



Aerospace
Fluid Conveyance

How to Repair Silicone Covered
Hose Abrasions Using AE272
Flexwrap Firesleeve



Aeroquip® Brand AE272 Flexwrap — Field Replaceable Silicone Firesleeve

Eaton's Aeroquip® brand Flexwrap™ Silicone Firesleeve provides easy field replacement of Firesleeve and repair of hose assemblies at the operator level.

Flexwrap sleeving is a split sleeve, which allows minimum sleeve diameters to be installed (wrapped) over hose assemblies regardless of end fitting configuration.

Flexwrap sleeving is a silicone-impregnated, asbestos-free, fiberglass cloth which has been

successfully fire-tested with Eaton's Aeroquip® hose assemblies.

This bulletin details how to repair damaged areas in Eaton's Aeroquip® brand integral silicone-covered hose. This simple procedure saves you the cost of replacing the complete hose assembly. Eaton's Aeroquip® brand AE400 and AE800 series (see Table 1) Teflon® hose with integral silicone fire protection cover has been repaired to meet the requirements of TSO-C75 and TSO-C53.

If the silicone cover has been gouged, nicked, abraded, or cut to a depth of .030 inches or less, a repair sleeve is not necessary. Any damage deeper than .030 inches must be repaired to retain the original fire resistance of the hose.

WARNING:

Hose with damaged reinforcement wire must be replaced.

CAUTION:

A cut in the silicone material may continue to enlarge if it is in a stressed area such as the outside bend of the hose. This should be repaired as soon as possible. All cuts should be repaired and closely monitored for any change in size.

CAUTION:

Damaged areas that have exposed wire braid should be checked for wire damage.



Items required to repair silicone covered hose: Isopropyl alcohol, Eaton Aeroquip AE272 Flexwrap Firesleeve, aircraft safety wire pliers, razor blade or sharp knife, wire cutters, silicone sealant RTV106 or RTV736, .031 diameter (minimum) stainless steel safety wire, clean rags or paper towels.



Figure 1



Figure 2

1. Determine the proper sleeve to use from Table 1. To determine the proper length, measure sleeve to extend one-inch beyond abrasion on each end. Cut to size with a razor blade or sharp knife.
 2. Clean damaged area with a cloth dampened with isopropyl alcohol. Allow to dry for 15 minutes. Fill the damaged area with RTV106 or RTV736 silicone to the original hose diameter.
 3. Wrap around hose using the natural curl of Flex-wrap AE272 to form around hose (Figure1). Apply a bead of silicone to the hose for the full length of the repair sleeve near the top edge; apply a bead of silicone to the repair sleeve near the sleeve edge.
 4. Wrap repair sleeve around the hose and apply a bead of silicone under the outer edge the full length of the sleeve.
 5. Press firmly along the repair sleeve edge.
 6. Wipe off excess silicone with a cloth or paper towel for a neat appearance.
 7. Apply one wrap of .031-inch (minimum) stainless steel safety wire approximately 1/2 – inch from each end of the repair sleeve and draw tightly with four or five twists of the wire.
 8. Wrap the wire ends back around the repair sleeve in the opposite direction and apply four or five twists. Cut off ends and bend toward hose.
- Note:** Repair sleeve lengths six inches or longer should be secured with wire every three inches.
9. Seal the ends of the repair sleeve with silicone to prevent wicking (fig 2).
 10. Silicone may also be placed on the twisted wire ends to prevent snagging. For handling purposes, allow silicone to cure four hours before reinstalling.

AE272 Sleeve Sizes	AE401	AE413	AE418	AE433	AE441/ AE443	AE446	AE466	AE818	AE841	AE846	AE866
-4						-4	-4			-4	-4
-6	-4 -5 -6		-4 -6	-4	-4 -6	-6	-6	-4 -6	-4 -6	-6	-6
-9	-8 -10		-8 -10	-10	-8 -10	-8 -10 -12	-8 -10 -12	-8 -10 -12	-8 -10	-8 -10 -12	-8 -10 -12
-11	-12			-12	-12		-16	-16	-12		-16
-13	-16 -20 -24	-16	-12 -16 -20	-12 -16 -20	-16 -20		-20 -24	-20	-16 -20		-20 -24
-16	-32				-20 -24 -32						

Table 1

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Eaton Corporation
Fluid Conveyance
300 South East Avenue
Jackson, Michigan 49203-1972
Phone: (517) 787-8121
Fax: (517) 787-5758
www.aerospace.eaton.com

Eaton Corporation
Fluid Conveyance
2500 W. Argyle St.
P.O. Box 1845
Jackson, Michigan 49202-1845
Phone: (517) 787-8121
Fax: (517) 789-4716
www.aerospace.eaton.com

Eaton Corporation
Fluid Conveyance
Meadowbrook Road
P.O. Box 819
Toccoa, Georgia 30577-0819
Phone: (706) 779-3351
Fax: (706) 779-2638
www.aerospace.eaton.com

Eaton LTD
Fluid Conveyance
Posttatch 1026
Carl -Benz-Strasse 9
D-82205 Gilching
Germany
Phone: (49) 810-575-0
Fax: (49) 810-575-27
www.aerospace.eaton.com

Eaton LTD
Fluid Conveyance
Chemin De Pau
64121 Serres-Castet
France
Phone: (33) 559-333-864
Fax: (33) 559-333-865
www.aerospace.eaton.com

Eaton LTD
Fluid Conveyance
Broad Ground Road
Lakeside
Redditch
Worcs B98 8YS
England
Phone: (44) 152-751-7555
Fax: (44) 152-751-7556
www.aerospace.eaton.com

