

■ Tech Tip: Hydraulic oil

Hydraulic oil for mini excavators and mini skid steers

1 ■ ■ Choosing the Right Oil Viscosity

Hydraulic oil viscosity is measured by ISO grade (AW-22, AW-32, AW-46, AW-68). The grade determines oil thickness at operating temperature.

Grade	Best For	Notes
AW-22 / AW-32	❄ ■ Cold climates / Winter use	Thinner oil reduces startup drag & cavitation.
AW-46	■ Moderate climates (50–90°F)	Most common factory fill.
AW-68	■ ■ Hot climates (90°F+)	Too thick for cool weather; causes slow operation.

■ Rule of Thumb:

- Northeast/Midwest U.S. → AW-32
- Southern U.S. summers → AW-46
- Hot climates consistently above 90°F → AW-68

2 ■ ■ Why You Should Change Hydraulic Oil on a New Machine

Most Chinese mini excavators are shipped with low-grade factory 'break-in oil'. It's often contaminated with casting sand, machining chips, paint flakes, and seal debris. It also lacks full anti-wear and anti-foam additives.

■ ■ Leaving factory oil in too long causes:

- Premature wear of pumps and motors
- Sticking valve spools
- Overheating from foaming and breakdown

3 ■ ■ Recommended Change Interval

- ■ First oil + filter change: 50 hours
- ■ Regular changes: Every 250–300 hours or once per season
- ■ Always use a quality hydraulic filter with correct micron rating

■ Tech Tip Summary

- Match hydraulic oil grade to your climate
- Drain factory fill – it's only break-in oil
- Change hydraulic oil + filter at 50 hours on new machines
- Clean oil = longer life for pumps, valves, and motors

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