

Installation Instructions Elsbett Conversion Toyota Landcruiser 1HZ

1 Preliminary notes

- 1.1 Before you start
 - Make sure the engine is in faultless condition
 - Disconnect the battery
 - Clean the engine
 - Drain the coolant
- 1.2 Fuel system
 - See separate fuel diagram
 - You can keep the existing fuel lines if they are biofuel-resistant and the inner diameter is greater than 8mm. Otherwise replace with supplied parts.
 - Fit SVO fuel filter when in colder climate or if fuel consumption is more than 10L/100km
 - Connect new components only with the supplied biofuel-resistant lines
- 1.3 Electrical system
 - See separate wiring diagram
 - Use correct gauge wires and tie new wires to original looms
 - Fit sufficient length of new wires as they will shorten in colder temperatures
- 1.4 Test Run
 - Fill and bleed cooling system
 - Fill fuel tank and bleed fuel system
 - Check both systems for leaks
 - Start the engine
 - Temperature switch should be open when operating temperature is reached
 - Re-check all systems for leaks
 - Make test drive

2 Injector nozzles

- Replace injector nozzles (Elsbett code 050601)
- Same pressure as original nozzles with a maximum tolerance of ≤ 5 bar
 - Fit new heat washers and seals (Bosch)
 - Clean seats of injectors before refitting

3 Glow plugs

- Replace glow plugs (Elsbett code 071429)
- Dimensions of old and new glow plugs should be the same except for length of glow pin (max. 3mm longer)
 - Clean seats of glow plugs before refitting

4 Rotary pump OUT screw

- Replace rotary pump OUT screw (Elsbett code 010110)
- Pay attention to correct direction of the OUT screw
 - Re-attach original banjo and fuel hoses to the OUT screw
 - Use the supplied new washers when fitting the new screw

5 SVO fuel filter

- Fit second fuel filter (Elsbett code 010109)
- Fit SVO fuel filter in parallel with original fuel filter, using t-pieces
 - Pay attention to correct flow direction
 - SVO fuel filter will function as main fuel filter
 - Connect fuel filters to rotary pump with new double-banjo IN screw
 - Fit stop valve to original fuel filter
 - Open stop valve to original fuel filter in case of frost or high fuel consumption (> 10L/100km)

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6 Fuel heat exchanger

Install fuel heat exchanger (Elsbett code 010107)

- Fit before and as close as possible to SVO fuel filter
- Fit lower than the connection to the coolant system
- Fit in parallel with cabin heater, using t-pieces
- Do not fit upside-down
- Make sure that cabin heater valve cannot prevent the coolant from reaching the fuel heat exchanger
- If necessary, weld bracket to separate base (not to the exchanger itself)

7 Temperature switch

Install temperature switch (Elsbett code 010112)

- Fit inline hose adapter between hot side t-piece and fuel heat exchanger
- Fit sealing ring between adapter and temperature switch
- Coolant temperature should reach at least 70 degrees Celsius (If not, find more suitable place)
- Check that temperature switch is open after reaching engine operating temperature

8 Electric fuel filter heater

Install electric heater to SVO fuel filter (Elsbett code 010106)

- See wiring diagram
- Electric heater fits around SVO fuel filter
- Connect heater and relay as shown in wiring diagram

9 Electrical connections for temperature switch

Connect using supplied parts (Elsbett code 010101)

- See wiring diagram
- Cut wire between pre-heating timer and original temperature sensor
- Connect temperature switch, relay and resistor as shown in wiring diagram

10 Manual fuel bleeding pump

Only to be fitted and used when needed (Elsbett code 010113)

- When engine is cold: fit between fuel heat exchanger and fuel filter(s)
- When engine is hot: fit before fuel heat exchanger
- Pay attention to the correct flow direction
- Do not build up too much pressure as this might damage gaskets and seals