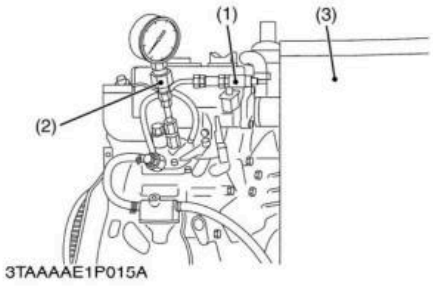
WSM

WORKSHOP MANUAL
TRACTOR

BX1830 BX2230

Kubota



3TAAAAE1P015A

Fuel Tightness of Delivery Valve

1. Remove the engine stop solenoid.
2. Remove the injection pipes and glow plugs.
3. Set a pressure tester to the fuel injection pump.
4. Install the injection nozzle (1) jetted with the proper injection pressure to the injection pump pressure tester (2).
5. Run the starter to increase the pressure.
6. Stop the starter when the fuel jets from the injection nozzle. After that, turn the flywheel by the hand and raise the pressure to approx. 13.7 MPa (140 kgf/cm^2, 1991 psi).
7. Now turn the flywheel back about half a turn (to keep the plunger free). Maintain the flywheel at this position and clock the time taken for the pressure to drop from 13.7 to 12.7 MPa (from 140 to 130 kgf/cm^2, from 1991 to 1849 psi).
8. Measure the time needed to decrease the pressure from 13.7 to 12.7 MPa (from 140 to 130 kgf/cm^2, from 1991 to 1849 psi).
9. If the measurement is less than allowable limit, replace the pump with new one or repair with a Kubota-authorized pump service shop.

Fuel tightness of delivery valve	Factory spec.	10 seconds 13.7 → 12.7 MPa 140 → 130 kgf/cm^2 1991 → 1849 psi
	Allowable limit	5 seconds 13.7 → 12.7 MPa 140 → 130 kgf/cm^2 1991 → 1849 psi

■ **NOTE**

- **Never try to disassemble the injection pump assembly. For repairs, you are strongly requested to contact a Kubota-authorized pump service shop.**

(1) Injection Nozzle
(2) Injection Pump Pressure Tester
(3) Protection Cover for Jetted Fuel

0000001361E


3TMABAB1P081A

Oil Clearance between Crankshaft Journal and Crankshaft Bearing 2 (Crankshaft Bearing 3)

1. Put a strip of plastigage (Code No. 07909-30241) on the center of the journal.
2. Install the bearing case and tighten the bearing case screws 1 to the specified torque, and remove the bearing case again.
3. Measure the amount of the flattening with the scale, and get the oil clearance.
4. If the oil clearance exceeds the allowable limit, replace the crankshaft bearing 2 (crankshaft bearing 3).
5. If the same size bearing is useless because of the crankshaft journal wear, replace it with an undersize one referring to the table and figure.

■ **NOTE**

- **Be sure not to move the crankshaft while the bearing case screws are tightened.**

[D722]

Oil clearance between crankshaft journal and crankshaft bearing 2 (Crankshaft bearing 3)	Factory spec.	0.028 to 0.059 mm 0.00110 to 0.00232 in.
	Allowable limit	0.20 mm 0.0079 in.

Crankshaft journal O.D. (Flywheel side)	Factory spec.	43.978 to 43.993 mm 1.73142 to 1.73201 in.
Crankshaft bearing 2 I.D.	Factory spec.	43.984 to 44.026 mm 1.73165 to 1.73331 in.

Crankshaft journal O.D. (Intermediate)	Factory spec.	39.934 to 39.950 mm 1.57221 to 1.57284 in.
Crankshaft bearing 3 I.D.	Factory spec.	39.978 to 39.993 mm 1.57394 to 1.57453 in.

[D902]

Oil clearance between crankshaft journal and crankshaft bearing 2 (Crankshaft bearing 3)	Factory spec.	0.028 to 0.059 mm 0.00110 to 0.00232 in.
	Allowable limit	0.20 mm 0.0079 in.

Crankshaft journal O.D. (Flywheel side)	Factory spec.	43.934 to 43.950 mm 1.72968 to 1.73031 in.
Crankshaft bearing 2 I.D.	Factory spec.	43.978 to 43.993 mm 1.73142 to 1.73201 in.

Crankshaft journal O.D. (Intermediate)	Factory spec.	43.934 to 43.950 mm 1.72968 to 1.73031 in.
Crankshaft bearing 3 I.D.	Factory spec.	43.978 to 43.993 mm 1.73142 to 1.73201 in.

0000004088E

TRAVELLING GEAR SHIFT SECTION

Symptom	Probable Cause	Solution	Reference Page
Noise from Transmission	● Transmission oil insufficient	Refill	2-S13
	● Gear worn or broken	Replace	—
	● Bearings worn	Replace	—
Gear Slip Out of Mesh	● Shift fork spring tension insufficient	Replace	2-S25
	● Shift fork or shifter worn	Replace	2-S25
	● Shift fork bent	Replace	2-S25

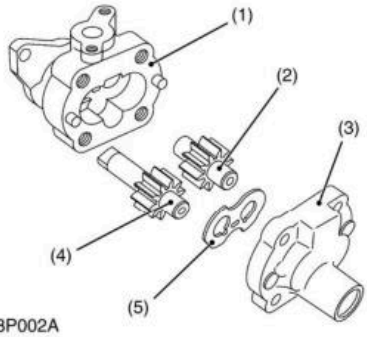
0000004151E

DIFFERENTIAL GEAR SECTION

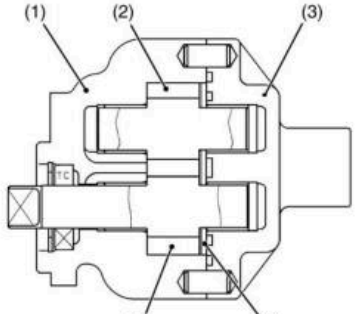
Excessive or Unusual Noise at All Time	● Improper backlash between spiral bevel pinion and bevel gear	Adjust	2-S37
	● Improper backlash between differential pinion and differential side gear	Adjust	2-S36
	● Bearing worn	Replace	—
	● Insufficient or improper type of transmission fluid used	Replenish or change	G-8, 2-S13
Noise while Turning	● Differential pinions or differential side gears worn or damaged	Replace	2-S28
	● Differential lock binding (does not disengaged)	Replace	2-S28
	● Bearing worn	Replace	—
Differential Lock Can Not Be Set	● Differential lock shift fork damaged	Replace	2-S28
	● Differential lock shifter mounting pin damaged	Replace	2-S28
	● Differential lock pin damaged	Replace	2-S28
Differential Lock Pedal Does Not Return	● Differential lock pedal return spring weaken or damaged	Replace	2-S18
	● Differential lock fork shaft rusted	Repair	2-S28

0000004152E

2. HYDRAULIC PUMP



3TAAAAB8P002A



3TRAAAA8P001A

The hydraulic pump is composed of the casing (1), cover (3), side plate (5), and two spur gears (drive gear (4) and driven gear (2)) that are in mesh.

Hydraulic pump is driven by the pump drive shaft in the transmission case.

Maximum displacement is as follows.

Displacement	Engine speed	Condition
21.0 L/min. 5.5 U.S.gal/min. 4.6 Imp.gal/min.	At 3000 min^{-1} (rpm)	at no load

(1) Casing
(2) Drive Gear
(3) Cover
(4) Driven Gear
(5) Side Plate

0000004150E

Full Version Available

Kubota BX1830 Tractor Workshop Manual

This is a short preview. The complete manual contains all chapters, wiring diagrams, torque specifications and full service procedures.