



MARINE

Diesel Fuel/Water Separators



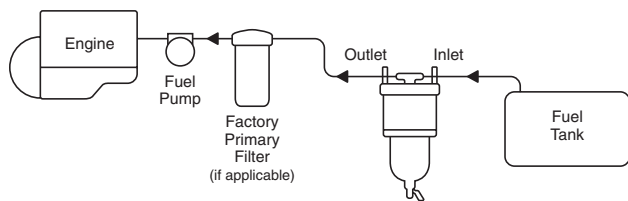
- Installation
- Operation
- Parts
- Service Information

INSTALLATION

A. FILTER MOUNTED ABOVE FUEL STORAGE TANK

1. Select a location in the fuel line between the fuel tank and the fuel pump, ahead of the vacuum side filters. All secondary or pressure side filters located between the pump and the engine should be serviced and left in place.
2. Mount the DAHL unit vertically on the vacuum (suction) side of all fuel pumps in a convenient location for servicing and inspection of contaminants in the bowl. Locate the height of the unit between the bottom of the fuel tank and the inlet of the fuel pump if possible. See Figure 1. Install furnished shock pads as indicated in Figure 3.

FIGURE 1



NOTE: Allow 2 1/2 inches (1 1/2 for 100-M) vertical clearance below the unit for servicing the element and draining the contaminants.

3. Install the fuel line from the fuel tank to the DAHL filter INLET using appropriate non-galvanized fittings. See DAHL Fittings Chart on Page 4.
4. Install the fuel line from the DAHL filter OUTLET to the INLET of the transfer or fuel pump.

NOTE: To obtain maximum element life, remove as much mechanical restriction as possible from the system by doing the following:

- a. Remove the primary filter (if this does not affect warranty).
- b. Use the largest diameter fuel line that is practical.
- c. Mount the unit as near to the level of the pump as possible.
- d. Eliminate sharp bends in the fuel lines wherever possible.

The best indicator of a fuel element's condition is a vacuum gauge. (See 85-VK Series in the Baldwin Product Guide catalog.) A tapped fitting is recommended for mounting the gauge on the OUTLET port of the DAHL filter unit. (Manifold units are already tapped and plugged.) Remove the 1/8 inch plug and install the vacuum gauge there. Fittings and gauges are available from your dealer or contact Baldwin Filters. Prime the filter as indicated under ELEMENT REPLACEMENT section.

B. FILTER MOUNTED BELOW FUEL STORAGE TANK

Installation procedures are the same as above plus an addition to Step 3: A ball- or butterfly-type shut-off valve must be installed ahead of the DAHL unit INLET. See Figure 2. This valve is necessary to shut off the fuel when changing the element. Valves are available from your dealer.

NOTE: Valve not required when installing DAHL valved manifold units.

FIGURE 2

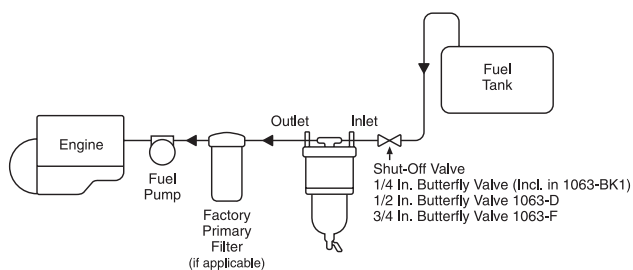
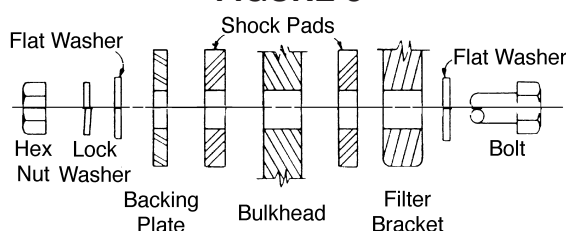


FIGURE 3

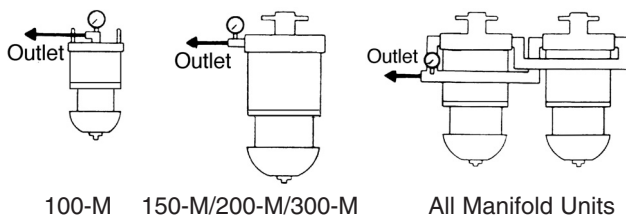


Mounting Hardware Sequence (200-M Shown)

NOTE: Fasteners Not Supplied with Unit

Vacuum Gauge Installation

FIGURE 4



REBUILD PROCEDURE

If it is ever necessary to dismantle the unit for inspection and/or possible repairs, refer to the parts illustration. Then follow these simple steps:

1. Refer to ELEMENT REPLACEMENT section for disassembly. (Dismount if desired.)
2. Remove the socket head bolts from the bowl ring to release the bowl. Stubborn bolts are easily removed by "shocking" the head. Place the allen wrench into the bolt and lightly rap the wrench with a hammer. Remove the bolt.
3. Unscrew the depressurizer cone to inspect the reverse flow valve. **Caution:** Cone edges are sharp. Use gloves or a rag

for protection.

4. Check all parts for damage. Replace all damaged parts or hard gaskets. (Order Gasket Kit 100-GK, 150-GK or 200-GK, as appropriate.)
5. Refer to the parts illustration for reassembly. Clean all gasket grooves and contact surfaces of foreign matter. Coat the lid cover and bowl gaskets with grease and all other gaskets and O-Rings with oil. Hand tighten the depressurizer cone and wrench tighten the socket head bolts.
6. Again, refer to ELEMENT REPLACEMENT section to finish reassembly.

SERVICING

DRAINING WATER

NOTE: The bowl should always be drained before water or contaminant levels reach the bottom of the depressurizer cone. Check daily with the engine off.

A. DAHL Units Mounted HIGHER Than Fuel Storage Tank

1. Turn engine off.
2. Vent the DAHL filter to allow draining as follows:
 - (a) On DAHL Model 100-M without a primer bulb, loosen the outlet port swivel fitting connection. Remove the pipe plug and drain all contaminants.
 - (b) On DAHL Models 75 & 100-M with a primer bulb, remove the pipe plug and squeeze the primer bulb to evacuate all contaminants.

- (c) On DAHL 150, 200 & 300 series, open the primer plug. Remove the pipe plug and drain all contaminants.

3. Replace the pipe plug and follow the priming instructions shown below.

B. DAHL Units Mounted LOWER Than Fuel Storage Tank

1. Turn engine off and close shut-off valve. (Valved Manifold units may be drained and elements replaced with the engine running at idle. Close inlet and outlet valves to isolate the filter being serviced.)
2. Remove the pipe plug and drain all contaminants.
3. Replace the pipe plug and follow the priming instructions shown below.

ELEMENT REPLACEMENT

A. When To Replace

As a general guideline, depending on fuel quality and engine use, elements should be replaced as follows:

1. DAHL 75 and DAHL 100 & 150 series, 500 hours or 20,000 miles.
DAHL 200 & 300 series, 1000 hours or 40,000 miles
2. If you have a vacuum gauge, the first replacement should be made at the very first indication of power loss at high RPMs. Make a note of the vacuum gauge reading at this point. The differences in various fuel system requirements make it impossible to predict what this reading will be. Mark the reading on the gauge dial or the unit for future element replacement.

B. How To Replace Contaminated Element

1. Follow directions for Draining Water. Drain all water and sufficient fuel for easy handling of the filter body.
2. Loosen the lid clamp knobs on 100-M series or the T-Bolt handle on 150, 200 & 300 series to release the filter body from the lid. (It is not necessary to completely remove the seal clamp or T-Bolt from the DAHL filter lids.) Support the filter body with your hand prior to release.
3. Remove the element with a turning motion. At this point, you may clean the outside of the filter body. Use only clean diesel fuel or kerosene and wipe clean.
4. Inspect the ejector spring(s) at the bottom of the body. Also check the centerpipe O-Ring and replace if hard or damaged.
5. Remove and replace the lid cover gasket. Be sure the lid groove and body lip are clean. (Grease lid gasket before positioning.)

C. Reassembly

1. Lubricate the top and bottom element gaskets. Install the element onto the centerpipe with a turning motion.
2. Fill the filter body with clean diesel fuel to within one inch of the top.
3. Double check the lid cover gasket position in the lid groove.
4. Attach the body to the lid and hand tighten the lid clamp knob or the T-Bolt handle.

NOTE: On DAHL Model 100-M, check the entire circumference of the body and lid for proper clamp alignment. (Clamp must be oriented with the knob to the right. See “up” arrow on band for correct orientation.)

D. Priming

1. Eliminate air — use existing fuel system primer, if so equipped.
 - (a) On DAHL Model 100-M with a primer bulb, loosen the outlet port swivel fitting connection and squeeze the bulb repeatedly until diesel fuel appears at swivel. Then tighten swivel fitting.
 - (b) If there is no primer bulb on a DAHL 100-M, remove the inlet port elbow fitting and fill to the top with clean diesel fuel. (Or, if you can pivot the unit upside down, prime it through the bowl plug.)
 - (c) On DAHL 150, 200 & 300 series, remove the primer plug and fill to the top with clean diesel fuel.

NOTE: Clean the heat deflector shield to remove any accumulated diesel fuel.

2. Start engine and check for leaks.

TROUBLESHOOTING

Engine starting and power loss problems from the fuel system are usually caused by one or more of the following:

A. Air Leaks

1. **Fittings.** Insure O-Rings on fittings in DAHL filter ports are lubricated and not damaged, cracked or dirty.

NOTE: When using JIC 37° fittings, be sure only mating JIC 37° fittings are used. Misalignment will occur and air leakage will result from an attempt to fasten a 45° fitting to a JIC 37° fitting. Check for fitting looseness, seat dents, misalignment or unmatched threads. All fittings must be wrench tight.

2. **Bubbles In The Bowl.** If bubbles appear at the depressurizer cone, a leak is indicated between the fuel tank and the inlet port.

NOTE: Old fuel lines (rubber hose or metal tubing) may crack when moved. Check areas around push-on fittings, pipe adapters, hose clamps, etc. If air bubbles appear at the pipe plug, check for particles stuck in the valve seat or a partly open pipe plug. Also check for defective, miscentered or unlubricated bowl gaskets. Check bowl plug O-Ring to make sure it is not cracked to extruded out of place. The bowl plug should be hand tightened only.

3. **Gaskets.** If the lid or bowl has been removed, make sure the gasket grooves are clean. Inspect gaskets for proper seating in the grooves. Lubricate gasket(s) with oil or grease.

NOTE: On DAHL Model 100-M, the arrow on the lid clamp must point up (large lip on top). Be sure the lid and body lips are inside the clamp lips for a complete seal. Knob must be hand tight.

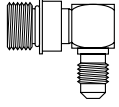
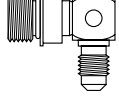
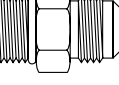

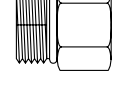
B. Clogging and Restriction

1. **Fuel Lines.** Check for collapsed lines caused by sharp bends or excessive turns. Check tank and/or filter shut-off valve(s).
2. **Filter Elements.** Early clogging can occur from badly contaminated fuel (micro-organism growth, rust, sludge, dirt, etc.) Always carry a spare DAHL element. Asphaltic materials (fuel oxidation products), which are normally harmless to the injection system, can eventually plug original equipment filters remaining in the fuel system. If problems persist after the DAHL element has been replaced, also replace the other fuel filter elements.
3. **Filter Inlet.** Severely contaminated fuel may cause inlet plugging. In this event, close the fuel tank supply shut-off valve (if equipped) and disconnect the inlet line. Remove the bowl and clean the inlet. Should the depressurizer cone also be plugged, disassemble and clean out.
4. **Bleed Back.** If fuel in the DAHL filter bleeds back to the fuel tank, an air leak or reverse flow valve problem is indicated. Inspect fuel lines and fittings first as indicated above. If the reverse flow valve is clogged, use air or clean fuel to flush out.

C. Malfunction of Engine Parts

Pre-existing conditions in pumps and injectors can also cause power loss and engine starting problems. See your equipment dealer if the above troubleshooting guides do not cover your problem.

DAHL FITTINGS CHART

FITTING	FOR DAHL UNIT	THREAD 1	THREAD 2	ORDER NUMBER
90° Elbow Straight Thread with O-Ring/37° Male JIC 	75 & 100 Series 75 & 100 Series 150 & 200 Series 150 & 200 Series 300 Series 300 Series	9/16-18 UNF 9/16-18 UNF 7/8-14 UNF 7/8-14 UNF 1 1/16-12 UNF 1 1/16-12 UNF	7/16-20 9/16-18 3/4-16 7/8-14 7/8-14 1 1/16-12	1010-6x4 1010-6x6 OBS 1010-10x8 OBS 1010-10x10 1010-12x10 OBS 1010-12x12
90° Elbow Straight Thread with O-Ring/37° Male JIC Drilled & Tapped for #4 Vacuum Gauge Hose 	75 & 100 Series 75 & 100 Series 75 & 100 Series 150 & 200 Series 150 & 200 Series 150 & 200 Series 150 & 200 Series 150 & 200 Series 300 Series 300 Series	9/16-18 UNF 9/16-18 UNF 9/16-18 UNF 7/8-14 UNF 7/8-14 UNF 7/8-14 UNF 7/8-14 UNF 7/8-14 UNF 1 1/16-12 UNF 1 1/16-12 UNF	7/16-20 9/16-18 9/16-18 3/4-16 3/4-16 3/4-16 3/4-16 7/8-14 7/8-14 1 1/16-12 1 1/16-12	1010-6x4DTC OBS 1010-6x6DTC OBS 1010-6x6DTC 1010-10x8DTA 1010-10x8DTB 1010-10x8DTC OBS 1010-10x8DTC 1010-10x10DTB 1010-12x10DTB OBS 1010-12x12DTB OBS
37° Male JIC Straight Thread with O-Ring 	75 & 100 Series 75 & 100 Series 150 & 200 Series 150 & 200 Series 300 Series 300 Series	9/16-18 UNF 9/16-18 UNF 7/8-14 UNF 7/8-14 UNF 1 1/16-12 UNF 1 1/16-12 UNF	7/16-20 9/16-18 3/4-16 7/8-14 7/8-14 1 1/16-12	1020-6x4 OBS 1020-6x6 OBS 1020-10x8 OBS 1020-10x10 OBS 1020-12x10 1020-12x12
37° Female JIC Swivel-Push-On Hose Fitting 	75 & 100 Series 75 & 100 Series 150 & 200 Series 150, 200 & 300 Series 300 Series	7/16-20 9/16-18 3/4-16 7/8-14 1 1/16-12	1/4 Hose 3/8 Hose 1/2 Hose 5/8 Hose 3/4 Hose	1030-4x4 OBS 1030-6x6 OBS 1030-8x8 OBS 1030-10x10 OBS 1030-12x12
Female Pipe Straight Thread with O-Ring 	75 & 100 Series 75 & 100 Series 150 & 200 Series 150 & 200 Series 150 & 200 Series 300 Series 300 Series	9/16-18 UNF 9/16-18 UNF 7/8-14 UNF 7/8-14 UNF 7/8-14 UNF 1 1/16-12 UNF 1 1/16-12 UNF	1/4-18 NPT 3/8-18 NPT 3/8-18 NPT 1/2-14 NPT 3/4-14 NPT 1/2-14 NPT 3/4-14 NPT	1040-6x4 1040-6x6 1040-10x6 1040-10x8 OBS 1040-10x12 OBS 1040-12x8 1040-12x12 OBS
90° Swivel Elbow Straight Thread with O-Ring/37° Female JIC	300 Series	1 1/16-12 UNF	3/4-14	1015-F
90° Swivel Elbow Straight Thread with O-Ring/37° Female JIC Drilled & Tapped for #4 Vacuum Gauge Hose	150 & 200 Series	7/8-14 UNF	1/2-14	1015-DDT

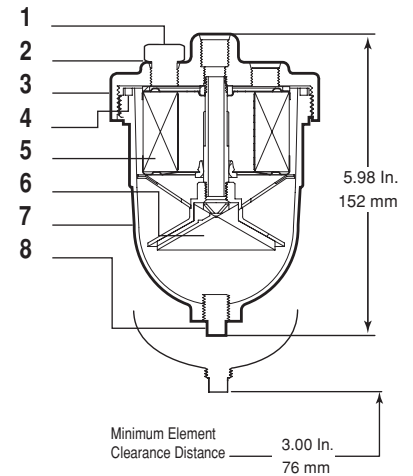
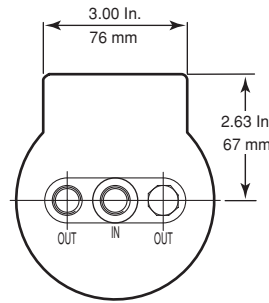
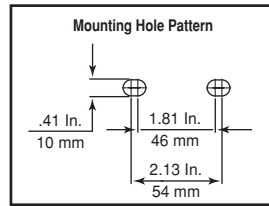
DAHL FITTINGS CROSS-REFERENCE CHART

DAHL NUMBER	AEROQUIP	PARKER	IMPERIAL	WEATHERHEAD
1010-6x4	2062-6-4S	2503-6-4	-	-
1010-6x6 OBS	2062-6-6S	2503-6-6	849-FSO-6x6	C5515x6
1010-10x8 OBS	2062-10-8S	2503-10-8	849-FSO-8x10	C5515x8x10
1010-10x10	2062-10-10S	2503-10-10	849-FSO-10x10	C5515x10
1010-12x10 OBS	2062-12-10S	2503-12-10	-	-
1010-12x12	2062-12-12S	2503-12-12	849-FSO-12x12	-
1020-6x4 OBS	202702-6-4S	0503-6-4	848-FSO-4x6	C5315x4x6
1020-6x6 OBS	202702-6-6S	0503-6-6	848-FSO-6x6	C5315x6x6
1020-10x8 OBS	202702-10-8S	0503-10-8	848-FSO-8x10	C5315x8x10
1020-10x10 OBS	202702-10-10S	0503-10-10	848-FSO-10x10	C5315x10
1020-12x10	202702-12-10S	0503-12-10	-	C5315x10x12
1020-12x12	202702-12-12S	0503-12-12	848-FSO-12x12	C5315x12
1030-4x4 OBS	4797-4B	30682-4-4	-	-
1030-6x6 OBS	4741-6B	30682-6-6	-	-
1030-8x8 OBS	4797-8B	30682-8-8	-	-
1030-10x10 OBS	4797-10B	30682-10-10	-	-
1030-12x12	4741-12B	30682-12-12	-	-
1040-6x4	2216-4-6S	0502-6-4	-	C3269x6x4
1040-6x6	-	0502-6-6	-	-
1040-10x6	-	0502-10-6	-	C3269x10x6
1040-10x8 OBS	2216-8-10S	0502-10-8	-	C3269x10x8
1040-10x12 OBS	-	0502-10-12	-	C3269x10x12
1040-12x8	2216-8-12S	0502-12-8	-	C3269x12x8
1040-12x12 OBS	2216-12-12S	0502-12-12	-	C3269x12x12

MODEL 75 SPECIFICATIONS & PARTS

Recommended Flow Rate: 20 GPH (U.S.) (75.7 LPH)
Port Thread: 9/16 - 18 w/O-Ring Boss
Height: 5 31/32 In. (152 mm)
Width: 4 3/16 In. (106.4 mm)
Depth: 4 3/4 In. (120.6 mm)
Weight: 2 lbs. (0.9 kg)
Maximum Working Pressure: 25 PSI (172 kPa)
Temperature Range: -50° to +225°F (-45° to +107°C)

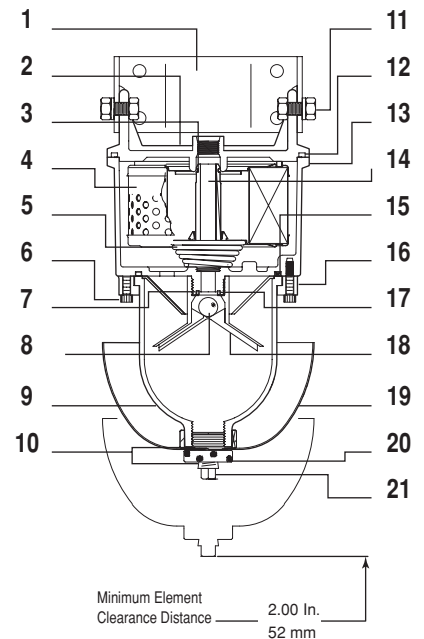
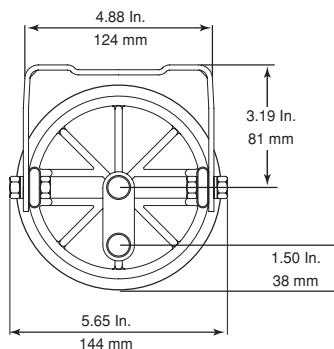
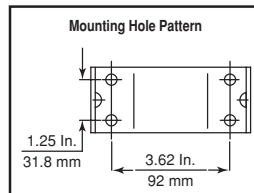
Item	Order #	Qty.	Description
1	60-31B	1	Primer Plug
2		1	O-Ring (Incl. in 60-GK)
3	65-14	1	Lid
4		1	Bowl Gasket (Square Cut) (Incl. in 60-GK)
5	66	1	Filter Element (Order Bowl Gasket Separately)
6	65-35A	1	Pipe/Depressurizer Assembly
7	75-21	1	Aluminum Bowl (Order 1072-B Separately)
8	1072-B OBS	1	Brass Pipe Plug



MODEL 100-M & 100-AL SPECIFICATIONS & PARTS

Recommended Flow Rate: 40 GPH (U.S.) (151 LPH)
Port Thread: 9/16-18 w/O-Ring Boss
Height: 11 1/8 In. (283 mm)
Width: 5 21/32 In. (144 mm)
Depth: 6 1/2 In. (165.1 mm)
Weight: 5 lbs. (2.27 kg)
Maximum Working Pressure: 25 PSI (172 kPa)
Temperature Range: -50° to +225°F (-45° to +107°C)

Item	Order #	Qty.	Description
1		1	Mounting Bracket (Incl. in 100-MNTG KIT)
2	100-14	1	Lid Cover
3		1	Centerpipe O-Ring (Incl. in 100-GK)
4	101	1	Filter Element
5	100-36	1	Spring
6	100-33	4	Socket Head Bolt
7		1	Reverse Flow Washer (Incl. in 100-DEPR KIT & 100-GK)
8		1	Reverse Flow Ball (Incl. in 100-DEPR KIT)
9	100-21M,AL	1	Marine or Aluminum Bowl
10		1	Bowl Plug O-Ring (Incl. in 100-GK)
11		2	Bracket Bolt, Washer & Nut Set (Incl. in 100-MNTG KIT)
12		1	Lid Cover Gasket (Incl. in 100-GK)
13	100-16	1	Body
14	100-35	1	Centerpipe
15		1	Bowl Gasket (Incl. in 100-GK)
16	100-20	1	Bowl Ring
17		1	Reverse Flow Gasket (Incl. in 100-DEPR KIT & 100-GK)
18		1	Depressurizer Set (Incl. in 100-DEPR KIT)
19	185-DS	1	Heat Deflector Shield (100-M Only)
20	100-29	1	Bowl Plug
21	1072-B OBS	1	Brass Pipe Plug

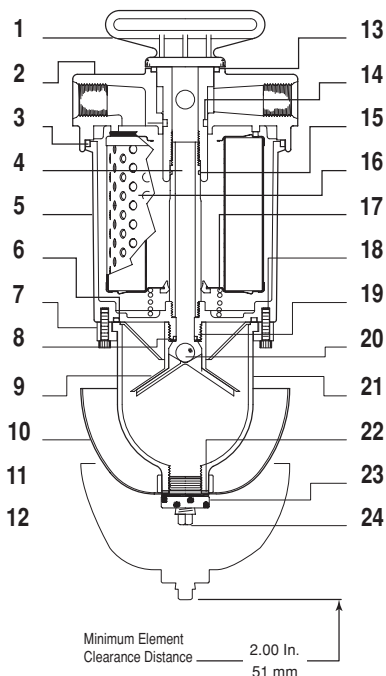
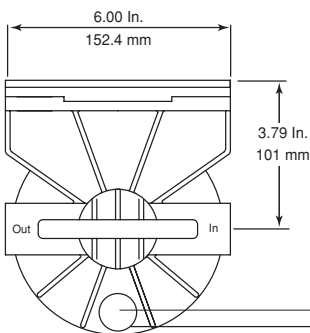
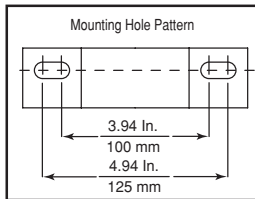


MARINE

MODEL 150-M & 150-AL SPECIFICATIONS & PARTS

Recommended Flow Rate: 80 GPH (U.S.) (302 LPH)
Port Thread: 7/8-14 w/O-Ring Boss
Height: 13 23/32 In. (348 mm)
Width: 6 In. (152.4 mm)
Depth: 6 11/32 In. (161.1 mm)
Weight: 9.5 lbs. (4.3 kg)
Maximum Working Pressure: 25 PSI (172 kPa)
Temperature Range: -50° to +225°F (-45° to +107°C)

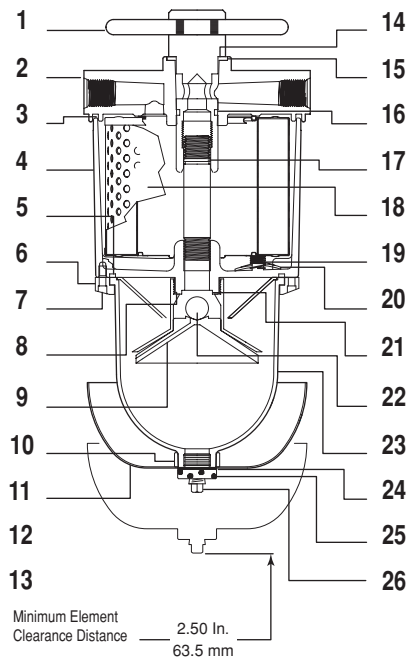
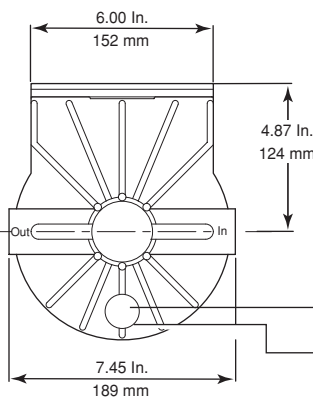
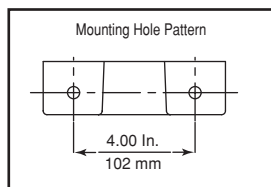
Item	Order #	Qty.	Description
1	150-10 OBS	1	T-Bolt
2	150-14	1	Lid Cover
3		1	Lid Cover Gasket (Incl. in 150-GK)
4	150-35	1	Centerpipe
5	150-16	1	Body
6		1	Bowl Gasket (Incl. in 150-GK)
7	100-20	1	Bowl Ring
8		1	Reverse Flow Washer (Incl. in 100-DEPR KIT & 150-GK)
9		1	Depressurizer Set (Incl. in 100-DEPR KIT)
10	185-DS	1	Heat Deflector Shield (150-M Only)
11	150-31	1	Primer Plug
12		1	Primer Plug O-Ring (Incl. in 150-GK)
13		1	T-Bolt O-Ring (Incl. in 150-GK)
14		1	Lid O-Ring (Incl. in 150-GK)
15		1	Centerpipe O-Ring (Incl. in 150-GK)
16	151	1	Filter Element
17		1	Spring
18	100-33 OBS	4	Socket Head Bolt
19		1	Reverse Flow Gasket (Incl. in 150-GK)
20		1	Reverse Flow Ball (Incl. in 100-DEPR KIT)
21	100-21M,AL	1	Marine or Aluminum Bowl
22		1	Bowl Plug O-Ring (Incl. in 150-GK)
23	100-29	1	Bowl Plug
24	1072-B OBS	1	Brass Pipe Plug



MODEL 200-M & 200-AL SPECIFICATIONS & PARTS

Recommended Flow Rate: 120 GPH (U.S.) (454 LPH)
Port Thread: 7/8-14 w/O-Ring Boss
Height: 15 7/8 In. (403 mm)
Width: 7 15/32 In. (189 mm)
Depth: 7 3/4 In. (196.9 mm)
Weight: 13 lbs. (5.9 kg)
Maximum Working Pressure: 25 PSI (172 kPa)
Temperature Range: -50° to +225°F (-45° to +107°C)

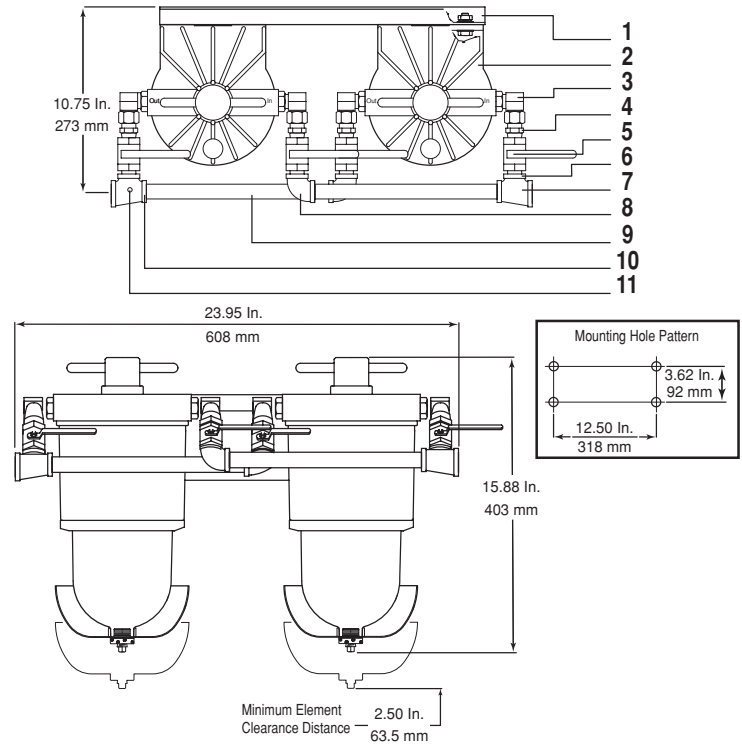
Item	Order #	Qty.	Description
1	200-10P	1	T-Bolt
2	200-14	1	Lid Cover
3		1	Lid Cover Gasket (Incl. in 200-GK)
4	200-16	1	Body
5		1	Bowl Gasket (Incl. in 200-GK)
6	200-20	1	Bowl Ring
7	200-33	8	Socket Head Bolt
8		1	Reverse Flow Washer (Incl. in 200-DEPR KIT & 200-GK)
9		1	Depressurizer Set (Incl. in 200-DEPR KIT)
10		1	Bowl Collar
11	285-DS	1	Heat Deflector Shield (200-M Only)
12	200-31	1	Primer Plug
13		1	Primer Plug O-Ring (Incl. in 200-GK)
14		1	Nylon Gasket (Incl. in 200-GK)
15		1	Upper T-Bolt Seal (Incl. in 200-GK)
16		1	Lower T-Bolt Seal (Incl. in 200-GK)
17		1	Centerpipe O-Ring (Incl. in 200-GK)
18	201	1	Filter Element
19	200-18 OBS	4	Ejector Spring
20	200-34	4	Ejector Spring Clip
21		1	Reverse Flow Gasket (Incl. in 200-DEPR KIT & 200-GK)
22		1	Reverse Flow Ball (Incl. in 200-DEPR KIT)
23	200-21M,AL	1	Marine or Aluminum Bowl
24		1	Bowl Plug O-Ring (Incl. in 200-GK)
25	100-29	1	Bowl Plug
26	1072-B OBS	1	Brass Pipe Plug



MODEL 200-MMV SPECIFICATIONS & PARTS

Recommended Flow Rate: 240 GPH (U.S.) (908 LPH)
Port Thread: 3/4-14 NPT
Height: 15 7/8 In. (403 mm)
Width: 23 31/32 In. (608 mm)
Depth: 10 3/4 In. (273 mm)
Weight: 35 lbs. (16 kg)
Maximum Working Pressure: 25 PSI (172 kPa)
Temperature Range: -50° to +225°F (-45° to +107°C)

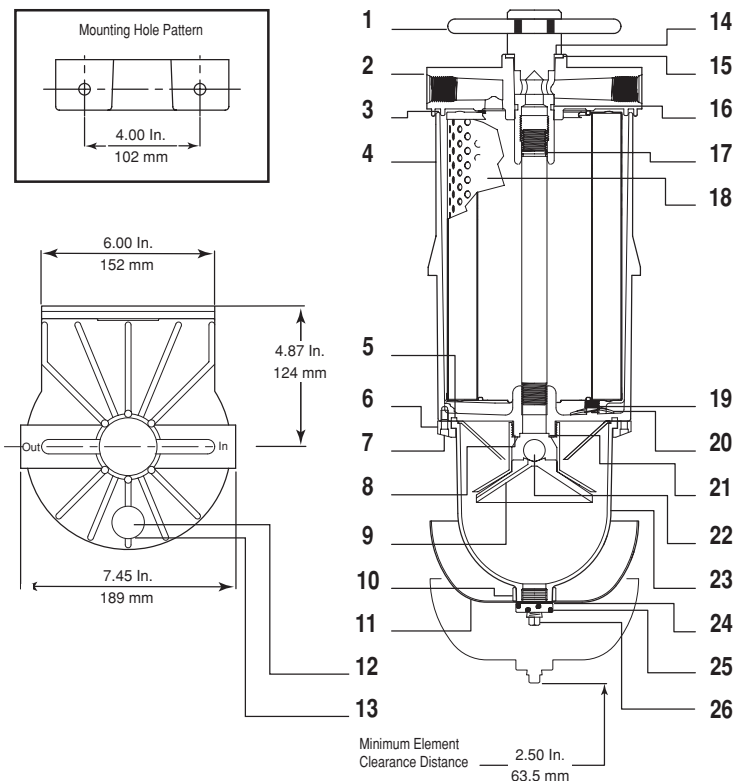
Item	Order #	Qty.	Description
1		1	Manifold Bracket
2	200-M	2	Filter/Separator
3		4	90° Swivel 7/8 x 1/2 In.
4		4	1/2 In. Pipe-Thread Adapter
5	1063-D	4	1/2 in Butterfly Shut-Off Valve
6		4	1/2 In. Close Nipple
7		1	3/4 x 1/2 x 1/2 In. Tee
8		2	1/2 In. Elbow
9		2	Long Nipple
10		1	Drilled & Tapped Tee
11		1	1/8 In. NTP Plug



MODEL 300-M SPECIFICATIONS & PARTS

Recommended Flow Rate: 180 GPH (U.S.) (681 LPH)
Port Thread: 1 1/16-12 w/O-Ring Boss
Height: 21 1/16 In. (535.4 mm)
Width: 7 15/32 In. (189.2 mm)
Depth: 7 3/4 In. (196.9 mm)
Weight: 16 lbs. (7.3 kg)
Maximum Working Pressure: 25 PSI (172 kPa)
Temperature Range: -50° to +225°F (-45° to +107°C)

Item	Order #	Qty.	Description
1	200-10P	1	T-Bolt
2	300-14	1	Lid Cover
3		1	Lid Cover Gasket
4	300-16	1	Body
5		1	Bowl Gasket (Incl. in 200-GK)
6	200-20 OBS	1	Bowl Ring
7	200-33	8	Socket Head Bolt
8		1	Reverse Flow Washer (Incl. in 200-DEPR KIT & 200-GK)
9		1	Depressurizer Set (Incl. in 200-DEPR KIT)
10		1	Bowl Collar
11	285-DS	1	Heat Deflector Shield (300-M Only)
12	200-31	1	Primer Plug
13		1	Primer Plug O-Ring (Incl. in 200-GK)
14		1	Nylon Gasket (Incl. in 200-GK)
15		1	Upper T-Bolt Seal (Incl. in 200-GK)
16		1	Lower T-Bolt Seal (Incl. in 200-GK)
17		1	Centerpipe O-Ring (Incl. in 200-GK)
18	301	1	Filter Element
19	200-18 OBS	4	Ejector Spring
20	200-34	4	Ejector Spring Clip
21		1	Reverse Flow Gasket (Incl. in 200-DEPR KIT & 200-GK)
22		1	Reverse Flow Ball (Incl. in 200-DEPR KIT)
23	200-21M,AL	1	Bowl
24		1	Bowl Plug O-Ring (Incl. in 200-GK)
25	100-29	1	Bowl Plug
26	1072-B OBS	1	Brass Pipe Plug

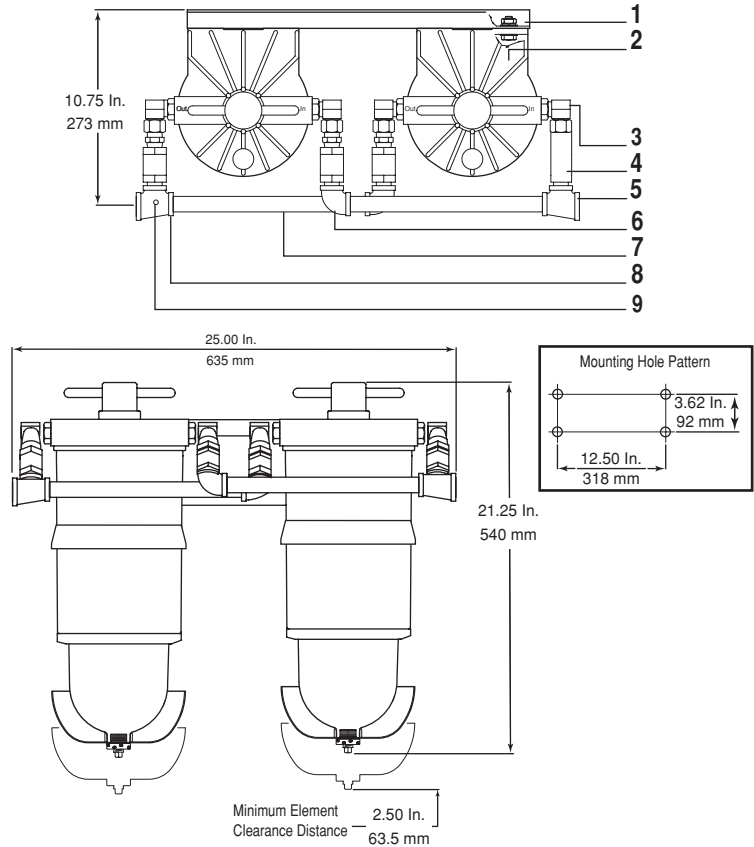


MARINE

MODEL 300-MM SPECIFICATIONS & PARTS

Recommended Flow Rate: 360 GPH (U.S.) (1,363 LPH)
Port Thread: 1-11 1/2 NPT
Height: 21 1/4 In. (540 mm)
Width: 25 In. (635 mm)
Depth: 12 1/4 In. (311.2 mm)
Weight: 43 lbs. (19.5 kg)
Maximum Working Pressure: 25 PSI (172 kPa)
Temperature Range: -50° to +225°F (-45° to +107°C)

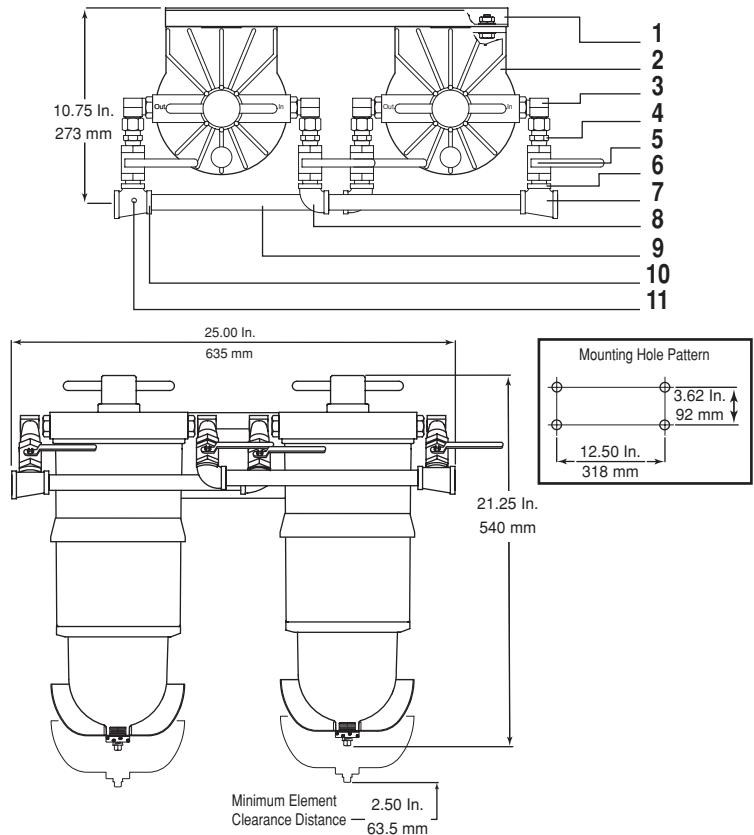
Item	Order #	Qty.	Description
1		1	Manifold Bracket
2	300-M	2	Filter/Separator
3	1015-F	4	90° Swivel 1 1/16 x 3/4 In.
4		4	3 In. Long Nipple
5		1	1 x 3/4 x 3/4 In. Tee
6		2	3/4 In. Elbow
7		2	10 In. Long Nipple
8		1	Drilled & Tapped Tee
9		1	1/8 In. NTP Plug



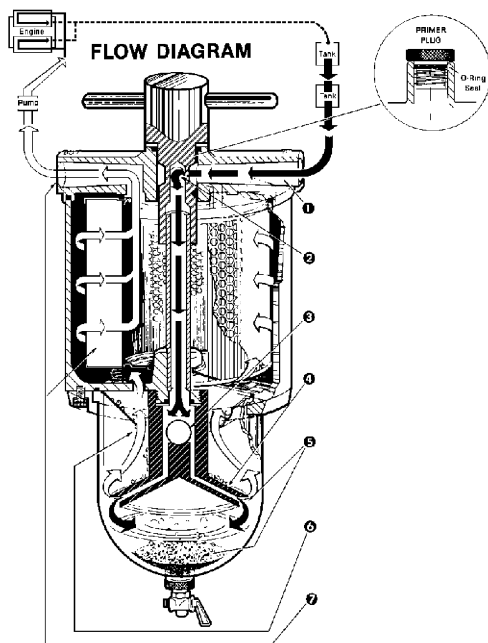
MODEL 300-MMV SPECIFICATIONS & PARTS

Recommended Flow Rate: 360 GPH (U.S.) (1,363 LPH)
Port Thread: 1-11 1/2 NPT
Height: 21 1/4 In. (540 mm)
Width: 25 In. (635 mm)
Depth: 12 1/4 In. (311.2 mm)
Weight: 46 lbs. (21 kg)
Maximum Working Pressure: 25 PSI (172 kPa)
Temperature Range: -50° to +225°F (-45° to +107°C)

Item	Order #	Qty.	Description
1		1	Manifold Bracket
2	300-M	2	Filter/Separator
3		4	90° Swivel 1 1/16 x 3/4 In.
4		4	3/4 In. Pipe-Thread Adapter
5	1063-F	4	3/4 In. Butterfly Shut-Off Valve
6		4	3/4 In. Close Nipple
7		1	1 x 3/4 x 3/4 In. Tee
8		2	3/4 In. Elbow
9		2	10 In. Long Nipple
10		1	Drilled & Tapped Tee
11		1	1/8 In. NTP Plug



HOW THE DAHL SYSTEM WORKS



1. The contaminated fuel enters the inlet port.
2. The T-Bolt redirects the fuel downward through the centerpipe.
3. Fuel flows through the reverse flow valve.
4. Fuel flow is spread by the depressurizer cone.
5. As fuel is discharged from the depressurizer cone, 80% of contaminant separation takes place. Most of the solid particles and water settle into the quiet zone of the bowl.
6. As the fuel rises upward, any remaining minute water droplets coalesce on the cone, baffle and bowl surfaces. Droplet size and weight gradually increase, causing downward flow into the sump.
7. Fuel is filtered completely by the element, which contains HydroShield™ media. The clean fuel then continues upward through the outlet port and on to the pump and injection system.

HOW TO SELECT THE RIGHT DAHL FILTER

Choose the size which can accommodate the flow rate recommended in the chart. (Maximum flow rate listed is for convenience in comparing with other systems only.) For most efficient separation and filtration, select from the recommended column.

Flow Rates in Gallons Per Hour

The chart is for Filter/Water Separators. Recyclers and Recycler/Blenders are limited by the pump. For example, a single 300 recycler unit has a flow rate limited to 180 GPH (U.S.), and a double 300 recycler unit has a flow rate limited to 360 GPH (U.S.).

FLOW RATES GPH (U.S.)

Model Series	Recommended	Maximum	Sump Capacity
65 & 75	20	30	4 oz.
100	40	65	8 oz.
100 Double	80	130	16 oz.
150	80	100	8 oz.
150 Double	160	200	16 oz.
200	120	200	24 oz.
200 Double	240	400	48 oz.
300	180	325	24 oz.
300 Double	360	650	48 oz.
300 Triple	540	975	72 oz.
500	1800	1920	11 Gallons
500 Double	3600	3840	22 Gallons
All Multiple Units	Multiply Flow Rate and Sump Capacity by Number of Units		

ACCESSORIES

REPLACEMENT FOR SERIES INDICATED:

Series.....100150200300
Shock Pad Mounting Kit.....186-SK286-SK286-SK286-SK

REPLACEMENT ELEMENT FOR SERIES INDICATED:

Series.....75.....100150200300
2 Micron Element66.....101151201301
10 Micron Element66-W101-W.....151-W.....201-W301-W
30 Micron Element66-30101-30151-30201-30.....301-30

REPLACEMENT GASKET FOR SERIES INDICATED:

Series.....100150200300
Gasket Kits (1 rebuild).....100-GK.....150-GK.....200-GK.....200-GK
Dealer Gasket Kits
(for multiple rebuilds)100-DGK OBS ---200-DGK200-DGK

WARNING: DO NOT use gasoline or any form of alcohol or anything containing it inside or outside a DAHL Fuel/Water Separator, with the exception of the DAHL Model 75 which is designed to allow use on Gasoline Engines.

MARINE

DAHL FUEL/WATER SEPARATORS

WHY DAHL?

Filters are a compromise wherever located. As a one-step strainer, a filter must be porous enough to allow sufficient flow volume. This means the filters which came with the equipment are usually in the 10-30 micron range.

However, if a more efficient media were used, the filter would become clogged very quickly, restricting the flow and resulting in frequent, costly element changes.

Not only that, many fuel filters are not designed to remove significant amounts of water, even though water is a primary cause of injector pump and nozzle damage.

Water and solid contaminants displace the diesel fuels lubricative coating on precision injection components. The loss of this protection results in wear, erosion, surface pitting and eventual fuel pressure loss.

THE SOLUTION

DAHL's functional dual chamber, 3-stage diesel fuel filter/water separators provide efficient suction side water separation and contaminant filtration. The key is the unique DAHL patented depressurizer cone, which spreads the flow of the fuel. The fact is, the more area to flow over, the slower the flow and the greater the separation of water and dirt from the fuel. DAHL diesel fuel filter/water separators have less mechanical flow resistance because the fuel changes direction only once.

COMPLETE EFFICIENCY

DAHL removes virtually 100% of the water and solid contaminants.

BALDWIN LIMITED WARRANTY

Baldwin Filters warrants each new Baldwin or DAHL Filter Product to be free from defects in workmanship and material as follows:

1. **Housings** one year from date of user's purchase.
2. **Electronics, Pumps and Motors** 90 days from date of user's purchase.
3. **Replaceable Elements, Spin-ons, Etc.** during equipment manufacturer's recommended filter service interval, if properly installed in a Baldwin recommended application.

Baldwin will replace or repair at its option, free of charge, any part still in the Baldwin warranty period found by Baldwin's inspection to be defective when such product is returned to place of purchase or to Baldwin Filters with transportation charges prepaid.

Specifically excluded from this warranty is damage resulting from excessive force, negligence, abuse, misuse, misapplication, tampering, improper installation, fire or accident. The warranty will not apply to any filter which has been cut apart or subject to tampering. Also, damage to plastic parts of fuel/water separators caused by the use of fluids containing alcohol is not covered by this warranty.

Full details of this warranty are in the Policy and Procedures Manual at the Baldwin or DAHL distributor or may be obtained from Baldwin's Service Engineering Department.

Baldwin Filters
Kearney NE 68848-6010
(800) 822-5394

PROVEN PERFORMANCE

DAHL diesel fuel/water separators have been tested and proven over millions of miles and hours under all sorts of conditions. Ask anyone who has used DAHL, or any Baldwin user, as Baldwin Filters makes DAHL products.

MARINE DURABILITY

Marine units 75, 100-AL, 100-M, 100-M30 OBS, 150-AL, 150-M, 200-AL, 200-M, 200-M30, 200-MMV, 200-MMV30, 300-AL OBS, 300-M, 300-MM, 300-MM30, 300-MMV and 300-MMV30 have passed severe U.L. testing. Tests include fire endurance, vibration fatigue, impact and thermal shock. These filters have also met U.S. Coast Guard requirements for Marine Applications.

CLEAN FUEL

DAHL eliminates nearly all of the engine problems caused by water and solid contaminants in diesel fuel. In addition to saving you the cost of expensive repair bills and aggravation, you can expect:

- Longer Injection System Component Life
- Full Power Performance
- Less Element Replacement Cost

SUPERIOR ENGINEERING

- Die cast aluminum
- Impact-resistant large transparent or aluminium bowl
- Element service life is several times longer than conventional
- Easy to install, service and clean
- Positive air elimination
- Advanced spring design assures positive element seal
- Less mechanical resistance because of streamlined flow path
- Baffle system is designed to stop emulsification and disperse trapped air
- Ball check valve to stop reverse flow
- Six series specifically designed to fit diesel engines of various capacities

Authorized Dealer

DAHL Products Division

BALDWIN FILTERS® **BALDWIN**

a CLARCOR company

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