

HEAVY EQUIPMENT RECOVERY COMBAT UTILITY LIFT AND
EVACUATION SYSTEM (HERCULES)
M88A2 System Plan

PROGRAM SUMMARY
SECTION I

The Heavy Equipment Recovery Combat Utility Lift and Evacuation System (HERCULES) (M88A2) is the Army's heavy tracked recovery vehicle. It is designed to fill a void in the Army's ability to safely and efficiently recover disabled vehicles in the 56-70 ton weight range. A single M88A1, the Army's medium recovery vehicle, cannot safely recover an Abrams tank due to traction and braking difficulties. There is a Safety of Use Message that requires the use of two M88A1 vehicles to recover an Abrams tank. This significantly diminishes the efficiency of the recovery fleet on the battlefield. The HERCULES was designed as a significant performance upgrade to correct this deficiency. The Low Rate Initial Production contract for the HERCULES was awarded in 1994. The HERCULES program entered Full Rate Production in Fiscal Year (FY) 1998.

The HERCULES provides the following performance improvements over the M88A1:

- a. Upgraded Powertrain
- b. 35 Ton Boom (40 percent more hoisting capability)
- c. 70 Ton Main Winch (55 percent more winching capability)
- d. Auxiliary Winch
- e. Upgraded Suspension
- f. Increased Armor Protection (30 mm)
- g. Single vehicle versus multiple vehicle tow
- h. Improved Hydraulic and Electrical Systems

As a combat enabler, the M88A2 will further enhance the capability of the warfighter by keeping pace with the supported system, improving soldier effectiveness, and reducing the logistics footprint. The more efficient we can make the soldier in the performance of recovery tasks, the more time the soldier will have available for other required tasks. Improved efficiency in recovery operations will afford a more effective

recovery mission, facilitating the rapid return of combat systems to the fight.

INITIATIVE DESCRIPTION SECTION II

INITIATIVE: M88A2 Recapitalization Program

The Vice Chief of Staff of the Army and Army Acquisition Executive approved the HERCULES program as a Recapitalization (RECAP) Program. Aside from total program quantities, the HERCULES RECAP program will be executed exactly as the HERCULES program had been conducted prior to the RECAP process. The approved HERCULES RECAP program provides for a total of 58 vehicles to be procured in FY 2002-2005. This quantity added to 102 vehicles already in the field and 29 vehicles procured in FY 2001 will complete the total Army Procurement Objective of 189 HERCULES. This quantity will support the Counterattack Corps (4th Infantry Division, 1st Cavalry Division, 3rd Army Cavalry Regiment, and 3rd Infantry Division) and a contingent of schoolhouse vehicles.

The HERCULES program begins by inducting a non-operational M88A1 at Anniston Army Depot, where it is completely torn down. Only the hull and a few other monolithic steel pieces are salvaged. These are shipped to United Defense, Limited Partnership, where an M88A2 is built using all new components and parts. There are no vehicle parts, components, or assemblies that are recapped (i.e. rebuilt or refurbished) in this process.

Business Process Improvement Office (BPI) will track the HERCULES RECAP by:

- a. Utilizing data provided by existing and future data collection systems.
- b. Utilizing existing data sources and leveraging on the Army Materiel Systems Analysis Activity (AMSAA) existing infrastructure and experience.
- c. Data collection systems are expected to be introduced into the field in the Fourth Quarter, FY 2002. This information will then be entered into the Predictive Maintenance Module (formerly Failure Analysis and Maintenance Planning System).

SYSTEM SPECIFIC DATA COLLECTION SECTION III

Method of Performance Measurement:

Mean Time Between Replacement and Mean Miles Between Replacement are subject to adjustment following trend analysis. The baseline for estimated hours and miles were calculated based on component test data. We will initiate data collection in approximately October 2002 for currently fielded vehicles and add additional data collection when the overhaul program is initiated at Anniston Army Depot in approximately January 2003. Adjustments to the baseline will be made at that time.

The following will be tracked for specified performance:

TRACKING FOR HERCULES RECAP SYSTEM

The following is a list of End Item components and Line Replacement Unit determined to require mandatory parts replacement. These items will be tracked as part of the overall HERCULES RECAP Program assessment.

RELIABILITY GOALS.

Nomenclature	National Stock Number (NSN)	Legacy	Projected MTBF	Percent Increase
Engine	2515-01-414-6821		250 Hours	
Transmission	2520-01-417-4144		2500 Miles	
Final Drive Left	2520-01-432-2681		3000 Miles	
Final Drive Right	2520-01-432-2685		3000 Miles	

KEY:

MTBR – Mean Time Between Removals

MTBF – Mean Time Between Failures

All signatories agree to the following:

- a. This is a living document and is current as of May 30, 2002.
- b. The Methods of Performance Measurements are outlined above.
- c. The Headquarters, Department of the Army (HQDA) BPI in coordination with all parties, will track results of HERCULES recap performance metrics established in this agreement.
- d. The HQDA BPI in coordination with all parties, will supply tracking results to participating organizations via the BPI website and tailored reports.
- e. The HQDA BPI will report tracking results to Army Senior Staff.
- f. The PM HERCULES in coordination with all parties will assist with metric development to be used in tracking execution.
- g. The PM HERCULES in coordination with signatories (dependent upon who is funding the effort) will supply FSR report data to HQDA BPI.
- h. The warfighters will ensure continued emphasis on accurate data reporting.
- i. The warfighters will facilitate/authorize HQDA liaison visits when necessary.
- j. Component/sub-component serial numbers will be linked prior to fielding. Retrofit and method of data collection will be determined in fielded systems.
- k. The PM HERCULES will provide updates to induction/distribution schedules, performance standards and baselines whenever necessary to HQDA BPI.
- l. The HQDA will furnish funding details as requested.
- m. The Deputy Assistant Secretary of the Army (Cost and Economics) (DASA (CE)) will perform substantive review of MACOM validated economic analysis for recapitalization and perform independent evaluations and analyses when applicable.
- n. AMC will provide independent evaluations and analyses to be conducted by AMSAA.

AGREEMENT DATE: May 30, 2002

Approved By:

PM, M88A2 Mr. William P. White/s- October 7, 2002

PM, CMS COL Michael Asada/s-October 7, 2002

PEO
CS & CSS BG Roger A. Nadeau/s-September 9, 2003

AMC COL Moses Whitehurst/s-October 16, 2002

FORSCOM
(Representing Warfighters) Mr. Milton L. Ford/s-October, 28, 2002

TRADOC
System Manager No TSM

DASA (CE) Mr. Robert Conley/s-August 15, 2002

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