

## Medium Tank (M3A2 Lee)

### GENERAL DATA

Crew:	6 or 7 men
Length: w/75mm gunM2, W/O sandshields	222 inches
Length: w/75mm gunM3, W/O sandshields	241 inches
Length: w/o Gun, w/o Sandshields	222 inches
Gun Overhang: Gun forward M3	19 inches
Width: over side doors	107 inches
Height: Over cupola	123 inches
Tread:	83 inches
Ground Clearance:	17 inches
Fire Height: 75mm gun	69 inches
Turret Ring Diameter: (inside)	54.5 inches
Weight Combat Loaded:	61,500 pounds *
Weight Unstowed:	57,400 pounds*
Power to Weight Ratio: Net	11.3 hp/ton
Gross	13.2 hp/ton
Ground Pressure: Zero penetration	12.6 psi

\*all weights based on T48 or T51 tracks

### ARMOR

Type: Turret, cast homogeneous steel; Hull, rolled homogeneous steel; welkded assembly

Hull Thickness:	Actual	Angled w/Vertical
Front, Upper	2.0 inches	30 degrees
Middle	1.5 inches	53 degrees
Lower	2.0 inches	0 to 45 degrees
Sides	1.5 inches	0 degrees
Rear	1.5 inches	0 to 10 degrees
Top	0.5 inches	83 to 90 degrees
Floor, Front	1.0 inches	0 degrees
Rear	0.5 inches	90 degrees
<b>Turret Thickness:</b>		
Front	2.0 inches	47 degrees
Sides	2.0 inches	5 degrees
Rear	2.0 inches	5 degrees
Top	0.875 inches	90 degrees

### ARMAMENT

Primary: 75mm Gun M2 or M3 in Mount M1 in right front hull  
 Traverse: Manual 30 degrees, (15 degrees L or R)  
 Elevation: Manual -20 to -9 degrees  
 Tiring Rate: (max) 20 rounds/minute  
 Loading System: Manual  
 Stabilizer System: Elevation only  
 37mm Gun M5 or M6 in Mount M24 in turret  
 Traverse: Hydraulic or Manual 360 degrees  
 Traverse Rate: (max) 20 seconds/360 degrees  
 Elevation: Manual +60 to -7 degrees  
 Firing rate: (Max) 20 rounds a minute  
 Loading system: Manual Stabilizer: Elevation only

### Secondary:

- (1) .30 caliber MG M1919A4 in turret cupola
- (1) .30 caliber MG M1919A4 coaxial w/37mm gun in turret
- (1) .30 caliber MG M1919A4 fixed in front plate
- Provision for (1) .45 caliber SMG M1928A1\*
- (2) in early production vehicles

### AMMUNITION

50 rounds of 75mm	12 hand grenades
178 rounds of 37mm	
1200 rounds .45 caliber	
9200 rounds .30 caliber	

### FIRE CONTROL AND VISION EQUIPMENT

Primary Weapon: Direct Indirect  
 75mm gun Periscope M1 with Gunner's Quadrant M1  
 Telescope M21A1  
 37mm gun Periscope M2 with  
 Telescope m19A1

Vision Devices:	Direct	Indirect
Driver	Hatch and	Protectiscope (1)
Gunner(75)	None	Periscope M1 (1)
Loader (75)	Hatch	Protectiscope (1)
Commander	hatch and vision slots	Protectiscope (1)
Gunner (3)	None	Periscope M2 (1)
Loader (37)	Pistol Port	Protectiscope (1)

Total Periscopes: M1(1), M2 (2)

Total Protectiscopes: (7) #

Total Pistol Ports: Hull (4)\*, Turret (1)

\*very late production (6) #Very late production (3)

### ENGINE

Make and Model: Continental R975 EC2  
 Type: 9 cylinder, 4 cycle, radial  
 Cooling System: Air Ignition: Magneto  
 Displacement: 973 cubic inches  
 Bore and Stroke: 5 X 5.5 inches  
 Compression Ratio: 6.3:1  
 Net Horsepower (max) 340 hp at 2400 rpm  
 Gross Horsepower (max): 400 hp at 2400 rpm  
 Net Torque (max): 800 ft-lb at 1800 rpm  
 Gross Torque (max): 890 ft-lb at 1800 rpm  
 Weight: 1137 lb. dry  
 Fuel: 80 octane gasoline 175 gallons  
 Engine Oil: 36 quarts

### POWER TRAIN

Clutch: Dry disc, 2 or 3 plate  
 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 top 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  
 (T51) 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: (1) 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 508, in left front sponson SCR 506 in right rear sponson on command tanks  
 Interphone: (part of radio) 5 stations plus earphones for whole crew

\*early vehicles may be equipped with SCR 245

### FIRE PROTECTION

- (2) 10 carbon dioxide, fixed
- (2) 4 pound carbon dioxide, portable

### PERFORMANCE

Maximum Speed: Sustained, level road	21 miles/hour
Short periods, level	24 miles/hour
Maximum Grade:	60 percent
Maximum Trench:	7.5 feet
Maximum Vertical Wall:	24 inches
Maximum Fording Depth:	40 inches
Minimum Turning Circle: (diameter)	62 feet
Cruising Range: Roads	approx. 120 miles

