DEPARTMENT OF THE ARMY
TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE MANUAL

FOR

HULL, POWERPACK, DRIVE CONTROLS, TRACKS, SUSPENSION AND ASSOCIATED COMPONENTS

CARRIER, AMMUNITION, TRACKED

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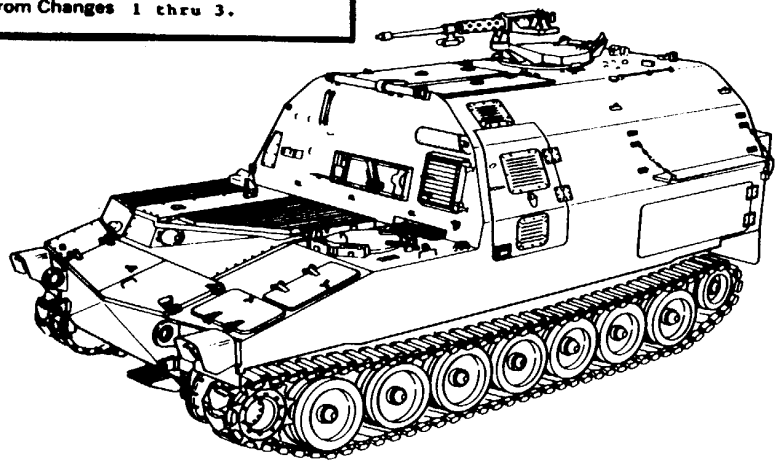

M992

(NSN 2350-01-110-4660)

OCTOBER 1985

TA309908

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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 28 OCTOBER 1985

ORGANIZATIONAL MAINTENANCE MANUAL FOR HULL, POWERPACK, DRIVE CONTROLS, TRACKS, SUSPENSION AND ASSOCIATED COMPONENTS FIELD ARTILLERY AMMUNITION SUPPORT VEHICLE M992 (NSN 2350-01-110-4660)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can improve this manual by recommending improvements using DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2, located in the back of this manual. Mail the form directly to: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-IM-OPIT, Warren, MI 48397-5000. A reply will be furnished to you.

You may also provide DA Form 2028-2 information to TACOM via datafax or e-mail:
* TACOM's fax number is DSN 786-6323 or commercial (810) 574-6323
* TACOM's e-mail address is tacom-tech-pubs@cc.tacom.army.mil

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CHAPTER 1
INTRODUCTION

Section I GENERAL INFORMATION

GENERAL INFORMATION

This manual contains instructions for organizational level maintenance of the M992.

APPENDIX A is a list of current references, including supply manuals, forms and other applicable publications.

APPENDIX B Section III, lists the common tools and supplements and special tools/ fixtures for the M992 maintenance functions.

APPENDIX C lists the torque limits for the M992.

APPENDIX D lists the expendable supplies and materials required to support the M992 maintenance functions.

APPENDIX E contains a hydraulic diagram in schematic form for the M992.

APPENDIX F contains an electrical diagram in schematic form for the M992.

APPENDIX G is an illustrated list of manufactured items for the M992. It includes complete instructions for making items authorized to be manufactured or fabricated at direct and general support maintenance.

MAINTENANCE FORMS, RECORDS AND REPORTS

Refer to DA Pam 738-750, The Army Maintenance Management System, for listing of authorized Deparment of the Army forms and for instructions on how to use these forms.

Accidents involving injury to personnel or damage to materiel will be reported on DA Form 285 (Accident Report) in accordance with AR385-40.

Explosive ammunition malfunctions will be reported m accordance with AR 75-1.

METRIC TOOLS

The M992 vehicle described in this manual is non-metric metric tools are not required.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR's)

EIR's must be submitted by anyone who is aware of unsatisfactory equipment design or operation. It is not necessary to show anew design or list abetter way to perform a procedure. Tell why the procedure is unfavorable or difficult. EIR's will be submitted on Standard Form 368. Mail directly to Commander, U.S. Army Tank-Automtive Command, ATTN: AMSTA-Q, Warren, Ml 48090.

NOTE

When equipment failure occurs that is not caused by normal wear, poor operation, or accident you must submit art Equipment Improvement Recommendation.

ADMINISTRATE STORAGE

Basic requirements for administrative storage are covered in TM 740-90-1.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Refer to TM 750-244-6 for procedures on how to destroy the M992.

Section II DESCRIPTION AND DATA

PURPOSE OF M992, CARRIER, AMMUNITION TRACKED VEHICLE

This fully armored and tracked carrier transports 155mm ammunition at convoy speed for howitzer support in both offensive and defensive combat operations.

CAPABILITIES AND FEATURES

Quick, efficient system for loading and unloading of ammunition.

Integrated ammunition cargo compartment containing

- Projectile storage racks
- Canister compartments
- Powered ammunition conveyor assembly
- Powered ammunition stacker assembly
- Crew seating for six, plus driver's and commander's seats

Remote start diesel Auxiliary Power Unit (APU) for continuous operation of electrical and hydraulic systems without use of main engine.

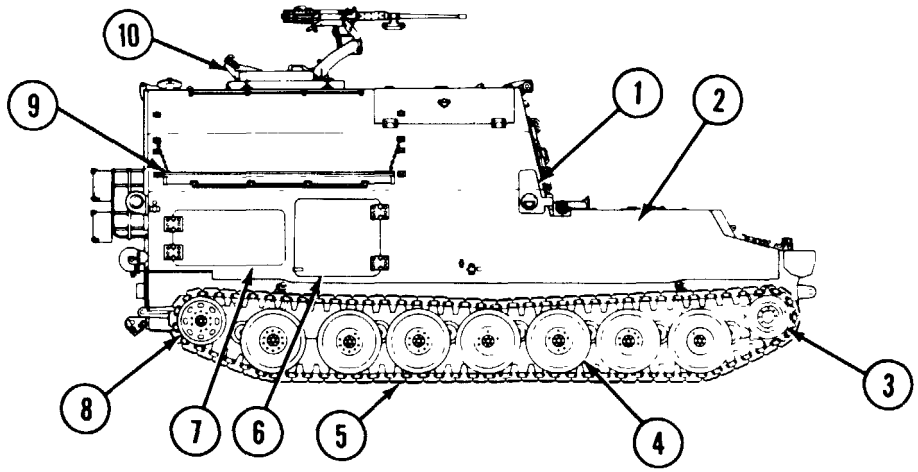
Main engine power takeoff for hydraulic system backup.

Rear door, when opened, provides overhead ballistic protection between M992 and supported howitzer.

Side doors on both sides of vehicle provide access for loading propellant charge canisters and copperhead projectiles into canister compartments.

On-board nuclear, biological and chemical (NBC) detection and protection.

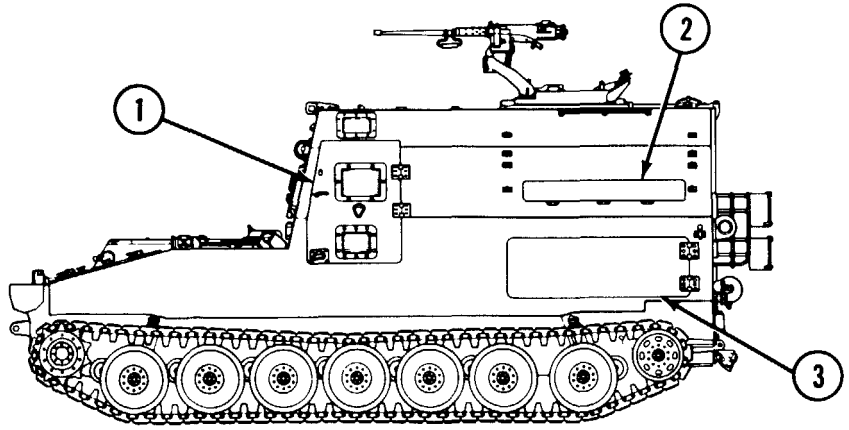
LOCATION OF VEHICLE COMPONENTS (VEHICLES 1 THRU 344) - EXTERIOR



RIGHT SIDE VIEW

LEGEND

1 Fuel fill access door
2 Hull
3 Drive sprocket
4 Roadwheel
5 Track
6 Personnel side door
7 Canister side door
8 Idler wheel
9 Duffle bag stowage rack
10 Commanders cupola

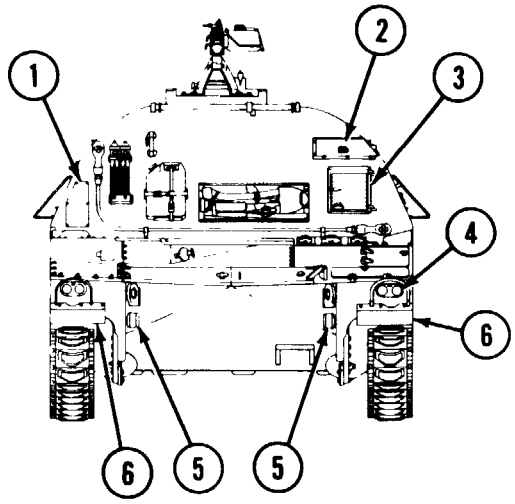


LEFT SIDE VIEW

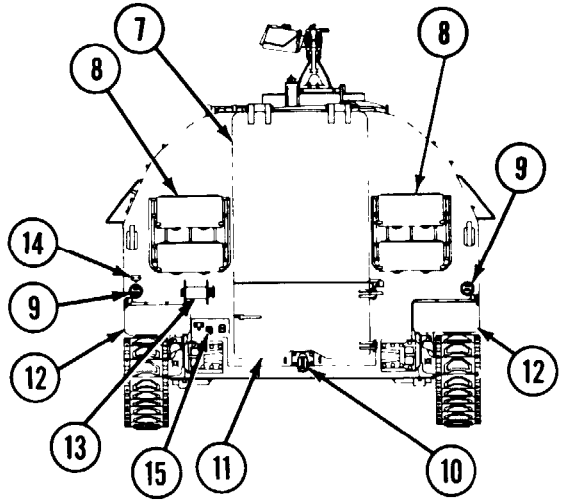
LEGEND

1 APU door
2 Duffle bag stowage rack
3 Canister side door/copperhead projectiles

LOCATION OF VEHICLE COMPONENTS (VEHICLES 1 THRU 344) – EXTERIOR (CONTINUED)



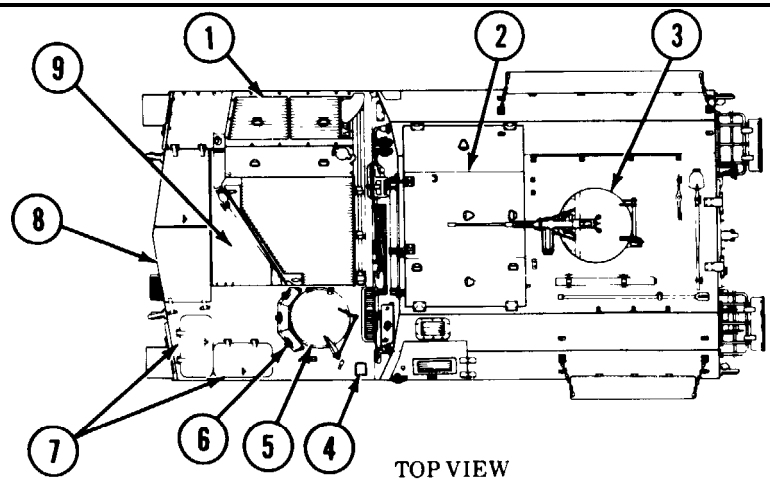
FRONT VIEW



REAR VIEW

LEGEND

1 Fuel fill filter access plate
2 APU muffler
3 APU air inlet door
4 Headlights
5 Towing lugs
6 Fenders
7 Rear door (upper)
8 Stowage racks and boxes
9 Taillights
10 Towing pintle
11 Rear door (lower)
12 Fenders
13 Telephone handreel
14 Telephone terminals
15 NBC terminals, NATO intervehicle slave connector and trailer receptacle

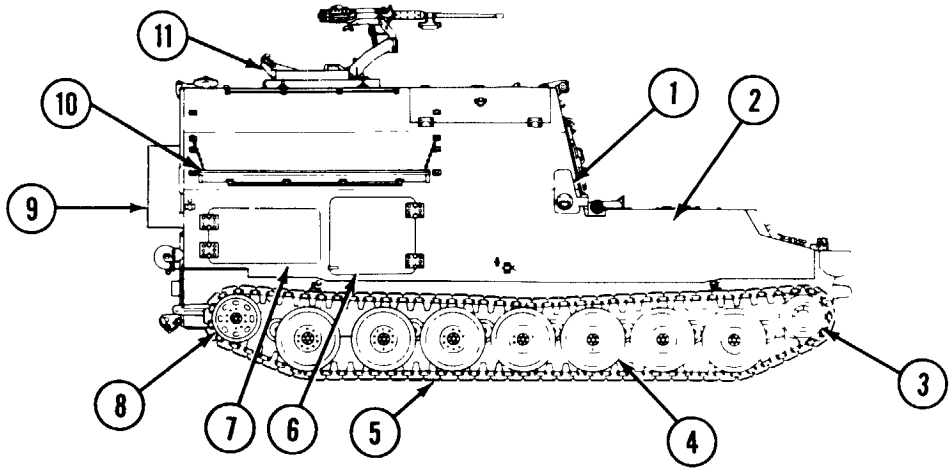


TOP VIEW

LEGEND

1 Air intake grille
2 Top doors
3 Commander's cupola
4 AFES Manual Discharge System; lanyard cable pull handle
5 Driver's hatch
6 Driver's periscope assembly
7 Battery access covers
8 Tranmission access covers
9 Engine deck access plates

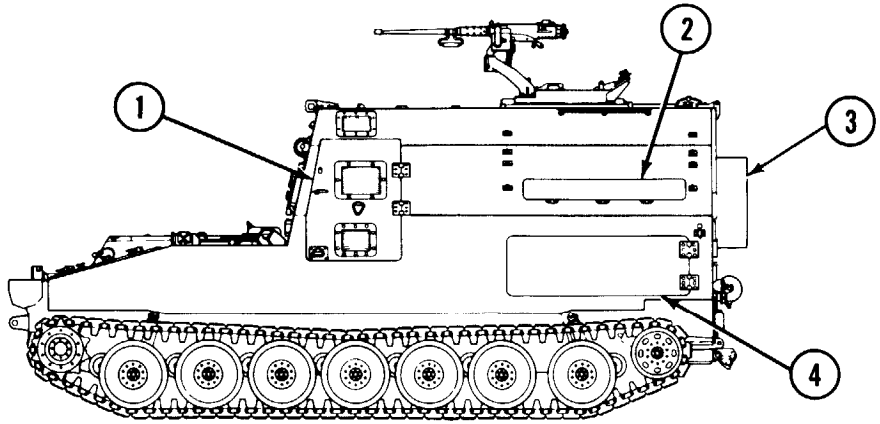
LOCATION OF VEHICLE COMPONENTS (VEHICLES 345 AND ABOVE) - EXTERIOR



RIGHT SIDE VIEW

LEGEND

1 Fuel fill access door
2 Hull
3 Drive sprocket
4 Roadwheel
5 Track
6 Personnel side door
7 Canister side door
8 Idler wheel
9 Crew AFES extinguisher box assembly
10 Duffle bag stowage rack
11 Commander's cupola

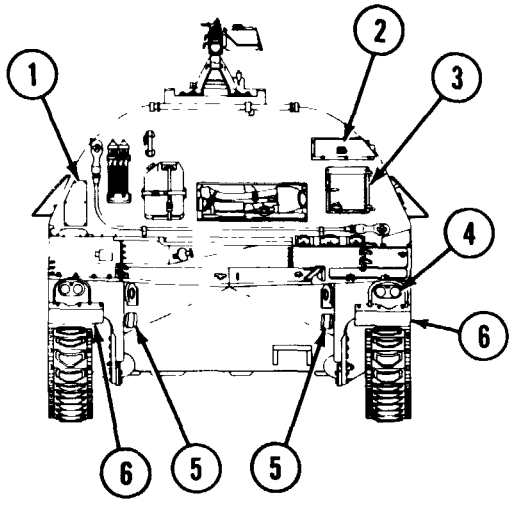


LEFT SIDE VIEW

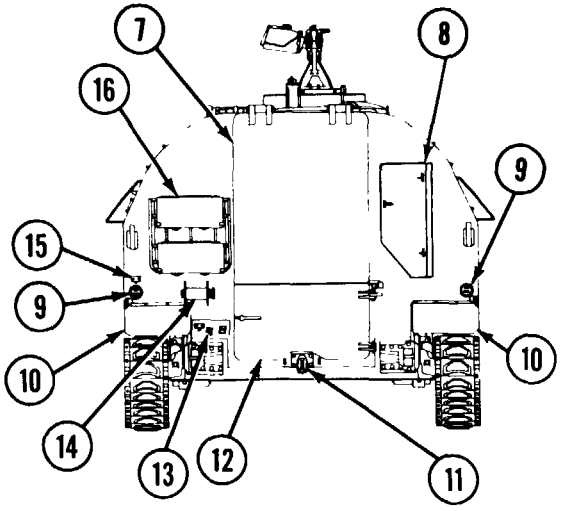
LEGEND

1 APU door
2 Duffle bag stowage rack
3 Crew AFES extinguisher box assembly
4 Canister door/copperhead projectiles

LOCATION OF VEHICLE COMPONENTS (VEHICLES 345 AND ABOVE) - EXTERIOR (CONTINUED)



FRONT VIEW



REAR VIEW

LEGEND

1 Fuel fill filter access plate
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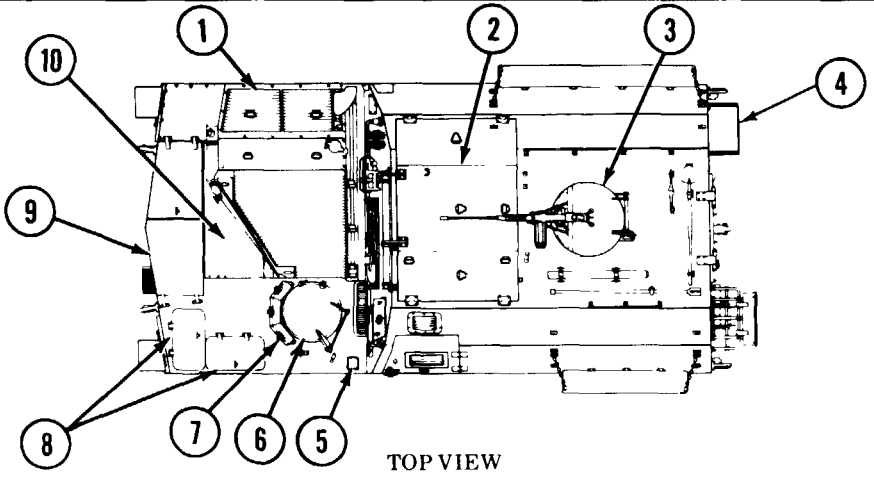
6 Fenders
7 Rear door (upper)
8 Crew AFES fire extinguisher box assembly
9 Tail lights
10 Fenders
11 Towing pintle
12 Rear door (lower)
13 NBC terminals, NATO intervehicle slave connector and trailer receptacle
14 Telephone handreel
15 Telephone terminals
16 Stowage rack and boxes

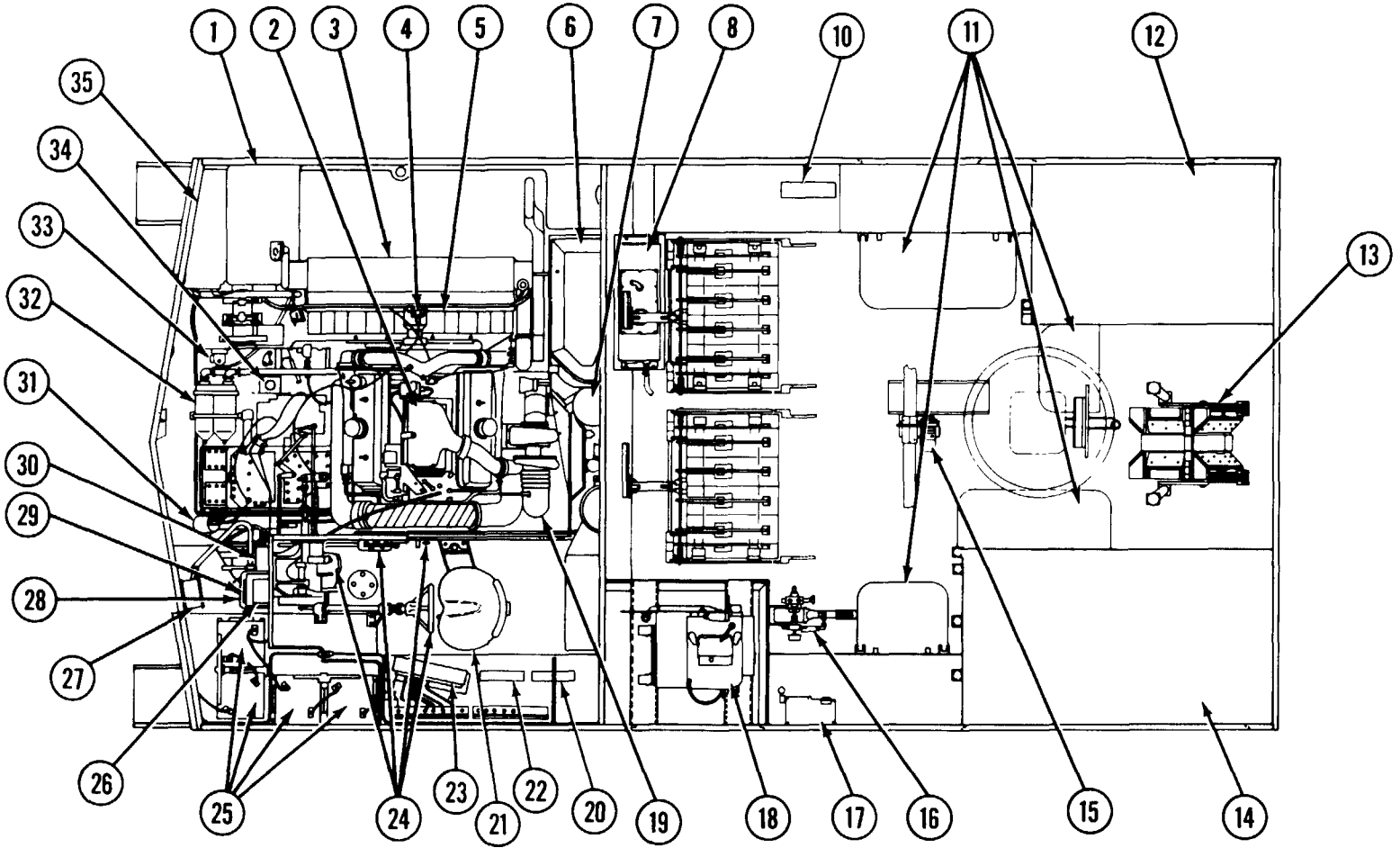


TOP VIEW

LEGEND

1 Air intake grille
2 Top doors
3 Commander's cupola
4 Crew AFES fire extinguisher box assembly
5 AFES Manual Discharge System; lanyard cable pull handle
6 Driver's hatch
7 Driver's periscope assembly
8 Battery access covers
9 Transmission access covers
10 Engine deck access plates

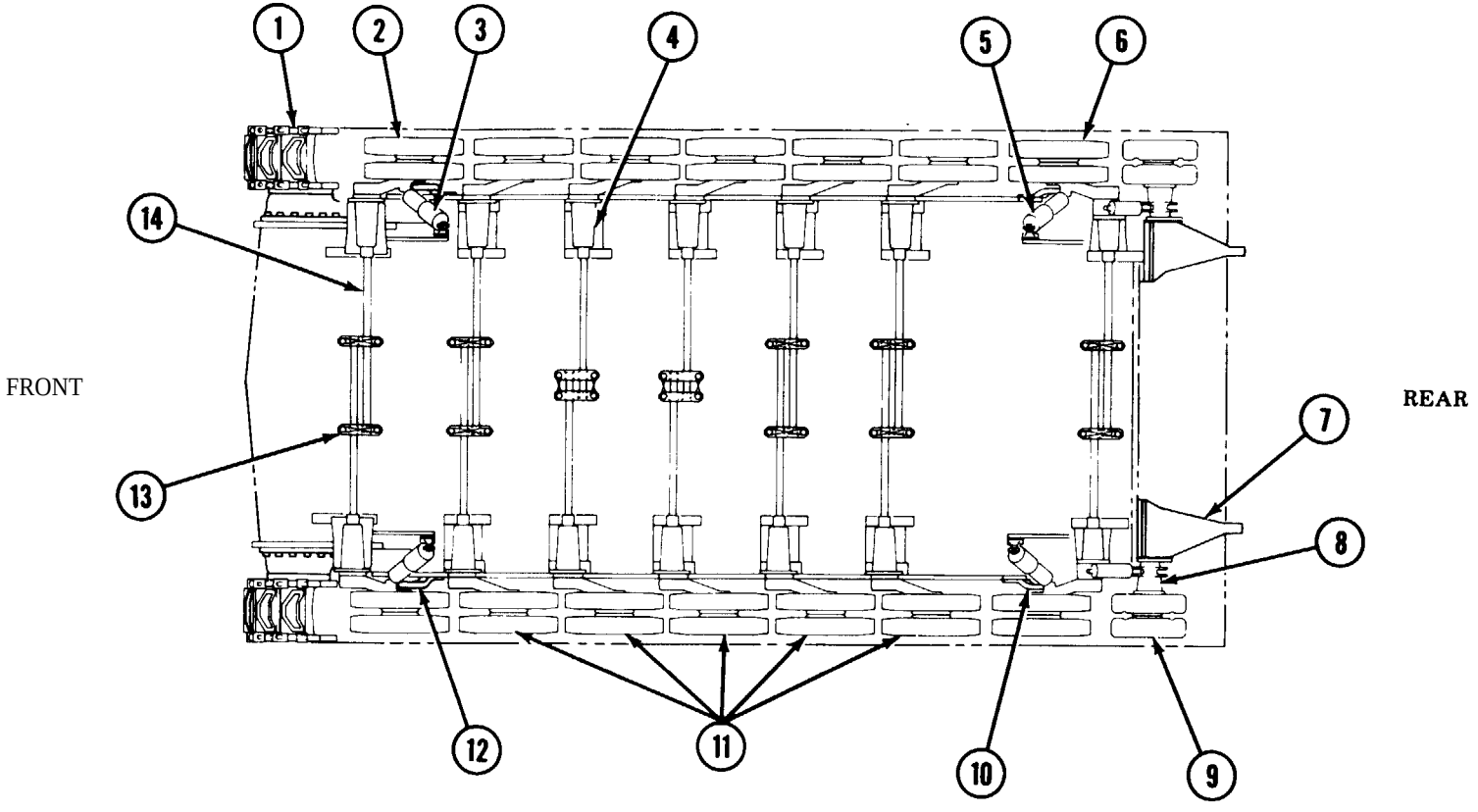
LOCATION OF VEHICLE COMPONENTS (VEHICLES 1 THRU 344 AND 345 AND ABOVE) - INTERIOR



LEGEND

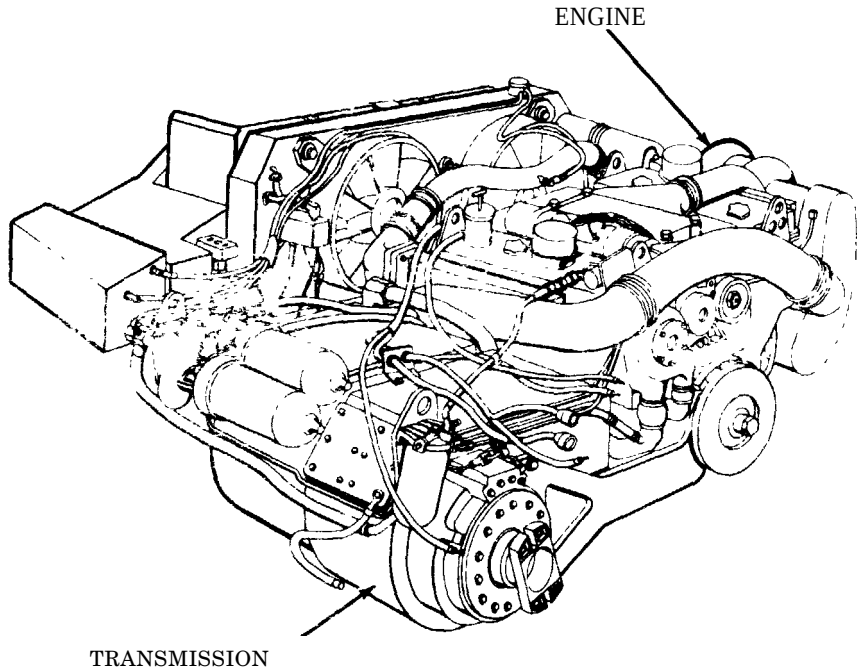
1 Fuel tanks and pumps
2 Engine
3 Radiator
4 Generator (alternator)
5 Fan assembly
6 Air cleaner
7 Personnel heater
8 Hydraulic fluid tank
9 Projectile racks
10 Crew AFES test and alarm (T/A) panel
11 Crew seats
12 Canister racks (right)
13 Conveyor assembly
14 Canister racks (left)
15 Stacker
16 Hydraulic hand pump
17 Hydraulic control panel
18 Auxiliary power unit (APU)
19 Backup hydraulic pump
20 AFES manual discharge system actuator assembly
21 Driver's seat
22 Engine AFES test and alarm (T/A) panel
23 Instrument panels (fixed and portable)
24 Driver control
25 Batteries
26 Voltage regulator
27 Rectifier
28 Bilge pump relay
29 Starter relay
30 Master relay
31 Fuel filter (secondary)
32 Oil filters (engine)
33 Fuel filter (primary)
34 Transmission
35 Coolant surge tank

LOCATION OF SUSPENSION SYSTEM COMPONENTS AND FINAL DRIVE



LEGEND

1 Drive sprockets
2 Front roadwheels
3 Shock absorbers (front)
4 Roadwheel arms and hubs
5 Shock absorbers (rear)
6 Rear roadwheels
7 Idler wheel housings
8 Idler arms and hubs
9 *Idler* wheels
10 Bump stop brackets
11 Intermediate roadwheels
12 Bump stop brackets
13 Torsion bar anchors
14 Torsion bars



POWERPACK

The powerpack includes the main diesel engine and unitized transmission and transfer assembly.

The transfer assembly transfers engine power to the transmission. The transmission transfers power through the final drive to the tracks.

The powerpack is removed and installed as a single unit and must be removed from the vehicle before the engine and transmission unit can be separated.

The engine is a Detroit Diesel, model 8V71T, turbocharged eight-cylinder, V-type, two-cycle diesel.

The Allison model XTG411-2A cross-drive transmission combines transmission, steering and braking. The driver's compartment steering wheel is connected through linkage to hydraulic controls in the transmission. Braking is controlled by the service brake pedal through linkage to disks in the transmission.

TA309925