

ICS 75.100
CCS E34



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

GB/T 12691-2021

Replacing GB/T 5904-1986

Air compressor oils

空气压缩机油

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Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" drafted: This document replaces GB/T 12691-1990 "Air Compressor Oil" and GB/T 5904-1986 "Light Load Oil Injection Rotary Air Compressor" Compared with GB/T 12691-1990 and GB/T 5904-1986, except for structural adjustments and editorial changes, the main The technical changes are as follows:

- a) Change the scope to read "This document specifies the product classification and marking of mineral oil, semi-synthetic and synthetic air compressor oils, Requirements and test methods, inspection rules and signs, packaging, storage and delivery, and acceptance of delivery: This document applies to reciprocating or dripping slew Air compressor oil, oil injection rotary air compressor oil (see Chapter 1, Chapter 1 of GB/T 12691-1990 and GB/T 5904- 1986 "scope");
- b) Modified normative references (see Chapter 2, Chapter 2 of GB/T 12691-1990 and Chapter 1 of GB/T 5904-1986 chapter);
- c) add product classification (see 4:1);
- d) Two viscosity grades of L-DAA220 and L-DAB220 were added (see Table 1);
- e) Kinematic viscosity (40°C) and kinematic viscosity (100°C) increase test methods GB/T 30515 and NB/SH/T 0870 (see Table 1 and table 2);
- f) For L-DAA and L-DAB, the viscosity index item is added, and the indicator is reporting; the viscosity index is increased in the test method GB/T 1995, and use it as an arbitration method (see Tables 1 and 2);
- g) The technical requirements for L-DAA to increase demulsibility (the time for the emulsification layer to reach 3mL), and the L-DAB demulsibility item is changed from "Demulsibility (40-37-3)" was changed to "Demulsibility (time for emulsification layer to

reach 3 mL)" (see Table 1);

h) L-DAA adds liquid phase rust items, and the index is qualified (see Table 1);

i) The test method for aging characteristics of L-DAA and L-DAB was changed from SH/T 0192 to GB/T 12709: L-DAB aging characteristics The value-added of carbon residue (200°C, Fe₂O₃) index is changed to not more than 2 (see Table 1, Table 1 of GB/T 12691-1990);

j) Change the item of L-DAA and L-DAB neutralization value (without and after addition) to acid value, and add test method GB/T 7304 (See Table 1, Table 1 of GB/T 12691-1990);

k) Added the detection method GB/T 17144 for carbon residue items (see Table 1 and Table 2);

l) Added moisture detection method GB/T 11133 (see Table 1 and Table 2);

m) L-DAA and L-DAB demulsibility, aging properties, residue properties after 80% distillation under reduced pressure, and moisture added Footnotes (see Table 1);

1 Scope

GB/T 12691-2021 is the Chinese national standard on air compressor oils, in the field of petroleum and related technologies. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 December 2021 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2022.

Classification: ICS 75.100, CCS E34. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies product classification and marking, requirements and test methods, inspection methods for mineral oil, semi-synthetic and synthetic air compressor oils Inspection rules and signs, packaging, storage, and delivery acceptance: This document applies to reciprocating or dripping rotary air compressor oils and oil-injected rotary air compressor oils:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document:

GB/T 259 Determination of water-soluble acids and bases of petroleum products

GB/T 260 Determination of Water Content of Petroleum Products Distillation Method

GB/T 265 Petroleum Products Kinematic Viscosity Determination Method and Dynamic Viscosity Calculation Method

GB/T 268 Determination of carbon residues in petroleum products (Kang's method)

GB/T 511 Determination of Mechanical Impurities in Petroleum and Petroleum Products and Additives

GB/T 1995 Petroleum Products Viscosity Index Calculation Method

GB/T 2433 Additive and additive-containing lubricating oil sulfate ash determination method

GB/T 2541 Petroleum Products Viscosity Index Calculation Table

GB/T 3141 ISO Viscosity Classification of Industrial Liquid Lubricants

GB/T 3535 Determination of Pour Point of Petroleum Products

GB/T 3536 Determination of flash point and fire point of petroleum products Cleveland open cup method

GB/T 4756 Petroleum liquid manual sampling method

GB/T 4945 Determination of acid value and base value of petroleum products and lubricants (color indicator method)