



BMW N54 TWIN TURBO
THROTTLE BODY HARD PIPE
INSTALLATION INSTRUCTIONS



Tools needed:

Short flat blade screwdriver

T20, T25 Torxs

14mm spanner

Needle nosed pliers

7mm hose clamp driver

Safety eyewear, footwear, gloves and protective clothing are also recommended.

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1. Allow the vehicle to cool down full before starting this installation. Open the bonnet and undo the 2x T20 Torxs screws.

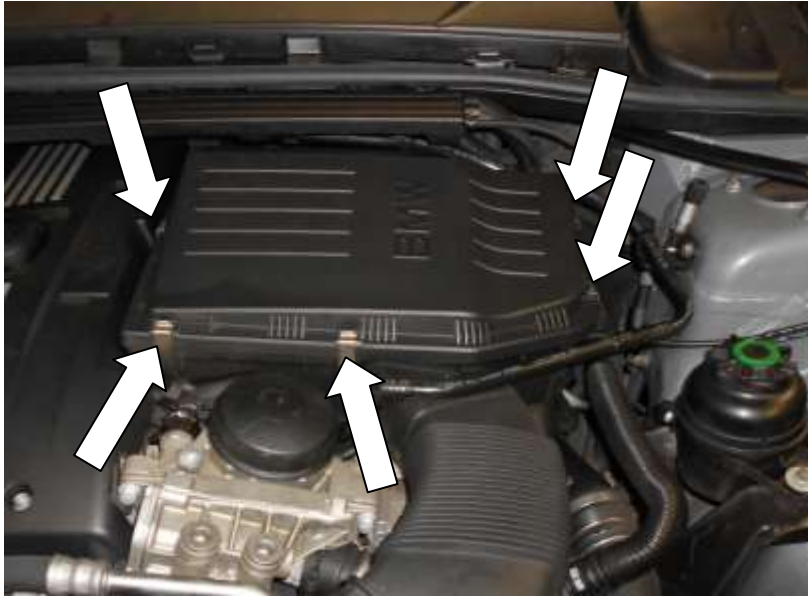


2. Unclip the ducting from the front of the air box and remove the duct.



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3. Undo the clips around the air box and remove the lid and air filter element.

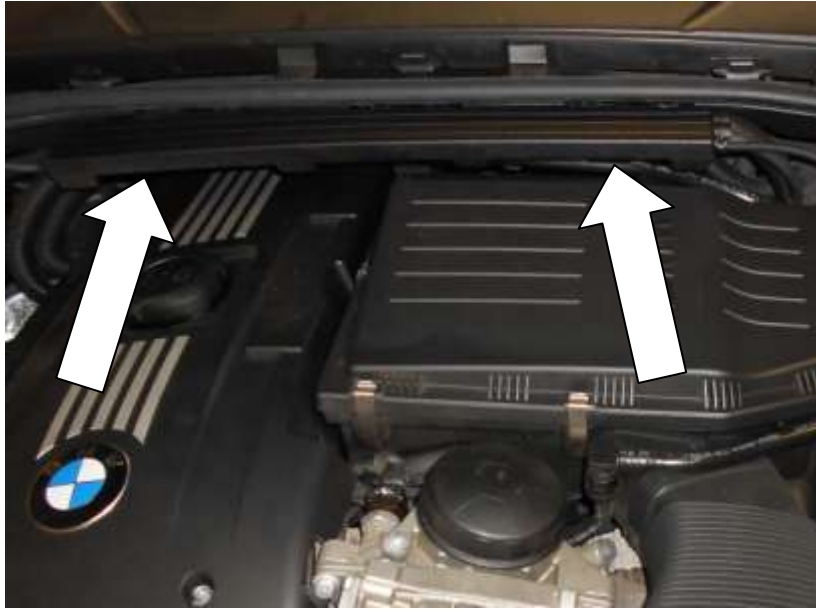


4. Unclip the vacuum pipe.

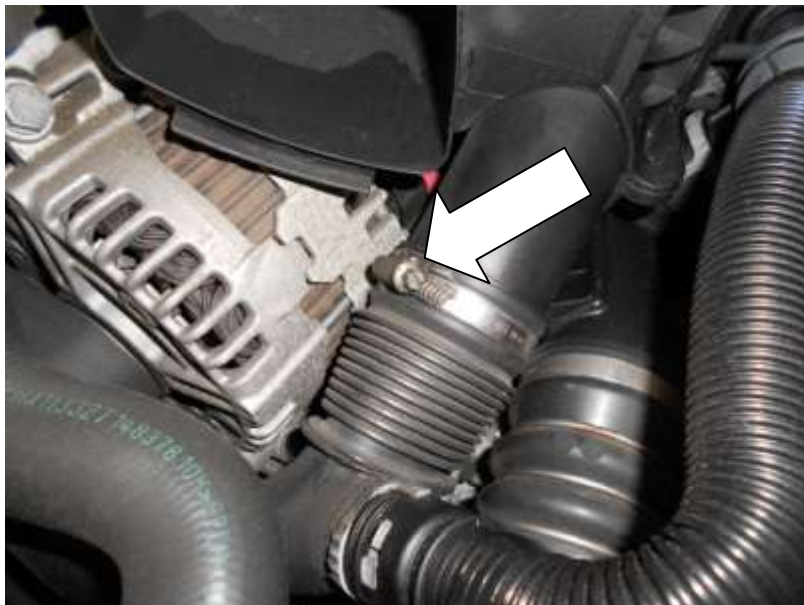


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5. Running across the top of the engine attached to the bulkhead are 2x plastic trays with wires in. To aid access to remove the air box it may be necessary to remove these, they are held on fragile plastics clips.

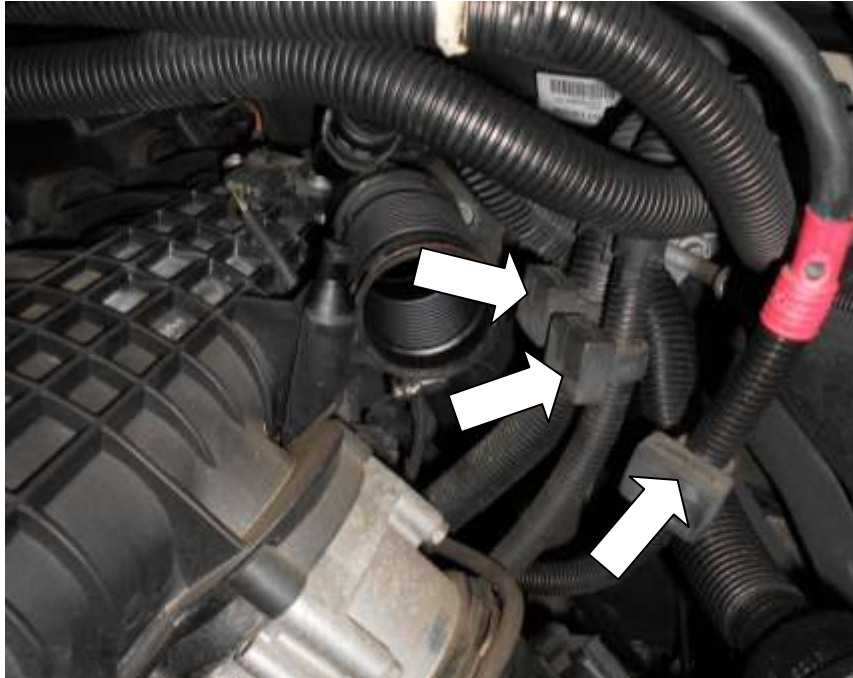


6. Using a short flat blade screwdriver undo both jubilee clips on the hoses either side of the air box. Slide the hoses off of their outlet.



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7. Reach around behind the back of the air box and slide the cable holders upward to release them from the pins on the air box. With a firm pull upwards release the air box from its 3x mounting pins and remove from the vehicle.



8. Twist the clip and pull off the pipe work running to both standard dump valves. Disconnect the vacuum hose running to the standard dump valves.



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9. Using a flat blade or 7mm hose clamp driver screwdriver undo the jubilee clip.

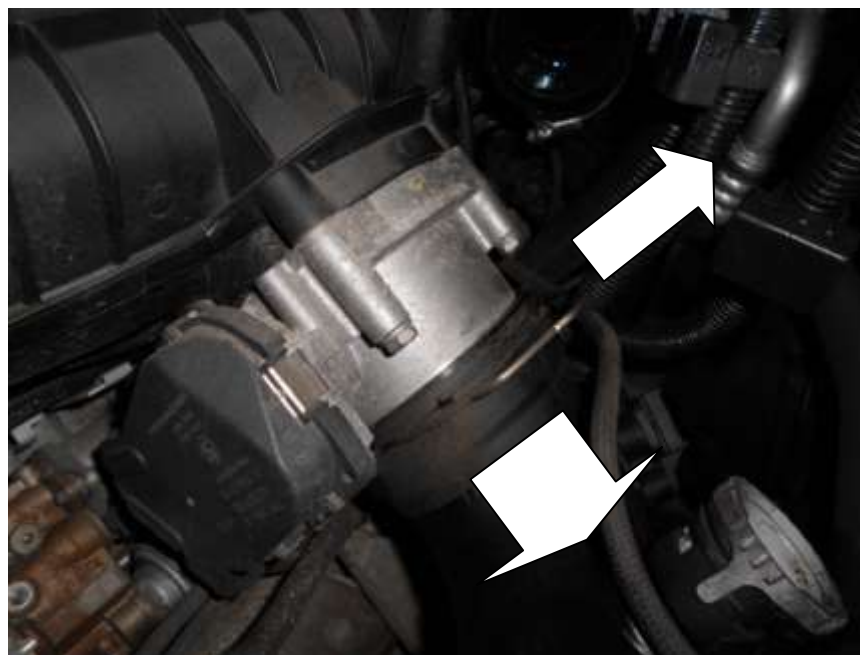


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10. Undo the T25 Torxs screw.

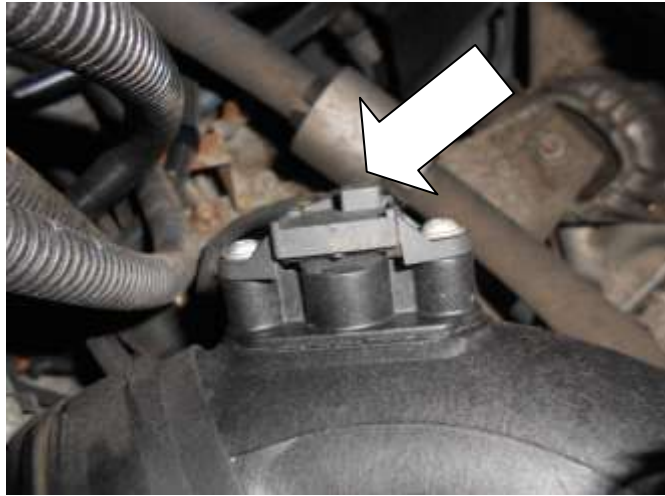


11. Using a flat blade screwdriver or pliers remove the spring clip from the throttle body hard pipe.

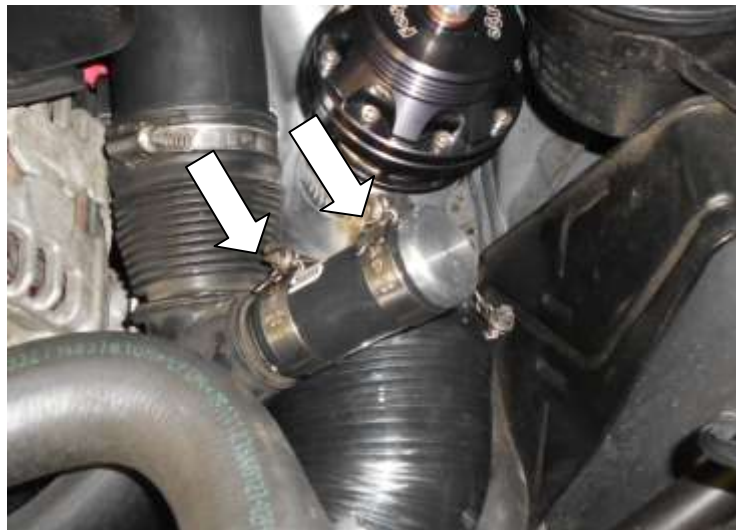


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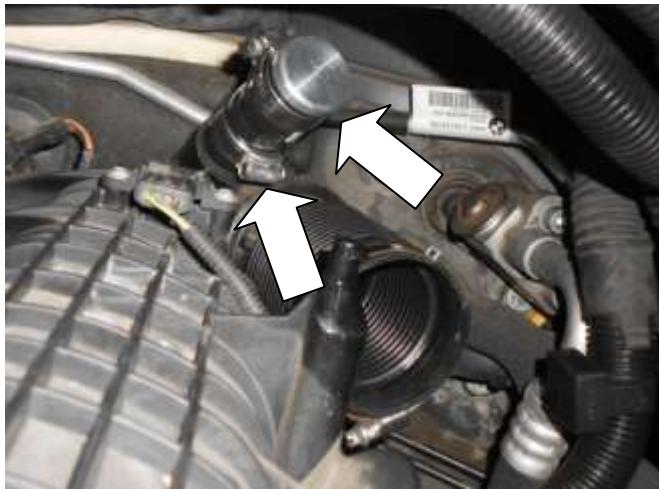
12. Disconnect the wiring running to the sensor before the throttle body.



13. With a firm pull release the coupler from the throttle body and remove the pipe from the vehicle.
14. Undo the 2x T20 Torxs screws from the sensor. With the 2x M6X12mm and M6 washers provided secure the sensor to your Forge hard pipe. Remove the O-Ring from inside the standard throttle body coupler and refit it to the Forge throttle body coupler.
15. Using the 25mm silicone hose, blanking plug and suitable hose clamps, blank off the both old dump valve inlet in the standard pipe work.



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16. Place a suitable hose clamp over the small end of the silicone elbow and fit it to the standard pipe work.
17. Place a suitable clamp hose over the open end of the silicone elbow. Into this push the open end of the alloy hard pipe.
18. Slide the other end onto the throttle body. It is a tight fit and has to be aligned correctly to slide on fully.
19. Using the M6X16mm and penny washer provided secure the alloy hard pipe to the original mount. **BE CAREFUL NOT TO DROP ANYTHING DOWN THE OPEN INLET TO THE TURBO.**



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20. Replace the spring clip onto the alloy coupler. Ensure the clip is facing in the correct direction. The cut outs in the coupler matching the spring clip. Tighten all hose clamp when everything is aligned.



21. Depending on which option you have purchased please follow the relevant instructions.

22. **Single DVRAY Valve Installation.**

23. Using a 14mm spanner loosen the vacuum take off banjo on the top of the DVRAY valve. This allows it to turn while screwing it onto the alloy pipe and allow the banjo to be aligned when the installation is complete. Screw the valve into position.
24. Using the length of 5mm silicone vacuum hose and joiner provided. Trim to length and connect to the standard vacuum hose.
25. Retighten the banjo bolt on top of the Ray valve.

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26. **Twin DVRay Valve Installation.**

27. Using a 14mm spanner loosen the banjo fitting on both valves. Screw both valves into position.
28. Using the length of 5mm silicone vacuum hose and T piece provided connect both valves to the standard vacuum pipe.
29. Retighten both banjo bolts.



30. Reassemble your vehicle. Your installation is now complete. Enjoy your new performance!

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