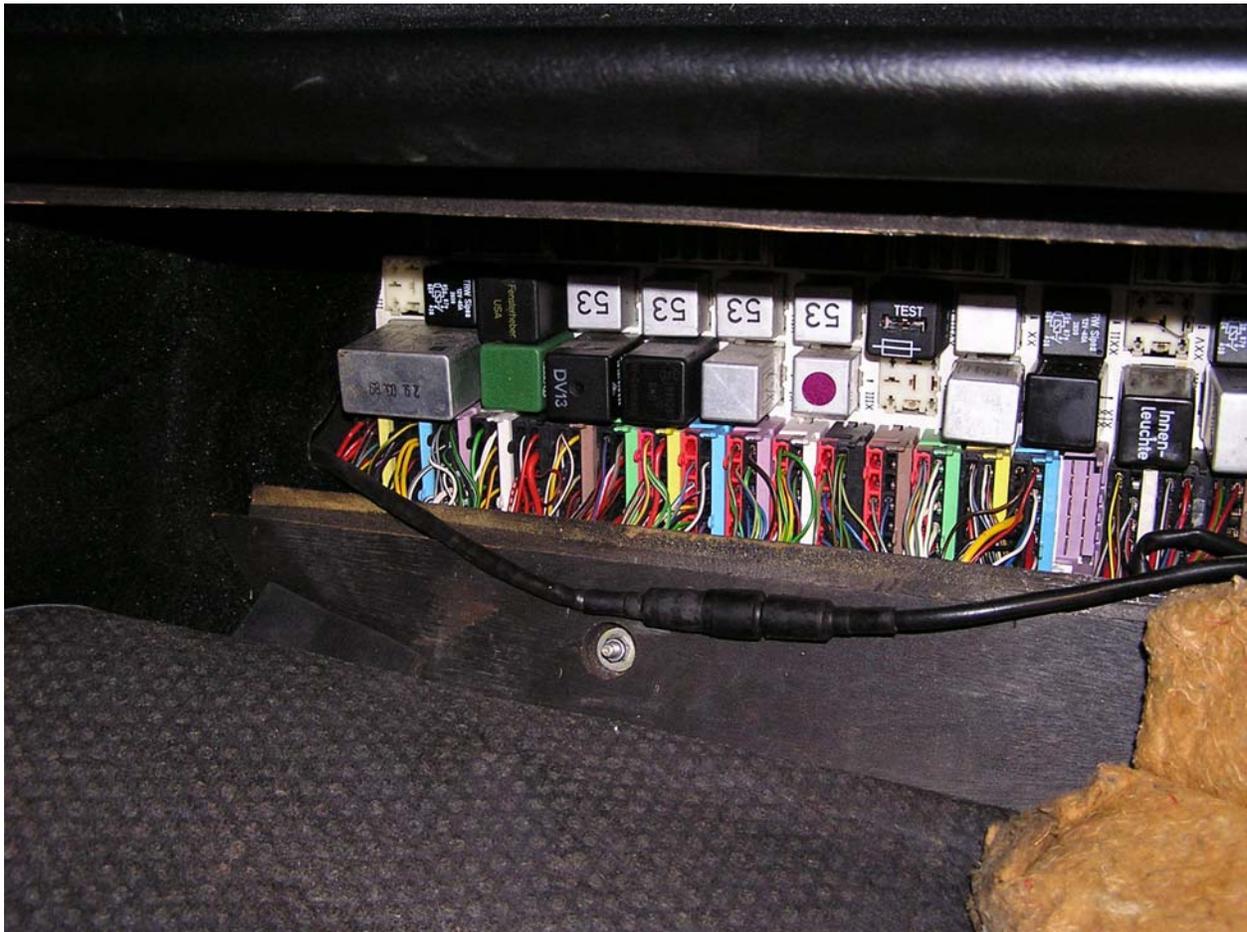




Installation Instructions for X-over System

Removal

Disconnect O2 sensor connection located in the bottom of the fuse box and push wiring harness through floorboard.



Remove the belly pans if installed.



Disconnect Air Pump feed line to factory catalytic converters (27mm and 4mm)



Remove rear clamps from factory catalytic converters. (15 or 17mm).

Remove the torque tube mounted exhaust hanger located in front of the transmission (if installed, 15mm or 8mm hex).

Remove the exhaust collector bolts, 3 per side, 13mm. You may have to loosen the 19mm bell housing bolts to swing the braces away from the collector if installed. These are usually the worst for corrosion and using PB Blaster, Kroil or even WD40 may help with removal. If you have a 5-speed, remove the clutch line heat shield.



Using a rotational movement while pulling on the factory catalytic converters works best to get them off of the factory cat back system.



I would suggest replacing the O2 sensor with a new one during this procedure unless yours is known fresh and functional.



Disclaimer: The Motorsport X-over is intended for off-road use only and will modify emissions. Even with the optional High Flow Catalytic Converters your vehicle may not pass local emission testing due to the fact that emission testing in your area may not allow tampering with the factory designed systems.



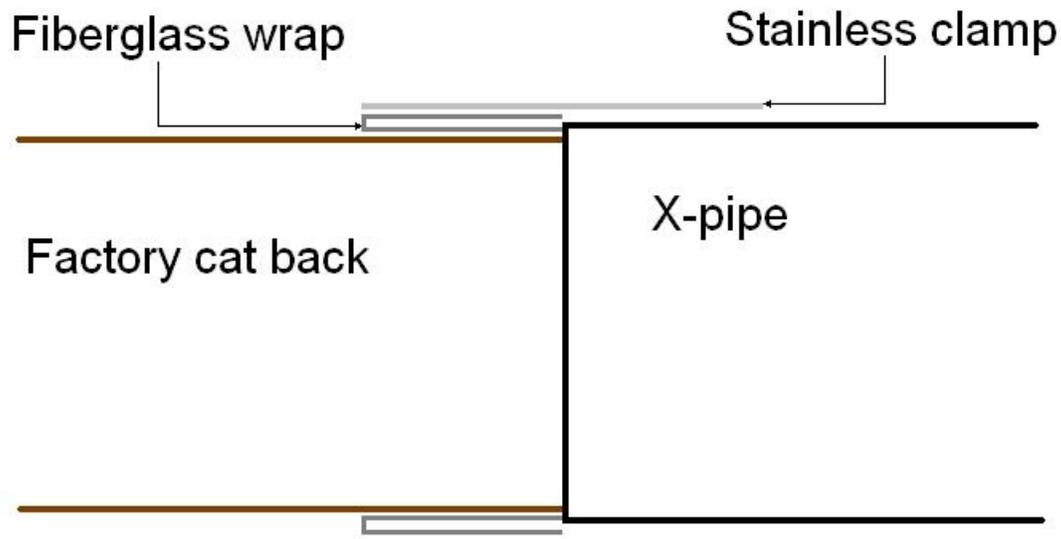
Installation – Without Catalytic Converters

Slide the Motorsport X-pipe over the factory cat back system. The 2.5” X-over size will slip over the factory pipes without any problems.

Install new or undamaged collector gaskets and collector bolts, re-assembling the factory braces and re-tightening the bell housing bolts. If you have a 5-speed, do not forget to re-install the clutch line heat shield.

Re-install the O2 sensor and push the wiring harness back up through the firewall opening, remembering to seat the rubber grommet fully. You may have to “clearance” the heat shield to clear the O2 sensor. (Do not forget to apply a touch of anti-seize to the threads)

Install rear stainless steel clamps provided with fiberglass heat wrap following the description given below.

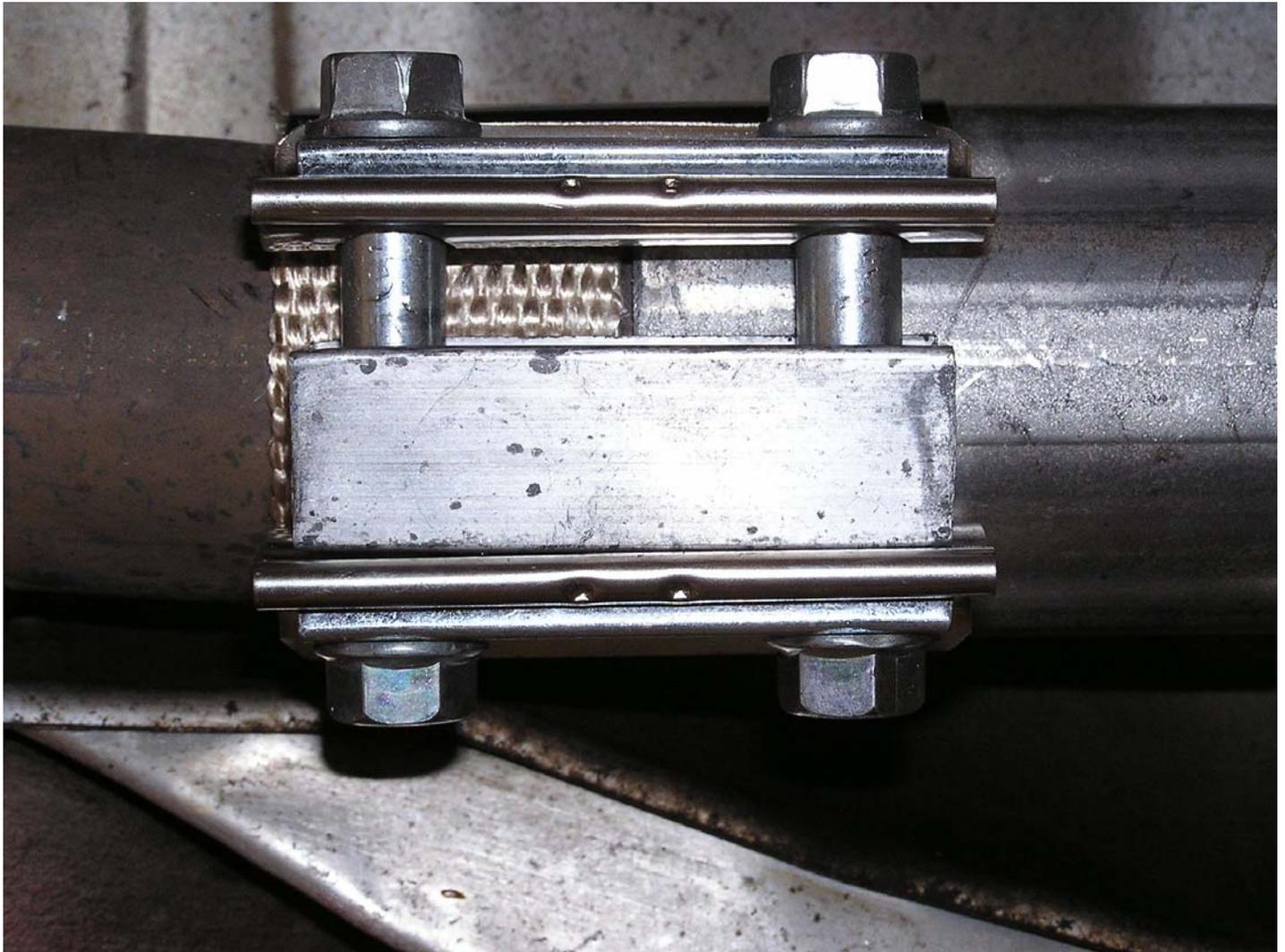


Fold the fiberglass wrap in two lengthwise and wrap around the factory cat back with 1/4" overlap on the ends. Install the stainless clamp over both the X-over and fiberglass wrap and tighten until the stainless clamp deforms over the junction. It is meant to stretch and follow the contours of the joint. If you wrap the fiberglass around twice it will allow too much movement and work it's way loose. I usually point the unfolded ends of the fiberglass toward the front but I don't think it really matters too much which way you install it. Do not wrap the fiberglass around the X-pipe as you will still have a gap underneath the clamp. The fiberglass is intended to fill the space between the sizes of the X-pipe and the factory exhaust. If done properly it seals completely and will last for years.



Re-install the torque tube mounted exhaust hanger if your car is so equipped.

Either remove or cut the air pump belt if you have an S4 or later. If you have an earlier car with a belt driven fan you will need to either replace the air pump with a pulley or use a short belt to drive the fan. You may also remove the belt driven fan completely and replace it with our electric fan system.



Reconnect the O2 sensor, start the vehicle and check for any exhaust leaks. Enjoy the sound, apologize to the neighbors.

If there are no leaks present, re-install the belly pans if so equipped and take a test drive. Enjoy the power.



Installation – With High Flow Catalytic Converters

Install the Motorsport X-pipe without the catalytic converters attached using new or undamaged collector gaskets and collector bolts, re-assembling the factory braces and re-tightening the bell housing bolts. If you have a 5-speed, do not forget to re-install the clutch line heat shield.

Re-install the O2 sensor and push the wiring harness back up through the firewall opening, remembering to seat the rubber grommet fully. You may have to “clearance” the heat shield to clear the O2 sensor. (Do not forget to apply a touch of anti-seize to the threads)

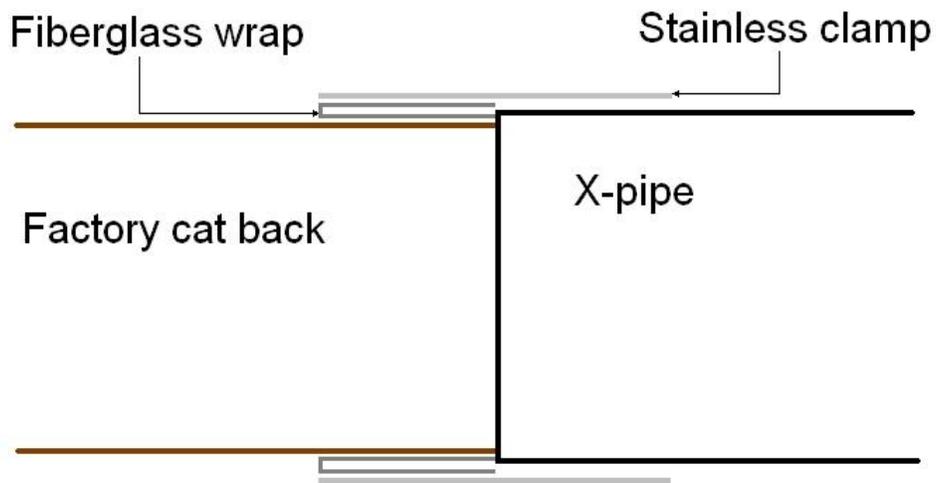
Slide the small end of the catalytic converters over the factory cat back system as far as they will go. Once both are on and slid back to their most rearward position, lift the rear exhaust up and slide the large end of the converters over the Motorsport X-pipe until they are centered between the X and the cat back pipes.

Rotate the converters until the heat shields are facing the outside of the vehicle and the tops are pointing toward each other. This will provide the best heat shielding and the most ground clearance. Install the included stainless steel clamps without any fiberglass heat wrap on the front of the converters. Tighten them until they deform over the junction and don't allow any pipe movement.





Install rear stainless steel clamps provided with fiberglass heat wrap following the description given below.



Fold the fiberglass wrap in two lengthwise and wrap around the factory cat back with 1/4" overlap on the ends. Install the stainless clamp over both the X-over and fiberglass wrap and tighten until the stainless clamp deforms over the junction. It is meant to stretch and follow the contours of the joint. If you wrap the fiberglass around twice it will allow too much movement and work it's way loose. I usually point the unfolded ends of the fiberglass toward the front but I don't think it really matters too much which way you install it. Do not wrap the fiberglass around the X-pipe as you will still have a gap underneath the clamp. The fiberglass is intended to fill the space between the sizes of the X-pipe and the factory exhaust. If done properly it seals completely and will last for years.



Re-install the torque tube mounted exhaust hanger if your car is so equipped.

Either remove or cut the air pump belt if you have an S4 or later. If you have an earlier car with a belt driven fan you will need to either replace the air pump with a pulley or use a short belt to drive the fan. You may also remove the belt driven fan completely and replace it with our electric fan system.

Reconnect the O2 sensor, start the vehicle and check for any exhaust leaks. Enjoy the sound, apologize to the neighbors.

If there are no leaks present, re-install the belly pans if so equipped and take a test drive. Enjoy the power.

