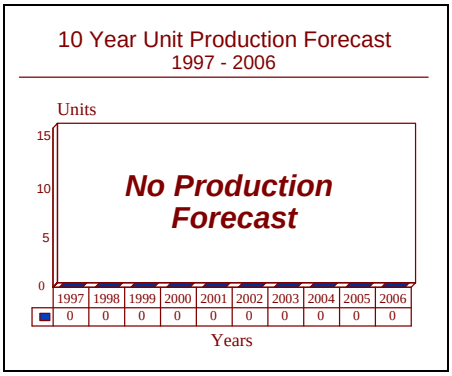
M60 - Archived 3/97

Outlook

- Production of the M60 completed in 1987
- A total of 15,914 M60 tanks manufactured
- M60 remains in service in at least 21 nations
- Additional modernization or retrofit programs for this tank are forecast



Orientation

Description. A tank

Sponsor. The development and United States procurement of the M60 was sponsored by the United States Department of Defense through the United States Army Tank and Automotive Command.

Contractors. This tank was originally developed and manufactured by the Chrysler Corporation at the Detroit Tank Plant. In March of 1982, Chrysler sold its tank production operation to General Dynamics, Land Systems Division, Warren, Michigan, United States of America. Major subcontractors included Teledyne Continental, General Motors Corporation/Allison Transmission Division, General Motors Corporation/Hughes Aircraft Company, Kollsman Instrument Company, Optic Electronic Corporation, Texas Instruments and Watervliet Arsenal.

Licensee. OTO Melara (now OTOBREDA), La Spezia, Italy, had a license to manufacture the M60.

Status. The serial production of the M60 ended in August of 1987. The tank remains in widespread service around the world.

Total Produced. A total of 15,914 M60 tanks was produced, including 200 in Italy.

Application. A tank for the projection of power as well as defensive missions.

Price Range. In Fiscal 1980 United States dollars, the unit price of the M60A3 was $869,000. Inflationary pressures plus a lower production rate raised the price to approximately $1.69 million per unit in 1985. An M60A3TTS conversion cost $292,000 per unit in 1991 dollars; this price is essentially the same in 1997. Beginning in 1991, the United States of America offered the M60A1 and A3 to selected nations for the shipping costs.

Technical Data

Crew. Four: commander, gunner, loader, driver.

Armor. The M60 is fitted with conventional rolled homogeneous armor. Some nations have fitted explosive reactive armor to this tank.

Dimensions. The following data are pertinent for the M60A3TTS.

	SI units	**US units**
Length	9.44 meters	30.97 feet
Width	3.63 meters	11.91 feet
Height	3.46 meters	11.35 feet
Fuel capacity	1,430 liters	380.31 gallons
Combat weight	51.98 tonnes	52.30 tons

Performance. The maximum speed and range figures are on a metalled road.

Maximum speed	48.3 kilometers per hour	29.98 miles per hour
Maximum range	500 kilometers	310.5 statute miles
Step	92 centimeters	3.01 feet
Trench	2.59 meters	8.49 feet
Slope	30%	30%
Gradient	60%	60%
Fording	1.22 meters	4.0 feet

Engine. Teledyne Continental provides the AVDS-1790-2D RISE (Reliability Improved Selected Equipment) 12 cylinder, supercharged, air cooled diesel engine rated at 559.3 kilowatts (750 horsepower) at 41.67 revolutions per second (2,500 revolutions per minute). The power-to-weight ratio is 10.76 kilowatts per tonne (14.34 horsepower per ton). A 24 volt 650 ampere generator and six 24 volt batteries compose the electric fit.

Gearbox. The M60 uses the Allison Transmission Division of General Motors Corporation CD-850-6A crossdrive gearbox with two forward and one reverse gear ratios and a hydraulic torque converter. Hydro-mechanical steering is used.

Suspension and Running Gear. The M60 uses a torsion bar type suspension with six dual tired road wheels and three return rollers. The first, second and sixth road wheel stations are each provided with a hydraulic shock damper.

Armament. The main armament of this tank is a license-produced Royal Ordnance L7A1 105 millimeter cannon designated M68. The L7, in slightly modified form, is manufactured under license by Watervliet Arsenal. This cannon is equipped with a fume extractor and is capable of firing all NATO standard 105 millimeter tank cannon ammunition; elevation is +20° and depression is -9°. An M85 12.7 millimeter machine gun is mounted on the commander's cupola and a Fabrique Nationale Nouvelle Herstal M240 7.62 millimeter machine gun is coaxially mounted with the main armament. Six M239 smoke grenade launchers are mounted on each side of the turret.

Fire Control. The turret drive is electro-hydraulic with manual back up; the M68 cannon is fully stabilized. The laser rangefinder is provided by Kollsman; this equipment, designated AN/VVG-2, is a neodymium yttrium-aluminum garnet type; the ballistic computer, designated M21, is also provided by Kollsman. The gunner's primary sight is the Texas Instruments AN/-VSG-2 thermal night sight also called the Tank Thermal Sight; the secondary optical sight is the M36E1. The driver's night sight is the AN/VVS-2; it is an infrared type. A one kilowatt searchlight, eight vision blocks for the commander, an M37 periscope for the gunner and three M27 periscopes for the driver are provided.

Variants/Upgrades

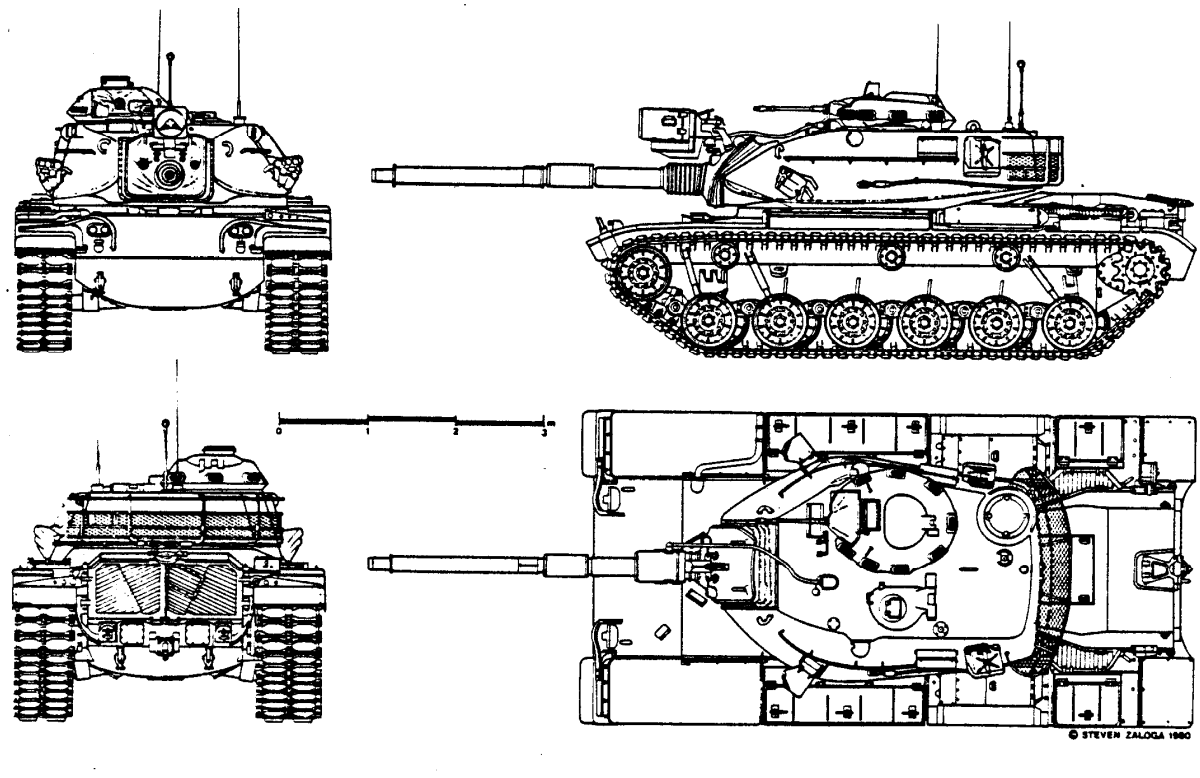
Variants. The M60 has been developed into a number of variants which have reached production. The following programs are described in detail in the Engineering Vehicles tab in this book.

Robotic Obstacle Breaching Assault Tank. In order to keep pace with the mine detection and clearing requirements of a modern battlefield, the United States Army has developed the XM1060 Robotic Obstacle Breaching Assault Tank. This vehicle is based on an existing M60 tank chassis (without the turret) upgraded to the A3 configuration on which the following specialized equipment was installed: a set of mine clearing rollers; a Clear Lane Marking System mounted on the rear of the chassis to provide lighted markers (cyalume lightsticks) indicating the cleared path; and armored pods at the turret location for two Mark 22 Mod 4 rockets and M58A3 Mine Clearing Line Charge. The vehicle was operated either manually or unmanned by radio control/fiber-optics for operation and viewing from a remote location. The development of the XM1060 was funded under program element numbers 64612A-Countermine & Barriers and 63619A-Landmine & Barrier Systems.

In late 1987, the Army decided to retain additional funding for the development of this system as a cost-cutting measure and to release funds for higher priority projects. To date, two M60A3-based Robotic Obstacle Breaching Assault Tank prototypes have undergone trials at Aberdeen Proving Grounds and Fort Knox. Initial procurement plans called for 142 XM1060 vehicles to be converted from existing M60A2s in storage at Anniston Army Depot, but have now been put on hold. At some future date the Army may take the Robotic Obstacle Breaching Assault Tank back "off the shelf" and fund its procurement.

Armored Vehicle Launched Bridge. The United States Army and United States Marine Corps continue to fund on an as needed basis the M60 Armored Vehicle Launched Bridge conversions. The Armored Vehicle Launched Bridge transports, deploys and retrieves an 18.29 meter (60 foot) scissors bridge. The bridge is carried, folded in half, atop the tank chassis. All conversions have been accomplished at the Anniston Army Depot utilizing M60A2 tanks held in storage. The Armored Vehicle Launched Bridge modification kits are supplied to Anniston by Universal Hydraulics.

M728 Combat Engineer Vehicle. This variant of the M60 mounts a hydraulically operated dozer blade, A frame, two speed winch and the M135 165 millimeter demolition gun. Approximately 319 M728 vehicles have been manufactured.



M60

Source: Forecast International

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