WSM

WORKSHOP MANUAL

TRACTOR,MOWER

BX1880,BX2380,BX2680, RCK60B-23BX,RCK54-23BX, RCK48-18BX,RCK60D-26BX, RCK54D-26BX

Kubota

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CONTENTS

1. INFORMATION

SAFETY FIRST 1-1
1. Safety first 1-1
2. Before you start service 1-2
3. Start safely 1-2
4. Operate safely 1-2
5. Avoiding high pressure fluid 1-3
6. Avoiding hot exhaust 1-3
7. Cleaning exhaust filter 1-3
8. Prevent a fire 1-4
9. Keep a good airflow in the work area 1-4
10. Discard fluids correctly 1-4
11. Prevent acid burns 1-4
12. Preparing for emergencies 1-5
SAFETY LABEL 1-7
1. Safety labels for BX tractor 1-7
2. Safety labels for mower 1-12
2.1 Care of danger, warning and caution labels 1-14
SPECIFICATIONS 1-15
1. BX tractor specifications 1-15
2. Mower specifications (RCK60B-23BX, RCK54-23BX and RCK48-18BX) 1-17
3. Mower specifications (RCK60D-26BX and RCK54D-26BX) 1-18
TRAVELING SPEEDS 1-19
DIMENSIONS 1-21

2. GENERAL

IDENTIFICATION 2-1
1. Tractor identification 2-1
1.1 Checking serial number and hour meter 2-1
1.2 Cylinder number 2-2
2. Checking mower identification 2-2
GENERAL PRECAUTIONS 2-3
HANDLING PRECAUTIONS FOR ELECTRICAL PARTS AND WIRING 2-5
LUBRICANTS, FUEL AND COOLANT 2-7
1. BX tractor 2-7
1.1 Lubricants, fuel, and coolant 2-7
1.1.1 Fuel 2-8
1.1.2 Engine oil 2-8
1.1.3 Transmission oil 2-8
1.2 Overview of biodiesel fuel (BDF) 2-9
2. Mower 2-11
2.1 Lubricants 2-11
TIGHTENING TORQUES 2-13
1. General use screws, bolts and nuts 2-13
2. Stud bolts 2-13
3. Metric screws, bolts and nuts 2-14
4. American standard screws, bolts and nuts with UNC or UNF threads 2-14
5. Plugs 2-14
MAINTENANCE CHECK LIST 2-15
1. BX tractor service intervals 2-15
2. Mower service intervals 2-17
CHECK AND MAINTENANCE 2-19
1. Periodic service 2-19
1.1 Opening bonnet 2-19

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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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SPECIFICATIONS

1. BX tractor specifications

Model			BX1880	BX2380	BX2680
PTO power*1			10.2 kW (13.7 HP)	13.2 kW (17.7 HP)	14.5 kW (19.5 HP)
Engine	Maker		Kubota		
	Model		D722	D902	D1005
	Type		Liquid-cooled, 4-cycle diesel		
	Number of cylinders		3		
	Bore and stroke		67 × 68 mm (2.64 × 2.68 in.)	72 × 73.6 mm (2.83 × 2.90 in.)	76 × 73.6 mm (2.99 × 2.90 in.)
	Total displacement		719 cm^3 (43.9 cu. in.)	898 cm^3 (54.8 cu. in.)	1001 cm^3 (61.1 cu. in.)
	Engine gross power*2		12.4 kW (16.6 HP)	16.1 kW (21.6 HP)	18.5 kW (24.8 HP)
	Rated revolution		3200 rpm		
	Low idling revolution		1350 to 1550 rpm		
	Maximum torque		44.9 N·m (33.1 lbf·ft)	56.1 N·m (41.4 lbf·ft)	60.2 N·m (44.4 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 5.5 Imp.gals		
	Engine crankcase (with filter)		3.0 L 3.2 U.S.qts 2.6 Imp.qts	3.3 L 3.5 U.S.qts 2.9 Imp.qts	4.0 L 4.2 U.S.qts 3.5 Imp.qts
	Engine coolant		2.9 L 3.1 U.S.qts 2.6 Imp.qts	3.1 L 3.3 U.S.qts 2.7 Imp.qts	3.3 L 3.5 U.S.qts 2.9 Imp.qts
	Recovery tank		0.4 L 0.1 U.S.gals 0.09 Imp.gals		
	Transmission case		11.3 L 2.99 U.S.gals 2.49 Imp.gals		
Dimensions	Overall length (without 3p)		2120 mm (83.5 in.)		
	Overall length (with 3p)		2425 mm (95.5 in.)		
	Overall width (Min. tread)		1120 mm (44.1 in.)	1145 mm (45.1 in.)	
	Overall height	(with ROPS)	2080 mm (81.9 in.)	2110 mm (83.0 in.)	
		(Top of seat)	1230 mm (48.4 in.)	1255 mm (49.4 in.)	1330 mm (52.4 in.)
	Wheel base		1400 mm (55.1 in.)		
	Min. ground clearance		148 mm (5.8 in.)	166 mm (6.5 in.)	
	Tread	Front	930 mm (36.6 in.)		
		Rear	820 mm (32.3 in.)		

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LUBRICANTS, FUEL AND COOLANT

1. BX tractor

1.1 Lubricants, fuel, and coolant

IMPORTANT

- **To prevent serious damage to hydraulic systems, use only KUBOTA genuine fluid or its equivalent.**

No.	Locations	Capacities			Grade	
		BX1880	BX2380	BX2680		
1	Fuel	25 L 6.6 U.S.gals 5.5 Imp.gals			• No. 2-D diesel fuel • No. 1-D diesel fuel if temperature is below -10 ℃ (14 ℉)	
2	Coolant with recovery tank	2.9 L 3.1 U.S.qts 2.6 Imp.qts	3.1 L 3.3 U.S.qts 2.7 Imp.qts	3.3 L 3.5 U.S.qts 2.9 Imp.qts	Fresh clean soft water with anti-freeze	
3	Engine crankcase	3.0 L 3.2 U.S.qts 2.6 Imp.qts *1	3.3 L 3.5 U.S.qts 2.9 Imp.qts *1	4.0 L 4.2 U.S.qts 3.5 Imp.qts *1	• **Engine oil** API Service Classification CF or higher	
					Above 25 ℃ (77 ℉)	SAE30, SAE10W-30 or 15W-40
					-10 ℃ to 25 ℃ (14 ℉ to 77 ℉)	SAE20, SAE10W-30, or 15W-40
					Below -10 ℃ (14 ℉)	SAE10W-30
4	Transmission case	11.3 L 2.99 U.S.gals 2.49 Imp.gals			• KUBOTA SUPER UDT-2 fluid*2	
5	Front axle case	3.6 L 3.8 U.S.qts 3.2 Imp qts			• KUBOTA SUPER UDT-2 fluid*2 or SAE 80-SAE90 gear oil	
6	**Greasing**	**No. of greasing points**			**Capacity**	**Type of grease**
	Battery terminal	2			Moderate amount	Multipurpose EP2 Grease (NLGI Grade No. 2)
	Speed control pedal	1			Until grease overflow	
	Rear link	4			Moderate amount	
	Bonnet lock	1			Moderate amount	
	Bonnet guide	1			Moderate amount	

*1 Oil amount when the oil level is at the upper level of the oil level gauge.

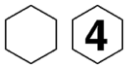
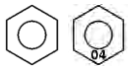
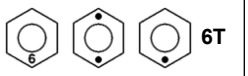
*2 The product name of KUBOTA genuine UDT fluid may be different from that in the operator's manual depending on countries or territories.

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TIGHTENING TORQUES

1. General use screws, bolts and nuts

Indication on top of bolt	 No-grade or 4T						 7T						 9T		
Indication on top of nut	 No-grade or 4T												 6T		
Material of opponent part	Ordinariness			Aluminum			Ordinariness			Aluminum			Ordinariness		
Unit	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft
M6	7.9 to 9.3	0.80 to 0.95	5.8 to 6.8	7.9 to 8.8	0.80 to 0.90	5.8 to 6.5	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31	7.9 to 8.8	0.80 to 0.90	5.8 to 6.5	12.3 to 14.2	1.25 to 1.45	9.05 to 10.4
M8	18 to 20	1.8 to 2.1	13 to 15	17 to 19	1.7 to 2.0	13 to 14	24 to 27	2.4 to 2.8	18 to 20	18 to 20	1.8 to 2.1	13 to 15	30 to 34	3.0 to 3.5	22 to 25
M10	40 to 45	4.0 to 4.6	29 to 33	32 to 34	3.2 to 3.5	24 to 25	48 to 55	4.9 to 5.7	36 to 41	40 to 44	4.0 to 4.5	29 to 32	61 to 70	6.2 to 7.2	45 to 52
M12	63 to 72	6.4 to 7.4	47 to 53	—	—	—	78 to 90	7.9 to 9.2	58 to 66	63 to 72	6.4 to 7.4	47 to 53	103 to 117	10.5 to 12.0	76.0 to 86.7
M14	108 to 125	11.0 to 12.8	79.6 to 92.5	—	—	—	124 to 147	12.6 to 15.0	91.2 to 108	—	—	—	167 to 196	17.0 to 20.0	123 to 144
M16	167 to 191	17.0 to 19.5	123 to 141	—	—	—	197 to 225	20.0 to 23.0	145 to 166	—	—	—	260 to 304	26.5 to 31.0	192 to 224
M18	246 to 284	25.0 to 29.0	181 to 209	—	—	—	275 to 318	28.0 to 32.5	203 to 235	—	—	—	344 to 402	35.0 to 41.0	254 to 296
M20	334 to 392	34.0 to 40.0	246 to 289	—	—	—	368 to 431	37.5 to 44.0	272 to 318	—	—	—	491 to 568	50.0 to 58.0	362 to 419

2. Stud bolts

Material of opponent part	Ordinariness			Aluminum		
Unit	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft
M8	12 to 15	1.2 to 1.6	8.7 to 11	8.9 to 11	0.90 to 1.2	6.5 to 8.6
M10	25 to 31	2.5 to 3.2	18 to 23	20 to 25	2.0 to 2.6	15 to 18
M12	30 to 49	3.0 to 5.0	22 to 36	31	3.2	23
M14	62 to 73	6.3 to 7.5	46 to 54	—	—	—
M16	98.1 to 112	10.0 to 11.5	72.4 to 83.1	—	—	—
M18	172 to 201	17.5 to 20.5	127 to 148	—	—	—

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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	2-23	*1	
2	Engine oil filter	Replace	◎			○				○				○			Every 200 Hr	2-23	*1	
3	Transmission oil filter	Replace	◎			○				○				○			Every 200 Hr	2-24	*1	
4	Engine start system	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Every 50 Hr	2-26		
5	OPC system	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Every 50 Hr	2-26		
6	Greasing	—	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Every 50 Hr	2-24		
7	Wheel bolt torque	Check	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Every 50 Hr	2-26		
8	Lock lever	Clean	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Every 50 Hr	2-27		
9	Battery condition	Check		○		○		○		○		○		○		○	Every 100 Hr	2-27	*B	
10	Air cleaner element	Clean		○		○		○		○		○		○		○	Every 100 Hr	2-23	*2	
		Replace															Every 1000 Hr or 1 year	2-36	*3	@
11	Fuel filter element	Check		○		○		○		○		○		○		○	Every 100 Hr	2-29		@
		Replace								○							Every 400 Hr	2-35		
12	Fan belt	Adjust		○		○		○		○		○		○		○	Every 100 Hr	2-30		
13	HST neutral spring	Adjust		○		○		○		○		○		○		○	Every 100 Hr	2-30		
14	Brake pedal	Adjust		○		○		○		○		○		○		○	Every 100 Hr	2-31		
15	Toe-in	Adjust				○				○				○			Every 200 Hr	2-33		
16	Transmission fluid	Change								○							Every 400 Hr	2-34	*1	
17	Transmission strainer	Clean								○							Every 400 Hr	2-35	*1	
18	Front axle case oil	Change								○							Every 400 Hr	2-35		
19	Front axle pivot	Adjust								○							Every 400 Hr	2-33		
20	Engine valve clearance	Adjust															Every 800 Hr	2-36		
21	Injection pressure of the fuel injection nozzle	Check															Every 1500 Hr	2-36		@
22	Cooling system	Flush															Every 2000 Hr or 2 years	2-36	*4	
23	Coolant	Change															Every 2000 Hr or 2 years	2-36 2-37	*4	
24	Injection pump	Check															Every 3000 Hr	2-38		@
25	Radiator hose and clamp	Check															Every 1 year	2-38	*R	
		Replace															Every 4 years	2-40		
26	Power steering oil line	Check															Every 1 year	2-39	*R	
		Replace															Every 4 years	2-40		
27	Fuel line	Check															Every 1 year	2-39	*R	@

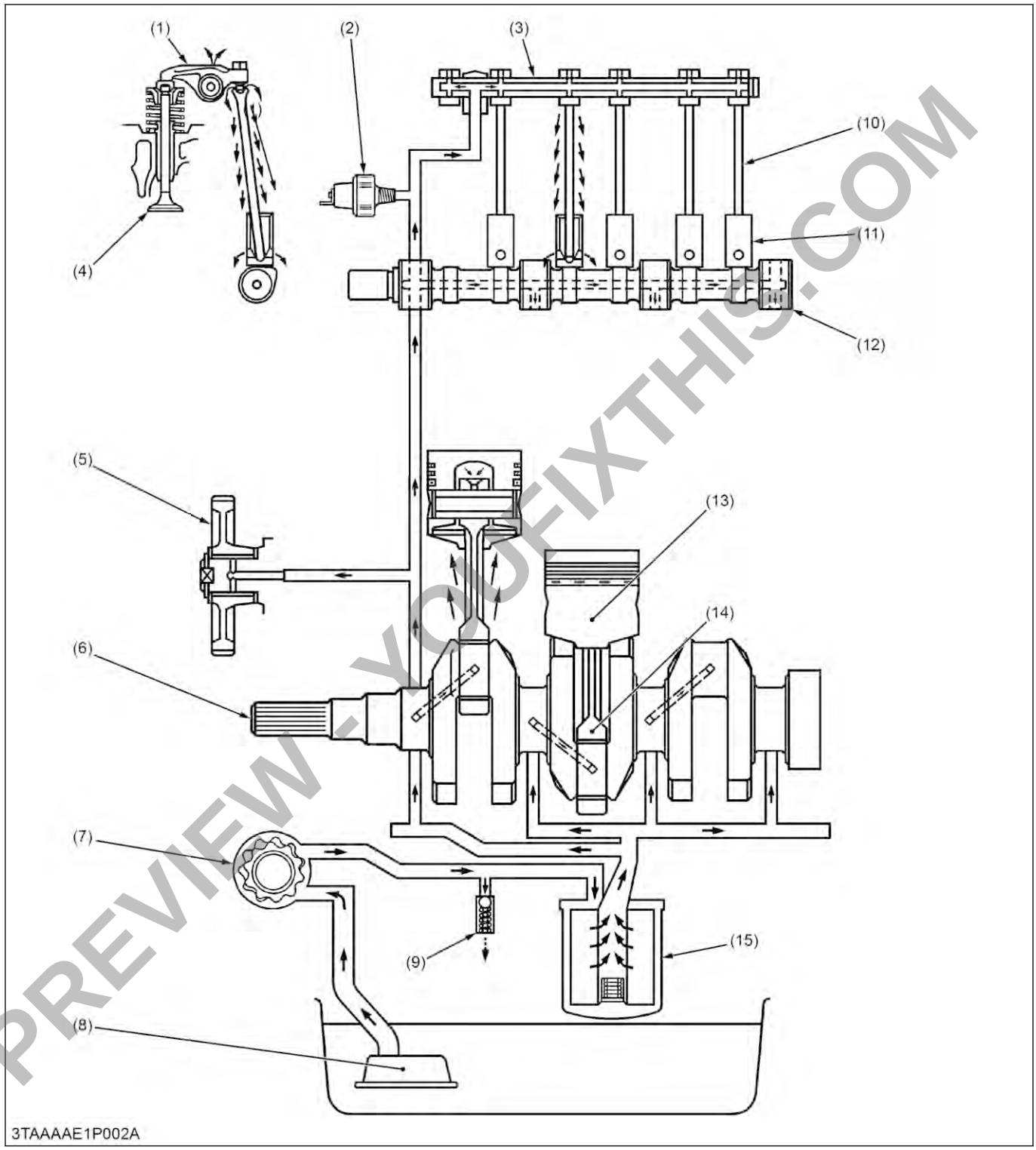
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2. Lubricating system

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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SERVICING

1. Troubleshooting for engine

Symptom	Probable cause and checking procedure	Solution	Reference page
Engine does not start	1. No fuel	Fill	2-7
	2. Air in fuel system	Vent air	2-41
	3. Fuel line clogged	Clean or replace	2-39
	4. Water in fuel system	Change fuel and repair or replace fuel system	2-39
	5. Fuel filter clogged	Replace	2-29
	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	3-43
	9. Incorrect injection timing	Adjust	3-34
	10. Fuel camshaft worn	Replace	3-50
	11. Injection nozzle clogged	Clean or replace	3-43
	12. Injection pump malfunctioning	Repair or replace	3-49
	13. Seizure of crankshaft, camshaft, piston, cylinder or bearing	Repair or replace	3-51 3-54
	14. Compression leak from cylinder	Replace head gasket, tighten cylinder head screw glow plug and nozzle holder	3-30 3-45
	15. Improper valve timing	Correct or replace timing gear	3-50
	16. Piston ring and cylinder worn	Replace	3-52
	17. Excessive valve clearance	Adjust	3-30
Starter does not operate	1.Battery discharged	Charge	2-27
	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	2-29

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2. Servicing specifications for engine

BX1880 (D722-E4) and BX2380 (D902-E4)

Engine body

Item		Factory specification	Allowable limit
Cylinder head surface	Flatness	—	0.005 mm 0.002 in.
Top clearance		0.55 to 0.70 mm 0.022 to 0.027 in.	—
Compression pressure [BX1880 (D722-E4)]		2.85 to 3.23 MPa 29.0 to 33.0 kgf/cm^2 413 to 469 psi	2.26 MPa 23.0 kgf/cm^2 327 psi
Compression pressure [BX2380 (D902-E4)]		3.53 to 4.02 MPa 36.0 to 41.0 kgf/cm^2 512 to 583 psi	2.55 MPa 26.0 kgf/cm^2 370 psi
Variance among cylinders		—	10% or less
Valve seat	Angle (Intake)	0.79 rad 45°	—
	Angle (Exhaust)	0.79 rad 45°	—
	Width	2.12 mm 0.0835 in.	—
Valve face	Angle (Intake)	0.79 rad 45°	—
	Angle (Exhaust)	0.79 rad 45°	—
Valve recessing	Intake and exhaust	0.10 (protrusion) to 0.10 (recessing) mm 0.0039 (protrusion) to 0.0039 (recessing) in.	0.30 (recessing) mm 0.012 (recessing) in.
Valve stem to valve guide	Clearance	0.030 to 0.057 mm 0.0012 to 0.0022 in.	0.10 mm 0.0039 in.
• Valve stem	O.D.	5.968 to 5.980 mm 0.2350 to 0.2354 in.	—
• Valve guide	I.D.	6.010 to 6.025 mm 0.2367 to 0.2372 in.	—
Valve clearance (Cold)		0.145 to 0.185 mm 0.00571 to 0.00728 in.	—
Valve spring	Free length	31.3 to 31.8 mm 1.24 to 1.25 in.	28.4 mm 1.12 in.
	Tilt	—	1.2 mm 0.047 in.
	Setting load	65 N / 27.0 mm 6.6 kgf / 27.0 mm 15 lbf / 1.06 in.	55 N / 27.0 mm 5.6 kgf / 27.0 mm 12 lbf / 1.06 in.
Rocker arm shaft to rocker arm	Clearance	0.016 to 0.045 mm 0.00063 to 0.0017 in.	0.15 mm 0.0059 in.
• Rocker arm shaft	O.D.	10.473 to 10.484 mm 0.41233 to 0.41275 in.	—
• Rocker arm	I.D.	10.500 to 10.518 mm 0.41339 to 0.41409 in.	—

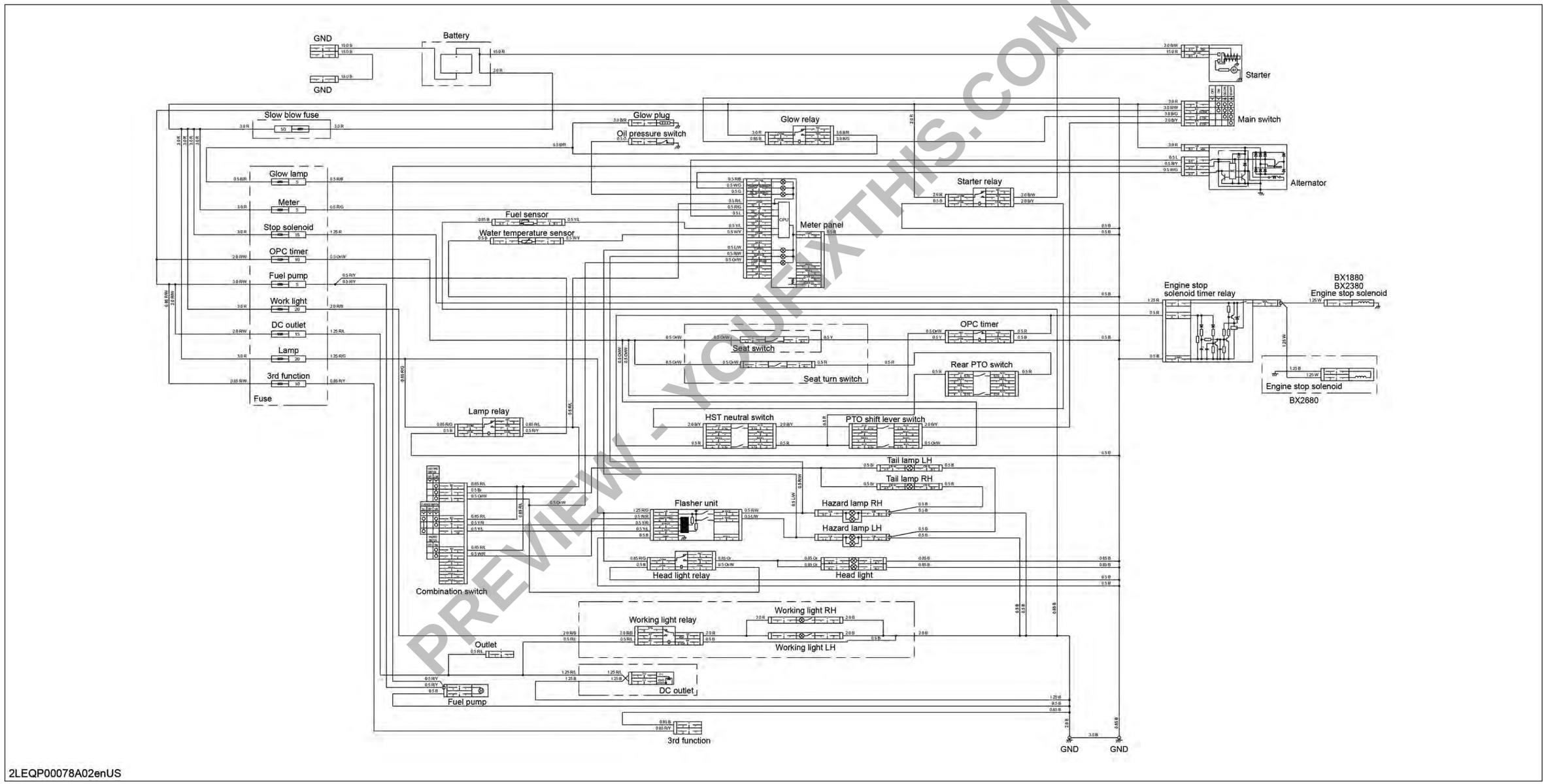
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MECHANISM

1. Wiring diagram of BX tractor



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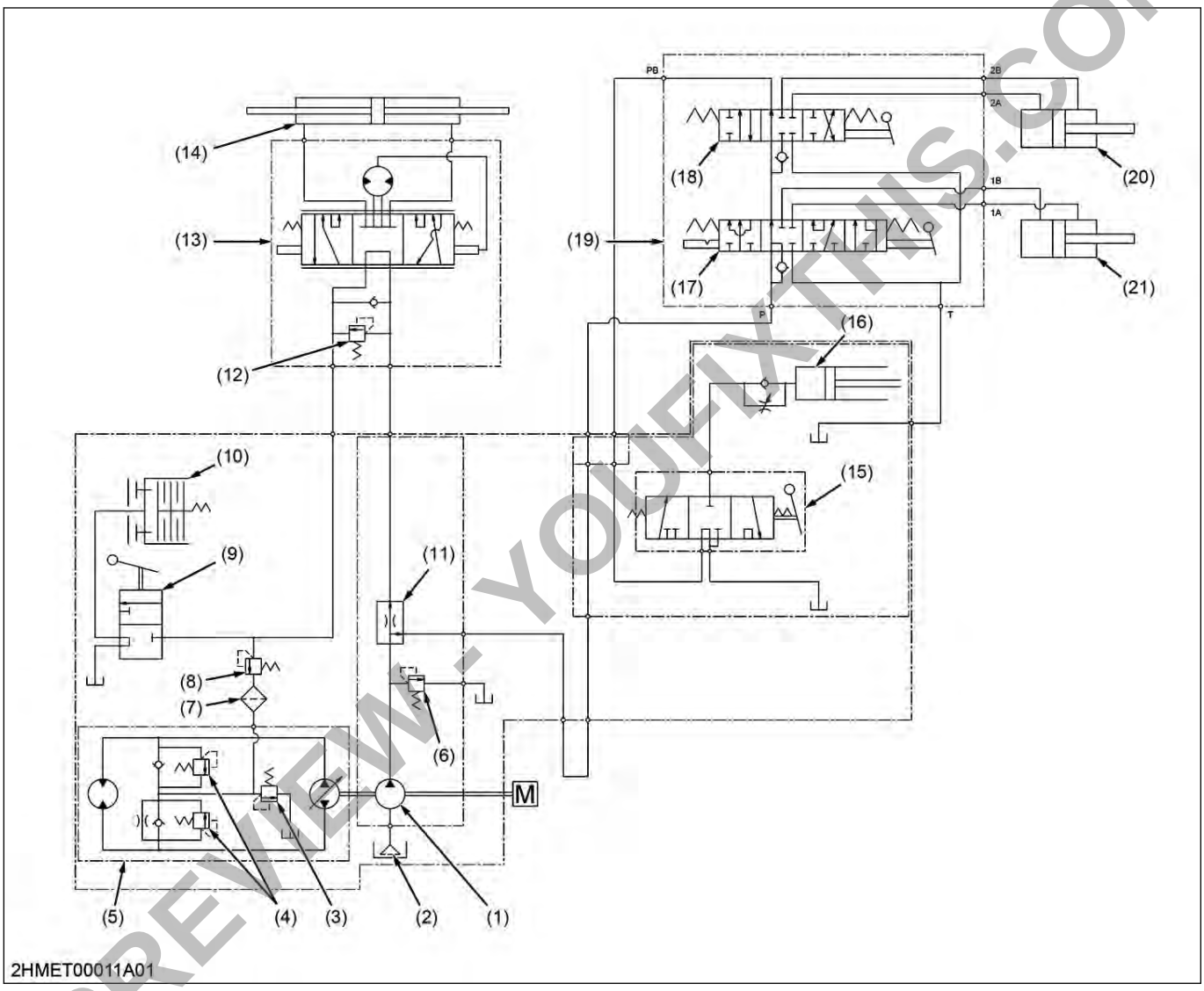
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2. Hydraulic circuit

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 operating 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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CHECK AND MAINTENANCE

1. Periodic service

⚠ WARNING

To avoid serious injury or death:

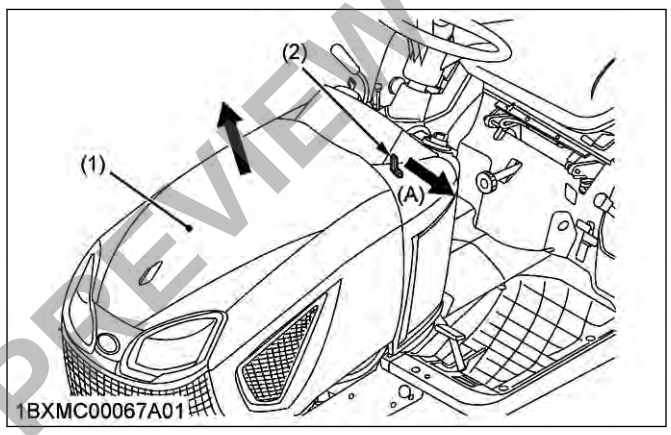
- **Do not work under any hydraulically supported devices. Hydraulically supported devices can settle, suddenly leak down, or be accidentally lowered.**
- **If necessary to work under the tractor or any machine elements for servicing or adjustment, securely support the tractor or any machine elements with stands or suitable blocking beforehand.**

1.1 Opening bonnet

⚠ WARNING

- **Never open the bonnet while the engine is running.**
- **Do not touch the muffler or the exhaust pipes while they are hot.**
  Touching the hot muffler or exhaust pipes could cause severe burns.

1. Pull the bonnet-open-lever to release the latch to open the bonnet, and open the bonnet.



(1) Bonnet
(2) Bonnet-open-lever
(A) Pull

1.2 Daily check

⚠ WARNING

- **To avoid serious injury or death:**
  Take the following precautions when checking the tractor.
  - **Park the machine on firm and level ground.**
  - **Set the parking brake.**
  - **Lower the implement to the ground.**
  - **Release all residual pressure of the hydraulic system.**
  - **Stop the engine and remove the key.**

For your own safety and maximum service life of the machine, make a thorough daily inspection before operating the machine or starting the engine.

1.2.1 Walk around inspection

Look around and under the tractor for such items as loose bolts, trash build-up, oil or coolant leaks, or broken or worn parts.

1.2.2 Checking fuel gauge and refueling

⚠ WARNING

To avoid serious injury or death:

- **Do not smoke while refueling.**
- **Be sure to stop the engine and remove the key before refueling.**

To avoid allergic skin reaction:

- **Wash hands immediately after contact with diesel fuel.**

■ IMPORTANT

- **Do not permit dirt, trash, or water to get into the fuel system.**
- **Be careful not to empty the fuel tank, otherwise air will enter the fuel system, necessitating bleeding before next starting the engine.**
- **Be careful not to spill the fuel during refueling. If you should spill, wipe it off at once, or it may cause a fire.**
- **To prevent water condensation and water accumulation in the fuel tank, fill the tank before parking overnight.**

Using fuel

Temperature	fuel
Above -10 ℃ (14 ℉)	Grade No. 2-Diesel fuel
Below -10 ℃ (14 ℉)	Grade No. 1-Diesel fuel

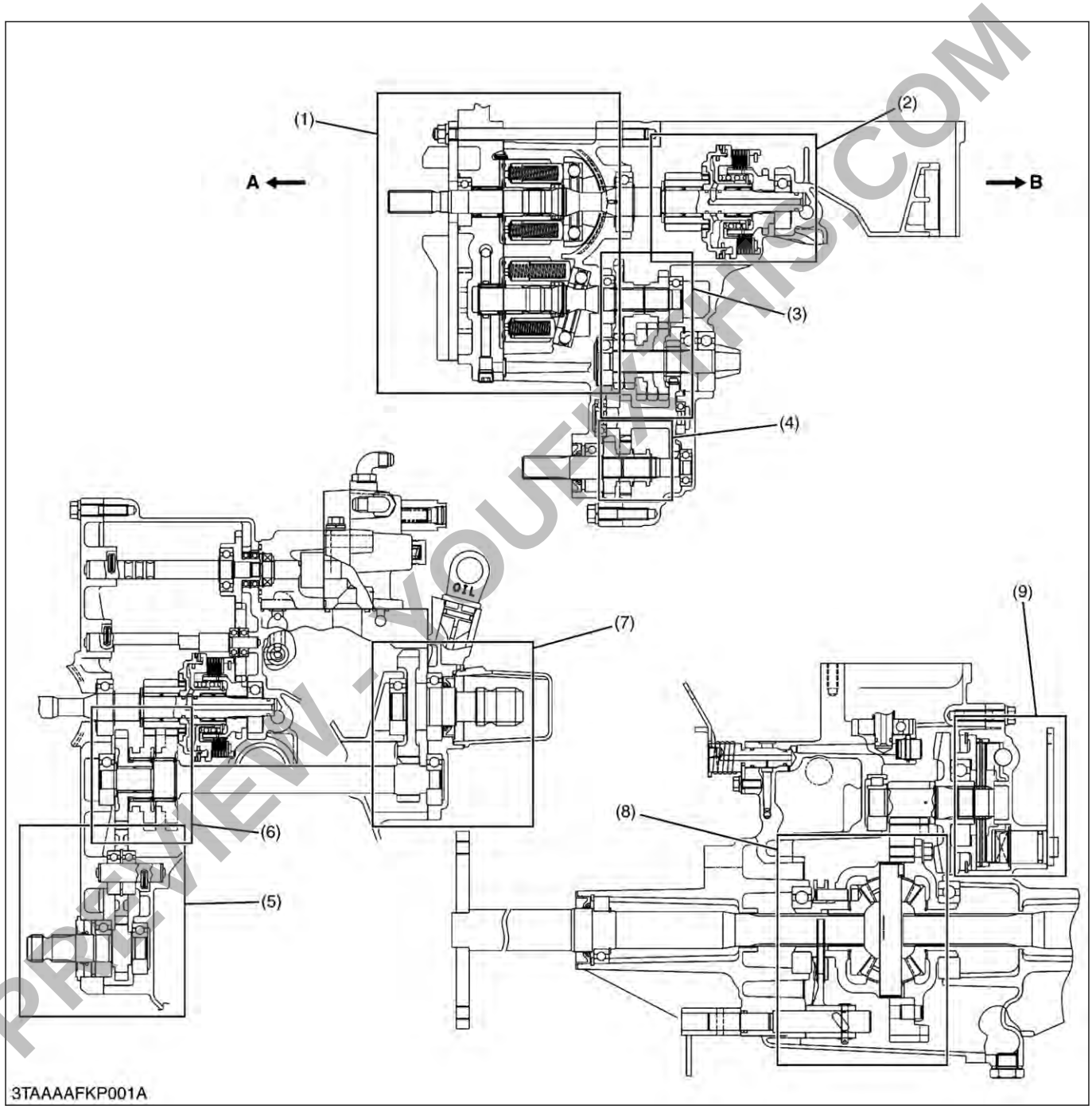
1. Turn the key switch to the **ON** position and check the amount of fuel by the fuel gauge.

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MECHANISM

1. Structure of transaxle



(1) Hydrostatic transmission
(2) PTO clutch section
(3) Range gear shift section
(4) Front wheel drive gear section
(5) Mid-PTO section
(6) PTO gear shift section
(7) Rear PTO section
(8) Differential gear section
(9) Brake section
A: Front side
B: Rear side

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3. ENGINE

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3. Tightening torques for transaxle

Item	Dimension × Pitch	N·m	kgf·m	lbf·ft
Charge relief valve checking plug	R 1/4	30 to 44	3.0 to 4.5	22 to 32
Hexagon socket head plug	R 1/4	30 to 44	3.0 to 4.5	22 to 32
Hexagon socket head screw	—	25 to 29	2.5 to 3.0	18 to 21
PTO clutch operating pressure plug	R 1/8	13 to 21	1.3 to 2.2	9.4 to 15
Lower ROPS mounting bolt and nut	—	48.0 to 55.9	4.90 to 5.70	35.5 to 41.2
Fuel tank stay mounting bolt and nut	—	48 to 55	4.9 to 5.7	36 to 41
Seat stopper bolt	—	123.5 to 147.0	12.6 to 15.0	91.2 to 108
Rear wheel mounting screw	—	109 to 129	11.1 to 13.2	80.3 to 95.4
Fender center stay mounting bolt and nut (M14)	—	98.0 to 125	11.0 to 12.8	79.6 to 92.5
Fender center stay mounting bolt and nut (M10)	—	39.2 to 45.1	4.00 to 4.60	29.0 to 33.2
Hitch plate mounting bolt and nut (M14)	—	124 to 147	12.6 to 15.0	91.2 to 108
Fender bracket mounting bolt and nut (M14)	—	124 to 147	12.6 to 15.0	91.2 to 108
Transaxle assembly mounting screw	M12	63 to 72	6.4 to 7.4	47 to 53
Transaxle assembly mounting screw	M14	124 to 147	12.6 to 15.0	91.2 to 108
Rear coupling mounting screw	M8	24 to 27	2.4 to 2.8	18 to 20
Front coupling mounting screw	M8	24 to 27	2.4 to 2.8	18 to 20
HST fan mounting screw	M8	9.8 to 11	1.0 to 1.2	7.3 to 8.6
Hydraulic control lever mounting bolt and nut	M8	18 to 20	1.8 to 2.1	13 to 15
HST front cover mounting bolt and nut	M10	18 to 20	1.8 to 2.1	13 to 15
Check and high pressure relief valve plug	—	59 to 78	6.0 to 8.0	44 to 57
Hydraulic cylinder mounting screw	—	40 to 44	4.0 to 4.5	29 to 32
Transaxle case front cover mounting bolt	M10	39 to 44	4.0 to 4.4	29 to 32
Hydraulic pump assembly mounting bolt	M6	7.9 to 8.8	0.80 to 0.90	5.8 to 6.5
Hydraulic pump assembly mounting bolt	M8	18 to 20	1.8 to 2.1	13 to 15
Rear PTO cover mounting bolt	M8	18 to 20	1.8 to 2.1	13 to 15
Rear axle case (R.H.) mounting bolt	M8	18 to 20	1.8 to 2.1	13 to 15
66T final gear mounting screw	—	61 to 70	6.2 to 7.2	45 to 52

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RELATED PAGE
TIGHTENING TORQUES on page 2-13

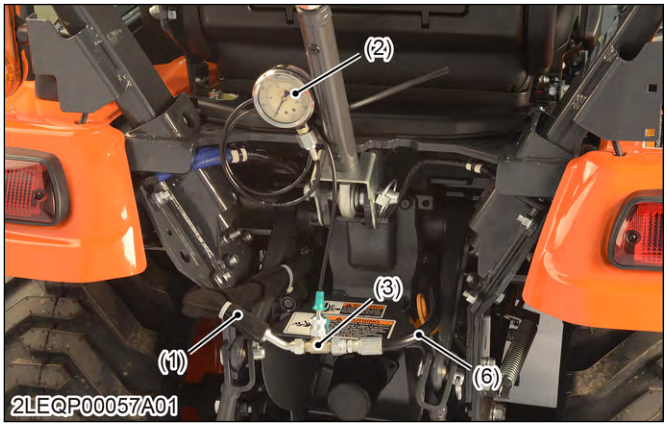
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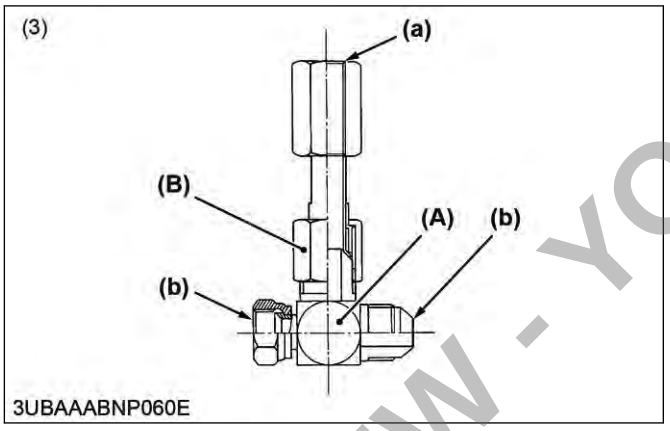
4. Checking and adjusting

4.1 Relief valve

4.1.1 Checking relief valve setting pressure

1. Disconnect the hydraulic hose (1) from the right side of the transaxle.
2. Install the hydraulic hose (6) and adaptor A (3) with pressure gauge (2).





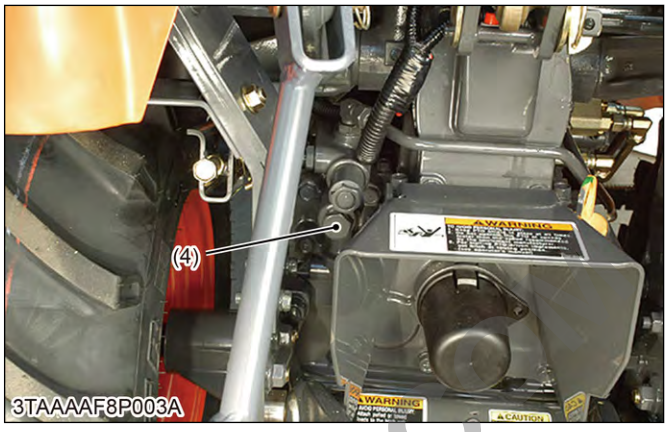
(1) Hydraulic hose
(2) Pressure gauge
(3) Adapter tee, swivel (9/16-18)
(6) Hydraulic hose
(A) Adapter tee, swivel (9/16-18)
(B) Adapter B
(a) Connect pressure gauge
(b) Connect hydraulic hose

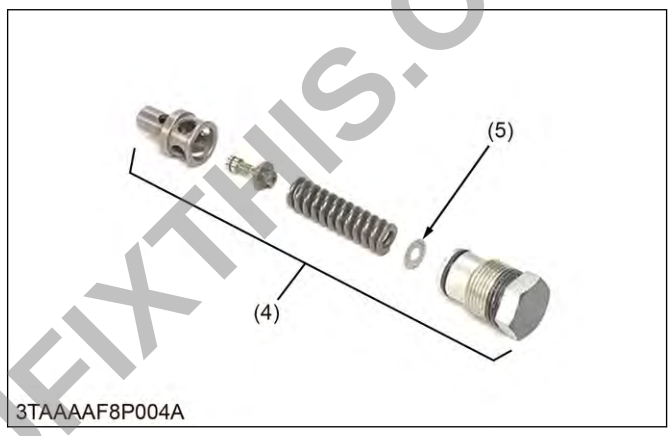
3. Start the engine and set at maximum speed.

Condition

Engine speed	Oil temperature
Maximum	45 to 55 ℃ 113 to 131 ℉

4. Move the control lever all way up to operate the relief valve and read the gauge.
5. If the pressure is not within the factory specifications, adjust with the adjusting shim (5).





(4) Relief valve
(5) Shim

Relief valve setting pressure	Factory specification	12.3 to 12.7 MPa 125 to 130 kgf/cm^2 1780 to 1840 psi

(Reference)

Thickness of shim (5)	0.1 mm 0.004 in.
	0.2 mm 0.008 in.
	0.4 mm 0.02 in.

0.269 MPa (2.74 kgf/cm^2, 39.0 psi) pressure is increased whenever the thickness of adjusting shim is increased by 0.1 mm (0.004 in.).

4.2 Pump and priority valve

4.2.1 Checking hydraulic pump oil flow

■ IMPORTANT

- **Use the instruction with the flowmeter when you use the flowmeter.**
- **While testing, do not close the flowmeter loading valve completely.**
- **To measure the flow volume of pump, oil flow on the power steering system side should be stopped.**

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