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Submitted for recognition as an American National Standard

**(R) OIL CHANGE SYSTEM FOR QUICK SERVICE OF OFF-ROAD
SELF-PROPELLED WORK MACHINES**

Foreword—This Document has also changed to comply with the new SAE Technical Standards Board Format.

1. **Scope**—This recommended practice deals with sizes, design considerations, and practices related to evacuating and refilling by positive means any oil compartment. This practice may also be applicable to other fluid compartments and is to supplement rather than eliminate the drain plug. (Ref. ISO TC 131/4/N27)

1.1 **Purpose**—This SAE Recommended Practice is to outline those procedures and practices which govern the use of an oil change system for quick service of construction and industrial machines as defined in SAE J1116. It will allow owners of a variety of machines to standardize on the quick-disconnect coupling system of their choice.

2. **References**

2.1 **Applicable Publications**—The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J223—Symbols and Color Codes for Maintenance Instructions, Container and Filler Identification

SAE J517—Hydraulic Hose

SAE J1116—Categories of Off-Road Self-Propelled Work Machines

2.1.2 ANSI PUBLICATION—Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ISO TC 131/4/N27

3. **Definitions**

3.1 **Lubrication Van**—Mobile lubrication service facility.

3.2 **Lubrication Stand**—Stationary lubrication service facility.

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4. **Adaptability**—Draining and refilling are to be accomplished by means of quick-disconnect couplings. The lubrication van or stand shall use a female quick-disconnect socket. The male quick-disconnect nipple shall be used in the line to the fluid compartment that is to be serviced.
5. **Position**
- 5.1 The couplings should be accessible to the servicing individual standing on the ground and clearly visible from the operator's station when possible.
- 5.2 Sight gauges and level gauges, when used, should be clearly visible to the servicing individual when the compartment is being filled.
- 5.3 The coupling should be located above the recommended oil level.
6. **Protection**—The couplings should be protected from contaminants by using an easily replaceable vandal-resistant cap or cover. Protective guards should be provided if the coupling is vulnerable to external damage. The guards should not prevent removal of the coupling for repairs.
7. **Sizes**
- 7.1 Lines used to connect the sump to the male coupling should have a minimum ID of 12 mm (1/2 in) on systems with 15 L (4 gal) or less capacity and 19 mm (3/4 in) ID on systems with greater than 15 L (4 gal) capacity to minimize evacuation restrictions.
- 7.2 The hose line should be of SAE 100R5 construction or better for abrasion or snag resistance. (Ref. SAE J517)
- 7.3 The pipe coupling or adapter for the quick-disconnect male coupling should be 3/4 in NPTF.
- 7.4 The flow capacity of the quick-disconnect coupling should be equivalent to that of the connecting hose.
8. **Practices**
- 8.1 The line from the male coupler to the sump should serve to evacuate as well as refill that compartment.
- 8.2 The quick-disconnect male coupling should be so constructed as to provide a seal against vacuum or pressure.
- 8.3 The capacity and name of the compartment to be filled should be permanently identified at the male coupler. (Ref. SAE J223)
- 8.4 Venting instructions, if required for drain or fill, shall be displayed at or near the male coupler.
- 8.5 The fill dispenser should utilize a meter to show the quantity dispensed.
9. **Notes**
- 9.1 **Marginal Indicia**—The change bar (I) located in the left margin is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. An (R) symbol to the left of the document title indicates a complete revision of the report.

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