OPERATOR'S MANUAL

KUBOTA

FRONT LOADER

MODEL LA525

READ AND SAVE THIS MANUAL

KUBOTA Corporation
English (U.S.A)
Code No. 7289-6911-2

LA525

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KUBOTA Corporation
English (U.S.A)
Code No. 7289-6911-2
## ABBREVIATION LIST

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<tr>
<td>2WD</td>
<td>2-Wheel Drive</td>
</tr>
<tr>
<td>4WD</td>
<td>4-Wheel Drive</td>
</tr>
<tr>
<td>API</td>
<td>American Petroleum Institute</td>
</tr>
<tr>
<td>ASABE</td>
<td>American Society of Agricultural and Biological Engineers, USA</td>
</tr>
<tr>
<td>ASTM</td>
<td>American Society of Testing and Materials, USA</td>
</tr>
<tr>
<td>DIN</td>
<td>Deutsches Institut für Normung, GERMANY</td>
</tr>
<tr>
<td>DT</td>
<td>Dual Traction [4WD]</td>
</tr>
<tr>
<td>fpm</td>
<td>Feet Per Minute</td>
</tr>
<tr>
<td>GST</td>
<td>Glide Shift Transmission</td>
</tr>
<tr>
<td>Hi-Lo</td>
<td>High Speed-Low Speed</td>
</tr>
<tr>
<td>HST</td>
<td>Hydrostatic Transmission</td>
</tr>
<tr>
<td>m/s</td>
<td>Meters Per Second</td>
</tr>
<tr>
<td>PTO</td>
<td>Power Take Off</td>
</tr>
<tr>
<td>RH/LH</td>
<td>Right-hand and left-hand sides are determined by facing in the direction of forward travel</td>
</tr>
<tr>
<td>ROPS</td>
<td>Roll-Over Protective Structures</td>
</tr>
<tr>
<td>rpm</td>
<td>Revolutions Per Minute</td>
</tr>
<tr>
<td>r/s</td>
<td>Revolutions Per Second</td>
</tr>
<tr>
<td>SAE</td>
<td>Society of Automotive Engineers, USA</td>
</tr>
<tr>
<td>SMV</td>
<td>Slow Moving Vehicle</td>
</tr>
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FOREWORD

You are now the proud owner of a KUBOTA Loader. This loader is a product of KUBOTA quality engineering and manufacturing. It is made of fine materials and under a rigid quality control system. It will give you long, satisfactory service. To obtain the best use of your loader, please read this manual carefully. If your tractor is provided with CAB, also read the CAB operator's manual, which is a separate manual. It will help you become familiar with the operation of the loader and contains many helpful hints about loader maintenance. It is KUBOTA's policy to utilize as quickly as possible every advance in our research. The immediate use of new techniques in the manufacture of products may cause some small parts of this manual to be outdated. KUBOTA distributors and dealers will have the most up-to-date information. Please do not hesitate to consult with them.

SAFETY FIRST

This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the mower 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 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, could result in minor or moderate injury.

IMPORTANT : Indicates that equipment or property damage could result if instructions are not followed.

NOTE : Gives helpful information.
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SAFE OPERATION

Most loader equipment accidents can be avoided by following simple safety precautions. These safety precautions, if followed at all times, will help you operate your loader safely.

1. BEFORE OPERATING THE LOADER

1. Know your equipment and its limitations.
   Allow only trained personnel to operate or service this equipment.
2. Read and understand all instructions and precautions found in both the tractor and the loader operator's manuals before using the loader.
   Lack of knowledge can lead to accidents.
3. It is the owner's responsibility to ensure that anyone who will operate the loader reads this manual first and becomes familiar with the safe operation of the loader.
4. For your safety, a ROPS with a seat belt is strongly recommended by KUBOTA in almost all applications. If your tractor has a foldable ROPS, fold it down only when absolutely necessary and raise it up and lock it again as soon as possible. Do not wear the seat belt when a foldable ROPS is down or a fixed ROPS is removed. If you have any questions, consult your local KUBOTA dealer.
   Always use the seat belt when the tractor is equipped with a ROPS. Never use the seat belt when the tractor is not equipped with a ROPS.
5. Visually check for hydraulic leaks and broken, missing, or malfunctioning parts.
   Make necessary repairs before operating.
6. Replace damaged or illegible safety labels. See following pages for required labels.
7. When the front loader is mounted on the tractor, enter and exit the operator's seat only from left side of the tractor.
8. Engage the loader control valve lock to prevent accidental actuation when the implement is not in use or during transport. Do not utilize the valve lock for machine maintenance or repair.
9. Assemble, remove and reinstall the loader only as directed in this manual. Failure to do this could result in serious personal injury or death.

10. Follow the precautions below when attaching attachments.
   • Make sure both handles (LH, RH) contact the ear plates at the points (A) and are all the way down.
   • Make sure both lock pins (LH, RH) protrude through the pin slots.
   • Use of a non-Kubota attachment that does not comply with ISO 24410 or the improper positioning of handle(s) or non-protrusion of pin(s) may result in detachment of the attachment or deformation, causing loss of performance, personal injury or death.

(A) The handle contacts the ear plate at the points.
2. OPERATING THE LOADER

1. Operate the loader only when properly seated at the controls. Do not operate from the ground.
2. Move and turn the tractor at low speeds.
3. Never allow anyone to get under the loader bucket or reach through the boom when the bucket is raised.
4. Keep children, others and livestock away when operating loader and tractor.
5. Do not walk or work under a raised loader bucket or attachment unless it is securely blocked and held in position.
6. For tractor stability and operator safety, rear ballast must be added to the 3-point hitch and to the rear wheels when using loader.
7. To increase stability adjust the rear wheels to the widest setting that is suitable for your application.
8. Exercise extra caution when operating the loader with a raised bucket or attachment.
9. Do not lift or carry any person on the loader, in the bucket, or other attachment.
10. Avoid loose fill, rocks and holes. They can be dangerous for loader operation or movement.
11. Avoid overhead wires and obstacles when the loader is raised. Contacting electric lines can cause electrocution.
12. Gradually stop the loader boom when lowering or lifting.
13. Use caution when handling loose or shiftable loads.
14. Using loaders for handling large, heavy, or shiftable objects is not recommended without proper handling attachments.
15. Handling large heavy objects can be extremely dangerous due to:
   - Danger of rolling the tractor over.
   - Danger of upending the tractor.
   - Danger of the object rolling or sliding down the loader boom onto the operator.
16. If you must perform this sort of work (item 15), protect yourself by:
   - Never lift the load higher than necessary to clear the ground.
   - Add rear ballast to the tractor to compensate for the load or use rear implement.
   - Never lift large objects with equipment that may permit them to roll back onto the operator.
   - Move slowly and carefully, avoiding rough terrain.
17. Never lift or pull a load from any point on the loader with a chain, rope, or cable. Doing so could cause a rollover or serious damage to the loader.
18. Be extra careful when operating the tractor on a slope, always operate up and down, never across the slope. Do not operate on steep slopes or unstable surfaces.
19. When operating another implement on a hillside, be sure to remove the loader to reduce the risk of rollover.
20. Carry loader boom at a low position during transport. (You should be able to see over the bucket.)
21. Allow for the loader length when making turns.

3. AFTER OPERATING THE LOADER

1. When loader work is complete and parking or storing, choose flat and hard ground. Lower the loader boom to the ground, stop the engine, set the brakes and remove the key before leaving the tractor seat.
2. Make sure the detached loader is on stands and on a hard, level surface.
3. Before disconnecting hydraulic lines, relieve all hydraulic pressure by moving the controls.
4. Do not remove the loader from the tractor without an approved bucket attached.

4. SERVICING THE LOADER

1. Always wear safety goggles when servicing or repairing the machine.
2. Do not modify the loader. Unauthorized modification may affect the function of the loader, which may result in personal injury.
3. Do not use the loader as a work platform or a jack to support the tractor for servicing or maintenance. Securely support the tractor or any machine elements with stands or suitable blocking before working underneath. For your safety, do not work under any hydraulically supported devices. They can settle or suddenly leak down or be accidentally lowered.
4. Escaping hydraulic oil under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Do not use hands to search for suspected leaks. If injured by escaping fluid, obtain medical treatment immediately.
5. Do not tamper with the relief valve setting. The relief valve is pre-set at the factory. Changing the setting can cause overloading of the loader and tractor which may result in serious personal injury.
6. When servicing or replacing pins in cylinder ends, bucket, etc., always use a brass drift and hammer. Failure to do so could result in injury from flying metal fragments.
DANGER, WARNING AND CAUTION LABELS

(1) Part No. 7J246-5643-1

![DANGER]

**DANGER**

**TO AVOID SERIOUS INJURY OR DEATH CAUSED BY FALLING LOADS:**
1. Load on raised bucket or fork can fall or roll back onto operator causing serious injury or death.
2. Use approved clamping and / or guard attachments for handling large, loose or shiftable loads such as bales, posts, sheets of plywood etc.
3. Carry loads as low as possible.

(2) Part No. 7J246-5641-1

![DANGER]

**DANGER**

**TO AVOID SERIOUS INJURY OR DEATH CAUSED BY ROLLOVERS:**
1. ROPS and a fastened seat belt are strongly recommended in almost all applications. Foldable ROPS should be in upright and locked position if equipped.
2. Adjust rear wheels to the widest setting that is suitable for the work.
3. Add recommended wheel ballast and rear weight for stability.
4. DO NOT drive on steep slopes or unstable surfaces.
5. Carry loader arms at low position during transport. Move and turn tractor at slow speeds.

(3) Part No. 7J266-5649-2

![CAUTION]

**CAUTION**

**TO AVOID INJURY FROM CRUSHING:**
1. Do not utilize the valve lock for machine maintenance or repair.
2. The valve lock is to prevent accidental actuation when implement is not in use or during transport.

(4) Part No. 7J246-5642-1

![DANGER]

**DANGER**

**TO AVOID SERIOUS INJURY OR DEATH CAUSED BY CONTACT WITH ELECTRIC LINES:**
- Check overhead clearance.

(5) Part No. 7J246-5645-1

![CAUTION]

**CAUTION**

**TO AVOID PERSONAL INJURY:**
2. Operate the loader from tractor seat only.
3. Keep children, others and livestock away when operating loader and tractor.
4. Avoid holes, loose ground, and rocks which may cause tractor / loader to tip.
5. Make sure approved bucket is attached before removing loader from tractor.
6. When parking or storing, choose flat and hard ground. Lower the bucket to the ground, set brakes and remove key before leaving tractor.
7. Before disconnecting hydraulic lines, relieve all hydraulic pressure.

(6) Part No. 7J246-5644-2 (Both sides)

![WARNING]

**WARNING**

**TO AVOID INJURY FROM FALLS OR BEING CRUSHED:**
1. DO NOT stand or work under raised loader or bucket.
2. DO NOT use loader as jack for servicing.
3. DO NOT use loader as a work platform.
4. NEVER connect chain, cable or rope to loader bucket while operating loader.
SAFE OPERATION

1. Load on raised bucket or fork can fall or roll back onto operator causing serious injury or death.
2. Use approved clamping and / or guard attachments for handling large, loose or shiftable loads such as bales, posts, sheets of plywood etc.
3. Carry loads as low as possible.

DANGER

TO AVOID PERSONAL INJURY OR DEATH CAUSED BY ROLLOVER

- Do not exceed rated load listed above.
- Use rear implement and tire ballast recommended in loader operator’s manual.
- Operate tractor slowly taking special care when turning.
CARE OF DANGER, WARNING AND CAUTION LABELS

1. Keep danger, warning and caution labels clean and free from obstructing material.
2. Clean danger, warning and caution labels with soap and water, dry with a soft cloth.
3. Replace damaged or missing danger, warning and caution labels with new labels from your local KUBOTA dealer.
4. If a component with danger, warning and caution label(s) affixed is replaced with new part, make sure new label(s) is (are) attached in the same location(s) as the replaced component.
5. Mount new danger, warning and caution labels by applying on a clean dry surface and pressing any bubbles to outside edge.
SERVICING OF LOADER

Your dealer is interested in your new loader and has the desire to help you get the most value from it. After reading this manual thoroughly, you will find that you can do some of the regular maintenance yourself. However, when in need of parts or major service, be sure to see your KUBOTA dealer. For service, contact the KUBOTA dealership from which you purchased your loader or your local KUBOTA dealer. When in need of parts, be prepared to give your dealer the loader serial number. Locate the serial numbers now and record them in the space provided.

KUBOTA LOADER

<table>
<thead>
<tr>
<th>Model</th>
</tr>
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<tbody>
<tr>
<td>Serial Number</td>
</tr>
<tr>
<td>Date of Purchase</td>
</tr>
<tr>
<td>Name of Dealer</td>
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</tbody>
</table>

(To be filled in by purchaser)

(1) Serial number
## SPECIFICATIONS

### SUITABLE TRACTOR
LA525: L2501, L3301, L3901

### LOADER SPECIFICATIONS

<table>
<thead>
<tr>
<th>LOADER MODEL</th>
<th>LA525</th>
</tr>
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<tbody>
<tr>
<td>TRACTOR MODEL</td>
<td></td>
</tr>
<tr>
<td>WHEEL BASE(WB)</td>
<td>mm (in.)</td>
</tr>
<tr>
<td>FRONT TIRES</td>
<td></td>
</tr>
<tr>
<td>REAR TIRES</td>
<td></td>
</tr>
<tr>
<td>BOOM CYLINDER</td>
<td>BORE mm (in.)</td>
</tr>
<tr>
<td></td>
<td>STROKE mm (in.)</td>
</tr>
<tr>
<td>BUCKET CYLINDER</td>
<td>BORE mm (in.)</td>
</tr>
<tr>
<td></td>
<td>STROKE mm (in.)</td>
</tr>
<tr>
<td>CONTROL VALVE</td>
<td>3 Position bucket control valve type</td>
</tr>
<tr>
<td>RATED FLOW</td>
<td>L/min (GPM)</td>
</tr>
<tr>
<td>MAXIMUM PRESSURE</td>
<td>MPa (kg/cm², psi)</td>
</tr>
<tr>
<td>NET WEIGHT(APPROXIMATE)</td>
<td>kg (lbs.)</td>
</tr>
</tbody>
</table>

- **LA525**
  - **L2501**
  - **L3301, L3901**

<table>
<thead>
<tr>
<th></th>
<th>L2501</th>
<th>L3301, L3901</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHEEL BASE(WB)</td>
<td>1610 (63.3)</td>
<td></td>
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<tr>
<td>FRONT TIRES</td>
<td>7 - 16</td>
<td></td>
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<tr>
<td>REAR TIRES</td>
<td>11.2 - 24</td>
<td></td>
</tr>
<tr>
<td>BORE mm (in.)</td>
<td>45 (1.77)</td>
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<tr>
<td>STROKE mm (in.)</td>
<td>476 (18.7)</td>
<td></td>
</tr>
<tr>
<td>BORE mm (in.)</td>
<td>45 (1.77)</td>
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<tr>
<td>STROKE mm (in.)</td>
<td>476 (18.7)</td>
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</tr>
<tr>
<td>CONTROL VALVE</td>
<td>One Detent Float Position, Regenerative Bucket Dump, Power Beyond Circuit</td>
<td></td>
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<tr>
<td>RATED FLOW</td>
<td>23.9 (6.3)</td>
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<tr>
<td>MAXIMUM PRESSURE</td>
<td>15.7 (160, 2275)</td>
<td>16.2 (165, 2347)</td>
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<tr>
<td>NET WEIGHT(APPROXIMATE)</td>
<td>365 (805)</td>
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</table>
## BUCKET SPECIFICATIONS

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<thead>
<tr>
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<tbody>
<tr>
<td>MODEL</td>
<td>SQUARE 60&quot;</td>
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<tr>
<td>TYPE</td>
<td>RIGID</td>
</tr>
<tr>
<td>WIDTH</td>
<td>mm (in.)</td>
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<tr>
<td>DEPTH (L)</td>
<td>mm (in.)</td>
</tr>
<tr>
<td>HEIGHT (M)</td>
<td>mm (in.)</td>
</tr>
<tr>
<td>LENGTH (N)</td>
<td>mm (in.)</td>
</tr>
<tr>
<td>CAPACITY</td>
<td>STRUCK m³ (CU.FT.)</td>
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<tr>
<td></td>
<td>HEAPED m³ (CU.FT.)</td>
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<tr>
<td>WEIGHT</td>
<td>kg (lbs.)</td>
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## DIMENSIONAL SPECIFICATIONS

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<td>TRACTOR MODEL</td>
<td>L2501, L3301, L3901</td>
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<tr>
<td>BUCKET TYPE</td>
<td>RIGID</td>
</tr>
<tr>
<td>A</td>
<td>MAX. LIFT HEIGHT (TO BUCKET PIVOT PIN)</td>
</tr>
<tr>
<td>B</td>
<td>MAX. LIFT HEIGHT UNDER LEVEL BUCKET</td>
</tr>
<tr>
<td>C</td>
<td>CLEARANCE WITH BUCKET DUMPED</td>
</tr>
<tr>
<td>D</td>
<td>REACH AT MAX. LIFT HEIGHT (DUMPING REACH)</td>
</tr>
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<td>E</td>
<td>MAX. DUMP ANGLE</td>
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<td>REACH WITH BUCKET ON GROUND</td>
</tr>
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<td>BUCKET ROLL-BACK ANGLE</td>
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<td>OVERALL HEIGHT IN CARRYING POSITION</td>
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<th>L2501</th>
<th>L3301</th>
<th>L3901</th>
</tr>
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<tbody>
<tr>
<td>U</td>
<td>LIFT CAPACITY (BUCKET PIVOT PIN, MAX. HEIGHT) kg (lbs.)</td>
<td>491 (1082)</td>
<td>513 (1131)</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>LIFT CAPACITY (500 mm FORWARD, MAX. HEIGHT) kg (lbs.)</td>
<td>372 (820)</td>
<td>388 (855)</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>LIFT CAPACITY (BUCKET PIVOT PIN, 1500 mm HEIGHT) kg (lbs.)</td>
<td>649 (1431)</td>
<td>676 (1490)</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>LIFT CAPACITY (500 mm FORWARD, 1500 mm HEIGHT) kg (lbs.)</td>
<td>515 (1135)</td>
<td>536 (1182)</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>BREAKOUT FORCE (BUCKET PIVOT PIN) N (lbf.)</td>
<td>10554 (2373)</td>
<td>10951 (2462)</td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td>BREAKOUT FORCE (500mm FORWARD) N (lbf.)</td>
<td>8033 (1806)</td>
<td>8335 (1874)</td>
<td></td>
</tr>
<tr>
<td>VV</td>
<td>BUCKET ROLL-BACK FORCE AT MAX. HEIGHT N (lbf.)</td>
<td>9403 (2114)</td>
<td>9685 (2177)</td>
<td></td>
</tr>
<tr>
<td>XX</td>
<td>BUCKET ROLL-BACK FORCE AT 1500 mm N (lbf.)</td>
<td>11646 (2618)</td>
<td>11998 (2697)</td>
<td></td>
</tr>
<tr>
<td>ZZ</td>
<td>BUCKET ROLL-BACK FORCE AT GROUND LEVEL N (lbf.)</td>
<td>9545 (2146)</td>
<td>9855 (2215)</td>
<td></td>
</tr>
<tr>
<td>RAISING TIME (RATED FLOW) sec.</td>
<td>4.1</td>
<td>3.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOWERING TIME (RATED FLOW) sec.</td>
<td>2.4</td>
<td>2.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUCKET DUMPING TIME (RATED FLOW) sec.</td>
<td>2.0</td>
<td>1.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUCKET ROLLBACK TIME (RATED FLOW) sec.</td>
<td>2.6</td>
<td>2.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
LOADER TERMINOLOGY

(1) Loader control lever
(2) Side frame
(3) Mounting pin
(4) Main frame
(5) Boom cylinder
(6) Boom
(7) Bucket cylinder
(8) Bucket
LUBRICATION
Lubricate all grease fittings with SAE multipurpose grease.

TRANSMISSION FLUID
Check the tractor transmission fluid level. Add fluid if necessary. Refer to the tractor operator's manual for instructions and proper fluid. Repeat this check after purging air from the system. At that time, it will be necessary to add transmission fluid.

[Manual Transmission Type]

[HST Type]

IMPORTANT:
- To check the tractor transmission fluid level, lower the bucket to the ground and lower the 3 point hitch.
TREAD
1. Set front tread as follows.

<table>
<thead>
<tr>
<th></th>
<th>Front Tread</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2WD</td>
<td></td>
<td>4WD</td>
</tr>
<tr>
<td>L2501</td>
<td>Front axle is not adjustable.</td>
<td>Front axle is not adjustable.</td>
</tr>
<tr>
<td>L3301</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L3901</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**IMPORTANT:**
- Setting tread wider than recommended may cause premature failure of front axle components due to excessive stress.

2. For better stability, set the rear tread as follows depending on the requirements of the work being done.

<table>
<thead>
<tr>
<th></th>
<th>Rear Tread</th>
</tr>
</thead>
<tbody>
<tr>
<td>L2501</td>
<td>1115 mm (43.9 in.) or more</td>
</tr>
<tr>
<td>L3301</td>
<td></td>
</tr>
<tr>
<td>L3901</td>
<td></td>
</tr>
</tbody>
</table>

REAR BALLAST

**WARNING**
To avoid serious injury:
- For tractor stability and operator's safety, rear ballast should be added to the rear of the tractor in the form of 3-point counter weight and rear wheel ballast. The amount of rear ballast will depend on the application.

**IMPORTANT:**
- Do not fill tires with water or solution more than 75% of full capacity (to the valve stem level at 12 o’clock position).

### Liquid ballast in rear tires
Water and calcium chloride solution provides a safe and economical ballast. Used properly, it will not damage tires, tubes or rims. The addition of calcium chloride is recommended to prevent the water from freezing. Use of this method of weighting the wheels has full approval of the tire manufacturers. See your tire dealer for this service.

**Liquid weight per tire (75 Percent filled)**

<table>
<thead>
<tr>
<th>Tire sizes</th>
<th>11.2-24</th>
<th>15-19.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slush free at -10 °C(14 °F) Solid at -30 °C(-22 °F)</td>
<td>105 kg</td>
<td>140 kg</td>
</tr>
<tr>
<td>[Approx. 1 kg (2 lbs.)</td>
<td>(230 lbs.)</td>
<td>(309 lbs.)</td>
</tr>
<tr>
<td>CaCl₂ per 4 L (1 gal.) of water]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slush free at -24 °C(-11 °F) Solid at -47 °C(-52 °F)</td>
<td>110 kg</td>
<td>150 kg</td>
</tr>
<tr>
<td>[Approx. 1.5 kg (3.5 lbs.)</td>
<td>(240 lbs.)</td>
<td>(331 lbs.)</td>
</tr>
<tr>
<td>CaCl₂ per 4 L (1 gal.) of water]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slush free at -47 °C(-52 °F) Solid at -52 °C(-62 °F)</td>
<td>115 kg</td>
<td>160 kg</td>
</tr>
<tr>
<td>[Approx. 2.25 kg (5 lbs.)</td>
<td>(253 lbs.)</td>
<td>(353 lbs.)</td>
</tr>
<tr>
<td>CaCl₂ per 4 L (1 gal.) of water]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**IMPORTANT:**
- Do not add liquid ballast or any other weights to the front tires.

---

**Implement as Counter Weight**

- 6’ Box Scraper: Approx. 450 kg (990 lbs.)
- Rotary Tiller: Approx. 240 kg (530 lbs.)
- Back Hoe: Approx. 770 kg (1690 lbs.)

1AIABACAP010A

1. Air
   - (A) Correct: 75% Full
   - Air compresses like a cushion
2. Water
   - (B) Incorrect: 100% Full
   - Water can not be compressed

**NOTE:**
- When mounting a heavy rear implement, liquid in the tires may not be required.

**IMPORTANT:**
- Do not add liquid ballast or any other weights to the front tires.
## TIRE INFLATION

Ensure that the tractor tires are properly inflated.
Refer to the tractor operator's manual for optional tires.

### Inflation pressure

<table>
<thead>
<tr>
<th>Tire sizes</th>
<th>Inflation Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear</td>
<td></td>
</tr>
<tr>
<td>11.2-24, 4PR</td>
<td>100 kPa (1.0 kgf/cm², 14 psi)</td>
</tr>
<tr>
<td>13.6-16, 4PR</td>
<td>100 kPa (1.0 kgf/cm², 14 psi)</td>
</tr>
<tr>
<td>15-19.5, 6PR</td>
<td>210 kPa (2.1 kgf/cm², 30 psi)</td>
</tr>
<tr>
<td>Front</td>
<td></td>
</tr>
<tr>
<td>5.00-15, 4PR</td>
<td>220 kPa (2.2 kgf/cm², 32 psi)</td>
</tr>
<tr>
<td>7-16, 6PR</td>
<td>180 kPa (1.8 kgf/cm², 26 psi)</td>
</tr>
<tr>
<td>23 x 8.50-12, 4PR</td>
<td>160 kPa (1.6 kgf/cm², 23 psi)</td>
</tr>
<tr>
<td>25 x 8.50-14, 6PR</td>
<td>160 kPa (1.6 kgf/cm², 23 psi)</td>
</tr>
<tr>
<td>27 x 8.50-15, 6PR</td>
<td>210 kPa (2.1 kgf/cm², 30 psi)</td>
</tr>
</tbody>
</table>

### TEST OPERATION

**WARNING**

To avoid serious personal injury:
- Keep engine speed at low idle during the test operation.
- Escaping hydraulic fluid under pressure can have sufficient force to penetrate skin, causing serious personal injury.

Before disconnecting lines, be sure to relieve all pressure by moving the controls.
Before applying pressure to the system, be sure all connections are tight and that lines, tubes and hoses are not damaged.
Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than your hands to search for suspected leaks.
If injured by escaping fluid, see a doctor at once. Serious infection or allergic reaction will develop if proper medical treatment is not administered immediately.

To begin a test operation, slightly move the control lever from the "N" position. Slowly raise the loader boom just enough for the bucket to clear the ground when fully dumped. Slowly work through the dump and roll back cycles.

**IMPORTANT:**
- If the boom or bucket does not work in the directions indicated on the label, lower the bucket to the ground, stop the engine, and relieve all hydraulic pressure. Recheck and correct all hydraulic connections and oil level.

**REMOVING AIR FROM THE HYDRAULIC SYSTEM**

Repeat raising and lowering the boom and bucket operations until all the air is removed from the system and the system responds properly.

**IMPORTANT:**
- Do not move the control lever into the float position when the bucket is off the ground.
The loader should be operated with the tractor engine speed depending on the application and the operator’s level of experience. Excessive speeds are dangerous, and may cause bucket spillage and unnecessary strain on the tractor and loader. When operating in temperatures below -1 °C (30 °F), run the tractor engine below 1200 rpm until the oil temperature exceeds -1 °C (30 °F).

The following text and illustrations offer suggested loader and tractor operating techniques.

**WARNING**

To reduce the possibility of roll over:
- It is not recommended that the loader be attached when operating another implement on a hillside.

**IMPORTANT:**
- Before operating the loader in rough terrain, remove the mower to avoid damage to the mower.

**FILLING THE BUCKET**

Approach and enter the pile with a level bucket.

Ease control lever toward you and then left to rollback and lift the bucket.

The rollback and lifting of the bucket will increase efficiency because a level bucket throughout the lifting cycle resists bucket lift and increases breakaway effort.

**NOTE:**
- Do not be concerned if the bucket is not completely filled during each pass. Maximum productivity is determined by the amount of material loaded in a given period of time. Time is lost if two or more attempts are made to fill the bucket on each pass.

**LIFTING THE LOAD**

When lifting the load, keep the bucket positioned to avoid spillage.

**WARNING**

To avoid serious personal injury:
- Do not attempt to lift bucket loads in excess of the loader capacity.
- Before raising the bucket to full height, make sure the tractor is on level ground. If not, it may tip over, even if the tractor is not moving.
CARRYING THE LOAD
Position the bucket just below the level of the tractor hood for maximum stability and visibility, whether the bucket is loaded or empty.

Use extreme care when operating the loader on a slope. Keep the bucket as low as possible. This keeps the bucket and tractor center of gravity low and will provide maximum tractor stability.

WARNING
To avoid serious personal injury:
- Be extra careful when working on inclines.
- When operating on a slope, always operate up and down the slope, never across the slope.

When transporting a load, keep the bucket as low as possible to avoid tipping, in case a wheel drops in a rut.

DUMPING THE BUCKET
Lift the bucket just high enough to clear the side of the vehicle. Move the tractor in as close to the side of the vehicle as possible, then dump the bucket.

LOWERED THE BUCKET
After the bucket is dumped, back away from the vehicle while lowering and rolling back the bucket.

OPERATING WITH FLOAT CONTROL
During operation on hard surfaces, keep the bucket level and put the lift control in the float position to permit the bucket to float on the working surfaces. If hydraulic down pressure is exerted on the bucket it will wear faster than normal.

The float position will also avoid mixing of surface material with stockpile material. The float position will reduce the chance of surface gouging while removing snow or other material, or when working with a blade.
LOADING FROM A BANK
Choose a forward gear that provides a safe ground speed and power for loading.

WARNING
To avoid serious personal injury:
- Be extra careful when working on inclines.
- When operating on a slope, always operate up and down the slope, never across the slope.

NOTE:
- Loader lift and break-away capacity diminish as loading height is increased.

Side cutting is a good technique for cutting down a big pile. Wheel width should not exceed the bucket width for this procedure.

If the pile sides are too high and liable to cause cave-in, use the loader to break down the sides until a slot can be cut over the top.

Another method for large dirt piles is to build a ramp to approach the pile.

It is important to keep the bucket level when approaching a bank or pile. This will help avoid gouging the work area.

PEELING AND SCRAPING
Use a slight bucket down angle, travel forward, and hold the lift control forward to start the cut. Make a short cut and break-out cleanly.

With the bucket level, start a cut at the notch approximately 2 in. deep. Hold the depth by feathering the bucket control to adjust the cutting edge up or down. When the front tires enter the notch, adjust the boom cylinder to maintain proper depth.

Make additional passes until the desired depth is reached. During each pass, use only the bucket control while at working depth. This will allow you to concentrate on controlling the bucket angle to maintain a precise cut.
LOADING LOW TRUCKS OR SPREADERS FROM A PILE

For faster loading, minimize the angle of turn and length of run between pile and spreader.

Backgrade occasionally with a loaded bucket to keep the work surface free of ruts and holes. Also, hold the lift control forward so the full weight of the bucket is scraping the ground. Use the heel of the bucket.

BACKFILLING

Approach the pile with the bucket flat.

Poor operating methods will move less dirt and make it more difficult to hold a level grade.

IMPORTANT:
- Do not use the bucket in the dumped position for bulldozing. As shown above, this method will impose severe shock loads on the dump-linkage, the bucket cylinders, and the tractor.

Leave dirt in the bucket because dumping on each pass wastes time.

Operate at right angles to the ditch. Taking as big a bite as the tractor can handle.

Leave dirt which drifts over the side of the bucket for final cleanup.

Pile dirt on the high side for easier backfilling on a slope.
HANDLING LARGE HEAVY OBJECTS

DANGER
To avoid serious personal injury or death:
- Handling large, heavy objects can be dangerous due to:
  (A) Danger of rolling the tractor over.
  (B) Danger of upending the tractor.
  (C) Danger of the object rolling or sliding down the loader boom onto the operator.
- If you must perform the above work, protect yourself by:
  (A) Not lifting the load higher than necessary to clear the ground when moving.
  (B) Adding rear ballast to the tractor to compensate for the load.
  (C) Not lifting large objects with equipment that does not have an anti-rollback device.
  (D) Moving slowly and carefully.
  (E) Avoiding rough terrain.
  (F) Keeping transport distance as short as possible and carry the load as low as possible during transport.

VALVE LOCK

WARNING
To avoid injury from crushing:
- Do not utilize the valve lock for machine maintenance or repair.
- The valve lock is to prevent accidental actuation when implement is not in use or during transport.

The control valve is equipped with a valve lock feature. The control valve is locked in the neutral position. The lock is not intended and will not prevent a leak down of the implement during the period of storage.

Standard valve

1) Lock lever
   (A) "Lock"
   (B) "Unlock"
FRONT GUARD

CAUTION
To avoid personal injury or machine damage:
- Do not open nor close the hood while the upper front guard is closed.
- Be sure to keep the front guard closed (back at its locked position) when operating the tractor or the loader.

IMPORTANT:
- Before moving the tractor or the front loader, make sure the front guards are tightly locked.

How to open the front guard
1. Lower the boom to the ground with the bucket in level position.
2. Pull the front guard lever and open the front guard.

IMPORTANT:
- Lower the front loader to the ground before opening the front guard.
- Do not raise the boom while the upper front guard is opened.

BUCKET LEVEL INDICATOR (if equipped)
Depending on the front attachment, loosen the indicator rod lock bolt and readjust the indicator rod length.
ATTACHING ATTACHMENTS (if equipped)
This quick attach coupler is designed to be used with Kubota attachments. Non-Kubota attachments, if used, must comply with ISO 24410, first edition 2005-04-15. This quick attach coupler allows the operator to change easily without the use of tools.

**DANGER**
To avoid serious personal injury or death:
- Use of a non-Kubota attachment that does not comply with ISO 24410 or the improper positioning of handle(s) or non-protrusion of pin(s) may result in detachment of the attachment or deformation, causing loss of performance, personal injury or death.

**NOTE:**
- Attachments should be located on a flat, firm surface when attaching and detaching them from the quick attach coupler.

1. To mount an attachment, pull the handles of the quick attach coupler latching pins to the unlatched position. The quick attach coupler handles must be all the way up to ensure that the latching pins are fully retracted.
2. Position the tractor squarely in front of the attachment and tilt the quick attach coupler forward with the bucket cylinders.
3. Ease the quick attach coupler mounting plate into the saddle of the attachment.
4. Roll the quick attach coupler back using the bucket cylinders and raise the boom slightly. The back of the attachment should rest against the front of the quick attach coupler mounting plate and the weight of the attachment should be supported by the loader.
5. When the attachment is properly seated in the saddle and against the front of the quick attach coupler mounting plate, turn off the engine and set the parking brake. Push the quick attach coupler handles to the fully latched position. Verify both latching pins are completely engaged in the base of the attachment.

**WARNING**
To avoid serious injury or machine damage:
- Raise the boom only enough to latch the attachment. The attachment could swing off the quick attach coupler.
1. **OPERATING THE LOADER**

To avoid serious personal injury or death:

- The following engagement points are critical.
  1. The lock pins of the quick attach coupler have to protrude into and through the pin slots of the attachment on both sides. It is critical that the pins are in good condition and without visible signs of wear or damage and that the operator align the loader quick attach coupler with the attachment to allow the pins to go through the pin slots.
  2. Both handles have to be pushed down until the handles contact the ear plates near the points where the pin bolt goes through the handle (A).
  3. Do not operate the tractor or attachment unless all of the above conditions are met.

6. Visually verify when pushing the quick attach coupler handles into locked position that the latch pins rotate completely and are located underneath the stop of the quick attach coupler.

7. When attaching different attachments visually inspect for broken or damaged pins. If broken or damaged pins are found, replace before using. Use of broken pins may result in attachment detachment or deformation, causing loss of performance, personal injury or death.

8. You are now ready to use the attached attachment. All compatible attachments attach and detach using the same method.

---

### WARNING

To avoid serious injury or machine damage:

- Never operate or transport attachments which are not attached completely.
- Always replace damaged hardware immediately.

### DETACHING ATTACHMENTS

1. Detaching attachments is done in the reverse of attaching attachments. The procedure is below.
2. Lower the attachment to ground level with the attachment slightly in the rolled back position. Stop the engine and set the parking brake.
3. Pull the quick attach coupler handles to the unlatched position to release the latching pins.
4. While sitting in the tractor operator's seat, start the engine and slowly move the loader control lever to the "DUMP" position until the attachment is pushed away slightly from the quick attach coupler.
5. Lower the loader boom so that the quick attach coupler mounting plate clears the attachment saddle.
6. Back away from the attachment slowly.
7. If an attachment is not going to be attached to the quick attach coupler immediately, push the handles of the quick attach coupler to the locked position to prevent damage to the handle assembly.
DISMOUNTING THE LOADER

**WARNING**
To avoid machine damage or serious injury:
- Remove loader from tractor only when an approved loader bucket is attached.

Follow instructions provided in "REMOVING THE LOADER" section in this operator's manual.

MAINTENANCE
1. Attachments are secured to the quick attach coupler with an over center latching system. It is important that these parts are kept clean, lubricated and free from debris.
2. Keep the latching pins and latching handles free from debris. Lubricate the latching pins weekly with grease.
3. Keep the latching handles tight. If the handles become loose, tighten the hex nut slightly to remove any play from the handles.
4. Clean the saddle, at the top of the attachment, and the latching pin slots of any dirt and debris before mounting an attachment to the quick attach coupler.

ATTACHMENTS

- **Quick attach bucket**

  ![Quick attach bucket]

  **-SQUARE 66''**
  - WIDTH 1675mm (66in.)
  - STRUCK CAPACITY 0.23cu.m. (8.1cu.ft.)

- **Bale spear**

  ![Bale spear]

  **OVERALL HEIGHT**
  - 524mm (20.63in.)
  **OVERALL WIDTH**
  - 1149mm (45.24in.)
  **OVERALL LENGTH (INCLUDING MAIN SPEAR)**
  - 1376mm (54.17in.)
  **USEABLE LENGTH OF MAIN SPEAR**
  - 1008mm (39.69in.)
  **USEABLE LENGTH OF SPEAR 2**
  - 356mm (14.02in.)
  **MAXIMUM DIAMETER OF MAIN SPEAR**
  - 51mm (2.00in.)
  **DIAMETER OF SPEAR 2**
  - 32mm (1 1/4in.)
  **WEIGHT OF IMPLEMENT**
  - 74kg (163lbs)
ASSEMBLE PALLET FORK

1. Install the fork to the middle of the frame.
   (fit the lower hook of the fork to the center notch of the frame)

2. Slide the fork to the desired position.

3. Push the lock lever and slide the fork slightly until the lock pin engages with one of the notches to lock the fork.

4. The other fork can be installed using the same procedures.
**WARNING**

To avoid serious injury:
- Be sure to check and service the tractor on a flat surface with the bucket on the ground, engine shut off, the key removed and the parking brake on.

**LUBRICATION**

1. Lubricate all grease fittings every 10 hours of operation. Also, lubricate joints of control lever linkage every 10 hours. High quality grease designating "extreme pressure" and containing Molybdenum disulfide is recommended. This grease may specify "Moly EP" on its label.

2. Daily before operation, check the tractor hydraulic fluid level. If low, add as described in the tractor's operator's manual. Also change the filter element and the hydraulic fluid as recommended in the tractor's operator's manual.

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Location</th>
<th>Bolt/Nut</th>
<th>Required Torque N-m (kgf-m, ft-lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Main frames</td>
<td>M16 bolts</td>
<td>226 (23, 166)</td>
</tr>
</tbody>
</table>
DAILY CHECKS

1. Check all hardware daily before operation.
   Tighten hardware to torque values as specified in the "Installation Instructions" and "Tightening Torque Chart".
2. With the engine off and the bucket on the ground, inspect all hoses for cuts or wear. Check for signs of leaks and make sure all fittings are tight.

⚠️ WARNING
To avoid serious personal injury:
- Escaping hydraulic fluid under pressure can have sufficient force to penetrate skin, causing serious personal injury. Before disconnecting lines, be sure to relieve all pressure.
- Be sure all connections are tight and that lines, tubes, and hoses are not damaged. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than your hands, to search for suspected leaks.

If injured by escaping fluid, see a doctor at once. Serious infection or allergic reaction will develop if proper medical treatment is not administered immediately.
- When removing the engine side covers, be careful not to touch hot loader cylinders. Allow all surfaces to cool before performing maintenance.
- Before servicing the loader or the tractor, be sure to place the loader boom in contact with the ground. If the loader boom must be raised during service or maintenance, support the boom as shown in the figure.

EVERY 50 HOURS

■ Checking main frame bolt torque

⚠️ CAUTION
To avoid personal injury:
- Never operate front loader with a loose main frame.
- Any time bolts and nuts are loosened, retighten to specified torque.
- Check all bolts and nuts frequently and keep them tight.

Check main frame bolts regularly especially when new. If they are loose, tighten them as follows.
## General torque specification

<table>
<thead>
<tr>
<th>SAE grade No.</th>
<th>SAE GR.5 (N-m)</th>
<th>SAE GR.8 (N-m)</th>
<th>Metric cap screws</th>
<th>8.8 Approx. SAE GR 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(kgf-m)</td>
<td>(kgf-m)</td>
<td>(N-m) (kgf-m) (ft-lbs)</td>
<td>(N-m) (kgf-m) (ft-lbs)</td>
</tr>
<tr>
<td>1/4</td>
<td>11.7 to 15.8</td>
<td>16.3 to 19.8</td>
<td>M6</td>
<td>9.8 to 11.2</td>
</tr>
<tr>
<td></td>
<td>1.19 to 1.61</td>
<td>1.66 to 2.02</td>
<td></td>
<td>1.0 to 1.1</td>
</tr>
<tr>
<td></td>
<td>8.6 to 11.6</td>
<td>12.0 to 14.6</td>
<td></td>
<td>7.2 to 8.3</td>
</tr>
<tr>
<td>5/16</td>
<td>23.1 to 27.8</td>
<td>32.5 to 39.3</td>
<td>M8</td>
<td>23.6 to 27.4</td>
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<tr>
<td></td>
<td>2.35 to 2.83</td>
<td>3.31 to 4.01</td>
<td></td>
<td>2.4 to 2.8</td>
</tr>
<tr>
<td></td>
<td>17.0 to 20.5</td>
<td>24.0 to 29.0</td>
<td></td>
<td>17.4 to 20.2</td>
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**Top of bolt**

- M6
- M8
- M10
- M12
- M14
- M16

**Length**

0 10 20 30 40 50 60 70 (mm)

M18 M20
WARNING
To avoid serious injury:
• Make sure an approved bucket is attached before removing the loader from the tractor.
• For removing the loader, choose flat and hard ground, preferably concrete.
• If the ground surface is soft, place suitable planks on the ground for the bucket and stands.
• Before starting the engine or using the hydraulic control valve, always sit in the operator’s seat.
• Make sure the bucket and stands are at ground level.

1. Raise the boom until the stands can be rotated.
2. Stop the engine.
3. Remove the spring pins holding the stands to the boom.
4. Slide the stands outward and rotate them until the hole in the stand and pin on the boom are aligned. Then slide the stands inward and insert the spring pin as shown.

5. Start the engine.
6. Dump the bucket approximately 20 degrees.
7. Lower the boom and raise the front wheels slightly.

8. Stop the engine.
9. Remove the mounting pins from the loader main frame and hold them on the side frames.
10. Start the engine and run at idle. Slowly move the loader control lever to rollback position to raise the loader side frames up and out of the receivers of the main frames as shown.

11. Stop the engine.
12. Slowly release all hydraulic pressure by moving the hydraulic control lever in all directions.
13. Disconnect the 4 hoses with quick couplers at the control valve and place them to the hose guide as shown.
14. Place the protective caps and plugs on the quick coupler ends.

15. Start the engine and slowly back the tractor away from the loader.
STORING THE LOADER

1. Store the loader in a clean dry place.
2. Make sure the loader is properly supported.
3. Attach the protective plugs and caps to the couplers to protect them from dust.
4. Check all hydraulic hoses and connections. Repair or replace them if necessary.
5. Repair or replace any worn, damaged or missing parts.
6. Lubricate loader as described in "LUBRICATION" in Maintenance section.
7. Apply a coat of grease to all exposed cylinder rods and mounting pins to prevent rust.
8. Repaint worn or scratched parts.
REINSTALLING THE LOADER

WARNING
To avoid serious injury:
- Before starting the engine and operating the control valve, always sit in the operator’s seat.

1. Slowly drive the tractor between the loader side frames until the rear portion of both side frames touches the main frames as shown.

2. Stop the engine.
3. Connect the four hoses with couplers to the nipples on the control valve as indicated with color marks. Then connect the protective caps and plugs to each other.

4. Start the engine and run at idle.
5. Slowly move the loader control lever to dump position to lower the side frames into the main frames and engage the bosses of the side frames to the guide plates of the main frames. Then lift the weight off the front wheels with the loader - do not lift the wheels off the ground.

6. Stop the engine. Reinstall the mounting pins and insert the slide bar of the mounting pins to the hole of the side frame.
7. Start the engine.
8. Raise the boom until the stands can be rotated.
9. Stop the engine.
10. Store the stands to their original positions and secure them with the spring pins as shown.

11. Start the engine.
12. Lower the boom and level the bucket.
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