Painting - Calculating the Dew Point:

During the winter of 23/24 I painted the TA chassis, picking suitable times between the inclement weather. If you are working in a garage then it's no problem as you can put the heaters on. I do most of my restoration work under my carport so need to take into account the 'Dew Point'.

Calculating the dew point:
The **'Dew Point'** is the temperature at which water vapour begins to condense into water; this is obviously important for various reasons and situations. The main reason that interests, or concerns, us car builders/restorers is when we come to applying paint; i.e. we must avoid painting in damp conditions.

In general when painting the temperature must be at least two degrees Centigrade above the Dew Point. So how do we calculate the Dew Point? The simple answer is with difficulty. However, there is an easy way, and that is to use a search engine on the Internet; by entering the Temperature and Humidity** the Dew Point will be displayed.

Notes.
*** The 'Humidity' is published on weather reports.*

My text refers to working outside or in an unheated undercover area; obviously relative humidity is reduced inside a warm (heated) building.

It is interesting that if you enter any temperature plus a humidity of 100% the Dew Point will always equal the temperature entered. This effectively means that regardless of the temperature when the humidity is 100%, we cannot apply paint. "We can only apply paint when the humidity is below 100%!"

For me 10° Centigrade has always been the defining temperature for working out of doors, riding a motorcycle or driving a convertible car with the roof down. Entering a temperature of 10° C and a humidity of 85% gives a Dew Point of 7.59° C (which is two and a bit degrees below 10° C) so theoretically ok for painting.

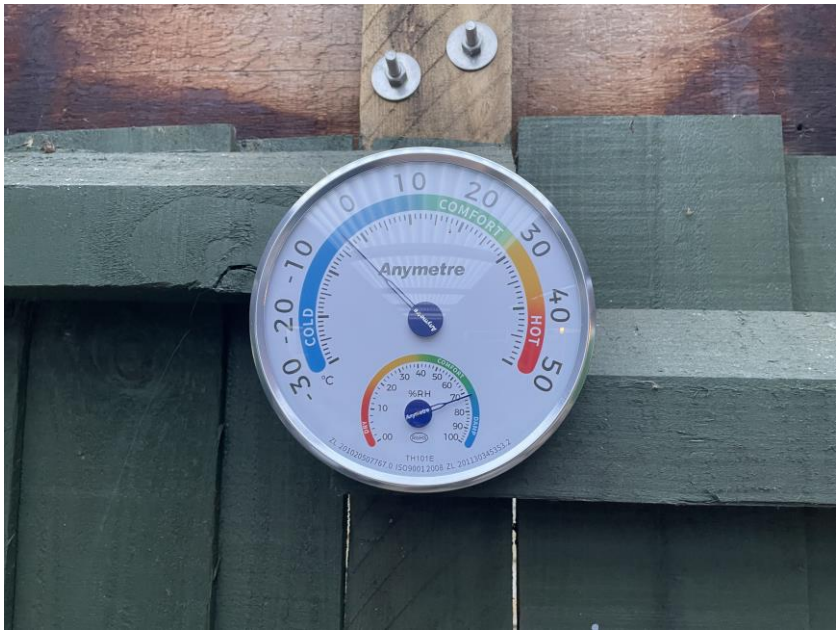
Bearing in mind my personal aversion to working out of doors at temperatures below 10° C and the requirement for painting to be carried out at a minimum of two degrees above the Dew Point my **MINIMUM** painting requirements, are as shown below.

'Requirements for painting out of doors equal a minimum temperature of 10° C and a maximum humidity level of 85%.'

I have never been a happy bunny working with minimum criteria so let's up the anti and go for a minimum temperature of 12° C and working at 5 degrees above the Dew Point. Doing the sums reveals that at 12° C I need a maximum humidity level of 71% which equals a Dew Point of 7° C.

My improved requirements for painting out of doors are therefore ***'a minimum of 12° C with a maximum of 71% humidity'*** which will mean I will be painting at least 5° C above the Dew Point.

To make things easy I purchased a combined temperature and humidity indicator which is located permanently under my carport. It is interesting that even a carport provides some warmth and it is normally 2° C above the outside temperature.



Temperature and humidity indicator.

A lot of hard work.

Note the absence of front engine mountings.

Finished in two coats of red oxide and two coats of agricultural gloss black.

Summary:
For long lasting results you need to restrict any painting to those times when the temperature is a minimum of 2 degrees Centigrade above the ‘Dew Point’. Failure to do so will result in trapping moisture between the paint and the object being painted; the end result will be the early formation of rust.