

For the operation of motor vehicles and engines, only blended oils are approved. These lubricants are made from selected base oils (on a mineral, partially or fully synthetic basis) by adding oil-soluble chemical additions (additives) and therefore have, in addition to a high lubricating effect, all the characteristics which a good lubricant is expected to have, such as protection against wear, protection against corrosion, pressure absorption capacity, dispersion capacity and washing effect, resistance to aging, foam prevention, cold-flow capacity and many others.

During the production of lubricants, the formulation, concentration and combination of additives must be adapted to each other and to the base oil in such a manner that

However, motorists are always offered additives which are said to improve the effectiveness of the tested, conventional lubricants approved by us. For better differentiation, we refer to such additives as **specific additives**. These specific additives may be oil-soluble or non-soluble in oil.

After the composition of the lubricants approved by us has been established on a basis of extensive research and tests, it is by no means up to the consumer to change the character of such lubricants later on. This, however, would be done by the addition of specific additives. These additives must be adapted to each other and to the base oil in such a manner that

Practical experience has shown that the consumer is rarely able to recognize and evaluate a specific additive from personal experience, both with regard to its effect and whether the additive will partially or completely cancel given qualities of the lubricant.

Straight (non-blended) oils can be improved by specific additives. But since we exclusively approve and recommend blended lubricants, there is **not the slightest reason for adding specific additives**.

It is therefore an obvious conclusion that we do not approve the use of specific additives for our vehicles and engines, since they will not provide any improvement during operation and will only cause unnecessary additional cost.

Specific additives not soluble in oil, so-called solid lubricants, are mainly products on a molybdenum disulfide or graphite base. The use of such specific additives in engines

The check as to whether a specific additive that is not soluble in oil meets these demands is not easily done. Controlled road tests are necessary, but we do not run such tests. As we see no necessity for adding specific additives that are not soluble in oil, and the possibility of confusion can never be excluded, we recommend not to use specific additives insoluble in oil even in engines without turbocharger and without catalytic converter.

But we definitely do **not approve** of the use of specific additives which are not soluble in oil in certain components, particularly in automatic transmissions, synchromesh transmissions and limited-slip differentials. These components establish positive connections which will remain effective only if the frictional value is not changed by the addition of some friction reducer or other (molybdenum disulfide or graphite).

The oils approved by us for the rear axle and the steering system meet all pertinent demands, so that any addition of specific additives for these components is not required.

Specific additives on a polytetrafluoroethylene (PTFE) basis which, according to the manufacturer, are expected to form layers on sliding contact surfaces, are also

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cted by us, since the possibility of damage cannot be excluded.

The application of specific additives is always at the risk of the operator of the vehicle, since their use may impair the warranty issued both by the manufacturer of the vehicle and the supplier of the lubricant.

The use of specific additives should never result in an extension of the specified oil change intervals or altering of other specifications.