Using and Maintaining a Pressure Canner Dial Gauge Testing Unit

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1. Each county extension center should have the following gauge tester which can be purchased (if needed) with the order form at this page:

http://nchfp.uga.edu/educators/Presto%20Testing%20Unit%20ADW07-5239C.pdf

This tester unit allows for quick testing of the pressure canner dial gauge. When you remove the testing unit from the box, it is fully assembled, except that the master gauge will need to be attached before testing the gauges. The master gauge is packaged in the file card container inside of the box. It is recommended this file card container be kept, and all foam packaging.

Referring to Figure C above, set the testing unit base on a secure table and place the air pump on the floor in a position that is convenient for the tester when seated in a chair. Attach the master gauge to the brass socket by pressing the gauge firmly down into the socket until it snaps into place.

(Note: To put the gauge on, hold the stem firmly and push down until it clicks all the way. It takes a little pressure to do it. If it is not on tight, the gauge will not work correctly.)

When testing is completed, remove the master gauge by holding the stem with one hand and use your other hand to push the brass sleeve upward to release the gauge from the socket. The master gauge may be left on the tester if used frequently, but store the fully assembled unit in a safe location where it can’t be dropped or damaged.

2. The pressure gauge on the canner testing unit should be tested and calibrated each year.

During the winter months is the best time to do this as there is a shorter “turn around time” from Presto. When sending the master gauge for annual accuracy testing, it is not necessary to send the entire testing unit.
Send only the master gauge to the service department address listed below. Please ship in the file card container with foam packaging, both which accompanied the testing unit.

Service Department
National Presto Industries, Inc.
3925 North Hastings Way
Eau Claire, WI 54703

If the master gauge is accurate when tested, it will be returned to you. If it is not accurate, a new master gauge will be sent to you at no charge.

If there are concerns about any other parts of the testing unit, please send it to the same address with a contact phone number and a note stating the concern. The testing unit will be examined and repaired or replaced at no charge.

3. Other times the master gauge may need to be checked:

a. If the gauge has been submerged in water, dropped, or if the gauge glass is broken or has fallen out.

b. If any parts are rusty.

c. If the pointer does not rest at O when the gauge is not in use.

d. If, for any reason, you believe the gauge may not be accurate.

4. Questions concerning the use of the Presto® Testing Unit can be directed to:

Test Kitchen
National Presto Industries, Inc.
3925 North Hastings Way
Eau Claire, Wisconsin
54703-3703
Telephone: 800-368-2194
Email: contact@GoPresto.com

Sources: Presto Corporation, and Inspecting Pressure Canners and Dial Gauges, What County Offices Need to Do by Pam Duitsman)
Inspecting and Testing Pressure Canners

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A consumer pressure canner with a dial gauge should be tested and inspected annually before the start of each canning season.

A consumer pressure canner with weighted gauge does not become uncalibrated and does not need to be checked for accuracy. If a client doubts the accuracy of a weighted gauge, encourage them to contact the manufacturer. The problem may be leakage between the lid and canner rather than accuracy of the gauge. If the weighted gauge is cracked or broken it should be replaced.

When testing the pressure canner dial gauge, use the Dial Gauge Inspection Form/Pressure Canner Inspection Form (Revised June 2015 and stored at S:\MUCampus\HES\Food Preservation\Other). This is a two sided form and may be printed front and back. The entire form should be completely filled out; the original form is given to the consumer and a copy should be made for the county extension center to keep on file for one year. After one year these forms may be discarded. If the consumer only brings in the canner lid with the gauge, note that the canner base/body was not available for inspection.

Testing the dial gauge using the pressure gauge testing unit.

A. First, inspect the gauge itself to complete the “condition of gauge” section on the form. Examine the gauge and note if it is rusty, broken, cracked, has interior moisture, or if the cover is too scratched to read.

B. Checking gauges that are attached to canner lid.

1. Place short rubber adaptor (found in the adapter storage canister on the base of the unit) onto the vent pipe.
2. Position canner lid/cover over white tube air reservoir. Allow opening of dial gauge to drop onto vent pipe. Press down firmly on the cover to form a seal. The angle of the canner lid should match that of the white air reservoir.
3. With the foot, press down on the pedal of the air pump repeatedly until desired pressure is reached on the master gauge.
4. THE GAUGE MUST BE CHECKED AT 6 psi (pounds per square inch) AND 11 psi AS INDICATED ON YOUR DIAL GAUGE INSPECTION FORM.
5. Initially, the pressure may drop slightly on both the master gauge and dial gauge. Once stabilized, compare pressure registered on master gauge with that of the dial gauge being tested; while holding the gauge firmly against the tester, pump the foot pedal up to 6 pounds, and then 11 pounds. Compare what the dial gauge indicates and write that on the form. Be aware the hash marks might be 1/2 psi increments. If too much pressure is pumped
in, release some pressure by lifting the dial gauge a little bit to release some pressure. It’s just a tube of compressed air, so it’s not a problem. When done, reduce pressure by lifting the dial gauge from vent pipe.

6. Refer to the table on the Dial Gauge Inspection Form and circle the appropriate recommendations:
   a. If the gauge reads high or low by 2 psi or less, use the chart on the front of the inspection form to determine the adjustment that needs to be made in order to process jars safely.
   b. If the gauge reads high or low by more than 2 psi, the gauge needs to be replaced. (Be sure to double check the pressure gauge if it is off more than 2 psi.)

C. Checking dial gauges that are free of the canner lid.
   1. Place the short rubber adaptor (found in the adapter storage canister on the base of the unit) on the vent pipe.
   2. Place the gauge to be checked on the vent pipe. Press down firmly to seal.
   3. Follow steps 3 through 6 in section B above.

The Dial Gauge Inspection Form/Pressure Canner Inspection Form includes an inspection of the full canner body. Following the diagram on the next page may be helpful in completion of the form.

A. Completing the Inspection Form
   1. Put the client’s name, address, and phone number on form.
   2. Turn the form over to the canner inspection side. Note the canner brand size and model (especially important if they bring in more than one canner). Put some other identifier if needed. The client needs to know which form goes with which canner.
   3. Mark the appropriate box(es) as you complete the inspection:
      a. Check condition of the handles on the canner and also on the lid. Check to make sure they are not loose, and are solid and secure.
      b. Check the body of the canner. First, check the inside of canner. Sometimes hard water has left dried salt or lime lines. Advice may be offered to the client for cleaning: mix one part vinegar to 4 parts water; let it soak, then rinse well. Make sure the canner surface is not pitted. Feel across the bottom with your hand. Also look at condition all around to ensure there are no cracks. If deeply pitted or cracked, it needs to be replaced. If warped (uneven or round bottom), it should not be used. If discolored, or scratched just a tiny bit, those things are fine. If unsure, contact a regional Nutrition and Health Specialist or State Food Preservation leaders, Susan Mills-Gray or Tammy Roberts.
      c. Check the rubber gasket by turning the canner lid upside down. Pull the rubber gasket out a bit to look in trough to see if it’s free from any food and other materials. Trough should be clean, and if not, recommend that it be cleaned. The gasket should be soft and pliable. The gasket should fit nicely and securely inside the trough. If loose, the gasket MAY be “plumped”. Share this advice with clients to “plump the gasket”: pull the rubber gasket out of the canner lid and boil it for 10 minutes in a quart of water and ½ cup of vinegar; take the gasket out of the boiling mixture and, while it is still hot (use hot pads or gloves to avoid burns), fit it back into the canner lid. This may help to improve the snug fit needed to seal the canner so pressure can build up inside the canner. If the gasket is cracked or brittle, it needs to be replaced. For best results, manufacturers recommend replacing a pressure canner’s rubber gasket, and all rubber parts, every two to three years. Those that are cracked and/or brittle should be replaced.
      d. Check closing devices (for example clamps or screw-down canners). Check those to make sure those are clean and working well.
e. Check safety plug, also made of rubber. It should be very soft and pliable.

f. Check steam vent or petcock. This is the “jiggler” that releases little bits of pressure. Make sure tube is clear. Hold up and look against the light. Make sure it is clean and works easily and is not sticky or gummy.

4. The form should now be complete. Make a copy for the county center files and give the original form to the client.

***NOTE*** A client may bring in a pressure cooker to be tested. IF the pressure cooker WILL NOT HOLD at least FOUR quart jars, it should not be used for home canning purposes. This applies even if the client plans to use pint jars. If the cooker does not have the capacity to hold at least four quart jars it does not have the structural capability to pressure process low-acid foods safely.

Sources: Presto Corporation, National Center for Home Food Preservation, University of Missouri Extension food preservation publications, and Inspecting Pressure Canners and Dial Gauges, What County Offices Need to Do by Pam Duitsman)
Handling Food Preservation Questions
~Official Guidelines~

Responding to consumer questions:
• ANY information distributed MUST be research-based. See list below in next section.
• Only tested safe methods and recipes can be distributed due to food safety liability. Approved food preservation tested and safe recipe sources are listed in the next section below. Under no circumstances should untested/unapproved recipes be shared.
• Any MU Extension publication information may be shared with consumers.
• People will ask a variety of questions, including: “here’s what I did, is it okay?”. Please do not attempt to answer such a question, please refer the client to a Nutrition and Health Specialist for follow-up.

Research-based Food Preservation Resources:
• National Center for Home Food Preservation @ http://www.uga.edu/nchfp/ or type in “homefoodpreservation.org” in address line of web browser
• So Easy to Preserve, 6th edition, University of Georgia Extension
• University of Missouri Extension food preservation publications (listed below)
• Other Cooperative Extension Services publications @ http://search.extension.org
• Ball Corporation Bluebooks or other Ball published home canning books (published 1989 or later)
• Missouri Families Website - http://missourifamilies.org/foodsafety/

Directing Questions:
• Regional Nutrition and Health Education Specialists
  ▶ Susan Mills-Gray, mills-grays@missouri.edu; (816) 506-3338
  ▶ Tammy Roberts, robertstt@missouri.edu; (660) 679-4167
• Show-Me Nutrition Hotline @ 1-888-515-0016
MU Extension food preservation publications


Quality for Keeps publications:
- MX950 - Complete Guide to Home Canning
- GH1451 - Before You Start to Can, Learn the Basics
- GH1452 - Steps to Success in Home Canning
- GH1454 - Preserve Your Garden Delights—How to Can Fresh Vegetables
- GH1455 - Fruitful Canning
- GH1456 - Tantalizing Tomatoes—How to Can Fresh Tomato Products
- GH1457 - Pickling Basics—In a Pickle
- GH1459 - Pack a Pickled Product
- GH1461 - Sweet Spreads and Syrups
- GH1490 - Canning Meat, Fish and Poultry
- GH1501 - Freezing Basics
- GH1502 - Freezing Fruits
- GH1503 - Freezing Vegetables
- GH1504 - Freezing Meat, Poultry, Fish, Eggs and Dairy Products
- GH1505 - Freezing Home-Prepared Foods
- GH1506 - Freezer Problem Solver
- GH1507 - Freezing Unusual Fruits and Vegetables
- GH1562 - Drying Foods
- GH1563 - How to Dry Foods at Home
- GH1564 - Food Preservation—How to Use Dried Foods

Additional Preservation Guidesheets:
- MP556 - Storing Food in the Freezer
- MP557 - Storing Food in the Cupboard
- MP558 - Storing Food in the Refrigerator
- MP562 - Home Storage of Fruits and Vegetables in Root Cellars

Sources: National Center for Home Food Preservation, University of Missouri Extension food preservation publications, and Nutrition and Food Questions, What Southwest Region Staff Need to Know by Pam Duitsman)