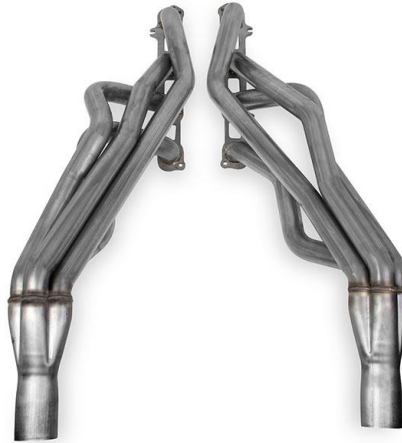




## 2005-2016 Challenger/Charger/300C

304SS, 1-7/8 or 1-3/4 Long Tube Headers  
2005-16 6.1L-6.4L V8 / 2009-16 5.7L V8

### 70102304-RHKR - 70102305-RHKR 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 and patience. 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 HEADER exhaust system.

**WARNING!** This product is not street legal and may only be used on Racing Vehicles. Racing Vehicles must be used exclusively for racing or other forms of competition. Racing vehicles must not be registered and must never be used on the street. It is illegal to install this product on a registered vehicle and use it on the street.

#### **BEFORE STARTING:**

Your vehicle must be raised a minimum of 18 inches. A floor hoist is ideal and recommended. 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.** This installation requires a moderate amount of mechanical ability and a good selection of hand tools to make installation less difficult. If you are not confident in your mechanical ability or lack the tools listed below please allow a professional to perform the installation of your BLACKHEART headers.

**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	Tools Needed:	
505R21	16	8mm x 1.25 x 25mm Bolts	3/8" Drive Metric Socket Set	16mm Deep Well Socket
540R21	1	Dipstick Bushing	<b>*13mm Compact Swivel Socket*</b>	15mm Deep Well Socket
199R11203	1	Instruction Sheet	10mm Compact Swivel Socket	13mm Deep Well Socket
599R94	2	Blackheart Decal	<b>*24" Long 3/8 Drive Extension*</b>	Metric Box Wrench Set
271R1120A	2	O2 Sensor Extension Harness	3" long 3/8 Drive Extension	13mm Ratcheting Wrench
<b>Parts List:</b>	1	Left Side Header	3/8" Drive Universal	14mm Ratcheting Wrench
	1	Right Side Header	Ratcheting Tie Down Strap	15mm Ratcheting Wrench
	1	Accessory Pack		Penetrating Oil / WD40®

\* OEM Dodge Manifold Gaskets recommended: **5.7L** P/N 5045495AA / P/N 5045496AA **6.1/6.4L** P/N 5038098AA / 5038099AA

## PRE-INSTALLATION:

**NOTE:** Presoak the studs to the catalytic converters and manifold bolts with WD-40® or equivalent prior to starting installation.

1. Place vehicle on flat solid surface set parking brake and block front wheels.
2. **Disconnect the negative terminal of the battery.** Lift the vehicle a minimum of 18 inches and support with jack stands.
3. Remove both front wheels.
4. Remove the (x4) bolts securing the engine service cover under car.

## 5.7L EXHAUST MANIFOLD REMOVAL: 6.1/6.4L installations skip to 6.1L- 6.4L steps

**NOTE:** Loop the driver's side seatbelt through the steering wheel and latch the seatbelt. This will prevent the steering wheel from being turned while the column is disconnected and damaging the clock spring.

1. Unplug the (x2) pre-catalyst O2 sensors and (x2) post-catalyst O2 sensors.

**IMPORTANT! Mark the pre catalyst O2 plug with a paint pen or tape to prevent plugging extension harness into the wrong plug after assembly.**

2. Loosen the 15 mm nuts at the clamp on the X-pipe inlet to allow the catalyst down pipes to be removed.
3. Remove the catalytic converters and down pipes from the manifolds and exhaust system.
4. Remove the (x4) 10mm nuts (1 at each corner of each manifold) that attach the heat shield.
5. Remove the alternator support bracket from the engine mount and leave the alternator side attached but loose (passenger's side).
6. Remove the dipstick tube.
7. Remove the starter. (DO NOT REMOVE THE STARTER IF INSTALLED ON THE DRIVER'S SIDE / 2015-16 8-SPD Auto Trans.)
8. Remove the knock sensors
9. Remove the engine mount heat shields from the left and right side.
10. Remove the bolt securing the steering shaft to the steering rack and remove the steering shaft from the steering rack.

**NOTE:** 15-16 w/ driver's side starter - Index and remove the lower half of the steering shaft from the vehicle.

11. Support the engine with a screw jack or suitable alternative. (DO NOT SUPPORT THE ENGINE WITH THE OIL PAN OR TRANSMISSION PAN). Raise the engine just enough to take the weight off the engine mounts to remove the hardware (**Figure 3**).
12. Remove the (x2) bolts from each engine mount that attaches the rubber mount to the frame and lift the engine slightly to allow the engine mounts to be removed.
13. Remove the **Driver's side** (Left) engine mount assembly from the vehicle. (It is not necessary to separate the rubber mount from the block plate)

**ATTENTION:** Be very careful to keep the engine supported while the engine mounts are removed from the engine and during the installation process. Failure to do so may result in severe personal injury.

14. Remove the left manifold heat shield.
15. Remove the (x8) bolts securing the left exhaust manifold to the cylinder head. Remove the exhaust manifold and gasket. Clean any debris from the cylinder head surface in preparation for the new gasket (gaskets not supplied).
16. Position the tie strap to pull the engine to the driver's side. Be sure the tie strap is securely attached to the engine and vehicle frame before attempting to pull the engine to the driver's side (**Figure 3**).
17. Loosen the 2 bolts securing the right engine mount to the engine block plate and remove (**Figure 4**).

**IMPORTANT:** 2013-16 vehicles -The forward bolt cannot be removed until the engine is pulled as far to the driver's side as possible. Be very careful not to damage the A/C or water lines on the left side of the engine when applying the tie strap.

**NOTE:** Be very careful to keep the engine supported while the engine mounts are removed from the engine and during the installation process. Failure to do so may result in severe personal injury.

18. Remove the right engine mount.
19. Remove the 4 bolts from the right engine block plate and remove from the vehicle.
20. Remove the right manifold heat shield.
21. Remove the (x9) bolts securing the right exhaust manifold to the cylinder head. Remove the exhaust manifold and gasket. Clean any debris from the cylinder head surface in preparation for the new gasket (gaskets not supplied).

\*\* Do not release the ratchet strap at this time if used

## 6.1L -6.4L EXHAUST MANIFOLD REMOVAL

1. Unplug (x2) pre catalyst O2 sensors and (x2) post catalyst O2 sensors.

**IMPORTANT!** Mark the pre catalyst o2 plug with a paint pen or tape to prevent plugging extension harness into the wrong plug after assembly.

2. Loosen the 15 mm nuts at the clamp on the X-pipe inlet to allow the catalyst down pipes to be removed.
3. Remove the catalytic converters and down pipes from the manifolds and exhaust system.
4. Remove the alternator support bracket from the engine mount and leave the alternator side attached but loose (passenger's side).
5. Remove the dipstick tube.
6. Remove the starter. (DO NOT REMOVE THE STARTER IF INSTALLED ON THE DRIVER'S SIDE.)
7. Remove the knock sensors
8. Remove the engine mount heat shields from the left and right side.
9. Remove the bolt securing the steering shaft to the steering rack and remove the steering shaft from the steering rack.

**NOTE:** 2015-16 w/ driver's side starter - Index and remove the lower half of the steering shaft from the vehicle.

10. Support the engine with a screw jack or suitable alternative. (DO NOT SUPPORT THE ENGINE WITH THE OIL PAN OR TRANSMISSION PAN.) Raise the engine just enough to take the weight off the engine mounts to remove the hardware (**Figure 3**).
11. Remove the 2X bolts from each engine mount that attaches the rubber mount to the frame and lift the engine slightly to allow the engine mounts to be removed.
12. Remove the **Driver's side** (Left) engine mount assembly from the vehicle. (It is not necessary to separate the rubber mount from the block plate)
13. Position the tie strap to pull the engine to the passenger's side. Be sure the tie strap is securely attached to the engine and vehicle frame before attempting to pull the engine to the passenger's side (**Figure 3**).

**ATTENTION:** Be very careful to keep the engine supported while the engine mounts are removed from the engine and during the installation process. Failure to do so may result in severe personal injury.

14. Remove the (x8) bolts securing the left exhaust manifold to the cylinder head. Remove the exhaust manifold and gasket. Clean any debris from the cylinder head surface in preparation for the new gasket (gaskets not supplied).
15. Position the tie strap to pull the engine to the driver's side. Be sure the tie strap is securely attached to the engine and vehicle frame before attempting to pull the engine to the driver's side (**Figure 3**).
16. Loosen the 2 bolts securing the right engine mount to the engine block plate and remove (**Figure 4**).

**IMPORTANT:** 2013-16 vehicles -The forward bolt cannot be removed until the engine is pulled as far to the driver's side as possible. Be very careful not to damage the A/C or water lines on the left side of the engine when applying the tie strap.

**NOTE:** Be very careful to keep the engine supported while the engine mounts are removed from the engine and during the installation process. Failure to do so may result in severe personal injury.

17. Remove the right engine mount.
18. Remove the (x4) bolts from the right engine block plate and remove from the vehicle.
19. Remove the (x9) bolts securing the right exhaust manifold to the cylinder head. Remove the exhaust manifold and gasket. Clean any debris from the cylinder head surface in preparation for the new gasket (gaskets not supplied).

\*\* Do not release the ratchet strap at this time if used

## INSTALLATION OF HEADERS:

**Recommendation:** Use HOOKER BLACKHEART Mid Pipe Kit to connect your BLACKHEART headers to the factory exhaust system.  
P/N 70802301-RHKR (5.7L)  
P/N 70802302-RHKR (6.1 - 6.4L)

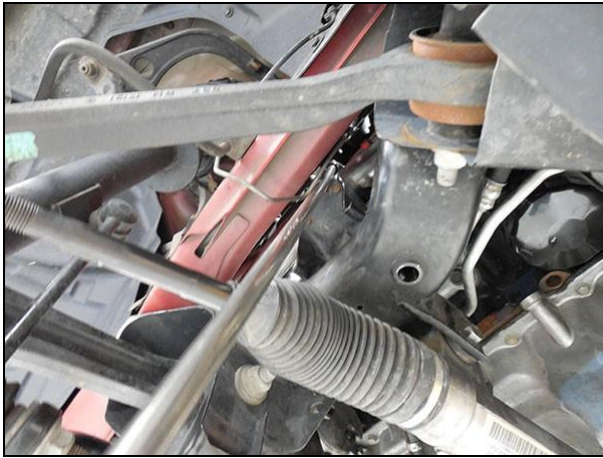
See the Holley website for a complete line of header back exhaust systems for you specific vehicle.

1. Clean the exhaust port sealing surface to remove any dirt or gasket material that may affect the sealing performance of the gasket and cause leaks. **Repair any damaged threads or broken bolts.**
2. Install the supplied left and right O2 sensor extension harnesses to the factory pre catalyst O2 sensor connector previously marked. Be sure and use the correct connector as they are keyed the same for both O2 sensors.
3. Install the right exhaust manifold gasket with the supplied 8mm x 1.25 flange bolts on the bottom 4 holes. Install bolts just a few threads.
4. Hang the **RIGHT** header assembly on to the bolts then install the four remaining top bolts. Access to most of the header bolts can be done with the 24" extension and a 13mm swivel socket through the primary tubes (**Figure 1**).
5. Use a 13mm box wrench to tighten the bottom two bolts closest to the starter. Tighten the bolts evenly in steps from the center out until all the bolts are tight. Repeat this process several times. For vehicles mounting the dipstick tube to the manifold bolt, reuse the O.E.M studded bolt with the supplied spacer to mount the dipstick in the factory location (**Figure 2**).
6. Re-install the right engine mount block plate on to the engine and tighten, install the engine mount into the frame and install the (x2) long bolts that will secure the engine mount to the block plate. Release the tie strap (if used) and allow the engine to return to its normal position. Do not tighten the (x2) long bolts at this time

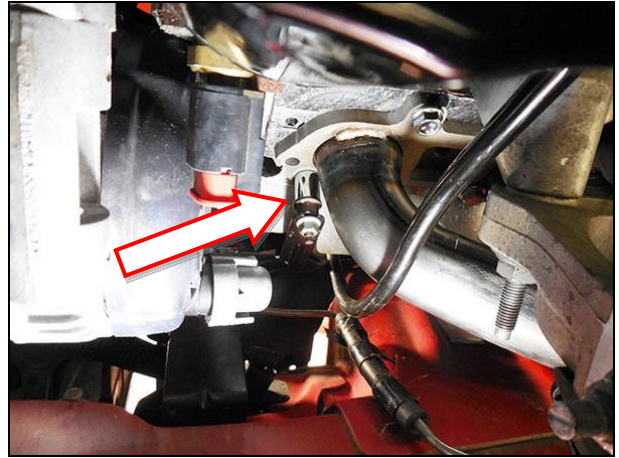
**NOTE:** Be very careful to keep the engine supported while the engine mounts are being installed.

7. Install the left purchased new Dodge exhaust manifold gasket with the supplied 8mm x 1.25 Flange bolts on the bottom 4 holes. Install bolts just a few threads.
8. Reposition the tie strap and pull the engine to the passenger's side.
9. Position the left engine mount assembly into the vehicle and allow the assembly to remain loose while the header is installed.
10. Hang the **LEFT** header assembly on to the bolts and install the four remaining top bolts. Access to most of the header bolts can be done with the 24" extension and a 13mm swivel socket through the primary tubes and from the bottom of the header. Tighten bolts evenly in steps from the center out until all the bolts are tight. Repeat this process several times.
11. Install the (x4) bolts in the left engine mount block plate and tighten.
12. Loosen the tie strap and allow the engine to return to its normal position.
13. Tighten the (x2) long bolts in the **RIGHT** engine mount to the block plate.
14. Lower the engine on to the mounts and install the (x2) bolts in the left and right engine mount to the frame.
15. Install the engine mount heat shields and nuts except the right hand nut securing the alternator bracket.
16. Install the left and right pre-catalyst O2 sensors in the header collectors and connect to the O2 sensor extension harnesses harness. Route the harness away from the exhaust and plug in the harness to the vehicle.
17. Install the dipstick tube after checking the condition of the O-ring (replace if necessary). Vehicles with the dipstick tube mounted to the exhaust manifold bolt will re-use the factory studded bolt and the supplied spacer (**Figure 2**) to install the dipstick in the factory location. **VERIFY THE TUBE IS IN THE ENGINE BLOCK!!!**

18. Install the alternator support bracket and final nut and tighten all heat shield nuts and the alternator bracket bolt.
19. Install the starter and connections if removed.
20. Install the Left and Right knock sensor.
21. **Install the steering column on to the steering rack (verify the steering wheel position is correct). Apply thread locking compound to the threads and install the bolt securing the steering column to the steering rack & shaft. Be sure the column is seated completely on to the shaft and the steering wheel is in the correct position. (Install the upper shaft connection and bolt for 2015-16 applications.) Torque the bolt(s) to the factory recommended specification.**
22. Recheck all connections and hardware to be sure all work is complete.
23. Check for proper clearance on all wiring harnesses, hoses, and lines around the headers to prevent damage from hot exhaust pipes.
24. Install the front wheels and torque the lug nuts to the factory recommended specifications.
25. Install the service cover.
26. Start the vehicle and check for leaks.
27. Remove the jack stands and lower the car.
28. **IMPORTANT: After the first 50 miles, re-check all connections and clamps.**



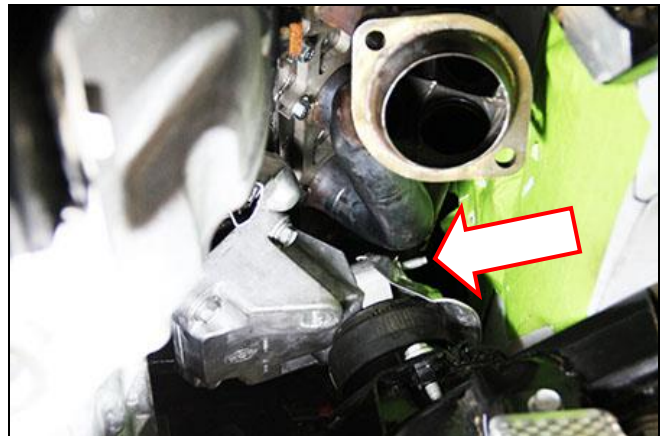
**Figure 1** – Access to top center bolt passenger's side



**Figure 2** – Dipstick tube mounting bracket spacer w/ OEM bolt



**Figure 3** – Engine support and tie strap



**Figure 4** – Engine mount bolts

**NOTE: It is normal for your new Blackheart exhaust system to emit smoke for the first few minutes of operation.**