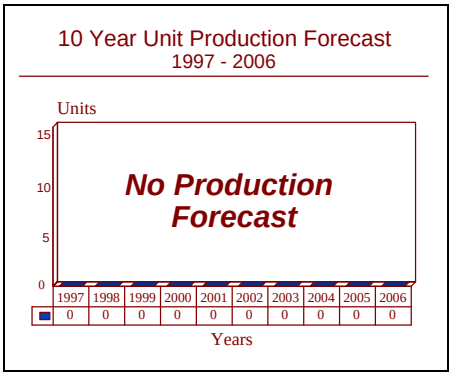
M52 105 mm Self-Propelled Howitzer - Archived 4/97

Outlook

- The serial production of the M52 was completed in 1958
- A total of 684 M52 systems was manufactured
- Only a minimal amount of modernization and retrofit potential exists for the remaining systems



Orientation

Description. A tracked 105 millimeter self-propelled artillery system.

Sponsor. The development and procurement of the M52 was sponsored by the United States Department of Defense through the United States Army Materiel Command and the Armament, Munitions and Chemical Command.

Contractors. This artillery system was manufactured at the Detroit Arsenal by General Motors Corporation; Detroit, Michigan, United States of America.

Licensees. None

Status. The manufacture of the M52 was completed in 1958 and the system remains in service in a number of countries.

Total Produced. A total of 684 M52/M52A1 artillery systems was manufactured.

Application. Mobile artillery support for the field army at the battalion level.

Price Range. The M52 has not been extensively traded on the international market through Foreign Military Sales/Military Assistance Programs channels or by principals or brokers. Most of the present users received their inventories some time ago. The latest reported sale of the M52 was in early 1985 for two units by an international principal to an unspecified Asian nation; the unit price was $86,000.

Technical Data

Crew. Five

Muzzle Brake. None

Recoil System. Hydromechanical

Breech Mechanism. Vertically sliding block

Ammunition. The M52 can fire most United States/ NATO standard 105-millimeter ammunition types.

Dimensions. The following data are pertinent to the M52A1.

	SI units	US units
Length	5.79 meters	18.99 feet
Width	3.15 meters	10.33 feet
Height	3.32 meters	10.89 feet
Combat weight	24.04 tonnes	26.5 tons
Fuel capacity	678 liters	180.32 gallons
Ordnance caliber	105 millimeters	4.13 inches

Performance. Aside from a slower (56.3 kilometers per hour - 35 miles per hour) maximum speed, the automotive performance of the M52 and M52A1 are essentially the same; these data are on a metalled road. The maximum ordnance range is when firing the standard M1 High Explosive projectile.

Maximum speed	67.6 kilometers per hour	41.98 miles per hour
Maximum range	160 kilometers	99.36 statute miles
Step	91.4 centimeters	2.99 feet
Trench	1.83 meters	6.0 feet
Slope	32%	32%
Gradient	60%	60%
Fording	1.22 meters	4.0 feet
Elevation	+65°	+65°
Depression	0°	0°
Traverse	60° left and right	60° left and right
Maximum ordnance range	15,000 meters	16,404 yards
Maximum rate of fire	10 rounds per minute	10 rounds per minute

Engine. The original M52 uses a Continental (now Teledyne Continental) AOS-895-3 six-cylinder, air cooled, supercharged spark ignition engine rated at 373 kilowatts (500 horsepower) at 46.67 revolutions per second (2,800 revolutions per minute). The power-to-weight ratio is 15.52 kilowatts per tonne (18.87 horsepower per ton). The M52A1 uses a fuel injected version of that same engine designated AOSI-895-5; this version is rated the same as the -3 engine. A 24 volt electrical system with four model 6TN 12 volt batteries is the standard electrical fit. A General Motors Model A41-1 spark ignition engine is used as an auxiliary power unit.

Gearbox. The Allison Transmission Division of General Motors Corp CD-500-3 gearbox with four forward and two reverse gear ratios is used.

Suspension and Running Gear. The M52 uses a torsion bar suspension with six dual tired road wheels and four return rollers on each side. The first, second, fourth and fifth road wheel stations are provided with hydraulic shock dampers.

Fire Control. The M52 can be used for direct and indirect fires as needed. For indirect fires, the targeting information is from a forward observer through a fire direction center command post. The crew of the M52 receives this data by radio and then lays the cannon in the appropriate manner. The gunner has a M100 four power panoramic telescope with a ten degree field of view, a M101 direct fire telescope with similar optical parameters, azimuth indicator and gunner's quadrant.

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