



## **2004-2008 FORD F-150 5.4L 2WD/ 4WD HEADER INSTALLATION INSTRUCTIONS**

Thanks for purchasing Stainless Works Muscleflow headers for your 2004-2008 2WD/ 4WD F-150 5.4L SUPERCAB with 6.5' bed or SUPERCREW with 5.5' or 6.5' bed. 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.

### **DISASSEMBLY**

4. Raise and support vehicle.
5. Disconnect battery.
6. Support vehicle and remove right front tire.
7. Remove screws and push pins holding inner fender on and remove inner fender.
8. Disassemble double wide clamp at rear of Y-Pipe. Keep this clamp as it is used for reconnection to factory exhaust. (It is not needed if connecting to Stainless Works True Dual Exhaust.)
9. Remove the hangers from the rubber insulators and remove the exhaust. If using a lift, the exhaust can be removed in one piece, but if not, the tailpipe may need to be cut in half for removal.
10. Remove (4) 8mm bolts holding rear skid plate on.
11. Remove (4) 8 mm bolts holding front skid plate.

12. Remove (2) 8mm bolts holding front hanger bracket to X-member.
13. Remove (2) 6 mm bolts that hold right and left heat shields to X-member.
14. Support transmission and transfer case, remove (2) 12mm nuts from transmission mount.
15. Remove (4) 12 mm bolts and nuts and cross member
16. Unplug (4) O2 sensors.
17. Loosen clamp and remove (4) 10 mm nuts for Y-pipe and remove Y-pipe.
18. Re-install cross-member and transmission mount at this time.
19. Remove (1) 8mm nut and (1) 6mm nut and remove starter wires.
20. Remove (1) 8mm nut and (3) 8 mm bolts and starter.
21. Remove (1) 6mm bolt holding dipstick tube and remove dipstick.
22. Remove (2) 6 mm bolts holding right heat shield and slide it back.
23. Remove (16) 8mm nuts and studs (8 per side), holding manifolds in and remove manifolds.

### **INSTALLATION OF HEADERS AND LEAD PIPES**

24. Install front O2 extensions (109014) to O2 wires on truck.
25. Apply RTV sealant to headers, wait 15 minutes and install from bottom.
26. Install catalytic converters or off road pipes using (2) 3" clamps.
27. Slide factory rubber hanger insulator on left lead pipe and install using a 2.5 clamp then re-fasten hanger to X-member.



28. Install right lead pipe using 2.5 clamp, re-install right heat shield and bolt in left heat shield.
29. Install front O2 sensors, this will require removing nubs off plugs.
30. Install rear O2 sensors using extensions (109014), this will require removing nubs from plugs.
31. Re-install all components except rear skid plate and battery.
32. Follow directions per application below:

### **CONNECTING TO FACTORY EXHAUST**

33. This step is only required if reinstalling the factory exhaust. At the front of the exhaust, there is a double wide clamp that was loosened above to remove the old exhaust. Mark 10" from the front of the OEM pipe at this location and cutoff this amount of tubing using a hacksaw. Remove the sharp edges. This removed section will provide room to install the Y-Pipe from the headers to the factory exhaust. See picture below:



34. Using (2) clamps provided, attach the Y-pipe to the lead pipes.
35. Place the OEM double clamp on the outlet end of the Y-pipe, reinstall factory exhaust and slip into the double clamp.

## CONNECTING TO STAINLESS WORKS TRUE DUAL EXHAUST

36. The following instructions are utilized to adjust the length of the X-pipe based on the Truck cab and bed configurations:
37. The X-pipe length in the box is 31" long. This X-pipe is designed to be cut to fit the following truck cab/bed configurations. Cut the rear (non-expanded end) of the X-pipe and deburr, according to the lengths described in the following table:

CAB/ BED	AMOUNT TO BE REMOVED FROM REAR OF X-PIPE	FINAL X-PIPE LENGTH
SUPERCREW/ 6.5' BED	0"	31"
SUPERCAB/ 6.5' BED	7"	24"
SUPERCREW/ 5.5' BED	13"	18"

38. Using (2) clamps provided, attach the X-pipe to the leadpipes.
39. Follow the instructions in the Exhaust Installation Instructions.

## FINISH THE INSTALLATION

40. Reinstall rear skid plate and battery.
41. 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 ½" of clearance and wrap any suspect areas with DEI thermal barrier wrap.
42. Tighten all clamps.
43. Lower the vehicle.
44. 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.