

TECHNICAL MANUAL

**UNIT AND INTERMEDIATE DIRECT SUPPORT (DS)
MAINTENANCE MANUAL (INCLUDING REPAIR PARTS
AND SPECIAL TOOLS LIST)
FOR
PARACHUTE, PERSONNEL TYPE:
35-FOOT DIAMETER, T-10B
TROOP BACK PARACHUTE ASSEMBLY
NSN 1670-00-591-0720**

This copy is a reprint which includes
current pages from Change 1.

Approved for public release; distribution is unlimited.

The following manuals, TM 10-1670-269-23&P, TM 10-1670-274-23&P, TM 10-1670-27-23&P, TM 10-1670-273-23&P and TM 10-1670-27A-23&P, in their entirety, supersede TM 10-1670-213-23, dated April, 1969, including all changes.

HEADQUARTERS, DEPARTMENTS OF THE ARMY AND AIR FORCE,
AND HEADQUARTERS, U.S. MARINE CORPS

16 SEPTEMBER 1988

TECHNICAL MANUAL 10-1670-271-23&P
TECHNICAL ORDER 14D1-2-464-2
TECHNICAL MANUAL 01136B23&P/1

HEADQUARTERS, DEPARTMENTS OF THE
ARMY AND AIR FORCE,
HEADQUARTERS, U.S. MARINE CORPS
WASHINGTON, D.C., 16 September 1988

**Unit and Intermediate Direct Support (DS) Maintenance Manual
(Including Repair Parts and Special Tools List)
for
PARACHUTE, PERSONNEL TYPE: 35-FOOT DIAMETER
T-10B TROOP BACK PARACHUTE ASSEMBLY,
NSN 1670-00-591-0720**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

ARMY

You can help improve this manual. If you find any mistakes, or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. You may also submit your recommended changes by E-mail directly to <mpmt%avma28@st-louis-emh7.army.mil>. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

AIR FORCE

Reports by U.S. Air Force units should be submitted on AFTO Form 22 (Technical Order Publication Improvement Report and Reply) and forwarded to the address prescribed above for the Army. An information copy of the prepared AFTO Form 22 shall be furnished to SA-ALC/TILD, Kelly AFB, TX 78241-6421.

MARINE CORPS

Commander, ATTN: (Code 850), Marine Corps Logistics Bases, 814 Radford Blvd., Albany, GA 31704-1128.

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

TABLE OF CONTENTS

	Page
CHAPTER 1. INTRODUCTION	1-1
OVERVIEW	1-1
Section I. General	1-1
Section II. Equipment Description and Data	1-4
CHAPTER 2. UNIT AND INTERMEDIATE MAINTENANCE INSTRUCTIONS	2-1
OVERVIEW	2-1
Section I. Repair Parts, Special Tools, Test Measurement and Diagnostic Equipment (TMDE) and Support Equipment	2-1
Section II. Service Upon Receipt	2-2
Section III. Assembly	2-7
Section IV. Preventive Maintenance Checks and Services	2-10

The following manuals, TM 10-1670-269-23&P, TM 10-1670-271-23&P, TM 10-1670-272-23&P, TM 10-1670-273-23&P and TM 10-1670-274-23&P, in their entirety, supersede TM 10-1670-213-23, dated April 1969, including all changes.

TABLE OF CONTENTS (CONT)

		Page	Figure
Section V.	Unit and Intermediate Maintenance Procedures.....	2-15	
Section VI.	Repair	2-80	
Section VII.	Preparation for Storage or Shipment.....	2-179	
APPENDIX A	REFERENCES	A-1	
APPENDIX B	MAINTENANCE ALLOCATION CHART	B-1	
APPENDIX C	REPAIR PARTS AND SPECIAL TOOLS LIST	C-1	
Section I.	Introduction	C-1	
Section II.	Repair Parts List	C-1	
	T-10 OB Troop Back Personnel Parachute.....	C-10	C-1
	Personnel Canopy W/Net T-10B.....	C-12	C-2
	Deployment Bag	C-16	C-3
	Personnel Harness.....	C-18	C-4
	Personnel Parachute Pack.....	C-20	C-5
	Bulk Materials	C-22	
Section III.	(Not Applicable)		
Section IV.	National Stock Number and Part Number Index	C-23	
APPENDIX D	EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST	D-1	
APPENDIX E	ILLUSTRATED LIST OF MANUFACTURED ITEMS	E-1	
INDEX		Index 1	

LIST OF ILLUSTRATIONS

Figure Number	Title	Page
1-1	T-10B Troop Back Parachute Assembly, 35-Ft Diameter, Deployed	1-2
1-2	Canopy Assembly.....	1-5
1-3	Pack Tray	1-6
1-4	Deployment Bag.....	1-7
1-5	T-10B Parachute Harness Assembly.....	1-8
1-6	T-10B Parachute Riser Assembly.....	1-9
2-1	Installing Attachment Tie on Parachute Log Record.....	2-3
2-2	Inside Front Cover of Parachute Log Record	2-4
2-3	Inside Back Cover of Parachute Log Record.....	2-5
2-4	Log Record Entries for the Modification Work Order Compliance Record Page	2-5
2-5	Log Record Entries for Unit and Intermediate Repair and Inspection Data Page	2-6
2-6	Data Entries for a Log Record Note Page.....	2-7

LIST OF ILLUSTRATIONS (CONT)

Figure Number	Title	Page
2-7	Attaching Pack Tray to the T-10B Harness	2-8
2-8	Assembly Cable-Loop-Type Canopy Release	2-9
2-9	Shakeout	2-17
2-10	Rigger's Orientation	2-28
2-11	Canopy Attached to Packing Table Apex Hook	2-29
2-12	Removing Inversion.....	2-29
2-13	Removing Turns from Suspension Lines.....	2-30
2-14	Removing Tangles from Suspension Lines	2-31
2-15	Removing Twists from Suspension Lines.....	2-32
2-16	Tracing Suspension Lines to Connector Links.....	2-33
2-17	Parachute In Proper Layout	2-34
2-18	Dressing Apex	2-35
2-19	Flipping the Right Group of Gores Over the Left Group	2-36
2-20	Folding First Gore of Right Group.....	2-36
2-21	Grasping and Scissoring Right Group of Suspension Lines.....	2-37
2-22	Completed Scissoring and Rotating Right Group of Suspension Lines	2-37
2-23	Folding Last Two Gores of Left Group	2-38
2-24	Two Groups of Lines Inserted In Line Separator and Folded Gores Draped to Right Side of Table	2-39
2-25	Turning Line Separator Counterclockwise	2-40
2-26	Packing Weight on Suspension Lines	2-40
2-27	Left Group of Gores Flipped to Left Side of Table.....	2-41
2-28	Flatfolding the Canopy.....	2-41
2-29	Dressing Right Side	2-43
2-30	Flatfolding Completed.....	2-44
2-31	Checking of Clear Channel	2-45
2-32	Longfolding the Net and Lower Lateral Band.....	2-45
2-33	Beginning Longfold of Canopy	2-46
2-34	Right Side of Longfold Completed	2-47
2-35	Beginning Longfold of Left Side	2-48
2-36	Longfold Completed	2-49
2-37	Deployment Bag Prepared for Stowing of Canopy	2-50
2-38	Tying Static Line Loop to Bridle Loop.....	2-51
2-39	Static Line Loop Secured to Bridle Loop with Surgeon's Knot and Locking Knot	2-52
2-40	First Canopy Stow	2-53
2-41	Continuing Canopy Stow.....	2-53
2-42	Stowing Remaining Canopy and Net.....	2-55
2-43	Closing the Deployment Bag.....	2-56
2-44	Forming a Locking Loop	2-56
2-45	Inserting Stow Hook, Right Side.....	2-57
2-46	Right Locking Stow Loop	2-57
2-47	Inserting Stow Hook, Left Side.....	2-58
2-48	Completing Second Stow.....	2-58
2-49	Forming First Regular Stow	2-59
2-50	Completing First Regular Stow	2-60
2-51	Completing Second Regular Stow	2-60

LIST OF ILLUSTRATIONS (CONT)

Figure Number	Title	Page
2-52	Stowed Suspension Lines	2-61
2-53	Tying Connector Link.....	2-62
2-54	Connector Link Ties Completed	2-62
2-55	Packer Entering Deployment Bag Number.....	2-63
2-56	Pack Tray Moved Forward on Risers	2-64
2-57	U-Fold of Risers.....	2-65
2-58	Rotating Deployment Bag	2-66
2-59	Static Line Sleeve Folded	2-67
2-60	Threading Type 1,1/4-inch Cotton Webbing	2-68
2-61	Tying Pack Closing Loops.....	2-70
2-62	Pack Tray Dressed	2-71
2-63	First Static Line Stow.....	2-71
2-64	Static Line Completely Stowed	2-72
2-65	Signing Log Record	2-73
2-66	Attaching 5-Foot Static Line Extension	2-74
2-67	Taped Static Line Extension Cover.....	2-75
2-68	Stowing 5-Foot Extension Line	2-76
2-69	Attaching Chest Strap Snap.....	2-77
2-70	Attaching Quick-Ejector Snaps	2-78
2-71	Forming a Quick-Release	2-79
2-72	Darning Method Using a Darning Sewing Machine.....	2-85
2-73	Hand Darning Method.....	2-86
2-74	Repair Method Using a Zig-Zag Sewing Machine.....	2-87
2-75	Basic Patch Application	2-89
2-76	Basic Patching Details Using Parachute Mending Cloth.....	2-90
2-77	Common Miscellaneous Canopy Patches (6 sheets).....	2-94
2-78	Bridle Loop Replacement Details	2-103
2-79	Vent Line Replacement Details.....	2-105
2-80	Upper Lateral Band Splicing Details.....	2-107
2-81	Replacing Gore Section 3 or 4	2-110
2-82	Replacing Gore Section 2	2-112
2-83	Replacing Gore Section 1	2-113
2-84	Bias Constructed Gore Section 5 Replacement	2-115
2-85	Securing a Patch on a Radial Seam	2-117
2-86	Lower Lateral Band Splicing Details - Damage Between Radial Seams.....	2-119
2-87	Lower Lateral Band Splicing Details - Damage Extending into Radial Seam	2-120
2-88	Pocket Band Replacement Details.....	2-122
2-89	V-Tab Inside View with Stitching.....	2-123
2-90	Inside View with Stitching Cut.....	2-124
2-91	V-Tab Replacement Details	2-125
2-92	Anti-Invasion Net Repairs	2-127
2-93	Basic Net Repairs	2-128
2-94	Repair of Bottom Cord.....	2-129
2-95	Suspension Line Replacement Details.....	2-131
2-96	Clove Hitch and Half Hitch.....	2-132
2-97	L-Bar Connector Link Assembly.....	2-134

LIST OF ILLUSTRATIONS (CONT)

Figure Number	Title	Page
2-98	Deployment Bags with Woven and Rolled Stow Loops	2-137
2-99	Deployment Bags Showing Maximum Damage and Repair to Suspension Line Stow Loops	2-138
2-100	Machine Darning Method	2-140
2-101	Basic Patch Application	2-141
2-102	Reinforcing Webbing Repair	2-142
2-103	Deleted	
2-104	Deleted	
2-105	Locking Stow Loop Hood Replacement Details	2-146
2-106	Suspension Line Protector Cover Tiedown Loop Replacement	2-147
2-107	Static Line Safety Pin and Lanyard Replacement	2-148
2-108	Attaching Static Line to Deployment Bag	2-149
2-109	Attaching Snap Hook to Static Line	2-149
2-110	Fabrication of Elastic Retainer Webbing	2-152
2-111	Replacement of Horizontal Backstrap	2-153
2-112	Fabrication of Canopy Release Pad	2-154
2-113	Inserting and Securing Cellular Rubber in Sleeve	2-155
2-114	Canopy Release Pad Construction Details	2-157
2-115	Assembly of Canopy Release Pad to Harness	2-158
2-116	Ejector Snap Pad Pattern Layout	2-159
2-117	Ejector Snap Pad Construction Details	2-160
2-118	Installation of Ejector Snap Pad	2-161
2-119	Spicing Pack Tray Edge Binding	2-163
2-120	Replacement of Pack Tray	2-164
2-121	Installation of Horizontal Backstrap Retainer	2-164
2-122	Installation of Diagonal Backstrap Retainer	2-165
2-123	Fabrication of Backstrap Retainer	2-166
2-124	Installation of Socket and Stud Assemblies	2-167
2-125	Fabric Cutting Tools for Snap Fastener Installation	2-167
2-126	Snap Fastener Installation Tools	2-168
2-127	Snap Fastener Installation Tools Prepared for Use	2-169
2-128	Installation of Diagonal Backstrap Retainers	2-170
2-129	Installation of Horizontal Backstrap Retainers	2-171
2-130	Repair of Pack Closing Loop	2-172
2-131	Replacement of Retainer Band Keeper	2-174
2-132	Replacement of Static Line Slack Retainer	2-175
2-133	Waistband Replacement Details	2-176
2-134	Waistband Adjuster Panel Fabrication	2-177
2-135	Accordion Folding a Parachute Canopy Assembly	2-182
2-136	Rigger Rolling a Parachute Canopy Assembly	2-183

LIST OF TABLES

Figure Number	Title	Page
2-1	Preventive Maintenance Checks and Services (PMCS)	2-11
2-2	Sewing Machine Code Symbols	2-82
2-3	Stitching and Restitching Specifications	2-83
2-4	Mending Cloth Patching Specifications	2-88

CHAPTER 1

INTRODUCTION

	Page
Overview	1-1
Section I. General	1-1
Section II. Equipment Description and Data.....	1-4

OVERVIEW

This chapter includes the general information common to all parachute manuals and specific information pertinent to the parachute described in this manual.

Section I. GENERAL

Paragraph		Page
1-1	Scope	1-1
1-2	Maintenance Forms and Records.....	1-1
1-3	Destruction of Army Materiel to Prevent Enemy Use.....	1-1
1-4	Preparation for Storage or Shipment	1-3
1-5	Reporting of Equipment Improvement Recommendations (EIR)	1-3

1-1. Scope. The scope of this manual is described in the following subparagraphs.

a. Type of Manual. This manual provides unit and intermediate maintenance instructions for parachute, NSN 1670-00-591-0720. This is a 35-Foot Diameter Troop Back Parachute (Figure 1-1). This manual also provides a Repair Parts and Special Tools List located at Appendix C.

b. Equipment Name. T-10B Troop Back Parachute Assembly, 35-Foot Diameter.

c. Purpose of Equipment. The parachute provides capability to safely deliver an airborne soldier and individual equipment from an aircraft in flight for a vertical assault on an enemy.

1-2. Maintenance Forms and Records. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System and TB 750-126. Maintenance forms and records used by Marine Corps personnel are prescribed by TM 4700-15/1.

1-3. Destruction of Army Materiel to Prevent Enemy Use. Destruction methods are described in the following subparagraphs.

a. General.

(1) Objective. Methods of destruction used to Inflict damage on air delivery equipment should make it impossible to restore equipment to a usable condition In a combat zone by either repair or cannibalization.

(2) Authority. Destruction of air delivery equipment that is In Imminent danger of capture by an enemy is a command decision that must be made by a battalion or higher commander or the equivalent.

1-3. Destruction of Army Materiel to Prevent Enemy Use (CONT).

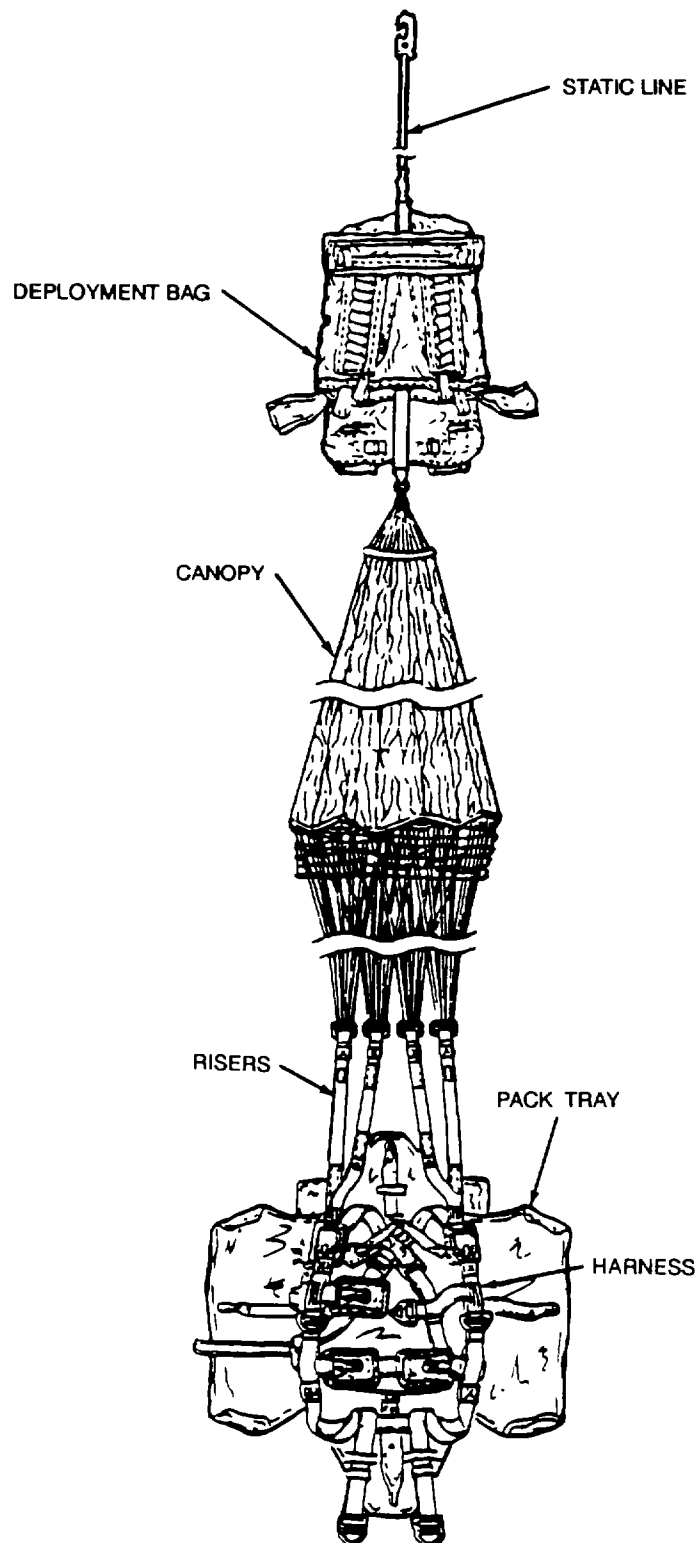


Figure 1-1. 35-Foot Diameter, T-10B Troop Back Parachute Assembly, Deployed.