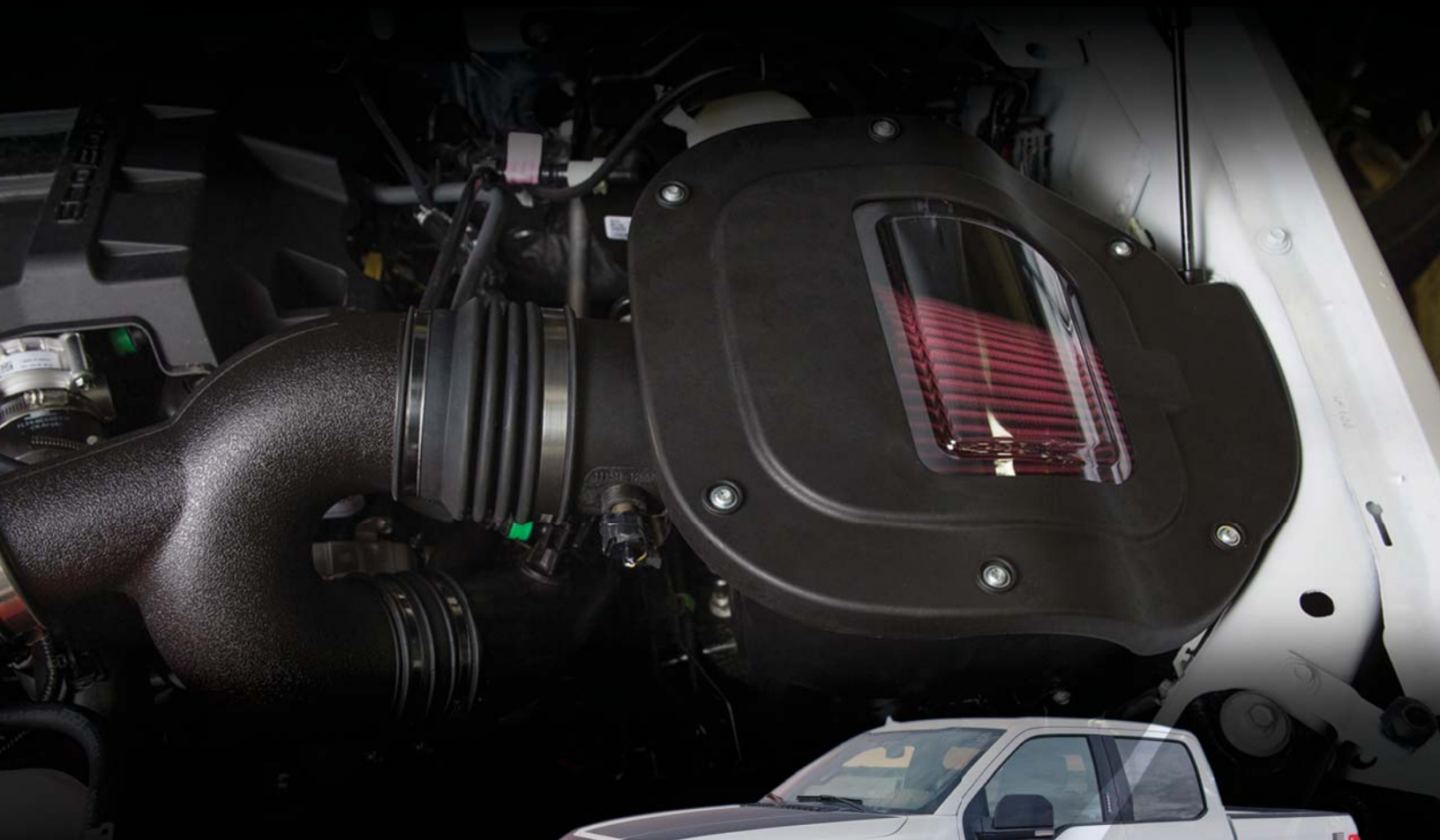


2019 F-150/Raptor 3.5L Ecoboost Performance Pac1

Installation Instructions
P/N: 422171 (1118TT-PERFPK1)



ROUSH
PERFORMANCE

2019 F-150/Raptor 3.5L EcoBoost Performance Pac1

Installation Instructions

P/N: 422171 (1118TT-PERFPK1)

Application: 2019 Ford F-150 3.5L engine including Raptor

Important Note:

Before installing the ROUSH Performance Product, please read through the installation procedure and verify that all items are present. If you are missing hardware or have any questions, please contact ROUSH Performance at 1-800-59-ROUSH, 9:00 AM to 5:00 PM EST.

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PACKING LIST FOR F-150/RAPTOR 3.5L ECOBOOST PERFORMANCE PAC1

Description	Part Number	Quantity
2.7L and 3.5L EcoBoost V-6 Cold Air Kit	1118TT-9600	1
Upper Airbox Cover Assembly	1118-9643HC	1
Upper Airbox Cover Window	1118-9643WND	2
Upper Airbox Cover	1118-9643	1
Filter Assembly - Hydrocabon	GN15-9T303	1
Airbox Tray	1115-9A612	1
MAP Tube (Insert for MAP Sensor)	1115TT-12B579	1
Tube, Clean Air (Blow Molded)	1115TT-9B659	1
Air Filter - Conical Red	131550-9601R	1
Hardware Kit, F150 Air Induction	1118TT-CAKHWK	1
Screw, Self Tapping M6 x 25 mm	W506976-S437	6
Bolt - MAF Tube to Airbox (M8 x 1.25 x 25)	W500224-S437	2
EPDM Coupler - Airbox to Tube	1115TT-9B661	1
EPDM Coupler - CAT to DR	1115TT-9B662	1
EPDM Coupler - CAT to PS	1115TT-9B663	1
Clamp - Worm Drive (110-130) - MAF Tube to Air Tube/Air Tube	R07130015-13	1
Clamp - Worm Drive (100-120)	R07130028-13	3
Clamp Worm Drive 3-1 16 to 4 Clamp Diameter 12 mm	308707426	2
Hardware Kit B	1115TT-CAKHWKB	1
Harness - IAT Jumper	1117-12A690	1
Airbox Tray Bracket	1117-9B611	1
M6 X 1.0 X 16 Hex Flange with Black Finish	W500013-S307	2
ROUSH Sticker	ROUSH-STKR-7X1.25	2
2018 F-150 Flash Pack	1118-FLASHPK	1
2018 F-150 Powerpak Calibration Card	P1118-PP	1
Calibration voucher card	CAL-VOUCHER	1
Label - 2015+ F-150 PP	L1118-PP	1
Sticker - White ROUSH	ROUSH-STKR-7x1.25	2
Optional Warranty	336PTW	1
EO LABEL	D41838-9A095EO	1

EQUIPMENT AND SUPPLIES REQUIRED

- Metric 1/4" Drive Socket Set
- Flat-head Screwdriver
- Trim Tool
- Torx Screwdriver

If you are missing any items, please call us toll free at 1-800-59-ROUSH.

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 PRECAUTIONS



CAREFULLY READ THE IMPORTANT SAFETY PRECAUTIONS and WARNINGS BEFORE PROCEEDING WITH THE INSTALLATION!

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 installation.

- Always wear safety glasses for eye protection.
- Place ignition switch in the OFF position.
- Always apply the parking brake when working on a vehicle.
- Block the front and rear tire surface to prevent unexpected vehicle movement.
- If working with a lift, always consult vehicle manual for correct lifting specifications.
- Operate the engine only in well-ventilated areas to avoid exposure to carbon monoxide.
- Do not smoke or use flammable items near or around the fuel system.
- Use chemicals and cleaners in well-ventilated areas.
- Batteries produce explosive gases, which can cause personal injury. Therefore, do not allow flames, sparks or flammable substances to come near the battery.
- Keeps hands and any other objects away from the radiator fan blades.
- Keep yourself and your clothing away from moving parts when the engine is running.
- Do not wear loose clothing or jewelry that can get caught in rotating parts or scratch surface finishes.
- 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.

SECTION A – REMOVAL

The following section will guide you through the removal of the stock components. Special care should be taken to label fasteners and parts that are taken off during this procedure since many will be reused.

1. Cover both fenders with fender covers to protect the vehicle finish.
2. Disconnect the battery ground cable.
3. Remove the bolt retaining the stock air box to the inner driver side fender. Retain the bolt, sleeve and grommet for later use.



4. Loosen the hose clamps retaining the clean air tube to the throttle body and air box lid.



5. Disconnect the two (2) quick connect fittings from the clean air tube.



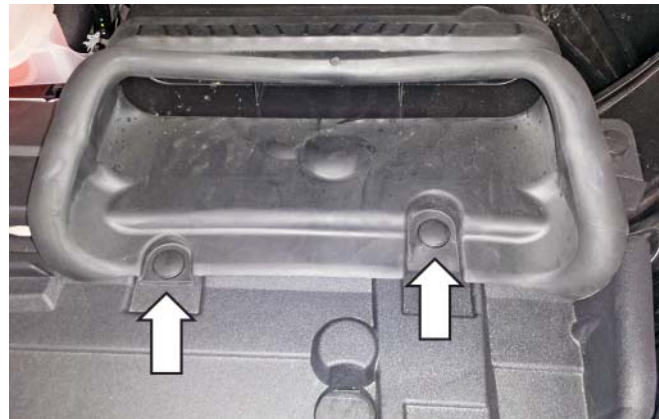
6. Release the two (2) clamps on the front of the air box.



7. Remove the air box lid.



8. Remove the clean air tube from the vehicle.



10. Remove the lower air box and dirty air duct from the vehicle.



9. Remove the two (2) push clips retaining the dirty air inlet duct to the grill closeout.



11. Remove the self-tapping screw retaining the dirty air inlet onto the lower air box.



12. Remove the dirty air inlet from the lower air box.



IMPORTANT: Do not remove the shown silencer rings.



13. If necessary, remove the two (2) rubber grommets from the bottom of the air box and reinstall them into the tray below the air box.

SECTION B — INSTALLATION

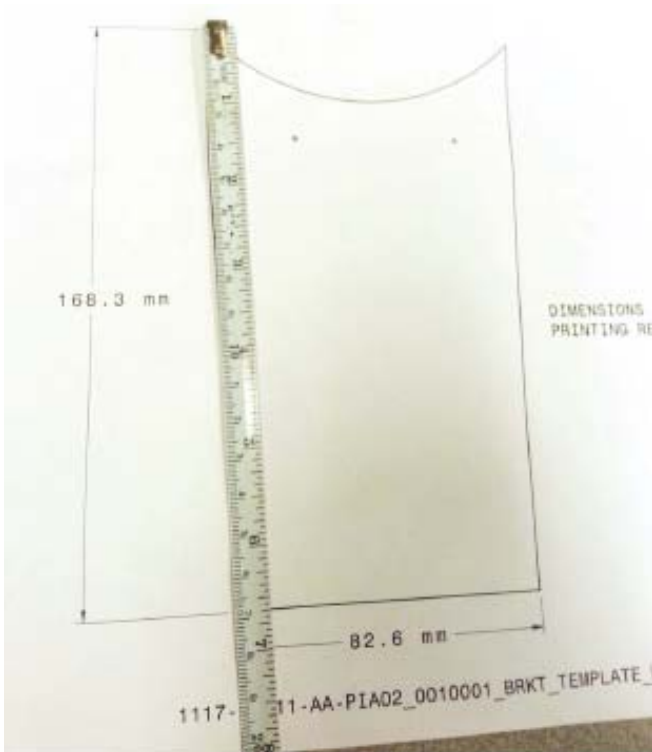
1. Insert the dirty air inlet into the Roush air box (P/N: 1115-9A612). Reuse the self-tapping screw that was removed earlier. Tighten to 3 Nm.



2. Reinstall the bolt, grommet and sleeve into the driver side fender. Tighten the bolt to 17.5 Nm.



3. Print out the template and make sure the dimensions are correct. Cut out the template.



4. Tape the template to the side of the air box. Use a punch to mark the two (2) drill holes.



6. Mount the bracket (P/N: 117-9B611) to the outside of the air box using two (2) M6 bolts (P/N: W500013-S307). Torque to 10 Nm.



5. Drill the holes out using a 17/64" drill bit.

7. Install the Roush airbox into the truck by locating the two (2) bosses on the bottom of the box while aligned to the grommet.

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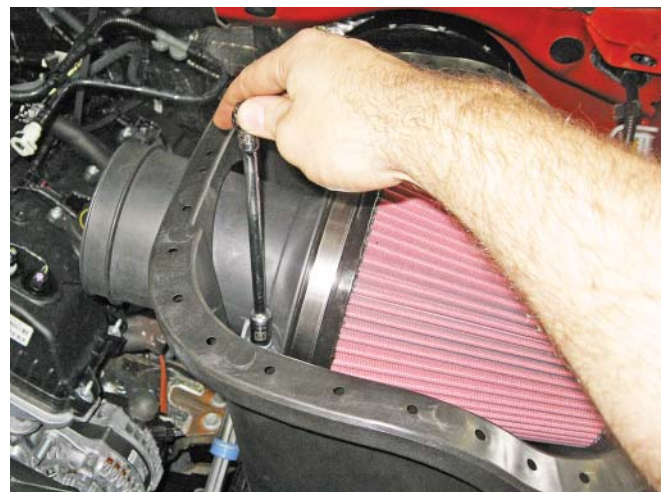
9. Install the air filter (P/N: 131550-9601R) onto the filter tube (P/N: 111550-12B579) and tighten the clamp to 3 Nm. Make sure the filter is installed (as shown) with the metal rib down.



10. Slide the filter and tube assembly into the air box. Twist the IAT sensor into the port as shown.
NOTE: 2017 F-150 use the IAT sensor jumper harness (P/N: 117-12A690) to connect the IAT sensor.



11. Install the two (2) M8 bolts (P/N: W500224-S437) and tighten to 10 Nm.



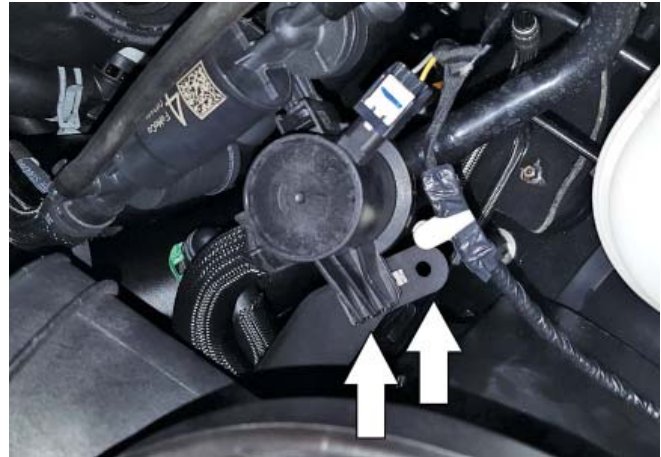
12. Install couplers and clamps onto the clean air tube (P/N: 1115TT-9B660) as shown. Tighten the clamps retaining the coupler to the tube to 3 Nm. Leave the outside clamps loose (coupler: top P/N: 1115TT-9B663, bottom P/N: 1115TT-9B661, left P/N: 1115TT-9B662) (clamps: top P/N: R07130028-13, bottom P/N: R07130015-13 and P/N: R07130028-13, left P/N: 308707426).



13. Install the clean air tube assembly between the throttle body and the air box. Tighten the clamps to 3 Nm.



14. Clip the harness and vacuum line into position on the air box bracket.



15. Reinstall the two (2) push pins into the dirty air inlet.



16. Install the air box cover (P/N: 1118-9643HC) as shown. Fasten to the air box tray using the provided six (6) self tapping screws (P/N: W506976-S437).



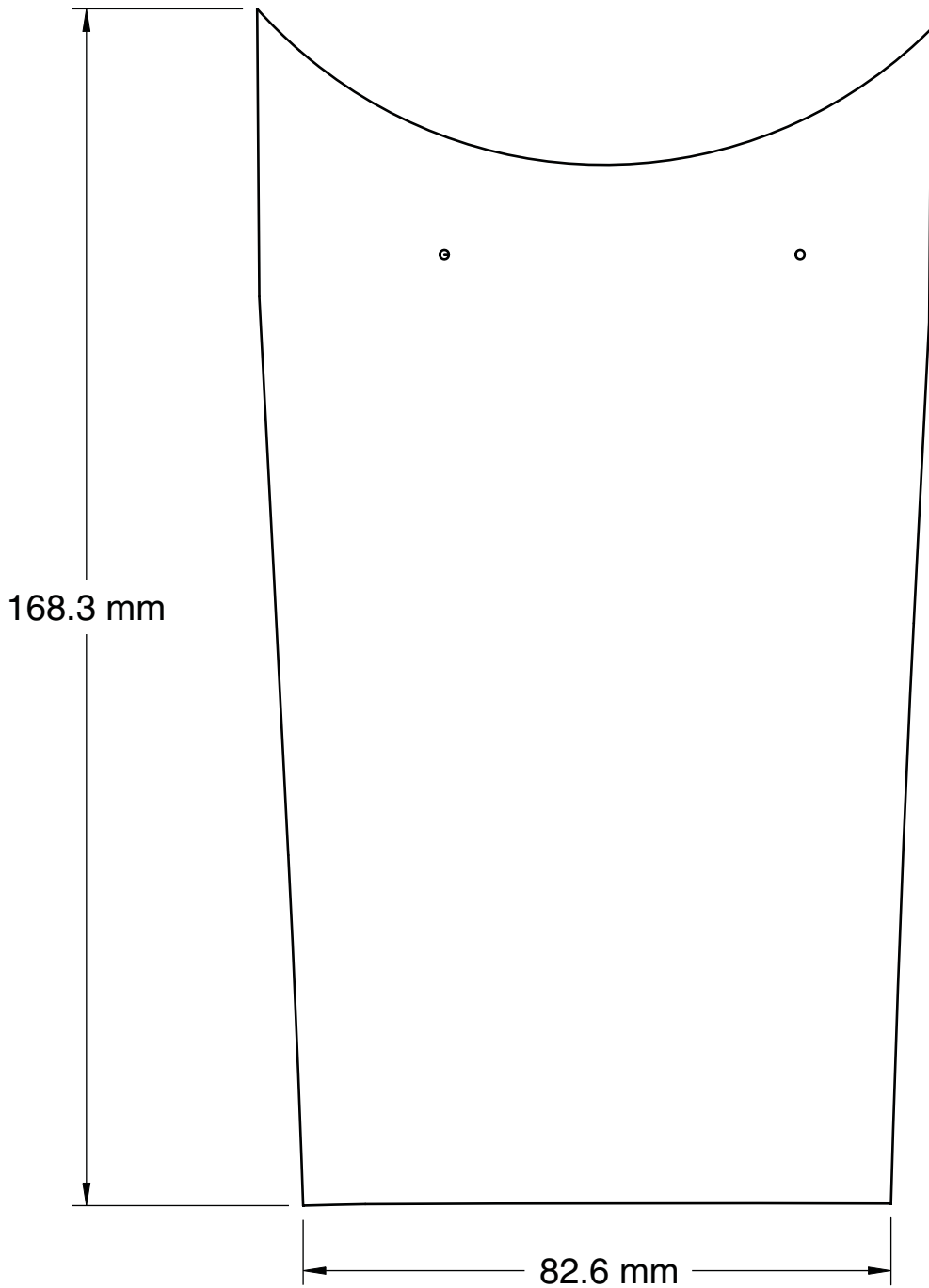
17. Install EO label (D41838-9A095EO-AA)
on the underside of the hood.

SECTION C — PCM FLASHING

Proceed with steps 1-2 if you have a SAE J2534 pass through device (e.g. Puma, VCM I, VCM II).

If you do not have a SAE J2534 device, visit your local ROUSH Dealer or Performance Shop with the appropriate tools for PCM Calibration.

1. If equipped with a SAE J2534 pass through device, refer to the RDT-CALIM manual found on our website. <http://rdt.roush.com> The RDT-CALIM manual will guide you through the ROUSH Diagnostic Tool (RDT) software installation process and the ROUSH PCM flashing procedure detailed in RDT-CALIM.
2. Once the PCM has been successfully recalibrated, 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.



DIMENSIONS ARE
FOR PRINTING
REFERENCE ONLY.