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# Pontiac G8 Cold Air Intake System Installation Guide



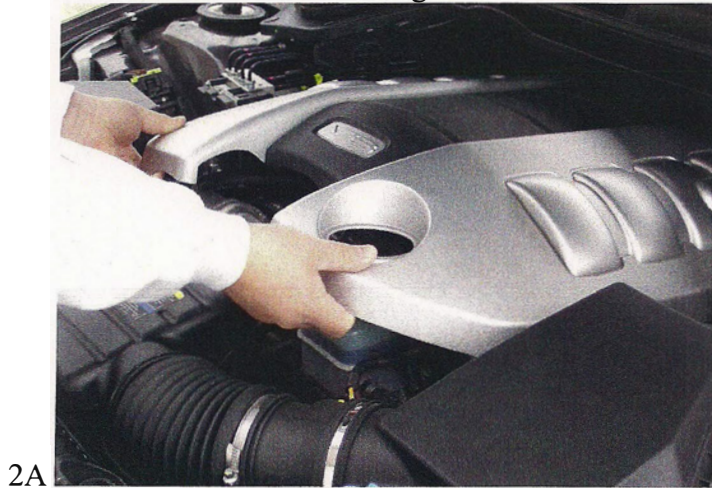
Tools Required : Ratchet  
Phillips screwdriver  
T27 torx bit  
7mm socket  
8mm socket  
10mm deep well socket  
13mm socket

## OEM Air Intake Removal

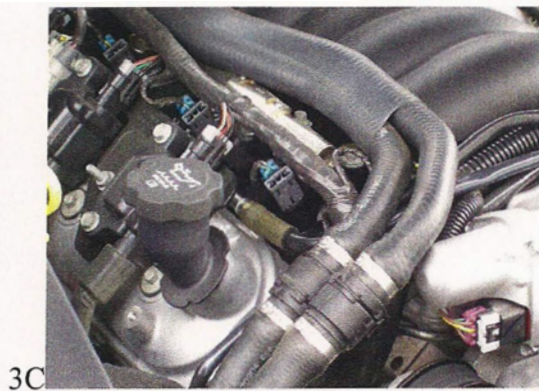
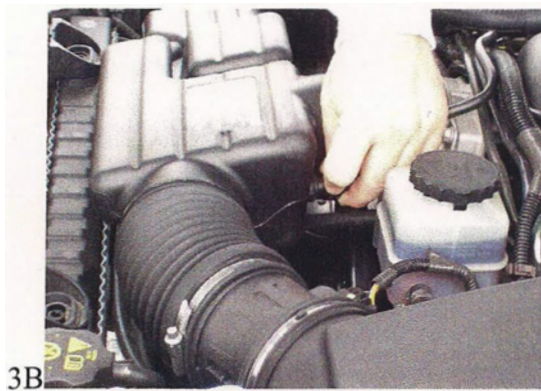
Step 1. Remove engine oil fill cap.



Step 2. Remove engine cover. There are four mounting points on the engine cover. Lift on both sides at the front of the engine cover to remove the engine cover.



Step 3. Remove breather tube that runs from the air inlet tube to the passenger side valve cover. With your fingers, squeeze and pull on the fitting shown in illustration 3B. Next, pull the hose from the valve cover and remove tube.



Step 4. Remove the air inlet assembly. Using a 7mm socket, loosen the hose clamp at each end of the assembly. One clamp is located at the throttle body entry and the other is located at the MAF sensor. See illustration 4A for clamp locations.

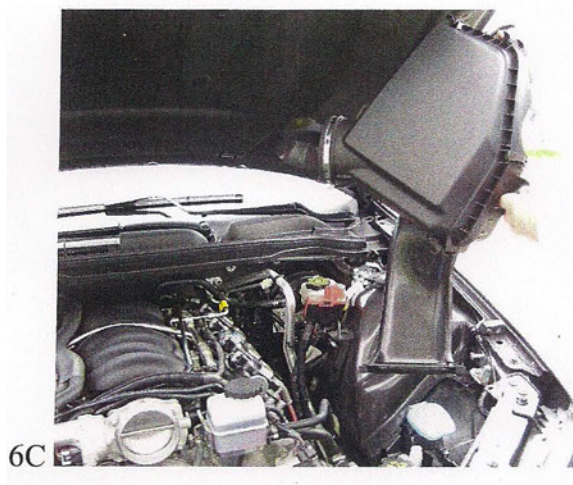
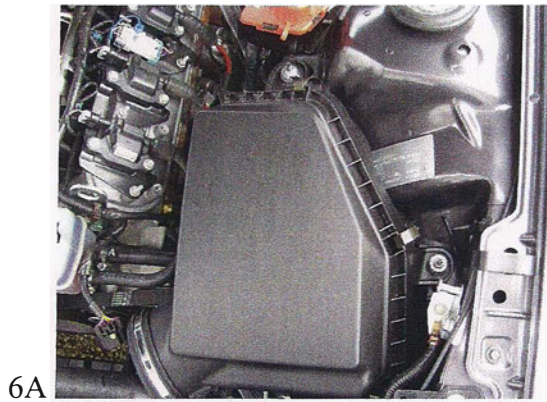




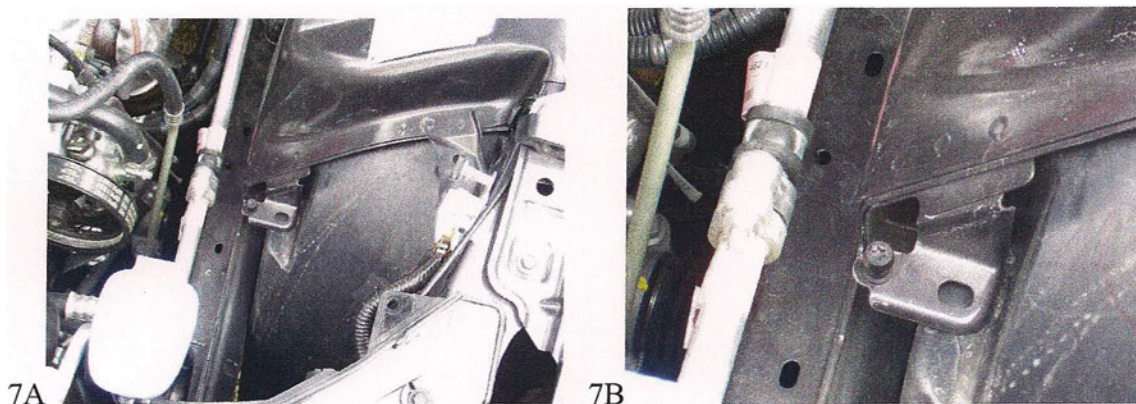
Step 5. Remove the MAF sensor. CAUTION be careful not to damage the MAF screen. Using a 7mm socket, loosen the remaining hose clamp on the MAF sensor. Pull the MAF sensor from the air box assembly. Using your fingers, squeeze and pull firmly to disconnect the MAF sensor harness and remove MAF sensor. Set aside for re-installation.



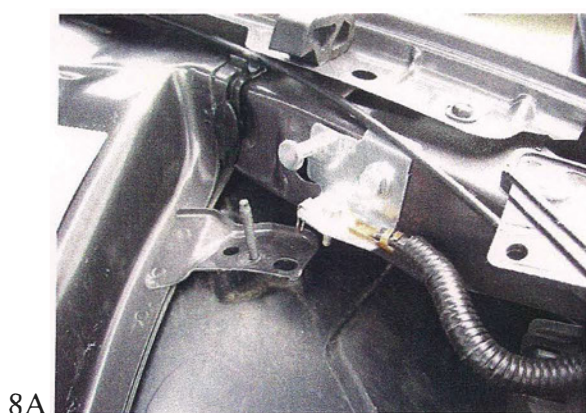
Step 6. Remove air box assembly. Using a 10mm socket, remove the two flanged nuts shown in illustration 6A. Pull firmly up on the airbox assembly and rotate as shown in illustrations 6B and 6C to remove air box.



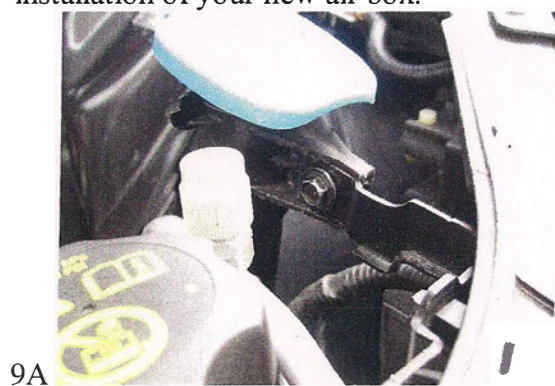
Step 7. Remove torx head stud. Using a T27 torx bit, remove the grommet stud show in illustrations 7A and 7B. \*Although Roto-Fab recommend using a torx bit, a vise grips could also be used to remove this if necessary.



Step 8. Remove battery ground post bracket. Using a 13mm socket, remove bolt shown in illustration 8A to remove bracket assembly.



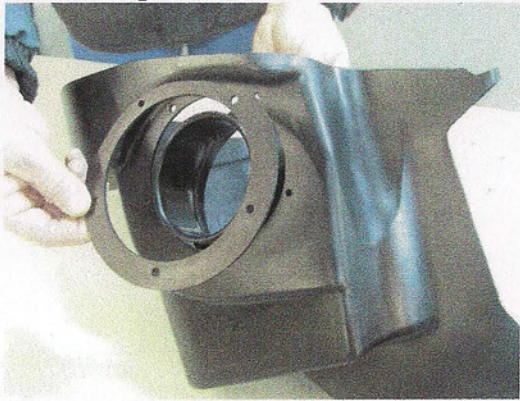
Step 9. Remove windshield fluid neck bolt. Using a 10mm wrench, remove the bolt shown in illustration 9A. The removal of this bolt is necessary for flexibility that simplifies the installation of your new air box.





## Air intake installation

Step 1. Locate #1 air box, #3 filter housing, #18 mounting flange, and #11 10-32 machine screws. Insert filter housing as shown in illustrations A1 and B1. Align the five mounting holes of the flange, air box, and filter housing and insert all five of the 10-32 machine screws. Tighten all five screws using a phillips screwdriver. CAUTION. Be careful not to over tighten. \* Note: The mounting flange has a "T" stamp which goes towards the top of the air box and faces towards the air box.



A1



B1

Step 2. Locate #6 inlet elbow and #9 90 degree fitting. Install threaded fitting into the brass insert located in the inlet elbow. Align fitting parallel with parting line on the inlet elbow. See illustrations A2 and B2 for alignment location.

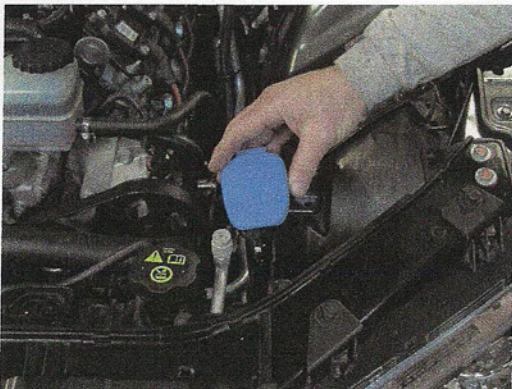


A2

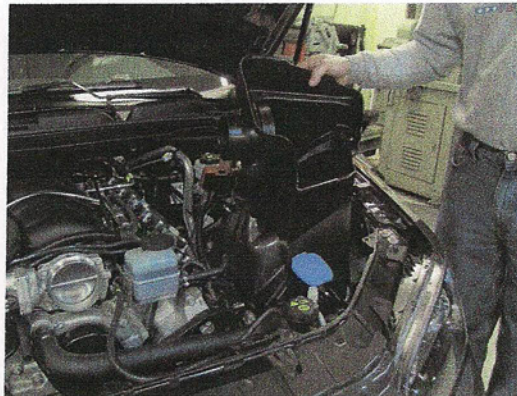


B2

Step 3. Move windshield washer fluid neck to the opposite side of the mounting bracket. This is necessary for the installation of the new air box. See illustrations A3 and B3 for details.



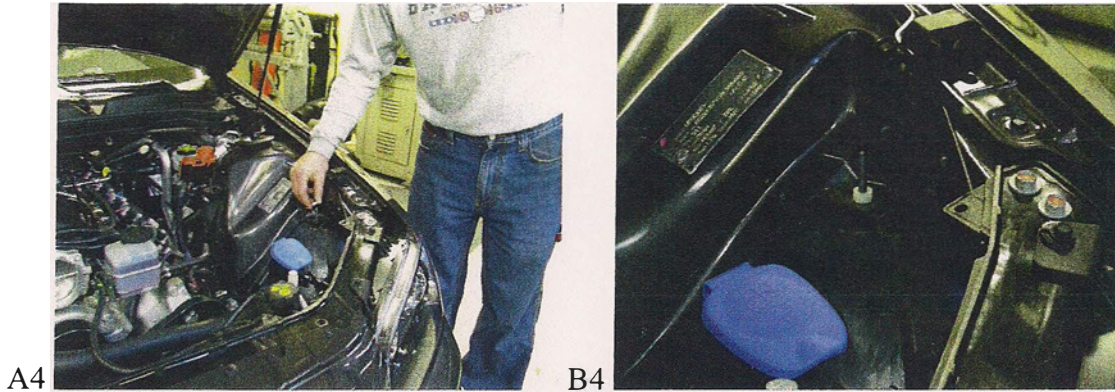
A3



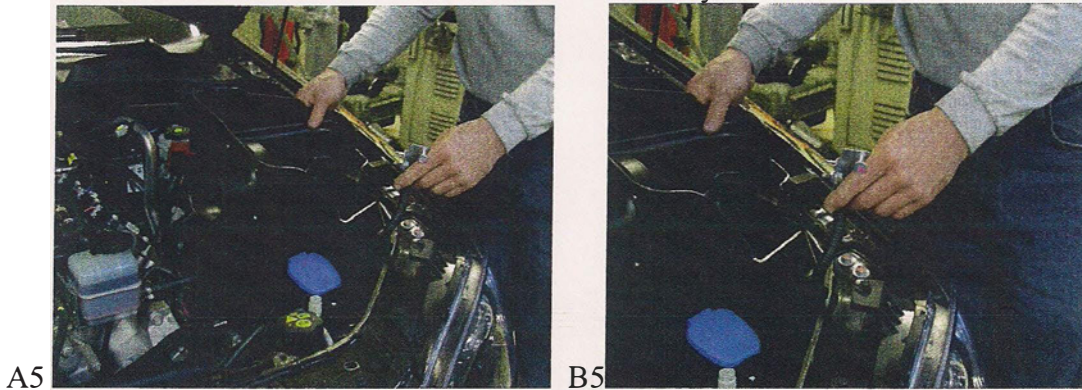
B3



Step 4. Locate #14 spacer. Slide over the air box mounting stud as show in illustrations A4 and B4.



Step 5. Locate #1 air box. To install the airbox assembly, hold the airbox assembly with your right hand, while using your left hand to hold the ground wire out of the way as shown in illustrations A5 and B5. Lower the airbox into position while aligning the ground wire with the notch located at the front airbox assembly.



Step 7. Place the windshield washer fluid neck back to its original location and hand tighten the mounting bolt. Do not tighten this bolt at this time.

Step 8. Locate #13 M6 bolt. Align air box with lower mounting hole and hand tighten bolt. Locate #12 M6 flange nut and install on mounting stud shown in installation. Only hand at this time.

Step 9. Adjust windshield washer fluid neck to full forward position and tighten bolt with 10mm wrench.

Step 10. IMPORTANT. Adjust airbox assembly to its full counter clockwise position and hold in place while tightening mounting bolt and nut. The airbox should be in contact with the windshield washer fluid cap.

Step 11. Install the ground wire bracket back to the original location.

Step 12. Locate #4 air filter, and #16 air filter clamp. Position clamp on filter as shown in illustration A12. Install air filter as shown in illustration B12. Fully engage air filter onto the filter housing. Tighten hose clamp using 8mm socket to secure air filter. CAUTION. Do not over tighten hose clamp.

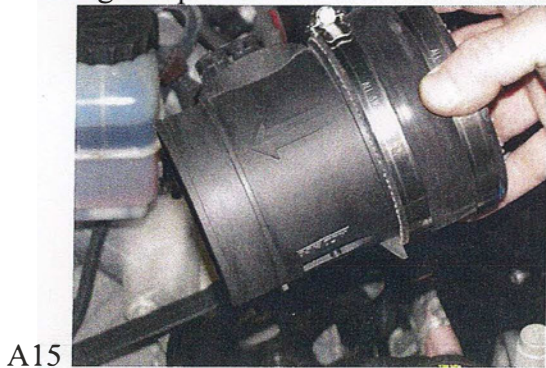


Step 13. Locate the #5 hose coupler, two of the #15 4" hose clamps, and the OEM MAF sensor. Install hose coupler onto the MAF sensor. Install and tighten hose clamp, securing the hose coupler to the MAF sensor. See illustration A13 for clamp location. Slide the other hose clamp over the hose coupler as shown in illustration B13.



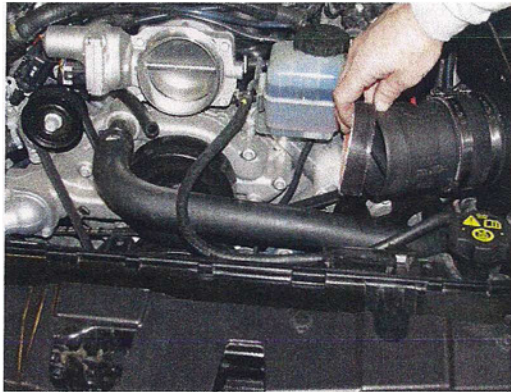
Step 14. Reconnect the MAF sensor harness.

Step 15. Install the MAF sensor assembly by sliding the hose coupler over the air filter housing until the MAF sensor is fully seated against the air filter housing. Make sure that the arrow on the MAF sensor housing is pointing towards the engine as shown in illustration A15. Rotate the MAF sensor to position the arrow located on the MAF sensor housing is top center location. See illustration B15 for positioning details.





Step 16. Locate #17 3 3/4" x 3/4" hose sleeve. Install onto the MAF sensor flange. See illustration A16.

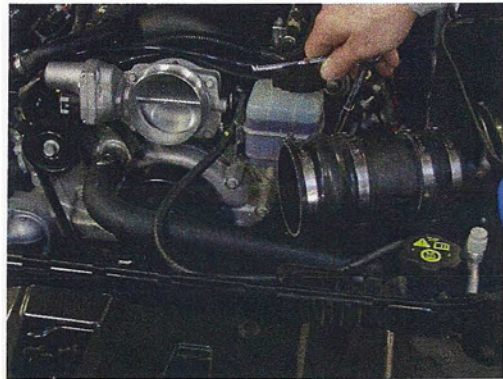


A16

Step 17. Locate #8 4" Hump hose 3" long. (This is the longer of the two 4" hump hoses) and two #15 4" hose clamps. Position clamps on each side of hump hose. Install hump hose assembly over the #17 hose sleeve on the MAF sensor assembly. Align the #8 hump hose with the edge of the #17 hose sleeve. See illustration. Clock hose clamps equal to the previous installed clamps as shown in illustrations A17 and B17 and tighten clamp to MAF sensor assembly.



A17



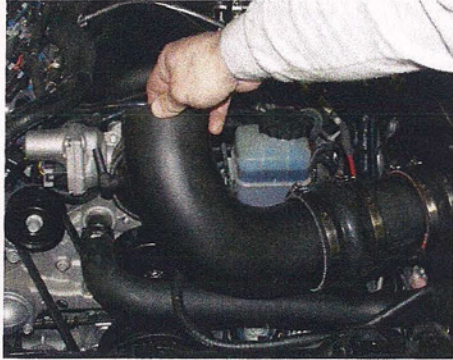
B17

Step 18. Locate #19 4" hump hose 2 3/8" long and two #15 4" hose clamps. Position one clamp on the hump hose and locate onto throttle body as shown in illustration A18. Position the other hose clamp on the hump hose as shown, but do not tighten hose clamps at this time.





Step 19. Locate #6 Air Inlet Elbow Assembly. Install inlet elbow into 4" hump hose as shown in illustration A19. Rotate downward and insert the other end of the air inlet into the hump hose located on the throttle body.



A19

Step 20. Align the elbow at both ends and tighten the clamps. DO NOT OVERTIGHTEN

Step 21. Align and tighten the hose clamp that secures the 4" hump hose to the air inlet elbow. At this time, Double check all of the installed hose clamps for tightness.

Step 22. Locate #10 3/8" ID rubber hose. Using your right hand, insert hose just below the throttle body control motor. With your left index finger, help rout the hose up towards the passenger valve cover. Connect hose to hose barb on the air inlet elbow. Next, connect the other end of the hose to the hose barb on the passenger side valve cover.

Step 23. Locate #2 Airbox Hood Seal. Align notch in seal with windshield washer fluid neck. Using both hands, secure the airbox seal around the edge of the airbox. Push firmly each 1/2" to assure that the seal is properly seated on the edge of the box.

Step 24. Remove engine oil fill cap and reinstall engine cover. Align mounting tabs on fuel rail and push down on the engine cover to secure the cover. Install the engine oil fill cap. You should have now completed your installation!!

