



Exhaust System Adjustment Guide
3" Turbo-Back & Cat-Back Exhaust Systems
2010 Volkswagen GTI MK.VI
Dual Rear Exit w/ Single 4.0" Tips / Side
FE100037 & CB100047

System Adjustment Guide for Installation of the APR MK VI GTI Turbo-Back & Cat-Back Exhaust Systems:

Note: This document is intended as a supplement to the Installation instructions included with the APR MK VI GTI turbo-back & cat-back systems.

A misalignment condition may be observed after the initial installation of the APR cat-back or turbo-back exhaust system for the Mark VI GTI. If the system is not adjusted properly, the right side exhaust tip may protrude excessively far out from the rear valence, and more of this tip will be exposed when compared to the left side exhaust tip. (See Fig. A)

Proper exhaust tip positioning and alignment can be achieved through the following adjustment process. This process requires having at least two people available; one person can adjust the pipe overlap, rotate, and hold components in place while the other person can tighten the clamps at the expansion joints.

1. Proper positioning of the tunnel muffler section:

The tunnel muffler section needs to be properly positioned to enable the remainder of the cat-back system to be installed correctly.

Procedure:

First, make sure that the catted midpipe section (for the turbo-back system) or the stock downpipe to APR cat-back adapter (for the cat-back system) are far enough forward in the vehicle to be able to properly position the tunnel muffler section.

A) For the turbo-back system, the catted midpipe section should be slid onto the upper downpipe section until the edge of the expansion is just short of touching the hanger mounting bracket. (See Fig. B)

B) For the cat-back system, make sure that the end of the stock downpipe is trimmed enough to allow for the tunnel muffler hangers to be properly positioned according to figures C through E. If this positioning cannot be achieved, then additional length should be taken out of the end of the stock downpipe.

Next, verify that both of the front tunnel muffler hangers, and the rear tunnel muffler hanger, are swung noticeably forward in the corresponding mounting grommets on the vehicle. (See Fig. C, D, & E) The front hanger grommet on the inside of the bend, as shown in figure D, should almost be touching the heat shielding material.



Fig. A

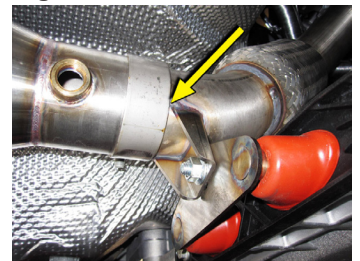


Fig. B

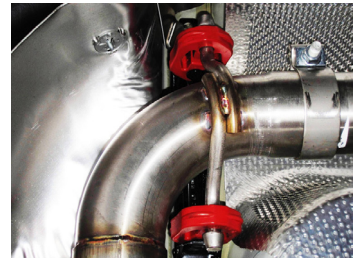


Fig. C

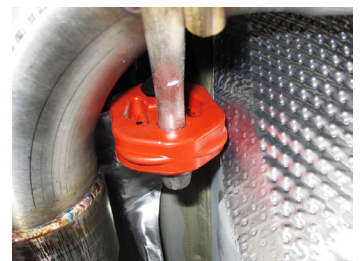


Fig. D



Fig. E



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Also, check that the tunnel muffler has proper clearance on both sides within the vehicle cavity. **(See Fig. F)** The flexibility of the upper sections of both the APR and the stock downpipes should allow for the tunnel muffler to be moved side-to-side as needed.

2. Proper positioning of the rear axle pipe section:

The correct position and rotation of the rear axle pipe section, which includes the right side rear hanger near the tip, is vital for getting both the rear muffler and the right side tip assembly properly adjusted. If the axle pipe inlet is positioned too far outward, the entire rear half of the cat-back system will be rotated clockwise (when viewed from above), which can cause the misalignment condition being addressed in this adjustment guide.

Procedure:

The rear axle pipe section can be moved by adjusting the amount of overlap at the inlet expansion, and by rotating the rear axle pipe section about the expansion joint. **(See Fig. G)**

First, the rear axle pipe section should be pushed almost fully onto the outlet of the tunnel muffler at the expansion joint, which will position this section more forward in the vehicle.

Next, the axle pipe rotation should be set so that the middle of the pipe before the "U" bend is parallel to the ground. **(See Fig. H)** The weight of the rear muffler will try to rotate the axle pipe counter-clockwise about the joint shown in figure G, and make the middle of the pipe slope down at an angle **(See Fig. I)**, which will result in everything else being improperly positioned. The rear muffler will likely need to be pushed upwards on the left side while pulling down on the rear axle pipe near the hanger on the right side in order to rotate this pipe clockwise about its inlet and into the proper position.

The right side rear hanger should be double checked at this time to be swung well forward in the corresponding mounting grommet on the vehicle. **(See Fig. J)** If it is only swung slightly forward in the grommet, then the axle pipe is not positioned correctly, **(See Fig. K)** and additional adjustments should be made according to the above steps until it is properly positioned.



Fig. F



Fig. G



Fig. H (Correct)



Fig. I (Incorrect)



Fig. J (Correct)



Fig. K (Incorrect)



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3. Proper positioning of the rear muffler section:

The correct position and rotation of the rear muffler section is needed to properly position the right side exhaust tip in the cutout in the rear valence, and to make sure there is adequate clearance between the right side tip pipe and the "U" bend in the axle pipe.

Procedure:

The rear muffler section can be moved by adjusting the amount of overlap at the inlet expansion, and by rotating the rear muffler section about the expansion joint. **(See Fig. L)**

First, the amount of overlap at the expansion joint where the rear muffler section fits onto the outlet of the axle pipe should be adjusted so that the right side exhaust tip is centered side to side in the cutout in the rear valence.

Next, the rear muffler rotation should be set so that there is adequate clearance (approx. a finger tip sized gap) between the tip pipe and the axle pipe. **(See Fig. M)** If the front of the rear muffler is rotated too far downwards, and the right side exhaust tip is too far upwards in the rear valence, then the tip pipe and the axle pipe may be contacting each other at this point **(See Fig. N)**, which will result in a potential rattling sound being made while the vehicle is running.

When the overlap and rotation of the rear muffler are both correctly adjusted, the tip will be properly positioned in the rear valence. **(See Fig. O)** If the right side tip sits too low when there is the proper amount of clearance between the tip pipe and the axle pipe, then the rear axle pipe **has not been rotated sufficiently clockwise at its inlet** and should be readjusted according to step two above.

The right side exhaust tip depth should be double checked at this time; the outer top edge of the tip should align with the edge of the rear valence when viewed from the inside as shown. **(See Fig. P)** If the tip is sticking out noticeably past the rear valence, then it is not positioned correctly, **(See Fig. Q)** and additional adjustments should be made according to the above steps until it is properly positioned.

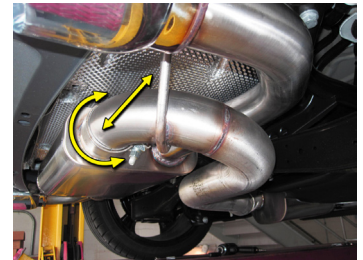


Fig. L



Fig. M (Correct)

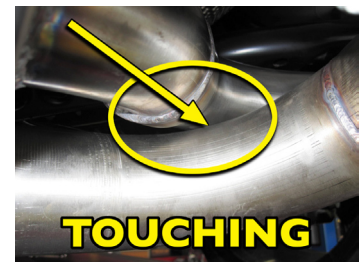


Fig. N (Incorrect)



Fig. O



Fig. P (Correct)



Fig. Q (Incorrect)



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4. Proper positioning of the left side tip pipe section:

The correct position and rotation of the left side tip pipe section is needed to properly position the left side exhaust tip in the cutout in the rear valence.

Procedure:

The left side tip pipe section can be moved by adjusting the amount of overlap at the inlet expansion, and by rotating the left side tip pipe section about the expansion joint. (See Fig. R)

First, the amount of overlap at the expansion joint where the left side tip pipe section fits onto the left side outlet of the rear muffler should be adjusted so that the left side exhaust tip is centered side to side in the cutout in the rear valence.

Next, the left side tip pipe rotation should be set so that the vertical gap between the left side exhaust tip and the rear valence is the same as it is for the right side exhaust tip positioned in step 3 above. When the overlap and rotation of the left side tip pipe are both correctly adjusted, the tip will be properly positioned in the rear valence. (See Fig. S)

Finally, the left side exhaust tip depth should be double checked at this time; the outer top edge of the tip should align with the edge of the rear valence when viewed from the inside as shown. (See Fig. T) Verify that the left side rear hanger is swung well forward in the corresponding mounting grommet on the vehicle as shown. (See Fig. U) The tip depth relative to the rear valence should now be equal between both the left and right side exhaust tips. (See Fig. P & T)

Proper adjustment of the APR Mark VI GTI cat-back or turbo-back system can be achieved by following the above steps of this adjustment guide in the proper sequence. Both exhaust tips should now look even and symmetric to each other in both the up and down and front to back directions, and should both be centered in the tip cutouts in the rear valence as shown. (See Fig. V & W)

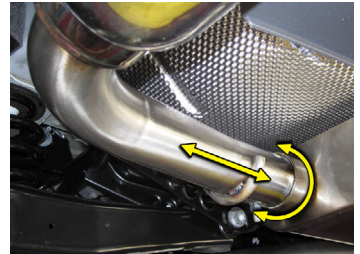


Fig. R



Fig. S

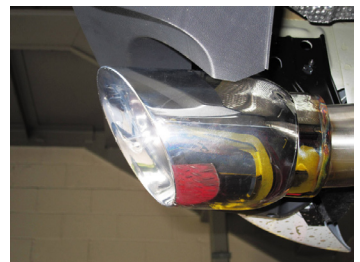


Fig. T



Fig. U



Fig. V



Fig. W