

INSTRUCTIONS

MODEL

Edge Turbo Upgrade



FITS:

2016+ Polaris RZR XPT

2018+ Polaris RZR Turbo-S

2020+ Polaris RZR Pro XP

BoonDocker
EDGE

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Contents List



(1) BoonDocker Turbo

Turbo/Oil Line Kitbag

- O-ring for oil drain
- Banjo Bolt and reducers
- Turbo Bracket
- Turbo Heat Shield
- 6 mm Allen Head bolt
 - flat washer
 - Nylon Lock Nut

(1) 2-Piece Charge Tube

Silicone Kit Bag

- 2"x2"x1" Silicone T
- 2 1/4" x 3" long silicone tube
- 2" x 3" long silicone tube
- Fuel Line 1: 4" long
- Fuel Line 2: 12" long
- Fuel Line 3: 14" Long
- (1) 6mm button head screw
- (4) #32 hose clamps
- (1) #36 hose clamp
- (10) 8" Zip Ties
- (10) 4" Zip Ties

(1) Cold Air Intake Tube Intake Kitbag

- 3" x 3" long silicone tube
- 3" x 2 1/4" silicone reducer
- (3) #48 hose clamps
- (1) #36 hose clamp
- (2) #16 hose clamps
- (1) 6mm button head screw

(1) Outlet Down Pipe Inlet/Outlet Kitbag

- 3 Hole Flange Gasket
- O2 Sensor Bung Adaptor
- (8) 6mm by 10 mm flange bolts
- (3) 8 mm bolts
 - 5/16" flat washers
 - Nuts
 - Lock Washers

(1) Inlet Header Header Kitbag

- (5) 8mm by 25mm Allen head bolts
- (4) 8mm x 40mm bolts
 - top lock nuts
 - Nordlock washers x 8
- Factory Replacement Header Gasket

Possible KIT variations:

Premium Options

- Fuel System Upgrade
- Tuner
- Clutching

Elite Options

- Head Studs
- Blow Off Valve Kit
- Total Voltage Coils

Platinum Options

- Double Down Muffler
- 2 x Gates Redline Belts

FAQ'S

HOW LONG DOES IT TAKE TO INSTALL?

A qualified technician should be able to install this product in approximately six hours. The average joe should be able to handle it over a weekend.

CAN BOONDOCKER INSTALL THIS PRODUCT?

Absolutely! We have a fully-staffed service department. We know our products best, and can go beyond a simple installation with our dyno tune-and-test service. Know that your vehicle is ready for the weekend. We also have a strong dealer network across the nation. Our premiere dealers have demonstrated the knowledge of our products and sell enough volume to be competent in both installation and service.

WHERE ARE THE INSTALLATION INSTRUCTIONS?

The installation instructions are provided below. Please click on the image to download the PDF. We suggest you browse the instructions before you determine if you want to install this product yourself or if you want a dealer to install.

CAN I INSTALL THIS PRODUCT MYSELF?

This product is easy to install. A mechanically inclined person can easily tackle this project. We suggest that you look at the instructions and determine if you need assistance from one of our dealers.

ARE ANY SPECIALTY TOOLS REQUIRED?

You will need a secondary-clutch compression tool to install the clutch kit. Otherwise, simple hand tools are required.

I ALREADY HAVE SOME PARTS OF THIS KIT, CAN YOU TAKE THEM OUT?

Absolutely! If you wish to take components out of this kit, we suggest starting with the base and adding the required parts. Need a consultation on this? Message us and we'd be happy to go as far as adding the correct items to your cart!

User Manual

GENERAL SAFETY

1. ALWAYS wear your seatbelt, helmet, and PPE when operating your vehicle.
2. Clutching, belts, motor, exhaust components and drivetrain may be HOT enough to burn you. Do not touch until vehicle has had sufficient time to cool.
3. ALWAYS follow the safety suggestions of your owner's manual.

OPERATION

1. ALWAYS allow your vehicle to reach proper operating temperatures before driving. Refer to your owners manual.
2. The Edge Turbo Upgrade is a HIGH PERFORMANCE accessory. Proper fuel and maintenance is critical.
3. High performance machines are more prone to belt failure. ALWAYS carry a spare belt, and understand how to change/replace your belt BEFORE you get out in the field. Properly inspect your belt and clean your clutches before each ride. For sand use, we recommend open clutch covers which will provide adequate belt cooling. If you use the OEM enclosed cover, we suggest that you allow your belt to cool after any aggressive driving. To cool your belt, let your vehicle idle, with the gear-selector in the Park position, for at least two (2) minutes.
4. Modifying your Blow-Off Valve (BOV) to vent to atmosphere reduces the performance of your machine, and could allow debris (even with filter installed) into the charge system, which can cause a boost leak in the BOV, and/or may damage the internals of the turbo/engine.
5. Head studs (sold separately) are recommended for the Edge pump-gas tune. Head studs are required for the Edge AV/Race-Gas tune(s).
6. ANY "DET" or Detonation codes are not acceptable. If you get a DET code during normal operation, you likely have bad gas. Drain all of the fuel, and replace with fresh fuel from a different source. If the problem continues, immediately contact your dealer.

User Manual

FUEL

1. The Edge Turbo Upgrade is a HIGH PERFORMANCE accessory. Proper fuel is critical.
2. Pump Gas tunes REQUIRE 91-octane fuel (or higher). Non-ethanol fuel is preferred. DO NOT use fuel with >10% Ethanol.
3. AV-Gas tunes REQUIRE 100LL (or higher) Race Gas tunes REQUIRE 112-octane (or higher)
4. Fuel degrades with time. Fuel stored in plastic containers should be used within two weeks. Fuel in the tank of your vehicle will also degrade.
5. Operating your vehicle with old/degraded fuel may cause engine failure
6. Operating your vehicle with the incorrect fuel for your tune may cause engine failure.

CLUTCHING & CLUTCH MAINTENANCE

1. A primary-clutch puller is recommended for clutching installation. If you do not have one, you can have your dealer install the clutching. BoonDocker sells clutch pullers, and most dealerships also stock them, some even rent them.
2. Our clutching is engineered and validated for the Edge. Using other clutching may cause a loss of performance, and is not supported or suggested.
3. Clutch springs wear out over time. We suggest replacing clutch springs every 500 miles.
4. Clutch maintenance is CRITICAL on high performance machines. We suggest you clean your clutches after each ride: Remove the belt. Use compressed air to blow any remaining debris from the clutch internals. Use a red scotch-brite pad to loosen any rubber/debris from the clutch-sheave faces. Dampen a rag with acetone and wipe the clutch sheave faces. Inspect belt for damage and/or wear. BoonDocker has a full Clutch Refresh kit available available if any worn or broken components are found..
5. Any clutch-weight modification MUST be done to all three weights in unison. DO NOT run unbalanced weights.
6. Peak RPM on the Boondocker Edge turbo kit is 8650 +/- 100 RPM's.
7. Adjusting peak RPM is possible by adding/removing weight from the toe.

Prep Work Area



Verify kit contents against included contents list.

Tuning



Locate the vehicle OBDI (Onboard Diagnostic Interface) port, under the hood, against the fire-wall. With the key in the "OFF" position, plug the PV3 Tuner into the OBDI Port. Ensure the cord is plugged into the PV3 Tuner. Once the connection is made, turn the key to the "ON" position, but do not start the vehicle.

Tuning



This cable is what you will use to connect your OBDI port to the PV3 tuner.



On the left side of your PV3 you will find two ports, the row on the right will be where you insert the cable you now have attached to your OBDI.



Once your PV3 is attached to your OBDI it will power on displaying it's gauges.
Press the select button located between the arrows facing up and down.
When you press the select button your main menu will open, use your arrows to
highlight "VEHICLE TOOLS" then select it.



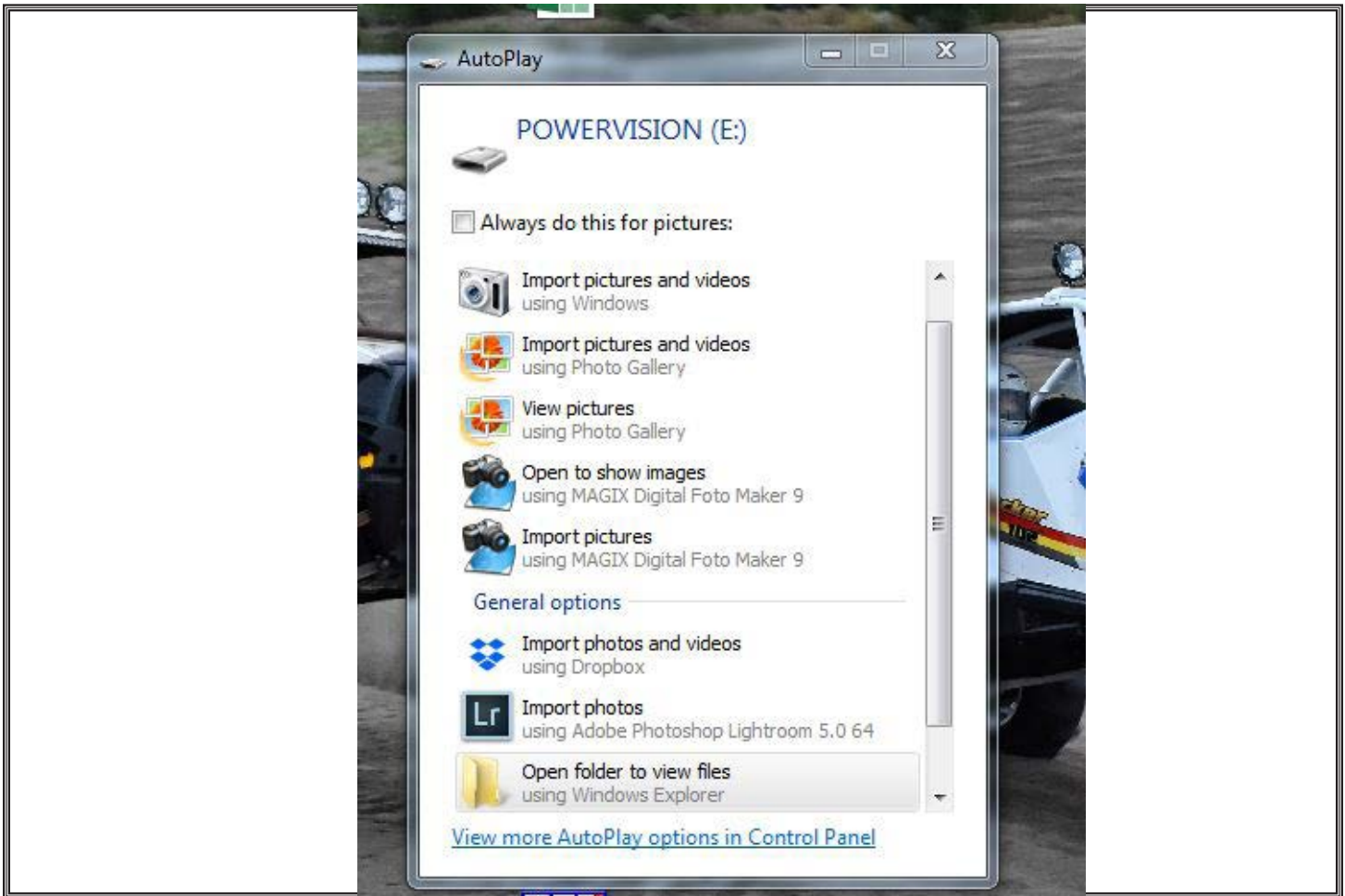
Inside the Vehicle Tool menu use the arrows to highlight and select "READ ECU" then begin the read. This will take a few minutes.

After the ECU Read is complete the PV3 may ask you if you would like to delete non-compatible tunes, please select yes.

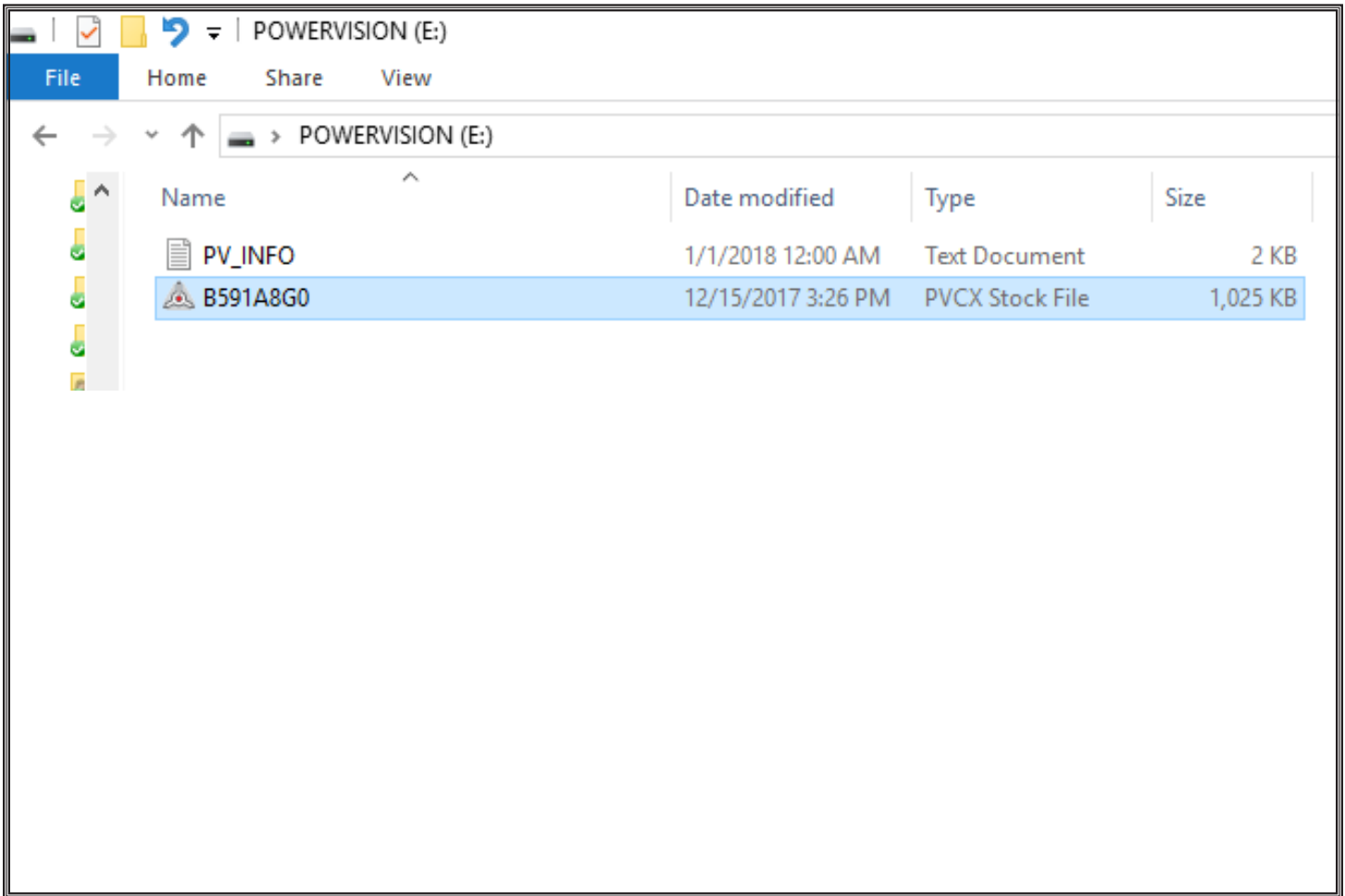


Now that the ECU read is complete, power down your RZR and disconnect the tuner.

Locate your USB/Mini USB cable in your tuner's packaging then use it to connect the PV3 to a computer with internet access. The smaller end of the cable will attach to the port found on the left of where you connected the previous cable.

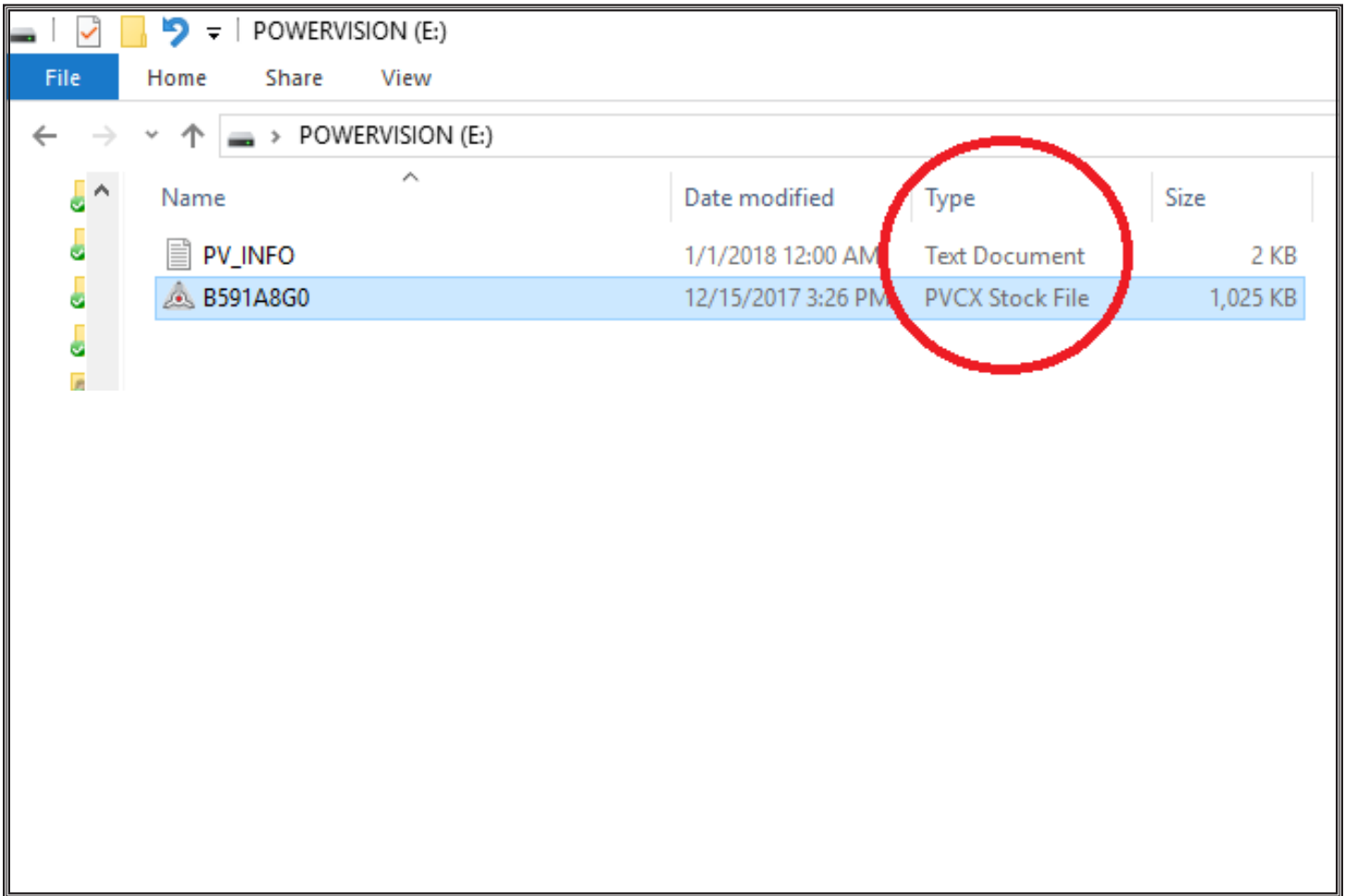


Once you plug the PV3 into your computer, it will bring up the auto-play window. Select "Open Folder to View Files". If auto-play doesn't come up, you can open a windows file explorer, and browse to find "Powervision" in your external devices.



Once you've opened the PV3 in your file explorer, you will see several files.

NOTE: The file that ends in ".STK" is your stock tune, if you ever need to return the car to stock. DO NOT attempt to open, modify, or delete this file.



Locate your PV_Info file by looking at the 'Type' section of your explorer, then identify it by looking for "Text Document"

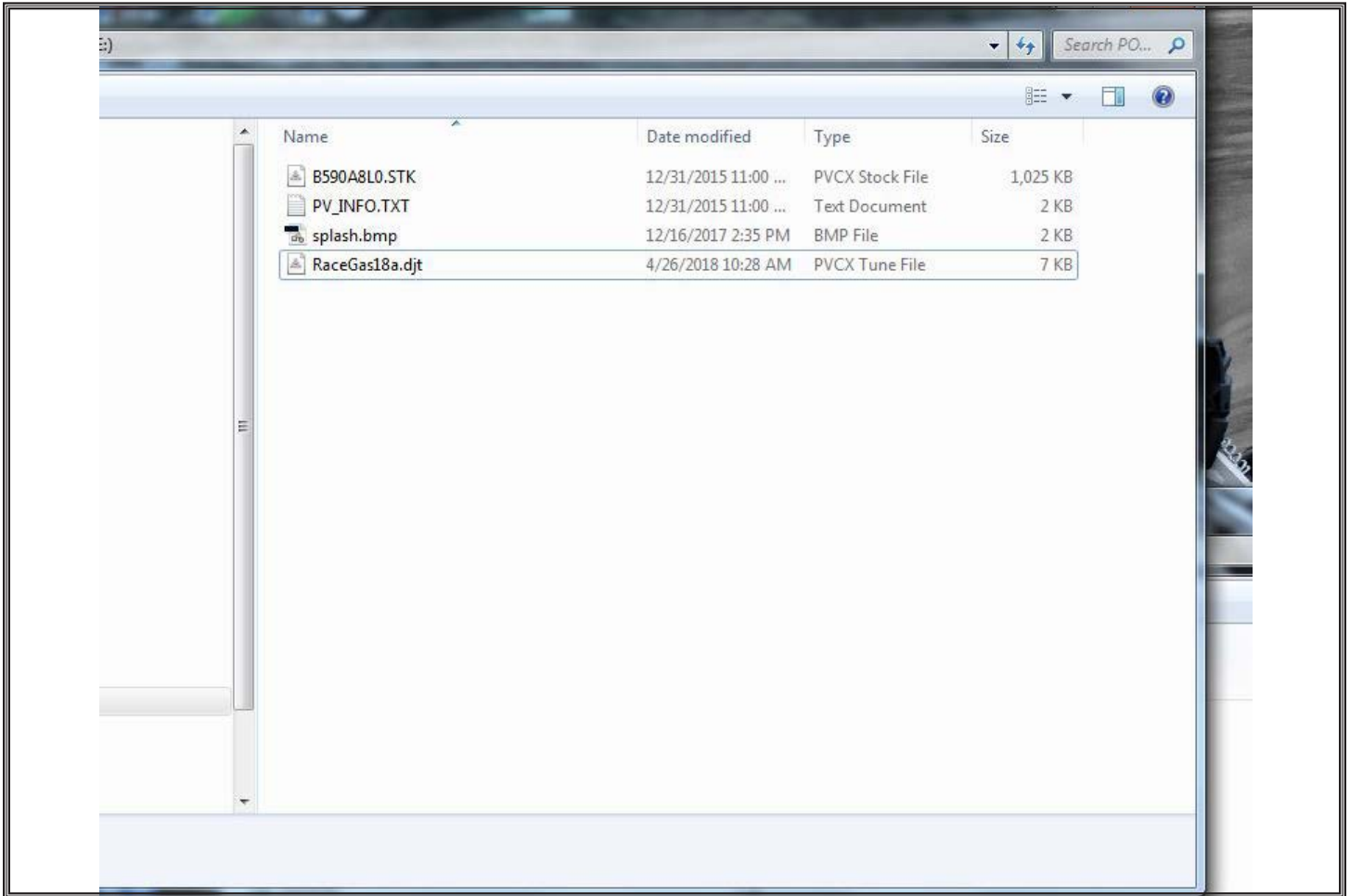
Tuning



Contact BoonDocker by emailing us a copy of your PV_Info file along with the model of your RZR with it's year, and we'll turn around your tune ASAP!

Due to the fact we use the PV3 as a stand alone tuner please add a note saying you need tuning for the Edge Turbo Upgrade.

Email: Tunes@BoonDockers.com



You will receive your new tune(s) via email. To save your new tune(s), simply save them (or drag-and-drop from your email) to your PV3(Powervision) device. The new tune file(s) will end in ".DJT". Disconnect the PV3 from your computer and bring the PV3 back to your vehicle.

Tuning

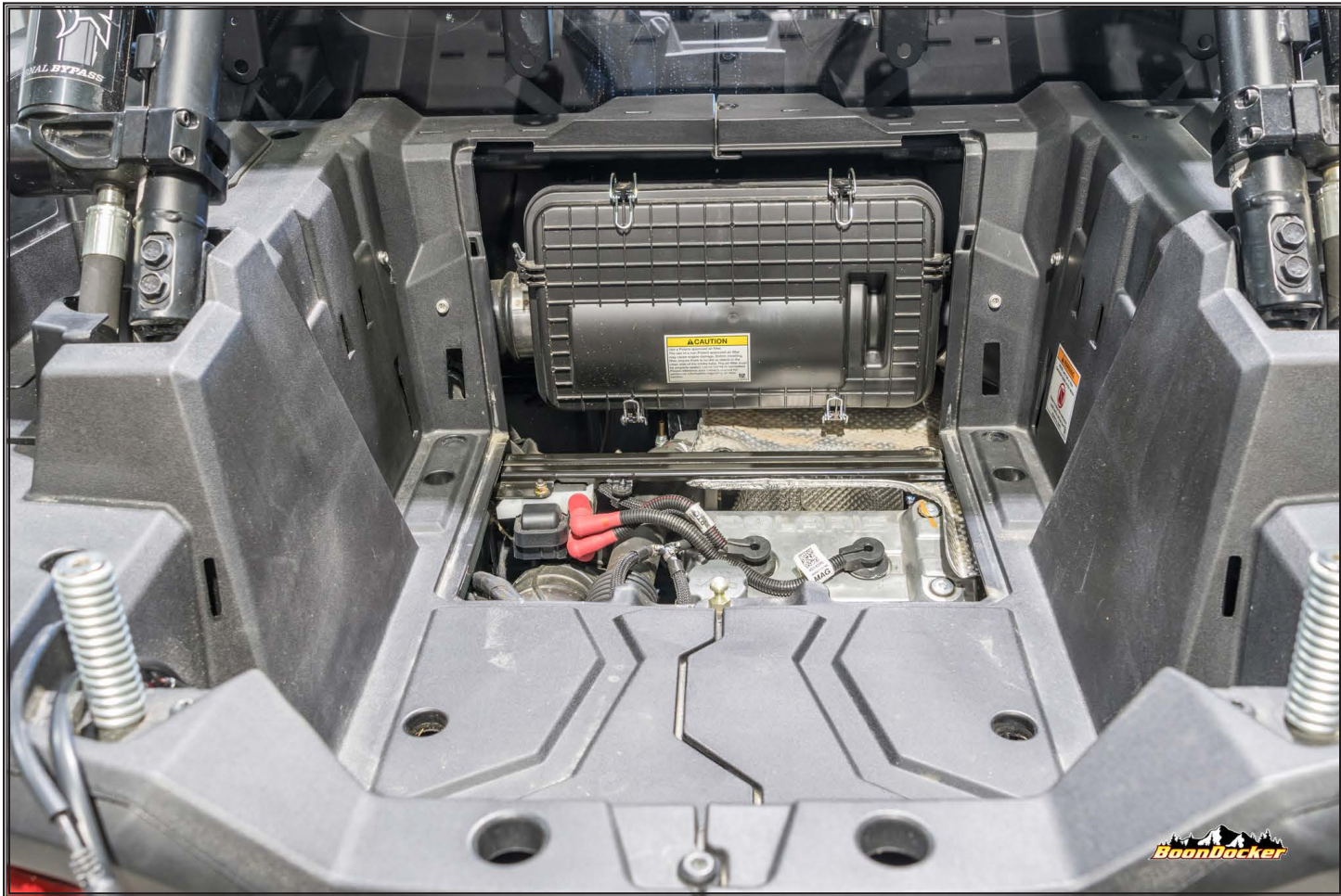


Plug the PV3 into the OBDI port as done previously. Use the buttons to select "Flash Tune"

Use the buttons to scroll down to the tune you wish to load. Use the middle button to select the tune. Writing to the ECU may take 15+ minutes.

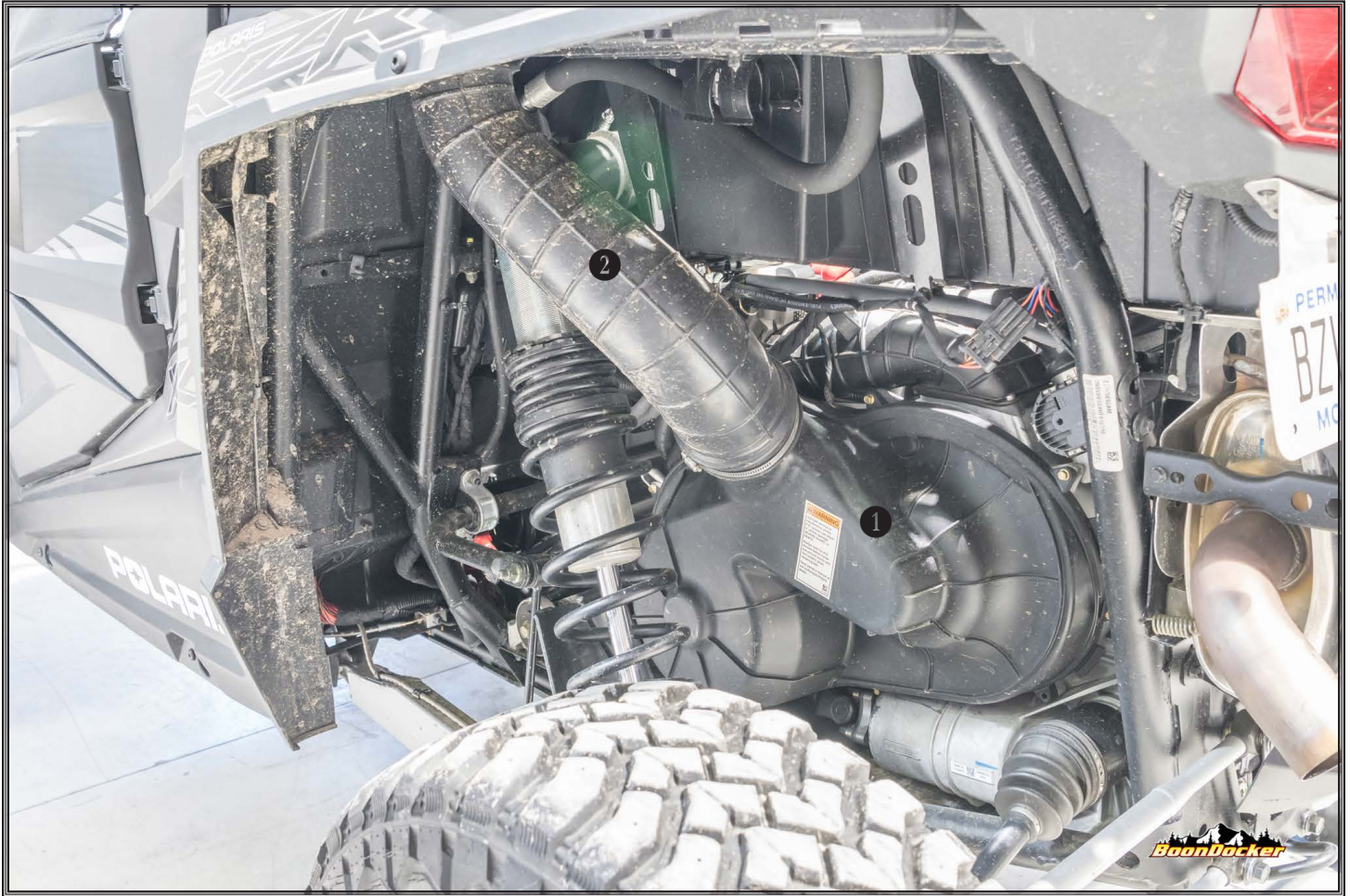
NOTE: The file that ends in ".STK" is your stock tune, if you ever need to return the car to stock.

Initial Teardown



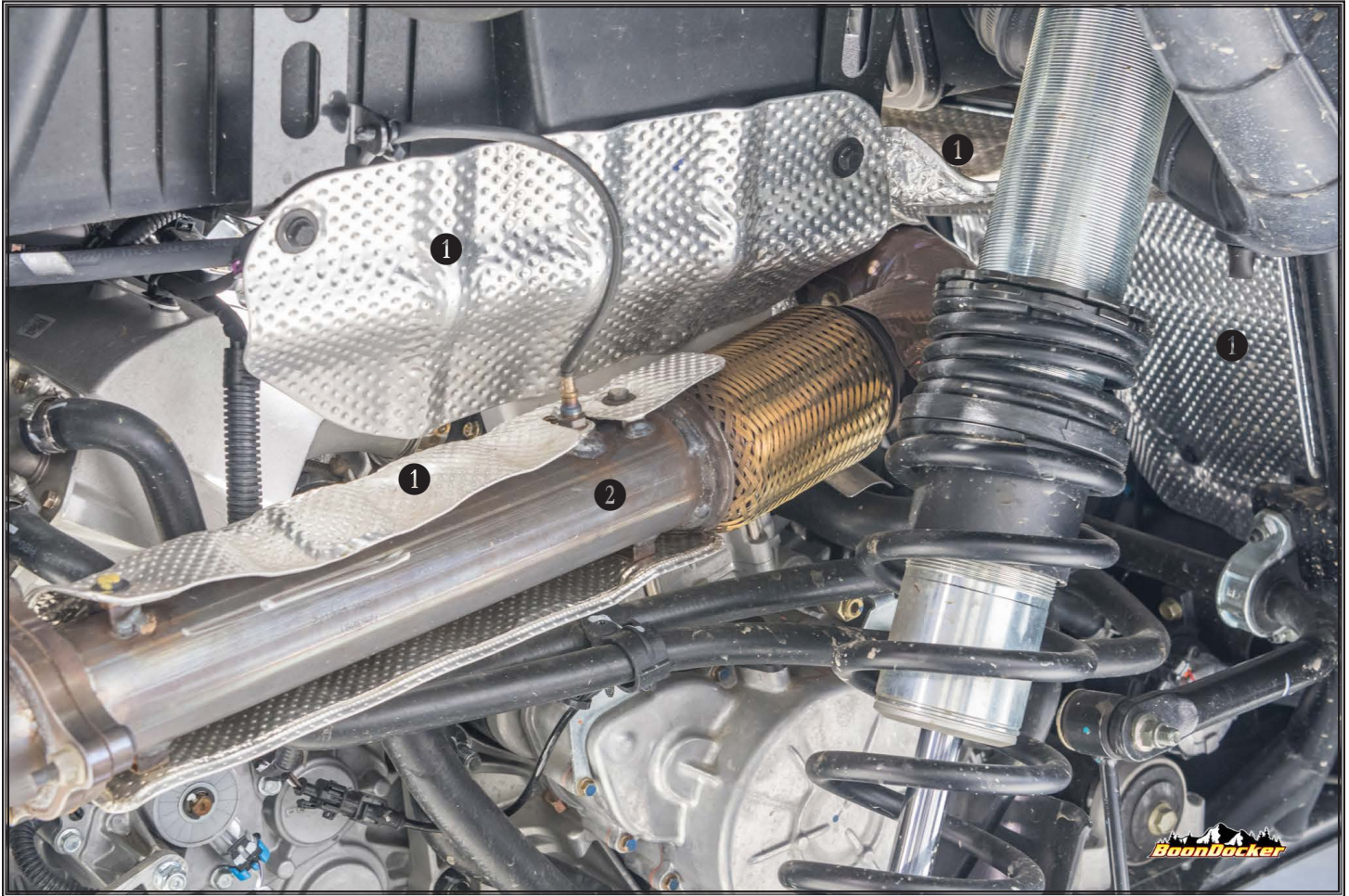
Remove engine cover as shown

Initial Teardown



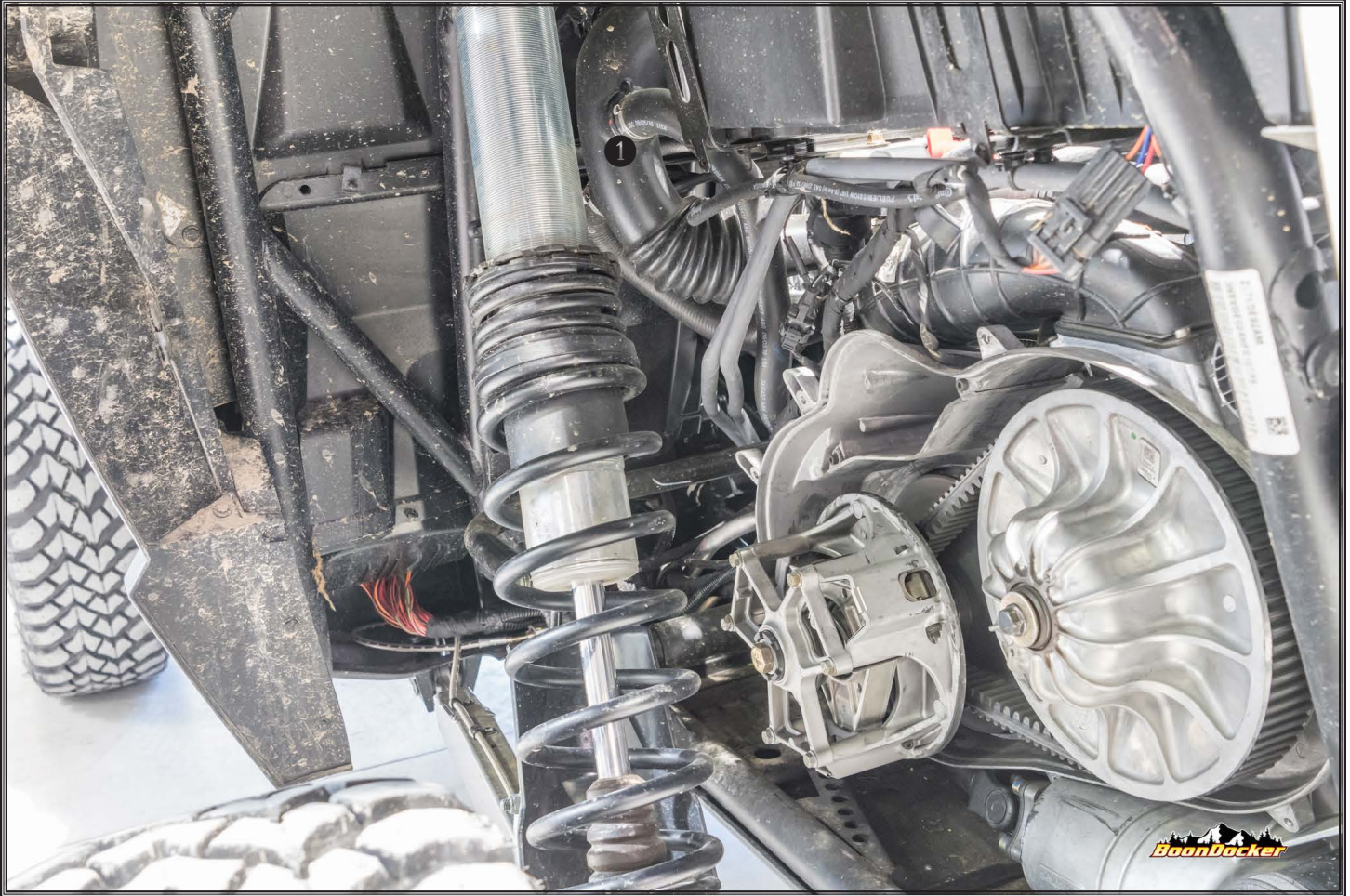
Remove rubber clutch vent ② and clutch cover ① as on ssembly, it will drop out the bottom between the trailing arm and frame.

Initial Teardown



Remove aluminum heat shields ①, including the piece on top of the engine, accessed from the bed. Remove Exhaust pipe, ② muffler can be left in place.

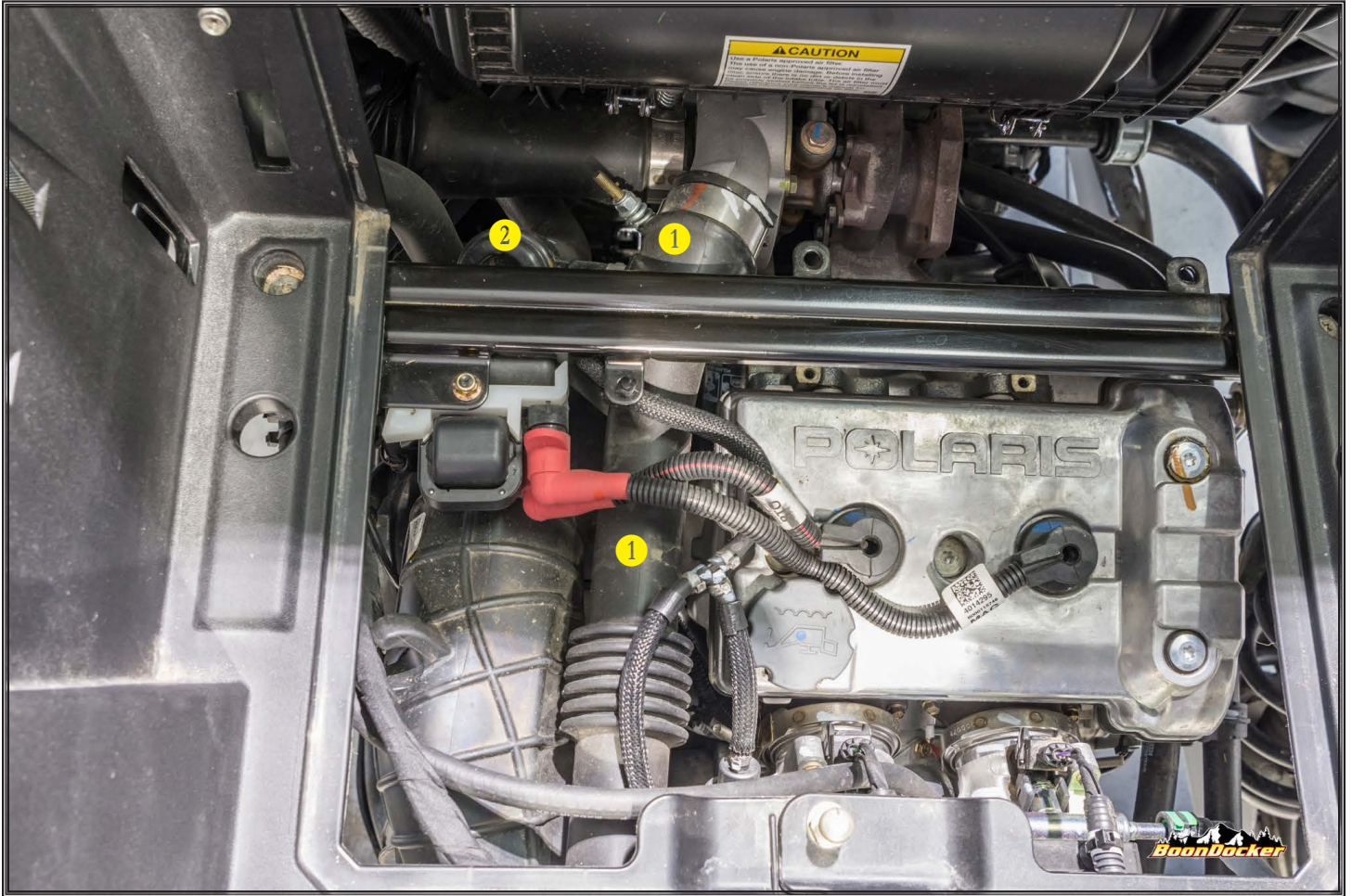
Initial Teardown



Remove cold air intake ❶. Cut the oetiker clamps from cold air, charge tube, and blow-off valve (BOV)

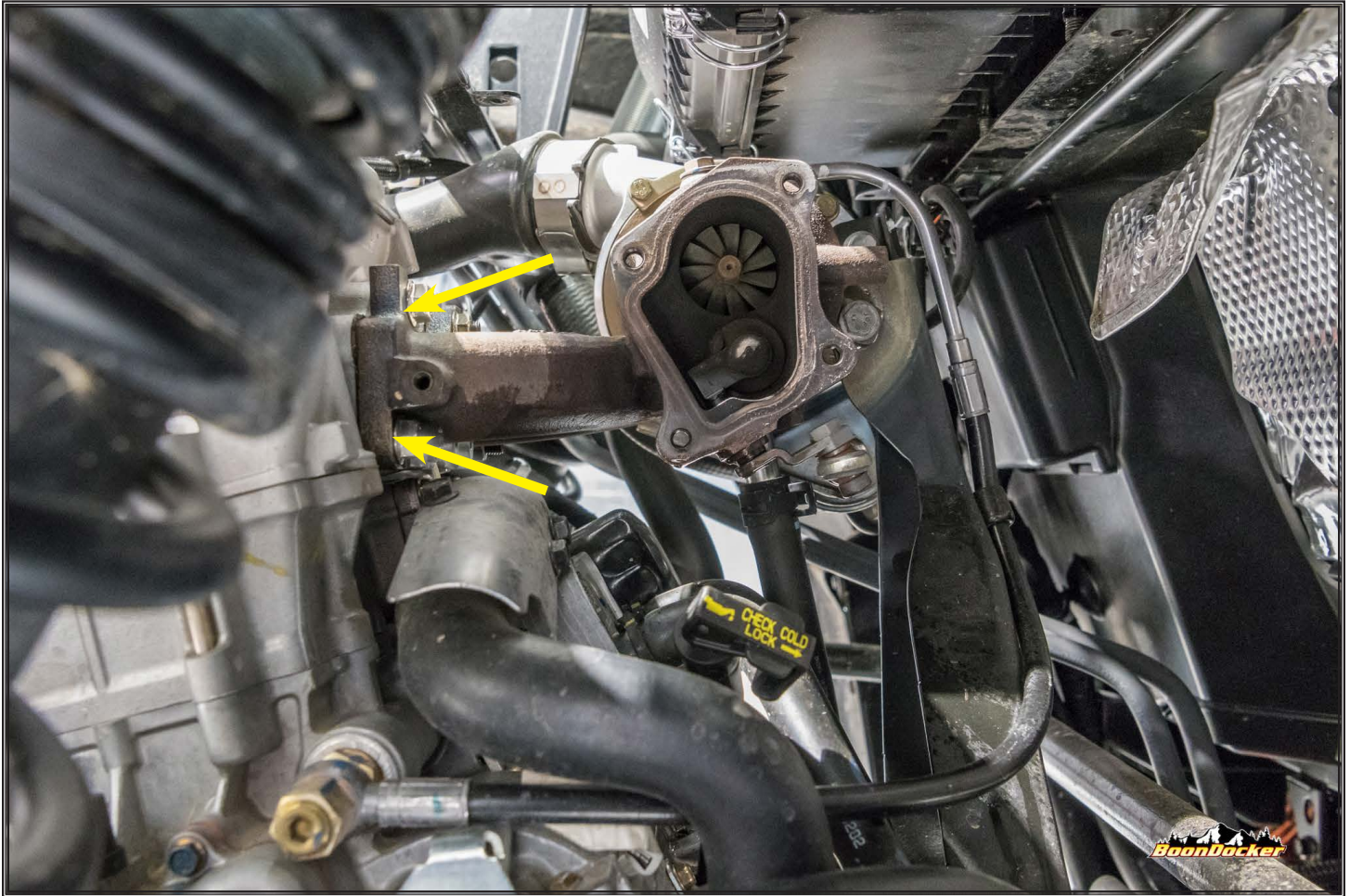
Note: remove TBAP sensor before removal to prevent harness damage

Initial Teardown



Remove charge tube ① and BOV ②
Unplug TMAP sensor before removal, take care not to damage clip on connector.

Initial Teardown



Remove oil feed and drain lines from OEM turbocharger, take care not to damage as they are re-used later in installation.

Unbolt exhaust manifold from engine there are (4) studs with nuts, and (2) bolts. Unbolt turbo bracket from frame (easiest to access from panel behind seats/console).

Install Turbo



*Uninstall factory oil drain from turbo.
Install factory oil drain to Boondocker Edge turbo with new supplied O-ring and factory bolts.*

Install Turbo



Clean gasket material from exhaust flange surface on head. Install turbo header and new header gasket with factory fasteners.

Install Turbo



Bolt Turbo to header with supplied bolts, nord lock washers and lock nuts.

Note: 4 bolt metal turbo gasket (zip tied to turbo for shipping) goes between header and turbo flanges.

Install Turbo



*Intall turbo bracket to actuator bracket using suplied 6mm bolt, washer and lock nut.
Fasten turbo bracket to engine mount using the upper bolt on engine cross bar.*

Install Turbo



Install factory oil feed line to turbo with supplied banjo bolt and washers.

Install Turbo



Remove oil drain line from engine and re-install to both the engine and the turbo in the opposite direction of stock routing to prevent kinking.

Install Turbo



*Install supplied Fuel Line 1 to brass 90 on turbo.
Install supplied mid-length Fuel Line 2 to turbo actuator and secure with 4" zip ties.*

Install Exhaust



Install both factory down pipe heat shields to new down pipe with supplied flange bolts.

Install down pipe to turbo and muffler using supplied fasteners.

Re-install all other previously uninstalled heat shields using factory hardware.

Re-install O2 sensor into Down pipe.

Note: O2 reducer is supplied in kit for models 2019 and older.

Anti-Seize is recommended on all exhaust fasteners.

Install Charge Air



Install MAP sensor from factory charge tube into new charge tube using supplied bolt.

Install Charge Air



Install S shaped charge tube to turbo using silicone T.

Install Charge Air



Connect charge tubes together loosely using supplied straight silicone.

Install Charge Air



*Install charge tube to throttle body using supplied silicone and factory T clamp.
Tighten silicone joint between charge tubes.
Plug MAP sensor back into factory harness.*

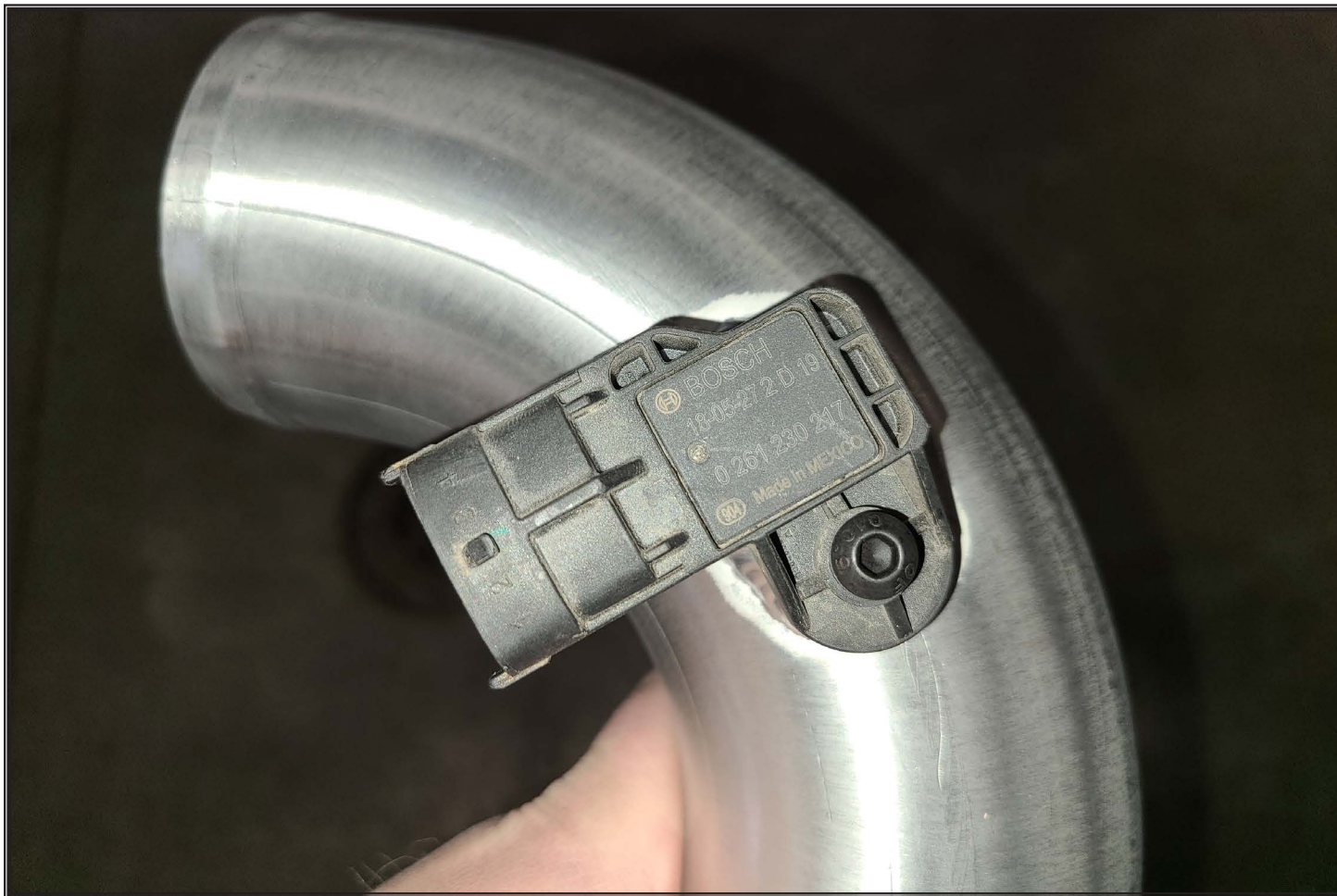
Install Charge Air



*Re-install blow off valve using supplied long Fuel Line 3 (reference kit photo),
replace factory BOV hose.*

Note: 2020 and older models, Replace line to T. DO NOT Remove T.

Install Intake



Remove T-BAP sensor from factory intake tube and install on new intake tube using supplied bolt.

Install Intake



*Install Cold Air Intake Tube to factory Airbox and turbo using supplied silicone.
Install factory crank case vent tube to upper nipple of intake tube using supplied hose clamp.*

Install Intake



*Install Factory Blow off Valve vent tube to Lower nipple of intake tube using supplied hose clamp.
Note: Double check and tighten all intake/charge tube hose clamps.*

Startup Procedure



For the initial startup: 1) Ensure you're using the correct fuel. If you have old/incorrect fuel, drain the tank and fill with the correct fuel. 2) Allow the engine to reach an operating temperature of at least 174F. You may notice a small amount of smoke coming from the engine bay. This is normal, as the residual packing oil on the turbo burns off. 3) Inspect the installation - look for any leaks and/or insecure wires/hoses. 4) BoonDocker recommends re-checking all hardware after 50 miles of operation.

**Perform this installation is
at your own risk.**

**These instructions act as a
general guideline, and may
not include some steps. As
the installer, YOU take
responsibility for the
entirety of the installation.**

**YOU must ensure proper
routing, fitment, shielding,
etc to prevent melted parts,
chaffed wires, poor
performance, etc. Improper
installation, of any type, is
not covered as a defect
under any warranty, implied
or written.**