



## **INSTALLATION INSTRUCTIONS FOR HEADERS AND EXHAUST FOR HEADERS FOR 09-14 CADILLAC CTSV SEDAN, WAGON AND COUPE**

Thanks for purchasing Stainless Works Muscelflow Headers for your 09-14 Cadillac CTSV. We have gone to great pains to make sure that our exhaust systems fit and sound great. Please follow these steps to ensure that your installation goes as planned.

1. Stainless Works recommends the use of Hi-Temp RTV sensor safe silicon gasket maker as an option to or in conjunction with the use of factory gaskets. The recommended Oxygen Sensor Safe RTV is either Valco All-in-One Aluminum or Permatex Copper P/N 101BR available at NAPA, Autozone and other retailers.
2. Disconnect the battery before starting work on the exhaust system for your vehicle. Reconnect the battery when the job is completed.
3. Your exhaust system can be installed by a weekend warrior but the use of a lift is recommended for ease of installation. If using a jack, the vehicle must be placed on a level hard surface and jack stands are required for safety reasons.
4. You will assemble the components together as specified below, but only snug the clamps as you move along from front to back. When placing the X-pipe into position, make certain that you push it fully forward and level it in with the vehicle. After aligning all the components in the vehicle, you will tighten all the clamps working from front to back of the vehicle.

### **DISASSEMBLY**

1. Raise and support the vehicle.
2. Disconnect battery.
3. Remove (2) 8mm bolts in cross brace that runs underneath the exhaust. Note that this cross brace will not be reused during installation of the 3" system.
4. Remove exhaust from factory connection points and rubber hangers and remove.
5. Remove and disconnect (4) O2 sensors.
6. Remove (2) 10mm nuts from right manifold to catalytic converter pipe and remove.
7. Remove (2) 10mm nuts from left manifold to catalytic converter pipe and remove.
8. Remove covers on Left and Right side of engine compartment.
9. Remove (2) 12mm bolts (2) 12mm nuts holding strut tower brace on and remove.
10. Remove engine covers.

11. Remove air box and air inlet.
12. Remove spark plug wires from coil packs.
13. Remove dipstick tube (1) 10 mm bolt.
14. Remove (8) coil packs (2) 6mm bolts each.
15. Remove plug wires and plugs.
16. Mark and remove (2) 6 mm bolts in steering shaft. This mark will be used to assure proper alignment when reinstalled.
17. Remove (12) 8 mm bolts, (6) per side from manifolds and remove manifolds.

#### **ASSEMBLY FOR ALL VEHICLE TYPES AND EXHAUST TYPES**

1. Install O2 extensions- left front O2 wire (P/N 105073) and both rear O2 wires (P/N 109233) are the supplied extensions. Do not yet install the O2 sensors in the headers and leadpipes.
2. Apply RTV silicone to headers and install from bottom using (12) 8mm bolts.
3. Install catted or off-road lead pipes using (2) 3" clamps.
5. Install X pipe using (2) 3" clamps. Level the X-pipe. Note: This is a critical step as the X-pipe needs to be level (side to side) and centered in the channel!

#### **ASSEMBLY WITH STAINLESS WORKS EXHAUST (SEDAN AND WAGON)**

1. Install tailpipes using (2) 3" clamps
2. Install mufflers to hangers and tails using (2) 3" clamps
3. Adjust and tighten

#### **ASSEMBLY WITH STAINLESS WORKS EXHAUST (COUPE ONLY)**

1. Install tailpipes using (2) 3" clamps
2. Install mufflers into hangers and onto tailpipes using (2) 3" clamps
3. Install tips using (2) 3" clamps
4. Adjust and tighten.

#### **ASSEMBLY WITH STAINLESS WORKS CENTER SECTION TO FACTORY MUFFLERS (SEDAN AND WAGON ONLY)**

1. Mark and cut factory exhaust at 12 ½" from the tangent point of the bend. A hacksaw with metal blade, sawzall or cutoff wheel will do the job. (see photo below).
2. Install lead pipes using (2) 3" clamps.
3. Install mufflers to hangers and pipes using (2) 2.5 clamps.
4. Adjust and tighten.



## FINAL ASSEMBLY FOR STAINLESS WORKS HEADERS

1. Re-install O2 sensors and re-connect and secure wires. We recommend the use of a small amount of anti-seize compound on the threads of the O2 sensors, but do not allow the compound to come in contact with the sensor end itself, as this may damage the sensor.
2. Re-install steering shaft using alignment marks made at disassembly.
3. Re-install plugs and wires.
4. Re-install dipstick using spacer provided and (1) 10mm bolt.
5. Re-install coil packs.
6. Re-install engine covers.
7. Re-install strut tower brace.
8. Re-install air inlet and air box.
9. Re-install engine compartment left and right covers.
10. Reconnect battery.
11. Be sure to have adequate clearance around all wires, hoses and lines. **If anything is in contact with the exhaust system, it will melt.** Make sure to have at least 1/2" of clearance and wrap any suspect areas with DEI thermal barrier wrap.
12. After double checking for clearance and making sure all lines, wires and hoses are secured, drive the car for 10-20 miles and re-check all clamps and clearances. Your system may be tack welded at the joints/ clamps to reduce shifting of the system during heating and cooling cycles. Make certain to disconnect the battery before performing any welding.