

# CorkSport Performance

## AXO-6-112-99 V2 Downpipe

Installation Instructions for replacing the V1 CorkSport Downpipe with the V2 CS downpipe for the 2021+ Mazda 3/CX30 and 2023+ Mazda CX50, 2.5L Turbo.

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## INTRODUCTION

In this installation guide we have provided step by step instructions to remove the V1 CS downpipe and install the V2 CorkSport Performance Turbo Downpipe.

### Advisory:

- Working under the vehicle requires a safe and sturdy location for the vehicle to sit on jackstands.
- 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.

- **Downpipe for off-road and race use only.**

### TOOLS:

- 10mm Wrench (1)
- 12mm Wrench (1)
- 14mm Wrench (1)
- 17mm Wrench (1)
- 22mm wrench (1)
- 10mm Socket (1)
- 12mm Socket (1)
- 14mm Socket - Deep (1)
- 17mm Socket - Deep (1)
- 3/8" Ratchet (1)
- 3/8" Extension (1)
- O2/Oxygen Sensor Socket (1)
- 3/8" Torque Wrench (1)
- Flathead Screwdriver (1)
- Hydraulic Jack (1)
- Jack Stand (2)
- Exhaust Hanger Pliers (1)
- Glass Cleaner (1)
- Anti-Seize (1)

### PARTS:

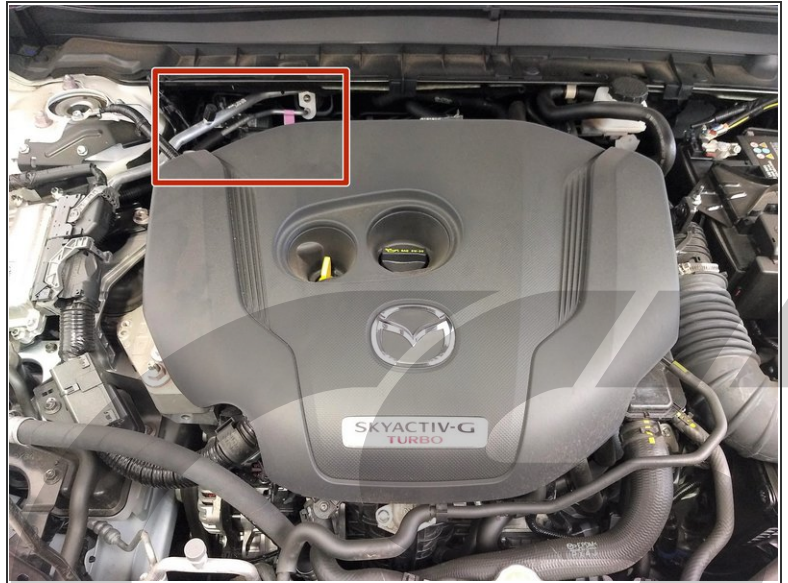
- CorkSport Mazda3/CX30/CX50 2.5T Downpipe (1)
- CorkSport SkyActiv 2.5T Bellmouth (1)
- CorkSport SkyActiv 2.5T DP Heatshield (1)
- 3.5" V-Band Clamp (1)
- 3" Crush Gasket (1)
- Turbocharger Stud (5)
- Turbocharger Crimp Nut (5)
- M10x1.5 Nut (2)
- M10 Exhaust Hardware Assembled (2)
- M6x1.0x8mm Bolt (3)
- M6 Washer (3)

## Step 1 — Getting Started



- First and foremost; **THANK YOU** for becoming a part of the CorkSport Family. We hope to bring you the highest level of Parts, Customer Service, & Support
- ① How To Use These Instructions: The instruction format will relate colored marking in the image to the color dot in the text to the right of the image
- ⚠ The vehicle featured in this installation guide is a 2021 Mazda3 Turbo equipped with the CorkSport 80mm Catback exhaust system. Downpipe installation on CX30/CX50 and OEM or smaller CorkSport exhaust systems will be similar. Fitment with other exhaust manufacturers is not guaranteed

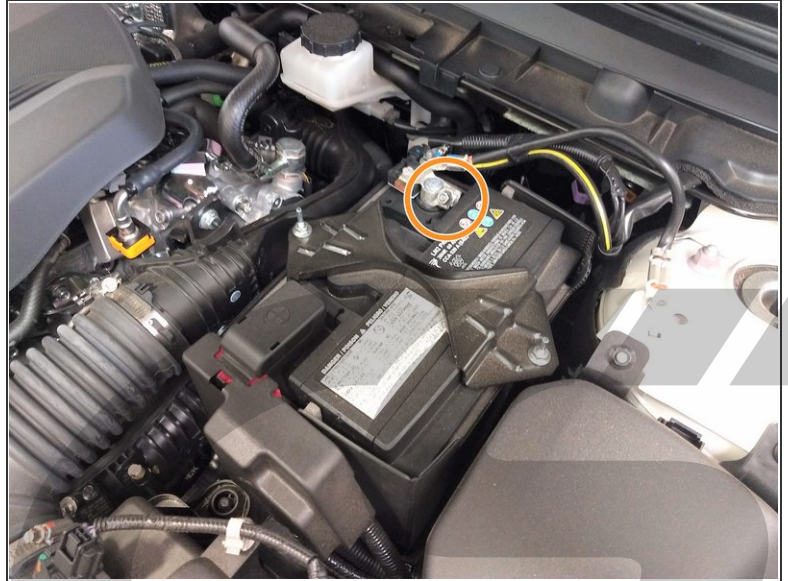
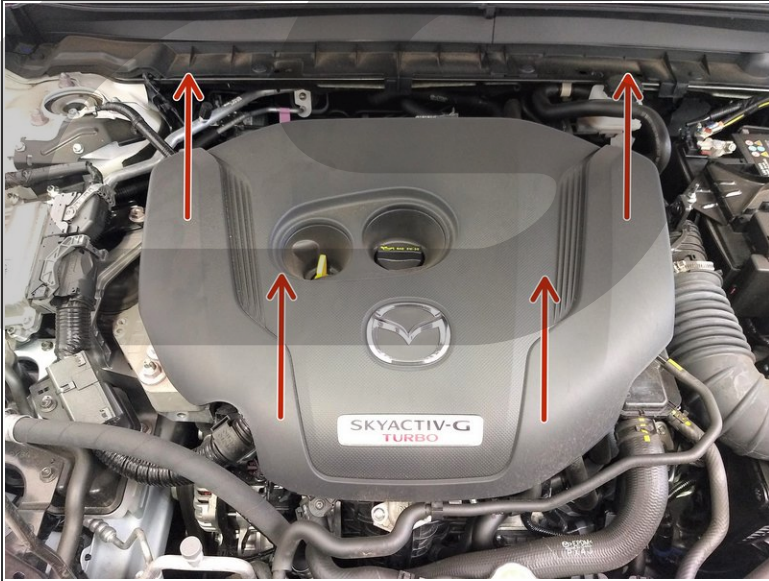
## Step 2 — Lifting the Car & Locating the Downpipe



⚠ Ensure the vehicle is parked on a level surface before proceeding

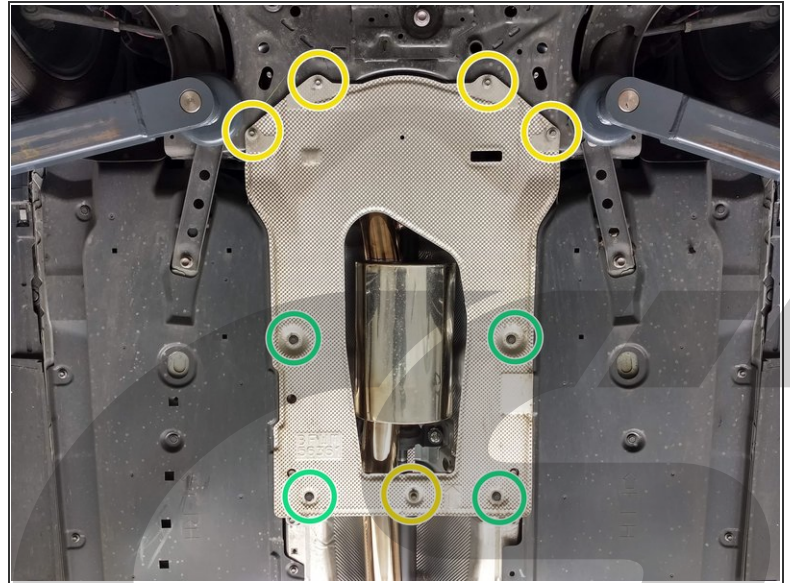
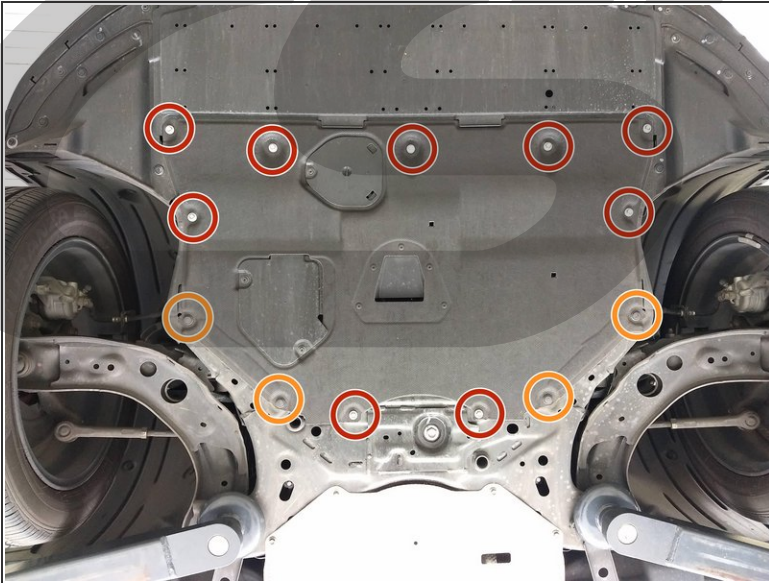
- Start by lifting up the front of the car using the hydraulic jack and jack stands
  - ⚠ Be sure to reference your owners manual for jack points and the jack manufacturer's instructions for proper practices
- The downpipe is located in the back of the engine bay on the right-side of the vehicle

### Step 3 — Remove the Engine Cover and Disconnect the Battery

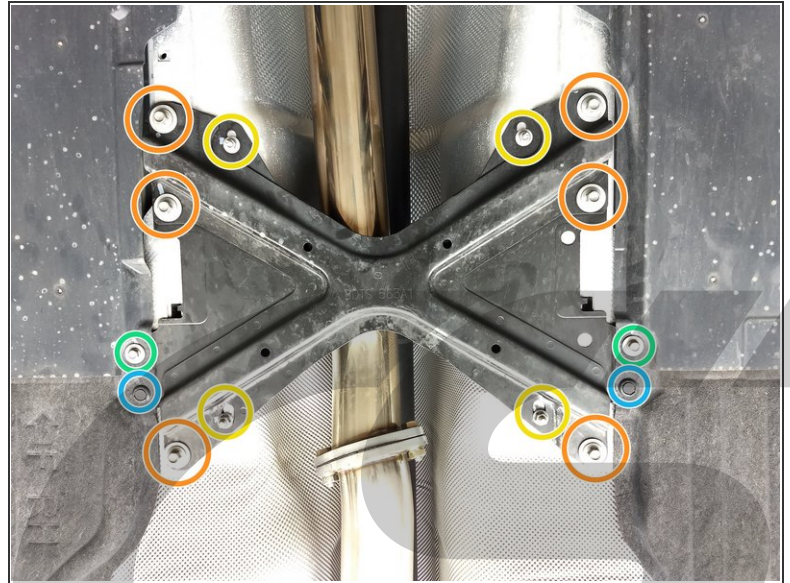
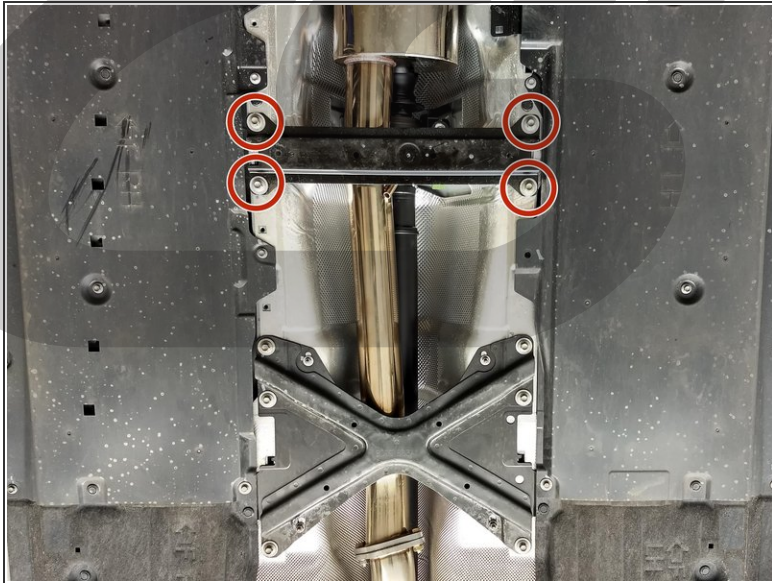


- Lift upwards on the plastic engine cover to pop it free from the four rubber mounting locations
- With a **10mm socket and ratchet**, disconnect the negative terminal of the battery and tuck out of the way

## Step 4 — Mazda3, CX30: Remove Underbody Pieces - Part 1

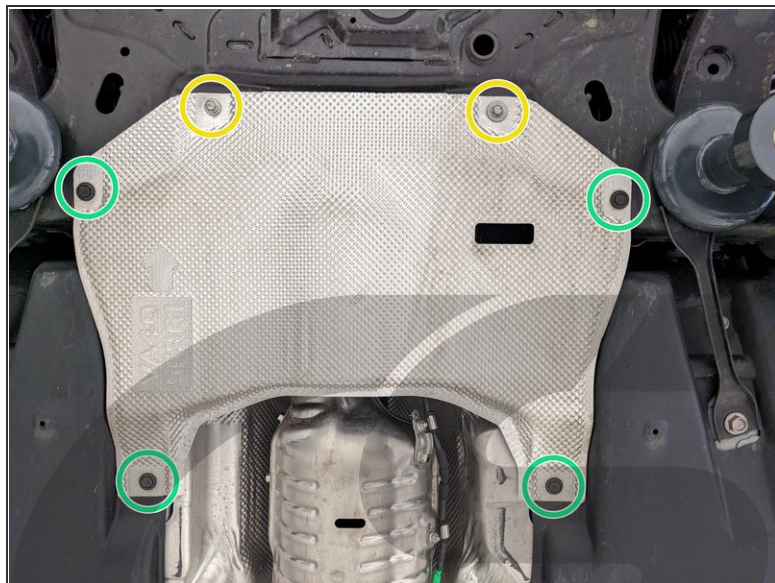
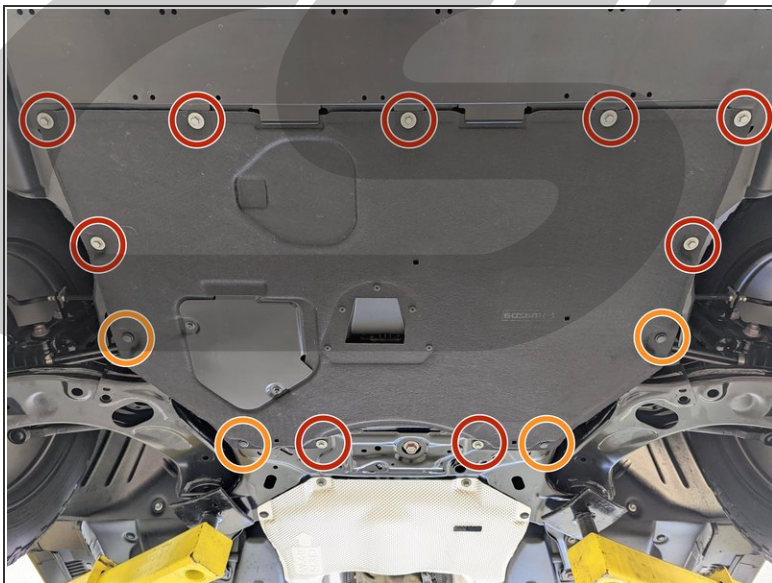


- ❶ Mazda CX50: Skip to Step 6
- ❶ Head underneath the car as we will be removing underbody shielding to access the downpipe
- Underneath the car, remove the **Nine(9) 10mm bolts** from the rear section of the engine underbody tray using a **10mm socket and ratchet**.
- With a **flathead screwdriver**, remove the **Four(4) small push clips** in the locations shown
- Remove the rear section of engine underbody tray from the vehicle and set aside
- Remove the **Five(5) 10mm bolts** from the Silver Exhaust Heat Shield
- Remove the **Four(4) Plastic Push Pins**
- Remove the Silver Exhaust Heat Shield from the vehicle and set aside

**Step 5 — Mazda3, CX30: Remove Underbody Pieces - Part 2**

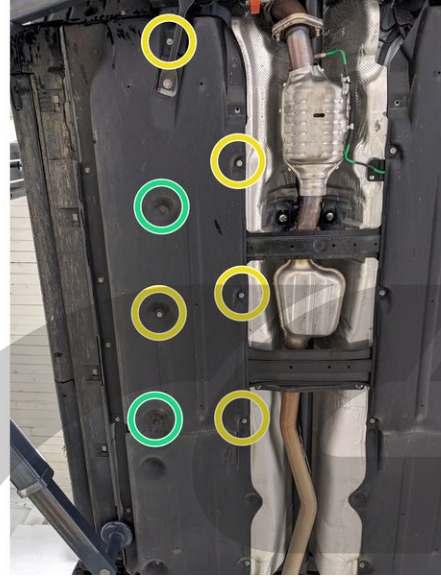
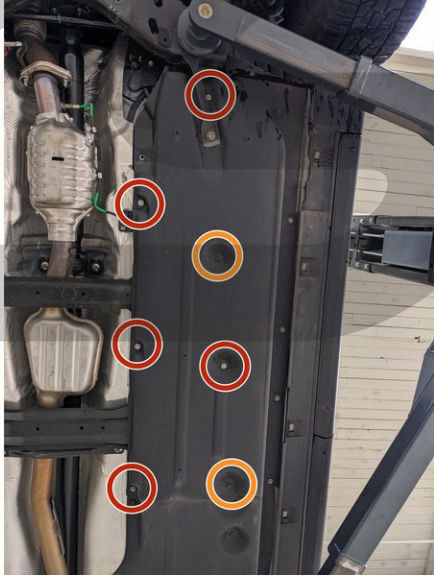
- Remove the **Four(4) 12mm Bolts** securing the front crossmember to the vehicle
  - Push the crossmember rear-ward. The brace will then drop on the right-hand side, then it can be removed from the vehicle
- Remove the **Six(6) 12mm bolts** from the rear X-brace
- Remove the **Four(4) 10mm nuts** with a **10mm deep socket**
- Remove the **Two(2) 10mm bolts**
- Remove the **Two(2) plastic push pins**
- Push the rear X-brace rear-ward. The brace will then drop on the right-hand side. Peel back the plastic and carpeted trim to allow clearance for the brace, then remove from the vehicle
- Skip to step 9

## Step 6 — Mazda CX50: Remove Underbody Pieces - Part 1

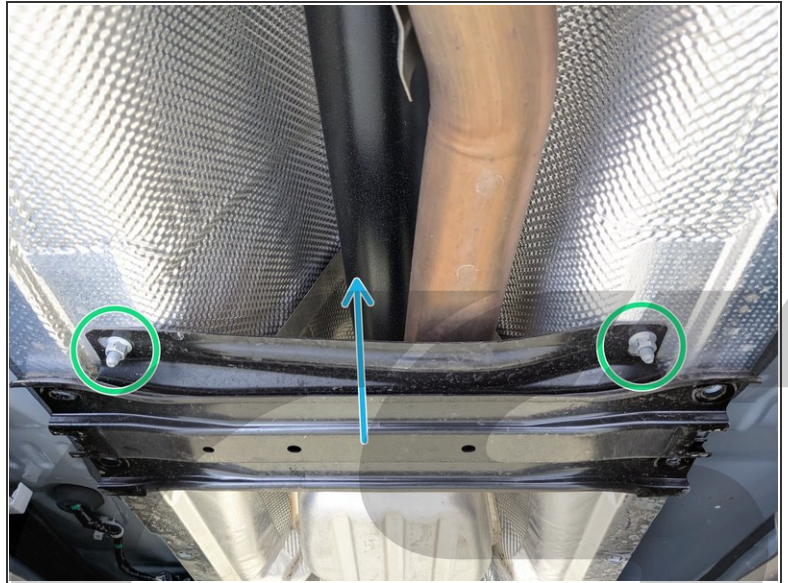
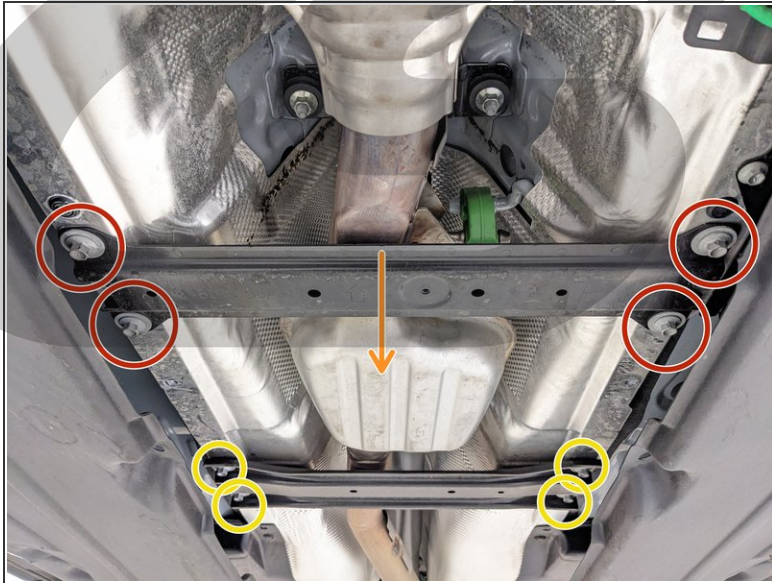


- Underneath the car, remove the **Nine(9) 10mm bolts** from the rear section of the engine underbody tray using a **10mm socket and ratchet**.
- With a flathead screwdriver, remove the Four(4) small push clips in the locations shown
- Remove the rear section of engine underbody tray from the vehicle and set aside
- Remove the Two(2) 10mm Bolts
- Remove the Four(4) Plastic Fasteners with a flathead screwdriver
- Remove the Silver heat shield from the vehicle and set aside



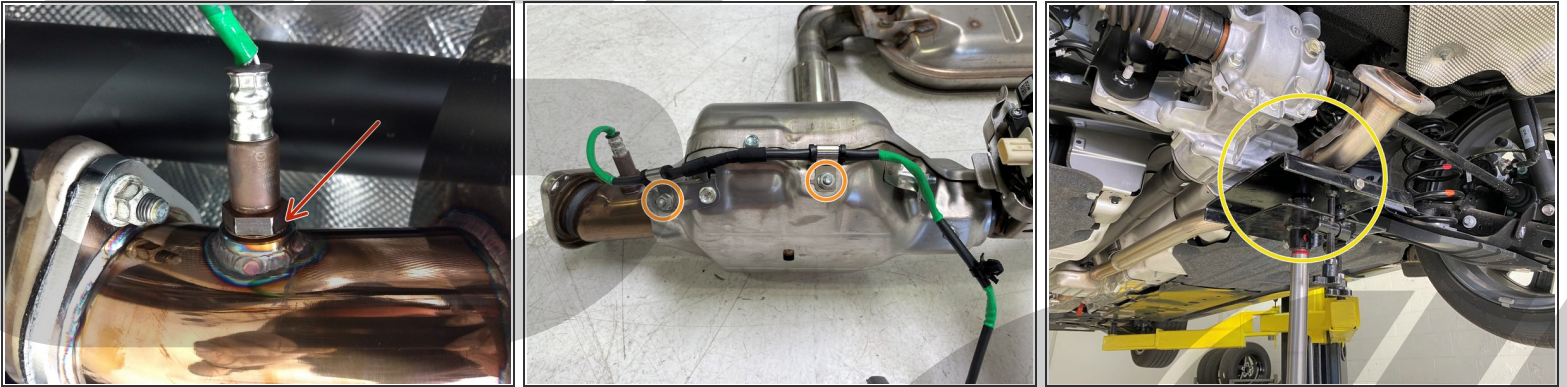
**Step 7 — Mazda CX50: Remove Underbody Pieces - Part 2**

- Partially remove the Left side Plastic undertray by removing:
  - Five(5) 10mm bolts
  - Two(2) plastic push pins with a flathead screwdriver
- Partially remove the Right side plastic undertray by removing:
  - Five(5) 10mm bolts
  - Two(2) plastic push pins with a flathead screwdriver
- ① Allow the trays to hang to gain access to the Bracing shown in the next step

**Step 8 — Mazda CX50: Remove Underbody Pieces - Part 3**

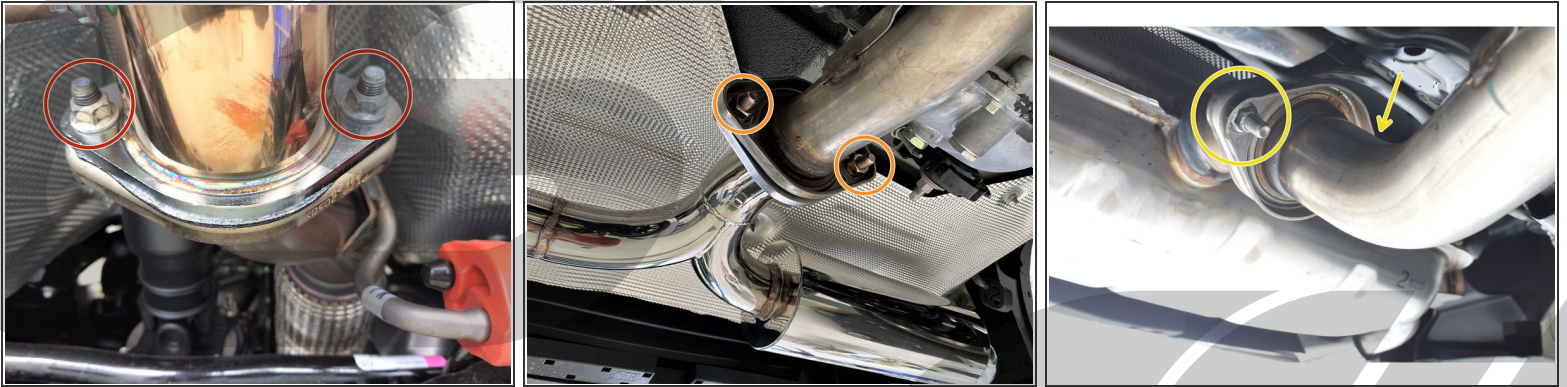
- Remove the Four(4) 12mm bolts on the Front Underside Bracing
- Remove the Front Underside Bracing by pushing rearwards. The Brace should drop and be able to be removed from the car
- Remove the Four(4) 12mm bolts on the Rear Underside Bracing
- Remove the Two(2) 12mm Nuts on the Rear side of the Rear Underside Bracing
- Remove the Rear Underside Bracing by pushing rearwards. The Brace should drop and be able to be removed from the car

## Step 9 — Remove Exhaust Midpipe - Part 1



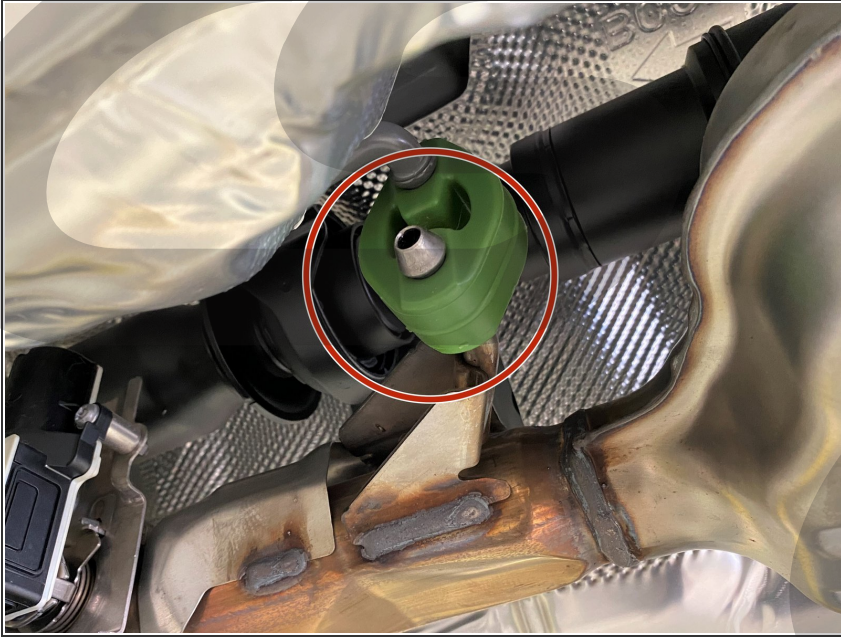
- ❗ The vehicle pictured in this installation guide is a Mazda3 equipped with the CorkSport 80mm Catback Exhaust. Smaller CorkSport exhaust systems will be identical. OEM exhaust removal will be similar
- Remove the **O2 Sensor** located at the front of the midpipe using a **22mm wrench** or **O2 sensor removal socket**
- If you have an OEM midpipe, remove the **Two(2) 10mm nuts** securing the O2 Sensor wiring to the midpipe
- Tuck the O2 sensor away in a safe location
- Place a **jack stand** under the rear section of the midpipe, or have a friend assist you when performing the following steps to avoid damage to your exhaust or any surrounding parts

## Step 10 — Remove Exhaust Midpipe - Part 2



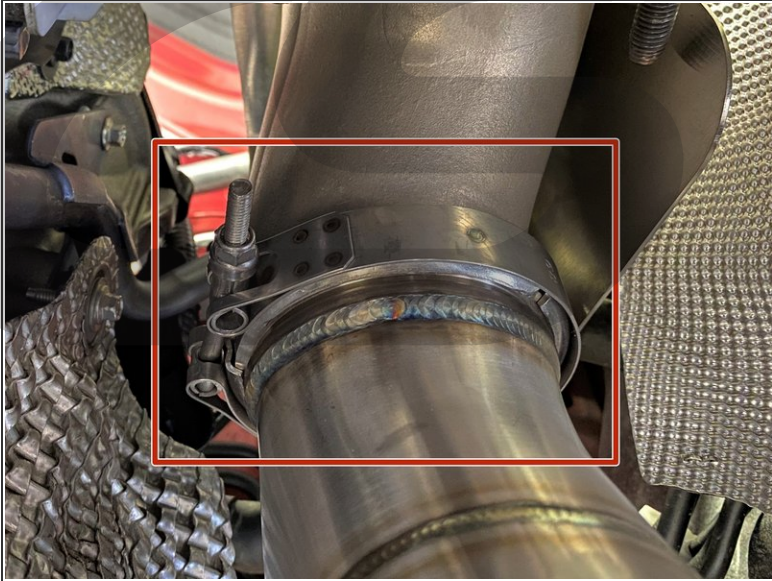
- Remove the **Two(2) 14mm nuts** securing the Turbo downpipe to the forward midpipe
- If your vehicle is equipped with a CorkSport Axleback exhaust system:
  - Remove the **Two(2) bolts** securing the rear-midpipe to the Axleback exhaust section with a **17mm wrench and 17mm socket-and-ratchet**
- If your vehicle is equipped with an OEM axleback system
  - Remove the **Two(2) 14mm nuts** securing the midpipe to the Axleback section

## Step 11 — Remove Exhaust Midpipe- Part 3



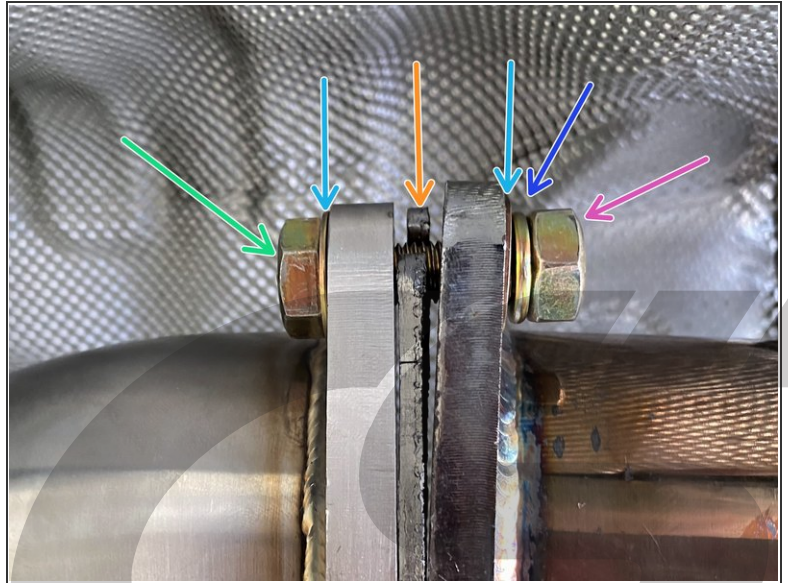
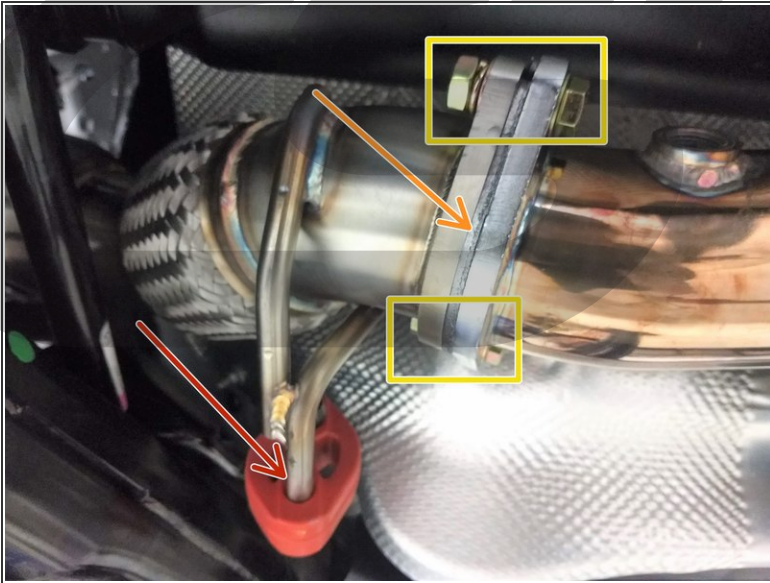
- Spray the rubber exhaust hanger located on the front of the midpipe with spray lubricant. (WD40, silicone spray, or even glass cleaner works well).
- Using **channel lock pliers** or **exhaust hanger pliers**, remove the midpipe hanger.
  - ⓘ Make sure to support the front of the midpipe by holding it up or by using another jack stand
- Remove the midpipe from the vehicle

## Step 12 — Removing the V1 CS Downpipe



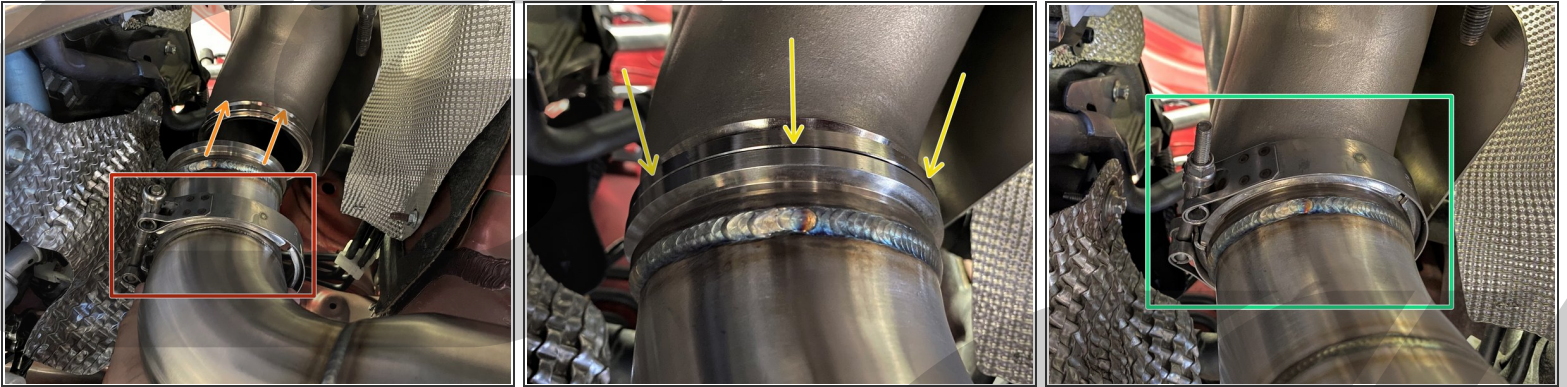
- Loosen & remove the v-band clamp that holds the downpipe to the bellmouth with a 10mm socket and ratchet
- ⓘ Upon completing the next steps, the downpipe will be free and able to fall. Please use caution
- Spray the rubber exhaust hanger located on the downpipe with spray lubricant. (WD40, silicone spray, or even glass cleaner works well).
- Using **channel lock pliers** or **exhaust hanger pliers**, remove the downpipe hanger.
- Carefully snake the V1 CS downpipe out of your vehicle and set aside.

## Step 13 — Installing the V2 CorkSport Downpipe Part 1



- Lift the V2 CorkSport downpipe into position, then reinstall the midpipe in reverse order of removal. **Leave all hardware loose for now**
- Place the exhaust hanger on the CS downpipe through the rubber hanger on the chassis. This will help keep the downpipe in position
- Reinstall the midpipe and place the new supplied "Remflex" crush gasket in between the CS downpipe and the midpipe section of exhaust
- Secure the downpipe to the midpipe using the new supplied M10 hardware. **Leave hardware loose for now.** Match hardware stack as shown:
  - M10x1.25x35mm bolt
  - M10 flat washer
  - M10 lock washer
  - M10x1.25 nut

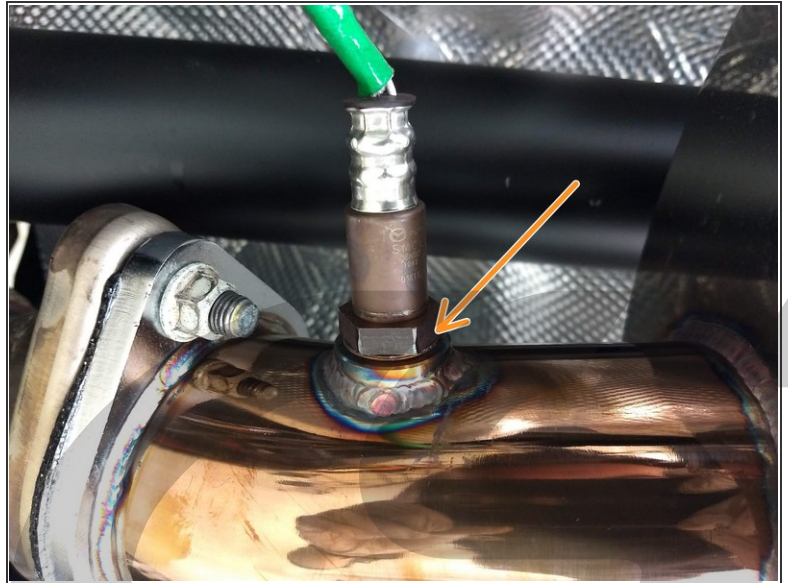
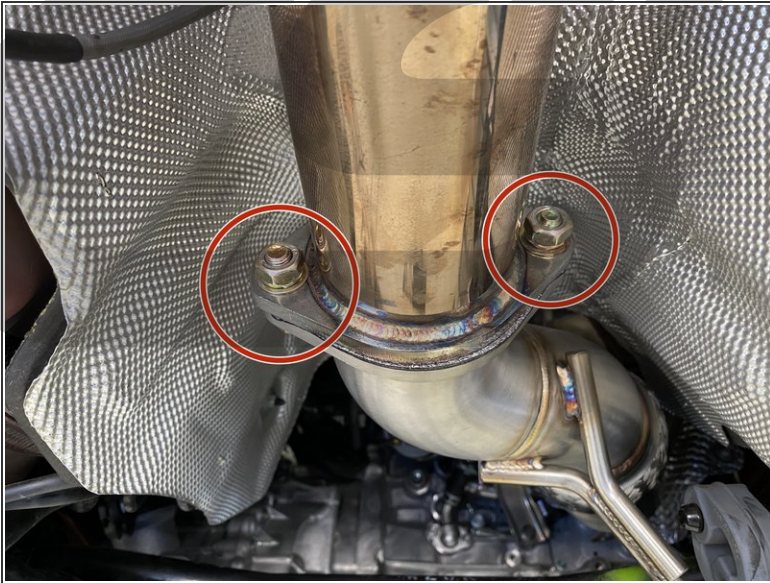
## Step 14 — Installing the V2 CorkSport Downpipe Part 2



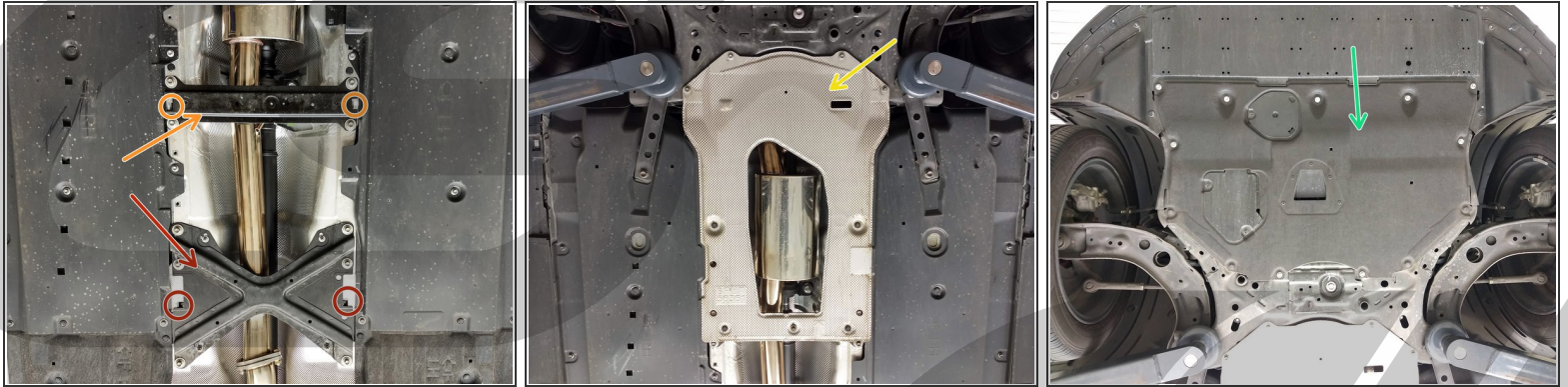
- Place the original V-band clamp over the end of the V2 downpipe. Match the orientation shown for easy access when tightening
  - ⓘ You may need to remove the nut from the clamp to fit the clamp over the V-band flange
- Lift the downpipe into position against the cast bellmouth
- Ensure the downpipe is sitting even and flat against the cast bellmouth all around. A very small gap between the flanges is expected as the inner ring does the sealing
- Once happy with fitment, use the V-band clamp to hold the two flanges together. Tighten to **8-12ft-lbs.** using a 10mm socket and ratchet
  - ⓘ Overtightening can break the threaded portion of the v-band clamp
  - ⓘ Having a Second Person hold the downpipe in position while the other tightens will greatly help the installation process



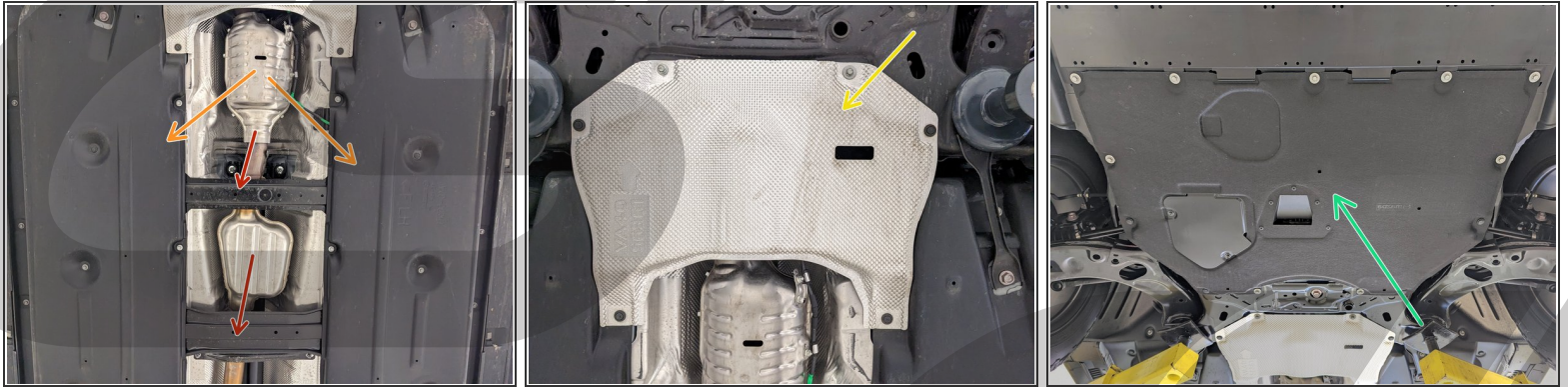
## Step 15 — Installing the V2 CorkSport Downpipe Part 3



- Line up the downpipe flange, midpipe flange, and crush gasket so they are all centered with each other
  - ⓘ If the flanges do not seem to line up, you may need to loosen the v-band clamp at the bellmouth and rotate the downpipe slightly
- Tighten the two bolt flange hardware to **30ft-lbs.** using a **17mm socket, ratchet, and wrench.**
- Tighten the remaining midpipe hardware to **30ft-lbs** using a **17mm socket, ratchet, and wrench**
- Reinstall the O2 sensor into the midpipe to 22-39ft-lbs. **Do not overtighten**
  - If installing onto a CorkSport midpipe, secure your O2 wiring how you had it before removal.
  - If installing onto an OEM midpipe, reinstall the **Two(2) 10mm bolts** securing the O2 sensor wiring to the OEM midpipe
- ⓘ Wipe down the exhaust with a cleaning agent and clean towel to remove any grease, dirt, or fingerprints. These can become baked into the exhaust with heat and become extremely difficult to remove

**Step 16 — Reassemble the Vehicle - Mazda3/CX30**

- Reinstall the Rear X-brace by sliding the left-side tab into its slot first, then the right-side, then pushing the brace forward into place
- ⓘ Note that the plastic and carpeted trim-piece lays **on the-outside-of** the rear portion of the X-brace where the 10mm bolt and plastic push pin are located
- Reinstall the Front Crossmember in the same manner as the X-brace
- Reinstall the Silver exhaust heat shield
- Reinstall the underbody engine cover
- Reconnect the Negative Battery Terminal

**Step 17 — Reassemble the Vehicle - Mazda CX50**

- Reinstall the Crossmember pieces
- Resecure the left and right-side plastic coverings
- Reinstall the Silver Forward Heat Shield
- Reinstall the underbody engine cover
- Reconnect the Negative Battery Terminal

## Step 18 — Installation Complete



- This completes your installation of the V2 CorkSport Performance Turbo Downpipe!
- ⓘ Before the first start, wipe down the exhaust with a cleaning agent and clean towel to remove any grease, dirt, or fingerprints. These can become baked into the exhaust with heat and become extremely difficult to remove
- ⓘ Listen for any strange noises upon first start up. If any are present, you may have an exhaust leak and need to readjust the downpipe section and/or re-tighten the flanges.
- ⓘ A slight "burning off" smell will be present as the exhaust is heated for the first time. This should dissipate within a few minutes. If penetrating fluid was used, smoke will be visible upon first start, but should dissipate within a few minutes
- ⓘ An increase in Noise, Vibration, and Harshness (NVH) is normal upon installation of the downpipe, especially paired with larger exhaust systems. Listen for any ticking or rushing air around connection points and fix accordingly
- ⓘ We strongly recommend a tune to go with your downpipe as the exhaust will flow much better with the CorkSport Downpipe
- Contact us with any questions or concerns at [sales@corksport.com](mailto:sales@corksport.com) or (360) 260-2675.
- Share your experience using #CorkSport on Instagram, Facebook, and Twitter.