

## Fitting a water temperature gauge

I recently obtained a 'new old stock' capillary type temperature gauge and decided to fit it to my A7 Ruby.

There are several ways of fixing such a gauge to ensure the 'sender bulb' is surrounded by coolant and the most obvious options are either to incorporate a commercially available housing into the top radiator hose or turn-up an adapter bush to fit directly into the upper radiator tank. Having a friend who owns a lathe and likes a challenge - I opted for the latter. It was also cheaper of course!

The first task was to measure the male thread on the sender's captive ferrule and also the diameter of the sender itself. The thread turned-out to be 0.656" dia by 19 tpi (3/8" BSP) and the sender needed a 21/64" dia hole.



So, then, it was simple task of turning-up an adapter bush (from 1" AF brass hexagon) to accept the sender and include a male threaded spigot to pass through a 1/2" hole in the tank wall. The bush was secured with a fibre washer either side of the tank

wall and secured with a nut on the inside. The protruding spigot was threaded 1/2" x 26tpi (but almost any 1/2" thread would do) and counter-bored a little way to admit coolant to as much of the bulb surface as possible. The only critical longitudinal dimensions of the bush were to

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- Provide sufficient depth of thread to properly secure the loose ferrule whilst ensuring that it was shallow enough to ensure satisfactory compression of the small O-ring seal without the ferrule hexagon 'bottoming' on the bush
- Have a long enough ½" spigot to provide full engagement of the inner securing nut
- Make sure that the counter-bore, left sufficient material for the small O-ring housing to be secure

The hole in the tank was positioned reasonably low down to ensure the sender would be covered with coolant and adjacent to the filler cap aperture, so that the inner securing nut could be reached for securing with a ring spanner whilst tightening the adapter.

After cutting and cleaning-up the hole in the tank, the bush was secured in position with a little silicone gasket sealant on both sides of the outer fibre washer (the left hand one in the above photo).

The gauge was mounted on the dashboard where it could easily be seen and the capillary was tidily and securely routed through the engine compartment to the top of the radiator. Then, a small, well-fitting O-Ring was slid onto the sender bulb before finally assembling it into the bush and gently tightening the captive ferrule.

A very satisfying job ..... Brian Wooster