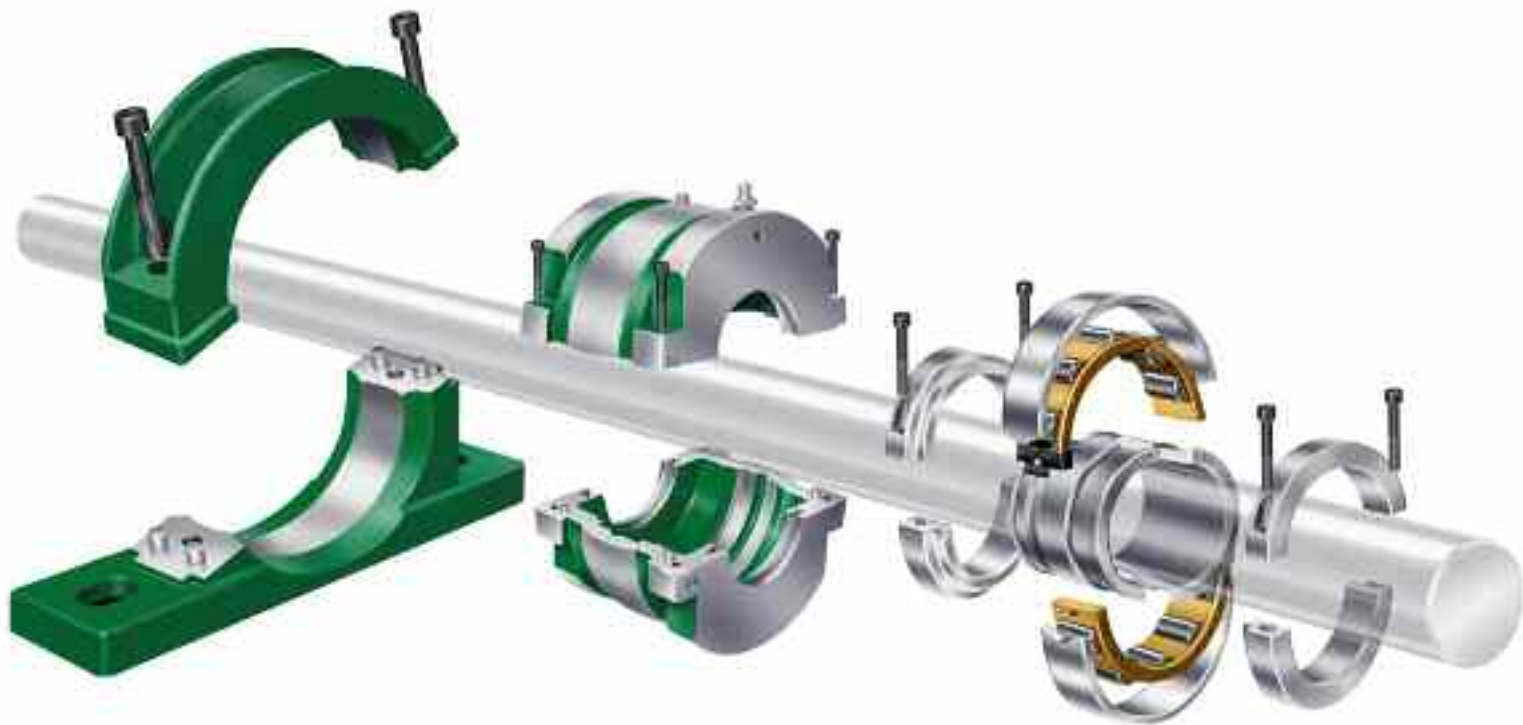# DON'T SHOOT THE MESSENGER!!!

Bearings are effectively the messenger of rotating equipment in that they support the load rotating. Often there is a problem with the rotating load which impacts on the bearing, these problems will be reflected in heat and or increased vibration and may be indicated or diagnosed by observing abnormal wear patterns.

If we consider what is to be expected of a bearing, the bearing should have been selected for a finite life of say 100 000 hours using ISO formulae, thus when a bearing does not achieve this life questions should be asked as follows:

1. **Has the load and speed conditions changed?**
2. **Is the shaft and or housing damaged?**
3. **Was the bearing fitted correctly?**
4. **Is the correct lubrication being used in the correct quantities?**
5. **Is the Alignment correct?**
6. **Is the balancing correct? (where applicable)**
7. **Is the bearing housing/support correctly shimmed for even load distribution?**
8. **Is the bearing fitted from a reputable supplier?**

It should be noted that about 80% of bearings fail before reaching their design life mainly due to the points above. If a bearing is showings signs of distress the above problems should be investigated.

A Split Roller Bearing (SRB) unlike Plummer blocks which it replaces can be inspected in situ in a very short time (less than an hour). By examining the running surfaces of the bearing a number of the above problems can be identified and rectified ensuring the bearing reaches its design life. We at OE Bearings have been called on many times to inspect SRB bearings we have supplied by end users under the misconception that there is a bearing problem. From our experience we often find that the root cause is either; out of balance loads, misalignment and shims, damaged housing and shaft, poor or incorrect lubrication to name but a few.

In any situation where a bearing appears to be failing before its design life, it would be sound engineering practice to investigate the possible root causes elsewhere in the system rather than making the bearing itself the first port of call. Bearings can tell the engineer a great deal about how the entire application is performing. All you need to do is listen.