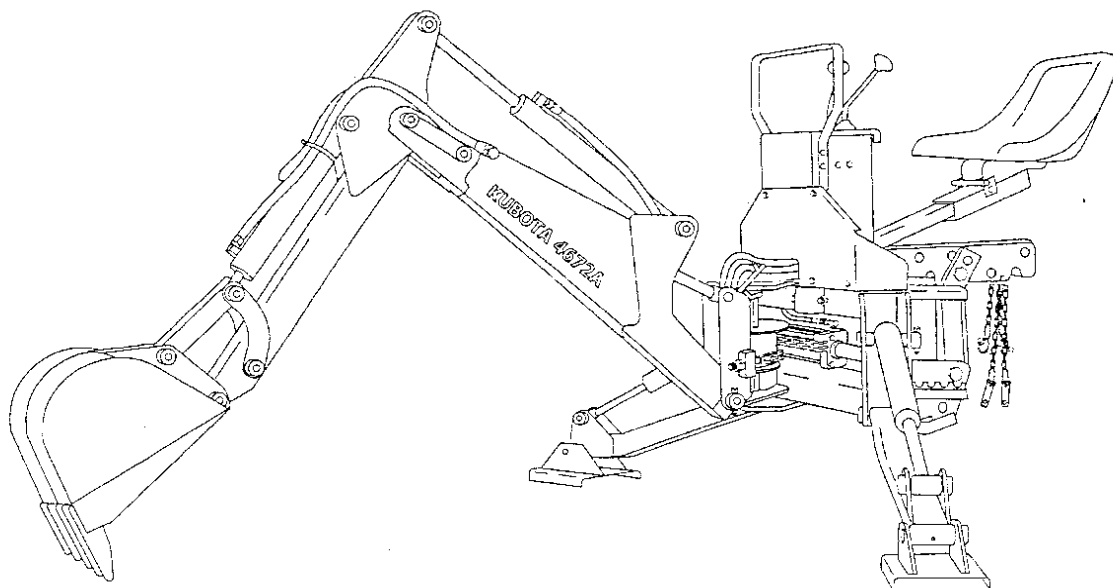


OPERATOR'S & PARTS MANUAL

KUBOTA®

B4672A & BL4690A

BACKHOE



Form 70000-73822

Rev. 3/02

TABLE OF CONTENTS

SAFETY PRECAUTIONS	3
Before Operation	3
During Operation	4
Maintenance	5
SAFETY SIGNS	6
SPECIFICATIONS	8
Backhoe Terminology	9
GENERAL INFORMATION	10
General	10
Model/Serial Information	10
PRE-OPERATION INSTRUCTIONS	11
Operational Check-Out	11
OPERATING INSTRUCTIONS	12
Operating Speeds	12
Backhoe Controls	12
Placing the Stabilizers	13
General Operation	14
Backfilling the Excavation	15
Loading Trucks	16
Lifting or Craning	16
Transporting the Backhoe	17
Removing - Reinstalling the Backhoe	18
LUBRICATION & MAINTENANCE	19
Lubrication Fittings	19
Hydraulic System Service	20
Backhoe Bucket Service	20
Swing Chain Adjustment	20
Hydraulic Circuit Schematic	21

-- Table of Contents continued on page two --




TORQUE TIGHTENING CHART	22
SETTING UP INSTRUCTIONS	23
Backhoe/Tractor/ROPS Applications	23
Tractor Preparation	25
Backhoe Preparation	27
Backhoe Sub-Assembly	28
Mast Charts, Group 1 Tractors	30
Group 2 Tractors	31
Group 3 Tractors	32
Special Group 4 Tractors	33
Group 4 Tractors	34
Seat to ROPS Adjustment	39
Swing & Boom Locks	40
Installing the Backhoe Bucket	40
Set-Up Service & Lubrication	41
PARTS ILLUSTRATIONS	43
Mainframe Components	44
Seat & Mast Components	48
Reinforced 3-Point Top Link Brackets	50
Boom Components	52
Dipper Components	54
Stabilizer Components	56
Hydraulic Controls	58
Control Valve Fittings & Hoses	60
Pump Hydraulics	62
PTO Pump Service Parts	64
Control Valve Service Parts	66
Cylinder Service Parts	68
A) Swing Cylinder	68
B) Boom, Stabilizer/Crowd & Curt	68
NUMERICAL INDEX	70

SAFETY PRECAUTIONS



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 assemble or use this unit.

-  **DANGER:** Indicates an immediately 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.

Kubota backhoes are designed to give safe, dependable service if they are operated according to instructions. Read and understand this manual and the tractor manual before operating the backhoe. It is the backhoe owner's responsibility to be certain anyone operating the backhoe read this manual first to become familiar with the backhoe and all safety precautions. Failure to do so could result in serious personal injury or equipment damage. If you have any questions, consult your Kubota dealer.

Kubota strongly recommends the use of a ROPS (Roll Over Protective Structure) and seat belt in almost all applications. Never fasten the seat belt without a ROPS. Always fasten the seat belt when operating this equipment. Do not modify a ROPS in any way. Welding, bending, drilling or cutting any portion of the replaced, not repaired or revised. If any structural member is damaged, replace the entire structure at your local Kubota dealership. Check the seat belt daily and replace it if damaged or frayed.

BEFORE OPERATION

• Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are generally attracted to machines and the work being done. Never assume children will remain where you last saw them.

1. Keep children out of the operating area and under the watchful eye of another responsible adult.
2. Be alert and turn the machine off if children enter the work area.
3. Before and when backing, look behind and down for small children.

4. Never carry children while operating the machine. They may fall off and be seriously injured or interfere with safe operation of the machine.

5. Never allow children to play on the machine or attachment even when turned off.

6. Never allow children to operate the machine even under adult supervision.

7. Use extra care when approaching blind corners, shrubs, trees, or other obstructions that might hide children from sight.

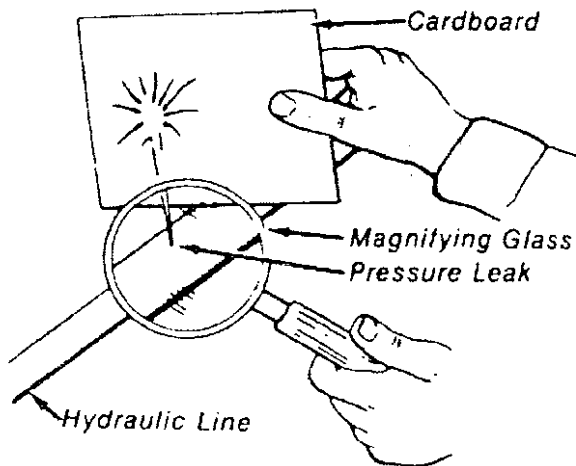
SAFETY PRECAUTIONS - Continued

DURING OPERATION

- Allow only trained personnel to operate or service this equipment. Know and understand all precautions before service or operation. Also read and understand all precautions found in the Tractor and Loader Operator's Manuals.
- For safe operation, check all bolts and nuts for tightness before each days operation. Also observe all maintenance and lube procedures, and inspect all hoses and cylinders daily.
- Do not permit anyone but the operator to ride on the unit while in operation or transport. There is no safe place for passengers on this equipment.
- Use the hand rail and mounting steps while getting on and off the backhoe. Keep the steps and operator's platform clean and free of mud, grease or oil, and other debris.
- This 4600 Series backhoe has been designed for excavating ONLY! DO NOT use this unit for lifting or craning. There is NO safe way to attach a lifting chain or sling to the backhoe boom, dipper or digging bucket.
- For all excavation work, operate the backhoe from the backhoe operator's seat only.
- A complete front loader, including the lift arms and bucket, is required for backhoe stability, at all times.
- If the tractor/loader is to be used with the backhoe removed from the tractor, rear ballast or calcium chloride in the rear tires is required for tractor/loader stability.
- Make sure the stabilizers and loader bucket are on solid footing, and the unit is as level as possible, before backhoe operation.
- Keep all bystanders away from the swing arc; from under the boom and dipper, and well clear of the backhoe, at all times.
- Do not place spoil close to the edge of the excavation where its weight could cause a cave-in.
- Use care when operating on slopes to avoid an overturn. Travel at speeds compatible with safe operation, especially when operating on uneven terrain, crossing ditches and while turning.
- When working on slopes, one stabilizer will be lower than the other. Use extreme care during excavation, as risk of overturn will be increased.
- When excavating on a slope, dig with the backhoe uphill.
- Do not dig under the stabilizers or tractor, especially in soft or sandy soil. Take extra precautions in wet or thawing ground. These conditions can become unstable, and may collapse under the weight of the unit.
- To reduce the risk of overturn on a slope, place the spoil to the height side of the excavation.
- Keep the backhoe and loader well clear of electrical lines. If in doubt on safe distance, contact the local power company.
- Be alert for buried electrical, telephone, water, and gas lines. When in doubt on their possible location, contact the local utility companies for their buried location.
- Check local codes or regulations that may apply to tractor, loader, backhoe operation on public streets or highways, before transporting. Use a slow moving vehicle (SMV) sign, and the tractor flashing lights when traveling on public roads.
- Park the unit on level ground whenever possible. Center the boom and lower the backhoe bucket and both stabilizers to the ground, engage the swing lock pin, and disengage the tractor PTO. Lower the loader bucket, set the parking brake, shut off the engine, and remove the key before leaving the unit unattended.
- Always securely fasten the tractor, loader, backhoe with chains and chain binders; determine and note the height of the backhoe for underpass clearance; before transporting on a trailer.

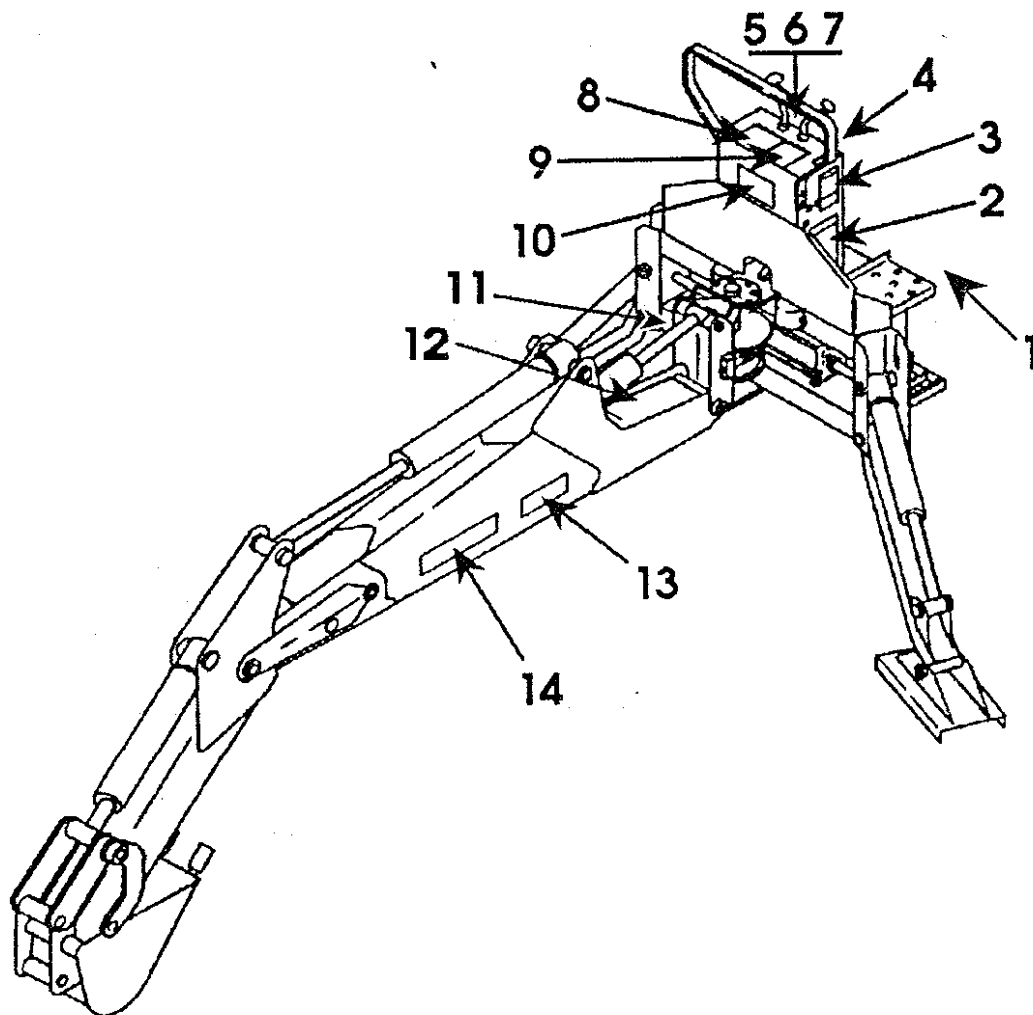
MAINTENANCE

- DO NOT change any backhoe control valve relief settings. They have been set at the factory for best backhoe performance and operator safety.
- Never make any repairs, service, or adjustments, when the hydraulic system is under pressure, when the engine is running, or when any backhoe cylinder is under load.
- Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious injury. Before applying pressure to the system, make sure all connections are tightened, and lines, pipes and hoses are not damaged. Fluid escaping from pinholes may be invisible. Do not use your hands to search for suspected leaks. Instead, use a piece of cardboard and wear protective eyewear such as safety goggles.
- Do not work under an elevated backhoe boom, or any part of the tractor/loader/backhoe unless it is securely supported by a suitable hoist, floor jack, or jackstands. Position the hoist, floor jacks and jackstands with care to assure stable support for the tractor, loader and backhoe.
- When installing or removing tight fitting pins or bolts, care should be taken to guard against injury from pieces that may chip off of the pin, bolt, or object used in striking it. Always use a brass punch and lead hammer, and always wear safety glasses.
- After daily service, make sure the hand rail, control levers and steps are free of grease, oil, or mud.
- Replace all Safety Signs that are damaged, lost, or otherwise become illegible. If a part to be replaced has a sign on it, obtain a new safety sign from your KUBOTA Dealer and install it in the same place as on the removed part.



- Obtain IMMEDIATE MEDICAL CARE if injured in any way by escaping hydraulic fluid. Serious allergic reaction or infection will develop if proper treatment is not administered, by a doctor, at once.

SAFETY SIGN LOCATIONS



CARE OF SAFETY SIGNS

1. Keep safety signs clean and free from obstructing material.
2. Clean safety signs with soap and water and dry with a soft cloth.
3. Replace damaged or missing safety signs with new safety signs from your KUBOTA Dealer.
4. If a component with safety sign(s) affixed is replaced with a new part, make sure new safety sign(s) is (are) attached in the same location(s) as the replaced component.
5. Mount new safety signs by applying on a clean dry surface and pressing air bubbles to outside edges.