

# TRU-FLATE®

Installation and Service Instructions  
 1M102TFG  
 Miniature Series Regulator - 24-444  
 Filter / Regulator -24-243, 24-244  
 ISSUED: January, 2002  
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 Doc.#1M102TF, ECN#P28829, Rev. 8

## ! WARNING

To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer's specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

## REGULATOR -24-444

### Installation

1. Install REGULATOR so that air flows in the direction of arrow. Installation must be upstream from devices it is to service (lubricator, valve, cylinder or tool and mounted closely to the other devices). Mounting may be in any position.
2. Gauge ports are located on both sides of the REGULATOR body for your convenience. It is necessary to install a gauge or pipe plugs into each port during installation.
3. For protection against rust, pipe scale and other foreign matter, install a FILTER on the upstream (high pressure) side as close to the REGULATOR as possible.

### Application Limits

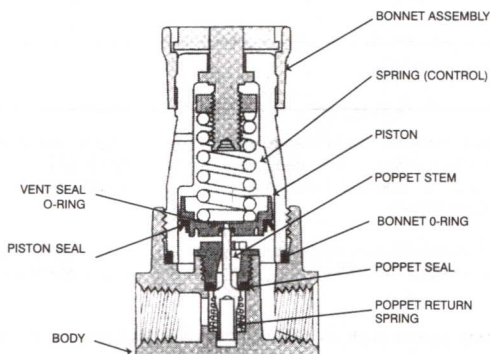
These products are intended for use in general purpose compressed air systems only.

#### Maximum Operating Pressure:

Inlet Pressure:	kPa	PSIG	bar
	1724	250	17.2

#### Ambient Temperature Range:

32°F to 125°F (0°C to 52°C)



### Maintenance Service Kits

<b>Bonnet Assy.</b>	L01369
<b>Control Springs</b>	
5 to 125 PSI	P01173
1 to 15 PSI	P01176
2 to 60 PSI	P01174
1 to 30 PSI	P01175
<b>Relieving Unbalanced Repair Kit</b>	PS426
<b>Gauges</b>	
0 to 60 PSI — 413 kPa	24-805
0 to 200 PSI — 0-14k/cm <sup>2</sup>	24-801
<b>Panel Mounting Nut</b>	P78652
<b>Mounting Bracket</b>	24-950

### Operation & Service

1. BEFORE INSTALLING OR DISASSEMBLING REGULATOR FOR SERVICING, SHUT OFF SUPPLY PRESSURE TO REGULATOR.
2. To service the Regulator, disengage the yellow lock sleeve by pulling upward. Turn adjusting knob counterclockwise until compression is released from the pressure control spring. Remove bonnet assembly to service the piston area, or the poppet area, or both.  
NOTE: When installing Poppet Kit Number PS424, visually inspect the Poppet Assembly. If the Poppet Assembly is black in color, the balancing seal and washer below the Poppet Return Spring must be removed.
3. After servicing the Regulator, or upon installing the Regulator, turn on air supply. Then proceed to adjust the desired downstream pressure by turning the adjusting knob clockwise. This permits pressure to build up slowly, preventing any unexpected operation of valve, cylinders, tools, etc. in the downstream line.
4. To decrease regulated pressure settings, always reset from a pressure lower than the final setting required. Example, lowering the secondary pressure from 80 PSI to 60 PSI is best accomplished by dropping the secondary pressure to 50 PSI, then adjusting upward to 60 PSI.
5. When desired secondary pressure settings have been reached, push the yellow locking sleeve down to lock the adjusting knob.

## ! WARNING

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

**EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.**

### Installation

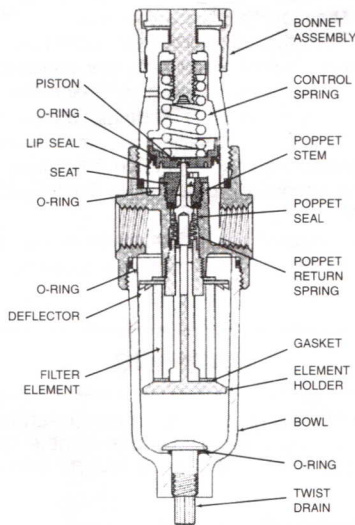
1. The equipment to which the FILTER/REGULATOR is attached should be internally cleaned to remove all traces of accumulated oil and dirt. Also, new pipe or hose should be installed between the filter and equipment being protected.
2. Blow all upstream pipe work clear of accumulated dirt and liquids.
3. Select a FILTER/REGULATOR location as close as possible to the equipment being protected.
4. Install FILTER/REGULATOR so that air flows in the direction of arrow on body.
5. Install FILTER/REGULATOR vertically with the bowl drain mechanism at the bottom. Free moisture will thus drain into the sump ("quiet zone") at the bottom of the bowl (automatic drain models are recommended as standard equipment).
6. Gauge ports are located on both sides of the REGULATOR body for your convenience. It is necessary to install a gauge or pipe plugs into each port during installation.

### Application Limits

These products are intended for use in general purpose compressed air systems only.

#### Pressure & Temperature Rating

Polycarbonate Bowl -	kPa	PSIG	bar
Operating Pressure Maximum	1000	150	10.3
Operating Temperature Maximum - 32°F to 125°F (0°C to 53°C)			
Metal Bowl -	kPa	PSIG	bar
Operating Pressure Maximum	1724	250	17.2



### Operation and Service

1. Both free moisture and solids are removed automatically by the FILTER/REGULATOR.
2. Drain whenever water level in sump ("quiet zone") reaches the lower baffle. Install Automatic Drain if bowl draining is frequent.
3. The filter element should be removed and replaced when the pressure differential across the filter is excessive.
4. To remove filter element: SHUT AIR LINE DOWN and exhaust the secondary pressure.
  - a. Unscrew threaded bowl
  - b. Unscrew element holder and remove element and gaskets.
  - c. Clean bowl and internal parts before reassembling.
  - d. Replace element and gaskets (2)
  - e. Attach element post assembly and tighten firmly.
  - f. Replace bowl seal; lubricate seal top assist in retaining it in position. Use only mineral base oils or grease. DO NOT use synthetic oils such as esters, and DO NOT use silicones
  - g. Screw bowl into body
5. The Regulator may be serviced without removing it from the line. Before disassembling FILTER/REGULATOR, SHUT OFF AIR SUPPLY. Turn adjusting knob counter clockwise.
6. To bleed down trapped pressure. For servicing piston or control springs, unscrew bonnet from body. For servicing the poppet and relief tube, remove threaded bowl and filter element assembly. BEFORE TURNING ON AIR SUPPLY, TURN ADJUSTING KNOB COUNTERCLOCKWISE UNTIL COMPRESSION IS RELEASED FROM PRESSURE CONTROL SPRING. Turn on air pressure. Then proceed to adjust air pressure by turning adjusting knob clockwise. This permits pressure to build up slowly in the downstream line.

**NOTE: SHUT AIR LINE DOWN and exhaust pressure before servicing**

**CAUTION: SEE SAFETY: TRANSPARENT BOWLS SECTION.**

### Maintenance Service Kits

<b>Bonnet Assy.</b>	L01369
<b>Control Springs</b>	
5 to 125 PSI	P01173
1 to 15 PSI	P01176
2 to 60 PSI	P01174
<b>Relieving Unbalanced Repair Kit</b>	PS426
<b>5 Micron Element Kit</b>	PS403
<b>40 Micron Element Kit</b>	PS401
<b>Polycarbonate Bowl Manual Drain</b>	PS404
<b>Polycarbonate Bowl Automatic Drain</b>	PS408
<b>Metal Bowl Manual Drain</b>	PS447B
<b>Metal Bowl Auto Drain</b>	PS451
<b>Gauges</b>	
0 to 60 PSI — 413 kPa	24-805
0 to 200 PSI — 0-14 k/cm <sup>2</sup>	24-801
<b>Panel Mounting Nut</b>	P78652
<b>Mounting Bracket Kit W/Mounting Ring</b>	24-950

### CAUTION

Polycarbonate bowls being transparent and tough, are ideal for use with Filters and Lubricators. They are suitable for use in normal industrial environments, but should not be located in areas where they could be subjected to direct sunlight, an impact blow, nor temperatures outside of the rated range. As with most plastics, some chemicals can cause damage. Polycarbonate bowls should not be exposed to chlorinated hydrocarbons, ketones, esters and certain alcohols. They should not be used in air systems where compressors are lubricated with fire-resistant fluids such as phosphates ester and di-ester types.

Metal bowls are recommended where ambient and/or media conditions are not compatible with polycarbonate bowls. Metal bowls resist the action of most such solvents, but should not be used when strong acids or bases are present or in salt laden atmospheres. Consult the factory for specific recommendations where these conditions exist.

**TO CLEAN POLYCARBONATE BOWLS USE MILD SOAP AND WATER ONLY! DO NOT** use cleaning agents such as acetone, benzene, carbon tetrachloride, gasoline, toluene, etc. which are damaging to this plastic.