FAQ/Walkthrough for Installation of the APR MK V GTI Turbo Back Exhaust System:

Note: This document is intended as a supplement to the Installation instructions included with the APR MK V GTI turbo-back system.

1. **Q:** Why do I see a gap between some of the expanded joints and the pipes that fit inside of them, and will this cause a problem?

   A: The mandrel bending process causes some compression of the outside diameter of the tube, and an oval cross section of the tube, within and near the bent sections of pipe. When the pipes are fit together, the gap between the expanded pipe and the mating pipe can appear to larger than what it should be. This will not end up causing a problem, as the clamping process will align and seal the joint.

   Actions Needed: Install the clamp so that its edge is flush with the edge of the expanded pipe, and torque it down to 45 ft-lbs. This will compress the two pipes together and properly seal the joint. The profile of both pipes will be formed to each other as the clamp tightens the joint. **(For an example of this clamping effect, see Fig. A & B)**

Fig. A

Fig. B

2. **Q:** Why am I having an issue aligning the triangular downpipe hanger bracket to the mounting tab on the upper downpipe? How can I get the two parts to align properly?

   A: Following the proper installation sequence will allow the triangular hanger bracket to align with the mounting tab on the upper downpipe section. This process is outlined in detail in the system installation instructions. Here are a few additional pointers to compliment the instructions provided on the installation sheet.

   Actions Needed: The tab on the upper downpipe section may not appear to be aligned properly with the hanger bracket when it is first slid onto the turbo studs. This is because the whole assembly is sagging due to its own weight. **(See Fig. C & D)** Tightening at least three of the four nuts that hold the downpipe to the turbo flange will properly seat and position the flange and upper elbow portion of the downpipe (above the flex section). **(See Fig. E)** This will also slightly improve the alignment at the mounting tab. **(See Fig. F)** Also, there is some play in the OEM grommet bracket, which can be pushed upward or side to side to help the alignment of the downpipe tab to the hanger bracket. **(See Fig. G) MAKE SURE THAT THE GROMMET BRACKET IS NOT INSTALLED UPSIDE DOWN.**

(Continued on next page)

Next, note that the portion of the upper downpipe below the flex section can be moved both horizontally and vertically a significant amount. **(See Fig. H & I)** Simply move this lower section of the downpipe until the slotted hole in the tab aligns with the mating hole in the triangular hanger bracket. These two holes can be held in alignment using one hand. **(See Fig. J)** Next, loosely install the lower downpipe section (with the catalytic converter), which will help keep these two holes aligned. **(See Fig. K & L)** At this time, it should be relatively easy to install the M10 nut and bolt through the tab slot and the hole on the hanger bracket. **(See Fig. M)** These fasteners should then be loosely tightened to secure this joint, but not yet fully tightened. The final tightening of this joint should be one of the last things that is done on the install of the whole system. Note that once the downpipe tab is anchored to the hanger bracket, the opposite end of the lower downpipe section may favor the driver side of the vehicle. **(See Fig. N)** This is not an issue, as the whole downpipe below the flex section will pivot around the tab/hanger bracket joint as the flex section changes shape to accommodate the movement. **(See Fig. O & P)** Mounting the tunnel muffler section of the exhaust to the end of the downpipe will properly position and align the rest of the downpipe. Once again, there is a large amount of adjustment in the positioning of the downpipe due to the flex section.

Fig. C

Fig. D

Fig. E

Fig. F

Fig. G

Fig. H

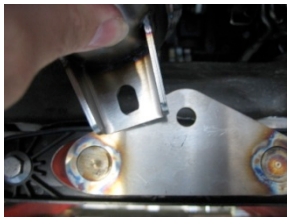

Fig. I

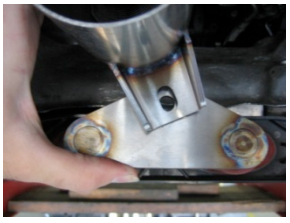

Fig. J

Fig. K

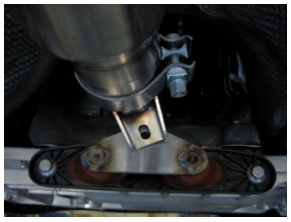

Fig. L

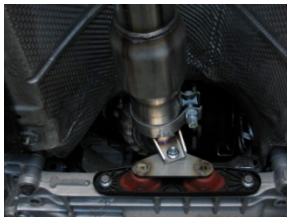

Fig. M

Fig. N

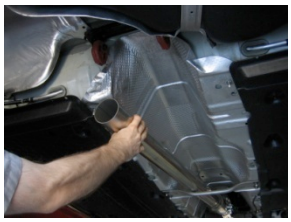

Fig. O

Fig. P

3. Q: How can I properly align the tips to the cutout in the rear bumper cover?

A: There is a great deal of adjustment in the positioning of the rear muffler due to the clamp joint location just in front of the inlet to the rear muffler. Here are some examples of how the position and angle of the tips can be adjusted to suit the customer's liking.

Actions Needed: To adjust the vertical position of the tips, just rotate the muffler about the clamp joint at the muffler inlet either up or down to the desired height or tip clearance from the top of the bumper cutout. **(See Fig. Q & R)** To adjust the side to side angle of the tips, either push upwards on the tip side of the rear muffler while pulling down on the inlet side of the rear muffler, or vice versa. **(See Fig. S & T)** To adjust the horizontal position of the tips, just slide the rear muffler either right or left by adjusting the amount of overlap at the clamp joint at the inlet to the rear muffler. **(See Fig. U & V)** The combination of these three adjustments should allow for proper position and orientation of the tips in the bumper cutout. **(See Fig. W)** Note that the tips are designed to exit the bumper cutout at a slight angle when viewed from the side of the vehicle. **(See Fig. X)** The combination of this 1.5 degree upward angle with the .500 inch of tip stagger may make the rear edge of the inside tip look very slightly higher than the outside tip. This is normal and a result of the required geometry needed to position this system within the vehicle envelope without compromising clearances.

NOTE: The upward angle of the tips at the exit is the same as the previous generation of the APR MK V GTI exhaust system. The old system, however, did not have any front to rear tip stagger, which made the outside tip stick out noticeably more than the inside tip when viewed from above. Our design philosophy is that the proper tip stagger is much more aesthetically noticeable than an insignificant amount of difference in vertical position.

Fig. Q

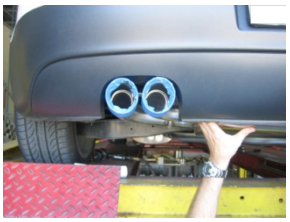

Fig. R

Fig. S

Fig. T

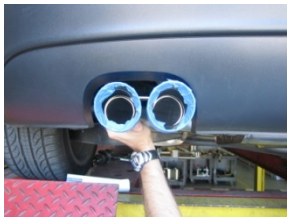

Fig. U

Fig. V

Fig. W

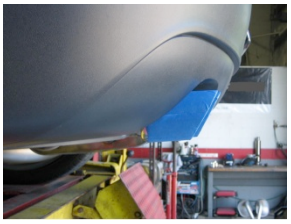

Fig. X