

## CEMENTING VALVE

The pressure activated stage cementing valve functions by applied pressure to permit upper stage cementing. Opening is controlled by a piston at the end of the first stage cementing. Opening pressure moves an inner sleeve upward aligning the cementing ports.

The Stage Cementing Valve is closed by the wiper plug following the second stage cement. The inner sleeve is held in position by a ratchet type lock ring and pressure integrity is maintained.



## COILED TUBING SETTING TOOL

The coiled tubing setting tool is a hydraulic release liner setting tool for running liner hangers on coiled tubing. Once the liner is conveyed and set in the existing casing string it can be hydraulically released by shifting a piston causing a set of lugs to disengage from a profile in the tool. A mechanical release mechanism is available should the hydraulics fail. The mechanical release is accomplished by slacking off a predetermined weight onto the top of the tool causing a series of pins to be sheared, thus leaving the piston free to disengage.

