

Strut Your Stuff...Just Don't Stuff Your Strut

Many landing gear designs employ so-called oleo struts, which contain a mixture of oil or specified hydraulic fluid and a gas under pressure to carry loads, dampen compression and rebound action, and absorb shocks. Since it doesn't promote corrosion, nitrogen usually is the preferred gas, although shop air can be used in a pinch.

This self-contained hydraulic package also must also be in-spec for optimal effect. Too little fluid hampers rebound damping; a strut could bottom out, damaging the airframe on a hard landing. Too much fluid and the strut may move too little, again transmitting too much energy to the mount. Too little nitrogen and the suspension can bottom out with a rough "BANG!" on touchdown. Conversely, over-pressurized struts can be damaged by the excess pressure while encouraging landing bounce with their stiffness.

