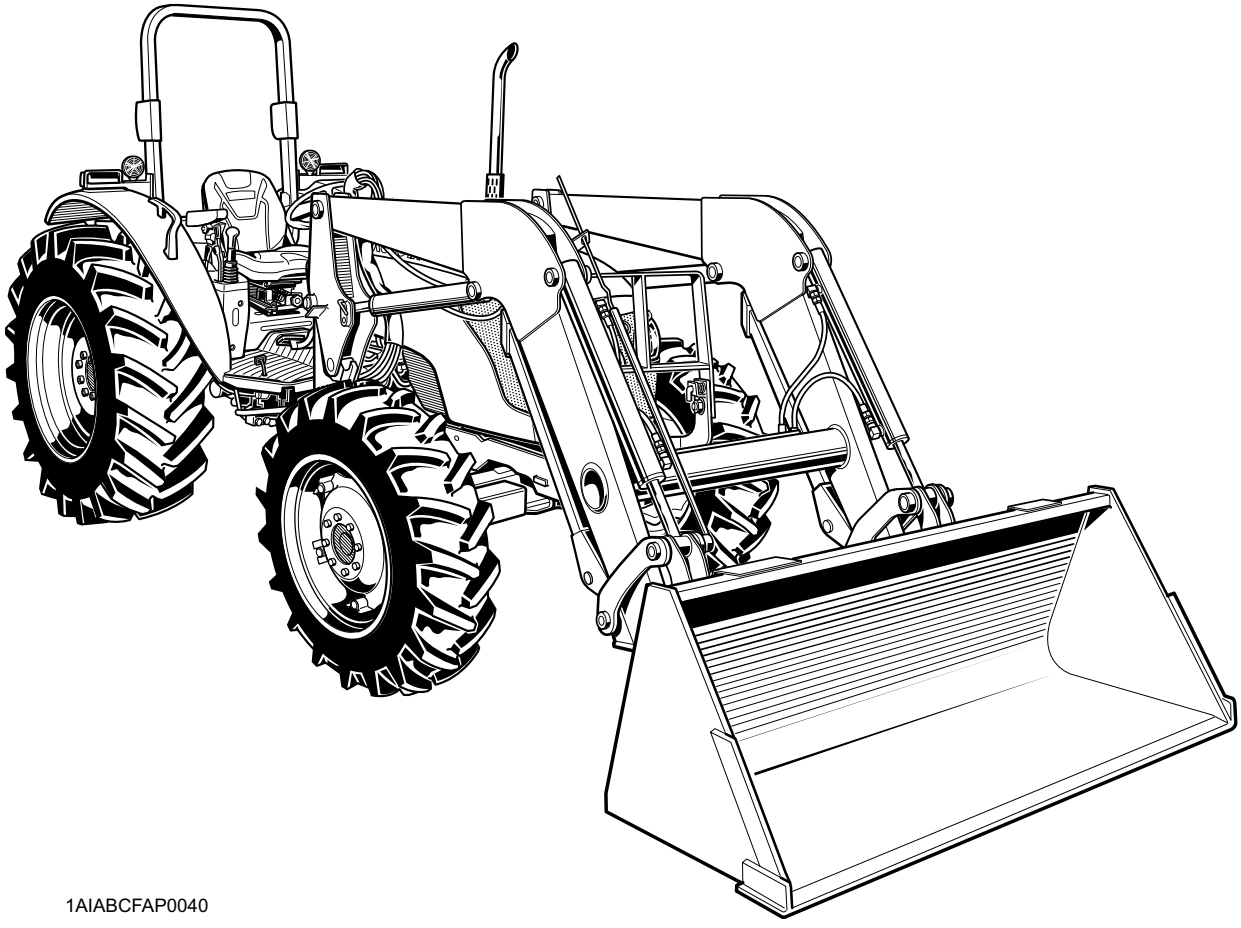
ASSEMBLY INSTRUCTIONS

MODEL LA1154



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READ AND UNDERSTAND THIS MANUAL BEFORE ASSEMBLING

Kubota

AT. F. 5-5. -. K. Code No. 7J437-6915-5 English

CONTENTS

ASSEMBLY INSTRUCTIONS

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 marks and indications 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, 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

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.


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


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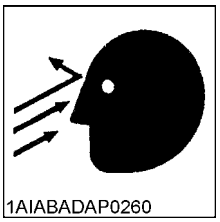
   (4) Always wear a mask and protective goggles during work when dust or flying debris may be thrown by equipment.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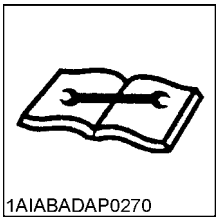
2. Assembly and adjustments
   (1) Before assembling equipment, read the assembly instructions for the product to become familiar with the equipment and procedures.
   (2) Use only adequate and required equipment, tools and instruments (e.g. torque wrench, battery hydrometer and etc.).
   (3) Set the 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.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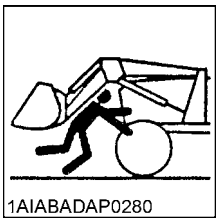
   (5) Before working under suspended or raised equipment, support the equipment or attachment and utilize the valve lock to prevent the machine from falling or moving out of place.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   (6) Keep fire from cigarettes, matches or other ignition sources away from fuel, oil, antifreeze and other flammable materials.


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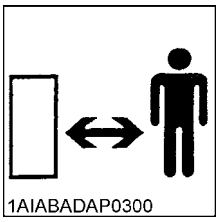
3. After assembly check
   (1) Before operating or test driving the equipment, read and understand the operator's manual.
   (2) Once the equipment is fully assembled, select a safe place for a test run. Prevent onlookers from approaching the equipment.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DANGER

To avoid personal injury or death:

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


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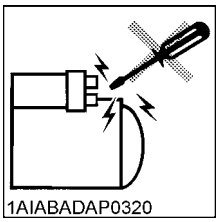
DANGER

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.**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UNPACKING AND CHECKING PARTS

■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 figure 1.

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 the crate and remove from the immediate area.
   (4) Remove the remaining slats from the crate. These are indicated by the oblique lines in **Figure 1**...

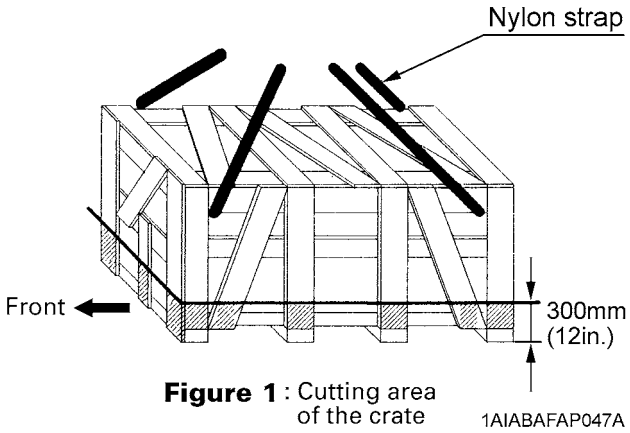
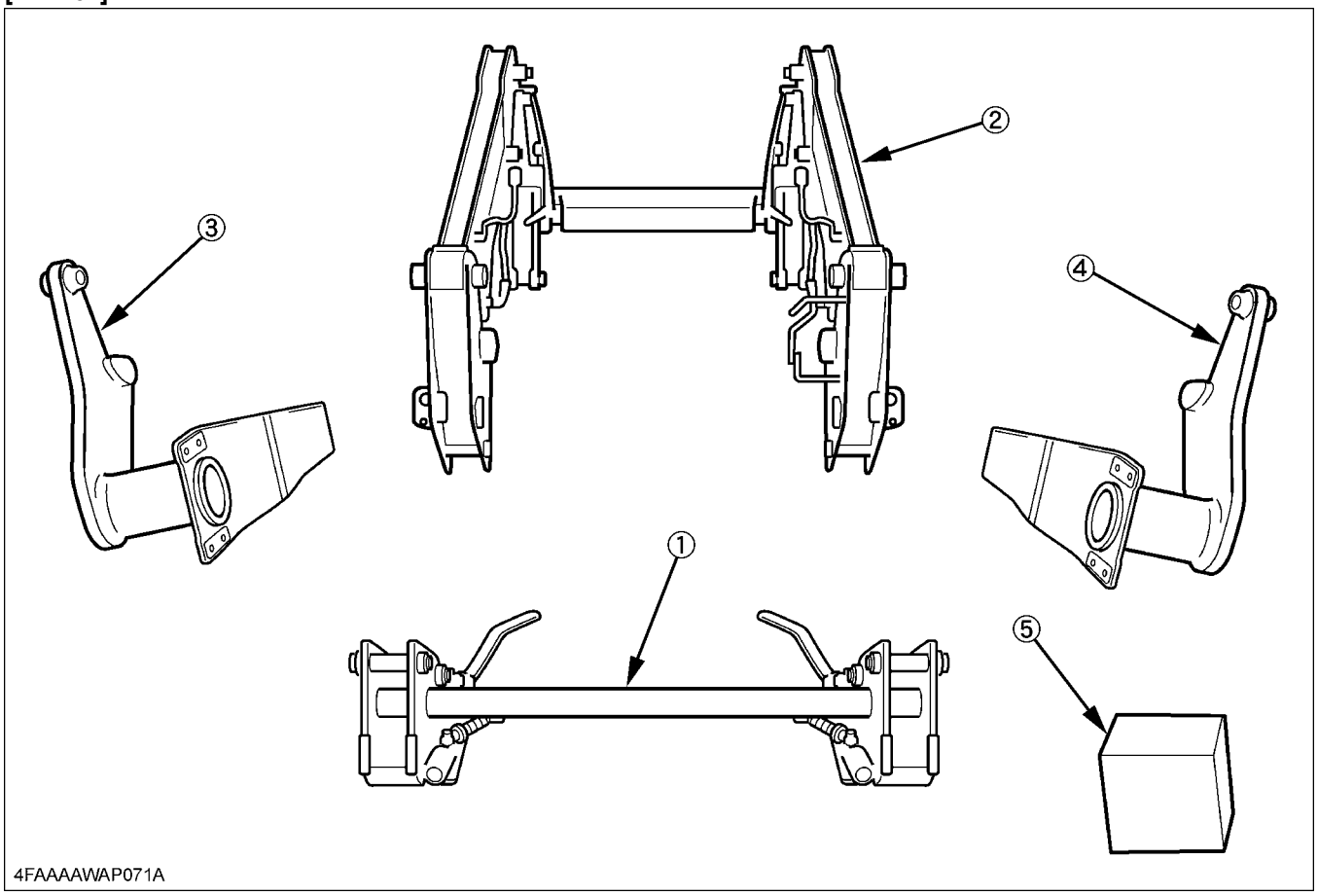


Figure 1 : Cutting area of the crate

■Checking Parts

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

[LA1154]



(1) Quick hitch
(2) Boom assembly
(3) Main frame LH
(4) Main frame RH
(5) Parts box

[Contents of parts box]

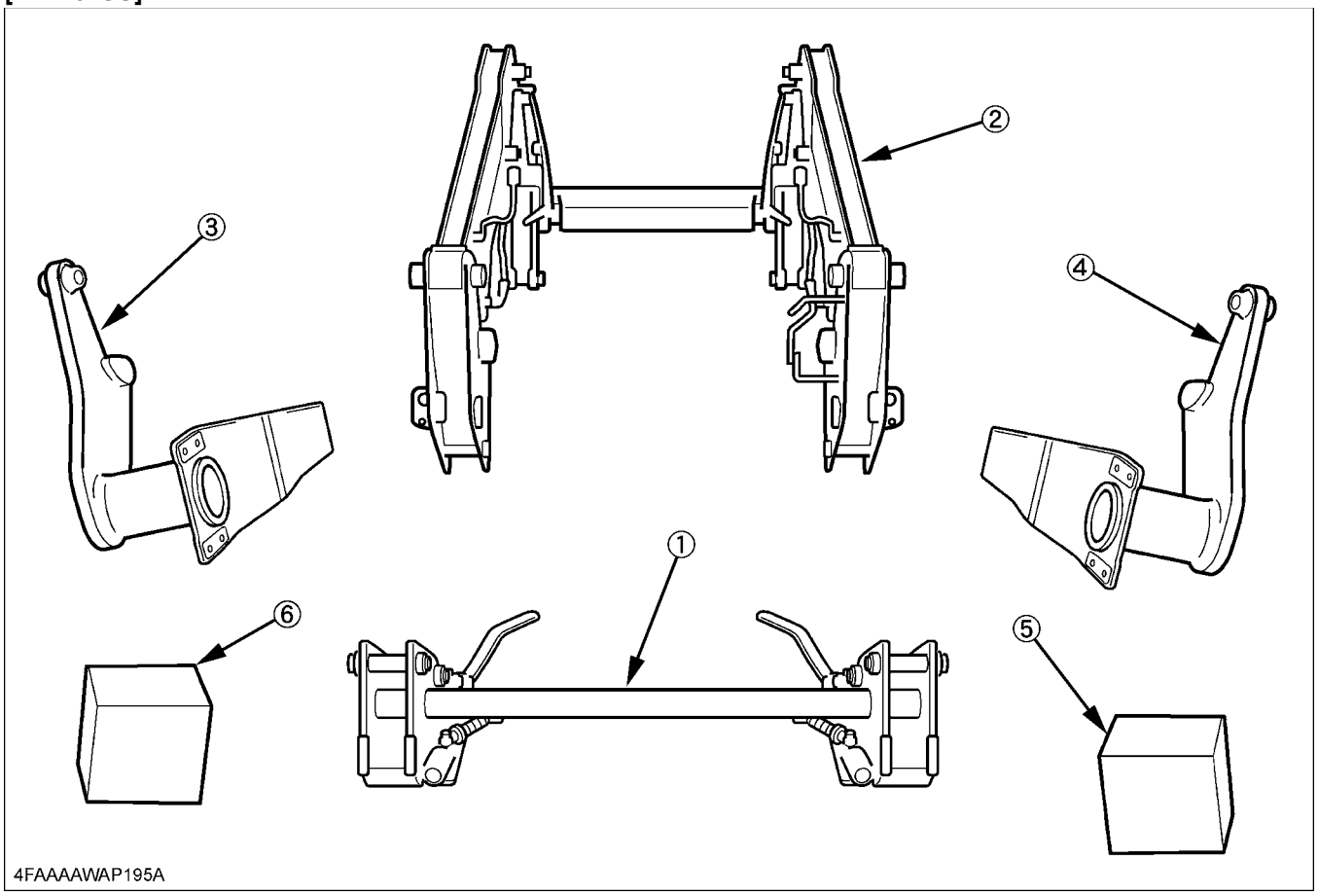
2-pin mounts
16-M20 x 60 bolts
16-M20 spring lock washers
16-3/4 hardened plain washers
Operator's manual
Instruction manual

NOTE :

- For valve kit, 3rd function kit, accumulator kit and front guard kit, check the checklists included in each kit.

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

[LA1154SU]



(1) Quick hitch
(2) Boom assembly
(3) Main frame LH
(4) Main frame RH
(5) Parts box
(6) Valve box

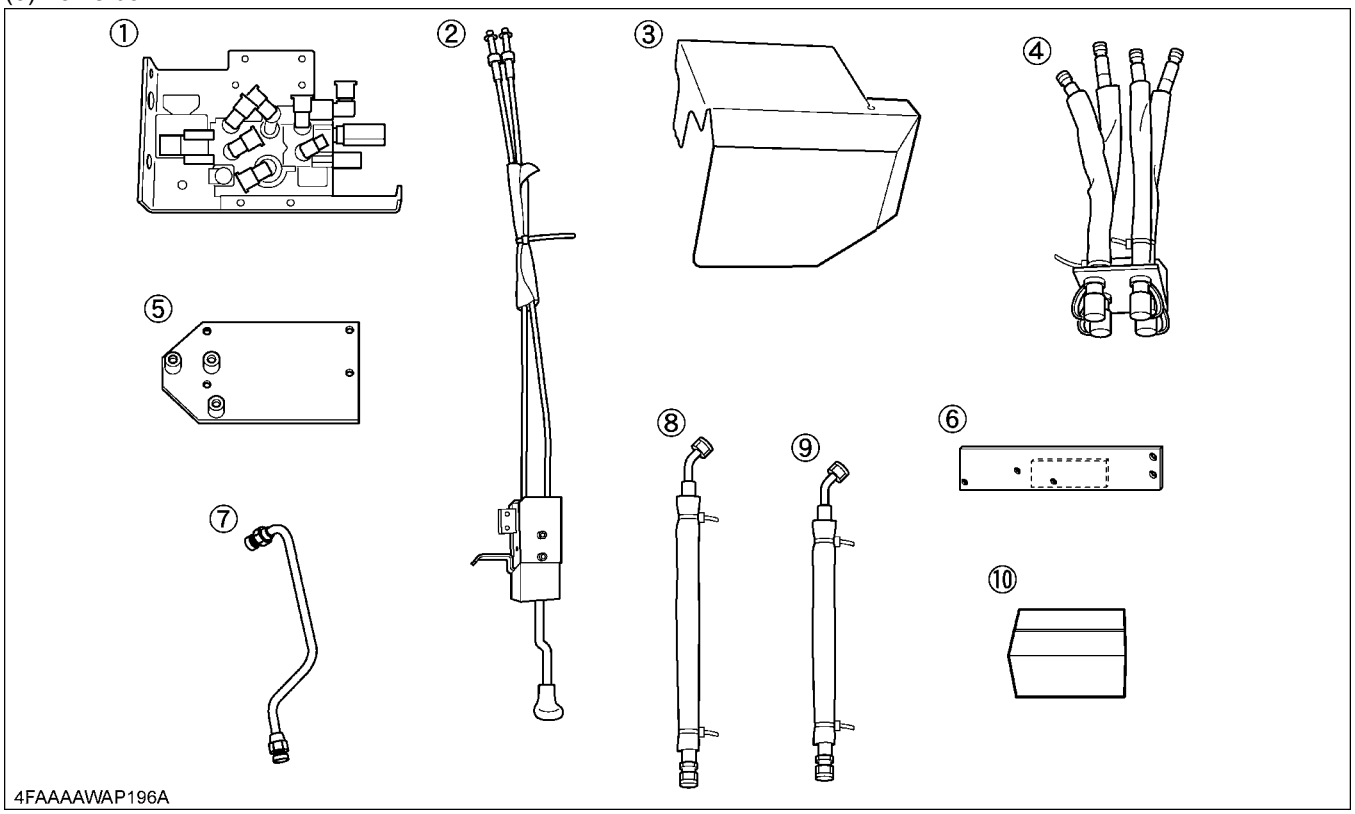
[Contents of parts box]

2-pin mounts
16-M20 x 60 bolts
16-M20 spring lock washers
16-3/4 hardened plain washers
Operator's manual
Instruction manual

NOTE :

- For valve kit, 3rd function kit, accumulator kit and front guard kit, check the checklists included in each kit.

(6) Valve box



REF. No.	PART No.	PART NAME	Q'TY	REMARKS
1	-	VALVE, CONTROL, ASSY	1	
2	-	CONTROLLER, ASSY	1	
3	-	COVER (VALVE), ASSY	1	
4	-	STAY, CONNECTOR, ASSY	1	
5	7J417-7135-0	SUPPORT, VALVE STAY	1	
6	7J446-7796-0	STAY (2 CONTROLLER)	1	
7	7J417-7850-0	TUBE, RETURN	1	
8	7J417-7631-0	HOSE 5, HYDRAULIC, ASSY	1	500 mm
9	7J417-7641-0	HOSE 6, HYDRAULIC, ASSY	1	630 mm
10	01125-50820	BOLT, W SEMS	3	M8 x 1.25 x 20
	01153-50830	HEX. BOLT	3	M8 x 1.25 x 30
	01133-51030	BOLT, SEMS	2	M10 x 1.25 x 30
	01173-51060	HEX. BOLT	2	M10 x 1.25 x 60
	01133-51275	BOLT, SEMS	3	M12 x 1.25 x 75
	02114-50080	HEX. NUT	3	M8 x 1.25
	02118-50100	HEX. NUT	2	M10 x 1.25
	04015-50100	WASHER, PLAIN	2	
	04512-50080	WASHER, SPRING LOCK	3	
	04512-50100	WASHER, SPRING LOCK	2	
	75572-6180-0	ASSY ADAPTER 1	1	
	7K520-8541-0	TEE, SWIVEL RUN 7/8	1	
	7J800-6473-0	CAP, NUT#10, 7/8-14 JIC37DEG	1	
	75540-6219-0	PIN	2	
	05525-50500	PIN SNAP	2	
	7J417-7774-0	LABEL, R/V LOCK	1	

TRACTOR PREPARATION

1. Locate the tractor on a firm level surface.
   Lower the implement to the ground, set the parking brake and stop the engine.
2. Set the front tread as follows.

		Tire sizes	Front Tread
M5660SU	Front 4WD	9.5-22, 6PR	1430 mm (56.3 in)
		11.2R20	1435 mm (56.5 in)
		29 x 12.5-15NHS	1510 mm (59.4 in)
		14-17.5, R4	1410 mm (55.5 in)
	Front 2WD	6.50-16, 6PR	1420 mm (55.9 in)
		7.50-16, 6PR	
		9.5L-15, 6PR	1500 mm (59.1 in)
M6060 M7060	Front 4WD	9.5-20, 6PR	1520 mm (59.8 in)
		9.5-24, 6PR	
	Front 2WD	6.50-16, 6PR	1420 mm (55.9 in)
		9.5L-15, 6PR	

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

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

	Rear Tread
M5660SU	1420 mm (55.9 in.) or more
M6060 M7060	1520 mm (59.8 in.) or more

■Tool Box (CAB MODEL)

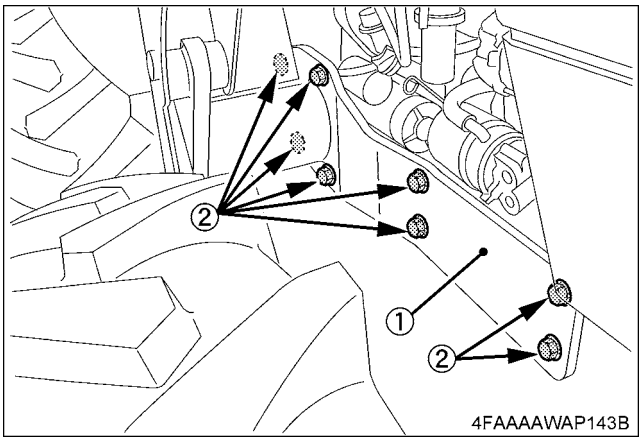
1. Remove the tool box and stays from the tractor.

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 a hard surface, preferably concrete.

■Main Frame [Upper Muffler Model]

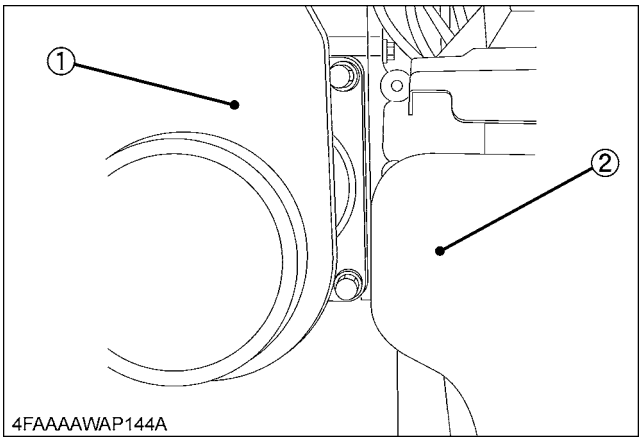
1. Install the main frames to the clutch housing and the front axle as shown.



(1) Main frame
(2) 16-M20 x 60 bolts
16-M20 spring lock washers
16-3/4 hardened plain washers

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

NOTE :
- Main frame must be hoisted vertically as shown to avoid contact with the fuel tank.



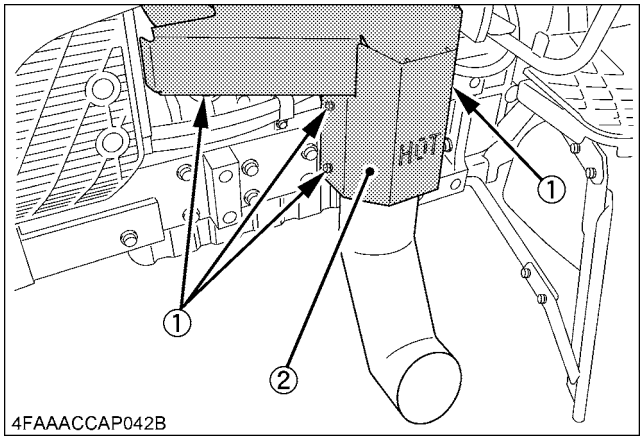
(1) Main frame
(2) Fuel tank

■Main Frame [Under Muffler Model]

CAUTION

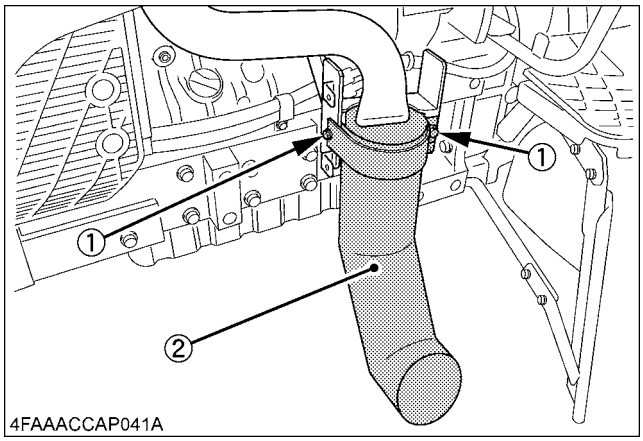
- Wait long enough for the muffler cover and the muffler pipe to cool down.

1. Remove the bolts and the muffler cover. (Left side)



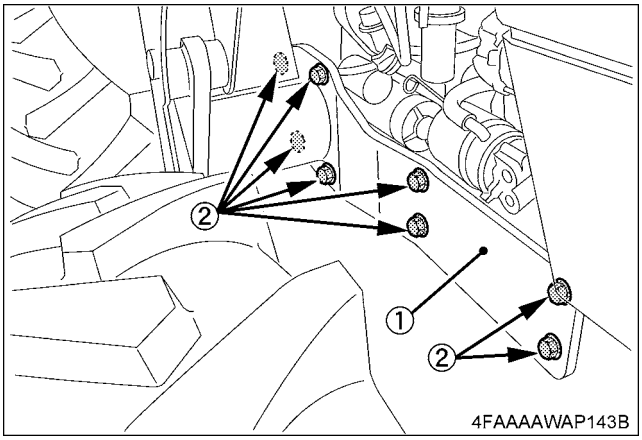
(1) 4-M8 x 12 bolts
(2) Muffler cover

2. Remove the bolts and the muffler pipe. (Left side)



(1) 2-M8 x 16 bolts
(2) Muffler pipe

3. Install the main frames to the clutch housing and the front axle as shown.

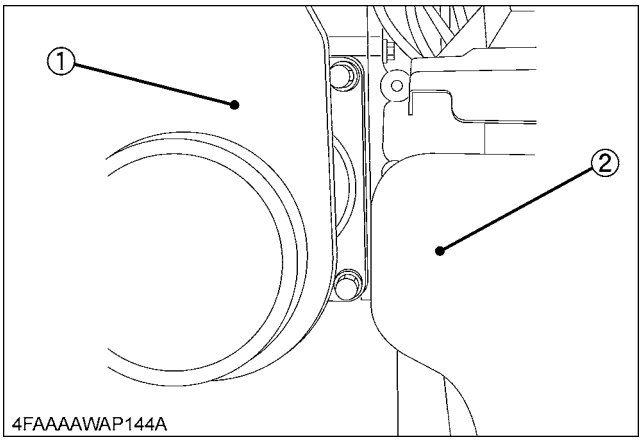


(1) Main frame
(2) 16-M20 x 60 bolts
16-M20 spring lock washers
16-3/4 hardened plain washers

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

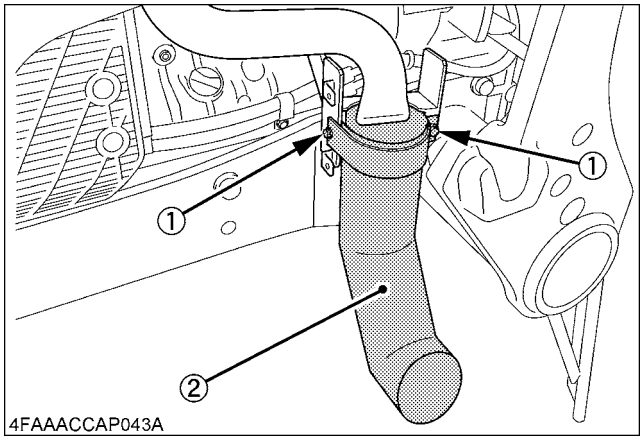
NOTE :

- Main frame must be hoisted vertically as shown to avoid contact with the fuel tank.



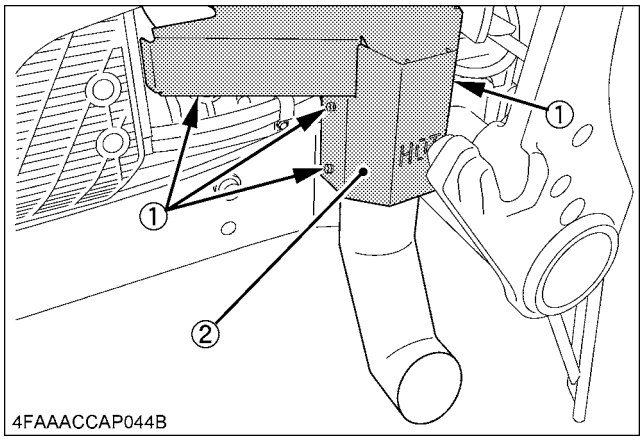
(1) Main frame
(2) Fuel tank

4. Reinstall the muffler pipe with the original bolts. (Left side)



(1) 2-M8 x 16 bolts (Original)
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(2) Muffler pipe

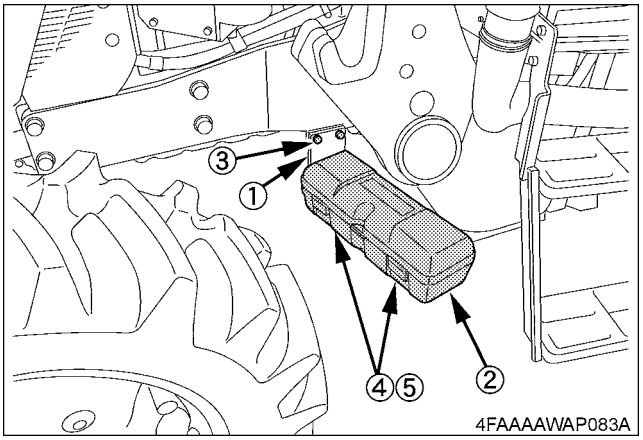
5. Reinstall the muffler cover with the original bolts. (Left side)



(1) 4-M8 x 12 bolts (Original)
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(2) Muffler pipe

■Tool Box (CAB MODEL)

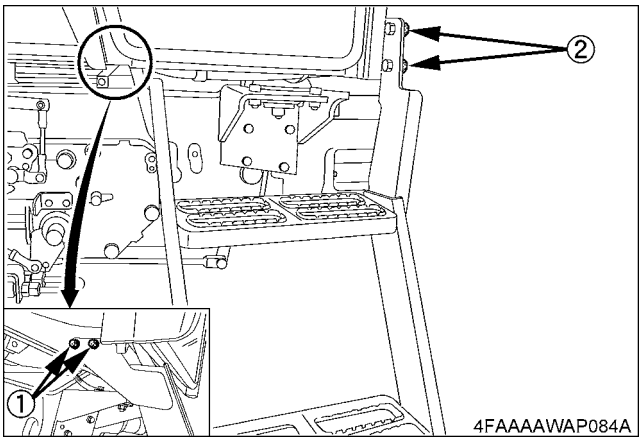
1. Attach the tool box stay to the main frame LH using bolts.
2. Attach the tool box to the stay using the original bolts and M8 nuts.



(1) Tool box stay
(2) Tool box
(3) 2-M10 x 20 bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(4) 2-M8 nuts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

■Step

1. Before assembling the standard valve, remove the step.

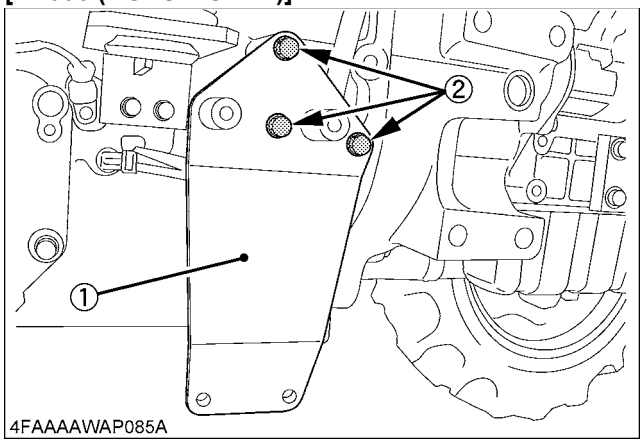


(1) 2-M10 bolts
(2) 2-M10 nuts

■Standard Valve

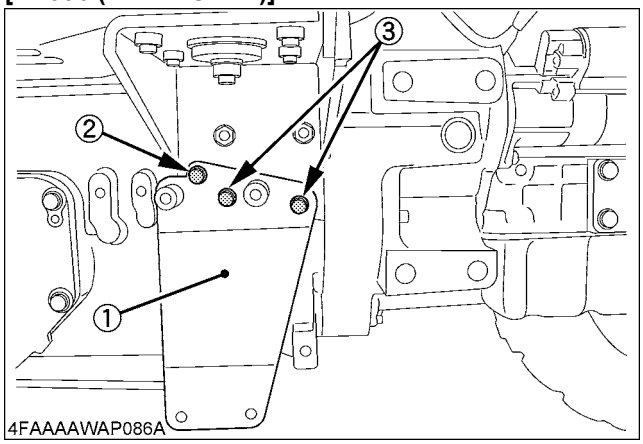
1. Attach the valve stay support on the tractor.

[M7995 (ROPS MODEL)]



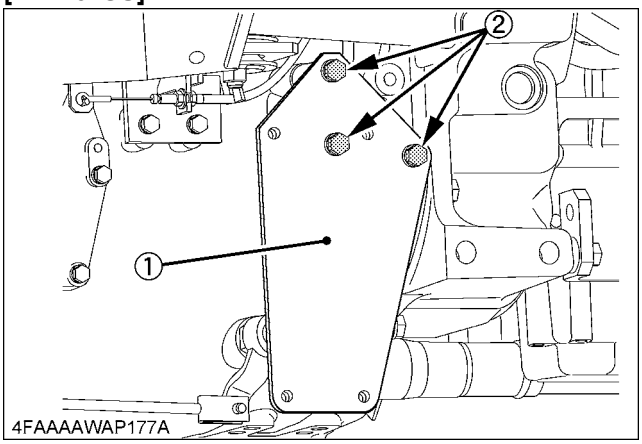
(1) Valve stay support
(2) 3-M12 x 30 bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

[M7996 (CAB MODEL)]



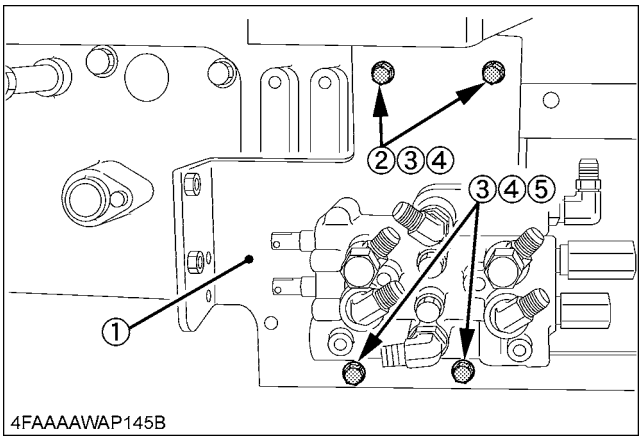
(1) Valve stay support
(2) 1-M12 x 25 bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(3) 2-M12 x 35 bolts (original)
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

[LA1154SU]



(1) Valve stay support
(2) 3-M12 x 75 sems bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

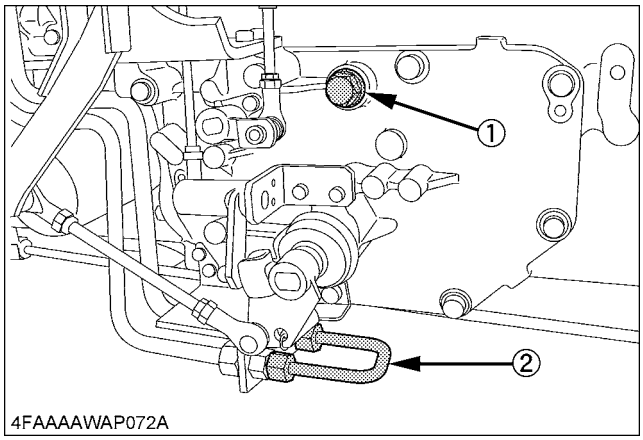
2. Fit the valve stay assembly to the valve stay support.



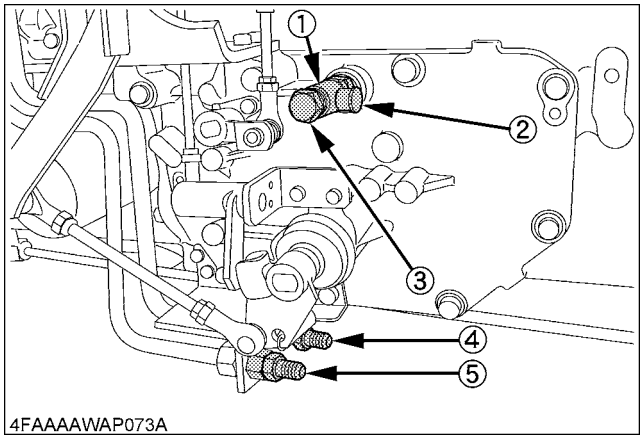
[M7995 (ROPS MODEL), M7996 (CAB MODEL)]
(1) Valve stay
(2) 2-M10 x 110 hex. bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(3) 4-M10 spring lock washers
(4) 4-M10 plain washers
(5) 2-M10 x 120 hex. bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
[LA1154SU]
(1) Valve stay
(2) 2-M10 x 110 hex. bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(3) 4-M10 spring lock washers
(4) 4-M10 plain washers
(5) 2-M10 x 110 hex. bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

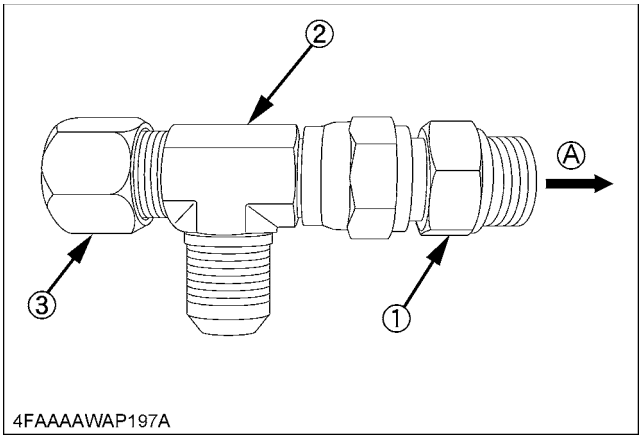
■Hydraulic Lines

1. Remove the U pipe and tank port plug.
   Connect the loader adapters to the tank port.



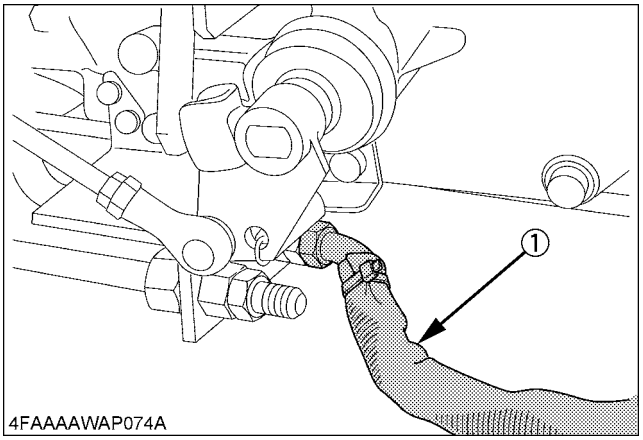
(1) Tank port plug *(2) U pipe*





(1) Assy adapter 1
Tightening torque: 77.0 to 85.0 N-m
(7.9 to 8.6 kgf-m, 57.0 to 62.0 ft-lbs)
(2) Tee, swivel run 7/8
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS, AND OTHERS" section.
(3) Cap, nut#10, 7/8-14 jic37deg
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS, AND OTHERS" section.
(4) Pump line port
(5) Power beyond port
(A) To the tractor tank port

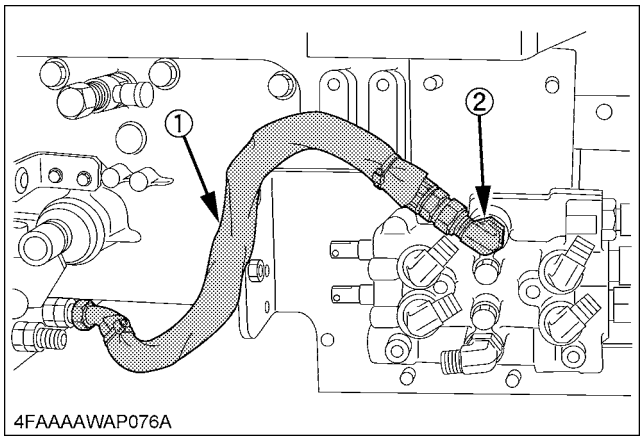
2. Connect the pump line hose as shown.



(1) Pump line hose with sleeve
(hose 6, 630 mm (24.8 in.), 7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS, AND OTHERS" section.

3. Connect the pump line hose to the valve.

IMPORTANT :
- Equipment or property damage could result if instructions are not followed.

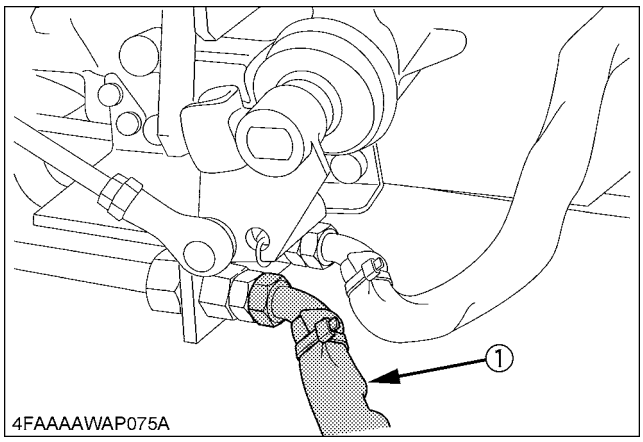


(1) Pump line hose with sleeve (hose 6, 630 mm (24.8 in.), 3/4-UNF)

Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS, AND OTHERS" section.

(2) Valve port marked with an orange dot (Pump line)

4. Connect the power beyond line hose as shown.

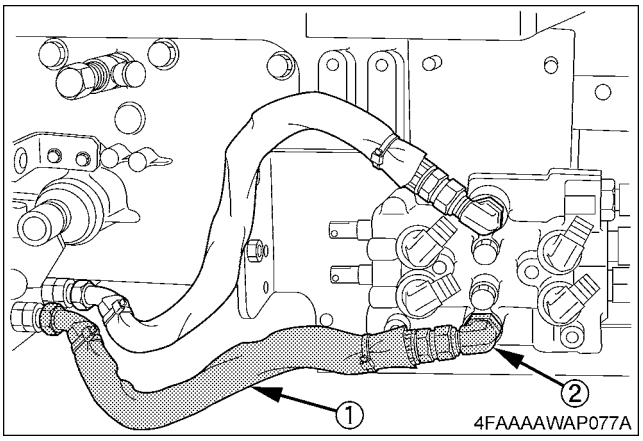


(1) Power beyond line hose with sleeve (hose 5, 500 mm (19.7 in.), 7/8-UNF)

Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS, AND OTHERS" section.

5. Connect the power beyond line hose to the valve.

IMPORTANT :
- Equipment or property damage could result if instructions are not followed.



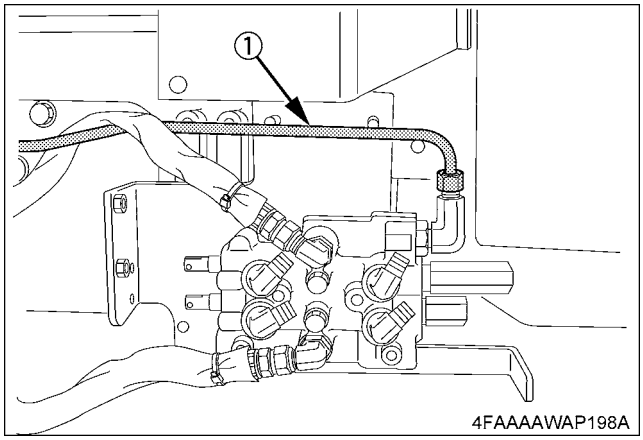
(1) Power beyond line hose with sleeve (hose 5, 500 mm (19.7 in.), 3/4-UNF)

Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS, AND OTHERS" section.

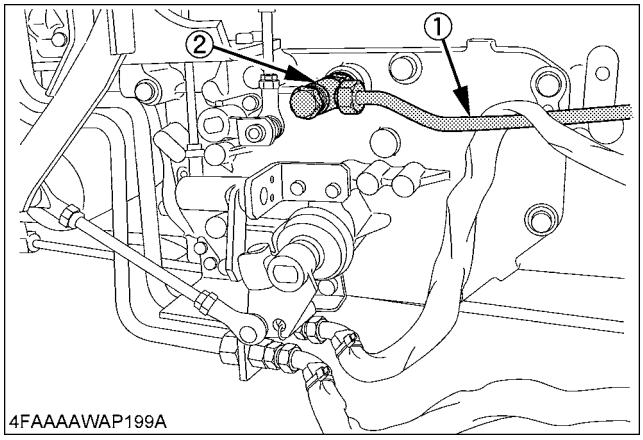
(2) Valve port marked with a green dot (Power beyond line)

IMPORTANT :
- If the loader operates slowly up and down while operating the tractor, turn off the tractor immediately. Check connecting pump line hose and power beyond line hose to verify that it is installed correctly to the control valve.
- To verify the hoses, the power beyond line hose should be installed to the green colored port and the pump line should be installed to the orange colored port of the valve.
- If the pump line hose and power beyond line hose are installed incorrectly, the tractor hydraulic pump may experience malfunction.

6. Connect the return line tube.



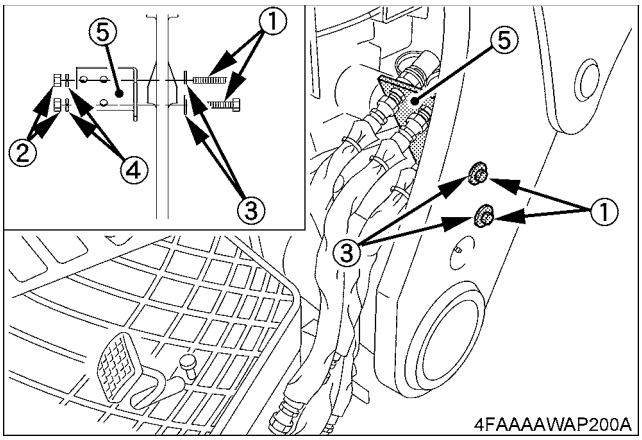
(1) Return line tube (7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS, AND OTHERS" section.



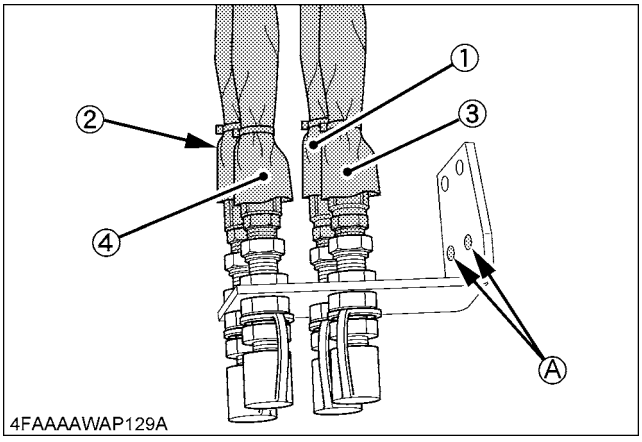
(1) Return line tube (7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS, AND OTHERS" section.
(2) Tee, swivel run (7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS, AND OTHERS" section.

NOTE :
- Before tightening up the return line tube, loosen the tee swivel run first and then temporarily tighten the above two parts. Then tighten them up together.

7. Fit the connector assembly stay to the main frame with the bolts and plain washers inserted from the outside and the nuts and spring lock washers from the inside.

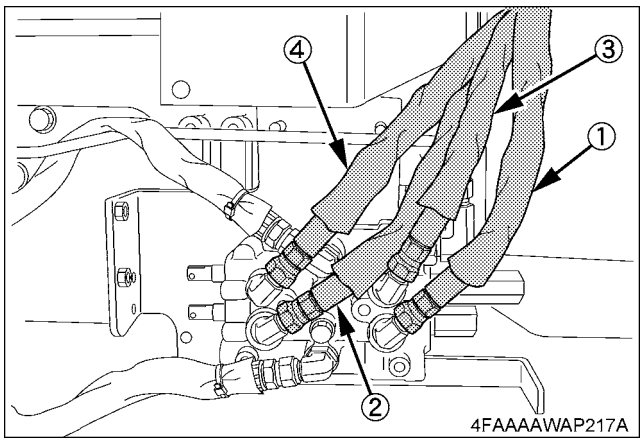


(1) 2-M10 x 60 bolts
(2) 2-2-M10 nuts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(3) 2-M10 plain washers
(4) 2-M10 spring lock washers
(5) Connector assy stay



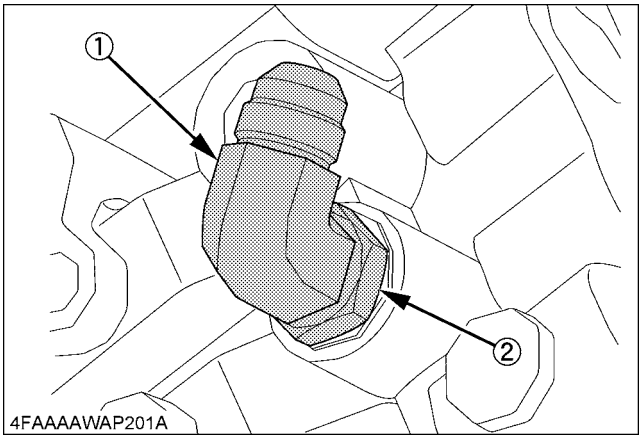
(1) Hydraulic hose (Red)
(2) Hydraulic hose (Blue)
(3) Hydraulic hose (Yellow)
(4) Hydraulic hose (White)
(A) Use the holes.

8. Connect the hoses between the connector assembly stay and the valve.



[M7995 (ROPS MODEL), M7996 (CAB MODEL)]
(1) Hydraulic hose (Red 500 mm (19.7 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose (Blue 597 mm (23.5 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(3) Hydraulic hose (Yellow 465 mm (18.3 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(4) Hydraulic hose (White 559 mm (22.0 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
[LA1154SU]
(1) Hydraulic hose (Red 500 mm (19.7 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose (Blue 560 mm (22.0 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(3) Hydraulic hose (Yellow 465 mm (18.3 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(4) Hydraulic hose (White 510 mm (20.1 in.), 3/4-UNF)

IMPORTANT :
- With all the hoses connected to the valve, be certain that any of the hoses is out of close contact with the other hoses, the fittings and edges.
- If the above problem is found, correct the hoses to remove their twist of loosen the nut shown in the figure to readjust the fitting angle for avoiding such close contact.

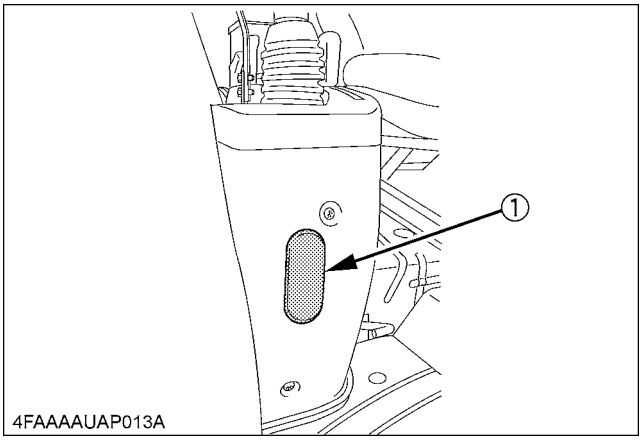


(1) Fitting
(2) Nut
Tightening torque: 48.0 to 54.0 N-m
(4.9 to 5.5 kgf-m, 35.0 to 40.0 ft-lbs)

■Controller and Cables

◆ **M7995 (ROPS MODEL), M7996 (CAB MODEL)**

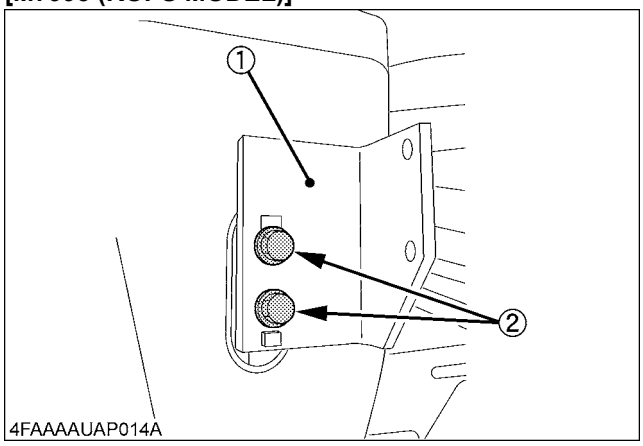
1. Remove the cover cap of the tractor.



(1) Cover cap

2. Fit the controller stay 2 in position.

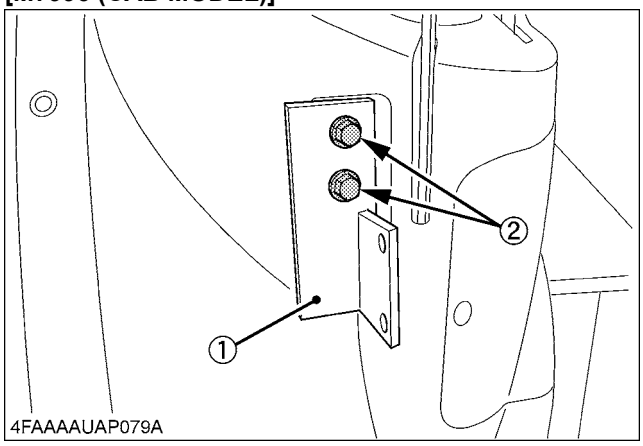
[M7995 (ROPS MODEL)]



(1) Controller stay 2
(2) 2-M10 x 40 bolts

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

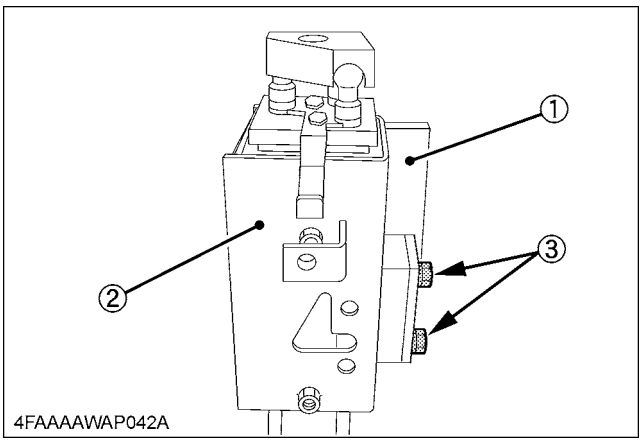
[M7996 (CAB MODEL)]



(1) Controller stay 2
(2) 2-M10 x 70 bolts
2-M10 Spring lock washer

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

3. Fix the controller assembly stay 1 to the controller stay 2.

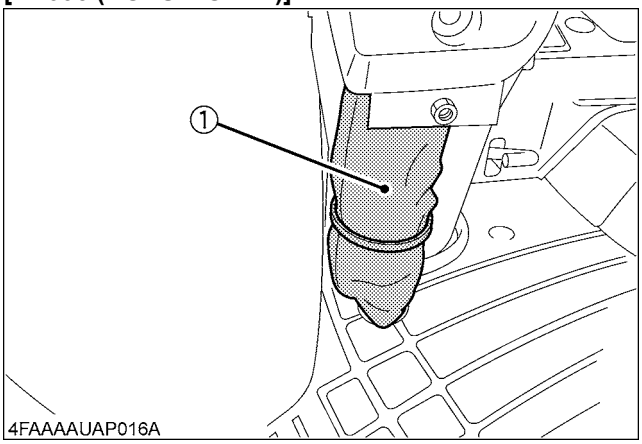


(1) Controller stay 2
(2) Controller assy stay 1
(3) 2-M8 x 20 bolts

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

4. Pass the wire cable in the specified route.

[M7995 (ROPS MODEL)]



(1) 3-Assy cable with sleeve

[M7996 (CAB MODEL)]

(1) Remove the mat.
(2) Pass the cable through the opening.
(3)Make a cut in the mat so that the cable can pass through the slit.

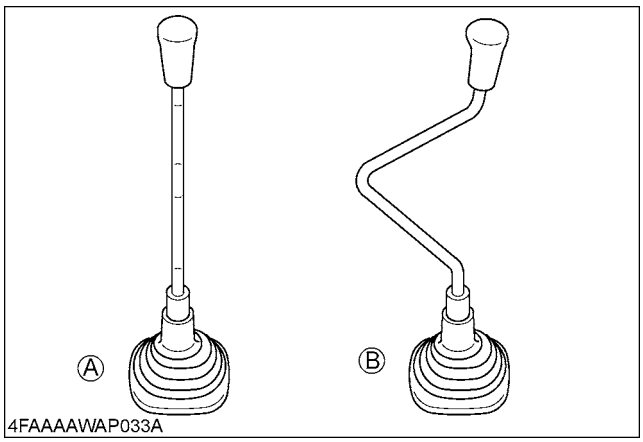
NOTE :

- For the cutting position, refer to the pattern sheet on last page.
- Keep the wire cable hidden with the sleeve. Pass the sleeve down through the bottom of the hole.

5. Install the control lever.

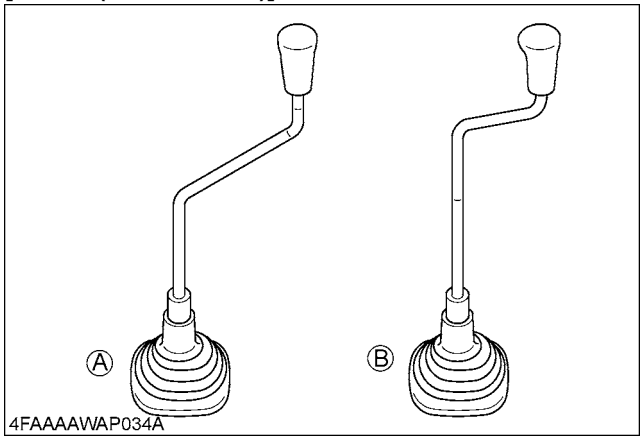
[M7995 (ROPS MODEL)]

Install the lever pointing straight to the traveling direction.



(A) "FRONT"
(B) "SIDE"

[M7996 (CAB MODEL)]

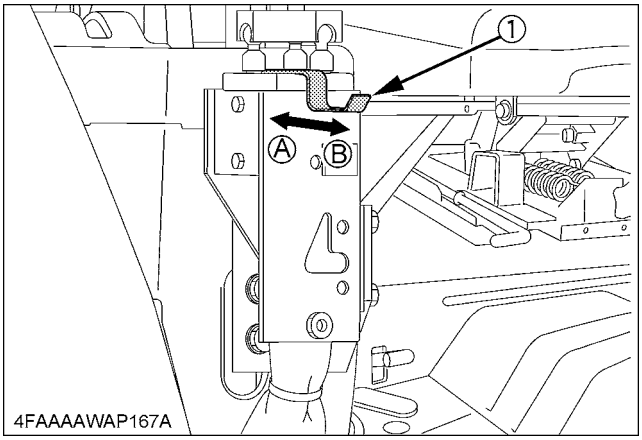


(A) "FRONT"
(B) "SIDE"

6. Set the lock lever on the cable controller to the neutral position.

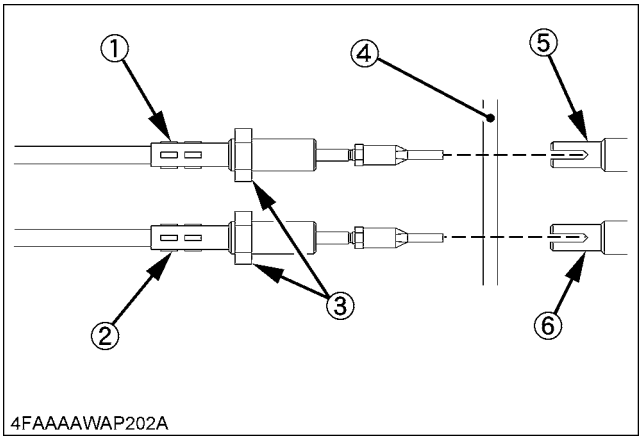
IMPORTANT :

- Control lever should be neutral and be locked with lock lever.



(1) Lock lever
(A) "LOCK"
(B) "UNLOCK"

7. Install one lock nut to each cable end. Then route the cable ends through the valve stay.

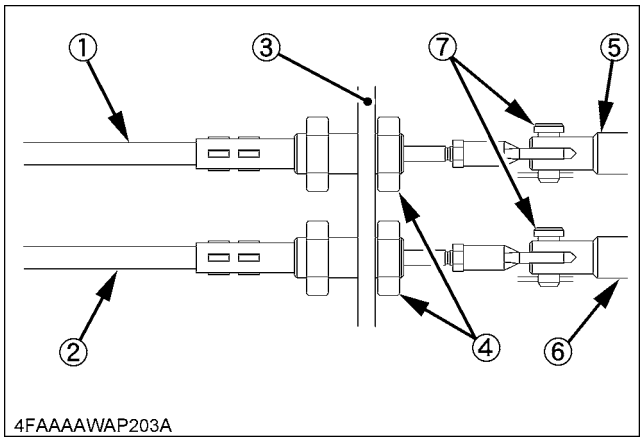


(1) Cable (Blue, Boom section)
(2) Cable (Red, Bucket section)
(3) 2-M16 Lock nuts
(4) Valve stay
(5) Spool (Boom section)
(6) Spool (Bucket section)

NOTE :

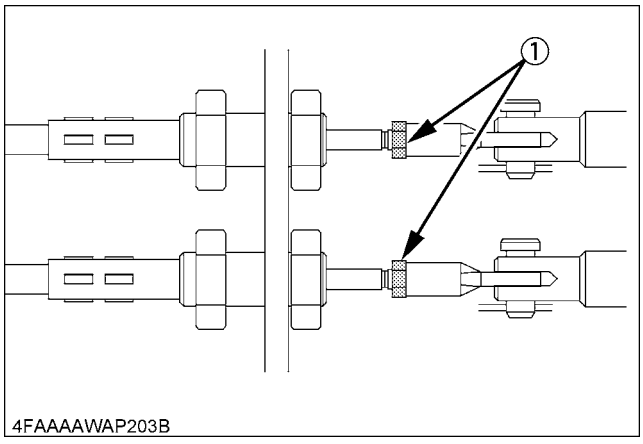
- The cable with blue tape is for boom section and the cable with red tape is for bucket section.

8. Install the other lock nuts to the cable ends and adjust the location of lock nuts so that the cable end hole aligns with the spool hole. Then connect the cable to the spools with pins.



(1) Cable (Blue, Boom section)
(2) Cable (Red, Bucket section)
(3) Valve stay
(4) 2-M16 Lock nuts
(5) Spool (Boom section)
(6) Spool (Bucket section)
(7) 2-Pins
2-Snap pins

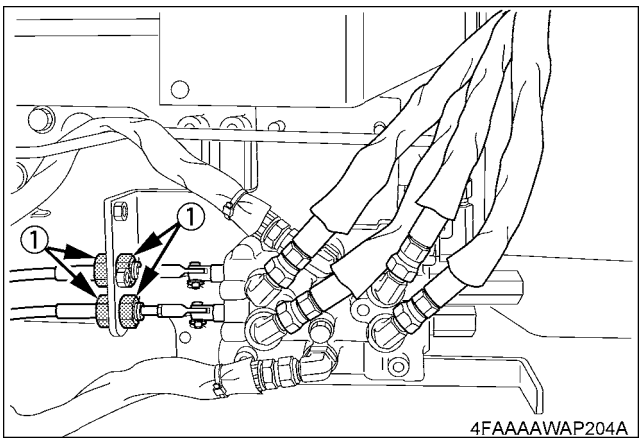
9. Loosen the M6 lock nuts of the cable ends. Turn the cable ends and spools so that the direction of the pins should be as shown in the figure. Then retighten the M6 lock nuts.



(1) 2-M6 Lock nuts
Tightening torque: See “TIGHTENING TORQUE OF BOLTS AND NUTS” section.

NOTE :
- To reposition the cables for correct connections, use the M16 lock nuts.

10. Tighten up the lock nuts at both sides of the valve stay to secure the cables in place.

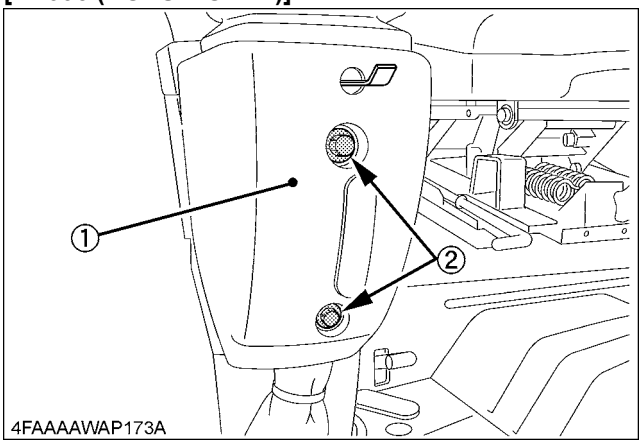


(1) 4-M16 Lock nuts
Tightening torque: 60.0 to 80.0 N-m
(6.1 to 8.2 kgf-m, 44.3 to 59.0 ft-lbs)

IMPORTANT :
- With the lock nuts tight in position, move the lever to make sure that the cables and spools behave smoothly as specified.

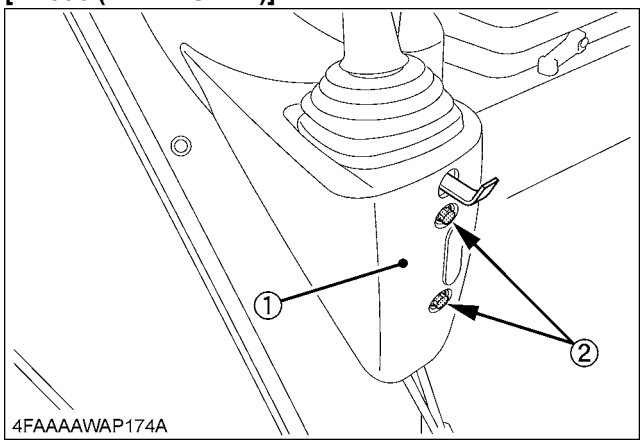
11. Attach the lever cover in place.

[M7995 (ROPS MODEL)]



(1) Lever cover *(2) 2-M8 x 16 flange bolts*

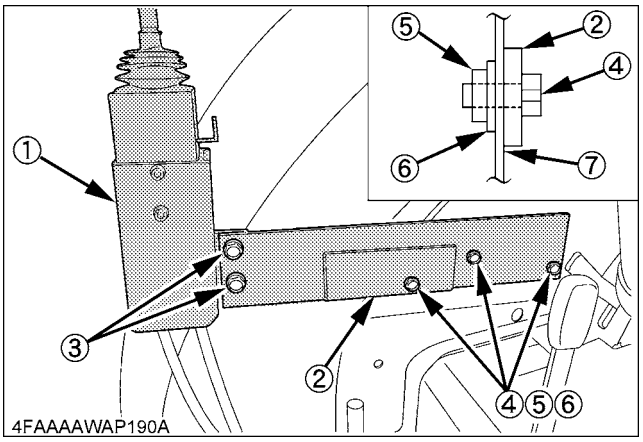
[M7996 (CAB MODEL)]



(1) Lever cover
(2) 2-M8 x 16 flange bolts

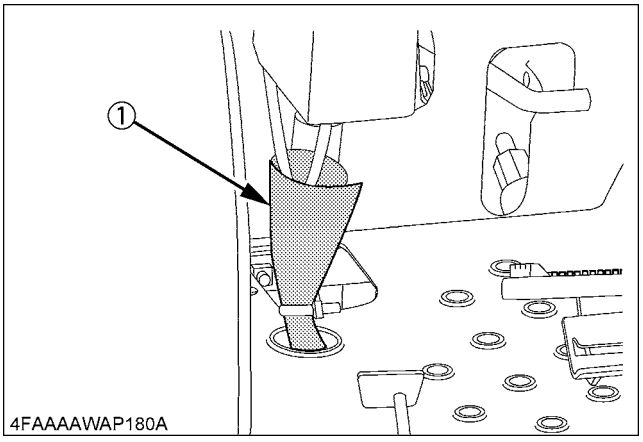
◆ **LA1154SU**

1. Fit the controller stay in position.
2. Fix the controller assy to the controller stay.



(1) Controller assy
(2) Controller stay
(3) 2-M10 x 30 bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(4) 3-M8 x 30 bolts
(5) 3-M8 nuts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(6) 3-Spring washers
(7) Fender

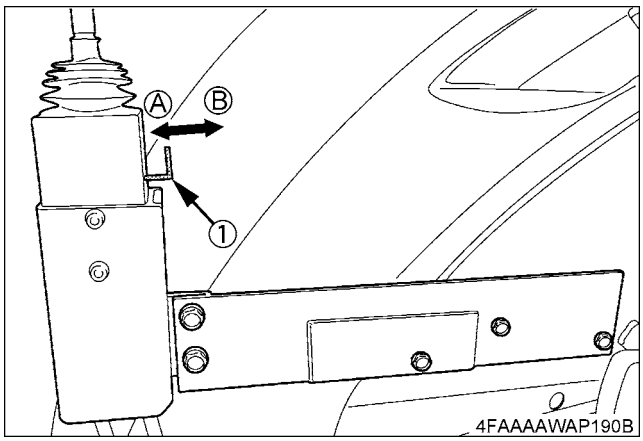
3. Pass the wire cable in the specified route.



(1) 2-Assy cable with sleeve

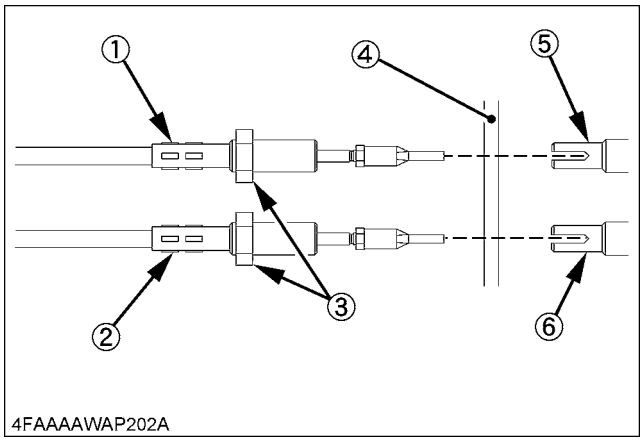
4. Set the lock lever on the cable controller to the neutral position.

IMPORTANT :
- Control lever should be neutral and be locked with lock lever.



(1) Lock lever *(A) "LOCK"* *(B) "UNLOCK"*

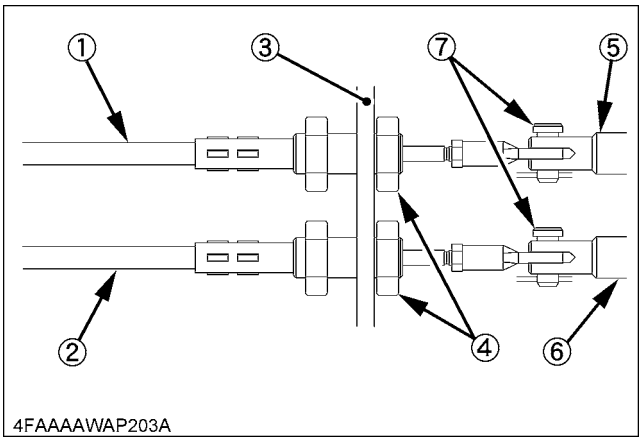
5. Install one lock nut to each cable end. Then route the cable ends through the valve stay.



(1) Cable (Blue, Boom section)
(2) Cable (Red, Bucket section)
(3) 2-M16 Lock nuts
(4) Valve stay
(5) Spool (Boom section)
(6) Spool (Bucket section)

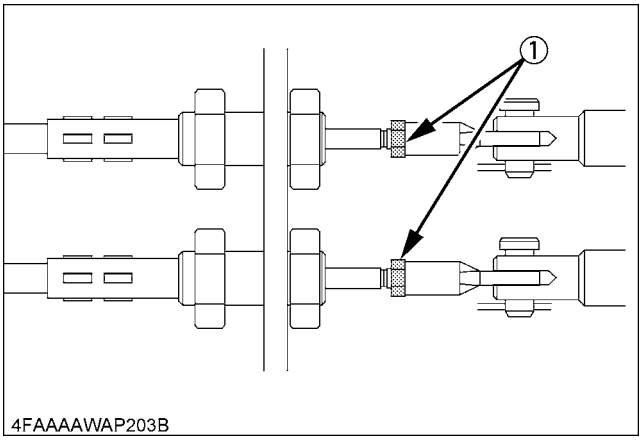
NOTE :
- The cable with blue tape is for boom section and the cable with red tape is for bucket section.

6. Install the other lock nuts to the cable ends and adjust the location of lock nuts so that the cable end hole aligns with the spool hole. Then connect the cable to the spools with pins.



(1) Cable (Blue, Boom section)
(2) Cable (Red, Bucket section)
(3) Valve stay
(4) 2-M16 Lock nuts
(5) Spool (Boom section)
(6) Spool (Bucket section)
(7) 2-Pins

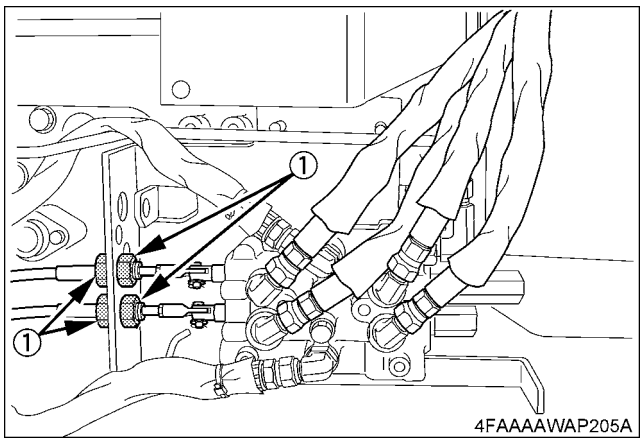
7. Loosen the M6 lock nuts of the cable ends. Turn the cable ends and spools so that the direction of the pins should be as shown in the figure. Then retighten the M6 lock nuts.



(1) 2-M6 Lock nuts
Tightening torque: See “TIGHTENING TORQUE OF BOLTS AND NUTS” section.

NOTE :
- To reposition the cables for correct connections, use the M16 lock nuts.

8. Tighten up the lock nuts at both sides of the valve stay to secure the cables in place.



(1) 4-M16 Lock nuts

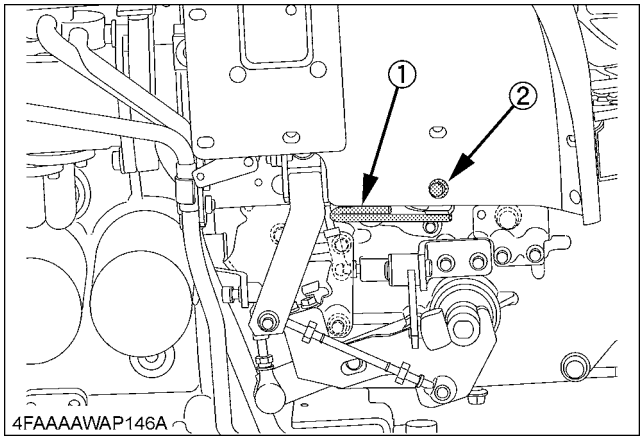
Tightening torque: 60.0 to 80.0 N-m
(6.1 to 8.2 kgf-m, 44.3 to 59.0 ft-lbs)

IMPORTANT :

- With the lock nuts tight in position, move the lever to make sure that the cables and spools behave smoothly as specified.

■Cable Guide [M7995 (ROPS Model)]

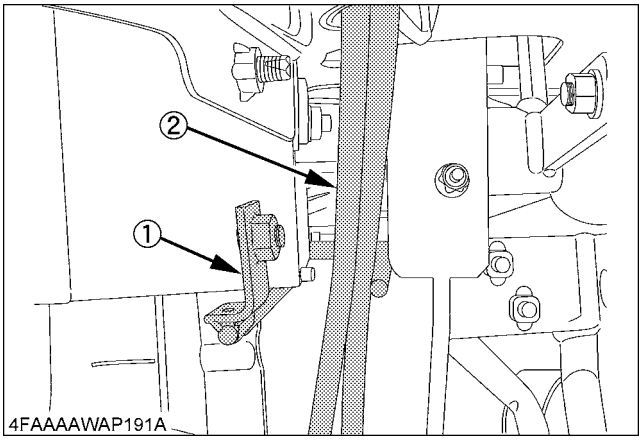
1. Attach the cable guide to the fender.



(1) Cable guide
(2) 1-M8 x 16 bolt with washers

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

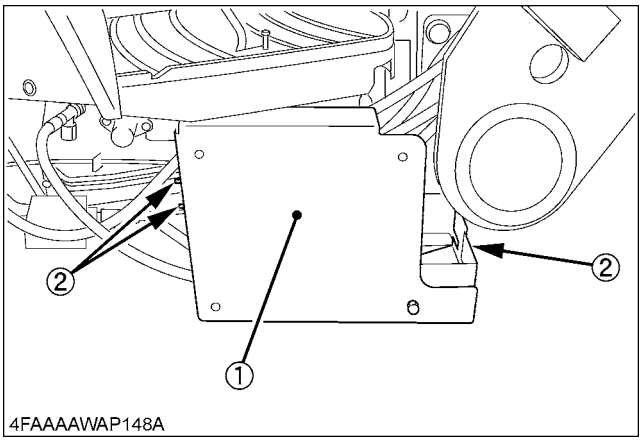
2. Pass the controller cable through the cable guide.



(1) Cable guide *(2) Controller cable*

■Control Valve Cover

1. Attach the valve cover to the valve stay.



(1) Valve cover
(2) 3-M8 x 20 bolts with washers

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

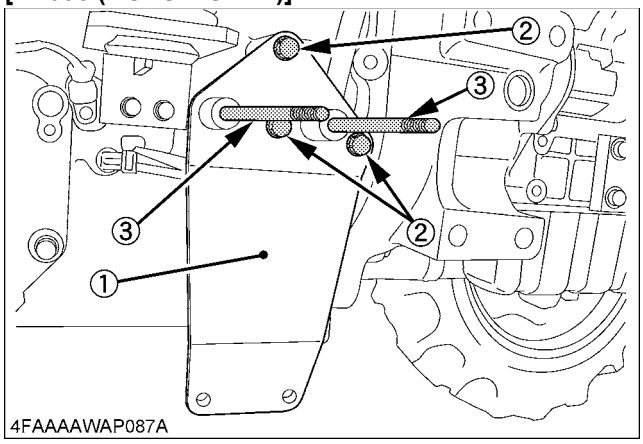
■Step

Attach the step.

■Self-Level Valve (if equipped)

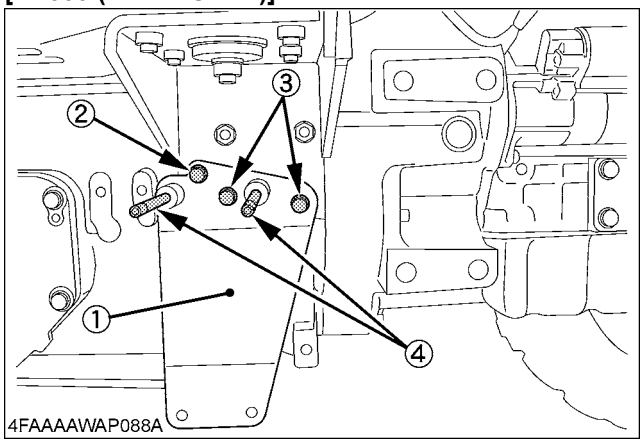
1. Put the stud bolt in the valve stay support.

[M7998 (ROPS MODEL)]



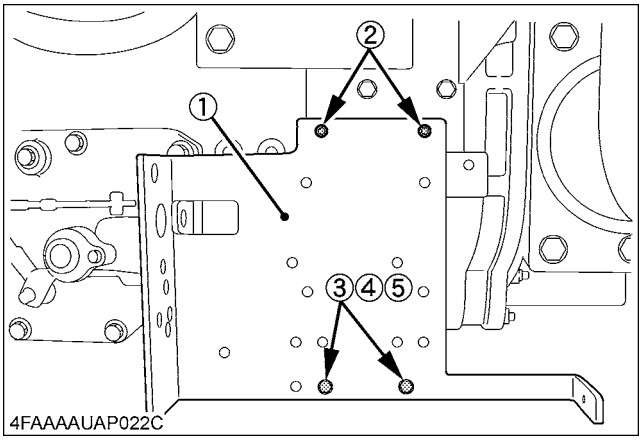
(1) Valve stay support
(2) 3-M12 x 30 bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section
(3) 2-M10 Stud bolts
Tightening torque: 24.5 to 31.4 N-m
(2.5 to 3.2 kgf-m, 18.1 to 23.2 ft-lbs)

[M7999 (CAB MODEL)]



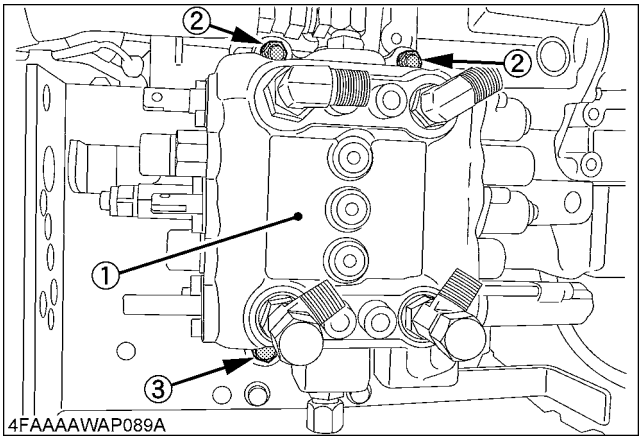
(1) Valve stay support
(2) 1-M12 x 25 bolt
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(3) 2-M12 x 35 bolts (original)
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(4) 2-M10 Stud bolts
Tightening torque: 24.5 to 31.4 N-m
(2.5 to 3.2 kgf-m, 18.1 to 23.2 ft-lbs)

2. Temporarily assemble the valve stay to the valve stay support.



(1) Valve stay
(2) 2-Stud bolts
(3) 2-M10 x 120 hex. bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(4) 2-M10 spring lock washers
(5) 2-M10 plain washers

3. Attach the self-level valve assy to the valve stay.

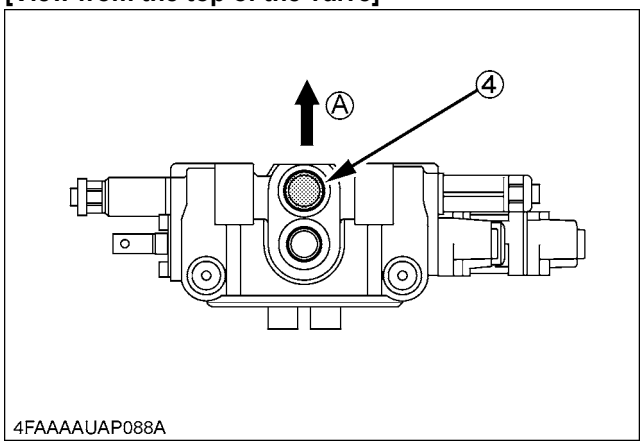


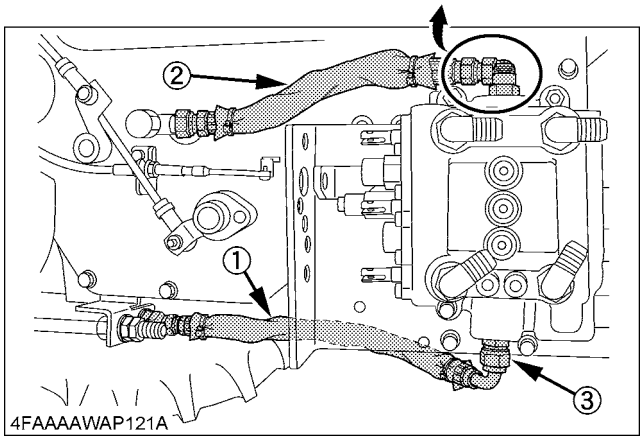
(1) Self-level valve assy
(2) 2-M10 nuts
2-M10 spring lock washers
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(3) M10 x 60 hex. bolt
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

4. Connect the pump line hose and tank hose.

IMPORTANT :
- Equipment or property damage could result if instructions are not followed.

[View from the top of the valve]





(1) Pump line hose with sleeve (hose 6) (580 mm (22.8 in.), 7/8-UNF and 3/4-UNF) *(A) Tractor side*

Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

(2) Hydraulic tank hose with sleeve (345 mm (13.6 in.), 7/8-UNF and 7/8-UNF)

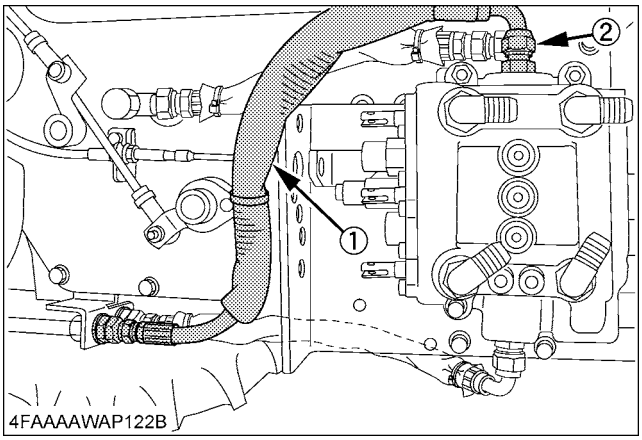
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

(3) Valve port marked with an orange dot (Pump line)

(4) Valve port (Tank)

5. Connect the power beyond hose.

IMPORTANT :
- Equipment or property damage could result if instructions are not followed.



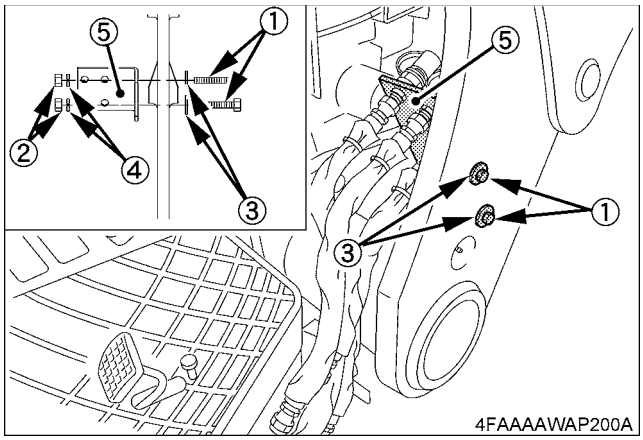
(1) Power beyond line hose with sleeve (hose 5) (730 mm (28.4 in.), 3/4-UNF and 3/4-UNF)

Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

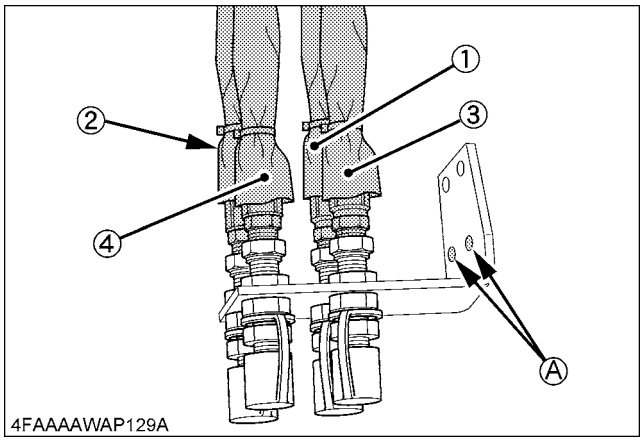
(2) Valve port marked with a green dot (Power beyond line)

IMPORTANT :
- If the loader operates slowly up and down while operating the tractor, turn off the tractor immediately. Check connecting pump line hose and power beyond line hose to verify that it is installed correctly to the control valve.
- To verify the hoses, the power beyond line hose should be installed to the green colored port and also the pump line should be installed to the orange colored port of the valve.
- If the pump line hose and power beyond line hose are installed incorrectly, the tractor hydraulic pump may experience malfunction.

6. Fit the connector assembly stay to the main frame with the bolts and plain washers inserted from the outside and the nuts and spring lock washers from the inside.

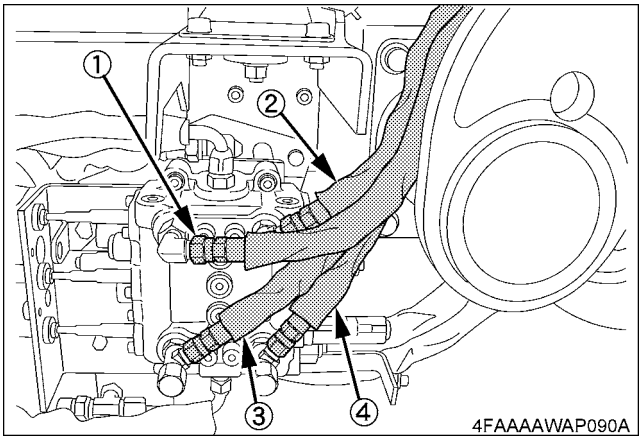


(1) 2-M10 x 60 bolts
(2) 2-M10 nuts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(3) 2-M10 plain washers
(4) 2-M10 spring lock washers
(5) Connector assy stay



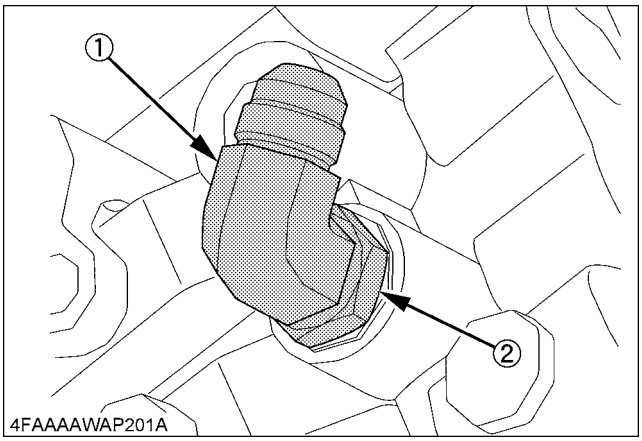
(1) Hydraulic hose (Red)
(2) Hydraulic hose (Blue)
(3) Hydraulic hose (Yellow)
(4) Hydraulic hose (White)
(A) Use the holes.

7. Connect the hoses between the connector assembly stay and the valve.



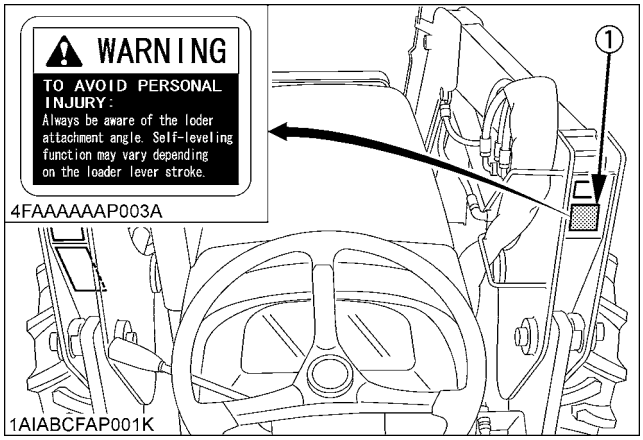
(1) Hydraulic hose (Red 500 mm (19.7 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPATOARS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose (Blue 432 mm (17.0 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPATOARS, ELBOWS AND OTHERS" section.
(3) Hydraulic hose (Yellow 520 mm (20.4 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPATOARS, ELBOWS AND OTHERS" section.
(4) Hydraulic hose (White 485 mm (19.1 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPATOARS, ELBOWS AND OTHERS" section.

IMPORTANT :
- With all the hoses connected to the valve, be certain that any of the hoses is out of close contact with the other hoses, the fittings and edges.
- If the above problem is found, correct the hoses to remove their twist of loosen the nut shown in the figure to readjust the fitting angle for avoiding such close contact.



(1) Fitting
(2) Nut
Tightening torque: 48.0 to 54.0 N-m
(4.9 to 5.5 kgf-m, 35.0 to 40.0 ft-lbs)

8. Attach the label on the back of the side frame (RH).

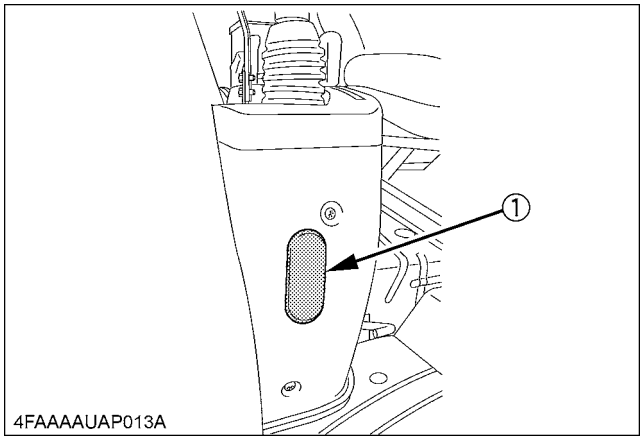


(1) Label (7J437-7778-1)

■Controller and Cables for Self Level Valve

◆ **M7998 (ROPS MODEL), M7999 (CAB MODEL)**

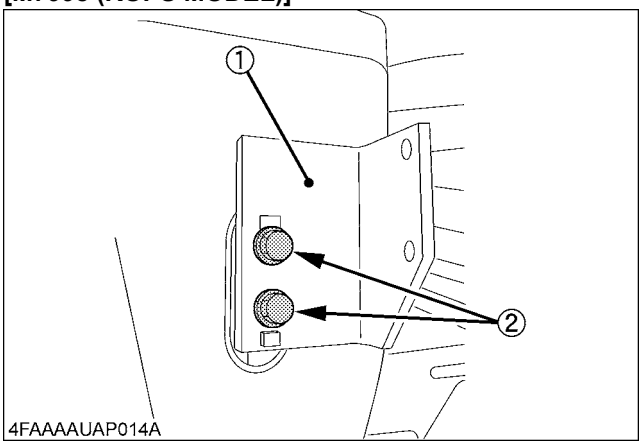
1. Remove the cover cap of the tractor.



(1) Cover cap

2. Fit the controller stay 2 in position.

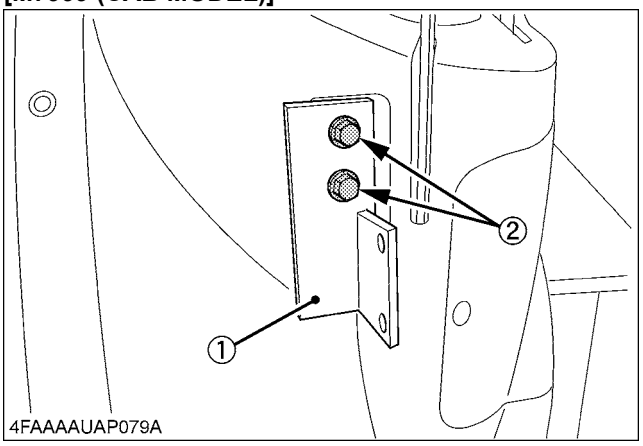
[M7998 (ROPS MODEL)]



(1) Controller stay 2
(2) 2-M10 x 40 bolts

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

[M7999 (CAB MODEL)]

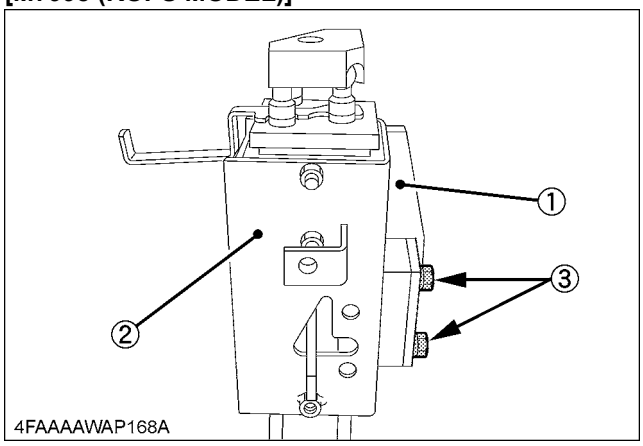


(1) Controller stay 2
(2) 2-M10 x 70 bolts
2-M10 spring lock washer

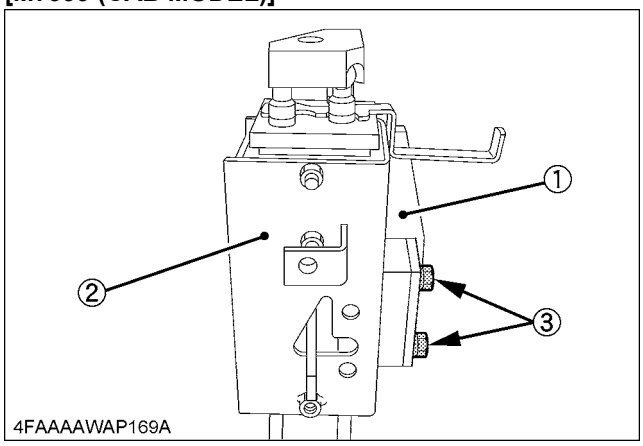
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

3. Fix the controller assembly stay 1 to the controller stay 2.

[M7998 (ROPS MODEL)]



[M7999 (CAB MODEL)]

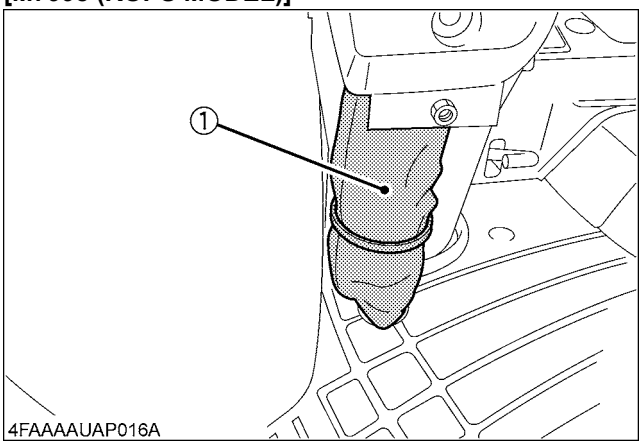


(1) Controller stay 2
(2) Controller assy stay 1
(3) 2-M8 x 20 bolts

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

4. Pass the wire cable in the specified route.

[M7998 (ROPS MODEL)]



(1) 3-Assy cable with sleeve

[M7999 (CAB MODEL)]

(1) Remove the mat.
(2) Pass the cable through the opening.
(3) Make a cut in the mat so that the cable can pass through the slit.

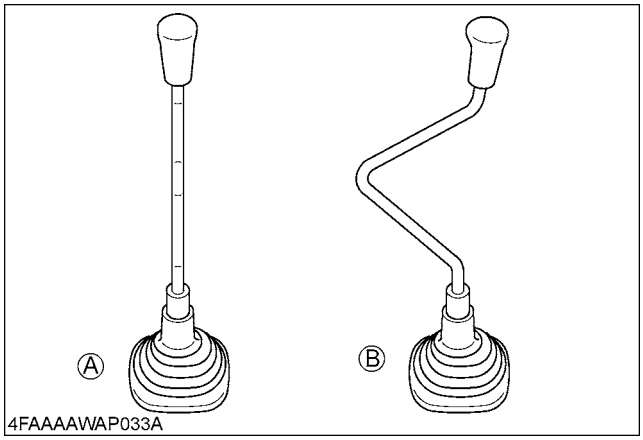
NOTE :

- For the cutting position refer to the pattern sheet on last page.
- Keep the wire cable hidden with the sleeve.
  Pass the sleeve down through the bottom of the hole.

5. Install the control lever.

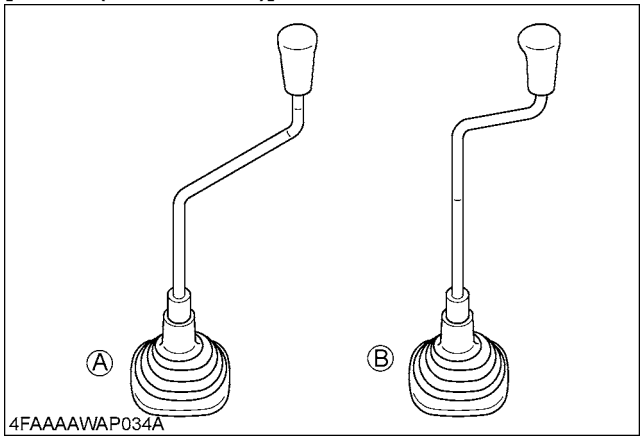
[M7998 (ROPS MODEL)]

Install the lever pointing straight to the traveling direction.



(A) "FRONT"
(B) "SIDE"

[M7999 (CAB MODEL)]



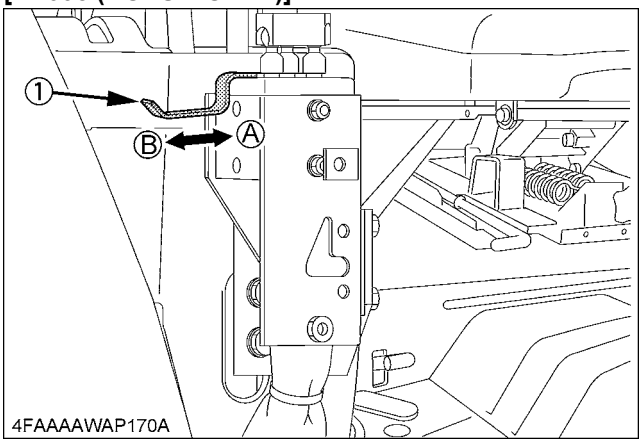
(A) "FRONT"
(B) "SIDE"

6. Set the lock lever on the cable controller to the neutral position.

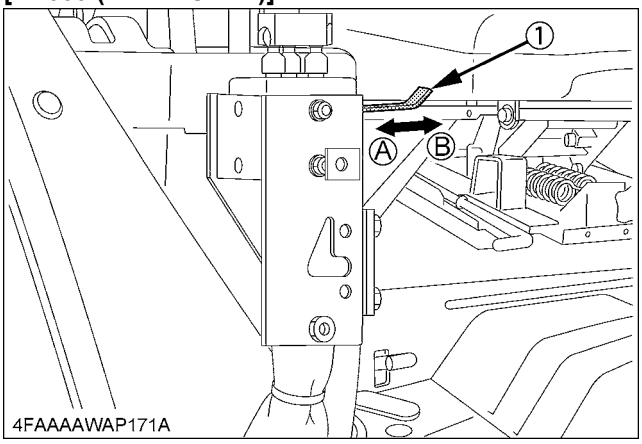
IMPORTANT :

- Control lever should be neutral and be locked with lock lever.

[M7998 (ROPS MODEL)]



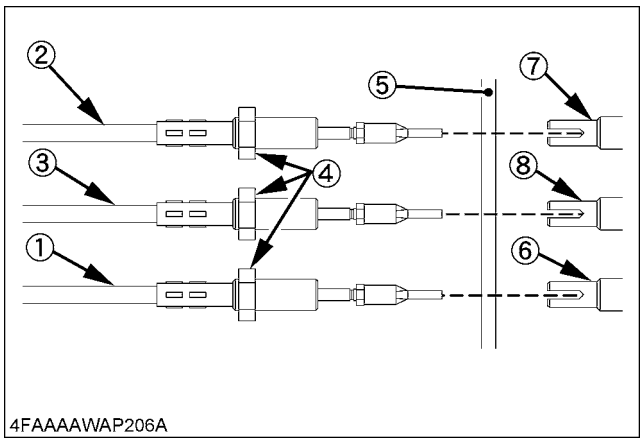
[M7999 (CAB MODEL)]



(1) Lock lever

(A) "LOCK"
(B) "UNLOCK"

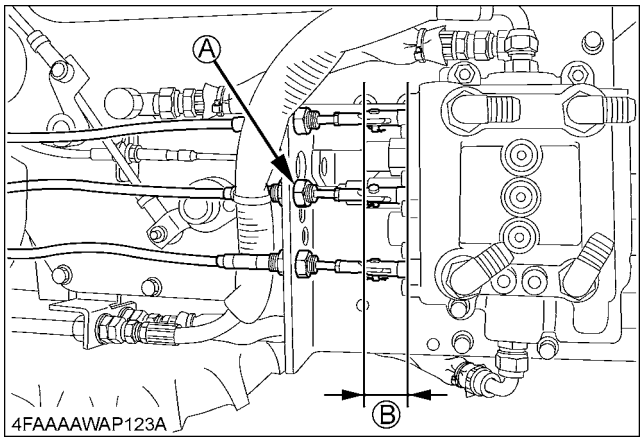
7. Install one lock nut to each cable end. Then route the cable ends through the valve stay.



(1) Cable (Blue, Boom section)
(2) Cable (Red, Bucket section)
(3) Cable (Gray, Switch section)
(4) 3-M16 Lock nuts
(5) Valve stay
(6) Spool (Boom section)
(7) Spool (Bucket section)
(8) Spool (Switch section)

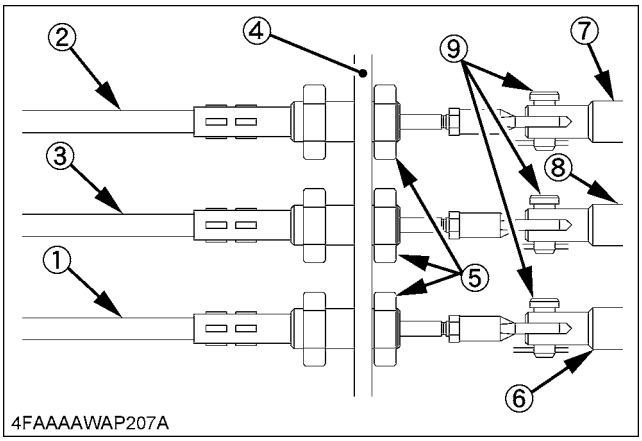
NOTE :
- The cable with blue tape is for boom section and the cable with red tape is for bucket section and the cable with gray tape is for switch section.
- Connect the switch section, keeping the self-level on/off lever downward.

IMPORTANT :
- Check the spool position at first. It must be same length like other spools.



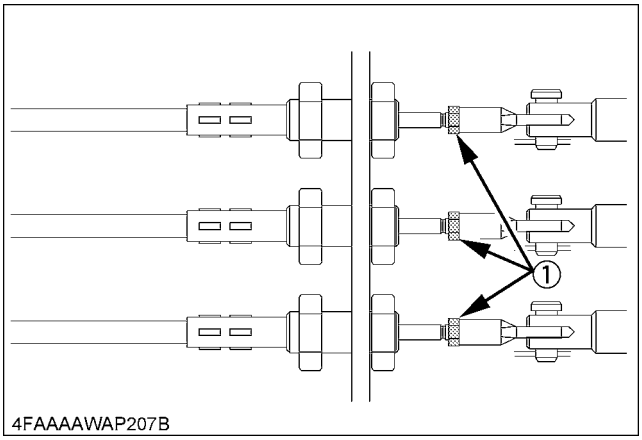
(A) For switch section
(B) Same length (30 mm (1.2 in.))

8. Install the other lock nuts to the cable ends and adjust the location of lock nuts so that the cable end hole aligns with the spool hole. Then connect the cable to the spools with pins.



(1) Cable (Blue, Boom section)
(2) Cable (Red, Bucket section)
(3) Cable (Gray, Switch section)
(4) Valve stay
(5) 3-M16 Lock nuts
(6) Spool (Boom section)
(7) Spool (Bucket section)
(8) Spool (Switch section)
(9) 3-Pins
3-Snap pins

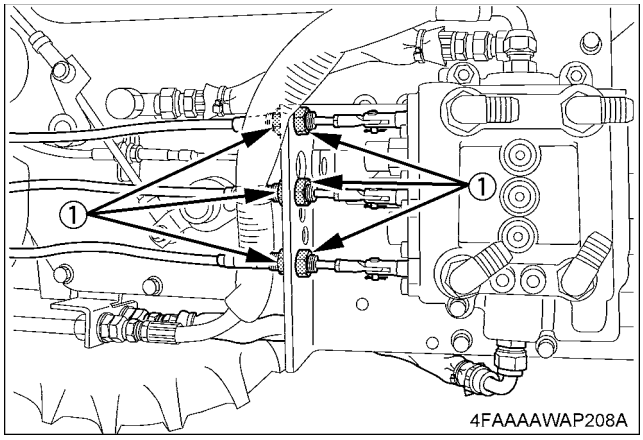
9. Loosen the M6 lock nuts of the cable ends. Turn the cable ends and spools so that the direction of the pins should be as shown in the figure. Then retighten the M6 lock nuts.



(1) 3-M6 Lock nuts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

NOTE :
- To reposition the cables for correct connections, use the M16 lock nuts.

10. Tighten up the lock nuts at both sides of the valve stay to secure the cables in place.



(1) 6-M16 Lock nuts

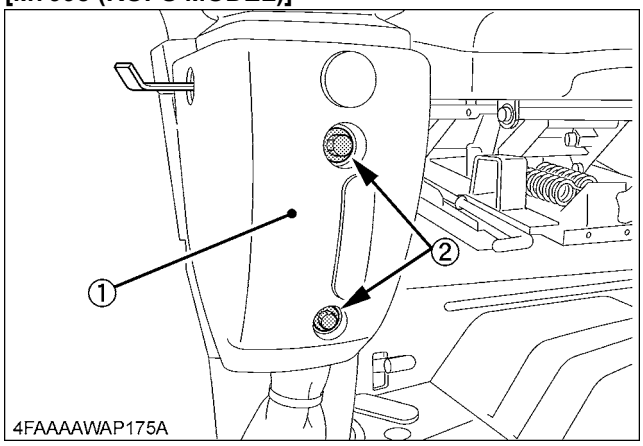
Tightening torque: 60.0 to 80.0 N-m
(6.1 to 8.2 kgf-m, 44.3 to 59.0 ft-lbs)

IMPORTANT :

- With the lock nuts tight in position, move the lever to make sure that the cables and spools behave smoothly as specified.

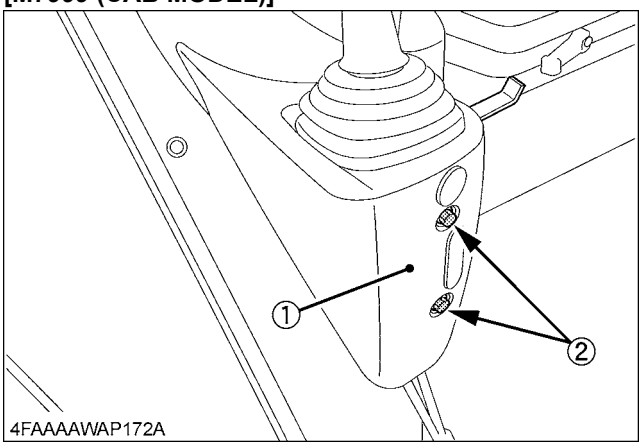
11. Attach the lever cover in place.

[M7998 (ROPS MODEL)]



(1) Lever cover *(2) 2-M8 x 16 flange bolts*

[M7999 (CAB MODEL)]



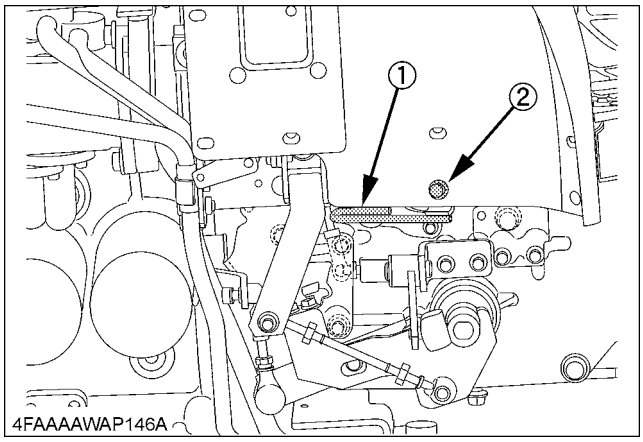
(1) Lever cover
(2) 2-M8 x 16 flange bolts

NOTE :

- The self-level adjustment procedure is referred to in the operator's manual.

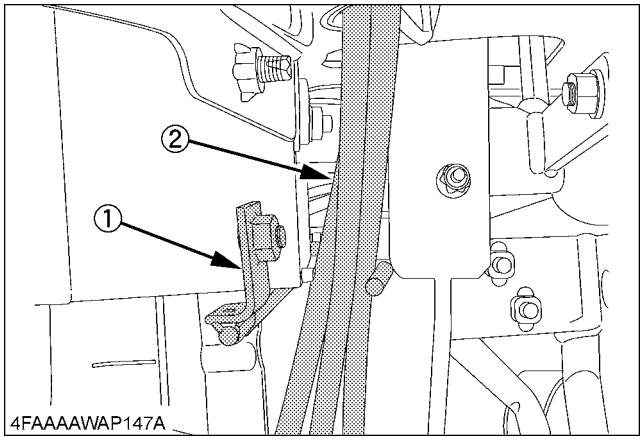
■Cable Guide [M7998 (ROPS Model)]

1. Attach the cable guide to the fender.



(1) Cable guide
(2) 1-M8 x 16 bolt with washers
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

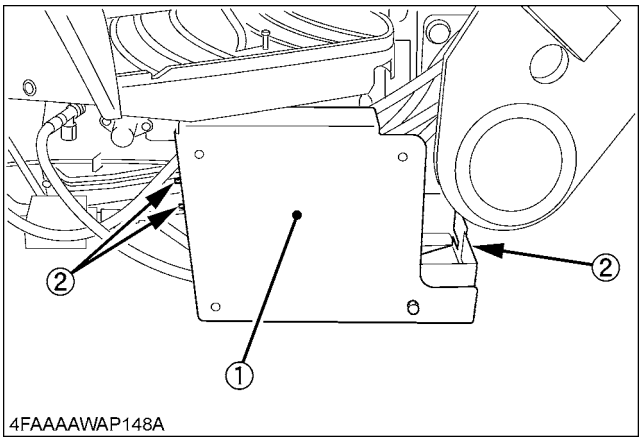
2. Pass the controller cable through the cable guide.



(1) Cable guide *(2) Controller cable*

■Control Valve Cover

1. Attach the valve cover to the valve stay.

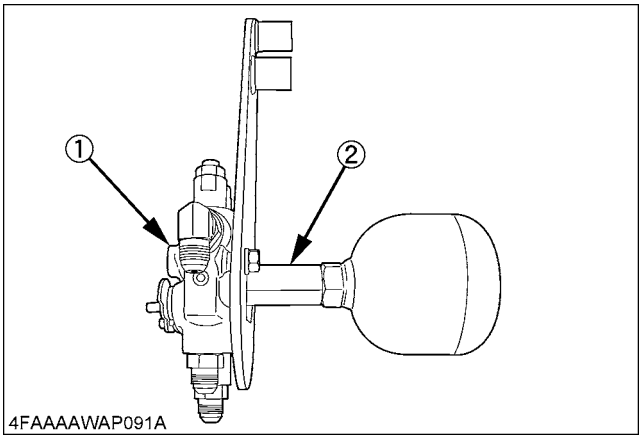


(1) Valve cover
(2) 3-M8 x 16 bolts with washers
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

■Accumulator (if equipped)

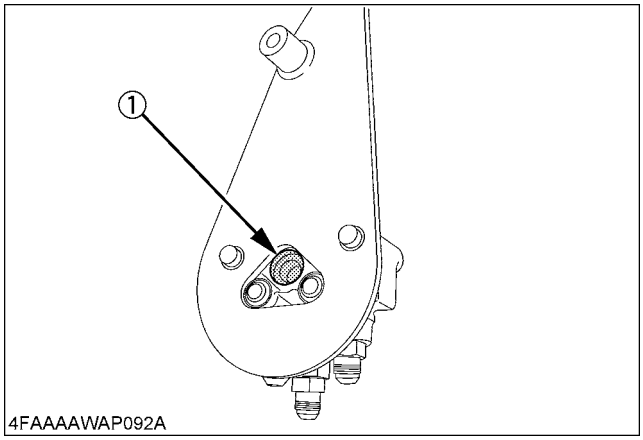
IMPORTANT :
When the control valve is of self-level type:
- If the machine is equipped with the optional self-level valve, fit the accompanying orifice to the accumulator assembly (RH) in the following procedure.
- If the machine does not have a self leveling valve, the orifice is not needed.

1. Remove the adapter from the accumulator valve.

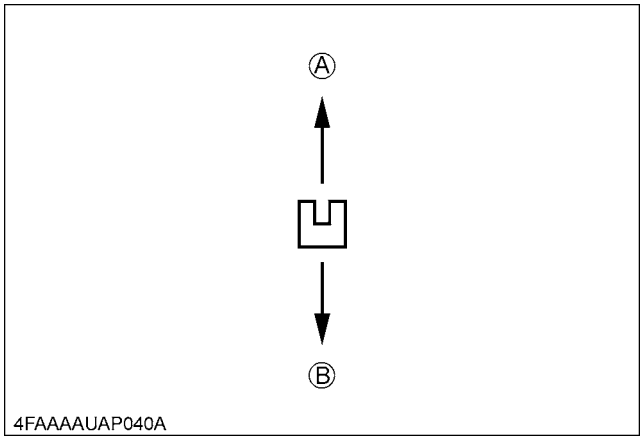


(1) Accumulator assy (RH)
(2) Adapter assy

2. Set the orifice into the port.



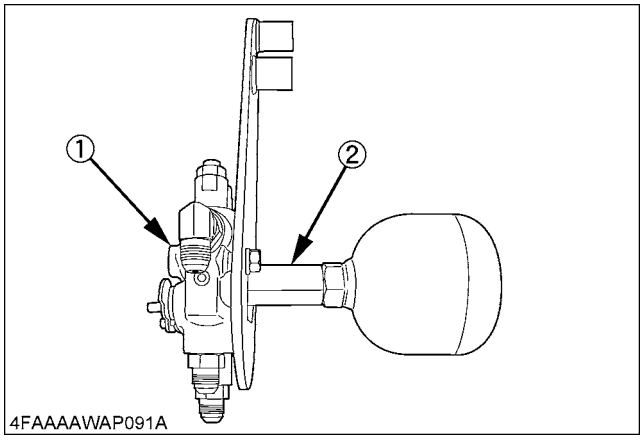
(1) Port



(A) Adapter side
(B) Accumulator valve side

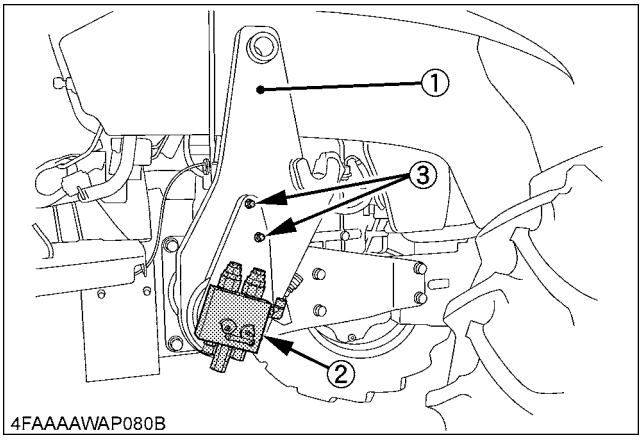
NOTE :
- Be careful not to confuse the orifice direction.

3. Attach the adapter back to the accumulator valve.



(1) Accumulator assy (RH)
(2) Adapter assy (3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

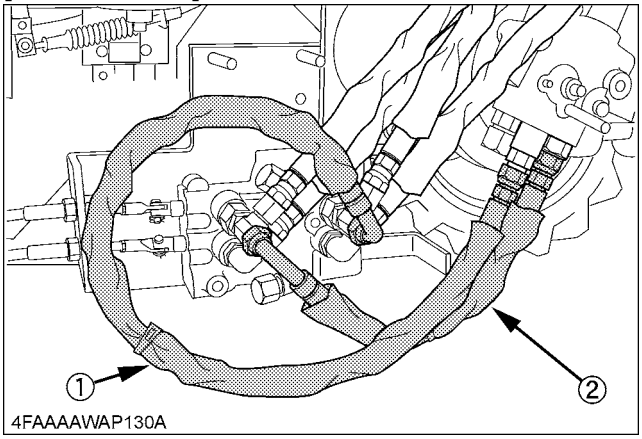
4. Connect the accumulator assembly (RH) to the main frame (RH).



(1) Main frame (RH)
(2) Accumulator assy (RH)
(3) 2-M10 x 110 bolts
2-M10 spring lock washers
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

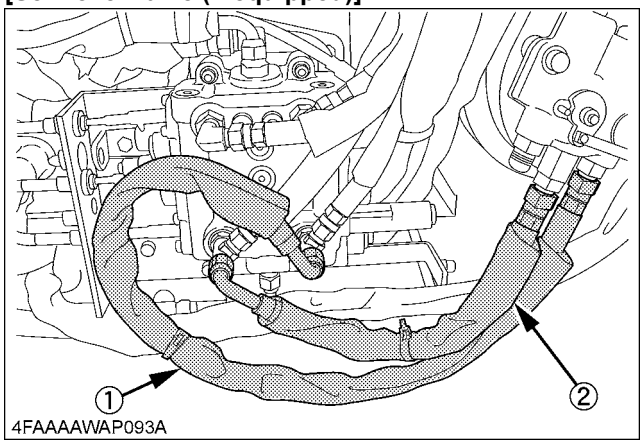
5. Fit the boom section adapter in position, and connect the hose between the accumulator valve and the control valve.

[Standard valve]



(1) Hydraulic hose 13 with sleeve
(850 mm (33.5 in.), 3/4-UNF and 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose 12 with sleeve
(385 mm (15.2 in.), 3/4-UNF and 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

[Self-level valve (if equipped)]



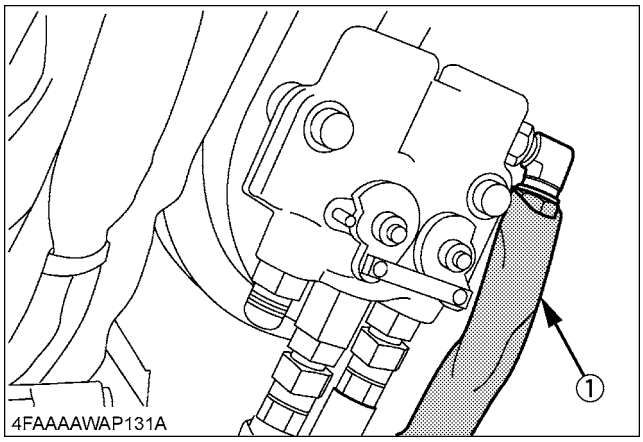
(1) Hydraulic hose 13 with sleeve (850 mm (33.5 in.), 3/4-UNF and 3/4-UNF)

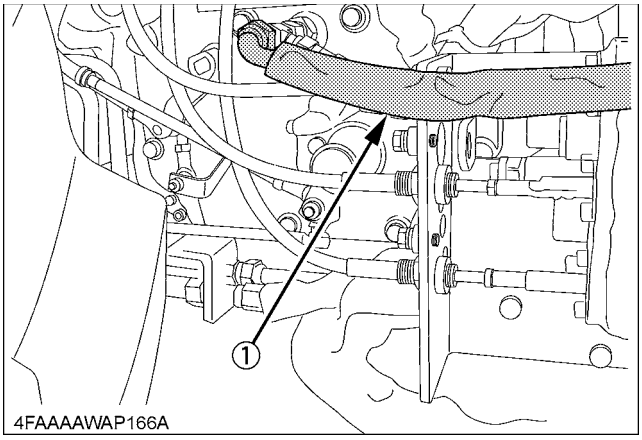
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

(2) Hydraulic hose 12 with sleeve (385 mm (15.2 in.), 3/4-UNF and 3/4-UNF)

Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

6. Connect the tank hose as shown in following figure.





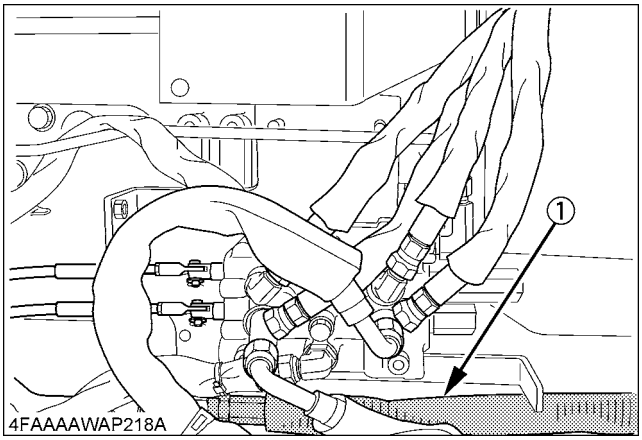
(1) Hydraulic tank hose with sleeve (914 mm (36.0 in.), 3/4-UNF and 7/8-UNF)

Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

[3rd function (if equipped)]

NOTE :

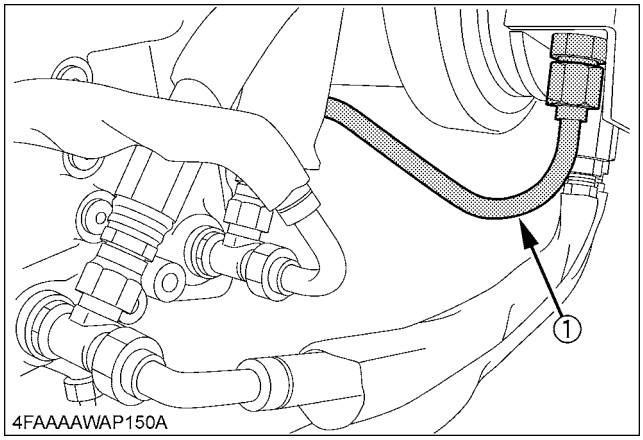
- Connect the hydraulic tank hose to the 3rd function port.



(1) Hydraulic tank hose with sleeve (625 mm (24.6 in.), 7/8-UNF)

Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

7. Connect the pipe as shown in following figure.



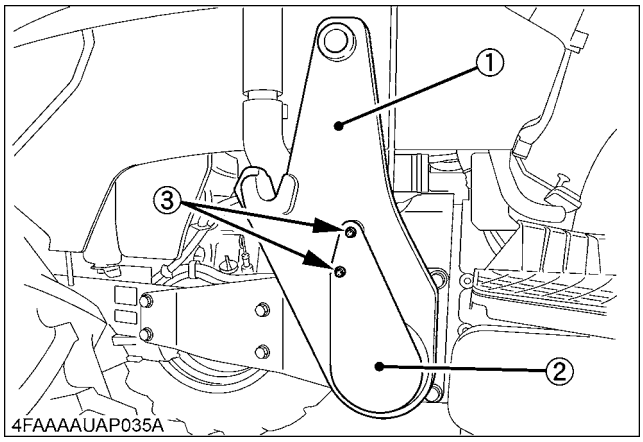
(1) Pipe (3/4-UNF)

Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

NOTE :

- There are two different pipes in the accumulator kit to accommodate different models.
- It should be apparent by fit which one should be used.

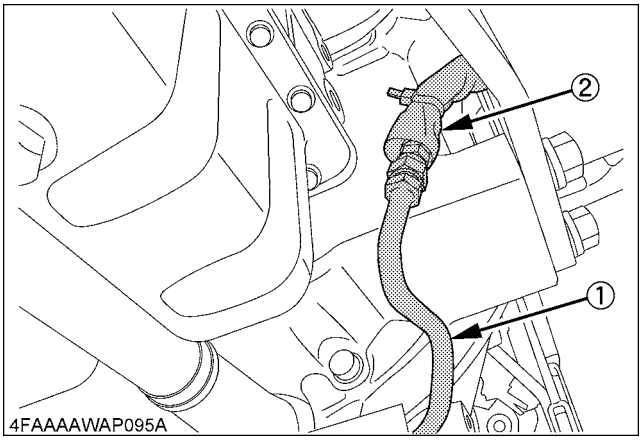
8. Connect the accumulator assembly (LH) to the main frame (LH).



(1) Main frame (LH)
(2) Accumulator assy (LH)
(3) 2-M10 x 80 bolts
2-M10 nuts

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

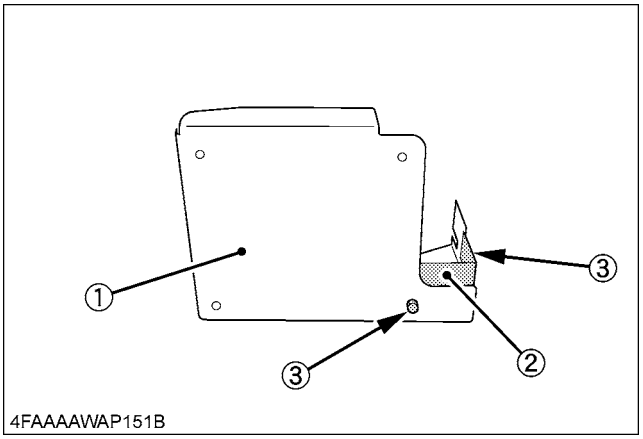
9. Connect the pipe to the accumulator assembly (LH).



(1) Pipe
(2) Hydraulic hose (LH) with sleeve (275 mm (10.8 in.), 3/4-UNF)

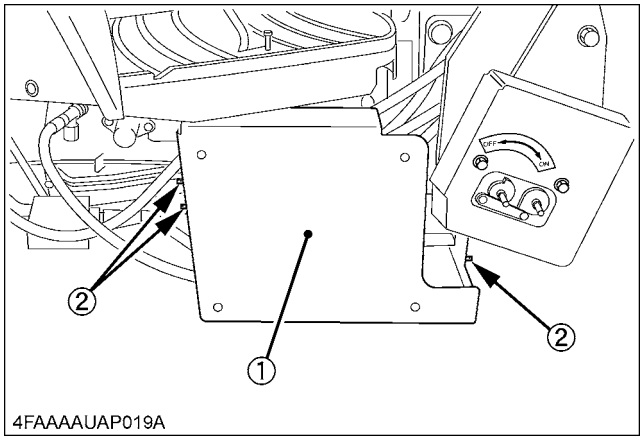
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

10. Remove the valve cover 2 from the valve cover.



(1) Valve cover
(2) Valve cover 2
(3) 2-M10 x 16 bolts

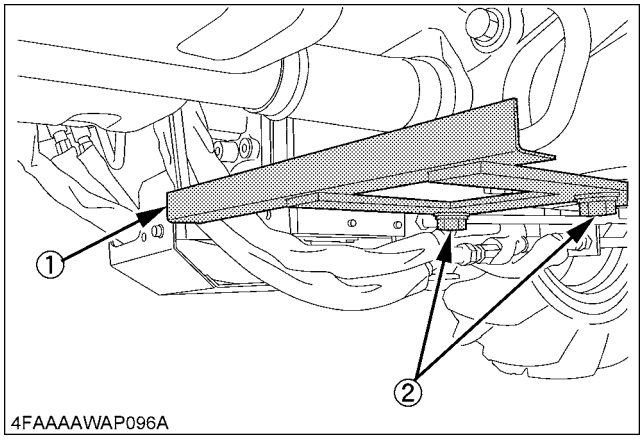
11. Attach the valve cover



(1) Valve cover
(2) 3-M8 x 20 bolts with washers
[Standard valve]
3-M8 x 16 bolts with washers
[Self leveling valve]

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

12. Attach the pipe cover in place.

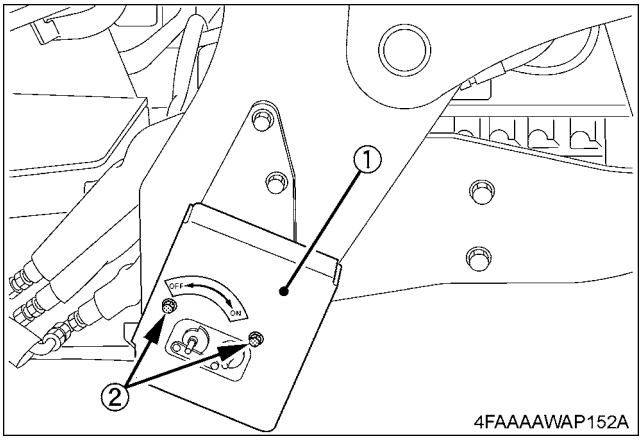


(1) Pipe cover
(2) 2-M16 x 40 bolts
2-M16 plain washers
2-M16 spring lock washers

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

NOTE :
- There are two different pipe covers in the accumulator kit to accommodate different models.
- It should be apparent by fit which one should be used.

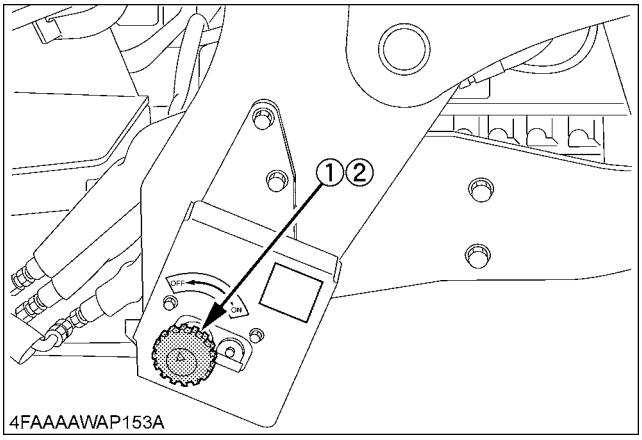
13. Attach the accumulator valve cover in place.



(1) Accumulator valve cover
(2) 2-M8 x 20 bolts

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

14. Apply the selector lever to the accumulator valve.



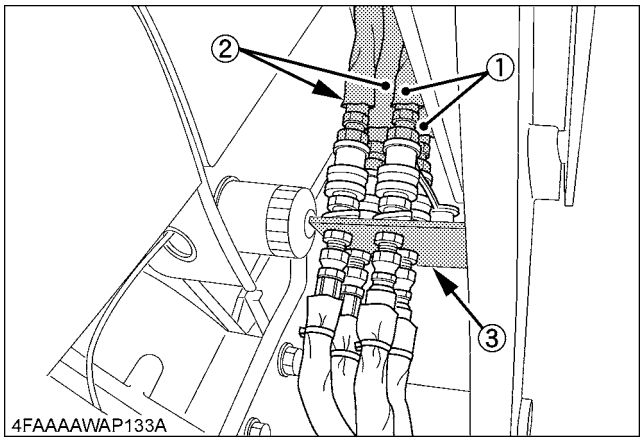
(1) Selector lever
(2) M8 lock nut

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

NOTE :
- Secure the selector lever with the lock nut.

■Multi Coupler (if equipped)

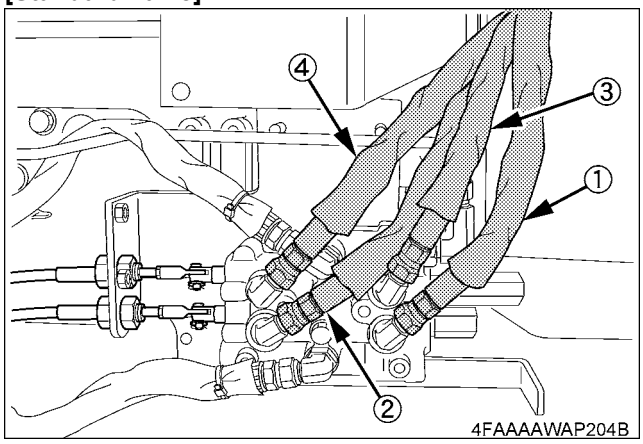
1. Detach the loader.



(1) Hose 1
(2) Hose 2
(3) Coupler stay

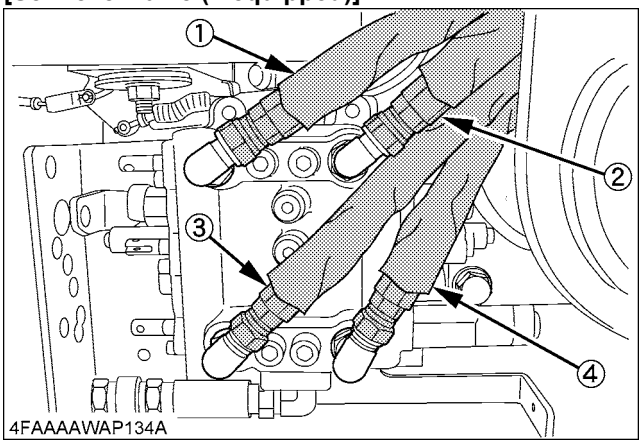
2. Disconnect the hoses from the valves and coupler stay.

[Standard valve]



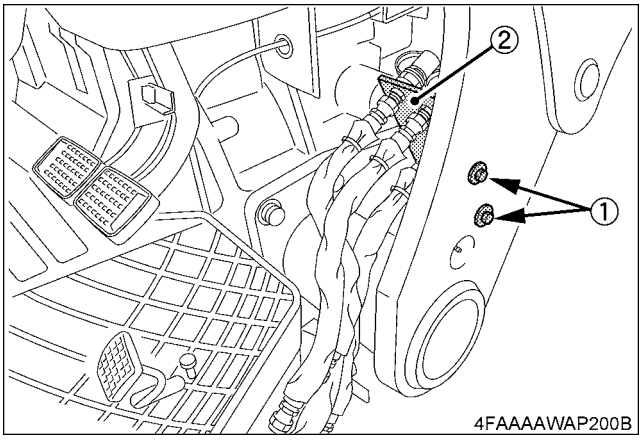
(1) Hydraulic hose (Red 500 mm (19.7 in.))
(2) Hydraulic hose (Blue 597 mm (23.5 in.))
(3) Hydraulic hose (Yellow 465 mm (18.3 in.))
(4) Hydraulic hose (White 559 mm (22.0 in.))

[Self-level valve (if equipped)]



(1) Hydraulic hose (Red 500 mm (19.7 in.))
(2) Hydraulic hose (Blue 432 mm (17.0 in.))
(3) Hydraulic hose (Yellow 520 mm (20.4 in.))
(4) Hydraulic hose (White 485 mm (19.1 in.))

3. Remove the connector stay assembly.

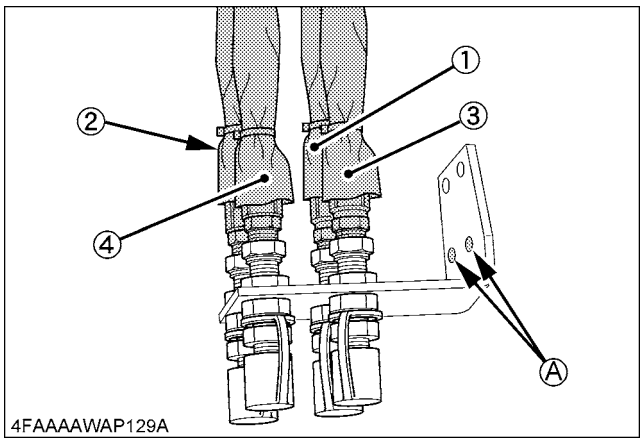


(1) 2-M10 x 60 bolts
2-M10 nuts

Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

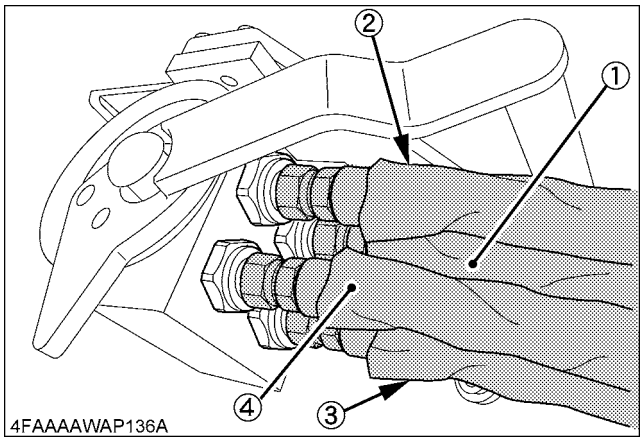
2-M10 plain washers
2-M10 spring lock washers
(2) Connector assy stay

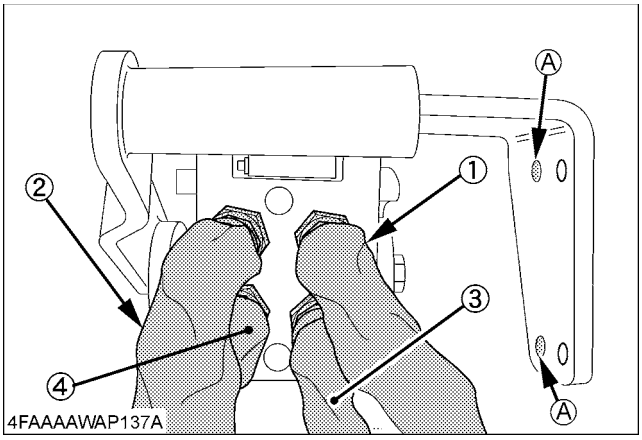
4. Disconnect the hoses from the connector stay assembly.



(1) Hydraulic hose (Red)
(2) Hydraulic hose (Blue)
(3) Hydraulic hose (Yellow)
(4) Hydraulic hose (White)

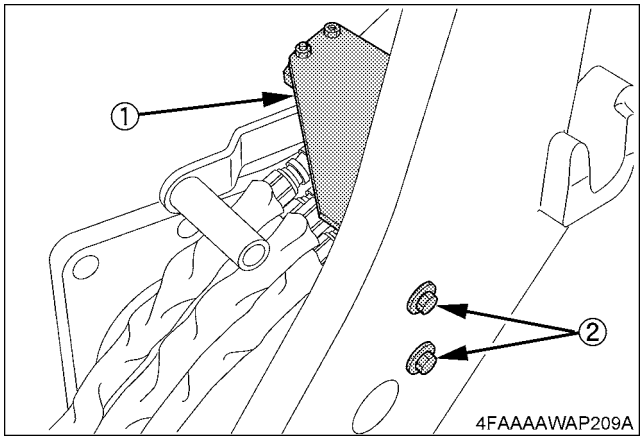
5. Connect the hoses to the multi coupler 1.





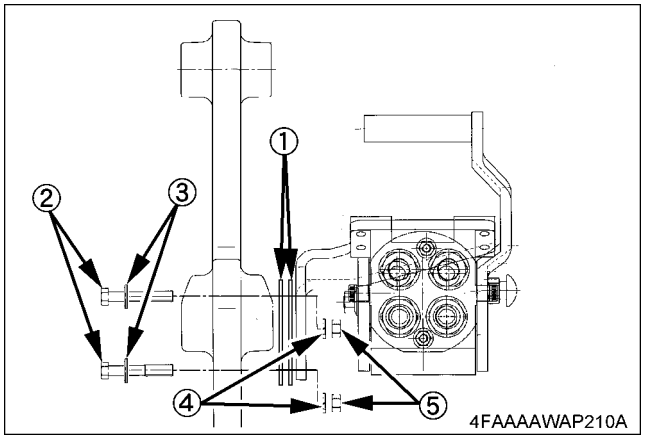
(1) Hydraulic hose (Red, 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose (Blue, 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(3) Hydraulic hose (Yellow, 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(4) Hydraulic hose (White, 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(A) Use the holes.

6. Attach the multi coupler 1 to the main frame (RH).



(1) Multi coupler 1
(2) 2-M10 x 65 bolts
2-M10 Plain washers
2-M10 spring lock washers
2-M10 Nuts

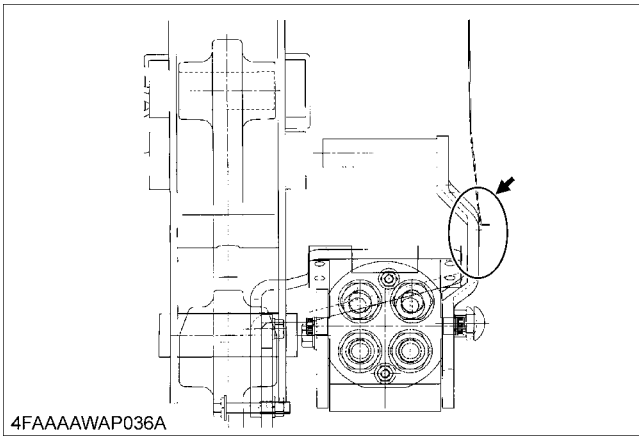
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.



(1) Spacer
(2) 2-M10 x 65 bolts
(3) 2-M10 Plain washers
(4) 2-M10 Spring lock washers
(5) 2-M10 Nuts (original)

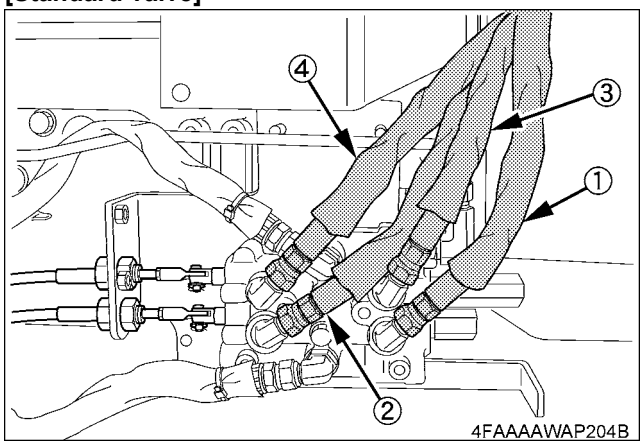
NOTE :

- When lever of multi coupler is near the bonnet, use one spacer. Clearance is dependant on tractor model and whether it is a CAB or ROPS unit.



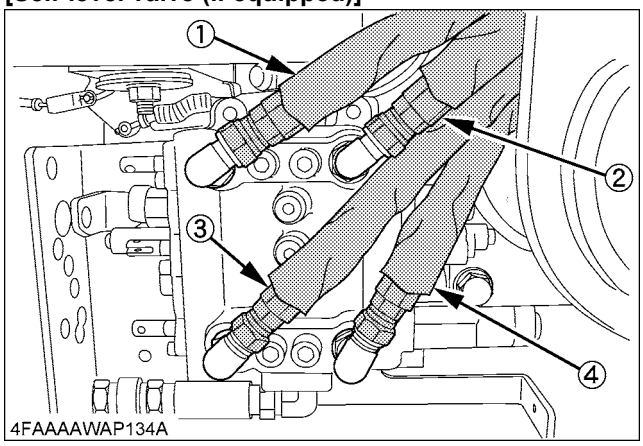
7. Connect the hoses to the valve.

[Standard valve]



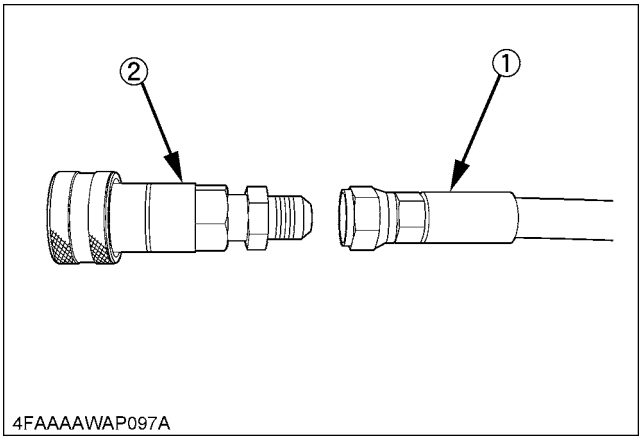
(1) Hydraulic hose (Red 500 mm (19.7 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose (Blue 597 mm (23.5 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(3) Hydraulic hose (Yellow 465 mm (18.3 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(4) Hydraulic hose (White 559 mm (22.0 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

[Self-level valve (if equipped)]



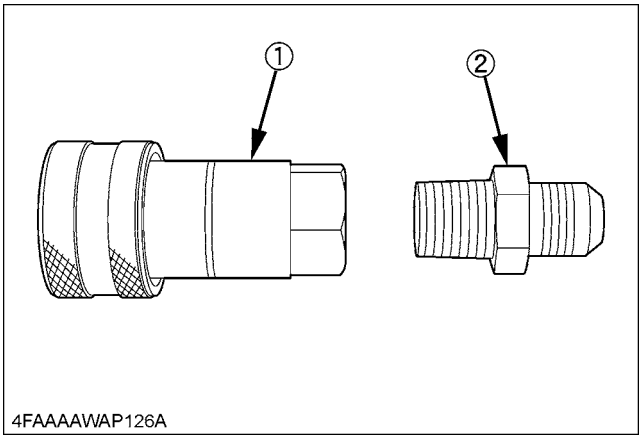
(1) Hydraulic hose (Red 500 mm (19.7 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose (Blue 432 mm (17.0 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(3) Hydraulic hose (Yellow 520 mm (20.4 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(4) Hydraulic hose (White 485 mm (19.1 in.), 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

8. Disconnect the couplers from the hose 1 and hose 2.



(1) 2-Hoses 1
2-Hoses 2
(2) 4-Couplers

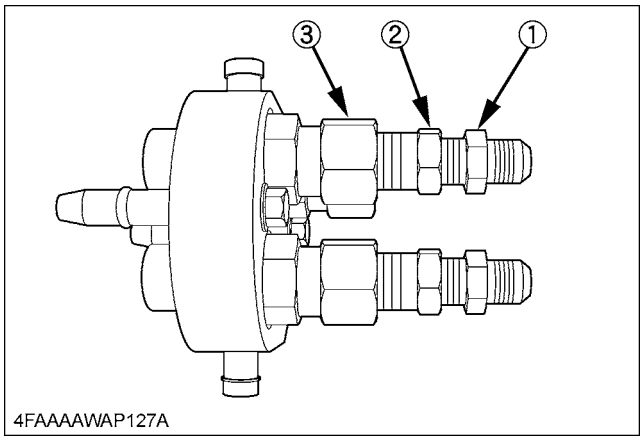
9. Remove the adapter from the coupler.



(1) 4-Couplers
(2) 4-Adapters 1

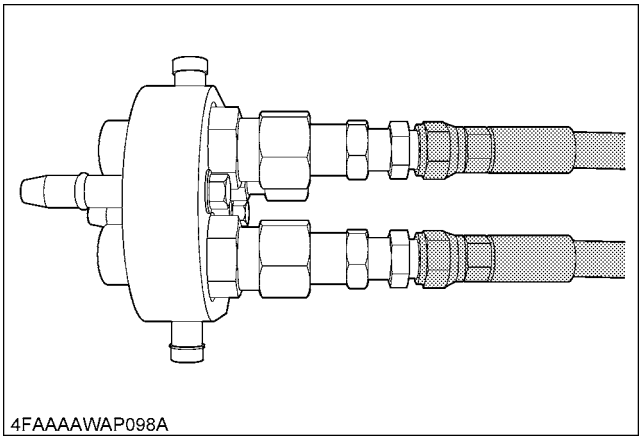
10. Attach the adapter 1 and 2 to the multi coupler 2

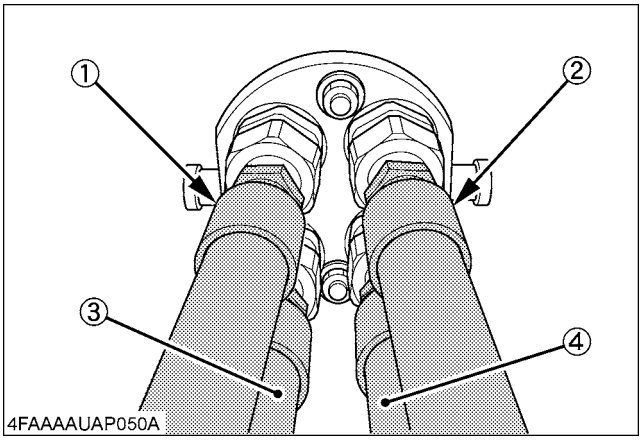
IMPORTANT :
- Wrap each adapter 1 and 2 with Teflon tape or similar liquid sealer before connecting to the multi coupler 2.



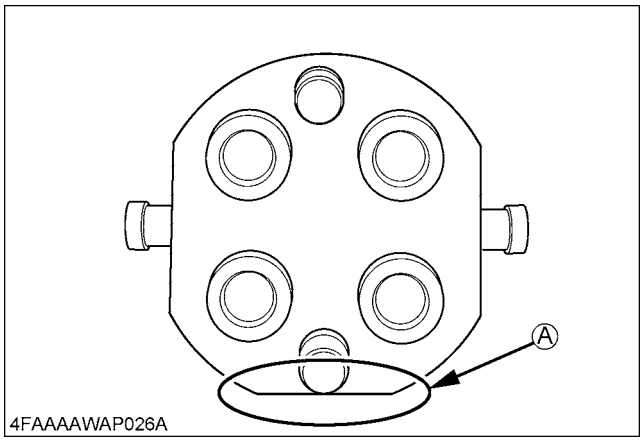
(1) 4-Adapters 1 (original, 1/2-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) 4-Adapters 2
(3) 1-Multi coupler 2

11. Connect the hose 1 and hose 2 to the multi coupler 2.





(1) Hydraulic hose 1 (Red, 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose 2 (Blue, 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(3) Hydraulic hose 1 (Yellow, 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(4) Hydraulic hose 2 (White, 3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.



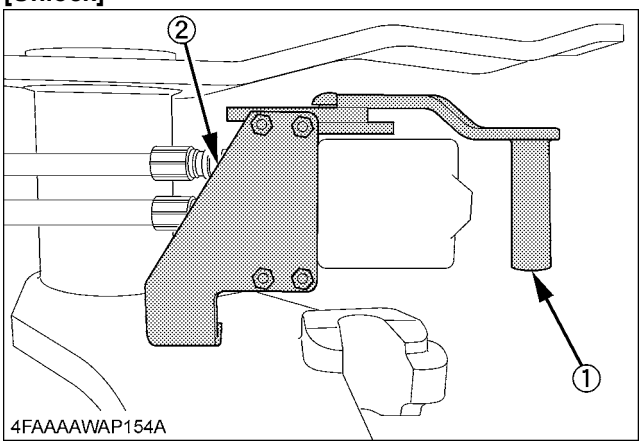
(A) Flat face

IMPORTANT :

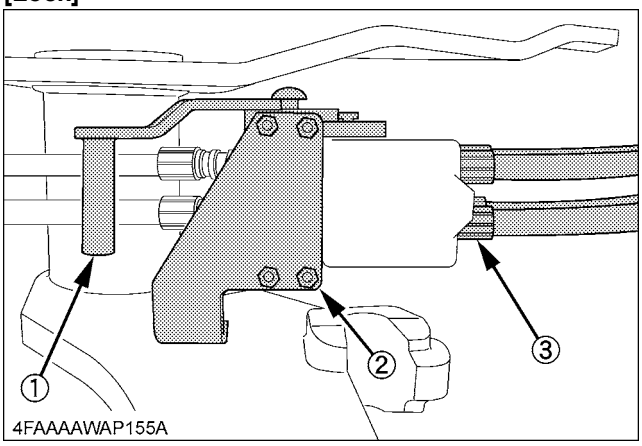
- Install the multi coupler with its flat face facing downward, as shown above.

12. Interconnect the multi coupler 1 and multi coupler 2.

[Unlock]



[Lock]



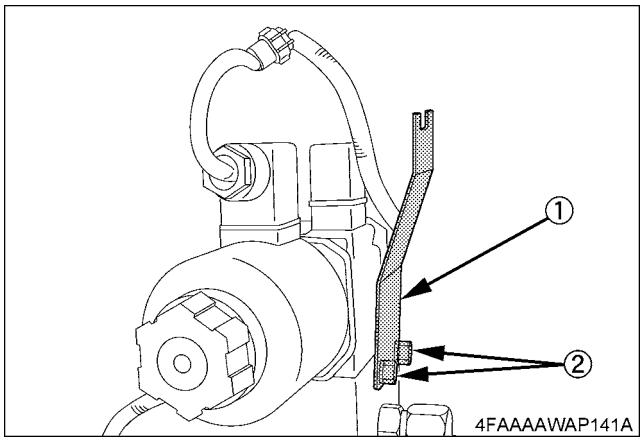
(1) Lever
(2) Multi coupler 1
(3) Multi coupler 2

NOTE :

- If the hoses 1 and 2 are twisted when the multi couplers 1 and 2 are temporarily connected, untwist them and reconnect.

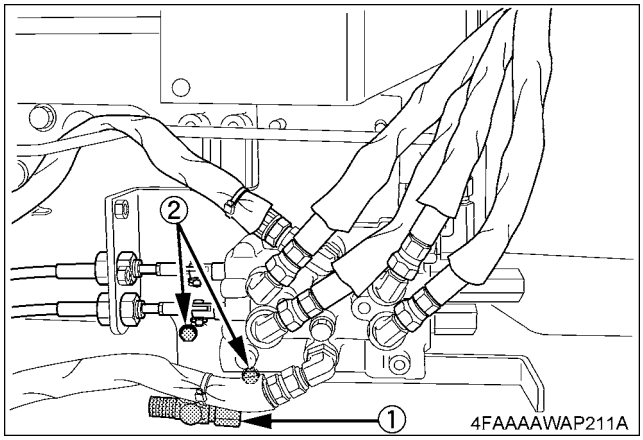
■3rd Function (if equipped)

1. Attach the relay stay to the solenoid valve assy.



(1) Relay stay (Solenoid valve assy)
(2) 2-M8 x 16 bolts
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

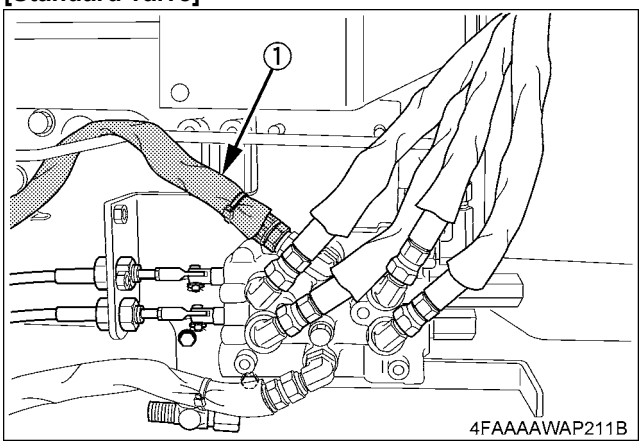
2. Assemble the following parts as shown below.



(1) Solenoid valve assy
(2) 2-M10 x 30 bolts with washers
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

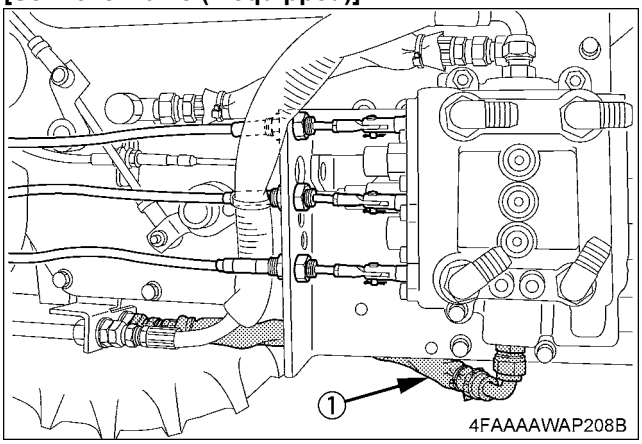
3. Disconnect the pump line hose.

[Standard valve]



(1) Pump line hose

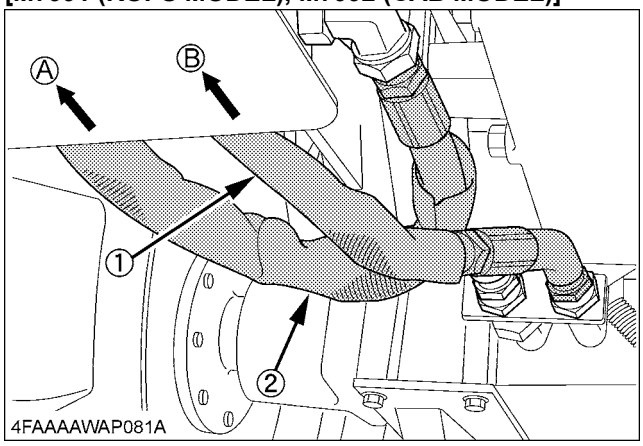
[Self-level valve (if equipped)]

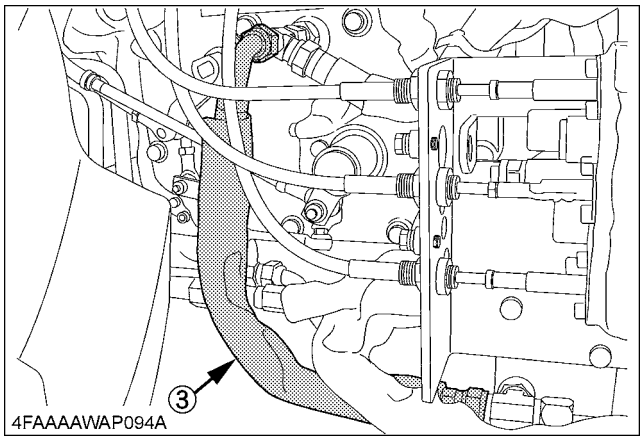


(1) Pump line hose

4. Assemble the following parts as shown below.

[M7991 (ROPS MODEL), M7992 (CAB MODEL)]



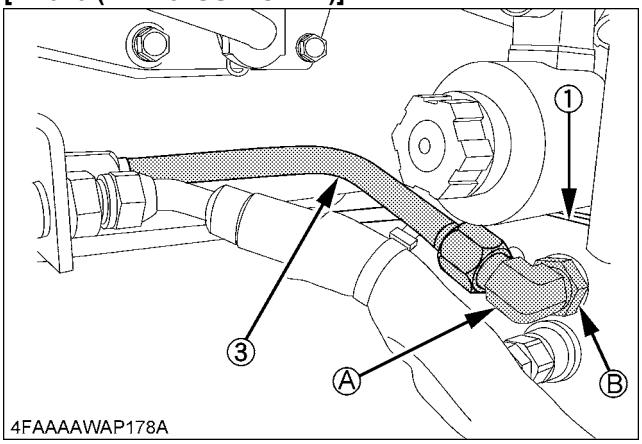


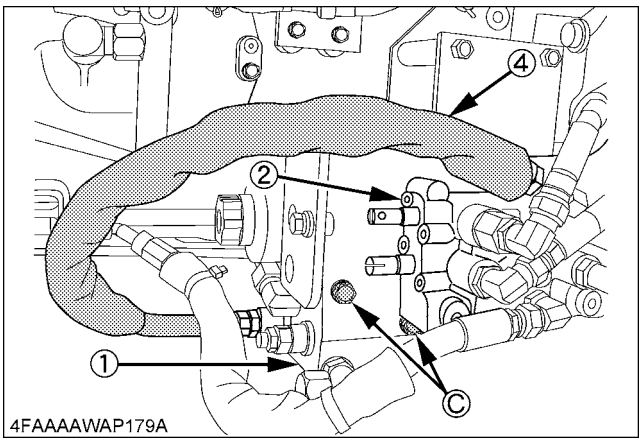
(1) Pump line hose 1 (300 mm (11.8 in.), 7/8-UNF and 7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

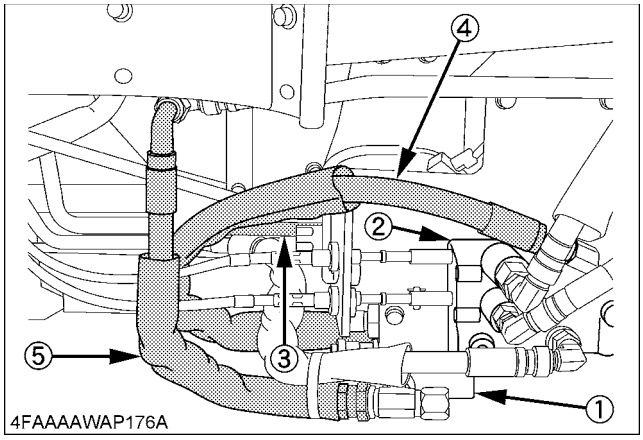
(2) Pump line hose 2
(For standard valve: 710 mm (28.0 in.), 3/4-UNF and 7/8-UNF)
(For self-level valve: 570 mm (22.4 in.), 3/4-UNF and 7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

(3) Tank hose (460 mm (18.1 in.), 7/8-UNF and 7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.

[M7949 (LA1154SU MODEL)]



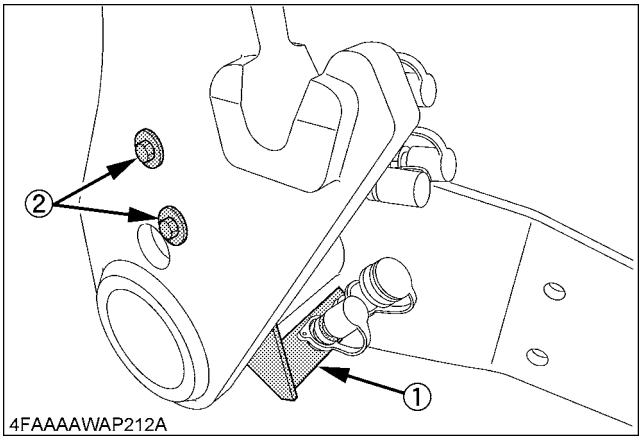


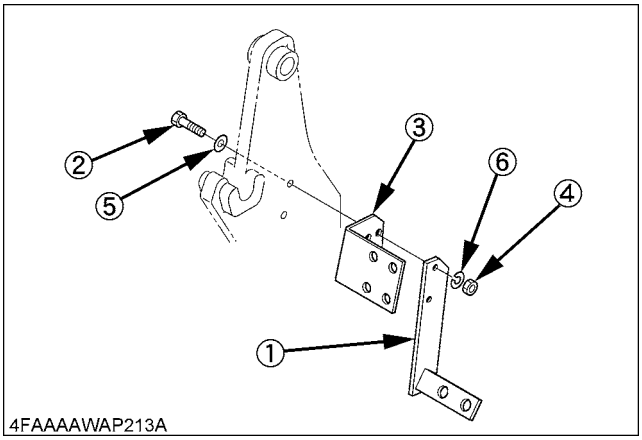


(1) Solenoid valve block
(2) Control valve (ST)
(3) Pump line pipe (7/8-UNF and 7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(4) Pump line hose (710 mm (28.0 in.), 3/4-UNF and 7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(5) Tank hose (460 mm (18.1 in.), 7/8-UNF and 7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(A) Pump line fitting
(B) Pump line fitting nut
(C) 2-M10 x 30 bolts with washers

NOTE :
- If the pump line pipe (3) cannot be properly connected, loosen the nut (B) and the bolts (C). After assembling the pump line pipe (3), tighten the nut (B) and the bolts (C).
  Each tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

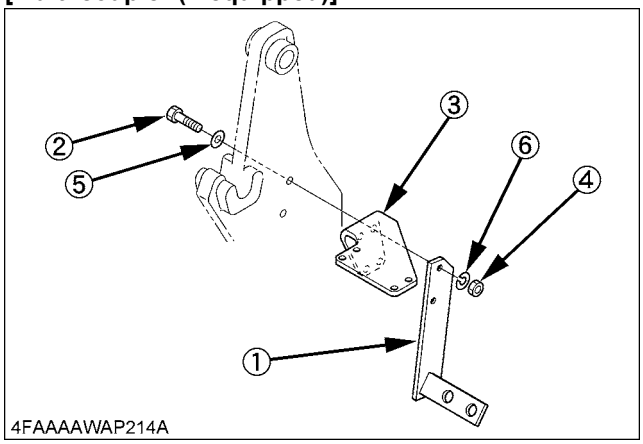
5. Fit the coupler stay assembly as shown below.





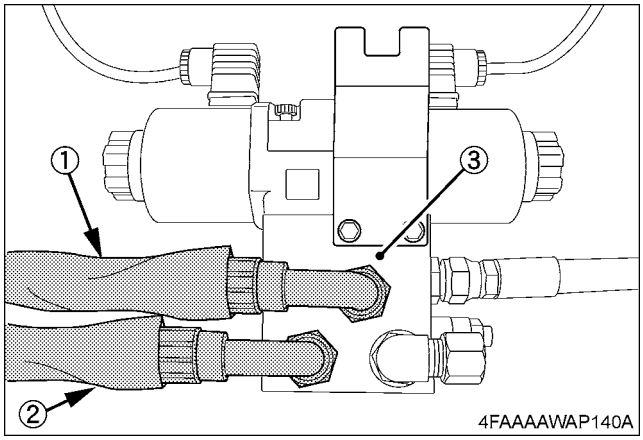
(1) Coupler stay assy
(2) 2-M10 x 60 bolts (original)
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(3) Connector stay assy
(4) 2-M10 nuts (original)
(5) 2-M10 plain washers (original)
(6) 2-M10 spring lock washers (original)

[Multi coupler (if equipped)]



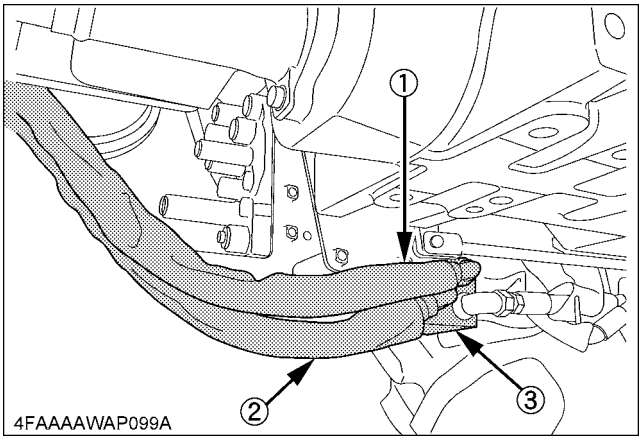
(1) Coupler stay assy
(2) 2-M10 x 60 bolts (original)
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(3) Multi coupler stay assy (original)
(4) 2-M10 nuts (original)
(5) 2-M10 plain washers (original)
(6) 2-M10 spring lock washers (original)

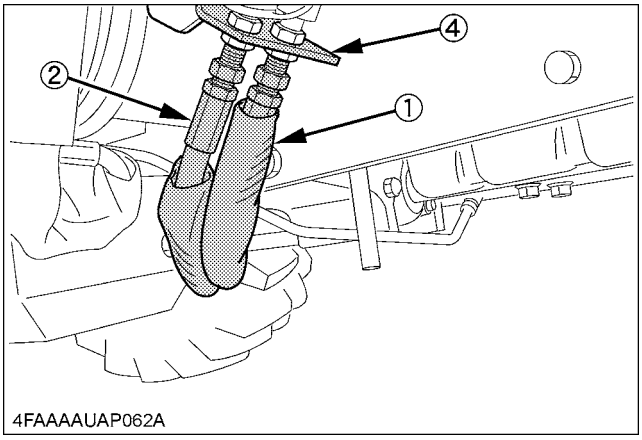
6. Connect the hydraulic hose A-1 and hydraulic hose A-2 to the solenoid valve assembly.



(1) Hydraulic hose A-1 (648 mm (25.5 in.), 7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose A-2 (648 mm (25.5 in.), 7/8-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(3) Solenoid valve assy

7. Connect Hydraulic hose A-1 and Hydraulic hose A-2 to coupler stay assembly.

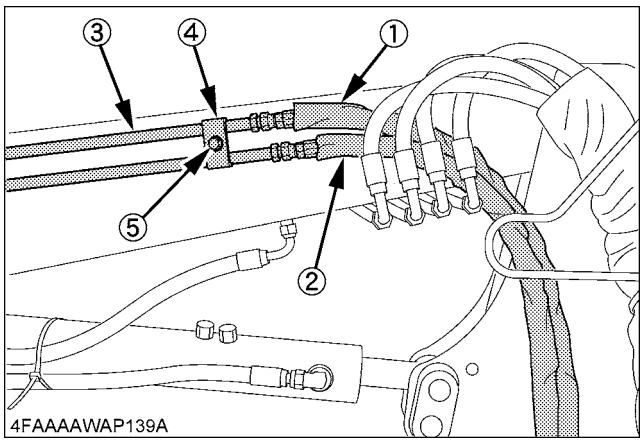




(1) Hydraulic hose A-1 (3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose A-2 (3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(3) Solenoid valve assy
(4) Coupler stay assy

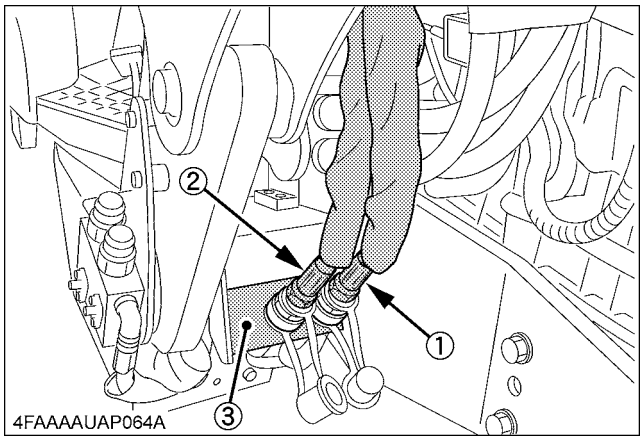
NOTE :
- When connecting, be careful not to interfere the brake link.

8. Install tubes to the boom and install the hydraulic hoses to the tubes.



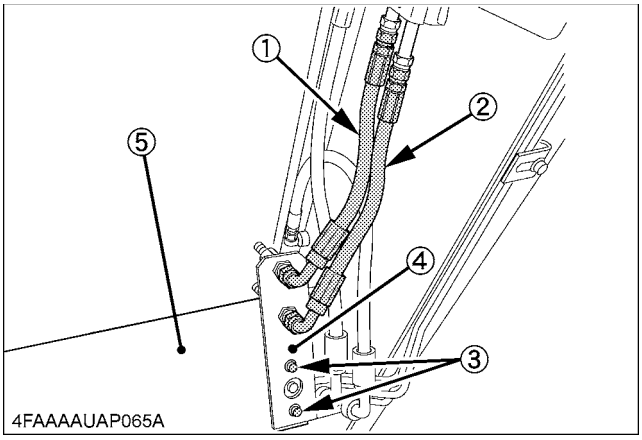
(1) Hydraulic hose mid-1 (with nipple) (3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(2) Hydraulic hose mid-2 (with coupler) (3/4-UNF)
Tightening torque: See "TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS" section.
(3) 2-Tubes
(4) 2-Tube stays
(5) 2-M8 x 35 bolts
2-Collars
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.

9. Connect the hydraulic hoses to the coupler stay assy.



(1) Hydraulic hose mid-1 (with fitting)
(2) Hydraulic hose mid-2 (with coupler)
(3) Coupler stay assy

10. Remove the M8 bolts from the cover.
Using the M8 bolts contained in the kit, secure the stay (provided with the hydraulic hose joint) and the cover together in position.
11. Connect the hydraulic hose hitch 1 and hydraulic hose hitch 2 between the pipe and hitch stay assembly.

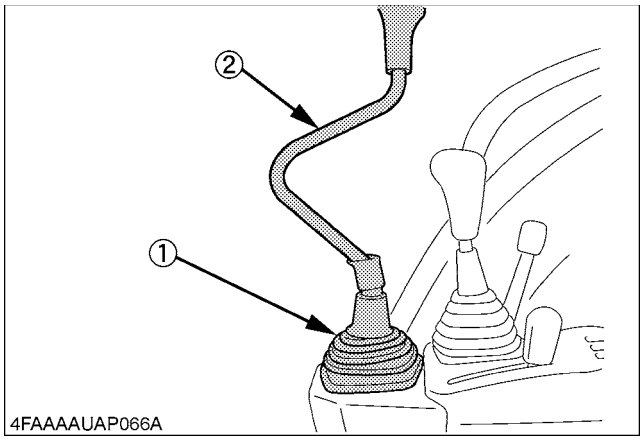


(1) Hydraulic hose hitch-1
(2) hydraulic hose hitch-2
(3) 2-M8 x 40 bolts
(4) Stay
(5) Cover

■Controller and Wire Harness for 3rd Function

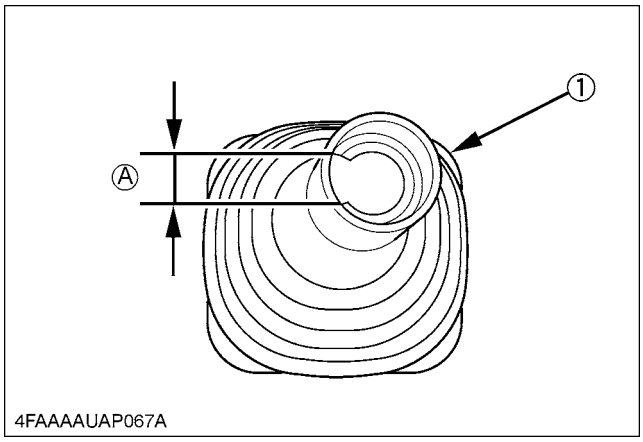
◆ **M7991 (ROPS MODEL), M7992 (CAB MODEL)**

1. Remove the lever boot first and then the lever.



(1) Lever boot
(2) Control lever

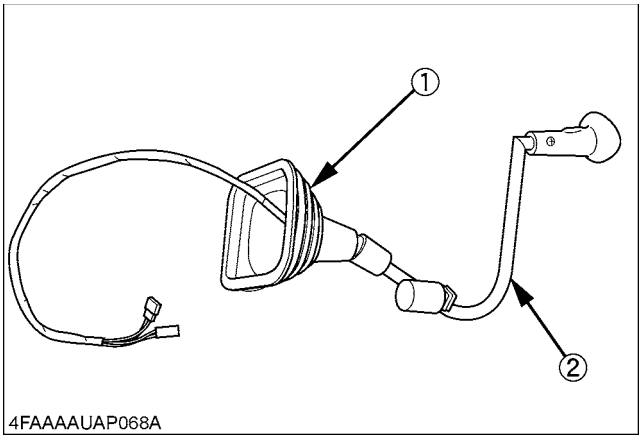
2. Cut the lever boot as shown below.



(1) Lever boot *(A) 15 mm (0.6 in.)*

3. Pass the lever boot through the 3rd function control lever, and attach the 3rd function control lever to the tracator.

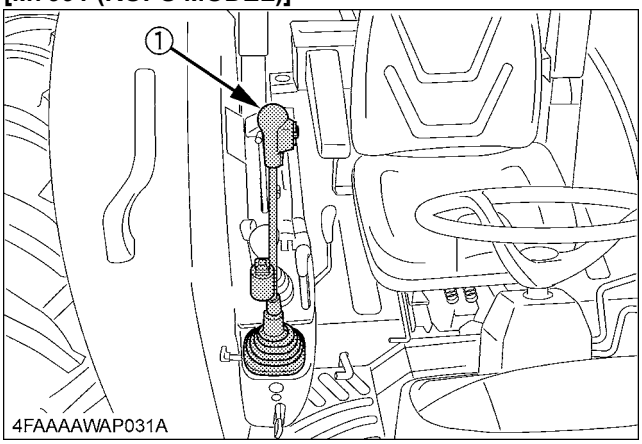
NOTE :
- Pass the harness through the cut opening of the boot.



(1) Lever boot
(2) 3rd function control lever

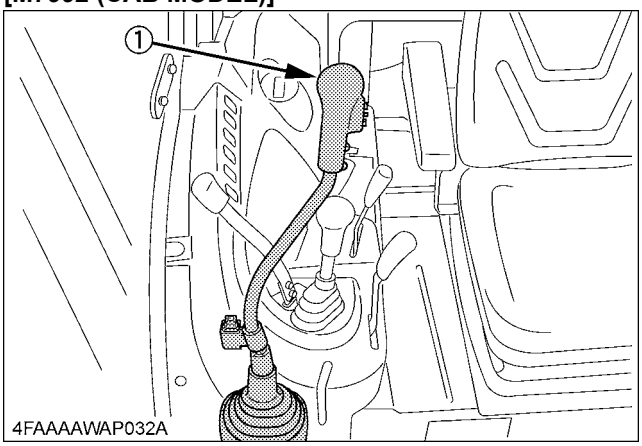
NOTE :
- Install the lever upright in position.

[M7991 (ROPS MODEL)]



(1) 3rd function control lever

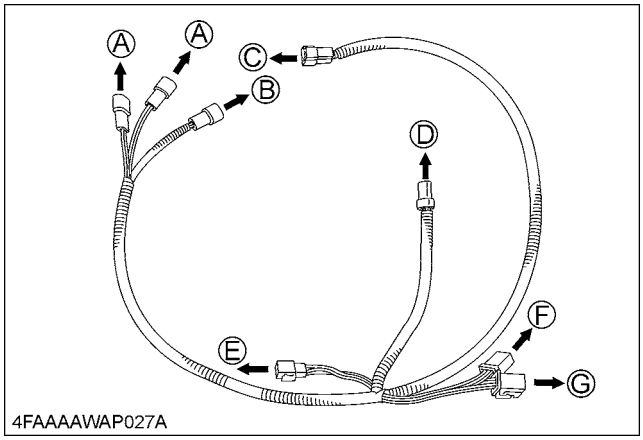
[M7992 (CAB MODEL)]



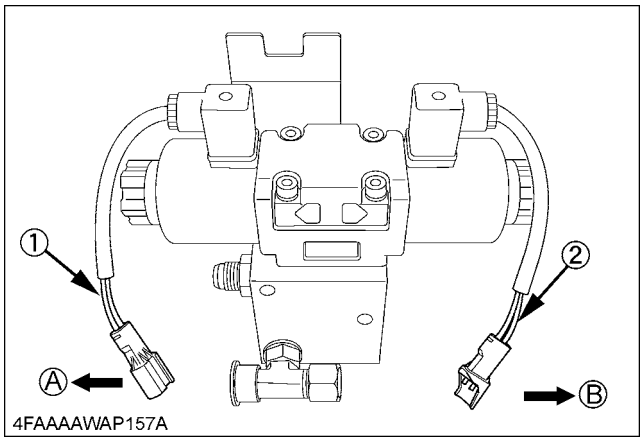
(1) 3rd function control lever

4. Attach the relay to the wire harness, and connect the wire harness to the tractor and solenoid valve harness.

IMPORTANT :
- Connect the wire harness couplers of the 3rd function control lever to their respective same-color couplers.

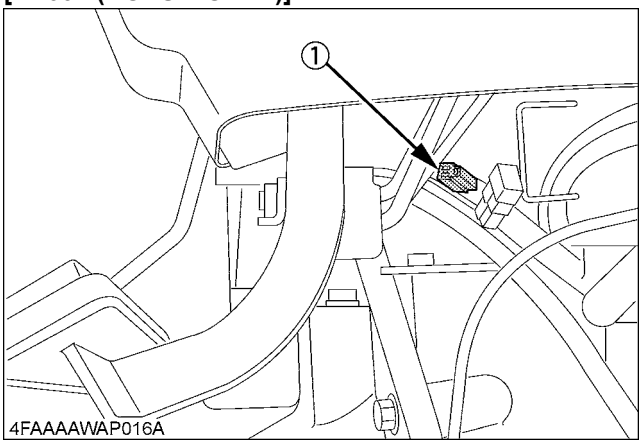


(A) To 3rd function control lever
(B) To ON/OFF switch
*(C) To tractor harness **[M7991]***
*To additional harness **[M7992]***
(D) To solenoid valve harness-1
(E) To solenoid valve harness-2
(F) To relay
(G) To relay



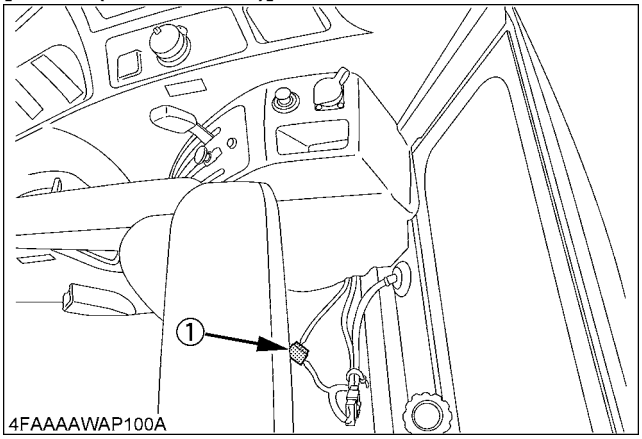
(1) Solenoid valve harness-1 *(A) Rear of tractor*
(2) Solenoid valve harness-2 *(B) Front of tractor*

[M7991 (ROPS MODEL)]



(1) Tractor harness

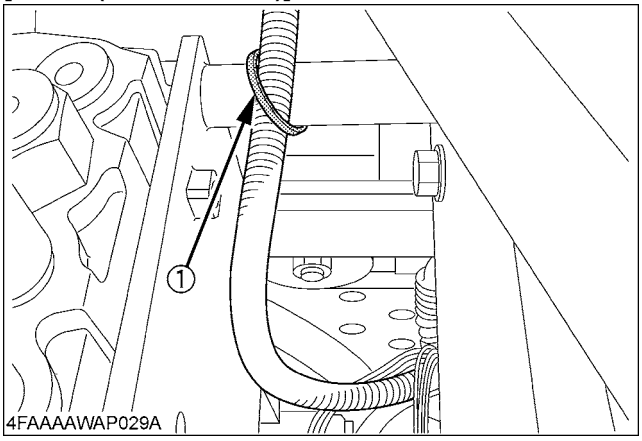
[M7992 (CAB MODEL)]



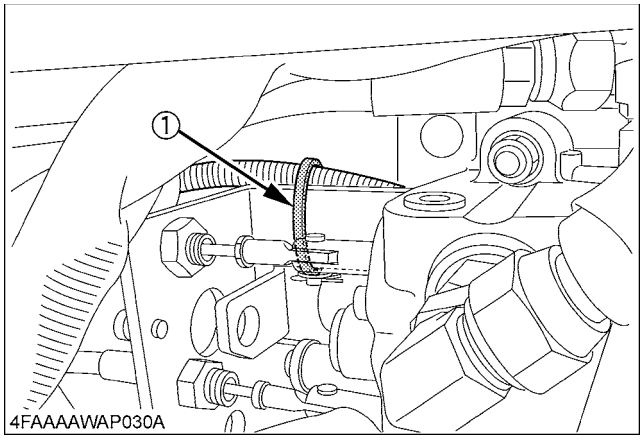
(1) Tractor harness

5. Clamp the wire harness as shown below.

[M7991 (ROPS MODEL)]

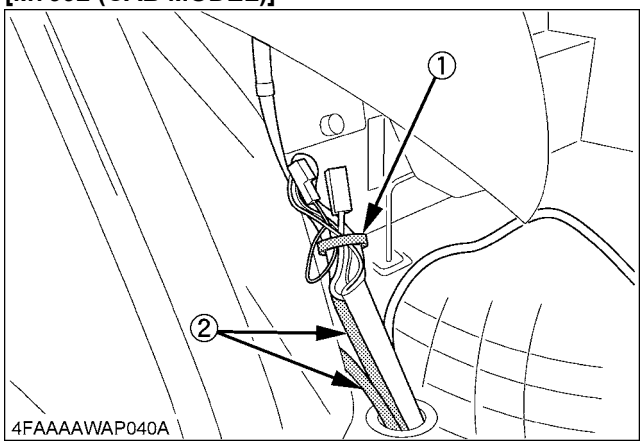


(1) Clamp (cord band)



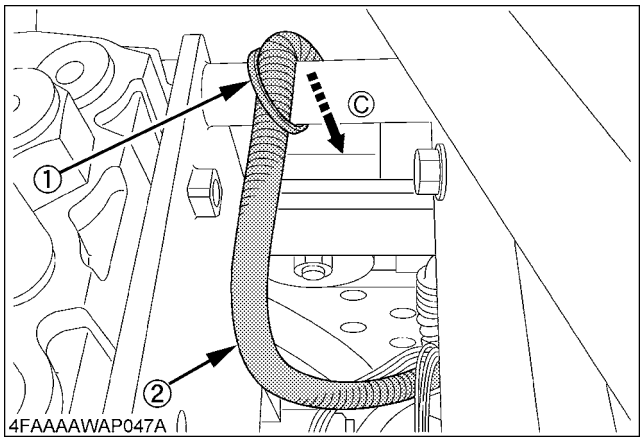
(1) Clamp (cord band)

[M7992 (CAB MODEL)]

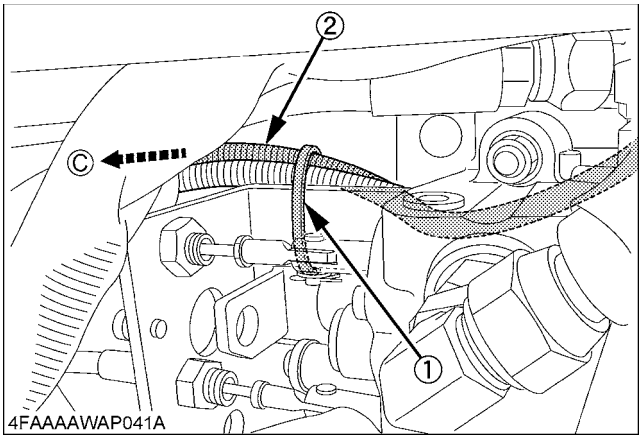


(1) Clamp (cord band)
(2) Controller cable

Pass the wire harness along with its coupler facing the back of the tractor.

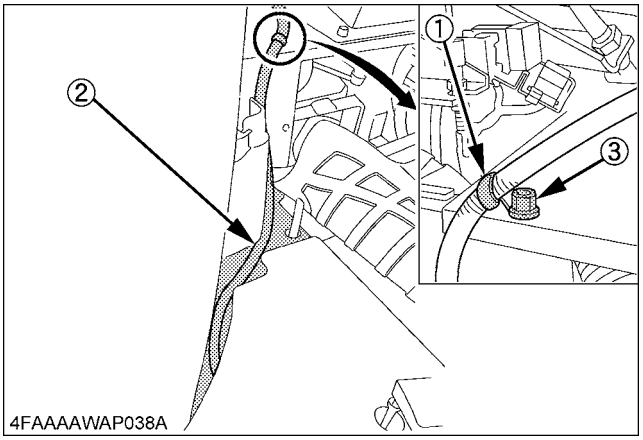


(1) Clamp (cord band) *(C) To additional harness*
(2) Wire harness



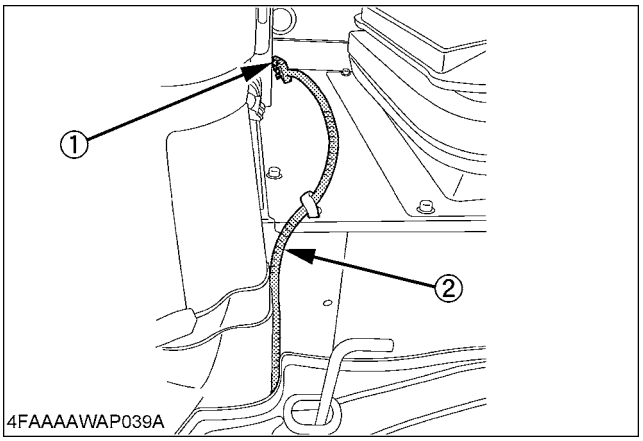
(1) Clamp (cord band) *(C) To additional harness*
(2) Wire harness

Put an additional harness in the interior trim clearance. Remove the bolt and clamp the harness.



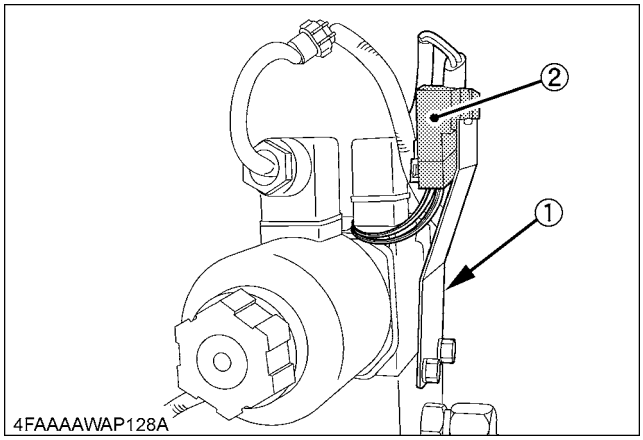
(1) Clamp (cord band) *(3) Bolt*
(2) Additional harness

Connect the additional harness to the tractor harness.



(1) Tractor harness *(2) Additional harness*

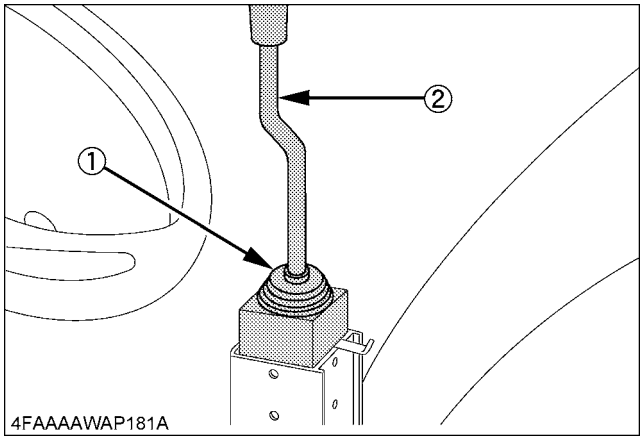
6. Fix the relays to the relay stay.



(1) Relay stay (Solenoid valve assy)
(2) 2-relays

◆ **M7949 (LA1154SU MODEL)**

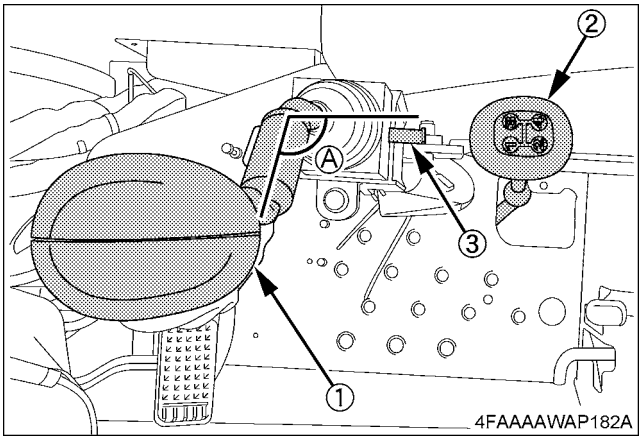
1. Remove the lever boot first and then the lever.



(1) Lever boot
(2) Control lever

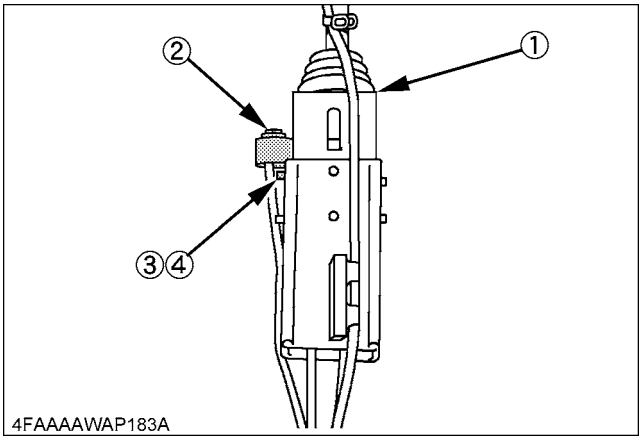
2. Pass the lever boot through the 3rd function control lever, and attach the 3rd function control lever to the tractor.

NOTE :
- Install the lever upright in position.



(1) 3rd function control lever
(2) Main gear shift lever
(3) Lock lever
(A) Perpendicular to the lock lever

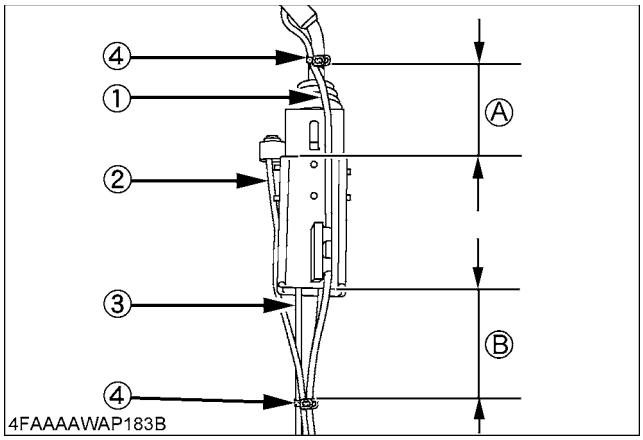
3. Remove the nuts and spring washer from the controller assy, as shown in the figure. Reattach these parts with the ON/OFF switch in place.



(1) Controller assy
(2) ON/OFF switch
(3) M6 lock nuts (original)
Tightening torque: See "TIGHTENING TORQUE OF BOLTS AND NUTS" section.
(4) M6 spring washer (original)

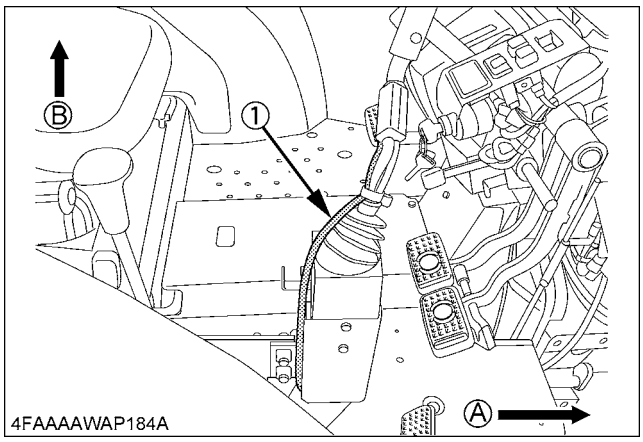
4. Remove the sleeve from the controller assy's lever cable.

5. Pass the control lever wire harness and the ON/OFF switch wire harness, as shown in the figure. Fix these harnesses and the lever cable with the cord band.



(1) Control lever harness
(2) ON/OFF switch harness
(3) Lever cable
(4) 2-cord bands
(A) 110 to 130 mm (4.3 to 5.1 in.)
(B) 110 to 150 mm (4.3 to 5.9 in.)

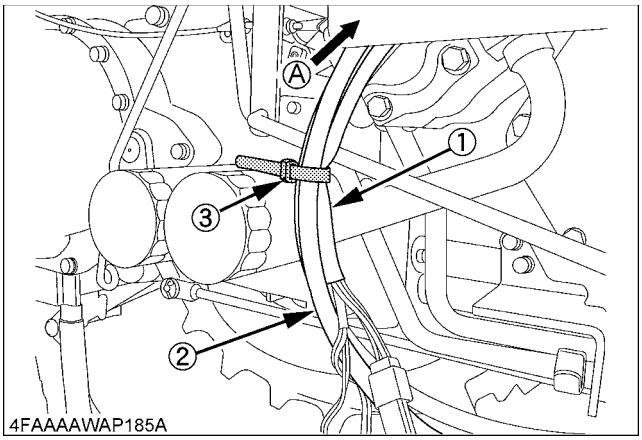
IMPORTANT :
- Tilt the control lever toward the front left of the tractor, as shown in the figure, to make sure the control lever wire harness becomes too tight.



(1) Control lever haraness
(A) Toward the tractor front
(B) Toward the tractor left side

6. Cover the control lever cable and the wire harnesses with the sleeve (original). Using the cord band, secure these parts back into position.

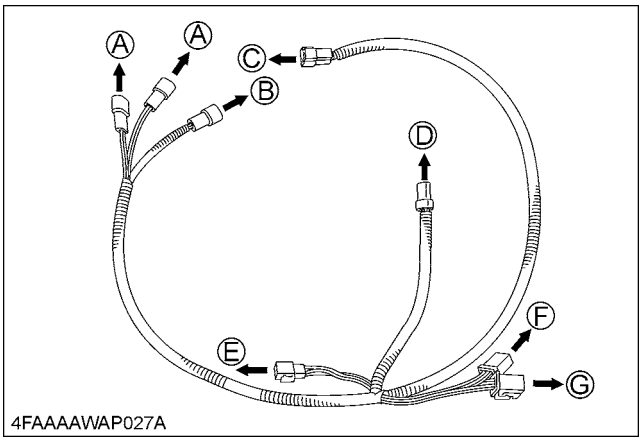
7. Using the cord band, fix the control lever wire harness and the control lever cable, located below the step, as shown in the figure.



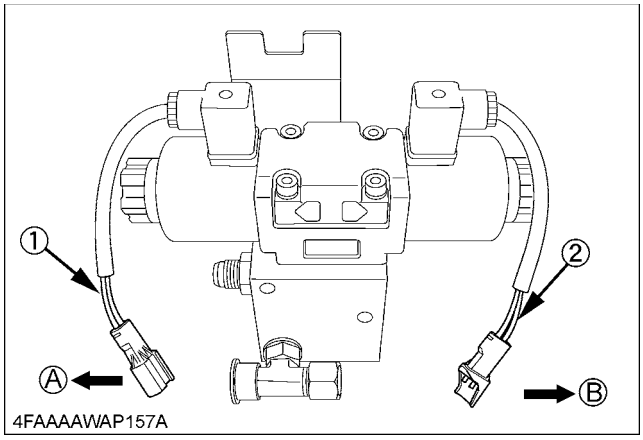
(1) Lever harness
(2) Lever cable
(3) Clamp (cord band)
(A) To control lever

8. Attach the relay to the wire hanress, and connect the wire harness to the tractor and solenoid valve harness.

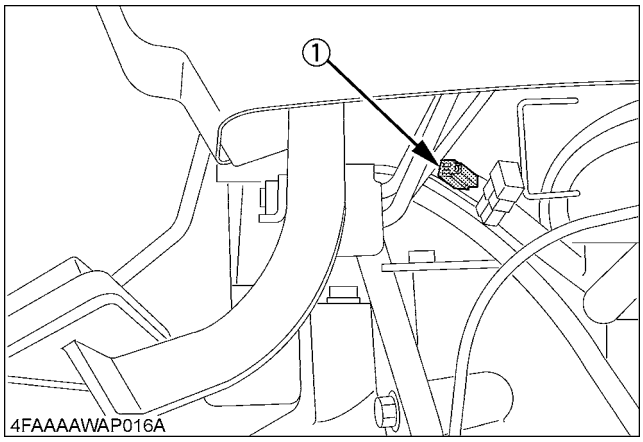
IMPORTANT :
- Connect the wire harness couplers of the 3rd function control lever to their respective same-color couplers.



(A) To 3rd function control lever
(B) To ON/OFF switch
(C) To tractor harness
(D) To solenoid valve harness-1
(E) To solenoid valve harness-2
(F) To relay
(G) To relay

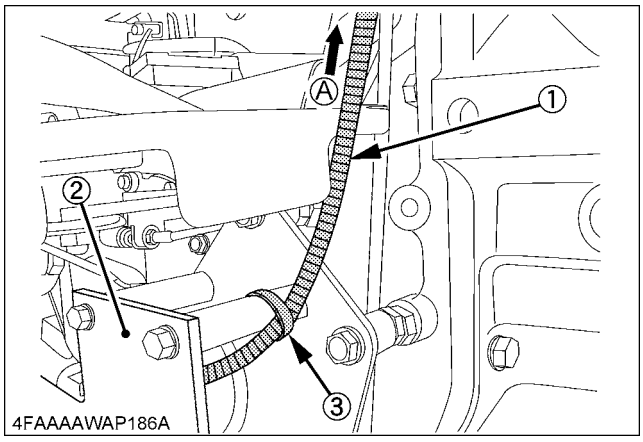


(1) Solenoid valve harness-1 *(A) Rear of tractor*
(2) Solenoid valve harness-2 *(B) Front of tractor*



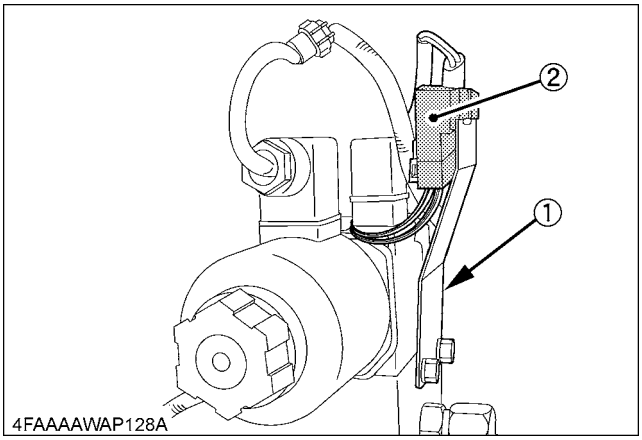
(1) Tractor harness

9. Clamp the wire harness as shown below.



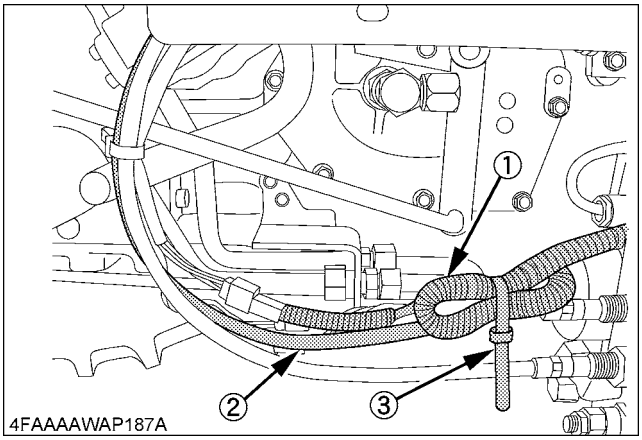
(1) Wire harness *(A) To tractor harness*
(2) Valve stay
(3) Clamp (cord band)

10. Fix the relays to the relay stay.



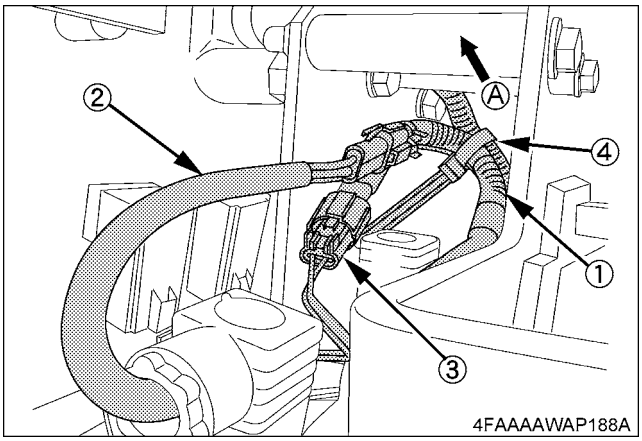
(1) Relay stay (Solenoid valve assy)
(2) 2-relays

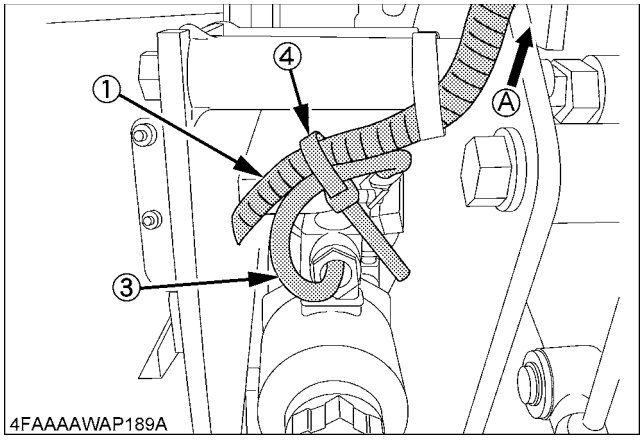
11. Fold excess wire harness and secure it to the control lever cable.



(1) Wiire harness
(2) Lever cable
(3) Clamp (cord band)

12. Fix the wire harness, connected with the solenoid valve wire harness, together with another wire harness, as shown in the figure.

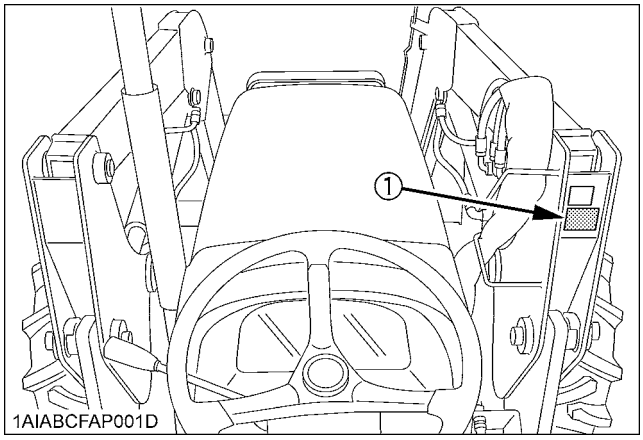




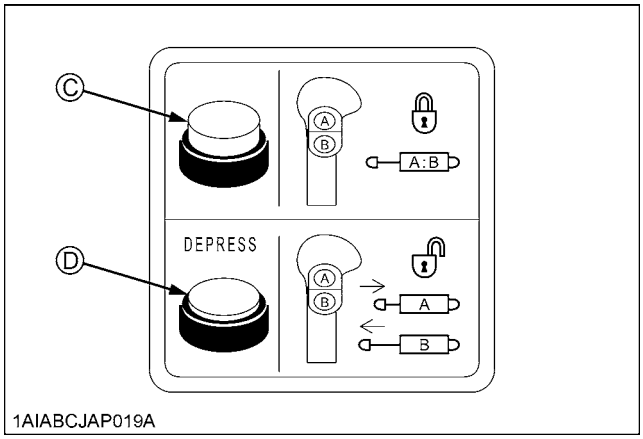
(1) Wiire harness
(2) Solenoid valve harness-1
(3) Solenoid valve harness-2
(4) Clamp (cord band)

■3rd Function Control Operation

1. Apply the label as shown in the illustration.

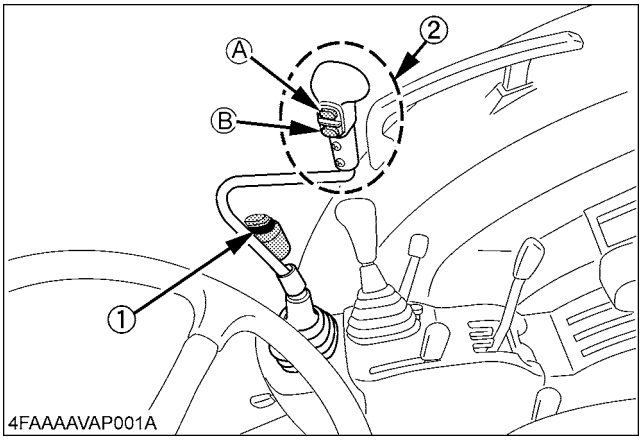


(1) Label

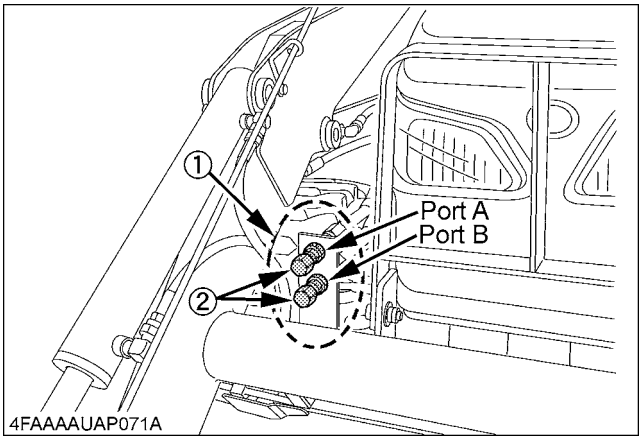


(C) Front hydraulic valve main switch "OFF"
(D) Front hydraulic valve main switch "ON"

2. Front hydraulic valve main switch
   Push the front hydraulic valve main switch (1) to engage the front hydraulic valve.
   A light on the switch will illuminate to indicate that the front hydraulic valve is on, and to enable the activation switch (2).
3. Activation switch
   (1) When pressing the "A" button, hydraulic oil will come out of Port A and return through Port B as long as the switch is pressed.
   (2) When pressing the "B" button hydraulic oil will come out of Port B and return through Port A as long as the switch is pressed.
4. Push the front hydraulic valve main switch again to disengage the front hydraulic valve, and the light of the front hydraulic valve main switch will turn off.



(1) Front hydraulic valve main switch
(2) Activation switch



(1) Front hydraulic outlet
(2) Plug

■Quick Hitch Frame and Bucket

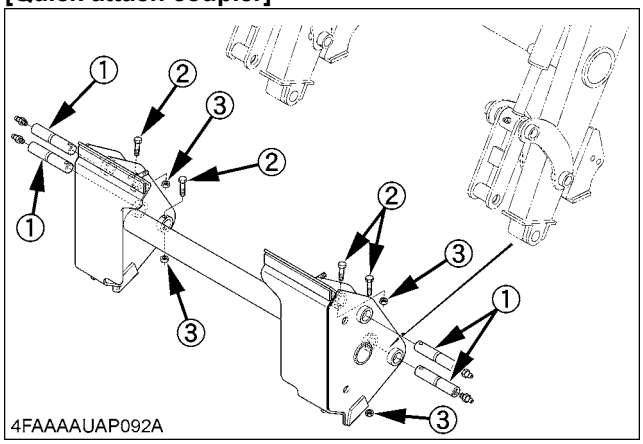
CAUTION

To avoid personal injury:

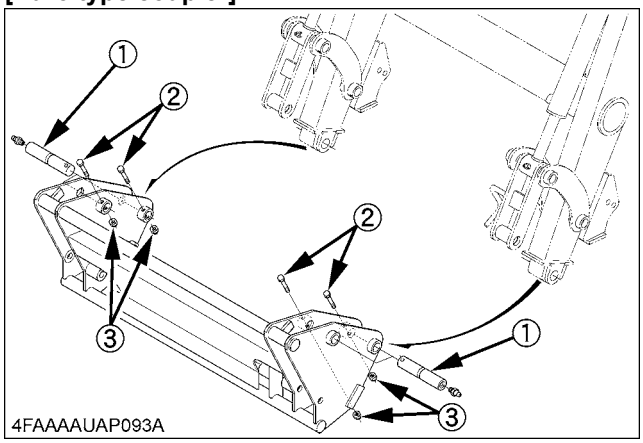
- **Do not operate or mount loader without quick attach or bucket installed to loader. Damage may occur to bucket cylinders without these conditions being set.**

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

[Quick attach coupler]



[Euro type coupler]

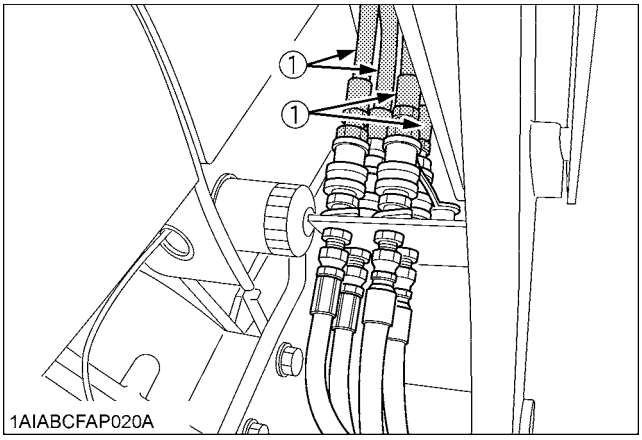


(1) 4- Pin 3
(2) 4- M8 x 65 hex. bolts
(3) 4- M8 locking nuts

2. Attach the bucket to the quick hitch.
   (See operator's manual)

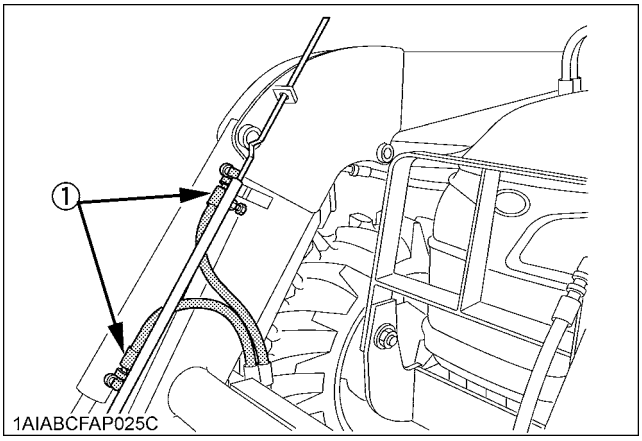
■Hydraulic Hoses

1. Connect four hydraulic hoses, with quick couplers, between the hydraulic tube lines and the control valve as indicated with color marks.
   Then connect the protective caps and plugs to each other.



(1) Hose 1 and hose 2

2. Adjust Hose 10 which connects the bucket cylinder to the hydraulic tubes, so that the hoses do not touch the level indicator rod.

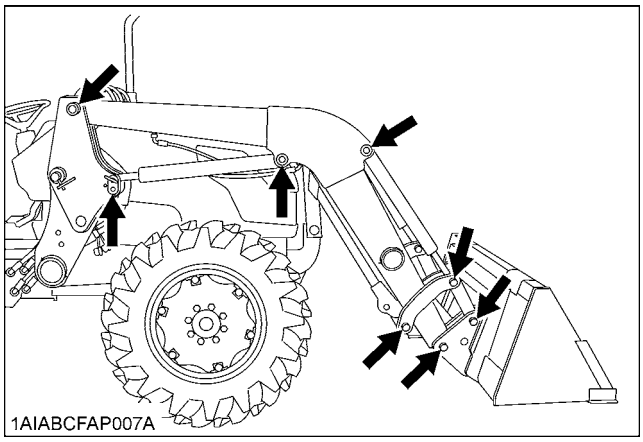


(1) Hose 10

PRE-OPERATION CHECK

■Lubrication

Lubricate all grease fittings with SAE multipurpose grease.

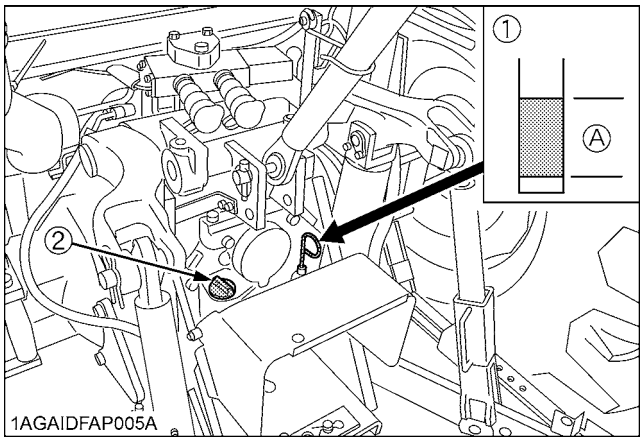


■Transmission Fluid

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.

IMPORTANT :

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



(1) Gauge *(A) Oil level is acceptable within this range*
(2) Oil inlet

ESTIMATED ASSEMBLY TIME

Refer to the following table for the estimated assembly time from opening the crate to finishing assembling the loader.

Assembly time on the table are just reference under average conditions with the following assumptions.

(1) When assembly is performed by two workers.

(2) Following tools and equipment are prepared.

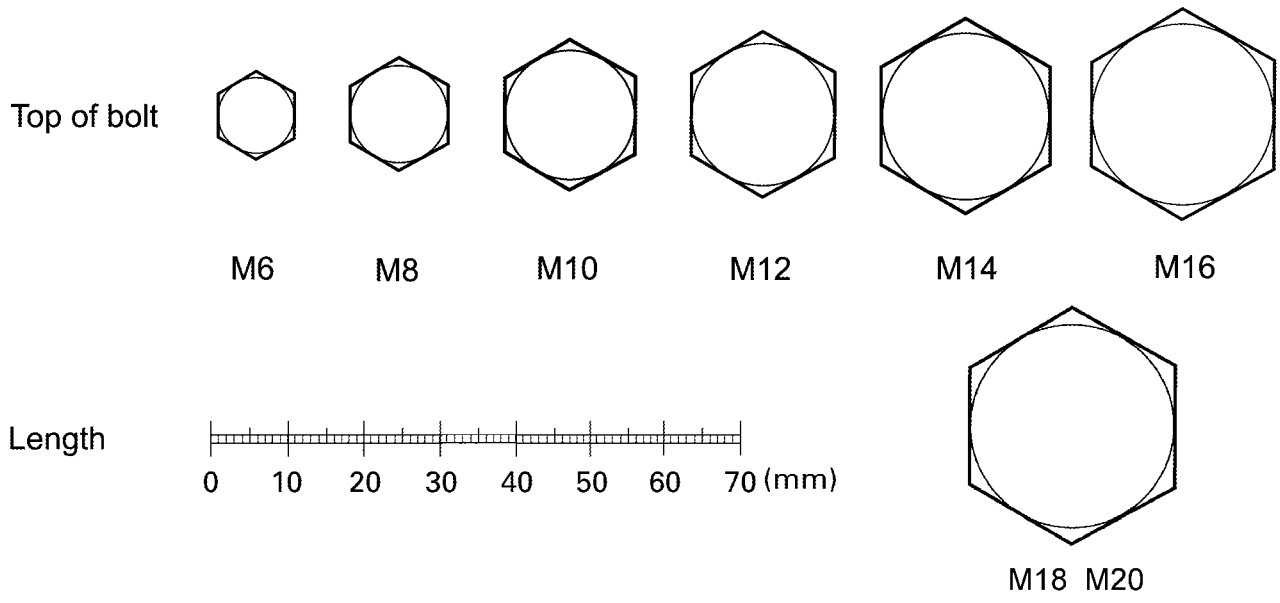
1. Chain hoist or crane.
2. Impact wrench, Ratchet wrench, Torque wrench, Socket wrench, Spanner wrench.
3. Nylon strap.

	Remote Valve Type Loader
LA1154	1.5 hours

TIGHTENING TORQUE OF BOLTS AND NUTS

*If the torque levels are specified in the text, follow that specification.

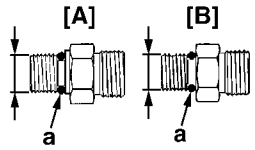
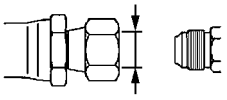
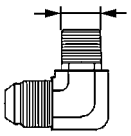
American standard screws, bolts and nuts with UNC or UNF threads				Metric cap screws 8.8		
SAE grade No.		SAE GR.5	SAE GR.8	property class		8.8 Approx. SAE GR 5
1/4	(N-m) (kgf-m) (ft-lbs)	11.7 to 15.8 1.19 to 1.61 8.6 to 11.6	16.3 to 19.8 1.66 to 2.02 12.0 to 14.6	M6	(N-m) (kgf-m) (ft-lbs)	9.8 to 11.2 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 2.83 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 5.81 35.0 to 42.0	61.0 to 73.2 6.22 to 7.46 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 11.06 to 13.28 80.0 to 96.0	149.2 to 179.0 15.21 to 18.25 110.0 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 15.21 to 18.25 110.0 to 132.0	217.0 to 260.4 22.13 to 26.55 160.0 to 192.0	M14	(N-m) (kgf-m) (ft-lbs)	124 to 147 12.6 to 15.0 91.5 to 108.4
5/8	(N-m) (kgf-m) (ft-lbs)	203.4 to 244.1 20.74 to 24.89 150.0 to 180.0	298.3 to 358.0 30.42 to 36.51 220.0 to 264.0	M16	(N-m) (kgf-m) (ft-lbs)	196 to 225 20.0 to 23.0 145 to 166
				M18	(N-m) (kgf-m) (ft-lbs)	275 to 318 28.0 to 32.5 203 to 235
				M20	(N-m) (kgf-m) (ft-lbs)	368 to 431 37.6 to 44.0 272 to 318



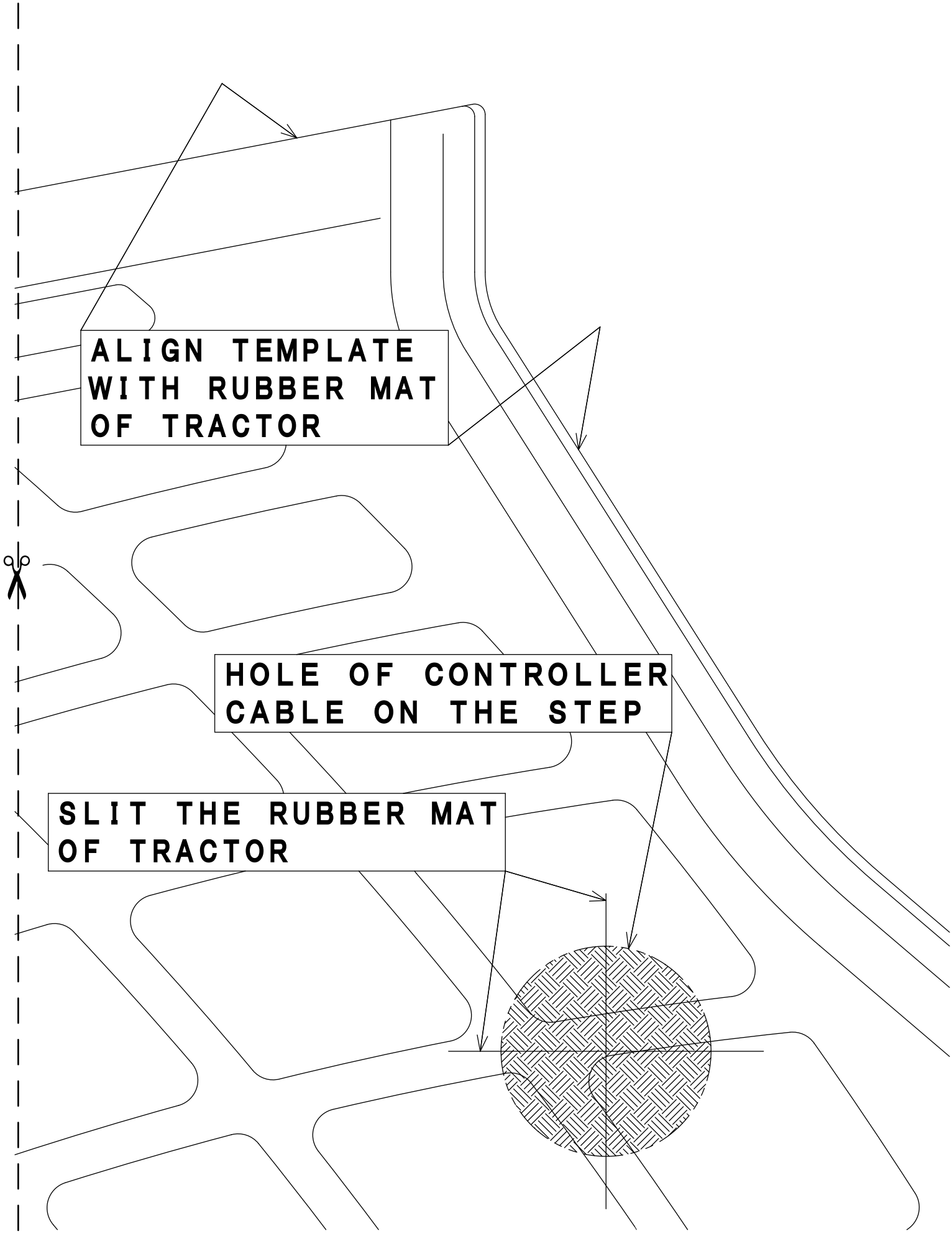
1AIABACAP042P

TIGHTENING TORQUE OF ADAPTORS, ELBOWS AND OTHERS

*If the torque levels are specified in the text, follow that specification.

Item	Shape	Thread size	Tightening torque		
			N-m	kgf-m	ft-lbs
Adjustable elbow, Adaptor (O-ring port) (UNF)	 [A] Nut Type [B] No Nut Type a: O-ring 4FBAAAKAP064A	9/16	37 to 44	3.8 to 4.5	27 to 33
		3/4	48 to 54	4.9 to 5.5	35 to 40
		7/8	77 to 85	7.9 to 8.6	57 to 62
Hose fitting, Flare nut (UNF)	 4FBAAAKAP065A	9/16	22 to 25	2.3 to 2.6	16 to 19
		3/4	36 to 40	3.6 to 4.1	26 to 30
		7/8	43 to 50	4.4 to 5.0	32 to 36
Adaptor (NPT)	 4FBAAAKAP066A	1/4	30 to 50	3.1 to 5.0	23 to 36
		3/8	39 to 60	4.0 to 6.1	29 to 44
		1/2	49 to 58	5.0 to 5.9	36 to 43

TEMPLATE FOR CONTROLLER CABLE

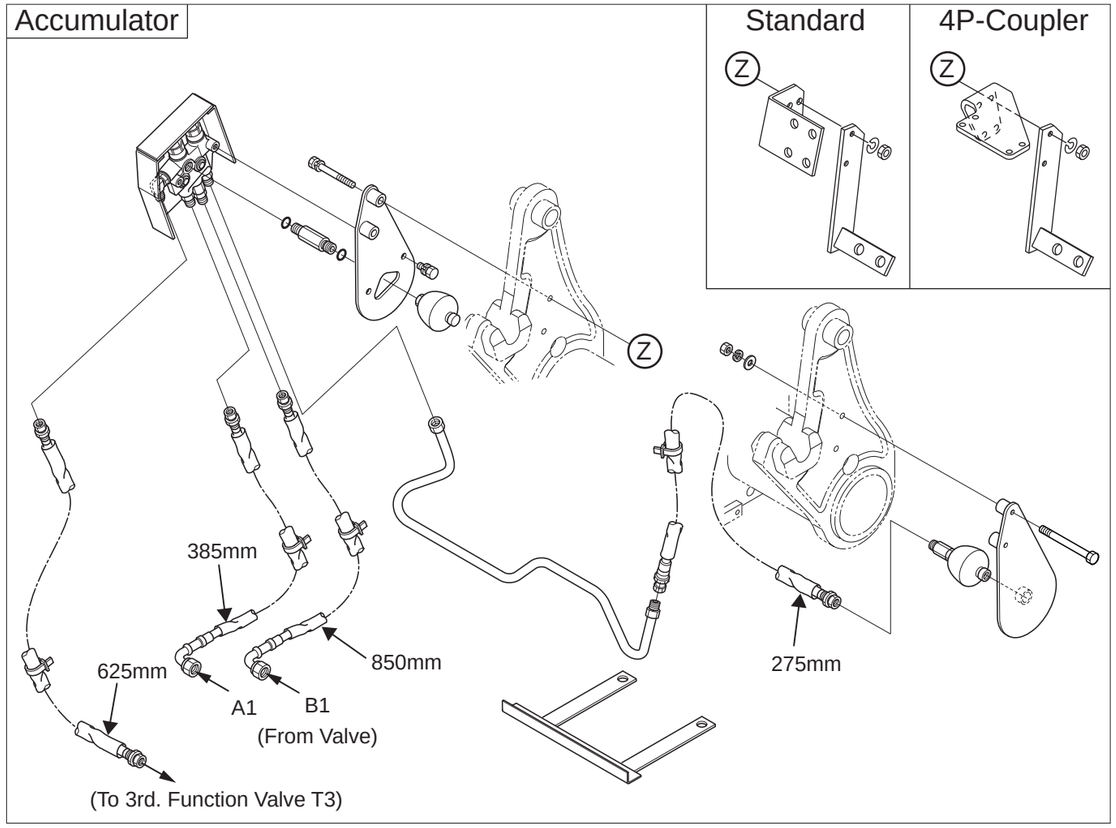

ALIGN TEMPLATE WITH RUBBER MAT OF TRACTOR
HOLE OF CONTROLLER CABLE ON THE STEP
SLIT THE RUBBER MAT OF TRACTOR

MODEL LA1154

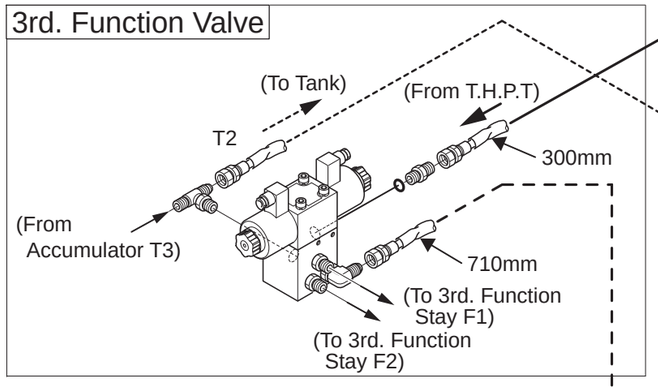
[Standard valve with 3rd. Function, Accumulator]

PUMP LINE
POWER BEYOND LINE
TANK LINE

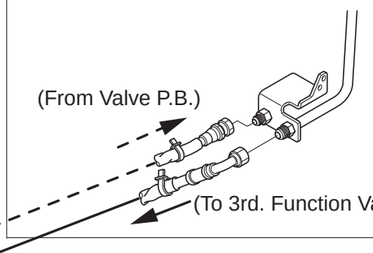
Accumulator

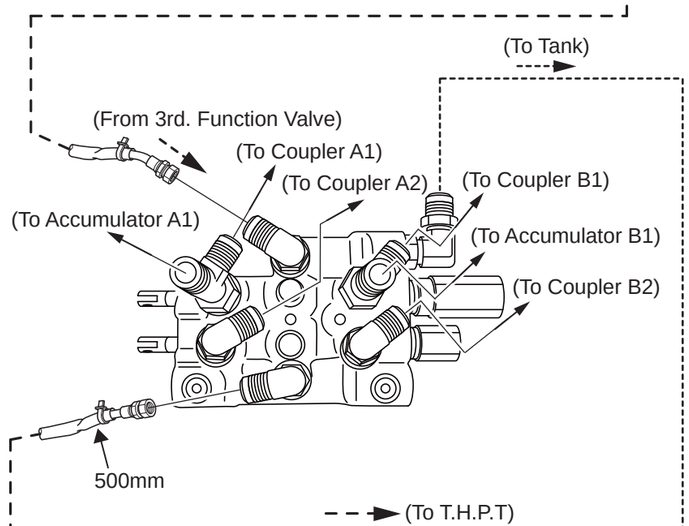


3rd. Function Valve



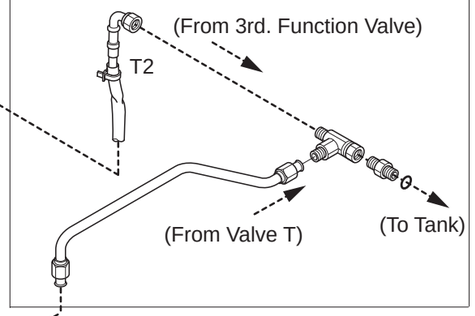
Tractor's Hydraulic Power Take-off (T.H.P.T.)



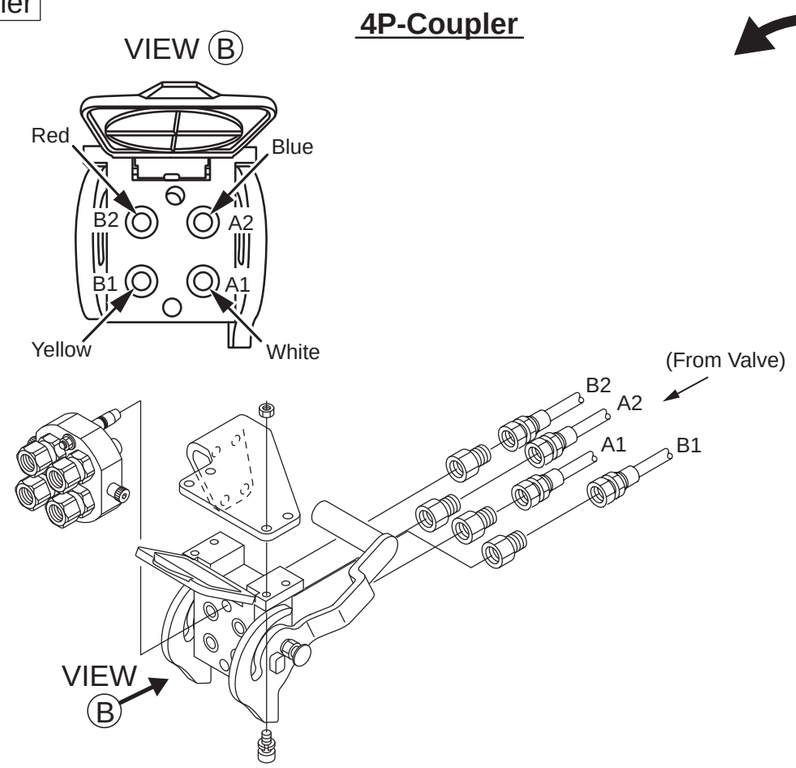


460mm

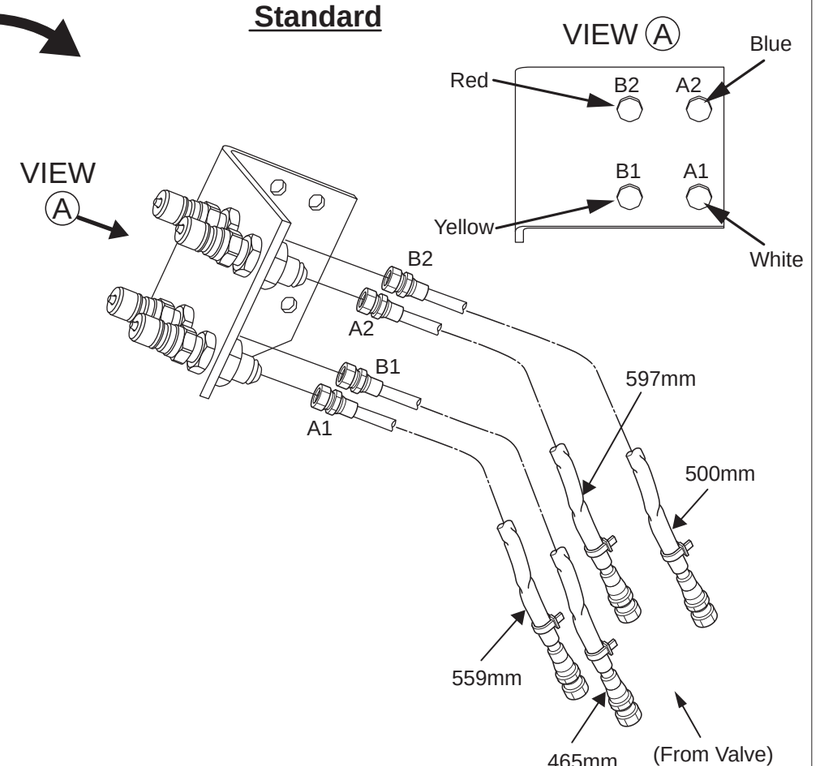
Tank

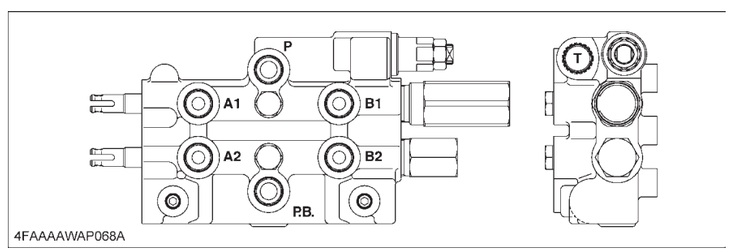


Coupler

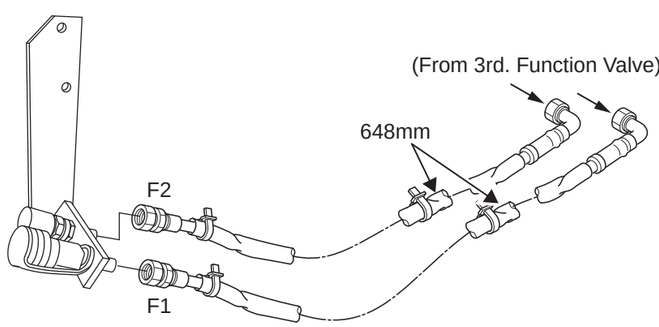


4P-Coupler ⟷ **Standard**





3rd. Function Stay

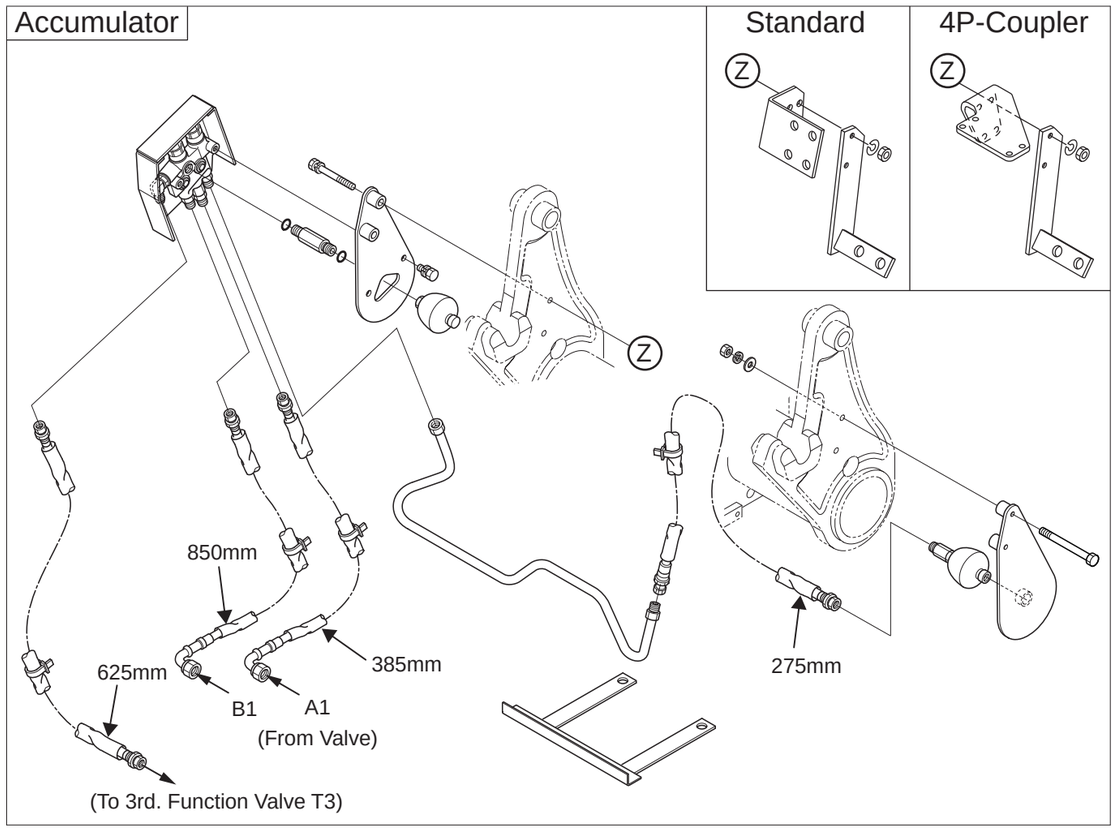


MODEL LA1154

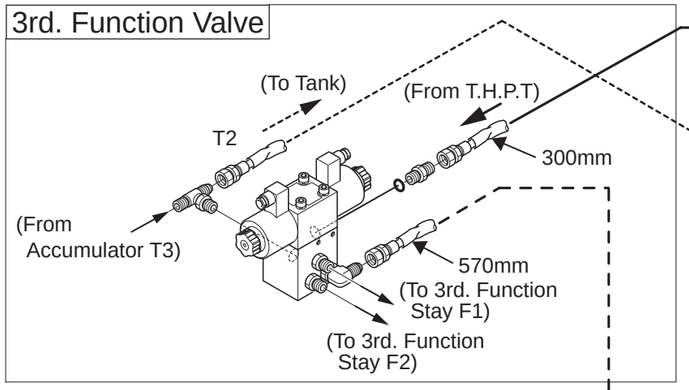
[Self-leveling valve with 3rd. Function, Accumulator]

PUMP LINE
POWER BEYOND LINE
TANK LINE

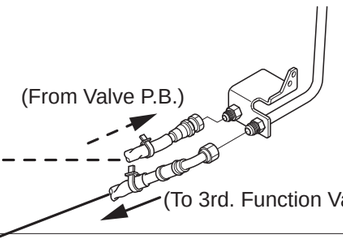
Accumulator

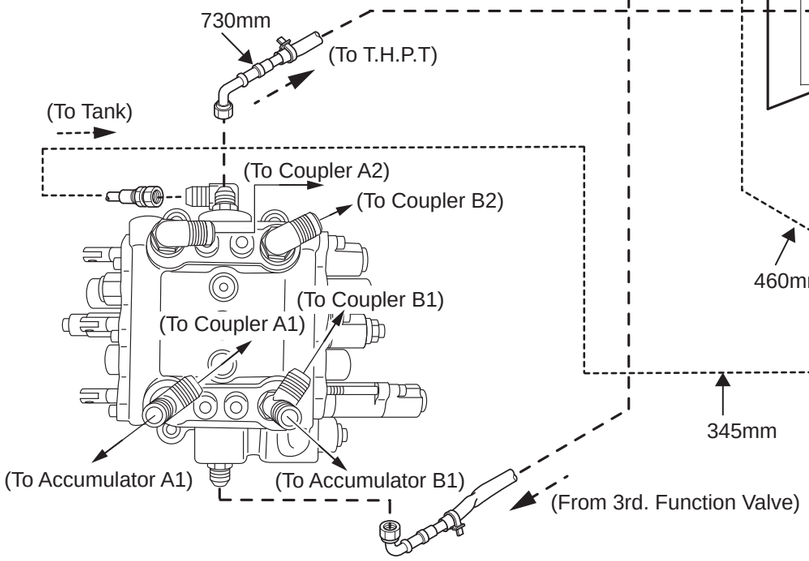


3rd. Function Valve

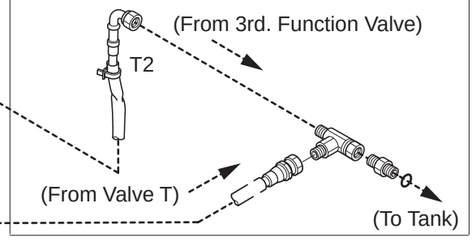


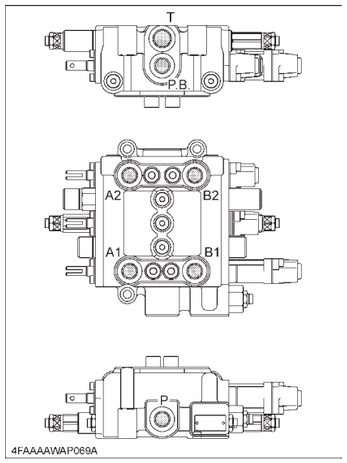
Tractor's Hydraulic Power Take-off (T.H.P.T.)



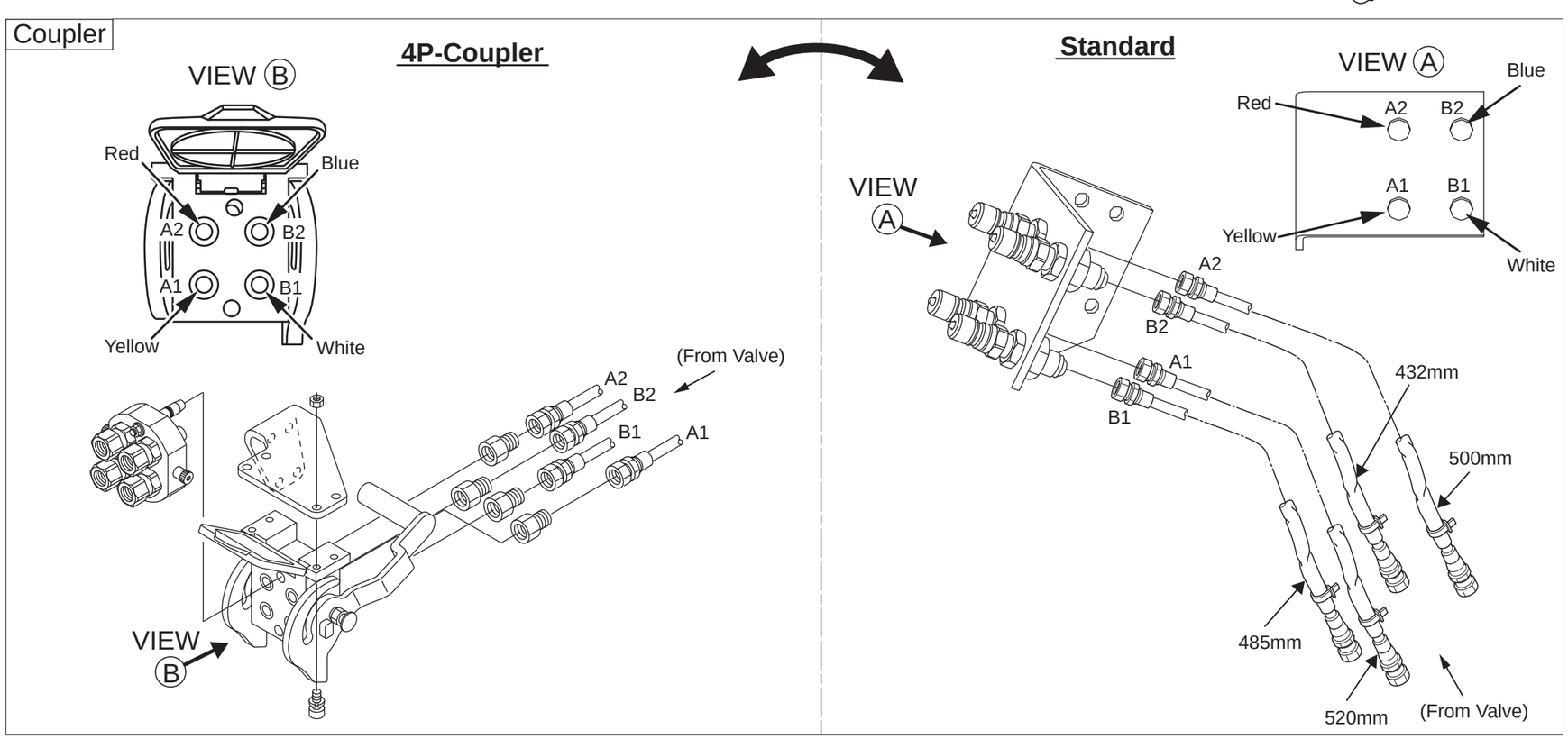


Tank

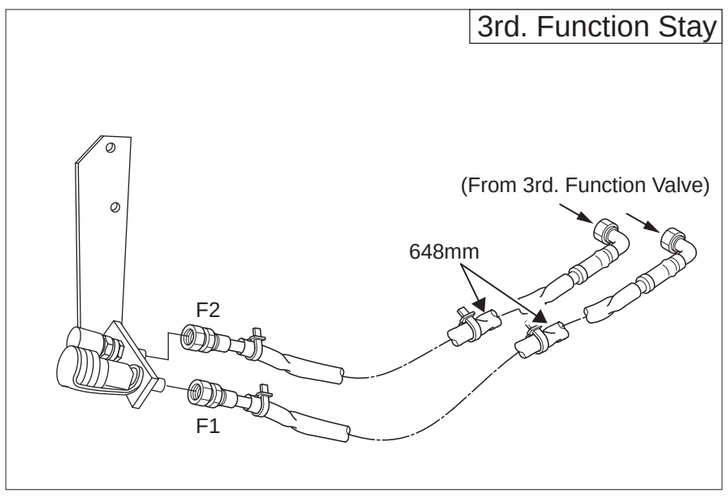




Coupler



3rd. Function Stay

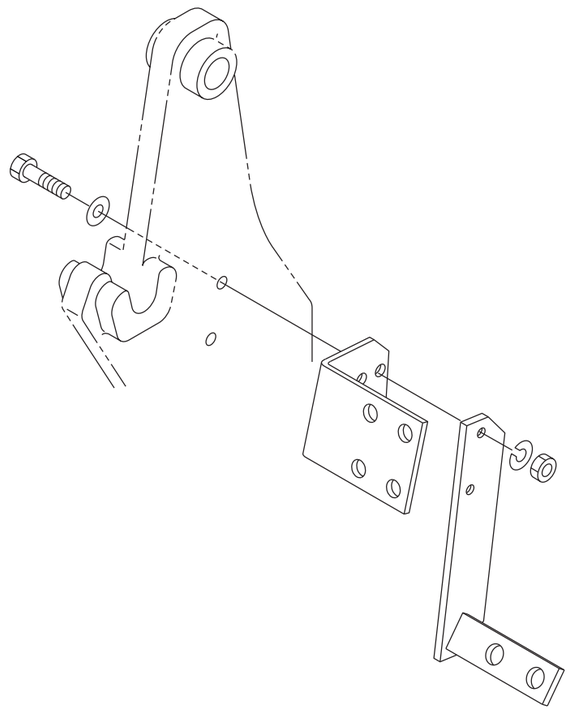


MODEL LA1154SU

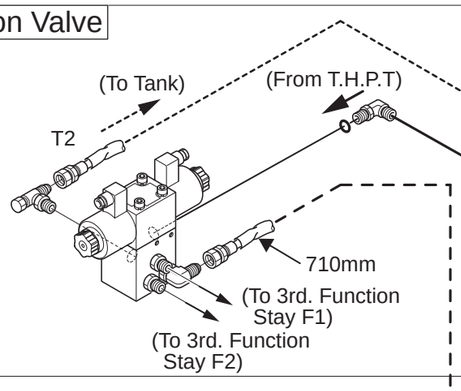
[Standard valve with 3rd. Function]

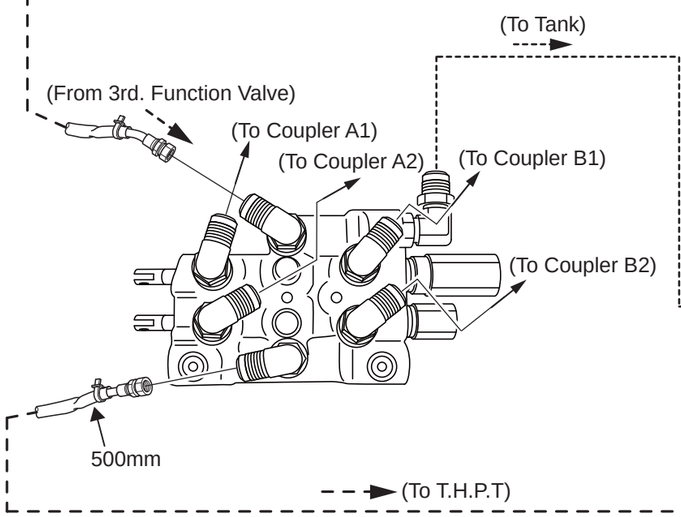
PUMP LINE
POWER BEYOND LINE
TANK LINE

Coupler Stay

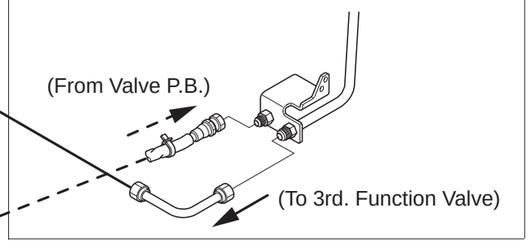


3rd. Function Valve

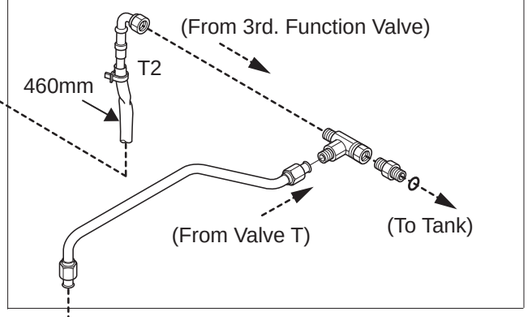




Tractor's Hydraulic Power Take-off (T.H.P.T.)

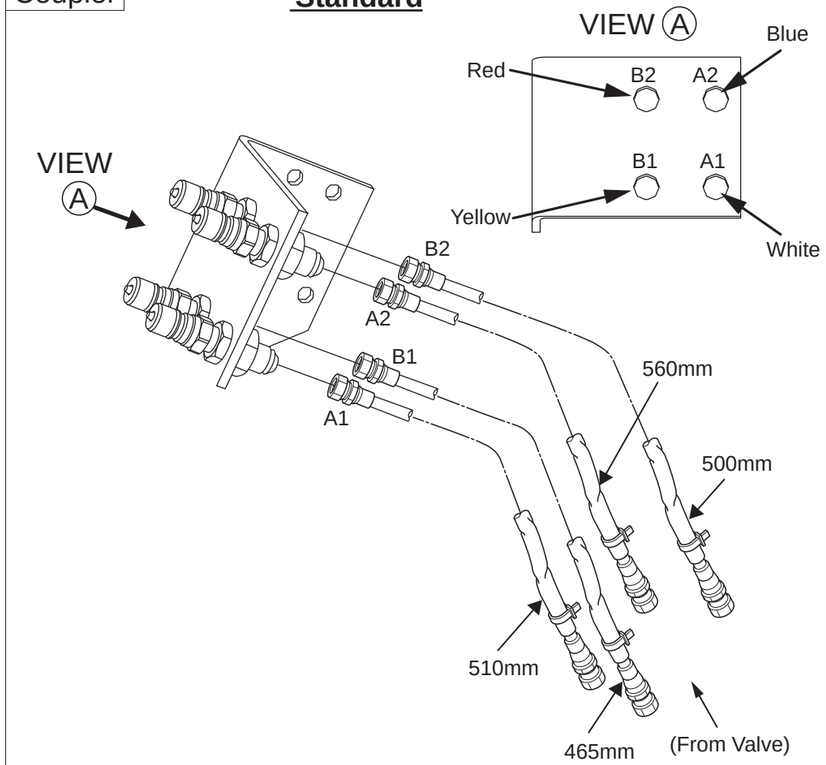


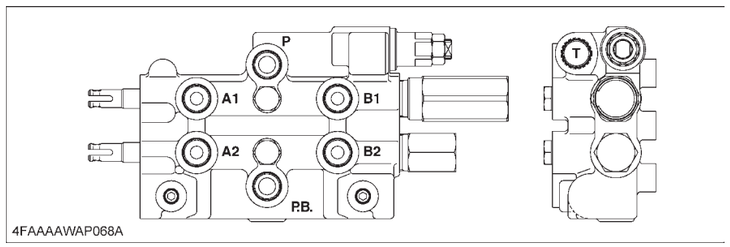
Tank



Coupler

Standard





3rd. Function Stay