



2005+ Nissan Frontier Axle Vent Modification

Overview

Below is a quick write-up about the 2nd Gen Nissan Frontiers for modifying the axle vent. It is well known that these trucks are having a great deal of seal issues on both the pinion seals and axle shaft seals. These problems also extend to the M226 axle in the Titans and Xterra's. The biggest issue with the stock vent fitting is it is a check valve allowing air to escape but not easily re-enter the axle which can build a vacuum on the inside of the axle which can add stress to the seals causing premature failure. In addition, off roading and dirt and compound this problem.

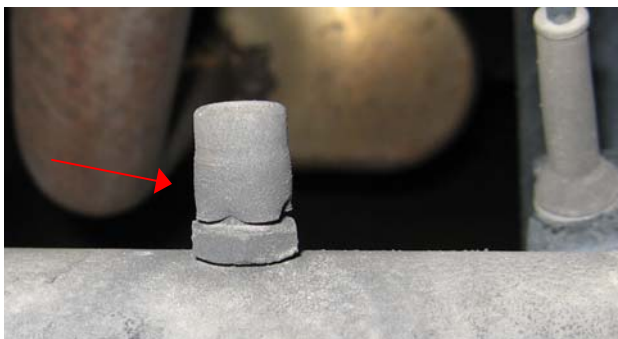
Because nobody has done a write-up for the Frontiers (only seen Titan), here's how I did it on my 2006 SE 2wd with the M226 axle.

Parts List

- 5' 1/4" fuel line
- 1/8" NPTF x 1/4" barbed pipe fitting (not NPT, but straight thread NPTF)
 - I used Toyota part # 9040451026
- #2 stainless steel hose clamp
- Nylon zip ties
- 1/4" barbed fitting fuel filter (basic lawn mower inline fuel filter)
- Stainless mesh
 - I bought a SS lint trap at Home Depot and cut to size
- Teflon thread tape
- Split plastic tubing (optional)

Instructions

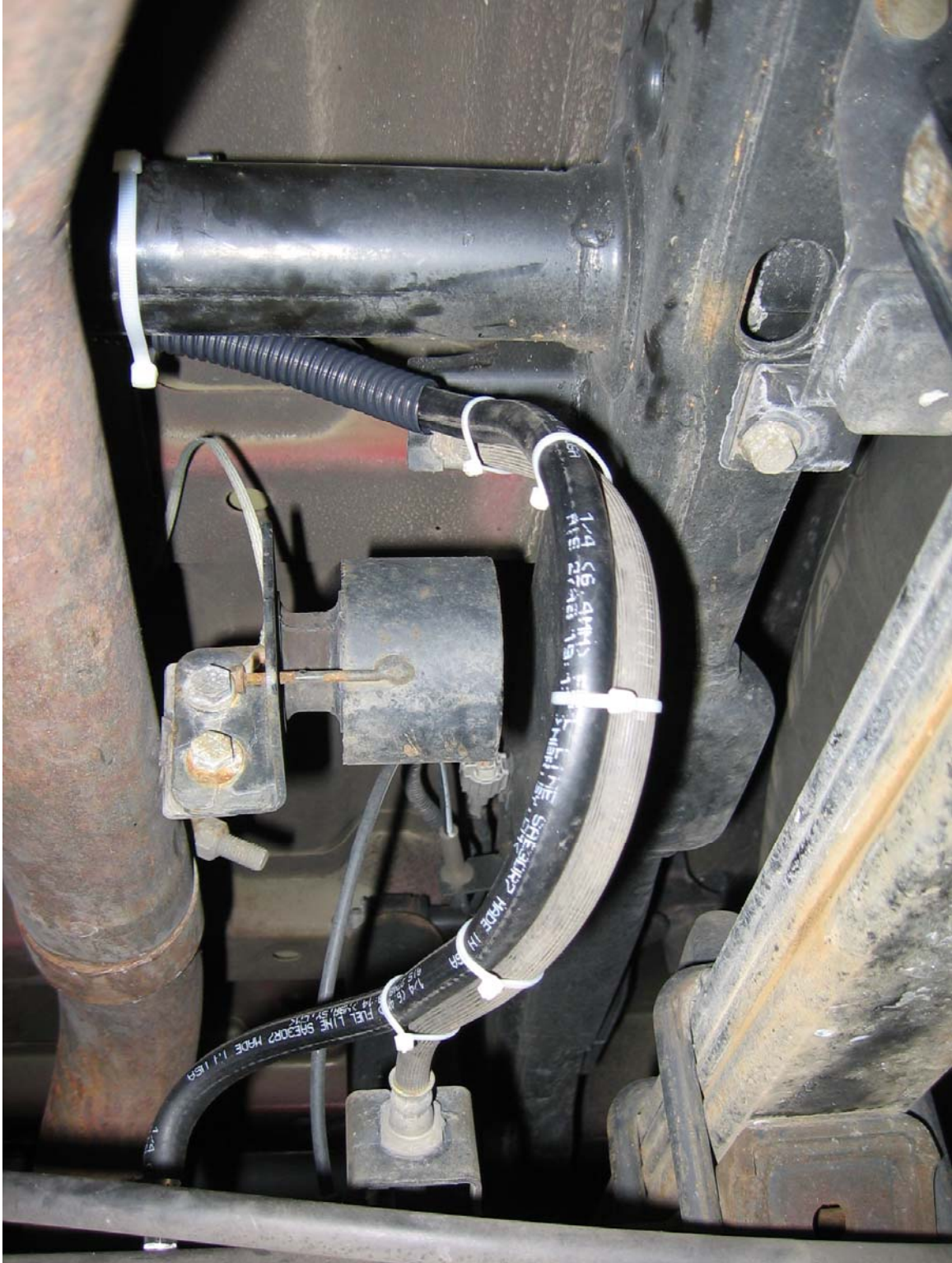
1. Compile and verify all parts are ready. See image to the right.
2. Clean dirt around stock axle vent and remove. It is important to prevent grit and dirt from falling into axle. See image of stock vent valve below.



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3. Determine desired routing path. Make sure to allow full axle movement (suspension travel) without causing excessive tension on hose. Also, keep hose securely fastened to prevent contact with exhaust.
 - a) I routed mine up the brake line, across the round cross member under the bed, and snapped it into a bracket that appears to have been made to snap a hose in place.
4. Determine cut lengths for hose and mark.
5. Layout all parts on a flat surface and assemble.
 - a) Square up all hose cut ends
 - b) Zip tie the hose to the inline filter
 - c) I used the SS mesh to create a barrier/screen to prevent pests from clogging the hose. I cut an appropriate length, wound it tight, and pressed it into the end of the hose. Then I zip tied it to compress the hose around the mesh.
 - d) Test the airflow through the whole assembly
6. Put Teflon tape on the fitting threads and install into the axle.
7. Place hose clamp over hose and slip onto fitting, route along desired path, and zip tie hose securely.
8. I also used split plastic tubing to help protect hose from exhaust heat and abrasion on cross-member.
9. Reference images below of final installation.





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