

Typical thermal control circuit, the Oka Thermo Amp may be similar.

See <http://www.craig.copperleife.com/tech/thermo/> for details.

Note, if replicating this circuit, R1 should be changed to 2.7k to match Oka thermistor (assuming it is still working, if not replace it with a 10k NTC thermistor and change R1 to 10k).

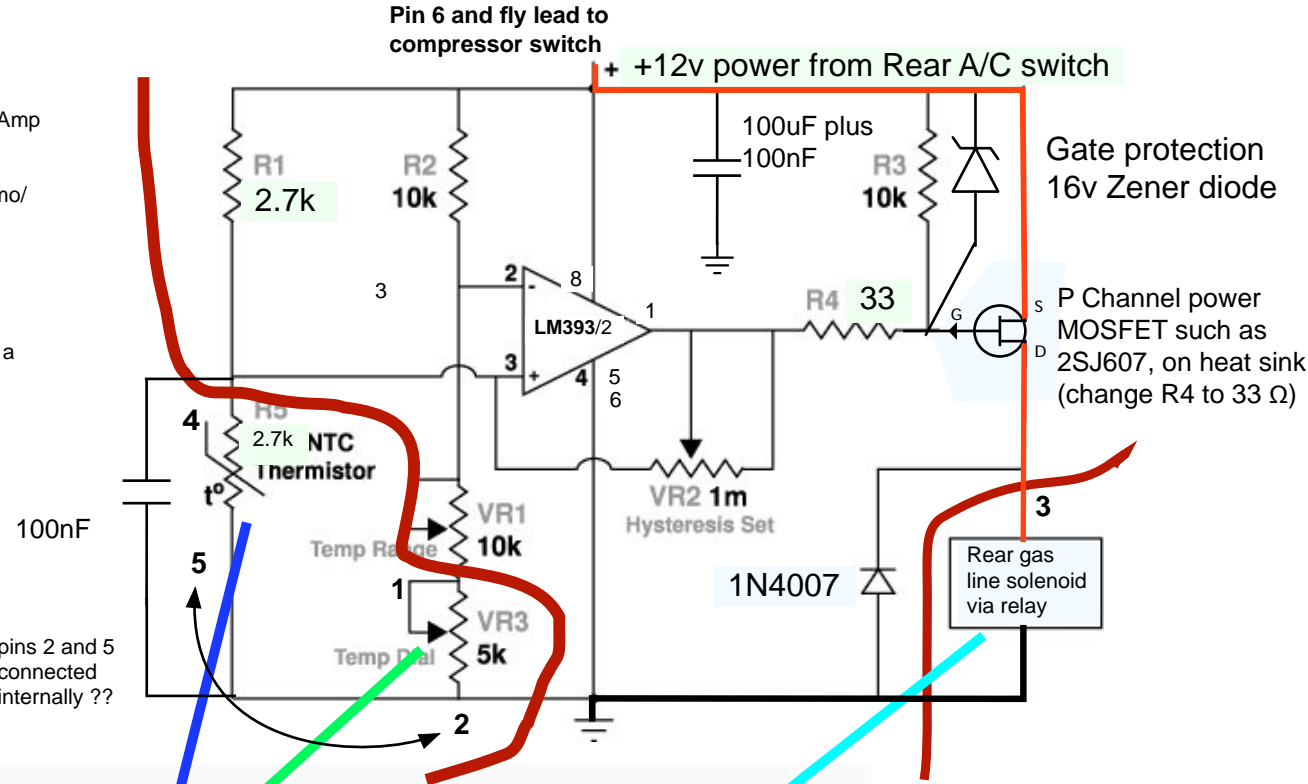
Replace the ancient 741 for 1/2 an LM 393 comparator (ground unused input pins)

Add some power supply decoupling

The 1MΩ Hysteresis trimpot (VR2) is to set the difference between the on and off temperatures, to avoid continuous cycling as the system (and therefore the thermistor) cools and re-heats. Cycling once every 30-60 seconds is OK.

The LM393 has an open collector output so the 10k pull up resistor (R3) is necessary to turn off the MOSFET and discharge the gate capacitance.

The capacitor across the thermistor (LM393 pin 3) will reduce the effect of noise on the input lead.



pins 2 and 5 connected internally ??

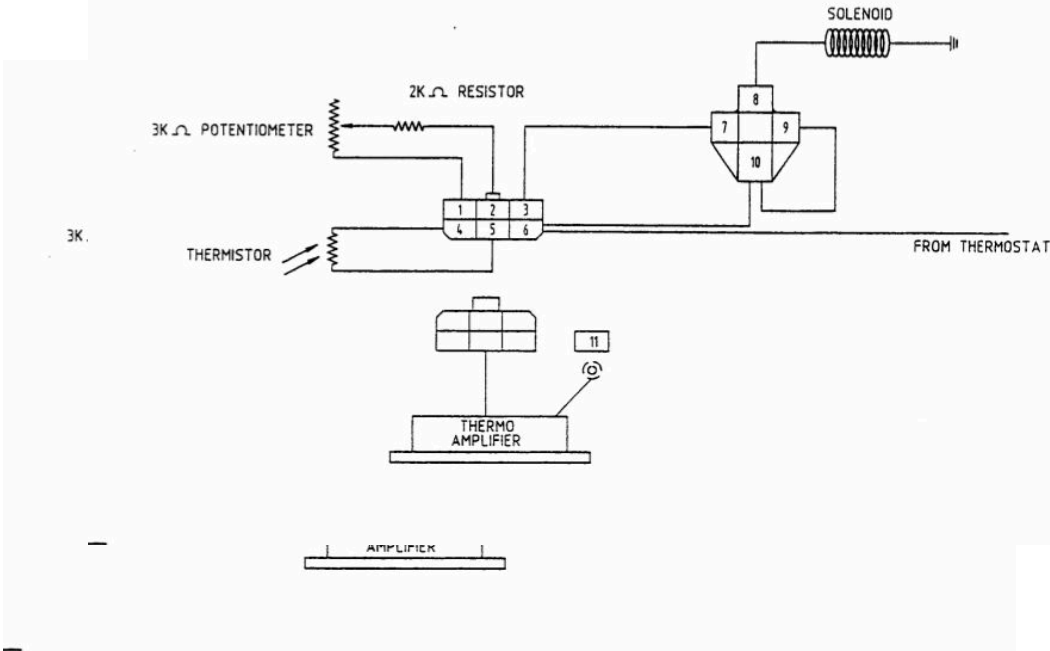
Oka Rear A/C Operation (from Manual)

The rear air conditioning control circuit uses a thermistor which is mounted in the rear evaporator. This signal is amplified using a solid state thermo am~ which operates a relay to cycle the solenoid in the high pressure line to the rear unit.

Temperature control is achieved using a 3 K. OHMS potentiometer (temperature control switch), with a 2 K. OHMS in the line. Turning the potentiometer clockwise will lower the temperature, counter clockwise to increase.

Power to operate the relay and thermo amplifier is tapped off the compressor circuit between the front thermostat and the low pressure switch. When fault finding the circuit, the rear circuit will only operate when the front air conditioning is operating.

Pin	Colour	Function	Notes
1 (Gnd?)	Yell/Red	3K temp ctl	S/C to F/Lead
2	Yell/Black	3K temp ctl	
3	Blue/Black tce	Relay drive	Relay base 7
4	Gray	Thermistor	S/C to 6 (+12v?)
5	Gray	Thermistor	
6	Blue	+12v?	Relay base 10
F/Lead	Blue/Gray tce	Ground?	



Oka Rear Air Conditioning Controls