



## UE36600-78-X Prestige Parts® 78°C Thermostat



UE36600-78-X is a 78°C thermostat, which may be used in place of the original 88°C thermostat when a lower engine operating temperature is desirable. This might be in countries where the ambient temperature is high and/or where there is an elevated ethanol content in fuel (>9%), which tends to increase engine temperature. In Rolls-Royce and Bentley models built after 1987 we advise fitting our 88°C thermostat (UE36600-X), as certain ancillary systems require the vehicle to reach this temperature in order to operate effectively. For similar reasons, vehicles incorporating catalytic convertors should be fitted with an 88°C thermostat to enable the convertor to reach and maintain the correct operating temperature.

*Prestige Parts*® thermostats are manufactured to the highest specifications by a specialist provider of thermostatic units, and only for the *Prestige Parts*® range. UE36600-78-X is geometrically identical to the OE thermostat and features the same valve in terms of diameter and shape. However, modern production techniques have been used to improve performance from that found in the original design, most particularly by achieving more consistent and reliable performance over the lifetime of the thermostat, as well as by using modern testing equipment to control product quality and consistency. The *Prestige Parts*® thermostat features the original lead safety plugs, and the thermostatic valve is of brass construction with a steel pin, to overcome the problem of chemical galling of the thermostatic valve exhibited in some early original designs, caused by both components being constructed of the same material.

Thermostatic performance is critical to managing engine temperature. Each *Prestige Parts*® thermostat is individually tested before being released for sale. Two measures are critical to thermostat performance:

**STO** (Start Temperature Opening, i.e. the temperature at which the thermostat begins to open)

**MS** (Minimum Stroke, i.e. the distance the thermostat should open by a certain temperature)

- For UE36600-X the **STO** is 78°C +/- 3°C.
- **MS** is 8.0 mm minimum at 92°C.

Other technical data is as follows:

- When the thermostat has achieved a stroke of 8.0+ mm, **coolant flow** is 261 litres/minute.
- **Average decrease in pressure** within the system = 7.3 p.s.i. at full opening (as per original equipment, when operating at optimum performance).

The original thermostat design and execution suffered from decline in performance over a relatively small number of cycles, mainly due to the technology available at the time. In practice, this meant that the thermostatic stroke (the amount the thermostat opens) would begin to decline after a few hundred cycles. This is evidenced in the relatively frequent replacement of thermostats in the Rolls-Royce and Bentley service schedules. In order to combat this, an increased stroke was incorporated in the original design as a safety feature. Modern designs incorporate a slightly lower thermostatic stroke, which is compensated for by robust and accurate STO and MS performance over time, and in testing superior to the OE thermostat. This is accomplished through incorporation of superior wax within the valve mechanism, and by improved sealing design around the wax pellet, which promotes greater longevity. In short, reproducing a greater stroke is rendered redundant because the thermostat unit is manufactured using methods that promote the maintenance of optimum stroke throughout the working life of the thermostat.