NATIONAL INTERAGENCY FIRE CENTER

3833 South Development Avenue
Boise, Idaho 83705

9216 NFES (LLFA240000)

February 12, 2010

NATIONAL FIRE EQUIPMENT SYSTEM
CACHE MEMORANDUM NO. 10-2

To: NFES: National Interagency Support Caches

From: Tory Henderson, Chair, Equipment Technology Committee – NWCG

Subject: Sling Psychrometer (NFES 1156) Non-Mercury Thermometer Retrofit

The mercury contained in the two thermometer components of the sling psychrometer (NFES 1156) and also found in the belt weather kit (NFES 1050) can create a health and environmental hazard during use or refurbishment if the mercury is released due to glass breakage. An Executive Order mandates, but sets no specific deadline, for the removal of mercury from the workplace and requires all federal agencies to phase out and discontinue the use of products containing mercury. A commercially available replacement sling psychrometer that does not contain mercury thermometers is now available through GSA.

The San Dimas Technology and Development Center (SDTDC) have developed a retrofit process which allows for the conversion of older psychrometers with mercury thermometers to the non-mercury thermometer type. Non-mercury replacement thermometers are available from:

The Weksler Gauges Company.
Mailing address: All Island Industrial Sales, Inc.
681 Grand Boulevard Unit 3
Deer Park, New York 11729
Phone: 866-415-2002
Fax: 866-415-3019
E-mail: sales@weksler-gauges.com

Part to order: Replacement Thermometers No. 317 RS

The retrofit requires minor modifications to the metal frames holding the thermometers and is described below.

Sling Psychrometer, Non-Mercury
Thermometer Replacement Procedure

To accommodate the new, non-mercury thermometers, the holes in the retaining tabs on the sling must first be enlarged.

A: Removal of old mercury thermometers.

Untie or cut the string securing the cotton "wet" sleeve. Remove the mercury thermometers from the sling. Retain all screws, hold-down brackets, the 2 rubber sleeves and the cotton "wet" sleeve as these will be reused.

B: Enlargement of holes.

There are three methods for enlarging the holes. The use of a #5 reamer securely held in a tap wrench, a reamer or a #8 round file. Whichever method is used, care must be taken to not bend the retaining tabs. The holes must be enlarged by .5-.7mm (.019-.027 inch).

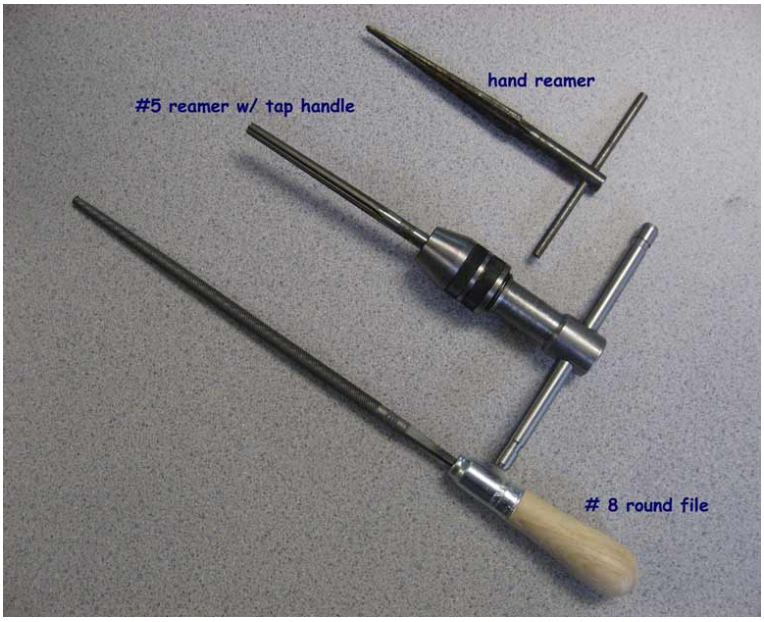

Figure 1: Tools to enlarge the holes

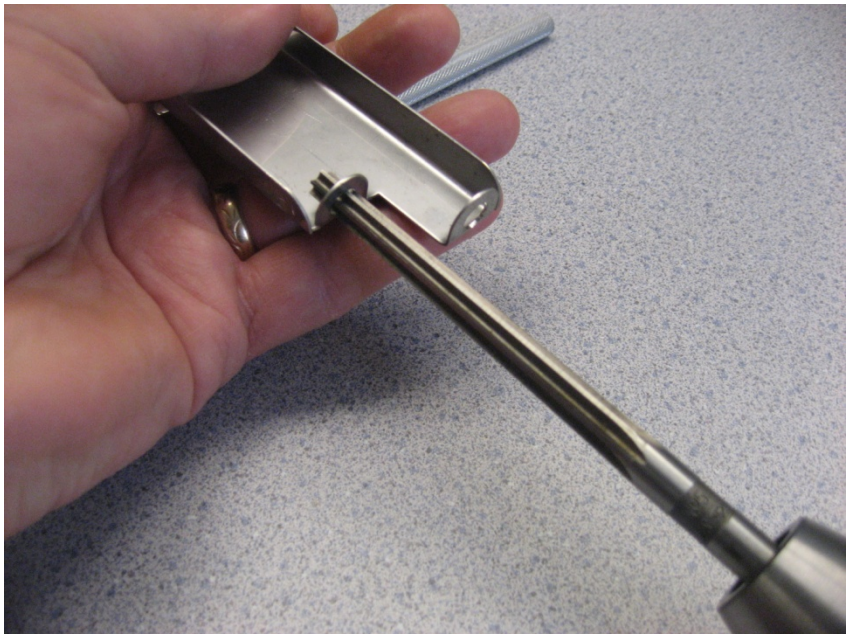

Figure 2: Using a #5 reamer to enlarge the hole

C: Replacement with new non-mercury thermometers.

Slip the rubber sleeves over the "button" end of the thermometers. If the rubber sleeves are worn, ripped or cracked, replace them with an equivalent material.

Insert the thermometers into the retaining tabs, and using the existing hold-down brackets and screws, secure them to the sling.

Place the cotton "wet" sleeve over the appropriate thermometer and retain by wrapping a new string and tying to secure.

Please contact Carl Schaefer, SDTDC at 909-599-1267 extension 274 if you have questions or comments regarding the information in this memorandum.

/s/ Tory Henderson

cc:
State Fire Management Officers - BLM
Regional Directors Fire and Aviation Management - USFS
Technology Development Centers - San Dimas, Missoula
Agency Directors - NIFC
Logistics Center – NICC
Bill Hicks – GSA