

ABSTRACT

TITLE: MODULAR CRANKSHAFT

In accordance with certain embodiments, a modular crankshaft features a connection system between modules that features opposed female receptacles. A pin having opposed beveled ends and hydraulic passages with it is inserted into the opposed receptacles. A pair of seals is disposed on the beveled ends and straddles a hydraulic fluid outlet. The crankshaft wall that defines each receptacle is designed to flex in response to applied hydraulic pressure between the seals on the tapered pin portion. A notch at the base of the receptacle in the crankshaft reduces stress concentration and enables the wall defining the crankshaft receptacle to come back when hydraulic pressure through the pin is removed. The opposed crankshaft receptacles are flanged to allow them to be pulled together over the pin. An interference fit results around the pin after the flanges are mated and the hydraulic pressure is removed.

[FIG. 1]