

MECHANICAL PLANT LIFE AND MAINTENANCE

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Modern mechanical plant operation requires the "KNOW HOW" attitude by all connected with it. This knowledge or "KNOW HOW" can mean the success or failure of a project and of the plant involved. A tool in the hands of an amateur cannot be fully utilised unless its capacity and utilisation under various conditions is appreciated and operative skill applied.

With the many problems resulting from the influx of modern plant and equipment into the Department over the last few years, proper work selection, supervision, operation and maintenance are of major importance. The "KNOW HOW" attitude to these factors, therefore, becomes vital to plant life and maintenance.

It is essential to be fully conversant with the capabilities of the new equipment and the conditions under which it has to be applied.

Most specialised plant such as earth moving equipment, power saws (especially chain saws), 4 x 4 vehicles, fire pumps etc. require up to date instruction of the operator before commencement of operations. Often it is not only a question of being conversant with the maintenance and normal operation of a certain plant item, but to know from the start the technique of specialised operation for which the machine was designed. The makers instruction book usually gives a good lead, but often with more specialised equipment demonstrations by skilled operators are essential, as otherwise "teething troubles" and misuse will cut down the normal plant life to a minimum, often with results that lead to the wrong conclusions in regard to the usefulness and commercial value of the plant.

The specialised nature of forestry work to which certain machinery has to be adapted, makes a hard and fast rule very often impossible, but the usage of certain types of earth moving equipment such as graders, front end loaders etc. under tough conditions without the preliminary use of a bulldozer to achieve suitable work conditions, tends to keep maintenance costs high.

Great advances in design of modern mechanical plant have been made and with it more specialised and intricate plant components. Most makers claim that plant life has been increased, but to reap the benefit of the extended lease of life "work selection" becomes a must, to get the best out of the equipment.

Maintenance today is of a more specialised nature and falls mainly into two categories:-

1. Operator's maintenance.
2. Workshop maintenance (by specialised tradesmen)

The first can only be satisfactorily assured if checked by the second who in turn must be fully conversant with the particular machine or plant item in question, which can be relatively easily achieved through the medium of the "Workshop Manual" which most makers publish for the uniform repairs of their products. It becomes absolutely essential for the modern mechanic serviceman to be fully conversant with this Manual as the rule of the thumb cannot possibly be used today due to the specialised and intricate designs.

Field or bush maintenance should always be checked periodically by mechanical personnel and a close liaison between operator and maintenance mechanic pays dividends at all times, as it leads to longer plant life.

Another important item is preventive maintenance. All modern plant requires periodic maintenance as recommended by the makers to keep performances up and to ensure uniformity of wear. Often it becomes necessary to have this maintenance done at shorter intervals where plant works under abnormal conditions.

In conclusion it can be said that the main factors ensuring maximum plant life are -

1. Plant potential to be well assessed by Officer-in-Charge.
 2. Operator fully conversant with the handling and maintenance of plant.
 3. Good work selection for plant.
 4. Co-ordinated maintenance by operator and workshop personnel.
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