11-018, 11-818 & 11-918 Precision Pressure Regulator
Installation & Maintenance Instructions

11 - ★18 - ★★★★

Thread
0 PTF
8 ISO G parallel
9 ISO Rc taper

TECHNICAL DATA

Fluid: Compressed air, oil free, filtered to 5 micron
Maximum inlet pressure:
Low Pressure Models: 8 bar (115 psig)*1)
Normal Pressure Models: 10 bar (150 psig)*1)
High Pressure Models: 14 bar (200 psig)*1)
Operating temperature: 0° to +70°C (32° to +158°F)
* Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).
Recommended Regulated Pressures:
Low Pressure Models: 0,02 to 0,5 bar (0,3 to 8 psig)*2)
Normal Pressure Models: 0,07 to 4 bar (1 to 60 psig)*2)
High Pressure Models: 0.4 to 10 bar (6 to 150 psig)*2)
Maximum Flow (low pressure unit) with 8 bar (115 psig) inletpressure, 0,4 bar (6 psig) outlet pressure and pressure drop of 0,025 bar (0,36 psig): 4 dm3/s
Maximum Flow (standard unit) with 8 bar (115 psig) inlet pressure, 4 bar (60 psig) outlet pressure and pressure drop of 0,005 bar (0,07 psig): 8 dm3/s
Maximum Flow (high pressure unit) with 10 bar (150 psig) inlet pressure, 8 bar (115 psig) outlet pressure and pressure drop of 0,01 bar (0,15 psig): 4 dm3/s
Port Size: ¼"

MATERIALS:

Main body, Intermediate body, Bonnet: Zinc
Bottom plug: Brass
Elastomeric materials: Synthetic rubber
Pilot valve: Stainless steel
Pilot valve seat: Aluminium
Main valve: Polycarbonate
Main valve seat: Teflon
Pilot diaphragm:
Low/Normal pressure models: Steel, Brass
High pressure models: Brass
Adjusting knob: Acetal resin
Note: These units are not recommended for deadend use.
*1) Inlet pressure must be at least 0,5 bar (7 psig) greater than the adjusted outlet pressure for proper operation.
*2) Recommended Regulated Pressures ranges are not minimum or maximum outlet pressure limits. Regulators can be adjusted to pressures less than and in excess of those specified. The use of these regulators to control pressures outside of the specified ranges is not recommended.

REPLACEMENT ITEMS

Service kit, contains required items circled:

Type	Minor Repair Kit	Major Overhaul Kit
Standard Pressure	2787-01	2787-98
High Pressure	2787-02	2787-97
Low Pressure	2787-99	2787-96

PANEL MOUNTING DIMENSIONS

Panel mounting hole diameter: 12 mm (0,47")
Panel thickness: 2,4 mm (0,094") max.

INSTALLATION

1. Install regulator as close as possible to the device being serviced. Regulator can be installed at any angle.
2. In systems with a cyclic demand, install regulator upstream of cycling control valves.
3. Air line piping should be same size as regulator ports.
4. Main ports are indicated by the words IN and OUT on the bottom of the regulator body. Connect piping to proper ports. If needed, use pipe thread sealant on male threads only. Do not allow sealant to enter interior of regulator.
5. If present, gauge ports are located on sides of the regulator. If desired, connect an outlet pressure gauge to one of the gauge ports. Gauge ports can also be used as additional full flow outlets. Plug unused gauge ports.
6. Regulator requires oil free air and a 5 µm general purpose filter installed immediately upstream of regulator.

ADJUSTMENT

1. Before applying inlet pressure regulator, turn adjustment counterclockwise to remove all force on regulating spring.
2. Turn on system pressure.
3. Turn regulator adjustment clockwise until the desired outlet pressure is reached.
4. To avoid minor readjustment after making a change in pressure setting, always approach the desired pressure from a lower pressure. When reducing from a higher to a lower setting, first reduce to some pressure less than that desired, then bring up to the desired pressure. Tighten locknut (regulators with knob adjustment) or replace tamper-resistant cap (regulator with screw adjustment) to lock pressure settings.

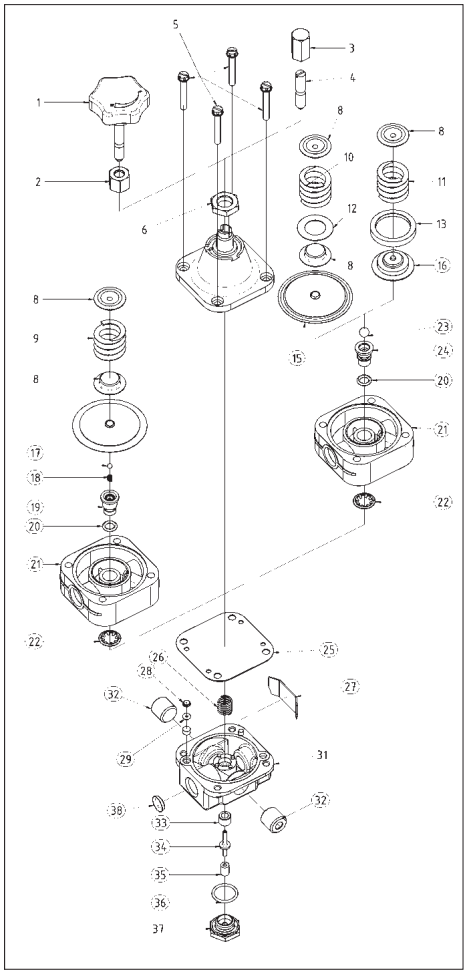
DISASSEMBLY

NOTE: These regulators are precision instruments and should be repaired only by personnel trained in the proper techniques for working on fluid power control and systems. In all other cases, return the regulator to the factory for repair. When overhauling more than one regulator, do not intermix parts of one regulator with those of another.

1. Shut off inlet pressure and reduce pressure in regulator inlet and outlet lines to zero.
2. Turn regulator adjustment knob (1) or screw (4 -remove cap first) counterclockwise until all load is removed from spring (9, 10 or 11). Remove regulator from air line.
3. Remove four screws (5), then remove bonnet (7) to gain access to the parts (8 thru 20, 23 and 24) located in the upper portion of the intermediate body (21).
4. Separate intermediate body (21) from main body (31) to gain access to items 22 and 25 thru 30.
5. Unscrew bottom plug (37) and remove o-ring (36). Remove main valve (34) and valve seal (35) if seat is damaged. Using the special inserter tool (part number 681-01), press valve seat (33) out of the main body (31) from the top.

CLEANING

1. Clean parts using warm water and soap.
2. Rinse all parts and dry thoroughly. Blow out internal passages in bodies (21 and 31) using clean, dry compressed air.
3. Inspect parts and replace those found to be damaged.



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REASSEMBLY

Do not allow grease or other contaminants to contact pilot ball (17 or 23) or orifice (28).

1. Lubricate o-rings (20 and 36) with a small amount of good quality o-ring grease. Do not allow sealant to enter interior of regulator.
2. Lubricate the threads and tip on the adjusting screw (1 or 4), spring rest ball in top of pilot diaphragms (14 or 15), and threads of bonnet screws (5) with a small amount of grease.
3. Assemble the regulator as shown in the exploded view. Use special inserter tool (part number 681-01) when pressing new valve seat (33) into body (31) to avoid damaging sealing lip on seat. Tighten bottom plug (37) to 2,3 to 4,5 Nm (20 to 40 lbs).Tighten the bonnet screw (5) evenly to 1,9 to 2,5 Nm (17 to 22 lbs).
4. Orifice assy instruction : (see the picture on the right). Press filter disc 74563-01 into main body (31). Place orifice P0171A-05 (28) (orientation as shown) into intermediate body (21) Place O-Ring 2305-04 (29) in hole below orifice.

CAUTION

Water vapor will pass through these units and could condensate into liquid form downstream as air temperature drops. Install an air dryer if water condensation could have a detrimental effect on the application.

WARNING

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under 'Technical Data'.
Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within Publisher specifications, consult NORGREN.
Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.
System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.
System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.