

M502: THERMAL ENVIRONMENT

STUDENT EXERCISE 3

A fitter (mechanic) is working on mobile diesel equipment (Figure 1) in the field away from the workshop. The task involves servicing the diesel engine, a process which takes about two hours, and is normally done at the start of each shift. In this case the worker commences his task at 2pm which is the hottest part of the day. Some surfaces (exhaust, engine, etc) are hot to touch and the process involves climbing and descending to gain access to components.

The work site is situated about 2 km from the workshop, which has a cool rest area. Drinking water is available in the service vehicle. The fitter is acclimatised, has attended a training session on thermal stress, is wearing a single layer long shirt and trousers and a respirator is not required.

The work rate is moderate, there is a light breeze and the WBGT has been measured at 26.9°C.

QUESTION

Using the above information describe in detail the approach you would take to evaluate the working conditions for potential heat induced illness.



Figure 1