



U.S. Coast Guard Safety Alert



Marine Safety, Security and Environmental Protection

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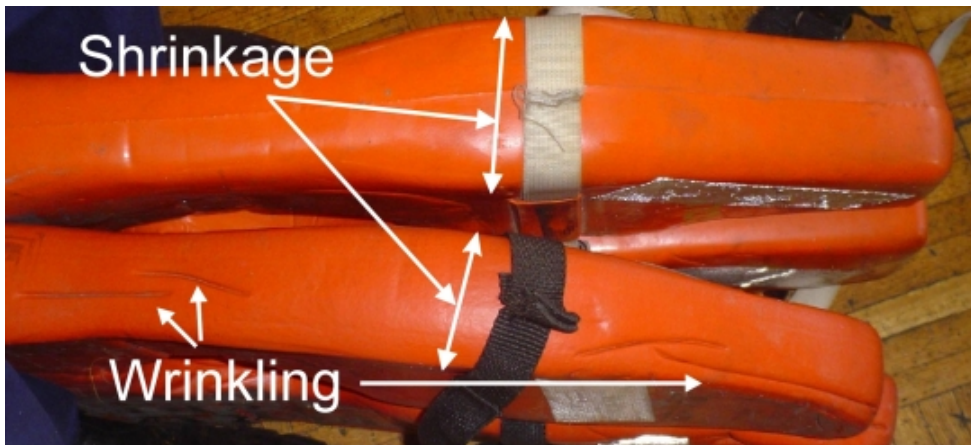
Non-Serviceable and Substandard Type I Unicellular Plastic Foam Life Preservers

Recently during several annual inspections of small passenger vessels, Coast Guard Marine Inspectors discovered a number of problems with Personal Flotation Devices (PFDs) manufactured by Atlantic-Pacific Manufacturing Co. (APCO). APCO formerly produced various types of PFDs including several sizes of unicellular plastic foam life preservers and is currently out of business. PFDs from other manufacturers could have similar problems.

A close inspection revealed –

- varying body strap lengths, sometimes less than 54” from the tip of the snap hook to the tip of the D-ring, resulting in a very tight fitting adult sized PFD on average sized crewmember,
- non-resilient and brittle condition of the PFD flotation foam,
- differences in foam volumes and physical size for the same model of PFD and,
- inaccurate markings, incorrect Q-spec numbers (106.055 vs. 160.055), misspelled words, and incorrect narratives.

Additionally, follow-up buoyancy tests of suspect PFDs performed by the Marine Inspectors resulted in numerous failures. All PFDs that had failed were condemned and each exhibited noticeable shrinkage and compression. Many of these PFDs have been in use since the 1970’s and may have reached the end of their service life.



Left image shows an example of a vinyl dipped PFD with compressed or hardened foam. Right image illustrates a fabric covered PFD with brittle foam.



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The US Coast Guard **strongly recommends** that owners and operators carefully inspect all of their older Type I unicellular plastic foam PFDs. Potential indications that a Type I unicellular plastic foam PFD may no longer be serviceable are:

1. Compression: The PFD may be compressed from many years of stowage.
2. Loss of resiliency: The PFD is excessively hard, stiff or its foam is brittle. Normally after compressing the PFD to about half its initial thickness, the foam should expand to its original dimension in a short period of time.
3. Shrinkage: A physical reduction in size may be indicated by “wrinkling” of the coating on vinyl-dipped type or by a loose fitting shell on a fabric-covered PFD.
4. Manufacturer: While the potential for problems applies to all older PFDs, those manufactured by Atlantic-Pacific Manufacturing Corporation (APCO) have been specifically noted. Approval numbers for APCO PFDs are:

160.055/54/1	Adult Model 8130
160.055/111/0	Adult Model 8150
160.055/112/1	Child Model 81510
160.055/121/0	Adult Model 81407 LOT # 73
160.055/122/0	Child Model 81410 or 81413

Questions regarding the information presented in this alert may be addressed to Mr. Marty Jackson, Staff Engineer of the U.S. Coast Guard Headquarters Lifesaving & Fire Safety Standards Division at 202.372.1391 or mjackson@comdt.uscg.mil.

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