NAVSEA
PEO Aircraft Carriers

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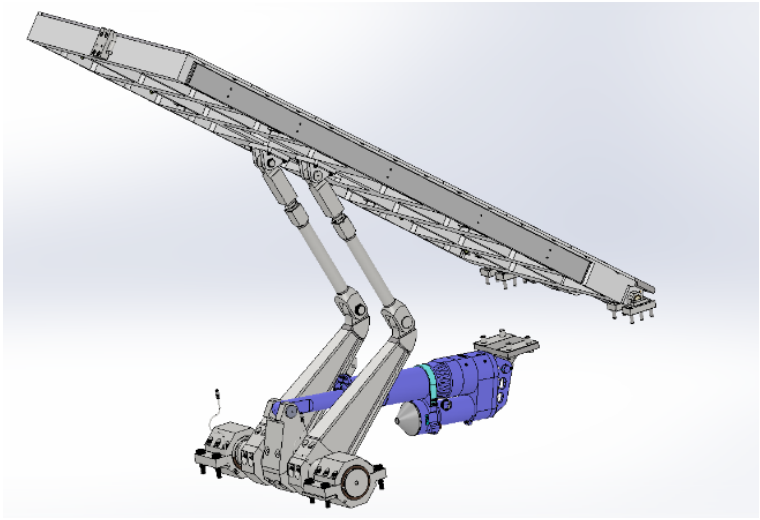
NAVSEA PEO Aircraft Carriers- FY23.1 Topics



Technology Objective: Electromechanical Actuators (EMAs) are used extensively on the GERALD R. FORD Class Aircraft Carrier flight decks for the Jet Blast Deflectors (JBDs), Integrated Catapult Control System, Barricade Stanchions, and Landing Signal Officer Display Systems. Existing EMA's are unable to lower in the event of mechanical or select electrical failures, creating a risk to flight deck operations, including loss of aircraft. The objective of this topic is to develop an EMA that can lower in a safe, controlled manner in the event of a system or component failure.

Technological Challenge/Risk: Current mitigations to lower a failed, extended EMA require significant shipboard alterations and introduction of manually operated hydraulic systems. The technology challenge is to develop an actuator that can lower with minimal external power and within the required time, in the event of system or component failure.

Navy/Program Requirement: Must meet desired specifications for installation and integration across desired Aircraft Carrier platforms. Must meet clearance of landing area requirements within required time to prevent potential loss of aircraft in blue water operations.

Benefit/Payoff/ROI: A planned alteration to introduce a lowering capability into a single Jet Blast Deflector has high costs and disruption to air warfare availability. A successful self lowering EMA would avoid this installation on each ship in the class, while extending the self lowering capability to all systems using these EMA's.

Transition/Acquisition Strategy: Current EMA modified configurations are in installed with marginal mitigation to operational risk. Improved EMAs could be back-fit during limited modernization periods, but there significant cost, schedule and technical risk. As automation integration on ships progresses, future surface ships will make use of the new and improved EMA technology, particularly where there is a need to secure a load in the event of system failure (such as weapons handling systems).