OSD Maintenance Challenge

Abstract Form	
Paper Title:	Mast Boom Lift for wash rack operations
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Abstract: (300-500 words)

The Maintenance Activity Kaiserslautern (MAK) is supporting the AG (Agricultural) cleaning mission and is the largest US Army owned FM (Field Maintenance), limited SM (Sustainment Maintenance) repair facility in USAREUR.

a. In accordance with The Federal Plant Protection Act 2000 (Title IV of Public Law 106-224) the DOD is required to process equipment prior entering or being returned to U.S. Items must be free of prohibited and restricted plants, animals, and plant and animal products when returned (Agricultural cleaning is required). All vehicles shall be cleaned with high-pressure fresh water or steam. Special attention is paid for removing mud from a vehicle's recessed areas as well as undercarriage, fender wells, axles, springs, bumpers, and wheels. To satisfactory complete this process; workers are required to reach all recessed areas with high-pressure fresh water lances regardless of the vehicles dimensions. At large size wheeled equipment all cleaning procedures are challenging the worker regarding reachability of all areas to be cleaned. Partially stepping/climbing is required.
In addition MAK has a pretty large FM repair and paint mission requiring dozens of pieces to be steam cleaned every week. consisting of

b. In the recent past the Maintenance Activity experienced two accidents with more or less serious personal injuries during the process of vehicles at our wash rack. Both accidents happened during climbing down of vehicles. Personal slipped off and fell down. Both accidents were going along with "lost time".

c. After a extensive investigation of the accidents and a local market research it was decided to procure a mast boom lift with bucket, which did significantly reduced the risk of such accidents. The worker will easy reach all recessed or embedded areas at the vehicles as well as high surfaces like roof structures. All process steps are worked in a safe manner. Up and down stepping/climbing by using steps and walking on top of Vehicles, e.g. Tank trucks are nearly eliminated. All process steps are worked in a safe manner. Furthermore, while eliminating the accident risk and utilizing procured equipment the man hours required for wash rack operations were reduced as well (cost avoidance). Instead of walking down/up and relocating scaffolds, stepladders and high-pressure fresh water lances, the worker is able to steam clean surfaces all at once and without interruptions, while lifting or turning the boom to whatever spot required. Accordingly process time is reduced.

d. The costs of a mast boom lift was $ 45,000 with tangible savings of $ 9,000 each year, not even considering the sick accident costs in this calculation. Furthermore it significantly improved the ergonomics of such wash rack operation duties for the cleaning personnel.