



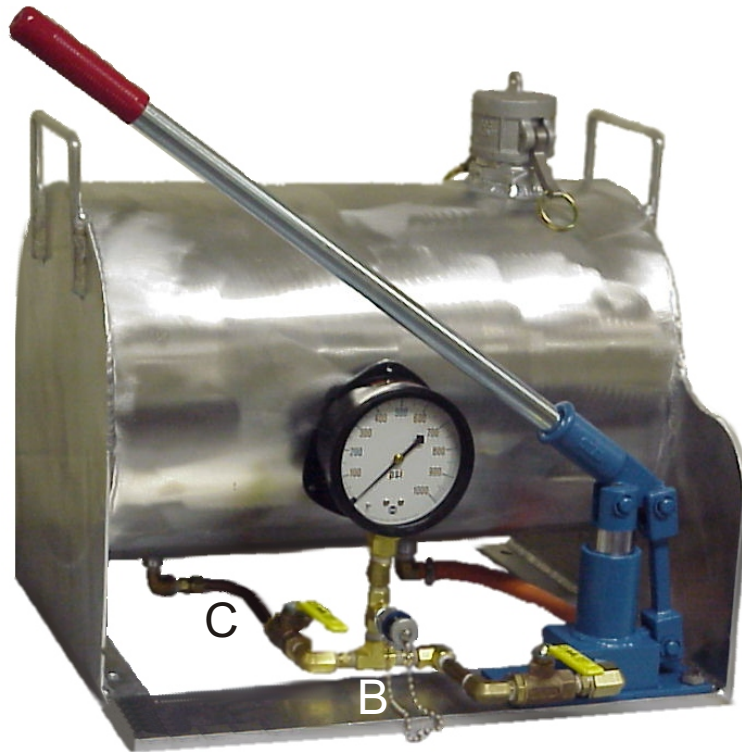
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**AIRCRAFT
FUELING HOSE
TESTER**

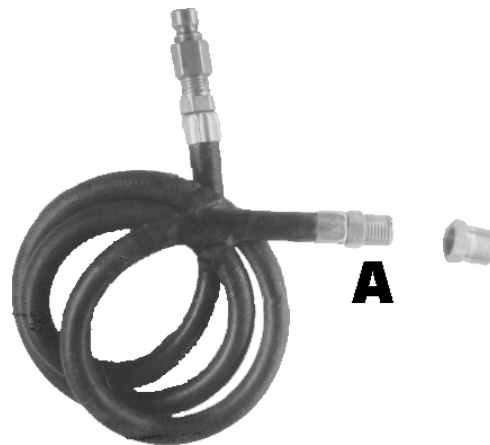
**BULLETIN 79
(12-02)**

AIRCRAFT FUELING HOSE TESTER



The GTP-2157-A is of non-ferrous construction, designed for periodic testing of jet refueling hose, using jet fuel for pressurizing.

The unit consists of a 10 U.S. gallon (38 liters) aluminum tank GTP-2234 equipped with a vented fill cap, hand pump GTP-8076, 0-1000 psi 4½" face pressure gauge GTP-281-H, quick disconnect GTP-1004-4MA, six feet of ¼" hose to connect to the tester.



**GTP-8079 SIX FEET OF HOSE
INCLUDED WITH THE HOSE TESTER**

Hose Test Procedure for GTP-2157

Overview

This tester is designed to perform integrity tests on hose assemblies used in the refueling of aircraft. A thorough inspection of the hose should be done before testing, and if any significant flaw is found, the test should not be run. The purpose of this test is to ensure that the couplings are still secure and that no physical flaw exists that cannot be seen on a physical inspection. Air **MUST NOT BE PRESENT** in the system or else, in the event of a failure of the hose or a fitting, the trapped air will cause an explosive release carrying particles at high speed as it expands.

Procedure

Note: The primary application of this tester is for testing aircraft refueling hose in accordance with API Bulletin 1529. When testing newly coupled Grade 1 hose, the test pressure is 300 psi. Periodic tests are required at the working pressure which is 150 psi. When testing Grade 2 hose the test pressure is 600 psi for newly coupled or recoupled hose but periodic testing is to be 300 psi. Because most aircraft refueling hose is Grade 2, the instructions below are written for a 300 psi periodic test with the hose full of jet fuel and remaining attached to the hose reel or to piping on the refueling vehicle.

When testing equipment other than hose, the standard practice is to perform hydrotests at 1.5 times the design or working pressure.

Note: If a failure occurs during this test, fuel may be released. Be sure to have the site of the test in a secure area so that the spill will be contained and no fire hazard exists. Be sure to wear the proper personal protection such as eye protection.

1. Extend the hose full length.
2. **BE SURE:**
 - A. No air is present in the hose.
 - B. The hose and couplings are fully inspected for flaws.
 - C. The hose reel must be rated for 300 psi proof pressure and there must be a 300 psi rated isolation valve upstream.
 - D. Remove overwing nozzle and install a pipe cap with vent valve.
 - E. Determine if the underwing nozzle can handle 300 psi (some brands are unable). Connect it to a fueling adapter having a 300 psi rated stop valve downstream. Open the nozzle valve before pressurizing the hose.
 - F. If the hose reel and/or nozzle do not meet the 300 psi rating, the hose must be removed for testing. Install a pipe cap having a vent valve on the hose end.
 - G. Mark the hose all the way around at the edge of the ferrule/fitting with a light coat of paint or by other means so that you will be able to clearly see if the hose begins to slip out of the ferrule when the hose is pressurized.
 - H. Use vent valves to release all air before pressurizing the hose.
3. Close the hose reel inlet valve.
4. Connect the GTP Hose Tester to the nozzle (or other point) using the supplied hose "A". Underwing nozzles have a plug in the side which can be used for this purpose. Once again, be sure no air is present in the hose, nozzle or associated pipe.
5. Open Valve "C" and step lightly on hose "A" to displace any air in it. Close valve "C".
6. Pump the pressure up to 300 psi in accordance with API-1529 Appendix D for Grade 2 hose, observing for leaks, bubbles, cuts or blisters. Roll the hose to observe the entire cover of the hose. If defects that penetrate the cover material to the reinforcing cord are observed, stop the test; it is a failure. Depressurize immediately as instructed in step 8.
7. Look at the paint mark on the hose at the ferrule. If there is more than 1/32" (0.8 mm) gap after the test pressure has been released, the test is a failure; depressurize after the test.
8. When the test is completed, open valve "C" to bleed off pressure by returning the pumped fuel to the hose tester reservoir. Disconnect the test equipment.