GM ENGINEERING STANDARDS	Material Specification	9986157

Export Diesel Fuel, Factory Fill

1 Scope

1.1 Material Description. This specification describes a premium ultralow sulfur No. 2-D or summer grade diesel fuel (sulfur content 15 ppm or below) intended as factory fill for vehicles destined for export. This specification is based on European Union Standard EN 590.

1.1.1 This diesel fuel shall be clean, bright and free from contamination with pour and cloud points adequate for production processing and engine operation.

1.1.2 The fuel may also contain additives such as: cetane improver, metal deactivator, antioxidant, dehazer, corrosion inhibitor, detergent, lubricity improver, biocide, antistatic additive, pour depressant, flow improver, dye, dispersant, deicer, and additives to reduce particulate emissions. Specific type and quantity of these or other types of additives shall be agreed upon by purchaser and seller.

1.2 Symbols. Not applicable.

1.3 Applicability. This standard defines fuel that could be used in case the fuels defined in the preferred standards for factory fill, 9985074 or B 040 1268 (GME), are not available. This standard does not replace the requirement of fuels as defined in standards 9985074 or B 040 1268 (GME) and is to be used only as a temporary solution in case of unavailability of approved factory fill diesels either per 9985074 or B 040 1268 (GME) standards.

Caution: This fuel may not be appropriate for winter use in regions with arctic or severe winter conditions. Use of this fuel in winter months in such regions may necessitate use of various strategies to winterize this fuel, such as use of cold flow additives, blending with artic grade diesel as per standards 9985074 or B 040 1268 (GME) or blending with local winterized market place fuel which requires diesel fuel with low temperature properties that vary according to regional requirements depending on season.

2 References

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

2.1 External Standards/Specifications.

ASTM D613	ASTM D6371	EN 14078	EN 23015
ASTM D975	EN 116	EN 15195	EN ISO 5165
ASTM D2500	EN 590		

2.2 GM Standards/Specifications.

9985074	B 040 1268	GMW3059

2.3 Additional References.

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

3 Requirements

3.1 Diesel fuel according to latest version of EN 590 and/or ASTM D975 with following deviations all year round:

- Cetane Number per ASTM D613 or EN ISO 5165 OR EN 15195: 45, minimum Cold Filter Plugging Point.
- Cold Filter Plugging Point (CFPP) as per ASTM D6371 or EN 116 °C: - 10 °C maximum Cloud point as per ASTM D2500 or EN 23015 °C: - 10 °C maximum.
- Biodiesel, fatty acid methyl ester (FAME), content per EN 14078 volume percent: 0.5% maximum.

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3.2 All tests shall be performed according to the latest date of issue. Where two methods are listed, either may be used. In case of dispute, the method listed first shall be the referee method.

3.3 To prevent fungal growth in in-plant storage tanks, the diesel fuel may contain 100 ppm of BIOBOR JF or an equally effective concentration of an equivalent fuel fungicide.

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. In addition, product MSDS/SDS submissions must be in compliance with specific country General Motors TMC003 Material Safety Data Sheet/Safety Data Sheet guidance documents where available.

5.6 All materials supplied to this standard must comply with the requirements of International Materials Database System (IMDS) and GMW3059, **Restricted and Reportable Substances for Parts.**

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.

7 Notes

7.1 Glossary. Not applicable.

7.2 Acronyms, Abbreviations, and Symbols.

CFPP	Cold Filter Plugging Point
FAME	Fatty Acid Methyl Ester
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
GSSLT	Global Subsystem Leadership Team

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