HYDRAULIC OIL RECYCLER MODELS

- Installation
- Operation
- Parts
- Service Information
PORTABLE UNITS

Portable units are mounted on a sturdy 46 inch high cart. Easy-rolling 10 inch wheels with rubber tires make it simple to wheel these units to the equipment rather than bring the equipment to the unit.

110 Volt AC is standard, but 220 Volt AC is also available. Maximum flow rate for single motorized units is 180 GPH (U.S.), 300 GPH (U.S.) for double units.

The motorized pump includes an on/off switch and 7 1/2 feet of heavy-duty 16/3 cable with ground.

Units come with 15 foot lengths of number 10 or number 12 fuel hoses. Number 10 fuel hoses come with 1/2” NPT male threaded fittings and number 12 fuel hoses come with 3/4” NPT male threaded fittings.

PIPE EXTENSION NOTE: For best suction control, a half-inch by ten foot section of pipe can be attached to the end of the suction hose. Notch the suction end of the pipe for good flow. If possible, periodically move the location at the bottom of the tank.

OPERATION — RECYCLING

1. Priming
   a. Loosen the T-Bolt handle to release the filter body from the lid. Support the filter body with your hand prior to release.
   b. Fill the filter body to within one-inch of the top with clean diesel fuel.
   c. Lubricate the lid cover gasket and replace.
   d. Reinstall the body to the lid. Hand tighten only.

2. Turn unit on. The toggle switch is on the motor. All DAHL units operate continuously and must NEVER be left running dry (No fluid flow through the pump).

3. Recycling time is determined by the fuel quality or until no additional contaminants appear in the bowl. Recycling time (in hours or minutes) may be estimated with the use of Table 1.

4. Monitor the bowl for water and contaminants. Drain as needed.

NOTE: Water must be drained before the level reaches the depressurizer cone. Refer to DRAINING WATER section. An optional water sensor with automatic pump shut-off is a handy accessory.

5. Element condition is monitored by the vacuum gauge located on the DAHL filter outlet. Refer to ELEMENT REPLACEMENT section.

<table>
<thead>
<tr>
<th>Recyclers Flow Rates</th>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAHL Model Series</td>
<td>Gallons Per Hour*</td>
</tr>
<tr>
<td></td>
<td>Divide Gallons of Fuel by</td>
</tr>
<tr>
<td>300 Double Series</td>
<td>300</td>
</tr>
</tbody>
</table>

* Maximum Pump Rating - Actual flow may be less.

SERVICING

DRAINING WATER

When free water is found in the hydraulic oil, it will generally be removed by the depressurizer cones found in the bowl. Other contaminants that are large enough and dense enough will also be removed by the depressurizer cones. For these reasons, the bowl should be visually inspected from time to time. The bowl must be drained before the level of water and contaminants reaches the depressurizer cone.

A. Turn unit off.

NOTE: On units with automatic vacuum-activated shut-off, the motor will shut off automatically when the pump produces a predetermined suction. Drain replace elements and press the reset button to resume operation.

B. Open the draincock up to 1/4 turn and drain all contaminants.

NOTE: If the contaminant will not drain out, slowly open the primer plug on the lid to allow air to enter the system.

C. Close the primer plug and draincock.

D. Prime the system, if necessary. Refer to ELEMENT REPLACEMENT section.

E. Start unit and check for leaks.
HYDRAULIC OIL RECYCLERS

SERVICING

WATER-ABSORBING CARTRIDGE REPLACEMENT

A. When To Replace
The DAHL unit will shut off when the restriction of the filters causes the pump to produce a predetermined suction. The water-absorbing cartridge should be changed at this point.

B. How To Replace Water-Absorbing Cartridge
1. Turn on the override switch and check the vacuum reading. Note the vacuum rating. Turn the unit off.
2. Drain the body by opening the draincock. It may be necessary to open the primer plug slightly to allow air to flow into the body. Drain only enough oil to allow easier handling of the filter body.
3. Close the draincock and primer plug.
4. Loosen the T-Bolt handle to release the filter body from the lid. (It is not necessary to completely remove the T-Bolt from the DAHL filter lids.) Support the filter body with your hand prior to release.
5. Remove the cartridge with a turning motion.
6. Inspect the ejector spring(s) at the bottom of the body. Also check the centerpipe O-Ring and replace if hard or damaged.
7. Remove and replace the lid cover gasket. Be sure the lid groove and body lip are clean. (Greas the lid cover gasket before positioning.)

C. Reassembly
1. Lubricate the top and bottom cartridge gaskets. Install the cartridge onto the centerpipe with a turning motion.
2. Fill the filter body with clean oil to within one inch of the top.
3. Double check the lid cover gasket position in the lid top.
4. Attach the body to the lid and hand tighten the T-Bolt handle.
5. Start unit and check for leaks.

SYNTHETIC CARTRIDGE REPLACEMENT

A. When To Replace
The synthetic element is a secondary filter and should not become plugged as quickly as the water-absorbing cartridge. The actual life will be dependent upon the filtering conditions.

B. How To Replace Synthetic Cartridge
1. Drain the body by opening the draincock. It may be necessary to open the primer plug slightly to allow air to flow into the body. Drain only enough oil to allow easier handling of the filter body.
2. Close the draincock and primer plug.
3. Loosen the T-Bolt handle to release the filter body from the lid. (It is not necessary to completely remove the T-Bolt from the DAHL filter lids.) Support the filter body with your hand prior to release.
4. Remove the cartridge with a turning motion.
5. Inspect the ejector spring(s) at the bottom of the body. Also check the centerpipe O-Ring and replace if hard or damaged.
6. Remove and replace the lid cover gasket. Be sure the lid groove and body lip are clean. (Greas the lid cover gasket before positioning.)

C. Reassembly
1. Lubricate the top and bottom cartridge gaskets. Install the cartridge onto the centerpipe with a turning motion.
2. Fill the filter body with clean oil to within one inch of the top.
3. Double check the lid cover gasket position in the lid top.
4. Attach the body to the lid and hand tighten the T-Bolt handle.
5. Start unit and check for leaks.

TROUBLESHOOTING

Poor performance of the recycler or blender units is 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.
2. Bubbles In The Bowl. If bubbles appear at the depressurizer cone, a leak is indicated between the tank and the inlet port.
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. 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 or oil (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 fluids may cause inlet plugging. In this event, close the tank supply shut-off valve (if equipped) and disconnect the inlet line. Remove the bowl and clean the inlet. Should the depressorizer 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 lines and fittings first as indicated above. If the reverse flow valve is clogged, use air or clean fluid to flush out.

C. Motorized Pump Malfunction

Danger! Electric Shock Hazard. Only qualified personnel should test or repair defective components.

1. Check the power source and on-off toggle switch for operation.
2. On water-activated automatic shut-off models, drain the water or select the override position on the switch.

D. Water Sensor Light Malfunction

NOTE: This is a 12 Volt DC low voltage system. There is no danger of electrocution from the probes at the clear bowl even though the current is switched on.

1. With the unit on, test the light by temporarily attaching a test wire across the two probes at the clear bowl.
2. If the water level is above the probes and the light still does not work, refer to PROBE CLEANING section.
HYDRAULIC OIL RECYCLERS
MODEL 300 SPECIFICATIONS

DAHL Model 300

Mounting Hole Pattern
Clearance for 3/8 in. Diameter Fasteners

- T-Bolt
- Nylon Gasket (Incl. in 200-GK)
- Upper T-Bolt Seal (Incl. in 200-GK)
- Lower T-Bolt Seal (Incl. in 200-GK)
- Primer Plug
- Primer Plug O-Ring (Incl. in 200-GK)
- Lid Cover
- Lid Cover Gasket (Incl. in 200-GK)
- Centerpipe O-Ring (Incl. in 200-GK)
- Element w/Gasket
- Centerpipe
- Body
- Ejector Spring (4 required)
- Ejector Spring Clip (4 required)
- Reverse Flow Gasket (Incl. in 200-DEPR KIT)
- Reverse Flow Washer (Incl. in 200-DEPR KIT & 200-GK)
- Reverse Flow Ball (Incl. in 200-DEPR KIT)
- Bowl Gasket (Incl. in 200-GK)
- Depressurizer Set (Incl. in 200-DEPR KIT)

- 200-21 Bowl
- 200-20 Bowl Ring
- 200-33 Socket Head Bolt
- 1/4-20 x 5/8 (8 required)
- O-Ring (Incl. in 200-GK)
- 100-29 Bowl Plug
- 100-30 Draincock

* Standard with Unit Unless Stated.

SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>300 DOUBLE</th>
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<tbody>
<tr>
<td>Flow Rate (Recommended)</td>
<td>300 GPH (U.S.) 1136 LPH</td>
</tr>
<tr>
<td>Height (w/o Cart)</td>
<td>22 1/4 in. (565.2 mm)</td>
</tr>
<tr>
<td>(w/Cart)</td>
<td>46 in. (1168 mm)</td>
</tr>
<tr>
<td>Width of Portable Units</td>
<td>26 in. (660 mm)</td>
</tr>
<tr>
<td>Depth of Portable Units</td>
<td>25 in. (635 mm)</td>
</tr>
<tr>
<td>Dry Weight, Portable Units</td>
<td>125 lbs. (57 kg)</td>
</tr>
<tr>
<td>Port Size — Inlet</td>
<td>1/2 in. NPT</td>
</tr>
<tr>
<td>Outlet</td>
<td>3/4 in. NPT</td>
</tr>
<tr>
<td>Sump Water Capacity</td>
<td>48 ounces</td>
</tr>
<tr>
<td>Filter Elements</td>
<td>301-W</td>
</tr>
</tbody>
</table>

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 the appropriate ELEMENT REPLACEMENT steps 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 200-GK.)
5. Refer to the parts illustration for reassembly. Clean all gasket grooves and contact surfaces of foreign matter. Coat the lid cover gasket with grease to hold in place before positioning and coat all other gaskets and O-Rings with diesel fuel. Hand tighten the depressurizer cone and wrench tighten the socket head bolts.
6. Again, refer to ELEMENT REPLACEMENT section to finish reassembly.

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

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.