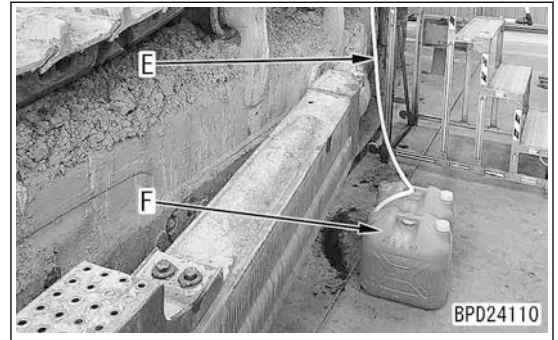
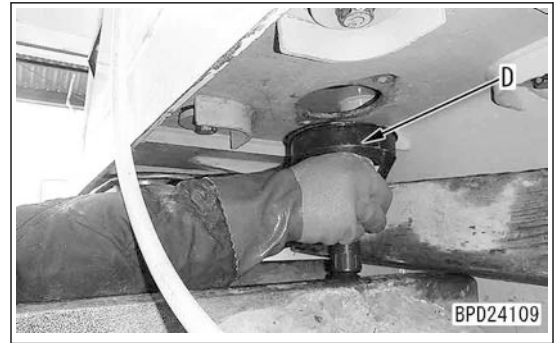


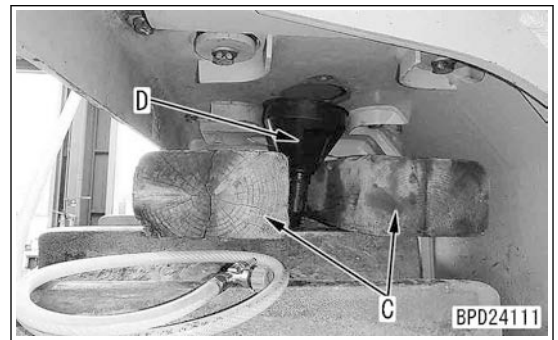
20. After removing drain plug (20), draining amount increases or decreases in approximately 10 seconds. Change tool A to tool D at the timing of decreasing.

REMARK

Insert tip of tool D into tool E that is placed on the ground.



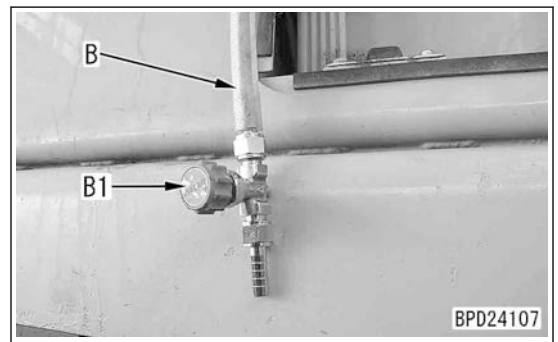
21. Pinch tool D by using tool C to fix it.




22. Fully open valve B1 of tool B.
 23. When tool F is nearly fully filled, securely close valve B1 of tool B.
 24. After closing valve B1, draining amount increases or decreases in approximately 10 seconds. Change tool F to tool E at the timing of decreasing.

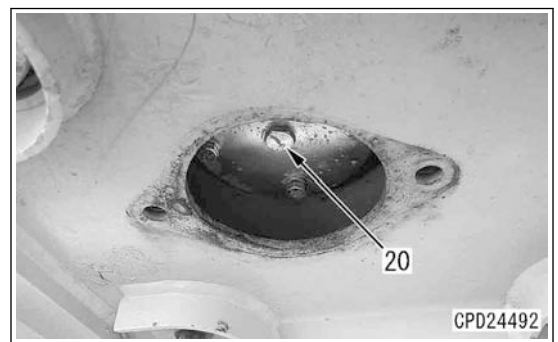
REMARK

The guide until draining is weakened is approximately 0.9 l.



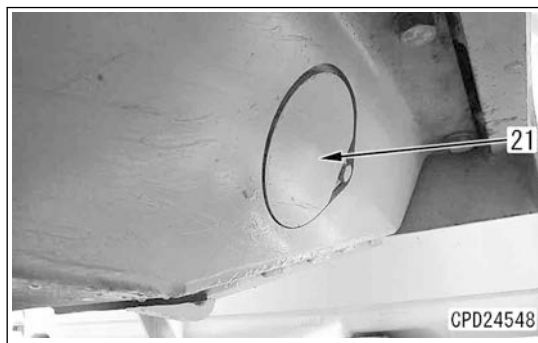
25. When the AdBlue/DEF tank becomes empty, install drain plug (20) securely.

 Drain plug (20):
 9.8 to 12.7 Nm {1.0 to 1.3 kgm}



Draining coolant

26. Remove cover (21).

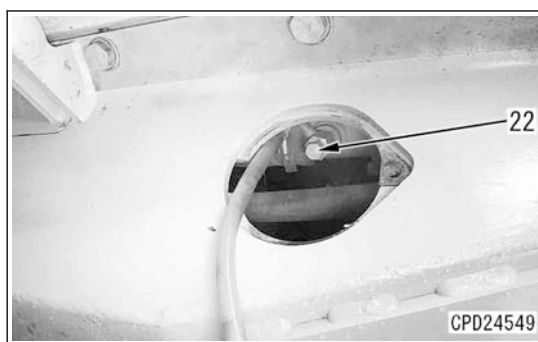


27. Loosen drain plug (22), and drain the coolant.

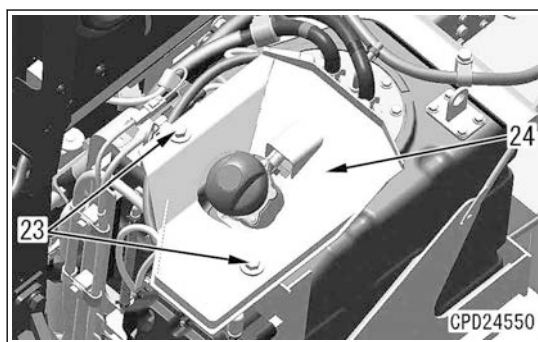


Radiator:

103.5 l

**Hose, connector**

28. Remove bolts (23) (2 pieces), and remove cover (24).



29. Disconnect connector UHV2 (25).

30. Remove clamp (26).

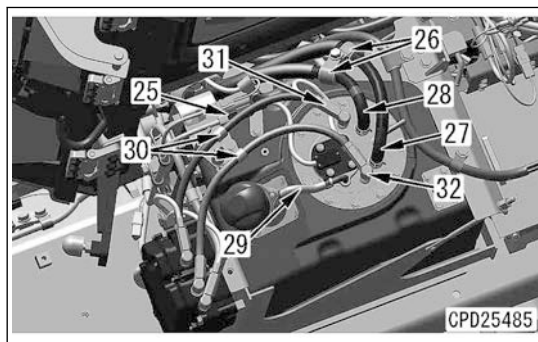
31. Disconnect coolant outlet hose (27).

32. Disconnect coolant inlet port hose (28).

33. Remove hose (29).

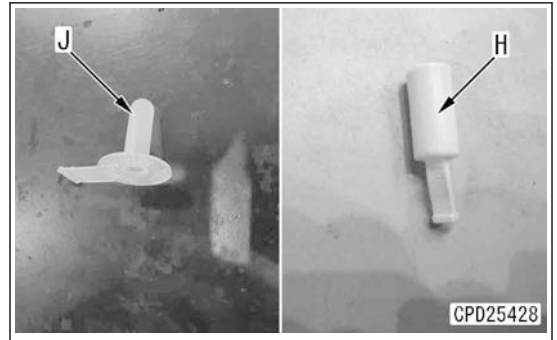
34. Remove clamp (30).

35. Before removing AdBlue/DEF hoses (31) and (32), wash their connections with clean city water to remove the sticking materials.

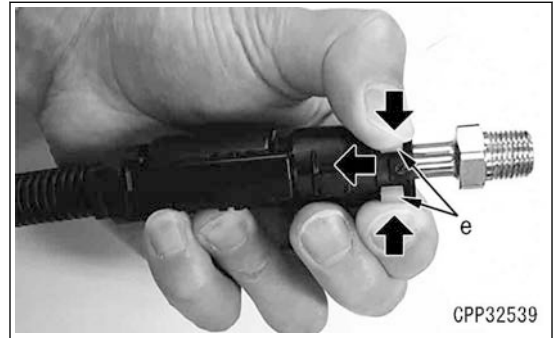
**NOTICE**

- When handling AdBlue/DEF, be sure to use tool G.

- After disconnecting the AdBlue/DEF hose, install tool H to the hose side and install tool J to the nipple side to prevent leakage.

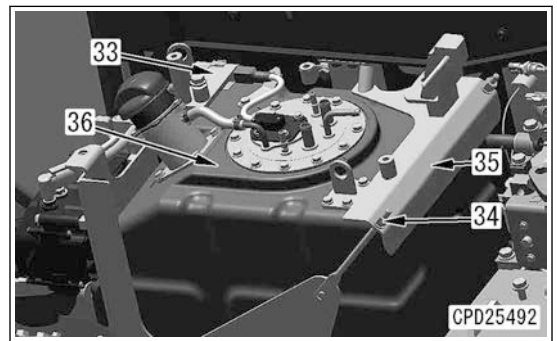


36. Pinch protruding portions (e) of clip with your fingers, and the lock is released. While they are kept pinched, pull out AdBlue/DEF hoses (31) and (32) in the opposite direction to the AdBlue/DEF tank side, and remove it.



AdBlue/DEF tank assembly

37. Remove bracket (33).
38. Remove nut (34), and remove holder (35).
39. Remove AdBlue/DEF tank assembly (36).

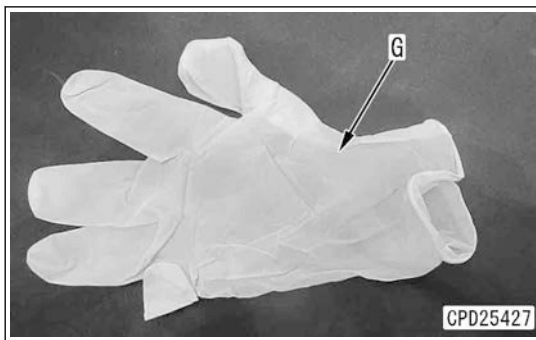


METHOD FOR INSTALLING AdBlue/DEF TANK ASSEMBLY

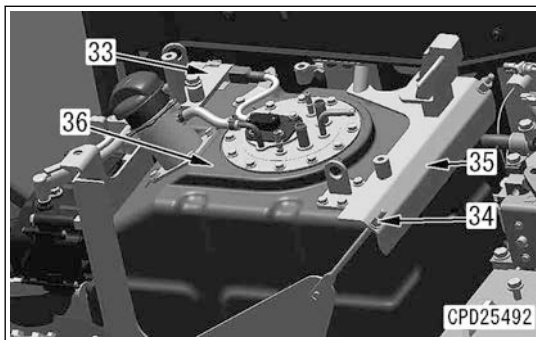
AdBlue/DEF tank assembly

NOTICE

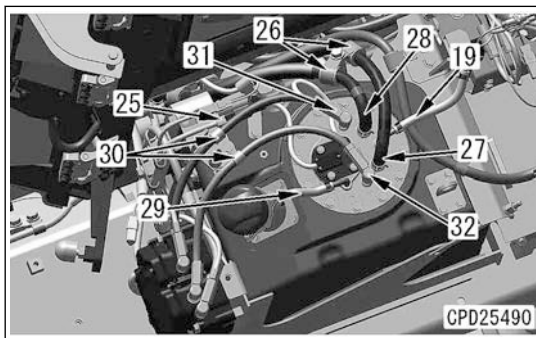
When handling AdBlue/DEF, be sure to use tool G.



1. Install AdBlue/DEF tank assembly (36).
2. Install holder (35) with nut (34).
3. Install bracket (33).

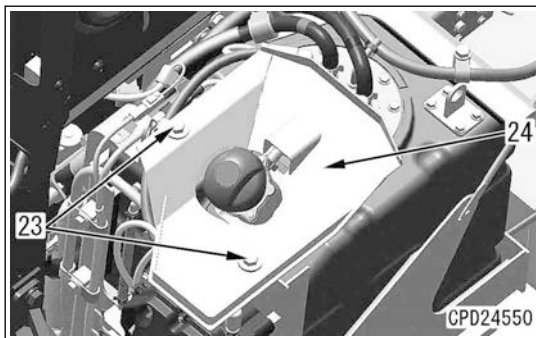
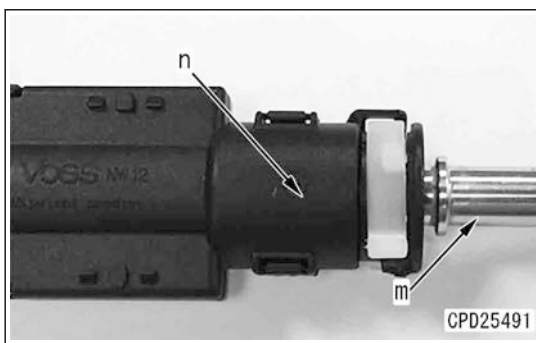
**Hose, connector**

4. Wash the connection of AdBlue/DEF hoses (31), (32), and pin (m) with clean city water to remove the sticking materials. Check the AdBlue/DEF hoses and pin (m) are not damaged.
5. Insert connectors (n) of AdBlue/DEF hoses (31) and (32) into pin (m) on the injector side until click sound is heard to install them.

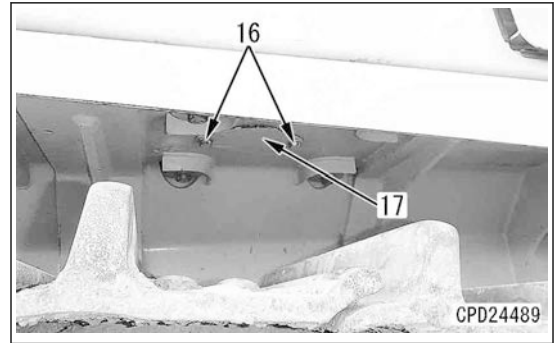
**REMARK**

When it is inserted until the convex part of pin (m) passes the convex part inside the clip, it can be locked by the clip.

6. Install clamp (30).
7. Install hose (29).
8. Install coolant inlet port hose (28).
9. Install coolant outlet hose (27).
10. Install clamp (26).
11. Install breather hose (19).
12. Install connector UHV2 (25).
13. Install cover (24) with bolts (23) (2 pieces).



14. Install cover (17) with bolts (16) (2 pieces).

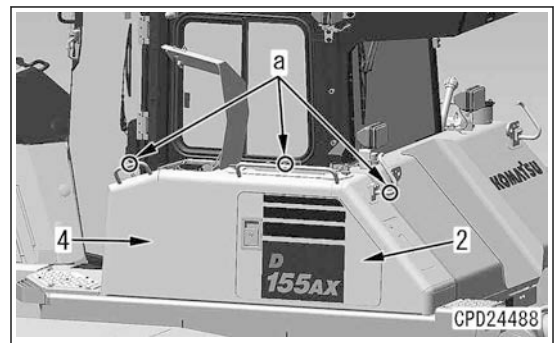


Battery cover

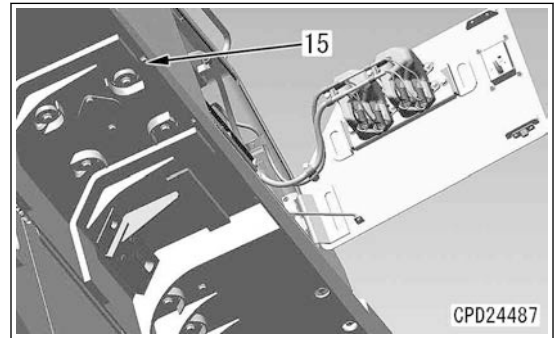
15. Close cover (2), and install it to parts (a) (3 places) of battery cover (4) by using the nylon sling.

REMARK

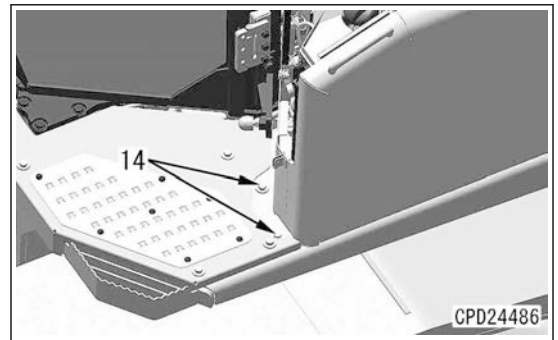
Place it on the fender, and then slightly open cover (2) to check the position.



16. Install bolts (15) (6 pieces).

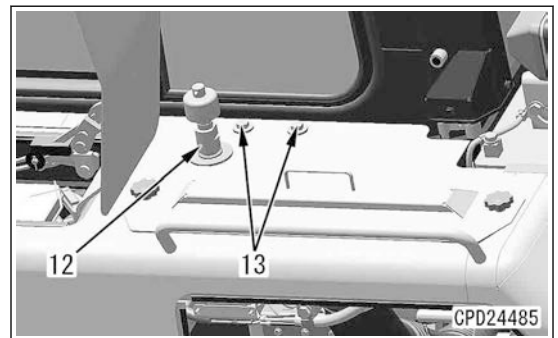


17. Install bolts (14) (2 pieces).



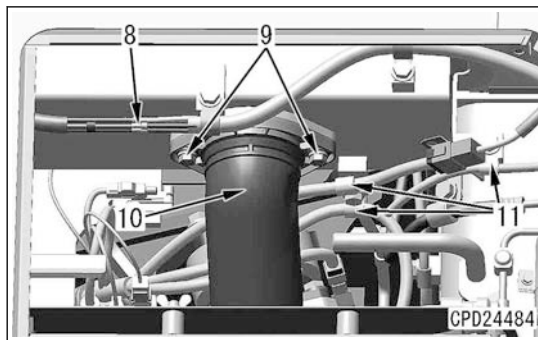
18. Install bolts (13) (2 pieces).

19. Install breather (12).

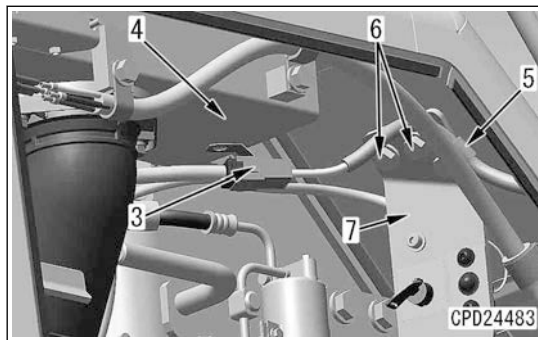


REMOVE AND INSTALL AdBlue/DEF TANK ASSEMBLY

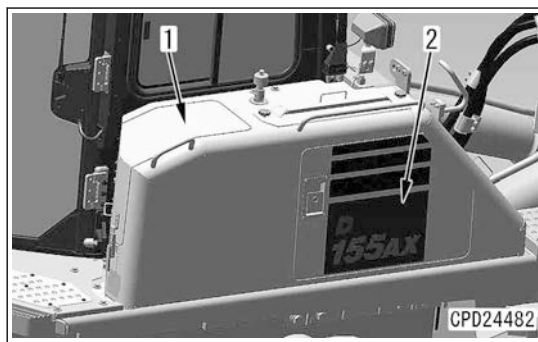
20. Install clamp (11).
21. Install tube (10) with bolts (9) (2 pieces).
22. Connect washer hose (8).



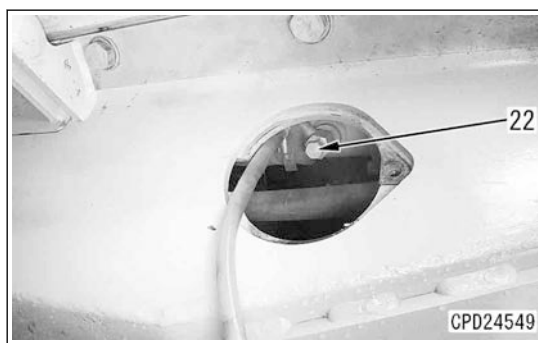
23. Install bracket (7) with bolts (6) (2 pieces).
24. Install connector (3) to battery cover (4).
25. Install clamp (5).

**Refilling with AdBlue/DEF**

26. Refill with AdBlue/DEF to the specified level through the filler port of the AdBlue/DEF tank.
27. Close covers (1) and (2).

**Refilling with coolant**

28. Tighten drain plug (22).

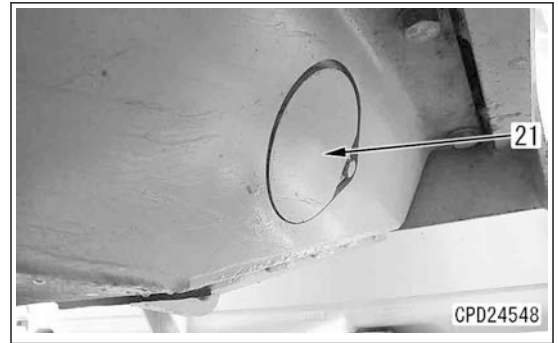


29. Install cover (21).
30. Refill the radiator with coolant to the specified level through the coolant filler port. Run the engine to circulate the coolant. Then check the coolant level again.

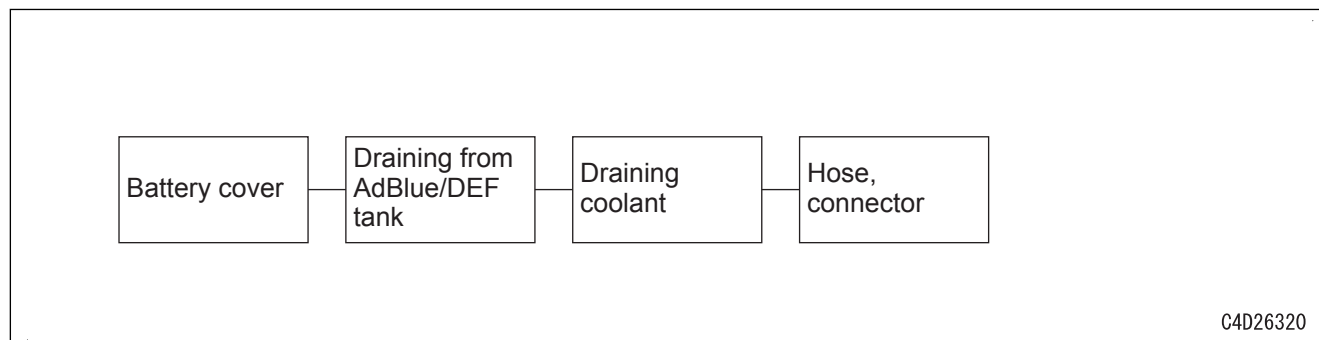


Radiator:

103.5 ℓ



REMOVE AND INSTALL AdBlue/DEF TANK SENSOR FLANGE ASSEMBLY



Tools for removal and installation of AdBlue/DEF tank sensor flange assembly

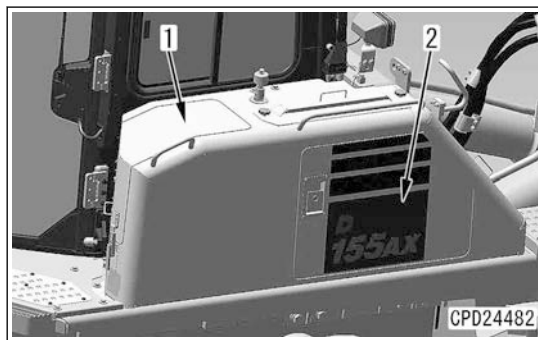
Symbol	Part No.	Part name	Necessity	Qty	New/Redesign	Sketch	Remarks
A	-	Oil pan	■	1	N		Draining of AdBlue/DEF
B	-	Remote breather hose	■	1			
	-	Valve	■	1			
	-	Hose	■	1			
C	-	Wooden block	■	1			
D	-	Funnel	■	1			
E	-	Hose	■	1			
F	-	Polyethylene container	■	1			
G	-	Vinyl gloves	■	1			Disconnection and connection of AdBlue/DEF hose
H	6540-71-2720	AdBlue/DEF pump cap kit	■	1			
J	600-919-5030	AdBlue/DEF hose plug (3/8 inch)	■	1			

- ⚠ Park the machine on a level ground, and set parking brake lever to the LOCK position.
- ⚠ Lower the work equipment to the ground, and set the work equipment lock lever to LOCK position.
- ⚠ Turn the starting switch to OFF position to stop the engine.
- ⚠ Turn the battery disconnect switch to OFF position, and remove the key. (For details, see TESTING AND ADJUSTING, “HANDLING BATTERY DISCONNECT SWITCH”.)

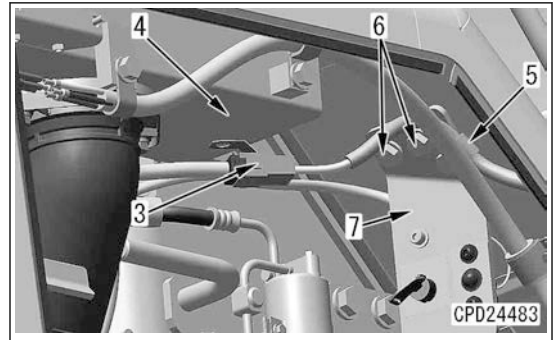
METHOD FOR REMOVING AdBlue/DEF TANK SENSOR FLANGE ASSEMBLY

Battery cover

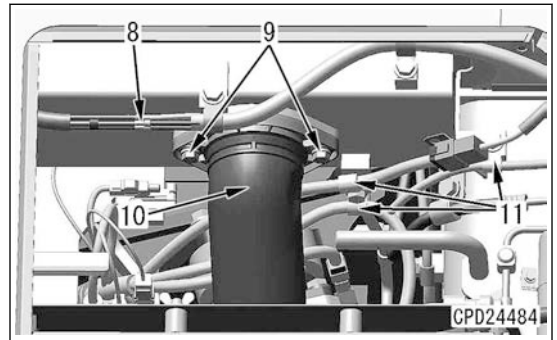
1. Open covers (1) and (2).



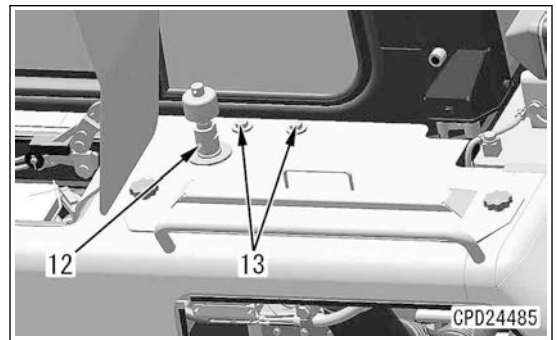
2. Remove connector (3) from battery cover (4).
3. Remove clamp (5).
4. Remove bolts (6) (2 pieces) and move bracket (7) aside so that it does not hinder the work.



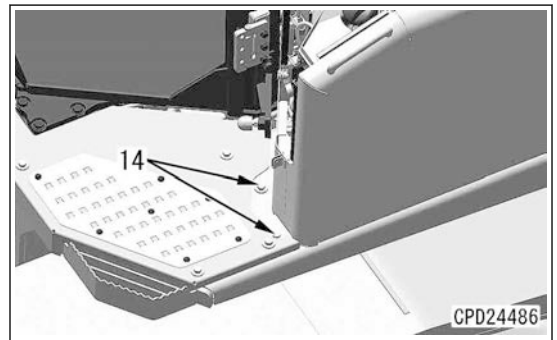
5. Disconnect washer hose (8).
6. Remove bolts (9) (2 pieces), and disconnect tube (10).
7. Remove clamp (11).



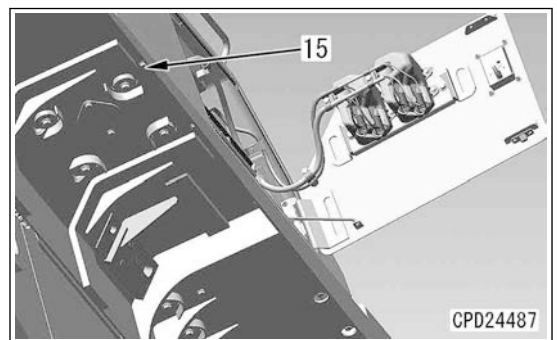
8. Remove breather (12).
9. Remove bolts (13) (2 pieces).



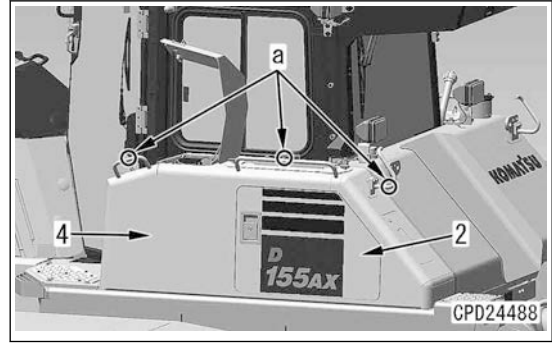
10. Remove bolts (14) (2 pieces).



11. Remove bolts (15) (6 pieces).

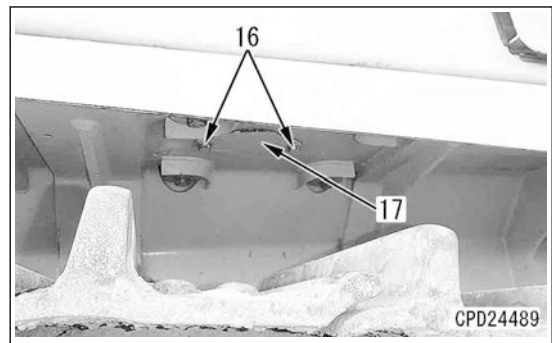


12. Close cover (2), and remove it from parts (a) (3 places) of battery cover (4) by using the nylon sling.



Draining from AdBlue/DEF tank

13. Remove bolts (16) (2 pieces), and remove cover (17).



14. Check that cap (18) is securely closed.



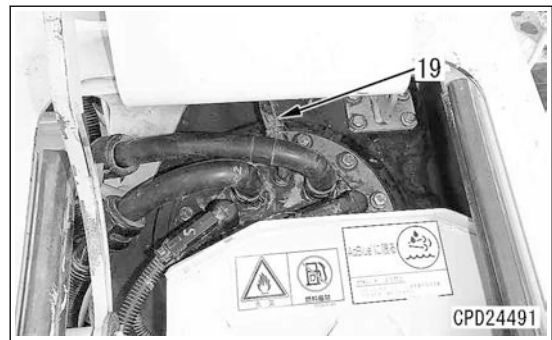
15. Place tool C on the track shoe for future used as described in the subsequent steps.
16. Prepare tool A under AdBlue/DEF tank.

REMARK

Toxic gas or corroded material may be generated by a chemical reaction if an iron or aluminum container is used to catch the draining AdBlue/DEF from the machine. Use a container made of resin (PP, PE) or stainless steel to catch the draining AdBlue/DEF.

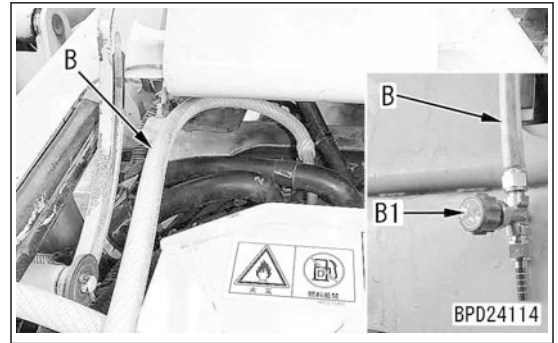


17. Disconnect breather hose (19), and connect tool B.




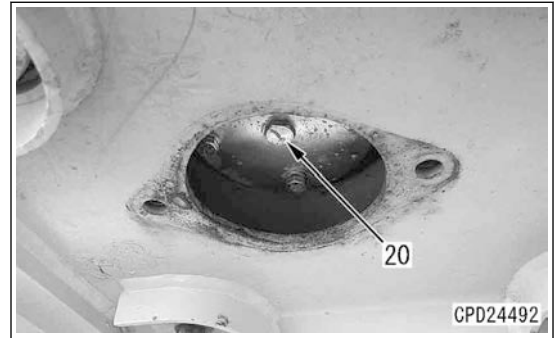
REMARK

When connecting tool B, be sure to close valve B1 of tool B.



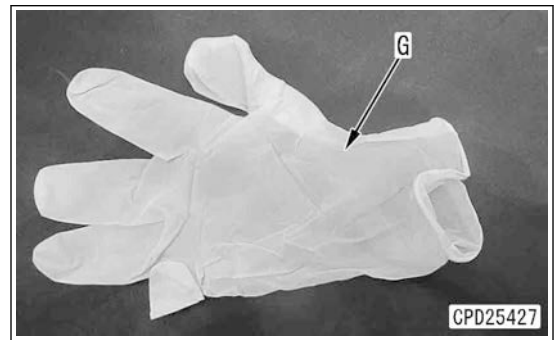
18. Loosen drain plug (20) 6 turns, and drain AdBlue/DEF into tool A.

 AdBlue/DEF tank:
73 ℓ



NOTICE

When handling AdBlue/DEF, be sure to use tool G.



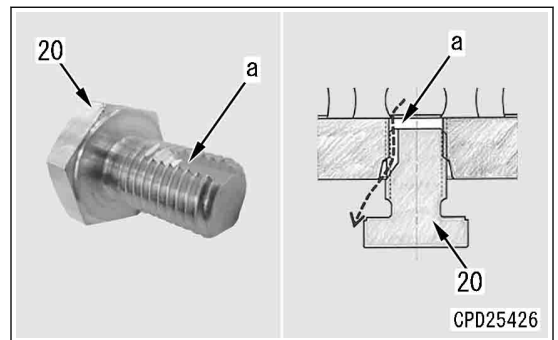
REMARK

There is a slit (a) at threaded part of drain plug (20) so that AdBlue/DEF is not drained too much and splashed.

19. After the draining rate decreases in 3 to 4 minutes, remove drain plug (20).

REMARK

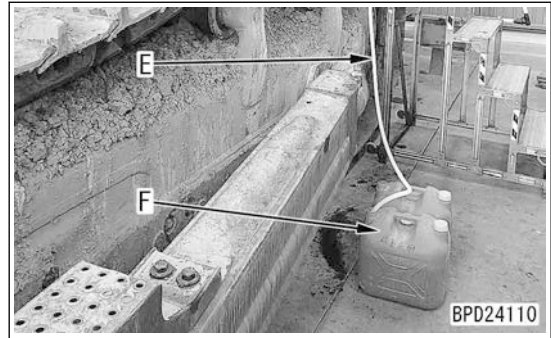
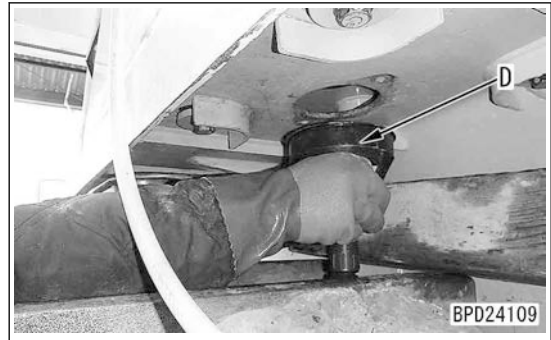
The guide until draining is weakened is approximately 1.8 ℓ.



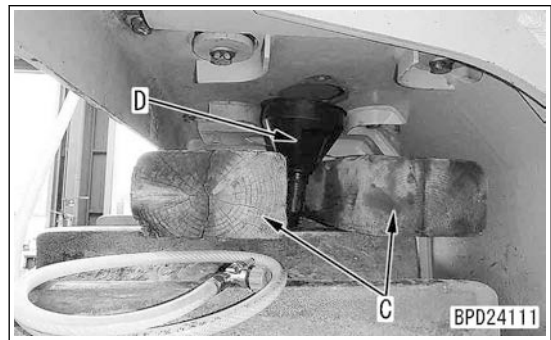
20. After removing drain plug (20), draining amount increases or decreases in approximately 10 seconds. Change tool A to tool D at the timing of decreasing.

REMARK

Insert tip of tool D into tool E that is placed on the ground.



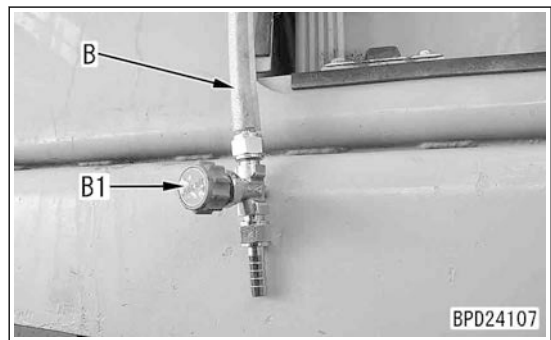
21. Pinch tool D by using tool C to fix it.




22. Fully open valve B1 of tool B.
 23. When tool F is nearly fully filled, securely close valve B1 of tool B.
 24. After closing valve B1, draining amount increases or decreases in approximately 10 seconds. Change tool F to tool E at the timing of decreasing.

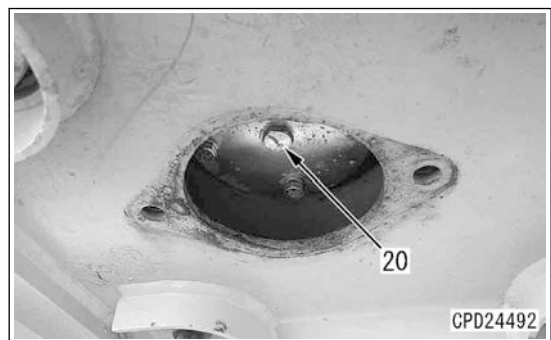
REMARK

The guide until draining is weakened is approximately 0.9 l.



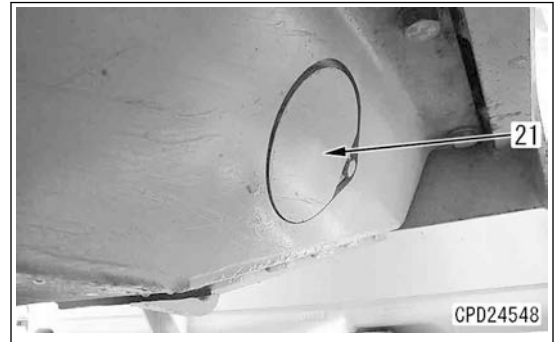
25. When the AdBlue/DEF tank becomes empty, install drain plug (20) securely.

 Drain plug (20):
 9.8 to 12.7 Nm {1.0 to 1.3 kgm}



Draining coolant

26. Remove cover (21).

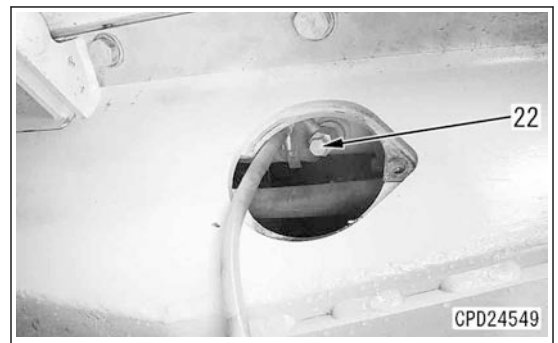


27. Loosen drain plug (22), and drain the coolant.

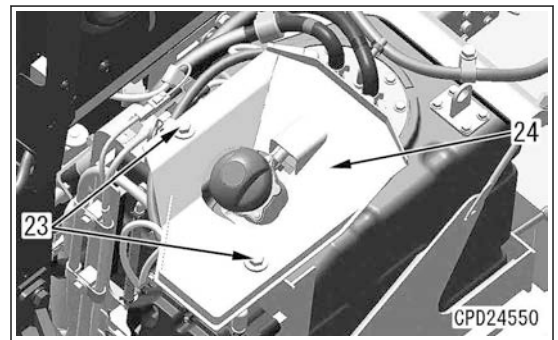


Radiator:

103.5 ℓ

**Hose, connector**

28. Remove bolts (23) (2 pieces), and remove cover (24).



29. Disconnect connector UHV2 (25).

30. Remove clamp (26).

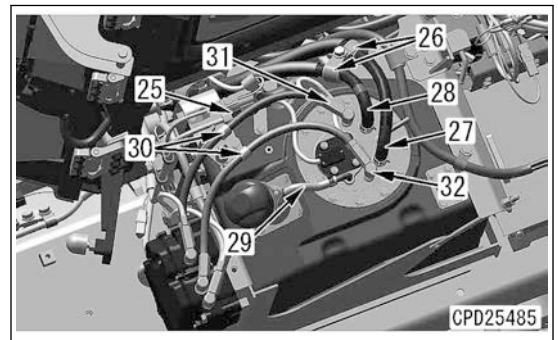
31. Disconnect coolant outlet hose (27).

32. Disconnect coolant inlet port hose (28).

33. Remove hose (29).

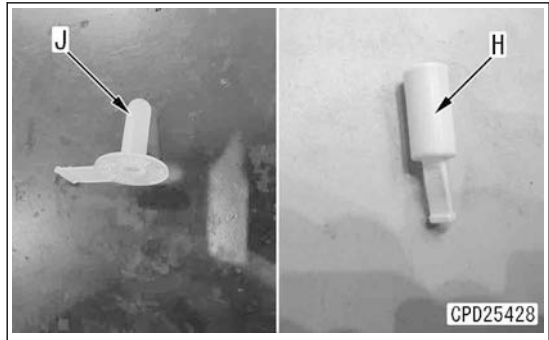
34. Remove clamp (30).

35. Before removing AdBlue/DEF hoses (31) and (32), wash their connections with clean city water to remove the sticking materials.

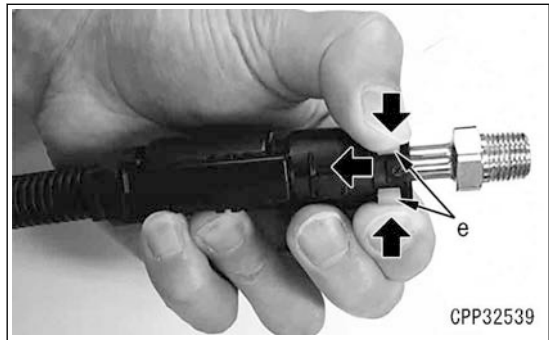
**NOTICE**

- When handling AdBlue/DEF, be sure to use tool G.

- After disconnecting the AdBlue/DEF hose, install tool H to the hose side and install tool J to the nipple side to prevent leakage.



36. Pinch protruding portions (e) of clip with your fingers, and the lock is released. While they are kept pinched, pull out AdBlue/DEF hoses (31) and (32) in the opposite direction to the AdBlue/DEF tank side, and remove it.

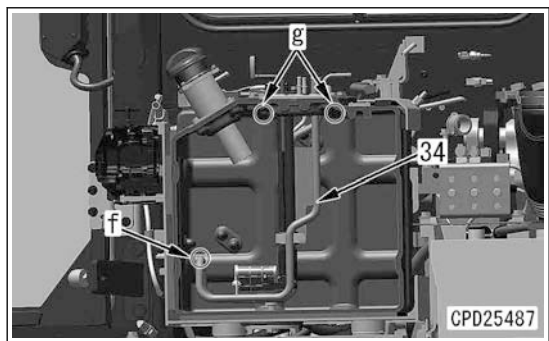
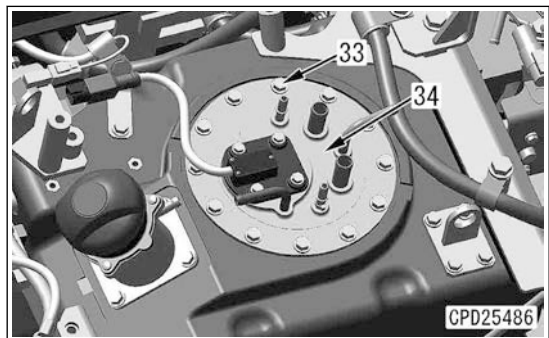


AdBlue/DEF tank sensor flange assembly

37. Remove bolts (33) (12 pieces), and remove AdBlue/DEF tank flange sensor assembly (34).

NOTICE

Pull out tip (f) of AdBlue/DEF tank sensor flange assembly (34) carefully not to interfere with the edge (g) of the tank.

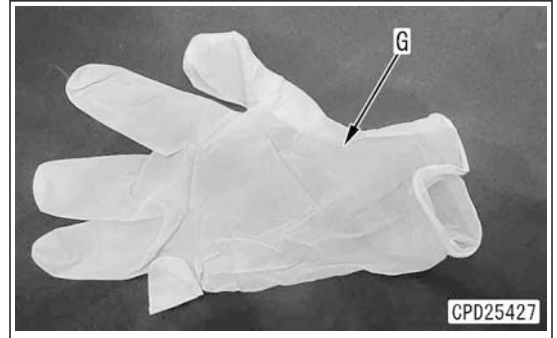


METHOD FOR INSTALLING AdBlue/DEF TANK SENSOR FLANGE ASSEMBLY

AdBlue/DEF tank sensor flange assembly

NOTICE

When handling AdBlue/DEF, be sure to use tool G.



1. Install O-rings (35) and (36), and install AdBlue/DEF tank sensor (34).


NOTICE

- Use brand new O-rings (35) and (36).
- Check if tip (h) of AdBlue/DEF tank sensor (34) is certainly inserted into tank groove bottom (j).

NOTICE

Install AdBlue/DEF tank sensor (34) according to the following procedures to prevent O-rings (35) and (36) from damaged, falling off, being caught, and twisted.


- 1) Apply distilled water for lubricating O-rings (35) and (36).

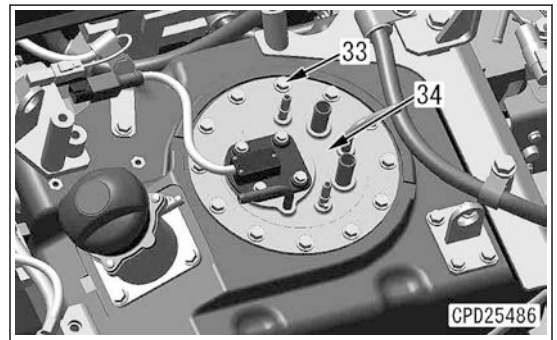
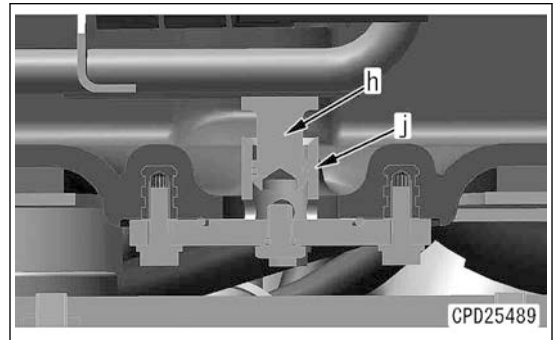
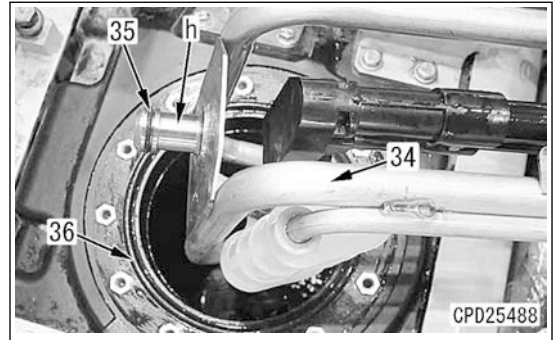
 O-rings (35) and (36):
Distilled water

REMARK

If any foreign material is mixed into AdBlue/DEF tank, it may be the cause of the failure. Do not use grease, lubricating oil or any lubricating substance.

2. Install AdBlue/DEF tank flange sensor assembly (34) with bolts (33) (12 pieces).

 Mounting bolt (33):
9.5 to 10.5 Nm {0.97 to 1.07 kgm}



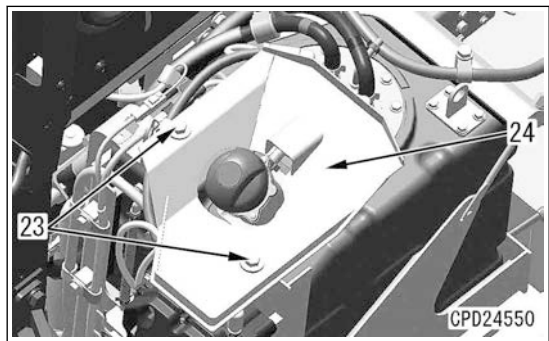
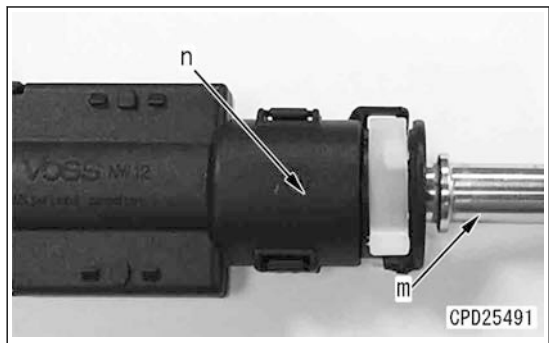
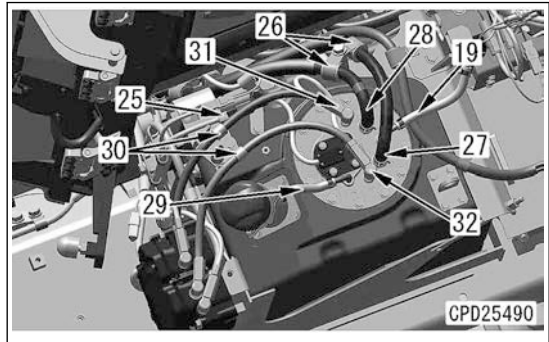
Hose, connector

3. Wash the connection of AdBlue/DEF hoses (31), (32), and pin (m) with clean city water to remove the sticking materials. Check the AdBlue/DEF hoses and pin (m) are not damaged.
4. Insert connectors (n) of AdBlue/DEF hoses (31) and (32) into pin (m) on the injector side until click sound is heard to install them.

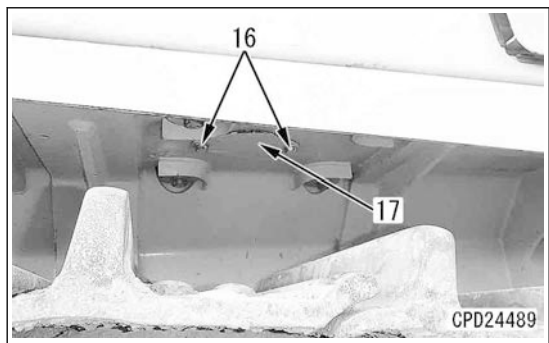
REMARK

When it is inserted until the convex part of pin (m) passes the convex part inside the clip, it can be locked by the clip.

5. Install clamp (30).
6. Install hose (29).
7. Install coolant inlet port hose (28).
8. Install coolant outlet hose (27).
9. Install clamp (26).
10. Install breather hose (19).
11. Install connector UHV2 (25).
12. Install cover (24) with bolts (23) (2 pieces).



13. Install cover (17) with bolts (16) (2 pieces).

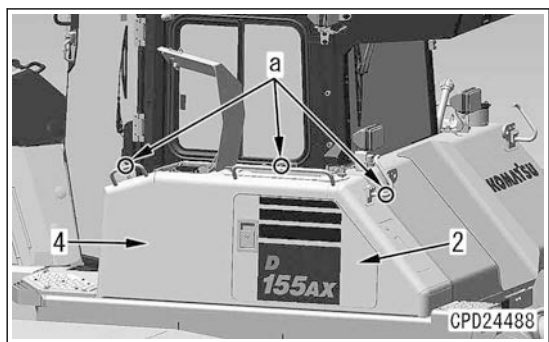


Battery cover

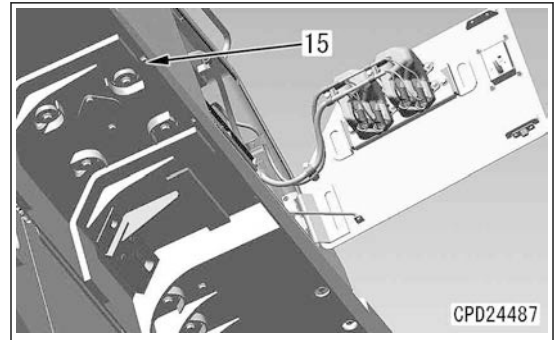
14. Close cover (2), and install it to parts (a) (3 places) of battery cover (4) by using the nylon sling.

REMARK

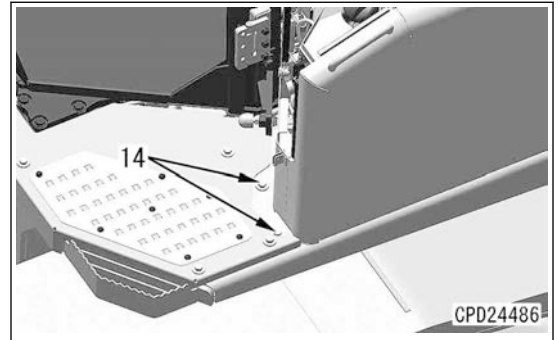
Place it on the fender, and then slightly open cover (2) to check the position.



15. Install bolts (15) (6 pieces).

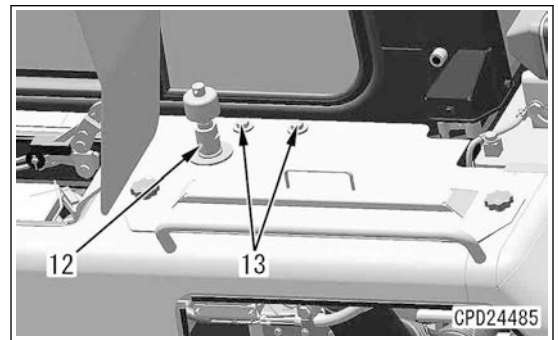


16. Install bolts (14) (2 pieces).



17. Install bolts (13) (2 pieces).

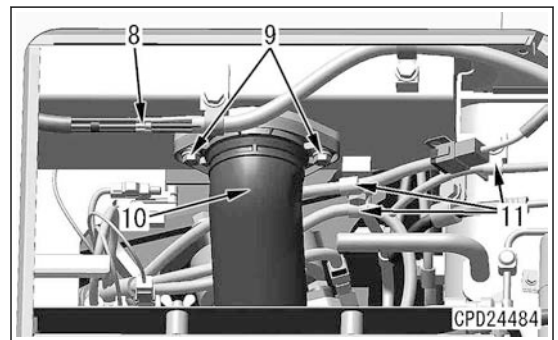
18. Install breather (12).



19. Install clamp (11).

20. Install tube (10) with bolts (9) (2 pieces).

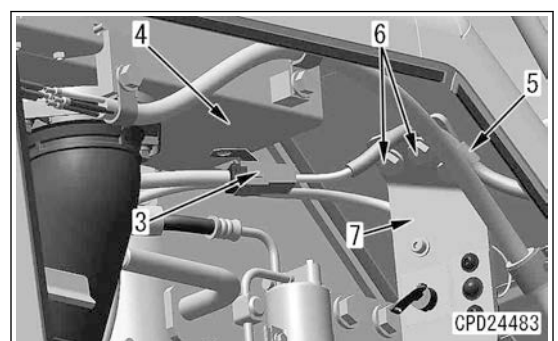
21. Connect washer hose (8).



22. Install bracket (7) with bolts (6) (2 pieces).

23. Install connector (3) to battery cover (4).

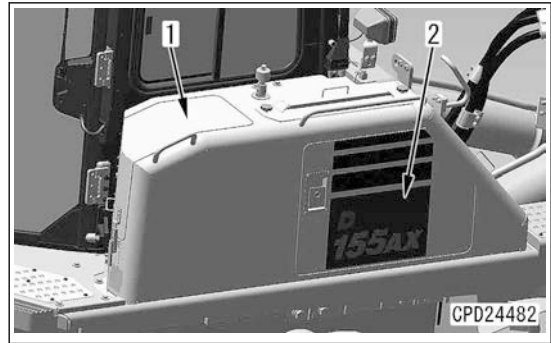
24. Install clamp (5).



Refilling with AdBlue/DEF

25. Refill with AdBlue/DEF to the specified level through the filler port of the AdBlue/DEF tank.

26. Close covers (1) and (2).



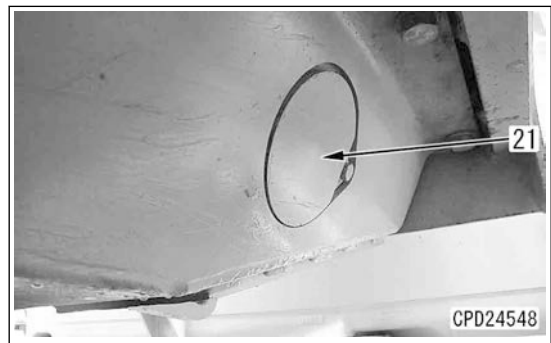
Refilling with coolant

27. Tighten drain plug (22).

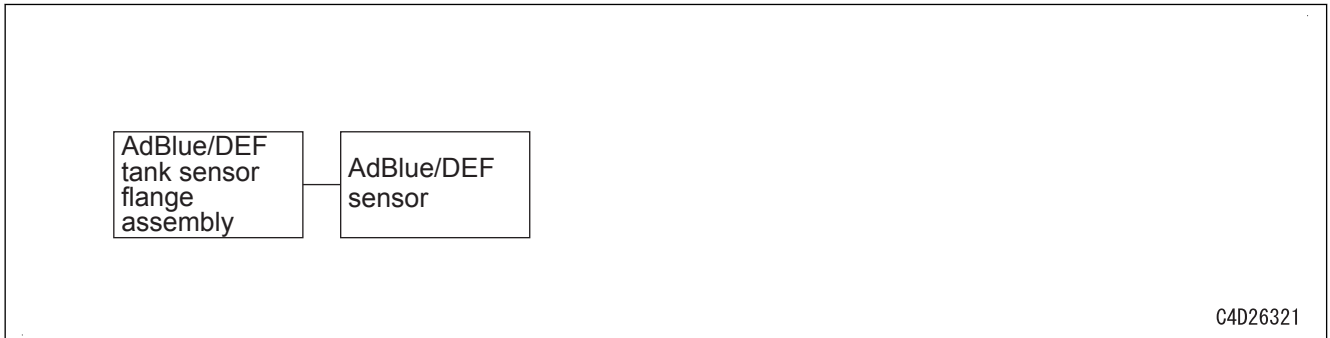


28. Install cover (21).
29. Refill the radiator with coolant to the specified level through the coolant filler port. Run the engine to circulate the coolant. Then check the coolant level again.

 Radiator:
103.5 ℓ



REMOVE AND INSTALL AdBlue/DEF TANK SENSOR



METHOD FOR REMOVING AdBlue/DEF TANK SENSOR

AdBlue/DEF tank sensor flange assembly

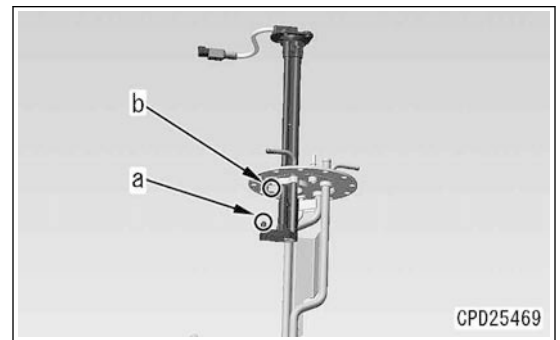
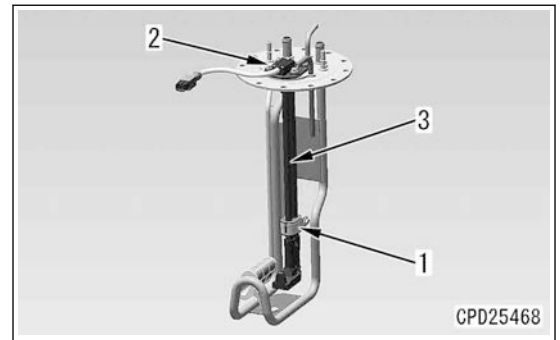
1. Remove AdBlue/DEF tank sensor flange assembly. For details, see "REMOVE AND INSTALL AdBlue/DEF TANK SENSOR FLANGE ASSEMBLY".

AdBlue/DEF sensor

2. Remove clamp (1).
3. Remove mounting bolts (2) (4 pieces), and remove AdBlue/DEF sensor (3).

NOTICE

Pull out tip (a) of AdBlue/DEF tank sensor (3) carefully not to interfere with edge (b) of AdBlue/DEF tank sensor flange assembly.




METHOD FOR INSTALLING AdBlue/DEF TANK SENSOR

AdBlue/DEF sensor

1. Install O-ring (4).

REMARK

- Use a brand new O-ring.
- If any foreign material is mixed into AdBlue/DEF tank, it may be the cause of the failure. Do not use grease, lubricating oil or any lubricating substance.
- Apply distilled water to O-ring (4) for lubricating.

 O-ring (4):
Distilled water

