

90mm Gun Motor Carriage M36

GENERAL DATA

Crew: 5 men
 Length: Gun forward w/o muzzle brake 293 inches
 Length: Gun to Rear w/o muzzle brake 247 inches
 Length: w/o Gun, 235.1 inches
 Gun Overhang: Gun forward w/o muzzle brake 58 inches
 Width: 120 inches
 Height: Over AA MG 129 inches
 Tread: 83 inches
 Ground Clearance: 17 inches
 Fire Height: 85 inches
 Turret Ring Diameter: (inside) 69 inches
 Weight Combat Loaded: 63,000 pounds
 Weight Unstowed: 58,000 pounds
 Power to Weight Ratio: Net 14.3 hp/ton
 Gross 15.9 hp/ton
 Ground Pressure: Zero penetration 12.9 psi

ARMOR

Type: Turret, cast homogeneous steel; Hull, rolled and cast homogeneous steel; Welded assembly

Hull Thickness:	Actual	Angled w/Vertical
Front, Upper	1.5 inches	55 degrees
Lower	4.25 to 2 inches	0 to 56 degrees
Sides upper	.75 inches	30 degrees
Lower	1.0 inches	0 degrees
Rear	.50 inches	0 to 22 degrees
Top front	0.75 inches	83 to 90 degrees
Rear	0.375 inches	90 degrees
Floor	0.50 inches	90 degrees

Turret Thickness:

Gun Shield	3.0 inches	0 degrees
Sides	1.25 inches	5 degrees
Rear	1.75 to 5.0 inches	0 degrees
Top	0.375 to 1.0 inches	90 degrees

ARMAMENT

Primary: 90mm Gun M3 in Mount M4 (T8) in Turret
 Traverse: Hydraulic and Manual 360 degrees
 Traverse Rate: (max) 15 seconds/360 degrees
 Elevation: Manual -20 to -10 degrees
 Tiring Rate: (max) 8 rounds/minute
 Loading System: Manual
 Stabilizer System: none

Secondary:

(1) .50 caliber MG HB M2 flexible AA mount on turret
 Provision for (5) .30 caliber Carbins M1

AMMUNITION

47 rounds of 90mm 12 hand grenades
 1000 rounds .50 caliber 4 smoke pots HC M1
 450 rounds .30 caliber (Carbine)

FIRE CONTROL AND VISION EQUIPMENT

Primary Weapon:	Direct	Indirect
Telescope M76D		Azimuth Indicator M18
		Gunner's Quadrant M1
		Elevation Quadrant M9
Vision Devices:	Direct	Indirect
Driver	Hatch	Periscope M6 (2)
Asst. Driver	Hatch	Periscope M6 (2)
Commander	Open turret	none
Gunner	Open turret	none
Loader	Open turret	none

Total Periscopes: M6 (6)
 Total Pistol Ports: Hull (0), Turret (1)

ENGINE

Make and Model: Ford GAA
 Type: 8 cylinder, 4 cycle, 60 degree vee
 Cooling System: Liquid Ignition: Magneto
 Displacement: 1100 cubic inches
 Bore and Stroke: 5.4 X 6 inches
 Compression Ratio: 7.5:1
 Net Horsepower (max) 450 hp at 2600 rpm
 Gross Horsepower (max): 500 hp at 2600 rpm
 Net Torque (max): 950 ft-lb at 2200 rpm
 Gross Torque (max): 1040 ft-lb at 2200 rpm
 Weight: 1560 lb. dry
 Fuel: 80 octane gasoline 192 gallons
 Engine Oil: 32 quarts

POWER TRAIN

Clutch: Dry disc, 2 plate
 Transmission: Synchronesh, 5 speeds forward, 1 reverse
 Gear Ratios: 1st 7.56:1 4th 1.11:1
 2nd 3.11 5th 0.73:1
 3rd 1.78 Reverse 5.65:1
 Steering: Controlled differential
 Bevel Gear Ratio: 3.53:1 Steer Ratio: 1.5515:1
 Brakes: Mechanical, external contracting
 Final Drive: Herringbone gear Gear ratio: 2.84:1
 Drive Sprocket: At front of vehicle with 13 teeth
 Pitch Diameter: 25.038 inches

RUNNING GEAR

Suspension: Vertical volute Spring
 12 wheels in 6 bogies (3 bogies/track)
 Tire Size: 20 X 9 inches
 6 track return rollers (1 at rear of each bogie)
 Adjustable idler at rear of each track
 Idler Size: 22 X 9 inches
 Tracks: Outside guide: T48, T49, T51, and T54E1
 Type: (T48) Double pin, 16.56 inch width, chevron, rubber
 (T49) Double pin, 16.56 inch width, parallel bar, steel
 (T51) Double pin, 16.56 inch width, smooth, rubber
 (T54E1) Double pin, 16.56 inch width, chevron, steel
 Pitch: 6 inches
 Shoes per Vehicle: 158 (79/track)
 Ground Contact Length: 147 inches

ELECTRICAL SYSTEM

Nominal Voltage: 24 volts DC
 Main Generator: (2) 24 volts, 50 amperes, driven by power take-off from main engine
 Auxiliary Generator: (1) 30 volts, 50 amperes, driven by the auxiliary engine
 Battery: (2) 12 volts in series

COMMUNICATIONS

Radio: SCR 610 in right front sponson
 Interphone: RC99, 5 stations
 Flag Set M238, Panel Set AP50A
 Pyrotechnic Hand Projector M9

FIRE AND GAS PROTECTION

(2) 10 carbon dioxide, fixed
 (2) 4 pound carbon dioxide, portable
 (2) 1 1/2 Quart decontaminating apparatus

PERFORMANCE

Maximum Speed: Sustained, level road	26 miles/hour
Maximum Grade:	60 percent
Maximum Trench:	7.5 feet
Maximum Vertical Wall:	24 inches
Maximum Forging Depth:	36 inches
Minimum Turning Circle: (diameter)	62 feet
Cruising Range: Roads	approx. 150 miles

