



VE SIDI (LLT) Manifold Insulators

Fitting Instructions
(Installed on a 3.6L SIDI VE SV6)



Tools

- Flat-Head Screwdriver
- Pliers
- 4mm Socket
- 10mm Socket
- 13mm Socket and Spanner



Removing Trim

1. Remove the engine cover by simply pulling it straight off (pull in upward direction).
2. Remove the plastic clips on the windscreen trim.
Use a flat-head screwdriver to assist in lifting out the centre screw before the rest of the clip can be removed.



3. Now pull the rubber trim off starting at one end and continuing to the other.

4. Pull the right side of the plastic windscreen trim upward to remove.



5. Remove the plastic clips on the plastic windscreen trim underneath the rubber trim that was just removed again using a flat-head screwdriver to assist.



6. The windscreen trim should lift up from the right side (please note that it cannot be completely removed).



7. Remove the intake manifold cover by removing the two plastic clips on either side with a flat-head screw driver.
Then pull it in an upward direction toward yourself (standing at the front of the car).



Removing Air Intake

1. First unclip the PCV breather hose from in front of the throttle-body.
Flick and hold the clip as show in the picture to pull off.



It is removed from the rear of the engine by simply pulling it straight out in and upward direction.



2. Loosen the hose clamp at the front of the throttle –body with a 4mm socket. (Not all the way off, just enough to pull off the intake pipe).
Now pull the intake pipe straight off.





3. Loosen the hose clamp at the front of the MAF sensor. (Again, not all the way off, just enough to remove the intake pipe). Now pull off the intake pipe.



4. The complete intake piping should now be removed leaving the airbox in its position.



Removing Intake Manifold

1. Unclip the wire connected to the throttle body.
Push the top of the clip with your thumb while pulling it straight off.
2. Remove the wire connected above the throttle-body on the intake manifold.
Flick and hold the clip, then pull it straight upward to remove.



3. Unclip the MAP sensor from the rear left-hand side of the engine.
Flick and hold the clip, then pull it straight upward to remove.





*To assist in the rest of the installation ask a friend to hold up the windscreen trim or retain the windscreen trim yourself with something (eg. Screwdriver) to hold it up. This gives more room behind the intake manifold to work.



4. Removing the vacuum hose. A spring clip holds it in place, use pliers to loosen and then pull straight off the intake manifold.





5. Remove the 10mm bolt which attaches a bracket to the left side of the intake manifold.



6. Remove the bolts at the rear of the intake manifold using a 13mm spanner.

7. Remove the 10mm bolt attached to the intake manifold next to the throttle-body.





8. *Optional:
Remove the top plenum cover off the intake manifold by removing the surrounding 10mm bolts and four 13mm bolts holding it in place.



9. Remove all six (or two, if optional step was completed) 10mm bolts holding the intake manifold in place.
(One bolt at the left- front, 4 in the middle and one at the right-rear of the intake manifold).



10. Pull intake manifold off by lifting upward and toward yourself (standing at front of the car).



Cleaning

1. Remove the factory intake manifold gasket from the engine.
2. *Optional:
The throttle-body can be removed from the intake manifold for cleaning purposes by removing the four 10mm bolts on each corner.
3. The top plenum cover of the intake manifold (if not removed already in optional step) can be taken off by the removal of the surrounding 10mm bolts.
4. Clean away all oil that can be seen using degreaser and a cloth.

Installing Manifold Insulators

CAUTION

EXERCISE EXTREME CAUTION TO ENSURE NOTHING FALLS INSIDE THE RUNNERS.
IF ANYTHING DOES FALL IN, IT MUST BE REMOVED OTHERWISE DAMAGE TO ENGINE WILL RESULT

1. **Apply sealant** on the underside of the insulator and place the insulator onto the runners using the bolts previously removed to line up correctly. Apply 4mm wide lines of sealant or distribute evenly with your finger. Let the insulators sit for a couple of minutes to set in place.



2. Also apply sealant on the upper side of the insulators as shown below.

SEALANT MUST BE APPLIED ON BOTH SIDES OF INSULATOR. FAILURE TO DO SO WILL RESULT IN A VACUUM LEAK, REQUIRING THE ENTIRE JOB TO BE REPEATED.



3. Reassemble the manifold in the reverse order

Note:

The bolt attached to the intake manifold next to the throttle-body will no longer align due to the height increase of the manifold caused by the insulators.

The two bolts attached to the rear of the intake manifold will no longer align due to the height increase of the manifold caused by the insulators.

(They can be still attached if the metal plate that attaches to the manifold is slightly lifted when putting back on).