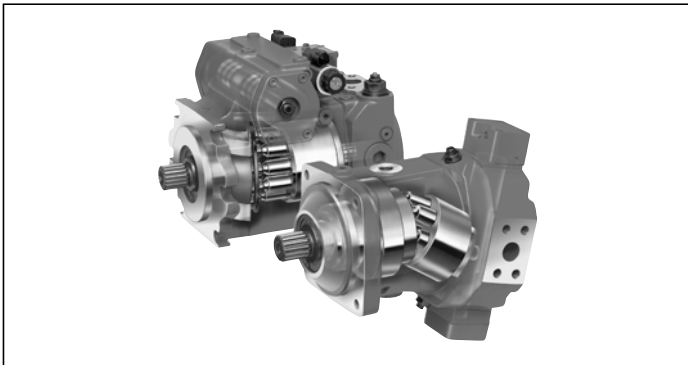


Storage and preservation of axial piston units

RE 90312

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General

Preservation protects our axial piston units against corrosion. This recommendation only considers units that are operated with a mineral oil-based hydraulic fluid. Other hydraulic fluids require preservation methods that are specifically designed for them. Please consult the manufacturer of the hydraulic fluid regarding this.

Units that are put into interim storage for long lengths of time or that are sealed off over long transits (in particular transportation by sea) must be preserved. Here it does not matter whether our axial piston units are delivered separately or as part of a hydraulic system that has already undergone a test run.

This recommendation also applies accordingly when shutting down hydraulic systems equipped with our units, while keeping external and internal corrosion protection measures in mind.

External protection

Corrosion protection class K1:

Corrosion protection film + disposable packaging

Rexroth products from the Elchingen and Horb plants (axial piston units and spare parts) are delivered in corrosion protection packaging (corrosion protection film).

The active agent, which comes out of the corrosion protection

film towards the inside, deposited on the metal surface and forms a layer separating the material and electrolyte (water vapor).

To prevent contact rust, gloves are to be worn when handling the parts.

Note

- ▶ When storing Rexroth products from the Elchingen and Horb plants, do not take them out of the film (unless you are planning to protect them from corrosion yourself).
- ▶ If the film gets damaged or is opened, the active agent escapes into the environment and the parts are no longer protected from corrosion (any openings in the film must be immediately sealed).
- ▶ To ensure that corrosion protection is maintained during temperature changes, only remove the corrosion protection when the temperature of the components is the same as the ambient temperature.
- ▶ The active agent is not harmful!

Disposal

The film can be disposed of in the same way as other polyethylene materials.

Corrosion protection class K2:

Seaworthy packing = K1 + necessary additional measures
 (e.g., wooden box, desiccants)

Internal protection

Corrosion protection class I1 (standard, no extra charge):

We test the axial piston unit with mineral oil according to DIN 51524-2.

The unit is drained after the test run. All ports are then plugged.

Corrosion protection class I2 (with extra charge):

The unit is drained after the test run. A dosed amount of VCI corrosion protection oil is injected into the axial piston unit via the ports. All ports are then plugged. The VCI corrosion protection oil forms a protective oil film. In addition, inhibitors evaporate which deposited on the metal surfaces where the liquid product cannot form a protective film. The VCI corrosion protection oil is compatible with mineral oil and does not have to be drained.

Storing the axial piston unit

Requirements:

- ▶ The storage areas must be free of corrosive materials and gases.
- ▶ To prevent damage to the seals, ozone-forming equipment (e.g., mercury-vapor lamps, high voltage equipment electric motors, sources of electrical sparks or electrical discharge) must not be operated in storage areas.
- ▶ The storage areas must be dry because the corrosion protection film is not diffusion proof. Recommended relative humidity $\leq 60\%$.
- ▶ Ideal storage temperature: $+6\text{ °C}$ bis $+20\text{ °C}$
- ▶ Minimum storage temperature: -50 °C (exception: units with on-board electronics: -40 °C).
- ▶ Maximum storage temperature: $+60\text{ °C}$.
- ▶ Keep out of direct sunlight.
- ▶ Do not stack axial piston units and store them not in a shock-proof manner.
- ▶ Do not store the axial piston unit on the drive shaft or attachments, e.g., sensors or valves.
- ▶ The following table lists other storage conditions and the maximum permissible storage times for an originally packed axial piston unit with an undamaged and sealed corrosion protection film.

Storage conditions	Standard corrosion protection (maximum of 12 months)	Long-term corrosion protection (maximum of 24 months)
Closed, dry room, uniform temperature between $+6\text{ °C}$ und $+20\text{ °C}$, not in seaworthy packaging	K1 + I1	K1 + I2
Closed, dry room, uniform temperature between $+6\text{ °C}$ und $+20\text{ °C}$, in seaworthy packaging	K2 + I1	K2 + I2

Check the axial piston unit monthly to ensure proper storage.

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