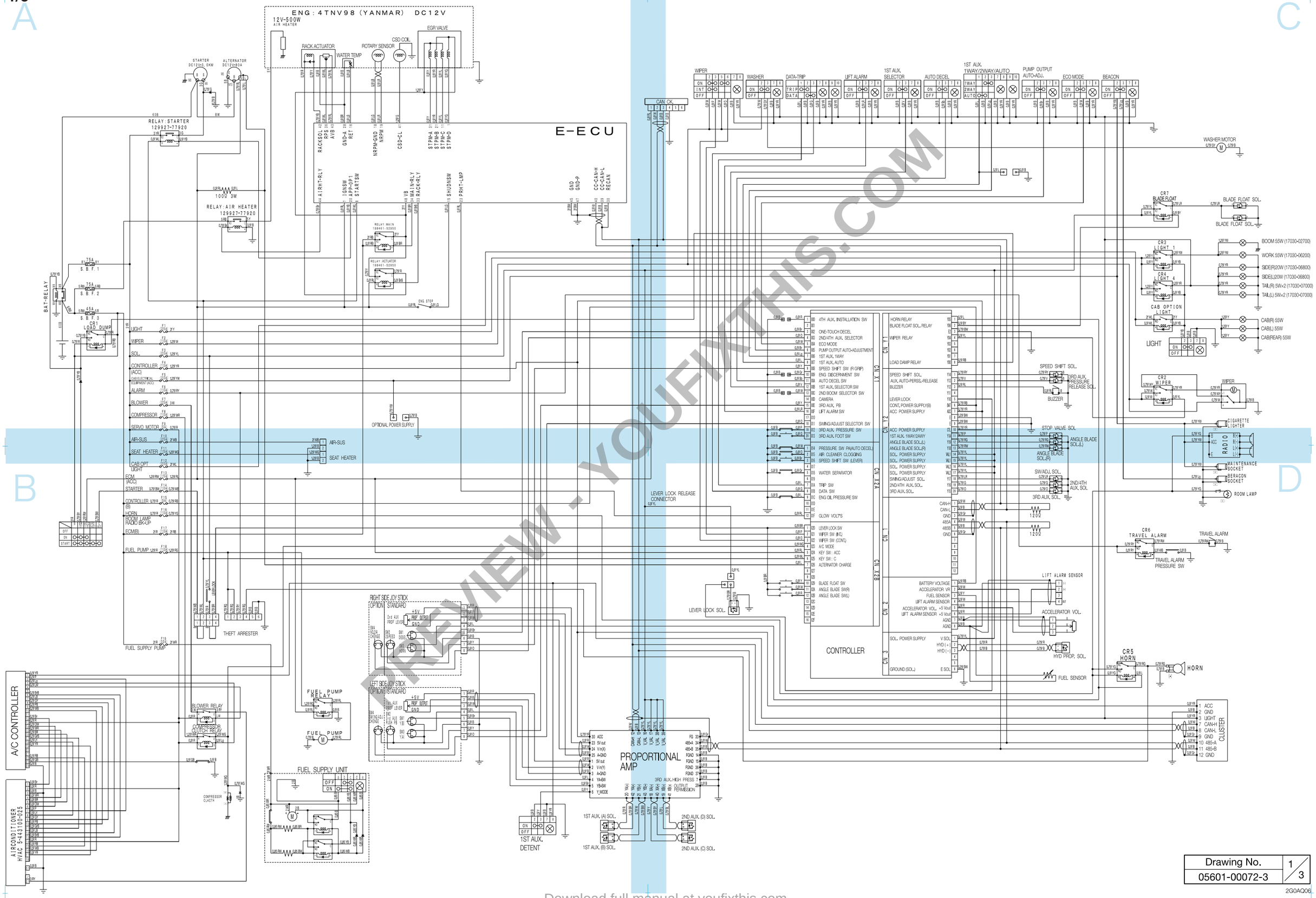
ELECTRICAL WIRING DIAGRAM

S/N 185000002~185000778

1/3



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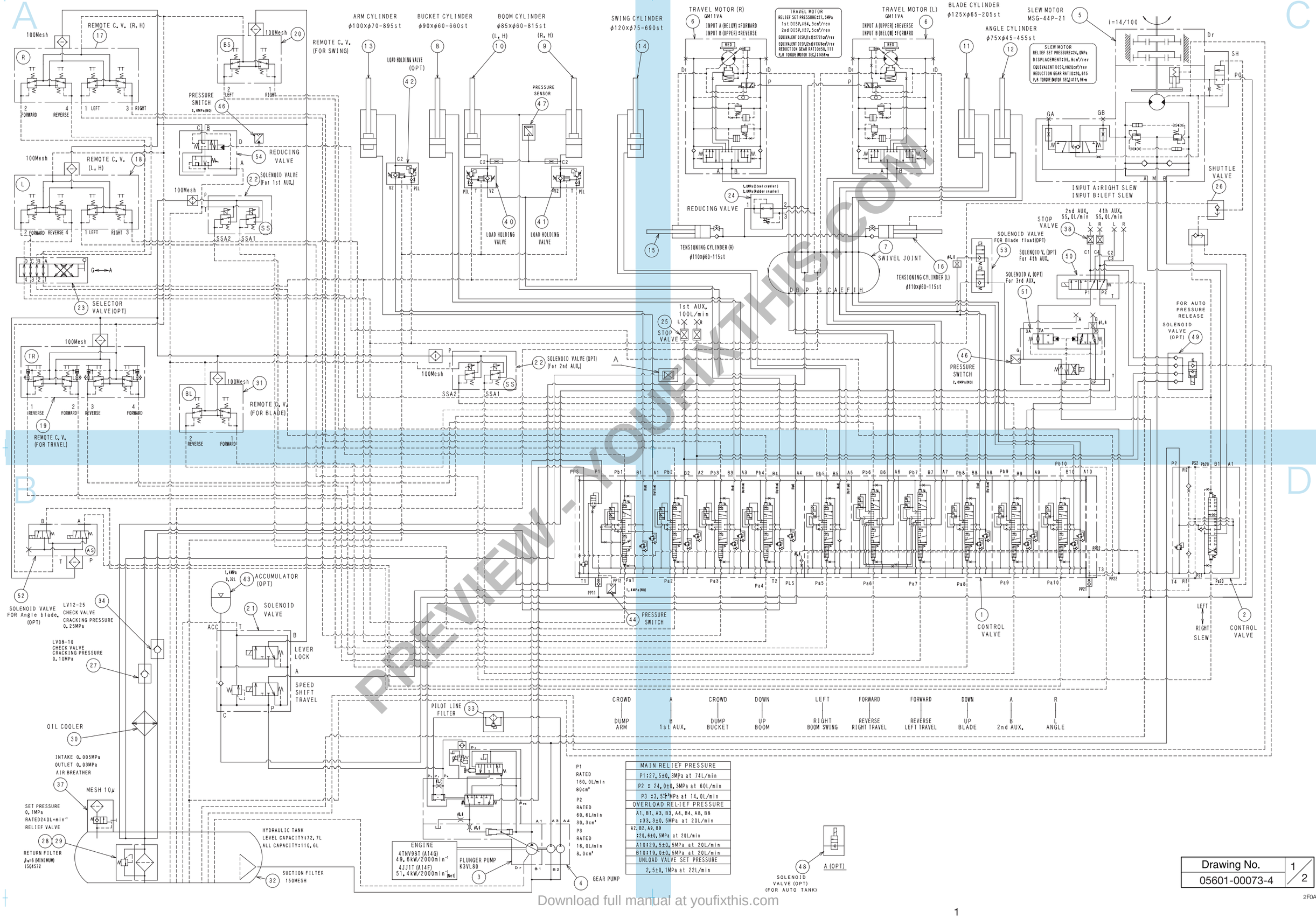
Drawing No.	1/3
05601-00072-3	

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HYDRAULIC CIRCUIT DIAGRAM

Mono-boom



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05601-00073-4	

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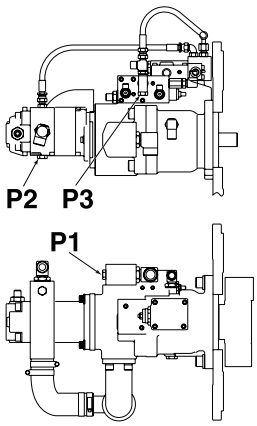
OVERALL MACHINE

No operation is possible.

1	Check the hydraulic oil level.	Insufficient	Add hydraulic oil.
		Sufficient	
2	Check the hydraulic pump.	Faulty	• Repair or replace the hydraulic pump. • Replace the coupling.

1. Check the hydraulic oil level.
   Check the hydraulic oil tank level.
   ☞ "4. Disassembly and assembly, Hydraulic oil tank"
   When adding, use the same brand of oil currently being used.
   ☞ "2. Service data, Fuel and lubricant table"

2. Checking the hydraulic pump.
   • Check the pressure of pump P1.
   ☞ "2. Service data, Performance criteria"
   ☞ "5. Troubleshooting, Piston pump"
   • Check the pressure of pump P3.
   ☞ "2. Service data, Performance criteria"
   ☞ "5. Troubleshooting, Gear pump"



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SPECIFICATION TABLES

Operating mass	Rubber crawler	Canopy	kg (lb)	–
		Cab	kg (lb)	8465 (18660)
	Steel crawler	Canopy	kg (lb)	–
		Cab	kg (lb)	8700 (19185)
Rated output	Net (ISO 14396)		kW/min^{-1}(hp/rpm)	51.6/2000 (69.1/2000)
	Net (ISO 9249/SAEJ1349)		kW/min^{-1}(hp/rpm)	49.6/2000 (66.5/2000)
Bucket capacity	Heaped capacity		m^3 (ft.^{3})	0.245 (8.65)
	Struck capacity		m^3 (ft.^{3})	0.185 (6.53)

Performance

Standard loading mass			kg (lb)	440 (972)
Slew speed			min^{-1} (rpm)	10.3 (10.3)
Travel speed	Rubber crawler	1st	km/h (mph)	2.6 (1.62)
		2nd	km/h (mph)	5.0 (3.11)
	Steel crawler	1st	km/h (mph)	2.5 (1.55)
		2nd	km/h (mph)	4.8 (2.98)
Maximum tractive force			kN (lbf)	88.0 (19780)
Gradeability			%	58
			deg.	30
Ground pressure	Rubber crawler	Canopy	kPa (psi)	–
		Cab	kPa (psi)	37.9 (5.5)
	Steel crawler	Canopy	kPa (psi)	–
		Cab	kPa (psi)	39.4 (5.71)
Noise level	Sound-power level		dB (A)	99
	Sound-pressure level		dB (A)	–

Machine dimensions

Overall length in transport condition	Standard arm		mm (in.)	6530 (257.1)
	Middle arm		mm (in.)	6575 (258.9)
	Long arm		mm (in.)	6660 (262.3)
Overall width	During normal operation		mm (in.)	2200 (86.6)
	Track retracted		mm (in.)	–
Overall working equipment height in transept position	Rubber crawler	Canopy	mm (in.)	–
		Cab	mm (in.)	2565 (100.9)
	Steel crawler	Canopy	mm (in.)	–
		Cab	mm (in.)	2560 (100.8)

Dimensions of base machine

Overall length of base machine		mm (in.)	3460 (136.3)
Overall width of base machine	During normal operation	mm (in.)	2200 (86.6)
	Track retracted	mm (in.)	–
Upper structure overall width		mm (in.)	2140 (84.3)
Upper structure overall width	Left	mm (in.)	1100 (43.3)
	Right	mm (in.)	1040 (40.9)
Cab overall width		mm (in.)	1050 (41.3)

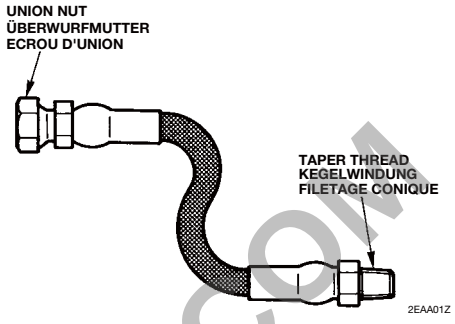
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TIGHTENING TORQUE

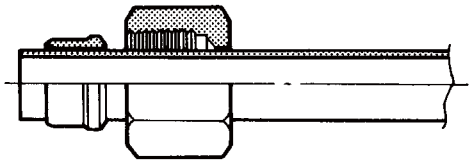
Hydraulic hose

Hose fitting size	Tightening torque			
	Union nut (G)		Taper thread (R)	
	N·m	ft.-lb	N·m	ft.-lb
1/8	$9.8^{+4.9}_{0}$	$7.3^{+3.5}_{0}$	11.8 ± 1.2	8.7 ± 0.8
1/4	$24.5^{+4.9}_{0}$	$18.1^{+3.5}_{0}$	29.4 ± 2.9	21.7 ± 2.1
3/8	$49.0^{+4.9}_{0}$	$36.2^{+3.5}_{0}$	53.9 ± 5.4	39.8 ± 3.9
1/2	$58.8^{+4.9}_{0}$	$43.4^{+3.5}_{0}$	88.3 ± 8.8	65.1 ± 6.4
3/4	$117.7^{+4.9}_{0}$	$86.8^{+3.5}_{0}$	147.1 ± 14.7	108.5 ± 10.7
1	$137.3^{+4.9}_{0}$	$101.3^{+3.5}_{0}$	196.1 ± 19.6	144.7 ± 14.3



Bite-type pipe fitting for steel pipe

Outer diameter of pipe (mm)	Tightening torque	
	N·m	ft.-lb
8	34.3 ± 4.9	23.5 ± 3.5
10	41.7 ± 2.5	30.7 ± 1.7
12	58.8 ± 4.9	43.4 ± 3.5
15	88.3 ± 4.9	65.1 ± 3.5
16	93.2 ± 4.9	68.7 ± 3.5
18	132.4 ± 4.9	97.6 ± 3.5
22	205.9 ± 9.8	151.8 ± 7.2
27.2	245.2 ± 9.8	181.0 ± 7.2
28	313.8 ± 19.6	231.4 ± 14.3
32	313.8 ± 19.6	231.4 ± 14.3
35	411.9 ± 19.6	303.7 ± 14.3

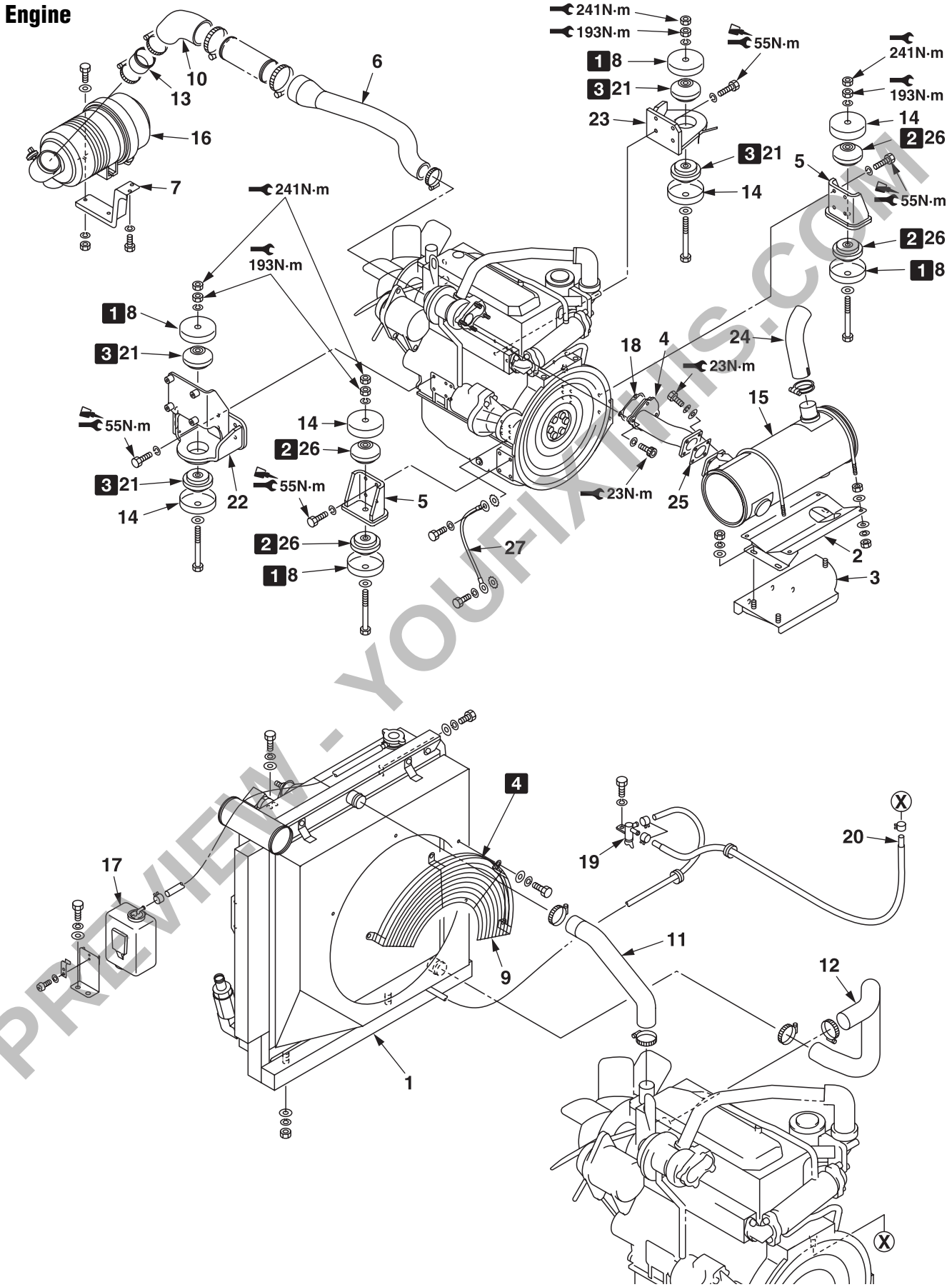


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DRIVE SYSTEM

Engine



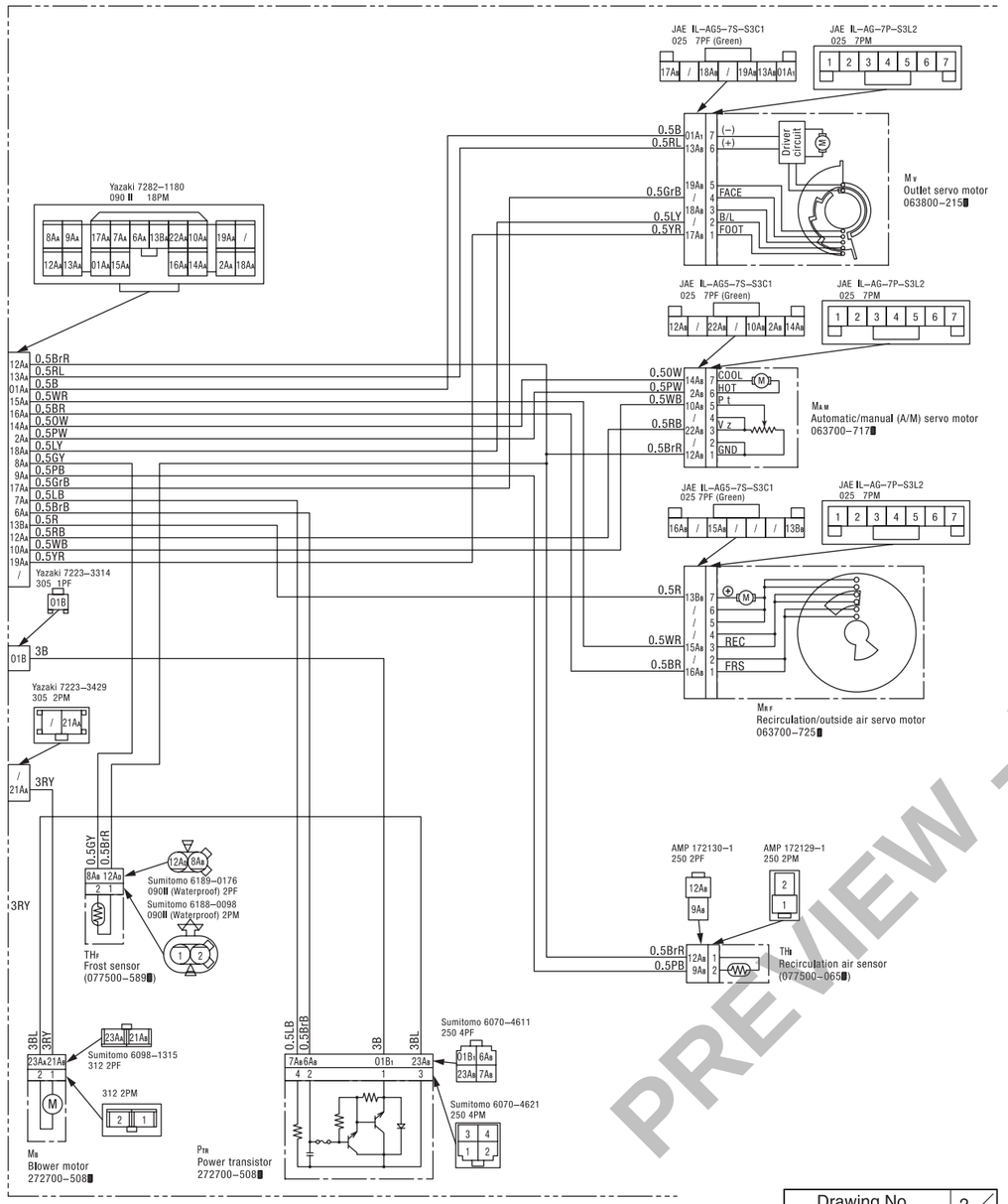
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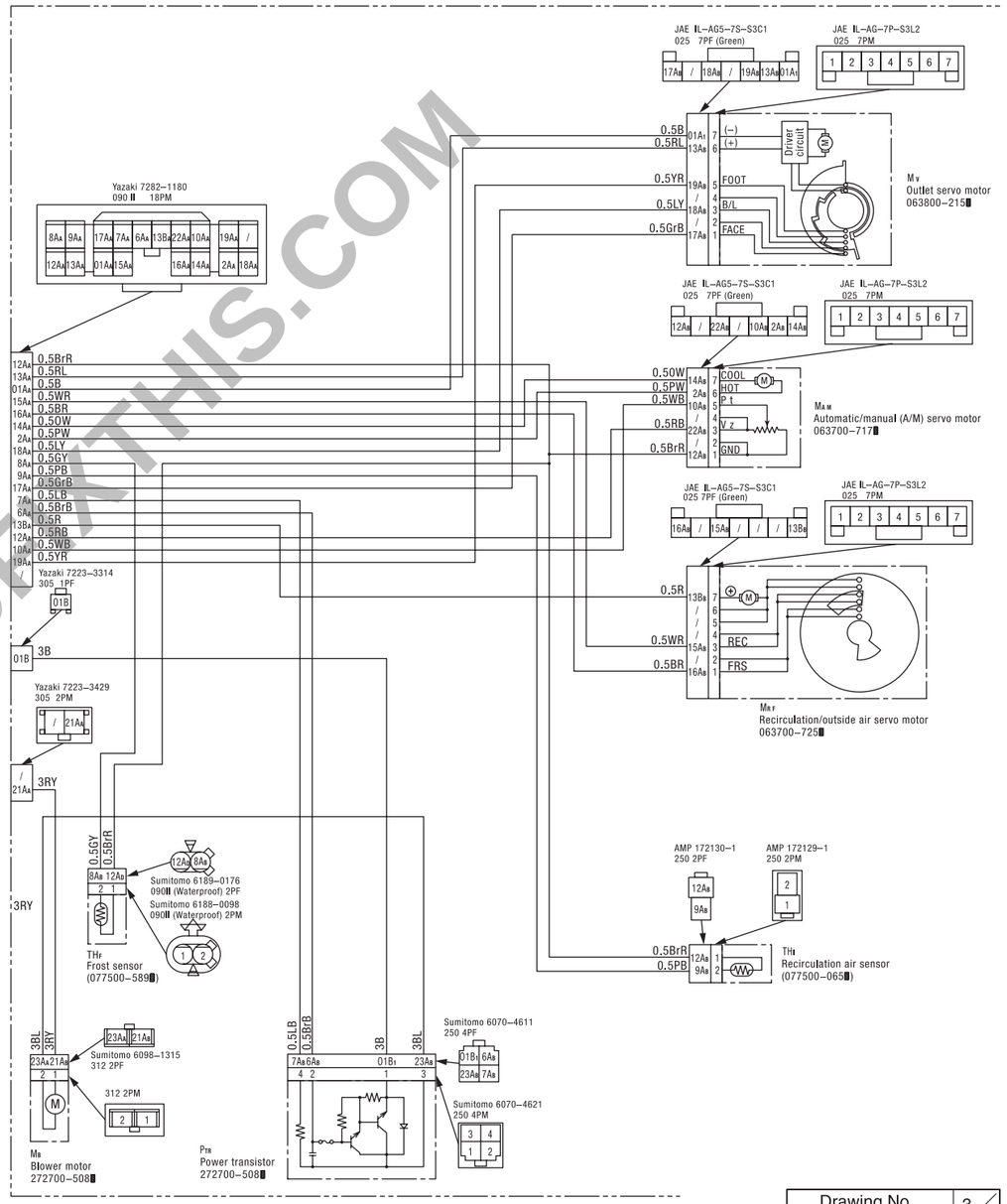


Drawing No.	2/3
05601-00072-3	

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S/N 185000015~185000778



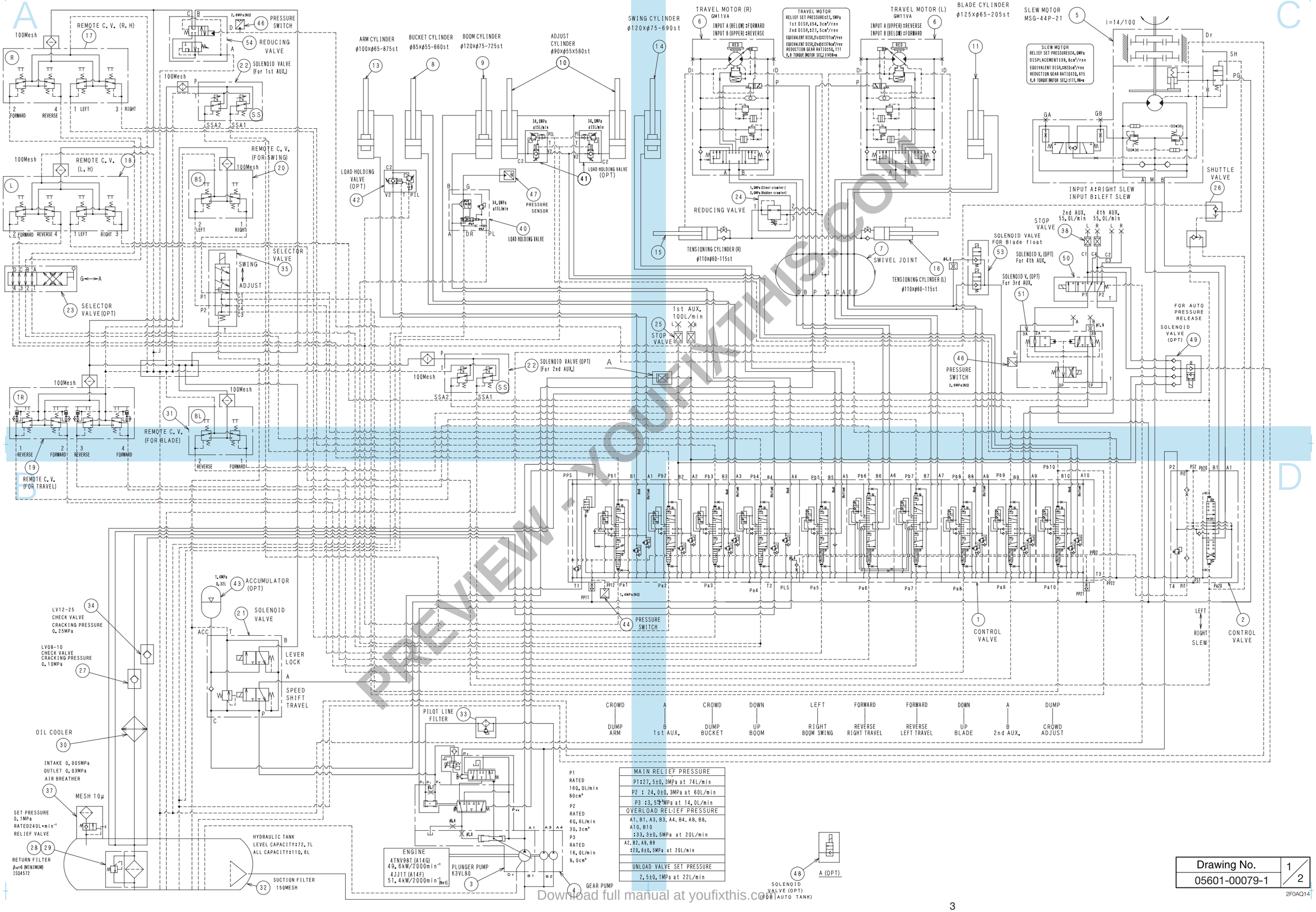
Drawing No.	3/3
05601-00072-3	

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2-piece boom, Type A: Two adjusting cylinders



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TRAVELING

No right or left travel

1	Check the operation of actuators other than the travel motor.	Abnormal	Check the main relief valve and pump.
		Normal	
2	Check the pilot valve (travel).	Faulty	Repair or replace the pilot valve (travel).
		Normal	
3	Check the control valve.	Faulty	Repair or replace the housing block.
		Normal	
4	Check the swivel joint.	Faulty	Repair or replace the swivel joint.
		Normal	
5	Check the travel motor.	Faulty	Repair or replace the travel motor.

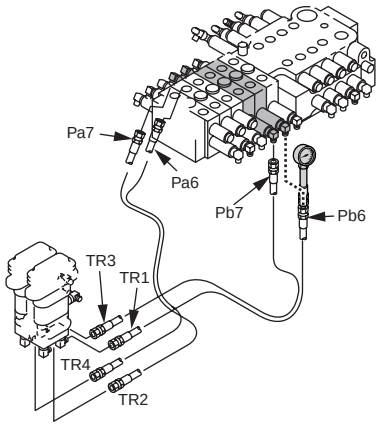
1. Check the operation of actuators other than the travel motor.
   - Check whether only the travel operation is faulty.

   If the operation of other actuators is also defective, see Overall machine.
   ☞"5. Troubleshooting, Overall machine"

2. Check the pilot valve (travel).
   - Disconnect the hose between the pilot valve and control valve (travel block) from the control valve. Attach a pressure gauge to the disconnected hose.
   - Operate the travel lever and measure the pressure.
   - The pilot valve is normal if the pressure varies between 0 and 3.4 MPa, depending on the lever angle.

   ☞"2. Service data, Performance criteria"
   - If the measured pressure is abnormal, check the pilot valve.

   ☞ "5. Troubleshooting, Pilot valve"



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Overall height of base machine	Rubber crawler	Canopy	mm (in.)	–
		Cab	mm (in.)	2565 (100.9)
	Steel crawler	Canopy	mm (in.)	–
		Cab	mm (in.)	2560 (100.8)
Swing radius			mm (in.)	1650 (65.0)
Overall height of base machine			mm (in.)	1640 (64.6)
Clearance height under upper structure			mm (in.)	785 (30.9)
Crawler base	Rubber crawler		mm (in.)	2210 (87.0)
	Steel crawler		mm (in.)	2180 (85.8)
Crawler overall length	Rubber crawler		mm (in.)	2855 (112.4)
	Steel crawler		mm (in.)	2830 (111.4)
Undercarriage overall width	During normal operation		mm (in.)	2200 (86.6)
	Track retracted		mm (in.)	–
Track gauge	During normal operation		mm (in.)	1750 (68.9)
	Track retracted		mm (in.)	–
Track shoe width			mm (in.)	450 (17.7)
Ground clearance of undercarriage	Rubber crawler		mm (in.)	385 (15.1)
	Steel crawler		mm (in.)	360 (14.2)

Engine

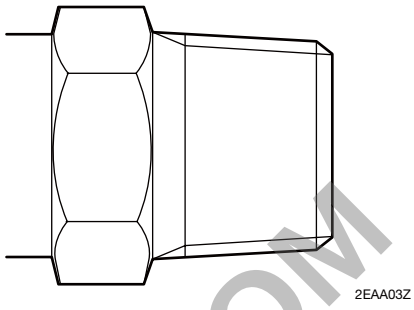
Model			Yanmar 4TNV98T-ZXWTB
Type			4-cycle, vertical, water-cooled, in-line, 4-cylinder, direct-injection, exhaust turbo super-charged
Number of cylinders -bore × stroke		mm (in.)	4-98×110 (3.86×4.33)
Total displacement		L (cu. in.)	3.3 (202.5)
Maximum torque		N·m (ft.-lb.)	278 to 302 (205 to 223)
		min^{-1} (rpm)	1475 (1475)
Specific fuel consumption (at rated output)		g/kW·h (lb./hp-hr.)	245 (0.403)
Fuel/air cleaner			Centrifugal, filter paper-type
Cooling system	Fan		Suction
	Radiator		Pressurized
Starting system	Voltage	V	12
	Output	kW	3.0
Generator	Voltage	V	12
	Output	kW	0.96
Battery	Voltage	V	12
	Capacity	A·h	72
	Quantity		1

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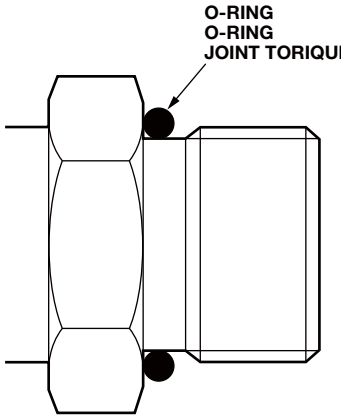
Joint for piping

Nominal thread diameter (R)	Tightening torque			
	Steel		Cast steel	
	N·m	ft.-lb	N·m	ft.-lb
1/8	11.8 ± 1.2	8.7 ± 0.8	10.8 ± 1.1	8.0 ± 0.7
1/4	29.4 ± 2.9	21.7 ± 2.1	24.5 ± 2.5	18.1 ± 1.7
3/8	53.9 ± 5.4	39.8 ± 3.9	49.0 ± 4.9	36.2 ± 3.5
1/2	88.3 ± 8.8	65.1 ± 6.4	73.5 ± 7.4	54.3 ± 5.3
3/4	147.1 ± 14.7	108.5 ± 10.7	127.5 ± 12.7	94.1 ± 9.3
1	196.1 ± 19.2	144.7 ± 14.3	171.6 ± 17.2	126.6 ± 12.5



Joint for piping (O-ring seal type)

Nominal thread diameter (G)	Tightening torque	
	N·m	ft.-lb
1/8	19.6 ± 2.0	14.5 ± 1.4
1/4	34.3 ± 4.9	25.3 ± 3.5
3/8	53.9 ± 4.9	39.8 ± 3.5
1/2	63.7 ± 4.9	47.0 ± 3.5
3/4	93.2 ± 4.9	68.7 ± 3.5
1	107.9 ± 9.8	79.5 ± 7.2
1–1/4	117.7 ± 9.8	86.8 ± 7.2
1–1/2	137.3 ± 9.8	101.2 ± 7.2



Nominal thread diameter (UNF)	Tightening torque	
	N·m	ft.-lb
7/19–20	16.7 ± 2.0	12.3 ± 1.4
1/2–20	22.6 ± 2.0	16.6 ± 1.4
9/16–18	31.4 ± 2.9	23.1 ± 2.1
3/4–16	59.8 ± 4.9	44.1 ± 3.5
1–1/16–12	102.0 ± 5.9	75.2 ± 4.4
1–5/16–12	135.3 ± 7.8	99.8 ± 5.8
1–5/8–20	181.4 ± 9.8	133.8 ± 7.2

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Removing the hydraulic pump

1. Remove the battery ground cable from the battery terminal.
2. Remove the covers.
   ☞ "Removing the covers"
3. Drain the hydraulic oil from the tank.
   ☞ "Removing the hydraulic tank"
4. Disconnect the electrical wiring from the hydraulic pump.
5. Disconnect the suction hose from the hydraulic pump.
6. Disconnect the discharge hose from the hydraulic pump.
7. Take out the bolts, and remove the hydraulic pump assembly.
   Apply molybdenum disulfide grease on the spline.
   Bolt: 256 N·m
   : 89 kg

Installing the hydraulic pump

For installation, follow the same procedures as for removal but in the reverse order.

Cautions on starting the hydraulic pump

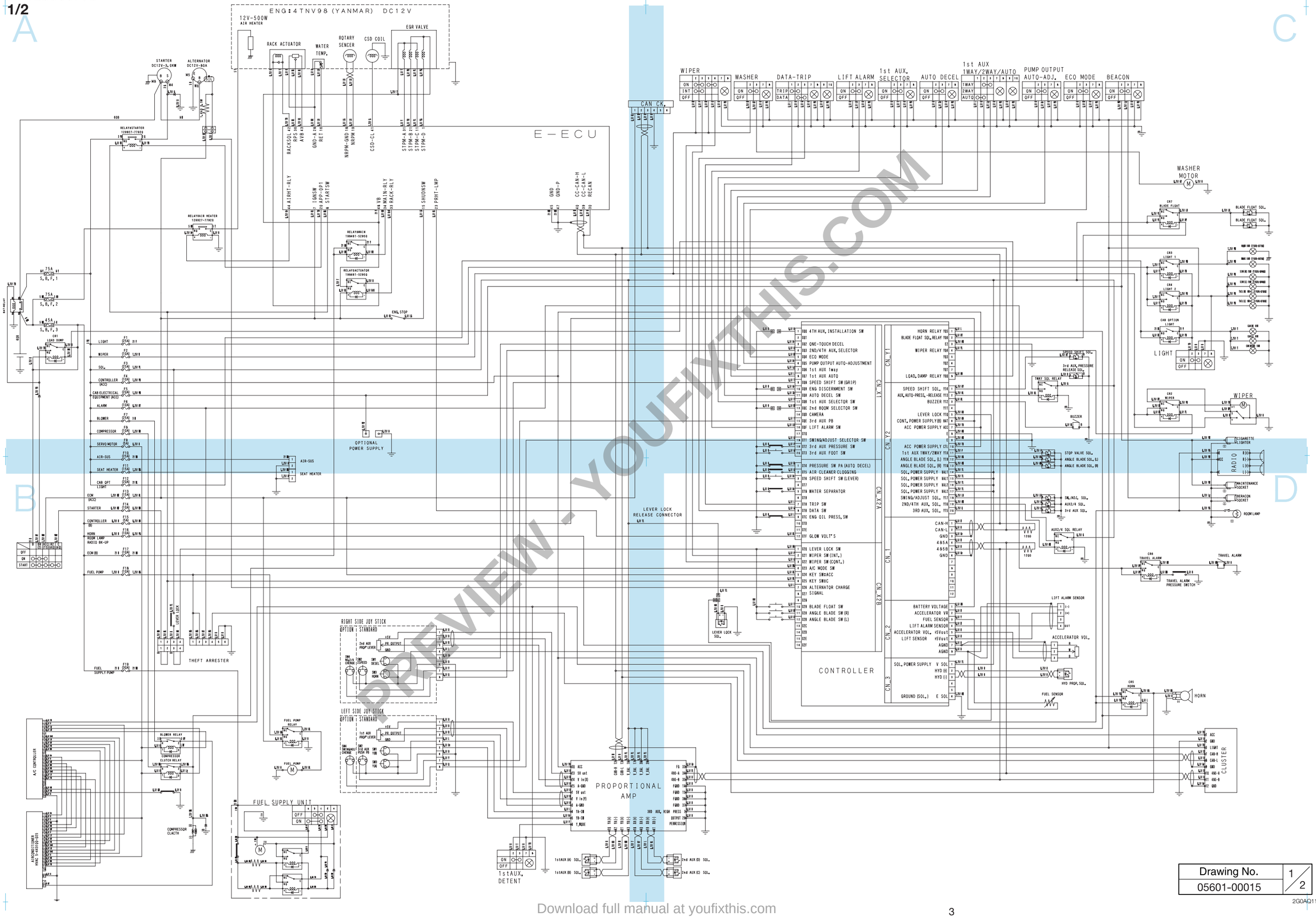
a. Fill the pump housing with hydraulic oil before starting.
   - Fill the pump housing with hydraulic oil from the air vent port "Dr".
b. Start the engine, let it run at a low idling speed for ten minutes, and then extend and retract each cylinder 4 or 5 times, without letting them reach the stroke end.
c. Run the engine at high speed, and then extend and retract each cylinder 4 or 5 times, without letting them reach the stroke end.
d. Return the engine speed to low idle, and then extend and retract each cylinder 4 or 5 times, without letting them reach the stroke end.

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1/2



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05601-00015	

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A

REMOTE C. V. (R, H)
100Mesh
17
R
2 FORWARD
4 REVERSE
1 LEFT
3 RIGHT

C B
2.6MPa(NO)
46 PRESSURE SWITCH
D
54 REDUCING VALVE
A
22 SOLENOID VALVE (For 1st AUX.)

100Mesh
P
T
SS
SSA2 SSA1

100Mesh
REMOTE C. V. (L, H)
18
L
2 FORWARD REVERSE 4
1 LEFT RIGHT 3

REMOTE C. V. (FOR SWING)
100Mesh
20
BS
2 LEFT
1 RIGHT

D C B A
4 3 2 1
G⟷A
23 SELECTOR VALVE(OPT)

SELECTOR VALVE
35
SWING
ADJUST
P1
P2
C1
C2
C4
C3
T

ARM CYLINDER
ϕ100xϕ65-875st
13

BUCKET CYLINDER
ϕ85xϕ55-660st
8

BOOM CYLINDER
ϕ120xϕ75-725st
9

ADJUST CYLINDER
ϕ90xϕ55x580st
10

SWING CY
ϕ120xϕ75
1

LOAD HOLDING VALVE (OPT)
42
C2
V2 T PIL

34.0MPa at5L/min
PIL
T
V2
C2
41 LOAD HOLDING VALVE (OPT)

B G
47 PRESSURE SENSOR
34.0MPa at5L/min
40 LOAD HOLDING VALVE
A DR PL

100Mesh
TR
1 2 3 4

100Mesh
31
BL
REMOTE C. V. (FOR BLADE)

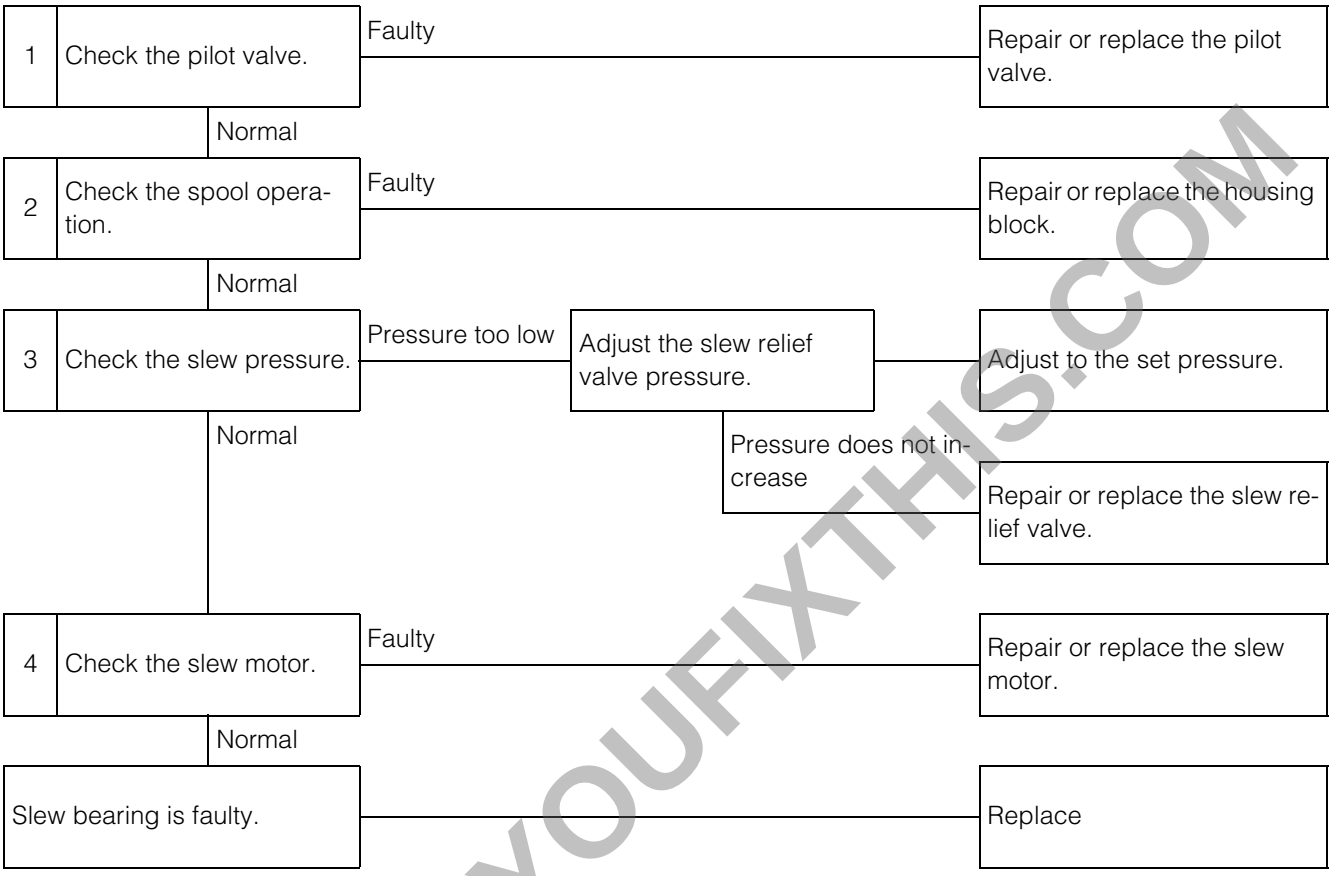
P
T
100Mesh
SSA2 SSA1
SS
22 SOLENOID VALVE (OPT) (For 2nd AUX.)
A

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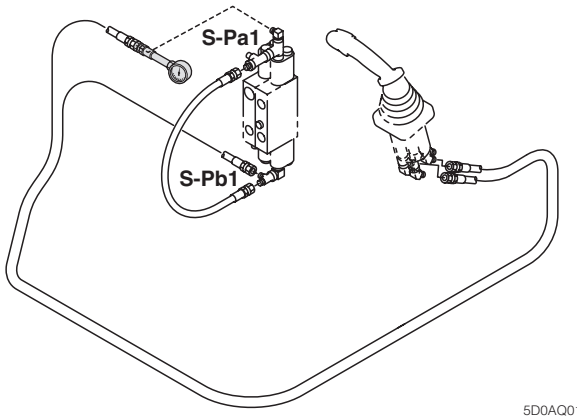
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SLEWING

No slew movement.



1. Check the pilot valve.
   Disconnect the control valve end of the hose connecting the pilot valve and control valve (slew). Attach a pressure gauge to the disconnected hose.
   - Attach plugs to the control valve ports.
   - Operate the lever (slew) and measure the pressure.
   - The pilot valve is normal if the pressure varies between 0 and 3.4 MPa, depending on the lever angle.



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Hydraulic system

Hydraulic pump drive system			Engine-linked
Hydraulic pump	Type		Variable discharge piston plus double gear
	Quantity		1
	Delivery	L/min. (US gal./min.)	160 (42.27)
		L/min. (US gal./min.)	60.6 (16.01)
		L/min. (US gal./min.)	16.0 (4.23)
		L/min. (US gal./min.)	–
	Hydraulic pump control system		Load-sensing control
Main relief valve pressure setting		MPa (psi)	27.5 (3990)
		MPa (psi)	24.0 (3480)
		MPa (psi)	3.4 (490)
		MPa (psi)	–
Hydraulic tank pressure			Pressure tank
Control valve	Type		Directional control valve, with 9 valves in series (standard specifications)
	Operation type		–
Hydraulic oil filter	Type		Glass fiber filter paper-type
	Filter precision		BETA10=6
	Installing position		Return circuit (inside tank)
Hydraulic oil cooler	Cooling system		Air-cooled
	Radiation of heat area	m^2 ($ft.^2$)	–

Operating device

Cab	Position		Left-side
	Construction		Suspension seat, adjustable
Cab or canopy	Construction		Steel enclosed cab with fully reinforced glass windows
Operating lever and pedals	Shifting operation		Variable travel speed switch (operating lever handle grip)
	Travel operation		Hydraulic pilot operated, 2 levers
	Slew operation		Hydraulic pilot operated
	Arm operation		Hydraulic pilot operated
	Bucket operation		Hydraulic pilot operated
	Boom operation		Hydraulic pilot operated
	Boom swing operation		Hydraulic pilot operated
	Other		Dozer blade operation: Hydraulic pilot operated, Auxiliary line hydraulic piping operation: Switch operated
Instrument, switches	Cluster gauge		Water temperature gauge, fuel gauge, hour meter, charge, oil, water temperature, deceleration, glow, water separator, air cleaner, lift alarm, 2nd-speed travel, eco mode
Lighting device	Headlight, Boom light	V-W	12 V-55 W, H3-halogen
	Side light	V-W	12 V-20 W ×2
Warning, safety devices			12 V, 108 dB
Others			With wiper, heater, and defroster

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Bolts and nuts (JIS strength category 10.9)

Thread	Size × pitch	Tightening torque			
		General tightening points		Special tightening points	
		N·m	ft.-lb	N·m	ft.-lb
Coarse·	M6 × 1.0	9.8 ± 0.5	7.2 ± 0.4	11.8 ± 1.1	8.7± 0.4
	M8 × 1.25	22.6 ± 1.1	16.6 ± 0.8	26.5 ± 2.5	19.5 ± 0.9
	M10 × 1.5	47.1 ± 2.4	34.7 ± 1.7	54.9 ± 4.9	40.5 ± 2.0
	M12 × 1.75	83.4 ± 4.1	61.5 ± 3.0	97.1 ± 7.4	71.6 ± 3.5
	M14 × 2.0	134.4 ± 6.7	99.1 ± 4.9	155.9 ± 12.7	115.0 ± 5.7
	M16 × 2.0	207.9 ± 10.4	153.3 ± 7.7	241.2 ± 17.2	177.9 ± 8.9
	M20 × 2.5	410.9 ± 20.5	303.1 ± 15.1	475.6 ± 23.7	350.8 ± 17.5
Fine	M8 × 1.0	24.5 ± 1.2	18.1 ± 0.9	28.4 ± 1.4	21.0 ± 1.0
	M10 × 1.25	50.0 ± 2.5	36.9 ± 1.8	58.8 ± 2.9	43.4 ± 2.2
	M12 × 1.5	87.3 ± 4.3	64.4 ± 3.2	102.0 ± 5.1	75.2 ± 3.8
	M14 × 1.5	135.3 ± 6.8	99.9 ± 5.0	157.9 ± 7.8	116.5 ± 5.8
	M16 × 1.5	220.6 ± 11.0	162.7 ± 8.1	256.0 ± 12.7	188.8 ± 9.4
	M20 × 1.5	452.1 ± 22.6	333.4 ± 16.6	524.7 ± 26.1	387.0 ± 19.2

1. General tightening points (non-lubricated)
   All securing points that have no special tightening torque specified in this manual and that are not special tightening points.
2. Special tightening points (grease with molybdenum disulfide applied)
   Points where a specific tightening torque is specified in this manual.
3. Points where thread-locking compound should be applied (ThreeBond #1324).
4. If a tightening torque value is specified in this manual for a point not listed in the table above, follow the specification in the manual.
5. To tighten multiple bolts and nuts evenly, tighten opposite bolts/nuts alternately as a pair.

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Removing the battery

⚠ WARNING

- Wear protective glasses and gloves when working with batteries.
- Batteries generate flammable hydrogen gas which may explode. Keep away from flames and sparks.
- Be sure to stop the engine by turning off the starter switch before inspecting or handling the battery.
- Be careful not to let metal tools (or any metal objects) such as a hammer or wrench come into contact with the battery terminals.
- When disconnecting the battery wiring, always disconnect it from the earth side (-). When connecting, connect the earth side last.
- Loose battery terminals may cause sparks. Be sure to fasten terminals tightly.

1. Disconnect the battery ground cable (6) from the battery terminal.
2. Remove the battery cables (1).
3. Remove the nuts.
   - Upper nut: 12.3 N·m
   - Lower nut: 9.8 N·m
4. Remove the battery (9).

Installing the battery

For installation, follow the same procedures as for removal but in the reverse order.

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SAFETY ALERT SYMBOL



This symbol represents the safety alert.
The message that follows the symbol contains important information regarding human safety.
Read and understand the message to avoid personal injury or death.

Safety label

Safety labels are used to alert operators or other people exposed to the risks of injury or damage. There are the following three types of labels.
Read the labels carefully as they are important for your safety.

⚠ DANGER

The word “DANGER” indicates an imminently hazardous situation which, if not avoided, is likely to result in serious injury or death.

⚠ WARNING

The word “WARNING” indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.

⚠ CAUTION

The word “CAUTION” indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

IMPORTANT: The word “IMPORTANT” is used to alert operators and maintenance personnel about situations which could result in damage to the machine and its components.

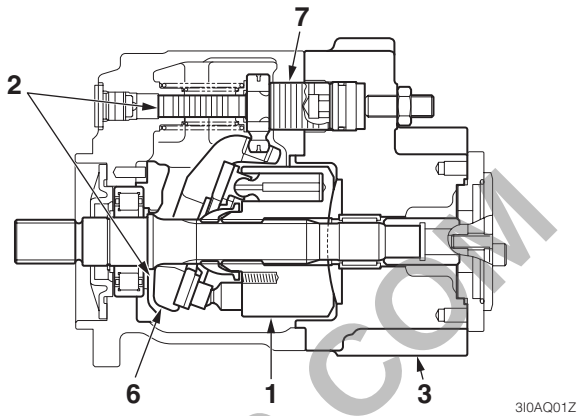
This manual is intended for trained and qualified personnel only. Warnings or cautions described in this manual do not necessarily cover all safety measures. It is also impossible to cover all hazards and risks which may be associated with the maintenance of the machine in every environment. For maintenance work, each person must take adequate safety precautions against possible hazards in the respective working environment.

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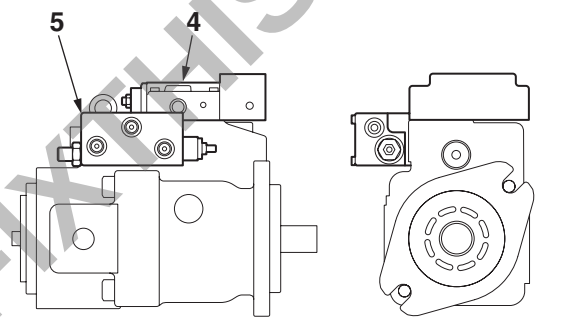
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HYDRAULIC PUMP

In broad terms, this pump comprises a cylinder block group (1), a swash plate group (2), and a valve cover group (3). The cylinder block group (1) constitutes the main part of the piston pump, which performs rotary motion. The swash plate group (2) adjusts the discharge volume, and the valve cover group (3) switches between the intake and discharge of oil.
The pump is also equipped with a control section comprising a horsepower control regulator (4) and a load-sensing control regulator (5), allowing it to control a swash plate (6) and a servo piston (7) in order to adjust the discharge volume.



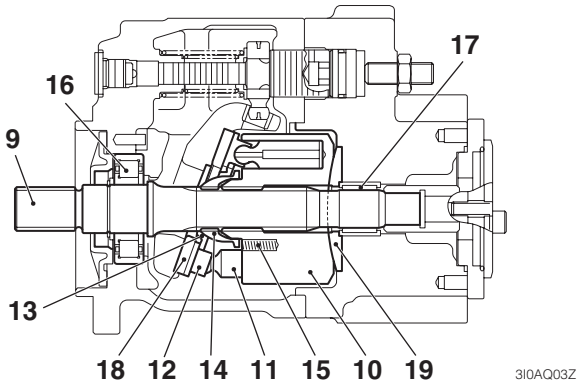
3I0AQ01Z



3I0AQ02Z

Piston pump

The cylinder block group comprises a drive shaft (9), a cylinder block (10), pistons (11), shoes (12), a plate (13), a guide (14), and springs (15). The drive shaft (9) is supported at both ends by bearings (16) and (17). The shoes (12) is caulked by the pistons (11) so as to form a ball joint. In addition, it also features a pocket section that balances hydraulic pressure in order to reduce the thrust force produced by load pressure and slide smoothly on the shoe plate (18). In order that the sub-group comprising the pistons (11) and shoes (12) can move smoothly on the shoe plate (18), it is pressed against the shoe plate (18) by the springs (15) and mounted on the shoe plate (18) by means of the plate (13) and the guide (14). In the same way, the cylinder block (10) is also pressed against a valve plate (19) by the springs (15).



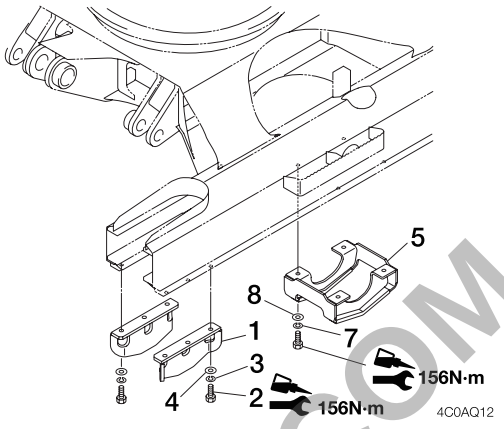
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Replacement of a rubber crawler to a steel crawler.

The description given below refers to cases when a rubber crawler is switched out for a steel one.



Items needed

S/N 185000003~185000847

Shoe guide assembly

Item No.	Part No.	Part Name	Quantity
1	05617-00310	Shoe guide	4
2	11010-41435	Bolt	12
3	11400-20014	Spring washer	12
4	11411-10014	Washer	12

Center guide assembly

Item No.	Part No.	Part Name	Quantity
5	05617-00410	Center guide	2
6	11010-41435	Bolt	8
7	11400-20014	Spring washer	8
8	11411-10014	Washer	8

S/N 185000848~

Shoe guide assembly

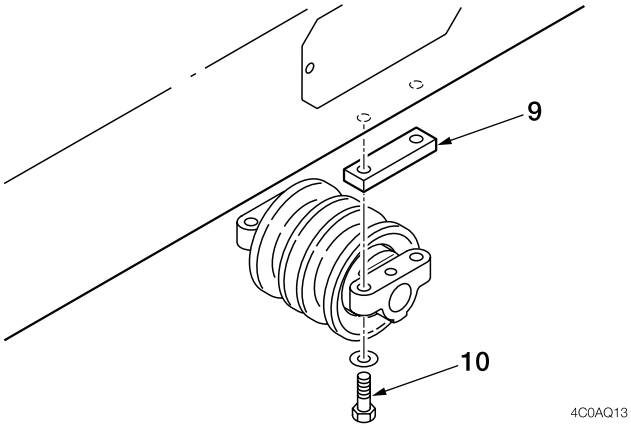
Item No.	Part No.	Part Name	Quantity
1	05617-00005	Shoe guide	4
2	11010-41435	Bolt	12
3	11400-20014	Spring washer	12
4	11411-10014	Washer	12

Center guide assembly

Item No.	Part No.	Part Name	Quantity
5	05617-00002	Center guide	2
6	11010-41435	Bolt	8
7	11400-20014	Spring washer	8
8	11411-10014	Washer	8

Spacer

Item No.	Part No.	Part Name	Quantity
9	05613-08210	Spacer	20
10	11010-41470	Bolt	40



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Disassembly and Assembly

The numbers in parentheses () listed after the names of parts in this document match the numbers used in the construction diagrams and parts lists.

General Precautions

- Perform disassembly and assembly work in a clean place. Provide clean containers to hold parts during disassembly.
- Clean around the ports before disassembly. Remove paint around connectors with a wire brush.
- Clean the disassembled parts with wash oil.
- Put alignment marks on all parts to reassemble them in the same positions.
- After each disassembly, replace all seals and apply a thin layer of grease to them.
- Check each part for abnormal wear or seizing. Remove any burrs with sandpaper.
- Do not move adjusting screws, unless absolutely necessary.

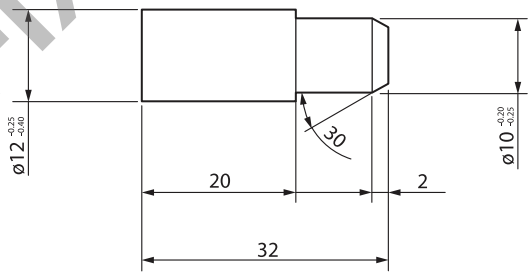
Special Jigs

(for bushing removal)

Disassembly

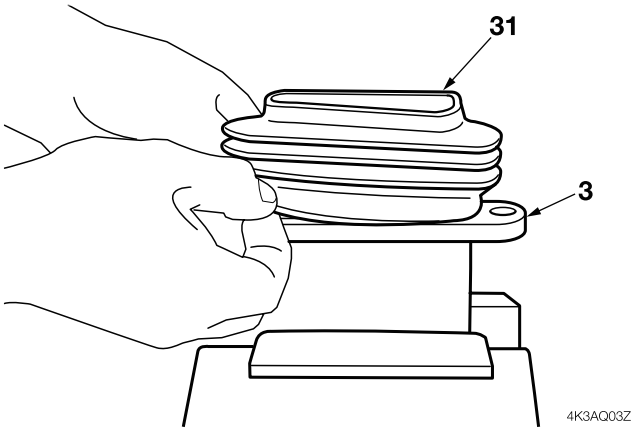
⚠ WARNING

The spring may fly out during disassembly. Refer to the construction diagram and take precautions.



4K3AQ02Z

1. Remove the boot (31) from the cover (3).



4K3AQ03Z

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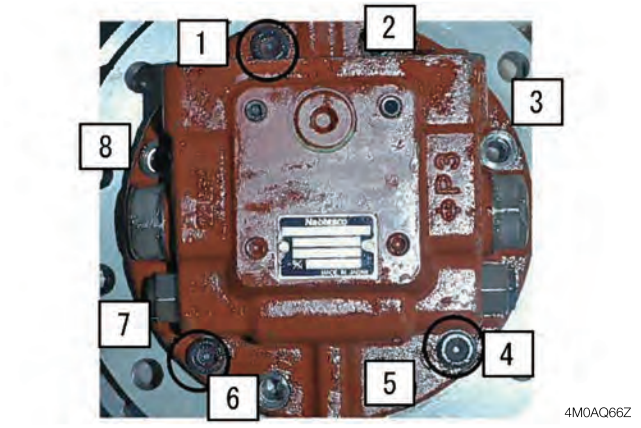
b. Insert the two pins (42) into the spindle (2).
c. Insert hydraulic oil into the spindle (2).
   • Amount of hydraulic oil to use: 1.2 L
d. Coat surfaces that make contact with the valve plate (109) of the cylinder block (104) with hydraulic oil.


4M0AQ24Z

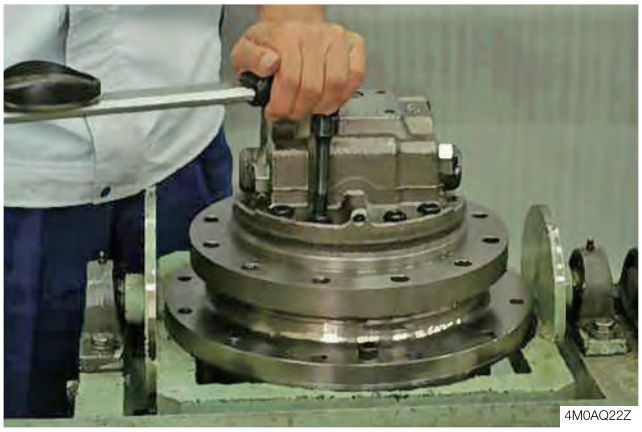
e. Attach the rear flange (301) to the spindle (2).
   • Line up the two pins (42) on the spindle with the pin holes on the rear flange (301).
f. Screw the cap screws (345) into the M12 screw holes (No. 1, 4, 7) on the spindle (2), tightening them down bit by bit, while keeping the rear flange (301) and the spindle (2) parallel.
   • If there is any interference encountered while the screws are being tightened, disassemble the assembled part assembly and inspect each part individually for problems before attempting reassembly.


4M0AQ23Z

g. Insert the remaining six cap screws (345).
h. Screw the eight cap screws (345) into the spindle (2) at the specified torque.
   • Tighten down the screws using the torque wrench at a diagonal.
   Cap screws: 102 ± 15.7 N·m



4M0AQ66Z


4M0AQ22Z

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PILOT VALVE

☞ "4. Disassembly and assembly, Pilot valve"

Symptoms	Major causes	Remedies
The secondary pressure is too low	• Primary pressure is insufficient. • The spring is broken or worn out. • The clearance between the spool and the casing is too large. • Too much play in the handle.	• Keep the primary pressure. • Replace • Replace the spool and the casing assembly. • Disassemble and assemble or replace.
The secondary pressure is unstable	• The sliding part is not smooth. • The tank line pressure fluctuates. • Air is present in the piping.	• Repair or replace. • Remove the faulty part(s) in the tank line. • Bleed air by operating the valve several times.
The secondary pressure is high	• Pressure in the tank line is high. • The sliding part is not smooth.	• Remove the faulty part(s) in the tank line. • Repair or replace.

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