

## Installation instructions for fitting ANJ220WC alternator to 70 series Land Cruiser

The alternator is installed by accessing the space on the front, driver's side of the engine.

1. Disconnect the battery.
2. Remove the air-cleaner box taking care that the pipe between the snorkel and air box does not fall between the inner and outer guard.
3. Carefully seal the air-manifold entry points so that no foreign material can enter the engine.
4. Drain the engine coolant (approximately 5-6 litres) via the tap on the bottom passenger side of radiator. Drain into a clean sealable container so that the coolant can be returned to the engine.
5. Unbolt the header tank and allow the tank to hang away from existing position in order to create more room for access to alternator area. Seal up any open piping.
6. Remove the power steering pump from the engine and carefully secure the pump out of the way taking care not to stretch the hoses unduly. Ensure that the pump O-ring does not get damaged or lost.
7. Block the power steering pump entry point on the engine so that no foreign material can enter the engine.
8. Remove the fan belt by releasing the pressure on the auto-tensioner
9. Remove the idler pulley from the OE auto-tensioner bracket.
10. Remove the water manifold pipe from the water pump on the front of the engine. Ensure that the thermostat does not drop out of its cavity.
11. Remove the O/E alternator.
12. Unbolt the wiring harness clamp from the engine



13. Terminate the O/E alternator positive cable with the heat-shrink end-cap and tie up out of the way. It will no longer be required and is not connected to the new alternator.



14. Fit the 2 x M8 x 50mm grub screws to the 2 rear M8 threaded holes at the rear of the alternator bracket



15. Fit the RP1WCTV8-14/120 alternator to the engine bracket by carefully lowering the alternator into position. Ensure that the coolant hoses and electrical cables do not get caught or damaged as alternator is fitted into position. Lower rear of alternator into cavity first



16. Use the 2 x M8 x 50mm Socket Head screws to bolt the alternator to the bracket. Fit the 2 x M8 flange nuts to the grub screws. Tighten all screws and nuts.

17. Refit all of the engine parts previously removed.

**IMPORTANT!! CHECK FOLLOWING!!**

**A.** Ensure O-ring is seated in power steering pump

**B.** Ensure that 3/8 braided hose clips into correct position under steel water pipe.



Braided hose fits into clamp  
behind water pipe here

**C.** Ensure that fan belt is correctly seated in all pulleys and fitted in the correct wrap position

**D.** Ensure that all bolts are tight

**E.** Ensure that all O/E coolant pipe clamps are in place.

18. Rout the alternator coolant hoses and battery cable as per photo



Place the alternator positive cable beside the engine harness that runs across the top of the engine



19. Connect then alternator control circuit lead to the engine harness via the Deutsch connector

Connect the wiring as per below

Deutsch connector

Toyota O/E connector

Pin 1 – BROWN -----BLACK/GREEN (Ignition+)

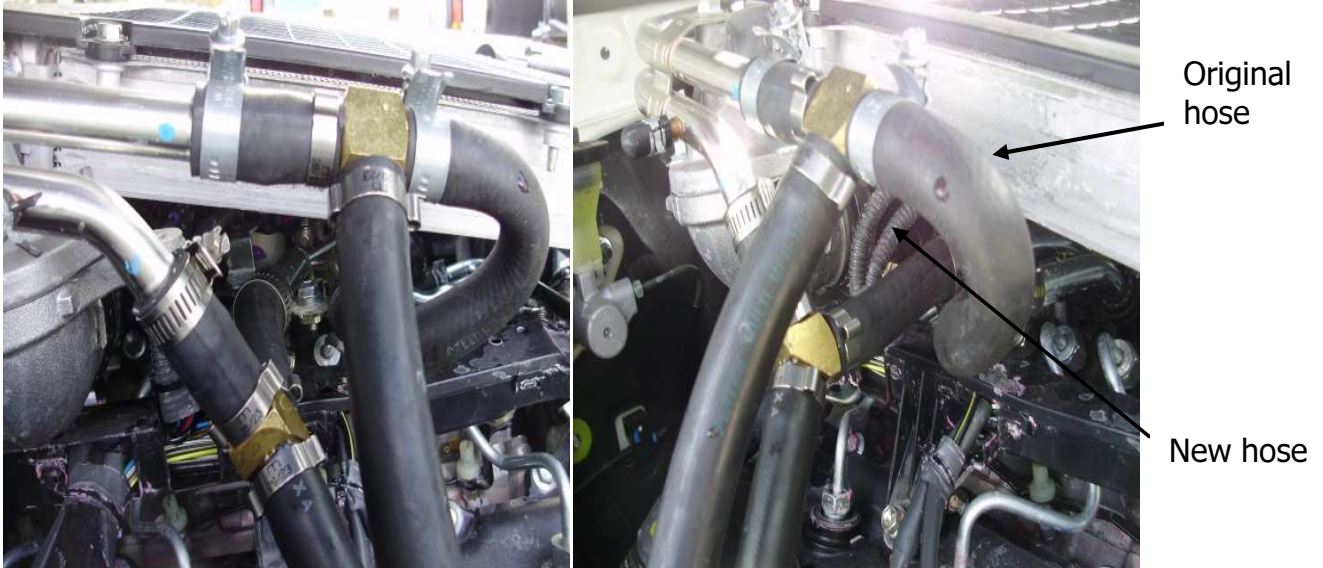
Pin 2 – BLUE-----YELLOW ( alternator light)



20. Disconnect the heater hoses and plumb the coolant hoses as per following instructions

### **COOLANT CONNECTION**

Plumb the alternator hoses parallel to heater circuit as per the photos below



### **NOTE**

21. Refit the header tank and ensure that the radiator drain tap is closed and then return the **CLEAN** coolant to the header tank.
22. Refit the air cleaner box.
23. Reconnect the negative battery terminal.
24. Test the operation of alternator; ensure that charge light works correctly. The alternator will produce a maximum output of 140 Amps. The voltage regulator set point is 14.1V
25. Run the vehicle for 10 minutes and ensure that there are no leaks from any part of the coolant circuit