



Pro R Paragon-54 450 Turbo Upgrade System

SKU(s):604FP0077

NOTE: Expect 24–48-hour turnaround from the time we receive your ECU for unlock. Please send your ECU to EVP WI headquarters. Create your Maptuner/CodeShooter account before starting the project. Email us at givememorepower@evopowersports.com

This is a high-performance upgrade! Although we have gone through great lengths to build safety into the upgrade turbo system, the fact is installing any upgrade / turbo system requires care in both operation and installation. Poor fuel, improper setup or any number of things that are done incorrectly can damage your engine!

- You have likely voided the sound and exhaust emission standards of your country if applicable.
- This upgrade is intended for OFFROAD and RACING use only.
- This is a performance upgrade which will VOID your engine warranty especially if installed incorrectly or operated without regard to your instruments.
- The fuel requirements must be adhered to. Poor fuel can destroy an engine in seconds.
- Evolution Powersports bears no responsibility for damage caused to your vehicle by the installation of EVP products. The warranty on big turbo kits is 30 days from the date of purchase. Evolution Powersports, at its discretion will determine whether a part meets the warranty requirements. In no case is there any warranty from EVP for your vehicle or vehicles drivetrain. Although we have been careful to supply you with the highest quality parts possible, we assume no liability for damage to the vehicle or personal injury from installing or using any of our products.
- The installation of this kit is technical and mechanical in nature with many opportunities to make mistakes – mistakes that can be very costly. If you are not qualified to install this kit, bring your vehicle to one of our qualified installation centers to do the installation.
- This kit will make your vehicle faster, climb higher and accelerate more quickly and take a longer distance to brake than a stock tuned vehicle. If you are not capable of controlling the vehicle with the added performance, do not install the kit.
- High boost is hard on spark plugs – they must be changed frequently. If you experience misfire issues – Gap and replace the spark plugs.
- A full exhaust and clutching are required for this kit and can be purchased separately.
- Do not ever allow a child or an unqualified driver to operate this vehicle.



Parts Included in Paragon 54-400 Turbo Upgrade System

604FP0075	Pro R Paragon 54/68 Black Turbocharger Assembly
604FP0076	Pro R Paragon Installation Kit
100FP0186	Pro R Triple Fan Kaizen Intercooler Assembly
953RU0485	Pro R Triple Fan Intercooler Hardware Kit
100RP0154	Pro R Charge Tube Kit, Black
953RU0421	Pro R Turbocharger Charge Tube Hardware Kit
203FP0110	Pro R Turbocharger Air Intake Kit
804FP0259	Pro R Coolant Tank Relocation Kit
953RU0486	Pro R Turbocharger Boost Control Kit
803FU0011	Pro R Catch Can Kit
100FP0187	Pro R Blow Off Valve 2.0 (BOV) Kit
300FP0374	Pro R Turbocharger Header/Exhaust System
604FP0078	Pro R Turbocharger Hardware Installation Kit
004FP0361	Pro R Turbo Bench Power Flash, CAN Unlock
502FU0018	1300cc Injector, ID1300-XDS Usicar, 34mm Length, 14mm top, 14mm lower, set of 4
603FP0005	Pro R External Wastegate Assembly
705RU0029	3 Bar MAP Sensor
925FP0184	Pro R Exhaust Facia Trim Plate
102FP0007	Pro R Intercooler Mount

Parts Included Pro R Paragon Install Kit

804FP0253	Pro R Intake Manifold Spacer	1
804FP0219	Pro R Head Gasket, Shimmed	1
804FP0252	Pro R Valve Cover Spacer	1
953RU0483	Permatex 82180, 3oz	1
953RU0484	1/4" Carbide Bur	1

Level	Tunes	Max Boost (psi)	Spark Plug Gap	Spring	Operating RPM	Engine HP
P54-350	91	8.5-9 psi	.016 - .018	Pink (7)	8200-8450	350CHP, 287WHP
P54-450	110	15-1 6psi	.016 - .018	Pink (7)	8200-8450	450CHP, 369WHP



Required Parts (Sold Separately)

- EVP calibrated Tapp primary clutch
- EVP calibrated STM secondary clutch
- AFR Module
- Oil Change Kit
- Engine Coolant
- Compressed air and parts cleaner
- Damper puller **OTC PN:6667**
- P90X primary clutch puller

Pro R Disassembly

Step 1: Remove the (4) bed screws using a T-40. Remove the bed.

Step 2: Remove the passenger and driver seat, if a 4-seater remove the rear seats.

Step 3: Remove both firewall panels, (6) 1/4-turn fasteners.

Step 4: Cut all zip-ties holding the taillight harness and rear-view camera. DO NOT remove the clips from the panels, this way you can reuse all OEM clips and supplied zip-ties in the hardware kit.



Figure 1

Step 5: Unplug both rear taillights and camera.

Step 6: Remove the lower rear valance around the muffler tips. Use a T-50 socket.



Figure 2

Step 7: Remove the upper rear valance with taillights. (4) T-40 screws and (6) push darts. (2) push darts are tucked underneath the rear fenders.

Step 8: Remove the cold air intake tube (bed to airbox tube) and intake tube (airbox to throttle body). Remove the crankcase breather tube from the intake tube. (4) worm drive clamps total.



Figure 3



Figure 4

Step 9: Remove the engine belly pan using a 10mm socket. (8) screws and oversized washers.

Step 10: Remove the coolant reservoir cap. Locate the water pump housing (above the oil filter) and remove the 4mm Allen plug. Place a catch pan underneath the vehicle. (figure 5).



Figure 5

Step 11: Remove the (2) 10mm screws holding the airbox in place. Two tabs will be located underneath the airbox.

Step 12: Remove (2) T-40 screws holding the coolant reservoir in place. Remove all hoses from the coolant reservoir.



Figure 6



Figure 7

Step 13: Remove the bed frame hardware (4) 13mm bolts and (1) T-40 for the CVT boot support bracket.



Figure 8

Step 14: Remove (2) 14mm bolts holding the muffler and header pipe together. Remove the muffler by sliding it out of (3) rubber gromets (towards the left side of the vehicle). Gromets shown below.



Figure 9

Step 15: Remove the airbox and bed frame. Cut all zip-ties holding the engine harness to the bed frame.

Step 16: Remove the header heat shield. (4) 10mm screws.



Figure 10

Step 17: Remove (9) 6mm Allen screws holding the header to the engine block. Unplug the O2 sensor from the engine harness. Remove the header.

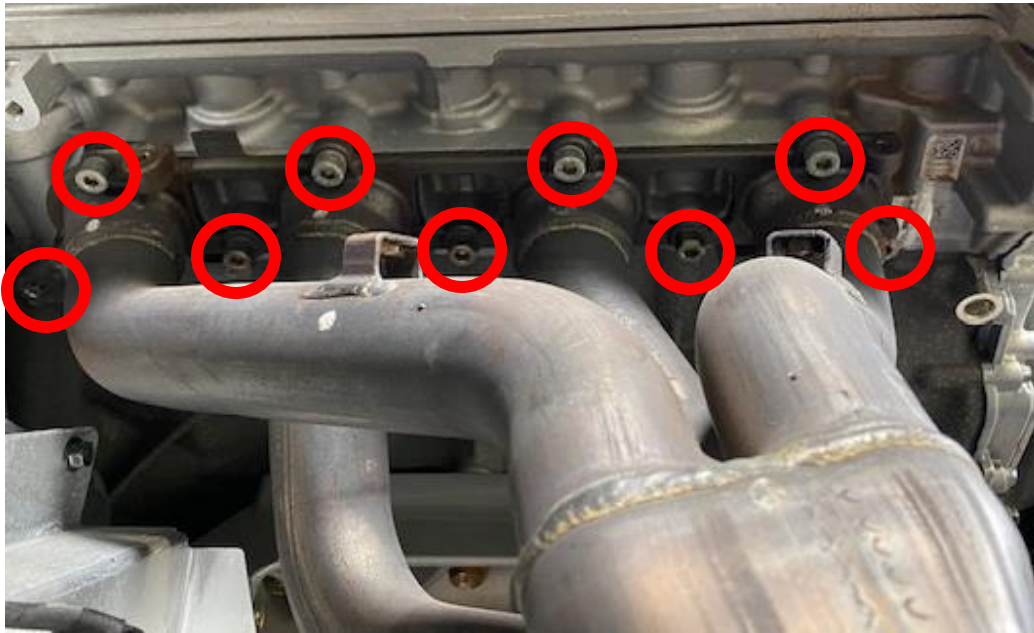


Figure 11

Step 18: Remove the alternator belt cover. (7) 10mm screws.

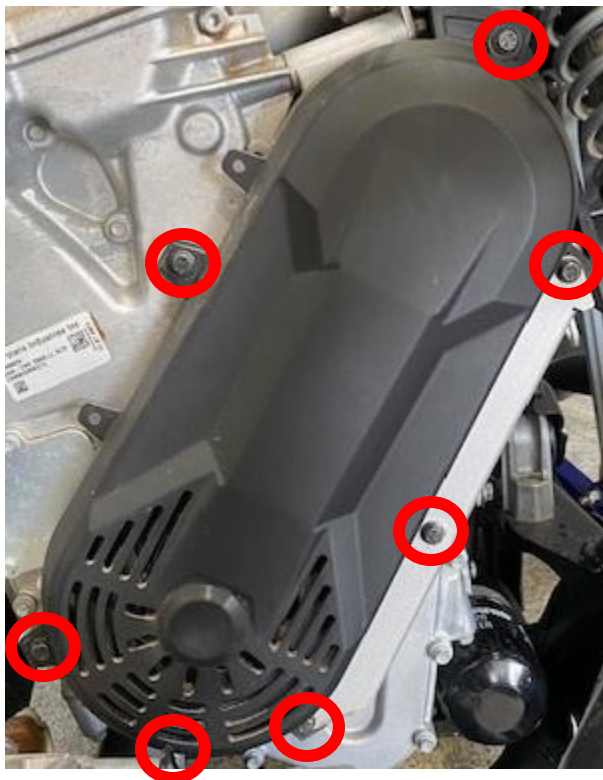


Figure 12

Step 19: Remove the alternator shroud. (6) 10mm screws. It is easier to remove the hose from the engine breather box.

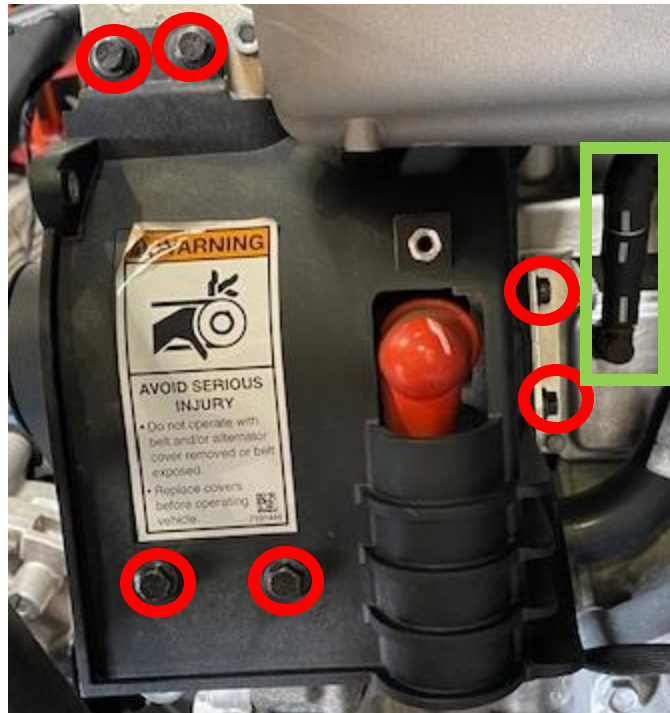


Figure 13

Step 20: Remove the CVT box breather. (1) worm drive clamp.



Figure 14

Step 21: Remove the alternator stretch belt. Use a 19mm socket to turn the crank.

Step 22: Remove the 13mm nut holding the power cable onto the alternator. Disconnect the 1-pin connector on the backside of the alternator. Remove (3) 10mm bolts and (3) 6mm Allen screws holding the alternator to the block. Remove alternator.



Figure 15

Step 23: Remove the (blue clip) from the fuel rail and (green clip) from the throttle body.

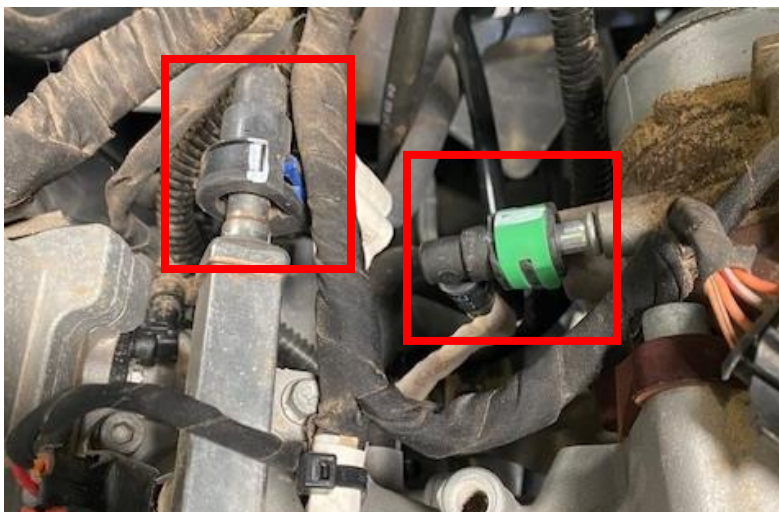


Figure 16

Step 24: NOTE: clean the entire engine and intake plenum with compressed air if you haven't already! Remove (4) injector connectors, (4) coil connectors. Cut the zip-ties holding the injector harness to the intake plenum. Disconnect the MAP sensor from the engine harness. Remove the valve cover breather tube. Disconnect the coolant temperature sensor underneath the plenum. Located between cylinder 3 & 4.

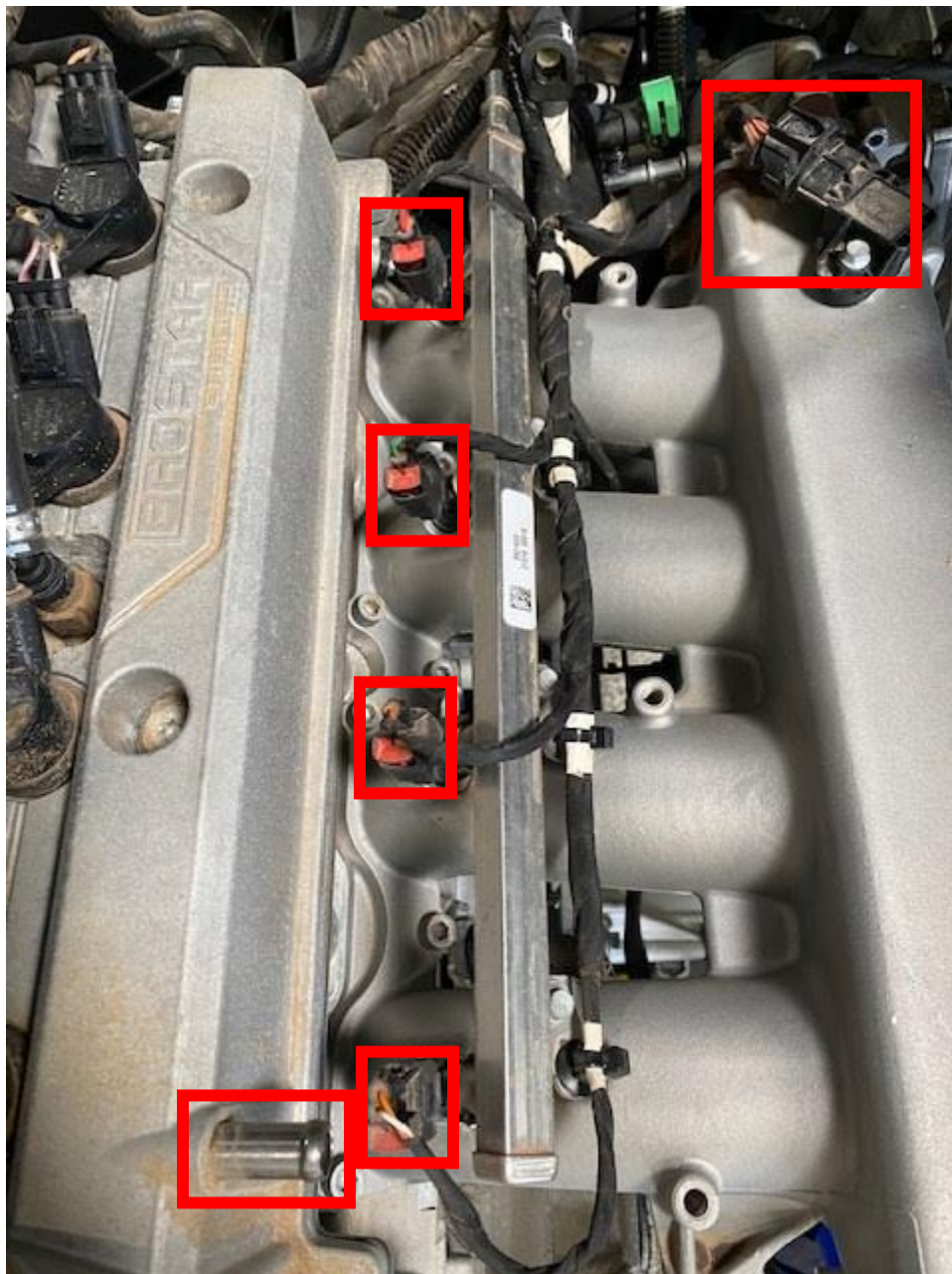


Figure 17

Step 25: Remove the harmonic damper bolt, using a 19mm socket. **NOTE:** Use a Damper Puller OTC PN: 6667 to remove the damper.



Figure 18



Figure 19

Step 26: Remove the (4) ignition coils using a 8mm & 10mm socket. Remove the spark plugs using a 5/8" socket. DO NOT damage the spark plugs when removing them from the head. Use a magnet to pull them out.

Step 27: Remove (7) intake plenum fasteners using a 6mm Allen socket. Remove the intake plenum and gasket from the engine block. The fuel rail and throttle body will come with it.

Step 28: Remove all (4) hoses off the thermostat housing block. The large hardline with O-ring going to the water pump will stay on the block. Remove (5) screws holding the thermostat block to the engine. (Figure 20)



Figure 20

Step 29: Remove the coolant line quick connector from the valve cover.



Figure 21

Step 30: Remove the (8) valve cover screws using a T-40 socket. Remove the valve cover and rubber gasket.

Step 31: Remove the chain tensioner access panel from the timing chain cover, using an 8mm socket.



Figure 22

Step 32: Find top-dead-center on the engine. Ensure the intake and exhaust camshaft notches are in the 12 o'clock position. The number 1 piston should be at top dead center (TDC), crankshaft key at 12 o'clock. The engine is timed top-dead center exhaust stroke. You can also slide the chain tensioner access panel into the key way on both camshafts.



Figure 23

Step 33: Place a catch pan underneath the timing chain cover. Remove the (20) timing chain cover screws using a 10mm & 6mm Allen socket. The cover may struggle to come off due to the water pump bearing in the cover.



Figure 24

Step 34: Remove the (2) screws holding the top chain guide using a 10mm socket.

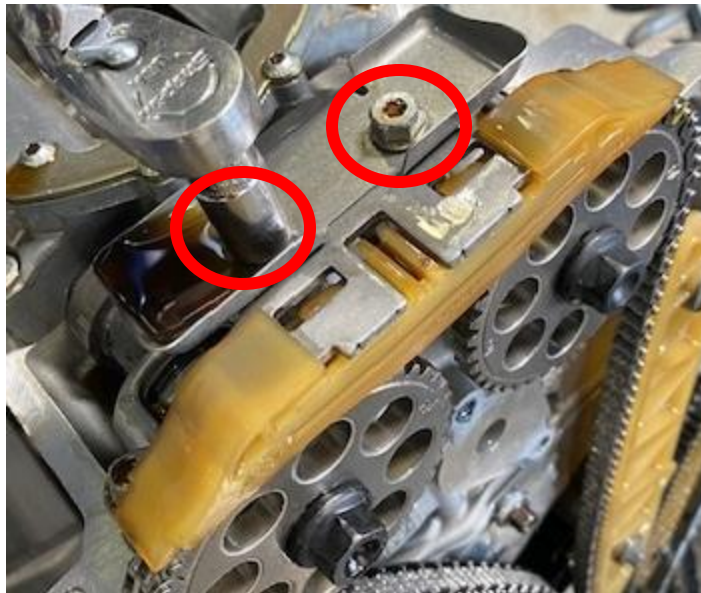


Figure 25

Step 35: Clean the timing gears and chain with parts cleaner, wipe clean and let dry.

Step 36: With a paint marker, mark the intake/exhaust cam gears and chain. Also make a mark on the crankshaft and chain. This is for reassembly purposes.

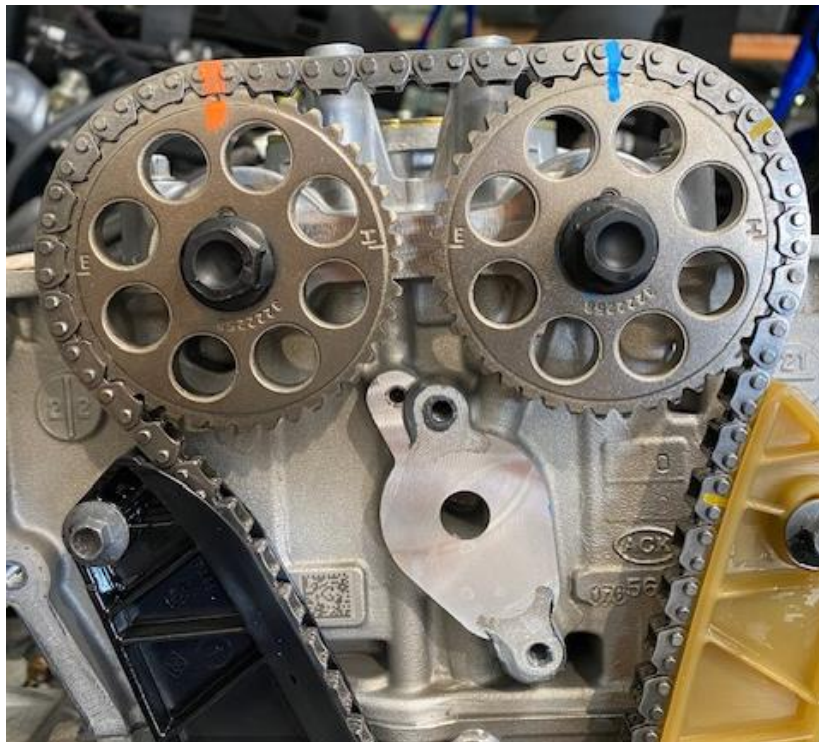


Figure 26



Figure 27

Step 37: Remove the chain tensioner by removing (2) 8mm screws. When removing the chain tensioner be careful not to damage the piston or spring. This will be reused.

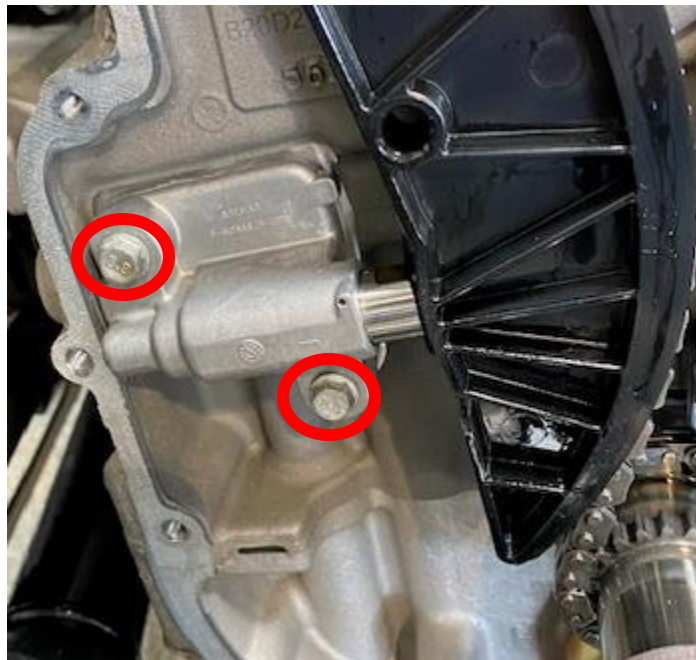


Figure 28

Step 38: Remove both (black/neutral) chain guides. Total of (3) 8mm bolts. Remove the timing chain off the gears and place it in a safe area.

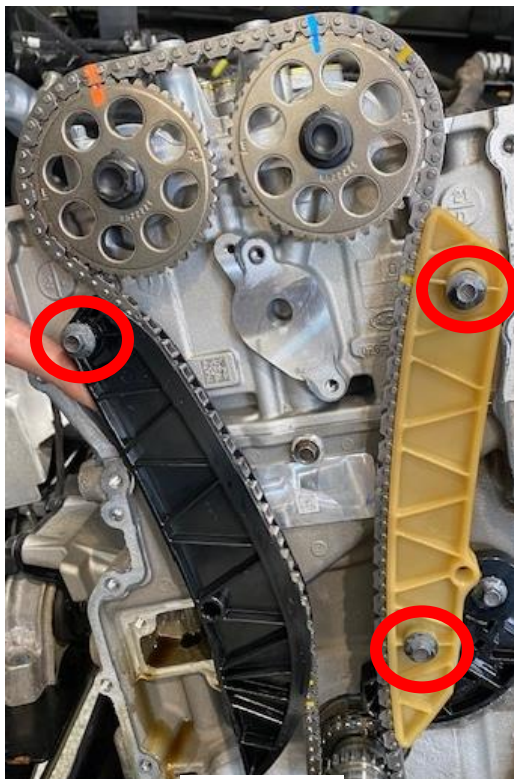


Figure 29

Step 39: Remove the camshaft carrier fasteners. (18) 8mm and (2) 10mm screws. Remove the intake and exhaust camshafts.

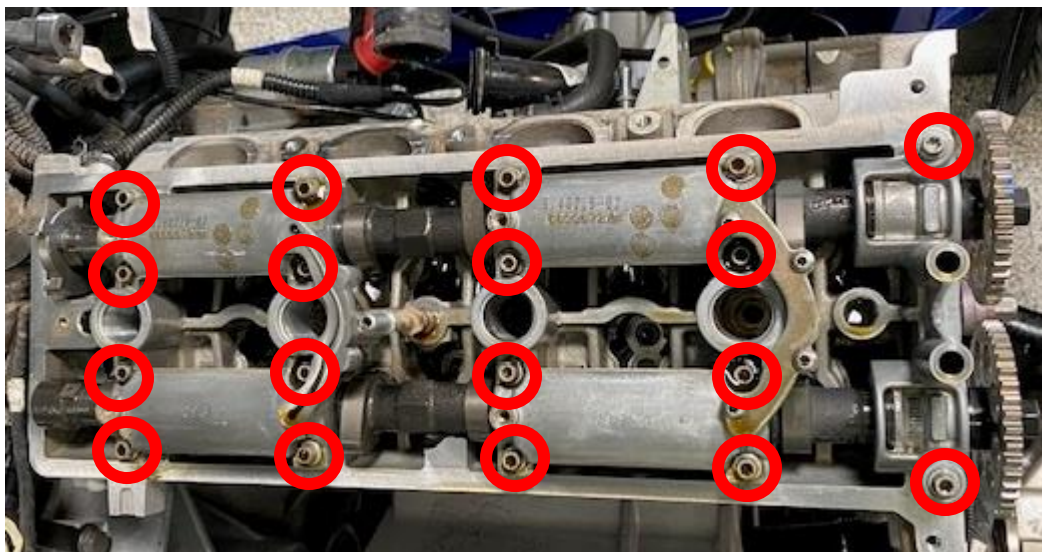


Figure 30

Step 40: Unplug the camshaft sensor, located on the rear of the engine.



Figure 31

Step 41: Loosen the (10) head bolts. Start from the inside of the head and crisscross towards the outside of the head, only doing a full turn on each bolt. Doing this takes any binding pressure off the head.

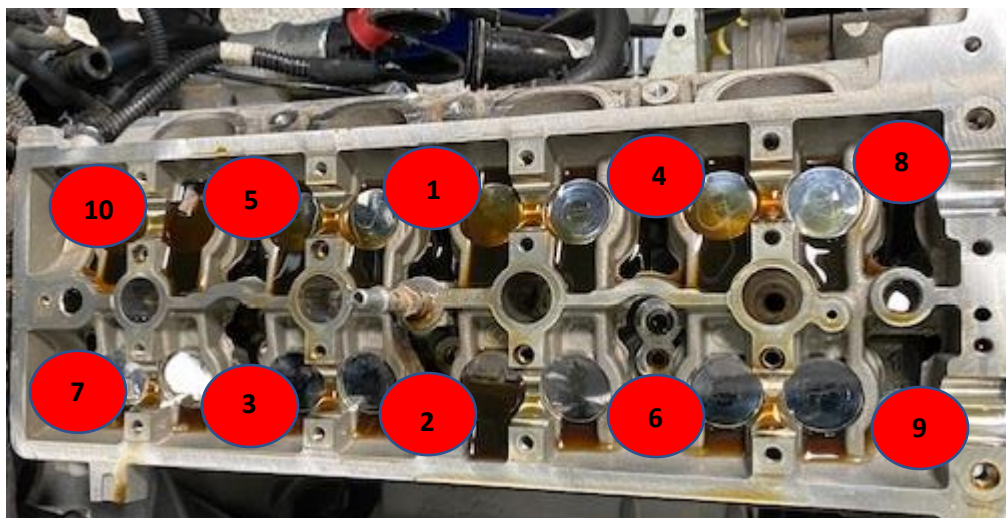


Figure 32

Step 42: Remove the head from the block. Place the head on a dry clean surface. Remove the head gasket and inspect the top end of your engine.



Figure 33

Cylinder Head Cleaning

NOTE: Now is a good time to inspect your cylinder head. Look for cracks around the valves / valve seats. For renewing valve seats please see shop manual Pg: 3.52-3.54. If any debris is found on the topside of your cylinder head, you can remove the intake/exhaust tappet from the valve and clean thoroughly. Keep mated parts together in order with respect to their locations in the cylinder head. Always reinstall tappets with a fair amount of assembly lube on the outer portion. Clean both surfaces where the intake/exhaust gaskets lay. For more information, please see shop manual Pg: 3.54- 3.95.

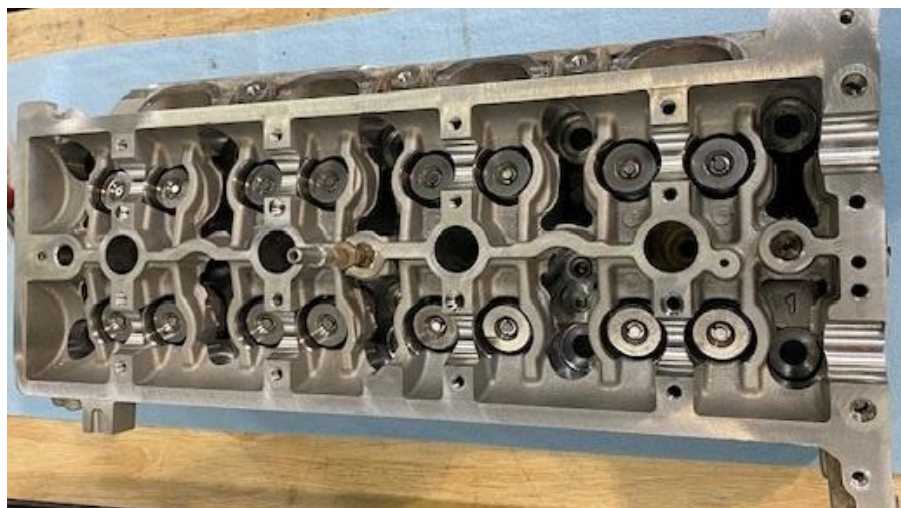


Figure 34

Pro R Engine Reassembly

Step 1: Install the EVP supplied head gasket. Reinstall the cylinder head and head bolts. Head bolts can be re-used up to 4 times. If you have removed your cylinder head more than 4 times without replacing the OEM head bolts, they need to be replaced. See torque sequence below.

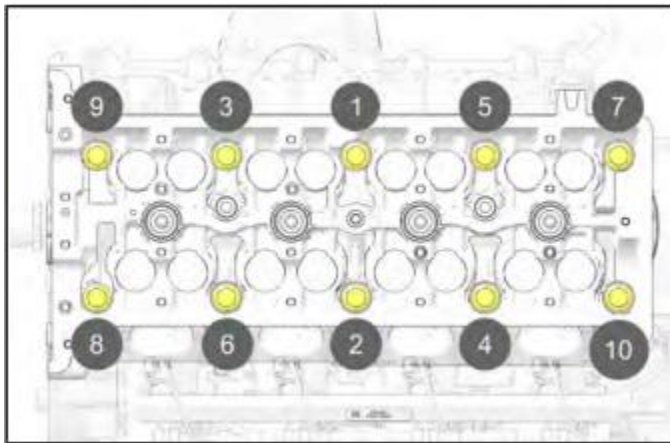
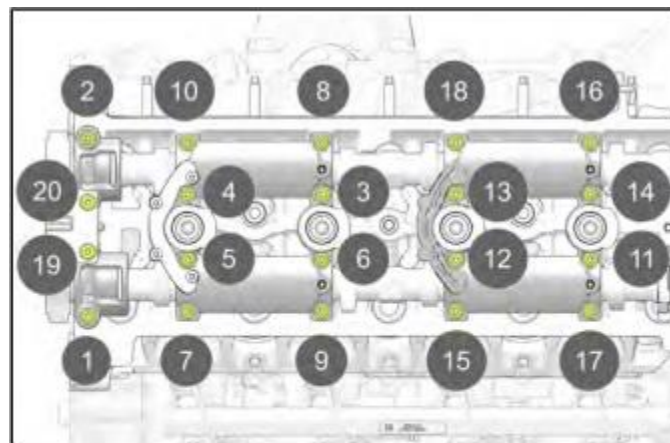


Figure 35

TORQUE	
Cylinder Head Fasteners:	
a.	Torque all fasteners to 14 ft-lbs (20 N·m) in sequence specified.
b.	Torque all fasteners to 26 ft-lbs (35 N·m) in sequence specified.
c.	Angle torque all fasteners in sequence an additional 90°
d.	Angle torque all fasteners in sequence an additional 90°
e.	Angle torque all fasteners in sequence an additional 180°

Figure 36

Step 2: Install both intake/exhaust camshafts. Ensure the camshaft notches are in the 12 o'clock position (still at top dead center). Lubricate the camshaft bearing journal surfaces. Install camshaft gaskets and carriers. Torque sequence below.



TORQUE	
Camshaft Carrier Fasteners: 13 ft-lbs (17 N·m)	

Figure 37

Step 3: Install the timing chain with indicator marks on both camshaft gears and crankshaft gear. Install the timing chain guides and hand tighten for now. Double check all indication marks are still lined up with top dead center. Torque timing chain guides to **89 in-lbs.**



Figure 38

Step 4: Reset the timing chain tensioner. Remove the piston from the body and dry completely off. Press in and twist clock-wise on the piston until it stays collapsed by itself. Reinstall the piston assembly into the body of the tensioner. **Rotate the crankshaft clockwise to remove chain slack. Do not rotate the intake camshaft.** Install the tensioner assembly into the crankcase. Torque tensioner fasteners to **80 in-lbs.** Press in and release the tensioner piston to allow engagement with the chain guide. If you cannot get the piston to stay, there is a small hole on the body to retain the piston.



Figure 39



Figure 40

Step 5: With the supplied 1/4" carbide bit or file, grind away **0.0500" (1.30mm)** on the **top** of the (6) highlighted holes shown below. Take your time, test fit the cover a few times. Once those (6) screws thread in correctly, you are good.

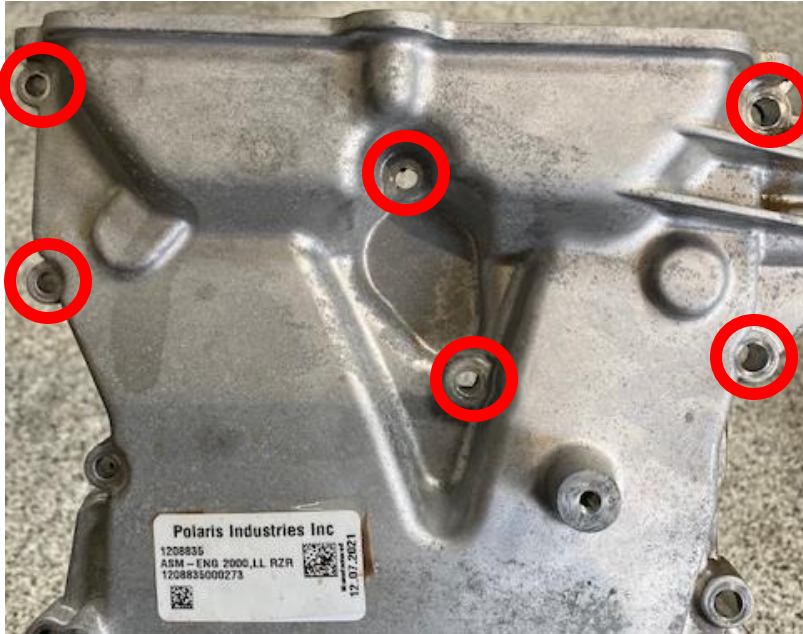


Figure 41



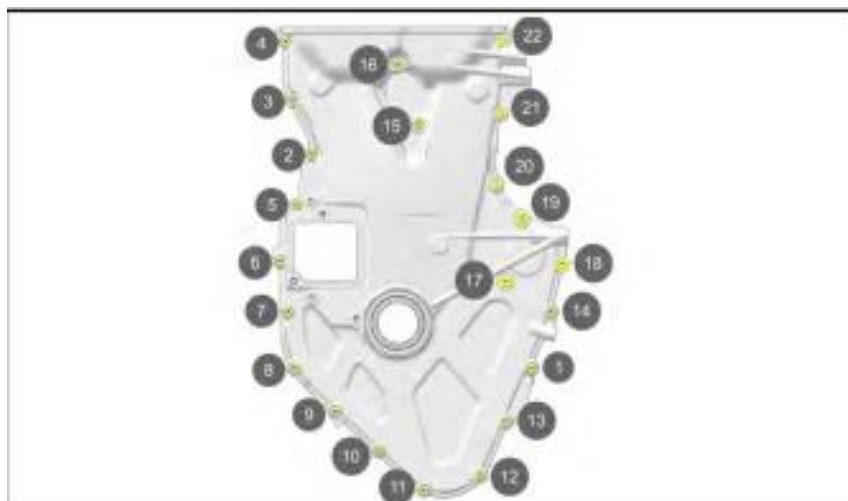
Figure 42

Step 6: With scotch brite pad and parts cleaner, remove all old gasket off the timing chain cover, engine block and cylinder head. Clean out the timing chain cover and timing chain galley. Use supplied Permatex gasket sealer and apply a bead on the timing chain cover and (2) spots between the engine block and cylinder head.



Figure 43

Step 7: Install the timing chain cover and loosely install fasteners. The longer screws support the water pump. Make sure the pump is seated correctly before torque procedure. Torque sequence below.



TORQUE

M6 Fasteners (Items 1–16):
80 in-lbs (9 N·m)

TORQUE

M8 Fasteners (Items 17–22):
16 ft-lbs (22 N·m)

Figure 44

Step 8: Install supplied EVP chain tensioner cover. Torque the OEM hardware to **80 in-lbs.**



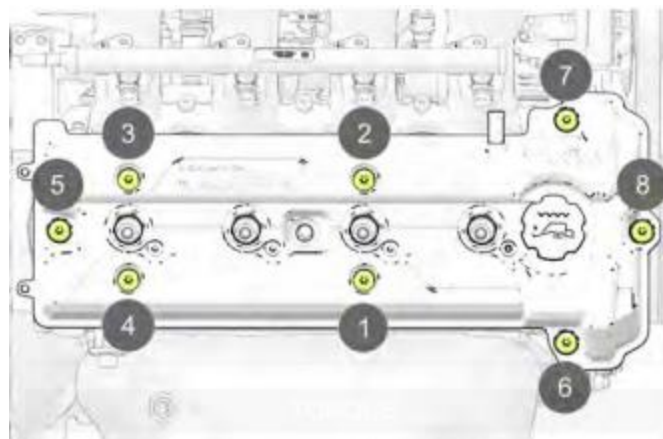
Figure 45

Step 9: Install supplied valve cover spacer. Apply Permatex gasket maker on the top of the timing cover.



Figure 46

Step 10: Reinstall the valve cover and gasket. Torque in sequence. **89 in-lbs.**

**TORQUE**

Valve Cover Fasteners:
89 in-lbs (10 N·m)

Figure 47

Step 11: Reinstall the thermostat block onto the engine. Apply dielectric grease to the O-ring on the hardline. Torque bolts.



Figure 48

Step 12: Reinstall 4 out of 5 OEM coolant hoses to the housing. Remove this hose from the car, it will be replaced with EVP supplied hose. Reinstall the camshaft sensor.

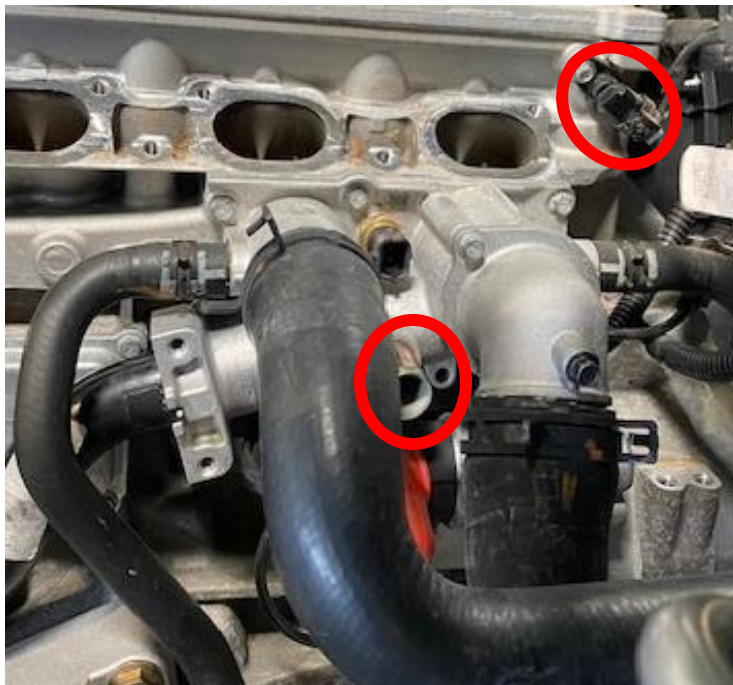


Figure 48

Step 13: Re-gap the OEM (NGK-ZMR7A-10) spark plugs to 0.018". Install the spark plugs back into the cylinder head. **Torque to 9 ft-lbs.**

Step 14: Reinstall ignition coils and **torque to 80 in-lbs.** Reconnect all (4) ignition coils to the harness.

Step 15: Loosen (4) 8mm screws holding the fuel rail to the intake plenum.

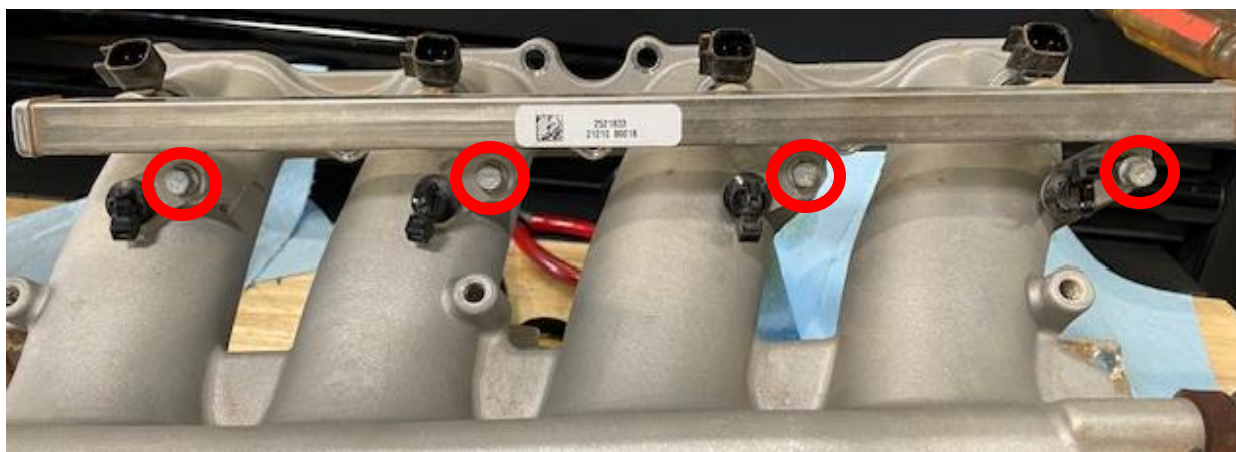


Figure 49

Step 16: Remove the injector clips, remove the injectors. Blow out the fuel rail with all injectors removed.



Injector "C" clip.

Figure 50

Step 17: Install the supplied (4) injectors. Apply dielectric grease to the O-ring on the injector. Reinstall the injector clip. Make sure the injector is properly seated. Torque fuel rail to **7 ft-lbs.**

Step 18: Remove the OEM MAP sensor using a 8mm socket. Install the supplied MAP sensor, apply dielectric grease on the O-ring before installing.



Figure 51

Step 19: Remove the brass barb fitting on the bottom side of the intake plenum. Install the supplied M12 x 1/4" barb fitting.



Figure 52

Step 20: Reinstall the intake plenum and gasket. Torque sequence below.

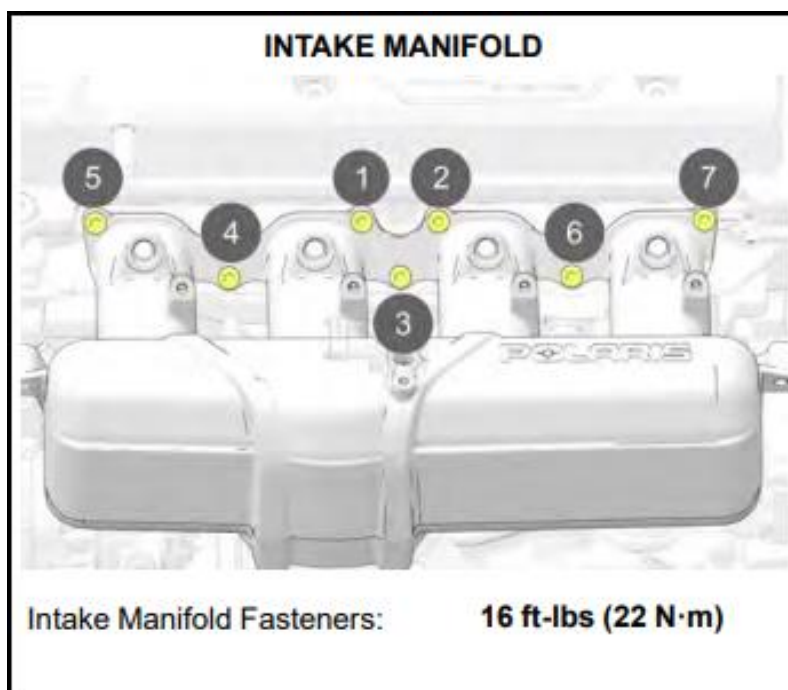


Figure 53

Step 21: Reinstall the fuel line to the fuel rail (blue clip) and EVAP connector to the throttle body (green clip).

Step 22: Install new zip-ties onto the plenum to hold the factory harness.



Step 23: Reinstall the alternator and torque to **15 ft-lbs**. Reconnect the positive lead and 1 pin connector on the back of the alternator.

Step 24: Reinstall the harmonic pulley onto the crankshaft.



2. Oil the threads and install the retaining fastener. Use the **PU-51123** guide and a breaker bar to prevent the crankshaft from rotating when tightening the fastener. Torque to specification.

TORQUE

Front Harmonic Pulley Fastener:

- a. Torque fastener to 74 ft-lbs (100 N·m)
- b. Loosen fastener 180°
- c. Torque fastener to 22 ft-lbs (30 N·m) + 70°

Figure 54

Step 25: Reinstall the alternator stretch belt.

Step 26: Reinstall the alternator shroud.

Step 27: Reinstall the alternator stretch belt cover.

Pro R Intercooler

Step 1: Remove (6) T-40 screws on the back cargo area. See photo below.

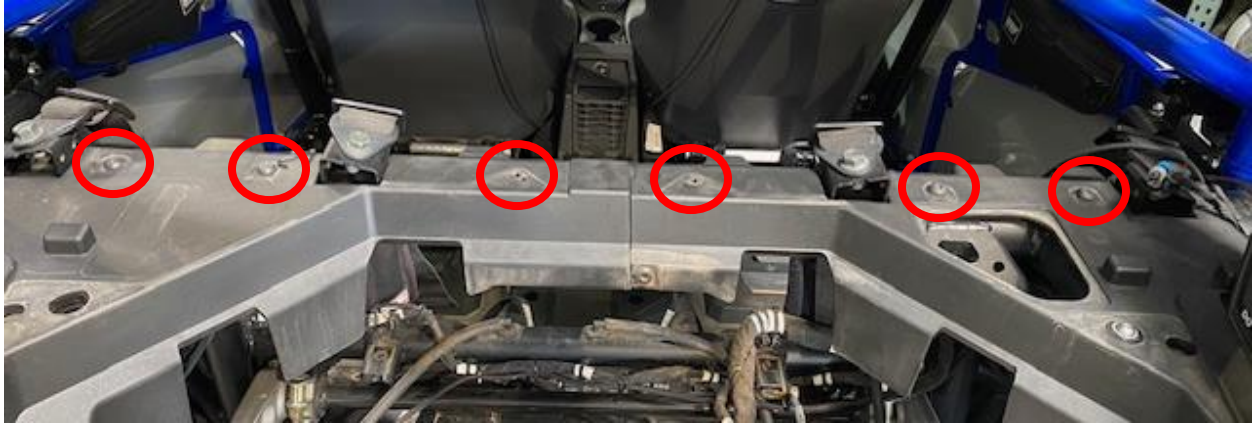


Figure 55

Step 2: Install the intercooler cage onto the vehicle. Hand tighten a few T40 screws to hold it secure. With a silver sharpie, outline both circles onto the plastic. Remove the cage. With a 3.50" whole saw or Dremel with a carbide bit, cut out both holes. Use fine grit sandpaper and a heat gun to clean up the burs.

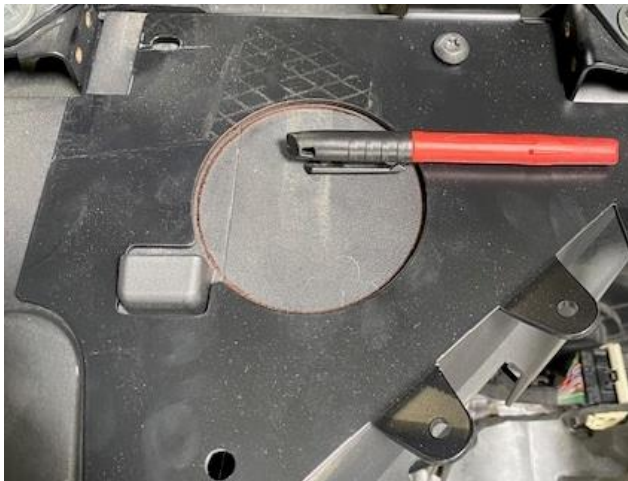


Figure 56



Figure 57

Step 3: Install the intercooler and cage onto the vehicle. Use OEM hardware to secure the intercooler cage to the vehicle. Use (2) M8x35mm button head, (2) oversized washers and nyloc nuts to secure the rear of the intercooler cage.



Figure 58



Figure 59

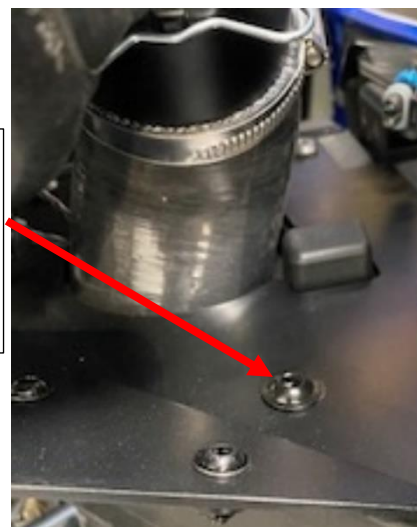


Figure 60

Pro R Header

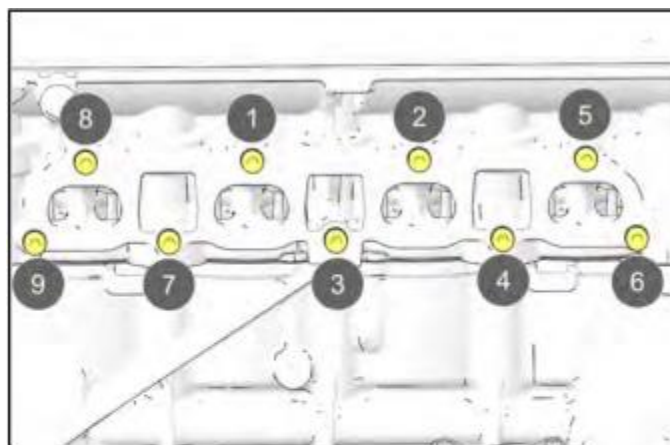
Step 1: Make sure all debris is off exhaust ports on the cylinder head, install supplied header gasket, header pipe, (9) M8x30mm screws with (9) conical washers. Torque to the sequence below.



Figure 61



Figure 62



NOTICE

Exhaust manifold hidden for image clarity

TORQUE

Exhaust Manifold Fasteners:
Step 1: 60 in-lbs (7 Nm) Step 2: 22 ft-lbs (30 Nm)

Figure 63

Step 2: Install the 41mm OD stainless steel sleeve into the intake cylinder on the wastegate. Install onto the header with a 204221 clamp. Apply anti seize on threads of the clamp. Keep clamp loose for now.



Figure 64



Figure 65

Step 3: Install turbocharger to the header using a 215221 clamp. Apply anti seize on threads of the clamp. Keep clamp loose for now.



Figure 66



Figure 67

Step 4: Install the mid-pipe to the turbocharger and wastegate dump. Apply anti seize on the threads. Leave clamps loose for now. Wastegate dump to mid-pipe will use clamp 105212. The turbocharger to mid-pipe will use clamp XXXXX.



Figure 68

Step 5: Leave the mid-pipe hanging for now, you will connect the muffler later when the bed frame gets reinstalled.

Pro R Coolant Tank/ECU Removal

Step 1: Located behind the passenger seat (if a 4 seater the rear passenger seat), remove the (4) push darts holding the sound dampener in.

Step 2: Located behind is the ECU. Remove the black clip. Remove the (4) T15 screws holding the ECU in place. Unclip the ECU connectors, left before the right.



Figure 69



Figure 70

Step 3: Remove the bed to CVT ducting, (2) worm drive clamps.

Step 4: Freely hold up the coolant reservoir bracket, keeping the EVP logo in line with the push dart hole and using the OEM existing hole for the bottom right Nutsert. (Figure 71-72).

Step 5: Angle the bracket so you cannot see the 90-degree bend on the plastic. Figure 73 wrong, Figure 74 correct.

Step 6: Mark the (3) holes out with a sharpie. Cut the holes out with a 1/4" drill bit. Install the mounting hardware on the bracket side.



Figure 71



Figure 72



Figure 73



Figure 74

Step 7: Mount the coolant tank. Make sure to mount the coolant tank inside the lower cutout.



Step 6: Cut the pinch clamp holding the valve cover water fitting on, remove the OEM hose from the valve cover fitting. Install the supplied 18" of 5/16" hose to the valve cover fitting. Use 15.7mm pinch clamp to secure.



Figure 71

Step 7: Install the OEM valve cover hose to the TOP barb on the coolant tank. Install the 8" piece of 5/16" hose on the BOTTOM barb for the radiator overflow. Install a 5/16 adapter to the end of the 8" piece of hose. Use 15.7mm pinch clamps.

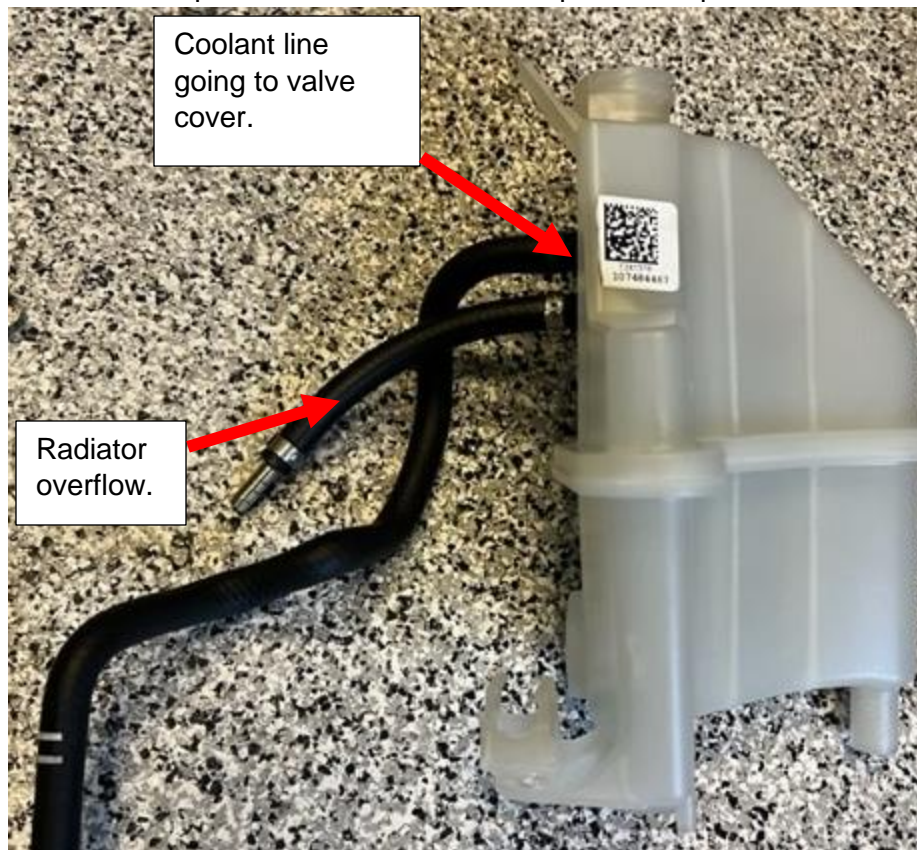


Figure 70

Step 8: On the valve cover water hose, the part that was connected to the fitting, cut 1.0" or the 45-degree bend off.



Figure 70

Step 9: Insert a 5/16" adaptor into the valve cover hose and connect it to the 18" of hose coming from the valve cover. Use 15.7mm pinch clamps.



Figure 70



Figure 70

Step 10: Install the supplied hose from the large barb on the coolant tank to the thermostat block. Reuse (2) self-tightening OEM clamps.

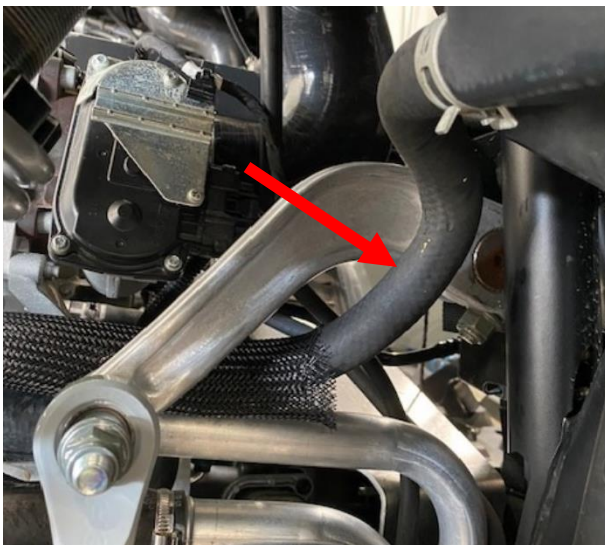


Figure 70



Figure 70

Turbocharger Oil Lines

Step 1: Locate the oil filter, remove the 5mm plug out of the oil filter housing.



Figure 80

Step 2: Locate the 60" oil feed line. Install supplied fire sleeve onto the oil feed line. Install supplied banjo bolt and washers on the straight fitting. Install it onto the oil filter housing. **DO NOT OVER-TIGHTEN.**



Figure 81



Figure 82

Step 3: Route the 90-degree fitting to the oil feed on the turbocharger.



Figure 83

Step 4: See oil feed line routing below, use supplied 5/16" & 1/2" P-clamps to hold the oil line around the timing chain cover.



Figure 84



Figure 85

Pro R Charge Tube

Step 1: Locate the airbox to turbocharger charge tube. Install the 1/2" plug into the crankcase vent port. Fasten with a 24.1mm pinch clamp. (Figure 88). Turbocharger to intercooler charge tube will need a BOV plug installed with a 34.6mm pinch clamp. (Figure 89)



Figure 88



Figure 89

Step 2: Install the O-rings into the billet charge tube connectors. Apply dielectric grease to the O-rings. The O-rings are directional, install as shown below.



Figure 90



Figure 91

Step 3: Locate the intercooler to throttle body charge tube. The blow off valve will be mounted in the port shown below.



Figure 92

Step 4: Install the turbocharger to intercooler charge tube. Once you have fit the silicone through the plastic, install the billet connector. Use dielectric grease if needed. Fasten down with a 60-80mm worm drive clamp. Fastened the turbocharger side with a 50-70mm worm drive.



Figure 93

Step 5: Install the throttle body to intercooler charge tube. Once you have fit the silicone through the plastic, install the billet connector. Use dielectric grease if needed. Fastened down with a 60-80mm worm drive. Fastened down the throttle body side with a 70-90mm worm drive.



Figure 94



Figure 95

Step 6: Install the billet connectors to the intercooler. Use (3) cotter pins per each side.



Figure 96



Figure 97

Pro R Airbox (Pre 10-24-2023)

Step 1: Locate the air filter adaptor template. Install it onto the outside of the airbox. Once aligned properly mark the (4) holes with a silver sharpie.

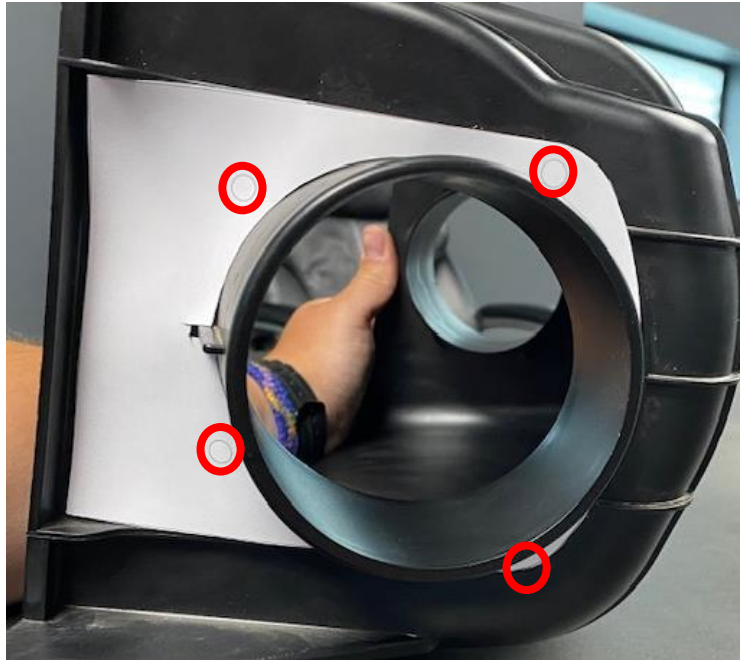


Figure 65

Step 2: Use a 1/4" drill bit and drill out (4) holes. Fasten the bracket down with supplied (4) M6x16mm flanged head screws into the Nutzerts.



Figure 66/67

Step 3: Reinstall the airbox (loosely) into the vehicle.

Step 4: Reinstall the bed frame with OEM hardware.

Step 5: Reinstall airbox hardware and engine harness clips. Use supplied zip-ties.

Step 6: Install supplied air filter and pre filter into the airbox.

Pro R Airbox (Post 10-24-2023)

Step 1: Locate firewall and bed frame brackets along with (4) M6x16mm flange bolts, (2) Nylock nuts and (2) M6 Nutzert.



Figure 57B

Step 2: Locate the firewall side of the bed frame, you will find (4) holes total (2) per frame rail. Install a M6x1.0 Nutzert into the bottom hole. On the bottom of bed frame.



Figure 58B

Step 3: Install (2) M6x16mm flanged screws holding the bed frame air box relocation bracket to the bottom of the bed frame. See photo.



Figure 59B

Step 4: Install the bed frame loosely, flip the airbox 180 degrees (making sure the airbox still opens inside the cab). Install the firewall air box relocation bracket using OEM hardware.

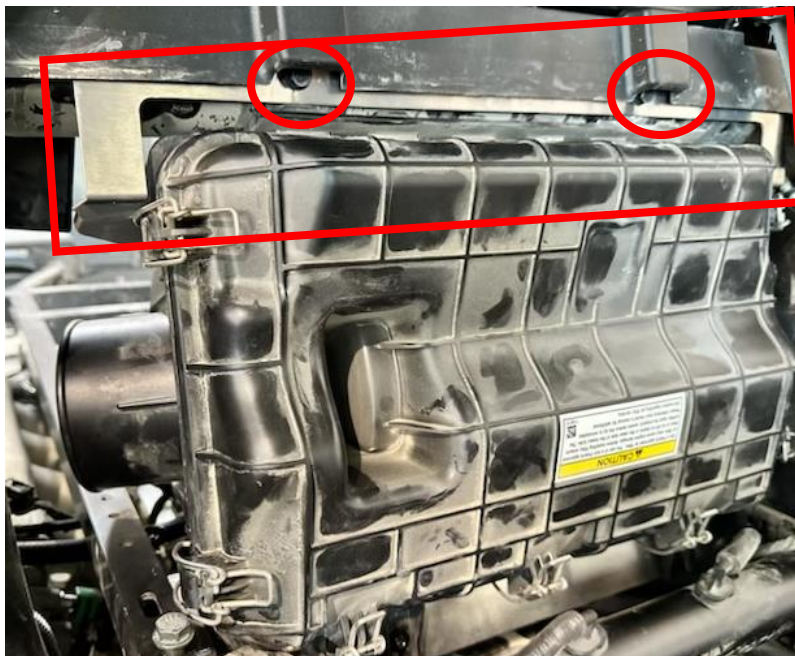


Figure 60B

Step 5: Install (2) M6x16mm screws and (2) M6 Nylock nuts holding the bottom of the airbox to the bed frame air box relocation bracket.



Figure 61B

Step 6: Reinstall the bed frame with OEM hardware.

Step 7: Reinstall airbox hardware and engine harness clips. Use supplied zip-ties.

Step 8: Install supplied air filter and pre filter into the airbox.

Pro R Boost Control

Step 1: Locate the 4-Port boost control solenoid with bracket. Install the bracket onto the bed frame. Fasten down with (2) M6x16 flanged head screws. See below.



Figure 100

Step 2: Install both 12" fire sleeve pieces onto the 21" lines. Install the 30" boost line between the top right "T" on the boost control solenoid to the turbocharger boost reference port. Install one 21" boost line between the bottom left single port on the boost control solenoid to the top port on the wastegate. Install the other 21" boost line between the bottom right "T" on the boost control solenoid to the bottom port on the wastegate. Fasten all fittings down with Teflon. (See diagram below).

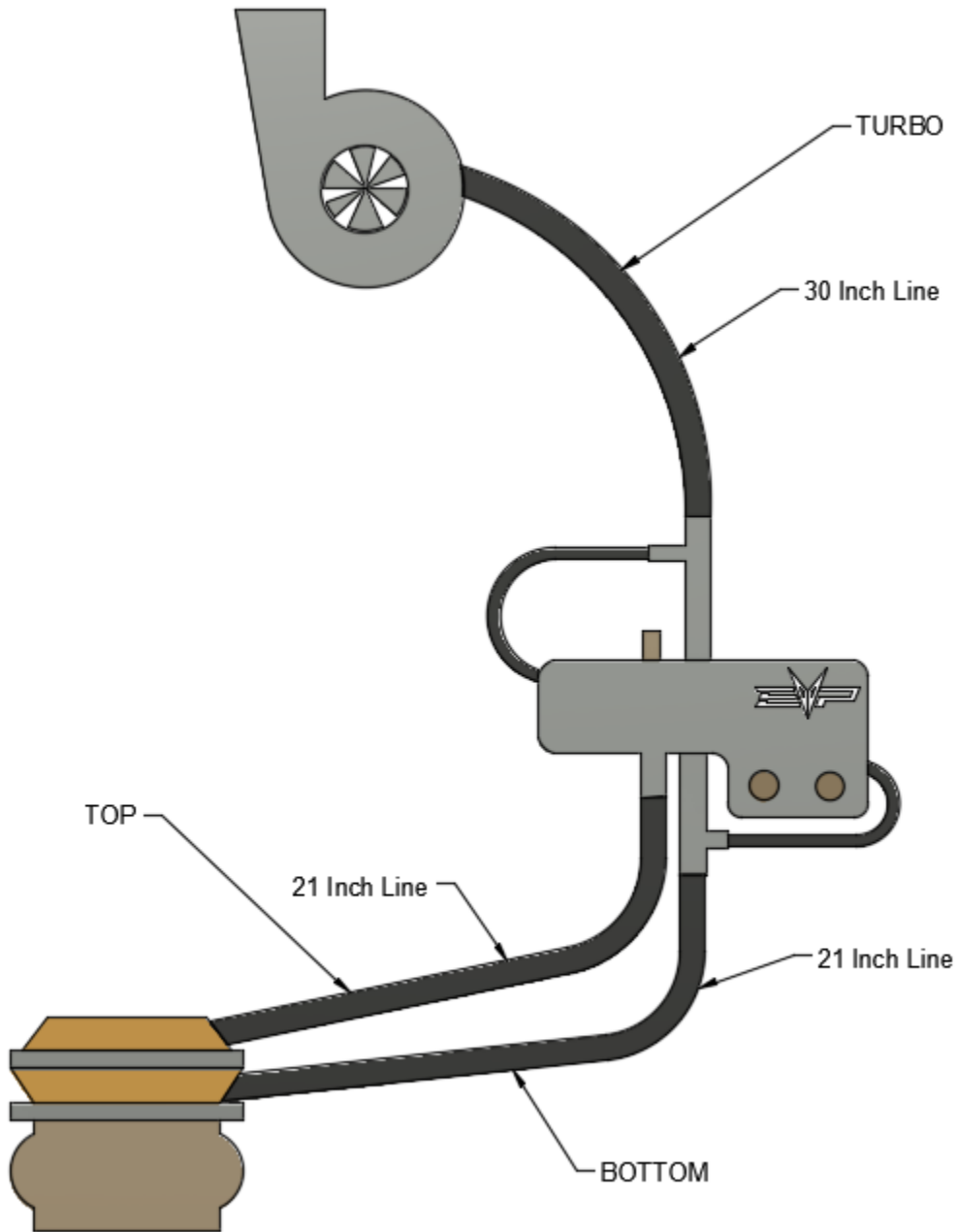


Figure 101

Pro R Kaizen Relay Harness

Step 1: Locate the storage compartment on top of the dash. Remove the insert. With the insert removed you will find the electrical BUS bar. You will need (1) port. Remove (1) blank from the bus bar. Install (1) plugs into the bus bar from the Kaizen relay harness.

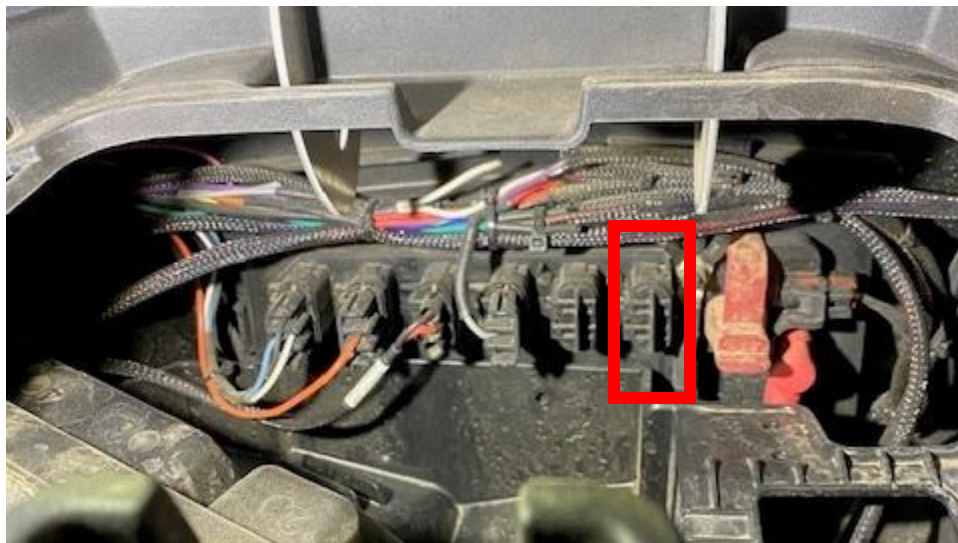


Figure 102

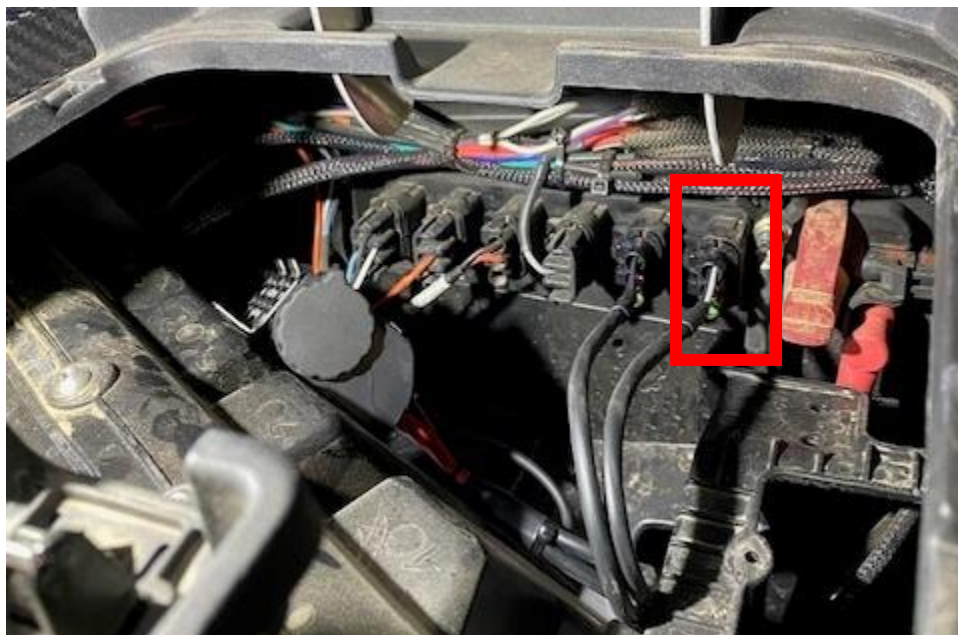


Figure 103

Step 2: Run the diagnostic port “Y harness” under the dash and over to the diagnostic port located under the steering wheel. Remove the OEM diagnostic port from the blank and connect it to the male connector off the “Y harness”. Install the female end back into the blank.

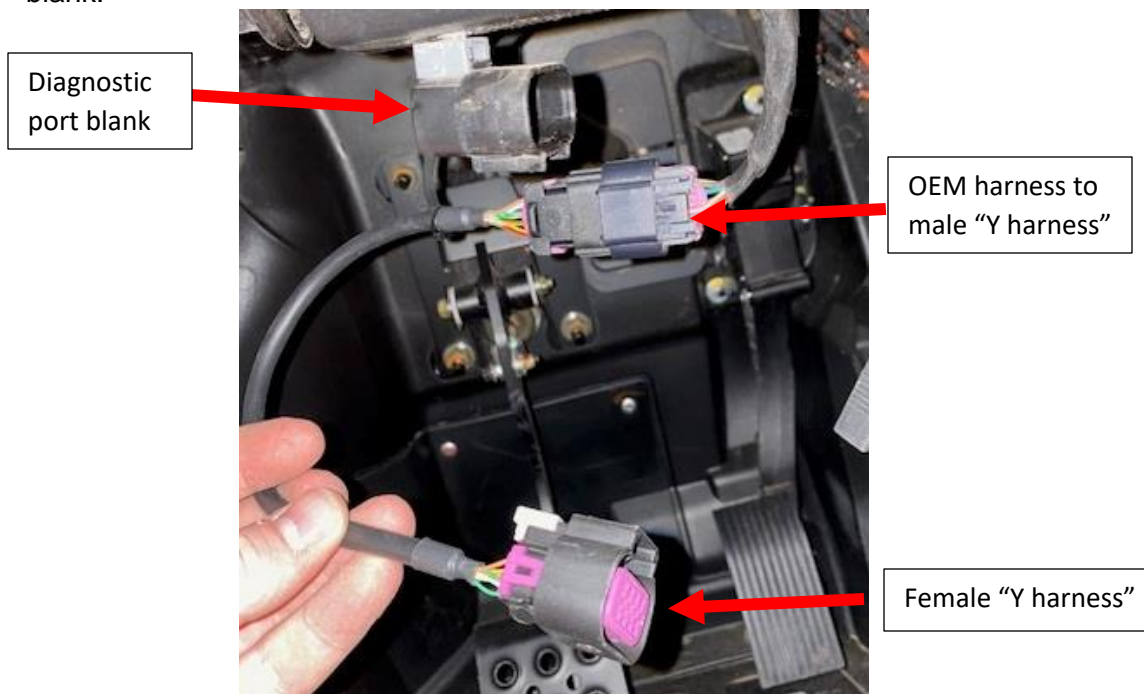


Figure 104

Step 3: Route the 4-pin connector under the dash and through the center tunnel, by the shifter and cup holders. (If a 4-seater run it through the rear tunnel). Run the harness back to the firewall.



Figure 105

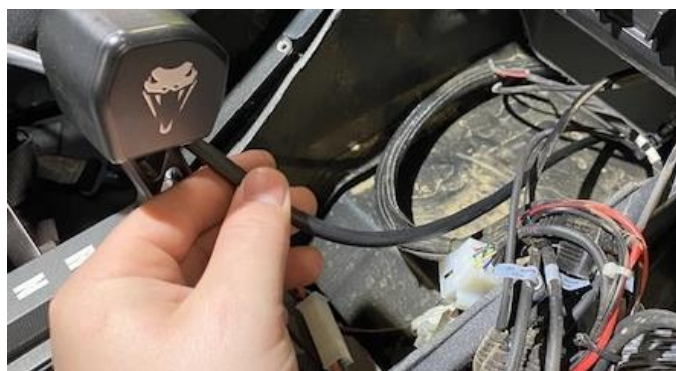


Figure 106

Step 4: With the 4-pin connector back at the firewall, install the intercooler triple fan harness. Run the triple fan harness back to the intercooler fans (on the inside of the cage). Also attached to the triple fan harness is a 2-pin connector. Connect the 2-pin connector to the 4-port boost control solenoid.



Figure 107



Figure 108

Step 5: Use (2) supplied 5/16" P-clamps to secure the (3) fan harnesses to the intercooler cage. Remove a M6 screw to fasten the clamp down with.

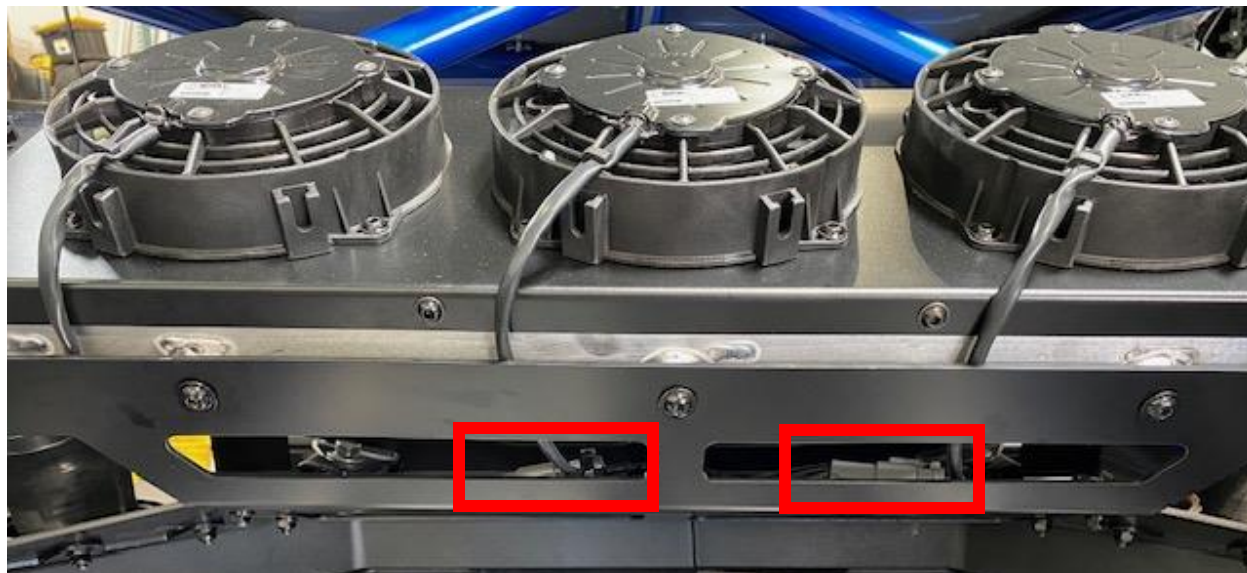


Figure 109

Step 6: Use supplied zip-ties to secure all wire harness to the frame, up to the front compartment.

NOTE: While keyed off, the CAN module LED should be **solid RED**. When fully keyed on (engine running or not), the CAN module LED should be **flashing GREEN**.

Pro R Catch Can

Step 1: Install the catch can on the left-rear frame. Tighten down the clamp around the tube frame. The port on the cap will face the engine bay. Install the 1/4" rubber hose to the barb located on the bottom of the catch can. Run it down into the belly pan.



Figure 110



Figure 111

Step 2: Locate the engine breather hose going to the plenum (which is currently removed). Remove the hose from the engine. Remove the longer piece of hose. Keep the small piece with the connector and one-way-ball valve. Reconnect the small piece to the engine.



Figure 112

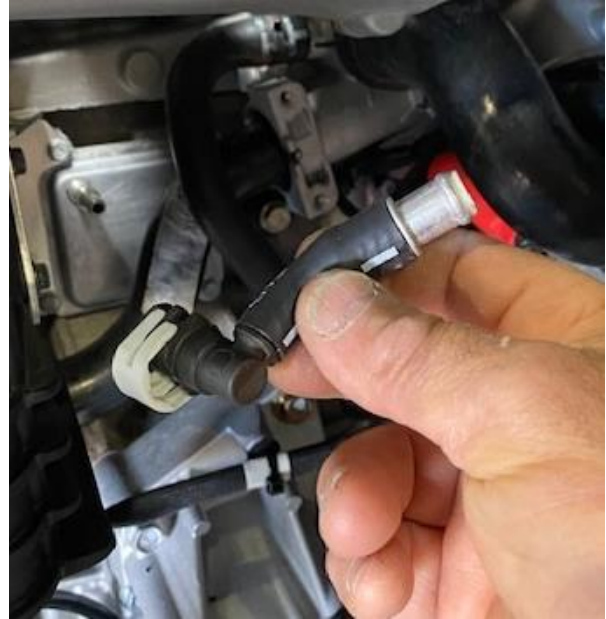


Figure 113

Step 3: Install the catch can hose. The “Y” portion of the hose will go to the small connector on the engine and the valve cover.



Figure 114



Figure 115



Figure 116

Pro R Blow Off Valve (BOV)

Step 1: Install the pre-filter onto the BOV and use supplied zip-tie around the base of the BOV to hold the prefilter on.

Step 2: Install the BOV into the charge tube between the intercooler and throttle body. Use supplied 25-40mm worm drive to fasten down.



Step 3: Install the vacuum line to the BOV and plenum barb, that was installed earlier. Use pinch clamps to secure.

Figure 117



Figure 118

Step 4: Install the V-flow from the turbocharger to airbox. Use supplied 70-90mm and 90-110 worm drive clamps.



Pro R Turbocharger Exhaust

Figure 119

Step 1: Remove the lower exhaust isolator from the frame. Use a 13mm socket.



Figure 120

Step 2: Install the exhaust clamp onto the muffler pipe. Install the muffler to the vehicle, re-use both top isolators. Install the bottom isolator onto the muffler and frame. Reinstall hardware.



Figure 121

Step 3: Remove the O2 sensor out of the OEM header using a 7/8" or 19mm wrench. Use anti seize on the threads and install onto the new down pipe. Reconnect the electrical connector to the harness.



Figure 122

Step 4: Tighten all clamps on the turbocharger, wastegate, mid-pipe, muffler, and muffler tips. Use anti seize on all threads. DO NOT overtighten the V-band clamps.

Polaris Pro R Rear Facia

Step 1: Open the new Pro R rear Facia box. Place the raw aluminum backer plate onto the rear facia trim. Use the M4 hardware and install. Keep the head of the screws on the outside.



Step 2: With a T50 socket remove the (2) screws holding the rear facia to the frame. Keep the plastic step washers.



Step 3: Place the EVP facia trim piece onto the vehicle. Reuse the OEM plastic step washer and bolt. Start securing but leave somewhat loose.



Step 4: Install the remaining hardware through the OEM plastic tabs. Place a washer on the head and nut side. Fasten down. Also finish fastening the T50 screws.



Pro R Turbocharger Clutching

Step 1: Remove the (5) CVT cover bolts using a 10mm socket. Loosen the 1/4 twist latches around the CVT cover. Remove the cover.

Step 2: Remove the belt.

Step 3: Remove the primary bolt using a breaker bar and T60 socket.

Step 4: Use a P90X primary clutch puller to remove the primary clutch from the crankshaft.

Step 5: Remove the secondary bolt using a 13mm socket.

Step 6: Using a clutch compression tool, loosen (3) helix bolts using a 13mm socket.

Step 7: Remove the OEM secondary spring and install supplied orange/blue spring. Put the secondary clutch back together.

Step 8: Reinstall the secondary clutch and torque the bolt to **55 ft-lbs**.

Step 9: Install the TAPP primary clutch. Install supplied spacer on the OEM bolt and torque to **90 ft-lbs.**

Step 10: Reinstall the CVT belt in the correct orientation.

Step 11: Spin the secondary a total of 5 rotations to set belt deflection.

Step 12: Reinstall the CVT cover and hardware.



Finishing Up

Figure 123

Step 1: Change engine oil and oil filter.

Step 2: Add coolant to the reservoir.

Step 3: Drain the fuel tank and add correct fuel for your tune.

Step 4: Reinstall your ECU.

Step 5: Start the vehicle and let it idle for a few minutes, keep an eye on the coolant level. Add if necessary. Look for any leaking. Once the coolant level is correct, shut the vehicle off.

Step 6: Reinstall all body panels, bed, skid plate, interior, etc.



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