

Abrams Tank Upgrade (M1A2)

INVESTMENT COMPONENT

Modernization

Recapitalization

Maintenance

MISSION

Closes with and destroys enemy forces on the integrated battlefield using mobility, firepower, and shock effect with lethality, survivability, and fightability necessary to defeat advanced threats.

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.

M1A1 SA: Improvements include the Gunners Primary Sight (GPS) with improved thermal imaging capabilities of the new Block I 2nd generation forward-looking infrared (FLIR) technology.

Lethality improvements include the Stabilized Commander's Weapon Station (SCWS) and ballistic solution upgrades for the M829A3 kinetic and the M1028 canister rounds. Common Abrams modifications include Blue Force Tracking (BFT), which is a digital command and control system that gives Army commanders across the battlefield current information about their location relative to friendly forces; and the Power Train Improvement and Integration Optimization Program (TIGER engine and improved transmission), which provides more reliability, durability, and a single standard for the vehicle's power train. Survivability improvements include frontal armor and turret side armor upgrades.

M1A2 SEP v2: Upgrades include improved survivability, automotive power pack, computer systems, and night vision capabilities. Lethality improvements include Common Remotely Operated Weapon Station (CROWS) and ballistic solution upgrades for the M829A3 kinetic and the M1028 canister rounds. The M1A2 SEP v2 has improved microprocessors, color flat panel displays, improved memory capacity,

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) on the M1A2 SEP tank include the improved thermal imaging capabilities of the new Block I second-generation FLIR technology. The M1A2 SEP has improved frontal and side armor for enhanced crew survivability. The M1A2 SEP is also equipped with battery based auxiliary power, Total InteGrated Engine Revitalization (TIGER), and an upgraded transmission for improved automotive reliability and durability.

SYSTEM INTERDEPENDENCIES

None

PROGRAM STATUS

- **Current:** The 1st Cavalry Division; 4th Infantry Division; 3rd Armored Cavalry Regiment, 1st Brigade; 1st Armored Division; Army Prepositioned Stock 5 (Kuwait); and the Army National Guard's Regional Training Institute and Regional Training Site-Maintenance are equipped with the Abrams M1A2

SEP v2; 1st Infantry Division and 3rd Infantry Division are equipped with the Abrams M1A1 SA; Theater Sustainment Stock (Kuwait) outfitted with both M1A1SA and M1A2 SEP v2 tanks

- **Current:** Abrams production of M1A1 SA and M1A2 SEP v2 tanks continue for both the Active Army, Army National Guard (ARNG) and the Training and Doctrine Command to meet the Army's modularity goals by 2013

PROJECTED ACTIVITIES

- **FY11-12:** 3rd Infantry Division, 4th and 2nd Brigades, 1st Armored Division, 1st Brigade, 2nd Infantry Division, and 116th Heavy Brigade Combat Team, Idaho ARNG will be fielded with the Abrams M1A2 SEP v2 tank; M1A1 SA fielding continues to the 30th NC ARNG, 81st WA ARNG, 155th MS ARNG, 11th ACR, and Army Prepositioned Stock 4 (Korea)
- **FY11-12:** Continue M1A2 SEP v2 multi-year contract production
- **FY11-12:** Continue TIGER production

ACQUISITION PHASE

Technology Development

Engineering & Manufacturing Development

Production & Deployment

Operations & Support

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FOREIGN MILITARY SALES

M1A1: Australia (59), Egypt (1,005), Iraq (140)

M1A2: Kuwait (218), 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 x-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

