

# TM 9-710

WAR DEPARTMENT TECHNICAL MANUAL

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## BASIC HALF-TRACK VEHICLES (WHITE, AUTOCAR, AND DIAMOND T)

WAR DEPARTMENT TECHNICAL MANUAL

*\*TM 9-710 — RESTRICTED*

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**BASIC HALF-TRACK VEHICLES  
(WHITE, AUTOCAR, AND  
DIAMOND T)**



WAR DEPARTMENT

*23 February 1944*

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**WAR DEPARTMENT**  
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**TM 9-710, Basic Half-track Vehicles (White, Autocar, and Diamond T),**  
is published for the information and guidance of all concerned.

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**BY ORDER OF THE SECRETARY OF WAR:**

**G. C. MARSHALL,**  
*Chief of Staff.*

**OFFICIAL:**

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*Major General,*  
*The Adjutant General.*

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(For explanation of symbols, see FM 21-6.)

## CONTENTS

### PART ONE—VEHICLE OPERATING INSTRUCTIONS

SECTION		Paragraphs	Pages
I	Introduction . . . . .	1	5
II	Description and tabulated data	2-4	6-22
III	Driving controls and operation	5-7	23-31
IV	Auxiliary equipment controls and operation . . . . .	8-9	32-33
V	Operation under unusual conditions . . . . .	10-16	34-43
VI	Inspection and preventive maintenance services . . . . .	17-21	44-53
VII	Lubrication . . . . .	22-23	54-66
VIII	Tools and equipment stowage on the vehicle . . . . .	24-33	67-94

### PART TWO—VEHICLE MAINTENANCE INSTRUCTIONS

IX	Record of modifications and new vehicle run-in tests . . . . .	34-37	95-99
X	Organization tools and equipment . . . . .	38-39	100
XI	Organizational preventive maintenance services . . . . .	40	101-117
XII	Trouble shooting . . . . .	41-57	118-132
XIII	Engine data, maintenance, and adjustment in vehicle . . . . .	58-66	133-147
XIV	Engine removal and installation . . . . .	67-68	148-156
XV	Clutch . . . . .	69-72	157-159
XVI	Fuel system . . . . .	73-78	160-169
XVII	Intake and exhaust system . . . . .	79-82	170-173
XVIII	Cooling system . . . . .	83-89	174-186
XIX	Ignition system . . . . .	90-96	187-199
XX	Starting and generating system	97-100	200-206
XXI	Transmission, transfer case, and power take-off . . . . .	101-103	207-213
XXII	Propeller shafts and universal joints . . . . .	104-106	214-217
XXIII	Front axle . . . . .	107-111	218-224
XXIV	Rear axle (jackshaft) . . . . .	112-115	225-228
XXV	Bogie suspension and track . . . . .	116-120	229-250
XXVI	Brake system . . . . .	121-134	251-285

**BASIC HALF-TRACK VEHICLES (WHITE, AUTOCAR, and DIAMOND T)**

		<b>Paragraphs</b>	<b>Pages</b>
<b>SECTION XXVII</b>	Wheels, sprockets, hubs and bearings, tires, and chains	135-138	286-292
<b>XXVIII</b>	Springs and shock absorbers	139-140	293-295
<b>XXIX</b>	Steering gear and drag link	141-142	296-302
<b>XXX</b>	Body and frame . . . . .	143-151	303-309
<b>XXXI</b>	Battery and lighting system	152-159	310-319
<b>XXXII</b>	Instruments and gages . . . .	160-165	320-325
<b>XXXIII</b>	Winch . . . . .	166-170	326-330
<b>XXXIV</b>	Shipment and temporary storage . . . . .	171-173	331-335

**PART THREE—VEHICLE ARMAMENT**

<b>XXXV</b>	Armament . . . . .	174-185	336-347
<b>REFERENCES</b>	. . . . .		348-351
<b>INDEX</b>	. . . . .		352-

**PART ONE—VEHICLE OPERATING INSTRUCTIONS**

**Section I**

**INTRODUCTION**

	Paragraph
Scope .....	1

**1. SCOPE.**

a. This technical manual is published for the information and guidance of the using arm personnel charged with the operation, maintenance, and minor repair of this materiel.

b. The specific vehicles derived from the basic half-track which is covered by this manual are designated:

- (1) Car M2 and M2A1.
- (2) Personnel Carrier M3 and M3A1.
- (3) 81-mm Mortar Carriers M4 and M4A1.
- (4) 75-mm Gun Motor Carriage M3 and M3A1.
- (5) 75-mm Howitzer Motor Carriage T30.
- (6) 105-mm Howitzer Motor Carriage T19.
- (7) Multiple Gun Motor Carriage M13.
- (8) Multiple Gun Motor Carriage M15 and M15A1.
- (9) Multiple Gun Motor Carriage M16.
- (10) 81-mm Mortar Carrier M21.

c. In addition to a description of the basic half-track vehicle, this manual contains technical information required for the identification, use, and care of the specific vehicles listed in subparagraph **b** above, and similar vehicles. This manual is divided into three parts. Part One, Section I through Section VIII, gives vehicle operating instructions. Part Two, Section IX through Section XXXIV, gives vehicle maintenance instructions to using arm personnel charged with the responsibility of doing maintenance work within their jurisdiction. Part Two also includes instructions for preparing the vehicles for shipment and temporary storage. Part Three, Section XXXV, gives armament data.

d. In all cases where the nature of the repair, modifications, or adjustment is beyond the scope or facilities of the unit, the responsible Ordnance Service should be informed so that trained personnel with suitable tools and equipment may be provided, or proper instructions issued.

**BASIC HALF-TRACK VEHICLES (WHITE, AUTOCAR, and DIAMOND T)**

**Section II**

**DESCRIPTION AND TABULATED DATA**

	Paragraph
Description .....	2
Differences among models.....	3
Tabulated data .....	4

**2. DESCRIPTION.**

a. The armored vehicles covered in this manual are the half-track type, consisting of a wheel suspension in the front, and a bogie and track suspension in the rear. The chassis is essentially the same on all the models with the main differences being in the armor plated body, converting the vehicle to best advantage for its specific duty. The chassis equipped with heavier armament are reinforced with extra frame members to carry the additional load. A roller or winch is mounted on the front end of the frame. The vehicles have doors located at advantageous positions, or side panels which fold down to gain gun depression. The vehicle has front and rear drive and is powered by a six cylinder gasoline engine.

**3. DIFFERENCES AMONG MODELS.**

a. Car M2 (figs. 1 and 2). This vehicle has a seating arrangement for a crew of ten. A driver's seat, commander's seat, and one other seat are in the driver's compartment. Arrangement of all seats is shown in figure 39. A gun rail extends throughout the inside of the body allowing the movement of the guns mounted on skates to command full 360 degrees rotation. There is no rear door on this model, but it has two large ammunition storage compartments with outside doors, located just behind the driver's compartment. A lid on each stowage chest opens from inside the vehicle, allowing removal of ammunition boxes from the top shelf. Access to the remaining shelves is reached from outside the vehicle. The gas tanks are located inside the vehicle body at the rear sides. A radio mast is located at the side of the rear center seat. There are no rifle scabbards or gun pedestals on this model and it comes equipped with a roller or a winch at the front end of the vehicle. The M2 armament consists of one caliber .30 and one caliber .50 machine gun and a caliber .45 submachine gun. A top view may be seen by referring to figure 39.

b. Car M2A1 (figs. 3 and 4). This vehicle is the same as the Car M2 with the addition of a ring mount on the front side of the driver's compartment. It has one caliber .50 machine gun in ring mount. There are also three pintles for caliber .30 machine guns, located one on each side, and one in rear.

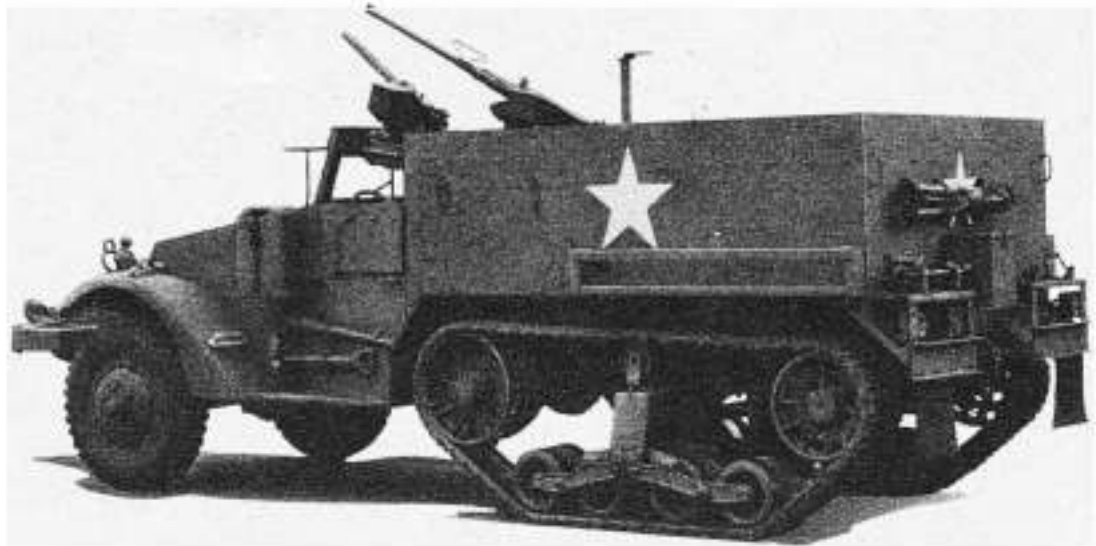
c. Personnel Carrier M3 (figs. 5 and 6). This vehicle has a seating arrangement for a crew of 13 men. There are three seats in the driver's compartment and the other ten are arranged in two rows of five each, backed up against the fuel tanks and body sides. The fuel tanks are

**DESCRIPTION AND TABULATED DATA**



RA PD 313982

**Figure 1—Car M2 (Right Front)**

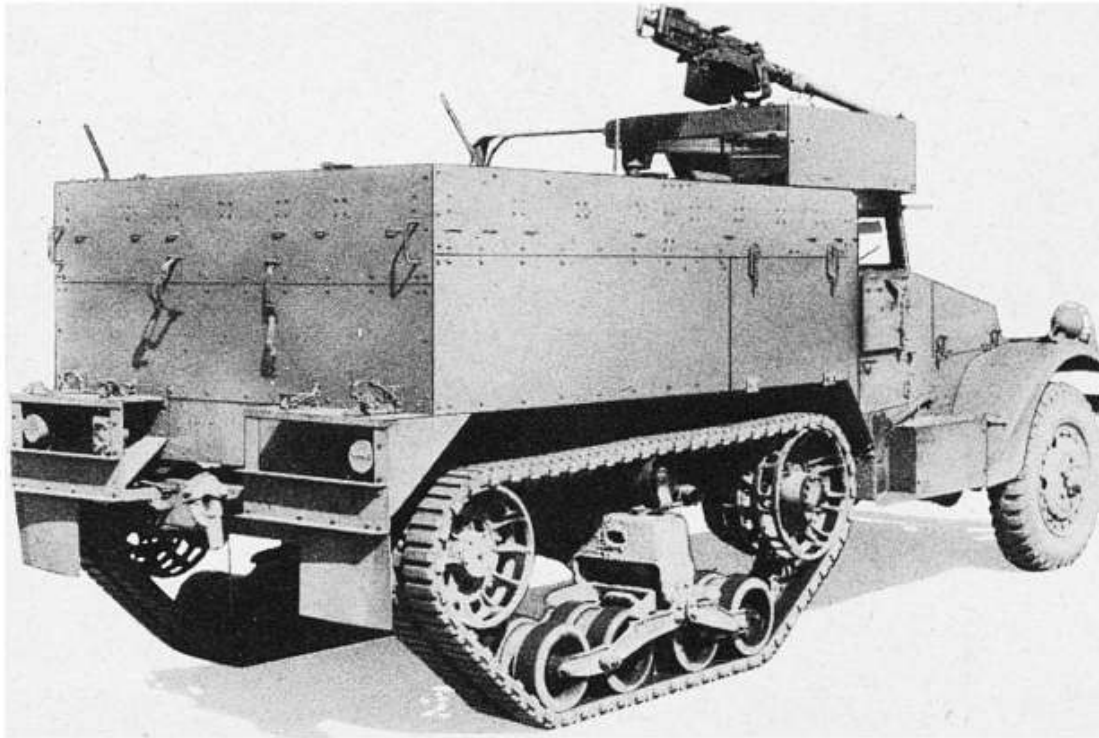


RA PD 313983

**Figure 2—Car M2 (Left Rear)**



**BASIC HALF-TRACK VEHICLES (WHITE, AUTOCAR, and DIAMOND T)**



RA PD 313984

**Figure 3—Car M2A1 (Right Rear)**



RA PD 313985

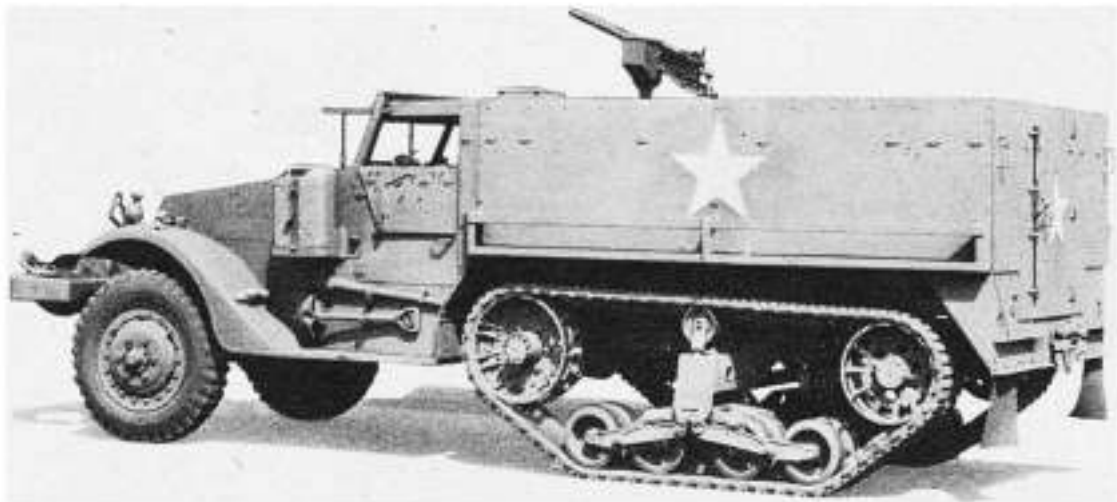
**Figure 4—Car M2A1 (Left Rear)**

DESCRIPTION AND TABULATED DATA



RA PD 313986

**Figure 5—Personnel Carrier M3 (Right Front)**



RA PD 313987

**Figure 6—Personnel Carrier M3 (Left Rear)**