

TECHNICAL MANUAL

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CARRIER, CARGO, TRACKED, 1 1/2 TON, M973
SMALL UNIT SUPPORT VEHICLE (SUSV)
(NSN 2350-01-132-9099)

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**HEADQUARTERS, DEPARTMENT OF THE ARMY
APRIL 1984**

TECHNICAL MANUAL
NO. 9-2350-272-34

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., 2 April 1984

**DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL
CARRIER, CARGO, TRACKED, 1 1/2 TON, M973
SMALL UNIT SUPPORT VEHICLE (SUSV)
(NSN 2350-01-132-9099)**

REPORTING OF ERRORS

You can help improve this publication. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publication and Blank Forms), or DA Form 2028-2 located in the back of this publication direct to: US Army Tank-Automotive Command, ATTN: DRSTA-MBP, Warren, MI 48090. A reply will be furnished to you.

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HOW TO USE THE MANUAL

This manual is designed to help you maintain the M973 Cargo Carrier and accessory equipment. Listed below are special features which will help you locate the information you need:

Front cover table of contents for quick reference to important information.

An index to the manual contents is located in the final pages of this manual. Use the index to locate specific items of information.

All measurements in this manual are given in both English and Metric units.

A Metric to English conversion chart is also provided on the inside back cover of this manual.

Warning pages are located in the front of this manual. You should learn the warnings before operating or doing maintenance on the vehicle. Important warnings and cautions are also located on other pages in the manual. They appear before a step that may result in personnel injury or damage to equipment. If the instructions are not followed, or care is not taken, you may injure yourself.

Notes are located before a step to make the step or steps following the note easier to understand. Always read all cautions, warnings, and notes before performing the next step.

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE.

This manual is for your use in maintaining the M973 Cargo Carrier. It provides information on the maintenance of the equipment which is beyond the scope of the tools, equipment, personnel or supplies normally available to organizational levels of maintenance.

1-2. MAINTENANCE FORMS AND RECORDS.

Maintenance forms and records that you are required to use are explained in DA PAM 738-750.

1-3. METRIC SYSTEM.

The vehicle and its system is metric. Metric tools are required for equipment maintenance. Metric to English conversion tables are on inside back cover.

1-4. EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs).

If your equipment needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at US ARMY TANK-AUTOMOTIVE COMMAND, ATTN: DRSTA-MP, Warren MI, 48090. We will send you a reply.

1-5. NOMENCLATURE CROSS REFERENCE.

All nomenclatures are standard US Army.

1-6. ADMINISTRATIVE STORAGE.

TM 740-90-1 has information on administrative storage of vehicles.

1-7. DESTRUCTION TO PREVENT ENEMY USE.

Refer to TM 750-244-6.

SECTION II. EQUIPMENT DESCRIPTION AND DATA

1-8. DESCRIPTION

A general description of the M973 Cargo Carrier and information pertaining to the identification plates are contained in TM 9-2350-272-1 0. A more detailed description of specific components and assemblies is contained in TM 9-2350-272-20 and the applicable sections of this manual.

1-9. DATA

Refer to TM 9-2350-272-10 and TM 9-2350-272-20 for general data information. More detailed data lists are contained in the applicable sections of this manual.

CHAPTER 2

DIRECT SUPPORT AND GENERAL SUPPORT

MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS, AND EQUIPMENT

2-1. TOOLS AND EQUIPMENT.

Standard and commonly used tools and equipment having general application to the M973 Cargo Carrier are authorized for issue by the Table of Allowances (TA) and the Tables of Organization and Equipment (TOE).

2-2. SPECIAL TOOLS AND TEST EQUIPMENT.

Table 2-1 in this manual lists special tools and equipment you need for the M973 Cargo Carrier maintenance. Use TM 9-2350-272-24P to request special tools and equipment.

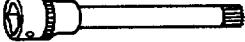
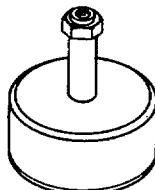
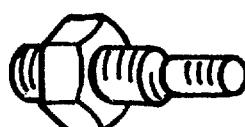
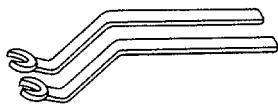
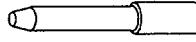
3-2. DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS.

Repair parts are listed in TM 9-2350-272-24P Repair Parts and Special Tools List.

2-4. FABRICATED TOOLS AND EQUIPMENT.

The specially designed tools and equipment are listed in Table 2-2 are for direct and general support maintenance on the M973. The tools and equipment listed in Table 2-2 are not available for issue, but must be fabricated by qualified direct and general support maintenance personnel.

TABLE 2-1. SPECIAL TOOLS AND TEST EQUIPMENT

ITEM	NOMENCLATURE	PART NUMBER [NSN]	USE TO:	ILLUSTRATION
1	Socket, Hex	617589001000 (4537785-023)	Replace Cylinder Head Bolts	
2	Puller	116589203300 (4537785-006) [5120-01-170-6686]	Remove Timing Chain Guide Rail	
3	Bolt, Puller	116589013400 (4537785-007) [5120-01-170-6687]	Remove Timing Chain Guide Rail	
4	Wrench	615589000100 (4537785-002) [5120-01-170-6760]	Adjust Valves	
5	Pipe, Overflow	636589022300 (4537785-024)	Timing Injector Pump	
6	Drift Pin	615589011500 (4537785-030)	Remove Valve Stem Guide	
7	Drift Pin	617589001500 (4537785-031)	Replace Valve Stem Guide	

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TABLE 2-1. SPECIAL TOOLS AND TEST EQUIPMENT

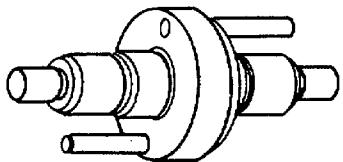
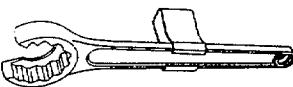
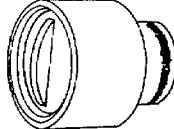
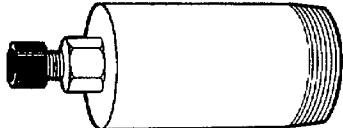
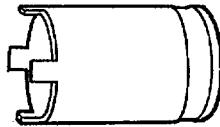
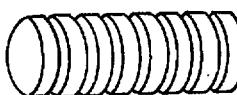
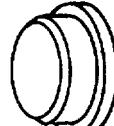
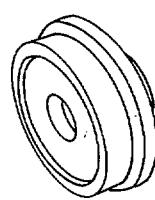
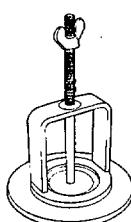
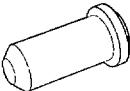
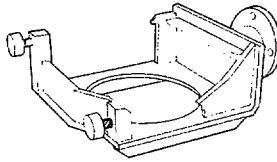
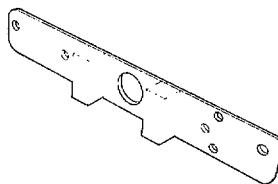
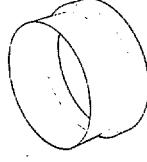
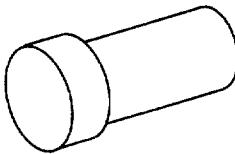
ITEM	NOMENCLATURE	PART NUMBER [NSN]	USE TO:	ILLUSTRATION
8	Balancing Tool	617589026300 (4537785-040)	Balance Counter-weights for Vibration Damper	
9	Holding Wrench	615589000300 (4537785-001)	Valve Spring Retainer — Holds from Turning	
10	Installation Tool	617589004300 (4537408-099) [5120-01-170-6681]	Install Valve Stem Seals	
11	Plug Wrench	4537408-019 (F1054-036410) [5120-01-166-1992]	Remove Plug Secondary Pump	
12	Extractor Tool	4537408-020 (F1054-036480)	Extract Seals and O-Rings from Transmission and Transfer	
13	Fixture	4537408-021 (F1053-021670) [4910-01-167-1735]	Hold Transmission Shaft from Turning	 TA259350

TABLE 2-1. SPECIAL TOOLS AND TEST EQUIPMENT

ITEM	NOMENCLATURE	PART NUMBER [NSN]	USE TO:	ILLUSTRATION
14	Tap Wrench	115589010700 (4537408-023) [5120-01-170-6727]	Remove Output Shaft Nut	
15	Testing Device	115589112100 (4537408-024) [5120-01-170-6677]	Check Pin Length for Modulation Vacuum Valve	
16	Compression Tool	4537408-031 (F1054-036470) [5120-01-166-1990]	Remove Secondary Pump	
17	Support Plate	4537409-006 (F1054-036430) [4910-01-167-1740]	Remove Bearing from Front Housing	
18	Adapter Assembly	4537409-008 (F1054-036460) [5120-01-165-0463]	Install Output Bearing	
19	Wrench	4537409-011 (F1052-014360) [5120-01-166-5282]	Replace Clutch Disc Assembly	

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TABLE 2-1. SPECIAL TOOLS AND TEST EQUIPMENT

ITEM	NOMENCLATURE	PART NUMBER [NSN]	USE TO:	ILLUSTRATION
20	Drift Pin	4537409-012 (F1054-036440) [5120-01-166-2088]	Install Transmission Bearing	
21	Fixture	4537409-013 (F1051-109480) [4910-01-167-1783]	Hold Transmission During Maintenance	
22	Lock Plate	4537409-014 (F1053-021660) [4910-01-167-1784]	Hold Torque Converter in Place	
23	Installation Tool	116589051400 (4537409-015) [5120-01-170-6682]	Install Position Brake Band B-2	
24	Installation Tool	112589016100 (4537409-016) [5120-01-170-6683]	Install Piston Clutch K-1	
25	Drift Pin	4537409-017 (F1054-037640)	Install Bearing in Transmission Front Housing	

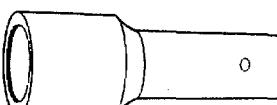
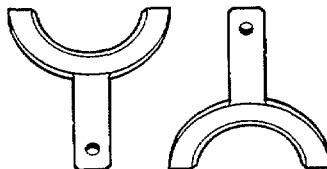
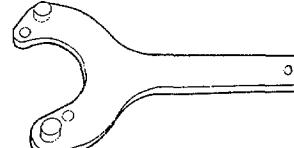
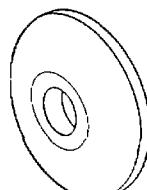
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TABLE 2-1. SPECIAL TOOLS AND TEST EQUIPMENT

ITEM	NOMENCLATURE	PART NUMBER [NSN]	USE TO:	ILLUSTRATION
26	Measuring Bridge	116589002100 (4537409-018) [5120-01-170-6684]	Measure Play in Gear Assembly	
27	Assembling Tool	116589095900 (4537409-020) [5120-01-170-6693]	Remove/Install Brake Piston Cap	
28	Puller	6899991-821 [5120-01-167-1775]	Remove Brake Band Piston Seal	
29	Extractor	6899994-030 [5120-01-167-1778]	Remove Seal in Secondary Pump	
30	Adapter Puller	4537408-016 (F1054-036830) [5120-01-166-2004]	Install Seals	
31	Adapter Puller	4537408-017 (F1054-036840) [5120-01-166-1988]	Install Seals	

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TABLE 2-1. SPECIAL TOOLS AND TEST EQUIPMENT

ITEM	NOMENCLATURE	PART NUMBER [NSN]	USE TO:	ILLUSTRATION
32	Mandrel	4537408-018 (F1054-037100) [3460-01-166-2107]	Install Bearing in Flange	
33	Drift Pin	4537408-025 (F1053-021960) [5120-01-166-2077]	Install Dust Guard	
34	Drift Pin	4537408-026 (F1054-037520) [5120-01-169-6350]	Install Dust Guard	
35	Yoke	4537408-027 (F1054-037530) [5120-01-167-1787]	Install Dust Guard	
36	Yoke	4537408-029 (F1053-021930) [5120-01-167-1741]	Hold Differential Input Flange from Turning	
37	Adapter	4537409-036 (F1054-036810) [5120-01-166-1980]	Install Bearing	

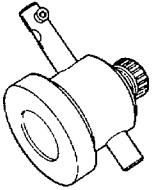
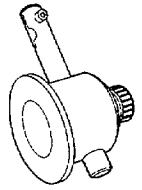
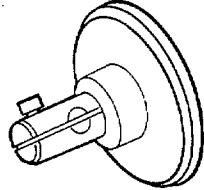
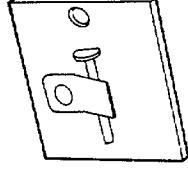
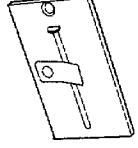
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TABLE 2-1. SPECIAL TOOLS AND TEST EQUIPMENT

ITEM	NOMENCLATURE	PART NUMBER [NSN]	USE TO:	ILLUSTRATION
38	Alignment Tool	4537409-037 (F1054-037060) [5120-01-166-1983]	Align Input Shaft	
39	Alignment Tool	4537409-038 (F1054-037020) [5120-01-166-1984]	Remove Bearing on Shaft	
40	Drift Pin	4537409-039 (F1054-037030) [5120-01-166-2079]	Install Bearing	
41	Drift Pin	4537409-040 (F1054-036820) [5120-01-166-2080]	Install Bearing on Gear	
42	Drift Pin	4537409-041 (F1054-037040) [5120-01-166-2081]	Remove Gear	
43	Fixture	4537409-042 (F1054-014510) [4910-01-167-1737]	Mount Differential on Stand	

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TABLE 2-1. SPECIAL TOOLS AND TEST EQUIPMENT

ITEM	NOMENCLATURE	PART NUMBER [NSN]	USE TO:	ILLUSTRATION
44	Holder	4534709-043 (F1053-022070) [5120-01-167-1733]	Holder for Dial Indicator	
45	Holder	4534709-044 (F1053-022080) [5120-01-167-1736]	Holder for Dial Indicator	
46	Holder	4537409-045 (F1053-022060) [5220-01-166-6011]	Holder for Dial Indicator	
47	Gage, Distance Check	4537409-046 (F1054-037580)	Measure Pinion Preload	
48	Gage, Distance Check	4537409-047 (F1054-037570) [5220-01-166-1981]	Measure Pinion Preload	

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