

# CorkSport Performance

## **AXO/CX30-6-102-XX Cat Back Exhaust**

Installation Instructions for the CorkSport Performance 80mm Cat Back Exhaust for the 2019+ Mazda 3 AWD and 2020+ CX-30 AWD.

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## INTRODUCTION

In this installation guide we have provided step by step instructions to install the CorkSport Performance 80mm Cat Back Exhaust for the 2019+ Mazda3 AWD and 2020+ Mazda CX30 AWD

### Advisory:

- Working under the vehicle requires a safe and sturdy location for the vehicle to sit on jackstands.
- Exhaust will be hot after vehicle operation let the vehicle and/or direct a fan on the rear section of the exhaust to cool before attempting to work on the vehicle.
- Non-Turbo Models with cylinder deactivation require a bracket that must be ordered from CorkSport separately from the exhaust kit.

### TOOLS:

- Hydraulic Jack (1)
- Jack Stand (2)
- 3/8" Drive Ratchet (1)
- 3/8" Torque Wrench (1)
- 14mm Socket - Deep (1)
- 14mm Wrench (1)
- 15mm or 9/16" socket (1)
- 15mm or 9/16" wrench (1)
- 17mm Socket - Deep (1)
- 17mm Wrench (1)
- Exhaust Hanger Pliers (1)
- Silicone Lubricant Spray (1)
- 8mm Wrench (1)
- T30 Torx Bit (1)
- 1/4" Drill Bit (1)
- Cordless Power Drill (1)
- Channel Lock Pliers (1)
- Blue Painters Tape (1)
- Bungee Cord (1)

### PARTS:



- AXO-6-102-21 CorkSport Axle Back Exhaust (1)
- AXO-6-102-2X Front Midpipe Section (1)
- AXO-6-102-2X Rear Midpipe Section (1)
- CX30-6-102-2X Rear Midpipe Section - Not included with Mazda3 Kit (1)
- AXO-6-102-3X CorkSport Exhaust Tips (2)
- GEN-4-100-76 Exhaust Clamp (2)
- AXO-6-10X Hardware Kit (1)

## Step 1 — Getting Started

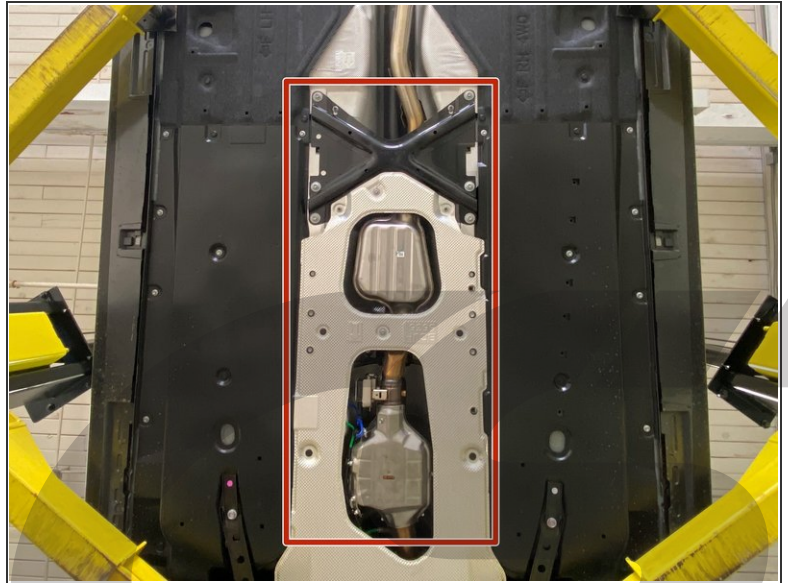
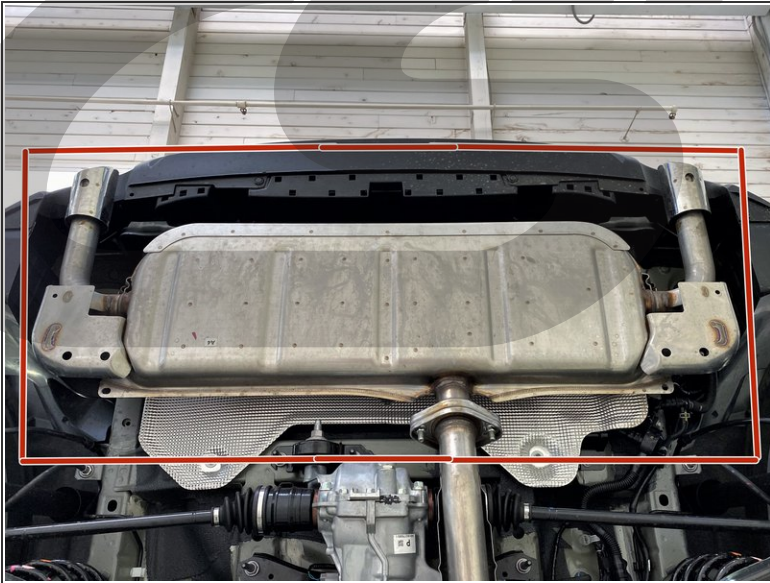


- First and foremost; **THANK YOU** for becoming a part of the CorkSport Family. We hope to bring you the highest level of Parts, Customer Service, & Support

### How To Use These Instructions

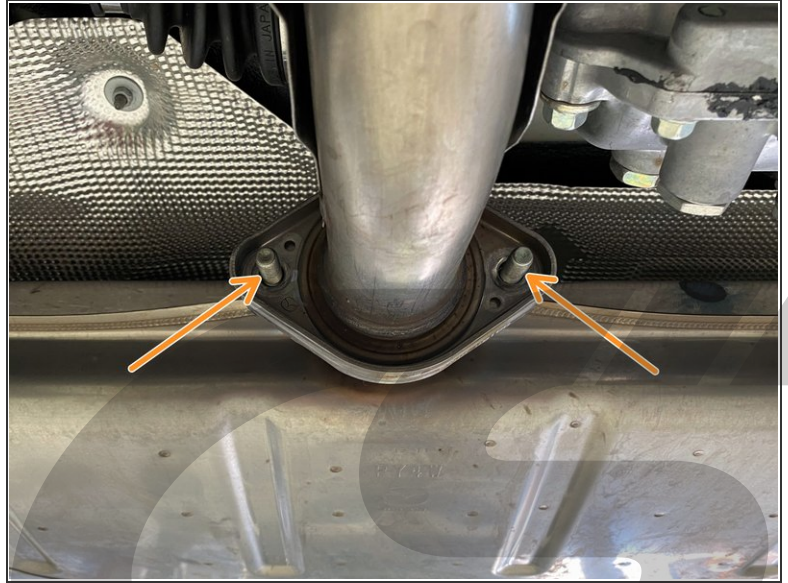
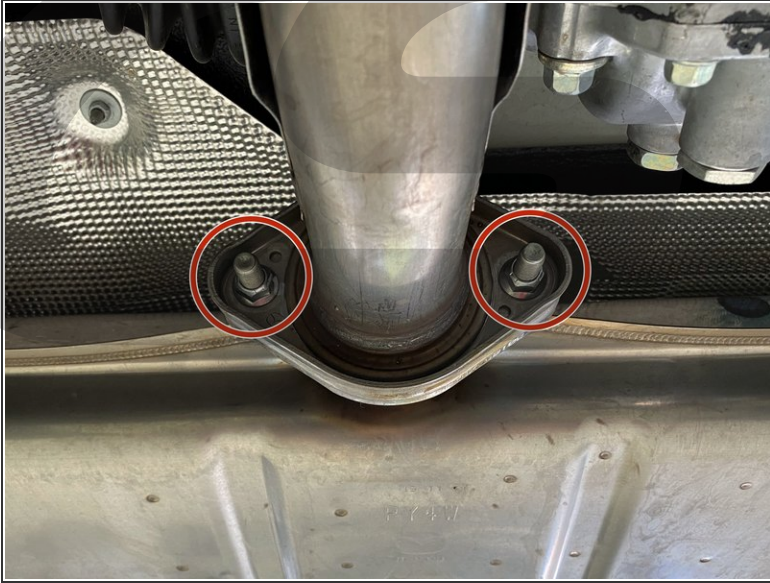
- The instruction format will relate colored marking in the image to the color dot in the text to the right of the image
-  Assistance from another person is recommended for some portions of the install.
-  The vehicles used in this installation guide is an AWD 2021 Mazda 3 Turbo Hatchback. Installation for AWD 2021+ Mazda CX30, Mazda 3 Hatch with Aero Kit and Sedan will be similar. Vehicle specific images are shown as needed.

## Step 2 — Lifting the Car



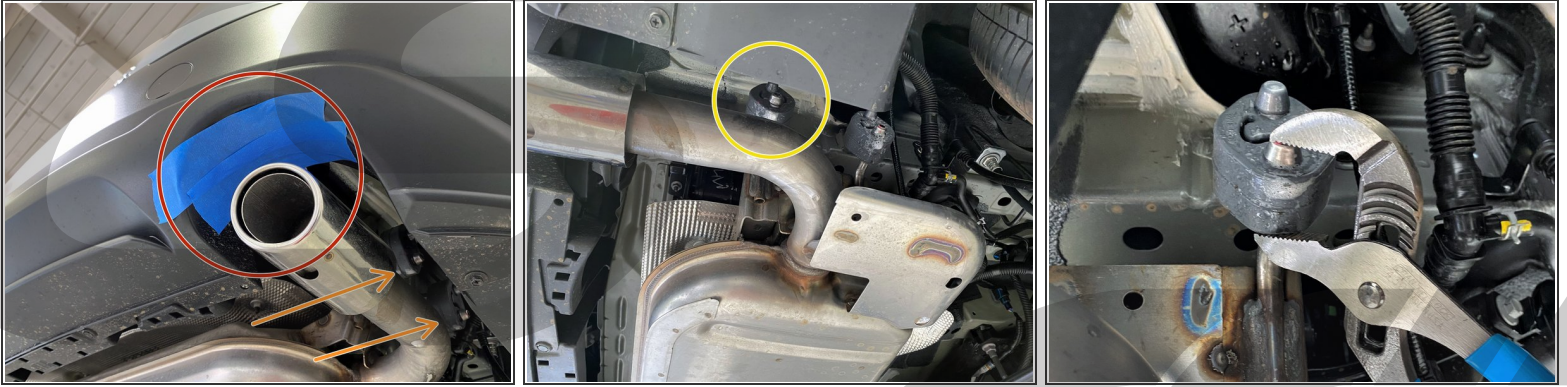
- ⚠ Ensure the vehicle is parked on a level surface before proceeding.
- ⚠ Be sure to reference your owner's manual for jack points and the jack manufacturer's instructions for proper practices.
- Start by lifting up the rear of the car using the hydraulic jack and jack stands.
- During installation of the CS Cat Back you will need to access the locations shown

### Step 3 — Unbolting the OEM Axle Back Exhaust



- Using a 14mm socket and ratchet, remove the two nuts that connect the OEM axle back section to the OEM midpipe section.
- Keep the OEM axle back section's studs inside the holes of the midpipe section. This helps support the axle back during removal.

## Step 4 — Removing the OEM Axle Back Rear Mounts



- **OPTIONAL:** Now is a good time to use painters tape in the exhaust cutouts in your bumper as shown to prevent damage. This is optional but will prevent any scratches during removal & installation.
  - Spray the four rubber exhaust hangers with your spray lubricant. (WD40, silicone spray, or even glass cleaner works well). The hangers are located on the sides of the exhaust as shown.
  - Using channel lock pliers or exhaust hanger pliers, disconnect the OEM axle back exhaust from the rearmost rubber exhaust hanger. There is one on each side of the exhaust.
- i** The third image shows how to use channel lock pliers to remove the rubber hangers for reference. Exhaust hanger pliers are easier to use if available.

## Step 5 — Removing the OEM Axle Back Front Mounts

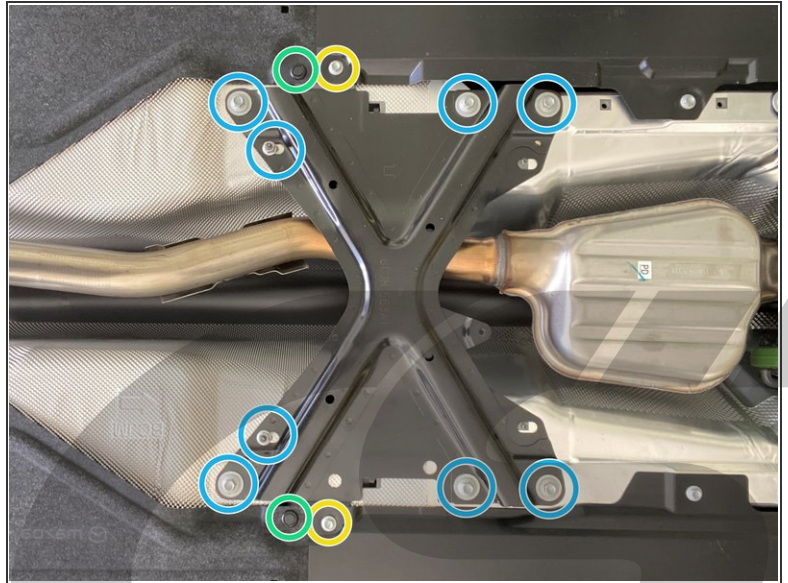
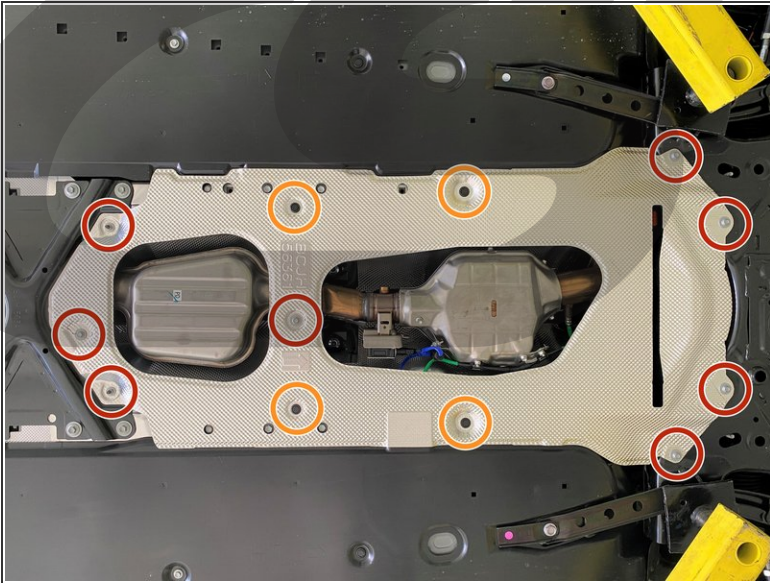


- Your exhaust should be pivoted downward as shown.

**⚠** For the next step, support the axle back as you remove it from the final rubber hangers to keep it from falling to the ground or onto you. The easiest way is to get a friend to help or use a floor jack for support.

- Using channel lock pliers or exhaust hanger pliers, disconnect the OEM axle back exhaust from the two remaining rubber exhaust hangers, then remove the axle back from your vehicle.
- Upon removal, your vehicle will look like the third image.

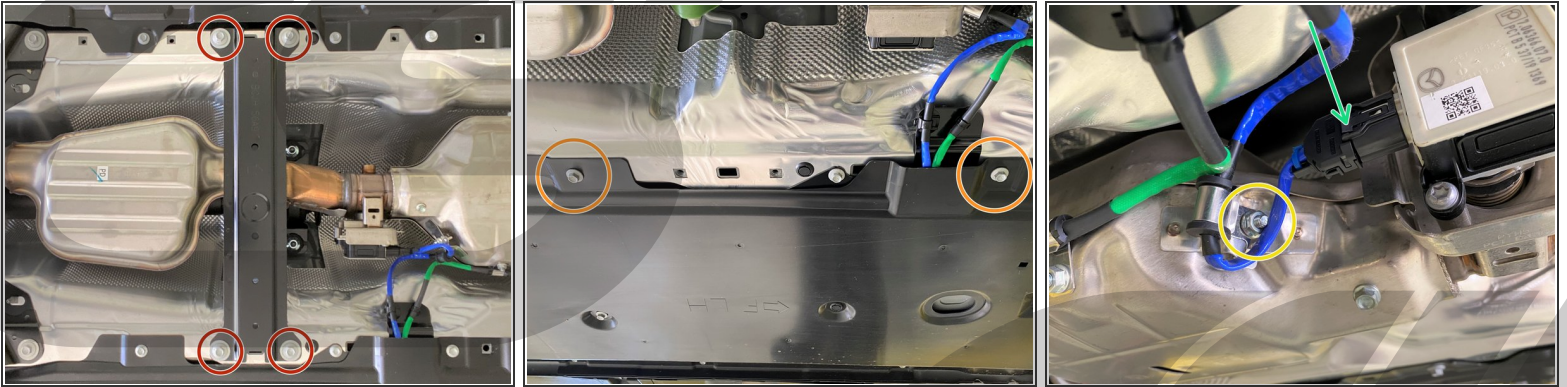
## Step 6 — Uninstalling the Midpipe Shield and Rear Brace



- Using the 10mm socket and ratchet, remove the 8 bolts circled.
  - ⓘ Some models have a shorter exhaust shield and only have 5 bolts
- Remove the 4 plastic push clips using a flathead screw driver to pry the center of the clip.
  - ⓘ When removing the final clips, hold the front of the shield to make sure it does not bend.
- Start to remove the rear brace by using the 10mm socket and ratchet again to remove the 2 bolts circled.
- Using the flathead screw driver pop out the 2 clips circled.
- Now use the 12mm socket and ratchet to remove the 8 bolts circled.
  - ⓘ Once all the hardware is removed, the brace will need to be slid to the rear of the car and then it can be removed.

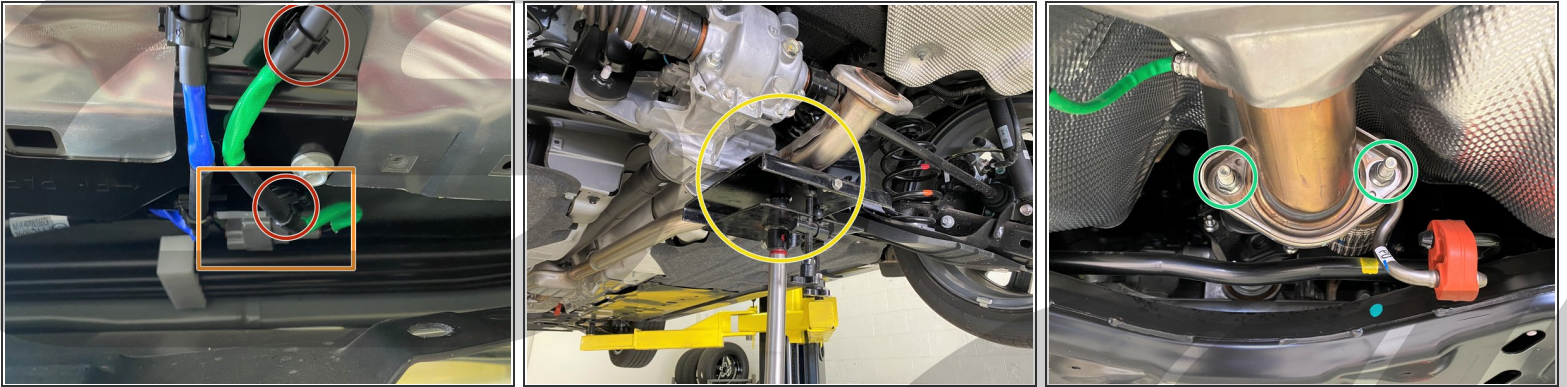


## Step 7 — Uninstalling the Midpipe Front Brace and Wiring



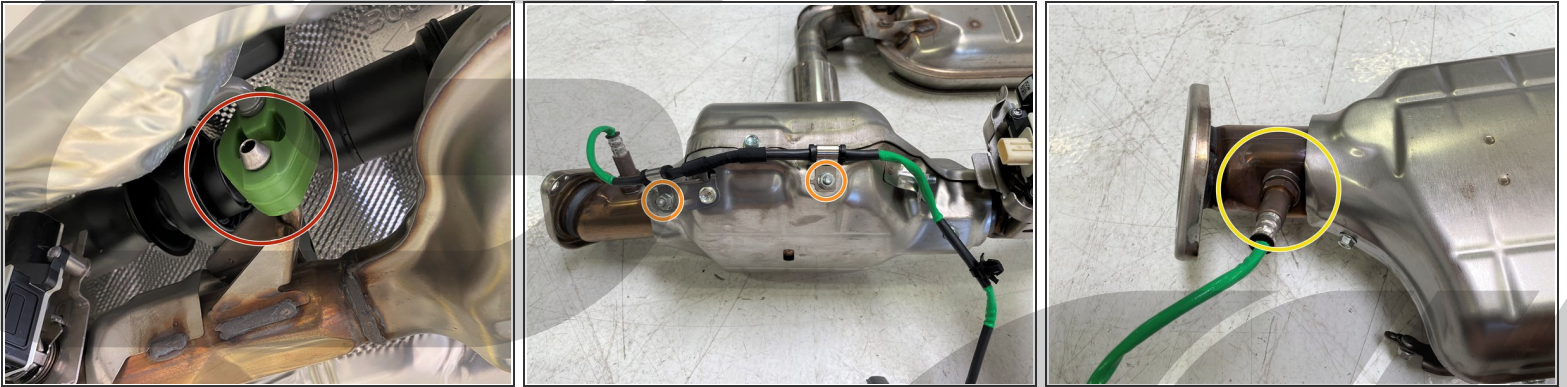
- Continuing to use the 12mm socket and ratchet, remove the 4 bolts circled.
- ⓘ Similar to the rear brace, slide the front brace to the rear of the car to remove.
- Unscrew the 2 bolts circled using a 10mm socket and ratchet.
- ⓘ The next two steps are only necessary if your car is equipped with cylinder deactivation.
- Unbolt the single 10mm nut securing the wiring for the cylinder deactivation valve motor.
- Unplug the connector by depressing the tab and pulling.

## Step 8 — Uninstalling the O2 Wiring and Midpipe



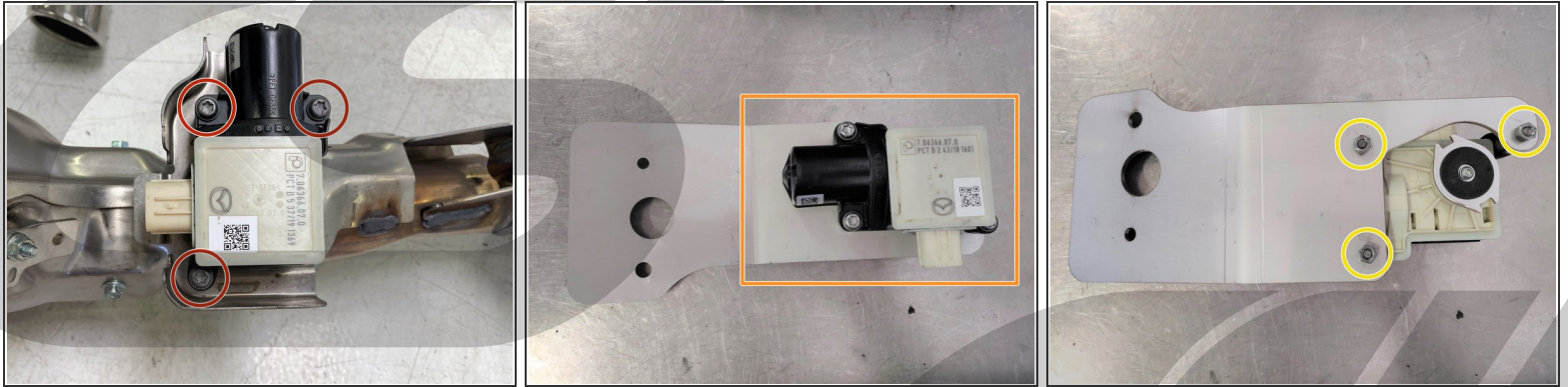
- Pull down the plastic cover and remove the 2 clips that hold the O2 wiring to the bracket by squeezing the tabs on the backside of the bracket towards the center using a flat head screw driver.
- Unplug the O2 sensor connector by pulling down the plastic cover and depressing the tab on the back side of the connector and pulling.
- Place a jack stand under the rear section of the midpipe to support it to make sure it does not fall when removing the midpipe.
- Using the 14mm socket and ratchet, remove the 2 nuts holding the midpipe to the downpipe.
  - ⓘ The studs in the downpipe may come out when undoing the nuts. This is common. When reinstalling you can either use the 2 extra exhaust bolts and washers included or the OEM hardware.

## Step 9 — Uninstalling the Midpipe and O2 Sensor



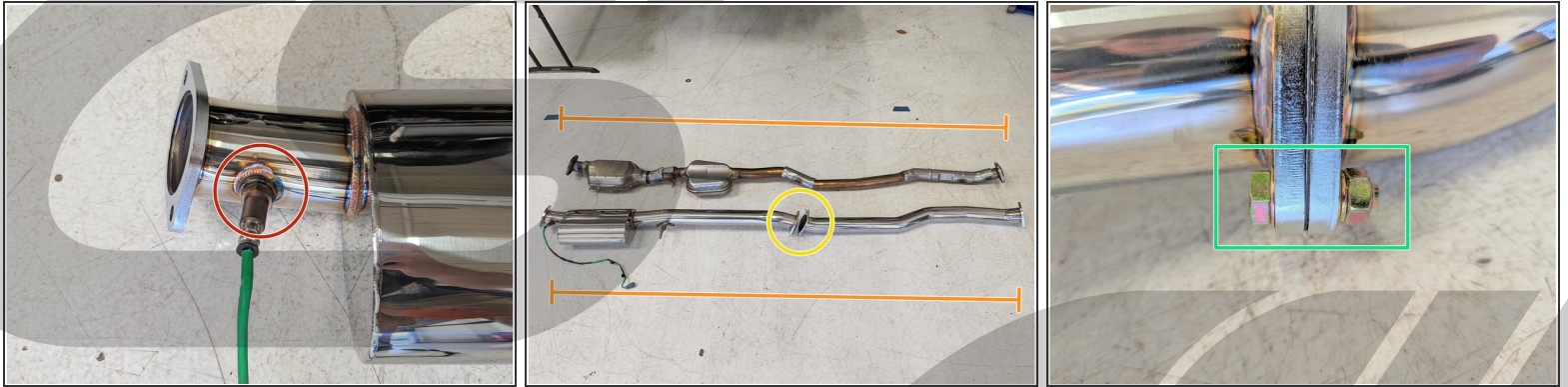
- Spray the rubber exhaust hanger with your spray lubricant. (WD40, silicone spray, or even glass cleaner works well).
- Using channel lock or exhaust hanger pliers, remove the midpipe hanger.
- ⓘ Make sure to support the front of the midpipe by holding it up or by using another jack stand.
- Once the midpipe is removed, use the 10mm socket and ratchet to remove the 2 nuts that hold the O2 wiring to the midpipe.
- Remove the O2 sensor from the midpipe by using a 22mm wrench.

## Step 10 — Removing and Installing the Cylinder Deactivation Valve Motor



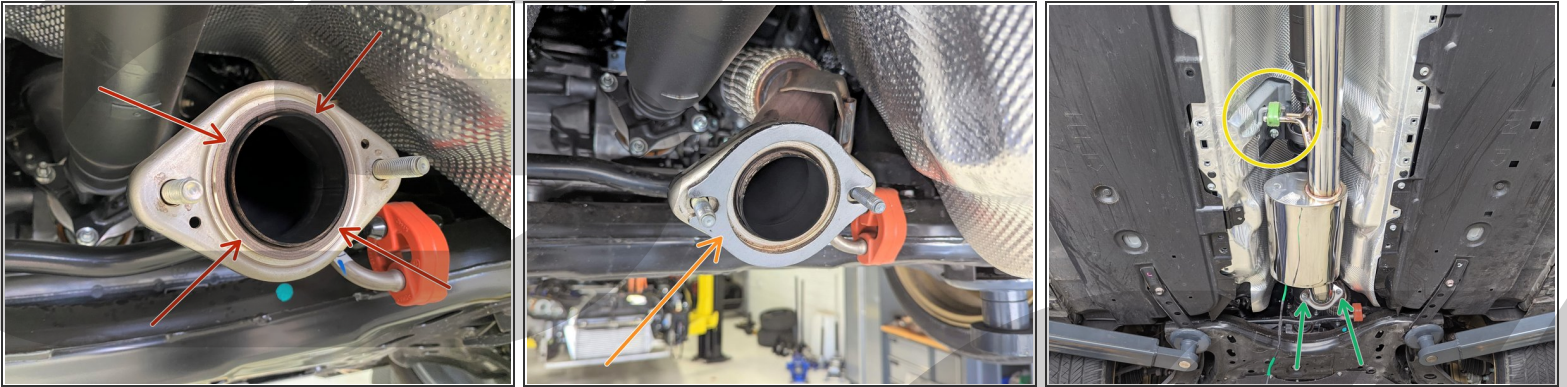
- i This step is only necessary if your car is equipped with cylinder deactivation. Turbo Models do not have cylinder deactivation.
- i Bracket shown is a special order item from CorkSport, this is not included with the exhaust kit.
  - Remove the three bolts holding the cylinder deactivation valve motor to the OEM midpipe by using a T30 Torx bit and an 8mm wrench.
  - Take the included cylinder deactivation motor bracket and reinstall the motor using the OEM hardware as shown.
  - Using the same T30 Torx bit and 8mm wrench tighten the 3 bolts until they are all hand tight.

## Step 11 — Reinstalling the O2 Sensor and Laying Out the Midpipes



- Install the O2 sensor into the Corksport front midpipe section and tighten it with a 22mm wrench.
- ⓘ We recommend applying some Anti-Seize to the treads of the O2 sensor for easy removal in the future.
- This step shows how to layout the CorkSport front and rear midpipe sections compared to the OEM midpipe.
- Locate the flanges that connect the front and rear midpipes.
- Install the included hardware and tighten finger tight so the flanges can be adjusted later.
- ⓘ The hardware is assembled going from left to right in the order of bolt, washer, flange, gasket, flange, washer, lock washer, then nut.

## Step 12 — Installing the Front and Rear Midpipes



- Remove the OEM gasket that is on the downpipe.
- Take the included Remflex exhaust gasket and install it as shown.
- ⓘ Spray the rubber exhaust hanger again with your spray lubricant.
- ⓘ To hold up the back of the midpipe, a jack stand can be used again with a towel on top so that it does not scratch the finish or a bungee cord can be attached to the rear springs
- Now install the midpipe into the hanger.
- Line up the downpipe flange and studs with the midpipe flange and install the nuts leaving them finger tight so the flanges can be adjusted later.
- ⓘ The studs in the downpipe may have come out when undoing the nuts in a prior step. This is common. When reinstalling you can either use the 2 extra exhaust bolts and washers included or the OEM hardware.

## Step 13 — Routing the O2 Wiring Option 1



- There are two options that we recommend when reinstalling the O2 sensor wiring and **Option 1** is shown below.
- Remove both of the metal and rubber mounts that are on the O2 wiring .
- Pull down the plastic cover and reconnect the O2 wiring and route it as shown.
- ⓘ The O2 wiring should end up towards the back of the plastic cover

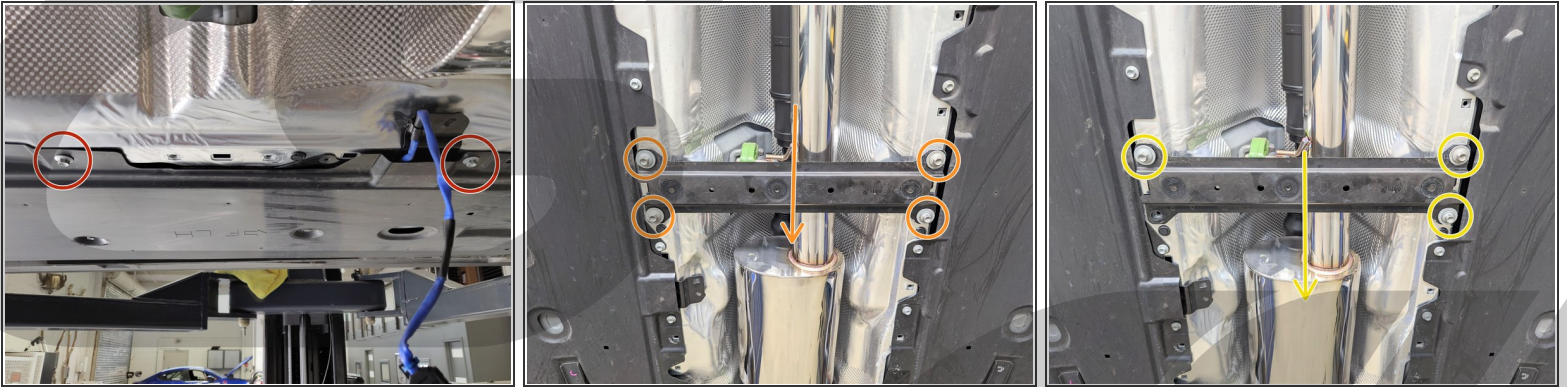
## Step 14 — Routing the O2 Wiring Option 2



- **Option 2** for routing the O2 wiring is shown below and requires the included M6 hardware, a drill and a drill bit.
- Remove the metal and rubber mount that is closest to the connector end of the wiring and leave the mount that is circled.
- Pull down the plastic cover and reconnect the O2 wiring and route it as shown.
- ⓘ The O2 wiring should end up towards the back of the plastic cover
- Select a spot in the location circled on the heat shield that can be drilled through, making sure there is enough room behind it to fit a nut and nothing behind it that could get damaged when drilling.
- Drill a hole in the selected location using a 1/4" drill bit. Secure the O2 wiring by using the included hardware and the bracket on the O2 wiring and tightening it to the heat shield.
- ⓘ The metal tab on the bracket might need to be bent straight to fit flush against the heat shield

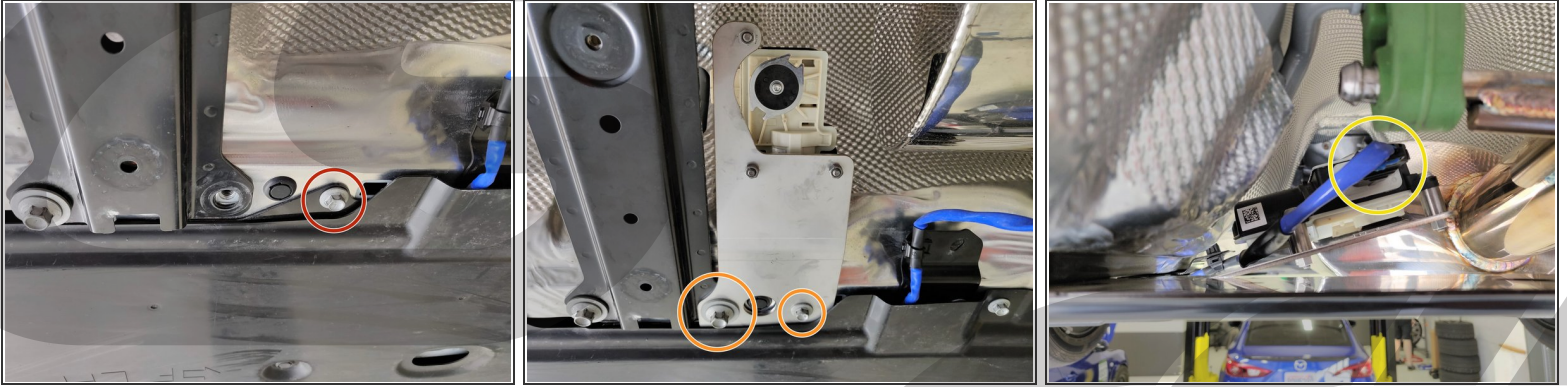


## Step 15 — Reinstalling the Plastic Cover and Front Brace



- Reinstall the two bolts circled into the plastic cover using a 10mm socket and wrench until snug.
- ⓘ The orange step below is for cars with out Cylinder Deactivation and the yellow step is for cars with Cylinder Deactivation.
- Place the front brace back into the slots and slide it forward to line up the holes and then reinstall the four bolts using a 12mm socket and tighten down to **15-17** ft-lb.
- Place the front brace back into the slots and slide it forward to line up the holes and then reinstall only the three bolts circled using a 12mm socket and torque to **15-17** ft-lb.

## Step 16 — Installing the Cylinder Deactivation Bracket



- ⓘ This step is for cars equipped with Cylinder Deactivation. Turbo Models do not have cylinder deactivation.
- Remove the bolt circled using a 10mm socket and wrench.
- Install the Cylinder Deactivation bracket as shown using the 10mm bolt that was just removed and the remaining 12mm bolt from the front brace.
- ⓘ Torque the 12mm bolt to **15-17** ft-lb and the 10mm to **5-7** ft-lb
- Remove the metal and rubber mount from the wiring and route it as shown and reconnect it to the motor.

## Step 17 — Installing the CorkSport Axle Back Exhaust

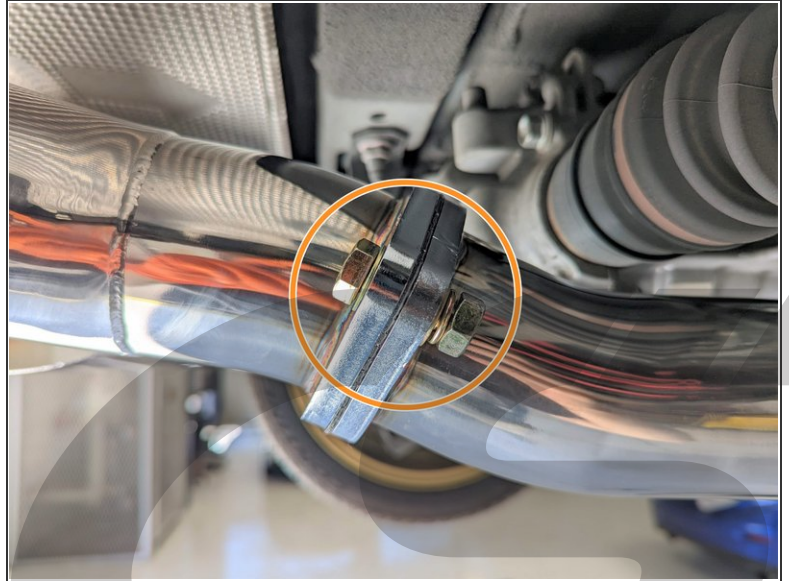


**i** We recommend leaving as much protective packaging in place as possible to prevent damage to the axle back or vehicle during installation. It is shown removed for clarity.

**⚠** We recommend having a friend assist with the CS axle back installation.

- Lift the CorkSport axle back into place and install the metal hangers into the 2 rubber exhaust hangers on each side. The exhaust will hang in place as shown.

## Step 18 — Connecting the CorkSport Axle Back to the OEM Midpipe



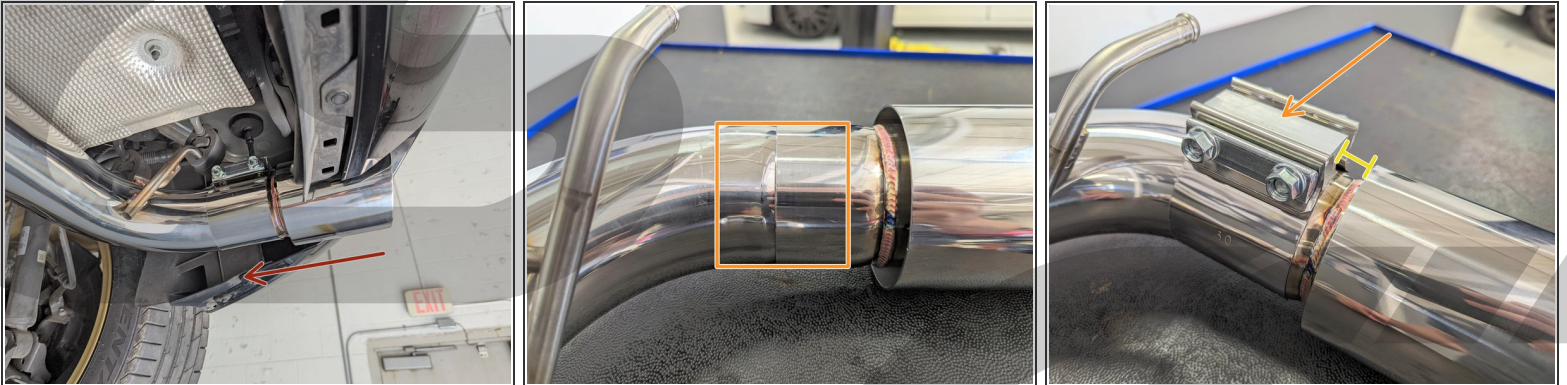
- Align the CS Axle Back to the rear midpipe.
- Connect the CorkSport axle back exhaust to the midpipe using the supplied hardware. Only hand tighten for now.
- ⓘ The hardware is assembled going from left to right in the order of bolt, washer, flange, gasket, flange, washer, lock washer, then nut.

## Step 19 — What Tips Are You Installing?



- If you are installing the Mazda 3 Hatchback tips w/Out the Appearance kit continue to the next step.
- If you are installing the Mazda 3 Hatchback tips with the Appearance kit or CX-30 tips continue to **Step 22**.
- If you are installing the Mazda 3 Sedan tips continue to **Step 24**.

## Step 20 — Installing the CorkSport Exhaust Tips - Mazda 3 Hatchback w/Out Appearance Kit Part 1



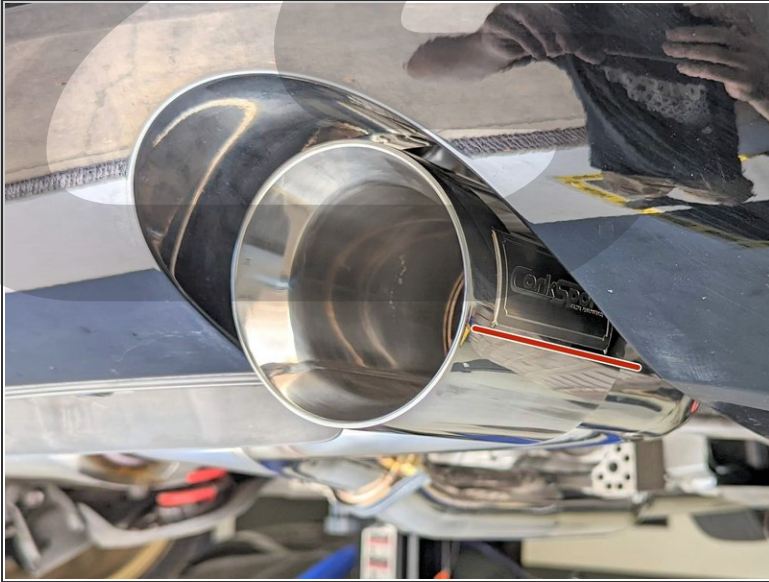
**⚠** The exhaust tips will come with the clamps preinstalled for shipping purposes only and are not in the correct location for installation.

**i** Some pictures of the tip installation are shown outside of the vehicle for demonstration purposes.

- Slide a tip with a clamp installed onto the axle back. The exhaust tip will fit over the smaller diameter section of pipe on the axle back and will stop when it is pushed all the way on.
- i** Ensure that the CorkSport badge is facing towards the outside of your vehicle.
- Now position the clamp on both the tip and axle back, **making sure that the clamp is on the axleback side and on the tip side.**
- Rotate the clamp as needed so the bolts are at the top and not easily visible.
- To ensure that the clamp is in the correct location, measure the distance between the back of the tip and front of the clamp as shown.

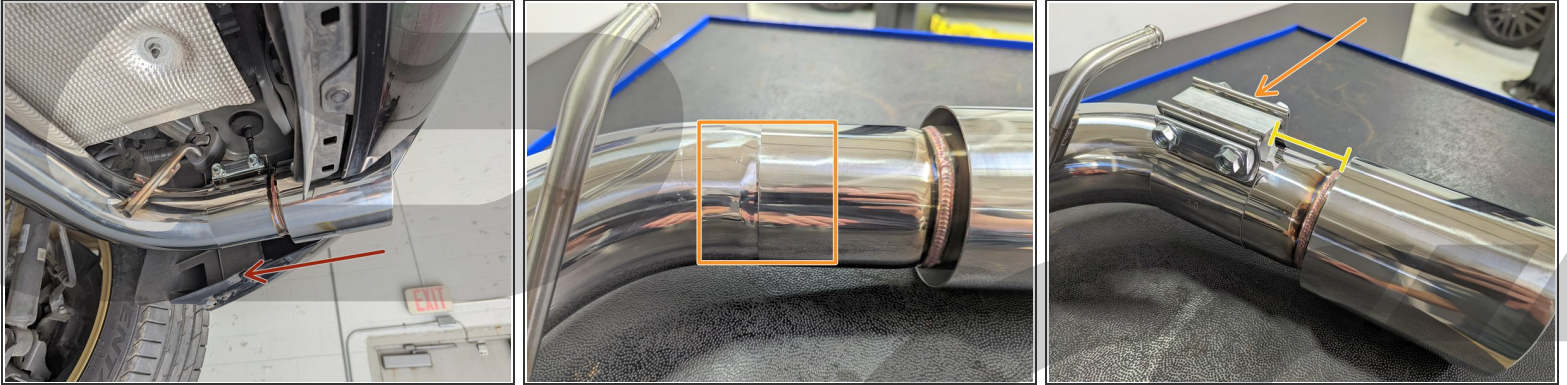
**⚠** The distance should be at least ~0.6in or 15mm

## Step 21 — Installing the CorkSport Exhaust Tips - Mazda 3 Hatchback w/Out Appearance Kit Part 2



- Rotate the exhaust tip as needed until the CorkSport name badge is sitting level with the side of the vehicle as shown.
- Tighten the clamp using a 15mm or 9/16inch socket, ratchet, and 15mm or 9/16inch wrench to **40-45ft-lbs.**
- ⚠ Tighten the two bolts on the clamp evenly to ensure even clamping force on the exhaust and tip.
- Repeat steps 20 and 21 for the other exhaust tip.
- ⚠ Lost exhaust tips are NOT covered under warranty, replacement is at owners cost.
- Skip to Step 26 to continue with the installation.

## Step 22 — Installing the CorkSport Exhaust Tips - Mazda 3 Hatchback with Appearance Kit, CX-30 Part 1



**⚠** The exhaust tips will come with the clamps preinstalled for shipping purposes only and are not in the correct location for installation.

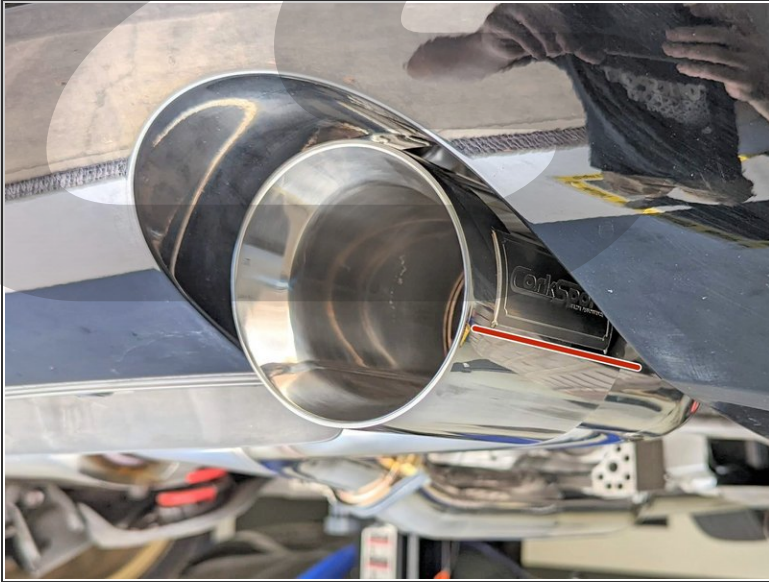
**i** Some pictures of the tip installation are shown outside of the vehicle for demonstration purposes. **These are vehicle specific images.**

- Slide a tip with a clamp installed onto the axle back. The exhaust tip will fit over the smaller diameter section of pipe on the axle back and will stop when it is pushed all the way on.
- i** Ensure that the CorkSport badge is facing towards the outside of your vehicle.
- Now position the clamp on both the tip and axle back, **making sure that the clamp is on the axleback side and on the tip side.**
- Rotate the clamp as needed so the bolts are at the top and not easily visible.
- To ensure that the clamp is in the correct location, measure the distance between the back of the tip and front of the clamp as shown.

**⚠** The distance should be at least ~2in or 50mm



## Step 23 — Installing the CorkSport Exhaust Tips - Mazda 3 Hatchback with Appearance Kit, CX-30 Part 2



- Rotate the exhaust tip as needed until the CorkSport name badge is sitting level with the side of the vehicle as shown.
- Tighten the clamp using a 15mm or 9/16inch socket, ratchet, and 15mm or 9/16inch wrench to **40-45ft-lbs.**
- ⚠ Tighten the two bolts on the clamp evenly to ensure even clamping force on the exhaust and tip.
- Repeat steps 22 and 23 for the other exhaust tip.
- ⚠ Lost exhaust tips are NOT covered under warranty, replacement is at owners cost.
- Skip to Step 26 to continue with the installation.

## Step 24 — Installing the CorkSport Exhaust Tips - Mazda 3 Sedan Part 1



**⚠️ The exhaust tips will come with the clamps preinstalled for shipping purposes only and are not in the correct location for installation.**

**ⓘ Some pictures of the tip installation are shown outside of the vehicle for demonstration purposes. These are vehicle specific images.**

- Slide a tip with a clamp installed onto the axle back. The exhaust tip will fit over the smaller diameter section of pipe on the axle back and will stop when it is pushed all the way on.
- ⓘ Ensure that the CorkSport badge is facing towards the outside of your vehicle.
- Now position the clamp on both the tip and axle back, **making sure that the clamp is on the axleback side and on the tip side.**
- Rotate the clamp as needed so the bolts are at the top and not easily visible
- To ensure that the clamp is in the correct location, measure the distance between the back of the tip and front of the clamp as shown.

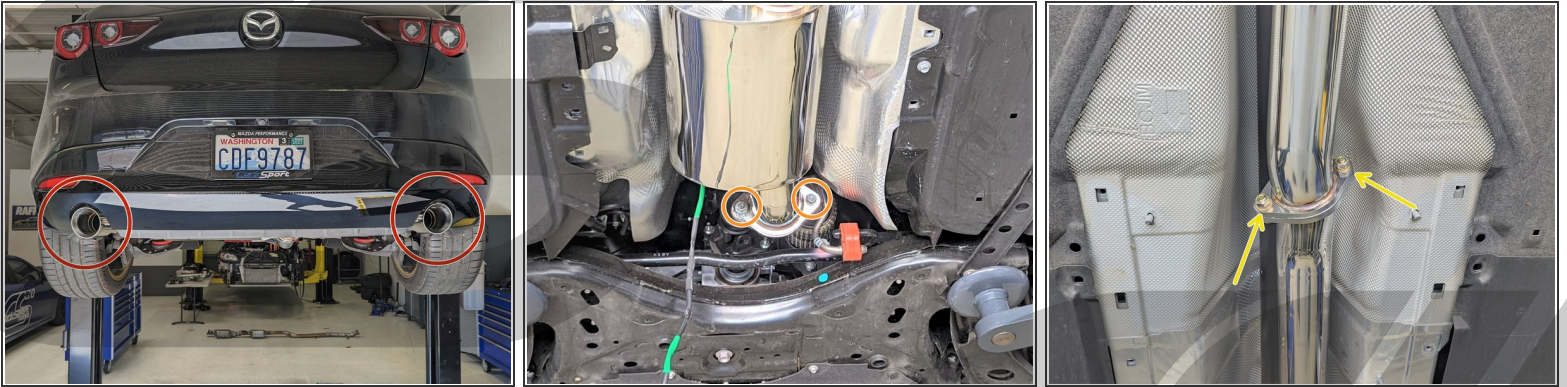
**⚠️ The distance should be at least ~8.5in or 215mm**

## Step 25 — Installing the CorkSport Exhaust Tips - Mazda 3 Sedan Part 2



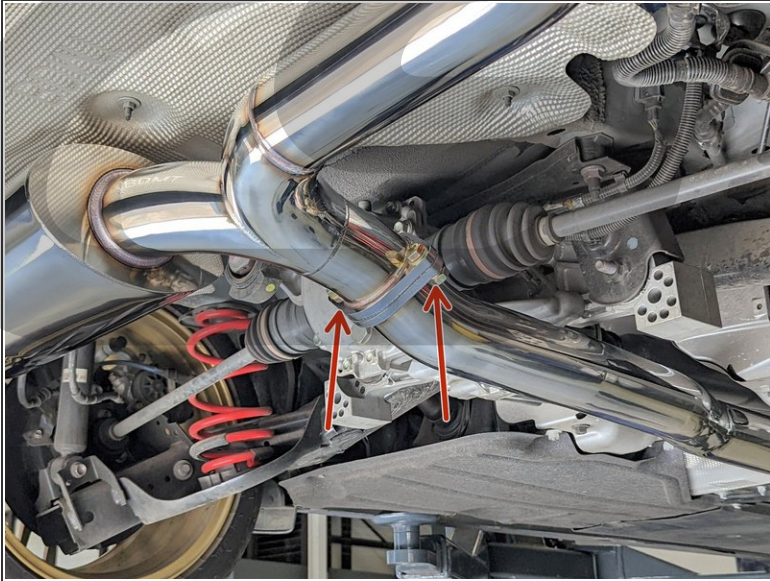
- Rotate the exhaust tip as needed until the CorkSport name badge is sitting level with the side of the vehicle as shown.
- Tighten the clamp using a 15mm or 9/16inch socket, ratchet, and 15mm or 9/16inch wrench to **40-45ft-lbs.**
- ⚠ Tighten the two bolts on the clamp evenly to ensure even clamping force on the exhaust and tip
- Repeat steps 24 and 25 for the other exhaust tip.
- ⚠ Lost exhaust tips are **NOT** covered under warranty, replacement is at owners cost.

## Step 26 — Aligning the CorkSport Catback Back Exhaust Part 1



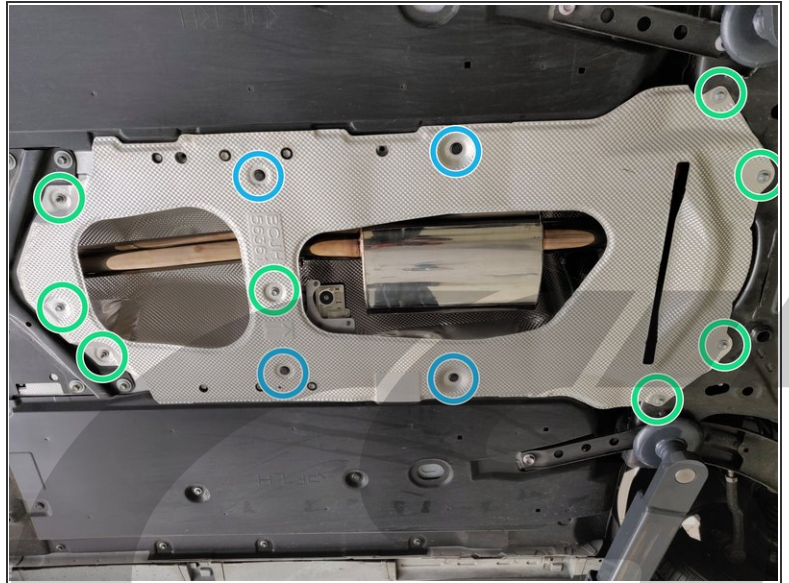
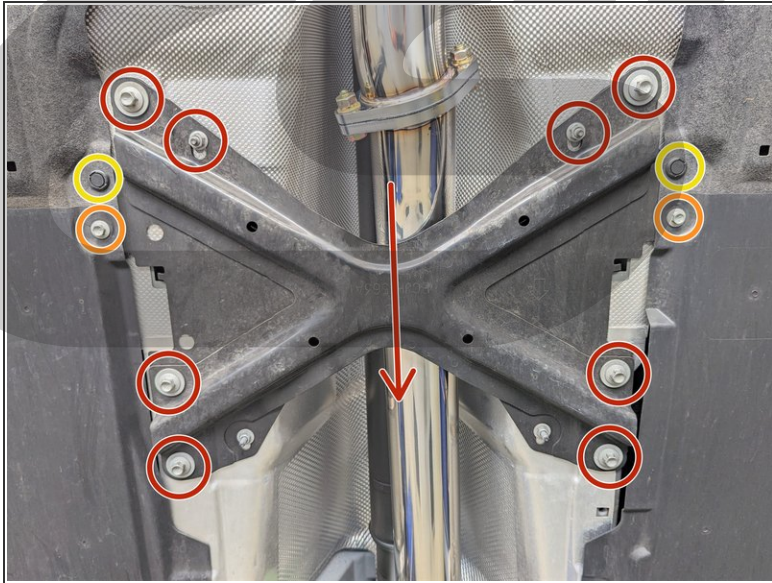
- Align the exhaust tips and hangers so the exhaust is straight and centered in the exhaust cutouts. There should be a gap all around the exhaust tips.
- Starting back at the downpipe flange, tighten the nuts to **35 ft-lb** with a 14mm socket and ratchet.
- Continue onto the flanges connecting the front and rear midpipes and tighten the bolts to **45 ft-lb** using a **17mm** socket and wrench.

## Step 27 — Aligning the CorkSport Catback Back Exhaust Part 2



- Now tighten the bolts connecting the rear midpipe flange to the axle back to **45ft-lbs** using a 17mm socket, ratchet, and wrench.
- ⓘ Recheck the exhaust after tightening the hardware to ensure proper tip alignment and clearance to the driveshaft. Readjust the exhaust as needed.
- ⓘ After installation and before starting car, wipe down exhaust with cleaner and a clean towel. Grease and fingerprints can become hard to remove after the exhaust heats up.

## Step 28 — Reinstalling the Rear Brace and Midpipe Shield



- Reinstall the rear brace by lining up the slots and sliding it forward and use the 12mm socket and ratchet to tighten the 6 bolts and 2 nuts circled to **15-17** ft-lb.
- Install the 2 10mm bolts circled and tighten until snug.
- Place the 2 plastic push clips back into the locations shown.
- Reinstall the midpipe shield using the 8 10mm bolts and nuts in the circled locations and tighten to **5-7** ft-lb.
- ⓘ Some models have a shorter exhaust shield and only have 5 bolts holding the shield.
- Take the 4 plastic clips and reinstall them in the circled locations.

## Step 29 — Installation Complete



- This completes your installation of the CorkSport Performance 80mm Cat Back Exhaust System!
- ⓘ Listen for any strange noises upon first drive. If any are present, inspect exhaust hangers & exhaust tip clamps.
- ⓘ A slight "burning off" smell will be present as the exhaust is heated for the first time.
- Contact us with any questions or concerns at [sales@corksport.com](mailto:sales@corksport.com) or (360) 260-2675.
- Please leave a review here: [www.corksport.com](http://www.corksport.com)
- Share your experience using #CorkSport on Instagram, Facebook, and Twitter.