



Fluid, Manual Transmission, Synthetic

1 Scope

1.1 Material Description. A synthetic manual transmission lubricant intended for use in Front Wheel Drive (FWD) vehicles. This material would be classified as SAE 75W-80 and American Petroleum Industry (API) Gear Lubricant (GL) API GL-4.

1.2 Symbols. Not applicable.

1.3 Applicability. Front Wheel Drive vehicle manual transmissions.

2 References

Note: Only the latest approved standards are applicable unless otherwise specified.

2.1 External Standards/Specifications.

ASTM D892	DIN 51354	DIN 51777	SAE J306
ASTM D5800	DIN 51398	ISO 1817	SAE J308
ASTM D6082	DIN 51408	ISO 2592	SAE 75W-80
DIN 51350-6	DIN 51562	ISO 3016	

2.2 GM Standards/Specifications.

GME L-0-3	GMI 60454	GMW3059	GMW15636
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2.3 Additional References.

TMC003 Material Safety Data Sheet guidance documents (available at www.gmsupplypower.com).

3 Requirements

3.1 Chemical, Physical and Performance Properties. See Table 1.

Table 1: Chemical, Physical, and Performance Properties

Properties	Values	Test Methods
Viscosity Grade	SAE 75W-80	SAE J306
API Service Classification	API GL-4	SAE J308
Color	Red	Not applicable
Pour Point	-42 °C Maximum	ISO 3016
Flash Point	200 °C Minimum	ISO 2592
Water	0.1 Weight Percent (%) Maximum	DIN 51777
Chlorine	0.005 Weight Percent (%) Maximum	DIN 51408
Viscosity at 100 °C	10.0 cSt Minimum	DIN 51562

Properties	Values	Test Methods
Viscosity at -10 °C	1450 cSt Maximum	DIN 51562
Brookfield Viscosity at -40 °C	50 000 MPa Maximum	DIN 51398
Shear Stability Viscosity at 100 °C after 192 h	10.0 cSt Minimum	DIN 51350-6
Extreme Pressure, Performance, Load Stage	10 Minimum	DIN 51354
Anti-Corrosion - Steel Panel - Brass Panel	No corrosion No scale or back coloring	GMI 60454
Foam - Height - Collapse Time	10 mm Maximum 1 Minute Maximum	ASTM D892/ASTM D6082
Thermal Stability - Volatility - Viscosity Increase at 100 °C - Sediment	2.5 Weight Percent (%) Maximum 10% Maximum 0.1 Weight Percent (%) Maximum	ASTM D5800
Elastomeric Compatibility	Pass	ISO 1817
Transmission Bench Tests - Durability test of bearings and bushings, synchronizers, forward gears, and speedometer gear - Flat gasket test - Radial seal test	Pass Pass Pass	GMW15636 GME L-0-3

4 Manufacturing Process

Not applicable.

5 Rules and Regulations

5.1 Legal Regulations. All materials must satisfy applicable laws, rules, regulations and recommendations valid in the country of usage.

5.2 Language. In the event of conflict between the English and domestic language, the English language shall take precedence.

5.3 Inspection and Rejection. All shipments of material or parts under contract or purchase order manufactured to this specification shall be equivalent in every respect to the initial samples approved by Engineering. There shall be no changes in either formulation or manufacturing processes permitted without prior notification and approval by Engineering. Lack of notification by the supplier constitutes grounds for rejection of any shipment. While samples may be taken from incoming shipments and checked for conformance to this specification, the supplier shall accept the responsibility for incoming shipments meeting this specification without dependence upon purchaser's inspection.