



TIM'S TECH TIPS



Hose Orientation with Threaded Fittings

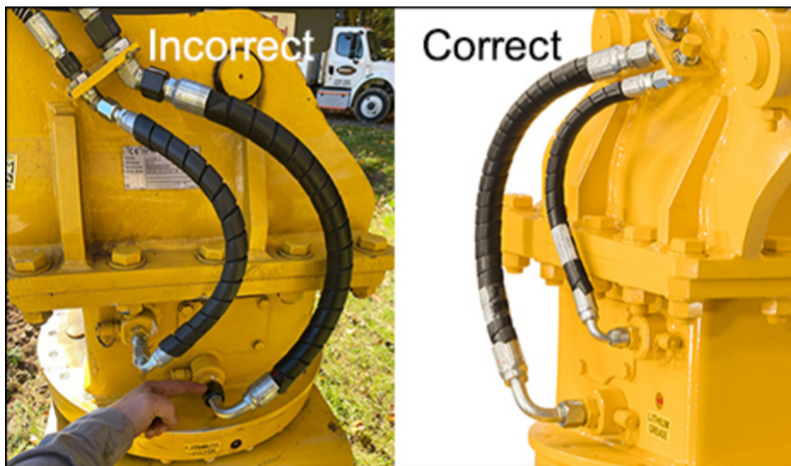
When an attachment is installed on a carrier, hydraulic lines must be correctly sized to handle the full pump flow provided by the excavator to prevent system restriction, excess back pressure and heat generation.

Properly sized hoses, however, won't perform as well as they should if they're not properly routed and installed.

Hydraulic hoses have internal steel braiding, resembling a Chinese finger trap, that makes them flexible yet strong enough to withstand pressure. When a hose is pressurized, it simultaneously swells in diameter, shortens in length, and pulls on hose fittings and adapters, which is where trouble begins.



Hoses should be oriented so the fittings and adapters pull tighter in a clockwise direction. If a hose pulls threaded fittings and adapters in a counterclockwise direction, they will eventually come loose due to the repetitive pulsing of the hose.



Hoses that are twisted when the fittings are tightened may also come loose as they will want to twist counterclockwise when they pulse under pressure. This is something we see quite regularly, especially with rotation jump lines from the carrier to the attachment. Tightening a twisted hose will cause the hose connection, bulkhead fittings, and flow control connections to come loose. A hose that is twisted may also prematurely fail in the area that is twisted or at the fitting.

The simple fix is to rotate the hose so it's not pulling the fittings counterclockwise. If this is not possible due to space restraints, try using a different length hose. Applying Loctite® 5452 Thread Sealant, a hydraulic system compatible thread locker, is another alternative.

Do not use standard red or blue thread locker in hydraulic systems. Once cured, they can flake into the hydraulic system and jam small orifices, causing system issues.

If you have questions about proper hydraulic hose sizing or installation, contact Tim at 218-349-5755, talseth@genesisattachments.com, or Loren at 715-919-8316, llagesse@genesisattachments.com with any questions.