

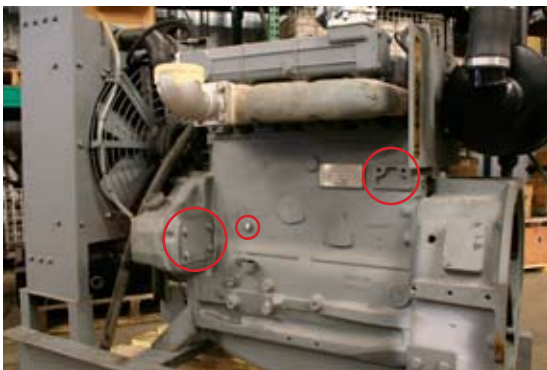
INSTALLATION INSTRUCTIONS

OIL BYPASS FILTRATION SYSTEM

5110



The oil bypass filter system installs on the left side of the engine below the exhaust manifold. No engine crankcase modifications are required. Replacement oil filter elements can be ordered from Arrow Engine Company, part number LFS801BPE.



1. Remove mounting bracket from filter unit. Locate the two 10mm threaded holes located toward the rear of the engine. Attach filter mounting bracket to engine block (as shown) using two M10x1.5 (20mm long) bolts with flat washers.
2. It may be necessary to loosen the control panel bracket to be able to fasten the oil filter into the bracket. This may be done at three points. (Note: Reattach the control panel bracket after the oil bypass filter assembly has been completed.)



3. Install IN and OUT port fittings on the filter (oriented as shown). Both will use 1/4"NPT, 45° brass elbow fittings. (Note: Use a thread sealant paste, not included, on all pipe threads and fittings. Use care not to get sealant into passages of hoses or fittings. Do not use Teflon tape.)

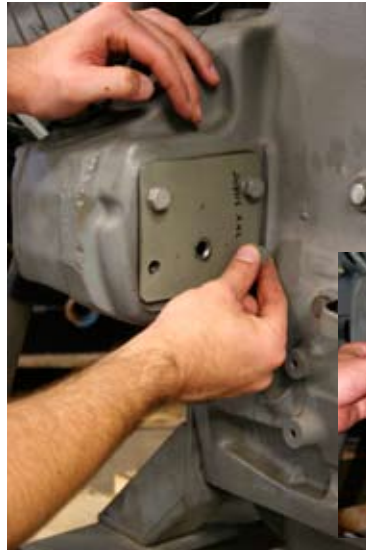




4. Reattach filter to mounting bracket. (Use Loctite 271 or equivalent, not included, for head fitting threads.)



5. Remove block off plate from crankcase front cover and replace with block off plate containing 1/4" NPT hole (AEC part number 208512-A42) and gasket (AEC part number 208512-A42G). Make sure to align the hole on both the gasket and the plate. (Note: If the block off plate already contains a 1/4" NPT hole, it will contain



a pipe plug. If this is the case, you may simply remove pipe plug from plate and proceed to next step.)



6. Remove plug from pressurized port located on left side of engine block. Replace plug with M10x1-to-1/8" NPT adapter. Attach 90° brass elbow with 1/8" NPT-to-5/16" tube fitting to adapter.



7. Attach straight brass fitting with 1/4" NPT-to-5/16" tube fitting to 1/4" NPT hole in block off plate.

8. Attach 18" braided hose to IN side 45° fitting. Attach opposite end of 18" braided hose (from IN side of filter) to 5/16" tube fitting of 90° brass elbow.



9. Attach 23" braided hose to OUT side 45° fitting. Attach opposite end of 23" braided hose (from OUT side of filter) to 5/16" tube fitting side of straight brass fitting.



10. Ensure plumbing flow through the system is correct (Pressurized oil from block should flow to IN side of filter; oil from OUT side of filter should drain to the crankcase front cover through the block off plate.).

11. Start engine and check for leaks. Let engine run briefly to begin oil circulation through bypass filter. Verify oil circulation by checking the filter can for heat (Caution: the filter canister can be hot.).



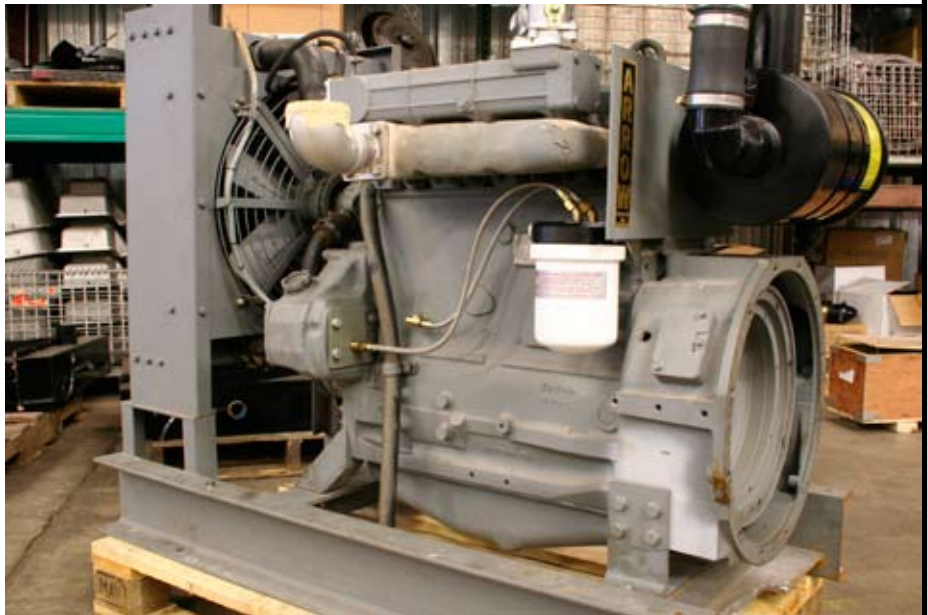
12. IMPORTANT - Shut off engine and check oil level. The addition of the bypass filter should require approximately one additional quart of engine oil to maintain the recommended engine oil level.



SERVICE INSTRUCTIONS

OIL BYPASS FILTRATION SYSTEM

1. Service the element annually or when it is clogged (this may be determined by checking the OUT side hose for warmth – a clogged element will have a cold outlet hose), whichever comes first.
2. Make sure the engine is off and the canister is cool to the touch.
3. Unscrew the canister from the head, drain, clean, and set aside.
4. Unscrew the element from the spud on the head and dispose of properly.
5. Thread the new element on to the head spud and lubricate o-ring with clean engine oil.
6. Fill the canister with clean oil and thread canister back onto head assembly.
7. Start engine and check for leaks.
8. Important: Stop engine and check for proper oil level.



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ARROW ENGINE COMPANY

2301 E. Independence, Tulsa, OK 74110

Toll Free **800.331.3662** Local 918.583.5711

Fax 918.388.3204 Toll Free Fax in US & Canada 800.266.1481

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