

Abrams Tank Upgrade

INVESTMENT COMPONENT

Modernization

Recapitalization

Maintenance

MISSION

Provides mobility, firepower, and shock effect with lethality, survivability, and fightability necessary to close with and destroy enemy forces on the integrated battlefield.

DESCRIPTION

The Abrams Tank Upgrade includes two powerful variants, the M1A1 SA (Situational Awareness) and the M1A2 SEP (System Enhancement Program) Version 2. The 1,500-horsepower AGT turbine engine, the 120mm main gun, and special armor make the Abrams tank particularly lethal against heavy armor forces. Both variants feature the new Block I 2nd generation forward-looking infrared (FLIR) technology and ballistic solution upgrades for the M829A3 kinetic and the M1028 canister rounds.

M1A1 SA: Improvements include the Gunner's Primary Sight (GPS),

with the new Block I 2nd generation FLIR technology and the Stabilized Commander's Weapon Station (SCWS). Modifications include Blue Force Tracking (BFT), a digital command and control system that gives commanders information about their location relative to friendly forces; and the Power Train Improvement and Integration Optimization Program (Total InteGrated Engine Revitalization (TIGER) engine and improved transmission), which provides more reliability and durability. Survivability improvements include frontal armor and turret side armor upgrades.

M1A2 SEP v2: Lethality improvements include the Common Remotely Operated Weapon Station (CROWS). The M1A2 SEP v2 has enhanced microprocessors, color flat-panel displays, better Soldier-machine interface, and a new open operating system designed to run the Common Operating Environment (COE) software. Both the GPS and the Commander's Independent Thermal Viewer (CITV) tank include Block I FLIR technology. The M1A2 SEP has improved frontal and side armor for enhanced crew survivability. The vehicle is also equipped with battery-based

auxiliary power, TIGER, and an upgraded transmission for improved automotive reliability and durability.

SYSTEM INTERDEPENDENCIES

Other Major Interdependencies

Army Battle Command System (ABCS), Blue Force Tracker (BFT), FM Voice-Advanced SINGARS Improvement Program (ASIP) Radio, System of Systems Common Operating Environment (SOSCOE)

PROGRAM STATUS

- **Current:** 3rd Armored Cavalry Regiment; 4th Infantry Division; 1st Cavalry Division; 1st Armored Division; Army Prepositioned Stocks 4 and 5; 1st Brigade, 2nd Infantry Division; 1st Armored Division; 3rd Infantry Division; 2nd Brigade, 1st Infantry Division, and the Training and Doctrine Command, Fort Benning GA are equipped with the Abrams M1A2 SEP v2.
- **Current:** Abrams production of the M1A2 SEP v2 tank continues for both the Active Army and the Army National Guard (ARNG) through June 2014.

PROJECTED ACTIVITIES

- **FY13:** Development of the next version of the Abrams tank begins. The upgrade will focus on increasing the electrical power margin, improving survivability with improved armor protection and advanced counter-IED protection, integrating the new Army network, electronic component improvements, a new auxiliary power unit, and an ammunition data link.
- **FY13-FY14:** Continue M1A2 SEP v2 production with final delivery in June 2014.
- **FY13-FY15:** 116th Heavy Brigade Combat Team (HBCT), ID ARNG will be fielded with the Abrams M1A2 SEP v2 tank; M1A1 SA fielding continues to the 30th HBCT, NC ARNG; 81st HBCT, WA ARNG; 155th HBCT, MS ARNG; 1-34 HBCT, MN ARNG; 278th HBCT, TN ARNG, 55-28th HBCT, PA ARNG; 1-118th Combined Arms Army Battalion (CAB), SC ARNG; 1-145th CAB, OH ARNG, 2-137th CAB, KS ARNG; 11th ACR; and Regional Training

ACQUISITION PHASE

Technology Development

Engineering & Manufacturing Development

Production & Deployment

Operations & Support

Abrams Tank Upgrade

FOREIGN MILITARY SALES

M1A1:

Australia (59), Egypt (1,130), Iraq (140)

M1A2:

Kuwait (218)

M1A2/M1A2S:

Saudi Arabia (329)

CONTRACTORS

Prime:

General Dynamics Land Systems
(Sterling Heights, MI)

Engine:

Honeywell (Phoenix, AZ)

Transmission:

Allison Transmission (Indianapolis, IN)
Anniston Army Depot (Anniston, AL)



Combat weight (tons): M1A1 - 68.59; M1A2 SEP v1 - 68.57;
M1A2 SEP v2 - 69.29

Speed: 42 mph, 30 mph cross-country

Main gun/rounds (basic load): M1 - 105mm/55 rounds

M1A1 - 120mm/40 rounds; M1A2 - 120mm/42 rounds

Machine guns: .50 caliber 900 rounds, 7.62mm 11,400 rounds

