

# 27WON

## FK8-6-209 Downpipe

Downpipe for FK8 Type R

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## INTRODUCTION

In this installation guide we have provided step by step instructions to remove the OEM downpipe and install the 27WON Performance Downpipe for Civic Type R

### Advisory:

- The engine bay will be hot after recent vehicle operation. Allow the vehicle to cool or use a fan to cool the engine bay before working on the vehicle.
- Working under the vehicle requires a safe and sturdy location for the vehicle to sit on jackstands.

### TOOLS:

- 3/8" Ratchet (1)
- 3/8" 3 in Extension (1)
- 1/4" Ratchet (1)
- 1/4" Ratchet Extension (1)
- 3/8" Torque Wrench (1)
- 12mm Wrench (1)
- 14mm Wrench (1)
- Wrench 22mm (1)
- 5.5mm Socket (1)
- 10mm Socket (1)
- 10mm Socket - Deep (1)
- 12mm Socket (1)
- 14mm Socket (1)
- 22mm Oxygen Sensor Socket (1)
- 5mm Allen Key Socket (1)
- 3/8" Drill Bit (1)
- Needle Nose Pliers (1)
- Pliers - Small (1)
- Flathead Screwdriver (1)
- Hydraulic Jack (1)
- Jack Stand (2)
- WD-40 or other penetrating fluid (1)
- Silicone Lubricant Spray (1)
- Shop Towels/Rags (1)

### PARTS:

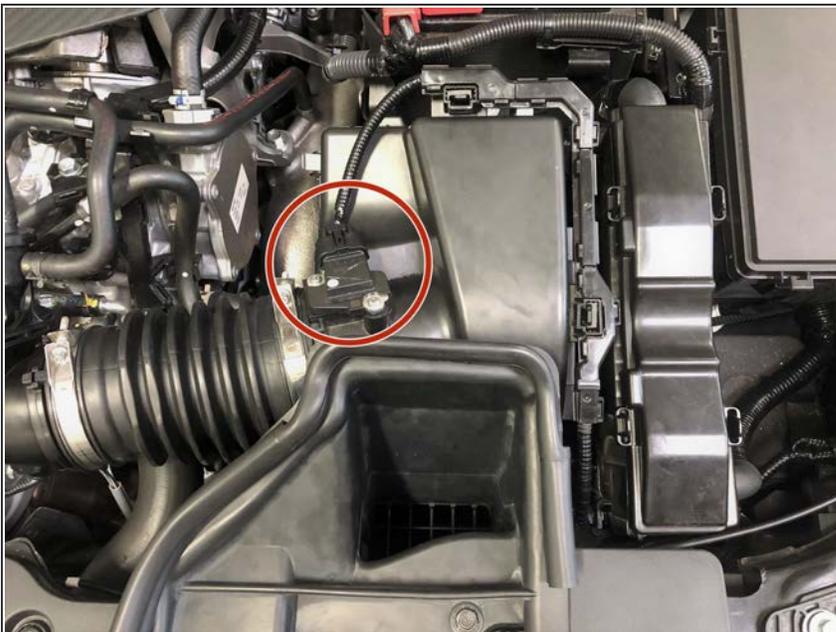
- 27WON Performance DownPipe (1)
- 27WON 80mm "2 & 1" Gasket (1)
- Exhaust Spacer (1)
- M10x1.5mmx42mm stud (3)
- M10 x 1.5mm flange nut (3)
- M6x1.0x10mm Flanged Bolt (4)
- Worm Gear Clamp 14-27mm (1)

## Step 1 — Getting Started



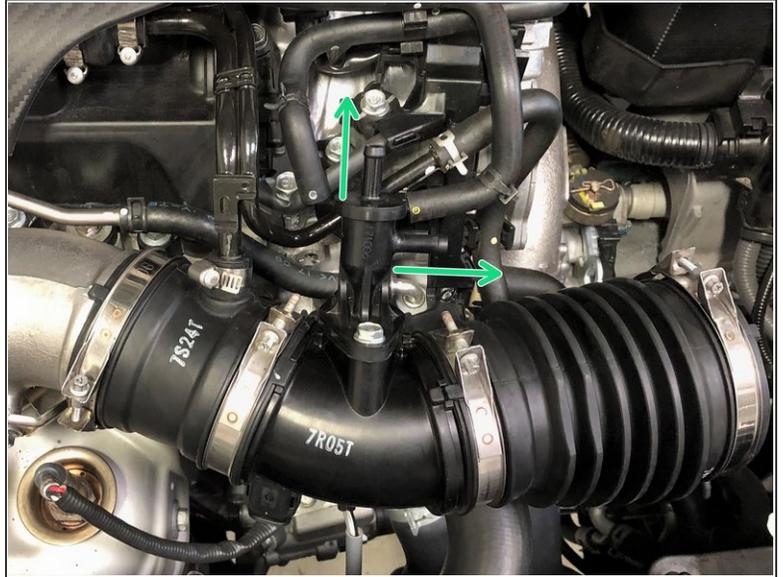
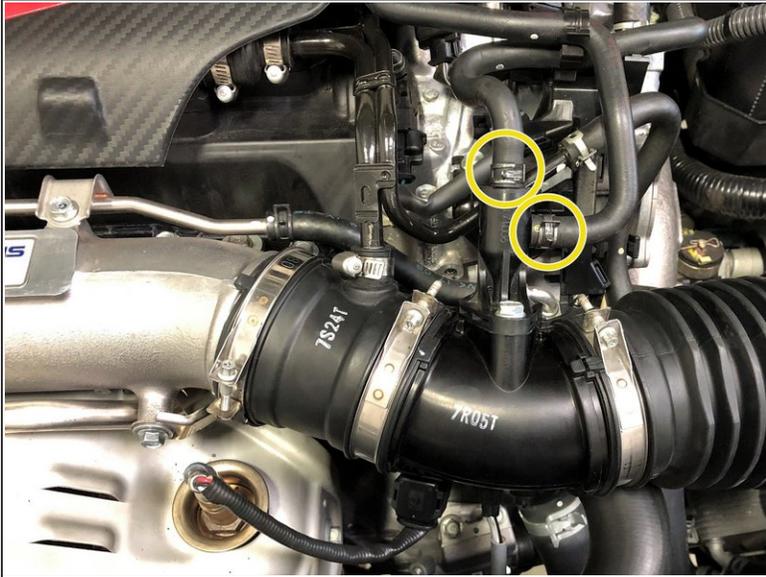
- First and foremost; **THANK YOU** for becoming a part of the 27WON Family. We hope to **REDEFINE** your experience of the aftermarket with the highest level Parts, Customer Service, Packaging, & Support
- ⓘ These instructions were written with a 2018 Honda Civic Type R
- ⚠ **Catted Downpipes are intended for racing use only. Installation and use are at the customers own risk**

## Step 2 — Unplug Mass Air Flow Sensor



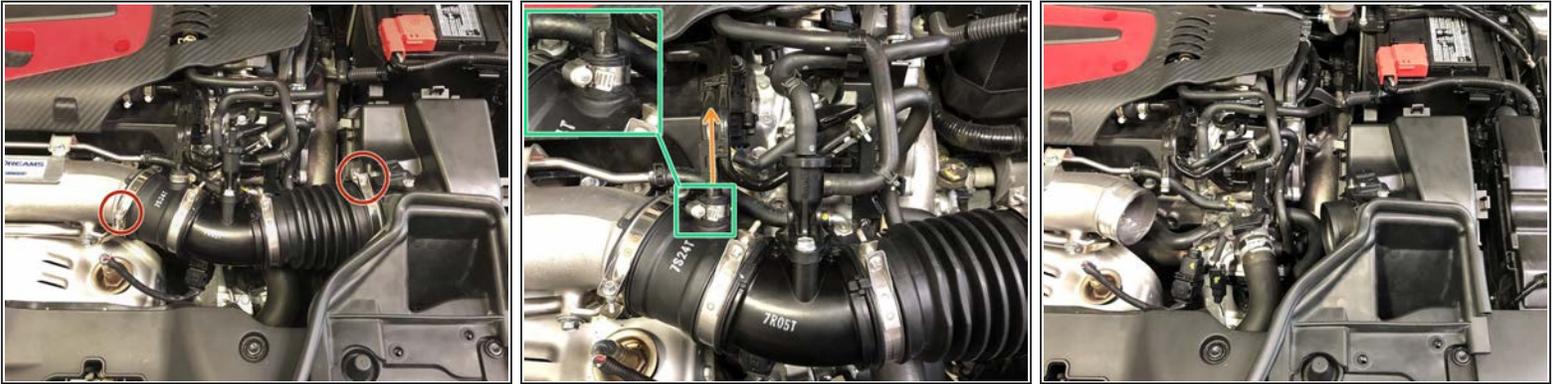
- Unplug the MAF sensor by pushing down on the tab (red circle) on top of the wiring connector

### Step 3 — Remove Hoses From EVAP Solenoid



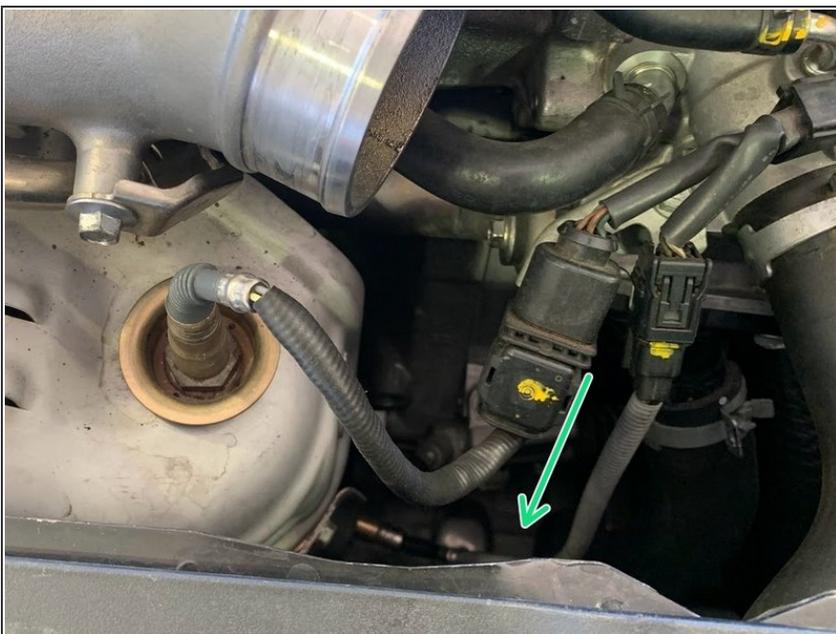
- Use needle nose pliers to loosen both OEM spring clamps and slide them up the hoses
- Pull the Boost Feed and EVAP Dump hoses off the EVAP solenoid

## Step 4 — Remove OEM Intake tube



- Using the 5.5mm socket and ratchet, loosen the two OEM clamps securing the intake tube
- Remove the valve cover breather pipe from the intake tube
  - This breather pipe is secured with a permanent OEM clamp. This clamp cannot be removed easily so the pipe will need to be pulled free without removing the clamp. This can be difficult the first time. This permanent clamp will be replaced with the provided regular hose clamp during re-installation
- Remove the OEM intake tube from the vehicle

## Step 5 — Unplug Upper Oxygen Sensor



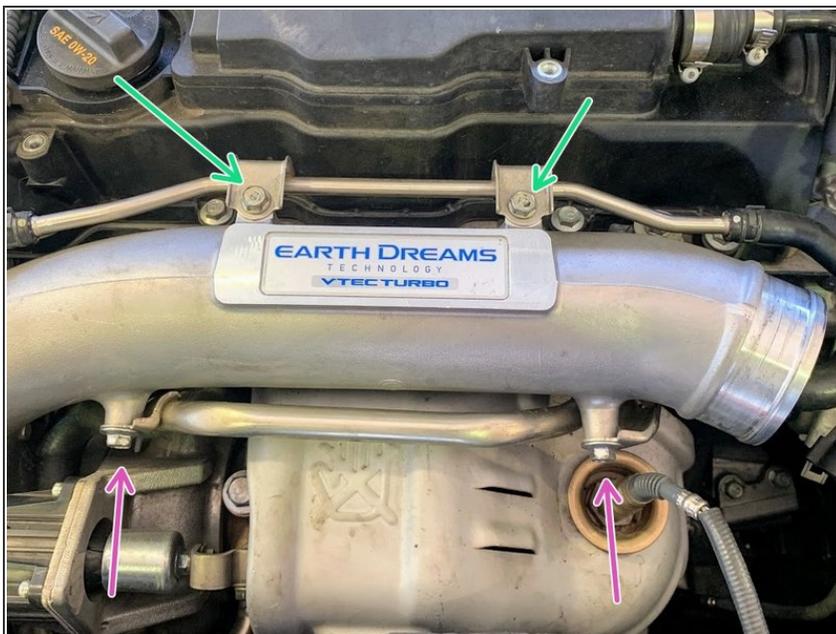
- Undo upper oxygen sensor electrical pigtail and let loose out of the way

## Step 6 — Unbolt Engine Cover



- Use a 10mm socket to remove the 5 bolts holding the engine cover
- Remove the engine cover

## Step 7 — Remove Hard Water Lines



- Remove (2) 10mm bolts securing the hard water line to the inlet pipe and move out of the way
- Remove (2) 10mm bolts securing lower hard water pipe

## Step 8 — Unbolt Inlet Pipe



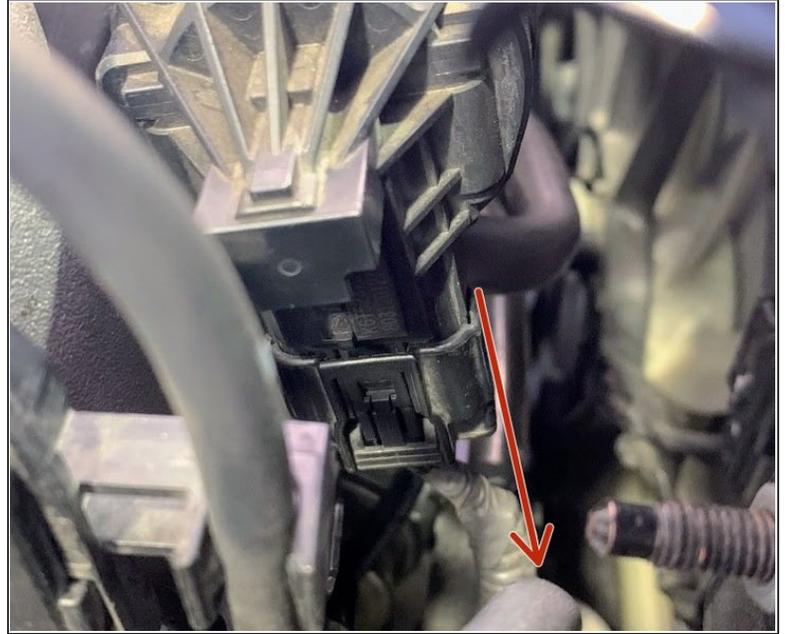
- Undo 10 mm bolt on the inlet pipe as shown

## Step 9 — Remove Sensor Bracket



- ⓘ There are 2 bolts holding this bracket. The lower one is well hidden (purple arrow)
- Using ¼ inch ratchet, 10mm deep socket, and 3 inch extension, remove the 10mm bolt shown
- Remove the lower 10mm bolt as shown

## Step 10 — Unplug Wastegate Connector



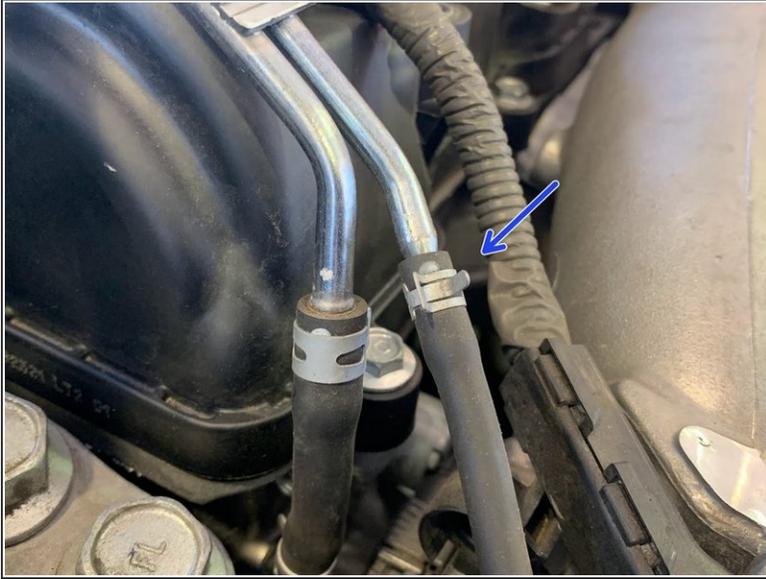
- Unplug electrical pigtail of electronic wastegate

## Step 11 — Unclip Hose from Bracket



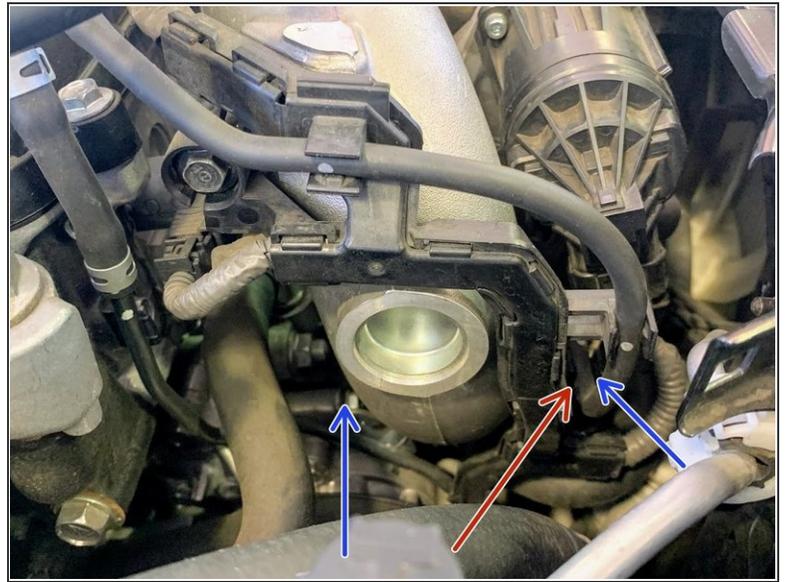
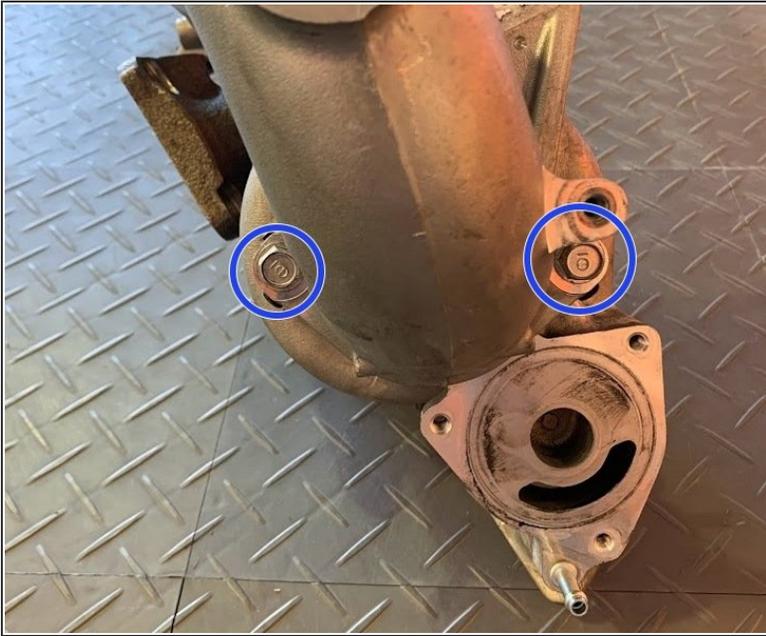
- Unclip the vacuum hose from the clips on the vacuum line retainer bracket

## Step 12 — Undo Clamps On Hard Lines



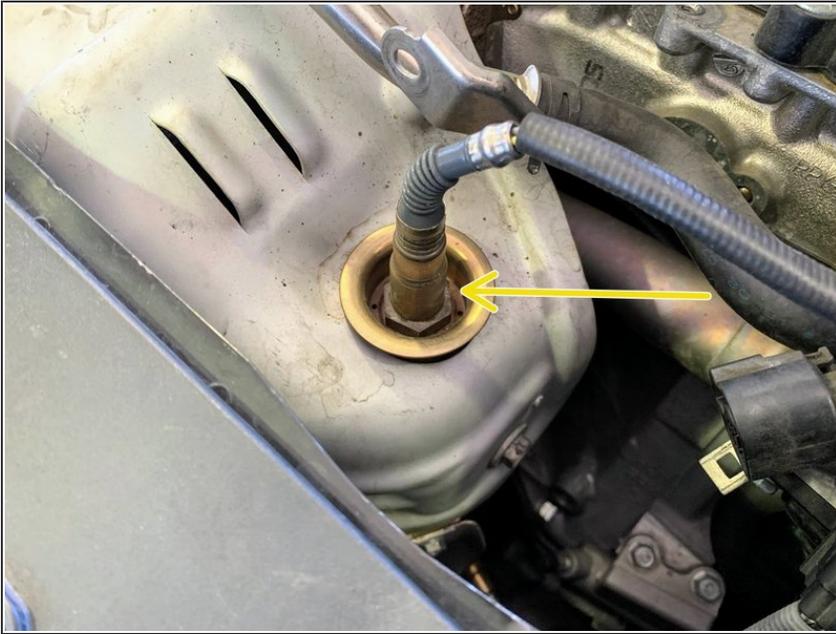
- Using needle nose pliers, undo the clamp as shown and free the silicone hose from the hardline
- Follow the line down and find the lower clamp holding the hose
- Undo the lower clamp and free the silicone hose from the receiver
- Remove the silicone hose from the car and set aside

## Step 13 — Remove Turbo Inlet Pipe



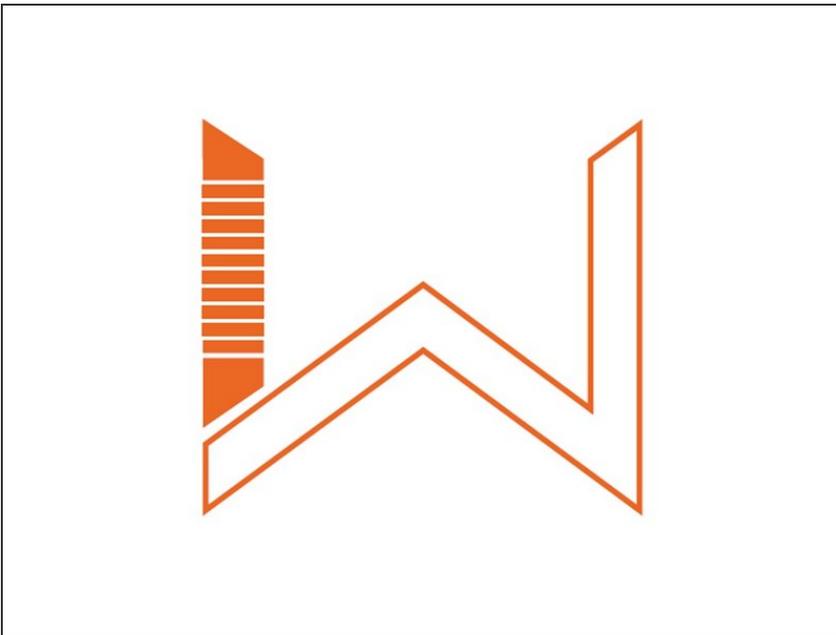
- ⓘ Turbo inlet pipe assembly is shown off the car here because the bolts are hard to see installed on vehicle
- The (2) 10mm bolts are shown off the car to better demonstrate their location
- Remove the Inlet Pipe by removing the (2) 10mm bolts shown above, a deep 10mm socket and ~3" extension work best here

## Step 14 — Remove Upper Oxygen Sensor



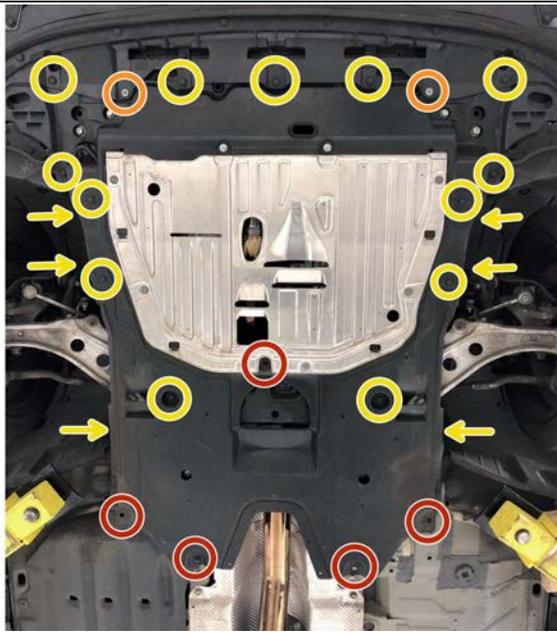
- Using a 22mm socket remove the upper oxygen sensor
- Set the sensor out of the way

## Step 15 — Jack Up Your Car



- Jack up your car and secure it with jack stands as you will need to get underneath

## Step 16 — Remove Engine Undertray - Part A



- Locate the engine undertray to gain access to the exhaust front-pipe
  - ⓘ Take pictures or take a good look at how the under tray fits with the other under body shields to help with easier reinstallation
- Use a 10mm socket & ratchet to remove the five 10mm bolts (red circles)
- Use a 5mm Allen Key/Allen Socket to remove the two (2) Allen head bolts (orange circles)
- Use a Flathead screwdriver or push clip removal tool to remove the 19 push clips from the under tray (yellow circles and arrows)
  - ⓘ For clarity on the push clips on the sides of the under tray (labeled with the arrows) please proceed to the next step

## Step 17 — Remove Engine Undertray - Part B



- The images in this step show the push clips on the side of the under tray. These are labeled with the arrows in the previous step
- ⓘ Passenger side shown, please repeat for the driver side before removing the under tray
- Remove the engine under tray from the vehicle

## Step 18 — Remove Upper Downpipe Heat Shield



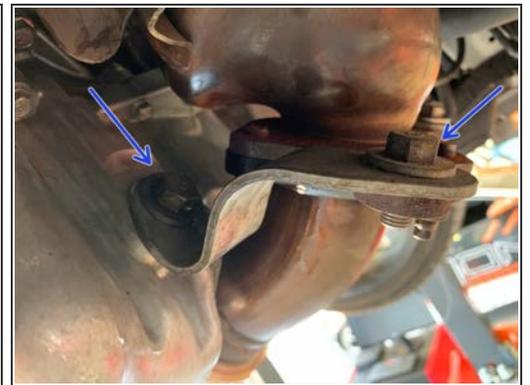
- Using a 12mm socket and ratchet, remove the (2) 12mm bolts from the upper part of the heat shield
- ⓘ It is very difficult to remove the lower bolt from the heat shield from the engine bay (shown off the car, orange arrow). We advise to remove this bolt from underneath the car
- Using a 12mm wrench, remove the lower 12mm bolt from the heat shield

## Step 19 — Unplug Lower Oxygen Sensor



- Unplug the lower oxygen sensor electrical pigtail connector located next to the upper oxygen sensor connector

## Step 20 — Unbolt Downpipe Brackets



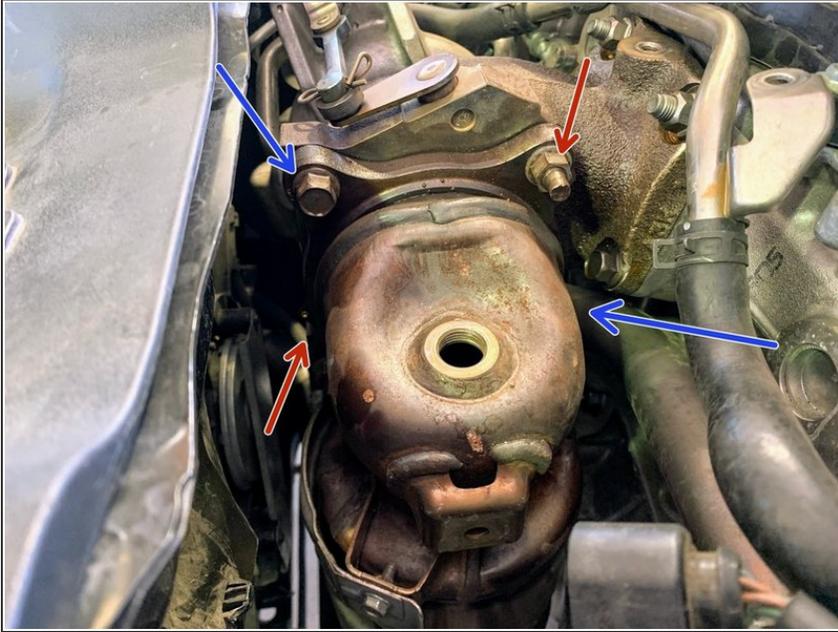
- Using a 14mm socket and a 14mm wrench , undo the (4) bolts for the downpipe brackets as shown
- Remove both of the brackets and set them aside

## Step 21 — Unbolt Downpipe from Front Pipe



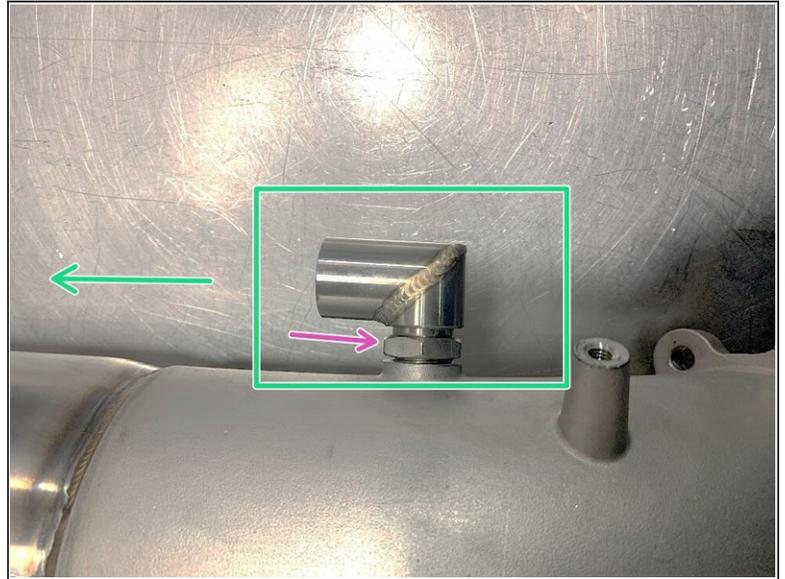
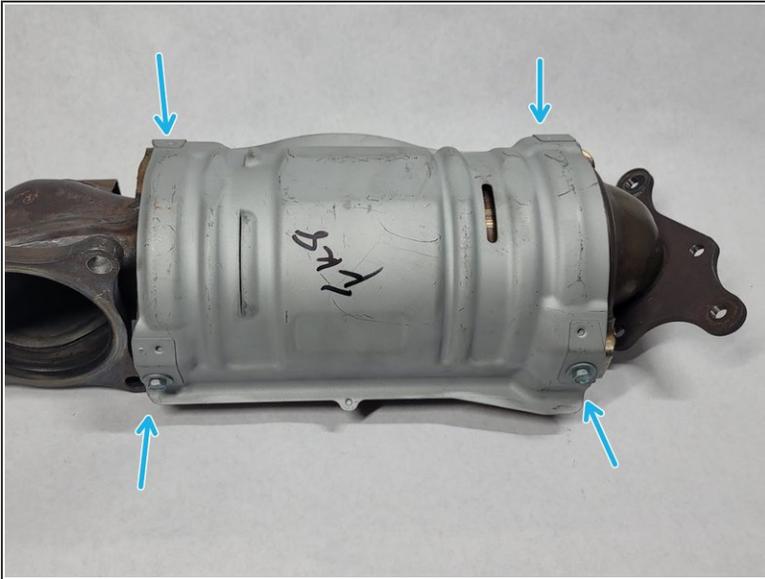
- Use a 14mm socket and ratchet to remove the three nuts that connect the front-pipe to the downpipe
- Pull the rubber hanger on the OE front-pipe free from the hanger rod on the chassis in the direction shown
- Usually the studs will remain in the downpipe causing issues when removing the downpipe. Pry the downpipe from front pipe by sticking a screwdriver in between the downpipe and the forward pipe

## Step 22 — Unbolt Downpipe from Turbo Assembly



- ⓘ There are 2 nuts and 2 bolts that mount the Downpipe to the Turbo. Soak them with Penetrating fluid prior to attempting removal
- Break lose the (2) 14mm bolts (blue arrows) and the (2) 14mm nuts (red arrows)
- Using a 14mm socket, remove the 2 nuts (red arrows)
- Using a 14mm socket remove the 2 bolts (blue arrows) as shown
- Remove the Downpipe from underneath the car

## Step 23 — Remove Lower Heat Shield

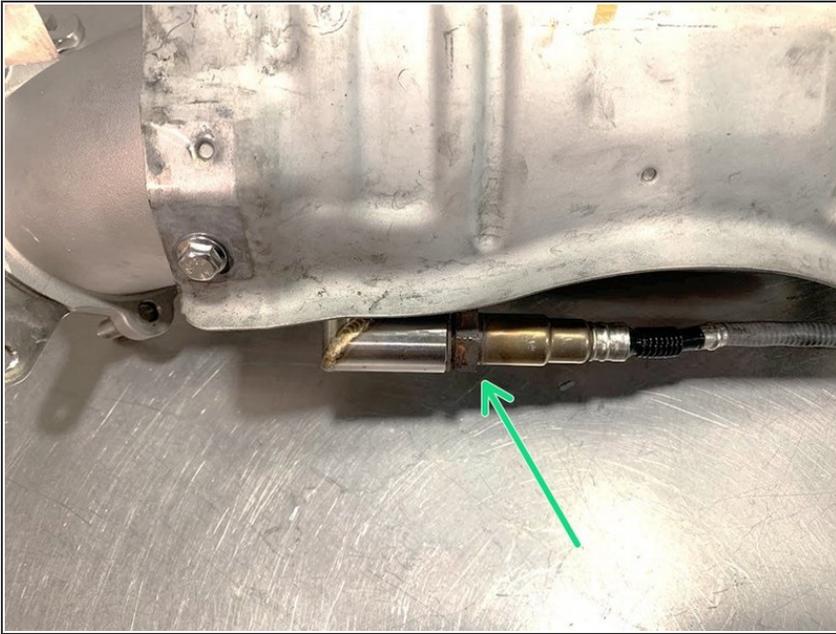


- Remove four (4) bolts from the lower heat shield using a 10mm socket or wrench. Set aside bolts. They will not be reused

**⚠ Use of exhaust spacer in this way on public roads and highways is prohibited. This is for racing use only**

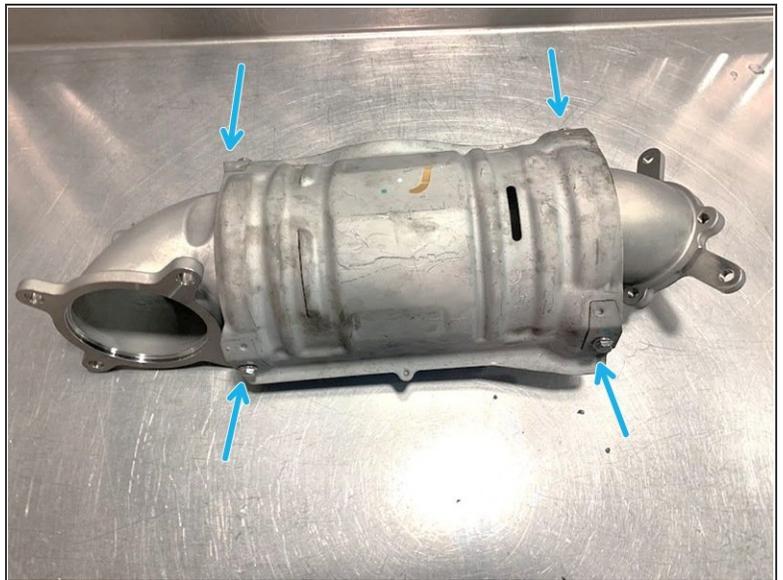
- Install provided exhaust spacer on 27WON Downpipe
  - Twist lock nut fully up spacer threads
  - Install spacer almost to lock nut. Make sure it's pointing as shown with the green arrow towards the catalyst
  - Use 22mm wrench to lock nut against the downpipe

## Step 24 — Swap Lower Oxygen Sensor



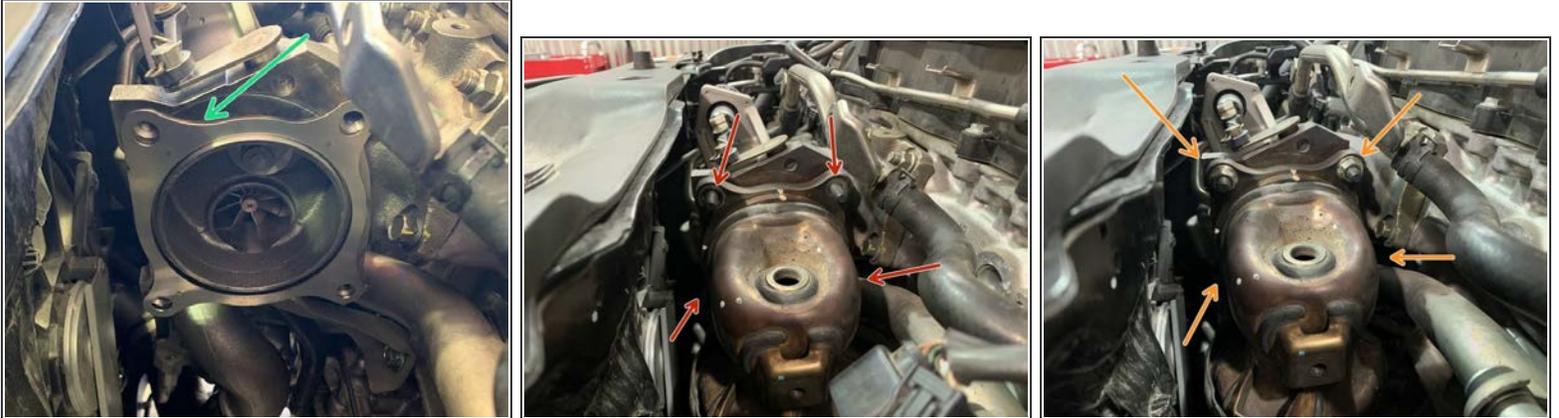
- Swap lower oxygen (O<sub>2</sub>) sensor from OE downpipe to 27WON Downpipe

## Step 25 — Modify OE Heat Shield and Install



- Drill out the four holes in OE heat shield using 3/8" Drill Bit
  - ⚠ The heat shield is sharp and can catch on the bit. Use a vice to hold the heat shield
- Install lower heat shield on 27WON Downpipe using four (4) **provided** M6x1.0x10mm flanged bolts

## Step 26 — Align the Downpipe Gasket and Install Downpipe



- Clean and place OE gasket as shown
  - ⓘ Shown without OE studs installed. Leave them in place
- Reinstall the downpipe onto the turbo over OE studs
  - ⓘ OE Downpipe Shown
- Thread (4) OE nuts onto the studs with anti-seize. **Torque to 40 ft-lb**

## Step 27 — Reconnect the Lower Oxygen Sensor



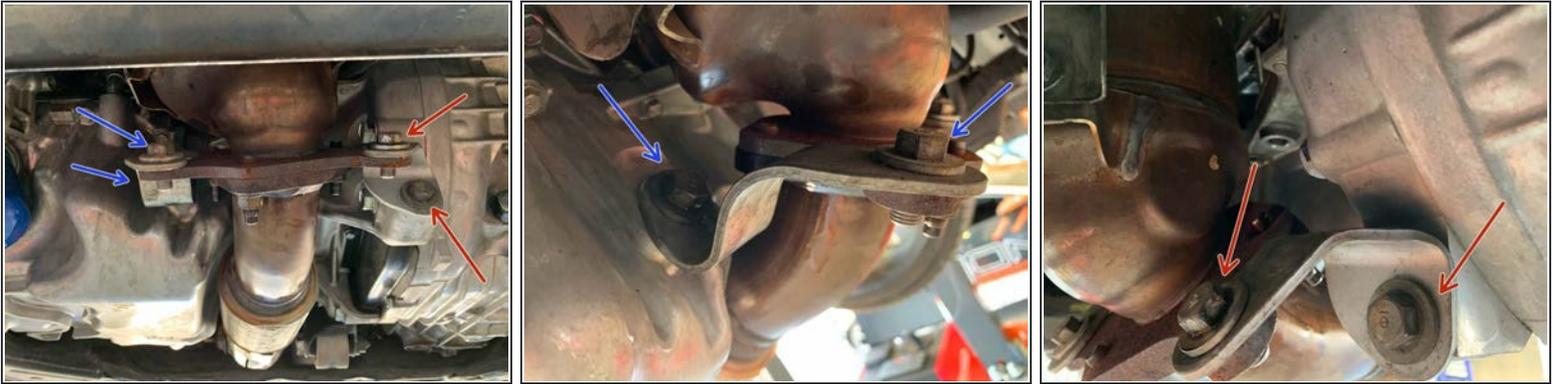
- Reconnect the lower oxygen sensor electrical pigtail as shown

## Step 28 — Connect Downpipe to Frontpipe



- ⓘ Outlet flange has five threaded holes. Three are M10x1.50 and two are M10x1.25. Use caution not to cross-thread
  - Install the three provided **M10x1.50** studs into the downpipe outlet flange as shown
    - ⚠ Do not use M10x1.25 hardware here. Use caution not to cross thread these three holes
  - Place provided 2+1 MLS exhaust gasket between downpipe and front pipe
    - ⓘ Please note, a prototype gasket is shown, your gasket will differ slightly in appearance
  - Align the downpipe with the front pipe and reinstall the (3) OE 14mm nuts. **Torque to 30-40 ft-lb**
  - Reinstall the exhaust hanger for the front pipe

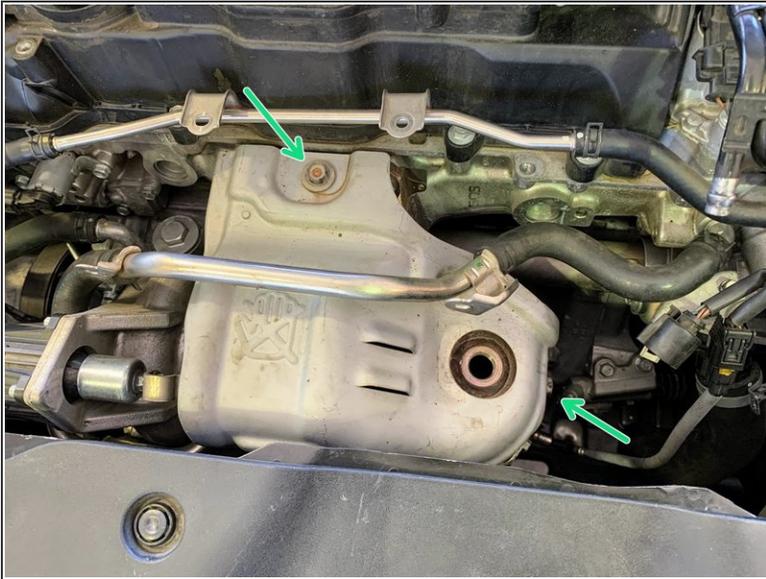
## Step 29 — Reinstall the Downpipe Brackets



### **i** OE Downpipe Shown

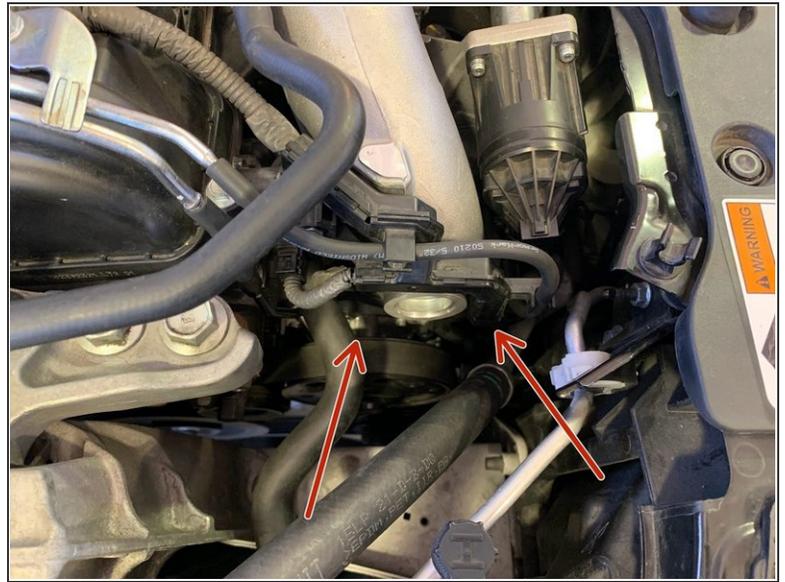
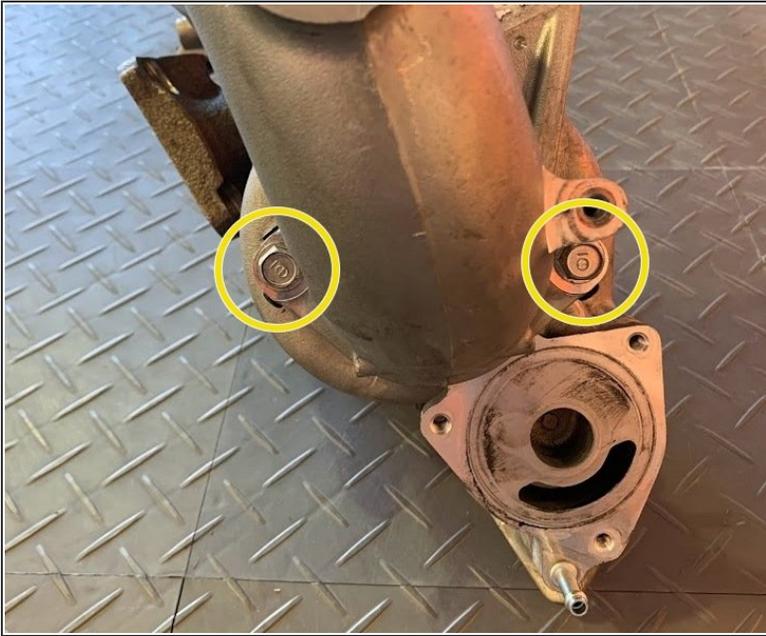
- Align the left side bracket and reinstall the (2) OE 14mm bolts with anti-seize. **Torque to 30-40 ft-lbs**
- Align the right side bracket and reinstall the (2) OE 14mm bolts with anti-seize. **Torque to 30-40 ft-lbs**

## Step 30 — Reinstall Upper Heat Shield



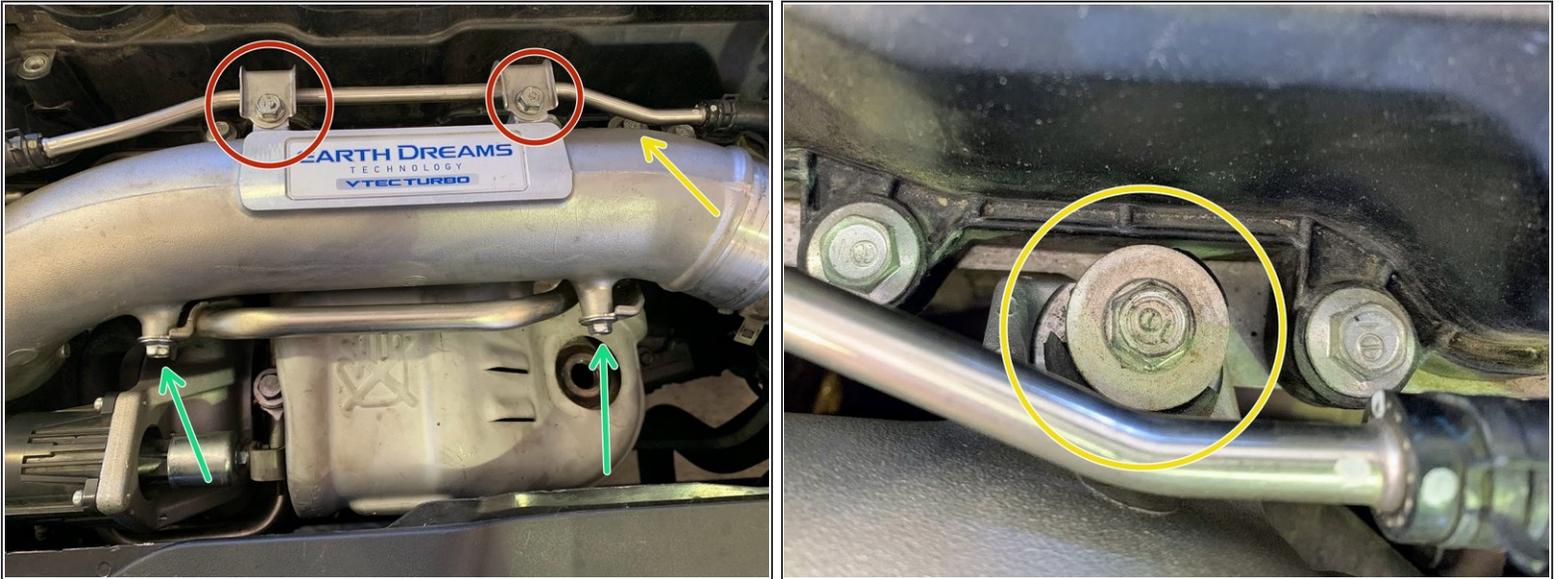
- Install the (2) 12mm bolts from the upper part of the heat shield
- ⓘ It is very difficult to install the lowest bolt from the heat shield from above (as shown off the car). We advise to install this bolt from underneath
- Install the lower 12mm bolt from the heat shield

## Step 31 — Reinstall the Turbo Inlet Pipe



- To demonstrate the location of the mounting screws, the turbo inlet pipe is shown off the car
- Use the OE (2) 10mm bolts to secure turbo inlet pipe to turbo

## Step 32 — Mount the Hard Lines to the Turbo Inlet Pipe



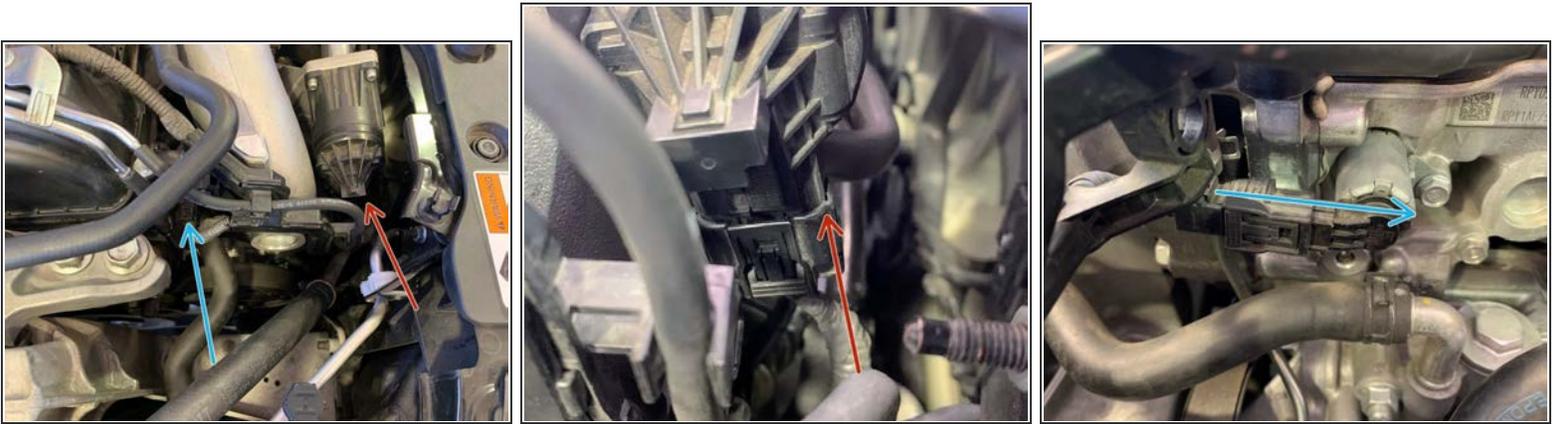
- Reinstall the (2) OE 10mm bolts to mount the top hard line to the intake pipe
- Reinstall the (2) OE 10mm bolts to mount the bottom hard line to the intake pipe
- Reinstall the OE 10mm bolt to mount the intake pipe as shown

## Step 33 — Install Vacuum Line Bracket



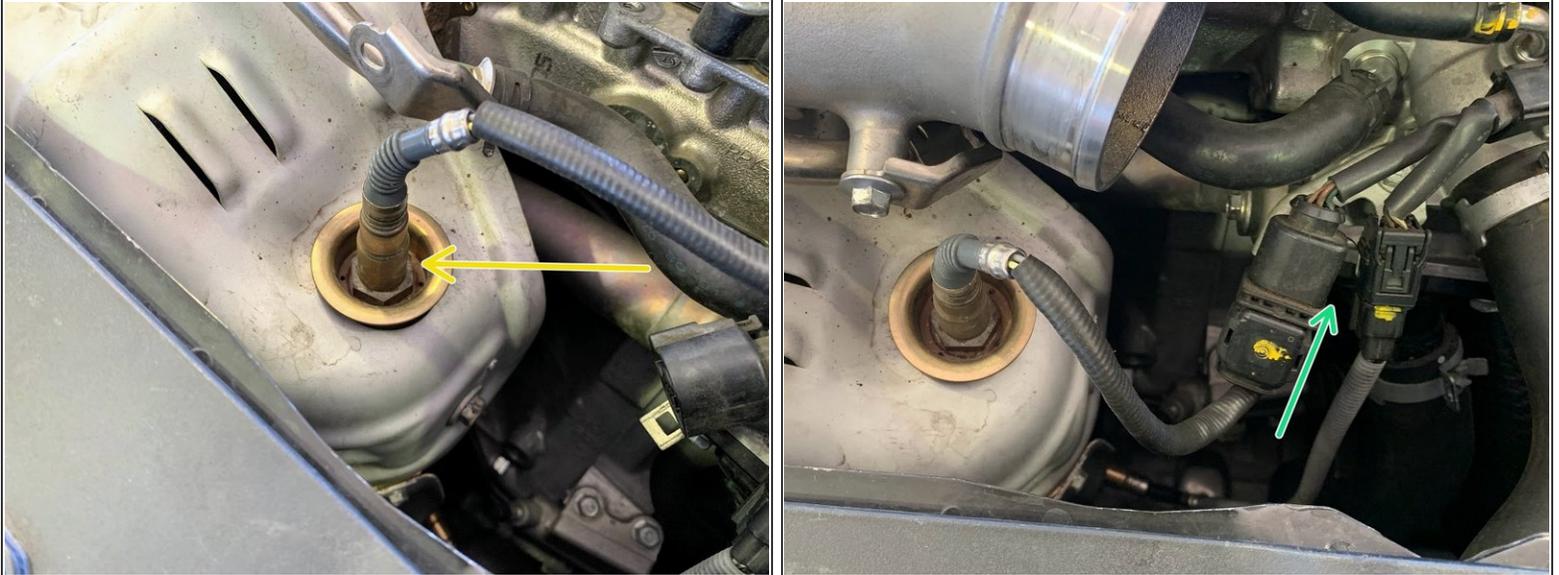
- ⓘ There are 2 bolts holding this bracket. The lower one is well hidden (purple arrow)
- Using the OE 10mm bolt reinstall the upper part of the vacuum line bracket as shown
- Using the OE 10mm bolt reinstall the lower part of the vacuum line bracket as shown

### Step 34 — Reconnect Electrical Wastegate Plug



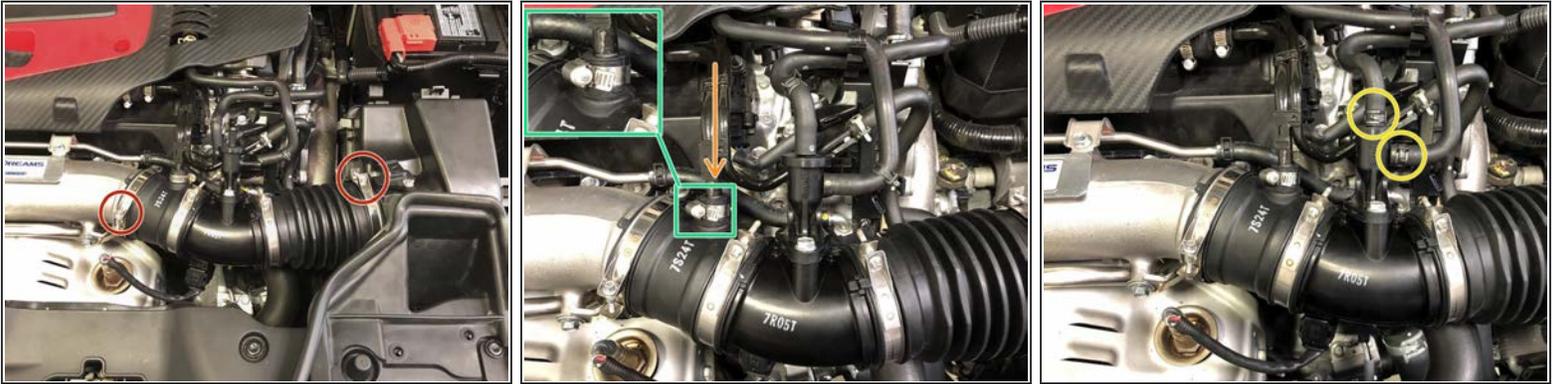
- Plug elect pigtail of electronic wastegate
- Follow the wire up and reconnect the other end of the electrical harness as shown

### Step 35 — Reinstall Upper Oxygen Sensor



- Reinstall the upper oxygen sensor using the 22mm oxygen socket. **Torque to 30 ft-lbs**
- Reconnect wiring harness for upper oxygen sensor

## Step 36 — Install Intake Tube



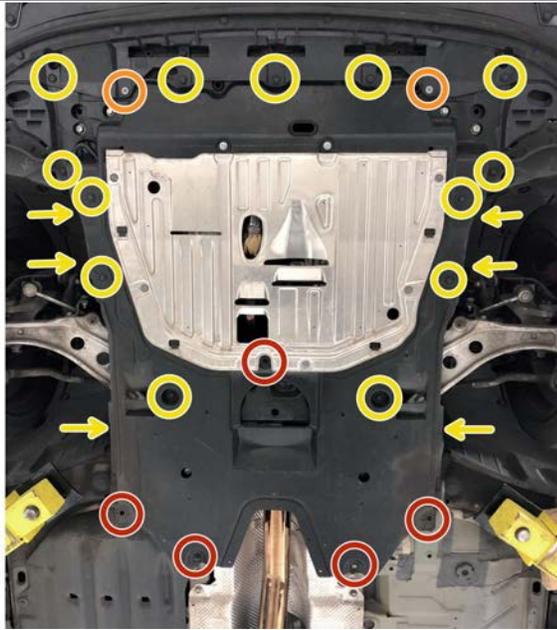
- Reinstall the intake tube as shown and secure the clamps with a 5.5mm socket
- Replace the clamp with the provided 14-27mm hose clamp
- Use needle nose pliers to clamp the OEM spring clamps for the EVAP silicon Boost feed and EVAP dump hoses

## Step 37 — Reinstall Engine Cover



- Use a 10mm socket and install the 5 bolts to hold the engine cover

## Step 38 — Reinstall Undertray-Part A



- Lift the under tray into position
  - Reinstall the five 10mm bolts with a 10mm socket & torque wrench. Torque to 6-8 lb-ft
  - Reinstall the two 5mm socket flange bolts with the 5mm Allen key & torque wrench. Torque to 6-8 lb-ft
  - Reinstall the 19 push clips at the bottom of the undertray and the sides
- i** For clarity on the push clips on the sides of the under tray (labeled with the arrows) please see the next step

## Step 39 — Reinstall Undertray - Part B



- The images in this step show the push clips on the side of the under tray. These are labeled with the arrows in the previous step

## Step 40 — Final Notes & Tips



**⚠** Some smell and faint smoke can be present on first start-up. This is normal and will not happen after the 2nd or 3rd heat cycle.

- i** To get the best performance from your Performance Downpipe, we highly recommend a custom tune. OTS maps will work for some people
- i** A custom tune for your specific vehicle with your specific modifications will provide the best performance for your Civic and the location you live in

## Step 41 — I Dare You to REDEFINE



- This completes the installation of your 27WON Performance FK8 Downpipe
- We hope you were impressed with your 27WON experience and love your new downpipe for years to come. Email us at [sales@27won.com](mailto:sales@27won.com) or call us at 571-271-0271 with any questions or concerns
- Please Leave a review here: <https://store.27won.com/2017-2021-civic-...>
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