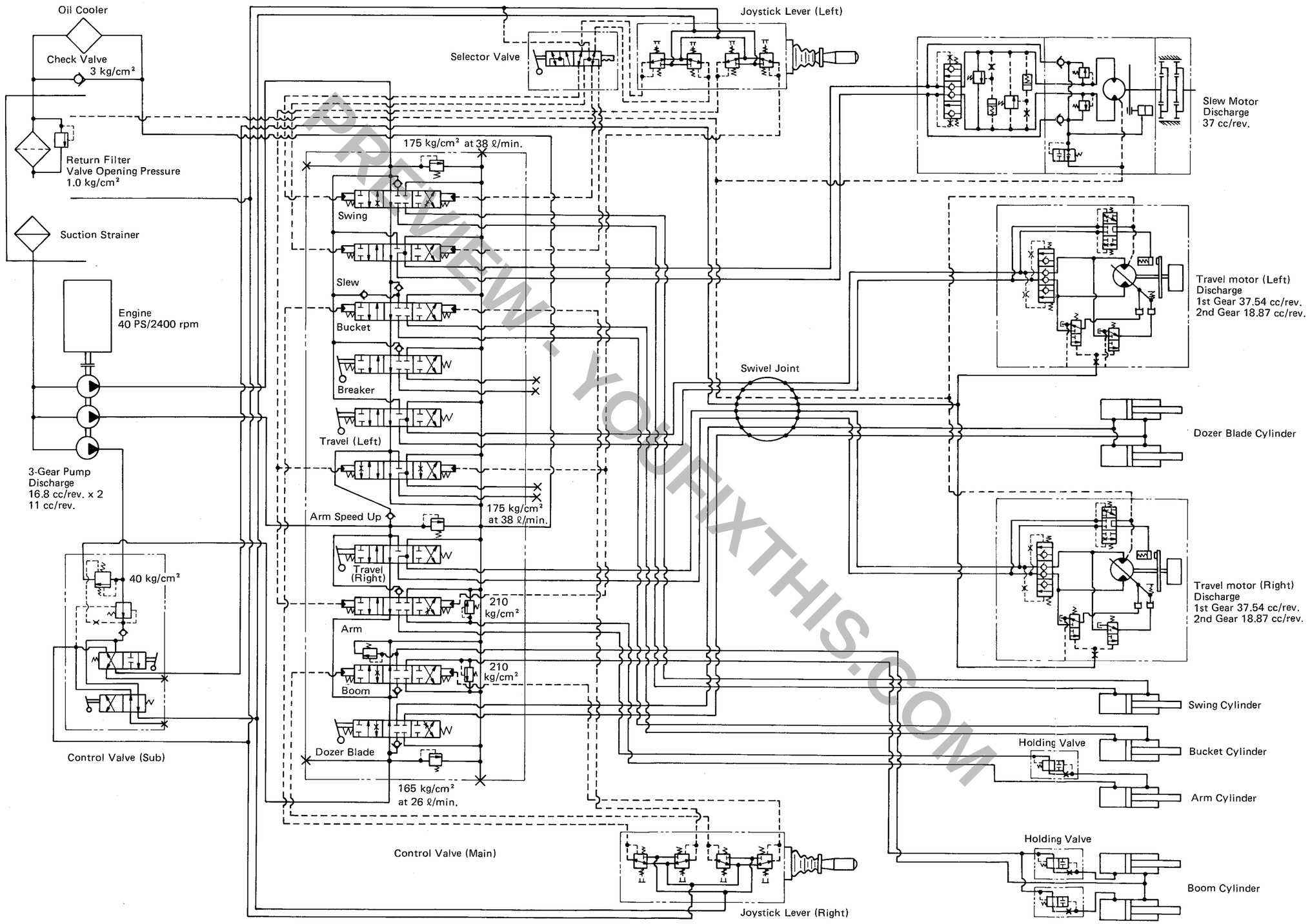
HYDRAULIC CIRCUIT DIAGRAM



KO-001A

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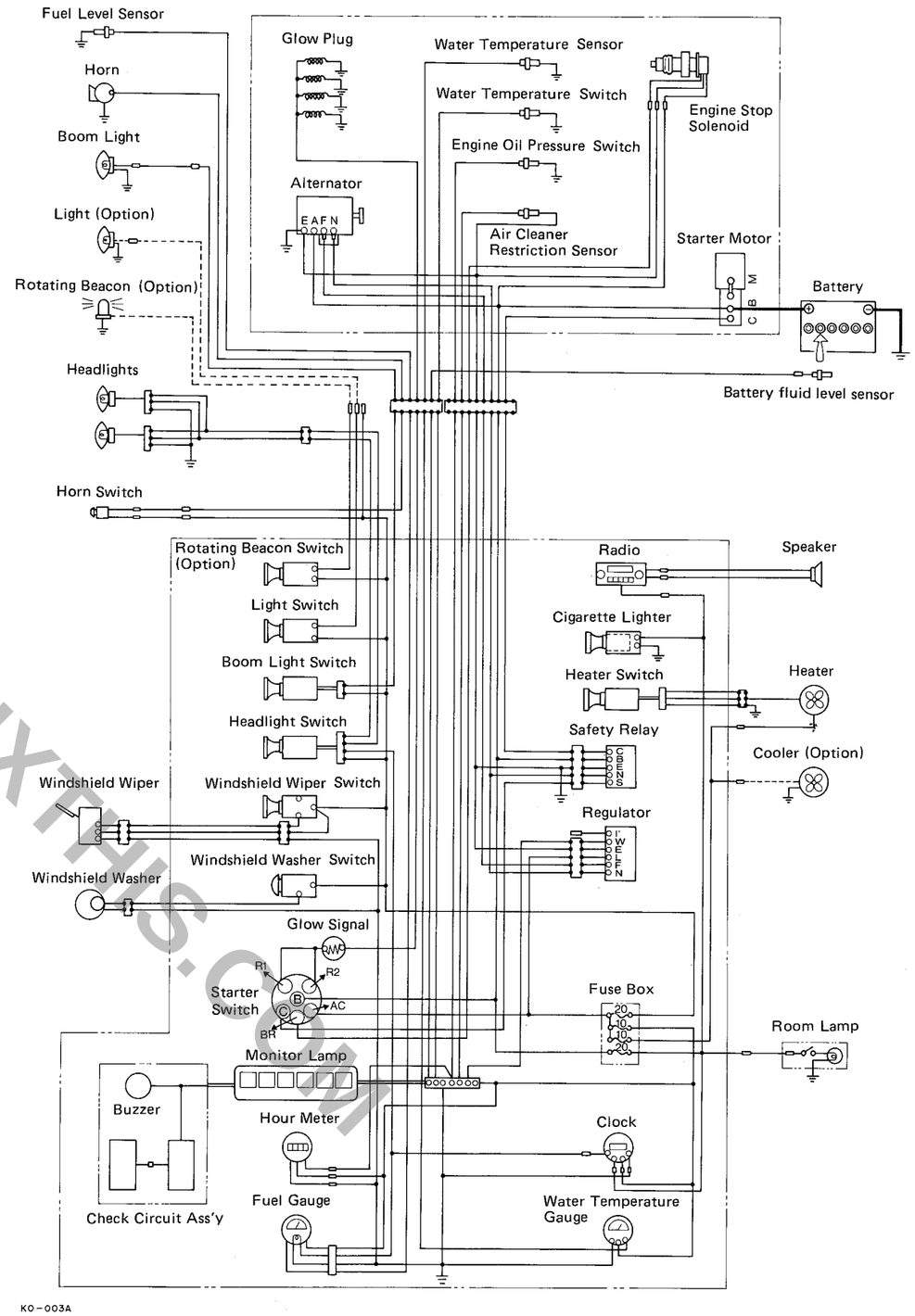
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SPECIFICATIONS

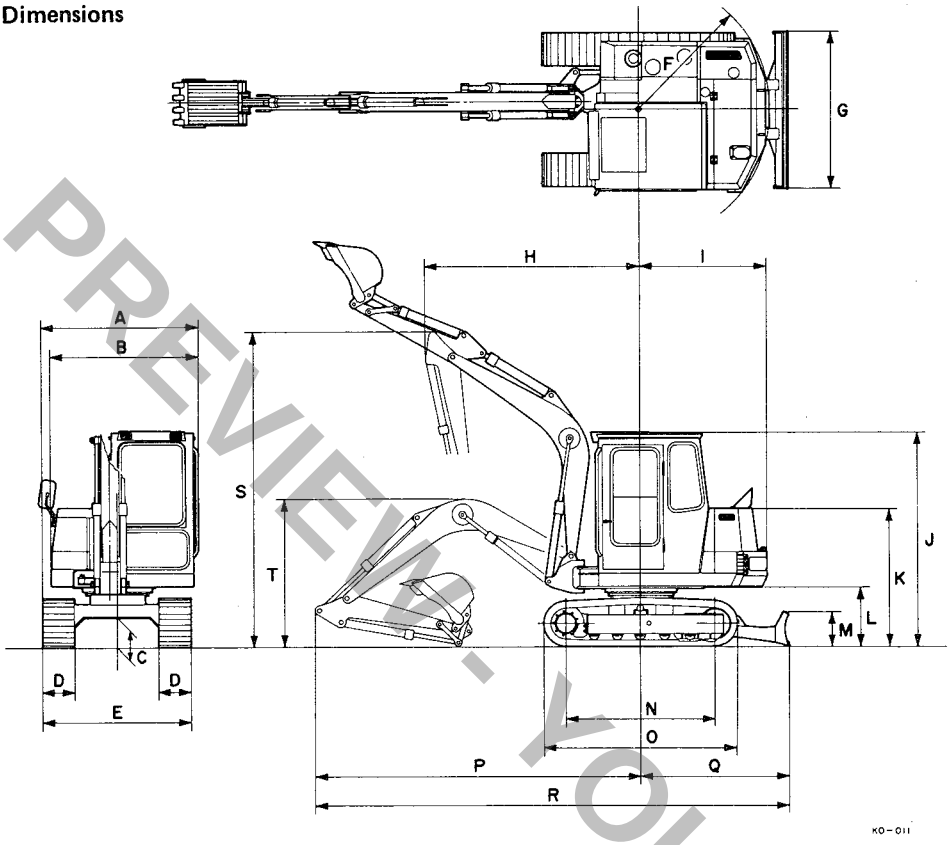
ELECTRICAL CIRCUIT DIAGRAM



KO-003A

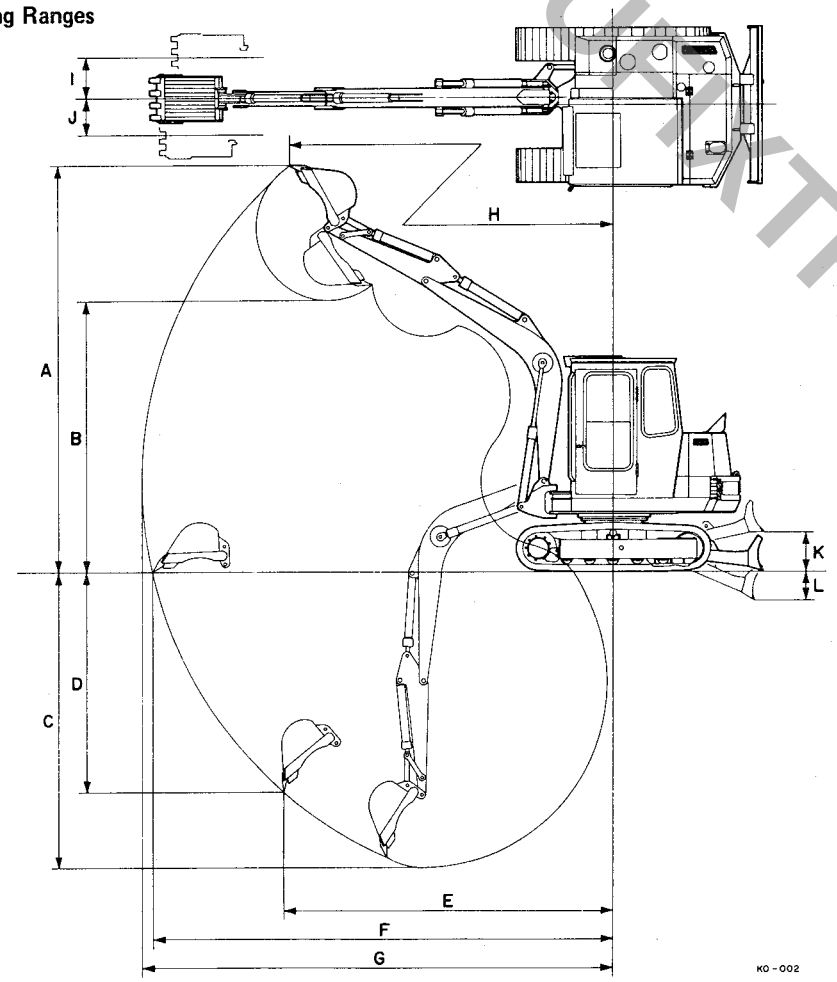
SPECIFICATIONS DIAGRAM

Dimensions



	mm.	in.
A	1860	73.5
B	1760	69.5
C	330	13
D	380	15
E	1780	70
F	1540	60.5
G	1840	72.5
H	2665	105
I	1485	58.5
J	2510	99
K	1600	63
L	690	27
M	405	16
N	1770	69.5
O	2290	90
P	3850	151.5
Q	1750	69
R	5600	220.5
S	3610	142
T	1850	73

Operating Ranges



	mm.	in.
A	4630	182.5
B	3080	121.5
C	3440	135.5
D	2580	101.5
E	3890	153
F	5450	214.5
G	5565	219
H	3935	155
I	480	19
J	420	16.5
K	445	17.5
L	335	13

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(1)

DISASSEMBLY, REASSEMBLY

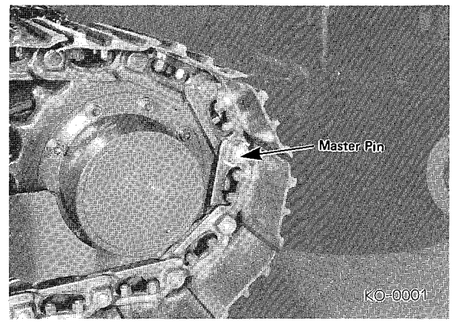
LOWER MACHINERY DISASSEMBLY AND REASSEMBLY

Lower Machinery → Crawler Belt → Carrier Roller
Crawler Belt → Track Roller
Crawler Belt → Travel Motor
Crawler Belt → Front Idler, Track Spring
Lower Machinery → Dozer Blade

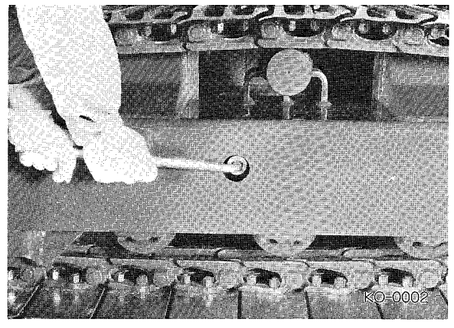
- Before removing hydraulic hoses, the air should be bled from the Hydraulic oil tank.
- Insert plugs in the openings where hydraulic hoses have been removed to keep dirt, etc. from getting in the lines.

Crawler belt Removal

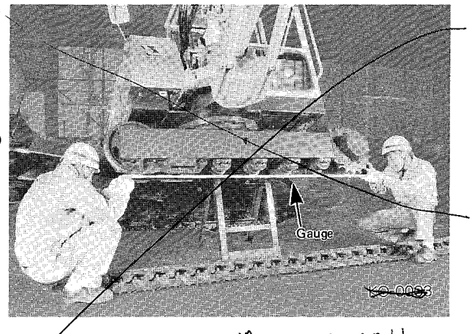
1. Stop the machine so that the position of the master pin is on the travel motor side or on the front idler side.



2. Loosen the check valve and loosen the tension on the crawler belt.
   - If the check valve is turned 7 or 8 times and loosened, the grease in the grease cylinder will coze out and the track tension will be lessened.



3. Knock out the master pin.



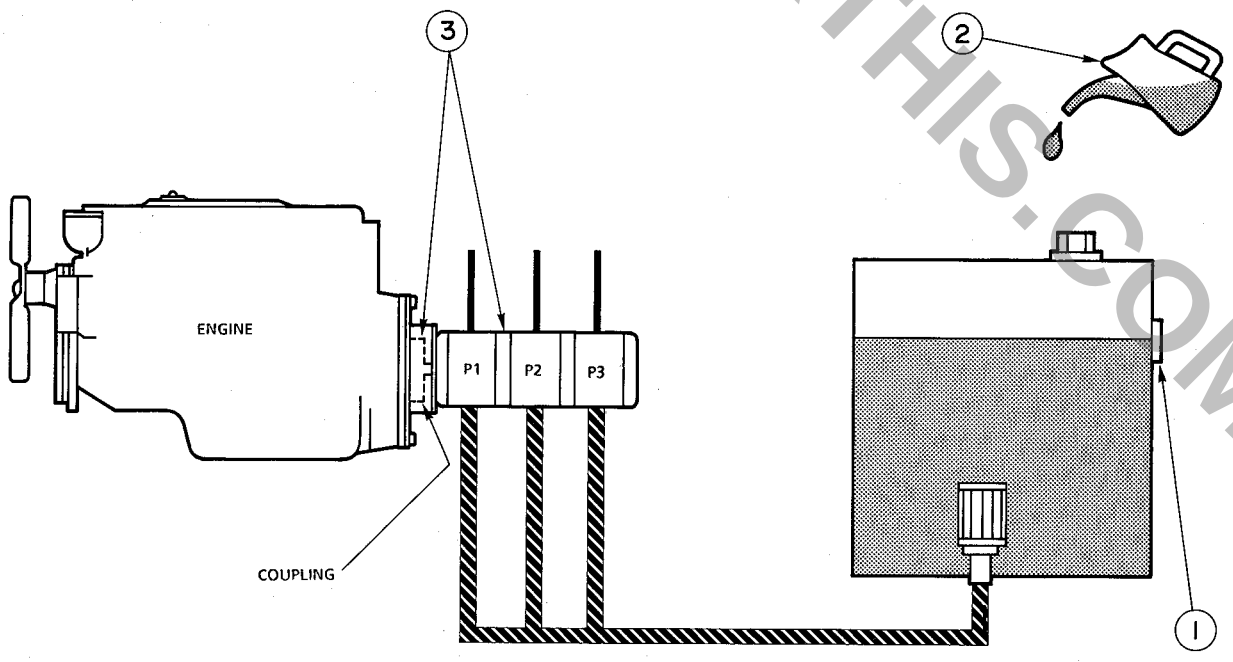
• KO-0003 のPhoto を入れる

正しい No → KO-0011

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MACHINE DOES NOT OPERATE AT ALL.

1	Check the hydraulic oil level.	Insufficient →	2	Replenish the hydraulic oil.
	↓ Enough			
3	Hydraulic pump or coupling is faulty.	→		· Repair or replace the hydraulic pump. · Replace the coupling.

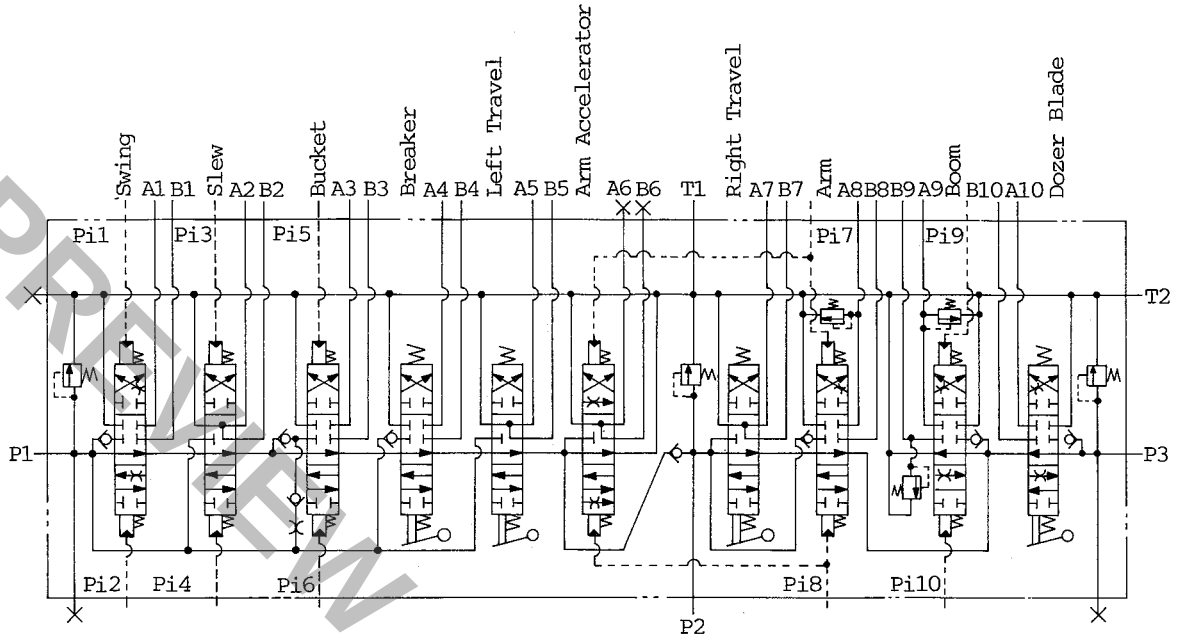


Z3–1015

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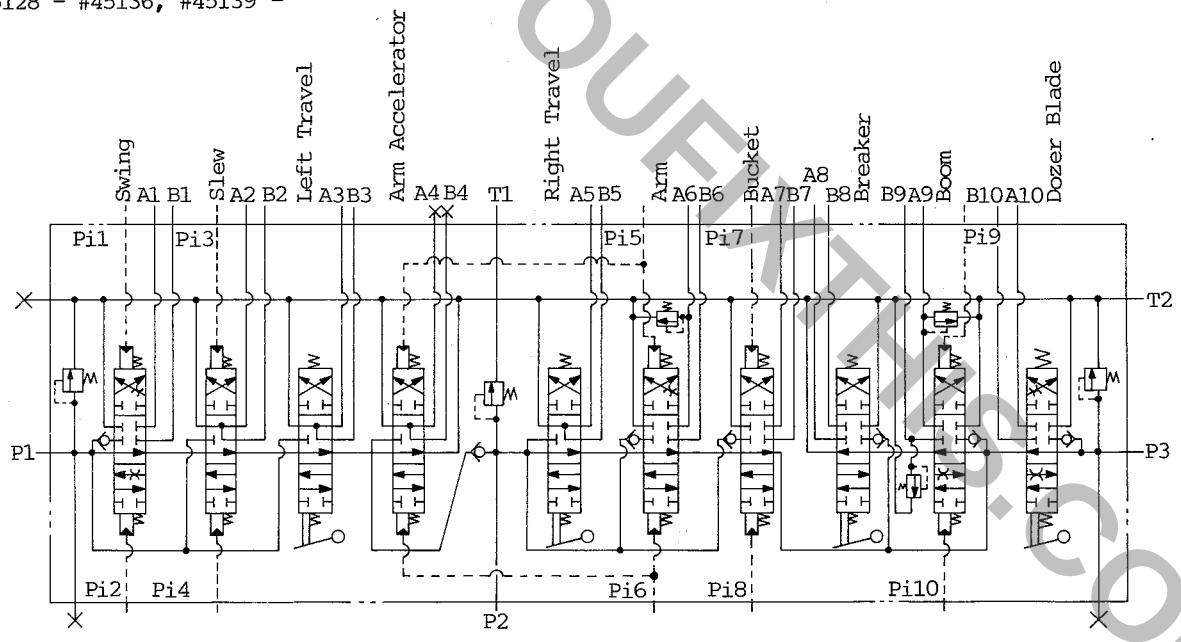
Hydraulic Circuit Diagram

#45001 - #45127, #45137, #45138



KO-026A

#45128 - #45136, #45139 -



KO-027A

Relief Valve Set Pressure	P1	175 kg/cm^2 at 38 l/min.
	P2	175 kg/cm^2 at 38 l/min.
	P3	165 kg/cm^2 at 26 l/min.
Overload Relief Valve Set Pressure	A8	210 kg/cm^2 at 3 l/min.
	A9	210 kg/cm^2 at 3 l/min.
	B9	210 kg/cm^2 at 3 l/min.

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TIGHTENING TORQUES

Hydraulic Hose Fittings

Thread Size	Union Nut (PF)		Taper Thread (PT)	
	kgf·m	ft·lb	kgf·m	ft·lb
1/8	0.8 ~ 1.2	5.8 ~ 8.6	1.0 ~ 1.3	7.2 ~ 9.4
1/4	2.5 ~ 3.0	18.1 ~ 21.7	2.7 ~ 3.0	19.5 ~ 21.7
3/8	5.0 ~ 6.0	36.2 ~ 43.4	5.0 ~ 6.0	36.2 ~ 43.4
3/4	10.0 ~ 12.0	72.3 ~ 86.7	13.5 ~ 16.5	97.6 ~ 119.3
1	14.0 ~ 15.0	101.2 ~ 108.4	18.0 ~ 22.0	130.2 ~ 159.1

Pipe Fittings (PT)

Thread Size	Steel		Case Steel	
	kgf·m	ft·lb	kgf·m	ft·lb
1/8	1.0 ~ 1.3	7.2 ~ 9.4	0.9 ~ 1.2	6.5 ~ 8.6
1/4	2.7 ~ 3.3	19.5 ~ 23.8	2.2 ~ 2.8	15.9 ~ 20.2
3/8	5.0 ~ 6.0	36.2 ~ 43.4	4.5 ~ 5.5	32.5 ~ 39.7
1/2	8.0 ~ 9.9	57.9 ~ 71.6	6.8 ~ 8.4	49.2 ~ 60.7
3/4	13.5 ~ 16.5	97.6 ~ 119.3	11.7 ~ 14.3	84.6 ~ 103.4
1	18.0 ~ 22.0	130.2 ~ 159.1	15.7 ~ 19.3	113.6 ~ 139.5

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CONTENTS

GENERAL ITEMS OF CAUTION 03
ITEMS OF CAUTION DURING DISASSEMBLY AND REASSEMBLY 05
ITEMS OF CAUTION DURING REMOVAL AND INSTALLATION OF THE HYDRAULIC UNITS 06
ITEMS OF CAUTION DURING REMOVAL AND INSTALLATION OF PIPING 07
HANDLING OF SEALS 08
TIGHTENING TORQUES
Hydraulic Hose Fittings 09
Pipe Fittings (PT) 09
Bolts and Nuts 10

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MANUAL OVERVIEW

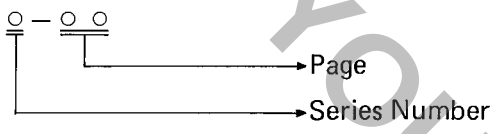
This manual is classified in the following series, and issued for each machine model.

I. GENERAL
II. SPEICIFICATIONS
III. DISASSEMBLY, REASSEMBLY
IV. HYDRAULIC UNITS
V. TROUBLESHOOTING

Sheet numbers

The following sheet numbers are assigned to each respective page. And if there are additional sheets, revisions, etc., an addition code is supplied. Please file the sheets in the order of the sheet numbers.

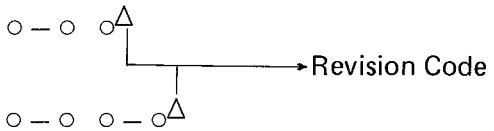
Sheet No.



Sheet Addition



Sheet Revision



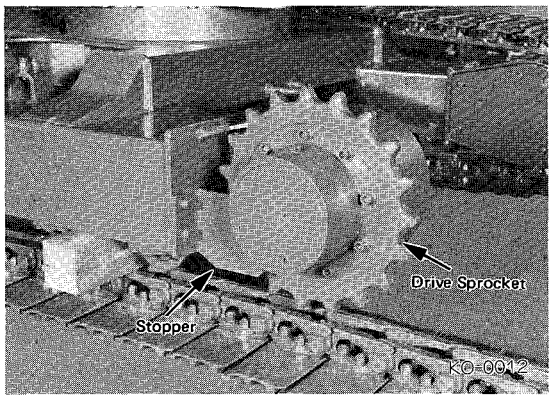
Example: II–08
II–09
II–09–1 · · · A page is added between page 09 and page 10.
II–10
II–11 · · · Page 11 has been revised for the first time.

If a sheet has been revised, it is to be used in place of the sheet used before revision and it is not necessary to keep the old sheet.

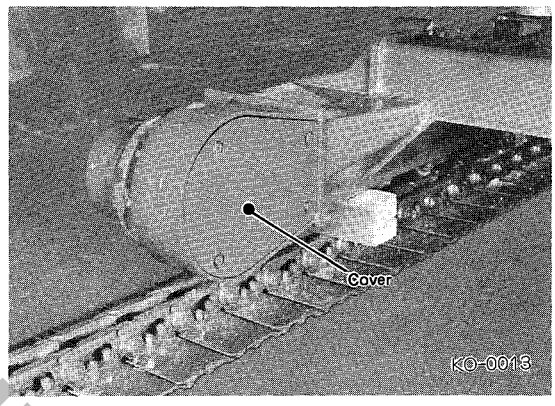
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Travel Motor Removal

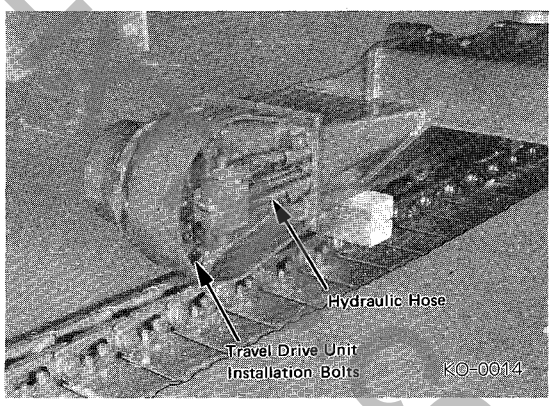
1. Remove the crawler belt stopper and the drive sprocket.



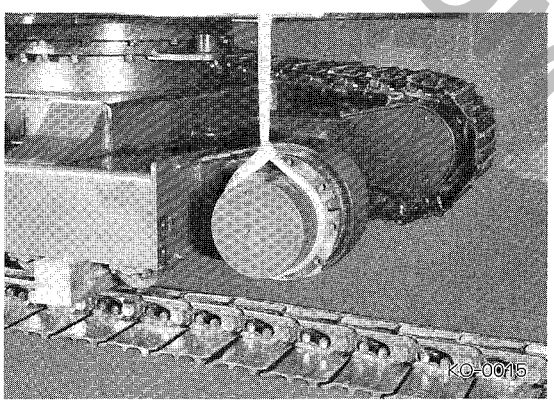
2. Remove the cover.



3. Remove the travel drive unit installation bolts after disconnecting the 4 hydraulic hoses. Be sure to leave the top bolt in place without removing it.



4. Remove the remaining bolt in the top after suspending the travel drive unit with a crane.



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Reference

Insufficient hydraulic oil makes it impossible to eliminate the turbulence in oil flow and results in air getting mixed into the oil, one of the causes for cavitation. Too little oil also decreases the amount of heat radiation time, causing the oil temperature to rise. If the hydraulic oil tank contains more oil than specified, the amount of air in the tank is reduced and the pressure inside the tank fluctuates greatly with fluctuations in the oil level.

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1. Check the hydraulic oil level.
   Refer to the "IV. Hydraulic Units, Hydraulic Oil Tank".

2. Replenish the hydraulic oil.
   Refer to V-04.

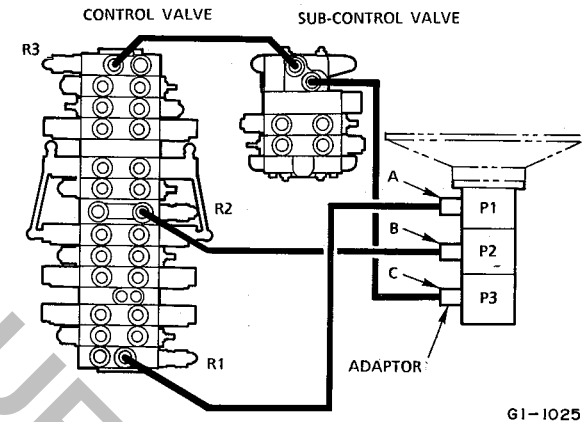
3. Abnormal noise is generated by the pump.
   Cavitation could be occurring in the pump due to a faulty suction line and it may be generating an abnormal noise, so perform the following checks.
   a. Check the tubing for hydraulic oil suction.
      · Coat the place that is thought to be faulty with grease or oil and watch it. (Check if air is being sucked in or not.)
   b. Check if the suction filter is clogged.
   c. Apply pressure to the hydraulic oil tank. (Refer to I-06.)

4. Check the relief valve.
   a. Add an adaptor for the pressurem sensor port to the pump's discharge port.
   b. Mount a pressure gauge in the pressure sensor port.
   c. Operate the lever for the relief valve in the hydraulic system being measured.
   d. Take a reading of the pressure gauge when the relief valve is operated. If the reading is as shown below, the relief valve is normal.

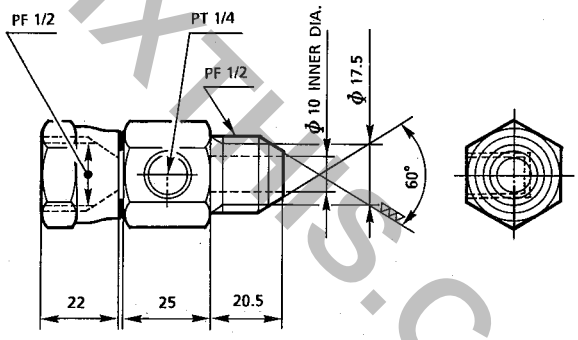
Relief Valve	Set Pressure	Pressure Sensor Port	Lever Operated
R1	175±2 kgf/cm²	A	Boom Swing
R2		B	Arm and Boom Swing
R3		C	Blade

· When checking relief valve R2, operate the arm lever and boom swing lever together and check the movement of the arm.
· If the relief valve's set pressure is insufficient, take off the cap nut on the relief valve and slowly screw the set screw in to adjust the set pressure. (Refer to V-07.)

Caution
Replace the relief valve if the pressure does not rise by the time the set screw has been screwed in 1/4 turn.



ADAPTOR FOR PRESSURE SENSOR PORT



PART NUMBER: 00079-90003 GI-1035

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