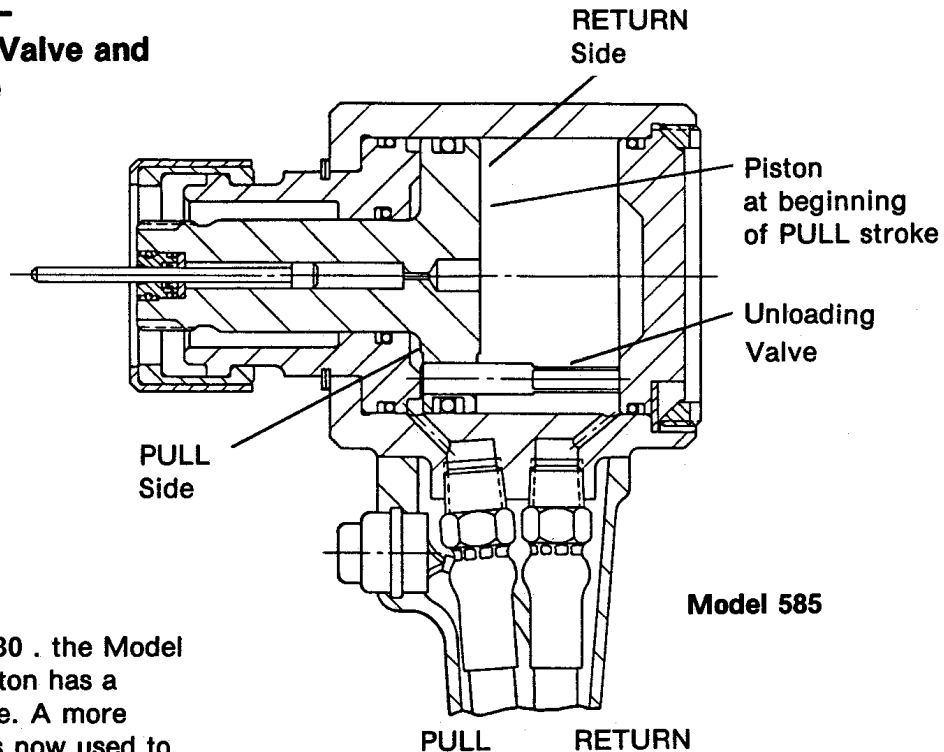
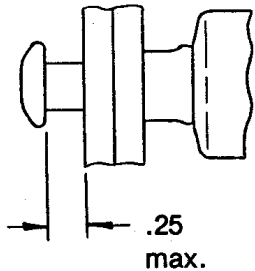


Model 585 Installation Tool— Improved Piston/Unloading Valve and Principle of Unloading Valve



Beginning with serial number 2030, the Model 585 Hydraulic Installation Tool Piston has a redesigned piston/unloading valve. A more exacting manufacturing process is now used to make a closer tolerance fit between piston and valve than was previously possible. The improved fit between Piston, P/N 112004, and Unloading Valve, P/N 111966, increases tool stroke. With the increased tool stroke, the tool has increased gap pull-up. A total gap of .25 is permissible—see illustration. The new piston/valve will take up .25 maximum gap and break the pintail on the first stroke.

The following description of the principle of operation will show the importance of a precise fit between piston and valve. As the tool is cycled, the hydraulic piston moves rearward. When the piston reaches the end of its PULL stroke, flats on the rear end of the valve provide a passage for hydraulic fluid from PULL side to RETURN side of piston. This “unloading” passage of fluid decreases hydraulic pressure against piston at the end of the PULL stroke by allowing fluid to flow back to the powerig hydraulic unit tank.

As the tool is used, wear on the contacting surfaces of the valve and piston cause improper leakage before the piston uncovers the flats. This leakage causes low hydraulic PULL pressure by “unloading” pressure prior to the flats being uncovered—the leakage has deprived the tool of the use of the valve’s proper function by decreasing PULL pressure too early and thereby decreasing effective tool stroke.

Regular inspection and observation of the fastener installation cycle will indicate when maintenance and/or repair is required. To correct deficient tool stroke, the new Piston, P/N 112004, and Unloading Valve, P/N 111966 are available as replacements in Model 585 Tools now in use.