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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 10327-2011

Replacing GB 10327-1989

**Reference fuel specification for diesel engine performance test
(English Translation)**

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Foreword

This standard replaces GB 10327-1989 "light diesel engine detected by standard technical conditions." the main difference between this standard and GB 10327-1989 are.

- Standard mandatory nature of the change recommended;
- Additional lubricity test items;
- Instead of using cetane index test items;
- Cancel a water-soluble acid, aniline point, the net calorific value of the test items;
- Distillation range used by the US standard 2-D fuel limits;
- The original moisture content of not more than 0.05 to not more than traces;
- By the sulfur content of not more than 0.1% (mass fraction) was revised to no more than 0.035% (mass fraction, stage III), not more than 0.005% (mass fraction, the first IV stage);
- The first III, IV stage to stage III and stage IV of vehicle emissions; stage III execution date from the date of enactment of this standard from execution date and execution stage IV standard GB 17691-2005 provisions identical to January 1, 2010;
- Density limit to 825kg/m³ ~ 840kg/m³;
- Oxidative stability index by the total insolubles 1.0mg/100mL to 2.5mg/100mL;
- By the color number no greater than 3.5 to not more than 2.5;
- Aromatic indicators to polycyclic aromatic hydrocarbons, limit to 3% to 6% (mass fraction).

This standard by the National Standardization Technical Committee on products and lubricant oil (SAC/TC280) proposed.

This standard by the National Standardization Technical Committee of petroleum products lubricants oil and lubricants and fuels Technical Committee (SAC/TC280 /SC1) centralized.

The standard by the China Research Institute of Petroleum Corp. petrochemical responsible for drafting.

1 Scope

This standard specifies the requirements and test methods for the detection engine, the standard light diesel oil inspection rules, marks, packaging, transportation, storage and security.

This standard is used as a diesel identify their products, calibration, testing, inspection, certification, modification of the reference fuel.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 190 packaging and marking of dangerous goods GB/T 258 gasoline, kerosene, diesel oil Determination of acidity GB/T 260 Petroleum products - Determination of water content GB/T 261 Flash Point by Pensky - Martens closed cup method (GB/T 261-2008, ISO 2719:2002, MOD) GB/T 265 Petroleum products - Determination of kinematic viscosity and calculation of dynamic viscosity GB/T 268 Petroleum products - Determination of carbon residue (Conradson method) (GB/T 268-1987, neqISO 6615. 1983) GB/T 384 Petroleum products - Determination of calorific value GB/T 386 Determination of ignition quality of diesel (cetane method) GB/T 508 Petroleum products - Determination of ash (GB/T 508-1985, neqISO 6245. 1982) GB/T 511 Petroleum products and additives - Determination of mechanical impurities (gravimetric method) GB/T 1884 crude oil and liquid petroleum products - Laboratory determination of density (density meter method) (GB/T 1884-2000, eqv ISO 3675.

1998)

GB/T 1885 Petroleum Measurement Tables (GB/T 1885-1998, eqv ISO 91-2:1991) GB/T 2540 Petroleum products - Determination of density (pycnometer method) GB/T 4756 petroleum liquids hand sampling method (GB/T 4756-1998, eqv ISO 3170. 1988) GB/T 5096 petroleum products copper corrosion test GB/T 6536 Petroleum products - Determination of distillation GB/T 6540 Petroleum products - Determination of color GB/T 11140 Petroleum products - Determination of sulfur content wavelength dispersive X-ray fluorescence spectrometry GB 13690 commonly used classification of dangerous chemicals and signs GB/T 17040 Petroleum and petroleum products Determination of sulfur content - Energy Dispersive X-ray Fluorescence Spectrometry GB/T 17144 Petroleum products - Determination of carbon residue (micro method) (GB/T 17144-1997, eqv ISO 10370:1993) SH0164 petroleum product packaging, storage and delivery

acceptance rules SH/T 0175 Determination of oxidation stability of distillate fuel (acceleration method) SH/T 0246 light petroleum products Determination of water (power law) SH/T 0248 diesel and domestic heating oil Determination of cold filter plugging point SH/T 0606 middle distillate hydrocarbon composition determination (mass spectrometry) SH/T 0689 and light hydrocarbon fuel and other oil products - Determination of total sulfur (UV fluorescence) SH/T 0765 diesel lubricity evaluation method (high-frequency reciprocating rig method) (SH/T 0765-2005, ISO 12156-1:1997, MOD) SH/T 0806 Determination of aromatics content of middle distillates (Refractive Index Detector High Performance Liquid Chromatography)