



Using R32 GTR ECU on R33 GTR

The R32 ECU is a plug-in job and works seamlessly in the R33 except that they use different O2 sensors (and heaters for the O2 sensors are wired differently). Both easily fixed.

Sensors:

R32 uses a zirconia sensor. This type of sensor produces a voltage of between approx 0V for lean to 1V for rich.

R33 uses a titania sensor. These sensors don't produce a voltage themselves - they're resistive. So resistance changes between rich and lean. When running these sensors with an R32 ECU you'll find that they still work but the voltage range is much lower - between approx 0.1 and 0.7V. The lean/rich trigger voltages must be adjusted using NISTune. Lean trigger works well around 0.2V and 0.6V for rich trigger.

Sensor heaters:

R32 runs the heaters whenever IGN power is on. R33 ECU controls the heaters itself by supplying GND (the heater has 12V supplied to the other side whenever IGN is on) to turn heaters on.

So what we need to do is supply GND to the heaters so they operate the same as R32 - they're on whenever IGN is on. This is done inside the ECU by linking O2 sensor GND (pin 50) to the pin used for heater GND by the R33 ECU (pin 115).

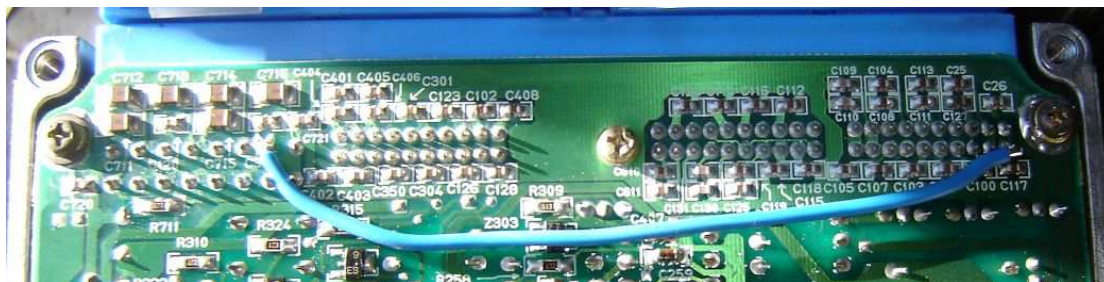
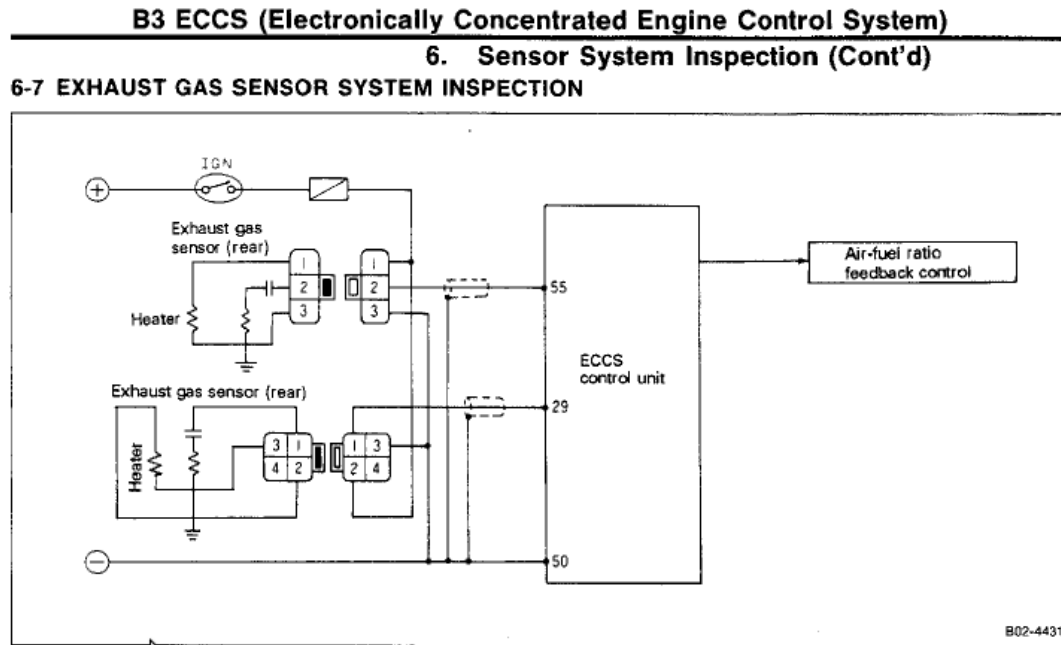


Figure 1 - Attach wire link between pins 50 and 115

Referring both factory manuals (see the screenshots below) - R32 GTR heaters AND SENSOR get ground from pin 50. R33 GTR heaters AND SENSOR get ground from pin 115.

On R32 GTR ecu pin 115 is not connected. On R33 GTR ecu pin 115 provides heater ground. So to provide this GND using the R32 ECU we simply need to bridge pin 50 to 115 with a wire link.



Cylinder, exhaust gas sensor, CONSULT (DATA MONITOR) display

Cylinder No.	Exhaust gas sensor	ECCS C/U terminal number	CONSULT (DATA MONITOR) display
No. 1, 2, 3, cylinders	Exhaust gas sensor (Front)	ECCS C/U terminal (29)	EXH GAS SEN-R
No. 4, 5, 6 cylinders	Exhaust gas sensor (Rear)	ECCS C/U terminal (55)	EXH GAS SEN

Figure 2 - R32 O2 Sensors

O₂ SENSOR HEATER SYSTEM

SYSTEM FAULT DIAGNOSIS

RB26DETT ENGINE

**9. O₂ SENSOR HEATER SYSTEM
CONTROL CIRCUIT DIAGRAM RB26DETT ENGINE**

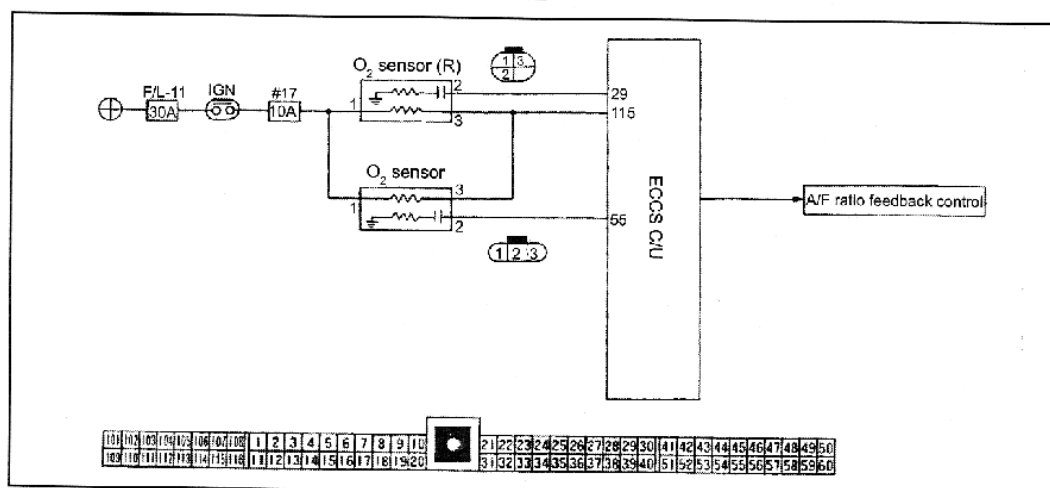


Figure 3 - R33 O2 Sensors