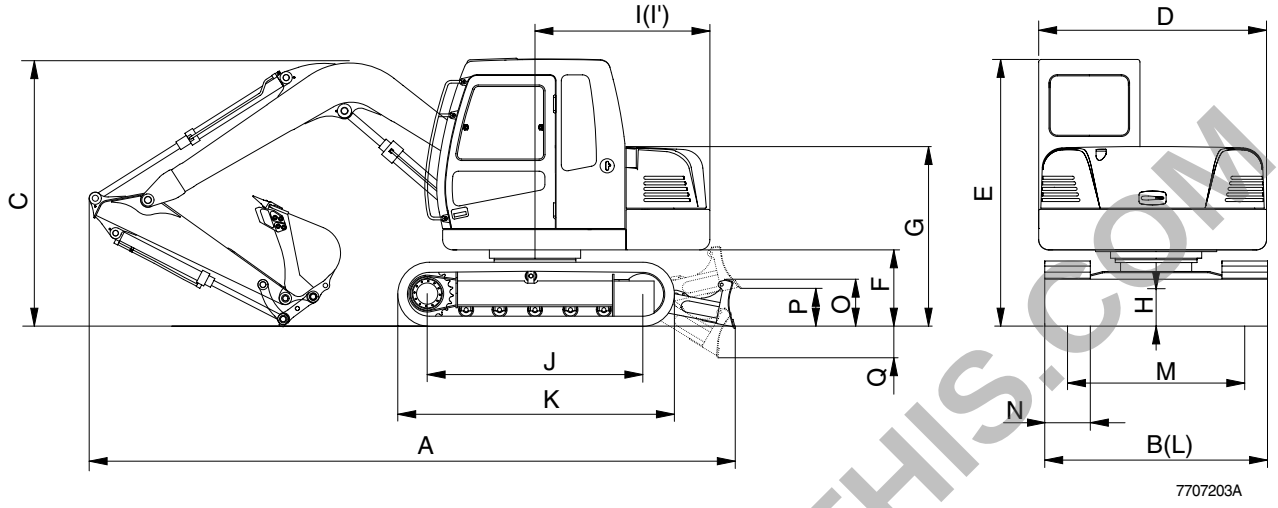
2. SPECIFICATIONS

1) 3.7m(12' 2") MONO BOOM, 1.67m(5' 6") ARM AND FRONT DOZER BLADE

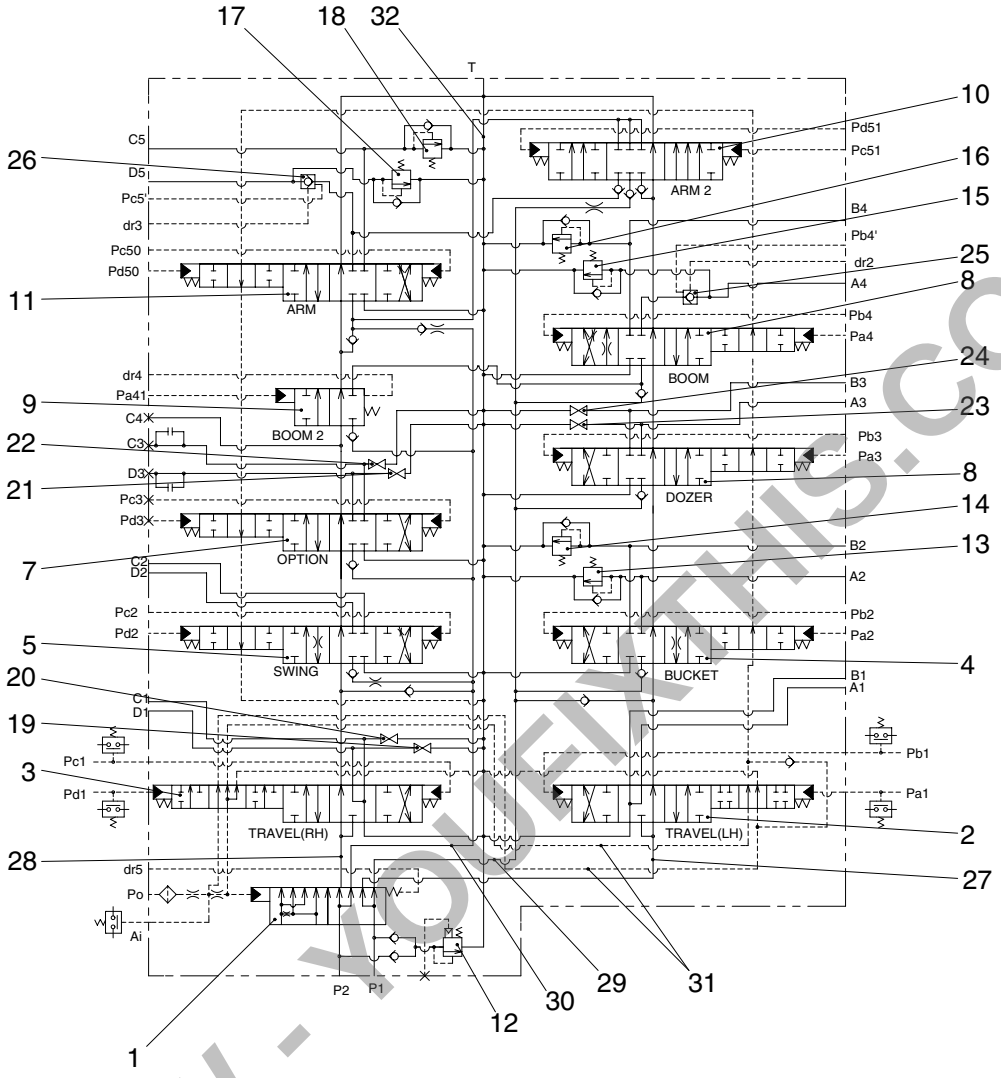


Description		Unit	Specification
Operating weight		kg(lb)	7800(17200)
Bucket capacity(SAE heaped), standard		$m^3(yd^3)$	0.28(0.25)
Overall length	A	mm(ft-in)	6325(20' 9")
Overall width, with 450mm shoe	B		2260(7' 5")
Overall height of boom	C		2605(8' 7")
Superstructure width	D		2250(7' 5")
Overall height	E		2650(8' 8")
Ground clearance of counterweight	F		755(2' 6")
Engine cover height	G		1775(5' 10")
Minimum ground clearance	H		360(1' 2")
Rear-end distance	I		1727(5' 8")
Rear-end swing radius	I'		1750(5' 9")
Distance between tumblers	J		2130(6' 12")
Undercarriage length	K		2724(8' 11")
Undercarriage width	L		2200(7' 3")
Track gauge	M		1750(5' 9")
Track shoe width, standard	N		450(1' 6")
Height of blade	O		460(1' 6")
Ground clearance of blade up	P		400(1' 4")
Depth of blade down	Q		280(0' 11")
Travel speed(Low/high)		km/hr(mph)	3.3/4.6(2.1/2.9)
Swing speed		rpm	12.0
Gradeability		Degree(%)	30(58)
Ground pressure(450mm shoe)		$kgf/cm^2(psi)$	0.37(5.26)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2. HYDRAULIC CIRCUIT DIAGRAM



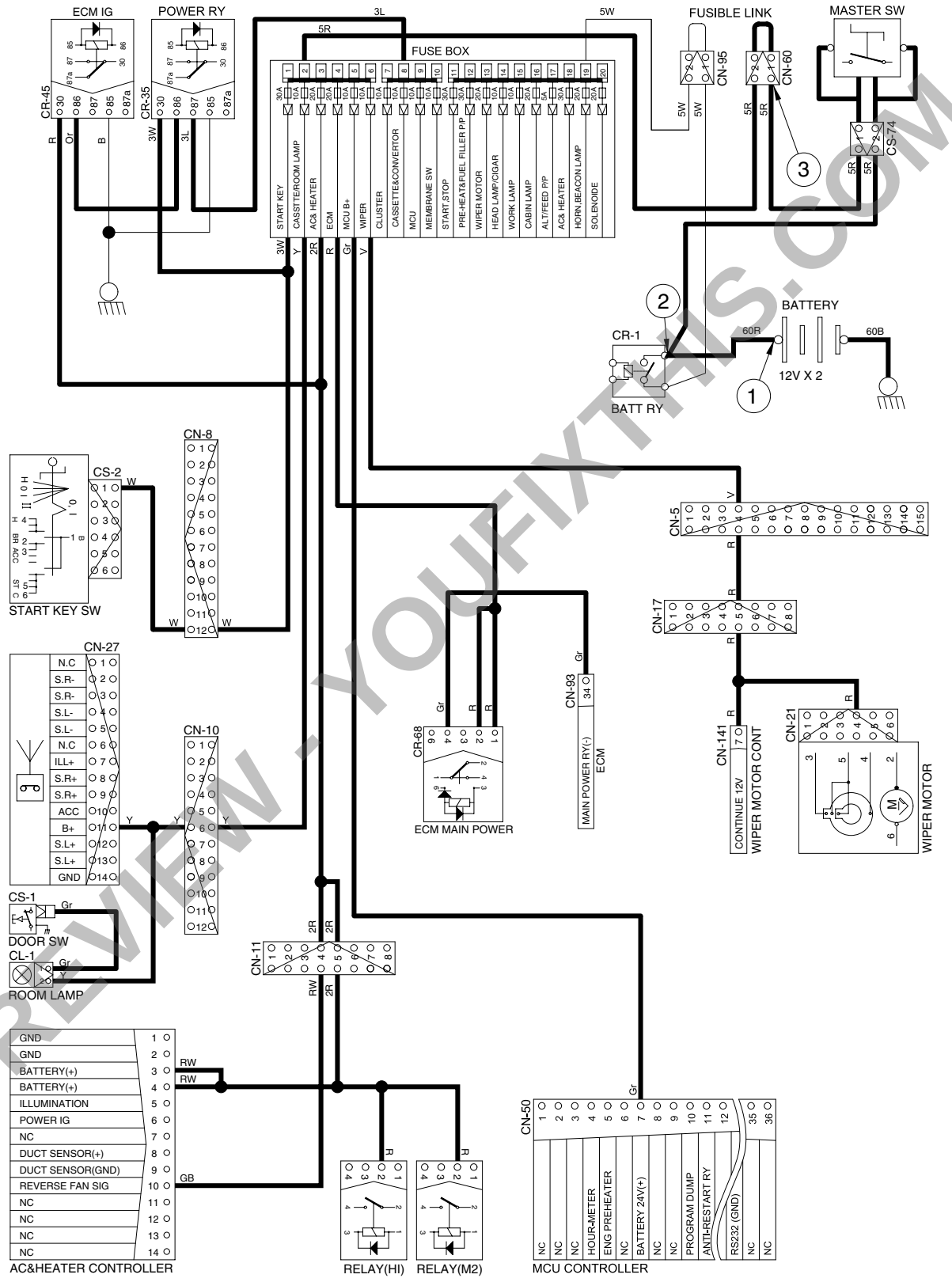
7072MCV01

Ref. No.	Description	Ref. No.	Description
1	Spool - Straight travel	17	Overload relief valve
2	Spool - Travel left	18	Overload relief valve
3	Spool - Travel right	19	Relief plug
4	Spool - Bucket	20	Relief plug
5	Spool - Swing	21	Relief plug
6	Spool - Dozer	22	Relief plug
7	Spool - Option	23	Relief plug
8	Spool - Boom	24	Relief plug
9	Spool - Boom2	25	Boom lock valve
10	Spool - Arm2	26	Arm lock valve
11	Spool - Arm	27	By - Pass(P1)
12	Main relief valve	28	By - Pass(P2)
13	Overload relief valve	29	Parallel passage(P1)
14	Overload relief valve	30	Parallel passage(P2)
15	Overload relief valve	31	Pilot signal passage
16	Overload relief valve	32	Tank passage

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

POWER CIRCUIT



807A4EL15

PREVIEW - YOUFIXTHIS.COM

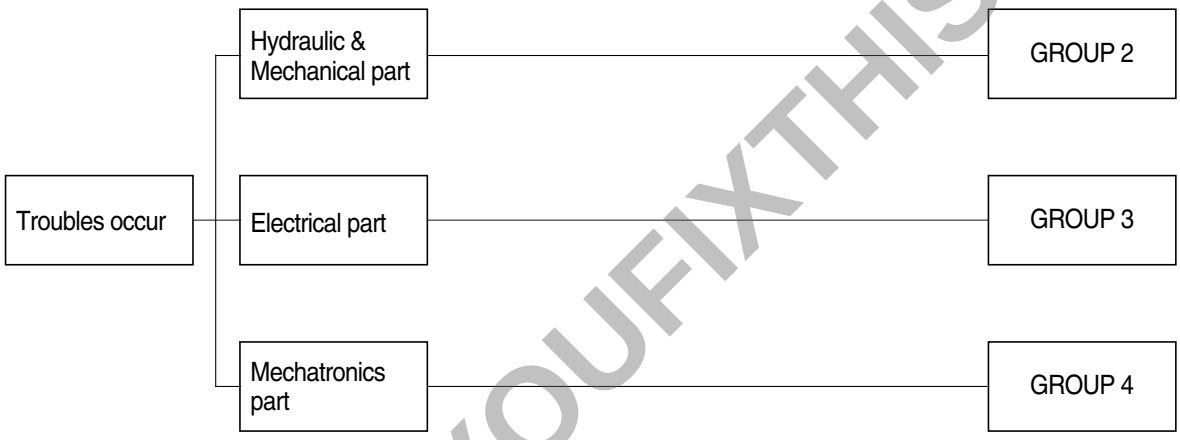
Download full manual at youfixthis.com

GROUP 1 BEFORE TROUBLESHOOTING

1. INTRODUCTION

When a trouble is occurred in the machine, this section will help an operator to maintain the machine with easy.

The trouble of machine is parted Hydraulic & Mechanical system, Electrical system and Mechatronics system. At each system part, an operator can check the machine according to the troubleshooting process diagram.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

1. REMOVAL AND INSTALL

1) REMOVAL

(1) Lower the work equipment to the ground and stop the engine.

(2) Operate the control levers and pedals several times to release the remaining pressure in the hydraulic piping

(3) Loosen the breather slowly to release the pressure inside the hydraulic tank.

⚠ **Escaping fluid under pressure can penetrate the skin causing serious injury.**

(4) Loosen the drain plug under the hydraulic tank and drain the oil from the hydraulic tank.

· Hydraulic tank quantity : 75 ℓ

(5) Disconnect hoses(4) and remove connectors(3).

(6) Disconnect pilot line hoses(6,8) and remove connectors(5,7).

(7) Remove socket bolts(2) and disconnect pump suction tube(1).

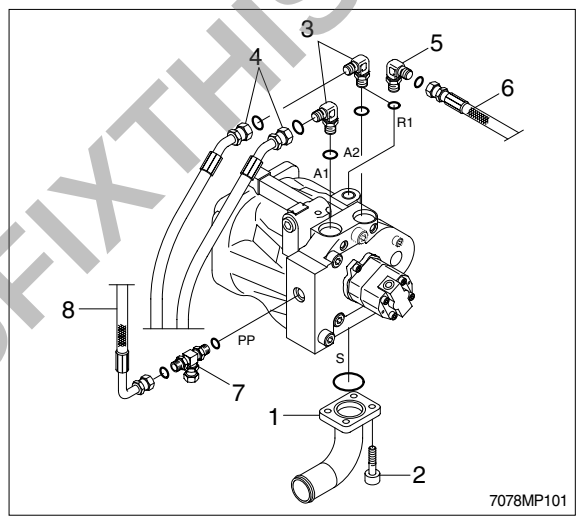
※ When pump suction tube is disconnected, the oil inside the piping will flow out, so catch it in oil pan.

(8) Sling the pump assembly and remove the pump mounting bolts.

· Weight : 50kg(110lb)

※ Pull out the pump assembly from housing. When removing the pump assembly, check that all the hoses have been disconnected.





PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

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	7±1.5	50.6±10.9
2		Engine mounting bolt(Bracket-Frame)	M16 × 2.0	25±0.5	181±3.6
3		Radiator mounting bolt, nut	M12 × 1.75	12.2±1.3	88.2±9.4
4		Coupling mounting bolt	M14 × 2.0	14±1.0	101±7.2
5	Hydraulic system	Main pump mounting bolt	M12 × 1.75	12±1.0	86.8±7.2
6		Main control valve mounting bolt	M10 × 1.5	6.9±1.4	49.9±10.1
7		Fuel tank mounting bolt	M16 × 2.0	25±2.5	181±18.1
8		Hydraulic oil tank mounting bolt	M16 × 2.0	25±2.5	181±18.1
9		Turning joint mounting bolt, nut	M12 × 1.75	12.3±1.3	88.2±9.4
10	Power train system	Swing motor mounting bolt	M16 × 2.0	29.7±3.2	215±23.1
11		Swing bearing upper mounting bolt	M16 × 2.0	29.7±5	215±36.2
12		Swing bearing lower mounting bolt	M16 × 2.0	29.7±5	215±36.2
13		Travel motor mounting bolt	M16 × 2.0	23±2.5	166±18.1
14	Under carriage	Sprocket mounting bolt	M16 × 2.0	29.7±4.5	215±32.5
15		Carrier roller mounting bolt, nut	M16 × 2.0	29.7±4.5	215±32.5
16		Track roller mounting bolt	M14 × 2.0	19.6±2.5	142±18
17		Track tension cylinder mounting bolt	M16 × 2.0	29.7±4.5	215±32.5
18		Track shoe mounting bolt, nut	M14 × 1.5	25.5±2.5	184±18.1
19	Others	Counter weight mounting bolt	M20 × 2.5	57.8±6.4	418±46.3
20		Cab mounting bolt, nut	M12 × 1.75	12.2±1.3	88.2±9.4
21		Operator's seat mounting bolt	M 8 × 1.25	1.17±0.1	8.5±0.7

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

5. ERROR CODES TABLE

Fault code No.	Description
00	No error
01	Short circuit in accel actuator motor system
02	Potentiometer circuit is shorted to Vcc(5V) or battery +
05	Short circuit in travel speed solenoid system
10	Short circuit in hour-meter system
11	Accel dial circuit is shorted to Vcc(5V) or battery +
16	Accel actuator motor circuit is open or shorted to ground
17	Potentiometer circuit is open or shorted to ground
20	Travel speed solenoid circuit is open or shorted to ground
25	Hour-meter circuit is open or shorted to ground
26	Accel dial circuit is open or shorted to ground
31	Engine preheater circuit is open or shorted to ground
33	Alternator circuit is open or shorted to ground
34	Actuator input voltage is below 18V
35	Actuator input voltage is over 38V
36	Communication error with cluster
37	Engine speed sensor circuit is open or shorted to ground
41	Hydraulic oil temperature sensor circuit is shorted to ground
42	Fuel level sensor circuit is shorted to ground
43	Coolant temperature sensor circuit is shorted to ground
45	Hydraulic oil temperature sensor circuit is open or shorted to battery +
46	Fuel level sensor circuit is open or shorted to battery +
47	Coolant temperature sensor circuit is open or shorted to battery +
49	Engine preheater circuit is shorted to battery +

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

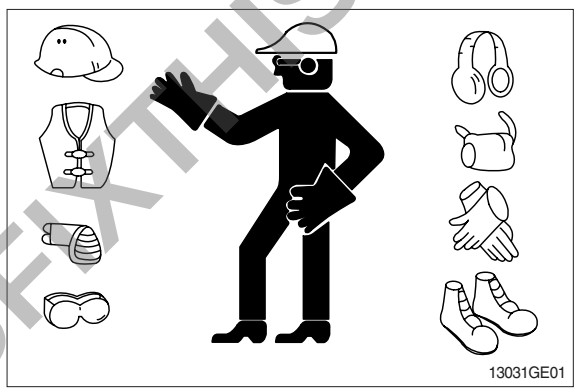
GROUP 1 SAFETY HINTS

FOLLOW SAFE PROCEDURE

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

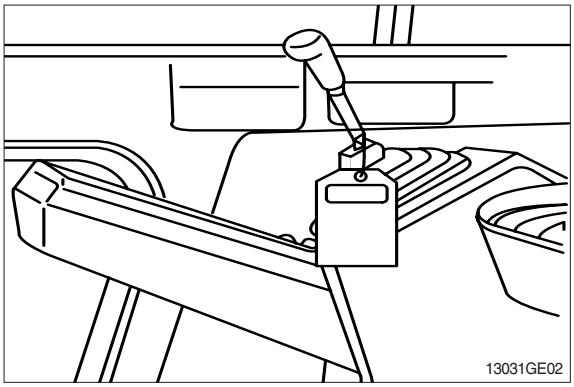
WEAR PROTECTIVE CLOTHING

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



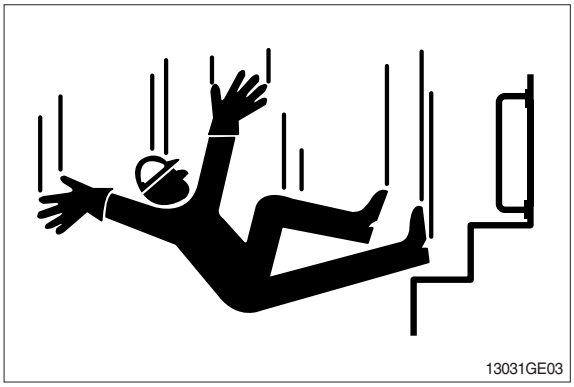
WARN OTHERS OF SERVICE WORK

Unexpected machine movement can cause serious injury.
Before performing any work on the 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.



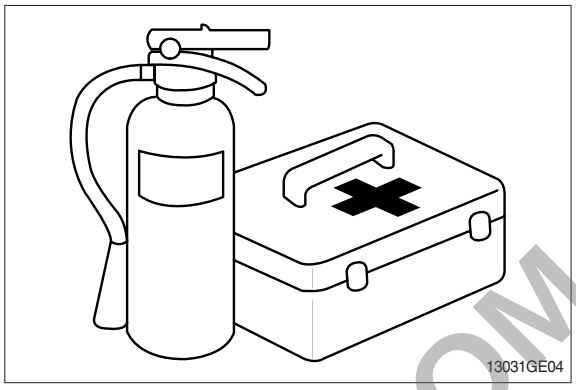
PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

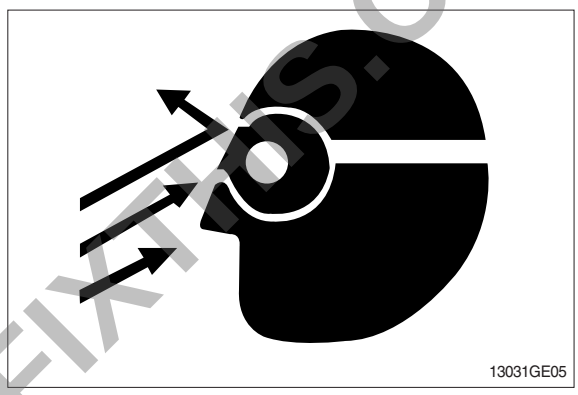
Keep a first aid kit and fire extinguisher handy.

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



PROTECT AGAINST FLYING DEBRIS

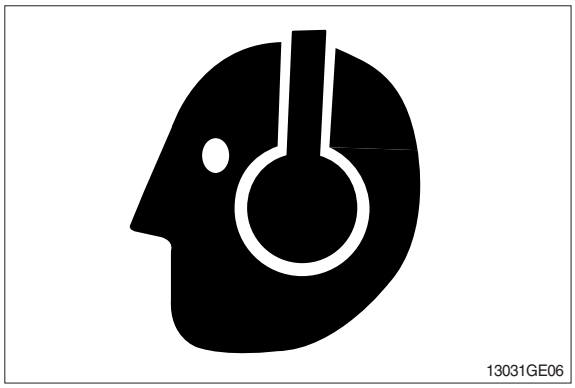
Guard against injury from flying pieces of metal or debris; Wear goggles or safety glasses.



PROTECT AGAINST NOISE

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

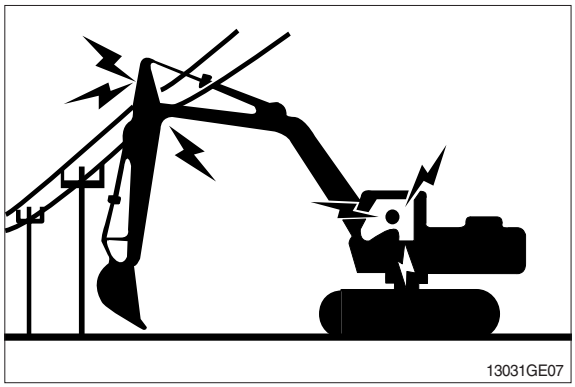
Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



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.



PREVIEW - YOUFIXTHIS.COM

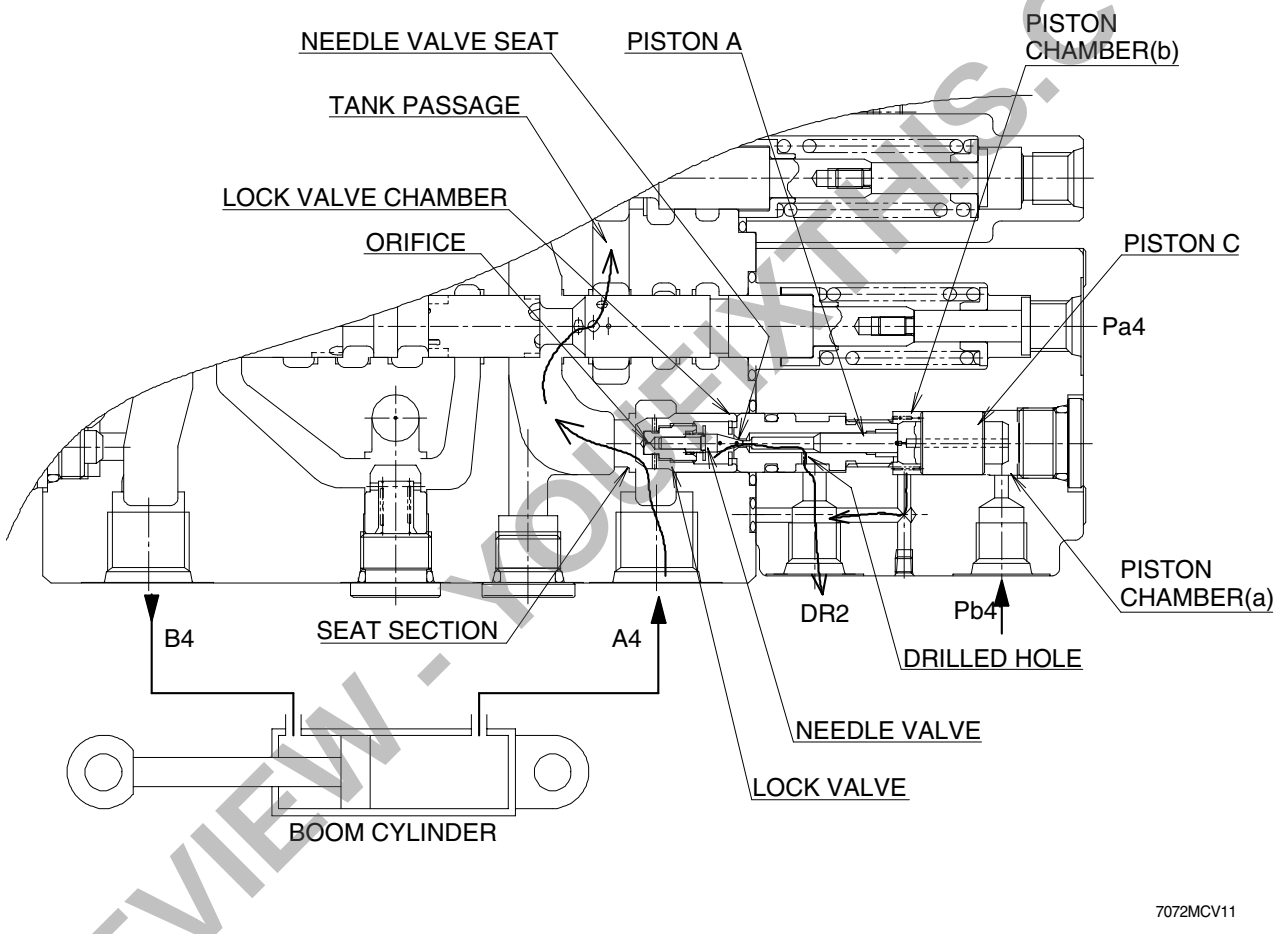
Download full manual at youfixthis.com

(2) Releasing

When the pilot pressure acts on pilot port(Pb4') for releasing of lock valve, piston(C) moves leftward, and pushes and opens the needle valve through piston(A).

Then the return oil from the boom cylinder flows through the orifice of the lock valve, lock valve chamber and drilled hole, and flows into the tank passage through the notch of the spool for boom.

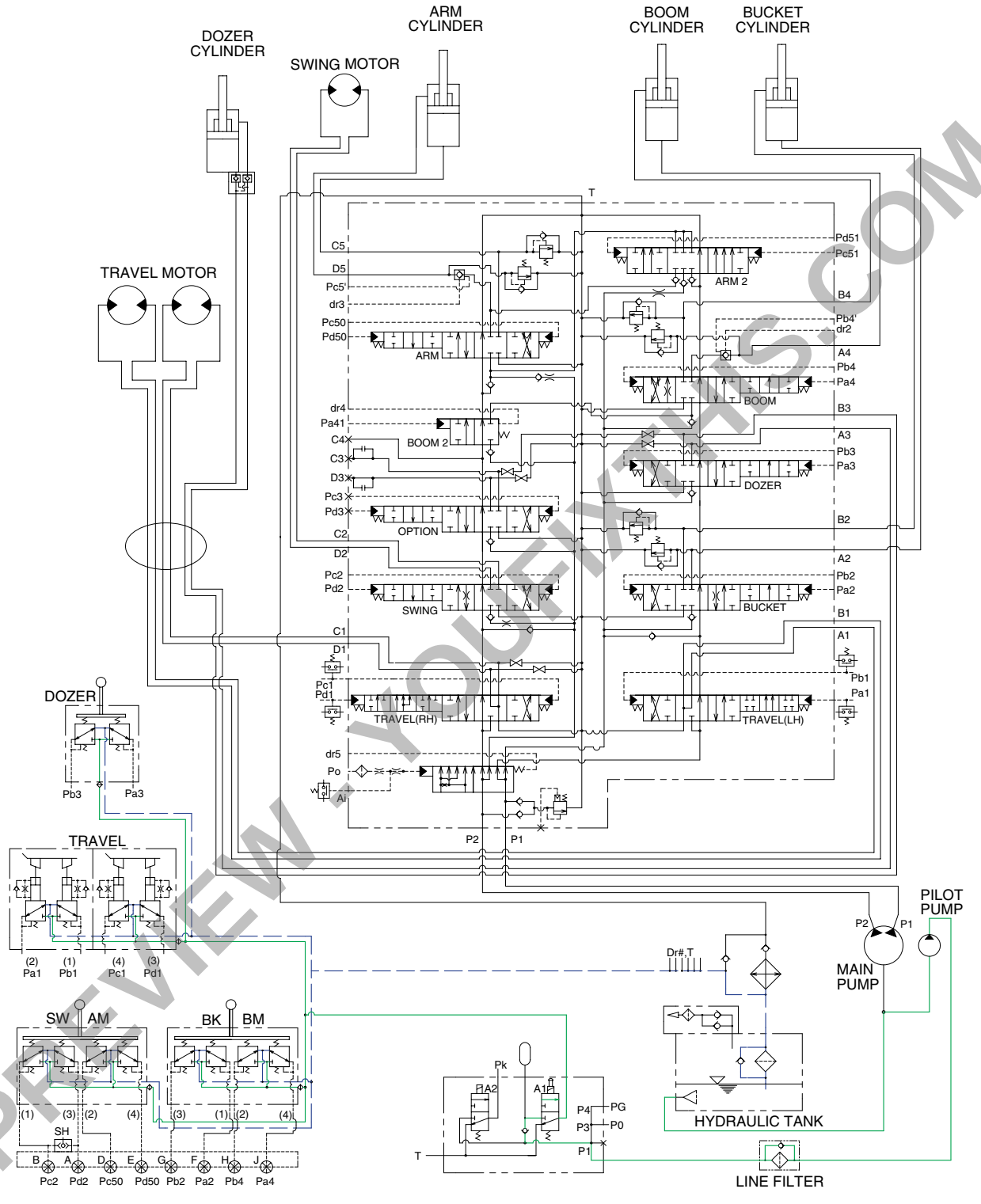
The pressure of the lock valve chamber lowers because the needle valve opens and the return oil from the boom cylinder opens the lock valve. Consequently the return oil from the boom cylinder flows into the tank passage through the notch of the spool for boom.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

1. SUCTION, DELIVERY AND RETURN CIRCUIT



7073HC02

The pilot pump receive oil from the hydraulic tank. The discharged oil from the pilot pump flows to the safety solenoid valve through the line filter. The oil is filtered by the line filter. The pilot relief valve is provided in the pilot pump for limiting the pilot circuit pressure.

The oil filtered by line filter flows remote control valve through safety solenoid valve.

The return oil flow into the hydraulic tank.

Download full manual at youfixthis.com

7. BEACON LAMP CIRCUIT

1) OPERATING FLOW

Fuse box (No.19) → I/conn [CN-8(3)] → Beacon lamp switch [CS-23(6)]

※ When lamp switch ON

Beacon lamp switch ON [CS-23(2)] → Switch Indicator lamp ON [CS-23(9)]

→ I/conn [CN-8(4)] → I/conn [CN-10(10)] → Beacon lamp ON [CL-7]

2) CHECK POINT

Engine	Start switch	Check point	Voltage
STOP	ON	① - GND(Fuse box) ② - GND(Switch power input) ③ - GND(Switch power output) ④ - GND(Beacon lamp)	20~25V

※ GND : Ground

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

GROUP 7 SELF-DIAGNOSTIC SYSTEM

1. OUTLINE

When any abnormality occurs in the NEW CAPO system caused by electric parts malfunction and by open or short circuit, the MCU controller diagnoses the problem and sends the error codes to the cluster and also stores them in the memory.

2. CURRENT ERROR DISPLAY

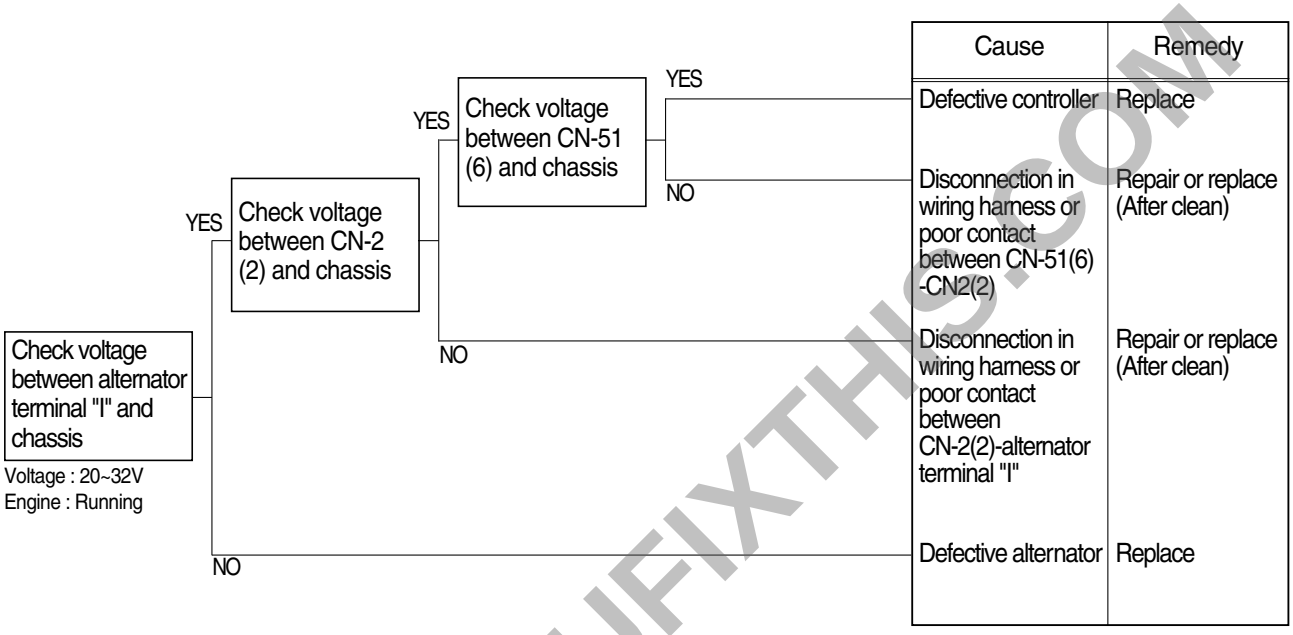


PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

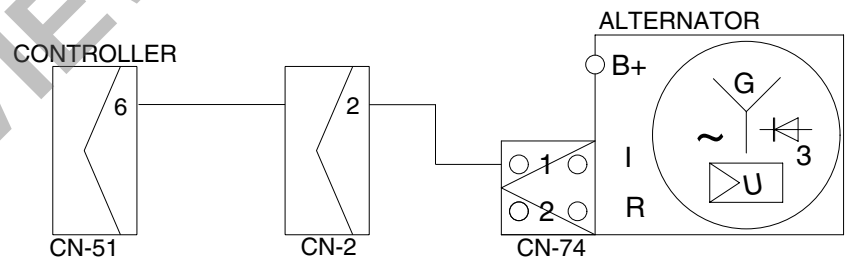
3. BATTERY CHARGING WARNING LAMP LIGHTS UP(Starting switch : ON)

- Before disconnecting the connector, always turn the starting switch OFF.
- Before carrying out below procedure, check all the related connectors are properly inserted.
- After checking, insert the disconnected connectors again immediately unless otherwise specified.



Check voltage

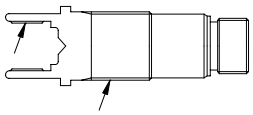
YES	20 ~ 32V
NO	0V



807A6TS02

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Part name	Check point	Standard dimension	Maximum allowable value (Criteria)	Remedy
Shaft(2) 	Spline sections(connected to cylinder barrel, and bear part)	-	No abnormality such as crack, chipping, nonuniformly wear-ing out, etc.	Replace
Bearings(1-3), (1-8), (1-13), (11), (12)	Rolling surface	-	No flaking or other abnormal damage on the rolling surface	Replace
Oil seal(13)	Seal lip	-	No damage or partial wear	Replace
O-rings, Back-up rings	-	-	-	In reassembling, they should be replaced with new ones even if no abnormality is detected.
Cylinder barrel(3)	Condition of the surface sliding with valve plate	Roughness < Ra 0.2μ m	Roughness < Ra 0.8μ m	Replace the set of cylinder barrel and valve plate
Valve plate(8)	Condition of sliding surface	Roughness < Ra 0.4μ m	Roughness < Ra 1.6μ m	Replace the set of cyli-nder barrel and valve plate

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

(2) The case of the section with lock valve(boom and arm)

Instruction for removing the boom spool(for instance) is follows :

Remove three cap screws by 5㎜ allen key wrench. Then remove pilot cover with piston guide, piston A, piston C, and spring of lock valve A.

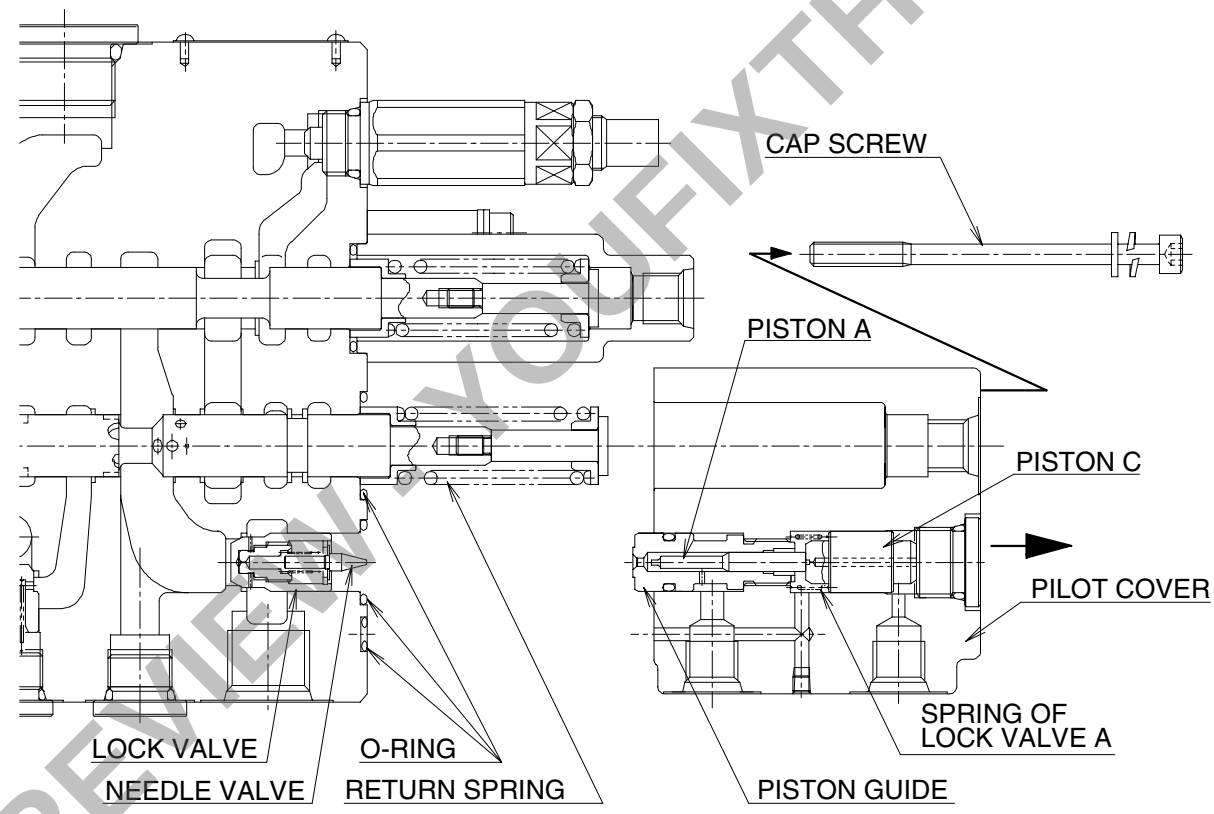
※ At this time, be careful for O-ring on the bottom of pilot cover mounting flange at body side and needle valve not to separate, and remove the pilot cover.

As the spring portion of the boom spool comes out, pull the spring straight slowly, by which spool assembly is removed.

※ Please treat it carefully so that a crack is not attached to the piston guide part exposed from the bottom of pilot cover.

※ In the case of spool replace, do not disassemble of a spool by any cases.

Please replace by spool assembly.

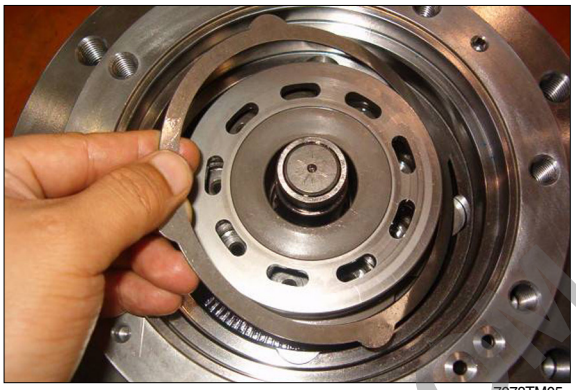


7078MCV02

PREVIEW - YOUFIXTHIS.COM

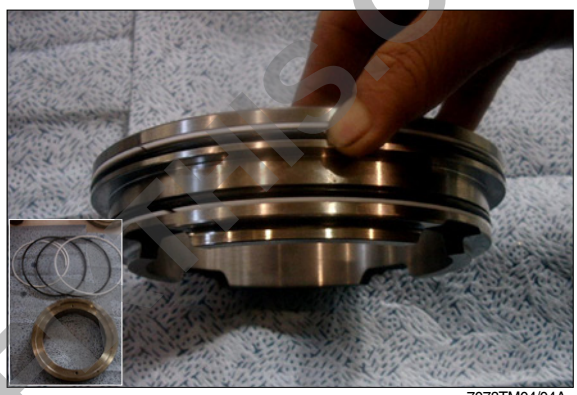
Download full manual at youfixthis.com

⑥ Assembling friction plate(15), parking plate(16)(respectively 3EA assembling) to the shaft casing(1).



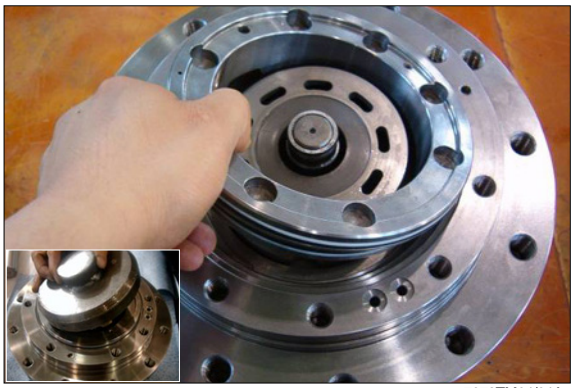
7078TM05

⑦ Assembling back up ring(19), O-ring(18, 20), back up ring(21) to the parking piston(17).



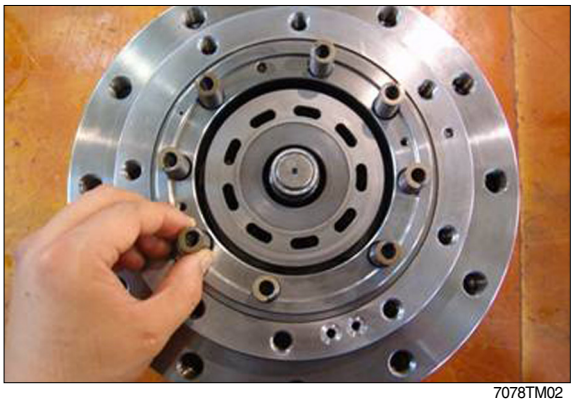
7078TM04/04A

⑧ Using a jig, insert the parking piston to the shaft casing(1) and assemble.



7078TM64/64A

⑨ Assemble spring(56) to the shaft casing(1) and then assemble O-ring(57).



7078TM02

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

3) DISASSEMBLY

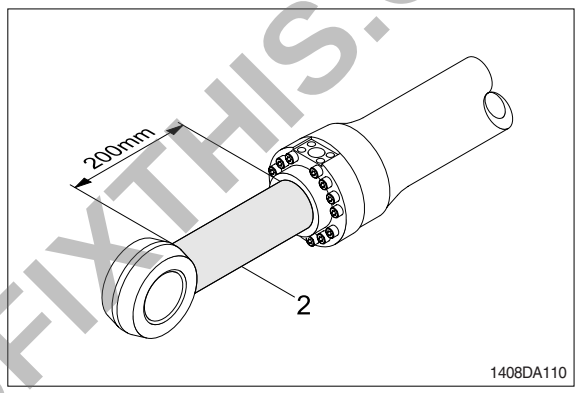
(1) Remove cylinder head and piston rod

※ **Procedures are based on the bucket cylinder.**

① Hold the clevis section of the tube in a vise.

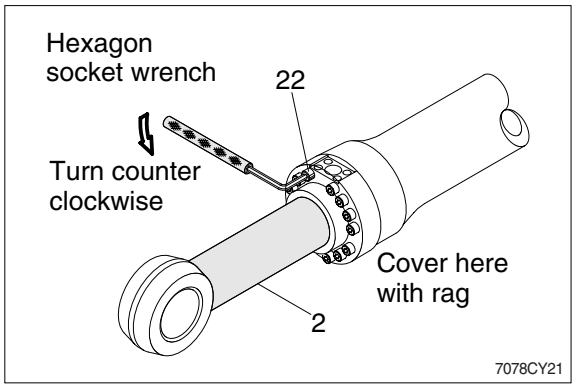
※ **Use mouth pieces so as not to damage the machined surface of the cylinder tube. Do not make use of the outside piping as a locking means.**

② Pull out rod assembly(2) about 200㎜ (7.1in). Because the rod assembly is rather heavy, finish extending it with air pressure after the oil draining operation.



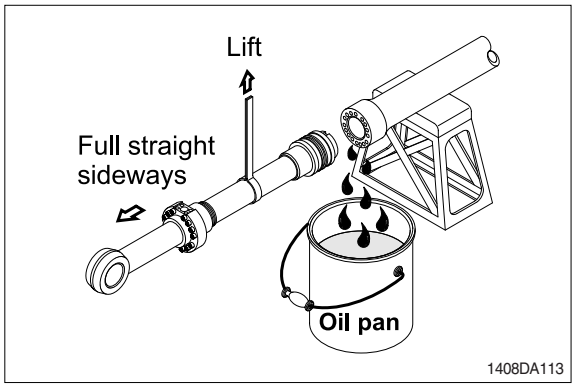
③ Loosen and remove socket bolts(22) of the gland in sequence.

※ Cover the extracted rod assembly(2) with rag to prevent it from being accidentally damaged during operation.



④ Draw out cylinder head and rod assembly together from tube assembly(1).

※ Since the rod assembly is heavy in this case, lift the tip of the rod assembly(2) with a crane or some means and draw it out. However, when rod assembly(2) has been drawn out to approximately two thirds of its length, lift it in its center to draw it completely.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 18 of 420 pages

The full manual includes:

- All 420 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Hyundai R80-7A Shop Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual