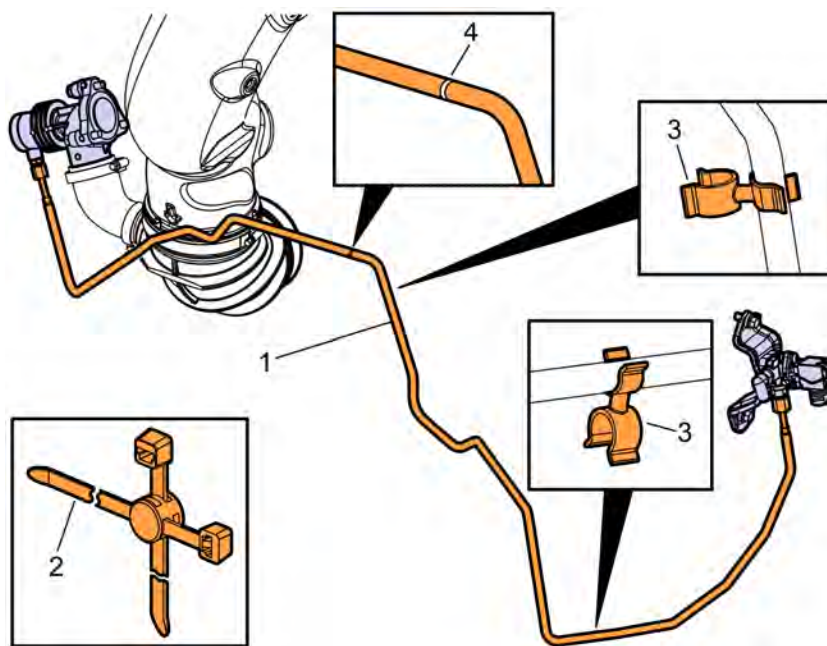


**Engine Turbocharger Compressor Bypass  
Valve, Air Line Routing**VN, VHD, VAH  
D11**FSB 258-033, Engine Turbocharger Compressor  
Bypass Valve, Air Line Routing**

(July 2012)

The existing steel engine turbocharger compressor bypass valve air line has been replaced by a flexible braided plastic line on VOLVO VN, VHD and VAH trucks equipped with D11 engines that still have the engine turbocharger compressor bypass valve in use. This document covers the procedure for routing the flexible air line around the front of the engine if the existing steel air line fail.



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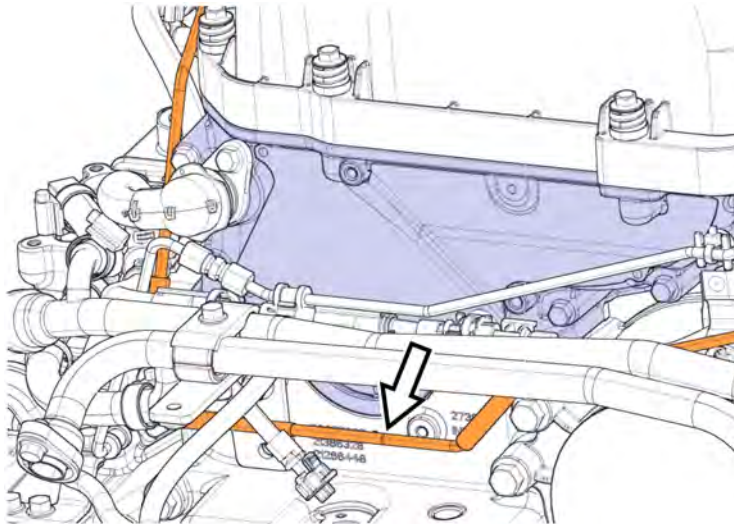
**Required Parts**

| Engine Turbocharger Compressor Bypass Valve, Air Line Parts and Markings |             |     |                   |
|--------------------------------------------------------------------------|-------------|-----|-------------------|
| Item #                                                                   | Part Number | QTY | Description       |
| 1                                                                        | 21485498    | 1   | Pipe Set Air Line |
| 2                                                                        | 20885496    | 6   | Retainer          |
| 3                                                                        | 883699      | 3   | Retainer Clip     |
| 4                                                                        | N/A         | N/A | Alignment Mark    |

## Procedure

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

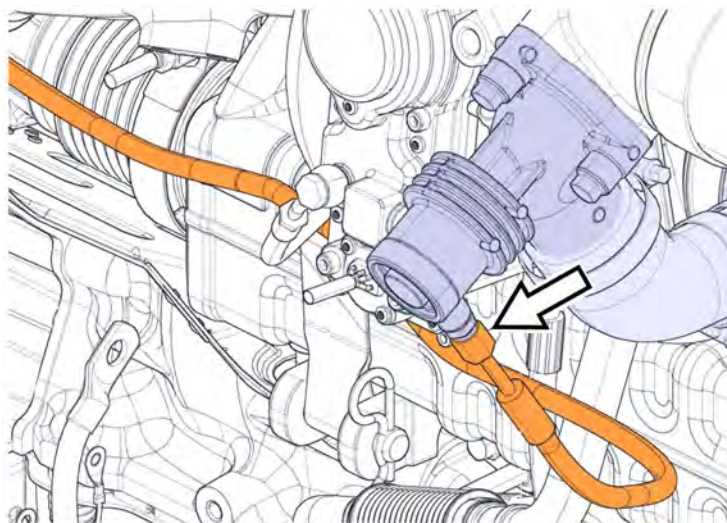
- 1 Apply parking brake and place shift lever in neutral.
- 2 Using wheel chocks, secure truck on a flat and level surface.
- 3 Unlatch and raise hood.
- 4 Disconnect all battery cables from the negative (ground) battery terminals to prevent personal injury from electrical shock and prevent damage to electrical components.
- 5 Remove left inner fender and bracket.
- 6 Remove the passenger seat.
- 7 Remove lower dash trim panels.
- 8 Remove engine cover.
- 9 Cut the existing air line into two sections at the rear of cylinder head.



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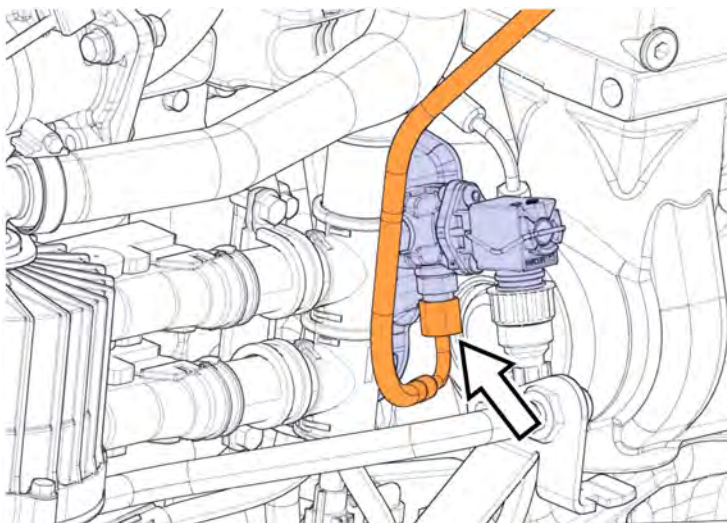
- 10 Remove all p-clamps and cable ties securing the air line at the rear and hot side of the engine.

- 11 Disconnect the air line and remove it from the engine turbocharger compressor bypass valve to the rear of the engine.



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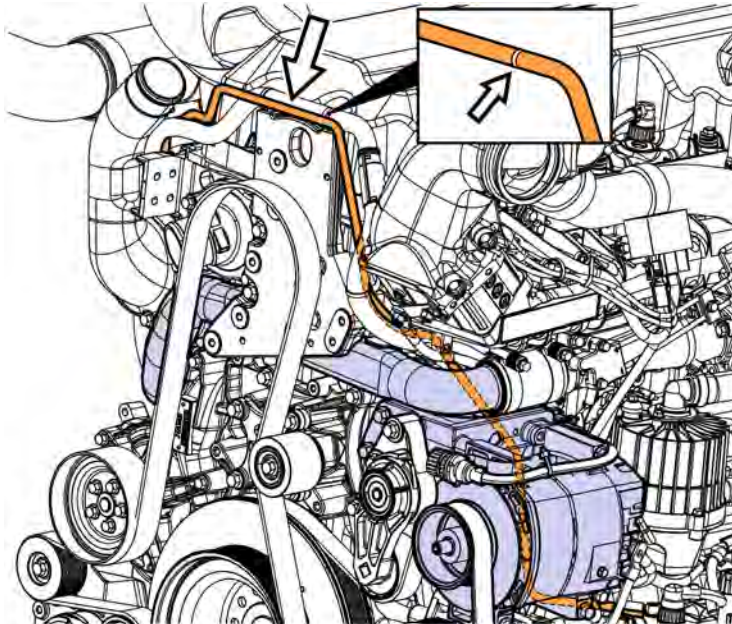
- 12 Disconnect the air line from the control valve.



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- 13 Cut cable ties as needed, then remove line on the hot side of the engine.

- 14 Starting at the front of the engine, align the white mark on the new engine turbocharger compressor bypass valve air line as shown in the figure below. Route the new air line above exhaust gas recirculation (EGR) pipe and behind the alternator as shown in the figure below.



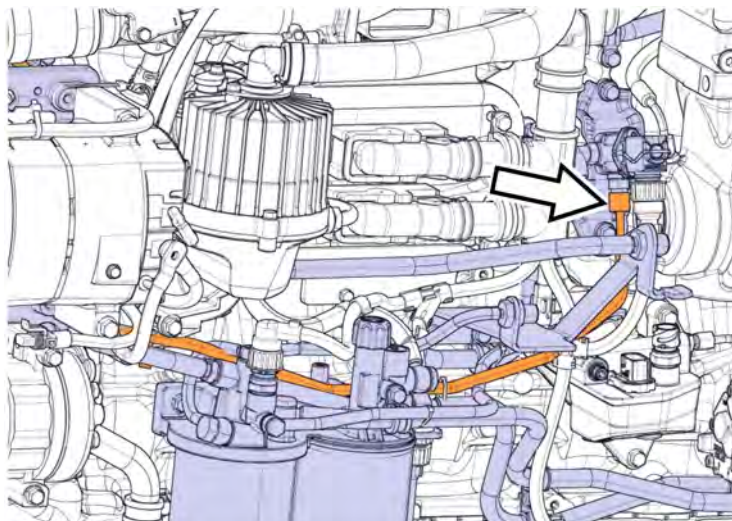
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- 15 Feed air line behind the alternator and alongside the fuel line.

**Note:** Note orientation of line fittings to ensure proper alignment for connection.

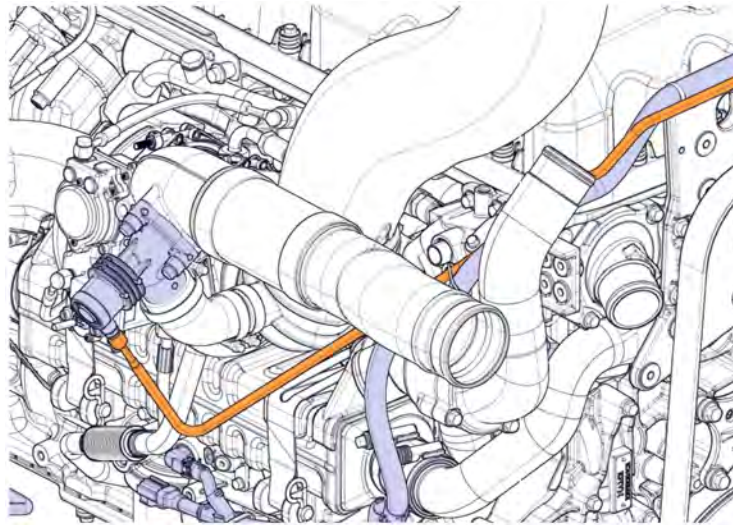
- 16 Continue routing the air line along the fuel line and under the bracket. Connect fitting to the control valve as shown in figure below.

**Note:** Temporarily snug fitting, but do not tighten.



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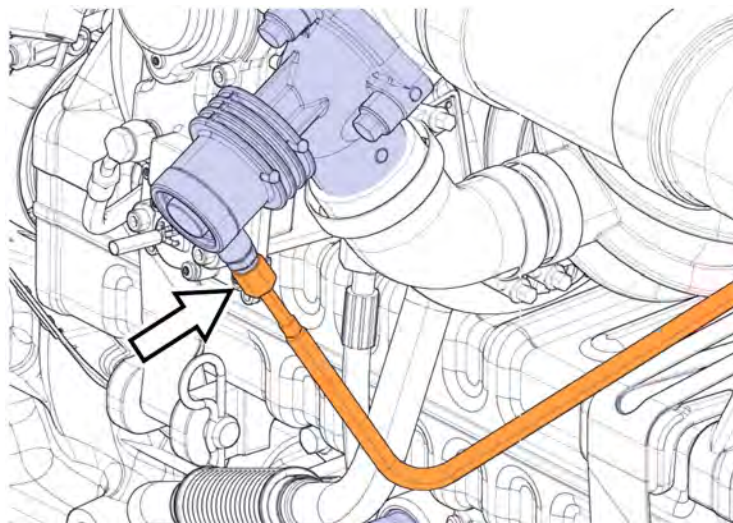
- 17 Route remaining engine turbocharger compressor bypass valve air line behind the radiator fan bracket and parallel to the wiring harness.



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- 18 Connect fitting to engine turbocharger compressor bypass valve.

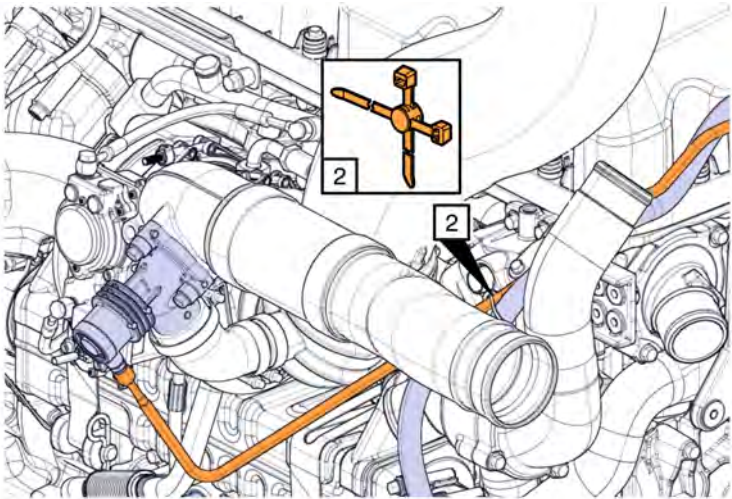
**Note:** Temporarily snug fitting, but do not tighten.



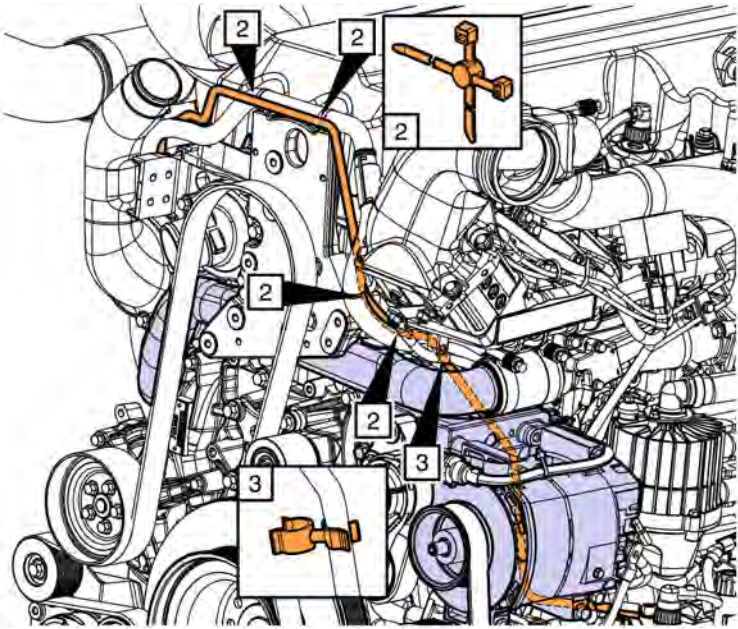
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- 19 Verify position of air line and tighten all fittings to  $17 \pm 1\text{Nm}$  ( $150 \pm 9\text{ in-lb}$ ).

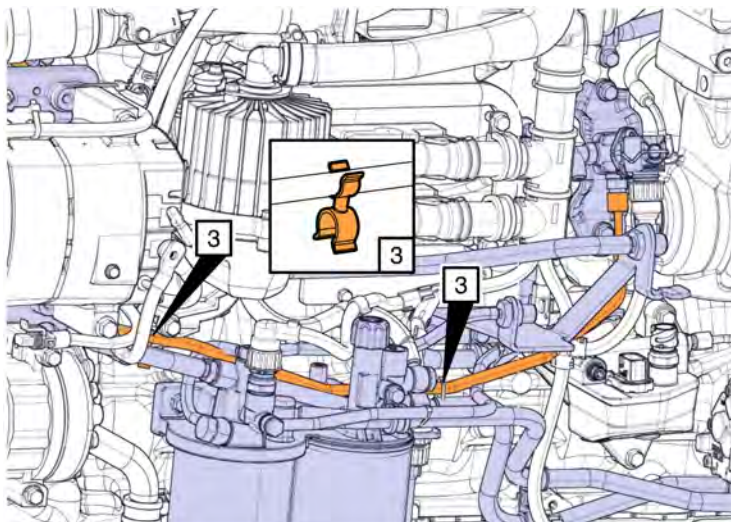
20 Using supplied retainer clips and retainers, secure new air line as shown in figures below.



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- 21 Build air pressure to operating pressure.
- 22 Check the engine turbocharger compressor bypass valve air line and connections for leaks by activating the actuator in Vehicle Computer Aided Diagnostic System (VCADS) function 2545-08-03-02.
- 23 Install engine cover.
- 24 Install lower dash trim panels.
- 25 Install passenger seat.
- 26 Install left inner fender and bracket.
- 27 Reconnect all previously removed cable to the negative (ground) battery terminals.
- 28 Close hood and latch hood.
- 29 Remove wheel chocks.

**Reimbursement**

|                                                                                                                                                                                                                                |                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>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.</b> |                        |
| <b>Claim Type (used only when uploading from the Dealer Bus. Sys.)</b>                                                                                                                                                         | W                      |
| <b>Labor Code</b>                                                                                                                                                                                                              |                        |
| Primary Labor Code                                                                                                                                                                                                             | 25814-2-00<br>2.5 hrs. |
| <b>Causal Part</b>                                                                                                                                                                                                             | 21365802               |

VOLVO Trucks North America engages in a continuous program of testing and evaluating to provide the best possible product. VOLVO Trucks North America, however, is not committed to, or liable for updating existing chassis.