

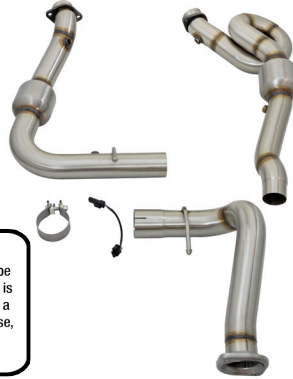


INSTALLATION INSTRUCTIONS

MAKE: Ford
MODEL: F-150 Raptor
YEAR: 2017-2019
ENGINE: V6-3.5L (tt) EcoBoost

**Twisted Steel
Down-Pipes
48-33021-HC (Street Series)
48-33021-HN (Race Series)**

P/N: 48-33021-HC shown.



Parts Included

- (P/N 05-145183) S/A Tube, DS Front Down-Pipe
- (P/N 05-145185) S/A Tube, DS Rear Down-Pipe
- (P/N 05-145184) S/A Tube, PS Front Down-Pipe

Hardware Included

- (P/N 05-41055) Clamp, Band 3" (x1)
- (P/N 03-50452) Bolt, Hex Cap: 10mm (x2)
- (P/N 03-50189) Nut, M10 (x2)
- (P/N 05-70022) Extension, O2 Sensor (x1)



RACE ONLY DISCLAIMER

This is a Race Only product that is to be used solely for competition, it cannot be used on vehicles that are operated on public streets, roads or highways. Its use is limited to closed-course and open-course racing that is formally sanctioned by a recognized racing organization. Any other use, including recreational off-road use, could be in violation of local, state and federal laws. A competition acknowledgement / liability release form must be filled out and submitted.

CAUTION: Allow time for your vehicle to cool down prior to installation. When working on or under your vehicle proceed with caution. Exhaust systems reach high temperatures and may cause serious burns. Wear protective safety equipment; eye goggles and gloves to ensure a safe installation. aFe recommends professional installation on our products.

- Step 1:** Remove your stock cat-back exhaust up to the OE Downpipes.
- Step 2:** Remove both skid plates that attach to the cross member.
- Step 3:** Remove the (x4) bolts holding the heat shields to the cross member and the (x2) bolts holding the wire harness to cross member.
- Step 4:** Using a jack stand to support the transmission, Undo the (x4) bolts and (x2) nuts on the cross member and remove the cross member.
- Step 5:** Remove the OE Hanger bracket from the transmission that holds the OE downpipes in place.
- Step 6:** Unplug and remove all O2 sensors from the downpipes. Make sure to mark the O2 sensors to reinstall them in the right place.
- Step 7:** Remove the (x4) nuts on the downpipe flanges and remove the downpipe.
- Step 8:** Install The O2 sensors into the new left and Right side aFe downpipes.
- Step 9:** Install provided O2 extension on the Passenger Side rear O2 sensor. (Above the Transmission)
- Step 10:** Install the Left side downpipe and plug in all O2 sensors. Do not fully tighten the nuts.
- Step 11:** Install the right side downpipe and plug in all O2 sensors. Do not fully tighten the nuts.
- Step 12:** Reinstall the OE hanger bracket to the new downpipes and bolt to transmission.
- Step 13:** Reinstall the cross member, wire harness, heat shield and heat shield bolts.
- Step 14:** Reinstall OE Exhaust. Now starting from the front working your way back align the down pipes and exhaust then tighten all nuts, bolts, clamps, and hardware.
- Step 15:** Reinstall both skid plates.
- Step 16:** Congratulation's your install is now complete it is recommended to re-check and tighten all nuts, bolts and hardware 50-100 miles after install.