



MF Program Action Item

Action Item Number: 1-129 **Date Submitted:** 04/25/10 **Submitted By:** MALS-16 FWD (CWO4 J. D. GERACE)

Problem/Project Description:

MF GM-02A, Drawing # MFGM020401, Rev. H, ORDNANCE REPAIR MF A is utilized by I-Level work centers for conducting maintenance on aircraft gun systems for both the F-18 (M61 Series 20MM gun) and the AV-8B (GAU-12 25MM gun/and GAK-14 Ammunition Handling System). The current configuration of GM-02 does not provide a means for safely placing either gun series into the MMF in a way that is both safe for personnel, minimizes risk to damaging the gun systems, and minimizes the risk of damaging the MMF van doorway itself upon entry and exit of a gun system from the van.

Both gun systems are bulky to maneuver when mounted to their perspective ground handling equipment. Here's what each system weighs:

M61 Series 20MM gun weight approx 400 lbs.

GAU-12 25MM gun weight 575 lbs.

GAK-14 25MM ammo handling weight approx 275 lbs.

Recommendation:

MF GM-02A should have modifications to the I-beam and doorway opening to incorporate a traveling I-beam the same length as the existing I-beam (Item #9) that extends outside the MMF from the entryway of GM-02A. This could be accomplished by suspending a secondary I-beam from existing I-beam and attaching the new I-beam on dual top bottom joined weight-bearing rollers. The existing hoist (Item 54) should then be reinstalled on the lower, door-extendable I-beam for the lifting and movement of all gun series into and out of MF GM-02A.

Considering that attaching an extendable rail to the existing rail system will considerably lower the hoist position, in order to clear the door opening. It may be a good idea to use an end opening type MF Shell. It has a much larger double door that opens the entire end of the MF.

Also, it may be easier to fabricate a standalone external frame with a rail system that can be broken down and shipped within the MF. It should be a much easier process to have something made with an extending rail system that can move the gear into the MF.

Status/Course of Action: (Funded Yes No N/A)

04/25/10 - Accepted

04/13/11 - This AI may generate a shell change for this configuration--well beyond just an added extension to the hoist/rail. (IPT may want to do a full design review since the design is 17 years old.) NI Engineering plans to contact CW04 Gerace at MALS-16 (author of AI) to gather more input.

04/29/11 - The recommended changes to this configuration involve significant changes to the rail/hoist and also requires review of the need to provide a wider door opening to move the gun assembly into the MF to prevent damage to it, and the doorway. At the time of this writing, a MALS site visit to view these GM02 issues is planned for May 2011. Due to the significant changes this action item recommends, a design review will be necessary.

06/15/11 - MALS-16 visit complete with info on F-18 guns system captured. Still need to get a visual on AV8-B Gun as diagrams/ drawings are inconclusive. Trip to Yuma (MALS-13) tentatively planned for July, after LRG. Information reviewed to date is inconclusive as to whether an extendable rail rail/hoist can be added.

Action Agency: NI Engineering **Assigned To:** Lloyd Bjurman **Date Assigned:** 04/25/10

Est. Completion Date: 06/30/12 **Act. Completion Date:** _____ **Closed By:** _____