



2012 - 2014 Ford F-150 ROUSH Phase 1 Kit 3.5L V6 Eco-Boost

P/N: 421735 (1135-P1CAL)

Installation Instructions

Before installing your ROUSH Cold Air Kit, please read through the entire installation procedure and check to make sure all items are present. Contact ROUSH Customer Service at 1-800-59-ROUSH, 9:00 AM to 5:00 PM EST weekdays, for any questions regarding fitment or instructions that are unclear to you.





Packaging List for F-150 Eco-Boost Phase 1 Kit

Item Description	Part Number	Qty/Kit
Upper Airbox Lid Asy	1111-9A600	1
Roush Premium Air Filter w/Clamp	997-466	1
Bolt - M8 x 1.25 x 25	W500224	2
Bolt - M4.2 x 20	M19-013-0018	1
J-Clip M8 - MAP Tube to Air Box Lid	W520823	2
MAP Tube	1135-12B579	1
EPDM Seal - MAP tube to Air Box Lid	1111-9645	1
PCM Warning Label	R07100008-10	1
Decal – EO Label (D-418-24)	D41824-9A095EO	1
Go to Website - Installation Manual	1315-P1INST	1
3.5L Eco-Boost Calibration Kit	1135-P1CALKIT	
Roush PCM Flash Request	PCM-FLASHDOC	1
Roush Flash Voucher	P1135-P1	1

Equipment and Supplies Required

- 8mm Socket
- 10mm Socket
- T-20 TORX Bit
- Flat Screwdriver



LIMIT OF LIABILITY STATEMENT

The information contained in this publication was accurate and in effect at the time the publication was approved for printing and is subject to change without notice or liability. ROUSH Performance Products (RPP) reserves the right to revise the information presented herein or to discontinue the production of parts described at any time.

SAFETY REQUIREMENTS

STOP! READ IMPORTANT SAFETY CAUTIONS AND WARNINGS BEFORE PROCEEDING.

IMPORTANT SAFETY NOTICE

Appropriate disassembly, assembly methods and procedures are essential to ensure the personal safety of the individual performing the kit installation. Improper installation due to the failure to correctly follow these instructions could cause personal injury or death. Read each step of the installation manual carefully before starting the actual installation.

1. Always wear safety glasses for eye protection.
2. Place ignition switch in the OFF position.
3. Always apply the parking brake when working on a vehicle.
4. Block the front and rear tire surface to prevent unexpected vehicle movement.
5. If working without a lift, always consult vehicle manual for correct lifting specifications.
6. Operate the engine only in well-ventilated areas to avoid exposure to carbon monoxide.
7. Do not smoke or use flammable items near or around the fuel system.
8. Use chemicals and cleaners in well-ventilated areas.
9. Batteries produce explosive gases, which can cause personal injury. Therefore, do not allow flames, sparks or flammable substances to come near the battery.
10. Keep hands and any other objects away from the radiator fan blades.
11. Keep yourself and your clothing away from moving parts when the engine is running.
12. Do not wear loose clothing or jewelry that can get caught in rotating parts or scratch surface finishes.
13. Allow the engine, cooling system, brakes and exhaust to cool before working on a vehicle.

WORK SAFELY!

Perform this installation on a good clean level surface for maximum safety and with the engine turned off.

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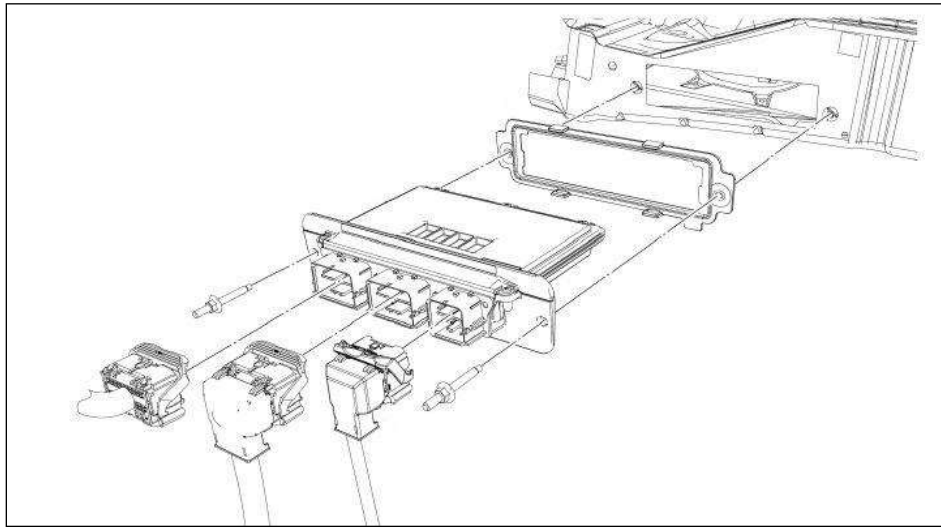
Note: Allow engine to cool prior to working under hood to avoid contact with hot engine components.

1. Open the hood of your vehicle.



Before continuing, refer to the CALKIT included with your Performance Pac kit. Determine the PCM (Powertrain Control Module) flash method you will be using. If performing the PCM flash yourself or at a preferred ROUSH dealer, proceed to step 4. If sending the PCM to ROUSH for a ROUSH performed PCM flash, continue with steps 2 and 3.

2. Remove the PCM (Powertrain Control Module) cover by undoing the two crimp nuts retaining the cover to the studs.
3. Undo the three (3) PCM connectors by lifting the grey levers over the connector back shell and lifting the connectors from their sockets. Remove the PCM by removing the two studs and pulling the PCM forward and lifting out of the engine compartment. Follow the instructions on the next page as soon as possible to help minimize the amount of time you are without a PCM.



Important: Be sure to write your VIN and phone number on the PCM using a permanent marker.

Please do this in case we need to contact you for additional vehicle information.



INSTRUCTIONS FOR RETURNING THE PCM TO ROUSH FOR CALIBRATION

Outlined below are the instructions for returning your stock Powertrain Control Module (PCM) to Roush Performance Products so we can install our calibration to make the engine run properly with the new components. **Please complete the "Optional Roush PCM Flash" request document. Send the completed "Optional Roush PCM Flash" request document along with the "Voucher Card", and your PCM.** Once we receive your PCM, we will reprogram and return it back to you the same day for next-day delivery.

Note: It is important to reinstall the PCM in the vehicle it came from to prevent setting a trouble code and having to relearn the anti-theft code which can only be performed using specialized Ford Service Bay tools.

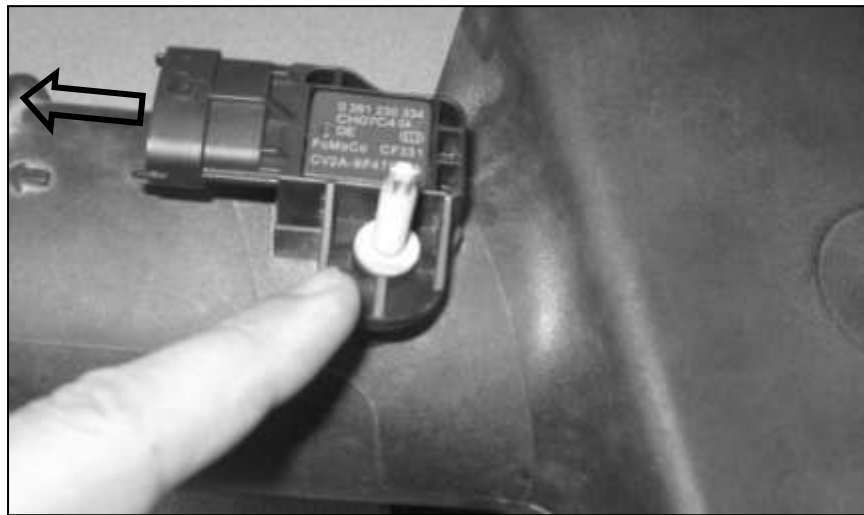
- If you haven't already done so, write your vehicle identification number (VIN) and phone number on the PCM using a permanent marker.
- Using bubble wrap, or another appropriate packing material, wrap and package the PCM to help prevent it from being damaged during shipping.
- Place the wrapped PCM in an appropriate shipping box.
- **Complete the "Optional ROUSH PCM Flash" request document (PCM-FLASHDOC) and attach the flash Voucher Card (P1135-P1) to the document.**
- **Include the "Optional ROUSH PCM Flash" document, and the Voucher Card in the shipping box, along with the PCM.**
- Ship the PCM and contents to:

**ATTN: PCM FLASH
39555 Schoolcraft Rd
Plymouth, MI 48170**

Upon receipt of the PCM, a customer service representative will contact you to for arrange payment.

Once you receive your ROUSH flashed PCM, reverse steps 2 and 3 for PCM installation.

4. Disconnect the MAP sensor wiring harness from the MAP Sensor and remove the bolt holding it to the tube. Note – the connector has a red locking tab on the bottom side of the connector.



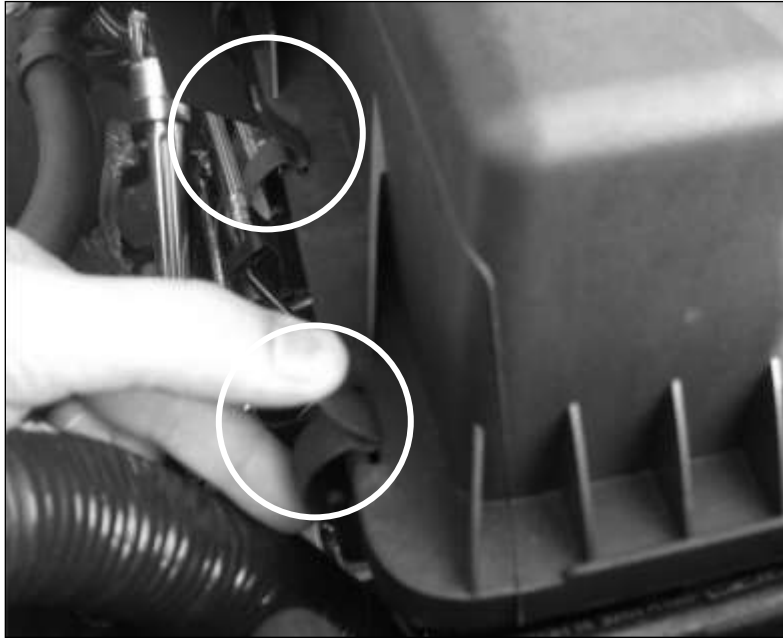
5. Loosen the hose clamp that connects the clean air tube to the airbox lid and disconnect the clean air tube at this joint. Note – Do not remove the clean air tube from the vehicle.



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6. Un-clip the three (3) upper air box lid clamps. Remove the air box lid and factory air filter from the lower air box tray.



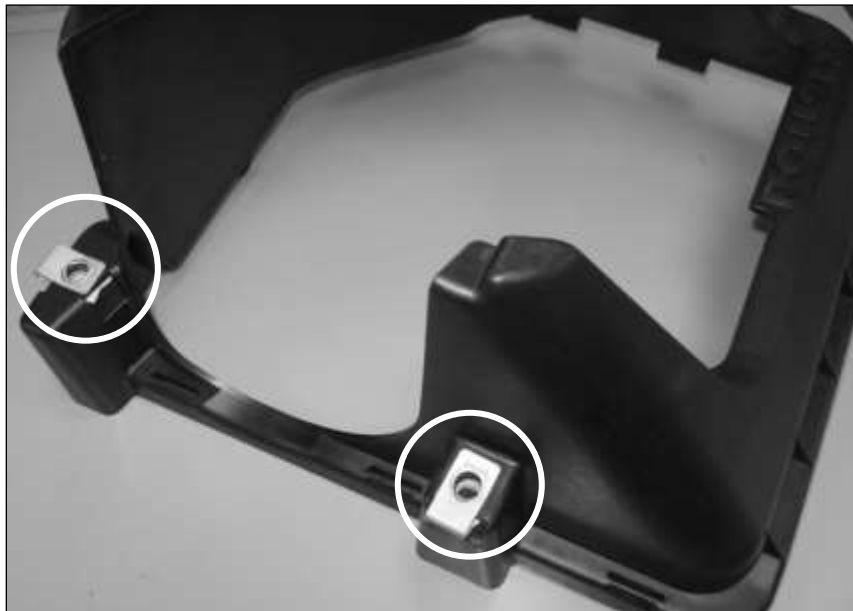
7. Transfer the MAP sensor from the factory air box lid to the new ROUSH MAP tube (1113-12B579) and fasten it with the supplied bolt (M19-013-0018). Torque the bolt to 1.8 - 2.2 Nm.



8. Install the new ROUSH open air filter (997-466) onto the MAP tube. Do not tighten the clamp at this time.



9. Install the two (2) J-clips provided (W520823) onto the air box lid as shown.



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10. Slide the MAP tube and filter assembly through the bottom opening into the new ROUSH air box lid (1111-9A600).



11. Install the EPDM close out seal (1111-9645) around the MAP Tube and clip into the edges of the upper air box tray.



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12. Secure the MAP tube to the air box lid using the two (2) M8x25 bolts supplied (W500224). Torque to 3-5 Nm.



13. Orient the filter so the clamp worm-screw and the filter parting line is viewable from the bottom side of the air box. Tighten the 8mm worm-screw to 3 Nm.



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14. Place the new ROUSH air box lid assembly (air box lid / filter / MAP tube) into the vehicle.



15. Connect the clean air tube to the new ROUSH air box lid assembly. Secure the clamps for the air box lid and tighten the clamp on the clean air tube to the MAP Tube. Tighten to 5Nm (44 lb-in).



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16. Re-connect the MAP wiring harness connector to the MAP sensor and push the red locking tab into place.



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17. Place the PCM warning sticker (R07100008-10) above the PCM on the cowl of the vehicle.



18. Place the EO label under hood in a visible location.





PCM Flashing

1. If equipped with a SAE J2534 pass through device, refer to the RDT-CALIM manual found online at rdt.roush.com for information on PCM flashing. The RDT-CALIM manual will guide you through the ROUSH Diagnostic Tool (RDT) software installation process and the ROUSH PCM flashing procedure.

OPERATING THE ENGINE WITHOUT THE RECALIBRATED PCM WILL RESULT IN ENGINE DAMAGE OR FAILURE AND WILL VOID THE WARRANTY.

2. Once the PCM has been successfully re-calibrated, start the engine and check for unusual noises, dash service lights, and unusual operation. If problems are detected, immediately stop the engine or vehicle, diagnose and repair the problem.

Congratulations!!! You have completed the installation of the ROUSH Phase 1 Kit. It is recommended that you save all parts removed from your vehicle during the installation of this kit.

