INSTRUCTIONS

MODEL: **Low-Boost SideKick**

BoonDocker

FITS: **2019 Polaris PRO-RMK 850**
2019 Polaris SKS 850 (155)
2019 Polaris ASSAULT 850

BoonDocker

AUTO SideKick™

Table of Contents

Contents

Contents List

REPLACE WITH STOCK IMAGE

(1) F47 Turbocharger including:
- (1) Bracket w/cotter key
- (1) Air solenoid
- Hoses, fittings, hardware

(1) Exhaust Inlet
(1) Tunnel Plate Assembly w/sleeve
(1) Exhaust Collector
(1) Muffler (depends on kit)
(1) Charge Air Box w/ Injectors & Bosch Sensor
(1) Charge Tube
(1) Exhaust Block Off Plate
(1) Coil Mount Bracket
(1) Cold Air Intake Plenum
(1) Fuel Control Box
(1) 20mL Syringe

INLET KIT BAG
- (4) Long exhaust springs
- (4) 8x25mm SS Hex bolt
- (4) 8mm SS top lock nut
- (4) 8mm SS washer

CHARGE TUBE KIT BAG
- (3) #40 Hose Clamp
- (1) #32 Hose Clamp
- (1) 2.5x2" Reducing Coupler
- (1) 2.5" Silicon 90

AIRBOX KIT BAG
- (2) 1.75 x 2.25 Silicon, notched
- (2) #36 Hose Clamp
- (2) T-bolt clamp, notched

MUFFLER KIT BAG
- (3) Short Exhaust Springs
- (10) 8" Zip Ties
- (5) 4" Zip Ties
- (4) 3/16 Steel Rivet (small)
- (2) 3/16 Steel Rivet (large)

COIL/BLOCK OFF KIT BAG
- (3) 3/16 Steel Rivet (large)
- (4) 1/4-20 x 3/4 bolt
- (4) 1/4-20 nylon lock nut

COLD AIR INTAKE KIT BAG
- (4) 70-90 mm Worm Drive Hose Clamp
- (2) 3" Silicon 90
- (1) Dart fastener

OIL LINE KIT BAG
- (1) Oil line
- (1) 1/8" Brass Tee
- (1) Polaris Oil Line

TUNNEL PLATE KIT BAG
- (2) Spring Tab
- (2) Short Exhaust Springs
- (2) Long Exhaust Springs

CLUTCH KIT BAG
- (1) 57-81g weights
- (1) Almond Primary Spring

Possible KIT variations:

1. Standard-exit muffler will not include tunnel plate assembly or exhaust block-off. Springs may differ.
2. High Boost kit will include:
   - (1) Lightweight water-to-air Intercooler
   - (1) Oil Pump Relocation Bracket
   - (18) 3/16 Steel Rivets (small)
   - (4) 3/16 Steel Rivets (large)
   - (2) 5/16 x 5/16 x 5/16 Brass Tee
   - (1) Radiator & Plate
   - (1) Water pump
   - (1) 2"x 3" Silicon Hose

Possible KIT variations:

- (2) #32 Hose Clamp
- (5) #4 Hose Clamp
- (10) 8" Zip Ties
- (1) 5/16 x 6.8" Push Lock Hose
- (5) Vibration Resistant Pinch Clamp
- (1) 15" Zip Ties
- (1) Rubber Insulated Clamp
- (2) Zinc-plated Hose
- (1) #8-32 x 3/8 Zinc Phillips Pan
- (1) 8" Length, 3/16 Boost Reference Tubing

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. 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. Installation IS YOUR RESPONSIBILITY. During the first ride, take the time to pull over, OFTEN, and check for excess heat, leaks, rubbing wires, and general installation fit and completion. BoonDocker does not cover or warranty parts against melting. We strongly recommend venting and heat-shielding as necessary. These items may not be included in the kit, but are YOUR RESPNOSIBILITY!

OPERATION

1. ALWAYS allow your vehicle to reach proper operating temperatures before driving. Refer to your owners manual.
2. Your Polaris comes with ECU-programmed "break-in". During this time, your SideKick may not perform at the optimum level. Once break-in is complete, you will likely notice more power and cleaner engine performance. During break-in, expect your snowmobile to run rich.
3. Because of excessive oiling, during break-in mode, you will need to replace your plugs more frequently. After break-in mode, replace plugs AT LEAST every 500 miles for maximum performance.
4. The SideKick turbo kit is a HIGH PERFORMANCE accessory. Proper fuel and maintenance is critical (see "FUEL")
5. 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.
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.
7. SideKick is calibrated for operation above 5,000 feet. Use below that elevation is at your own risk.
8. Check coolant levels after the first 10 minutes of operation. Coolant system may need to be bled.
9. Run your sled in "PREMIUM" mode. Switching to "ETHANOL" mode will make the vehicle run Richer (approx. 7% richer). Some sleds/fuel may require "ETHANOL" mode for a richer running condition. ONLY run "ETHANOL" mode if instructed. Refer to your owners manual to correctly configure your vehicle. DO NOT connect the "Map Jumper" unless instructed by BoonDocker.

FUEL

1. The SideKick is a HIGH PERFORMANCE accessory. Proper fuel is critical.
2. ALL KITS are initially calibrated for a 50/50 mix from BoonDocker. Using any other blend or straight pump gas may cause engine failure.
3. 50/50 Mix tunes require an exact 50% mix of 91-octane (up to 10% ethanol, and 50% 100LL Av-Gas. Using a 50/50 mix of 91/110 race gas is also acceptable.
4. When available (coming soon for Patriot 850) - Pump Gas tunes REQUIRE 91-octane fuel (or higher). Non-ethanol fuel is recommended. DO NOT use fuel with >10% Ethanol. If you're concerned about the quality of pump fuel, mix NO MORE than 15% Av-Gas. Using higher octane than required will cause poor performance.
5. When available (coming soon for Patriot 850) - AV-Gas tunes REQUIRE 100LL (or higher), Av-Gas tunes: INTERCOOLER REQUIRED.
6. USE ONLY THE FUEL DESIGNED FOR YOUR KIT!
7. 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. .
8. Operating your vehicle with old/degraded fuel may cause engine failure
9. Operating your vehicle with the incorrect fuel for your tune may cause engine failure.

CLUTCHING & CLUTCH MAINTENANCE

1. A primary-clutch puller is REQUIRED 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 SideKick. 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.
5. Weights may ship pre-loaded, or may be blank. Load weights 2-3-3-2 (from heel to toe). Total weight should be approximately 73g per weight for 50/50 SideKick.
6. Any clutch-weight modification MUST be done to all three weights in unison. DO NOT run unbalanced weights. Additionally, the magnets are polar. To change weighting, pull ALL magnets from the weights (all holes), align in a stack, and repopulate weights with magnets to preserve polarity. DO NOT just add one weight without preserving polarity of the entire magazine of weights. Failure to preserve polarity will lead to magnets being 'thrown' from weights and potential clutch damage and/or personal injury.
7. Turbocharged Polaris Patriots are expected to turn 8550 +/- 100 RPM's. Use provided adjustable weights to keep RPMs at recommended levels.
8. Adjusting peak RPM is possible by adding/removing weight from the toe.
9. It is possible for magnets to be ejected from weights if they're not properly seated. We suggest using a small amount of glue as a precationary measure.

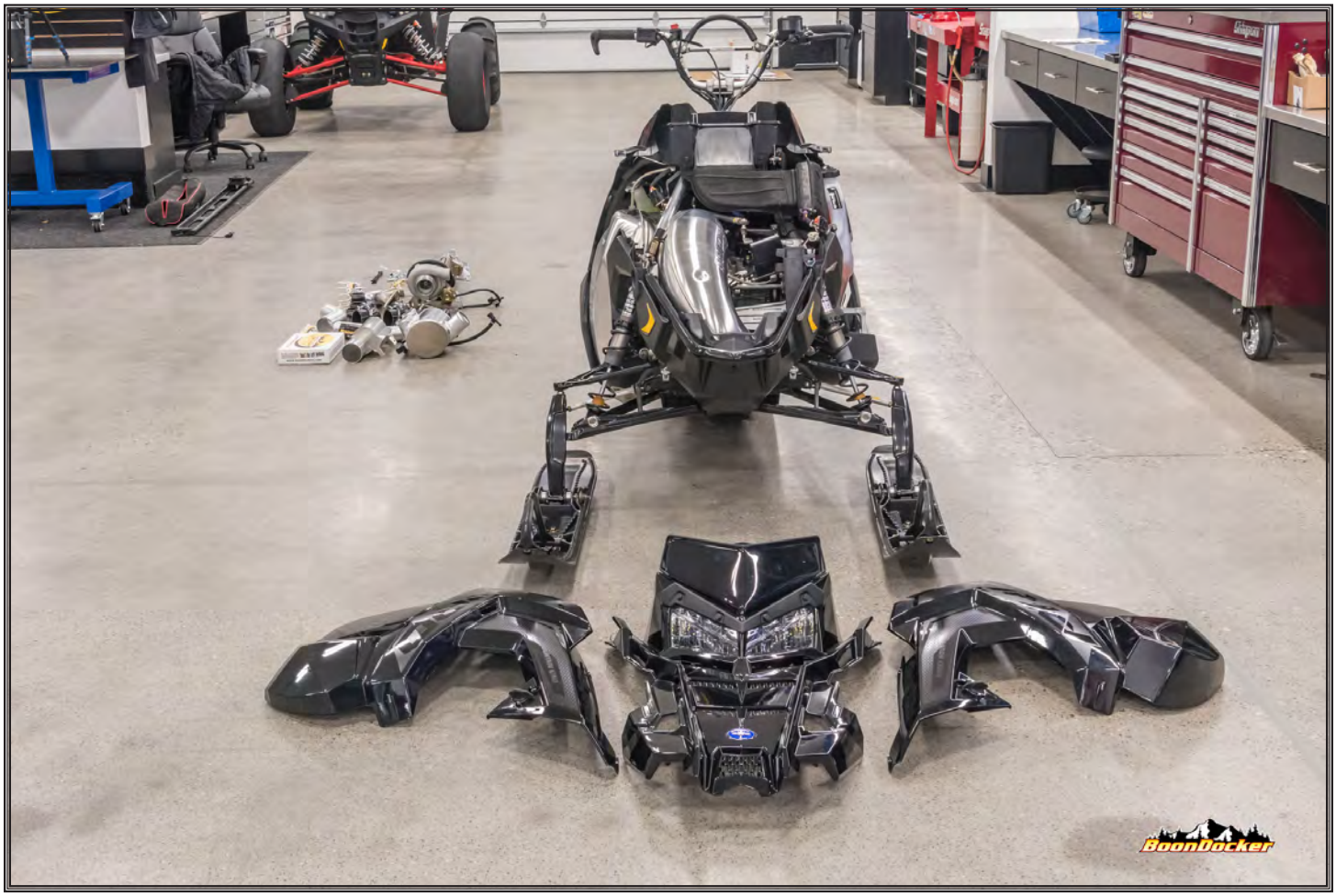
Prep Work Area

Verify kit contents against included contents list.

DO NOT lift turbo assembly by the plastic bag. Carefully remove turbo assembly from bag to avoid dropping and/or damaging turbo assembly!

READ THE ENTIRE INSTRUCTION PACKET BEFORE PROCEEDING!

Initial Teardown



Remove hood and side panels. To remove hood, disconnect dash/headlight harness at connector, located on the mag side, near the overstructure/on top of air-box.

Initial Teardown

Remove “dart” fasteners from console ❶. Remove Torx fasteners from airbox assembly ❷. Repeat on both sides. Cut the zip tie holding the EGT & Hood Harness.

Initial Teardown

Lightly pull the rope handle to allow slack. With console piece slighty pulled back, disconnect the wiring harness for the console switches, located on the back side of the console. Slide console piece behind rear of seat and secure as shown.

Initial Teardown

Use OEM provided clutch-tool to spread sheaves on secondary and remove belt. Remove secondary clutch.

NOTE: There are washers/spacers behind the secondary clutch. These may “stick” to the secondary clutch. Do not lose or misplace them. Keep note of their orientation.

Initial Teardown

Disconnect level-sensor wire harness from oil tank. Remove bolts that secure oil tank/clutch guard to the snowmobile. Slide tank/guard out of location and secure (oil feed line remains attached)

DO NOT allow oil tank to drop.

Initial Teardown

Remove rear fasteners from stock air intake.

Initial Teardown

Disconnect OBDI port from airbox plenum and cut Zip-Tie ❶. Leave the grey fastener. Remove both fabric-covered stock air intake plenum (not reused) ❷. Save plastic dart-fasteners for later use.

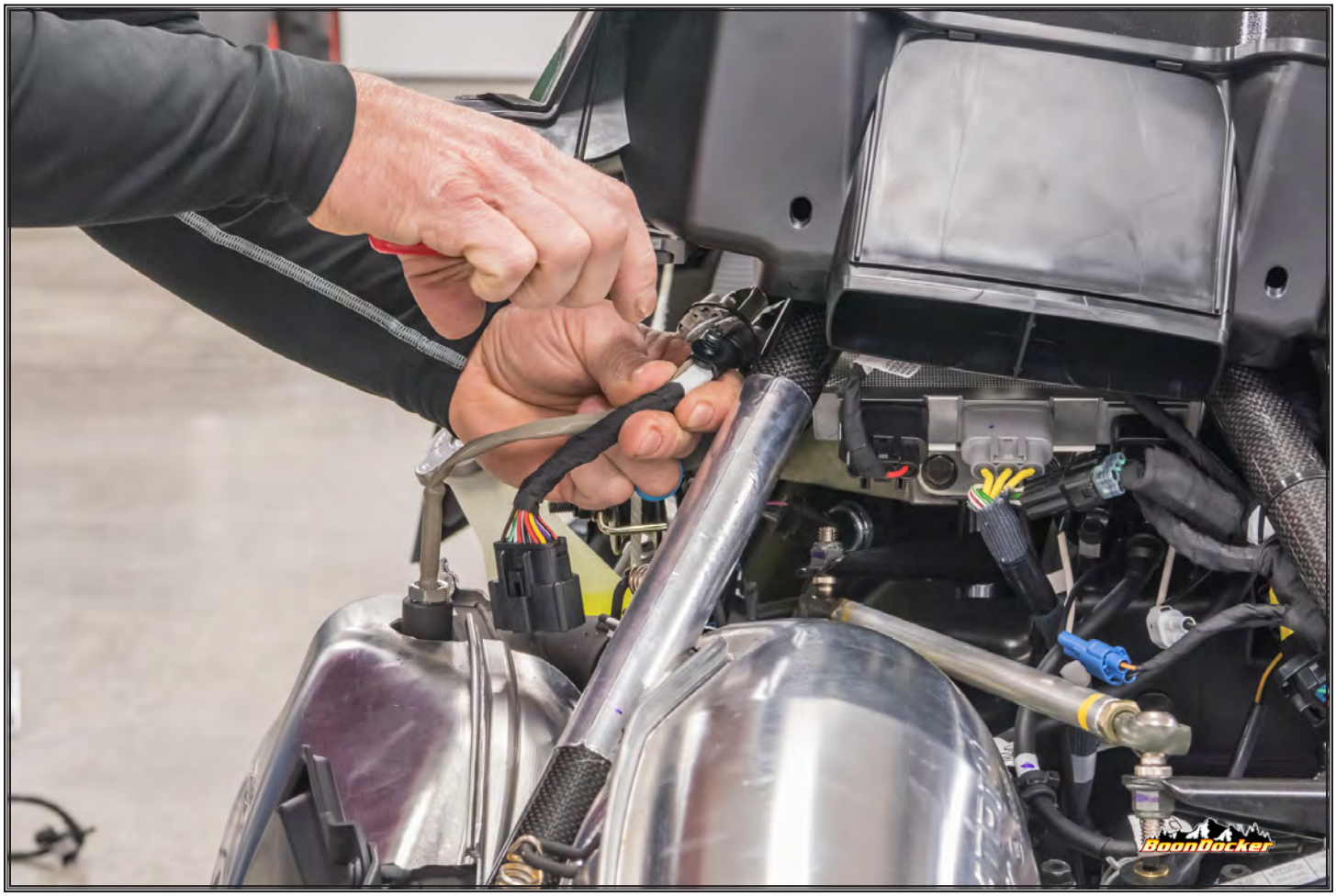
Initial Teardown

Disconnect ECU wiring harnesses by pressing the release tab(s) and gently pulling down on harness to prevent wire fatigue. Unbolt ECU from air intake/overstructure and set aside for future use.

Initial Teardown

Remove air intake fasteners

Initial Teardown



Remove wire-harness fastener (loom dart) from air intake. Remove and set aside air intake to prep for assembly and for ease of access.

Initial Teardown

Remove stock TBAP sensor from stock air-box.

Initial Teardown

Loosen throttle body clamps (prepare to remove airbox)

Initial Teardown

Unbolt the two coils from stock air-box

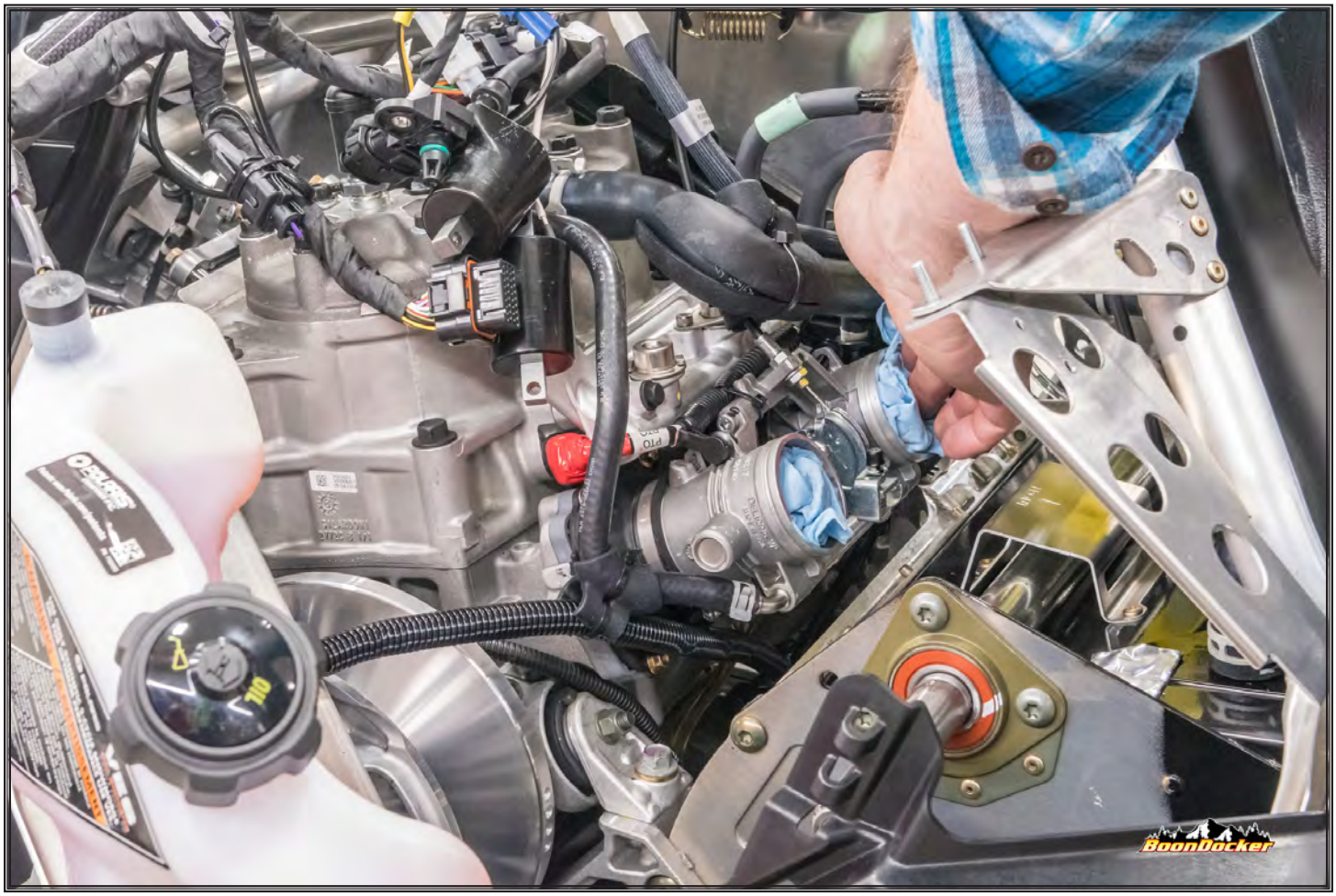
Initial Teardown

Cut zip-tie as shown to free wire harness from stock air-box

Initial Teardown

Remove stock air-box as shown (not reused). Use caution to avoid stress to wire harness.

Initial Teardown



Prevent any foreign-object contamination by blocking off throttle bodies.

DO NOT USE any rag or towel that will shed particulates. DO NOT USE a rag or towel that is dirty or can shed debris.

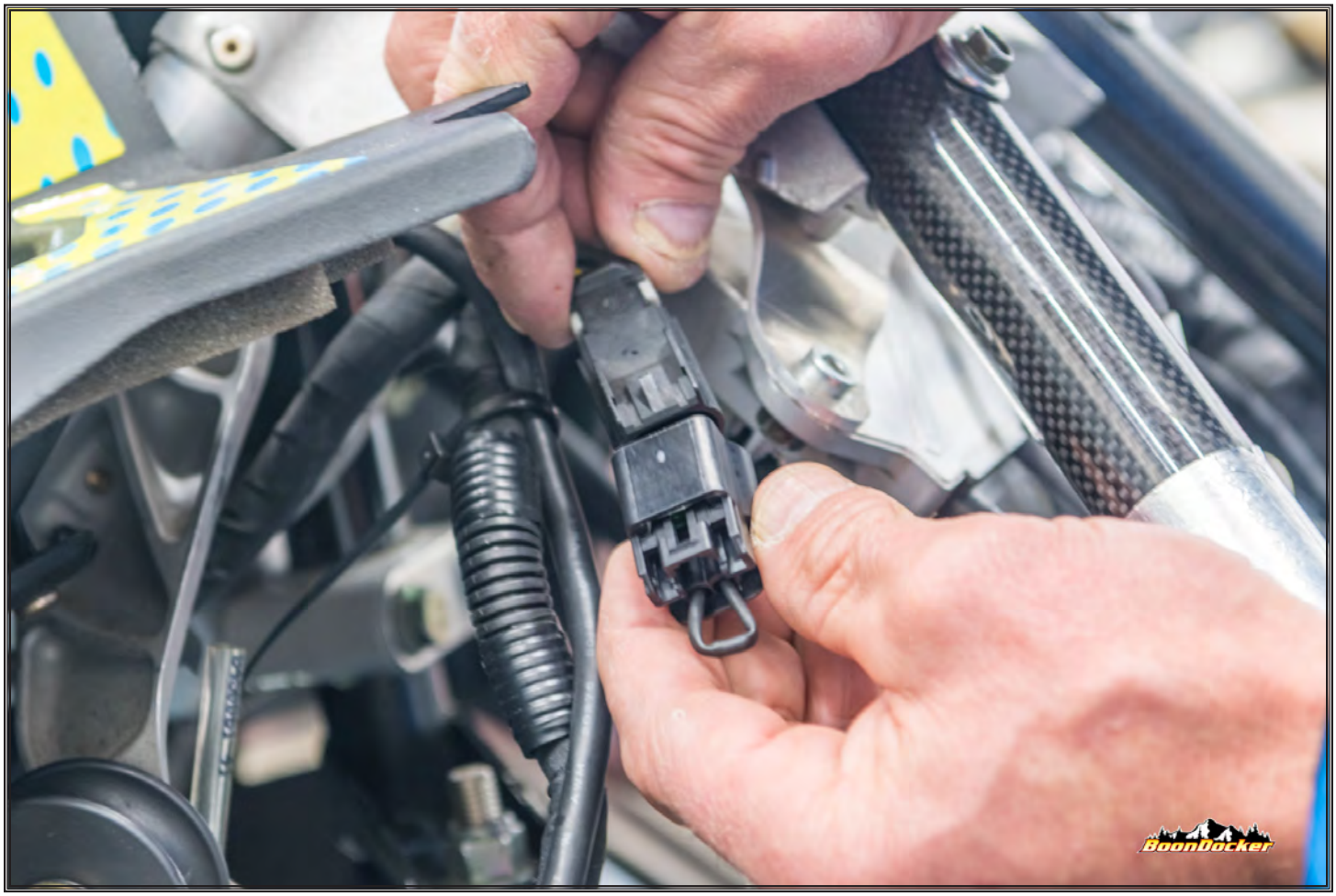
Initial Teardown

Remove exhaust springs from muffler assembly

Initial Teardown

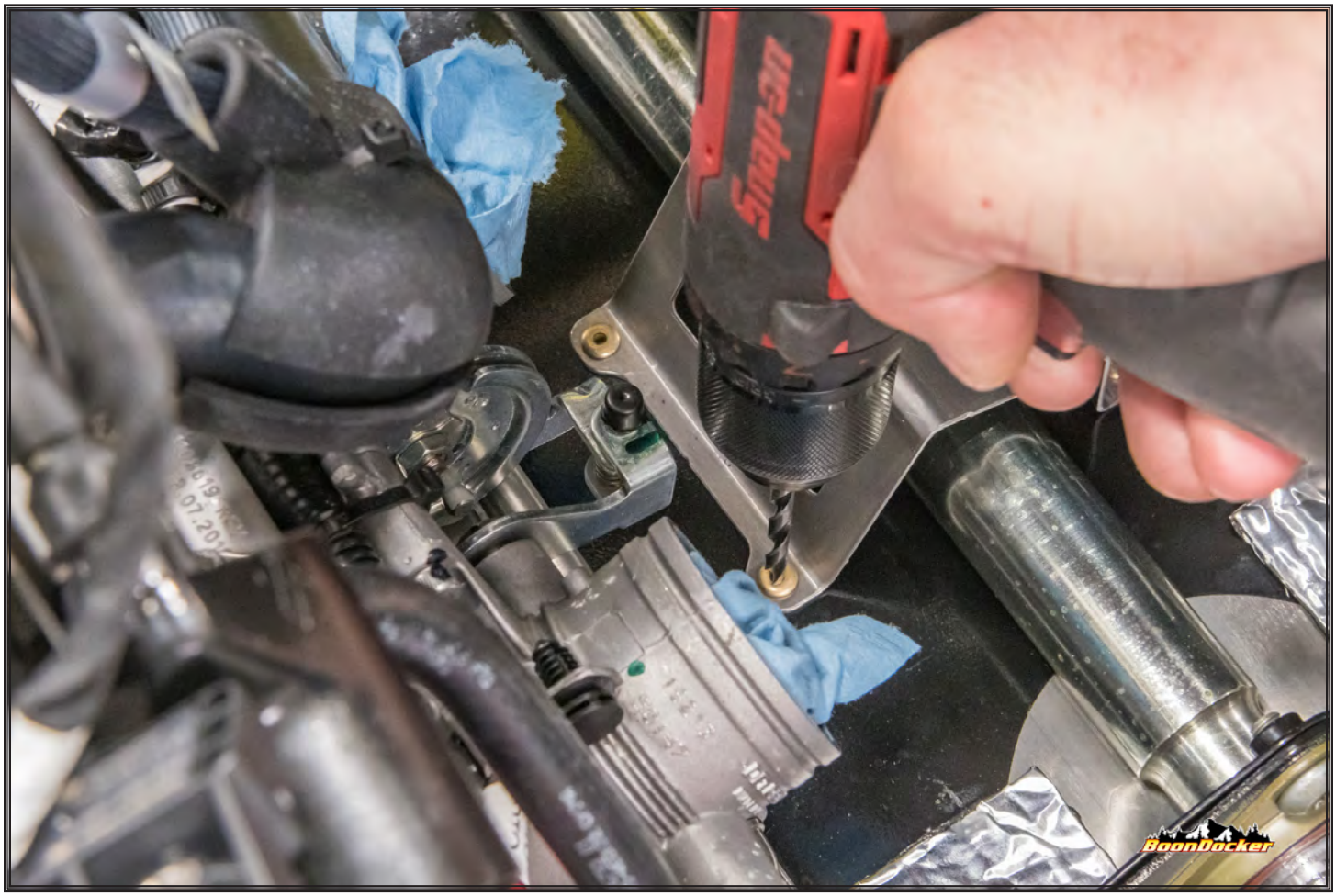
Cut the Zip-Tie to allow you to unplug the factory muffler-temp sensor. Unplug sensor from harness. Leave stock muffler-temp sensor probe installed in muffler (this part is not re-used with turbo installation). Remove muffler assembly from snowmobile.

Initial Teardown



Plug supplied resistor into harness, directly in place of factory muffler temp-sensor. Resistor is packaged with the control box and electronics.

Initial Teardown



Drill out rivets to remove jack-shaft guard. Remove jack-shaft guard. Clean up debris.

Deep Snow Muffler

DEEP SNOW MUFFLER INSTALLATION!
If you have a standard exit exhaust, skip next steps
Drill out rivets to remove stock exhaust guard and grommet.

NOTE: Before tipping sled, secure oil tank.

Deep Snow Muffler

DEEP SNOW MUFFLER INSTALLATION ONLY: Drill out rivets to remove foot-plate. Remove foot-plate (used in future steps)

Deep Snow Muffler

DEEP SNOW MUFFLER INSTALLATION ONLY: Remove rear-skid bolts: (Mag side only on front ❶, both sides for rear suspension attachment brackets ❷). This will ease tension on the track and allow for easier access and re-installation.

NOTE: Slightly loosen rear hardware from both sides before removing hardware, otherwise, the hardware adhesive on those bolts may be difficult to remove

Deep Snow Muffler

DEEP SNOW MUFFLER INSTALLATION ONLY: Remove hardware from bulkhead/tunnel as shown (4 nuts and washers). You may need to use a screwdriver to loosen washers, as the factory will have applied glue to the back-side of the washer(s).

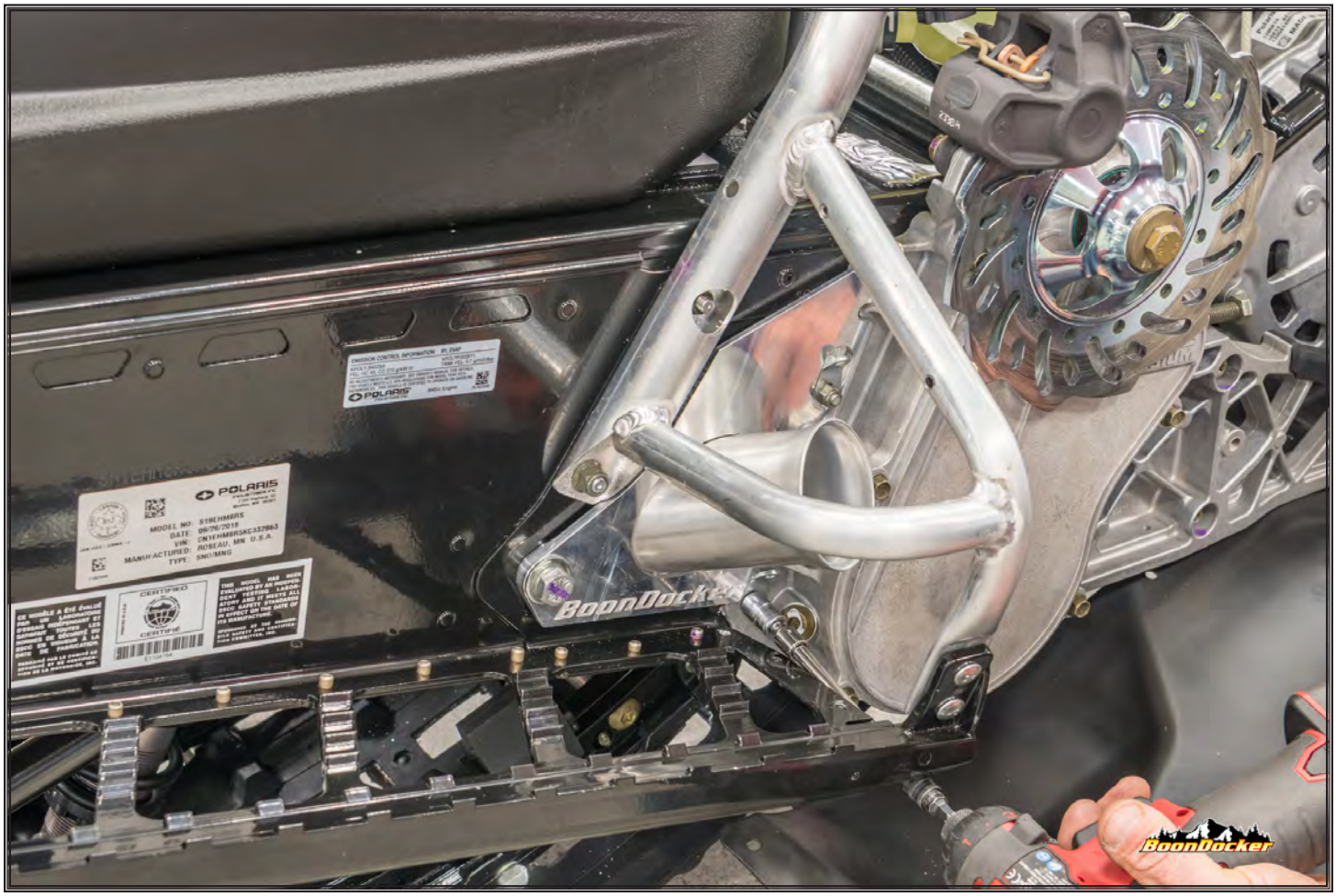
Deep Snow Muffler

DEEP SNOW MUFFLER INSTALLATION ONLY: Print off tunnel bracket template (included in instruction packet). Be sure to print it full-size. Cut out and align with bulk-head bolts AND rear-skid mounting hole. Properly printed, the template will exactly fit the pattern of bolts. Trace cut line per template. Cut hole in tunnel. Use a 2 3/4 hole saw to start the process, using existing rivet as a pilot hole. Use a saw and/or die-grinder to complete cut.

MAKE SURE TRACK IS CLEAR WHEN CUTTING HOLE TO PREVENT DAMAGE.

NOTE: If you tip the sled to drill this hole, cover the engine compartment to prevent metal shavings from entering the MAG side of the motor.

Deep Snow Muffler

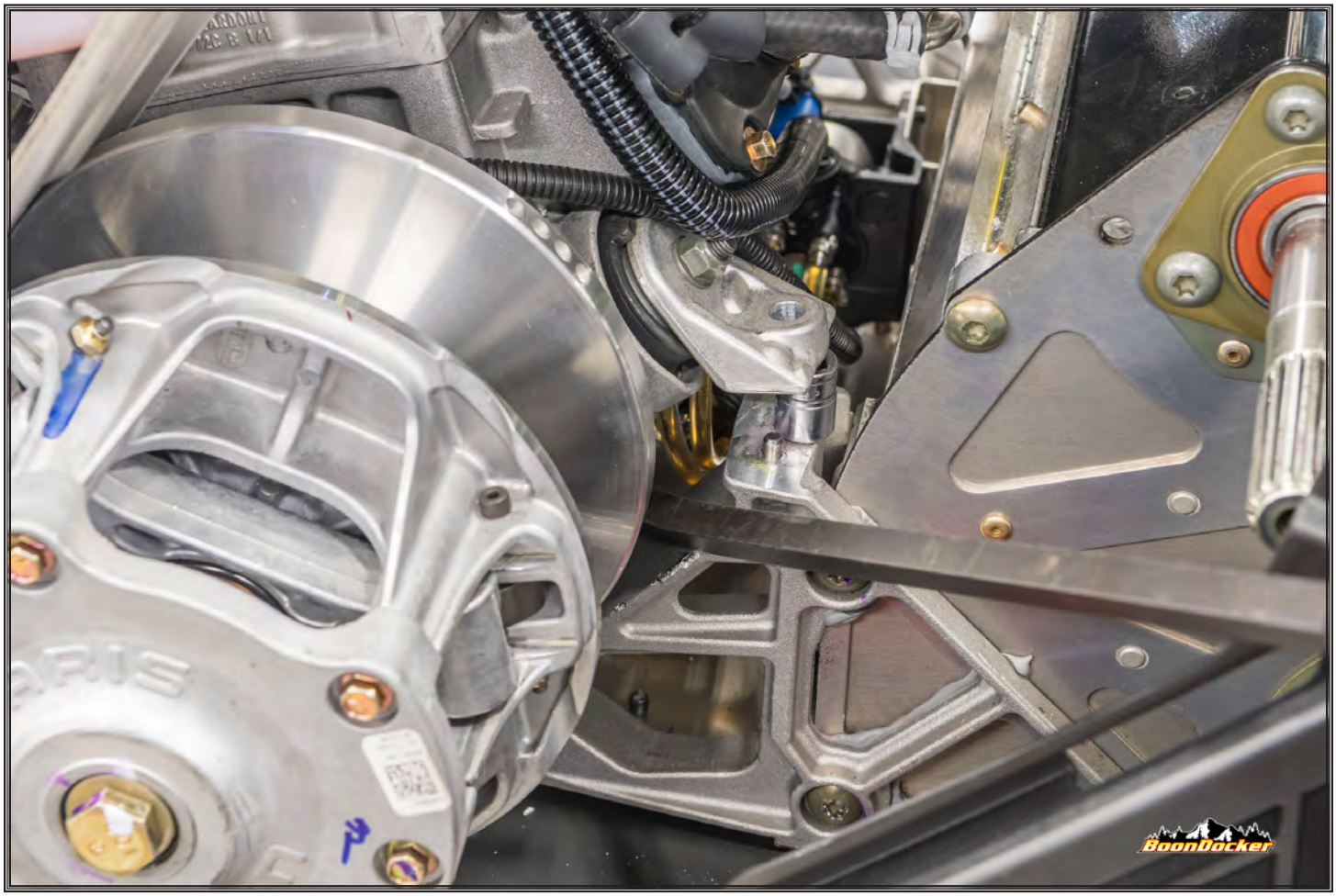


DEEP SNOW MUFFLER INSTALLATION ONLY: Install tunnel-bracket and spring tabs as shown. Don't install the supplied stainless exhaust sleeve into the bracket, yet. Tabs should be oriented "up", following the recessed groves in the tunnel plate. Re-install rear-skid mounting hardware. Tighten to factory spec. Expect to use the track as leverage to align bolt holes. Start with the front bolt, then do the rear bolts.

Deep Snow Muffler

DEEP SNOW MUFFLER INSTALLATION ONLY: Use supplied rivets to install exhaust block-off plate. Install the rivets from the bottom side, as shown. Some customers prefer to use silicone to seal the plate to the belly-pan. Either way is OK.

Oil System

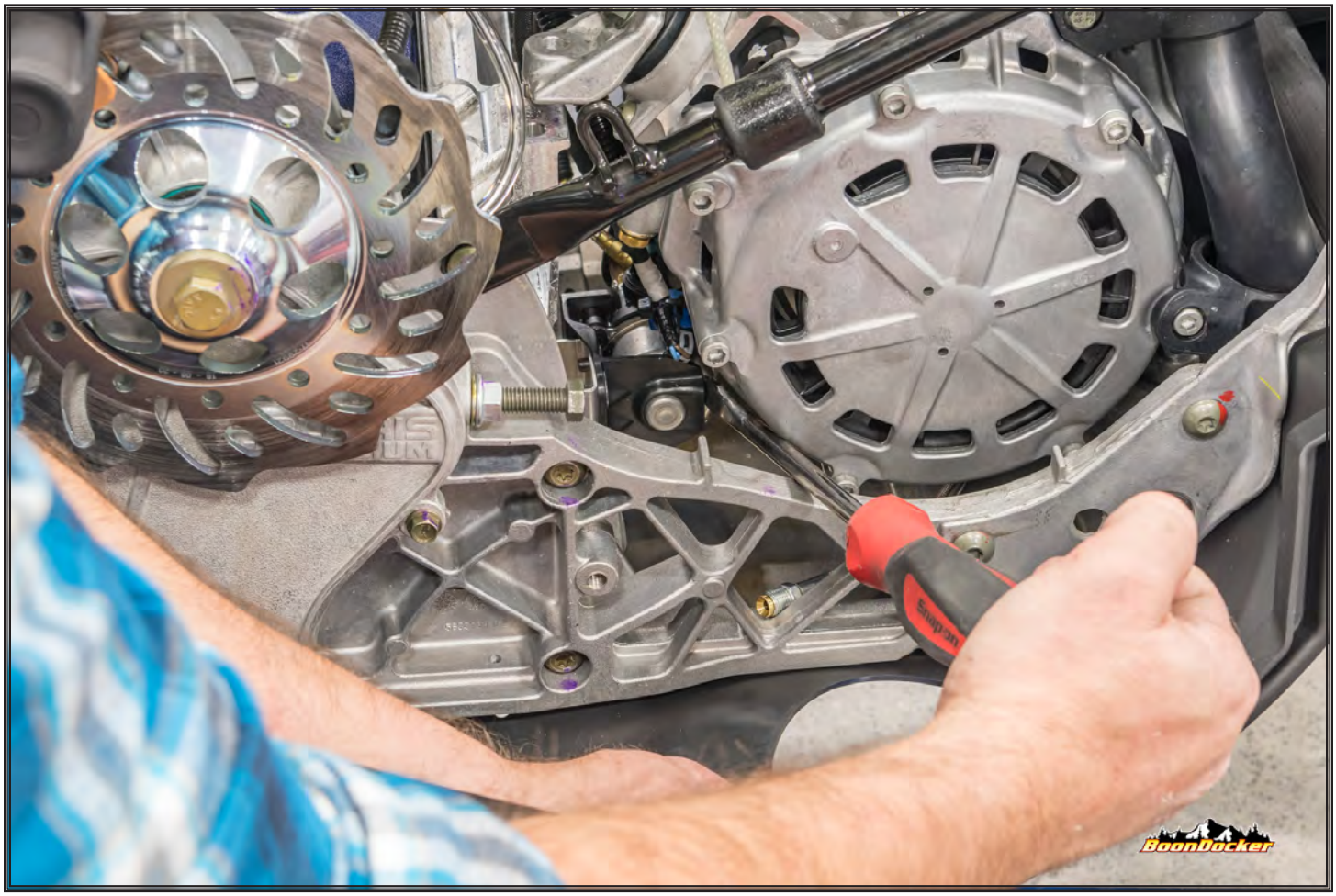


NON-INTERCOOLED ONLY, intercooled uses different access for these steps: Loosen the two (2) vertical bolts from rear motor mounts (both MAG and PTO side). Use pry bar as shown to lift the motor, approximately 1-inch. Use a 13mm socket to hold the motor in the raised position. Beware of the guide-dowel on each side, aligning the chassis-side of the motor mount.

NOTE: There is a case-bolt that the tip of the pry bar will lift on

DO NOT lift motor more than 1”

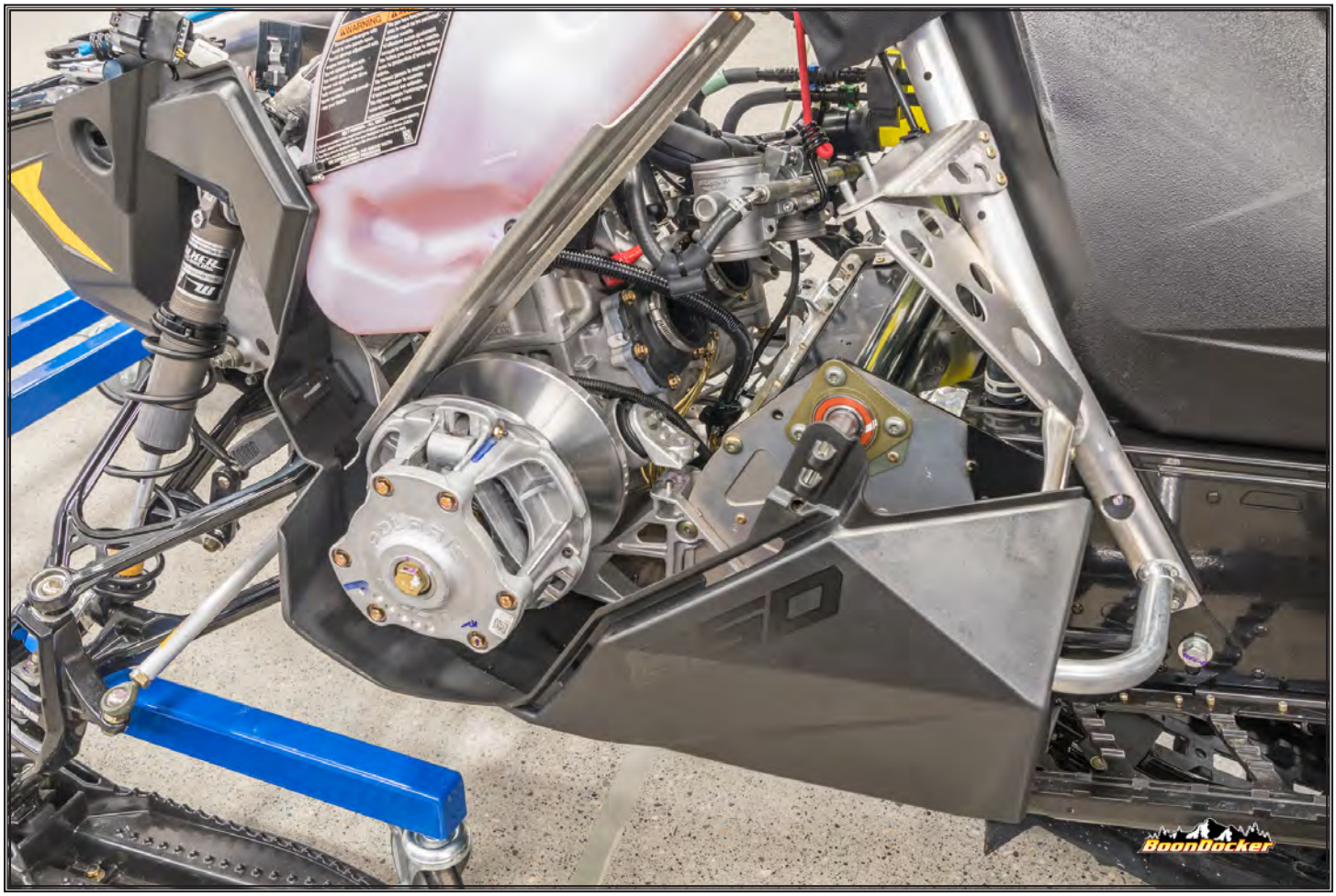
Oil System



NON-INTERCOOLED ONLY, intercooled uses different access for these steps: Use tool to gently push the outer edge of oil pump towards clutch. While pushing, swing tool towards rear of snowmobile to remove oil pump from plastic bracket.

DO NOT USE EXCESSIVE FORCE to avoid damage to plastic bracket.

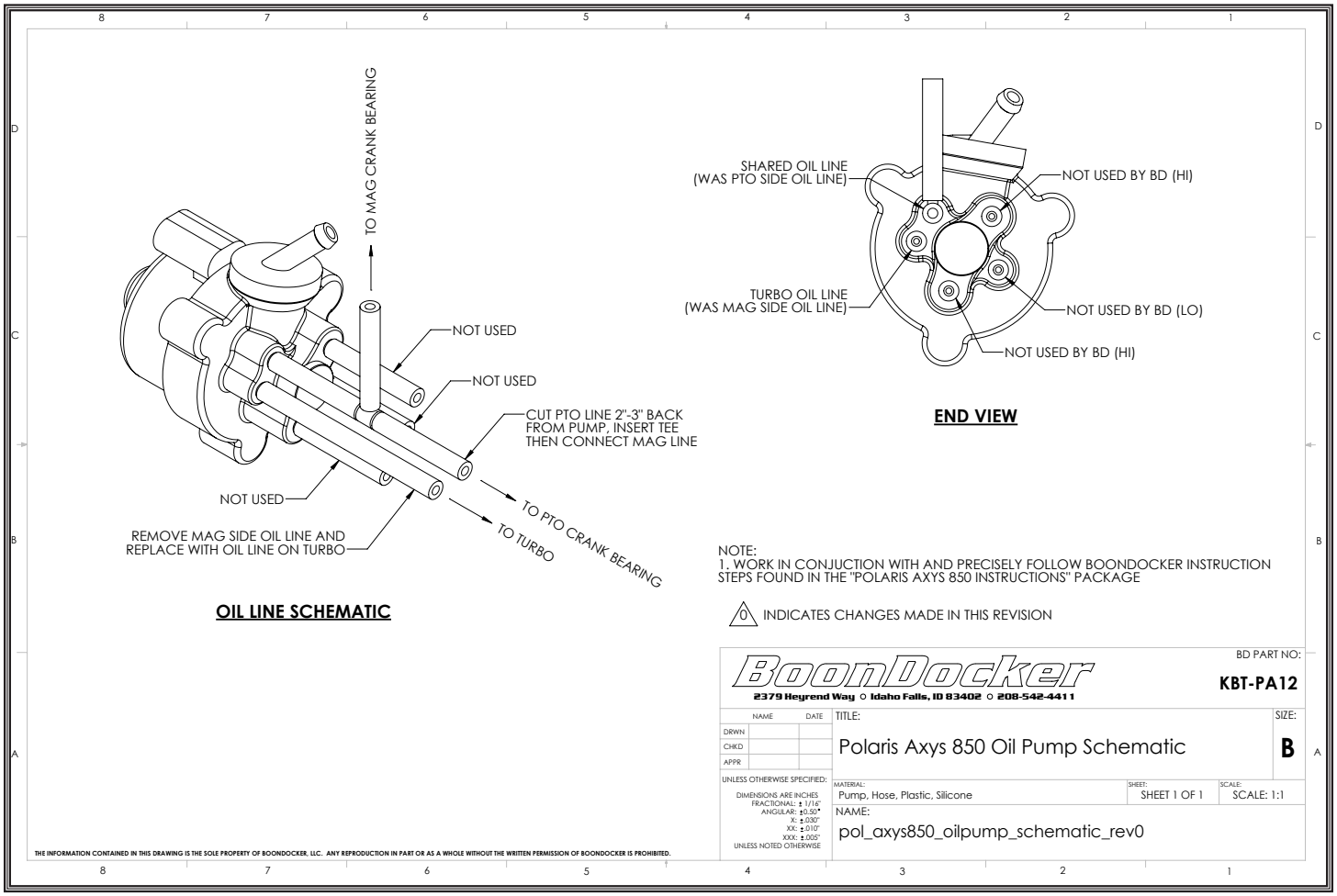
Oil System



NON-INTERCOOLED ONLY, intercooled uses different access for these steps: Loosen motor-side clamps from throttle bodies and gently lift upwards. Restrain throttle bodies in this position to allow easy access. Feed oil pump up, between reed cages.

NOTE: Use bungee cord to secure throttle bodies out of the way

Oil System

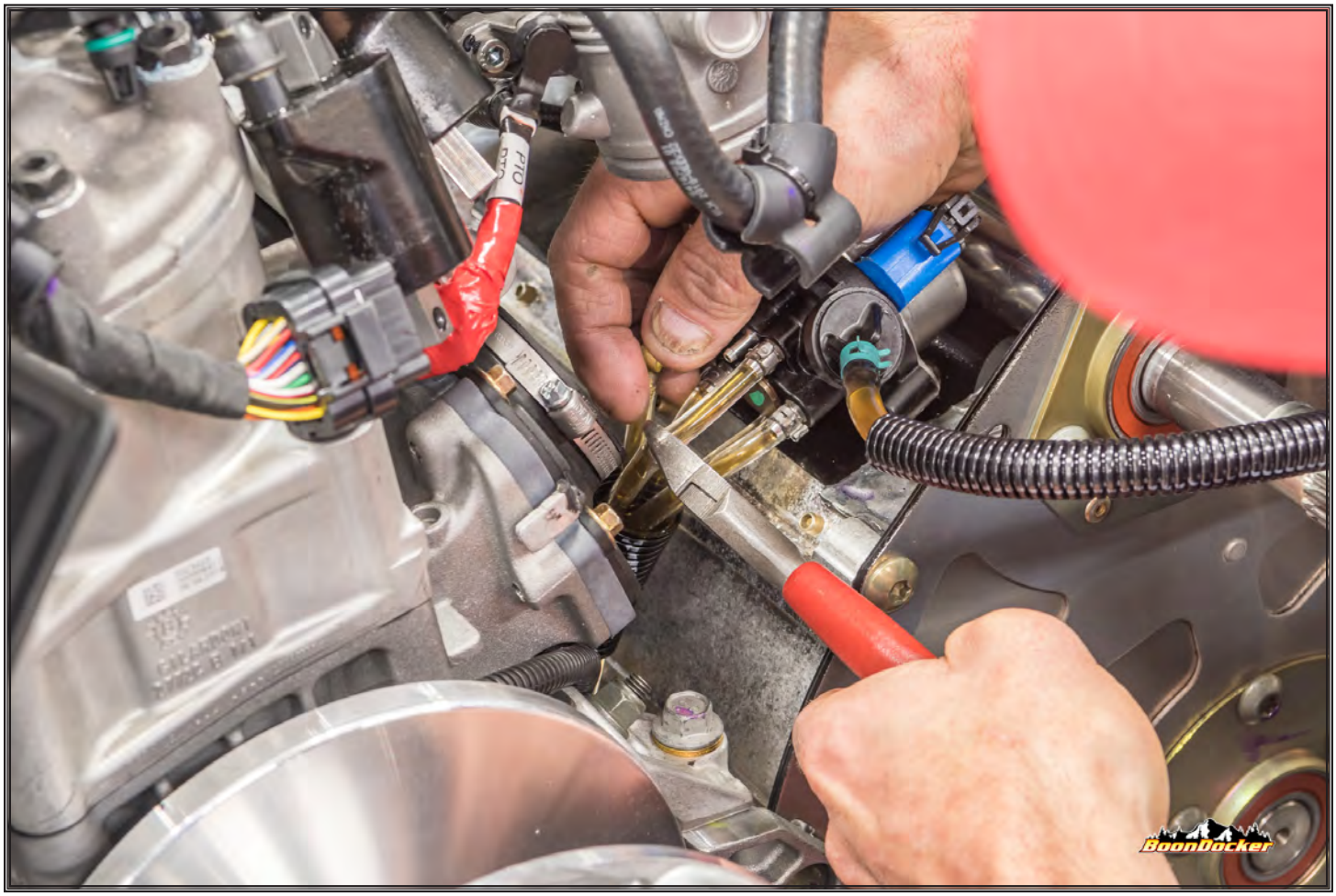


Oil Pump plumbing schematic (for next steps)

Oil System

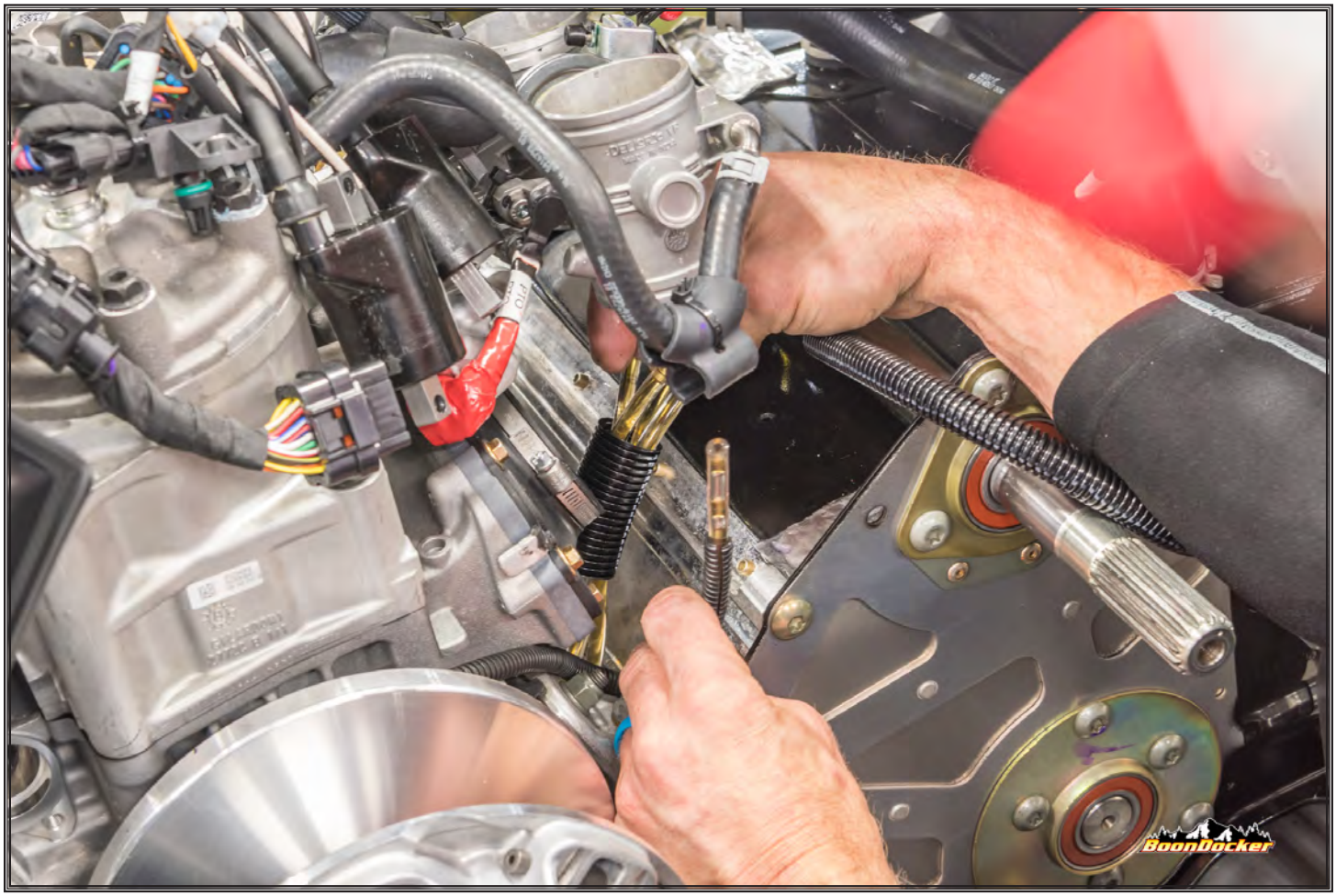
NON-INTERCOOLED ONLY, intercooled uses different access for these steps: With oil pump pulled as shown, cut oetiker clamp from MAG-side crank-end bearing oil feed line as shown. Remove line from pump.

Oil System



NON-INTERCOOLED ONLY, intercooled uses different access for these steps: Cut PTO-side crank-end bearing oil feed line approx 2-3" below barb from oil pump. NOTE: Mag-side has been disconnected in previous step.

Oil System



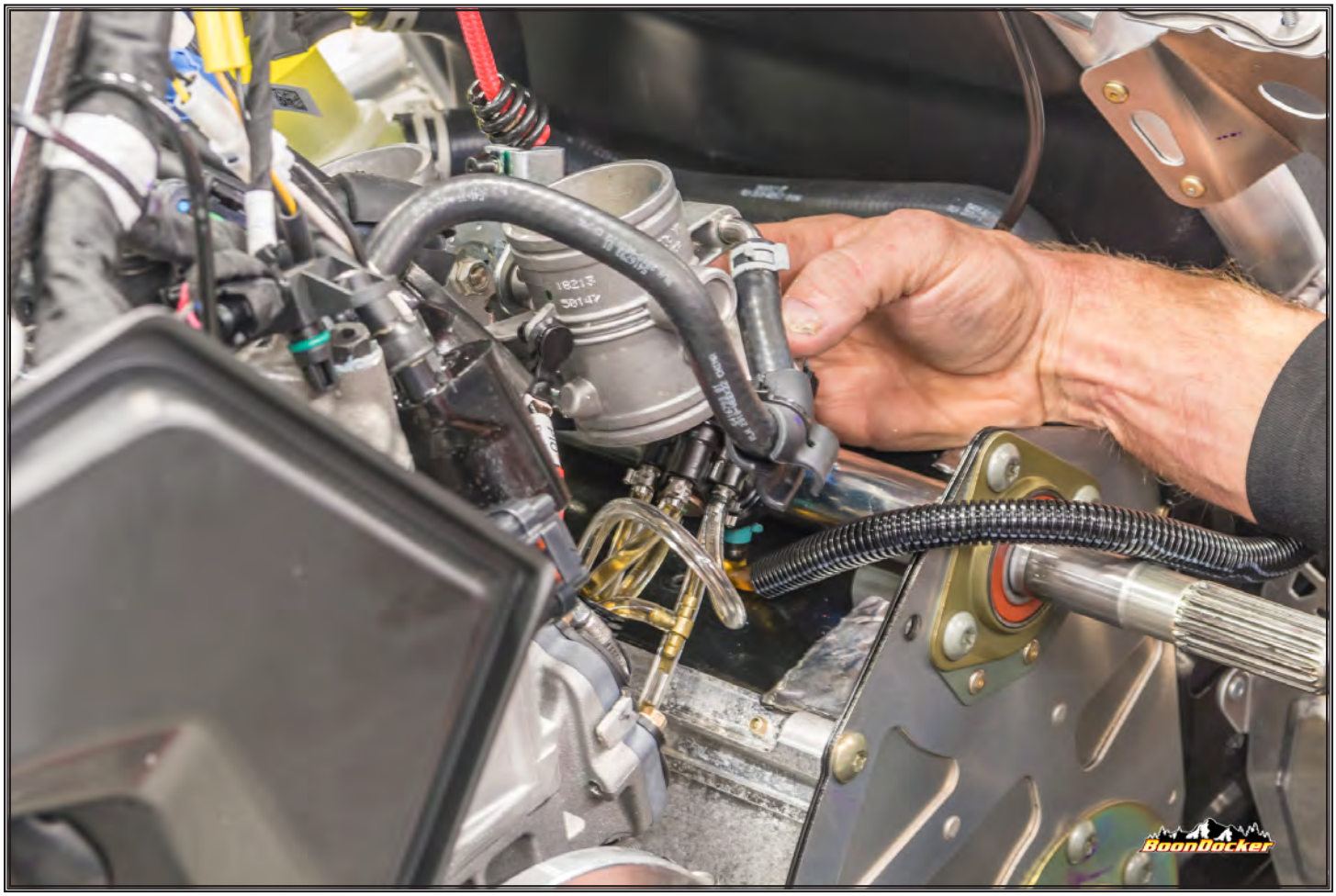
NON-INTERCOOLED ONLY, intercooled uses different access for these steps: Remove PTO-side crank-end bearing oil feed line from large-diameter convoluted tubing as shown (leave small-diameter convoluted tubing as shown).

Oil System

NON-INTERCOOLED ONLY, intercooled uses different access for these steps: Install supplied barbed-Tee as shown, teeing together the MAG and PTO crank-end bearing lines.

NOTE: Zip Ties are not necessary on the oil lines terminating to the barbed Tee

Oil System

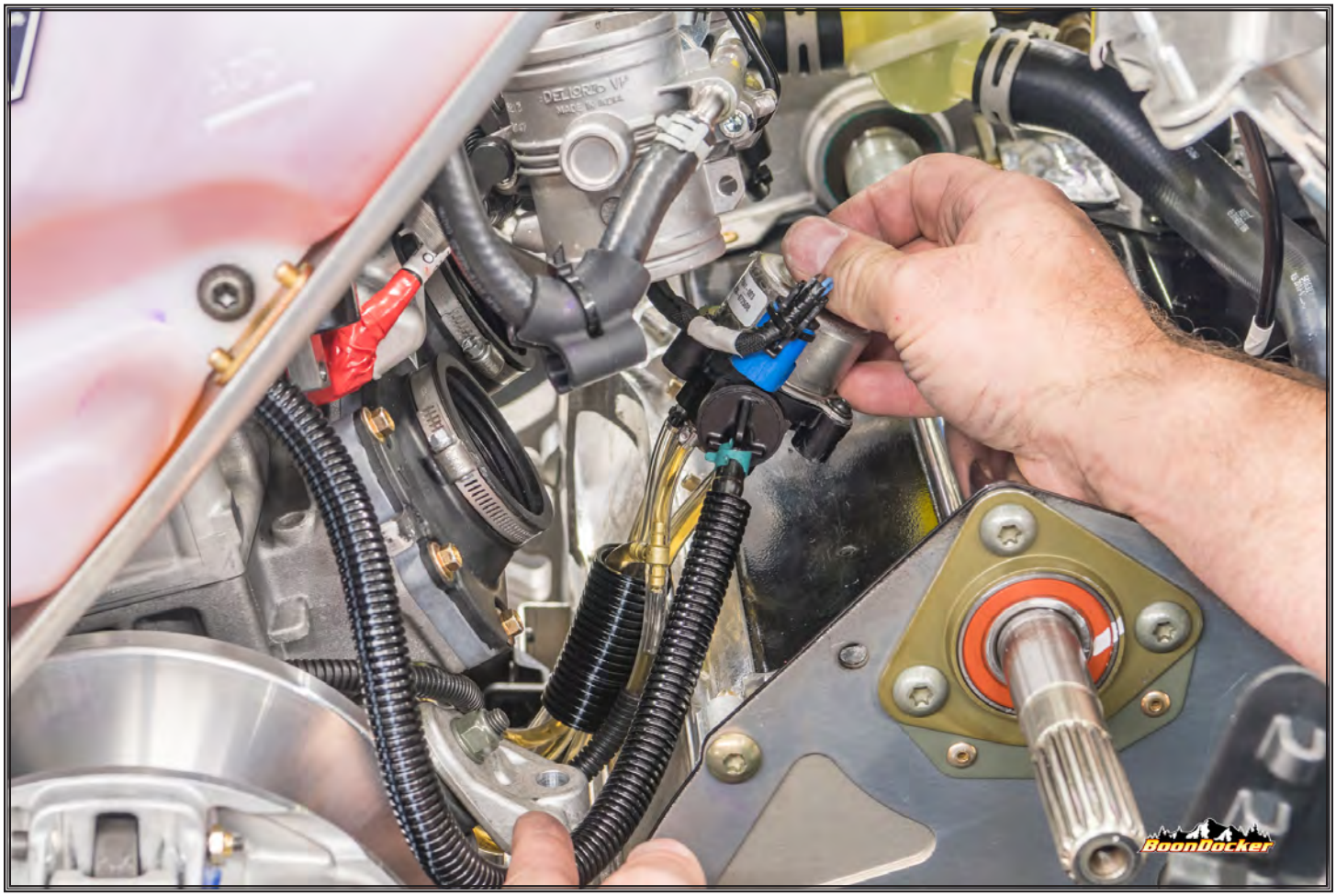


NON-INTERCOOLED ONLY, intercooled uses different access for these steps: Install provided oil line (clear hose to stainless-braid) to remaining barb on the oil pump. Use Zip Tie to secure line to oil pump. Feed the braided stainless end beneath motor and out the MAG-side of the chassis (shown in next step).

Oil System

NON-INTERCOOLED ONLY, intercooled uses different access for these steps: NOTE: Stainless Steel oil pump routing through the lower chassis structure ❶

Oil System

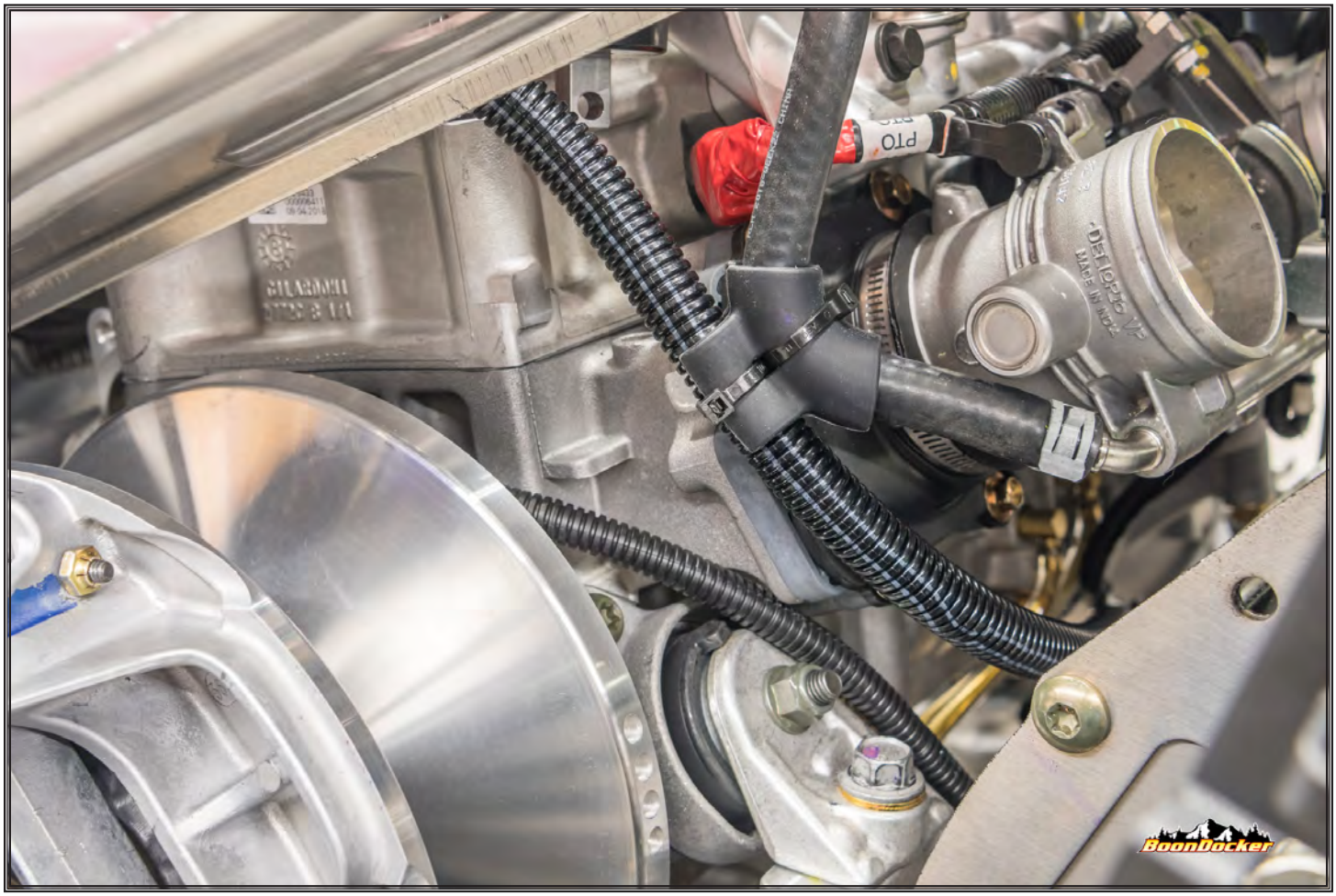


NON-INTERCOOLED ONLY, intercooled uses different access for these steps: Slide oil pump and hose assembly between throttle bodies and return to factory position in bracket.

NOTE: Verify line routing, specifically, that no lines are kinked.

NOTE: High pressure upgrade/Intercooler upgrade installation will relocate oil pump

Oil System



NON-INTERCOOLED ONLY, intercooled uses different access for these steps: Carefully lift motor using pry bar as in previous step. Remove the 13mm socket used to temporarily raise motor. Carefully lower rear of engine down and reinstall motor mount bolts, verifying guide-dowel properly seats on each side.

Cooling System

NON-INTERCOOLED ONLY, intercooled uses different access for these steps: Reinstall throttle bodies to reed cage. Tighten clamps. Next, use hose-pinch tool to block off coolant line to throttle bodies on PTO side to prevent back-feeding while draining coolant bottle.

Cooling System

Loosen tension clamp on outer barb of coolant bottle as shown. Have catch container available to contain coolant spillage. Drain fluid from coolant bottle. Use hose-pinch tool to prevent coolant from spilling out of coolant line.

NOTE: Vapor lock may prevent coolant from escaping coolant bottle. Crack the lid of the coolant bottle, once you have a catch-pan in place, to relieve vacuum.

NOTE: There is a baffle inside the bottle, so you cannot siphon coolant out.

Cooling System

Remove hose-pinch tool and drain coolant from line that runs to MAG-side of throttle bodies.

Cooling System

Set aside coolant to reuse. Remove coolant hose and clamps (running from PTO-side of throttle bodies to coolant bottle). Clamps are used in future steps. (Hose is not reused).

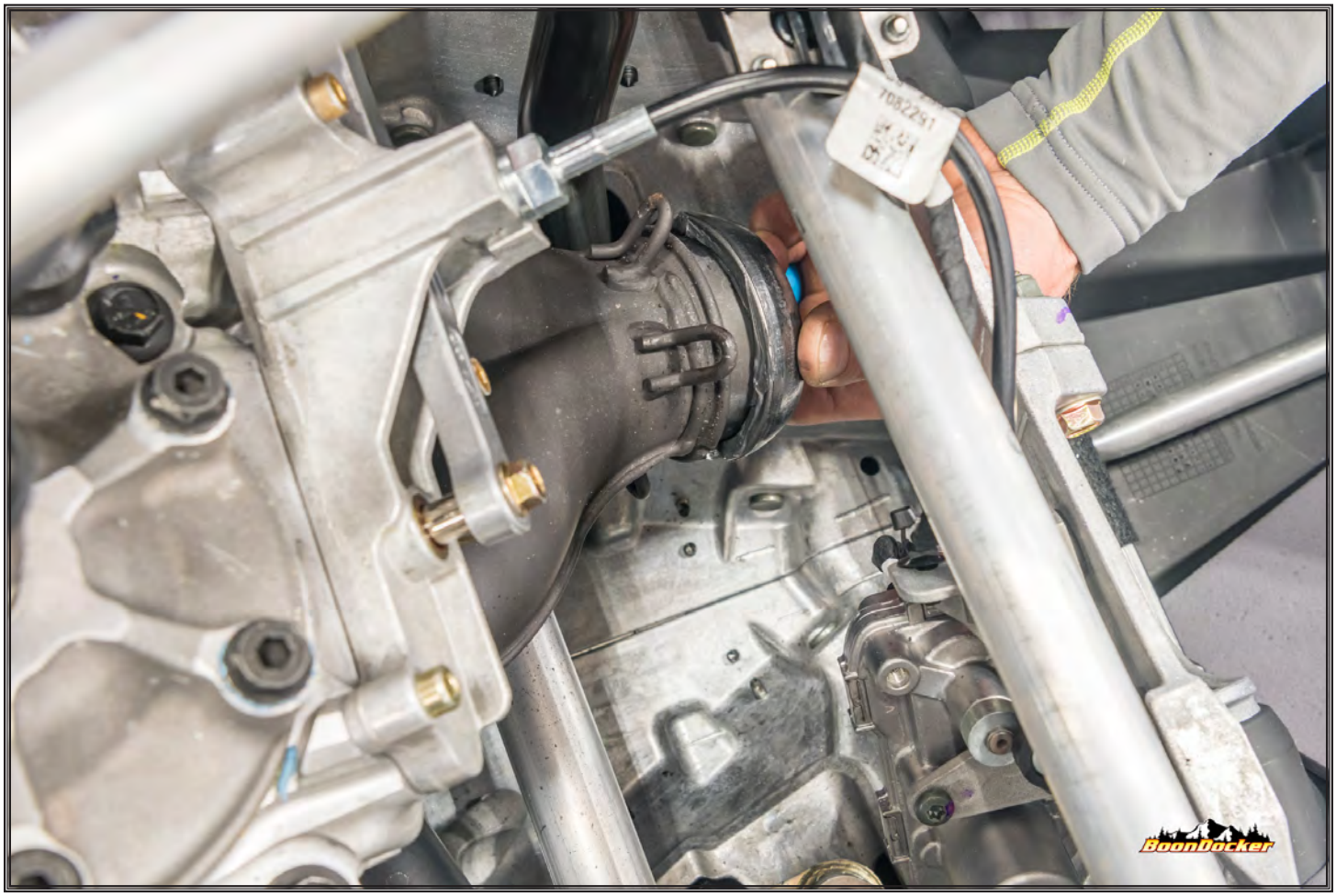
Turbo / Exhaust

REMOVE PIPE: Remove EGT probe from pipe to allow working space. Remove exhaust springs and factory pipe. Take care to preserve exhaust graphoil gasket.

Turbo / Exhaust

Inspect graphoil gasket. Replace if necessary. Use high-temp silicon to coat the outer surface of the graphoil gasket.

Turbo / Exhaust



Reinstall graphoil gasket using alignment tab on Y-pipe.

Turbo / Exhaust

Use high-temp silicon to coat the inner surface of the factory pipe, on the motor-side.

Turbo / Exhaust

Reinstall factory pipe. Use factory AND supplied (short) gold exhaust springs to “double-up” springs. Reinstall factory EGT probe into pipe.

Turbo / Exhaust

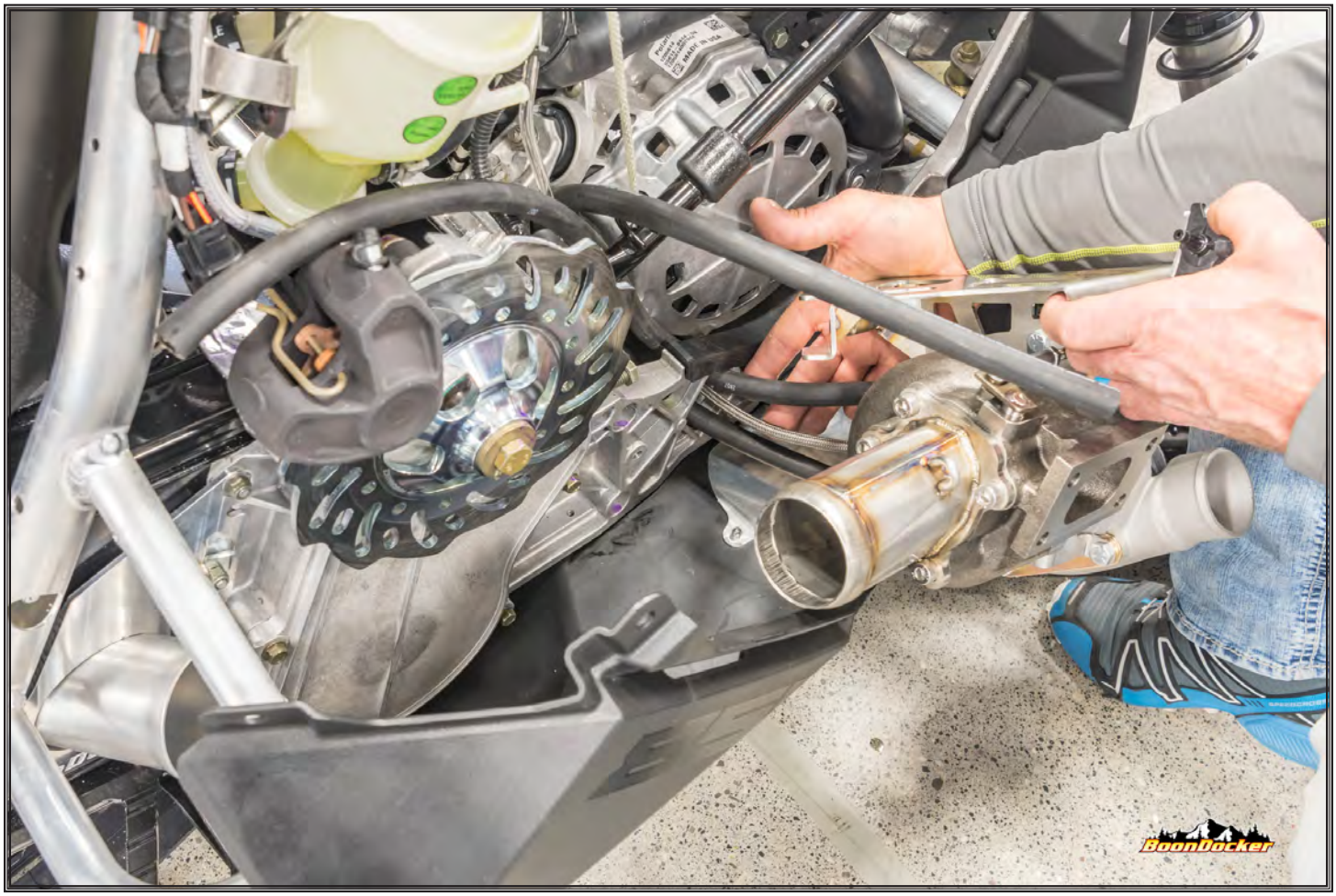
Install supplied air solenoid on turbo bracket as shown.

Turbo / Exhaust

Use supplied syringe to create a vacuum (you MUST use vacuum to suck the oil, NOT push oil) that will prime 2-stroke oil through the factory pump and through the line to the turbocharger (turbo-feed line). Once line is primed, connect oil-feed line to turbocharger.

NOTE: Immediately connect the oil-feed line to the turbocharger to prevent oil from spilling out of the line and losing the oil-prime that was conducted in this step.

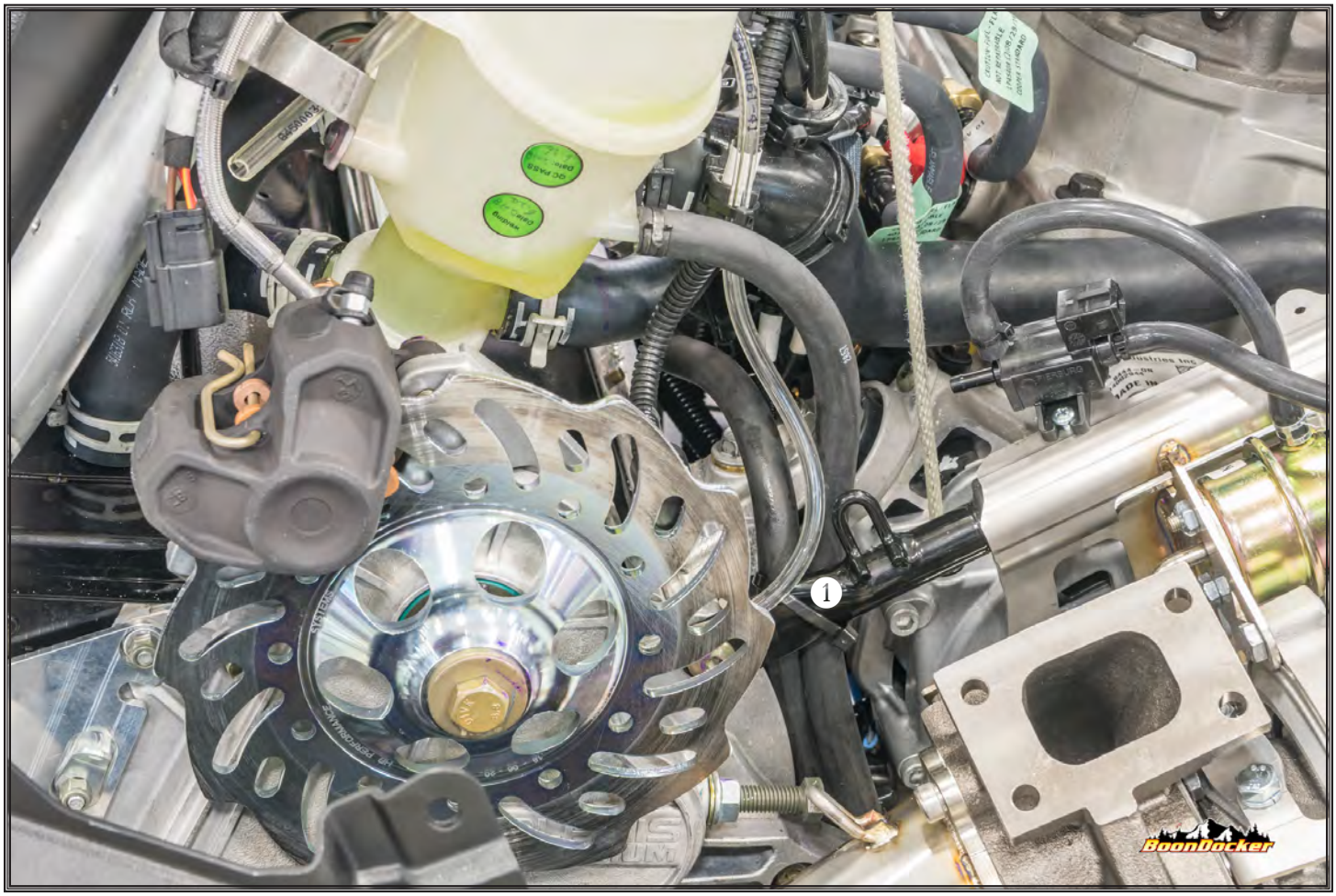
Turbo / Exhaust



Route coolant lines and oil feed lines as shown: Both coolant lines will route along bulk head, up towards coolant bottle. Bring stainless oil-feed line out. Verify routing to prevent kinks. Allow turbo bracket to seat on rubber isolator and chassis cross-member. Use supplied cotter-key to secure turbo bracket

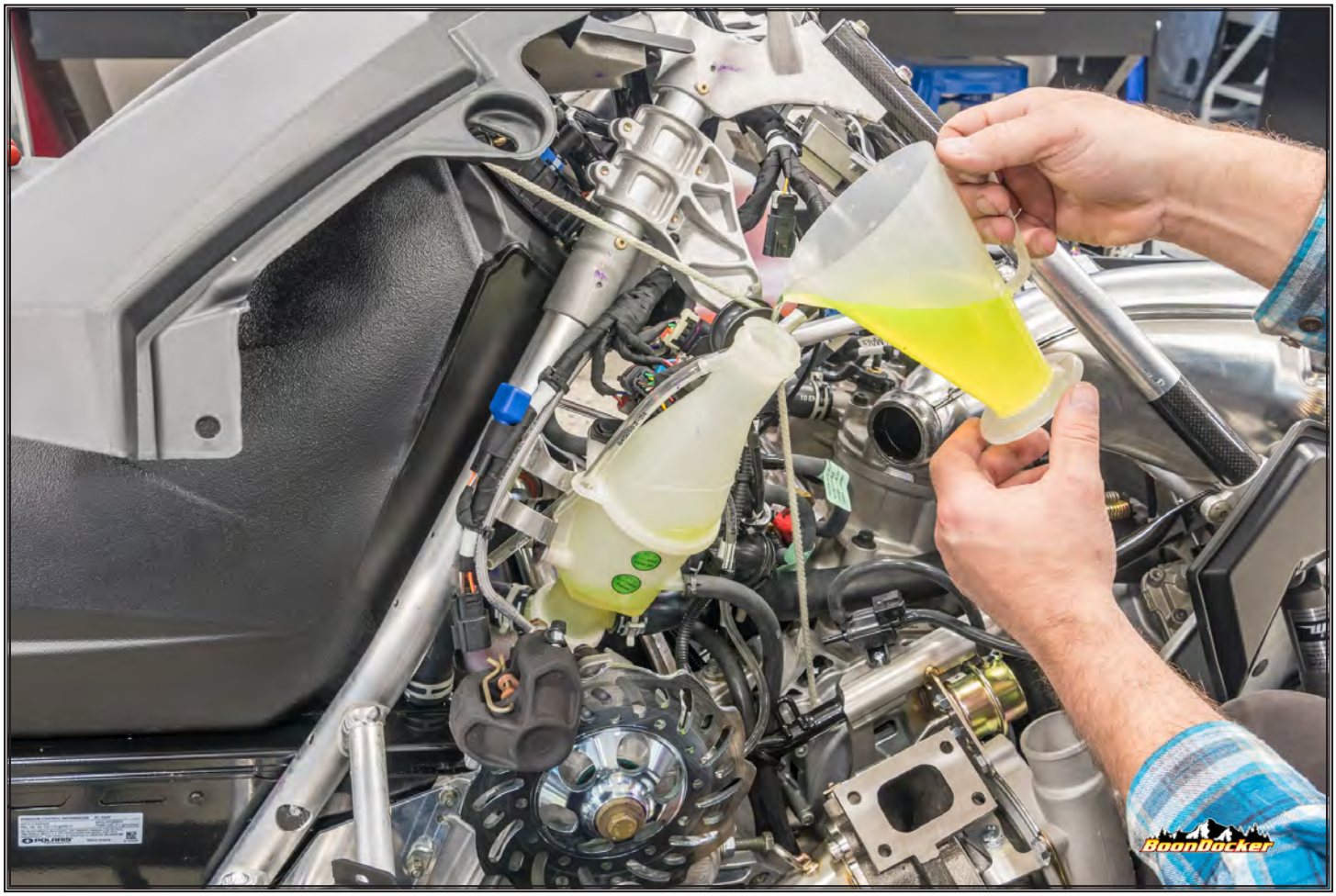
NOTE: Verify the rubber isolator is properly seated in the chassis-saddle. Your isolator MAY have stuck to the muffler during teardown. Verify the window on the isolator is properly oriented with the chassis topography.

Turbo / Exhaust



INSTALL TURBO COOLANT LINES: Connect the coolant line from the outer-side of the turbo to the coolant bottle. Connect the line from the inner-side of the turbo to the throttle bodies (where you removed the short piece of hose, previously). Trim lines to fit properly. Expect to trim a few inches from each line. Use factory clamps from previously-removed coolant line. Secure coolant lines with Zip Ties as shown ❶

Turbo / Exhaust



Refill coolant bottle to OEM spec.

NOTE: Check coolant levels after installation. Coolant system may need to be bled.

Turbo / Exhaust

Inspect graphoil gasket (between factory pipe and muffler). Replace if necessary. Apply high-temp silicon to graphoil gasket and slide onto pipe. Apply high-temp silicon to inner-surface of supplied exhaust inlet in preparation for installation.

Turbo / Exhaust

Using supplied gasket and hardware, install exhaust inlet to turbo. Bolts are installed from the top, with the head facing up. Washer will go beneath the bolt-head, on the top-side. Use anti-seize on threads to prevent gaulding.

NOTE: Be careful to not damage graphoil gasket. A damaged graphoil gasket or incorrect use of high-temp silicon may cause a boost leak. Boost leaks are difficult to diagnose.

Turbo / Exhaust

Using four (4) supplied (long) exhaust springs, connect factory pipe to exhaust inlet. PRO TIP: Use a small amount of high-temp silicon along the edge of the spring to reduce vibration and/or breakage of springs.

Deep Snow cont'd

DEEP SNOW MUFFLER INSTALLATION ONLY: CUT FOOT-PLATE: Measure up 1" from the bottom. Use a straight edge to draw a line from the measure-point to the bottom right corner of grate and cut as shown leaving (3) graded lines above the cut mark.

NOTE: Due to manufacturing tolerances, you may have to nip or bend for final fit.

Deep Snow cont'd

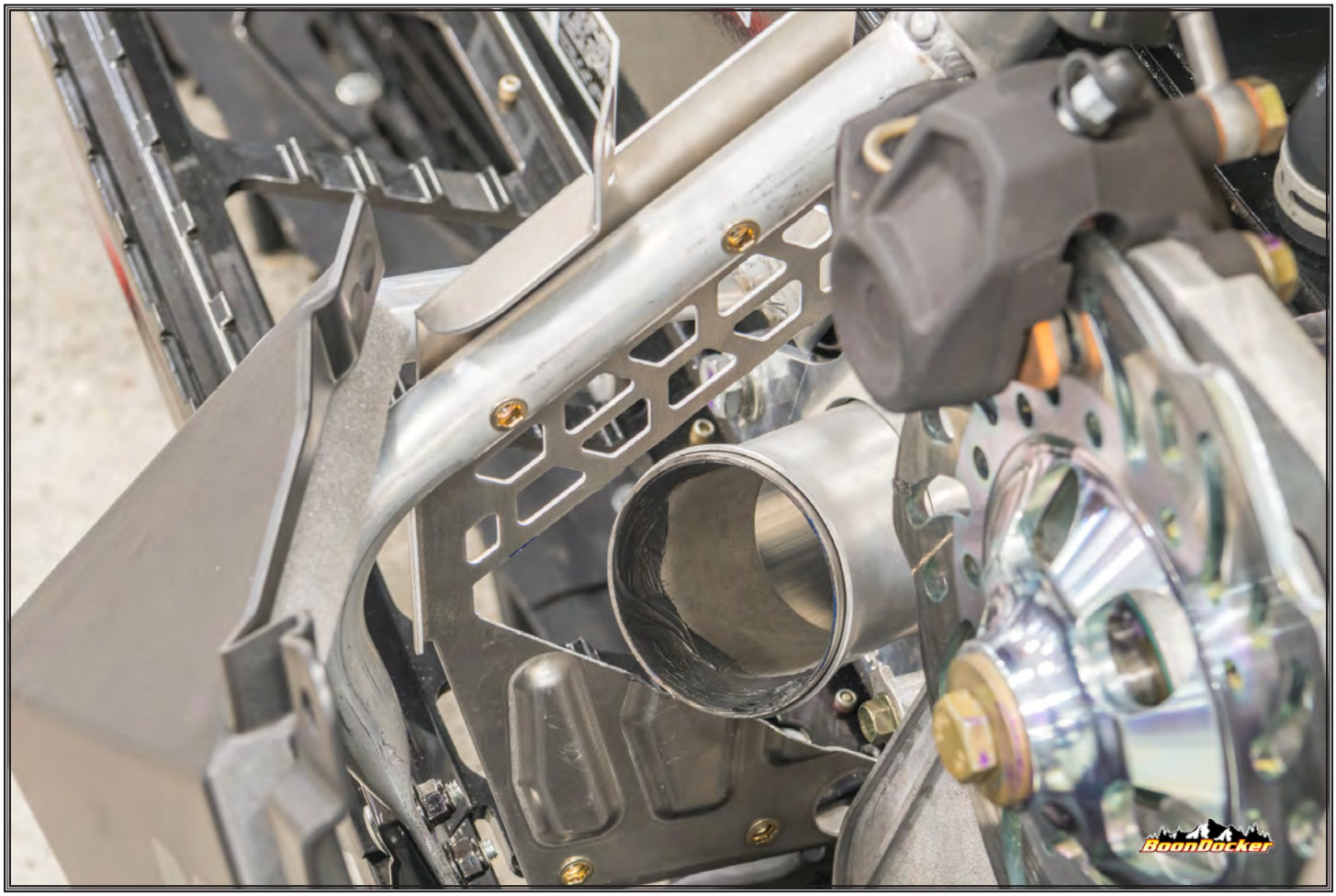
DEEP SNOW MUFFLER INSTALLATION ONLY: Reattach foot-plate as shown with the bottom of the footwell blockoff plate running on the bottom side of the running boards, using supplied rivets. Slide supplied stainless sleeve into tunnel bracket to prepare for muffler installation.

Deep Snow cont'd

DEEP SNOW MUFFLER INSTALLATION ONLY: Coat inner surface of ball-and-socket joint with high-temp silicon as shown.

NOTE: Standard muffler will appear different than deep snow muffler. In either case, coat inlet bell/socket with high-temp silicon.

Deep Snow cont'd



DEEP SNOW MUFFLER INSTALLATION ONLY: Coat inner surface of ball-and-socket joint of stainless sleeve through tunnel with high-temp silicon as shown.

Deep Snow cont'd

DEEP SNOW MUFFLER INSTALLATION ONLY: Install muffler as shown. Use supplied exhaust springs (short springs go on upper tabs of muffler, long springs go on lower tabs). Spring muffler to spring tabs on tunnel-bracket AND exhaust collector on turbocharger.

Turbo / Air Intake

Loosely install T-bolt clamps to notched silicon fittings as shown.

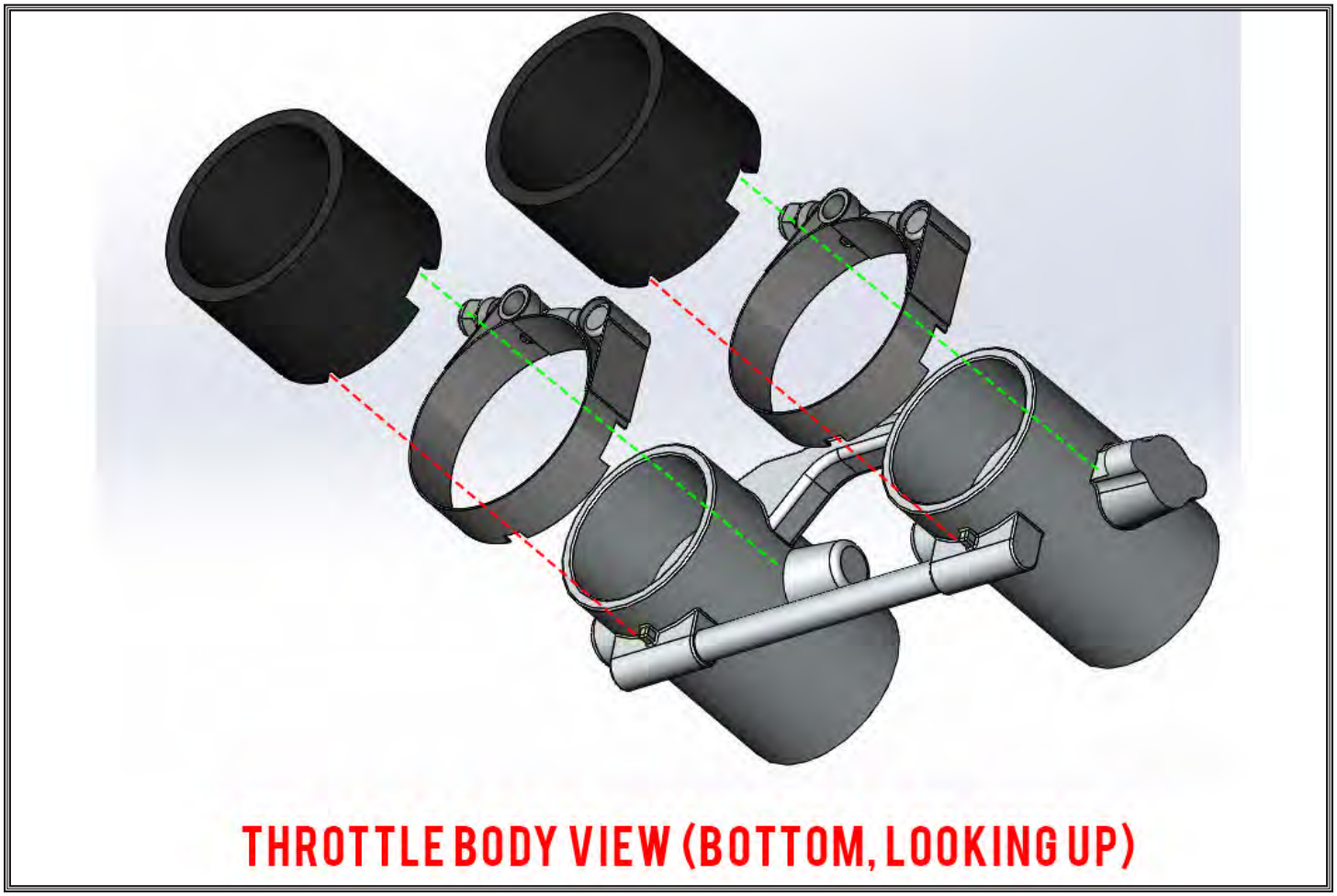
Turbo / Air Intake

Install fittings to throttle bodies. Verify notches on clamps and fittings are in alignment with tabs on throttle bodies.

CRITICAL: Verify clamps and silicone has complete seated. Trim clamps if necessary for fit.

NOTE: PTO-side has only one (1) tab utilizing slots in fitting/clamp. MAG-side will utilize both slots.

Turbo / Air Intake



View showing clamp & fitting alignment on the throttle bodies

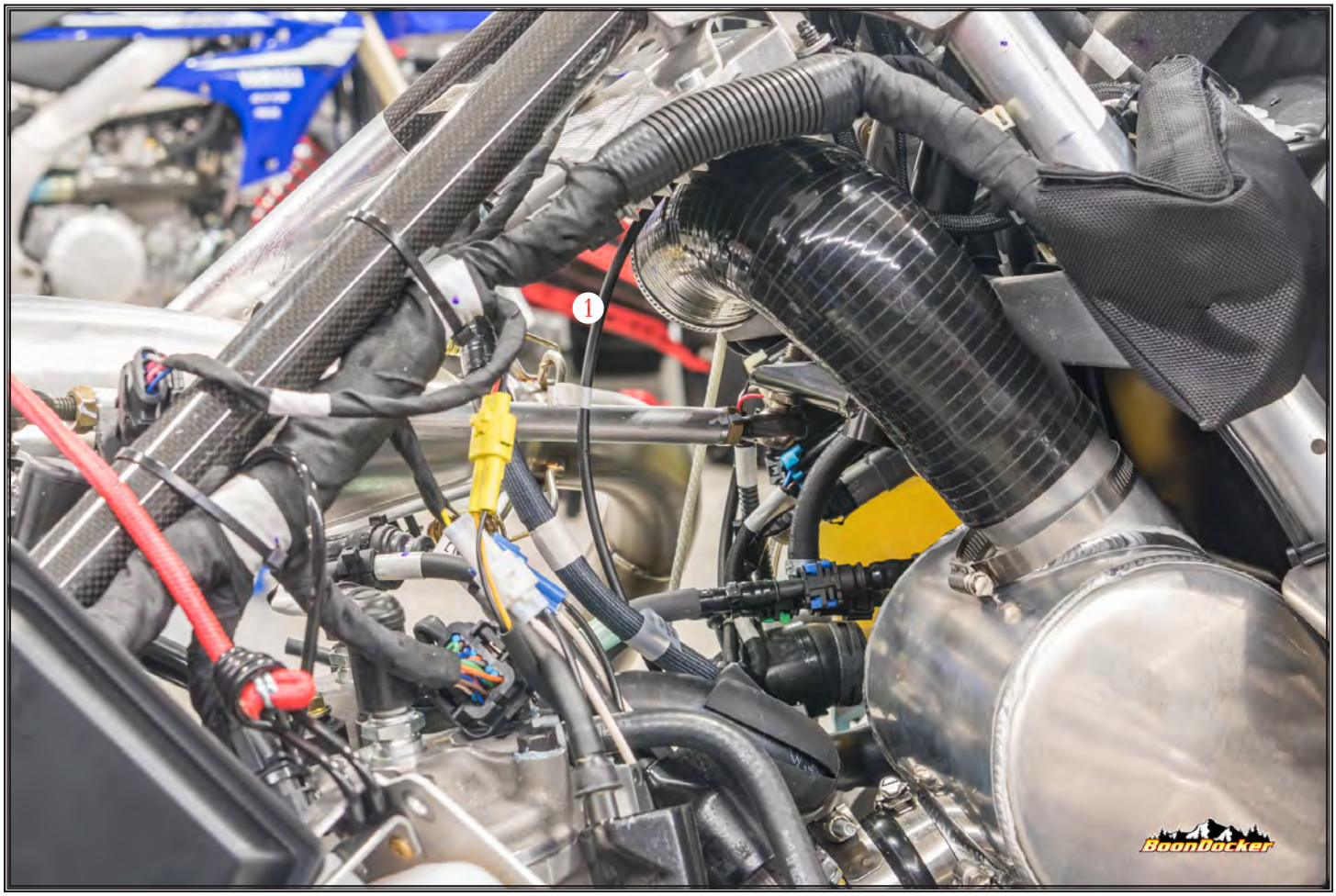
Fuel System

Install BoonDocker airbox. Secure by tightening hose clamps. Verify routing of auxiliary injector hoses: Auxiliary injector hoses should run along back side of airbox, and wrap around to factory fuel plugs without kink(s). Unplug fuel-sending line ❶ (green). Install auxiliary injector connection in-line. Remove foam line-isolator ❷.

Fuel System

Verify routing of fuel lines. Secure with Zip Tie as shown ❶. Verify clearance of fuel lines by turning skis each direction (check clearance of pitman arm and steering rod).

Charge Air



Install silicon 90 as shown. Verify throttle cable runs “on-top” of silicon 90 ❶.

NOTE: Loosely install hose clamps to allow for easy adjustment/fit for next steps.

Charge Air

Install charge-air intake tube using supplied silicon reducer and connect to silicon 90 installed in previous step. Verify silicon 90 installed in previous step is not bent or kinked. Once fittings & tubes are properly seated with acceptable clearance, tighten all clamps.

Charge Air

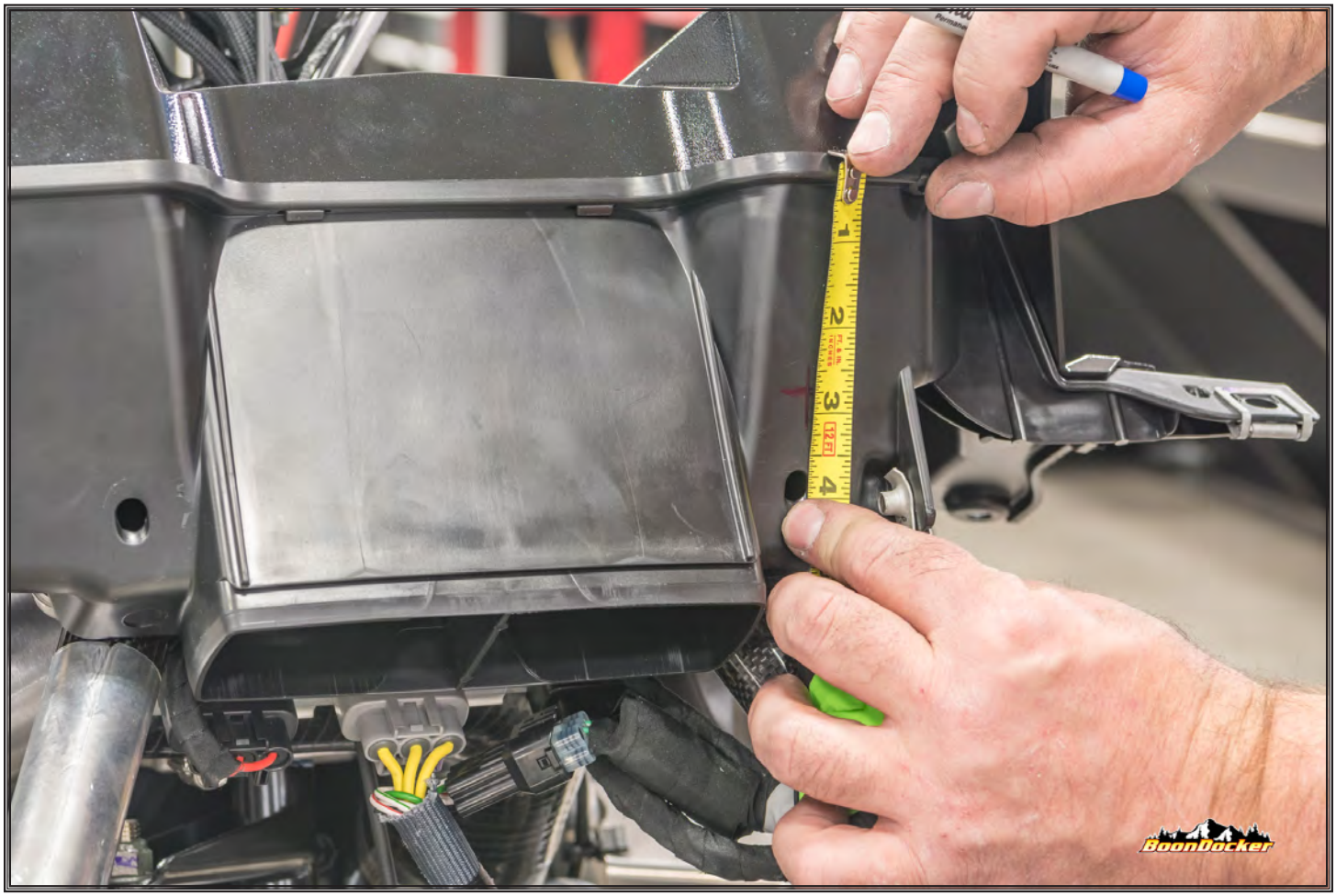
Install boost reference line, from charge-air intake tube to air-solenoid on turbo bracket.

Secure with Zip Tie ❶ to prevent boost reference line from disconnecting from barb

Cold Air

Lift factory air-collector off sled. Slide provided cold-air intake plenum onto factory air collector. Mark and drill hole using 5/16 drill bit. Remove supplied cold-air plenum for additional pre-assembly.

Cold Air



Measure down 2 3/4" from air collector box seam and align with the CENTER of the stock hole. Mark and drill 1/2" hole. Reinstall provided cold air intake plenum and fasten with push-darts (two darts from stock intake plenum, and one provided with kit).

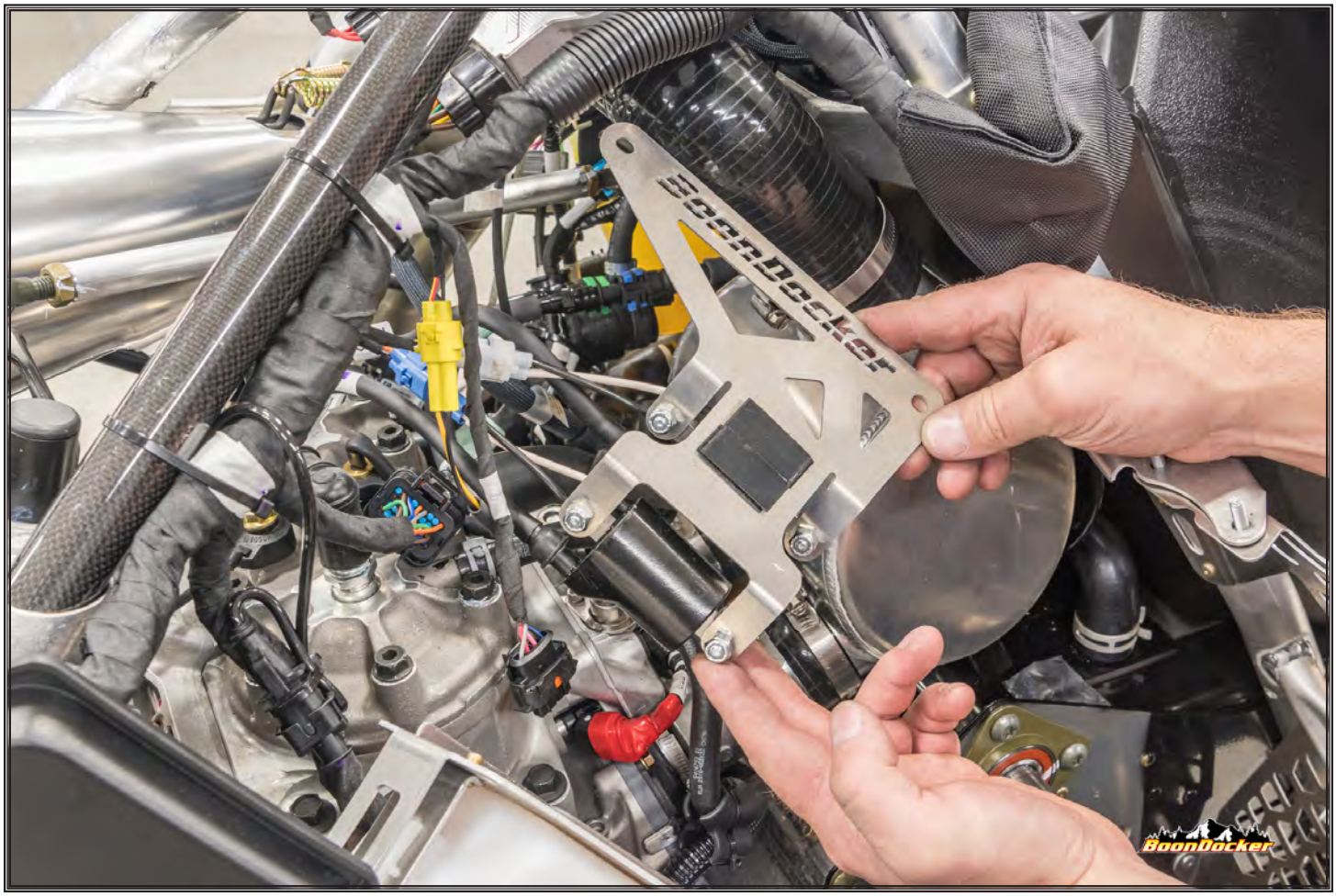
IMPORTANT: Prior to installing cold-air intake plenum, make sure ALL debris from drilling has been removed from cold-air intake collector box. Debris can damage turbo components.

Cold Air

Install TBAP sensor by pushing probe through 1/2" hole drilled previously. Use original screw to fasten TBAP sensor.

NOTE: DO NOT OVER TIGHTEN

Cold Air



Install coils onto supplied coil bracket. Coils go in the bracket with wires facing towards nose.

NOTE: MAG goes on bottom, PTO goes on top

Cold Air

Reinstall cold air intake assembly as shown.

Cold Air

Using stock hardware, install ECU and coil mount bracket. Bracket goes behind the ECU, with the coils angling inward. Use supplied velcro between ECU and coil bracket to prevent vibrations and to stabilize ECU / bracket.

Electronics

WIRING DIAGRAM:

❶ Goes to stock wiring harness (you removed this from the ECU in a prior step)
❷ Plugs directly into the stock ECU
❸ Attach ground wire to PTO side of snowmobile, where stock ground wires are attached (near bumper mount)
❹ Plugs to boost control solenoid on turbo bracket
❺ Plugs to 4-bar MAP sensor on BoonDocker supplied charge air box
❻ Plugs into the PTO side auxiliary fuel injector (supplied installed on BoonDocker charge air box
❼ Plugs into the MAG side auxiliary fuel injector (supplied installed on BoonDocker charge air box
❽ Plugs into exhaust valve servo motor and stock plug (underneath pipe, in nose cone)

Electronics

Lay out wire harness and start to connect as per the WIRING DIAGRAM. The next steps review each connection.

NOTE: Polaris uses white demarcations to show where the factory expects wiring harness to be secured with Zip Ties.

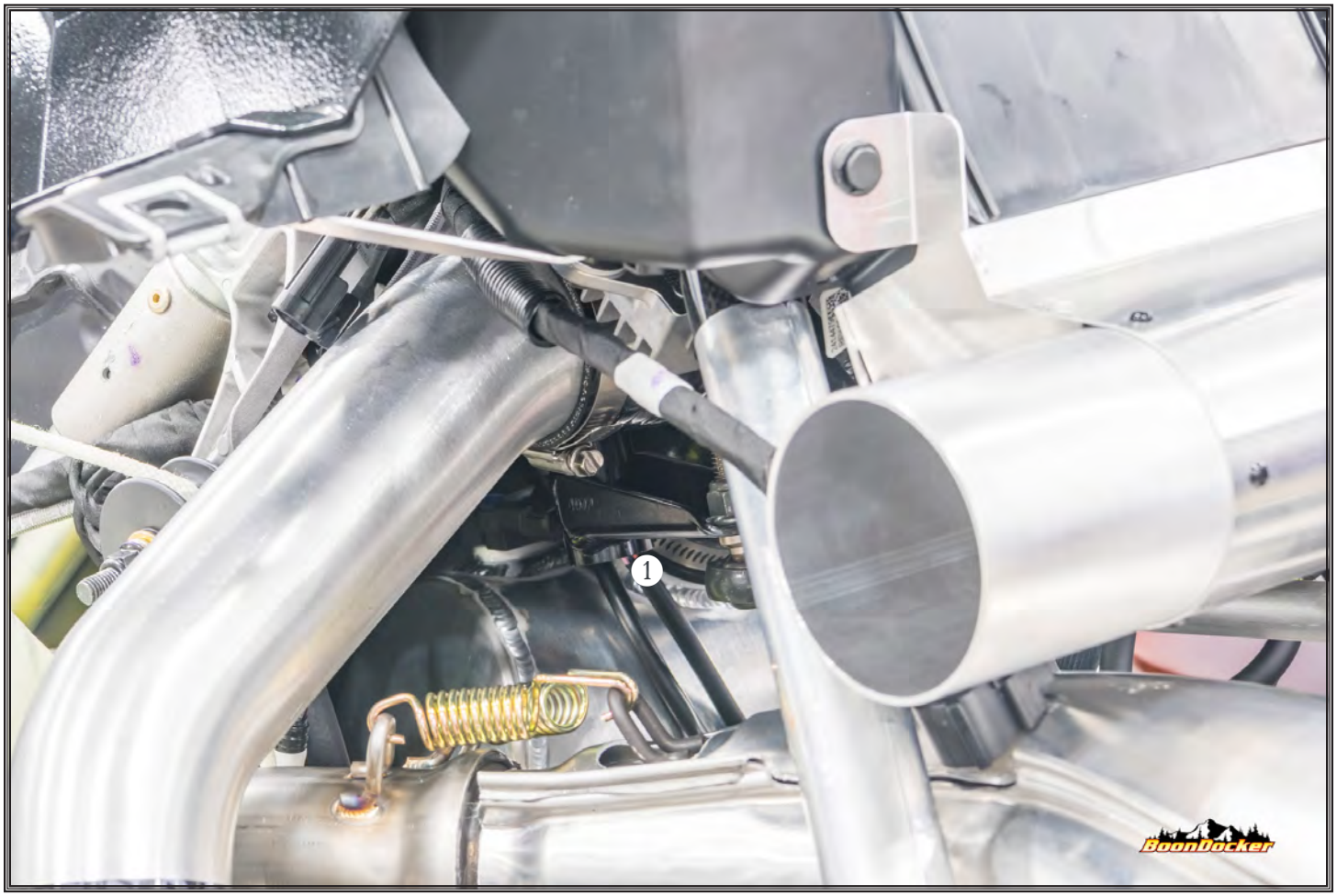
Electronics

Reconnect stock TBAP harness to relocated TBAP sensor as shown.

Electronics

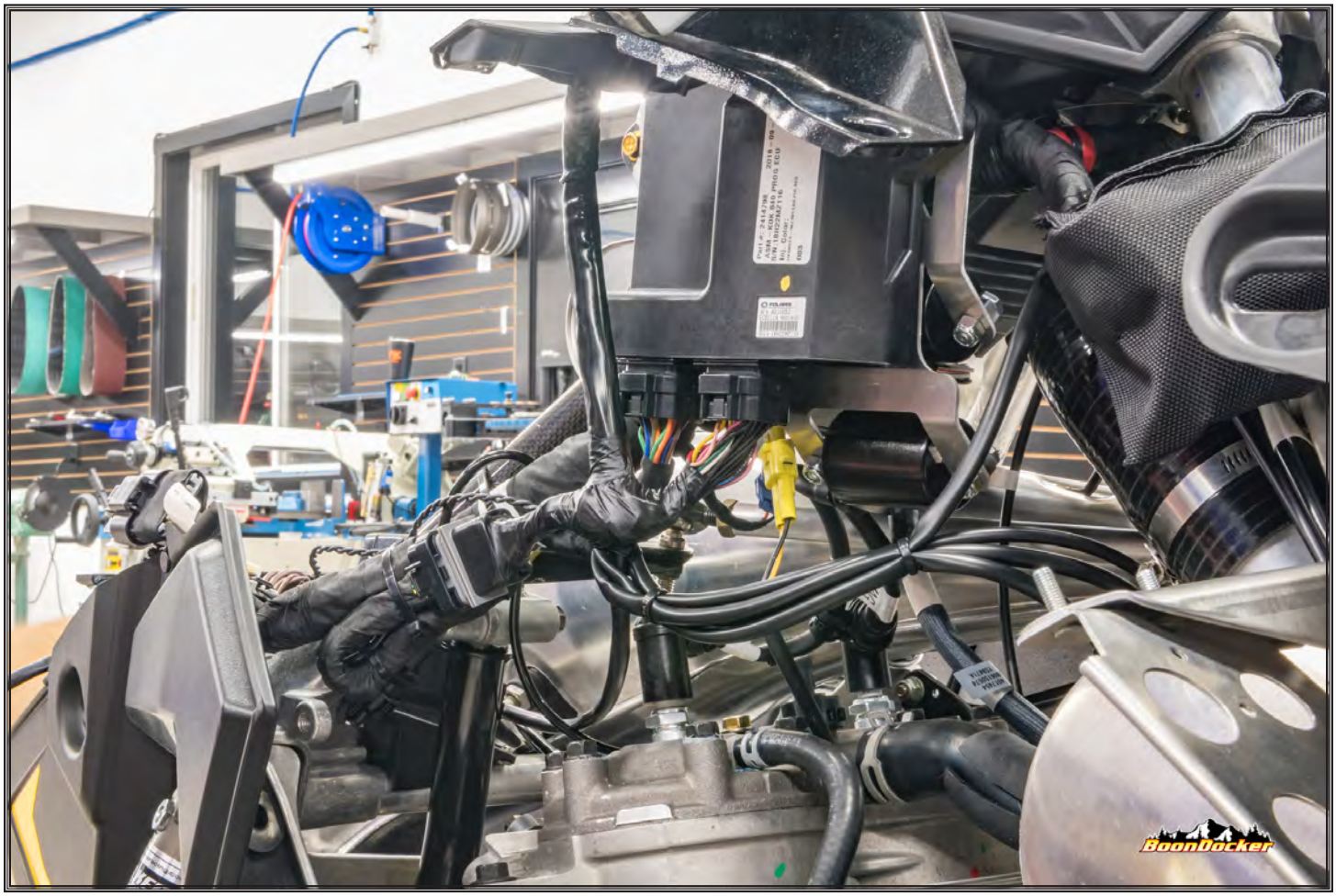
Install wire harness for auxiliary injectors. Route wires around MAG-side of air-box. Run the main wire to the PTO side of the airbox, and route the shorter tail back to the MAG side of the airbox.

Electronics



Connect BoonDocker wire to the 4-BAR MAP sensor on the BoonDocker charge air box ❶.

Electronics

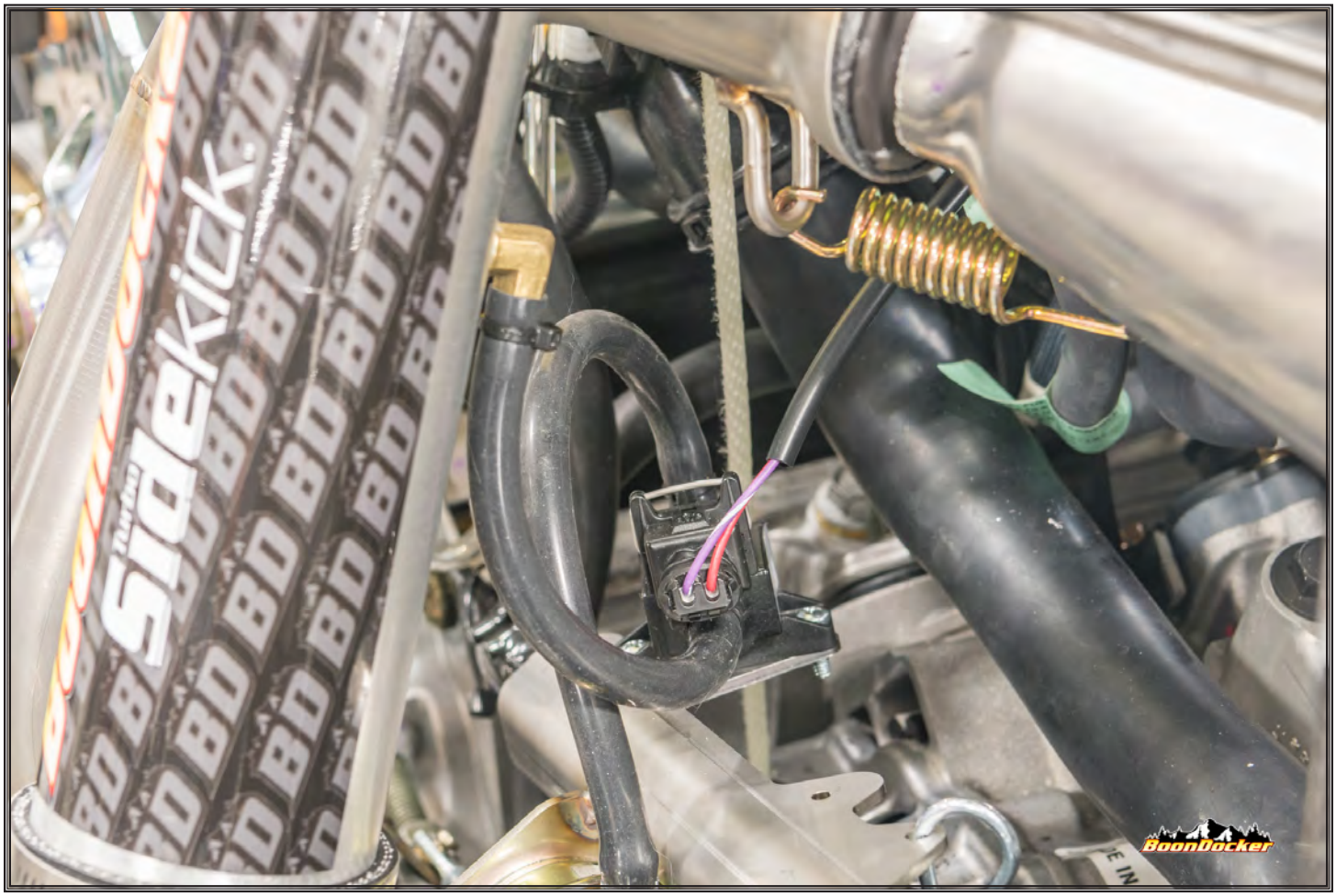


Route and secure wire harness as shown. Connect to ECU. Control box is extended out of the way for photo.

Electronics

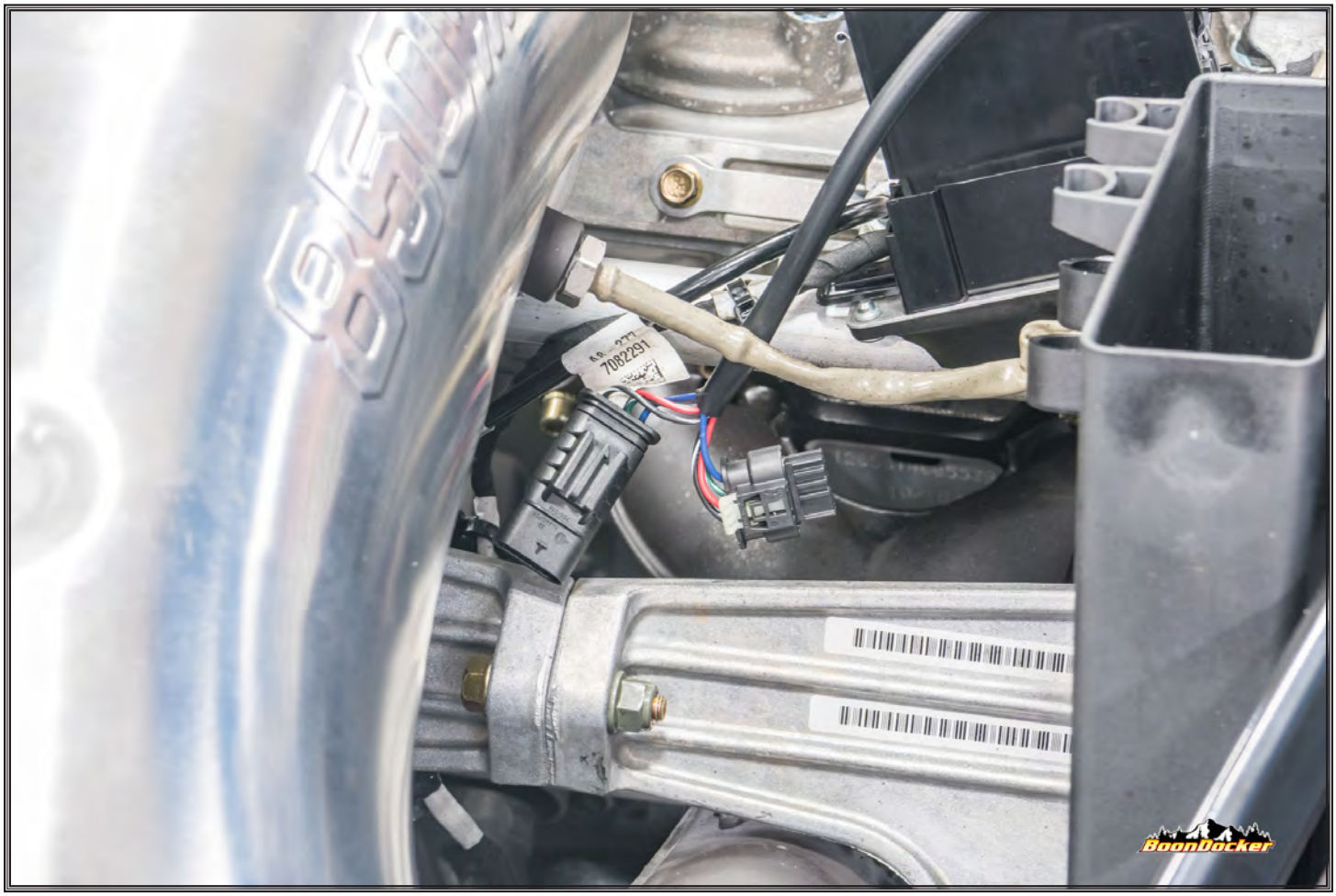
Route and secure ground wire to grounding stud (the same bolt to attach bumper on PTO side of snowmobile) as shown.

Electronics



Route boost control solenoid harness. Connect plug and secure wire harness as shown.

Electronics



Route harness for exhaust valve servo motor.

Electronics

Plug connections into exhaust valve servo motor. Zip-tie connector to servo-motor-harness to prevent wires from contacting or being too near to exhaust components.

TAKE THE TIME TO PROPERLY HEAT-SHIELD THESE WIRES AND CONNECTIONS. The exhaust pipe at the Y-pipe is going to read in excess of 1,000 degrees. We suggest a heavy application of heat tape and shielding.

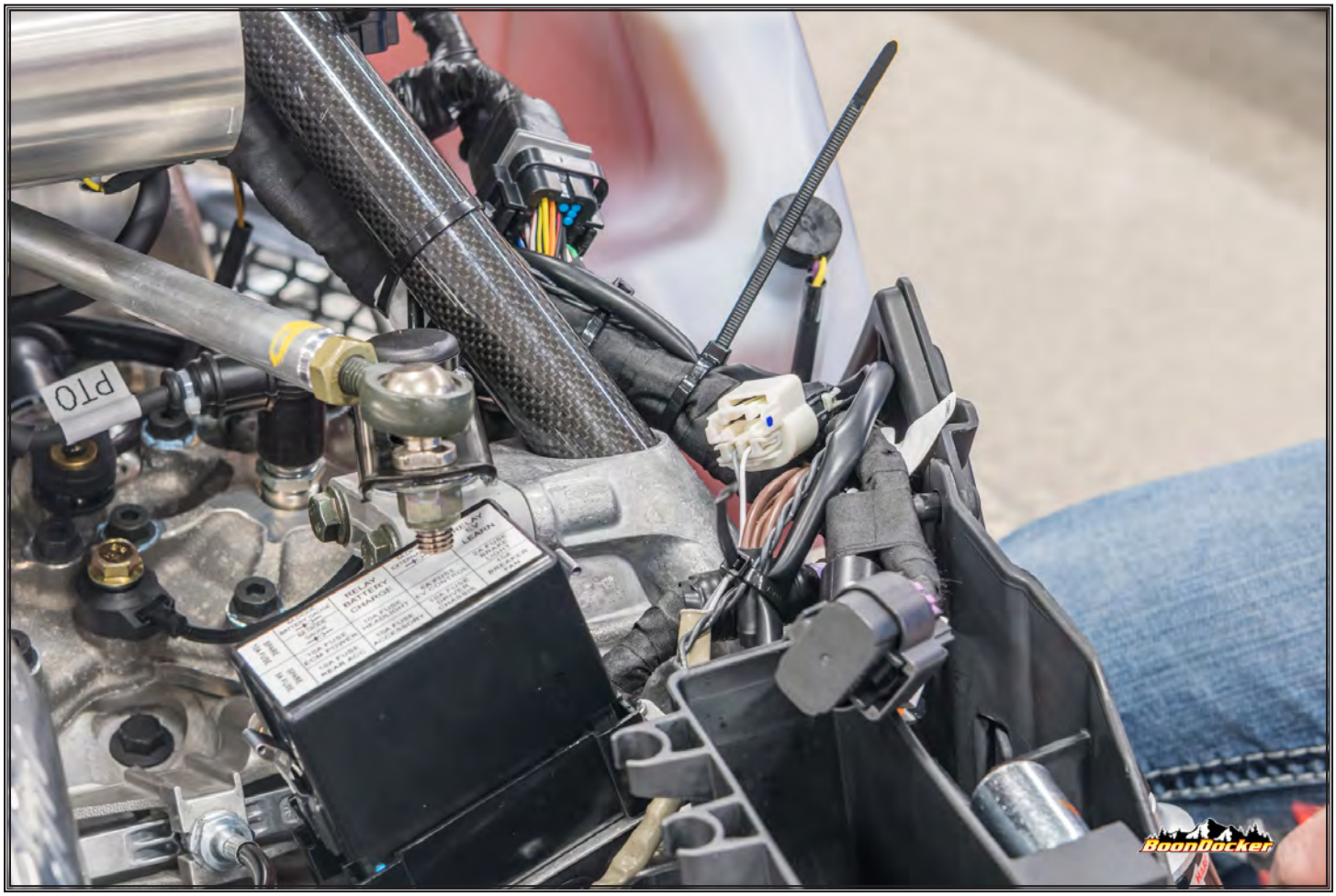
Electronics

Secure wires from exhaust valve servo motor using Zip-Ties.

Electronics

Secure wire harness to overstructure and existing wiring harness as shown.

Electronics

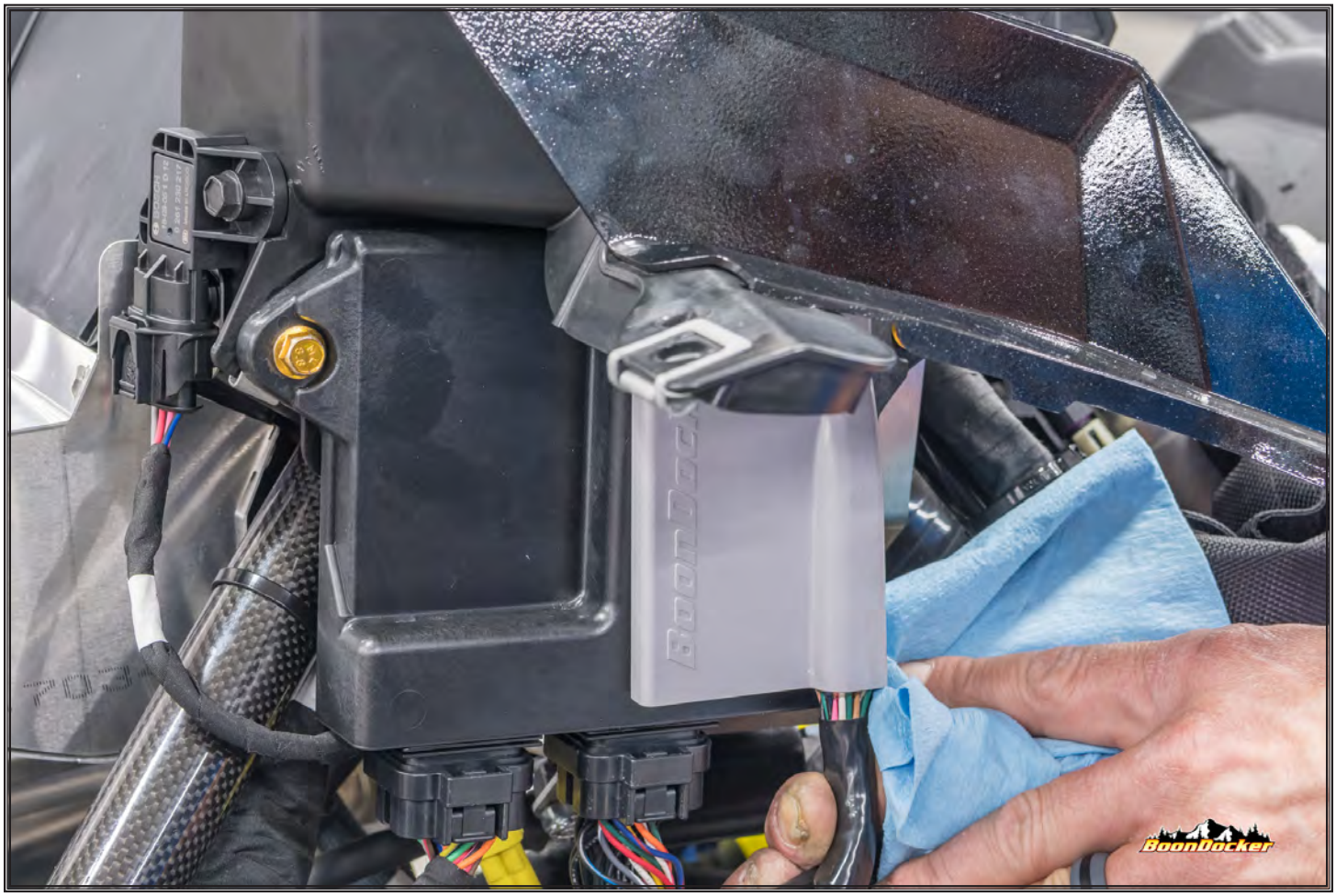


Additional View

Electronics

Additional View

Electronics



Affix BoonDocker control box as shown. Remove adhesive barrier from supplied Velcro (both sides of Velcro are supplied, installed on control box). Heat the adhesive on the back side of Velcro, just enough to make the adhesive shiny. Lightly heat the attachment point to provide additional adhesion. Secure the wire harness with Zip Tie in case adhesion-bond of Velcro breaks, to prevent control box from falling into clutches and becoming damaged.

NOTE: Do NOT use a torch to heat adhesive or airbox, instead, use a heat gun. Snowmobiles contain flammable liquids. Open flame can create a combustion hazard.

Reassembly

Install cold-air intake silicon and tubing. Tighten clamps.

Reassembly

Additional View

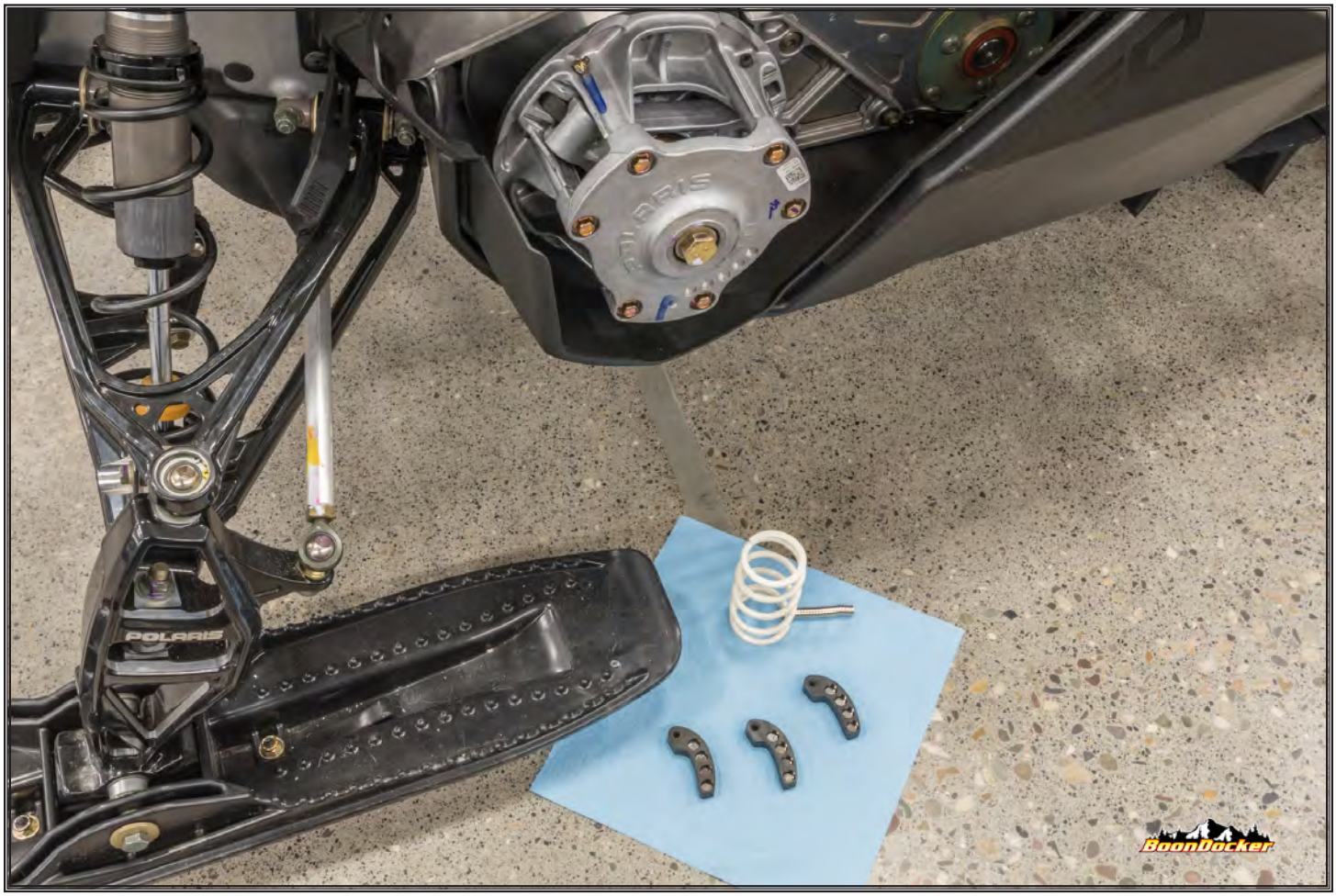
Reassembly

Additional View

Reassembly

Re-attach lower plastics using supplied rivets.

Clutching



Install supplied clutching (your kit may vary). Load weights per “User Manual”, located at the beginning of this document.

Reassembly, cont'd

Ensure tab ❶ correctly seats into groove on factory air intake box.

Reassembly, cont'd

Reinstall console plastics.

Reassembly, cont'd

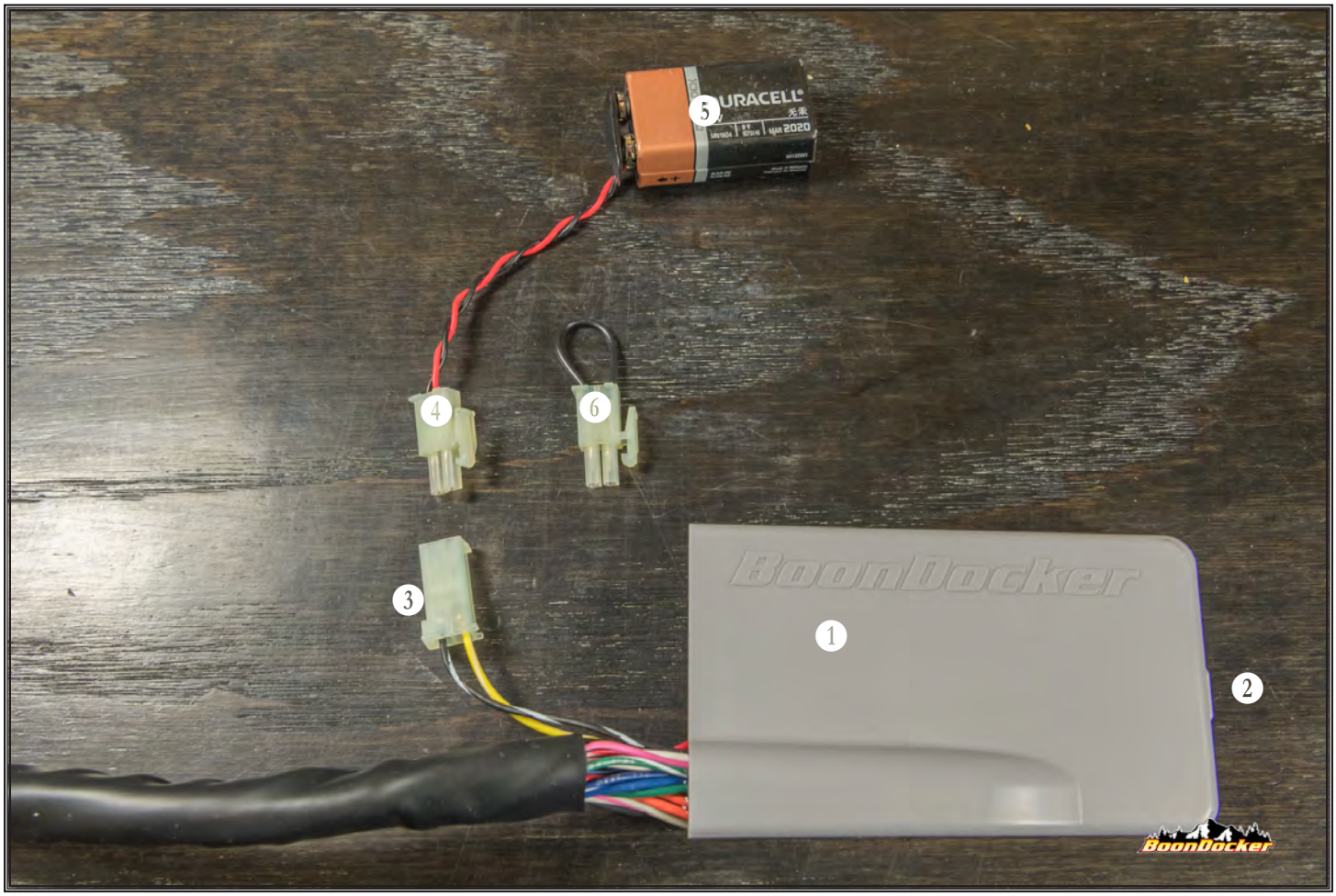
Reinstall hood and plastics. Don’t forget to plug in gauge harness

Fueling Mode

Configure your snowmobile for “Premium Mode” using your gauge. Refer to your owners manual or: “http://www.polaris.com/en-us/rider-support/owners-manual” to properly configure the fuel mode.

NOTE: PIDD and Standard Gauge will have different instructions

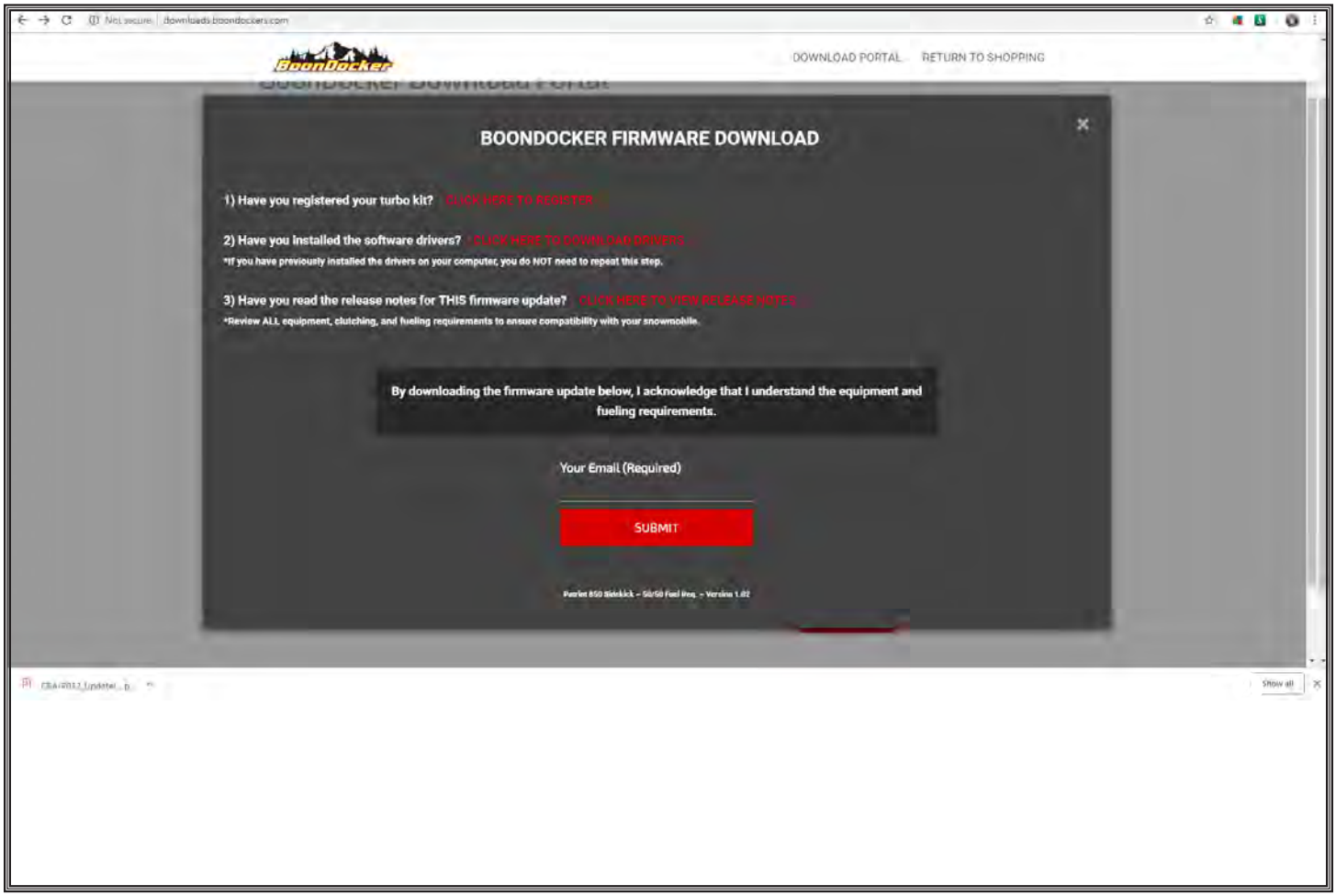
Control Box



❶ Control Box
❷ USB “Update” Port (Micro-USB cable not included, required for update installation)
❸ Control Box “Jumper” port
❹ “Battery Power” Jumper (required for update installation)
❺ 9V Battery (not included, required for update installation)
❻ “Map” Jumper (leave unplugged, unless instructed by BoonDocker)

NOTE: During normal operation, nothing should be plugged into the ❸ Jumper port, unless specifically requested by BoonDocker.

Control Box



UPDATING your control box is required! DO NOT RUN your snowmobile without first updating your control box.

UPDATE YOUR CONTROL BOX: Please refer to Control Box Update Instructions, available at http://downloads.boondockers.com/

HAVE FUN

GO HAVE FUN!