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January 21, 2020

By E-Mail
William J. Striejewske, Ph.D
Consumer Equitability Division
Nevada Department of Agriculture
405 South 21st Street
Sparks, Nevada 89431

Re: FALS Meeting
Item Block 2 (B2) Tractor Hydraulic Fluid

Dear Bill:

This letter is submitted on behalf of the Independent Lubricant Manufacturers Association ("ILMA") to explain further the Association's proposed amendments to the Tractor Hydraulic Fluid ("THF") provisions that were added to Handbook 130, effective January 1, 2020. ILMA's proposal (Block 2) will be discussed by FALS and the Laws & Regulations Committee at the NCWM Interim Meeting. ILMA requests that FALS recommend to the L&R Committee that these proposed amendments be advanced to the NCWM as a voting item.

Background

The THF provisions in Handbook 130 were considered and adopted by the NCWM last year on a fast-track basis. While ILMA fully supported the proposal submitted by Missouri's Ron Hayes and Lubrizol's Joy Black, the Association at the time suggested several edits. ILMA presented those changes at last July's FALS meeting in Milwaukee. At that session, the sponsors of the THF proposal were reluctant to accept any modifications to the THF language from ILMA or others, concerned that the item would remain as a developing, rather than as a voting, item. Mr. Hayes stated at the time that anyone with amendments should go through the Form 15 process after adoption of the item by NCWM.

ILMA did just that. The Association timely submitted Form 15 with its proposed edits last August. One issue that was identified during the consideration of ILMA's submission by the four regional associations last fall was that the Association's proposed edits were redlined against the THF proposal as it was forwarded by the L&R Committee to the full NCWM last July, as the publication version of the provisions as they appear in the 2020 edition of Handbook 130 was not available last August. While three of the four regional associations recommended withdrawal of ILMA's proposal amendments to rectify this "version" issue, NEWMA's L&R

Committee said that the unavailability of the publication version less than a month after the NCWM Annual Meeting should not be held against ILMA.

Substantive comments, however, were made on ILMA's item at the four regional association meetings last fall. ILMA appreciated those comments, and the Association has modified its proposed amendments, even though the intent of its suggested edits remains the same as last July.

ASTM THF Specification

ILMA has two, principal edits that are set forth on **Attachment A**.[1] The first change involves an allowance in Handbook 130 for the THF specification currently being developed by an ASTM International ("ASTM") subcommittee.

The current language in Handbook 130 (*see e.g.,* Section 2.39.1 in MOS) says that a THF "shall meet at least one current and/or verifiable original equipment manufacturer's specification for respective tractors." A list of current and verifiable OEM specifications is published and will be maintained on NCWM's website.

The intent of the ASTM effort is to create a *minimum* specification for THFs, particularly to service older tractors. An ASTM article describing the subcommittee's efforts is attached at **Attachment B**. A broad cross-section of the industry and some regulators, including Mr. Hayes and Ms. Black, are participating in the ASTM subcommittee's activities, and arguably they will have a vote on the final ASTM THF specification.

The "need" for the ASTM specification is that a large segment of the agricultural community is price sensitive to products, including THFs. The "yellow bucket" THF has been, and remains, the largest-volume SKU at many tractor supply stores. While most current OEM specifications are intended to be backward compatible to service their older tractors, the increased cost of these THFs at retail ($5.00 or more for a five-gallon bucket) over a period of time becomes a profitability issue for many farmers. At the same time, many farmers are keeping or buying older tractors and equipment. *See* **Attachment C**. While the front-facing, cautionary statement for "obsolete" THFs in Handbook 130 (*see e.g.,* Section 2.39.2.1. in MOS) is necessary, the ATSM specification will create a "floor" for the quality of THFs in the market, especially for those products with suitable-for-use claims for older tractors.[2]

If the need did not exist, ASTM likely would not be undertaking its current effort. ILMA was concerned last summer that, depending on when ASTM completed and published its specification, it could take Handbook 130 one or two years to "catch up" through the Form 15

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[1] This version is redlined against the language that appears in Handbook 130, 2020 edition.

[2] ILMA has been testing its members' THFs under a quality testing initiative since 2007. Based on this testing, the Association has a good sense of THF quality issues in the marketplace.

process. Accordingly, ILMA's suggested edit then and now is to "make room" for the ASTM specification.

ILMA's *original* Form 15 language last August made room for the ASTM THF specification by inserting "or a specification, standard or code of practice issued by a nationally-recognized association" (*see* L&R Committee agenda at page 96, lines 5-6). Comments from the four regional association meetings last fall were that ILMA's proposed addition was too vague or too broad from a regulatory perspective.

ILMA's *revised* proposal, therefore, references *only* ASTM, intending to have Handbook 130 make room solely for the ASTM THF specification under development without having to wait for one or two Form 15 cycles:

> Tractor fluids shall meet at least one current and/or verifiable original equipment manufacturer's specification **or ASTM specification** for respective tractors.

Once ASTM publishes a final THF specification, it then simply would be included with the list of current and verifiable OEM specifications published on the NCWM website:

> A list of current and verifiable **original equipment manufacturer's** Specifications **and ASTM specification** is located on the NCWM website (**www.ncwm.com**).

The foregoing, proposed edits should be non-controversial, particularly given NCWM's longstanding references to consensus-based ASTM specifications in Handbook 130.

Labeling

ILMA's second, proposed edit, then and now, goes to the Handbook 130 requirement that the cautionary statement for "obsolete" THFs be "clearly legible" (*see e.g.,* Section 2.39.2.1. of MOS). ILMA believes that "clearly legible" is subjective and open to interpretation, including in an enforcement action.

ILMA's Form 15 proposal would have added "and in a manner reasonably calculated to draw the purchaser's attention to such warning." (*See e.g.,* L&R page 96, line 31). Attendees at the four regional association meetings, however, felt ILMA's proposed language was equally subjective and open to interpretation as "clearly legible."

Following the four regional association meetings, ILMA informally surveyed a number of its members who manufacture THFs about specific font and type size for the now-required cautionary statement. A number of ILMA members reported that they rely on "hazardous

substances" regulations promulgated by the Consumer Product Safety Commission, specifically the labeling requirements found at 16 C.F.R. §1500.121 for products sold at retail to consumers.

Accordingly, ILMA revised proposal references the type-size requirements at 16 C.F.R. §1500.121(c)(2)(i) and (ii) (*see* **Attachment D**) for those labeling provisions in Handbook 130 for THF containers, including bottles, cans, multi-quart or liter containers, pails, kegs, drums, and intermediate bulk containers ("IBCs"):

> [A]ny obsolete equipment manufacturer specifications should be clearly Identified as "obsolete" and accompanied by the following warning on the front package label in **conspicuous and** clearly legible font size and color **in accordance with 16 C.F.R. §1500.121(c)(2)(i) and (ii)**.

As shown above, ILMA also proposes inserting the word "conspicuous" before "clearly legible" everywhere it appears in THF provisions in Handbook 130. A clearly legible cautionary statement could be "buried" in bills of lading, invoices or other documentation, as well as on labels, so adding the conspicuous requirement would address ILMA's concern that the cautionary statement draw the purchaser's attention.

Conclusion

ILMA appreciates the consideration of its proposed edits by FALS. The Association believes its suggested changes are non-controversial, improve the THF provisions in Handbook 130, and provide additional protections for consumers and industry participants. ILMA hopes that FALS members agree and will recommend advancing Block 2 as a voting item at the Interim Meeting.

Sincerely,

Jeffrey L. Leiter

Attachments (4)

cc: Ethan Bogren
Ron Hayes
Joy Black
Holly Alfano
Matthew Levetown

APPENDIX A

ILMA Revised Proposal (01/21/2020)

ITEM BLOCK 2 (B2) TRACTOR HYDRAULIC FLUID

B2: MOS-20.1 2.39. Tractor Hydraulic Fluid
B2: FLR-20.1 2.22. Tractor Hydraulic Fluid
B2: FLR-20.1 3.17. Tractor Hydraulic Fluid

Source:
Independent Lubricant Manufacturers Association (ILMA)

Purpose:
Amend recently adopted Handbook 130 provisions on tractor hydraulic fluids to include specification being developed by ASTM. Improve labeling for required cautionary statement and distinguish hydraulic fluids not intended for use in tractor central sump.

B2: MOS-20.1 2.39 Tractor Hydraulic Fluid

Item Under Consideration:
Amend NIST Handbook 130 Uniform Regulation for the Method of Sale of Commodities as follows:

2.39. Tractor Hydraulic Fluid.

2.39.1. Products for Use in Lubricating Tractors. – Tractor hydraulic fluids shall meet at least one current and/or verifiable original equipment manufacturer's specifications **or ASTM specification** for respective tractors. A specification is deemed verifiable if all necessary bench and laboratory tests are available to verify the fluid's ability to pass those requirements set out by the original equipment manufacturer. A list of current and verifiable **original equipment manufacturer's** ~~**specifications**~~ **and ASTM specifications** is located on the NCWM website (**www.ncwm.com**). Where a fluid can be licensed against an original equipment manufacturer's specification, evidence of current licensing by the marketer is acceptable documentation of performance against the specification. In the absence of a license from the original equipment manufacturer, adherence to the original equipment manufacturer's specifications **or ASTM specification** shall be assessed after testing per relevant methods available to the lubricants industry and the regulatory agency. Suitability for use claims shall be based upon appropriate field, bench, and/or rig testing. Any manufacturer of a tractor hydraulic fluid making suitable for use claims shall provide, upon request by a duly authorized representative of the Director, credible documentation of such claims. If the product performance claims published by a blender and/or marketer are based on the claim(s) of one or more additive suppliers, documentation of the claims shall be provided upon request to a duly authorized representative of the Director. Supporting data shall, upon request, be supplied directly to the Director's office by the additive supplier(s).

2.39.1.1. Conformance. – Conformance of a fluid per Section 2.39.1. Products for Use in Lubricating Tractors does not absolve the obligations of a fluid licensee with respect to the licensing original equipment manufacturer or the original equipment manufacturer's licensing agent(s), where relevant.

2.39.1.2. Tractor Hydraulic Fluid Additives. – Any material offered for sale or sold as an additive to tractor hydraulic fluids shall be compatible with the tractor hydraulic fluid to which it is added and shall meet all performance claims as stated on the label or published on any website referenced by the label. Any manufacturer of any such product sold shall provide, upon request by a duly authorized representative of the Director, documentation of any claims made on their product label or published on any website referenced by the label.

2.39.2. Labeling and Identification of Tractor Hydraulic Fluid. – Tractor hydraulic fluids shall be labeled or identified as described below.

2.39.2.1. Container Labeling. – The label on a container of tractor hydraulic fluid shall not contain any information that is false or misleading. Containers include bottles, cans, multi-quart or liter containers, pails, kegs, drums, and intermediate bulk containers (IBCs). In addition, each container of tractor hydraulic fluid shall be labeled with the following:

(a) the brand name;

(b) the name and place of business of the manufacturer, packer, seller, or distributor;

(c) the words "Tractor Hydraulic Fluid," which may include words such as "Hydraulic Fluid for Agricultural Applications" or "Universal Tractor Transmission Oil";

(d) the primary claim or claims met by the fluid and reference to where any supplemental claims may be viewed (e.g., website reference). Performance claims are those set by original equipment manufacturers **or ASTM specification**;

(e) any obsolete equipment manufacturer specifications should be clearly identified as "obsolete" and accompanied by the following warning on the front package label in **conspicuous and** clearly legible font size and color **in accordance with 16 C.F.R. §1500.121(c)(2)(i) and (ii)**:

Caution: Some of the specifications are no longer deemed active by the original equipment manufacturer. Significant harm to the transmission, hydraulic system, seals, final drive or axles is possible when using this product in applications in which it is not intended.

The above warning is not required if the fluid claims to meet current original equipment manufacturer's specifications **or ASTM specification** and refers to thereby preceding specifications~~.~~**; and**

(f) an accurate statement of the quantity of the contents in terms of liquid measure.

2.39.2.2. Identification on Documentation. – Tractor hydraulic fluid sold in bulk shall be identified on the manufacturer, packer, seller, or distributor invoice, bill of lading, shipping paper, or other documentation with the information listed below:

(a) the brand name;

(b) the name and place of business of the manufacturer, packer, seller, or distributor;

(c) the words "Tractor Hydraulic Fluid," which may include words such as "Hydraulic Fluid for Agricultural Applications" or "Universal Tractor Transmission Oil";

(d) the primary claim or claims met by the fluid and reference to where any supplemental claims may be viewed (e.g., website reference). Performance claims are those set by original equipment manufacturers **or ASTM specification**;

(e) any obsolete equipment manufacturer specifications should be clearly identified as "obsolete" and accompanied by the following warning on the front package label in **conspicuous and clearly** legible font size and color:

Caution: Some of the specifications are no longer deemed active by the original equipment manufacturer. Significant harm to the transmission, hydraulic system, seals, final drive or axles is possible when using in applications in which it is not intended.

The above warning is not required if the fluid claims to meet current original equipment manufacturer's specifications **or ASTM specification** and refers to thereby preceding specifications~~.~~**; and**

(f) an accurate statement of the quantity of the contents in terms of liquid measure.

2.39.2.3. Identification on Service Provider Documentation. – Tractor hydraulic fluid installed from a bulk tank at time of service shall be identified on the customer invoice with the information listed below:

(a) the brand name;

(b) the name and place of business of the service provider;

(c) the words "Tractor Hydraulic Fluid," which may include words such as "Hydraulic Fluid for Agricultural Applications" or "Universal Tractor Transmission Oil";

(d) the primary claim or claims met by the fluid and reference to where any supplemental claims may be viewed (e.g., website reference). Performance claims are those set by original equipment manufacturers **or ASTM specification**;

(e) any obsolete equipment manufacturer specifications should be clearly identified as "obsolete" and accompanied by the following warning on the front package label in **conspicuous and** clearly legible font size and color:

Caution: Some of the specifications are no longer deemed active by the original equipment manufacturer. Significant harm to the transmission, hydraulic system, seals, final drive or axles is possible when using in applications in which it is not intended.

The above warning is not required if the fluid claims to meet current original equipment manufacturer's specifications **or ASTM specification** and refers to thereby preceding specifications~~.~~**; and**

(f) an accurate statement of the quantity of the contents in terms of liquid measure.

2.39.2.4. Bulk Delivery. – When the tractor hydraulic fluid is sold in bulk, an invoice, bill of lading, shipping paper, or other documentation must accompany each delivery. This document must identify the fluid as defined in Section 2.39.2.2. Identification on Documentation.

2.39.2.5. Storage Tank Labeling. – Each storage tank of tractor hydraulic fluid shall be labeled with the following:

(a) the brand name; **and**

(b) the primary performance claim or claims met by the fluid or reference to where these claims may be viewed (for example, website reference). Performance claims are those set by original equipment manufacturers **or ASTM specification.**

2.39.3. Documentation of Claims Made Upon Product Label. – Any manufacturer, packer, or distributor of any product subject to this article and sold shall provide, upon request of duly authorized representatives of the Director, credible documentation of any claim made upon their product label, including claims made on any website referenced by said label. If the product performance claims published by a blender and/or marketer are based on the claim(s) of one or more additive suppliers, documentation of the claims shall be provided upon request to a duly authorized representative of the Director. Supporting data shall, upon request, be supplied directly to the Director's office by the additive supplier(s).

(Added 2019)**(Amended 202X)**

B2: FLR-20.1 2.22. Tractor Hydraulic Fluid
B2: FLR-20.1 3.17. Tractor Hydraulic Fluid

Item Under Consideration:
Amend NIST Handbook 130 Uniform Fuels and Automotive Lubricants Regulation as follows:

2.22. Products for Use in Lubricating Tractors. – Tractor hydraulic fluids shall meet at least one current and/or verifiable original equipment manufacturer's specifications **or ASTM specification** for respective tractors. A specification is deemed verifiable if all necessary bench and laboratory tests are available to verify the fluid's ability to pass those requirements set out by the original equipment manufacturer. A list of current and verifiable **original equipment manufacturer's** ~~**specifications**~~ **and ASTM specifications** is located on the NCWM website (**www.ncwm.com**). Where a fluid can be licensed against an original equipment manufacturer's specification, evidence of current licensing by the marketer is acceptable documentation of performance against the specification. In the absence of a license from the original equipment manufacturer, adherence to the original equipment manufacturer's specifications **or ASTM specification** shall be assessed after testing per relevant methods available to the lubricants industry and the regulatory agency. Suitability for use claims shall be based upon appropriate field, bench, and/or rig testing. Any manufacturer of a tractor hydraulic fluid making suitable for use claims shall provide, upon request by a duly authorized representative of the Director, credible documentation of such claims. If the product performance claims published by a blender and/or marketer are based on the claim(s) of one or more additive suppliers, documentation of the claims shall be provided upon request to a duly authorized representative of the Director. Supporting data shall, upon request, be supplied directly to the Director's office by the additive supplier(s).

2.22.1. Conformance. – Conformance of a fluid per Section 2.22. Products for Use in Lubricating Tractors does not absolve the obligations of a fluid licensee with respect to the licensing original equipment manufacturer or the original equipment manufacturer's licensing agent(s), where relevant.

2.22.2. Tractor Hydraulic Fluid Additives. – Any material offered for sale or sold as an additive to tractor hydraulic fluids shall be compatible with the tractor hydraulic fluid to which it is added and shall meet all performance claims as stated on the label or published on any website referenced by the label. Any manufacturer of any such product sold shall provide, upon request by a duly authorized representative of the Director, documentation of any claims made on their product label or published on any website referenced by the label.

(Added 2019) **(Amended 202X)**

3.17. Tractor Hydraulic Fluid

3.17.1. Labeling and Identification of Tractor Hydraulic Fluid. – Tractor hydraulic fluid shall be labeled or identified as described below

3.17.1.1. Container Labeling – The label on a container of tractor hydraulic fluid shall not contain any information that is false or misleading. Containers include bottles, cans, multi-quart or liter containers, pails, kegs, drums, and intermediate bulk containers (IBCs). In addition, each container of tractor hydraulic fluid shall be labeled with the following:

(a) the brand name;

(b) the name and place of business of the manufacturer, packer, seller, or distributor;

(c) the words "Tractor Hydraulic Fluid," which may include words such as "Hydraulic Fluid for Agricultural Applications" or "Universal Tractor Transmission Oil";

(d) the primary performance claim or claims met by the fluid and reference to where any supplemental claims may be viewed (e.g., website reference). Performance claims are those set by original equipment manufacturers **or ASTM specification**;

(e) any obsolete equipment manufacturer specifications should be clearly identified as "obsolete" and accompanied by the following warning on the front package label in **conspicuous and** clearly legible font size and color **in accordance with 16 C.F.R. §1500.121(c)(2)(i) and (ii)**:

Caution: Some specifications are no longer deemed active by the original equipment manufacturer. Significant harm to the transmission, hydraulic system, seals, final drive or axles is possible when using in applications in which it was not intended.

The above warning is not required if the fluid claims to meet current original equipment manufacturer's specifications **or ASTM specification** and refers to thereby preceding specifications~~.~~**; and**

(f) an accurate statement of the quantity of the contents in terms of liquid measure.

3.17.1.2. Identification on Documentation. – Tractor hydraulic fluid sold in bulk shall be identified on the manufacturer, packer, seller or distributor invoice, bill of lading, shipping paper, or other documentation with the information listed below:

(a) the brand name;

(b) the name and place of business of the manufacturer, packer, seller, or distributor;

(c) the words "Tractor Hydraulic Fluid," which may include words such as "Hydraulic Fluid for Agricultural Applications" or "Universal Tractor Transmission Oil";

(d) the primary performance claim or claims met by the fluid and reference to where any supplemental claims may be viewed (e.g., website reference). Performance claims include but are not limited to those set by original equipment manufacturers **or ASTM specification**;

(e) any obsolete equipment manufacturer standard should be clearly identified as "obsolete" and accompanied by the following warning on the front package label in **conspicuous and** clearly legible font size and color:

Caution: Some of the specifications are no longer deemed active by the original equipment manufacturer. Significant harm to the transmission, hydraulic system, seals, final drive or axles is possible when using in applications in which it is not intended.

The above warning is not required if the fluid claims to meet current original equipment manufacturer's specifications **or ASTM specification** and refers to thereby preceding specifications~~.~~**; and**

(f) an accurate statement of the quantity of the contents in terms of liquid measure.

3.17.1.3. Identification on Service Provider Documentation. – Tractor hydraulic fluid installed from a bulk tank at time of service shall be identified on the customer invoice with the information listed below:

(a) the brand name;

(b) the name and place of business of the service provider;

(c) the words "Tractor Hydraulic Fluid," which may include words such as "Hydraulic Fluid for Agricultural Applications" or "Universal Tractor Transmission Oil";

(d) the primary claim or claims met by the fluid and reference to where any supplemental claims may be viewed (e.g., website reference). Performance claims are those set by original equipment manufacturers **or ASTM specification**;

(e) any obsolete equipment manufacturer specifications should be clearly identified as "obsolete" and accompanied by the following warning on the front package label in **conspicuous and** clearly legible font size and color:

Caution: Some of the specifications are no longer deemed active by the original equipment manufacturer. Significant harm to the transmission, hydraulic system, seals, final drive or axles is possible when using in applications in which it is not intended.

The above warning is not required if the fluid claims to meet current original equipment manufacturer's specifications **or ASTM specification** and refers to thereby preceding specifications~~.~~**; and**

(f) an accurate statement of the quantity of the contents in terms of liquid measure.

3.17.1.4. Bulk Delivery. – When the tractor hydraulic fluid is sold in bulk, an invoice, bill of lading, shipping paper, or other documentation must accompany each delivery. This document must identify the fluid as defined in Section 3.17.1.1. Container Labeling.

3.17.1.5. Storage Tank Labeling. – Each storage tank of tractor hydraulic fluid shall be labeled with the following:

(a) the brand name; **and**

(b) the primary performance claim or claims met by the fluid and reference to where any supplemental claims may be viewed (e.g., website reference). Performance claims are those set by original equipment manufacturers **or ASTM specification.**

3.17.1.6. Documentation of Claims Made Upon Product Label. – Any manufacturer, packer, or distributor of any product subject to this article and sold shall provide, upon request of duly authorized representatives of the Director, credible documentation of any claim made upon their product label, including claims made on any website referenced by said label. If the product performance claims published by blender and/or marketer are based on the claim(s) of one or more additive suppliers, documentation of the claims shall be provided upon request to a duly authorized representative of the Director. Supporting data shall, upon request, be supplied directly to the Director's office by the additive supplier(s).

(Added 2019) **(Amended 202X)**

APPENDIX B

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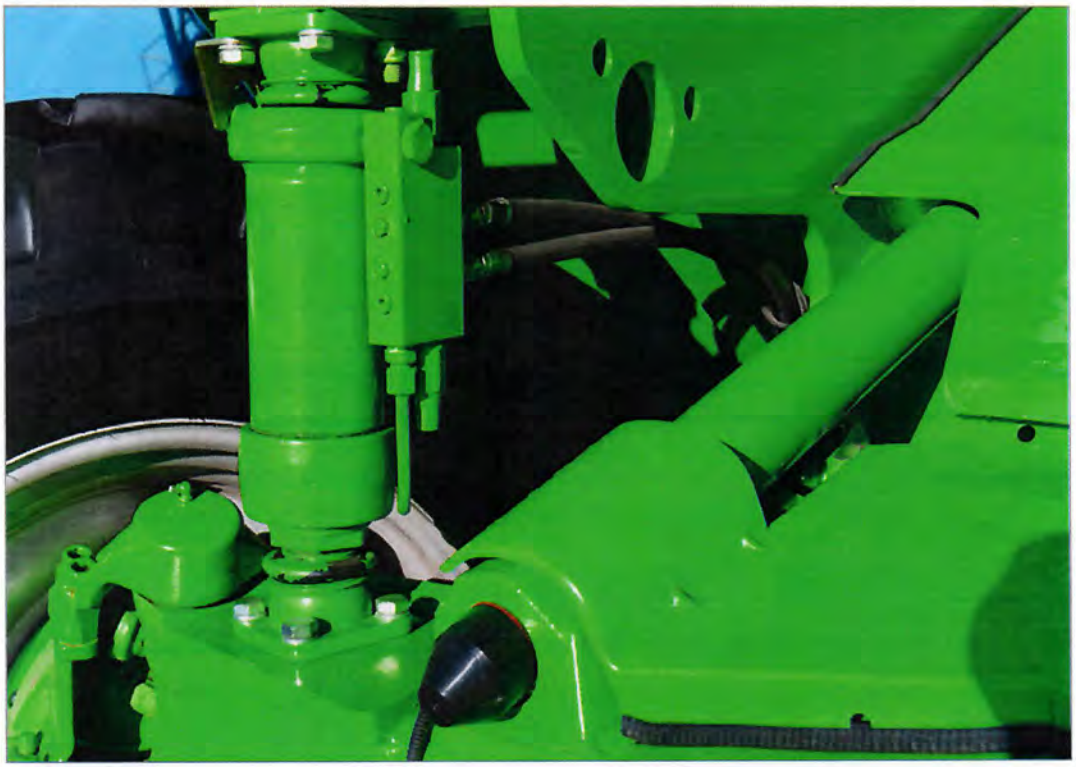
ASTM Standardization News



Hydraulic Fluid

Specification for Tractors and Equipment

A proposed standard from ASTM International's petroleum products, liquid fuels, and lubricants committee (**D02**) would set minimum performance requirements for tractor hydraulic fluids (THF). According to committee members, this specification aims to provide a verifiable level of protection for farm tractors and other equipment that uses THF.

This proposed standard (**WK68882**) was driven by both state regulators and the Independent Lubricant Manufacturers Association (ILMA). Lauren Huffman, technical services and development manager for lubricants and specialty fluids at The Dow Chemical Company, explains that "currently, a number of companies market low-quality THF, often claiming to meet an obsolete specification, that can cause serious harm to equipment."

According to Huffman, this "obsolete" specification was created for tractors manufactured between 1960 and 1974, but only 2% of tractors in use today originated from that period.

Huffman says that this new specification is long overdue. "In order to remove poor quality fluids from the marketplace and to ensure that customers purchase fluids that really work, a minimum performance specification is necessary."

The standard could prove useful to producers, regulatory bodies, original equipment manufacturers, farmers, and others, she says.

For more information on the petroleum products, liquid fuels, and lubricants committee, **watch this video**.

ASTM International welcomes participation in the development of its standards. For this standard, the committee is asking for more participation from OEM members, THF manufacturers, and suppliers of additive packages. **Become a member of ASTM**.

INDUSTRY SECTORS:

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This article appears in the September/October 2019 issue of Standardization News.

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APPENDIX C

POPULAR MECHANICS SUBSCRIBE SIGN IN

Why Farmers Still Insist on Buying Really Old Tractors

For starters, they rule.

By Caroline Delbert Jan 9, 2020

FARM IMAGES / GETTY IMAGES

- Farmers are creating more and more demand for high-quality used tractors.
- John Deere is eyeing technology like autonomous drones, but small farmers' real income just can't support these purchases.
- As long as farmers can find simpler machines that are easy to maintain and repair, they'll keep buying used tractors.

Minnesota's *Star Tribune* reports that farmers are flocking to 40-year-old tractors at auctions. The appeal is twofold: While classic tractors are cheaper to maintain, simpler to use, and *much* simpler to repair, they're still also far cheaper than comparable new tractors. Farmers are letting their money talk as they turn away from costly and cushy new models and choose older ones instead.

The *Star Tribune* mentions a recent record-setting auction where a 1979 John Deere 4640 tractor sold for $61,000. With just 826 hours on the clock—tractors log hours, not miles—out

of an expected lifetime of up to about 15,000, this is the tractor version of a car someone "only drove to church on Sunday." (Let's all, for no particular reason, revisit "Little Old Lady from Pasadena.") Still, $61,000 sounds like a lot, until you see a comparable horsepower, used, low-hours 2019 John Deere row crop tractor is listed for $141,000.

The average farm business, a category defined as farms with gross income over $350,000 or some smaller farms that meet certain criteria, makes an average of just over $90,000 in profits per year. That 2019 number is up almost 20 percent from 2018. For farmers to accumulate even the record-setting $61,000 tractor is a huge undertaking, but a used, newer tractor for the price of a well-equipped Maserati Quattroporte might as well *be* a Maserati for how feasible it is for an average farmer.

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BUSINESS

For tech-weary Midwest farmers, 40-year-old tractors now a hot commodity

Tractors built in 1980 or earlier cause bidding wars at auctions.

By Adam Belz (http://www.startribune.com/adam-belz/158965945/) Star Tribune

JANUARY 5, 2020 — 8:27PM

Kris Folland grows corn, wheat and soybeans and raises cattle on 2,000 acres near Halma in the northwest corner of Minnesota, so his operation is far from small. But when he last bought a new tractor, he opted for an old one — a 1979 John Deere 4440.

He retrofitted it with automatic steering guided by satellite, and he and his kids can use the tractor to feed cows, plant fields and run a grain auger. The best thing? The tractor cost $18,000, compared to upward of $150,000 for a new tractor. And Folland doesn't need a computer to repair it.

"This is still a really good tractor," said Folland, who owns two other tractors built before 1982.

"They cost a fraction of the price, and then the operating costs are much less because they're so much easier to fix," he said.

Track Folland, son of Kris Folland, feeds cattle at the family's farm near Halma using a 1979 John Deere 4440.

Tractors manufactured in the late 1970s and 1980s are some of the hottest items in farm auctions across the Midwest these days — and it's not because they're antiques.

Cost-conscious farmers are looking for bargains, and tractors from that era are well-built and totally functional, and aren't as complicated or expensive to repair as more recent models that run on sophisticated software.

"It's a trend that's been building. It's been interesting in the last couple years, which have been difficult for ag, to see the trend accelerate," said Greg Peterson, the founder of Machinery Pete, a farm equipment data company in Rochester with a website (https://www.machinerypete.com/) and TV show.

"There's an affinity factor if you grew up around these tractors, but it goes way beyond that," Peterson said. "These things, they're basically bulletproof. You can put 15,000 hours on it and if something breaks you can just replace it."

BigIron Auctions, a Nebraska-based dealer (https://www.bigiron.com/) that auctioned 3,300 pieces of farm equipment online in two days last month, sold 27 John Deere 4440 tractors through 2019.

The model, which Deere built between 1977 and 1982 at a factory in Waterloo, Iowa, was the most popular of the company's "Iron Horse" series of tractors, which used stronger and heavier internal components to support engines with greater horsepower. The tractors featured big, safe cabins, advancing a design first seen in the 1960s that is now standard.

A sale of one of those tractors in good condition with low hours of use — the tractors typically last for 12,000 to 15,000 hours — will start a bidding war today. A 1980 John Deere 4440 with 2,147 hours on it sold for $43,500 at a farm estate auction in Lake City (https://www.youtube.com/watch?v=cGa5NAuYpr8&t=115s) in April. A 1979 John Deere 4640 with only 826 hours on it sold for $61,000 at an auction in Bingham Lake (https://www.youtube.com/watch?v=f2VpKZGqxa0&t=307s) in August.

"Those older tractors that had good care and good maintenance, that's good property," said Mark Stock, co-founder of BigIron.

The tractors have enough horsepower to do anything most farmers need, and even at a record price like the $61,000 the tractor in Bingham Lake fetched, they're a bargain compared to what a farmer would pay for a newer tractor with similar horsepower.

The other big draw of the older tractors is their lack of complex technology. Farmers prefer to fix what they can on the spot, or take it to their mechanic and not have to spend tens of thousands of dollars.

"The newer machines, any time something breaks, you've got to have a computer to fix it," Stock said.

There are some good things about the software in newer machines, said Peterson. The dealer will get a warning if something is about to break and can contact the farmer ahead of time to nip the problem in the bud. But if something does break, the farmer is powerless, stuck in the field waiting for a service truck from the dealership to come out to their farm and charge up to $150 per hour for labor.

"That goes against the pride of ownership, plus your lifetime of skills you've built up being able to fix things," Peterson said.

The cheaper repairs for an older tractor mean their life cycle can be extended. A new motor or transmission may cost $10,000 to $15,000, and then a tractor could be good for another 10 or 15 years.

Folland has two Versatile 875s manufactured in the early 1980s in Winnipeg and bought a John Deere 4440 last year with 9,000 hours on it, expecting to get another 5,000 hours out of it before he has to make a major repair.

"An expensive repair would be $15,000 to $20,000, but you're still well below the cost of buying a new tractor that's $150,000 to $250,000. It's still a fraction of the cost," Folland said. "That's why these models are so popular. They've stood the test of time, well built, easy to fix, and it's easy to get parts."

He also said the modifications to newer diesel engines on tractors can cause mechanical problems, and the carbon footprint of an older tractor can be mitigated by using biodiesel, which is produced from soybeans grown in Minnesota and extends the life of an engine because it includes better lubricants than conventional diesel fuel.

Combine all that with nostalgia for the tractors of a farmer's youth, and 30- or 40-year-old tractors are in high demand. That's a shift from 30 years ago, Peterson said.

In 1989, 30-year-old tractors really were antiques. A 1959 tractor at that point would have sold for $2,000 or $3,000 (https://discuss.machinerypete.com/t/30-year-old-tractors-felt-like-antiques-30-years-ago-not-today/1439) and looked like a different species from the tractors in operation in the 1980s.

But tractors from the 1970s and 1980s aren't so dramatically different from tractors produced in the 2000s, other than the irksome software, and at a time when farmers are struggling financially, older tractors can make a lot of business sense.

Folland said his corn crop was better than the Minnesota average in 2019, despite the fact that he farms on the Canadian border and uses 40-year-old equipment.

"The main reason we do this is to make money," Folland said. "Older equipment is a way to reduce your cost per bushel to become more profitable."

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APPENDIX D

is required instead of any signal word are listed in § 1500.129.

(c) *Conspicuousness—type size and style.* To satisfy the requirement that cautionary labeling statements under the Act be conspicuous and legible, such statements shall conform to the following requirements:

(1) *Area of principal display panel.* The area of the principal display panel is the area of the side or surface of the immediate container, or of the side or surface of any outer container or wrapping, that bears the labeling designed to be most prominently displayed, shown, presented, or examined under conditions of retail sale. This area is not limited to the portion of the surface covered with labeling; rather, it includes the entire surface. Flanges at the tops and bottoms of cans, conical shoulders of cans, handles, and shoulders and necks of bottles and jars are excluded in measuring the area. For the purposes of determining the proper type size for cautionary labeling, the area of the principal display panel (or other panel bearing cautionary labeling, under paragraph (c)(2)(ii) of this section) is to be computed as follows:

(i) In the case of a rectangular package, where one entire side is the principal display panel, the product of the height times the width of that side shall be the area of the principal display panel.

(ii) In the case of a cylindrical or nearly cylindrical container or tube on which the principal display panel appears on the side, the area of the principal display panel shall be 40 percent of the product of the height of the container times its circumference.

(iii) In the case of any other shape of container, the area of the principal display panel shall be 40 percent of the total surface of the container, excluding those areas, such as flanges at tops and bottoms, specified in paragraph (c)(1) above. However, if such a container presents an obvious principal display panel (such as an oval or hourglass shaped area on the side of a container for dishwashing detergent), the area to be measured shall be the entire area of the obvious principal display panel.

(2) *Type-size requirements.* (i) The term *type size* refers to the height of the actual printed image of each upper case or capital letter as it appears on the label. The size of cautionary labeling shall be reasonably related to the type size of any other printing appearing on the same panel, but in any case must meet the minimum size requirements in table 1.

(ii) When an item of labeling is required to be in a specified type size, all upper case, or capital, letters must be at least equal in height to the required type size, and all other letters must be the same style as the upper case or capital letters. Unless otherwise specified in the regulations (examples appear at §§ 1500.14(b)(6), 1512.19, 1508.9, and part 1505), the type size of all cautionary statements appearing on any display panel shall comply with the specifications in table 1 when the area of the display panel is measured by the method in paragraph (c)(1) above:

TABLE I

Area of principal display panel in square inches	0–2	>2–5	>5–10	>10–15	>15–30	>30
Type size in inches *						
Signal word **	3/64	1/16	3/32	7/64	1/8	5/32
Statement of hazard	3/64	3/64	1/16	3/32	3/32	7/64
Other cautionary material ***	1/32	3/64	1/16	1/16	5/64	3/32

> means "greater than."
* minimum height of printed image of capital or upper case letters.
** including the word "poison" when required instead of a signal word by Section 3(b) of the Act (§ 1500.129).
*** size of lettering for other cautionary material is based on the area of the display panel on which such cautionary material appears.

(iii) If all of the required cautionary labeling does not appear on the principal display panel, the statement to "Read carefully other cautions on the _____ panel," or its practical equivalent, must appear in, as a minimum, the same type size as that required in table 1 for the other cautionary material which appears elsewhere on the label of a hazardous substance. The size of the cautionary labeling that does not appear on the principal display