WSM

WORKSHOP MANUAL

TRACTOR,FRONT LOADER, BACKHOE,ROTARY MOWER

BX23S,LA340,BT603, RCK54D,RCK60D, RCK54,RCK60B

Kubota

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KiSC issued 03, 2017 A

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2. GENERAL

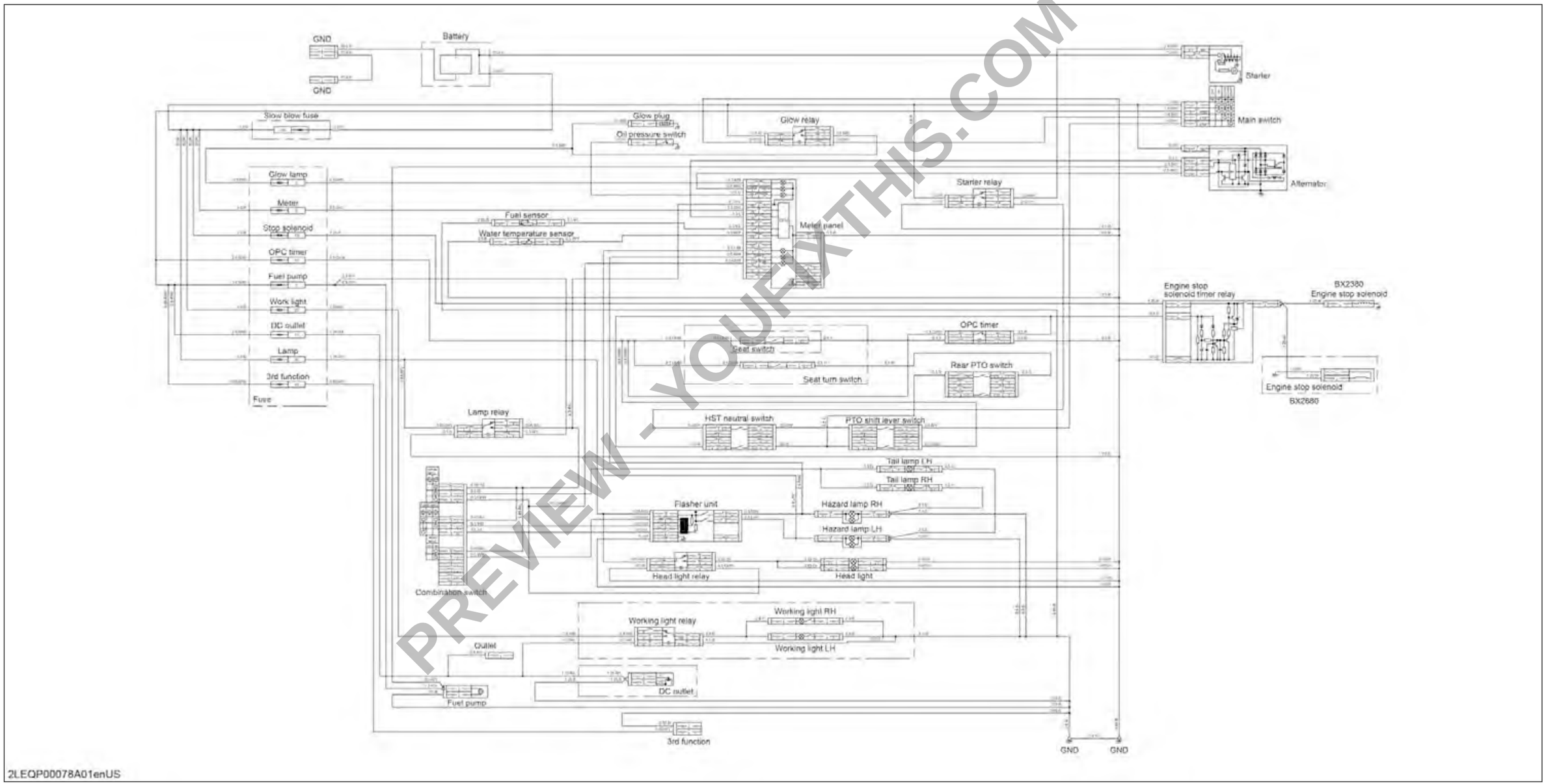
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MECHANISM

1. Wiring diagram of BX tractor



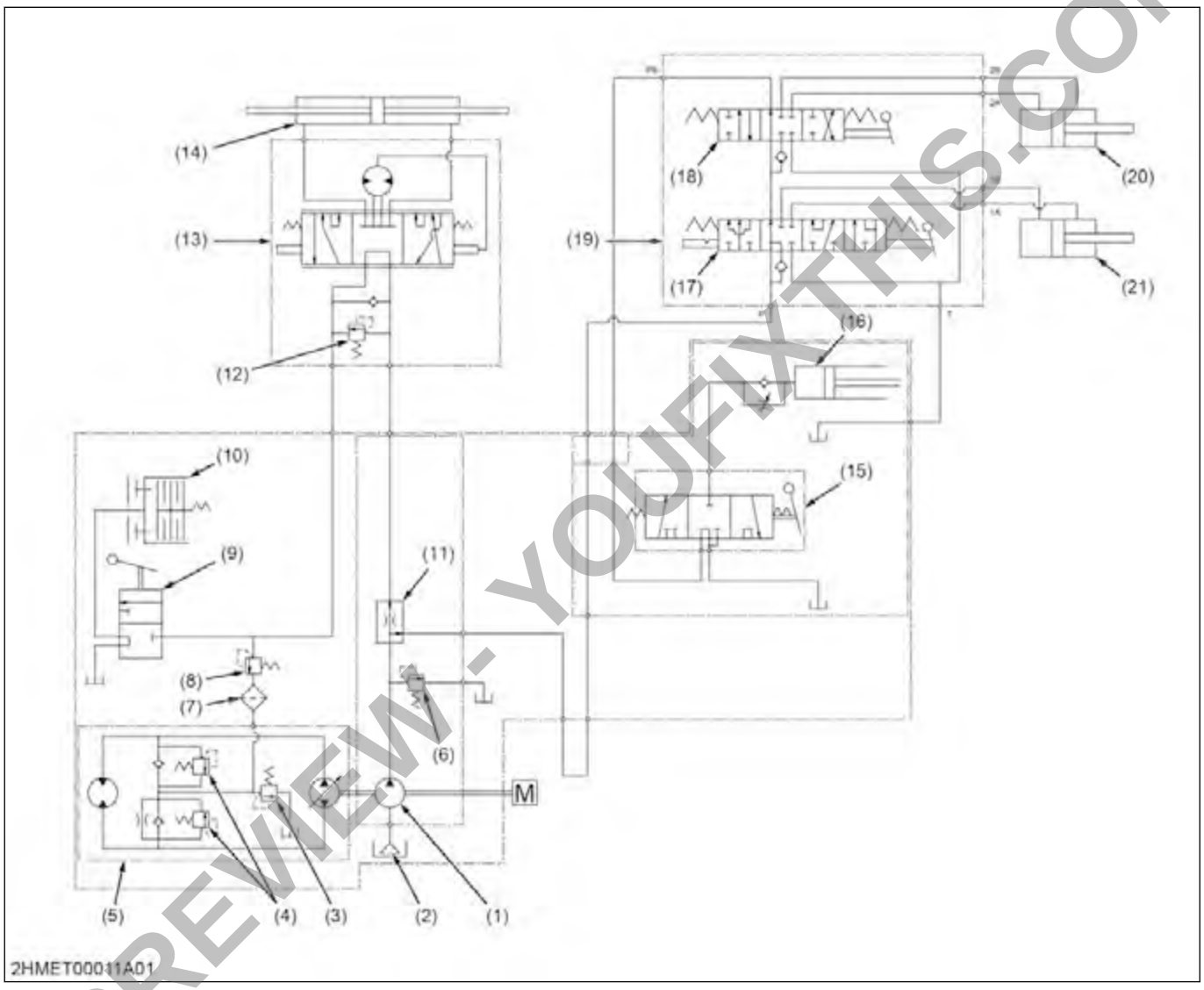
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2. Hydraulic circuit

The hydraulic system of this tractor consists of a hydraulic pump, control valve for front loader, 3 point hitch system and other components.
This system has the following functions:

1. Oil is supplied by hydraulic pump which is driven by pump drive shaft in the transmission case. As the pump drive shaft is connected to the propeller shaft, hydraulic pump starts running when engine is started.
2. The hydraulic pump supplies the high pressured oil to auxiliary hydraulic control valve for front loader, control valve for 3 point hitch system, power steering controller, PTO clutch valve and hydrostatic transmission after dividing oil flow by flow priority valve.



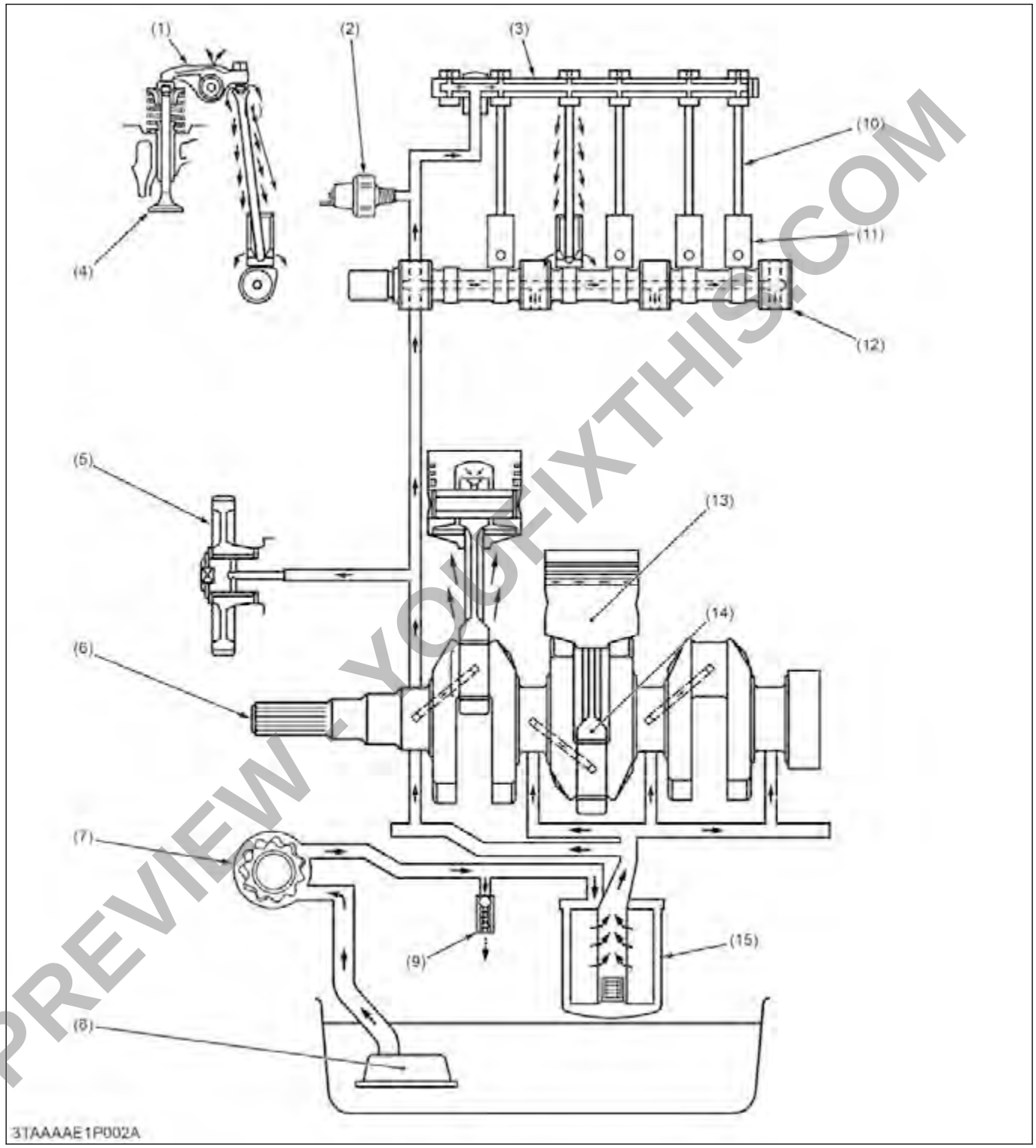
(1) Hydraulic pump
(2) Hydraulic oil filter
(3) Charge relief valve
(4) Check and high pressure relief valve
(5) Hydrostatic transmission
(6) Relief valve
(7) Hydraulic oil filter
(8) PTO clutch relief valve
(9) PTO clutch relief valve
(10) PTO clutch
(11) Flow priority valve
(12) Power steering relief valve
(13) Power steering controller
(14) Steering cylinder
(15) Control valve
(16) Hydraulic cylinder
(17) Boom control valve
(18) Bucket control valve
(19) Front loader control valve
(20) Bucket cylinder
(21) Boom cylinder

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2. Lubricating system

2.1 Overview of lubricating system



(1) Rocker arm
(2) Oil pressure switch
(3) Rocker arm shaft
(4) Valve
(5) Idle gear
(6) Crankshaft
(7) Oil pump
(8) Oil strainer
(9) Relief valve
(10) Push rod
(11) Tappet
(12) Camshaft
(13) Piston
(14) Connecting rod
(15) Oil filter cartridge

This engine's lubricating system consists of oil strainer (8), oil pump (7), relief valve (9), oil filter cartridge (15) and oil pressure switch (2).

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3. Tightening torques for engine

Tightening torques of screws, bolts and nuts on the table below are especially specified.

NOTE

- **In removing and applying the bolts and nuts marked with "*", a pneumatic wrench or similar pneumatic tool, if employed, must be used with enough care not to get them seized.**
- **For the screws, bolts and nuts with the mark "*", apply engine oil to their threads and seats before you tighten.**
- **The letter "M" in Dimension × Pitch shows that the screw, bolt or nut dimensions are in the metric system. The dimension is the nominal external diameter in mm of the threads. The pitch is the nominal distance in mm between 2 threads.**

Item	Dimension × Pitch	N·m	kgf·m	lbf·ft
Cylinder head cover screw	M6 × 1.0	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31
Cylinder head screw	M8 × 1.25	38 to 42	3.8 to 4.3	28 to 31
*Main bearing case screw 1	M6 × 1.0	13 to 15	1.3 to 1.6	9.4 to 11
*Main bearing case screw 2	M7× 1.0	27 to 30	2.7 to 3.1	20 to 22
*Flywheel screw	M10 × 1.25	54 to 58	5.5 to 6.0	40 to 43
*Connecting rod screw	M7 × 0.75	27 to 30	2.7 to 3.1	20 to 22
*Rocker arm bracket screw	M6 × 1.0	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31
*Fan drive pulley screw	M12 × 1.5	118 to 127	12.0 to 13.0	86.8 to 94.0
Bearing case cover mounting screw	M6 × 1.0	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31
Glow plug	M8 × 1.0	7.9 to 14	0.80 to 1.5	5.8 to 10
Nozzle holder assembly	M20 × 1.5	49 to 68	5.0 to 7.0	37 to 50
Nozzle holder	—	35 to 39	3.5 to 4.0	26 to 28
Oil pressure switch	PT 1/8	15 to 19	1.5 to 2.0	11 to 14
Injection pipe retaining nut	M12 × 1.5	25 to 34	2.5 to 3.5	18 to 25
Overflow pipe retaining nut	M12× 1.5	20 to 24	2.0 to 2.5	15 to 18
Drain plug with copper gasket	M12 × 1.25	33 to 37	3.3 to 3.8	24 to 27
Oil filter joint	—	40 to 49	4.0 to 5.0	29 to 36

RELATED PAGE
TIGHTENING TORQUES on page 2-13

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SERVICING

1. Troubleshooting for engine

Symptom	Probable cause and checking procedure	Solution	Reference page
Engine does not start	1. No fuel	Fill with fuel	2-7
	2. Air in fuel system	Vent air	2-43
	3. Fuel line clogged	Clean or replace	2-42
	4. Water in fuel system	Change fuel and repair or replace fuel system	2-42
	5. Fuel filter clogged	Replace	2-32
	6. Excessively high viscosity of fuel or engine oil at low temperature	Use specified fuel or engine oil	2-7
	7. Fuel with low cetane number	Use specified fuel	2-7
	8. Fuel leak due to loose injection pipe retaining nut	Tighten retaining nut	3-37
	9. Incorrect injection timing	Adjust	3-28
	10. Fuel camshaft worn	Replace	3-43
	11. Injection nozzle clogged	Clean or replace	3-37
	12. Injection pump malfunctioning	Repair or replace	3-42
	13. Seizure of crankshaft, camshaft, piston, cylinder or bearing	Repair or replace	3-44 3-47
	14. Compression leak from cylinder	Replace head gasket, tighten cylinder head screw glow plug and nozzle holder	3-24 3-38
	15. Improper valve timing	Correct or replace timing gear	3-43
	16. Piston ring and cylinder worn	Replace	3-45
	17. Excessive valve clearance	Adjust	3-24
Starter does not operate	1. Battery discharged	Charge	2-30
	2. Starter malfunctioning	Repair or replace	8-47
	3. Main switch malfunctioning	Replace	8-30
	4. Wiring disconnected	Connect	—
	5. Safety switch malfunctioning	Check and replace	8-33
Engine revolution is not smooth	1. Fuel filter clogged or dirty	Replace	2-32

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SPECIFICATIONS

1. BX tractor specifications

Model			BX23S
PTO power*1			13.2 kW (17.7 HP)
Engine	Maker		KUBOTA
	Model		D902
	Type		Liquid-cooled, 4-cycle diesel
	Number of cylinders		3
	Bore and stroke		72.0 × 73.6 mm (2.83 × 2.90 in.)
	Total displacement		898 cm^3 (54.8 cu. in.)
	Engine gross power*2		17.1 kW (23.0 HP)
	Rated revolution		55.0 to 58.3 r/s (3300 to 3500 rpm)
	Low idling revolution		1350 to 1550 rpm
	Maximum torque		56.1 N·m (41.4 lbf·ft)
	Battery		12 V, CCA: 560 A, RC: 86 min.
	Fuel		Diesel fuel No.1 [below -10 ℃ (14 ℉)] Diesel fuel No.2 [above -10 ℃ (14 ℉)]
Capacities	Fuel tank		25 L (6.6 U.S.gals.)
	Engine crankcase (with filter)		3.3 L (3.5 U.S.qts.)
	Engine coolant		3.1 L (3.3 U.S.qts.)
	Recovery tank		0.4 L (0.4 U.S.qts.)
	Transmission case		11.3 L (2.99 U.S.gals.)
Dimensions	Overall length (without 3p)		2210 mm (87.01 in.)
	Overall length (with 3p)		2515 mm (99.02 in.)
	Overall width (Min. tread)		1145 mm (45.08 in.)
	Overall height	(with ROPS)	2190 mm (86.22 in.)
		(Top of seat)	1255 mm (49.41 in.)
	Wheel base		1400 mm (55.12 in.)
	Min. ground clearance		148 mm (5.83 in.)
	Tread	Front	930 mm (36.6 in.)
		Rear	820 mm (32.2 in.)
Weight (with ROPS)			725 kg (1600 lbs)
Clutch			N/A
Traveling system	Tire	Front: Turf/Bar/industrial	18 × 8.50-10
		Rear: Turf/Bar/industrial	26 × 12.00-12
	Steering		Hydrostatic type power steering
	Transmission		Main: Hydrostatic transmission, High-Low gear shift (2 forward, 2 reverse)

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MAINTENANCE CHECK LIST

1. BX tractor service intervals

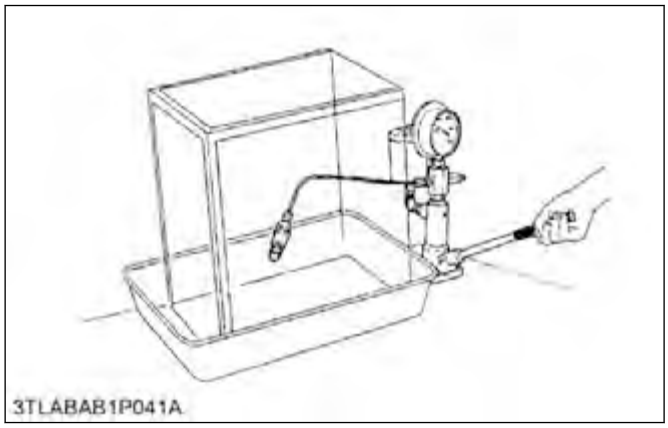
No.	Items		Indication on hour meter													Since then	Reference page		
			50	100	150	200	250	300	350	400	450	500	550	600	650	700				
1	Engine oil	Change	◎			○				○				○			every 200 Hr	2-25	*1	
2	Engine oil filter	Replace	◎			○				○				○			every 200 Hr	2-25	*1	
3	Transmission oil filter	Replace	◎			○				○				○			every 200 Hr	2-26	*1	
4	Transmission fluid	Change	◎							○							every 400 Hr	2-26	*1	
5	Transmission strainer	Clean	◎							○							every 400 Hr	2-27	*1	
6	Engine start system	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr	2-29		
7	OPC system	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr	2-29		
8	Greasing	—	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr	2-27		
9	Wheel bolt torque	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr	2-30		
10	Lock lever	Clean	○	○	○	○	○	○	○	○	○	○	○	○	○	○	every 50 Hr	2-30		
11	Battery condition	Check		○		○		○		○		○		○		○	every 100 Hr	2-30	*B	
12	Air cleaner element	Clean		○		○		○		○		○		○		○	every 100 Hr	2-25		
		Replace															every 1000 Hr or 1 year	2-39		@
13	Fuel filter element	Check		○		○		○		○		○		○		○	every 100 Hr	2-32		@
		Replace								○							every 400 Hr	2-38		
14	Fan belt	Adjust		○		○		○		○		○		○		○	every 100 Hr	2-33		
15	HST neutral spring	Adjust		○		○		○		○		○		○		○	every 100 Hr	2-33		
16	Brake pedal	Adjust		○		○		○		○		○		○		○	every 100 Hr	2-34		
17	Toe-in	Adjust				○				○				○			every 200 Hr	2-36		
18	Front axle case oil	Change								○							every 400 Hr	2-38		
19	Front axle pivot	Adjust								○							every 400 Hr	2-36		
20	Engine valve clearance	Adjust															every 800 Hr	2-39		
21	Injection pressure of the fuel injection nozzle	Check															every 1500 Hr	2-39		@
22	Cooling system	Flush															every 2000 Hr or 2 years	2-39	*4	
23	Coolant	Change															every 2000 Hr or 2 years	2-39 2-40	*4	
24	Injection pump	Check															every 3000 Hr	2-41		@
25	Radiator hose and clamp	Check															every 1 year	2-41	*R	
		Replace															every 4 years	2-43		
26	Power steering oil line	Check															every 1 year	2-41	*R	
		Replace															every 4 years	2-43		
27	Fuel line	Check															every 1 year	2-42	*R	@
		Replace															every 4 years	2-43		
28	Intake air line	Check															every 1 year	2-41	*R	@

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1. Set the injection nozzle to a nozzle tester.



2. Raise the fuel pressure, and keep at specified pressure for 10 seconds.

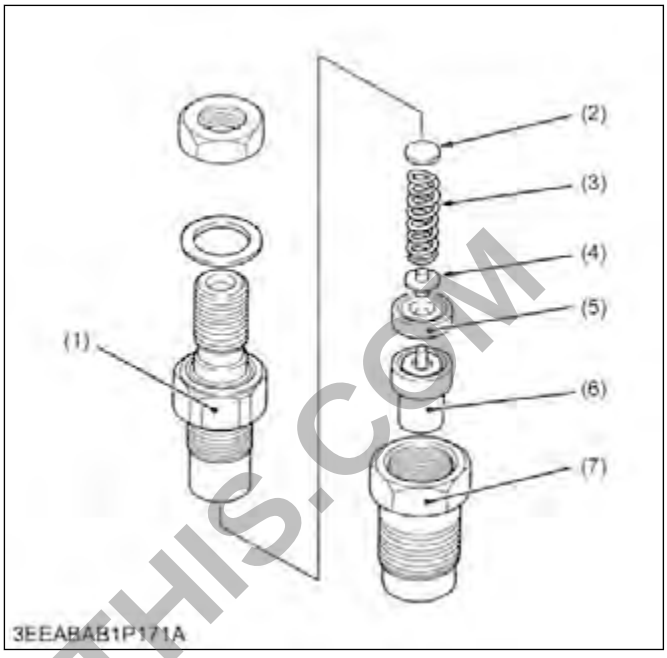
Valve seat tightness	Factory specification	No fuel leak at 12.75 MPa 130.0 kgf/cm^2 1849 psi

3. If any fuel leak is found, replace the nozzle piece.

4.4.7 Checking nozzle holder

CAUTION

- **Check the nozzle injection pressure and condition after you make sure that there is nobody standing in the direction the fume goes. If the fume from the nozzle directly contacts the human body, cells may be destroyed and blood poisoning may be caused.**



(1) Nozzle holder
(2) Adjusting washer
(3) Nozzle spring
(4) Push rod
(5) Distance piece
(6) Nozzle piece
(7) Nozzle retaining nut

1. Secure the nozzle retaining nut (7) with a vise.
2. Remove the nozzle holder (1), and remove parts inside.

(When reassembling)

- Assemble the nozzle in clean fuel oil.
- Install the push rod (4), noting its direction.
- After assembling the nozzle, be sure to adjust the fuel injection pressure.

Tightening torque	Nozzle holder	35 to 39 N·m 3.5 to 4.0 kgf·m 26 to 28 lbf·ft
	Overflow pipe retaining nut	20 to 24 N·m 2.0 to 2.5 kgf·m 15 to 18 lbf·ft
	Nozzle holder assembly	49 to 68 N·m 5.0 to 7.0 kgf·m 37 to 50 lbf·ft

5. Disassembling and assembling

5.1 Separating engine

5.1.1 Draining engine oil

1. Start and warm up the engine for approx. 5 minutes.
2. Place an oil pan underneath the engine.

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SAFETY FIRST

1. Safety first

This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully. It is essential that you read the instructions and safety regulations before you try to repair or use this unit.

DANGER
- **Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.**

WARNING
- **Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

CAUTION
- **Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**

IMPORTANT
- **Indicates that equipment or property damage could result if instructions are not followed.**

NOTE
- **Gives helpful information.**

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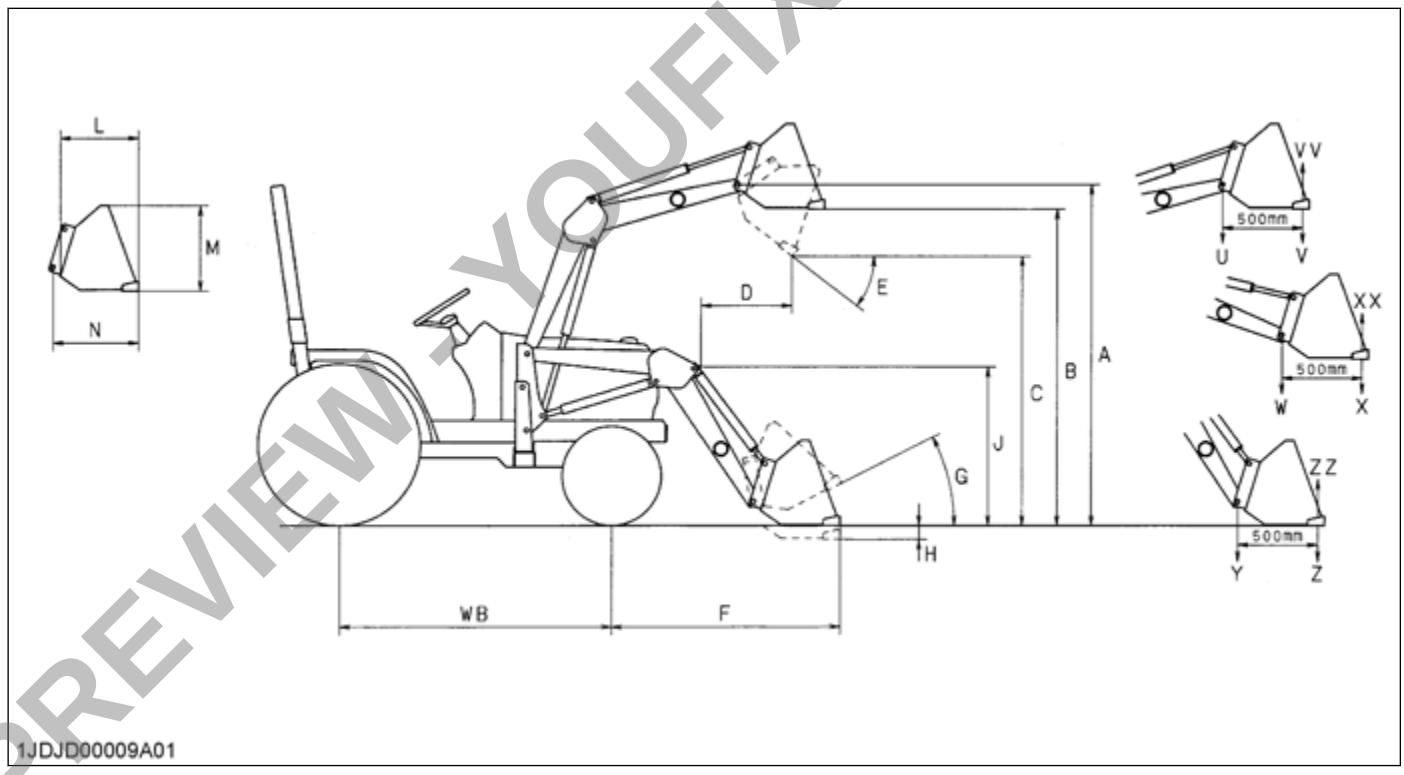
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3.4 Operational specifications of loader

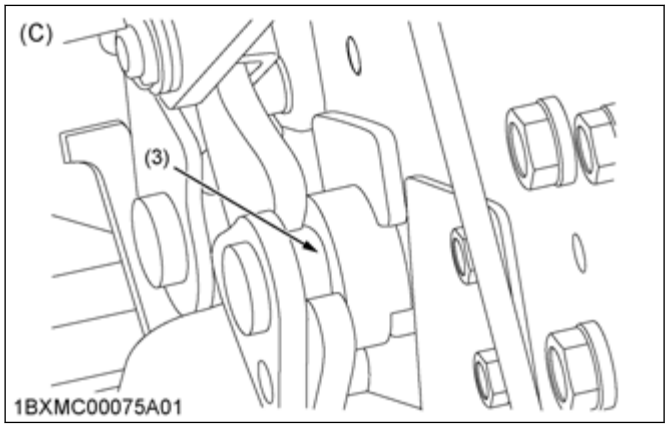
Loader model		LA340	LA340S
Tractor model		BX23S	
U	Lift capacity (Bucket pivot pin, max. height)	335 kg (739 lbs)	278 kg (613 lbs)
V	Lift capacity (500 mm forward, max. height)	231 kg (509 lbs)	192 kg (423 lbs)
W	Lift capacity (Bucket pivot pin, 1500 mm height)	372 kg (820 lbs)	317 kg (699 lbs)
X	Lift capacity (500 mm forward, 1500 mm height)	268 kg (591 lbs)	229 kg (505 lbs)
Y	Breakout force (Bucket pivot pin)	6258 N (1407 lbs)	5719 N (1286 lbs)
Z	Breakout force (500 mm forward)	4389 N (986.7 lbs)	4008 N (901.0 lbs)
VV	Bucket roll-back force at max. height	4731 N (1064 lbs)	4431 N (996.1 lbs)
XX	Bucket roll-back force at 1500 mm height	5557 N (1249 lbs)	5264 N (1183 lbs)
ZZ	Bucket roll-back force at ground level	5456 N (1227 lbs)	5195 N (1168 lbs)
Raising time		3.3 s	
Lowering time		2.5 s	
Bucket dumping time		2.7 s	
Bucket rollback time		2.3 s	

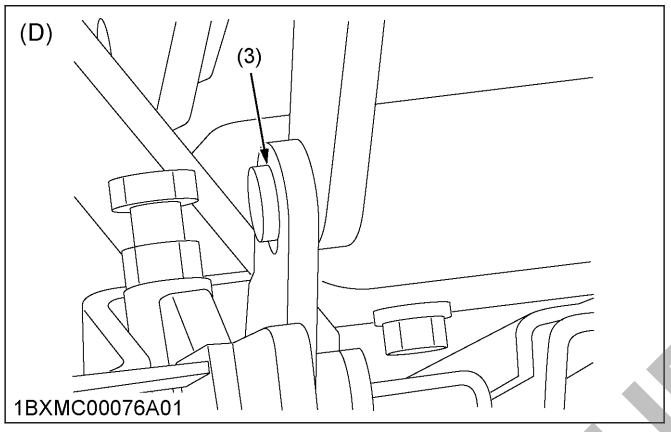


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(3) Bonnet lock
[A] Figure (A)
[B] Figure (B)
[C] Figure (C)
[D] Figure (D)

RELATED PAGE
LUBRICANTS, FUEL AND COOLANT on page 2-7

1.4.2 Checking engine start system

WARNING

To avoid serious injury or death:

- **Do not allow anyone near the tractor while testing.**
- **If the tractor does not pass the test, do not operate the tractor.**

Preparation before testing

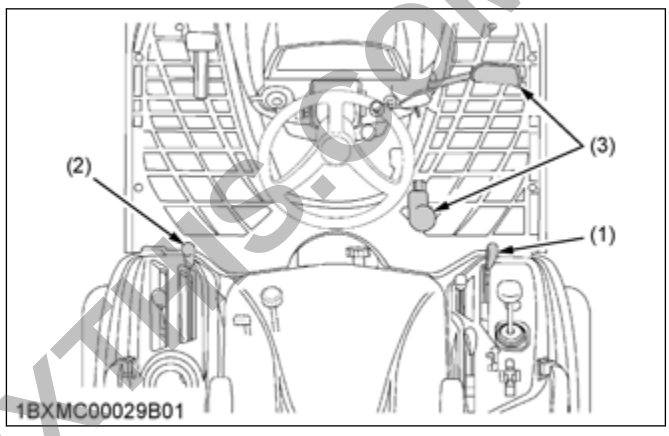
1. Sit on the operator's seat.
2. Set the parking brake and stop the engine.
3. Shift the range gear shift lever to the neutral position.
4. Check whether the speed control pedal is in the neutral position.
5. **Shift the PTO clutch lever to the off position.**

[Test 1] Switch for the speed control pedal

1. Make sure that the range gear shift lever is set in the neutral position.
2. Depress the speed control pedal.
3. Turn the key to the start position.
   The engine must not crank.

[Test 2] Switch for the PTO clutch lever

1. Make sure that the range gear shift lever is set in the neutral position.
2. Make sure that the speed control pedal is set in the neutral position.
3. **Shift the PTO clutch lever to the on position.**
4. Turn the key to the start position.
   The engine must not crank.



(1) Range gear shift lever (Hi-Lo)
(2) PTO clutch lever
(3) Speed control pedal

1.4.3 Checking operator presence control (OPC) system

WARNING

To avoid serious injury or death:

- **Do not allow anyone near the tractor while testing.**
- **If the tractor does not pass the test, do not operate the tractor.**

Preparation before testing

1. Sit on the operator's seat.
2. Set the parking brake and stop the engine.
3. Shift the range gear shift lever to the neutral position.
4. Check whether the speed control pedal is in the neutral position.
5. Shift the PTO clutch lever to the off position.

[Test 1] Switches for the operator's seat and the speed control pedal

1. Start the engine.
2. Depress the speed control pedal.
3. Stand up.
   Do not get off the machine.
   The engine must stop after approximately one second.

[Test 2] Switches for the operator's seat and the PTO clutch lever

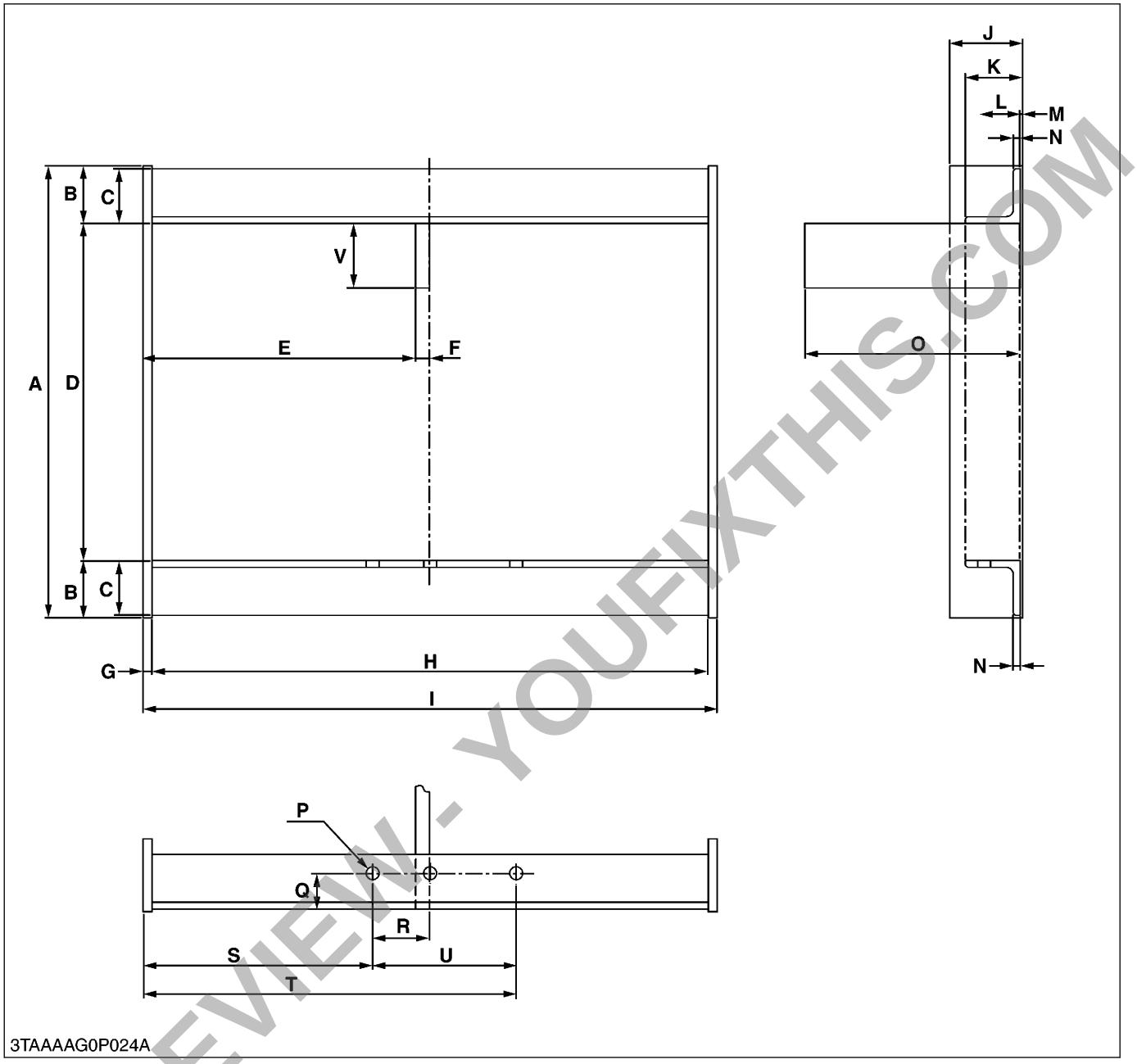
1. Start the engine.
2. Engage the PTO clutch lever.

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2.4 Disassembling and assembling stand (2/2)

Use to disassembling transaxle assembly and to assembling transaxle assembly.



A	311 mm (12.24 in.)
B	40 mm (1.57 in.)
C	38.1 mm (1.50 in.)
D	235 mm (9.25 in.)
E	170 mm (6.69 in.)
F	9.5 mm (0.37 in.)
G	6.4 mm (0.25 in.)
H	365 mm (14.37 in.)
I	377.8 mm (14.87 in.)

(Continued)

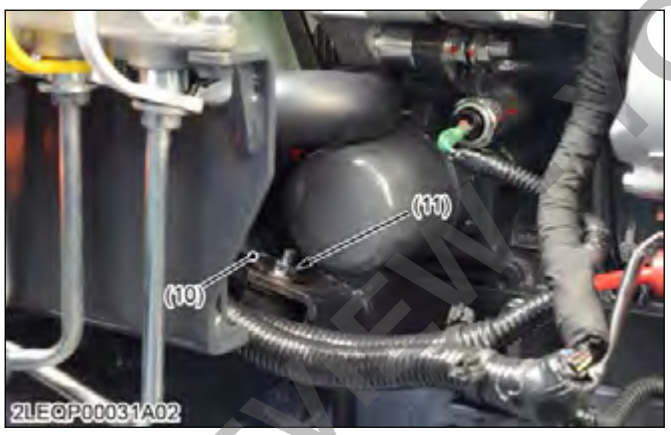
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3. Disconnect the ground cables (7), (8), and (9).







(7) Ground cable (Starer to frame)
(8) Ground cable (Harness to frame)
(9) Ground cable (Battery to L.H. engine support)
(10) Ground cable (Wire harness to R.H. engine support)
(11) Nut

(When reassembling)

Tightening torque	Engine mounting nut	24 to 27 N·m 2.4 to 2.8 kgf·m 18 to 20 lbf·ft

5.1.5 Disconnecting fuel hoses

1. Disconnect fuel return hose (1) and fuel supply hose (2) from engine.

2. Disconnect fuel filter (3) from engine.



(1) Fuel return hose
(2) Fuel supply hose
(3) Fuel filter

5.1.6 Disconnecting accelerator wire

1. Disconnect accelerator wire (2) from speed control lever (1).



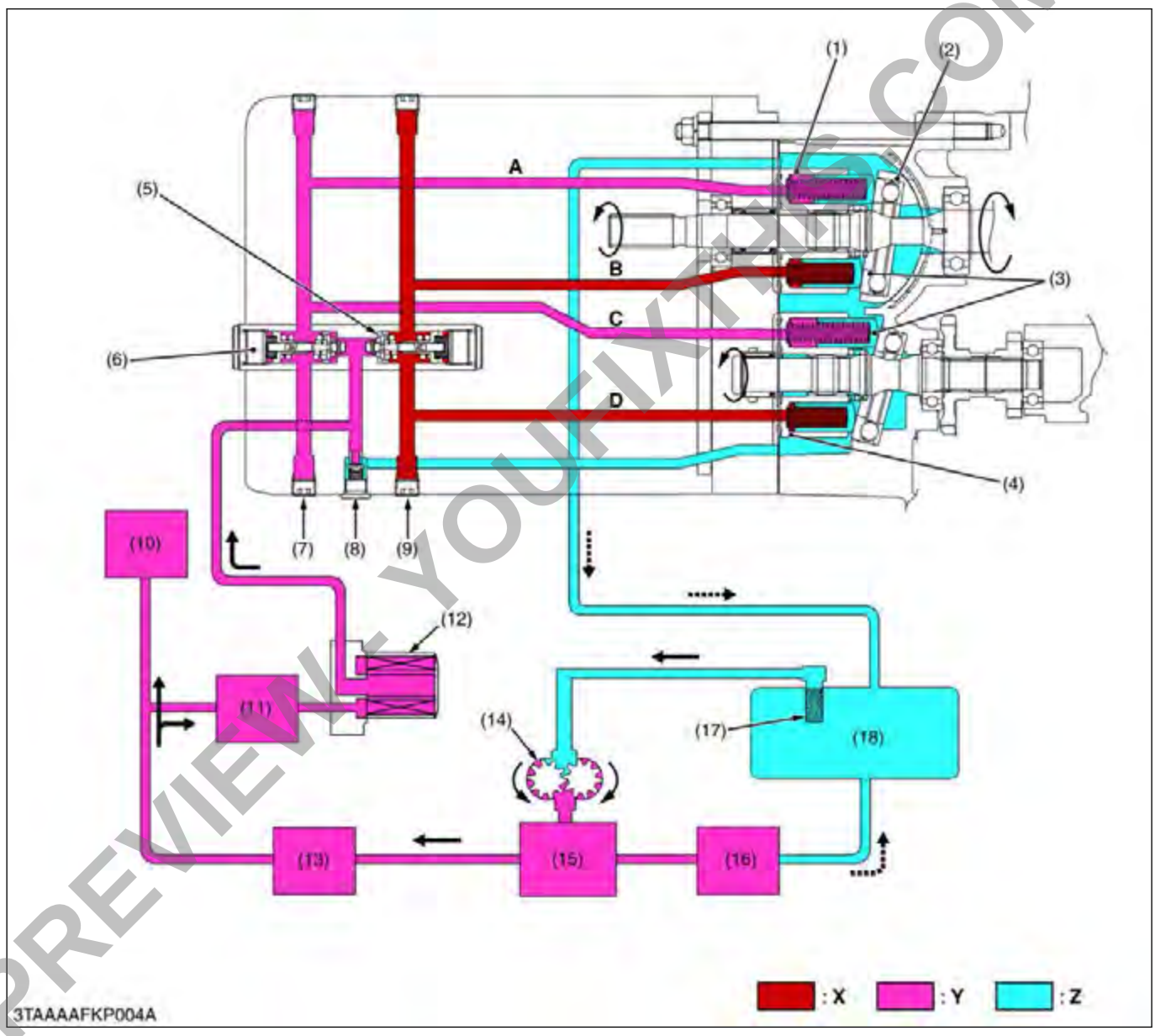
(1) Speed control lever
(2) Accelerator wire

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2.1.2.2 Forward position

When the speed control pedal is stepped on and in forward, the variable swashplate is tilted as shown in figure.
As the pump cylinder block rotates with the input shaft, oil is forced out of pump port B at high pressure. As pressure oil enters motor port D, the pistons, which align with port D, are pushed against the swashplate and slide down the inclined surface.
Then the output shaft rotates with the motor cylinder block. This drives the machine forward and the angle of pump swashplate determines the output shaft speed.
As the motor cylinder block continues to rotate, oil is forced out of motor port C at low pressure and returns to the pump.

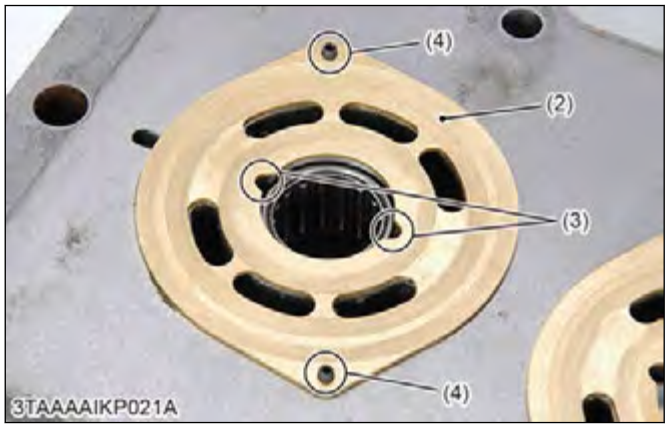


(1) Cylinder block (Pump)
(2) Swashplate
(3) Piston
(4) Cylinder block (Motor)
(5) Check and high pressure relief valve (Forward)
(6) Check and high pressure relief valve (Reverse)
(7) High pressure relief port plug (Forward)
(8) Charge relief valve
(9) High pressure relief port plug (Reverse)
(10) PTO clutch valve
(11) PTO relief valve
(12) Oil filter cartridge
(13) Power steering controller
(14) Hydraulic pump
(15) Flow priority valve (Hydraulic control valve)
(16) Position control valve
(17) Oil strainer
(18) Transmission case
A: A port
B: B port
C: C port
D: D port
X: High pressure
Y: Low pressure
Z: Free oil

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(When reassembling)

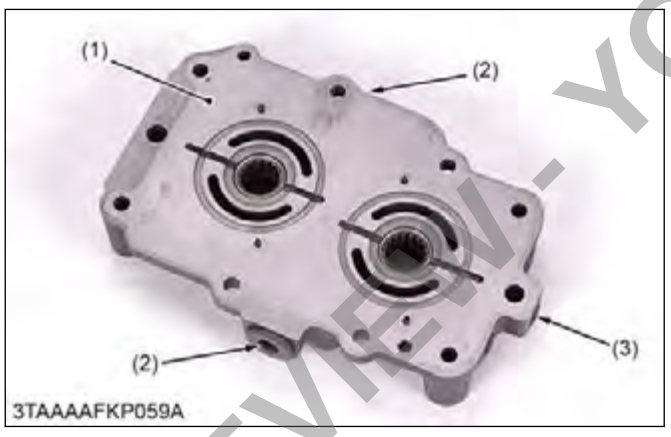


(2) Valve plate
(3) Groove
(4) Anchor pin

1. Check the direction of the groove (3).
2. Install the valve plates (2) to the anchor pins (4) securely.
3. Install the groove of the valve plate (pump plate) to the engine side.

5.2.5 Removing check and high pressure relief valve plug

1. Remove the check and high pressure relief plug (G 1/2).

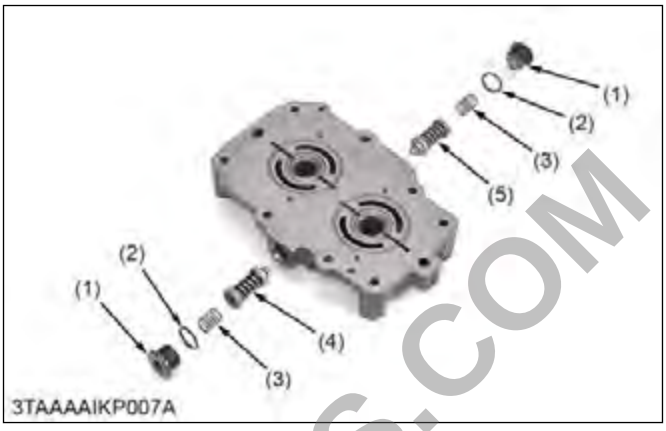


(1) Center section
(2) Plug
(3) Plug

(When reassembling)

Tightening torque	Check and high pressure relief valve plug (G 1/2)	59 to 78 N·m 6.0 to 8.0 kgf·m 44 to 57 lbf·ft

5.2.6 Checking check and high pressure relief valve



(1) Plug
(2) O-ring
(3) Spring
(4) Check and relief valve (Forward)
(5) Check and relief valve (Reverse)

1. After removing the plug (1), draw out the spring (3) and the check and high pressure relief valve assembly (4), (5).

(When reassembling)

- Be careful not to damage the O-ring (2) on the plug (1).
- Since there is an orifice in the check and relief valve body (reverse) (5), re-install the check and relief valve (4), (5) to their original positions.

Orifice	Factory specification	1.5 mm 0.059 in.

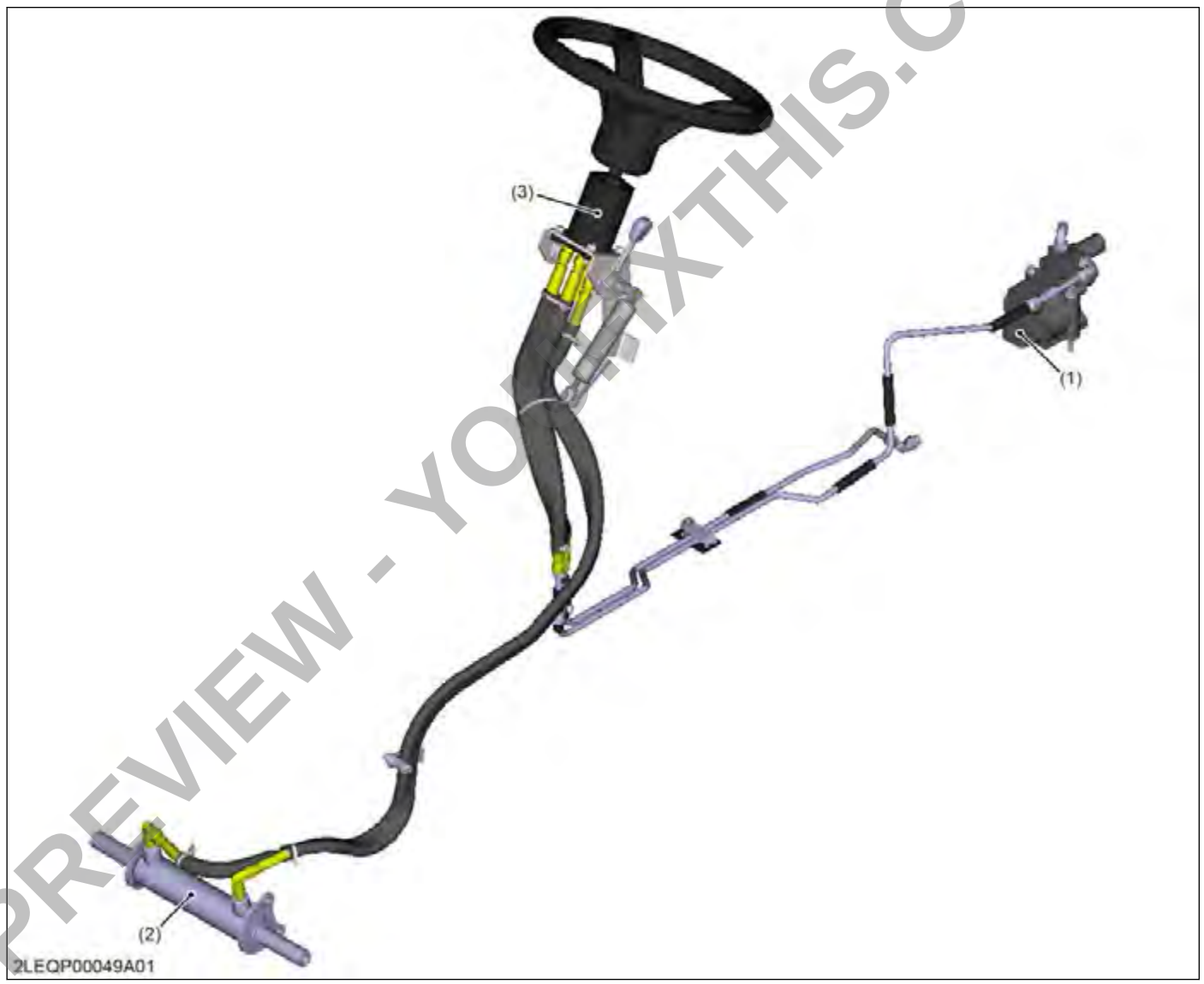
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MECHANISM

1. Structure of steering system

This model is provided with a full hydrostatic power steering. This steering system consists of a hydraulic pump (1), steering cylinder (2), steering controller (3), etc.
In the full hydrostatic power steering, the steering controller (3) is connected to the steering cylinder (2) with only the hydraulic hoses. This steering is actuated by oil pressure. Accordingly, it does not have mechanical transmitting parts such as steering gear, pitman arm, drag link, etc. Therefore, it is simple in construction.



(1) Hydraulic pump (2) Steering cylinder (3) Steering controller

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10.3.3 Loader control lever in down position

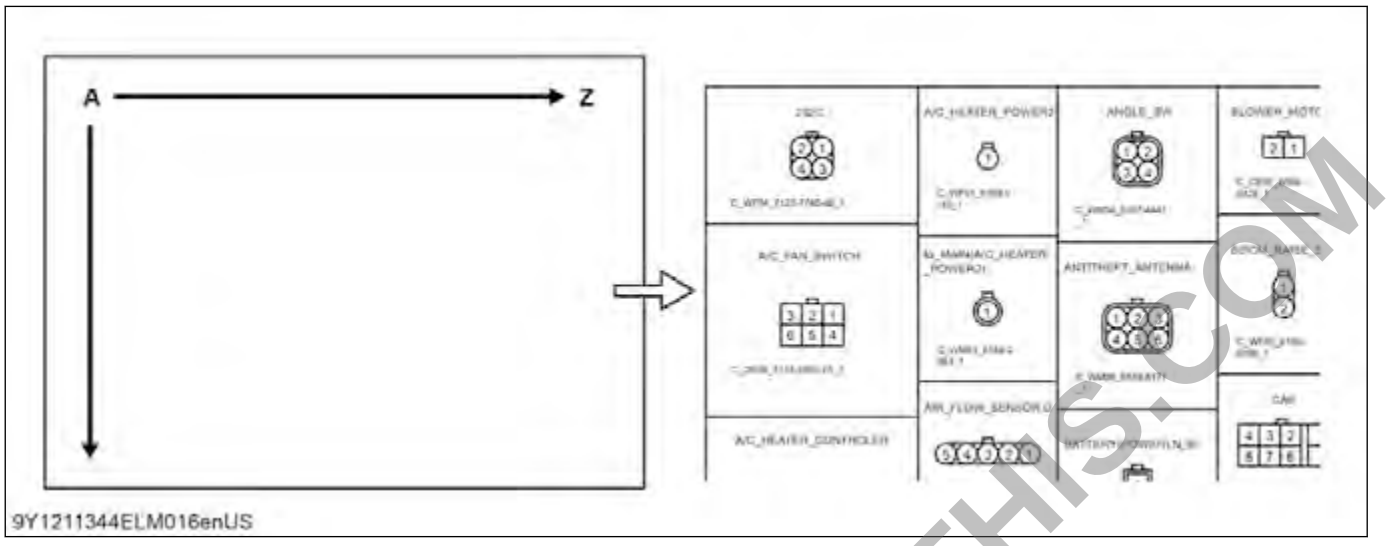
1. When the loader control lever is set at down position, the boom spool valve (3) moves inward. This creates an oil passage between the boom spool valve (3) and the front loader control valve (1). The pressured oil from the pump port (P) enters to the newly opened passage. The pressured oil is delivered to the boom cylinder (7) through 1A port (1A). This retracts and lowers the boom cylinder.
2. When the boom spool valve (3) moves inward, a passage between the boom spool valve (3) and 1B port (1B) is created. The return oil in the boom cylinder enters 1B port (1B), flows to the bucket spool valve (2), and exits to the PB port (PB).

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3.2 Layout of connector diagrams

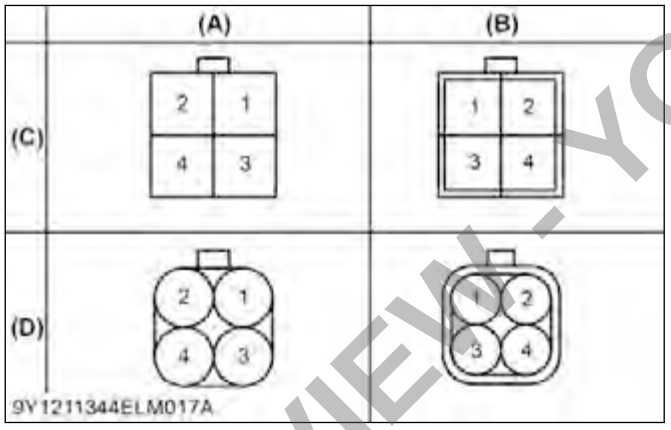
Connector arrangement sequence



Depiction of connectors

■ NOTE

- **In principle, the connector locking part is shown on the top side.**
- **Female connector terminal numbers start from 1 in the top right corner, looking at the connecting face.**
- **Male connector terminal numbers start from 1 in the top left corner.**



(A) Female connector terminal (B) Male connector terminal (C) Not waterproof (D) Waterproof

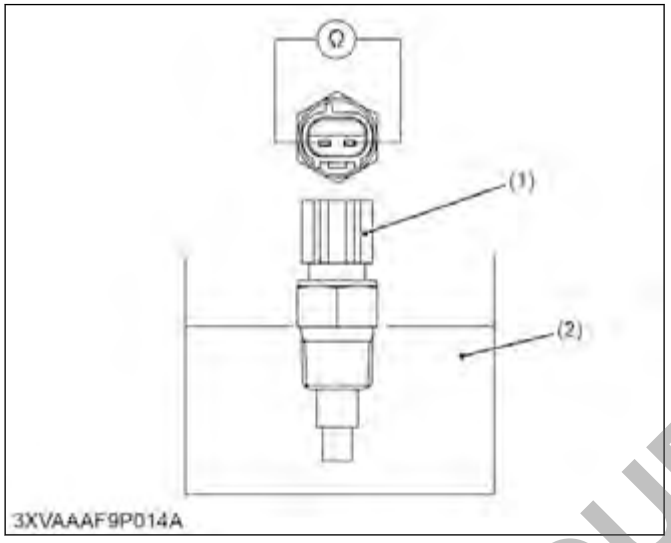
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3. If the voltage differs from the reference voltage, the wiring harness, fuse or coolant temperature gauge is damaged.

Voltage	2 terminal (W/Y) – Chassis	4.9 to 5.1 V

4.12.6 Checking coolant temperature sensor continuity

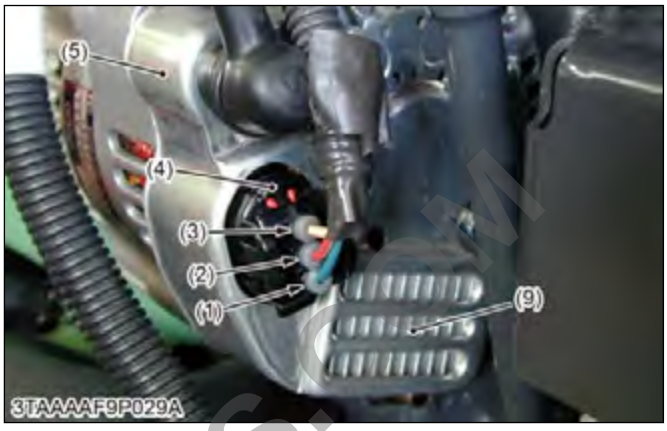


(1) Coolant temperature sensor (2) Coolant

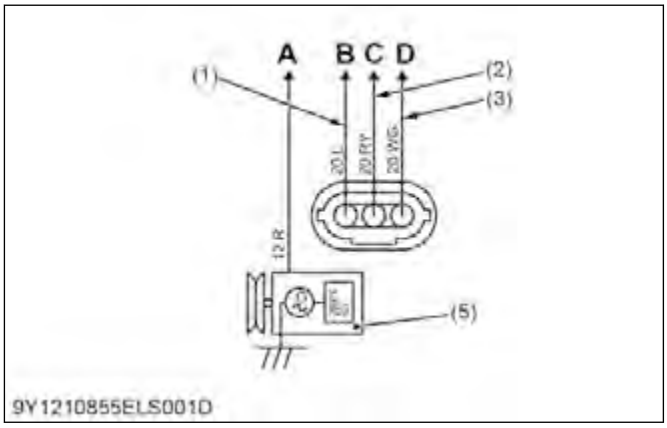
1. Measure the resistance with an ohmmeter across the sensor 1 terminal and 2 terminal.
2. If the reference value is not indicated, the sensor is damaged.

Resistance (1 terminal – 2 terminal)	Reference value	Approx. 11.08 Ω at 120 ℃ (248 ℉)
		Approx. 18.36 Ω at 100 ℃ (212 ℉)
		Approx. 31.8 Ω at 80 ℃ (176 ℉)
		Approx. 81.1 Ω at 50 ℃ (122 ℉)

4.12.7 Checking hour meter and tachometer







(1) L (blue) lead
(2) RY (red / yellow) lead
(3) WG (white / green) lead
(4) 3P connector
(5) Alternator
(6) Hour meter and tachometer terminal
(7) Ground terminal
(8) Charge lamp terminal
(9) IC regulator
(A) To the battery
(B) To hour meter and tachometer
(C) To main switch
(D) To charge indicator

1. Disconnect the 3P connector (4) from the IC regulator (9) located in the alternator (5) after starting the engine.
2. Measure the voltage with a voltmeter across the hour meter terminal (6) and the alternator body when the hour meter or tachometer does not indicated the proper value.

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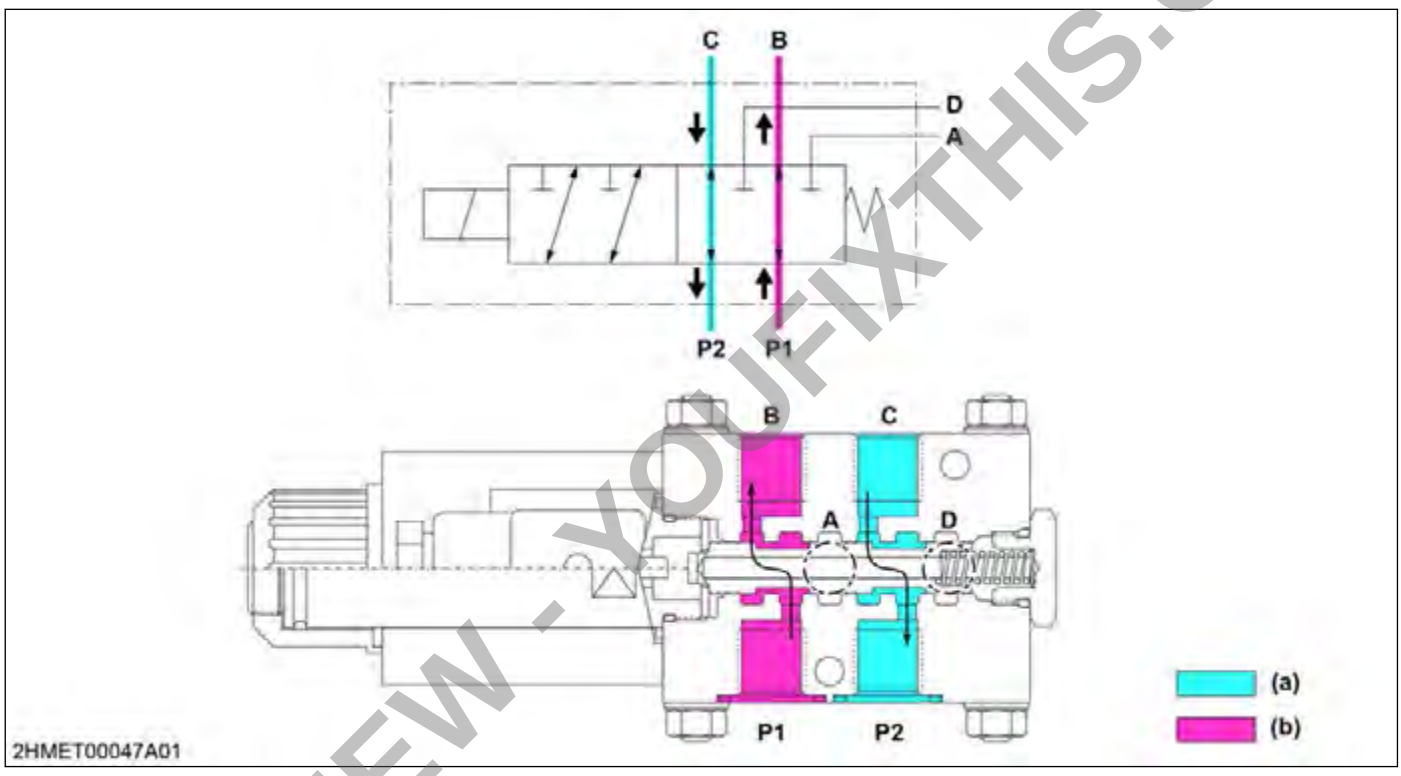
8.2 Function of 3rd function valve

8.2.1 Activation switch in off position

1. When the activation switch in off position, the spool of 3rd function valve doesn't move. The oil passage from P1 port to A port and the oil passage from P2 port to D port are opened.
2. When the loader control lever is set to the dump position, the hydraulic oil enters from P1 port and exits at B port. This extends the bucket cylinder.
3. Return oil from the bucket cylinder enters C port and travels throughout the valve to go to the transmission case through P2 port.

NOTE

When the loader control lever is set to the roll-back position, the hydraulic oil enters from P2 port and exits at C port. This extends the bucket cylinder. Return oil from the bucket cylinder enters B port and travels throughout the valve to go to the transmission case through P1 port.



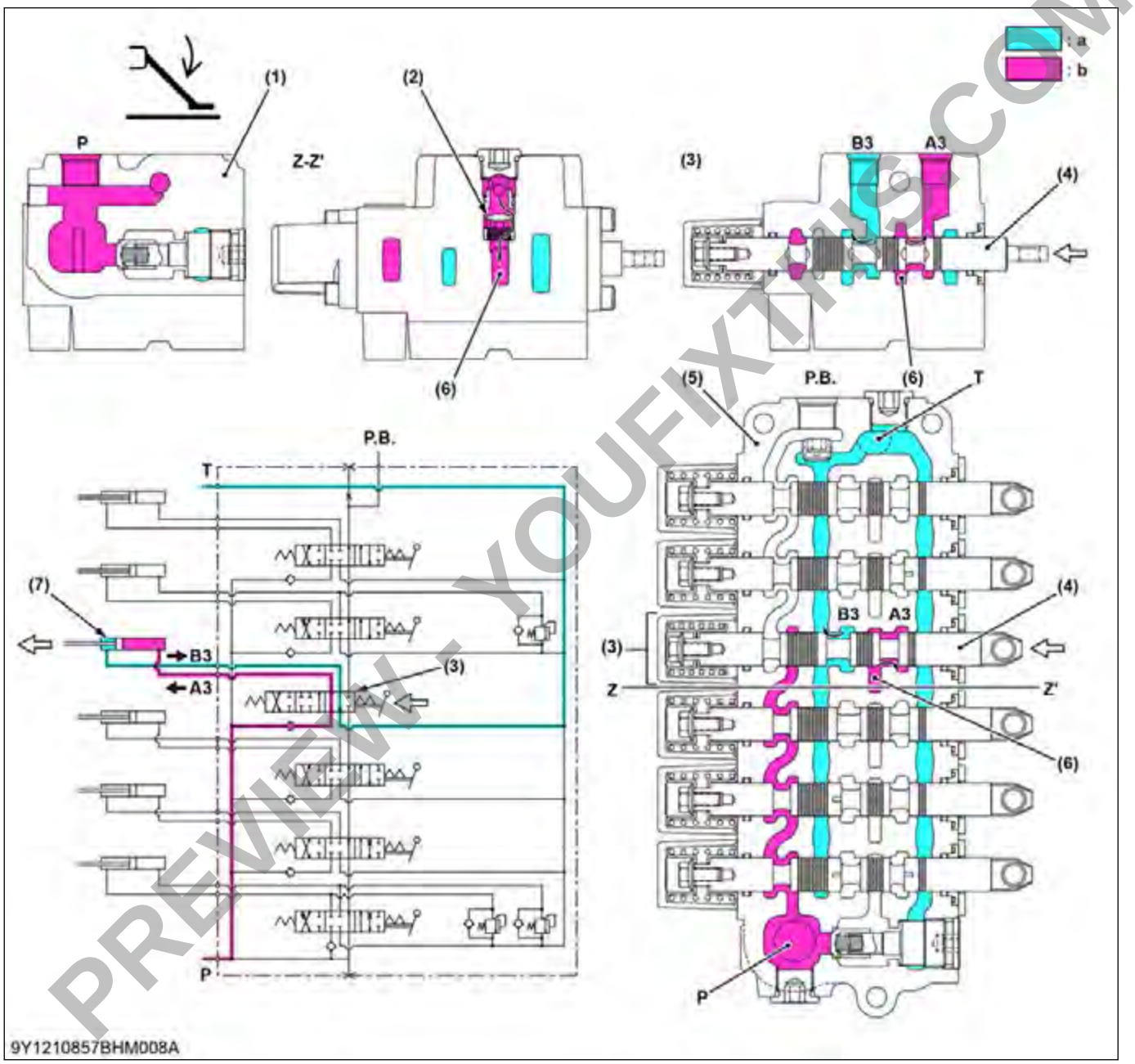
P1	P1 port	A	A port	C	C port	(a)	Low pressure
P2	P2 port	B	B port	D	D port	(b)	High pressure

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2.2.9 Backhoe control valve in R.H. stabilizer extend position

1. When the right stabilizer control lever is pulled to the downward to set to the extend position, the spool (4) of the stabilizer R.H. control valve moves to the right, which forms oil passage between bridge passage (6) and A3 port, and between B3 port and T port.
2. The pressure-fed oil from the P port opens the load check valve (2), and flows to A3 port to extend the right stabilizer cylinder.
3. Return oil from the right stabilizer cylinder returns to the transmission case through the B3 port, low pressure passage and T port.



(1) Inlet section
(2) Check valve
(3) Stabilizer R.H. section
(4) Spool
(5) Outlet section
(6) Bridge passage
(7) Stabilizer cylinder
A3: A3 port (to stabilizer cylinder)
B3: B3 port (from stabilizer cylinder)
P: Pump port
T: Tank port
P.B.: Power beyond port
a: Low pressure
b: High pressure

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