

BACHARACH

**INSTRUCTIONS 17-9003
MANOMETER
GAS PRESSURE GAUGE
Operation/Maintenance
Rev. 4 - November, 1993**

Part # 17-7000 (Filled)

Part # 17-7008 (Unfilled)

Range: 0-15 inches of water and 38 cm. water. (Reversible Scale)

Part # 17-7002 (Filled)

Range: 0-15 in. of water and 8.5 oz./sq. in. water. (Reversible Scale)

Part # 17-7013 (Filled).

Part # 17-7016 (Unfilled)

Range: 0-7 inches of water and 18 cm. water. (Reversible Scale)

WARRANTY

Bacharach, Inc. warrants to Buyer that at the time of delivery this Product will be free from defects in material and manufacture and will conform substantially to Bacharach Inc.'s applicable specifications. Bacharach's liability and Buyer's remedy under this warranty are limited to the repair or replacement, at Bacharach's option, of this Product or parts thereof returned to Seller at the factory of manufacture and shown to Bacharach Inc.'s reasonable satisfaction to have been defective; provided that written notice of the defect shall have been given by Buyer to Bacharach Inc. within one (1) year after the date of delivery of this Product by Bacharach, Inc. For full details concerning this warranty, contact Bacharach Inc.

Bacharach, Inc.

625 Alpha Drive, Pittsburgh, PA 15238
(412) 963-2000 - Fax (412) 963-2091

OPERATING INSTRUCTIONS

Supporting Gauge: (Optional - Not Supplied by Bacharach)

Clamp Bracket mounts on ¼ to 1-½ inch horizontal or vertical pipe. Where Clamp Bracket is not available, Gauge can be supported by hand or propped against vertical support while reading. In all cases, Gauge should be vertical while reading for maximum accuracy (estimation by eye is sufficient).

CONNECTING TO GAS LINE (Figure 1)

Turn OFF Main Gas Cock (6) to appliance. Remove Pipe Plug (7) from control valve or gas line between regulator and burner. (Bush Plug opening larger than ¼ inch N.P.T. to ¼ inch.) Press tapered rubber Plug (8) with projecting metal Tube (9) firmly into Plug hole with slight twisting motion. Open both Valves (10-11) one full turn. Press tapered Plug (12) over right hand (facing front) Valve (11). Open main Gas Cock (6) to appliance. Check pilot flame.

Where standard rubber sampling tube with tapered Plugs is not available, connect ¼ inch I. D. rubber tubing to gas line with hose nipple in pipe plug opening and other end of hose to Valve (11).

READING-ADJUSTING MANIFOLD PRESSURE (Figure 2)

Turn burner on (after checking pilot flame) either by advancing thermostat 5-10° F, or by manual turn on at control valve. **Slide Scale (14) up with Scale Knob (15) until Zero Scale Arrow (16) is opposite top of low (right hand) liquid column.** Read gas manifold pressure on Scale opposite top of higher (left hand) liquid column (17). **This is direct reading of pressure. Do not multiply this reading by 2.**

To adjust pressure, remove Regulator Cap (18- Figure 1). Turn exposed screw head clockwise to increase pressure, counterclockwise to reduce pressure. Adjust manifold pressure to value recommended by local utility (service engineer) or manufacturer of burner.

APPLICATION INSTRUCTIONS

With a given size orifice spud (or orifice setting where adjustable) the gas manifold pressure determines the firing rate in cubic feet of gas per hour. For quick, convenient calculation of firing rate or orifice size, use BACHARACH GAS SERVICE CALCULATOR. This is a simple type of slide rule designed specifically for gas service personnel or installer with simple, easy to follow instructions on the face of the calculator. For every type or mixture of combustible gases, it is necessary to operate burner in a given manifold pressure range for proper burner operation. Consult local gas utility, service engineer or burner manufacturer for recommended limits of gas manifold pressure.

MAINTENANCE INSTRUCTIONS

REVERSING SCALE (17-7002 only) (Figure 3)

Front of Scale, as shipped from factory, reads pressure in inches of water. Rear of Scale of 17-7002 (only) is also graduated in ounces per square inch. When only occasionally reading in ounces per square inch, reverse Scale.

Close Valves (10-11). Remove Screw (19). Press Retaining Ring (20-20) out of retaining grooves. Lift off Front Cover (21). Remove Scale Knob (15), Scale Clamp Cover (22), and Scale Clamp Screw. Reverse Scale and reassemble.

ADDING INDICATING FLUID (Figure 3)

Always use Bacharach Fluid, 17-0025. Use of other fluids will result in error in reading pressure.

NOTE: *Water will not operate in either Manometer Part# 17-7002 or 7-7013 (17-7016 unfilled) due to action of Blow Over-Seals (23).*

Remove left hand Valve (10) and open Valve (11). Slide Scale to bottom of Gauge. Add sufficient Bacharach Fluid, 17-0025, with dropper provided, through Valve opening to raise fluid level in both legs to Fill Line on Scale (with Gauge in vertical position).

Where Gauge contains little or no fluid, Blow-Over Seals may, in filling, prevent flow of fluid from one leg to the other. When this happens, fill left hand leg (through Valve (10) opening) approximately to Fill Line on Scale. Install Valve and close both Valves. Invert Gauge and rap sharply with palm of hand. Slowly turn Gauge upright and loosen both Valves. Fluid should now flow from one leg to the other. If not, close both Valves and repeat previous steps. Then remove Valve (10), loosen Valve (11), and add sufficient Bacharach Fluid, 17-0025, to raise Fluid level in both legs to Fill Line on Scale.

PARTS REPLACEMENT (Figure 3)

Valve (10-11) may be screwed out of top assembly for replacement without dismantling top assembly. To remove Front Back Covers (21-24) at both top and bottom of Gauge, remove Screws (19-25); press Retaining Rings (20-26) out of retaining grooves and lift off Covers. This will permit replacement of Body (27), Check Valve Balls (23-23, Manometer 17-7013 contains only one ball at bottom of right hand liquid column) and Grommet Tube (28) assembly.

CAUTION

Be sure to close Valves firmly before packing or transporting Gauge.

PARTS LIST

BACHARACH MANOMETER (Parts Apply to All Models Unless Noted)

Part No.	Description	Req'd
01-3466	Cover Screw	2
01-6829	Scale Screw	1
02-2715	Retaining Ring	4
03-6351	Hose (Flexible, Black 3/16" I.D. x 1/16" wall)	4.25 ft.
05-5108	O-Ring	2
17-7001	Body (17-7000/17-7002) (15" Range)	1
17-0002	Body (17-7013) (7" Range)	1
17-0003	Valve	2
17-0004	Cover (Rear)	2
17-0006	Cover (Front)	2
17-0007	Precision Plastic Ball (17-7013)	1
17-0007	Precision Plastic Ball (17-7000/17-7002)	2
17-0008	Grommet	2
17-0009	Connector Tube	1
17-0011	Knurled Nut	2
17-0013	Scale (17-7002) (15" Range and 8.5 oz/sq. in water)	1
17-0014	Scale (17-7000) (15" Range and 38 cm water)	1
17-0016	Scale Knob	1
17-0018	Scale Clamp	1
17-0025	Fluid Refill (Not Shown)	1
17-0030	Hose Assembly complete	1
17-0035	Manifold Plug	2
17-0050	Scale (17-7013) (7" Range and 18 cm. water)	1

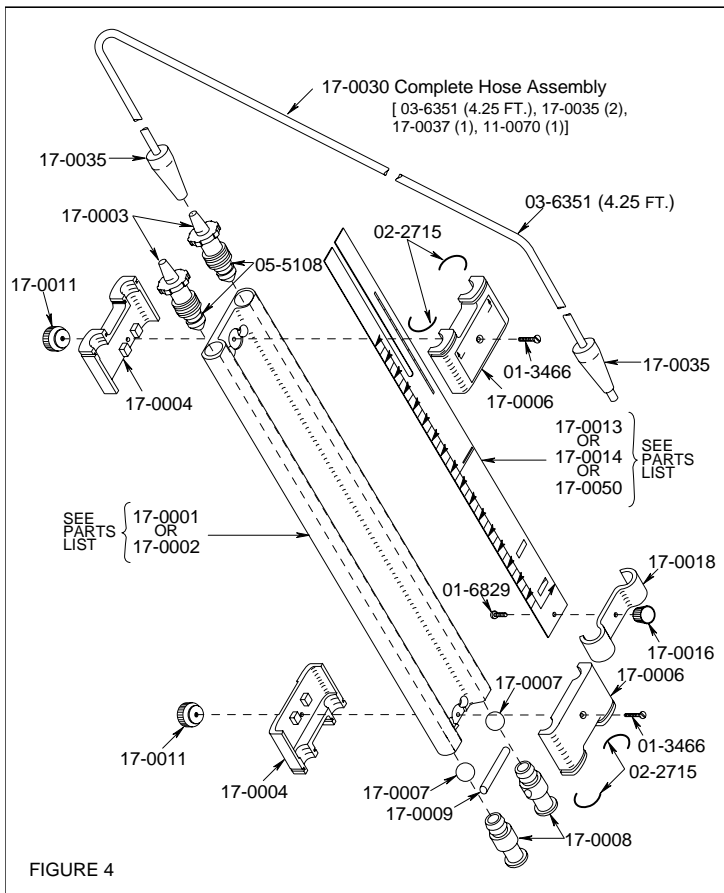


FIGURE 4