WSM

WORKSHOP MANUAL
TRACTOR

B2320HSD,B2920HSD

Kubota

KiSC issued 05, 2021 A

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GENERAL

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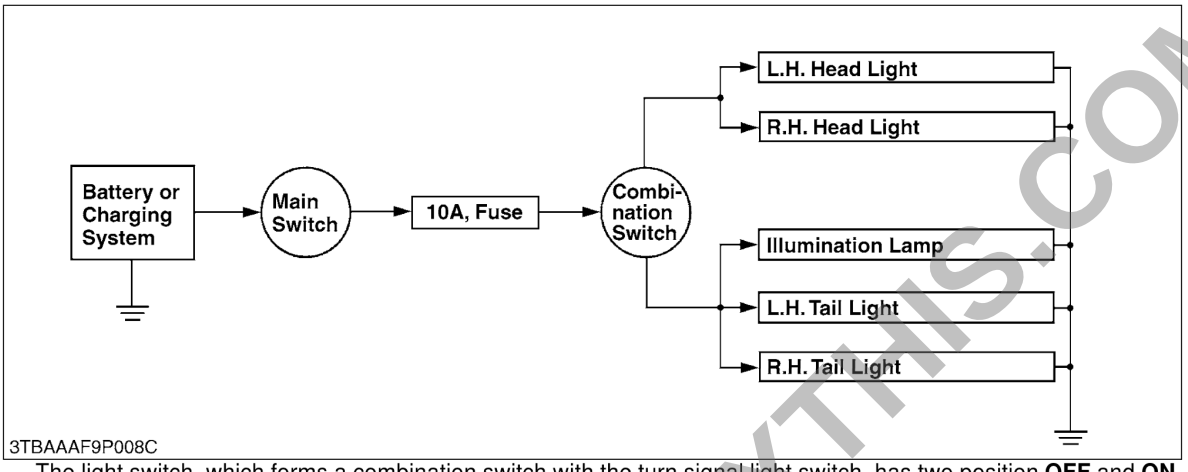
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3. LIGHTING SYSTEM

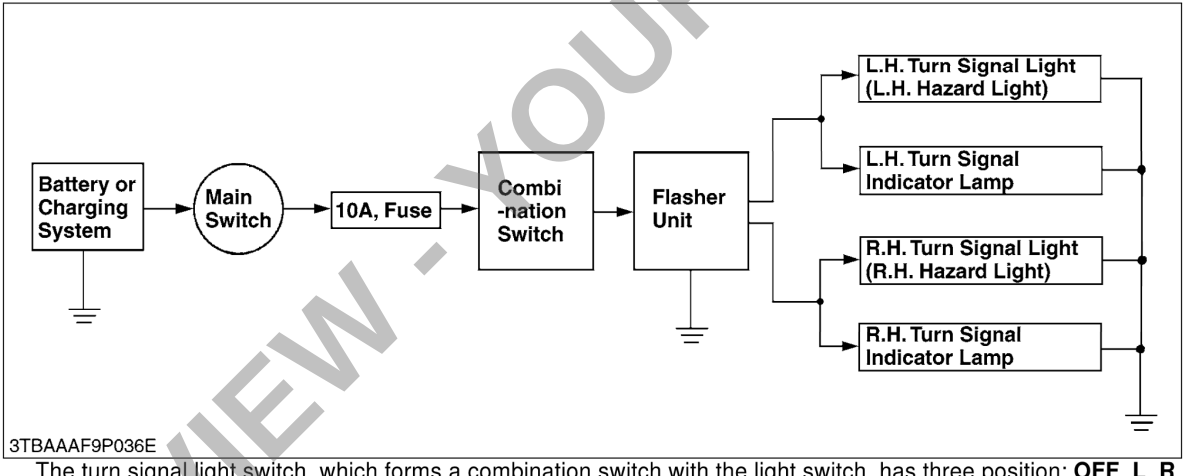
The lighting system consists of combination switch (light switch and hazard switch), head lights, tail lights, hazard lights, etc..

[1] HEAD LIGHT



The light switch, which forms a combination switch with the turn signal light switch, has two position **OFF** and **ON**.
A current passes through the light circuit as shown in the figure above.

[2] TURN SIGNAL LIGHT

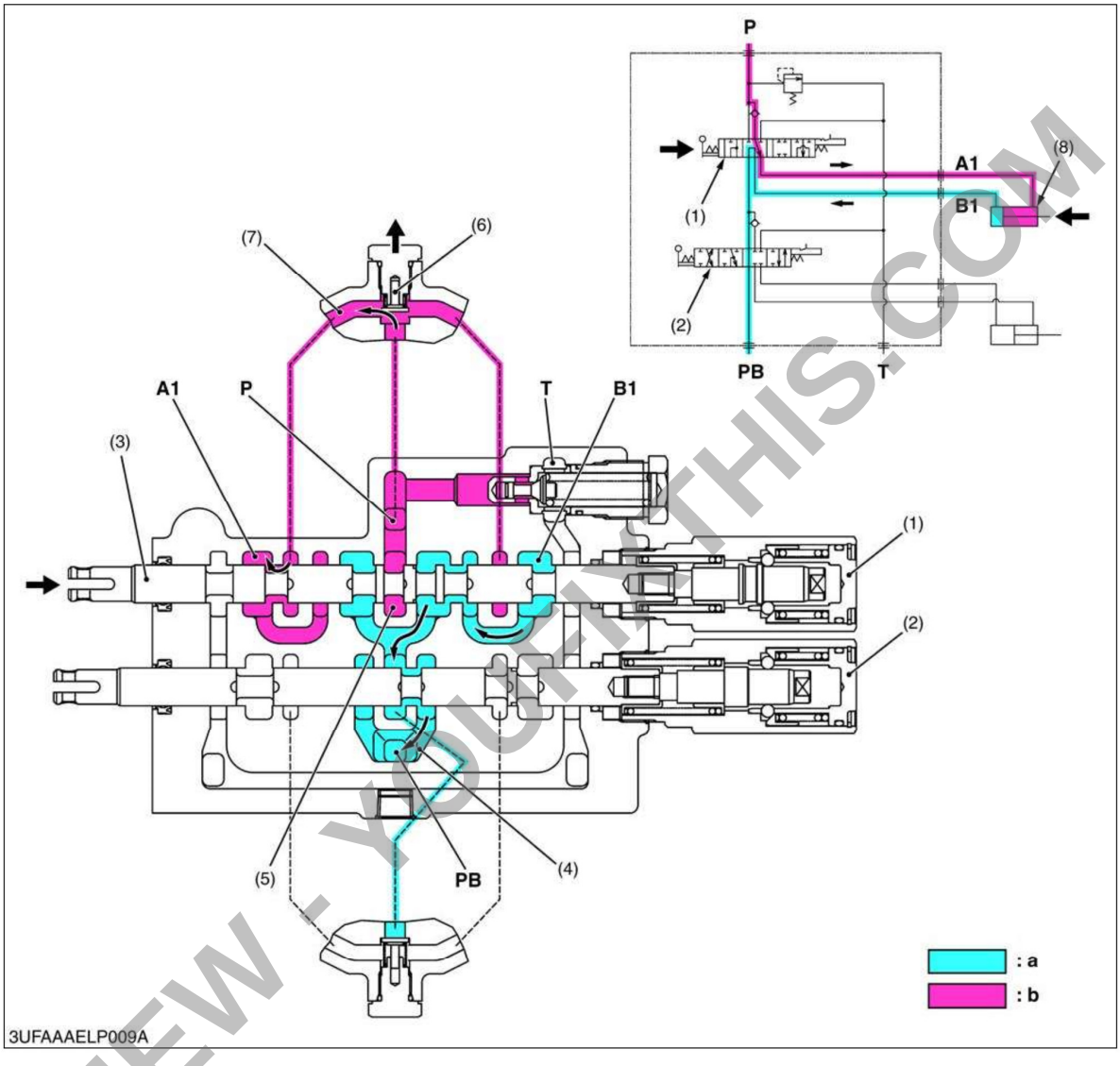


The turn signal light switch, which forms a combination switch with the light switch, has three position; **OFF**, **L**, **R**. When using turn signal light switch, only one side light blinks.

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■ Down



(1) Boom Control Section
(2) Bucket Control Section
(3) Spool
(4) **PB** Passage 1
(5) Neutral Passage 1
(6) Load Check Valve
(7) Passage 1
(8) Boom Cylinder

P : P Port
T : T Port

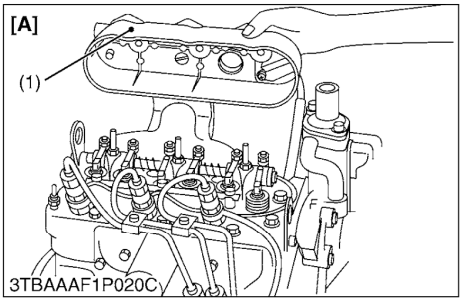
A1 : A1 Port (To Boom Cylinder)
B1 : B1 Port (From Boom Cylinder)
PB : PB Port
a : Low Pressure
b : High Pressure

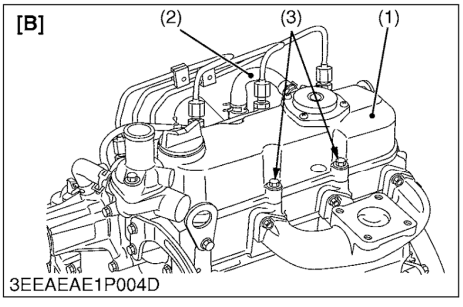
1. When the hydraulic control lever is set to the **"DOWN"** position, the spool (3) moves to the right, which forms oil passages between passage 1 (7) and **A1** port, and between **B1** port and **PB** passage 1 (4).
2. As the oil passage from the neutral passage 1 (5) to the **PB** passage 1 (4) is closed by the spool (3), the pressure-fed oil from the **P** port opens the load check valve (6) and flows through the notched section of the spool (3) and **A1** port to retract the boom cylinder (8).
3. Return oil from the boom cylinder (8) flows from the **B1** port through the passage in the spool (3) and **PB** passage 1 (4) to the bucket control section (2).

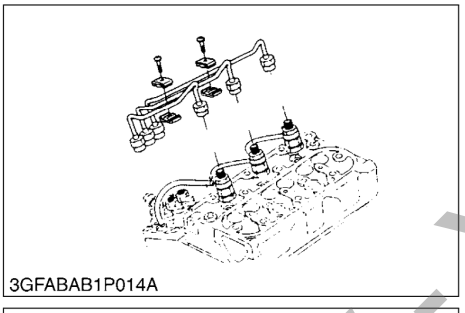
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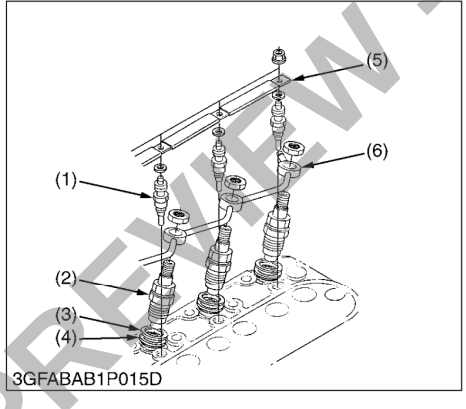
[3] DISASSEMBLING AND ASSEMBLING

(1) Cylinder Head and Valves









Cylinder Head Cover

1. Disconnect the breather hose (2).
2. Remove the cylinder head cover cap nut. [D1005]
3. Remove the cylinder head cover screw (3). [D1305]
4. Remove the cylinder head cover (1).

(When reassembling)

- Check to see if the cylinder head cover gasket is not defective.

[D1005]

Tightening torque	Cylinder head cover cap nut	7 to 8 N·m 0.7 to 0.9 kgf·m 5 to 6 lbf·ft

[D1305]

Tightening torque	Cylinder head cover screw	9.81 to 11.2 N·m 1.00 to 1.15 kgf·m 7.24 to 8.31 lbf·ft

(1) Cylinder Head Cover
(2) Breather Hose
(3) Cylinder Head Cover Screw

[A] D1005
[B] D1305

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Injection Pipes

1. Loosen the screws on the pipe clamps.
2. Detach the injection pipes.

(When reassembling)

- Send compressed air into the pipes to blow out dust. Then, reassemble the pipes in the reverse order.

Tightening torque	Injection pipe retaining nut	25 to 34 N·m 2.5 to 3.5 kgf·m 18 to 25 lbf·ft

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Nozzle Holder Assembly and Glow Plug

1. Remove the overflow pipe assembly (6).
2. Remove the nozzle holder assemblies (2).
3. Remove the copper gasket (3) and heat seal (4).
4. Remove the lead (5) from the glow plugs.
5. Remove the glow plugs (1).

(When reassembling)

- Replace the copper gasket and heat seal with new one.

Tightening torque	Nozzle holder assembly	49 to 68 N·m 5.0 to 7.0 kgf·m 37 to 50 lbf·ft
	Overflow pipe assembly retaining nut	20 to 24 N·m 2.0 to 2.5 kgf·m 15 to 18 lbf·ft
	Glow plug	7.9 to 14 N·m 0.8 to 1.5 kgf·m 5.8 to 10 lbf·ft

(1) Glow Plug
(2) Nozzle Holder Assembly
(3) Copper Gasket
(4) Heat Seal
(5) Lead
(6) Overflow Pipe Assembly

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3. TIGHTENING TORQUES

Tightening torques of screws, bolts and nuts on the table below are especially specified.
(For general use screws, bolts and nuts : See page G-11.)

[TRACTOR BODY]

Item	N·m	kgf·m	lbf·ft
Steering wheel mounting nut	30 to 49	3.0 to 5.0	22 to 36
Oil cooler pipe 2 mounting nut	34 to 39	3.5 to 3.9	25 to 28
Drag link slotted nut	18 to 34	1.8 to 3.5	13 to 25
Power Steering delivery pipe nut	65 to 75	6.7 to 7.6	48 to 55
Front axle frame mounting screw	78 to 90	7.9 to 9.2	58 to 66
Clutch housing and engine mounting screw (M8)	18 to 21	1.8 to 2.1	13 to 15
Clutch housing and engine mounting nut (M10)	48 to 55	4.9 to 5.7	36 to 41
Clutch cover mounting screw	24 to 27	2.4 to 2.8	18 to 20

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[ENGINE]

Item	Size x Pitch	N·m	kgf·m	lbf·ft
Cylinder head cover cap nut [D1005]	M7 x 1.0	7 to 8	0.7 to 0.9	5 to 6
Cylinder head cover screw [D1305]	M6 x 1.0	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31
Injection pipe retaining nut	M12 x 1.5	25 to 34	2.5 to 3.5	18 to 25
Nozzle holder assembly	M20 x 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
Overflow pipe assembly retaining nut	M12 x 1.5	20 to 24	2.0 to 2.5	15 to 18
Glow plug	M8 x 1.0	7.9 to 14	0.8 to 1.5	5.8 to 10
*Rocker arm bracket nut [D1005]	M7 x 1.0	22 to 26	2.2 to 2.7	16 to 19
*Rocker arm bracket screw [D1305]	M7 x 1.0	22 to 26	2.2 to 2.7	16 to 19
*Cylinder head screw	M10 x 1.25	64 to 68	6.5 to 7.0	47 to 50
Fan drive pulley retaining screw	M14 x 1.5	236 to 245	24.0 to 25.0	174 to 180
*Connecting rod screw	M8 x 1.0	42 to 46	4.2 to 4.7	31 to 33
*Flywheel screw	M12 x 1.25	54 to 58	5.5 to 6.0	40 to 43
*Main bearing case screw 1	M8 x 1.25	30 to 34	3.0 to 3.5	22 to 25
*Main bearing case screw 2	M9 x 1.25	49 to 53	5.0 to 5.5	37 to 39
Bearing case cover mounting screw	M6 x 1.0	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31

■ **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 "*" marked screws, bolt and nuts on the table, apply engine oil to their threads and seats before tightening.**
- **The letter "M" in Size x Pitch means that the screw, bolt or nut dimension stands for metric. The size is the nominal outside diameter in mm of the threads. The pitch is the nominal distance in mm between two threads.**

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1. TROUBLESHOOTING

Symptom	Probable Cause	Solution	Reference Page
Engine Does Not Start	No fuel	Replenish fuel	G-9
	Air in the fuel system	Bleed	G-32
	Water in the fuel system	Change fuel and repair or replace fuel system	–
	Fuel pipe clogged	Clean	G-25
	Fuel filter clogged	Clean or Change	G-23, 28
	Excessively high viscosity of fuel or engine oil at low temperature	Use specified fuel or engine oil	G-9
	Fuel with low cetane number	Use specified fuel	G-10
	Fuel leak due to loose injection pipe retaining nut	Tighten retaining nut	1-S30
	Incorrect injection timing	Adjust	1-S16
	Fuel camshaft worn	Replace	1-S36
	Injection nozzle clogged	Clean	1-S20
	Injection pump malfunctioning	Repair or replace	1-S36
	Seizure of crankshaft, camshaft, piston, cylinder or bearing	Repair or replace	1-S41, 44
	Compression leak from cylinder	Replace head gasket, tighten cylinder head screw, glow plug and nozzle holder	1-S11, 30, 32
	Improper valve timing	Correct or replace timing gear	1-S35
	Piston ring and cylinder worn	Replace	1-S42, 47, 65
	Excessive valve clearance	Adjust	1-S12
Starter Does Not Run	Battery discharged	Charge	G-21
	Starter malfunctioning	Repair or replace	9-S18
	Main switch malfunctioning	Repair or replace	9-S10
	HST pedal switch malfunctioning (HST Type)	Adjust or replace	9-S16
	PTO gear shift lever switch 1 malfunctioning	Adjust or replace	9-S17
	PTO gear shift lever switch 2 malfunctioning	Adjust or replace	9-S15
	Wiring disconnected	Connect	–

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4. LUBRICANTS, FUEL AND COOLANT

	Locations	Capacities		Grade	
		B2320HSD	B2920HSD		
1	Fuel	26 L 6.9 U.S.gals 5.7 Imp.gals		No. 2-D diesel fuel No. 1-D diesel fuel if temperature is below –10 °C (14 °F)	
2	Coolant (with recovery tank)	3.9 L 4.1 U.S.qts 3.4 Imp.qts		Fresh clean water with anti-freeze	
3	Engine crankcase (with filter)	3.1 L 3.3 U.S.qts 2.7 Imp.qts	3.5 L 3.7 U.S.qts 3.1 Imp.qts	Engine oil : CF or better (Refer to next page)	
				Above 25 °C (77 °F)	SAE30, SAE10W-30 or 15W-40
				0 to 25 °C (32 to 77 °F)	SAE20, SAE10W-30 or 15W-40
				Below 0 °C (32 °F)	SAE10W, SAE10W-30 or 15W-40
4	Transmission case	15 L 4.0 U.S.gals 3.3 Imp.gals		KUBOTA SUPER UDT fluid*	
5	Front axle case	3.2 L 3.4 U.S.qts 2.8 Imp.qts		KUBOTA SUPER UDT fluid*, SAE 80 or SAE 90 gear oil	
Grease					
	Greasing	No. of greasing points		Capacity	Type of grease
6	HST pedal	1		Until grease overflow.	Multipurpose grease NLGI-2 or NLGI-1 (GC-LB)
	Clutch pedal	1			
	Brake pedal	1			
	Top link	1			
	Lifting rod (RH)	1			
	Battery terminal	2		Moderate amount	

*KUBOTA original transmission hydraulic fluid.

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6. MAINTENANCE CHECK LIST

No.	Item		Period	Indication on hour meter										Every (Hr)		Reference page
				50	100	150	200	250	300	350	400	450	500			
1	Engine oil		Change	★			☆				☆				200	G-16
2	Engine oil filter		Replace	★			☆				☆				200	G-16
3	Hydraulic oil filter (for HST)		Replace	★			☆				☆				200	G-17
4	Clutch pedal		Adjust	★	☆		☆		☆		☆		☆		100	G-17
5	Engine start system		Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		50	G-18
6	Greasing		–	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		50	G-19
7	Wheel nut torque		Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		50	G-20
8	Battery condition		Check		☆		☆		☆		☆		☆	*4	100	G-21
9	Air cleaner element [Double type]	Primary element	Clean		☆		☆		☆		☆		☆	*1	100	G-23
			Replace											*2		G-23
		Secondary element	Replace													G-23
10	Fuel filter element		Clean		☆		☆		☆		☆		☆		100	G-23
			Replace								☆				400	G-23
11	Fan belt		Adjust		☆		☆		☆		☆		☆		100	G-24
12	Brake pedal		Adjust		☆		☆		☆		☆		☆		100	G-24
13	Fuel line		Check		☆		☆		☆		☆		☆		100	G-25
			Replace													G-25
14	Intake air line		Check				☆				☆				200	G-25
			Replace											*3		G-25
15	Radiator hose and clamp		Check				☆				☆				200	G-26
			Replace													G-26
16	Transmission fluid		Change								☆				400	G-27
17	Hydraulic oil filter		Replace								☆				400	G-26
18	Front axle case oil		Change								☆				400	G-27
19	Front axle pivot		Adjust								☆				400	G-28
20	Engine valve clearance		Adjust													1-S12
21	Cooling system		Flush													G-29
22	Coolant		Change													G-29
23	Fuel injection nozzle injection pressure		Check													1-S19
24	Injection pump		Check													1-S17
25	Fuel system		Bleed													G-32
26	Fuse		Replace													G-32
27	Light bulb		Replace													G-33

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■ IMPORTANT

- **The jobs indicated by ★ must be done after the first 50 hours of operation.**
- ***1 : Air cleaner should be cleaned more often in dusty conditions than in normal conditions.**
- ***2 : Every year or every 6 times of cleaning.**
- ***3 : Replace only if necessary.**
- ***4 : When the battery is used for less than 100 hours per year, check the fluid level annually.**

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SPECIFICATIONS

Model			B2320HSD	B2920HSD
PTO power			12.7 kW (17.0 HP)*	15.7 kW (21.0 HP)*
Engine	Maker		KUBOTA	
	Model		D1005-E3-D22	D1305-E3-D22
	Type		E-TVCS, liquid-cooled, 3-cylinder diesel	
	Number of cylinders		3	
	Bore and stroke		76 x 73.6 mm (3.0 x 2.9 in.)	78 x 88 mm (3.1 x 3.5 in.)
	Total displacement		1001 cm^3 (61.1 cu.in.)	1261 cm^3 (77.0 cu.in.)
	Engine gross power		17.2 kW (23.0 HP)*	21.6 kW (29.0 HP)*
	Rated revolution		2800 min^{-1} (rpm)	
	Maximum torque		60 N·m (44 lbf·ft)	78 N·m (58 lbf·ft)
	Battery		12 V, RC : 80 min, CCA : 430 A	
Capacities	Fuel tank		26 L (6.9 U.S.gals, 5.7 Imp.gals)	
	Engine crankcase (with filter)		3.1 L (3.3 U.S.qts, 2.7 Imp.qts)	3.5 L (3.7 U.S.qts, 3.1 Imp.qts)
	Engine coolant		3.9 L (4.1 U.S.qts, 3.4 Imp.qts)	
	Transmission case		15 L (4.0 U.S.gals, 3.3 Imp.gals)	
Dimensions	Overall length (without 3P)		2385 mm (93.9 in.)	2415 mm (95.1 in.)
	Overall width		1145 mm (45.1 in.)	1245 mm (49.0 in.)
	Overall height (with ROPS)		2130 mm (83.9 in.)	2160 mm (85.0 in.)
	Wheel base		1563 mm (61.5 in.)	
	Minimum ground clearance		305 mm (12.0 in.)	325 mm (12.8 in.)
	Tread	Front	800 mm (31.5 in.)	815 mm (32.1 in.)
		Rear	900 mm (35.5 in.)	950 mm (37.4 in.)
Weight (with ROPS)			670 kg (1477 lbs)	705 kg (1554 lbs)
Clutch			Dry single plate	
Travelling system	Tires	Front	6 - 12	7 - 12
		Rear	9.5 - 16	11.2 - 16
	Steering		Integral type power steering	
	Transmission		Main-hydrostatic transmission, 3 range gear shift (3 forward, 3 reverse)	
	Brake		Wet disk type	
	Min. turning radius (with brake)		2.1 m (6.9 feet)	
Hydraulic system	Hydraulic control system		Quarter inching valve	
	Pump capacity		3P : 17.9L / min (4.7 U.S.gals / min, 3.9 Imp.gals min) Power steering : 13.5 L / min (3.6 U.S.gals / min., 3.0 Imp.gals / min)	
	Three point hitch		SAE Category 1	
	Max. lift force	At lift points	615 kg (1356 lbs)	
		24 in. behind lift points	480 kg (1058 lbs)	
PTO system	Rear PTO	Shaft	SAE 1-3/8, 6 splines	
		PTO / Engine speed rpm	540 min^{-1} (rpm) at 2773 min^{-1} (rpm), 960 min^{-1} (rpm) at 2722 min^{-1} (rpm)	
	Mid PTO	Shaft	U.S.A. No.5 (KUBOTA 10-tooth) involute spline	
		PTO / Engine speed rpm	2500 min^{-1} (rpm) at 2750 min^{-1} (rpm)	

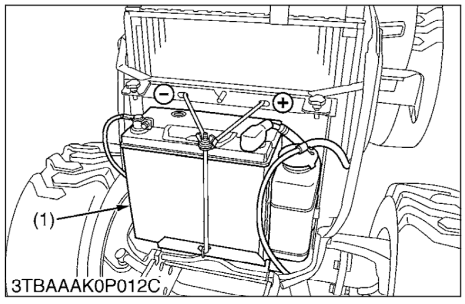
Note : * Manufacture's estimate
The company reserves the right to change the specifications without notice.

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(Continued)



■ Battery Charging

CAUTION

- **When the battery is being activated, hydrogen and oxygen gases in the battery are extremely explosive. Keep open sparks and flames away from the battery at all times, especially when charging the battery.**
- **When charging battery, remove battery vent plugs.**
- **When disconnecting the cable from the battery, start with the negative terminal first.**
  When connecting the cable to the battery, start with the positive terminal first.
- **Never check battery charge by placing a metal object across the posts.**
  Use a voltmeter or hydrometer.

1. To slow charge the battery, connect the battery positive terminal to the charger positive terminal and the negative to the negative, then recharge in the standard fashion.
2. A boost charge is only for emergencies. It will partially charge the battery at a high rate and in a short time.
   When using a boost-charged battery, it is necessary to recharge the battery as early as possible.
   Failure to do this will shorten the battery's service life.
3. The battery is charged if the indicator display turns green from black.
4. When exchanging an old battery into new one, use battery of equal specification shown in table 1.

Table 1

Battery Type	Volt (V)	Capacity at 5 H.R.	Reserve at (min.)	Cold Cranking Amps	Normal Charging Rate (A)
55B24L (S)-MF	12	36	79	433	4.5

■ Battery Storage

1. When storing the tractor for long periods of time, remove the battery from tractor, adjust the electrolyte to the proper level and store in a dry place out of direct sunlight.
2. The battery self-discharges while it is stored.
   Recharge it once every three months in hot seasons and once every six months in cold seasons.

(1) Battery

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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 attempt to repair or use this unit.

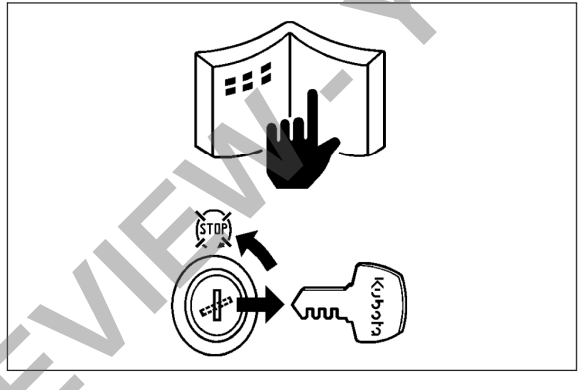
DANGER : **Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.**

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.**



BEFORE SERVICING AND REPAIRING

- Read all instructions and safety instructions in this manual and on your machine safety decals.
- Clean the work area and machine.
- Park the machine on a firm and level ground, and set the parking brake.
- Lower the implement to the ground.
- Stop the engine, and remove the key.
- Disconnect the battery negative cable.
- Hang a "**DO NOT OPERATE**" tag in operator station.

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[2] TREAD ADJUSTMENT

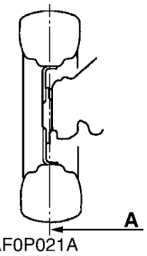
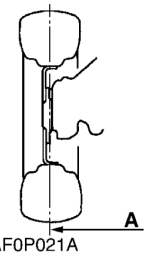
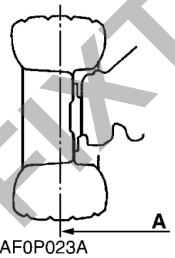
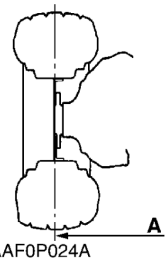
CAUTION
- **Support tractor securely on stands before removing a wheel.**
- **Never operate tractor with a loose rim, wheel or axle.**

■ **IMPORTANT**
- **Always attach tires as shown in the figure.**
- **If not attached as the figure, transmission parts may be damaged.**
- **Do not use tires larger than specified.**

(1) Front Wheels

Front wheel cannot be adjusted.

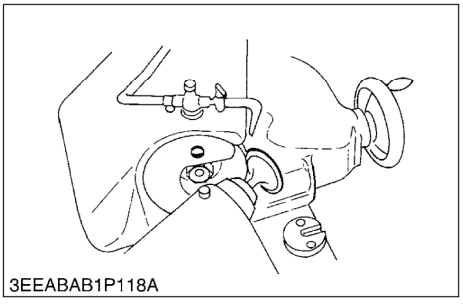
■ **IMPORTANT**
- **Do not turn front discs to obtain wider tread. In setting up the front wheels, make sure that the inflation valve stem of the tires face outward.**

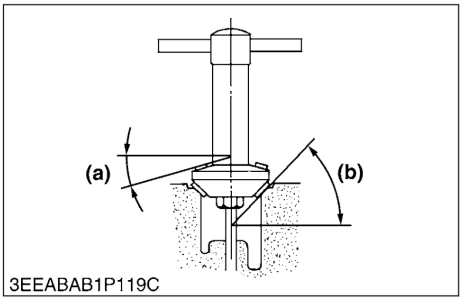
6 - 12 Farm	7 - 12 Farm	22 x 8.50 -12 Turf	24 x 8.50 - 12 Turf
B2320	B2920	B2320	B2920
 3TBAAAF0P021A	 3TBAAAF0P021A	 3TBAAAF0P023A	 3TBAAAF0P024A
795 mm (31.3 in.)	815 mm (32.1 in.)	835 mm (32.9 in.)	835 mm (32.9 in.)

A : Tread

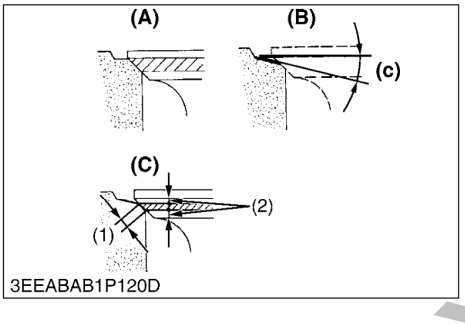
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3EEABAB1P120D

Correcting Valve and Valve Seat

■ **NOTE**

- **Before correcting the valve and seat, check the valve stem and the I.D. of valve guide section, and repair them if necessary.**
- **After correcting the valve seat, be sure to check the valve recessing.**

1) Correcting Valve

1. Correct the valve with a valve refacer.

Valve face angle	Factory spec.	IN.	1.0 rad 60 °
		EX.	0.79 rad 45 °

2) Correcting Valve Seat

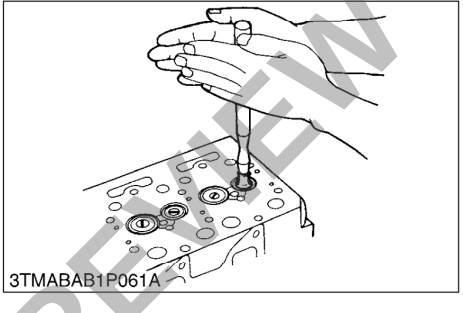
1. Slightly correct the seat surface with a 1.0 rad (60 °) (intake valve) or 0.79 rad (45 °) (exhaust valve) valve seat cutter.
2. Resurface the seat surface with a 0.52 rad (30 °) valve seat cutter to intake valve seat and with a 0.26 rad (15 °) valve seat cutter to exhaust valve seat so that the width is close to specified valve seat width (2.12 mm, 0.0835 in.).
3. After resurfacing the seat, inspect for even valve seating, apply a thin film of compound between the valve face and valve seat, and fit them with valve lapping tool.
4. Check the valve seating with prussian blue. The valve seating surface should show good contact all the way around.

Valve seat angle	Factory spec.	IN.	1.0 rad 60 °
		EX.	0.79 rad 45 °

(1) Valve Seat Width
(2) Identical Dimensions

(A) Check Contact
(B) Correct Seat Width
(C) Check Contact
(a) 0.26 rad (15 °) or 0.52 rad (30 °)
(b) 0.79 rad (45 °) or 1.0 rad (60 °)
(c) 0.52 rad (30 °) or 0.26 rad (15 °)

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Valve Lapping

1. Apply compound evenly to the valve lapping surface.
2. Insert the valve into the valve guide. Lap the valve onto its seat with a valve flapper or screwdriver.
3. After lapping the valve, wash the compound away and apply oil, then repeat valve lapping with oil.
4. Apply prussian blue to the contact surface to check the seated rate. If it is less than 70 %, repeat valve lapping again.

■ **IMPORTANT**

- **When valve lapping is performed, be sure to check the valve recessing and adjust the valve clearance after assembling the valve.**

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Item		Factory Specification	Allowable Limit
Differential Case to Differential Side Gear	Clearance	0.025 to 0.066 mm 0.00099 to 0.0025 in.	0.30 mm 0.012 in.
	Differential Case (I.D.)	32.000 to 32.025 mm 1.2599 to 1.2608 in.	–
	Spiral Bevel Gear (I.D.)	32.000 to 32.025 mm 1.2599 to 1.2608 in.	–
	Differential Side Gear (O.D.)	31.959 to 31.975 mm 1.2583 to 1.2588 in.	–
Differential Pinion Shaft to Differential Pinion	Clearance	0.048 to 0.084 mm 0.0019 to 0.0033 in.	0.30 mm 0.012 in.
	Differential Pinion (I.D.)	14.032 to 14.050 mm 0.55244 to 0.55314 in.	–
	Differential Pinion Shaft (O.D.)	13.966 to 13.984 mm 0.54985 to 0.55055 in.	–

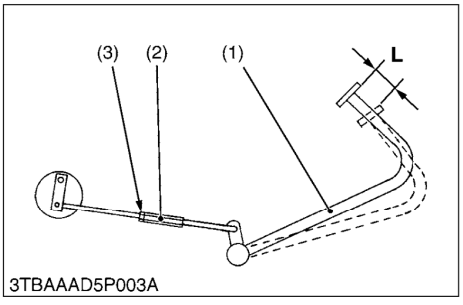
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4. CHECKING, DISASSEMBLING AND SERVICING

[1] CHECKING AND ADJUSTING



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Adjusting Brake Pedal Free Travel

CAUTION

- **Stop the engine and chock the wheels before checking brake pedal.**
- **The difference between the right and left pedal free travel must be less than 5 mm (0.2 in.).**

1. Release the parking brake.
2. Slightly depress the brake pedals and measure free travel at top of pedal stroke.
3. If the measurement is not within the factory specifications, loosen the lock nut and turn the turnbuckle to adjust the brake rod length.
4. Retighten the lock nut securely.
5. Keep the free travel in the right and left brake pedals equal.

Brake pedal free travel (**L**)	Factory spec.	30 to 40 mm 1.2 to 1.5 in.

■ **NOTE**

- **After checking brake pedal free travel, be sure to engage the parking brake lever fully and check to see that the brake pedals are securely locked.**

(1) Brake Pedal
(2) Turnbuckle
(3) Lock Nut
L : Free Travel

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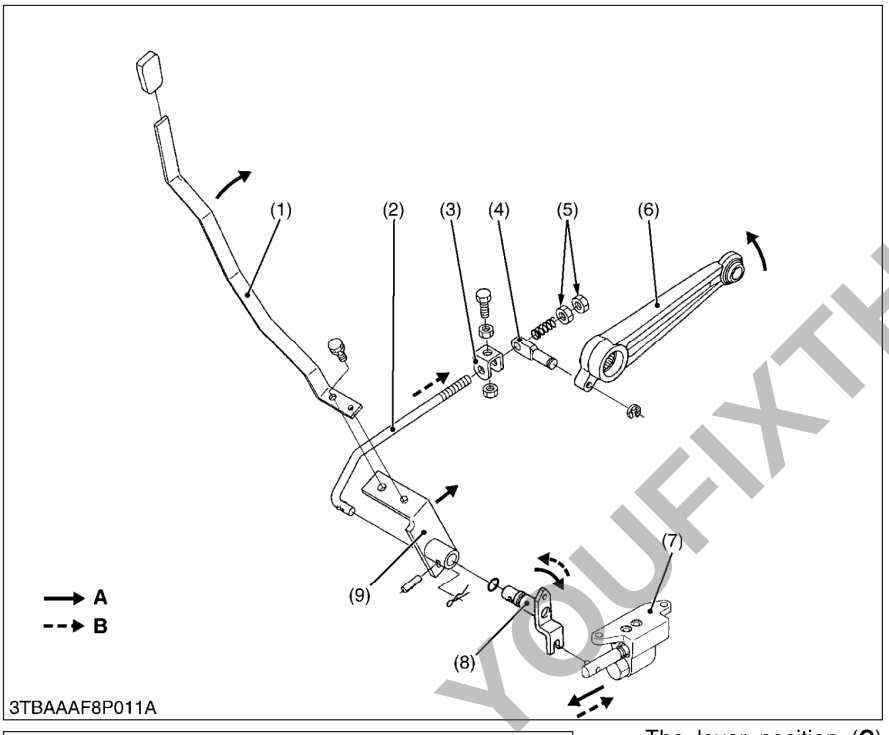
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4. THREE POINT HYDRAULIC SYSTEM

[1] FEEDBACK LINKAGE

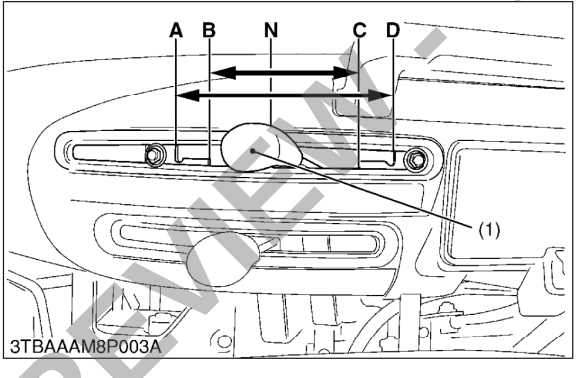
When the hydraulic control lever (1) is moved to rearward to lift the implement, the spool of the control valve (7) is pulled out to form a raising circuit. Then the lift arm begins to rise.

And after the lift arm (6) gets to the uppermost position, the spool is pushed in and returned to form a neutral circuit by the motions of feedback pin (4), lock nut (5), feedback rod (2), control lever arm (9) and control lever shaft (8).



(1) Hydraulic Control Lever
(2) Feedback Rod
(3) Interlocker
(4) Feedback Pin
(5) Lock Nut
(6) Lift Arm
(7) Control Valve
(8) Control Lever Shaft
(9) Control Lever Arm
A : When the hydraulic control lever is moved to rearward
B : When the lift arm gets to the uppermost position

W1014360



The lever position (**C**) enables you to control the control valve with ease in increments of approximately 1/4 inches at the lower link end.

(1) Hydraulic Control Lever

A : Down Position
B : Slow Down Position
C : Slow Up Position
D : Up Position
N : Neutral Position

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