

NEW OIL FOR OLD CARS

The Last Word

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Admittedly, the sub-title is a bit presumptuous as oils are always changing to meet current needs. However, the concern of collector car owners regarding changes in oil formulations is a bit overblown. Misinformation abounds causing confusion and needless worry for most collector car owners.

So, I will attempt to provide some information that can guide car owners in the choice of oil for their collector cars. The prime controlling factors are how the collector car is used and its age. First, answer these questions:

- ∞ Do you race your collector car?
- ∞ Do you drive it extensively at high speed under desert or similar conditions that stress engine components?
- ∞ Was your car manufactured before the mid-1950s?
- ∞ Have you had your camshaft reground or flat surface lifters replaced?

If you answered "no" to the foregoing questions, then you can safely use any current high quality oil that meets API and ILSAC criteria (look for the "donut" and "starburst" on the oil can). Do not buy cheap, bargain oil! Oil meeting these specifications has been tested in engines employing flat tappet cams and overhead cams with slider finger followers. Contrary to some, the latest specification oil, SN, still contains zinc

and phosphorous, albeit at smaller concentrations than 10 or more years ago. Caution – tests long ago proved that more than 0.20% phosphorous resulted in camshaft spalling; The old adage is "some us good, more is better" does not apply.

In the mid-1950s, (the exact time each manufacturer changed is a little different) engines began to experience galling of the camshaft and lifter surfaces. Although oil formulations were altered, the principal fix to this problem was surface hardening of the camshaft and lifter surfaces. Surface hardening affects only the top 0.005 to 0.01 inches. Engines with properly surface-hardened camshafts and lifters resist galling as long as lubrication exists.

Replacement lifters and reground camshafts may or may not be surface hardened. It doesn't take much refinishing to remove the hardened surface. New camshafts and lifters supplied by such well known names as Crane, CompCams, Lunati, etc. are surface hardened. For others, it pays to check if the wear surfaces have been surface hardened.

If you have a car from the mid 1950s and before and do not drive it extensively, the latest oils will work just fine provided they are changed at least once each year (the best time is in the fall before the winter lay-up). However, if it is driven more extensively than is

typical for many collector cars (500 to 1,000 miles in mostly short trips), then you should:

- ∞ Use some of the boutique oils that have come to the market in the last couple of years – such as, Brad-Penn, Quaker State's *Defy*, Classic Car Club Oil, Royal Purple, Joe Gibbs Racing, etc. – that have higher (higher than 'SN' oils) zinc and phosphorous concentrations;
- ∞ Add a zinc/phosphorous supplement, like GM's EOS, to

the current "SN" oils (1 oz of EOS per quart); or

- ∞ Use diesel engine oil classified CI-4 HD

Summary

Given the limited use that most collector cars experience, high quality modern oil will adequately protect the car's engine. For those that extensively use cars pre-dating the mid-1950s, there are now many oils available that offer increased levels of zinc and phosphorous.