

Critical LFT&E Issues – Ground Combat System Example

3.6.1.1 Critical LFT&E Issues.

Critical LFT&E Issue		Evaluation Strategy	Data Source				
			Existing Data	PIM LFT	BDAR/R	M&S	Eng. Analysis
1	What is the vulnerability of the combat loaded Paladin Integrated Management (PIM) and crew to the spectrum of current (Initial Operational Capability [IOC]) and future (IOC+10) threats?	Use all test data and modeling and simulation (M&S). Use engineering judgment to evaluate any synergistic effects that contribute to vehicle or crew vulnerability.	x	x	x	x	x
1.1	What are the major causes of crew and passenger casualties and incapacitation?	Use all test data and M&S. Use engineering judgment to evaluate any synergistic effects that contribute to vehicle or crew vulnerability.		x		x	x
1.2	How do stowed ammunition, supplies, and onboard equipment contribute to vulnerability?	Conduct Full-Up System Level (FUSL) testing. Use engineering judgment to supplement M&S and test data to evaluate.	x	x		x	x
1.3	How do vehicle subsystems contribute to vulnerability?	Conduct component testing, fuel subsystem testing, and FUSL test events. Use engineering judgment to supplement M&S and test data to evaluate.		x		x	x
1.4	How well does the PIM meet ballistic requirements?	(See Attachment 3 for threats corresponding to ballistic requirements.)	x	x		x	x
1.5	What is the penetration resistance of the armors?	(See Attachment 3 for direct fire, indirect fire, and improvised explosive device [IED] threats.)	x	x			

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1.6	What are the behind armor debris characteristics following penetration?	(See Attachment 3 for overmatching threats.)		x		x	
1.7	What are the ballistic shock vulnerabilities of PIM components?	Conduct component testing and FUSL test events. Use engineering judgment to supplement test data to evaluate.		x			x
2	What components are mission critical? What is the vulnerability of these components and how do they impact the mission accomplishment?	Conduct component testing and FUSL test events. Conduct battle damage assessment and repair/recovery (BDAR/R) following FUSL test events. Use engineering judgment, Mission-Based Test and Evaluation (MBT&E), and M&S to supplement BDAR/R to evaluate.		x	x	x	x
3	Are there unexpected vulnerabilities or unexpected levels of vulnerabilities?	Use all test data and M&S. Use engineering judgment to supplement M&S and test data to evaluate.		x		x	x
3.1	What is the operational significance of the unexpected vulnerabilities?	Conduct BDAR/R following FUSL test events. Use engineering judgment and MBT&E to supplement BDAR/R to evaluate.			x		x
3.2	How can these vulnerabilities be reduced?	Conduct BDAR/R following FUSL test events. Use engineering judgment to supplement BDAR/R to evaluate. Use M&S to make recommendations for vulnerability reductions			x	x	x

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4	What are the planned vulnerability reduction measures and how do they contribute to vehicle or crew survivability?	Conduct BDAR/R following FUSL test events. Use engineering judgment to supplement BDAR/R to evaluate. Use M&S to make recommendations for vulnerability reductions		x	x	x	x
5	How effective is BDAR/R in restoring the vehicle to functional combat capability and in recovering damaged vehicles following an attack?	Conduct BDAR/R following FUSL test events. Assessment by BDAR/R team.			x		
5.1	What design features facilitate or inhibit troubleshooting, repair or recovery?	Conduct BDAR/R following FUSL test events. Assessment by BDAR/R team.			x		
5.2	How effective and reliable are built-in diagnostic capabilities or the Vehicle Health Management System (VHMS) in supporting the BDAR process (if equipped)?	Conduct BDAR/R following FUSL test events. Assessment by BDAR/R team.			x		
5.3	Are BDAR manuals available and adequate?	Assessment by BDAR/R team.			x		
5.4	Is BDAR training, doctrine and provisioning adequate to facilitate the repair of battle damage vehicles?	Conduct BDAR/R following FUSL test events. Assessment by BDAR/R team.			x		
5.5	Does vehicle design allow expedient and safe recovery with existing recovery equipment?	Conduct BDAR/R following FUSL test events. Assessment by BDAR/R team.			x		