

#### Please take time to read and understand these installation instructions.

APR recommends that installation of this system be performed by a qualified service center or professional muffler installer who has the necessary equipment, tools and experienced personnel. However, if you decide to perform this install, the use of a hoist and an additional person will be required.

CAUTION: Never work on a hot exhaust system. Allow time for the vehicle to cool. Always wear eye protection when working under a vehicle.

Please confirm that all parts are present before beginning the factory exhaust system removal and APR exhaust system installation.

# **Bill of Materials:**

- 1- Tunnel Muffler Assembly
- 2- Rear Muffler Assembly
- 3- Left Side Tip Pipe Assembly
- 4- Right Side Tip Pipe Assembly
- 5- 3" Cat-Back Adapter
- 6- Axle Pipe Assembly
- 7- Latex Gloves
- 8- Hardware Kit
- 9- Anti-Seize Lubricant Packet

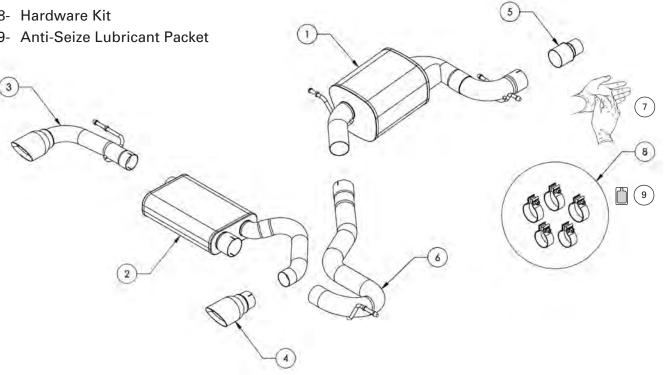
## **Recommended Tools:**

- Safety Glasses
- 13mm socket and ratchet
- 15mm socket
- Grommet pullers

- Soap & water solution
- Torque wrench

6 8

Long Extension



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### **Removal of Stock System:**

- 1. Using a 13mm socket and ratchet, loosen both nuts on the factory cat-back to downpipe clamp. (See Fig. A)
- 2. Using grommet pullers or a similar device, remove the grommets from the two front hangers near the front of the cat-back section. (See Fig. B)

**NOTE:** The use of a soapy water solution may aid in the removal and later installation of the hangers in the rubber isolators.

- 3. Using grommet pullers or a similar device, remove the hanger from the grommet at the rear of the factory tunnel muffler. (See Fig. C)
- Using a 13mm socket and a long extension, unbolt the right side rear muffler hanger mount from the vehicle by removing the two retaining bolts. (See Fig. D)
- Using grommet pullers or a similar device, remove the left side hanger from the last grommet supporting the factory rear muffler. (See Fig. E) Carefully slide the factory rear section back from the clamping location to free it from the vehicle.
- 6. With the factory rear section on the ground, remove the right side rear muffler hanger from the rubber isolator on the hanger mount using a grommet puller or a similar device. (See Fig. F) Set aside both the rear muffler hanger mount and the retaining bolts to be reused during the installation process.
- (Optional) If this system will be mounted to a factory downpipe, remove the rear tunnel brace by taking out the four retaining nuts, using a 13mm socket and ratchet. (See Fig. G) The factory downpipe will most likely droop without the rear tunnel brace installed. This completes the removal process.



FIG. A



FIG. B



FIG. C



FIG. D



FIG. E





FIG. G

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FIG. F



## Installation of APR Exhaust System:

NOTE: Apply the anti-seize lubricant (supplied) to the threads ONLY of all the clamps and flange bolts. Failure to follow this procedure can cause nuts to seize on clamps and potentially destroy threads. After applying anti-seize lubricant, be sure to thoroughly clean hands as lubricant will tarnish stainless steel.

**NOTE:** Align all clamps so that the center of the clamp bolt is 90 degrees from the notch in the pipe (See Fig. A)

All clamps should be tightened using a properly calibrated Torque Wrench. Using an air impact gun will damage the clamp and reduce its ability to effectively seal the joint. It may also cause the joint to separate thereby causing damage to your exhaust system and your vehicle.

 Remove all exhaust system components from the shipping carton, including the three 3" clamps, the two 2.5" clamps and the 3" Cat-Back adapter, which allows this system to be connected to the factory downpipe (If necessary).

If connecting to the factory downpipe: trim the rear of the factory downpipe to create space to fit in the 3" cat-back adapter. Reuse the factory downpipe to cat-back clamp to connect the small end of the adapter to the trimmed factory downpipe, and tighten the clamp nuts with a 13mm socket and ratchet. Torque the clamp nuts to factory specs. Next, reinstall the factory rear tunnel brace using the four retaining nuts, and tighten using a 13mm socket and ratchet. Torque nuts to 18 ft-lbs (24 N-m). (See Fig. B) The APR tunnel muffler assembly will mount to the larger end of the 3" cat-back adapter, and is secured with one of the 3" clamps included with this system (See step 2).

**If connecting to an aftermarket 3" downpipe:** do not use the 3" cat-back adapter. Your APR system will mount directly to 3"diameter pipe. Note that additional fabrication may be necessary to adjust the length or position of any 3" downpipe (other than the APR downpipe) being used to properly mount to this APR cat-back system.

2. Locate the APR tunnel muffler assembly, and a 3" clamp. Properly align the clamp on the tunnel muffler inlet, and slide it over the end of the 3" downpipe (or 3" catback adapter – see above note). Insert the hangers into the corresponding rubber grommets, starting with the two front hangers, and then moving to the hanger just behind the tunnel muffler. (See Fig. C & D) A soapy water solution will aid in the installation process of the hangers. Snugly tighten the 3" clamp to retain the tunnel muffler section.

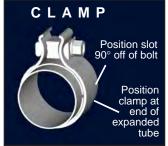


FIG. A



FIG. B



FIG. C



FIG. D



3. Locate the APR axle pipe assembly, another 3" clamp, and the right side rear muffler hanger mount with its retaining bolts set aside in step 6 of the catback removal process. Insert the axle pipe hanger into the right side hanger mount, making sure that the mount is oriented as shown. (See Fig. E) Next, properly align the clamp on the axle pipe inlet, and slide it over the end of the tunnel muffler assembly. (See Fig. F) Make sure that the axle pipe is positioned so that the right side hanger mount is both below and parallel to its mounting holes in the chassis (See Fig. G), and then snugly tighten the 3" clamp to retain the axle pipe section. (See Fig. H) Do not bolt the hanger mount to the chassis at this time.

NOTE: The rear muffler installation is difficult to perform without any assistance, since the rear of the axle pipe has to be left un-mounted and drooping down while the right side tip pipe is moved over the top of it. We recommend having an assistant available to help position both the axle pipe and the rear muffler assembly during this process.

- 4. Locate the APR rear muffler assembly, and the last 3" clamp. Properly align the clamp on the rear muffler inlet. Next, move the tip pipe over and around the axle pipe as shown (See Fig. I), and then slide the rear muffler inlet over the end of the axle pipe assembly. While holding the rear muffler up so that the right side hanger mount is touching the chassis, align the hanger mount with the chassis mounting holes, and secure with the two bolts retained from the removal process using a 13mm socket and ratchet. (See Fig. J) Torque to 18 ft-lbs (24 N-m).
- 5. Locate the APR right side tip assembly, and a 2.5" clamp. Properly align the clamp on the tip inlet, and slide the tip assembly onto the end of the right side tip pipe. While holding the right side tip in place, snugly tighten the 2.5" clamp to retain the tip assembly. (See Fig. K)



FIG. E



FIG. F



FIG. G



FIG. H



FIG. I





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- 6. Adjust the amount of overlap at the rear muffler clamp joint, and the rotation of the rear muffler assembly until the gap between the right side tip and the rear bumper cover looks even all around. (See Fig. L) Verify that there is at least 1/4" (or a fingertip) clearance between the right side tip pipe and the axle pipe as shown. (See Fig. M) While holding both the rear muffler and axle pipe in place, snugly tighten the 3" clamp to retain the rear muffler section. (See Fig. N)
- Locate the APR left side tip assembly, and the last 2.5" clamp. Properly align the clamp on the left side tip pipe inlet, and then insert the tip pipe hanger into the left side hanger mount. (See Fig. O) Slide the tip pipe onto the end of the rear muffler assembly. Adjust the amount of overlap at the clamp joint, and the rotation of the tip pipe assembly until the gap between the left side tip and the rear bumper cover looks even all around. (See Fig. P) While holding the tip in place, snugly tighten the 2.5" clamp to retain the tip assembly. (See Fig. Q)
- 8. Visually inspect the exhaust system position, tip alignment, clamp orientation, and exhaust pipe clearance. Make any necessary adjustments at the five slip joints.
- 9. When the exhaust system is in the desired location, tighten the nuts on the clamps. Torque nuts to 45 ft-lbs (61 N-m).
- **10.** It is **STRONGLY SUGGESTED** that all clamps be checked and re-tightened (if necessary) to the recommended torque after initial road testing of the vehicle, as thermal cycling has occurred on the system. Please wait until system has fully cooled to perform this step.



FIG. L



FIG. P



FIG. M



FIG. Q



FIG. N

FIG. O

**NOTE:** During cold weather start-ups, you may experience an exhaust sound that is deeper and louder in tone than usual. This is temporary and will diminish to normal levels once your engine has reached its normal operating temperature.

**NOTE:** Immediately following the installation of your exhaust system, you may experience a trace of smoke after initial start-up. DO NOT be alarmed. The smoke is caused by the burning of a small amount of forming oil residue used in the manufacturing process.

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