

The role of the unit aircraft mechanic is becoming more and more a scientific one, with the publication of TB 55-6650-300-15 (9 Jun 66) backed up by AR 750-13 (5 Dec 66) on spectrometric oil analysis.

Like a medic, you can now take specimens when your bird is registered in the oil sampling program. 'Course, this sampling is based on the fact that metal wears and kicks off microscopic particles that can't be seen, felt between the fingers or trapped by filters and chip detectors.

Since the maximum amount of normal wear for each metal component in a system is known, this "threshold limit" of metal contamination can be detected by a laboratory spectrograph or spectrophotometer.

So, any high amount of iron, silver, chromium, aluminum, copper, tin, and magnesium will alert you to the fact that an engine, transmission or gear box is about to fold up.