

# *2018-2023 ROUSH F-150 2.7L, 3.5L ECOBOOST AND POWERBOOST V6 COLD AIR INTAKE KIT*

**INSTALLATION INSTRUCTIONS**

**P/N: 422089 (1118TT-9600)**



**ROUSH**<sup>®</sup>  
P E R F O R M A N C E

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# 2018-2023 F-150 3.5L and 2.7L Ecoboost V6 Installation Instructions

P/N: 422089 (1118TT-9600)



Application: 2018-2023 Ford F-150 2.7L Ecoboost V6, 2018-2023 Ford F-150 3.5L Ecoboost V6

**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.

## TABLE OF CONTENTS

Packing List for F-150 3.5L and 2.7L Ecoboost V6 Cold Air Intake .....	3
Equipment and Supplies Required .....	3
Limit of Liability Statement .....	4
Safety Precautions.....	4
Work Safely!.....	4
Section A – Removal.....	5
Section B – Installation.....	7
Appendix A – Hydrocarbon Trap Relocation.....	14

PACKING LIST FOR F-150 3.5L AND 2.7L ECOBOOST V6

Description	Part Number	Quantity
Upper Air Box Cover Assembly	1118-9643HC	1
Air Box Tray	1115-9A612	1
MAP Tube (Insert for MAP Sensor)	1115TT-12B579	1
Clean Air Tube (Blow Molded)	1115TT-9B659	1
Air Filter - Conical Red	131550-9601R	1
Hardware Kit	1118TT-CAKHWK	1
Self Tapping Screw M6 x 25 mm	W506976-S437	6
Push Nut- ROUND NO. 10 (Hydrocarbon Trap Retention)	94800A816	4
Bolt - MAF Tube to Air Box (M8 x 1.25 x 25)	W500224-S437	2
EPDM Coupler – Air Box 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 mm) MAF Tube to Air Tube/Air Tube	R07130015-13	1
Clamp - Worm Drive (100-120 mm)	R07130028-13	3
Clamp - Worm Drive (3-1/16" to 4") (Clamp Dia. 12 mm)	308707426	2
Hardware Kit B (2017 3.5L EcoBoost Only)	1115TT-CAKHWKB	1
Harness IAT Jumper	1117-12A690	1
Air Box Tray Bracket	1117-9B611	1
Bolt (M6 x 1.0 x 16)	W500013-S307	2
ROUSH Sticker	ROUSH-STKR-7X1.25	1
Installation Manual	1315-P1INST	1

EQUIPMENT AND SUPPLIES REQUIRED

- Metric 1/4" Drive Socket Set
- Flat-head Screwdriver
- Trim Tool
- Pliers
- Drill
- 17/64" Drill Bit
- Center Punch
- 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.

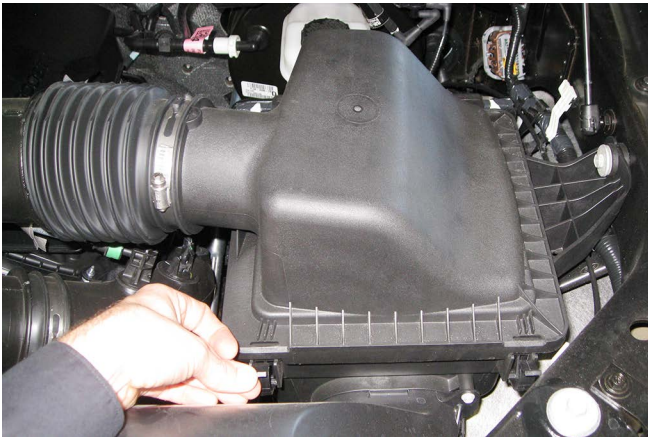
- Always wear safety glasses for eye protection.
- Place ignition switch in the OFF position.
- Always apply the parking brake when working on a vehicle.
- Block the front and rear tire surface to prevent unexpected vehicle movement.
- If working with a lift, always consult vehicle manual for correct 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.



## 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.

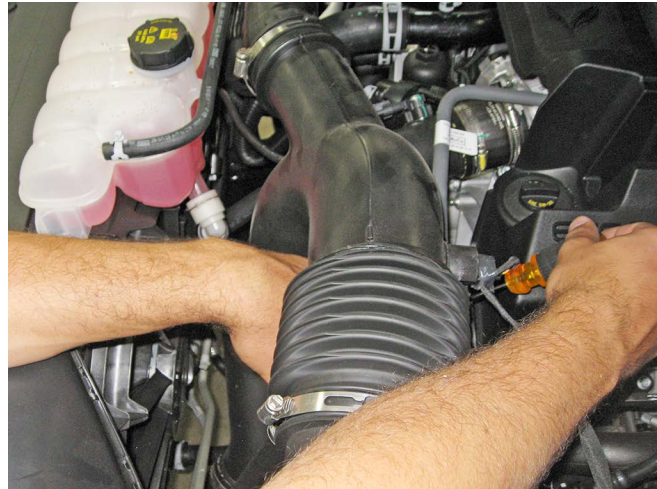
1. Cover both fenders with fender covers to protect the vehicle finish.
2. Disconnect the battery ground cable.
3. Release both clips holding the lid on the air box.



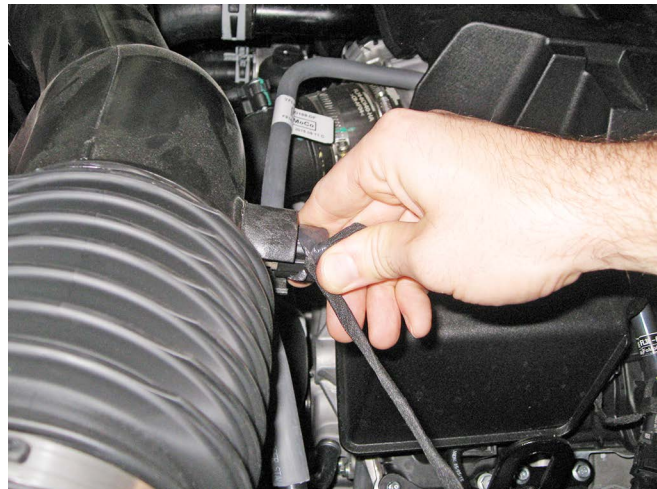
4. Loosen the clamp between the clean air tube and the passenger side turbo inlet.



5. Loosen the clamp between the clean air tube and the driver side turbo inlet.



6. Remove the IAT by twisting the sensor.



7. Remove the clean air tube and air box lid from the vehicle.





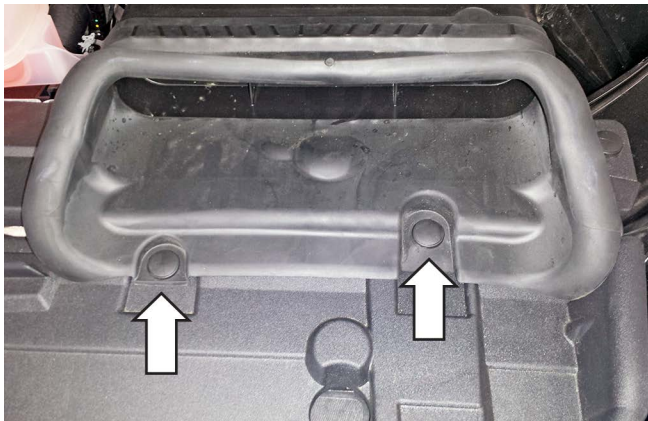
8. Remove the bolt retaining the stock air box to the inner driver side fender. Retain the bolt, sleeve and grommet for later use.



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



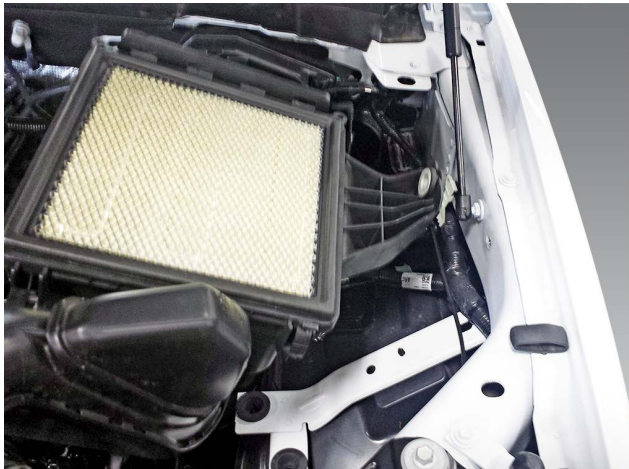
9. Remove the two (2) push clips retaining the dirty air inlet duct to the grill closeout.



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



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



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

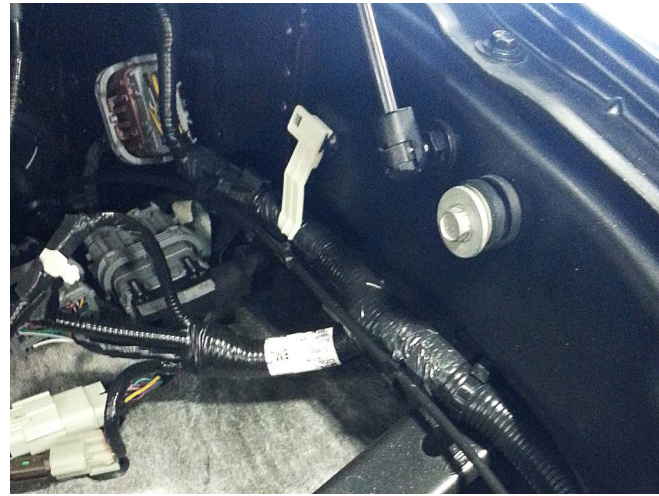
1. Insert the dirty air inlet into the Roush air box (P/N: 1115-9A612). Reuse the self-tapping screw that was removed earlier. Tighten to 3 Nm.



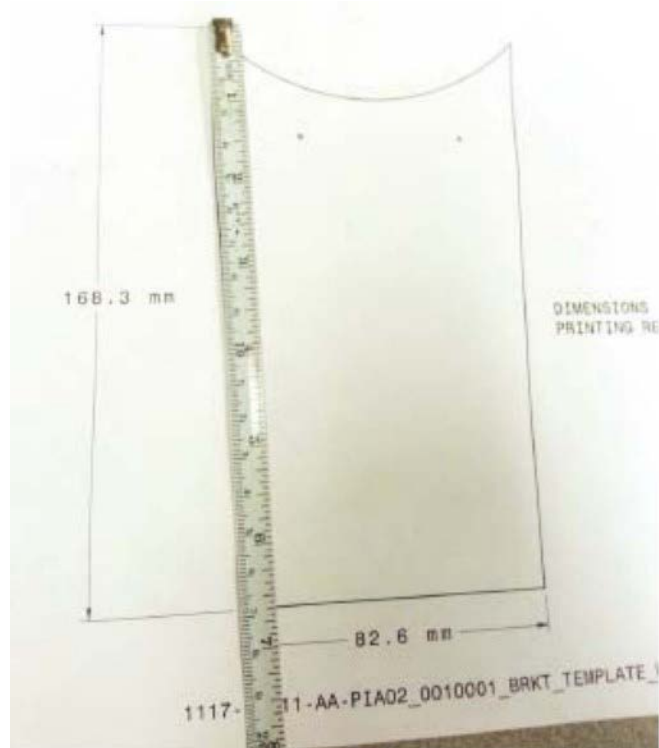
**IMPORTANT:** Do not remove the shown silencer rings.



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.



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



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.



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.

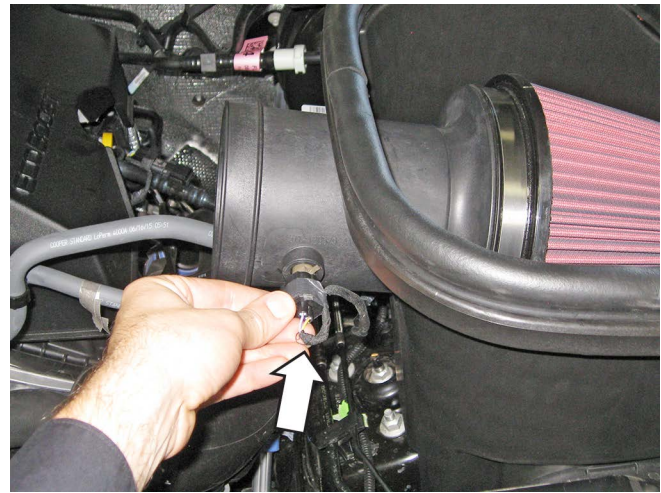
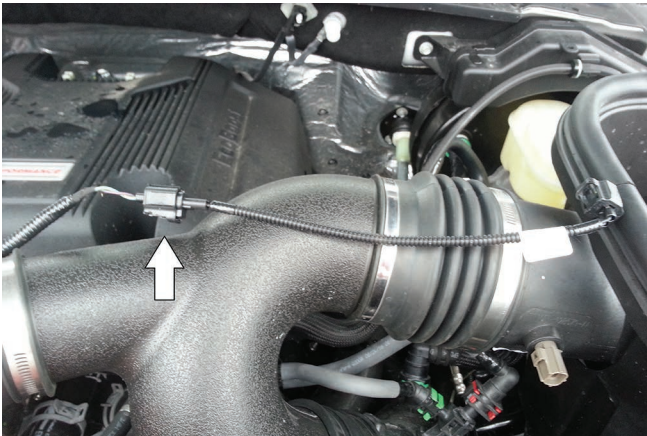




8. Install the air filter (P/N: 131550-9601R) onto the filter tube (P/N: 111550-12B579) and tighten the clamp to 3 Nm. Make sure the filter is installed (as shown) with the metal rib down.

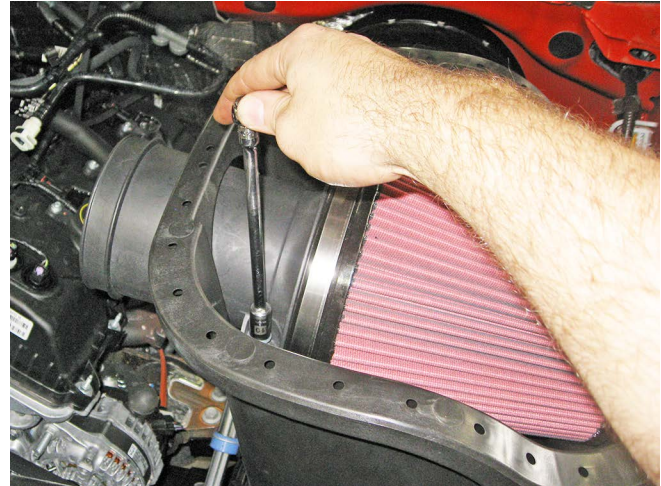


9. Slide the filter and tube assembly into the air box. Twist the IAT sensor into the port as shown.  
NOTE: 2017 F-150 use the IAT sensor jumper harness (P/N: 117-12A690) to connect the IAT sensor.



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

**NOTE: Hand start bolts and make sure both bolts are started in the airbox before torquing them down.**

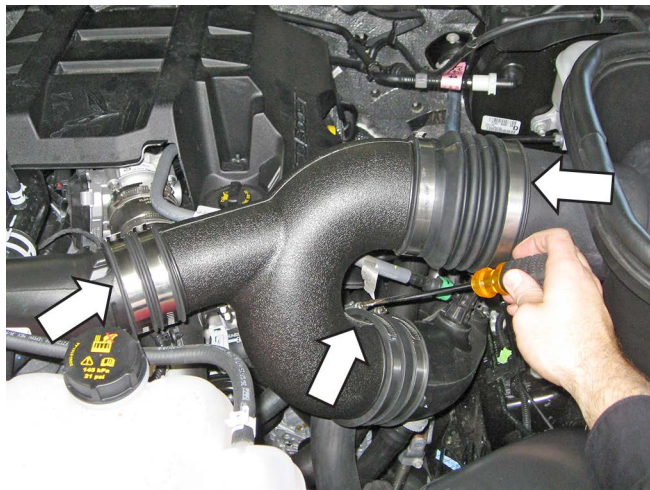




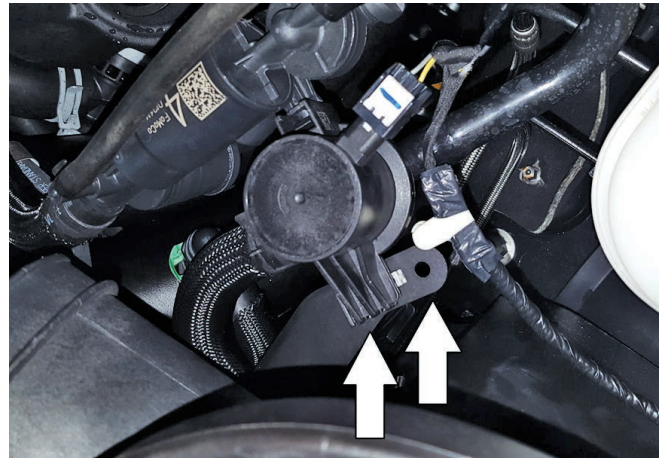
11. Install couplers and clamps onto the clean air tube (P/N: 1115TT-9B660) as shown. Tighten the clamps retaining the coupler to the tube to 3 Nm. Leave the outside clamps loose (coupler: top P/N: 1115TT-9B663, bottom P/N: 1115TT-9B661, left P/N: 1115TT-9B662) (clamps: top P/N: R07130028-13, bottom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



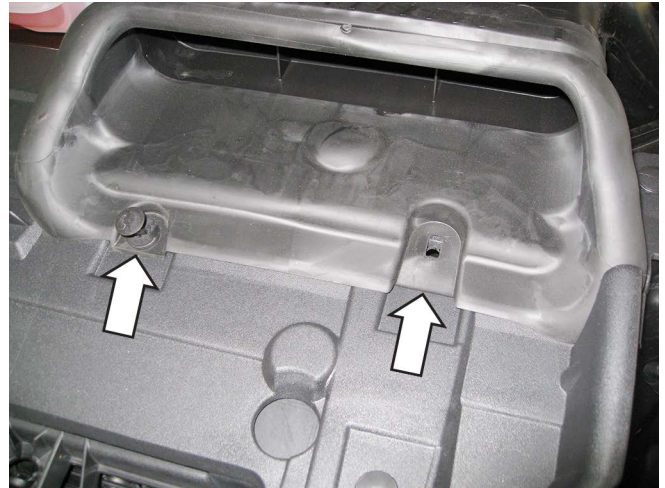
12. Install the clean air tube assembly between the throttle body and the air box. Tighten the clamps to 3 Nm.



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



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





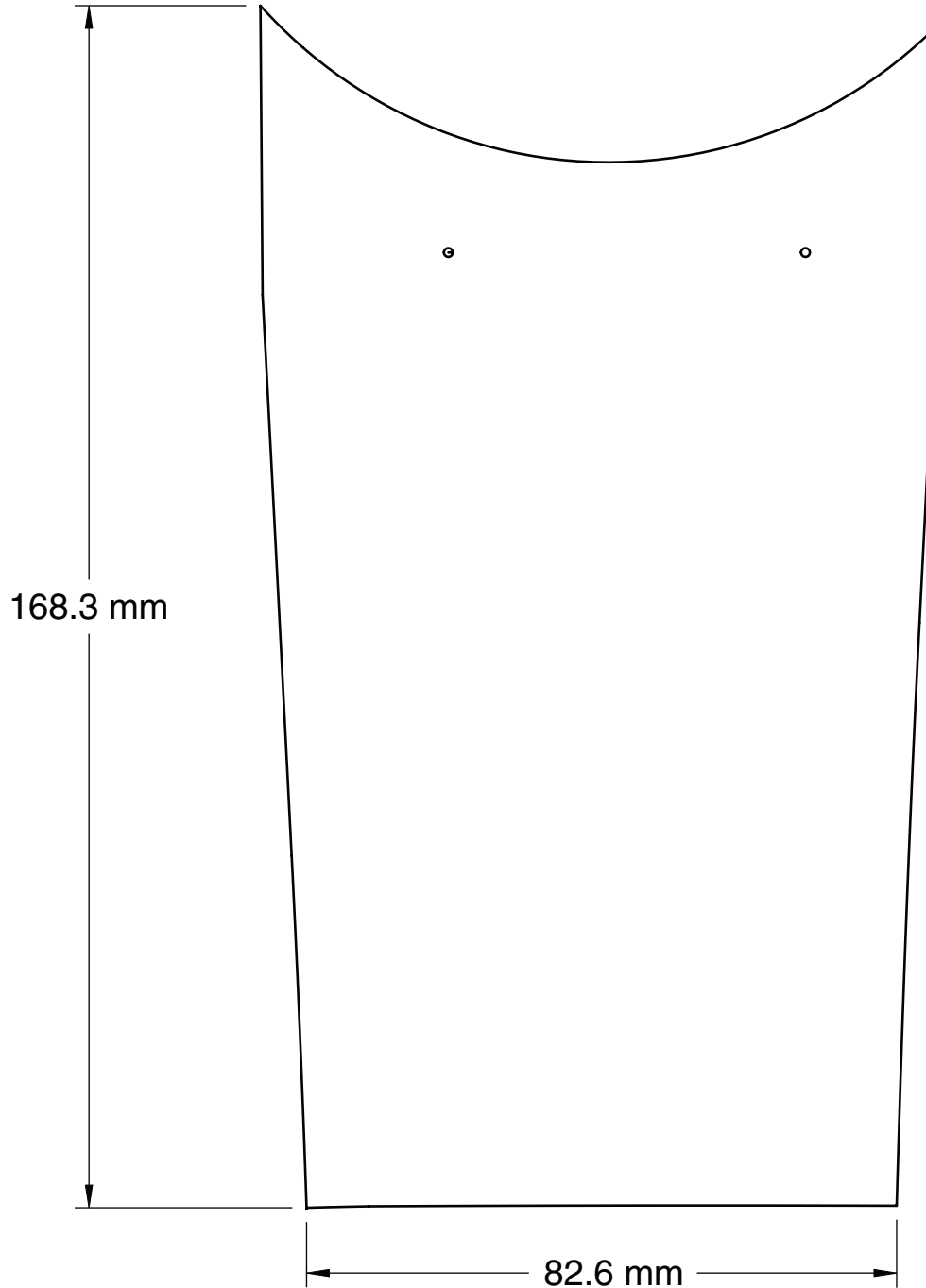
15. Install the air box cover (P/N: 1118-9643HC) as shown. Fasten to the air box tray using the provided six (6) self tapping screws (P/N: W506976-S437).



*\*Note\** IF THE ROUSH AIRBOX LID DOES NOT HAVE A HYDROCARBON TRAP ON THE UNDERSIDE OF THE LID, REFER TO APPENDIX A AT THE END OF THIS DOCUMENT ON PAGE 14.



16. The installation is now complete.



DIMENSIONS ARE  
FOR PRINTING  
REFERENCE ONLY.

## APPENDIX A – Hydrocarbon trap

1. Locate the stock airbox. Remove the Hydrocarbon Trap from the lid by either Drilling out / Cutting off the four corners of the plastic welds holding on the stock hydrocarbon trap. Note: Drill bit size 1/4" (Fraction) or 7 mm (Metric). BE CAREFUL TO NOT DRILL THRU THE HYDROCARBON TRAP.



2. Carefully remove the hydrocarbon Trap from the stock Ford airbox lid.



3. Transfer this hydrocarbon trap onto the Roush airbox lid as shown. Make sure the four corners of the hydrocarbon trap align with the Roush airbox lid pins, push the hydrocarbon trap onto the Roush airbox lid.



4. Using one Round Push Nut (94800A816) found in the Air Induction Hardware kit and place one onto each of the four pins with prongs facing upwards.



5. Using an 8mm socket to push and secure the hydrocarbon trap onto the Roush airbox lid as shown.



6. Repeat steps 4-5 for the other 3 pins.
7. Make sure the hydrocarbon trap is secured in place as shown, test it by hand, it should be secure onto the Roush airbox lid.

