Pneumatic Division
Richland, Michigan USA
www.parker.com/pneumatics

STAINLESS STEEL FRL

	Bulletin Number		Bulletin Description
☐	IS-F504-F10SS	Rev. 3	PF10 Filter, Installation & Service
☐	IS-F501-F11SS	Rev. 3	PF11 Coalescing Filter, Installation & Service
☐	IS-F501-F11SS	Rev. 3	PF501 Miniature Coalescing Filter, Installation & Service
☐	IS-F504-F10SS	Rev. 3	PF504 Miniature Filter, Installation & Service
☐	IS-B548-B11SS	Rev. 4	PB11 Integral Filter / Regulator, Installation & Service
☐	IS-B548-B11SS	Rev. 4	PB548 Miniature Integral Filter / Regulator, Installation & Service
☐	IS-L10SS	Rev. 2	PL10 Mist Lubricator, Installation & Service
☐	IS-R364-R10SS	Rev. 3	PR10 Regulator, Installation & Service
☐	IS-R364-R10SS	Rev. 3	PR364 Miniature Regulator, Installation & Service
☐	Safety Guide	———	PDN Safety Guide

Visit www.pdnplu.com for additional instruction sheets.

Pneumatic Division
Richland, Michigan 49083
269-629-5000

Installation and Service Instructions
IS-F504/F10SS
1/4" Miniature Port &
1/2" Standard Port
Stainless Steel Particulate Filters
ISSUED: March, 2008
Supersedes: July, 2006
Doc. #ISF504F10SS, ECN #080189, Rev. 3

⚠ 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.**

Safety Guide

For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the **Pneumatic Division Safety Guide** at: www.parker.com/pneumatics

Introduction

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

Application Limits

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

Maximum Recommended Pressure Drop:

	kPa	PSIG	bar
Particulate Filter	**70**	**10**	**0.7**

Operating Pressure Maximum	**kPa**	**PSIG**	**bar**
Bowl w/ Twist Drain / No Sight Gauge	**2068**	**300**	**21.0**
Bowl w/ Auto Drain / No Sight Gauge	**1210**	**175**	**12.1**
Bowl w/ Twist Drain and Sight Gauge	**1700**	**250**	**17.0**
Bowl w/ Auto Drain and Sight Gauge	**1210**	**175**	**12.1**

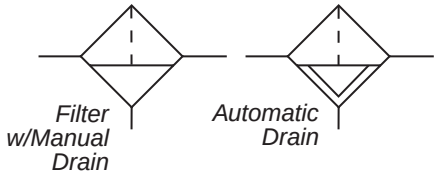
Operating Temperature Range:

F504 –	
Manual Twist Drain	0°F to 180°F (-18°C to 82°C)
Auto Pulse Drain	32°F to 150°F (0°C to 66°C)
F10 –	
Manual Twist Drain (D)	0°F to 180°F (-18°C to 82°C)
Manual Twist Drain (W)	0°F to 150°F (-18°C to 66°C)
Automatic Float Drain	32°F to 150°F (0°C to 66°C)

Standard Size Low Temperature Operating Temperature: -40°C/F

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Symbols



Installation

1. The filter should be installed with reasonable accessibility for service whenever possible – repair service kits are available. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe – never into the female port. Do not use PTFE tape to seal pipe joints – pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction. Also, new pipe or hose should be installed between the filter and equipment being protected.
2. The upstream pipe work must be clear of accumulated dirt and liquids.
3. Select a filter location as close as possible to the equipment being protected and upstream of any pressure regulator.
4. Install filter so that air flows into port labelled "IN" on body.
5. Install filter vertically with bowl drain mechanism at the bottom. Free moisture will thus drain into the sump "quiet zone" at the bottom of the bowl.

⚠ 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.

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

Operation

1. Both free moisture and solids are removed automatically by the filter.
2. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the baffle or end cap.
3. The filter element should be removed and replaced when pressure differential across the filter is 69 kPa (10 PSIG).

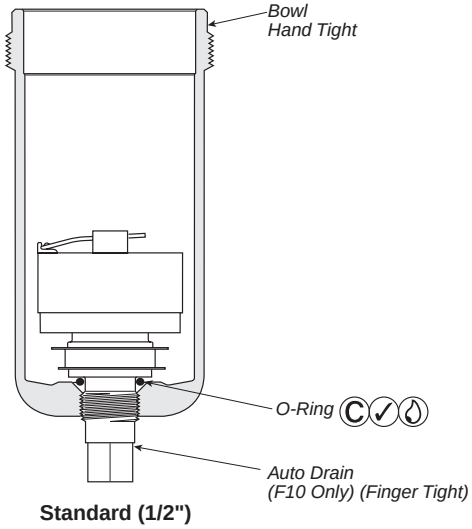
Service Procedure

⚠ **Caution: Shut off air supply and exhaust the pressure trapped within the filter bowl before servicing unit.**

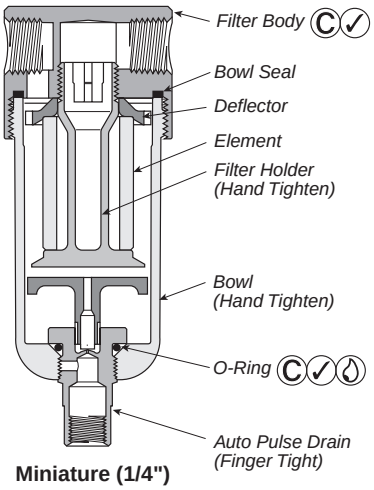
1. Unscrew and remove bowl.
2. Unscrew the filter holder from body and then remove element.
3. Clean all internal parts and bowl before reassembling.
4. Element should be replaced if soiled or creating excessive pressure drop. IMPORTANT: The filter will not operate properly if the deflector is not installed properly. The deflector must be installed between the filter stem and the filter body.
5. Attach filter holder and finger tighten firmly.
6. Replace bowl seal. Lightly lubricate new seal to assist with retaining it in position.
7. Install bowl into body and tighten; hand tight, plus 1/4 turn.
8. After servicing, apply system pressure and check for air leaks. If leakage occurs, **DO Not Operate** — conduct servicing again.

Service Kits Available

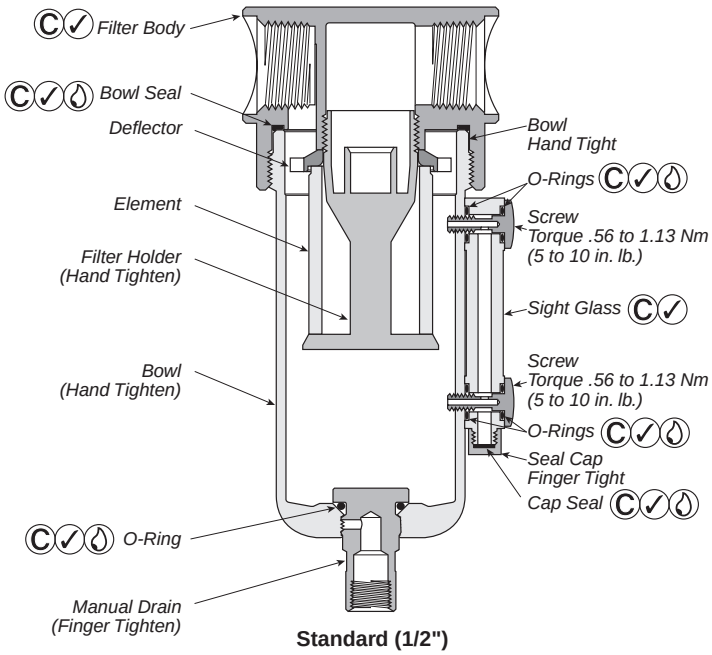
Description	Miniature (1/4")	Standard (1/2")
Auto Drain	—	SA10MDSS
Auto Pulse Drain	RKP05482-SS	—
Element (5 Micron)	EK504VY	EK55G
Element (20 Micron)	EK504Y	—
Element (40 Micron)	—	EK55J
Manual Drain	SAP05481	SAP05481
Sight Gauge Kit	—	SA607Y103-2SS
Bowl Seal	GSK-504Z101-1VT	F10Y103-2VT



**Standard (1/2")
Metal Bowl
with Auto Drain**



**Miniature (1/4")
Particulate Filter**



**Standard (1/2")
Metal Bowl
with Sight Gauge**

💧 Lightly grease with provided lubricant.

✓ Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.

C Clean with lint-free cloth.

Pneumatic Division
Richland, Michigan 49083
269-629-5000

Installation & Service Instructions
IS-F501/F11SS
1/4" F501-SS & 1/2" F11-SS
Coalescing Filters
ISSUED: May, 2008
Supersedes: July, 2006
Doc. #ISF501F11SS, EN #080328, Rev. 3

⚠ WARNING

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- **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.**

Safety Guide

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Introduction

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

Application Limits

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

Maximum Recommended Pressure Drop:

	kPa	PSIG	bar
Coalescing Filter	70	10	0.7

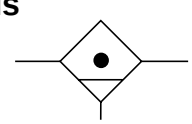
Operating Pressure Maximum	kPa	PSIG	bar
Bowl w/ Twist Drain / No Sight Gauge	2068	300	21.0
Bowl w/ Auto Drain / No Sight Gauge	1210	175	12.1
Bowl w/ Twist Drain and Sight Gauge	1700	250	17.0
Bowl w/ Auto Drain and Sight Gauge	1210	175	12.1

Operating Temperature Range:

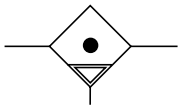
F501 –	
Manual Twist Drain	0°F to 180°F (-18°C to 82°C)
Auto Pulse Drain	32°F to 150°F (0°C to 66°C)
F11 –	
Manual Twist Drain (D)	0°F to 180°F (-18°C to 82°C)
Manual Twist Drain (W)	0°F to 150°F (-18°C to 66°C)
Automatic Float Drain	32°F to 150°F (0°C to 66°C)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Symbols



Coalescing FIlter w/ Manual Drain



Coalescing Filter w/ Auto Drain

Installation

1. The filter should be installed with reasonable accessibility for service whenever possible – repair service kits are available. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe – never into the female port. Do not use PTFE tape to seal pipe joints – pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction. Also, new pipe or hose should be installed between the filter and equipment being protected.
2. The upstream pipe work must be clear of accumulated dirt and liquids.
3. Select a filter location as close as possible to the equipment being protected and upstream of any pressure regulator.
4. A 5 micrometer pre-filter is recommended to protect the high efficiency filter and to prolong the element's life.
5. Install filter so that air flows into port labelled "IN" on body.
6. Install filter vertically with bowl drain mechanism at the bottom. Free moisture will thus drain into the sump "quiet zone" at the bottom of the bowl.

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Operation

1. Both free moisture and solids are removed automatically by the filter.
2. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the baffle or end cap.
3. The filter element should be removed and replaced when pressure differential across the filter is 69 kPa (10 PSIG).

Service Procedure

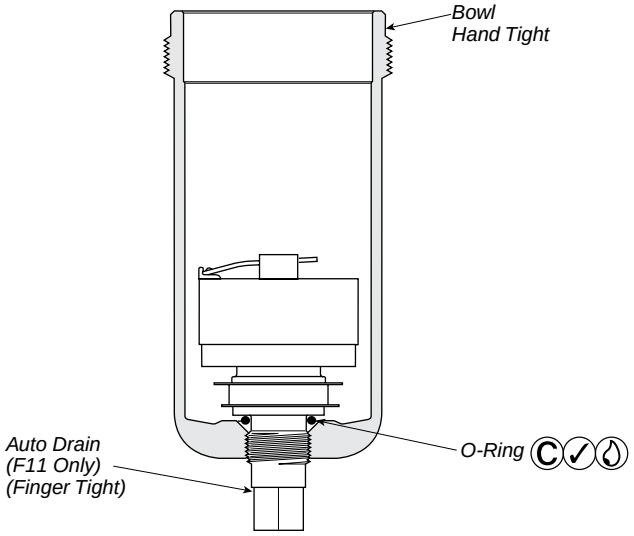
⚠ **Caution: Shut off air supply and exhaust the pressure trapped within the filter bowl before servicing unit.**

⚠ **Caution: Touching or handling the new element section may cause contamination, spotting, or migration of oil.**

1. Unscrew and remove bowl.
2. Unscrew the filter holder from body and then remove element.
3. Clean all internal parts and bowl before reassembling.
4. The coalescing filter element should be removed and replaced when pressure differential across the filter is 10 PSID. Differential gauges should be used to determine when the maximum recommended pressure differential has been reached.
5. Attach filter holder and finger tighten firmly.
6. Replace bowl seal. Lightly lubricate new seal to assist with retaining it in position.
7. Install bowl into body and tighten; hand tight, plus 1/4 turn.
8. After servicing, apply system pressure and check for air leaks. If leakage occurs, **DO Not Operate** — conduct servicing again.

Service Kits Available

Description	F501 (1/4")	F11 (1/2")
Auto Drain	—	SA10MDSS
Auto Pulse Drain	RK504SY-SS	—
Element (0.3 Micron)	EKF501H	—
Element (0.01 Micron)	—	EKF71
Manual Drain	SAP05481	SAP05481
Sight Gauge Kit	—	SA607Y103-2SS
Bowl Seal	GSK-504Z101-1VT	F10Y103-2VT

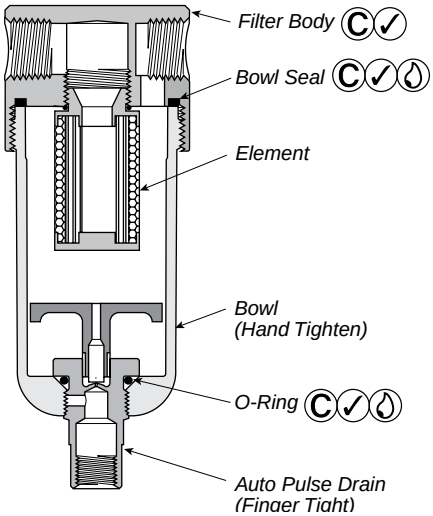


F11 Metal Bowl with Auto Drain

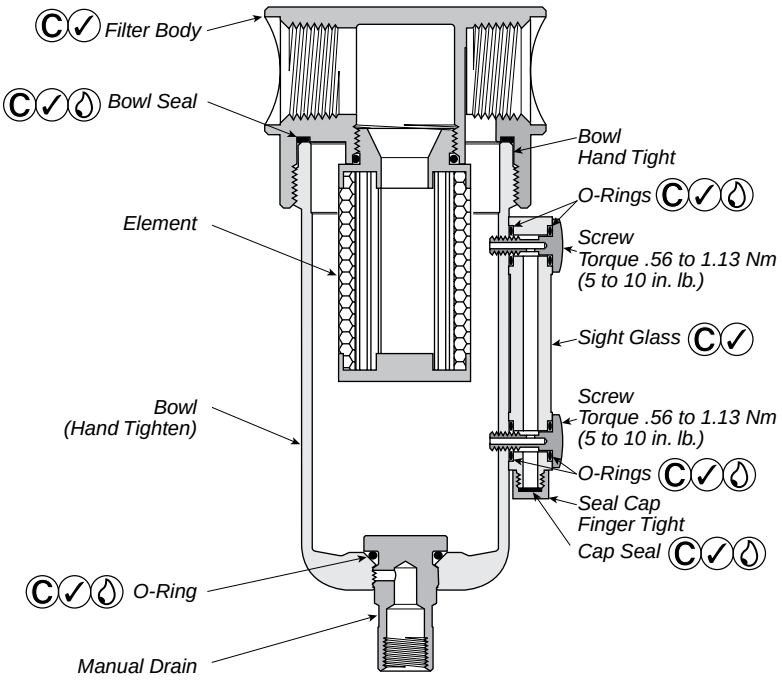
💧 Lightly grease with provided lubricant.

✓ Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.

C Clean with lint-free cloth.



F501 Coalescing Filter with Auto Pulse Drain



F11 Coalescing Filter With Sight Gauge

Pneumatic Division
Richland, Michigan 49083
269-629-5000

Installation and Service Instructions
IS-B548/B11SS
1/4" Miniature Port &
1/2" Standard Port
(Knob & T-Handle) Filter / Regulators
ISSUED: March, 2008
Supersedes: July, 2006
Doc. #ISB548B11SS, EN #080139, Rev. 4

⚠ WARNING

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⚠ WARNING

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

Safety Guide

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Introduction

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Application Limits

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

Maximum Recommended Pressure Drop:

	kPa	PSIG	bar
Particulate Filter	70	10	0.7
Operating Pressure Maximum	**kPa**	**PSIG**	**bar**
Bowl w/ Twist Drain / No Sight Gauge	2068	300	21.0
Bowl w/ Auto Drain / No Sight Gauge	1210	175	12.1
Bowl w/ Twist Drain and Sight Gauge	1700	250	17.0
Bowl w/ Auto Drain and Sight Gauge	1210	175	12.1

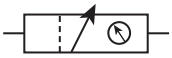
Operating Temperature Range:

B548	0°F to 150°F (-18°C to 66°C)
B558	0°F to 180°F (-18°C to 82°C)
Auto Pulse Drain	32°F to 150°F (0°C to 66°C)
B11 Metal Bowl D or W	0°F to 150°F (-18°C to 66°C)
B12 Metal Bowl D	0°F to 180°F (-18°C to 82°C)
B12 Metal Bowl W	0°F to 150°F (-18°C to 66°C)
Automatic Float Drain	32°F to 150°F (0°C to 66°C)

Standard Size Low Temperature Operating Temperature: -40°C/F

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Symbols



Filter / Regulator

Installation

1. The Filter / Regulator should be installed with reasonable accessibility for service whenever possible – repair service kits are available. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe – never into the female port. Do not use PTFE tape to seal pipe joints – pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction. Also, new pipe or hose should be installed between the Filter / Regulator and equipment being protected.
2. The upstream pipe work must be 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 into port labelled "IN" 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.
6. Gauge ports are located on both sides of the Filter / Regulator body for your convenience. It is necessary to install a gauge or socket pipe plugs into each port during installation.

Operation

1. Both free moisture and solids are removed automatically by the filter.
2. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the baffle / filter holder.
3. The filter element should be removed and replaced when pressure differential across the filter is 69 kPa (10 PSIG).
4. Before turning on the air supply:

4A. On Miniature with Knob, disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.

4B. On Standard, push down on the adjusting knob while turning knob counterclockwise until the compression is released from the pressure control spring. (Knob is locked when up.)

5. Then turn knob clockwise and adjust regulator to desired downstream pressure. This permits pressure to build up slowly in the downstream line.
6. To decrease regulated pressure settings, always reset from a pressure lower than the final setting required. Example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 PSIG) is best accomplished by

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dropping the secondary pressure to 350 kPa (50 PSIG), then adjusting upward to 410 kPa (60 PSIG).

7. When desired secondary pressure settings have been reached, push the knob down to lock this pressure setting on the Miniature or up to lock on the Stand ard.

Service

⚠ **Caution: Disconnect or shut off air supply and exhaust the primary and secondary pressures before servicing unit. Turning the adjusting knob counterclockwise does not vent downstream pressure on non-relieving regulators. Downstream pressure must be vented before servicing regulator.**

⚠ **Caution: Grease packets are supplied with kits for lubrication of seals. Use only mineral based grease or oils. Do not use synthetic oils such as esters. Do not use silicones.**

Note: After servicing unit, turn on air supply and adjust regulator to the desired downstream pressure. Check unit for leaks. If leakage occurs, do not operate - conduct repairs and retest.

Servicing Filter Element - (Refer to Figure 1)

1. Unscrew and remove bowl.
2. Unscrew the filter holder from body and then remove element.
3. Clean all internal parts and bowl before reassembling.
4. Install new element. IMPORTANT: The Filter / Regulator will not operate properly if the deflector is not installed properly. The deflector must be installed between the filter stem and the filter body.
5. Attach filter holder and finger tighten.
6. Replace bowl seal. Lightly lubricate new seal to assist with retaining it in position.
7. Install bowl into body and tighten; hand tight, plus 1/4 turn.

Servicing Regulator - (Refer to Figure 1)

1A. On Miniature with Knob, disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.

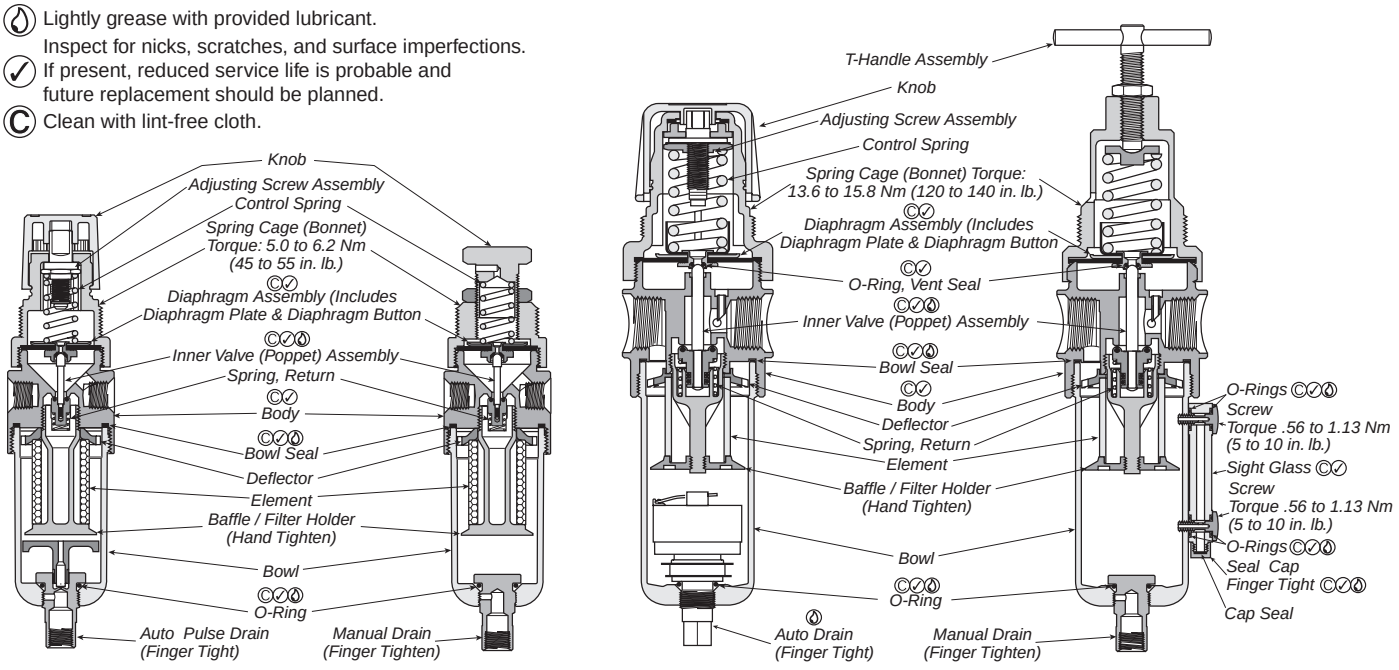
1B. On Standard, push down on the adjusting knob while turning knob counterclockwise until the compression is released from the pressure control spring. (Knob is locked when up.)

2. Remove the bonnet and bowl assemblies by unscrewing the bonnet and bowl from the body.
3. Remo ve diaphragm assembly from bonnet assembly.
4. Remove filter stem, filter element, poppet assembly, poppet return spring.
5. Clean and carefully inspect parts for wear or damage. If replacement is necessary, use parts from service kits. Clean bowl.
6. Lubricate o-rings with grease found in service kits.
7. Install poppet return spring, poppet assembly, and filter holder. IMPORTANT: The Filter / Regulator will not operate properly if the defector is not installed properly. The deflector must be installed between the filter stem and filter body.
8. Install filter element and firmly tighten baffle / filter holder onto the filter stem.
9. Install bowl into body and tighten, hand tight, plus 1/4 turn.
10. Install diaphragm assembly into body assembly. Assemble bonnet assembly onto body and tighten per Figure 1.

Service Kits Available

Description	Miniature (1/4")	Standard (1/2")
Automatic Drain	—	SA10MDSS
Auto Pulse Drain	RKP05482-SS	—
Bonnet Assembly - Knob	CKR364YSS	CKR10YSS
Bonnet Assembly - Stainless Steel	CKR354YSS	CKR11YSS
Element (5 Micron)	EK504VY	EKF10VY
Element (20 Micron)	EK504Y	—
Element (40 Micron)	—	EKF10Y
Gauge	K4515N14160SS	K4520N14160SS
Manual Drain	SAP05481	SAP05481
Panel Mount Nut	R05X51SS	R10X51SS
Spring, 0-25 PSIG	SPR-375-2-SS	—
Spring, 0-60 PSIG	SPR-376-1-SS	SPR-388-1-SS
Spring, 0-125 PSIG	SPR-377-1-SS	SPR-389-1-SS
Spring, 0-250 PSIG	—	SPR-390-1-SS
Regulator Repair Kit (Relieving)	RK549YSS	RKR10YSS
Regulator Repair Kit (Non-Relieving)	RK548YSS	RKR10KYSS
Sight Gauge Kit	—	SA607Y103-2SS
Bowl Seal	GSK-504Z101-1VT	F10Y103-2VT

Lightly grease with provided lubricant.
Inspect for nicks, scratches, and surface imperfections.
If present, reduced service life is probable and future replacement should be planned.
Clean with lint-free cloth.



Miniature Filter / Regulator with Plastic Knob | **Miniature Filter / Regulator with Stainless Bonnet** | **Standard Filter / Regulator with Plastic Knob** | **Standard Filter / Regulator with T-Handle**

Figure 1

Pneumatic Division
Richland, Michigan 49083
269-629-5000

Installation & Service Instructions: IS-L10SS

1/2" L10SS Mist Lubricators

ISSUED: May, 2008
Supersedes: February, 2005

Doc. #ISL10SS, EN# 080328, Rev. 2

⚠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.**

Safety Guide

For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the **Pneumatic Division Safety Guide** at: www.wilkersoncorp.com

Introduction

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

Application Limits

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

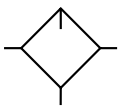
Operating Pressure Maximum	**kPa**	**PSIG**	**bar**
Bowl w/ Twist Drain / No Sight Gauge	**2068**	**300**	**21.0**
Bowl w/ Twist Drain and Sight Gauge	**1700**	**250**	**17.0**

Operating Temperature Ratings –

Metal Bowl w/o Sight Gauge	0°F to 150°F (-18°C to 66°C)
Metal Bowl w/ Sight Gauge	0°F to 150°F (-18°C to 66°C)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Symbol



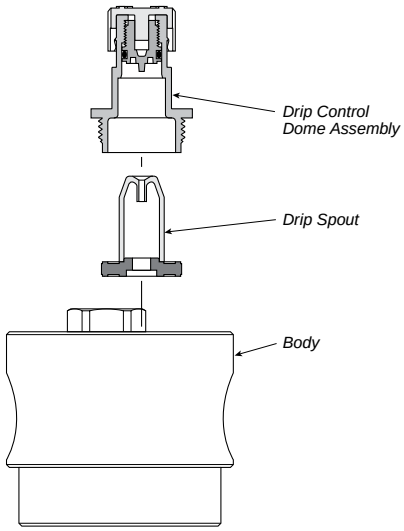
Lubricator w/ Manual Drain

Installation

1. The lubricator should be installed with reasonable accessibility for service whenever possible. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe – never into the female port. Do not use PTFE tape to seal pipe joints – pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction.
2. Install lubricator so air flows into port labelled "IN" on body.
3. Installation should be upstream of the device it is to lubricate (valve, cylinders, tool, etc.) as possible.

Service Kits Available

Description	L10 (1/2")
Drip Control Kit	PS740N
Sight Gauge Kit	SA607Y103-2-SS
Bowl Seal	F10Y103-2VT



⚠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.

Operation and Service

⚠ **Caution: Shut off air supply and exhaust the pressure trapped within the lubricator before filling unit.**

1. Remove the fill plug and fill the lubricator with the suggested lubricant.

   Suggested lubricant: F442

   Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F. (Mobil DTE24 and Sun Company Sunvis 932 are good examples). Do not use oils with adhesives, compound oils containing solvents, graphite, detergents or synthetic oils.

2. Replace the fill plug (by turning clockwise) and seat firmly. Excessive torque is not required. If leakage occurs, **DO NOT OPERATE** — check to make sure the fill plug is installed properly. The lubricator is now ready for setting.

3. Oil delivery adjustment — To adjust oil delivery, turn adjustment knob on top of the lubricator.

   Leaner — Clockwise

   Richer — Counterclockwise

   By counting the number of drops per minute in the sight dome, you can adjust to your requirements.

   Every drop visible in the sight dome goes downstream.

   Generally, one drop per minute downstream for every 10 - 15 SCFM flow is satisfactory.

   25 drops per minute equals one (1) ounce per hour - volume of oil passing through the sight dome.

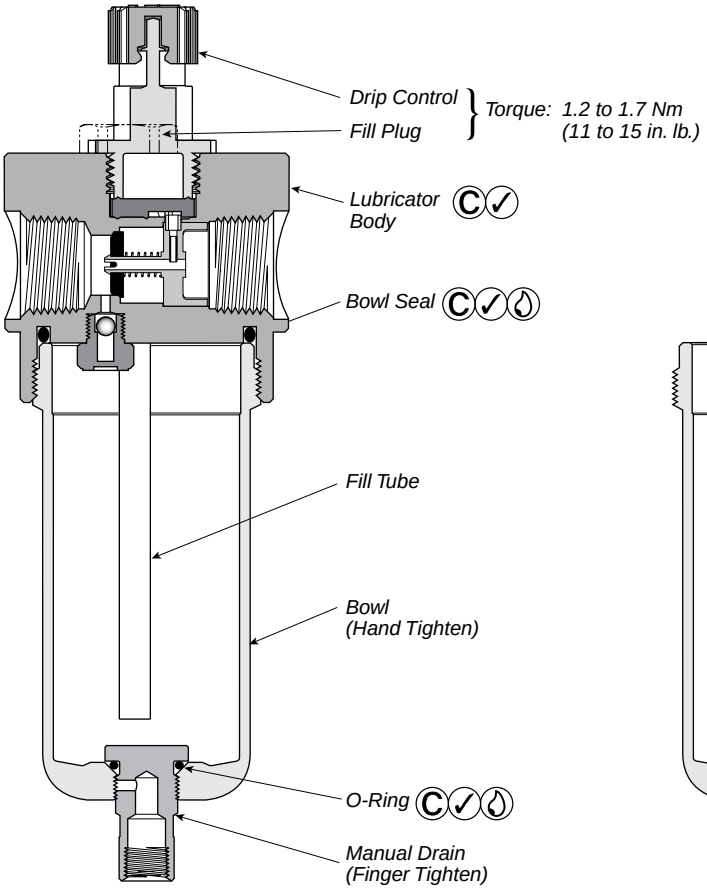
   NOTE: This is a constant density type lubricator which delivers a constant ratio of oil to air flow. Therefore, if air flow increases or decreases, oil delivery will be adjusted proportionately. ONLY IF A DIFFERENT RATIO IS DESIRED SHOULD YOUR ADJUSTMENT KNOB SETTING BE CHANGED AFTER YOUR INITIAL SETTING.

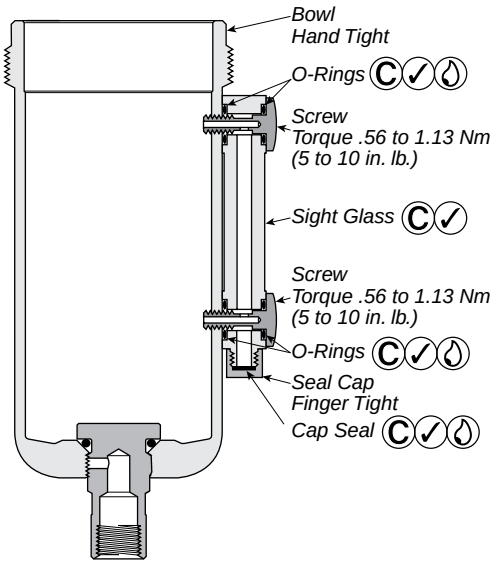
4. To replace fill plug, drip control, & service lubricator:

   A. Turn off air supply and depressurize the unit.

   B. Refer to pictorial for servicing and torque values.

   C. Turn on air supply and check lubricator for leakage. If leakage occurs, **DO NOT OPERATE** — conduct repairs again.





L10 Metal Bowl With Sight Gauge

Ⓛ Lightly grease with provided lubricant.

✓ Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.

Ⓒ Clean with lint-free cloth.

Pneumatic Division
Richland, Michigan 49083
269-629-5000

Installation and Service Instructions
IS-R364/R10SS

1/4" Miniature Port & 1/2" Standard Port (Knob & T-Handle) Regulators

ISSUED: February, 2008
Supersedes: April, 2006

Doc. #ISR364R10SS, ECN #080037, Rev. 3

⚠ 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.**

⚠ WARNING

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

Safety Guide

For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the **Pneumatic Division Safety Guide** at: www.parker.com/pneumatics

Introduction

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

Application Limits

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

Operating Pressure:

	kPa	PSIG	bar
Maximum Inlet Pressure	2068	300	20.7

Operating Temperature Range:

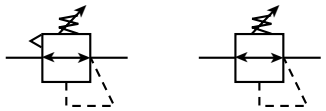
Plastic Knob	0°F to 150°F (18°C to 66°C)
Stainless Steel Knob	0°F to 180°F (18°C to 82°C)

Option "L" Minimum Operating Temperature*: -40°F (-40°C)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

* Note: "Low Temperature" option is intended for applications where the ambient temperature may be down to -40° C/F. Air supply must be free of moisture to prevent ice formation and malfunction of units. These units contain EPDM seals. Make sure any oils in the airstream are compatible.

ANSI Symbols



Relieving Regulator Adjustable | **Non-Relieving Regulator Adjustable**

Installation

1. The regulator should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside unit, possibly causing malfunction.
2. Install regulator so that air flow is into port labelled "IN". Installation must be upstream (high pressure) side and as close to the devices it is to service (valve, cylinder, tool, etc.) as possible. Mounting may be in any position.
3. 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.
4. 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.

Operation

1. Before turning on the air supply:

1A. On Miniature Port Regulators, disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.

1B. On Standard Port Regulators, push down on the adjusting knob while turning knob counterclockwise until the compression is released from the pressure control spring. (Knob is locked when up.)

2. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting knob clockwise. This permits pressure to build up slowly, preventing any unexpected operation of the valve, cylinders, tools, etc., attached to the line.

⚠ 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.

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Adjustment to desired secondary pressure can be made only with primary pressure applied to the regulator.

3. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 psig) is best accomplished by dropping the secondary pressure to 350 kPa (50 psig), then adjusting upward to 410 kPa (60 psig).

Service

⚠ **CAUTION:**
SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (Turning the knob counterclockwise reduces regulator's setting, but does not vent downstream pressure on non-relieving regulators.)

⚠ **CAUTION:**
Lubricate parts with a mineral based grease / oil or silicone grease. DO NOT use synthetic grease / oils such as esters.

A. Servicing the Bonnet and Diaphragm Assembly-

1A. On Miniature Port Regulators, disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.

1B. On Standard Port Regulators, push down on the adjusting knob while turning knob counterclockwise until the compression is released from the pressure control spring. (Knob is locked when up.)

2. Unscrew the threaded bonnet assembly. Next, disassemble, clean, and carefully inspect parts for wear and/or damage. If replacement is necessary, use parts from service kits.
3. Install diaphragm assembly into body. Then install bonnet assembly to body. See Figure 1 for torque value.

B. Servicing the Poppet Assembly-

1. Exhaust system air pressure as previously described. Then remove bottom plug by unscrewing it from body. Next, remove bottom plug o-ring, spring and poppet assembly.
2. Next, clean, and carefully inspect parts for wear and/or damage. If replacement is necessary, use parts from service kits.
3. Lubricate o-ring and sliding surfaces using grease supplied with service kit.
4. Lubricate bottom plug o-ring and install it in o-ring groove on bottom plug. Then screw bottom plug into body until the plug bottoms out in body. See Figure 1 for torque value.
5. Turn on air supply and adjust to desired secondary pressure as described in the **Operation** section.

Turn on air pressure and check regulator for leakage. If leakage occurs, DO NOT OPERATE — conduct repairs again.

If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

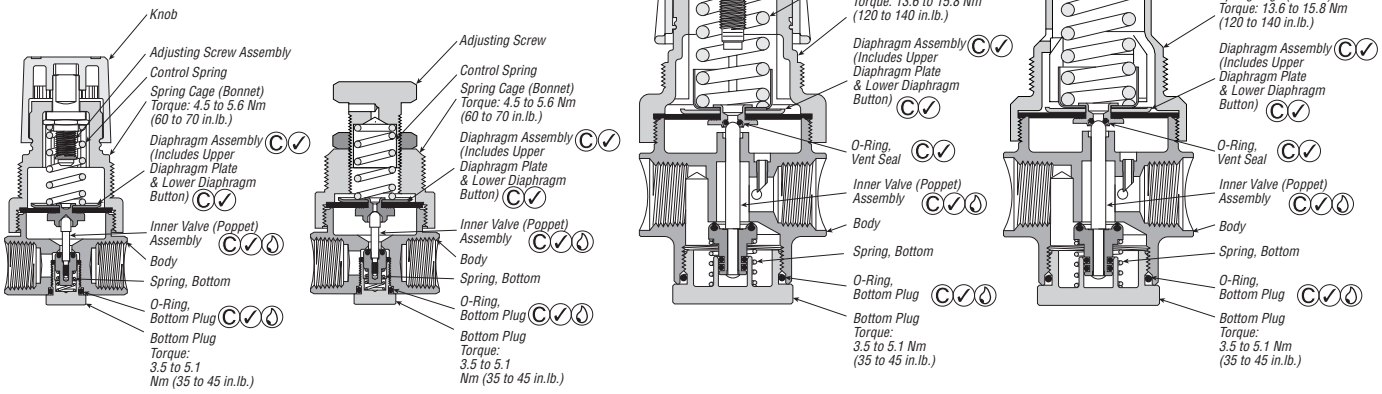
Service Kits Available

Description	Miniature Plastic Knob (1/4")	Miniature Adjusting Screw (1/4")	Standard Knob (1/2")	Standard T-Handle (1/2")
Spring Cage Assembly	CKR364YSS	CKR354YSS	CKR10YSS	CKR11YSS
Gauges	K4515N14160SS	K4515N14160SS	K4520N14160SS	K4520N14160SS
Panel Mount Nut	R05X51SS	R05X51SS	R10X51SS	R10X51SS
Regulator Repair Kit (Relieving)	RKR364YSS	RKR364YSS	RKR10YSS	RKR10YSS
Regulator Repair Kit (Relieving) Low Temp.	—	—	RKR10LYSS	RKR10LYSS
Regulator Repair Kit (Non-Relieving)	RKR364KYSS	RKR364KYSS	RKR10KYSS	RKR10KYSS
Regulator Repair Kit (Non-Relieving) Low Temp.	—	—	RKR10LKYSS	RKR10LKYSS
Spring, 0-25 PSIG	SPR-375-2-SS	SPR-375-2-SS	—	—
Spring, 0-60 PSIG	SPR-376-1-SS	SPR-376-1-SS	SPR-388-1-SS	SPR-388-1-SS
Spring, 0-125 PSIG	SPR-377-1-SS	SPR-377-1-SS	SPR-389-1-SS	SPR-389-1-SS
Spring, 0-250 PSIG	—	—	SPR-390-1-SS	SPR-390-1-SS

Ⓛ Lightly grease with provided lubricant.

✓ Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.

Ⓒ Clean with lint-free cloth.



Miniature Port Regulator Plastic Knob (Non-Relieving Shown)

Miniature Port Regulator Stainless Steel Knob (Non-Relieving Shown)

Standard Port Regulator - Knob (Relieving Shown)

Standard Port Regulator - T-Handle (Relieving Shown)

Figure 1

Pneumatic Division
Richland, Michigan 49083
269-629-5000

PDNSG-1
Pneumatic Division Safety Guide
ISSUED: August 1 , 2006
Supersedes: June 1, 2006

Safety Guide For Selecting And Using Pneumatic Division Products And Related Accessories

⚠ WARNING:

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF PNEUMATIC DIVISION PRODUCTS, ASSEMBLIES OR RELATED ITEMS ("PRODUCTS") CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE. POSSIBLE CONSEQUENCES OF FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS INCLUDE BUT ARE NOT LIMITED TO:

- Unintended or mistimed cycling or motion of machine members or failure to cycle
- Work pieces or component parts being thrown off at high speeds.
- Failure of a device to function properly for example, failure to clamp or unclamp an associated item or device.
- Explosion
- Suddenly moving or falling objects.
- Release of toxic or otherwise injurious liquids or gasses.

Before selecting or using any of these Products, it is important that you read and follow the instructions below.

1. GENERAL INSTRUCTIONS

1.1. Scope: This safety guide is designed to cover general guidelines on the installation, use, and maintenance of Pneumatic Division Valves, FRLs (Filters, Pressure Regulators, and Lubricators), Vacuum products and related accessory components.

1.2. Fail-Safe: Valves, FRLs, Vacuum products and their related components can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of associated valves, FRLs or Vacuum products will not endanger persons or property.

1.3 Relevant International Standards: For a good guide to the application of a broad spectrum of pneumatic fluid power devices see: ISO 4414:1998, Pneumatic Fluid Power – General Rules Relating to Systems. See www.iso.org for ordering information.

1.4. Distribution: Provide a copy of this safety guide to each person that is responsible for selection, installation, or use of Valves, FRLs or Vacuum products. Do not select, or use Parker valves, FRLs or vacuum products without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.5. User Responsibility: Due to the wide variety of operating conditions and applications for valves, FRLs, and vacuum products Parker and its distributors do not represent or warrant that any particular valve, FRL or vacuum product is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the appropriate valve, FRL, Vacuum component, or accessory.
- Assuring that all user's performance, endurance, maintenance, safety, and warning requirements are met and that the application presents no health or safety hazards.
- Complying with all existing warning labels and / or providing all appropriate health and safety warnings on the equipment on which the valves, FRLs or Vacuum products are used; and,
- Assuring compliance with all applicable government and industry standards.

1.6. Safety Devices: Safety devices should not be removed, or defeated.

1.7. Warning Labels: Warning labels should not be removed, painted over or otherwise obscured.

1.8. Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2. PRODUCT SELECTION INSTRUCTIONS

2.1. Flow Rate: The flow rate requirements of a system are frequently the primary consideration when designing any pneumatic system. System components need to be able to provide adequate flow and pressure for the desired application.

2.2. Pressure Rating: Never exceed the rated pressure of a product. Consult product labeling, Pneumatic Division catalogs or the instruction sheets supplied for maximum pressure ratings.

2.3. Temperature Rating: Never exceed the temperature rating of a product. Excessive heat can shorten the life expectancy of a product and result in complete product failure.

2.4. Environment: Many environmental conditions can affect the integrity and suitability of a product for a given application. Pneumatic Division products are designed for use in general purpose industrial applications. If these products are to be used in unusual circumstances such as direct sunlight and/or corrosive or caustic environments, such use can shorten the useful life and lead to premature failure of a product.

2.5. Lubrication and Compressor Carryover: Some modern synthetic oils can and will attack nitrile seals. If there is any possibility of synthetic oils or greases migrating into the pneumatic components check for compatibility with the seal materials used. Consult the factory or product literature for materials of construction.

2.6. Polycarbonate Bowls and Sight Glasses: To avoid potential polycarbonate bowl failures:

- Do not locate polycarbonate bowls or sight glasses in areas where they could be subject to direct sunlight, impact blow, or temperatures outside of the rated range.
- Do not expose or clean polycarbonate bowls with detergents, chlorinated hydro-carbons, keytones, esters or certain alcohols.
- Do not use polycarbonate bowls or sight glasses in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.

2.7. Chemical Compatibility: For more information on plastic component chemical compatibility see Pneumatic Division technical bulletins Tec-3, Tec-4, and Tec-5

2.8. Product Rupture: Product rupture can cause death, serious personal injury, and property damage.
- Do not connect pressure regulators or other Pneumatic Division products to bottled gas cylinders.
- Do not exceed the maximum primary pressure rating of any pressure regulator or any system component.
- Consult product labeling or product literature for pressure rating limitations.

3. PRODUCT ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1. Component Inspection: Prior to assembly or installation a careful examination of the valves, FRLs or vacuum products must be performed. All components must be checked for correct style, size, and catalog number. DO NOT use any component that displays any signs of nonconformance.

3.2. Installation Instructions: Parker published Installation Instructions must be followed for installation of Parker valves, FRLs and vacuum components. These instructions are provided with every Parker valve or FRL sold, or by calling 1-800-CPARKER, or at www.parker.com.

3.3. Air Supply: The air supply or control medium supplied to Valves, FRLs and Vacuum components must be moisture-free if ambient temperature can drop below freezing

4. VALVE AND FRL MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1. Maintenance: Even with proper selection and installation, valve, FRL and vacuum products service life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a component failure, and experience with any known failures in the application or in similar applications should determine the frequency of inspections and the servicing or replacement of Pneumatic Division products so that products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.10.

4.2. Installation and Service Instructions: Before attempting to service or replace any worn or damaged parts consult the appropriate Service Bulletin for the valve or FRL in question for the appropriate practices to service the unit in question. These Service and Installation Instructions are provided with every Parker valve and FRL sold, or are available by calling 1-800-CPARKER, or by accessing the Parker web site at www.parker.com.

4.3. Lockout / Tagout Procedures: Be sure to follow all required lockout and tagout procedures when servicing equipment. For more information see: OSHA Standard – 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy – (Lockout / Tagout)

4.4. Visual Inspection: Any of the following conditions requires immediate system shut down and replacement of worn or damaged components:
- Air leakage: Look and listen to see if there are any signs of visual damage to any of the components in the system. Leakage is an indication of worn or damaged components.
- Damaged or degraded components: Look to see if there are any visible signs of wear or component degradation.
- Kinked, crushed, or damaged hoses. Kinked hoses can result in restricted air flow and lead to unpredictable system behavior.
- Any observed improper system or component function: Immediately shut down the system and correct malfunction.
- Excessive dirt build-up: Dirt and clutter can mask potentially hazardous situations.

Caution: Leak detection solutions should be rinsed off after use.

4.5. Routine Maintenance Issues:
- Remove excessive dirt, grime and clutter from work areas.
- Make sure all required guards and shields are in place.

4.6. Functional Test: Before initiating automatic operation, operate the system manually to make sure all required functions operate properly and safely.

4.7. Service or Replacement Intervals: It is the user's responsibility to establish appropriate service intervals. Valves, FRLs and vacuum products contain components that age, harden, wear, and otherwise deteriorate over time. Environmental conditions can significantly accelerate this process. Valves, FRLs and vacuum components need to be serviced or replaced on routine intervals. Service intervals need to be established based on:
- Previous performance experiences.
- Government and / or industrial standards.
- When failures could result in unacceptable down time, equipment damage or personal injury risk.

4.8. Servicing or Replacing of any Worn or Damaged Parts: To avoid unpredictable system behavior that can cause death, personal injury and property damage:
- Follow all government, state and local safety and servicing practices prior to service including but not limited to all OSHA Lockout Tagout procedures (OSHA Standard – 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy – Lockout / Tagout).
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to system and Pneumatic Division products before installation, service, or conversion.
- Installation, servicing, and / or conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversions air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or if the product does not operate properly, do not put product or system into use.
- Warnings and specifications on the product should not be covered or painted over. If masking is not possible, contact your local representative for replacement labels.

4.9. Putting Serviced System Back into Operation: Follow the guidelines above and all relevant Installation and Maintenance Instructions supplied with the valve FRL or vacuum component to insure proper function of the system.