

# Lagondaforum: Thermostatic Radiator Grill opening Mechanism

## Thermostatic Radiator Grill opening Mechanism

*Written by Rich5ltr at Jan 23, 2016 10:03 am*

Just a thought, how many of your cars have the thermostatically controlled radiator grill shutters operating correctly? The previous owner of my 16/80 fixed up a rather Heath Robinson manual control on my car using some Bowden cables and and what looks like motorbike hand throttle lever under the dashboard. I wonder how difficult to would be to reinstate the correct thermostatic operation? Any one got any advice?

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## Re: Thermostatic Radiator Grill opening Mechanism

*Written by bill at Jan 23, 2016 10:21 am*

I have a similar arrangement on LG45 and also had the same on my M45. I would not dispose of your existing system without trying it fully first of all. I found that the thermostatic control was always "too late" i.e. it only opened fully a long time after you incurred problems on the road. It only seemed to open right at the top of a very long hill or when you had been waiting for some time at roadworks or congestion.

I therefore converted my shutters so that I could operate them by hand and anticipate the problems that I could clearly see on the road.

I know that this arrangement will not suit everyone but it works well for me !

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## Re: Thermostatic Radiator Grill opening Mechanism

*Written by Mark at Jan 23, 2016 4:11 pm*

Richard,

I am in the process of rebuilding the thermostatically operated radiator shutters on my LG45. They worked really well until a family of pheasants hit the shutters, radiator shell and headlamp at 40+ mph...but that's another story.

I have had all the mechanism apart and ordered a new Calorstat that fits in the top tank on the rad (same as Bentley/Rolls Royce arrangement so not cheap). There are several adjustment points on the shutter mechanism which should have no tightness or resistance in its operation. Testing a new Calorstat all the action takes place at between 70 and 80C. As I never had any problems with the original system we will see what the refurbished set up performs like. Give me a call if you want to discuss in more detail

Regards

Mark

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## Re: Thermostatic Radiator Grill opening Mechanism

*Written by Colin M34 at Jan 26, 2016 10:26 am*

I would reinforce Mark's view. The automatic shutter arrangement on my 16/80 worked quite well.

I was hit by a worse problem which was the radiator being blocked by limescale despite being a fairly new core. I recommend using a film core of the type fitted to LG45s or at least descaling the existing core.

Colin

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## Re: Thermostatic Radiator Grill opening Mechanism

*Written by Bill LG45 at Jan 30, 2016 11:29 am*

Hi all,

Mark makes a very good point about making sure there is no resistance in the linkages and of course most of the linkage is inaccessible once the chrome surround is installed...

Weber carburetor items are nice and free moving and available from ebay...

Regarding the calorstat opening late, I guess this may have been because it had been set up for too high a temperature or leaked a bit or the linkage was stiff /not quite right and this is undoubtedly a fiddle of a job... but they can be got to work well.

If you want the engine to run at 70 to 80 deg C it would seem sensible to set up the calorstat to open at a lower temperature to account for the lag and I believe I agreed to just below 70 deg C when the radiator restorer did the initial set up. I quite expect the linkage will need adjusting to get this right when I get my car on the road.

Regards

# Lagondaforum: Thermostatic Radiator Grill opening Mechanism

Bill

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## Re: Thermostatic Radiator Grill opening Mechanism

*Written by Colin M34 at Jan 30, 2016 12:18 pm*

I have been doing some digging on the internet. Takes a look at eBay item number:151733056759 on the US site. This is for a Wahler Air Intake Box Thermostat for Volvo. I then found a YouTube video at <https://www.youtube.com/watch?v=FGWXXyXD2ME> . I think this is worth investigating because it seems to be precisely what we want.

One could possibly buy one and embed it in a brass disc which slips into the housing on the 16/80 radiator. They are not that expensive so I may buy one anyway to play with. Thoughts anyone?

Colin

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## Re: Thermostatic Radiator Grill opening Mechanism

*Written by Rich5ltr at Jan 30, 2016 11:28 pm*

The snag I would see there is that that operates at body temperature so 35-37 degrees. I assume the radiator grill slats start to open at around 70 degrees?

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## Re: Thermostatic Radiator Grill opening Mechanism

*Written by Colin M34 at Feb 01, 2016 9:09 pm*

Hi Richard

That's why I said it it might be fun to play with - perhaps in a test rig, plotting deflection against temperature. This would tell us how linear the curve is. I think the radiator slats should start to open at around at body temperature (35-37 degrees as you said) and be fully open at 70 degrees.

The nice thing about the 16/80 (and other) radiator set-up is that everything is adjustable so you could set up the operating temperature of the engine quite precisely, according to personal preferences. I like an engine to run at about 75 degrees.

I also enjoy repairing temperature gauges, refilling and calibrating them once all the bubbles are out. Fortunately the local pharmacist will sell me ether - usually after I explain what I am using it for. I always repair these in a well ventilated room!

Colin

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## Re: Thermostatic Radiator Grill opening Mechanism

*Written by Mark at Feb 01, 2016 11:39 pm*

New Calorstats are set to open the shutters at 70c and that will give the operating temperature of 70- 75c. My LG45 sits at 70 c unless in really heavy traffic at which point it goes to 80c and never seen it higher. There is a big old fan on the LG45 !

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## Re: Thermostatic Radiator Grill opening Mechanism

*Written by Colin M34 at Feb 02, 2016 12:01 am*

Mark

Do your slats clang open at 70 degrees or do they open gradually? Both could be achieved with a suitable linkage.

Cheers

Colin

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