleaning vessel filled with kerosene, turning it slowly to clean them even to their insides (Finish cleaning).

※ Do not dry parts with compressed air, since they will be damaged and/or rusted by dust and moisture in air.

(18) Rust prevention of parts.

Apply rust-preventives to all parts.

※ If left as they after being cleaned, they will be rusted and will not display their functions fully after being reassembled.

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