320RMAM04
For Gasoline/Diesel Marine Applications

Instruction Part Number 30759 Rev C

Advanced Filtration/Separation Technology
The unique design of the 320RMAM04 directs the fuel flow to the center core of the unit. The reduced velocity causes heavy liquid and solid contaminants to accumulate in the filter/separator bowl. Then they are drained off through a tapered pipe thread drain plug. This primary separation or precleaning stage gives extended filter life.

The 320R Filter/Separator units are compact and easy to service.

Vacuum (suction side) Applications
The 320RMAM04 units are designed for vacuum side installations. For maximum separation and filtration efficiency, do not install these units on the pressure side (downstream from pump) of the fuel delivery system.

Contact Information:
Parker Hannifin Corporation
Racor Division
P.O. Box 3208
3400 Finch Road
Modesto, CA 95353

phone 800 344 3286
209 521 7860
fax 209 529 3278
racor@parker.com
parker.com/racor

Product Features:
• 320RMAM04 is UL listed, and USCG approved for inboard marine use.
• 2-port die-cast aluminum head with 7/8"-14 SAE fuel ports and removable mounting bracket.
• High-capacity Aquabloc® media.
• Rugged and reliable.
• Superior corrosion resistance with electrostatic powder coating.
Replacement Parts

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>RK30287  Filter Head (7/8&quot;-14 SAE ports)</td>
</tr>
<tr>
<td>2.</td>
<td>N/A     Cap Screws (not sold separately)</td>
</tr>
<tr>
<td>3.</td>
<td>N/A     Mounting Bracket (not sold separately)</td>
</tr>
<tr>
<td>4.</td>
<td>S3204TUL Replacement Filter (10 micron)</td>
</tr>
<tr>
<td>A)</td>
<td>RK 10503 Square-Cut Gasket</td>
</tr>
<tr>
<td>B)</td>
<td>RK 30076 Bowl O-ring</td>
</tr>
<tr>
<td>5.</td>
<td>RK30473 Metal Bowl Kit (includes B and 6)</td>
</tr>
<tr>
<td>6.</td>
<td>918-N6  3/8&quot;-14 NPT Plug</td>
</tr>
</tbody>
</table>

Replacement Filter Includes A and B

Installation Diagram

With fuel tanks above filter, head pressure should not exceed maximum PSI of filter.

Fuel Tank (Pressure Side Installation)

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

Fuel Tank (Ideal Vacuum Side Installation)

Install a check valve (with light or no restriction) when tank is lower than filter to main prime.

Fuel Tank (Vacuum Side Installation)

Fuel tank below filter Do not exceed 0' (1.5m) of lift or 4 inches of mercury (inHg) of inlet piping restrictions

Pressure Side:
Fuel transfer pump not to exceed maximum PSI or flow rate of filter. Not ideal - pumps emulsify water hindering filter performance.

Valve 1
Open

Valve 2
Open

Valve 3
Closed

Unit On-line
Open
Open
Closed

Unit Off-line
Closed
Closed
Open

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

valves used to service filter without shutting down engine.

Valves

<table>
<thead>
<tr>
<th>Valves</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit On-line</td>
<td>Open</td>
<td>Open</td>
<td>Closed</td>
</tr>
<tr>
<td>Unit Off-line</td>
<td>Closed</td>
<td>Closed</td>
<td>Open</td>
</tr>
</tbody>
</table>

Engine

Suction (vacuum) Side:
Primary (first) filter - use 10 micron. If it is the only filter in the system, use 2 micron.

Fuel transfer pump (IDEAL vacuum side installation)

Maintain a service clearance below filter assembly of at least 2 in. (5.1 cm) for draining and servicing the bowl.
Priming The Unit

1. Make sure engine is off and cool to touch.
2. Spin bowl off of mounting head and fill with clean fuel.
3. Spin bowl back onto mounting head and tighten firmly by hand.
4. Verify all other connections are tight.
5. Start engine and check for leaks. Correct as necessary with engine off.

Troubleshooting

A major cause of power loss or hard starting is a result of an air leak (or clogged filter). If your unit will not prime or fails to hold prime, check that drain, lid, 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 elements are new) call Racor Technical Support for assistance: 1-800-344-3286.

Installation Guidelines

Danger! Great care must be exercised to avoid potential fire hazards during installations on fuel systems. Do not smoke or permit open flames or sparks near the fuel system.

1. Any secondary or pressure side filters located between pump and engine should be serviced and left in place.
2. Mount unit vertically on suction side of fuel pump, transfer pump, or non-removable filters, whichever comes first.
3. Use quality fuel hose in maximum fuel line size applicable to reduce potential fuel flow restrictions.

Note: USCG accepted hose recommended. Contact your Racor distributor for your application requirements.

Draining Contaminants

Periodically check sediment bowl and drain if water is present. The water and contaminates settle to the bottom of the bowl.

If the unit is equipped with a water detection kit, the operator will be warned when high water level conditions exists and servicing is needed. If your unit is not equipped with a water detection kit a daily inspection is recommended.

With Engine Off

1. Remove drain plug.
2. Drain bowl into proper receptacle and discard according to local laws and regulations. (Drain 1 cup of fuel, and check for consistency in color, if water is visible, drain out more fuel until clean fuel is present).
3. Re-prime unit by following priming instructions below.

Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>320RMAM04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Flow Rate</td>
<td></td>
</tr>
<tr>
<td>Diesel</td>
<td>40 GPH (151 LPH)</td>
</tr>
<tr>
<td>Gasoline</td>
<td>85 GPH (322 LPH)</td>
</tr>
<tr>
<td>Port Size</td>
<td>7/8&quot;-14 SAE</td>
</tr>
<tr>
<td>Weight</td>
<td>4.2 LBS (1.9 kg)</td>
</tr>
<tr>
<td>Height</td>
<td>8.9 in. (22.6 cm)</td>
</tr>
<tr>
<td>Width</td>
<td>4.0 in. (10.2 cm)</td>
</tr>
<tr>
<td>Depth</td>
<td>5.0 in. (12.7 cm)</td>
</tr>
</tbody>
</table>
Limited Warranties Statement

All products manufactured or distributed by Racor are subject to the following, and only the following, LIMITED EXPRESS WARRANTIES, and no others: For a period of one (1) year from and after the date of purchase of a new Racor product, Racor warrants and guarantees only to the original purchaser-user that such a product shall be free from defects of materials and workmanship in the manufacturing process. The warranty period for pumps and motors is specifically limited to ninety (90) days from date of purchase. A product claimed to be defective must be returned to the place of purchase. Racor, at its sole option, shall replace the defective product with a comparable new product or repair the defective product. This express warranty shall be inapplicable to any product not properly installed and properly used by the purchaser-user or to any product damaged or impaired by external forces.

THIS IS THE EXTENT OF WARRANTIES AVAILABLE ON THIS PRODUCT. RACOR SHALL HAVE NO LIABILITY WHATSOEVER FOR CONSEQUENTIAL DAMAGES

FLOWING FROM THE USE OF ANY DEFECTIVE PRODUCT OR BY REASON OF THE FAILURE OF ANY PRODUCT. RACOR SPECIFICALLY DISAVOWS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, ALL WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE (EXCEPT FOR THOSE WHICH APPLY TO PRODUCT OR PART THEREOF THAT IS USED OR BOUGHT FOR USE PRIMARILY FOR PERSONAL, FAMILY, OR HOUSEHOLD PURPOSES), WARRANTIES OF DESCRIPTION, WARRANTIES OF MERCHANTABILITY, TRADE USAGE OR WARRANTIES OR TRADE USAGE.

Warning

Failure or improper selection or improper use of the products and/or systems described herein or related items can cause death, personal injury and property damage. This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the applications are met. The products described herein, including with limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

The following statement is required pursuant to proposition 65, applicable in the State of California: ‘This product may contain a chemical known to the State of California to cause cancer or reproductive toxicity’.

© Parker Hannifin Corporation

January 2012

Parker
Racor

ENGINEERING YOUR SUCCESS.