

ABSTRACT

TUBING HANGER SPACE-OUT MECHANISM

A space-out mechanism that may be used in a tubing hanger system to install a tubing hanger and rigidize the tubing hanger and a casing hanger within a wellhead housing in a single trip is provided. The space-out mechanism may include two pieces that are configured to rotate against each other such that the axial length of the space-out mechanism can be adjusted to remove any axial gaps created in the installation of the tubing hanger or rigidizing of the tubing hanger and casing hanger within the wellhead housing. The two pieces of the space-out mechanism may include a ramp ring and a piston. The ramp ring and piston may each have ramp surfaces that rotate and bear against each other until the system is rigidized.

FIGURE 1A