

[c o r k s p o r t]



Installation Instructions for CorkSport Cx7 Downpipe

Tools Required

- 8mm wrench
- 13mm wrench or socket
- 8mm socket ¼ drive
- 12mm socket ¼ or 3/8 drive
- ¼ drive ratchet
- Torque wrench
- Varying length ratchet extensions both ¼ and 3/8
- WD40 or similar
- Pliers
- Safety glasses
- Pry bar (4wd models)
- 10mm wrench
- 17mm wrench
- 10mm socket ¼ drive
- 14mm semi deep socket (swivel type works best 3/8 drive
- 3/8 drive ratchet
- Anti Seize
- Large flat screwdriver
- O2 sensor socket
- Floor Jack
- Jack stands

Contents

- 1 CorkSport Downpipe
- 3 Bolt Exhaust Gasket
- 24 Page Installation Instructions
- O2 Spacer

WARNING: This kit will raise boost level approximately 2-3 psi on an otherwise stock car. Please make sure if you have other modifications to your vehicle that fuel delivery is correct and safe for your modifications including this downpipe.

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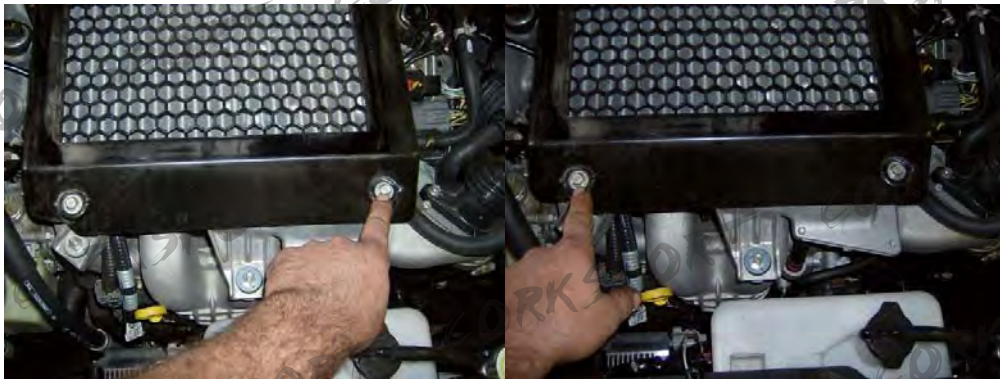
Installation of this product acknowledges that you are using this part for racing only and accept all responsibilities for the installation and use of this product. By removing the factory downpipe you are removing a catalytic converter from your car and thus affecting emissions. Installation of this product is involved. It requires a good working knowledge of cars to remove the original part and install the new part. Read through the installation instructions **before** attempting the work to make sure you are comfortable with the job. If you are not then take it to a professional. Before starting make sure the vehicle is cooled down and on a flat hard level surface.

Step 1: Disconnect the negative battery cable.

Step 2: Remove the two clips from the intercooler air scoop. Lift up the scoop and pull out.



Step 3: Remove the two 10mm headed bolts that hold the stock intercooler cover on. The cover then slides to the back and lifts off.



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Step 4: Remove the vacuum hose to the bypass valve using the pliers to pinch the clamp open on the tabs. Remove the hose clamp on the large hose, which connects to the bypass valve. Some effort may be required to remove the hoses once the clamps are removed.



Step 5: Loosen the two 10mm headed clamps on the intercooler inlet and outlet hoses.



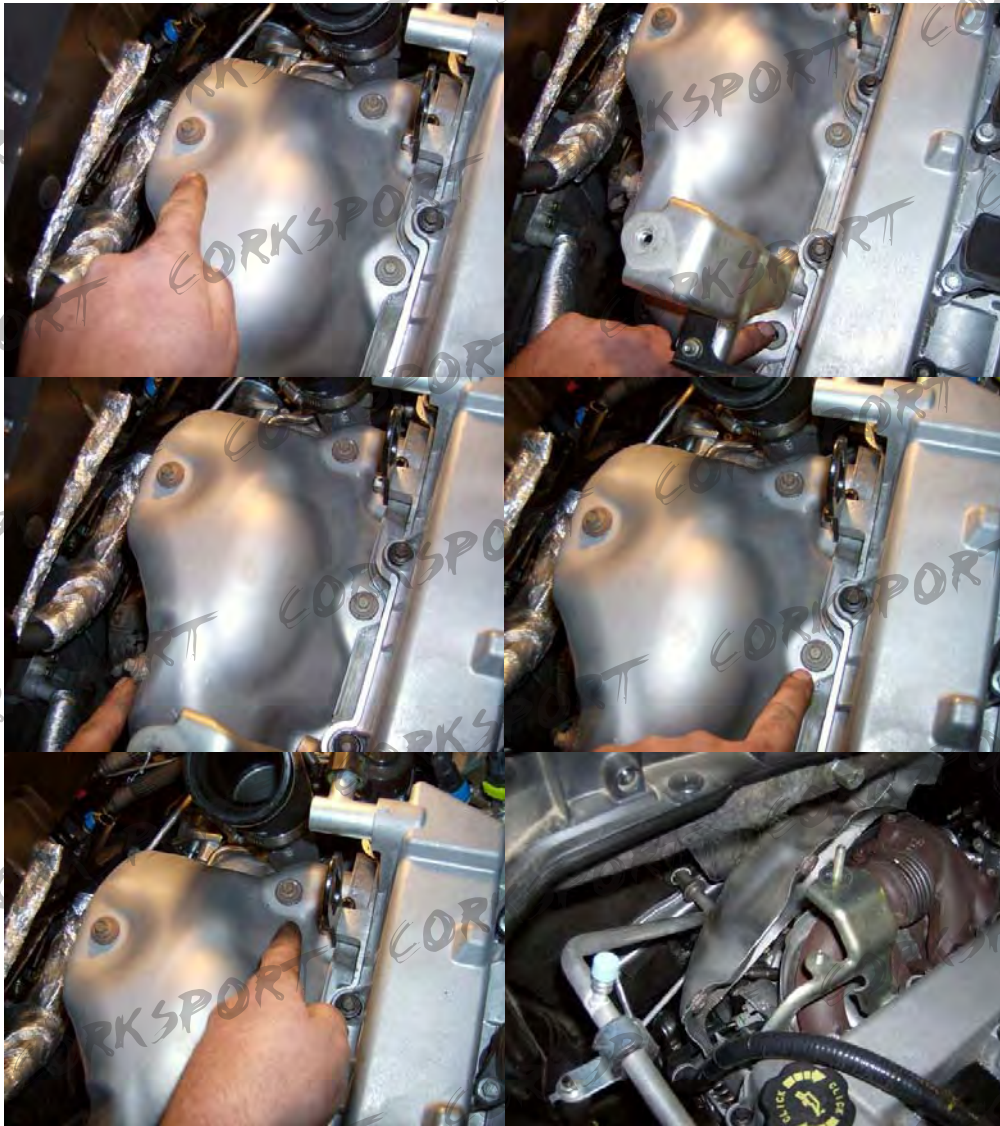
Step 6: Remove the three 12mm headed nuts from the intercooler mounts. Carefully remove the intercooler and set it aside in a safe place. Be careful not to damage the fins on the intercooler.



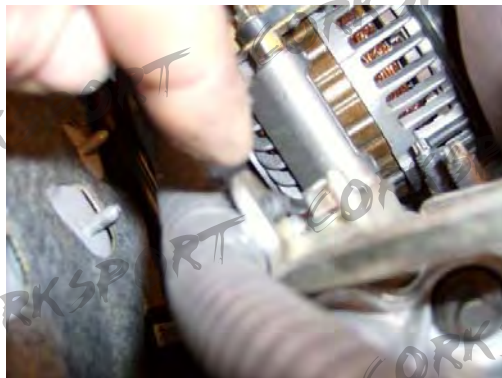
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Step 7: Remove the five 8mm headed bolts that secure the exhaust manifold heat shield to the exhaust manifold. Slide the heat shield back to gain access to the intercooler mounting bracket.



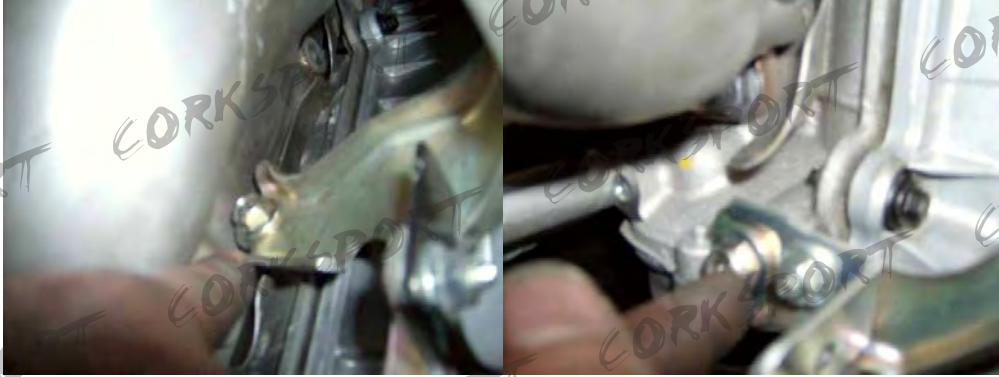
Step 8: Remove the wiring clip from the intercooler mounting bracket.



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Step 9: Remove the two 13mm headed bolts that hold the intercooler mounting bracket shown in the pictures below to the engine. Remove the bracket and upper heat shield from the engine.



DANGER: Follow instructions that came with your jack/stands. Death and or significant property damage could result if you do not.

Step 10: Jack up your vehicle and place it securely on jack stands.

Step 11: Remove the eight 10mm headed bolts and one plastic clip from the under tray. Remove the under tray.



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Step 12: Disconnect the three O2 sensor connectors. There are two gray and one black shown below. Remove the O2 sensor wires from the wire holders.



Step 13: Remove the lower O2 Sensor.



Step 14: Remove the three 14mm headed nuts from the mid pipe to exhaust connection. Remove the pipe.



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Step 15: Remove the two 14mm headed nuts and springs from the mid pipe to downpipe connection. Remove the mid pipe.



Step 16: Remove the gasket from the main cat to exhaust pipe connection.



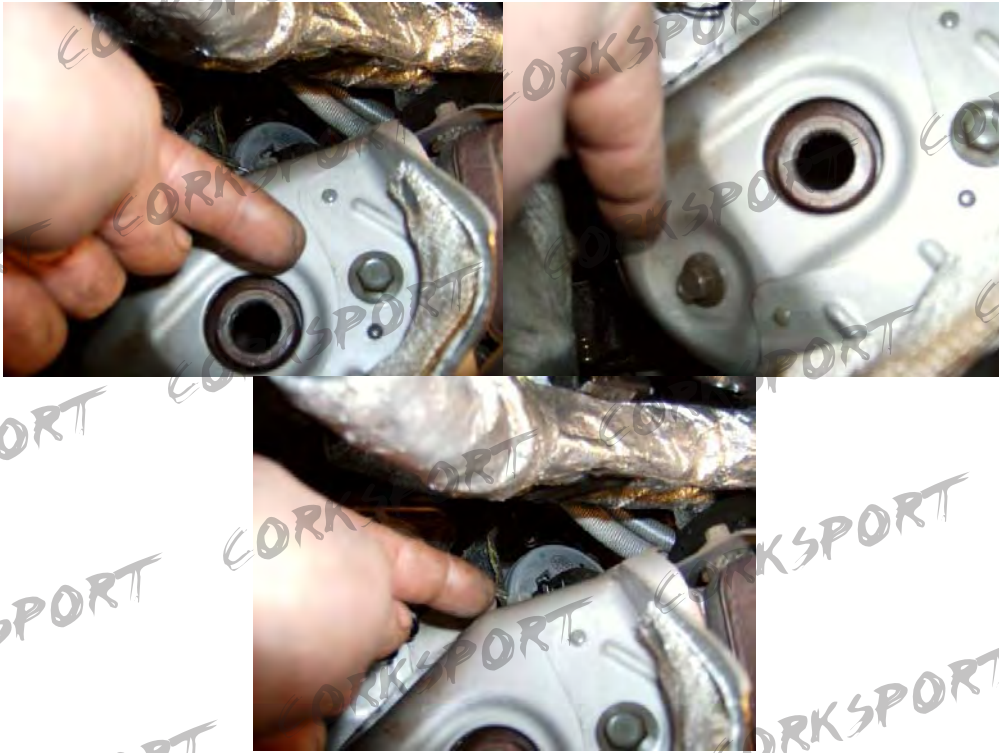
Step 17: Using the penetrating spray, spray around the base of the upper O2 sensor where it meets the stock downpipe. Let the fluid soak for several minutes. Remove the O2 sensor wires from the wire holder. Using the O2 sensor socket loosen the O2 sensor a few turns. Spray more of the penetrating spray onto the threads of the O2 sensor. Thread the sensor back in. The sensor should be easier to remove.



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Step 18: Remove the three 10mm headed bolts from the downpipe heat shield.



Step 19: Remove the three 8mm headed bolts from the lower exhaust manifold heat shield and remove the heat shield.



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Step 20: Spray the penetrant on the five 14mm headed nuts that hold the factory downpipe to the turbocharger. Let them soak for several minutes then remove the nuts. They are a factory locking style nut so they may be difficult to remove.



Step 21: Remove the two 14mm headed bolts from the factory downpipe to engine mounting bracket.



Step 22: Remove the two 14mm headed bolts which hold the bracket to the engine. Remove the bracket from the vehicle.



Step 23: Remove the stock downpipe.

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Step 24: If you have a 2wd model skip to step 39. If you have a 4wd model remove the two 14mm headed nuts and springs at the mid pipe to muffler connection.



Step 25: Remove the exhaust mid pipe from the three exhaust hangars and set it aside.



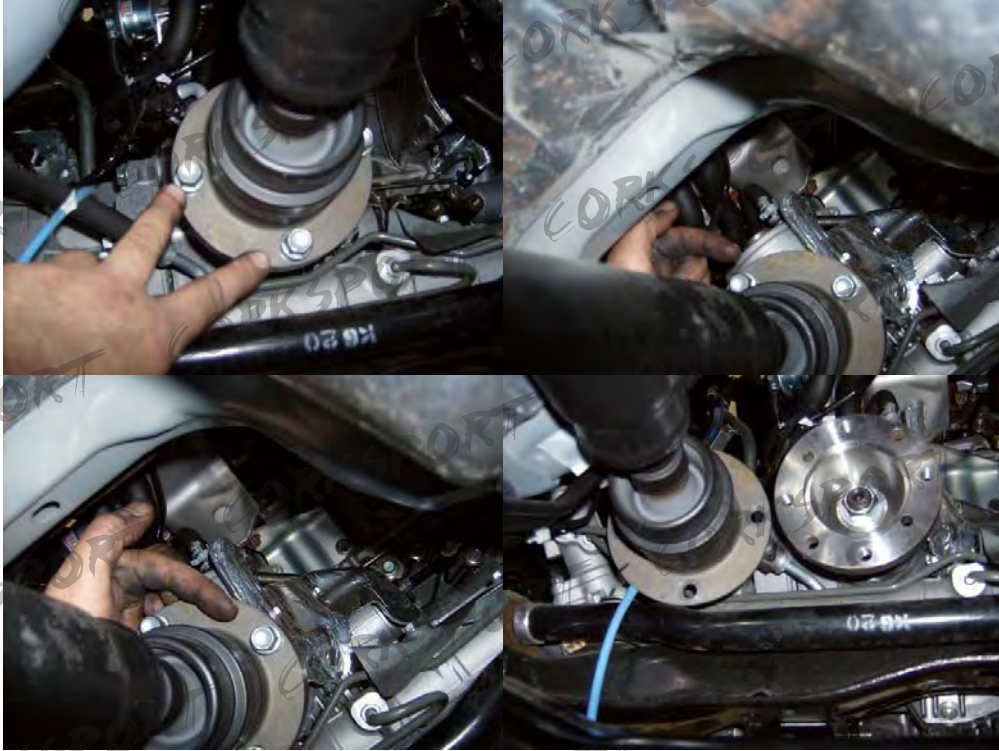
Step 26: Make a visible mark on the driveshaft mounting plate to the center differential.



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Step 27: Remove the four 14mm headed bolts from the drive shaft to center differential. Pull the driveshaft away from the center differential and set the front aside.



Step 28: Loosen the 17mm headed bolt on the lower engine mount.



Step 29: Remove the 17mm headed bolt and nut from the front of the lower engine mount.



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Step 30: Loosen the two 19mm headed from the engine mount brake and let the mount swing down.



Step 31: Using a pry tool, pry the bottom of the engine forward as much as possible and remove the stock downpipe from your Cx7. It is a tight fit but it does come out.

Step 32: Place the lower mount back into the bracket and slide the 17mm bolt back into the mount. Tighten the two 19mm headed bolts to 55-76 ft/lbs.



Step 33: Install the 17mm headed nut on the 17mm headed mount bolt and tighten to 55-76 ft/lbs.



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Step 34: Tighten the 17mm headed bolt on the other end of the lower mount to 55-76 ft/lbs



Step 35: Reinstall the drive shaft to the center differential. Make sure the mark you made earlier is lined up.



Step 36: Reinstall the four 14mm headed bolts and tighten them to 39-44 ft/lbs.



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Step 37: Reinstall the exhaust mid section into the three (3) hangars.



Step 38: Reconnect the two 14mm nuts and springs on the exhaust mid pipe to muffler connection.



Step 39: Install the 3 bolt gasket on to the main exhaust flange.



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Step 40: Install the O2 extension into the lower O2 sensor hole on the new downpipe. Installing this device which is used to keep the check engine light from illuminating from the removal of the catalyst, you are accepting responsibility for the disabling the catalyst monitor.



Step 41: While prying/pushing back towards the rear of the Cx7 on the stock exhaust install the downpipe onto the turbo studs then onto the exhaust mid section studs.



Step 42: Install the three 14mm headed nuts on the downpipe to exhaust mid section and tighten to 28-38 ft/lbs.



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Step 43: Install the two 14mm nuts on the downpipe to turbo connection. Make sure to use anti-seize on the studs before installing the nuts. You will want to do this step from under the vehicle.



Step 44: Install the remaining three 14mm headed nuts that hold the downpipe to the turbo. Make sure you use anti-seize on the studs. Tighten the nuts in a criss-cross pattern to 39-46 ft/lbs

Step 45: Install the lower O2 sensor (single grey plug) into the O2 extension. Apply a little anti-seize to the threads before installation. Reconnect the O2 sensor to the harness.



Step 46: Install the upper O2 sensor with a small amount of anti-seize on the threads into the upper O2 sensor port on the downpipe. Route the wires in the factory direction and reconnect the O2 sensor to the harness.



Pictures Continued On Next Page

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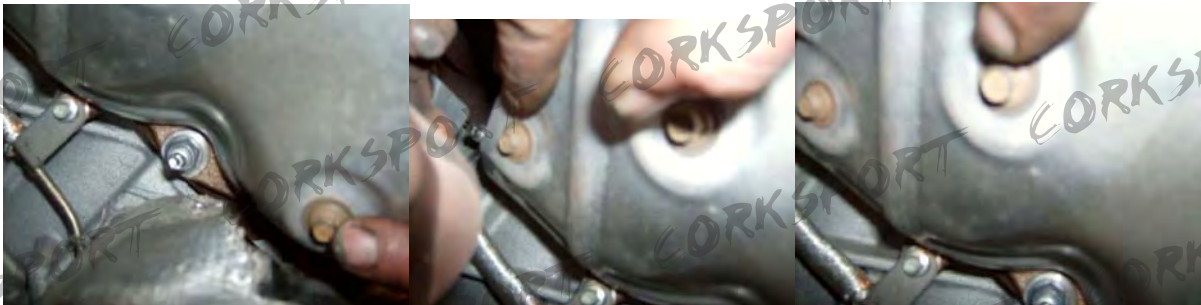
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Step 47: Reinstall the under tray with the eight 10mm headed bolts and one clip. Remove the Cx7 from the jack stands once the under tray is reinstalled.

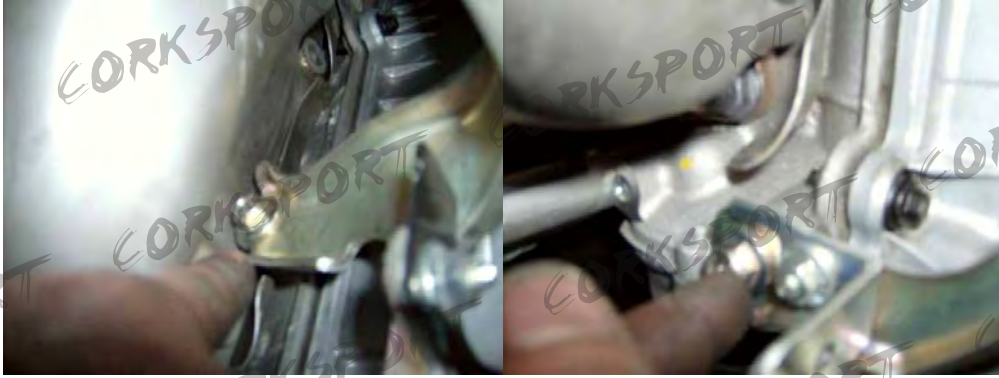


Step 48: Re-install the lower exhaust manifold heat shield with the three 8mm headed bolts.

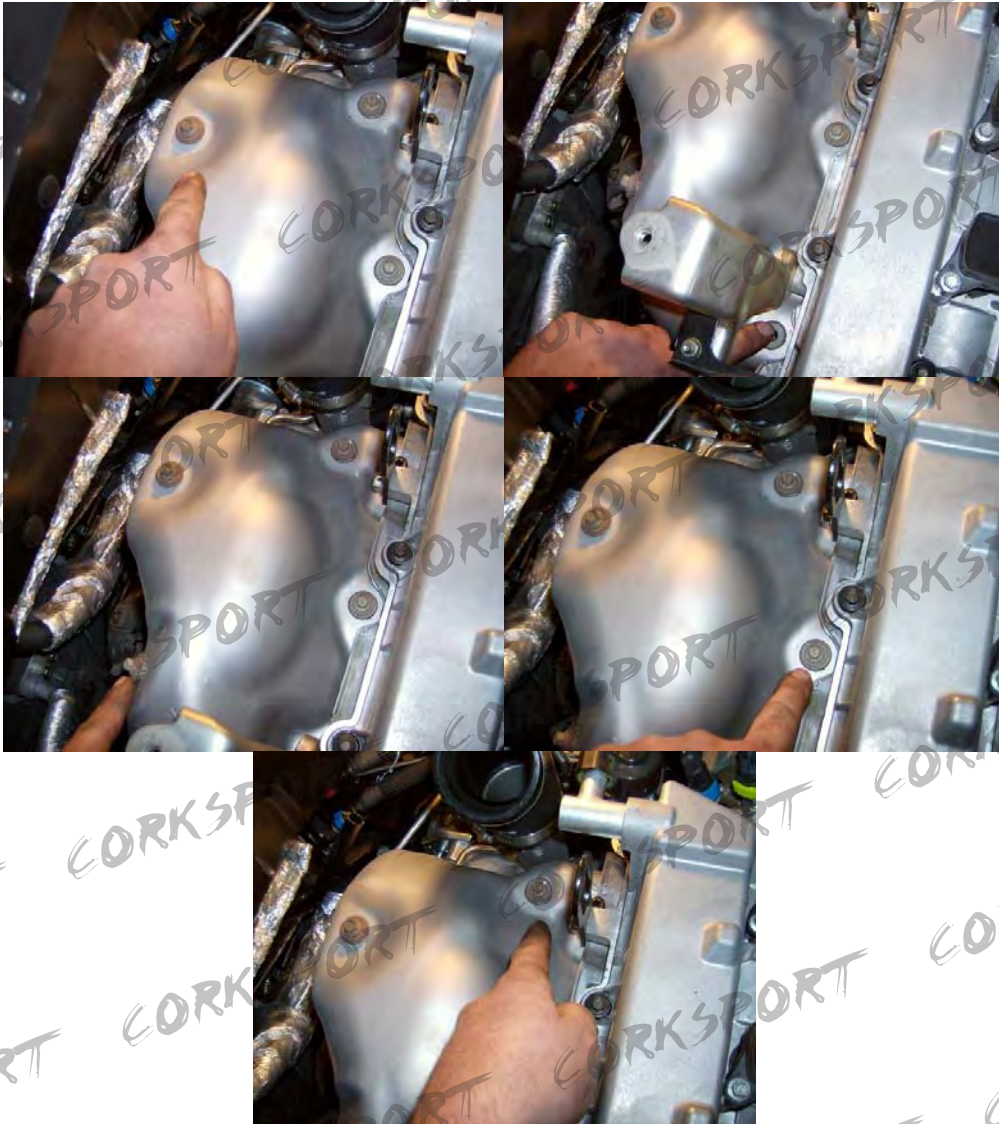


Step 49: Install the stock intercooler mounting bracket with the two 13mm headed bolts.
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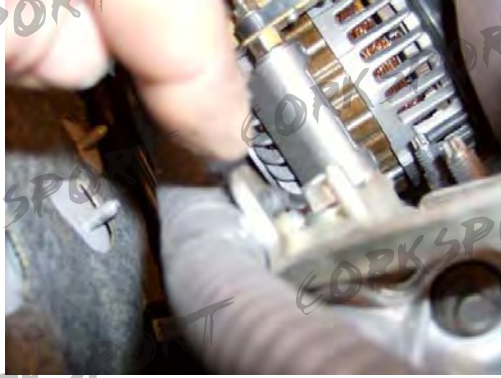
Step 50: Re-install the upper exhaust manifold heat shield with the original five 8mm headed bolts.



Step 51: Mount the wiring clip to the bracket.

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Step 52: Set the intercooler carefully back onto the motor. Reconnect the inlet and outlet hoses and secure with the 10mm headed hose clamps. Reconnect the vacuum hose and clamp to the bypass valve. Reconnect the large hose and clamp to the bypass valve.

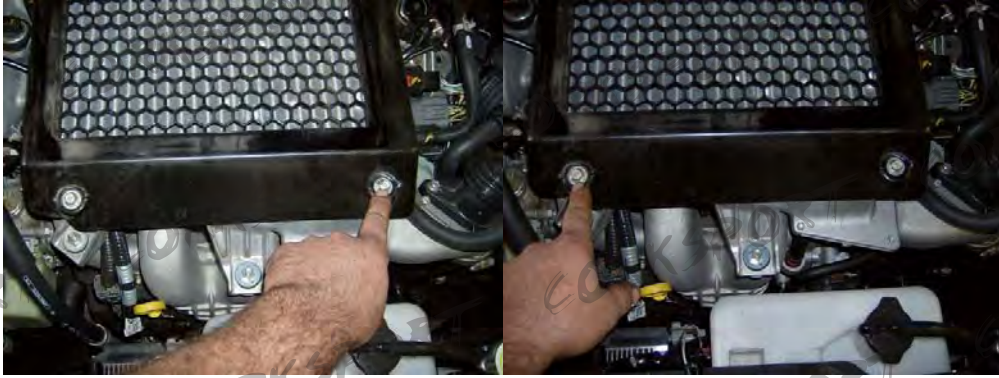


Step 53: Secure the intercooler with the three 12mm nuts and tighten to 18-23 ft/lbs.



Step 54: Re-install the intercooler cover and re-install the two 10mm bolts.

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Step 55: Reinstall the intercooler air scoop.



Step 56: Reconnect the battery.

Step 57: Start up vehicle and check for intake or exhaust leaks. To correct an exhaust leak check the connections at the turbocharger to downpipe connection. Make sure the nuts are tight. If the exhaust leak is at the downpipe to catalyst verify the three 14mm headed nuts are tightened properly. If you have an intake leak you can find it easily. This can be done with a spray bottle of water by spraying the rubber connectors and joints. If the idle changes when spraying connections then check the hose clamps for tightness and the fitment of the rubber connectors. After finding a connection leak re-start your car and repeat if necessary.