



AU Falcon INTECH and VCT

RAPTOR ProStreet Kit FITTING INSTRUCTIONS

1. Remove the fuel pump relay located in the power distribution box behind the battery. Start the engine and let it run till it dies. This will release the fuel pressure in the rail. Turn ignition key to the off position and reinstall relay. Remove the particular relay as shown in image.



2. Remove the air filter assembly, including air box, cold air snorkel and the plastic pipe that takes air around to the throttle body. When done your engine bay should appear just like the image below. Also remove the throttle body from manifold to facilitate remove of the injectors from manifold.



3. Remove the standard fuel injectors and replace with the supplied BOSCH 36lb@5bar injectors, these new injectors are a direct fit, some 2 stroke oil is good to lube the orings prior to refitting the fuel rail..
4. Now fit the 4 Bar fuel pressure reg at end of fuel rail, circlip pliers needed.
5. Remove stock sparkplugs and replace with your own new sparkplugs or supplied sparkplugs if included in your kit. BPR6EFIX-11 NGK is highly recommended. Gap to 1.0mm, if misfiring occurs reduce GAP to .85mm
6. Now is a great time to find the rubber bung which comes with no clamp, this is to be fitted to the strut rod on the passenger side to prevent direct metal to metal contact between strut rod and boost charge pipe when it is fitted later on.
7. Remove the electric radiator fans, undo the 2 x 10mm located at either side top of fan assembly, then unplug the electrical connection on drivers side of fan assembly and remove fan assembly by lifting up and out. It is tricky to get it just right to remove, you will need to bring the drivers side up a bit higher to facilitate removal. Take care, the plastic will be brittle and can easily snap sections away.
8. Remove engine drive belt, you will need a 3/8 drive ratchet or breaker bar with a long piece of metal pipe to fit over the handle to allow more leverage, the spring in the auto tensioner is very strong and great care is needed to prevent personal injury when removing and refitting the drive belt. Engage your 3/8 drive into the square hole in auto tensioner and then pull across to passenger side of vehicle to loosen the belt, slip belt off. See image below.



9. Remove electrical connection from A/C compressor clutch, the plug has a clip on the underside which needs to be levered down to release catch so plug will come away.



- 10.** Under no circumstances should any gas or hoses be removed from compressor, it is an offence to release AC gas into atmosphere. Remove all 4 bolts that secure the A/C compressor to the engine, upon removing the bolts you will find the compressor can be tilted up so that the bottom to bolts can be slid from the compressor unit. Now find the supplied 4 new bolts supplied in the SC fitting kit along with 4 spacers, 4 flat washers and 4 spring washers. Put one spring washer, one flat washer and one spacer on all 4 bolts. Insert 2 of the longer bolt assembly's into the to lower holes on the A/C compressor and then place compressor back into original position, screw the 2 lower bolts in a few turns then leave them.
- 11.** Remove the lower bolt from thermostat housing.

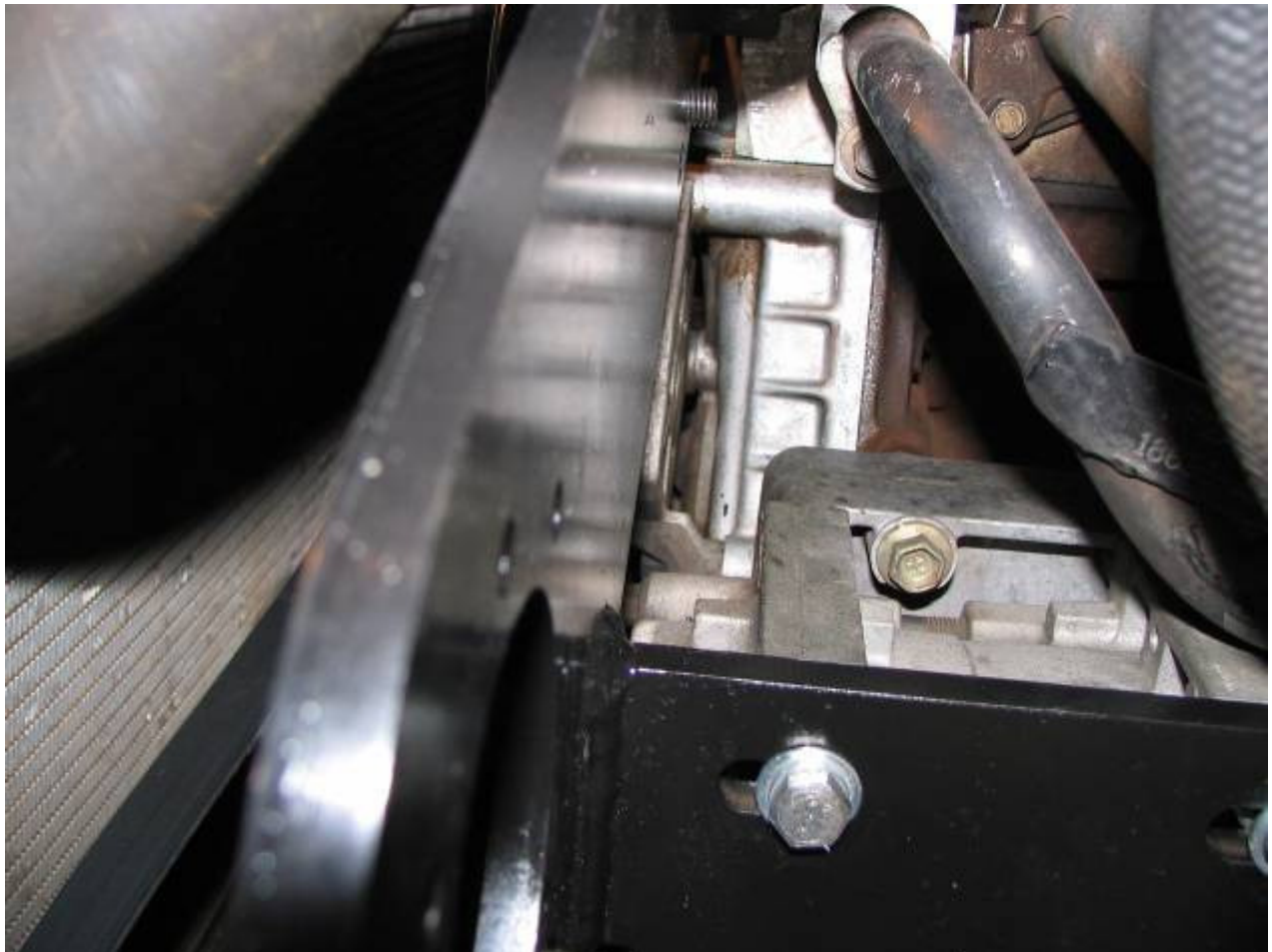


- 12.** Now take supercharger mounting bracket and fit it to the engine, you will be able to manoeuvre it into position as shown in the following position. When it is roughly into position then arrange the spacers on the 2 lower bolts in AC compressor to be in against compressor and the washers to be out against the head of the bolts. This will leave approx a 20mm gap on bolts to allow the bracket slots to engage the bolts. Lift bracket up under the radiator hose and you will just be able to get bottom of bracket onto the bolts, slide down then across. Now fit the 2 upper bolts into AC compressor with spacers between bracket and compressor and washers against the head of the bolts. Screw all bolts in until the washers just begin to touch the SC mounting bracket. This will allow you to manoeuvre the bracket later for proper belt alignment.



- 13.** Now fit the supplied stainless bolt into the upper SC mount hole and then into the thermostat housing, again just thread it in a bit so bracket can still be moved. TAKE CARE TO NO CROSS THREAD INTO THE ALLOY cylinder head material. You may need to file out the hole if there seems to be an alignment issue with this bolt, this is highly unlikely since the brackets were welded into place on an AU Ford engine.

14. Place the mounting bracket into place using the two longer 8mm bolts supplied, use the original a/c compressor bolt and install the spacer in between the bracket and manifold. “Note” Leave all bolts loose until the bracket is lined up and all bolts started. Tension the a/c compressor bolts to 23NM.
15. ALIGNMENT OF SUPERCHARGER MOUNTING BRACKET, this is VERY easy but you must be certain you have it correct or you will have HEADACHES to burn ☺.
16. The image below shows very clearly the rear of bracket plate being perfectly flush with back of casting behind upper engine idler pulley mount, it must be perfectly flush both horizontally and vertically to give perfect belt alignment. The image next down shows a small ruler being used to obtain a guide for flush fitting. It is perfectly possible to do the horizontal and vertical alignment by eye only however if you don't get it correct you might find you are removing it all again in a few days to recorrect it.





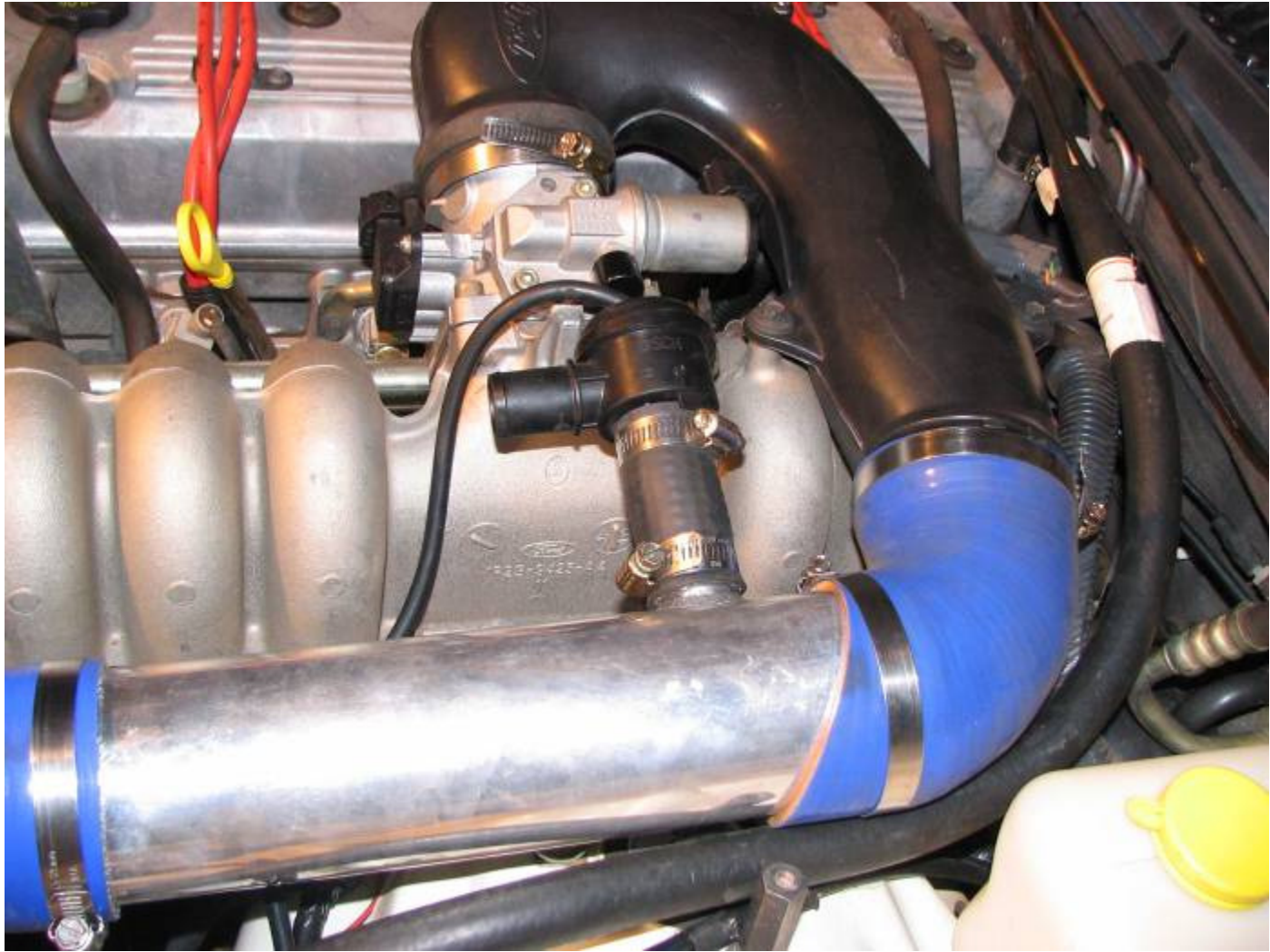
17. Tension all four compressor bolts and thermostat housing bolt.
18. Now reconnect AC compressor electrical connector plug through the hole in the bracket.
19. Now take the supercharger and slide it pulley first through the hole in the bracket with supercharger outlet facing vertically UP or near to. Use the supplied 8 stainless countersunk screws to secure supercharger to bracket. Tighten screw firmly but not ridiculously tight, if you are damaging the socket head in the screw then ease of a bit.



- 20.** Install the blow off valve to the pressure pipe using the joiner hose and 2 clamps supplied. Install the 3/16 tee into the vacuum line which runs under the intake manifold. Run the supplied 3/16 vacuum hose from the tee piece to the blow off valve. “Note” This valve vents to the atmosphere. There is no need to plumb anything. Install the pressure pipe with the box facing downwards between the manifold and body.



- 21.** Remove the 5/8 hose between the tappet cover and plastic inlet pipe and block off with the bung supplied. Fit 5/8 rubber hose to the tappet cover. The other end installs to the aluminium supercharger intake pipe. You will see it in the image below, it has the white paper band around it.



- 22.** Lubricate the o ring on the aluminium intake pipe and install to the supercharger, if the 3/16" screw supplied is too long then cut to length, you should have 4-5 threads extending beyond the rear of the support arm as a gauge of correct length. Install the mounting bracket and tension to ----NM. Fit the 5/8 hose and install the air filter (POD type), oil the pod filter with filter oil if this is allowed in your state. Qld OK.
- 23.** Now install the stainless steel support ring as shown in following image. It slips into end of plastic pipe (stock) which is coming around from the throttle body, just slip the stainless former in, nothing else to do, fit the silicone bend the fit elbow onto supercharger outlet and position all parts to resemble the image in point 20 of these instructions.

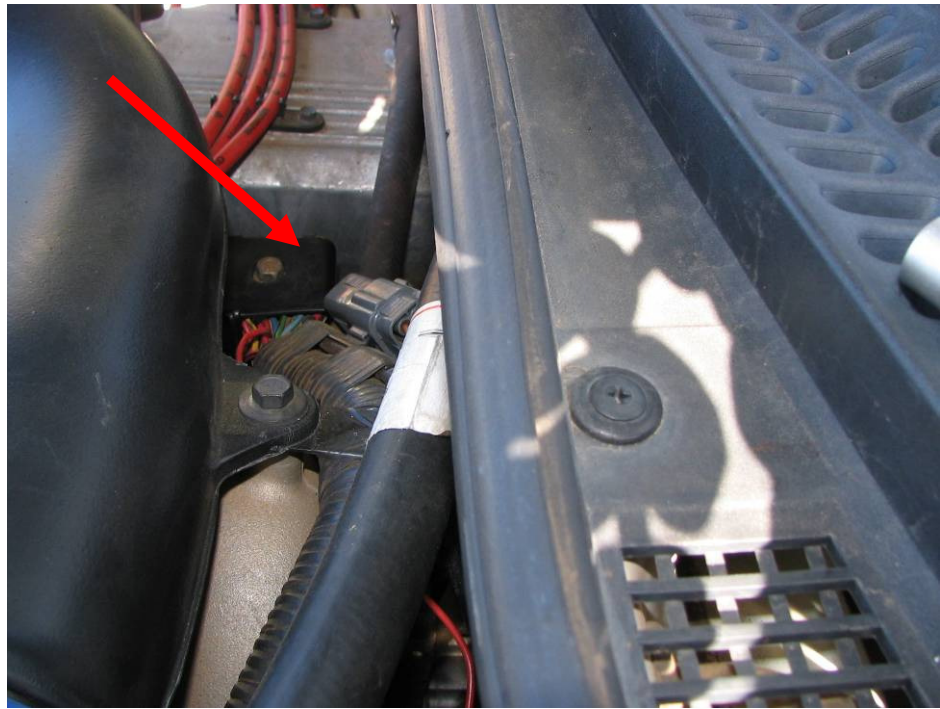
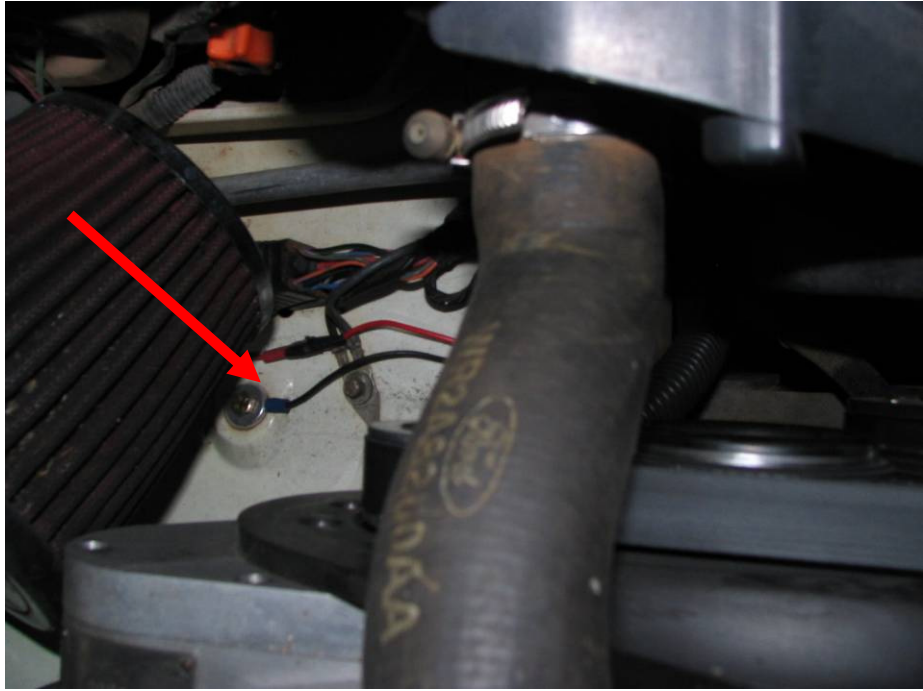


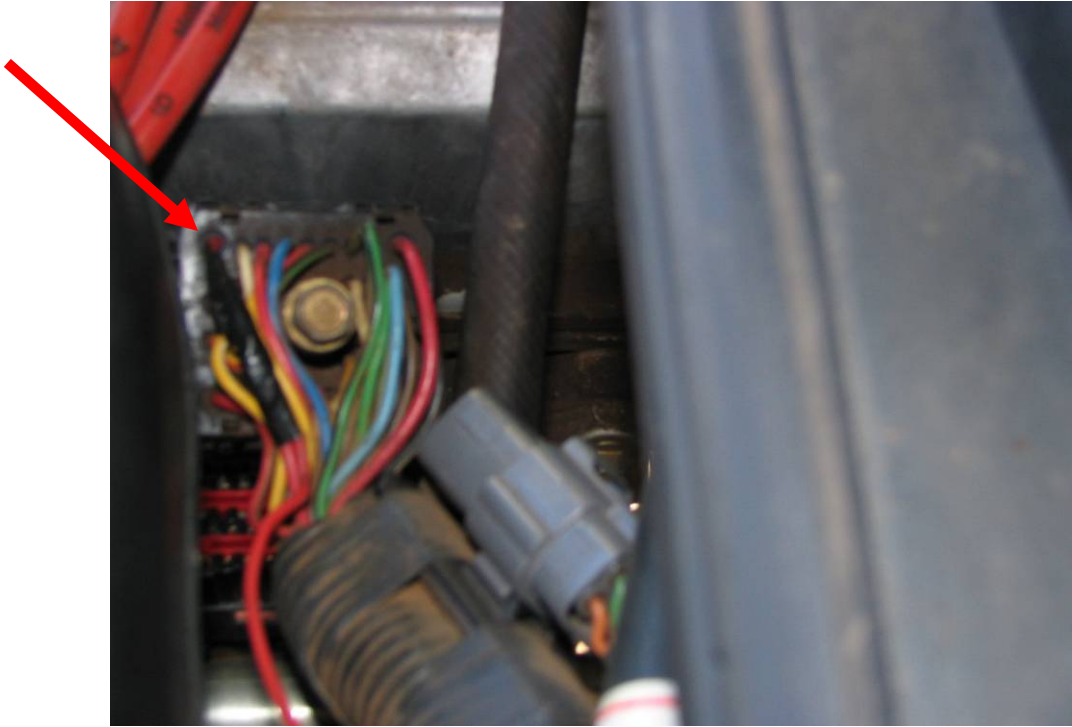
- 24.** Install the supplied map CHEATER onto the ECU wiring. “Note” It is strongly recommended that these two steps be performed by an auto electrician, as the wiring is critical to the vehicles performance, not to mention damage to expensive electronic components can easily occur. Your MAP cheater is the small electrical looking device with a black and a blue wire protruding from it. You are strongly recommended to solder these connections which are as a T connection. By this we mean you merely REMOVE some plastic insulation from the appropriate wires back from the ECU where you can easily work with them and then solder the wires from the MAP cheater to the correct wires on the ECU. DO NOT CUT ANY WIRES AT ALL. There is information on back of ECU as how to work out the pin numbering.

MAP cheater information

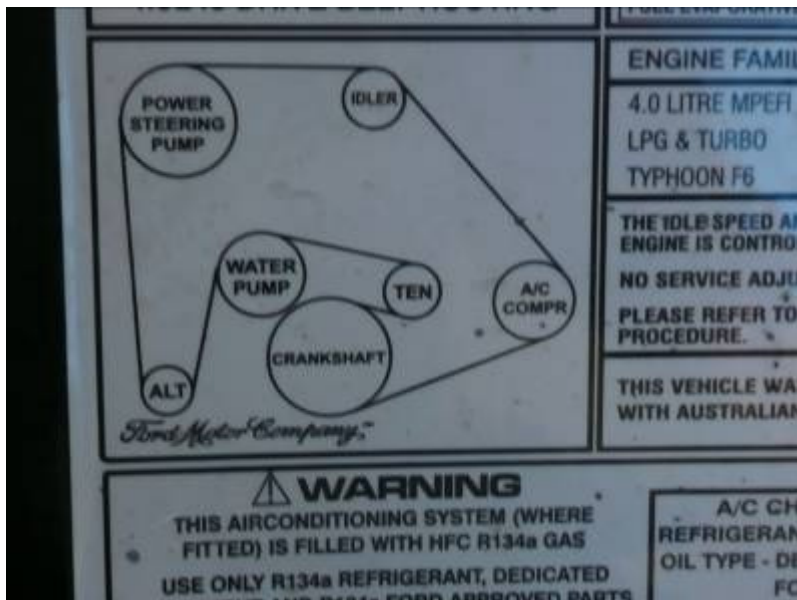
Connect the black wire of the MAP CHEATER to the BLACK/WHITE at PIN:91
Connect the blue wire of the MAP CHEATER to the BLUE/YELLOW at PIN:34

- 25.** Leave ECU cover off until you are certain the MAP cheater is working correctly, MAP cheater will be destroyed if not correctly installed but no other harm will occur to cars electrical system. We will supply a new MAP cheater should this be the case.
- 26.** Now to fit the Supercharger cooling system. First you need to remove the grill so that you can fit the black cooler fan unit into the area behind the bumper bar. The black fan unit is to be zip tied with supplied ties horizontally to the bumper former in a position approximately behind the number plate itself. Now find the supplied wiring loom and connect red to red and black to black in the connector block on fan unit, now run wiring into engine bay on the passenger side, below the pod filter of SC intake there are threaded holes in the body of the vehicle, connect the earth lug via a bolt into one of these holes. The red wire is to be run to back of engine bay on passenger side for connection at a large square multipin plug near end of fuel rail. The red wire is to be then connected (soldered) to the thick red wire in this plug which would in effect be nearest the car battery. See pictures of plug and also earth connection point. Then run the convoluted 19mm hose from fitting on charger trans down to cooler unit and cut to length. Then push approx 20mm of hose into the cooler unit, zip tie hose into position.

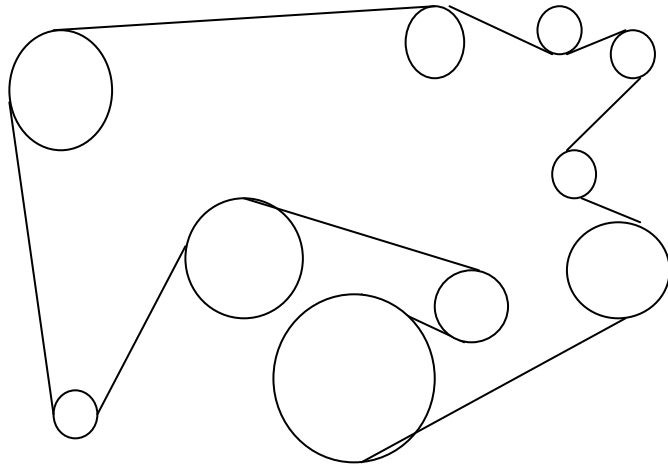




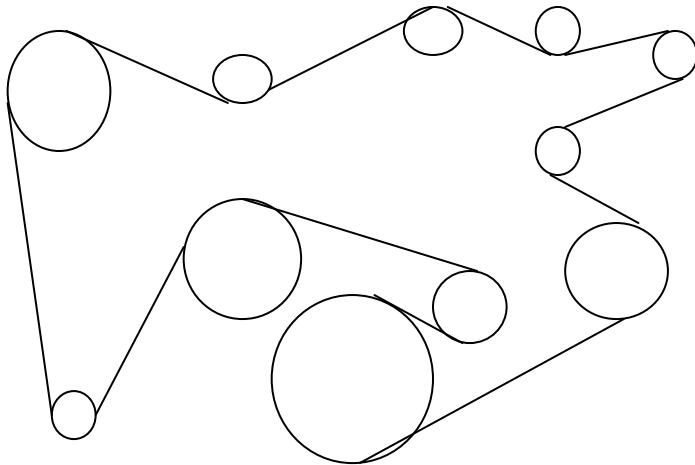
- 27. Now install the Supercharger/engine drive belt (6PK2910)
- 28. Refit the electric cooling fans to the engine radiator and CONNECT THE ELECTRICAL supply plug
- 29. Check engine coolant level, add coolant if some was lost while the bolt was removed from thermostat housing.
- 30. Belt Routing (STOCK)



31. Belt routing (INTECH SUPERCHARGED)



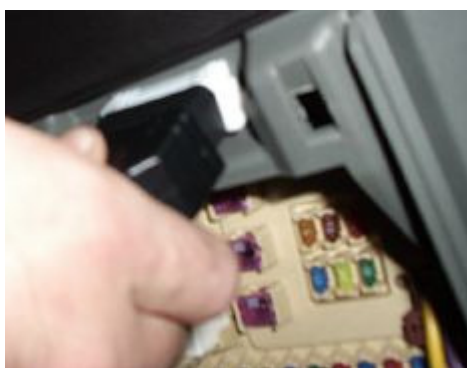
Belt Routing (VCT SUPERCHARGED)



32. Perform the steps for the flash tuner BLUE SCREEN as per supplied instructions. You will have been supplied one of either of the examples in the following image



The Flash Tuner BOX is easy to use, a few simple steps is all it takes to load a new program into a vehicle.



1. Plug the flash tuner into the diagnostics port of your car (under the fuse panel).



2. With the key off, use the 'SELECT' button, to choose the program you wish to install into the car (Factory, 1, 2 or 3).



3. With the LED lit up on the program you wish to install, hold the program button for 3 seconds. The LEDs will flash on and off. This will time out after 30 seconds.



4. While the LEDs are flashing, turn the ignition to on (dash lights illuminate) but do not start the vehicle. The flash tuner will now download your factory program and upload the new program.



5. Once the lights stop flashing, the programming is done. Turn the key to the off position and remove the OBD-II connector. Turn the key to on and verify that the car starts.

33. Blower run in, see notes at end of this section.

34. Get your vehicle certified by State authorities, e.g. blue plate if in Queensland. Inform your insurance company of modifications.

35. Dyno check your vehicle or with a mobile AFR (air fuel ration meter). Check the fuel isn't too lean as this will detonate leading to engine failure often quite quickly.

36. Other recommendations

SPARKPLUGS: When fitting kit source these sparkplugs and fit

NGK BKR6EIX-P 0.9mm gap

ONLY RUN 98 OCTANE FUEL (BP ULTIMATE)

RUN IN SUPERCHARGER **FOR 200 kms BEFORE
USING FULL POWER**

**DYNOTEST TO CHECK Air/Fuel RATIOS BEFORE
DRIVING AT FULL POWER. CONTACT RAPTOR IF
AFR IS LEANER THAN 12.5:1, A LEANER READING
IS 12.8:1 FOR EXAMPLE.**

THEN GET OUT THERE AND ENJOY THE POWER

Images of the kit installed





Contacts for information relating to this FORD kit

RAPTOR SUPERCHARGERS 0409 897 081 Call Raptor if there is problem with supplied tune, supercharger unit or anything else.

Liability

No liability whatsoever (including liability in negligence) is accepted by Raptor Superchargers for the fitment of incorrect tuning or incorrect fitment of kits and systems. The onus is clearly with the fitter to ensure the kit supplied is correct for the particular system. Any damage to parts or consequential damage or cost resulting from the fitment of the incorrect parts or incorrect fitment of parts is totally the responsibility of the fitter

Fuel systems

All Raptor Supercharger systems are fashioned to give adequate fuel enrichment (when supplied with fuelling/tuning modifications) on unmodified vehicles. If vehicle engine is modified (ie extractors, air filter pod, fuel pumps, manifolds, etc) most kits will require additional enrichment not provided with kit/s. Raptor superchargers is in no way liable for engine damage arising due to incorrect tuning, un-maintained fuel systems and the like.

Meeting legal requirement for on road use

The Raptor system is NOT sold for on road use, it is up to owner of vehicle whom after fitting the SC system to their car to organise for car to be engineered/inspected/approved by the relevant state authorities and receiving written approval before using vehicle ON ROAD.

