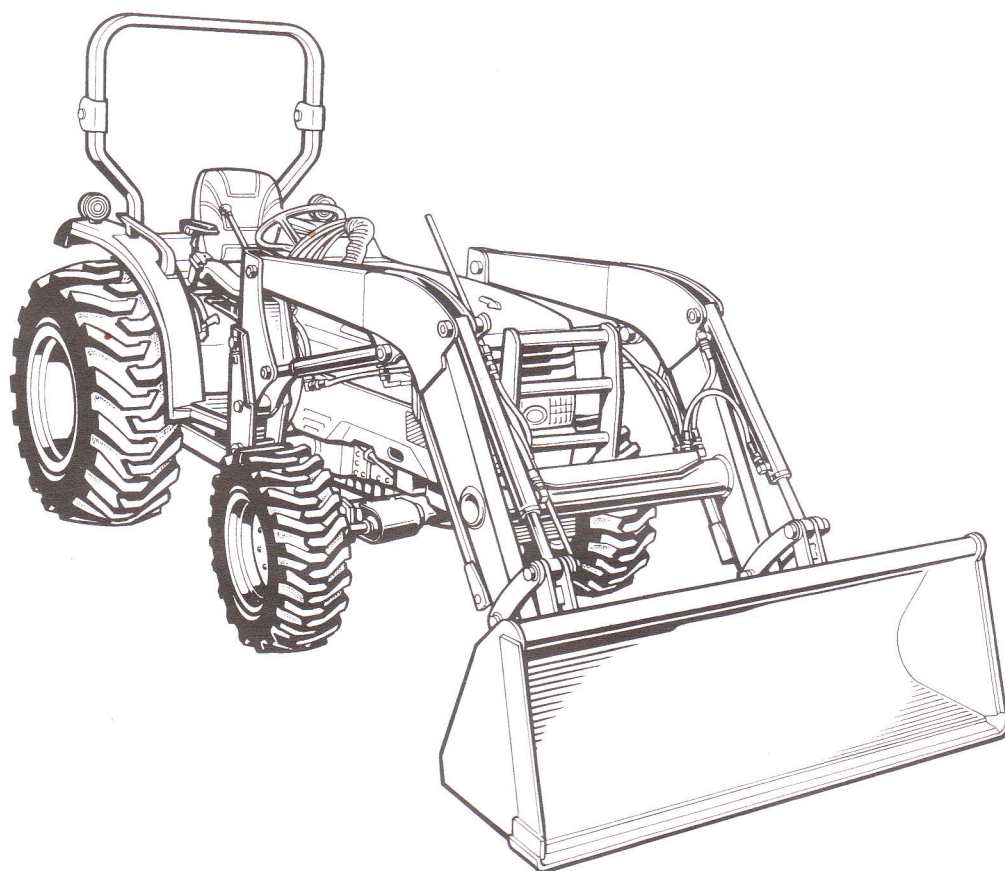


ASSEMBLY INSTRUCTIONS

MODELS LA513 • LA723 • LA853



READ AND UNDERSTAND THIS MANUAL
BEFORE ASSEMBLING

Kubota

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1. TO THE DEALER

- (1) This manual contains procedures intended to assist the dealer in unpacking and assembling the product before delivering to the customer.
The customer's purchase is based on confidence in both the product and your store. Observe the procedures in this manual to assemble and adjust equipment for your customer's safety and satisfaction. When fully assembled, check function of each part and feature.
- (2) The following safety alert symbol mark and indication are found throughout this manual in steps where particular attention is required so as to ensure your safety and to avoid product damage. Observe the instructions in these warnings where indicated.



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, may result in minor or moderate injury.

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

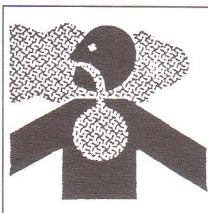
NOTE: Gives helpful information.

2. SAFETY

To prevent accidents, read through the following items before starting work, and always regard safety when working. It is your responsibility to ensure your safety on the job.

(1) Preparations

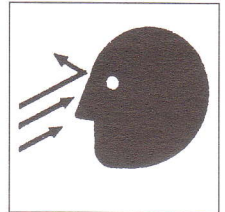
1. Select a work site which is level, has sufficient space, and is not close to dangerous objects.
2. Avoid poorly ventilated rooms. Asphyxiation from exhaust fumes is always a possibility that accompanies running an engine.



3. Working clothes which may be pinched or caught in the equipment must not be worn. Loose clothing can cause serious injury or death.



4. Always wear a mask and protective goggles during work when dust or flying debris may be thrown by equipment.



(2) Assembly and adjustments

1. Before assembling equipment, read the assembly instructions for the product to become familiar with the equipment and procedures.

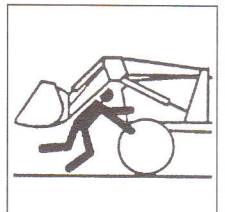


2. Use only adequate and required equipment, tools and instruments (e.g. torque wrench, battery hydrometer and etc.).

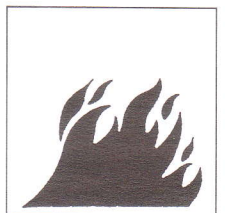
3. Set the parking brake and block wheels to prevent machine (or tractor) movement.

4. Lower the attachment or implement to the ground before assembling or adjusting equipment.

5. Before working under suspended or raised equipment, support the equipment or attachment to prevent the machine from falling or moving out of place.

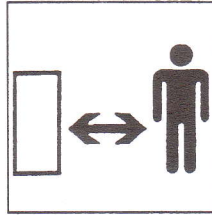


6. Keep fire from cigarettes, matches or other ignition sources away from fuel, oil, antifreeze and other flammable materials.



(3) After assembly check

1. Before operating or test driving the equipment, read and understand the operator's manual.
2. Once the equipment is fully assembled, select a safe place for a test run. Prevent bystanders from approaching the equipment.

**DANGER**

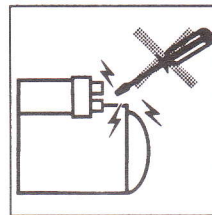
To avoid personal injury or death:

- Do not start engine or operate levers from anywhere other than the seat.

**DANGER**

To avoid personal injury:

- Do not bypass-start the equipment. Short circuiting the starter terminal runs the risk that the equipment will start operating or moving unexpectedly.




3. UNPACKING AND CHECKING PARTS

3.1 UNPACKING WOODEN CRATE

- (1) Cutting metal bands (if two are banded together). Metal bands hold the two crates together as one. Cut these bands and separate the crates.
- (2) Unpacking the crates
 1. Hook a hoist to the 4 corners of the crate and raise the hoist cable until taut. This serves to prevent the upper part of the crate from striking the loader when cut.
 2. Saw the crate as indicated in the figure on the right.

IMPORTANT:

- Sawing outside the indicated area may damage the loader or accessory parts.
- Be sure that the crate is free of other obstructions (e.g. nails, staples and etc.).

3. Raise the upper part of crate and remove from the immediate area.
4. Remove the remaining slats from the crate. These are indicated by the oblique lines in Figure1..... 

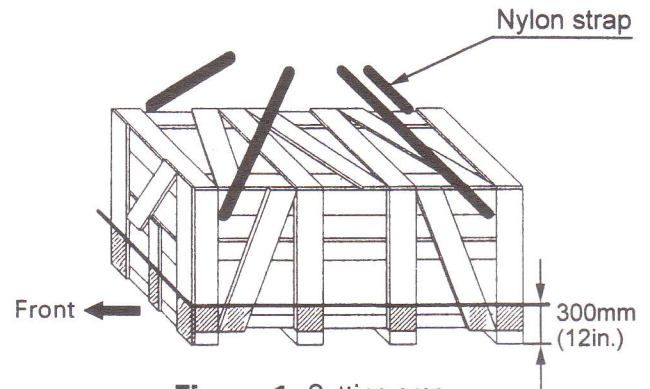
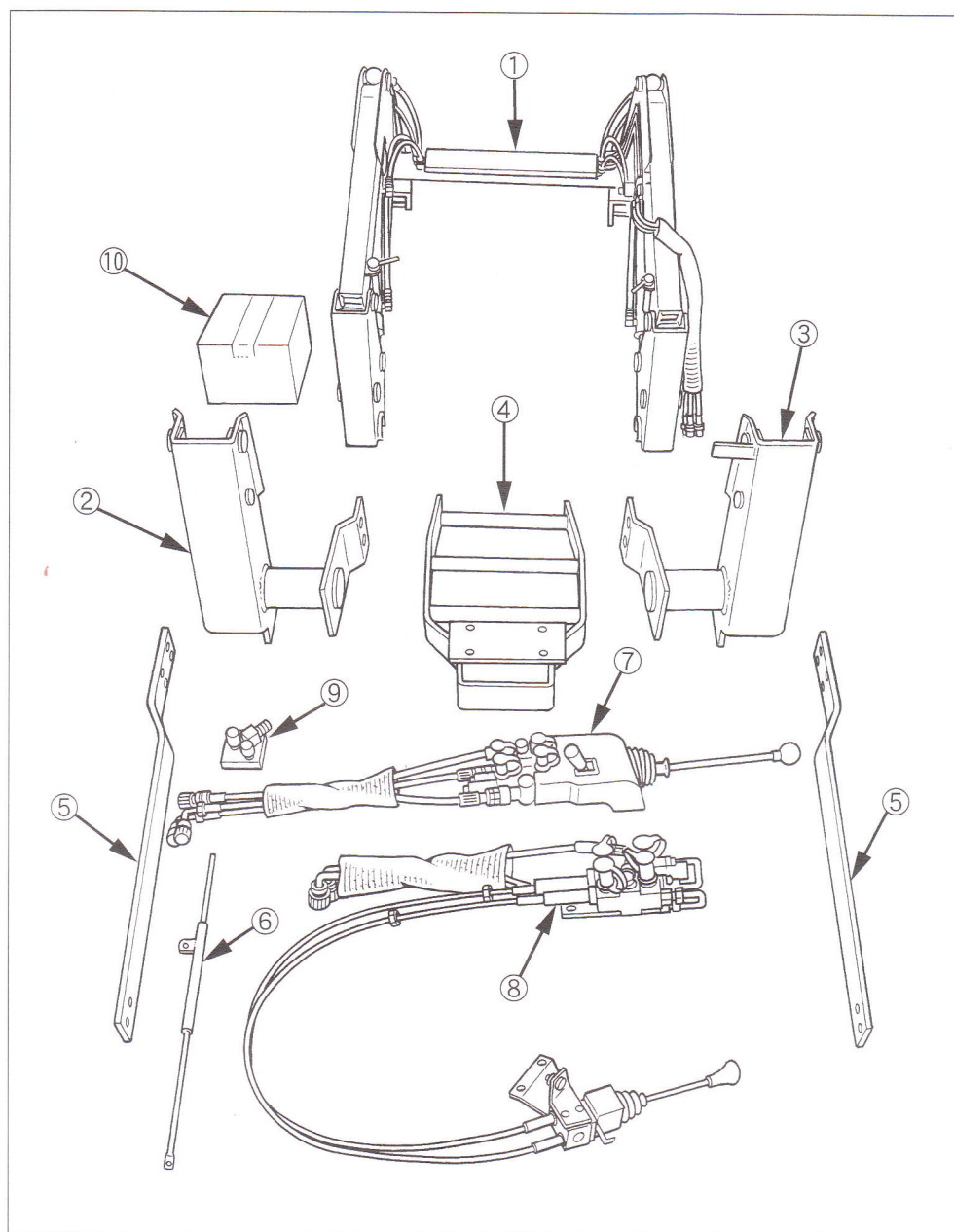


Figure 1 : Cutting area of the crate

3.2CHECKING PARTS

Remove all loader components. Referring to the illustration, insure that all components have been included.



- (1) Boom assembly
- (2) Main frame LH
- (3) Main frame RH
- (4) Front guard
- (5) Sub frame
- (6) Level indicator
- (7) Control valve assembly
[L2203,L2213]
- (8) Control valve assembly
[L2223]
- (9) Hydraulic block
[L2203,L2213,L2223]
- (10) Parts Box

4. TRACTOR PREPARATION

1. Remove the mid mount mower from the tractor if equipped.
2. Locate the tractor on a firm level surface.
Lower the implement to the ground, set the parking brake and stop the engine.
3. Set front tread as follows.

	Front Tread	
	2WD	4WD
L3130 L3830	1310mm (51.6 in)	Front axle is not adjustable.

IMPORTANT:

- Setting tread wider than recommended may cause premature failure of front axle components due to excessive stress.
4. For better stability, set the rear tread as follows depending on the requirements of the work being done.

	Rear Tread
L3130 L3430	1200mm (47.2 in.) or more
L3830 L4330 L4630	1280mm (50.6 in.) or more
L5030	1325mm (52.2 in.) or more

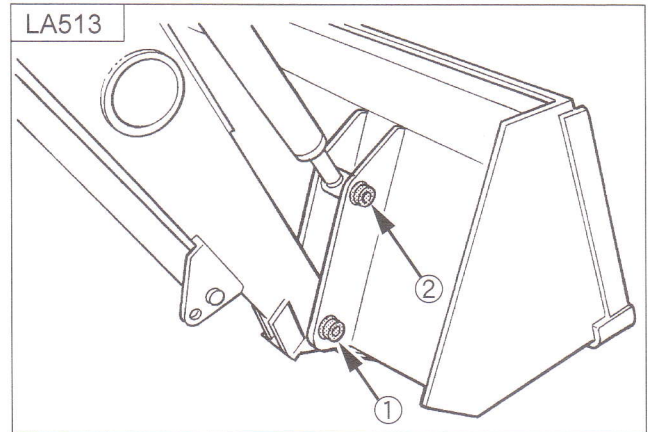
5. ASSEMBLY

IMPORTANT:

- Do not tighten any bolts firmly until most components are attached to the tractor.
- Before finally tightening all mounting hardware, start the engine and apply down pressure to the bucket until the loader takes the tractor weight off the front wheels - do not lift the wheels off the ground. Make sure that the mounting pins can be rotated easily. Torque all bolts and nuts in this position.
- To avoid damage to hoses, adjust all connections to route hoses away from sharp edges.
- Assemble on the surface preferably concrete.

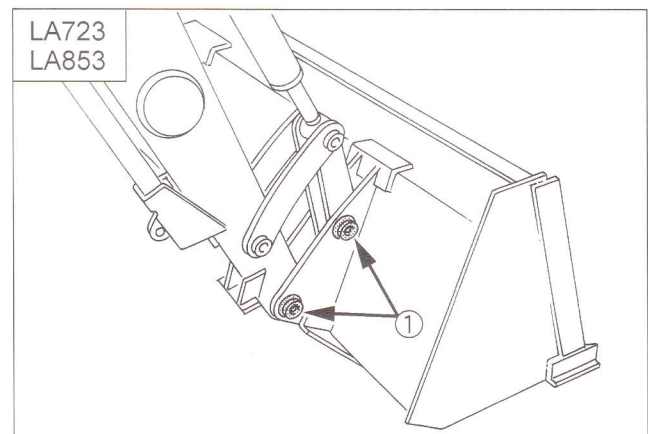
■ Boom Assembly

1. Attach the bucket to the boom and bucket links as shown.



- (1) 3-Pin3
4-M6X55 bolts
4-M6 locking nuts

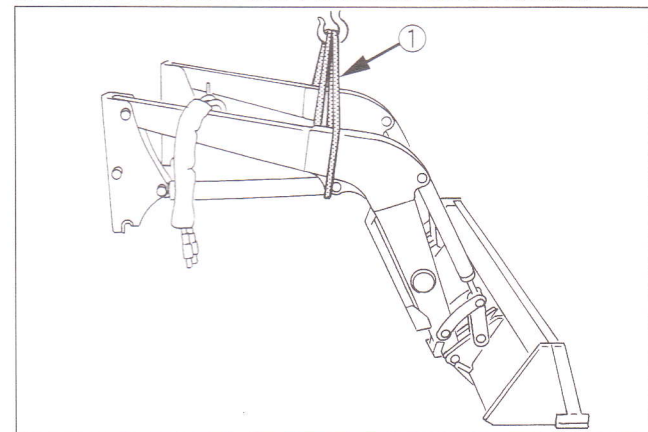
- (2) 1-Pin8



- [LA723]
(1) 4-Pin3
4-M6X55 bolts
4-M6 locking nuts

- [LA853]
(1) 4-Pin3
4-M8X60 bolts
4-M8 locking nuts

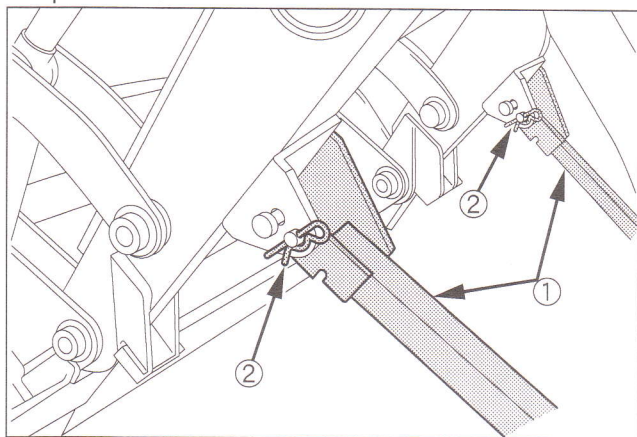
2. Raise the boom until the stands can be rotated.



- (1) Nylon strap

3. Remove the spring pins holding the stands to the boom.

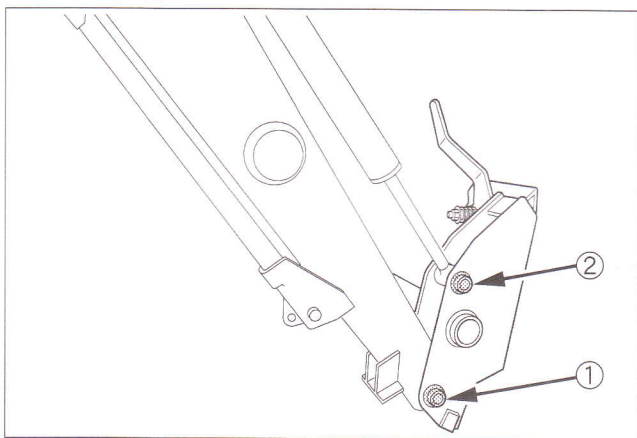
4. Rotate the stands until the pin on the stand and hole in the boom are aligned.
Then slide the stands outward and insert the spring pin as shown.



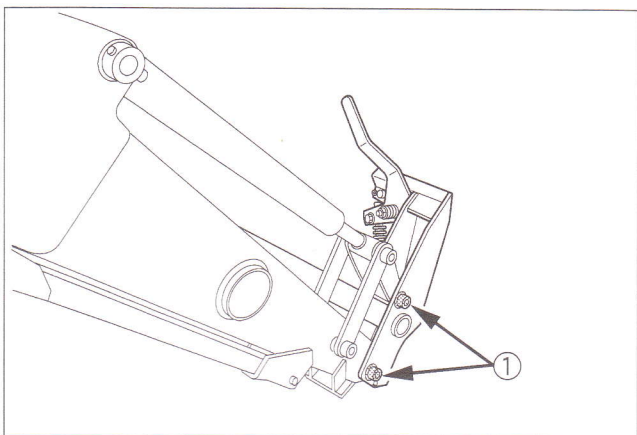
- (1) Stand
(2) Spring pin

■ Boom Assembly with Quick Hitch (Option)

1. Attach the quick hitch to the boom and bucket links as shown.

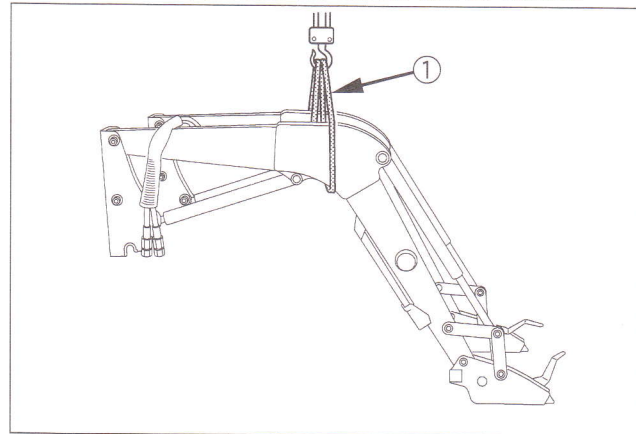


- (1) 3-Pin3
4-M6X55 bolts
4-M6 locking nuts
- (2) 1-Pin8



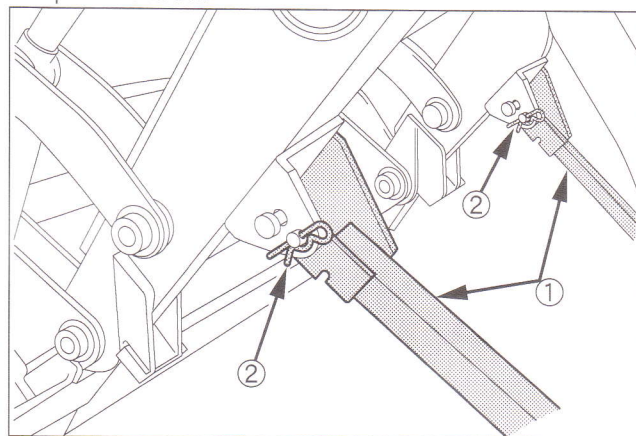
- [LA723]
(1) 4-Pin3
4-M6X55 bolts
4-M6 locking nuts
- [LA853]
(1) 4-Pin3
4-M8X60 bolts
4-M8 locking nuts

2. Raise the boom until the stands can be rotated.



- (1) Nylon band

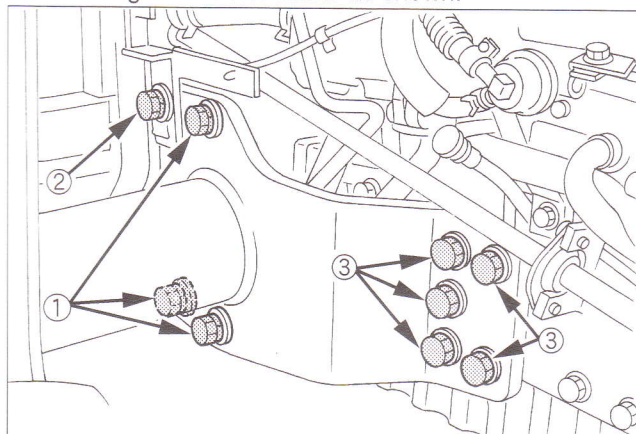
3. Remove the spring pins holding the stands to the boom.
4. Rotate the stands until the pin on the stand and hole in the boom are aligned.
Then slide the stands outward and insert the spring pin as shown.



- (1) Stand
(2) Spring pin

■ Main Frame

1. Remove plastic plugs and any excess paint from tractor body bolt locations.
2. Attach the main frame LH and RH to the flywheel housing and tractor frame as shown.



[LA513]

- | | |
|------------------------------|-----------------------------|
| (1) 7-M16X40 bolts | (2) 1-M16X45 bolt |
| 7-M16 spring lock washers | 1-M16 spring lock washer |
| 7-5/8 hardened plain washers | 1-5/8 hardened plain washer |
| (3) 8-M16X40 bolts | |
| 8-M16 spring lock washers | |

[LA723]

- | | |
|------------------------------|-----------------------------|
| (1) 7-M16X45 bolts | (2) 1-M16X50 bolt |
| 7-M16 spring lock washers | 1-M16 spring lock washer |
| 7-5/8 hardened plain washers | 1-5/8 hardened plain washer |
| (3) 8-M16X45 bolts | |
| 8-M16 spring lock washers | |

[LA853]

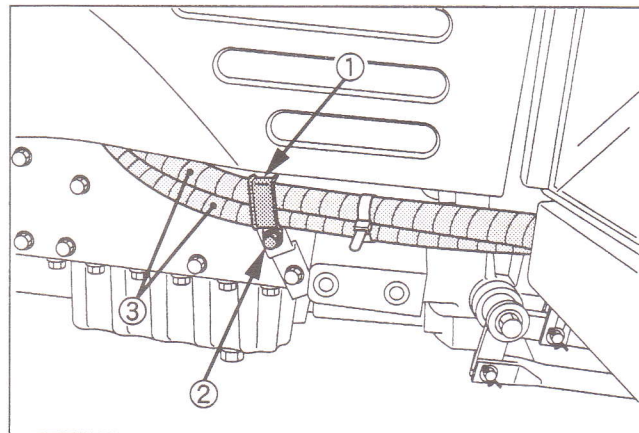
- | | |
|------------------------------|-----------------------------|
| (1) 7-M16X45 bolts | (2) 1-M16X50 bolt |
| 7-M16 spring lock washers | 1-M16 spring lock washer |
| 7-5/8 hardened plain washers | 1-5/8 hardened plain washer |
| (3) 10-M16X45 bolts | |
| 10-M16 spring lock washers | |

Tightening torque : 23kgf-m (166 ft-lbs)

◆Re-route the hoses position.

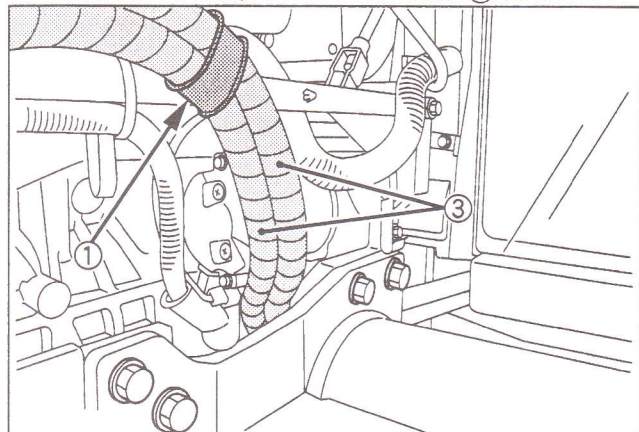
(LA513, LA723 for L3430 CAB type)

- Before the main frame of front loader is attached to the tractor, remove the clamp ① from the tractor frame.



- (1) Clamp
(2) Bolt, Flange (M8X1.25X16)
(3) Hose

- When the main frame of front loader is attached to the tractor frame, re-route the hoses ③ as shown.



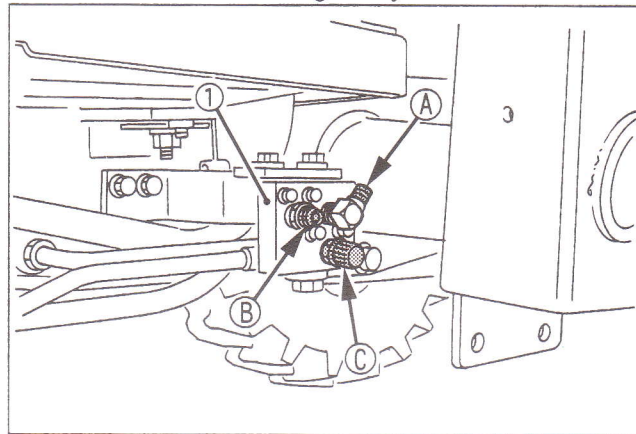
- (1) Clamp (3) Hose

■Hydraulic Line

- Remove the cover of the hydraulic block on the tractor.
- Install the loader hydraulic block to the tractor hydraulic block.
Tightening torque : 2.35 kgf-m (17 ft-lbs)

NOTE:

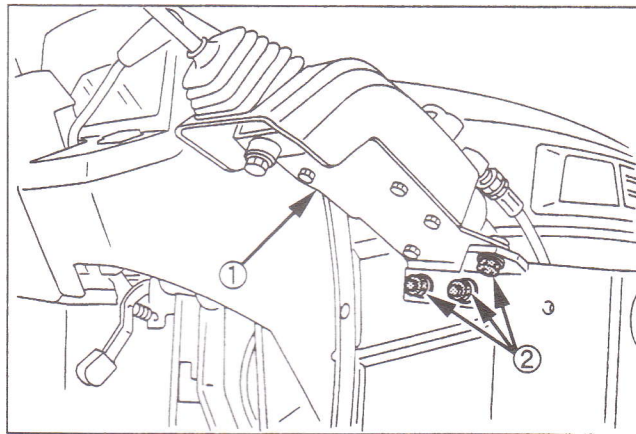
- Make sure install the O-RINGS at the hydraulic block cover.
- Reuse the bolts fastening the hydraulic block cover.



- (1) Hydraulic block (A) Pump port
(B) Power beyond port
(C) Tank port

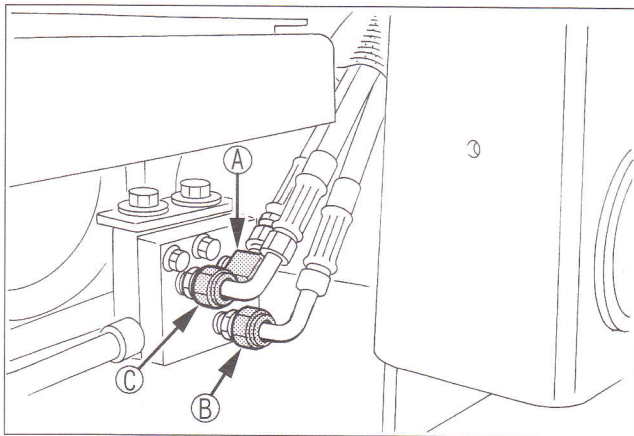
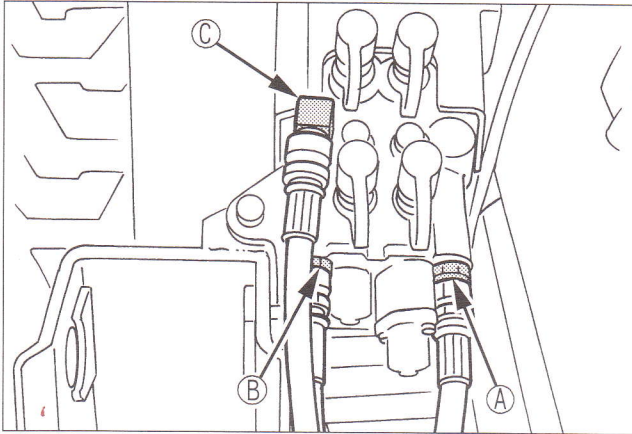
Standard valve type

- Install the control valve assembly to the main frame RH as shown.



- (1) Control valve assembly
(2) 3-M12X30 bolts
3-M12 nuts
3-M12 spring lock washers

4. Connect the hose from "**Pump port**" on the control valve assembly to "**Pump port**" on the hydraulic block.
5. Connect the hose from "**Tank port**" on the control valve assembly to "**Tank port**" on the hydraulic block.
6. Connect the hose from "**Power beyond port**" on the control valve assembly to "**Power beyond port**" on the hydraulic block.



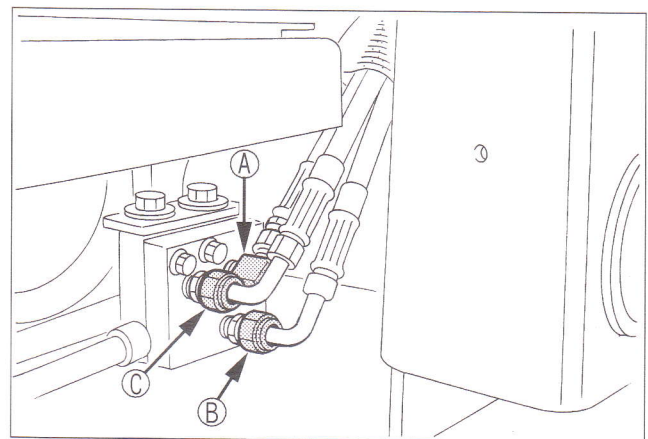
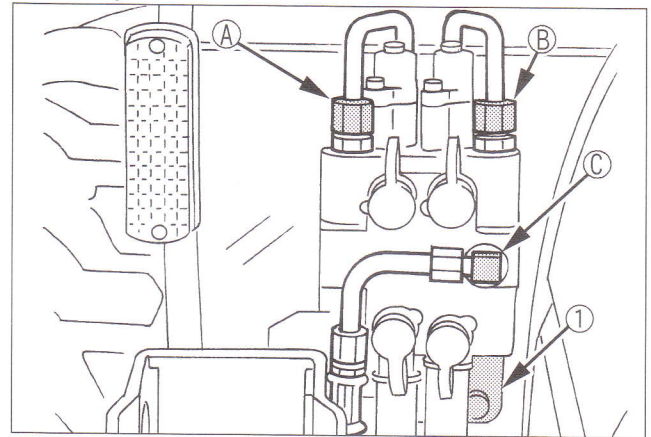
(A) Pump port
(B) Tank port
(C) Power beyond port

IMPORTANT:

- Hoses pre-installed on the control valve assembly are not securely tightened to ease installation of hoses to hydraulic block. Be sure to securely tighten all hose fittings after installing.
- Turn the hose fittings so the hoses clear the tractor and tractor parts.
- Clamp three hoses and sleeve in the middle with plastic tie.

Remote valve type

3. Install the control valve assembly to the main frame RH as shown.
4. Connect the hose from "**Pump port**" on the control valve assembly to "**Pump port**" on the hydraulic block.
5. Connect the hose from "**Tank port**" on the control valve assembly to "**Tank port**" on the hydraulic block.
6. Connect the hose from "**Power beyond port**" on the control valve assembly to "**Power beyond port**" on the hydraulic block.



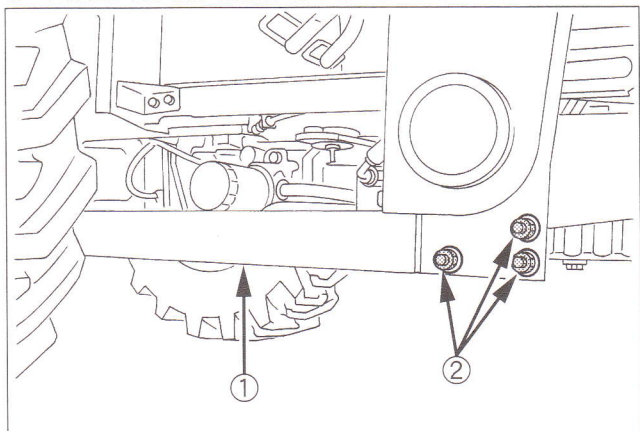
(1) Control valve assembly
2-M12X30 bolts
2-M12 nuts
2-M12 spring lock washers
(A) Pump port
(B) Tank port
(C) Power beyond port

IMPORTANT:

- Hoses pre-installed on the control valve assembly are not securely tightened to ease installation of hoses to hydraulic block. Be sure to securely tighten all hose fittings after installing.
- Turn the hose fittings so the hoses clear the tractor and tractor parts.
- Clamp three hoses and sleeve in the middle with plastic tie.

■ Sub Frame

1. Attach the sub frame to the main frame as shown.



(1) Sub frame

[LA513]

(2) 6-M16 x 50 bolts

6-M16 spring lock washers

6-5/8 hardened plain washers

[LA723, LA853]

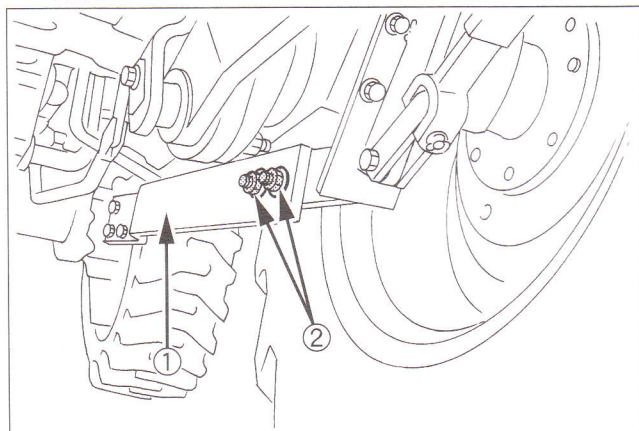
(2) 6-M16 x 55 bolts

6-M16 spring lock washers

6-5/8 hardened plain washers

tightening torque: 23kgf-m(166ft-lbs)

2. Attach the rear of sub frames to the rear brackets as shown.



(1) Sub frame

[LA513]

(2) 4-M16 x 50 bolts

4-M16 spring lock washers

4-5/8 hardened plain washers

[LA723, LA853]

(2) 4-M16 x 55 bolts

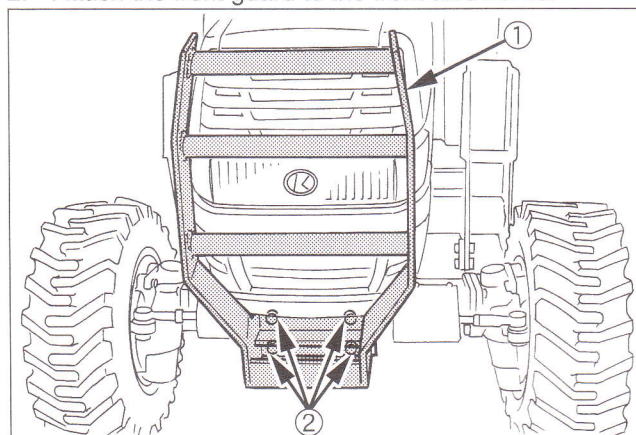
4-M16 spring lock washers

4-5/8 hardened plain washers

tightening torque: 23kgf-m(166ft-lbs)

■ Front Guard

1. Remove the front bumper from the front axle frame, if equipped.
2. Attach the front guard to the front axle frame.



(1) Front guard

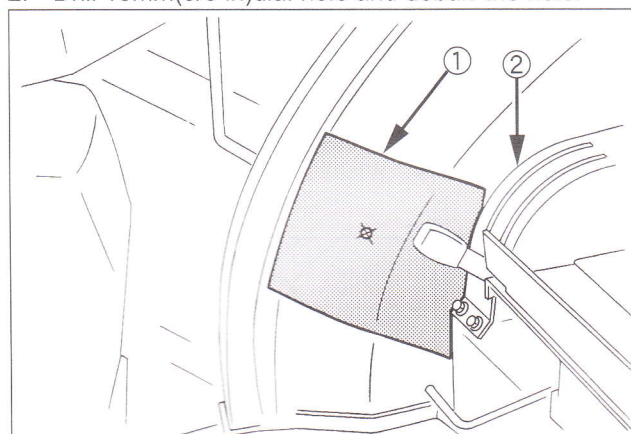
(2) 4-M14 x 1.5-40 bolts

4-9/16 spring lock washers

Remote valve type

■ Controller Assembly

1. Attach template to right hand fender, and align with lever guide of tractor. Mark the mounting hole. Use attached template.(see page 11)
2. Drill 10mm(3/8 in)dia. hole and deburr the hole.

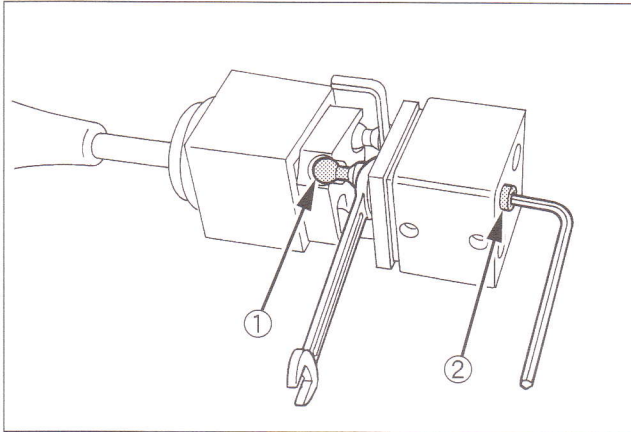


(1) Template

(2) Lever guide

3. After installing the controller temporarily, make the rest of the holes aligning with the holes on the controller stays.

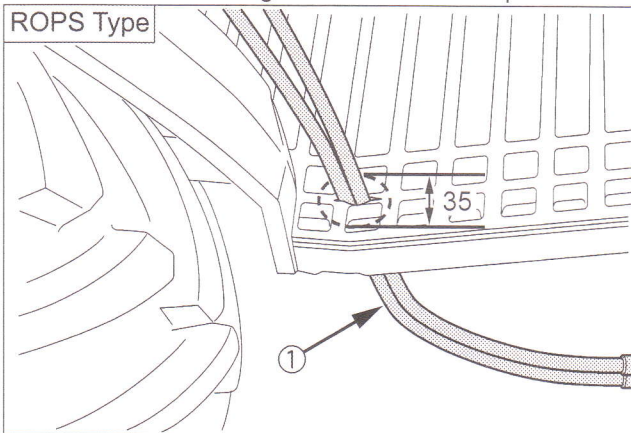
4. Slide the rubber boot up the control lever to expose the cable ends. Disassemble the control lever and cable ends from the controller by loosening the socket head cap screw at the control lever pivot.



- (1) Control lever pivot
(2) Socket head cap screw

5. Make a hole in the step as shown.

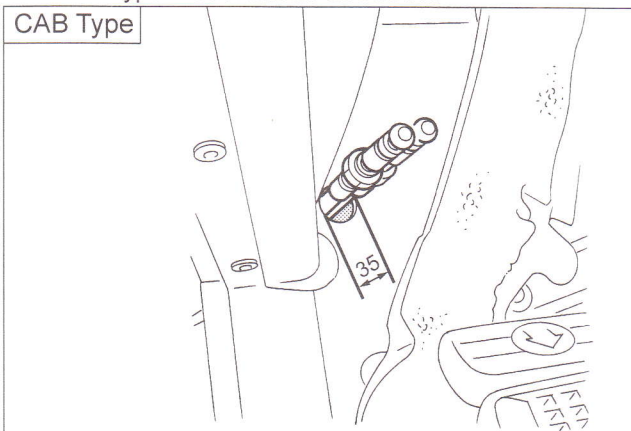
Route cables through the holes in the step as shown.



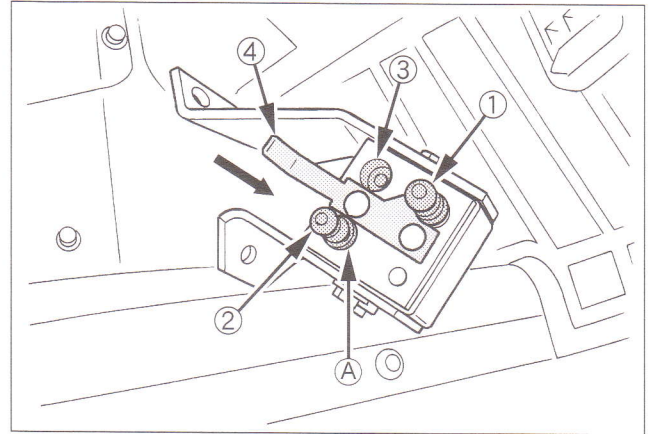
- (1) Control cables

NOTE:

- Make a slit in the floor mat for the control cables on ROPS type model tractor as shown.

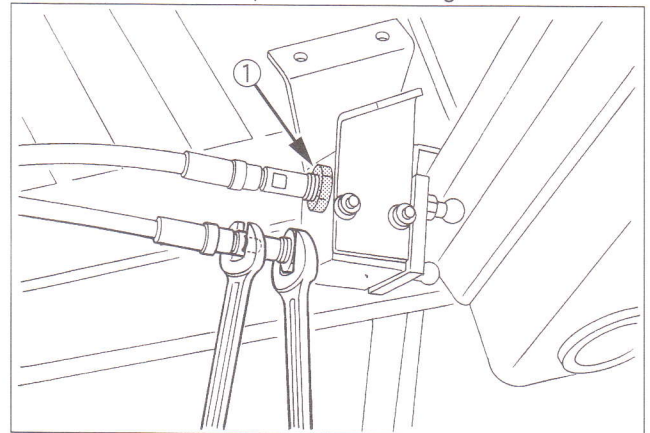


6. Screw the cables into the controller and lock the control lever in the neutral position.



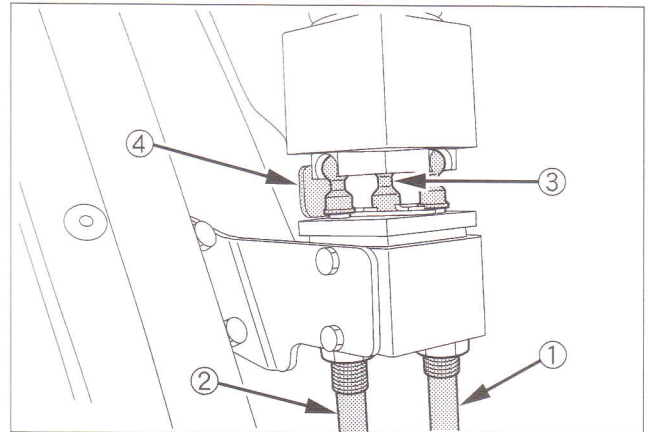
- (1) Cable with blue tape for boom section (A) "Groove"
(2) Cable with red tape for bucket section
(3) Control lever pivot position
(4) Control lever

7. Lock the cable in place with the large lock nuts.



- (1) Lock nuts

8. Re-attach the control lever as shown.

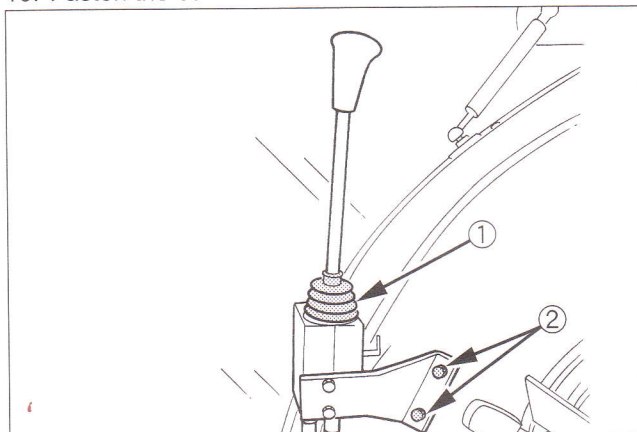


- (1) Cable with blue tape for boom section
(2) Cable with red tape for bucket section
(3) Control lever pivot
(4) Lock lever

NOTE:

- To aid in assembly of the control lever, install the boom section cable end first and the bucket section cable end second. Then, connect the control lever to control lever pivot.

- Tighten the socket head cap screw at the control lever pivot.
- Fasten the control stand to the fender.



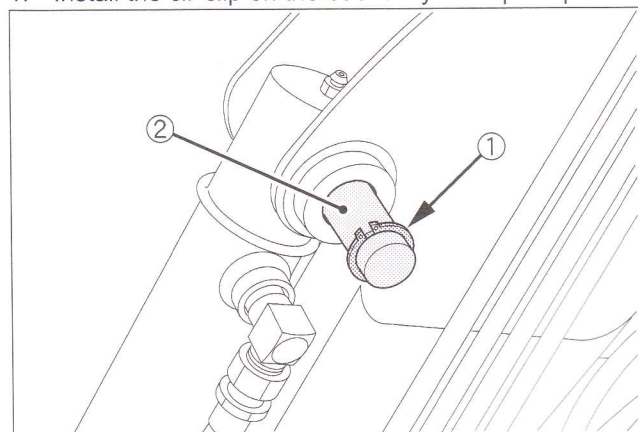
- Control stand
- 3-M8 x 25 bolts, 3-M8 nuts
3-M8 plain washers
3-M8 spring lock washers

IMPORTANT:

- Install the plain washers and spring lock washers on the tire side of the fender.

Bucket Level Indicator

- Install the cir-clip on the bucket cylinder pivot pin.

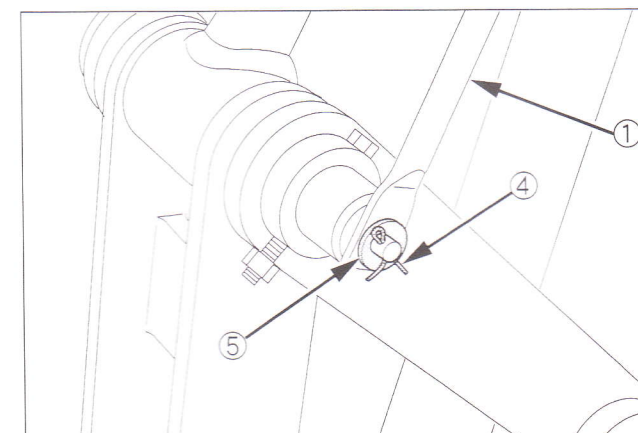
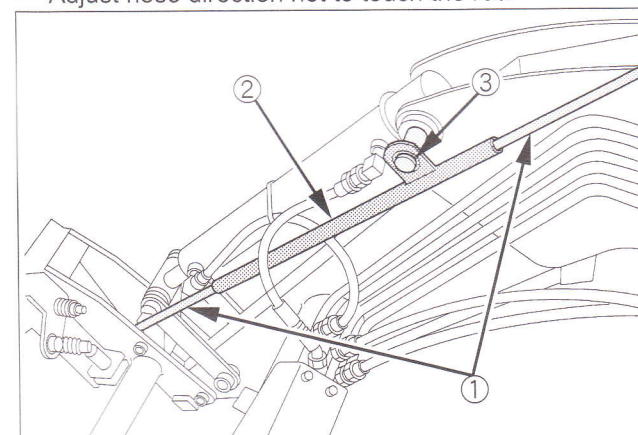


- Cir-clip
- Bucket pivot pin

- Install guide, rod, and cir-clip as shown.

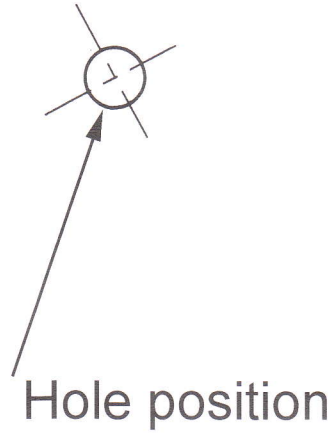
NOTE:

- Adjust hose direction not to touch the rod.



- Rod
- Guide
- Cir-clip
- Split pin
- M8 plain washer

6.TEMPLATE FOR CONTROLLER ASSEMBLY



Align template with
lever guide of tractor

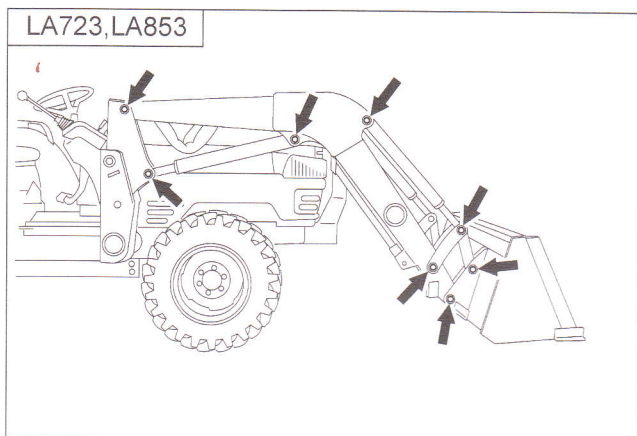
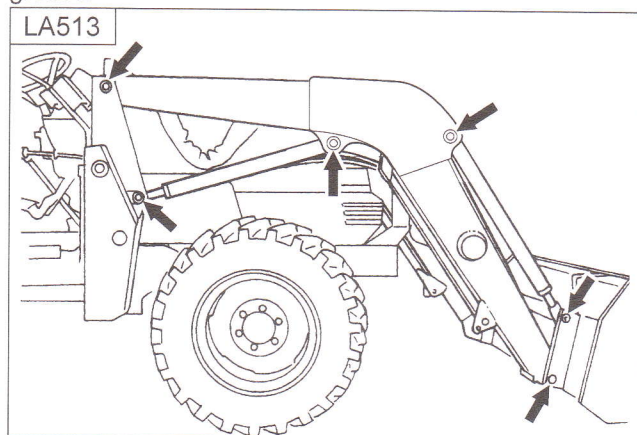


CUT

7. PRE-OPERATION CHECK

■ Lubrication

Lubricate all grease fittings with SAE multipurpose grease.



■ Transmission Fluid

Check 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.

IMPORTANT:

- To check tractor transmission fluid level, lower the bucket to the ground and lower the 3 point hitch.

8. ESTIMATED ASSEMBLY TIME

Refer to the following table for the estimated assembly time to open the crate and assemble the loader.




Assembly times on the table are just reference under the average conditions with following assumption.

- (1) Assembly by one worker.
- (2) Following tools and equipment are prepared.
 1. Chain hoist or crane.
 2. Impact wrench, Ratchet wrench, Torque wrench, Socket wrench, Spanner wrench.
 3. Nylon strap.

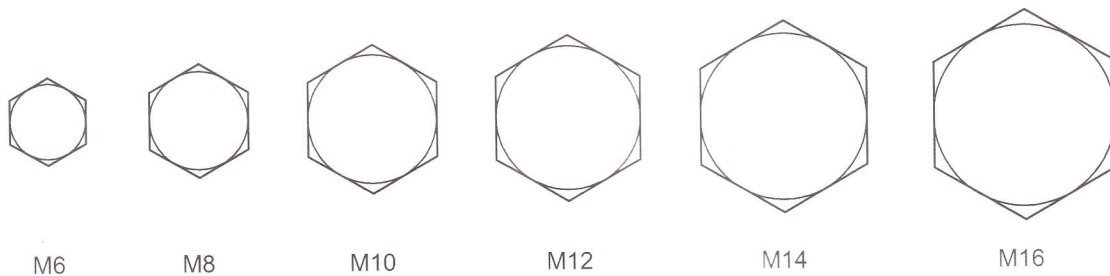
	Standard valve type Loader	Remote valve type Loader
LA513 LA723 LA853	1.5 hour	1.9 hour

9.TIGHTENING TORQUE OF BOLTS AND NUTS

General torque specification

American standard screws, bolts and nuts with UNC or UNF threads			Metric cap screws 	
SAE grade No.	SAE GR.5 	SAE GR.8 	property class	8.8 Approx. SAE GR 5
1/4 (N-m) (kgf-m) (ft-lbs)	11.7 to 15.8 1.19 to 1.60 8.6 to 11.6	16.3 to 19.8 1.66 to 2.02 12.0 to 14.6	M6 (N-m) (kgf-m) (ft-lbs)	9.8 to 11.2 1.0 to 1.1 7.2 to 8.3
5/16 (N-m) (kgf-m) (ft-lbs)	23.1 to 27.8 2.35 to 2.84 17.0 to 20.5	32.5 to 39.3 3.31 to 4.01 24.0 to 29.0	M8 (N-m) (kgf-m) (ft-lbs)	23.6 to 27.4 2.4 to 2.8 17.4 to 20.2
3/8 (N-m) (kgf-m) (ft-lbs)	47.5 to 57.0 4.84 to 5.82 35.0 to 42.0	61.0 to 73.2 6.22 to 7.47 45.0 to 54.0	M10 (N-m) (kgf-m) (ft-lbs)	48.1 to 55.8 4.9 to 5.7 35.5 to 41.2
1/2 (N-m) (kgf-m) (ft-lbs)	108.5 to 130.2 11.07 to 13.29 80.0 to 96.0	149.2 to 179.0 15.22 to 18.27 110.0 to 132.0	M12 (N-m) (kgf-m) (ft-lbs)	77.5 to 90.1 7.9 to 9.2 57.2 to 66.5
9/16 (N-m) (kgf-m) (ft-lbs)	149.2 to 179.0 15.22 to 18.27 110.0 to 132.0	217.0 to 260.4 22.14 to 26.57 160.0 to 192.0	M14 (N-m) (kgf-m) (ft-lbs)	124 to 147 12.6 to 15.0 91.2 to 108
5/8 (N-m) (kgf-m) (ft-lbs)	203.4 to 244.1 20.75 to 24.91 150.0 to 180.0	298.3 to 358.0 30.44 to 36.53 220.0 to 264.0	M16 (N-m) (kgf-m) (ft-lbs)	196 to 225 20.0 to 23.0 145 to 166

Top of bolt



Length





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