
TECHNICAL MANUAL

UNIT MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

FOR

ANCILLARY EQUIPMENT FOR

LOW VELOCITY AIR DROP SYSTEM (LVADS)

Line, Multi-Loop (Extraction Lines, Deployment Lines, Bag Clustering Lines, Riser Extension, Suspension Slings): NSNs 1670-01-062-6301; 1670-01-062-6306; 1670-01-062-6304; 1670-01-062-6305; 1670-01-062-6311; 1670-01-063-7760; 1670-01-062-6310; 1670-01-062-6303; 1670-01-062-6307; 1670-01-062-6312 1670-01-063-7761; 1670-01-062-6308; 1670-01-062-6302; 1670-01-064-4453; 1670-01-107-7651 1670-01-062-6309; 1670-01-064-4451; 1670-01-064-4452; 1670-01-107-7652; Coupling, Extraction Force Transfer: NSNs 1670-00-434-5783; 1670-00-434-5785; 1670-00-434-5787; 1670-00-434-5782; 1670-01-326-7309; Release, Cargo Parachute, M-1: NSN 1670-01-097-8816; Release, Cargo Parachute, M-2: NSN 1670-01-097-8817; Link Assembly, Single Suspension, Type IV: NSN 1670-00-783-5988; Assembly, Heavy Duty: NSNs Link, 4-Point 1670-00-006-2752; Cover, Link, Type IV 1670-00-360-0329; Clevis, Aerial Delivery: NSNs 4030-00-360-0304; 4030-00-678-8562; 4030-00-090-5354; 4030-00-432-2516; Cover, Clevis: NSN 1670-00-360-0328; Strap, Parachute Release, Single Knife: NSN 1670-01-207-7223; Strap, Parachute Release, Multi-Knife: NSN 4340-00-040-8219 ; Link Assembly, Coupling, 3-Point: NSN 1670-01-307-0155; Bracket, Suspension: NSN 1670-01-207-7223; Bracket, Suspension: NSN 1670-00-078-4319; Plate, Suspension: NSN 1670-01-141-1522; Tie-down, Cargo, 10K: NSN 1670-00-937-0271; Tie-down, Cargo, Quick-Release: NSN 1670-01-333-6082; Tie-down, Cargo, Aircraft: NSN 1670-00-545-9063; Drive Off Aid, Type IV: NSN 1670-01-344-0825; Link, 2-Point, 3 ¼-IN.: NSN 1670-01-493-6418; Link, 2-Point, 5 ½-IN.: NSN 1670-01-493-6420; Break Away Static Line, Main: NSN 1670-01-487-5461; Jettison System, Parachute, Extraction: NSN 1670-01-475-1990



DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.
*This manual supercedes TM 10-1670-296-20&P, dated 15 September 1995

TECHNICAL MANUAL

UNIT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR

ANCILLARY EQUIPMENT FOR LOW VELOCITY AIR DROP SYSTEMS (LVADS)

Line, Multi-Loop (Extraction Lines, Deployment Lines, Bag Clustering Lines, Riser Extension, Suspension Slings): NSNs 1670-01-062-6301; 1670-01-062-6306; 1670-01-062-6304; 1670-01-062-6305; 1670-01-062-6311; 1670-01-063-7760; 1670-01-062-6310; 1670-01-062-6303; 1670-01-062-6307; 1670-01-062-6312 1670-01-063-7761; 1670-01-062-6308; 1670-01-062-6302; 1670-01-064-4453; 1670-01-107-7651 1670-01-062-6309; 1670-01-064-4451; 1670-01-064-4452; 1670-01-107-7652; Coupling, Extraction Force Transfer: NSNs 1670-00-434-5783; 1670-00-434-5785; 1670-00-434-5787; 1670-00-434-5782; 1670-01-326-7309; Release, Cargo Parachute, M-1: NSN 1670-01-097-8816; Release, Cargo Parachute, M-2: NSN 1670-01-097-8817; Link Assembly, Single Suspension, Type IV: NSN 1670-00-783-5988; Assembly, Heavy Duty: NSNs Link, 4-Point 1670-00-006-2752; Cover, Link, Type IV 1670-00-360-0329; Clevis, Aerial Delivery: NSNs 4030-00-360-0304; 4030-00-678-8562; 4030-00-090-5354; 4030-00-432-2516; Cover, Clevis: NSN 1670-00-360-0328; Strap, Parachute Release, Single Knife: NSN 1670-01-207-7223; Strap, Parachute Release, Multi-Knife: NSN 4340-00-040-8219 ; Link Assembly, Coupling, 3-Point: NSN 1670-01-307-0155; Bracket, Suspension: NSN 1670-01-207-7223; Bracket, Suspension: NSN 1670-00-078-4319; Plate, Suspension: NSN 1670-01-141-1522; Tie-down, Cargo, 10K: NSN 1670-00-937-0271; Tie-down, Cargo, Quick-Release: NSN 1670-01-333-6082; Tie-down, Cargo, Aircraft: NSN 1670-00-545-9063; Drive Off Aid, Type IV: NSN 1670-01-344-0825; Link, 2-Point, 3 ¾-IN.: NSN 1670-01-493-6418; Link, 2-Point, 5 ½-IN.: NSN 1670-01-493-6420; Break Away Static Line, Main: NSN 1670-01-487-5461; Jettison System, Parachute, Extraction: NSN 1670-01-475-1990

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 the procedures, please let us know. Mail your letter, 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 Soldier, Biological and Chemical Command, ATTN: AMSSB-RIM-L (N), Kansas St., Natick, MA 01760. You may also submit your recommended changes by E-mail directly to: <amssbriml@natick.army.mil>. A reply will be furnished directly to you. Instructions for sending 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 WP-ALC/TILTA, 420 2nd Street, Suite 100, Robins AFB, GA 31098-1640.

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

*This manual supercedes TM 10-1670-296-20&P, dated 15 September 1995

TABLE OF CONTENTS

	WP Sequence No.
WARNING SUMMARY	a
HOW TO USE THIS MANUAL	v
 CHAPTER 1 – INTRODUCTORY INFORMATION	
General Information.....	0001 00
Equipment Description and Data.....	0002 00
<hr/> CHAPTER 2 – OPERATOR MAINTENANCE INSTRUCTIONS	
Service Upon Receipt	0003 00
Preventive Maintenance Checks and Services (PMCS), Introduction	0004 00
Preventive Maintenance Checks and Services (PMCS), Before Procedures	0005 00
Preventive Maintenance Checks and Services (PMCS), After Procedures	0006 00
<hr/> CHAPTER 3 – UNIT MAINTENANCE INSTRUCTIONS	
Inspection	0007 00
Cleaning and Drying	0008 00
Salt/Fresh-Water Contamination Test	0009 00
Sewing Procedures	0010 00
Marking, Restencilling, and Repainting	0011 00
Multi-Loop.....	0012 00
Extraction Force Transfer Coupling.....	0013 00
EFTC Adapter Link Assembly	0014 00
EFTC 3-Point Adapter Link Assembly.....	0015 00
EFTC Connector Latch Assembly	0016 00
EFTC Latch Assembly Coupling	0017 00
EFTC Cable Assembly	0018 00
EFTC Actuator Assembly	0019 00
M-1 Cargo Parachute Release.....	0020 00
M-2 Cargo Parachute Release.....	0021 00
Parachute Connector	0022 00
Timer Delay Assembly	0023 00
Type IV Single Suspension Link Assembly	0024 00
Heavy-Duty Link Assembly	0025 00
4-Point Link	0026 00
Type IV Link Cover.....	0027 00
Aerial Delivery Clevis	0028 00
Clevis Cover	0029 00
Single Knife Parachute Release Strap.....	0030 00
Multi-Knife Parachute Release Strap	0031 00
3-Point Coupling Link Assembly.....	0032 00
M-35 Suspension Bracket	0033 00
M-59 Suspension Bracket	0034 00

CHAPTER 3 – UNIT MAINTENANCE INSTRUCTIONS- continued

Suspension Plate	0035 00
10K Cargo Tie-Down.....	0036 00
Quick-Release Cargo Tie-Down.....	0037 00
Type IV Drive-Off Aid	0038 00
Aircraft Cargo Tie-Down.....	0039 00
3 ¾-IN., 2-Point Link.....	0040 00
5 ½-IN., 2-Point Link.....	0041 00
Release Away Static Line Assembly.....	0042 00
Extraction Parachute Jettison System (EPJS).....	0043 00
Extraction Parachute Jettison Device (EPJD), Squib, and Squib Cable	0044 00
Y-Connector	0045 00
Y-Connector Mounting Box (C-130, C-141, C-17, C-5).....	0046 00
Control Box.....	0047 00
Platform Cable (All)/4-Foot Extension Cable (C-5 and C-17 only).....	0048 00
10-Foot Interconnect Cable.....	0049 00
50-Foot Main Cable.....	0050 00
20-Foot Power Cable	0051 00
Protective Cover.....	0052 00
Kit Bag.....	0053 00
Y-Connector Mounting Box Tie-Down Bracket (C-5)	0054 00
20-Foot Power Cable Extension (C-17 only).....	0055 00
1-Foot Power Cable Adapter (C-5 only).....	0056 00
Safety Cap.....	0057 00
Initiator Simulator	0058 00
Squib Tester.....	0059 00
28 VDC Power Supply.....	0060 00

CHAPTER 4 – SUPPORTING INFORMATION

Preparation For Storage.....	0061 00
Preparation For Shipment	0062 00
References	0063 00
Maintenance Allocation Chart (MAC).....	0064 00
Repair Parts and Special Tools List (RPSTL), Introduction	0065 00
RPSTL Group 01 Multi-Loop Line	0066 00
RPSTL Group 02 Extraction Force Transfer Coupling.....	0067 00
RPSTL Group 0201 Extraction Force Transfer Coupling Adapter Link Assembly	0068 00
RPSTL Group 0202 Extraction Force Transfer Coupling 3-Point Coupling Link Assembly	0069 00
RPSTL Group 0203 Extraction Force Transfer Coupling Latch Assembly Coupling	0070 00
RPSTL Group 0204 Connector Latch Assembly.....	0071 00
RPSTL Group 0205 Coupling Cable Assembly.....	0072 00
RPSTL Group 0206 Actuator Assembly.....	0073 00
RPSTL Group 03 M-1 Cargo Parachute Release	0074 00
RPSTL Group 0301 Parachute Connector.....	0075 00
RPSTL Group 0302 Timer Delay Assembly.....	0076 00
RPSTL Group 04 M-2 Cargo Parachute Release	0077 00
RPSTL Group 0401 Parachute Connector.....	0078 00
RPSTL Group 0402 Timer Delay Assembly.....	0079 00
RPSTL Group 05 Type IV Single Suspension Link Assembly	0080 00
RPSTL Group 0501 Heavy-Duty Link Assembly.....	0081 00
RPSTL Group 0502 4-Point Link.....	0082 00

CHAPTER 4 – SUPPORTING INFORMATION - continued

RPSTL Group 0503 Type IV Link Cover	0083 00
RPSTL Group 0504 Aerial Delivery Clevis.....	0084 00
RPSTL Group 0505 Clevis Cover	0085 00
RPSTL Group 0506 Single Knife Parachute Release Strap	0086 00
RPSTL Group 0507 Multi-Knife Parachute Release Strap.....	0087 00
RPSTL Group 0508 3-Point Coupling Link Assembly	0088 00
RPSTL Group 0509 M-35 Suspension Bracket.....	0089 00
RPSTL Group 0510 M-59 Suspension Bracket.....	0090 00
RPSTL Group 0511 Suspension Plate.....	0091 00
RPSTL Group 0512 10K Cargo Tie-Down	0092 00
RPSTL Group 0513 Quick-Release Cargo Tie-Down	0093 00
RPSTL Group 0514 Type IV Drive-Off Aid.....	0094 00
RPSTL Group 0515 Aircraft Cargo Tie-Down	0095 00
RPSTL Group 0516 3 ¼-IN., 2-Point Link	0096 00
RPSTL Group 0517 5 ½-IN., 2-Point Link	0097 00
RPSTL Group 0518 Release Away Static Line Assembly	0098 00
RPSTL Group 06 Extraction Parachute Jettison System (EPJS).....	0099 00
RPSTL Group 0601 Extraction Parachute Jettison Device (EPJD)	0100 00
RPSTL Group 0602 Y-Connector.....	0101 00
RPSTL Group 0603 Y-Connector Mounting Box (C-130, C-141, C-17).....	0102 00
RPSTL Group 0604 Y-Connector Mounting Box (C-5)	0103 00
RPSTL Group 0605 Control Box.....	0104 00
RPSTL Group 0606 Squib Assembly.....	0105 00
RPSTL Group 0607 EPJS Squib Cable	0106 00
RPSTL Group 0608 10-Foot Platform Cable.....	0107 00
RPSTL Group 0609 10-Foot Interconnect Cable	0108 00
RPSTL Group 0610 50-Foot Main Cable	0109 00
RPSTL Group 0611 20-Foot Power Cable.....	0110 00
RPSTL Group 0612 Protective Cover	0111 00
RPSTL Group 0613 Kit Bag	0112 00
RPSTL Group 0614 4-Foot Extension Cable (C-5 and C-17)	0113 00
RPSTL Group 0615 Y-Connector Mounting Box Tie-Down Bracket (C-5).....	0114 00
RPSTL Group 0616 20-Foot Power Cable Extension (C-17 only)	0115 00
RPSTL Group 0617 1-Foot Power Cable Adapter	0116 00
RPSTL Group 0618 Safety Cap	0117 00
RPSTL Group 0619 Initiator Simulator.....	0118 00
RPSTL Group 0620 Squib Tester	0119 00
RPSTL Group 0621 28 VDC Power Supply	0120 00
RPSTL Group 90 Bulk Materials	0121 00
RPSTL Group 95 Special Tools List.....	0122 00
National Stock Number (NSN) Index.....	0123 00
Part Number (P/N) Index.....	0124 00
Expendable/Durable Supplies and Materials List.....	0125 00
Illustrated List of Manufactured Items	0126 00
Torque Limits.....	0127 00

ALPHABETICAL INDEX INDEX 1

HOW TO USE THIS MANUAL

In this manual, primary chapters appear in upper case/capital letters; work packages are presented in numeric sequence, e.g., 0001 00; paragraphs within a work package are not numbered and are presented in a titles format. For a first level paragraph, title all upper case/capital letters, e.g., INTRODUCTION, the next subordinate paragraph title will have the first letter of the first word of each principle word all upper case/capital letters, e.g., How to Use This Manual. The location of additional material that must be referenced is clearly marked. Figures supporting maintenance procedures/text are located as close as possible to their references.

FRONT MATTER. Front matter consists of front cover, warning summary, title block, table of contents, and how to use this manual page.

CHAPTER 1 - INTRODUCTION. Chapter 1 contains general information and equipment description.

CHAPTER 2 - OPERATOR INSTRUCTIONS. Chapter 2 contains service upon receipt and Preventive Maintenance Checks and Services (PMCS) information.

CHAPTER 3 – UNIT MAINTENANCE INSTRUCTIONS. Chapter 3 contains maintenance procedures authorized at the unit level.

CHAPTER 4 – SUPPORTING INFORMATION. Chapter 4 contains references, expendable and durable items list, maintenance allocation char, repair parts and special tools list, national stock number index, part number index, illustrated list of manufactured items, and torque limits.

REAR MATTER. Rear matter consists of alphabetical index, DA Form 2028, authentication page, and back cover.

Manual Organization and Page Numbering System. The manual is divided into two major chapters that detail the topics mentioned above. Within each chapter are work packages covering a wide range of topics. Each work package is numbered sequentially starting at page 1. The work package has its own page-numbering scheme and is independent of the page numbering used by other work packages. Each page of a work package has a page number of the for XXXX YY-ZZ where XXXX is the work package number (e.g. 0010 00 is work package 10), YY is the revision number for that work package, and ZZ represents the number of the page within that work package. A page number such as 0010 00-1/(2 Blank) means that page 1 contains information but page 2 of that work package has been intentionally left blank.

Finding Information. The Table of Contents permits the reader to find information in the manual quickly. The reader should start here first when looking for a specific topic. The Table of Contents lists the topics contained within each chapter and the Work Package Sequence Number where it can be found.

Example: If the reader were looking for instructions on "Disassemble Extraction Force Transfer Coupling", which is a Unit Maintenance topic, the Table of Contents indicates that Unit Maintenance information can be found in Chapter 3. Scanning down the listings for Chapter 2, "Disassemble Extraction Force Transfer Coupling" information can be found in WP 0013 00 (Work Package 13).

An Alphabetical Index can be found at the back of the manual, and lists specific topics with the corresponding work package.

CHAPTER 1
INTRODUCTORY INFORMATION
FOR
ANCILLARY EQUIPMENT FOR
LOW VELOCITY AIR DROP SYSTEMS (LVADS)

**ANCILLARY EQUIPMENT FOR LOW VELOCITY AIR DROP SYSTEMS (LVADS)
GENERAL INFORMATION**

SCOPE

This Technical Manual (TM) provides unit maintenance instructions for ancillary equipment for the Low Velocity Air Drop System (LVADS). Rigger procedures pertaining to items included in this manual are outlined in the FM 4.20 (FM 10-500) Series publications. This manual also provides a Repair Parts and Special Tools List (RPSTL), located in WP 0065 00 through WP 0121 00.

Part Number and Equipment Name. Part Nos. 68F217-48, 68F217- 52, 68F217-49, 68F217-53, 68F217-58, 68F217-59, 68F217-50, 68F217-54, 68F217-22, 68F217-55, 68F217-51, 68F217-56, 68F217-57, 68F217-47, 68F217-45, 68F217-30, 68F217-32, 68F217-41, 68F217-33, 68F217-60, 68F217-61 Line, Multi-Loop (Extraction lines, deployment lines, bag clustering lines, riser extension, suspension slings).

Part Number	Name
11-1-2060	Coupling, Extraction Force Transfer
11-1-1487-2	Release, Cargo Parachute, M-1
11-1-565-2	Release, Cargo Parachute, M-2
11-1-3359	Link Assembly, Single Suspension, Type IV
66B1883	Link Assembly, Heavy Duty
65D3820	Link, 4-Point
50C7496	Cover, Link, Type IV
MS70087	Clevis, Aerial Delivery
50C7406	Clover, Clevis
11-1-129	Strap, Parachute Release, Single-Knife
11-1-484	Strap, Parachute Release, Multi-Knife
11-1-1715-2	Link Assembly, Coupling, 3-Point
53C7084-1	Bracket, Suspension
53C7084-2	Bracket, Suspension
11-1-2615	Plate, Suspension
11-1-721	Tie-down, Cargo, 10k
11-1-3922	Tie-down, Cargo, Quick-Release
11-1-3771	Drive Off Aid, Type IV
MIL-T-25959	Tie-down, Cargo, Aircraft
11-1-7026-1	Link, 2 Point, 3 ¾-Inch
11-1-7026-2	Link, 2 Point, 5 ½-Inch
11-1-4180-1	Assembly, Release Away Static Line
811-00429	Jettison System, Extraction Parachute

Purpose of Equipment. The LVADS Ancillary Equipment includes miscellaneous canvas, webbing, and metal items necessary for attaching parachutes to airdrop cargo loads. This equipment is used by airborne/rigger qualified personnel. It does not include the parachutes or platforms used in Low Velocity Air Drop.