

ELATE 1UZ VVTI / 3UZ SUPERCHARGER MANIFOLD (INTERCOOLED AND NON-INTERCOOLED)

(UNIVERSAL INSTALLATION PROCESS TO SUIT TOYOTA AND LEXUS 1UZ VVTI AND 3UZ ENGINES ONLY)



INSTALLATION INSTRUCTIONS

IMPORTANT ** ELATE MFG. RECOMMENDS THAT THIS PRODUCT IS INSTALLED BY A QUALIFIED AUTOMOTIVE MECHANIC OR BY SOMEONE WHO IS MECHANICALLY CONFIDENT IN UNDERTAKING THIS TASK WITH THE EXPECTATION THAT THERE POTENTIALLY COULD BE SCENARIOS THAT ARISE DURING FITMENT THAT MAY NOT BE COVERED BY THESE INSTALLATION INSTRUCTIONS.

PLEASE READ AND THE RE-READ THESE INSTRUCTION, IF FOR WHATEVER REASON SOMETHING DOES NOT MAKE SENSE THEN PLEASE GET IN CONTACT WITH US AND WE WILL DO WHAT WE CAN TO ASSIST. WE ASK THAT YOU DO NOT TAKE INSTALLATION QUESTIONS TO ONLINE FORUMS AND FACEBOOK GROUPS AS THERE IS ALOT OF MISLEASADING INFOMATION THAT COULD RESULT IN YOU EITHER DAMAGEING THE KIT OR YOUR ENGINE.

THIS KIT IS SUPPLIED FOR OFF ROAD USE ONLY, PLEASE CHECK THE LEGALITIES OF INSTALLING A SUPERCHARGER ON YOUR VEHICLE IF YOU PLAN ON USING IT FO ANYTHING OTHER THAN WHAT IT HAS BEEN SUPPLIED FOR.

ELATE TAKES NO RESPONSIBILITY FOR DAMAGE THE ADDITIONAL POWER AND TORQUE MAY CAUSE TO YOUR VEHICLES OTHER COMPONENTS SUCH AS ENGINE, DRIVELINE, GEARBOX, ETC.

MANIFOLD INSTALLATION

**** THESE INSTRUCTIONS COVER THE INSTALLATION PROCESS ONLY AND ASSUMES THE INSTALLER IS COMPETENT ENOUGH TO REMOVE THE FACTORY INTAKE MANIFOLD AS PER THE TOYOTA SERVICE MANUAL. ENSURE THAT YOU HAVE DISCONNECTED THE BATTERY BEFORE COMMENCING ANY WORK****

1. INSERT THE SUPPLIED 1/8 NPT 90° BARB FITTING INTO ONE OF THE TWO PORTS ON THE UNDERSIDE OF THE MANIFOLD. ENSURE THREAD SEALANT IS USED ON THE THREADS AND ONCE TIGHTENED SO IT FACES TOWARDS THE BACK OF THE MANIFOLD SET ASIDE WHILE YOU PREPARE THE ENGINE.
2. REMOVE THE INTAKE GASKETS FROM THE HEADS AND INSPECT. IF DAMAGED OR SHOWING SIGNS OF WEAR THEN THEY WILL NEED TO BE REPLACED.
3. REMOVE THE 10 X M8 STUDS THAT WERE BEING USED TO FASTEN THE FACTORY LOWER INTAKE TO THE HEADS AS THESE ARE NO LONGER NEEDED. WE RECOMMEND USING A STUD REMOVAL TOOL FOR THIS TASK.
4. FULLY CLEAN THE MOUNTING SURFACES ON THE CYLINDER HEADS AND INSPECT FOR ANY DAMAGE, IF DAMAGE IS PRESENT THEN IT WILL NEED TO BE RECTIFIED BEFORE CONTINUING.
5. PLACE THE 2 X INTAKE GASKETS BACK ON THE HEADS ENSURING THEY ARE ORIENTATED CORRECTLY. THIS WILL TAKE A STEADY HAND AS THE STUDS ARE NO LONGER PRESENT TO STOP THE GASKETS FROM MOVING.
6. GET THE MANIFOLD ASSEMBLY READY FOR INSTALLATION BY FITTING THE SUPPLIED VACUUM LINE TO THE BARB FITTING YOU INSTALLED EARLIER, WE ADVISE USING A CABLE TIE TO FULLY SECURE IT TO THE BARB FITTING.
7. CAREFULLY PLACE THE MANIFOLD ASSEMBLY ONTO THE ENGINE, IF THE GASKETS SLIGHT MOVE THEN LIFT THE MANIFOLD OFF AGAIN AND REPOSITION.
8. INSERT THE 10 X M8X55 CAP SCREWS THROUGH THE MANIFOLD AND INTO THE HEAD, ENSURE THE INCLUDED WASHERS ARE USED. THREAD THEM IN BY HAND AND TORQUE TO 18 NM / 13 FT-LBF. WE RECOMMEND APPLYING A SMALL AMOUNT OF ANTI-SEIZE TO THE BOLT THREADS PRIOR TO INSTALLING. TIGHTEN IN A CRISS CROSS PATTERN STARTING FROM THE INSIDE BOLTS AND WORKING YOUR WAY TO THE OUT.
9. REMOVE THE FUEL RAILS AND INJECTORS FROM THE FACTORY MANIFOLD.
10. INSPECT THE INJECTOR SEALS, IF THEY ARE DAMAGED THEN THEY WILL NEED TO BE REPLACED. WE RECOMMEND USING GENUINE TOYOTA AS SOME AFTERMARKET SEALS CAN VARY IN SIZE.
11. APPLY O-RING GREASE TO THE LOWER AND UPPER INJECTOR SEALS. IF O-RING GREASE ISN'T AVAILABLE PETROLEUM JELLY WILL ALSO WORK.

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12. INSTALL THE INJECTORS INTO THE MANIFOLD. TAKE YOUR TIME DOING THIS AS IT IS EASY TO DAMAGE THE LOWER INJECTOR SEALS.
13. INSTALL THE RAILS ONTO THE INJECTORS. USE THE SUPPLIED RAIL SPACERS IN PLACE OF THE ONES REMOVED FROM THE FACTORY MANIFOLD. DO NOT OVER TIGHTEN! NOTE THAT AT THIS STAGE YOU MAY DISCOVER THE HARD REAR FUEL LINE CONNECTING THE 2 RAILS TOGETHER MAY NEED TO BE REPLACED WITH AN 400 SERIES -6AN LINE. WE RECOMMEND REMOVING THE FUEL DAMPENERS AND REPLACING WITH A BANJO BOLT AND AFTERMARKET BANJO BOLTS WITH -6AN MALE FLARES.
14. FOR NON-INTERCOOLED MANIFOLDS ONLY REMOVE THE TOP PLATE AND APPLY A UNIFORM BEAD OF FUEL RESISTANT GASKET SEALANT ONTO THE MOUNTING SURFACE OF THE MANIFOLD. WE RECOMMEND PERMATEX ULTRA-GREY OR A SIMILAR PRODUCT RESISTANT TO FUEL. INTERCOOLED MANIFOLDS WILL ALREADY COME ASSEMBLED SO THERE IS NO NEED TO REMOVE THE TOP PLATE.
15. PLACE THE TOP PLATE ON TO THE MANIFOLD AND TIGHTEN THE M8 FASTENERS REMOVED PREVIOUS TO 18 NM / 13 FT-LB IN A CRISS-CROSS PATTERN. (NON-INTERCOOLED ONLY)
16. INSTALL YOUR HEAT EXCHANGER, W2A PUMP AND RESERVOIR MAKING SURE THE RESERVOIR IS ABOVE THE MANIFOLD HEIGHT OR AT LEAST AT THE SAME HEIGHT. FAILURE TO DO THIS WILL RESULT IN A SYSTEM THAT IS HARD TO BLEED. THE PUMP SHOULD ALSO BE SLIGHTLY LOWER THE HEAT EXCHANGER AS THESE PUMPS DO NOT 'SUCK' FLUID AND ARE REQUIRED TO BE FED. (INTERCOOLED KIT ONLY)
17. WIRE IN THE W2A PUMP TO A FUSED IGN+, ENSURE TO CHECK THE POLARITY IS WIRED CORRECTLY OR THE PUMP WILL SPIN IN THE WRONG DIRECTION. (INTERCOOLED KIT ONLY)
18. RUN YOUR -12AN LINES, THE 2 X 90° FITTINGS ARE USED FOR BEHIND THE MANIFOLD AND THE STRAIGHT FITTINGS ARE FOR THE HEAT EXCHANGER. WE SUGGEST DOING THE FOLLOWING:
 - A. RUN A HOSE FROM ONE SIDE OF THE MANIFOLD (EITHER SIDE IS FINE) TO THE TOP PORT ON THE RESERVOIR.
 - B. RUN A HOSE FROM THE LOW PORT ON THE RESERVOIR TO THE TOP -12AN FITTING OF THE HEAT EXCHANGER.
 - C. RUN A HOSE FROM THE LOWER -12AN FITTING OF THE HEAT EXCHANGER WILL TO THE INLET OF THE PUMP (TOP OF PUMP)
 - D. RUN A HOSE FROM THE OUTLET (SIDE OF PUMP) THROUGH TO THE OTHER 90° FITTING ON THE MANIFOLD.
19. APPLY A UNIFORM BEAD LOCTITE 518 OR FUEL RESISTANT GASKET SEALANT TO THE UNDERSIDE OF THE SUPERCHARGER IF USING A CHARGER THAT DOES NOT HAVE AN INTEGRATED SEAL ON THE UNDERSIDE (HARROP FDFI RANGE FOR EXAMPLE)
20. CAREFULLY PLACE THE SUPERCHARGER ONTO THE TOP PLATE.
21. INSERT THE SUPPLIED BOLTS WITH WASHERS THROUGH THE FLANGE INTO THE TOP PLATE AND TIGHTEN BY HAND FIRST.
22. ONCE BOLTS ARE SLIGHTLY THREADED IN TORQUE THEM DOWN TO 18 NM / 13 FT-LB AND AGAIN DO SO IN A CRISS CROSS FASION STARTING FROM THE MIDDLE WORKING OUTWARS.

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23. ATTACH THE VAC LINE THAT YOU INSTALLED ON THE UNDERSIDE OF THE MANIFOLD TO A VACUUM BANK / MANIFOLD. FROM THERE YOU CAN PLUMB UP TO THE BYPASS VALVE, FUEL REG, BOOST GAUGE, MAP SENOR, ETC. WHEN PLUMBING THE BYPASS HOOK UP TO THE TOP BARB ON THE BYPASS VALVE, THE BOTTOM PORT IS LEFT AS IS TO VENT TO ATMOSPHERE. NOTE THAT HARROP FDI CHARGERS ALREADY HAVE THE BYPASS HOOKED UP.
24. INSTALL YOUR 6PK DRIVE BELT, IF YOU PURCHASED A KIT THEN THIS WOULD HAVE BEEN SUPPLIED.
25. WITH THE CHARGER AND MANIFOLD INSTALLED YOU WILL NEED TO FIT YOUR THROTTLE BODY TO THE CHARGER. IF YOU HAVE PURCHASED A FULL KIT THIS WOULD HAVE BEEN INCLUDED WITH THE SUPERCHARGER.
26. THE MANIFOLD AND SUPERCHARGER INSTALL IS NOW COMPLETE. YOU SHOULD NOW REATTACH ANY RADIATOR HOSES THAT WERE REMOVED, TOP UP FLUIDS, CONNECT THE FACTORY AFM / AIRBOX TO THE THROTTLE BODY, EXTEND ANY WIRING AND BLANK OFF ANYTHING NO LONGER BEING USED. **DOUBLE CHECK EVERYTHING BEFORE STARTING THE ENGINE.**

**** THESE INSTRUCTIONS ARE SUPPLIED AS UNIVERSAL AND SO NOT SPECIFIC TO ANY VEHICLE, PLEASE EXPECT SOME VARIATION FROM THE STEPS ABOVE ALONG WITH SOME ADDITIONAL ONES NEEDED TO COMPLETE THE INSTALL CORRECTLY. IF ANYTHING DOES NOT MAKE SENSE OR YOU NEED CLARIFICATON PLEASE REACH OUT TO US DIRECTLY AT INFO@ELATEMFG.COM ****