

# 2019+ RAM 1500

## HEADER INSTALLATION INSTRUCTIONS

Thanks for purchasing a Stainless Works Header system for your 2019+ Ram 1500. Our team has worked to ensure that this product is the premium in performance, quality, and fitment. We are proud to say that this system will unleash the true character of your vehicle. We encourage you to read through the following steps, and check the included Bill of Materials before beginning. Please follow these steps to ensure that your installation goes as planned.



**2019+ Ram 1500**  
(RAM19H)

**a.** Stainless Works recommends the use of Hi-Temp RTV sensor safe silicone gasket maker as an option or in conjunction with the use of factory gaskets. The recommended Oxygen Sensor Safe RTV is either Valco All-in-One Aluminum or Permatex Copper P/N 101BR available at NAPA, Autozone and other retailers.

**b.** Disconnect the battery before starting to work on the exhaust system for your vehicle. Reconnect the battery when the job is completed.

**c.** Your exhaust system can be installed by a weekend warrior, but the use of a lift is recommended for ease of installation. If using a jack, the vehicle must be placed on a hard level surface. Jack stands are required for safety.

**d.** You will assemble the components together as specified below, but only snug the clamps as you move along from front to back. After aligning all the components in the vehicle, you will tighten all the clamps working from front to back of the vehicle.



*Detail a*

## DISASSEMBLY

1. Disconnect the battery.
2. Raise and support the vehicle.
3. Remove (2) 16mm bolts at the rear 2 bolt flange and (2) 15mm nuts at the front 2 bolt flange. Remove the OEM mid section.
4. Mark the location of the (4) O2 sensors, and remove them from the OEM exhaust.
5. Remove (4) 14mm bolts at the manifold connection and remove the Y-pipe assembly

*To simplify the header installation, we have found easier access to the bolts by removing the front tires and fender liners. These next steps will be based on this method.*

6. Remove both front tires.
7. Remove the fender liners by removing (15) 8mm screws and (3) push clips per side.
8. Remove (4) 15mm bolts to disconnect the front drive shaft and move it to the side.
9. Remove (2) 10mm bolts holding the heat shield to the starter.
10. Remove (1) 13mm nut holding the wire to the starter. Remove the wire and unplug the second wire from the starter.
11. Remove (2) 15mm bolts from the starter to remove it from the vehicle.



Detail 3: OEM mid section

#### 12.

Unplug and remove (1) 13mm bolt to remove the knock sensor.

#### 13.

Support the engine and remove (6) 15mm bolts from the motor mount plate. (2) of these bolts are on the side of the transmission.

#### 14.

Remove the manifold heat shields by removing (4) 10mm bolts from each side.

#### 15.

Raise engine to gain access to the lower dipstick tube bolt. Remove (1) 10mm bolt and remove the dipstick tube.

#### 16.

Remove (8) 13mm bolts - 4 per side - from the manifolds as well as (5) 10mm from the passenger side and (4) 10mm bolts from the driver side. Remove the manifolds.

#### 17.

Remove (1) 18mm nut from the driver side motor mount and remove the shield to allow room for the headers.

#### 18.

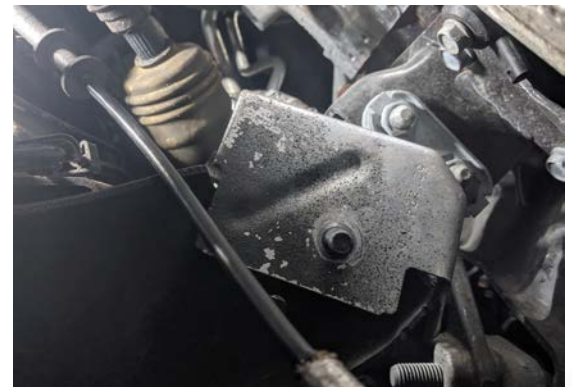
Remove loom from the stud for the shift cable bracket. Use a 13mm wrench to remove the stud and bracket. Reinstall the the stud.

#### 19.

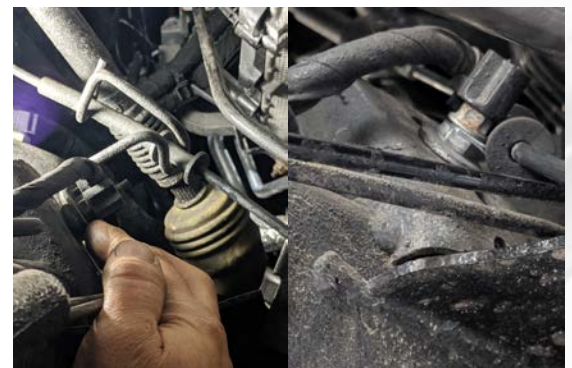
Use the provided loop clamp and one of the 10mm nuts removed from the manifold heat shield to re-secure the shift cable to the stud. The loop clamp should be around the sleeve on the cable, between the flanged section



*Detail 15: Lower dipstick tube bolt*



*Detail 17: Motor mount heat shield*



*Detail 18 & 19: Shift cable relocation*

#### 20.

Along the frame on the passenger side, remove (2) wire looms from the frame (see picture) and zip tie the wiring to the brake line. This will give additional header clearance.

### ASSEMBLY

#### 21.

Install O2 extensions. The 12" long extensions are used on driver front and passenger front. The 24" long extensions are used on driver rear and passenger rear.

#### 22.

Use the RTV to create a seal on the mating side of each header flange.

#### 23.

Install headers using the supplied bolt kit. The front bolt on the driver side will require the use of the provided spacer and a factory 13mm stud.

#### 24.

Reinstall the dipstick tube through the header and reinstall using the factory 10mm bolt and 10mm nut.

#### 25.

Reinstall all other removed engine components.

#### 26.

Reinstall fender liners and front tires.

#### 27.

Depending on your purchase, install the driver side catted or offroad lead pipe to the header using (1) 3" clamp.

#### 28.

Install either the catalytic converter or an offroad pipe to the passenger side header using (1) 3" clamp.

#### 29.

Install passenger side lead pipe using (1) 3" clamp



*Detail 20a: Wire looms to be removed*



*Detail 20b: Wiring secured to brake line*



*Detail 29: Headers and catted leads installed*

### 30.

Your system may require trimming depending on cab/bed configuration. The chart to the right shows the amount to trim from the X-pipe. If you are installing a performance connect system to a Stainless Works catback, you may find it easier to trim the (2) straight mid pipes instead. Measure from the outlet end, mark the tube, cut, and deburr before installing.

### 31.

Install the X-pipe to the leads using (2) 3" clamps.

### 32.

*For factory connection* - Install the Y-pipe to the X-pipe using (2) 3" clamps. Bolt the Y-pipe flange to the factory connection using the factory hardware.

*For performance connection* - Install the performance connect mid pipes to the X-pipe using (2) 3" clamps. Connect to your Stainless Works catback by following the instructions provided with that kit.

### 33.

Reinstall O2 sensors into bungs and secure the wires.

### 34.

Adjust and tighten the system from front to back.

### 35.

Be sure to have adequate clearance around all wires, hoses, and lines. If anything is in contact with the exhaust system it will melt. Make sure to have at least 1/2" of clearance and wrap any suspect areas with DEI thermal barrier wrap.

### 36.

After double checking for clearance and making sure all lines, wires and hoses are secured, drive the vehicle for 10-20 miles and re-check all clamps and clearances. Your system may be tack welded at the joints/ clamps to reduce shifting of the system during heating and cooling cycles. Make certain to disconnect the battery before performing any welding.

Cab Configuration	Bed Length	Wheelbase	Cut Length
Quad Cab	6'4"	140.5"	13"
Crew Cab	5'7"	144.6"	9"
	6'4"	153.5"	0"

*Detail 30: X-pipe or mid pipe trim chart*



*Detail 32: Factory connect configuration*



*Detail 32b: Performance connect configuration*