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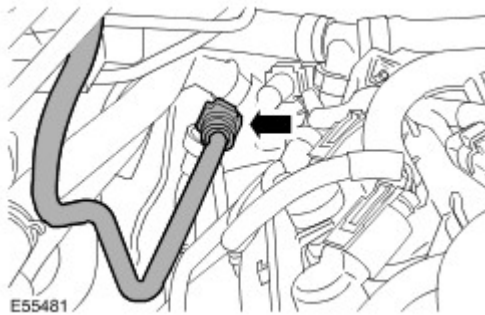
Brake Vacuum Pump - 2.7L Diesel (70.50.19)


Removal

1. Disconnect the battery ground cable. For additional information, refer to [Specifications](#) (Section 414-00)
2. Remove the engine cover. For additional information, refer to [Engine Cover - 2.7L Diesel \(12.30.50\)](#) (Section 501-05)

3.  **CAUTION: Always plug any open connections to prevent contamination.**

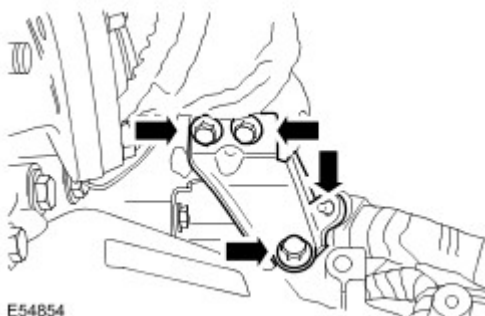
Disconnect the brake booster vacuum line from the brake vacuum pump.



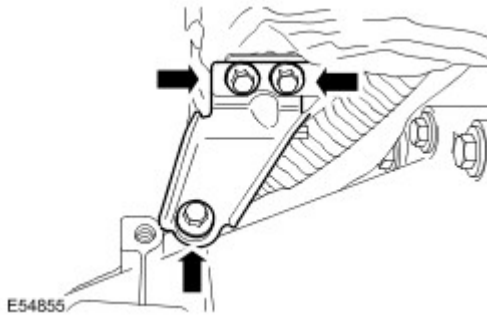
4.  **WARNING: Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.**

Raise and support the vehicle.

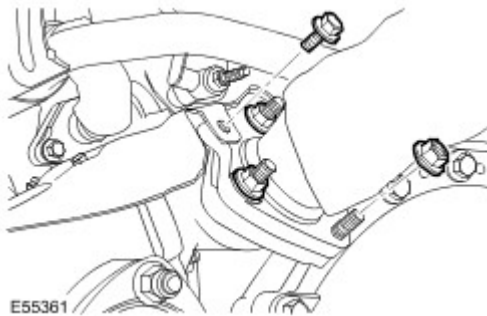
5. Remove the exhaust system. For additional information, refer to [Exhaust System \(30.10.08\)](#) (Section 309-00)
6. Remove the exhaust cross-over pipe LH support bracket.
 - ▶ Release the wiring harness.
 - ▶ Remove the three retaining bolts.



- 7 . Remove the exhaust cross-over pipe RH support bracket.
- Release the wiring harness.
 - Remove the three retaining bolts.



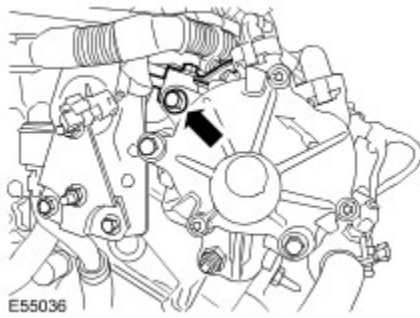
- 8 . Release the exhaust cross-over pipe from the LH exhaust manifold.
- Remove the exhaust manifold heatshield retaining bolt.
 - Remove and discard the three retaining nuts.



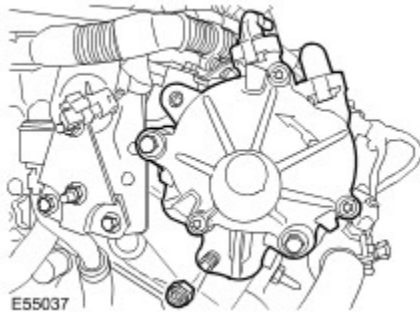
- 9 . Remove the exhaust cross-over pipe.
- Remove the exhaust manifold heatshield retaining bolt.
 - Remove and discard the three retaining nuts.
 - Remove and discard the two gaskets.



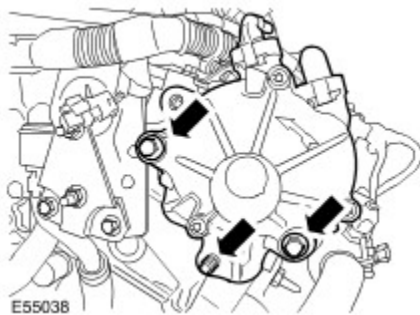
- 10 . Release the high pressure fuel supply line.
- Remove the retaining bolt.



11. Remove the brake vacuum pump retaining nut.

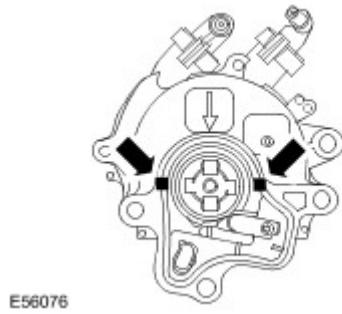


12. Remove the brake vacuum pump.
- Remove the retaining stud.
 - Remove the two retaining bolts.



Installation

1. Apply sealant to the two places shown. For additional information, refer to [Specifications](#) (Section 206-00)
- The application of sealant must be 10 mm square in two places. Install the brake vacuum pump immediately after applying the sealant.
 - The brake vacuum pump should be fitted directly to the engine without smearing the sealant.



- 2 . Install the brake vacuum pump.
 - Install the two retaining bolts.
 - Tighten the bolts to 23 Nm (17 lb.ft).
- 3 . Install the brake vacuum pump retaining stud.
 - Tighten to 13 Nm (10 lb.ft).
- 4 . Install the brake vacuum pump retaining nut.
 - Tighten to 13 Nm (10 lb.ft).
- 5 . Secure the high pressure fuel supply line.
 - Tighten the retaining bolt to 10 Nm (7 lb.ft).
- 6 . Install the exhaust cross-over pipe.
 - Install new gaskets.
 - Install new retaining nuts.
 - Tighten the nuts to 22 Nm (16 lb. ft).
 - Install the exhaust manifold heatshield retaining bolt.
 - Tighten the bolt to 10 Nm (7 lb.ft).
- 7 . Attach the exhaust cross-over pipe to the LH exhaust manifold.
 - Install new retaining nuts.
 - Tighten the nuts to 22 Nm (16 lb. ft).
 - Install the exhaust manifold heatshield retaining bolts.
 - Tighten the bolts to 10 Nm (7 lb.ft).
- 8 . Install the exhaust cross-over pipe LH and RH support brackets.
 - Align the exhaust cross-over pipe support bracket assembly.
 - Tighten the bolts evenly to 25 Nm (18 lb.ft).
 - Attach the two wiring harness clips.
- 9 . Install the exhaust system. For additional information, refer to [Exhaust System \(30.10.08\)](#) (Section 309-00)

10 .



CAUTION: Always plug any open connections to prevent contamination.

Connect the brake booster vacuum line to the brake vacuum pump.

11 .

Install the engine cover. For additional information, refer to [Engine Cover - 2.7L Diesel \(12.30.50\)](#) (Section 501-05)

12 .

Connect the battery ground cable. For additional information, refer to [Specifications](#) (Section 414-00)