

**U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Office of Hazardous Materials Enforcement**



**DOT-3HT Inspection Action Plan
August 2008**

Introduction: PHMSA's Office of Hazardous Materials Enforcement (OHME) implements this action plan to focus on the manufacture, requalification, preparation, fill, shipping and use of compressed gas cylinders in aircraft service.

Packaging Focus: DOT-3HT Specification and certain high pressure DOT Special Permit cylinders used in aircraft.

Activity Focus: DOT-3HT and SP cylinder manufacturers, requalifiers, fillers, shippers and users

Objective: To ensure safety, compliance and educate the known industry affecting DOT-3HT packaging design, manufacture, requalification, filling, shipping and use in accordance with the prescribed safety and process regulations of the Hazardous Materials Regulations (HMR).

Approach: Compile a focus list of probable high priority inspection targets

- A. Using inspection and enforcement data, OHME will evaluate prior inspections to determine a list of 3HT activities for reinspection. (e.g. entities having prior violations for requalifying 3HT cylinders, low stress stamps).
- B. Using data from the Office of Hazmat Special Permits and Approvals, OHME will evaluate and identify the Requalifier Identification Number (RIN) Approvals:
 1. For approved activities that indicate requalification of 3HT cylinders;
 2. For approved activities and entities that indicate aircraft maintenance facilities.
- C. Using industry contacts and information from FAA, OHME will identify fillers and shippers of 3HT cylinders.

Action: Conduct unannounced inspections of targeted entities

- A. OHME will prepare and distribute the compiled list of focus activities nationally for each region based on geographic location. The focus list will also include requalifiers identified as aircraft service centers. All manufacturing inspection activities will be conducted by OHME Special Investigations.

- B. Activity is priority ranked based on National Business Strategy methods and the following;
 - 1. Entities holding RIN Approvals that perform aircraft maintenance functions are ranked “high priority”
 - 2. Entities having prior enforcement history with prior violations of 3HT requirements will be ranked “medium priority”;
 - 3. Entities with approval to test 3HT’s are ranked “priority”.

- C. OHME will coordinate and work with FAA ADG on activities where practical joint operations and cross modal training is amenable to both operations, including, but not limited to joint inspections at air carriers and FAA authorized repair stations.

Measure: Monitor and measure outcomes

- A. OHME will monitor and measure its inspection and activities outcomes.

- B. Adjust focus based on patterns of safety and compliance problem trends.

- C. OHME will report on its progress and successes.

Background:

The DOT-3HT specification is a lightweight, high tensile strength steel thin walled, high pressure cylinder design, generally used in aircraft applications where the weight of the pressure vessel is a consideration. DOT-3HT cylinders have a minimum wall thickness of 0.05 inches, where a typical DOT-3AA has a minimum wall thickness of 0.10 inches, and DOT-3AL has a minimum wall thickness of 0.125 inches.

Test Requirements:

(See 49 CFR 180.205 and 189.209 and CGA Pamphlet C-8)

DOT-3HT cylinders are required to be hydrostatically requalified at 5/3 times the marked service pressure with the tests being performed at least once every three years. The requirement for continued use in service for DOT-3HT cylinders include:

- 1. The total elastic expansion of a DOT-3HT during hydrostatic test may not exceed the marked rejection elastic expansion (REE) value.
- 2. Service life may not exceed 24 years or 4380 pressurization cycles, whichever occurs first.
- 3. Low stress steel stamps may only be used for marking DOT-3HT cylinders, including for successful hydrostatic requalification tests. No side wall stamping permitted.
- 4. Must also be requalified in accordance with Compressed Gas Association Pamphlet C-8.