

Description of component, subsystem, or function	Symptom (what?)	Effect (so what)	Failure mode (why?)	Probability of failure	Severity of effect	Risk priority	Remedial action
Suction Path	Flow rate is decreased	Suction is decreased	Suction getting clogged with sediment	2	3	6	Use pump to add pressure to lines
Slip Ring	Resists rotation	Slower rotation speed/ no rotation	Friction in slip ring	2	2	4	Add lubrication
Axle	Gears don't line up	No rotation	Supports on axle fail	3	4	12	Add more supports
Suction Sweeper	Reduced sediment removal	Uneven suction	Deflection	1	2	2	Sand down male connection
Gears	Uneven rotation	Focused areas of suction	Gear tooth breaking	1	3	3	Create stronger gears
Slip Ring	Leaking sediment	Sediment resuspended	Inadequate seal	2	2	4	Create part that fits with lip seals
Risk Matrix		Very Probable	Probable	Occasional	Remote	Improbable	
		5	4	3	2	1	
Catastrophic	4	20	16	12	8	4	
Critical	3	15	12	9	6	3	
Marginal	2	10	8	6	4	2	
Negligible	1	5	4	3	2	1	
Severity of Effect							
Catastrophic	The failure causes substantial damage to the product itself or related items (including people), requiring repair.						
Critical	The failure causes significant damage to the product itself or related items, requiring repair.						
Marginal	The failure causes some damage to the product itself or related items, potentially requiring repair.						
Negligible	The failure causes no significant damage.						

Probability of Failure							
Very Probable	Every time						
Probable	Most times						
Occasional	Observed multiple times during the project.						
Remote	Might be possible during the project.						
Improbable	Maybe observed once during the project or predicted to happen after hand off.						