DAHL®
BALDWIN

# 65 & 75 SERIES

## Fuel/Water Separators

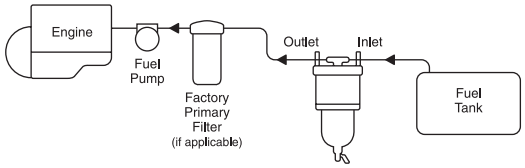

- **Installation**
- **Operation**
- **Parts**
- **Service Information**

# 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.

**FIGURE 1**




**NOTE:** Allow 3 1/2 inches 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 below.
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:

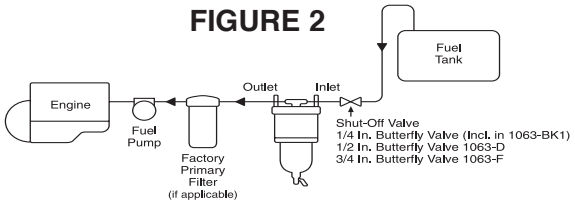
a. Remove the primary filter (if this does not affect warranty).
b. Use the largest diameter fuel line that is practical.
c. Mount the unit as near to the level of the pump as possible.
d. Eliminate sharp bends in the fuel lines wherever possible.

The best indicator of a fuel element's condition is a vacuum gauge. (See 85-V Series in Form 4005.) 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.

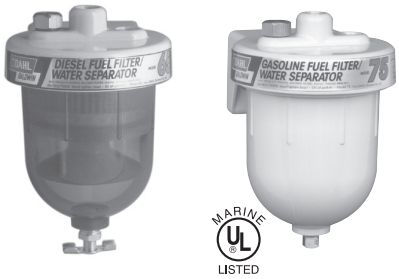
## B. Filter Mounted Below Fuel Storage Tank

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 fuel when changing the element. Valves are available from your dealer or by contacting Baldwin Filters.

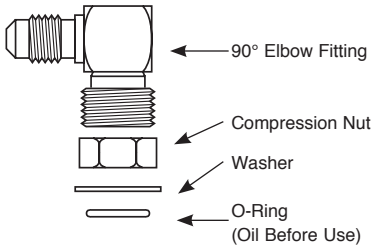
**FIGURE 2**



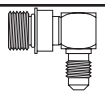
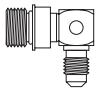
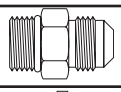
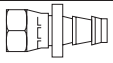

## C. Standard Fittings Installation/DAHL Fittings Chart




**MODEL 65** **MODEL 75**

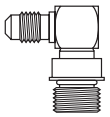



**Note:** Mount Model Before Installing Fittings. O-Ring Seal Fittings Require Care in Installation. **DO NOT OVERTIGHTEN.** See Instructions Below.

| FITTING | THREAD 1 | THREAD 2 |
|---|---|---|
| **90° Elbow** Straight Thread with O-Ring/37° Male JIC  | 9/16-18 UNF<br>9/16-18 UNF | 7/16-20<br>9/16-18 |
| **90° Elbow** Straight Thread with O-Ring/37° Male JIC Drilled & Tapped for #4 Vacuum Gauge Hose  | 9/16-18 UNF<br>9/16-18 UNF<br>9/16-18 UNF | 7/16-20<br>9/16-18<br>9/16-18 |
| **37° Male JIC** Straight Thread with O-Ring  | 9/16-18 UNF<br>9/16-18 UNF | 7/16-20<br>9/16-18 |
| **37° Female JIC** Swivel-Push-On Hose Fitting  | 7/16-20<br>9/16-18 | 1/4 Hose<br>3/8 Hose |
| **Female Pipe** Straight Thread with O-Ring  | 9/16-18 UNF<br>9/16-18 UNF | 1/4-18 NPT<br>3/8-18 NPT |

**NOTE:** See Form 4005 or Baldwin Product Guide Catalog for Fittings Cross-Reference Chart.

**1** Install "Out" Port First



Adjust Compression Nut All the Way Back

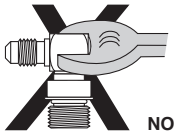
**2** Screw in O-Ring fitting until washer contacts port

Hand Tighten Only

YES

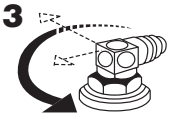
(Important: Do Not Tighten Further)

Do NOT Use Wrench



NO

**3**



Turn Fitting Counterclockwise to Desired Position

**4** Hold fitting by hand in desired position and tighten compression nut with wrench.

CAUTION: Use Low Torque:
**No More Than 8 Foot Pounds**

**NOTE:** Use Same Procedure for "In" Port.

# 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. Always open the draincock or remove the pipe plug completely to flush particulates out. Failure to do so could cause a leaky valve.

**A. DAHL Units Mounted HIGHER Than Fuel Storage Tank**

1. Turn engine off. Vent the DAHL filter to allow draining.
2. Open the primer plug and then the draincock or remove the pipe plug. If your fuel system is equipped with a DAHL primer bulb, open the draincock and squeeze the primer bulb to evacuate all contaminants.
3. Close the draincock or 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.
2. Open the draincock or remove the pipe plug completely and drain all contaminants.
3. Close the draincock or 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 66 is a 2 micron element which can be used approximately 250 hours or 10,000 miles. (DAHL 66-W is a 10 micron element for use in winter or severe applications and DAHL 66-30 is a 30 micron element.)
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. Open the draincock or remove the pipe plug completely to empty the bowl and flush particulates out. Failure to do so could cause a leaky valve.
2. Unscrew and remove the filter bowl.
3. Unscrew the depressurizer assembly from the lid and remove the contaminated element.
4. Discard the used filter element and bowl gasket.
5. Clean the bowl and gasket groove. Grease the lid cover gasket before positioning and install.

**C. Reassembly**

1. Lubricate the element grommet gasket and install this end on the centerpipe first. Grease the gasket on the opposite end of the element.
2. Screw the depressurizer assembly into the lid. Hand tighten only.
3. Double check the lid cover gasket position in the lid groove.
4. Apply grease to the bowl threads and reassemble the bowl with the lid. Hand tighten only.

**D. Priming**

1. Primer Bulb System
   For ease of priming, install the primer bulb kit, DAHL 140-50 KIT (3/8 inch hose) between the fuel tank and DAHL Model 65 or 75.
   a. Close the draincock or replace the pipe plug.
   b. Loosen the primer plug and pump the bulb until the fuel displaces the air.
   c. Tighten the primer plug.
   d. Start the engine and check for leaks.
2. No Priming System
   a. Close the draincock or replace the pipe plug.
   b. Fill the bowl 3/4 full with clean fuel.
   c. Screw the bowl into the lid. Hand tighten only.
   d. Remove the primer plug and slowly pour clean fuel into the primer port until the unit is full.
   e. Start the engine and check for leaks.
3. Existing Engine Primers
   a. Close the draincock or replace the pipe plug.
   b. Follow the engine manufacturer's instructions to purge air through existing vents between the filter and the engine.
   c. Start the 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 the O-Rings on the fittings in the 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 draincock or pipe plug, check for particles stuck in the valve seat or a partly open draincock. Also check for defective, miscentered or unlubricated bowl gaskets. Check the bowl plug O-Ring to make sure it is not cracked or 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 the gaskets for proper seating in the grooves. Lubricate the gasket(s) with oil or grease.

**B. Clogging And Restriction**

1. **Fuel Lines.** Check for collapsed lines caused by sharp bends or excessive turns. Check the 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. Asphaltinic 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.

# PARTS & SPECIFICATIONS

## MODEL 65 & 75 SPECIFICATIONS

**Recommended Flow Rate:**
*(For Optimum Element Life & Separation Efficiency)*
**Model 65 & 75 Series** ..... 20 GPH (U.S.) (75.7 LPH)
**Maximum Flow Rate:**
**Model 65 & 75 Series** ..... 30 GPH (U.S.) (113.5 LPH)
**Flow Resistance:** ..... 0.75 In. Mercury
**Maximum Working Pressure:** ..... 25 PSI (172 kPa)
**Temperature Range:** ..... -50° to +225°F (-45° to +107°C)
**Port Thread:**
**Single Units** ..... 9/16-18 w/O-Ring Boss
**Overall Height:**
**Model 65** ..... 6 3/8 In. (161.9 mm)
**Model 75** ..... 6 1/8 In. (155.6 mm)
**Width:** ..... 4 3/16 In. (106.4 mm)
**Depth:** ..... 4 3/4 In. (120.6 mm)
**Dry Weight:** ..... 5 lbs. (2.27 kg)
**Element Removal Clearance:** ..... 3 1/2 In. (88.9 mm)
**Sump Capacity:** ..... 4 oz. (118 ml)
**Seal Material:** ..... Buna N
**Element Number:** ..... 66 (2 Micron)
66-W (10 Micron)
66-30 (30 Micron)
**Element Material:** ..... Resin Impregnated Cellulose

## BALDWIN LIMITED WARRANTY

Baldwin Filters, Inc. ("Baldwin") warrants that each new DAHL product manufactured by Baldwin will be made free of defects in workmanship and material and will perform in accordance with its specifications as follows:

1. Housings one year from date of user's purchase.
2. Replaceable Elements during equipment manufacturer's recommended filter service interval, if properly installed.

Baldwin will replace any product found to be defective when you return it to Baldwin or to your Baldwin distributor where you purchased the product.

**Return Process**
You should first contact your salesperson at Baldwin or at your Baldwin distributor if you purchased a product that you believe does not meet the warranty stated above. The salesperson will help you complete the necessary paperwork, and will also help you return the suspected defective product to Baldwin for analysis.

**Warranty Fulfillment**
If Baldwin finds that a returned product does not meet the warranty stated above, Baldwin will promptly replace the defective product. If the defective product directly caused damage to the machine on which it was installed, Baldwin will promptly reimburse the machine owner for that portion of the repair costs that were necessary to restore the machine to its condition immediately prior to the damage caused by the defective product.

**Conditions**
Baldwin's warranty fulfillment obligations above do not apply if: **a)** the product is not returned to Baldwin for analysis, **b)** Baldwin finds that the product was not defective, **c)** the product was improperly installed or used, **d)** the product was reused or not replaced inside a normal service interval, or **e)** the product is tampered with or damaged in a manner that may inhibit Baldwin's ability to conduct a warranty investigation. Baldwin does not warrant any products that it does not manufacture (e.g., electronics, pumps, motors, etc.). You must look exclusively to the manufacturer of those products for warranty coverage.

**The above warranty and warranty fulfillment obligations are exclusive and in lieu of all other warranties or related remedies.** Baldwin is not liable for indirect, incidental, punitive or consequential damages arising in any way from the products it manufactures or sells.

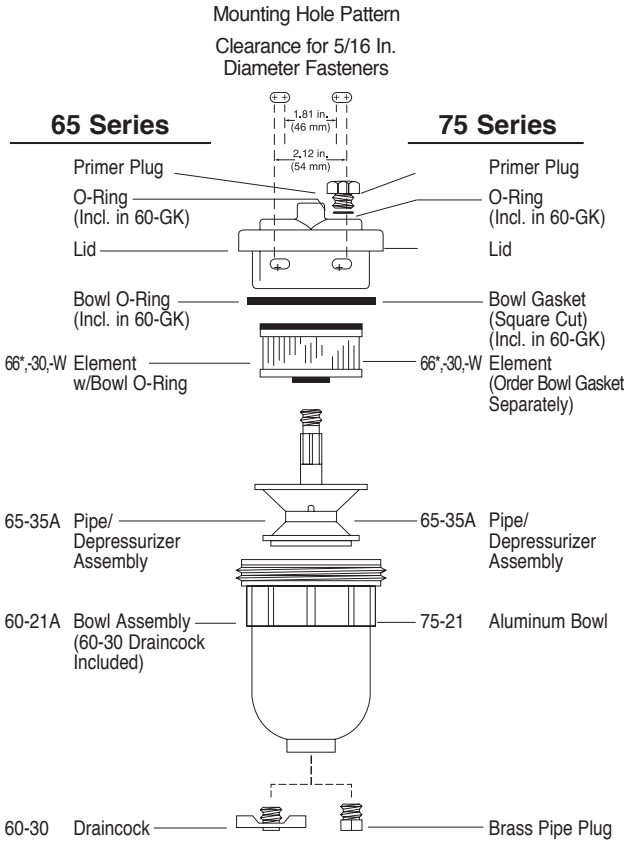
## 65 & 75 SERIES UNITS

**65** Diesel Fuel Filter/Water Separator

**65-W30** Diesel Fuel Filter/Water Separator — (30 Micron Element)

**75** Gasoline or Diesel Fuel Filter/Water Separator with Aluminum Bowl — U.L. Listed. Meets U.S. Coast Guard requirements.

**75-W30** Gasoline or Diesel Fuel Filter/Water Separator with Aluminum Bowl — (30 Micron Element)




* Standard with Unit Unless Stated.

**Authorized Dealer**

**WARNING:** These products can expose you to chemicals, including Diisononyl Phthalate, Carbon black extracts, Nickel, 1,3 Butadiene, Ethylene Oxide, Epichlorohydrin, which are known to the State of California to cause cancer, and Bisphenol-A, Ethylene Glycol, Ethylene Oxide, 1,3 Butadiene, Epichlorohydrin, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to **www.P65Warnings.ca.gov.**