

BULLETIN	TOPIC	ISSUE DATE	ISSUED BY
LSI-TB-018 V1	PCP TAGBAR TOP TAG PLATE DESIGN	OCTOBER 20, 2020	ENGINEERING

BACKGROUND

Progressing cavity pumps (PCP's) require an accessory component often referred to as the tagbar or stop pin. This component is used to properly land the rotor inside the stator during installation in the wellbore and was historically located in a special assembly located below the stator. The conventional tagbar system was either solid or slotted to maximize inflow directly to the intake of the PCP. An example of the conventional tagbar system is show to the right.

In Cold Heavy Oil Production with Sand (CHOPS) applications, it is advantageous to not have the flow restriction created by the tagbar sub on the bottom of the stator. By integrating the tagging component in the form of a tagging plate into the top of the stator, the bottom tagbar assembly can be omitted.



TOP TAG PLATE

The top tag plate design relies on several compression rings and a top tag plate strategically located at the top of the stator. This plate engages with the shoulder on the head of the PCP rotor to prevent passage of the rotor head and top coupling. The top tag plate utilizes a no weld design that is properly indexed or timed with the top of the stator profile as show in Figure 1.

This simple design can be easily inspected for reuse by breaking the top pup joint from the PCP assembly followed by removal of the compression rings and evaluation of the top tag plate. The tagging plate is PCP family/model specific and requires a nose cone modification to the bottom of the rotor to ensure that the rotor enters the stator without obstruction as shown in Figure 2.

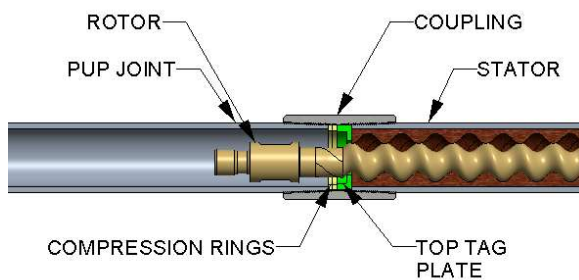


Figure 1 – Top Tag Plate, Top Rotor View

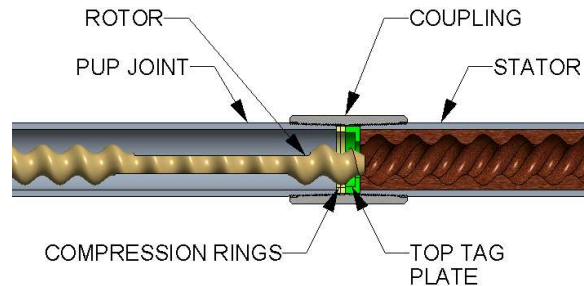


Figure 2 – Top Tag Plate, Bottom Rotor View