

SOLID TURBOS

POLARIS AXYS/MATRYX 850 and 9R TURBO KIT
INSTRUCTIONS



*****DISCLAIMER*****

- BEFORE INSTALLING THIS TURBO KIT, IT IS IMPERATIVE THAT YOU ARE USING STOCK ENGINE COMPONENTS, SUCH AS; HEAD, PISTON, PIPE, Y-PIPE. **ANY MODIFICATIONS TO THE ENGINE COULD CAUSE CATASTROPHIC FAILURE!**
- **IT IS RECOMMENDED THAT YOU INSTALL AN AFR GUAGE!**
- IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT US AT 385-777-1534

RECOMMENDED TOOL LIST

- FLAT BLADE SCREWDRIVER
- #2 PHILLIPS SCREWDRIVER
- ¼ RACHET WRENCH AND EXTENSIONS
- ¼ IMPACT (NOT NECESSARY, BUT IS FASTER)
- ¼ 6MM SOCKET
- ¼ 10MM SOCKET
- 3/8 RACHET WRENCH AND EXTENSION
- 3/8 13MM SOCKET
- 3/8 15MM SOCKET
- ½ RACHET WRENCH
- 13/16 SOCKET
- T25 TORX BIT
- 18MM OPEN WRENCH
- T30 TORX BIT
- T40 TORX BIT
- CLUTH PULLER
- CLUTCH COMPRESSOR TOOL FOR PRIMARY
- CLUTCH COMPRESSOR TOOL FOR SECONDARY
- TORQUE WRENCH
- PLIERS
- RAZOR BLADE
- SIDE CUTTERS
- 9/16 OPEN WRECNH
- 17MM OPEN WRENCH
- ½ OPEN WRENCH
- 6MM ALLEN

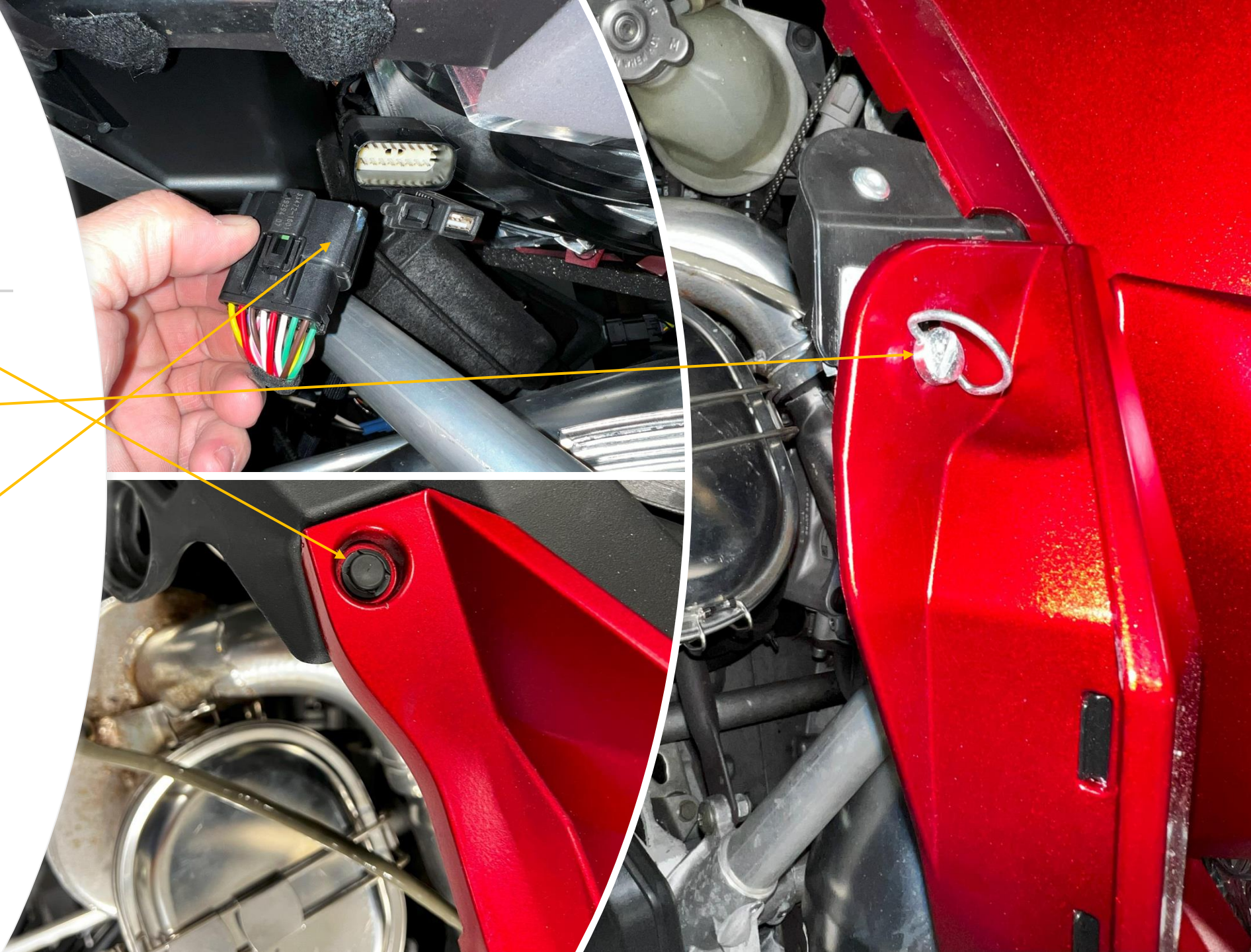
DISASSEMBLY OF PANELS/HOOD/SEAT/FUEL TANK

- The Axys and Matryx differ slightly when it comes to the side panels, hood, and cowl around the tank. However, they are similar enough that you should have no problems disassembling/assembling the hood pieces.



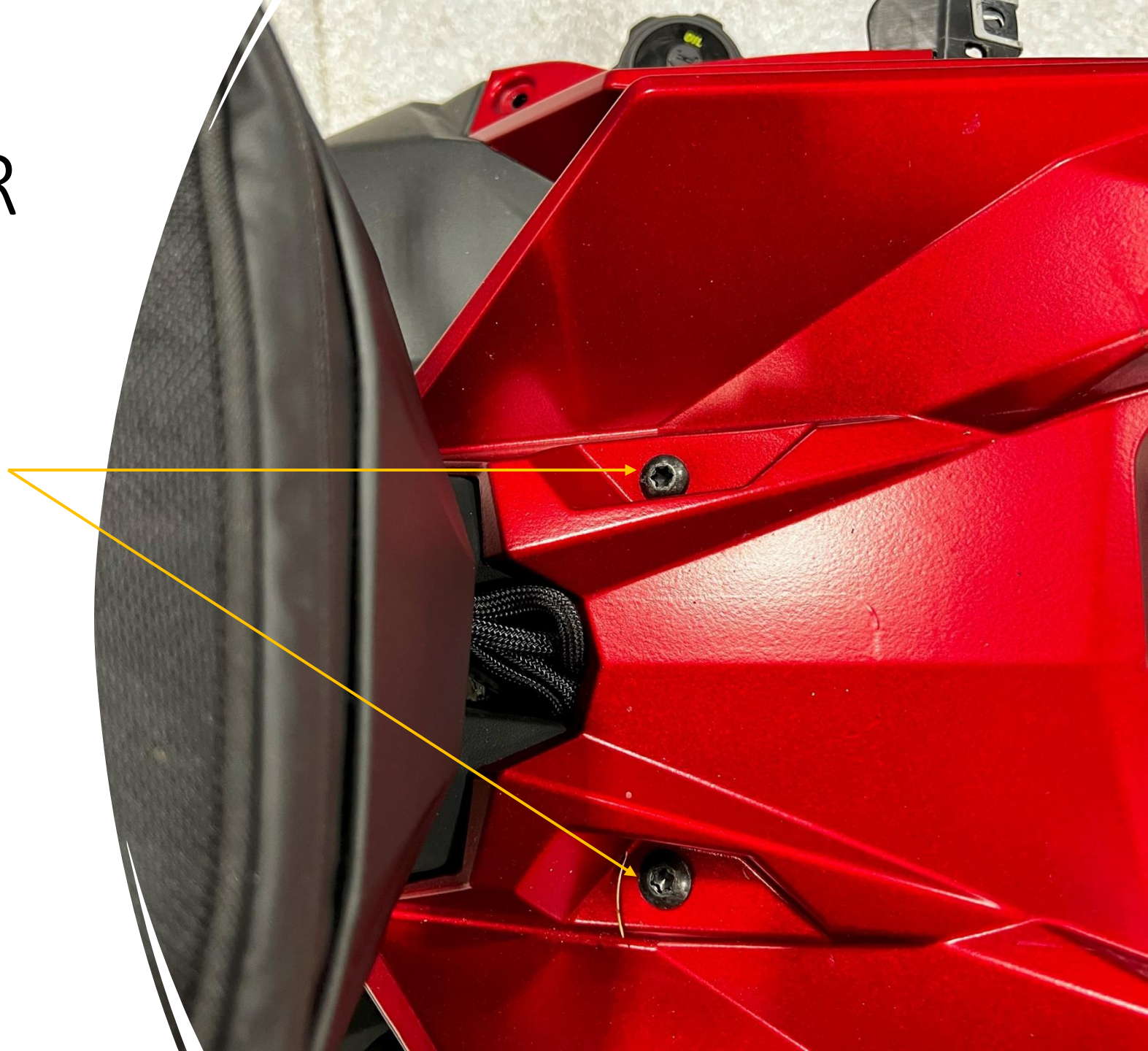
Remove the side panels and hood

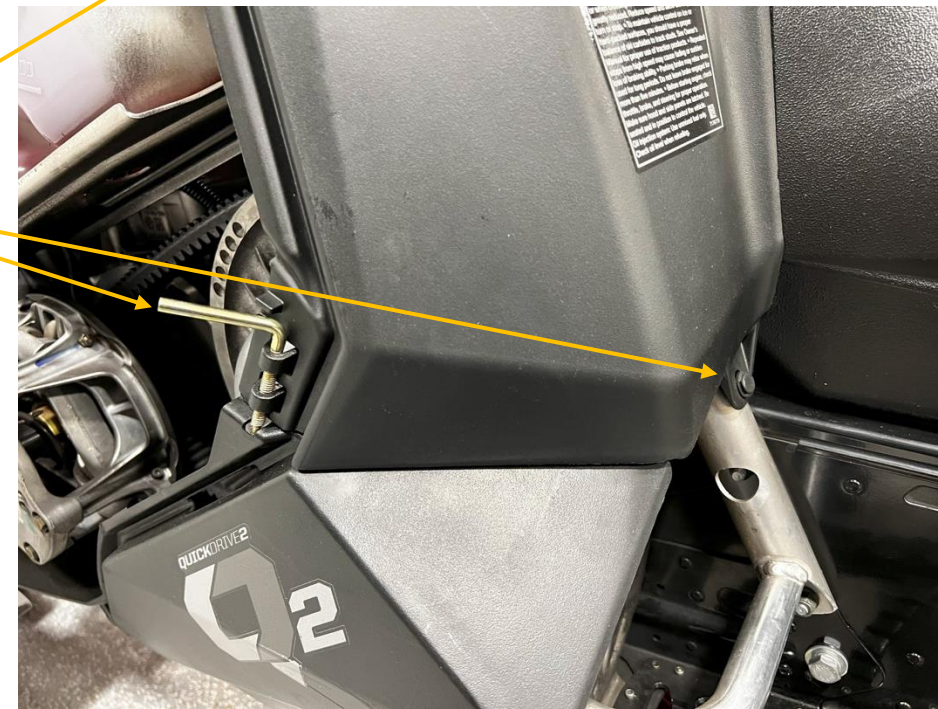
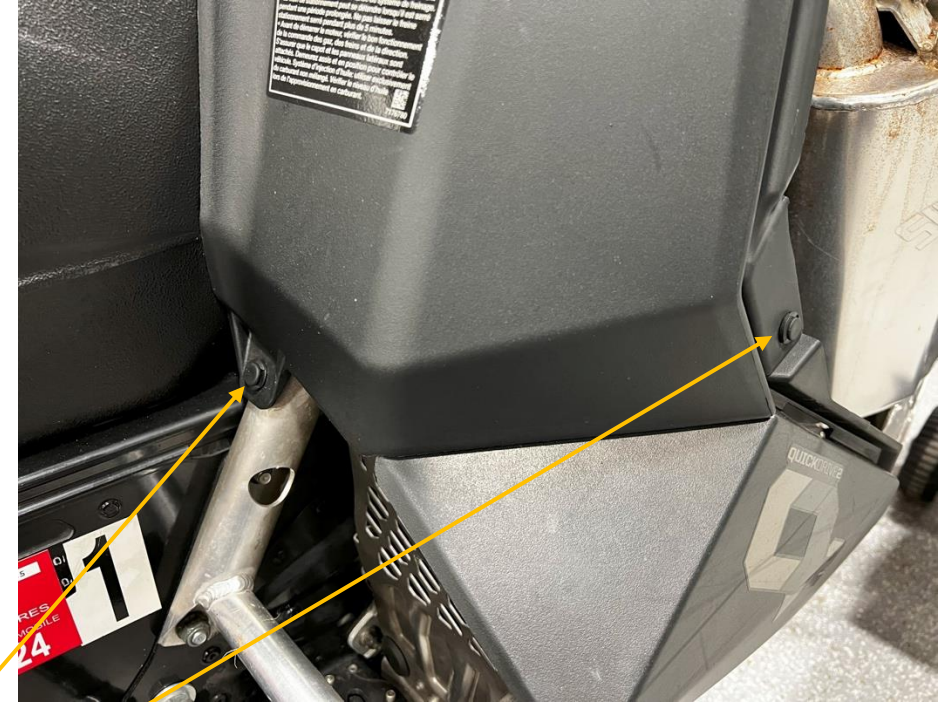
- Once the side panels are off, remove the black push clips, and unlock the silver twist locks. Also, disconnect the harness from the hood connector.



REMOVE UPPER COWL BOLTS

- USING A T30 or T40 TORX,
REMOVE THE SCREWS THAT
SECURE THE UPPER
COWL/GUAGE TO THE CHASSIS





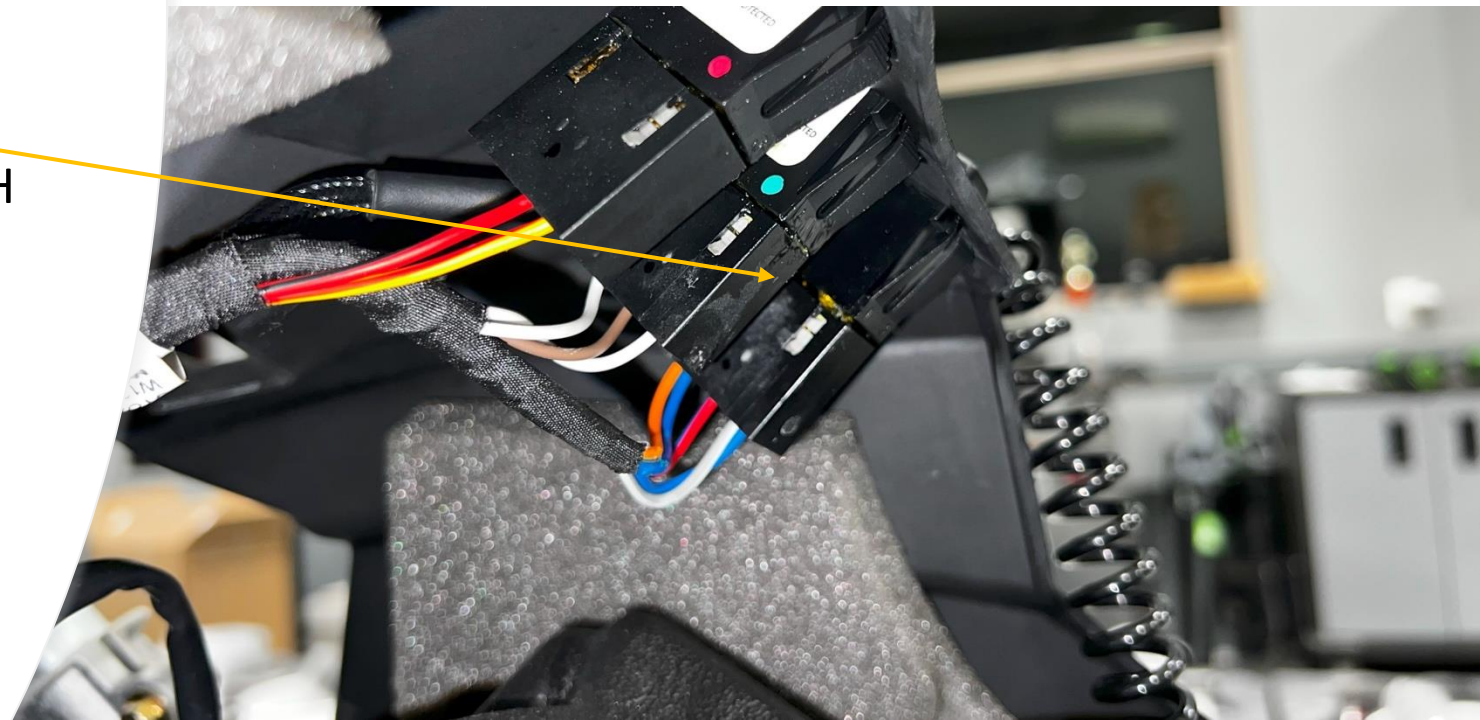
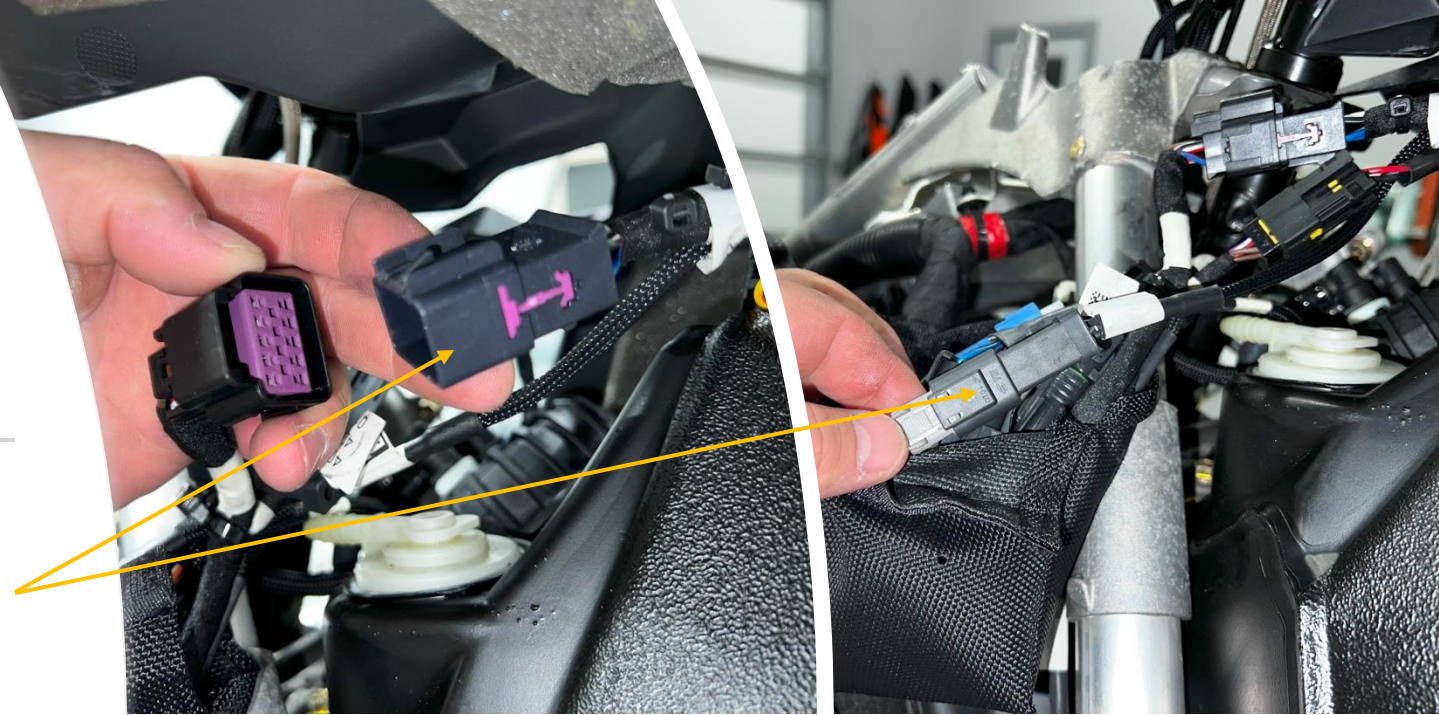
REMOVE THE COWL

- REMOVE THE COWL BY REMOVING THE PLASTIC PUSH CLIPS
- ON THE MATRYX YOU WILL HAVE TO REMOVE THE NUT UNDER THE FUEL CAP. YOU CAN USE A LARGE PAIR OF PLIERS, OR YOU CAN SOURCE YOUR OWN SOCKET.

ELECTRICAL CONNECTORS

- DISCONNECT THE FOLLOWING CONNECTS FOR THE ACCESSORIES ON THE COWL AND THE TETHER

- IT IS EASIER IF YOU LEAVE THESE CONNECTORS CONNECTED TO THE SWITCH AND DISCONNECT THE CONNECTORS AS SHOWN ABOVE.



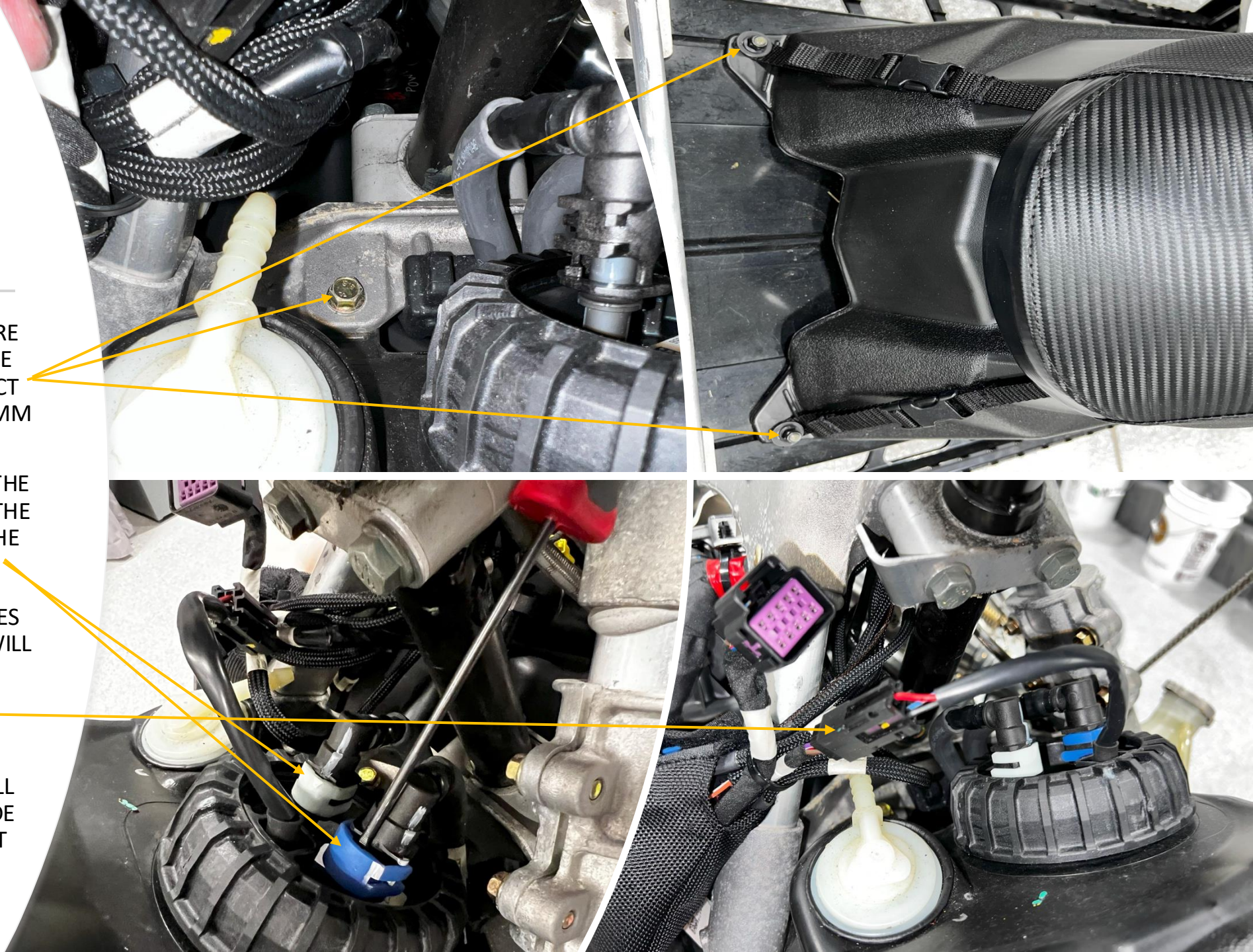
PULL ROPE

- THERE ARE A COUPLE OPTIONS WHEN IT COMES TO THE PULL ROPE. IN ORDER TO COMPLETELY REMOVE THE COWL, THE PULL ROPE HANDLE MUST BE REMOVED. YOU CAN LEAVE THE ROPE THROUGH THE COWL, BUT IT MAKES IT MUCH MORE DIFFICULT TO WORK AROUND.
- YOU CAN CUT THE PULL ROPE CLOSE TO THE HANDLE AND TIE A LOOP IN THE ROPE AND HANG IT ON THE HANDLEBARS AS SHOWN.
- BE CAREFUL IF YOU DO THIS NOT TO LET GO OF THE ROPE, OR IT MAY GET RECOILED INSIDE WHICH REQUIRES EXTRA EFFORT.



FUEL TANK

- TO REMOVE THE FUEL TANK THERE ARE TWO (2) 10MM NUTS ON THE BACK OF THE TANK THAT CONNECT IT TO THE TUNNEL, AND ONE 10MM BOLT NEAR THE FILLER NECK.
- REMOVE THE FUEL LINES FROM THE PUMP. CAREFULLY DISCONNECT THE PLASTIC CLIPS AND LIFT UP ON THE FUEL LINE. DO NOT FORCE THE LINES OFF. IF THE CLIPS ARE NOT COMPLETELY REMOVED, THE LINES WILL NOT COME OFF AND YOU WILL DAMAGE THE PUMP.
- DISCONNECT THE FUEL PUMP CONNECTOR
- ONCE THE LINES AND ELECTRICAL CONNECTOR ARE REMOVED, SLIDE THE TANK REARWARD AND LIFT IT OUT



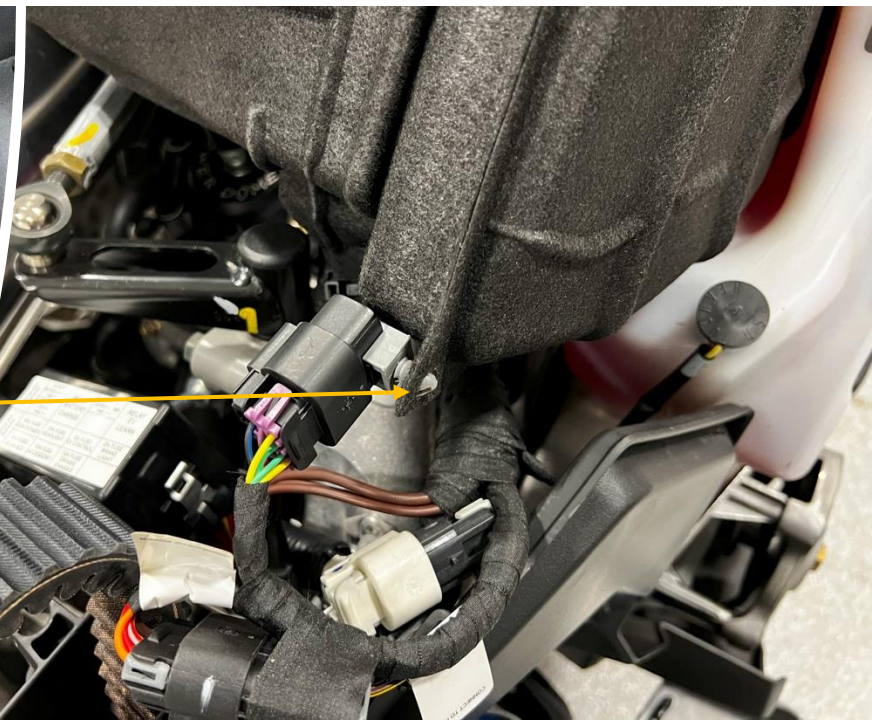
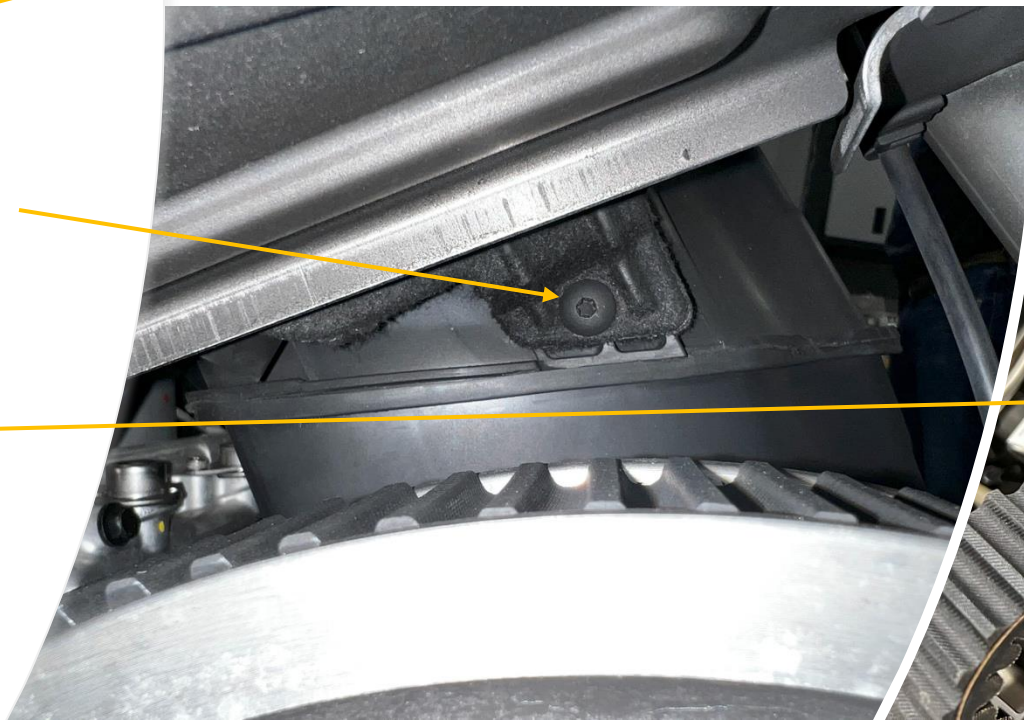
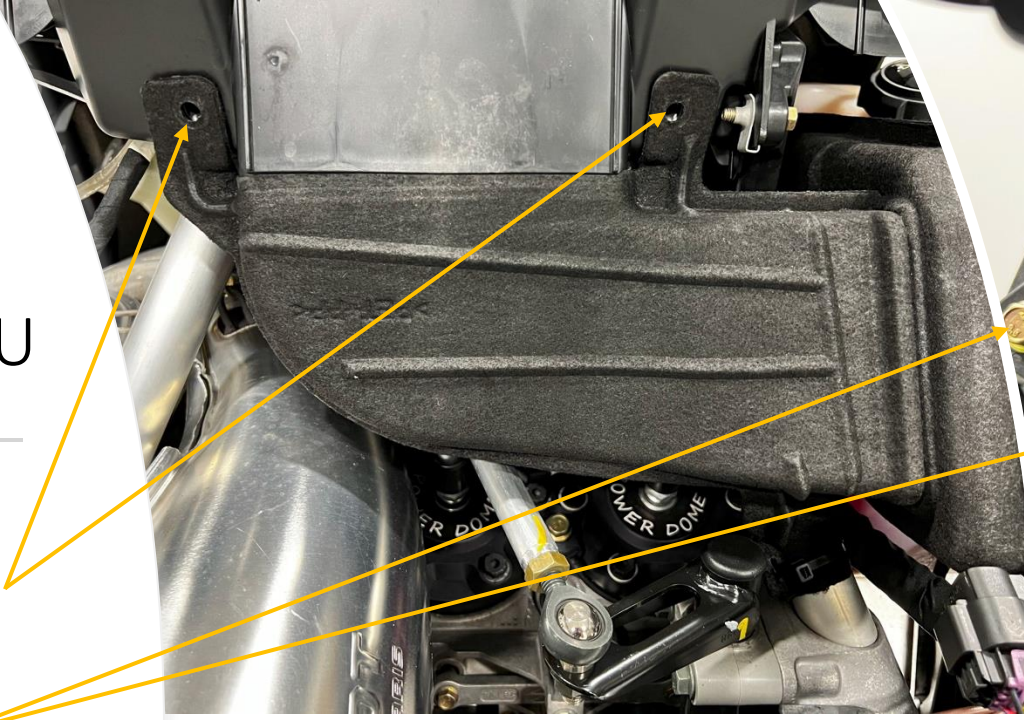
INTAKE COMPONENTS/ECU

REMOVE THE STOCK INTAKE COMPONENTS. DO NOT DISCARD THE BLACK PUSH CLIPS.

REMOVE THE TWO (2) 8MM BOLTS THAT HOLD THE ECU TO THE UPPER INTAKE

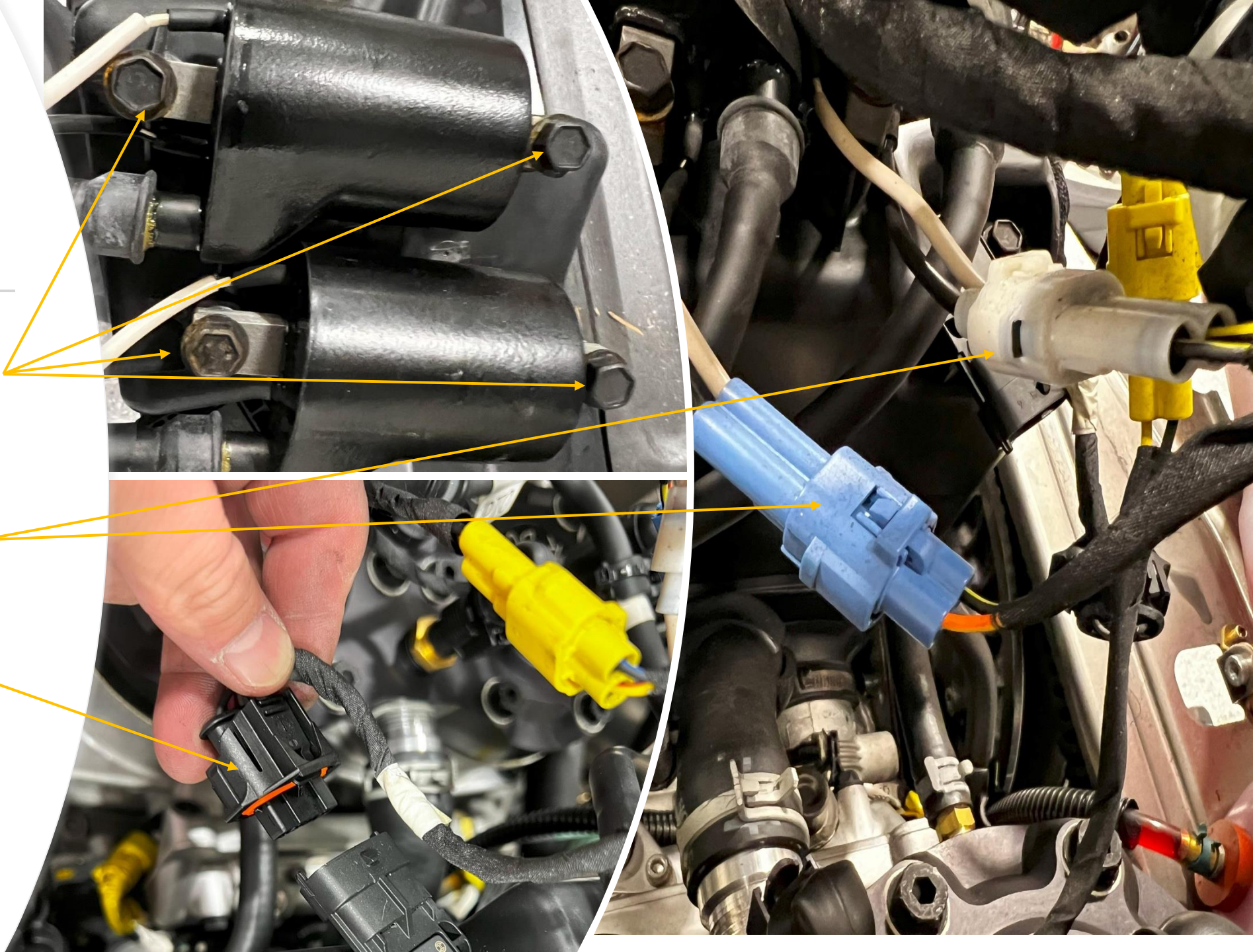
USING A T25 TORX, REMOVE THE SCREW THAT HOLDS THE INTAKE PIECE TO THE INTAKE BOX

REMOVE THE DIAGNOSTIC CONNECTOR FROM THE INTAKE BY PULLING THE TAB THROUGH



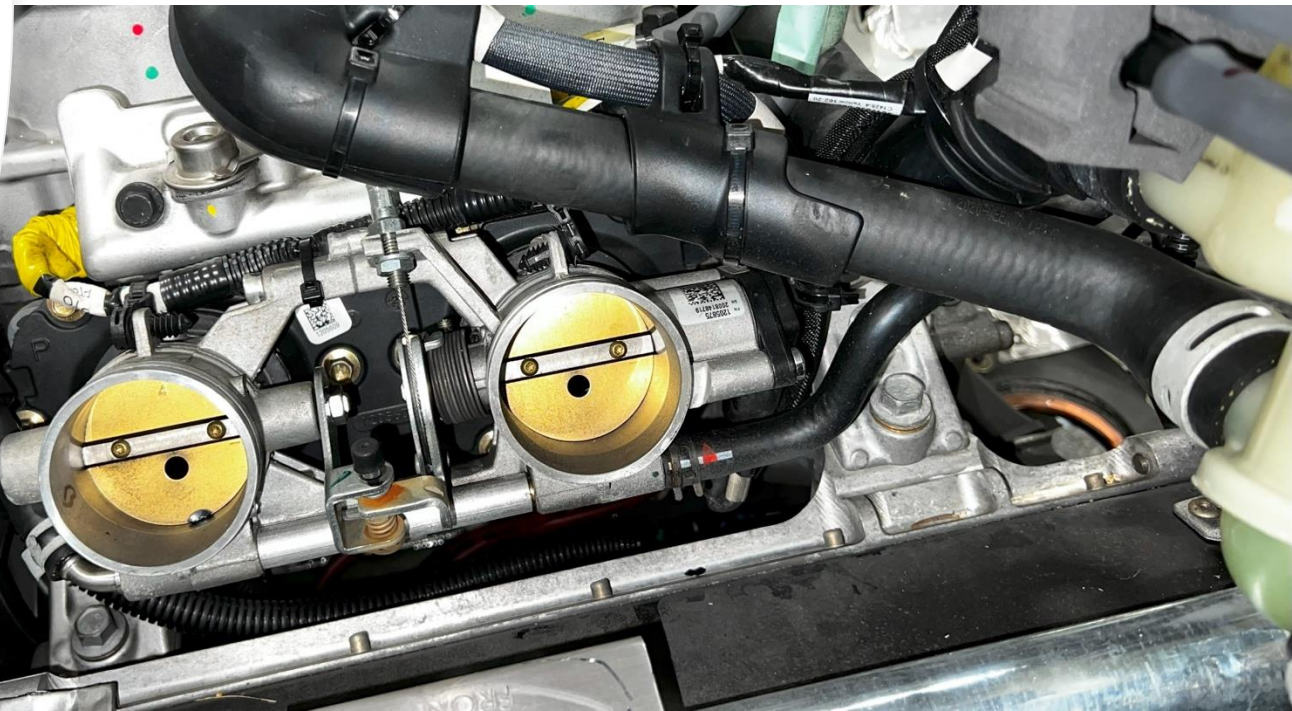
COILS

- REMOVE THE COILS FROM THE INTAKE PLENUM BY REMOVING THE FOUR (4) 10MM SCREWS.
- DISCONNECT THE ELECTRICAL CONNECTORS FOR THE COILS (WHITE AND BLUE CONNECTORS)
- DISCONNECT THE TMAP SENSOR CONNECTOR



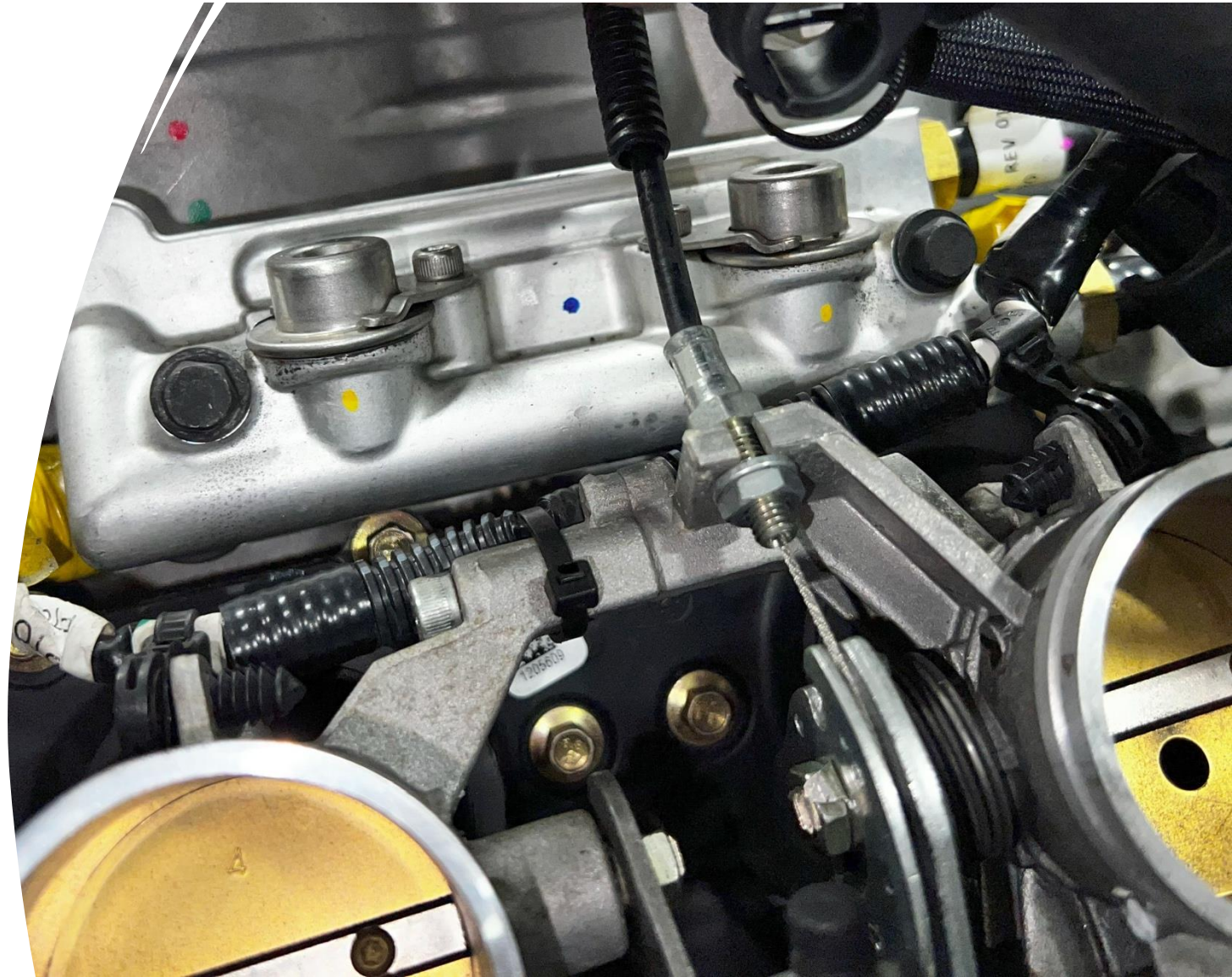
INTAKE PLENUM

- REMOVE THE INTAKE PLENUM FROM THE THROTTLE BODIES. USING A LONG #2 PHILLIPS SCREWDRIVER, OR A 6MM SOCKET, LOOSEN THE CLAMPS THAT HOLD THE PLENUM TO THE THROTTLE BODIES.
- ONCE THE CLAMPS ARE LOOSENED, REMOVE THE PLENUM THROUGH THE OPENING IN THE CHASSIS WHERE THE FUEL TANK WAS.



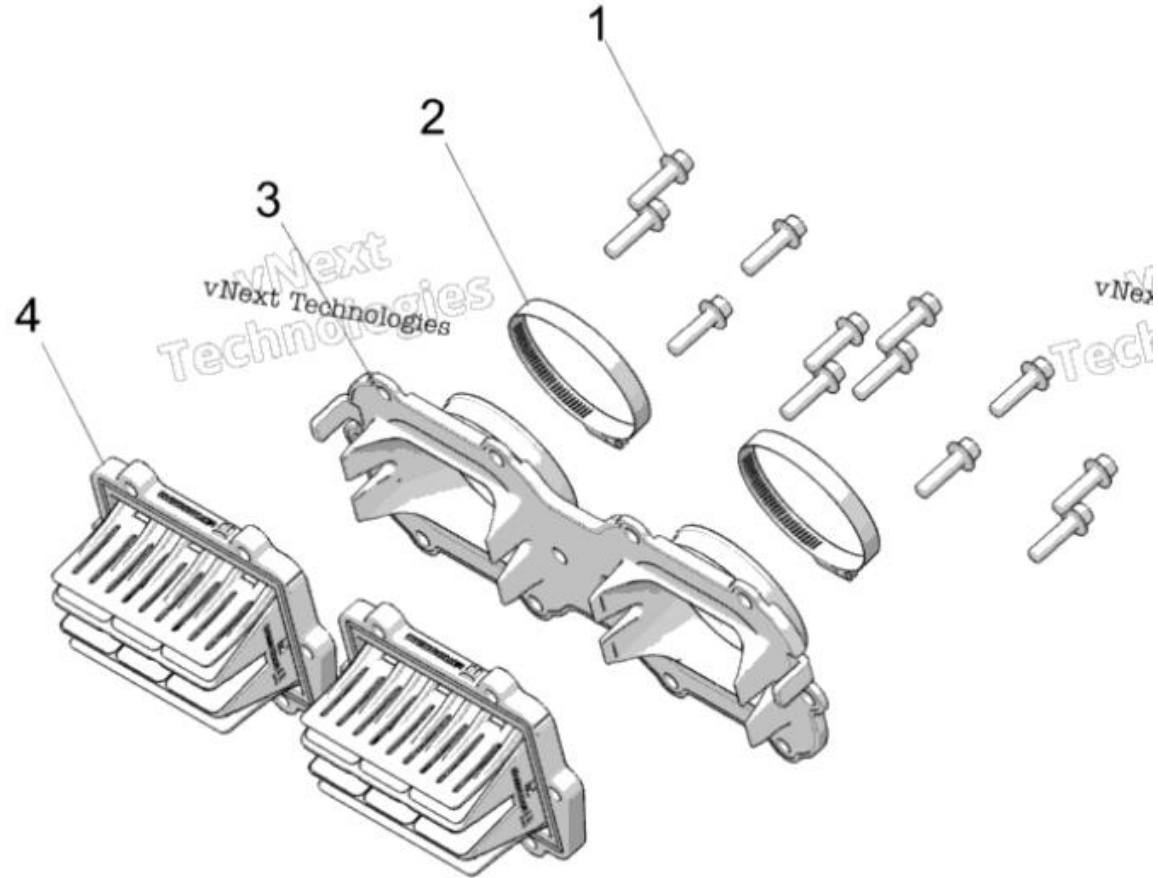
THROTTLE BODIES AND INJECTORS

- THIS KIT IS SUPPLIED WITH NEW LARGER INJECTORS. USING A PAIR OF SIDE CUTTERS, REMOVE THE ZIP TIES HOLDING THE INJECTOR HARNESS TO THE THROTTLE BODIES, AS WELL AS THE PLASTIC CLIPS. IT IS ADVISED TO DRAIN THE COOLANT SYSTEM NOW. IT IS EASY TO ACCESS THE MAIN COOLANT HOSE ON THE FRONT OF THE ENGINE. LOOSEN THE CLAMP AND REMOVE THE HOSE. PLACE DRAIN PAN UNDER SLED TO CATCH COOLANT.
- REMOVE THE THROTTLE CABLE FROM THE THROTTLE BODIES
- USING A SCREWDRIVER, LOOSEN THE CLAMPS HOLDING THE THROTTLE BODIES IN THE REED CAGE BOOTS AND REMOVE THROTTLE BODIES.
- USING A 10MM SOCKET, REMOVE THE TWO BOLTS HOLDING THE FUEL RAIL TO THE CYLINDERS. IT IS ADVISED NOT TO UNPLUG THE INJECTOR HARNESS FROM THE INJECTORS. MOST OF THEM ARE GLUED TOGETHER.
- UNPLUG INJECTOR HARNESS AND REMOVE THE FUEL RAIL.
- **BE CAREFUL NOT TO LOSE THE INJECTOR ORINGS!**



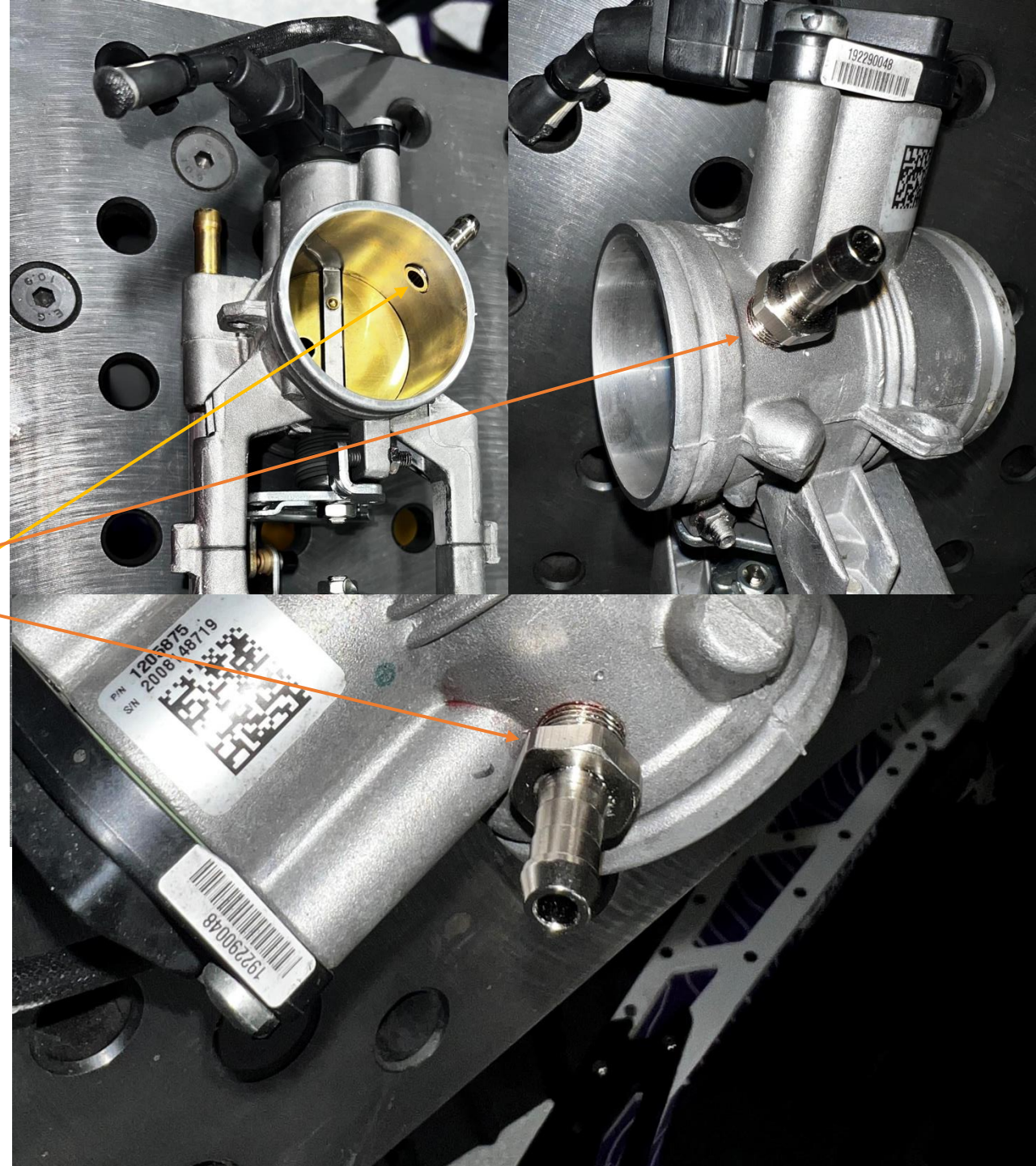
CHECK REEDS

- IF YOUR SLED IS NEW, YOU SHOULDN'T HAVE TO CHECK THE REEDS.
- REMOVE THE 12 8MM BOLTS AND REMOVE THE REED CAGE ASSEMBLIES.
- INSPECT THE REED PETALS FOR CHIPS, BREAKS, CRACKS, AND TO ENSURE THEY ARE SEALING AGAINST THE REED CAGE.
- REPLACE AS NEEDED AND REINSTALL.



BOOST REFERENCE PORT

- YOU WILL NEED TO INSTALL A FITTING IN THE MAG SIDE THROTTLE BODY. THIS WILL BE USED AS THE BOOST REFERENCE FOR THE BLOW OFF VALVE.
- USING THE SUPPLIED DRILL BIT, CAREFULLY DRILL A HOLE INTO THE THROTTLE BODY AS SHOWN.
- USING AN 1/8 NPT TAP, VERY CAREFULLY INSERT THE TAP. DO NOT RUN THE TAP ALL THE WAY IN. YOU WANT THE FITTING TO BE FLUSH, OR CLOSE TO THE INSIDE OF THE THROTTLE BODY. RUNNING THE TAP ALL THE WAY IN WILL ENLARGE THE THREADS MAKING THE FITTING SIT LOWER.
- INSTALL THE FITTING WITH RED LOCTITE AND LET CURE.



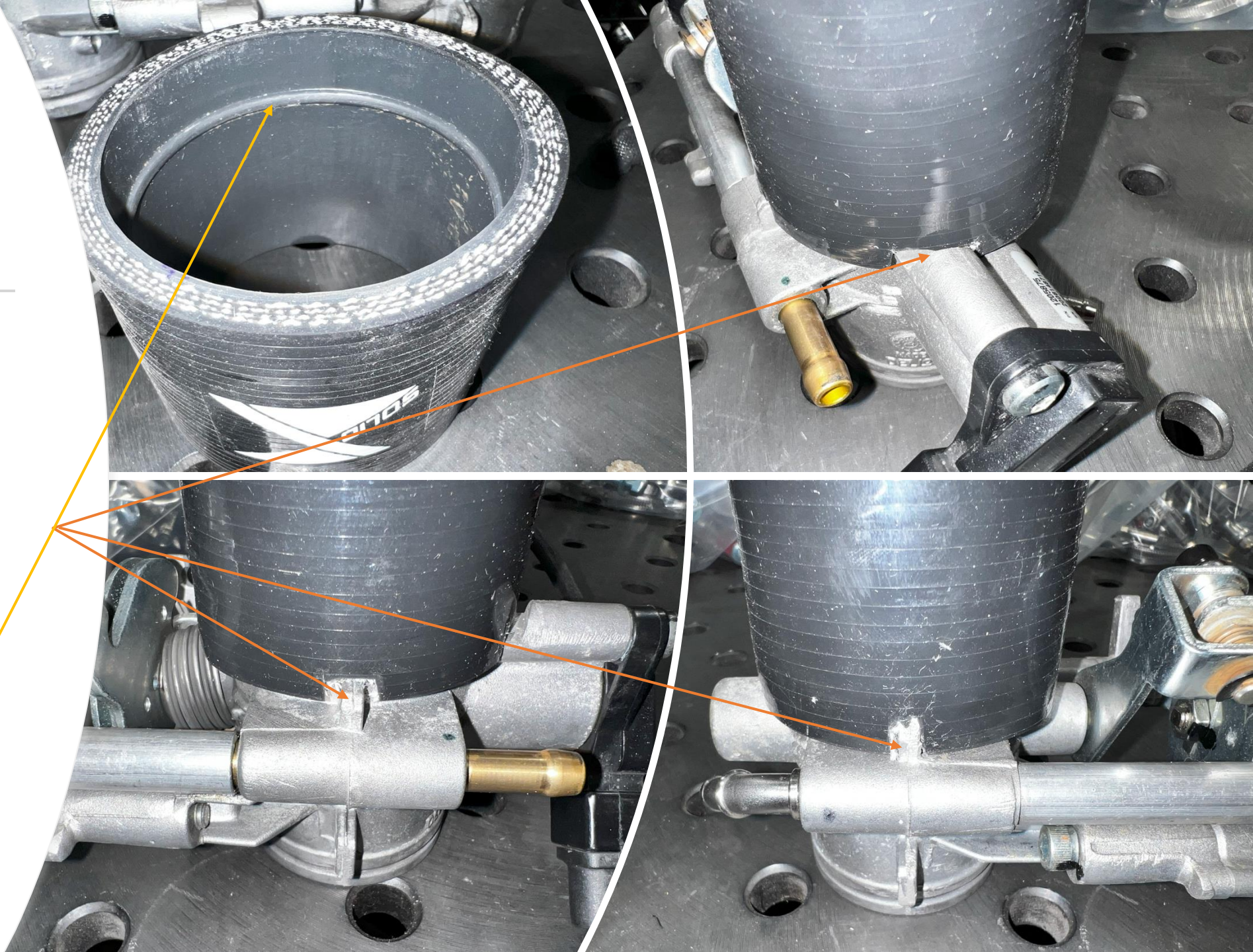
INSTALL INJECTORS

- USING THE SUPPLIED INJECTORS, INSTALL THE INJECTORS INTO THE CASE, ENSURING THAT THE LARGE BLUE ORING IS SEATED PROPERLY.
- INSTALL THE FUEL RAIL ONTO THE INJECTORS, ENSURING THAT YOU DO NOT PINCH OR RIP THE ORINGS ON THE INJECTOR.
- TIGHTEN THE TWO 10MM BOLTS AND PLUG IN THE HARNESS.



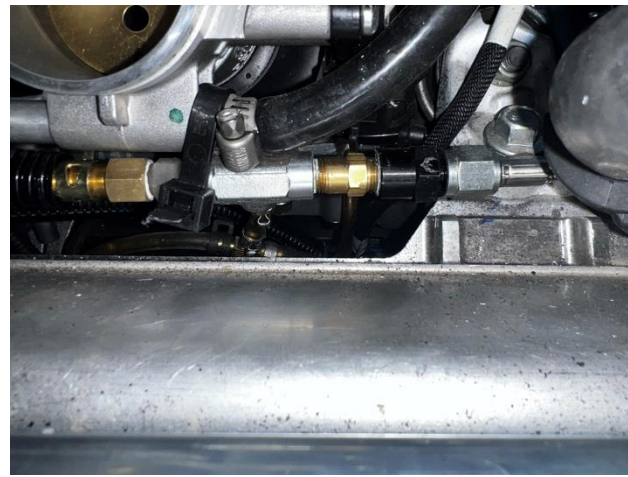
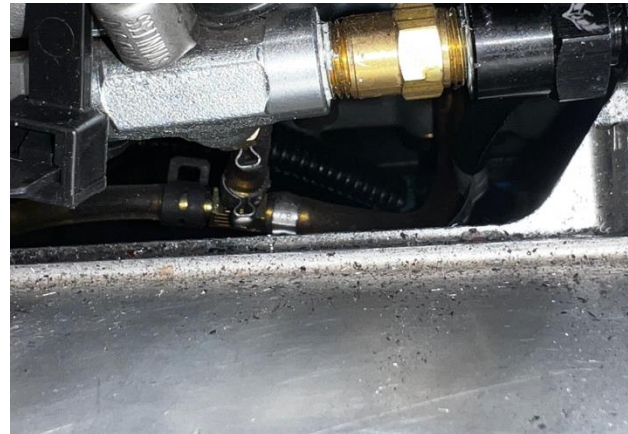
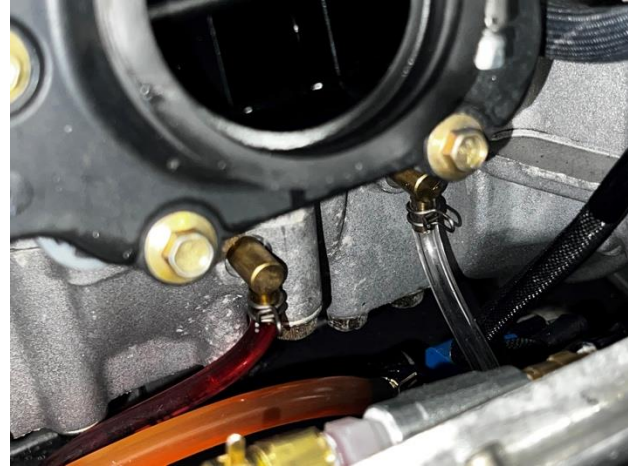
THROTTLE BODY COUPLERS

- THE KIT IS SUPPLIED WITH TWO THROTTLE BODY COUPLERS. THESE COUPLERS NEED TO BE TRIMMED IN ORDER TO FIT PROPERLY ON THE THROTTLE BODIES.
- USING A PAIR OF SIDE CUTTERS, OR RAZOR BLADE, LINE UP THE COUPLERS AS SHOWN AND CAREFULLY TRIM THE COUPLERS SO THEY FIT ON THE THROTTLE BODY WITHOUT INTERFERENCE.
- ONCE THE TRIMMING IS COMPLETE, YOU SHOULD BE ABLE TO FEEL THE RIB IN THE COUPLER SNAP INTO THE GROOVE IN THE THROTTLE BODY.



OIL LINES

- THERE IS A SUPPLIED OIL LINE KIT THAT MUST BE INSTALLED TO ENSURE THE ENGINE AND TURBO RECEIVE PROPER OIL.
- REMOVE THE OIL TANK AND THE SUPPLY LINE FROM THE TANK TO THE OIL PUMP. INSTALL THE NEW SUPPLY LINE TO THE TANK AND OIL PUMP.
- REMOVE THE MAG SIDE OIL LINE ON THE CASE AND CONNECT IT TO THE T FITTING.
- INSTALL THE OIL LINE FROM THE T FITTING TO THE OIL PORT ON THE CASE.
- INSTALL THE TURBO OIL FEED LINE TO THE THREADED FITTING ON THE OIL LINE KIT.
- YOU NEED TO PRE-FILL THE OIL LINES BEFORE STARTING THE SLED. USING THE SUPPLIED SYRINGE, FILL IT WITH INJECTION OIL. FROM THE OIL LINE FEEDING THE T, INJECT THE OIL UNTIL OIL COMES OUT OF THE BRAIDED FEED LINE FOR THE TURBO. THIS SHOULD ALSO FILL THE LINE TO THE CASE.



INSTALL THROTTLE BODIES

- INSTALL THE THROTTLE BODIES ONTO THE REED CAGE BOOTS. INSTALL THE PTO SIDE COOLANT LINE TO THE THROTTLE BODY. INSTALL THE SUPPLIED COOLANT LINE TO THE MAG SIDE THROTTLE BODY. YOU CAN ROUTE THIS LINE LATER. INSTALL COOLANT HOSE FROM FRONT OF ENGINE THAT YOU REMOVED TO DRAIN COOLANT.
- USE THE SUPPLIED CLAMPS AND ENSURE THEY ARE TIGHT.
- DO NOT USE OIL TO LUBE UP THE COUPLERS, THEY WILL HAVE A TENDENCY TO BLOW OUT UNDER BOOST.
- INSTALL THE COUPLERS ON THE THROTTLE BODIES AND INSTALL THE CHARGE BOX. IT CAN TAKE SOME TIME TO GET THE COUPLERS ON THE CHARGE BOX. IT'S IMPORTANT THAT THEY GET INSTALLED CORRECTLY AND TIGHTENED WITH THE CLAMPS.
- INSTALL THE SUPPLIED BOOST REFERENCE LINE FROM THE BLOW OFF VALVE TO THE PORT IN THE THROTTLE BODY THAT YOU INSTALLED.



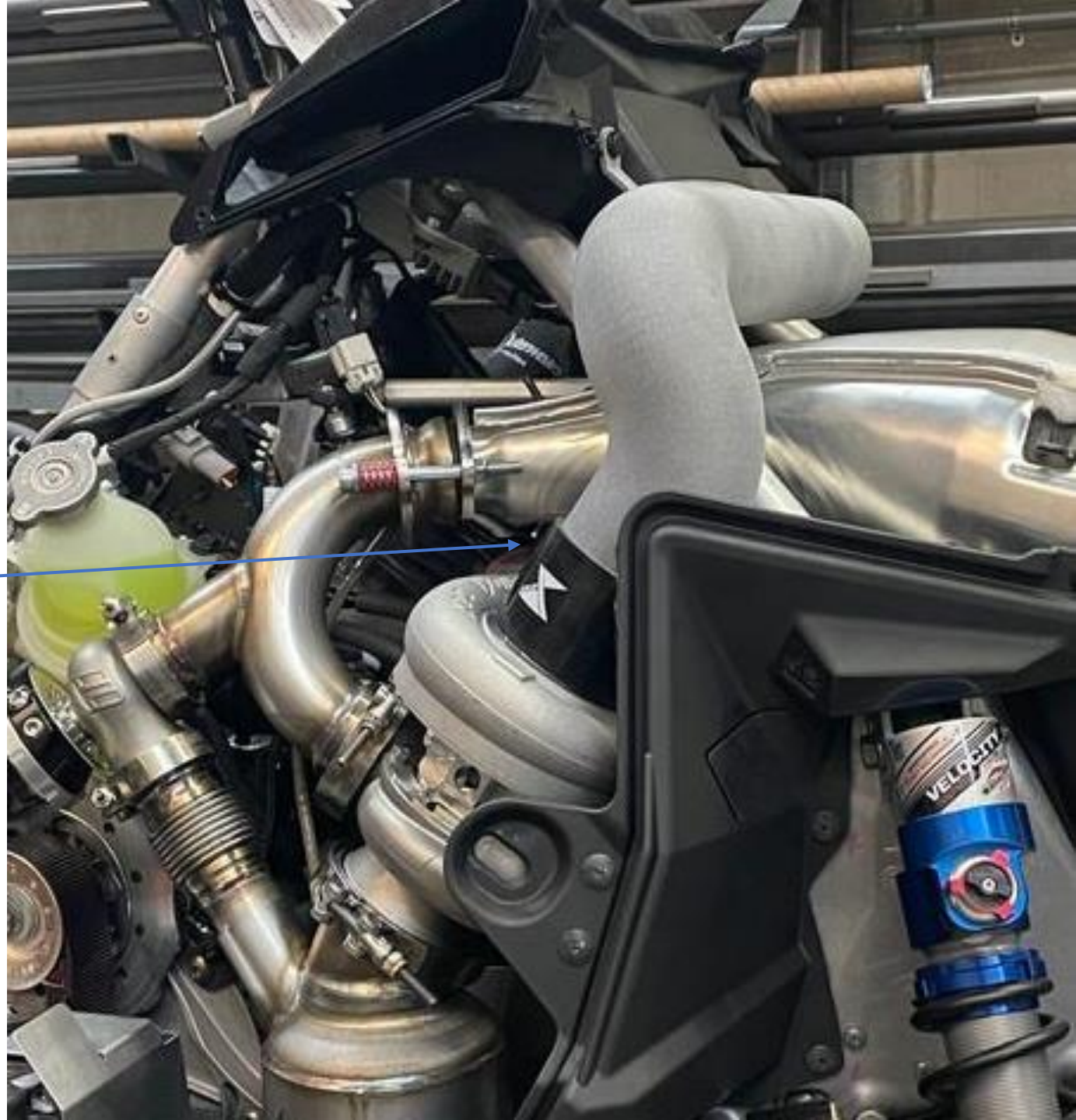
MUFFLER

- REMOVE THE STOCK MUFFLER. USING A 17MM WRENCH, REMOVE THE SENSOR. USING A SPRING TOOL, REMOVE THE SPRINGS HOLDING THE MUFFLER TO THE PIPE AND CHASSIS.



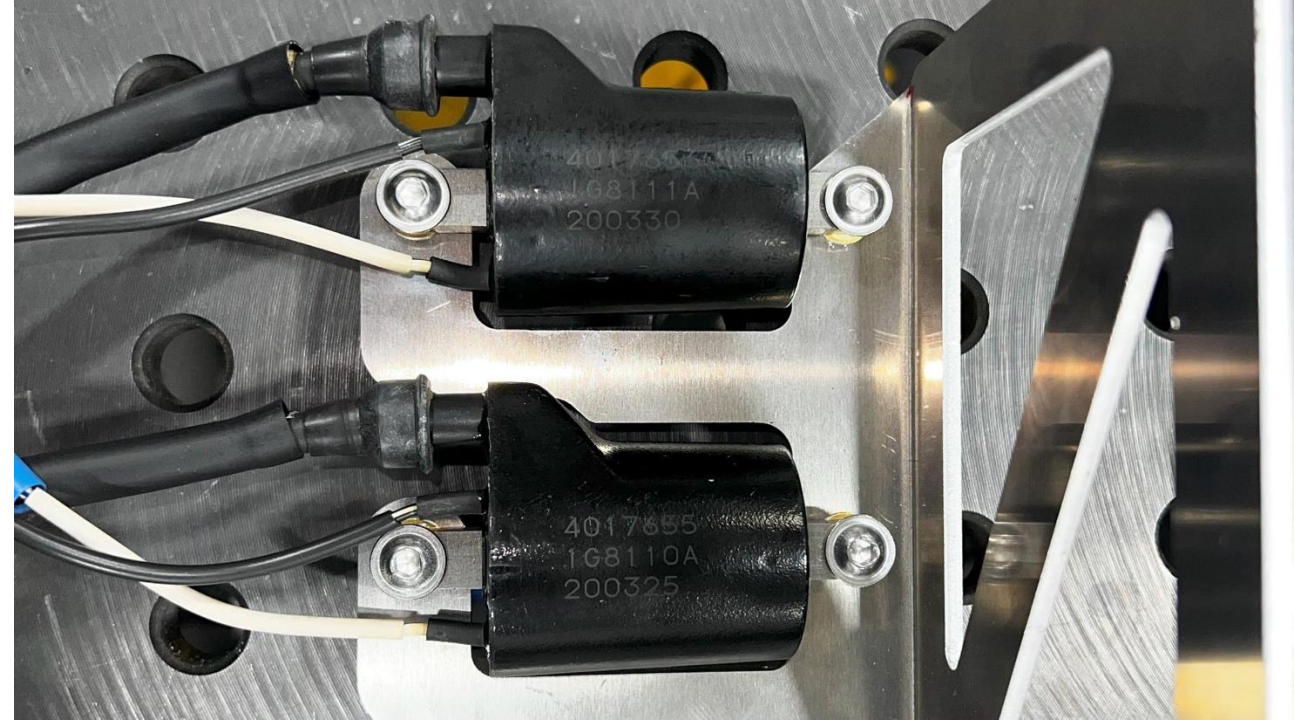
PIPE SPRING TAB

- THE BOTTOM SPRING TAB ON THE PIPE WILL NEED TO BE BENT TO AID IN CHARGE TUBE CLEARANCE. IF YOU HAVE A LARGE PAIR OF CHANNEL LOCK PLIERS, YOU CAN EASILY SQUEEZE THE TAB AND BEND IT DOWN TO THE PIPE. YOU CAN CAREFULLY HEAT IT UP IF YOU NEED EXTRA ASSISTANCE.



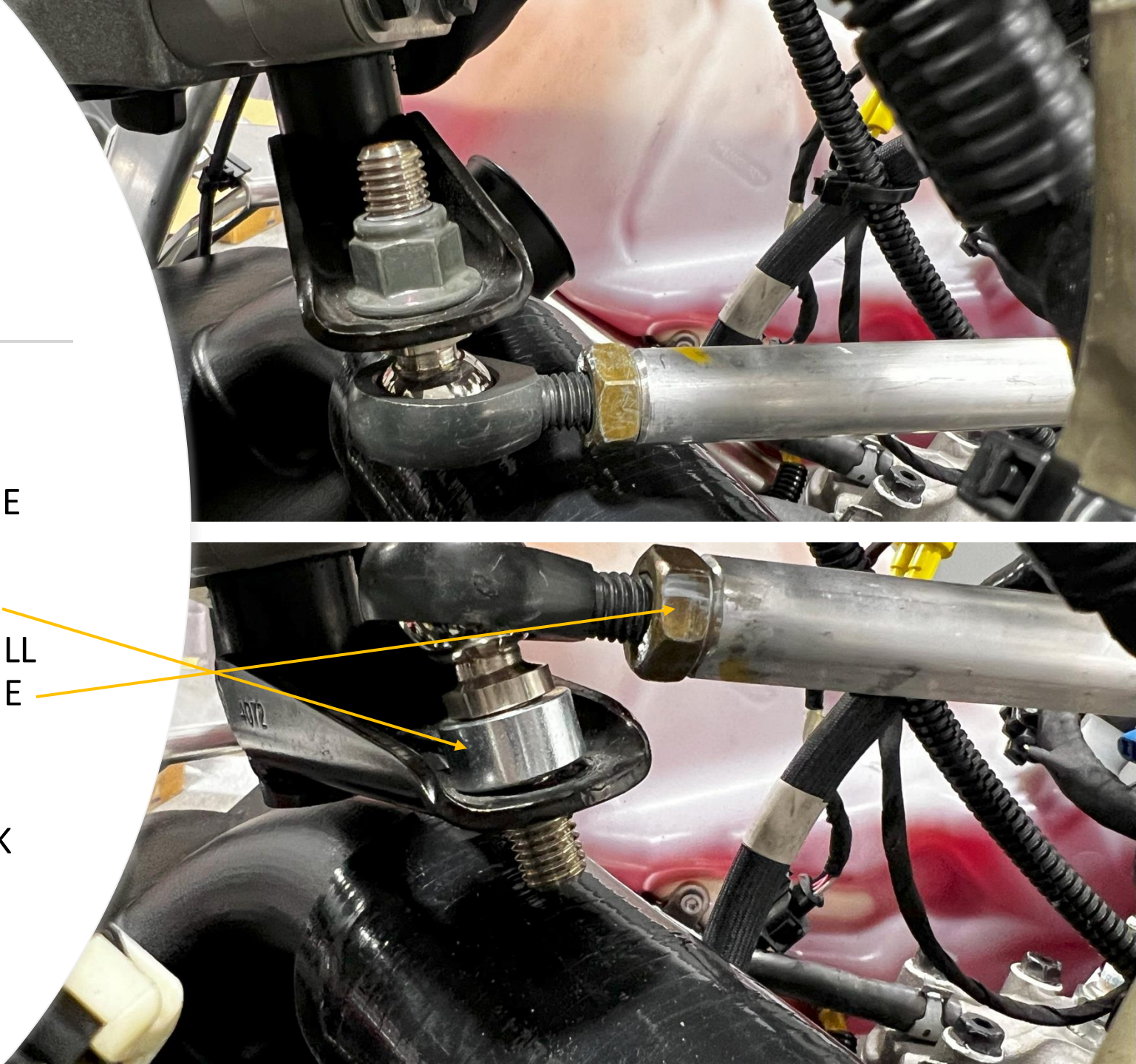
COILS AND BRACKET

- INSTALL THE COILS ONTO THE SUPPLIED COIL BRACKET.
- INSTALL THE ECU AND COIL BRACKET ONTO THE LEFT SIDE OF CHASSIS. THE ECU BOLTS OVER TOP OF THE SUPPLIED COIL BRACKET
- CHECK SPARK PLUG GAP. GAP PLUGS TO .020. REPLACE PLUGS IF THEY APPEAR FOULED OR WORN. WE RECOMMEND THE FACTORY NGK PLUGS WITH THE NON-THREADED CAPS.
- PLUG IN THE COIL CONNECTORS AND INSTALL PLUG WIRES ONTO SPARK PLUGS.
- INSTALL THE SUPPLIED TMAP SENSOR HARNESS. THIS JUST LENGTHENS THE HARNESS.



DRAG LINK

- TO ENSURE THE DRAG LINK CLEARS THE CHARGE TUBE, YOU WILL HAVE TO RELOCATE IT FROM THE BOTTOM OF THE LINK TO THE TOP.
- USING THE SUPPLIED SPACER, FLIP THE JOINT TO THE TOP OF THE LINK. YOU WILL HAVE TO LOOSEN THE JAM NUTS ON THE DRAG LINK.
- ONCE INSTALLED, ENSURE THE SKIS ARE STRAIGHT, THEN ADJUST THE DRAG LINK UNTIL THE HANDLEBARS ARE STRAIGHT AGAIN.



INSTALLATION

- INSTALL THE FUEL TANK, FUEL LINES, COWL, AND SEAT.
- WHEN INSTALLING THE COWL, YOU WILL HAVE TO ROUTE THE PULL CORD THROUGH THE COWL AND INTO THE HANDLE IF YOU CUT IT OFF.
- CAREFULLY FEED THE CORD THROUGH THE HANDLE AND TIE A DOUBLE KNOT IN IT.
- PLUG IN ALL OF THE PLUGS FOR ACCESSORIES, FUEL PUMP AND TETHER.



TURBO ASSEMBLY

- INSTALL THE TURBO ASSEMBLY INTO THE ENGINE BAY.
- USE THE FACTORY RUBBER GROMMET ON THE MUFFLER WHERE IT MEETS THE CHASSIS. THIS IS CRUCIAL TO ENSURE THAT THE TURBO IS SECURE AND FREE FROM EXCESSIVE VIBRATION.
- USING THE SUPPLIED EXHAUST COUPLER, TIGHTEN THE BOLTS UNTIL THE RED DIE SPRINGS ARE COMPRESSED ABOUT HALFWAY. YOU WANT THE SPRINGS TO BE ABLE TO FLEX.
- INSTALL THE FACTORY EXHAUST SENSOR INTO THE MUFFLER AND TIGHTEN WITH 17MM WRENCH.
- INSTALL THE COOLANT LINES ON THE TURBO FITTINGS USING AN 18MM WRENCH. ROUTE THE COOLANT LINES AWAY FROM EXHAUST COMPONENTS AND TIE TO THE CHASSIS.
- THE COOLANT HOSE THAT IS NOT CONNECTED TO THE THROTTLE BODY FROM THE TURBO WILL CONNECT TO THE COOLANT RESERVOIR BOTTLE. REMOVE THE FACTORY HOSE AND INSTALL THE SUPPLIED HOSE. FILL COOLANT RESERVOIR.
- INSTALL THE INTAKE ONTO THE TURBO AND CHASSIS. USE THE FACTORY CLIPS TO INSTALL THE INTAKE TO THE CHASSIS.
- INSTALL THE OIL FEED LINE TO THE TURBO USING A 9/16 WRENCH.



CHARGE TUBE

- INSTALL THE CHARGE TUBE FROM THE TURBO TO THE CHARGE BOX. YOU WILL WANT TO SLIDE THE SUPPLIED TBOLT CLAMPS ON THE TURBO AND CHARGE BOX BEFORE INSTALLING THE SILICONE TUBE.
- USING A 10MM WRENCH OR SOCKET, TIGHTEN THE TBOLT CLAMPS. MAKE SURE THEY ARE TIGHT TO AVOID HAVING THE TUBE BLOWING OFF OF THE TURBO OR CHARGE BOX.



ASSEMBLE HOOD/SIDE PANELS

- REINSTALL THE HOOD AND SIDE PANELS.
- REFERENCE INSTRUCTIONS ON DISASSEMBLY IF YOU NEED GUIDANCE AND DO THE REVERSE...

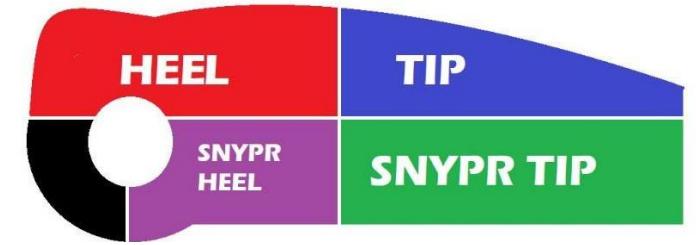
CLUTCHING

- REMOVE THE DRIVE CLUTCH AND DRIVEN CLUTCH. IF YOU DO NOT HAVE THE PROPER TOOLS TO REMOVE THE CLUTCHES, AND DISASSEMBLE THEM, IT IS RECOMMENDED THAT YOU DO NOT ATTEMPT TO DO IT YOURSELF AS SERIOUS INJURY AND OR DAMAGE COULD OCCUR.



DRIVE CLUTCH

- ONCE CLUTCH IS REMOVED FROM MACHINE, REMOVE THE CLUTCH COVER.
- REMOVE THE WEIGHTS AND SPRING.
- INSPECT THE CLUTCH FOR EXCESSIVE WEAR. IF EXCESSIVE WEAR IS FOUND, REPLACE THE CLUTCH.
- USING THE SUPPLIED WEIGHTS, LOAD THEM AS FOLLOWS: LONG THREADED INSERT IN THE HEEL. INSTALL THIS UNTIL IT IS FLUSH. LOAD THE MAGNETS 3,3,2 FROM SNYPR HEEL TO SNYPR TIP. INSTALL THE SUPPLIED SPRING AND WEIGHTS INTO THE CLUTCH AND REINSTALL IN MACHINE. TORQUE THE CLUTCH BOLT TO 50LBS.



DRIVEN CLUTCH

- REMOVE THE HELIX FROM THE SHEAVE USING A T27 TORX. YOU MAY HAVE TO HEAT THE THREADS UP TO GET THE BOLTS LOOSE, BUT DON'T OVERHEAT.
- USING A COMPRESSOR TOOL, REMOVE THE ROLLER ASSEMBLY.
- THE KIT IS SUPPLIED WITH NEW ROLLERS. THEY MUST BE USED WITH OUR HELIX AS THEY ARE DIFFERENT SIZES. INSTALL THE NEW ROLLERS.
- INSTALL THE SUPPLIED SECONDARY SPRING. REINSTALL ROLLER ASSEMBLY.
- YOU WILL NOTICE THAT THERE ARE TWO DIFFERENT HELIX ANGLES. USE THE 40-44 ANGLE.
- INSTALL THE HELIX AND USE BLUE LOCTITE ON THE BOLTS.
- REINSTALL DRIVEN CLUTCH.
- SET YOUR BELT DEFLECTION.

ECU FLASH

- THE KIT IS SUPPLIED WITH A TORQUE LINK FLASHING DEVICE THAT WILL ALLOW YOU TO FLASH TUNES ON YOUR OWN AS LONG AS YOU HAVE A WINDOWS BASED PC.
- GO TO C3.TORQUELINK.COM AND CREATE AN ACCOUNT.
- DOWNLOAD THE APP.
- LOG IN AND CONNECT THE FLASHING DEVICE TO THE SLED. MAKE SURE TO REMOVE TETHER AND ENSURE KILL SWITCH IS OFF.
- CONNECT FLASHING DEVICE TO PC AND GO THROUGH THE PROCESS OF CONNECTING YOUR LICENSE TO YOUR ECU BY FOLLOWING THE PROMPTS ON THE SCREEN.
- ONCE LICENSE IS CONNECTED, SELECT THE TUNE FILE AND DOWNLOAD. DO NOT TURN OFF COMPUTER OR UNPLUG THE FLASHING DEVICE UNTIL THE FLASH IS COMPLETE.