

Introduction

This installation guide provides instructions for installation, startup, and adjustment. For further information refer to:

Type 1098-EGR Instruction Manual, form 5084, D100339X012, or Type 99 Instruction Manual, form 589, D100260X012, or www.FISHERregulators.com.

P.E.D. Categories

This product may be used as a safety accessory with pressure equipment in the following Pressure Equipment Directive 97/23/EC categories. It may also be used outside of the Pressure Equipment Directive using sound engineering practice (SEP) per table below.

PRODUCT SIZE	CATEGORIES	FLUID TYPE
DN 6 (1/4-inch)	SEP	1

Specifications

Available Configurations

61L: Low pressure pilot for 0,02 to 1,38 bar (0.25 to 20 psig set points)

61LD: Low pressure, narrow proportional band pilot for 0,02 to 1,38 bar (0.25 to 20 psig)

61LE: Low pressure, wide proportional band pilot for 0,02 to 1,38 bar (0.25 to 20 psig)

61H: high pressure pilot for set pressures from 0,69 to 4,48 bar (10 to 65 psig)

61HP: high pressure pilot for set pressures from 1,03 to 20,7 bar (15 to 300 psig)

Maximum Inlet Pressure⁽¹⁾

61L, 61LE, 61H: 20,7 bar (300 psig)

61LD: 11 bar (160 psig)

61HP: 41,4 bar (600 psig)

Outlet Pressure Ranges⁽¹⁾

61L, 61LD, 61LE: 0,02 to 0,14 bar (0.25 to 2 psig); 0,07 to 0,35 bar (1 to 5 psig); 0,14 to 0,69 bar (2 to 10 psig); 0,35 to 1,03 bar (5 to 15 psig); 0,69 to 1,38 bar (10 to 20 psig)

61H: 0,69 to 4,48 bar (10 to 65 psig)

61HP: 1,03 to 3,10 bar (15 to 45 psig); 2,41 to 6,90 bar (35 to 100 psig); 6,90 to 20,68 bar (100 to 300 psig)

Maximum Spring Case Pressure for Pressure Loading⁽¹⁾

61L, 61LD, 61LE: 1,7 bar (25 psig)

61H: 5,0 bar (72 psig)

61HP: 6,9 bar (100 psig)

Proof Test Pressure

All Pressure Retaining Components have been proof tested per Directive 97/23/EC - Annex 1, Section 7.4

Temperature Capabilities

Nitrile/Neoprene: -40 to 82°C (-40 to 180°F)

Fluoroelastomer: -18 to 149°C (0 to 300°F) hot water limited to 82°C (180°F)

Installation



WARNING

Only qualified personnel should install or service a regulator. Regulators should be installed, operated, and maintained in accordance with international and applicable codes and regulations, and Fisher instructions.

If the regulator vents fluid or a leak develops in the system, it indicates that service is required. Failure to take the regulator out of service immediately may create a hazardous condition.

Personal injury, equipment damage, or leakage due to escaping fluid or bursting of pressure-containing parts may result if this regulator is overpressured or is installed where service conditions could exceed the limits given in the Specifications section, or where conditions exceed any ratings of the adjacent piping or piping connections.

To avoid such injury or damage, provide pressure-relieving or pressure-limiting devices (as required by the appropriate code, regulation, or standard) to prevent service conditions from exceeding limits.

Additionally, physical damage to the regulator could result in personal injury and property damage due to escaping fluid. To avoid such injury and damage, install the regulator in a safe location.

Clean out all pipelines before installation of the regulator and check to be sure the regulator has not been damaged or has collected foreign material during shipping. For NPT bodies, apply pipe compound to the male pipe threads. For flanged bodies, use suitable line gaskets and approved piping and bolting practices. Install the regulator in any position desired, unless otherwise specified, but be sure flow through the body is in the direction indicated by the arrow on the body.

Note

It is important that the regulator be installed so that the vent hole in the spring case is unobstructed at all times. For outdoor installations, the regulator should be located away from vehicular traffic and positioned so that water, ice, and other foreign materials cannot enter the spring case through the vent. Avoid placing the regulator beneath eaves or downspouts, and be sure it is above the probable snow level.

1. The pressure/temperature limits in this installation guide and any applicable standard or code limitation should not be exceeded.



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Overpressure Protection

The recommended pressure limitations are stamped on the regulator nameplate. Some type of overpressure protection is needed if the actual inlet pressure exceeds the maximum operating outlet pressure rating. Overpressure protection should also be provided if the regulator inlet pressure is greater than the safe working pressure of the downstream equipment.

Regulator operation below the maximum pressure limitations does not preclude the possibility of damage from external sources or debris in the line. The regulator should be inspected for damage after any overpressure condition.

Startup

The regulator is factory set at approximately the midpoint of the spring range or the pressure requested, so an initial adjustment may be required to give the desired results. With proper installation completed and relief valves properly adjusted, slowly open the upstream and downstream shutoff valves.

Adjustment

To change the outlet pressure, remove the closing cap or loosen the locknut and turn the adjusting screw clockwise to increase outlet pressure or counterclockwise to decrease pressure. Monitor the outlet pressure with a test gauge during the adjustment. Replace the closing cap or tighten the locknut to maintain the desired setting.

Taking Out of Service (Shutdown)

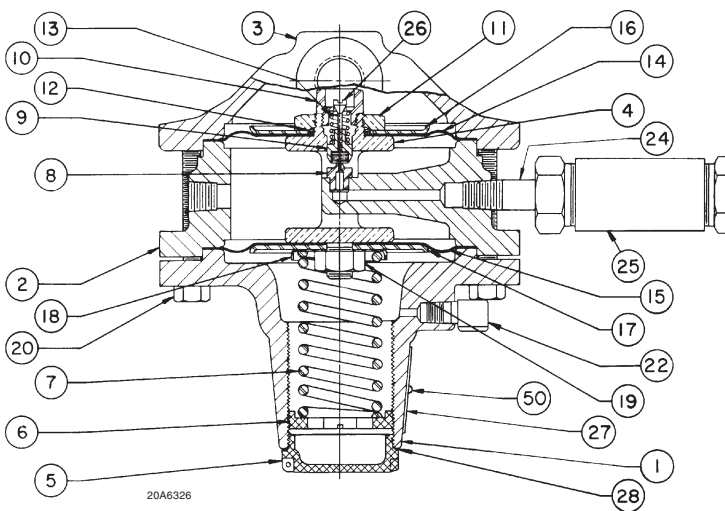


WARNING

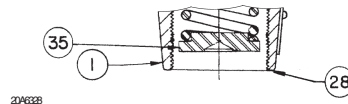
To avoid personal injury resulting from sudden release of pressure, isolate the regulator from all pressure before attempting disassembly.

Parts List

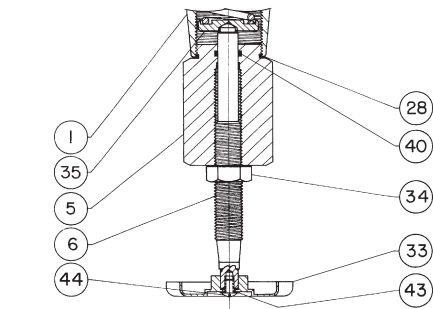
Key	Description	Key	Description
1	Relay Spring Case	24	Pipe Nipple
2	Relay Valve Body	25	Filter Assembly
3	Bottom Cover	26	Bleed Valve
4	Relay Yoke	27	Nameplate
5	Closing Cap Assembly	28	Gasket
6	Adjusting Screw	30	Pipe Plug
7	Control Spring	33	Handwheel
8	Relay Orifice	34	Hex Nut
9	Disc Holder Assembly	35	Spring Seat
10	Bleed Orifice	40	O-ring
11	Diaphragm Nut	41	Adaptor
12	O-ring Seal	42	Yoke Cap
13	Relay Spring	43	Lockwasher
14	Upper Relay Diaphragm	44	Machine Screw
15	Lower Relay Diaphragm	45	Valve Spring Seat
16	Upper Relay Head	46	Cap Screw
17	Lower Relay Head	47	Machine Screw
18	Spring Seat	48	Cap Screw
19	Hex Nut	50	Drive Screw
20	Cap Screw	51	Diaphragm Insert
23	Pipe Plug or Vent Assembly	52	Lower Yoke Cap
		53	Bleed Plug
		54	Vent Assembly



TYPE 61L, 61LD, AND 61LE PILOT

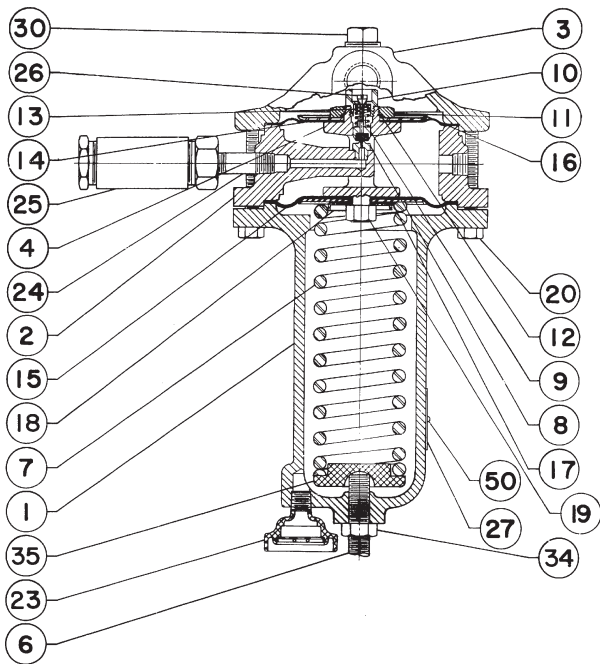


DETAIL OF CAPPED ADJUSTING SCREW OPTION



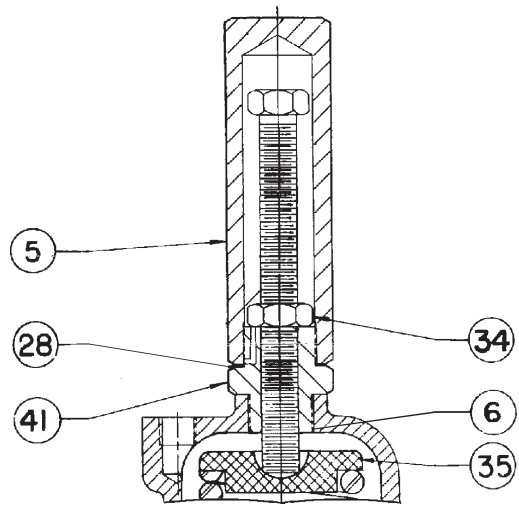
DETAIL HANDWHEEL OPTION

Figure 1. Type 61L, 61LD, and 61LE Pilot Assemblies



TYPE 61H PILOT

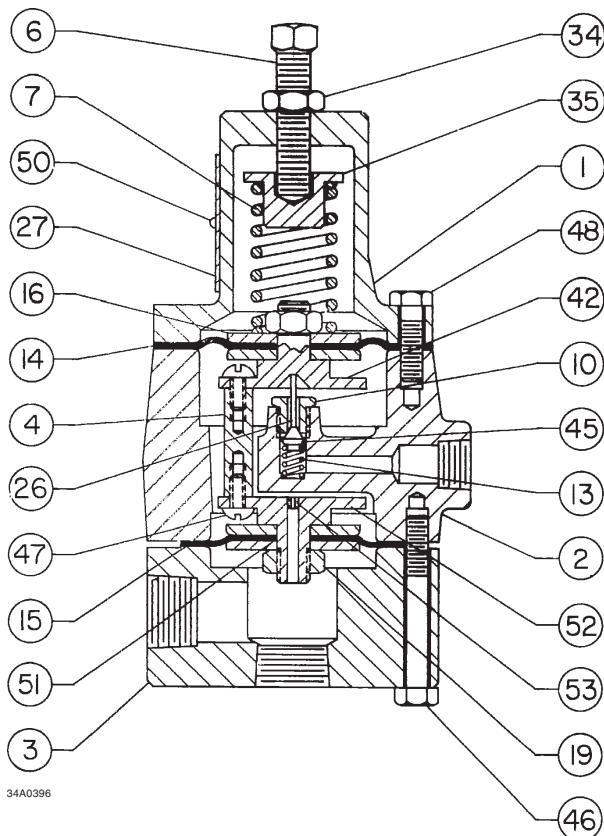
32A2068



30A6330

DETAIL OF CAPPED ADJUSTING SCREW OPTION

Figure 2. Type 61H Pilot Assembly



34A0396

Figure 3. Type 61HP Pilot Assembly

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