Example of a Higher Level, Hardware-based FMEA

Machine/Process: Onboard compressed air system

Subject: 1.2 Compressor subsystem

Description: Equipment used to compress the intake air to 100 psig (including the compressor and its control loop, the discharge relief valve, and associated piping)

Next higher level: 1. Compression system

Failure Mode	Effects			Causes	Indications	Safeguards	Recommenda-tions/Remarks
	Local	Higher Level	End				
•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•
⊟ Fails to provide air at 100 psig	No air pressure and the compressor not operating	No air flow/ pressure	Interruption of the systems supported by compressed air	Compressor control loop – no start signal when the system pressure is low Compressor – fails to operate Relief valve – spuriously opens Piping – leak/ rupture	Low pressure indicated on the air receiver pressure gauge	Rapid detection because of quick interruption of the supported systems	Consider a redundant compressor (diesel powered) with separate controls Calibrate sensors annually Replace the relief valve annually
•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•