

# THE LUNGS OF ANY GEARBOX

BREATHERS AND VENTS

 **GAEYAH**



# What is a Breather and Vent



When the gearbox is running at full speed, heat is generated inside the box. The heat is absorbed by the Lube oil inside the gear unit. The heat is then transferred to the gearbox casing and air inside by way of conduction and convection. It leads to growing pressure inside the gearbox. The temperature will rise proportionally. The effects of temperature increase will adversely affect all internal components most especially the bearings and oil seals.

The breather or vent mounted on the gearbox allows the hot and humid air inside the gearbox released to atmosphere.

**Breather:** With a spring-loaded relief valve, it keeps a constant pressure inside the gearbox. Excess pressure gets released to atmosphere.

**Vents:** Simply does the job of releasing the hot air move out of the gear box.



# Why Breather or Vent ?



If the heat generated during running of gear box is not vented out the temperature of the Lube oil will continue to increase leading to its property loss like viscosity, carbonization.

Finally, the lube oil cannot hold the load at the contact point of gear mesh leading to metal contact of gears resulting in the pitting of gears.

Same phenomenon occurs inside the bearings. After all, the load on the gears is transferred to the casing through bearings on the shaft. When lube oil loss its property, the rollers touch the races and scratches occur on the rollers and races. Eventually more noise and vibration leading to the failure of the bearings and gears.



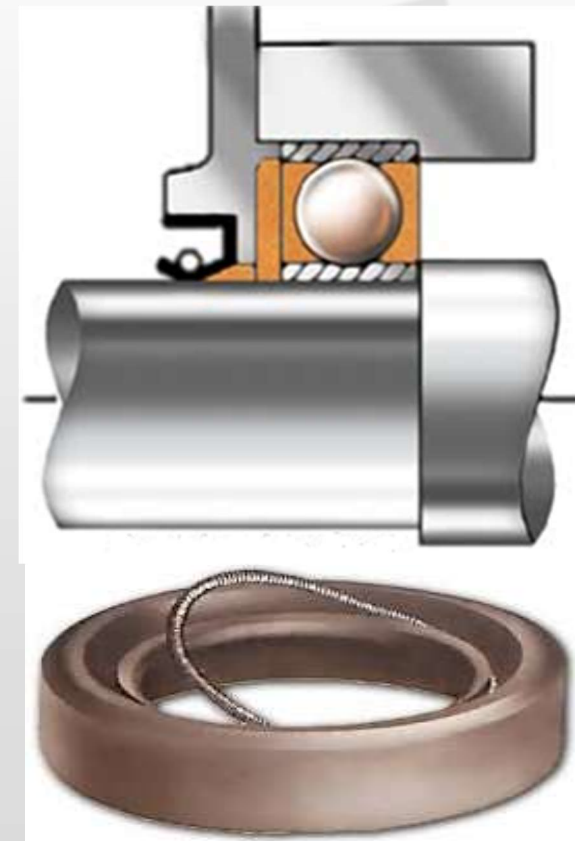
# Why Breather or Vent ?



If the heat generated during running of gear box is not vented out the temperature of the Lube oil will continue to increase; leading to expansion of air inside the gear unit and thereby increasing the pressure within the gear unit.

When the pressure increases inside the gear unit the spring fitted (inside the oil seal) the oil seal lip cannot hold the excess pressure and its released through the seal leading to oil leakage from the seal. First it starts with high-speed seal and later on to slow speed seal.

When the oil leaks or seeps through the seal over a period of time the gear unit run dry leading to complete internal fail due oil starvation.





You want your gearbox  
to work long

Use & Clean the  
Breather or Vent at  
regular interval

for it's the lung of your  
gearbox.

In the Interest of customers By



[www.gaeyah.com](http://www.gaeyah.com) | [sales@gaeyah.com](mailto:sales@gaeyah.com)



Gaeyah Supplies Breather plugs with each gearbox inside a pouch. Remove the dummy plug (fitted at the topmost point of the gearbox) replace it with the breather plug. For more information contact gaeyah

