

MECHANICAL DEPARTMENT **LUBRICATION TEST (T15)**

CANDIDATE NAME: GROUP NO:

RESULT

PASS

Needs more training DATE:

ASSESSOR: *PRINT*: *SIGN*

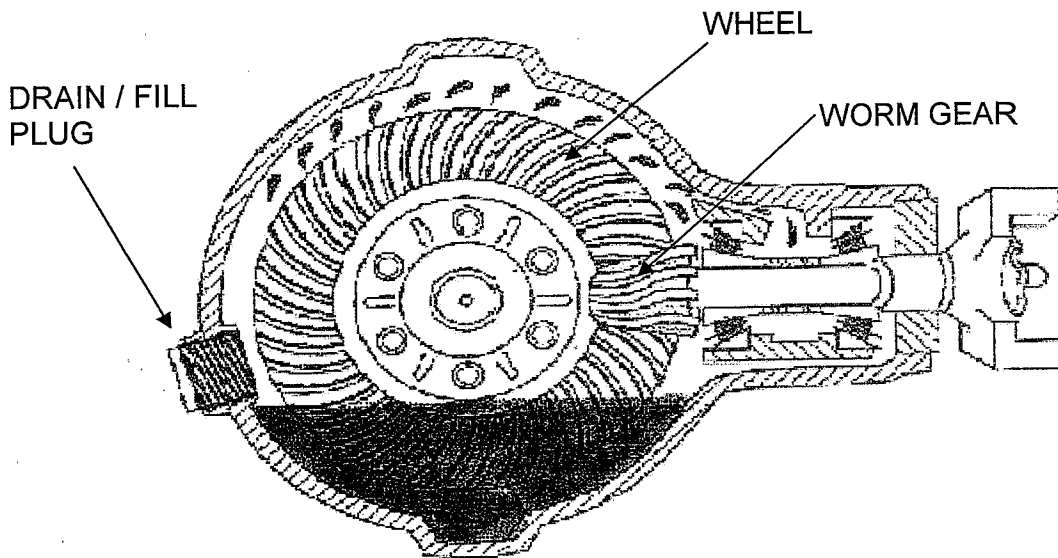
- 1 What are the three basic requirements of lubrication?
 - i) Coolant – Heat transference properties
 - ii) Anti corrosion – Rust inhibitor additives
 - iii) Anti friction – reducing wear on moving parts

- 2 State three varieties of lubrication and describe applications for each.
 - i) Coolant - Heat transference
 - ii) Oils/Greases – Application dependant
 - iii) Hydraulics – Power transmittance (Vehicle brakes/ Jack)

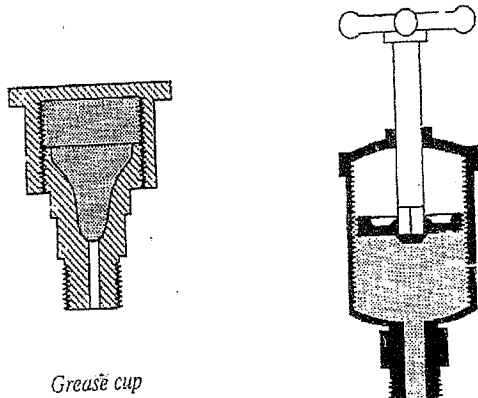
- 3 Show, by means of sketches and describe the operation of, an oil bath lubrication system involving a gearbox worm wheel and shaft

DESCRIPTION

As the wheel is partly submerged in the oil when it is turning, it pulls up oil that has adhered to it. The oil is thrown off as the wheel spins, which then splashes down onto the components.



4. Show by means of sketches and describe the operation principles of grease cups.



Every turn of the handle or cap will deliver a measured quantity of lubricant. This system must be operated on a regular (monitored and recorded) basis to ensure the moving parts do not seize.

- 5 Give an application for light oil

Vehicle Brakes / Automatic Gearboxes

- 6 Give an application for medium oil.

Vehicle Engine Sumps

- 7 Give an application for heavy oil.

Vehicle Gearboxes/Axles

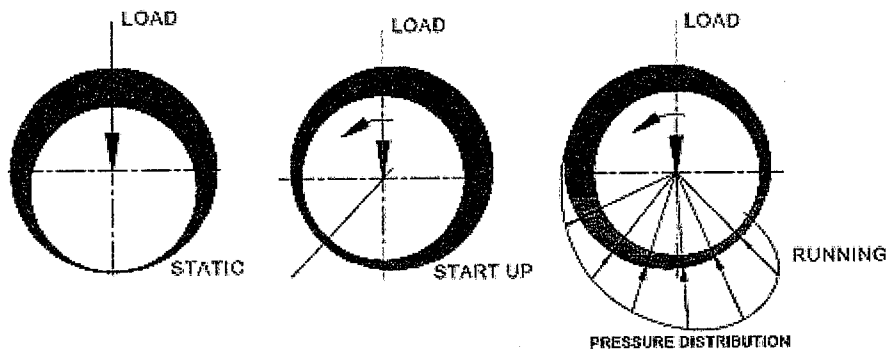
8 Give an application for graphite grease.

Valve - Gland Packing

9 What are the effects of over packing and under packing a bearing?

- a) Churning
- b) Overheating

10 with the aid of a sketch describe in detail the principles of how the hydrodynamic lubrication of a rotating shaft in a plain bearing works.



11. Draw a labeled sketch and describe the DENCO lubrication system.

