



Section: A Mobile Fuel Filtration

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

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025 Series

025 Series

In-Line Fuel Prefilters

025 Series In-Line Fuel Prefilters are the first stage in keeping your fuel clean. Dirt and grime in fuel can spell disaster. A secondary or final Racor filter should be installed after this filter for superior protection.

Installing a prefilter in your fuel system will increase overall filter life, saving you money.

Typical Mobile Applications:

- ATV (4-wheeler)
- Small Gensets
- Small Tractors
- Any Small Engine



Product Features:

025-RAC-01 and 025-MBL-02B

- 1/4" -18 NPTF Ports
- 15 GPH (57 LPH) with Diesel 25 GPH (95 LPH) with Gasoline
- Easy Spin-On Servicing
- Proprietary Aquabloc®II filter
- Easy Installation
- Saves Money

025-RAC-10A, 025-RAC-11, 025-RAC-12, and 025-RAC-13

- Easy One-Piece Installation
- Use with Gasoline and Blended Fuels
- Rugged and Reliable
- Saves Money
- Clear Plastic Design



Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

025 Series

025 Series Overview



| Specifications | 025-RAC-01 | 025-MBL-02B | 025-RAC-10A |
|---|------------------------------------|------------------------------------|-------------------------------------|
| Maximum Flow Rate: (with gasoline) (with diesel) | 25 GPH (95 LPH) 15 GPH (57 LPH) | 25 GPH (95 LPH) 15 GPH (57 LPH) | 60 GPH (227 LPH) 25 GPH (95 LPH) |
| Inlet/Outlet Port Size | 1/4''-18 NPTF | 1/4''-18 NPTF | 1/2'' NPTF |
| Replacement Filter | S2501 | S2502 | N/A |
| Micron Rating (nominal) | 250 | 10 | 104 |
| Minimum Service Clearance | 3.0 in. (7.6 cm) | 3.0 in. (7.6 cm) | 1.0 in. (2.5 cm) |
| Height | 4.3 in. (10.9 cm) | 4.3 in. (10.9 cm) | 4.2 in. (10.7 cm) |
| Width | 2.3 in. (5.8 cm) | 2.3 in. (5.8 cm) | 1.9 in. (4.8 cm) |
| Depth | 2.1 in. (5.3 cm) | 2.1 in. (5.3 cm) | 1.9 in. (4.8 cm) |
| Weight (dry) | 0.3 lb (0.14 kg) | 0.3 lb (0.14 kg) | 0.6 lb (0.27 kg) |
| Maximum Working Pressure¹ | 100 PSI (6.9 bar) | 100 PSI (6.9 bar) | 50 PSI (3.4 bar) |
| Clean Pressure Drop | 0.35 PSI (0.02 bar) | 0.35 PSI (0.02 bar) | 0.6 PSI (0.04 bar) |
| Water Removal Efficiency | 12% | 99% | N/A |
| Case Quantity | 6 | 12 | 6 |
| Ambient Fuel Temperature | -10° to 180°F (-23° to 82°C) | | |
| Maximum Fuel Temperature | 160°F (71°C) | | |

Special Notes: ¹ Pressure installations acceptable up to maximum PSI shown (vacuum installations recommended).

025 Series

025 Series Overview



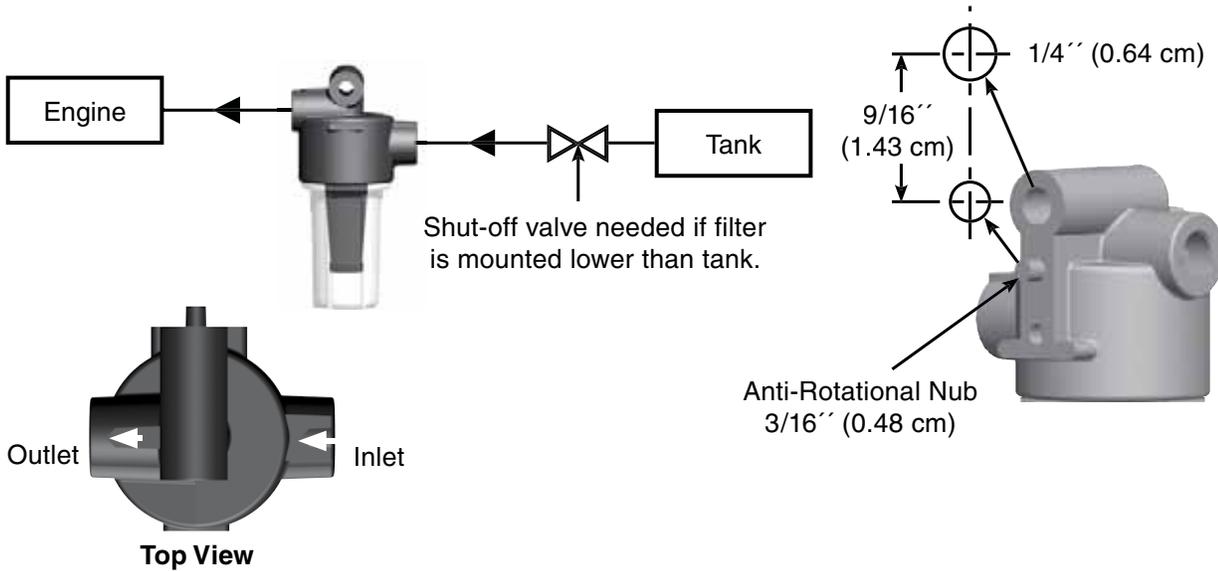
| Specifications | 025-RAC-11 | 025-RAC-12 | 025-RAC-13 |
|---------------------------------------|------------------------------|------------------|------------------|
| Maximum Flow Rate (with gasoline) | 12 GPH (45 LPH) | 12 GPH (45 LPH) | 12 GPH (45 LPH) |
| Inlet/Outlet Port Size | 1/4" Hose Bead | 5/16" Hose Bead | 3/8" Hose Bead |
| Replacement Element | N/A | N/A | N/A |
| Micron Rating (nominal) | 12 | 12 | 12 |
| Minimum Service Clearance | 1.0 in. (2.5 cm) | 1.0 in. (2.5 cm) | 1.0 in. (2.5 cm) |
| Height | 3.5 in. (8.9 cm) | 3.5 in. (8.9 cm) | 3.5 in. (8.9 cm) |
| Diameter | 2.1 in. (5.3 cm) | 2.1 in. (5.3 cm) | 2.1 in. (5.3 cm) |
| Weight (dry) | 0.1 lb (0.05 kg) | 0.1 lb (0.05 kg) | 0.1 lb (0.05 kg) |
| Maximum Working Pressure ¹ | 10 PSI (0.7 bar) | 10 PSI (0.7 bar) | 10 PSI (0.7 bar) |
| Water Removal Efficiency | N/A | N/A | N/A |
| Case Quantity | 1 | 1 | 1 |
| Ambient Fuel Temperature | -10° to 180°F (-23° to 82°C) | | |
| Maximum Fuel Temperature | 160°F (71°C) | | |

Special Notes: ¹ Pressure installations acceptable up to maximum PSI shown (vacuum installations recommended).

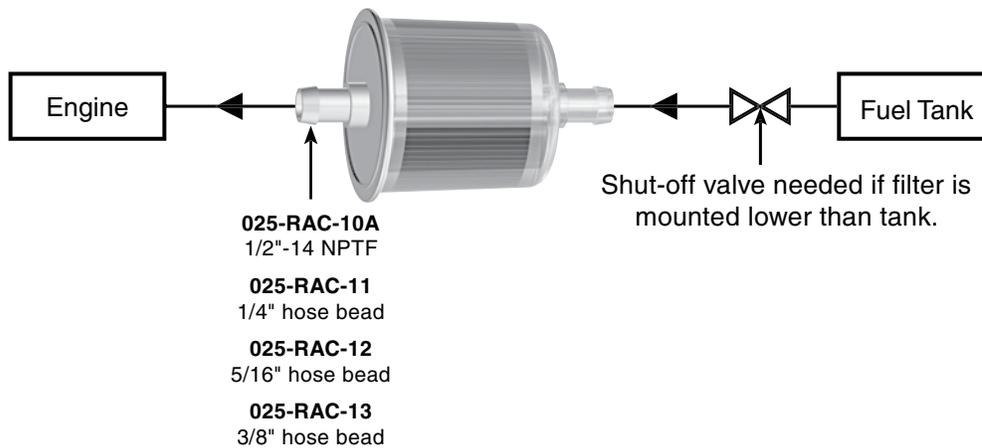
025 Series

Mounting Instructions

025-RAC-01 and 025-MBL-02B



025-RAC-10A, 025-RAC-11, 025-RAC-12 and 025-RAC-13

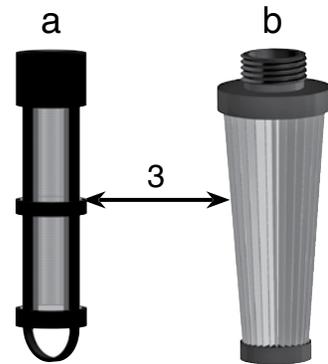


025 Series

Replacement Parts

025-RAC-01 and 025-MBL-02B

| | Part Number | Description |
|----|----------------------|--|
| 1. | N/A | Mounting Head Kit (1/4"-18 NPTF Ports) |
| 2. | N/A | Bowl O-ring |
| 3. | a: S2501 b: S2502 | 250 micron (for 025-RAC-01) Includes #2 10 micron (for 025-MBL-02B) Includes #2 |
| 4. | RK 31391 | Clear Bowl Kit (includes #2) |



025-RAC-10A, 025-RAC-11, 025-RAC-12, and 025-RAC-13

No replacement parts available. Order complete assembly for replacement.

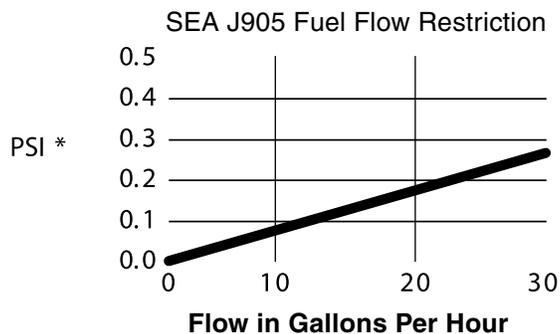
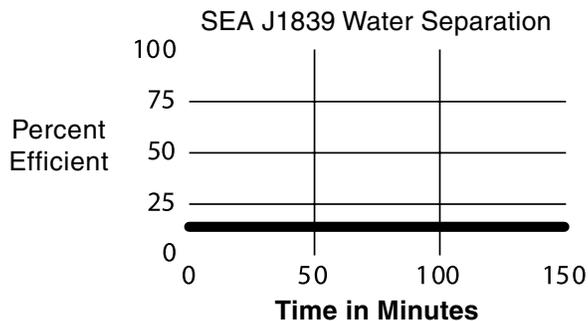


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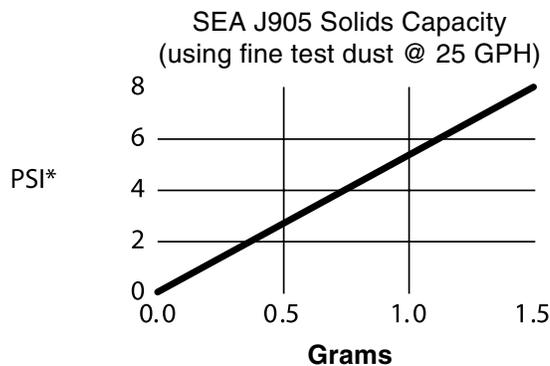
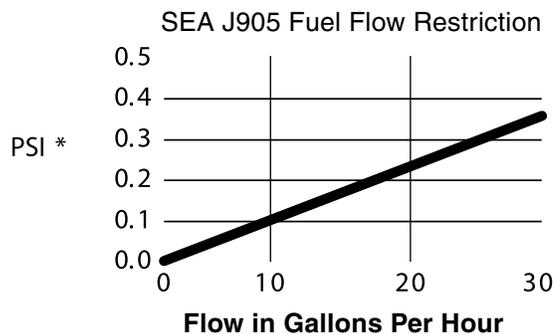
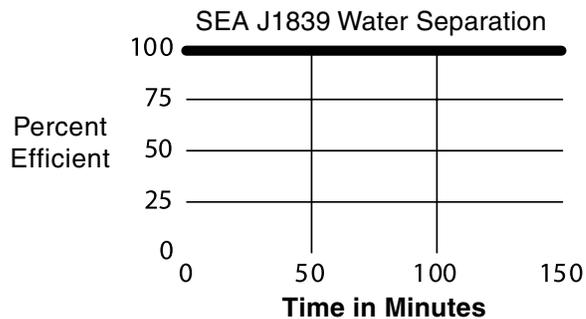
025 Series

Test Data (not available for all assemblies)

025-RAC-01 only



025-MBL-02B



(PSI X 2.036 = inHg) (PSI X 6.895 = kPa)

Test results are from controlled laboratory testing. Field results may vary.

025 Series

025-RAC-01

Fuel Filter/Water Separator



The 025-RAC In-line Gasoline Filter Series keeps your fuel clean and dry, because having grime and water in your fuel spells disaster. More than ever, today's high performance gasoline engines require clean, dry fuel. Standard fuel filters simply succumb from normal usage, and don't offer the improved features, durability and peace-of-mind that comes with Racor fuel filters. Experienced sailors trust their engines, their livelihood, and even their lives to Racor's high quality marine products. Shouldn't you?

| Specifications | |
|---|---|
| Maximum Flow Rate: (with gasoline) | 25 GPH (95 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | S2501 (straining element) |
| Micron Rating (nominal) | 250 |
| Minimum Service Clearance (below filter) | 3.0 in. (7.6 cm) |
| Height | 4.3 in. (10.9 cm) |
| Depth | 2.1 in. (5.3 cm) |
| Width | 2.3 in. (5.8 cm) |
| Weight (dry) | 0.3 lbs (0.14 kg) |
| Maximum Working Pressure ¹ | 100 PSI (6.9 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.35 PSI (0.02 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.



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025 Series

025-RAC-02

Fuel Filter/Water Separator



The 025-RAC In-line Gasoline Filter Series keeps your fuel clean and dry, because having grime and water in your fuel spells disaster. More than ever, today's high performance gasoline engines require clean, dry fuel. Standard fuel filters simply succumb from normal usage, and don't offer the improved features, durability and peace-of-mind that comes with Racor fuel filters. Experienced sailors trust their engines, their livelihood, and even their lives to Racor's high quality marine products. Shouldn't you?



Specifications

| | |
|---|---|
| Maximum Flow Rate: (with gasoline) (with diesel) | 25 GPH (95 LPH) 15 GPH (57 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | S2502 |
| Micron Rating (nominal) | 10 |
| Minimum Service Clearance (below filter) | 3.0 in. (7.6 cm) |
| Height | 4.3 in. (10.9 cm) |
| Depth | 2.1 in. (5.3 cm) |
| Width | 2.3 in. (5.8 cm) |
| Weight (dry) | 0.3 lbs (0.14 kg) |
| Maximum Working Pressure¹ | 100 PSI (6.9 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.35 PSI (0.02 bar) |
| Case Quantity | 12 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.



025 Series

025-MBL-02B

Fuel Filter/Water Separator



Water and contaminants in fuel have been a problem for decades. More than ever, today's high-performance engines require clean, dry fuel. Standard fuel filters simply don't offer the improved features and peace-of-mind that come with Racor fuel filter/water separators.

These compact heavy-duty filters install quickly and remove solid contaminants and water from gasoline or diesel fuel. Typical applications include: small gensets, snow machines, lawn mowers, pressure washers, and small diesel engines up to 80 HP (gasoline up to 250 HP).



| Specifications | |
|---|---|
| Maximum Flow Rate: (with gasoline) (with diesel) | 25 GPH (95 LPH) 15 GPH (57 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | S2502 |
| Micron Rating (nominal) | 10 |
| Minimum Service Clearance (below filter) | 3.0 in. (7.6 cm) |
| Height | 4.3 in. (10.9 cm) |
| Depth | 2.1 in. (5.3 cm) |
| Width | 2.3 in. (5.8 cm) |
| Weight (dry) | 0.3 lbs (0.14 kg) |
| Maximum Working Pressure¹ | 100 PSI (6.9 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.35 PSI (0.02 bar) |
| Case Quantity | 12 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

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025 Series

025-RAC-05

Fuel Filter/Water Separator



The 025-RAC In-line Gasoline Filter Series keeps your fuel clean and dry, because having grime and water in your fuel spells disaster. More than ever, today's high performance gasoline engines require clean, dry fuel. Standard fuel filters simply succumb from normal usage, and don't offer the improved features, durability and peace-of-mind that comes with Racor fuel filters. Experienced sailors trust their engines, their livelihood, and even their lives to Racor's high quality marine products. Shouldn't you?



| Specifications | |
|---|---|
| Maximum Flow Rate: (with gasoline) (with diesel) | 25 GPH (95 LPH) 15 GPH (57 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | S2502 |
| Micron Rating (nominal) | 10 |
| Minimum Service Clearance (below filter) | 3.0 in. (7.6 cm) |
| Height | 4.3 in. (10.9 cm) |
| Depth | 2.1 in. (5.3 cm) |
| Width | 2.3 in. (5.8 cm) |
| Weight (dry) | 0.3 lbs (0.14 kg) |
| Maximum Working Pressure¹ | 100 PSI (6.9 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.35 PSI (0.02 bar) |
| Case Quantity | 12 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

025 Series

025-RAC-09

Fuel Filter/Water Separator



The 025-RAC In-line Gasoline Filter Series keeps your fuel clean and dry, because having grime and water in your fuel spells disaster. More than ever, today's high performance gasoline engines require clean, dry fuel. Standard fuel filters simply succumb from normal usage, and don't offer the improved features, durability and peace-of-mind that comes with Racor fuel filters. Experienced sailors trust their engines, their livelihood, and even their lives to Racor's high quality marine products. Shouldn't you?

| Specifications | |
|---|---|
| Maximum Flow Rate: (with gasoline) (with diesel) | 25 GPH (95 LPH) 15 GPH (57 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | S2502 |
| Micron Rating (nominal) | 10 |
| Minimum Service Clearance (below filter) | 3.0 in. (7.6 cm) |
| Height | 4.3 in. (10.9 cm) |
| Depth | 2.1 in. (5.3 cm) |
| Width | 2.3 in. (5.8 cm) |
| Weight (dry) | 0.3 lbs (0.14 kg) |
| Maximum Working Pressure¹ | 100 PSI (6.9 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.35 PSI (0.02 bar) |
| Case Quantity | 12 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Questions? Contact Technical Support:
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e-mail: racortech@parker.com

025 Series

Installation Instructions

The following customer supplied materials should be on hand before beginning:

- Two 1/4"-18 NPT fittings.
- 1/4" hose (or larger) and hose clamps.
- Thread sealant (no thread tapes).
- 1/4" bolt (or lag bolt).

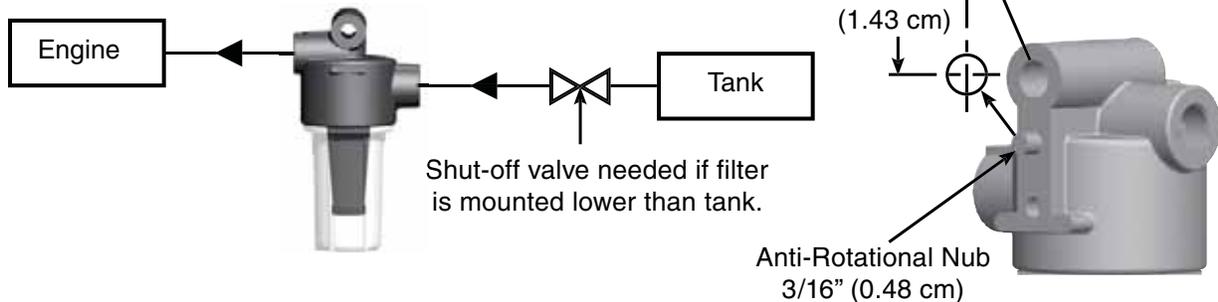
The 025 series filters are designed to be installed on suction (vacuum)

side applications; (pressure side installations are acceptable up to 100 PSI (6.9 bar)). Do not smoke or allow open flames around fuel or filters.

1. Make sure engine is off and cool to touch.
2. Apply thread sealant to 1/4" NPT fittings (do not use thread tapes as particles may break off and contribute to clogging filter).
3. Thread fittings into fuel ports and tighten snugly.

4. Mount filter vertically in a protected area and away from heat sources. Maintain at least 3 inches of clearance below filter for servicing. Follow mounting instructions below and use a 1/4" bolt to secure filter to engine.
5. Attach fuel lines to filter.
6. Start engine and check for leaks. Correct as necessary with engine off.

Mounting Instructions



Service Instructions

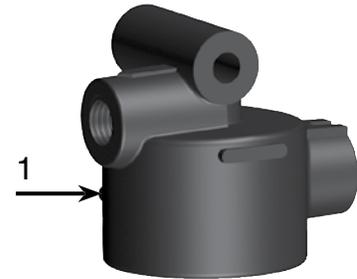
1. When water is visible in clear bowl or engine performance is reduced, service is required.
2. Make sure engine is off and cool to touch.
3. Spin clear bowl off of mounting head by turning in a counter-clockwise motion.
4. Replace used filter with new filter (part number S2502).
5. Lubricate bowl o-ring with clean motor oil.
6. Thread bowl onto mounting head and tighten hand tight only - do not use tools.
7. Start engine and check for leaks. Correct as necessary with engine off.

025 Series

Replacement Parts

025-MBL-02B, 025-RAC-01 and 025-RAC-02

| Part Number | Description |
|--------------------------|---|
| 1. RK 31390-05-03 | Mounting Head Kit (1/4"-18 NPT Ports) (includes #4) |
| 2. N/A | Bowl O-ring is included with every new element |



Replacement Elements (includes #4)

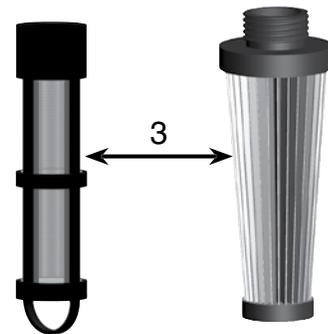
| | |
|--------------------|---------------------------------|
| 3. S2501 | 250 micron (for 025-RAC-01) |
| S2502 | 10 micron (for 025-RAC-02) |
| 4. RK 31391 | Clear Bowl Kit (includes #4) |



Note:

025-RAC-05, 025-RAC-09, 025-RAC-10A
025-RAC-11, 025-RAC-12, and 025-RAC-13

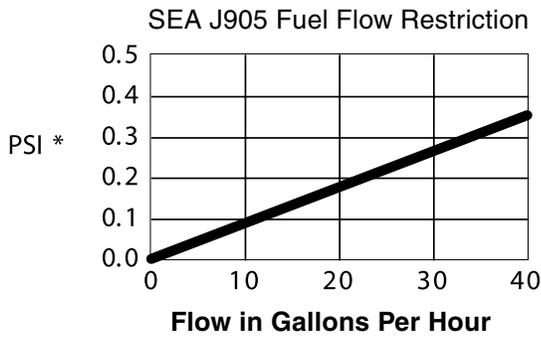
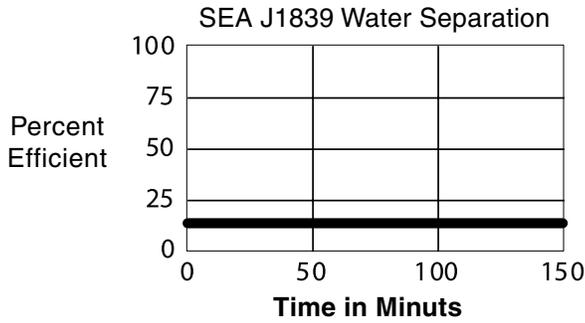
No replacement parts available. Order complete assembly for replacement.



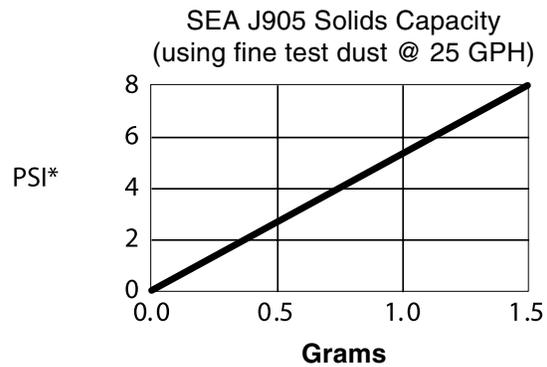
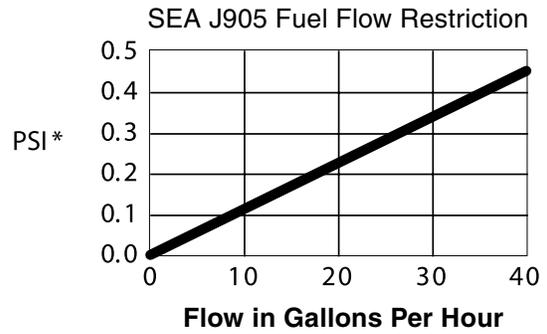
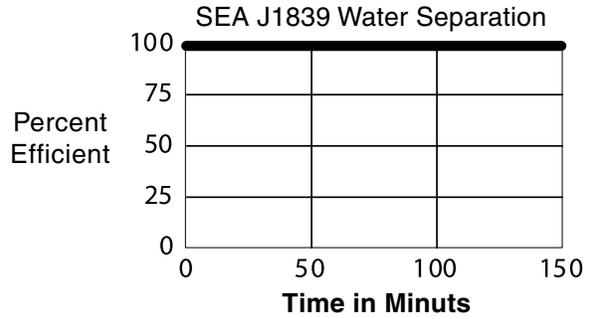
025 Series

Test Data (not available for all assemblies)

025-RAC-01 only



**025-MBL-02B
025-RAC-02**



(PSI X 2.036 = inHg) (PSI X 6.895 = kPa)

Test results are from controlled laboratory testing. Field results may vary.

025 Series

025 Series Overview



| Specifications | 025-RAC-01 | 025-RAC-02 | 025-RAC-05 | 025-RAC-09 |
|-------------------------------------|--|---|--|----------------------|
| Maximum Flow Rate | 25 GPH (95 LPH) | 25 GPH (95 LPH) | 25 GPH (95 LPH) | 35 GPH (132 LPH) |
| Application | Outboard | Outboard | Inboard | Inboard |
| Port Size | 1/4"-18 NPT | 1/4"-18 NPT | 5/16" Hose Bead | 3/8" NPT |
| Housing Material | ¹ Anodized diecast aluminum head with clear, reusable plastic bowl. | ¹ Anodized diecast aluminum head with clear, reusable plastic bowl. Separates water. | All steel with black "E" coating for corrosion resistance. | All stainless steel. |
| Replacement Element | S2501 (straining element) | S2502 (Aquabloc®II element) | N/A | N/A |
| Micron Rating | 250 | 10 | 10 | 116 |
| Min. Service Clearance | 3.0 in. (7.6 cm) | 3.0 in. (7.6 cm) | 1.0 in. (2.5 cm) | 1.0 in. (2.5 cm) |
| Height | 4.3 in. (10.9 cm) | 4.3 in. (10.9 cm) | 4.8 in. (12.1 cm) | 4.5 in. (11.4) |
| Diameter | 2.1 in. (5.3 cm) | 2.1 in. (5.3 cm) | 2.3 in. (5.7 cm) | 2.2 in. (5.6 cm) |
| Weight (dry) | 0.3 lb (0.14 kg) | 0.3 lb (0.14 kg) | 0.3 lb (0.14 kg) | 0.3 lb (0.14 kg) |
| Max. Working Pressure ² | 100 PSI (690 kPa) | 100 PSI (690 kPa) | 30 PSI (207 kPa) | 30 PSI (207 kPa) |
| H ₂ O Removal Efficiency | N/A | 99% | N/A | N/A |
| Case Quantity | 6 | 6 | 12 | 6 |
| Ambient Fuel Temperature | -10° to +180°F (-23° to +82°C) | | | |

Special Notes: ¹Anodizing is a chemical process that provides corrosion resistance.

²Pressure installations acceptable up to maximum amount shown - vacuum installations recommended.

025 Series

025 Series Overview



| Specifications | 025-RAC-10A | 025-RAC-11 | 025-RAC-12 | 025-RAC-13 |
|-------------------------------------|--------------------------------|--------------------|--------------------|--------------------|
| Maximum Flow Rate | 35 GPH (132 LPH) | 12 GPH (45 LPH) | 12 GPH (45 LPH) | 12 GPH (45 LPH) |
| Application | Inboard | Outboard | Outboard | Outboard |
| Port Size | ½" NPT | ¼" Hose Bead | 5/16" Hose Bead | 3/8" Hose Bead |
| Housing Material | All steel, painted black. | Plastic | Plastic | Plastic |
| Replacement Element | N/A | N/A | N/A | N/A |
| Micron Rating | 104 | 12 | 12 | 12 |
| Min. Service Clearance | 1.0 in. (2.5 cm) | 1.0 in. (2.5 cm) | 1.0 in. (2.5 cm) | 1.0 in. (2.5 cm) |
| Height | 4.2 in. (10.7 cm) | 3.5 in. (8.9 cm) | 3.5 in. (8.9 cm) | 3.5 in. (8.9 cm) |
| Diameter | 1.9 in. (4.8 cm) | 2.1 in. (5.3 cm) | 2.1 in. (5.3 cm) | 2.1 in. (5.3 cm) |
| Weight (dry) | 0.6 lb (0.27 kg) | 0.1 lb (0.05 kg) | 0.1 lb (0.05 kg) | 0.1 lb (0.05 kg) |
| Max. Working Pressure ¹ | 100 PSI (690 kPa) | 10 PSI (69 kPa) | 10 PSI (69 kPa) | 10 lb (69 kPa) |
| H ₂ O Removal Efficiency | N/A | N/A | N/A | N/A |
| Case Quantity | 6 | 1 | 1 | 1 |
| Ambient Fuel Temperature | -10° to +180°F (-23° to +82°C) | | | |

Special Notes: ²Pressure installations acceptable up to maximum amount shown - vacuum installations recommended.

PS120 Series Strainer/Prefilters

PS 120

Strainer/Prefilter

From personal watercraft to agricultural equipment, the PS120 Series high-flow diesel or gasoline strainer/prefilter is designed to protect fuel pumps, carburetors, injectors and related fuel system components. These innovative strainer/prefilters feature a heavy-duty die-cast aluminum mounting head, 4 port mounting versatility, a 200-260 micron cleanable nylon mesh screen, and a reusable clear water and sediment collection bowl.

The PS120 Series is ideal for equipment in environments with severe contamination and must be installed prior to, and in conjunction with, a Racor fuel filter/water separator. Strainers remove large droplets of free water and contaminants down to 200 micron. When used prior to engine fuel filter/water separator, extended filter life is realized.



Product Features

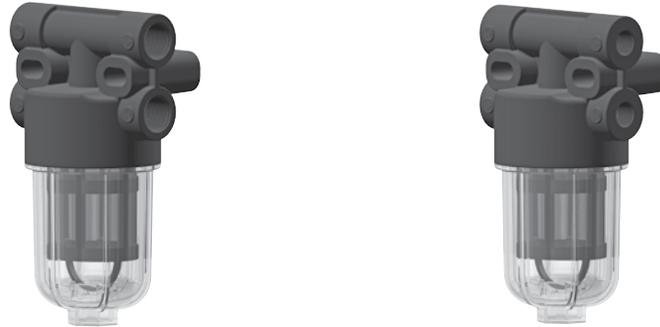
- 4-port aluminum mounting head with 3/8" or 1/2" NPTF threads
- Rugged construction
- Reusable collection bowl
- Easy to service and install
- 200-260 micron cleanable mesh screen filter
- Use on any gasoline or diesel application.
- Removes large droplets of water and sediment
- Saves time and money
- Extends filter life
- Use in land and marine applications



Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

PS120 Series Strainer/Prefilters

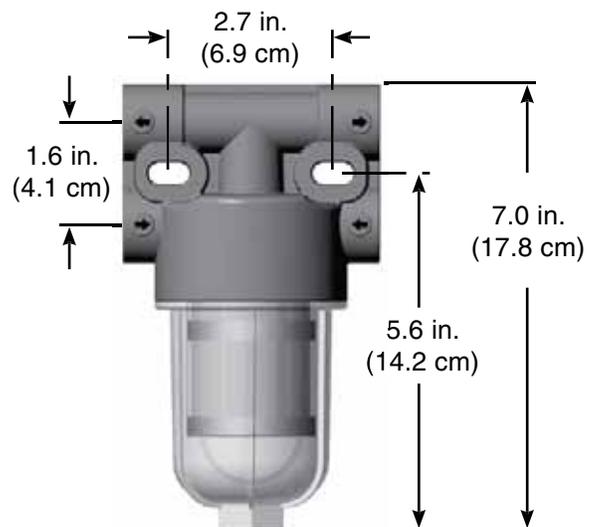
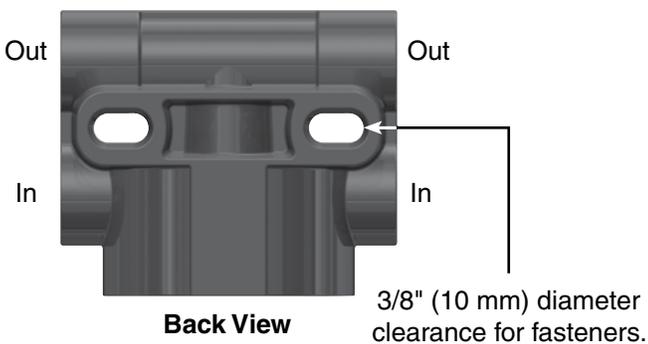
PS120 Series Strainer/Prefilters Overview



| Specifications | PS120-01 | PS120-02 |
|---------------------------------------|---|---|
| Maximum Flow Rate | 120 GPH (454 LPH) | 120 GPH (454 LPH) |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. | Die-cast aluminum head with clear, reusable plastic bowl. |
| Micron Rating | 200-260 | 200-260 |
| Height | 7.0 in. (17.8 cm) | 7.0 in. (17.8 cm) |
| Width | 4.0 in. (10.2 cm) | 4.0 in. (10.2 cm) |
| Maximum Working Pressure ¹ | 30 PSI (2.1 bar) | 30 PSI (2.1 bar) |
| Clean Pressure Drop | 0.9 PSI (0.1 bar) | 0.9 PSI (0.1 bar) |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) | -40° to +250°F (-40° to +121°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Mounting Information



PS120 Series Strainer/Prefilters

Service Instructions

Mesh screen cleaning/replacement frequency is determined by contamination level in fuels. Fuel flow to engine becomes restricted as screen gradually plugs with contaminants, resulting in noticeable power loss and/or hard starting. As a guideline, clean screen every 500 hours, 10,000 miles, every other oil change, annually, or at first indication of power loss, whichever occurs first. Replace if mesh screen is damaged. Always carry extra replacement screens and fuel filters as one tankful of excessively dirty fuel can quickly plug a prefilter and a fuel filter/water separator filter.

1. **Make sure engine is off and cool to touch.**
2. **Close all fuel valves, if applicable, to make sure excess fuel does not spill during servicing.**
3. **With a collection pan in place, slowly remove clear bowl and mesh screen.**
4. **Clean screen with solvent and soft brush (or replace with new).**
5. **Lube bowl o-ring with motor oil or clean fuel.**
6. **Re-install mesh screen and clear bowl and tighten by hand only—do not use tools.**

7. **Open all fuel valves, if applicable.**
8. **Prime fuel system as instructed in engine manufacturers owner's manual.**
9. **Start engine and check for leaks.**

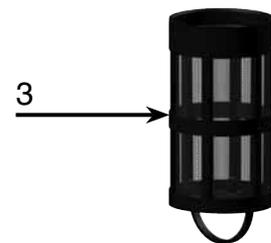
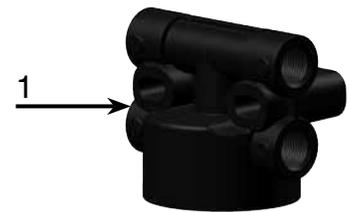
Note: Correct as necessary with engine off.

Replacement Parts

| Part Number | Description |
|-------------|--|
| 1. N/A | Mounting Head |
| 2. N/A | O-ring (not available separately) |
| 3. RK 51216 | Mesh Screen Filter Kit (200-260 micron) (includes # 2) |
| 4. RK 51217 | Clear Bowl Kit (includes # 2) |

Additional Parts (not shown)

| | |
|--------|--|
| 918-N8 | PS120-01: 1/2" NPT Metal Plug Kit (one per kit) |
| 22231 | PS120-02: 3/8" NPT Metal Port Plug Kit (two per kit) |
| 14387 | Installation Instructions |



PS120 Series Strainer/Prefilters

Installation Instructions

Exercise great caution when installing a PS120 Series strainer/prefilter to avoid a fire hazard. Do not smoke, allow open flame or excessive heat which could ignite a fire. Perform installation in a well ventilated area.

Refer to Mounting Information and Installation Diagram and install as follows:

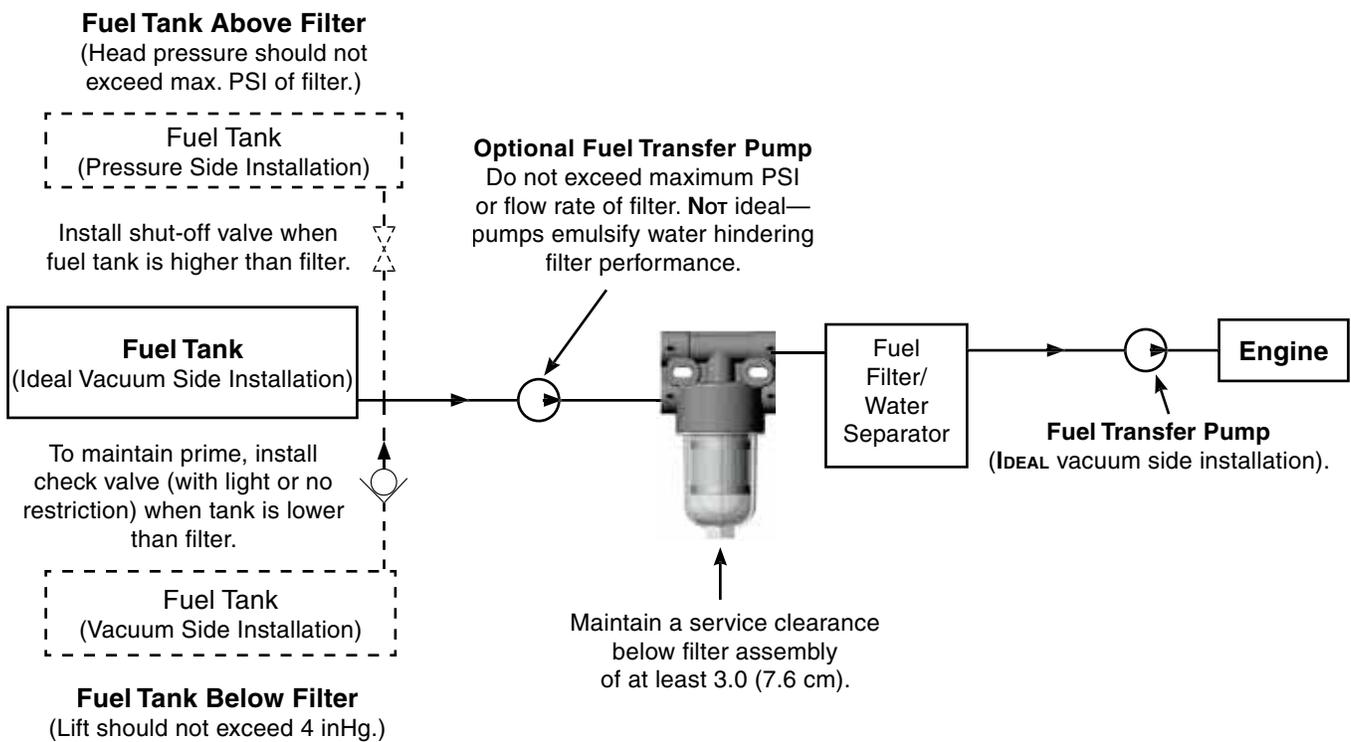
1. **Make sure engine is off and cool to touch.**
2. **Apply thread sealant to 3/8" NPTF fittings (do not use thread tapes as particles may break off and contribute to clogging filter).**
3. **Thread fittings into appropriate fuel ports and tighten snugly. Plug unused ports with port plugs and tighten snugly.**
4. **Mount strainer/prefilter vertically prior to fuel filter/water separator and in protected area away from heat sources. Maintain at least 3 in. (7.6 cm) of clearance below filter for servicing.**
5. **Attach fuel lines.**

Note: Avoid tight bends and rubbing areas when routing hose.

6. **Prime fuel system as instructed in engine manufacturers owner's manual.**

7. **Start engine and check for leaks. Correct as necessary with engine off.**

Installation Diagram



045-RAC-351

045-RAC-351

Fuel Filter/Water Separator

The 045-RAC-351 fuel filter/water separator is assembled with our legendary Aquabloc®II media, a plated steel housing, a vent plug, and a lateral drain.

This filter is designed to be installed on the suction (or vacuum) side of the fuel system and is extremely effective in removing better than 93% of free water normally found in fuel due to condensation. It also removes 95% of particulate matter down to 10 micron (nominal).



Product Features

- 5/16" Hose Bead
- 45 GPH (170 LPH) with Diesel 35 GPH (132 LPH) with Gasoline
- Proprietary Aquabloc®II filter
- Easy Installation
- Mounting Bracket Included
- Drain Water Easily
- Rugged and Reliable
- Saves Money

Typical Mobile Applications:

- Small Gensets
- Small Tractors
- Any Small Engine (up to 220 HP)



Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

045-RAC-351

045-RAC-351 Overview

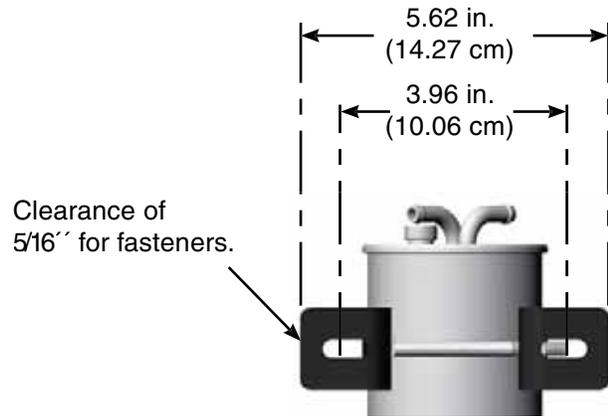
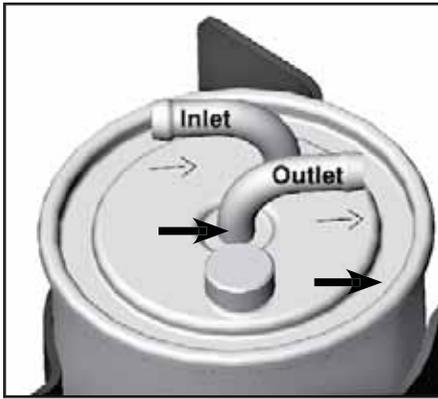


| Specifications | 045-RAC-351 |
|--|--|
| Maximum Flow Rate: (with gasoline) (with diesel) | 35 GPH (132 LPH) 45 GPH (170 LPH) |
| Inlet/Outlet Port Size | 5/16" Hose Bead |
| Housing Material | Steel |
| Replacement Element | R32281 |
| Micron Rating (<i>nominal</i>) | 10 |
| Minimum Service Clearance (above filter) | 5.0 in. (12.7 cm) |
| Height | 6.2 in. (15.7 cm) |
| Depth | 4.9 in. (12.4 cm) |
| Width | 5.6 in. (14.2 cm) |
| Weight (dry) | 1.5 lb (0.68 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 93% |
| Clean Pressure Drop | 4 inHg (0.14 bar) |
| Contaminant Capacity | 6.3 oz (0.19 L) |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) Max Fuel Temp: 190°F (88°C) |

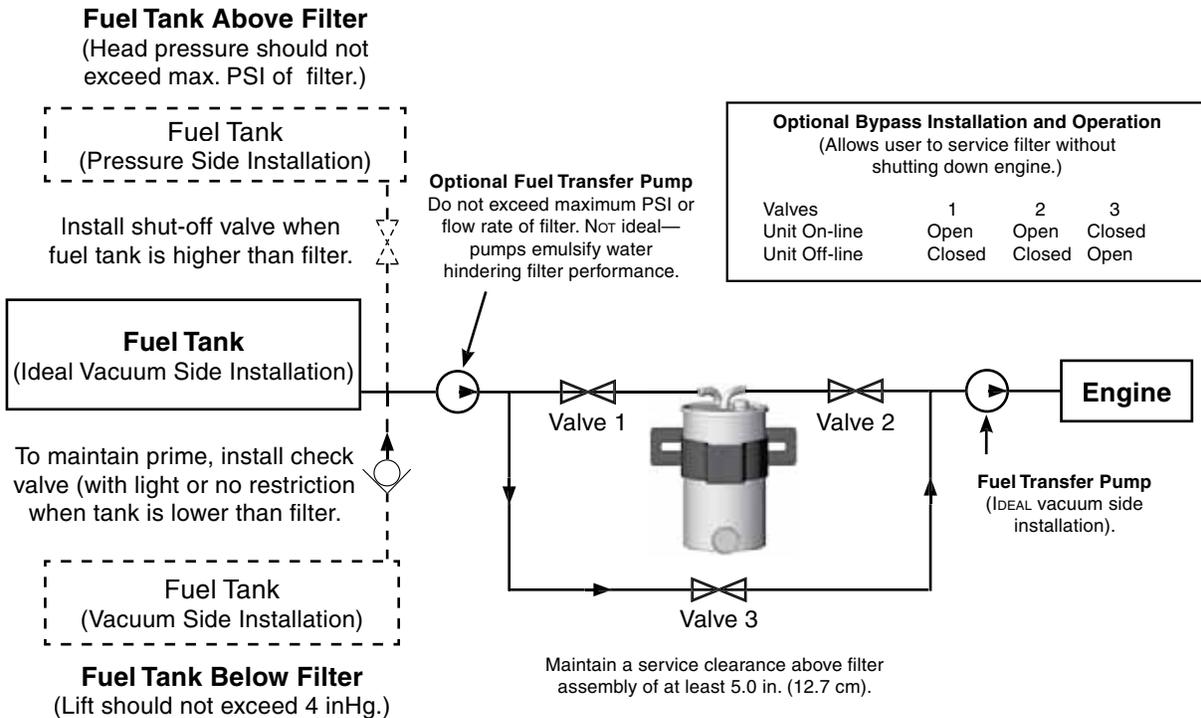
Notes: ¹Pressure installations acceptable up to maximum PSI shown.
Vacuum installations are recommended.

045-RAC-351

Mounting Information



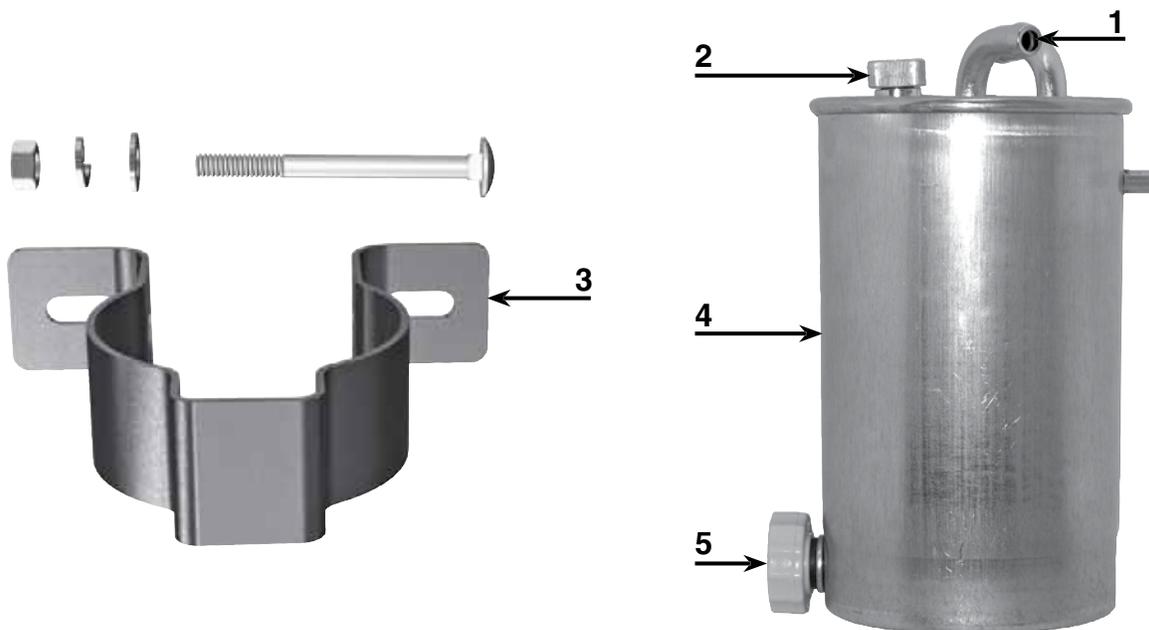
Installation Diagram



Questions? Contact Technical Support:
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e-mail: racortech@parker.com

045-RAC-351

Replacement Parts



| Part Number | | Description |
|-------------|---------|--|
| 1. | N/A | Inlet/Outlet (5/16" hose bead) |
| 2. | N/A | Vent Plug |
| 3. | RK32274 | Mounting Bracket Kit (includes bracket, carriage bolt, washers, and nut) |
| 4. | R32281 | Replacement Filter (includes #'s 1, 2, and 5) |
| 5. | N/A | Water Drain Valve |
| | | Additional Parts (not shown) |
| | 32282 | Installation Instructions |

100 Series

110A

Fuel Filter/Water Separator



The Racor 110A fuel filter/water separator features a variety of compact sizes to fit the most cramped engine compartments. All units feature 1/4"-18 NPTF inlet and outlet fuel ports and a unitized mounting bracket.

The 110A fuel filter/water separator optional accessories include: water detection kits, vacuum or compound gauges. High-capacity, Aquabloc®II cartridge elements which stop water, remove solid contamination, and are available in 2 or 10 micron.



Specifications

| | |
|---|-------------------------------------|
| Maximum Flow Rate: (with gasoline) (with diesel) | 15 GPH (57 LPH) 35 GPH (132 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Metal |
| Replacement Element and Micron Rating | R11S (2 micron) R11T (10 micron) |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 6.0 in. (15.2 cm) |
| Depth | 3.3 in. (8.4 cm) |
| Width | 3.2 in. (8.1 cm) |
| Weight (dry) | 1.3 lb (0.59 kg) |
| Maximum Working Pressure¹ | 100 PSI (6.9 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.15 PSI (0.01 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +200°F (-40° to +93°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Questions? Contact Technical Support:
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e-mail: racortech@parker.com

100 Series

Top View

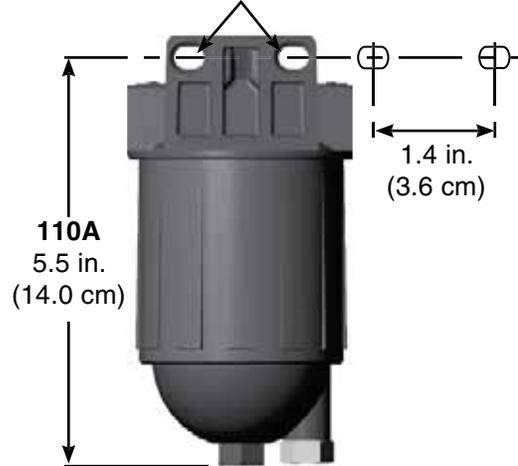
110A

Ports 1 and 3 are inlets.
 Ports 2 and 4 are outlets.
 Plug ports not used by fuel lines.



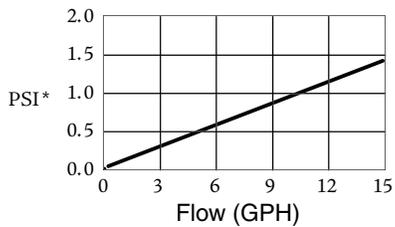
Back View

5/16 in. (.02 cm)
 diameter clearance for
 fasteners.

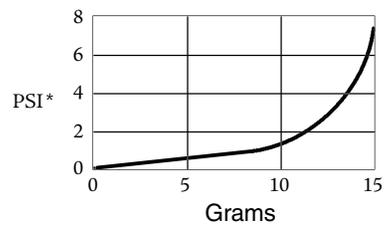


Test Data

(Test results are from controlled laboratory testing. Field results may vary.)



SAE J905 Fuel Flow Restriction



SAE J905 Solids Capacity
 (using SOFTC-2A; R11T Element)

PSI X 2.036 = inHg. / PSI X 6.895 = kPa

100 Series

Replacement Parts

110A

- | <u>Part No.</u> | <u>Description</u> |
|--------------------------------------|---------------------------------------|
| 1. N/A | Head Kit (not available) |
| 2. RK 10110 | Metal Vent Plug Kit (3/8"-24 UNF) |
| 3. RK 21363 | Gasket/O-ring Kit |
| 4. Replacement Element (includes #3) | |
| R11S | 2 Micron |
| R11T | 10 Micron |
| 5. RK 21364 | Housing Kit (includes #'s 5 and 6) |
| 6. RK 20022 | Metal Plug Kit (1/2"-20 UNF) |

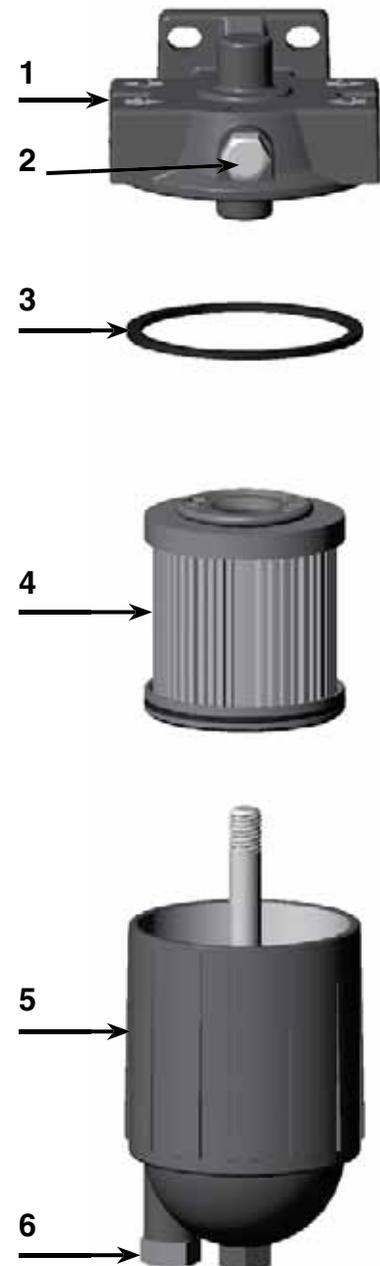
Additional Parts (not shown)

RK 30880E¹ Water Probe

RK 30817 Port Plug Kit
(2 plugs per kit)

21410 Installation Instructions

¹ Do not use on gasoline applications. Water probe must be used with a water detection module - see Accessories.



100 Series

120A

Fuel Filter/Water Separator



The Racor 120A fuel filter/water separator features a variety of compact sizes to fit the most cramped engine compartments. All units feature 1/4\"-18 NPTF inlet and outlet fuel ports and a unitized mounting bracket.

These units feature Spin-On contaminant collection bowls. The clear bowls used with these models will not discolor from alcohol, additives, or UV light and have a leak-proof, positive seal drain for easy servicing. Water and contamination levels can be seen easily at a glance.

Metal bowls should be specified when filtering fuels in hazardous locations where equipment is exposed to flying gravel and debris.



Specifications

| | |
|---|---|
| Maximum Flow Rate: (with diesel) | 15 GPH (57 LPH) |
| Inlet/Outlet Port Size | 1/4\"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | See Replacement Parts List |
| Micron Rating | See Replacement Parts List |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 6.5 in. (16.5 cm) |
| Depth | 3.2 in. (8.1 cm) |
| Width | 3.2 in. (8.1 cm) |
| Weight (dry) | 1.1 lb (0.50 kg) |
| Maximum Working Pressure¹ | 7.0 PSI (0.48 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.15 PSI (0.01 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +200°F (-40° to +93°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

100 Series

120B

Fuel Filter/Water Separator



The Racor 120B fuel filter/water separator features a variety of compact sizes to fit the most cramped engine compartments. All units feature 1/4\"-18 NPTF inlet and outlet fuel ports and a unitized mounting bracket.

These units feature Spin-On contaminant collection bowls. The clear bowls used with these models will not discolor from alcohol, additives, or UV light and have a leak-proof, positive seal drain for easy servicing. Water and contamination levels can be seen easily at a glance.

Metal bowls should be specified when filtering fuels in hazardous locations where equipment is exposed to flying gravel and debris.



Specifications

| | |
|---|---|
| Maximum Flow Rate: (with diesel) | 20 GPH (76 LPH) |
| Inlet/Outlet Port Size | 1/4\"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | See Replacement Parts List |
| Micron Rating | See Replacement Parts List |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 8.0 in. (20.3 cm) |
| Depth | 3.2 in. (8.1 cm) |
| Width | 3.2 in. (8.1 cm) |
| Weight (dry) | 1.2 lb (0.54 kg) |
| Maximum Working Pressure¹ | 7.0 PSI (0.48 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.15 PSI (0.01 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +200°F (-40° to +93°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

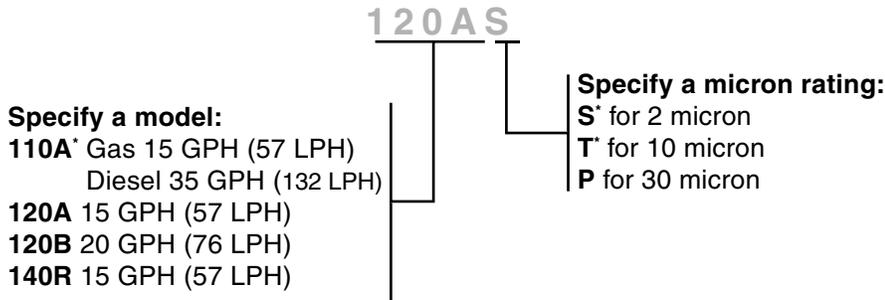
Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Questions? Contact Technical Support:
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100 Series

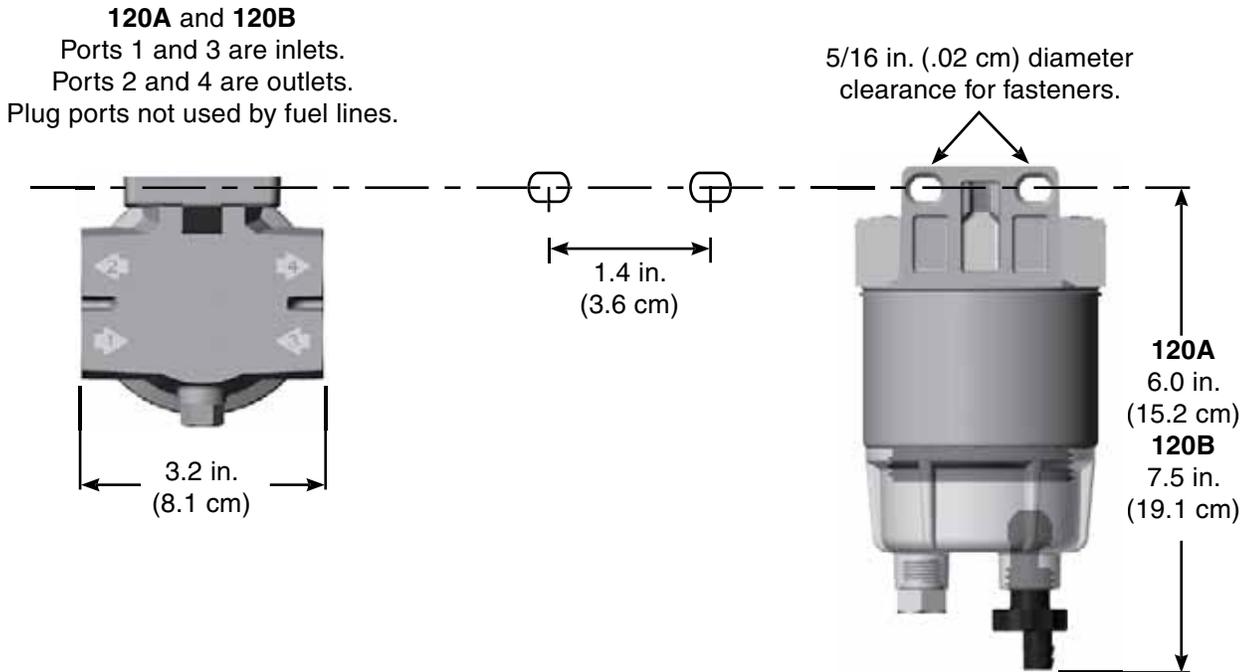
How to Order

(The example below shows how a part number is constructed.)



*110A is available in 2 and 10 micron only.

Top View/Back View



100 Series

Replacement Parts

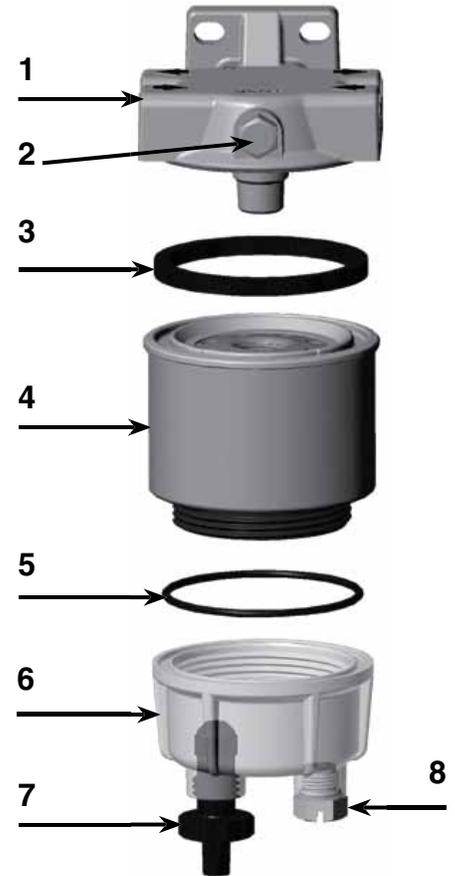
120A and 120B

| <u>Part Number</u> | <u>Description</u> |
|---|---|
| 1. RK 10214 | Mounting Head Kit (1/4"-18 NPTF ports) |
| 2. RK 10110 | Metal Vent Plug Kit (3/8"-24 SAE threads) |
| 3. RK 10503 | Head Gasket Kit |
| 4. Replacement Element (includes #'s 3 and 5) | |
| R12S | 120A: 2 micron |
| R12T | 120A: 10 micron |
| R12P | 120A: 30 micron |
| R13S | 120B: 2 micron |
| R13T | 120B: 10 micron |
| R13P | 120B: 30 micron |
| 5. RK 10012 | Bowl O-ring Kit |
| 6. RK 10215 | Clear Bowl Kit |
| 7. RK 30476 | Self-venting Drain Kit |
| 8. RK 20126 | Plastic Plug Kit (1/2"-20 SAE threads) |

Additional Parts (not shown)

| | |
|-----------------------------|---------------------------|
| RK 30964¹ | Water Probe Kit |
| RK 10109 | Metal Bowl Kit |
| 10219 | Installation Instructions |

¹ Do not use on gasoline applications. Water probe must be used with a water detection module—see accessories.

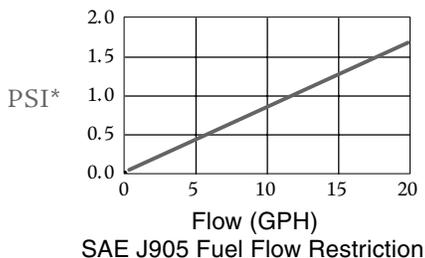


120A Shown above.

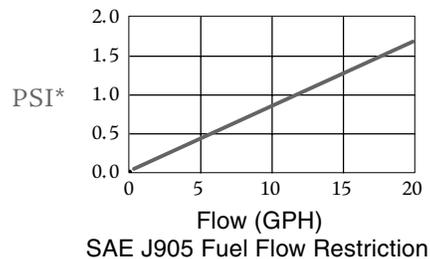
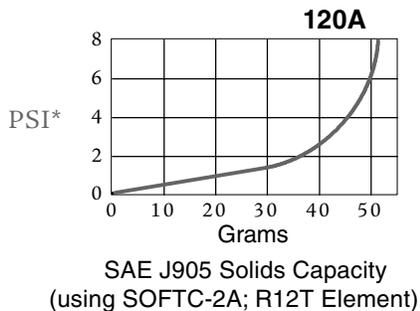
100 Series

Test Data

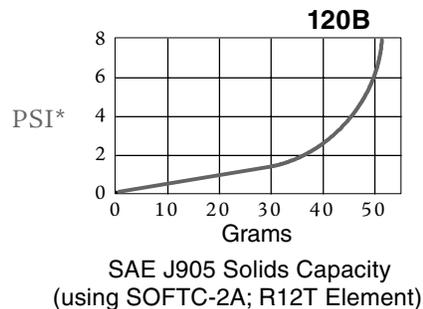
(Test results are from controlled laboratory testing. Field results may vary.)



PSI X 2.036 = inHg / PSI X 6.895 = kPa



PSI X 2.036 = inHg / PSI X 6.895 = kPa



100 Series

140R

Fuel Filter/Water Separator



The Racor 140R fuel filter/water separator features a variety of compact sizes to fit the most cramped engine compartments. All units feature 1/4"-18 NPTF inlet and outlet fuel ports and a unitized mounting bracket.

These units feature Spin-On contaminant collection bowls. The clear bowls used with these models will not discolor from alcohol, additives, or UV light and have a leak-proof, positive seal drain for easy servicing. Water and contamination levels can be seen easily at a glance.

Metal bowls should be specified when filtering fuels in hazardous locations where equipment is exposed to flying gravel and debris.



| Specifications | |
|---|---|
| Maximum Flow Rate: (with diesel) | 15 GPH (57 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | See Replacement Parts List |
| Micron Rating | See Replacement Parts List |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 6.0 in. (15.2 cm) |
| Depth | 3.2 in. (8.1 cm) |
| Width | 3.2 in. (8.1 cm) |
| Weight (dry) | 1.1 lb (0.50 kg) |
| Maximum Working Pressure ¹ | 7.0 PSI (0.48 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.15 PSI (0.01 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +200°F (-40° to +93°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

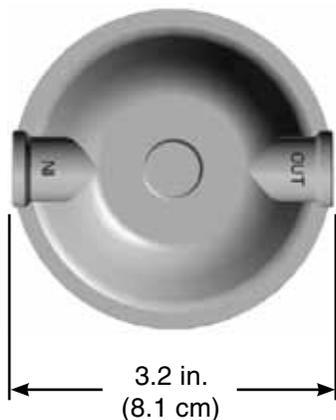
Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

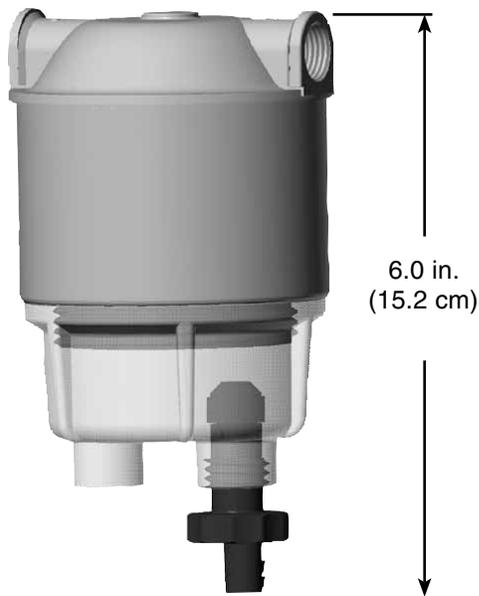
100 Series

140R

Top View

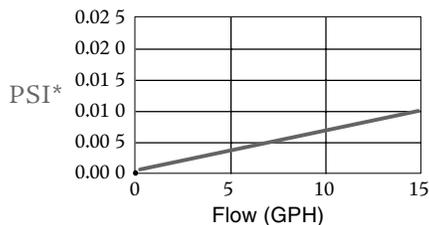


Front View

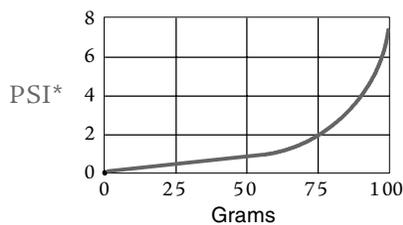


Test Data

(Test results are from controlled laboratory testing. Field results may vary.)



SAE J905 Fuel Flow Restriction



SAE J905 Solids Capacity
(using SOFTC-2A; R12T Element)

PSI X 2.036 = inHg / PSI X 6.895 = kPa

100 Series

Replacement Parts

140R

| <u>Part Number</u> | <u>Description</u> |
|---|--|
| 1. RK 10216 | Mounting Head Kit (1/4"-18 NPTF ports) |
| 2. RK 10503 | Head Gasket Kit |
| 3. Replacement Element (includes #'s 2 and 4) | |
| R12S | 2 micron |
| R12T | 10 micron |
| R12P | 30 micron |
| 4. RK 10012 | Bowl O-ring Kit |
| 5. RK 10222 | Clear Bowl with Drain Kit |
| 6. RK 30476 | Self-venting Drain Kit |
| Additional Parts (not shown) | |
| 10192 | Installation Instructions |



100 Series

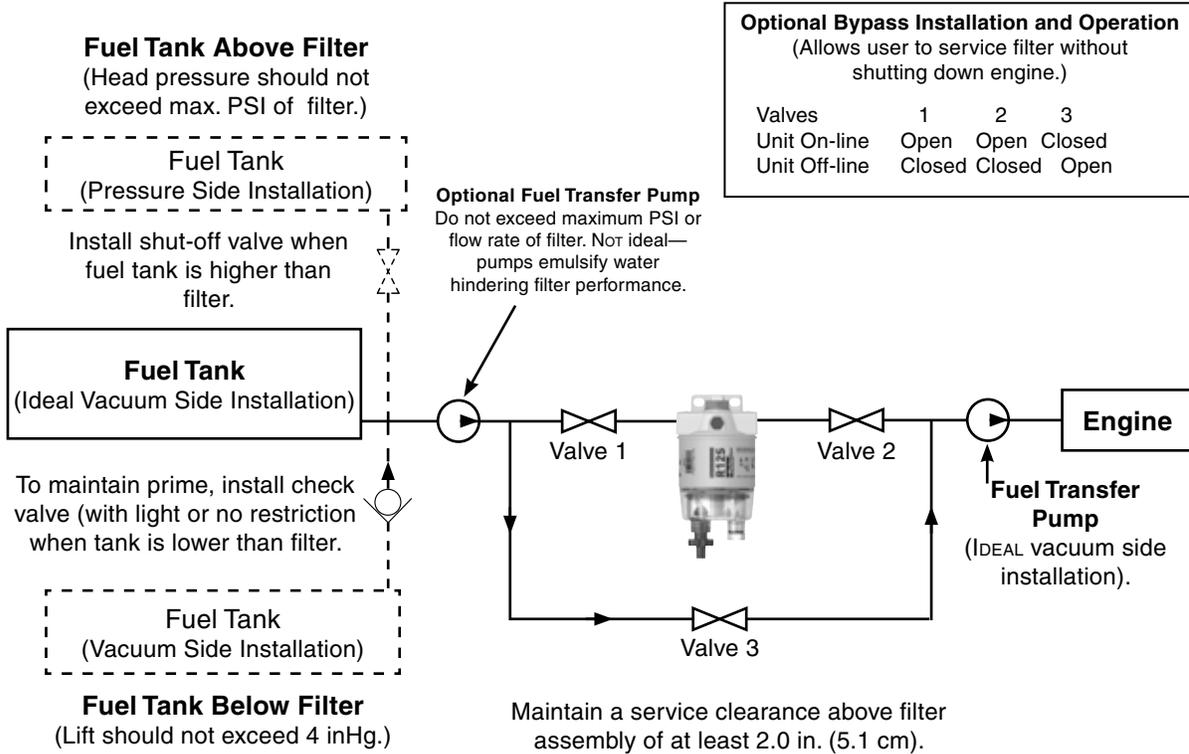
100 Series Overview



| Specifications | 110A | 120A | 120B | 140R |
|---|-------------------------------------|------------------------|------------------------|------------------------|
| Maximum Flow Rate: (with diesel fuel) (with gasoline) | 15 GPH (57 LPH) 35 GPH (132 LPH) | 15 GPH (57 LPH) N/A | 20 GPH (76 LPH) N/A | 15 GPH (57 LPH) N/A |
| Port Size: (SAE J476) | 1/4"-18 NPTF | 1/4"-18 NPTF | 1/4"-18 NPTF | 1/4"-18 NPTF |
| Total Number of Ports: (total inlets) (total outlets) | 4 2 2 | 4 2 2 | 4 2 2 | 2 1 1 |
| Minimum Service Clearance | 2.0 in. (5.1 cm) | 2.0 in. (5.1 cm) | 2.0 in. (5.1 cm) | 2.0 in. (5.1 cm) |
| Center Threads | N/A | M18 x 1.5 | M18 x 1.5 | M18 x 1.5 |
| Height | 6.0 in. (15.2 cm) | 6.5 in. (16.5 cm) | 8.0 (20.3 cm) | 6.0 in. (15.2 cm) |
| Depth | 3.3 in. (8.4 cm) | 3.2 in. (8.1 cm) | 3.2 in. (8.1 cm) | 3.2 in. (8.1 cm) |
| Width | 3.2 in. (8.1 cm) | 3.2 in. (8.1 cm) | 3.2 in. (8.1 cm) | 3.2 in. (8.1 cm) |
| Weight (dry) | 1.3 lb (0.59 kg) | 1.1 lb (0.50 kg) | 1.2 lb (0.54 kg) | 1.1 lb (0.50 kg) |
| Clean Pressure Drop | 0.15 PSI (0.01 bar) | 0.15 PSI (0.01 bar) | 0.15 PSI (0.01 bar) | 0.01 PSI (0.0007 bar) |
| Max. Allowable Pressure¹ | 100 PSI (6.9 bar) | 7.0 PSI (0.48 bar) | 7.0 PSI (0.48 bar) | 7.0 PSI (0.48 bar) |
| Available Options:² (water sensor probe) (heater) | Yes No | Yes No | Yes No | No No |
| Water in Bowl Capacity | 1.2 oz. (36 ml) | 1.8 oz. (52 ml) | 1.8 oz. (53 ml) | 1.8 oz. (53 ml) |
| H₂O Removal Efficiency | 99% | 99% | 99% | 99% |
| Operating Temperature | -40° to +200°F (-40° to +93°C) | | | |

Special Notes: ¹ Pressure installations are applicable up to maximum PSI shown. Vacuum installations are recommended. ² Not for use with gasoline applications.

Installation Diagram



Installation diagram applies to all 100 Series filters. Model 120A shown above. Racor offers hose and fittings to complete this installation—see Accessories.

200 Series

215R

Fuel Filter/Water Separator



The Racor diesel Spin-On 200 Series features a variety of compact sizes to fit in the most cramped engine compartments.

All models are standard with 1/4"-18 NPTF (SAE J476) inlet and outlet fuel ports (14M ports also available) and a unitized mounting bracket.

They also include an in-head primer pump which allows the operator to hand prime the filter and simplifies service procedures.



Specifications

| | |
|---|---|
| Maximum Flow Rate: (with gasoline) | 15 GPH (57 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | see element chart |
| Micron Rating | see element chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 8.3 in. (21.1 cm) |
| Depth | 4.0 in. (10.2 cm) |
| Width | 3.9 in. (9.9 cm) |
| Weight (dry) | 1.8 lb (0.82 kg) |
| Maximum Working Pressure¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.12 PSI (0.008 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +200°F (-40° to +93°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

200 Series

230R

Fuel Filter/Water Separator



Options for the 230R filter/water separator with heater installed: water detection kits (for diesel applications only), vacuum or compound gauges, 12 or 24 volt dc (200 watt) heaters, hose and fittings, and metal bowls. Metal bowls should be specified when filtering fuels in hazardous locations where equipment is exposed to flying gravel and debris.



Specifications

| | |
|---|---|
| Maximum Flow Rate: (with gasoline) | 30 GPH (114 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | see element chart |
| Micron Rating | see element chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 9.0 in. (22.9 cm) |
| Depth | 4.0 in. (10.2 cm) |
| Width | 3.9 in. (9.9 cm) |
| Weight (dry) | 2.0 lb (0.91 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.31 PSI (0.02 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +200°F (-40° to +93°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

200 Series

245R

Fuel Filter/Water Separator



All 200 Series filters feature Spin-On, high-capacity, Aquabloc®II replaceable filter elements which separate water, remove solid contamination, and are available in 2, 10, and 30 micron.

Filtration needs should be based on application, fuel quality, operating climates and maintenance schedules.

The see-through bowls used with these models will not discolor from alcohol, additives, or UV light and have a leak-proof, positive seal, self-venting drain for easy servicing. Water and contamination levels can be seen easily at a glance.



Specifications

| | |
|---|---|
| Maximum Flow Rate: (with gasoline) | 45 GPH (170 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | see element chart |
| Micron Rating | see element chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 10.5 in. (26.7 cm) |
| Depth | 4.0 in. (10.2 cm) |
| Width | 3.9 in. (9.9 cm) |
| Weight (dry) | 2.2 lb (1.0 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.61 PSI (0.04 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +200°F (-40° to +93°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

200 Series

200 Series Overview



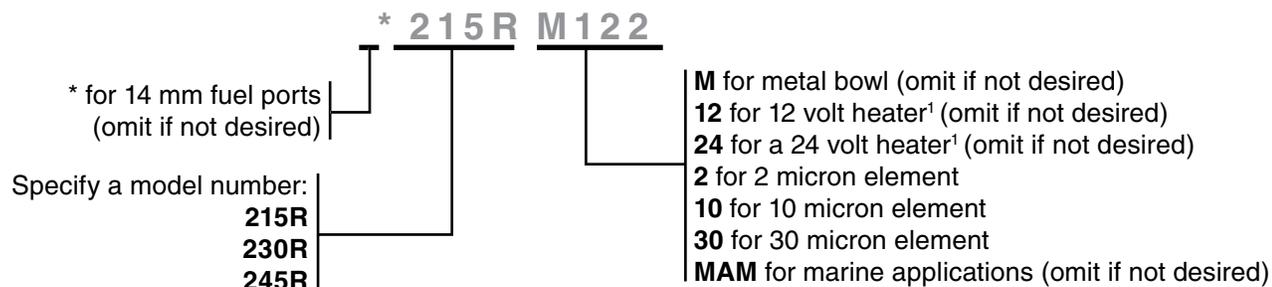
| Specifications | 215R | 230R | 245R |
|---|--------------------------------|---------------------|---------------------|
| Maximum Flow Rate | 15 GPH (57 LPH) | 30 GPH (114 LPH) | 45 GPH (170 LPH) |
| Port Size | 1/4"-18 NPTF | 1/4"-18 NPTF | 1/4"-18 NPTF |
| Total Number of Ports (total inlets) (total outlets) | 3 1 2 | 3 1 2 | 3 1 2 |
| Minimum Service Clearance | 2.0 in. (5.1 cm) | 2.0 in. (5.1 cm) | 2.0 in. (5.1 cm) |
| Element Threads | 1"-14 | 1"-14 | 1"-14 |
| Height | 8.3 in. (21.1 cm) | 9.0 in. (22.9 cm) | 10.5 in. (26.7 cm) |
| Depth | 4.0 in. (10.2 cm) | 4.0 in. (10.2 cm) | 4.0 in. (10.2 cm) |
| Width | 3.9 in. (9.9 cm) | 3.9 in. (9.9 cm) | 3.9 in. (9.9 cm) |
| Weight (dry) | 1.8 lb (0.82 kg) | 2.0 lb (0.91 kg) | 2.2 lb (1.0 kg) |
| Clean Pressure Drop | 0.12 PSI (0.008 bar) | 0.31 PSI (0.02 bar) | 0.61 PSI (0.04 bar) |
| Max. Allowable Pressure ¹ | 30 PSI (2.07 bar) | 30 PSI (2.07 bar) | 30 PSI (2.07 bar) |
| Available Options: ² (water sensor) (heater) | Yes Yes | Yes Yes | Yes Yes |
| Water in Bowl Capacity | 2.2 oz. (65 ml) | 2.2 oz. (65 ml) | 2.2 oz. (65 ml) |
| H ₂ O Removal Efficiency | 99% | 99% | 99% |
| Operating Temperature | -40° to +200°F (-40° to +93°C) | | |

Special Notes: ¹ Pressure installations are applicable up to the maximum PSI shown. Vacuum installations are recommended. ² Not for use with gasoline applications.

200 Series

How To Order

(The example below illustrates how part numbers are constructed.)



¹ Use with Racor rely kit—see Accessories. Standard fuel ports are 1/4"-18 NPTF (SAE J476). Mounting head includes in-head primer pump.

Replacement Elements

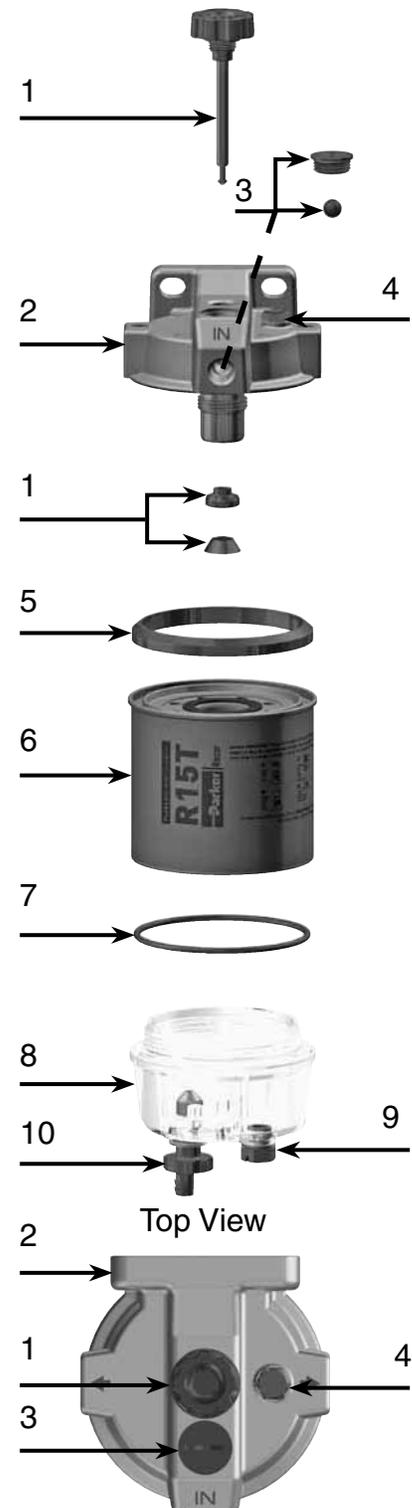
| Replacement Elements (seals included) | | | |
|---------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|
| Model Number | 2 Micron (Final Filtration) | 10 Micron (Secondary Filtration) | 30 Micron (Primary Filtration) |
| 215R | R15S | R15T | R15P |
| 230R | R20S | R20T | R20P |
| 245R | R25S | R25T | R25P |

200 Series

Replacement Parts

| <u>Part Number</u> | <u>Description</u> |
|--------------------------------|--|
| 1. RK20025-01 | Primer Pump Assembly Kit (includes #3) |
| 2. RK20046-01 | Mounting Head Kit (with 1/4"-18 NPTF Ports) |
| RK20049-01 | Mounting Head Kit (with 14 mm x 1.5 Ports) |
| RK20717 | Mounting Head Kit (no pump, 1/4"-18 NPTF Ports) |
| 3. RK 20011-01 | Check Ball and Plastic Cap Kit |
| RK 20742 | Optional Metal Cap Kit |
| 4. RK 10110 | Metal Vent Plug Kit (3/8"-24 SAE threads) |
| 5. RK22061 | Beveled Gasket |
| 6. (various) | Spin-On Elements (see Replacement Element chart) |
| 7. RK 22244 | Bowl O-ring Kit |
| 8. RK 22350-02 | Clear Bowl Kit (includes #'s 7-10) |
| RK 22354-01¹ | (same as above plus a 200 watt, 12 volt dc heater) |
| RK 22354-02¹ | (same as above plus a 200 watt, 24 volt dc heater) |
| RK 22368 | Metal Bowl Kit (includes drain plug and O-ring) |
| 9. RK 20022 | Metal Plug (1/2"-20 SAE threads) |
| RK 20126 | Plastic Plug (1/2"-20 SAE threads) |
| 10. RK 30476 | Self-venting Drain Kit |
| Additional Parts (not shown) | |
| RK 12041 | Metal Port Plug Kit (1/4"-18 NPTF threads) |
| RK 30876¹ | Heater Connector Kit |
| RK20075-01 | Complete Seal Service Kit |
| 22360 | Installation Instructions |

¹ Do not use on gasoline applications.



200 Series

Hand Primer Pump Upgrade

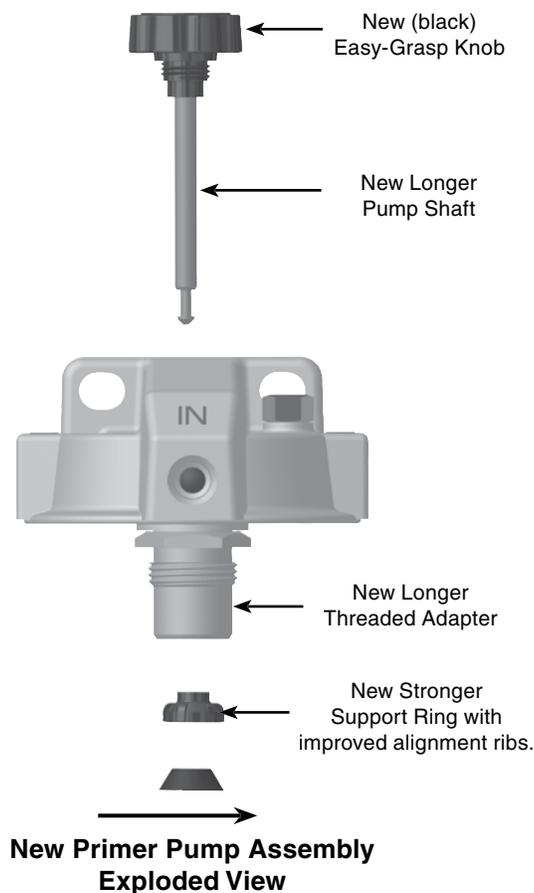
Benefits

- Up to 37% increase in volume of fuel pumped per stroke
- Improved strength and alignment
- Improved ease of operation
- Reduced restriction in fuel flow
- Changeable in the field

This enhancement is possible by increasing the stroke length, by about 1/2", on the pump shaft and the element threaded adapter. Additionally, the knob and support ring have been redesigned to be more robust.

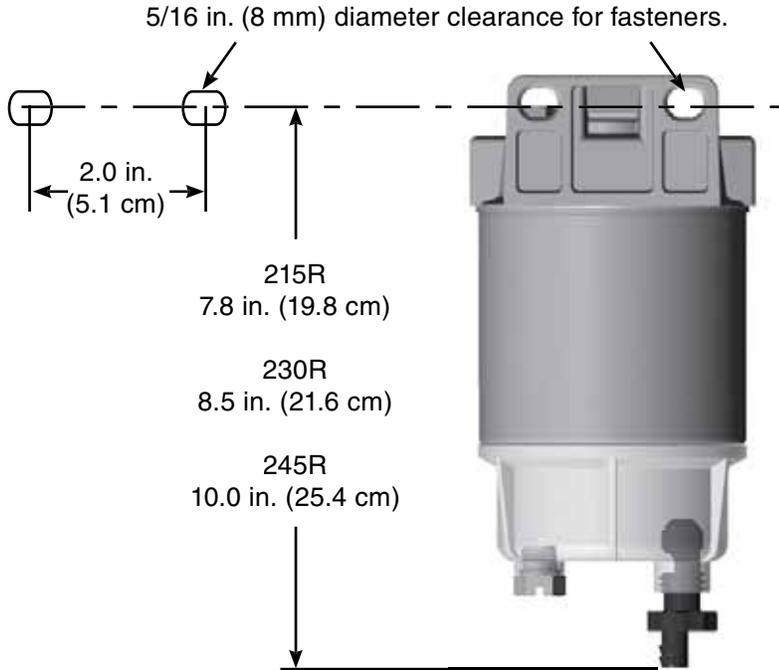
This change also affects replacement kits for the primer pump and head assemblies. The new style primer pump requires an additional 0.5 inch of space above the assembly (2 inches total) to utilize the added length of stroke; however, the primer pump will perform as always without any mounting modifications.

The new easy-grasp pump knob is larger than current knobs and the color will be changed from white to black to make a clear visual change between current pumps and newer versions.



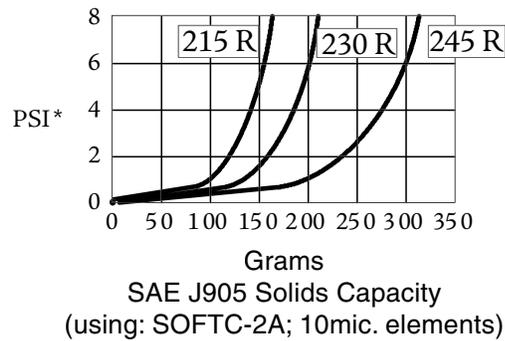
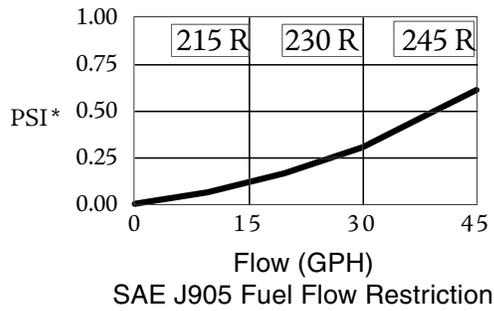
200 Series

Mounting Information



Test Data

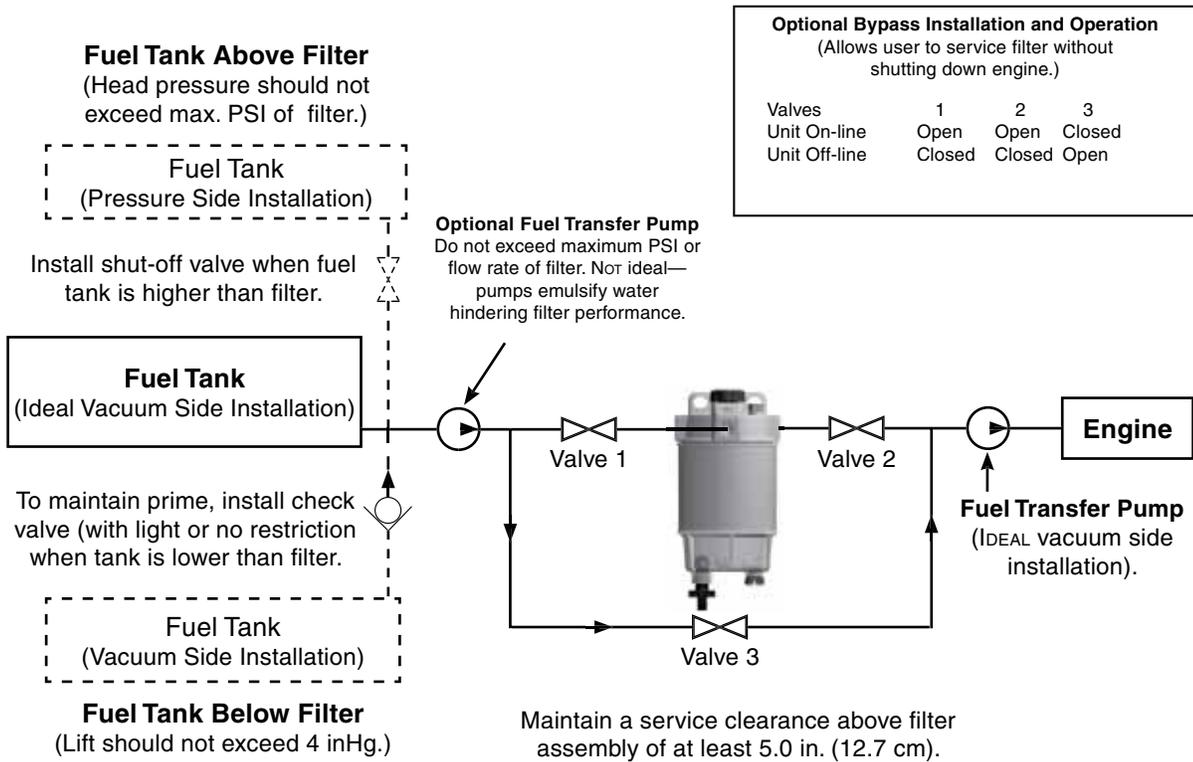
(Test results are from controlled laboratory testing. Field results may vary by application.)



PSI x 2.036=inHg. /PSI x 6.895=kPa

200 Series

Installation Diagram



Installation diagram applies to all 200 Series filters. Model **215R** shown above. Racor offers hose and fittings to complete this installation. See Accessories.

215R Series

215R

Fuel Filter/Water Separator



The Racor diesel Spin-On 200 Series features a variety of compact sizes to fit in the most cramped engine compartments.

All models are standard with 1/4"-18 NPTF (SAE J476) inlet and outlet fuel ports (14M ports also available) and a unitized mounting bracket.

They also include an in-head primer pump which allows the operator to hand prime the filter and simplifies service procedures.

| Specifications | |
|--|---|
| Maximum Flow Rate: (with gasoline) (with diesel) | 15 GPH (57 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | see element chart |
| Micron Rating | see element chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 8.3 in. (21.1 cm) |
| Depth | 4.0 in. (10.2 cm) |
| Width | 3.9 in. (9.9 cm) |
| Weight (dry) | 1.8 lb (0.82 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.12 PSI (0.008 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

230R Series

230R

Fuel Filter/Water Separator



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Specifications

| | |
|---|---|
| Maximum Flow Rate: (with gasoline) (with diesel) | 30 GPH (114 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | see element chart |
| Micron Rating | see element chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 9.0 in. (22.9 cm) |
| Depth | 4.0 in. (10.2 cm) |
| Width | 3.9 in. (9.9 cm) |
| Weight (dry) | 2.0 lb (0.91 kg) |
| Maximum Working Pressure¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.31 PSI (0.02 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

245R Series

245R

Fuel Filter/Water Separator



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Tat, quis nim quisi. Pat.

Ugue do odobore minciduisi dignibh essi essequat.

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Specifications

| | |
|---|---|
| Maximum Flow Rate: (with gasoline) (with diesel) | 45 GPH (170 LPH) |
| Inlet/Outlet Port Size | 1/4"-18 NPTF |
| Housing Material | Die-cast aluminum head with clear, reusable plastic bowl. |
| Replacement Element | see element chart |
| Micron Rating | see element chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 10.5 in. (26.7 cm) |
| Depth | 4.0 in. (10.2 cm) |
| Width | 3.9 in. (9.9 cm) |
| Weight (dry) | 2.2 lb (1.0 kg) |
| Maximum Working Pressure¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.61 PSI (0.04 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

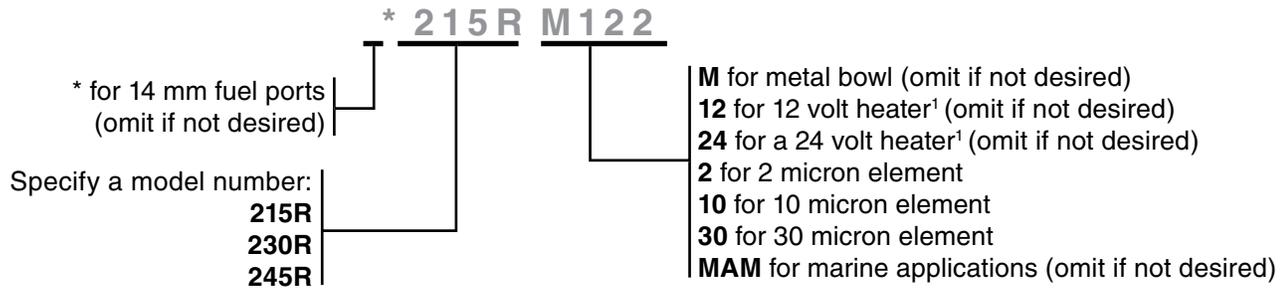
Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

245R Series

How To Order

(The example below illustrates how part numbers are constructed.)



¹ Use with Racor rely kit—see Accessories. Standard fuel ports are 1/4"-18 NPTF (SAE J476). Mounting head includes in-head primer pump.

Replacement Elements

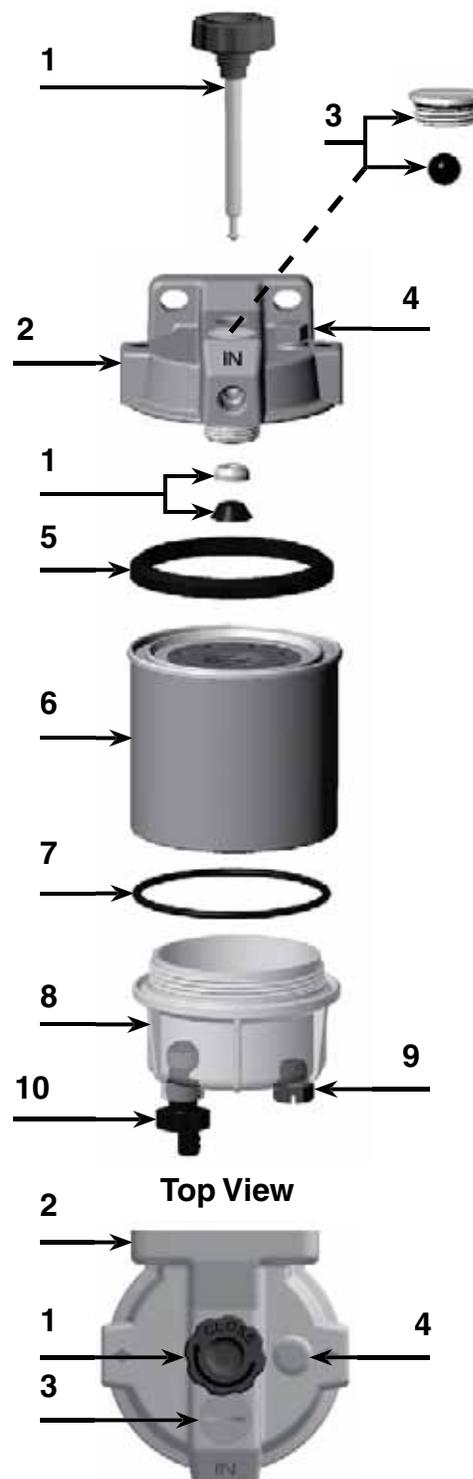
| Replacement Elements (seals included) | | | |
|---------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|
| Model Number | 2 Micron (Final Filtration) | 10 Micron (Secondary Filtration) | 30 Micron (Primary Filtration) |
| 215R | R15S | R15T | R15P |
| 230R | R20S | R20T | R20P |
| 245R | R25S | R25T | R25P |

245R Series

Replacement Parts

| <u>Part Number</u> | <u>Description</u> |
|--------------------------------|--|
| 1. RK20025-01 | Primer Pump Assembly Kit (includes #3) |
| 2. RK20046-01 | Mounting Head Kit (with 1/4"-18 NPTF Ports) |
| RK20049-01 | Mounting Head Kit (with 14 mm x 1.5 Ports) |
| RK20717 | Mounting Head Kit (no pump, 1/4"-18 NPTF Ports) |
| 3. RK20011-01 | Check Ball and Plastic Cap Kit |
| RK 20742 | Optional Metal Cap Kit |
| 4. RK 10110 | Metal Vent Plug Kit (3/8"-24 SAE threads) |
| 5. RK 22061 | Beveled Gasket |
| 6. (various) | Spin-On Elements (see Replacement Element chart) |
| 7. RK 22244 | Bowl O-ring Kit |
| 8. RK 22350-02 | Clear Bowl Kit (includes #'s 7-10) |
| RK 22354-01¹ | (same as above plus a 200 watt, 12 volt dc heater) |
| RK 22354-02¹ | (same as above plus a 200 watt, 24 volt dc heater) |
| RK 22368 | Metal Bowl Kit (includes drain plug and O-ring) |
| 9. RK 20022 | Metal Plug (1/2"-20 SAE threads) |
| RK 20126 | Plastic Plug (1/2"-20 SAE threads) |
| 10. RK 30476 | Self-venting Drain Kit |
| Additional Parts (not shown) | |
| RK 12041 | Metal Port Plug Kit (1/4"-18 NPTF threads) |
| RK 30876¹ | Heater Connector Kit |
| RK20075-01 | Complete Seal Service Kit |
| 22360 | Installation Instructions |

¹ Do not use on gasoline applications.



245R Series

Hand Primer Pump Upgrade

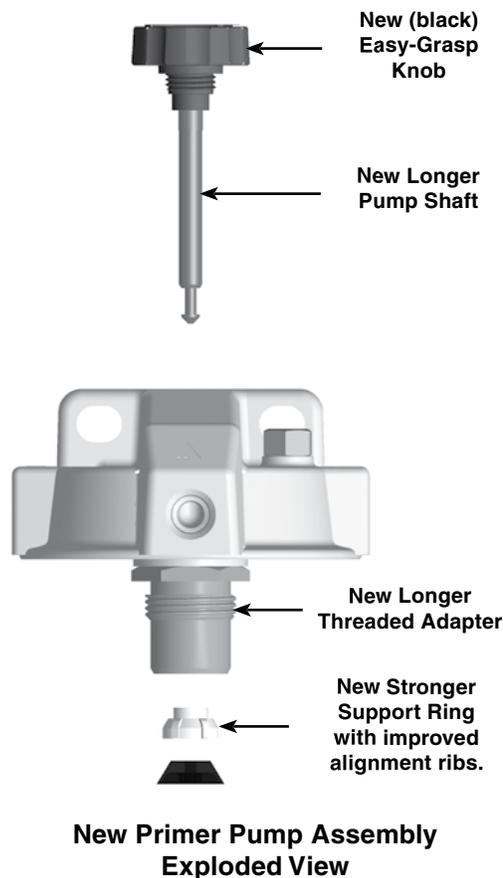
Benefits

- Up to 37% increase in volume of fuel pumped per stroke
- Improved strength and alignment
- Improved ease of operation
- Reduced restriction in fuel flow
- Changeable in the field

This enhancement is possible by increasing the stroke length, by about 1/2", on the pump shaft and the element threaded adapter. Additionally, the knob and support ring have been redesigned to be more robust.

This change also affects replacement kits for the primer pump and head assemblies. The new style primer pump requires an additional 0.5 inch of space above the assembly (2 inches total) to utilize the added length of stroke; however, the primer pump will perform as always without any mounting modifications.

The new easy-grasp pump knob is larger than current knobs and the color will be changed from white to black to make a clear visual change between current pumps and newer versions.



245R Series

Customer Interface Drawing

3X FUEL PORTS
CHECKBALL CAP
HAND OPERATED PRIMER PUMP
MOUNTING HEAD
ELEMENT
VENT PLUG
OPTIONAL ALUMINUM BOWL
CLEAR CONTAMINANT COLLECTION BOWL
DRAIN ASSEMBLY - W/BARB FOR Ø. 3/2 (7.9) I.D. HOSE
1/2-20 UNF PORT PLUG FOR OPTIONAL WATER PROBE (SOLD SEPARATELY)

2.00 (50.8)
 4.02 (102.1)
 3.91 (99.3)
 2.89 (73.5)
 7.00 (177.8)
 2X .51 (12.8)
 2X .38 (9.7)
 2X .41 (10.3)
 1.37 (34.6)
 1.99 (50.4)
 Ø 3.65 (92.8)
 3.10 (78.7)
 215R: 8.30 (210.9)
 230R: 9.0 (228.6)
 245R: 10.30 (261)

| REV | DESCRIPTION | REVISED | C. N. | DATE | BY | CHK |
|-----|--|---------|-------|--------|-----|-----|
| - | DRAWING RELEASE | | 16853 | 112904 | MY | RH |
| A | ADDED NEW PRIMER PUMP W/NOB DELINEATION. REVISE NOTES. | | 19711 | 101207 | MEC | RH |

NOTES: UNLESS OTHERWISE SPECIFIED-

- DIMENSIONS GIVEN REPRESENT NOMINAL VALUES AND ARE FOR REFERENCE ONLY. SCHEME: INCH(MM).
- SPECIFICATIONS:
 - A. APPLICATION: DIESEL, VACUUM SIDE
 - B. MAXIMUM ALLOWABLE PRESSURE: 30 PSI / 207 kPa
 - C. MAXIMUM FLOW RATES:
 - 215R: 45 GPH
 - 230R: 30 GPH
 - 245R: 45 GPH
 - D. STANDARD FUEL PORTS: 1/4-18 NPTF
 OPTIONAL FUEL PORTS: M14 X 1.5-GH
 - E. BOWL WATER CAPACITY: 2.2 OZ. (65 ML)
 - F. ALLOW AT LEAST 2 INCHES (51MM) UNDER UNITS FOR SERVICE.
- SERVICE PARTS ELEMENTS:
 - 215R
 - R15S (2 MICRON)
 - R1ST (10 MICRON)
 - R1SP (30 MICRON)
 - 230R
 - R2S (2 MICRON)
 - R2ST (10 MICRON)
 - R2SP (30 MICRON)
 - 245R
 - R25S (2 MICRON)
 - R2ST (10 MICRON)
 - R2SP (30 MICRON)

MOUNTING HEADS:
 -R20048-01 - 1/4-18 NPTF FUEL PORT THREADS
 -R20049-01 - M14 X 1.5-GH FUEL PORT THREADS

BOWLS:
 -CLEAR: RW2250-02
 -ALUMINUM: RW30497

- OPTIONAL ACCESSORIES:
 -12V/200W OR 24V/200W IN-BOWL HEATER
- PACKAGING:
 STANDARD PACKAGING IS A CASE QUANTITY OF SIX.

CUSTOMER INTERFACE DRAWING

| QUANTITY | HEAD | PART NUMBER | DESCRIPTION | UNIT |
|----------|------|-------------|-------------|------|
| | | | | |

REVISE ONLY ON PROVE SYSTEM
 THIS PRINT OPERATES BY EARLIER DATE, DESTROY DATE

AWM: VERGAMEN 17504
 MEC: RE HAMILTON 112904

DATE PRINTED AND ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED
 THIS DRAWING IS THE PROPERTY OF PARKER HANOVER INC. IT IS TO BE USED ONLY FOR THE PROJECT IT IS SUBJECT TO RETURN OR DESTRUCTION

PLEASE CONTACT THE SELLER FOR RELEASES

REVISED BY: []
 DATE: []
 PART: []
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 SCALE: []
 RELEASE DATE: []

DO NOT SCALE DRAWING

FF/WS ASSEMBLY
 200R SERIES

DATE: 05752
 SCALE: 1.000
 RELEASE DATE: 112904

REV: A

1 of 1

Questions? Contact Technical Support:
 800 344 3286 or 209 521 7860 ext. 7555
 e-mail: racortech@parker.com

300 Series

325R

Fuel Filter/Water Separator



Racor's 325R Diesel Fuel Filter/ Heater/ Water Separators are specifically designed to handle today's tough fuel system problems. These units feature a standard in-head PTC heater and reusable see-thru contaminant collection bowl. They are different only in flow capacity and element size.

These units are recommended for suction (vacuum) side installations but they may also be installed on the pressure side up to 15 PSI maximum. The die-cast aluminum mounting head features standard 3/8" NPTF fuel ports.

Specifications

| | |
|---|----------------------------------|
| Maximum Flow Rate: (with diesel) | 60 GPH (227 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF (SAE J476) |
| Replacement Element | see element chart |
| Micron Rating | see element chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 9.7 in. (24.6 cm) |
| Depth | 4.8 in. (12.2 cm) |
| Width | 4.4 in. (11.2 cm) |
| Weight (dry) | 3.1 lb (1.4 kg) |
| Maximum Working Pressure¹ | 15 PSI (1.03 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.17 PSI (0.01 bar) |
| Water in Bowl Capacity (with heater) | 2.7 oz (82 ml) 2.3 oz (70 ml) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

300 Series

330R

Fuel Filter/Water Separator



Racor's 330R Diesel Fuel Filter/ Heater/ Water Separators are specifically designed to handle today's tough fuel system problems. These units feature a standard in-head PTC heater and reusable see-thru contaminant collection bowl. They are different only in flow capacity and element size.

These units are recommended for suction (vacuum) side installations but they may also be installed on the pressure side up to 15 PSI maximum. The die-cast aluminum mounting head features standard 3/8" NPTF fuel ports.



Specifications

| | |
|---|----------------------------------|
| Maximum Flow Rate: (with diesel) | 75 GPH (284 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF (SAE J476) |
| Replacement Element | see element chart |
| Micron Rating | see element chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 11.0 in. (27.9 cm) |
| Depth | 4.8 in. (12.2 cm) |
| Width | 4.4 in. (11.2 cm) |
| Weight (dry) | 3.1 lb (1.4 kg) |
| Maximum Working Pressure¹ | 15 PSI (1.03 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.39 PSI (0.03 bar) |
| Water in Bowl Capacity (with heater) | 2.7 oz (82 ml) 2.3 oz (70 ml) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

300 Series

3150R

Fuel Filter/Water Separator



Racor's 3150R Diesel Fuel Filter/Water Separators are specifically designed to handle high flow applications that require low restriction values.

These robust filters use a reusable see-thru contaminant collection bowl with an in-bowl heater option. The die-cast aluminum mounting head features standard 7/8" UNF O-ring inlet and outlet fuel ports. With a large 3/4" SAE port for easy fuel priming.

These units are recommended for suction (vacuum) side installations but they may also be installed on the pressure side up to 7 PSI maximum pressure.

Specifications

| | |
|---|----------------------------------|
| Maximum Flow Rate: (with diesel) | 150 GPH (568 LPH) |
| Inlet/Outlet Port Size | 7/8"-14 UNF (SAE J1926) |
| Replacement Element | see element chart |
| Element Threads | 1 1/4"-12 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 13.6 in. (34.5 cm) |
| Depth | 5.5 in. (14.0 cm) |
| Width | 4.75 in. (12.1 cm) |
| Weight (dry) | 3.6 lb (1.6 kg) |
| Maximum Working Pressure¹ | 7 PSI (0.48 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.17 PSI (0.01 bar) |
| Water in Bowl Capacity (with heater) | 2.7 oz (82 ml) 2.3 oz (70 ml) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

300 Series

3250R

Fuel Filter/Water Separator



Racor's 3250R Diesel Fuel Filter/Water Separators are specifically designed to handle high flow applications that require low restriction values.

These robust filters use a reusable see-thru contaminant collection bowl with an in-bowl heater option. The die-cast aluminum mounting head features standard 7/8" UNF O-ring inlet and outlet fuel ports. With a large 3/4" SAE port for easy fuel priming.

These units are recommended for suction (vacuum) side installations but they may also be installed on the pressure side up to 7 PSI maximum pressure.



Specifications

| | |
|---|----------------------------------|
| Maximum Flow Rate: (with diesel) | 250 GPH (946 LPH) |
| Inlet/Outlet Port Size | 7/8"-14 UNF (SAE J1926) |
| Replacement Element | see element chart |
| Element Threads | 1 1/4"-12 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 17.3 in. (43.9 cm) |
| Depth | 5.5 in. (14.0 cm) |
| Width | 4.8 in. (12.2 cm) |
| Weight (dry) | 4.6 lb (2.1 kg) |
| Maximum Working Pressure ¹ | 7 PSI (0.48 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 1.0 PSI (0.07 bar) |
| Water in Bowl Capacity (with heater) | 2.7 oz (82 ml) 2.3 oz (70 ml) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

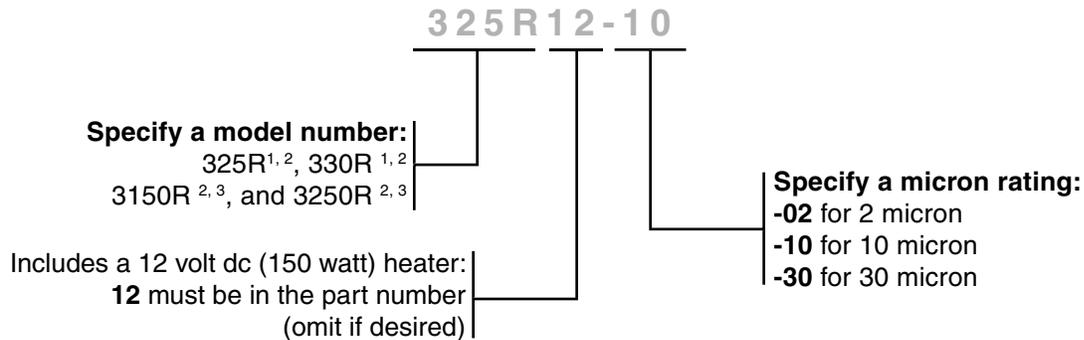
Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

300 Series

How to Order

(The example below illustrates how part numbers are constructed.)



¹ Filter includes **RK22010** for a 12 volt dc (150 watt) in-head Heater. see installation diagram.

² In-bowl heater option: **RK30900** for a 12 volt dc (200 watt) = 16.6 amps, **RK30924** for a 24 volt dc (200 watt) = 8.3 amps. Use with Racor relay kit. - see Accessories.

³ Standard fuel ports are 7/8"-14 UNF (SAE J1926). 10 micron element included as standard with this filters.

Replacement Elements

| Model Number | 2 Micron (Final Filtration) | 10 Micron (Secondary Filtration) | 30 Micron (Primary Filtration) |
|--------------|--------------------------------|-------------------------------------|-----------------------------------|
| 325R | S3225S | S3225T | S3225P |
| 330R | S3226S | S3226T | S3226P |
| 3150R | N/A | S3238 | S3238P |
| 3250R | S3207S | S3207T | S3207P |

300 Series

300 Series Overview



| Specifications | 325R | 330R | 3150R | 3250R |
|---|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Maximum Flow Rate | 60 GPH (227 LPH) | 75 GPH (284 LPH) | 150 GPH (568 LPH) | 250 GPH (946 LPH) |
| Port Size | 3/8"-18 NPTF (SAE J476) | 3/8"-18 NPTF (SAE J476) | 7/8"-14 UNF (SAE J1926) | 7/8"-14 UNF (SAE J1926) |
| Total Number of Ports: | 2 | 2 | 2 | 2 |
| Inlets | 1 | 1 | 1 | 1 |
| Outlets | 1 | 1 | 1 | 1 |
| Min. Service Clearance | 2.0 in. (5.1 cm) |
| Element Threads | 1"-14 | 1"-14 | 1 1/4"-12 | 1 1/4"-12 |
| Height | 9.7 in. (24.6 cm) | 11.0 in. (27.9 cm) | 13.6 in. (34.5 cm) | 17.3 in. (43.9 cm) |
| Depth | 4.8 in. (12.2 cm) | 4.8 in. (12.2 cm) | 5.5 in. (14.0 cm) | 5.5 in. (14.0 cm) |
| Width | 4.4 in. (11.2 cm) | 4.4 in. (11.2 cm) | 4.75 in. (12.1 cm) | 4.75 in. (12.1 cm) |
| Weight (dry) | 3.1 lb (1.4 kg) | 3.2 lb (1.5 kg) | 3.6 lb (1.6 kg) | 4.6 lb (2.1 kg) |
| Clean Pressure Drop | 0.17 PSI (0.01 bar) | 0.39 PSI (0.03 bar) | 0.68 PSI (0.05 bar) | 1.0 PSI (0.07 bar) |
| Max. Allowable Pressure¹ | 15 PSI (1.03 bar) | 15 PSI (1.03 bar) | 7 PSI (0.48 bar) | 7 PSI (0.48 bar) |
| Water in Bowl Capacity (with heater)^{2,3} | 2.7 oz (82 ml) 2.3 oz (70 ml) |
| H₂O Removal Efficiency | 99% | 99% | 99% | 99% |
| Operating Temperature | -40° to +255°F (-40° to +124°C) | | | |

¹Pressure installations are OK up to maximum PSI shown. Vacuum installations are recommended.

²Not for use with gasoline applications.

³Maximum power requirements for 3150R and 3250R in-bowl heater option: 12 volt dc (200 watt) = 16.6 amps, 24 volt dc (200 watt) = 8.3 amps. See Accessories for heater relay kits.

300 Series

Optional Accessories

(For models 325R and 330R)

Warning! Racor electrical options are for use on diesel fuel applications ONLY.

In-head 150 Watt PTC Heater

The in-head 150 watt heater is a cold weather starting aid and is thermostatically controlled when power is provided. The heater will automatically turn ON if the fuel temperature drops below 45°F (7°C) and will automatically turn OFF at about 75°F (24°C). Heat is supplied just below the inlet port to melt the wax crystals and allow fuel to efficiently pass through the element. The heater is operated by turning the ignition switch on for a minimum of five minutes prior to starting the engine. See installation diagram on this page.

- **Note: do not smoke or allow open flames near installation to reduce potential for fire.**
- **All wires should be 14 AWG (minimum).**
- **Wire/terminal connections should be soldered and crimped.**
- **Run wires in protected locations; avoid hot surfaces and places that may pinch or rub on wires.**
- **Disconnect battery ground cable before beginning installation.**
- **If vehicle has fused and ignition switch activated terminal on fuse block, then route 14 AWG wire to heater connector wire. This terminal should be capable of 16 amp load and be dedicated only to Racor heater.**
- **A Racor relay is recommended for safest method of installation. Use RK11861 for 12 vdc applications and RK11862 for 24 vdc applications. These kits include an in-line fuse and holder.**
- **An ON/OFF toggle switch may be used to control power to heater relay. This allows operator to cut power during summer use.**
- **Ground Racor filter to chassis by adding a ground wire, if necessary.**

RK 11-1570 (Water Sensor and Element Restriction Gauge)

This optional kit alerts the operator in the event accumulated water (about 80 ml) reaches the water probe or when element restriction has reached 7 inches of mercury. The gauge will illuminate either the 'DRAIN WATER' or 'CHANGE FILTER' lamps, respectfully. An audible buzzer will sound for 2 seconds and then go off. The light(s) will remain on until the

condition has been corrected. The sequence will repeat upon each initial power-up. After 2 seconds, both the lights and buzzer will go off (if no water or restriction is present). The gauge resets itself automatically.

- **Mount gauge in instrumentation panel (2 in. [5.1 cm] diameter hole required for mounting) or locate within instrumentation proximity.**
- **Attach wires as shown using provided hardware.**
- **Use provided wire ties to route wires neatly and away from heat or moving surfaces.**

Testing the Installation

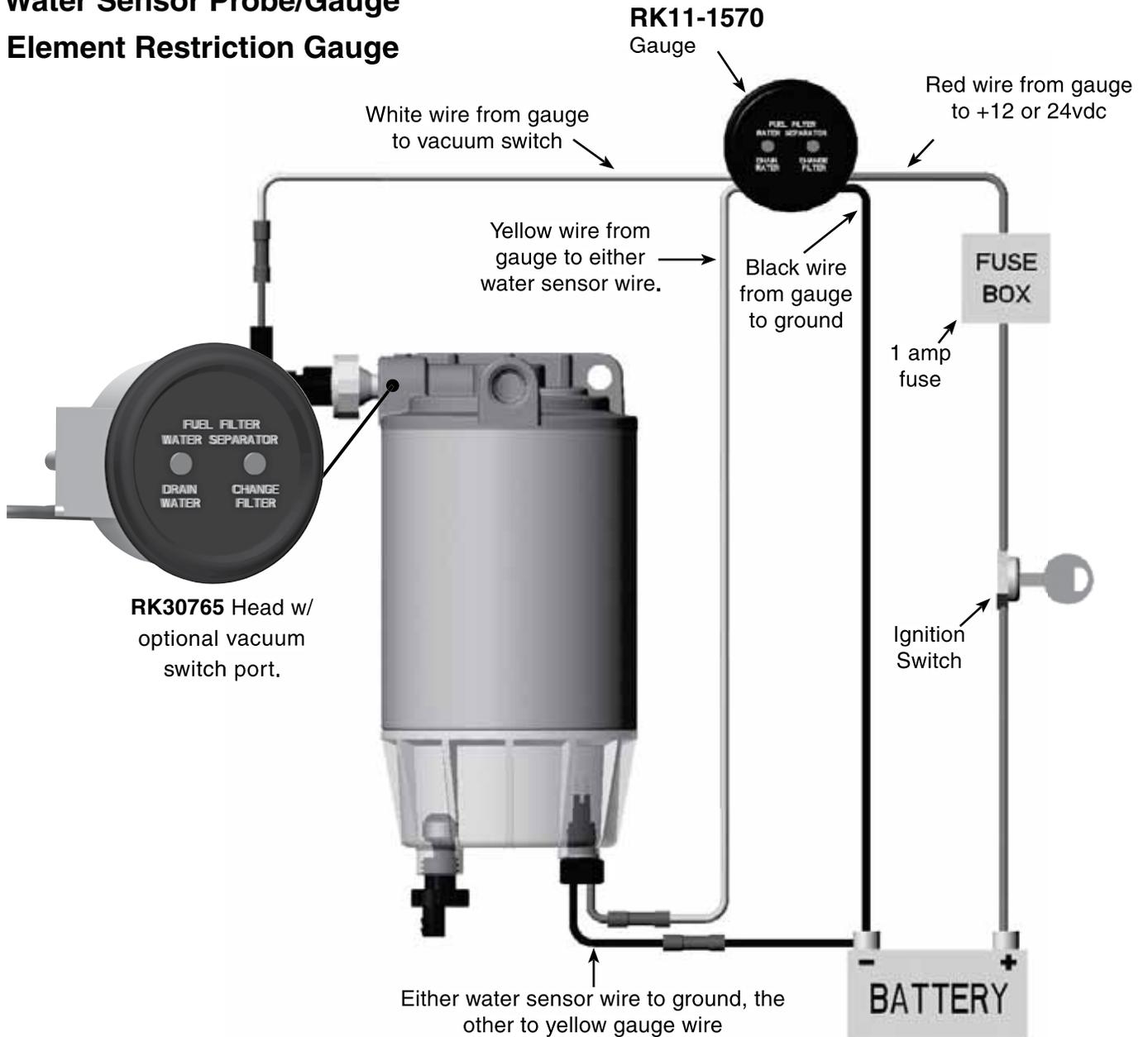
With the battery reconnected, turn the ignition switch to 'ON'. The self-diagnosis sequence will occur. Disconnect the vacuum switch and ground the terminal inside the

connector. After a short delay, the gauge will activate. Remove the water probe and jump the sensor tips, again the gauge should activate. Failures usually are due to poor connections.

300 Series

Installation Diagram

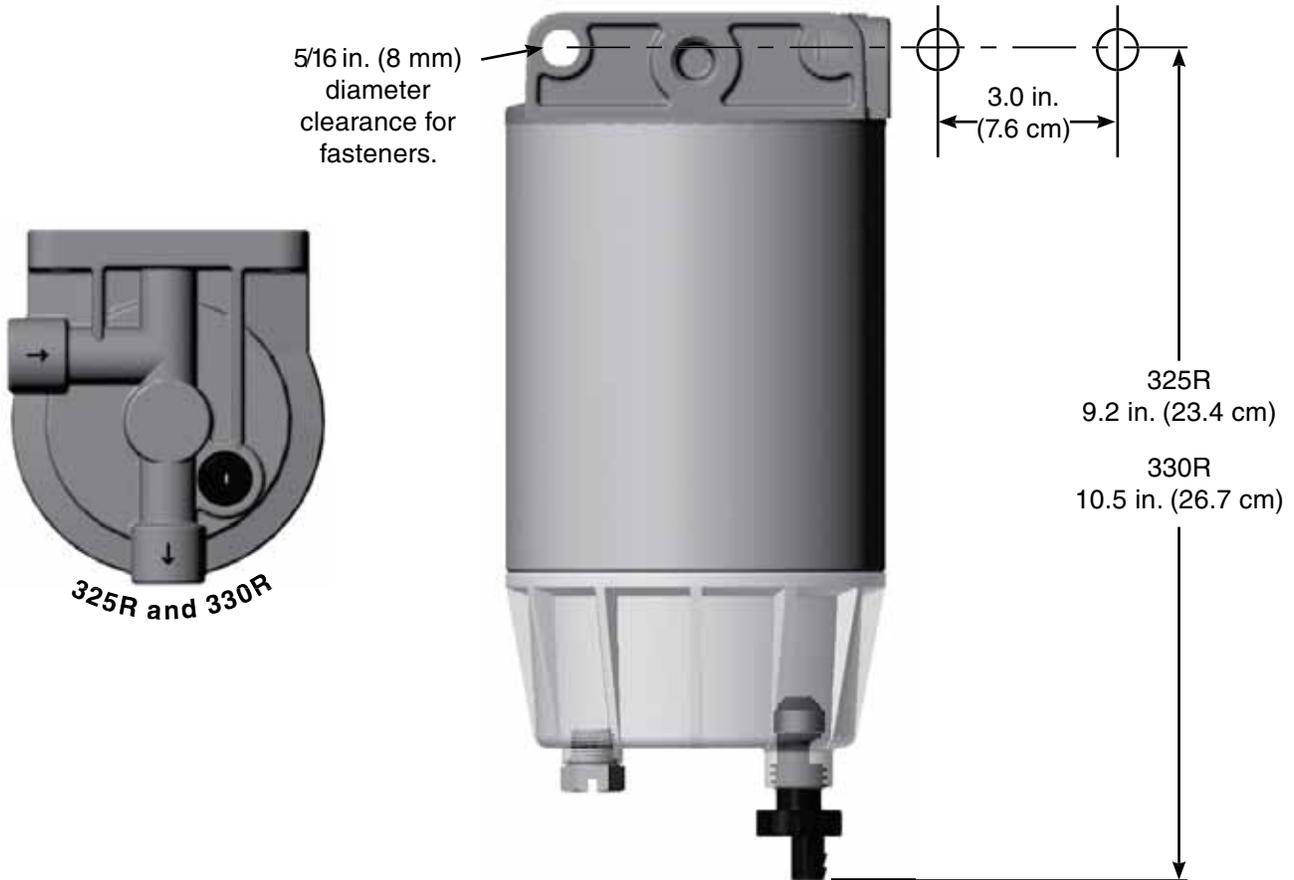
- Vacuum Switch
- Water Sensor Probe/Gauge
- Element Restriction Gauge



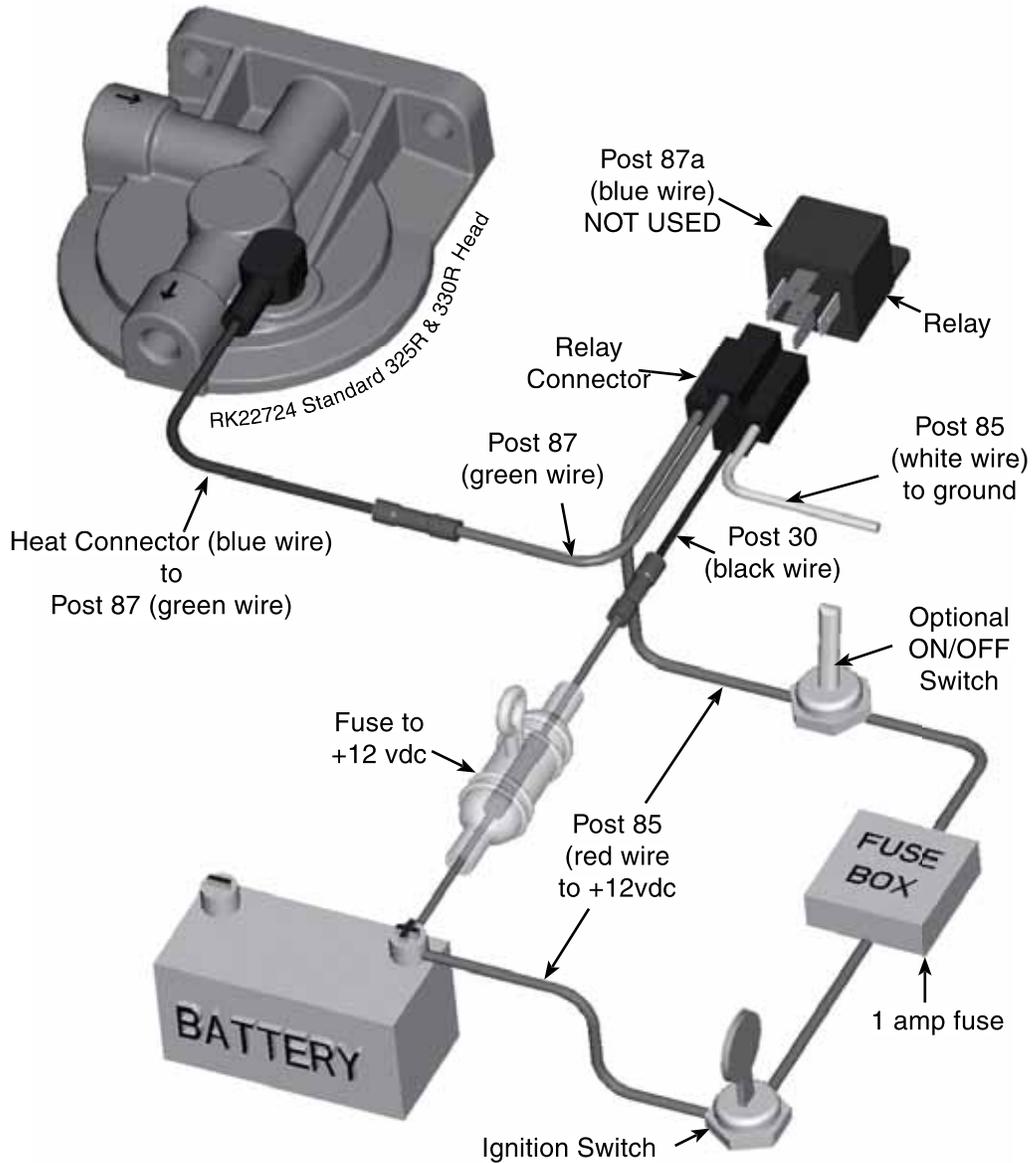
Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

300 Series

Mounting Information

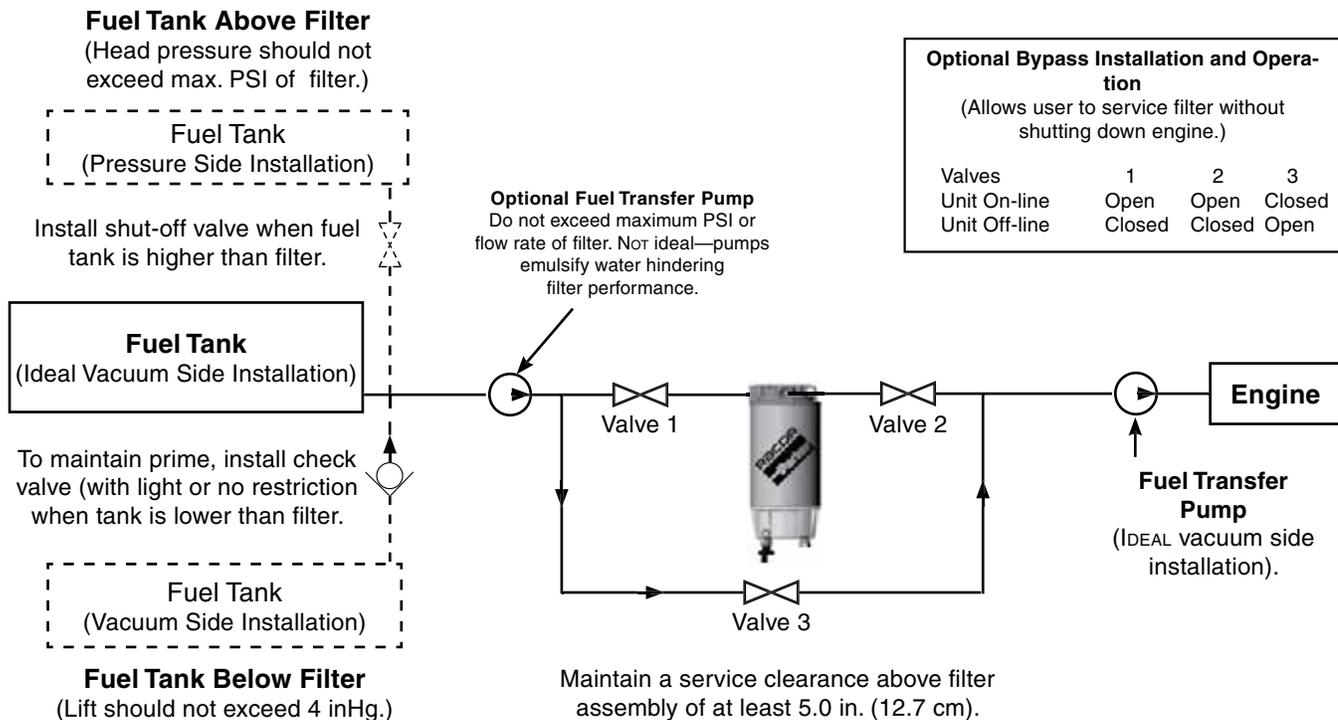


Heater Installation Diagram



300 Series

Installation Diagram

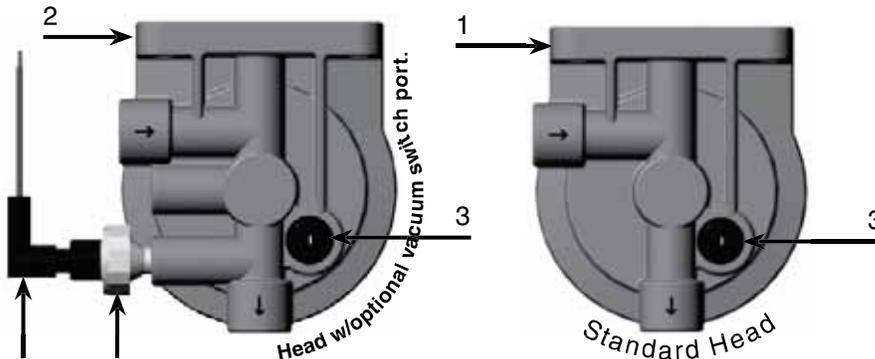
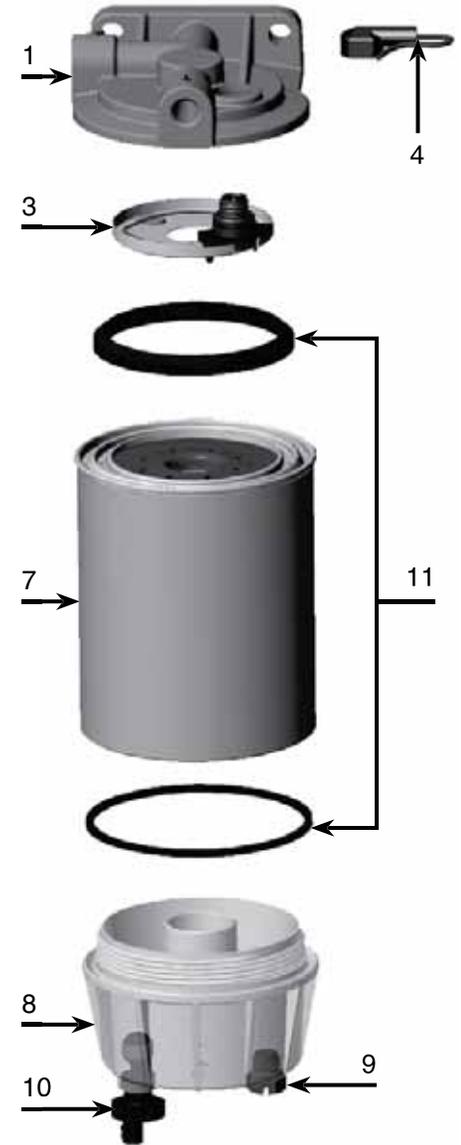


Installation diagram applies to all 300 Series filters. Model 325R shown above. Racor offers hose and fittings to complete this installation - see Accessories.

300 Series

Replacement Parts

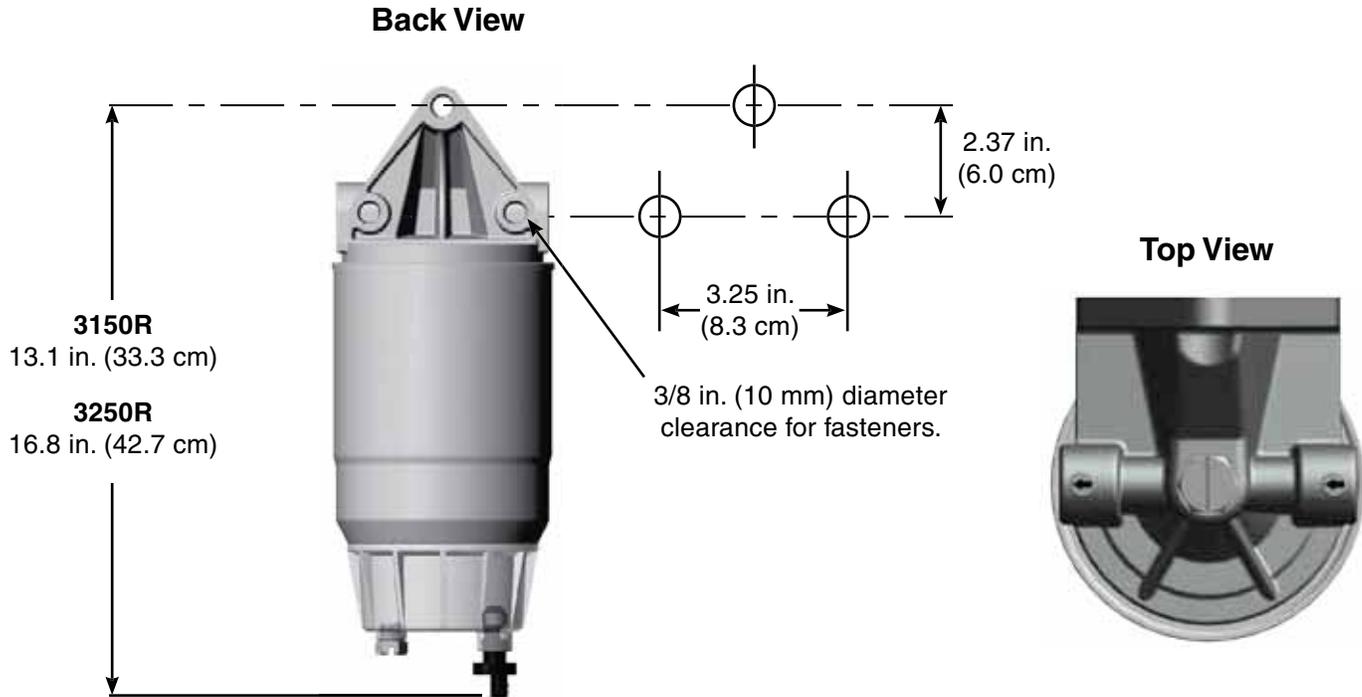
| <u>Part Number</u> | <u>Description</u> |
|-------------------------------------|--|
| 1. RK 22724 | Standard Mounting Head Kit |
| RK 22724-01 | Mounting Head Kit (no hole for heater) |
| 2. RK 30765 | Mounting Head Kit (with optional vacuum switch port) |
| 3. RK 22010 | In-head Heater Kit 12 vdc (150 watt) |
| 4. RK 20366 | Heater Connector Kit |
| 5. RK 20163 | Optional Vacuum Switch Kit (preset at 7 inHg) |
| 6. RK 21030 | Vacuum Switch Connector Kit |
| 7. Spin-On Elements (includes #’12) | |
| 325R | |
| S3225S | 2 Micron |
| S3225T | 10 Micron |
| S3225P | 30 Micron |
| 330R | |
| S3226S | 2 Micron |
| S3226T | 10 Micron |
| S3226P | 30 Micron |
| | See “Replacement Element” chart |
| 8. RK 30063 | Clear Bowl Kit (with self-venting drain, probe plug and O-ring) |
| 9. RK 20126 | Plastic Probe Plug Kit (1/2”-20 UNF threads) |
| 10. RK 30476 | Self-venting Drain Kit (includes seal) |
| 11. 22312 | Gasket Pack |
| | Additional Parts (not shown) |
| 30762 | Installation Instructions |



Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

300 Series

Mounting Information



Installation Information

Exercise great caution when installing 300 Series filters to avoid fire hazards. Do not smoke, allow open flame or excessive heat which could ignite a fire. Perform installation in a well ventilated area.

Refer to Mounting Instructions and Installation Diagram and install as follows:

1. **Make sure engine is off and cool to touch.**
2. **Apply thread sealant to NPTF fittings (do not use thread tapes as particles may break off and contribute to clogging element). Apply motor oil or diesel fuel to UNF fitting O-rings. See Accessories for hose and fitting options.**
3. **Thread fittings into appropriate fuel ports and tighten snugly.**
4. **Mount filter vertically in a protected area and away from heat sources. Maintain at least two inches of clearance below filter for servicing.**
5. **Attach fuel lines to filter. Avoid tight bends and rubbing areas when routing hose.**
6. **Prime filter by removing element and bowl together and filling with fuel. Reinstall and tighten snugly by hand only.**
7. **Connect water probe and heater wires, if equipped.**
8. **Verify all connections are tight and start engine. Correct as necessary with engine off.**

300 Series

Service Instructions

Element replacement frequency is determined by contamination level in fuels. Fuel flow to engine becomes restricted as element gradually plugs with contaminants, resulting in noticeable power loss and/or hard starting. As a guideline, change element every 500 hours, 10,000 miles, every other oil change, annually, or at first indication of power loss, whichever occurs first. Always carry extra replacement elements as one tankful of excessively dirty fuel can quickly plug a filter.

1. **Make sure engine is off and cool to touch.**
2. **Close all fuel valves, if applicable, to make sure excess fuel does not spill during servicing.**
3. **Disconnect water probe and heater connectors.**
4. **Open vent plug on mounting head, if equipped.**
5. **Open drain on bottom of bowl to drain filter.**
6. **Remove bowl and element; dispose properly.**
7. **Lubricate new seals with motor oil or clean fuel.**
8. **Attach bowl to new element.**
9. **Prime filter by filling element (with bowl attached) with fuel.**
10. **Re-install element and bowl and tighten by hand only - do not use tools.**

11. **Connect water probe and heater connectors.**
12. **Open all fuel valves, if applicable.**
13. **Verify all connections are tight and start engine. Correct as necessary with engine off.**

Draining

Water is heavier than fuel and will settle to bottom of bowl and appear different in color if collected in a clear jar. In high humidity environments, check bowl frequently (daily if a poor fuel source is suspected). 300 Series bowls are equipped with a water probe port (water probe sold separately). A water sensing kit will alert the operator of a high water condition in the filter.

Warning! DO NOT use water probe electronics in gasoline applications - an explosion could occur.

1. **Make sure engine is off and cool to touch.**
2. **Open vent plug, if equipped.**
3. **Drain water from filter by opening self-venting drain on bottom of bowl. Close as soon as all water has evacuated.**

Note: if drain is open too long, the entire filter assembly may drain completely of water and fuel.

4. **Tighten drain and vent plug snugly.**
5. **Follow Priming Instructions.**

Priming

1. **Prime filter by removing bowl and element (together) and filling with clean fuel.**
2. **Re-install bowl and element and tighten by hand only - do not use tools.**
3. **Verify all other connections are tight.**
4. **Start engine and check for leaks. Correct as necessary with engine off.**

Trouble Shooting

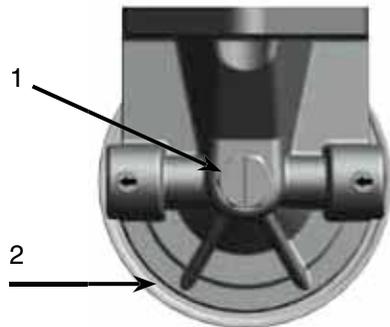
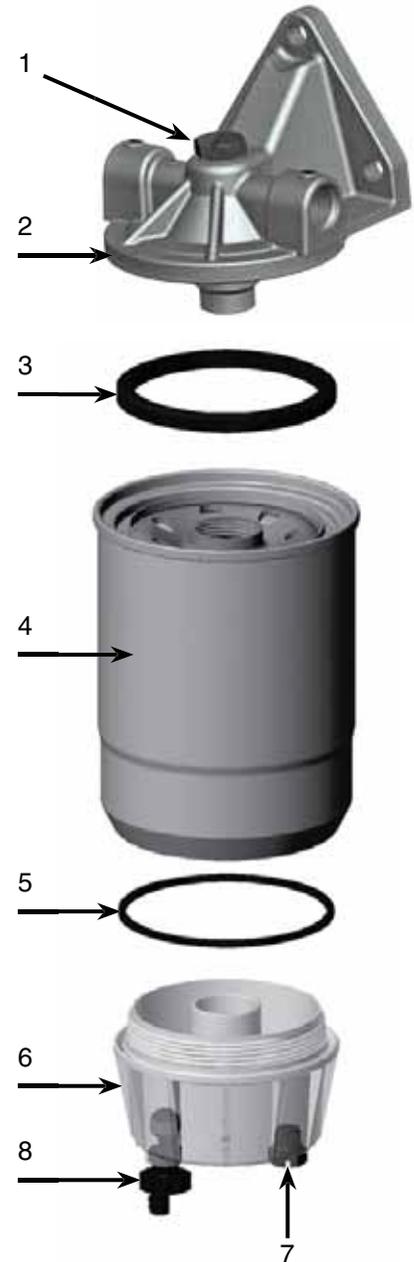
If a 300 Series filter fails to hold prime, first check vent plug (if equipped), drain valve, fittings and head/element/bowl are properly tightened. Next, check fuel line connections and verify that they are free of pinches or unnecessary bends and check to see if fuel tank strainer (or pick-up tube) is clogged. If problems persist and element is new, call Racor Technical Support at the number listed below.

300 Series

Replacement Parts

3150R and 3250R

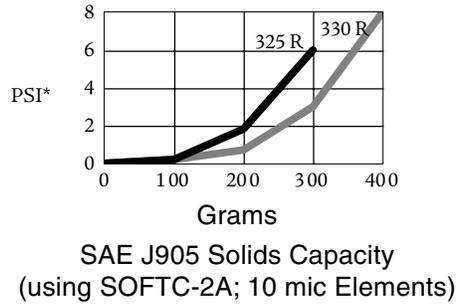
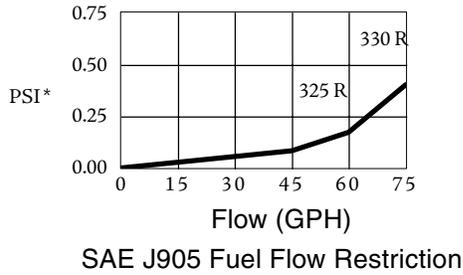
| <u>Part Number</u> | <u>Description</u> |
|--|---|
| 1. 22351 | Vent Plug Kit (3/4"-16 UNF threads) |
| 2. RK 31547 | Mounting Head Kit |
| 3. N/A | Head Gasket (sold with element only) |
| 4. Spin-On Elements (includes #'s 3 & 5) | |
| 3150R | |
| N/A | 2 Micron |
| S3238 | 10 Micron |
| S3238P | 30 Micron |
| 3250R | |
| S3207S | 2 Micron |
| S3207T | 10 Micron |
| S3207P | 30 Micron |
| 5. RK 30965 | Bowl O-ring Kit |
| 6. RK 30063 | Clear Bowl Kit (with self-venting drain, probe plug and O-ring) |
| RK 30900 | Same as RK30063 Plus a 12 vdc (200 watt) Heater |
| RK 30925 | Same as RK30063 Plus a 24 vdc (200 watt) Heater |
| 7. RK 20126 | Plastic Probe Plug Kit (1/2"-20 UNF threads) |
| 8. RK 30476 | Self-venting Drain Kit (includes seal) |
| Additional Parts (not shown) | |
| 30942 | Installation Instructions |



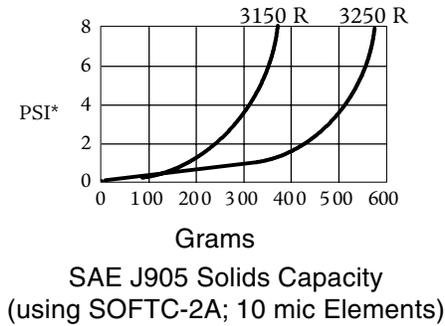
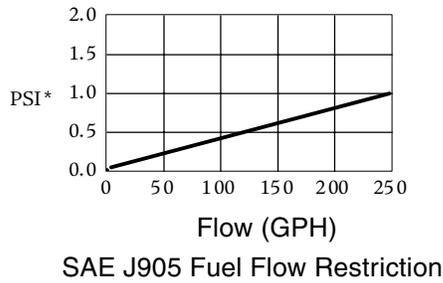
Top View

Test Data

325R and 330R



3150R and 3250R



(Test results are from controlled laboratory testing. Field results may vary.)
 (PSI X 2.036 = inHG) (PSI X 6.895 = kPa)

300RC Series

345RC

Fuel Filter/Fuel Heater/
Water Separator



Racor's 300RC Series Fuel Filter/ Heater/Water Separators are specifically designed to handle today's tough fuel system problems. These units feature a standard high efficiency coolant heat exchanger to heat incoming fuel and are only different in flow capacity and element size.

These units are recommended for suction (vacuum) side installations however the unit may be installed on the pressure side up to 30 PSI maximum. The die-cast aluminum mounting head features standard 3/8" NPTF fuel ports. The coolant heater features hose beads to accept standard 5/8" I.D. hose. Additionally, the coolant heat exchanger may be rotated 360° for installation versatility simply by loosening the center cap at the top of the unit. Either port may serve as the inlet or outlet.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 45 GPH (170 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF |
| Coolant Heater Ports | 5/8" I.D. Hose Bead |
| Total Number of Ports: | 4 |
| Fuel Inlet | 1 |
| Fuel Outlet | 1 |
| Coolant Inlet | 1 |
| Coolant Outlet | 1 |
| Housing Material | Die-cast Aluminum |
| Element Center Threads | 1"-14 SAE |
| Minimum Service Clearance (above filter) | 5.0 in. (12.7 cm) |
| (below filter) | 2.0 in. (5.1 cm) |
| Height | 9.3 in. (23.6 cm) |
| Depth | 4.8 in. (12.2 cm) |
| Width | 4.4 in. (11.2 cm) |
| Weight (dry) | 2.5 lb (1.1 kg) |
| Maximum Working Pressure¹ | 30 PSI (2.1 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.10 PSI (0.69 kPa) |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

300RC Series

360RC

Fuel Filter/Fuel Heater,
Water Separator



Racor's 300RC Series Fuel Filter/ Heater/Water Separators are specifically designed to handle today's tough fuel system problems. These units feature a standard high efficiency coolant heat exchanger to heat incoming fuel and are only different in flow capacity and element size.

These units are recommended for suction (vacuum) side installations however the unit may be installed on the pressure side up to 30 PSI maximum. The die-cast aluminum mounting head features standard 3/8" NPTF fuel ports. The coolant heater features hose beads to accept standard 5/8" I.D. hose. Additionally, the coolant heat exchanger may be rotated 360° for installation versatility simply by loosening the center cap at the top of the unit. Either port may serve as the inlet or outlet.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 60 GPH (227 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF |
| Coolant Heater Port | 5/8" I.D. Hose Bead |
| Total Number of Ports: | 4 |
| Fuel Inlet | 1 |
| Fuel Outlet | 1 |
| Coolant Inlet | 1 |
| Coolant Outlet | 1 |
| Housing Material | Die-cast Aluminum |
| Element Center Threads | 1"-14 SAE |
| Minimum Service Clearance (above filter) | 5.0 in (12.7 cm) |
| (below filter) | 2.0 in (5.1 cm) |
| Height | 11.0 in. (27.9 cm) |
| Depth | 4.8 in. (12.2 cm) |
| Width | 4.4 in. (11.2 cm) |
| Weight (dry) | 2.7 lb (1.2 kg) |
| Maximum Working Pressure¹ | 30 PSI (2.1 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.22 PSI (1.52 kPa) |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

300RC Series

390RC

Fuel Filter/Fuel Heater/
Water Separator



Racor's 300RC Series Fuel Filter/ Heater/Water Separators are specifically designed to handle today's tough fuel system problems. These units feature a standard high efficiency coolant heat exchanger to heat incoming fuel and are only different in flow capacity and element size.

These units are recommended for suction (vacuum) side installations however the unit may be installed on the pressure side up to 30 PSI maximum. The die-cast aluminum mounting head features standard 3/8" NPTF fuel ports. The coolant heater features hose beads to accept standard 5/8" I.D. hose. Additionally, the coolant heat exchanger may be rotated 360° for installation versatility simply by loosening the center cap at the top of the unit. Either port may serve as the inlet or outlet.



Specifications

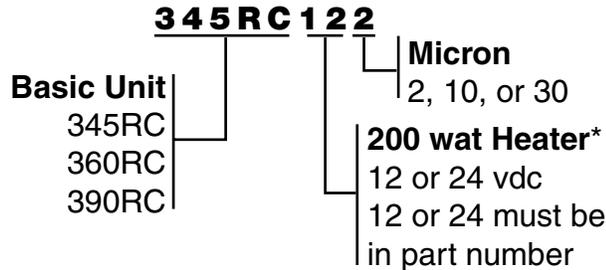
| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 90 GPH (341 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF |
| Coolant Heater Port | 5/8" I.D. Hose Bead |
| Total Number of Ports: | 4 |
| Fuel Inlet | 1 |
| Fuel Outlet | 1 |
| Coolant Inlet | 1 |
| Coolant Outlet | 1 |
| Housing Material | Die-cast Aluminum |
| Element Center Threads | 1"-14 SAE |
| Minimum Service Clearance (above filter) | 5.0 in (12.7 cm) |
| (below filter) | 2.0 in. (5.1 cm) |
| Height | 11.8 in. (29.9 cm) |
| Depth | 4.8 in. (12.2 cm) |
| Width | 4.4 in. (11.2 cm) |
| Weight (dry) | 2.9 lb (1.3 kg) |
| Maximum Working Pressure¹ | 30 PSI (2.1 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.76 PSI (5.24 kPa) |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (88°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

300RC Series

How to Order

(The examples below illustrate how part numbers are constructed)



*Recommended for use with Racor Heater Relay Kit. See Accessories

| Replacement Elements | | | |
|----------------------|--------------------------------|-------------------------------------|------------------------------------|
| Model Number | 2 Micron (Final Filtration) | 10 Micron (Secondary Filtration) | 30 Micron* (Primary Filtration) |
| 345RC | R45S | R45T | R45P |
| 360RC | R60S | R60T | R60P |
| 390RC | R90S | R90T | R90P |

*A secondary/final filter is required downstream.

Options

Always keep extra replacement elements on hand as one tank of poor quality fuel can clog a filter.

The reusable clear contaminant collection bowl allows the operator to check contamination build-up at a glance. When water is present, rotate the drain valve open to evacuate contaminants.

In-Bowl Heater: Besides the standard built-on head coolant heat exchanger, a powerful 12 or 24 vdc 200 watt in-bowl heater option is available to quickly warm the element fuel thus providing easier starting and optimum operating efficiency in cold weather or climates.

Water Sensor Probe: When used with a Racor Water Detection Kit, the in-cab

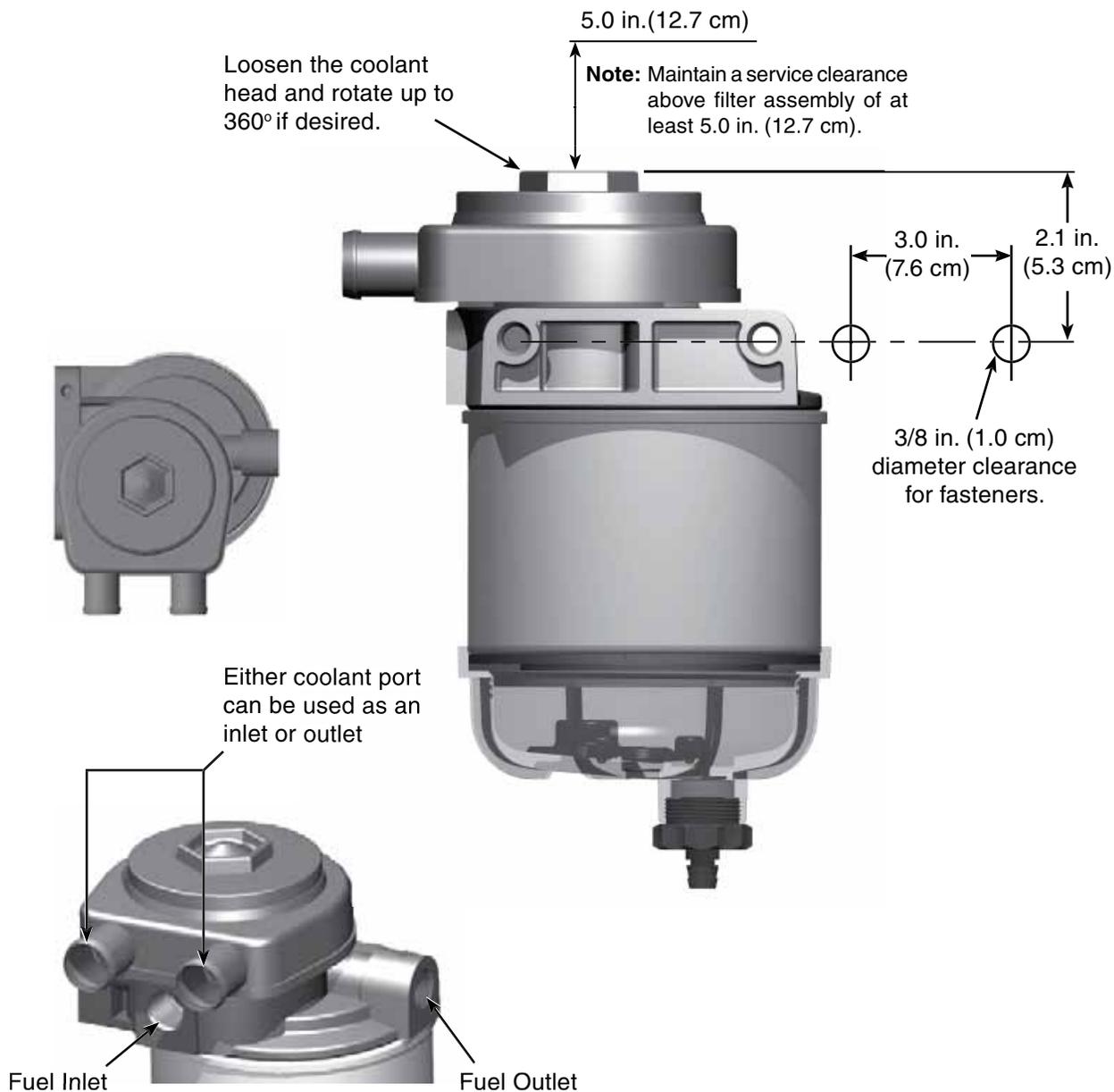
module will alert the operator when it's time to drain the bowl. See Accessories.

Note: These electrical accessories are not intended for use with gasoline applications.

Note: These electrical accessories are not intended for use with gasoline applications.

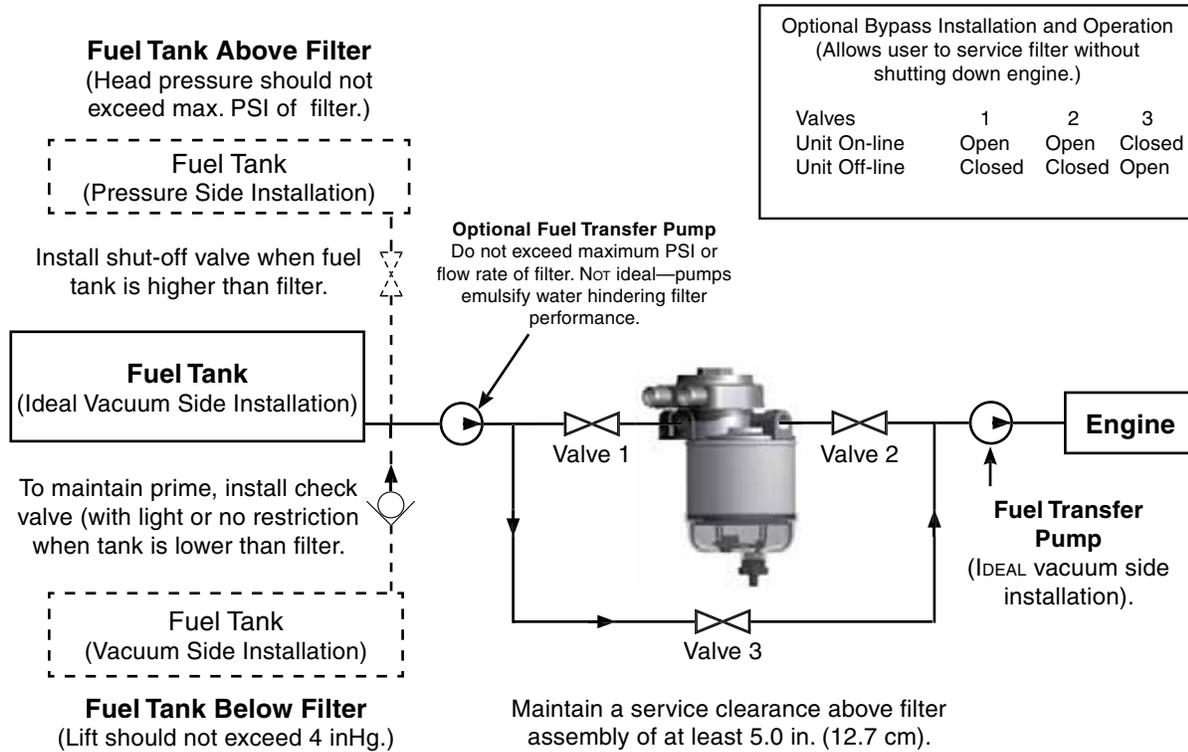
300RC Series

Mounting Instructions



300RC Series

Installation Diagram



Installation diagram applies to all 300RC Series filters. Model 345RC shown above.

In-bowl 12 or 24 vdc Heater

The in-bowl 200 watt heater is a cold weather starting aid with an internal automatic thermostat that turns the heater on if the fuel temperature drops below 45°F (7°C). Heat is supplied just below the replacement element to melt the wax crystals and allow fuel to efficiently pass through the element. The heater will automatically turn off at about 75°F (24°C). The heater is operated by turning on the ignition switch for a minimum of five minutes prior to starting the engine. see Replacement Part list.



300RC Series

Coolant Hose Routing Instructions

The Racor coolant heat exchanger is plumbed from the pressure side of the coolant pump and coolant is returned to the suction side of the pump. If a coolant port is not available in the pump or engine block, the coolant may be supplied by tapping into the cab heater coolant supply as shown below. The heat exchanger head may be rotated to facilitate installation by loosening the center cap on top of the unit.

Either heat exchanger port may be used for the inlet or outlet (Valves are customer supplied).

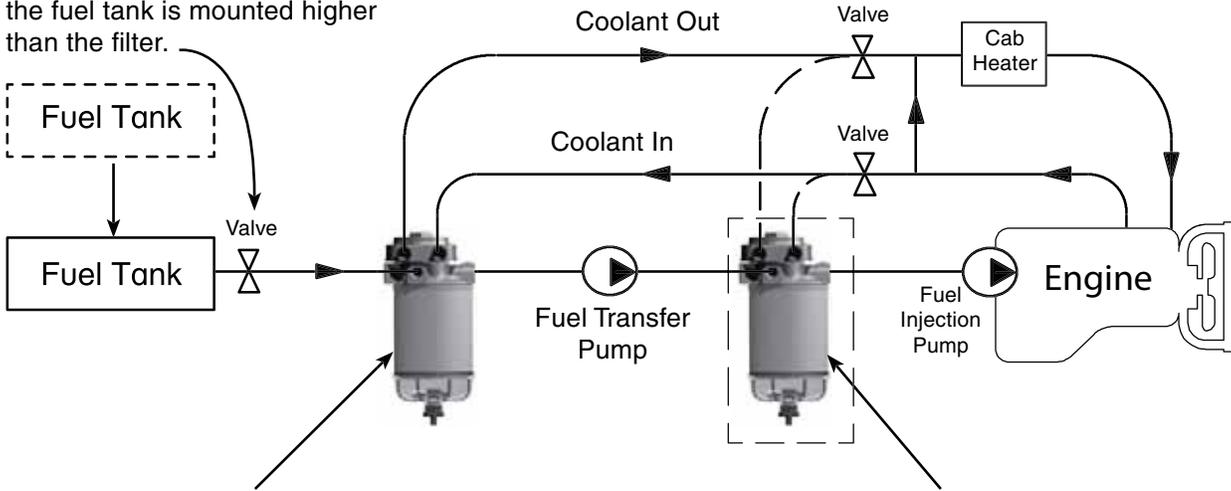
Note: Because of the high heat exchange efficiency of these units, customer supplied manual shut-off valves should be used to regulate coolant to the Racor unit.

Valve Positions:

Open: About equal flow through Racor and cab heater.

Closed: All coolant to the cab heater.

Note: A fuel shut-off valve (customer supplied) is recommended when the fuel tank is mounted higher than the filter.



Recommended Location: Suction Side
 Filtration: Primary (first) filter - use 30 micron
 (If it is the only filter in the system, use 10 or 2 micron)

Acceptable Location: Pressure Side (Must not exceed 30 PSI)
 Filtration: Secondary/Final (10 or 2 micron)

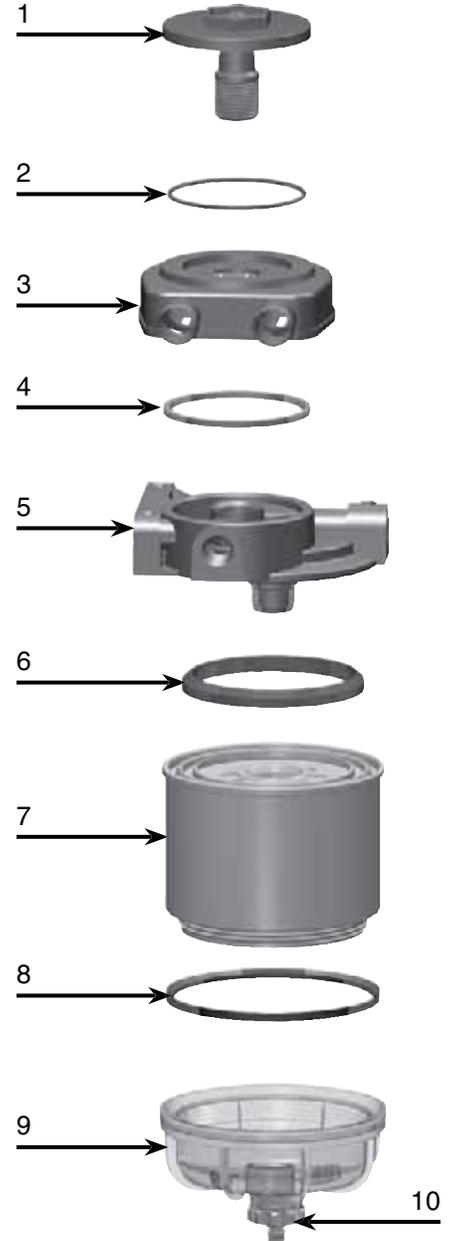
300RC Series

Replacement Parts

345RC, 360RC and 390RC

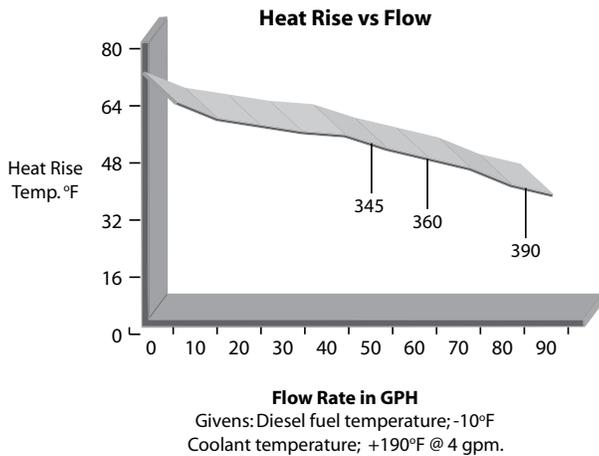
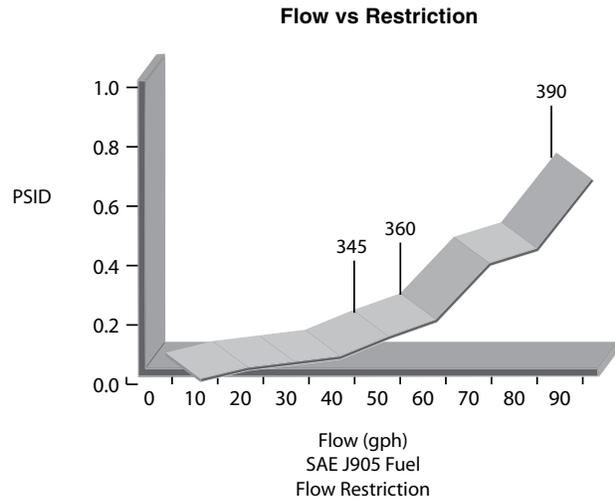
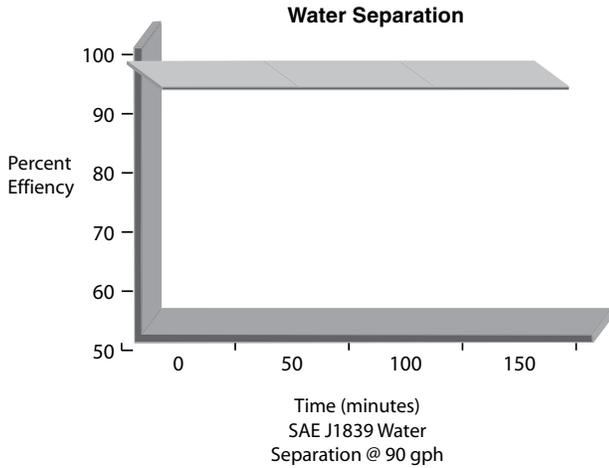
| <u>Part Number</u> | <u>Description</u> |
|------------------------------------|-------------------------------------|
| 1. RK 30234 | Heat Exchanger Cap Kit |
| 2. RK 10012 | Cap / Heat Exchanger O-ring |
| 3. N/A | Heat Exchanger Kit |
| 4. 30237 | Square-cut Gasket |
| 5. RK 22365-01 | Head Kit |
| 6. 21501 | Gasket Pack |
| Replacement Elements (includes #6) | |
| 7. R45S | 2 micron |
| R45T | 10 micron |
| R45P | 30 micron |
| R60S | 2 micron |
| R60T | 10 micron |
| R60P | 30 micron |
| R90S | 2 micron |
| R90T | 10 micron |
| R90P | 30 micron |
| 8. RK 22333 | Bowl gasket Kit |
| 9. RK 21113-13-06 | Clear Bowl Kit, 9/16" SAE Ports |
| RK 21113-13 | Bowl Kit with Probe 9/16" SAE Ports |
| RK 22266-01 | Bowl Kit with Probe & 12 vdc Heater |
| RK 22266-02 | Bowl Kit with Probe & 24 vdc Heater |
| RK 22266-03 | Bowl Kit with Heater 12 vdc |
| RK 22266-04 | Bowl Kit with Heater 24 vdc |
| 10. RK 22329 | Water Drain Kit |
| Additional Parts (not shown) | |
| RK 21199 | Water Sensor Connector Kit |
| RK 22323 | Heater Connector Kit |
| RK 22493 | Complete Seal Service Kit |
| RK 21145¹ | Water Probe Only 9/16" SAE |
| RK 11-1679 | Port Plug 9/16" SAE |

¹Must be used with a Water Detection Kit. see Accessories section.



300RC Series

Test Data



(Test results are from controlled laboratory testing. Field results may vary.)
(PSI X 2.036 = inHG) (PSI X 6.895 = kPa)

300RC Series

300RC Series Overview



| Specifications | 345RC | 360RC | 390RC |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| Maximum Flow Rate | 45 GPH (170 LPH) | 60 GPH (227 LPH) | 90 GPH (341 LPH) |
| Fuel Port Size (SAE J476) Coolant Port Size | 3/8"-18 NPTF Fits 5/8" I.D. Hose | 3/8"-18 NPTF Fits 5/8" I.D. Hose | 3/8"-18 NPTF Fits 5/8" I.D. Hose |
| Total Number of Ports: | 4 | 4 | 4 |
| Fuel Inlet | 1 | 1 | 1 |
| Fuel Outlet | 1 | 1 | 1 |
| Coolant Inlet | 1 | 1 | 1 |
| Coolant Outlet | 1 | 1 | 1 |
| Min. Service Clearance | | | |
| Above | 5.0 in (12.7 cm) | 5.0 in (12.7 cm) | 5.0 in (12.7 cm) |
| Below | 2.0 in (5.1 cm) | 2.0 in (5.1 cm) | 2.0 in (5.1 cm) |
| Element Center Threads | 1"-14 SAE | 1"-14 SAE | 1"-14 SAE |
| Height | 9.3 in. (23.6 cm) | 11.0 in. (27.9 cm) | 11.8 in. (29.9 cm) |
| Depth | 4.8 in. (12.2 cm) | 4.8 in. (12.2 cm) | 4.8 in. (12.2 cm) |
| Width | 4.4 in. (11.2 cm) | 4.4 in. (11.2 cm) | 4.4 in. (11.2 cm) |
| Weight (dry) | 2.5 lb (1.1 kg) | 2.7 lb (1.2 kg) | 2.9 lb (1.3 kg) |
| Clean Pressure Drop | 0.10 PSI (0.69 kPa) | 0.22 PSI (1.52 kPa) | 0.76 PSI (5.24 kPa) |
| Maximum Pressure | 30 PSI (207 kPa) | 30 PSI (207 kPa) | 30 PSI (207 kPa) |
| Water in Bowl Capacity (with heater) | 4.0 oz (118 ml) 3.5 oz (104 ml) | 4.0 oz (118 ml) 3.5 oz (104 ml) | 4.0 oz (118 ml) 3.5 oz (104 ml) |
| H₂O Removal Efficiency | 99% | 99% | 99% |
| Operating Temperature | -40° to +255°F (-40° to +124°C) | | |

400 Series

445R

Fuel Filter/Water Separator



445R Spin-On fuel filter/water separators feature a hand (palm) operated fuel priming pump which simplifies service procedures and yields extremely low flow resistance due to its unique pump bypass characteristic.

These filters also feature multiple fuel ports (two inlets and two outlets) and a unitized mounting bracket for installation convenience. Inlet and outlet threads are 3/8"-18 NPTF (SAE J476). These filter assemblies provide flexibility during mounting to fit any engine application.



Specifications

| | |
|--|---------------------------------|
| Maximum Flow Rate: (with diesel) | 45 GPH (170 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF (SAE J476) |
| Housing Material | Cast Aluminum |
| Replacement Element | See Element Chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 9.3 in. (23.6 cm) |
| Depth | 4.5 in. (11.4 cm) |
| Width | 4.8 in. (12.1 cm) |
| Weight (dry) | 2.5 lb (1.1 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.17 PSI (0.01 bar) |
| Available Options: ² (water sensor) (heater) ³ | Yes Yes |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

²Do not use with gasoline applications.

400 Series

460R

Fuel Filter/Water Separator



460R Spin-On fuel filter/water separators feature a hand (palm) operated fuel priming pump which simplifies service procedures and yields extremely low flow resistance due to its unique pump bypass characteristic.

These filters also feature multiple fuel ports (two inlets and two outlets) and a unitized mounting bracket for installation convenience. Inlet and outlet threads are 3/8"-18 NPTF (SAE J476). These filter assemblies provide flexibility during mounting to fit any engine application.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 60 GPH (227 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF (SAE J476) |
| Housing Material | Cast Aluminum |
| Replacement Element | See Element Chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 11.0 in. (27.9 cm) |
| Depth | 4.5 in. (11.4 cm) |
| Width | 4.8 in. (12.1 cm) |
| Weight (dry) | 2.7 lb (1.2 kg) |
| Maximum Working Pressure¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.39 PSI (0.03 bar) |
| Available Options:² (water sensor) (heater)³ | Yes Yes |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown.

Vacuum installations are recommended.

²Do not use with gasoline applications.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

400 Series

490R

Fuel Filter/Water Separator



490R Spin-On fuel filter/water separators feature a hand (palm) operated fuel priming pump which simplifies service procedures and yields extremely low flow resistance due to its unique pump bypass characteristic.

These filters also feature multiple fuel ports (two inlets and two outlets) and a unitized mounting bracket for installation convenience. Inlet and outlet threads are 3/8"-18 NPTF (SAE J476). These filter assemblies provide flexibility during mounting to fit any engine application.



Specifications

| | |
|--|---------------------------------|
| Maximum Flow Rate: (with diesel) | 90 GPH (341 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF (SAE J476) |
| Housing Material | Cast Aluminum |
| Replacement Element | See Element Chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 11.8 in. (30.0 cm) |
| Depth | 4.5 in. (11.4 cm) |
| Width | 4.8 in. (12.1 cm) |
| Weight (dry) | 2.9 lb (1.3 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.95 PSI (0.07 bar) |
| Available Options: ² (water sensor) (heater) ³ | Yes Yes |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown. Vacuum installations are recommended.

²Do not use with gasoline applications.

400 Series

4120R

Fuel Filter/Water Separator



4120R Spin-On fuel filter/water separators feature a hand (palm) operated fuel priming pump which simplifies service procedures and yields extremely low flow resistance due to its unique pump bypass characteristic.

These filters also feature multiple fuel ports (two inlets and two outlets) and a unitized mounting bracket for installation convenience. Inlet and outlet threads are 3/4"-16 UNF (SAE J1926). These filter assemblies provide flexibility during mounting to fit any engine application.



Specifications

| | |
|--|---------------------------------|
| Maximum Flow Rate: (with diesel) | 120 GPH (454 LPH) |
| Inlet/Outlet Port Size | 3/4"-16 SAE (SAE J1926) |
| Housing Material | Cast Aluminum |
| Replacement Element | See Element Chart |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 15.0 in. (38.1 cm) |
| Depth | 4.5 in. (11.4 cm) |
| Width | 4.8 in. (12.1 cm) |
| Weight (dry) | 3.9 lb (1.8 kg) |
| Maximum Working Pressure ¹ | 15 PSI (1.03 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.85 PSI (0.06 bar) |
| Available Options: ² (water sensor) (heater) ³ | Yes Yes |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Pressure installations acceptable up to maximum PSI shown.

Vacuum installations are recommended.

²Do not use with gasoline applications.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

400 Series

How to Order

(The examples below illustrate how part numbers are constructed)

| * | 490R | 12 | 2 |
|---|---|---|--|
| Add an * for optional 16 mm fuel ports ¹ (omit if not desired) | Specify a model number: 445R, 460R, 490R, or 4120R. | Add 12 or 24 for a 12 or 24 volt dc heater ² . (omit if not desired) | Specify a micron rating: 2, 10, or 30. |

¹ Standard fuel ports are 3/8"-18 NPTF (445R, 460R and 490R) and 3/4"-16 UNF (4120R).

² Use with Racor relay kit - see Accessories.

| Replacement Elements | | | |
|----------------------|-----------------------------|----------------------------------|--------------------------------|
| Model Number | 2 Micron (Final Filtration) | 10 Micron (Secondary Filtration) | 30 Micron (Primary Filtration) |
| 445R | R45S or R47S | R45T | R45P |
| 460R | R60S | R60T | R60P |
| 490R | R90S | R90T | R90P |
| 4120R | R120S | R120T | R120P |

Optional Dual Media Filter

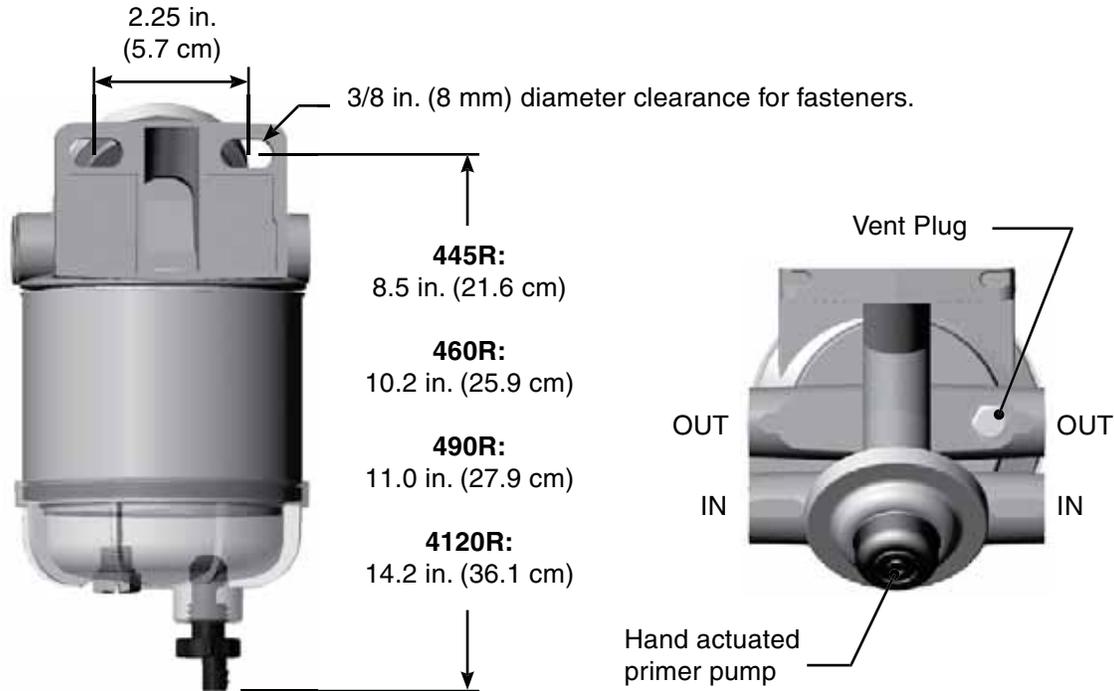
Dual-Layer media offers enhanced high dirt-holding capacity, and extended filter life. Dual-Layer media ensures more complete removal of all size contaminants. The R47S filter replaces the R45S Spin-On element, and provides removal efficiencies of 99.98% nominal on 2 micron particles. Still much greater than the 50-90% efficiency of most single-stage filters.



R47S Dual Media Filter

400 Series

Mounting Information



Installation Instructions

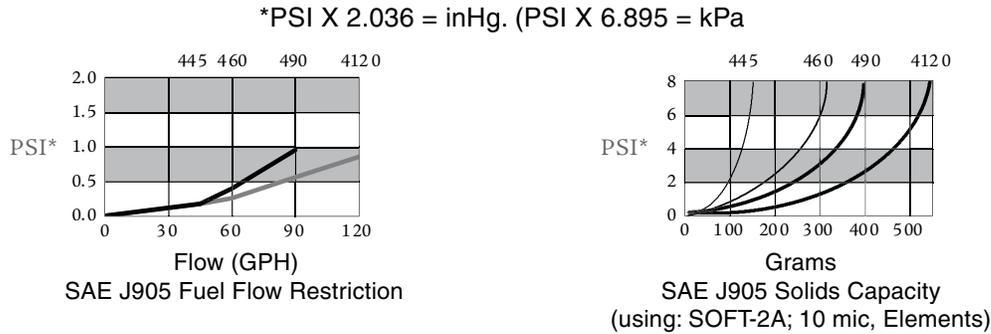
Refer to Mounting Instructions and Installation Diagram and install as follows:

1. Make sure engine is off and cool to touch.
2. 445R, 460R and 490R: Apply thread sealant to NPT fittings (do not use thread tapes as particles may break off and contribute to clogging element). 4120R: Apply motor oil or diesel fuel to O-ring on UNF fittings.
3. Thread fittings into appropriate fuel ports and tighten snugly. Plug unused ports (if any) with port plugs and tighten snugly.
4. Mount filter vertically in a protected area and away from heat sources. Maintain at least 2.0" (5.1 cm) of clearance below filter for draining water and servicing element.
5. Attach fuel lines to filter. Avoid tight bends and rubbing areas when routing hose.
6. Connect water probe and heater wires (if equipped).
7. Open vent plug and operate hand primer pump until fuel purges from vent.
8. Close vent plug and start engine. Correct as necessary with engine off.

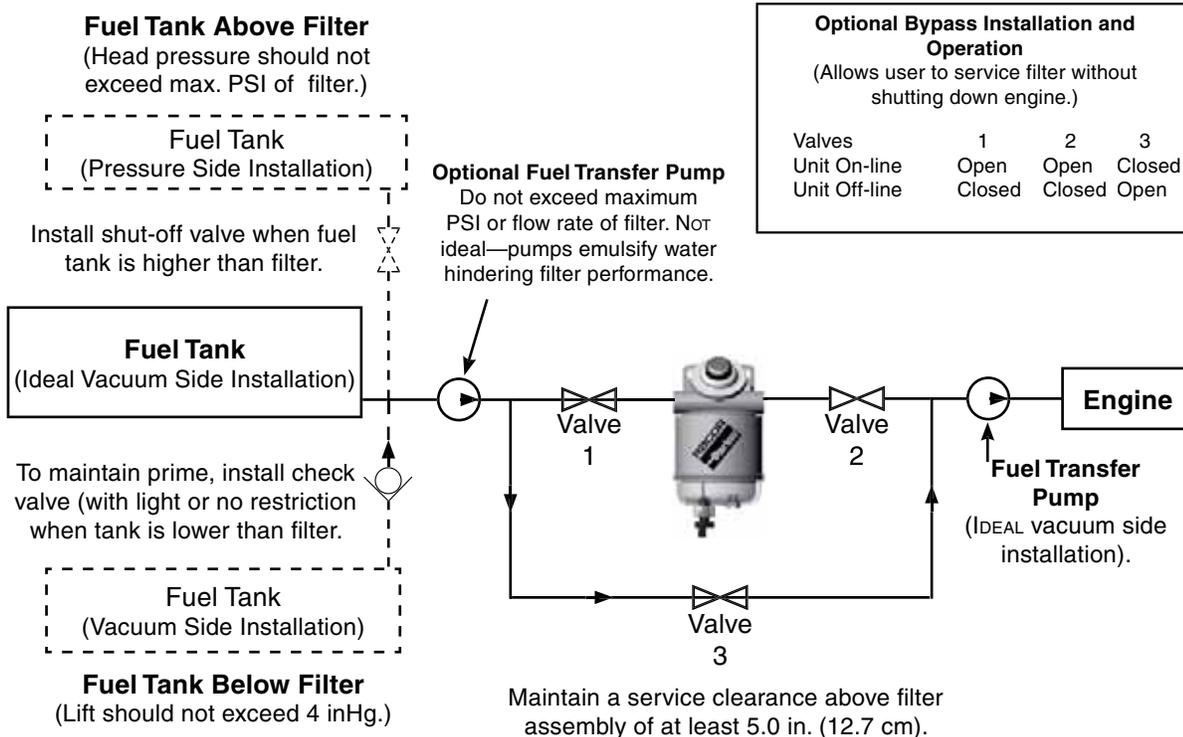
400 Series

Test Data

(Test results are from controlled laboratory testing. Field results may vary.)



Installation Diagram



Installation diagram applies to all 400 Series filters. Model 445R shown above. Racor offers hose and fittings to complete this installation - see Accessories.

400 Series

Service Instructions

Element replacement frequency is determined by contamination level in fuels. Fuel flow to engine becomes restricted as element gradually plugs with contaminants, resulting in noticeable power loss and/or hard starting. As a guideline, change element every 500 hours, 10,000 miles, every other oil change, annually, or at first indication of power loss, whichever occurs first. Always carry extra replacement elements as one tankful of excessively dirty fuel can quickly plug a filter.

1. **Make sure engine is off and cool to touch.**
2. **Close all fuel valves, if applicable, to make sure excess fuel does not spill during servicing.**
3. **Disconnect water probe and heater connectors, if equipped.**
4. **Open vent plug on mounting head.**
5. **Drain unit of fuel.**
6. **Remove bowl and element. Dispose element properly. Bowl is reusable.**
7. **Lubricate new element seals with motor oil or**

clean fuel and install only with new element.

8. **Re-install bowl and tighten by hand only - do not use tools.**
9. **Connect water probe and heater connectors, if equipped.**
10. **Open all fuel valves, if applicable.**
11. **Operate hand primer pump until fuel purges from vent.**
12. **Close vent plug and start engine. Correct as necessary with engine off.**

Draining the Collection Bowl

Water is heavier than fuel and will settle to bottom of bowl and appear different in color if collected in a clear jar. In high humidity environments, check bowl frequently (daily if a poor fuel source is suspected). 400 Series bowls are equipped with a water sensor port that will accept a water probe (sold separately) and will alert operator of a high water condition in the filter.

Do NOT use water probe electronics in gasoline applications - an explosion could occur.

1. **Make sure engine is off and cool to touch.**
2. **Open vent plug.**
3. **Drain water from filter by opening self-venting drain. Close as soon as all water has evacuated.**

If drain is open too long, the entire filter may drain completely of water and fuel

4. **Follow priming instructions.**

Priming Instructions

1. **Prime filter by operating hand primer pump until fuel spills out of vent port.**
2. **Close vent plug snugly.**
3. **Verify all other connections are tight.**
4. **Start engine and check for leaks. Correct as necessary with engine off.**

Trouble Shooting

If a 400 Series filter fails to hold prime, first check vent plug, drain valve, fittings, head, element and bowl are properly tightened. Next, check fuel line connections and verify that they are free of pinches

or unnecessary bends and check to see if fuel tank strainer (or pick-up tube) is clogged. If problems persist and element is new, call Racor Technical Support at the number listed below.

400 Series

Replacement Parts

| 445R, 460R and 490R | Part Number | Description |
|---------------------|---|--|
| 1. | RK 10110 | Metal Vent Plug Kit (3/8"-24 SAE) |
| 2. | RK 22425 | Mounting Head Kit (3/8"-18 NPTF) (includes head, #1, #3 and #4) |
| | N/A | Mounting Head Kit (16 mm X 1.5) (includes same as RK22425) |
| 3. | RK 22798 | Bypass Valve Kit |
| 4. | RK22998 | Element Gasket Kit |
| 5. | See Replacement Element Chart | |
| 6. | RK 22333 | Bowl Gasket Kit |
| 7. | Replacement Bowl Kits (includes bowl #6, #8 and #9) | |
| | RK 21113-13-11 | Clear Bowl Kit |
| | RK 22616-01¹ | Heated Clear Bowl Kit (same as above, 12 vdc heater) |
| | RK 22616-02¹ | Heated Clear Bowl Kit (same as above, 24 vdc heater) |
| 8. | RK 20126 | Plug Kit (1/2"-20 SAE) |
| 9. | RK 30476 | Self-Venting Drain Kit |
| 10. | RK 30964² | Water Probe Kit |
| | Additional Parts (not shown) | |
| | RK 22323¹ | Heater Connector Kit |
| | 22209 | Installation Instructions |

¹ In-bowl heater may require a Heater Relay Kit. Power requirements (maximum) are: 12 vdc = 16.6 amps, 24 vdc = 8.3 amps.

² Water probe must be used with a Water Detection Kit - see Accessories. Do not use on gasoline applications.



400 Series

Replacement Parts

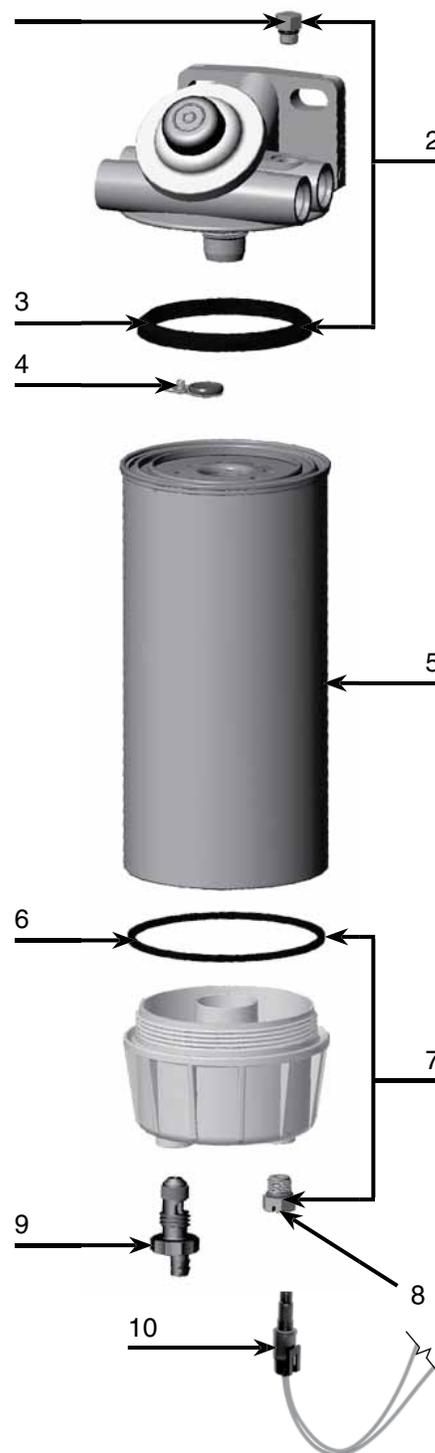
4120R

| Part Number | Description |
|--|---|
| 1. RK 10110 | Metal Vent Plug Kit (3/8"-24 SAE) |
| 2. RK 22168 | 4120R Mounting Head Kit (3/4"-16 SAE) (includes head, #1, #3 and #4) |
| 3. RK22998 | Element Gasket (includes #3 and #6) |
| 4. RK 22798 | By-Pass Valve Kit |
| 5. Replacement Elements: | |
| R120S | 2 micron |
| R120T | 10 micron |
| R120P | 30 micron |
| 6. RK22998 | Bowl O-ring |
| 7. Replacement Bowl Kits (includes bowl #6, #8 and #9) | |
| RK 30063 | Clear Bowl Kit |
| RK 30900¹ | Heated Clear Bowl Kit (same as above, 12 vdc heater) |
| RK 30925¹ | Heated Clear Bowl Kit (same as above, 24 vdc heater) |
| 8. RK 20126 | Plug Kit (1/2" SAE) |
| 9. RK 30476 | Self-Venting Drain Kit |
| 10. RK 30964² | Water Probe Kit |

Additional Parts (not shown)
22209 Installation Instructions

¹ In-bowl heater may require a Heater Relay Kit. Power requirements (maximum) are: 12 vdc = 16.6 amps and 24 vdc = 8.3 amps - see Accessories.

² Water probe must be used with a Water Detection Kit - see Accessories. Do not use on gasoline applications.



400 Series

400 Series Overview



| Specifications | 445R | 460R | 490R | 4120R |
|--|--------------------------------------|--------------------------------------|--------------------------------------|------------------------------------|
| Maximum Flow Rate | 45 GPH (170 LPH) | 60 GPH (227 LPH) | 90 GPH (341 LPH) | 120 GPH (454 LPH) |
| Port Size | 3/8"-18 NPTF (SAE J476) | 3/8"-18 NPTF (SAE J476) | 3/8"-18 NPTF (SAE J476) | 3/4"-16 SAE (SAE J1926) |
| Total Number of Ports: (total inlets) (total outlets) | 4 2 2 | 4 2 2 | 4 2 2 | 4 2 2 |
| Min. Service Clearance | | 2.0 in. (5.1 cm) | 2.0 in. (5.1 cm) | 2.0 in. (5.1 cm) |
| Center Threads | 1"-14 | 1"-14 | 1"-14 | 1"-14 |
| Height | 9.3 in. (23.6 cm) | 11.0 in. (27.9 cm) | 11.8 in. (30.0 cm) | 15.0 in. (38.1 cm) |
| Width | 4.8 in. (12.1 cm) | 4.5 in. (11.4 cm) | 4.5 in. (11.4 cm) | 4.5 in. (11.4 cm) |
| Depth | 4.5 in. (11.4 cm) | 4.8 in. (12.1 cm) | 4.8 in. (12.1 cm) | 4.8 in. (12.1 cm) |
| Weight (dry) | 2.5 lb (1.1 kg) | 2.7 lb (1.2 kg) | 2.9 lb (1.3 kg) | 3.9 lb (1.8 kg) |
| Clean Pressure Drop | 0.17 PSI (0.01 bar) | 0.39 PSI (0.03 bar) | 0.95 PSI (0.07 bar) | 0.85 PSI (0.06 bar) |
| Max. Allowable Pressure¹ | 30 PSI (2.07 bar) | 30 PSI (2.07 bar) | 30 PSI (2.07 bar) | 15 PSI (1.03 bar) |
| Available Options:² (water sensor) (heater) ³ | Yes Yes | Yes Yes | Yes Yes | Yes Yes |
| Bowl Capacity (water) (with heater) | 4.0 oz. (118 ml) 3.5 oz. (104 ml) | 4.0 oz. (118 ml) 3.5 oz. (104 ml) | 4.0 oz. (118 ml) 3.5 oz. (104 ml) | 2.8 oz. (82 ml) 2.4 oz. (70 ml) |
| H₂O Removal Efficiency | 99% | | | |
| Operating Temperature | -40° to +255°F (-40° to +124°C) | | | |

¹ Pressure installations are applicable up to maximum PSI shown. Vacuum installations are recommended.

² Do not use with gasoline applications.

³ Maximum power requirements for in-bowl heater option: 12 vdc (200 watt) = 16.6 amps, 24 vdc (200 watt) = 8.3 amps. See Accessories section for heater relay kits, if needed.

424Series

WFH424

Fuel Heater/Water Separator



Want proven reliability? A Racor 424 Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47° F rise in fuel temperature, eliminating the need for fuel blending.

A 424's three-stage water separation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

Stage 3: A floating check ball valve system guards against loss of prime during service.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 60 GPH (227 LPH) |
| Inlet/Outlet Port Size | 1/2 NPT |
| Housing Material | Aluminum |
| Replacement Element | Screen |
| Micron Rating | 70 |
| Minimum Service Clearance (below filter) | 4.0 in. (10.2 cm) |
| Height | 10.0 in. (25.4 cm) |
| Depth | 5.9 in. (15.0 cm) |
| Width | 5.3 in. (13.5 cm) |
| Weight (dry) | 6.3 lbs (2.9 kg) |
| Maximum Working Pressure ¹ | N/A |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.04 PSI (0.28 kPa) |
| Case Quantity | - |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

424 Series

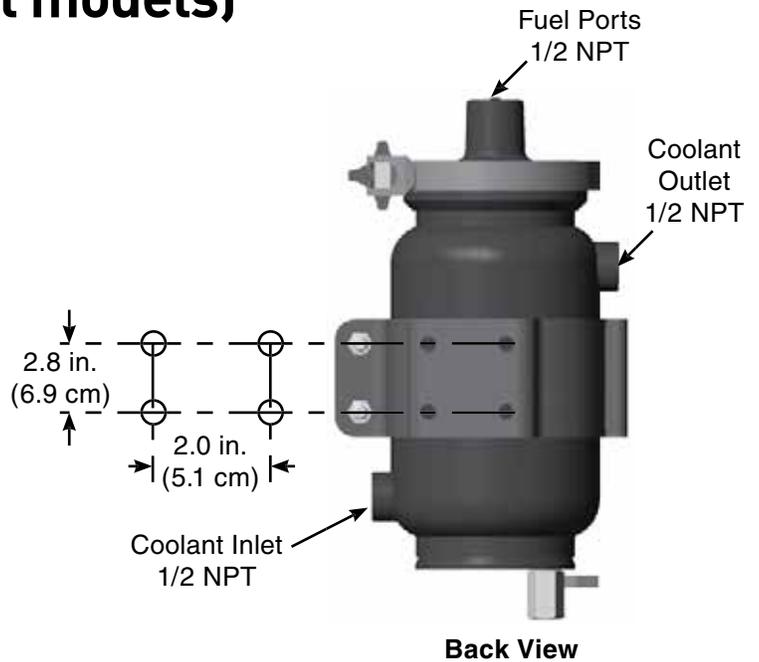
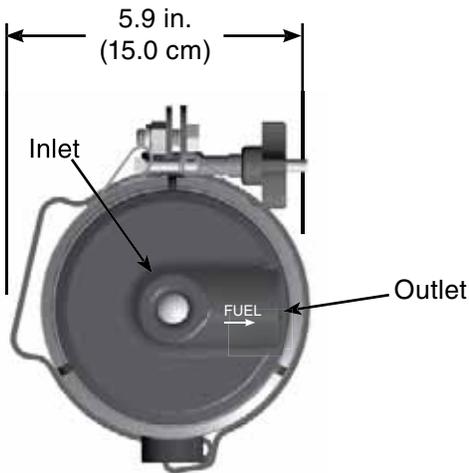
How to Order

WFH424

Basic Model Comes standard with a 70 Micron Stripper Screen and Mounting Brackets.



Mounting Information (all models)



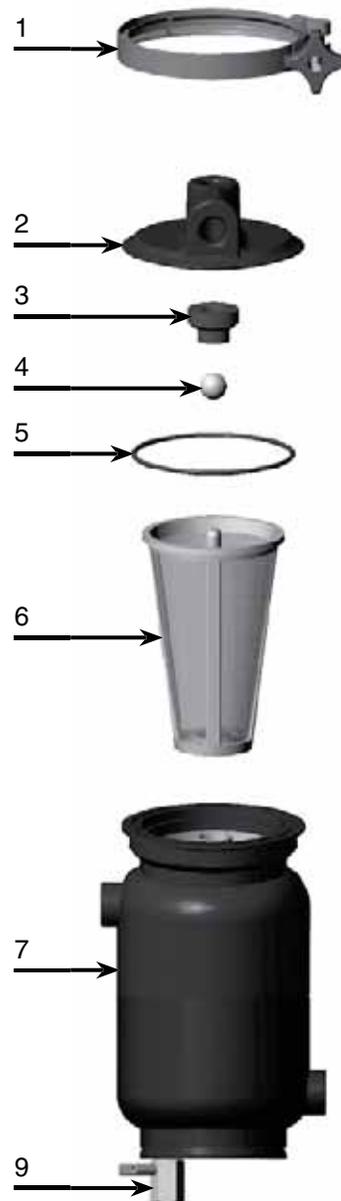
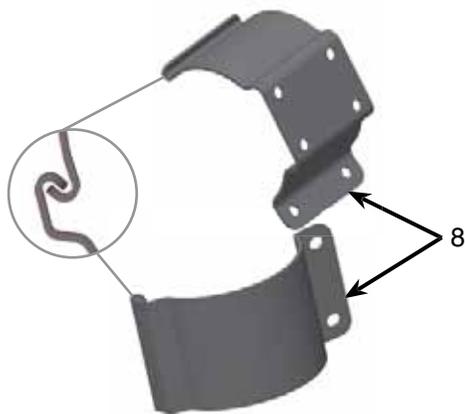
424 Series

Replacement Parts

| <u>Part Number</u> | <u>Description</u> |
|--------------------|------------------------------------|
| 1. WFH5760 | Cover Clamp Kit |
| 2. WFH5726X | 424 Cover Kit |
| 3. WFH5731C | Stopper Seal Kit |
| 4. WFH5731K | Check Ball Kit |
| 5. WFH5730P | O-ring Kit |
| 6. WFH4732 | 70 Micron Screen Kit (includes #5) |
| 7. WFH4738 | 424 Body Kit |
| 8. WFH4736 | Mounting Bracket Kit |
| 9. WFH5742 | Ball Valve Kit |

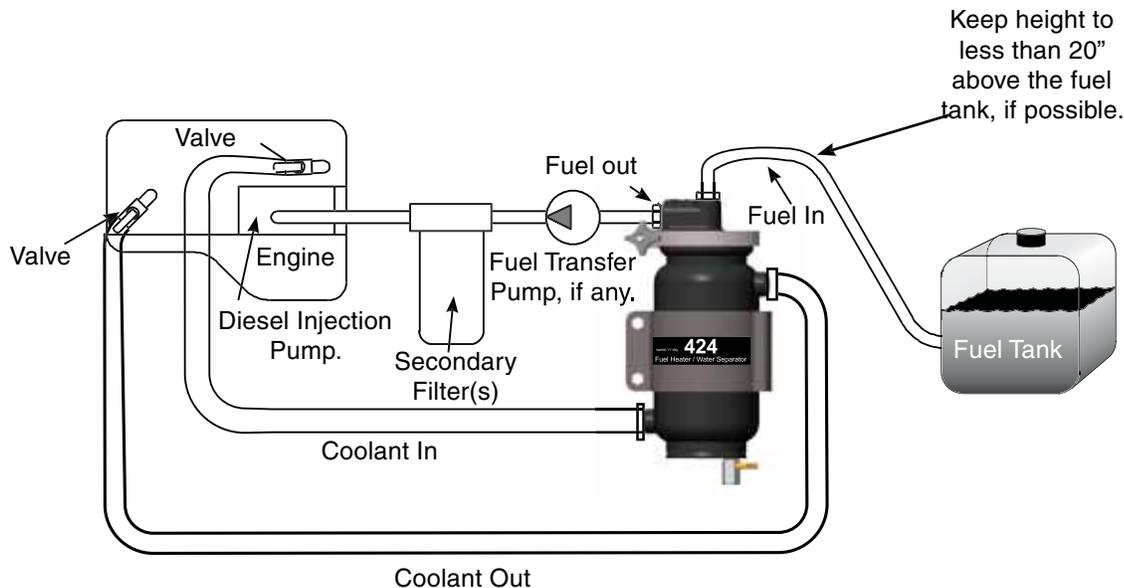
Additional Parts (not shown)

- BK38100L** Bolt Kit
- WFH4750K** 424 Complete Rebuild Kit



424 Series

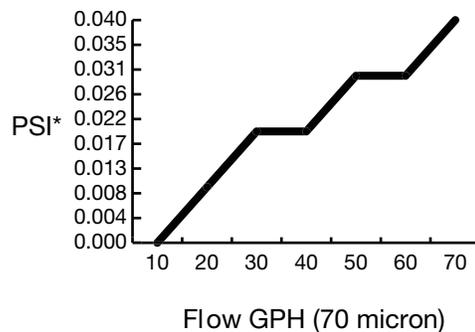
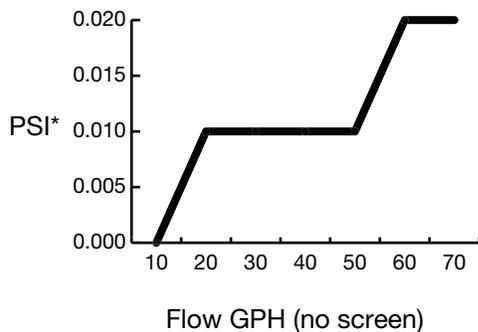
Installation Diagram



Note: Coolant must be maintained according to engine manufacturers specifications. Improperly maintained coolant may cause damage to this product and other components. If any work is performed on the cooling system, be sure properly maintained coolant is circulated through the fuel heater or freeze damage may occur.

Test Data

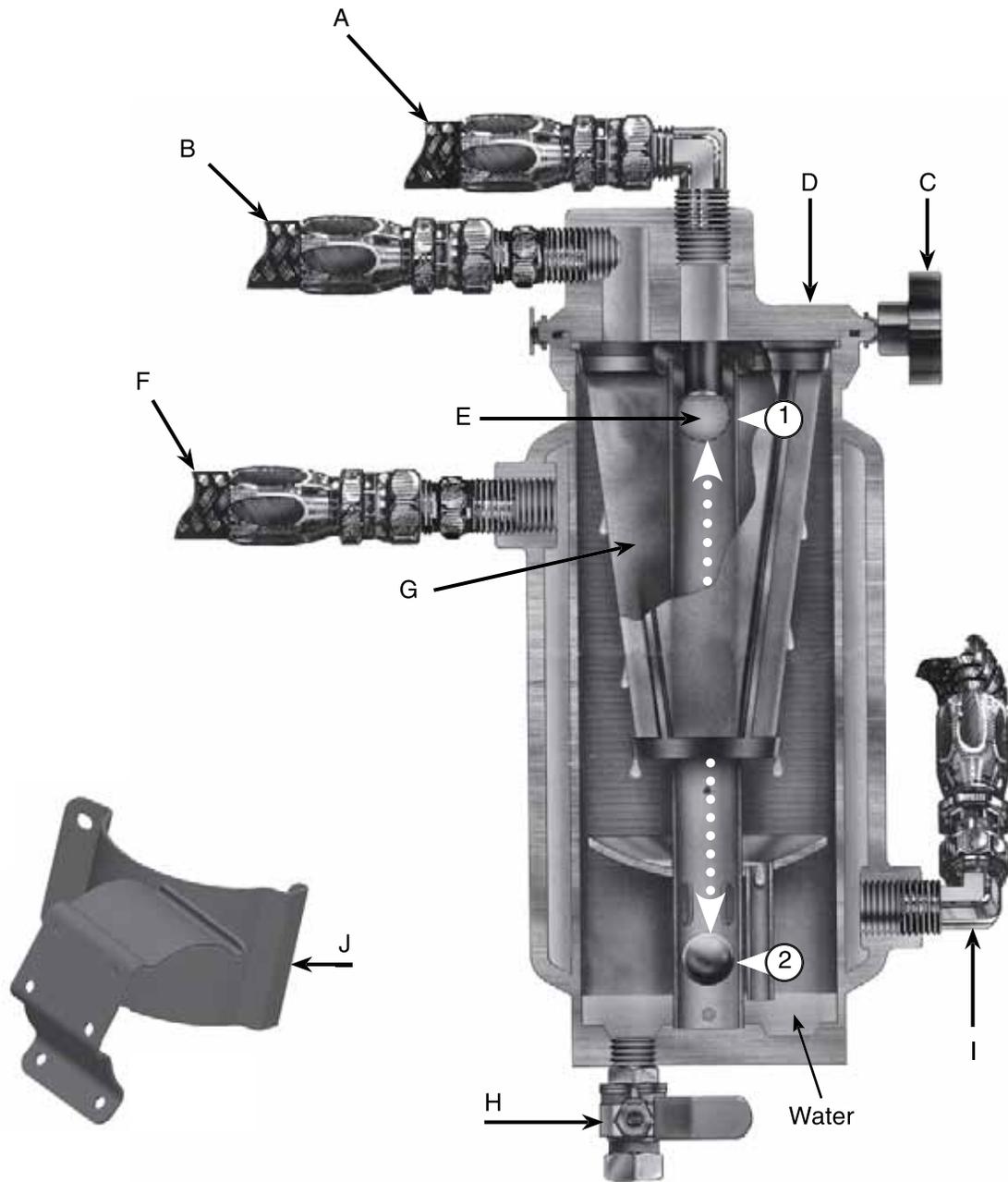
Test results are from controlled laboratory testing. Field results may vary by application.



*PSI X 2.036 = inHg (PSI X 6.895 = kPa)

424 Series

Please refer to page 96 for call out descriptions.



Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

424 Series

Features and Benefits

- A. **Fuel Inlet:** Fuel flows in and is cleaned and heated before returning to engine.
- B. **Fuel Outlet:** Warm fuel escapes and is consumed by engine.
- C. **Cover Clamp:** Allows cover to be rotated 180° for ease and versatility of installation. Do not use tools, hand-tighten clamp only.
- D. **Cover:** The self piloting no thread clamp-on design allows the top cover to be positioned in any direction for fuel routing. The cover may be removed with fuel line intact, and without tools.
- E. **Internal Check Valve:** The floating check ball (check ball moves up and down through tube to ensure prime is not lost) valve system guards against loss of prime during fuel system service. Delaying the check ball for four and a half seconds allows time for any foreign matter to clear the valve seat area, ensuring a tight seat.
 - 1. **Engine Off**
 - 2. **Engine Running**
- F. **Stripper Screen:** The 424 has a self-flushing screen that will not allow water to pass through, and it acts as a prefilter removing contaminants to 70 micron. Eliminating the need for a primary fuel filter.
- G. **Coolant Outlet:** Coolant that was circulating through unit is now returning to engine.
- H. **Self Venting Drain Valve:** Unique one-valve system for fast and simple water draining, it is easy for operators to drain unit.
- I. **Coolant Inlet:** Coolant enters unit to warm fuel and exits through outlet.
- J. **Mounting Bracket:** Two piece design, mount filter vertically only.

The 3-Stage Process

Stage 1.

Fuel enters the 424 through the cover's center port. The fuel travels down the isolator tube, pushing the check ball down, then passes through fuel slots on the bottom. The fuel changes direction and travels up and around the diffuser plate. The entire time it is being warmed by the surrounding hot water jacket.

Stage 2.

Fuel then passes through the self flushing stripper screen where the contaminants and water are left behind to fall to the top of the diffuser plate. Their, the contaminates settle below incoming fuel and collect at the base of the unit, were the contaminants and water are drained.

Stage 3.

Finally the clean, dry, and warm fuel exits the 424 unit through the cover's side port and than is ingested by the engine.

500 Series

WFH500

Fuel Heater/Water Separator



Want proven reliability? A Racor 525 Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47° F rise in fuel temperature, eliminating the need for fuel blending.

A 525's three-stage water separation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

Stage 3: A floating check ball valve system guards against loss of prime during service.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 60 GPH (227 LPH) |
| Inlet/Outlet Port Size | 1/2 NPT |
| Housing Material | Aluminum |
| Replacement Element | Screen |
| Micron Rating | 70 |
| Minimum Service Clearance (below filter) | 4.0 in. (10.2 cm) |
| Height | 10.0 in. (25.4 cm) |
| Depth | 5.9 in. (15.0 cm) |
| Width | 5.3 in. (13.5 cm) |
| Weight (dry) | 6.3 lbs (2.9 kg) |
| Maximum Working Pressure ¹ | N/A |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.04 PSI (0.28 kPa) |
| Case Quantity | - |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

500 Series

WFH525

Fuel Heater/Water Separator



Want proven reliability? A Racor 525 Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47° F rise in fuel temperature, eliminating the need for fuel blending.

A 525's three-stage water separation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

Stage 3: A floating check ball valve system guards against loss of prime during service.

Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 60 GPH (227 LPH) |
| Inlet/Outlet Port Size | 1/2 NPT |
| Housing Material | Aluminum |
| Replacement Element | Screen |
| Micron Rating | 70 |
| Minimum Service Clearance (below filter) | 4.0 in. (10.2 cm) |
| Height | 10.0 in. (25.4 cm) |
| Depth | 5.9 in. (15.0 cm) |
| Width | 5.3 in. (13.5 cm) |
| Weight (dry) | 6.3 lbs (2.9 kg) |
| Maximum Working Pressure ¹ | N/A |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.04 PSI (0.28 kPa) |
| Case Quantity | - |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

500 Series

WFH525/ACV

Fuel Heater/Water Separator



Want proven reliability? A Racor 525 Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47° F rise in fuel temperature, eliminating the need for fuel blending.

A 525's three-stage water separation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

Stage 3: A floating check ball valve system guards against loss of prime during service.

Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 60 GPH (227 LPH) |
| Inlet/Outlet Port Size | 1/2 NPT |
| Housing Material | Aluminum |
| Replacement Element | Screen |
| Micron Rating | 70 |
| Minimum Service Clearance (below filter) | 4.0 in. (10.2 cm) |
| Height | 10.0 in. (25.4 cm) |
| Depth | 5.9 in. (15.0 cm) |
| Width | 5.3 in. (13.5 cm) |
| Weight (dry) | 6.3 lbs (2.9 kg) |
| Maximum Working Pressure¹ | N/A |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.04 PSI (0.28 kPa) |
| Case Quantity | - |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

500 Series

WFH525EHA

Fuel Heater/Water Separator



Want proven reliability? A Racor 525 Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47° F rise in fuel temperature, eliminating the need for fuel blending.

A 525's three-stage water separation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

Stage 3: A floating check ball valve system guards against loss of prime during service.

Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 60 GPH (227 LPH) |
| Inlet/Outlet Port Size | 1/2 NPT |
| Housing Material | Aluminum |
| Replacement Element | Screen |
| Micron Rating | 70 |
| Minimum Service Clearance (below filter) | 4.0 in. (10.2 cm) |
| Height | 10.0 in. (25.4 cm) |
| Depth | 5.9 in. (15.0 cm) |
| Width | 5.3 in. (13.5 cm) |
| Weight (dry) | 6.3 lbs (2.9 kg) |
| Maximum Working Pressure ¹ | N/A |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.04 PSI (0.28 kPa) |
| Case Quantity | - |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

500 Series

Features and Benefits

- A. **Fuel Inlet:** Fuel flows in and is cleaned and heated before returning to engine.
- B. **Fuel Outlet:** Warm fuel escapes and is consumed by engine.
- C. **Cover Clamp:** Allows cover to be rotated 180° for ease and versatility of installation. Do not use tools, hand-tighten clamp only.
- D. **Cover:** The self piloting no thread clamp-on design allows the top cover to be positioned in any direction for fuel routing. The cover may be removed with fuel line intact, and without tools.
- E. **Internal Check Valve:** The floating check ball (check ball moves up and down through tube to ensure prime is not lost) valve system guards against loss of prime during fuel system service.
- F. **Stripper Screen:** The 500 has a self-flushing screen that will not allow water to pass through, and it acts as a prefilter removing contaminants to 70 micron. Eliminating the need for a primary fuel filter, the assembly also comes with a 30 micron screen.
 - 1. **Engine Off**
 - 2. **Engine Running**
- G. **Coolant Outlet:** Coolant that was circulating through unit is now returning to engine.
- H. **Self Venting Drain Valve:** Unique one-valve system for fast and simple water draining, it is easy for operators to drain unit.
- I. **Coolant Inlet:** Coolant enters unit to warm fuel and exits through outlet.
- J. **Automatic Coolant Valve (ACV):** Shuts off coolant supply at 80° F (26.6 c) to protect electronic engine controls from over heating.
- K. **Mounting Bracket:** Two piece design, mount filter vertically only.
- L. **Optional:** 12 vdc 200 watt preheater cartridge (part number CH4.5).
- M. **Optional:** 120 vdc 63 watt electric preheater (part number CH2.75-1).

The 3-Stage Process

Stage 1.

Fuel enters the 500 through the cover's center port. The fuel travels down the isolator tube, pushing the check ball down, then passes through fuel slots on the bottom. The fuel changes direction and travels up and around the diffuser plate. The entire time it is being warmed by the surrounding hot water jacket.

Stage 2.

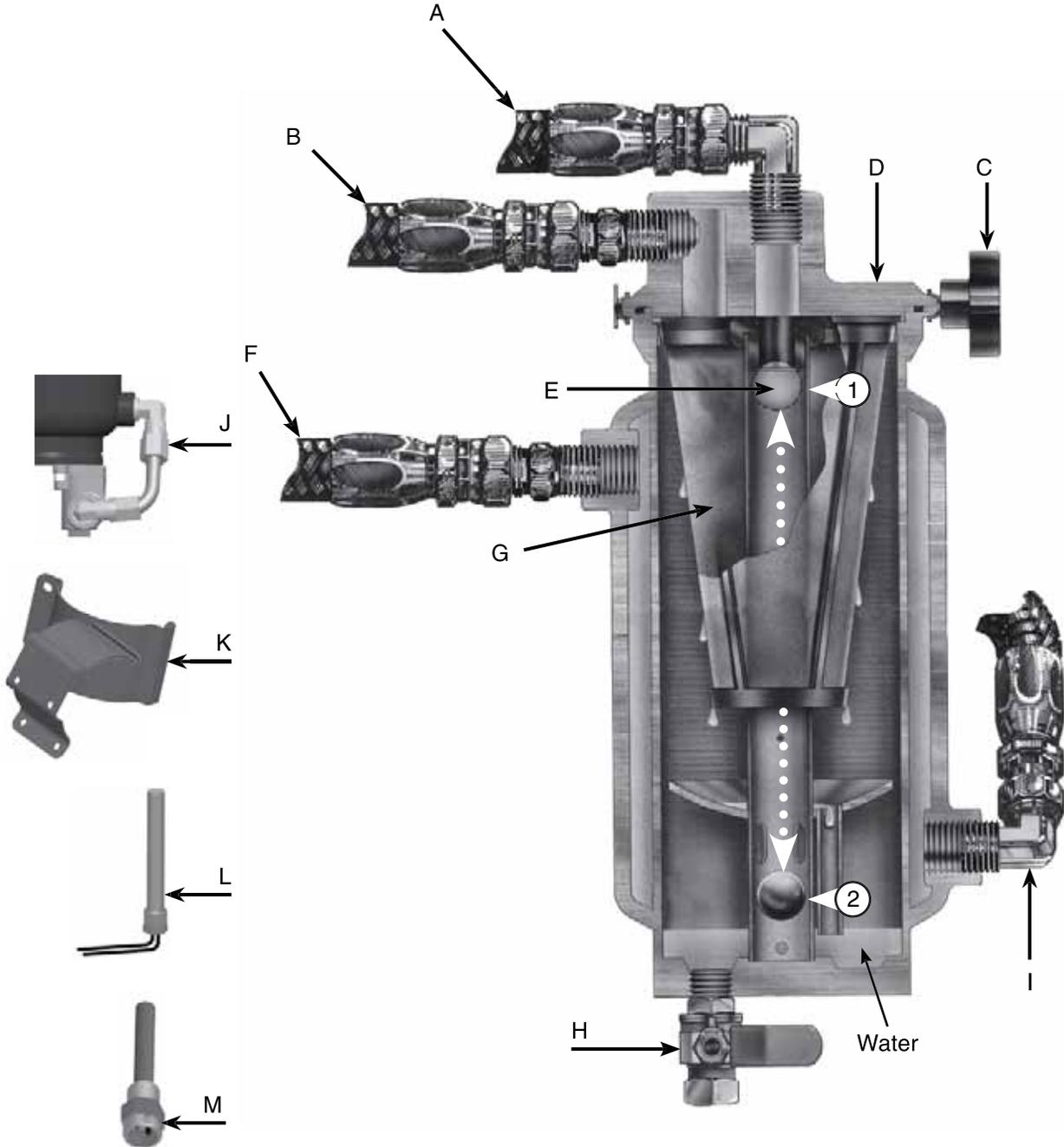
Fuel then passes through the self flushing stripper screen where the contaminants and water are left behind to fall to the top of the diffuser plate. There, the contaminants settle below incoming fuel and collect at the base of the unit, where the contaminants and water are drained.

Stage 3.

Finally the clean, dry, and warm fuel exits the 500 unit through the cover's side port and then is ingested by the engine.

500 Series

Please refer to page 101 for call out descriptions.



500 Series

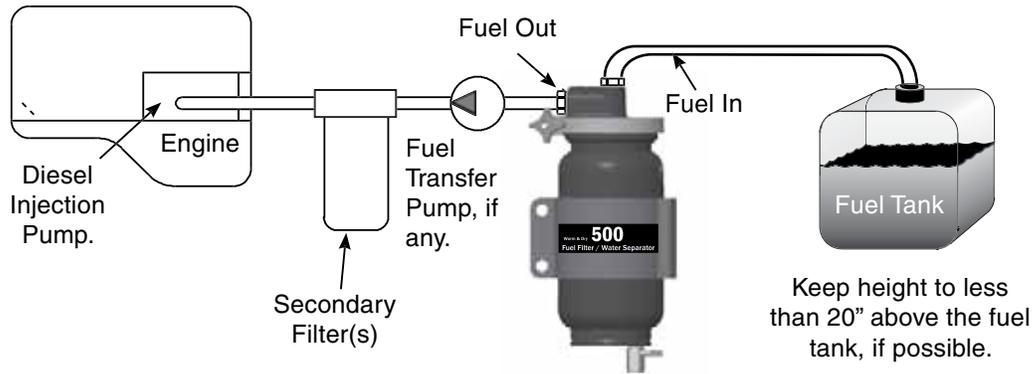
500 Series Overview



| Specifications | WFH500 | WFH525 | WFH525/ACV | 525EHA |
|-------------------------------|---------------------------------|----------------------|----------------------|----------------------|
| Flow Rate | 120 GPH (454 GPH) | 120 GPH (454 GPH) | 120 GPH (454 GPH) | 120 GPH (454 GPH) |
| Fuel Port Size | 1/2 NPT | 1/2 NPT | 1/2 NPT | 1/2 NPT |
| Coolant Port Size | N/A | 1/2 NPT | 1/2 NPT | 1/2 NPT |
| Width | 5.3 in. (13.5 cm) | 5.3 in. (13.5 cm) | 5.3 in. (13.5 cm) | 5.3 in. (13.5 cm) |
| Depth | 5.3 in. (13.5 cm) | 5.3 in. (13.5 cm) | 5.3 in. (13.5 cm) | 5.3 in. (13.5 cm) |
| Height | 15.8 in. (40.1 cm) | 15.8 in. (40.1 cm) | 15.9 in. (40.3 cm) | 15.9 in. (40.3 cm) |
| H ₂ O Removal | 99% | 99% | 99% | 99% |
| Coolant Ports | No | Yes | Yes | Yes |
| Heater Ports | | | | |
| 12 vdc Pre-heater | Yes | No | No | No |
| 120 vdc Pre-heater | No | No | No | Yes |
| Automatic Coolant Valve (ACV) | No | No | Yes | Yes |
| Service Element | 4 in. | 4 in. | 4 in. | 4 in. |
| Operating Temperature | -40° to +255°F (-40° to +124°C) | | | |

500 Series

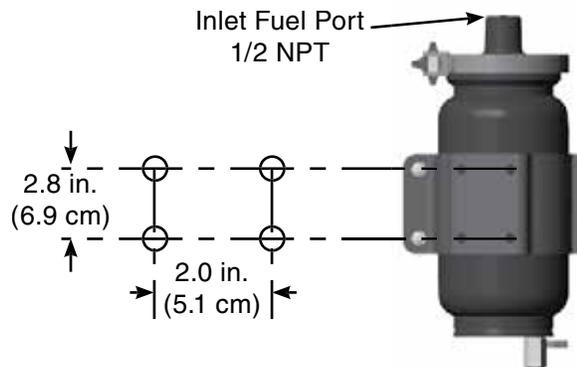
Installation Diagram



Mounting Information



Top View



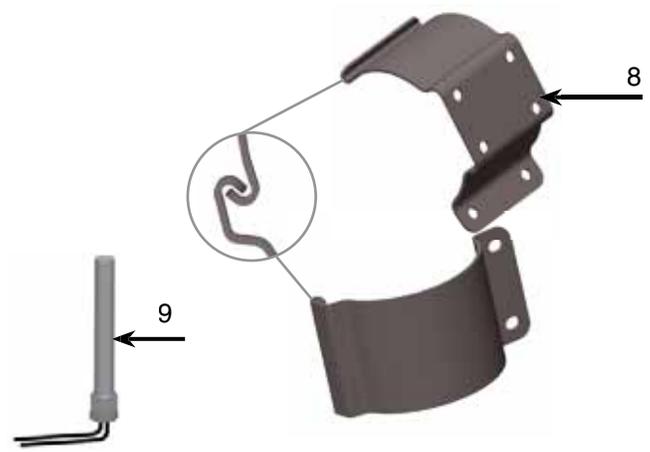
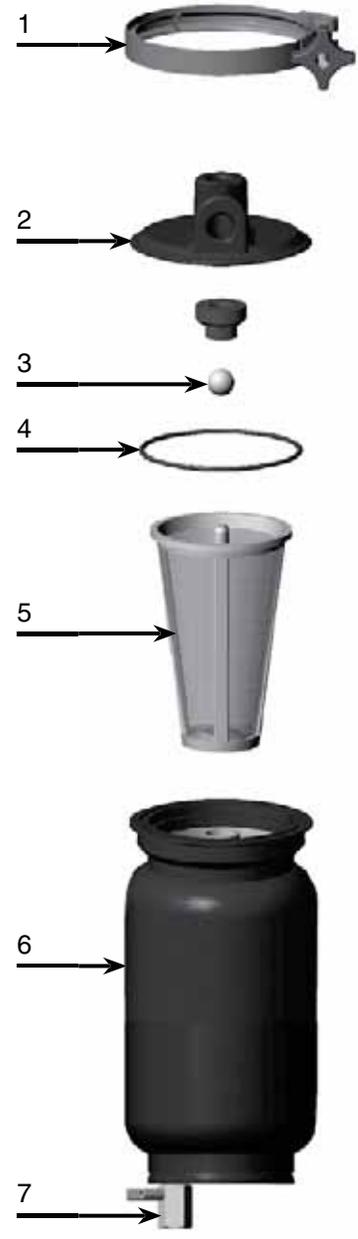
Back View

500 Series

Replacement Parts

WFH500

| <u>Part Number</u> | <u>Description</u> |
|------------------------------|---|
| 1. WFH5760 | Cover Clamp Kit |
| 2. WFH5726B | 500 Cover Kit |
| 3. WFH5731K | Check Ball Kit (includes items 3, 4 & 5) |
| 4. WFH5730P | O-ring Kit (includes 6 o-rings) |
| 5. WFH5732 | 70 Micron Stripper Screen Kit |
| WFH5732/30 | 30 Micron Stripper Screen Kit (includes o-ring) |
| 6. WFH5038X | 500 Body Kit |
| 7. WFH5742 | Drain Valve Kit |
| 8. WFH5736 | Mounting Bracket Kit |
| 9. N/A | 12 vdc 200 watt Cartridge Heater |
| Additional Parts (not shown) | |
| 525B/V | Bolt Kit |
| WFH5750K | Rebuild Kit 70 Micron (fits all 500 series) |
| WFH5750K/30 | Rebuild Kit 30 Micron (fits all 500 series) |



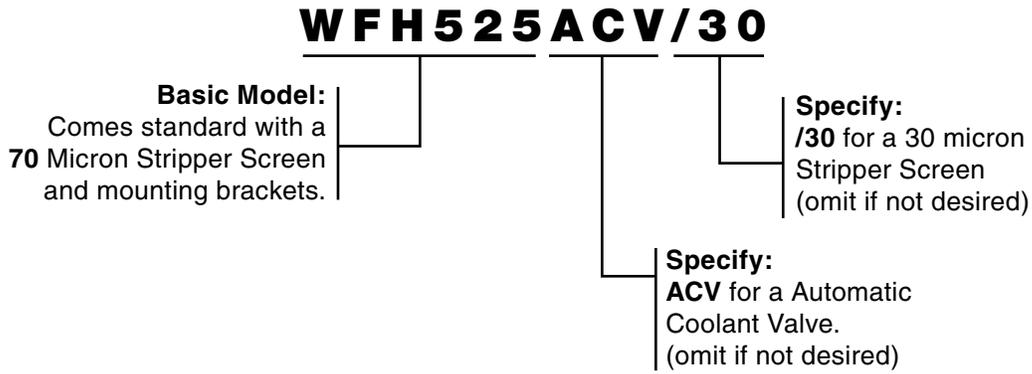
Questions? Contact Technical Support:
 800 344 3286 or 209 521 7860 ext. 7555
 e-mail: racortech@parker.com



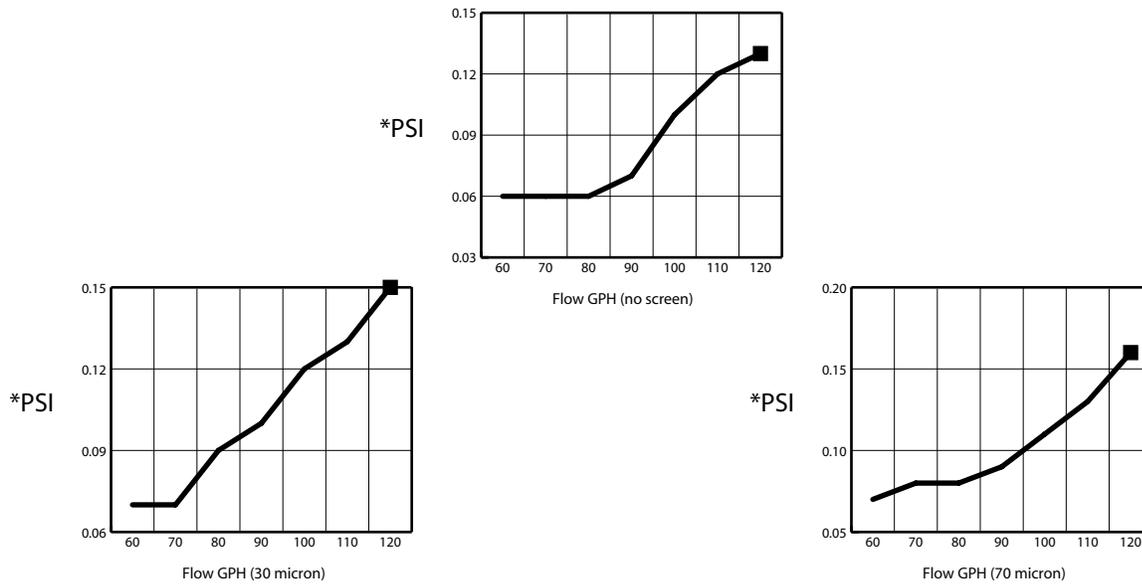
500 Series

How to Order

(The example below illustrates how part numbers are constructed.)



Test Data

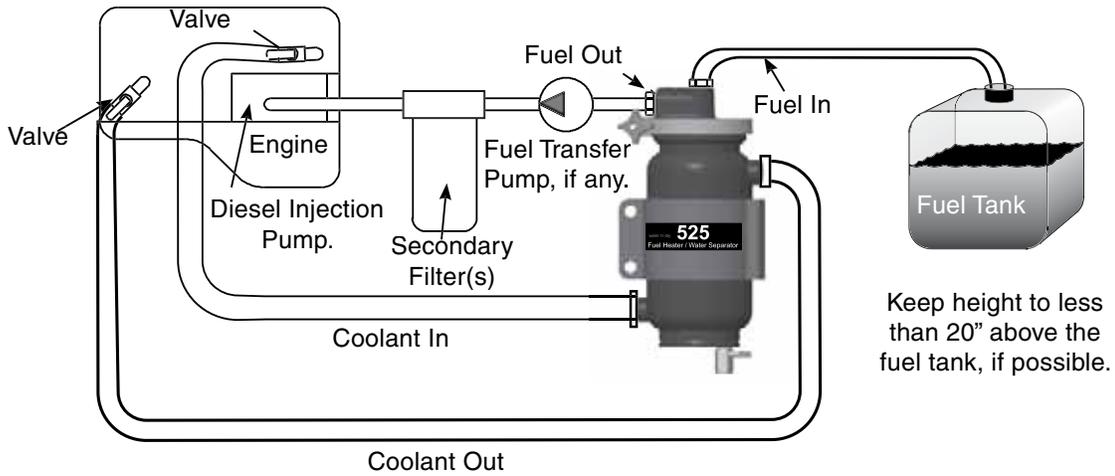


PSI X 2.036 = inHg (PSI X 6.895 = kPa)

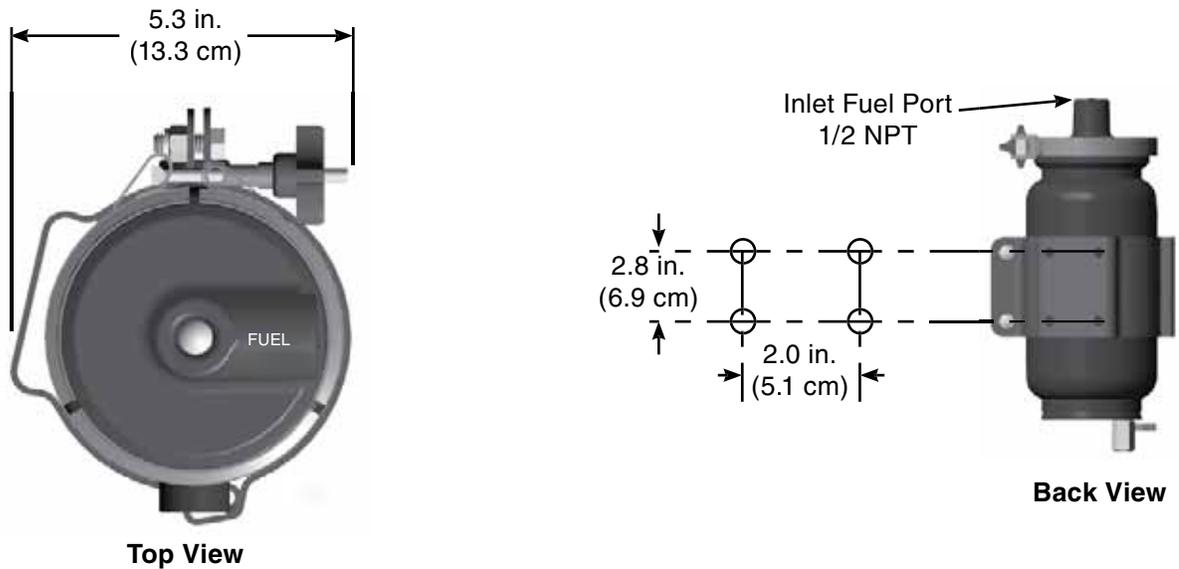
Test results are from controlled laboratory testing. Field results may vary by application.

500 Series

Installation Diagram



Mounting Information



Questions? Contact Technical Support:
 800 344 3286 or 209 521 7860 ext. 7555
 e-mail: racortech@parker.com

500 Series

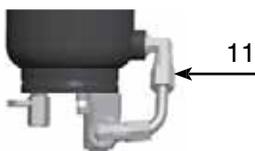
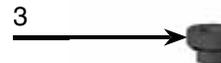
Replacement Parts

WFH525/WFH525ACV

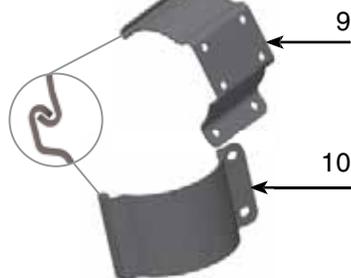
| <u>Part Number</u> | <u>Description</u> |
|--------------------|--|
| 1. WFH5760 | Cover Clamp Kit |
| 2. WFH5726B | 525 Cover Kit |
| 3. WFH5731K | Stopper Seal Kit |
| 4. WFH5731P | Check Ball Kit (includes items 3, 4 & 5) |
| 5. WFH5730P | O-ring Kit |
| 6. WFH5732 | 70 Micron Screen Kit |
| WFH5732/30 | 30 Micron Screen Kit |
| 7. WFH5738X | 525 Body Kit |
| 8. WFH5742 | Ball Valve Kit |
| 9. WFH5736S | (back) Mounting Bracket Kit |
| 10. WFH5736 | (front) Mounting Bracket Kit (includes 9 & 10) |
| 11. ACV4500 | Automatic Coolant Shutoff Valve |

Additional Parts (not shown)

| | |
|--------------------|--|
| BK38100L | Bolt Kit |
| WFH5750K | Rebuild Kit 70 Micron (all 500 series #'s 3-6) |
| WFH5750K/30 | Rebuild Kit 30 Micron (all 500 series #'s 3-6) |
| RK23045 | 120vdc Heater Kit |



Optional ACV
(automatic coolant valve).



500 Series

How to Order

(The example below illustrates how part numbers are constructed.)

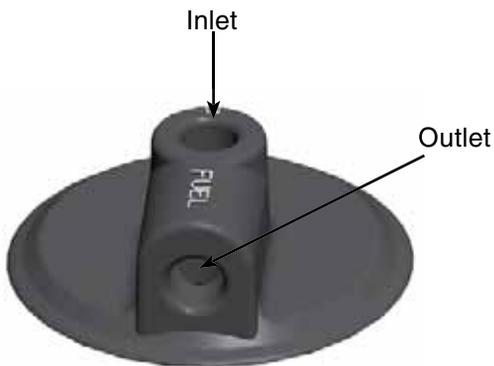
5 2 5 E H A 3 0

Basic Model:
Comes standard with a
70 Micron Stripper Screen
and mounting brackets
and a 120 vdc electric
heater and **ACV** valve.

Specify:
30 for a 30 micron
Stripper Screen
(omit if not desired)



70 Micron Stripper Screen
Optional 30 Micron is Available.



Lid showing Fuel Ports



ACV
(automatic coolant valve).

500 Series

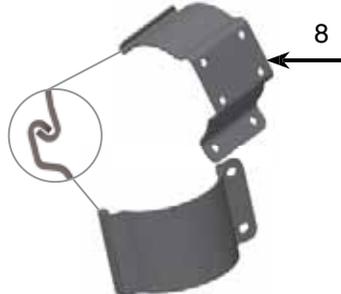
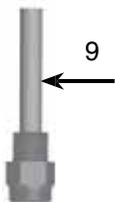
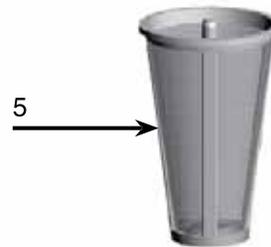
Replacement Parts

525EHA/525EHA30

| <u>Part Number</u> | <u>Description</u> |
|---------------------|---|
| 1. WFH5760 | Cover Clamp Kit |
| 2. WFH5726B | 525 Cover Kit |
| 3. WFH5731K | Check Ball Kit (includes itmes 3, 4 & 5) |
| 4. WFH5730P | O-ring Kit (includes 6 o-rings) |
| 5. WFH5732 | 70 Micron Stripper Screen Kit (includes o-ring) |
| WFH5732/30 | 30 Micron Stripper Screen Kit (includes o-ring) |
| 6. WFH5738VX | 525 Body Kit (with ACV Kit) |
| 7. WFH5742UX | 3/8" Ball Valve Kit |
| 8. WFH5736 | Mounting Bracket Kit |
| 9. RK23045 | 120 vdc Heater Kit |
| CH3.5 | 12 vdc 200 watt Electric Pre Heater |

Additional Parts (not shown)

| | |
|--------------------|--|
| BK38100L | Bolt Kit |
| WFH5750K | Rebuild Kit 70 Micron (all 500 series #'s 3-6) |
| WFH5750K/30 | Rebuild Kit 30 Micron (all 500 series #'s 3-6) |



525 Series

525 Series

Want proven reliability? A Racor 525 Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47° F rise in fuel temperature, eliminating the need for fuel blending.

A 525's three-stage water separation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

Stage 3: A floating check ball valve system guards against loss of prime during service.

525 units require no scheduled servicing, other than periodic water draining. The screen filtration system is also self-cleaning eliminating the need for additional maintenance. Separated water is quickly and easily eliminated through an integral self-venting drain valve with no loss of prime.

525 units are available with either a 12 volt or 120 volt preheater and optional thermostat, and a ACV (Automatic Coolant Valve). Unit cover rotates 360° for ease of installation on any existing engine configuration.



WFH525, WFH525/30



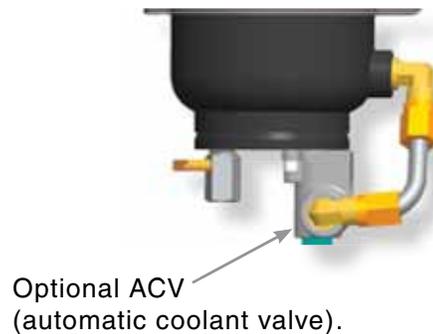
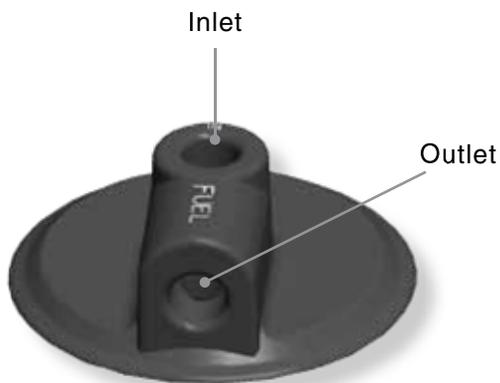
WFH525/ACV

525 Series

525 Series Overview



| Specifications | WFH525 | WFH525ACV |
|--|---------------------------------|--------------------|
| Flow Rate | 120 GPH (454 GPH) | 120 GPH (454 GPH) |
| Port Size | 1/2 NPT | 1/2 NPT |
| Width | 5.3 in. (13.5 cm) | 5.3 in. (13.5 cm) |
| Depth | 5.3 in. (13.5 cm) | 5.3 in. (13.5 cm) |
| Height ¹ | 15.8 in. (40.1 cm) | 15.9 in. (40.3 cm) |
| H ₂ O Removal Efficiency | 99% | |
| Operating Temperature | -40° to +255°F (-40° to +124°C) | |
| ¹ Allow 4" additional space for screen removal. | | |

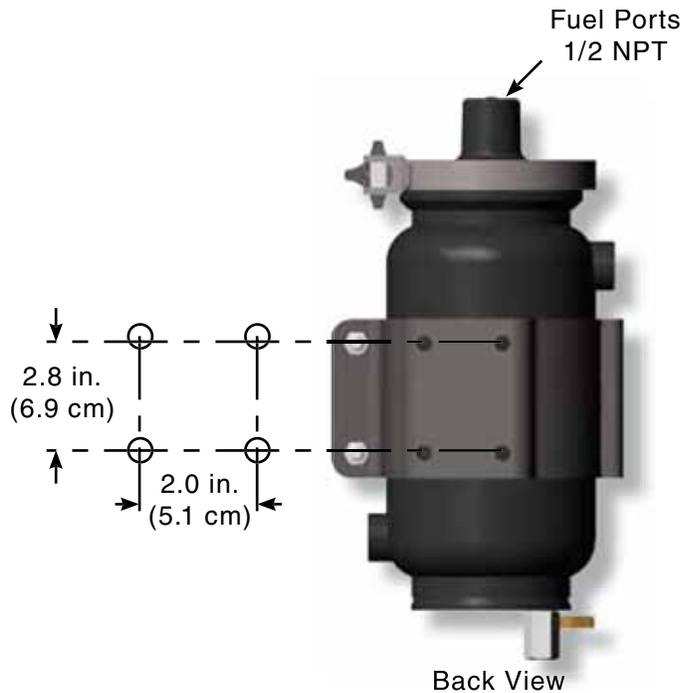
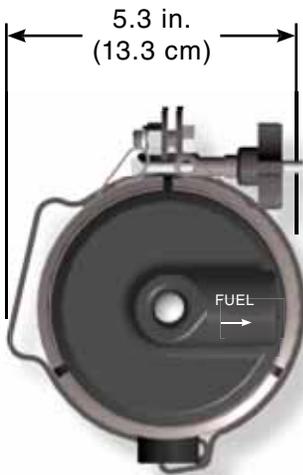


525 Series

How to Order

| WFH525 | /ACV | /30 |
|--|--|--|
| <p>Basic Model Comes standard with a 70 Micron Stripper Screen and mounting brackets.</p> | <p>Specify: /ACV for a Automatic Coolant Valve. (omit if not desired)</p> | <p>Specify: /30 for a 30 micron Stripper Screen (omit if not desired)</p> |

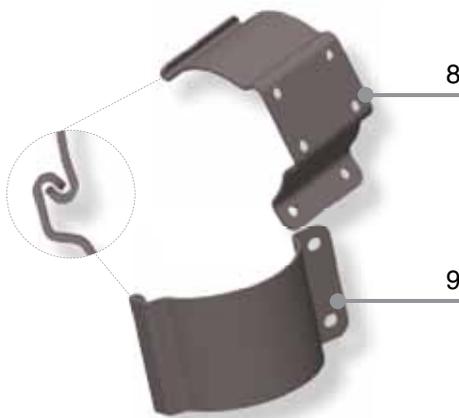
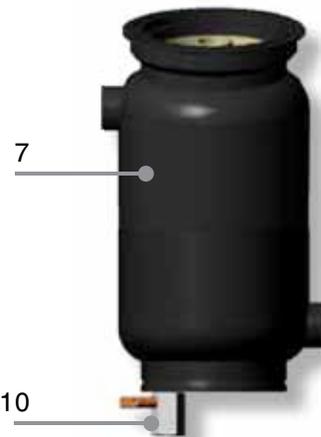
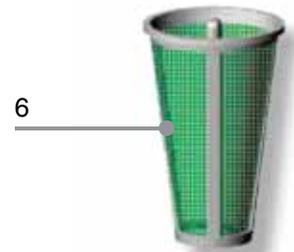
Mounting Information



525 Series

Replacement Parts

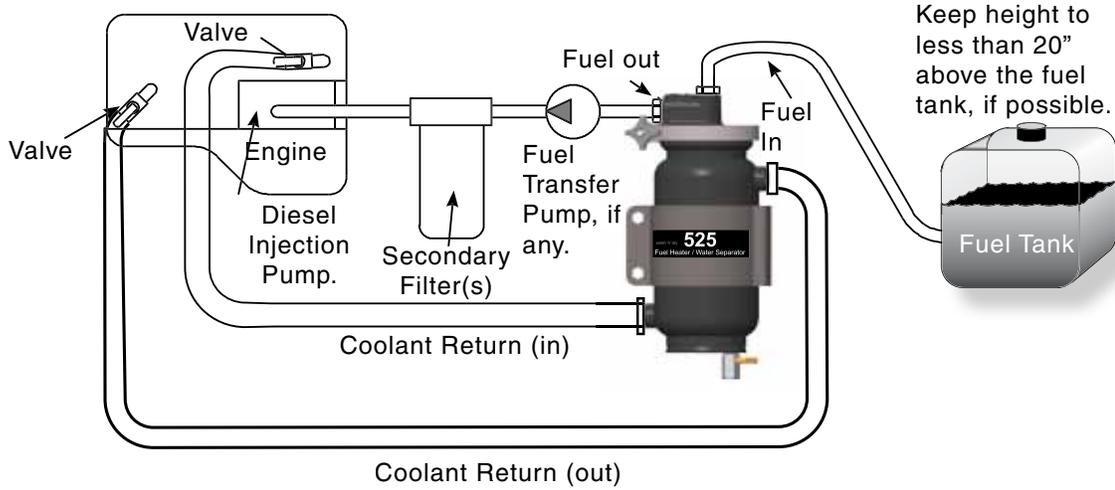
| <u>Part Number</u> | <u>Description</u> |
|------------------------------|-------------------------------------|
| 1. WFH5760X | Cover Clamp Kit |
| 2. WFH5726X | 525 Cover Kit |
| 3. WFH5731C | Stopper Seal Kit |
| 4. WFH5731B | Check Ball Kit |
| 5. WFH5730X | O-ring Kit |
| 6. WFH5732 | 70 Micron Screen Kit |
| WFH5732/30 | 30 Micron Screen Kit |
| 7. WFH5738X | 525 Body Kit |
| 8. WFH5736S | (back) Mounting Bracket Kit |
| 9. WFH5736R | (front) Mounting Bracket Kit |
| 10. WFH5742 | Ball Valve Kit |
| 11. ACV1350 | Automatic Coolant Shutoff Valve |
| Additional Parts (not shown) | |
| BK38100L | Bolt Kit |
| CH4.5 | 12 vdc 200watt Cartridge Heater |
| CH2.75 | 120 vdc 63 watt Electric Pre Heater |



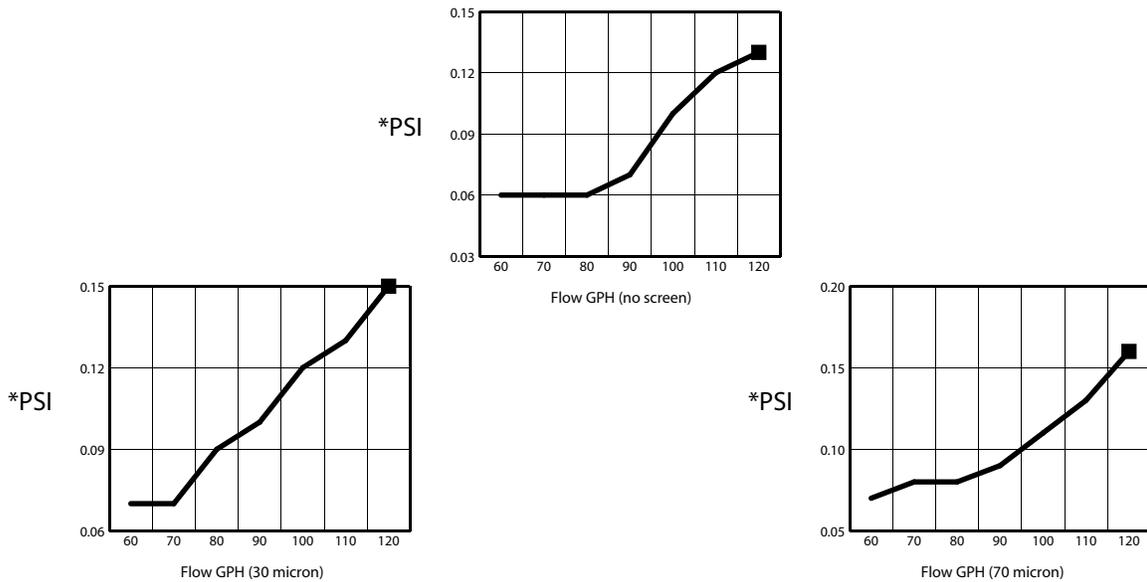
Optional ACV (automatic coolant valve).

525 Series

Installation Diagram



Test Data



PSI X 2.036 = inHg (PSI X 6.895 = kPa)

Test results are from controlled laboratory testing. Field results may vary by application.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

525 Series

Features and Benefits

- A. Fuel Inlet:** Fuel flows in and is cleaned and heated before returning to engine.
- B. Fuel Outlet:** Warm fuel escapes and is consumed by engine.
- C. Cover Clamp:** Allows cover to be rotated 180° for ease and versatility of installation. Do not use tools, hand-tighten clamp only.
- D. Cover:** The self piloting no thread clamp-on design allows the top cover to be positioned in any direction for fuel routing. The cover may be removed with fuel line intact, and without tools.
- E. Internal Check Valve:** The floating check ball (check ball moves up and down through tube to ensure prime is not lost) valve system guards against loss of prime during fuel system service. Delaying the check ball for four and a half seconds allows time for any foreign matter to clear the valve seat area, ensuring a tight seat.
 - 1. Engine Off**
 - 2. Engine Running**
- F. Stripper Screen:** The 525 has a self-flushing screen that will not allow water to pass through, and it acts as a prefilter removing contaminants to 70 micron. Eliminating the need for a primary fuel filter, comes in a 30 micron screen also.
- G. Coolant Outlet:** Coolant that was circulating through unit is now returning to engine.
- H. Self Venting Drain Valve:** Unique one-valve system for fast and simple water draining, it is easy for operators to drain unit.
- I. Coolant Inlet:** Coolant enters unit to warm fuel and exits through outlet.
- J. Automatic Coolant Valve: (ACV)** Protects electronic engine controls from over heating.
- K. Mounting Bracket:** Two piece design, mount filter vertically only.

Other features also include an optional 120 or 12 volt electric preheaters.

The 3-Stage Process

Stage 1.

Fuel enters the 525 through the cover's center port. The fuel travels down the isolator tube, pushing the check ball down, then passes through fuel slots on the bottom. The fuel changes direction and travels up and around the diffuser plate. The entire time it is being warmed by the surrounding hot water jacket.

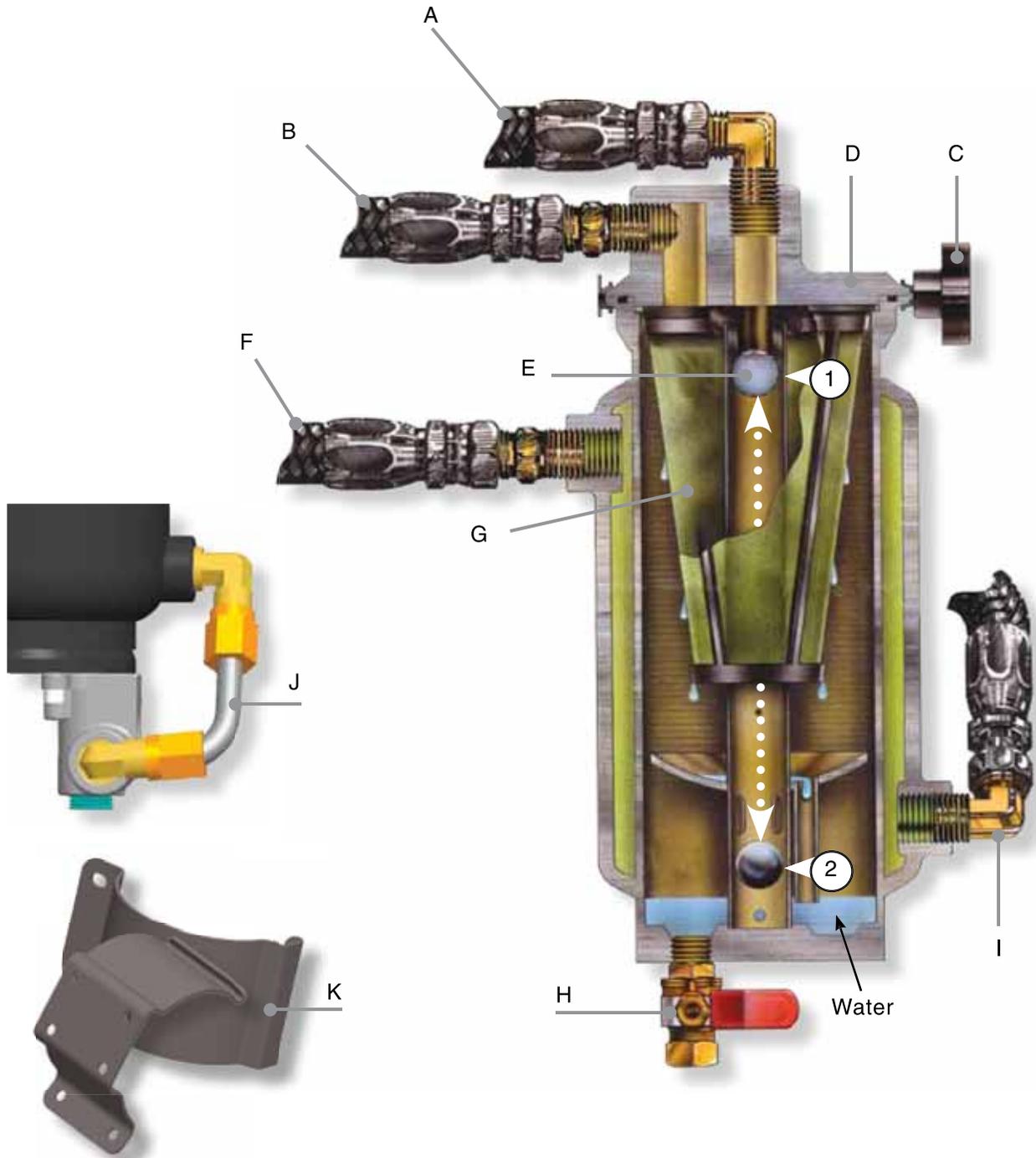
Stage 2.

Fuel then passes through the self flushing stripper screen where the contaminants and water are left behind to fall to the top of the diffuser plate. There, the contaminants settle below incoming fuel and collect at the base of the unit, where the contaminants and water are drained.

Stage 3.

Finally the clean, dry, and warm fuel exits the 525 unit through the cover's side port and then is ingested by the engine.

525 Series



Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

A117

600 Series

645R

Fuel Heater/Water Separator



All 600 Series Spin-On fuel filter/water separators feature multiple fuel ports (4 inlets and 3 outlets) and a unitized mounting bracket for installation convenience. Inlet and outlet threads are 3/8"-18 NPTF for all models. These filter assemblies provide flexibility during mounting and fit any engine application.

Additional 600 Series features include Spin-On high capacity, Aquabloc® II replaceable filter elements which stop water, remove solid contamination, and are available in 2, 10 and 30 micron. Filtration needs should be based on application, fuel quality, operating climates, and maintenance schedules.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 45 GPH (170 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Center Threads | 1"-14 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 8.5 in. (21.6 cm) |
| Depth | 4.5 in. (11.4 cm) |
| Width | 4.5 in. (11.4 cm) |
| Weight (dry) | 2.4 lb (1.09 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.01 PSI (0.001 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

600 Series

660R

Fuel Heater/Water Separator



All 600 Series Spin-On fuel filter/water separators feature multiple fuel ports (4 inlets and 3 outlets) and a unitized mounting bracket for installation convenience. Inlet and outlet threads are 3/8"-18 NPTF for all models. These filter assemblies provide flexibility during mounting and fit any engine application.

Additional 600 Series features include Spin-On high capacity, Aquabloc® II replaceable filter elements which stop water, remove solid contamination, and are available in 2, 10 and 30 micron. Filtration needs should be based on application, fuel quality, operating climates, and maintenance schedules.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 60 GPH (227 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF |
| Housing Material | Aluminum |
| Replacement Element | See Element Cart |
| Center Threads | 1"-14 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 10.2 in. (25.9 cm) |
| Depth | 4.5 in. (11.4 cm) |
| Width | 4.5 in. (11.4 cm) |
| Weight (dry) | 2.6 lb (1.18 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.05 PSI (0.003 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

600 Series

690R

Fuel Heater/Water Separator



All 600 Series Spin-On fuel filter/water separators feature multiple fuel ports (4 inlets and 3 outlets) and a unitized mounting bracket for installation convenience. Inlet and outlet threads are 3/8"-18 NPTF for all models. These filter assemblies provide flexibility during mounting and fit any engine application.

Additional 600 Series features include Spin-On high capacity, Aquabloc® II replaceable filter elements which stop water, remove solid contamination, and are available in 2, 10 and 30 micron. Filtration needs should be based on application, fuel quality, operating climates, and maintenance schedules.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 90 GPH (341 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Center Threads | 1"-14 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 11.2 in. (28.4 cm) |
| Depth | 4.5 in. (11.4 cm) |
| Width | 4.5 in. (11.4 cm) |
| Weight (dry) | 2.7 lb (1.22 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.07 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.29 PSI (0.02 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

600 Series

6120R

Fuel Heater/Water Separator



All 600 Series Spin-On fuel filter/water separators feature multiple fuel ports (4 inlets and 3 outlets) and a unitized mounting bracket for installation convenience. Inlet and outlet threads are 3/8"-18 NPTF for all models. These filter assemblies provide flexibility during mounting and fit any engine application.

Additional 600 Series features include Spin-On high capacity, Aquabloc® II replaceable filter elements which stop water, remove solid contamination, and are available in 2, 10 and 30 micron. Filtration needs should be based on application, fuel quality, operating climates, and maintenance schedules.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 120 GPH (454 LPH) |
| Inlet/Outlet Port Size | 3/8"-18 NPTF |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Center Threads | 1"-14 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 14.1 in. (35.8 cm) |
| Depth | 4.5 in. (11.4 cm) |
| Width | 4.5 in. (11.4 cm) |
| Weight (dry) | 3.9 lb (1.8 kg) |
| Maximum Working Pressure ¹ | 15 PSI (1.03 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 2.65 PSI (0.18 bar) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

600 Series

600 Series Overview



| Specifications | 645R | 660R | 690R | 6120R |
|--|--------------------------------------|--------------------------------------|--------------------------------------|------------------------------------|
| Maximum Flow Rate | 45 GPH (170 LPH) | 60 GPH (227 LPH) | 90 GPH (341 LPH) | 120 GPH (454 LPH) |
| Port Size (SAE J476) | 3/8"-18 NPTF | 3/8"-18 NPTF | 3/8"-18 NPTF | 3/8"-18 NPTF |
| Total Number of Ports: (total inlets) (total outlets) | 7 4 3 | 7 4 3 | 7 4 3 | 7 4 3 |
| Min. Service Clearance | 2.0 in. (5.1 cm) | 2.0 in. (5.1 cm) | 2.0 in. (5.1 cm) | 2.0 in. (5.1 cm) |
| Center Threads | 1"-14 | 1"-14 | 1"-14 | 1"-14 |
| Height | 8.5 in. (21.6 cm) | 10.2 in. (25.9 cm) | 11.2 in. (28.4 cm) | 14.1 in. (35.8 cm) |
| Depth | 4.5 in. (11.4 cm) | 4.5 in. (11.4 cm) | 4.5 in. (11.4 cm) | 4.5 in. (11.4 cm) |
| Width | 4.5 in. (11.4 cm) | 4.5 in. (11.4 cm) | 4.5 in. (11.4 cm) | 4.5 in. (11.4 cm) |
| Weight (dry) | 2.4 lb (1.09 kg) | 2.6 lb (1.18 kg) | 2.7 lb (1.22 kg) | 3.9 lb (1.8 kg) |
| Clean Pressure Drop | 0.01 PSI (0.001 bar) | 0.05 PSI (0.003 bar) | 0.29 PSI (0.02 bar) | 2.65 PSI (0.18 bar) |
| Max. Allowable Pressure¹ | 30 PSI (2.07 bar) | 30 PSI (2.07 bar) | 30 PSI (2.07 bar) | 15 PSI (1.03 bar) |
| Available Options:² (water sensor) (heater) ³ | Yes Yes | Yes Yes | Yes Yes | Yes Yes |
| Bowl Capacity (water) (with heater) | 4.0 oz. (118 ml) 3.5 oz. (104 ml) | 4.0 oz. (118 ml) 3.5 oz. (104 ml) | 4.0 oz. (118 ml) 3.5 oz. (104 ml) | 2.8 oz. (82 ml) 2.4 oz. (70 ml) |
| H₂O Removal Efficiency | 99% | | | |
| Operating Temperature | -40° to +255°F (-40° to +124°C) | | | |

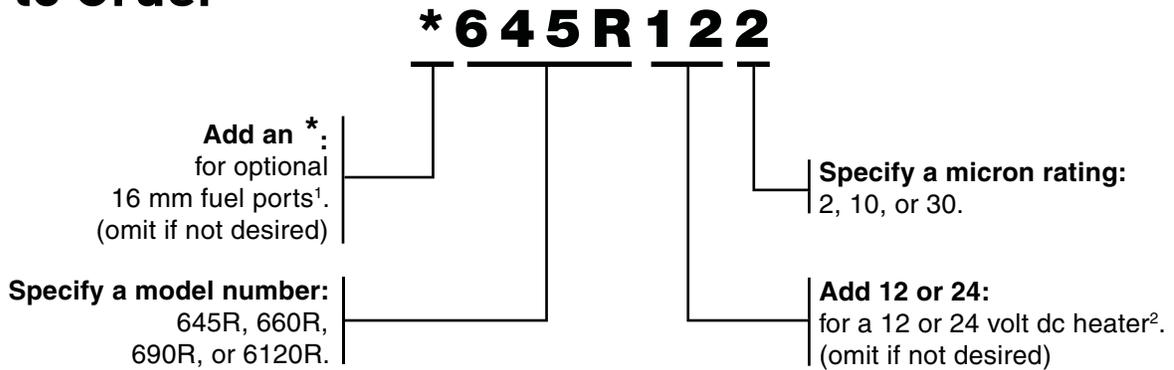
¹ Pressure installations are applicable up to maximum PSI shown. Vacuum installations are recommended.

² Not for use with gasoline applications.

³ Maximum power requirements for in-bowl heater option: 12 vdc (200 watt) = 16.6 amps, 24 vdc (200 watt) = 8.3 amps - see Accessories section for heater relay kits, if needed.

600 Series

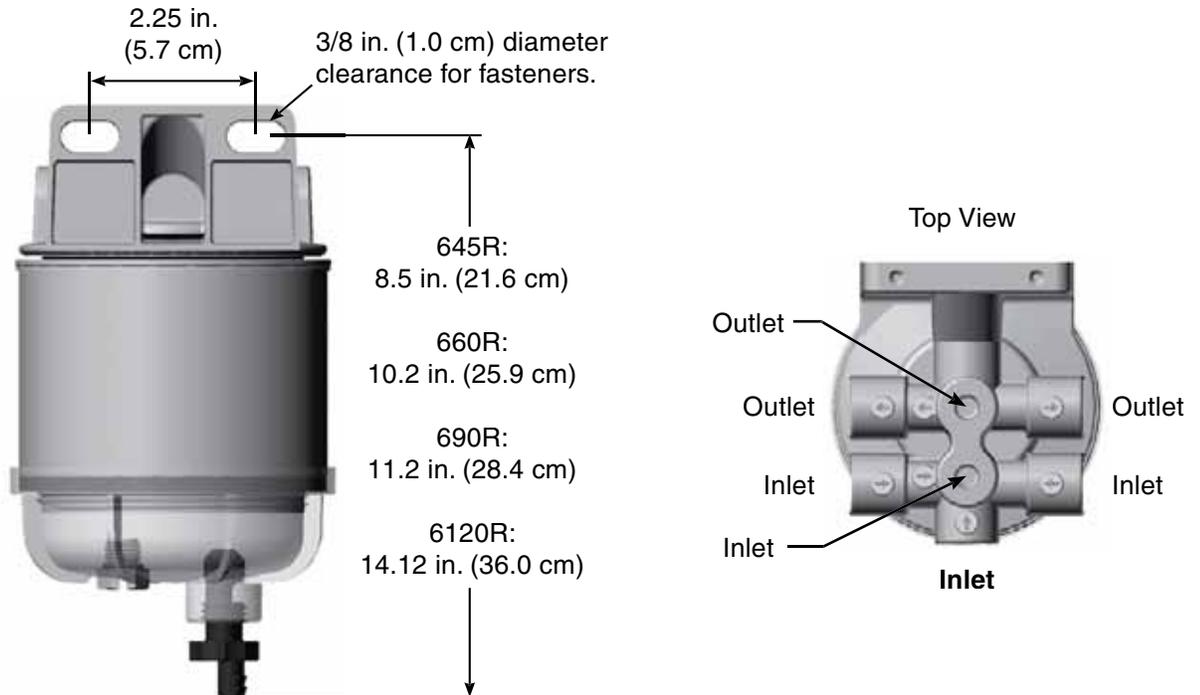
How to Order



¹ Standard fuel ports are 3/8"-18 NPTF.
² Use with Racor relay kit - see Accessories.

| Replacement Elements | | | |
|----------------------|--------------------------------|-------------------------------------|-----------------------------------|
| Model Number | 2 Micron (Final Filtration) | 10 Micron (Secondary Filtration) | 30 Micron (Primary Filtration) |
| 645R | R45S | R45T | R45P |
| 660R | R60S | R60T | R60P |
| 690R | R90S | R90T | R90P |
| 6120R | R120S | R120T | R120P |

Mounting Information



Questions? Contact Technical Support:
 800 344 3286 or 209 521 7860 ext. 7555
 e-mail: racortech@parker.com

600 Series

Replacement Parts

645R, 660R and 690R

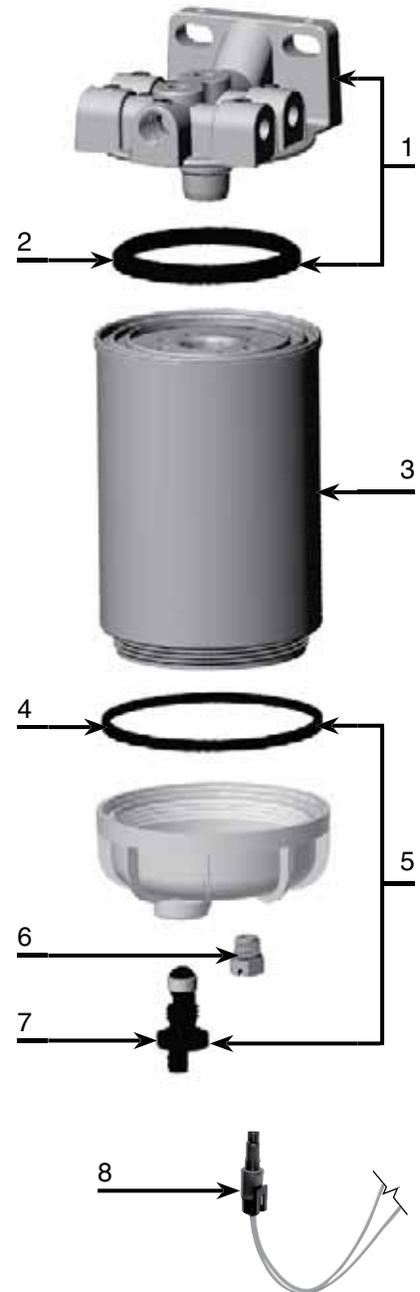
| Part Number | Description |
|-----------------------------------|---|
| 1. RK22098 | Mounting Head Kit (3/8"-18 NPTF) (includes #2 & Plug Kit 3/8" NPT) |
| RK 22423 | Mounting Head Kit (Metric) (16 mm X 1.5) (includes #2) |
| 2. RK22998 | Element Gasket Kit |
| 3. | See Replacement Element Chart |
| 4. RK 22333 | Bowl Gasket Kit |
| 5. | Replacement Bowl Kits (includes bowl, #4 , #6 and #7) |
| RK 21113-13-11¹ | Clear Bowl Kit |
| RK 22616-01² | Heated Clear Bowl Kit (same as above, 12 vdc heater) |
| RK 22616-02² | Heated Clear Bowl Kit (same as above, 24 vdc heater) |
| 6. RK 20126 | Bowl Plug Kit (1/2" SAE) |
| 7. RK 30476 | Drain Valve Assembly Kit |
| 8. RK 30964³ | Water Probe Kit |

Additional Parts Not Shown

| | |
|-----------------|---------------------------|
| 01SP-6S | Metal Plug (3/8" NPTF) |
| 22231 | Plug Kit 3/8" NPT |
| RK 22323 | Heater Connector Kit |
| 22249 | Installation Instructions |

Notes:

- ¹ Includes water probe port plug 1/2" SAE.
- ² In-bowl heater may require a Heater Relay Kit.
Maximum power requirements are: 12 vdc =16.6 amps,
24 vdc = 8.3 amps.
- ³ Water probe must be used with a Water Detection Kit
- see Accessories. Do not use on gasoline applications.



600 Series

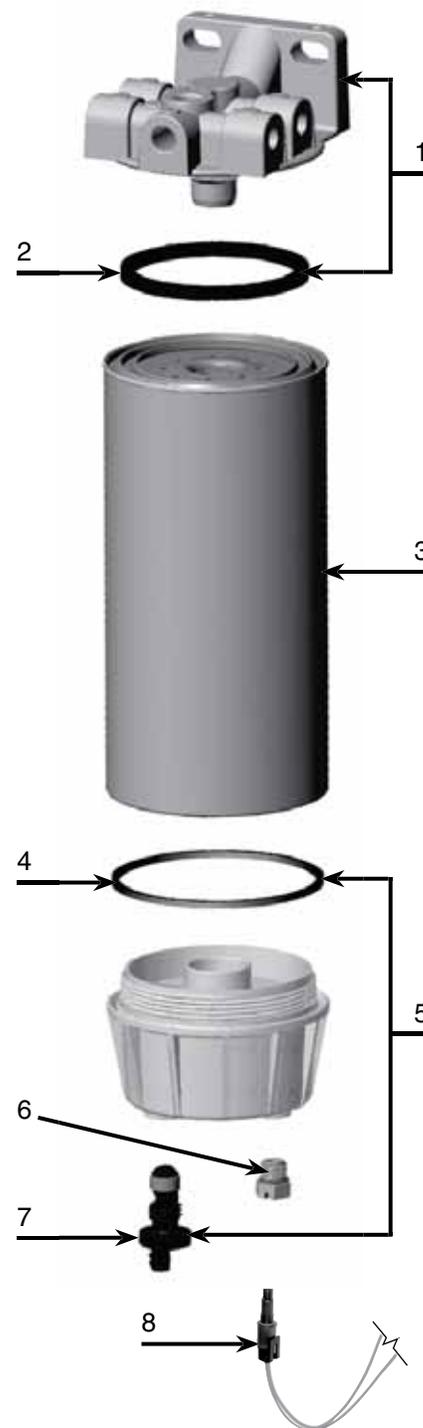
Replacement Parts

6120R

| Part Number | Description |
|--------------------------------|---|
| 1. RK22098 | Mounting Head Kit (3/8"-18 NPTF) (includes #2 & Plug Kit 3/8" NPT) |
| RK 22423 | Mounting Head Kit (Metric) (16 mm X 1.5) (includes #2) |
| 2. RK22998 | Element Gasket Kit |
| 3. | See Replacement Element Chart |
| 4. RK 30965 | Bowl Gasket Kit |
| 5. | Replacement Bowl Kits (includes Bowl, #4, #6 and #7) |
| RK 30063¹ | Clear Bowl Kit |
| RK 30900² | Heated Clear Bowl Kit (same as above, 12 vdc heater) |
| RK 30925² | Heated Clear Bowl Kit (same as above, 24 vdc heater) |
| 6. RK 20126 | Bowl Plug Kit (1/2" SAE) |
| 7. RK 30476 | Self-Venting Drain Kit |
| 8. RK 30964³ | Water Probe Kit |
| Additional Parts (not shown) | |
| 01SP-6S | Metal Plug (3/8" NPTF) |
| 22231 | Plug Kit 3/8" NPT |
| RK 30876 | Heater Connector Kit |
| RK 30058 | Drain Valve Seal Kit |
| 22249 | Installation Instructions |

Notes:

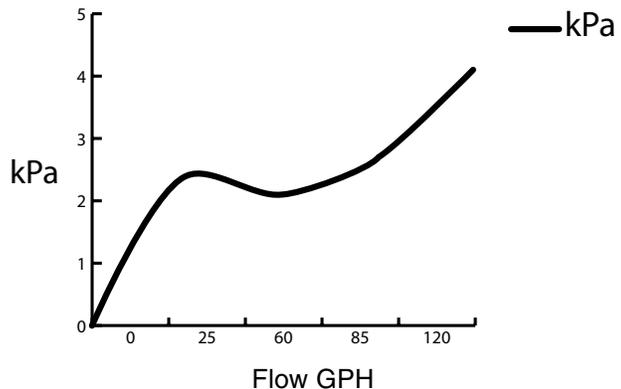
- ¹ Includes water probe port plug 1/2" SAE.
- ² In-bowl heater may require a Heater Relay Kit.
Maximum power requirements are: 12 vdc =16.6 amps,
24 vdc = 8.3 amps.
- ³ Water probe must be used with a Water Detection Kit
- see Accessories. Do not use on gasoline applications.



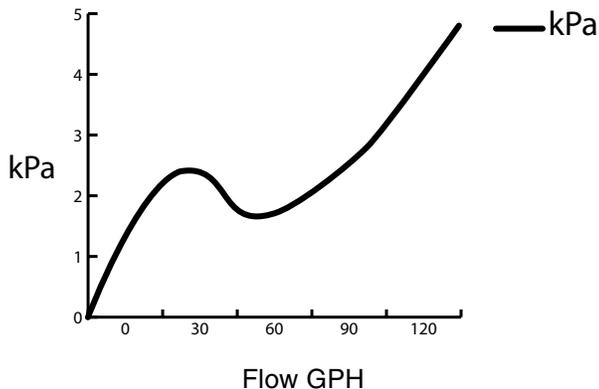
600 Series

Test Data

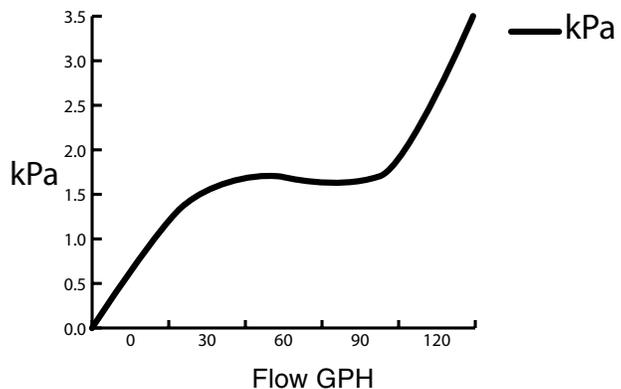
645R



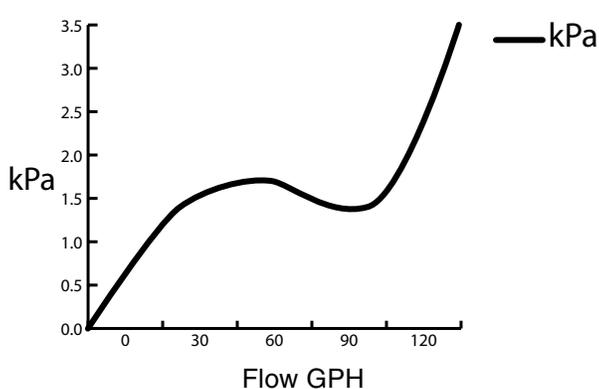
660R



690R



6120R



Test results are from controlled laboratory testing. Field results may vary.
(PSI X 2.036 = inHG) (PSI X 6.895 = kPa)

Nautilus

Nautilus Series fuel filter/water separators use a unique, patented coalescing Spin-On element that enhances centrifugal force thereby pulling 99% of the suspended free water from fuel. The Nautilus element, S6464, is self-cleaning and does not require replacement under normal operating conditions; it is not a particulate removing filter.

The 6400/6401 models feature an internal heat exchanger, which uses hot engine coolant to heat the incoming fuel. The fittings fit 5/8" I.D. coolant hoses and attach to the pressure side, up to 35 PSI (2.4 bar), of the engine cooling system.

Additionally, the 6401 model also includes an internal coolant shut-off valve which is automatically

controlled by a thermostat which opens at approximately 45°F (7.2°C) and closes at 100°F (37.7°C).

Heating the fuel dissolves paraffin wax crystals that form when diesel fuel is chilled thus enabling water separation to occur more efficiently and prevents downstream fuel filters from plugging with wax and/or ice crystals.

Nautilus assemblies are for PRIMARY filtration and separation use only. A secondary filter is required downstream. Model 6400 features a coolant heat exchanger as standard; a customer supplied shut-off valve may be required. Model 6401 features an internal automatic thermostat (shuts off coolant flow to heat exchanger to control fuel temperature).



6400/6401

| Specifications | 6400/6401 |
|--|---------------------------------------|
| Maximum Flow Rate: (with S3226P element) (with S6464 coalescer element) | 75 GPH (284 LPH) 120 GPH (454 LPH) |
| Port Size: (inlet/outlet fuel) (coolant fittings) | 7/8"-14 SAE 5/8" Hose Barb |
| Service Filter Element | S6464 or S3226P |
| Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Center Threads | 1"-14 |
| Height | 16.5 in. (41.9 cm) |
| Width | 6.0 in. (15.2 cm) |
| Depth | 6.0 in. (15.2 cm) |
| Weight (dry) | 11.3 lb (5.1 kg) |
| Clean Pressure Drop | 0.5 PSI (0.03 bar) |
| Max. Allowable Pressure | 15 PSI (1.03 bar) |
| Bowl Capacity (water) (to probe tips) (with Heater) | 2.8 oz. (82 ml) 2.4 oz. (70 ml) |
| H₂O Removal Efficiency | 99% |
| Operating Temperature | -40° to +255°F (-40° to +124°C) |

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

Nautilus

How to Order

(the example below illustrates how a part number is constructed)

| 6401 | N |
|--|---|
| Specify: 6400 (no thermostat valve), or 6401 (with thermostat valve) | Specify: ¹ N coalescer element. (omit if not desired) |

¹ 30 micron S3226P element is standard unless **N** option is selected for coalescer element (see below).

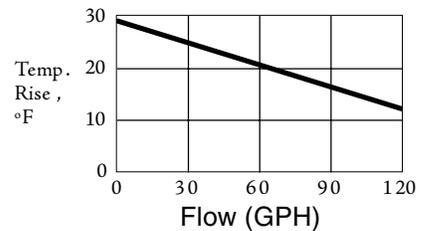
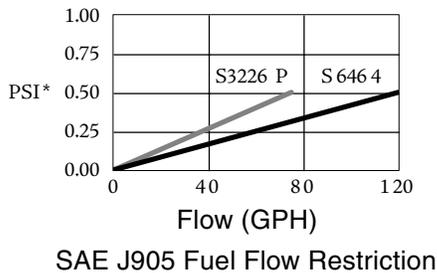
Replacement Elements

| S6464 | S3226P |
|---|---|
| Coalescer Element (removes water only from fuel; does not remove sediment). This filter is self-cleaning and does not require replacement under normal operating conditions.* | 30 Micron Element (removes sediment and separates water)* |

*A secondary/final filter must be in the downstream fuel system.

Test Data

Test results are from controlled laboratory testing. Field results may vary by application.

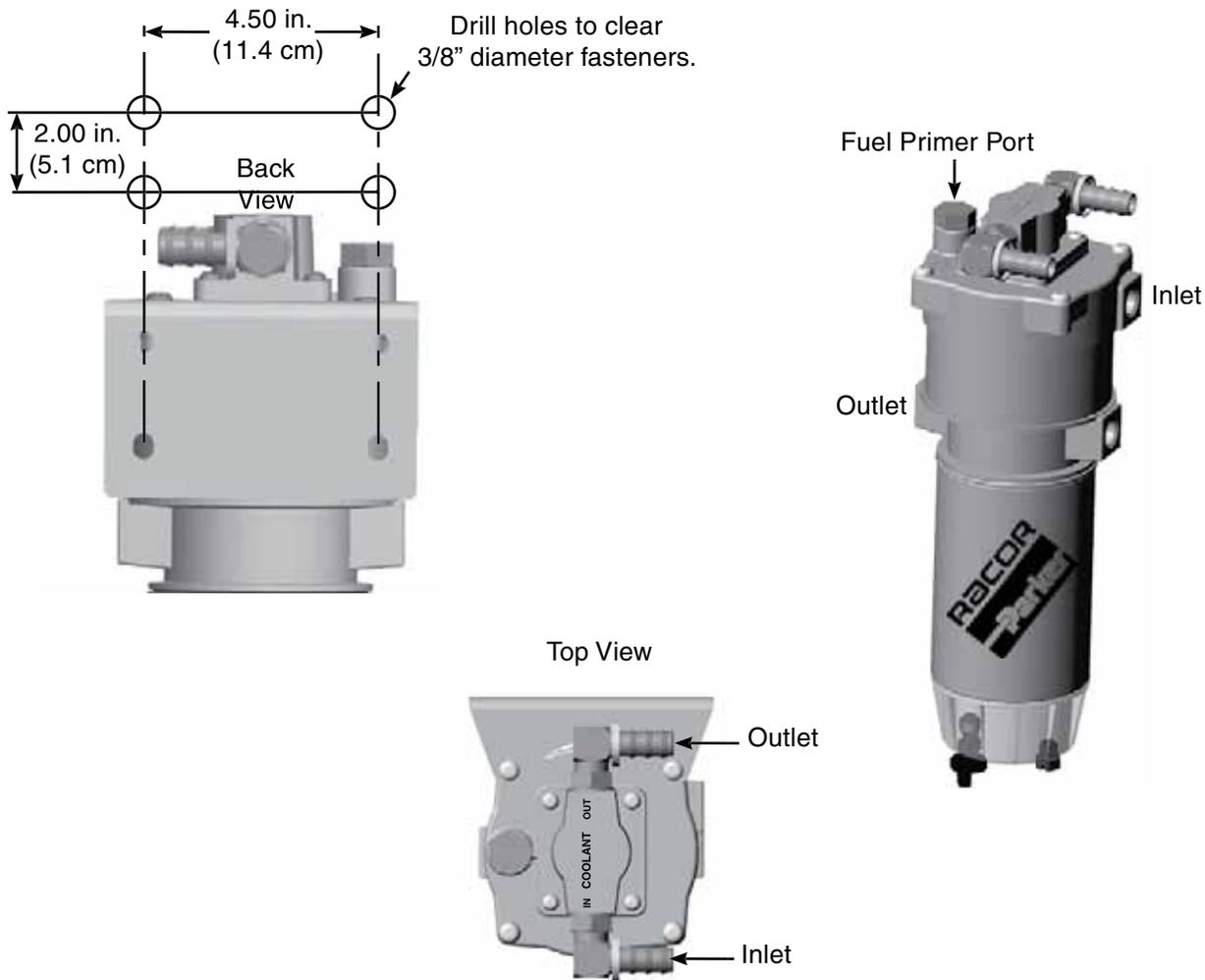


6400 Heat Rise vs Flow
Fuel = -10°F
Coolant = +185°F @ 5 gpm

*PSI X 2.036 = inHg / PSI X 6.895 = kPa

Nautilus

Mounting Information



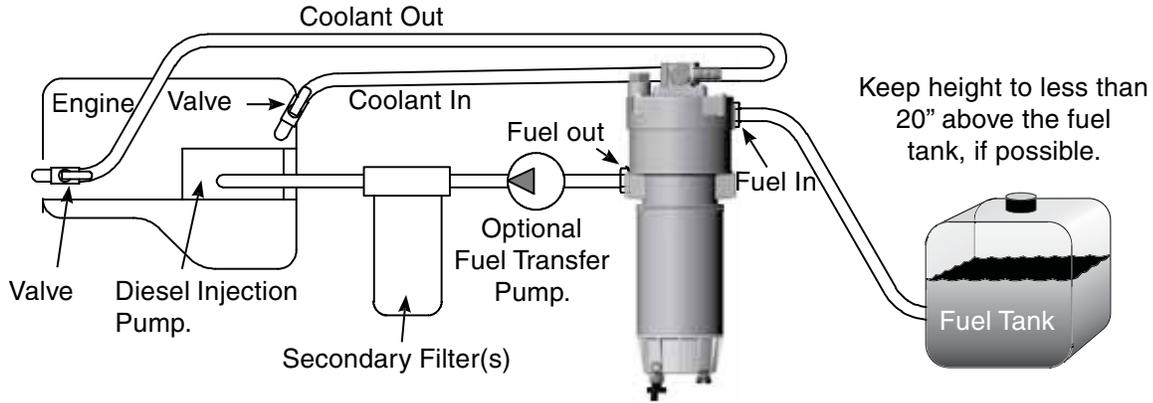
Important:

The fuel and coolant port orientation may be changed to suit any installation. Fuel ports may face opposite direction by repositioning L-bracket on opposite side along with clamp bracket. Torque 5/16" bracket fasteners to 20 ft. lbs.

Coolant fittings may be repositioned within a 180° arc by loosening the locknuts. Reposition and tighten locknuts snugly. Coolant in/out manifold may be repositioned opposite as shown; torque 1/4" fasteners to 20 ft. lbs.

Nautilus

Installation Diagram



Coolant Plumbing Alternatives

Parallel System with a cab heater.

Manual shut-off valves (customer supplied) maybe used to regulate coolant to the Racor unit for summer use, if desired.

Valve Positions:

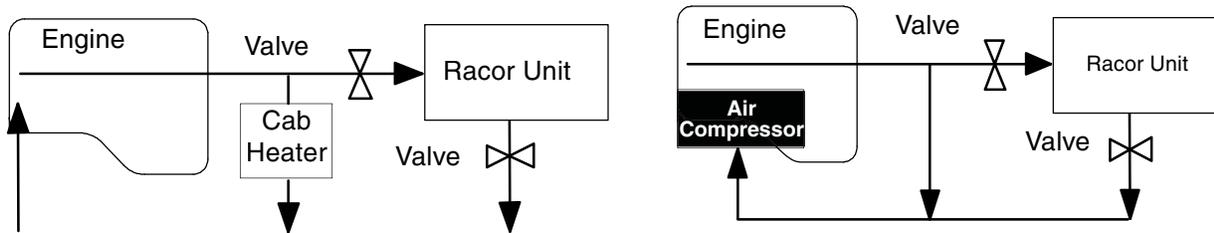
Open: About equal flow through Racor and cab heater. Closed: All coolant to the cab heater.

Parallel System with an air compressor.

Manual shut-off valves (customer supplied) may be use, if desired.

Valve Positions:

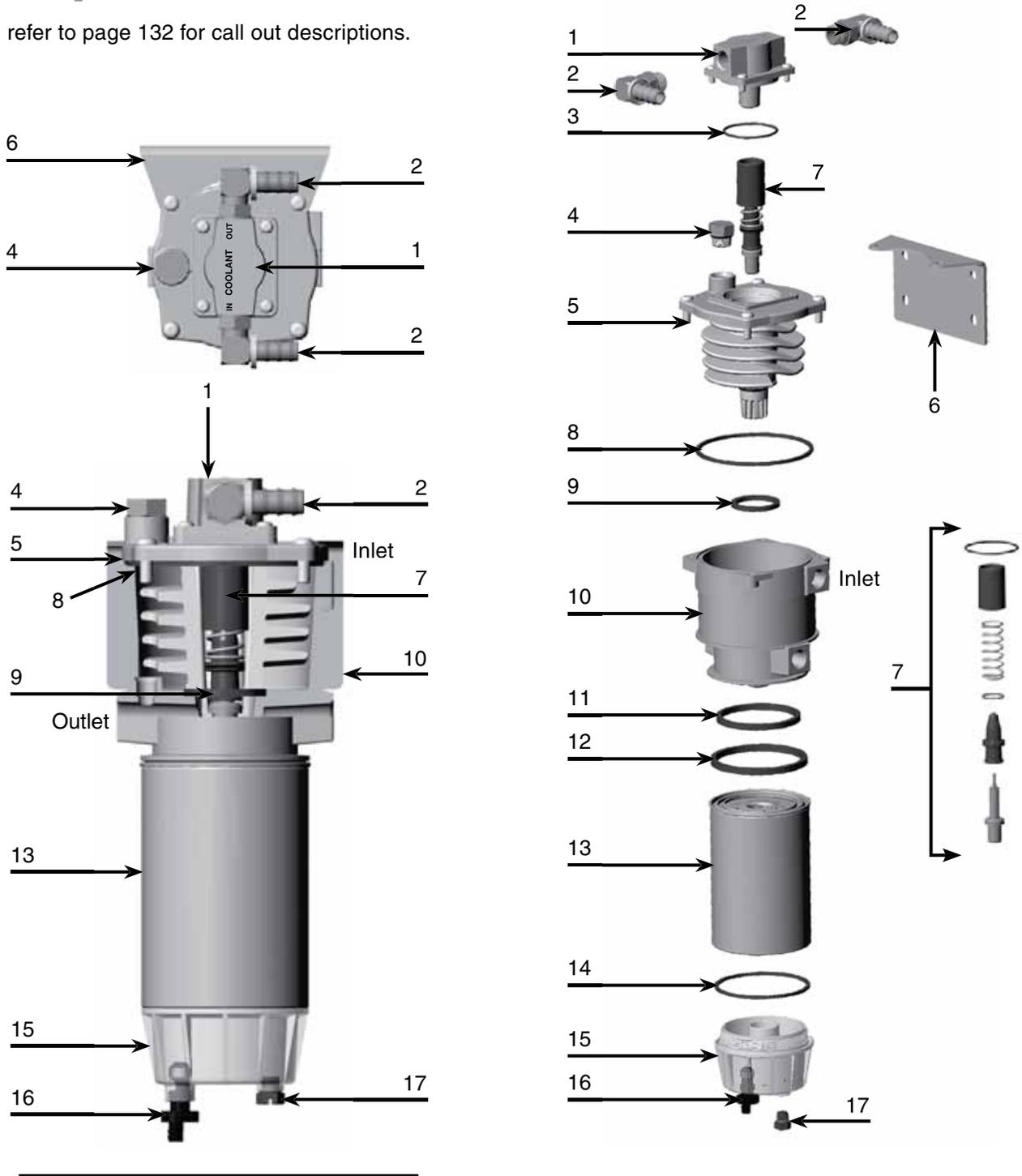
Open: About equal flow through Racor and air compressor. Closed: All coolant to the air compressor



Nautilus

6400/6401

Please refer to page 132 for call out descriptions.



Nautilus

Replacement Parts

6400 / 6401

| <u>Part Number</u> | <u>Description</u> |
|-------------------------------------|--|
| 1. RK 16070 | Coolant Head Kit (includes #3) |
| 2. 913-O10-H10 | Standard Elbow Fitting (5/8" hose barb) |
| 913-O10-H12 | Optional Elbow Fitting (3/4" hose barb) |
| 3. 16083 | Coolant Head O-ring |
| 4. RK 11911 | Priming Port Plug Kit |
| 5. RK 16007 | Heat Exchanger Kit (includes #'s 8 and 9) |
| 6. RK 16073 | L-Bracket Kit |
| 7. RK 16086 (includes #3) | Thermostat Valve Kit |
| 8. 16083 | Coolant Head O-ring |
| 9. 16029 | Heat Exchanger Base Seal |
| 10. RK 16076 | Head Assembly Kit (includes #'s 8 and 9) |
| 11. 20505 | Element Gasket (for S6464 coalescing element) |
| 12. 40685 | Element Gasket (for S3226P 30 micron element) |

| <u>Part Number</u> | <u>Description</u> |
|---|---|
| 13. S6464 | Water Coalescing Element (includes #11 and 14) |
| S3226P | 30 Micron Filter Element (includes #12 and 14) |
| 14. 30965 | Bowl Gasket |
| 15. Replacement Bowls (includes #'s 14 to 17) | |
| RK 30063 | Bowl and Drain Kit |
| RK 30900 ¹ | Same as Above with 12 vdc Heater |
| RK 30925 ¹ | Same as Above with 24 vdc Heater |
| 16. RK 30476 | Self-venting Drain Valve Kit |
| 17. RK 20126 | Water Port Plug Kit |
| Additional Parts (not shown) | |
| RK 16040 | Complete Seal Service Kit |
| RK 30964 ² | Water Probe Kit |
| 16104 | Installation Instructions |

Notes:

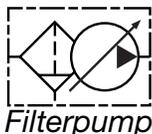
¹ In-bowl heater may require a heater relay kit.

² Water probe must be used with a water detection kit - see Accessories.

700 Series

745R30

Fuel Heater/Water Separator



The 700 series fuel filter/water separator assembly is a two-stage filtration and repriming system featuring a 12 volt solid-state controlled electronic priming pump, a vent valve to purge air, a 100 micron prefilter screen, a 30 micron Aquabloc®II Spin-On element, a water sensor probe, a clear collection bowl and a weather proof control box. This complete fuel management system isolates contaminants present in diesel fuels and traps them prior to reaching the fuel injection system, protecting the engine's fuel system from costly and premature failure.

Note:

All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



| Specifications | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 45 GPH (170 LPH) |
| Inlet/Outlet Port Size | 7/8"-14 UNF |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Micron Rating | 30 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 10.8 in. (25.7 cm) |
| Depth | 6.5 in. (16.5 cm) |
| Width | 4.3 in. (11.0 cm) |
| Weight (dry) | 4.5 lbs (2.0 kg) |
| Maximum Working Pressure ¹ | 15.0 PSI (1.0 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

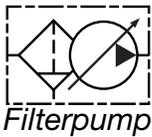
Notes: ¹Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

700 Series

760R30

Fuel Heater/Water Separator



The 700 series fuel filter/water separator assembly is a two-stage filtration and repriming system featuring a 12 volt solid-state controlled electronic priming pump, a vent valve to purge air, a 100 micron prefilter screen, a 30 micron Aquabloc®II Spin-On element, a water sensor probe, a clear collection bowl and a weather proof control box. This complete fuel management system isolates contaminants present in diesel fuels and traps them prior to reaching the fuel injection system, protecting the engine's fuel system from costly and premature failure.

Note:

All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



Specifications

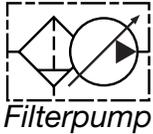
| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 60 GPH (227 LPH) |
| Inlet/Outlet Port Size | 7/8"-14 UNF |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Micron Rating | 30 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 11.8 in. (28.4 cm) |
| Depth | 6.5 in. (16.5 cm) |
| Width | 4.3 in. (11.0 cm) |
| Weight (dry) | 5.5 lbs (2.5 kg) |
| Maximum Working Pressure ¹ | 15.0 PSI (1.0 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

700 Series

790R30

Fuel Heater/Water Separator



The 700 series fuel filter/water separator assembly is a two-stage filtration and repriming system featuring a 12 volt solid-state controlled electronic priming pump, a vent valve to purge air, a 100 micron prefilter screen, a 30 micron Aquabloc®II Spin-On element, a water sensor probe, a clear collection bowl and a weather proof control box. This complete fuel management system isolates contaminants present in diesel fuels and traps them prior to reaching the fuel injection system, protecting the engine's fuel system from costly and premature failure.

Note:

All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



| Specifications | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 90 GPH (341 LPH) |
| Inlet/Outlet Port Size | 7/8"-14 UNF |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Micron Rating | 30 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 12.8 in. (32.5 cm) |
| Depth | 6.5 in. (16.5 cm) |
| Width | 4.3 in. (11.0 cm) |
| Weight (dry) | 6.5 lb (3.0 kg) |
| Maximum Working Pressure ¹ | 15.0 PSI (1.0 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

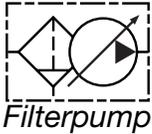
Notes: ¹Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

700 Series

790R3024

Fuel Heater/Water Separator



The 700 series fuel filter/water separator assembly is a two-stage filtration and repriming system featuring a 24 volt solid-state controlled electronic priming pump, a vent valve to purge air, a 100 micron prefilter screen, a 30 micron Aquabloc®II Spin-On element, a water sensor probe, a clear collection bowl, push button and a wire harness. This complete fuel management system isolates contaminants present in diesel fuels and traps them prior to reaching the fuel injection system, protecting the engine's fuel system from costly and premature failure.

Note:

All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



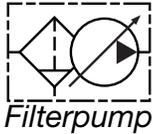
| Specifications | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 90 GPH (341 LPH) |
| Inlet/Outlet Port Size | 7/8"-14 UNF |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Micron Rating | 30 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 12.8 in. (32.5 cm) |
| Depth | 7.1 in (18.0 cm) |
| Width | 4.3 in. (11.0 cm) |
| Weight (dry) | 6.5 lb (3.0 kg) |
| Maximum Working Pressure ¹ | 15.0 PSI (1.0 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

700 Series

7125R30

Fuel Heater/Water Separator



The 700 series fuel filter/water separator assembly is a two-stage filtration and repriming system featuring a 12 volt solid-state controlled electronic priming pump, a vent valve to purge air, a 100 micron prefilter screen, a 30 micron Aquabloc®II Spin-On element, a water sensor probe, a clear collection bowl and a weather proof control box. This complete fuel management system isolates contaminants present in diesel fuels and traps them prior to reaching the fuel injection system, protecting the engine's fuel system from costly and premature failure.

Note:

All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



| Specifications | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 120 GPH (454 LPH) |
| Inlet/Outlet Port Size | 7/8"-14 UNF |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Micron Rating | 30 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 15.2 in. (36.6 cm) |
| Depth | 6.5 in. (16.5 cm) |
| Width | 4.3 in. (11.0 cm) |
| Weight (dry) | 6.7 lb (3.03 kg) |
| Maximum Working Pressure ¹ | 15.0 PSI (1.0 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

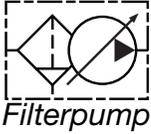
Notes: ¹Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

700 Series

7125R3024

Fuel Heater/Water Separator



The 700 series fuel filter/water separator assembly is a two-stage filtration and repriming system featuring a 24 volt solid-state controlled electronic priming pump, a vent valve to purge air, a 100 micron prefilter screen, a 30 micron Aquabloc®II Spin-On element, a water sensor probe, a clear collection bowl, push button and a wire harness. This complete fuel management system isolates contaminants present in diesel fuels and traps them prior to reaching the fuel injection system, protecting the engine's fuel system from costly and premature failure.

Note:

All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | 120 GPH (454 LPH) |
| Inlet/Outlet Port Size | 7/8"-14 UNF |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Micron Rating | 30 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 15.2 in. (36.6 cm) |
| Depth | 7.1 in (18.0 cm) |
| Width | 4.3 in. (11.0 cm) |
| Weight (dry) | 6.7 lb (3.03 kg) |
| Maximum Working Pressure ¹ | 15.0 PSI (1.0 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

700 Series

700 Series Overview



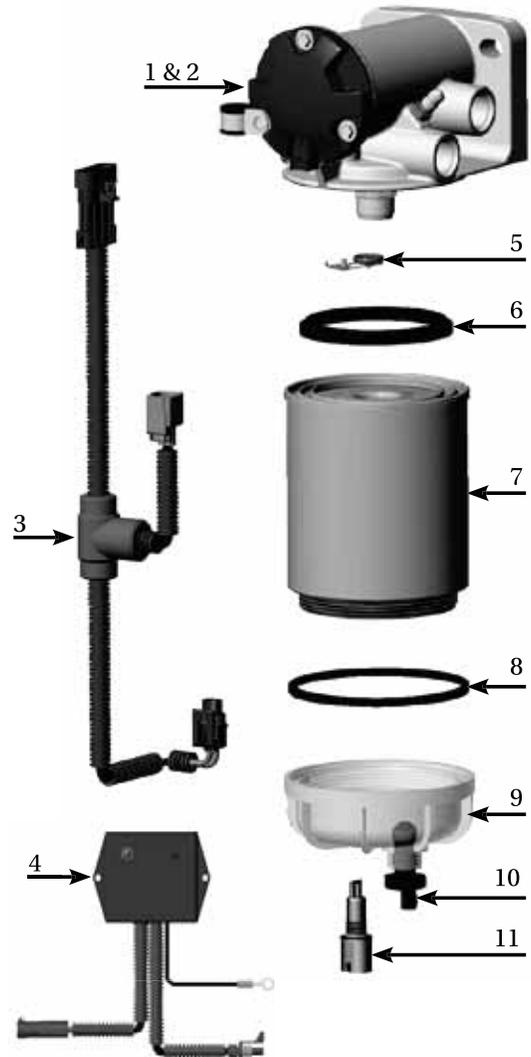
| | 745R30 | 760R30 | 790R30 | 790R3024 | 7125R30 | 7125R3024 |
|------------------------------|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Power | 12 volt | 12 volt | 12 volt | 24 volt | 12 volt | 24 volt |
| Max Flow Rate | 45 GPH (170 LPH) | 60 GPH (227 LPH) | 90 GPH (341 LPH) | 90 GPH (341 LPH) | 120 GPH (454 LPH) | 120 GPH (454 LPH) |
| Port Size (SAE J1926) | 7/8"-14 UNF | 7/8"-14 UNF | 7/8"-14 UNF | 7/8"-14 UNF | 7/8"-14 UNF | 7/8"-14 UNF |
| Height | 10.8 in. (25.7 cm) | 11.8 in. (28.4 cm) | 12.8 in. (31.2 cm) | 12.8 in. (31.2 cm) | 15.2 in. (38.5 cm) | 15.2 in. (38.5 cm) |
| Width | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) |
| Depth | 6.5 in. (16.5 cm) | 6.5 in. (16.5 cm) | 6.5 in. (16.5 cm) | 7.1 in. (18.0 cm) | 6.5 in. (16.5 cm) | 7.1 in. (18.0 cm) |
| Weight (dry) | 4.5 lb (2.0 kg) | 5.5 lb (2.5 kg) | 6.5 lb (3.0 kg) | 6.5 lb (3.0 kg) | 6.7 lb (3.03 kg) | 6.7 lb (3.03 kg) |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) | 0.7 PSI (4.8 kPa) | 0.7 PSI (4.8 kPa) | 0.7 PSI (4.8 kPa) | 0.7 PSI (4.8 kPa) | 0.7 PSI (4.8 kPa) |
| Ambient Temp. Range | -40° to +250°F (-40° to +121°C) | | | | | |
| Max. Fuel Temp. | 190°F (32°C) | | | | | |

Note: All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.

700 Series

12 Volt Replacement Parts

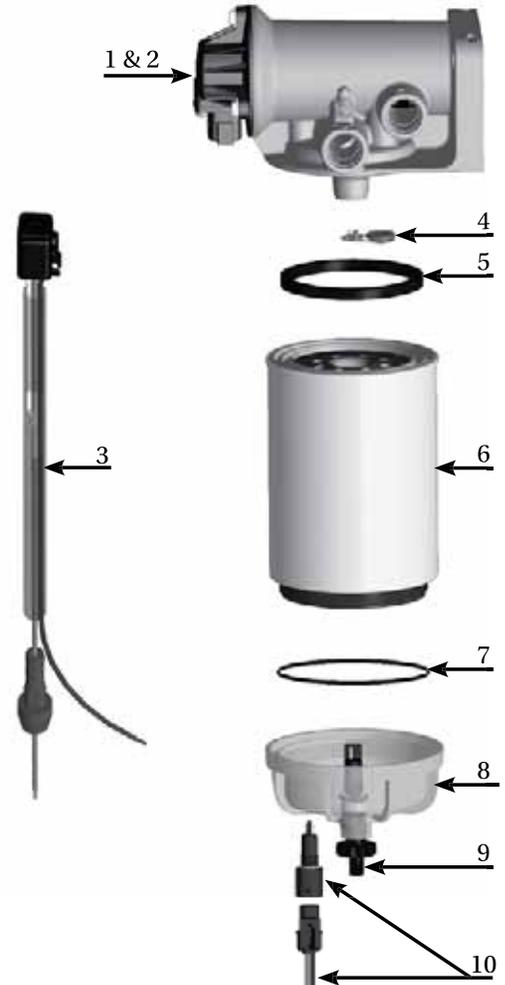
- | <u>Parts</u> | <u>Description</u> | | |
|-------------------------------------|---|------------------|------------------|
| 1. RK22895 | Replacement Pump Head with Pump | | |
| 2. RK22933 | 12 vdc Primer Pump Kit (Includes pump, o-rings, screws, prescreen element and more. Does NOT include mounting head.) | | |
| 3. RK22902 | Wire Harness Kit | | |
| 4. RK22943 | Control Panel Kit | | |
| 5. RK 22798 | Bypass Valve Kit | | |
| 6. RK 21501 | Gasket Kit (Includes #'s 6 and 8) | | |
| 7. (see below) Replacement Elements | | | |
| <u>Model</u> | <u>2 Micron</u> | <u>10 Micron</u> | <u>30 Micron</u> |
| 745R | R45S | R45T | R45P |
| 760R | R60S | R60T | R60P |
| 790R | R90S | R90T | R90P |
| 7125R | R125S | R125T | R125P |
| 8. RK 21501 | Gasket Kit (Includes #'s 6 and 8) | | |
| 9. RK 21113-13-11 | Clear Bowl Kit (Includes #'s 8 and 10) | | |
| 10. RK 30476 | Self-venting Drain Kit | | |
| 11. RK 30902 | Water Sensor Probe Kit | | |
| Additional Parts (not shown) | | | |
| RK11-1970 | Port Plug Kit | | |
| RK22934 | Prescreen Element Kit (100 micron) | | |



700 Series

24 Volt Replacement Parts

- | <u>Parts</u> | <u>Description</u> | | |
|-------------------------------------|---|------------------|------------------|
| 1. RK23085 | Replacement Pump Head with Pump | | |
| 2. RK23087 | 24 vdc Primer Pump Kit (Includes pump, o-rings, screws, prescreen element and more. Does NOT include mounting head.) | | |
| 3. RK23088 | Push Button/Harness Kit | | |
| 4. RK 22798 | Bypass Valve Kit | | |
| 5. RK 21501 | Gasket Kit (Includes #'s 5 and 7) | | |
| 6. (see below) Replacement Elements | | | |
| <u>Model</u> | <u>2 Micron</u> | <u>10 Micron</u> | <u>30 Micron</u> |
| 790R | R90S | R90T | R90P |
| 7125R | R125S | R125T | R125P |
| 7. RK 21501 | Gasket Kit (Includes #'s 5 and 7) | | |
| 8. RK 21113-13-11 | Clear Bowl Kit (Includes #'s 7 and 9) | | |
| 9. RK 30476 | Self-venting Drain Kit | | |
| 10. RK 30964 | Water Sensor Probe Kit/Connector | | |
| Additional Parts (not shown) | | | |
| RK11-1970 | Port Plug Kit | | |
| RK22934 | Prescreen Element Kit (100 micron) | | |



700 Series

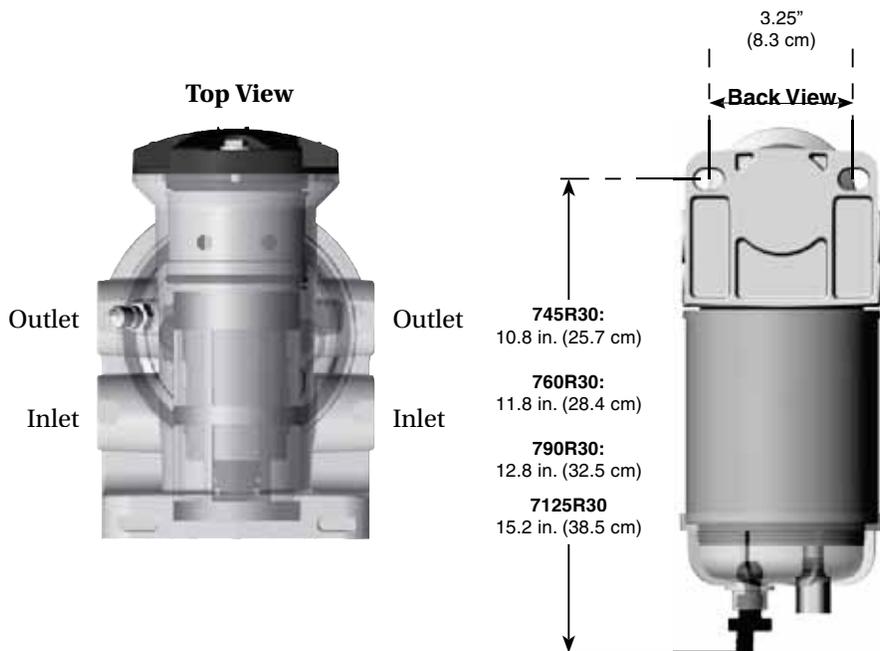
Mounting

Keep all fuel lines and flow restrictions to a minimum. Use maximum size fuel hose possible. Do not use two 45° fittings where one 90° elbow will work.

Avoid sharp bends, surfaces that move, sharp edges, or hot areas such as exhaust piping.

Use 3/8" mounting hardware.

Mount filter vertically on suction (vacuum) side of fuel transfer pump (or injection pump).



Installation Diagram

Fuel Tank Above Filter
(Head pressure should not exceed max. PSI of filter.)

Fuel Tank
(Pressure Side Installation)

Install shut-off valve when fuel tank is higher than filter.

Fuel Tank
(Ideal Vacuum Side Installation)

To maintain prime, install check valve (with light or no restriction) when tank is lower than filter.

Fuel Tank
(Vacuum Side Installation)

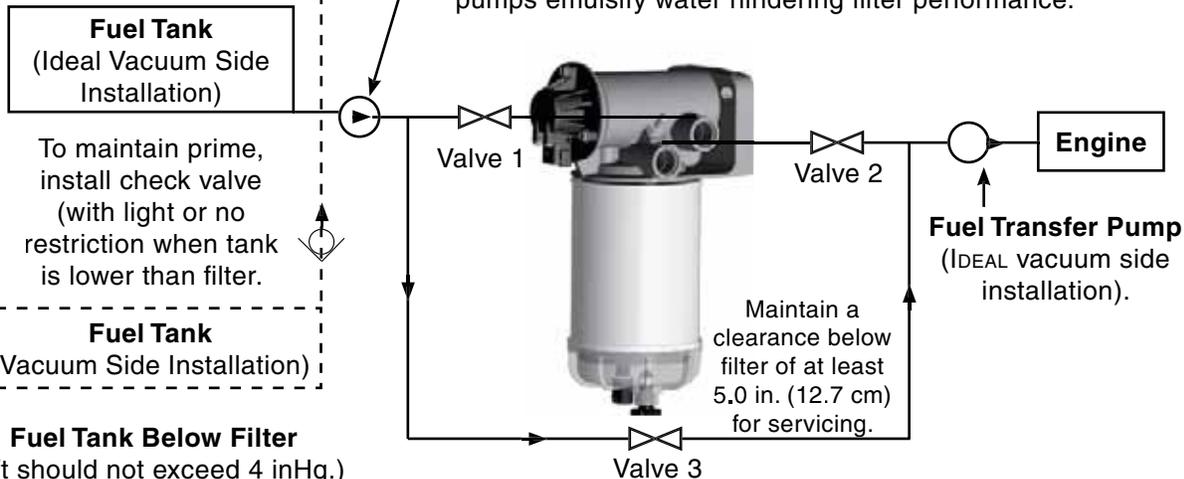
Fuel Tank Below Filter
(Lift should not exceed 4 inHg.)

Optional Bypass Installation and Operation
(Allows user to service filter without shutting down engine.)

| Valves | 1 | 2 | 3 |
|---------------|--------|--------|--------|
| Unit On-line | Open | Open | Closed |
| Unit Off-line | Closed | Closed | Open |

Optional Fuel Transfer Pump

Do not exceed maximum PSI or flow rate of filter. NOT ideal—pumps emulsify water hindering filter performance.



700 Series

Optional Accessories



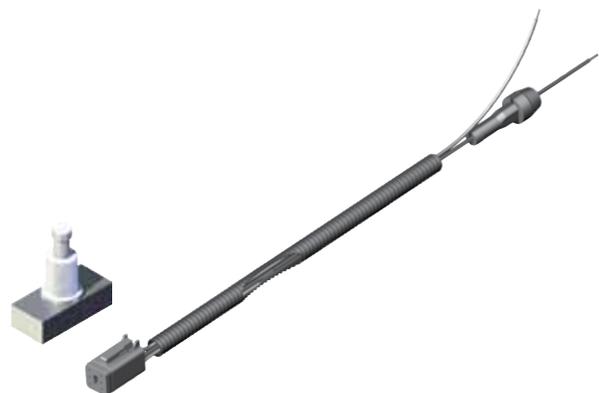
RK22943
Replacement Control Panel
12 volt System



RK22902
Replacement Wire Harness
12 volt System

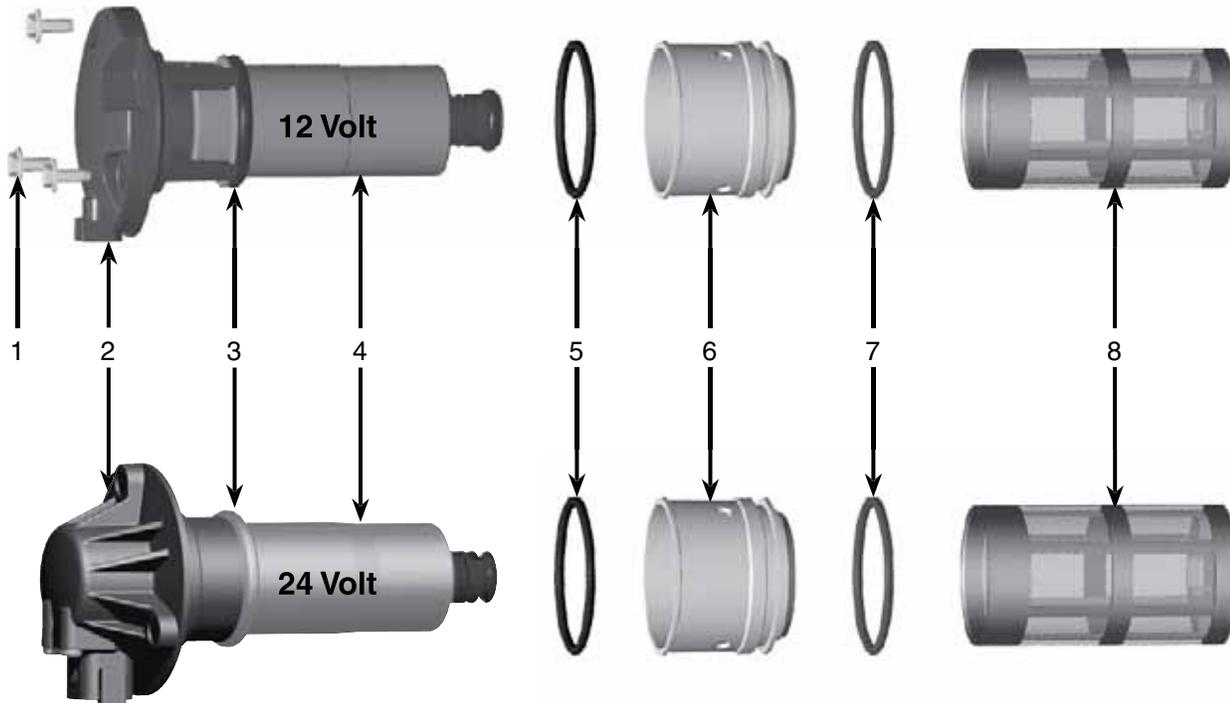


RK 30964
Replacement WIF Sensor Kit
24 volt System Includes Detachable
2-wire Connector. Requires a Detection
Module.



RK23088
Replacement Push Button and Harness Kit
24 volt System

Primer Pump Kit



Replacement Parts

RK22933 12 vdc Primer Pump Kit includes all parts shown above.

| Part Number | Description |
|----------------|--|
| 1. N/A | Screws (3) |
| 2. N/A | Pump Cover |
| 3. N/A | Body O-ring |
| 4. N/A | Pump Sub Assembly |
| 5. N/A | Cover O-ring |
| 6. N/A | Pump Seal Adapter |
| 7. N/A | Adapter O-ring |
| 8. N/A | Prescreen 100 micron |
| RK22934 | Prescreen Element Kit 100 micron (includes numbers 3, 5, 7 & 8) |

RK23087 24 vdc Primer Pump Kit includes all parts shown above.

| Part Number | Description |
|----------------|--|
| 1. N/A | Screws (3) |
| 2. N/A | Pump Cover |
| 3. N/A | Body O-ring |
| 4. N/A | Pump Sub Assembly |
| 5. N/A | Cover O-ring |
| 6. N/A | Pump Seal Adapter |
| 7. N/A | Adapter O-ring |
| 8. N/A | Prescreen 100 micron |
| RK22934 | Prescreen Element Kit 100 micron (includes numbers 3, 5, 7 & 8) |

777R Series

777R Series

Fuel Heater/Water Separator



The 777R assembly is a complete fuel filtration system that removes contaminants from fuel using the following two stage process:

Stage 1: As fuel enters the assembly, it moves through the centrifuge and spins off large solids and water droplets, which are heavier than fuel, and fall to the bottom of the collection bowl.

Stage 2: Proprietary Aquabloc® II cartridge elements repel water and remove contaminants from fuel down to 2 micron. They are waterproof and effective longer than water absorbing elements.

Note: All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



Specifications

| | |
|---|---------------------------------------|
| Maximum Flow Rate: (with diesel) | 150 GPH (568 LPH) |
| Inlet/Outlet Port Size | ½" NPT |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Micron Rating | 30 |
| Minimum Service Clearance (above filter) (below filter) | 6.0 in. (15.2 cm) 2.0 in. (5.1 cm) |
| Height | 18.8 in. (47.8 cm) |
| Depth | 6.8 in. (17.3 cm) |
| Width | 8.1 in. (20.6 cm) |
| Weight (dry) | 12.0 lb (5.4 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.1 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

777R Series

777R1230FH

Fuel Heater/Water Separator



777R1202FH, 777R1210FH & 777R1230FH assemblies are shipped with no fluid heat port plugs. Coolant lines are plumbed directly to the fluid heat ports.

Stage 1: As fuel enters the assembly, it moves through the centrifuge and spins off large solids and water droplets, which are heavier than fuel, and fall to the bottom of the collection bowl.

Stage 2: Proprietary Aquabloc® II cartridge elements repel water and remove contaminants from fuel down to 2 micron. They are waterproof and effective longer than water absorbing elements.

Note: All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



Specifications

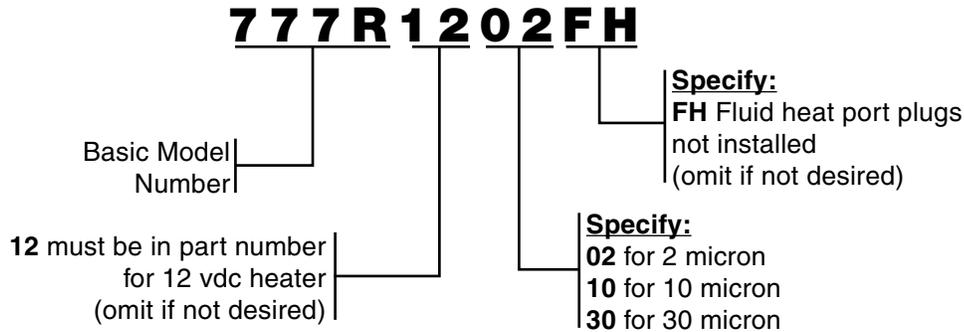
| | |
|---|---------------------------------------|
| Maximum Flow Rate: (with diesel) | 150 GPH (568 LPH) |
| Inlet/Outlet Port Size | ½" NPT |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Micron Rating | 30 |
| Minimum Service Clearance (above filter) (below filter) | 6.0 in. (15.2 cm) 2.0 in. (5.1 cm) |
| Height | 18.8 in. (47.8 cm) |
| Depth | 6.8 in. (17.3 cm) |
| Width | 8.1 in. (20.6 cm) |
| Weight (dry) | 12.0 lb (5.4 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.1 bar) |
| Water Removal Efficiency | 99% |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

777R Series

How to Order

(The example below illustrates how part numbers are constructed.)



| Replacement Elements | | |
|--------------------------------|-------------------------------------|-----------------------------------|
| 2 micron (Final Filtration) | 10 micron (Secondary Filtration) | 30 micron (Primary Filtration) |
| 6732S | 6732T | 6732P |

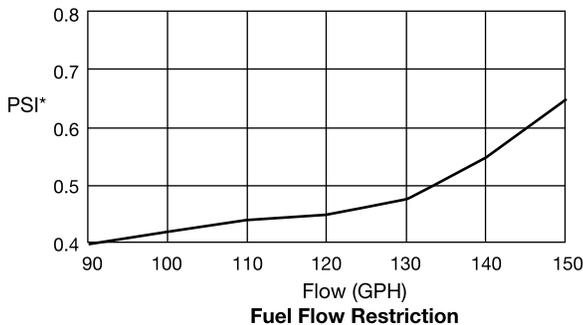
Note: Maintain 6 in. (15.2 cm) overhead clearance for servicing.

777R assemblies feature an internal thermostat to protect electric engine controls from overheating by the fuel heater and regulates fuel temperature automatically; warm fuel in the winter, cool fuel in the summer (thermostat setting: on at 40°F (4°C), off at 61°F (16°C). This filter

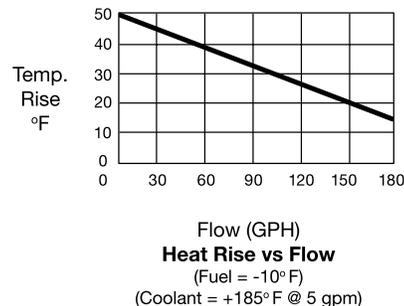
also offers temperature controlled fuel heating with return fuel or engine coolant; thermostat valve open to 95°F (35°C). Other features include a fuel primer port on top of the assembly, a internal check valve that guards against loss of prime, a heavy duty integrated mounting bracket that is

part of its one-piece billet machined body, a clear bottom bowl that allows the operator to check for water and solid contamination at a glance, and a self-venting drain. Optional accessories include a vacuum gauge and a water detection system.

Test Data



* PSI X 2.036 = inHg. / PSI X 6.895 = kPa



Flow (GPH)
Heat Rise vs Flow
(Fuel = -10°F)
(Coolant = +185°F @ 5 gpm)

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

777R Series

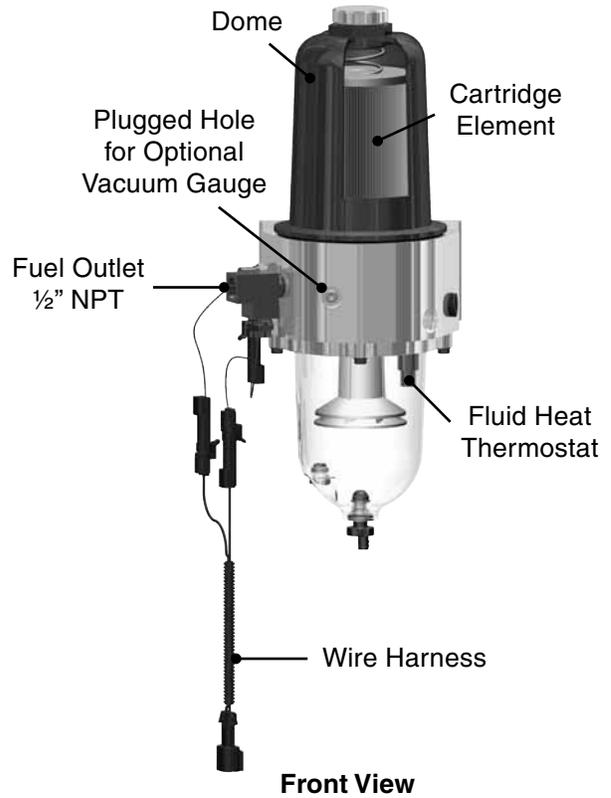
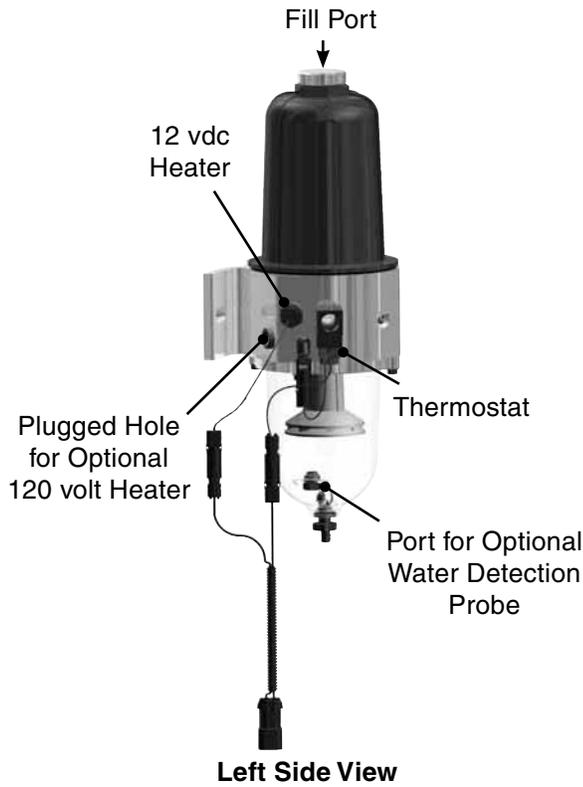
777R Series Overview



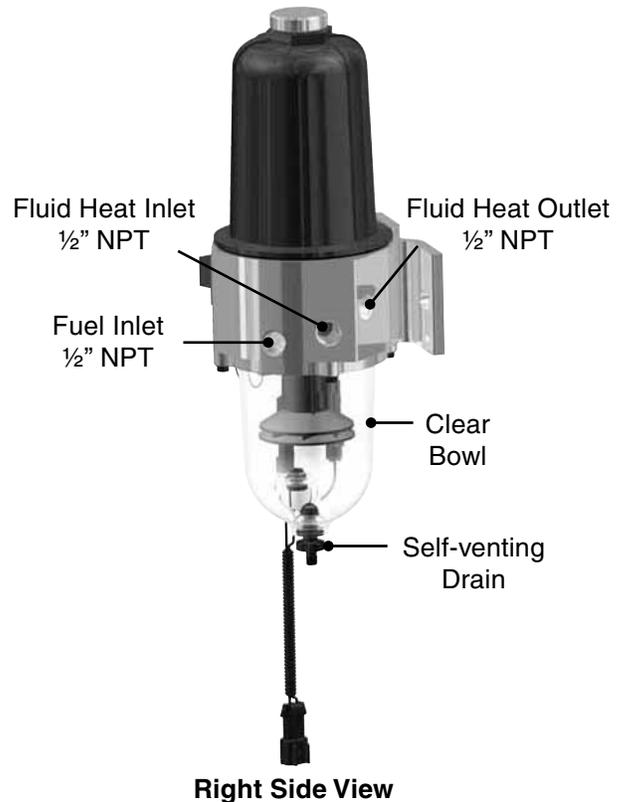
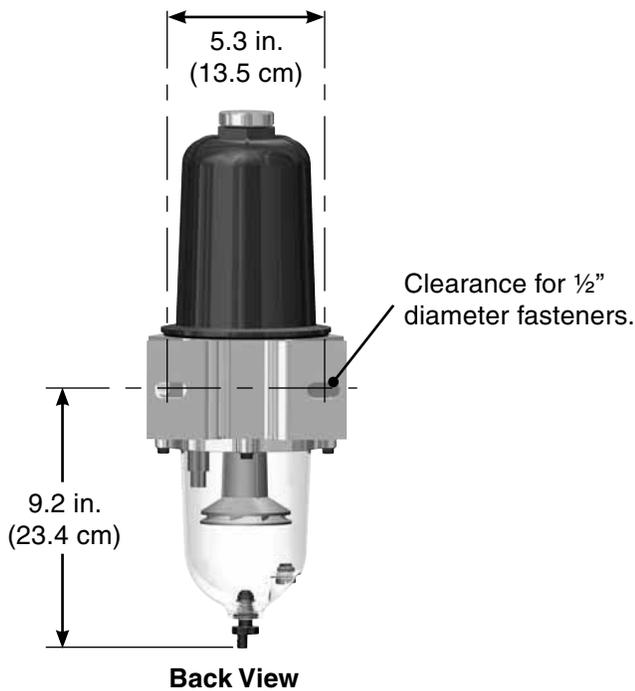
| Specifications | 777R1230 | 777R1230FH ² |
|---|---------------------------------------|---------------------------------------|
| Maximum Flow Rate: (with diesel) | 150 GPH (568 LPH) | 150 GPH (568 LPH) |
| Inlet/Outlet Port Size | ½" NPT | ½" NPT |
| Housing Material | Aluminum | Aluminum |
| Replacement Element | See Element Chart | See Element Chart |
| Micron Rating | 30 | 30 |
| Minimum Service Clearance (above filter) (below filter) | 6.0 in. (15.2 cm) 2.0 in. (5.1 cm) | 6.0 in. (15.2 cm) 2.0 in. (5.1 cm) |
| Height | 18.8 in. (47.8 cm) | 18.8 in. (47.8 cm) |
| Depth | 6.8 in. (17.3 cm) | 6.8 in. (17.3 cm) |
| Width | 8.1 in. (20.6 cm) | 8.1 in. (20.6 cm) |
| Weight (dry) | 12.0 lb (5.4 kg) | 12.0 lb (5.4 kg) |
| Maximum Working Pressure ¹ | 30 PSI (2.1 bar) | 30 PSI (2.1 bar) |
| Water Removal Efficiency | 99% | 99% |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) | 0.7 PSI (4.8 kPa) |
| Case Quantity | 6 | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) | 190°F (32°C) |

Notes: ¹Vacuum side installations only.
²Fluid heat port plugs not installed.

777R Series



Mounting Information

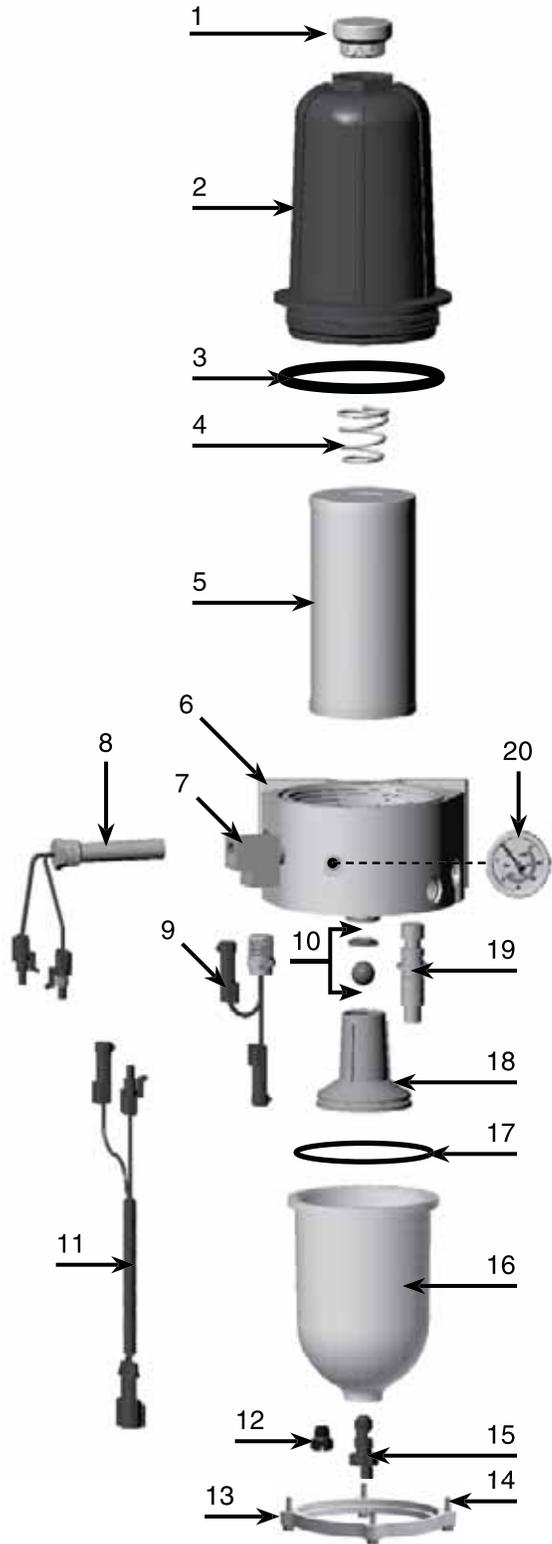


Questions? Contact Technical Support:
 800 344 3286 or 209 521 7860 ext. 7555
 e-mail: racortech@parker.com

777R Series

Replacement Parts

| <u>Part Number</u> | <u>Description</u> |
|------------------------------|---|
| 1. 6707 | Priming Plug Kit (includes o-ring) |
| 2. RK23007 | Top Dome Kit (includes #'s 1 to 4) |
| 3. 6706P | Dome Gasket (kit includes 3 gaskets) |
| 4. RK6733 | Element Spring |
| 5. Replacement Element | |
| 6732S | 2 Micron |
| 6732T | 10 Micron |
| 6732P | 30 Micron |
| 6. N/A | Machined Billet Body |
| 7. RK012T-8-8 | Tee Fitting |
| 8. RK23017 | Heater Assembly Kit (12 vdc, 180 watt) |
| 9. RK23018 | Thermostat Assembly Kit (12 vdc) |
| 10. RK23046 | Check Valve Kit (includes checkball and checkball gasket) |
| 11. RK23019 | Heater Wire Harness (12 vdc) |
| 12. RK 20126 | Sensor Plug Kit (½" SAE) |
| 13. RK23080 | Bowl Retaining Ring Kit |
| 14. RK 11542 | Capscrew Kit (4 capscrews) |
| 15. RK 30476 | Self Venting Drain Kit |
| 16. RK 11-1938 | Bottom Bowl Kit (includes #'s 12, 15, & 17) |
| 17. 11007 | Bowl Seal Kit |
| 18. N/A | Turbine Centrifuge Kit |
| 19. RKSV700A | Thermostat Kit |
| 20. RKVFG80 | Vacuum Gauge Kit |
| Additional Parts (not shown) | |
| RK23045 | Optional 120 volt Heater Kit |
| RK 32204 | Optional Water Sensor Kit |
| 23013 | Installation Instructions |



RK12963

RK12963

Retrofit Kit/Filtration System



The RK12963 is a one-time retrofit kit for 90S1230C Integrated assemblies which incorporates a high quality water probe (with connectors), an indestructible metal bowl and a high-capacity 30 micron element. Once the retrofit from a 200200 element is complete, customers would then purchase the S3230P replacement element for their next service.

Note: All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



| Specifications | |
|---|---------------------------------|
| Maximum Flow Rate: (with diesel) | |
| Inlet/Outlet Port Size | |
| Housing Material | |
| Replacement Element | |
| Micron Rating | |
| Minimum Service Clearance (above filter) (below filter) | |
| Height | |
| Depth | |
| Width | |
| Weight (dry) | |
| Maximum Working Pressure ¹ | |
| Water Removal Efficiency | |
| Clean Pressure Drop | |
| Case Quantity | |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

RK12963

RK12963 Retrofit Kit Overview

The 90S1230C Integrated assemblies are two-stage filtration and repriming systems featuring a solid-state controlled electronic priming pump, electronic air purge, a cleanable pre-filter with a stainless steel element and a fuel filter/water separator. These complete fuel management systems isolate contaminants present in diesel fuel and trap them prior to reaching the fuel injection system, protecting the engine's fuel system from costly and premature failure.

Pictured below are some of the components included with this kit. Detailed teardown and rebuild instructions are also included.

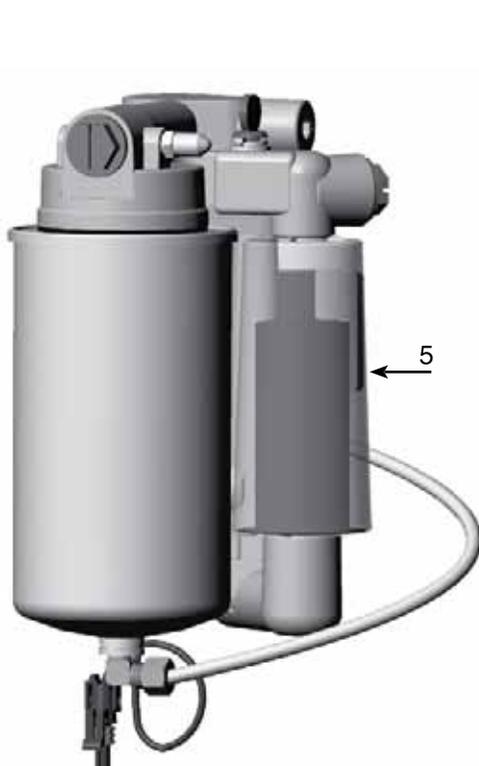


| | <u>Part Number</u> | <u>Description</u> |
|----|--------------------|--------------------|
| 1. | 0102-6-2 | Bushing |
| 2. | 30899 | Water Sensor |
| 3. | 30745 | Metal Bowl |

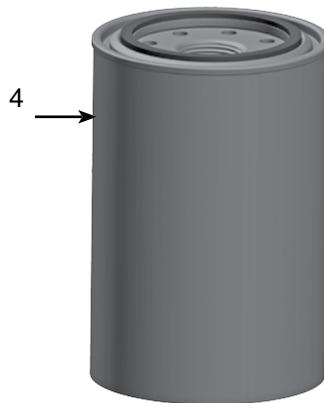
(sold separately)

| | | |
|----|---------------|---|
| 4. | S3230P | Replacement Element |
| 5. | 300200 | Prescreen 200 micron (includes O-rings) |

Before

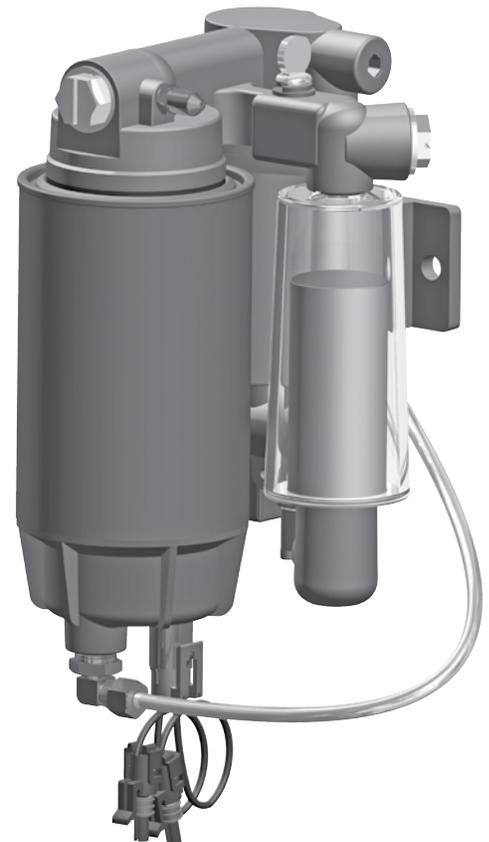


Integrated Assembly



S3230P Filter sold separately

After



Integrated Assembly

790R30 Integrated

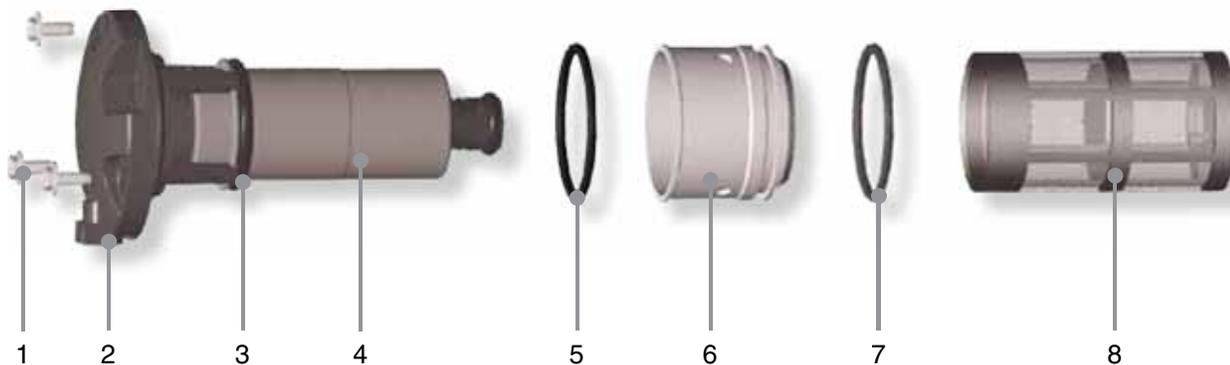
790R30

The 790R30 Integrated fuel filter/water separator assembly is a two-stage filtration and repriming system featuring a solid-state controlled electronic priming pump, a vent valve to purge air, a 200 micron prefilter screen, a 30 micron Aquabloc® II Spin-On element, a water sensor probe, a metal collection bowl and a weather proof control box. This complete fuel management system isolates contaminants present in diesel fuels and traps them prior to reaching the fuel injection system, protecting the engine's fuel system from costly and premature failure.



| Specifications | 790R30 |
|-------------------------------------|---------------------------------|
| Maximum Flow Rate | 60 GPH (227 LPH) |
| Fuel Port Size SAE J1926 | 7/8"-14 NPT |
| Replacement Element | S3230P |
| Micron Rating | 30 micron |
| Height | 12.3 in. (31.2 cm) |
| Width | 4.3 in. (11.0 cm) |
| Depth | 6.5 in. (16.5 cm) |
| Weight (dry) | 6.5 lb (3.0 kg) |
| Clean Pressure Drop | 0.25 PSI (1.7 kPa) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -40° to +225°F (-40° to +107°C) |

Primer Pump Kit



Replacement Parts

RK22933 Primer Pump Kit includes all parts shown above.

| <u>Part Number</u> | <u>Description</u> |
|--------------------|---|
| 1. N/A | Screws (3) |
| 2. N/A | Pump Cover |
| 3. N/A | Body O-ring |
| 4. N/A | Pump Sub Assembly |
| 5. N/A | Cover O-ring |
| 6. N/A | Pump Seal Adapter |
| 7. N/A | Adapter O-ring |
| 8. RK22934 | Prescreen Element Kit 200 micron (includes numbers 5, 7 & 8) |

Primer Pump Kit

Installation Instructions



Please read ALL instructions before beginning installation. See installation diagram on next page for reference and additional information.

Maintain a safe working environment. Obtain good ventilation and do not smoke or allow open flame near the installation.

The engine must be off and cool to touch before beginning installation.

This filter assembly will replace stand-alone primary fuel filters that may be installed on the engine. Remove existing primary filter, if applicable, and dispose of properly.

Apply thread sealant to fittings, lubricant to o-rings and install fittings into the appropriate inlet and outlet ports. Tighten snugly. Install port plugs in unused ports and tighten snugly.

Connect fuel hose to the inlet/outlet fittings and use hose clamps where appropriate.

Notes:

Completely drain assembly. Tear-down is performed in numerical order shown above (1-8). Rebuild assembly in reverse order (8-1), substituting new parts for old. On rebuild, lubricate all O-rings with motor oil or clean diesel fuel

and tighten screws to 50 in. lbs (maximum).

Important: Insure inside face of cover is flush with pump body and all flat surfaces are clean (free of scratches and debris).

Prescreen element can be cleaned and inspected before replacement.

Clean in solvent bath with a soft brush. Flush with diesel fuel. Gently blow dry with air, if necessary.

Prime the system and check for leaks. Correct as necessary with engine off.

Primer Pump Kit

Repriming, Draining Element Replacement

Operation For Repriming Unit:

(for initial installation, repriming, or to restart after running out of fuel).

1. Turn ignition to ON position; do not start engine.
2. Remove cap from vent valve. Press and hold PRIME button on control panel; this will activate primer pump and yellow 'prime' LED will illuminate.
3. Press and hold vent valve open to release excess air from filter. Release vent valve at first indication of fuel. Warning! If vent valve is kept open too long, a pressurized stream of fuel will exit creating a potentially hazardous situation. Continue to hold PRIME button for about 30 seconds (or until unit is primed) and release.
4. Start engine and run at high idle for about three minutes. Note: The engine may run rough while remaining air is forced through the fuel system.

Service Draining Water:

Frequency of water draining or element replacement is determined by the contamination level of the fuel. Drain bowl frequently if contaminated fuel is suspected or when remote water-in-fuel lamp illuminates.

Element Replacement:

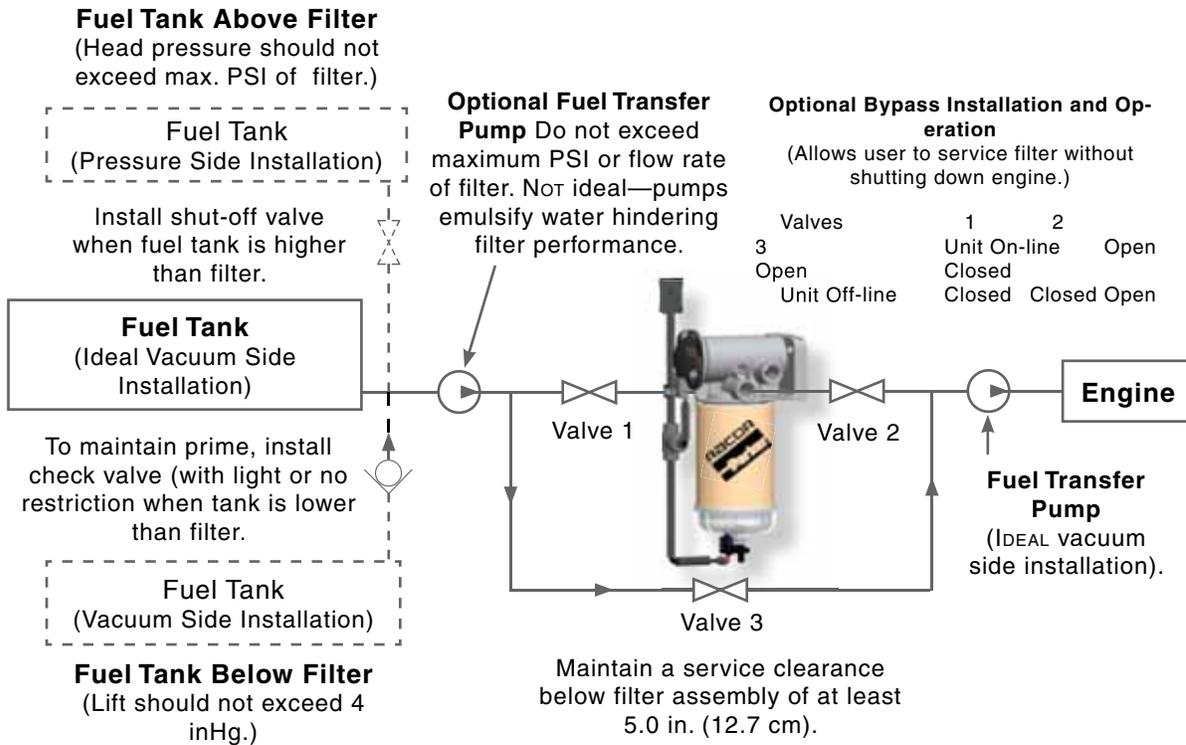
Replace element every 10,000 miles, 500 hours, every other oil change, if power loss is noticed, or annually, whichever occurs first. Note: Always carry extra replacement elements as one tankful of excessively dirty fuel can plug a filter. To replace element:

1. Disconnect water sensor connector and drain any water from the see-thru bowl.
2. With a collection pan in place, remove element and bowl assembly from mounting head.
3. Remove see-thru bowl from element and dispose of element properly. Bowl is reusable.

4. Lubricate gasket on new element with motor oil or diesel fuel and spin new element (without bowl) onto mounting head. Hand tighten only.
5. Clean bowl of debris. Lubricate new bowl O-ring, place in gland of bowl and spin bowl onto new element. Hand tighten only.
6. Reattach water sensor connector.
7. Open fuel tank outlet valve, if applicable, and follow Operation instructions to reprime system.

790R30 Integrated

Installation Diagram



790R30 Integrated

Installing the Control Panel

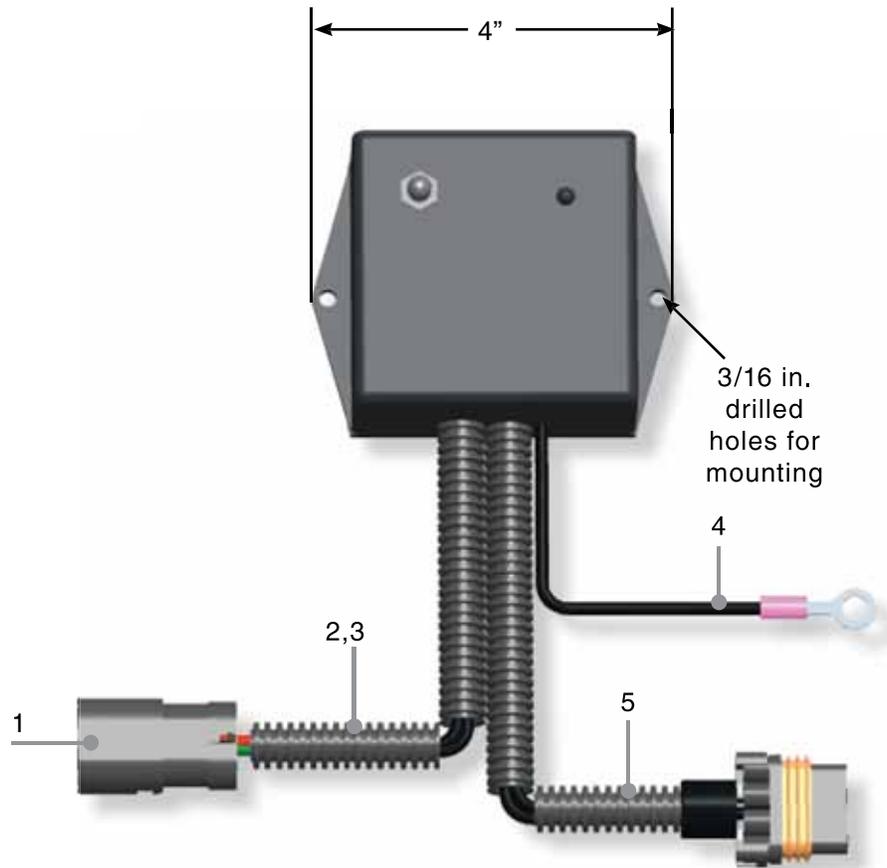
- 1. Monaco Connector:**
(cut off if installing on any other application).
- 2. Green Wire:**
To remote warning light or cap off.
- 3. Red Wire:**
To 7.5 amp fuse, then to +12 volt dc power.
- 4. Black Wire:**
To ground.
- 5. To Filter Connector.**

Install control panel in engine compartment. Mount control panel on a solid surface and in an area that is visible and easily accessible.

Use control box as a template to mark locations for mounting holes. Drill Two (3/16 in.) holes and mount control box.

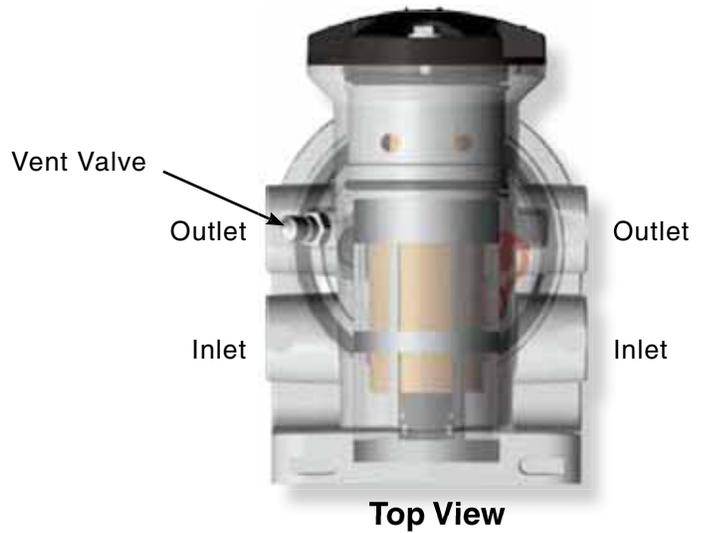
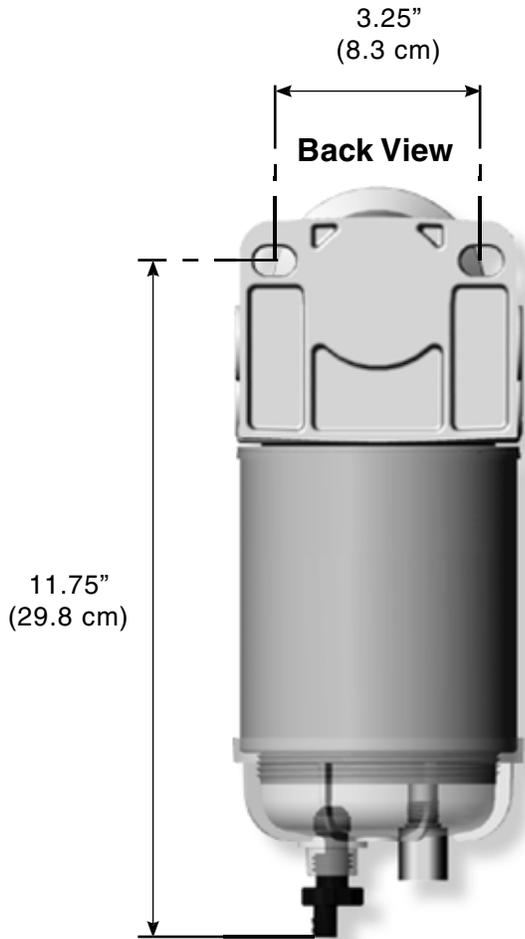
Route the filter wiring harness to control panel and attach connectors; push firmly until safety lock engages.

Use wire ties to secure wiring. Connect black wire to ground. Connect red wire through a 7.5 amp in-line fuse to a constant 12 volt dc power source. Connect green wire to an optional remote warning light, if equipped, or cap off.



790R30 Integrated

Mounting & Port Information



Dual Spin-On Series

75/B32009

Dual Filter/Water Separator



The Racor Dual Spin-On Series provides twice the filtering capacity in one compact and robust package. A shut-off valve located in the mounting head can switch to the clean filter so that the dirty filter may be serviced (servicing filters is not possible while engine is running).

These assemblies feature Aquabloc® II replaceable filter elements that stop water, remove solid contamination, and are available in 2, 10 and 30 micron. Filtration needs should be based on application, fuel quality, operating climates, and maintenance schedules.

Note: All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (one filter on-line) | 60 GPH (227 LPH) |
| (two filters online) | 120 GPH (454 LPH) |
| Inlet/Outlet Port Size | 7/8"-14 |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Center Threads (UNF JIC)¹ | 16mm X 1.5 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 12.4 in. (31.5 cm) |
| Depth | 5.3 in. (13.5 cm) |
| Width | 8.4 in. (21.3 cm) |
| Weight (dry) | - |
| Maximum Working Pressure² | 30 PSI (2.1 bar) |
| Water Removal Efficiency | 99% |
| Solids Capacity (with one filter) | 13.7 oz. (388 g) |
| (with two filters) | 27.4 oz. (777 g) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹Units are standard with M18 X 1.5 (ISO9974-1) O-ring face seal fuel ports. 75/B32009 includes two adapter fittings to 7/8"-14 UNF JIC.

²Vacuum side installations only.

Dual Spin-On Series

75/B32016

Dual Filter/Water Separator



The Racor Dual Spin-On Series provides twice the filtering capacity in one compact and robust package. A shut-off valve located in the mounting head can switch to the clean filter so that the dirty filter may be serviced (servicing filters is not possible while engine is running).

These assemblies feature Aquabloc® II replaceable filter elements that stop water, remove solid contamination, and are available in 2, 10 and 30 micron. Filtration needs should be based on application, fuel quality, operating climates, and maintenance schedules.

Note: All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel.



Specifications

| | |
|---|---------------------------------|
| Maximum Flow Rate: (one filter on-line) | 20 GPH (75 LPH) |
| (two filters online) | 40 GPH (151 LPH) |
| Inlet/Outlet Port Size | 3/4"-16 |
| Housing Material | Aluminum |
| Replacement Element | See Element Chart |
| Center Threads¹ | 16mm X 1.5 |
| Minimum Service Clearance (below filter) | 2.0 in. (5.1 cm) |
| Height | 10.3 in. (26.2 cm) |
| Depth | 4.9 in. (12.4 cm) |
| Width | 7.6 in. (19.3 cm) |
| Weight (dry) | - |
| Maximum Working Pressure² | 30 PSI (2.1 bar) |
| Water Removal Efficiency | 99% |
| Solids Capacity (with one filter) | 6.4 oz. (182 g) |
| (with two filters) | 12.8 oz. (363 g) |
| Case Quantity | 6 |
| Ambient Temperature Range | -40° to +250°F (-40° to +121°C) |
| Maximum Fuel Temperature | 190°F (32°C) |

Notes: ¹ Units are standard M18 X 1.5 (ISO9974-1) O-ring face seal fuel ports. The 75/B32016 includes two adapter fittings to 3/4"-16 UNF JIC

² Vacuum side installations only.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

Dual Spin-On Series

How to Order

75/B32009M-10

Select an assembly by flow rate:

75/B32016: 40 GPH (151 LPH)

75/B32009: 120 GPH (454 LPH)

Specify M for a metal bowl:

Use metal bowls on gasoline applications.
(omit if not desired)

Specify a micron rating:

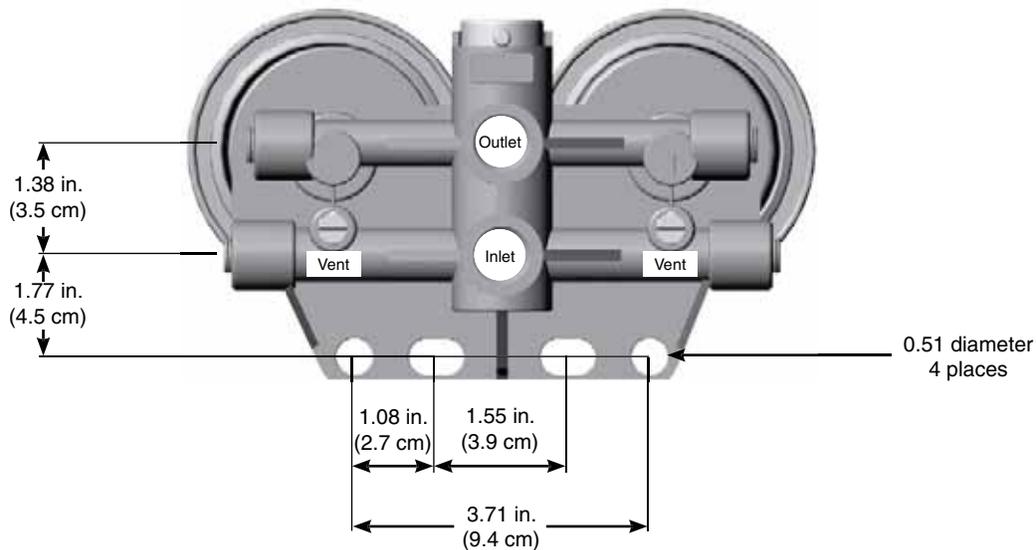
-2 for 2 micron,
-10 for 10 micron, or
-30 for 30 micron.

Replacement Elements

| Model | 2 micron (Final) | 10 micron (Secondary) | 30 micron* (Primary) |
|-----------|------------------|-----------------------|----------------------|
| 75/B32016 | S3216S | S3216T | S3216P |
| 75/B32009 | S3209S | S3209T | S3209P |

* A secondary/final filter is required downstream.

Mounting Information



Dual Spin-On Series

Dual Spin-On Series Overview



| Specifications | 75/B32009 | 75/B32016 |
|--|---------------------------------------|-------------------------------------|
| Maximum Flow Rate: (one filter on-line) (two filters online) | 60 GPH (227 LPH) 120 GPH (454 LPH) | 20 GPH (75 LPH) 40 GPH (151 LPH) |
| Port Size (UNF JIC) ¹ | 7/8"-14 | 3/4"-16 |
| Height | 12.4 in. (31.5 cm) | 10.3 in. (26.2 cm) |
| Width | 8.4 in. (21.3 cm) | 7.6 in. (19.3 cm) |
| Depth | 5.3 in. (13.5 cm) | 4.9 in. (12.4 cm) |
| Center Threads | 16mm X 1.5 | 16mm X 1.5 |
| Solids Capacity: (with one filter) (with two filters) | 13.7 oz. (388 g) 27.4 oz. (777 g) | 6.4 oz. (182 g) 12.8 oz. (363 g) |
| Available Options: (water sensor) (heater) | Yes Yes | Yes Yes |
| Operating Temperature | -40° to +255°F (-40° to +124°C) | |

¹ Units are standard with M18 X 1.5 (ISO9974-1) O-ring face seal fuel ports. The 75/B32016 includes two adapter fittings to 3/4"-16 UNF JIC and the 75/B32009 includes two adapter fittings to 7/8"-14 UNF JIC.

The Selection Valve



Do not service filters with engine on.

Dual Spin-On Series

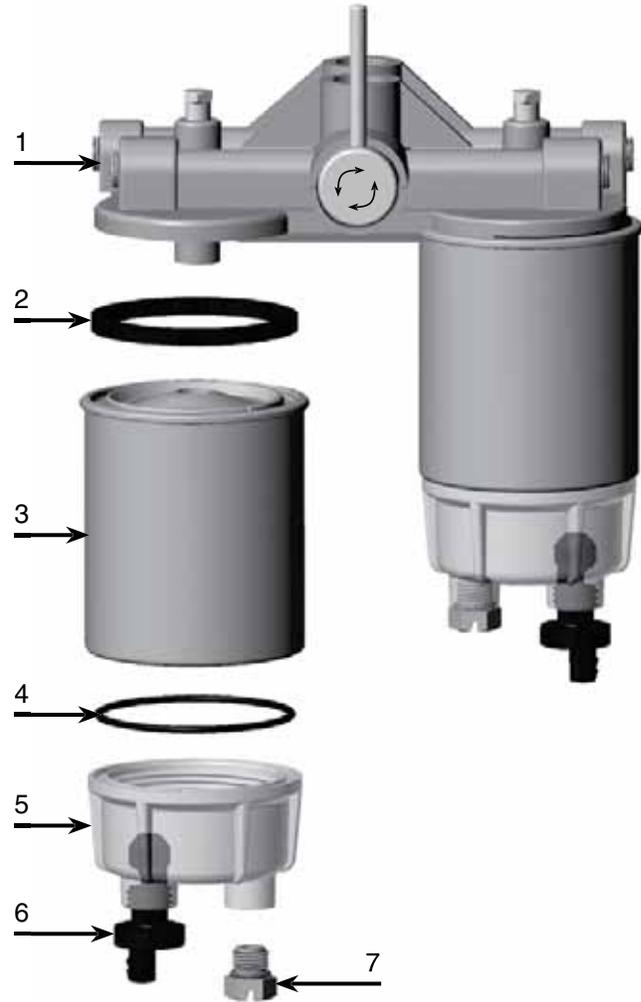
Replacement Parts

75/B32009 and 75/B32016

- | Part Number | Description |
|--------------------|---|
| 1. 30628 | Dual Filter Head |
| 2. RK 10503 | Element Gasket Kit |
| 3. | See Replacement Element Chart |
| 4. RK 30076 | 75/B32009 Bowl O-ring Kit |
| RK 10012 | 75/B32016 Bowl O-ring Kit |
| 5. | Replacement Bowl Kits (includes bowl, #'s 4 to 7) |
| RK 30051 | 75/B32009 Clear Bowl Kit |
| RK 30473 | 75/B32009 Metal Bowl Kit (no probe port) |
| RK 10215 | 75/B32016 Clear Bowl Kit |
| RK 10109 | 75/B32016 Metal Bowl Kit (no probe port) |
| 6. RK 30476 | Drain Valve Kit |
| 7. RK 20126 | 1/2" SAE Plug with O-ring |

Additional Parts (not shown)

- | | |
|--------------|--|
| 30837 | 75/B32009 Adapter Fitting (7/8"-14 UNF JIC) |
| 30945 | 75/B32016 Adapter Fitting (3/4"-16 UNF JIC) |



Engine Spin-On Series

Engine Spin-On Series

Racor quality in one easy spin! The Racor Engine Spin-On Series is designed to directly replace existing engine fuel filters and features high-capacity Aquabloc® II elements that remove contaminants and water. Optional accessories may include: mounting heads, fuel heaters, water detection kits, hose, fittings and more. A wide variety of Engine Spin-On Series assemblies are available to fit most applications.



And many more...

Engine Spin-On Series

How to Order

| B120 | S |
|---|--|
| Basic Model Number (includes element & bowl) | Specify a micron rating: S (2 micron) T (10 micron) P (30 micron) |

| Specifications | B120 |
|--|--------------------------------|
| Maximum Flow Rate | 120 GPH (454 LPH) |
| Replacement Element: (2 micron) (10 micron) (30 micron) | R120S R120T R120P |
| Element Height | 8.5 in. (22 cm) |
| Bowl and Element Height | 12 in. (30 cm) |
| Diameter | 4.38 in. (11 cm) |
| Center Threads | 1"-14 |
| Solids Capacity | 18.2 oz. (515 grams) |
| Case Quantity | 6 |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



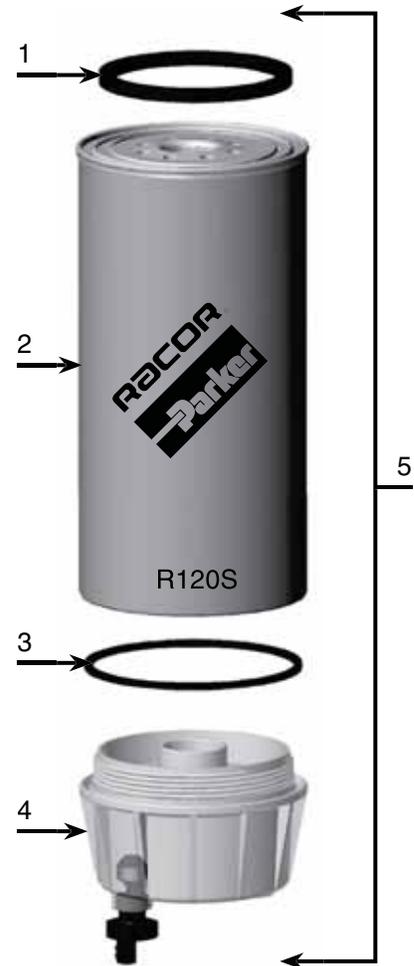
B120S
Assembly

Engine Spin-On Series

Replacement Parts

B120

- | | <u>Part Number</u> | <u>Description</u> |
|----|--|--|
| 1. | RK20505 | Element Gasket |
| 2. | Replacement Elements: | |
| | R120S | 2 micron |
| | R120T | 10 micron |
| | R120P | 30 micron |
| 3. | RK30965 | Bowl O-ring |
| 4. | RK30480 | Standard Bowl Assembly (no water sensor port - see note below) |
| | RK30063 | Clear Bowl Kit (non-heated) |
| | RK30900 | Heated, Clear Bowl Kit (12 volt dc, 200 watt, no water sensor port) |
| | RK30925 | Heated, Clear Bowl Kit (24 volt dc, 200 watt, no water sensor port) |
| 5. | Bowl and Element Assembly (includes #'s 1 - 4) | |
| | B120S | 2 micron |
| | B120T | 10 micron |
| | B120P | 30 micron |
| | Additional Parts (not shown) | |
| | RK30880 | Water Detection Kit (other kits are available - see Accessories) |
| | RK21539 | Gasket Pack (includes #'s 1 and 3) |



The standard B120 bowl does not have a water sensor port. Bowls with water sensor ports are available as replacement kits (see item #4 above). Do not use water sensors on gasoline applications.

Engine Spin-On Series

How to Order

| S3201 | S |
|---|--|
| Basic Model Number (includes element and bowl) | Specify a micron rating: S (2 micron) T (10 micron) P (30 micron) |

| Specifications | S3201 |
|-------------------------------------|--------------------------------|
| OEM Applications | Cummins or ThermoKing |
| Maximum Flow Rate | 90 GPH (341 LPH) |
| Element Height | 7.4 in. (18.8 cm) |
| Bowl and Element Height | 10.6 in. (26.9 cm) |
| Diameter | 3.82 in. (9.7 cm) |
| Center Threads | 1"-14 |
| Solids Capacity | 11.6 oz. (329 grams) |
| Case Quantity | 12 |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



S3201S

S3201S
Filter

Cross References

All Racor S3201 replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

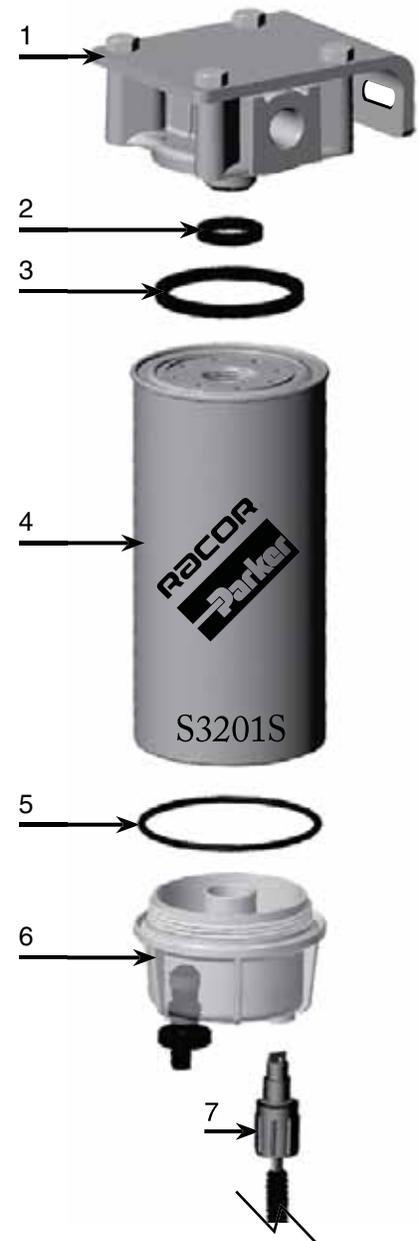
| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|--|----------------------------------|--|---|---------|---|-------|
| Cummins: 138627 154709 156172 202893 | TP619 TP629 TP811 TP972 | BF7557 BF948 BF948D BF957 BF957D | FF104 FF105 FF105C/D FS1212 FF213 | P1101PL | 6683776 6694036 PER15 PER23-1 PER23-2 | 33107 |

Engine Spin-On Series

Replacement Parts

B32001

- | <u>Part Number</u> | <u>Description</u> |
|---|---|
| 1. RK30287 | Optional Mounting Head Kit (7/8"-14 UNF Ports) |
| 2. 30563 | Thread Gasket |
| 3. RK_10503 | Element Gasket |
| 4. Replacement Elements (includes #'s 2 to 5) | |
| S3201S | (2 micron) |
| S3201T | (10 micron) |
| S3201P | (30 micron) |
| 5. RK_30076 | Bowl O-ring |
| 6. RK30475 | Optional Clear Bowl Kit (no water sensor port - see note below) |
| RK30051 | Non-heated, Clear Bowl Kit |
| RK30895 | Heated, Clear Bowl Kit (12 vdc, 200 watt, no water sensor port) |
| RK30924 | Heated, Clear Bowl Kit (24 vdc, 200 watt, no water sensor port) |
| RK30745-01 | Non-heated, Metal Bowl Kit |
| 7. RK30880 | Water Detection Kit (other kits are available - see Accessories) |
| Additional Parts (not shown) | |
| 30562 | Gasket Pack (includes #'s 2, 3, and 5) |



The standard S3201 bowl does not have a water sensor port. Bowls with water sensor ports are available as replacement kits (see item #6 above). Do not use water sensors on gasoline applications.

Engine Spin-On Series

How to Order

| Specifications | B32002 |
|-------------------------------------|--------------------------------|
| OEM Applications | Detroit Diesel |
| Maximum Flow Rate | 90 GPH (341 LPH) |
| Replacement Element: (30 micron) | S3202 |
| Element Height | 7.4 in. (18.8 cm) |
| Bowl and Element Height | 10.6 in. (26.9 cm) |
| Diameter | 3.82 in. (9.7 cm) |
| Center Threads | 1"-12 |
| Solids Capacity | 19.6 oz. (557 grams) |
| Case Quantity | 12 |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



B32002
Assembly

Cross References

All Racor B32002/S3202 replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|-----------------|--------------|---------|-----------------|-------|-----------|-------|
| DDA: 6438839 | T815 T915 | BF580 | FF207 FS1213 | P1146 | PER96 | 33118 |

Engine Spin-On Series

Replacement Parts

B32002/S3202

| Part Number | Description |
|---|--|
| 1. 30563 | Thread Gasket |
| 2. RK20505 | Element Gasket |
| 3. Replacement Element (includes #'s 1 to 4) S3202 | (30 micron) |
| 4. RK_30076 | Bowl O-ring |
| 5. RK30475 | Clear Bowl Kit (no water sensor port - see note below) |
| RK30051 | Clear, Non-heated Bowl Kit |
| RK30745-01 | Non-heated, Metal Bowl Kit |
| RK30895 | Heated, Clear Bowl Kit (12 volt dc, 200 watt, no water sensor port) |
| RK30924 | Heated, Clear Bowl Kit (24 volt dc, 200 watt, no water sensor port) |
| 6. RK30880 | Water Detection Kit (other kits are available - see Accessories) |
| 7. Bowl and Element Assembly (includes #'s 1 - 5) B32002 | (30 micron) |

Additional Parts (not shown)

| | |
|-------|---|
| 21381 | Gasket Pack (includes #'s 1, 2, and 4) |
|-------|---|



The standard B32002 bowl has no water sensor port. Bowls with water sensor ports are available as replacement kits (see item #5 above). Do not use water sensors on gasoline applications.

Engine Spin-On Series

How to Order

| Specifications | B32003 |
|-------------------------------------|--------------------------------|
| OEM Applications | Caterpillar or Navistar |
| Maximum Flow Rate | 90 GPH (341 LPH) |
| Replacement Element: (2 micron) | S3203 |
| Element Height | 5.5 in. (14.0 cm) |
| Bowl and Element Height | 8.7 in. (22.1 cm) |
| Diameter | 3.82 in. (9.7 cm) |
| Center Threads | 1"-14 |
| Solids Capacity | 7.1 oz. (201 grams) |
| Case Quantity | 12 |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



B32003
Assembly

Cross References

All Racor B32003/S3203 replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

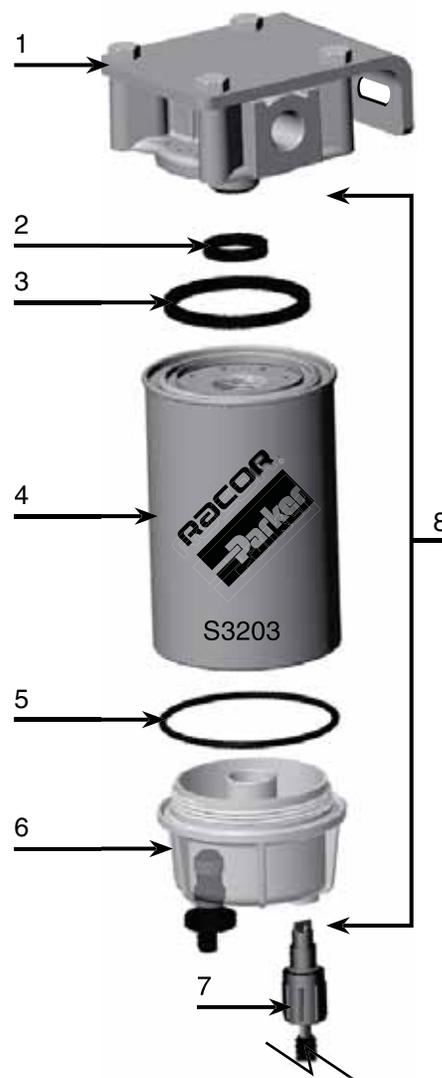
| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|----------------------------------|----------------|-------------------------|---------------------------|---------------------------|----------------------------------|-------------------------|
| Caterpillar: 1P2299 6L7440 | TP619 TP877 | BF957 BF970 BF979 | FF5020 FS104 FS1212 | P1101PL P1104 P1118 | PER15 PER35 PER39 PER53 | 33107 33341 33352 |
| Cummins: 138627 | | | FS1214 FS1215 | | | |
| International: 625627C1 | | | FS1225 FS185 | | | |

Engine Spin-On Series

Replacement Parts

B32003/S3203

| <u>Part Number</u> | <u>Description</u> |
|--|--|
| 1. RK30287 | Optional Mounting Head Kit (7/8"-14 UNF ports) |
| 2. 30563 | Thread Gasket |
| 3. RK_10503 | Element Gasket |
| 4. Replacement Element (includes #'s 2 to 5) S3203 | (2 micron) |
| 5. RK_30076 | Bowl O-ring |
| 6. RK30475 | Clear Bowl Kit (no water sensor port - see note below) |
| RK30051 | Clear, Non-heated Bowl Kit |
| RK30745-01 | Non-heated, Metal Bowl Kit |
| RK30895 | Heated, Clear Bowl Kit (12 volt dc, 200 watt, no water sensor port) |
| RK30924 | Heated, Clear Bowl Kit (24 volt dc, 200 watt, no water sensor port) |
| 7. RK30880 | Water Detection Kit (other kits are available, see Accessories) |
| 8. Bowl and Element Assembly (includes #'s 2 - 6) B32003 | (2 micron) |
| Additional Parts (not shown) | |
| 30562 | Gasket Pack (includes #'s 2, 3, and 5) |



The standard B32003 bowl has no water sensor port. Bowls with water sensor ports are available as replacement kits (see item #6 above). Do not use water sensors on gasoline applications.

Engine Spin-On Series

How to Order

| B32004 | S |
|---|---|
| Basic Model Number (includes element & bowl) | Specify a micron rating: S (2 micron) T (10 micron) P (30 micron) |

| Specifications | B32004 |
|--|--------------------------------|
| OEM Applications | Navistar |
| Maximum Flow Rate | 40 GPH (151 LPH) |
| Replacement Element: (2 micron) (10 micron) (30 micron) | S3204S S3204T S3204P |
| Element Height | 4.0 in. (10.2 cm) |
| Bowl and Element Height | 7.2 in. (18.3 cm) |
| Diameter | 3.82 in. (9.7 cm) |
| Center Threads | 1"-14 |
| Solids Capacity | 9.0 oz. (255 grams) |
| Case Quantity | 12 |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



B32004S
Assembly

Cross References

All Racor B32004/S3204 replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

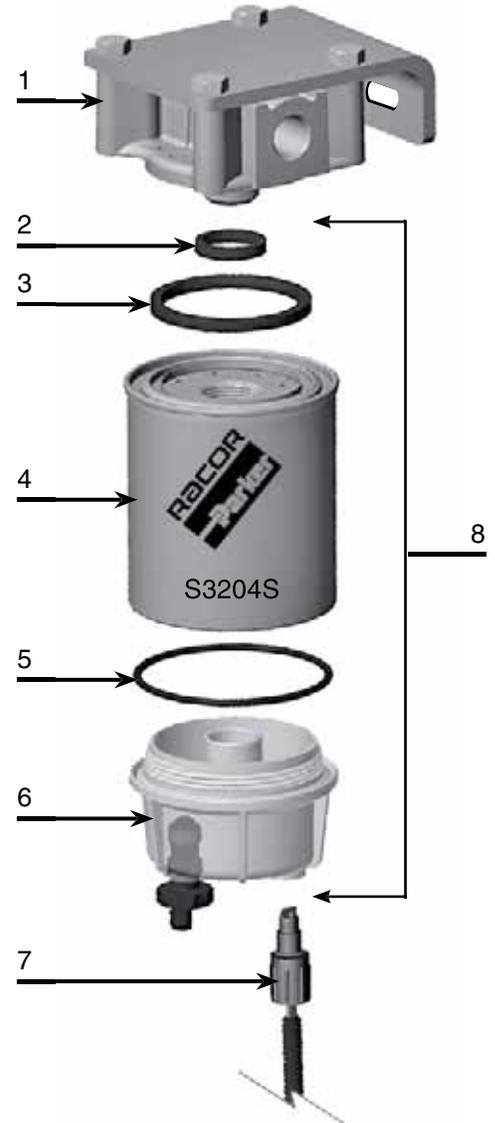
| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|----------------------------|-------|---------|-----------------|----------------|-----------|-------|
| International: 625625C1 | TP807 | BF984 | FF196 FS1220 | P1117 P3767 | PER35 | 33239 |

Engine Spin-On Series

Replacement Parts

B32004/S3204

| Part Number | Description |
|---|--|
| 1. RK30287 | Optional Mounting Head Kit (7/8"-14 UNF ports) |
| 2. 30563 | Thread Gasket |
| 3. RK_10503 | Element Gasket |
| 4. Replacement Elements (includes #'s 2 to 5) | |
| S3204S | (2 micron) |
| S3204T | (10 micron) |
| S3204P | (30 micron) |
| 5. RK_30076 | Bowl O-ring |
| 6. RK30475 | Clear Bowl Kit (no water sensor port - see note below) |
| RK30051 | Clear, Non-heated Bowl Kit |
| RK30745-01 | Non-heated, Metal Bowl Kit |
| RK30895 | Heated, Clear Bowl Kit (12 volt dc, 200 watt, no water sensor port) |
| RK30924 | Heated, Clear Bowl Kit (24 volt dc, 200 watt, no water sensor port) |
| 7. RK30880 | Water Detection Kit (other kits are available - see Accessories) |
| 8. Bowl and Element Assembly (includes #'s 2 - 6) | |
| B32004S | (2 micron) |
| B32004T | (10 micron) |
| B32004P | (30 micron) |
| Additional Parts (not shown) | |
| 30562 | Gasket Pack (includes #'s 2, 3, and 5) |



The standard B32004 bowl has no water sensor port. Bowls with water sensor ports are available as replacement kits (see item #6 above). Do not use water sensors on gasoline applications.

Engine Spin-On Series

How to Order

| Specifications | S3205 |
|-------------------------------------|--------------------------------|
| OEM Applications | Mack |
| Maximum Flow Rate | 90 GPH (341 LPH) |
| Replacement Element: (30 micron) | S3205 |
| Element Height | 6.3 in. (16.0 cm) |
| Bowl and Element Height | 9.8 in. (24.9 cm) |
| Diameter | 4.38 in. (11.1 cm) |
| Center Threads | 1"-14 |
| Solids Capacity | 19.1 oz. (541 grams) |
| Case Quantity | 6 |
| H ₂ O Removal efficiency | 99% |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



S3205
Element

Cross References

All Racor S3205 replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|--------------------|-------|---------|-----------------|-------|-----------|-------|
| Mack: 483GB219A | TP635 | BF877 | FF172 FS1219 | F1109 | PER31 | 33219 |

Engine Spin-On Series

Replacement Parts

S3205

- | <u>Part Number</u> | <u>Description</u> |
|---|--|
| 1. RK_10503 | Element Gasket |
| 2. Replacement Elements (includes #'s 1 to 3) | |
| S3205 | (30 micron) |
| 3. RK_30965 | Bowl O-ring |
| 4. RK30480 | Optional Clear Bowl Kit (no water sensor port - see note below) |
| RK30063 | Non-heated, Clear Bowl Kit |
| RK21640 | Non-heated, Metal Bowl Kit |
| RK30900 | Heated, Clear Bowl Kit (12 volt dc, 200 watt, no water sensor port) |
| RK30925 | Heated, Clear Bowl Kit (24 volt dc, 200 watt, no water sensor port) |
| 5. RK30880 | Optional Water Detection Kit (other kits are available - see Accessories) |

Additional Parts (not shown)

- | | |
|--------------|---------------------------------------|
| 22310 | Gasket Pack (includes #'s 1 and 3) |
|--------------|---------------------------------------|



Engine Spin-On Series

How to Order

| Specifications | S3206 |
|-------------------------------------|--------------------------------|
| OEM Applications | Caterpillar |
| Maximum Flow Rate | 90 GPH (341 LPH) |
| Replacement Element: (2 micron) | S3206 |
| Element Height | 8.5 in. (21.6 cm) |
| Bowl and Element Height | 12.0 in. (30.5 cm) |
| Diameter | 4.38 in. (11.1 cm) |
| Center Threads | 1"-14 |
| Solids Capacity | 18.2 oz. (515 grams) |
| Case Quantity | 6 |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



S3206
Element

Cross References

All Racor S3206 replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|------------------------|--------|---------|-----------------|-------|-----------|-------|
| Caterpillar: 4N5823 | TP-920 | BF-584 | FF211 FS1218 | P3376 | PER85 | 33384 |

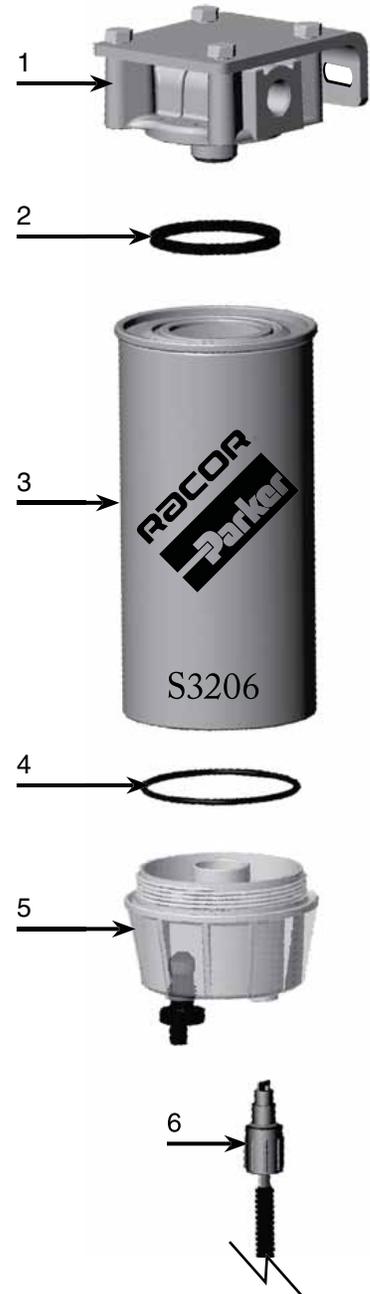
Engine Spin-On Series

Replacement Parts

S3206

- | <u>Part Number</u> | <u>Description</u> |
|---|---|
| 1. RK30287 | Optional Mounting Head Kit (7/8"-14 UNF ports) |
| 2. RK_10503 | Element Gasket |
| 3. Replacement Elements (includes #'s 2 to 4) S3206 | (2 micron) |
| 4. RK_30965 | Bowl O-ring |
| 5. RK30480 | Optional Clear Bowl Kit (no water sensor port - see notes below) |
| RK30063 | Non-heated, Clear Kit |
| RK21640 | Non-heated, Metal Bowl |
| RK30900 | Heated, Clear Bowl (12 volt dc, 200 watt, no water sensor port) |
| RK30925 | Heated, Clear Bowl (24 volt dc, 200 watt, no water sensor port) |
| 6. RK30880 | Optional Water Detection Kit (Other kits are available - see Accessories) |

Additional Parts (not shown)
22310 Gasket Pack
 (includes #'s 2 and 4)



Engine Spin-On Series

How to Order

| B32007 | P |
|---|---|
| Basic Model Number (includes element & bowl) | Specify a micron rating P (30 micron) |

| Specifications | B32007 |
|-------------------------------------|--------------------------------|
| OEM Applications | Cummins |
| Maximum Flow Rate | 180 GPH (681 LPH) |
| Replacement Element: (30 micron) | S3207P |
| Element Height | 9.9 in. (25.1 cm) |
| Bowl and Element Height | 13.5 in. (34.3 cm) |
| Diameter | 5.09 in. (12.9 cm) |
| Center Threads | 1¼" -14 |
| Solids Capacity | 28.4 oz. (804 grams) |
| Case Quantity | 6 |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



B32007P
Assembly

Cross References

All Racor B32007P/S3207P replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

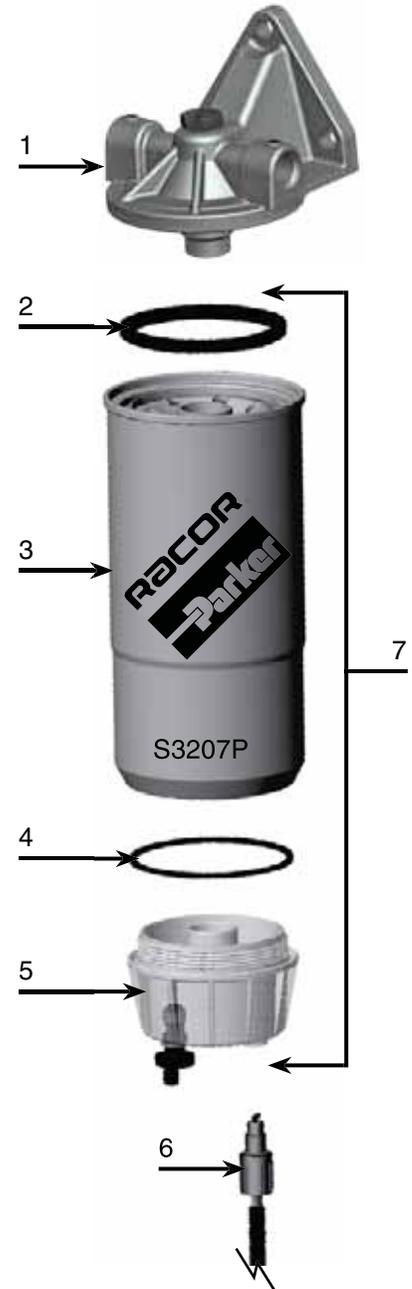
| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|--------------------|--------|---------|-----------------|-------|-----------|-------|
| Cummins: 299202 | TP-917 | BF-596 | FF202 FS1216 | P3430 | PER134 | 33116 |

Engine Spin-On Series

Replacement Parts

B32007P/S3207P

- | <u>Part Number</u> | <u>Description</u> |
|---|---|
| 1. 31547-16 | Optional Mounting Head Kit (7/8"-14 UNF ports) |
| 2. 30604 | Element Gasket |
| 3. Replacement Elements (includes #'s 2 to 4) S3207P | (30 micron) |
| 4. RK_30965 | Bowl O-ring |
| 5. RK30480 | Clear Bowl Kit (no water sensor port - see note below) |
| RK30063 | Non-heated, Clear Bowl Kit |
| RK21640 | Non-heated, Metal Bowl Kit |
| RK30900 | Heated, Clear Bowl Kit (12 volt dc, 200 watt, no water sensor port) |
| RK30925 | Heated, Clear Bowl Kit (24 volt dc, 200 watt, no water sensor port) |
| 6. RK30880 | Water Detection Kit (other kits are available - see Accessories) |
| 7. Bowl and Element Assembly (includes #'s 2 - 5) B32007P | (30 micron) |
| Additional Parts (not shown) | |
| 22311 | Gasket Pack (includes #'s 2 and 4) |



The standard B32007 bowl has no water sensor port. Bowls with water sensor ports are available as replacement kits (see item #5 above). Do not use water sensors on gasoline applications.

Engine Spin-On Series

How to Order

| B32008 | P |
|---|---|
| Basic Model Number (includes element & bowl) | Specify a micron rating: P (30 micron) |

| Specifications | B32008 |
|--|--------------------------------|
| OEM Applications | Deutz or Volvo |
| Maximum Flow Rate | 30 GPH (114 LPH) |
| Replacement Element: (2 micron) (10 micron) (30 micron) | S3208P |
| Element Height | 5.25 in. (13.3 cm) |
| Bowl and Element Height | 7.25 in. (18.4 cm) |
| Diameter | 2.85 in. (7.2 cm) |
| Center Threads | 16mm X 1.5 |
| Solids Capacity | 9.7 oz. (275 grams) |
| Case Quantity | 12 |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



B32008P
Assembly

Cross References

All Racor B32008P/S3208P replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|---------------------------------------|--------|---------|-----------------|-------|-----------|---------------|
| Deutz: Q1H4117 Volvo: 243004 | TP-961 | BF-993 | FF1221 FF202 | P4102 | PC-42 | 33195 336P |

Engine Spin-On Series

Replacement Parts

B32008P/S3208P

| Part Number | Description |
|---|---|
| 1. RK_10503 | Element Gasket |
| 2. Replacement Elements (includes #'s 1 to 3) S3208P | (30 micron) |
| 3. RK_10012 | Bowl O-ring |
| 4. N/A | Clear Bowl Kit (no water sensor port - see notes below) |
| RK10215 | Non-heated, Clear Bowl Kit |
| RK10109 | Non-heated Metal Bowl Kit |
| 5. RK_30476 | Self-venting Drain |
| 6. RK30880 | Water Detection Kit (other kits are available - see Accessories) |
| 7. Bowl and Element Assembly (includes #'s 1 - 4) B32008P | (30 micron) |



The standard B32008 bowl has no water sensor port. Other bowls with water sensor ports are available as replacement kits (see item #4 above). Water sensors are not for use with gasoline applications.

Engine Spin-On Series

How to Order

| B32009 | S |
|---|--|
| Basic Model Number (includes element & bowl) | Specify a micron rating: S (2 micron) T (10 micron) P (30 micron) |

| Specifications | B32009 |
|--|--------------------------------|
| OEM Applications | Mann |
| Maximum Flow Rate | 60 GPH (227 LPH) |
| Replacement Element: (2 micron) (10 micron) (30 micron) | S3209S S3209T S3209P |
| Element Height | 5.5 in. (14.0 cm) |
| Bowl and Element Height | 8.8 in. (22.4 cm) |
| Diameter | 3.82 in. (9.7 cm) |
| Center Threads | 16mm X 1.5 |
| Solids Capacity | 13.7 oz. (388 grams) |
| Case Quantity | 12 |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



B32009S
Assembly

Cross References

All Racor B32009/S3209 replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

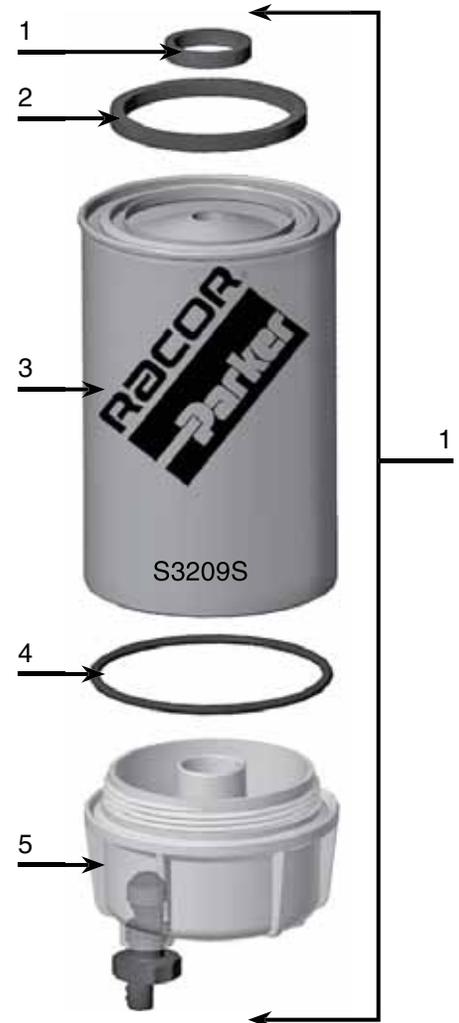
| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|------------------------------------|-----|---------|------------|--------|-----------|-------|
| Mann: WK962/4 DAF: 247138 | N/A | BF980 | FF4070 | PS6837 | PC45 | 33449 |

Engine Spin-On Series

Replacement Parts

B32009/S3209

- | <u>Part Number</u> | <u>Description</u> |
|---|---|
| 1. 30563 | Thread Gasket |
| 2. RK_10503 | Element Gasket |
| 3. Replacement Elements (includes #'s 1 to 4) | |
| S3209S | (2 micron) |
| S3209T | (10 micron) |
| S3209P | (30 micron) |
| 4. RK_30076 | Bowl O-ring |
| 5. RK30475 | Clear Bowl Kit (no water sensor port - see note below) |
| RK30051 | Non-heated, Clear Bowl Kit |
| RK30745-01 | Non-heated, Metal Bowl Kit |
| RK30895 | Heated, Clear Bowl Kit (12 vdc, 200 watt no water sensor port) |
| RK30924 | Heated, Clear Bowl Kit (24 vdc, 200 watt no water sensor port) |
| 6. Bowl and Element Assembly (includes #'s 1 - 5) | |
| B32009S | (2 micron) |
| B32009T | (10 micron) |
| B32009P | (30 micron) |
| Additional Parts (not shown) | |
| RK30880 | Water Detection Kit (other kits are available - see Accessories) |
| 30562 | Gasket Pack (includes #'s 1, 2, and |
- 4)



The standard B32009 bowl has no water sensor port. Bowls with water sensor ports are available as replacement kits (see item #5 above). Do not use water sensors on gasoline applications.

Engine Spin-On Series

How to Order

| Specifications | B32012 |
|-------------------------------------|--------------------------------|
| OEM Applications | GM or Detroit Diesel |
| Maximum Flow Rate | 90 GPH (341 LPH) |
| Replacement Element: (30 micron) | S3212 |
| Element Height | 4.0 in. (10.2 cm) |
| Bowl and Element Height | 7.3 in. (18.5 cm) |
| Diameter | 3.82 in. (9.7 cm) |
| Center Threads | 1"-12 |
| Solids Capacity | 8.2 oz. (233 grams) |
| Case Quantity | 12 |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



B32012
Assembly

Cross References

All Racor B32012/S3212 replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|-----|--------|---------|------------|-------|-----------|-------|
| N/A | TP-936 | BF-592 | FF235 | P2594 | PER227F | 33121 |

Engine Spin-On Series

Replacement Parts

B320012/S3212

| <u>Part Number</u> | <u>Description</u> |
|---|----------------------------|
| 1. 30563 | Thread Gasket |
| 2. RK20505 | Element Gasket |
| 3. Replacement Elements (includes #'s 1 to 4) | |
| S3212 | (30 micron) |
| 4. RK_30076 | Bowl O-ring |
| 5. RK30475 | Clear Bowl Kit |
| (no water sensor port - see note below) | |
| RK30051 | Non-heated, Clear Bowl Kit |
| RK30745-01 | Non-heated, Metal Bowl Kit |
| RK30895 | Heated, Clear Bowl Kit |
| (12 vdc, 200 watt, no water sensor port) | |
| RK30924 | Heated, Clear Bowl Kit |
| (24 vdc, 200 watt, no water sensor port) | |
| 6. RK30476 | Self Venting Drain Kit |
| 7. Bowl and Element Assembly (includes #'s 1 - 5) | |
| B32012 | (30 micron) |
| Additional Parts (not shown) | |
| RK30880 | Water Detection Kit |
| (other kits are available - see Accessories) | |
| 21381 | Gasket Pack |
| (includes #'s 1, 2, and 4) | |



The standard B32012 bowl has no water sensor port. Bowls with water sensor ports are available as replacement kits (see item #5 above). Do not use water sensors on gasoline applications.

Engine Spin-On Series

How to Order

| B32016 | S |
|-------------|---|
| Basic Model | Specify a micron rating: S (2 micron) T (10 micron) P (30 micron) |

| Specifications | B32016 |
|--|--------------------------------|
| Maximum Flow Rate | 20 GPH (76 LPH) |
| Replacement Element: (2 micron) (10 micron) (30 micron) | S3216S S3216T S3216P |
| Element Height | 4.0 in. (10.2 cm) |
| Bowl and Element Height | 5.85 in. (14.9 cm) |
| Diameter | 2.85 in. (7.2 cm) |
| Center Threads | 16 mm X 1.5 |
| Solids Capacity | 6.4 oz. (182 grams) |
| Case Quantity | 12 |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



B32016S
Assembly

Cross References

All Racor B32016/S3216 replacement elements meet or exceed OEM specifications and replace all of the following filter numbers:

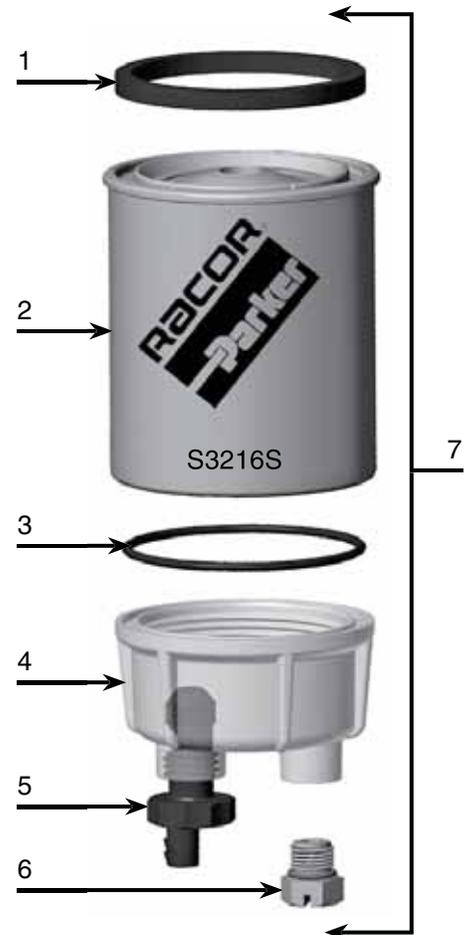
| OEM | AC | Baldwin | Fleetguard | Fram | Purolator | Wix |
|-----|-----|---------|------------|------|-----------|-------|
| N/A | N/A | BF1267 | N/A | N/A | N/A | 33392 |

Engine Spin-On Series

Replacement Parts

B32016/S3216

| <u>Part Number</u> | <u>Description</u> |
|---|--|
| 1. RK_10503 | Element Gasket |
| 2. Replacement Elements (includes #'s 1 to 3) | |
| S3216S | (2 micron) |
| S3216T | (10 micron) |
| S3216P | (30 micron) |
| 3. RK_10012 | Bowl O-ring |
| 4. N/A | Clear Bowl Kit |
| RK10215 | Non-heated, Clear Bowl Kit |
| RK10109 | Non-heated, Metal Bowl Kit |
| 5. RK30476 | Self Venting Drain Kit |
| 6. RK_20126 | Water Sensor Port Plug ½" SAE (includes O-ring) |
| 7. Bowl and Element Assembly (includes #'s 1 and 3) | |
| B32016S | (2 micron) |
| B32016T | (10 micron) |
| B32016P | (30 micron) |
| Additional Parts (not shown) | |
| RK30880 | Water Detection Kit |
| (other kits are available - see Accessories) | |



Do not use water sensors on gasoline applications.

Engine Spin-On Series

How to Order

| Specifications | S3229 |
|-------------------------------------|--------------------------------|
| Maximum Flow Rate | 90 GPH (341 LPH) |
| Replacement Element: (10 micron) | S3229 |
| Element Height | 7.3 in. (18.5 cm) |
| Bowl and Element Height | 10.6 in. (26.9 cm) |
| Diameter | 3.82 in. (9.7 cm) |
| Center Threads | 1"-12 |
| Case Quantity | 12 |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



Engine Spin-On Series

Replacement Parts

S3229

| Part Number | Description |
|--|---|
| 1. 30563 | Thread Gasket |
| 2. 20505 | Element Gasket |
| 3. Replacement Element (includes #'s 1 to 4) S3229 | (10 micron) |
| 4. 30076 | Bowl O-ring |
| 5. RK30475 | Standard Bowl Kit (no water sensor port - see notes below) |
| RK30051 | Non-heated, Clear Bowl Kit |
| RK30745-01 | Non-heated, Metal Bowl Kit |
| RK30895 | Heated, Clear Bowl Kit (12 vdc, 200 watt, no water sensor port) |
| RK30924 | Heated, Clear Bowl Kit (24 vdc, 200 watt, no water sensor port) |
| 6. RK30476 | Self Venting Drain Kit |
| Additional Parts (not shown) | |
| RK30880 | Water Detection Kit (other kits are available - see Accessories) |
| 21381 | Gasket Pack (includes #'s 1, 2, and 4) |



The standard B32029 bowl has no water sensor port. Bowls with water sensor ports are available as replacement kits (see item #5 above). Do not use water sensors on gasoline applications.

Engine Spin-On Series

How to Order

| Specifications | S3238 |
|-------------------------|--------------------------------|
| Maximum Flow Rate | 150 GPH (568 LPH) |
| Element Height | 6.4 in. (16.3 cm) |
| Bowl and Element Height | 9.9 in. (25.1 cm) |
| Diameter | 4.38 in. (11.1 cm) |
| Center Threads | 1 1/4"-12 |
| Case Quantity | 6 |
| Operating Temperature | -40° to +255°F (-40° to 124°C) |



Engine Spin-On Series

Replacement Parts

S3238

- | <u>Part Number</u> | <u>Description</u> |
|---|---|
| 1. RK31547 | Optional Mounting Head Kit (7/8"-14 UNF port) |
| 2. 30604 | Element Gasket |
| 3. Replacement Elements (includes #'s 2 to 4) | |
| S3238 | (10 micron) |
| 4. 30965 | Bowl O-ring |
| 5. RK30480 | Clear Bowl Kit |
| (no water sensor port - see note below) | |
| RK30063 | Non-heated, Clear Bowl Kit |
| RK21640 | Non-heated, Metal Bowl Kit |
| RK30900 | Heated, Clear Bowl Kit |
| (12 volt dc, 200 watt, no water sensor port) | |
| RK30925 | Heated, Clear Bowl Kit |
| (24 volt dc, 200 watt, no water sensor port) | |
| 6. Bowl and Element Assembly (includes #'s 2 - 5) | |
| B32038T | (10 micron) |
| Additional Parts (not shown) | |
| RK30880 | Water Detection Kit |
| (other kits are available - see Accessories) | |
| 22311 | Gasket Pack |
| (includes #'s 2 and 4) | |

3.25 in. (8.3 cm) diameter clearance for 3 fasteners.



The standard B32038 bowl has no water sensor port. Bowls with water sensor ports are available as replacement kits (see item #5 above). Do not use water sensors on gasoline applications.

Engine Spin-On Series

Engine Spin-On Series Overview

| Part Number | Description | Max Flow Rate | Thread | Micron Rating | Height | Diameter | Solids Capacity | Typical Application |
|-------------------------------|----------------|----------------------|---------------|---------------|-----------------------|----------------------|---------------------|-------------------------|
| B120S B120T B120P | Bowl & Element | 120 GPH (454 LPH) | 1"-14 | 2 | 12.0 in. (30.5 cm) | 4.4 in. (11.1 cm) | 18.2 oz. (515 g) | General Use |
| R120S R120T R120P | Element Only | | | 10 | | | | |
| B32001T B32001P | Bowl & Element | 90 GPH (341 LPH) | 1"-14 | 10 | 10.6 in. (26.9 cm) | 3.8 in. (9.7 cm) | 11.6 oz. (329 g) | Cummins or ThermoKing |
| S3201S S3201T S3201P | Element Only | | | 30 | | | | |
| B32002 | Bowl & Element | 90 GPH (341 LPH) | 1"-12 | 30 | 10.6 in. (26.9 cm) | 3.8 in. (9.7 cm) | 19.6 oz. (557 g) | Detroit Diesel |
| S3202 | Element Only | | | 30 | | | | |
| B32003 | Bowl & Element | 90 GPH (341 LPH) | 1"-14 | 2 | 8.7 in. (22.1 cm) | 3.8 in. (9.7 cm) | 7.1 oz. (201 g) | Caterpillar or Navistar |
| S3203 | Element Only | | | 2 | | | | |
| B32004S B32004T B32004P | Bowl & Element | 40 GPH (151 LPH) | 1"-14 | 2 | 7.2 in. (18.3 cm) | 3.8 in. (9.7 cm) | 9.0 oz. (255 g) | Navistar |
| S3204S S3204T S3204P | Element Only | | | 10 | | | | |
| S3205 | Element Only | 90 GPH (341 LPH) | 1"-14 | 30 | 6.3 in. (16.0 cm) | 4.4 in. (11.1 cm) | 19.1 oz. (541 g) | Mack |
| S3206 | Element Only | 90 GPH (341 LPH) | 1"-14 | 2 | 8.5 in. (21.6 cm) | 4.4 in. (11.1 cm) | 18.2 oz. (515 g) | Caterpillar |
| S3207S S3207T S3207P | Element Only | 180 GPH (681 LPH) | 1 1/4"-14 | 2 | 9.9 in. (25.1 cm) | 5.1 in. (12.9 cm) | 28.4 oz. (804 g) | Cummins |
| B32008P | Bowl & Element | 30 GPH (114 LPH) | 16mm X 1.5 | 30 | 7.3 in. (18.4 cm) | 2.9 in. (7.2 cm) | 9.7 oz. (275 g) | Deutz or Volvo |
| S3208S S3208T S3208P | Element Only | | | 2 | | | | |
| B32009P | Bowl & Element | 60 GPH (227 LPH) | 16mm X 1.5 | 30 | 8.8 in. (22.4 cm) | 3.8 in. (9.7 cm) | 13.7 oz. (388 g) | Mann |
| S3209S S3209T S3209P | Element Only | | | 2 | | | | |

Engine Spin-On Series

Engine Spin-On Series Overview

| Part Number | Description | Max Flow Rate | Thread | Micron Rating | Height | Diameter | Solids Capacity | Typical Application |
|-------------------------------|----------------|----------------------|---------------|---------------|-----------------------|----------------------|---------------------|----------------------|
| B32011 | Bowl & Element | 90 GPH (341 LPH) | 1"-14 | 10 | 8.6 in. (21.9 cm) | 3.6 in. (9.2 cm) | 8.2 oz. (232 g) | Cummins |
| S3211 | Element Only | | | 10 | 5.5 in. (14.0 cm) | | | |
| B32012 | Bowl & Element | 90 GPH (341 LPH) | 1"-12 | 30 | 7.3 in. (18.5 cm) | 3.8 in. (9.7 cm) | 8.2 oz. (233 g) | GM or Detroit Diesel |
| S3212 | Element Only | | | 30 | 4.0 in. (10.2 cm) | | | |
| B32016S B32016T B32016P | Bowl & Element | 20 GPH (76 LPH) | 16mm X 1.5 | 2 10 30 | 5.9 in. (14.9 cm) | 2.9 in. (7.2 cm) | 6.4 oz. (182 g) | General Use |
| S3216S S3216T S3216P | Element Only | | | 2 10 30 | 4.0 in. (10.2 cm) | | | |
| B32022 | Bowl & Element | 90 GPH (341 LPH) | 1"-14 | 30 | 10.6 in. (26.9 cm) | 3.8 in. (9.7 cm) | 19.6 oz. (557 g) | General Use |
| S3222 | Element Only | | | 30 | 7.4 in. (18.8 cm) | | | |
| S3223 | Element Only | 90 GPH (341 LPH) | 1"-14 | 30 | 8.5 in. (21.6 cm) | 4.4 in. (11.1 cm) | 18.2 oz. (515 g) | General Use |
| B32025S B32025T B32025P | Bowl & Element | 60 GPH (227 LPH) | 1"-14 | 2 10 30 | 8.4 in. (21.3 cm) | 4.4 in. (11.1 cm) | 10.8 oz. (305 g) | General Use |
| S3225S S3225T S3225P | Element Only | | | 2 10 30 | 5.0 in. (12.7 cm) | | | |
| B32026S B32026T B32026P | Bowl & Element | 75 GPH (284 LPH) | 1"-14 | 2 10 30 | 9.6 in. (24.4 cm) | 4.4 in. (11.1 cm) | 19.1 oz. (541 g) | General Use |
| S3226S S3226T S3226P | Element Only | | | 2 10 30 | 6.3 in. (16.0 cm) | | | |
| S3229 | Element Only | 90 GPH (341 LPH) | 1"-12 | 10 | 7.3 in. (18.5 cm) | 3.8 in. (9.7 cm) | 18.2 oz. (515 g) | General Use |
| B32030S B32030T | Bowl & Element | 60 GPH (227 LPH) | 1"-14 | 2 10 | 8.8 in. (22.4 cm) | 3.8 in. (9.7 cm) | 13.7 oz. (388 g) | General Use |
| S3230S S3230T S3230P | Element Only | | | 2 10 30 | 5.5 in. (14.0 cm) | | | |
| B32038 B32038P | Bowl & Element | 150 GPH (568 LPH) | 1 1/4"-12 | 10 30 | 9.9 in. (25.1 cm) | 4.4 in. (11.1 cm) | 28.4 oz. (804 g) | General Use |
| S3238 S3238P | Element Only | | | 10 30 | 6.4 in. (16.3 cm) | | | |

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

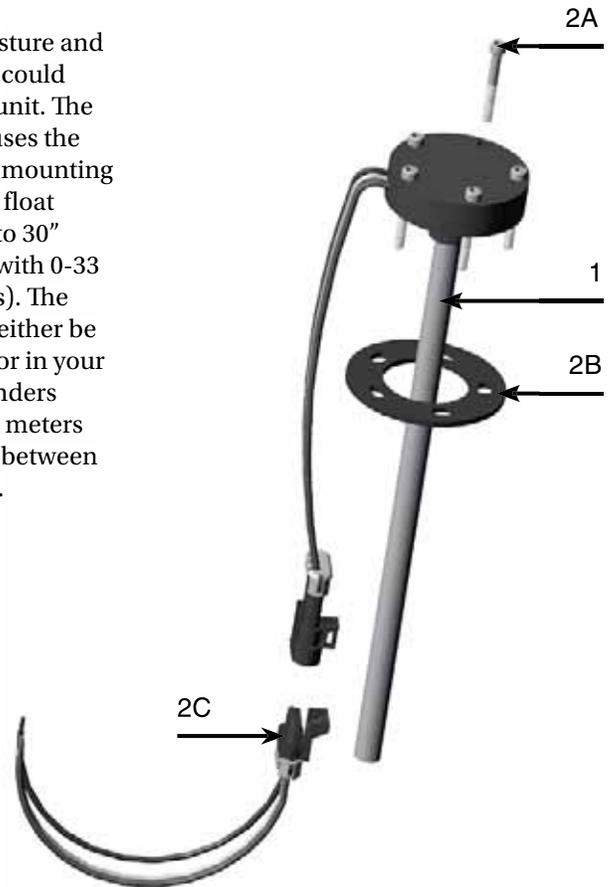
FS240 Series Fuel Senders

FS240 Series

Racor FS240 Series Electronic Fuel Senders are rugged and reliable, 100% solid state and designed for use in any 12 or 24 volt petroleum based product. They provide a continuous readout of the fuel level in the tank, and eliminate the need to continuously replace mechanical senders. FS240 Fuel Senders can be used in either stand alone application or they can be integrated with our Hot STK fuel heaters.

The FS240 Electronic Fuel Sender consist of a sensor probe and an amplifier which is located in the mounting plate assembly. All components are encapsulated in an

epoxy resin to seal out moisture and other contaminants which could affect the operation of the unit. The mounting plate assembly uses the same standard, 5 hole SAE mounting bolt pattern as mechanical float sending units. They fit 12" to 30" tanks and are compatible with 0-33 ohm fuel gauges or (meters). The meter (receiving unit) can either be remotely located close by, or in your dash. FS240 Series Fuel Senders can drive either one or two meters simultaneously (switching between the meters is not required).



How to Order

(The examples below illustrate how part numbers are constructed).

| FS240/ | 20 |
|--------------------|--|
| Basic Model Number | Specify a Tank Diameter: 20, 21, 22, 23, 24, 25, 26, or 27 |

Note: Additional lengths and styles are available; contact Racor Technical Support.

FS240 Replacement Part List

| Part No. | Description |
|-------------------|----------------------------|
| 1. FS240/ | Basic Fuel Sender Assembly |
| 2. FS2703K | Mounting Kit |

Includes:

- A. (5) 10/32" x 1.5" Screws
- B. (1) Adaptor Plate Gasket
- C. (1) Female Pigtail

FS240 Series Fuel Senders

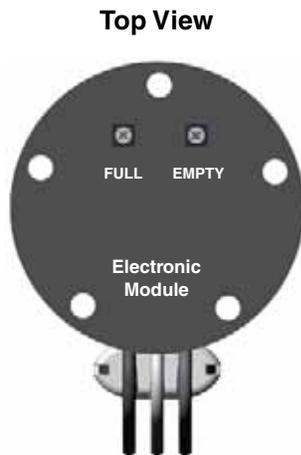
FS240 Series

General Instructions

Disconnect battery before beginning. Do not over-tighten mounting bolts; torque to a MAXIMUM of 15 in. lbs. This unit is calibrated at the factory for the EMPTY setting. The FULL setting may require a slight adjustment. Adjustment screws are located on top of module. Note: When ignition switch is on, fuel sender will show FULL for a few seconds, then drop back to the actual fuel level.

Wiring Instructions

Ground existing wire directly to frame using appropriate fasteners and ring terminals.



Red wire to ignition power (12 or 24 volt).
White wire to existing send wire off old sender.
Black wire to existing ground wire off old sender.

Note: If excess water is present in fuel tank, sender will show a false FULL reading until excess water is removed.

Re-calibration Instructions

Racor Electronic Fuel Senders are preset at the factory. Due to variance in fuel gauges and fuel tank filler neck placement, the fuel gauge may not show exactly FULL. The EMPTY level is nonadjustable. Note: Re-calibrate FULL level ONLY if needle variance is too extreme.

1. Calibration procedures require two people (one to monitor fuel gauge, another to set adjustment screw). Note: Verify tank is full of fuel.
2. Turn ignition switch on.
3. Make adjustments carefully with small Phillips screwdriver. It may be necessary to remove silicone sealant from adjustment screw before adjustments are possible. Caution: Be careful when removing silicone sealant to avoid damage to adjustment screw.
4. Carefully turn FULL adjustment screw to full clockwise position.
5. Turn adjustment screw counter-clockwise very slowly, as a small rotation will cause a large needle movement. Keep turning until desired location is obtained on fuel gauge. If needle passes desired location, repeat procedure by turning screw clockwise until needle moves above desired position and then turn adjustment screw counter-clockwise again. Always set as needle is falling.
6. After calibration is complete, seal adjustment screws with a generous coat of a silicone sealant.

Warning: Use of other than Racor components can cause damage and voids warranty.

P Series

P Series



P3



P4



P5

The Racor P Series filter assemblies are designed and manufactured to provide the highest possible value to the diesel engine, vehicle and equipment. The innovative and modular design of the P Series incorporates all of the low pressure fuel components required by the latest generation of electronically-controlled fuel injection systems. The consistent pressure and volume delivery of pure fuel under various engine speed, load and environmental conditions, are absolutely essential to achieve the efficiency levels required in today's engines. The modular design of the P Series allows features to be added or

deleted independent of one another – providing a new level of design flexibility.

The P Series assemblies are available in three sizes and all feature 3/8" NPT inlet and outlet fuel ports and clear collection bowls.

Features and Benefits

- A durable, 12 vdc roller-cell electric fuel pump offers the benefit of an electric, on demand priming pump. Fuel flow will bypass pump when not in use
- A thermostatically controlled PTC style electric (150 watt) heater for cold weather starting.

- The high performance Aquabloc®II cartridge style filter media has greater contaminant holding capacity, is environmentally friendly and can be incinerated.
- A clear removable and reusable contaminant collection bowl is standard on all models.
- A self-venting drain makes draining water quick and easy.
- A water-in-fuel (WIF) sensor alerts the operator when service is required.
- A under-dash control module for pump and water sensor operation is included with pump option.

P Series

P Series Overview



| Specifications | P3 | P4 | P5 |
|--|--|--|--|
| Maximum Flow Rate | 30 GPH (114 LPH) | 40 GPH (170 LPH) | 50 GPH (227 LPH) |
| Clean Pressure Drop | 0.4 PSI (2.8 kPa) | 0.5 PSI (3.4 kPa) | 0.8 PSI (5.5 kPa) |
| Maximum Pump Output (at 14.4 volts) | 40 GPH (151 LPH) | 40 GPH (151 LPH) | 40 GPH (151 LPH) |
| Standard Fuel Port Size (SAE J476) | 3/8"-18 NPT | 3/8"-18 NPT | 3/8"-18 NPT |
| Number of Ports Available: (fuel inlets) (fuel outlets) | 2 1 1 | 2 1 1 | 2 1 1 |
| Replacement Elements: (2 micron) (10 micron) (30 micron) | R58060-02 R58060-10 R58060-30 | R58095-02 R58095-10 R58095-30 | R58039-02 R58039-10 R58039-30 |
| Minimum Service Clearance | 2.5 in. (2.8 cm) | 2.5 in. (2.8 cm) | 2.5 in. (2.8 cm) |
| Height | 7.7 in. (19.6 cm) | 9.0 in. (23.0 cm) | 11.5 in. (29.2 cm) |
| Depth | 5.2 in. (13.2 cm) | 5.2 in. (13.2 cm) | 5.2 in. (13.2 cm) |
| Width (with bracket) | 8.8 in. (22.4 cm) | 8.8 in. (22.4 cm) | 8.8 in. (22.4 cm) |
| Weight (dry) | 3.4 lb (1.5 kg) | 3.8 lb (1.7 kg) | 4.2 lb (1.9 kg) |
| Maximum Pump Outlet Pressure | 10 PSI (0.7 bar) | 10 PSI (0.7 bar) | 10 PSI (0.7 bar) |
| Features: ¹ Water Sensor Heater Pressure Regulator (10 PSI) Pump By-pass Flow Valve | Standard Standard Standard Standard | Standard Standard Standard Standard | Standard Standard Standard Standard |
| H ₂ O Removal Efficiency | 99% | | |
| Operating Temperature | -40° to +255°F (-40° to +124°C) | | |

Vacuum installations are recommended. ¹ Do not use on gasoline applications.

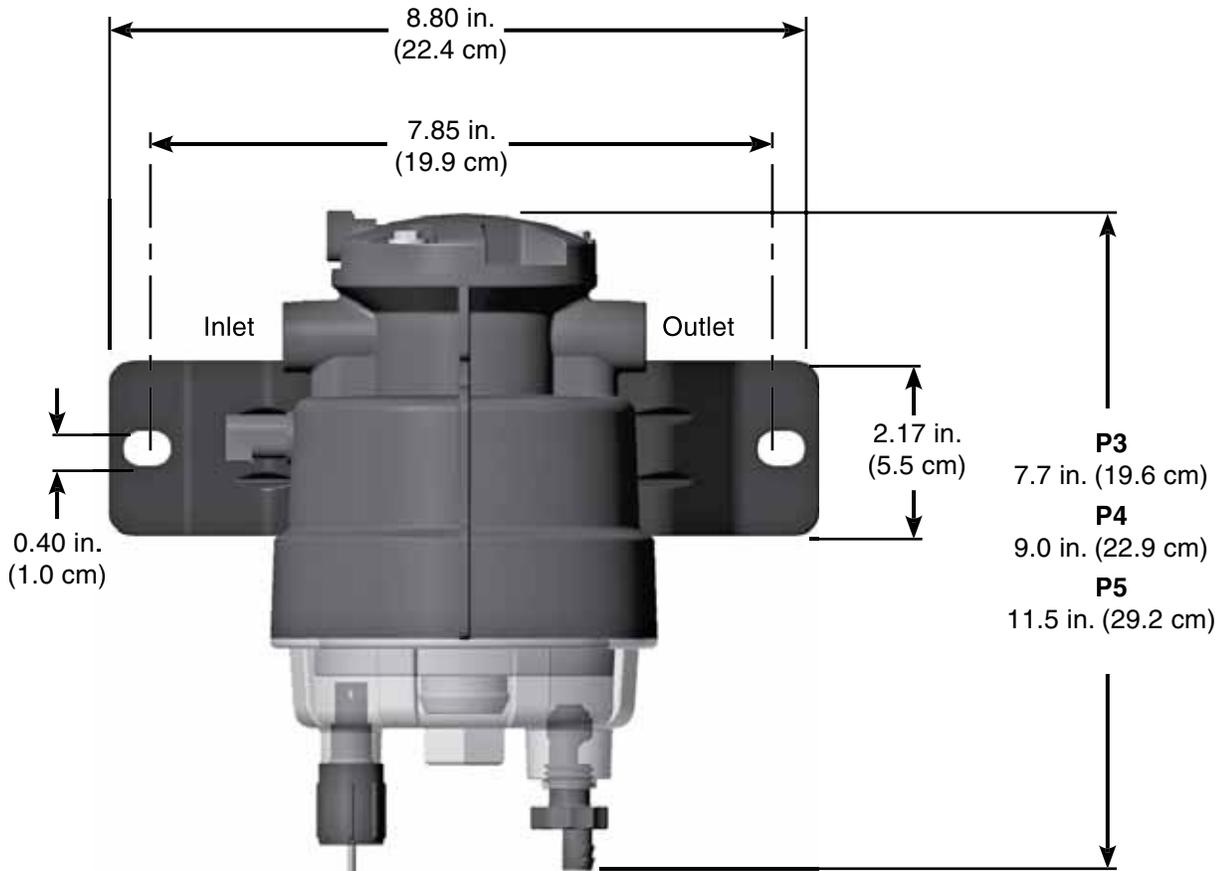
P Series

How to Order

| P4 | 2 | 10 | N | H |
|---|--|---|--|--|
| Specify a flow rate: P3 for 30 GPH, P4 for 40 GPH, or P5 for 50 GPH | 2 must be in the part number. (It specifies a 12 vdc pump) | Specify micron rating: 02 for 2 micron, 10 for 10 micron, or 30 for 30 micron | N must be in the part number. (It specifies standard 3/8" NPT ports) | H must be in the part number. (It specifies a 12 vdc, 150 watt heater) |

For continuous run pump operation, contact Technical Support at number listed below.

Mounting Information

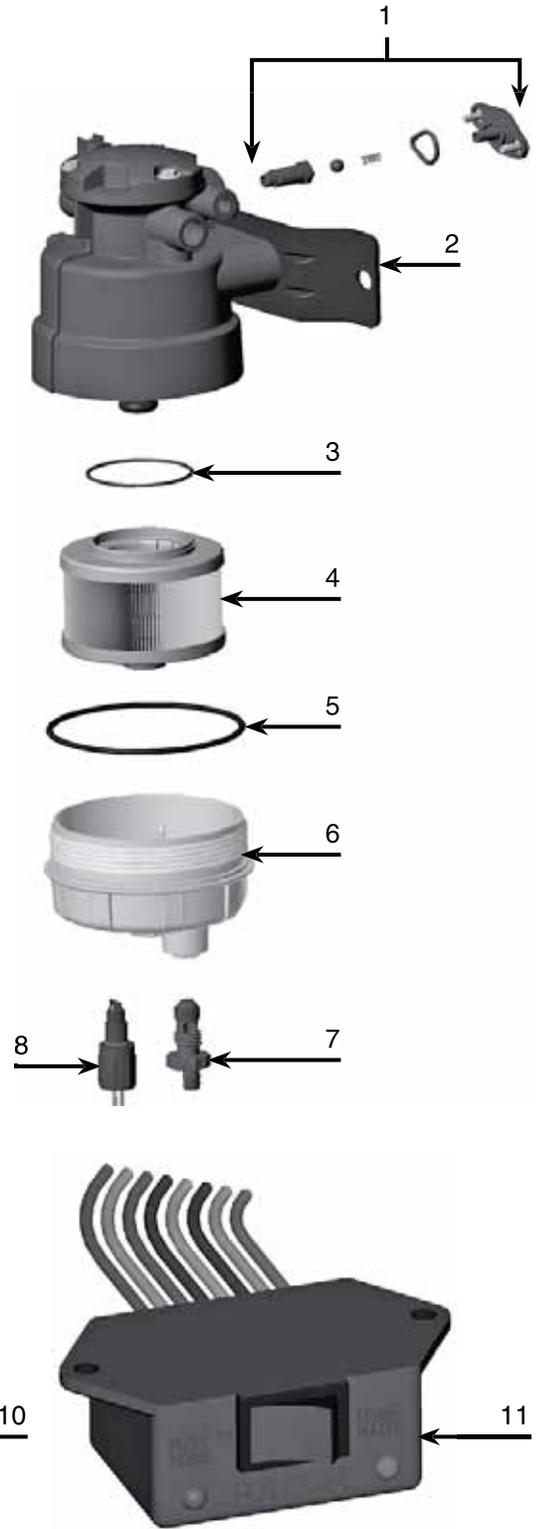


P Series

Replacement Parts

| Part Number | Description |
|---|--|
| 1. RK 58075 ¹ | Pressure Regulator |
| 2. RK 58109 ¹ | Bracket Kit |
| 3. 58066 ¹ | Element O-ring |
| 4. Replacement Elements (see Specifications chart) (includes #3) | |
| 5. 22099 ¹ | Bowl O-ring |
| 6. Clear Bowls (includes #'s 5 to 8) | |
| 58179 | P3 (shown) |
| 58180 | P4 |
| 58181 | P5 |
| 7. RK 30476 ¹ | Drain Valve Kit (includes # 5) |
| 8. RK 21069 ¹ | Water Probe Kit |
| 9. RK58107 ¹ | 6-Way Electrical Harness Kit (includes #9) |
| 10. 58137 ¹ | Mating Connector Harness |
| 11. 58132 ¹ | Under-dash Control Panel |

Notes: ¹ For use with all models.



ParFit™ Products

For on/off highway vehicles and stationary equipment, ParFit fuel filter products protect expensive system components not only from microscopic solid contaminants, but from damaging water as well. ParFit products are engineered and manufactured to meet stringent quality requirements and Original Equipment Manufacturer (OEM) specifications for service life and efficiency.

When you specify ParFit filters, you know you're doing everything you can to protect your equipment, extend its life-cycle and effectiveness, and improve your bottom line. Models are available for direct spin-on replacement and with integral, die cast aluminum heads. The complete ParFit series includes OEM replacement filter/separators for the most popular diesel engines including: Navistar, Cummins, Detroit Diesel, Ford and Caterpillar. This means that you get the engine protection you want at a very competitive price.



And many more...

ParFit™ Products

100 Series

| Specifications | PF101 |
|---------------------------|---------------------------------|
| Maximum Flow Rate | 65 GPH (246 LPH) |
| Maximum Working Pressure: | 25 PSI (172 kPa) |
| Element Part Number: | |
| (2 micron) | N/A |
| (10 micron) | PF101-10 |
| (30 micron) | N/A |
| Height | 3.25 in. (8.3 cm) |
| Diameter | 4.25 in. (10.8 cm) |
| Weight (dry) | 0.4 lb (0.2 kg) |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



200 Series

| Specifications | PF201 |
|---------------------------|---------------------------------|
| Maximum Flow Rate | 120 GPH (454 LPH) |
| Maximum Working Pressure: | 25 PSI (172 kPa) |
| Element Part Number: | |
| (2 micron) | PF201-2 |
| (10 micron) | PF201-10 |
| (30 micron) | PF201-30 |
| Height | 4.6 in. (11.7 cm) |
| Diameter | 6.1 in. (10.8 cm) |
| Weight (dry) | 1.0 lb (0.5 kg) |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



ParFit™ Products

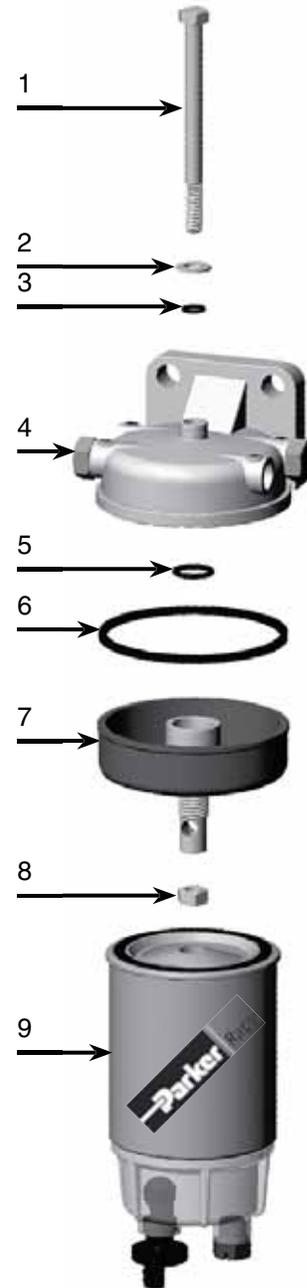
IN CAV Filter Adapter Kit

Filter adapter kit IN CAV converts old C.A.V. filter head canister and glass bowl units into a Spin-On filter assembly. This kit allows the use of Racor B32008 or B32016 Spin-On filters that feature patented clear Spin-On contaminant collection bowls and self-venting drains.

Fits:

- Ford
- Perkins
- Massey
- Saab
- Volvo-Penta
- Ford Lehman engines, up to 70 HP.

PFCAV Adapter Kit includes numbers 1, 2, 3, 5, 6, 7, and 8. Number 4 is the CAV mounting head and number 9 is a Racor B32016 filter assembly.



ParFit™ Products

PFF829B

| Specifications | PF F829B |
|-------------------------------------|--|
| Application | Navistar 7.3L Diesel Engines in Ford E & F Series Vehicles |
| Maximum Flow Rate | 20 GPH (75.7 LPH) |
| Maximum Working Pressure | 30 PSI (2.1 bar) |
| Element Part Number | PFF829B (2 micron) |
| Height (with metal bowl) | 5.5 in. (14 cm) |
| Diameter | 4.3 in. (11.0 cm) |
| Center Threads | 1-14 UNS |
| Solids Capacity | 12.3 oz (350 g) |
| Weight (dry) | 1.2 lb (0.5 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram |
|------------------|------------------|---------------------|--------------------|-----------|-------------------|
| FS1278 FS1281 | 33217 33217MP | LFF5824 LFF5824B | BF1222 BF1222SP | P553375 | PS6554 PS6554A |

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

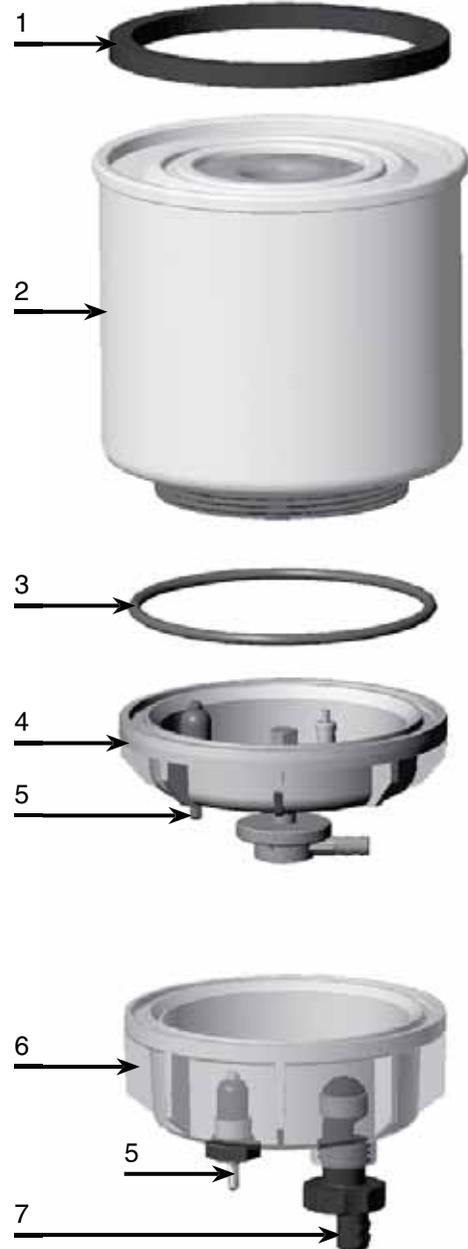
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ParFit™ Products

Replacement Parts

PFF829B

| | Part Number | Description |
|----|-------------------|---|
| 1. | RK 22061 | Element Gasket Kit |
| 2. | PF F829B | Replacement Element (includes #'s 1 & 3) |
| 3. | N/A | Bowl O-ring Kit |
| 4. | PFRK20567 | Metal Bowl Kit (includes #'s 3 , 4 & 5) |
| 5. | 20301 | Water Probe |
| 6. | IN RK21057 | Optional Clear Bowl Kit (includes #'s 3, 5, 6 & 7) |
| 7. | RK 30476 | Self-venting Drain Kit |



PFF830

| Specifications | PFF830 |
|--|---|
| Application | Navistar 7.3L medium duty trucks & buses with diesel engines. |
| Maximum Flow Rate | 30 GPH (114 LPH) |
| Maximum Working Pressure | 30 PSI (2.1 bar) |
| Micron Rating | 40 micron |
| Height: (with bowl) (without bowl) | 6.0 in. (15.2 cm) 5.25 in. (13.3 cm) |
| Diameter | 4.3 in. (11.0 cm) |
| Center Threads | 1-14 UNS |
| Solids Capacity | 13.9 oz (395 g) |
| Weight (dry) | 1.2 lb (0.5 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

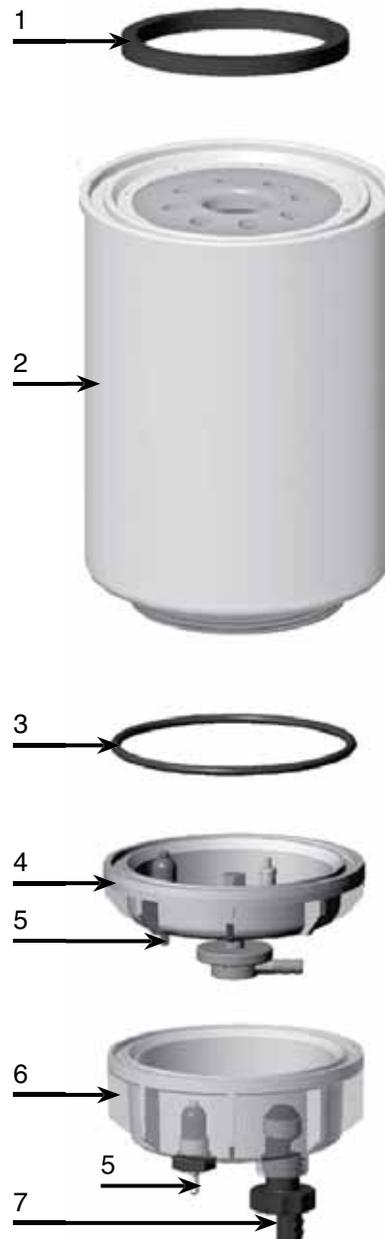
| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram |
|------------------------------|----------------|--|--|-----------|----------------------------|
| FS1291 FS19547 FS79551 | 33232 33411 | LFF3579 LFF1223 LFF3290 LFF3292 | BF1345 BF1345SP BF1223 BF1329 BF1348, BF1349 | P550729 | PS8186 PS7713 PS7170 |

ParFit™ Products

Replacement Parts

PFF830

| | <u>Part Number</u> | <u>Description</u> |
|----|--------------------|---|
| 1. | N/A | Element Gasket |
| 2. | IN F830 | Replacement Element (includes #'s 1, 2 & 3) |
| 3. | RK 21156 | Bowl O-ring |
| 4. | PFRK20567 | Optional Metal Bowl Kit (includes #'s 3, 4 & 5) |
| 5. | 20301 | Water Probe |
| 6. | IN RK21057 | Optional Clear Bowl Kit (includes #'s 3, 5, 6 & 7) |
| 7. | RK 30476 | Self-venting Drain Kit |



PF F831

| Specifications | PF F831 |
|--|--|
| Application | Navistar 6400 Series with diesel engines |
| Maximum Flow Rate | 30 GPH (114 LPH) |
| Maximum Working Pressure | 30 PSI (2.1 bar) |
| Micron Rating | 40 micron |
| Height: (with bowl) (without bowl) | 5.5 in. (14 cm) 4.0 in. (10.2 cm) |
| Diameter | 4.3 in. (11.0 cm) |
| Center Threads | 1-14 UNS |
| Solids Capacity | 13.9 oz (395 g) |
| Weight (dry) | 1.2 lb (0.5 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

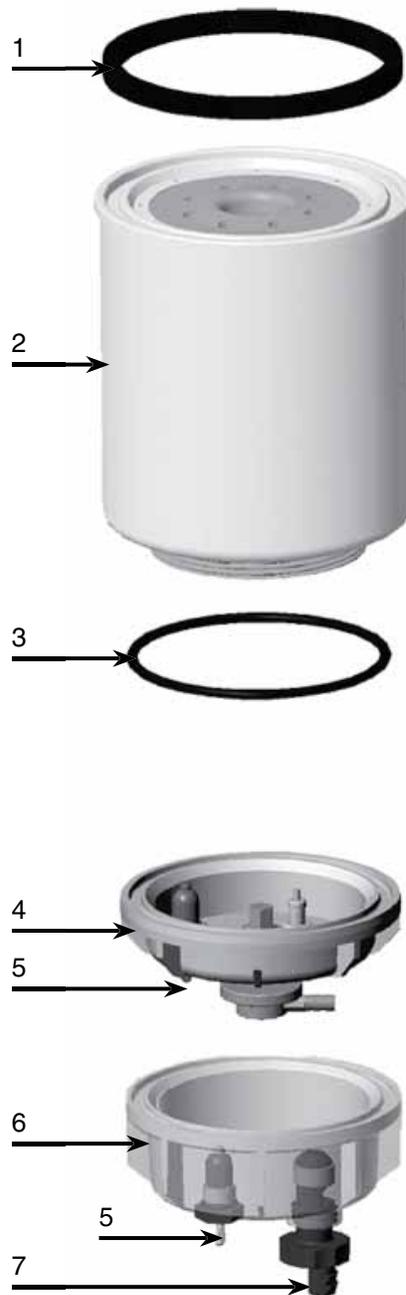
| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram |
|------------------------------|----------------|---|--------------------|-----------|----------------------------|
| FS1287 FS19532 FS19551 | 33231 33411 | LFF3345 LFF5766 LFF8038 LFF8063 LFF8957 | BF1223 BF1223SP | P550730 | PS7716 PS8187 PS8486 |

ParFit™ Products

Replacement Parts

PF F831

| | <u>Part Number</u> | <u>Description</u> |
|----|--------------------|---|
| 1. | N/A | Element Gasket |
| 2. | PF F831 | Replacement Element (includes #'s 1, 2 & 3) |
| 3. | RK 21156 | Bowl O-ring |
| 4. | PFRK20567 | Optional Metal Bowl Kit (includes #'s 3, 4 & 5) |
| 5. | 20301 | Water Probe |
| 6. | IN RK21057 | Optional Clear Bowl Kit (includes #'s 3, 5, 6 & 7) |
| 7. | RK 30476 | Self-venting Drain Kit |



Fuel Dispensing Elements Overview



| Specifications | PFFDW3525 | PFFDW3825 | PFFDW51125 |
|-------------------------------------|---------------------------------|---------------------|----------------------|
| Maximum Flow Rate | 450 GPH (1703 LPH) | 900 GPH (3406 LPH) | 3000 GPH (11356 LPH) |
| Max. Working Pressure | 100 PSI (689.6 kPa) | 100 PSI (689.6 kPa) | 100 PSI (689.6 kPa) |
| Micron Rating | 25 | 25 | 25 |
| Height | 5.0 in. (12.7 cm) | 8.0 in. (20.3 cm) | 11.0 in. (27.9 cm) |
| Diameter | 4.0 in. (10.2 cm) | 4.0 in. (10.2 cm) | 5.0 in. (12.7 cm) |
| Center Threads | 1"-12 | 1"-12 | 1.5"-16 |
| Solids Capacity | 0.5 oz. (15.6 g) | 1.0 oz. (28.7 g) | 2.0 oz (56.5 g) |
| Water Capacity | 8.4 oz. (0.2 L) | 15.4 oz. (0.5 L) | 30.3 oz (0.9 L) |
| Weight (dry) | 1.2 lb (0.5 kg) | 1.5 lb (0.7 kg) | 2.8 lb (1.3 kg) |
| H ₂ O Removal Efficiency | 99% | | |
| Operating Temperature | -50° to +225°F (-45° to +107°C) | | |

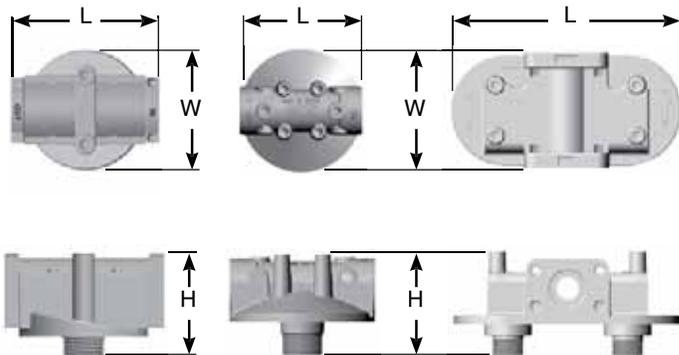
ParFit™ Products

Optional Mounting Heads



| Specifications | PFHH07500 | PFFDH12500 | 23179001** |
|--------------------|---------------------|-----------------------|-----------------------|
| Maximum Flow Rate | 900 GPH (3,406 LPH) | 3000 GPH (11,356 LPH) | 6000 GPH (22,712 LPH) |
| Fuel Ports | 0.75" NPT | 1.25" NPT | 1.5" NPT |
| Height | 2.5 in. (6.4 cm) | 3.5 in. (8.9 cm) | 4.5 in. (11.4 cm) |
| Length | 3.8 in. (9.7 cm) | 5.3 in. (13.5 cm) | 11.3 in. (28.7 cm) |
| Width | 3.0 in. (7.6 cm) | 5.3 in. (13.5 cm) | 5.5 in. (14.0 cm) |
| Weight | 0.7 lb (0.3 kg) | 1.3 lb (0.6 kg) | 6.0 lb (2.7 kg) |
| Gasket Pack (5 pc) | N/A | INGCSG100 | INGCSG100 |
| Operating Pressure | 100 PSI (6.9 bar) | 100 PSI (6.9 bar) | 100 PSI (6.9 bar) |

**23179001 dual head. Please call Parker's Hydraulic Filter Division to order (419.644.4311).



PFF19528

| Specifications | IN F19528 |
|-------------------------------------|---|
| Application | 1998 & 1999 Dodge Trucks w/Cummins Diesel Engines |
| Maximum Working Pressure | 30 PSI (2.1 bar) |
| Micron Rating | 2 micron |
| Height | 4.4 in. (11.2 cm) |
| Diameter | 3.6 in. (9.1 cm) |
| Solids Capacity | 5.1 oz (144 g) |
| Weight (dry) | 0.4 lb (0.2 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram |
|--------------------|-------|-------------|----------------------------|-----------|--------|
| FS19522 FS19528 | 33349 | L5021F | PF7610 PF7651 PF7751 | P551310 | CS8323 |

ParFit™ Products

Replacement Parts

PFF19528

| | <u>Part Number</u> | <u>Description</u> |
|------------------------------|--------------------|---|
| 1. | N/A | Element O-ring |
| 2. | N/A | Housing Gasket |
| 3. | PFF19528 | Replacement Element (includes #'s 1 & 2) |
| Additional Parts (not shown) | | |
| | 54039 | Gasket Pack (includes #'s 1 & 2) |



ParFit™ Products

PFF32423

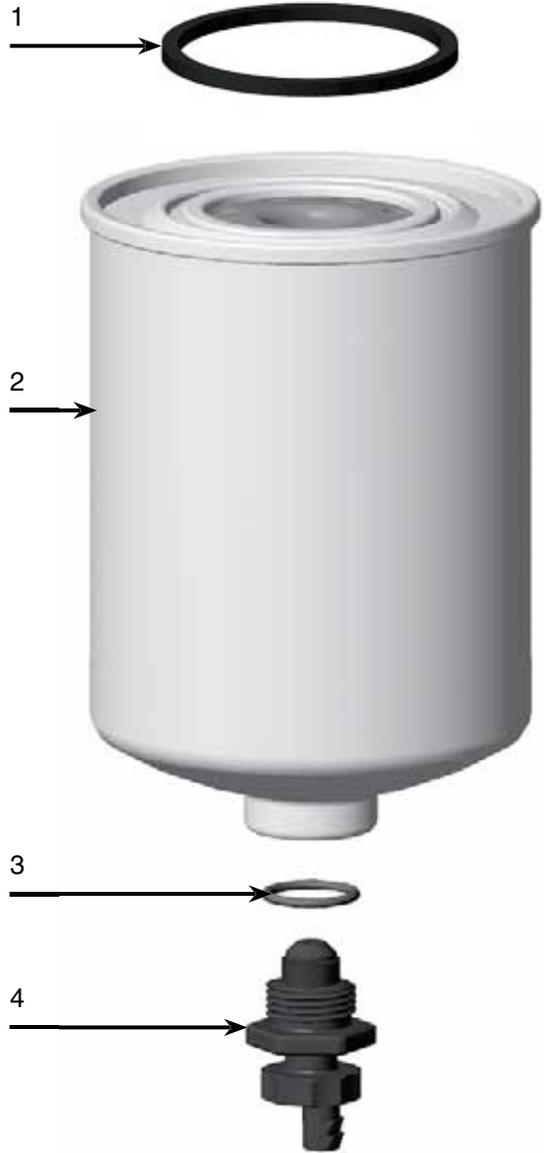
| Specifications | PFF32423 |
|-------------------------------------|--|
| Application | International DT466, DT570 and HT570 Engines |
| Cross References | Navistar: 1822588C1 Fleetguard: FFO526904 |
| Maximum Flow Rate | 45 GPH (173 LPH) |
| Working Pressure | 60 PSI (4.1 bar) |
| Micron Rating | 2 micron |
| Height | 7.5 in. (19.1 cm) |
| Diameter | 4.4 in. (11.2 cm) |
| Solids Capacity | 14.1 oz (400 g) |
| Weight (dry) | 1.5 lb (0.7 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Replacement Parts

PFF32423

| | <u>Part Number</u> | <u>Description</u> |
|----|--------------------|---|
| 1. | RK 10503 | Element Gasket |
| 2. | PFF32423 | Replacement Element (includes #'s 1, 2, 3 & 4) |
| 3. | RK 11340 | Drain O-ring Kit |
| 4. | RK 30488 | Drain Kit (includes #3) |



PFF4595

| Specifications | IN F4595 |
|-------------------------------------|---|
| Application | 7.3L Navistar T444E Powerstroke: 1994 - 1999 |
| Micron Rating | 2 micron |
| Maximum Flow Rate | 20 GPH (76 LPH) |
| Height | 4.0 in. (10.2 cm) |
| Diameter | 3.5 in. (8.9 cm) |
| Weight (dry) | 0.4 lb (5.8 oz.) |
| Solids Capacity | 12.3 oz (350 g) |
| Lid Gasket Part Number | 31226 |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram | Motorcraft |
|-------------|-------|-------------|------------------|-----------|--------|------------|
| FS1298 | 33517 | L3508F | PF7578 PF7678 | P550966 | CS8323 | FD4595 |

ParFit™ Products

Replacement Parts

PFF4595

| | <u>Part Number</u> | <u>Description</u> |
|----|--------------------|--------------------|
| 1. | RK 31449 | Filter Cap Kit |
| 2. | 31025 | Gasket |
| 3. | PFF4595 | Element |



ParFit™ Products

PFF4596

| Specifications | PFF4596 |
|-------------------------------------|--|
| Application | 7.3L Navistar T444E Powerstroke: 1999 - current |
| Maximum Flow Rate | 20 GPH (76 LPH) |
| Maximum Working Pressure | 30 PSI (2.1 bar) |
| Micron Rating | 7 micron |
| Height | 2.8 in. (7.1 cm) |
| Diameter | 3.6 in. (9.1 cm) |
| Solids Capacity | 12.3 oz (350 g) |
| Weight (dry) | 0.3 lb (0.1 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram | Motorcraft |
|-------------|-------|------------------|---------|-----------|--------|------------|
| FF5418 | 33518 | L4596F L5788F | PF7698 | P550437 | CS8629 | FD4596 |

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

A219

ParFit™ Products

Replacement Parts

PFF4596

| | Part Number | Description |
|----|----------------|---|
| 1. | 31025 | Element Gasket |
| 2. | PFF4596 | Replacement Element (includes #'s 1 and 3) |
| 3. | 20151-B | Element O-ring |

Additional Parts (not shown)

31749 Gasket Pack



PFF4604



(includes both elements)

| Specifications | Secondary Fuel Filter | Primary Fuel Filter |
|-------------------------------------|---|---------------------|
| Application | Ford 6.0L Powerstroke Engines. Model Years 2003 to 2006 | |
| Maximum Flow Rate | 34 GPH (130 LPH) | 34 GPH (130 LPH) |
| Maximum Working Pressure | 58 PSI (4.0 bar) | 58 PSI (4.0 bar) |
| Micron Rating | 4 micron | 10 micron |
| Height | 2.6 in. (6.6 cm) | 4.4 in. (11.2 cm) |
| Diameter | 2.3 in. (5.8 cm) | 3.4 in. (8.6 cm) |
| Weight (dry) | 0.1 lb (0.05 kg) | 0.3 lb (0.1 kg) |
| Solids Capacity (with both filters) | 0.2 oz (5.7 g) | |
| Gasket Pack | 21746 | |
| H ₂ O Removal Efficiency | 99% | |
| Operating Temperature | -50° to +225°F (-45° to +107°C) | |

Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Motorcraft |
|-------------|-------|-------------|-----------|-----------|------------|
| N/A | 33599 | N/A | PF7812KIT | P550527 | FD4604 |

ParFit™ Products

PFF4606



(includes both elements)

| Specifications | Secondary Fuel Filter | Primary Fuel Filter |
|-------------------------------------|---|---------------------|
| Application | Ford 6.0L Powerstroke Engines. Model Years 2003 to 2006 | |
| Micron Rating | 4 Micron | 10 Micron |
| Height | 2.5 in. (6.4 cm) | 3.1 in. (7.9 cm) |
| Diameter | 2.3 in. (5.8 cm) | 3.7 in. (9.4 cm) |
| Weight (dry) | 1.8 oz | 4.6 oz |
| Gasket Pack | Included | |
| Filter Life | 15,000 miles | |
| H ₂ O Removal Efficiency | 99% | |
| Operating Temperature | -40° to +250°F (-40° to +121°C) | |

Cross Reference

| Amsoil | Wix | Honeywell | Baldwin | Napa | Carquest | Hastings | Champion Lab |
|--------|-------|-----------|---------|------|----------|----------|--------------|
| FFK60 | 33600 | CS98153 | 168153 | 3600 | 86600 | FF1158 | L4606F |

ParFit™ Products

PFFRK51216

| Specifications | PFFRK51216 |
|--------------------------|---------------------------------|
| Application | Pre-Filter |
| Maximum Flow Rate | N/A |
| Maximum Working Pressure | N/A |
| Micron Rating | 200-260 |
| Height | 4.4 in. (11.2 cm) |
| Diameter | 1.9 in. (4.8 cm) |
| Weight (dry) | N/A |
| Solids Capacity | N/A |
| Gasket Pack | RK51218 |
| Water Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |

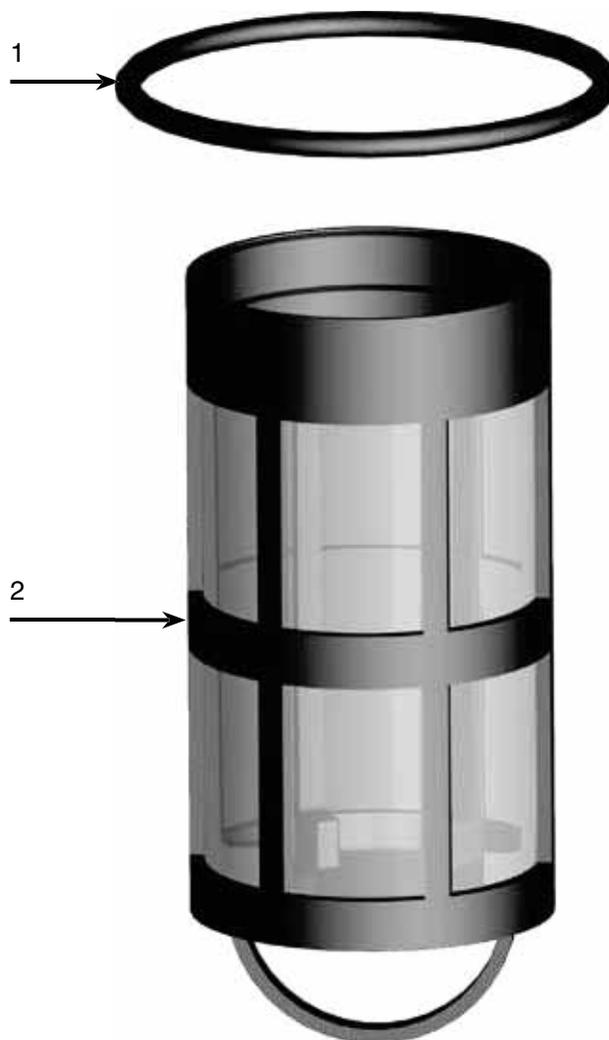


ParFit™ Products

Replacement Parts

Replacement Parts

| | <u>Part Number</u> | <u>Description</u> |
|----|--------------------|-----------------------|
| 1. | N/A | O-ring Kit |
| 2. | RK 51216 | Prescreen Element Kit |



PFF5500

| Specifications | PFF5500 |
|-------------------------------------|--------------------------------------|
| Application | Detroit Diesel (secondary filter) |
| Max. Working Pressure | 60 PSI (4.1 bar) |
| Micron Rating (98% nominal) | 10 micron |
| Height | 6.9 in. (17.4 cm) |
| Diameter | 3.8 in. (9.5 cm) |
| Center Threads | 13/16-12 UNS 2B |
| Weight (dry) | 1.5 lb (0.7 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram | Detroit | AC |
|---------------------------|-------|--|---|--------------------|---------------------------|----------|--------|
| FF5206 FF206 FF5227 | 33120 | LFP816FN LFF3291 LFP816F LFP816FN | BF5810 BF581 BF5815 BF7612 BF7640 | P556916 P169091 | P1147G PS8479 P3823 | 23518530 | TP916D |

ParFit™ Products

PFF5501

| Specifications | PFF5501 |
|-------------------------------------|---------------------------------|
| Application | Caterpillar (primary filter) |
| Max. Working Pressure | 60 PSI (4.1 bar) |
| Micron Rating (98% nominal) | 10 micron |
| Height | 10.2 in. (25.8 cm) |
| Diameter | 4.3 in. (11.0 cm) |
| Center Threads | 1-14 UNS-2B |
| Weight (dry) | 2.4 lb (1.1 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram | Caterpillar |
|-------------|-------|--------------------|-----------------|--|-------|-------------|
| FF211 | 33384 | LFF5823 LFP5823 | BF584 BF584B | P555823 EFF9092 EFF9092S FFP170823 FFP555823 | P3376 | 4N-5823 |

PFF5502

| Specifications | PFF5502 |
|-------------------------------------|---------------------------------|
| Application | Cummins, Freightliner |
| Max. Working Pressure | 60 PSI (4.1 bar) |
| Micron Rating (98% nominal) | 5 micron |
| Height | 9.7 in. (24.6 cm) |
| Diameter | 3.7 in. (9.4 cm) |
| Center Threads | 1-14 UNS-2B |
| Weight (dry) | 1.6 lb (0.7 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram |
|-------------|-------|-------------|---------|-----------|----------|
| FS1000 | 33406 | LFF1000 | BF1259 | P551000 | PS8048 |
| FS1212 | 33405 | LFF5D | BF1212 | P170212 | PCS5059 |
| FS1009 | | LFF8000 | BF1282 | P550691 | PCS5059M |
| | | LFF8011 | BF957D | P558000 | PCS5062 |
| | | LFF8020 | | P558020 | PS3712 |

ParFit™ Products

PFF5503

| Specifications | PFF5503 |
|-------------------------------------|------------------------------------|
| Application | Detroit Diesel (primary filter) |
| Max. Working Pressure | 60 PSI (4.1 bar) |
| Micron Rating (98% nominal) | 30 micron |
| Height | 8.2 in. (20.8 cm) |
| Diameter | 3.8 in. (9.7 cm) |
| Center Threads | 1-12 UNS-2B |
| Weight (dry) | 1.5 lb (0.7 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram | Detroit | AC |
|-----------------|-------|---------------------|-----------------|--|-----------------|----------|-------|
| FF5207 FF207 | 33118 | LFP815F LFP815FN | BF580 BF5800 | P556915 P550915 FFP170915 FFP550915 | P1146 P1146G | 23517471 | T915D |

ParFit™ Products

PFF5504

| Specifications | PFF5504 |
|-------------------------------------|---------------------------------|
| Center Threads | M16 X 1.5 |
| Maximum Flow Rate | GPH (LPH) |
| Maximum Working Pressure | 30 PSI (2.1 bar) |
| Micron Rating | 10 micron |
| Height | 4 in. (10 cm) |
| Diameter | 3.3 in. (8.3 cm) |
| Solids Capacity | 12.3 oz (350 g) |
| Weight (dry) | 1.0 lb (0.5 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram |
|-------------|-------|-------------|---------|-----------|-------|
| FF5095 | 33195 | LFF3806 | BF790 | P555095 | P6503 |

ParFit™ Products

PFF5505

| Specifications | PFF5505 |
|-------------------------------------|---------------------------------|
| Center Threads | M16 x 1.5 |
| Maximum Flow Rate | GPH (LPH) |
| Maximum Working Pressure | 30 PSI (2.1 bar) |
| Micron Rating | 10 micron |
| Height | 4.9 in. (12.3 cm) |
| Diameter | 3.3 in. (8.3 cm) |
| Solids Capacity | 12.3 oz (350 g) |
| Weight (dry) | 1.0 lb (0.5 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram |
|--|-------|---------------------------------------|---|---|--------------------------|
| FF5018 FF231 FF5046 FF50502 FF5074 FF5167 FF5494 | 33358 | FP586F G6353 LFF3521 LFF3506 | BF7689 BF788 BF900 BF983 BF988 BF993 | P550272 P550440 P554620 FFP550440 FFP553004 | P7513 P4102 P4102A |

PFF5509

| Specifications | PFF5509 |
|-------------------------------------|---|
| Application | Cummins, Ford, GM, Dodge, Kenworth and Hino Trucks (secondary filter) |
| Max. Working Pressure | 60 PSI (4.1 bar) |
| Micron Rating (98% nominal) | 7 micron |
| Height | 5.3 in. (13.5 cm) |
| Diameter | 3.7 in. (9.4 cm) |
| Center Threads | 1-14 UNS-2B |
| Weight (dry) | 1.2 lb (0.5 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram | Cummins |
|-------------|-------|-----------------|---------------------------|---|--------------------------|---------|
| FF105 | 33109 | LFF5 LFF8012 | BF957 BF5801 BF957B | P550105 P550106 FFP170105 FFP550105 FFP550106 P16909 | P3528 P3538A P1101 | 154709 |

ParFit™ Products

PFF5525

| Specifications | PFF5525 |
|-------------------------------------|---------------------------------|
| Application | Hydraulic Spin-On |
| Max. Working Pressure | 100 PSI (6.9 bar) |
| Micron Rating (98% nominal) | 25 micron |
| Height | 8.8 in. (22.4 cm) |
| Diameter | 3.8 in. (9.7 cm) |
| Center Threads | 1-12 UNF - 2b |
| Weight (dry) | 1.9 lb (0.9 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



PFF5527

| Specifications | PFF5527 |
|-------------------------------------|---------------------------------|
| Application | Ford F550, F650 Trucks |
| Maximum Flow Rate | 30 GPH (114 LPH) |
| Maximum Working Pressure | 40 PSI (2.8 bar) |
| Micron Rating | 30 micron |
| Height | 4.0 in. (10.2 cm) |
| Diameter | 3.6 in. (9.1 cm) |
| Center Threads | 1"-14 UNS-2A |
| Solids Capacity | 10.0 oz (277 g) |
| Weight (dry) | 0.7 lb (0.3 kg) |
| H ₂ O Removal Efficiency | 99% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Fram |
|-------------|-------|-------------|---------|-----------|---------|
| N/A | 33736 | L4597F | N/A | N/A | PS91110 |

Replacement Parts

PFF5527

| <u>Part Number</u> | <u>Description</u> |
|--------------------|--|
| 1. N/A | Element Gasket |
| 2. PFF5527 | Replacement Element (includes #'s 1, 2 & 3) |
| 3. 20707 | O-ring Kit (includes #'s 1 & 3) |
| 4. RK22350-02 | Replacement Bowl |



ParFit™ Products

PFF558095



PFF5548

Fuel Filter

| Specifications | PFF5548 |
|-------------------------------------|--|
| Application | International MaxxForce 9 model year 2007 I-326 engine |
| Maximum Flow Rate | 50 GPH (189 LPH) |
| Maximum Working Pressure | 30 PSI (206 kPa) |
| Micron Rating | 2 Micron Aquabloc |
| Height | 5.0 in. (12.7 cm) |
| Diameter | 3.2 in. (8.1 cm) |
| Center Threads | N/A |
| Solids Capacity | N/A |
| Weight (dry) | 3.4 oz (0.1 kg) |
| H ₂ O Removal Efficiency | 95% |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



PFF5550



(includes both elements)

| Specifications | Secondary Fuel Filter | Primary Fuel Filter |
|--|--|---------------------|
| Application | Primary and Secondary Parfit Fuel Filter Replacement Elements for the Ford Power Stroke® Model Year 2007 Engine. (FD-4609) | |
| Maximum Flow Rate | | |
| Maximum Working Pressure | | |
| Micron Rating | | |
| Height | | |
| Diameter | | |
| Weight (dry) | | |
| Solids Capacity (with both filters) | | |
| Gasket Pack | Included | |
| H₂O Removal Efficiency | 99% | |
| Operating Temperature | -50° to +225°F (-45° to +107°C) | |

ParFit™ Products

PFF5556

| Specifications | PFF5556 |
|-------------------------------------|---------------------------------|
| Application | Itech 1-6 Prescreen kit |
| Maximum Flow Rate | N/A |
| Maximum Working Pressure | N/A |
| Micron Rating | 200-260 |
| Height | 4.4 in. (11.2 cm) |
| Diameter | 1.9 in. (4.8 cm) |
| Center Threads | N/A |
| Solids Capacity | N/A |
| Replacement Gasket | RK51218 |
| H ₂ O Removal Efficiency | Screen |
| Operating Temperature | -50° to +225°F (-45° to +107°C) |



PFF558095

Fuel Filter



(includes both elements)

| Specifications | Secondary Fuel Filter | Primary Fuel Filter |
|-------------------------------------|---|---------------------|
| Application | Fuel Filter/Water Separator Kit For GM610 Van | |
| Maximum Flow Rate | 34 GPH (130 LPH) | 34 GPH (130 LPH) |
| Maximum Working Pressure | 58 PSI (4.0 bar) | 58 PSI (4.0 bar) |
| Micron Rating | 4 micron | 10 micron |
| Height | 2.6 in. (6.6 cm) | 4.4 in. (11.2 cm) |
| Diameter | 2.3 in. (5.8 cm) | 3.4 in. (8.6 cm) |
| Weight (dry) | 0.1 lb (0.05 kg) | 0.3 lb (0.1 kg) |
| Solids Capacity (with both filters) | 0.2 oz (5.7 g) | |
| Gasket Pack | Included | |
| H ₂ O Removal Efficiency | 99% | |
| Operating Temperature | -50° to +225°F (-45° to +107°C) | |

Cross Reference

| Fleet Guard | Wix | Luber Finer | Baldwin | Donaldson | Motorcraft |
|-------------|-------|-------------|-----------|-----------|------------|
| N/A | 33599 | N/A | PF7812KIT | P550527 | FD4604 |

ParFit™ Products

PFF32715



(includes both elements)

| Specifications | Primary Fuel Filter | Secondary Fuel Filter |
|-------------------------------------|---|-----------------------|
| Application | Parfit V8 Primary and Final Fuel Element Service Kit with seals | |
| Micron Rating | 4 Micron | 10 Micron |
| Height | 2.5 in. (6.4 cm) | 3.1 in. (7.9 cm) |
| Diameter | 2.3 in. (5.8 cm) | 3.7 in. (9.4 cm) |
| Weight (dry) | 1.8 oz | 4.6 oz |
| Gasket Pack | Included | |
| Filter Life | 15,000 miles | |
| H ₂ O Removal Efficiency | 99% | |
| Operating Temperature | -40° to +250°F (-40° to +121°C) | |

ParFit™ Products

PFFG01 Filter Glove

Application

The Racor Filter Glove fits most marine and auto filters. The Filter Glove fits conveniently onto the bottom of Spin-On filters.

Product

The Racor Filter Glove is made with a durable, soft poly-blend material that is not effected by fuel, oil, heat or cold. The Filter Glove allows for easy cleaning and reusing every time you service a filter or element.

How It Works

Push the Filter Glove firmly on to most filters (3" to 4" in diameter). The Filter Glove is designed with 10 tapered fingers to allow that the Filter Glove fits snugly on the filter. Unscrew the filter or element (a bowl or strap wrench might be needed). When the filter is broken loose, the oil or fuel will leak down the sides and will be caught in the bottom of the Filter Glove. This process will help you avoid mess in bilges, driveways and help protect our environment.



PFFG01 Filter Glove

Interceptor to Parfit Cross Reference Guide

Navistar 6.9L Complete Replacement Fuel Filters

| Interceptor Part Number | ParFit Part Number | Description |
|-------------------------|--------------------|--|
| IN BF811 (Obsolete) | PF BF811 | Replaces standard fuel filter on 6.9L diesel in Ford E & F Series vehicles |
| IN F811 (Obsolete) | PF F811 | Replacement Fuel Filter for above. |
| IN RK30785 (Obsolete) | N/A | Water Sensor Kit for PF BF811 applications. Replaces the OEM water sensor |

Navistar 6.9L Complete Replacement Assemblies

| Interceptor Part Number | ParFit Part Number | Description |
|-------------------------|--------------------|---|
| IN RK30787 (Obsolete) | N/A | Navistar 6.9L Replacement Kit for Ford F Series trucks (uses IN F829B filter) |
| IN RK30801 (Obsolete) | N/A | Navistar 6.9L Replacement Kit for Ford E Series vans (uses IN F829B filter) |
| IN RK20567 (Obsolete) | PFRK20567 | Replacement Metal Bowl Kit for IN F811 (PF F811, IN F829B (PF F829B), IN F830 and IN F831 (PF F831) |
| IN RK21057 | N/A | Replacement Clear Bowl Kit for IN F811 (PF F811, IN F829B (PF F829B), IN F830 and IN F831 (PF F831) |

Replacement Filters For OEM Applications

| Interceptor Part Number | ParFit Part Number | Description |
|-------------------------|--------------------|---|
| IN F829B (Obsolete) | PF F829B | Navistar 7.3L diesel in Ford E & F Series vehicles, 2 micron |
| IN F830 | N/A | Navistar 7.3L medium-duty trucks and buses, 40 micron |
| IN F831 (Obsolete) | PF F831 | Navistar 6400 Series fuel heater/filter/water separators, 40 micron |
| IN F4595 | N/A | Navistar T444E (7.3L) Powerstroke (model 1994 to 1999) |
| IN F4596 (Obsolete) | PFF4596 | Navistar T444E (7.3L) Powerstroke (model 1999 to current) |
| IN F4597 (Obsolete) | N/A | Ford 550 and 650 with Cat engines and cold weather element |
| IN F19528 | N/A | Dodge trucks with a Cummins engine, replacement element (model 1998 & 1999) |
| IN F296 (Obsolete) | N/A | CAV: Replaces CAV7111/296 |
| IN F796 | N/A | IN F796 CAV: Replaces CAV7111/796 |
| IN F3368 (Obsolete) | PF F3368 | Ford 6.6L/7.8L engines, 1991 to 1992 |
| IN FR26P Obsolete | N/A | Ford 6.6L/7.8L engines, 1985 to 1990 |
| IN F18786 Obsolete | N/A | Replaces Stanadyne Fuel Filter No.18667 (square, box-type) |
| IN F19797 Obsolete | N/A | Replaces Stanadyne Fuel/Water Separator No.19856 (square, box-type) |
| IN F52525 Obsolete | N/A | Replaces Webb #52525 / DDC Applications |

Interceptor to Parfit Cross Reference Guide

Replacement Filters for Dahl

| Interceptor Part Number | ParFit Part Number | Description |
|-------------------------|--------------------|----------------|
| IN 101-2 (Obsolete) | PF101-2 | 100, 2 Micron |
| IN 101-10 (Obsolete) | PF101-10 | 100, 10 Micron |
| IN 101-30 (Obsolete) | PF101-30 | 100, 30 Micron |
| IN 201-2 (Obsolete) | PF201-2 | 200, 2 Micron |
| IN 201-10 (Obsolete) | PF201-10 | 200, 10 Micron |
| IN 201-30 (Obsolete) | PF201-30 | 200, 30 Micron |
| IN 301-10 (Obsolete) | PF301-10 | 300, 10 Micron |
| IN 301-30 (Obsolete) | PF301-30 | 300, 30 Micron |

Transmission Filters For Allison Automatic Transmissions

| Interceptor Part Number | ParFit Part Number | Replaces | Description | Application |
|-------------------------|--------------------|-----------------------------------|---|--|
| IN TA2062 | N/A | DDA 23042062 and Pall 1309836 | Spin-On Filter, 6 micron microglass media (1 1/2"-16 threads) | School bus, and refuse collection vehicles |
| IN TA60075Q (Obsolete) | N/A | Allison # 23018853 | Cartridge Filter | N/A |
| IN TA60076Q (Obsolete) | N/A | Allison # 23049373 | Cartridge Filter | N/A |
| IN TA6898 (Obsolete) | N/A | Allison # 29526898 | Cartridge Filter | World Transmission |
| IN TA6899 (Obsolete) | N/A | Allison # 29526899 | Cartridge Filter | World Transmission |
| IN HF60058 (Obsolete) | N/A | DDA 23049373 and Pall 13112668 | Cartridge Filter | Construction, mining logging and other off-road vehicles |
| IN HF60074 (Obsolete) | PFHF60074 | DDA 23040988 and Pall HC8200SDN8Z | Cartridge Filter | Transit bus and refuse vehicles |

Water Absorbing Filters

| Interceptor Part Number | ParFit Part Number | Micron Rating | Center Thread | Diameter | Length | Media Area Sq in. (Sq cm) | Solids Capacity | Water Capacity | Maximum Operating Pressure |
|-------------------------|--------------------|---------------|---------------|-----------------|------------------|---------------------------|------------------|-----------------|----------------------------|
| IN FDC3510G (Obsolete) | N/A | 10 | 1.5"-16 | 3.8 in (9.7 cm) | 5.0 in (12.7 cm) | 480 / 3096 | 0.3 oz (9.04 g) | N/A | 100 PSI (689.6 kPa) |
| IN FDC3530G (Obsolete) | N/A | 30 | 1.5"-16 | 3.8 in (9.7 cm) | 5.0 in (12.7 cm) | 480 / 3096 | 0.3 oz (9.04 g) | N/A | 100 PSI (689.6 kPa) |
| IN FDW3510 (Obsolete) | N/A | 10 | 1"-12 | 3.8 in (9.7 cm) | 5.0 in (12.7 cm) | 190 / 1226 | 0.5 oz (13.7 g) | 8.4 oz (247 ml) | 100 PSI (689.6 kPa) |
| IN FDW3510A (Obsolete) | N/A | 10 | 1"-12 | 3.8 in (9.7 cm) | 5.0 in (12.7 cm) | 335 / 2161 | (0.5 oz (13.7 g) | 5.9 oz (175 ml) | 100 PSI (689.6 kPa) |
| IN FDW3525 (Obsolete) | PFFDW3525 | 25 | 1"-12 | 3.8 in (9.7 cm) | 5.0 in (12.7 cm) | 190 / 1226 | 0.6 oz (15.6 g) | 8.4 oz (247 ml) | 100 PSI (689.6 kPa) |

Interceptor to Parfit Cross Reference Guide

Water Absorbing Filters

| Interceptor Part Number | ParFit Part Number | Micron Rating | Center Thread | Diameter | Length | Media Area Sq in. (Sq cm) | Solids Capacity | Water Capacity | Maximum Operating Pressure |
|-------------------------|--------------------|---------------|---------------|-------------------|--------------------|---------------------------|-----------------|------------------|----------------------------|
| IN FDW3810A (Obsolete) | N/A | 10 | 1"-12 | 3.8 in. (9.7 cm) | 5.0 in. (12.7 cm) | 608 / 3920 | 1.4 oz (39.5 g) | 10.7 oz (315 ml) | 100 PSI (689.6 kPa) |
| IN FDW3825 (Obsolete) | N/A | 25 | 1"-12 | 3.8 in. (9.7 cm) | 8.0 in. (20.3 cm) | 350 / 2258 | 1.0 oz (28.7 g) | 15.4 oz (455 ml) | 100 PSI (689.6 kPa) |
| IN FDW3830 (Obsolete) | N/A | 30 | 1"-12 | 3.8 in. (9.7 cm) | 8.0 in. (20.3 cm) | 350 / 2258 | 1.0 oz (28.7 g) | 15.4 oz (455 ml) | 100 PSI (689.6 kPa) |
| IN FDW51125 (Obsolete) | PFFDW51125 | 25 | 1.5"-16 | 5.0 in. (12.7 cm) | 11.0 in. (27.9 cm) | 689 / 4444 | 2.0 oz (56.5 g) | 30.3 oz (896 ml) | 100 PSI (689.6 kPa) |

Filter Heads

| Interceptor Part Number | ParFit Part Number | Center Thread | Port Size | Fuel Flow Rate | Filter Application | Bypass Setting | Restriction Gauge | Gauge Port |
|-------------------------|--------------------|---------------|-----------|-----------------------|--------------------|----------------|-------------------|------------|
| IN HH07500 (Obsolete) | PFFH07500 | 1"-12 | 3/4" NPT | 15.0 GPM (56.8 LPM) | FDW3525 FDW3825 | No | Optional | 1/8" NPT |
| IN FDH12500 (Obsolete) | PFFDH12500 | 1.5"-16 | 1.25" NPT | 50.0 GPM (189.3 LPM) | FDW51125 | No | Optional | 1/8" NPT |
| IN FDH125DD | N/A | 1.5"-16 | 1.5" NPT | 100.0 GPM (378.5 LPM) | FDW51125 (2) | No | Optional | 1/8" NPT |

CAV Filter Adapter Kit

| Interceptor Part Number | ParFit Part Number | Description | Application |
|-------------------------|--------------------|-------------|---|
| IN CAV | N/A | Adaptor Kit | Ford, Perkins, Massey, Saab, Volvo-Penta, and Ford Lehman |

Filter Adapter Kit IN CAV turns old C.A.V. Filter Head, cannister and glass bowl units into a spin-on filter. Fits Ford, Perkins, Massey Ferguson, Saab, Volvo-Penta and more! This kit allows the use of Interceptor Spin-On Filters that feature the patented see-thru, spin-on contaminant collection bowl: IN B32008 or IN B32016. For engines up to 70 HP.

Interceptor to Parfit Cross Reference Guide

Hydraulic Filters - Low Pressure

Interceptor Hydraulic Water Absorbing Filter elements feature a specially-designed media which absorbs damaging water. By also trapping solid contamination, like dirt and rust, the media protects precision hydraulic components from abrasion.

As the element fills with water and plugging occurs, fluid flow slows and the filter head will go into a by-pass mode. Interceptor Spin-On filters are available for virtually all applications and can be specified in 10 and 25micron nominal ratings (3micron

is available upon request). They are engineered and manufactured under the most up-to-date quality control processes to meet or exceed original equipment specifications.

Silicone Cellulose Filter

| Interceptor Part Number | ParFit Part Number | Micron Rating | Center Thread | Diameter | Length | Media Area Sq in. (Sq cm) | Solids Capacity | Maximum Operating Pressure |
|-------------------------|--------------------|---------------|---------------|-------------------|--------------------|---------------------------|-----------------|----------------------------|
| IN HC3510 (Obsolete) | PFHC3510 | 10 | 1"-12 | 3.8 in. (9.7 cm) | 5.0 in. (12.7 cm) | 480 / 3096 | 0.3 oz (9.0 g) | 100 PSI (689.6 kPa) |
| IN HC3525 (Obsolete) | PFHC3525 | 25 | 1"-12 | 3.8 in. (9.7 cm) | 5.0 in. (12.7 cm) | 450 / 2903 | 0.4 oz (12.5 g) | 100 PSI (689.6 kPa) |
| IN HC3810 (Obsolete) | N/A | 10 | 1"-12 | 3.8 in. (9.7 cm) | 8.0 in. (20.2 cm) | 878 / 5665 | 0.6 oz (16.7 g) | 100 PSI (689.6 kPa) |
| IN HC3825 (Obsolete) | N/A | 25 | 1"-12 | 3.8 in. (9.7 cm) | 8.0 in. (20.2 cm) | 826 / 5329 | 0.8 oz (23.1 g) | 100 PSI (689.6 kPa) |
| IN HC5710 | N/A | 10 | 1.5"-16 | 5.0 in. (12.7 cm) | 7.0 in. (17.8 cm) | 950 / 6128 | 0.6 oz (18.1 g) | 100 PSI (689.6 kPa) |
| IN HC5725 | N/A | 25 | 1.5"-16 | 5.0 in. (12.7 cm) | 7.0 in. (17.8 cm) | 900 / 5805 | 0.9 oz (25.2 g) | 100 PSI (689.6 kPa) |
| IN HC51110 | N/A | 10 | 1.5"-16 | 5.0 in. (12.7 cm) | 11.0 in. (27.9 cm) | 1710 / 11030 | 1.1 oz (32.5 g) | 100 PSI (689.6 kPa) |
| IN HC51125 (Obsolete) | PFHC51125 | 25 | 1.5"-16 | 5.0 in. (12.7 cm) | 11.0 in. (27.9 cm) | 1620 / 12449 | 1.6 oz (45.4 g) | 100 PSI (689.6 kPa) |

Interceptor to Parfit Cross Reference Guide

Water Absorbing Filter

| Interceptor Part Number | ParFit Part Number | Micron Rating | Center Thread | Diameter | Length | Media Area Sq in. (Sq cm) | Solids Capacity | Water Capacity | Maximum Operating Pressure |
|-------------------------|--------------------|---------------|---------------|-------------------|--------------------|---------------------------|-----------------|------------------|----------------------------|
| IN HW3825 (Obsolete) | N/A | 25 | 1"-12 | 3.8 in. (9.7 cm) | 8.0 in. (20.3 cm) | 350 / 2258 | 1.0 oz (28.7 g) | 15.4 oz (455 ml) | 100 PSI (689.6 kPa) |
| IN HW5710 | N/A | 10 | 1 1/2"-16 | 5.0 in. (12.7 cm) | 7.0 in. (17.8 cm) | 383 / 2470 | 1.0 oz (27.6 g) | 16.8 oz (498 ml) | 100 PSI (689.6 kPa) |
| IN HW5725 (Obsolete) | PFHW5725 | 25 | 1 1/2"-16 | 5.0 in. (12.7 cm) | 7.0 in. (17.8 cm) | 383 / 2470 | 1.1 oz (31.4 g) | 16.8 oz (498 ml) | 100 PSI (689.6 kPa) |
| IN HW51110 | N/A | 10 | 1 1/2"-16 | 5.0 in. (12.7 cm) | 11.0 in. (27.9 cm) | 689 / 4444 | 1.7 oz (49.6 g) | 30.3 oz (896 ml) | 100 PSI (689.6 kPa) |
| IN HW3510 (Obsolete) | N/A | 10 | 1"-12 | 3.8 in. (9.7 cm) | 5.0 in. (12.7 cm) | 190 / 1226 | 0.5 oz (13.7 g) | 8.4 oz (247 ml) | 100 PSI (689.6 kPa) |
| IN HW3510A (Obsolete) | N/A | 10 | 1 1/8"-16 | 3.8 in. (9.7 cm) | 5.0 in. (12.7 cm) | 190 / 1226 | 0.5 oz (13.7 g) | 8.4 oz (247 ml) | 100 PSI (689.6 kPa) |
| IN HW3825 (Obsolete) | N/A | 25 | 1"-12 | 3.8 in. (9.7 cm) | 5.0 in. (12.7 cm) | 190 / 1226 | 0.6 oz (15.6 g) | 8.4 oz (247 ml) | 100 PSI (689.6 kPa) |
| IN HW3810 (Obsolete) | N/A | 10 | 1"-12 | 3.8 in. (9.7 cm) | 8.0 in. (20.3 cm) | 350 / 2258 | 0.9 oz (25.2 g) | 15.4 oz (455 ml) | 100 PSI (689.6 kPa) |
| IN HW51125 | N/A | 25 | 1 1/2"-16 | 5.0 in. (12.7 cm) | 11.0 in. (27.9 cm) | 689 / 4444 | 2.0 oz (56.5 g) | 30.3 oz (896 ml) | 100 PSI (689.6 kPa) |

Stainless Steel Mesh Filters

| Interceptor Part Number | ParFit Part Number | Micron Rating | Center Thread | Diameter | Length | Media Area Sq in. (Sq cm) | Solids Capacity | Water Capacity |
|-------------------------|--------------------|---------------|---------------|-------------------|--------------------|---------------------------|-----------------|----------------|
| IN HSSM57 (Obsolete) | N/A | 100 Mesh | 1 1/2"-16 | 5.0 in. (12.7 cm) | 7.0 in. (17.8 cm) | 200 / 1290 | N/A | N/A |
| IN HSSM511 (Obsolete) | N/A | 100 Mesh | 1 1/2"-16 | 5.0 in. (12.7 cm) | 11.0 in. (27.9 cm) | 315 / 3291 | N/A | N/A |

Micro Glass Filters

| Interceptor Part Number | ParFit Part Number | Micron Rating | Center Thread | Diameter | Length | Media Area Sq in. (Sq cm) | Solids Capacity | Water Capacity |
|-------------------------|--------------------|---------------|---------------|-------------------|-------------------|---------------------------|-----------------|----------------|
| IN HMG3606 (Obsolete) | N/A | 6 | 1 1/2"-16 | 3.8 in. (9.7 cm) | 6.0 in. (15.2 cm) | 240 / 1548 | 0.6 oz (16.3 g) | N/A |
| IN HM5710 (Obsolete) | N/A | 10 | 1 1/2"-16 | 5.0 in. (12.7 cm) | 7.0 in. (17.8 cm) | 510 / 3291 | 2.0 oz (56.1 g) | N/A |

Interceptor to Parfit Cross Reference Guide

Hydraulic Filters - Medium Pressure

Racor hydraulic filters for medium pressure applications are rated to 3,000 PSI, and are crafted from corrosion-resistant anodized aluminum. An optional pop-up indicator signals

the bypass condition and need for element replacement; however, a built-in bypass valve allows the system to continue operating in an unfiltered condition. Two flow rates

and housings lengths accept a 10 micron element with extended lengths providing longer element life and larger sump capacity.

| Interceptor Part Number | ParFit Part Number | Flow Rate | Pressure | Element Length |
|-------------------------|--------------------|----------------------|--------------------|----------------|
| IN HP60077 (Obsolete) | N/A | 20.0 GPM (75.7 LPM) | 3000 PSI (206 bar) | Standard |
| IN HP60080 (Obsolete) | N/A | 20.0 GPM (75.7 LPM) | 3000 PSI (206 bar) | Extended |
| IN HP60083 (Obsolete) | N/A | 50.0 GPM (189.3 LPM) | 3000 PSI (206 bar) | Standard |
| IN HP60086 (Obsolete) | N/A | 50.0 GPM (189.3 LPM) | 3000 PSI (206 bar) | Extended |

Hydraulic Filter Heads

1. Specify L or R. L provides the standard color-coded bar restriction gauge on the side of the head with the flow direction going to your left. R has the flow going to the right.

2. MP signifies a multi-port head. The multi-ports are for an optional in-head vacuum gauge, such as the IN HG 15LF.

| Interceptor Part Number | ParFit Part Number | Center Thread | Port Size | Flow Rate | Application | Bypass Setting | Restriction Gauge | Gauge Port | Maximum Operating Pressure |
|--------------------------------------|-------------------------|---------------|-----------|------------------|------------------|-----------------|-------------------|------------|----------------------------|
| N/A | PFHH07500 | 1"-12 | 3/4" NPT | 15 GPM (56 LPM) | N/A | N/A | N/A | N/A | 175 PSI (12.1 bar) |
| N/A | PFFDH12500 | 1.5"-16 | 1.3" NPT | 50 GPM (189 LPM) | N/A | N/A | Optional | 1/8" NPT | 100 PSI (6.9 bar) |
| IN HH07503 (Obsolete) | N/A | 1"-12 | 3/4" NPT | 15 GPM (56 LPM) | 3500/3800 Series | 3 PSI (0.2 bar) | Optional | 1/8" NPT | 175 PSI (12.1 bar) |
| IN HH07515 | N/A | 1"-12 | 3/4" NPT | 15 GPM (56 LPM) | 3500/3800 Series | 15 PSI | Optional | 1/8" NPT | 175 PSI (12.1 bar) |
| IN HH07525 | N/A | 1"-12 | 3/4" NPT | 15 GPM (56 LPM) | 3500/3800 Series | 25 PSI | Optional | 1/8" NPT | 175 PSI (12.1 bar) |
| IN HH07515MP ² | N/A | 1"-12 | 3/4" NPT | 15 GPM (56 LPM) | 3500/3800 Series | 15 PSI | Optional | 1/8" NPT | 175 PSI (12.1 bar) |
| IN HH07525MP ² (Obsolete) | N/A | 1"-12 | 3/4" NPT | 15 GPM (56 LPM) | 3500/3800 Series | 25 PSI | Optional | 1/8" NPT | 175 PSI (12.1 bar) |
| IN HH12515L ¹ (Obsolete) | N/A | 1.5"-16 | 1.3" NPT | 50 GPM (189 LPM) | 5700/5100 Series | 15 PSI | Standard | 1/8" NPT | 175 PSI (12.1 bar) |
| IN HH12515R ¹ | N/A | 1.5"-16 | 1.3" NPT | 50 GPM (189 LPM) | 5700/5100 Series | 15 PSI | Standard | 1/8" NPT | 175 PSI (12.1 bar) |
| IN HH12525L (Obsolete) | PFFH12525L ¹ | 1.5"-16 | 1.3" NPT | 50 GPM (189 LPM) | 5700/5100 Series | 25 PSI | Standard | 1/8" NPT | 175 PSI (12.1 bar) |

ParFit™ Products

Interceptor to Parfit Cross Reference Guide

Hydraulic Filter Heads

1. Specify L or R. L provides the standard color-coded bar restriction gauge on the side of the head with the flow

direction going to your left. R has the flow going to the right.

2. MP signifies a multi-port head. The multi-ports are for an optional in-

head vacuum gauge, such as the IN HG 15LF.

| Interceptor Part Number | ParFit Part Number | Center Thread | Port Size | Flow Rate | Application | Bypass Setting | Restriction Gauge | Gauge Port | Maximum Operating Pressure |
|-------------------------|--------------------------|---------------|-----------|------------------|------------------|----------------|-------------------|------------|----------------------------|
| IN HH12525R (Obsolete) | PFHH12525R ¹ | 1.5"-16 | 1.3" NPT | 50 GPM (189 LPM) | 5700/5100 Series | 25 PSI | Standard | 1/8" NPT | 175 PSI (12.1 bar) |
| IN HH12515MP (Obsolete) | PFHH12515MP ² | 1.5"-16 | 1.3" NPT | 50 GPM (189 LPM) | 5700/5100 Series | 15 PSI | Optional | 1/8" NPT | 175 PSI (12.1 bar) |
| IN HH12525MP (Obsolete) | PFHH12525MP ² | 1.5"-16 | 1.3" NPT | 50 GPM (189 LPM) | 5700/5100 Series | 25 PSI | Optional | 1/8" NPT | 175 PSI (12.1 bar) |

Replacement Pressure Gauge

IN HG15LF

Compound Pressure Vacuum Gauge

- 1.5" Dial, Liquid Filled,
- Stainless Steel Enclosure, and
- 1/8" NPT Back Mount.



Hydraulic Reservoir Breathers

RESERVOIR BREATHERS

Reservoir breather filters provide precision hydraulic components with special protection against wear particles and destructive moisture. These inherent contaminants can damage and destroy close tolerance pumps, motors, actuators, valves, and other hydraulic-driven parts. Their useful life can be severely reduced and expensive costs incurred for downtime and replacement parts. The use of reservoir breather filters

is especially critical in high humidity areas or where moisture is present near hydraulic systems.

Interceptor Hydraulic Reservoir Breather Filters contain a dual-purpose ten (10) micron media which removes both dirt and moisture from hydraulic reservoir air. The Spin-On design provides ease of service and they fit in most mobile, marine and off-highway applications.

Change the breather after each 500 hours of operation. More frequent replacement may be required when operated in heavily contaminated areas. Under such conditions, increase replacement frequency to every 250 hours.

Interceptor to Parfit Cross Reference Guide

Reservoir Breather Adapters

Reservoir Breathers

Reservoir breather filters provide precision hydraulic components with special protection against wear particles and destructive moisture. These inherent contaminants can damage and destroy close tolerance pumps, motors, actuators, valves, and other hydraulic-driven parts. Their useful life can be severely reduced and expensive costs incurred for downtime and replacement parts. The use of reservoir breather filters is especially critical in high humidity areas or where moisture is present near hydraulic systems.

Interceptor Hydraulic Reservoir Breather Filters contain a dual-

purpose ten (10) micron media which removes both dirt and moisture from hydraulic reservoir air. The Spin-On design provides ease of service and they fit in most mobile, marine and off-highway applications.

Change the breather after each 500 hours of operation. More frequent replacement may be required when operated in heavily contaminated areas. Under such conditions, increase replacement frequency to every 250 hours.

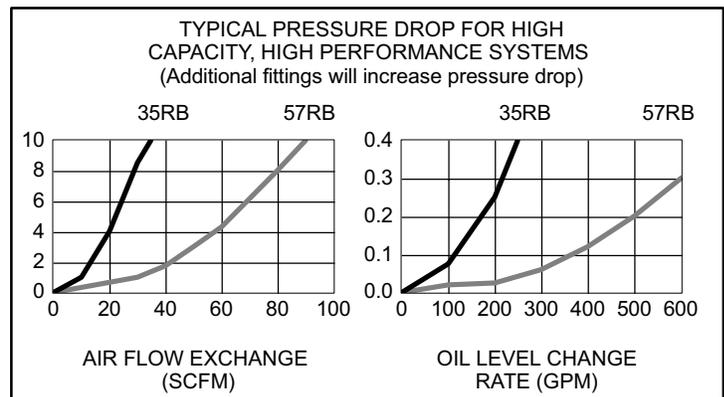
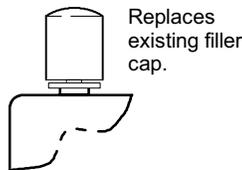
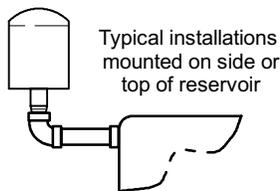
Interceptor simplifies installation to the tank with the use of adapters which include O-rings for an air-tight seal and are listed for all Interceptor Reservoir Breathers below. A pipe

flange, weld collar, etc. may be used to connect the adaptor to the reservoir, if needed. Make sure that air is not able to leak around the adaptor. When mounting on the side of the reservoir, the installation should be as high as possible to stay above the surface of the fluid. See illustrations below.

Selection

Find the maximum rate of reservoir drawdown or air flow exchange rate for your application. As a rule, clean pressure drop should be limited to 0.18 psid (5" H₂O).

Use the graphs shown, if applicable.



Specifications

| Interceptor Part Number | ParFit Part Number | Micron Rating | Center Thread | Filter Diameter | Filter Length | Media Area (Sq. in./cm) | Solids Capacity | Water Capacity |
|-------------------------|--------------------|---------------|---------------|-------------------|-------------------|-------------------------|-----------------|------------------|
| IN HW33RB (Obsolete) | N/A | 10 | 3/4"-16 | 3.0 in. (7.6 cm) | 3.0 in. (7.6 cm) | 60 / 387 | 0.2 oz (4.3 g) | 2.6 oz (78 ml) |
| IN HW35RB (Obsolete) | N/A | 10 | 1"-16 | 3.8 in. (9.7 cm) | 5.0 in. (12.7 cm) | 190 / 1226 | 0.5 oz (13.7 g) | 8.4 oz (247 ml) |
| IN HW57RB | N/A | 10 | 1.5"-16 | 5.0 in. (12.7 cm) | 7.0 in. (17.8 cm) | 383 / 2470 | 1.0 oz (27.6 g) | 16.8 oz (498 ml) |

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

Turbine Series

Turbine Series



All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel. See Racor bulletin 7679.



And more...

Turbine Series Electric Primer Pump

The Turbine Series Electric Primer Pump Kits can be retrofitted to many of the Racor 900 or 1000 series fuel filters already in service. The Filter Pump is an innovative and proprietary system consisting of a pre-screen filter, a flow bypass circuit and a roller cell pump powered by a DC motor. When the switch is activated the fuel is drawn into the pre-screen and then pumped through the housing, refilling the unit with fuel. When not in use the Filter Pump system is bypassed and the Racor fuel filter/water separator functions normally.

The RKP1912, 12V DC Kit, contains a traditional brushed motor design. The RKP1924, 24V DC Kit, contains innovative brushless motor technology.

The use of this primer pump kit allows the operator to easily re-prime the Racor Filter/Separator directly from the fuel storage tank with no mess

Turbine Series

Turbine Series filter assemblies are designed to be installed on the vacuum side of the fuel transfer pump for best efficiency and protect precision engine components from dirt, rust, algae, asphaltines, varnishes, and especially water, which is prevalent in engine fuels. They remove contaminants from fuel using the following legendary three stage process:

Stage One: Separation

As fuel enters the filter assembly, it moves through the centrifuge and spins off large solids and water droplets which fall to the bottom of the collection bowl.

Stage Two: Coalescing

Small water droplets bead-up on the surface of the conical baffle and cartridge element. When heavy enough, they too fall to the bottom of the bowl.

Stage Three: Filtration

Proprietary Aquabloc^{II} cartridge elements repel water and remove contaminants from fuel down to two micron (nominal). They are waterproof and effective longer than water absorbing elements.

Features and Benefits

- Available in several sizes to fit any application.
- Heavy duty construction.
- Installs quickly.
- Available in 2, 10, and 30 micron.
- Easy to service.
- Clear collection bowl.
- Self-venting water drain.

Optional accessories may include: water detection kits, 12 or 24 volt dc heaters, heavy-duty fuel hose and fittings. see Accessories section.

Turbine Series

Turbine Series Overview



| Specifications | 500FG | 900FH | 1000FH |
|---|---|---|---|
| Maximum Flow Rate: (one unit online) (two units online) (three units online) | 60 GPH (227 LPH) N/A N/A | 90 GPH (341 LPH) N/A N/A | 180 GPH (681 LPH) N/A N/A |
| Port Size (female threads) | 3/4''-16 UNF (SAE J1926) | 7/8''-14 UNF (SAE J1926) | 7/8''-14 UNF (SAE J1926) |
| Min. Service Clearance: (above assembly) (below assembly) | 5.0 in. (12.7 cm) 2.0 in. (5.1 cm) | 7.5 in. (19.1 cm) 2.0 in (5.1 cm) | 10.0 in. (25.4 cm) 2.0 in. (5.1 cm) |
| Replacement Element: (2 micron) (10 micron) (30 micron) | (1 Per Assembly) 2010SM-OR 2010TM-OR 2010PM-OR | (1 Per Assembly) 2040SM-OR 2040TM-OR 2040PM-OR | (1 Per Assembly) 2020SM-OR 2020TM-OR 2020PM-OR |
| Height | 11.5 in. (29.2 cm) | 17.0 in. (43.2 cm) | 22.0 in. (55.9 cm) |
| Depth | 4.8 in. (12.2 cm) | 7.0 in. (17.8 cm) | 7.0 in. (17.8 cm) |
| Width | 5.8 in. (14.7 cm) | 6.0 in. (15.2 cm) | 6.0 in. (15.2 cm) |
| Weight (dry) | 4.0 lb (1.8 kg) | 6.0 lb (2.7 kg) | 10.0 lb (4.5 kg) |
| Clean Pressure Drop | 0.25 PSI (1.7 kPa) | 0.30 PSI (2.1 kPa) | 0.43 PSI (3.0 kPa) |
| Maximum Pressure¹ | 25 PSI (1 bar) | 25 PSI (1 bar) | 25 PSI (1 bar) |
| Water In Bowl Capacity: (per bowl) | 3.7 oz (109 ml) | 10.3 oz (305 ml) | 10.3 oz (305 ml) |
| Available Options:² (water detection kit) (12 or 24 volt dc heater) (vacuum gauge) | Yes Yes Yes | Yes Yes Yes | Yes Yes Yes |
| H₂O Removal Efficiency | 99% | | |
| Operating Temperature | -40° to +255°F / -40° to +124°C | | |

¹ Pressure installations are applicable up to the maximum PSI shown. Vacuum installations are recommended.

² Not for use on gasoline applications.

Note: Units with 1/2'' NPT ports are available, contact the factory.

Turbine Series

Turbine Series Overview



| Specifications | 75500FGX | 75900FHX | 751000FHX |
|---|---|---|---|
| Maximum Flow Rate: (one unit online) (two units online) (three units online) | 60 GPH (227 LPH) 120 GPH (454 LPH) N/A | 90 GPH (341 LPH) 180 GPH (681 LPH) N/A | 180 GPH (681 LPH) 360 GPH (1363 LPH) N/A |
| Port Size (female threads) | 3/4''-16 UNF (SAE J1926 female threads) | 7/8''-14 UNF (SAE J514 male threads) | 7/8''-14 UNF (SAE J514 male threads) |
| Min. Service Clearance: (above assembly) (below assembly) | 5.0 in. (12.7 cm) 2.0 in. (5.1 cm) | 7.5 in. (19.1 cm) 2.0 in (5.1 cm) | 10.0 in. (25.4 cm) 2.0 in. (5.1 cm) |
| Replacement Element: (2 micron) (10 micron) (30 micron) | (2 Per Assembly) 2010SM-OR 2010TM-OR 2010PM-OR | (2 Per Assembly) 2040SM-OR 2040TM-OR 2040PM-OR | (2 Per Assembly) 2020SM-OR 2020TM-OR 2020PM-OR |
| Height | 11.5 in. (29.2 cm) | 17.0 in. (43.2 cm) | 22.0 in. (55.9 cm) |
| Depth | 9.5 in. (24.1 cm) | 11.0 in. (27.9 cm) | 11.0 in. (27.9 cm) |
| Width | 14.5 in. (36.8 cm) | 18.8 in. (47.8 cm) | 18.8 in. (47.8 cm) |
| Weight (dry) | 17.0 lb (7.7 kg) | 23.0 lb (10.4 kg) | 30.0 lb (13.6 kg) |
| Clean Pressure Drop | 0.7 PSI (4.8 kPa) | 1.7 PSI (11.7 kPa) | 3.7 PSI (25.5 kPa) |
| Maximum Pressure¹ | 25 PSI (1 bar) | 25 PSI (1 bar) | 25 PSI (1 bar) |
| Water In Bowl Capacity: (per bowl) | 3.7 oz (109 ml) | 10.3 oz (305 ml) | 10.3 oz (305 ml) |
| Available Options:² (water detection kit) (12 or 24 volt dc heater) (vacuum gauge) | Yes Yes Yes | Yes Yes Yes | Yes Yes Yes |
| H₂O Removal Efficiency | 99% | | |
| Operating Temperature | -40° to +255°F / -40° to +124°C | | |

¹ Pressure installations are applicable up to the maximum PSI shown. Vacuum installations are recommended.

² Not for use on gasoline applications.

Note: Units with 1/2'' NPT ports are available, contact the factory.

Turbine Series

How to Order

(The example below illustrates how part numbers are constructed.)

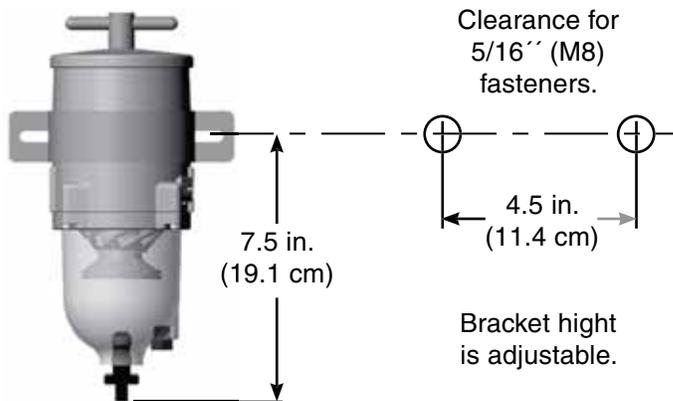
| 500FG | 12 | 2 |
|---|---|---|
| Specify 500FG for 3/4"-16 UNF ports or *500FG for 16M ports. | Add 12 for a 12 volt dc heater or 24 for a 24 volt dc heater ¹ . (omit if not desired) | Specify a micron rating: 2, 10, or 30. |
| ¹ 150 watt heater, use with a Racor relay kit - see Accessories. | | |

| Replacement Elements (seals included) | | |
|---------------------------------------|-------------------------------------|-----------------------------------|
| 2 micron (Final Filtration) | 10 micron (Secondary Filtration) | 30 micron (Primary Filtration) |
| 2010SM-OR | 2010TM-OR | 2010PM-OR |

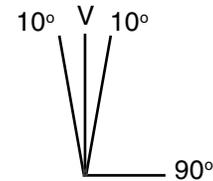
All 2010 Series filters are 2.7" tall by 3.1" in diameter.

Not all configurations are available - contact Technical Support for more information.

Mounting Instructions



Note: Mount filter assembly as close to vertical (V) as possible. For best efficiency, do not exceed 10° from V.

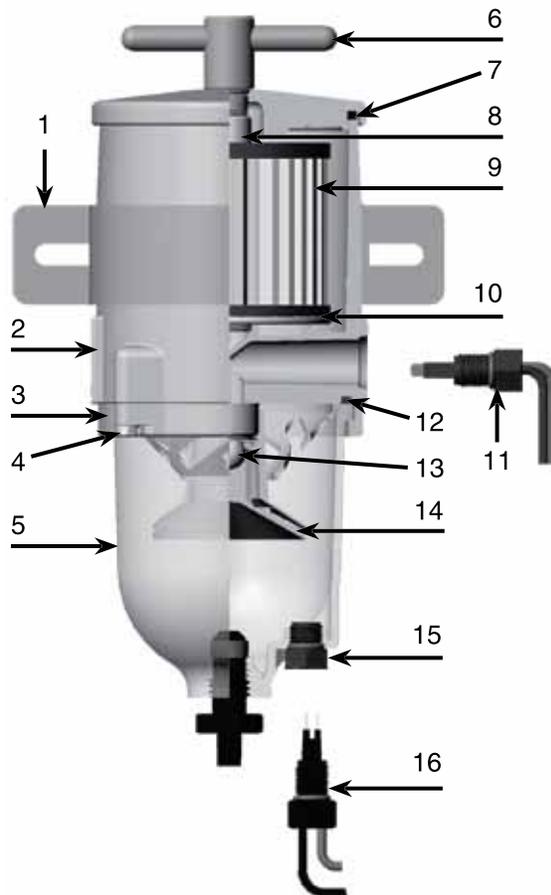


Turbine Series

Replacement Parts

500FG

| <u>Part Number</u> | <u>Description</u> |
|---|---|
| 1. RK 15378 | Mounting Bracket Kit |
| RK 11838 | Bracket Hardware Kit (5/16"-18, not shown) |
| 2. N/A | Body Kit (3/4"-16 UNF Ports) |
| N/A | Body Kit (16M X 1.5 Ports) |
| 3. RK 15035 | Bowl Ring Kit |
| 4. RK 15081 | Hex Head Capscrews Kit (includes 4, 10-24 x 7/8") |
| 5. RK15405 | Clear Bowl Kit (includes bowl, drain, bowl gasket and probe plug) |
| RK 15301 | Metal Bowl Kit (not shown) (includes 1/4" NPT drain) |
| 6. RK 11-1945 | T-handle and O-ring Kit (9/16"-18 UNF threads) |
| 11350 | T-handle O-ring |
| 7. RK 15078 | Lid and Lid Gasket Kit |
| 15005 | Lid Gasket |
| 8. N/A | Return Tube Kit |
| 9. (Replacement elements include seals) | |
| 2010SM-OR | 2 Micron Element |
| 2010TM-OR | 10 Micron Element |
| 2010PM-OR | 30 Micron Element |
| 10. (Heater kits include item #11) | |
| RK 15383-01¹ | Heater Kit (12 vdc, 150 watt) |
| RK 15383-02¹ | Heater Kit (24 vdc, 150 watt) |
| 11. RK 21067 | Feed-thru Assy Kit (for heater) |
| RK 11-1679 | Feed-thru Plug Kit (not shown) |
| 12. 15374 | Bowl Gasket |
| 13. RK 15010B | Check Ball with Seal Kit |
| 14. RK 15013D | Centrifuge/Conical Baffle Kit |
| 15. RK 20126 | Water Probe Port Plug Kit |
| 16. RK 21069² | Water Sensor Probe Kit |
| Additional Parts (not shown) | |
| RK 15211 | Complete Seal Service Kit |



Notes:

¹ In-filter heater kits require a Heater Relay Kit - see Accessories section of this catalog. Maximum power requirements for in-filter heaters are: 12.5 amps for 12 vdc and 6.3 amps for 24 vdc.

² Water probe must be used with Water Detection Kit - see Accessories section of this catalog.

Turbine Series

How to Order

(The example below illustrates how part numbers are constructed.)

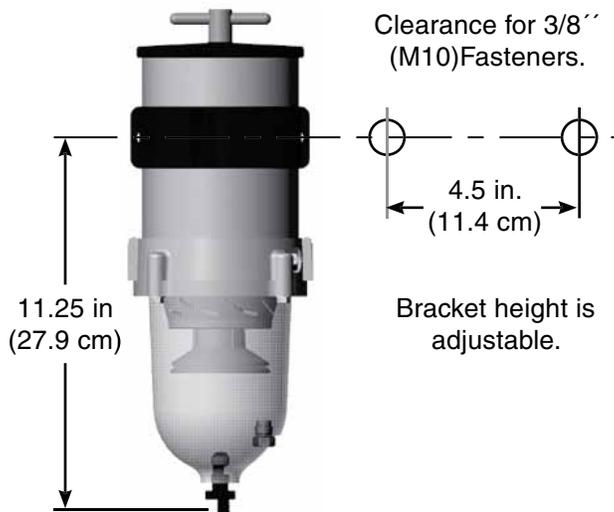
| 900FH | 312 | 2 |
|---|---|---|
| Specify 900FH for 7/8"-14 UNF ports or 902FH for 22M ports. | Add 312 for a 12 volt dc heater or 324 for a 24 volt dc heater ¹ . (omit if not desired) | Specify a micron rating: 2, 10, or 30. |
| ¹ 300 watt heater, use with a Racor relay kit - see Accessories. | | |

| Replacement Elements (seals included) | | |
|---------------------------------------|-------------------------------------|-----------------------------------|
| 2 micron (Final Filtration) | 10 micron (Secondary Filtration) | 30 micron (Primary Filtration) |
| 2040SM-OR | 2040TM-OR | 2040PM-OR |

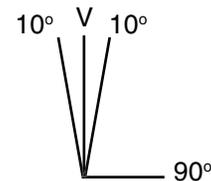
All 2040 Series filters are 4.6" tall by 4.7" in diameter.

Not all configurations are available - contact Technical Support for more information.

Mounting Instructions



Note: Mount filter assembly as close to vertical (V) as possible. For best efficiency, do not exceed 10° from V.

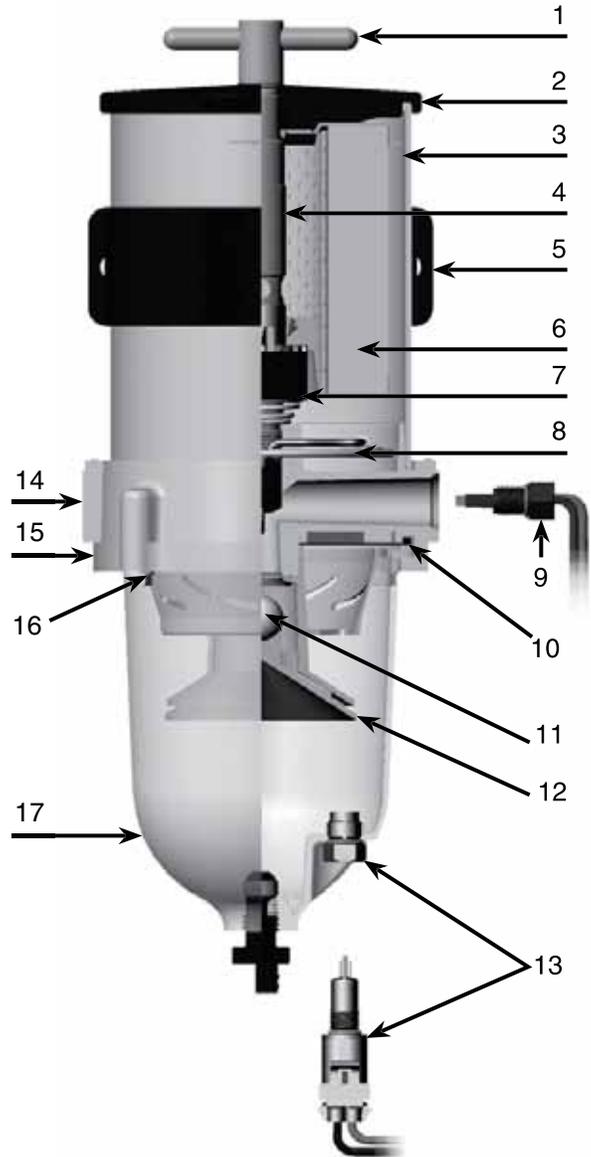


Turbine Series

Replacement Parts

900FH

| Part Number | Description |
|---|---|
| 1. RK 11-1945 | T-handle and O-ring Kit (9/16"-18 UNF Threads) |
| 11350 | T-handle O-ring |
| 2. RK 11-1927-01 | Lid and Lid Gasket Kit |
| 11007 | Lid (and Bowl) Gasket |
| 3. RK11-2009 | see note 4 below |
| 4. RK11-2009 | see note 4 below |
| 5. RK 11815-103 | Mounting Bracket (hardware included) |
| 6. (All replacement elements include seals) | |
| 2040SM-OR | 2 Micron Element |
| 2040TM-OR | 10 Micron Element |
| 2040PM-OR | 30 Micron Element |
| 7. RK11-2009 | see note 4 below |
| 8. (Heater kits include item #9) | |
| RK 11-1800-01¹ | Heater Kit (12 vdc, 300 watt) |
| RK 11-1800-02¹ | Heater Kit (24 vdc, 300 watt) |
| 9. RK 21067 | Feed-thru Assy Kit (for heater) |
| RK 11-1679 | Feed-thru Plug Kit (not shown) |
| 10. 11007 | Bowl (and Lid) Gasket |
| 11. RK 11028B | Check Ball with Seal Kit |
| 12. RK 11-1939 | Centrifuge/Conical Baffle Kit |
| 13. RK 32204² | Water Sensor Probe Kit |
| RK 20126 | Water Probe Port Plug Kit |
| 14. RK11-2009 | see note 4 below |
| 15. RK 11037A | Bowl Ring Kit (5" Diameter) |
| 16. RK 11542 | Capscrew Kit (quantity - 4) |
| 17. RK 11-1938 | Clear Bowl Kit (includes bowl, drain, bowl gasket and probe plug) |
| Additional Parts (not shown) | |
| RK 11-1952 | Complete Seal Service Kit |
| RK11-1978³ | Checkball and Spring Kit |



Notes:

- ¹ In-filter heater kits require a Heater Relay Kit - see Accessories section of this catalog. Maximum power requirements for in-filter heaters are: 25 amps for 12 vdc and 12.5 amps for 24 vdc.
- ² Water probe must be used with Water Detection Kit - see Accessories section of this catalog. Water probe features a detachable harness connector.
- ³ Spring Kit on all 900 or 1000 Turbine Series fuel filter/water separator assemblies for those applications with insufficient back pressure. **Do NOT** use this kit on 500 Turbine Series assemblies.
- ⁴ This replacement kit includes the filter body, cylinder, and return tube, pre-assembled and ready to go. It also includes two (2) additional 11007 gaskets (for the lid and bowl) and four (4) new fasteners to install the bowl and bowl ring. The kit will be packaged in a single carton.

Turbine Series

How to Order

(The example below illustrates how part numbers are constructed.)

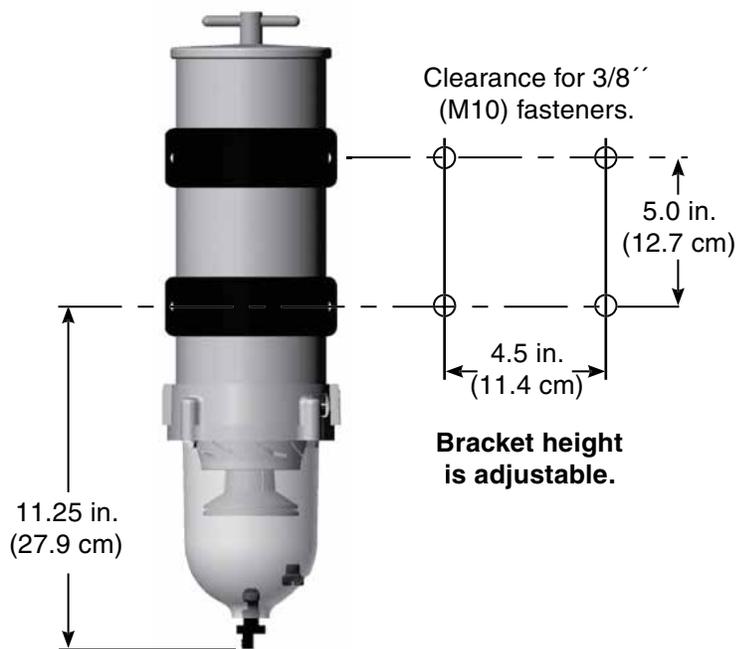
| 1000FH | 312 | 2 |
|---|---|---|
| Specify 1000FH for 7/8"-14 UNF ports or 1002FH for 22M ports. | Add 312 for a 12 volt dc heater or 324 for a 24 volt dc heater ¹ . (omit if not desired) | Specify a micron rating: 2, 10, or 30. |
| ¹ 300 watt heater, use with a Racor relay kit - see Accessories. | | |

| Replacement Elements (seals included) | | |
|---------------------------------------|-------------------------------------|-----------------------------------|
| 2 micron (Final Filtration) | 10 micron (Secondary Filtration) | 30 micron (Primary Filtration) |
| 2020SM-OR | 2020TM-OR | 2020PM-OR |

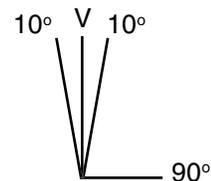
All 2020 Series filters are 9.6" tall by 4.7" in diameter.

Not all configurations are available - contact Technical Support for more information.

Mounting Instructions



Note: Mount filter assembly as close to vertical (V) as possible. For best efficiency, do not exceed 10° from V.



Turbine Series

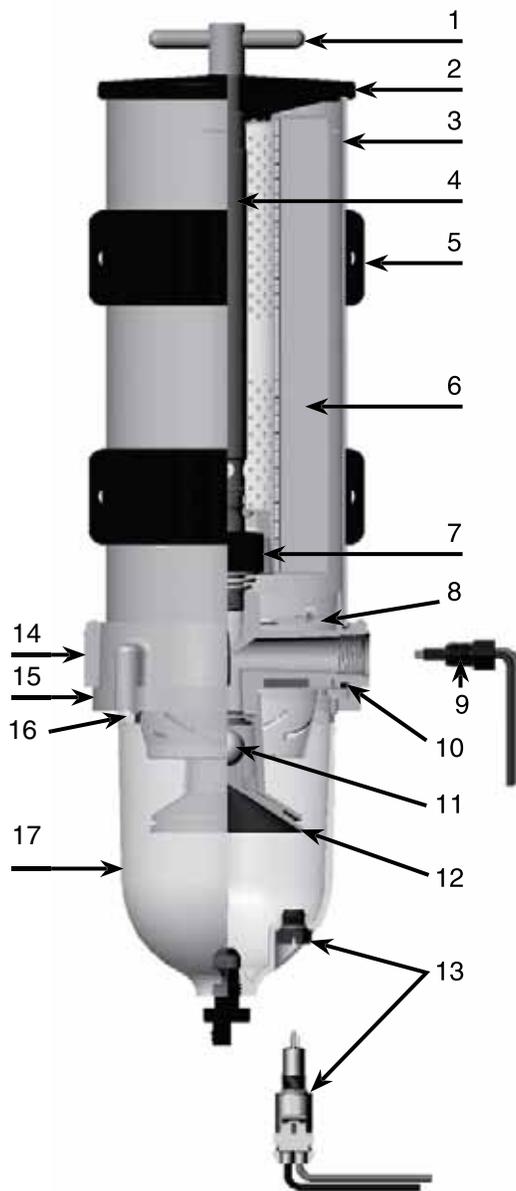
Replacement Parts

1000FH

| Part Number | Description |
|---|---|
| 1. RK 11-1945 | T-handle and O-ring Kit (9/16"-18 UNF Threads) |
| 11350 | T-handle O-ring |
| 2. RK 11-1927-01 | Lid and Gasket Kit |
| 11007 | Lid (and Bowl) Gasket |
| 3. RK11-2010 | see note 4 below |
| 4. RK11-2010 | see note 4 below |
| 5. RK 11815-103 | Mounting Bracket (includes bracket hardware) |
| 6. (All replacement elements include seals) | |
| 2020SM-OR | 2 Micron Element |
| 2020TM-OR | 10 Micron Element |
| 2020PM-OR | 30 Micron Element |
| 7. RK11-2010 | see note 4 below |
| 8. (Heater kits include item #9) | |
| RK 11-1800-01¹ | Heater (12 vdc, 300 watt) |
| RK 11-1800-02¹ | Heater (24 vdc, 300 watt) |
| 9. RK 21067 | Feed-thru Assy (for heater) |
| RK 11-1679 | Feed-thru Plug (not shown) |
| 10. 11007 | Bowl (and Lid) Gasket |
| 11. RK 11028B | Check Ball with Seal |
| 12. RK 11-1939 | Centrifuge/Conical Baffle |
| 13. RK 32204² | Water Sensor Probe |
| RK 20126 | Water Probe Port Plug |
| 14. RK11-2010 | see note 4 below |
| 15. RK 11037A | Bowl Ring (5" diameter) |
| 16. RK 11542 | Capscrew Kit (quantity - 4) |
| 17. RK 11-1938 | Clear Bowl Kit (includes bowl, drain, bowl gasket and probe plug) |

Additional Parts (not shown)

| | |
|------------------------------|---------------------------|
| RK 11-1952 | Complete Seal Service Kit |
| RK11-1978³ | Checkball and Spring Kit |



Notes:

- ¹ In-filter heater kits require a Heater Relay Kit - see Accessories section of this catalog. Maximum power requirements for in-filter heaters are: 25 amps for 12 vdc and 12.5 amps for 24 vdc.
- ² Water probe must be used with Water Detection Kit - see Accessories section of this catalog. Water probe features a detachable harness connector.
- ³ Spring Kit on all 900 or 1000 Turbine Series fuel filter/water separator assemblies for those applications with insufficient back pressure. **Do NOT** use this kit on 500 Turbine Series assemblies.
- ⁴ This replacement kit includes the filter body, cylinder, and return tube, pre-assembled and ready to go. It also includes two (2) additional 11007 gaskets (for the lid and bowl) and four (4) new fasteners to install the bowl and bowl ring. The kit will be packaged in a single carton.

Turbine Series

How to Order

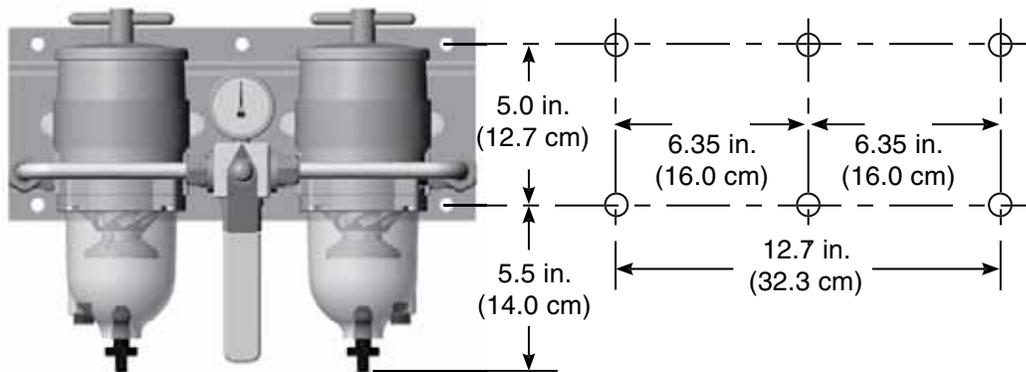
(The example below illustrates how part numbers are constructed.)

| 75500FGX | 12 | 2 |
|---|---|---|
| Base model with 3/4"-16 UNF fuel ports (SAE J1926) | Add 12 for a 12 volt dc heater or 24 for a 24 volt dc heater ¹ . (omit if not desired) | Specify a micron rating: 2, 10, or 30. |
| ¹ 150 watt heater, use with a Racor relay kit - see Accessories. | | |

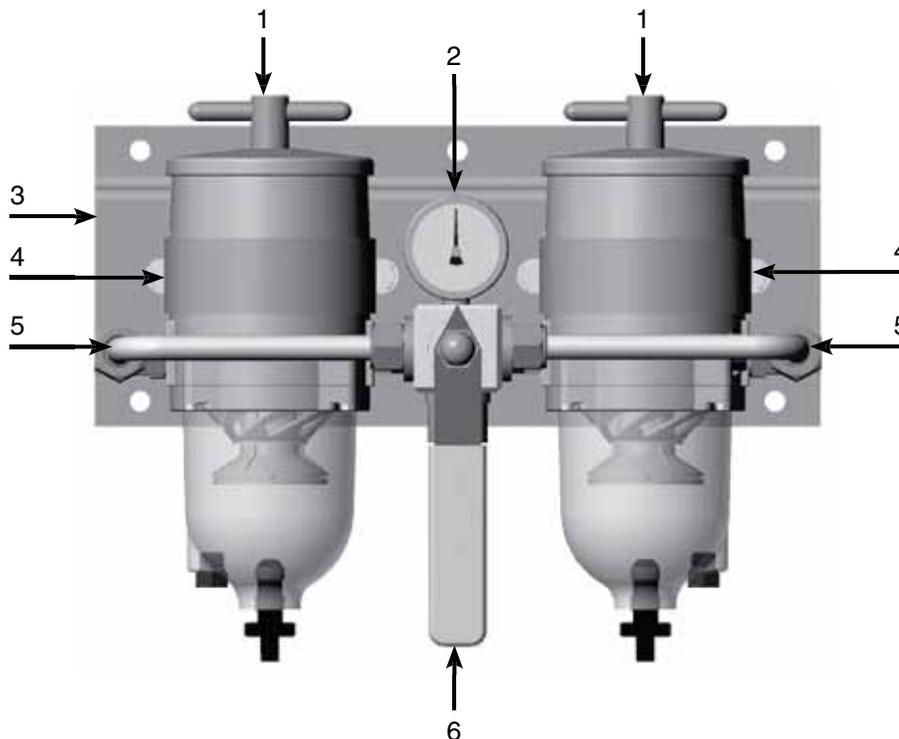
| Replacement Elements (seals included) | | |
|---------------------------------------|----------------------------------|--------------------------------|
| 2 micron (Final Filtration) | 10 micron (Secondary Filtration) | 30 micron (Primary Filtration) |
| 2010SM-OR | 2010TM-OR | 2010PM-OR |

Note: 75500FGX assemblies use TWO elements (one per 500FG housing).
 Not all configurations are available - contact Technical Support for more information.

Mounting Instructions



Turbine Series



Replacement Parts

75500FGX

| <u>Part Number</u> | <u>Description</u> |
|--------------------|--|
| 1. 500FG | See 500FG Replacement Parts List |
| 2. RK 19476 | Gauge Assembly Kit |
| 3. RK 15329 | Main Bracket Kit |
| 4. RK 15378 | Housing Bracket |
| RK 11838 | Housing Bracket Hardware (5/16"-18, not shown) |
| 5. RK 15391 | Rigid Tubing and Fittings Kit |
| 6. RK 15390 | Heavy-Duty Valve Assembly Kit |

Turbine Series

How to Order

(The example below illustrates how part numbers are constructed.)

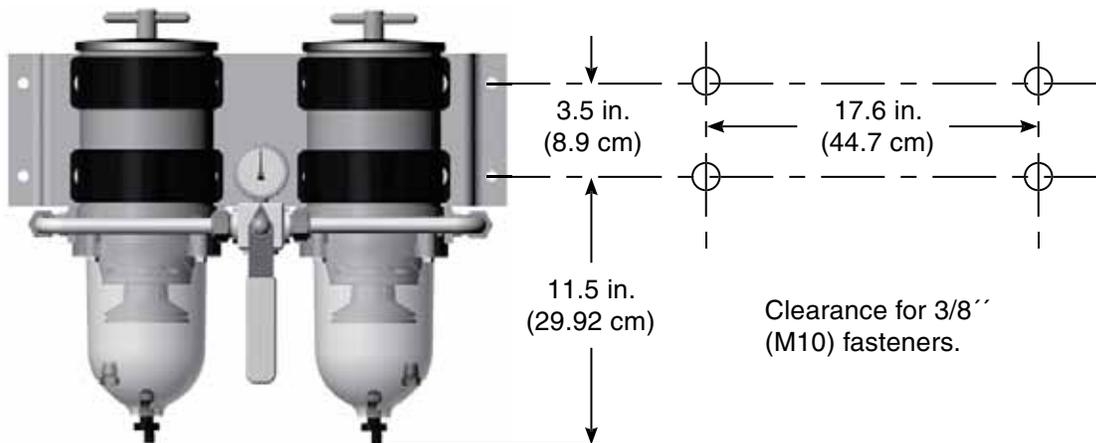
| 75900FHX | 312 | 2 |
|---|---|---|
| Base model with 7/8''-14 UNF fuel ports (SAE J514) | Add 312 for a 12 volt dc heater or 324 for a 24 volt dc heater ¹ . (omit if not desired) | Specify a micron rating: 2, 10, or 30. |
| ¹ 300 watt heater, use with a Racor relay kit - see Accessories. | | |

| Replacement Elements (seals included) | | |
|---------------------------------------|-------------------------------------|-----------------------------------|
| 2 micron (Final Filtration) | 10 micron (Secondary Filtration) | 30 micron (Primary Filtration) |
| 2040SM-OR | 2040TM-OR | 2040PM-OR |

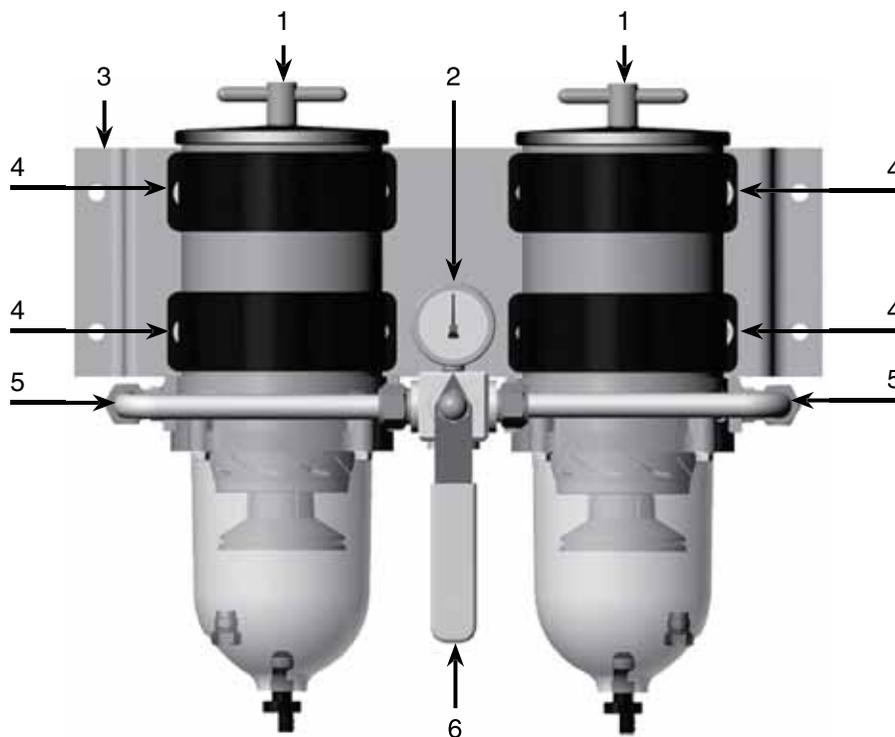
Note: 75900FHX assemblies use TWO elements (one per 900FH housing).

Not all configurations are available - contact Technical Support for more information.

Mounting Instructions



Turbine Series



Replacement Parts

75900FHX

| <u>Part Number</u> | <u>Description</u> |
|------------------------|-------------------------------------|
| 1. 900FH | See 900FH Replacement Parts List |
| 2. RK 19476 | Gauge Assembly Kit |
| 3. RK 19486 | Main Bracket Kit |
| 4. RK 11815-103 | Housing Bracket (includes hardware) |
| 5. RK 19475 | Rigid Tubing and Fittings Kit |
| 6. RK 19473 | Valve Assembly Kit |
| RK 19506 | Valve Service Kit (not shown) |

Turbine Series

How to Order

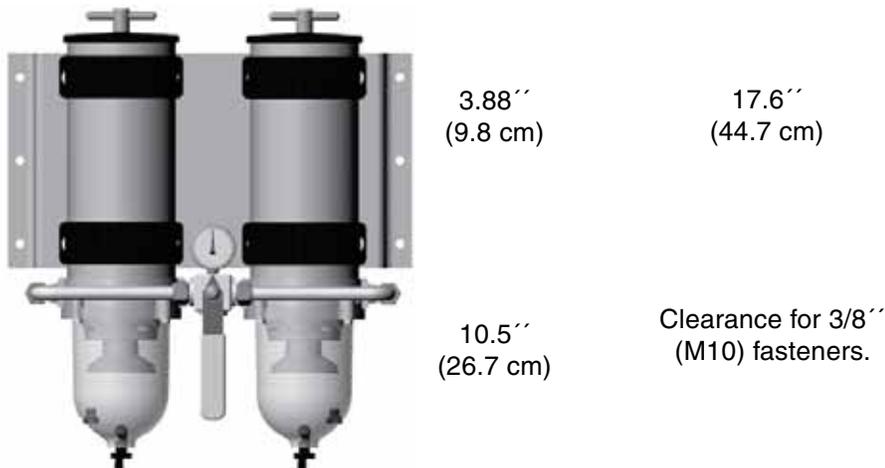
(The example below illustrates how part numbers are constructed.)

| 751000FHX | 312 | 2 |
|---|---|---|
| Model with 7/8"-14 UNF fuel ports (SAE J514). | Add 312 for a 12 volt dc heater or 324 for a 24 volt dc heater ¹ . (omit if not desired) | Specify a micron rating: 2, 10, or 30. |
| ¹ 300 watt heater, use with a Racor relay kit - see Accessories. | | |

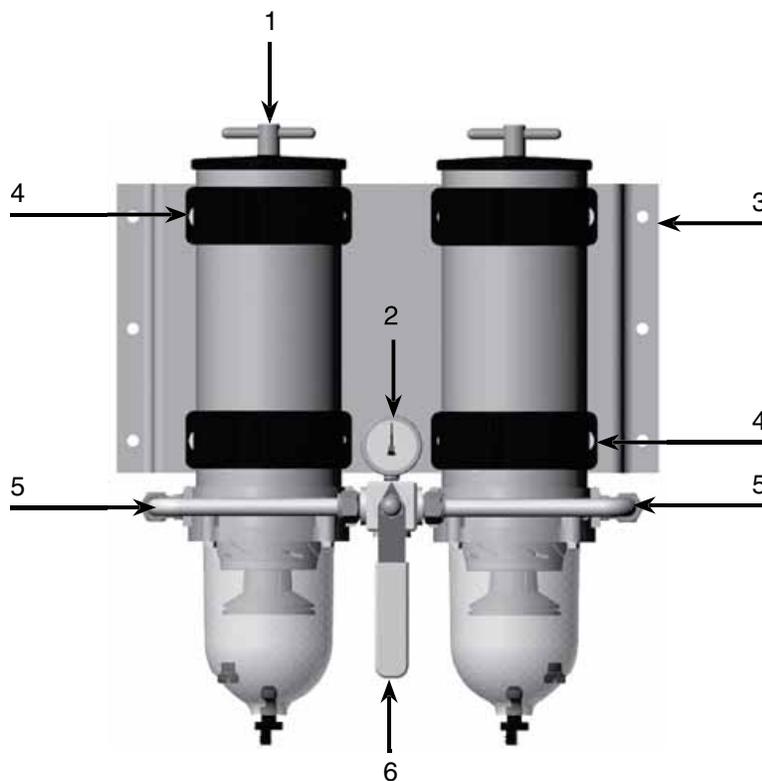
| Replacement Elements (seals included) | | |
|---------------------------------------|-------------------------------------|-----------------------------------|
| 2 micron (Final Filtration) | 10 micron (Secondary Filtration) | 30 micron (Primary Filtration) |
| 2020SM-OR | 2020TM-OR | 2020PM-OR |

Note: 751000FHX assemblies use TWO elements (one per 1000FH housing).
Not all configurations are available - contact Technical Support for more information.

Mounting Instructions



Turbine Series



Replacement Parts

751000FHX

| <u>Part Number</u> | <u>Description</u> |
|--------------------|-------------------------------------|
| 1. 1000FH | See 1000FH Replacement Part List |
| 2. RK 19476 | Gauge Assembly Kit |
| 3. RK 11-1777 | Main Bracket Kit |
| 4. RK 11815-103 | Housing Bracket (includes hardware) |
| 5. RK 19475 | Rigid Tubing and Fittings Kit |
| 6. RK 19473 | Valve Assembly Kit |
| RK 19506 | Valve Service Kit (not shown) |

Turbine Series

Turbine Series Overview



| Specifications | 731000FH | 771000FH | 791000FHV |
|---|---|---|---|
| Maximum Flow Rate: (one unit online) (two units online) (three units online) | N/A 360 GPH (1363 LPH) N/A | N/A N/A 540 GPH (2044 LPH) | 180 GPH (681 LPH) 360 GPH (1363 LPH) 540 GPH (2044 LPH) |
| Port Size (male threads) | 3/4"-14 NPT (SAE J476) | 1"-11.5 NPT (SAE J476) | 3/4"-14 NPT (SAE J476) |
| Min. Service Clearance: (above assembly) (below assembly) | 10.0 in. (25.4 cm) 2.0 in. (5.1 cm) | 10.0 in. (25.4 cm) 2.0 in. (5.1 cm) | 10.0 in. (25.4 cm) 2.0 in. (5.1 cm) |
| Replacement Element: (2 micron) (10 micron) (30 micron) | (2 Per Assembly) 2020SM-OR 2020TM-OR 2020PM-OR | (3 Per Assembly) 2020SM-OR 2020TM-OR 2020PM-OR | (3 Per Assembly) 2020SM-OR 2020TM-OR 2020PM-OR |
| Height | 22.0 in. (55.9 cm) | 22.0 in. (55.9 cm) | 22.0 in. (55.9 cm) |
| Depth | 12.0 in. (30.5 cm) | 12.0 in. (30.5 cm) | 11.8 in. (30.0 cm) |
| Width | 16.5 in. (41.9 cm) | 21.5 in. (54.6 cm) | 21.5 in. (54.6 cm) |
| Weight (dry) | 26.0 lb (11.8 kg) | 39.0 lb (17.7 kg) | 52.0 lb (23.6 kg) |
| Clean Pressure Drop | 1.7 PSI (11.7 kPa) | 1.7 PSI (11.7 kPa) | 2.5 PSI (17.2 kPa) |
| Maximum Pressure ¹ | 25 PSI (1 bar) | 25 PSI (1 bar) | 25 PSI (1 bar) |
| Water (per bowl) Capacity: | 10.3 oz (305 ml) | 10.3 oz (305 ml) | 10.3 oz (305 ml) |
| Available Options: ² (water detection kit) (12 or 24 vdc heater) (vacuum gauge) | Yes Yes Yes | Yes Yes Yes | Yes Yes Yes |
| H ₂ O Removal Efficiency | 99% | | |
| Operating Temperature | -40° to +255°F / -40° to +124°C | | |

¹Pressure installations are applicable up to the maximum PSI shown. Vacuum installations are recommended.

²Not for use on gasoline applications. **Note:** Units with 1/2" NPT ports are available, contact the factory.

Turbine Series

How to Order

(The example below illustrates how part numbers are constructed.)

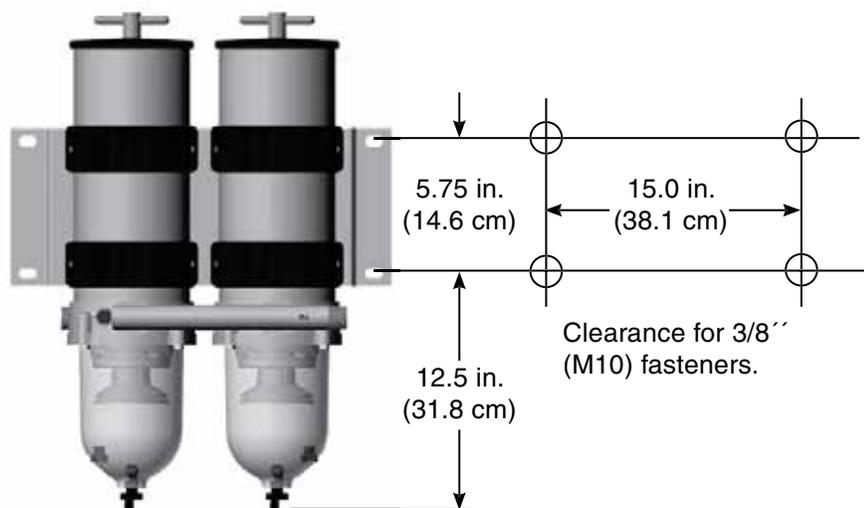
| 731000FH | 312 | 2 |
|---|---|---|
| Base model with 7/8''-14 UNF fuel ports (SAE J514). | Add 312 for a 12 volt dc heater or 324 for a 24 volt dc heater ¹ . (omit if not desired) | Specify a micron rating: 2, 10, or 30. |
| ¹ 300 watt heater, use with a Racor relay kit - see Accessories. | | |

| Replacement Elements (seals included) | | |
|---------------------------------------|-------------------------------------|-----------------------------------|
| 2 micron (Final Filtration) | 10 micron (Secondary Filtration) | 30 micron (Primary Filtration) |
| 2020SM-OR | 2020TM-OR | 2020PM-OR |

Note: 731000FH assemblies use TWO elements (one per 1000FH housing).

Not all configurations are available - contact Technical Support for more information.

Mounting Instructions

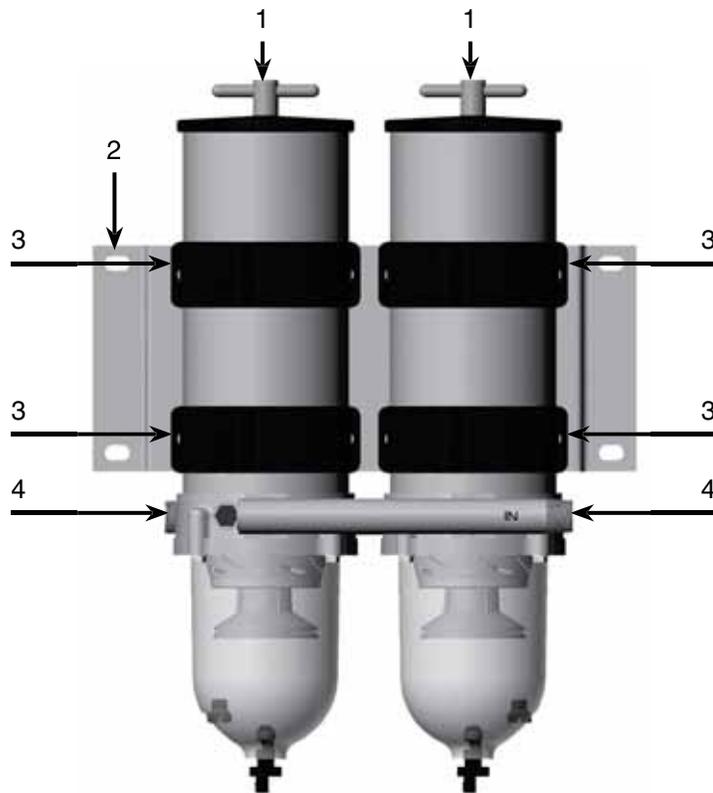


Turbine Series

Replacement Parts

731000FH

| | <u>Part Number</u> | <u>Description</u> |
|----|---------------------|--|
| 1. | 1000FH | See 1000FH Replacement Parts List |
| 2. | 11065 | Main Bracket |
| 3. | RK 11815-103 | Housing Bracket (includes hardware) |
| 4. | RK 11892 | Inlet or Outlet Manifold Tube (with 3/4"-16 NPT threads) |



Turbine Series

How to Order

(The example below illustrates how part numbers are constructed.)

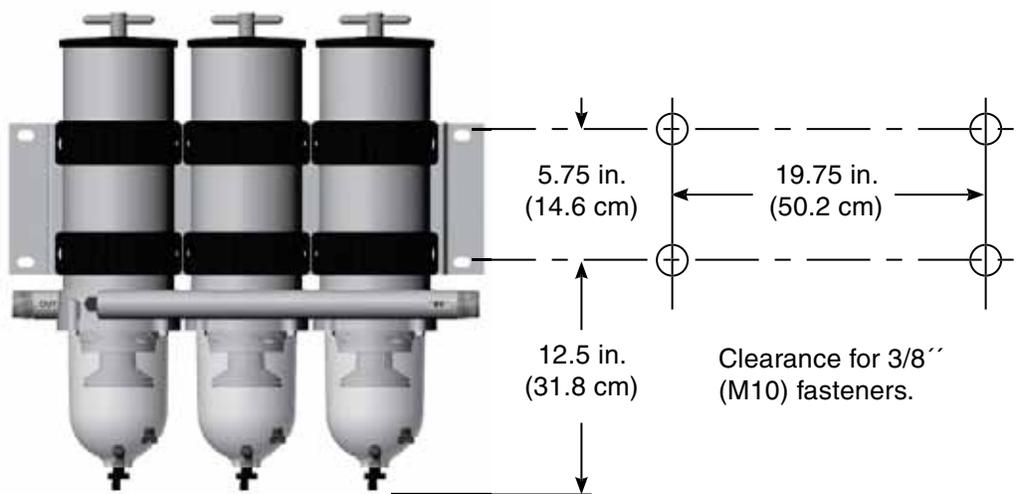
| 771000FH | 312 | 2 |
|---|---|---|
| Base metal with 1"-11 1/2 NPT fuel ports (SAE J476). | Add 312 for a 12 volt dc heater or 324 for a 24 volt dc heater ¹ . (omit if not desired) | Specify a micron rating: 2, 10, or 30. |
| ¹ 300 watt heater, use with a Racor relay kit - see Accessories. | | |

| Replacement Elements (seals included) | | |
|---------------------------------------|-------------------------------------|-----------------------------------|
| 2 micron (Final Filtration) | 10 micron (Secondary Filtration) | 30 micron (Primary Filtration) |
| 2020SM-OR | 2020TM-OR | 2020PM-OR |

Note: 771000FH assemblies use THREE elements (one per 1000FH housing).

Not all configurations are available - contact Technical Support for more information.

Mounting Instructions

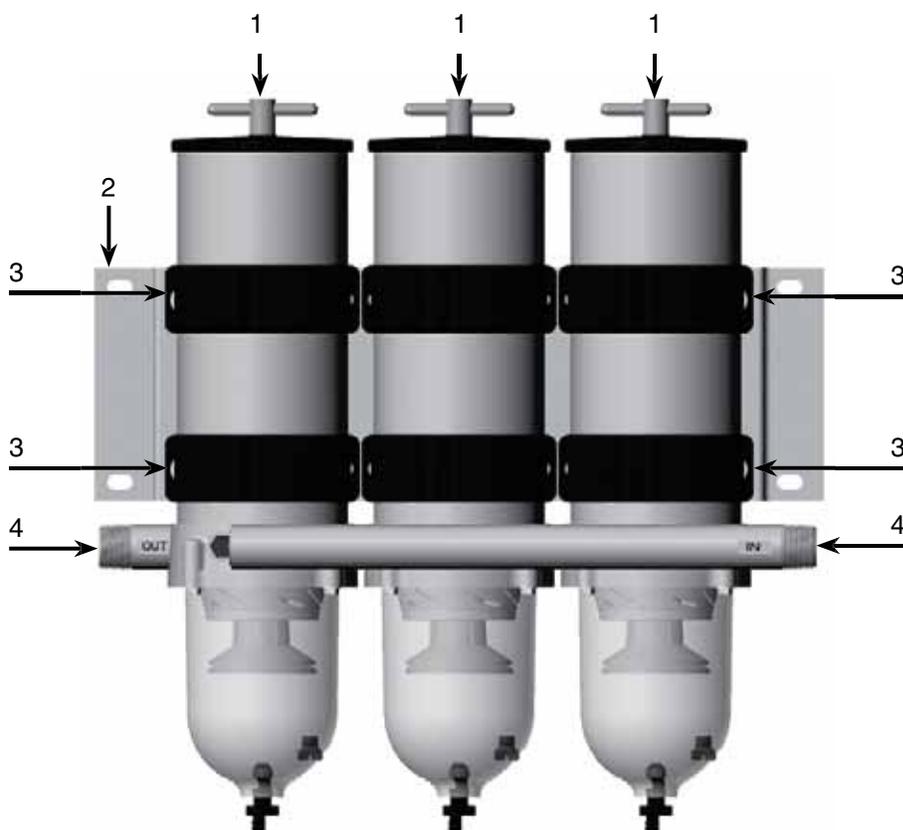


Turbine Series

Replacement Parts

771000FH

| <u>Part Number</u> | <u>Description</u> |
|--------------------|--|
| 1. 1000FH | See 1000FH Replacement Parts List |
| 2. 18998 | Main Bracket Kit |
| 3. RK 11815-103 | Housing Bracket (includes hardware) |
| 4. 11076 | Inlet or Outlet Manifold Tube (with 1"-11 1/2 NPT threads) |



Turbine Series

How to Order

(The example below illustrates how part numbers are constructed.)

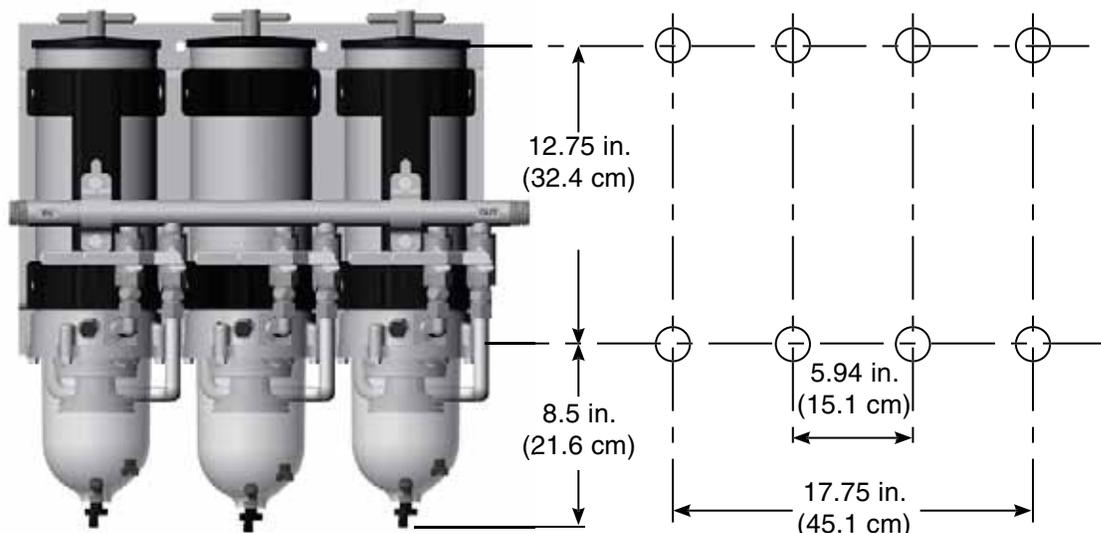
| 791000FHV | 312 | 2 |
|---|---|---|
| Base model with 3/4"-14 NPT fuel ports (SAE J476). | Add 312 for a 12 volt dc heater or 324 for a 24 volt dc heater ¹ . (omit if not desired) | Specify a micron rating: 2, 10, or 30. |
| ¹ 300 watt heater, use with a Racor relay kit - see Accessories. | | |

| Replacement Elements (seals included) | | |
|---------------------------------------|-------------------------------------|-----------------------------------|
| 2 micron (Final Filtration) | 10 micron (Secondary Filtration) | 30 micron (Primary Filtration) |
| 2020SM-OR | 2020TM-OR | 2020PM-OR |

Note: 791000FHV assemblies use THREE elements (one per 1000FH housing).

Not all configurations are available - contact Technical Support for more information.

Mounting Instructions



Turbine Series

Replacement Parts

791000FHV

| <u>Part Number</u> | <u>Description</u> |
|--------------------|-----------------------------------|
| 1. 11-1632 | Main Bracket |
| 2. 11895 | Clamp Bracket Kit |
| 3. 11-1761 | 'U' Bracket Kit |
| 4. 19460 | Inlet Manifold Kit |
| 5. 1000FH | See 1000FH Replacement Parts List |
| 6. 19461 | Outlet Manifold Kit |
| 7. RK 11073 | 1/2" Ball Valve Kit |
| 8. 11-1626 | Formed Tubing Kit |



Turbine Series

Troubleshooting

New filter installations must be filled with fuel and the fuel system must be adequately primed following the engine manufacturer's recommendations. Existing installation difficulties are usually associated with improper priming procedures or damage to the unit or fuel system. The result is either internal air suction or external fuel leakage. Diagnose with the following steps:

- 1. Check fuel tank level and verify fuel delivery valves are open.**
- 2. Verify T-handle, bowl fasteners and fuel fittings are tight and bowl drain is closed.**
- 3. If element is new, check potential restriction at fuel tank draw tube. An in-tank strainer may be plugged.**
- 4. Review other troubleshooting instructions to uncover other solutions.**

Correct external fuel leaks immediately! These conditions result in reduced engine performance such as: hard starting, stalling, reduced power and fire hazards.

Correct Application

It is very important that Turbine Series filter assemblies are not 'under specified' for the application. The maximum fuel flow rating of the filter assembly must not be exceeded; doing so will reduce efficiency and de-gas (pull air from) the fuel.

Filter Elements

Replacement elements are available in 2, 10 and 30 micron ratings (nominal). Filtration needs are based on application, fuel quality, maintenance schedules and

operating climates. A simple rule to remember is... the finer the filtration, the more frequent the filter change interval.

Always carry extra replacement elements with your equipment as one tankful of excessively contaminated fuel can plug an element quickly.

When clogged to maximum capacity, elements will have a brown to black color or tar like contaminants may be present - this is normal.

An appearance of a multi-colored slime (which may have a foul odor) is an indication of microbiological contamination. This condition must be treated immediately. Racor offers a wide variety of gasoline and diesel additives to prevent and treat these problems; see 'Additives' section of this catalog. Severe conditions must be corrected by a repair facility.

Never operate a filter assembly without the element in place. The element safety valve on the fuel return tube will not expose the outlet hole if the element is removed. Instead, punch the emergency tab on the top of the element and leave in place.

Warning! Puncturing the emergency tab will bypass all filtration and send unfiltered fuel to your engine. Service the element as soon as possible to avoid harmful contaminants flowing downstream to the engine.

Water Sensors

This feature alerts the operator of a high-water condition. The bowl must be drained of water at the earliest convenience. A Racor water detection module is needed to work with the in-bowl sensor. The unit should activate

when the water reaches the sensor tips (and when they measure below 47,000 or 100,000 ohms of resistance, depending on the detection module used). If not, the tips may be fouled with a coating. Remove the sensor and clean the tips with a cloth. Run a jumper wire between the tips with the ignition ON to test the system. Difficulties usually lie in the wire connections, power source, or an independent ground.

Heaters

In-filter heaters are starting aids only, but may be left on during cold operations to supply additional heat. The 150 and 300 watt heaters are an extremely reliable option, but MUST be powered via a relay switch due to the initial amperage surge at start-up: 25 amps at 12 vdc and 12.5 amps at 24 vdc. They do not activate unless the fuel is below 50°F (10°C) and automatically deactivate at 80°F (28°C).

Heater Testing

The heater can only be tested when the thermostat is closed (fuel temperature is below 50°F or 10°C). With a voltmeter attached to external wiring, and engine off, power should drop when heater is switched on. (Option - remove the heater and place in a freezer until the temperature is under 50°F (10°C). Remove the heater and repeat the above test).

Turbine Series

Troubleshooting

All Racor Turbine Series filters are 100% tested to ensure a leak-proof, quality product.

Apply Parker Super O-lube (part number RK31605) or equivalent to all seals at major attachment points to maintain integrity, seal elasticity, to

fill small voids and provide protection from degradation. Perform the following checks with the engine OFF (and applicable valves closed). For replacement parts, refer to the appropriate 'Replacement Parts' section of this catalog.

Damaged, worn, or dirty seals will allow air ingestion. Inspect and replace all seals as needed. Lube all seals with Parker Super O-Lube. Clean sealing surfaces thoroughly of dirt and debris every time an element is replaced.

Hand tighten T-handle; do not use tools!

If element is changed or assembly drained for any reason, repriming assembly (filling with fuel) may be necessary. Fill to just above top of element before replacing lid.

Do not overtighten carriage bolt as this may distort cylinder roundness.

Do not overtighten self-taping screws; this may strip the threads. After disassembly, start screws by hand prior to using tools. Specifications: 55-65in. lbs.

The hollow aluminum check-ball floats up against the seal when the fuel is stopped thus preventing fuel bleed-back. If your unit loses prime, inspect upstream hose connections first, otherwise, disassemble the unit and inspect the seal and ball.

Drain water before it reaches this level.

Air bubbles or fuel leakage appearing from drain may indicate that the drain is not closed completely or that a seal has been clogged with contaminants. Tighten drain and inspect. If self-venting drain will not work when opened, it may be clogged. Cycle drain (open close) or attach a hose and briefly apply air (<2-3 PSI, with T-handle and lid removed) to dislodge any contaminants that may be stuck.

Element should be replaced every 10,000 miles or every 500 hours, or every other oil change, annually, or at first indication of power loss, which ever comes first. Construction and agricultural equipment should change element every 300 hours.

See 'Heaters' on previous page.

SAE O-ring ports should have a smooth angled seat for sealing. Do not scratch surface. Check O-ring for damage. Replace if necessary.

Heater feed-thru O-ring must not be damaged or swollen. Tighten snugly. Specifications; 15-20 in. lbs.

Air bubbles appearing from turbine are an indication of an upstream leak between Racor inlet and fuel tank pick-up tube.

A water sensor plug is standard equipment on new assemblies. Water sensor kits are available as accessories; see 'Accessories' section of this catalog. Tighten plug or water sensor snugly. Specification; 15-20 in. lbs.

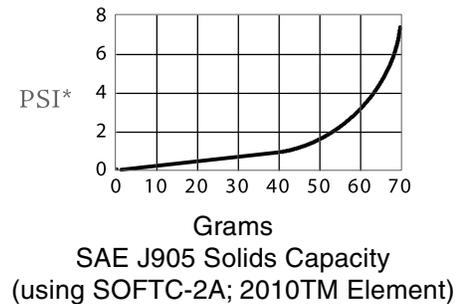
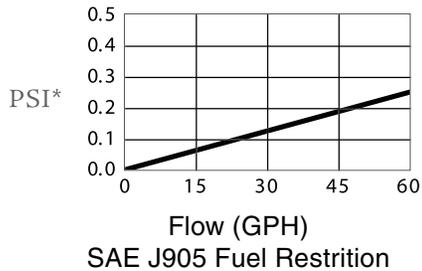
Water sensors activate when water contacts the sensor tips. Air bubbles or fuel leakage appearing from sensor area may indicate that it is loose or O-ring is damaged. Tighten or disassemble and inspect. Specification; 15-20 in. lbs.

Turbine Series

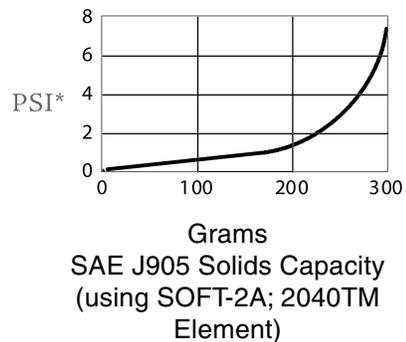
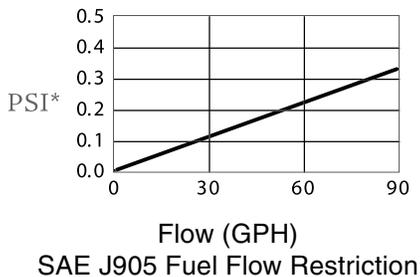
Test Data



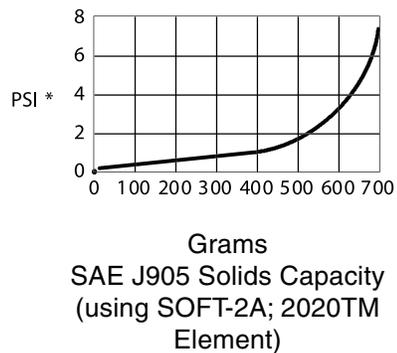
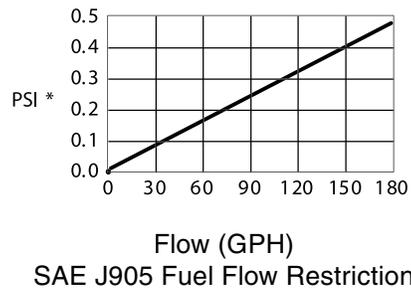
500FG



900FH



1000FH

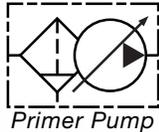


(Controlled laboratory test. Field results may vary.)

(PSI X 2.036 = inHg) (PSI X 6.895 = kPa)

Electric Primer Pump Kit

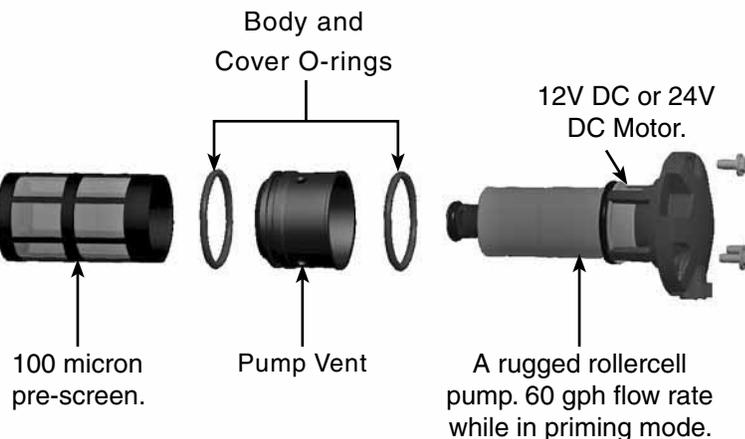
Electric Primer Pump Kit



The electric primer kit can be retrofitted to many of the Racor 900 or 1000 series fuel filters already in service. The filter pump is an innovative and proprietary system consisting of a pre-screen filter, a flow bypass circuit and a roller cell pump powered by a 12 vdc motor or innovative 24 vdc Racor brushless motor.

When the switch is activated the fuel is drawn into the pre-screen and then pumped through the housing, refilling the unit with fuel.

When not in use the filter pump system is bypassed and the Racor fuel filter/water separator functions normally.



All Racor filter materials and seals are compatible with ultra-low sulphur diesel (ULSD) fuel and B2 to B20 Biodiesel. The **RKP1912**, 12 vdc Kit, contains a traditional brushed motor design.

The **RKP1924**, 24 vdc Kit, contains innovative brushless motor technology.

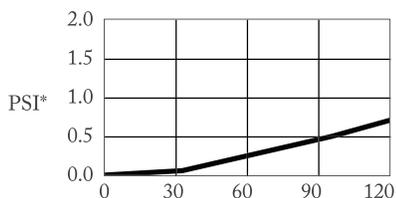
The use of this primer pump kit allows the operator to easily re-prime the Racor Filter/Water Separator directly from the fuel storage tank with no mess.

Turbine Series

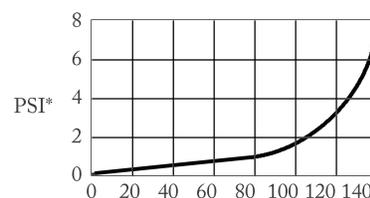
Test Data



75500FGX



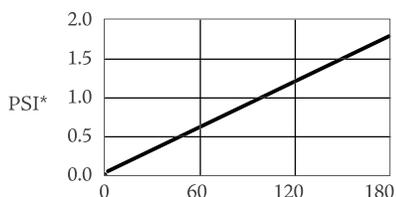
SAE J905 Fuel Flow Restriction



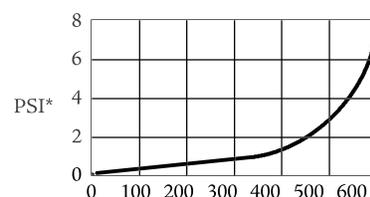
SAE J905 Solids Capacity
(using SOFT-2A; 2010TM Element)



75900FHX



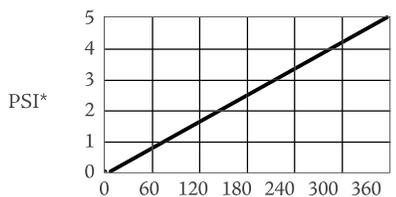
SAE J905 Fuel Flow Restriction



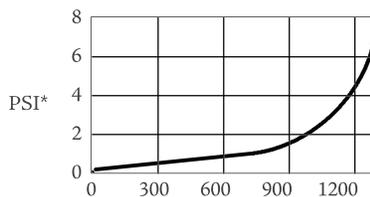
SAE J905 Solids Capacity
(using SOFT-2A; 2040TM Element)



751000FHX



SAE J905 Fuel Flow Restriction



SAE J905 Solids Capacity
(using SOFT-2A; 2020TM Element)

(Controlled laboratory test. Field results may vary.)

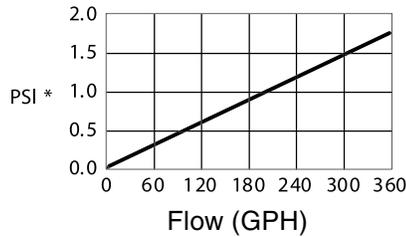
(PSI X 2.036 = inHg) (PSI X 6.895 = kPa)

Turbine Series

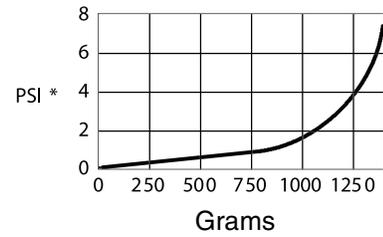
Test Data



731000FH



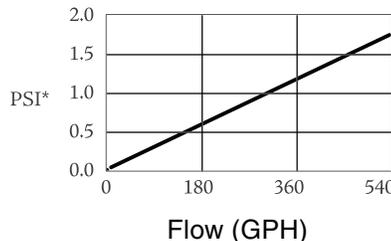
SAE J905 Fuel Flow Restriction



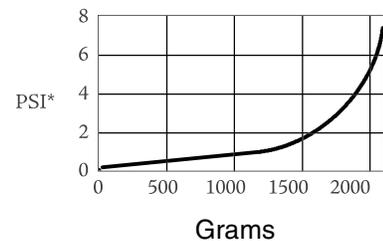
SAE J905 Solids Capacity
(using SOFT-2A; 2020TM Element)



771000FH



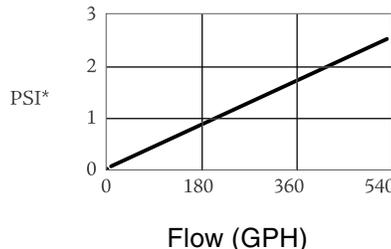
SAE J905 Fuel Flow Restriction



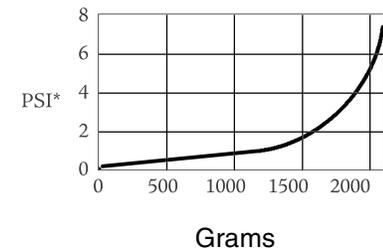
SAE J905 Solids Capacity
(using SOFT-2A; 2020TM Element)



791000FHV



SAE J905 Fuel Flow Restriction



SAE J905 Solids Capacity
(using SOFT-2A; 2020TM Element)

(Controlled laboratory test. Field results may vary.)

(PSI X 2.036 = inHg) (PSI X 6.895 = kPa)

Filterpumps

Smart Pumps

Instant Fuel Flow at "Key On" – Automatic Priming,
No More Hard Starts

ADVANCED DSP CONTROLLER TECHNOLOGY

The Racor sensorless Digital Signal Processor (DSP) controller allows for precise fuel flow management and diagnostics tailored to customer specifications using flexible software routines. Precision control of fuel flow, current draw, motor rpm, and system pressure is possible using the internal DSP and/or with input from the Electronic Control Unit (ECU). DSP technology provides peripheral capabilities such as fault isolation and reporting of critical system parameters – in short, total fuel management for optimum engine performance.

- **Fixed speed operation – flow does not vary with load**
- **Variable speed operation – controlled by input signal from ECU**
- **Built-in test and diagnostics with output signal capability**

GEROTOR PUMP

Racor's advanced gerotor pump uses the same proven technology used in lubrication pumps in the aircraft industry. It offers the benefits of fewer parts, smaller size, and lighter weight than other pumps of the same capacity.

- **Fewer parts than gear or vane-style pumps**
- **Smaller size and lighter weight than pumps with the same capacity**
- **Greater contamination resistance**
- **Proven aerospace design**
- **2 lpm to 4 lpm possible at 60 psi**

BRUSHLESS DC MOTOR

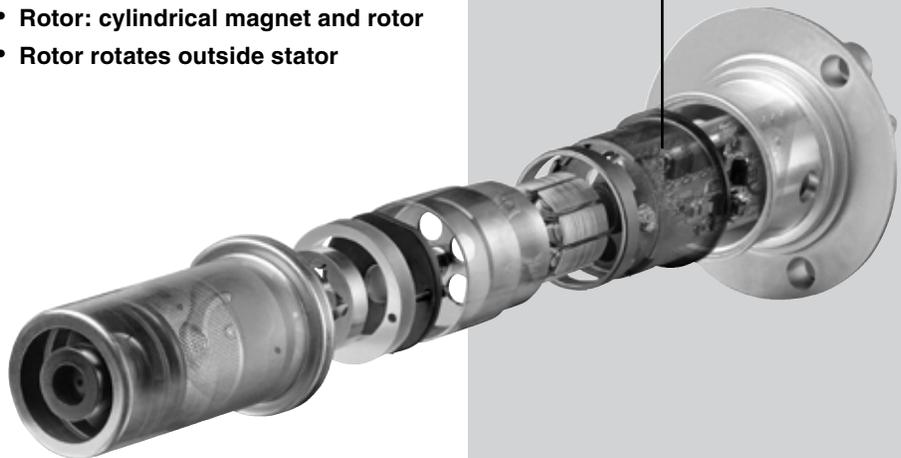
Most electric DC motors use carbon "brushes" to conduct the electrical current to the "commutator" that serves to sequentially polarize the motor windings and induce rotation. Racor's brushless DC motor windings are sequentially polarized to rotate the pump shaft by high speed electronic switching, controlled by a DSP, not by brushes rubbing and making sparks on a metallic commutator. No brushes means nothing to wear out, and no possibility of brush debris in the fuel. Brushless motors are more efficient than brushed motors and have unsurpassed reliability and long life. The brushless motor's shaft directly drives the gerotor gear, creating a unique, positive displacement pump assembly.

- **Design proven up to 26V DC, 10A continuous power**
- **Resistant to vibration and can be engine mounted**
- **8-pole, 9-slot configuration**
- **Rotor: cylindrical magnet and rotor**
- **Rotor rotates outside stator**

Whether the fuel filter/water separator is frame or engine-mounted, Racor brushless filter pumps offer the industry's most advanced and robust electronic fuel management systems. Important system benefits include the possibility of variable flow fuel delivery and monitoring of the entire fuel system...even when the engine is not running. No more fuel leak-back issues, no more hard starts. This is the next generation of fuel management and conditioning, for the next generation of diesel engines.

ELECTRONIC CONTROLLER

With DSP controller technology, engine operating specifications can be met with flexible software routines, instead of costly hardware re-designs. Current, velocity, and pressure parameters can be programmed with greater precision.



Filterpumps

P Series

Fuel Conditioning Modules

**Product Features:**

- Durable, quiet 12V DC roller-cell electric fuel pump for intermittent or continuous duty.
- Thermostatically controlled PTC-style electric (150-watt) heater.
- Aquabloc®II Filter Technology
- Removable and reusable contaminant collection bowl.
- Water-in-fuel (WIF) sensor.
- Standard: 12V DC brushed pump motor.
Optional: 12V or 24V DC brushless pump motor.

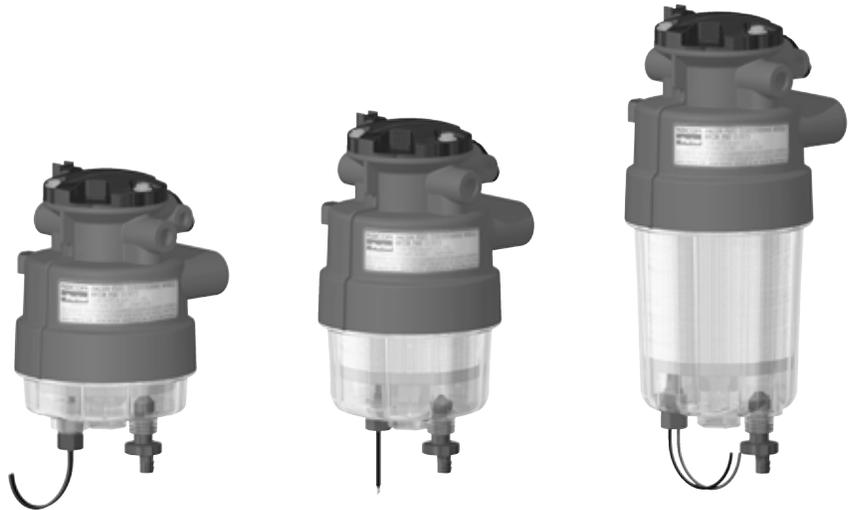


The patented P Series diesel fuel conditioning module was developed for installation on any diesel engine fuel injection system. P Series assemblies are available in three sizes and all feature 3/8" NPT fuel ports. This innovative and modular fuel filter/water separator incorporates low-pressure fuel system components into a single package. The P Series Diesel Fuel Conditioning Module is available with a brushless pump. Please contact Racor Division for information on specific applications.



Filterpumps

Specifications

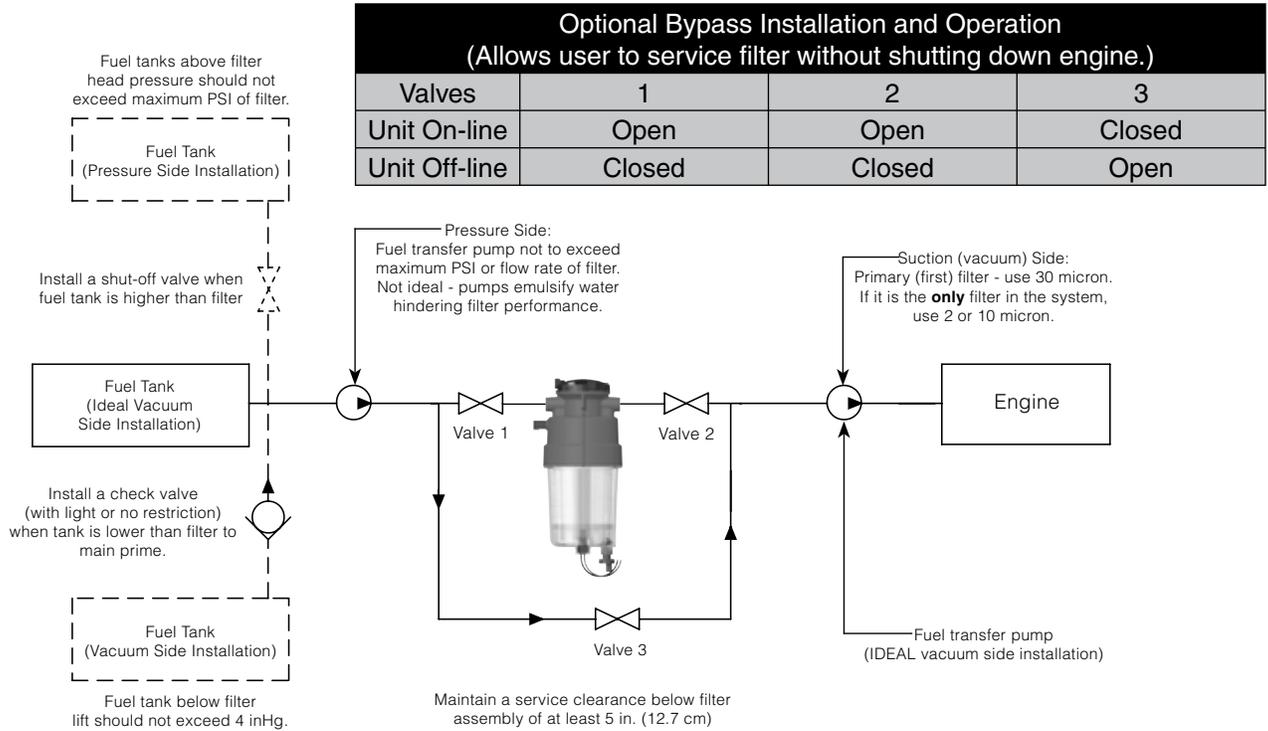


| | P3 | P4 | P5 |
|---|----------------------------------|-------------------|-------------------|
| Max. Flow Rate | 30 GPH / 114 LPH | 40 GPH / 170 LPH | 50 GPH / 227 LPH |
| Clean Pressure Drop | 0.4 psi / 2.8 kPa | 0.5 psi / 3.4 kPa | 0.8 psi / 5.5 kPa |
| Max. Pump Output at 14 volts / 70 psi (480 kPa) / 6.2 amps | 40 GPH / 151 LPH | | |
| Pump Output Pressure | 10 to 70 psi (60 kPa to 480 kPa) | | |
| Standard Fuel Port Size (SAE J476) | 3/8" – 18 NPT | | |
| Biodiesel Compatible | B2 to B20 | | |
| Replacement Filters | | | |
| 2 micron | R58060-2 | R58095-2 | R58039-2 |
| 10 micron | R58060-10 | R58095-10 | R58039-10 |
| 30 micron | R58060-30 | R58095-30 | R58039-30 |
| Min. Service Clearance | 2.5" (28 mm) | | |
| Height | 7.7" (196 mm) | 9.0" (229 mm) | 11.5" (292 mm) |
| Depth | 5.2" (132 mm) | | |
| Width | 4.8" (122 mm) | | |
| Weight (dry) | 3.4 lb (1.5 kg) | 3.8 lb (1.7 kg) | 4.2 lb (1.9 kg) |
| Features:¹ | | | |
| Water Sensor | Standard | | |
| Heater | Standard | | |
| Pressure Regulator (10 psi) | Standard | | |
| Operating Temperature | -40° to +255°F / -40° to +121°C | | |

¹ Not for use with gasoline applications.

Filterpumps

Installation Diagram



Mounting & Port Information

Keep all fuel lines and flow restrictions to a minimum.

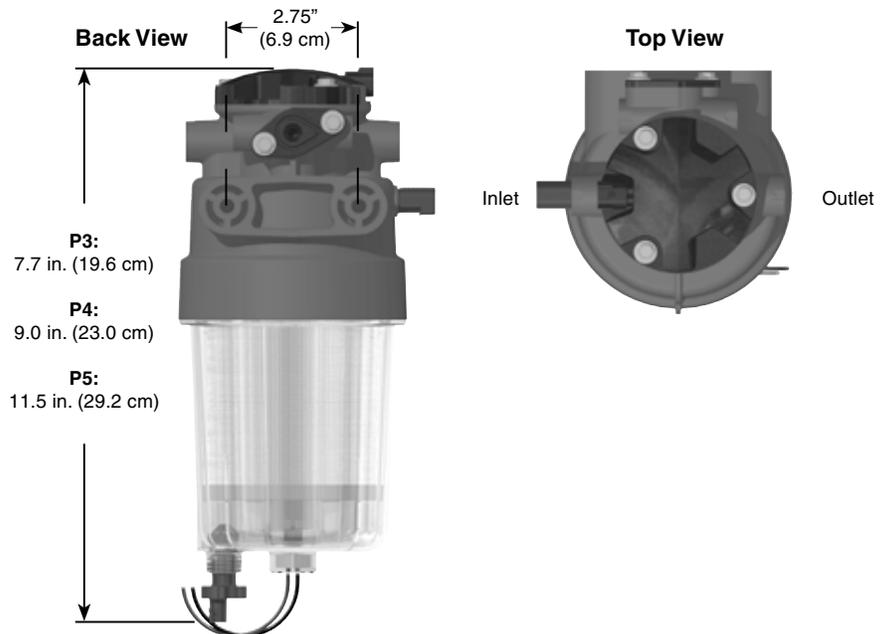
Use maximum size fuel hose possible.

Do not use two 45° fittings where one 90° elbow will work.

Avoid sharp bends, surfaces that move, sharp edges, or hot areas such as exhaust piping.

Use 3/8" mounting hardware.

Mount filter vertically.



Filterpumps

P Series Replacement Parts

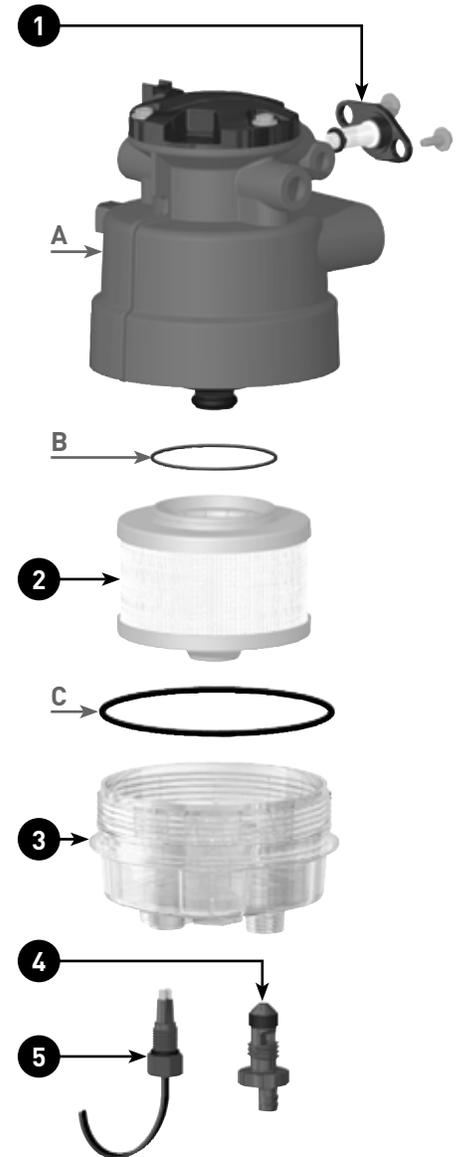
| Part No. | Description |
|----------------------------|--|
| 1. RK58075 | Pressure Regulator |
| 2. Replacement Filters | See Chart Below - includes B |
| 3. 58179 58180 58181 | Clear Bowl (P3) - includes C, 4, 5 Clear Bowl (P4) - includes C, 4, 5 Clear Bowl (P5) - includes C, 4, 5 |
| 4. RK30476 | Drain Valve Kit |
| 5. RK21069 | Water Probe Kit |

Replacement Filters

| | P3 | P4 | P5 |
|------------|-----------|-----------|-----------|
| 2 Micron | R58060-02 | R58095-02 | R58039-02 |
| 10 Micron. | R58060-10 | R58095-10 | R58039-10 |
| 30 Micron | R58060-30 | R58095-30 | R58039-30 |

Additional Parts

| Part No. | Description |
|----------|------------------------------|
| RK58107 | 6-way Electrical Harness Kit |
| 58137 | Mating Connector Harness |
| 58132 | Under-dash Control Panel |



Filterpumps

Spin-On Series With Electric Priming

**Product Features:**

- 12 or 24 volt Priming Pump
- 100 micron prefilter screen
- Aquabloc®II Filter Technology

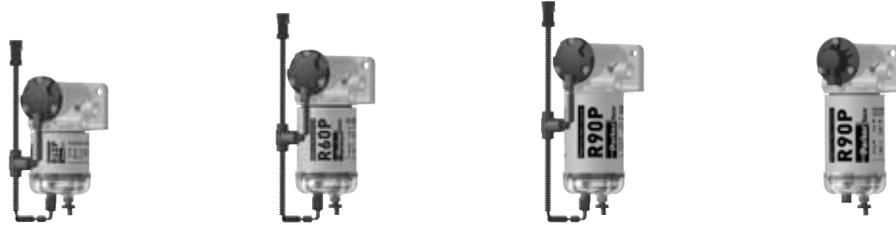


The Racor 700 Series is equipped with state-of-the-art fuel pumps with either brush or brushless DC motors. In brushless versions, the motor shaft directly drives the gerotor, creating a unique, positive displacement pump. The gerotor has fewer parts than gear or vane pumps, and the sensorless control technology of the brushless DC motor make this product the most reliable filter and pump assembly on the market. The brushless pump assembly is ideal for tough on-engine applications. For off-engine mounting, brushed pumps are a more economical alternative.

The 700 Series Integrated Fuel Filter/Water Separators have a two-stage filtration and repriming system featuring a 12 or 24 volt solid-state controlled electronic priming pump, a vent valve to purge air, a 100 micron prefilter screen, a 10 or 30 micron Aquabloc®II Spin-On filter (see specifications), a water sensor probe, a clear collection bowl and a weather proof control box. This complete fuel management system isolates contaminants present in diesel fuels and traps them prior to reaching the fuel injection system, protecting against costly and premature failure.

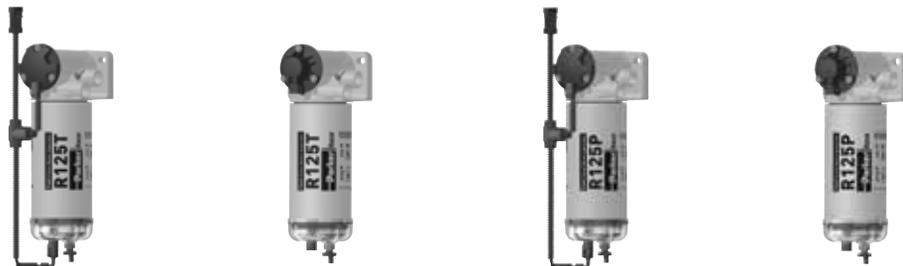
Filterpumps

Filterpumps Overview



Models shown with factory installed filter elements

| | 745R30 | 760R30 | 790R30 | 790R3024 |
|------------------------------|---------------------------------|--------------------|--------------------|--------------------|
| Power | 12 volt | 12 volt | 12 volt | 24 volt |
| Max. Flow Rate | 45 GPH (170 LPH) | 60 GPH (227 LPH) | 90 GPH (341 LPH) | 90 GPH (341 LPH) |
| Port Size (SAE J1926) | 7/8"-14 UNF | 7/8"-14 UNF | 7/8"-14 UNF | 7/8"-14 UNF |
| Height | 10.8 in. (27.4 cm) | 11.8 in. (29.9 cm) | 12.8 in. (32.5 cm) | 12.8 in. (32.5 cm) |
| Width | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) |
| Depth | 6.5 in. (16.5 cm) | 6.5 in. (16.5 cm) | 6.5 in. (16.5 cm) | 6.5 in. (16.5 cm) |
| Weight (dry) | 5.5 lb (2.5 kg) | 5.7 lb (2.6 kg) | 5.9 lb (2.7 kg) | 6.5 lb (3.0 kg) |
| Clean Pressure Drop | 0.70 PSI (4.8 kPa) | 0.70 PSI (4.8 kPa) | 0.70 PSI (4.8 kPa) | 0.70 PSI (4.8 kPa) |
| Ambient Temp. Range | -40° to +250°F (-40° to +121°C) | | | |
| Max. Fuel Temp. | 190°F (88°C) | | | |



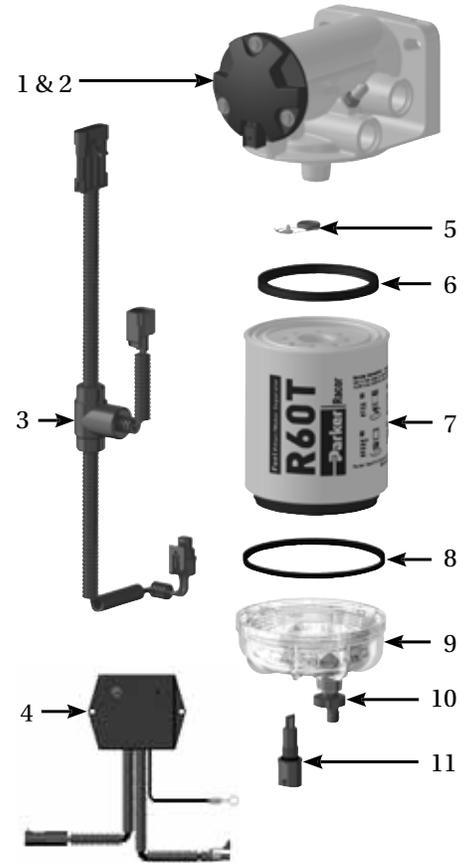
Models shown with factory installed filter elements

| | 7125R10 | 7125R1024 | 7125R30 | 7125R3024 |
|------------------------------|---------------------------------|--------------------|--------------------|--------------------|
| Power | 12 volt | 24 volt | 12 volt | 24 volt |
| Max. Flow Rate | 120 GPH (455 LPH) | 120 GPH (455 LPH) | 120 GPH (455 LPH) | 120 GPH (455 LPH) |
| Port Size (SAE J1926) | 7/8"-14 UNF | 7/8"-14 UNF | 7/8"-14 UNF | 7/8"-14 UNF |
| Height | 15.2 in. (38.5 cm) | 15.2 in. (38.5 cm) | 15.2 in. (38.5 cm) | 15.2 in. (38.5 cm) |
| Width | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) | 4.3 in. (11.0 cm) |
| Depth | 6.5 in. (16.5 cm) | 6.5 in. (16.5 cm) | 6.5 in. (16.5 cm) | 6.5 in. (16.5 cm) |
| Weight (dry) | 6.9 lb (3.1 kg) | 6.9 lb (3.1 kg) | 6.9 lb (3.1 kg) | 6.9 lb (3.1 kg) |
| Clean Pressure Drop | 0.70 PSI (4.8 kPa) | 0.70 PSI (4.8 kPa) | 0.70 PSI (4.8 kPa) | 0.70 PSI (4.8 kPa) |
| Ambient Temp. Range | -40° to +250°F (-40° to +121°C) | | | |
| Max. Fuel Temp. | 190°F (88°C) | | | |

Filterpumps

Replacement Parts

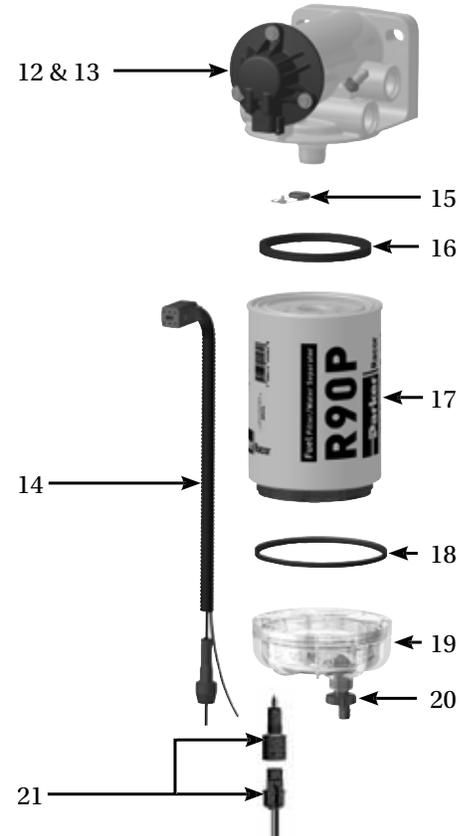
| 12 Volt Parts | Description | | |
|---|---|------------------|------------------|
| 1. RK22895 | Replacement Pump Head with Pump | | |
| 2. RK22933 | Primer Pump Kit (Includes pump, o-rings, screws, prescreen element and more. Does NOT include mounting head.) | | |
| 3. RK22902 | Wire Harness Kit | | |
| 4. RK22943 | Control Panel Kit | | |
| 5. RK 22798 | Bypass Valve Kit | | |
| 6. RK 21501 | Gasket Kit (Includes #'s 6 and 8) | | |
| 7. (see below) | Replacement Elements | | |
| <u>Model</u> | <u>2 Micron</u> | <u>10 Micron</u> | <u>30 Micron</u> |
| 745R | R45S | R45T | R45P |
| 760R | R60S | R60T | R60P |
| 790R | R90S | R90T | R90P |
| 7125R | R125S | R125T | R125P |
| 8. RK 21501 | Gasket Kit (Includes #'s 6 and 8) | | |
| 9. RK 21113-13-11 | Clear Bowl Kit (Includes #'s 8 and 10) | | |
| 10. RK 30476 | Self-venting Drain Kit | | |
| 11. RK 30902 | Water Sensor Probe Kit | | |
| Additional Parts (not shown) RK11-1970 RK22934 | Port Plug Kit Prescreen Element Kit (100 micron) | | |



Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

Filterpumps

| 24 Volt Parts | Description | | |
|---------------------------------|---|------------------|------------------|
| 12. RK23085 | Replacement Pump Head with Pump | | |
| 13. RK23087 | Primer Pump Kit (Includes pump, o-rings, screws, prescreen element and more. Does NOT include mounting head.) | | |
| 14. RK23088 | Push Button/Harness Kit | | |
| 15. RK 22798 | Bypass Valve Kit | | |
| 16. RK 21501 | Gasket Kit (Includes #'s 16 and 18) | | |
| 17. (see below) | Replacement Elements | | |
| <u>Model</u> | <u>2 Micron</u> | <u>10 Micron</u> | <u>30 Micron</u> |
| 790R | R90S | R90T | R90P |
| 7125R | R125S | R125T | R125P |
| 18. RK 21501 | Gasket Kit (Includes #'s 16 and 18) | | |
| 19. RK 21113-13-11 | Clear Bowl Kit (Includes #'s 19 and 20) | | |
| 20. RK 30476 | Self-venting Drain Kit | | |
| 21. RK 30964 | Water Sensor Probe Kit/Connector | | |
| Additional Parts (not shown) | | | |
| RK11-1970 | Port Plug Kit | | |
| RK22934 | Prescreen Element Kit (100 micron) | | |



Filterpumps

Installation & Maintenance

Please read ALL instructions before beginning installation.

Maintain a safe working environment. Obtain good ventilation and do not smoke or allow open flame near the installation.

The engine must be off and cool to touch before beginning installation.

This filter assembly will replace stand-alone primary fuel filters that may be installed on the engine. Remove existing primary filter, if applicable, and dispose of properly.

Apply thread sealant to fittings, lubricant to o-rings and install fittings into the appropriate inlet and outlet ports. Tighten snugly. Install port plugs in unused ports and tighten snugly.

Connect fuel hose to the inlet/outlet fittings and use hose clamps where appropriate.

Completely drain assembly. Tear-down is performed in numerical order shown above (1-8). Rebuild assembly in reverse order (8-1), substituting new parts for old. On rebuild, lubricate all O-rings with motor oil or clean diesel fuel and tighten screws to 50 in. lbs (maximum).

Important: Insure inside face of cover is flush with pump body and all flat surfaces are clean (free of scratches and debris).

Prescreen filter can be cleaned and inspected before replacement.

Clean in solvent bath with a soft brush. Flush with diesel fuel. Gently blow dry with air, if necessary.

Prime the system and check for leaks. Correct as necessary with engine off.

Operation For Repriming Unit:

(for initial installation, repriming, or to restart after running out of fuel).

1. **Turn ignition to ON position; do not start engine.**
2. **Remove cap from vent valve. Press and hold PRIME button on control panel; this will activate primer pump and yellow 'prime' LED will illuminate.**
3. **Press and hold vent valve open to release excess air from filter. Release vent valve at first indication of fuel. Warning! If vent valve is kept open too long, a pressurized stream of fuel will exit creating a potentially hazardous situation. Continue to hold PRIME button for about 30 seconds (or until unit is primed) and release. Note: fuel flow will bypass pump when not in use.**
4. **Start engine and run at high idle for about three minutes. Note: The engine may run rough while remaining air is forced through the fuel system.**

Draining Water:

Frequency of water draining or filter replacement is determined by the contamination level of the fuel. Drain bowl frequently if contaminated fuel is suspected or when remote water-in-fuel lamp illuminates.

Filter Replacement:

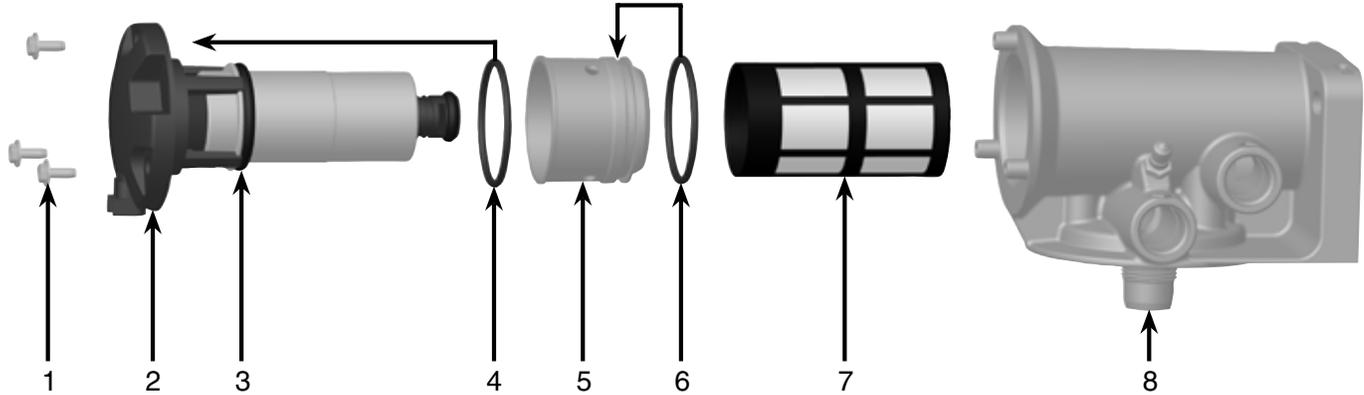
Replace filter every 10,000 miles, 500 hours, every other oil change, if power loss is noticed, or annually, whichever occurs first. Note: Always carry extra replacement elements as one tankful of excessively dirty fuel can plug a filter. To replace filter:

1. **Disconnect water sensor connector and drain any water from the see-thru bowl.**
2. **With a collection pan in place, remove filter and bowl assembly from mounting head.**
3. **Remove see thru bowl from filter and dispose properly. Bowl is reusable.**
4. **Lubricate gasket on new filter with motor oil or diesel fuel and spin new filter (without bowl) onto mounting head. Hand tighten only.**
5. **Clean bowl of debris. Lubricate new bowl O-ring, place in gland of bowl and spin bowl onto new filter. Hand tighten only.**
6. **Reattach water sensor connector.**
7. **Open fuel tank outlet valve, if applicable, and follow Operation instructions to reprime system.**



Filterpumps

Primer Pump Parts Breakdown

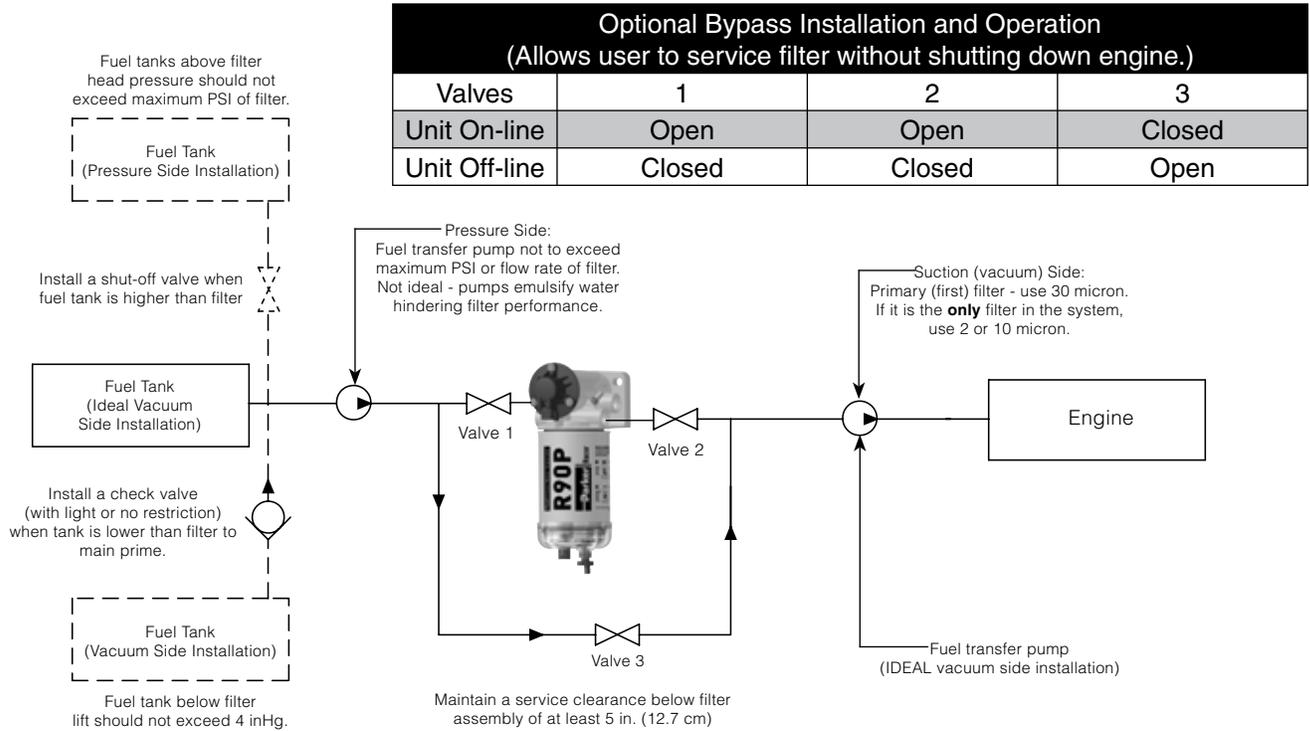


| 12 volt Primer Pump Kit Parts List | |
|--|-------------------|
| 1. | Screws |
| 2. | Pump |
| 3. | Body o-ring |
| 4. | Pump/Head o-ring |
| 5. | Adapter |
| 6. | Adapter o-ring |
| 7. | Prescreen Element |
| 8. | Mounting Head |
| RK22895 Primer Head Kit (Includes all parts shown) | |
| RK22933 Primer Pump Kit (Includes numbers 1-7) | |
| RK22934 Prescreen Kit (Includes numbers 3-7) | |

| 24 volt Primer Pump Kit Parts List | |
|--|-------------------|
| 1. | Screws |
| 2. | Pump |
| 3. | Body o-ring |
| 4. | Pump/Head o-ring |
| 5. | Adapter |
| 6. | Adapter o-ring |
| 7. | Prescreen Element |
| 8. | Mounting Head |
| RK23085 Primer Head Kit (Includes all parts shown) | |
| RK23087 Primer Pump Kit (Includes numbers 1-7) | |
| RK22934 Prescreen Kit (Includes numbers 3-7) | |

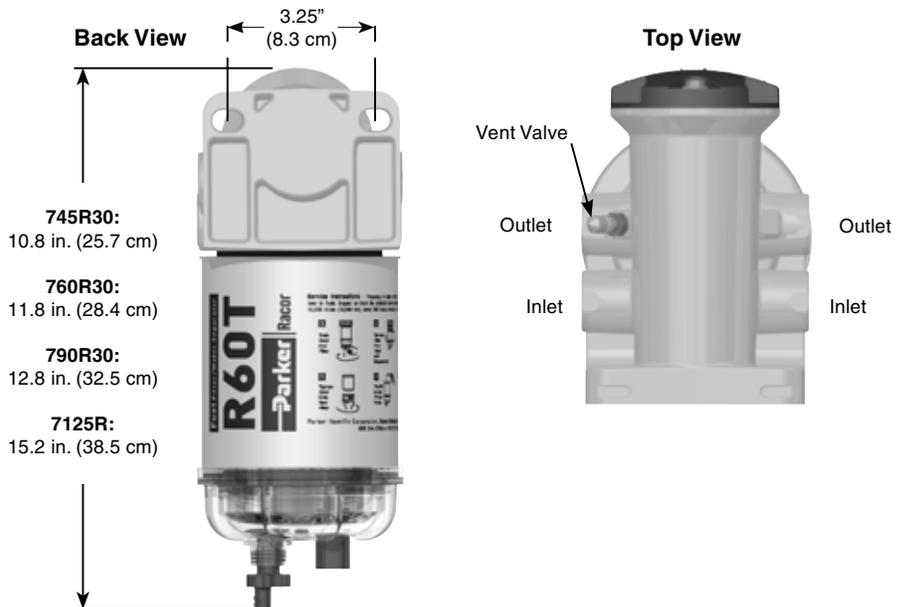
Filterpumps

Installation Diagram



Mounting & Port Information

- Keep all fuel lines and flow restrictions to a minimum.
- Use maximum size fuel hose possible.
- Do not use two 45° fittings where one 90° elbow will work.
- Avoid sharp bends, surfaces that move, sharp edges, or hot areas such as exhaust piping.
- Use 3/8" mounting hardware.
- Mount filter vertically on suction (vacuum) side of fuel transfer pump (or injection pump).



Filterpumps

Installing the Control Panel 12 Volt

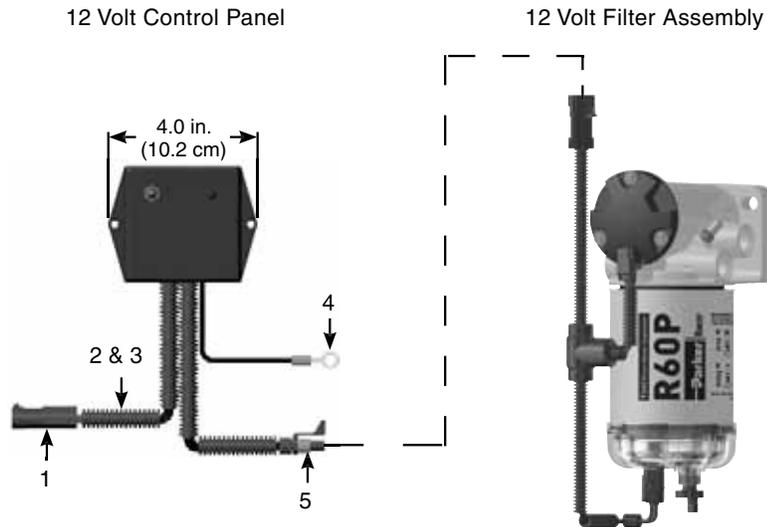
1. **Monaco Connector:**
(cut off if installing on any other application).
2. **Green Wire:**
To remote warning light or cap off.
3. **Red Wire:**
To 7.5 amp fuse, then to +12 volt dc power.
4. **Black Wire:**
To ground.
5. **To Filter Connector.**

Use wire ties to secure wiring.
Connect black wire to ground. Connect red wire through a 7.5 amp in-line fuse to a constant 12 volt dc power source. Connect green wire to an optional remote warning light, if equipped, or cap off.

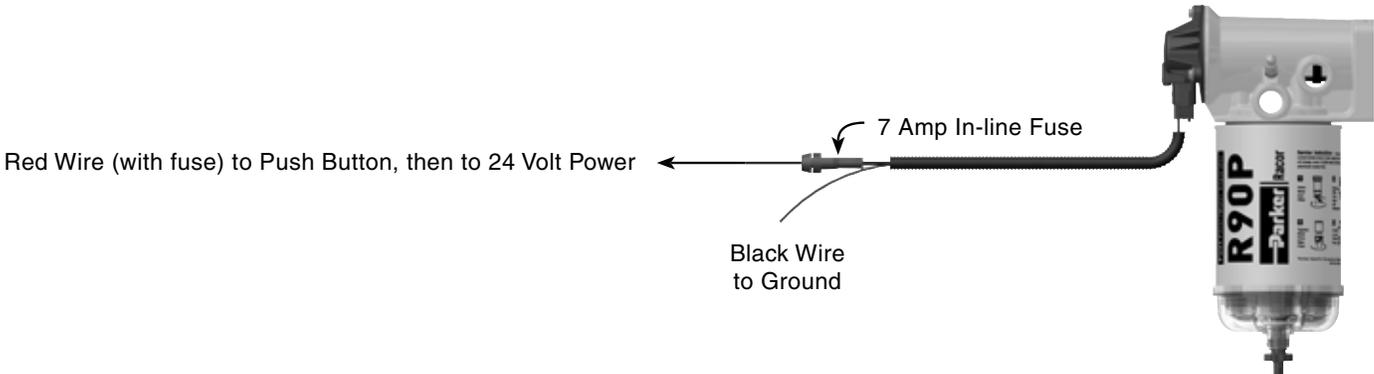
Install control panel in engine compartment. Mount control panel on a solid surface and in an area that is visible and easily accessible.

Use control box as a template to mark locations for mounting holes. Drill holes and mount control box.

Route the filter wiring harness to control panel and attach connectors; push firmly until safety lock engages.



24 Volt



Filterpumps

Lift Pump Filters



The Lift Pump Filter (LPF) has been proven on many original equipment applications. No electrical contacts. No bearings or diaphragms to wear out or fatigue. Endurance life almost doubles nearest competitor.

Two bolt mounting makes installations easy. Nothing to adjust. The pump is self priming to 10 ft.

Stainless steel design allows for no opportunity for corrosion.

The LPF is specifically designed to provide a constant, smooth, dependable supply of fuel to the engine. Priming the fuel system with the LPF removes the air allowing for normal operating conditions. Its small compact design allows for installation in numerous applications where space is an issue.

Product Features:

- 12 or 24 volt Priming Pump
- 100 micron prefilter screen
- Aquabloc®II Filter Technology

| Specifications | 23084 | 23082 |
|---------------------------------|---------------------------------|--------------------|
| Power (Voltage) | 12 volt | 24 volt |
| Max. Flow Rate | 30 GPH (114 LPH) | 30 GPH (114 LPH) |
| Filter Micron Rating | 80 micron | 80 micron |
| Port Size (SAE J1926) | 1/8"-27 NPTF | 1/8"-27 NPTF |
| Height | 7.1 in. (18.0 cm) | 7.1 in. (18.0 cm) |
| Width | 3.2 in. (8.1 cm) | 3.2 in. (8.1 cm) |
| Depth | 3.5 in. (8.9 cm) | 3.5 in. (8.9 cm) |
| Weight (dry) | 2.3 lb (1.0 kg) | 2.3 lb (1.0 kg) |
| Clean Pressure Drop | 0.70 PSI (4.8 kPa) | 0.70 PSI (4.8 kPa) |
| Shut-off Pressure (Min. - Max.) | 9 - 11.5 | 9 - 11.5 |
| Ambient Temp. Range | -40° to +250°F (-40° to +121°C) | |
| Max. Fuel Temp. | 190°F (88°C) | |

Filterpumps

Mounting & Port Information

Keep all fuel lines and flow restrictions to a minimum.

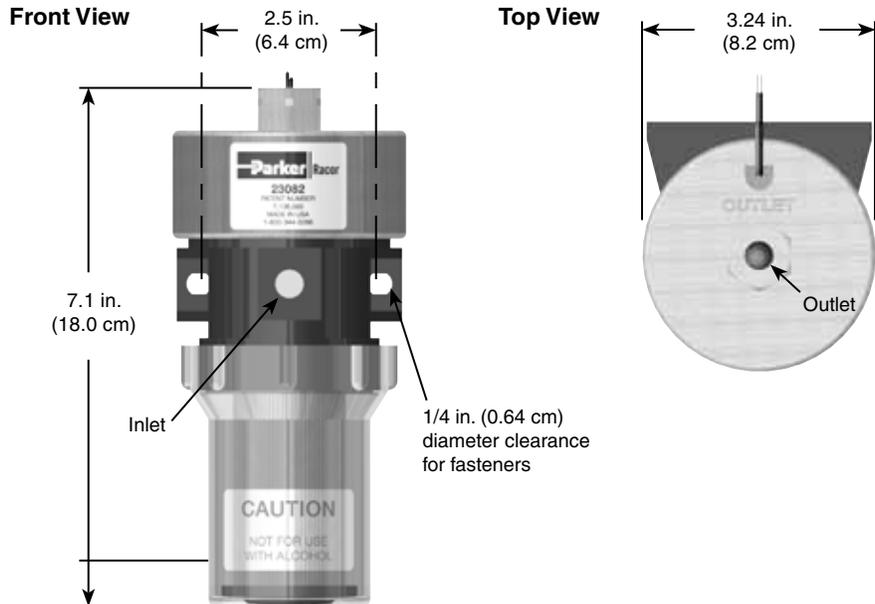
Use maximum size fuel hose possible.

Do not use two 45° fittings where one 90° elbow will work.

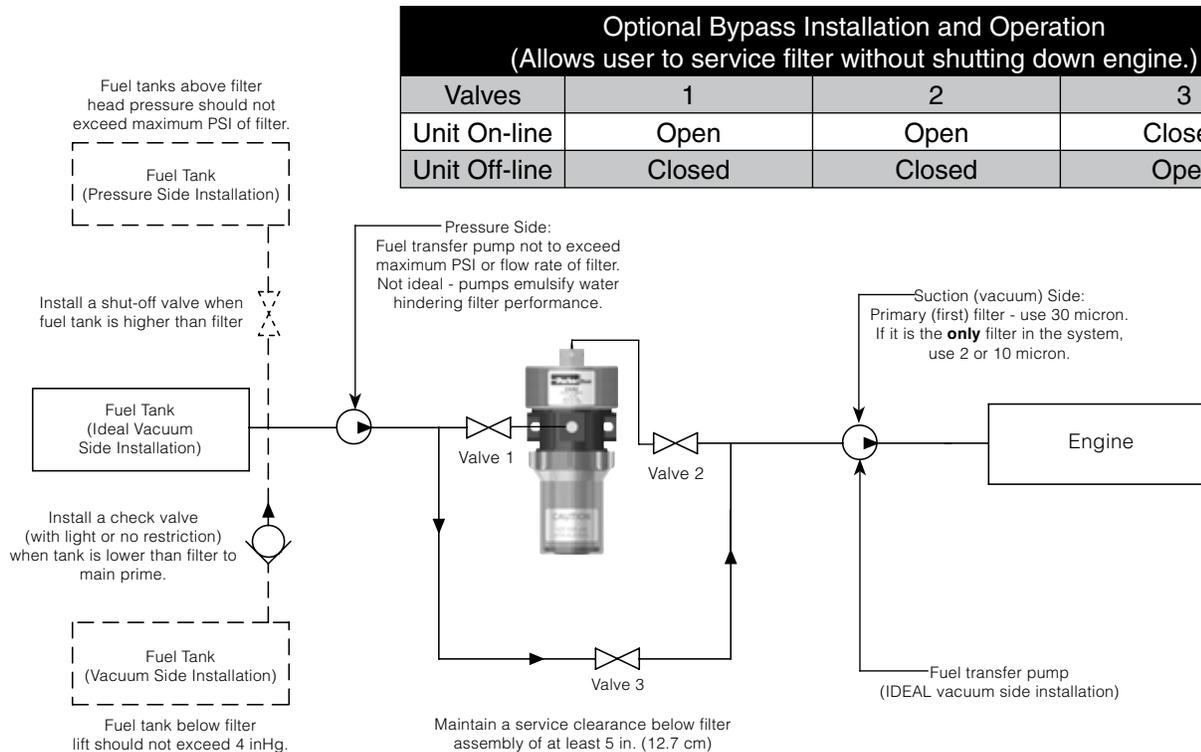
Avoid sharp bends, surfaces that move, sharp edges, or hot areas such as exhaust piping.

Use 1/4" mounting hardware.

Mount filter vertically on suction (vacuum) side of fuel transfer pump (or injection pump).

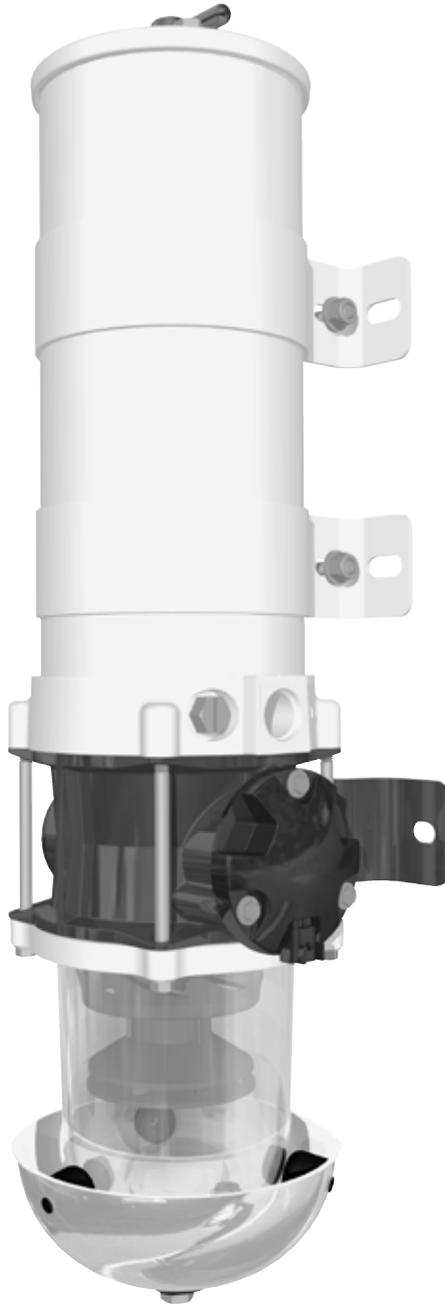


Installation Diagram



Filterpumps

Turbine Series Electric Primer Pump Kit



Product Features:

- Easy installation.
- Pump adds only 3.3" to the over all assembly.
- 60 gallons per hour flow rate while in priming mode.
- 12 VDC brushed electric motor.
- 24 VDC brushless electric motor.
- 100 micron pre-screen.
- One size fits several models.
- Kit includes wiring harness and controller switch.
- Allows for electric re-priming of filter and fuel system.
- Not for use as continuous duty.



The Fuel Primer Pump Kit is an innovative and proprietary system consisting of a pre-screen filter, a flow bypass circuit and a roller cell pump powered by a 12VDC brushed motor or a 24VDC brushless motor.

When the switch is activated the fuel is drawn into the pre-screen and then pumped through the housing refilling the unit with fuel. When not in use the primer pump system is bypassed and the Racor fuel filter/water separator functions normally.

The Primer Pump Kit works on Racor duplex and triplex systems also. This will allow one Racor primer pump to prime the other filter or filters in a manifold system such as a 751000MAX for example.

1000MA with Electric Priming Pump (RKP1912) installed on a sport fishing yacht.

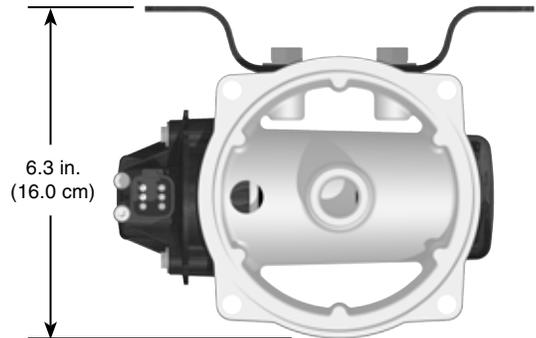
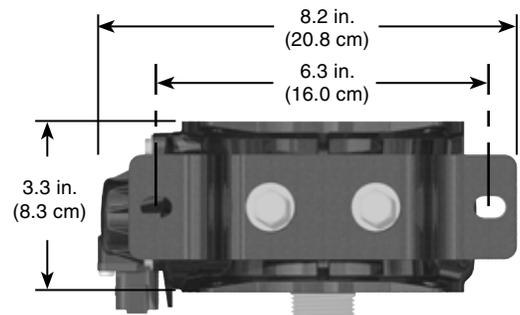
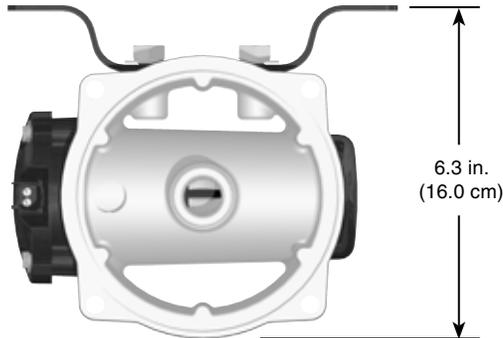
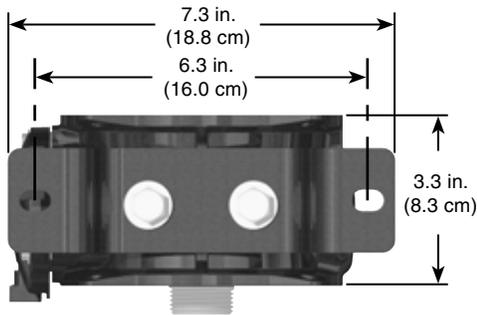
Filterpumps

Filterpumps Overview



| | RKP1912 | RKP1924 |
|-----------------------------|---------------------------------|---------------------|
| Power (Voltage) | 12 volt (Brushed) | 24 volt (Brushless) |
| Max. Flow Rate | 60 GPH (227 LPH) | 60 GPH (227 LPH) |
| Filter Micron Rating | 100 micron | 100 micron |
| Height | 3.3 in. (8.4 cm) | 3.3 in. (8.4 cm) |
| Width | 7.3 in. (18.8 cm) | 8.2 in. (20.8 cm) |
| Depth | 6.3 in. (16.0 cm) | 6.3 in. (16.0 cm) |
| Weight (dry) | 2.3 lb (1.0 kg) | 2.3 lb (1.0 kg) |
| Ambient Temp. Range | -40° to +250°F (-40° to +121°C) | |
| Max. Fuel Temp. | 190°F (88°C) | |

Mounting & Dimensions

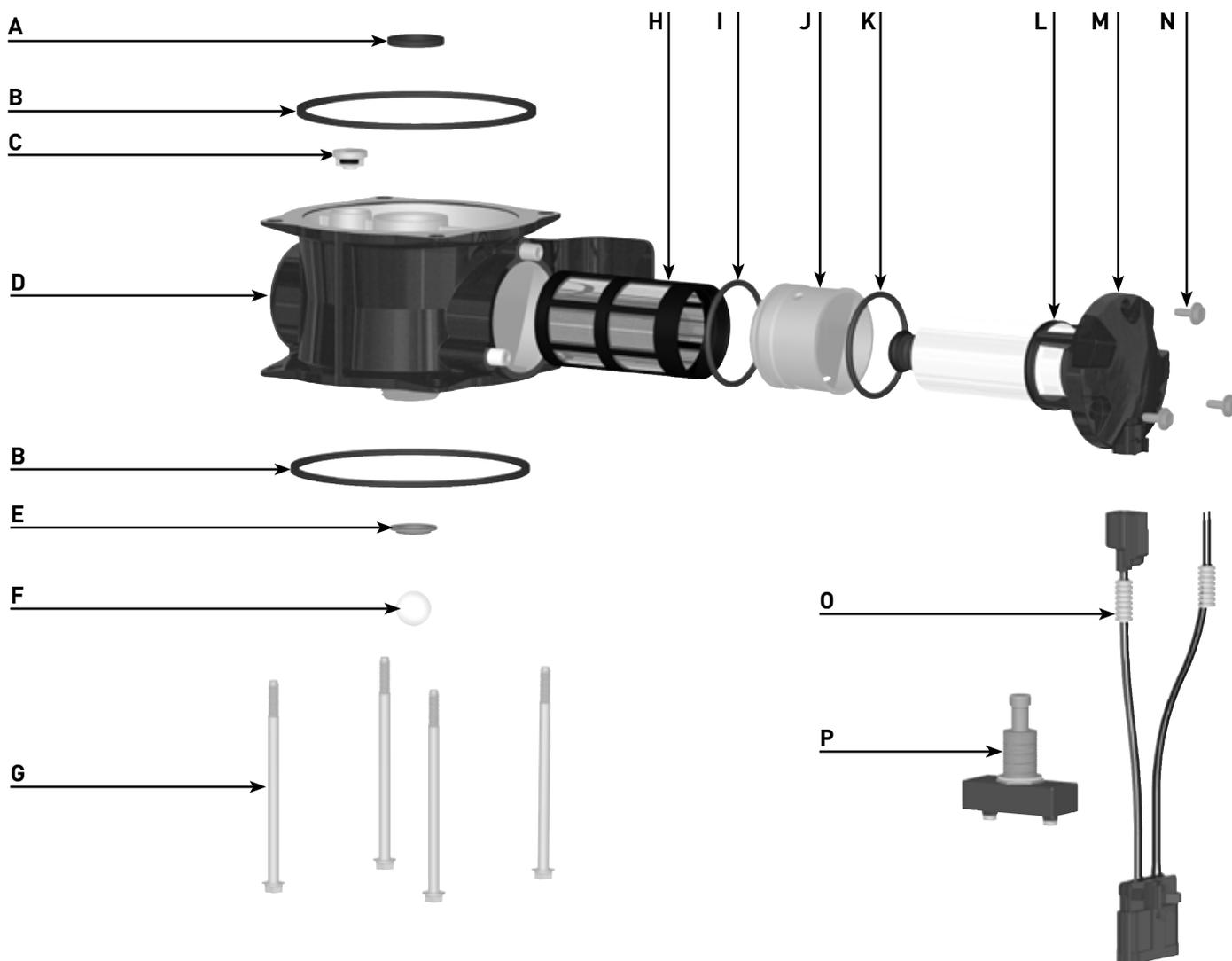


Filterpumps

RKP1912 Part Breakdown

| Description | |
|-------------|---------------------------|
| A | Rubber Gasket |
| B | Housing O-ring (x2) |
| C | Check Valve - Primer Pump |
| D | Primer Pump Housing |
| E | Checkball - Gasket |
| F | Checkball |
| G | Mounting Screws (x4) |
| H | Prescreen Element |

| Description | |
|-------------|-----------------------|
| I | Adapter O-ring |
| J | Adapter |
| K | Pump O-ring |
| L | Body O-ring |
| M | 12V Primer Pump |
| N | Pump/Head Screws (x3) |
| O | 12V Connector Harness |
| P | Push Button Switch |



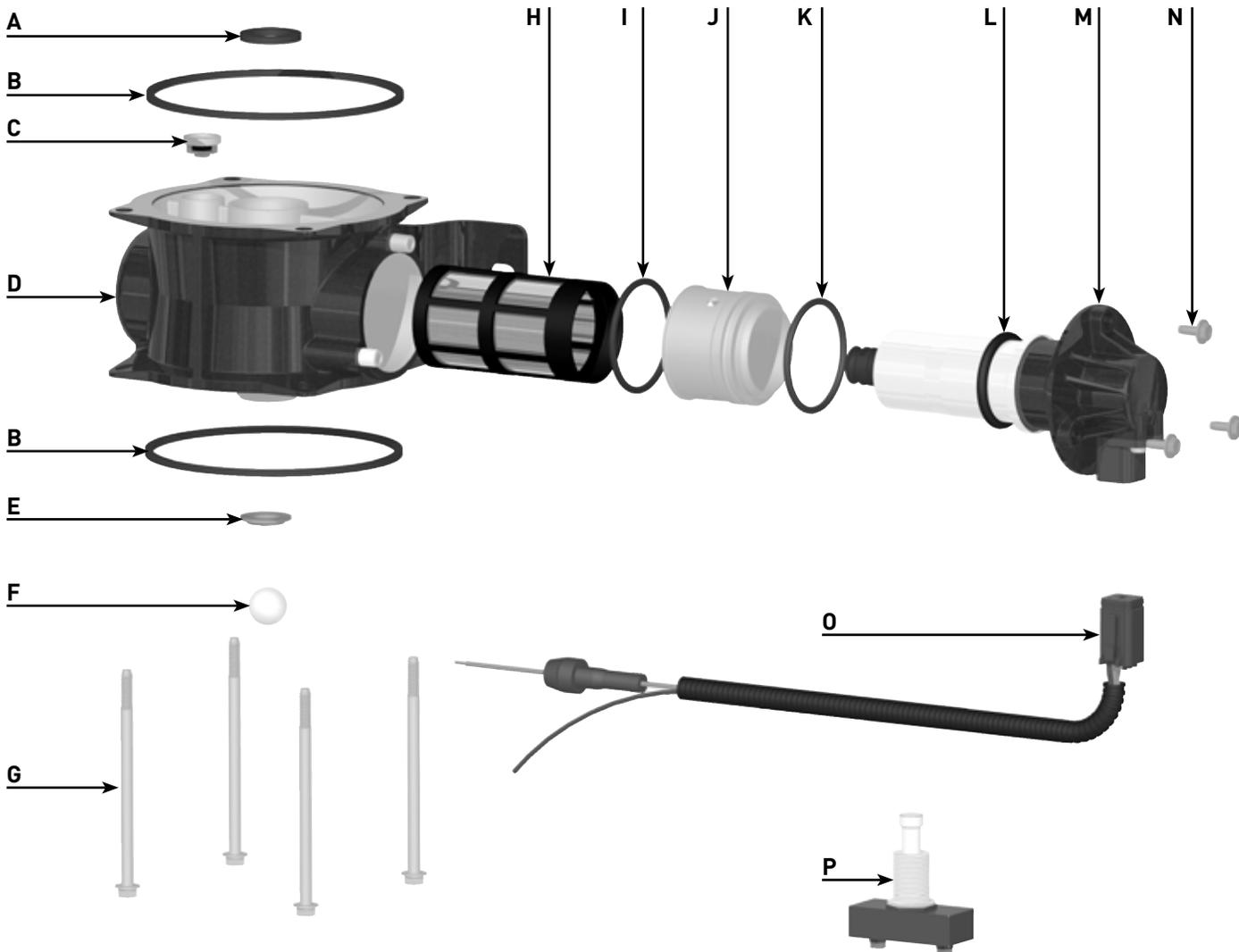
Questions? Contact Technical Support:
 800 344 3286 or 209 521 7860 ext. 7555
 e-mail: racortech@parker.com

Filterpumps

RKP1924 Part Breakdown

| Description | |
|-------------|---------------------------|
| A | Rubber Gasket |
| B | Housing O-ring (x2) |
| C | Check Valve - Primer Pump |
| D | Primer Pump Housing |
| E | Checkball - Gasket |
| F | Checkball |
| G | Mounting Screws (x4) |
| H | Prescreen Element |

| Description | |
|-------------|-----------------------|
| I | Adapter O-ring |
| J | Adapter |
| K | Pump O-ring |
| L | Body O-ring |
| M | 24V Primer Pump |
| N | Pump/Head Screws (x3) |
| O | 24V Connector Harness |
| P | Push Button Switch |



Accessories

REF600LE

Solid State Electronic Flasher

**Overview:**

The REF600LE is suitable for today's longer rigs requiring more lamps, as well as many special need vehicles. These 12 volt power houses generate over 100 million flashes per flasher for optimum value. Proven reliable in years of field testing, each flasher features overload and short protection, 14-bulb capacity, no ground wire, and can be reset.

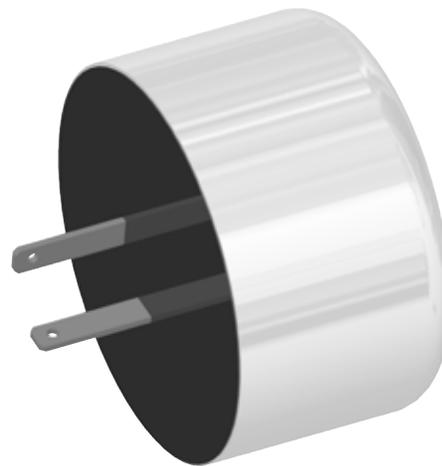
Product Features:

- **Overload and Short Protection**
- **Fallout History of Less Than One Tenth of One Percent**
- **14-Bulb Capacity**
- **Handles 30 Amps**
- **No Ground Wire**
- **Resettable**

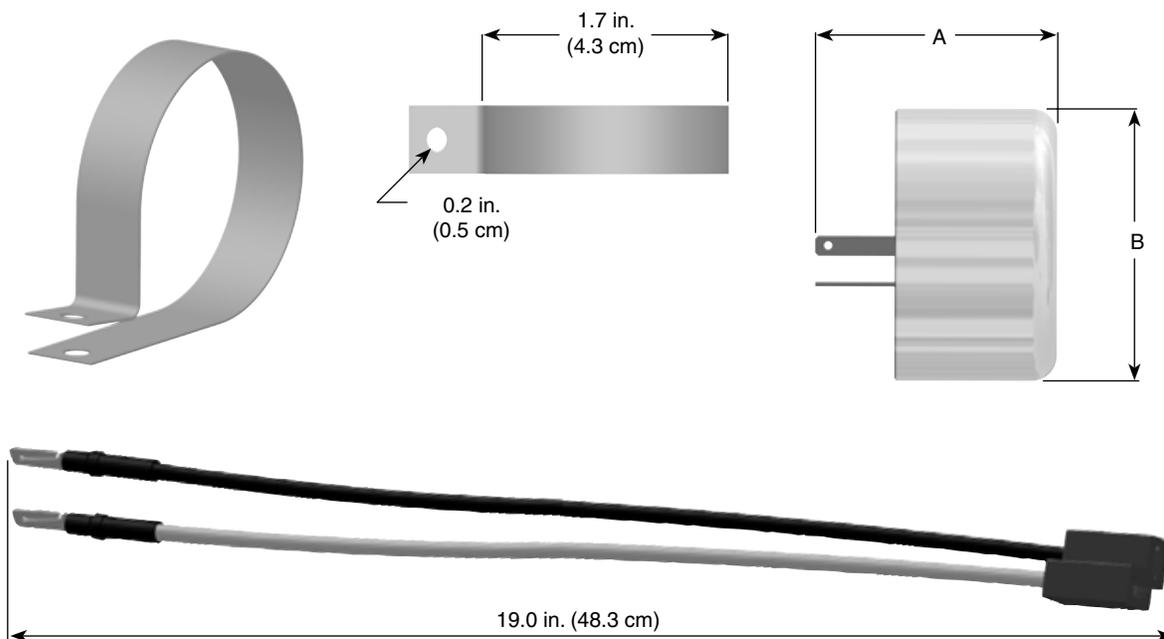
Accessories

Specifications

| REF600LE | |
|-----------------------|------------------|
| Power Supply | 12 Volt |
| Power Handling | 30 Amps |
| Maximum Bulb Capacity | 14 |
| Flash Count | >100,000,000 |
| Depth (A) | 1.5 in. (3.8 cm) |
| Diameter (B) | 1.7 in. (4.3 cm) |
| Weight | 0.3 lb (0.14 kg) |



Dimensions



Replacement Parts

| | <u>Part Number</u> | <u>Description</u> |
|----|--------------------|---|
| 1. | REF600LE | Solid State Electronic Flasher (includes #'s 2 and 3) |
| 2. | N/A | Mounting Clamp |
| 3. | N/A | Wire Harness |

Additional Parts (not shown)
14391 Installation Instructions



Accessories

RK22936 No Spill Filler Spout

These versatile filler spouts have unlimited uses. They fit many Racor products including additives bottles and the flexible design allows users to bend the spout for flow control. This kit includes 4 hanging strips with 12 pieces on each strip; that's a total of 48 pieces per kit.



RK 31605 Parker Super O-lube

Another great product that helps with the installation of our filter assemblies and ensures a correct seal. Parker Super O-lube has a silicone base and will not harm O-rings, seals and other gaskets. Available in a 2 oz. tube which gives you plenty to go around. One 2 oz. tube per kit.



RK 22628 Bowl Wrench

Racor offers a hand wrench to remove all metal and see-thru Spin-On bowls that feature external ribs. By simply fitting the wrench over the bowl ribs, the bowl can be removed from the replaceable Spin-On element, or filter housing with little effort. The wrench is made of a corrosion proof, high-impact, high-strength engineered polymer. One bowl wrench per kit.



Accessories

Water Probe Kits

Racor offers a wide selection of water probes, each designed for use with particular models and installation requirements. These probes are available in various configurations to fit every Racor filter/separator. The water probe is only a component in the water detection system and will

not work without a Racor electronic detection module (see next two pages).

The **RK30880** has the electronic detection module built-in to its design and has the simplest installation procedure. Multiplex units must use

one probe for each collection bowl but only one water detection module is needed. Wiring instructions are supplied with each water detection module sold Use the guide below to find the correct probe for your application.



| Specifications | RK 21069 | RK 30964 | RK 22371 | RK 30880 |
|--|---|--|--|--|
| Threads | 1/2"-20 Threads | 1/2"-20 Threads | 9/16"-18 Threads | 1/2"-20 Threads |
| Description | One piece design with two wires. Requires a detection module. | Includes detachable 2-wire connector. Requires a detection module. | Includes detachable 2-wire connector. Requires a detection module. | Includes detachable 3-wire connector, built-in detection electronics and under-dash warning light. Probe sends ground signal to light. |
| Voltage | 12 or 24 vdc | 12 or 24 vdc | 12 or 24 vdc | 12 or 24 vdc |
| Power Draw: (12 volt) (24 volt) | N/A | N/A | N/A | 5 Milliamps 10 Milliamps |
| Maximum Load | N/A | N/A | N/A | 1 Amp |
| Weight | 0.03 lb (0.01 kg) | 0.02 lb (0.01 kg) | 0.1 lb (0.05 kg) | 0.4 lb (0.2 kg) |

Caution: Never wire a water probe directly to voltage or another brand of detection module.

Accessories

RK 21069 Replacement Part List

RK 21069 Water Probe
(one piece design)



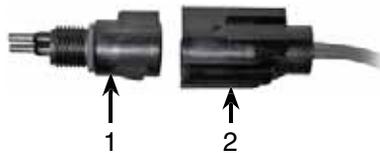
RK 30964 Replacement Part List

- 1. RK 30902 Water Probe
- 2. 30904 Connector



RK 22371 Replacement Part List

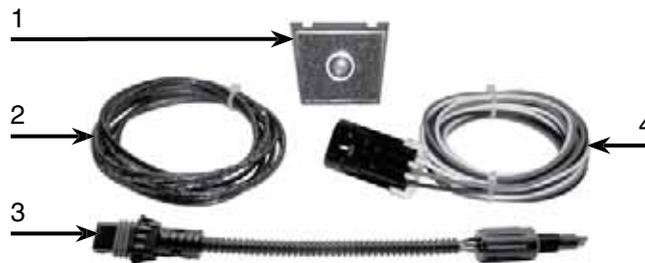
- 1. RK 21145 Water Probe
- 2. RK 21199 Connector



RK 30880 Replacement Part List

(individual components NOT sold separately)

- 1. Light Panel
- 2. 14GA Black Wire
- 3. Water Probe with Male Connector
- 4. Three Wire Female Connector



Accessories

Water Detection Modules

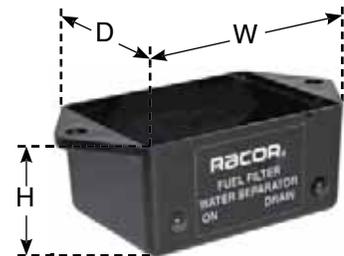
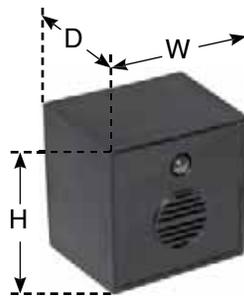
Racor Water Detection Kits are available in a wide selection for various installation requirements. Under dash, in-dash and remote mount, these solid-state units may be used with any Racor fuel filter/water separator and water probe. They are manufactured

using the highest quality materials and are all 100% electrically tested.

An electric detection module analyzes electrical resistance at the water probe and determines if water is present. If so, the detection module operates to indicate water, based on

its features listed below. All units reset automatically after water is removed (unless specified). All water detection module kits include an RK21069 water probe.

Under Dash



| Specifications | RK 12870 | RK 12871 | RK 20725 | RK 20725-24 |
|---------------------------|--|---------------------------|--|-------------------------|
| Voltage | 12 vdc | 24 vdc | 12 vdc | 24 vdc |
| Features | Light and Buzzer | Light and Buzzer | Light Only | Light Only |
| Description | Lamp illuminates and buzzer sounds when water is detected. Water must be drained to reset light and stop buzzer. | Same as RK12870 | Green ON lamp illuminates with power and red DRAIN lamp illuminates when water is detected. Includes initial power-up self diagnosis feature & circuit protection. | Same as RK20725 |
| Dimensions | 1.4" H x 1.25" D x 1.4" W | 1.4" H x 1.25" D x 1.4" W | 1.0" H x 1.5" D x 2.0 W | 1.0" H x 1.5" D x 2.0 W |
| Power Draw | 1 Milliamp | 1 Milliamp | 10 Milliamps | 10 Milliamps |
| Max. Internal Load | 30 Milliamps | 30 Milliamps | 30 Milliamps | 30 Milliamps |
| Weight | 0.2 lb (0.1 kg) | 0.2 lb (0.1 kg) | 0.4 lb (0.2 kg) | 0.4 lb (0.2 kg) |

Accessories

11-1048 Conversion Kit

Introduction

The 11-1048 conversion kit converts a RK12870 or RK12871 electronic water detection module from under-dash mounting to in-dash mounting, see image below.

Description

1. Mounting Bracket
2. Face Plate
3. (2) #6 x 3/8" Screws

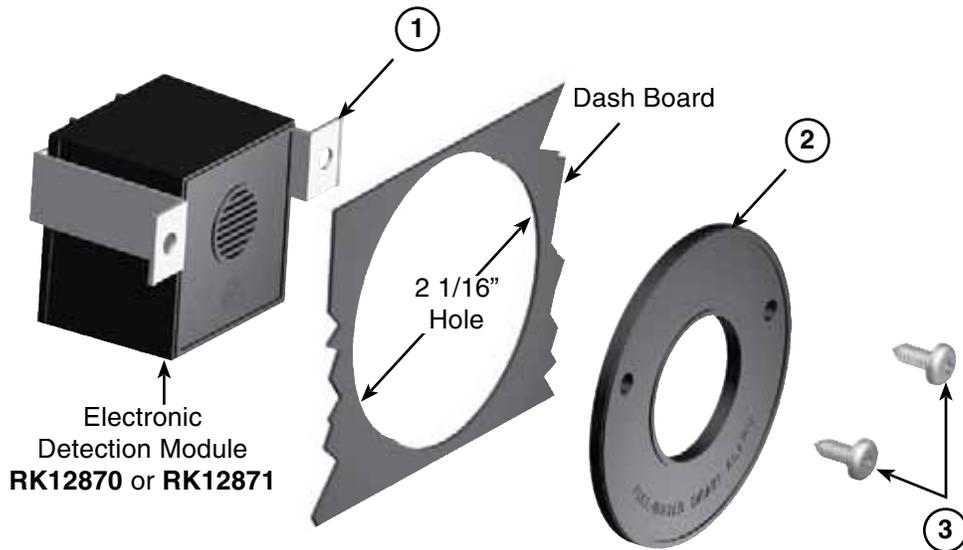
Installation

Slide metal bracket onto back of a electronic detection module. Verify bracket fits snugly between raised bracket guides on alarm's back cover.

Insert face plate onto 2 1/16" diameter hole. Align holes in face plate at top half of opening. Insert screws into face plate holes.

While holding face plate and screws in place, bring electronic detection module with attached metal bracket up behind opening. Align holes in metal bracket with screws.

Tighten screws with Phillips screw driver until assembly is snug—do not overtighten. (see 11-1049 Installation Instructions for more information).



Accessories

Water Detection Modules In Dash



| Specifications | RK 20726 | RK 11-1570 |
|--|--|---|
| Voltage | 12 or 24 vdc | 12 or 24 vdc |
| Features | Light & Buzzer | Light & Buzzer |
| Description | Red DRAIN lamp illuminates continuously and buzzer sounds momentarily when water is detected. Power-up self diagnosis feature and circuit protection included. | Includes pre-set vacuum switch (12in.Hg.), connector and outlet adapter fitting. The red DRAIN or CHANGE FILTER lamps illuminate continuously and buzzer sounds momentarily when water is detected. |
| Dimensions¹ | 2.2" Diameter x 3.2" Depth | 2.2" Diameter x 2.0" Depth |
| Power Draw: (12 volt) (24 volt) | 3 Milliamps 13 Milliamps | 3 Milliamps 14 Milliamps |
| Max. Internal Load | 30 Milliamps | 30 Milliamps |
| Weight | 0.4 lb (0.2 kg) | 0.9 lb (0.4 kg) |

¹ Cut 2.0" diameter hole to mount gauges in instrument panel.

Accessories

Remote-Mount Water Detection Modules



| Specifications | RK14329 | RK14321 | 14332 |
|---------------------------|--|--|--|
| Voltage | 12 vdc | 24 vdc | 12 vdc |
| Features | Sends Hot (+) Signal | Sends Hot (+) Signal | Sends Ground (-) Signal |
| Description | Receives a signal from a water probe or vacuum switch (not included) and then sends a signal to a horn or lamp. Must be used with a relay if power draw is over 1 amp. | Same as RK14329 but sends 24 vdc hot (+) signal. | Same as RK14329 but sends 12 vdc ground (-) signal |
| Dimensions | 0.7" H x 2.5" D x 2.8" W | 1.0" H x 1.5" D x 2.0 W | 1.0" H x 1.5" D x 2.0 W |
| Power Draw | 14 Milliamps | 10 Milliamps | 10 Milliamps |
| Max. Internal Load | 30 Milliamps | 30 Milliamps | 30 Milliamps |
| Weight | 0.3 lb (0.1 kg) | 0.4 lb (0.2 kg) | 0.4 lb (0.2 kg) |

1606B Part List

- 1. RK11233 Vacuum Gauge
- 2. 7232-4 Adapter Fitting (1/8" NPTM x #4 (1/4") hose)
- 3. 7234-4 Adapter Fitting (1/4" swivel x #4 (1/4") hose)
- 11-1115 Installation Instructions



Accessories

Vacuum Gauges

Vacuum gauges are available to monitor element condition and as the filter element slowly becomes clogged with contaminants the restriction (resistance to flow) increases. The fuel pump still tries to draw fuel (suction) but because of this restriction less fuel is delivered to the engine and instead more air is pulled from it (fuel de-gassing). These results can cause the engine to lose power and eventually stall.

By installing a vacuum gauge in your fuel system (at the outlet side of the Racor filter) visual monitoring of element condition is possible at a glance. At the first indication of decreased performance, note the dial reading or apply the 'red line' decal provided with most kits. This will assist in knowing when to change the filter at the next interval.



| Specifications | RK 11233 | 1606B |
|--------------------|--|---|
| Description | Silicone dampened, 0-30 inHg. Instrument panel installation. | Includes gauge and two fittings (see below). Instrument panel installation. |
| Threads | 1/4" NPT back bracket mount. | 1/4" NPT back bracket mount. |
| Dimensions | 2.0" W x 1.9" D | 2.0" W x 1.9" D |
| Dial | 2 in. | 2 in. |
| Weight | 0.4 lb (0.2 kg) | 0.4 lb (0.2 kg) |

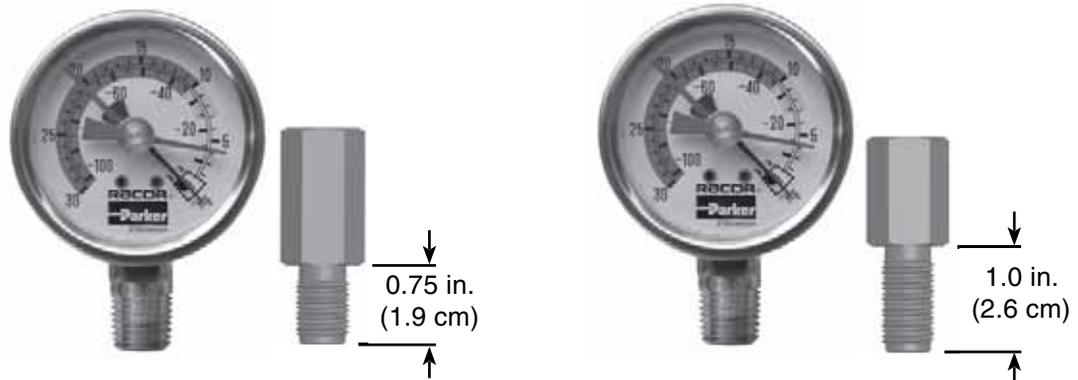
Special Notes: For severe vibration applications, mount the gauge on a stable, remote location and connect to the source using flexible tubing. After September 1999, Racor converted many liquid-filled gauges to new silicone dampened movement. This new (dry) technology provides a vibration resistant design that never leaks fluid or requires adjustments due to temperature or altitude variations.

Accessories

T-handle Vacuum Gauge

T-handle vacuum gauges are available to monitor element condition and as the filter element slowly becomes clogged with contaminants the restriction (resistance to flow) increases. The fuel pump still tries to draw fuel (suction) but because of this restriction less fuel is delivered to the engine and instead more air is pulled from it (fuel de-gassing). These results can cause the engine to lose power and eventually stall.

By installing a vacuum gauge in your fuel system (at the outlet side of the Racor filter) visual monitoring of element condition is possible at a glance. At the first indication of decreased performance, note the dial reading or apply the 'red line' decal provided with most kits. This will assist in knowing when to change the filter at the next interval.



| Specifications | RK11-1969 | RK 11-1669 |
|--------------------|---|---|
| Description | 500FG units only. T-handle vacuum gauge kit includes gauge & 11-1969 Fitting 9/16"-18 UNF | For 900FH & 1000FH units only. T-handle vacuum gauge kit includes gauge & 11-1668 Fitting, 9/16"-18 UNF |
| Threads | ¼" NPT bottom boss mount. | ¼" NPT bottom boss mount. |
| Dimensions | 2.0" W x 1.1" D | 2.0" W x 1.1" D |
| Dial | 2 in. | 2 in. |
| Weight | 0.3 lb (0.1 kg) | 0.3 lb (0.1 kg) |

Special Notes: For severe vibration applications, mount the gauge on a stable, remote location and connect to the source using flexible tubing. After September 1999, Racor converted many liquid-filled gauges to new silicone dampened movement. This new (dry) technology provides a vibration resistant design that never leaks fluid or requires adjustments due to temperature or altitude variations.

Accessories

Compound Gauge Kits

Compound gauges are recommended for applications where pressure is occasionally present. These conditions are typically a result of 'head' pressure which is present in overhead fuel tank installations. Whatever the reason, compound gauges should be

used because damage may result if a straight vacuum only gauge is used. Liquid filled (glycerin) gauges are recommended for high-vibration and pulsation applications (not engine mounted).



| Specifications | RK 19476 |
|----------------|------------------------|
| Description | 0-25 inHg / 0-15 PSI. |
| Threads | 1/4" NPT bottom mount. |
| Dimensions | 2.0" W x 1.1" D |
| Dial | 2 in. |
| Weight | 0.2 lb (0.1 kg) |

Special Notes: For severe vibration applications, mount the gauge on a stable, remote location and connect to the source using flexible tubing.

Accessories

Vacuum Restriction Indicators

RK 32036 and RK32037

Vacuum restriction indicators monitor element condition as the filter slowly becomes clogged with contaminants. As the element gets dirty, restriction increases and less fuel is delivered to your engine causing the engine to lose power and eventually stall.

By installing a vacuum indicator in your fuel system, visual monitoring of element condition is possible at a glance, increasing fuel system troubleshooting efficiency, eliminating guess work, and lengthening element change intervals.



RK 32036
(3/8" SAE Threads)

RK32037
(1/8" NPT Threads)

CAUTION: Do not use with gasoline applications!

Accessories

Filter “Block-Off” Caps



| Specifications | 22021 | 11548 |
|-------------------------|--|---|
| Description | Ford Spin-On Cap Assembly (not a filter) | Cummins Spin-On Cap Assembly (not a filter) |
| Threads | 1"-14 | 1"-14 |
| Gasket Outside Diameter | 3.60" x 0.25" thick | 2.83" x 0.22" thick |
| Dimension | 3.63" diameter, 3.5" long | 3.63" diameter, 3.5" long |
| Weight | 0.3 lb (0.1 kg) | 0.3 lb (0.1 kg) |

Mounting Bracket Kit



| Specifications | RK 11-1518 |
|----------------|---|
| Description | Frame Rail Mounting Bracket Kit. Features an adjustable powder coated 10 gauge steel design to fit frame rails up to 10" X 3 3/4" and 13/16" thick. Includes mounting hardware. |
| Weight | 6.0 lb (2.7 kg) |

Accessories

OEM Kits

RK 31923

F540/550 Bracket, Hose and Fittings Kit:

This kit is designed for use with 1999 and newer 2 wheel drive (2WD) and 4 wheel drive (4WD) vehicles.

For this application the 645R30 model fuel filter/water separator (30 micron primary filter element) is suggested - order separately. For colder climate applications, the heated version is recommended: 645R1230 (this model includes a 12 vdc, 200 watt in-bowl heater - order relay kit number RK 11861 unless your vehicle can accommodate a 17 amp draw at startup).



RK32313

DMAX Primary Fuel Filter Kit:

This primary fuel filter kit was designed specifically for General Motors pickups (extended cab and crew cab only) with 6.6L Duramax Diesel engines.

Kit Includes:

| Qty | Part No. | Description |
|-----|------------------|--------------------------------|
| 1 | 11-1962 | Primary Filter Label |
| 1 | RK 11861 | 12v Heater Relay Kit |
| 4 | 11801 | 3/8"-16 X 1.5 Capscrews |
| 8 | 11080 | 3/8" SAE Flat Washers |
| 4 | 11901 | 3/8"-16 Self-locking Hexnuts |
| 12 | 11114 | 6 3/4" Plastic Wire Ties |
| 2 | 11-1220 | 3/8" Ring Terminals |
| 2 | 12252 | Wire Splice Connectors |
| 2 | 911-N6-H8 | 3/8" NPT X 1/2" Hose Fittings |
| 2 | 32280 | 1/2" Hose X 1/2" Tube Fittings |
| 4 | 50016 | #10 Hose Clamps |
| 1 | 660R1210 | Fuel Filter/Water Separator |
| 1 | 32312 | #8 X 36" Rubber Hose |
| 1 | 32311 | Filter Bracket |
| 1 | 32314 | Water Sensor/Harness Kit |

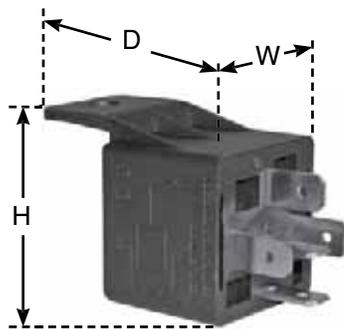
Illustration does not show all components.



Accessories

Electrical Heater relay Kits

The following relay kits may be necessary when installing Racor Heater Kits due to the power demand. Standard OE fuses, wiring and alternators may be unable to carry the load without overheating or potential shorting, creating a serious condition.



| Specifications | RK 11861 | RK 11862 | RK 19490-12 | RK 19490-24 |
|-------------------------|---|---|--------------------------|--------------------------|
| Description | Heater Relay Kit, Includes fuse and holder. | Heater Relay Kit, Includes fuse and holder. | Heavy-Duty Relay Kit | Heavy-Duty Relay Kit |
| Voltage | 12 vdc | 24 vdc | 12 vdc | 24 vdc |
| Detection Module | Remote Mount | Remote Mount | Under Dash | Under Dash |
| Maximum Watts | 300 | 360 | 600 | 900 |
| Maximum Amps | 25 | 15 | 50 | 37 |
| Dimensions | 1.3" H x 1.6" D x 1.1" W | 1.3" H x 1.6" D x 1.1" W | 1.7" H x 2.9" D x 5.1" W | 1.7" H x 2.9" D x 5.1" W |
| Weight | 0.3 lb (0.1 kg) | 0.3 lb (0.1 kg) | 1.6 lb (0.7 kg) | 1.6 lb (0.7 kg) |

Caution: If you are uncertain if your electrical system can provide the additional power draw, consult your equipment dealer or qualified electrician.

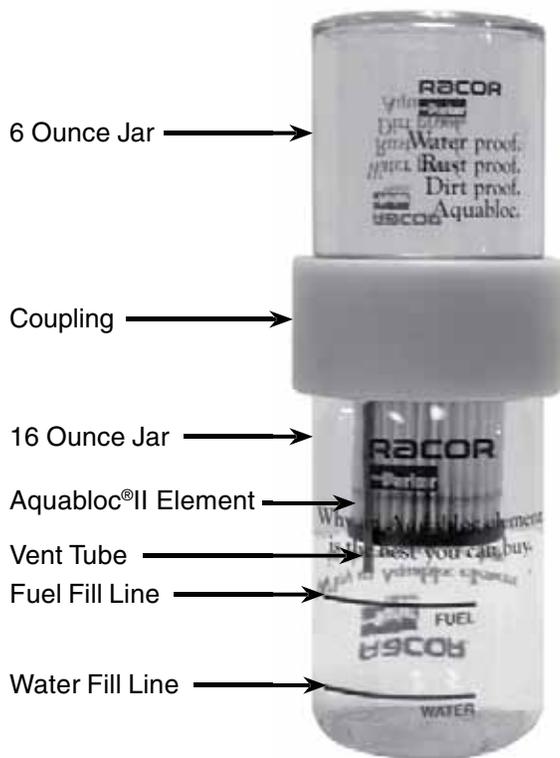
Accessories

12879

Aquabloc®II Demonstration Unit

The Racor Attache Aquabloc®II Demonstration Unit is a unique way of showing the exceptional water separation capabilities of our Aquabloc®II paper media. This demonstration will show that our Aquabloc®II paper media will easily separate a fuel/water mixture and allow fuel to pass through the element while water is blocked and held back.

This demonstration can be repeated many times with the same element and will prove that Racor Aquabloc®II elements are far superior than other elements on the market.



Before Demonstration



Completed Demonstration

FPM-050

Fuel Polishing Module

How it works, the advantages of daily fuel polishing

As diesel fuel warms through engine use or the daily heat of the sun, its natural capacity to absorb water increases, dissolving and dispersing a percentage of any water in the tank. When the fuel cools, this dissolved water desorbs into a bacteria harboring emulsified suspension. By flowing the fuel gently over many hours, the FPM maximizes your filter's ability to separate this difficult to remove emulsion and filter out particles.

Benefits:

- Daily fuel maintenance keeps fuel dry, promoting a bacteria-free environment & preventing contaminant build-up
- Reduces the need to use expensive fuel treatments and additives

- Patented solid state technology consumes only 150 mA, minimizing battery drain and enabling continuous fuel maintenance. Unit can be run off a small solar panel
- Breakthrough technology allows for fuel maintenance during engine down time and off-season storage



| Specifications | FPM-050 |
|---------------------------------------|--|
| Filtration Rate | 50 gallons per day (up to 350 gallons per week) |
| Power Requirements | less than 2 watt (less than 3A-hrs per day) |
| Internal Pressure Drop | less than 0.5 PSI |
| Voltage Requirements | 10-16 VDC, 12 VDC nominal |
| Approximate Dimensions (Body) | 3.8" L x 2.47" H x 2.14" D |
| Approximate Dimensions (with Bracket) | 3.87" L x 4.48" H x 2.14" D |
| Ports (Inlet & Outlet) | ³ / ₈ " NPTF, Recirculation - ¹ / ₄ " NPTF |
| Weight | less than 2 lbs. |
| Acceptable Fuels | diesel, biodiesel, kersone |
| Connections | includes 18 AWG leads |

Note: Actual flow rate is system dependent

Note: Not compatible with gasoline or other flammable liquids

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

Accessories

FPM-PTC-12

Programmable Timer/Controller for FPM

Benefits:

- Easy to install enclosure can be flush - or surface - mounted
- Programmable timer can control common appliances to save energy and increase safety and security
- Customize to any schedule with up to 8 daily switching cycles
- Compatible with 12 VDC systems and appliances
- Enables unattended fuel polishing when used with a Parker Fuel Polishing Module
- Splash proof enclosure protects timer from harsh environments



| Specifications | FPM-PTC-12 |
|-----------------------|---|
| Switch Type | single pole/single throw |
| Switch Current Rating | 10 A at 25°C, 16 at 40°C |
| Operating Voltage | 12 VDC nominal |
| Connections | includes 18 AWG leads |
| Operating Range | 14° F (-10°C) to 131° F (55°C) |
| Overall Size | 3.95" diameter x 1.68" deep (including cover) |
| Approximate Weight | 0.75 lbs |
| Mounting | #4 screws recommended |

800D-5REC-D

Heavy-Duty Filter/Recycler Buggy

Installation and Service Instructions

Instruction Part Number 14406 Rev -

This mobile unit can serve a variety of applications at various locations using minimal floor space. It is generally used in a truck service shop for filtering/recycling/transferring fuel from tank to tank. Used for this purpose they remove contaminants from fuel using the following legendary three stage process:

Stage 1 - Separation

As fuel enters the assembly, it moves through the centrifuge and spins off large solids and water droplets, which are heavier than fuel, and fall to the bottom of the collection bowl.

Stage 2 - Coalescing

Small water droplets bead-up on the surface of the conical baffle and cartridge filter. When heavy enough, they too fall to the bottom of the collection bowl.

Stage 3 - Filtration

Proprietary Aquabloc® II cartridge filters repel water and remove contaminants from fuel down to 2 micron (nominal).

Product Features:

- Portable and easy to use
- Replacement filters available to 2 micron
- Easy to service
- Simple installation
- Heavy-duty construction
- Increased fuel efficiency
- Clear collection bowl
- Self-venting water drain



Operating the Recycler

Place Fuel Tank Suction Line (15 ft max. length) so that fuel is drawn from bottom most portion of the tank. The Fuel Tank Return Line (15 ft max. length) is to return filtered fuel to the top of fuel tank (see Operation Diagram below).

Priming/Maintenance Instructions

1. Switch pump off.
2. Open drain valves on bottom of filters. Drain all contaminants. Close drain valves.
3. Remove T-handles and lids from top of filter housings.
4. Fill filter housings with clean fuel.
5. Lubricate lid gaskets and T-handle O-rings with clean fuel or motor oil.
6. Replace lids and T-handles, tighten snugly by hand - do not use tools.

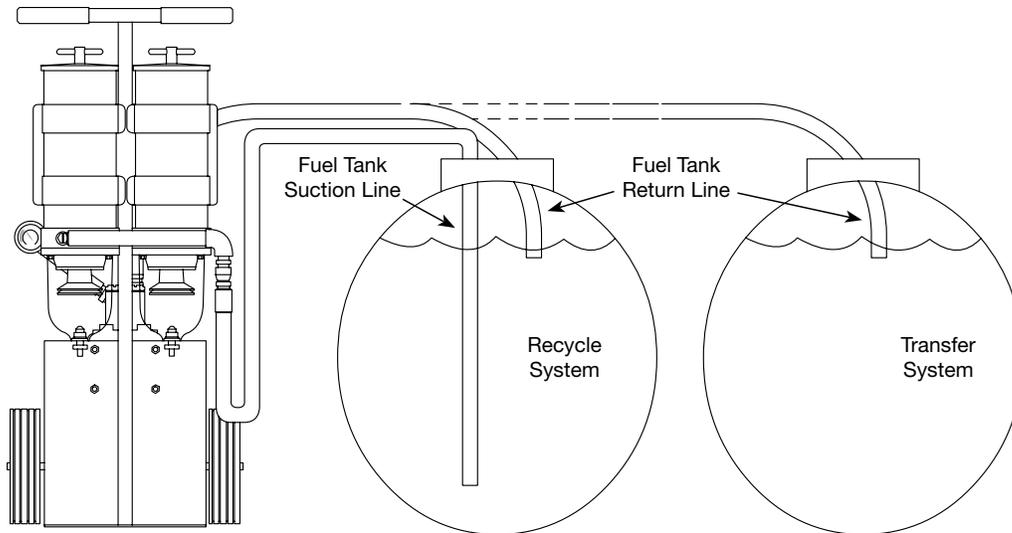
Filter Replacement

1. Switch pump off.
2. Remove T-handles and lids.
3. Remove filters by holding bail handles and slowly pulling upward with a twisting motion. Dispose of properly.
4. Install new filters.
5. Fill filter housings with clean fuel.
6. Lubricate lid gaskets and T-handle O-rings with clean fuel or motor oil.
7. Replace lids and T-handles, tighten snugly by hand - do not use tools.

Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

Accessories

Operation Diagram



Troubleshooting

| Mechanical Symptom | Solution | Electrical Symptom | Solution |
|---|---|--|---|
| Unit will not prime. | Unit not filled with fuel. (see priming instructions) | Unit will not turn on. | Motor impellar is bound. (carefully turn motor fan in rear with a screwdriver.) |
| | T-handle not tight. (tighten) | | Loose wiring. (tighten) |
| | Hose fittings are loose. (tighten) | | Motor overheated and turned off. (turn power off allowing motor to cool.) |
| | Drain valve open. (close valve) | | |
| No fuel flow or low flow, high vacuum restriction, or poor filter life. | Filters clogged. (replace filters) | Caution: Turn off power when performing check list on motor. | |
| | Hose restricted. (check hose length, may be a pinched or plugged hose.) | | |
| | Viscosity of fuel too high. (fuel must be heated.) | | |

Accessories

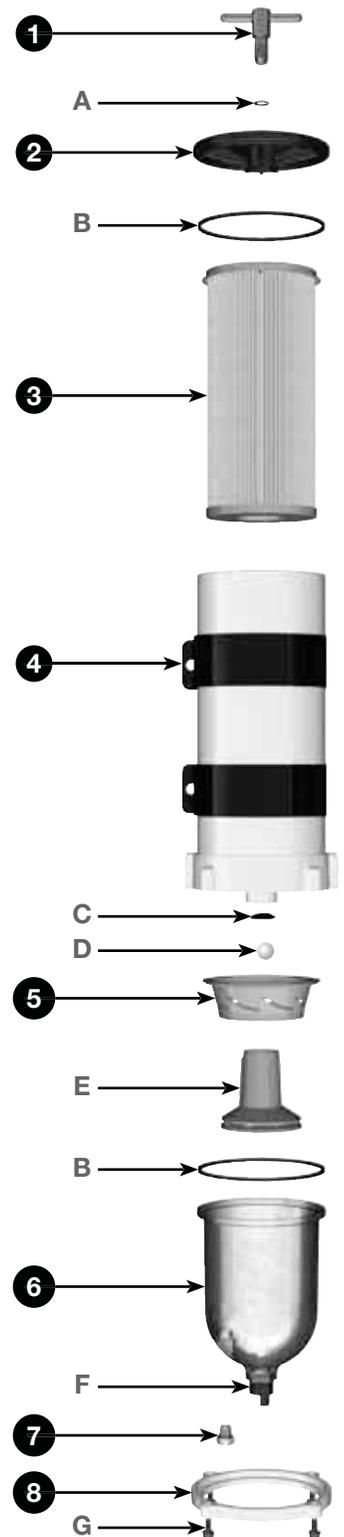
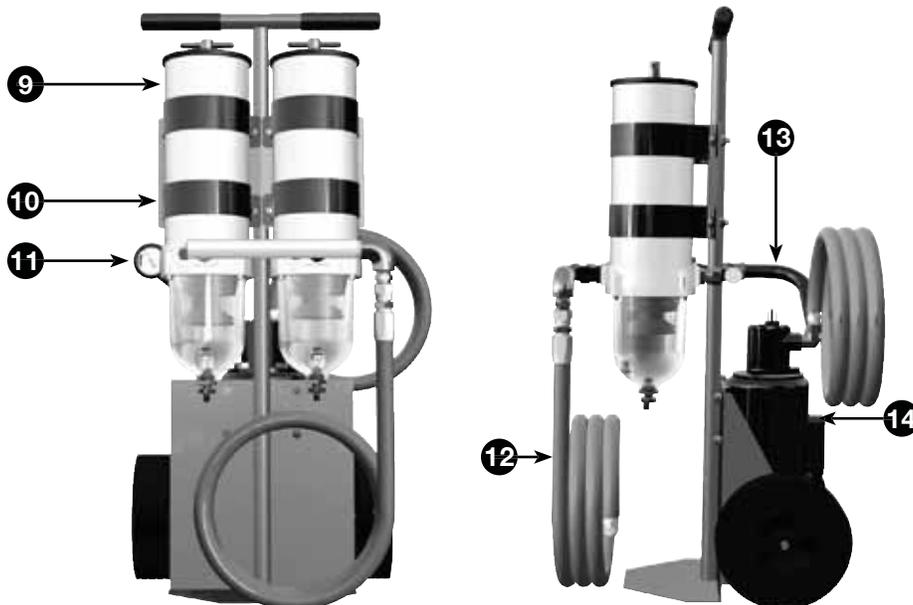
Replacement Parts

1000FH10

| | Part No. | Description |
|----|---------------|---|
| 1. | RK 11-1945 | T-handle and O-ring Kit (includes A) |
| 2. | RK 11-1927-01 | Lid Kit (includes B) |
| 3. | 2020TM-OR | Replacement Filter (10 Micron) (includes A & B) Other filter options: 2020SM-OR (2 micron) 2020PM-OR (30 micron) |
| 4. | RK 11815-103 | Mounting Bracket Kit |
| 5. | RK 11-1939 | Conical Baffle and Turbine Centrifuge Kit (includes B, C, D, & E) |
| 6. | RK 11-1938 | See-thru Bowl with Drain and Plug Kit (includes B, F, & 10) |
| 7. | RK 20126 | Bowl Plug Kit |
| 8. | RK 11037A | Bowl Ring (includes B & G) |
| G. | RK 11542 | Cap Screw Kit |

800D-5REC-D

| | Part No. | Description |
|-----|-----------------|----------------------------------|
| 9. | 1000FH10 | Fuel Filter/Water Separator (X2) |
| 10. | RK 11815-103 | Mounting Bracket Kit |
| 11. | Contact Factory | Compound Gauge Kit |
| 12. | Contact Factory | STK Hose |
| 13. | Contact Factory | Hose Assembly Pipe Inlet |
| 14. | Contact Factory | Pump Motor 3GPM 110/220 Kit |



Questions? Contact Technical Support:
800 344 3286 or 209 521 7860 ext. 7555
e-mail: racortech@parker.com

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