

# The Yellow Bucket

BY THOMAS F. GLENN

Many in our industry call it the yellow bucket. This is a generic term for tractor hydraulic fluid, a unique multifunctional lubricant primarily used in farm and industrial tractors. In short, it's a hydraulic fluid, transmission fluid and gear oil all in one, with U.S. demand estimated at 63 million gallons and valued at roughly \$360 million in 2010. And while the term "yellow bucket" makes it all sound the same, it's anything but.

Numerous specifications define the performance of THF, and most are OEM specific. In fact, it's not unusual for a yellow bucket's label to list more than 25 specifications from as many as 14 OEMs, including Massey Ferguson, Allis-Chalmers, Case, Kubota, Caterpillar, Duetz, Dresser, New Holland and others.

These labels sporting well-known OEM brands and numerous specifications might look impressive,

but in many cases they can be deceiving and misleading, since some of the citations are often obsolete. As a result, farmers and others may pay less per gallon, but could end up paying significantly more in equipment repairs if they buy their THF without reading and understanding the label.

Take for example the many THFs labeled as satisfying John Deere's JD-303 and JDM-20A specifications and Quatrol brand requirements. Deere dropped the JD-303 spec in the 1970s because it was based on sperm whale oil, which is illegal now to use

as a lubricant. JDM-20A has been defunct since the early 1990s; it was superseded by JDM-20C. And listing "Quatrol" on labels can also be misleading since it was discontinued at the same time JDM-20A was deemed defunct. Deere has not monitored the quality of THF or claims relating to its specifications or brand names since the early 1990s, and this unfortunately has resulted in a free-for-all in the use of Deere nomenclature on labels — and in how products are formulated.

Absent any policing, some blenders reportedly now take the additive package designed to meet JDM-20C and use it at a lower treat rate to make fluids they claim meet JDM-20A (the defunct spec). Since JDM-20C replaced the older JDM-20A specification, they seem to have surmised that they can simply down-treat with the JDM-20C package and hit the mark. These oils are then sold to unsuspecting farmers as a THF meeting the needs of older equipment. But according to those in the know, this blending logic is flawed.

What some blenders apparently do not understand (or choose to ignore) is that additive manufacturers did not have to change their additive packages when the specification changed from JDM-20A to JDM-20C. When Deere upgraded to JDM-20C, its primary aim was to capture the requirements of the Allison C-4 specification; it did this by adding an oxidation and seal test for the formulated lubricant. All of the other tests carried over from JDM-20A. As a result, THF additive packages met the new specification without reformulation, at the same treat rates. Thus, a down-treat of the



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JDM-20C packages likely yields a fluid that flunks the defunct JDM-20A performance requirements.

Others in the industry are more direct about their concerns with down-treating. Rather than an innocent error born from blenders aiming to meet the needs of older tractors, they say down-treating is a deliberate attempt by some to cut costs and capture sales on price. And blenders get away with it because no one is looking and few seem to care.

Even more worrisome, some see down-treating as just the tip of the THF iceberg. They point to the use of very low quality base oils (even line wash) to blend products that in some cases are not even close to meeting the hot- or cold-temperature viscosity limits for these fluids. As a result, farmers using these THFs may be buying themselves cold-flow problems (starting, starvation, etc.) and/or hot operation problems (high pump leakage, excessive gear wear and others). In addition, their oxidation resistance may be very poor, and this could lead to deposits, sludging, oil thickening, shortened service intervals and reduced equipment life.

Another important issue that speaks to the depth and breadth of the problem can be seen by taking a closer look at the wording on THF labels. Many fluids on the market don't even say the products meet Deere, Case and other OEM specifications. Instead, they use such phrases as "recommended for," "commonly used," "typically used," or "can be used where the following recommendations are made." Sound familiar?

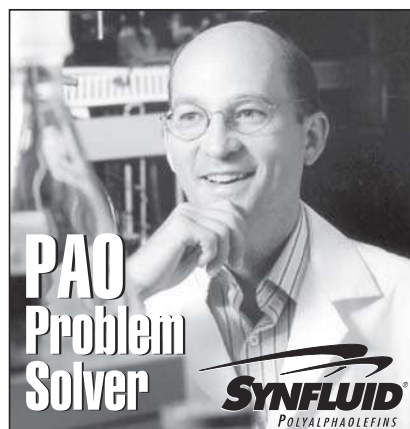
There is little argument from Deere and others that down-treating, use of

low-quality base oils, and weasel-wording on labels is going on. Furthermore, there continues to be a market for these products — and little wonder why. The THFs in question are priced well below legitimate products. As such, if marketers refuse to play the price game, they are boxed out of a significant volume of business. And they are not the only ones. Dealers also sell this low-price/low-quality juice in an effort to meet the needs of their price-sensitive customers. And when the dealers themselves are selling it, it's tough to convince farmers that a cut-rate fluid may not meet specifications and could cost them much more in the long run.

With that said, one has to ask, "Is it too late to educate consumers and stop the tumbling of quality in THF?" And beyond that, is there something we can learn from the THF mess and apply to other products left on the street with orphaned specs, like ATF? ■



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with Ken Hope, Ph.D.

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Low Temperature	E	G	E	G
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