



Model 100 Series Kits

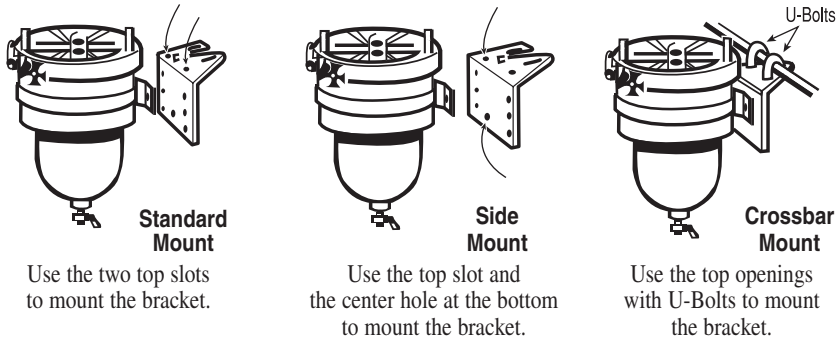
Diesel Fuel Filter/Water Separators Installation Instructions

Introductory Installation Information

- Always install DAHL 100 on the vacuum (suction) side of transfer pump and ahead of any other filter:** On domestic vehicles, remove the 3/8 inch I.D. hose from the transfer pump and splice to the DAHL inlet hose. On foreign engines, cut the 8 mm I.D. metric hose in half between the factory filter and the steel line. Splice the two halves to the DAHL inlet and outlet hoses.
- Install DAHL 100 as vertical as possible:** Do not tilt more than 10°.
- Install DAHL 100 as low as possible:** The best location for filter operation is below the highest level, where the fuel reaches.
- Do not mount DAHL 100 directly on the engine:** Vibration of the engine will loosen fittings and bolts.
- Priming of DAHL 100:** Priming eliminates air from the fuel system for smoother initial engine start up. (See page 2.)
- Do not remove factory filter:** Removal of new equipment components can void your warranty. Check with the vehicle dealer or leave the original filter in place. Always install the DAHL 100 ahead of any fuel filter left in place.
- Hose splicer installation:** Hose splicers normally do not require clamps. If clamps are used, do not over tighten, as the hose could be cut by the clamps. 
- Barb fitting installation:** Heating the end of the hose with hot water will ease the installation of all barbed push-on fittings. 

Typical Mounting Bracket for Model 100

Illustrated is Model 140-10 for GM Cars. This typical mounting bracket can be placed in a variety of locations. Additional brackets for special and foreign models are also available. (See page 3.)



Bracket Modifications

Brackets can be modified to fit a specific engine compartment layout by:

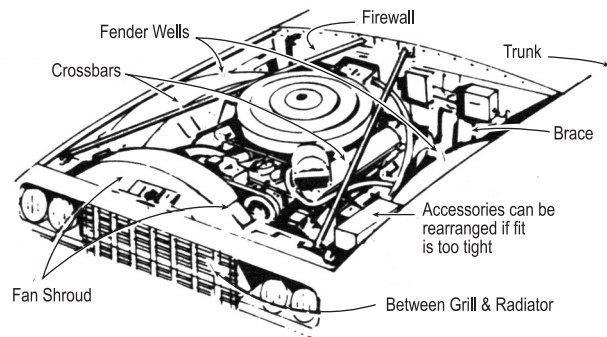
- Hacksawing a corner
- Drilling holes
- Bending in a vise

Different brackets are in different kits. Another kit may have a suitable bracket.

Basic Installation Steps for Model 100

- Select mounting location:** A DAHL 100 series fuel filter/water separator should be located between the transfer pump and the steel line from the fuel tank. It should not interfere with normal engine maintenance, such as dipstick removal, access to coolant reservoir, etc. Be sure the DAHL draincock is accessible. (Mounting location determines the hose routing.) Keep the hoses away from abrasive points, fan belts or any moving parts. See illustration at right for mounting options.
- Install mounting bracket:** Punch holes as required.

NOTE: Before drilling or punching, always check the opposite side for accessories, wires, lines or ducts.



Basic Installation Steps for Model 100, Cont'd.

Custom brackets: If modification or substitution does not solve the mounting problem, a customized bracket can easily be made from heavy sheet metal or bent or welded steel.

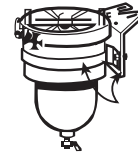
3. **Attach body clamp to mounting bracket:** Refer to the appropriate diagram inset for assembly detail.
4. **Hand tighten draincock assembly to filter:** Be sure the bowl plug is oiled and centered.
5. **Screw elbow fittings into filter (Do Not Tighten):** Grease or oil O-Ring. Final position of the fittings is determined by the hose routing.

NOTE: To avoid cutting the O-Ring, do not over tighten the locknut.

6. **Place filter into body clamp.** Do not tighten.



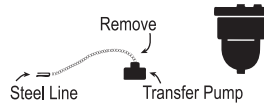
Overhead Bracket without Body Clamp



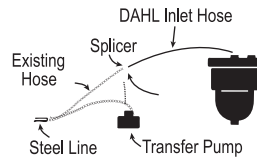
Mounting Bracket with Body Clamp

Domestic

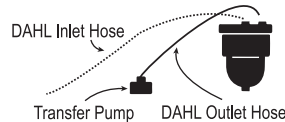
7. **Prepare inlet source:** Pull the standard 3/8" hose off the transfer pump.



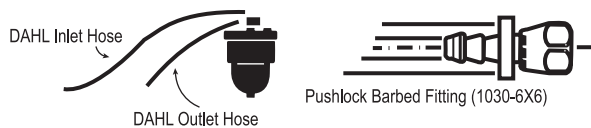
8. **Install DAHL inlet hose:** Measure from the DAHL inlet port to the existing hose attached to the steel line. Allow for slack and cut the inlet hose to size. Use a splicer to connect the hoses.



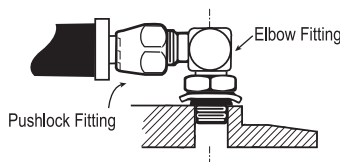
9. **Install balance of DAHL hose to outlet source:** Attach the DAHL outlet hose to the transfer pump. Use the clamp.



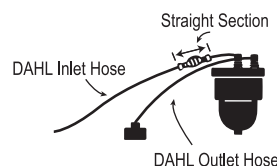
10. **Install pushlock fittings to open ends of DAHL inlet & outlet hoses:** (See page 1, item 8.)



11. **Loosely attach both pushlock fittings to elbow fittings.**

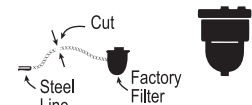


12. **Splice primer pump in line to inlet hose:** The primer must be installed in the straight section of the hose to assure airtight connection. (See page 3.)

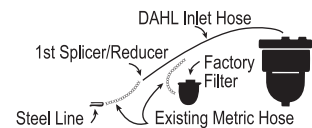


Imports

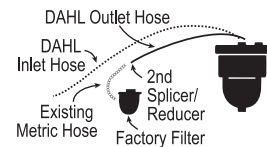
7. **Prepare inlet source:** Locate the 8 mm (approximately 5/16") hose between the factory filter and the steel line from the fuel tank. Cut in half.



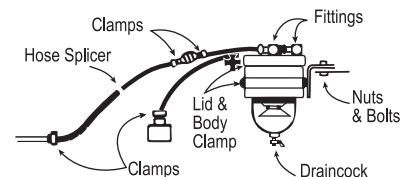
8. **Install DAHL inlet hose:** Measure from the DAHL inlet port to the half of the hose attached to the steel line. Allow for slack and cut the inlet hose to size. Connect the hoses with a splicer/converter.



9. **Install balance of DAHL hose to outlet source:** Splice DAHL outlet hose to half of metric hose attached to the factory filter with a splicer/converter.



13. **Position DAHL filter as desired:** Check and tighten all connections, including bolts and nuts (except outlet pushlock barbed fitting).

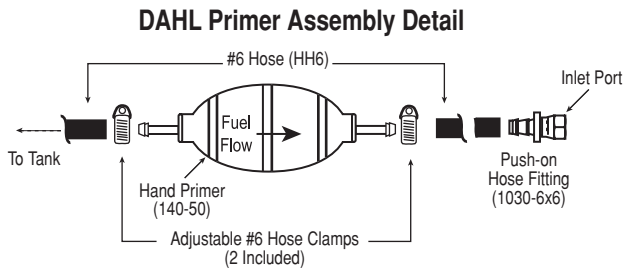


14. **Prime Fuel System:** Squeeze the primer bulb until the diesel fuel appears. Tighten the outlet pushlock barbed fitting. (Do not overtighten.)

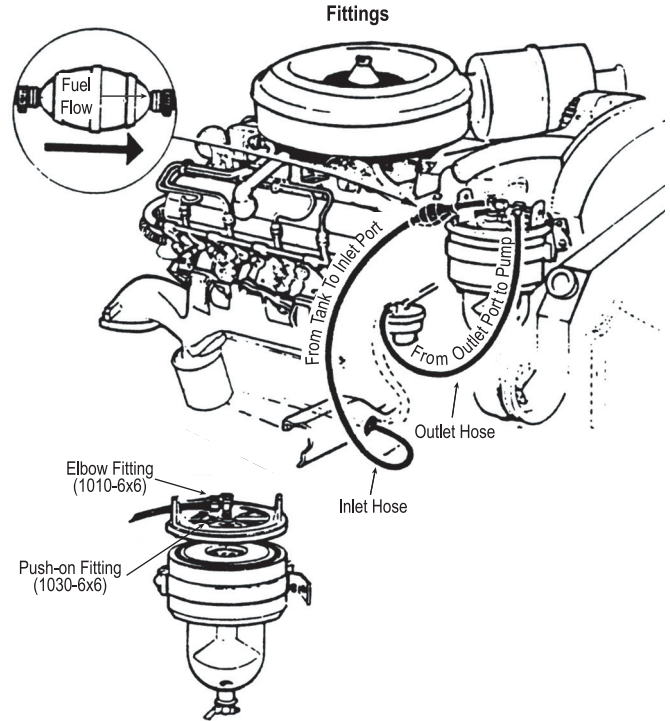
15. **Start engine and purge remaining air:** Check the installation. (See page 6.)

Installing a 140-50 Hand Primer

This hand primer is designed to make draining and/or element changing easy.



- 1. Installation:** Cut the hose a few inches from the inlet port at a straight section (as shown in the illustration). Install the primer in-line. Tighten both clamps securely.
- 2. Elimination of air:** Loosen the outlet pushlock barbed fitting to allow air to escape. Pump the primer bulb until the diesel fuel appears. Retighten the outlet fitting.
- 3. Check for leaks:** Check all connections. If a leak develops around the lid, the lid gasket may be improperly installed.



Contents of Installation Kits

Complete Installation Kits for Model 100-W/O
(Order 100-W/O Separately)

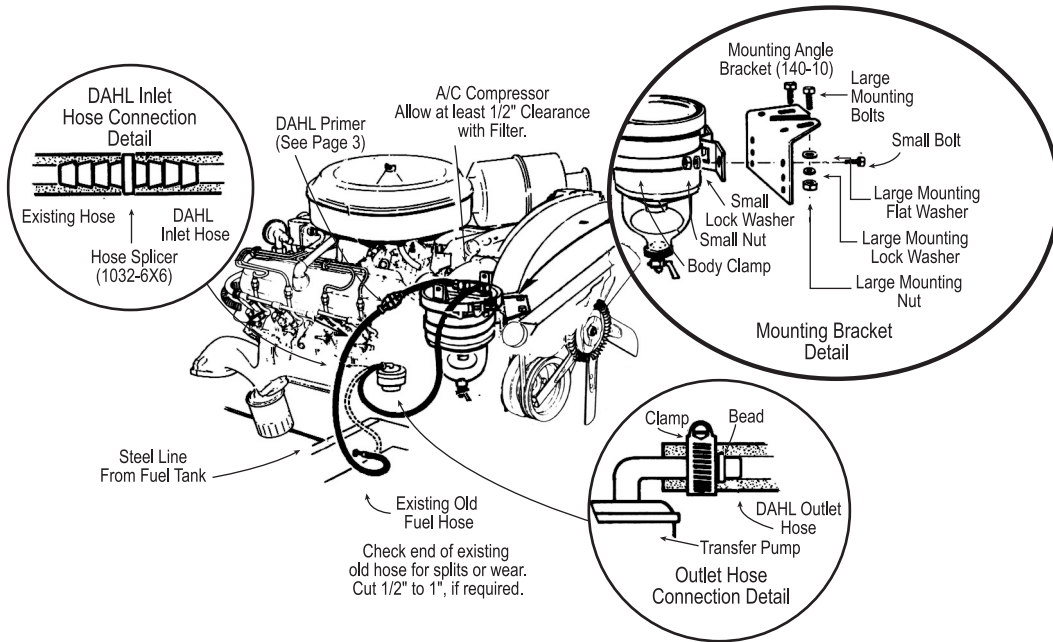
Most components listed in the kits are also available as individual part numbers. See complete DAHL price list for individual prices.

Description	Part No	Size	140 KIT	143-6L KIT	143-6L9 KIT
			for Most GMC Cars	for Pre-1984 GMC 6.2L Light-Duty Trucks	for Ford & International 6.9L Light-Duty Trucks
			Qty	Qty	Qty
Mounting Angle Bracket	140-10		1		
Body Clamp/Saddle Assembly			1	1	1
Small Bolt - Clamp to Bracket		1/4-20x5/8	2	2	2
Small Nut		1/4-20	2	2	2
Small Flat Washer		1/4	2	2	2
Small Lock Washer		1/4	2	2	2
Hose Clamp		#6 (3/8)	3	2	4
Primer Pump	140-50 KIT	#6	1	1	1
Large Mounting Bolt		5/16-24x3/4	2		
Large Lock Washer		5/16	2		
Large Nut		5/16-24	2		
Fuel Hose	HH6	#6 (3/8)	3 ft.	5 ft.	12 ft.
Large Flat Washer		3/8	2		
Elbow Fitting	1010-6x6	#6	2	2	2
Pushlock Barbed Fitting	1030-6x6	#6	2	2	2
Pushlock Barbed Hose Splicer		#6 (3/8)	1		
Inverted Female Fitting		#6		1	
Inverted Male Fitting		#6		1	

Typical Installation Diagrams

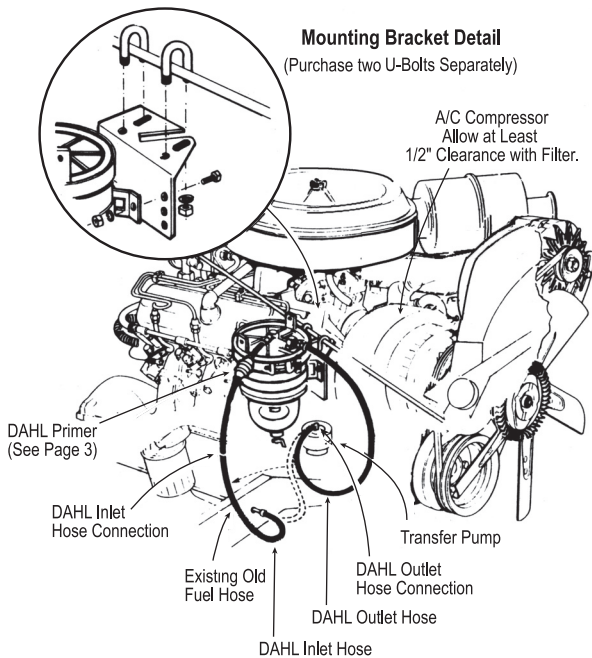
General Motors Diesel Cars

Use DAHL Model 100-BMK or Model 100-W/O and 140 KIT.



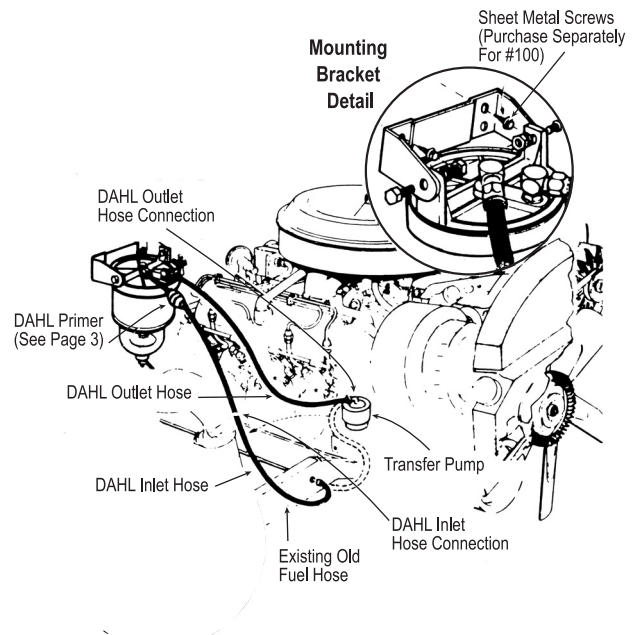
Crossbar Installation on General Motors Cars

Use DAHL Model 100-BMK or Model 100-W/O and 140 KIT.

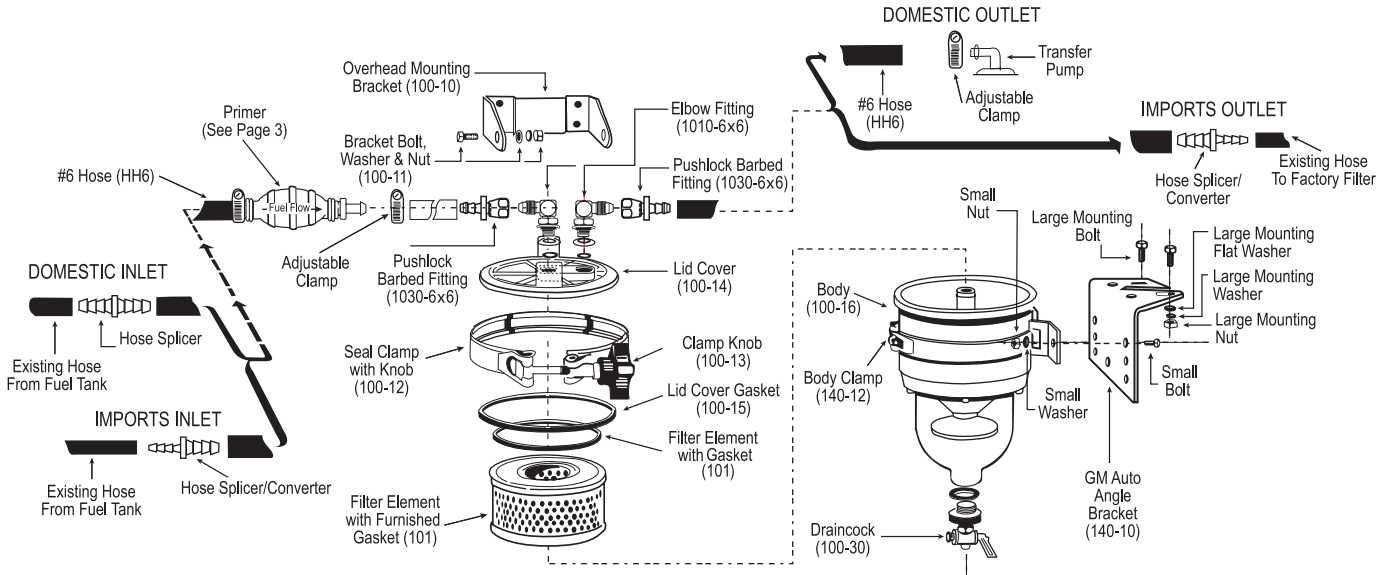


Firewall Installation on General Motors Light-Duty Trucks

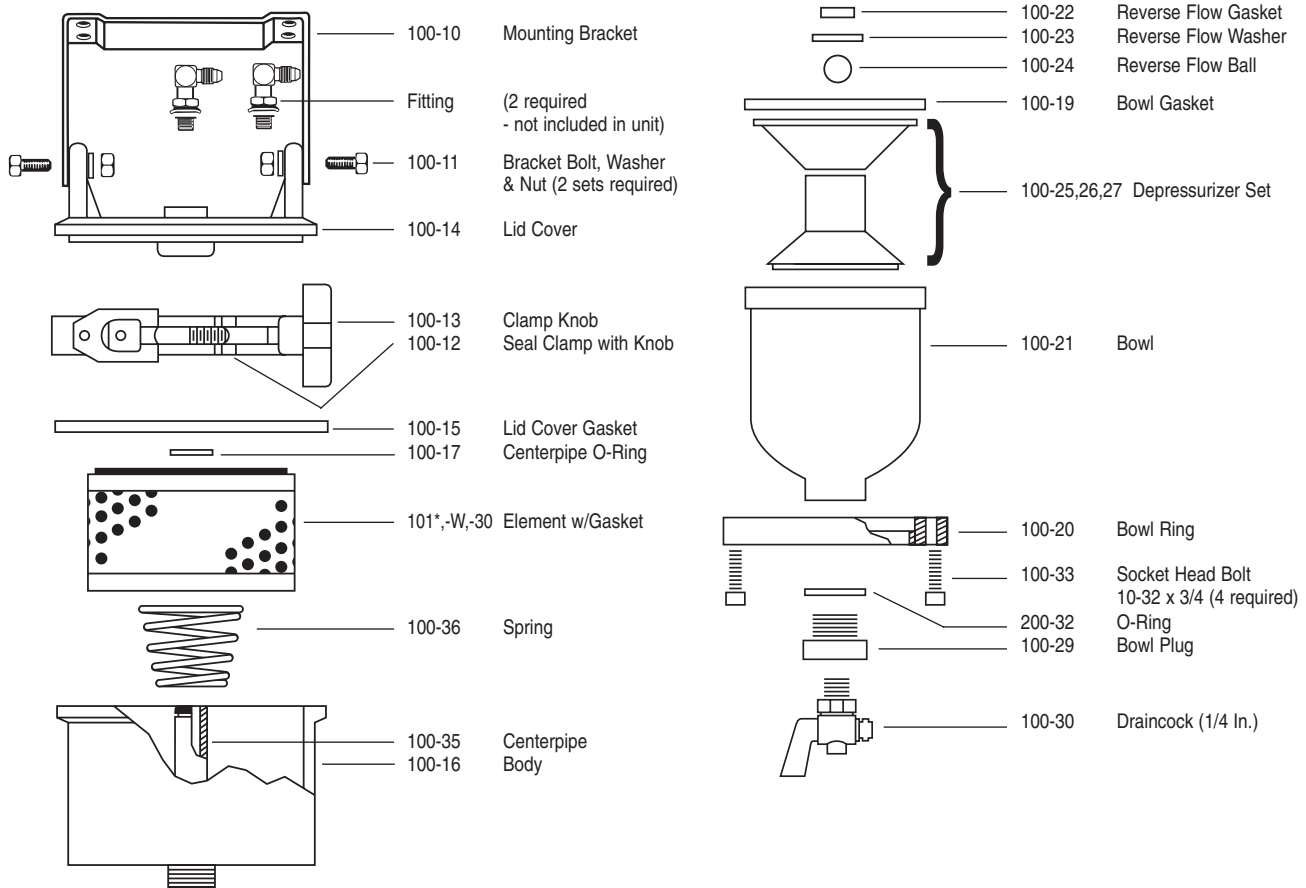
Use DAHL Model 100-BMK or Model 100-W/O and 143-6L KIT.



DAHL 100 Series Assembly Details



DAHL Model 100 Parts List



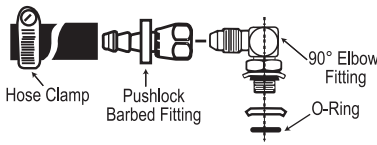
CAUTION

Do NOT use any form of alcohol or any agent containing it inside or outside any DAHL Filter.

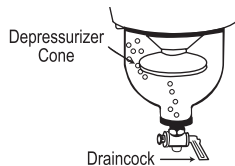
Troubleshooting

■ Air Leaks

Fittings: All fittings must be wrench tight. Next, check for looseness, dents, misalignment or unmatched threads. Then check for damaged, dirty or ungreased O-Rings. (If a leak occurs between the fuel tank and the inlet port, bubbles will appear at the depressurizer cone.)



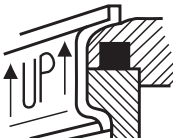
Draincock: If air bubbles are visible immediately above the draincock, check for defective, miscentered or an unlubricated bowl plug gasket. Hand tighten.



Hose & Tube: Old fuel lines may crack when moved. Check areas around the push-on fittings and hose clamps. Fix as needed. (See first illustration on this page.)

Lid & Element Gaskets: Check to see that both gaskets are properly sealed in their grooves.

Seal (Lid) Clamp: The arrow on the 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.



■ Clogging

Filter Element & Fuel Line: Clogging can occur from badly contaminated fuel (rust, sludge, algae, etc.) If ice has formed, change the element. Always carry a spare fuel element.

■ Malfunction of Engine Parts

Pumps & Injectors: A pre-existing condition or a non-related problem can also cause power loss or engine failure.

**The most important step
in installing a filter
is to make sure it works right.**

Always confirm:

- All seals have sealed completely.
- No leaks appear when engine is started
- The flow direction is correct.

If the filter you just installed checks out, fine. If not, check back to see that you have followed the instructions in this booklet. The most important step in installing a filter is to inspect it and make sure it works.

Unless there is a pre-existing condition or non-related problem with pumps and injectors, a properly installed filter will do the intended job. If there are engine starting or power loss problems from the fuel system at any time, follow the troubleshooting suggestions.

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

Authorized Dealer

DAHL Products Division

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a CLARCOR company

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