

This service bulletin replaces bulletin 234-014 dated 5.2012.

Date	Group	No.	Release	Page
5.2013	234	014	02	1(20)

Fuel Tank Ventilation Filter VAH, VHD, VN, VT

FSB 234-014, Fuel Tank Ventilation Filter

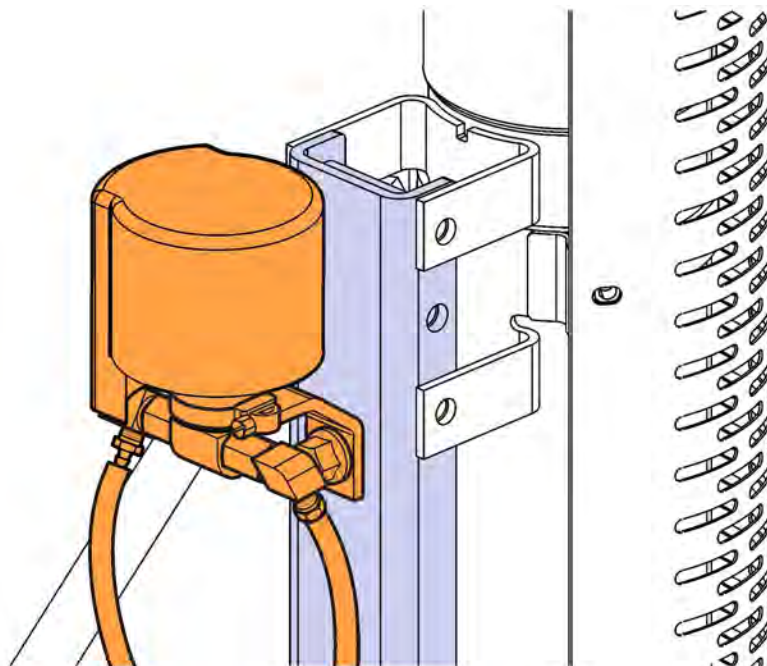
(May 2013)

VOLVO Trucks North America has introduced fuel tank ventilation filter kits for increased protection against fuel injector tip erosion. Two kits are available: kit number 21882780 designed for use in harsh, abrasive and dirty environments and kit number 85136403 designed as a simple but effective installation alternative that can be used in other environments.

Note: To ensure the effectiveness of the fuel tank ventilation filter system, the fuel tank ventilation filter must be changed at the same interval as the engine air filter.

Exhaust Stanchion-Mounted Ventilation Filter Kit Number 21882780

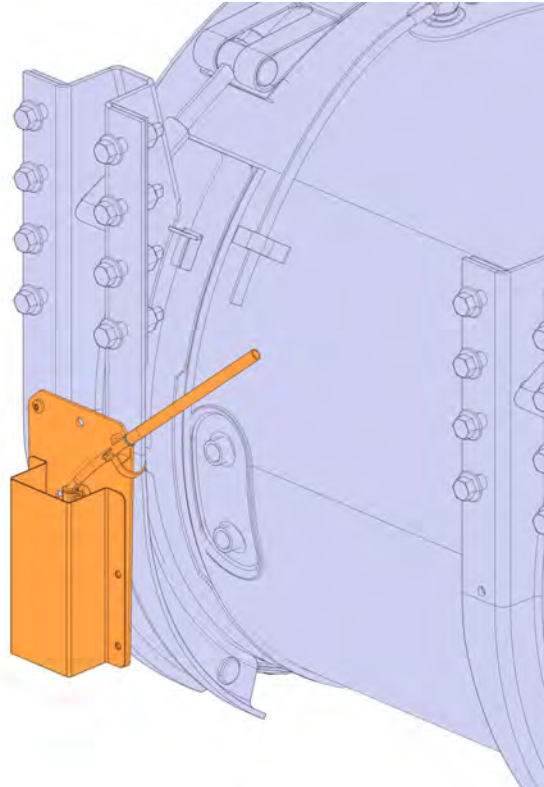
For this kit, the fuel tank ventilation filter is added to the fuel tank vent lines and mounted on the stanchion exhaust bracket at the right side of the truck. For both single or dual tank applications, the vent-lines will run from the tank vent fittings to the fuel tank ventilation filter. Stand-off brackets and cable ties will be used to secure the vent-lines. Rubber tubing over the vent-lines will be used to prevent chafing by the rear deck plate/frame.



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Fuel Tank Mounted Ventilation Filter Kit Number 85136403

For this kit, the fuel tank ventilation filter is mounted directly to the fuel tank J- bracket. This kit contains all parts needed for installation on the J-bracket of one tank, therefore two kits are required for dual tank applications.



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Required Parts

Exhaust Stanchion-Mounted Ventilation Filter Kit Number 21882780

Quantity	Part Number	Description
1	85132334	Rubber Hose, 4572 mm (180 in)
2	21776035	Hose Nipple
2	85103103	Elbow
2	982710	Reduction Nipple
1	984855	Flange Screw (M14)
1	20593078	Clamp (Mount with existing hardware)
1	984942	Clamp (Mount with existing hardware)
1	992328	Flange Nut (M14)
1	192489	Clamp (Mount with M10 Hardware)
1	1543499	Flange Nut (M10)
1	984753	Flange Screw (M10)
1	20455696	Manifold (Mount with M14 Hardware)
1	21882786	Air Cleaner
16	948211	Cable Tie
6	20885496	Retainer
16	980464	Cable Tie
1	991061	Plug
1	85132335	Tube, 5182 mm (204 in)
2	21807860	Label, Fuel Tank Filter

Note: Due to various tank and deck plate configurations, some routing and clipping hardware may not be used.

Fuel Tank Mounted Ventilation Filter Kit Number 85136403

Quantity	Part Number	Description
1	22038411	Bracket
1	22038417	Shield
2	994787	Six Point Socket Screw
2	994847	Washer
1	980464	Cable Tie
4	994785	Six Point Socket Screw
1	22017223	Adapter
1	85136401	Tube
1	21743197	Air Cleaner
2	990949	Flange Lock Nut
1	1578046	Retainer
2	984965	Retainer
1	21807860	Label, Fuel Tank Filter

Procedures

You must read and understand the precautions and guidelines in Service Information, Function Group 20, "Engine Safety Practices" before performing this procedure. If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.



DANGER

Do not attempt to repair or service this vehicle without having sufficient training, the correct service literature and the proper tools. Failure to follow this could make the vehicle unsafe and lead to serious personal injury or death.



CAUTION

Possible damage to electronic components. Turn the vehicle ignition switch OFF before disconnecting or connecting any electronic components. Failure to de-energize circuits may result in permanent damage to electronic components.

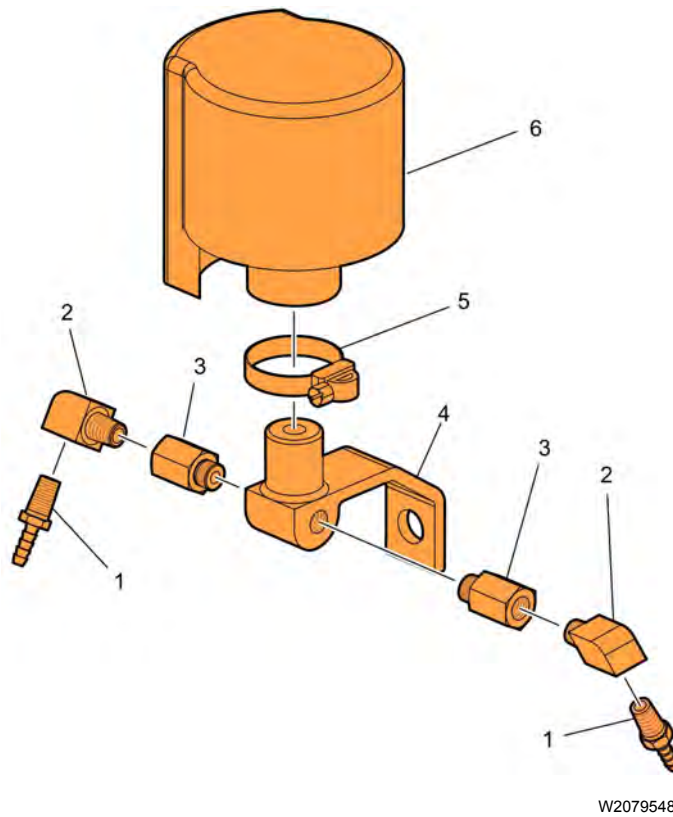
Note: Use standard torque values for all fasteners.

Exhaust Stanchion-Mounted Ventilation Filter Kit Number 21882780

- 1 Disconnect all cables from the negative (ground) battery terminals to prevent personal injury from electrical shock and prevent damage to electrical components.

- 2 Install filter on manifold, install fittings (with Thread Sealant) on manifold in the correct orientation, and tighten fittings.

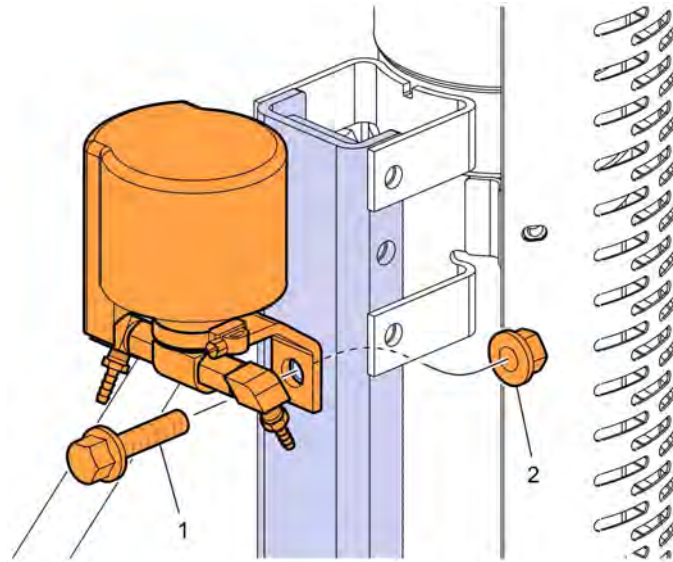
Note: Orient fittings in a downward direction to enable moisture to drain from vent-lines.



- | | |
|---------------------|-----------------------|
| 1. Hose Nipple | 4. Manifold |
| 2. Elbow | 5. Clamp |
| 3. Reduction Nipple | 6. Air Filter Housing |

- 3 Install manifold and filter on exhaust stack bracket and tighten fastener to 140 ± 25 Nm (103 ± 18 ft-lb).

Note: If fastener does not fit through hole in the exhaust stack support bracket shown below, drill out hole to accommodate the 14.0 mm (0.5 in) fastener.

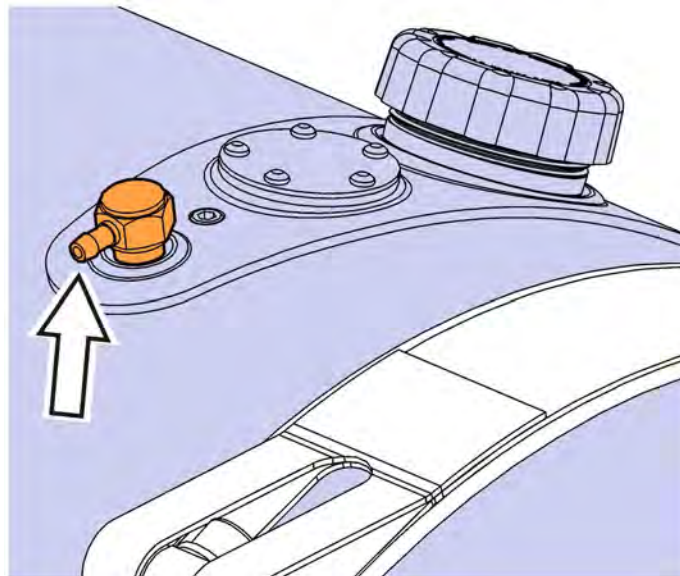


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1. Flange Screw (M14)

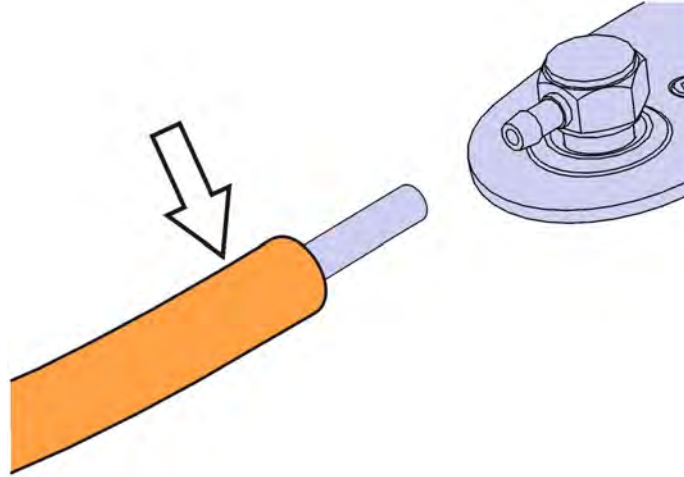
2. Flange Nut (M14)

- 4 Cut any cable ties securing wiring to line (Right Side). Remove existing vent-lines and discard (Right Side).
- 5 Install cable ties on wiring that was cut during removal of existing vent-line.
- 6 Reposition vent fittings on fuel tank as shown in figure below.



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- 7 Install protective rubber tubing over vent tubing in areas where chafing may occur.



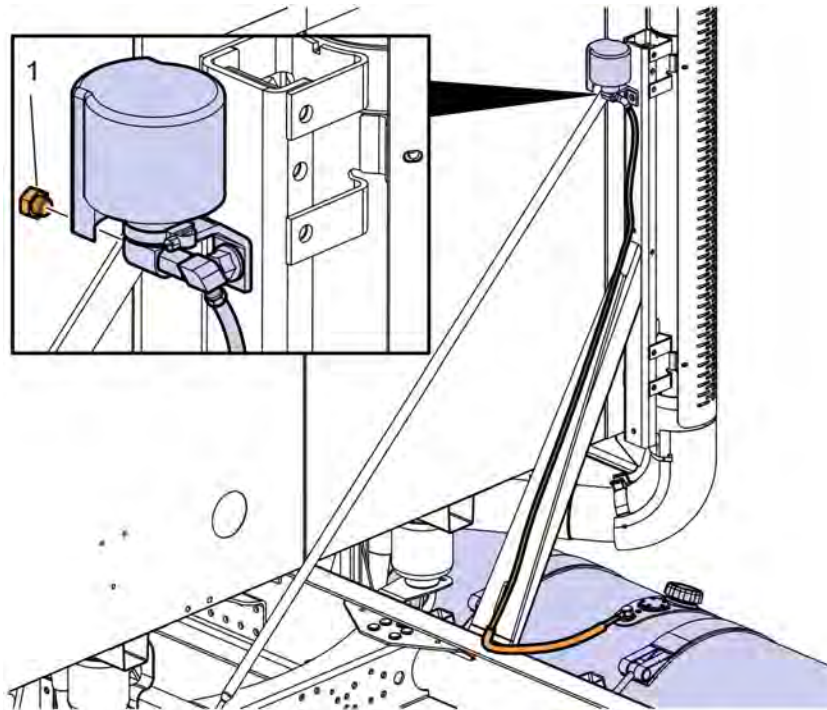
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- 8 Route new vent-line from fuel tank to filter (Right Side), and cut to length.

Note: Vent-lines must be routed without loops. Loops in the vent-lines will trap moisture and contaminate the fuel.

- 9 Install line on filter manifold (Right Side).

Note: Install plug part number 991061 in the open port of the manifold for single tank applications as shown in the figure below.



W2079550

1. Plug

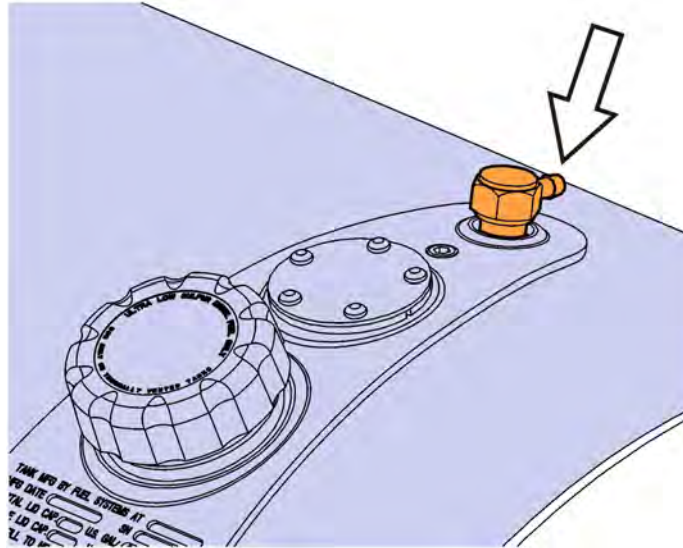
- 10 Use the appropriate cable ties and clamps to secure and prevent chafing or damage to the vent line.

Note: For single tank configurations, skip to step 18. For dual tank configurations, continue onto step 11.

- 11 Cut any cable ties securing wiring to line (Left Side). Remove existing vent-lines and discard (Left Side).

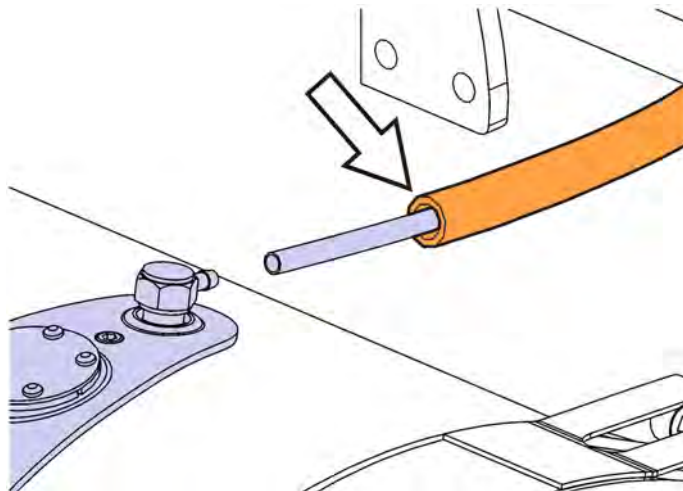
- 12 Install cable ties on wiring that was cut during removal of existing vent-line.

13 Reposition vent fittings on fuel tank as shown in figure below.



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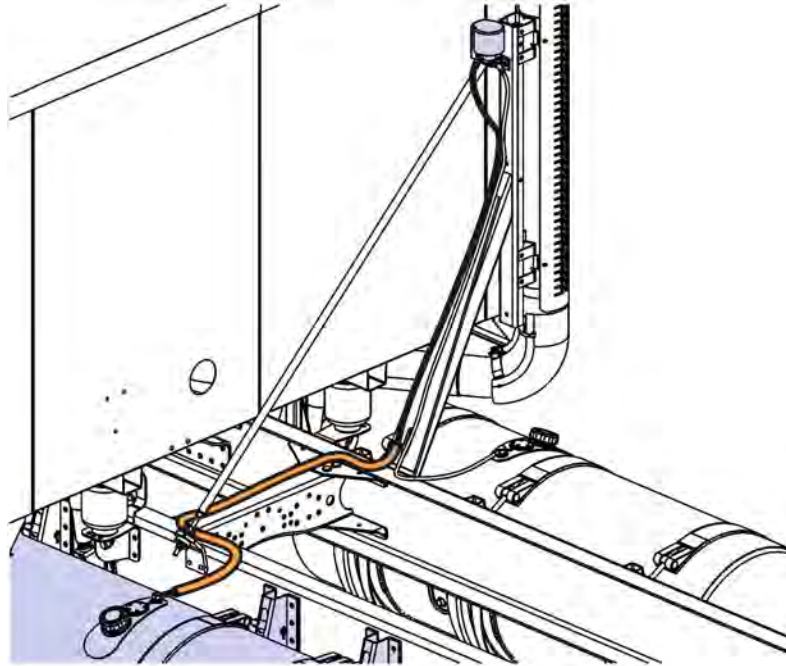
14 Install protective rubber tubing over vent tubing in areas where chafing may occur.



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15 Route new vent-line from the fuel tank, under the deck plate, and to the filter (Left Side).

16 Install vent-line on filter manifold (Left Side).

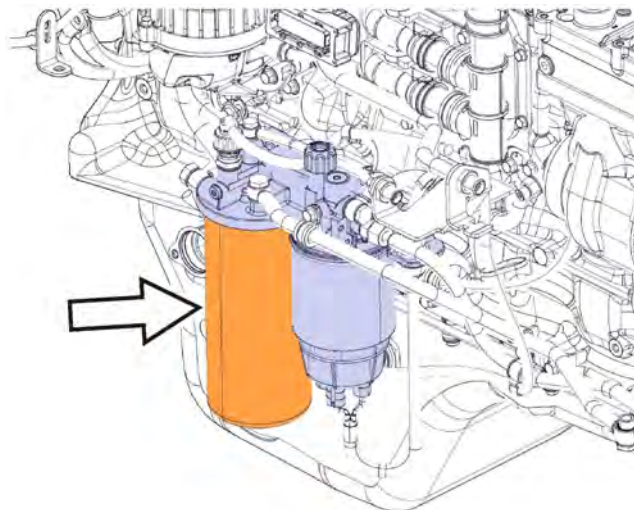


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17 Use the appropriate cable ties and clamps to secure and prevent chafing or damage to the vent-line.

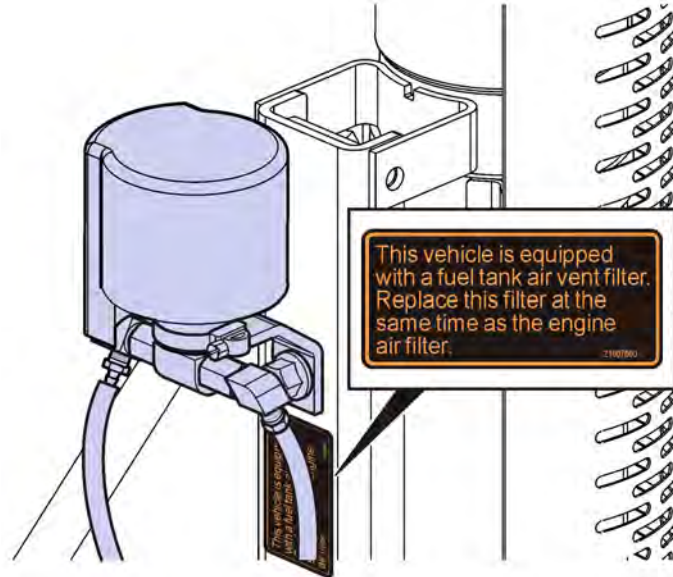
Note: The appropriate part numbers used for routing and clipping the vent-line is identified by double asterisks in the table on page 1.

18 Install replacement engine fuel filter, part number 15126069.

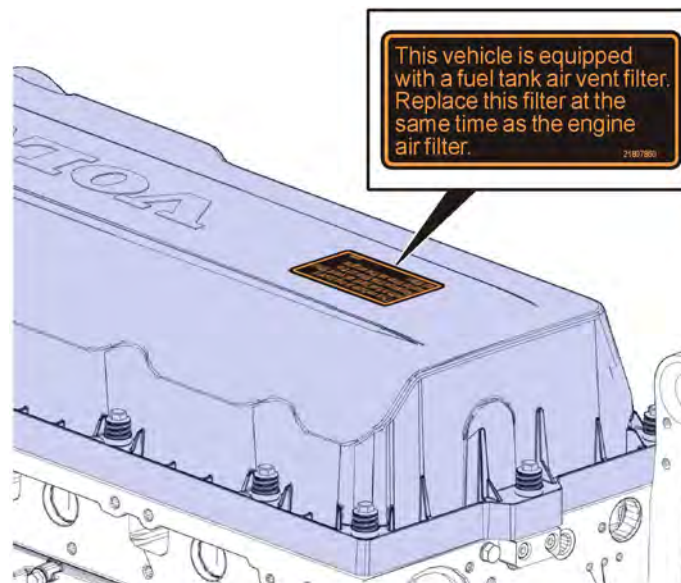


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19 Attach fuel tank ventilation filter labels (21807860) as shown in the figures below.



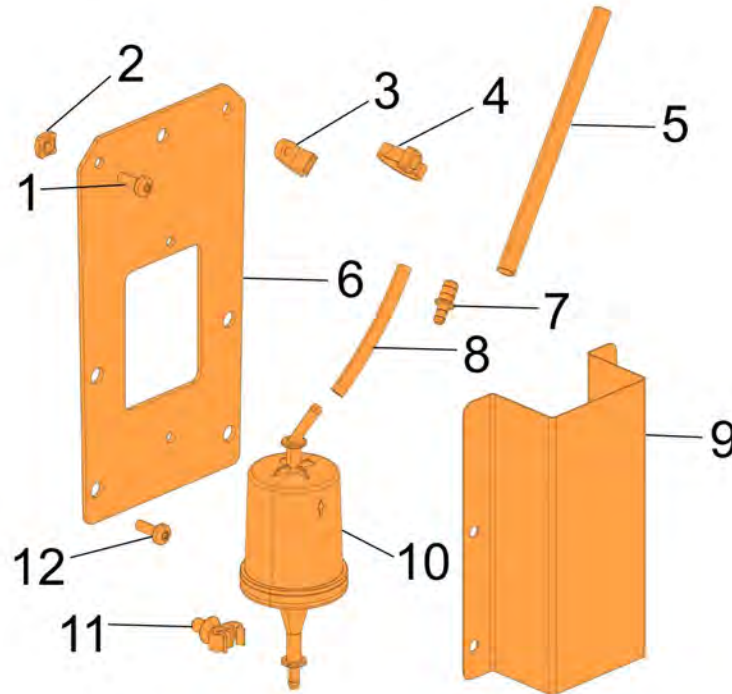
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W2069499

20 Reconnect all previously removed cables to the negative (ground) battery terminals and remove wheel chocks.

Fuel Tank Mounted Ventilation Filter Kit Number 85136403



W2081796

- | | |
|---------------------------------|------------------------------|
| 1. Bracket Fastener (2) | 7. Hose Adapter |
| 2. Lock Nut (2) | 8. Extension Hose |
| 3. Tie Strap Retainer | 9. Cover |
| 4. Tie Strap | 10. Filter Housing |
| 5. Existing Fuel Tank Vent Hose | 11. Filter Housing Retainers |
| 6. Bracket | 12. Cover Fastener (4) |

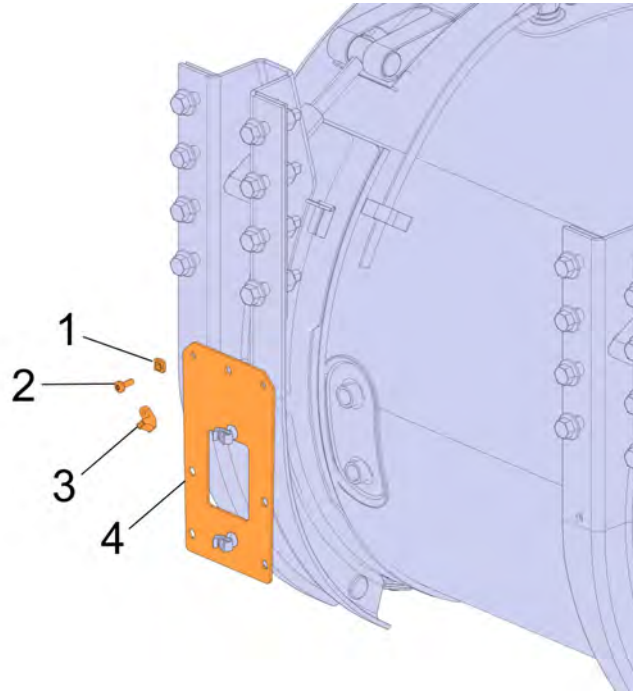
- 1 Disconnect all cables from the negative (ground) battery terminals to prevent personal injury from electrical shock and prevent damage to electrical components.

- 2 Install the filter housing retainers on the fuel tank vent filter housing bracket.



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- 3 Install the fuel tank vent filter housing bracket on the forward fuel tank support bracket using the pre-drilled holes and position the tie strap retainer. Only install the top two fasteners. Use lock nuts to secure fasteners.

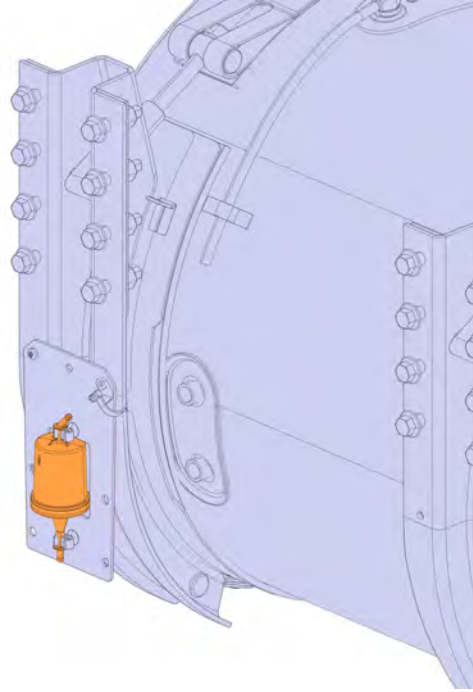


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- 1. Lock Nut
- 2. Fastener

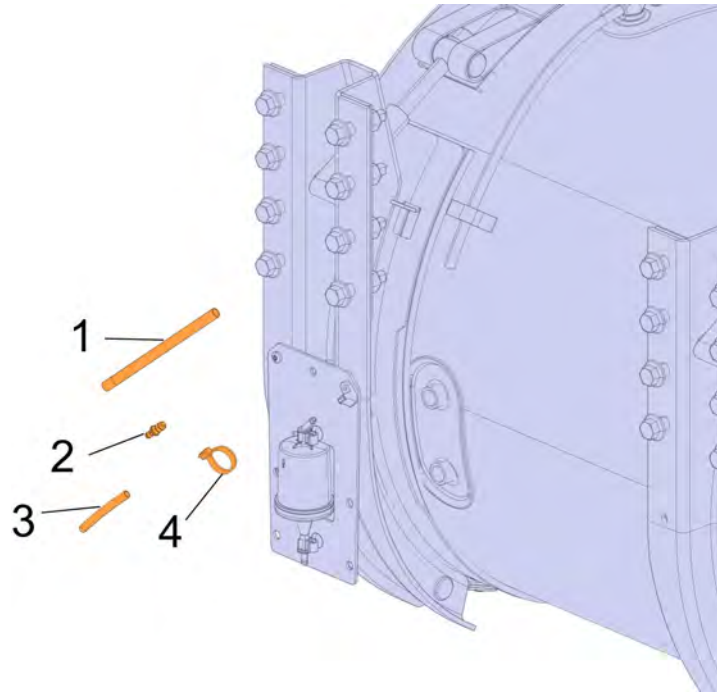
- 3. Tie Strap Retainer
- 4. Bracket

- 4 Install the vent filter on the retainers of the bracket with the 45° nipple on the top side.



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- 5 Install the hose adapter in the end of the existing fuel tank vent hose. Cut the appropriate length of extension hose. Connect extension hose to adapter and fuel vent filter. Install tie strap in tie strap retainer and secure extension hose with tie strap

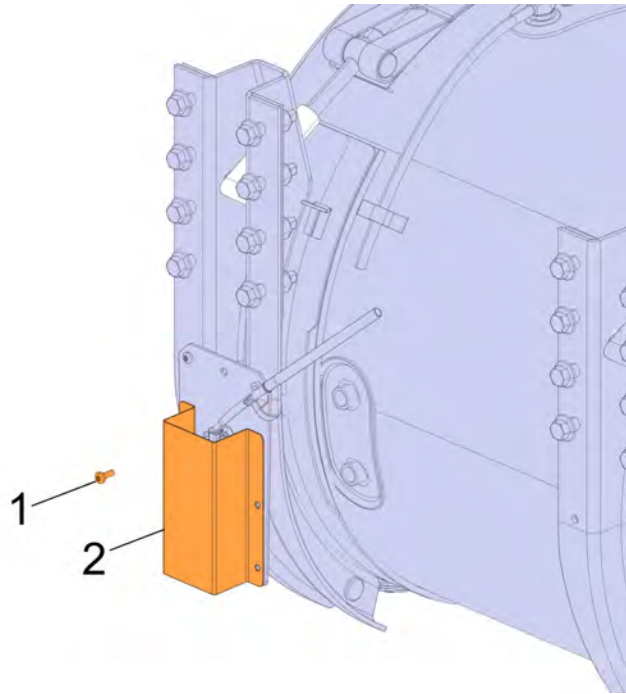


W2081601

1. Existing Fuel Tank Vent Hose
2. Hose Adapter

3. Extension Hose
4. Tie Strap

6 Install fuel tank vent filter cover.



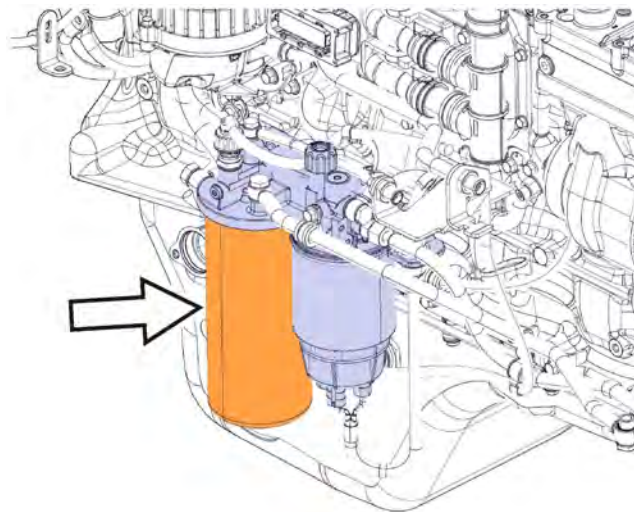
W2081797

1. Fastener

2. Cover

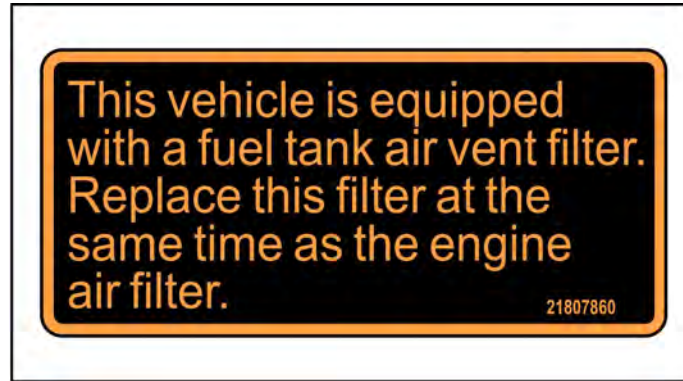
7 Repeat steps for remaining tank.

8 Install replacement engine fuel filter, part number 15126069.



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- 9 Identify a suitable location on the air filter housing and install the fuel tank ventilation filter label (21807860).



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- 10 Reconnect all previously removed cables to the negative (ground) battery terminals and remove wheel chocks.

Reimbursement

This repair may be eligible for reimbursement if a product failure was experienced within time and mileage limits of the applicable Warranty coverage. Reimbursement is obtained via the normal claim handling process.	
Claim Type (used only when uploading from the Dealer Bus. Sys.)	W
Primary Labor Code	
Exhaust Stanchion-Mounted Ventilation Filter Kit	Dual Tank Configuration – 23410-0-02 – 1.0 hrs Single Tank Configuration– 23410-0- 01 – 0.9 hrs
Fuel Tank Mounted Ventilation Filter Kit	Dual Tank Configuration – 23410-0-04 – 0.4 hrs Single Tank Configuration – 23410-0-03 – 0.3 hrs
Causal Part	20560284

VOLVO Trucks North America reserves the right to make any changes in design or to make additions to or upon its products without incurring any obligations to install the same on vehicles previously built.