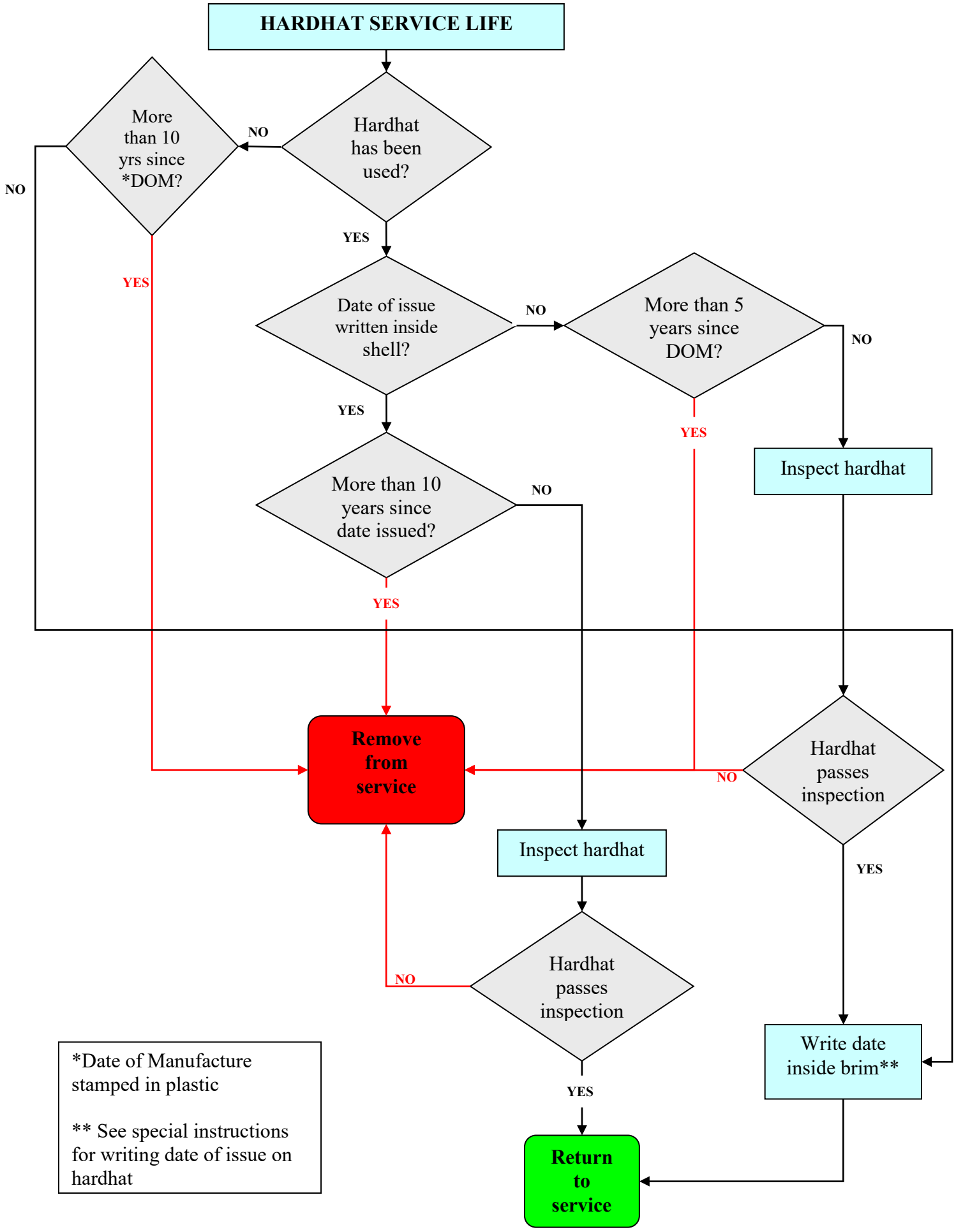

HARDHAT SERVICE LIFE
Hardhat has been used?
NO
More than 10 yrs since *DOM?
NO
YES
YES
Date of issue written inside shell?
NO
More than 5 years since DOM?
NO
YES
YES
Inspect hardhat
More than 10 years since date issued?
NO
YES
Remove from service
NO
Hardhat passes inspection
YES
Inspect hardhat
Hardhat passes inspection
NO
YES
Write date inside brim**
Return to service
*Date of Manufacture stamped in plastic
** See special instructions for writing date of issue on hardhat

NATIONAL INTERAGENCY FIRE CENTER

3833 South Development Avenue
Boise, Idaho 83705

9216 NFES (LLFA240000)

April 19, 2011

NATIONAL FIRE EQUIPMENT SYSTEM
CACHE MEMORANDUM NO. 11-01

To: NFES: National Interagency Support Caches

From: Ralph Gonzales, Acting Chair, Fire Equipment Working Team - NWCG

Subject: Helmet, Safety (NFES 000109), Service Life and Refurbishment Guidelines

There have been recurring fire community concerns regarding the appropriate service life for safety helmets (hardhats), most recently raised after the 2010 fire season. The direction from helmet manufacturers on their product's service life is somewhat ambiguous, with variables such as the conditions of storage, use, and chemical or heat exposure making a specific expiration or service life age for all helmets impractical. The national caches require clear guidance on helmet service life in order to implement appropriate practices for the issue and refurbishment of these items.

The NFES Subcommittee and the Refurbishment Unit are introducing the following hardhat decision key be to be used for determining hardhat service life. In addition, a supporting "Hardhat Service Life" flowchart has been developed (see attachment). The helmet service life protocols are based on service life recommendations provided by helmet manufacturers in combination with an analysis of the fire program's support and operating conditions. This decision key is based on a combination of factors including helmet manufacture date, date placed in service, and a used or unused condition.

Hardhat Service Life – Rules for Caches:

<u>Hardhat Decision Key</u>:

1. Is the hardhat used or unused? If it is used, go to **#2**. If it is unused, go to #7.
2. (**From #1, hardhat used**): has a date of issue been written on the inside of the shell? If yes go to #3. If no, go to #5.

3. (**From #2, hardhat used, date of issue written inside shell**): has it been more than 10 years since the date of issue? If yes, REMOVE FROM SERVICE, if no, go to #4.
4. (**From #3, hardhat used, less than 10 years since date of issue written on shell**): does the hardhat pass inspection (see Inspection Guidelines, below)? If yes RETURN TO SERVICE. If no, REMOVE FROM SERVICE.
5. (**From #2, hardhat used, no date of issue on shell**): has it been more than 5 years since the date of manufacture (stamped in plastic)? If yes, REMOVE FROM SERVICE. If no, go to #6.
6. (**From #5, hardhat used, no issue date, less than 5 years since date of manufacture**): does the hardhat pass inspection (see Inspection Guidelines, below)? If yes, write the current date inside the brim (see Marking the Date of Issue on Hardhats, below), and RETURN TO SERVICE. If no, REMOVE FROM SERVICE.
7. (**From #1, unused**): has it been more than 10 years since the date of manufacture? If yes, REMOVE FROM SERVICE. If no, RETURN TO SERVICE. Mark the date of issue on the inside of the brim (see Marking the Issue Date on Hardhats, below for special instructions).

I. **Inspection Guidelines:** (From **Your Hardhat: Inspection and Maintenance** 0267 2331. Missoula, MT: U.S. Department of Agriculture, Forest Service, Missoula Technology and Development Center. 4p.):

Inspection

Both the hardhat's shell and suspension system must be inspected frequently for signs of wear and degradation. Field personnel who wear hardhats should check them at least monthly, if not more frequently.

The shell should be inspected routinely for dents, cracks, nicks, gouges, and any damage that might reduce protection. Any hardhat that shows signs of worn or damaged parts should be removed from service immediately.

The shell material may be degrading if the shell becomes stiff, brittle, faded, or appears dull or chalky. With further degradation, the shell's surface may flake or delaminate. A hardhat should be replaced at the first sign of any of these conditions.

Here is a simple hardhat inspection for field employees, supervisors, and cache personnel.

- Compress the shell from both sides about 1 inch with your hands and release the pressure without dropping the shell. The shell should return to its original shape quickly, exhibiting elasticity. Compare the elasticity with that of a new shell. If the shell being tested does not have as much elasticity as the new shell, or if the shell cracks, it should be replaced immediately.

- Inspect the suspension system closely for cracks, cut or frayed shell straps, torn headband or size adjustment slots, loss of pliability, or other signs of wear. Remove and replace any suspension that is damaged.

II. **Marking the Date of Issue on Hardhats:**

The date of issue is written on hardhats in order to track service life and to aid in making decisions about whether or not to return a hardhat to service after use. Use the hardhat decision key above to determine whether a date of issue should be written on a hardhat. A used hardhat that is less than 5 years old (according to the stamped date of manufacture), is not already marked with a date of issue, and has passed inspection should be marked immediately, using the current date as the date of issue. Write the word "issued" and the date of issue in dark permanent marker on the brim of the hardhat, as shown in Figure 1.

An acceptable alternative for marking the date of issue on the hardhat is to use a white, adhesive backed 1"x 3" label with printed issue date information fixed inside the helmet shell adjacent to manufacturer and certification labels.

An unused hardhat that is less than 10 years old, (according to the stamped date of manufacture), and does not already have a date of issue written inside the shell should be marked with a date of issue when put into service. **However, when sending an unused hardhat to an incident, do not mark the hardhat with a date of issue until the hardhat has been returned to the cache system after the incident, and do so only if the hardhat has been removed from its packaging.** Many hardhats sent to incidents are never removed from their packaging and are returned unused.

Helmet suspension/liner assemblies and other refurbishment parts for older model hardhats no longer in production may be difficult or impossible to acquire. This situation will serve as an additional limitation on which older hardhats can be refurbished.

Disposal of unserviceable helmets and liners may be difficult through local plastic recyclers. Disposal through energy generation methods will require MSDS data sheets be provided.

Figure 1: The date of issue should be marked on the brim of the hardhat using permanent marker.

Please contact Dennis Davis, MTDC at (406) 329-3929 if you have questions or comments regarding the information in this memorandum.

Ralph H. Gonzales

Attachment (1 pg)

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

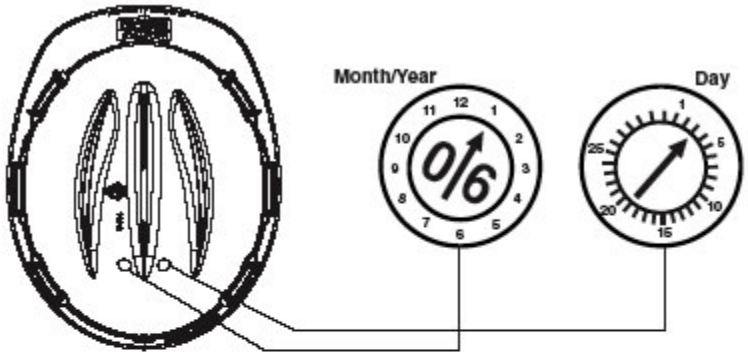
We replace our hard hats every five years regardless of condition. Is there any way to tell how old a hard hat is?

The date code indicates when the hat was molded. Date codes are molded into the hat shell and they specify the following:

- Day;
- Month; and
- Year the hat or cap was molded.

The large arrow inside the "Month / Year" circle points to the month, and the two digits inside that inner circle indicate the year. The arrow inside of the "Day" circle points to day of month. Depending on what model hard hat / cap you have you may find the date code in one of two locations on the hat, on the inside of the shell or the underside front brim of the hat / cap.

Location #1: This example shows a cap that was molded on January 3, 2006.



Location #2: This example shows a cap that was molded on July 7, 2001.