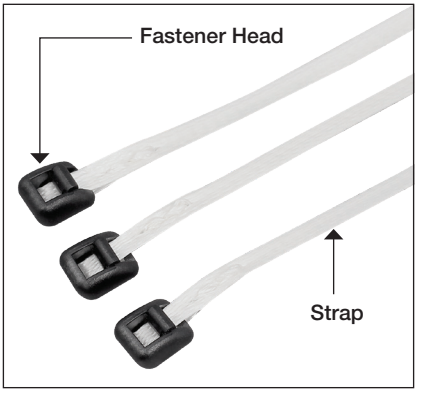
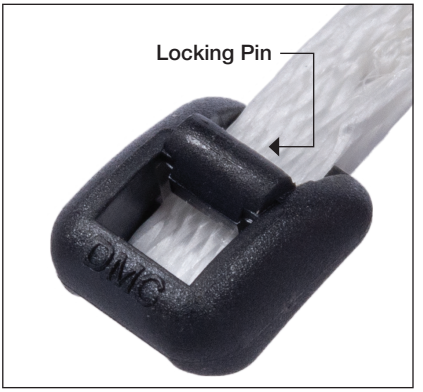
DANIELS MANUFACTURING CORPORATION®

LaceLok®
Cable Lacing Fasteners
Instruction Manual

LaceLok®
Installation Tool
M32555/01-01
(DLT-1100)



LaceLok® Cable Lacing Fastener (CLF)



LaceLok® CLF Fastener Head Detail

Standards & Specifications - MIL-DTL-32554B, MIL-DTL-32555A, NAVAIR 01-1A-505-1

Installation Tool - Must be installed using DMC Installation Tool (DLT-1100)

Configurations

LaceLok® Cable Lacing Fasteners are exceptionally strong with a single wrap. Additional strength can be achieved by simply applying a second or third wrap around the bundle prior to termination. Double and triple wrap configurations allow for a safe bundling option for pressure critical components such as coaxial and fiber optic cables.

Wraps Around Bundle	Minimum Tensile Strength
1 (Single)	55 lbs. (244N)
2 (Double)	110 lbs. (489N)
3 (Triple)	165 lbs. (733N)

Applications

Number of Wraps	Application
One	1/4” to 1” diameter cable bundles
Two	<1/4” and 1”- 3” diameter cable bundles
Three	>3” diameter cable bundle
Three	Exposure to turbine jet fuel
Two or Three	Bundles containing coaxial or fiber optic

Number of wraps should be evaluated for each specific application.

Installation Instructions

1. Select desired LaceLok® Cable Lacing Fastener (CLF) length based on size of bundle and application. Multiple wraps should be used where increased bundle strength or extreme resistance to lateral or radial motion is needed. Bundles containing pressure sensitive cables such as coax or fiber optic should also utilize multiple wraps.

Installation Instructions (continued)

2. Pass LaceLok® CLF around the cable bundle one to three times (Fig. 1). Feed lacing tape end through fastener head under locking pin (Fig. 2). Cinch tight around bundle (Fig. 3).

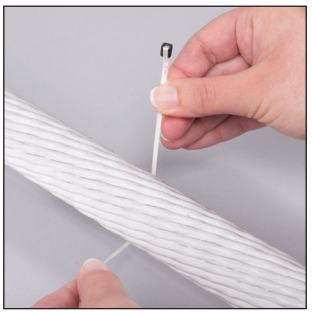


Fig. 1

Fig. 2

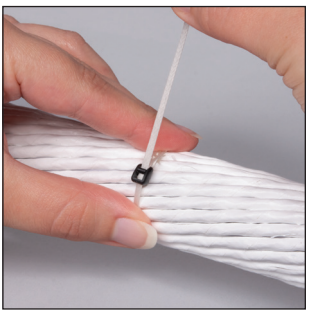


Fig. 3

Tips

To ensure the bundle is secured properly, it is important the lacing tape is not twisted during installation (Fig. 4).

If greater tensile strength is needed, wrap the lace around the bundle multiple times but only through the fastener head once on the final pass around the bundle. Do not thread the lace through the buckle multiple times (Fig. 5).

Fig. 4

Fig. 5

Fig. 6

3. Loop end of lace over locking pin and back through opening (Fig. 6). Ensure lace is not twisted around bundle or in fastener head. Cinch around bundle (Fig.7).

Fig. 7

4. Hold end of lace creating a vertical portion. Pull tool trigger to position capstan with a vertical slot. Raise free end of lace perpendicular from the bundle and side-load the lace into the capstan (Fig. 8).

Fig. 8

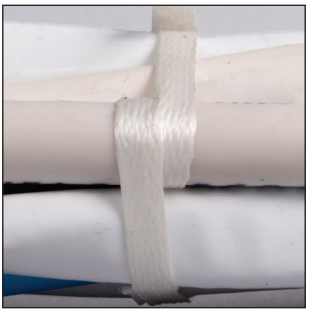


Fig. 9

Fig. 10

Tips

Remember the lace is not fed through the nose of the tool, but rather side-loaded through the capstan.

For larger bundles, bundles of twisted pair wire, or bundles where movement of the fastener may be a concern, a lockstitch is recommended to be used by looping the lace around one component and then completing the wraps and termination as normal (Fig. 9).

LaceLok® is used to wrap wire, not gather the bundle. Before wrapping with LaceLok®, it may be helpful to bundle the wire with a clamp or other bundling device. If a clamp is not available, it may be helpful to hold the bundle together with your non-dominant hand while using the tool with your dominant hand (Fig 10).

5. Side load lace into capstan and ensure that the LaceLok® fastener head is in the nose of the tool. (Fig. 11). Ensure LaceLok® tool is tangent to wire bundle diameter and directly in line with LaceLok® CLF head.

The tool shall not be in front or perpendicular to the fastener head (Fig. 13, 14, 15, 16). The tool nose should nest with and partially surround the fastener head (Fig. 11). Failure to correctly align the tool can result in a faulty LaceLok® CLF installation.

Fig. 11

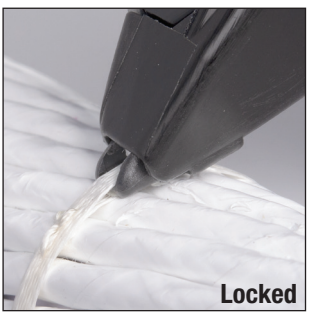


Fig. 12

Fig. 13

6. Squeeze installation tool trigger 2-3 times to rotate capstan and take up slack, tighten, lock, and terminate the LaceLok® CLF (Fig. 12). The operator will be able to hear and visually observe locking and termination (Fig. 12).

Tips

To achieve the best termination, remember to align the tool to the fastener head so that it is nested in the nose of the tool. Do not position the tool in front of (Fig 14) or perpendicular (Fig 13) to the fastener head. Failure to correctly align the tool can result in a faulty installation.

Fig. 14

Fig. 15

Fig. 16

Inspection

1. Confirm LaceLok® CLF locking pin is “Activated” and locked. The locking pin should move from its unlocked (Fig. 17) to locked position (Fig. 18). The lace should not be able to move around the locking pin.
2. The locking pin should be angled away from the cut end of lace (Fig.18, 19).
3. Ensure LaceLok® CLF is adequately tight around bundle.
4. Ensure lacing tape is not twisted in the head or around the bundle (Fig. 19).
5. Ensure cable lacing tape is cut cleanly and cut end measures 0.5 in. +/- 0.25 in. (12.7mm +/- 6.4mm) (Fig. 19).

Fig. 17

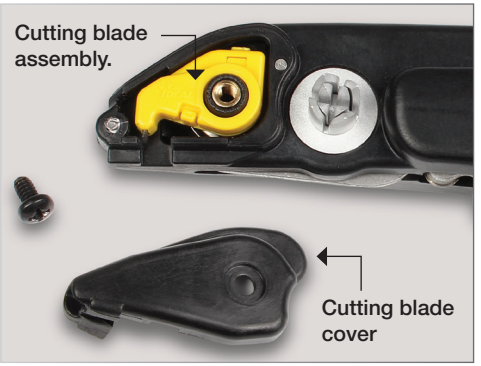
Fig. 18

Fig. 19

Maintenance

Cutting Blade and Nose Replacement

1. Unscrew cutting blade cover screw (1-1025).
2. Remove the cutting blade cover (DLT-1100-33).
3. Carefully remove used yellow cutting blade assembly (DLT-1100-SA5)(M32555/01-02).
4. Replace cutting blade assembly with new blade assembly.
5. Reinstall cutting blade cover, or replace as necessary.



⚠ CAUTION

The blade is sharp and could cause injury.

The installation tool was designed to be maintenance-free. The tool should be kept clean and away from debris which may affect the function of the tool. Repair work, other than changing the blade, including opening the tool, must only be conducted by DMC or those authorized by the manufacturer. If there is visible damage to the nose, contact DMC for a replacement nose.

Warnings

- Do not disassemble housing halves or injury may occur due to spring-loaded components.
- Disassembly of housing will void warranty.

Breakout Examples

LaceLok® can be used to create breakouts in a similar application method as plastic cable ties or hand tied lace by replacing the knot with the activated buckle. Examples of breakouts include, but are not limited to the following examples. It is up to the responsible engineering authority to determine the applicable method and application of LaceLok®.

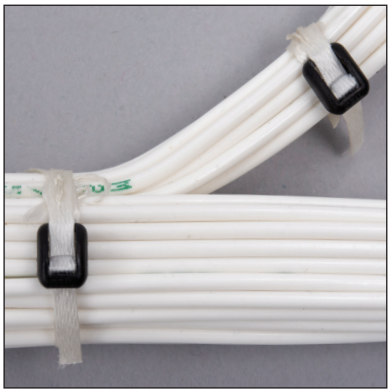


Fig. 20

Fig. 21

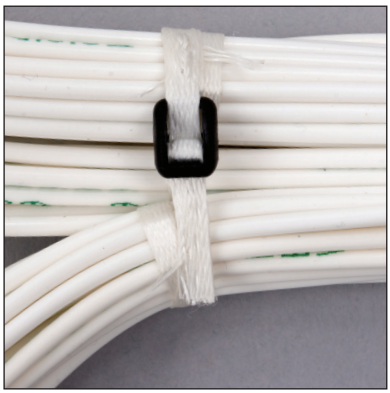


Fig. 22

Fig. 23

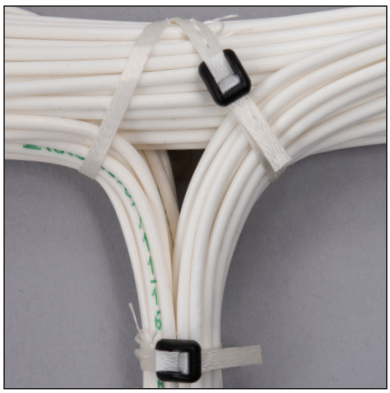


Fig. 24

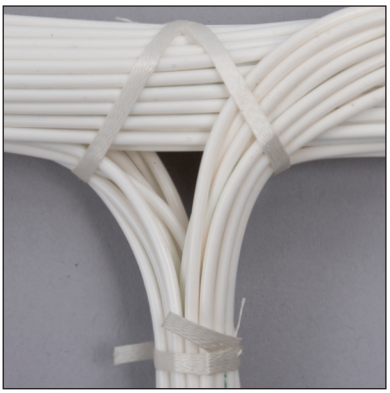


Fig. 25

CLF Color	CLF Length	Part No.	MIL-DTL Part No.
White	6 in. (15 cm)	**LF2-06NA1**	M32554-06-1-NA1
	10 in. (25 cm)	**LF2-10NA1**	M32554-10-1-NA1
	18 in. (45 cm)	**LF2-18NA1**	M32554-18-1-NA1
	24 in. (61 cm)	**LF2-24NA1**	M32554-24-1-NA1
Black	6 in. (15 cm)	**LF2-06BLK**	M32554-06-1-BLK
	10 in. (25 cm)	**LF2-10BLK**	M32554-10-1-BLK
	18 in. (45 cm)	**LF2-18BLK**	M32554-18-1-BLK
	24 in. (61 cm)	**LF2-24BLK**	M32554-24-1-BLK

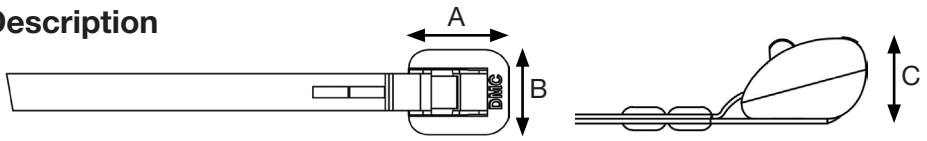
CLF is sold in quantities of 100. Contact DMC for additional CLF color options.

Tooling and Kits	CLF Length	Part No.	MIL-DTL Part No.
LaceLok Installation Tool	N/A	**DLT-1100**	M32555/01-01
Starter Kit: LaceLok Installation Tool, Cutting Blade Assembly, Wire Cutters, 100 Quantity of White CLF	10 in. (25 cm)	**DMC2300-10NA1**	N/A
	18 in. (45 cm)	**DMC2300-18NA1**	

Other starter kits are available with 6”, 10”, 18” and 24” length CLF in both natural (white) and black options.

Replacement Parts	Part No.	MIL-DTL Part No.
Cutting Blade Cover Screw	**1-1025**	N/A
Cutting Blade Cover	**DLT-1100-33**	N/A
Cutting Blade Assembly	**DLT-1100-SA5**	M32555/01-02

Description



Fastener Physical Dimensions	
Length (A)	0.28 in. (7.1mm)
Width (B)	0.23 in. (5.8mm)
Height (C)	0.18 in. (4.6mm)
Overall Length	6 - 24 in. (152-610mm)

Construction	
Fastener Head	Ultra high temperature thermoplastic (PEEK)
Lacing Tape	NOMEX® White or Black (A-A-52084 Size 2 Finish C)

Environmental	
Operating Temperature	-76°F to 500°F (-65°C to 260°C)
Chemical Resistance	Hydraulic fluid, jet fuel, lubricating oil, isopropyl alcohol