

ENGINEERING CHANGE NOTICE

NE R290 OIL MIGRATION POE TO AB

Embraco / Nidec Global Appliance would like to inform its customers, that from May 2023 on, all R290 compressor models of NE family up to 14,3 cc displacement will change the oil from Polyolester (POE) to Alkylbenzene (AB).

| IMPACTED MODELS (all voltages) | | | | | |
|--------------------------------|----------|----------|----------|--|--|
| NEK2121U | NEK6152U | NEU1140U | NEU6181U | | |
| NEK2125U | NEK6165U | NEU2140U | NEU6210U | | |
| NEK2134U | NEK6181U | NEU2155U | NEU6212U | | |
| NEK2150U | NEK6210U | | NEU6214U | | |
| NEK2160U | NEK6213U | | NEU6217U | | |
| | NEK6214U | | | | |
| | NEK6217U | | | | |

| CURRENT | NEW (from May 2023 on) |
|-------------------------------------|--------------------------------|
| Polyolester (POE) - Emkarate RL22HB | Alkylbenzene (AB) - Zerol 150T |

Additional Information:

- 1) Compressors SKUs remain unchanged
- 2) The POE and AB oils are functionally similar
- 3) Safety, reliability, and performance will not be impacted by the usage of AB oil
- 4) POE and AB oil are both fully compatible and miscible with R290
- 5) The mixture between AB and POE oils is completely compatible
- 6) Both oils (POE and AB) are compliant with RoHS and REACH regulations
- 7) There is no impact to external agency approvals (VDE, UL, ...)



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Find below some of the main characteristics of POE 22 and AB Zerol 150T oils

| Property | Polyolester (POE) | ZEROL 150T Alkylbenzene (AB) | Method |
|---------------------|-------------------------|------------------------------------|-------------|
| Appearance | Clear to yellow liquid | Clear & Bright | Visual |
| Color | max. 1 | max. 1 | ASTM D-1500 |
| Density | 0.997 g/cm ³ | 0.870 g/cm ³ | ASTM D-4052 |
| Viscosity grade | ISO 22 | ISO 32 | ASTM D-445 |
| Viscosity at 40 °C | 18.9 cSt | 28.8 – 35.2 cSt | ASTM D-445 |
| Viscosity at 100 °C | 4.2 cSt | (N/A) | ASTM D-445 |
| Acid number | < 0.05 mgKOH/g | < 0.05 mgKOH/g | ASTM D-974 |

During phase-in / phase-out period both oils may be delivered.

Manufacture site: Embraco Slovakia s.r.o, Spišská Nová Ves, Slovakia

For further information, please contact our Technical Support team.

We appreciate your understanding and comprehension.