TO THE READER

This Workshop Manual has been prepared to provide servicing personnel with information on the mechanism, service and maintenance of KUBOTA Tractors L2600 and L3000. It is divided into two parts, "Mechanism" and "Servicing" for each section.

■ **Mechanism**

Information on the construction and function are included. This part should be understood before proceeding with troubleshooting, disassembling and servicing.

■ **Servicing**

Under the heading "General" section comes general precautions, check and maintenance and special tools. Other section, there are troubleshooting, servicing specification lists, checking and adjusting, disassembling and assembling, and servicing which cover procedures, precautions, factory specifications and allowable limits.

All information, illustrations and specifications contained in this manual are based on the latest production information available at the time of publication.

The right is reserved to make changes in all information at any time without notice.

March 2000

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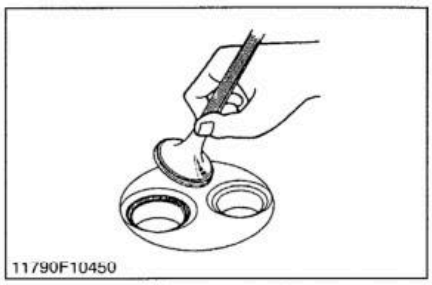
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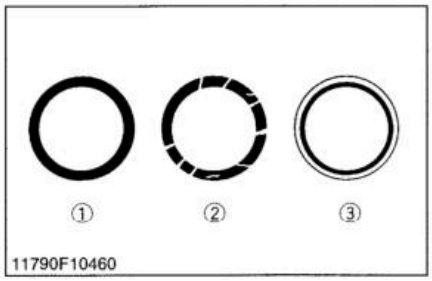

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Valve Seating

1. Coat the valve face lightly with prussian blue and put the valve on its seat to check the contact.
2. If the valve does not seat all the way around the valve seat or the valve contact is less than 70 %, correct the valve seating as follows.
3. If the valve contact does not comply with the reference value, replace the valve or correct the contact of valve seating.

(1) Correct
(2) Incorrect
(3) Incorrect

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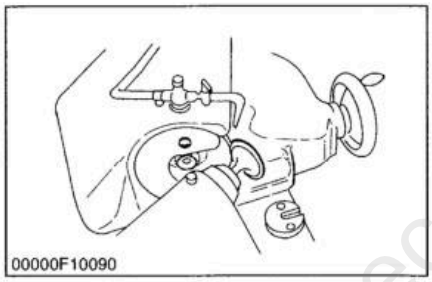
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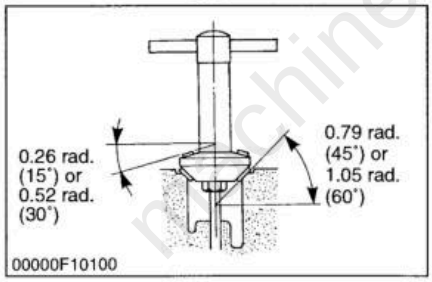

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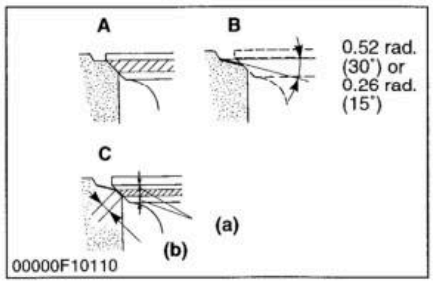

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Correcting Valve and Valve Seat

■ **NOTE**

- **Before correcting the valve and seat, check the valve stem and the I.D. of the 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.

2) Correcting Valve Seat

1. Slightly correct the seat surface with a 1.05 rad. (60°) (intake valve) or 0.79 rad. (45°) (exhaust 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.

(a) Identical Dimensions
(b) Valve Seat Width
(A) Check Contact
(B) Correct Seat Width
(C) Check Contact

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TROUBLESHOOTING

Symptom	Probable Cause	Solution	Reference Page
Excessive Transmission Noise	• Transmission fluid insufficient	Replenish	G-15
	• Gear worn or backlash improper	Replace	3-S22, S35
	• Bearings worn or broken	Replace	3-S23, S34
	• Shift fork worn	Replace	3-S22, S35
	• Spline worn	Replace	3-S22, S35
	• Snap rings on the shaft come off	Repair or replace	–
	• Spiral bevel pinion staking nut improperly tightened	Tighten	3-S29
	• Improper backlash between spiral bevel pinion and spiral bevel gear	Adjust	3-S37
	• Improper backlash between differential pinion and differential side gear	Adjust	3-S38
Gear Slip Out of Mesh	• Shift linkages rusted	Repair	–
	• Shifter or shift fork worn or damaged	Replace	3-S22, S35
	• Shift fork interlock ball spring weaken or damaged	Replace	3-S22, S35
	• Interlock ball fallen	Reassemble	3-S11, S16
	• Gears worn or broken	Replace	–
Hard Shifting	• Shifter or shift fork worn or damaged	Replace	3-S22, S35
	• Shift fork bent	Replace	–
	• Shift linkage rusted	Repair	–
	• Shaft part of shift arms rusted	Repair	–
Gears Clash When Shifting	• Clutch does not release	Adjust or repair	2-S3
	• Gears worn or damaged	Replace	–
Differential Lock Can Not Be Set	• Differential lock shift fork damaged	Replace	3-S27
	• Differential lock shift fork mounting spring pin damaged	Replace	3-S27
	• Differential lock shifter pin bent or damaged	Replace	3-S27
	• Differential lock fork shaft bent or damaged	Replace	3-S27
Differential Lock Pedal Does Not Return	• Differential lock pedal return spring weaken or damaged	Replace	–
	• Differential lock shifter pin bent or damaged	Replace	3-S27
	• Differential lock cam bent	Replace	3-S27
Excessive or Unusual Noise at All Time	• Improper backlash between spiral bevel pinion and spiral bevel gear	Adjust	3-S37
	• Improper backlash between differential pinion and differential side gear	Adjust	3-S38
	• Bearings worn	Replace	3-S23, S34
	• Insufficient or improper type of transmission fluid used	Replenish or replace	G-9, 15
Noise While Turning	• Differential pinions or differential side gears worn or damaged	Replace	3-S32, S34
	• Differential lock binding (does not disengage)	Replace	–
	• Bearing worn	Replace	3-S23, S34

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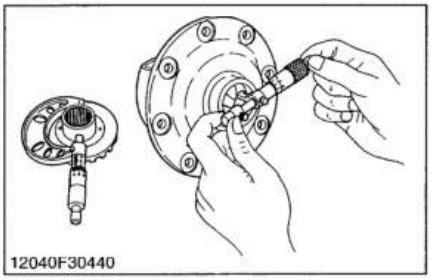
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Clearance between Differential Case Bore and Differential Side Gear Boss (L2600)

1. Measure the bore I.D. of the differential case.
2. Mesure the boss O.D. of the differential side gear and calculate the clearance.
3. If the clearance exceeds the allowable limit, replace.

Clearance between differential case bore and differential side gear boss	Factory spec.	0.025 to 0.124 mm 0.00098 to 0.00488 in.
	Allowable limit	0.35 mm 0.0138 in.
Differential case bore I.D.	Factory spec.	38.025 to 38.065 mm 1.49704 to 1.49862 in.
Differential side gear boss O.D.	Factory spec.	37.941 to 38.000 mm 1.49374 to 1.49606 in.

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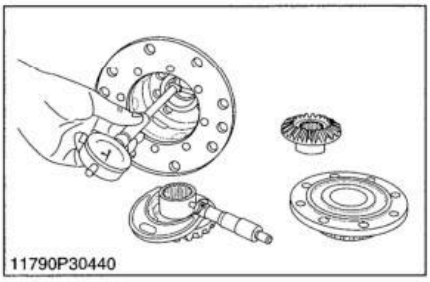
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Clearance between Differential Case Bore (Differential Case Cover Bore) and Differential Side Gear Boss (L3000)

1. Measure the bore I.D. of the differential case and differential case cover.
2. Measure the differential side gear boss O.D. and calculate the clearance.
3. If the clearance exceeds the allowable limit, replace them.

Clearance between differential case bore and differential side gear boss	Factory spec.	0.050 to 0.151 mm 0.00197 to 0.00594 in.
	Allowable limit	0.35 mm 0.0138 in.
Differential case bore I.D.	Factory spec.	40.500 to 40.562 mm 1.59449 to 1.59693 in.
Differential side gear boss O.D.	Factory spec.	40.411 to 40.450 mm 1.59098 to 1.59252 in.
Clearance between differential case cover bore and differential side gear boss	Factory spec.	0.090 to 0.169 mm 0.00354 to 0.00666 in.
	Allowable limit	0.35 mm 0.0138 in.
Differential case cover bore I.D.	Factory spec.	40.540 to 40.580 mm 1.59606 to 1.59764 in.
Differential side gear boss O.D.	Factory spec.	40.411 to 40.450 mm 1.59098 to 1.59252 in.

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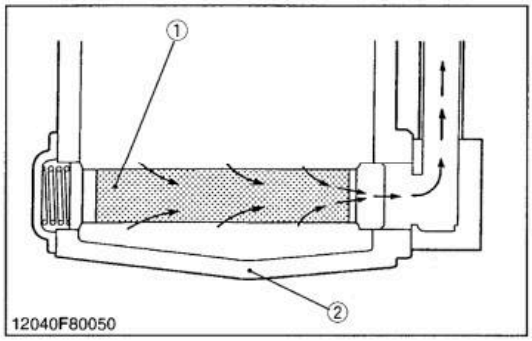
[3] OIL STRAINER

The oil strainer is located at the pump suction line.



This oil strainer (1) is located in the transmission case (2), and ensures a filtration degree of #38-65 mesh.

(1) Oil Strainer (2) Transmission Case

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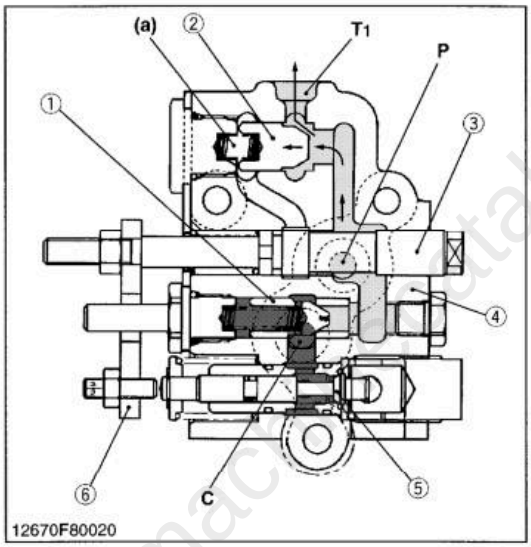
[4] POSITION CONTROL VALVE



■ Neutral

Pressurized oil flows at the **P** port, pushes open unload poppet (2) and returns to the transmission case from **T1** port.

The oil in the **A** chamber **(a)** behind the unload poppet (2) returns to the transmission case through the clearance between spool (3) and valve body (4). The oil in the hydraulic cylinder does not flow out because the circuit is cut off by the actions of poppet 1 (1) and poppet 2 (5).

This allows the implement to be kept at a steady height.

(1) Poppet 1
(2) Unload Poppet
(3) Spool
(4) Valve Body
(5) Poppet 2
(6) Plate

(a) A Chamber

C : C (Cylinder) Port
P : P (Pump) Port
T1 : T1 Port (To Transmission Case)

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Full Version Available

Kubota L3000 Tractor Workshop Manual

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