

Racor 75500FGX Turbine Series fuel filter/water separator 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

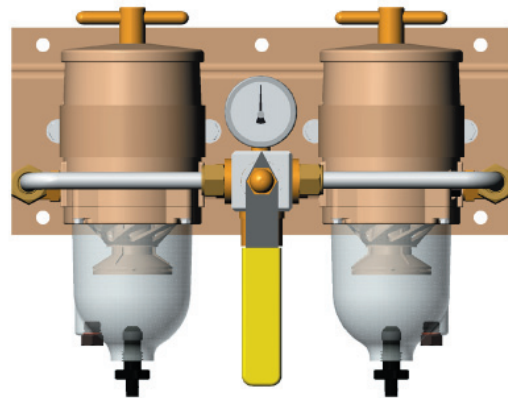
As fuel enters the filter assembly, it moves through the centrifuge and spins off large solids and water droplets which fall to the bottom of the collection bowl.

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.

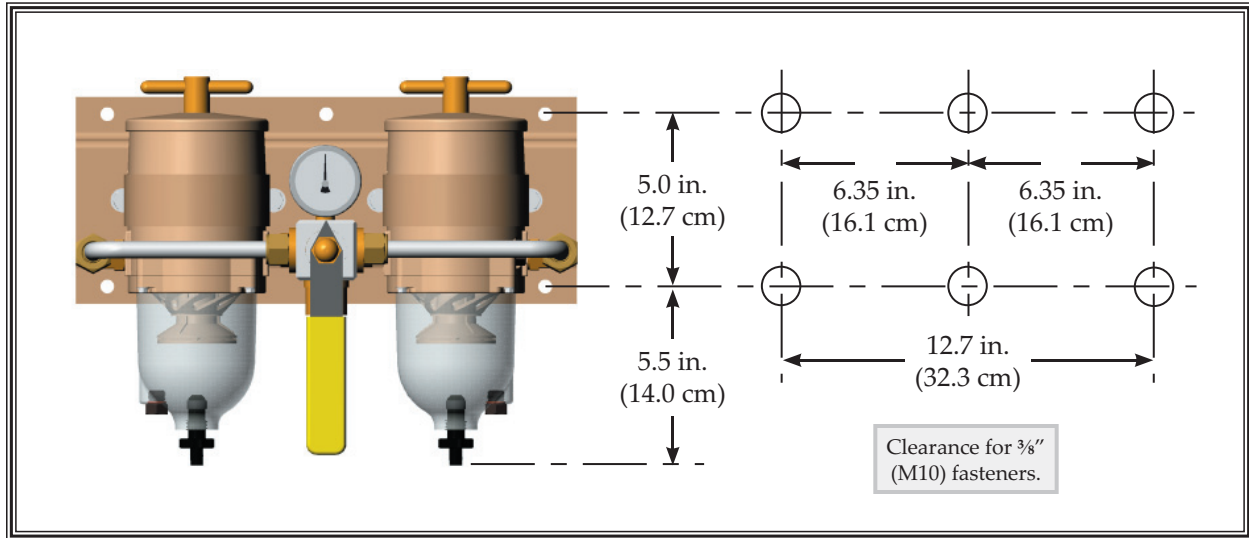
**Features and Benefits**

- Heavy duty construction.
- Installs quickly.
- Available in 2, 10, and 30 micron.
- Easy to service.
- See-thru collection bowl.
- Self-venting water drain.
- Selection valve.

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

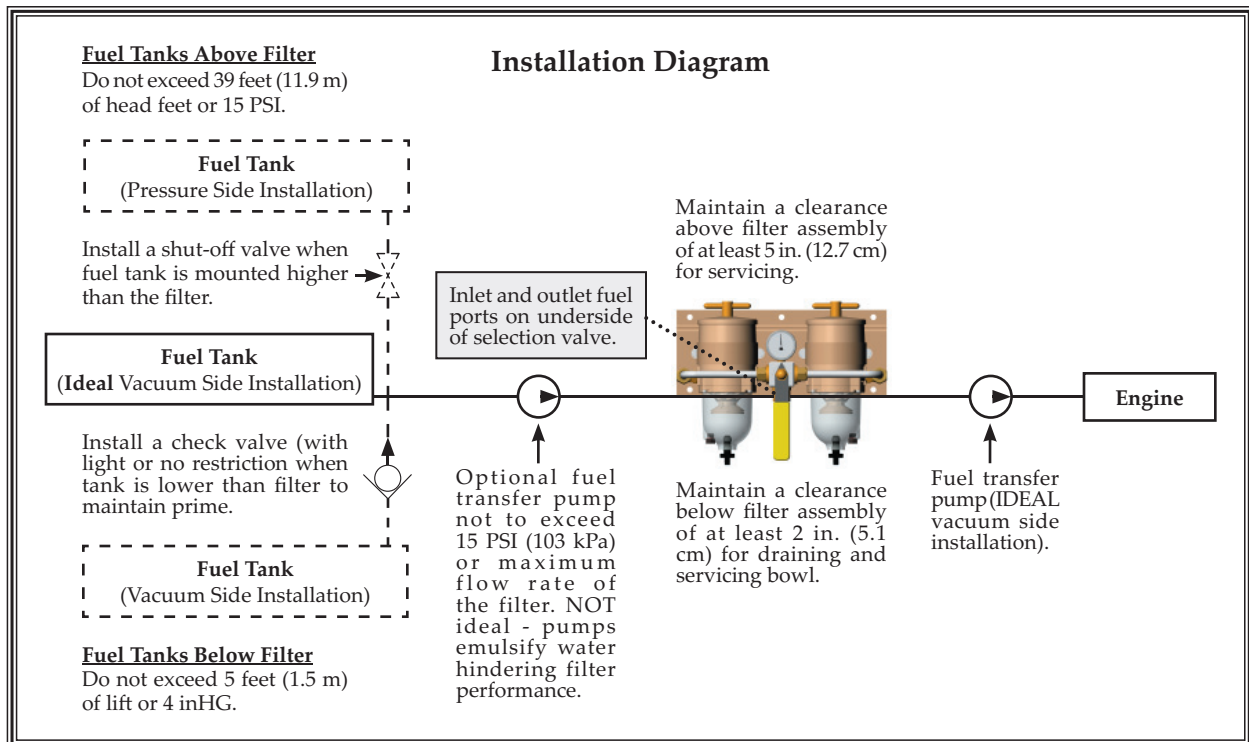
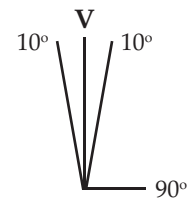
Please Read All Instructions Prior To Beginning Installation

Mounting Instructions



Notes:

1. Mount filter assembly as close to vertical (V) as possible. For best efficiency, do not exceed 10° from vertical.
2. Do not remove valve fittings as they are integral components to the valve body.



Installation Instructions

When positioning the 75500FGX:

- Install 75500FGX filter assemblies on the vacuum side of the fuel transfer pump for optimum water separating efficiency. See Installation Diagram.
- Keep fuel line restrictions to a minimum. Locate the 75500FGX assembly between the horizontal planes of the bottom of the fuel tank and the inlet of the fuel pump, if possible. If the 75500FGX assembly is installed where the fuel tank is higher than the filter, a shut-off valve must be installed between the tank and the 75500FGX INLET. This will be used when servicing the element.

Before installing the 75500FGX:

- Obtain good ventilation and lighting.
- Maintain a safe working environment.
- The engine must be off for installation.
- NO smoking or open flames near installation.

Installing the 75500FGX:

- Completely remove all vacuum side filters in fuel line between fuel tank and fuel pump. This is where the 75500FGX assembly will mount. Leaving these filters in place will increase fuel line restriction. Filter heads cast into engine or that are non-removable or hard piped should be serviced with a new element and left in place.
- Keep fuel flow restriction to a minimum. Always use the maximum size fuel hose possible. Do not make sharp bends with flexible fuel hose as kinks may occur. Avoid the use of two 45° elbow fittings where one 90° elbow will work.
- When routing hose, avoid surfaces that move, have sharp edges, or get hot.

Racor Fuel Hose

Racor fuel hose is fire resistant and meets SAE J1527 Type A class and SAE J1942 standards. This hose delivers test proven performance in a wide operating temperature range, constant working pressure in

popular sizes, long-lasting reinforced construction, kink and cut resistance, and compatibility with a variety of standard fittings.

Part Number	Hose I.D.
CGH-10	1/2" (12.5 mm)
CGH-12	5/8" (16 mm)
CGH-16	7/8" (22 mm)

Additional sizes are available.

Additional Features

- High-tensile steel wire braid.
- No-Skive (does not require removal of outer cover to install).
- USCG rated for gasoline, diesel, oil and hydraulic systems.
- -4° to +212°F (-20° to +100°C) working temp.



Parker/Racor Fittings

All fittings below are 3/4"-16 UNF (SAE J1926) O-ring Boss for the 75500FGX assembly.

Part Number	Description	Thread/Hose Size
913-O8-H6	Barbed Elbow	3/8"
913-O8-H8		1/2"
913-O8-H10		5/8"
911-O8-H6	Barbed Straight	3/8"
911-O8-H8		1/2"
911-O8-H10		5/8"
911-O8-F4	Female NPT	1/4"
911-O8-F6		3/8"
911-O8-F8		1/2"
913-O8-J6	SAE 37° Elbow	9/16"-18
913-O8-J8		3/4"-16
913-O8-J10		7/8"-14
911-O8-J6	SAE 37° Straight	9/16"-18
911-O8-J8		3/4"-16
911-O8-J10		7/8"-14

Priming Instructions

1. Remove both T-handles and lids from top of 75500FGX assembly.
2. Fill 75500FGX assembly with clean fuel.
3. Lubricate both lid gaskets and T-handle O-rings with clean fuel or motor oil.
4. Replace lids and T-handles and tighten snugly by hand - **do not use tools**.
5. If applicable, follow engine manufacturer's Service Manual to complete the fuel system priming/repriming procedure.
6. Start engine and check for leaks; correct as necessary with engine off.



Service Instructions

Draining Water:

Frequency of water draining is determined by the contamination level of the fuel. Inspect or drain the collection bowls of water daily or as necessary. The collection bowls must be drained before contaminants reach the top of the turbine, or when the Water Detection Module (optional equipment - sold separately) indicates it's time to 'drain water.'

1. Turn engine off and move selection valve to the ALL OFF position.

Warning! Do not leave self-venting drains open too long as it could eventually drain entire filter and possibly the entire fuel system of water AND fuel.

2. With an appropriate collection pan in place, open self-venting drains on bottom of see-thru bowls and allow water and contaminants to drain from assembly.
3. Close self-venting drains at first indication of fuel. Tighten by hand only - **do not use tools**.
4. Follow 'Priming Instructions.'

Element Replacement:

Frequency of element replacement is determined by the contamination level of the fuel. Replace the elements every 10,000 miles, every 500 hours, every other oil change, when the vacuum gauge reads between 6 to 10 inches of mercury (inHG), if power loss is noticed, or annually, whichever occurs first.

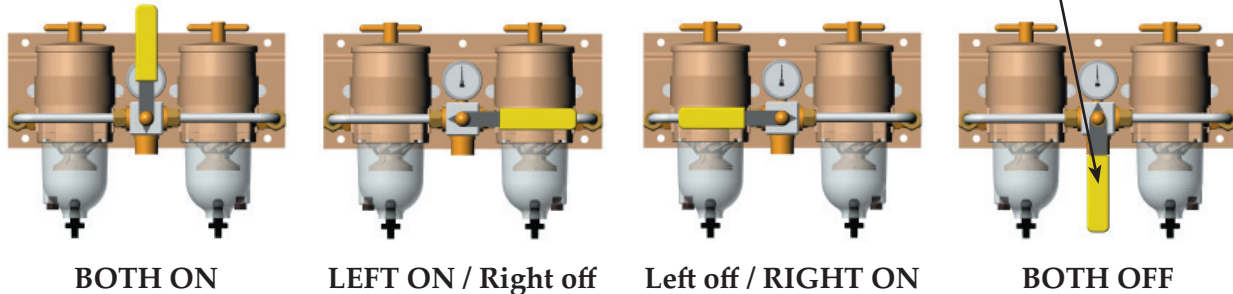
Always carry extra replacement elements as one tankful of excessively dirty fuel can plug a filter. Use **only** genuine Racor Aquabloc II replacement elements.

1. Move selection valve to turn OFF the filter that needs to be serviced.
2. Remove T-handle and lid.
3. Remove element by holding the bail handles and slowly pulling upward with a twisting motion. Dispose properly.
4. Replace lid gasket and T-handle O-ring with new (supplied with new element). Lubricate both seals with motor oil or diesel fuel before installing.
5. Install new element.
6. Follow 'Priming Instructions.'

The Selection Valve

The 75500FGX allows the operator to isolate one filter at a time for servicing - even while the engine is running. **The handle POINTER always indicates which unit is ON.** To take one filter off-line for servicing while the engine is running, select the filter to stay on-line, then begin servicing the other. See illustration below.

Warning! Handle rotates 360°. Avoid 'BOTH OFF' position if engine is running.



Optional Electronic Water Detection Kits

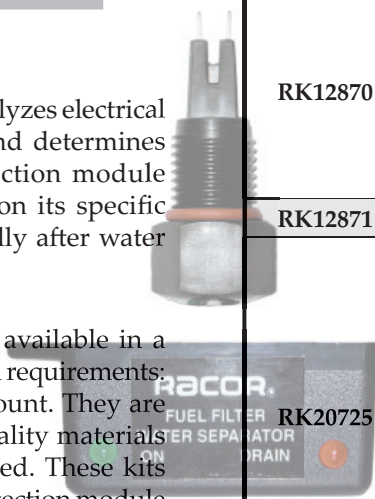
Below are some of our more popular water detection kits; others are available.

Warning! Racor electrical options are for diesel applications only.

Electronic Water Detection Kits:

An electronic water detection kit analyzes electrical resistance at the water sensor(s) and determines if water is present. If so, the detection module operates to indicate water, based on its specific features. All units reset automatically after water is removed (unless specified).

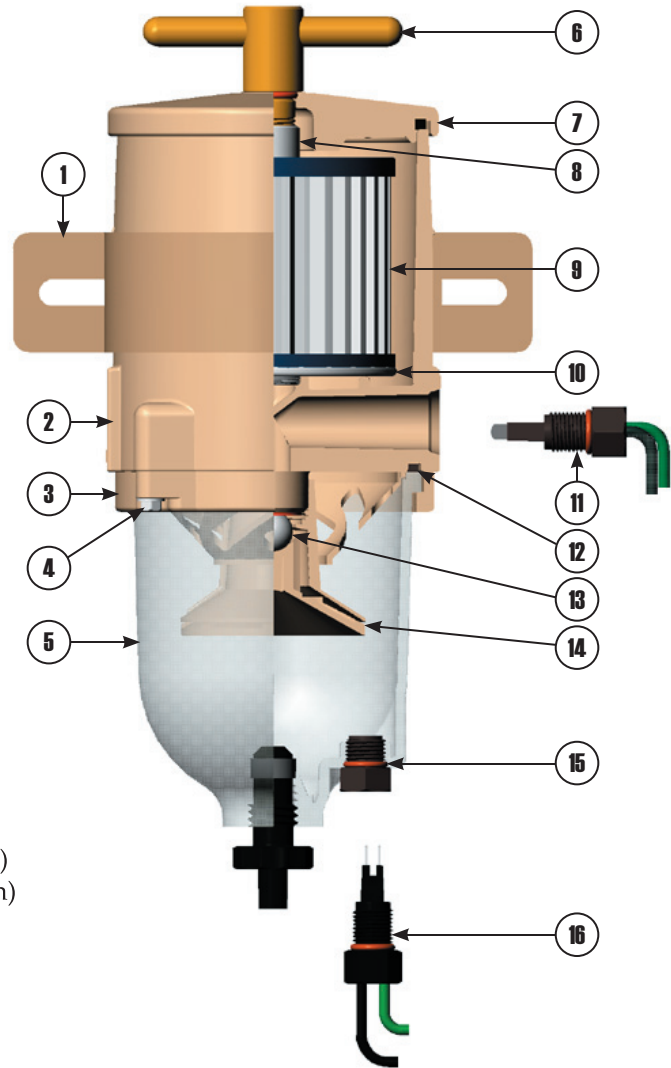
Electronic water detection kits are available in a wide selection for various installation requirements: under dash, in-dash and remote mount. They are manufactured using the highest quality materials and are all 100% electronically tested. These kits include one water sensor and one detection module (and other components). 75500FGX users will need to purchase an additional RK21069 water sensor to complete an installation. **Detailed installation instructions are included with each kit.**



Part Number	Description	Voltage
RK12870	Under-dash mount. Light and audio. Illuminates and sounds when water is detected. Plastic enclosure measures 1.4" square by 1.25" deep. Power draw is 1 milliamp.	12 vdc
RK12871	Same as above.	24 vdc
RK20725	Under-dash mount. Light only. Green 'ON' lamp illuminates with power and red 'DRAIN' lamp illuminates when water is detected. Initial power-up self diagnosis feature and circuit protection included. Plastic enclosure measures 2.75" by 1.0" by 1.5". Power draw is 10 milliamps.	12 vdc
RK20725-24	Same as above.	24 vdc

500FG Replacement Parts

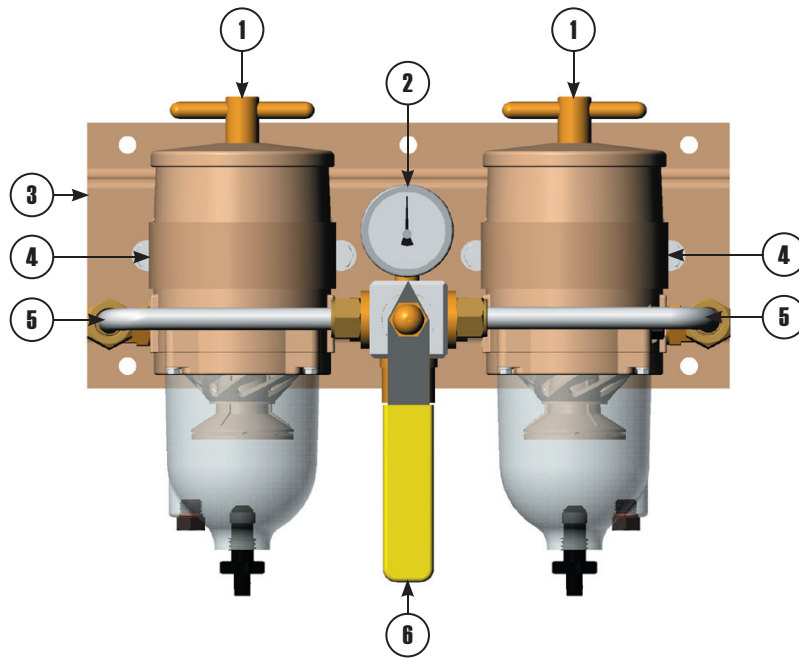
- | <u>Part Number</u> | <u>Description</u> |
|---|--|
| 1. RK15378 | Mounting Bracket Kit |
| RK11838 | Bracket Hardware Kit (5/16"-18, not shown) |
| 2. RK15377-01 | Body Kit (3/4"-16 UNF Ports) |
| RK15377-02 | Body Kit (16M X 1.5 Ports) |
| 3. RK15035 | Bowl Ring Kit |
| 4. RK15081 | Hex Head Capscrews Kit
(includes 4, 10-24 x 7/8") |
| 5. RK15405 | See-thru Bowl Kit
(includes bowl, drain, bowl
gasket and probe plug) |
| RK15301 | Metal Bowl Kit (not shown)
(includes 1/4" NPT drain) |
| 6. RK11-1945 | T-handle and O-ring Kit
(9/16"-18 UNF threads) |
| 11350 | T-handle O-ring |
| 7. RK15078 | Lid and Lid Gasket Kit |
| 15005 | Lid Gasket |
| 8. RK15397 | 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) | |
| RK15383-01 ¹ | Heater Kit (12 vdc, 150 watt) |
| RK15383-02 ¹ | Heater Kit (24 vdc, 150 watt) |
| 11. RK21067 | Feed-thru Assy Kit (for heater) |
| RK11-1679 | Feed-thru Plug Kit (not shown) |
| 12. 15374 | Bowl Gasket |
| 13. RK15010B | Check Ball with Seal Kit |
| 14. RK15013D | Centrifuge/Conical Baffle Kit |
| 15. RK20126 | Water Probe Plug Kit |
| 16. RK30880 ² | Water Sensor Probe Kit |

Additional Parts (not shown)

- | | |
|---------|---------------------------|
| RK15211 | Complete Seal Service Kit |
|---------|---------------------------|

1 In-filter heater kits require a Racor Heater Relay Kit. Maximum power requirements for in-filter heaters are: 12.5 amps for 12 volt dc and 6.3 amps for 24 volt dc.

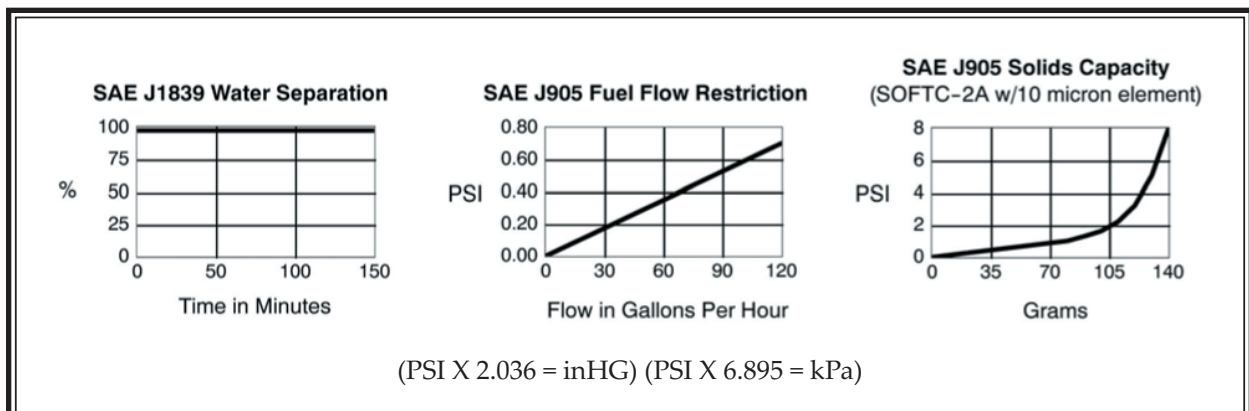
2 Do not use on gasoline applications. Water sensors must be used with a Racor Water Detection Module. Indash, underdash and others are available. See page 5.



75500FGX Replacement Parts

<u>Part Number</u>	<u>Description</u>
1. 500FG	(See 500FG Replacement Part List)
2. RK19476	Gauge Assembly Kit
3. RK15329	Main Bracket Kit
4. RK15378	Housing Bracket Kit
RK11838	Housing Bracket Hardware Kit (5/16"-18, not shown)
5. RK15391	Rigid Tubing and Fitting Kit
6. RK15390	Valve Assembly Kit

Performance Data (Controlled laboratory tests. Field results may vary.)



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