

TEMPORARY SPLICE PROTECTION USING CR TAPE

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1. GENERAL

1.01 This section introduces the use of 40-inch muslin on temporary closures and updates current placement procedures.

1.02 (Reserved for future use.)

1.03 Every effort should be made to place an approved closure as opposed to CR Tape. However, should the field conditions require their use, the following procedures must be adhered to. This will reduce the possibility of boot failure.

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1.04 This section includes information on the proper use of 40-inch sheet muslin on the CR Tape in conjunction with the *Touchtite** boot cover. (See Exhibit 1 for required materials.)

1.05 This section illustrates a splice with a single cable at one end and a Y-joint at the other. The methods described can be applied to straight splices and double Y splices.

1.06 Oil, dirt, or water reduces the adhesive qualities of the white rubber layer of tape. CR tape should be kept clean and dry and handled as little as possible to preserve this adhesive quality. Sunlight tends to shorten the service life of CR tape, so it is advisable to keep the tape covered during transportation and storage.

1.07 When CR tape is exposed to freezing temperatures, it tends to lose its adhesive strength. The loss of adhesiveness is temporary and can be corrected by raising the temperature of the tape. The condition of the tape can be determined by bending a sample piece and removing the separator. If the tape seems to be stiff and the separator does not peel cleanly, the tape needs warming. Cut the piece required for the job and place it in a warm room, a heated tent, or motor vehicle cab for several minutes immediately prior to using. *Do not warm the tape over an open flame.*

2. PREPARATION OF CABLES

Two or More Cables

2.01 When two or more cables enter one end of a splice, prepare the end as follows:

1. Thoroughly scuff the cable with a carding brush or approved 3M type scuffing tape. Be careful not to scuff parallel to the cable but perpendicular to it and around the full circumference. (See Fig. 1.)

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Fig. 1

2. Place two complete turns of B sealing tape around each cable so that the inner *edge* is about 4 inches from *sheath* end. (See Fig. 2.)

3. Equip a one-foot length of metal or polyethylene tubing with a valve (core removed). Roll 2 laps of B sealing tape on the cables as shown in Fig. 3. The tube in the figure is a C flash

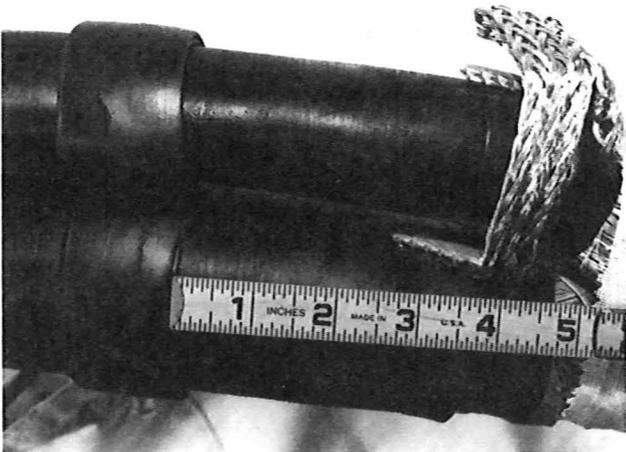


Fig. 2

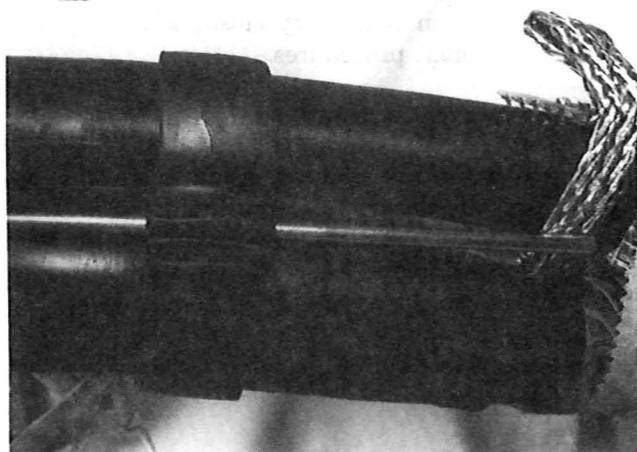


Fig. 3

testing valve, a commercially available item.

4. Fill in the spaces between the cables with rolls of B sealing tape. Then use rolls of B sealing tape to form an approximately round collar. (See Fig. 4.)

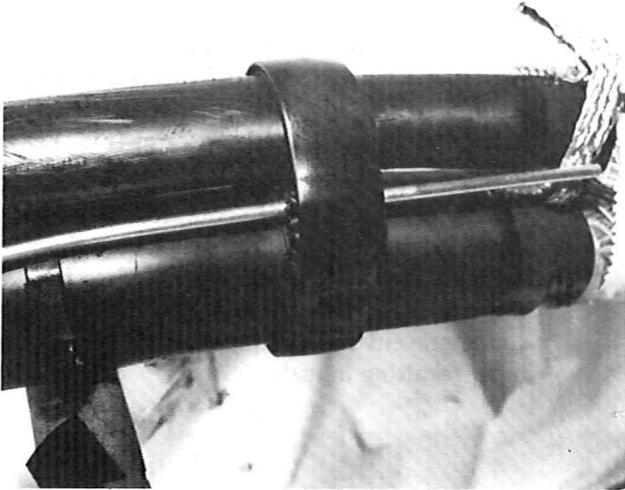


Fig. 4

5. When a single cable enters one end of a splice, simply place two complete wraps of B sealing tape around the cables 4 inches from the sheath opening.

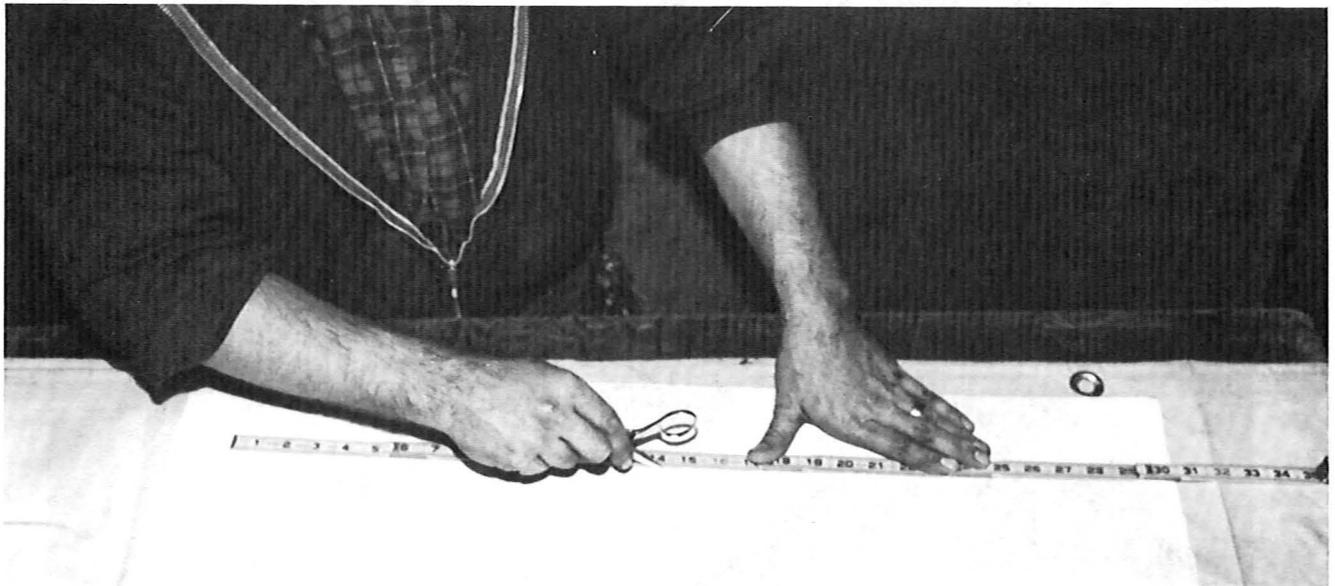


Fig. 5

3. PREPARATION OF CR TAPE

- 3.01 On lead or plastic cables, allow a 3 1/2-inch overlap beyond the longitudinal tab cuts or inner sheath clamps. If auxiliary sleeves are being used, allow 3 1/2-inch overlap on each end.

Placing over Lead Sheath End Plates

- 3.02 On existing lead sheath cables where end plates were used, allow approximately 5 inches overlap beyond the outside face of the end plate.

Measuring CR Tape Cover

- 3.03 The width of the CR tape cover is determined by adding 4 inches to the greatest circumference of the wrapped splice. This width may be determined by centering the proper length of CR tape over the splice opening with the ends hanging down. Press the ends together so the CR tape is contoured around the wrapped splice at the widest point and mark the location where the ends meet directly under the splice. *Add* 2 inches to each side and cut off excess tape.

- 3.04 Prepare the CR tape as follows: Carefully score the white separator material of the CR tape cover 3-1/2 inches from all four edges with splicing snips as shown in Fig. 5.

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Note: The 3 1/2-inch strip of material should not be removed until the cover is in place over the splice.

Placing CR Tape Cover

3.05 Position the CR tape as follows:

1. Place the CR tape over the splice. It should be long enough to extend 1/2 inch beyond the sealing tape collars.
2. Remove the 3 1/2-inch strip of white separator from the **edges** hanging down. Starting at either end of the cover, work across the bottom, **carefully** pressing the adhesive surfaces of the CR tape together to **avoid** wrinkles (See Fig. 6.) Allow the rear surface to extend 1/4 inch below the front surface for soaping and testing purposes. (See Fig. 7.)
3. Remove the 3 1/2-inch separator at one end of the CR tape. (See Fig. 8.)
4. Press the adhesive surface of the tape firmly against the top of the B sealing tape. **Do not** allow any wrinkles to remain where the CR tape meets the collar.
5. Pinch the CR tape tightly together on the bottom of the collar to form a tight seal around the collar. (See Fig. 9.) Follow these procedures for the other end of the CR tape.
6. Remove the valve stem from the flash testing valve if it has not yet been removed. (See Fig. 10.) Trim 1/2 inch off the side edges of the CR tape. This helps vulcanize the adhesive qualities of the CR material (Fig. 11).
7. Wrap a full rubber bandage over each of the collars, pulling tightly to compress the sealing tape. Tie the bandage off by placing the end through the last lap. **Do not** use less than a full roll of rubber bandage per collar as this could prevent full compression of the sealing tape, resulting in leaks.

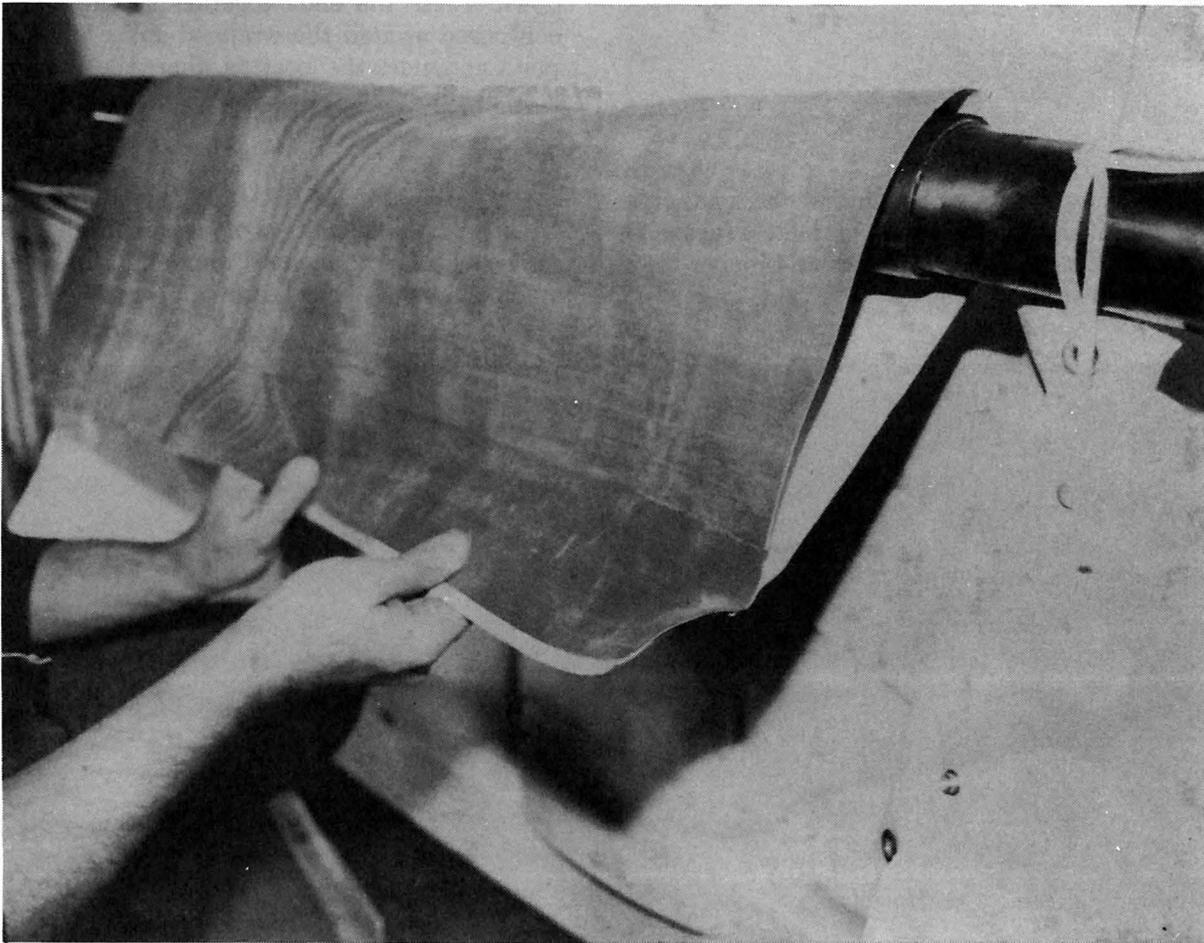


Fig. 6

4. TESTING THE CR TAPE COVER

4.01 Admit air through the air valve installed in the CR tape cover at a pressure not to exceed 1/2 pound per square inch. Apply pressure testing solution to the longitudinal seam along the bottom of the cover and along each of the end seals. A

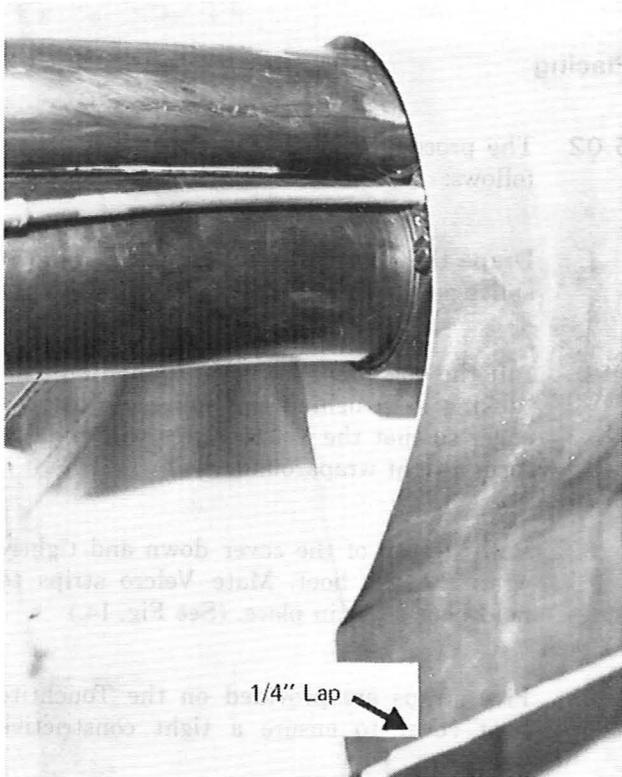


Fig. 7

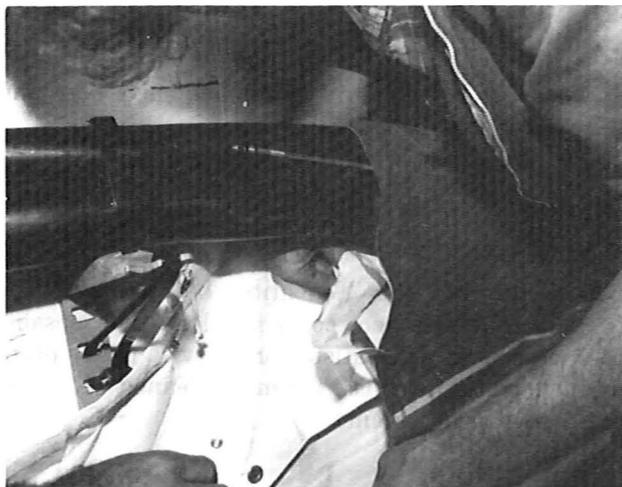


Fig. 8

leak in the long seam can usually be stopped by stretching the CR tape tightly together at the leak. A leak around the cable sheath at the end seals can usually be stopped by placing additional turns of rubber bandage adjacent to or over the original turns. After testing procedures, complete the vulcanizing process by trimming 1/2 inch of the bottom edge of the CR tape.

4.02 On nonpressurized cables, apply a half-lapped layer of 6-inch muslin over the CR tape for mechanical protection and replace the valve core and cap.

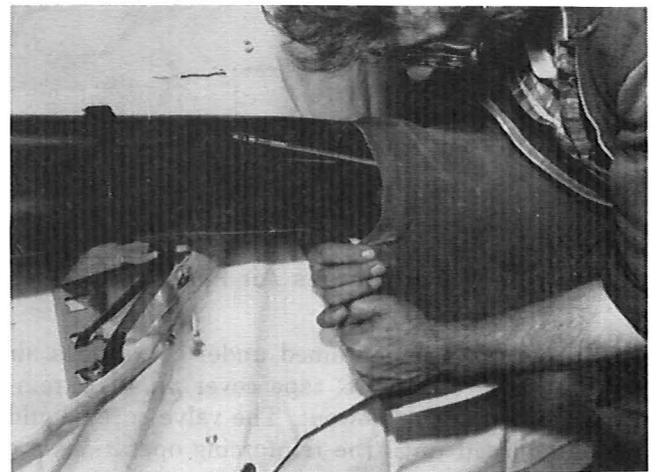


Fig. 9

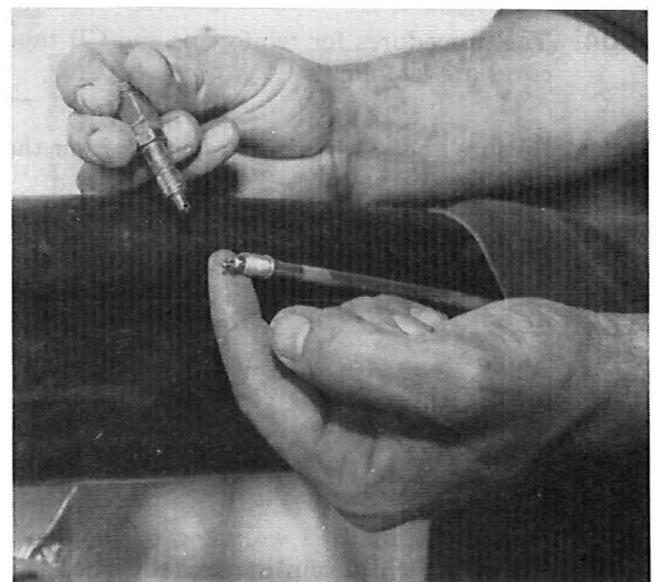


Fig. 10



Fig. 11

Cables Under Continuous Air Pressure

4.03 On cables maintained under continuous air pressure, the CR tape cover *must* be reinforced to prevent a blowout. The valve core should not be replaced until the reinforcing operations are completed.

Reinforcing CR Cover

4.04 The procedures for reinforcing the CR tape cover are as follows:

1. Be sure the valve core is removed from the flash testing valve.
2. Place a single wrap of 6-inch muslin over the CR tape to collapse it.
3. Apply three wraps of 40-inch sheet muslin around the CR tape cover and collars followed by two layers of half-lapped 6-inch muslin (as shown in Fig. 12).
4. Secure the finished wrapping by lapping a roll of 6-inch muslin horizontally back and forth across the vertical wrappings. Use a figure eight turn on the splice.

5. TOUCHTITE BOOT COVER

5.01 *Touchtite Boot Cover:* This plasticized nylon sheet is equipped with Velcro fasteners which help to obtain a tight wrap around irregular shaped splices. The cover will fit temporary closures ranging in sizes from 6 inches outside diameter (OD) to 13 inches OD.

Placing

5.02 The procedures for placing the cover are as follows:

1. Drape the boot cover behind the CR taped splice as shown in Fig. 13.
2. Lift the bottom of the cover up and around, tucking it in behind the splice. Adjust the cover so that the Velcro strips will mate to form a tight wraparound.
3. Pull the top of the cover down and tightly wrap the CR boot. Mate Velcro strips to hold boot cover in place. (See Fig. 14.)
4. Five straps are provided on the Touchtite boot cover to ensure a tight constrictive wrap.
5. Wrap the straps as tightly as possible and mate Velcro fastenings as illustrated in Fig. 15.

Note: Always be sure to replace valve core and cap into the flash testing valve.

Storing

5.03 Storing the Touchtite boot cover: The Touchtite boot cover is a long-life, reusable tool which will give satisfactory service under proper and careful field use. It can be cleaned with soap and water or detergents.

Caution: Do not store the cover until it is completely dry.

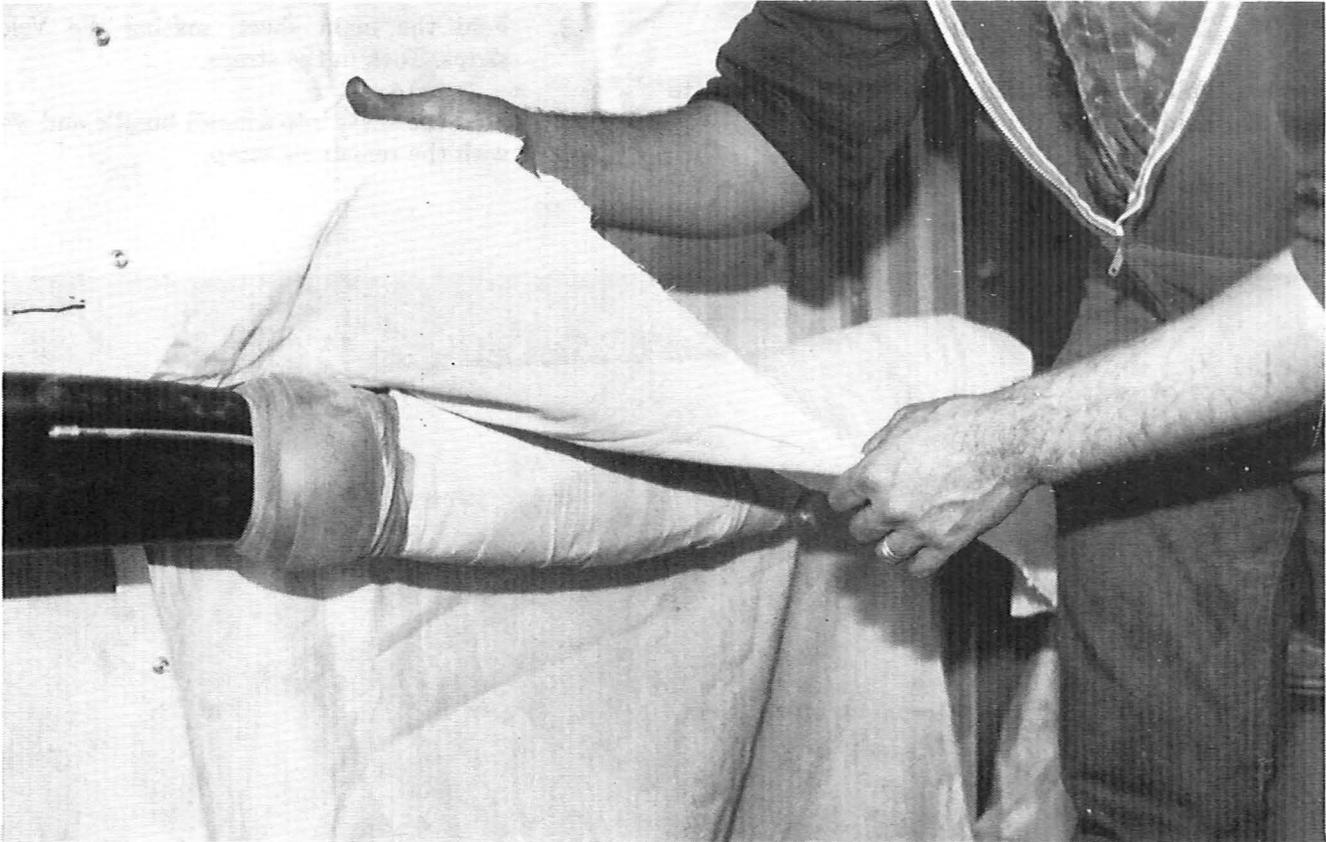


Fig. 12

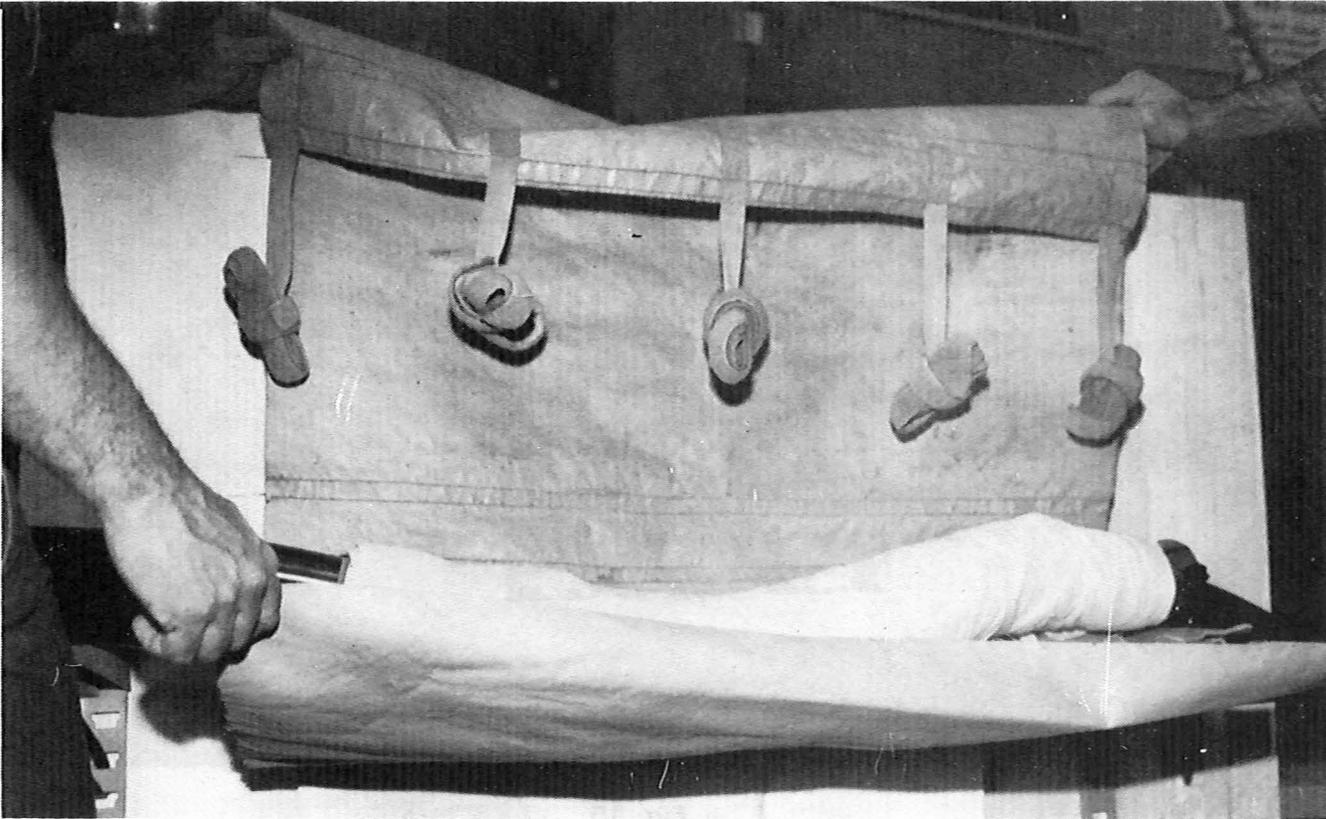


Fig. 13

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5.04 To store the cover, proceed as follows:

1. Fold the straps, using the Velcro fasteners to hold the roll.

Note: Leave one of the end straps free for wrapping up the entire bundle.

2. Fold the main sheet, mating the Velcro strips. Tuck in the straps.
3. Fold the sheet into a small bundle and wrap with the remaining strap.

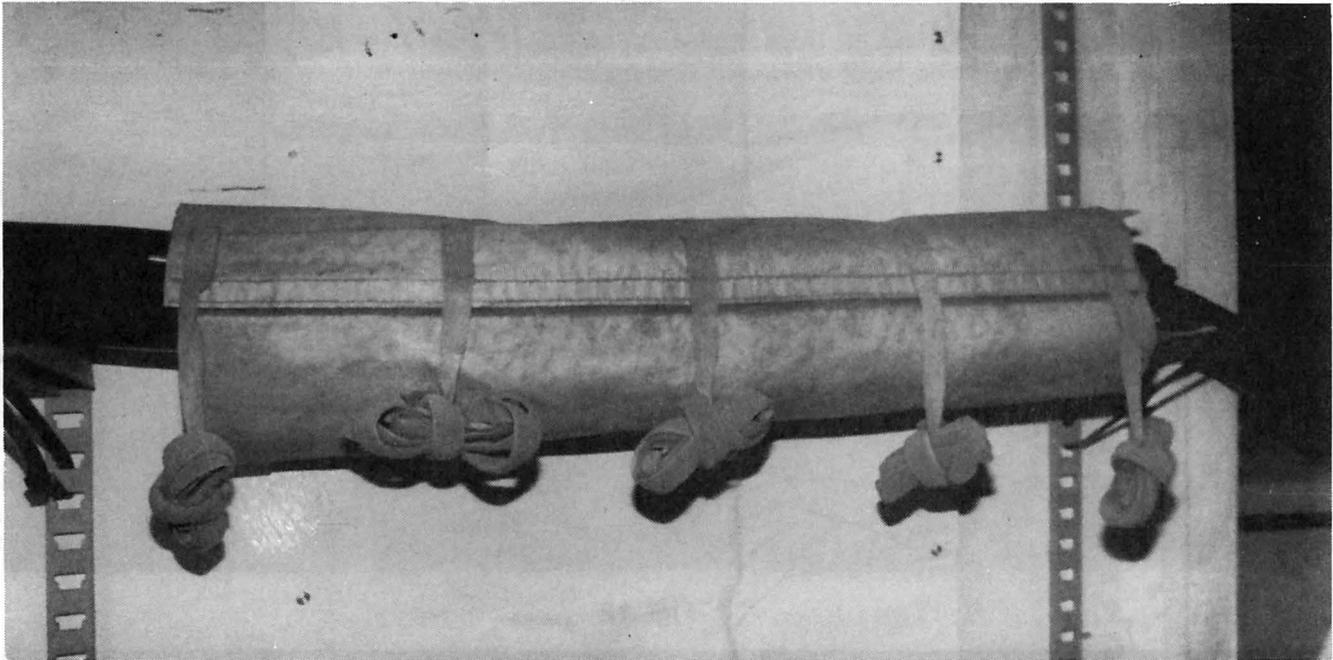


Fig. 14

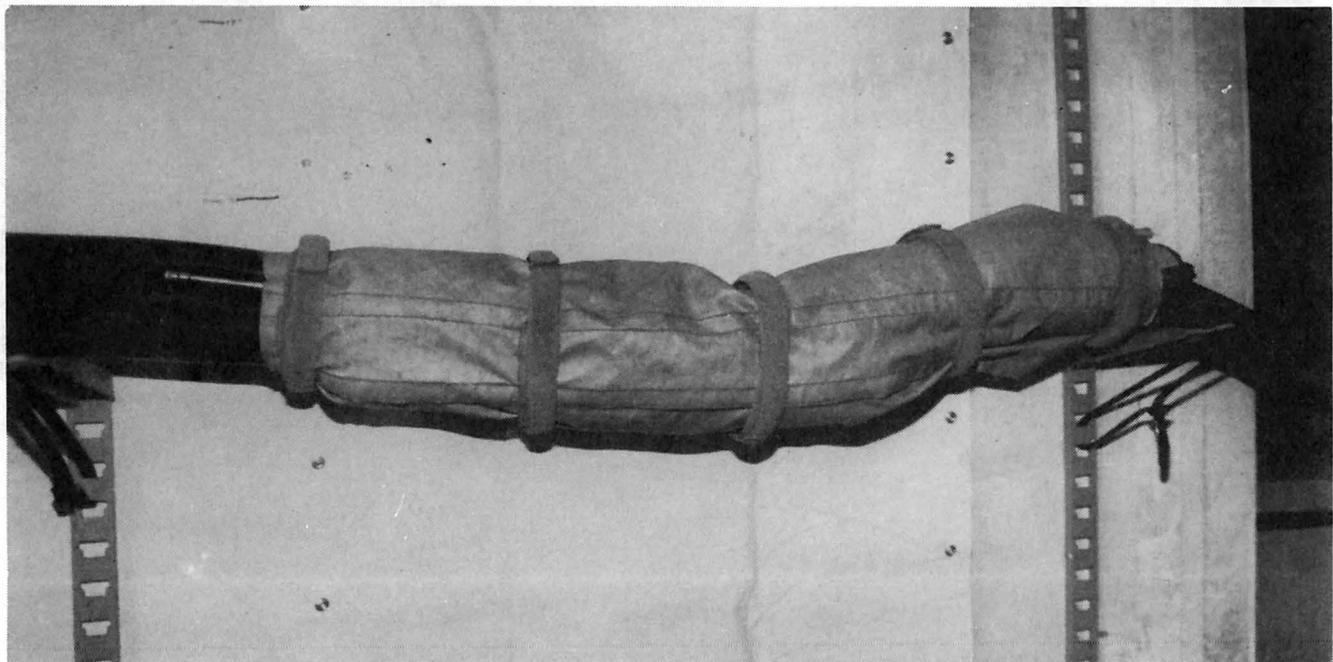
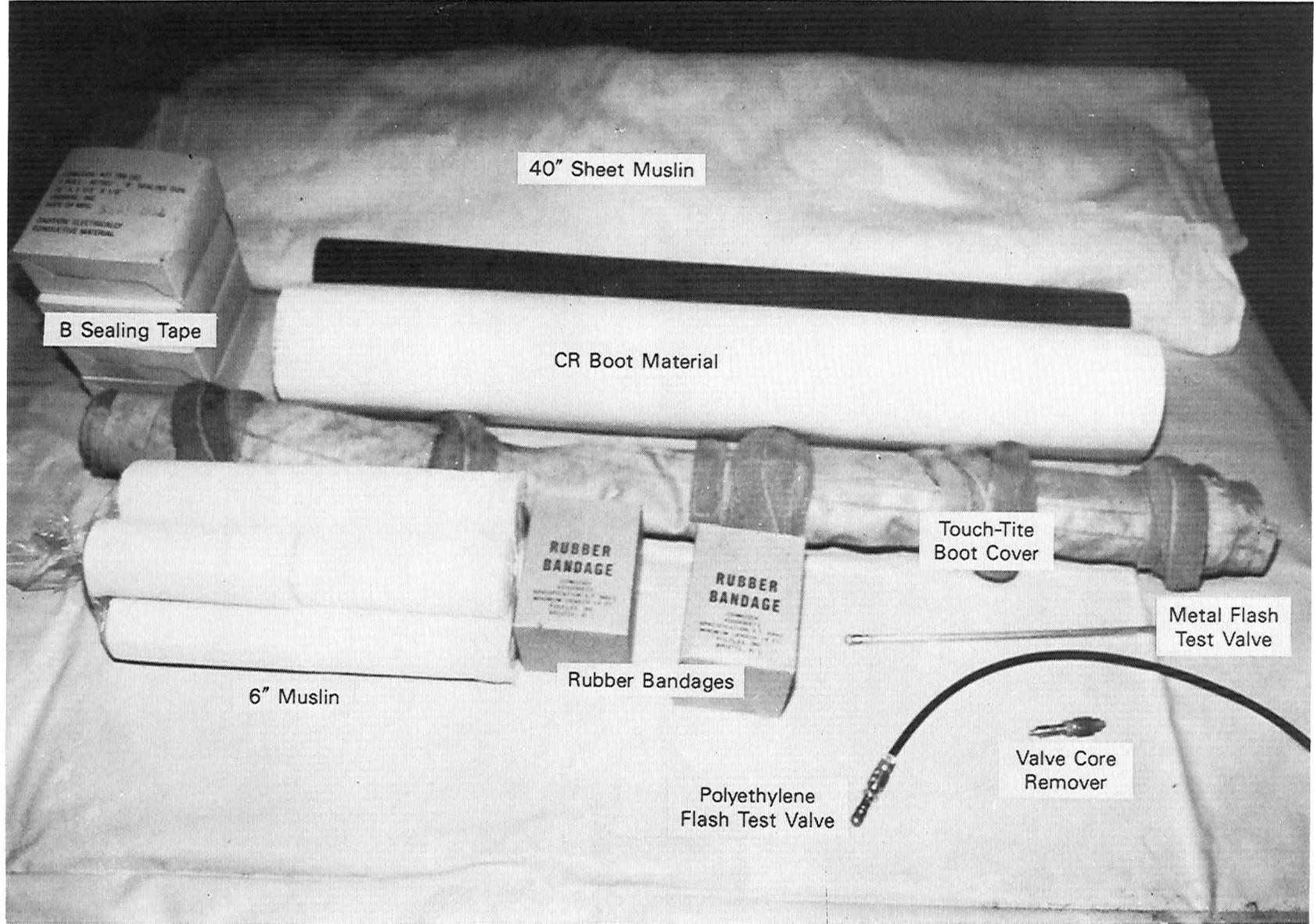


Fig. 15



Required Material for Boot Placement
Exhibit 1