800MA Series

Fuel Filter/WaterSeparators

Instruction Part Number 14381 Rev A

Overview:

800MA Series fuel filter/water separators are designed to filter water and solid contaminants from diesel fuel and offers large diesel engine operators both ease of maintenance and continuous engine operation. Continuous operations include filter change-outs, draining of accumulated water, and sufficient fuel flow for prime or standby power operations, commercial marine engines, or other large diesel engine applications.

This series includes the single 806MA or 812MA, the duplex 75806MA or 75812MA, and the triplex 79806MA or 79812MA. These assemblies utilize legendary Racor technology with Aquabloc®II filtration in a two stage water removal process with efficiency rating of 98% at 10 microns.

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Product Features:

- Flow rate up to 2160 GPH (8176 LPH)
- Water sight glass included as standard equipment
- Lowers maintenance costs
- Customer installed clear bowl included for non-marine applications
- Protects high-tolerance injection components and keeps engines running at peak performance
- Meets American Bureau of Shipping requirements
- Large inlet and outlet ports allow for high flow rates and low fuel flow restriction.

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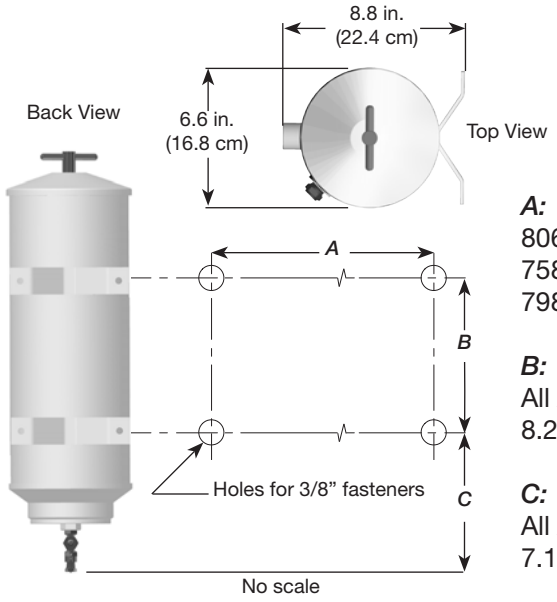
Mounting Specifications

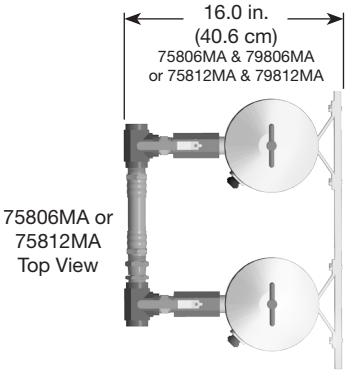
806MA



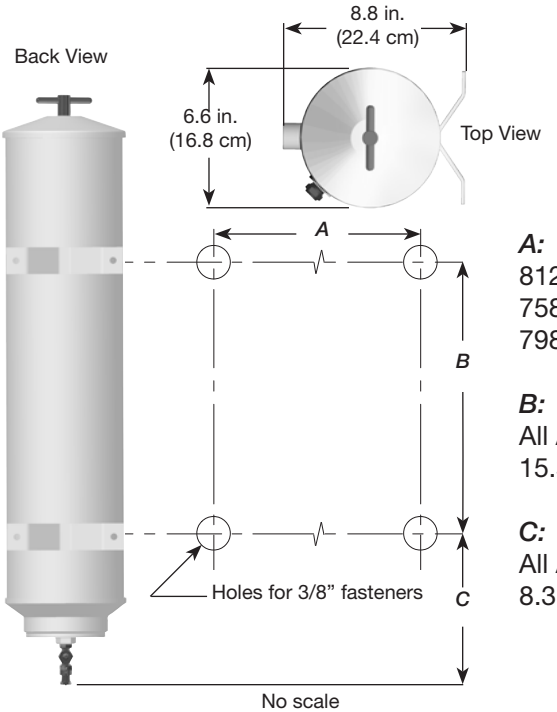
A:
806MA - 5.45 in. (13.8 cm)
75806MA - 20.25 in. (51.4 cm)
79806MA - 31.75 in. (80.6 cm)

B:
All Assemblies -
8.25 in. (21.0 cm)

C:
All Assemblies -
7.11 in. (18.1 cm)



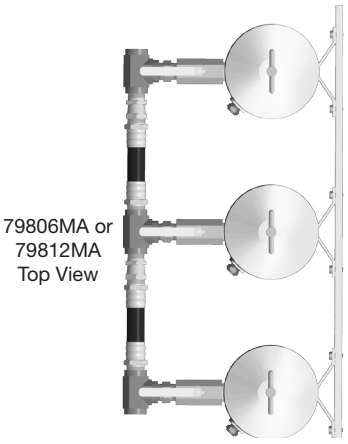
812MA



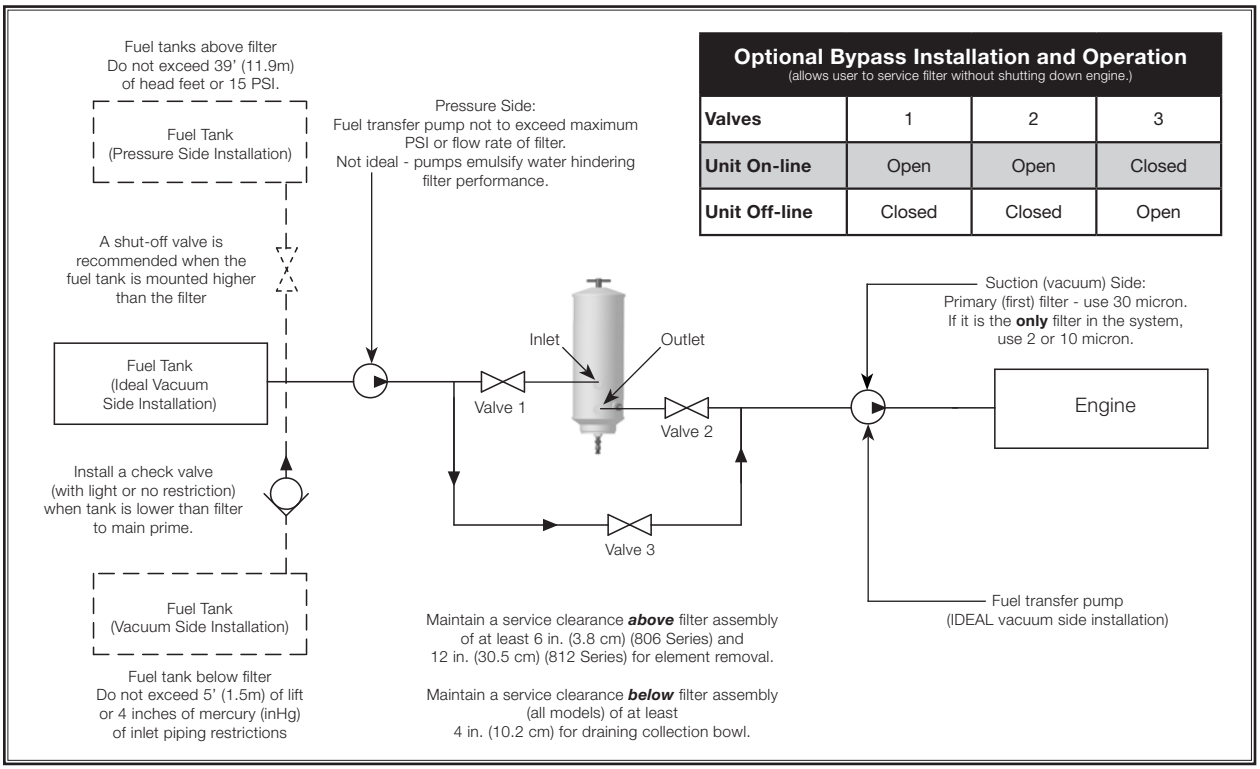
A:
812MA - 5.5 in. (13.8 cm)
75812MA - 20.25 in. (51.4 cm)
79812MA - 31.75 in. (80.6 cm)

B:
All Assemblies -
15.5 in. (39.4 cm)

C:
All Assemblies -
8.3 in. (21.0 cm)



Installation Diagram



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

Installation Guidelines

1. Obtain good ventilation and lighting.
2. Engine must be off for installation.
3. DO NOT smoke or allow open flames near installation.
4. Filter assemblies should be installed on vacuum side of fuel transfer pump for optimum water separating efficiency. See Installation Diagram.
5. Locate filter assembly between horizontal planes of bottom of fuel tank and inlet of fuel pump, if possible. If filter assembly is installed in an application where fuel tank is higher than filter, a shut-off valve must be installed between tank and filter assembly INLET. This will be used when servicing replacement elements.
6. Install assembly in a location which provides accessibility and protection from heat, flames, or accidental impacts. Always adhere to applicable local piping regulations and codes. Use maximum fuel line size possible and avoid reducers and elbows in order to keep restriction values as low as possible.
7. Apply thread sealant (no thread tapes) to inlet and outlet fittings prior to installing onto filter assembly.
8. When routing hose, avoid surfaces that move, have sharp edges, or get hot (such as exhaust piping).

Priming The Unit

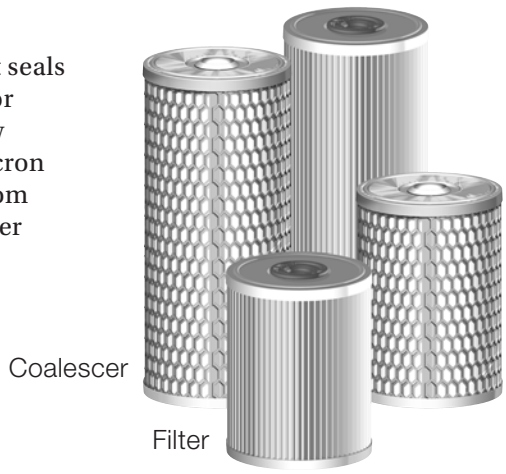
1. Close inlet fuel valve, if applicable.
2. Remove T-handle and lid from top of filter assembly.
3. Fill filter assembly with clean fuel.
4. Lubricate lid gasket and T-handle O-ring with clean fuel or motor oil.
5. Replace lid and T-handle and tighten snugly by hand only - do not use tools.
6. Open inlet fuel valve, if applicable.
7. Start engine and check for leaks. Correct as necessary with engine off and pressure relieved from filter.

Service

Element Replacement

Frequency of element replacement is determined by the contamination level in fuel. Recommended service intervals are as follows: every 500 hours, annually, or at the first indication of powerloss, whichever comes first. Note: Foul smelling fuel is an indication of microbiological contamination. A change in fuel source and Racor fuel additives are recommended. *Always carry extra replacement elements as one tankful of excessively contaminated fuel can plug a filter.*

1. Close inlet fuel valve (if applicable) and completely drain filter assembly.
2. Remove T-handle, lid, and lid gasket.
3. Remove elements from inside housing and dispose of properly.
4. Lubricate new element seals with clean fuel or motor oil and install only new Racor elements. 10 micron Coalescer goes in bottom position, 40 micron filter goes in top position.
5. Install new lid gasket into lid groove.
6. Prime fuel system following manufacturer's procedure or refer to Priming The Unit.

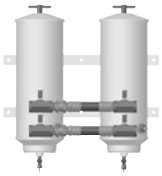
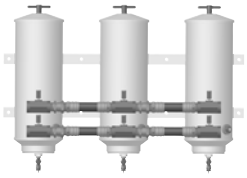


Draining the Collection Bowl

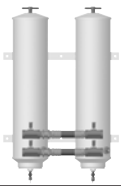
Check for water daily with the sight glass. Drain off water and contaminants by opening the petcock valve. If more than 40 ml of fluid is drained, follow Priming The Unit above. Otherwise, start engine and allow air to purge from system prior to operating equipment at normal loads.

Troubleshooting Procedures

A major cause of power loss or hard starting is result of an air leak (or clogged filter). If your unit will not prime or fails to hold prime, check that drain, bowl, and element are properly tightened. Next, check all fitting connections and ensure fuel lines are not pinched or clogged with contaminants. If problems persist (and element is new) call Racor Technical Service for assistance: (800) 344-3286 or (209) 575-7555.

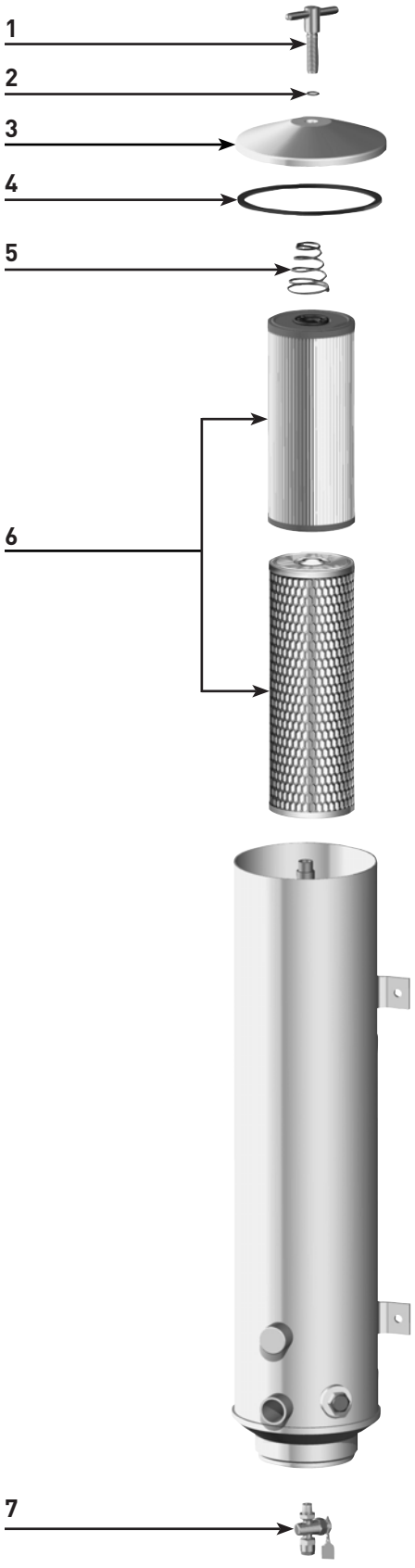
Specifications	806MA	75806MA	79806MA
Maximum Flow Rate	360 GPH (1,360 LPH)	720 GPH (2,720 LPH)	1,080 GPH (4,080 LPH)
Port Size	1" NPT	1" NPT	1" NPT
Element Replacement(s)	RK 22788	RK 22788 (x2)	RK 22788 (x3)
Micron Rating:			
Upper Filter	40	40	40
Lower Coalescer	10	10	10
Height	23.1 in. (58.9 cm)	23.1 in. (58.9 cm)	23.1 in. (58.9 cm)
Width	7.0 in. (17.8 cm)	21.8 in. (55.4 cm)	33.3 in. (84.6 cm)
Depth	9.0 in. (22.9 cm)	16.0 in. (40.6 cm)	16.0 in. (40.6 cm)
Weight (dry)	24.0 lb (10.9 kg)	73.0 lb (33.11 kg)	109.0 lb (49.44 kg)
Minimum Service Clearance			
Above	6.0 in. (3.8 cm)	6.0 in. (3.8 cm)	6.0 in. (3.8 cm)
Below	4.0 in. (10.2 cm)	4.0 in. (10.2 cm)	4.0 in. (10.2 cm)
Maximum Working Pressure	30 PSI (2.07 bar)	30 PSI (2.07 bar)	30 PSI (2.07 bar)
Differential Pressure	1.0 PSI (0.07 bar)	1.0 PSI (0.07 bar)	1.0 PSI (0.07 bar)
Water Removal Efficiency	98%		
Ambient Temperature Range	-10° to +180°F (-23° to +80°C)		
Maximum Fuel Temperature	190°F (32°C)		

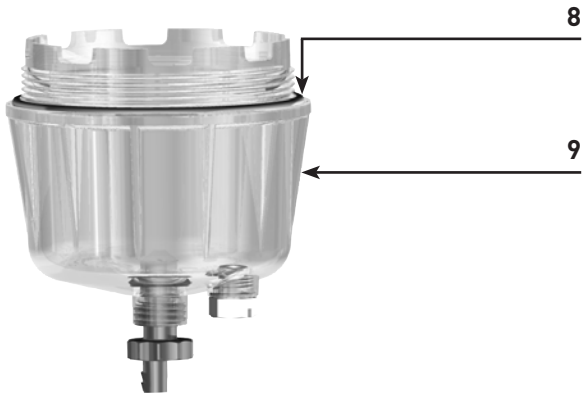




Specifications	812MA	75812MA	79812MA
Maximum Flow Rate	720 GPH (2,725 LPH)	1,440 GPH (5,450 LPH)	2,160 GPH (8,176 LPH)
Port Size	1" NPT	1" NPT	1" NPT
Element Replacement(s)	RK 22610	RK 22610 (x2)	RK 22610 (x3)
Micron Rating:			
Upper Filter	40	40	40
Lower Coalescer	10	10	10
Height	33.2 in. (84.3 cm)	33.2 in. (84.3 cm)	33.2 in. (84.3 cm)
Width	6.6 in. (16.8 cm)	21.8 in. (55.4 cm)	33.3 in. (84.6 cm)
Depth	8.8 in. (22.4 cm)	16.0 in. (40.6 cm)	16.0 in. (40.6 cm)
Weight (dry)	36.0 lb (16.3 kg)	89.0 lb (40.4 kg)	133.0 lb (60.4 kg)
Minimum Service Clearance			
Above	12.0 in. (30.5 cm)	12.0 in. (30.5 cm)	12.0 in. (30.5 cm)
Below	4.0 in. (10.2 cm)	4.0 in. (10.2 cm)	4.0 in. (10.2 cm)
Maximum Working Pressure	30 PSI (2.07 bar)	30 PSI (2.07 bar)	30 PSI (2.07 bar)
Differential Pressure	3.2 PSI (0.22 bar)	3.2 PSI (0.22 bar)	3.2 PSI (0.22 bar)
Water Removal Efficiency	98%		
Ambient Temperature Range	-10° to +180°F (-23° to +80°C)		
Maximum Fuel Temperature	190°F (32°C)		

806MA/812MA Replacement Parts

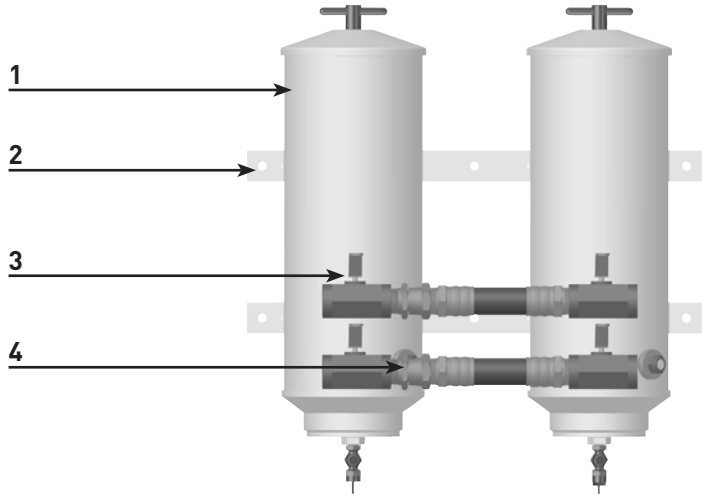
	Part No.	Description
1.	*RK 22688*	T-handle Kit (includes T- handle and T-handle O-ring)
2.	*11350*	T-handle O-ring
3.	*RK 22682*	Lid Kit (includes lid, lid gasket, lid spring, and T-handle)
4.	*RK 22609*	Lid Seal Kit (includes lid gasket and T-handle O-ring)
5.	*N/A*	Lid Spring
6.	*RK 22788*	*806* Filter Kit (includes upper 40 micron filter, lower 10 micron coalescer, and a lid gasket)
	RK 22610	*812* Filter Kit (includes upper 40 micron filter, lower 10 micron coalescer, and a lid gasket)
7.	*RK 19492*	U.L listed Drain Valve Kit (brass with plug)
8.	*11036*	Bowl O-ring
9.	*RK 16017*	Bowl Kit (includes clear bowl, bowl O-ring, drain valve & probe port plug) ***Included for non-marine applications only***

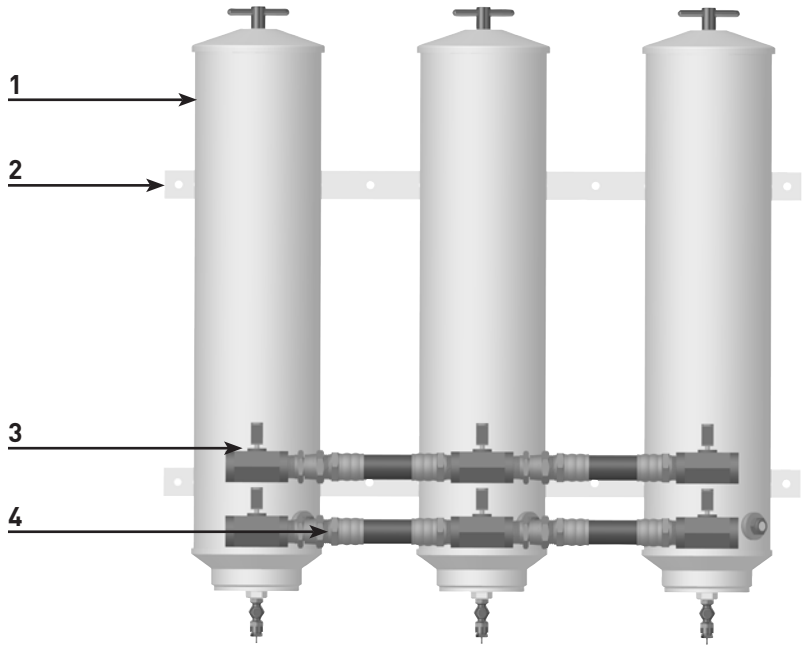




75806MA, 79806MA, 75812MA, and 79812MA Replacement Parts

Part No.	Description
1. *See 806MA/812MA Replacement Parts*	
2. *N/A*	Manifold Mounting Brackets
3. *RK22898*	Ball Valve Kit
4. *RK22897*	Hose and Fitting Kit





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May 2008

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