



## 2017-2021 Dodge Challenger R/T & T/A 5.7L-V8 Cat-Back 3" Exhaust System BH2382 w/ Muffler w/ AEV delete (no tips)



**Note: Reuse your factory OEM exhaust tips.**

### INSTALLATION INSTRUCTIONS

Thank you for making HOOKER HEADERS your choice in a high-performance exhaust system. Extensive dyno/track testing has enabled HOOKER to offer the most advanced design in exhaust systems. The installation, while not complex, will take a certain amount of time. However, the additional horsepower and improved performance will more than justify your efforts. Proper installation and maintenance will ensure long life and maximum performance from your HOOKER BLACKHEART exhaust system.

#### **BEFORE STARTING:**

Your vehicle must be raised a minimum of 18 inches. A floor hoist is ideal. If no hoist is available, we strongly urge the use of axle stands as a safety measure. **Please read and understand these instructions and disclaimer in their entirety before attempting installation.**

**CAUTION! WORK ONLY ON A LEVEL SURFACE. USE JACKS /JACK STANDS OF SUFFICIENT CAPACITY TO LIFT AND SUPPORT YOUR VEHICLE. NEVER WORK UNDER A VEHICLE SUPPORTED BY A FLOOR OR BUMPER JACK.**

#### **INCLUDED HARDWARE:**

Accessory Pack Contents		
P/N	Qty.	Description
556R28	2	2-3/4" Band Clamps
556R23	6	3" Band Clamps
556R41	2	Swivel Seal Clamp
539R31	6	10-32 x 3/4 Coupling Nut
505R83	6	10-32 x 3/4 Flange Bolt
505R84	6	10-32 x 1/4 Flange Bolt
546R21	6	5mm x 10mm Flat Washer

## INSTALLATION:

1. Place the vehicle on flat a surface, set the parking brake, and block the front wheels.
2. **Disconnect the negative terminal of the battery.**
3. Lift the vehicle and support with jack stands.

**CAUTION!** Never support a vehicle with a floor or bumper jack.

## REMOVING THE OEM EXHAUST:

1. Support the exhaust at both ends.
2. Support the left and right muffler assembly. Remove the bolts at the isolator brackets on the left and right tailpipes. Remove the bolts at the isolator brackets on the left and right differential hangers (**Figure 1**).

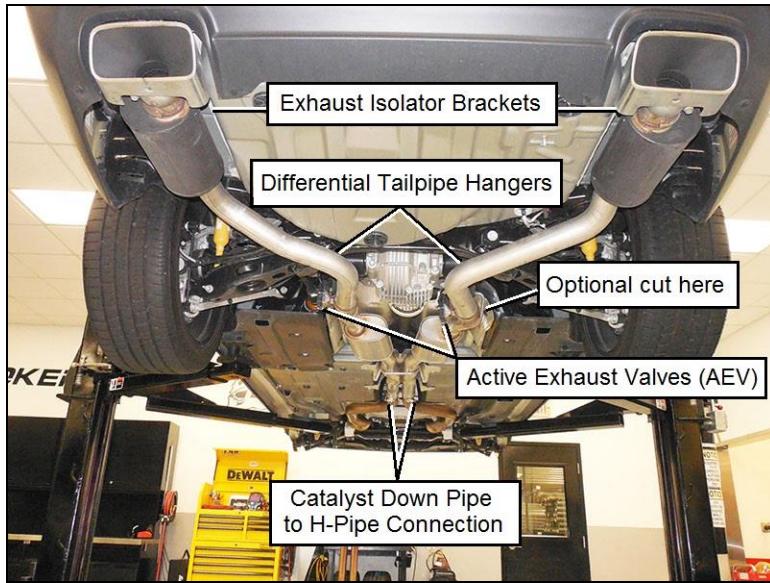


Figure 1

3. Loosen the clamps on the H-Pipe where it connects to the catalytic converter down pipes and spray the connection with WD-40® (**Figure 1**).
4. Unplug the connectors from the left and right Active Exhaust Valve actuator. Remove the 8mm nuts on each actuator and carefully remove the actuator from the tailpipe. Do not lose the drive spring, as it will be reused.
5. Lower the mufflers to clear the bumper. Remove the H-pipe and exhaust from the catalyst down pipes.

**NOTE:** Cutting the tailpipes at the resonator will make removal much less difficult, but is not necessary (**Figure 1**).

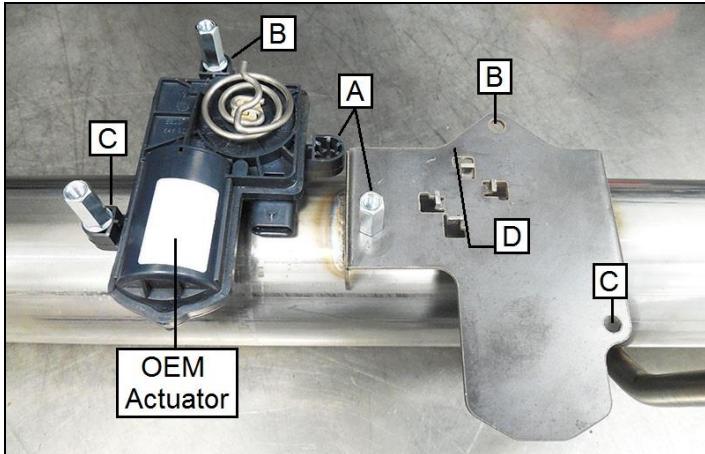
6. Take a picture of the tailpipe isolator assemblies before they are removed from the tailpipes for reference later. Remove the isolator assemblies from the factory exhaust. Keep the isolator assemblies separated (left and right) as they are different.

## INSTALLATION OF YOUR HOOKER BLACKHEART CAT-BACK EXHAUST:

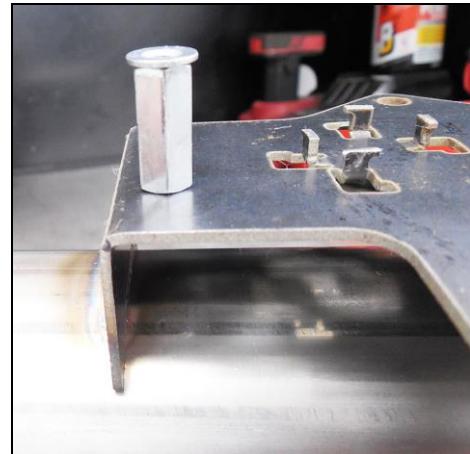
### Installing the AEV actuator on to the Blackheart tailpipe:

1. Place the Right tailpipe on the work bench with the AEV mounting bracket facing up (**Figure 2**).
2. Install the (x2) coupling nuts and washers onto the AEV actuator positions **B** and **C** with the 10-32 x 3/4" flange bolts (**Figure 2**). Be sure to install the washer between the actuator and the coupling nut. Do not over tighten the bolts, as the actuator case is plastic.
3. Install the third coupling nut onto the actuator mounting plate (position **A**) using a 10-32 x 1/4" flange bolt. Install the bolt from the back side of the bracket, as shown in **Figure 2**.

4. Install the coupler spring on to the actuator, making sure the drive spring is centered and firmly locked into the drive on the actuator (**Figure 2**).
5. Place a washer on to the top of the coupling nut installed on the mounting plate (**Figure 3**).
6. Place the actuator on to the mounting plate and align positions **A**, **B**, and **C**. Make sure the drive spring wire is located between the raised tabs on the mounting plate (**Figure 2** reference line **D**). Install the 10-32 x 3/4 flange bolt into position **A** on the actuator and into the washer and coupler nut previously installed on to the mounting plate. Be sure the washer is installed.
7. Align positions **B** and **C** by rotating the actuator clockwise and install the (x2) remaining 10-32 x1/4 flange bolts from the back side of the plate. **NOTE:** There will be a small amount of preload on the spring as you rotate the actuator into position when the spring contacts the raised tabs on the mounting plate. Do not force the actuator into position or you will damage the drive on the actuator. If more than a slight preload is required to align the bolt holes, re-check the spring coupler assembly for incorrect alignment.

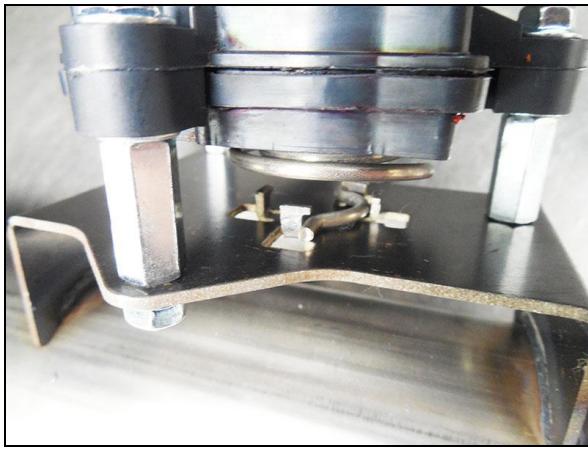


**Figure 2**



**Figure 3**

8. Check the alignment of the spring coupler after all the bolts have been installed, the drive spring needs to be positioned correctly between the raised tabs allowing 90 degrees of actuator rotation. This will simulate the amount of valve action on the factory AEV assembly. If the drive spring is positioned incorrectly (or missing), the actuator will not rotate through its correct range of motion and the CHECK ENGINE light will illuminate. Reference **Figure 4** for correct drive spring positioning.
9. Repeat the actuator installation procedure for the Left tailpipe.
10. Reference **Figure 5** for installed AEV actuator.



**Figure 4**



**Figure 5**

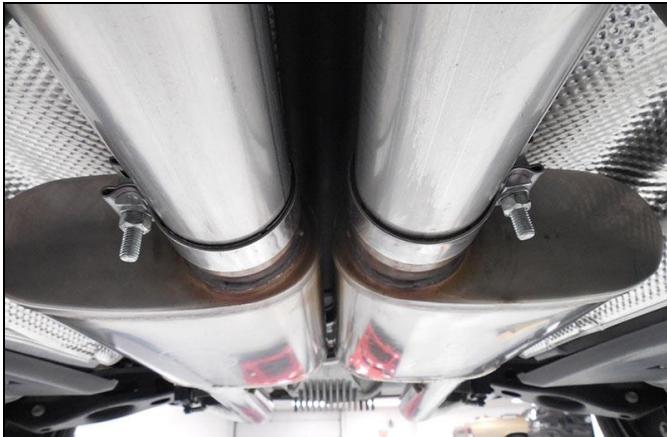
## **EXHAUST INSTALLATION:**

1. Inspect the exhaust hanger isolators and any OEM hardware to be reused. Replace, if necessary.
2. Install the 2-3/4" band clamps on to the (x2) catalytic converter down pipes (bolt facing outward and on the bottom). See **Figure 6**.

3. Install the **H-pipe** on to the catalytic converter down pipes. Spray the down pipes with WD-40® or equivalent to ease installation. Align the clamps at the bottom of the pipe with the bolt facing out. Tighten the clamps to allow for adjustment (**Figure 6**). Support the H-pipe to prevent damage to the catalytic converter down pipes.
4. Install a supplied 3" band clamp over each leg of the H-pipe outlet (bolt outside and nut down). See **Figure 7**.
5. Install the **Mufflers** on to the H-pipe. Align and tighten the clamps to allow for adjustment (**Figure 7**).



**Figure 6**



**Figure 7**



**Figure 8**

6. Install a supplied 3" band clamp over each muffler (bolt inside and nut down). See **Figure 8**.
7. Spray the Right isolators with WD-40® or equivalent and install the isolators on the tailpipe. Refer to pictures for proper orientation of the isolator assemblies before installation. Install the right side tailpipe into the muffler. Rotate the tailpipe up. Install the bolts for the tailpipe hangers and tighten to specification. Install the differential tailpipe hanger. Tighten the clamps at the muffler to allow for adjustment.
8. Spray the Left isolators with WD-40® or equivalent and install the isolators on the tailpipe. Refer to pictures for proper orientation of the isolator assemblies before installation. Install the left side tailpipe into the muffler. Rotate the tailpipe up. Install the bolts for the tailpipe hangers and tighten to specification. Install the differential tailpipe hanger. Tighten the clamps at the muffler to allow for adjustment.
9. Set the actuator to CV boot clearance by measuring the distance from the AEV bracket top edge straight across to the CV boot and verify there is a minimum of 1-1/2" in clearance (1-3/4" preferred). This will prevent the actuator from contacting the boot when the exhaust grows as it get hot (**Figure 9**).
10. Plug in the connector on each AEV actuator and slide the lock forward.
11. Install a supplied 3" band clamp over each tailpipe (bolt outside nut down). See **Figure 10**.
12. Install the supplied adapter to the OEM tip using the supplied swivel seal clamp. Tighten the clamp to allow for adjustment. Install the **Left and Right O.E.** tip assembly on to the tailpipe. Position the clamps. Align the tips and tighten the clamps (**Figure 10**).

13. Check all the hardware and the connection points for proper installation. Adjust and tighten all clamps starting at the front and working towards the tailpipes.
14. Remove the jack stands and lower the car. Connect the battery and remove the wheel blocks.
15. Start the vehicle and check for leaks and loose hardware.
16. Check all hardware again after the first 150 miles of driving.

**NOTE: It is normal for the Blackheart Cat-Back Exhaust System to emit smoke for the first few minutes during break-in period.**

Enjoy your Blackheart Exhaust!

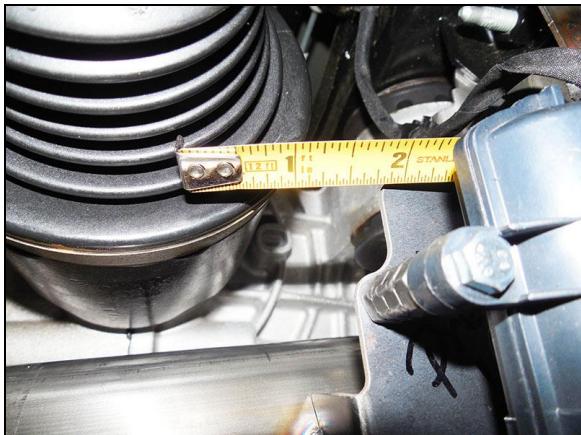
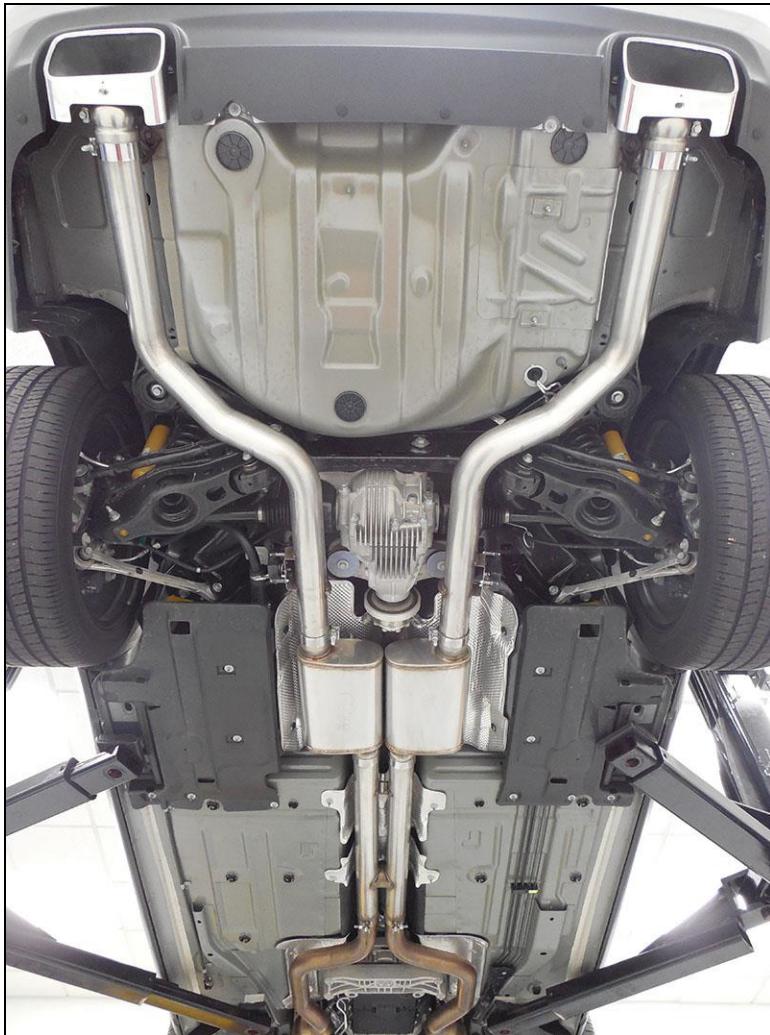


Figure 9



Figure 10



**Figure 11**

**Technical Support: 1-866-464-6553**

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