



INSTALLATION INSTRUCTIONS FOR MAK ECOBOOST F-150
PERFORMANCE AND CATTED Y PIPE.

**** THESE PERFORMANCE PIPES ARE INTENDED FOR OFF ROAD USE ONLY or COMPETITION USE ONLY.** Use on State and Federal Highways may be a violation of the EPA Clean Air Act. The Clean Air Act can be found at <http://www.epa.gov/air/caa/>. ******

“NOT FOLLOWING THESE INSTRUCTION COULD LEAD TO AN IMPROPER INSTALLATION RESULTING IN MISALIGNMENTS AND EXHAUST LEAKS”

1. Raise the truck on a lift (preferred method) or you can raise the truck on jack stands. Make sure that you allow enough time for the exhaust to cool down to the touch before you start the installation. * **Make sure the truck is secure and on a secure and level surface for safety.**
2. Remove belly pan/under shield. It has four quick release cam lock fasteners.
3. Support the transmission with screw jack or an adequate tool in order to remove the transmission cross member.
4. Remove the (2) transmission mount nuts on the center of the crossmember. (18 mm Nuts)
5. Remove the (2) 10mm bolts that secure the heat shield to the transmission crossmember
6. Remove the (4) 15 mm head bolts with 18mm nuts from the crossmember. **Note : two on each end of the crossmember**
7. Remove the (3) 15mm bolts to the transmission mount/exhaust hanger bracket that is mounted to the transmission.
8. Now the transmission crossmember is ready to come down and the factory y pipe now can be easily removed.
9. Disconnect all the exhaust sensors from the factory y pipe. You have (2) front wide bands next to the turbo and (2) rear o2 sensors.
10. Remove the (2) 15mm bolts that are on the rear flange of the y-pipe that connects to the cat back exhaust.

11. Support the factory y pipe and remove the (4) 15 mm nuts that attach the factory y pipe to the turbo. (2) on each side. **Note : The factory y pipe is heavy and assistance is recommended in this step**
12. Now that you have removed the factory y pipe, remove the (4) exhaust sensors from the y-pipe. **Note: Sensors have to be installed in the same location on the new performance y pipe as they were installed on the factory y pipe. VERY IMPORTANT !!**
13. ***** VERY IMPORTANT STEP ***** Pre assemble the y pipe (3 tubular pieces) with the supplied exhaust clamps in place.

But **“ DO NOT ”** tighten the exhaust clamps at this time. Make sure that the supplied couplers (2) are installed on the y pipe ends that will be bolted on to the turbo. Install the (2) front wide band sensors and the (2) rear o2 sensors on the off road y pipe in the same position as they were on the stock factory y pipe. (**Note: The pipes are designed and made with tight tolerances. They are inspected twice before packaging. In the case that you have a problem inserting the pipes into each other, simply rotate the pipe that you are trying to insert into the opening of the receiving pipe (Y Section) with a twisting motion. That will facilitate the inserting process) *** Remember “DO NOT TIGHTEN” the clamps at this point.**

OPTIONAL STEP- You could remove the heat shields, They are not required to leave on. There is plenty of space in between the y pipe and the body. If you like to leave on; they are very close and you will have to bend them a little with minimal effort for clearance. If you would like to remove them follow these steps... Remove the (2) heat shields from the truck. You will have three more remaining 10 mm bolts that secure the heat shield to the chassis. You already removed (2) in step # 5. You have (1) more on the driver side on the front of the shield and (2) more on the passenger side heat shield. They will not be used with this off road y pipe

15. Now you are ready to install the new MAK Off Road Y Pipe.
16. Raise the MAK Off Road Y Pipe on to the same location as the factory y pipe and secure with the factory hardware (4) 15mm nuts and (2) supplied washers to the turbo (2) on each side. **MAKE SURE THAT THE COUPLERS ARE PLACED IN THE Y PIPE OR YOU MAY HAVE AN EXHAUST LEAK.** **Note : We have supplied 4 extra flat washers that you could use if you think you may need more clamping force on the flanges. Do not over tighten flange or you will bend the flange and or bottom out the factory studs.**
17. Now you could bolt on the off road y pipe to the cat back exhaust system with the supplied (2) 10mm x 1.50 x 40 mm long (Silver in color) with washer and lock washer if you are using the **factory cat back “ OR “** you could use the supplied (2) 7/16 14 2 inch long (gold in color) with nut washers and lock washer for **after market cat back systems** if they require through bolts.
18. At this time you could re-connect all the exhaust sensors
19. Re-install the transmission mount/exhaust hanger bracket to transmission with original hardware
20. Re-install the crossmember with the original hardware

21. Bolt the transmissions mount to the crossmember with the original hardware.
22. At this time you could remove the screw jack or the tool that you used to support the transmission.
23. At this time you could inspect the MAK Off Road Y Pipe to make sure that you have clearance and that the y pipe is not making contact with the transmission crossmember or the transmission.
24. Once you have determined that you have no clearance issue and you have adjusted the Off Road Y pipe. You could now place the exhaust wrap around clamps in place (approx. 1 inch were the pipes overlap) and you could tighten them in place. **Note : Do not over tighten these clamps as they “WILL” deform the pipe if over tightened. Once you see that they start to indent the pipe as you tighten. You are done with this step.**
25. Re-inspect all the bolts and nuts on the exhaust system.
26. Start the truck and make sure that you have no exhaust leaks
27. Remove the truck from the lift or the jack stands
28. NOW YOU ARE READY TO ENJOY YOUR NEW MAK PERFORMANCE OFFROAD Y PIPE.

NOTE : THE CHECK ENGINE LIGHT (MIL) WILL MOST LIKELY TRIGGER ON THE VEHICLE WITHOUT A CUSTOM TUNE

FOR OUR Y-PIPE. EVEN WITH HIGH FLOW CATALYTIC CONVERTERS THE CHECK ENGINE LIGHT MAY STILL BE TRIGGERED. WE RECOMMEND RUNNING A CUSTOM TUNE TO OPTIMIZE PERFORMANCE GAINS FROM YOUR NEWLY INSTALLED MAK ECOBOOST Y-PIPE

SPECIAL NOTE: YOU WILL ONLY SEE OPTIMAL POWER GAINS WITH A CUSTOM TUNE THAT IS INTENDED FOR THIS COMBINATION

THANK YOU FOR YOUR PURCHASE AND PLEASE VISIT OUR WEBSITE [WWW. MAKPERFORMANCE.COM](http://WWW.MAKPERFORMANCE.COM) FOR ALL YOUR PERFORMANCE NEEDS.