

A better understanding of motor oil

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MILWAUKEE, Wisc. — Today's high-output turbocharged diesel engines require proper care of their lubrication system if they are to deliver years of satisfactory performance. Let's examine the functions and importance of today's motor oil.

What is the purpose of a motor oil? If you answered "to lubricate" you are only partially correct. Motor oils have four major functions:

1. Clean - The motor oil must keep internal engine parts free from carbon and varnish that may accelerate wear due to increased friction or heat.

2. Cool - Motor oil acts as coolant for all parts that it comes in contact with. Motor oil normally runs around 210°F. This cooling action helps control expansion of engine parts.

3. Lubricate - Yes, the motor oil must also act as a high quality lubricant.

4. Seal - In addition to the three items above, the motor oil helps seal seals by allowing the seals to retain a certain quantity of oil that keeps remaining oil from leaking out.

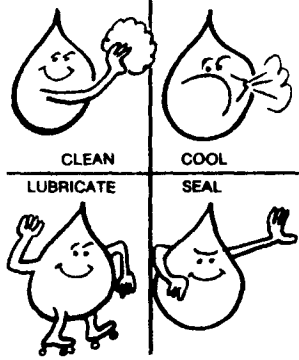
Today's motor oils are available in various grades and viscosities. Take, for example, the two cans of oil shown in "Oil Can 1" and "Oil Can 2."

Let's break down the terms on oil can No. 1.

Item
S.A.E.
30
A.P.I.
CD

Description

Society of Automotive Engineers; Viscosity of thickness at 212°F.; American Petroleum



Institute; Oil designed for high output turbo-charged diesel engines. and on can No. 2

Item
15W
40

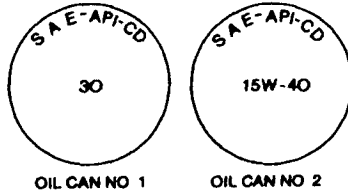
Description

Viscosity of the oil measured at 0°F. in sable universal seconds and computer from the 0° scale. Viscosity at 212°F computer from the 212° scale Viscosity at 212°F computer from the 212° scale.

Now let's compare the two motor oils.

Do we know what the viscosity of oil No. 1 is at 0°? Not really. In the case of oil No. 2 we know that at 0° the oil flows or acts as a 15W and at 212° it acts as a 40 grade. We must remember that the W scale or the first designation of the multi-vis oil is taken at 0° while the second rating is derived at 212°F.

Many people think that a multi-vis oil such as a 15W-40 actually gets thicker as it heats up. Not true. The oil will become less viscous or thins out as temperature rises. All multi-vis ratings have done for us allowing a measurement of the motor oil both when it is cold drinking and starting capabilities and warm



Increased oil change intervals can be achieved through the use of an oil analysis program where the oil is spectrographically analyzed for metallic contaminations. Many larger fleet oil suppliers offer this service at a nominal fee.

In summary, we must

remember that engine oil does many things other than just lubricate. With the use of a good quality CD rated oil of the viscosity that best fits a user's climate and implementing regular oil and filter changes, an engine should offer years of satisfactory performance.

W. corn rootworm found in Md.


ANNAPOLIS — A potentially important insect affecting corn has been detected for the first time in Maryland in 1984. The western corn rootworm (WCR), a one-inch "beetle", was recovered in specialized traps and represents a new State record for this pest.

A network of traps baited with WCR female sex attractant was set up and maintained through a cooperative program involving the University of Maryland, Maryland Department of Agriculture, and USDA, APHIS. More than 100 traps were placed within 16 counties. WCR adults were recovered in the following counties: Allegany, Anne Arundel, Baltimore, Carroll, Frederick, Garrett, Harford, Howard, Kent, Montgomery, Prince Georges, Queen Anne and Washington.

WCR is a serious pest of corn in

the Midwestern U.S. It causes an annual yield loss in excess of 5 percent. In addition over half of the corn crop is treated with insecticides to control this pest. Damage on corn by WCR is similar to that of other rootworms. The immature stages feed on corn roots causing "goosenecking", lodging and stressed plants.

In recent years this pest has been expanding its eastern range; moving into Ohio and Pennsylvania. Its impact on Maryland corn production is, at present, unclear. WCR has shown increasing resistance to soil insecticides in the Midwest. Rainfall and soil surface texture influence its numbers within an area. There are indications that WCR may pose a more serious risk in the heavier soils in Maryland. Detection surveys will be continued Statewide in 1985.



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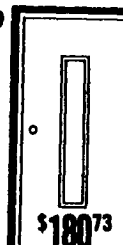
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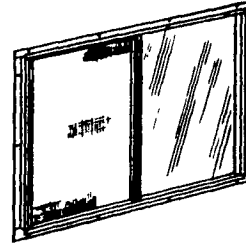
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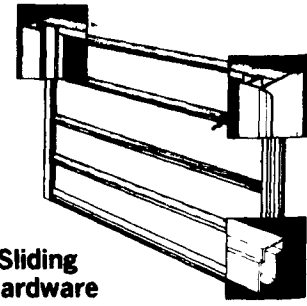
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