

INSTRUCTION MANUAL W-FILTER KIT for KUBOTA COMPACT TRACK LOADER SVL90-2

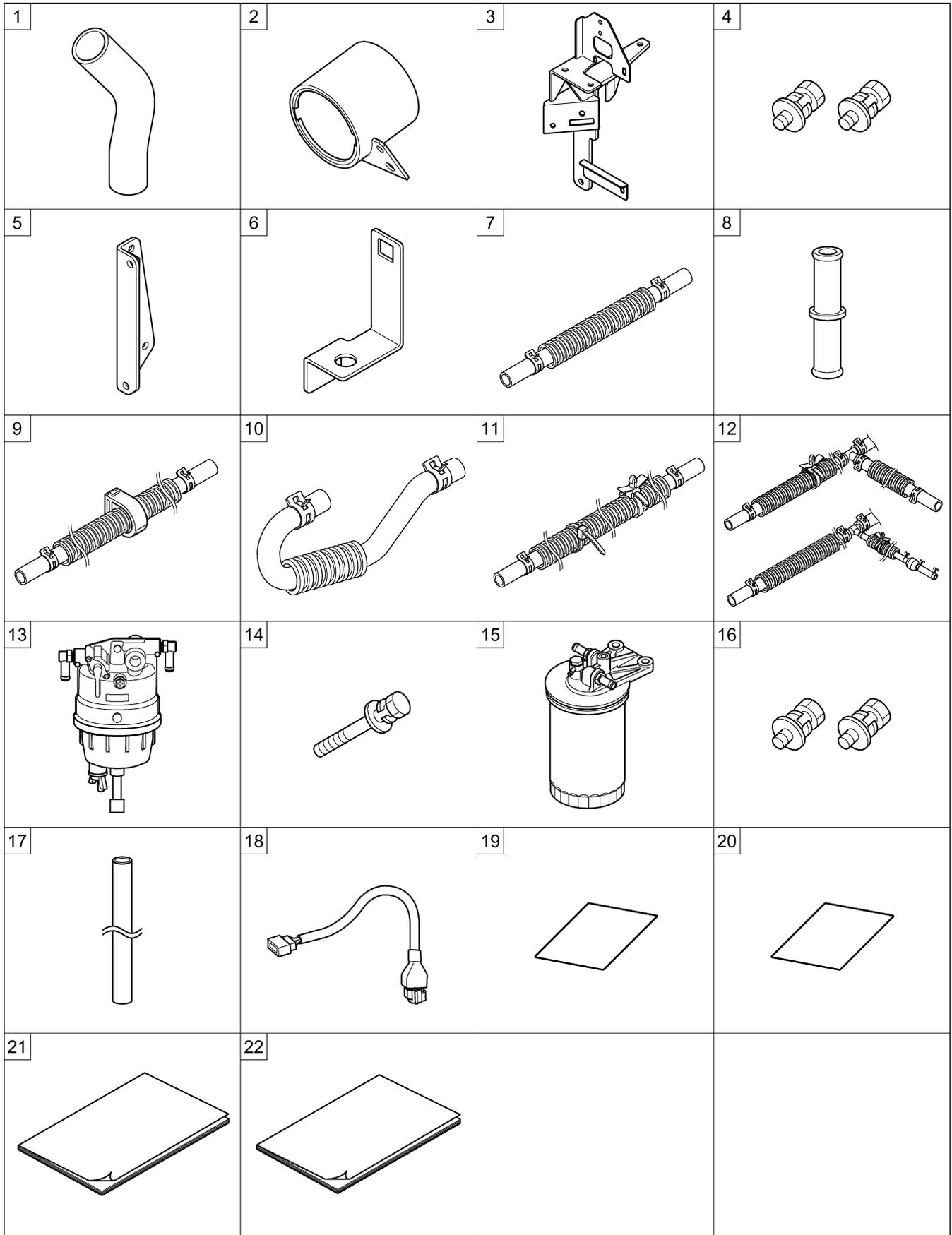
1. Introduction

This is the instruction manual to install the fuel filter and water separator on KUBOTA compact track loader SVL90-2. Please read this manual before starting to install it.

PART NAME	FILTER KIT (FUEL)
PART No.	V0621-9860△

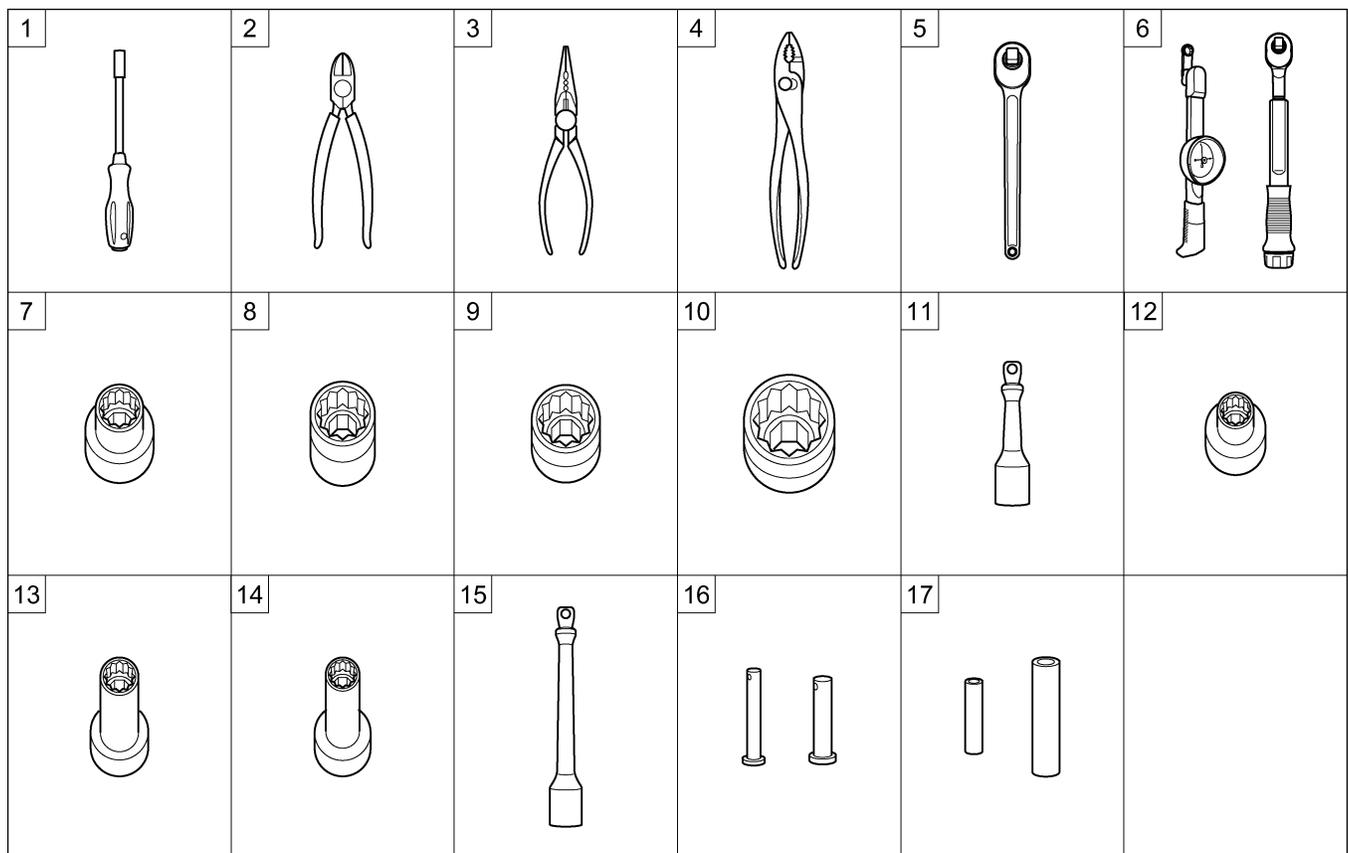
2. Parts list

REF. No.	PART NAME	PART No.	Q'TY	REMARKS
1	HOSE (FUEL)	V0511-5118△	1	
2	PIPE (FUEL)	V0511-5117△	1	
3	BRACKET (FILTER, 1)	V0621-9861△	1	
4	BOLT	01125-50825	2	
5	BRACKET (FILTER, 2)	V0621-9862△	1	
6	STAY (HOSE CLAMP)	V0621-9863△	1	
7	FUEL TUBE, ASSY (200)	V0621-9864△	1	
8	CONNECTOR (HOSE)	3C131-4246△	1	
9	FUEL TUBE, ASSY (500)	V0621-9865△	1	
10	FUEL TUBE, ASSY	V0621-9866△	1	
11	FUEL TUBE, ASSY (770)	V0621-9867△	1	
12	FUEL TUBE, ASSY (RETURN)	V0621-9868△	1	
13	FILTER, ASSY (SEPARATOR)	V0631-5186△	1	
14	BOLT	01135-51080	1	
15	FILTER, ASSY (FUEL)	V0631-5168△	1	
16	BOLT	01125-50830	2	
17	TUBE, FUEL	09664-60400	1	
18	W/H (CONVERSION, 2, WS-WH)	V0621-9869△	1	
19	LABEL (MAINTENANCE)	V0521-5756△	1	
20	LABEL (MAINTENANCE, FR)	V0521-5956△	1	
21	INSTRUCTION MANUAL	V0621-9870△	1	
22	MANUAL, OP (W-FILTER, TANK PIPE)	V0621-9871△	1	This booklet



3. Required tools

REF No.	TOOL	REMARKS
1	Flexible screwdriver	
2	Nipper	
3	Needle-nose pliers	
4	Pliers	
5	Ratchet handle	
6	Torque wrench	Required torque: 9.81 to 90.2 N-m (1.00 to 9.1 kgf-m) [7.24 to 66.5 ft-lbs]
7	12 mm socket	
8	14 mm socket	
9	19 mm socket	
10	24 mm socket	
11	Extension bar (50 mm)	
12	10 mm socket	
13	10 mm long socket	
14	12 mm long socket	
15	Extension bar (75 mm)	
16	Plug of male type	Ø6: 1 piece, Ø10: 8 pieces
17	Plug of female type	Ø6: 1 piece, Ø10: 8 pieces



NOTE :

- After disconnecting fuel tubes from pipes, insert plugs to the end of both tubes and pipes.
- Clean plugs before using.

IMPORTANT :

- If any contaminant such as dust or dirt enter the fuel system, it may cause failure.

4. Installation instruction



WARNING

To avoid personal injury or death:

- Park the machine on a firm and level ground and set the parking brake.
- Lower the bucket to the ground.
- Set all controls in their neutral positions.
- Release all residual pressure of the hydraulic system.
- Stop the engine. Remove the key from the ignition.
- The engine, hydraulic components and coolants can be hot. Wait until all the components are cooled down sufficiently to avoid burns.
- Clean the work area and the machine.
- Disconnect the battery negative cable.
- Hang a "DO NOT OPERATE" tag on the operator station.
- Put on working clothes and personal protective equipment.
- Read all instructions and safety instructions in this bulletin and safety labels on your machine.
- Follow the local safety regulations and/or laws in your country.
- If you are working with other people, make sure that your signals and communications are fully understandable for additional safety.

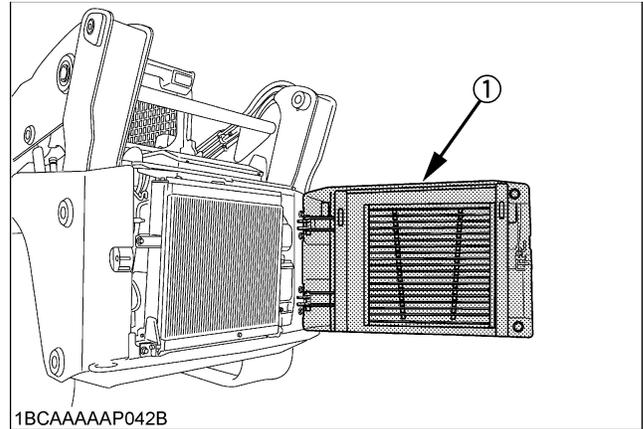
IMPORTANT :

- Do not contact fuel tubes to sharp edges, high temperature parts, and rotating parts.
- Do not stretch fuel tubes excessively.
- Do not clamp fuel tubes with electrical wiring.
- Do not flatten fuel tubes by the clamps.
- Take care not to leak fuel when disconnecting fuel tubes.

A) Preparation

After the following steps 1 to 5, install the necessary parts according to the installation manual B), C) and D). If necessary for the details, see the WSM.

1. Open the rear and upper bonnet (1) (3).

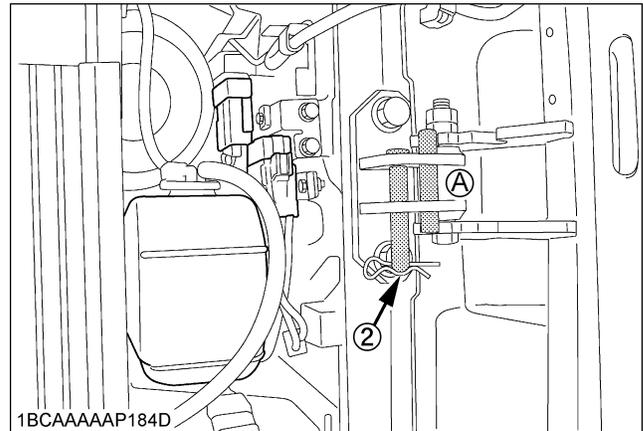


1BCAAAAAP042B

(1) Bonnet (Rear)

NOTE :

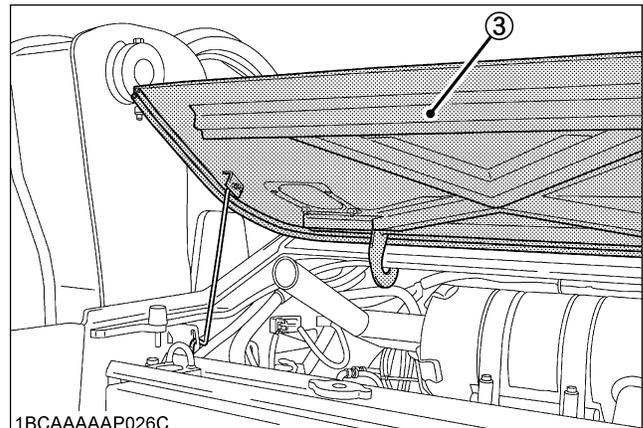
- Insert the pin (2) into the locked position (A) to fix the rear bonnet.



1BCAAAAAP184D

(2) Pin

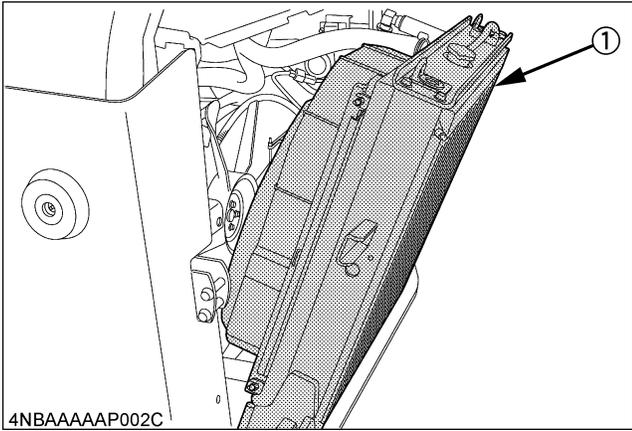
(A) Locked position



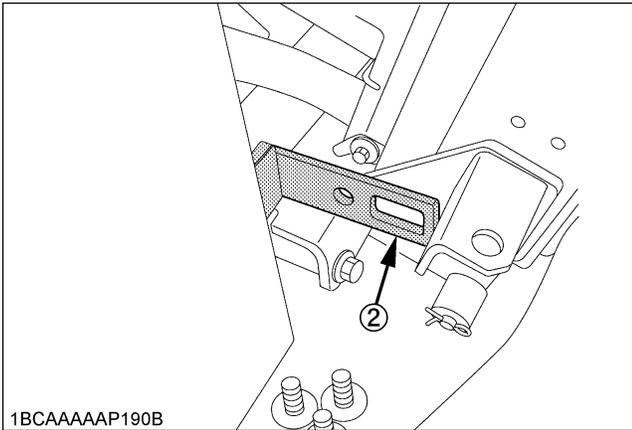
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(3) Bonnet (Upper)

2. Pull out the radiator (1) maximally, then set the stopper (2).

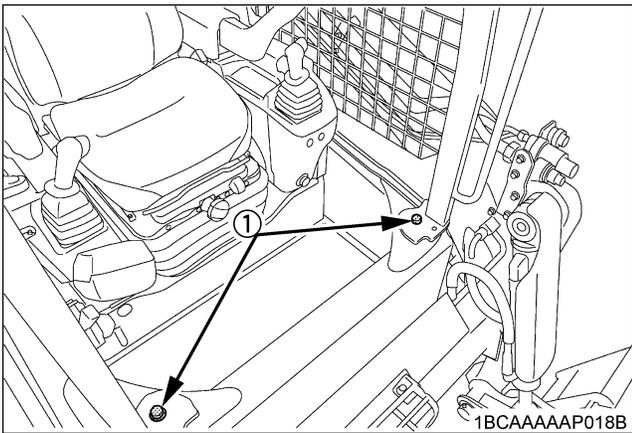


(1) Radiator



(2) Stopper

3. Remove the 2 lock bolts (1) from front of the machine.

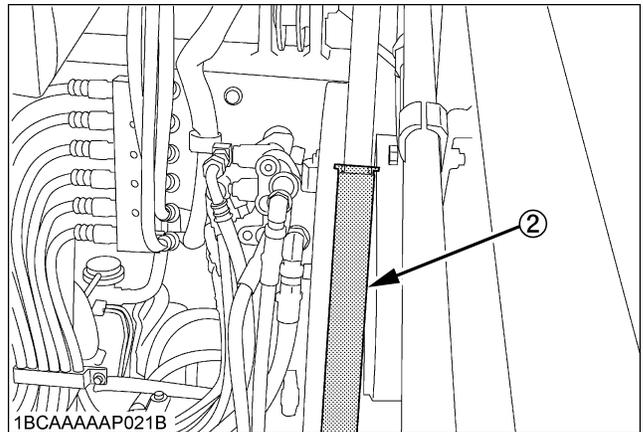
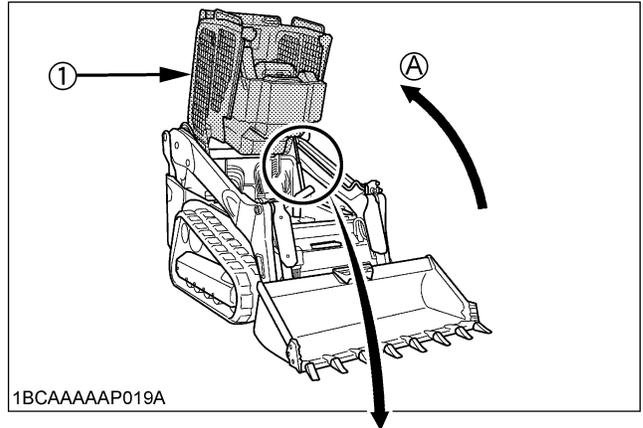


(1) Lock bolt

NOTE :

- Socket size: 24 mm

4. Slowly raise the cab (1) until the cab is all the way up and the latching mechanism (2) engages.

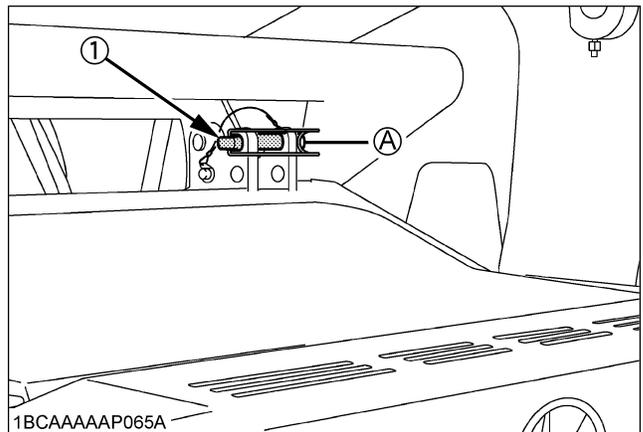


(1) Cab

(2) Latching mechanism

(A) Raise

5. Insert the stopper pin (1) into the locked position (A) to fix the cab.

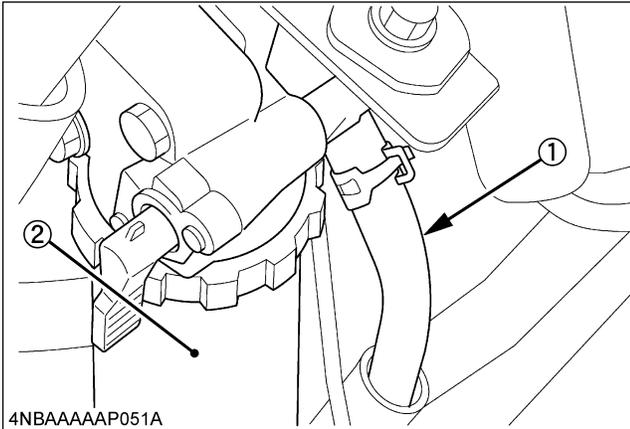


(1) Stopper pin

(A) Locked position

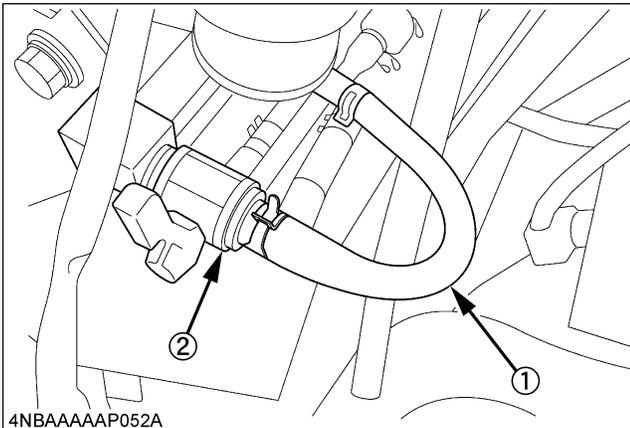
B) Disassembly

1. Disconnect the fuel tube (1) from the separator (2).



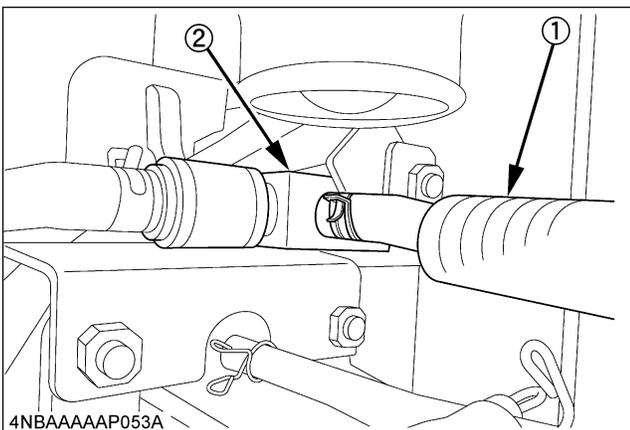
- (1) Fuel tube (fuel tank - separator)
- (2) Separator

2. Disconnect the fuel tube (1) from the shut off valve (2).



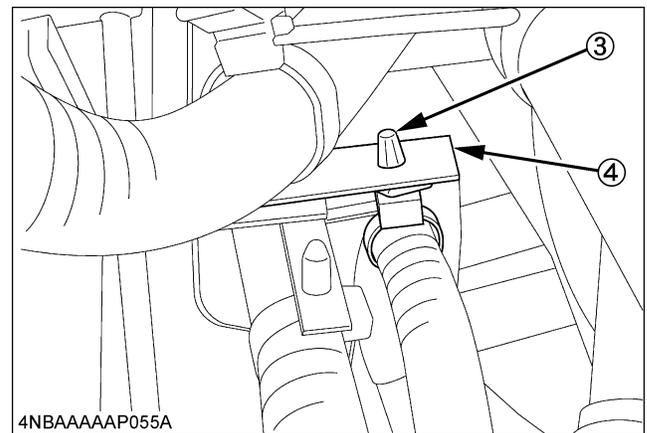
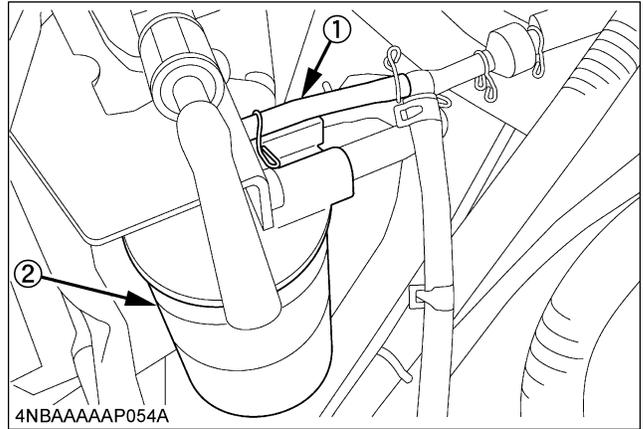
- (1) Fuel tube (valve - return)
- (2) Shut off valve

3. Disconnect the air vent hose (1) from the shut off valve (2).



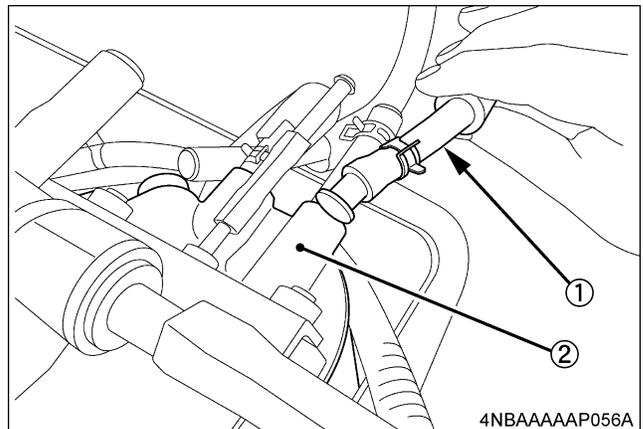
- (1) Air vent hose (valve - fuel pipe)
- (2) Shut off valve

4. Disconnect the fuel tube (1) from the fuel filter (2). Remove the clamp (3) from the guide (4).



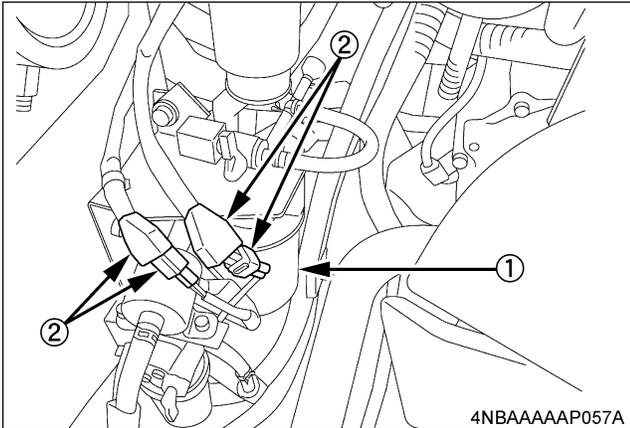
- (1) Fuel tube (fuel filter - return)
- (2) Fuel filter
- (3) Clamp
- (4) Guide

5. Disconnect the fuel tube (1) from the fuel filter (2).



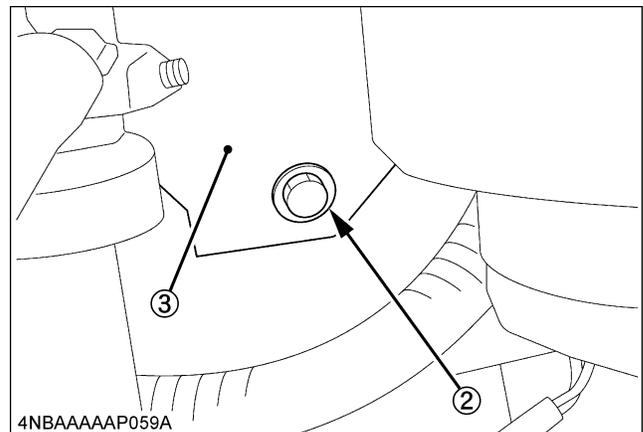
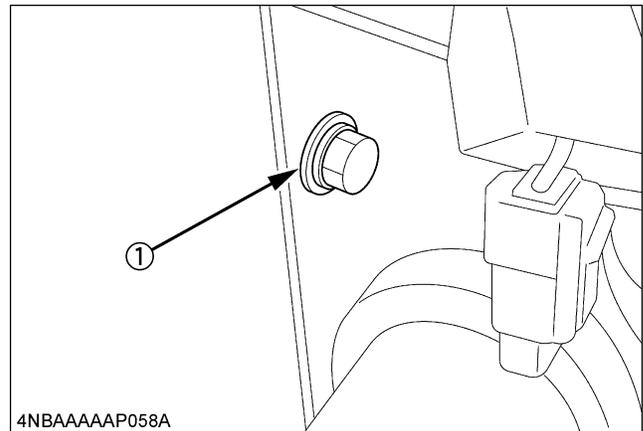
- (1) Fuel tube (fuel filter - supply pump)
- (2) Fuel filter

6. Disconnect the electrical connectors (2) of the fuel filter (1) and the fuel pump.



- (1) Fuel filter
(2) Connector

7. Remove the bracket (3).

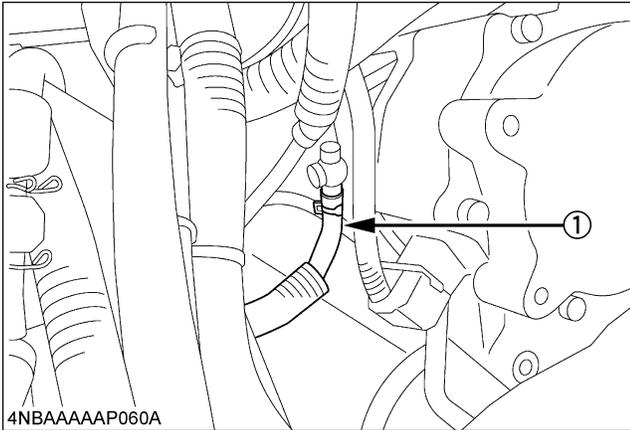


- (1) Bolt
(2) Bolt
(3) Bracket

NOTE :

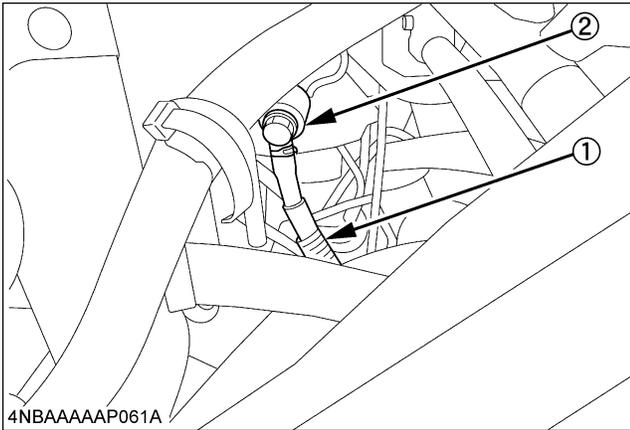
- Don't remove the separator, the fuel pump, the shut off valve, and the fuel filter from the bracket (3) on this step.
- Take care not to drop the bracket, when removing the bolts.
- The bolts (1) (2) will be reused.

8. Disconnect the fuel tube (1) from the engine.



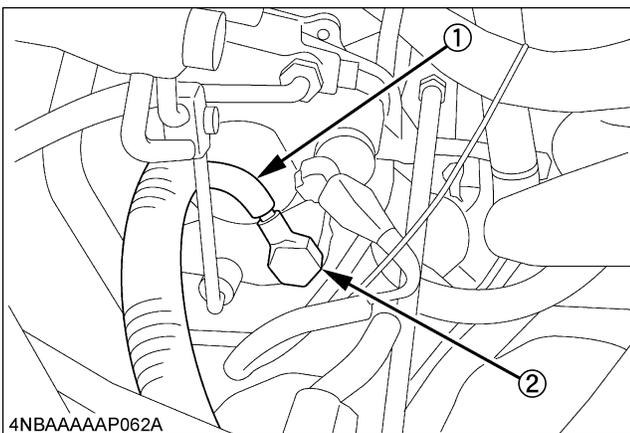
(1) Fuel tube (engine - return)

9. Disconnect the fuel tube (1) from the common rail (2).



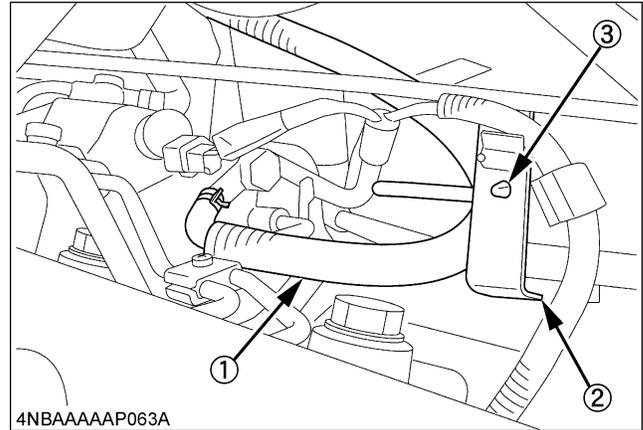
(1) Fuel tube (common rail - return)
(2) Common rail

10. Disconnect the fuel hose (1) from the supply pump (2).



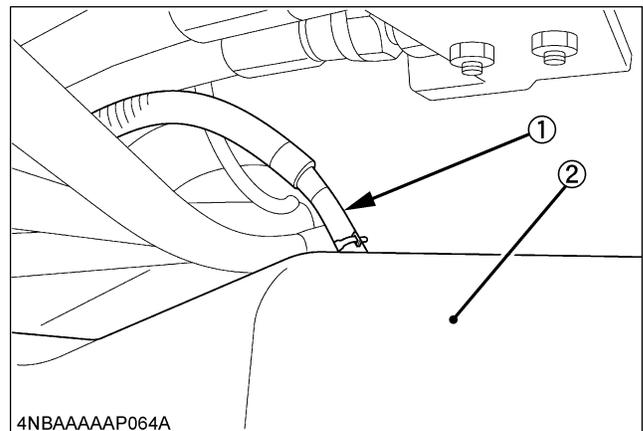
(1) Fuel tube (fuel filter - supply pump)
(2) Supply pump

11. Remove the clamp (3) of fuel tube (1) from the stay (2).



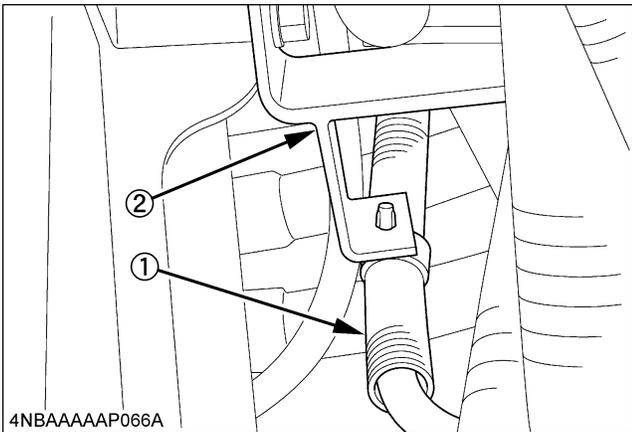
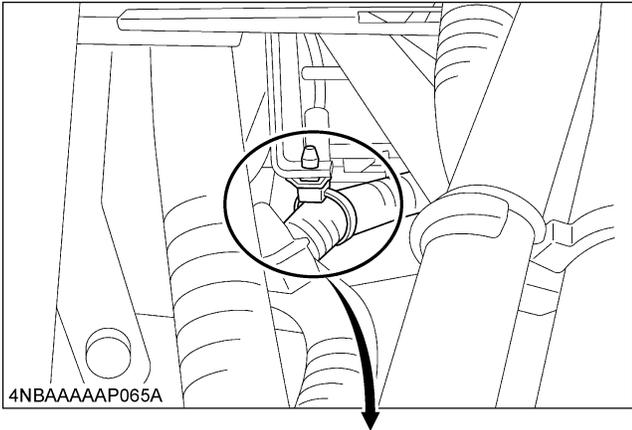
(1) Fuel tube (fuel filter - supply pump)
(2) Stay
(3) Clamp

12. Disconnect the fuel tube (1) from fuel tank (2).



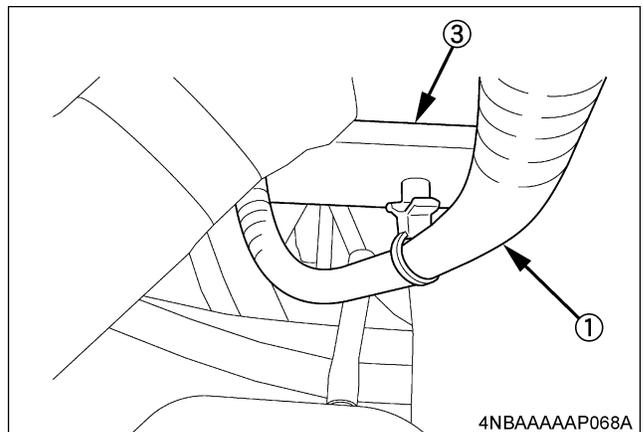
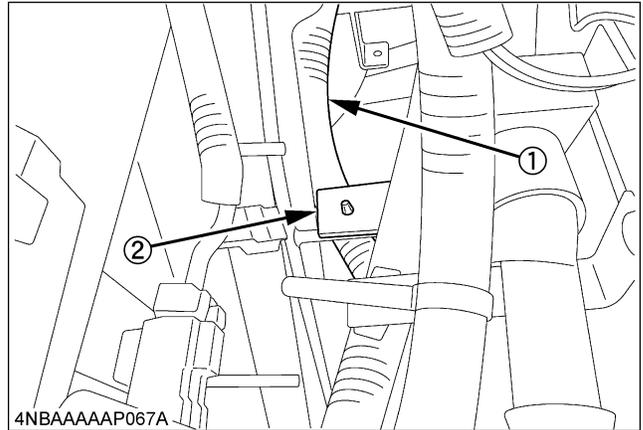
(1) Fuel tube (tank - return)
(2) Fuel tank

13. Remove the fuel tube (1) from the stay (2).



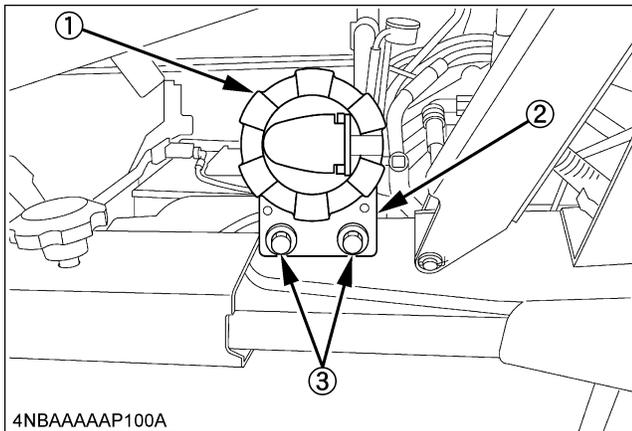
(1) Fuel tube (fuel filter - return)
 (2) Stay

14. Remove the fuel tube (1) from the stay (2) (3).



(1) Fuel tube (cock - fuel pipe)
 (2) Stay
 (3) Stay

15. Remove the cap (1) and the pipe (2).

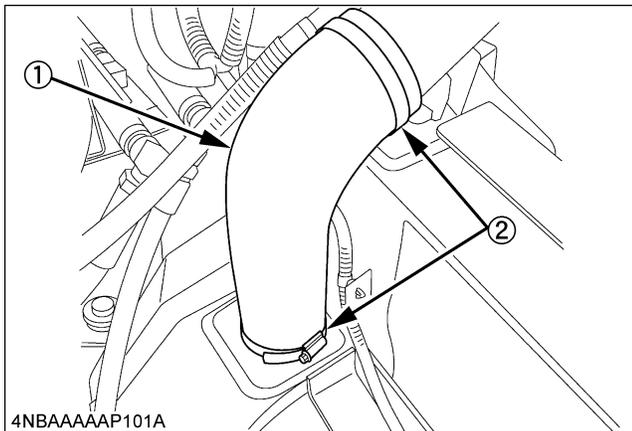


- (1) Fuel cap
(2) Pipe
(3) Bolt

NOTE :

- The cap (1) and the bolts (3) will be reused.

16. Remove the clamps (2) and the fuel hose (1).



- (1) Fuel hose
(2) Clamp

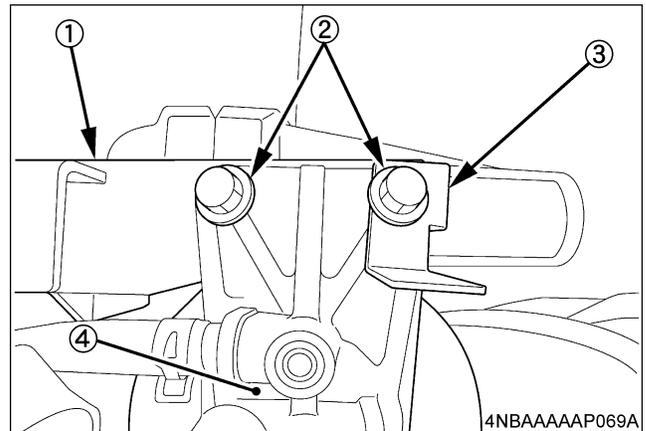
NOTE :

- The clamps (2) will be reused.

C) Sub assembly

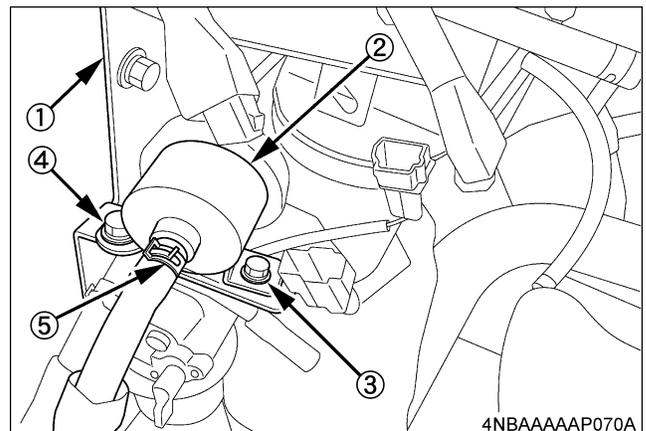
1. Install the fuel filter (4) and the stay (3) to the bracket (1).

Tightening torque	(2) Bolt	24 to 27 N-m 2.4 to 2.8 kgf-m 18 to 20 ft-lbs
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- (1) BRACKET (FILTER, 1) (V0621-9861△)
(2) BOLT (01125-50825)
(3) STAY (HOSE CLAMP) (V0621-9863△)
(4) FILTER, ASSY (FUEL) (V0631-5168△)

2. Disconnect the fuel tubes from both ends of the fuel pump (2) removed on step B)-7, then remove the fuel pump (2) from the bracket (1).



- (1) Bracket
(2) Fuel pump
(3) Bolt
(4) Bolt
(5) Band

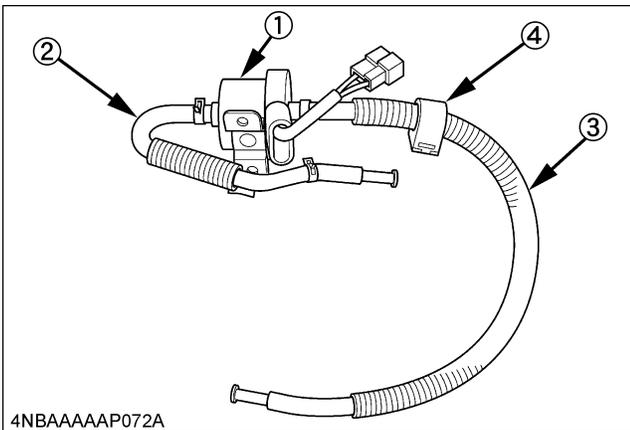
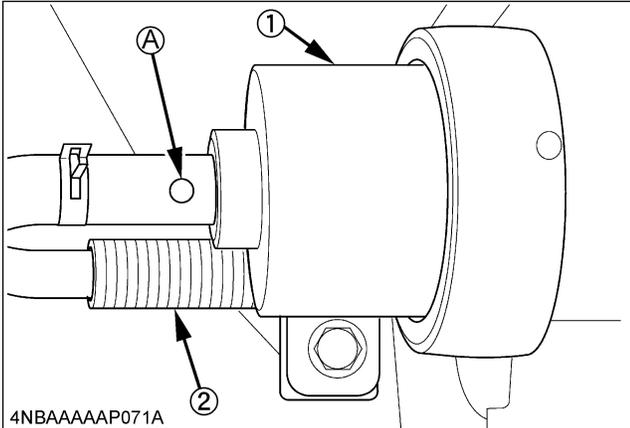
NOTE :

- The fuel pump (2) and the bolts (3) (4) will be reused.

3. Install the fuel tube (2) (3) to the fuel pump (1).

NOTE :

- White mark (A) on the fuel tube (2) should be on the opposite side of the fuel pump installation face.
- Connect the plastic clamp (4) side of the fuel tube (3) to the fuel pump (1) as shown in the illustration.



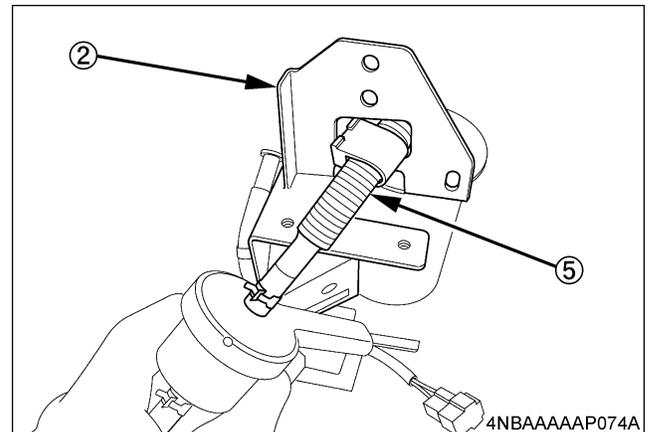
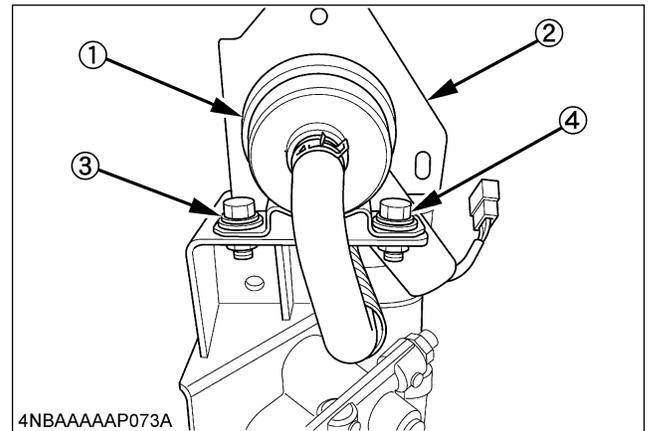
- (1) Fuel pump (reuse)
- (2) FUEL TUBE, ASSY (V0621-9866△)
- (3) FUEL TUBE, ASSY (500) (V0621-9865△)
- (4) Plastic clamp
- (A) White mark

4. Install the fuel pump (1) to the bracket (2).

Tightening torque	(3) M8 bolt	24 to 27 N-m 2.4 to 2.8 kgf-m 18 to 20 ft-lbs
	(4) M6 bolt	9.81 to 11.2 N-m 1.00 to 1.15 kgf-m 7.24 to 8.31 ft-lbs

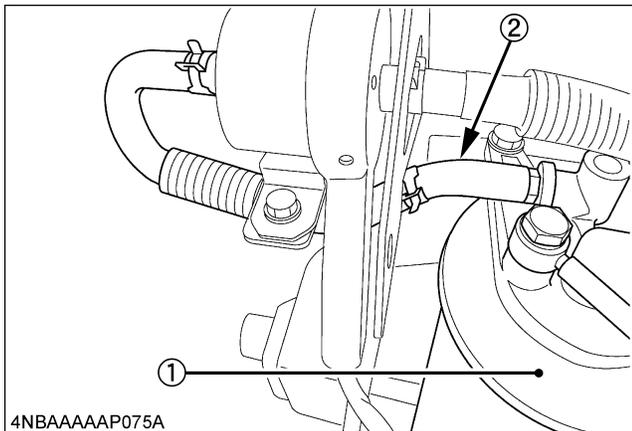
NOTE :

- Pass the fuel tube (5) through the hole of the bracket (2).



- (1) Fuel pump
- (2) Bracket
- (3) M8 bolt (reuse)
- (4) M6 bolt (reuse)
- (5) Fuel tube

5. Install the fuel tube (2) to the fuel filter (1).

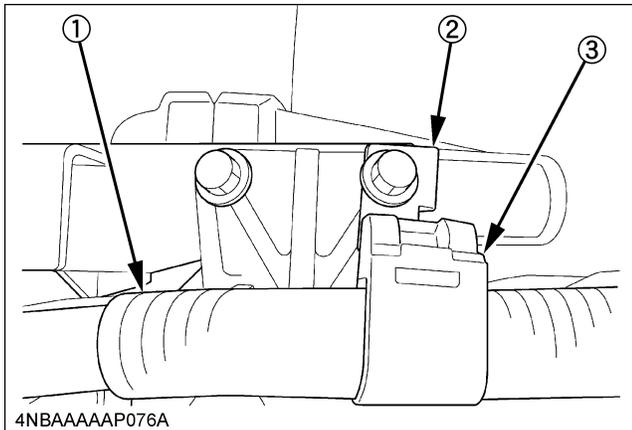


- (1) Fuel filter
(2) Fuel tube

6. Insert the clamp of the fuel tube (1) to the stay (2).

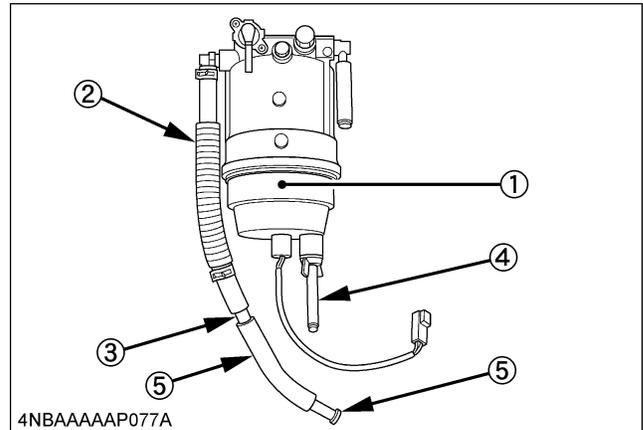
NOTE :

- Make sure that the clamp (3) does not come off.



- (1) Fuel tube
(2) Stay
(3) Clamp

7. Connect the fuel tube (2) (4) to the separator (1).
Install the connector (3) to the fuel tube (2).
Then insert the plugs (5) to the connector (3) to stop fuel leak.



- (1) FILTER, ASSY (SEPARATOR) (V0631-5186△)
(2) FUEL TUBE, ASSY (200) (V0621-9864△)
(3) CONNECTOR (HOSE) (3C131-4246△)
(4) TUBE, FUEL (09664-60400)
(5) Plug (male and female)

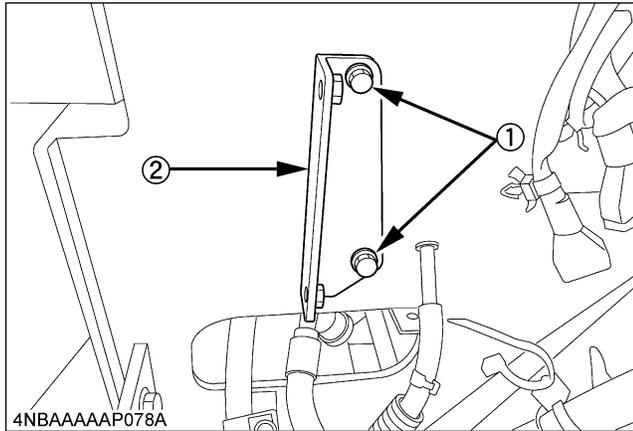
NOTE :

- The plugs (5) will be removed later before connecting the connectors (3) to other fuel tube on the step D)-5.

D) Installing new parts

1. Install the new bracket (2) to the place where the original bracket removed on step B)-7.

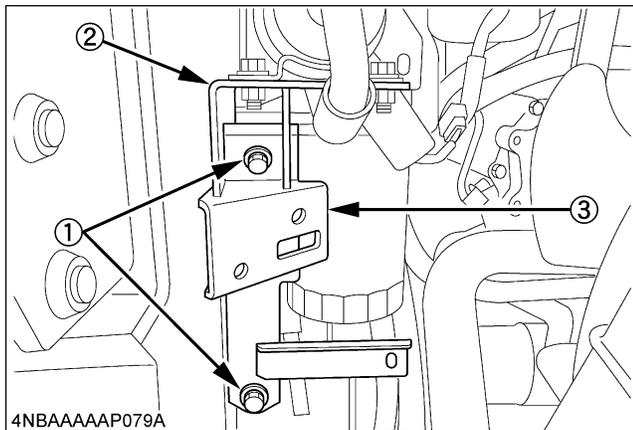
Tightening torque	(1) Bolt	24 to 27 N-m 2.4 to 2.8 kgf-m 18 to 20 ft-lbs
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- (1) BOLT (01125-50825)
- (2) BRACKET (FILTER, 2) (V0621-9862△)

2. Install the bracket (2) (3).

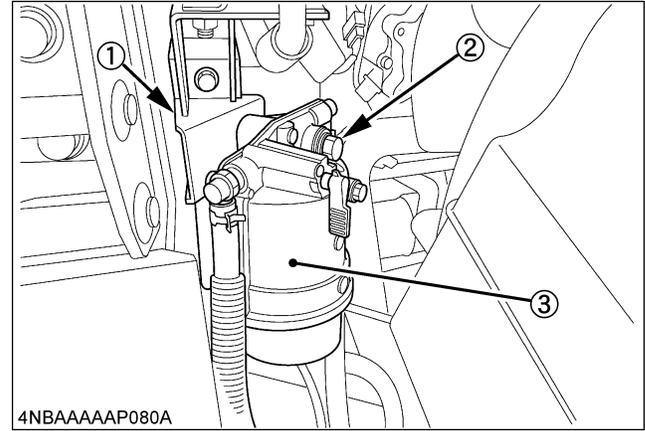
Tightening torque	(1) Bolt	24 to 27 N-m 2.4 to 2.8 kgf-m 18 to 20 ft-lbs
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- (1) Bolt (reuse)
- (2) Bracket
- (3) Bracket

3. Install the separator (3) to the bracket (1).

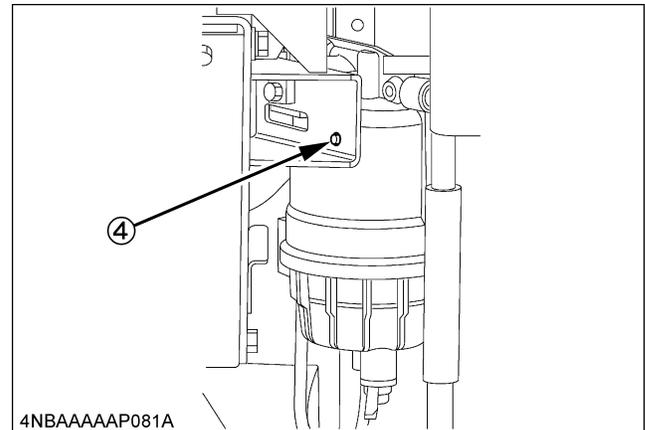
Tightening torque	(2) Bolt	48 to 55 N-m 4.8 to 5.7 kgf-m 36 to 41 ft-lbs
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- (1) Bracket
- (2) BOLT (01135-51080)
- (3) Separator

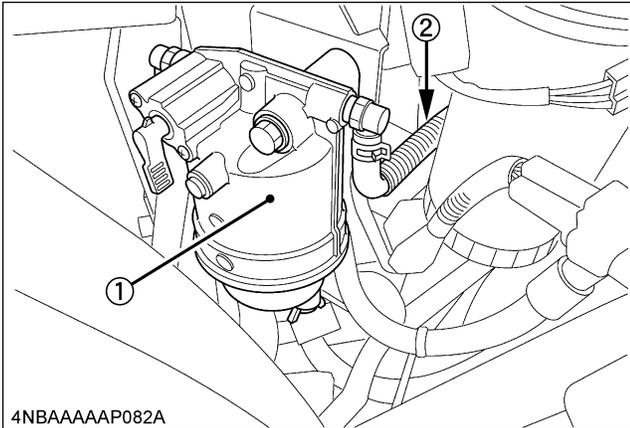
IMPORTANT :

- Set the detent protrusion (4) of separator (3) to the bracket (1).



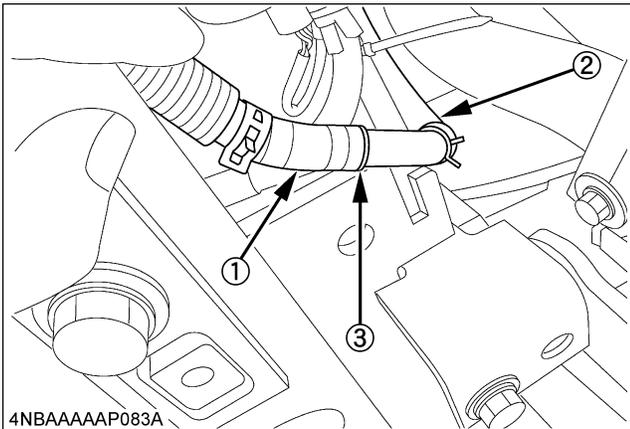
- (4) Detent protrusion

4. Connect the fuel tube (2) to the separator (1).



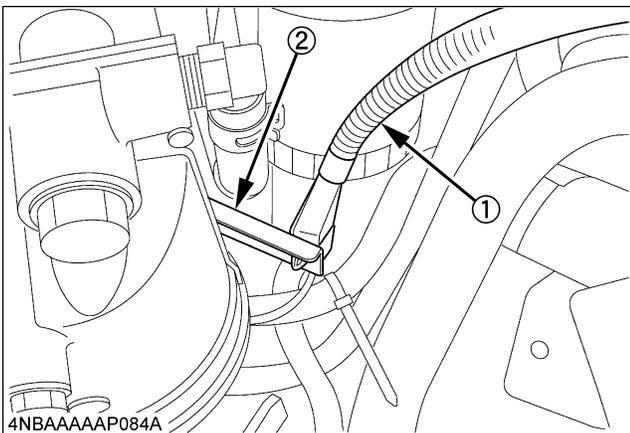
- (1) Separator
- (2) Fuel tube (separator - fuel pump)

5. Connect the fuel tubes (1) (2) with the connector (3).



- (1) Fuel tube (separator - connector)
- (2) Fuel tube (fuel tank - connector)
- (3) Connector

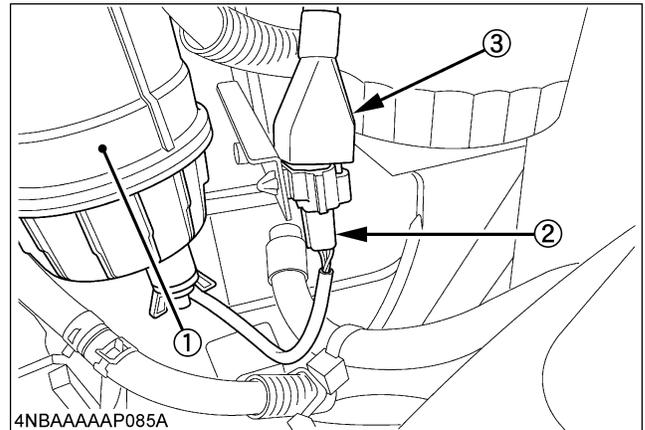
6. Install the wire harness (1) to the bracket (2).



- (1) W/H (CONVERSION, 2, WS-WH) (V0621-9869△)
- (2) Bracket

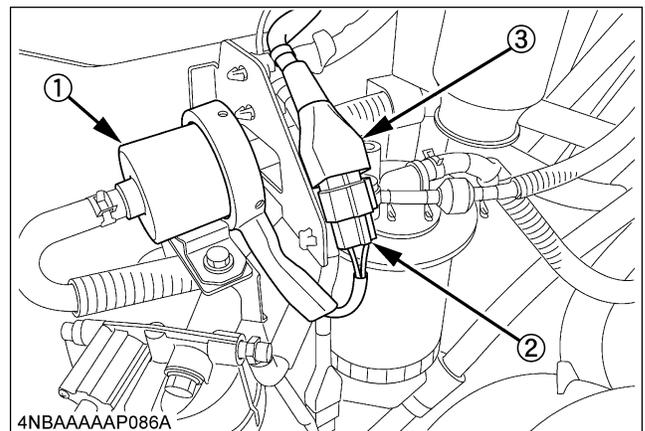
7. Connect the connector to the wire harness.

7-1. Connect the connector of separator (1) to the wire harness (3).



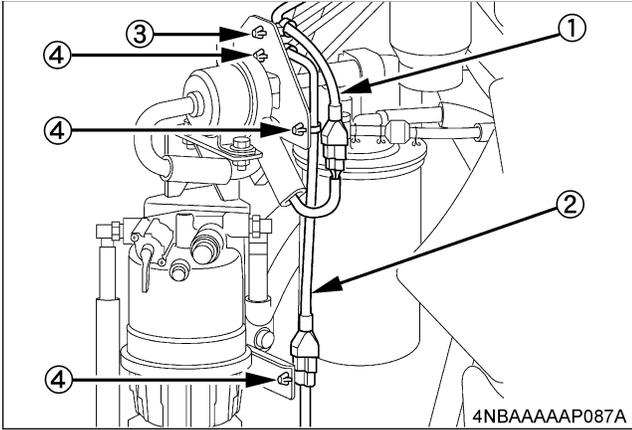
- (1) Separator
- (2) Connector
- (3) Wire harness

7-2. Connect the connector (2) of fuel pump (1) to the wire harness (3).



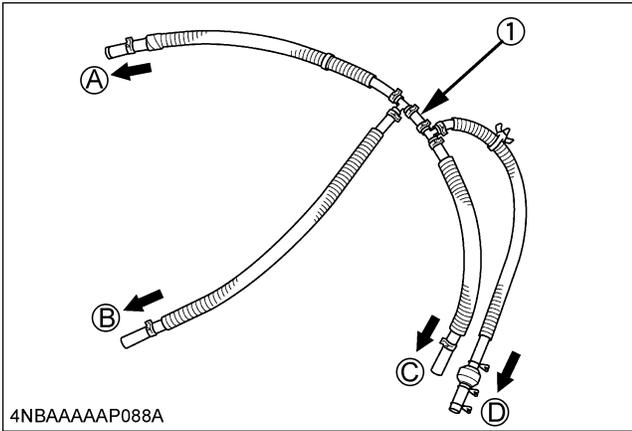
- (1) Fuel pump
- (2) Connector
- (3) Wire harness

8. Clamp the wire harnesses.
 - 8-1. Clamp the wire harness (1) of the fuel pump to the clamp position (3) of the bracket.
 - 8-2. Clamp the wire harness (2) of the separator to the clamp positions (4) of the bracket.



- (1) Wire harness (fuel pump)
- (2) Wire harness (separator)
- (3) Clamp position (wire harness of fuel pump)
- (4) Clamp position (wire harness of separator)

9. Prepare the fuel tube assy (1).

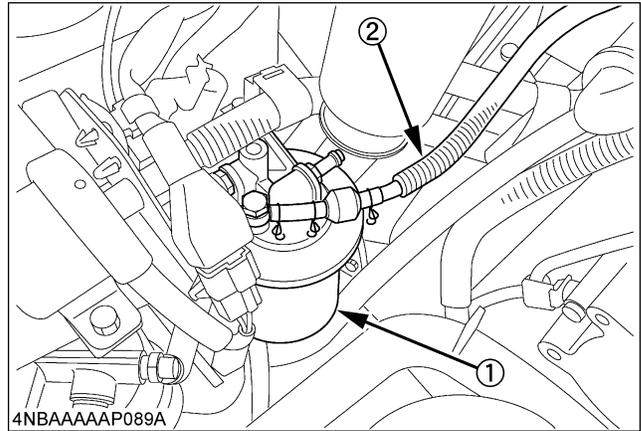


- (1) FUEL TUBE, ASSY (RETURN) (V0621-9868△)
- (A) To the fuel tank
- (B) To the engine common rail
- (C) To the fuel return from engine
- (D) To the fuel filter

10. Connect the fuel tube (2) to the fuel filter (1).

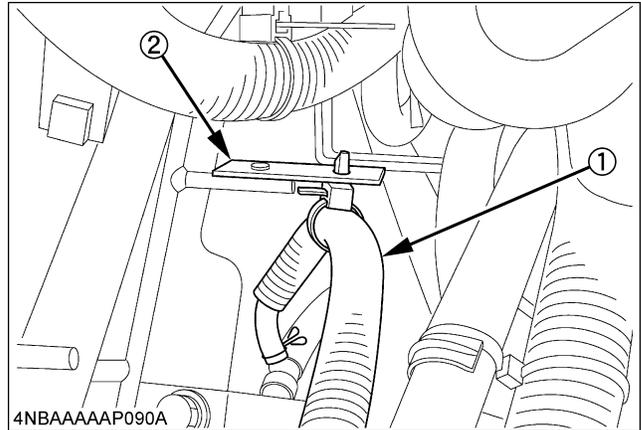
NOTE :

- Connect the D part of the tube. (See the step 9.)



- (1) Fuel filter
- (2) Fuel tube (return)

11. Clamp the fuel tube (1) to the stay (2).

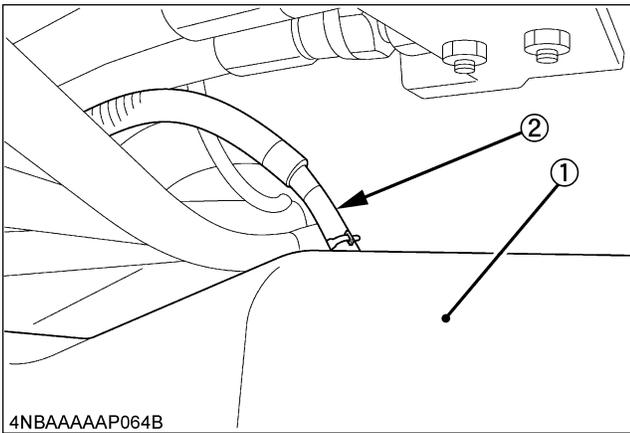


- (1) Fuel tube (return)
- (2) Stay

12. Connect the fuel tube (2) to the fuel tank (1).

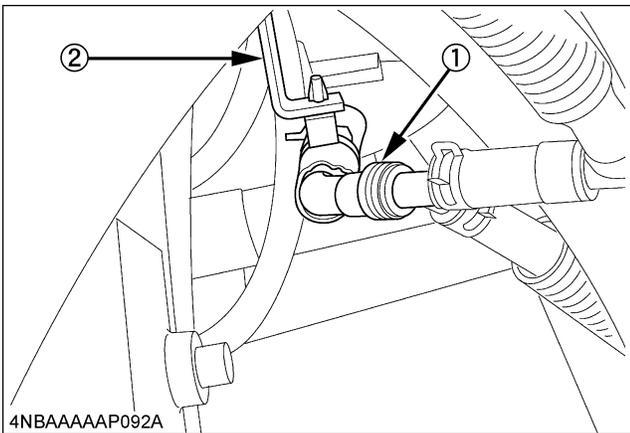
NOTE :

- Connect the A part of the tube. (See the step 9.)



- (1) Fuel tank
(2) Fuel tube (return)

13. Clamp the fuel tube (1) to the stay (2).

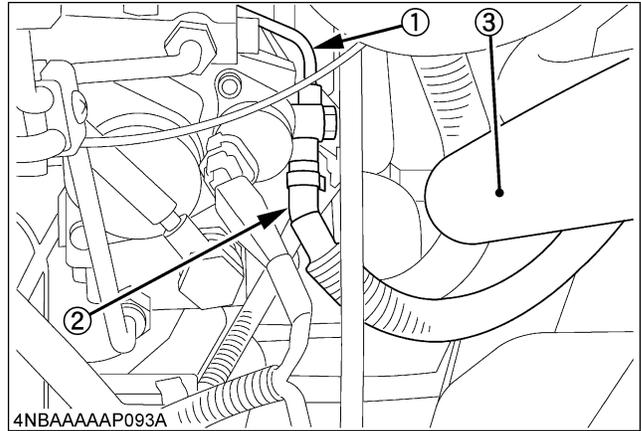


- (1) Fuel tube (return)
(2) Stay

14. Connect the fuel tube (2) to the fuel pipe (1) of the engine.

NOTE :

- Connect the C part of the tube. (See the step 9.)
- Pass the fuel tube (2) under the SP hose (3).

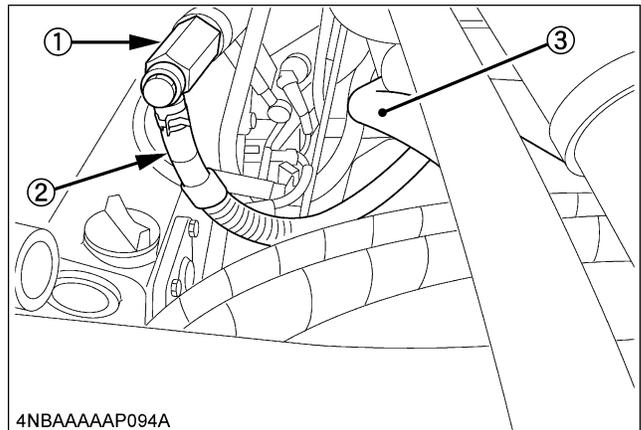


- (1) Fuel pipe
(2) Fuel tube (return)
(3) SP hose

15. Connect the fuel tube (2) to the common rail (1) of the engine.

NOTE :

- Connect the B part of the tube. (See the step 9.)
- Pass the fuel tube (2) under the SP hose (3).

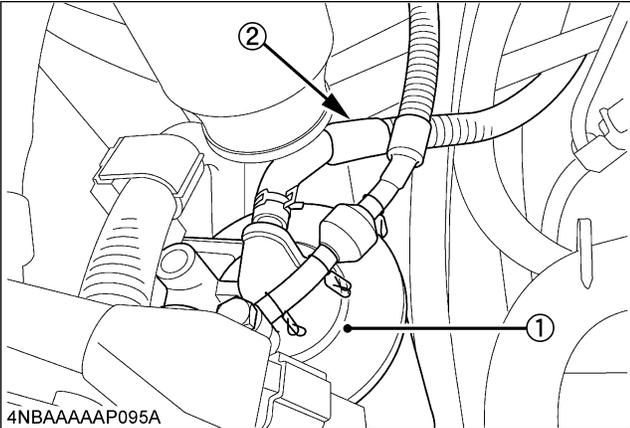


- (1) Common rail
(2) Fuel tube (return)
(3) SP hose

16. Connect the fuel tube (2) to the fuel filter (1).

NOTE :

- Connect the fuel tube (2) of the yellow tape side to the fuel filter (1).

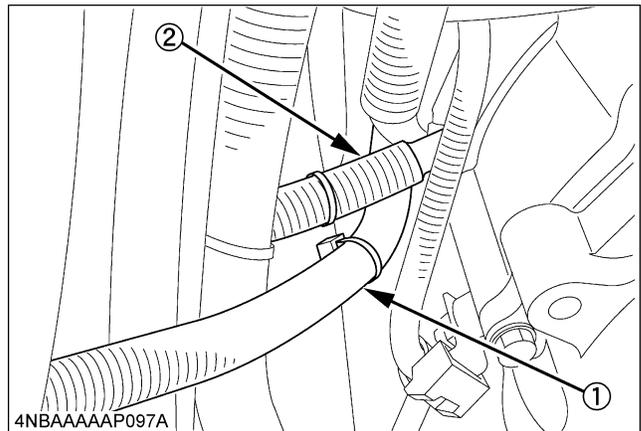
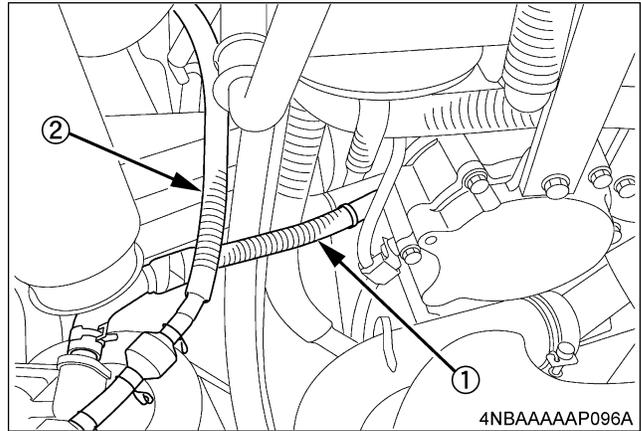


- (1) Fuel filter
- (2) FUEL TUBE, ASSY (770) (V0621-9867△)
(fuel filter - supply pump)

17. Connect the fuel tube (1) to the supply pump.

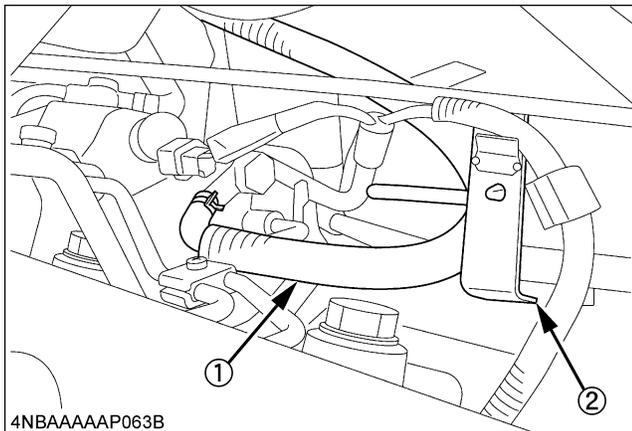
NOTE :

- Pass the fuel tube (1) under the fuel tube (2).



- (1) Fuel tube (fuel filter - supply pump)
- (2) Fuel tube (fuel filter - return)

18. Clamp the fuel tube (1) to the stay (2).

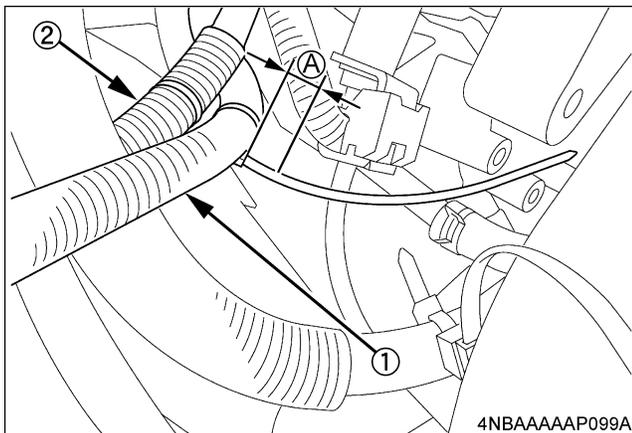


- (1) Fuel tube (fuel filter - supply pump)
- (2) Stay

19. Clamp the fuel tube (2) by the cord band on the fuel tube (1).

NOTE :

- Cut the cord band leaving 5 to 10 mm.



- (1) Fuel tube (fuel filter - supply pump)
- (2) Fuel tube (fuel filter - return)
- (A) 5 to 10 mm

20. Install the fuel pipe, the fuel hose, and the fuel cap by the steps reverse from B)-15 to B)-16.

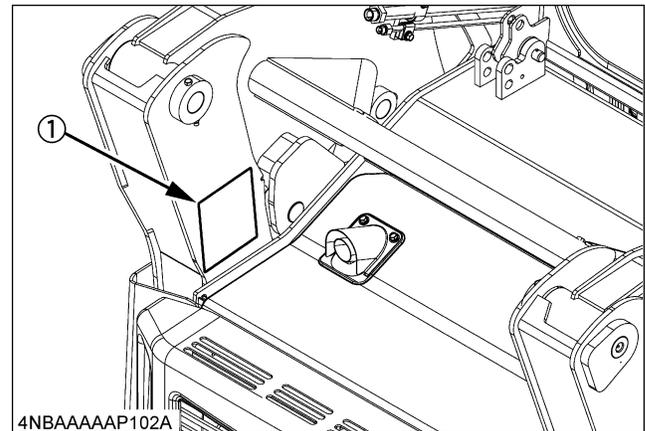
Tightening torque	Bolt	48 to 55 N-m 4.8 to 5.7 kgf-m 36 to 41 ft-lbs
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NOTE :

- Use the new parts below for the pipe and the hose.
- (1) HOSE (FUEL) (V0511-5118△)
- (2) PIPE (FUEL) (V0511-5117△)

21. Lower down the cab and make the machine to the first state by the steps reverse from A)-1 to A)-5.

22. Replace the label.



- (1) LABEL (MAINTENANCE) (V0521-5756△) (English)
or
LABEL (MAINTENANCE, FR) (V0521-5956△) (French)

23. Start the engine, then check there is no fuel leak.

NOTE :

- See "PURGING OF THE FUEL SYSTEM" in "OTHER CHECKS AND REPLACEMENTS" section in the Operator's Manual.