Herber Aircraft Service can supply you with internally and externally swaged hydraulic fitting and installation tooling from Eaton (Stanley Aviation Sierracin-Harrison).

**Harrison Hydraulic Fittings**

*Internally Swaged Hydraulic Fittings* – Harrison's internally swaged fittings are mechanically fastened on the end of removable (non-permanent) tube assemblies. These tube assemblies are used in hydraulic and high-pressure pneumatic applications. Internal Swage fittings are attached to the end of tubes by either elastomeric or roller swaging and include sleeves, unions, nuts, and bulkheads. They come in 2-groove and 3-groove versions and can be manufactured from CRES, titanium, aluminum and other exotic metals.

![Internal swage sleeve and union](image)

*Externally Swaged Hydraulic Fittings* – SierraSwage™ externally swaged hydraulic fittings are used in permanent applications to join two or more tube assemblies in similar systems. This type of fitting allows in-aircraft installation of straight “shape fittings” such as elbows and tees. The SierraSwage™ fittings are available in CRES, titanium and aluminum and can attain sealing pressures up to 5,000 psi.

**Swage Tooling** – Herber can also provide a complete line of portable, semi-automatic, and fully automatic swage machines. Portable hand swage tools are used for tube repair, low-to-medium volume production of tube assemblies, and experimental/prototype operations.

Semi-automatic and fully automatic swage machines are designed for high-volume manufacturing. They come housed in mobile steel carts that can attach fuel, hydraulic, and pneumatic fittings to CRES, aluminum or annealed titanium tubing in sizes from ¼ inch to 4 inches in diameter.

**K-Seals®**

Stanley Aviation metal seal products, also known as K-Seals, are high-performance static fluids seals that use the compression of machined metal beams against the mating surface to create a metal-to-metal, leak-proof seal. Because they provide superior sealing performance to any other static fluid seal, they are frequently used in critical environments including aircraft, rockets, nuclear submarines, and nuclear reactors.

Herber offers an exceptionally wide range of surface coatings -- gold, silver, lead, and Teflon® -- for the all-metal K-seals. Diameters range from ¼ inch up to 60 inches.

![Multiple sizes of K-seals](image)