



# Kubota

Bulletin No :  
CM-23-069-01-KEEN  
Date : Feb. 22, 2024  
Ref.PB No :

**SUBJECT :**  
**BREAKAGE OF THE AIR FLOW SENSOR**  
**BLUE WIRE**

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Kubota Europe S.A.S

**MODEL : U50-5**

**AFFECTED SERIAL NUMBER : U50-5 ; UP TO 13535**

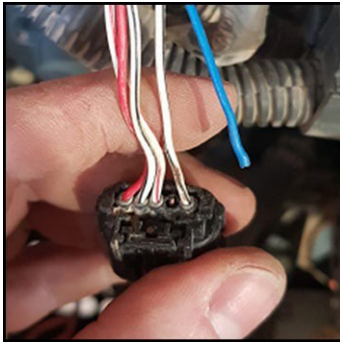
**AFFECTED COUNTRY : KE, KUK, AND KBD**

**REASON FOR ISSUE :**

Cases have been reported where the blue wire from the engine harness to the air flow sensor has broken.

Investigation has shown that the material of the blue wire is different from the other wires and has inferior specifications in terms of heat and bending resistance.

We herewith inform you of the action to be taken in such cases.



**PARTS INFORMATION :**

No.	Parts No.	Parts Name	Q'ty	Remarks
1	RD479-53080	W/H (REPAIR_AIR_FLOW)	1	-

☒ **WARRANTY INFORMATION**

☐ Mandatory Campaign : Allowable Man-hours ;

☒ Technical Bulletin : Allowable Man-hours ; 3.0 hrs.

Expiration date : 5 years from machine retail date for this specific failure only  
(Except emission related parts)

☐ Quality Related Information

## REPAIR PROCEDURE

### Repair wire outline

The repair wire (RD479-53080) consists of the connector (1), the blue wire (2), and the sleeve (3).

#### (1) Connector

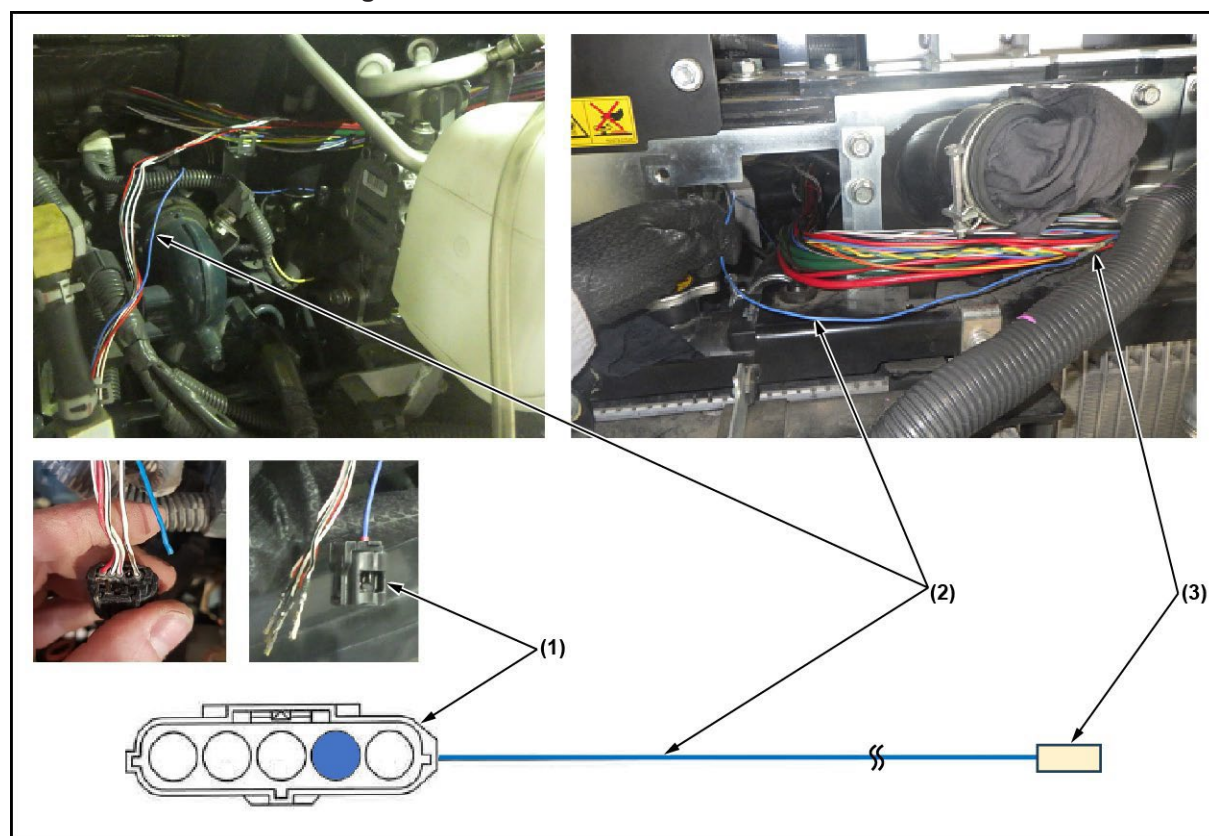
- The new connector itself is the same specification as the original connector.
- The original pins and wires other than the failed blue wire should be removed from the original connector, then reinstalled to the new connector.

#### (2) Blue wire

- The material is changed for better specifications.
- The length is 1190 mm.
- The failed blue wire should be cut at the designated point under the RH bonnet.
- The failed blue wire of the air flow sensor side with the original connector should be removed from the original engine wire harness.
- The new blue wire should be connected to the original blue wire of the frame side.

#### (3) Sleeve

- It is a waterproof sleeve.
- The new blue wire should be connected by this sleeve at the designated point under the RH bonnet to avoid engine vibration effect to this sleeve connection.



**Required tools**

No.	Tool Name	Remarks
(1)	Pin remover	Less than $\Phi 0.8$ mm and more than 10 mm length
(2)	Crimping tool	For crimp terminal with insulating coating, 0.5 mm <sup>2</sup> size
(3)	Wire stripping tool	0.5 mm <sup>2</sup> size
(4)	Heat gun	120 °C or higher hot air temperature specifications
(5)	Scissors	
(6)	Nipper	
(7)	Marker	
(8)	Heat-resistant vinyl tape	100 °C or higher heat-resistant tape (Width 19 mm)
(9)	Ratchet	
(10)	Torque wrench	Required torque: 2.5 to 55.9 N·m
(11)	14 mm socket	
(12)	10 mm socket	
(13)	Flathead screwdriver	

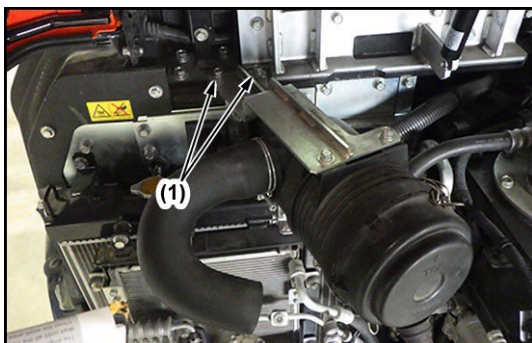
**Photo of tools**

## **WARNING**

To avoid personal injury or death:

- Park the machine on a firm and level ground.
- 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.

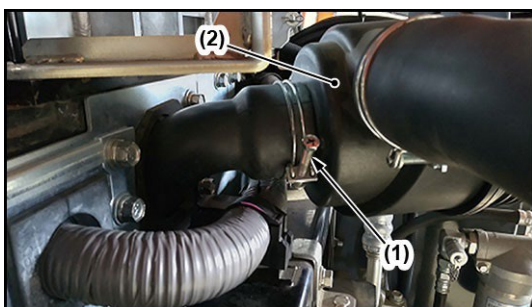
## 1. Preparation



### 1. Remove the bolts (1).

Tightening torque	Bolt	48.1 to 55.9 N·m 4.9 to 5.7 kgf·m 35.5 to 41.2 lbf·ft
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(1) Bolt x2 (Reuse)

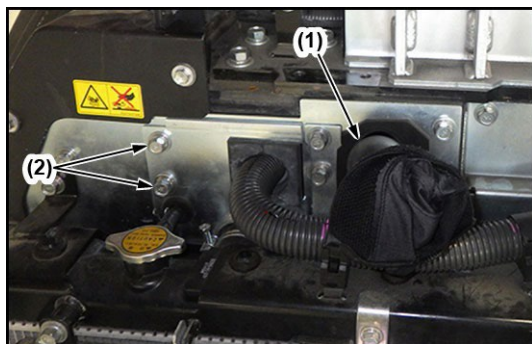


### 2. Loosen the clamp (1) and remove the air cleaner (2).

Tightening torque	Clamp	2.5 to 3.4 N·m 0.3 to 0.4 kgf·m 1.9 to 2.5 lbf·ft
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(1) Clamp (Reuse)  
(2) Air cleaner (Reuse)



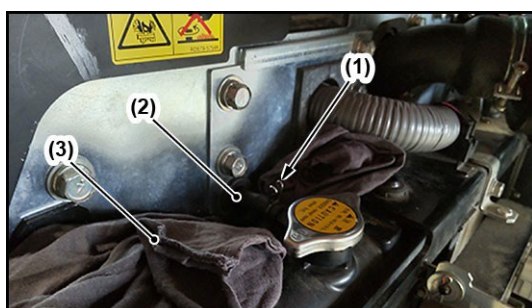


3. Plug the intake hose (1).

4. Remove the bolts (2).

Tightening torque	Bolt	48.1 to 55.9 N·m 4.9 to 5.7 kgf·m 35.5 to 41.2 lbf·ft
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- (1) Intake hose
- (2) Bolt x2 (Reuse)



5. Loosen the hose clip (1) and disconnect the reservoir hose (2).

#### ■ NOTE

- Put a cloth (3) under the reservoir hose (2) connection.

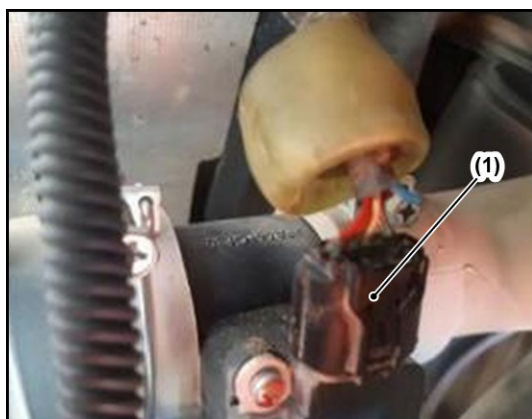
- (1) Hose clip (Reuse)
- (2) Reservoir hose (Reuse)
- (3) Cloth



6. Remove the plate (1).

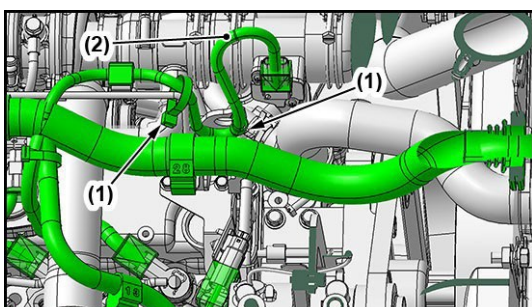
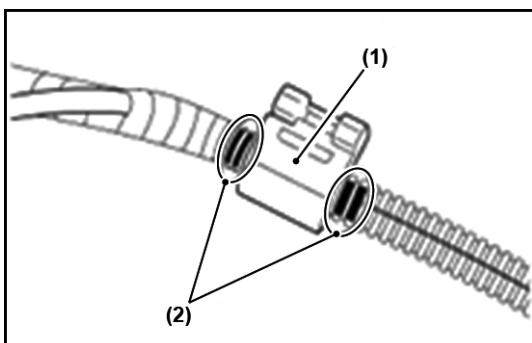
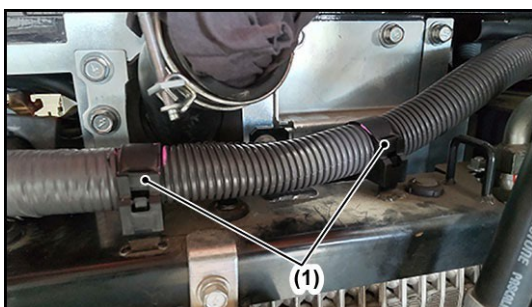
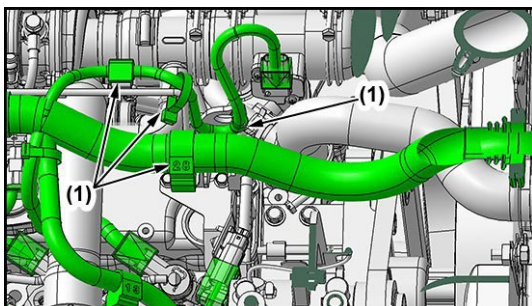
- (1) Plate

## 2. Disassembling the wire harness



1. Disconnect the air flow sensor connector (1).

- (1) Air flow sensor connector



2. Mark the positions of the clamps (1).

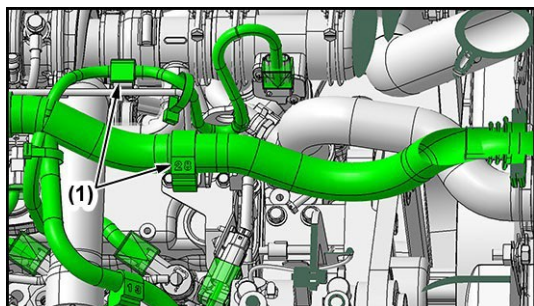
■ **NOTE**

- **Mark both sides of each clamp (1).**

- (1) Clamp x6  
(2) Mark x12

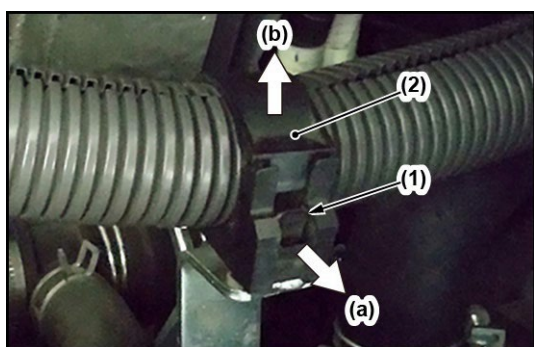
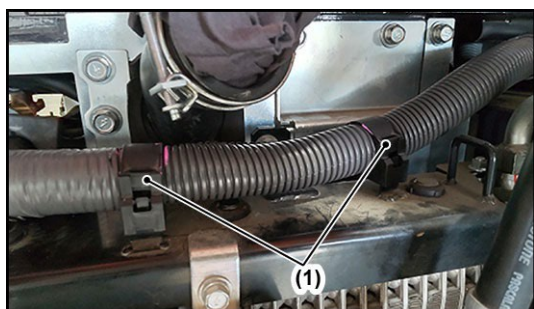
3. Loosen the clamps (1) and unclamp the wire harness (2).

- (1) Clamp x2 (Reuse)  
(2) Wire harness



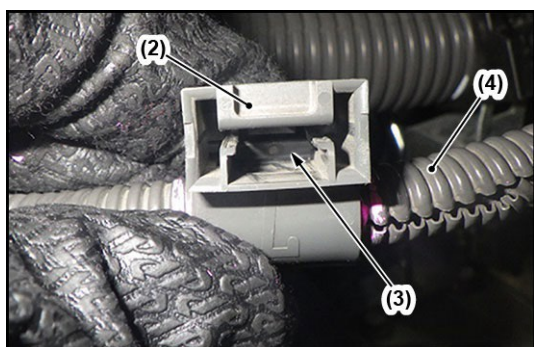
4. Remove the clamps (1) in the following procedure of 4-1 and 4-2.

(1) Clamp x4 (Reuse)



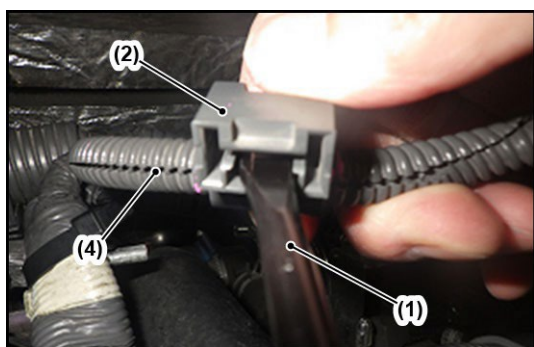
4-1. Pull the external tab (1) to unlock and pull-out the clamp (2).

(1) External tab  
(2) Clamp  
(a) Pull  
(b) Pull-out

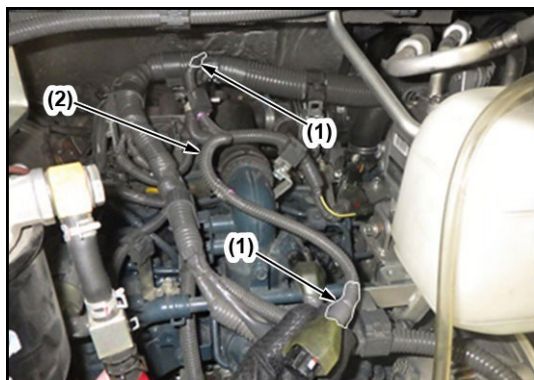


4-2. Insert the flathead screwdriver (1) in the clamp (2), unlock the internal tab (3) with the flathead screwdriver (1), and unclamp the corrugated tube (4).

(1) Flathead screwdriver  
(2) Clamp  
(3) Internal tab  
(4) Corrugated tube

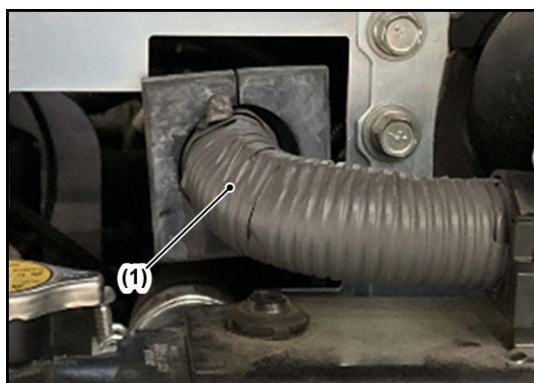






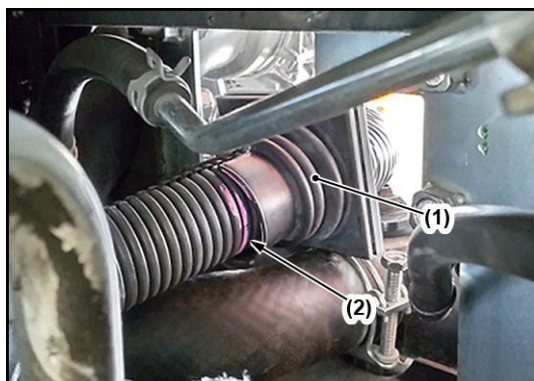
5. Remove the heat-resistant vinyl tapes (1) and the corrugated tube (2).

- (1) Heat-resistant vinyl tape x2
- (2) Corrugated tube



6. Remove the heat-resistant vinyl tape (1).

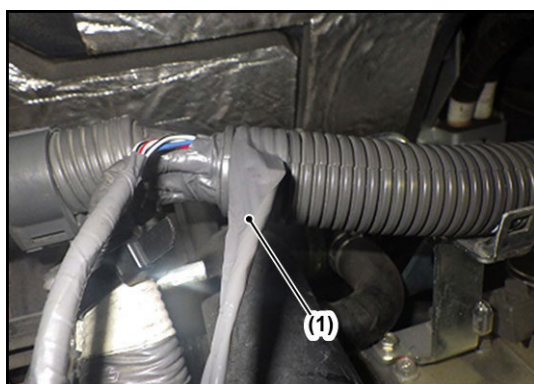
- (1) Heat-resistant vinyl tape



7. Mark the position of the grommet (1).

8. Remove the grommet (1).

- (1) Grommet
- (2) Mark



9. Remove the heat-resistant vinyl tape (1).

- (1) Heat-resistant vinyl tape





10. Remove the corrugated tube (1) down to the mark (2) for the clamp.

- (1) Corrugated tube
- (2) Mark



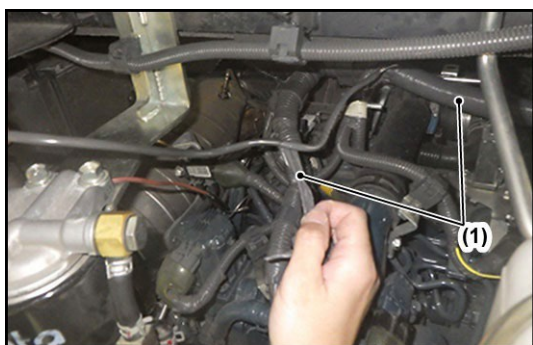
11. Remove the heat-resistant vinyl tape (1) down to the mark (2) for the clamp.

- (1) Heat-resistant vinyl tape
- (2) Mark



12. Remove the heat-resistant vinyl tapes (1).

- (1) Heat-resistant vinyl tape x2

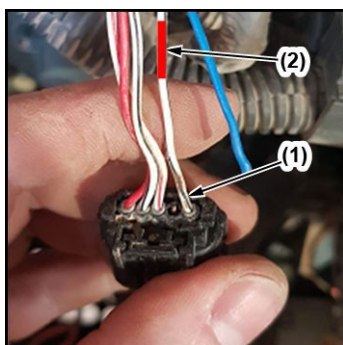




### 13. Remove the insulations (1).

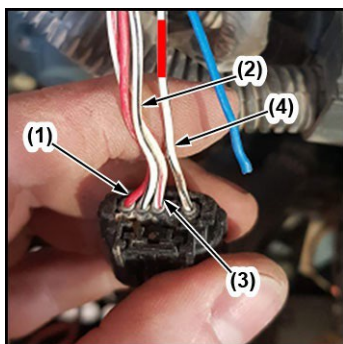
- (1) Insulation (Reuse) x2

## 3. Removing the wires from the old connector



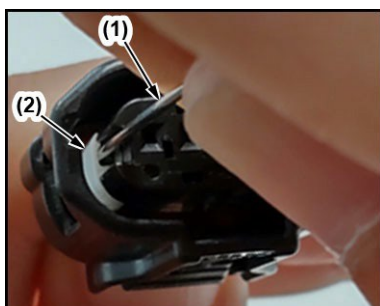
### 1. Mark the wire (1).

- (1) Wire (white / black: GND)  
(2) Mark



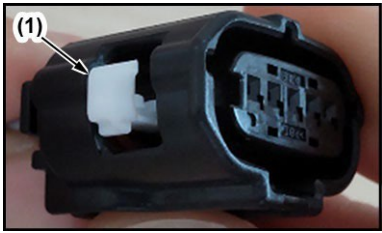
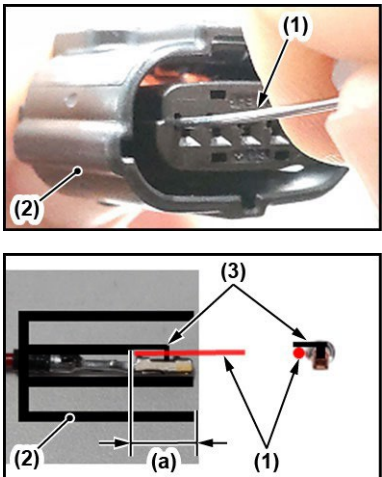
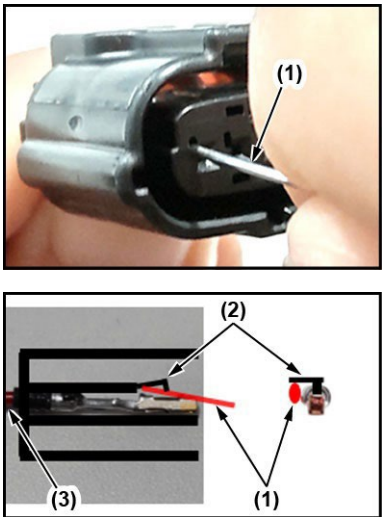
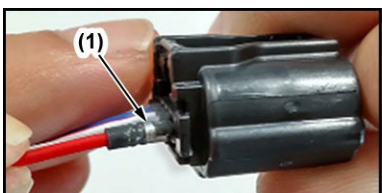
### 2. Disconnect the wires (1), (2), (3), (4) from the connector in the following procedure from 2-1 to 2-5.

- (1) Wire (red: POWER) (Reuse)  
(2) Wire (white / black: GND) (Reuse)  
(3) Wire (white / red: VC) (Reuse)  
(4) Wire (white / black + mark: GND) (Reuse)



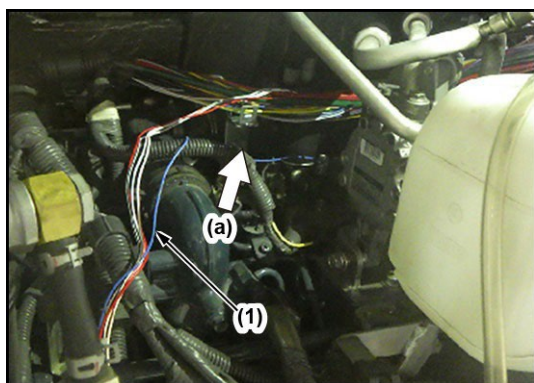
### 2-1. Insert the pin remover (1) in the holder (2).

- (1) Pin remover  
(2) Holder

	<p>2-2. Remove the holder (1) with the pin remover.</p> <p>■ <b>NOTE</b></p> <ul style="list-style-type: none"> <li>● <b>Be careful not to make the holder (1) pop out.</b></li> </ul> <p>(1) Holder</p>				
	<p>2-3. Insert the pin remover (1) in the connector (2).</p> <p>■ <b>NOTE</b></p> <ul style="list-style-type: none"> <li>● <b>Point the pin remover (1) at the underside of the plug hole to avoid damaging the tab (3).</b></li> </ul> <table border="1" data-bbox="775 647 1369 732"> <tr> <td data-bbox="775 647 970 689">(a) Length</td><td data-bbox="970 647 1369 689">Approximately 7 mm</td></tr> <tr> <td data-bbox="775 689 970 732"></td><td data-bbox="970 689 1369 732">Approximately 0.28 inch</td></tr> </table> <p>(1) Pin remover (2) Connector (3) Tab</p>	(a) Length	Approximately 7 mm		Approximately 0.28 inch
(a) Length	Approximately 7 mm				
	Approximately 0.28 inch				
	<p>2-4. Push up the pin remover (1) to unlock the tub (2).</p> <p>■ <b>NOTE</b></p> <ul style="list-style-type: none"> <li>● <b>If the wire (3) is pulled, the tab (2) holds pin (1) and it is not able to be unlocked. In this case, push in the wire (3).</b></li> </ul> <p>(1) Pin remover (2) Tab (3) Wire</p>				
	<p>2-5. Pull out the pin (1).</p> <p>(1) Pin</p>				



#### 4. Installing the repair wire

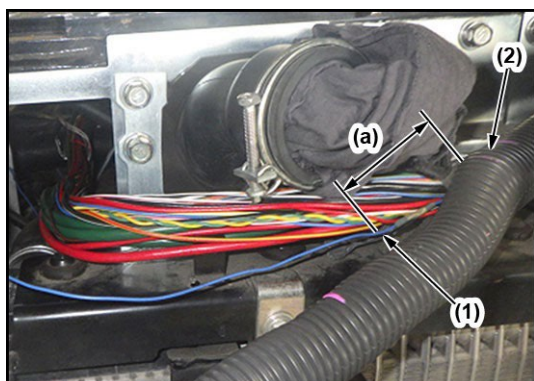
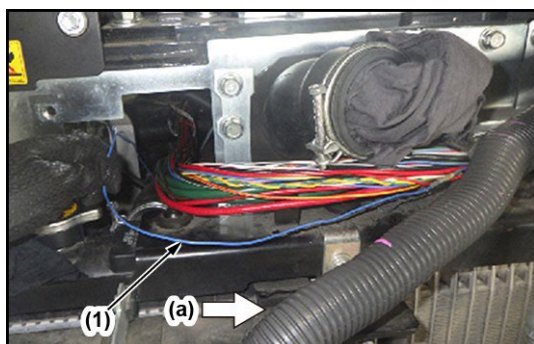


1. Draw out the broken blue wire (1) for the air flow sensor.

■ **IMPORTANT**

- There are three blue wires in the engine wire harness. Do not pull the other blue wires.

- (1) Blue wire  
(a) Draw out



2. Cut the blue wire from the air flow sensor in the position as shown.

■ **NOTE**

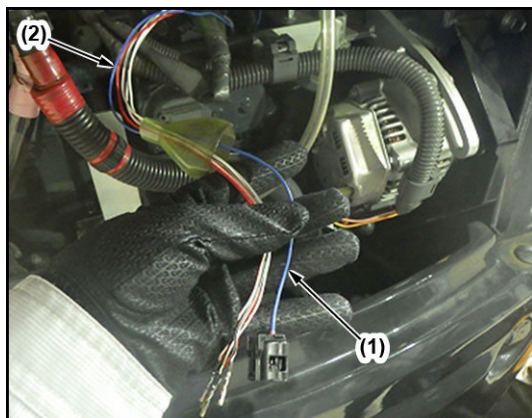
- The reference point of the length (a) is the mark (2).

(a) Length	80 mm
	3.15 inch

- (1) Cut position  
(2) Mark

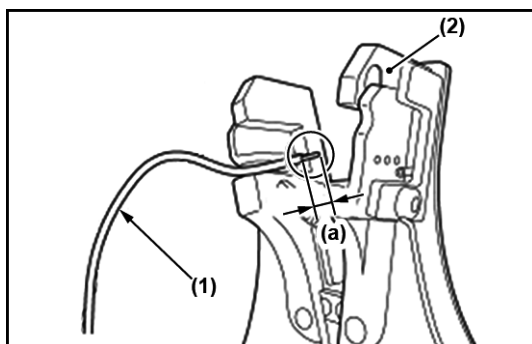
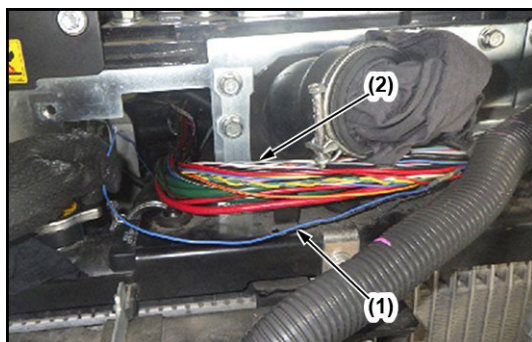
3. Remove the cut blue wire of the air flow sensor side.





4. Route the repair wire (1) aligning to the engine wire harness (2).

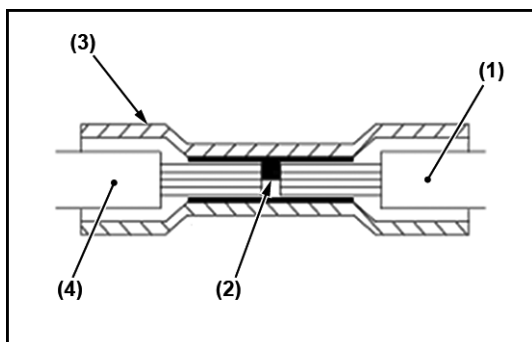
- (1) Repair wire (RD479-53080)
- (2) Engine wire harness



5. Strip the coating of the cut blue wire of the frame side (1) with the wire stripping tool (2) as shown.

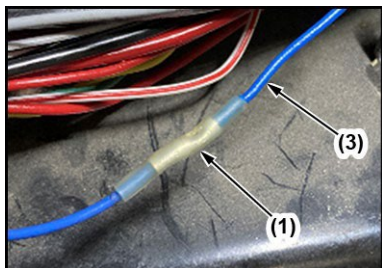
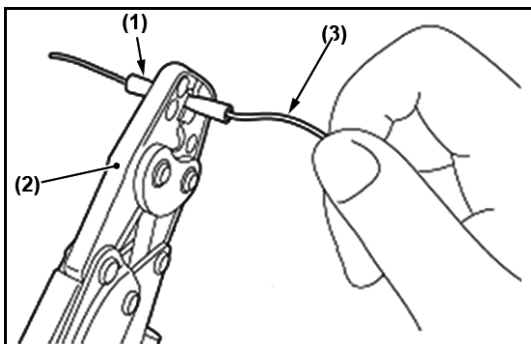
(a) Length	6 to 7 mm
	0.24 to 0.28 inch

- (1) Blue wire of the frame side
- (2) Wire stripping tool



6. Insert the stripped blue wire of the frame side (1) until it contacts the wire stopper (2) in the sleeve (3) of the repair wire (4).

- (1) Blue wire of the frame side
- (2) Wire stopper
- (3) Sleeve
- (4) Repair wire

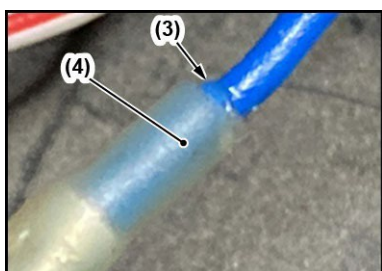
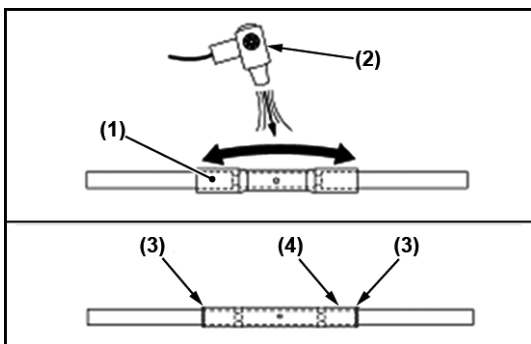


7. Press the handle down until the crimping tool (2) stopper ratchet activates to crimp the sleeve (1).

■ **IMPORTANT**

- **Confirm that there is no disconnection even when pulling the blue wire of the frame side (3) after completion.**

- (1) Sleeve  
(2) Crimping tool  
(3) Blue wire of the frame side

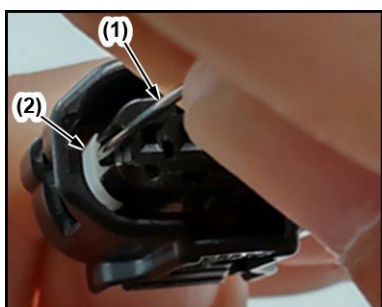


8. Heat the sleeve (1) to approximately 120 °C with the heat gun (2) until the inner layer (3) protrudes slightly from the outer layer (4).

■ **IMPORTANT**

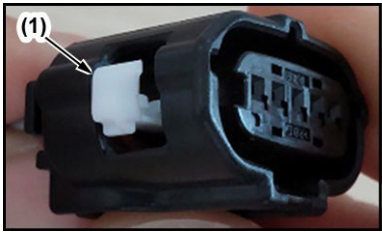
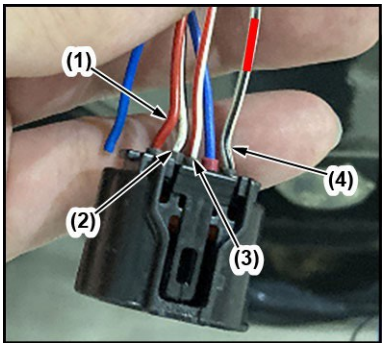

- **Heat from the center to the end of the sleeve (1).**
- **Rotate the sleeve (1) while heating so that the sleeve (1) is heated evenly.**
- **Do not bring into contact with a flame, such as that of a cigarette lighter, directly as this may cause scorching and shrinkage distortion.**
- **Do not apply warm air for over 5 minutes to avoid over-shrink.**
- **Make sure that there are no harmful cracks or splits.**

- (1) Sleeve  
(2) Heat gun  
(3) Inner layer  
(4) Outer layer




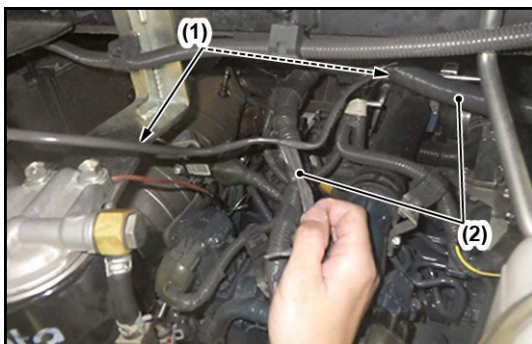
9. Insert the pin remover (1) in the holder (2) of the repair wire connector.

- (1) Pin remover  
(2) Holder

	<p>10. Remove the holder (1) with the pin remover.</p> <p>■ <b>NOTE</b></p> <ul style="list-style-type: none"> <li>● <b>Be careful not to make the holder (1) pop out.</b></li> </ul> <p>(1) Holder</p>
	<p>11. Install each pins of wires (1), (2), (3), (4) to the repair wire connector as shown.</p> <p>■ <b>IMPORTANT</b></p> <ul style="list-style-type: none"> <li>● <b>Confirm that there is no disconnection even when pulling the wires (1), (2), (3), (4) after installation.</b></li> </ul> <p>(1) Wire (red: POWER)  (2) Wire (white / black: GND)  (3) Wire (white / red: VC)  (4) Wire (white / black + mark: GND)</p>
	<p>12. Install the holder (1) in the repair wire connector.</p> <p>(1) Holder</p>

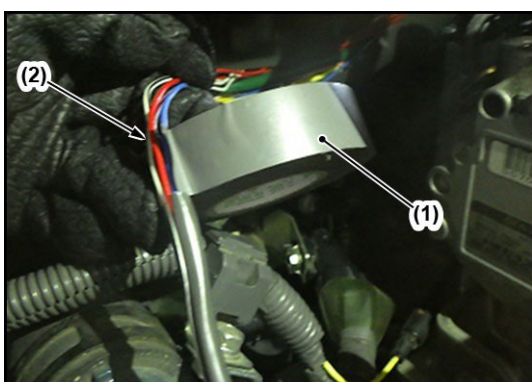
## 5. Assembling the wire harness

	<p>1. Install the insulations (1).</p> <p>(1) Insulation x2</p>
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2. Fix the insulations (1) with the heat-resistant vinyl tape (2) in the following procedure from 2-1 to 2-4.

- (1) Insulation x2
- (2) Heat-resistant vinyl tape

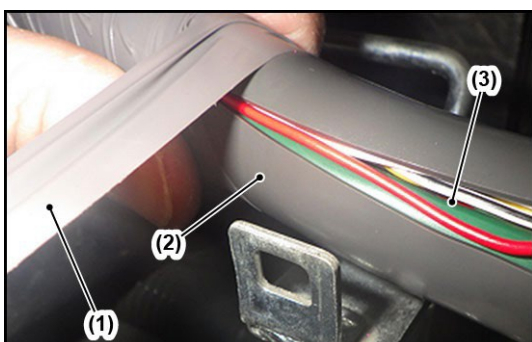


2-1. Wrap the wires (2) once with the heat-resistant vinyl tape (1).

■ **IMPORTANT**

- Do not cut the heat-resistant vinyl tape (1) in this working step.

- (1) Heat-resistant vinyl tape
- (2) Wires



2-2. Wrap the insulation (2) with the heat-resistant vinyl tape (1) as shown.

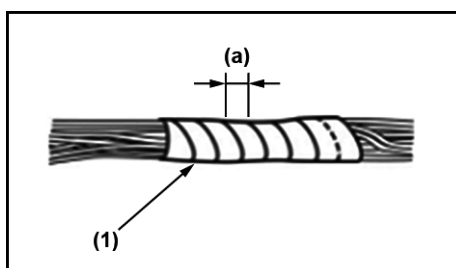
■ **IMPORTANT**

- Cover the wires (3) completely with the insulation (2) when wrapping them up.
- Do not cut the heat-resistant vinyl tape (1) in this working step.

(a) Overlap

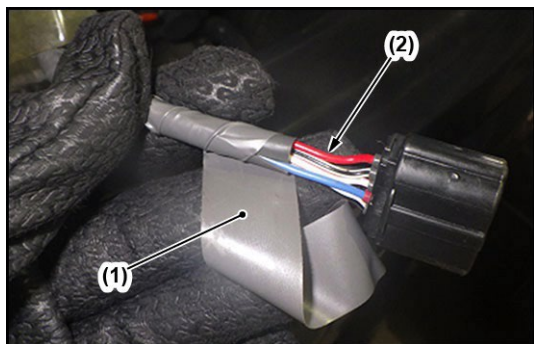
Less than 9.5 mm (tape width / 2)

Less than 0.37 inch (tape width / 2)



- (1) Heat-resistant vinyl tape
- (2) Insulation
- (3) Wires

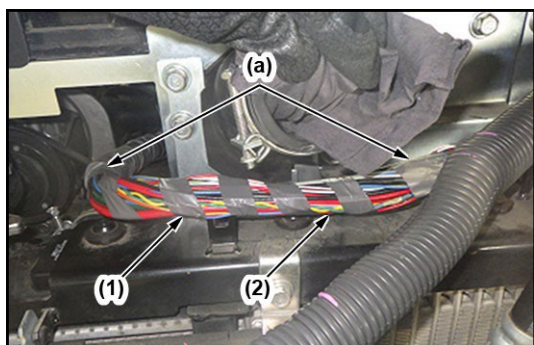




2-3. Wrap the wires (2) once with the heat-resistant vinyl tape (1).

2-4. Cut the heat-resistant vinyl tape (1).

- (1) Heat-resistant vinyl tape
- (2) Wires



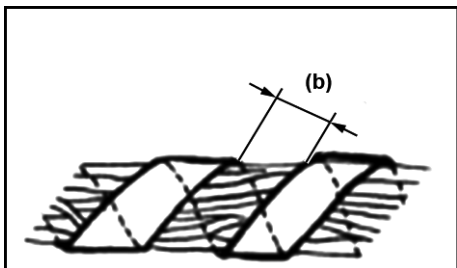
3. Wrap the wires (2) with the heat-resistant vinyl tape (1) as shown.

■ **NOTE**

- **Wrap the wires (2) once with the heat-resistant vinyl tape (1) at the beginning and the end (a).**

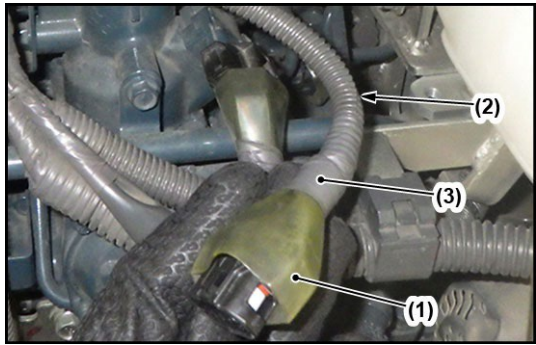

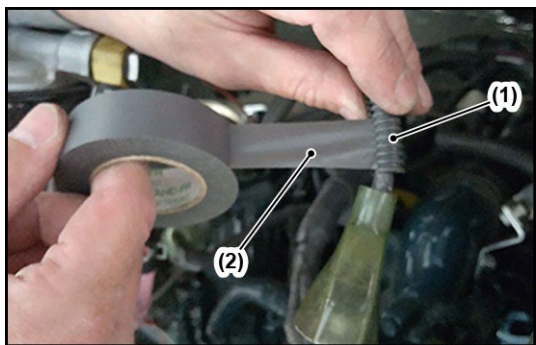

(b) Gap	Less than 19 mm (tape width)
	Less than 0.75 inch (tape width)

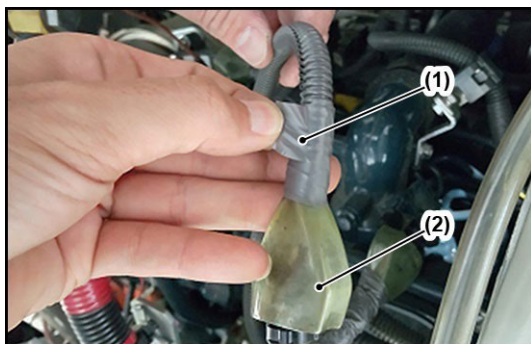
- (1) Heat-resistant vinyl tape
- (2) Wires
- (a) The beginning and the end



4. Install the corrugated tubes (1).

- (1) Corrugated tube x2

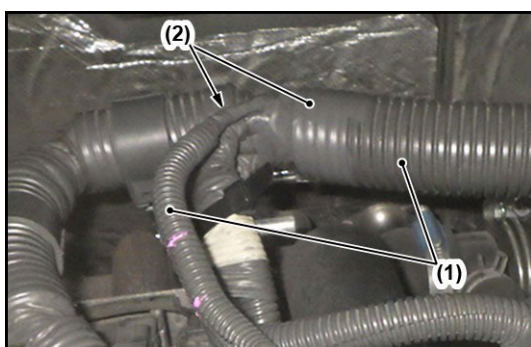
	<p>5. Fix the cover (1) and the corrugated tube (2) with the heat-resistant vinyl tape (3) in the following steps from 5-1 to 5-6.</p> <ul style="list-style-type: none"> <li>(1) Cover</li> <li>(2) Corrugated tube</li> <li>(3) Heat-resistant vinyl tape</li> </ul>
	<p>5-1. Remove the corrugated tube (1) partially as shown.</p> <p>5-2. Wrap the insulation (3) once with the heat-resistant vinyl tape (2).</p> <p>■ <b>IMPORTANT</b></p> <ul style="list-style-type: none"> <li>● <b>Do not cut the heat-resistant vinyl tape (1) in this working step.</b></li> </ul> <ul style="list-style-type: none"> <li>(1) Corrugated tube</li> <li>(2) Heat-resistant vinyl tape</li> <li>(3) Insulation</li> </ul>
	<p>5-3. Reinstall the corrugated tube (1) and draw out the heat-resistant vinyl tape (2) from the slit of the corrugated tube (1).</p> <p>■ <b>IMPORTANT</b></p> <ul style="list-style-type: none"> <li>● <b>Do not cut the heat-resistant vinyl tape (1) in this working step.</b></li> </ul> <ul style="list-style-type: none"> <li>(1) Corrugated tube</li> <li>(2) Heat-resistant vinyl tape</li> </ul>
	<p>5-4. Wrap the corrugated tube (2) once with the heat-resistant vinyl tape (1).</p> <p>■ <b>IMPORTANT</b></p> <ul style="list-style-type: none"> <li>● <b>Do not cut the heat-resistant vinyl tape (1) in this working step.</b></li> </ul> <ul style="list-style-type: none"> <li>(1) Heat-resistant vinyl tape</li> <li>(2) Corrugated tube</li> </ul>



5-5. Wrap the cover (2) over once with the heat-resistant vinyl tape (1).

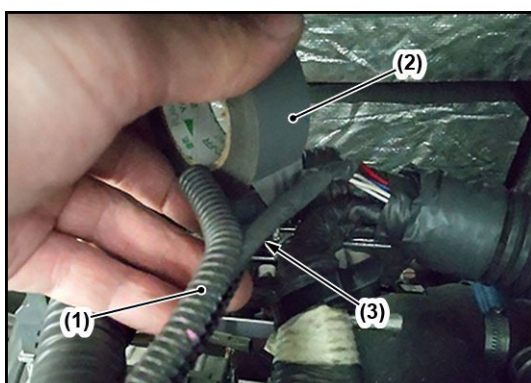
5-6. Cut the heat-resistant vinyl tape (1).

- (1) Heat-resistant vinyl tape
- (2) Cover



6. Fix the corrugated tubes (1) with the heat-resistant vinyl tape (2) in the following steps from 6-1 to 6-5.

- (1) Corrugated tube
- (2) Heat-resistant vinyl tape



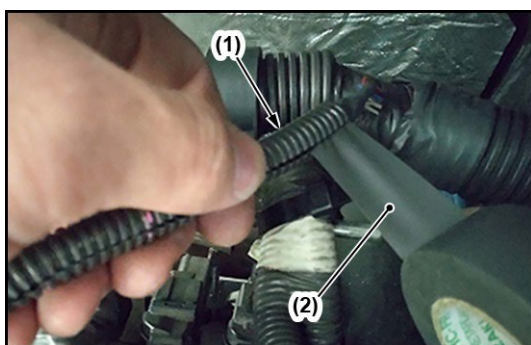
6-1. Remove the corrugated tube (1) partially as shown.

6-2. Wrap the insulation (3) once with the heat-resistant vinyl tape (2).

■ **IMPORTANT**

- **Do not cut the heat-resistant vinyl tape (2) in this working step.**

- (1) Corrugated tube
- (2) Heat-resistant vinyl tape
- (3) Insulation



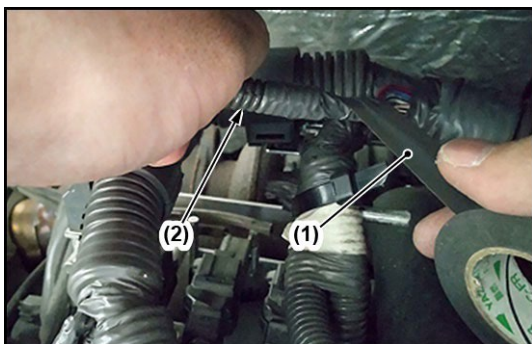
6-3. Reinstall the corrugated tube (1) and draw out the heat-resistant vinyl tape (2) from the slit of the corrugated tube (1).

■ **IMPORTANT**

- **Do not cut the heat-resistant vinyl tape (2) in this working step.**

- (1) Corrugated tube
- (2) Heat-resistant vinyl tape

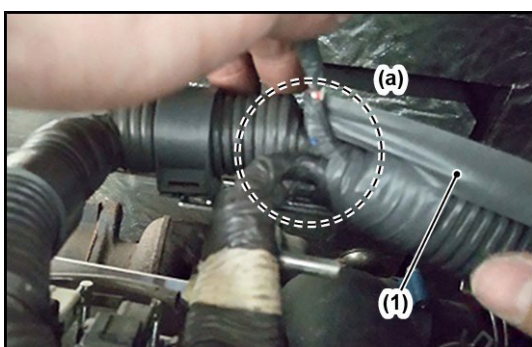




6-4. Wrap the corrugated tube (2) over once with the heat-resistant vinyl tape (1).

6-5. Cut the heat-resistant vinyl tape (1).

- (1) Heat-resistant vinyl tape
- (2) Corrugated tube

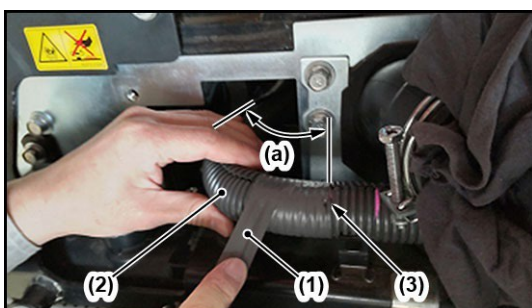
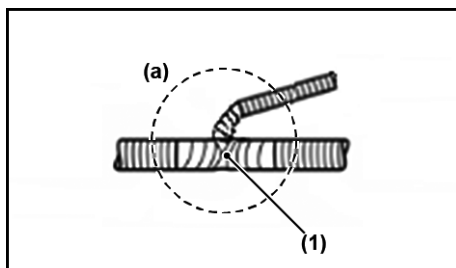


7. Wrap the branch area (a) with the heat-resistant vinyl tape (1) as shown.

#### ■ IMPORTANT

- Wrap the wires thickly with the heat-resistant vinyl tape (1) while stretching the heat-resistant vinyl tape (1) until the wires are no longer visible.
- Make sure that the wires are not visible even when the wire harness is bent.

- (1) Heat-resistant vinyl tape
- (a) Branch area



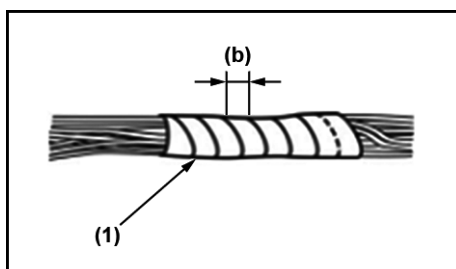
8. Wrap the corrugated tube (2) with the heat-resistant vinyl tape (1) as shown.

#### ■ NOTE

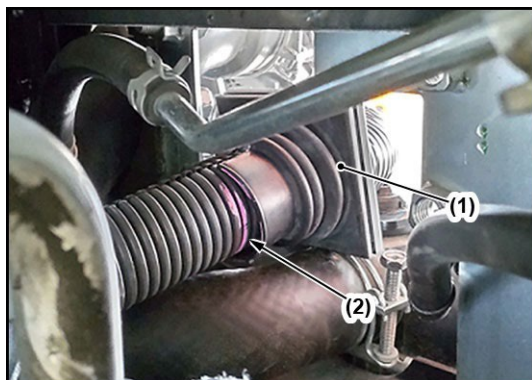
- The reference point of the length (a) is the mark (3).

(a) Length	145 mm
	5.71 inch
(b) Overlap	Less than 9.5 mm (tape width / 2)
	Less than 0.37 inch (tape width / 2)

- (1) Heat-resistant vinyl tape
- (2) Corrugated tube
- (3) Mark





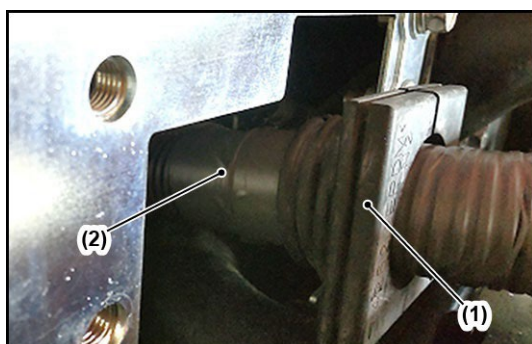
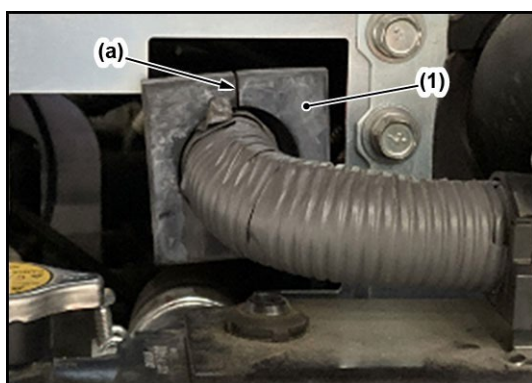


9. Install the grommet (1) in the original position referring to the mark (2).

■ **IMPORTANT**

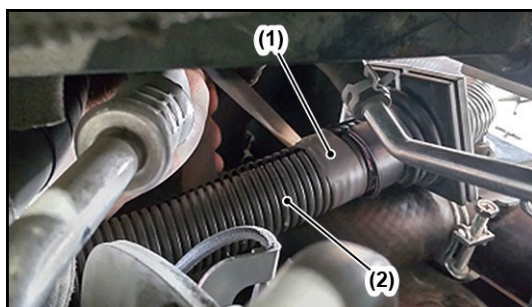
- **Slit (a) of the grommet (1) should be upward.**

- (1) Grommet
- (2) Mark
- (a) Slit



10. Fix the grommet (1) with the heat-resistant vinyl tape (2) in the following procedure from 10-1 to 10-3.

- (1) Grommet
- (2) Heat-resistant vinyl tape

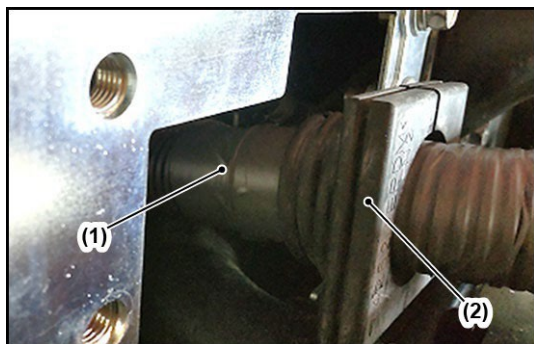


10-1. Wrap the corrugated tube (2) once with the heat-resistant vinyl tape (1).

■ **IMPORTANT**

- **Do not cut the heat-resistant vinyl tape (1) in this working step.**

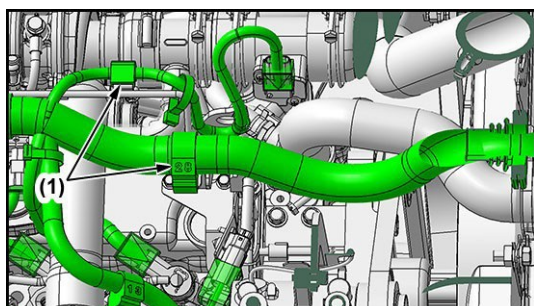
- (1) Heat-resistant vinyl tape
- (2) Corrugated tube



10-2. Wrap the grommet (2) over once with the heat-resistant vinyl tape (1).

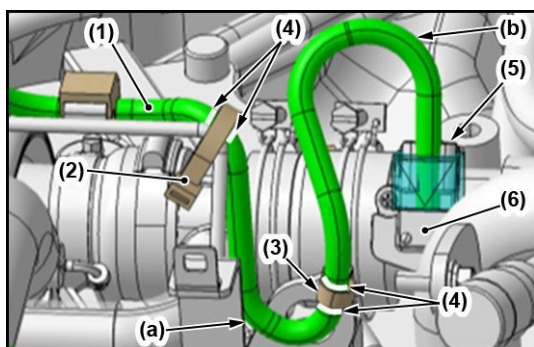
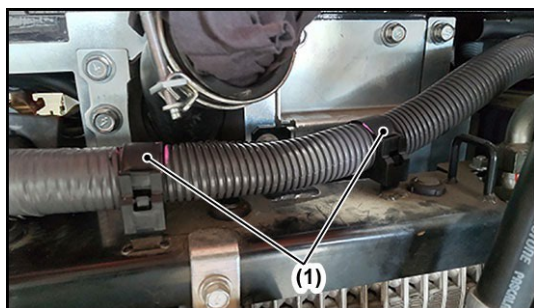
10-3. Cut the heat-resistant vinyl tape (1).

- (1) Heat-resistant vinyl tape
- (2) Grommet



11. Install the clamps in the original positions referring to the marks.

- (1) Clamp x4



12. Route and fix the engine wire harness (1) with the clamps (2), (3) as shown referring to the marks (4).

#### ■ IMPORTANT

- Route the wire harness (1) between clamp (2) and clamp (3) as shown (convex down).
- Route the wire harness (1) between clamp (3) and air flow sensor connector (5) as shown (convex up).
- The band of the clamp (3) should be horizontal.

13. Connect the air flow sensor connector (5) to the air flow sensor (6).

- (1) Engine wire harness
- (2) Clamp
- (3) Clamp
- (4) Mark x4
- (5) Air flow sensor connector
- (6) Air flow sensor
- (a) Convex down
- (b) Convex up

**6. Reassembling**

	1. Reassemble the plates and the air cleaner in the reverse order of the step "1. Preparation".
	2. Start the engine and make sure that there is no error code anymore.