

WILKERSON®

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Installation & Service Instructions
83-965-000

Remote Controlled Regulators

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⚠ 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.

Introduction:

Follow these instructions when installing, operating, or servicing the product.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

Installation

1. Refer to warning above.
2. Maximum pressure rating is 300 PSIG (21 bar). Temperature range is 32°F to 150° (0°C to 65.5°C).
3. Install unit as close as possible to where regulated air is needed.
4. Install unit with the air flowing through the body in the indicated direction.
5. Install 1/4" pipe or tubing from the pilot regulator to the 1/4" NPT inlet in top of cover. (See installation diagram below.)
6. A pressure gauge is not required; however, a gauge may be attached to one of the 1/4" NPT female cross ports by removing one of the pipe plugs. These ports may also be used as regulated air outlets.
7. Install an air filter before the regulator. Filter must be sized so it will adequately handle the flow of air to the device whose pressure is being regulated.

Maintenance

1. TO DISASSEMBLE: Shut off air and vent air lines on both sides of the regulator. Remove retaining ring and lift cover and piston out of body. Remove bottom plug (R31) or plate (R41) and pull out main valve.
2. TO ASSEMBLE: Relubricate all seals and sealing surfaces

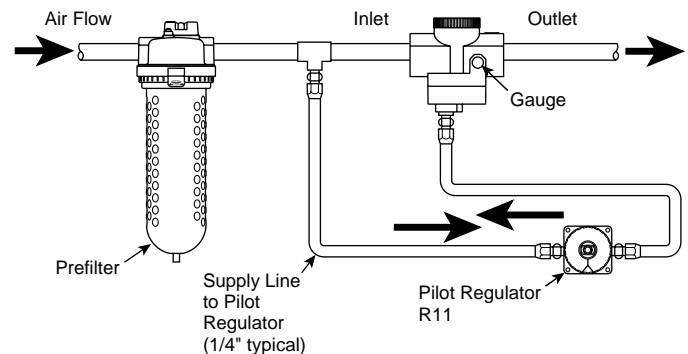
with Parker O-Lube. Assemble main valve, main valve spring, and bottom plug or plate. Insert piston into body and install cover and retaining ring. Ensure retaining ring is fully locked into retaining groove in body.

3. IF UNIT WILL NOT REGULATE TO PRESSURE, OR IF PRESSURE DROP BECOMES EXCESSIVE:
 - A. Check pilot air line for leaks, crimps, etc., and the pilot regulator for proper operation.
 - B. Remove bottom plug or plate and main valve. Clean and check seals valves and valve seats for wear and damage. Relubricated o-rings with Parker O-Lube. If main valve is worn or damaged, install the proper repair kit.



CAUTION: ENSURE RETAINING RING IS FULLY LOCKED INTO RETAINING GROOVE IN BODY. Failure to properly seat retaining ring into groove in body could allow separation of cover assembly from body when pressurized, causing personal injury or damage.

Typical Installation for
R21, R31, R41 Remote Controlled Regulators



Repair Kits for R21, R31, R41 on Page 2

⚠ 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.

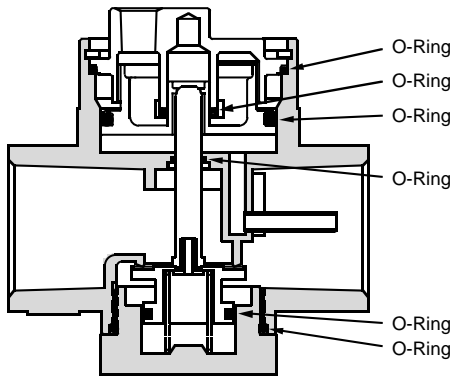
Lubrication Instructions

Symptoms of a Dry Regulator

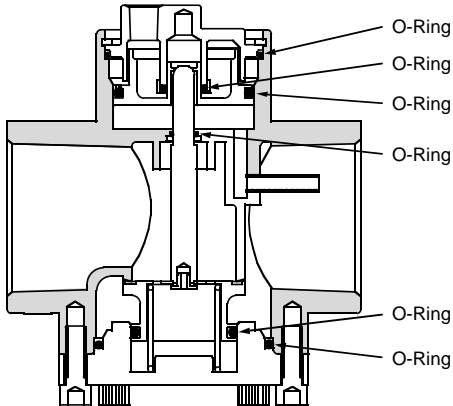
1. Loss of Calibration.
2. Regulator cannot attain high secondary pressures.
3. Erratic secondary pressures.

⚠ CAUTION: ENSURE RETAINING RING IS FULLY LOCKED INTO RETAINING GROOVE IN BODY. Failure to properly seat retaining ring into groove in body could allow separation of cover assembly from body when pressurized, causing personal injury or damage.

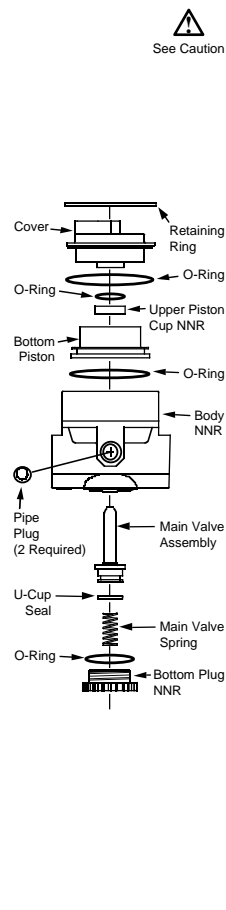
R21/R31



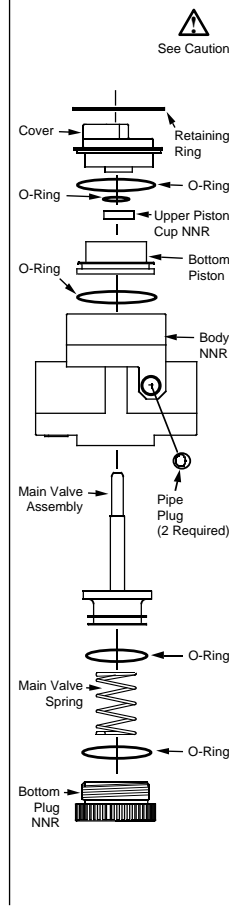
R41



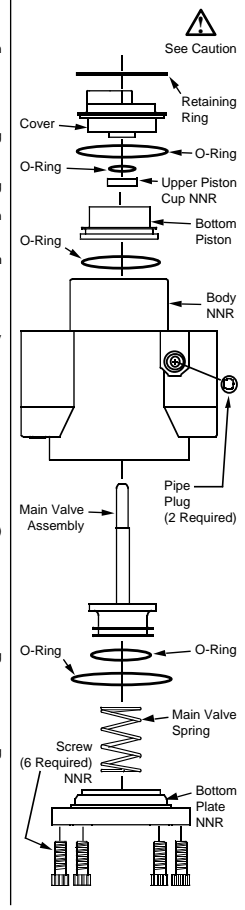
R21R



R31R



R41R



NNR = NOT NORMALLY REPLACED

Remedy — R21/R31 and R41

Disassemble regulator and lubricate seals with Parker O-Lube. If Parker O-Lube is not available, use a heavy grease such as Magnalube-G®, Lubriplate, or Molykote; however, expect "wash out" of these lubricants much sooner. Under no conditions should you use oil as a lubricant.

THE FACTORY LUBRICATES ALL MOVING SEALS WITH PARKER O-LUBE. UNDER NORMAL CONDITIONS THIS WILL LAST THROUGH MILLIONS OF CYCLES. HOWEVER, UNDER CONDITIONS OF WET AIR, HIGH FLOWS, OR LIGHT OIL FROM A LUBRICATOR SOMEWHERE IN THE CIRCUIT, MOISTURE CAN GET INTO THE DIAL-AIR™ REGULATOR AND THE LUBRICATION CAN BE WASHED OUT. PROPER LUBRICATION OF DIAL-AIR™ REGULATORS IS ABSOLUTELY ESSENTIAL.

Repair Kits and Replacement Parts

Repair Kit - Main Valve (R21R)	RRP-96-952
Repair Kit - Main Valve (R31R)	RRP-96-950
Repair Kit - Main Valve (R41R)	RRP-96-951
Repair Kit - Bottom Piston and Seal (R21R), (R31R), (R41R)	RRP-95-192
O-Ring Kit (R11B), (R21R)	GRP-95-260
O-Ring Kit (R31R)	GRP-95-261
O-Ring Kit (R41R)	GRP-95-262
Pilot Cover Kit (Black)	GRP-06-425-Q02
Main Valve and Piston (R31)	RRP-96-806
Main Valve and Piston (R41)	RRP-96-807