

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Materials Laboratory Division
Washington, D.C. 20594



September 21, 2016

MATERIALS LABORATORY FACTUAL REPORT

Report No. 16-087

A. ACCIDENT INFORMATION

Place : West Chester, Pennsylvania
Date : March 29, 2015
Vehicle : Piper PA-28-140
NTSB No. : ERA15FA171
Investigator : Timothy Monville AS-ERA

B. COMPONENTS EXAMINED

Gascolator valve

C. DETAILS OF THE EXAMINATION

The gascolator from the accident aircraft was submitted for to the Materials Laboratory, as shown in Figure 1, to determine the valve stem position. The outer surface of the gascolator was sooted and covered in a white oxide layer consistent with exposure to fire.

The gascolator was examined using a 50X to 200X digital microscope. The valve stem had impact damage and the locks were bent. There are some scrapes and divots on the lock but nothing consistent with the T-pin. The securing T-pin was found partially in the "Locked" position. It could not be determined conclusively if this was the position of the locking pin and valve prior to impact. The fire damage is obscuring or obliterated any witness marks.

To determine internal position of the valve stem, the gascolator was x-rayed. The radiograph, shown in Figure 2, shows that the internal stem is in the "Open" position.

Nancy B. McAtee
Chemist



Figure 1. Overall photograph of accident aircraft gascolator.

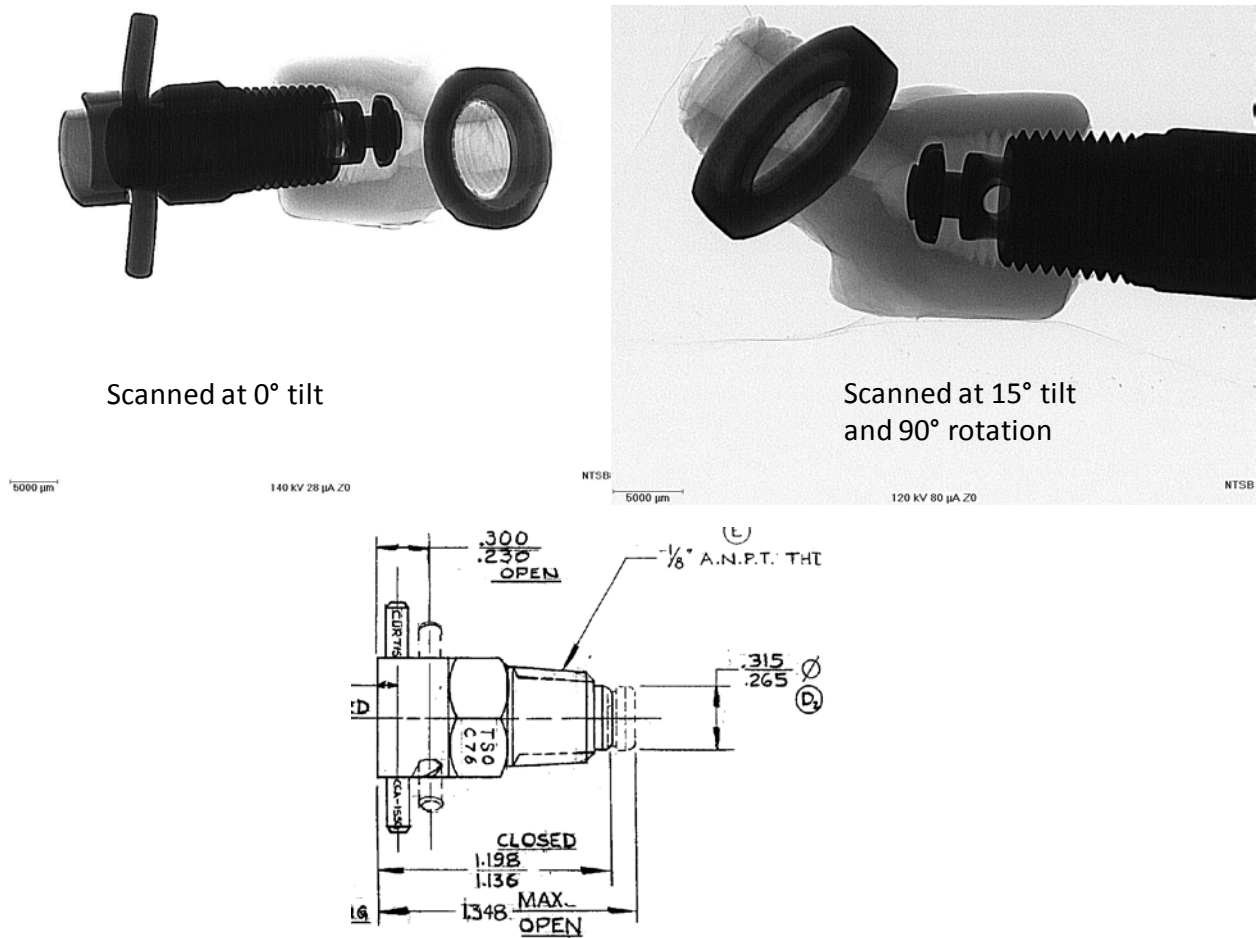


Figure 2. Radiographs of gascolator compared to part drawing.