

PROGRESSING CAVITY PUMP TROUBLESHOOTING GUIDE

For a complete PCP Troubleshooting Guide contact KUDU at 403 279 5838 or 1 800 642 5519.

Pump Problems and Possible Causes

PUMP PROBLEM	PROBABLE CAUSES
Drivehead does not rotate	1, 9
Pump turns with low amperage	2, 3, 4, 9, 11, 12, 13
Pump turns at high amperage	5, 9, 13, 15, 16, 17, 18, 19, 20, 21, 25, 27
Fluctuating amperage	7, 14, 18, 19, 20
Noisy belts	6, 7, 24
Low pump efficiency.	5, 10, 11, 12, 13, 16, 19, 20, 21
Broken polished rod	8
DRIVEHEAD PROBLEM	
Short packing life	22, 23, 26

Corresponding Remedies

PROBABLE CAUSES	REMEDIES
1 Broken belts	Replace broken belts
2 Broken rod	Shut down well if the rods continue in forward motion the rods or tubing have parted, analyze rod failure (coupling, body, corrosion etc.) make necessary changes
3 Broken rotor	Replace rotor and move tubing up or down the hole, check if space out was correct (was it caused by running on tag bar)

PROBABLE CAUSES		REMEDIES
4	Broken tubing	Shut down well if the rods continue in forward motion the rods or tubing have parted
5	Chemical attack	Ensure the proper chemical program is in place and the appropriate frequency is used
6	Drivehead alignment is improper	Realign motor or sheave
7	Drivehead belts are improper tightness	Tighten belts
8	Drivehead has incorrect alignment	Check wellhead or drivehead alignment
9	Electrical problem	Check current, voltage and amperage
10	Free gas	Use a gas separator or land below the perforations if possible
11	Hole in tubing (deviated well)	Check centralization program, evaluate the use of a tubing rotator and replace worn tubing
12	Hole in tubing (near pump)	Check centralizer program, fluid will circulate around the annulus and create high temperature in the stator
13	Hole in tubing (vertical well)	Check centralization program and replace worn tubing
14	Rod string wraps and releases, caused by low rpm in light oil or water wells	Increase rpm, change to a smaller pump, increase the rod string diameter so effective rod stress is less than 30%
15	Rotor selection too high in temperature	Use a rotor with a larger diameter (lower temperature)

PROBABLE CAUSES		REMEDIES
16	Rotor selection to low in temperature	Use a rotor with a smaller diameter (higher temperature)
17	Rotor too tight	Reduce interference fit with small rotor
18	Slugging sand	Set appropriate torque limit for the rod string, use an extended rotor, or sand agitator
19	Stator failure	The stator is completely worn, should be replaced
20	Stator hardened or worn	Replace stator, evaluate elastomer selection / rotor selection
21	Stator is pumped off	Pump rpm and projected fluid rate is greater than the formation will allow, slow the pump down, down size the pump, circulate fluid back down the annulus
22	Stuffing box brass is worn	Change brass during next workover
23	Stuffing box packing is worn	Change packing
24	Synchronous belted	Synchronous belts are noisy at high rpm
25	Viscosity greater than planned	Reevaluate installation, increase tubing size reduce centralization, add diluent
26	High heat	Loosen the packing and grease more often
27	Sand settling in tubing	Increase fluid velocity