

### 3-Inch Gun Motor Carriage M10 (Early)

#### GENERAL DATA

Crew:	5 men	
Length: Gun forward	286.3 inches	
Length: Gun to Rear	262.5 inches	
Length: w/o Gun,	235.1 inches	
Gun Overhang: Gun forward	33.7 inches	
Width:	120 inches	
Height: Over AA MG	114 inches	
Tread:	83 inches	
Ground Clearance:	17 inches	
Fire Height:	83 inches	
Turret Ring Diameter: (inside)	69 inches	
Weight Combat Loaded:	65,200 pounds	
Weight Unstowed:	60,000 pounds	
Power to Weight Ratio:	Net	11.5 hp/ton
	Gross	12.6 hp/ton
Ground Pressure: Zero penetration	13.4 psi	

#### ARMOR

Type: Turret, rolled and 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	2 inches	0 to 56 degrees
Sides upper	.75 inches	38 degrees
Lower	1.0 inches	0 degrees
Rear	.75 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 (gun shield)	2.25 inches	45 degrees
Sides	1.0 inches	5 degrees
Rear	1.0 inches	0 degrees
Top	.75 inches	90 degrees

#### ARMAMENT

Primary: 3 inch Gun M7 in Mount M5 in Turret	
Traverse: Hydraulic and Manual	360 degrees
Elevation: Manual	-30 to -10 degrees
Tiring Rate: (max)	15 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 Carbine M1

#### AMMUNITION

54 rounds of 3 inch	12 hand grenades
1000 rounds .50 caliber	4 smoke pots HC M1
450 rounds .30 caliber (Carbine)	

#### FIRE CONTROL AND VISION EQUIPMENT

Primary Weapon:	<u>Direct</u>	<u>Indirect</u>
	Telescope M70G	Azimuth Indicator M18 Gunner's Quadrant M1 Elevation Quadrant M9
Vision Devices:	<u>Direct</u>	<u>Indirect</u>
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 (3)

#### ENGINE

Make and Model:	General Motors 6046	
Type:	12 cylinder, 2 cycle, Twin In-Line 6	
Cooling System:	Liquid	<u>Ignition:</u> Compression
Displacement:	850 cubic inches	
Bore and Stroke:	4.25 X 5 inches	
Compression Ratio:	16:1	
Net Horsepower (max)	375 hp at 2100 rpm	
Gross Horsepower (max):	410 hp at 2900 rpm	
Net Torque (max):	1000 ft-lb at 1400 rpm	
Gross Torque (max):	885 ft-lb at 1900rpm	
Weight:	5110 lb. dry	
Fuel: 80 octane gasoline	165 gallons	
Engine Oil:	28 quarts	

#### POWER TRAIN

Clutch:	Dry disc, 2 plate (2)	
Transfer case Gear Ratio	0.73:1	
Transmission:	Synchronesh, 5 speeds forward, 1 reverse	
Gear Ratios:	1 <sup>st</sup> 7.56:1	4 <sup>th</sup> 1.11:1
	2 <sup>nd</sup> 3.11	5 <sup>th</sup> 0.73:1
	3 <sup>rd</sup> 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:	None	
Battery:	(2) 12 volts in series	

#### COMMUNICATIONS

Radio:	SCR 610 in right front sponson	
Interphone:	RC99, 5 stations	
Flag Set	M238	
Pyrotechnic pistol	M2 with 18 signals	

#### 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	25 miles/hour
	Short periods level	30 miles/hour
Maximum Grade:		60 percent
Maximum Trench:		7.5 feet
Maximum Vertical Wall:		24 inches
Maximum Fording Depth:		36 inches
Minimum Turning Circle: (diameter)		62 feet
Cruising Range: Roads		approx. 200 miles

