

## MACE ENGINEERING VQ35DE PERFORMANCE PLENUM SPACER INSTALLATION INSTRUCTIONS



Thank you for purchasing our plenum spacer to suit the VQ35DE motor and we hope you enjoy the performance gains the spacer has to offer. Please follow the instructions below to ensure trouble-free motoring after the spacer has been fitted.

### Strut Bar Removal (if applicable):

Loosen the (two) 24mm jam nuts on the left hand side. Mark the center hex adjuster and loosen it one full turn. Remove the (6)14mm head bolts and (2)14mm head nuts. Use a screw driver on the lock of the slide on wire connector and slide off. Use needle nose pliers to squeeze the snap in wire connectors and push them out. Carefully lift bar out of the way and set aside.

### Engine Cover Removal:

Remove the (2)10mm head nuts and (2)10mm head bolts. Carefully lift cover and set aside.

### Intake Tube Removal:

To disconnect the air intake tube from the throttle body, use a flat head screwdriver, loosen the hose clamp and pull air tube back carefully. Then use a ratchet to loosen the hose clamp at the MAF and pull hose off carefully. Move the oil vapor hose clamp aside with pliers and disconnect the hose. Set air tube aside. If you are using a stock air tube it is best to remove it entirely. Disconnect the vacuum line on the battery side of the plenum, use pliers to squeeze the clamp and move it two inches toward the battery. Slide hose off the nipple. Disconnect the negative terminal from the battery.

#### Plenum Cover Removal:

Remove all (16)10mm head bolts and (2)10mm head nuts. Also remove the 2 guide pins in the lower plenum. They can often be removed with a 4mm socket. If a 4mm socket is not available or it doesn't quite fit, open the plenum wide and using the original nut, turn it upside down and thread it back onto the stud about 12mm, then take the other nut and tightly screw it on right side up as shown.



You are now ready to remove the guide pin. Use the 10mm open ended wrench on the bottom nut to unscrew it. For easy alignment, leave the two 4mm guide pins in but loose so that they can be removed after the plenum top is lowered.

#### Cleaning Plenum Interior:

After unplugging the two hoses at the back of the plenum, lift the upper plenum and tilt it aside as shown. It is not necessary to remove it completely, however assistance may be required while inserting the plenum spacer.



Use a paper towel and degreaser to wipe up any dirt and oil. Clean the top, bottom and around the edges to remove any debris and residue. The interior of the plenum may be very oily but this is normal and OK. You can leave the stock gasket in place but you can take it out too. Either way, the plenum will still seal. It would be good practice to leave the stock gasket in place in the event you decide to sell the car and keep the spacer.

### Plenum Cover Re-assembly:

Thread one washer onto every supplied bolt. Lay our thermo-composite plenum spacer on the lower half of the plenum to find the correct orientation. Once you're content with the layout, run a bead of sealant on the mating surface (where the spacer will sit) of the lower half of the plenum after it has been thoroughly cleaned then run another on the top surface of the spacer prior to mating it to the plenum cover. Use the supplied 3 longest bolts on the back 3 posts of the plenum cover and the 3 second longest bolts on the front 3 posts (refer to numbered diagram). Using the appropriate bolts as a guide, feed them through the plenum cover then smear a light amount of sealant on one side of the supplied spacer bushes and make sure they bond to the underside of the posts as you seat the plenum cover to the spacer and lower half of the plenum.

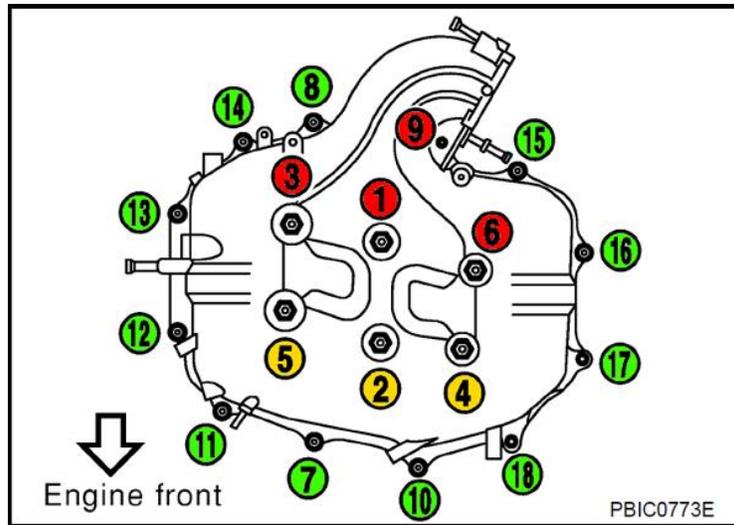


These centre plenum bolts (1 through 6 refer to numbered diagram) will require a drop of thread locker only to the tip of each shortly before threading them in.



#### Plenum Cover Bolt Torque and Tightening Sequence:

Install all the bolts with the washer's finger tight. The long bolts go in 9, 3, 1 and 6. Medium bolts go into 5, 2 and 4. The short bolts go into the plenums outer perimeter, also replacing the guide pins. The bolts need to be tightened in 3 separate stages. Once the plenum is bolted down finger tight, tighten all the bolts to 5 Nm in the numerical order shown on the numbered diagram. Second stage, torque all the bolts to 9 Nm. Third stage (only applicable to bolts 7 through to 18) torque to 11 Nm. The progressive tightening sequence will help insure force is distributed evenly across the plenum. After it is all bolted down you will never need to tighten the bolts again. After a few thermal cycles the gaskets will settle in for a good seal and the bolts will relax their tension a bit.



#### Intake Tube Re-assembly:

Reconnect the oil vapor line and gently push the air intake tube back onto the throttle body and MAF. Realign and tighten all the clamps.

#### Vacuum Line Re-assembly:

Push the hose back on and use pliers to squeeze the clamp and move it back to its original position. Turn the prongs of the hose clamp downward to avoid letting it touch the hood.

#### Intake Manifold Vac-leak Check:

Reconnect the battery negative terminal. Start the engine and let it idle. There should be no new hissing or buzzing sounds. Engine should idle smoothly. One of the most common causes of an air leak is the rubber oil fill spout getting stuck between the plenum and spacer, or a vacuum hose that is not reconnected. Another is when a piece of the stock gasket is accidentally bent or folded over upon itself.

#### Engine Cover Re-assembly:

Fit the engine cover and align it with the bolt holes and studs. Replace the 2x10mm head nuts and 2x10mm head bolts. The engine cover never needs to be cut.

Congratulations! You have completed the installation of our high performance Mace Engineering Plenum Spacer.