

INSTRUCTIONS

MODEL: *Dominator Diablo Upgrade*



FITS: *2018-2020 Maverick X3*



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Contents List



- (1) Dominator Turbo Upgrade
- (1) Trident Muffler
- (1) Upgraded Down-Pipe
- (1) Billet BOV
- (1) Aluminum Air Intake Piping
- (1) BoonDocker Diablo Intercooler
- (1) PV3 ECU-Flash Tuner w/ Guage
- (1) High-Flow Injector Upgrade
- (1) Set of Clutch Weights
- (1) High-Flow Air-Intake
- (1) Manual Boost Tee
- (3) Auxilary Fuel Injectors
- (2) 16" x 20" Boondocker Flag
- (2) Charcoal Gray BD Snapbacks
- (2) 5" BD Stickers
- (2) 12" BD Stickers
- (1) Tin of BoonMints

PIPING KIT BAG

- (4) # 32 Hose Clamps
- (1) 2" x 2" x 1" Silicone Tee
- (1) 2" to 7/8" Black 4 Ply Silicone Reducer
- (1) 1" to 3/4" Plastic Reducing 90
- (1) #16 Hose Clamp

BOV KIT BAG

- (1) 3' length of 3/16" fuel Line
- (2) #16 Hose Clamps
- (2) 4" Zip Ties
- (2) #32 Hose Clamps
- (1) Breather Filter

- (1) 2" x 2" x 1" Silicone Tee
- (1) 10/32" x 3/16" Barbed Fitting
- INTERCOOLER UPGRADE KIT BAG
- (4) 6 MM Clip-On Barrel Nut
- (4) 6MM x 10MM Stainless Flange Bolt
- CLUTCH LINER KIT BAG
- (13) Large 3/16" Steel Rivets
- (13) Rivet Washers
- (1) UMHW Clutch Liner

BOOST TEE KIT BAG

- (1) Turbo Smart Boost Controller
- (1) 3' length of 3/16' Fuel Line
- (4) 4" Zip Ties

FINISHING KIT BAG

- (3) 2" Xx 4.375" OD Frog Skins
- (2) 8" Zip Ties
- (1) 1' Length 5/8" Convoluted Tubing

TURBO KIT BAG

- (2) 10MM Washer for Banjo Fitting
- (1) 8 MM Nut
- (1) 3 Hole Paper gasket for Oil Flange
- (1) #10 Hose Clamp
- (1) #6 Hose Clamp

MUFFLER HARDWARE KIT BAG

- (1) 2 1/2" V-Band Clamp
- (5) 18-8 Stainless Steel Torx Machine Screw

User Manual

GENERAL SAFETY

1. ALWAYS wear your seatbelt (if applicable), 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. Wear proper PPE to prevent burns.
3. Clutching, belts, motor, exhaust components and drivetrain may be sharp. Wear proper PPE to prevent laceration.
4. Exhaust components are HOT. It is YOUR responsibility to prevent burns or melted items.
5. ALWAYS follow the safety suggestions of your owner's manual.

GENERAL

1. Print entire instruction manual. In the print settings, you can choose to print multiple tiles per page (we suggest 4-6). However, the tunnel-cut-pattern needs to be printed full size.
2. Read the ENTIRE manual before you start.

OPERATION

1. ALWAYS allow your vehicle to reach proper operating temperatures before driving. Refer to your owners manual.
2. You will need to replace your plugs more frequently with a turbocharger. After break-in mode, replace plugs AT LEAST every 500 miles for maximum performance. Plugs should be gapped to .018.
3. The Dominator turbo kit is a HIGH PERFORMANCE accessory. Proper fuel and maintenance is critical (see "FUEL")
4. 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.
5. **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.
6. Dominator for CanAm uses a MANUAL boost adjustment. You MUST adjust boost as you change elevation. Maximum boost is 22.5 PSI. Maximum boost at sea-level is 19.5 PSI. Operation outside of these parameters may cause engine damage, and is your responsibility.
 - 6.1. For Av-gas, the desired boost range is 19.5 PSI at sea-level to 22.5 PSI at 5000 ft.
 - 6.2. For Pump-gas, the desired boost range is 15.5 PSI at sea-level to 17.5 PSI at 5000 ft.
 - 6.3. It is YOUR RESPONSIBILITY to properly set the boost.
 - 6.4. Incorrect boost may cause engine damage. Please verify data logs!
7. Check coolant levels after the first 10 minutes of operation. Coolant system may need to be bled.
8. After the first hour of operation, check the torque on all bolts. The first heat cycle may cause bolts to loosen, which could create a boost leak or cause engine damage.



User Manual

FUEL

1. The Dominator is a HIGH PERFORMANCE accessory. Proper fuel is critical.
2. It is YOUR RESPONSIBILITY to ensure the octane of your fuel and that the proper octane is being used. Generally speaking, 100LL is required for boost in excess of 17 PSI. However, vehicle and configuration variances may alter this. Check your gauges for detonation-correction and adjust the boost properly to prevent engine damage.
3. USE ONLY THE FUEL DESIGNED FOR YOUR KIT!
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. DO NOT run fuel from any previous season or extended period of non-operation. .
5. Operating your vehicle with old/degraded fuel may cause engine failure. DO NOT allow fuel to sit in the tank for more than 30 days.
6. Operating your vehicle with the incorrect fuel for your tune may cause engine failure.

CLUTCHING & CLUTCH MAINTENANCE

1. Our clutching is engineered and validated for the Dominator. Using other clutching may cause a loss of performance, and is not supported or suggested.
2. Clutch springs wear out over time. We suggest replacing clutch springs every 500 miles.
3. 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.
4. Proper weight configuration is (3) 45-gram and (3) 50-gram weights, loaded in an alternating pattern.
5. Turbocharged CanAm X3's are expected to turn 8400 +/- 100 RPM's on av-gas, and should turn 7900 +/- 100 RPM's on pump gas. Use provided adjustable weights to keep RPMs at recommended levels. However, they stop producing additional power after 8000 RPM's
6. DO NOT allow your vehicle to turn over 8500 RPM's.



Initial Teardown



Start with a clean work area, and lay out the kit contents so you can easily find the parts

Initial Teardown



Remove bolts from plastic muffler cover, then completely remove cover.

Initial Teardown



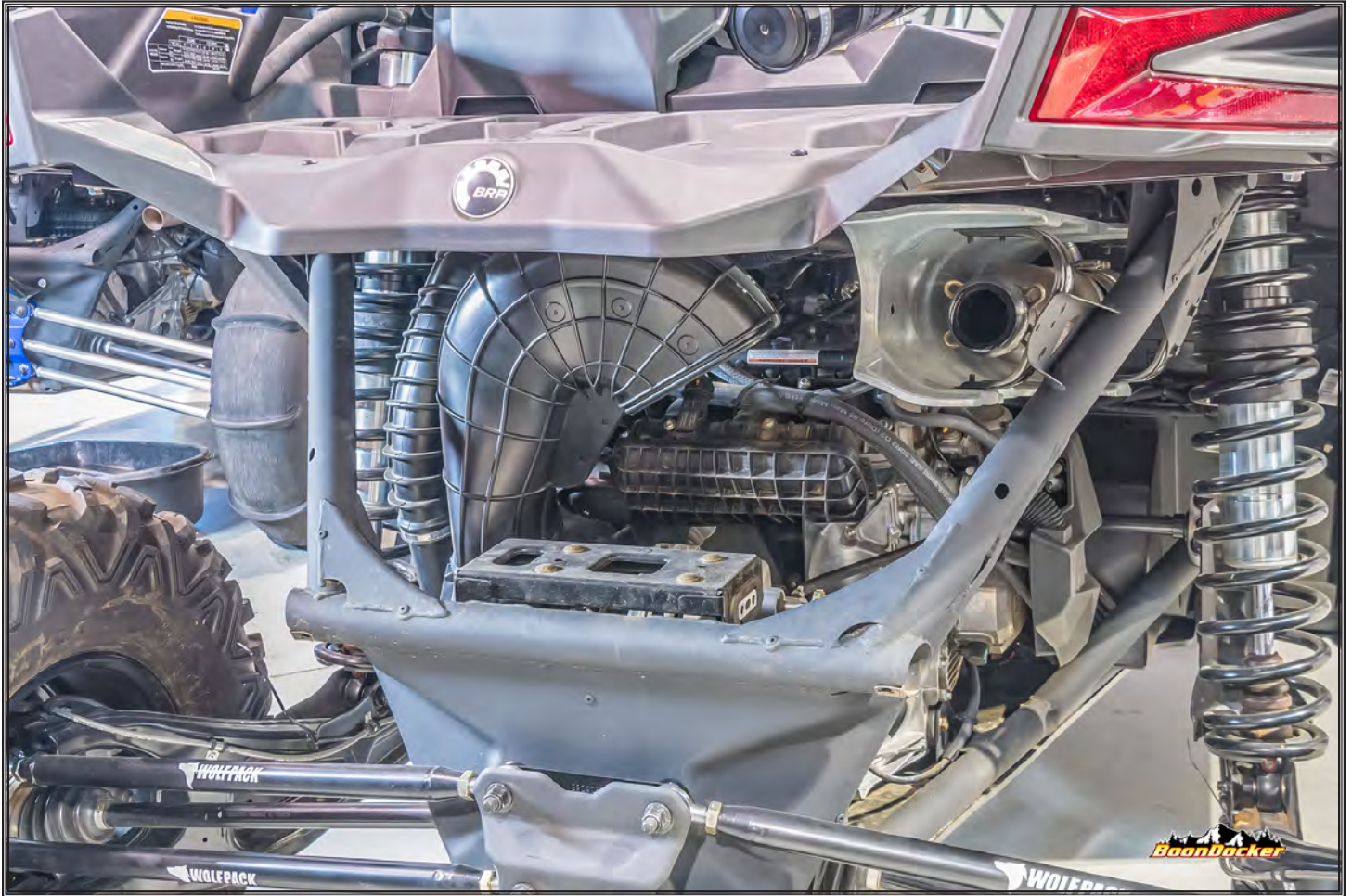
With cover removed, remove springs to release muffler from down-pipe.

Initial Teardown



Unfasten bolts holding muffler to car

Initial Teardown



Remove muffler

Initial Teardown



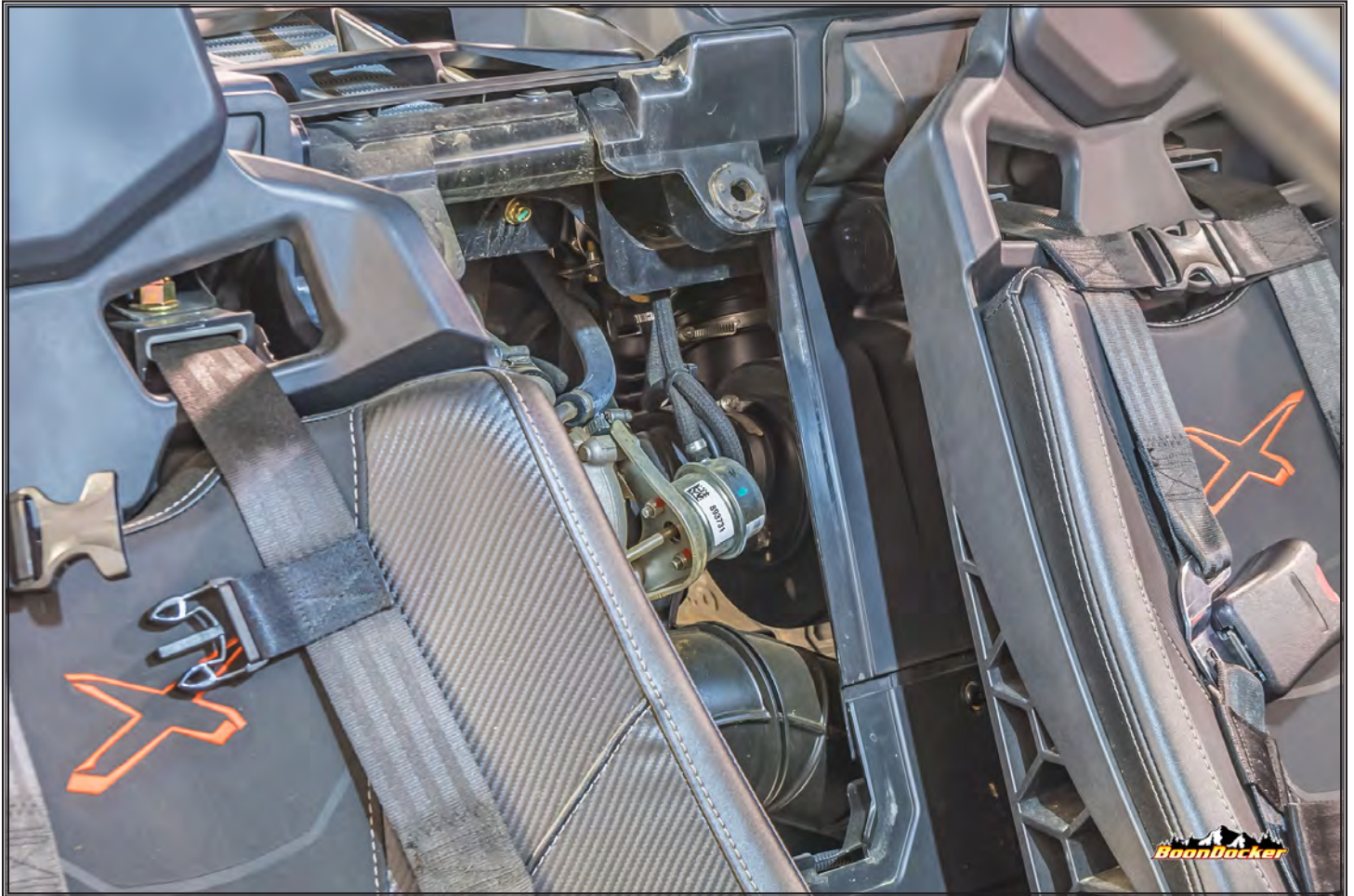
Remove bolts securing heat shield, and remove heat shield

Initial Teardown



Remove plastic cover (pulls up and out) between seats to expose the turbo.

Initial Teardown



it'll look like this

Initial Teardown



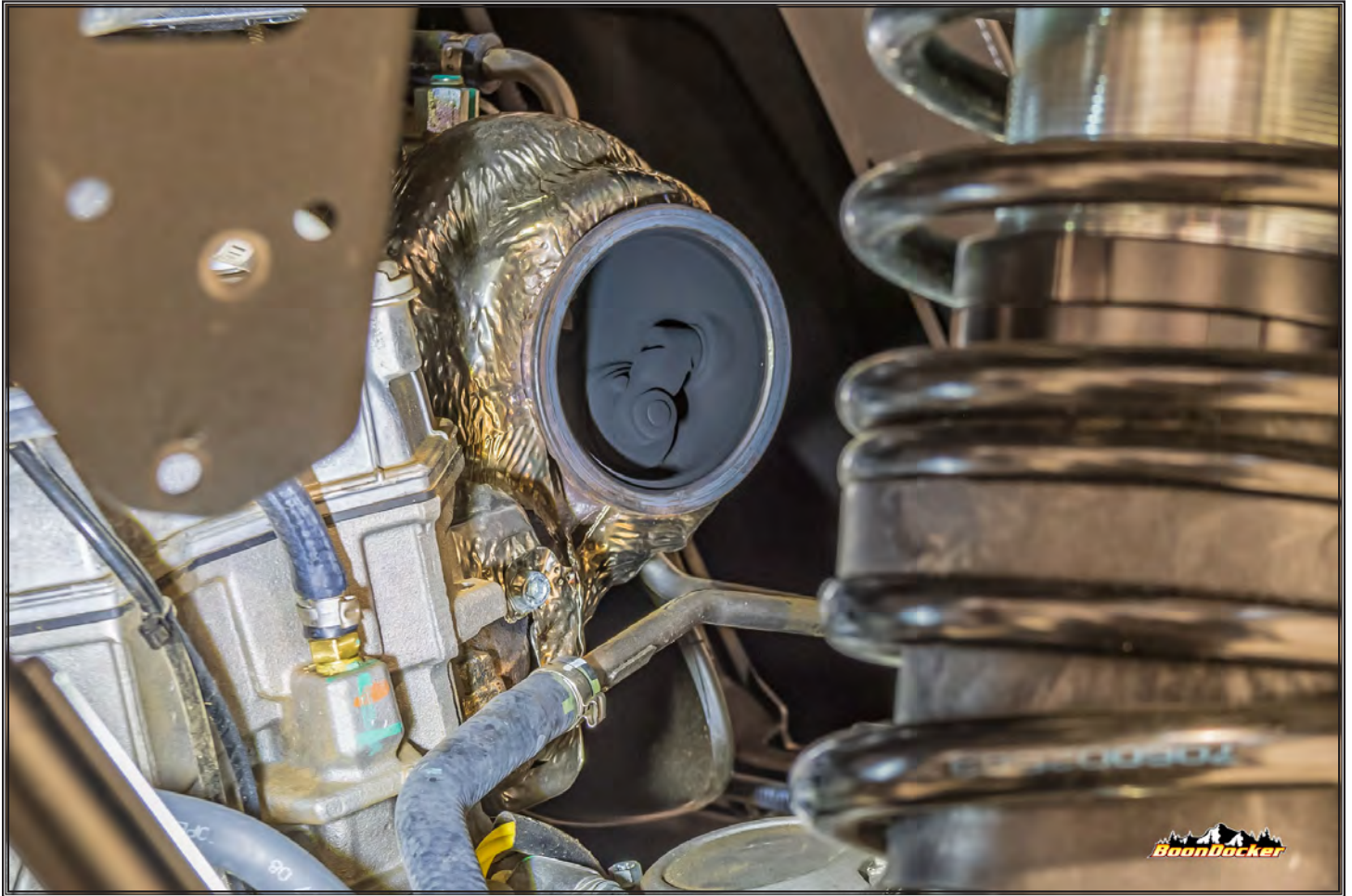
Clip zip tie holding O2 sensor cord to frame.

Initial Teardown



Go through the removed access panel to unfasten the v-bands holding the down-pipe to the turbo

Initial Teardown



Once the v-bands come off the down-pipe should pull right out.

Initial Teardown



Remove plastic covering over coolant bottle

Initial Teardown



Remove plastic covering Intercooler

Initial Teardown



Unfasten bolts holding intercooler in place.

Initial Teardown



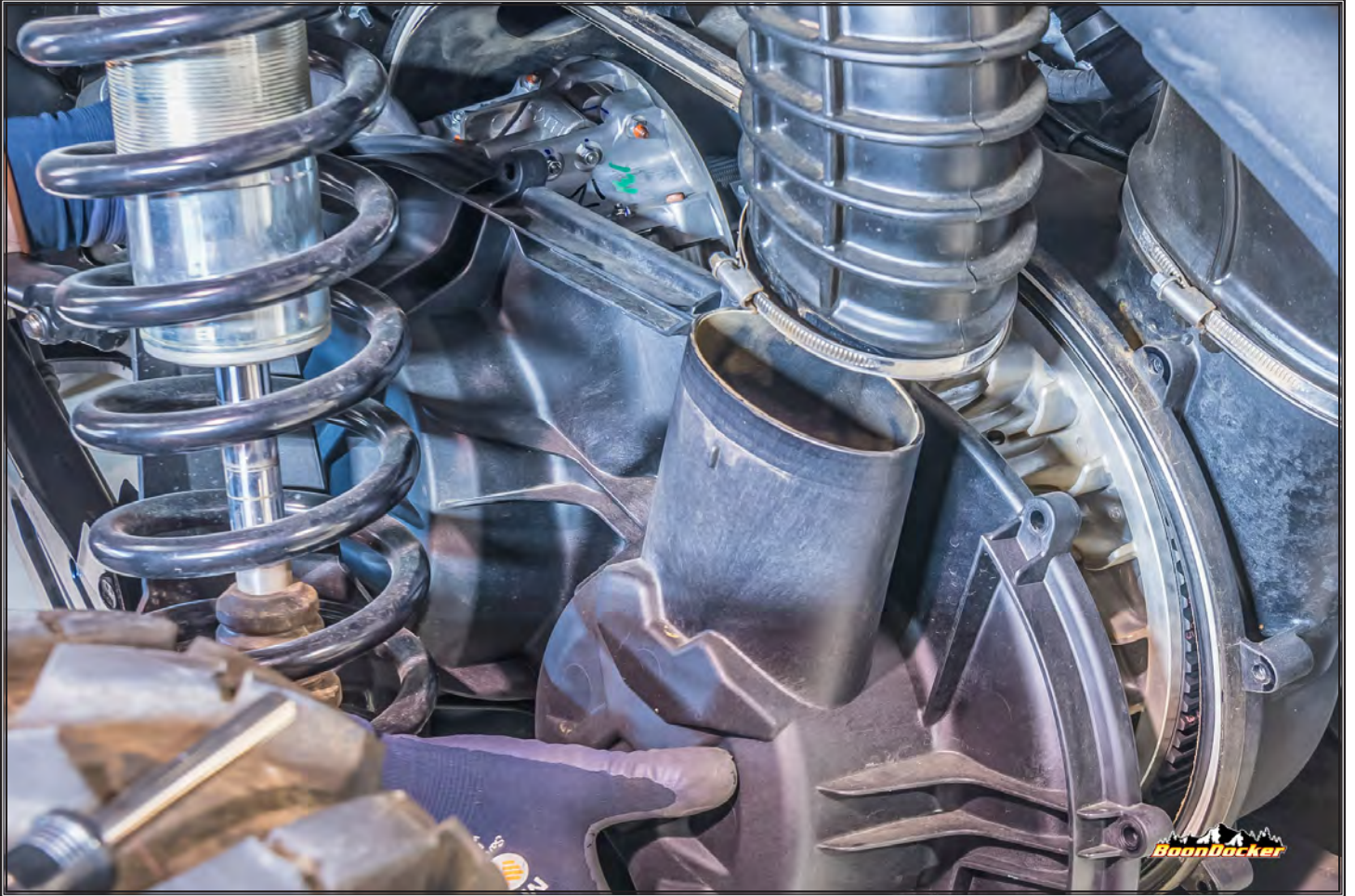
Pull intercooler assembly (intercooler & fan) out of car

Initial Teardown



Unfasten screws holding fan to intercooler. Set the fan aside for later use. The intercooler core will not be used again.

Initial Teardown



Remove outer clutch cover

Initial Teardown



Remove sway-bar linkage for additional workspace

Initial Teardown



Remove drive belt, then remove both the primary and secondary clutches from shafts. Special tools are required for this.

Initial Teardown



Remove hardware from inner clutch cover and remove cover

Initial Teardown



Remove hardware and water/oil fittings by hand to remove turbo from engine

It's very easy to strip the torx heads on the bolts. **DO NOT USE POWER TOOLS.** Use an open end wrench on the studs.

Initial Teardown



Remove oil drain line ① from OEM turbo and install on your new BoonDocker Dominator turbo.

Initial Teardown



Remove OEM Silicon Tee from air intake. Also remove OEM crank-breathe hose from Tee, but leave connected to engine.

Deep Snow Muffler



Replace OEM Tee with provided silicone Tee. Install crank-breathe hose with supplied plastic 90.

Oil System



Install your new DOMINATOR turbo!

The TOP-CENTER turbo fastener is a stud, that **MUST** be installed prior to installing the turbo.

Swap Injectors



Remove hardware to allow you to remove the fuel rail with injectors.

Be careful. The hardware that secures the fuel rail also secures ground-cables for the injectors. It's critical to not damage these connectors AND to remember to re-install them correctly.

Swap Injectors



Install provided Injectors. They have a blue band around the base.

The provided injectors have a shorter nozzle length, this is normal.

It is ESSENTIAL to properly align the grooves on the sides of the injector with the keeper on the fuel rail

Oil System



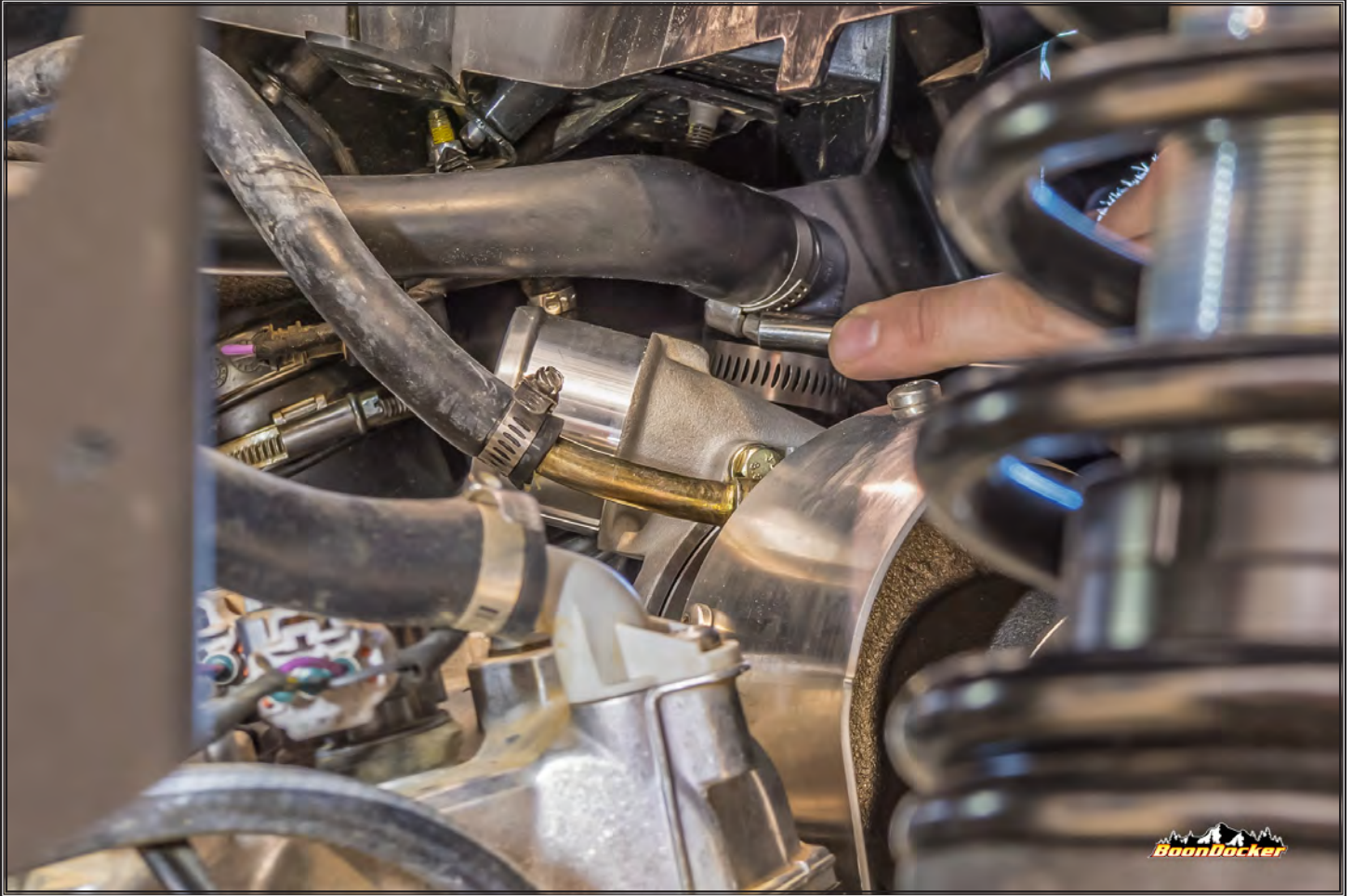
Remove the OEM water line from the water pump and install provided water line. Secure with hose clamp. Install provided plastic loom over water line to prevent cuts or damage to water line.

Oil System



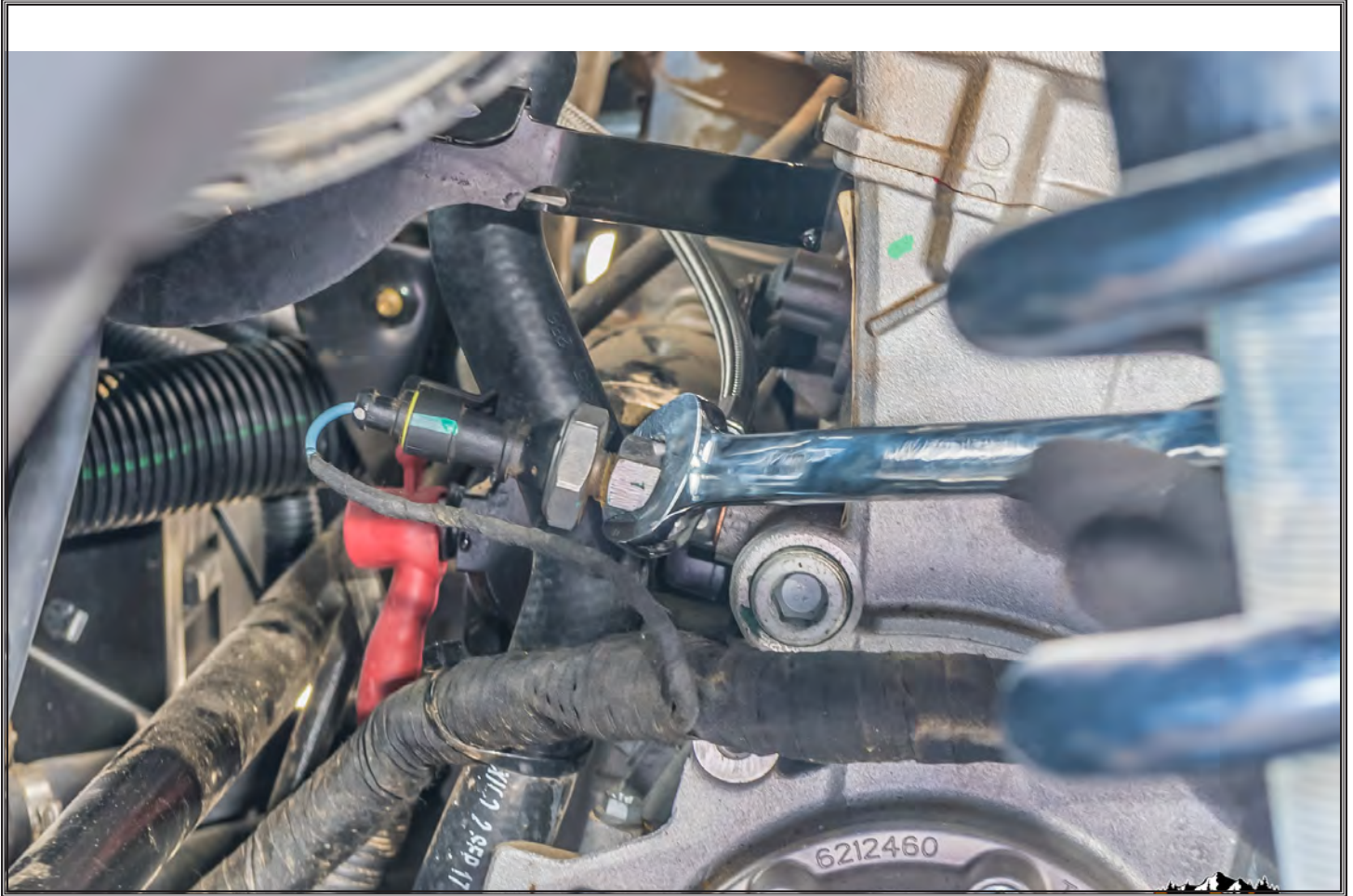
Install provided water line from pump to turbo. Secure with hose clamp.

Oil System



Secure crank breather hose on plastic fitting that leads to silicone intake fitting.

Oil System



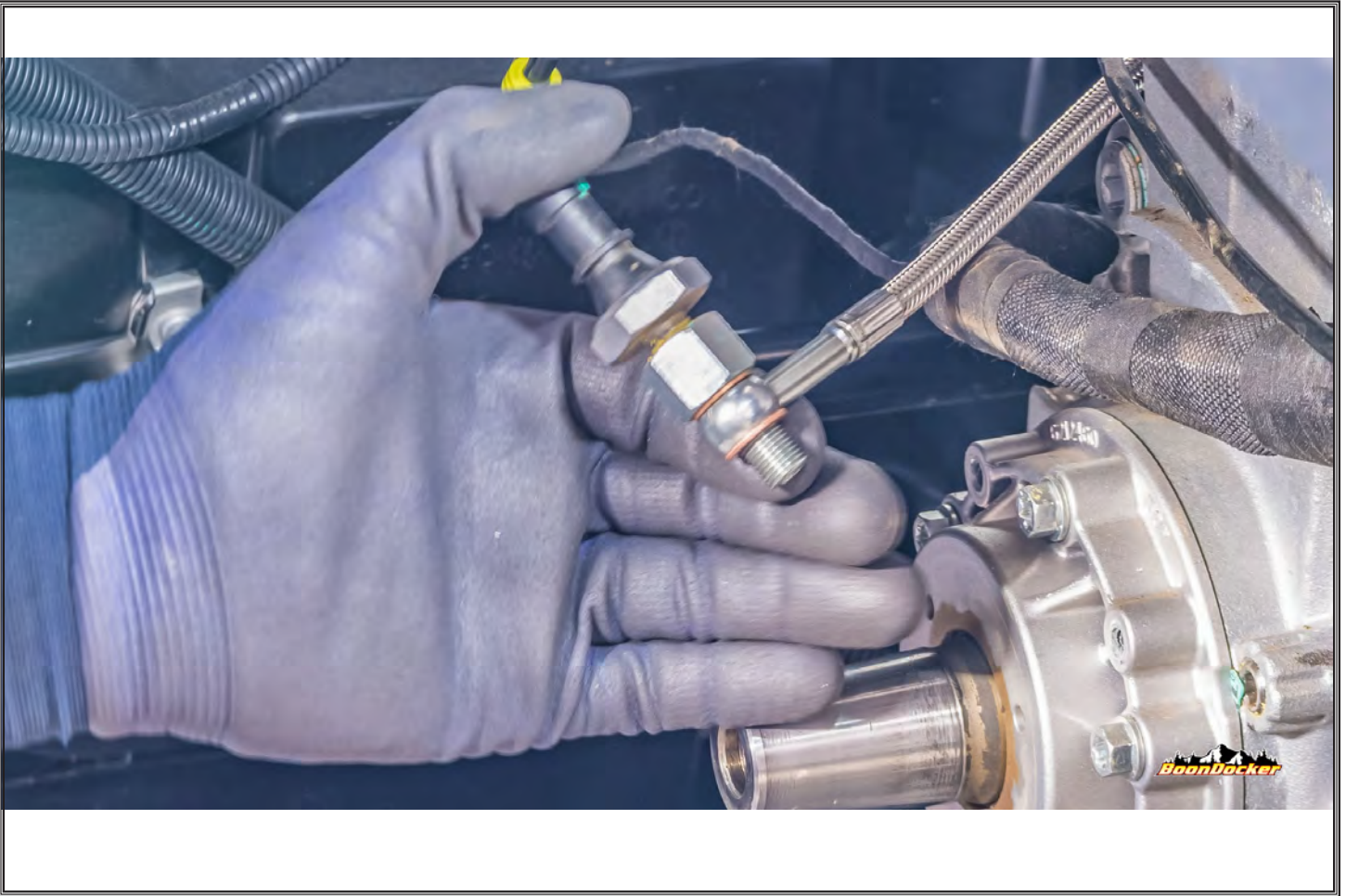
Remove stock oil-line and sensor from engine on the PTO side.

Oil System



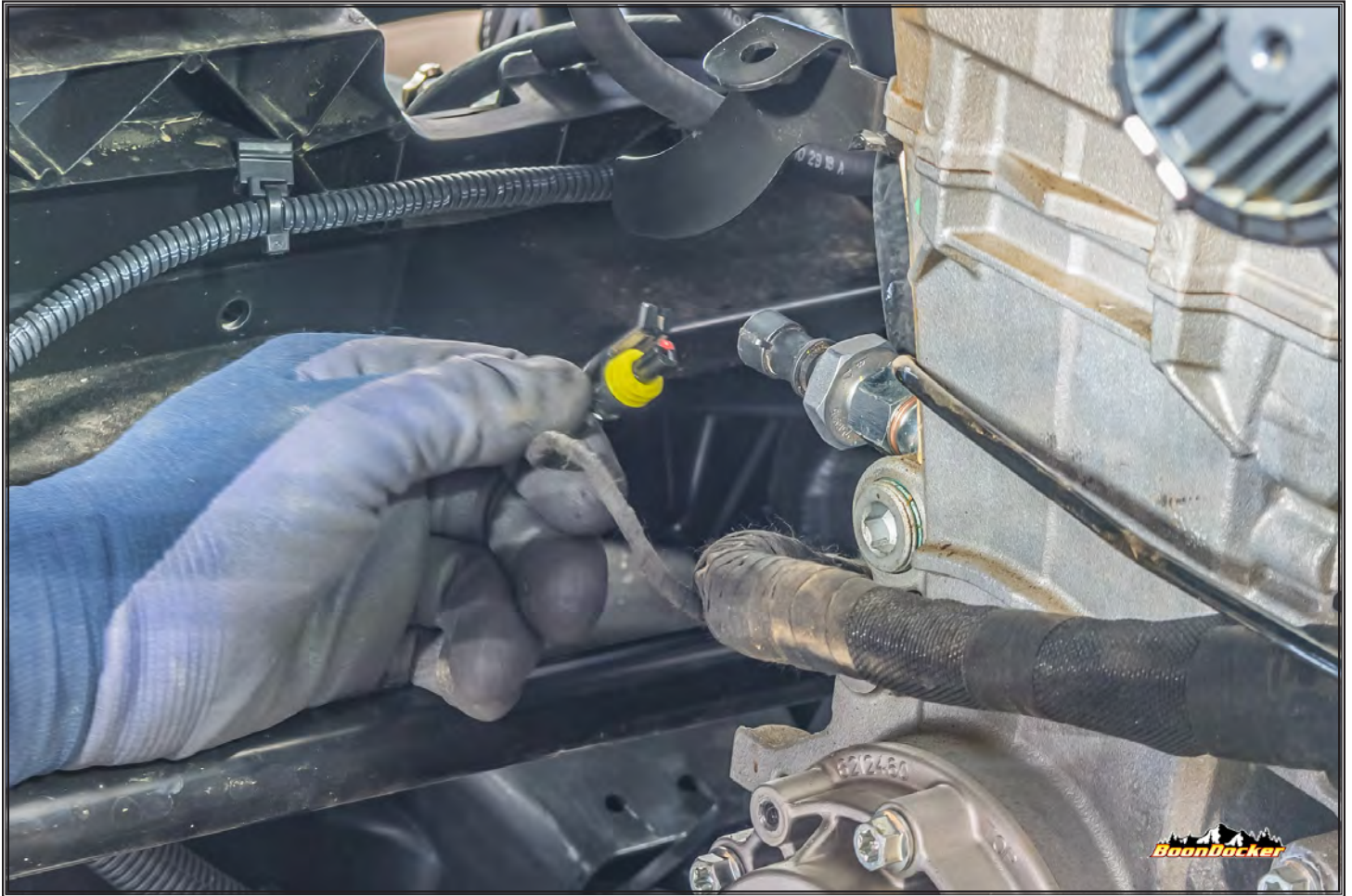
Install provided copper washers on the oil feed-line fitting.

Oil System



Install oil feed-line onto oil-feed fitting using the provided copper washers, as shown, and re-install into the PTO-side of the engine.

Oil System



Install harness to oil feed-line sensor.

Airbox Modification



Trace the three provided Frogskins evenly spaced around the airbox. Don't worry about placement, other than making sure all three "fit". Leave sufficient room for the adhesive edge of the Frogskins as shown.

Airbox Modification



Drill out inside corners big enough for your saw blade, we used a 3/8" and a small air saw to finish cutting out the inner square. Remove backing from Frogskins and place on air-box lid, using the outside line as an alignment tool.

Install Clutch Liner



Place liner into clutch cover and drill out corresponding holes in liner then rivet liner in place.

The “trick” is to un-roll the liner from the packaging, and coil it the opposite direction as it was packed. Use a large vice grip to drill out the hole, starting at ONE END of the liner. Install rivets as you go. DO NOT drill all the holes first and then try to install the rivets.

Install Clutch Liner



Install the rivets so that the flush side faces in inside of the clutch liner.

Oil System



Replace clutch cover. Install provided weights and springs (see owner's manual for configuration) and reassemble clutches. Install clutches on machine.

BOV Installation



Install Charge tube and provided silicone Tee as shown (BOV is installed in a future step).

BOV Installation



Loop the boost reference line from the boost solenoid back to itself (1 to 2) to prevent the solenoid from getting dirt or debris inside it. The boost solenoid is no longer used with this kit, and has been replaced with the manual boost Tee. For reference, one barb on the boost solenoid will return to the cold-air box, and the other two barbs will be connected to

BOV Installation



Place blow-off valve as shown. Tighten hose clamps.

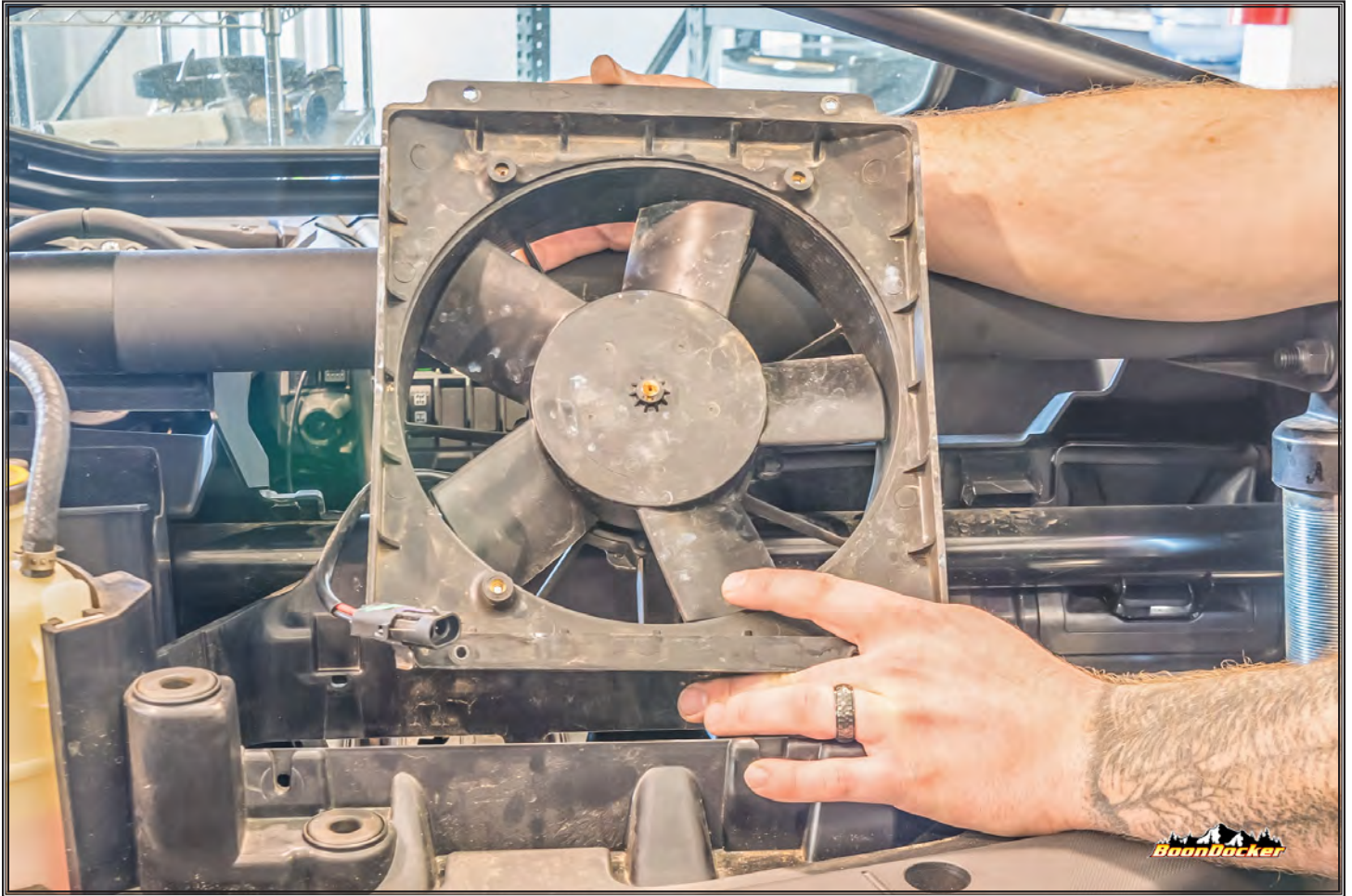
BOV Installation



On the charge-air box, remove the torx screw and plastic plate with O-ring. Use a 5/32 drill bit to drill a hole in the plastic plate to connect the hose as shown. Thread the provided brass fitting into the drilled hole. Then, reattach the plastic plate to the charge air box and secure with torx fastener. Don't forget the O-ring.

Connect the supplied hose from the brass fitting to the reference line fitting on the blow-off valve.

Cooling System



Drop fan into cavity it was originally pulled from. DON'T attach it to the intercooler first, they won't both fit.

Cooling System



Install provided intercooler, with provided hardware, onto the fan shroud (see next step). The 'Diablo' logo faces the rear of the UTV.

Turbo / Exhaust



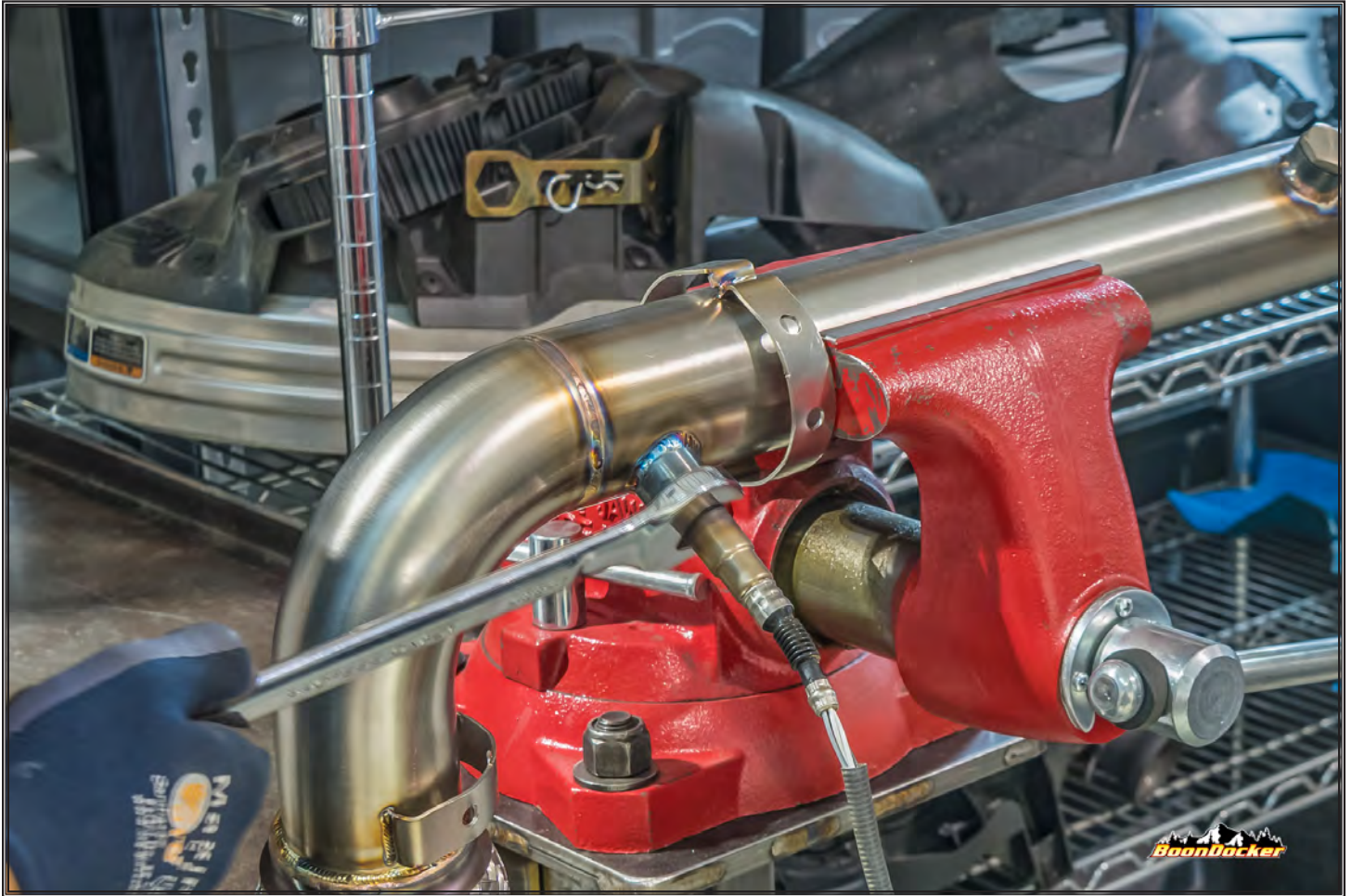
Place intercooler on top of fan, and fasten fan to intercooler

Turbo / Exhaust



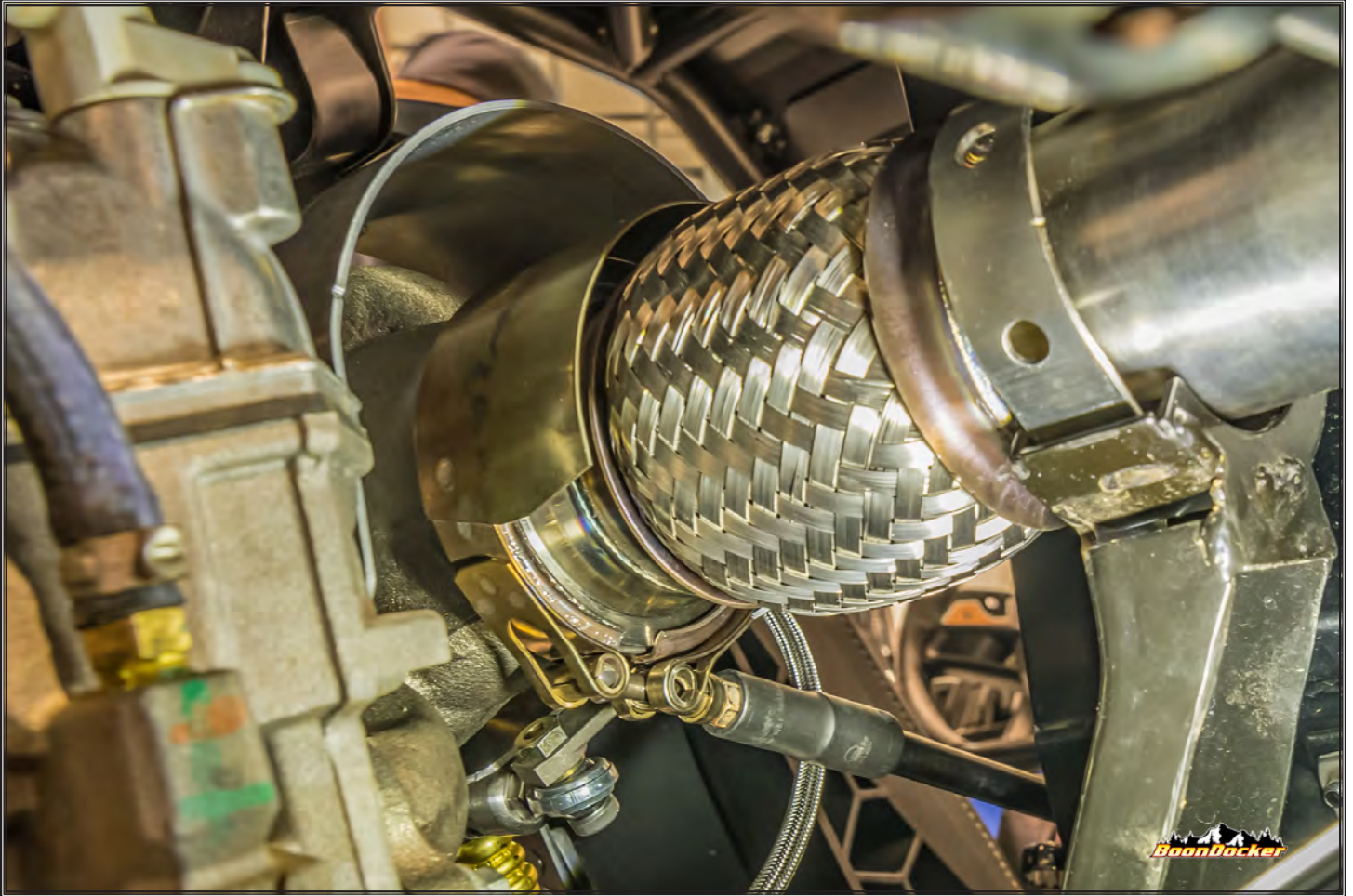
Re-fasten hoses to intercooler. Secure with hose clamps.

Turbo / Exhaust



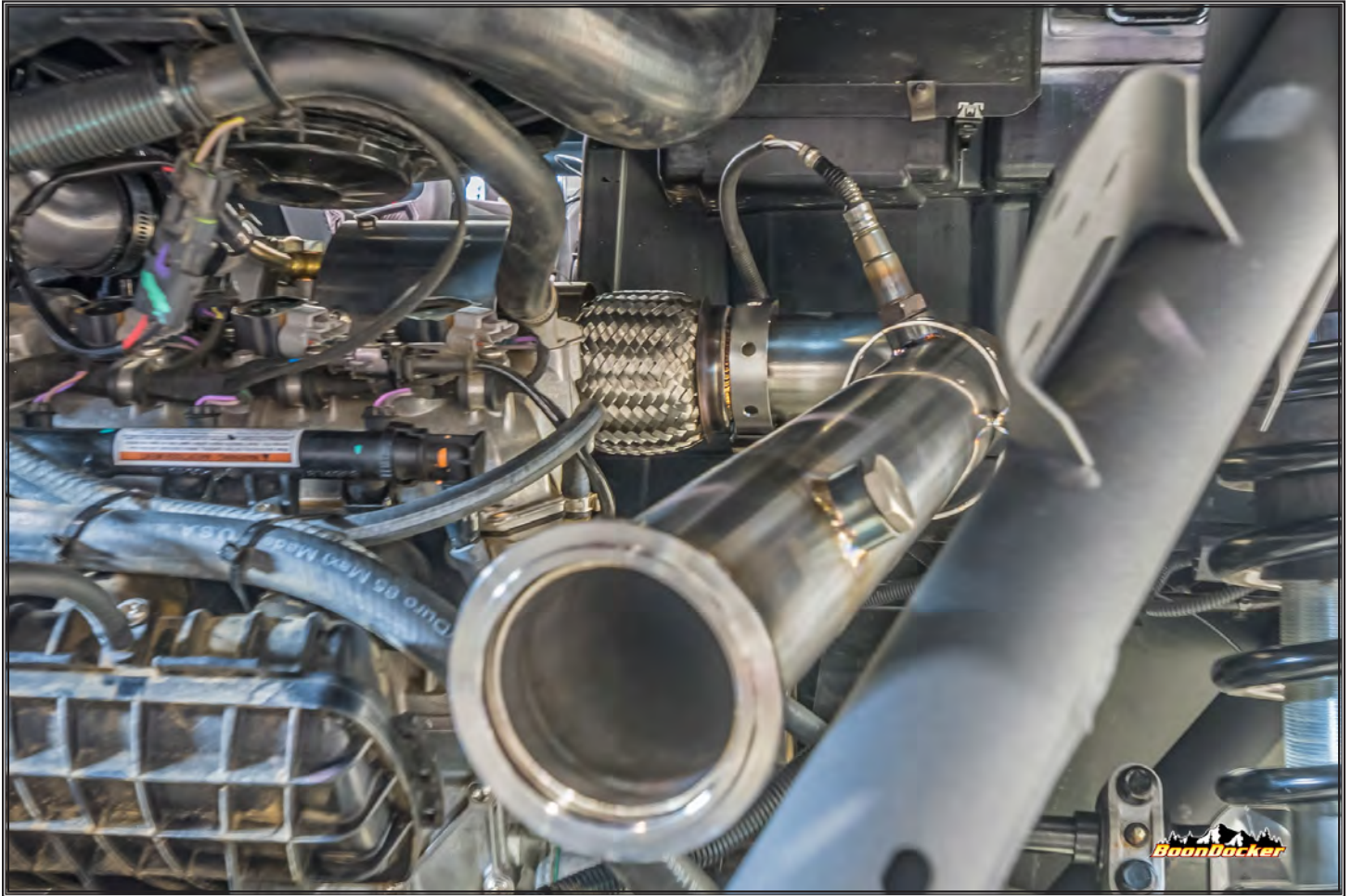
Remove OEM O2 sensor from old down-pipe and install on the provided new down-pipe.

Turbo / Exhaust



Re-attach down-pipe to turbo using OEM V-band clamp. Do not fully tighten V-band clamp until you've verified alignment and have installed muffler and muffler V-band clamp.

Turbo / Exhaust



Roughly align down-pipe in a horizontal fashion so that you can attach heat-shielding.

Turbo / Exhaust



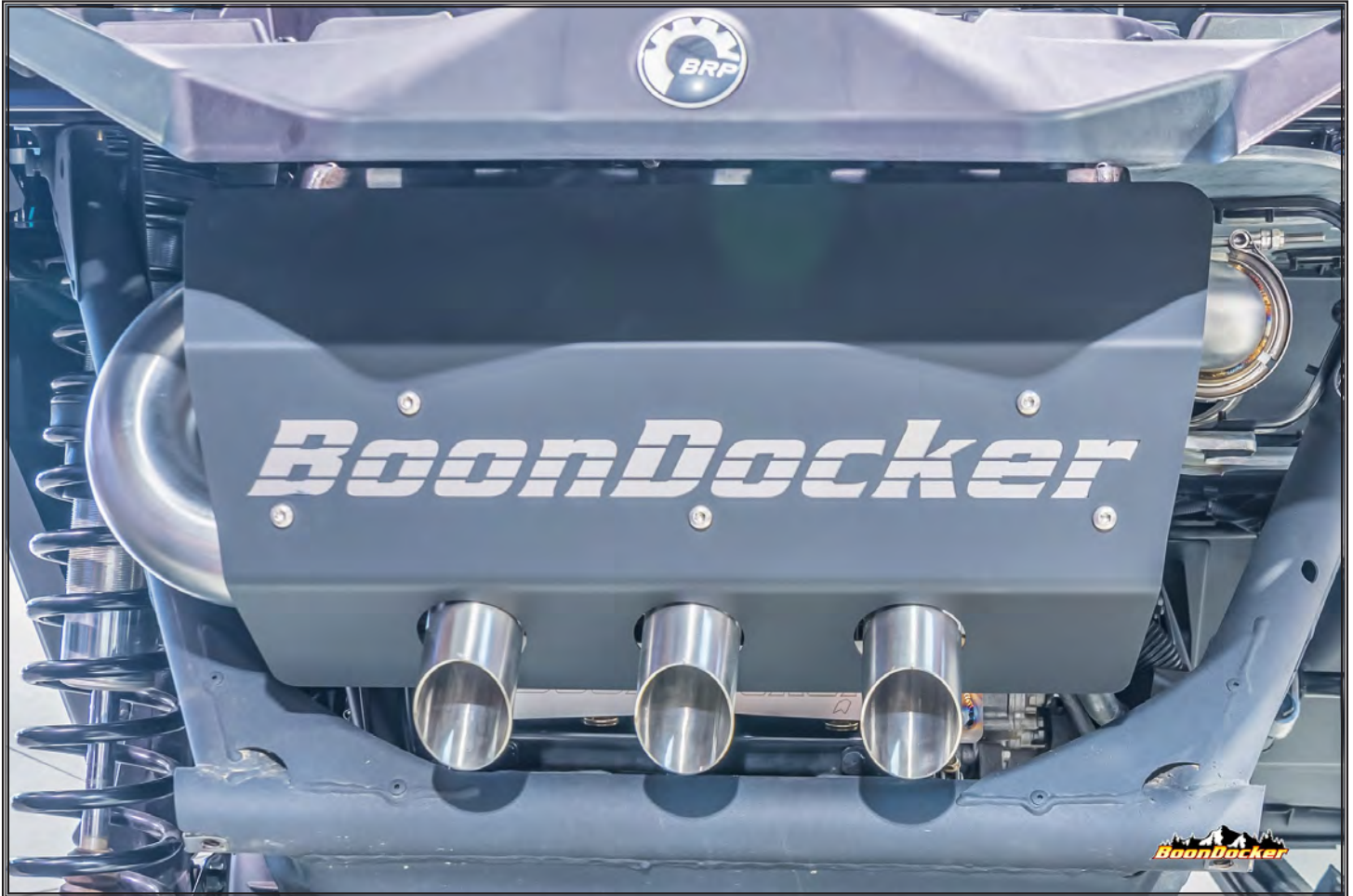
Re-fasten OEM heat shield to bracket

Turbo / Exhaust



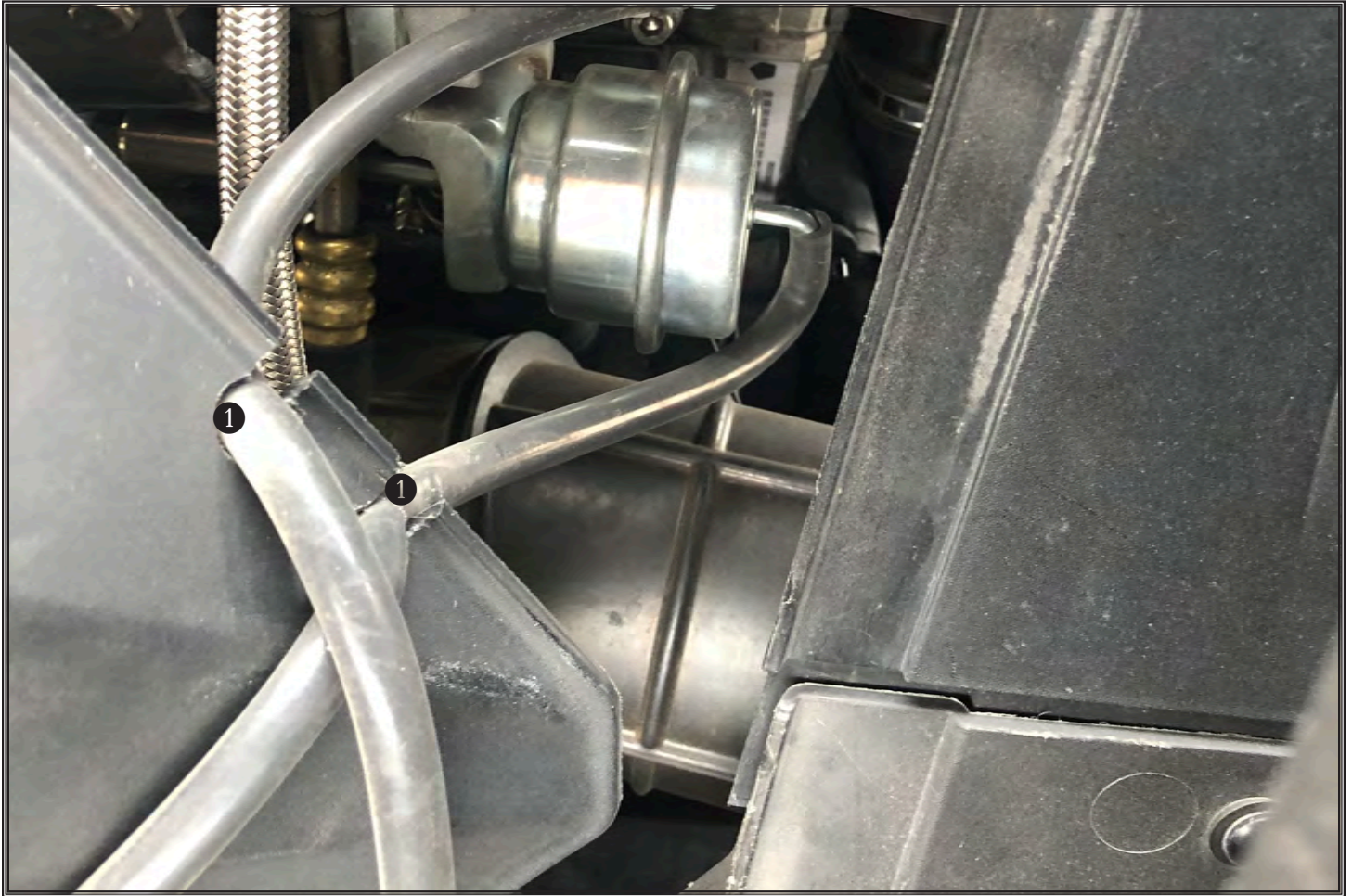
Install supplied Trident Muffler to muffler bracket using OEM fasteners removed during initial tear-down. Leave fasteners slightly loose so you can align muffler with down-pipe. Install V-band fitting to attach muffler to down-pipe. Tighten V-band fittings at muffler/down-pipe connection AND at down-pipe/turbo connection. Tighten fasteners on muffler, using a level across the cover back-plate to ensure the muffler is installed straight.

Turbo / Exhaust



Install muffer cover. We suggest using a little bit of RTV or high-temp silicone to create a barrier between the muffer cover and the back-plate to prevent vibration noise.

Turbo / Exhaust



In the turbo-access panel, make two small notches ① to allow the supplied boost-reference line to slip through. See next steps for additional location information.

Turbo / Exhaust



Install manual boost-Tee on top of the console, just in front of the turbo-access panel.

Turbo / Exhaust



Properly connect the boost-Tee to the wastegate. Pay attention to the orientation arrows on the boost-Tee. Connect line ① to the boost reference fitting on the turbo fitting. Connect line ② to the wastegate actuator as shown. Reinstall turbo-access panel. Verify that the hoses aren't kinked.

Turbo / Exhaust



CRITICAL: Prior to starting the vehicle, TURN THE MANUAL BOOST-TEE ALL THE WAY TO THE MINUS (-) SETTING. This is very important!

Go for a test drive. Allow the vehicle to come up to operating temperature. Check for boost leaks and review installation. Open the access panel and verify fasteners attaching turbo exhaust manifold to engine are tight, being careful not to burn yourself. Manually adjust the boost to your desired level. DO NOT EXCEED 22 PSI on your gauge.

HAVE FUN



GO HAVE FUN!