



GM A-Body Manifold Back System Instructions

Buick 400, 430, 455
Pontiac Ram Air III / HO
Olds 442 w/W & Z
Chevy Big & Small Block

For all '64 - '77 A-Body Vehicles

Included with this kit are the following:

2 - Downpipes

1 - Balance Tube Kit A
(unless Kit B is substituted)

2 - Headpipes

2 - Tailpipes

2 - Tailpipe Hanger Assemblies

8 - U-Bolt Clamps

Pipes which mount to the Exhaust Manifold. Includes 2 mounting flanges as is required except for the Pontiac Ram Air/HO Downpipes which will require the purchase of aftermarket repros for 2.5" tubing OR 2.25" originals can be honed out.

1 piece of straight tubing 22" long. If you substituted for Kit B, then it consists of 1 piece 16" long (expanded on one end), 1 piece 8" long and 1 SS Band Clamp.

Pipes which come from mufflers forward to meet the Downpipes.

Pipes which go over rear end and exit under the bumper with either a Turn-Down exit or Straight Exit for Tips.

Appropriate Muffler and Tailpipe hangers.

U-Bolt Clamps for securing system together and hanging. Zinc coated for extra long life.



The above layout is that of an A-Body, however the G-Body system is the same except for the tailpipes and an additional short pipe (adapter) in front of the mufflers.

NOTE: To minimize problems and inconvenience on your end, we recommend you do some measuring, etc., before "tearing off" the old system. This way, if you have one of the exceptions or something you've not anticipated, you will not have 'down time' if your vehicle is a daily driver. This will enable you to obtain the necessary parts to complete the installation.

MUFFLER NOTE: Muffler length is generally limited to a maximum of 20" case length. Walker, MagnaFlow and Flowmaster mufflers work equally well, however, the mufflers used need to be offset in and offset out on opposite sides.

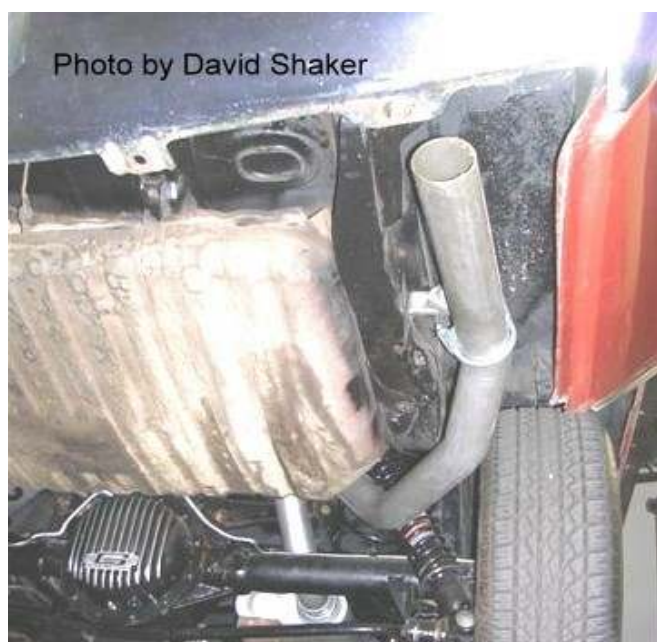


Photo by Phillip Miller
Passenger Side Buick Downpipe

Olds and Buick BB will have 1 2-Bolt Flange & 1 3-Bolt



Notice the Hanger: In this photo it is straight out away from the frame. You may "angle" it downwards or upwards some if necessary. Or you can move the mounting location to the frame up or down. Below the rubber part is angling down somewhat.



INSTALLATION:

1. First begin by reading the complete instructions to get a good overview.
2. Remember, safety first. Be sure vehicle is secure and that pipes can cut (fingers and hands).
3. Compare hardware with the list above and photos to be sure you have everything before beginning.
4. Begin by mounting the Downpipes to the Exhaust Manifolds. If you are using the Ram Air/Ho manifold flanges that originally came with the Ram Air/HO Manifold, because of their overall length, flexibility in positioning the Downpipe is unfortunately limited. Occasionally this will mean "tweaking" the Downpipe just a little to get the proper angle in positioning the end of the DownPipe relative to the Transmission Crossmember. The front of the Head Pipe will eventually mount to the end of the DownPipe.
5. **Now let's begin with the Tailpipes.** They must clear the suspension and the rear end, so they must be *positioned first*. In some situations it may be possible to use existing hangers, otherwise use what is provided with the kit. You will need to position the hangers for the mufflers directly above the rear of the muffler spout from the frame brace If your vehicle utilizes 2-Piece Tailpipes OR you will be installing tips, then either mount the hanger where they join OR shorten the main tailpipe so the joint will be where the hanger is located. Do Not shorten so much that the end of the Tailpipe Extension (or Tip) will not reach back far enough to obtain the look you are after.
6. **Tip Installation:** As you are placing the Tailpipe, keep in mind alignment so the tip will exit in the proper location.
7. Once you are satisfied with the placement of the Tailpipes, then tentatively secure the location by gently tightening necessary bolts—not too tight though as you might need to come back and "fine tune" fit.
8. Mount the Mufflers onto the front of the Tailpipes.

IMPORTANT:

Position Tailpipes BEFORE mounting the Hangers. Let the Tailpipes DETERMINE the Hanger location.





(Note placement of the bottom of the mufflers relative to the bottom of the differential in the photo on the next page.

9. With mufflers in place mount the Headpipes onto the ends of the Downpipes. When trimming you may need to trim the end of one or both Downpipes to keep things symmetrical and best overall fit. Remember, measure and re-measure, as it's easier to trim a little more off than to add because of trimming too much.
10. Fine-tune the fit. Once you have trimmed the Headpipes for proper fit, then begin "fine tuning" the overall fit of the system. Do not fully tighten clamps until the very last.



Photo by Phillip Miller



Notice bottom of Mufflers are a little lower than bottom of differential.

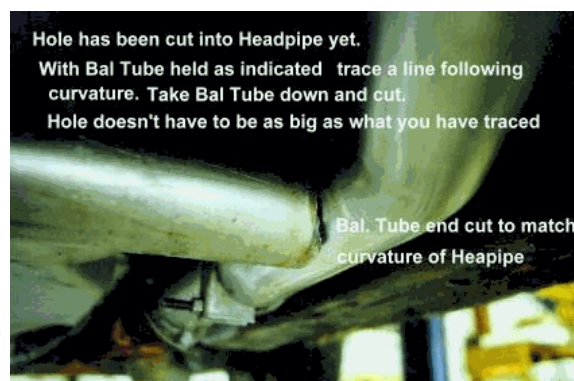
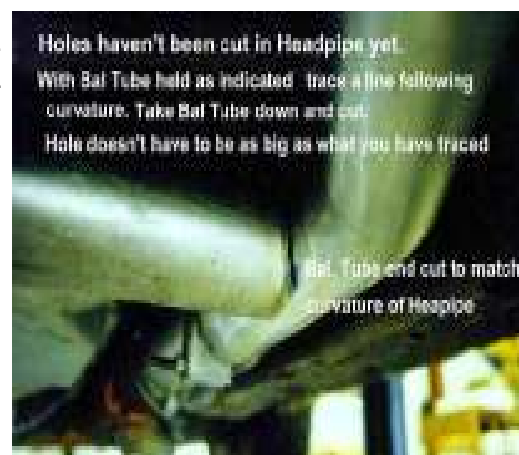


11. Check for leaks upon completion. Normally good sealing occurs with clamp type installations. However, occasionally we run into a situation where proper sealing is difficult to obtain. If this is the case, first try tightening the clamps a little more. However, with a lot of tightening, it is possible for the pipe to begin crimping or the U-Bolt to "break." OR, try relocating the clamp forward or backward from its present position and re-tightening. Another possibility is trying "muffler cement" which can be purchased from any muffler shop or auto parts outlet. If there is excessive clearance between the two pipes or muffler and pipe, then it might be necessary to cut one or more slots in the outer pipe to allow it to compress further for better sealing. Try to rotate clamps so the bolt part is not pointing downward for a cleaner looking installation.

12. Balance Tube Installation:

This may be a project for a professional if you don't have welding equipment handy or the welding skills or a buddy with such.

Both kits (A & B) are installed the same way. It is the only part of our system which needs to be welded and luckily this is done last after everything else is in place. We recommend mounting it immediately after the transmission cross-member.

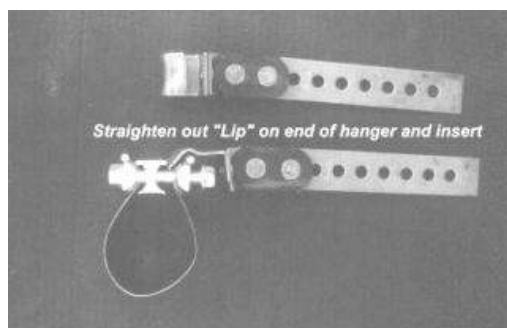




13. Now that you have determined where to mount it, you need to determine the length. Remember to allow for the curvature of the Headpipes, as you will want to have some curvature on each end of the Balance Tube. (With Kit B, first install the short piece of pipe into the longer piece and may be hold together with the Band Clamp—now you know the overall length and can determine everything just as if it were Kit A). Remember, better to cut too long than too short.

14. Now cut the holes in the side of the Headpipes. They DO NOT necessarily have to be as big a diameter as the size of the Balance Tube. Do not allow parts of the Balance Tube to protrude into the Headpipe as this will impede flow and be counterproductive. IF hole is cut a little too big OR if Balance Tube is cut a little short, you can "Fill Weld" in the gaps to make fit. It will be a good idea to paint the welds with some Hi-Temp Aluminized Paint as this will help protect it from rust.

Caution: When it comes time to "bust off" the engine after installation of the system, it is very likely a good bit of smoke will come from the exhaust for a short time as the oils used in lubricating the mandrel will be burning off.



Stainless Steel Band Clamp Upgrade Installation:

If you are using Band Clamps, you will need to "flatten out" the little lip that is always on the end of any hanger. This allows you to slip the end of the hanger into or between the bars of the Band Clamp as pictured here. The following photos show how to handle attaching most any hanger or bracket to a Band Type Clamp.

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