



ROBERTSHAW CONTROLS COMPANY  
YOUNGWOOD, PENNSYLVANIA

# Auto-Calibrator<sup>®</sup>

## OVEN HEAT CONTROL

THIS INSTRUCTION IS INTENDED TO ACQUAINT THE SERVICE MAN WITH  
SERVICING AND RECALIBRATING THE NEWEST COMBINATION  
THERMOSTAT AND OVEN GAS COCK.

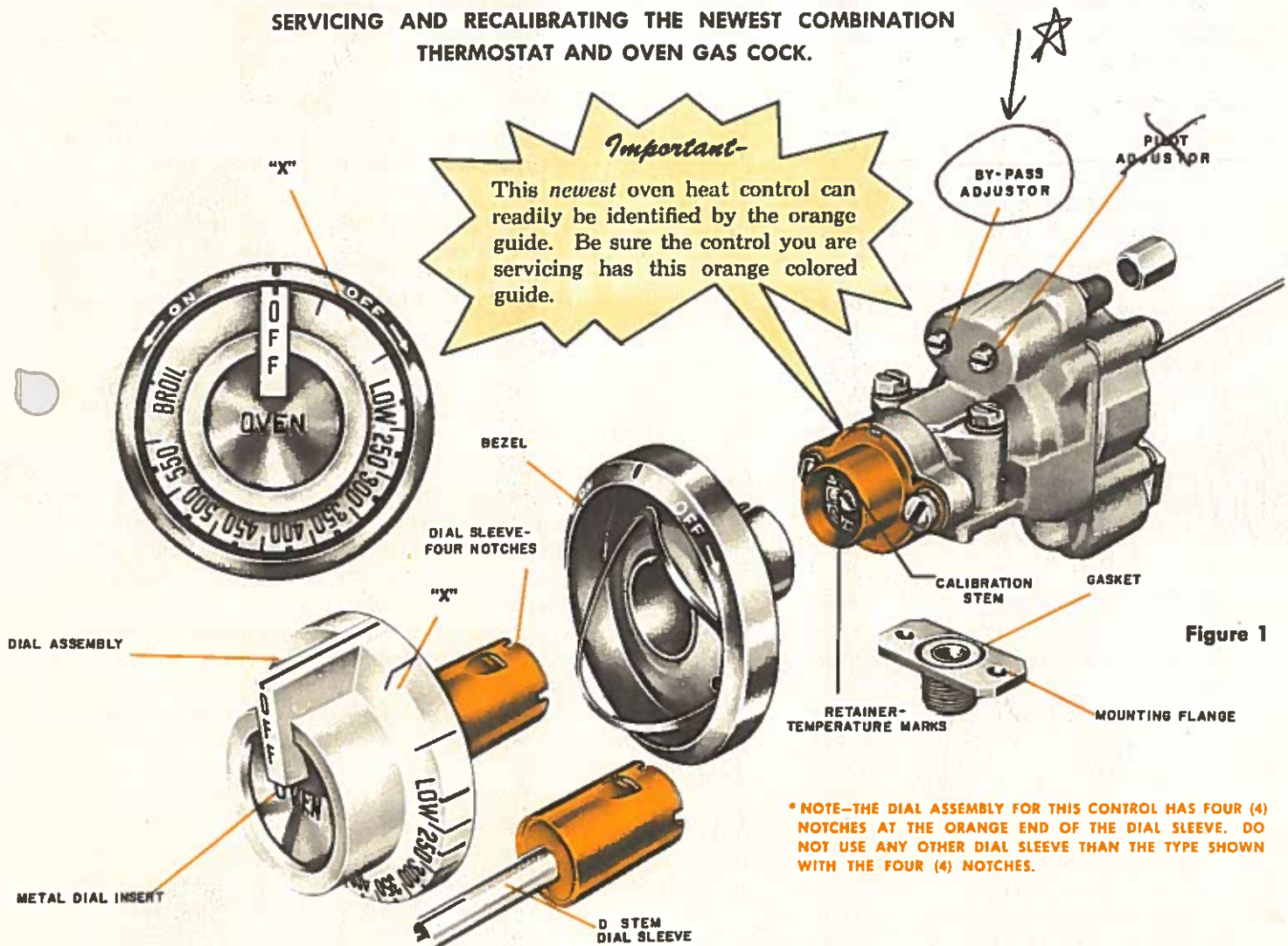


Figure 1

\* NOTE—THE DIAL ASSEMBLY FOR THIS CONTROL HAS FOUR (4) NOTCHES AT THE ORANGE END OF THE DIAL SLEEVE. DO NOT USE ANY OTHER DIAL SLEEVE THAN THE TYPE SHOWN WITH THE FOUR (4) NOTCHES.

### To Light Burner

Some ranges equipped with this oven heat control will also be equipped with an automatic lighting device. When this is the case, follow the instructions given by the manufacturer of the device.

If the range does *not* have automatic lighting, the procedure is as follows:

Push dial inward and turn it counter-clockwise a quarter of a turn or more.

2. Light the oven burner with a match.
3. Turn dial to the desired temperature.
4. To shut off gas, turn dial clockwise to "Off" position.

#### NOTE:—

Without automatic lighting, this procedure must be followed each time the oven is used. It is necessary to push the dial inward because the dial automatically locks itself in place when in the "Off" position.

SEE OTHER SIDE

## SERVICE INSTRUCTIONS

### To Adjust Pilot:

This pilot is *only on ranges not equipped with an automatic lighting device*. It is a small yellow flame near the oven burner which burns constantly and relights the oven burner if the flame should go out while the gas is still on. However, this pilot goes out when the oven control is turned to "OFF".

### ADJUSTMENTS—(See Figure 1)

1. Push dial inward, turn to 300 mark and light the oven burner.
2. Remove dial and bezel. *Dial is keyed into place—do not twist or turn it.* Grasp the dial or bezel at the outer edge and pull straight out.
3. With a screw driver, turn Pilot Adjustor *counter-clockwise* to increase the flame, *clockwise* to decrease it, until the flame is approximately  $\frac{3}{4}$ " long.
4. Replace bezel and dial, turning the dial clockwise until it locks in the "Off" position.

### To Recalibrate Oven Control.

This oven control is a precision instrument. It is carefully calibrated at the factory—that is, it is so adjusted that dial settings match actual oven temperatures. Field recalibration is seldom necessary, and should not be resorted to unless considerable experience with cooking results definitely proves that the control is not maintaining the temperatures to which the dial is set.

Recalibration should not be undertaken, however, until the by-pass oven flame has been adjusted.

To check oven temperatures when recalibrating, use a test instrument or a reliable mercury thermometer. Place the thermocouple of test instrument or the thermometer in the middle of the oven.

**If the dial has a removable metal insert, proceed as follows:**

1. Remove dial and push out metal insert. (See Figure 1)
2. Replace dial, turn to 400 mark, and light oven burner.
3. After burner has been on about 15 minutes check oven temperature. Oven door should be open for as short a time as possible. Use a flashlight, if necessary, to see the thermometer reading clearly.
4. Continue to check temperature, at 5-minute intervals, until two successive readings are within 5 degrees of each other.

The control should be recalibrated if your reading is not within 10 degrees of the dial setting (400 degrees). If recalibration is required, the additional steps to be taken are these:

5. Hold dial firmly, insert screw driver through center of dial, and push calibration stem (See Figure 1) inward. (Do not turn this stem)
6. While holding calibration stem in firmly with screw driver, turn dial until it is set at the actual oven

### To Adjust By-Pass Flame: (Minimum burner flame)

When the oven reaches the temperature at which the dial is set, the oven control cuts down the flow of gas to the amount required to keep the oven at that temperature. Always, however, the control must by-pass enough gas to keep the entire burner lighted. To maintain this minimum flame, *the by-pass must be set carefully and accurately*, as follows—(See Figure 1)

1. Light the oven burner, then turn dial to "Broil."
2. After 5 minutes, turn dial clockwise to point slightly beyond first mark on dial (shown by "X").
3. Remove dial and bezel.
4. With a screw driver, turn by-pass Adjustor—counter-clockwise to increase the flame, clockwise to decrease it, until there is a flame approximately  $\frac{1}{8}$ " high over the entire burner.
5. Replace bezel and dial, turning the dial clockwise until it locks in the "Off" position.

temperature as shown by your test instrument or thermometer. Release pressure on calibration stem. Replace dial insert.

7. Set dial at 450 mark. Check oven temperature again, as instructed in (3) and (4). If the oven temperature is not within 20 degrees of the dial setting (450 degrees), it means that the sensing element is inoperative and the control should be replaced.

**If the dial does not have a removable insert or if the dial has a "D" type stem, use the following procedure to recalibrate:**

1. Set dial to 400 mark and light oven burner.
2. After burner has been on about 15 minutes, check oven temperature. Oven door should be open for as short a time as possible. Use a flashlight, if necessary, to see the thermometer reading clearly.
3. Continue to check temperature, at 5-minute intervals, until two successive readings are within 5 degrees of each other.

The control should be recalibrated if your reading is not within 10 degrees of the dial setting (400 degrees). If recalibration is required, the additional steps to be taken are these:

4. Remove dial assembly or dial complete with "D" type stem.
5. Push calibration stem (See Figure 1) inward with screw driver, while holding calibration stem firmly in, turn slot clockwise to obtain a lower temperature or counter-clockwise for a higher temperature. Each mark on retainer represents 25 degrees. Replace dial assembly or "D" type stem with dial.
6. Set dial at 450 mark. Check oven temperature again, as instructed in (2) and (3). If the oven temperature is not within 20 degrees of the dial setting (450 degrees), it means that the sensing element is inoperative and the control should be replaced.