

FIAT 500 RECIRCULATION VALVE INSTALLATION

Tools needed:

10mm socket and 3/8 ratchet
3mm & 5mm Allen keys
Flat bladed screwdriver
Wire cutters
Pliers
Hose clamp driver (7mm)
T20 and T30 Screw drivers

1. Open the bonnet, and remove the clip holding the intake to the engine cover, the clip holding the recirculation pipe and undo the two 10mm bolts. Pull the engine cover upwards and forwards to release it from the rubber grommets. This will be tough if you haven't done it before.



2. Using a T20 screw driver, remove the plastic bracket that retains the 3 hoses next to the oil dipstick, then using a T30 screw driver remove the MAP sensor from the inlet manifold.

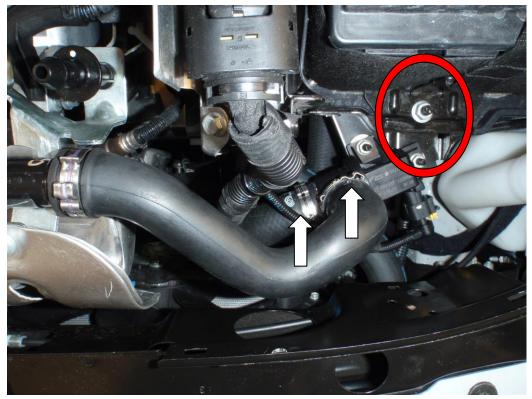


3. Place the Forge take off block **D** under the MAP sensor and push it securely in place, ensuring the o-ring is fitted to the take off. Screw the take off and MAP sensor as one unit back to the inlet manifold using supplied screw **C**. Place the supplied alloy spacer behind the plastic bracket and refit using supplied screw **B**.

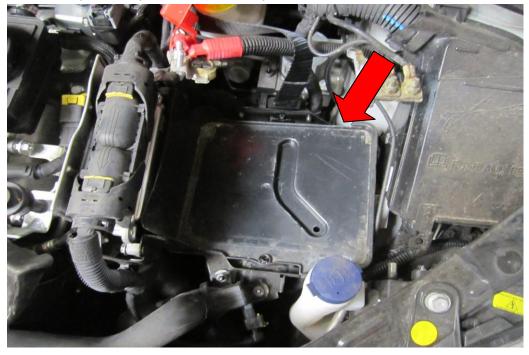


4. Connect the supplied length of silicon vacuum hose to the take off just fitted, and route it around the engine bay, using the clips already on the bulkhead to hold it in place, and route it between the ECU and the engine block to the front of the car by the stock valve. Use the supplied cable ties to secure it in the engine b

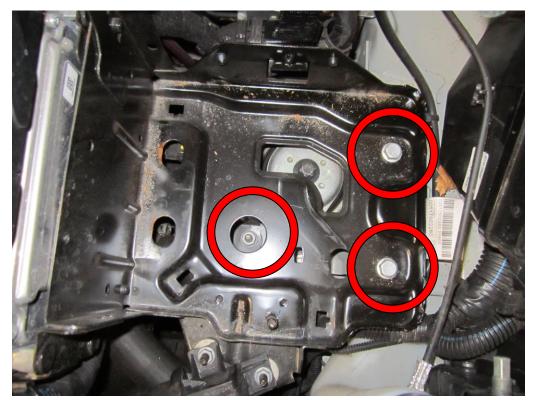
5. Remove the two clips arrowed below that connect the stock valve to the engine. Remove the electrical connector by pulling out the yellow 'safety' catch and then squeezing the connector to pull it off. Remove the two 10mm nuts holding the valve to the bracket on the chassis – MAKE SURE you have a hand under the valve to catch the bracket as it falls off!



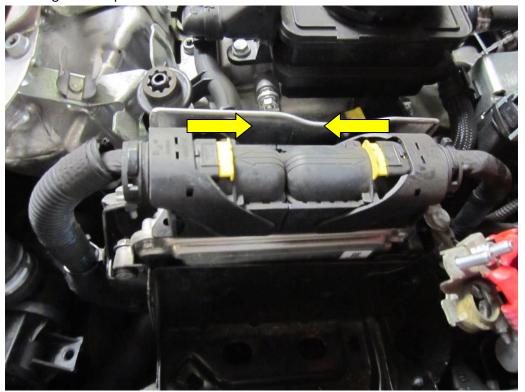
- 6. The boost source you now need to access will either be under the boost hose going to the stock valve (go to step 11) or under the battery tray which needs to be removed. Using a 13mm Ratchet and extension remove the 13mm nut circled in red.
- 7. Pull out the plastic tray beneath the battery .



8. Now the battery and plastic tray have been removed undo the remaining three bolts using a 13mm ratchet.



9. Now undo the wiring harness that connects to the engines ECU .Do this by pulling the yellow tabs and releasing the clamps.



10. There are several plastic clips on the battery tray holding cables etc. These need to be un-clipped to remove the tray completely. Do this by pulling back on the tab to release the 'tooth' as pictured.



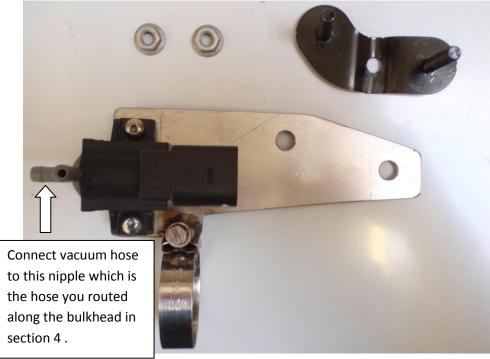
11. Now the battery tray has been completely removed locate the sensor that mounts on the boost pipe beneath. Using a T25 torx driver or Allen key, remove the sensor.



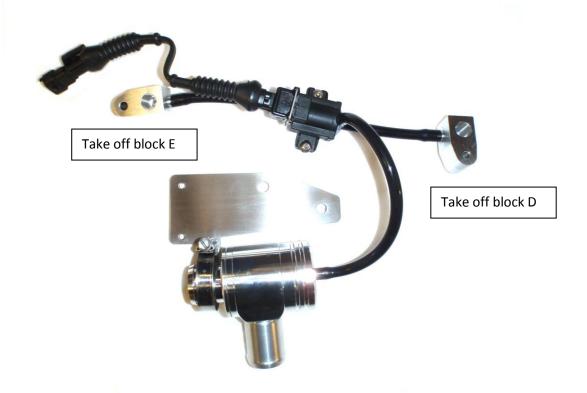
12. Place the Forge take off block **E** under the sensor and refit using screw A or C provided.



- 13. Attach the offcut of vacuum pipe to the sensor block and route towards the other piece of vacuum pipe fitted in step 4. Now refit the battery tray and the battery including all the clips you have undone.
- 14. Locate the supplied Forge mounting bracket and mount the solenoid as shown below, using the two M5 screws provided. Bolt the Forge bracket back to the chassis with the Fiat bracket you removed in step 5. Cut the silicon vacuum hose from step 4 to a length that allows it to connect to the end (horizontal) plastic nipple on the solenoid.



15. Then connect the other vacuum pipe to the solenoid that comes from your boost source, this is the piece of vacuum pipe you fitted to the take off block beneath the battery tray. The image below illustrates the correct way to install all the vacuum pipes.



- 16. Offer the valve up to the bracket already fitted, and pull the lower rubber hose through the jubilee clip welded to the bracket, and push it over the base pipe of the valve. Tighten the clip to secure the valve and pipe to the bracket.
- 17. Reconnect the recirculating hose from step 5.
- 18. Finally, plug the supplied wiring plug into the solenoid, and into the factory plug you removed from the stock valve in step 5. Installation is complete.



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