



Light Mineral Oil for Assembly Aid

1 Scope

Note: Nothing in this standard supercedes applicable laws and regulations.

Note: In the event of conflict between the English and domestic language, the English language shall take precedence.

1.1 Purpose/Material Description. This specification describes the physical and chemical requirements of light mineral oil (as defined per the viscosity requirements in Table 1) used as an assembly aid for fuel system components.

1.2 Symbols. Not applicable.

1.3 Applicability. Assembly aid for fuel system components: fuel rail, fuel injector, and fuel pump assembly.

1.4 Remarks. After it is applied, the coating will remain present on all mating parts.

2 References

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

2.1 External Standards/Specifications.

ASTM D92	ASTM D445	ASTM D1500	ASTM D4289
ASTM D97	ASTM D665		

2.2 GM Standards/Specifications.

GMW3059

2.3 Additional References.

GM Part Number 9981704

3 Requirements

3.1 All materials supplied to this standard must comply with GMW3059, **Restricted and Reportable Substances**, including the requirement to obtain a GM-approved International Material Data System (IMDS) submission.

3.2 The lubricant cannot contain silicone or soap.

3.3 The lubricant cannot be water based or contain amines, sulfonates, or sulfates.

3.4 The lubricant must not compromise the adjacent elastomeric or plastic components per ASTM D4289. In the event of compromise, an equivalent method can be used for evaluation after approval by the GM Materials Engineer.

3.5 Do not use engine oil as a replacement. Engine oil contains additives that may cause harm to the fuel system.

3.6 Refer to Table 1 for lubricant oil properties.

Table 1: Lubricant Oil Properties

Property	Test Value	Test Method
Viscosity at 40 °C	10 mm ² /s to 32 mm ² /s	ASTM D445
Flash Point	125 °C Minimum	ASTM D92
Pour Point	-5 °C Maximum	ASTM D97
Color	2.5 Maximum	ASTM D1500
Corrosion	No Rust	ASTM D665

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.

The series of tests used to approve each batch of product along with acceptance limits will be agreed upon by the purchaser and seller. The laboratory providing the certificate of analysis must also participate in a proficiency testing program (round robin) that is approved by the Fuels, Fluids, and Lubricants Global Subsystem Leadership Team (GSSLT) or designate. The Fuels, Fluids, and Lubricants GSSLT or designate must receive copies of the proficiency testing reports directly from the test program administrator.

5.4 Initial Source Approval. No shipment shall be made by any supplier until representative initial production samples have been approved by the Fuels, Fluids, and Lubricants Global Subsystem Leadership Team or designees meeting the requirements of this specification.

5.5 Material Safety Data Sheets/Safety Data Sheets (MSDS/SDS). For new product submissions, or when a change in chemical composition of an existing product has occurred, a complete copy of the Material Safety Data Sheet/Safety Data Sheet must be submitted in compliance with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) requirements or other country-specific MSDS/SDS requirements.

6 Approved Sources

Materials supplied to this specification must be approved by General Motors.

The appropriate GM Materials Engineering department(s) must confirm material as meeting the requirements of this specification. Any test data sheets of material submitted to General Motors for such confirmation (e.g., during Production Part Approval Process (PPAP)) under this material specification must list all properties and must apply corresponding test methods of this material specification.