SERVICE MANUAL

70000-70168

KUBOTA TRACTOR

MODEL B6000



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3. Specifications

Model		KUBOTA B6000	KUBOTA B6000E	KUBOTA B6000E-T
Engine:		KUBOTA ZL600		
Type		Vertical, water-cooled, 4-cycle diesel engine		
Cylinders		2		
Total displacement		35.21 cu. in. (577cc)		
Bare engine horse power		12.5 HP		
Revolution speed		2,700 rpm		
Max. revolution		2,900 rpm		
Fuel		Diesel light oil or No.2 diesel oil		
Starting		Electric starter with battery, glow plug & decompression device		
Starter		12V 0.8KW		
Lubrication		Forced lubrication by trochoidal pump		
Cooling		Water with pressurized radiator		
Battery		65AH		
Fuel tank cap.		2.38GA (9 lit.)		
Radiator cap.		0.79GA (3 lit.)		
Engine oil cap		0.53GA (2 lit)		
Fuel injection nozzle		DN12 SD12		
Injection pressure		2000psi (140 kg/cm^2)		
Injection timing		26° BTDC		
Dimensions:				
Overall length		71-5/8 inch (1820mm)	70-7/8 inch (1800mm)	70-4/8 inch (1790mm)
Overall width		36-2/8 inch (920mm)	36-2/8 inch (920mm)	37-6/8 inch (960mm)
Overall height		43-6/8 inch (1110mm)	42-7/8 inch (1090mm)	42-4/8 inch (1080mm)
Wheel base		45-5/8 inch (1160mm)	47-2/8 inch (1200mm)	47-2/8 inch (1200mm)
Min. ground clearance		9-4/8 inch (240mm)	10-5/8 inch (270mm)	9-4/8 inch (240mm)
Treads	Front	29-7/8 ~ 31-4/8 inch (760 ~ 800mm)	27-1/8 ~ 29-7/8 inch (690 ~ 760mm)	29-7/8 inch (760mm)
	Rear	28 ~ 36-2/8 inch (710 ~ 920mm)	28 ~ 36-2/8 inch (710 ~ 920mm)	24 ~ 35-4/8 inch (610 ~ 910mm)
Tires	Front	6–12	400–9	20 x 800 – 10
	Rear	7–16	7–16	27 x 850 – 15
Transmission:		Forward 6	Reverse 2	
Wheel alinement:				
Type		Center-pivot type		
Kingpin inclination		8°		
Toe-in		0 to 0.2" (0 to 5mm)		
Camber		2°		
Caster		1°		
Trail		0.55" (14mm)		
Clutch:		Dry single plate, pedal type		
Differential:		Bevel gear type (both front and rear)	Bevel gear type (rear only)	
Brake:				
Type		Internal-expanding type		
Lining OD width		3.74 x 1.02 (95 x 26mm)		
Parking brake		Hook-interlocked with main brake		

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5.7 Magnetic pump

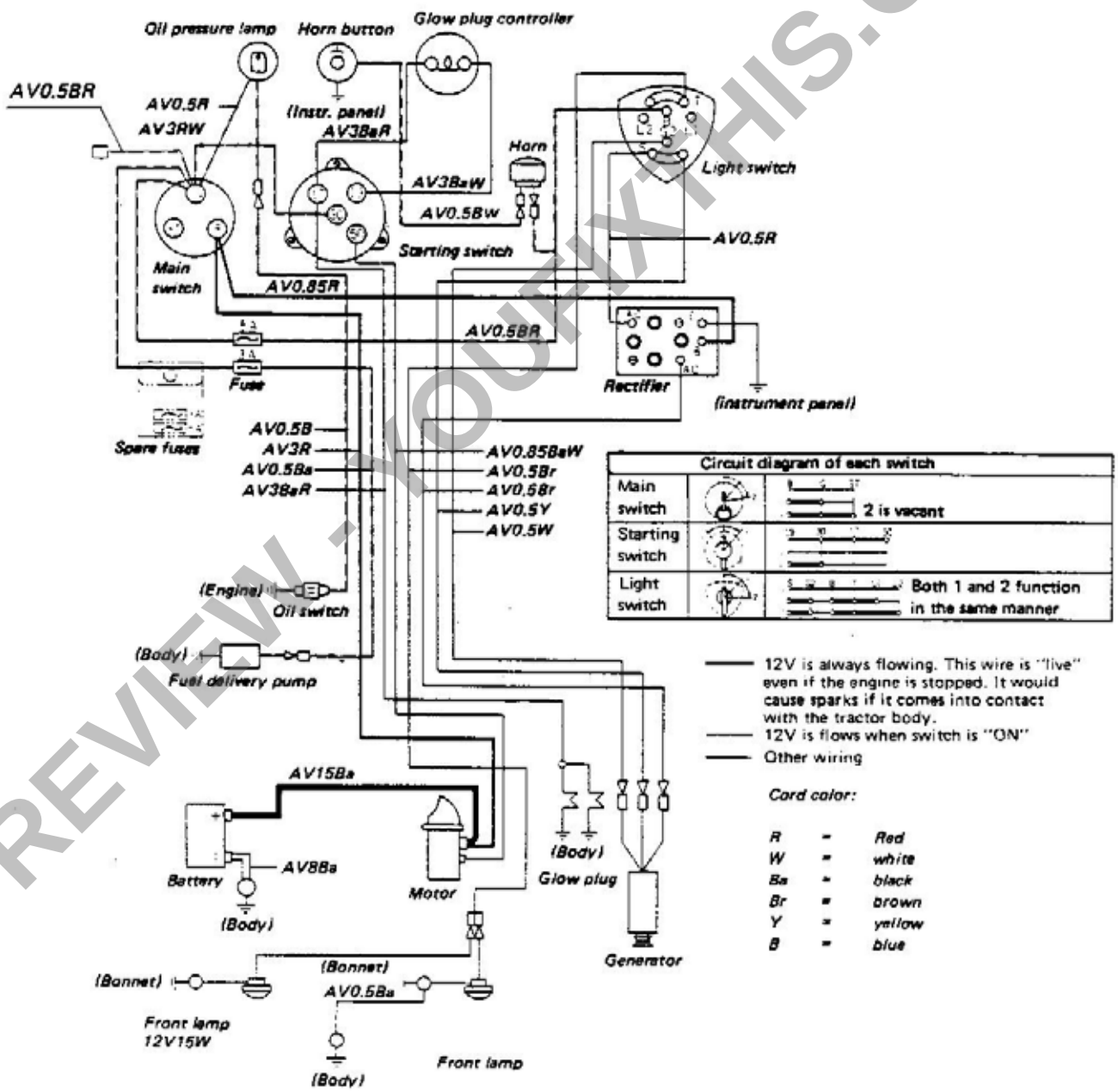
Specified voltage	12V
Working voltage	8 ~ 16V
Discharge	500cc
Average current	about 0.8A
Direction of installation	Discharge side up

The working part has a piston and valve in the central part, with the coil in the outer part. When the current is turned on, a magnetic field is formed in the coil, causing the piston to rise, which discharges the fuel. When the piston reaches the upper limit, the current is cut off, and the piston is pushed down by the force of the spring. This action is repeated to force the fuel to flow.

5.8 Fuse

There are two types, 3A and 5A. When a fuse blows, be sure to check for the cause before replacing.

5.9 Wiring Diagram



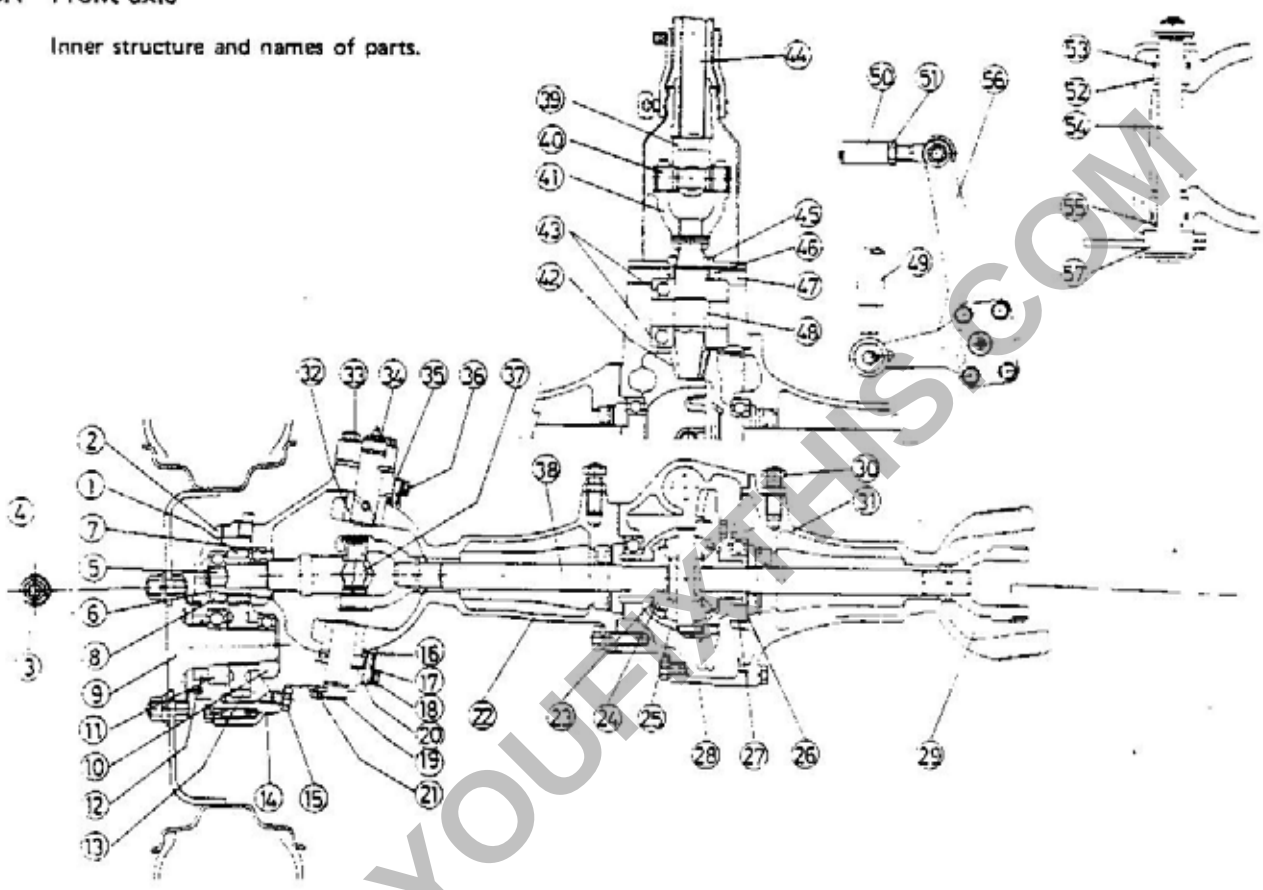
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8. Front Axle

8.1 Front axle

Inner structure and names of parts.



1 GEAR, spur 12
2 COVER, gear case
3 STUD
4 NUT
5 SHAFT, universal joint
6 SEAL, oil
7 BEARING, ball
8 BEARING, ball
9 HUB, front wheel
10 BEARING, ball
11 BEARING, ball
12 SEAL, oil
13 GEAR, spur 25
14 CASE, front wheel gear
15 PLUG
16 SEAL, dust
17 COVER, dust 1
18 COVER, dust 2
19 KINGPIN 2
20 BEARING, thrust ball
21 PLATE, lock 2
22 CASE, front axle 3
23 SHIM
24 GEAR, diff side
25 CASE, diff 2
26 SHIM 1
27 BEARING ball
28 CASE, front axle 1
29 JOINT, universal 3
30 BOLT
31 CASE, front axle 2
32 BUSH
33 ARM, knuckle 2
34 KINGPIN, 1
35 HOLDER, dust seal 1
36 PACKING, felt
37 JOINT, universal
38 SHAFT, front wheel drive
39 JOINT, universal 2
40 JOINT, universal
41 JOINT, universal
42 SHAFT, pinion bevel gear
43 BEARING, ball
44 SHAFT, front axle drive
45 NUT
46 SEAL, oil
47 COVER
48 COLLAR
49 LINK, drag
50 ROD, tie
51 NUT, LH
52 BUSH
53 O RING
54 PIN, center
55 O RING
56 ARM, knuckle
57 BUSH

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8.2 Front axle (4 wheel drive)

[Disassembly]

(1) Remove the tie-rod from the knuckle arm.
(2) Remove dust cover, and move the dust seal, the dust seal holder and packing to the inside.
(3) Remove the knuckle arm, and remove kingpin 1.
(4) Remove lock plates and withdraw kingpin 2.
(5) Pull out front wheel gear case, and remove dust seal, dust seal holder and packing.
(6) Remove front wheel gear case cover.
(7) Remove circlip on the end of universal joint shaft and pull out the ball bearing, #6302, with a bearing puller. (Be careful when removing. If a bronze hammer should be used to knock out, the inner #6204 ball bearing would be knocked out at the same time, which would be very tight. There are fears that the shaft may be deformed because the diameter of the shaft is so small.)
(8) Pull out the #6205 ball bearing from the front wheel shaft. Between 26T gear and #6206 ball bearing, there is a circlip, so it cannot be removed by hammering.
(9) The right side and the left side are the same.
(10) Remove front axle case 2 to the left and the front axle case 3 to the right. The differential is removed to the left.
(11) Remove the universal joint on the tip of the pinion shaft, remove the cover and pull out the pinion shaft.
(12) Disassembly of universal joint
  (a) Remove the circlip of the universal joint.
  (b) Push out the universal joint as much as it would go, using a bronze rod.
  (c) Pull out very carefully the needle bearing in the tip of the universal joint, using a plier. Be careful or the needle bearing would fall apart.

[Assembly]

(1) Assembly is in the reverse order of disassembly.
(2) At the time of assembly make adjustments if the bevel gear and pinion do not mesh correctly on the backlash is wrong. (standard is 0.13 ~ 0.25 mm.)
(3) Be careful not to scratch or otherwise damage the spherical surfaces of front axle cases 2 and 3. At the time, wipe off oil grease and dirt.
(4) Do not hammer in kingpins 1 and 2 with hammers, etc. Align well and push in by hand.
(5) Lubricate the universal joint inside of the front axle case with about 200 grams of high quality chassis grease. Also lubricate the king pin, joints, spherical surfaces, and other moving parts with grease.
(6) Also lubricate the universal joint of the drive shaft with about 40 grams of chassis grease.

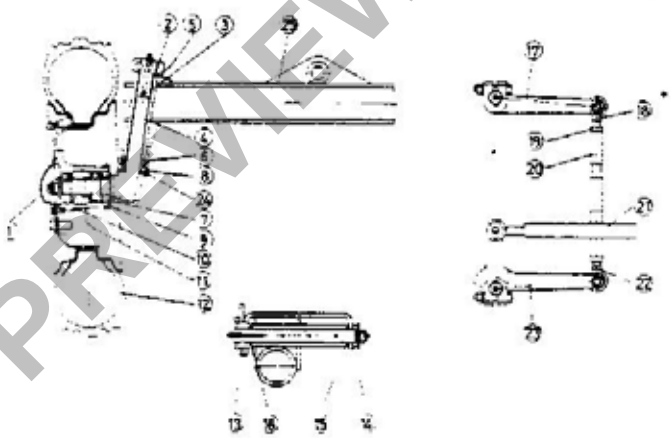
[NOTE]

There are 4 sets of universal joints used. The same cross joints are used for all the universal joints.

Universal joint 1	3 pcs
Front axle drive shaft	(Universal joint 1 is welded on.)
Universal joint shaft	(Shaft and universal joint 1 integrally forged) 2 pcs
Universal joint 2	(Boss Part has been lengthened to serve as sliding spline) 1 pc
Universal joint 3	2 pcs

8.3 Front axle

Structure and nomenclature.



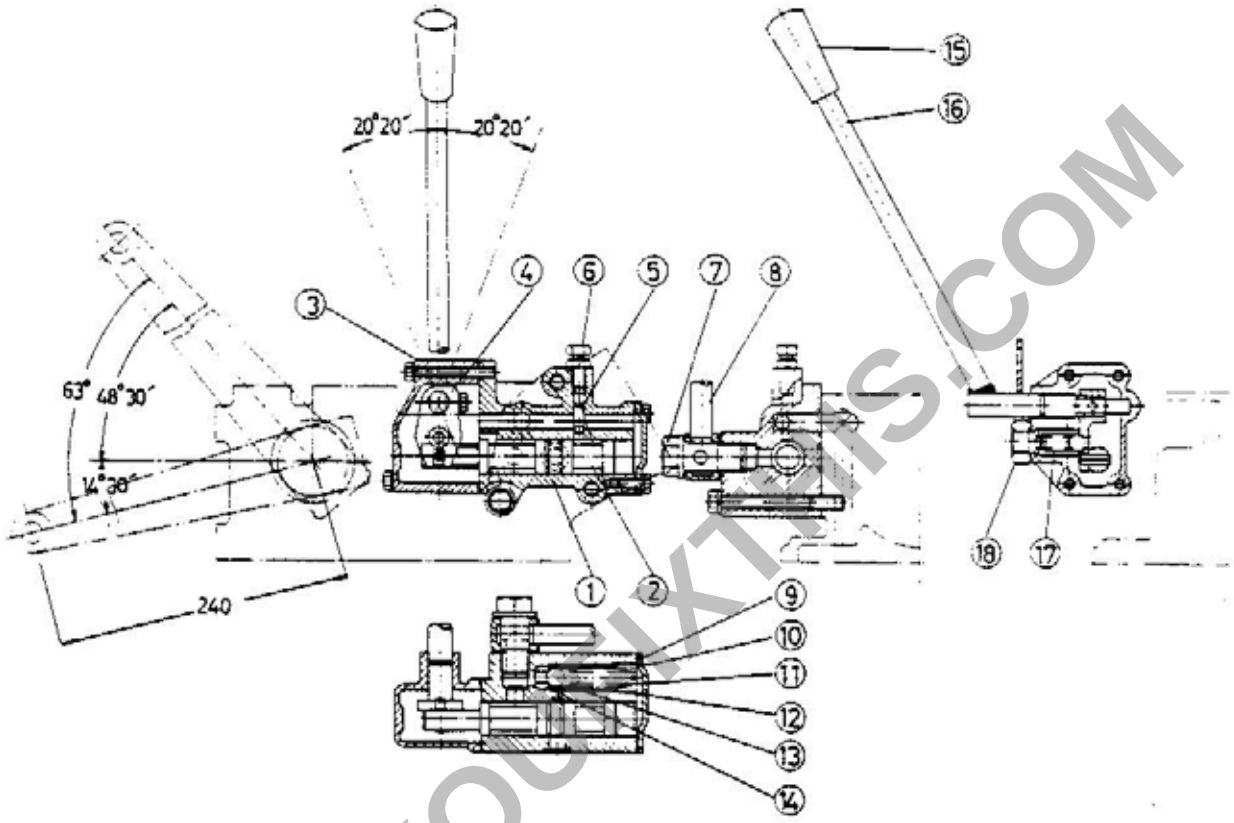
①CAP, front wheel hub
②COLLAR
③BUSH
④KINGPIN
⑤O RING
⑥BEARING, thrust ball
⑦SEAL, oil
⑧SEAL, oil
⑨COLLAR
⑩HUB, front wheel
⑪BEARING, ball
⑫FRONT WHEEL
⑬BUSH
⑭PIN, center
⑮SEAL, oil
⑯O RING
⑰ARM, knuckle 2
⑱ASSY END, rod 2
⑲NUT, LH
⑳ROD, tie
㉑LINK, drag
㉒ASSY END, rod 3
㉓ARM, knuckle 1
㉔COLLAR
㉕AXLE, front

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13. Hydraulic System

13.1 Hydraulic system structure



①BODY, valve	⑩SCREW, adjusting
②SPOOL	⑪SPRING
③COVER, valve	⑫COLLAR
④ARM, valve guide	⑬HOLDER, spring
⑤O RING	⑭HOLDER
⑥BOLT, adjusting	⑮GRIP, lever
⑦JOINT, eye	⑯LEVER, control
⑧PIPE	⑰SPRING
⑨CAP	⑱BOLT

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(Remarks) ● : Check or Replenishing
○ : Exchange or Cleaning

No.	Items	Service	Capacity	Operation Time			
				Daily (before operation)	Every 50hrs.	Every 100hrs.	Every 300hrs.
1	Engine crankcase oil	SAE30, 20, 10W-30	0.53GA(2 lit.)	●	○ : Change at initial 35 hours, every 75 hours thereafter.		
2	Air cleaner oil	Same	Up to the level	●	○		
3	Transmission case oil	SAE80	2.38GA(9 lit.)	●	○		○
4	Front axle case oil	SAE80	0.13GA(0.5 lit.)		○		○
5	Front wheel gear case (right & left sides)	SAE80	0.05GA(0.2 lit.)		○ Initial		○ There after
6	Steering case	SAE80	0.05GA(0.2 lit.)				○
7	Crankcase oil filter				○		○
8	Hydraulic oil filter				○		○
9	Fuel filter					○	
10	Cartridge filter				(Change once in 3 years.)		
11	King pin & Rod end	Chassis grease	proper	●			
12	Pedal shafts	Chassis grease	proper	●			
13	Interlocking rod	Lube oil or grease	proper	●			
14	Front wheel drive lever		proper	●			
15	Radiator	Water amount, leakage		●			○
16	Battery	Electrolyte, charg. condition		●	○ : Change once in 1 or 2 months. Replace once in about 2 years.		
17	Fuel tank	Fuel amount	2.64GA(10 lit.)	●			
18	Radiator hose	Leakage			(○ Replace every 2 years)		
19	Nozzle piece	Checking				○	
20	Fuel pipe	Leakage	(Replace every 2 years)			●	
21	Fan belt	Tention				●	
22	Clutch	Free travel				●	
23	Brake	Free travel				●	
24	Steering	Free travel				●	
25	Tire	Pressure		●			

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