



## 1970-1974 E-Body Mopar GEN3 HEMI Swap

P/N: BH23114 – 2.5” 304 Stainless Steel Exhaust System

P/N: BH23116 – 3” 304 Stainless Steel Exhaust System



### Installation Instructions

Thank you for choosing to use HOOKER™ engine swap Exhaust Systems as part of your GEN3 HEMI Swap project. These Exhaust Systems are part of the most comprehensively engineered system of mounting components, headers and exhaust systems available for this application. Please read these instructions thoroughly before attempting installation.

#### **IMPORTANT:**

This exhaust system is designed for use with under-axle sway bar assemblies and may not work with some over-axle sway bar systems.

#### **COMPATIBILITY INFORMATION:**

These exhaust systems were specifically designed to be installed with **Hooker Blackheart** HEMI swap engine and transmission mounting components and headers for this same application. Attempts to install these exhaust systems with any other type or combination of engine and transmission mounting components may cause them to not provide their intended ground or vehicle component clearances.

#### **Supporting Hooker Blackheart parts required for use with BH23114 & BH23116 exhaust systems:**

Hooker Blackheart Headers – BH2358

Engine mounting Brackets – BHS566

Transmission Crossmember – BHS567

Transmission Adaptor Plate – BHS568 (727), BHS569 (NAG1), BHS570 (8HP70), BHS591 (8HP90), BHS592 (Tremec GM TKX)

Transmission Mount – 71223029HKR (or any standard 2-bolt Chevy Mount of the same design)

## PARTS LIST:

Parts List	
Qty.	Description
1	Left Header Link Pipe
1	Right Header Link Pipe
1	X-Pipe
2	Mufflers
1	Left Over-Axle Pipe
1	Left Tailpipe Adapter
1	Right Over-Axle Pipe
1	Right Tailpipe Adapter
2	Left and right Tailpipe
1	Left R/T Style Tip
1	Right R/T Style Tip

Accessory Pack Contents	
Qty.	Description
4	Exhaust Couplers
10	2.5 or 3" Band Clamps
4	Rubber Exhaust Isolators
2	Muffler Hanger Brackets
2	Tailpipe Hanger Brackets
2	1/2" x 1.75" Flanged Hex Bolt
2	1/2" Lock Nut
2	1/2" Flat Washer
2	7/16-20 x 1.5" Hex Bolt
2	7/16-20 Nylock Nut
5	1/4-20 x 1" Thread Cutter Bolt
10	1/2" Hanger Rod Clips
2	Hooker Blackheart Decals
1	199R12239 Instruction sheet

## TOOLS NEEDED:

3/8" Standard Socket set to 7/8"
15mm Deep Socket
Drill
13/64 Drill Bit
Center Punch

## INSTALLATION:

These instructions assume the engine, transmission, and BH2358 headers are installed.

### **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.**

1. Install one 3" exhaust coupler onto each header collector.
2. Align the Left (driver's) and Right (passenger's) header link pipe with the straight end of the pipe with the least amount of bend to the header collector. The end with more bend will connect to the X-pipe. Even though the pipes look very similar, they will only install correctly one way.
3. Align the 3" exhaust coupler with a 50-50 split over the header collector and the header link pipe and tighten the coupler to allow for adjustment of the link pipe (**Figure 1**).
4. Install a 2.5" or 3" exhaust coupler (depending on the kit you have) on to the outlet of each header link pipe.
5. Install the X-pipe assembly and align the X-pipe inlet to the header link pipe. Support the X-pipe at both ends.

**NOTE:** The X-pipe should be installed with the longer leg of the X-pipe to the passenger's side muffler.

6. Slide the couplers from the header link pipe on to the X-pipe inlet. Align with a 50-50 split between the header link pipe and the X-pipe. Tighten to allow for adjustment. Keep the X pipe supported.
7. Align the header link pipes and X-pipe for adequate clearance on the transmission crossmember and floor pans. Start with a fingers width between these areas. Tighten the band clamps when all components are straight and level with good clearance.
8. Install a 2.5 or 3" band clamp onto the inlet and outlet of each muffler.

**NOTE:** Keep the outlet end of the X-pipe supported to avoid unnecessary weight on the exhaust components and headers until the exhaust hangers are installed

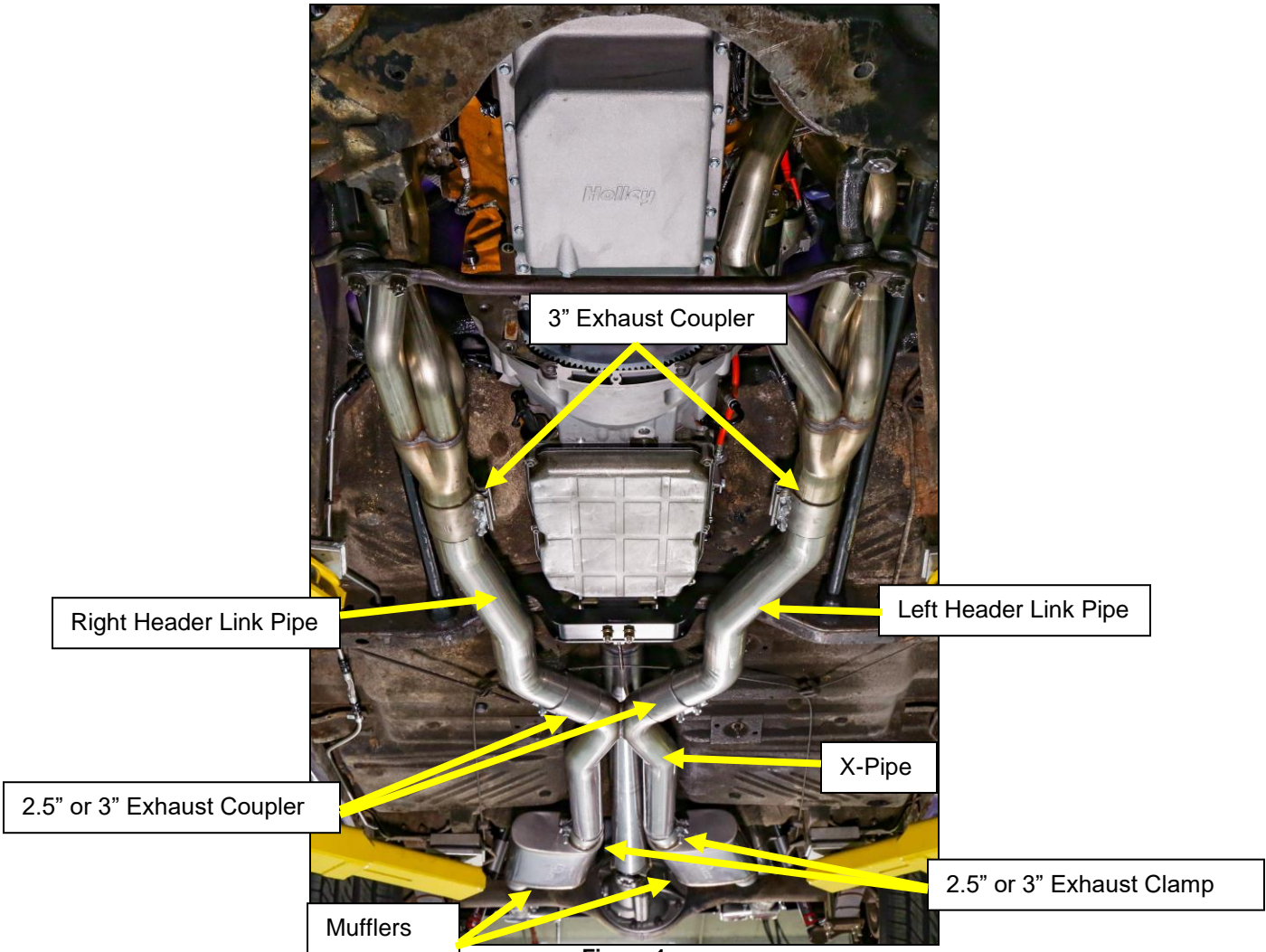
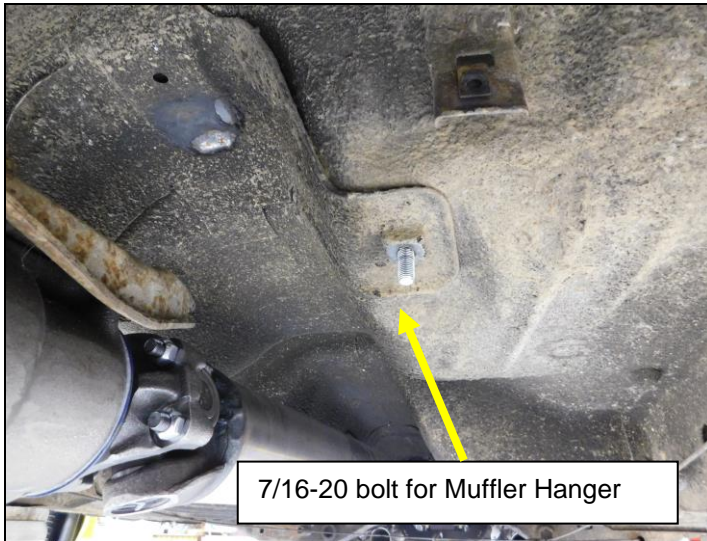


Figure 1

### Muffler and Tailpipe Hanger Brackets:

1. Remove the existing left and right muffler and tailpipe hanger assemblies and clip nuts from the vehicle.
2. Remove the center seat belt anchor bolt from the rear seat belts.
3. Replace the anchor bolt with the provided 7/16-20 x 1.5" bolt and tighten until the bolt just bottoms on the shoulder of the bolt or the seat belt anchor plate stops rotating. Then, back off ½ turn to allow the anchor plate to move. This will provide a convenient mounting point for the muffler hanger to be mounted (**Figure 2**).
4. Pre-assemble the tailpipe hanger brackets with the provided rubber isolator using the 1.75 long ½" bolt and lock nut with the washer against the rubber isolator (**Figure 3**).

**NOTE:** Do not over tighten or compress the rubber isolator.

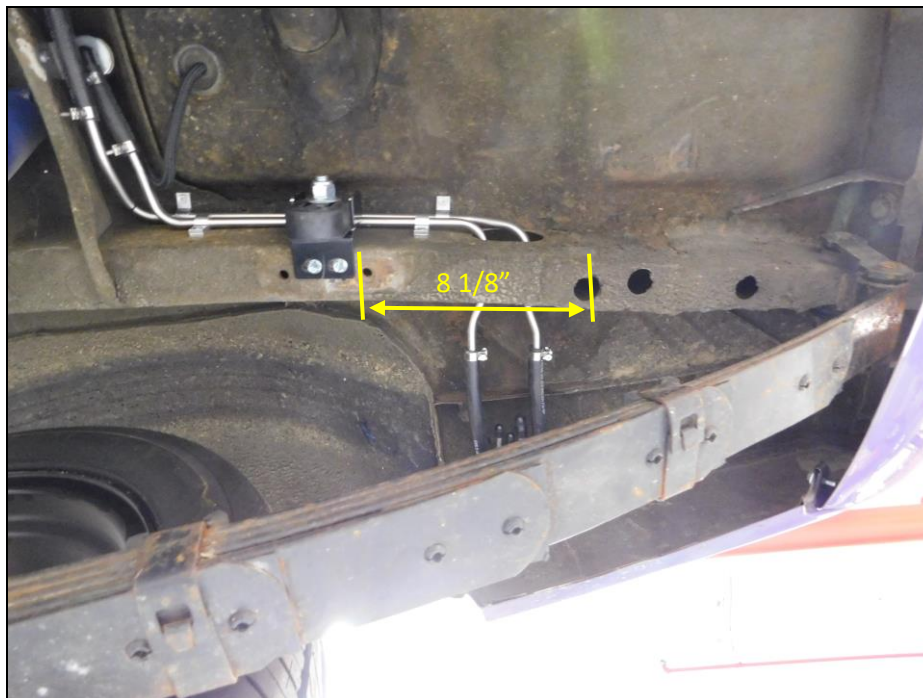


**Figure 2**



**Figure 3**

5. To install the tailpipe hanger assembly as shown in **Figure 4**, hold the tailpipe hanger assembly on to the frame rail in the location shown. Measure from the center of the hole to the edge of the hanger bracket and mark the location of the slots in the bracket with a sharp awl or scribe. Make sure the ½" nut is tight against the frame rail during this process.
6. Mark the center of each slot with a center punch to be drilled in step 8.
7. Repeat steps 5-7 for the driver's side tailpipe hanger assembly.



**Figure 4**

### Hanger Brackets:

- Using a 13/64<sup>th</sup> drill bit, carefully drill at the center punched marks in the frame rail, being careful not to let the drill bit wander off center.
- Use the supplied 1/4-20 thread cutter bolts and anchor the tailpipe hanger bracket to the frame rail as shown in Fig.5 and Fig.6. An impact driver can be used to start the thread cutter, but DO NOT tighten the bolts with an impact driver. Apply lock tight to the threads of the bolt and tighten by hand to approximately 20ft lbs.



Figure 5

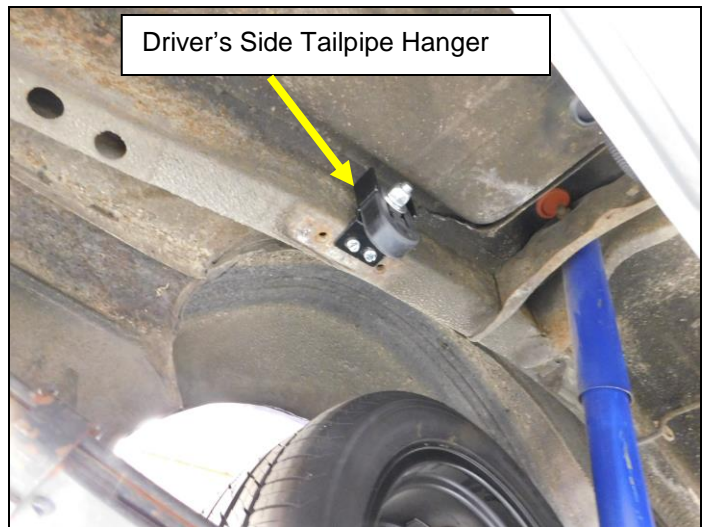


Figure 6

- Install muffler hanger rod assemblies (Figure 7) on to the 7/16-20 bolt at the seat belt anchor installed previously (Figure 8).
- Install the hanger assemblies with the hanger rods facing outwards, install the 7/16 Lock nut and tighten (Figure 8).

Muffler Hanger Assemblies

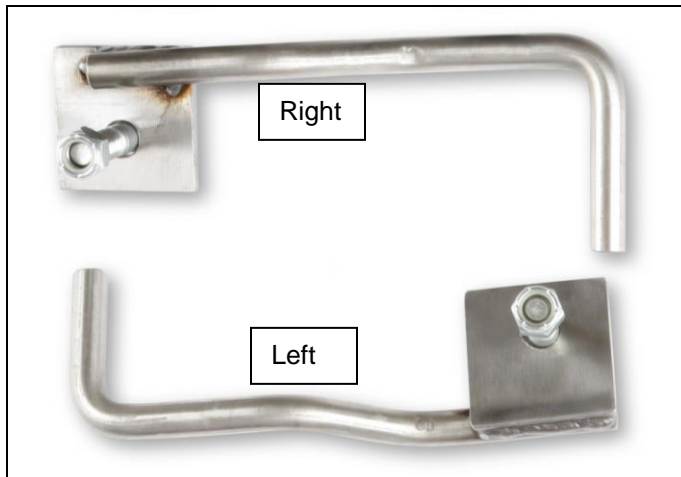


Figure 7

Muffler Hangers Installed

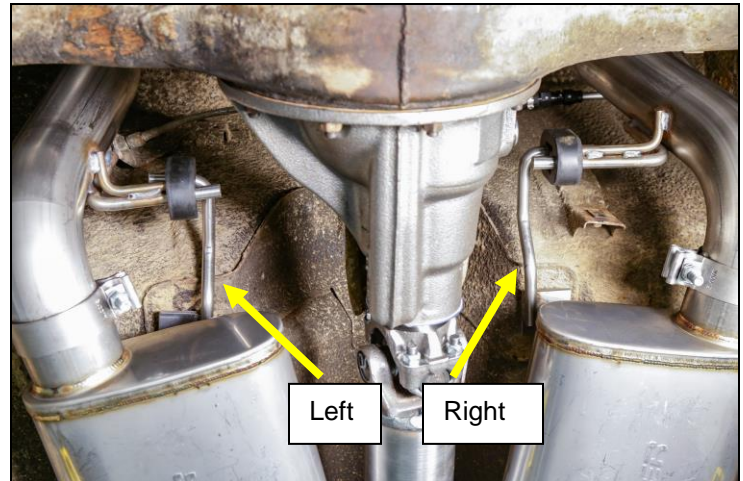


Figure 8

## Mufflers and Tailpipes:

12. Install the mufflers onto the X-pipe outlet (**Figure 1**).
13. Tighten the clamps on the X-pipe side of the muffler enough to hold the mufflers level while the tailpipes are installed.
14. Install a rubber isolator on to each muffler hanger rod (**Figure 9**).
15. Install a clamp over the muffler outlet and install the over-axle pipes with the short pipe into the muffler and the hanger rods facing inward (**Figure 9**).
16. Install the rubber isolator over the hanger rod and tighten the clamps to hold the over-axle pipe, but still allow adjustment.
17. Install a clamp on to the left tailpipe adapter expanded end. Install the expanded end of the tailpipe adapter on to the over-axle pipe with the hanger rod facing outward. Insert the hanger rod into the rubber isolator (**Figure 10**).
18. Tighten the clamp to allow for adjustment.
19. Install a clamp onto the tailpipe expanded end and install the tailpipe on to the adapter. Rotate the pipe to the highest point and tighten the clamp to allow for adjustment.
20. Install the Left tailpipe tip and tighten the clamp to allow for adjustment.
21. Repeat steps 14-20 for the right side tailpipes.

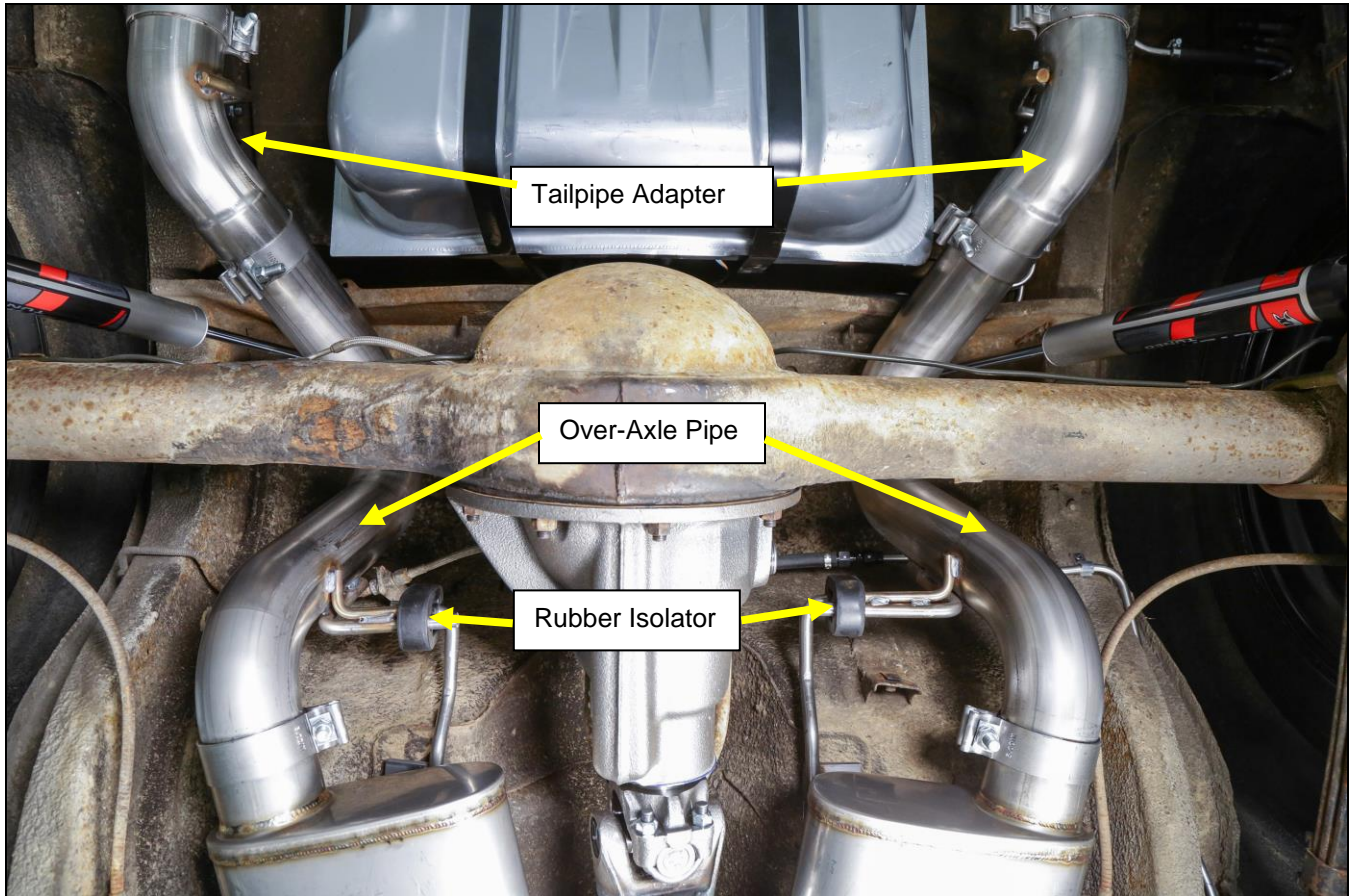


Figure 9

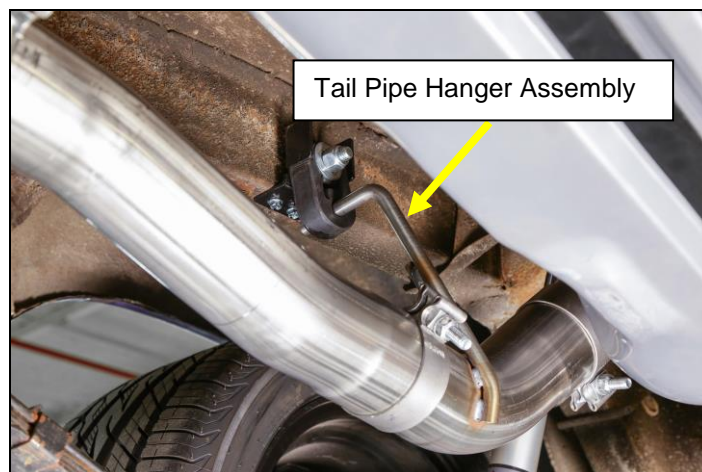


Figure 10

## Final Adjustment

22. Adjust the tailpipes for best clearance and alignment starting at the headers and working rearward. Tighten all the clamps and couplers as you go.
23. Once the alignment is complete, install the locking washers on to the hanger rods with a deep socket to hold the rubber isolators in place.

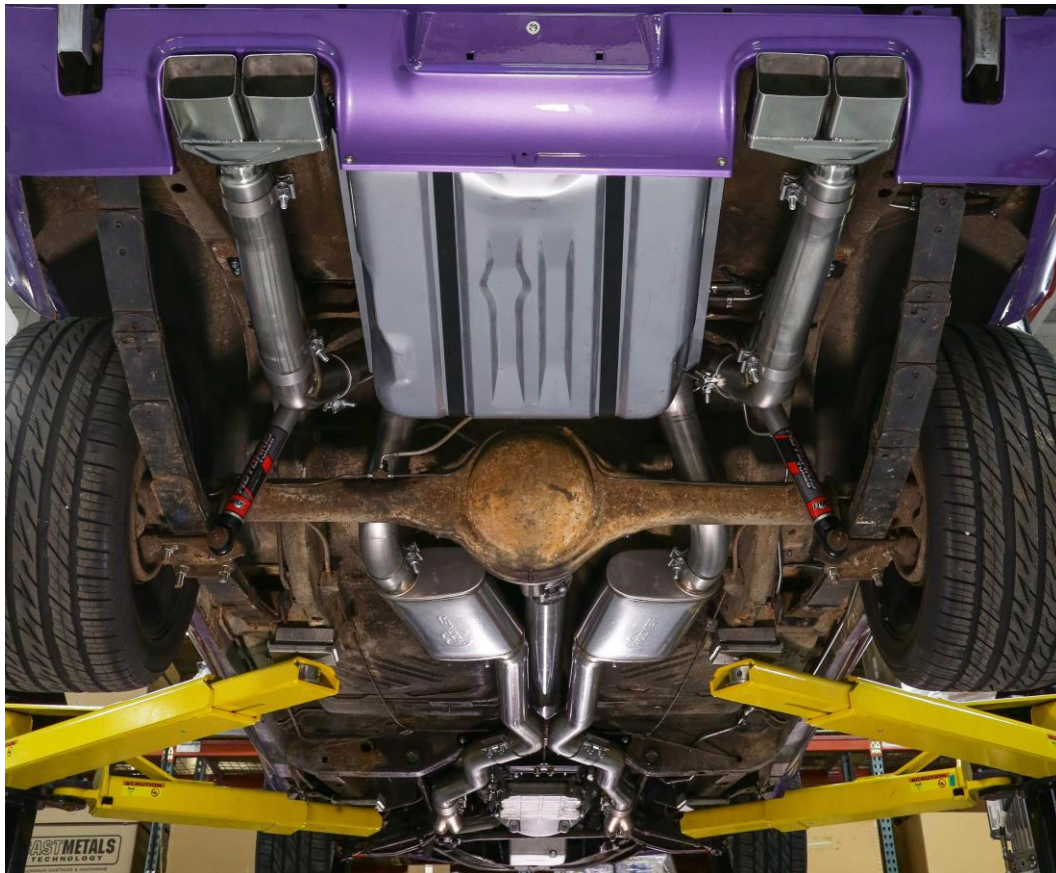


Figure 11

**NOTE:** It is normal for the Blackheart Exhaust System to emit smoke for the first few minutes during the break-in period. Re adjustment of the tail pipes is common after the first couple heat cycles.