Medium Tank (M3A2 Lee)

GENERAL DATA

Crew: 6 or 7 men
Length: w/75mm gun M2, W/O sandshields 222 inches
Length: w/75mm gun M3, 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 Clearence: 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 Amped 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

Turret Thickness: Front 2.0 inches 47 degrees
Sides 2.0 inches 47 degrees
Rear 2.0 inches 47 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)
 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
 Tiring 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
 Traverse: Manual 30 degrees
 Tiring Rate: (max) 20 rounds/minute
 Loading System: Manual
 Stabilizer System: Elevation only
Provision for (1).45 caliber SMG M1928A1*
(2) in early production vehicles

AMMUNITION
50 rounds of 75mm 12 handgrenades
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 M2A1A1
37mm gun Periscope M2 with
Telescope M19A1
Vision Devices:
Driver Hatch and
Protectoscope (1)
Gunner (75) None Periscope M1 (1)
Loader (75) Hatch
Protectoscope (1)
Commander hatch and vision slots
Protectoscope (1)
Gunner (3) None Periscope M2 (1)
Loader (37) Pistol Port
Protectoscope (1)

Total Periscopes: M1(1), M2 (2)
Total Protectoscopes: (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 lb-ft at 1800 rpm
Gross Torque (max): 890 lb-ft 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: Synchromesh, 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: 1.551:1
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: (T49) 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: (port 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 Forcing Depth: 40 inches
Minimum Turning Circle: (diameter) 62 feet
Cruising Range: Roads approx. 120 miles