L15-6-209-10 10th Gen Downpipe

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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.

Advisory:

- Non-Catted Downpipes are strictly intended for racing use only.
- Working under the vehicle requires a safe and sturdy location for the vehicle to sit on jackstands.
- The exhaust piping, turbocharger, and cooling system will be hot after recent vehicle operation. Allow the vehicle to cool or use a fan to cool the exhaust components before working on the vehicle.

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TOOLS:

- Silicone Lubricant Spray (1)
- WD-40 (1)

or other penetrating lubricant

- Shop Towels/Rags (1)
- Jack Stand (2)
- Hydraulic Jack (1)
- Flat Head Screwdriver - Large (1)
- Phillips Screwdriver - #2 (1)
- Tongue and Groove Adjustable Pliers (1)
- Needle Nose Pliers (1)
- Socket 5.5mm (1)
- Socket, 10mm (1)
- Socket 12mm (1)
- Socket 14mm (1)
- Ratchet Wrench Extension - Short (1)
- Ratchet Wrench Extension - Long (1)
- Ratchet Wrench (1)
- Wrench, 10mm (1)
- Wrench, 12mm (1)
- Wrench, 14mm (1)
- Wrench, 19mm (1)
- 5mm Allen Wrench (1)
- Torque Wrench (1)
- O2/Oxygen Sensor Socket (1)

7/8" or 22mm Specialty Socket

- Magnet on a Stick (1)

This tool will be critical to the turbo inlet pipe removal and installation

PARTS:

- 27WON Performance DownPipe (1)
- M6x1.0x12mm Flange Bolts (4)
- M10 x 1.5mm flange nut (3)
- M10x1.5mmx42mm stud (3)

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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

ⓘ If you are installing a 27WON Front-Pipe along with the Downpipe, please see the Front-Pipe Instructions Here: http://store.27won.com/support/instructi...

⚠ **Defouler & Non-Catted Downpipes are strictly intended for racing use only. Installation and use are at the customers own risk**

⚠ Heat shield fitment may be different outside North America. Some modification of heat shield may be required for proper fitment.

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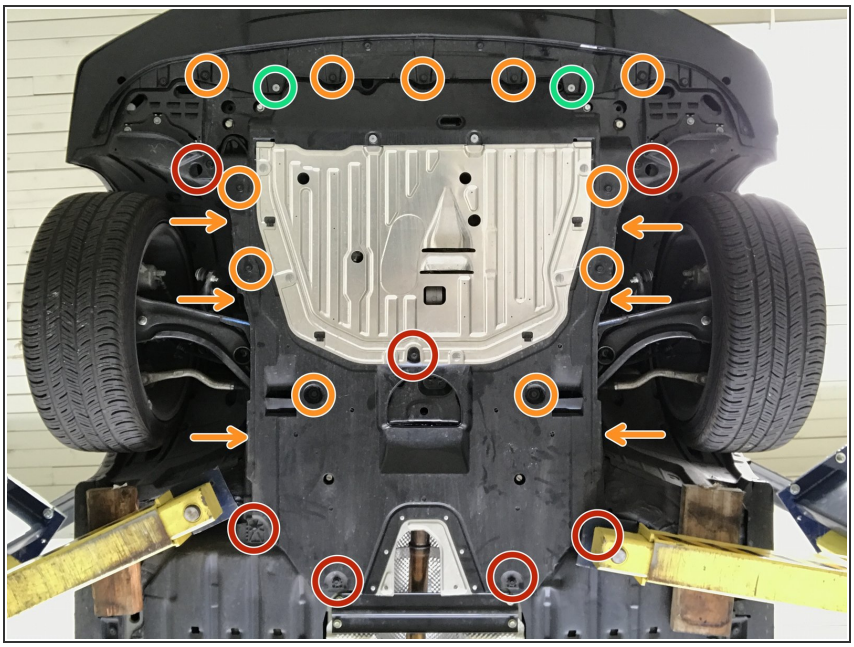
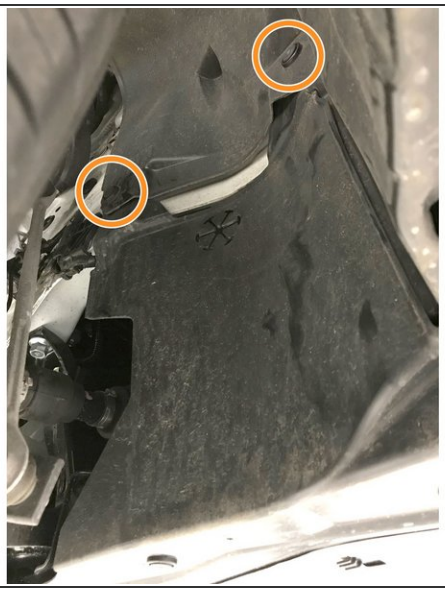
Step 2 — Removing the Skidtray Part A



- Locate the engine skidtray to gain access to the downpipe and front-pipe
- Use 5mm Allen to remove the two (2) bolts shown in green circles
- Use 10mm socket & ratchet to remove the seven (7) bolts shown in red circles
- Use a flathead screwdriver to remove the seventeen (17) plastic push-clips. **Orange arrows identify the push-clips described in the next step (3)**

Step 3 — Removing the Skidtray Part B



- Use large flat head screw driver to remove push-clips on each side of skidtray

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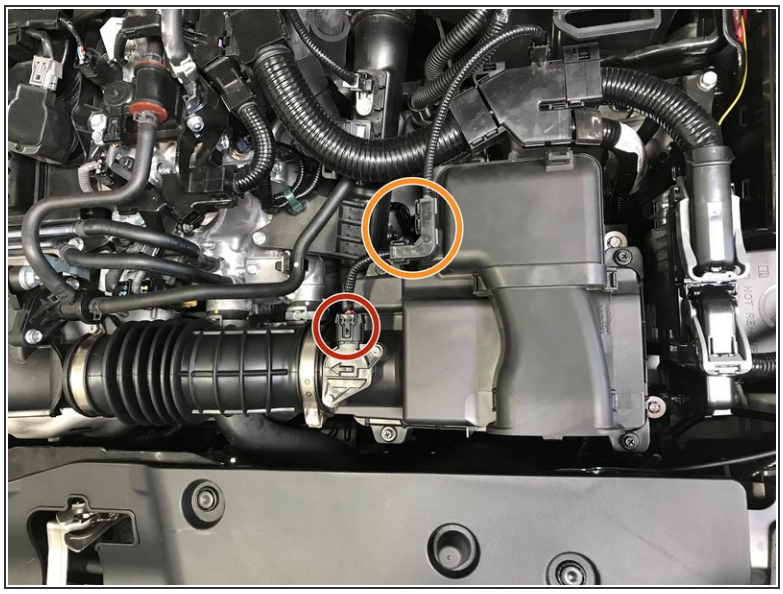
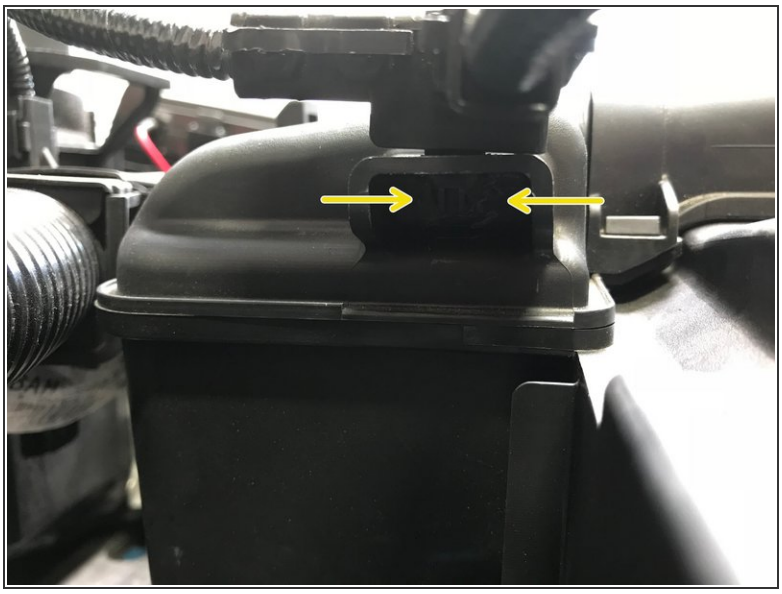
Step 4 — MAF Sensor Wire Removal





- Disconnect the wiring harness from the MAF Sensor
- Remove the wire cover from the airbox
  - Use needle nose pliers to pinch the clips then pull the cover off the airbox

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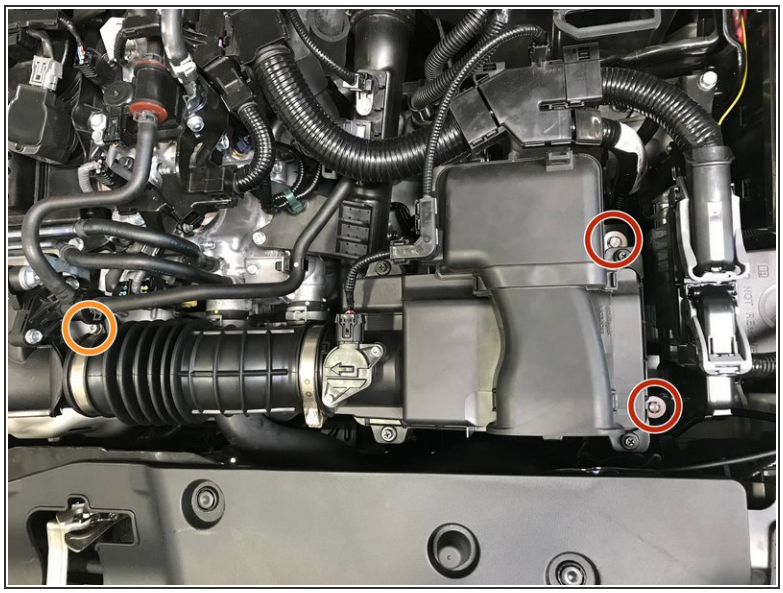
Step 5 — Removing Upper Airbox Assembly - Part A



- Use a 10mm socket, extension & ratchet to loosen the two (2) 10mm bolts
  - ⓘ You can leave the bolts loose in position during airbox removal
- Use a 5.5mm socket to loosen the hose clamp
  - ⓘ A small phillips screwdriver can be used, but is not recommend because the hose clamp head strips easily

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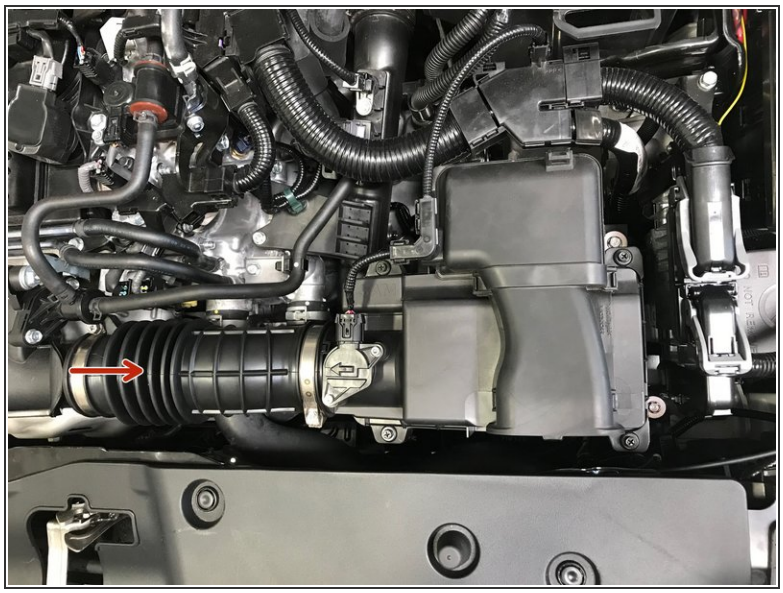
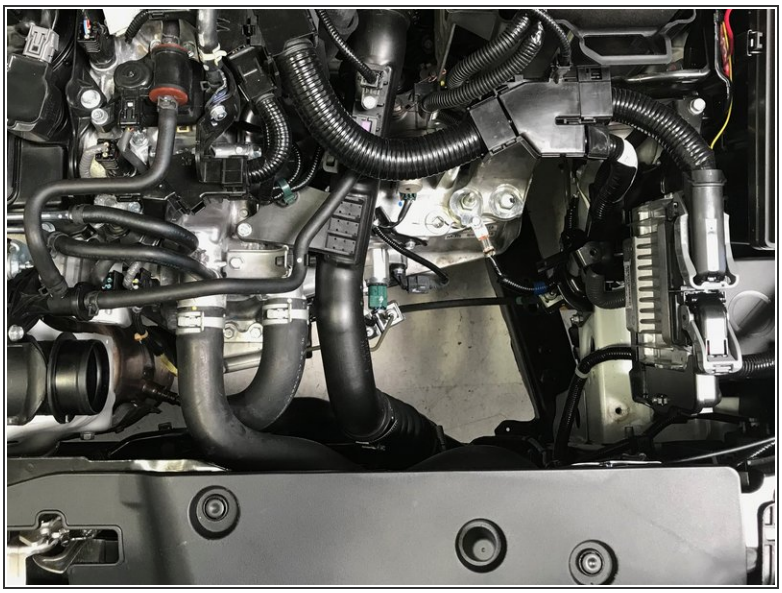
Step 6 — Removing Upper Airbox Assembly - Part B





- Pull the hose off the turbo inlet pipe in the direction of the arrow
- With the hose loose, remove the entire airbox from the engine bay
- The result will look as shown in the second image

Step 7 — Disconnect O2/Oxy Sensor Wire

- Disconnect the O2 sensor wire as shown with red arrow
- Use small pliers to remove the purple clip from the bracket
  - ⓘ Pinch the back side of the purple clip and push through the bracket

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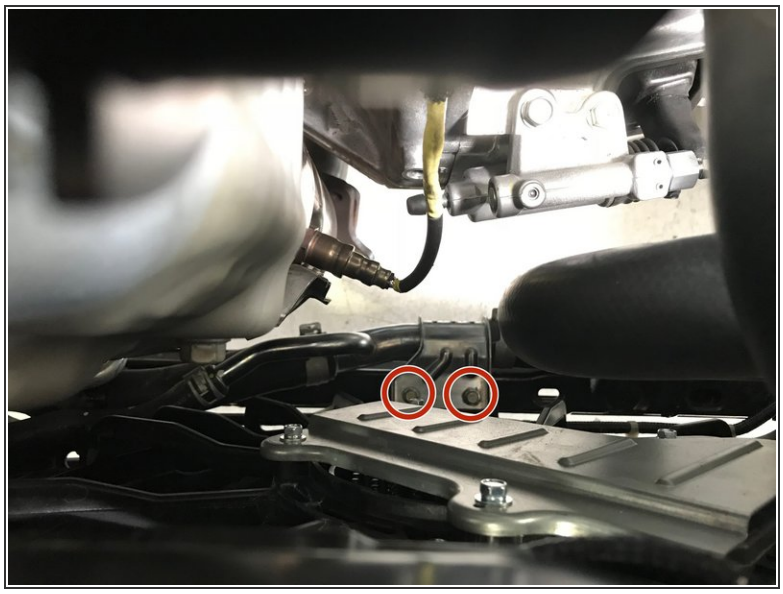
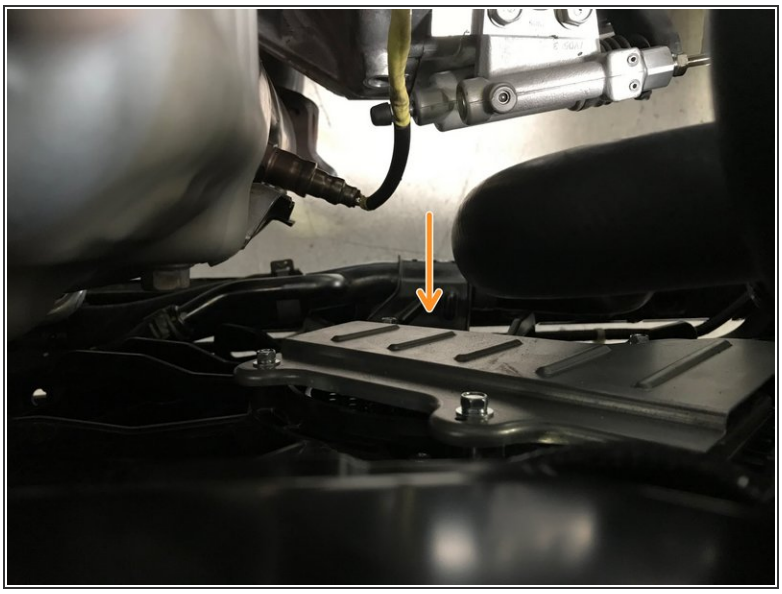
Step 8 — Move Lower Radiator Hose





⚠ Verify that the bracket and radiator hose are not hot. If hot allow the vehicle to cool before proceeding

ⓘ Moving the radiator hose allows improved clearance for downpipe removal

- Use a 10mm socket & ratchet to remove the two (2) 10mm bolts holding the lower radiator hose in place
- With the bolts removed, move the radiator hose upward and forward

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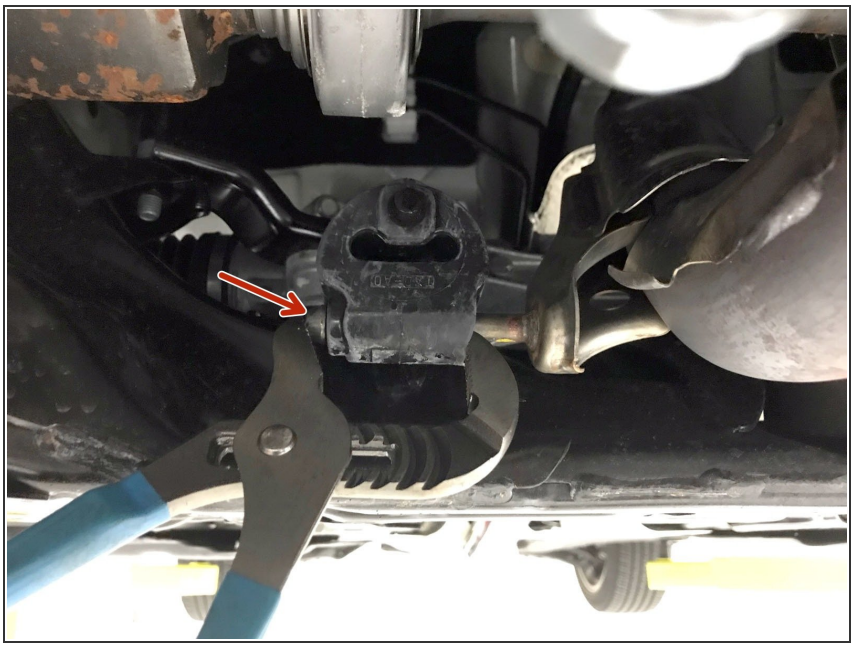
Step 9 — Rubber Exhaust Hanger Removal



- Apply a small amount of silicone spray to the end of the hanger rod (red arrow)
- Use the tongue and groove pliers as shown to remove the rubber hanger

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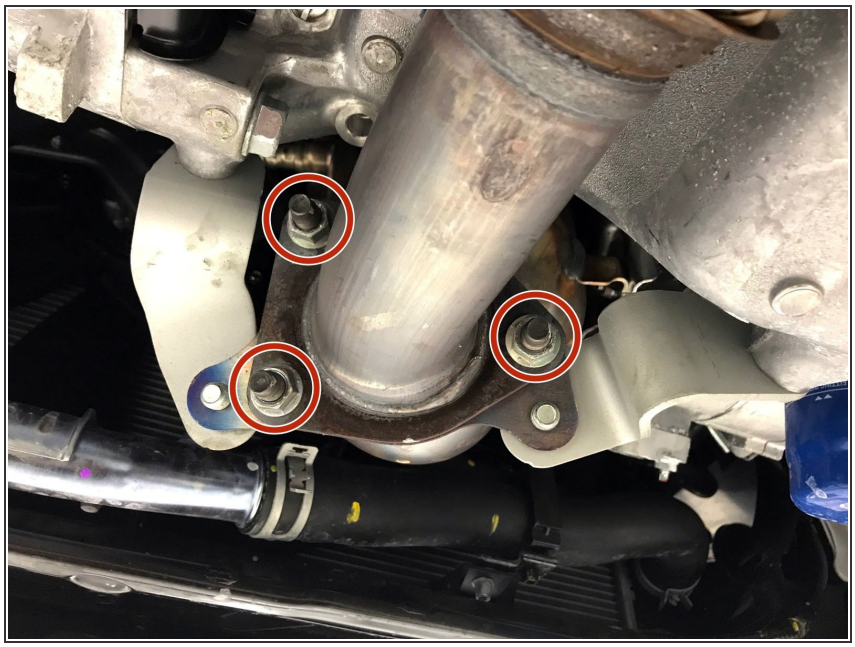
Step 10 — Disconnect Front-Pipe/Downpipe Flange



- Use a 14mm socket and ratchet to remove the three OE nuts, these nuts/studs can be set aside as you will use the provided three (3) 15mm stud/nuts when reinstalling the downpipe
  - ⓘ It is possible that the stud will thread out of the downpipe flange. This is not an issue. The stud can be threaded back into the flange like a bolt

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Step 11 — Remove Downpipe Brackets

⚠ Verify that the brackets and coolant hose are not hot. If hot allow the vehicle to cool before proceeding

- Use a 14mm socket & ratchet or wrench to remove the four (4) 14mm bolts as shown in red circles in two images
- Remove the brackets from the vehicle

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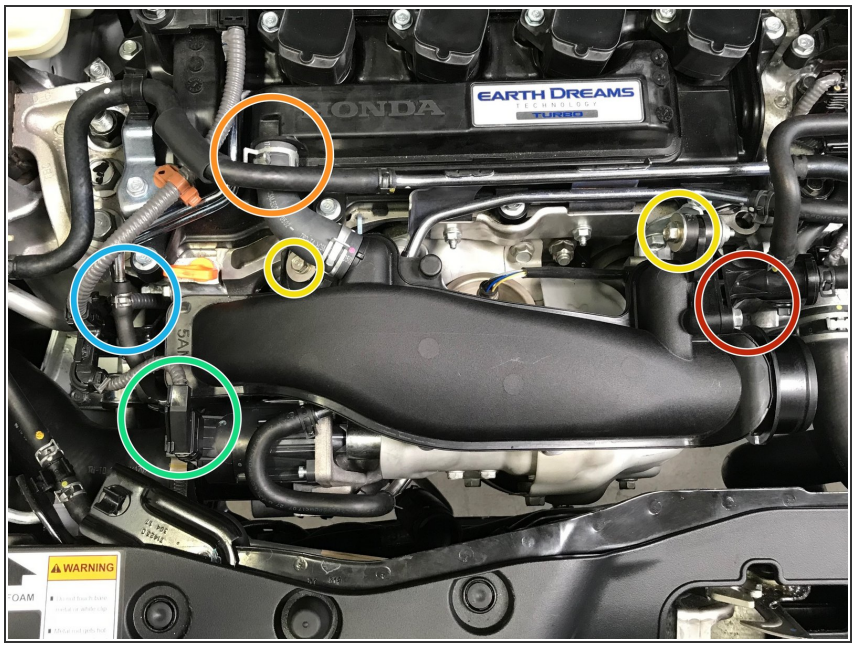
Step 12 — Remove Secondary O2 Sensor

- Locate the secondary O2 sensor on the downpipe
- Locate the specialty socket - 22mm or 7/8" O2 sensor socket
- Use the ratchet wrench in the specialty socket to remove the O2 sensor

Step 13 — Turbo Inlet Pipe (TIP) Components Identification



- Going forward we will reference the black plastic pipe connected to the turbo as the "Turbo Inlet Pipe (TIP)"
- The following components are identified for clarity in the following steps
  - EVAP Bleed Air
  - Valve Cover Breather Hose
  - TIP Mounting Points
  - Waste Gate Actuator (WGA) Wiring Connection
  - By-Pass Valve (BPV) Hoses

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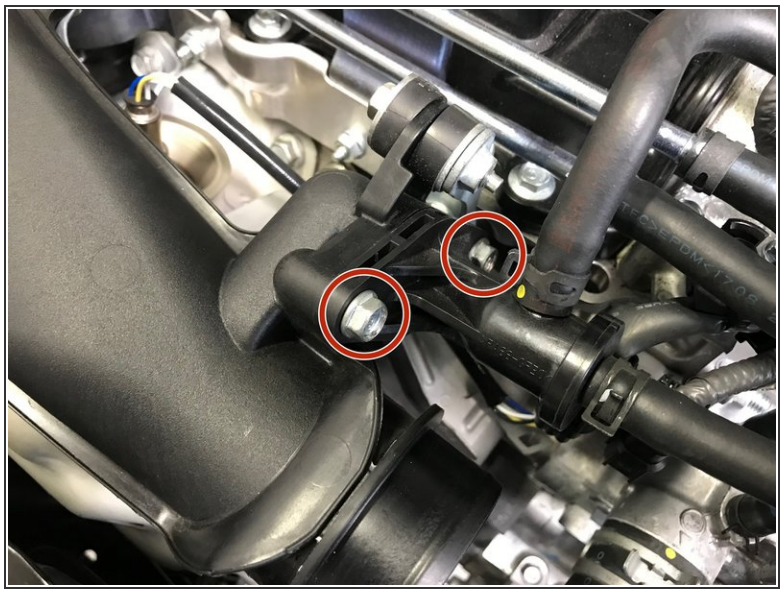
Step 14 — Remove EVAP Bleed Air



- Use a 10mm socket & ratchet to remove the two (2) 10mm bolts
- Pull the EVAP bleed air out of the TIP and set to the side

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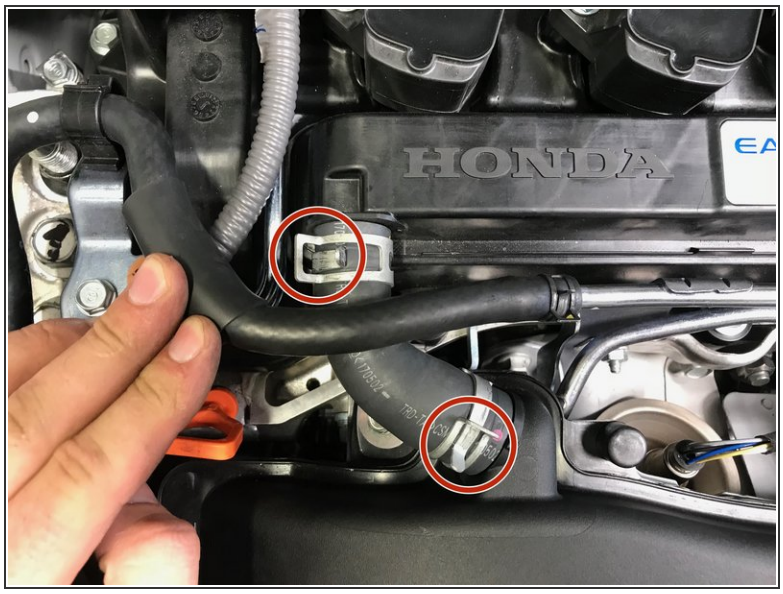
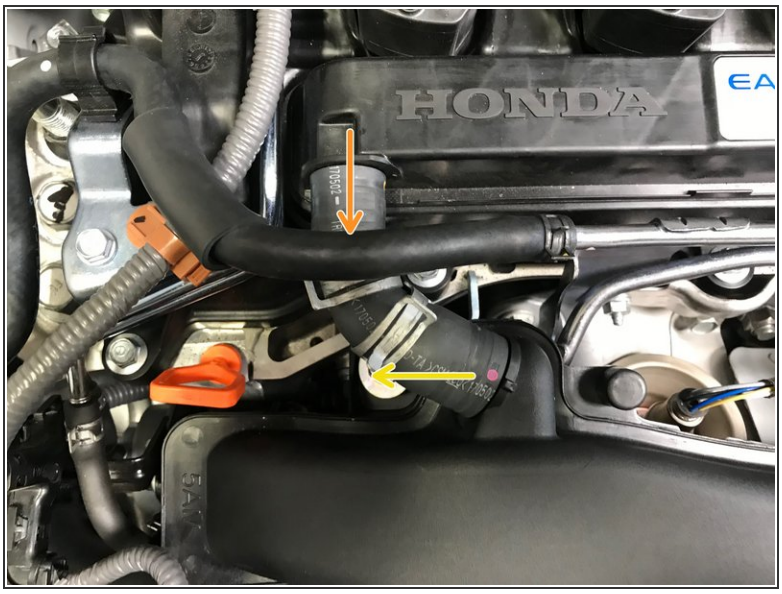
Step 15 — Remove Valve Cover Breather Hose





- Use pliers to loosen the spring clamps. Slide the clamps towards the center of the hose
- Pull the hose off the valve cover first
- Pull the hose off the TIP second

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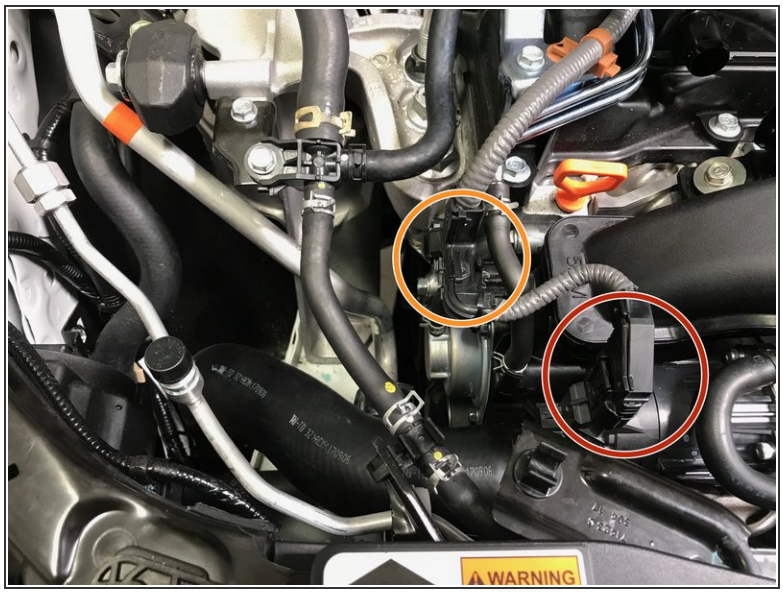
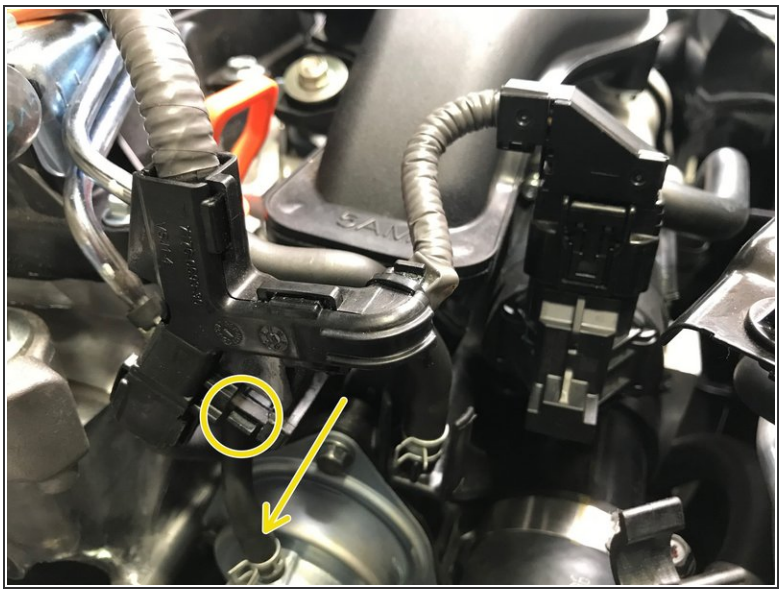
Step 16 — Disconnect WGA Wires





- Disconnect the wiring from the Waste Gate Actuator (WGA)
- Locate the wiring loom
- Press down on the small tab and pull the wiring loom from the bracket in the direction of the yellow arrow
- Move the wiring harness towards the rear of the car out of the way

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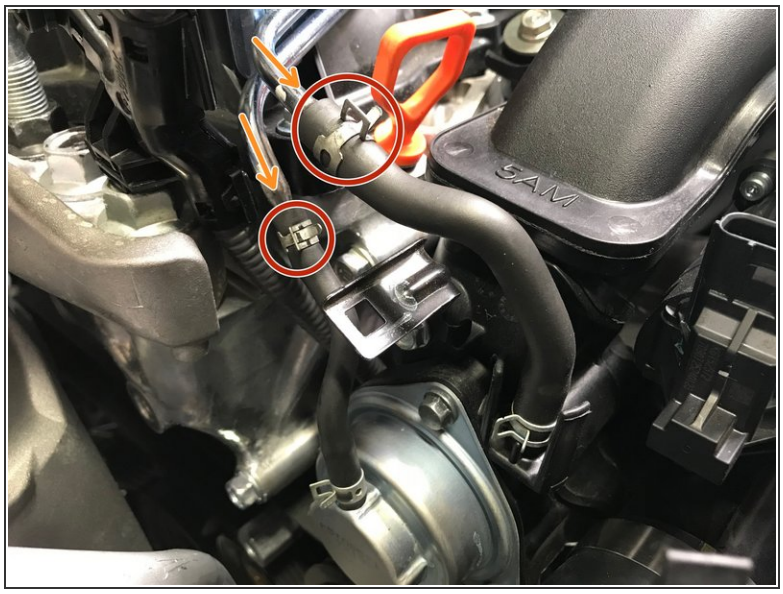
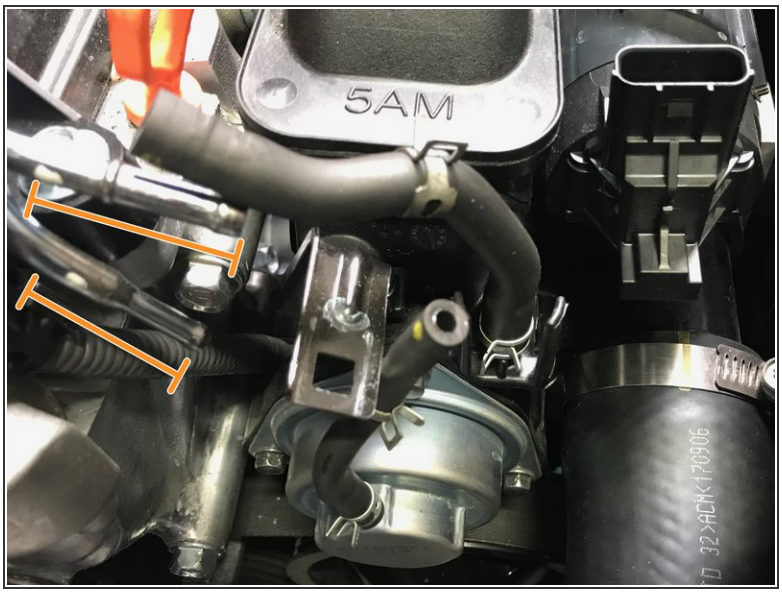
Step 17 — Disconnect BPV Hoses





- Use pliers to loosen the spring clamps. Slide the spring clamps with red circles towards the center of the hose
- Pull the BPV hoses off the metal tubes in the direction of the orange arrows

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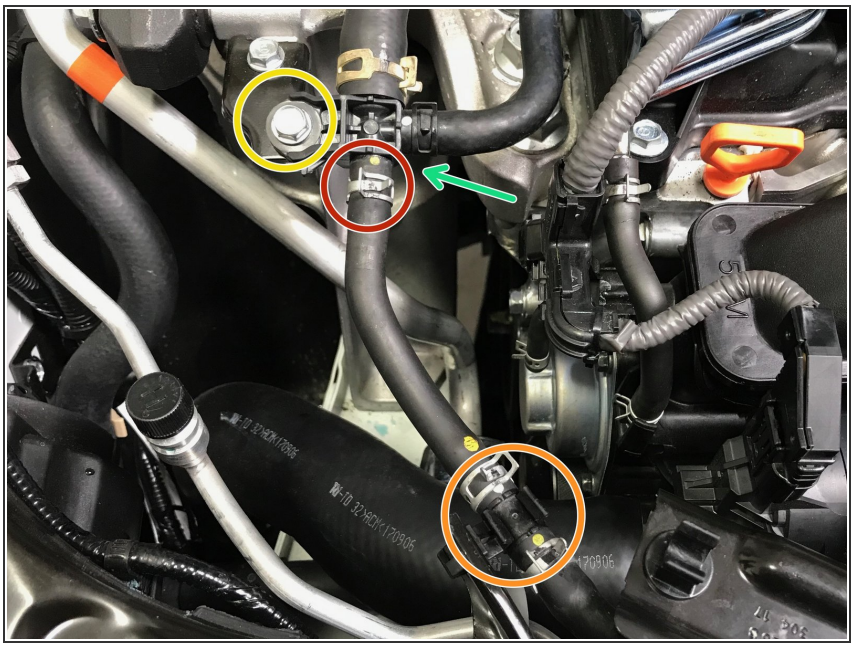
Step 18 — Disconnect Coolant Reservoir Hoses



- Use pliers to loosen the spring clamp. Slide the clamp towards the center of the of the hose
  - ⓘ Do not remove the hose yet
- Pop the hose out of the plastic clip
- Pull the hose off the plastic "T". Move the hose towards the front of the car out of the way
  - ⚠ Some coolant may spill from the hose and "T" connection
- Use a 10mm socket & ratchet to remove the bolt holding the "T" connection

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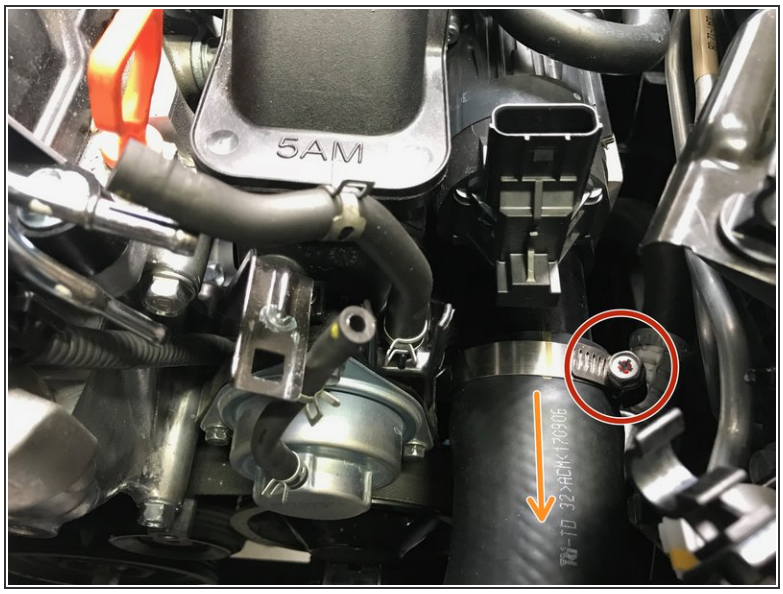
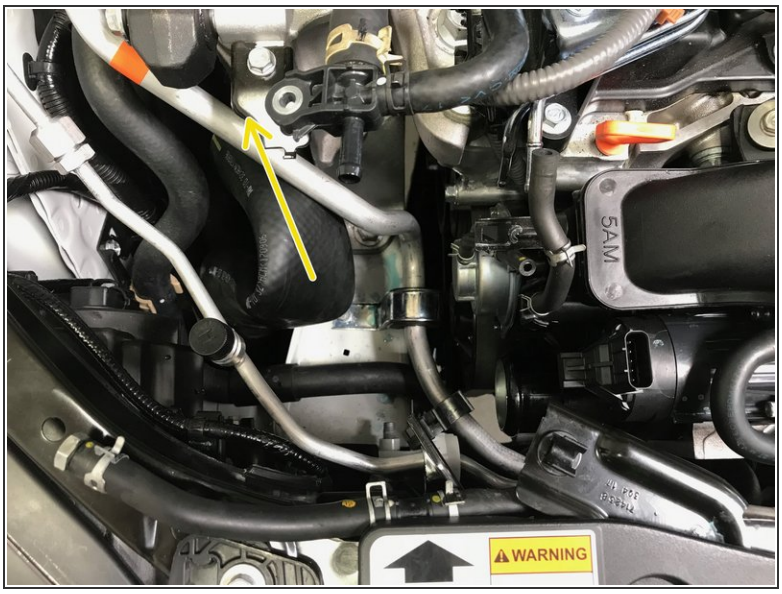
Step 19 — Remove Rubber Intercooler Hose





- Use a 10mm socket & ratchet or Phillips screwdriver to loosen the worm-gear clamp
- Pull the hose off the TIP in the direction of the arrow
- ⚠ Remove the clamp from the hose so it does not get lost in the engine bay
- Bend the hose towards the rear of the car. Stuff it into the fender liner out of the way

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Step 20 — Remove TIP Mounting Bolts

- Use a 10mm socket & ratchet to remove the two (2) TIP mounting bolts

Step 21 — Turbo Inlet Pipe Removal Preperation

ⓘ The next process is to remove the Turbo Inlet Pipe (TIP) from the vehicle.

- We will first identify the hardware location and how to remove without losing the hardware in the engine bay
- Second, we will show step by step images of physically removing the TIP for PDF users and a quick video for mobile users

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Step 22 — TIP Hardware Removal

- ⓘ Locating the mounting hardware on the TIP can be difficult. Please see the second image for clear identification
- ⚠ The hardware circled in red are bolts. The hardware circled in orange is a nut on a stud
- Use a 12mm socket, extension & ratchet to loosen the three (3) bolts
- Use a 12mm socket, extension & ratchet to loosen one (1) nut
- ⓘ With the bolts loose, but not removed, use the magnet on a stick to remove the bolts from the TIP

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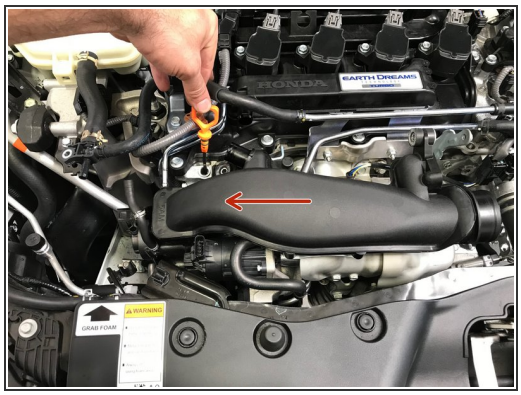
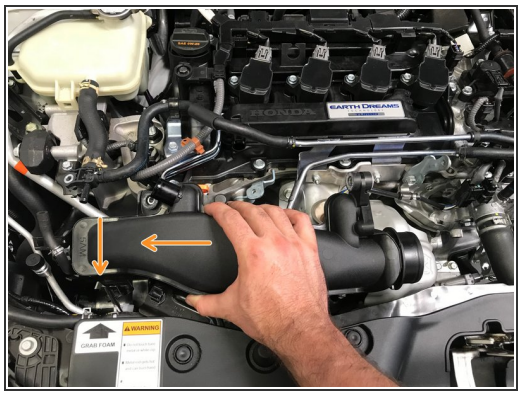
Step 23 — TIP Removal - PDF Users





- ⓘ Mobile Users proceed to Step 24 for video tutorial
- Pull the oil dip stick out a couple inches and flex out of way
- Move the TIP towards the passenger side of the vehicle past the oil dip stick
- Reinstall the oil dip stick
- Move the TIP further towards the passenger side of the vehicle and begin to rotate the top of the TIP towards the front of the vehicle
- Continue the rotation of the TIP while moving the TIP up and out of the engine bay

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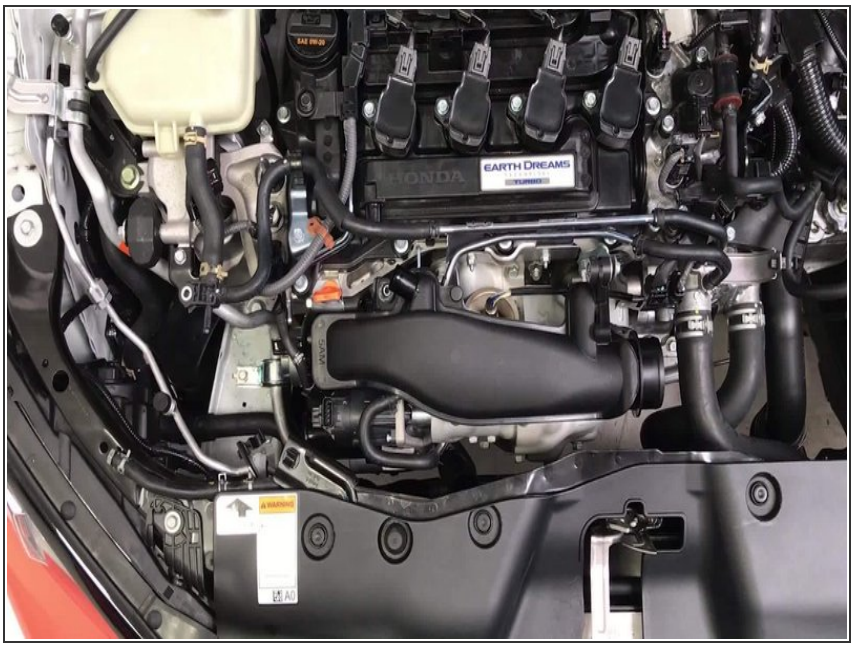
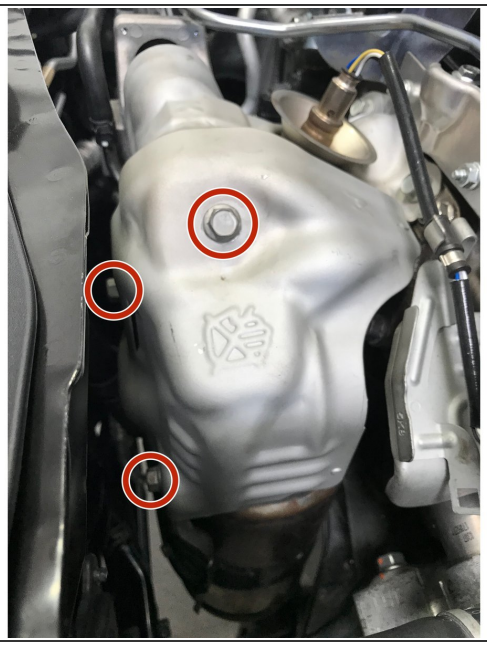
Step 24 — TIP Removal - Mobile Users



- Pull the oil dip stick out a couple inches and flex out of way
- Move the TIP towards the passenger side of the vehicle past the oil dip stick
- Reinstall the oil dip stick
- Move the TIP further towards the passenger side of the vehicle and begin to rotate the top top of the TIP towards the front of the vehicle
- Continue the rotation of the TIP while moving the TIP up and out of the engine bay

Step 25 — Remove Downpipe Heat Shield



⚠ Verify that the heat shield is not hot. If hot allow the vehicle to cool before proceeding

- Use a 12mm wrench to remove the three (3) 12mm bolts
- Remove the heat shield from the engine bay

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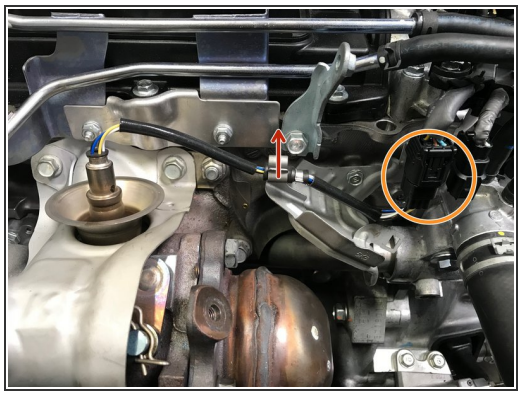
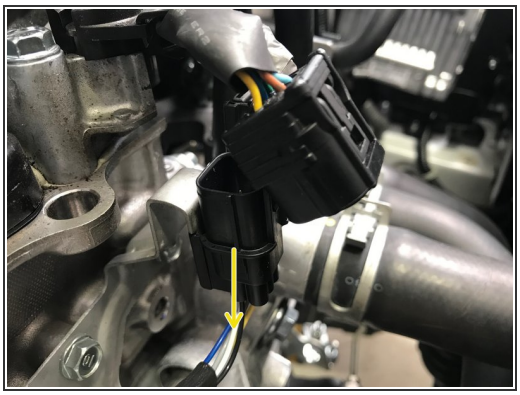
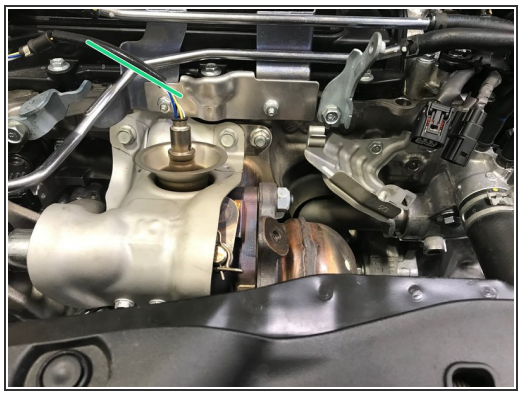
Step 26 — Disconnect Primary O2 Sensor

- Pull the wire out of the bracket as shown with the red arrow
- Disconnect the wiring circled in orange
  - Press a tab on the back of the wiring connection and pull down off the bracket as shown in second image
- Move the primary O2 sensor wire to the side out of the way

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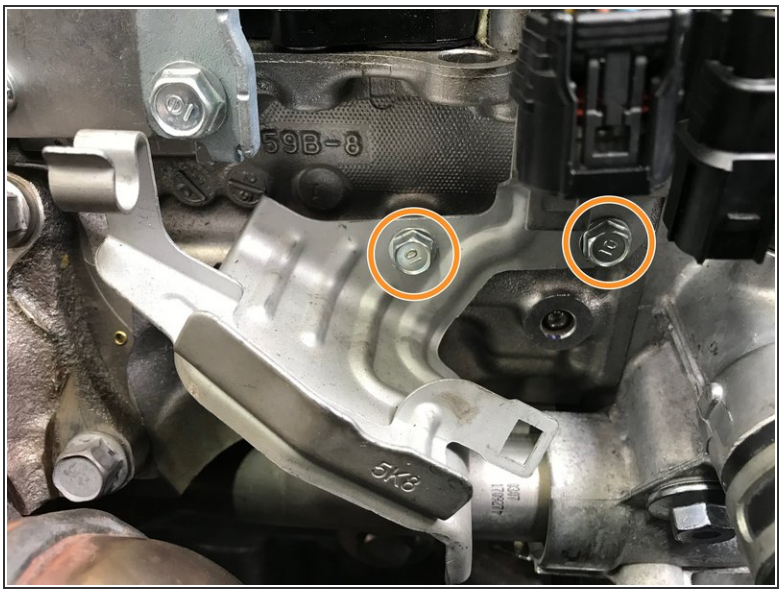
Step 27 — Remove Wiring Bracket



- Locate the wiring bracket to the driver's side of the turbo
- Use a 10mm socket & ratchet to remove the two (2) 10mm bolts
- Remove the bracket from the vehicle

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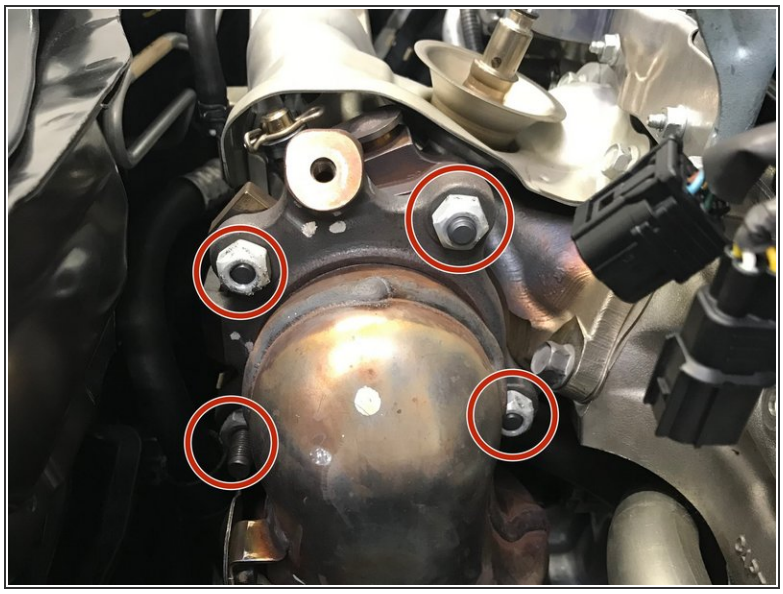
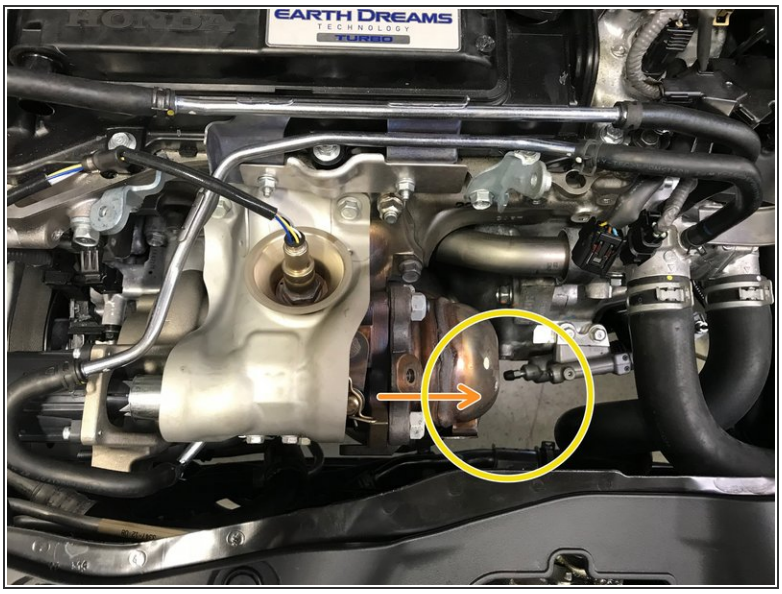
Step 28 — Remove Downpipe





- ⓘ It may be necessary to spray the studs/bolts with a penetrating lubricant before removal. Apply lubricant if needed and let sit for a few minutes then attempt removal
- Use a 14mm socket & ratchet to remove the two (2) nuts and two (2) bolts
- Move the downpipe off the studs towards the driver's side
- Lower the downpipe straight down through the opening below

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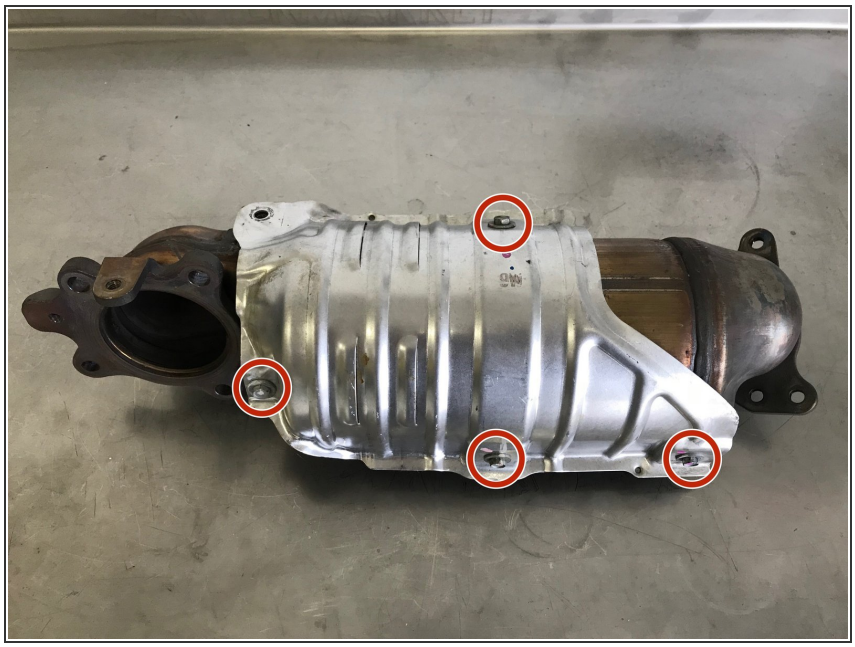
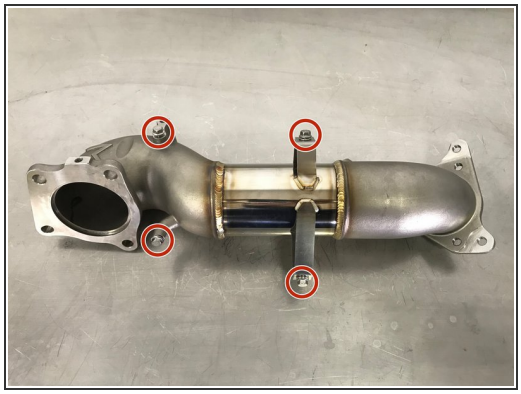
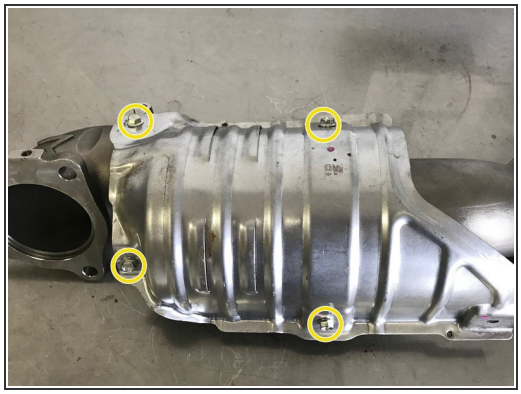
Step 29 — Remove OE Downpipe Heat Shield



- Use a 10mm socket & ratchet to remove the four (4) bolts

Step 30 — Install Hardware on 27WON Downpipe





- Use the specialty O2 sensor socket to install the secondary O2 sensor into the defouler. Torque to **30-33 ft-lbs**
- Locate the four (4) provided 10mm flange bolts on the downpipe
- Use a 10mm socket and torque wrench to install the provided four (4) 10mm flange bolts and heat shield. Torque to **12-15 ft-lbs**

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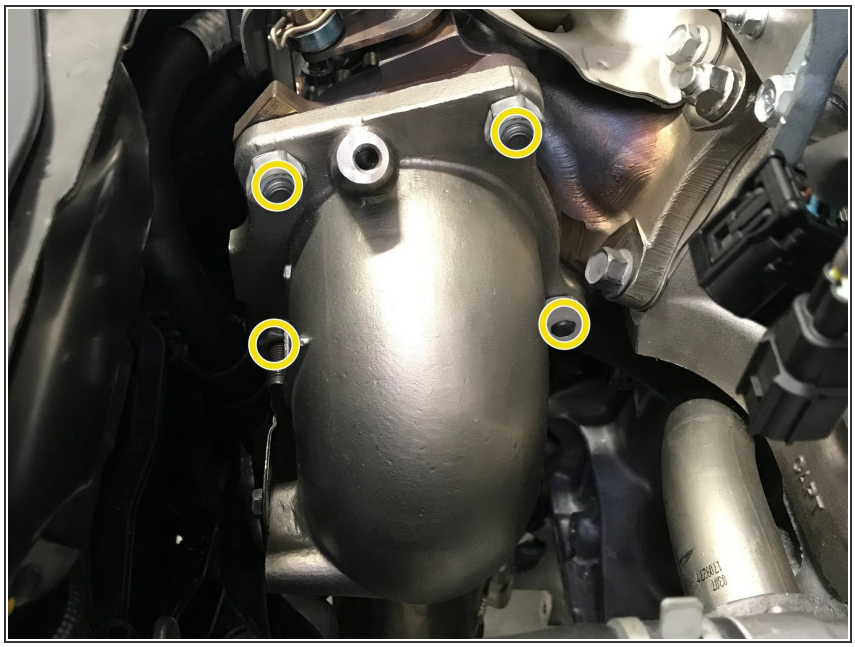
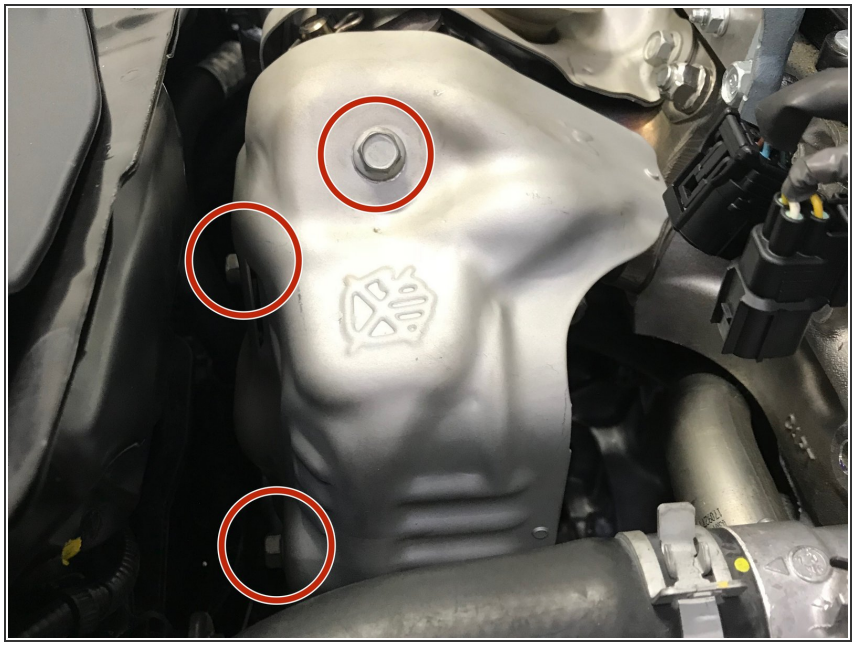
Step 31 — Install Downpipe



- In the situation that an OE stud or nut was damaged during downpipe removal, you may use a M10x1.25 stud or nut for replacement
- Use a 14mm socket & torque wrench to install the four (4) OE studs/nuts. Torque to **42-48 ft-lbs**

Step 32 — Install Downpipe Heat Shield



- Use a 12mm wrench to install the three (3) 10mm bolts and heat shield. Torque to **15-19 ft-lbs**
- Some aftermarket downpipes may not have the provision for this heat shield

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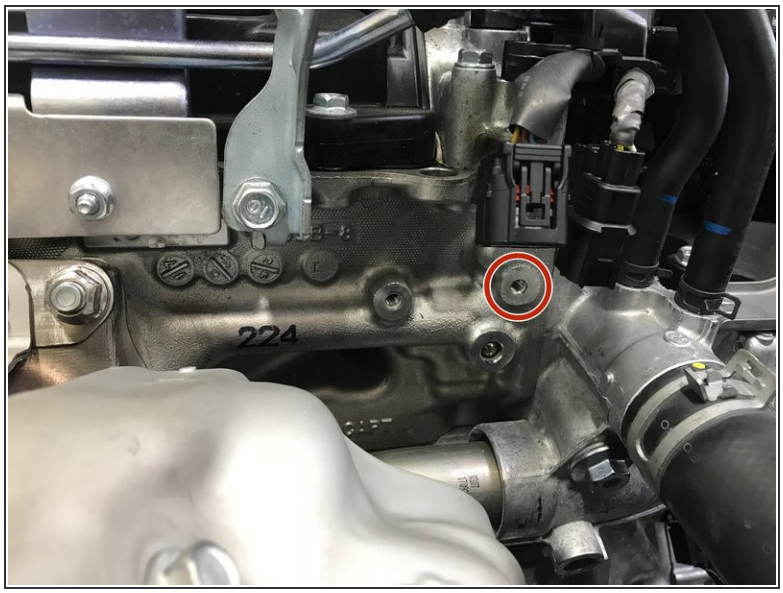
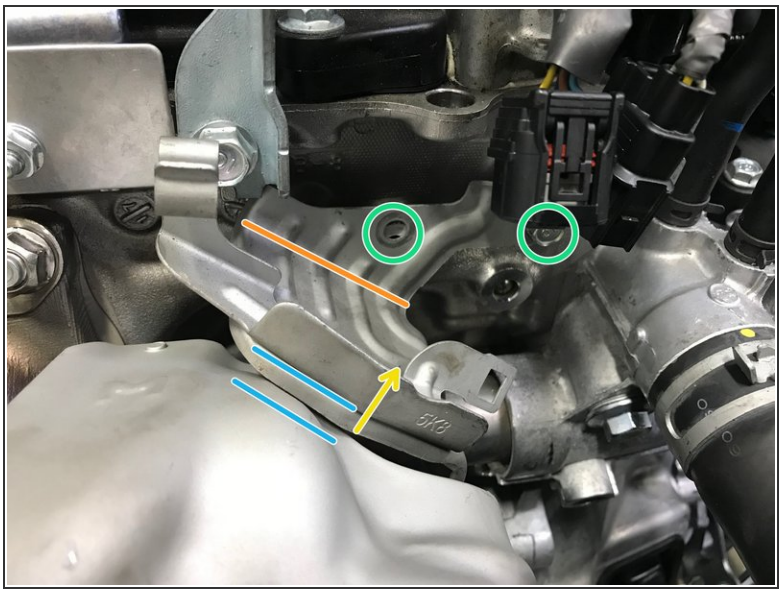
Step 33 — Install O2 Sensor Wiring Bracket





- Install the bracket and hand tighten one (1) 10mm bolt into the engine shown with the red circle
- ⓘ The wiring bracket will need to be bent up slightly to clear the downpipe heat shield.
- Bend the wiring bracket along the orange line in the direction of the yellow arrow until there is clearance
  - Clearance will require the bracket to be bent upward approximately 10mm
- Use a 10mm socket & torque wrench to install the two (2) 10mm bolts and bracket. Torque to **8-10 ft-lbs**
- After tightening the bolts, verify there is a small clearance gap between the bracket and heat shield

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Step 34 — Install O2 Sensors Wiring Part A

- Install the secondary O2 sensor wiring harness onto the bracket
- Install the primary O2 sensor wiring harness onto the bracket

Step 35 — Install O2 Sensor Wiring Part B

- Install the primary wire into the metal clip
- Connect the primary sensor to the wiring harness as indicated by orange arrow

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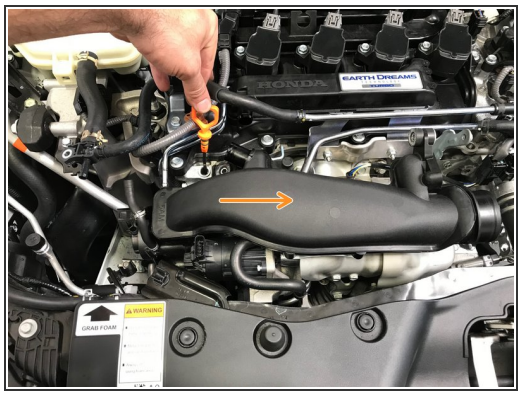
Step 36 — Install Turbo Inlet Pipe (TIP)



- ⓘ Installation of the TIP follows the same process for removal in reverse
- Lower the TIP into the engine bay with the TIP rotated towards the front of the car
- Rotate and lower the TIP into the engine bay then move it towards the driver's side of the engine bay
- Pull the oil dip stick out a couple inches and flex out of way
- Move the TIP further to the driver's side while sliding the TIP over the stud in the compressor housing
- Reinstall the oil dip stick

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Step 37 — Tech Tip - Magnet on a Stick

- With the TIP loosely in position on the turbo, we will begin the most frustrating part of the entire installation.
- Using the Magnet on a Stick we can loosely thread the nut onto the stud and the bolts into the compressor housing without the risk of losing the hardware in the engine bay

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Step 38 — Install TIP Hardware

- An installed TIP is shown out of the car for clarity
- The three (3) red circles show the locations of the 12mm bolts
- The orange circle shows the location of the 12mm nut and stud
- Use the magnet on a stick tech tip shown in Step 37 to first loosely install the bolts and nut
- Tighten the hardware and torque to **15-19 ft-lbs**

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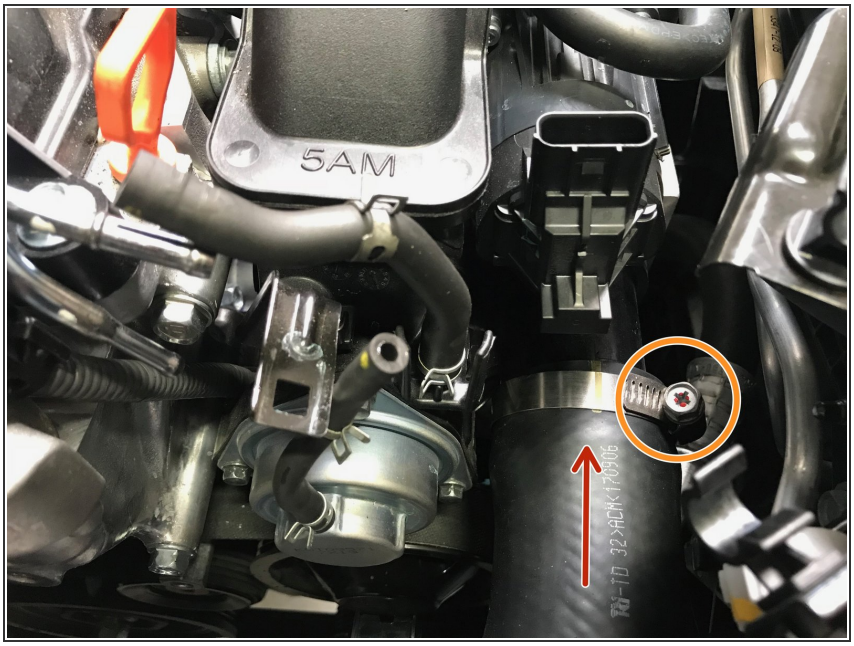
Step 39 — Install TIP Mounting Bolts

- Use a 10mm socket & torque wrench to install the two (2) TIP mounting bolts. Torque to **8-10 ft-lbs**

Step 40 — Install Rubber Intercooler Hose



- Pull the hose out and reinstall the band clamp in the same orientation it came off
- Push the hose onto the TIP in the direction of the arrow
- Use a 10mm socket & ratchet or Phillips screwdriver to tighten the worm-gear clamp until snug

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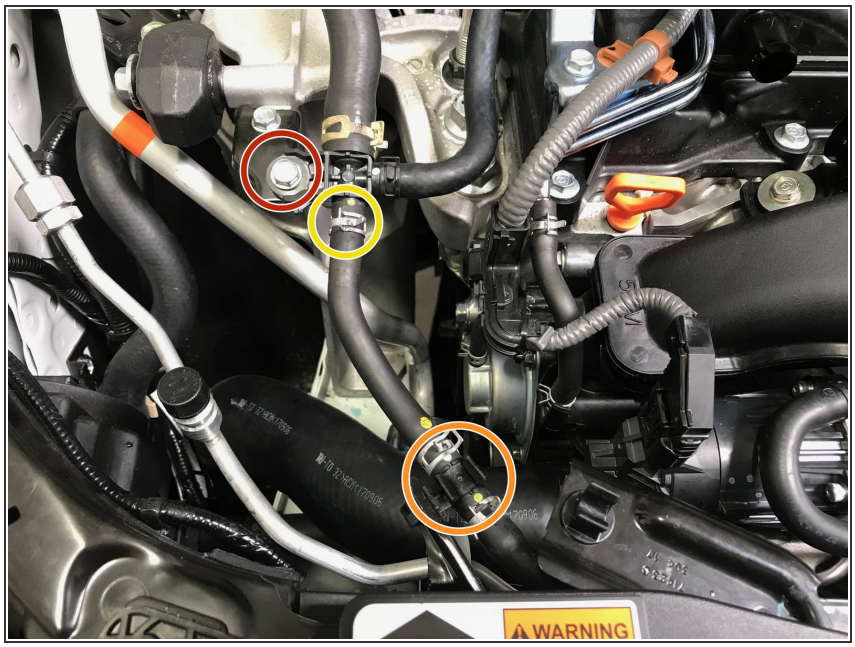
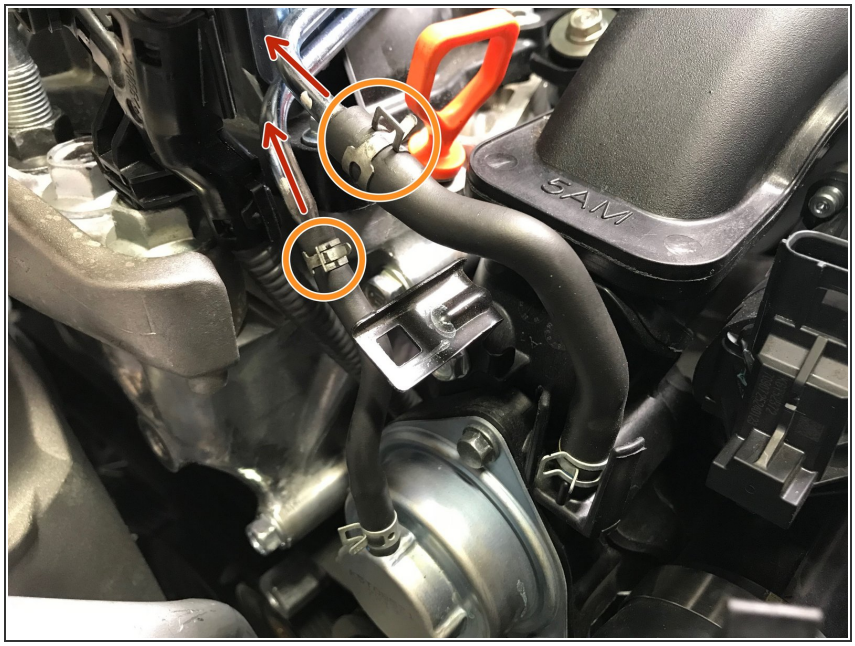
Step 41 — Reconnect Coolant Reservoir Hoses



- Use a 10mm socket to install the bolt holding the "T" connection. Torque to **8-10 ft-lbs**
- Pop the hose into the plastic clip
- Push the hose onto the plastic "T". Use pliers to install the spring clamp at the end of the coolant hose around the "T" connection

Step 42 — Reconnect BPV Hoses



- Push the BPV hoses onto the metal tubes in the direction of the red arrows
- Use pliers to install the spring clamps onto the end of the hoses around the metal pipe

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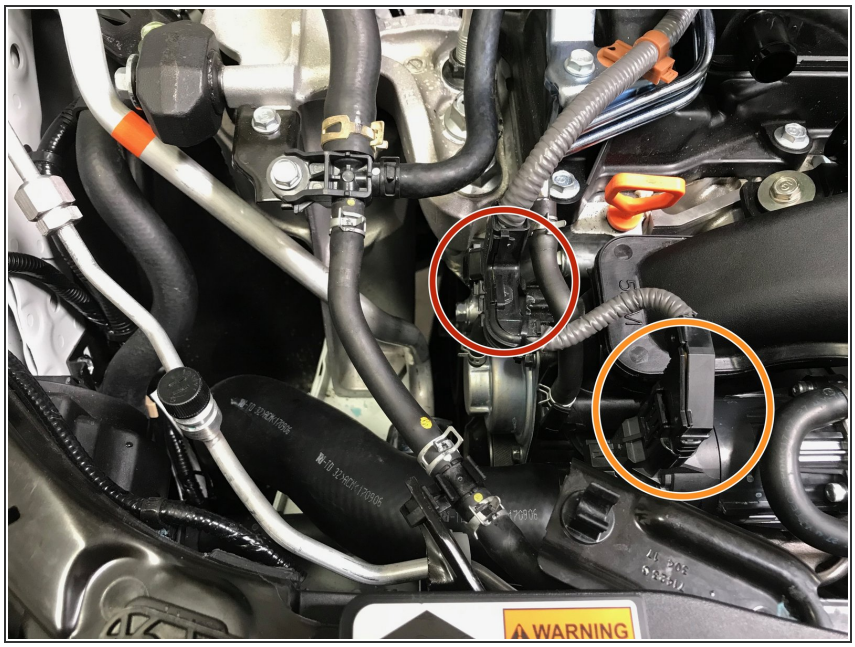
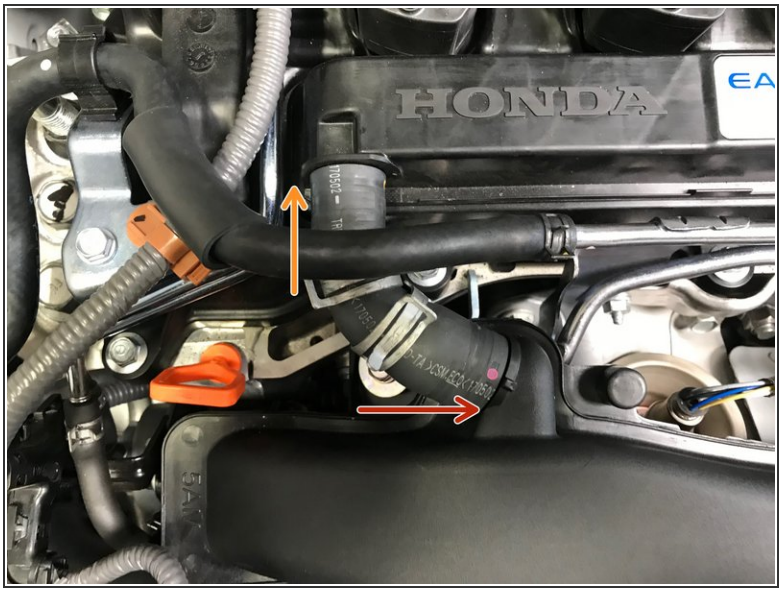
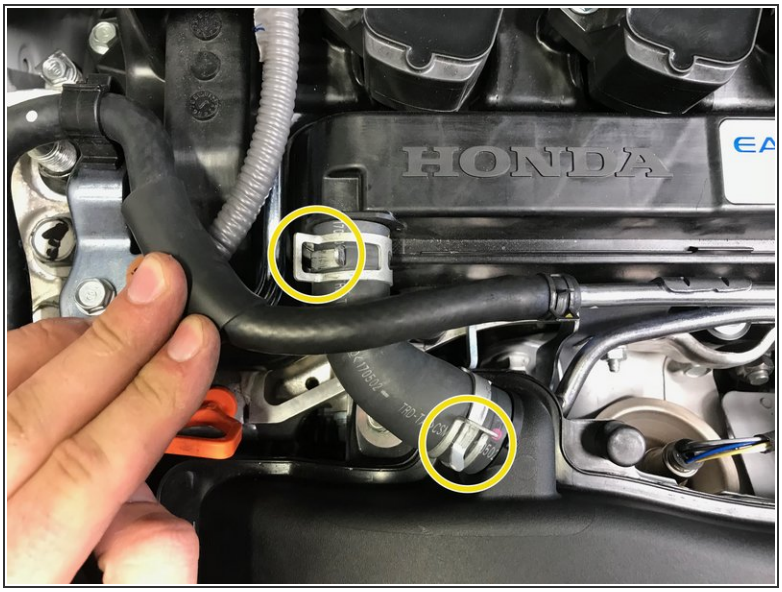
Step 43 — Reconnect WGA Wires



- Install the wiring harness back onto the bracket
- Reconnect the wiring harness to the WGA

Step 44 — Install Valve Cover Breather Hose





- Push the hose onto the TIP first, following the red arrow.
- Push the hose onto the valve cover second
- Use pliers to install the spring clamps onto the end of the hose

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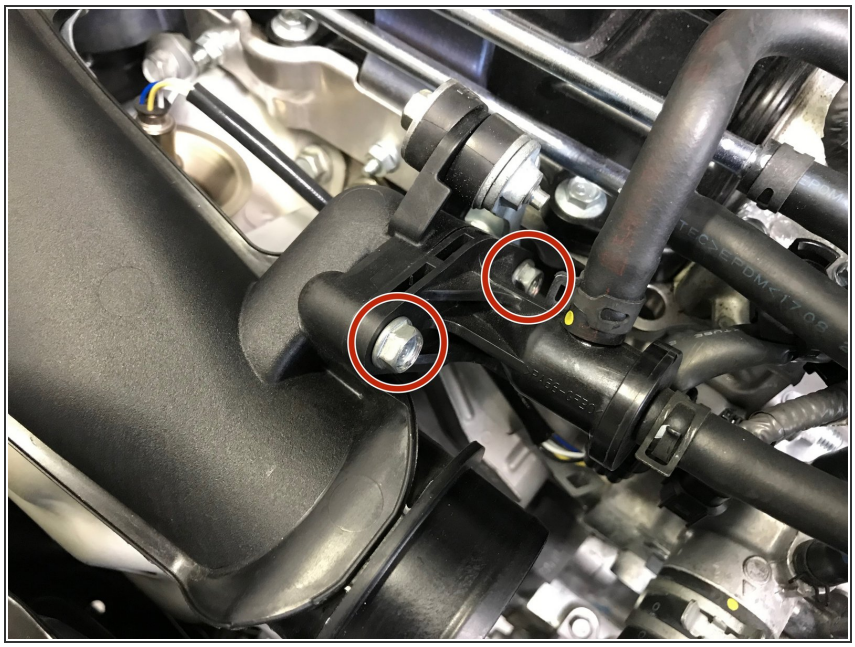
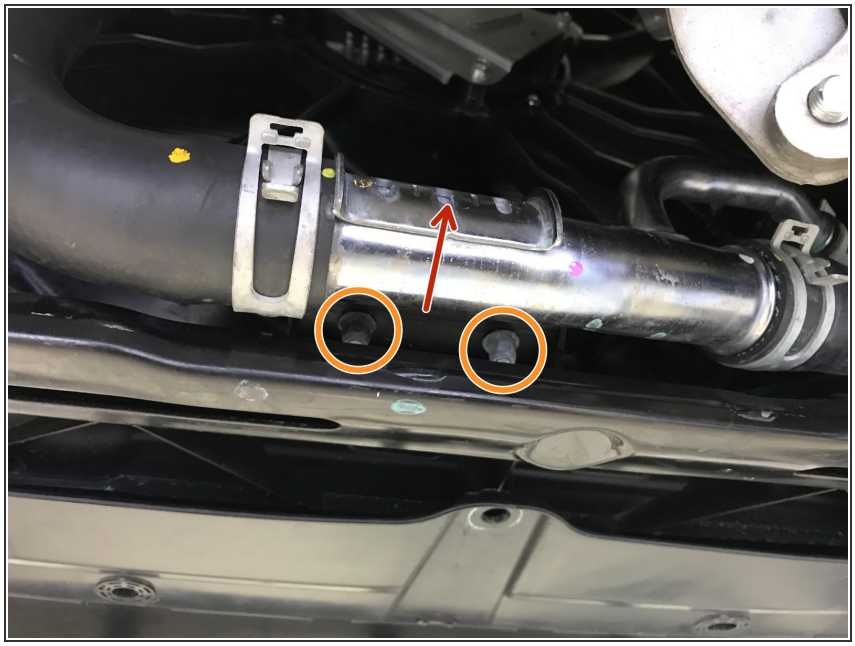
Step 45 — Install EVAP Bleed Air



- Use a 10mm socket & torque wrench to install the two (2) 10mm bolts. Torque to **8-10 ft-lbs**

Step 46 — Reattach Lower Radiator Hose



- Move the radiator hose back into the correct position so the bolt holes and bracket holes align
- Use a 10mm socket & torque wrench to install the two (2) 10mm bolts holding the lower radiator hose in place. Torque to **8-10 ft-lbs**

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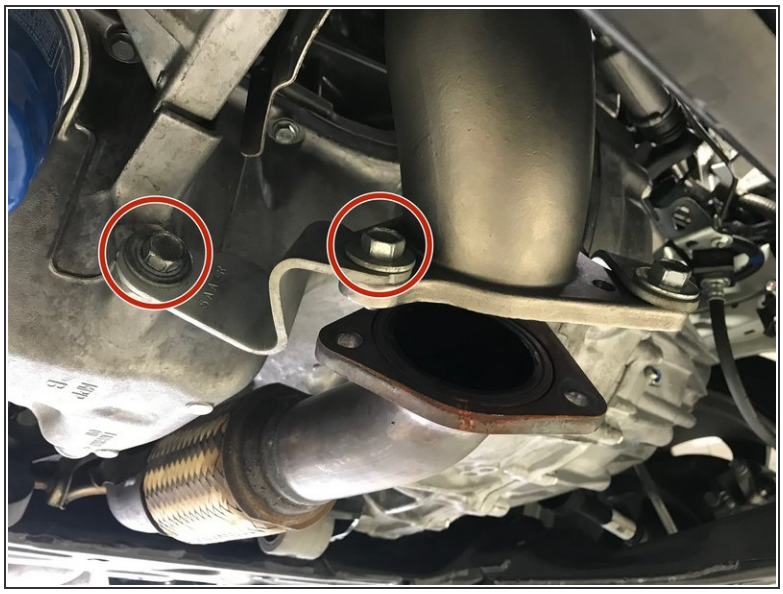
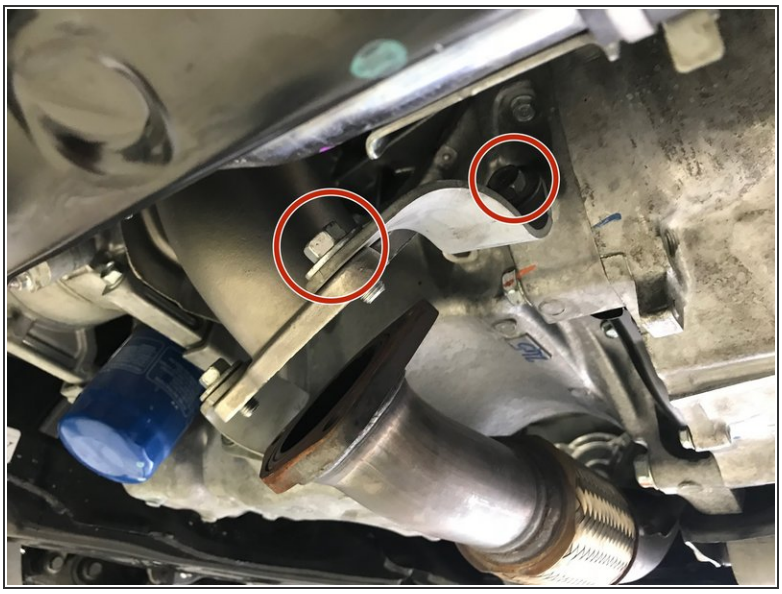
Step 47 — Install Downpipe Brackets





- Use a 14mm socket or wrench to install the four (4) 14mm bolts and brackets. Torque to **38-42 ft-lbs**

⚠ Use of the lower mounting brackets are necessary for the proper support of the downpipe

⚠ Failure to install these brackets can result in failure of downpipe

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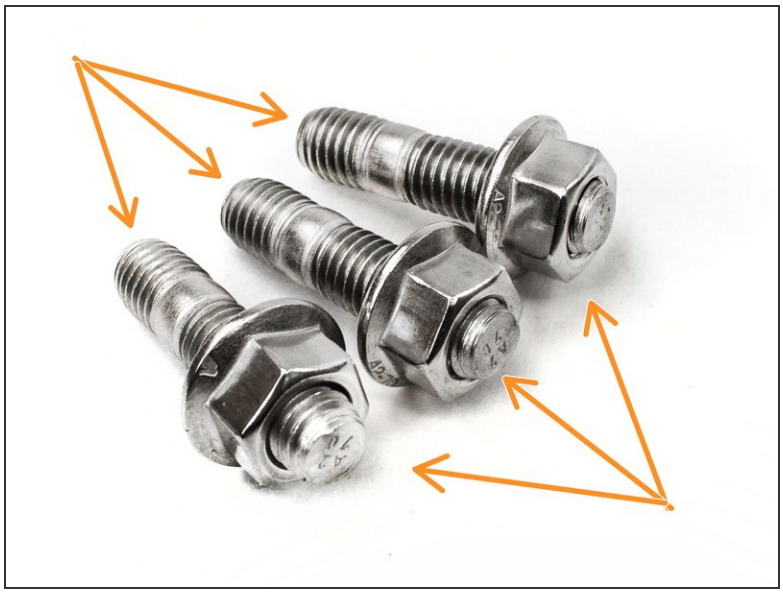
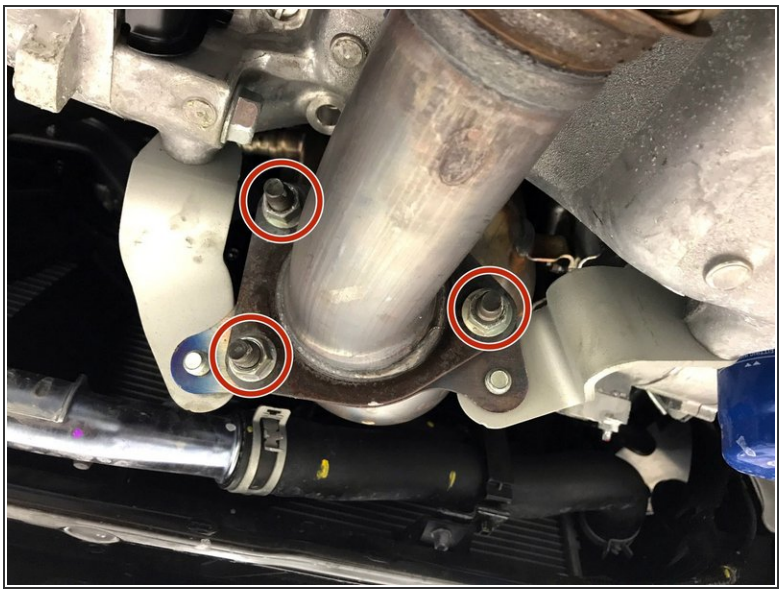
Step 48 — Install Front-Pipe to Downpipe





- Locate the three (3) provided M10 flange nuts and the three (3) provided M10 studs
- Use a 15mm socket & torque wrench to install the three (3) 15mm nuts/studs provided. Torque to **30-40 ft-lbs**
  - ⓘ Please note that the photo of the part installed on the car shows OEM hardware being used but this is not the case with current production parts.

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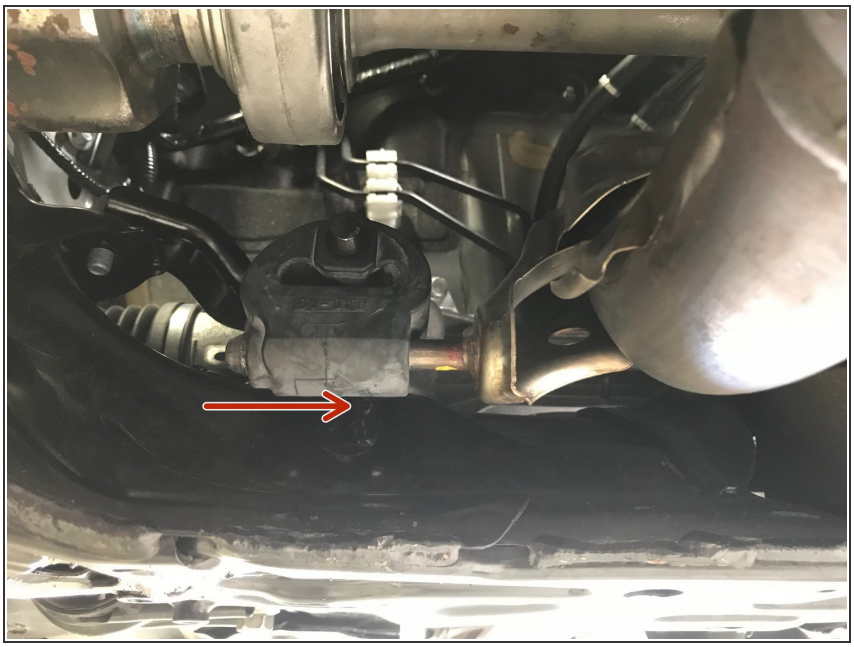
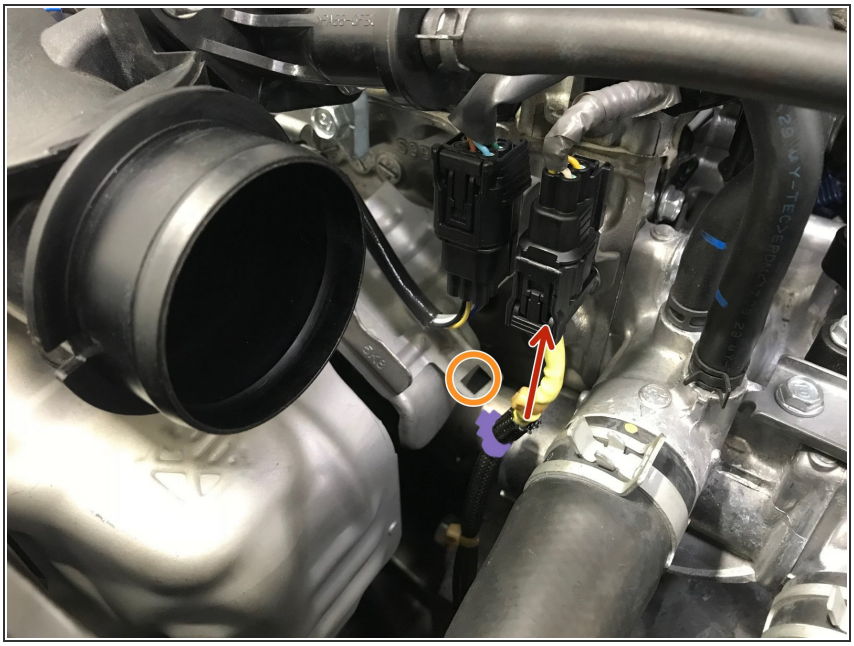
Step 49 — Install Rubber Exhaust Hanger



- Apply a small amount of silicone spray to the end of the hanger rod
- Push the rubber hanger onto the hanger rod

Step 50 — Connect Secondary O2 Sensor Wiring



- Connect the O2 sensor to the wiring harness
- Install the purple clip into the wiring bracket

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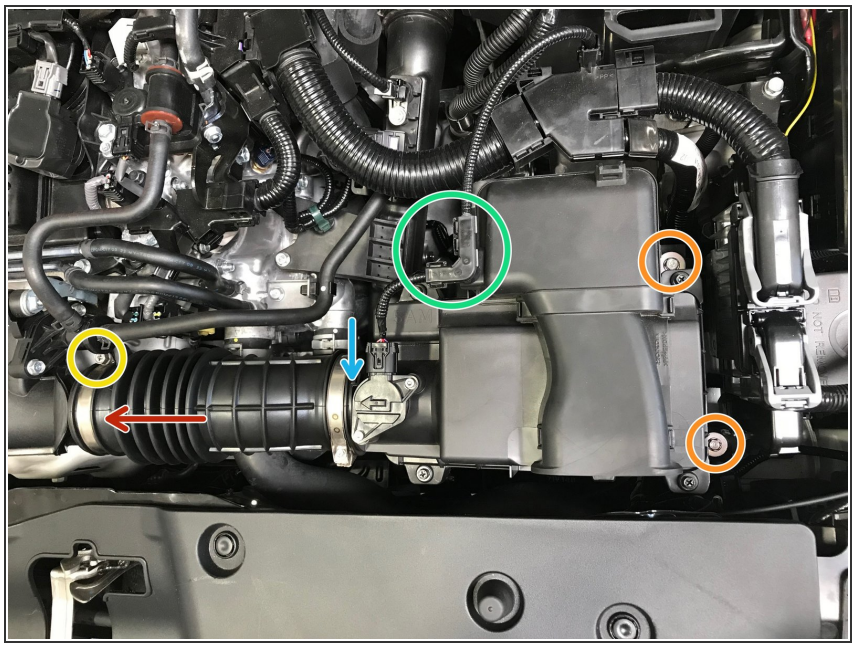
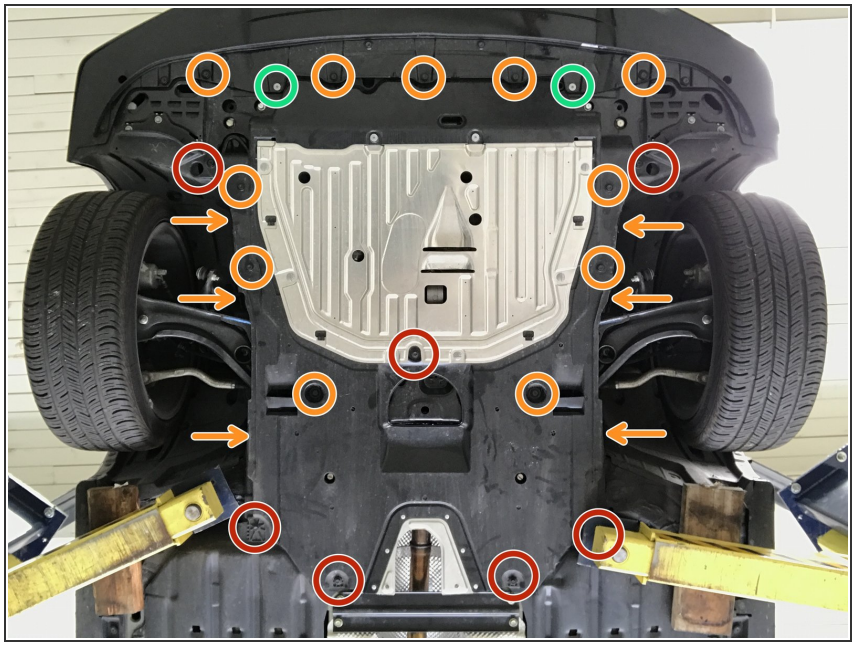
Step 51 — Install Upper Airbox Assembly



- Lower the airbox assembly into the engine bay
- Install the induction hose onto the TIP
- Use a 10mm socket and torque wrench to install the two (2) 10mm bolts that hold the airbox assembly. Torque to **3-4 ft-lbs**
- Use a 5.5mm socket or phillps screwdriver to tighten the band clamp until snug
- Install the wiring harness into the airbox
- Reconnect the MAF sensor wiring

Step 52 — Install Skidtray Part A



- Install the seventeen (17) plastic push-clips. **Orange arrows identify the push-clips described in the next step**
- Use 10mm socket & torque wrench to install the seven (7) bolts shown in red circles. Torque to **8-10 ft-lbs**
- Use 5mm Allen and torque wrench to install the two (2) bolts shown in green circles. Torque to **8-10 ft-lbs**

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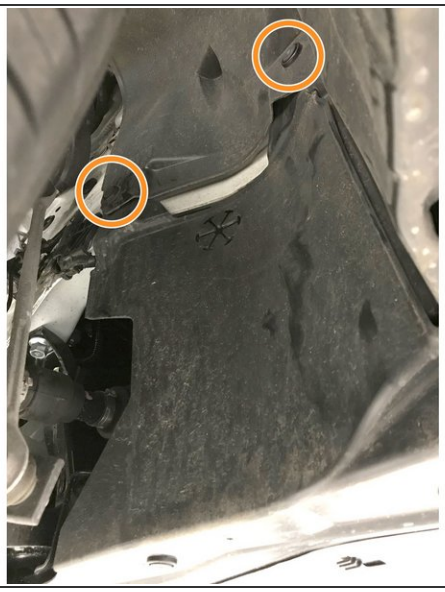
Step 53 — Install the Skidtray Part B



- Install the remaning six (6) push-clips on each side of the skidtray

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Step 54 — Final Notes & Tips

⚠ **Defouler & Non-Catted Downpipes are strictly intended for racing use only. Installation and use are at the customers own risk**

⚠ Some smell may be present on the first start as any residue on the downpipe burns off. This is normal and will not happen after the 1st heat cycle.

ⓘ To get the best performance from your Performance Downpipe, we highly recommend a custom tune.

- 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

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Step 55 — I Dare You to REDEFINE

- This completes the installation of your 27WON Performance Downpipe
- If you are installing a 27WON Front-Pipe along with the Downpipe, please see the Front-Pipe Instructions Here: http://store.27won.com/support/instructi...
- We hope you were impressed with your 27WON experience and love your new Downpipe for years to come. Email us at sales@27won.com or call us at 571-271-0271 with any questions or concerns
- Please Leave a review here: https://store.27won.com/10th-gen-civic-p...
- Share your experience using #27WON on Instagram and Facebook

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