

System Changeover to Castrol Anvol SWX Fire Resistant Fluid

Mineral oil or Polyol Ester based fluids to Anvol SWX fluids

Anvol SWX fluids are miscible and compatible with nearly all mineral oil and polyol ester type hydraulic fluids. To convert a system using these types of fluids, simply drain and recharge with Anvol SWX FM. For proper fire resistance, at least 95% of the mineral oil-based fluid should be removed. See 'Topping up an existing system' for more detailed changeover information.

Water glycol and emulsions to Anvol SWX fluids

Anvol SWX fluids are not miscible or compatible with water-containing fluids and these fluids must be removed from the system. Remove most of the fluid by draining the reservoir and lines. Remove residual fluid by circulating Anvol SWX and draining. Refill with fresh fluid. Repeat until residual fluid is less than 1% of system volume. The lower the residual the better, as water can cause hydrolysis and acid increase/breakdown of the ester in the Anvol SWX.

Phosphate ester to Anvol SWX

Some, but not all phosphate esters, are compatible with Anvol SWX FM. Testing prior to conversion is recommended. Please contact Castrol for testing and conversion recommendations.

Flushing Procedure

The following procedure should be used as a general guide when changing fluids of unknown compatibility, heavily contaminated systems or water glycol-based fluids to Anvol SWX:

- Drain the system as completely as possible, paying careful attention to the low points in pipelines, dead legs and pockets of fluid which may be trapped in pumps, valves, accumulators and other components.
- Clean the inside of the reservoir thoroughly using lint free cloth. Paint protected surfaces should preferably be stripped to bare metal before cleaning. If internal surfaces are to be left painted, the paint used should be either epoxy resin or phenolic resin or one recommended by the paint supplier.
- Manually swab the inside of the reservoir thoroughly with Anvol SWX.
- Remove filters, clean and replace.
- Check the seals, hose accumulator bladders etc. for compatibility with the Anvol SWX (polyol ester fluids) and replace with recommended materials as necessary.
- Pump, preferably by means of a small rotary hand pump, sufficient Anvol SWX through the suction and delivery pipes to ensure that all of the fluid previously used is removed from the hydraulic circuit. A slow viscosity flow, as from a small hand pump, is most effective for flushing and the small quantity used reduces costs.
- Drain the flushing fluid as completely as possible and clean the inside of the reservoir.
- Clean the filters and renew elements as necessary.
- Fill the reservoir with the Anvol SWX, clean the reservoir breather and check the circuit for leakage. The system is now ready for normal operation.
- A sample should be taken 4 hrs. after operation. If the previous fluid content is greater than 5%, the system should be drained and filled with new Anvol SWX

Industrial Technology Deployment

The information in the paper is provided for guidance and informational purposes only. The information contained herein has been compiled from sources deemed reliable and it is accurate to the best of our knowledge and belief.

However, Castrol cannot guarantee its accuracy, completeness, and validity and cannot be held liable for any errors or omissions, as the results change depending on the working condition/environment.

The content, website and information within the paper are not intended to provide investment, laboratory or manufacturing process advice.

Changes are periodically made to this information and may be made at any time. All information contained herein should be independently verified and confirmed.

Castrol Technology Deployment, 150 W Warrenville Rd., Naperville IL 60563