

CorkSport Performance

AXO-3-415 Stainless Steel Brake Lines

Installation Instructions for the CorkSport Performance Stainless Steel Brake Lines for 2019+ Mazda 3, 2020+ CX-30 and 2023+ CX-50.

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INTRODUCTION

In this installation guide we have provided step by step instructions to remove the OEM front and rear brakes lines and install the CorkSport Performance Stainless Steel Brake Lines

Advisory:

- Working under the vehicle requires a safe and sturdy location for the vehicle to sit on jackstands.
- Brake bleeding must be done properly to prevent braking issues. Follow the instructions carefully to prevent vehicle damage or personal injury.

TOOLS:

- Hydraulic Jack (1)
- Jack Stand (4)
- 3/8" Drive Ratchet (1)
- 1/2" Drive Breaker Bar (1)
- 1/2" Torque Wrench (1)
- 21mm Socket - Deep (1)
- 12mm Socket (1)
- Wrench, 17mm (1)
- Wrench, 19mm (1)
- 10mm Line Wrench (1)
- Small Needle Nose Pliers (1)
- Flathead Screwdriver (1)
- Shop Towels/Rags (1)
- Drip Pan (1)
- Gloves (1)
- Plastic Bottle (1)
- 5/32" Hose (1)
- Brake Fluid - DOT3 (1)
- Friend (1)

PARTS:

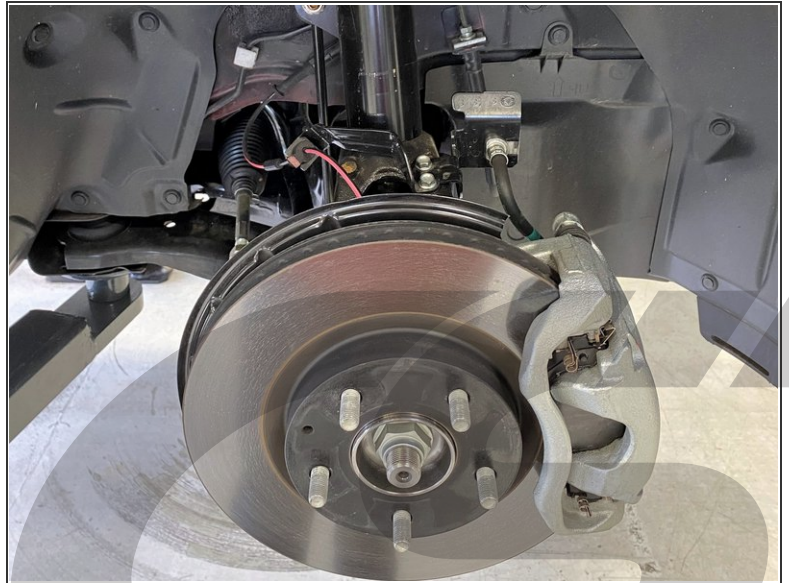
- CorkSport Front AXO Stainless Steel Brake Lines (2)
- CorkSport Rear AXO Stainless Steel Brake Lines (2)
- M10 Banjo Bolt (4)
- M10 Crush Washer (8)

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
 - ① The vehicle used in these instructions was a 2021 Mazda 3 Turbo. Other models and years will be similar.

Step 2 — Lifting the Car & Removing the Front Wheel



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

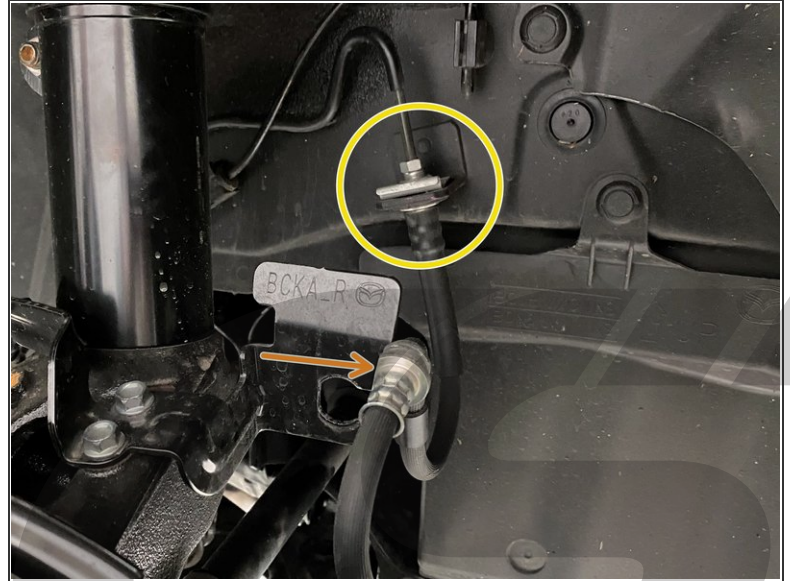
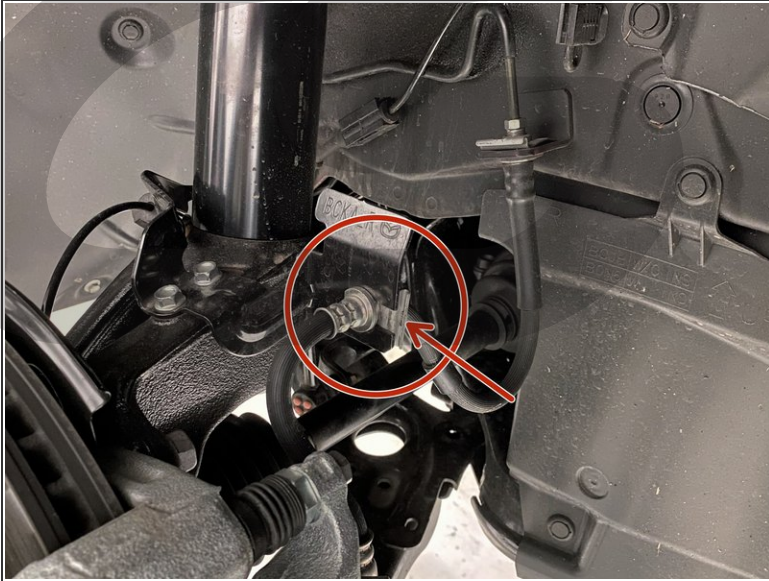
- Start by lifting up the front of the car using the hydraulic jack and jack stands.

⚠ Be sure to reference your owners manual for jack points and the jack manufacturer's instructions for proper practices.

- Remove the passenger's side (right hand side) front wheel from the vehicle using the 1/2" drive breaker bar or impact gun and 17mm or 21mm socket.

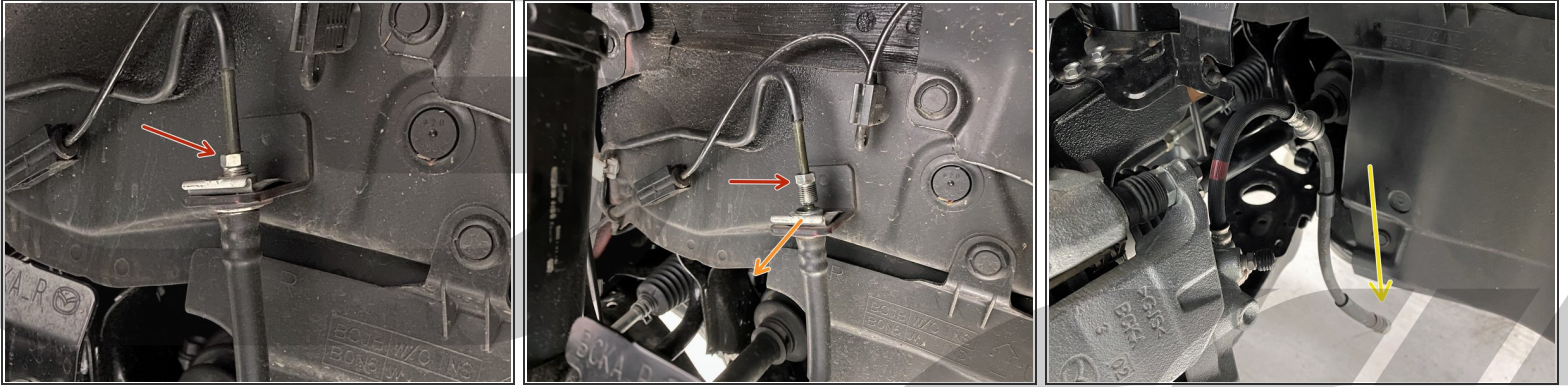
i 17mm or 21mm lug nuts present depending on year and trim level of your 3.

i A different socket may be required if you have aftermarket or locking lug nuts.

Step 3 — Freeing the Brake Line - Part 1

- Locate the front brake line.
- Using needle nose pliers or flathead screwdriver, remove the silver brake line retainer clip
- Then free the front brake line from the mounting bracket
- Trace the brake line to the inner fender and locate where it connects to the hard line
- ① This location will be referenced in the next step.

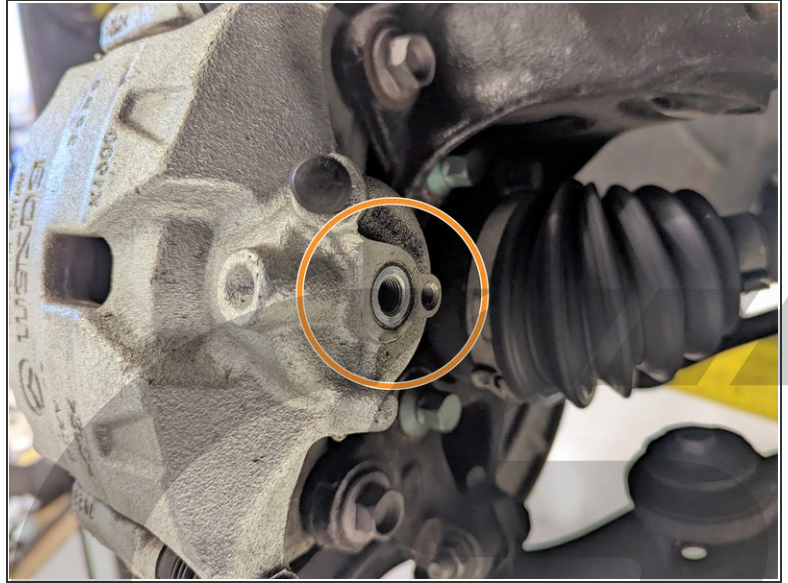
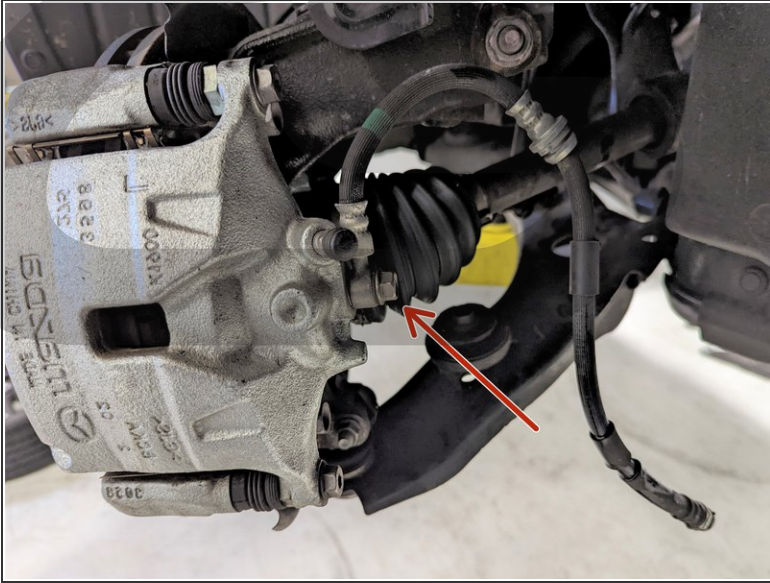
Step 4 — Freeing the Brake Line - Part 2



⚠ When releasing brake fluid, catch it with a drip pan. Brake fluid can take off paint and coatings so be cautious if the fluid is spilled. Using a small vacuum cap to block the hardline will help prevent any unnecessary fluid leakage

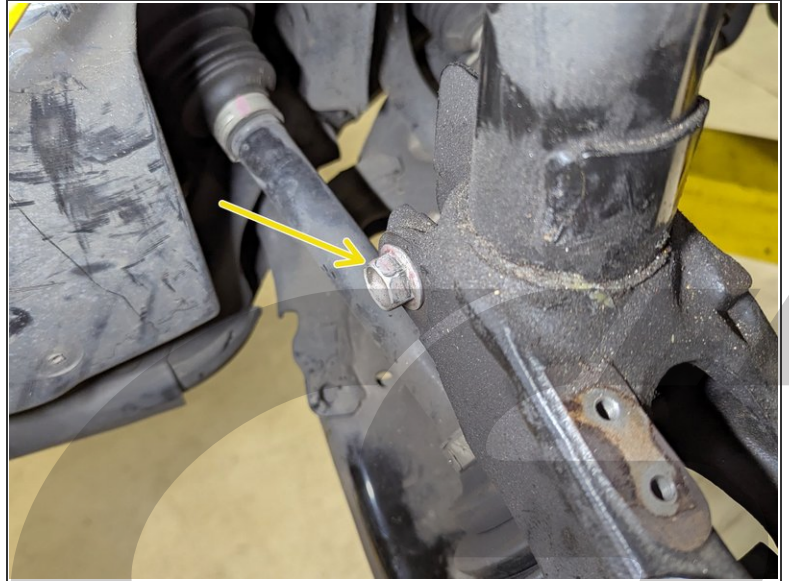
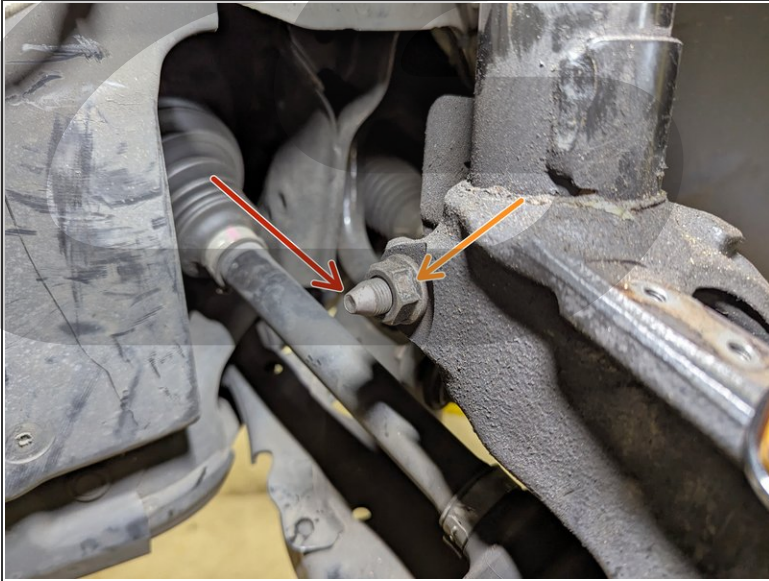
- Using a 10mm line wrench, loosen the brake line nut. Shown completed in the second image
- Remove the silver brake line retaining clip using the same method as before
- Free the brake line and point it downward to drain out any remaining brake fluid into your drip pan

Step 5 — Freeing the Brake Line - Part 3



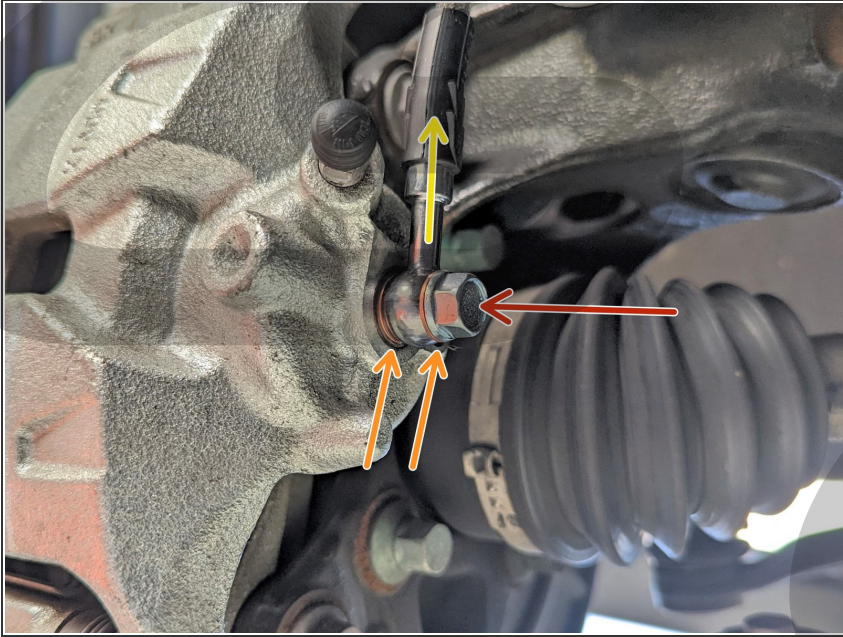
- Using a 12mm socket and ratchet remove the banjo bolt and brake line
- Ensure that the copper crush washer is not stuck to the caliper

Step 6 — Flipping the Strut Pinch Bolt



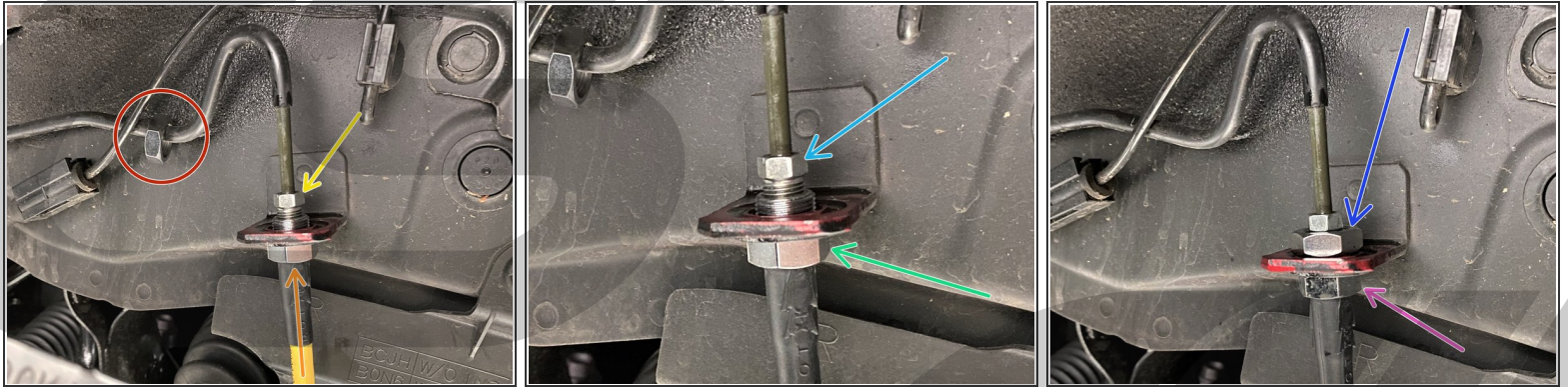
- On the drivers side of the vehicle the strut pinch bolt is orientated with the end of the bolt facing forward. When turning, the brake line can come into contact with the end of the bolt.
- To reduce the chance of rubbing, remove the pinch bolt and nut on the drivers side using a 19mm socket and ratchet along with a 17mm wrench
- Flip the bolt around so that the end of the bolt is facing the rear of the car and tighten to **68-75ft-lbs**

Step 7 — Brake Line Installation - Part 1

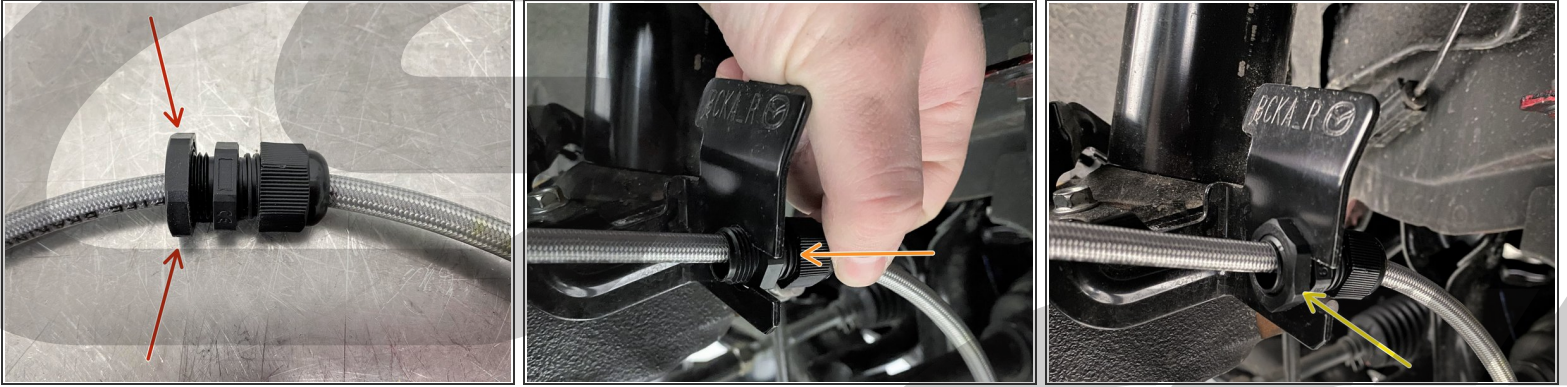


- Install a CorkSport front brake line onto the caliper as shown
 - Secure the brake line with one of the supplied M10 banjo bolts
 - Ensure there is one copper washer on either side of the brake line fitting
 - Ensure the CorkSport brake line points upwards as shown
- i** Only hand tighten the banjo bolt for now

Step 8 — Brake Line Installation - Part 2



- Remove the 19mm nut from the end of the CorkSport brake line and slide it over the OEM hardline on the inner fender. Slide it down along the hardline to keep it out of the way
- Slide the end of the CS brake line through the bottom of the brake line bracket on the inner fender
- Screw the OEM hardline into the CS brake line. Thread in the nut until hand tight
- Hold the CS brake line with a 17mm wrench
- Using a 10mm line wrench, tighten the OEM hardline to the CS brake line to **13-15ft-lbs.**
- Bring the 19mm nut down the hardline and hand tighten it to the CS brake line.
- Again hold the CS brake line with a 17mm wrench
- Using a 19mm wrench tighten the 19mm nut to secure the CS brake line to the inner fender bracket.

Step 9 — Brake Line Installation - Part 3

- Locate the plastic fitting in the center of the CorkSport front brake line
- Remove the plastic 22mm locknut from the fitting
- Slide the plastic fitting into the brake line retaining bracket as shown
- Secure the brake line to this bracket using the plastic 22mm lock nut removed earlier
 - Tighten the 22mm lock nut until snug, making sure to not over tighten

Step 10 — Brake Line Installation - Part 4



- Loosen the 19mm retaining nut to allow the brake line to move within the plastic fitting.
 - Slide the brake line in and out of the plastic fitting as needed until it has good slack everywhere and is not touching any components on the vehicle.
 - Once happy with fitment, tighten the 19mm retaining nut hand tight.
 - Finally, tighten the banjo bolt at the brake caliper using a 12mm socket and ratchet. Tighten to **15-19ft-lbs**.
- ⚠ Do not overtighten the banjo bolt**
- i** While tightening, ensure the brake line remains in the original orientation and has good clearances to all suspension components

Step 11 — Driver's Side Front Brake Line Installation



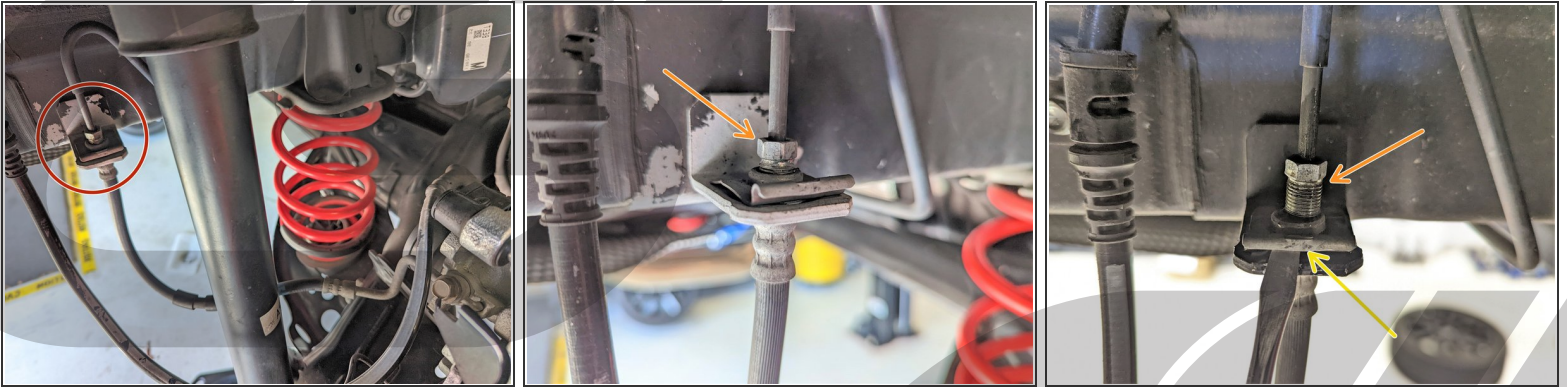
- Repeat steps 2-9 on the driver's side front (left hand side) of the vehicle

Step 12 — Lifting the Car & Removing the Rear Wheel



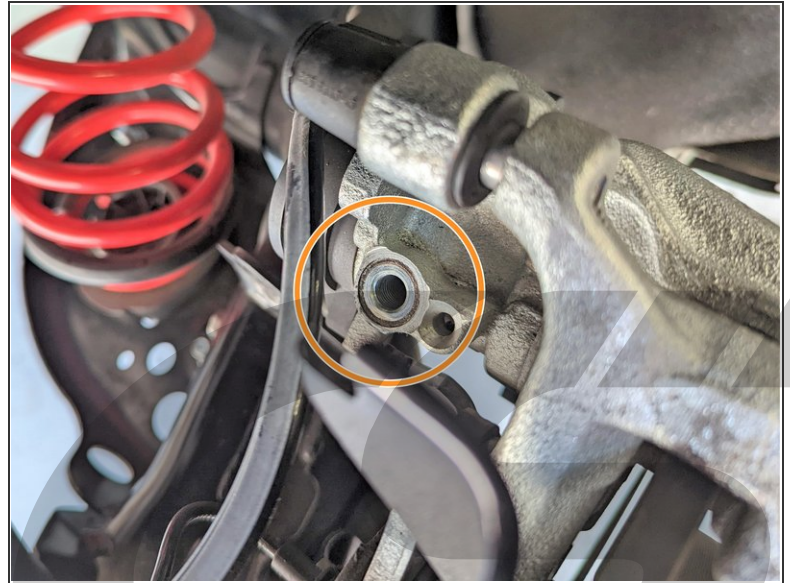
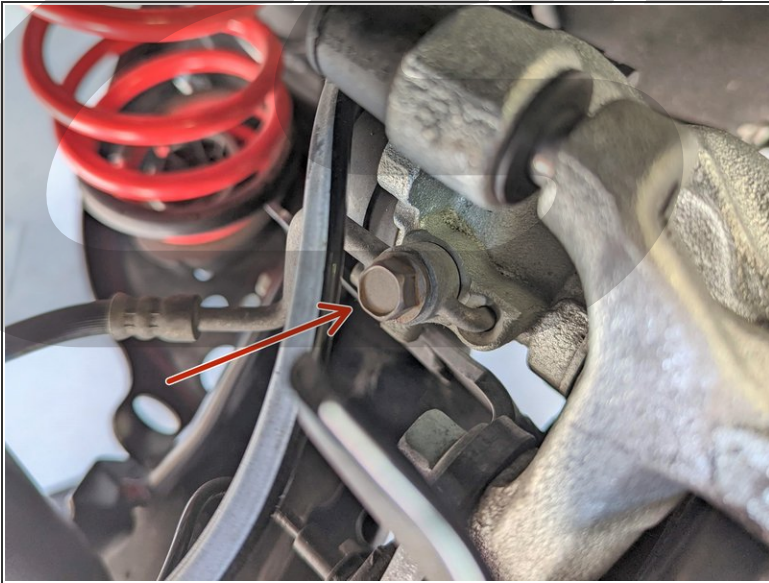
- Lift up the rear of the car using the hydraulic jack and jack stands.
 - ⚠ Be sure to reference your owners manual for jack points and the jack manufacturer's instructions for proper practices.
- Remove the passenger's side (right hand side) rear wheel from the vehicle using the 1/2" drive breaker bar or impact gun and 17mm or 21mm socket.
- ⓘ A different socket may be required if you have aftermarket or locking lug nuts.

Step 13 — Freeing the Brake Line - Part 1



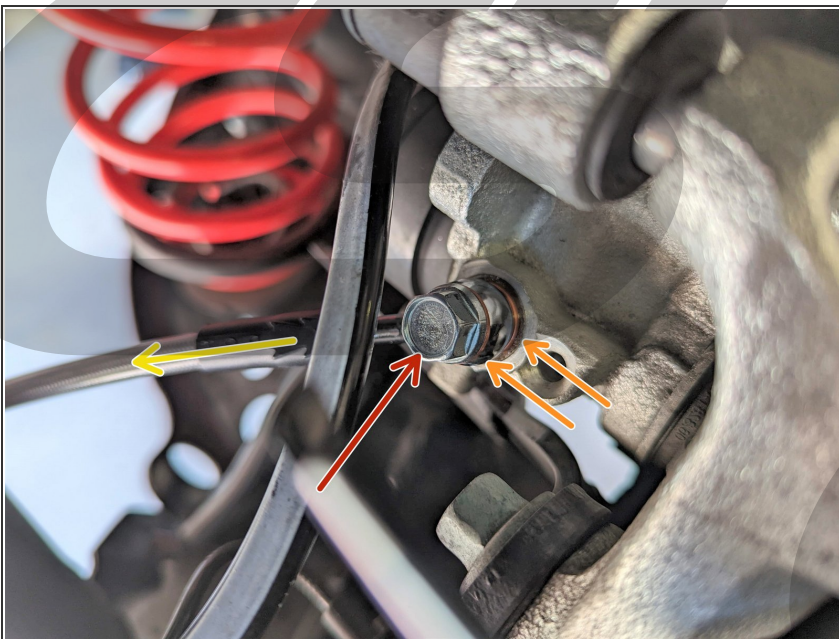
- Locate the rear brake line.
 - Trace the brake line to the inner fender and locate where it connects to the hard line
- ⚠ When releasing brake fluid, catch it with a drip pan. Brake fluid can take off paint and coatings so be cautious if the fluid is spilled. Using a small vacuum cap to block the hardline will help prevent any unnecessary fluid leakage**
- Using a 10mm line wrench, loosen the brake line nut. Shown completed in the second image
 - Remove the silver brake line retaining clip using the same method as before
 - Free the brake line and point it downward to drain out any remaining brake fluid into your drip pan

Step 14 — Freeing the Brake Line - Part 2



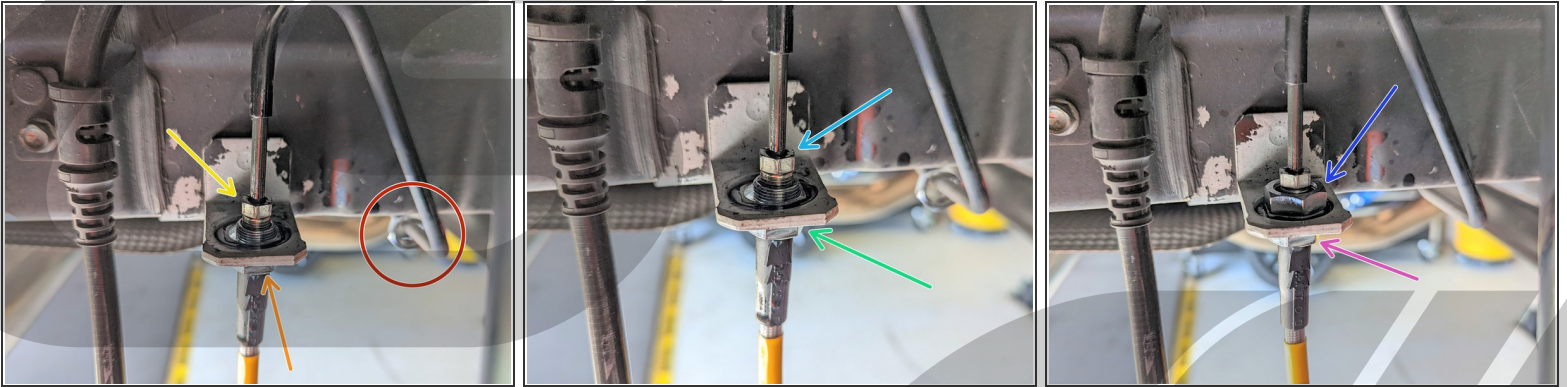
- Using a 12mm socket and ratchet remove the banjo bolt and brake line from the caliper
- Ensure that the copper crush washer is not stuck to the caliper

Step 15 — Brake Line Installation - Part 1



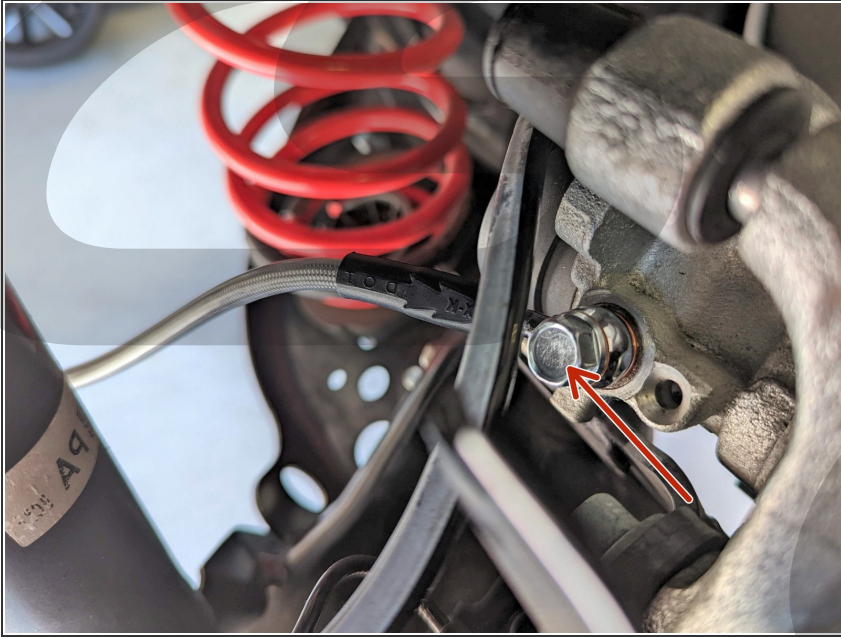
- Install the CorkSport rear brake line onto the caliper as shown
- Secure the brake line with one of the supplied M10 banjo bolts
- Ensure there is one copper washer on either side of the brake line fitting
- Ensure the CorkSport brake line is orientated as shown
- ⓘ Only hand tighten the banjo bolt for now

Step 16 — Brake Line Installation - Part 2



- Remove the 19mm nut from the end of the CorkSport brake line and slide it over the OEM hardline on the inner fender. Slide it down along the hardline to keep it out of the way
- Slide the end of the CS brake line through the bottom of the brake line bracket on the inner fender
- Screw the OEM hardline into the CS brake line. Thread in the nut until hand tight
- Hold the CS brake line with a 17mm wrench
- Using a 10mm line wrench, tighten the OEM hardline to the CS brake line to **13-15ft-lbs.**
- Bring the 19mm nut down the hardline and hand tighten it to the CS brake line.
- Again hold the CS brake line with a 17mm wrench
- Using a 19mm wrench tighten the 19mm nut to secure the CS brake line to the inner fender bracket.

Step 17 — Brake Line Installation - Part 3



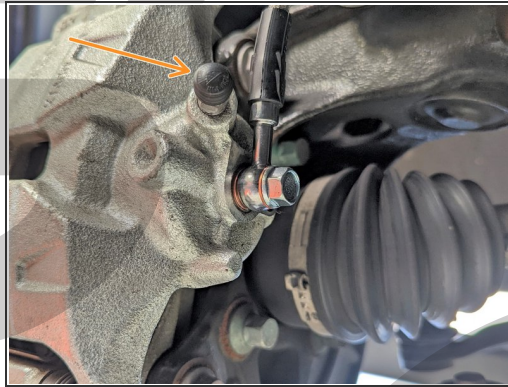
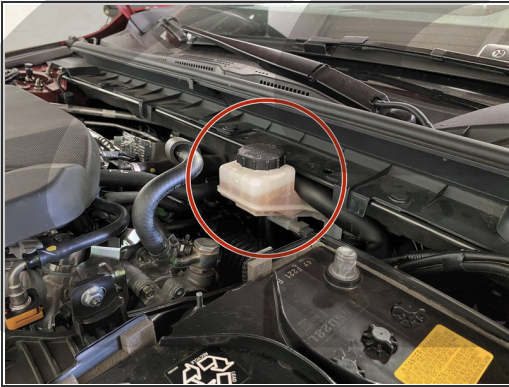
- Finally, tighten the banjo bolt at the brake caliper using a 12mm socket and ratchet. Tighten to **15-19ft-lbs**.
 - ⚠ Do not overtighten the banjo bolt
 - ⓘ While tightening, ensure the brake line remains in the original orientation and has good clearances to all suspension components

Step 18 — Driver's Side Rear Brake Line Installation



- Repeat steps 11-15 on the driver's side rear (left hand side) of the vehicle

Step 19 — Brake Bleeding - Part 1



- ⓘ "Bleeding" the brakes is the final step before you're ready to drive the car. It removes all air bubbles from braking system that were introduced during installation
- ⓘ We strongly recommend getting a friend to help you bleed your brakes. It makes the whole process much faster & easier
- Locate the brake master cylinder under the hood of your vehicle
- ⓘ Throughout the bleeding process it will be referenced
- Locate the bleed screw on the calipers. They will be covered with a black rubber dust boot
- Instead of buying a fancy brake bleeder, we recommend getting a plastic bottle and a short section of 5/32" (4mm) hose. Pour some brake fluid in the bottle and place the hose in the bottle like shown in the third image. Ensure the hose is sticking into the brake fluid
- ⓘ The bottle will catch excess brake fluid during the bleeding process

Step 20 — Brake Bleeding - Part 2



- i** For proper brake bleeding, always start with the bleed screw furthest from the master cylinder. In this case we start with the bleed screw on the passenger rear, then driver rear, passenger front, and finally driver front.
- Lift the rubber dust boot from the bleed screw
 - Place a wrench onto the hex of the bleed screw
 - Place the other end of your 5/32" hose onto the bleed screw.
 - Have your friend pump the brakes hard 3-5 times, then hold the brake pedal down
 - While your friend holds the pedal, loosen the bleed screw ~1/2 turn. Fluid and air will come out of the bleed screw and the pedal will travel to the floor
 - Once the pedal is on the floor, re-tighten the bleed screw. Once tight, your friend can lift their foot from the pedal

Step 21 — Brake Bleeding - Part 3



- Repeat the pumping & holding procedure from the previous step 3-5 times or until no more air bubbles are coming out of the bleeder hose for each caliper
- Check fluid level in the master cylinder. Top off with SAE J1703 DOT3 fluid as needed
 - ⚠ Top off brake fluid as needed between the bleeding of each caliper
- Once complete with all bleed screws, complete one final pumping & holding procedure on all bleed screws. Use the same order as before
- By this stage, there should be no air coming from the brake bleed screws and the brake pedal should be firm
- Verify there are no brake fluid leaks and top off your fluid one final time before moving on
- Clean any brake fluid off of components with brake parts cleaner

Step 22 — Reinstall the Wheels



- Torque your wheels in a star pattern to 80-90ft-lbs using a 17mm or 21mm socket and torque wrench

Step 23 — Installation Complete



- This completes your installation of the CorkSport Performance Stainless Steel Brake Lines!
- Contact us with any questions or concerns at sales@corksport.com or (360) 260-2675.
- Please leave a review here: <https://corksport.com>
- Share your experience using #CorkSport on Instagram, Facebook, and Twitter.