

APPLIANCE & LIGHTING (USA)

FIRE RESISTANT HYDRAULICS

Castrol Anvol® SWX 68*

ANNUAL SAVINGS: \$33,650



THE SITUATION

A leading producer of lighting components was experiencing frequent servo valve failures due to the rapid breakdown of the fire-resistant hydraulic fluid in their glass presses. Because of the high cost of this fluid, the customer was forced to operate on an extended oil cycle.

Castrol was challenged to reduce servo valve failures, increase hydraulic fluid life, minimize repair costs, and improve system uptime.

BEFORE

- An expensive competitive fluid was in use
- Fluid health was not monitored.
- Rapid oil breakdown within 6 months of service
- Average of 9 servo valve failures per year

AFTER

- Lower cost, higher performance Castrol Anvol SWX 68
- Fluid health monitored monthly
- Oil showed minimal signs of degradation after 12 months
- No servo failures. Three (3) servo cleanings per year. This is opportunistic cleaning not failure.

THE SOLUTION

- Use of Anvol SWX 68 fire resistant hydraulic fluid resulted in greatly improved servo valve performance.
- Systems are monitored by Castrol via oil samples and temp readings.
- Castrol Engineers surveyed the systems & provided recommendations for improved fluid cleanliness.
- Over the 12-month trial, the total acid number (TAN) was monitored and only increased slightly (0.7 pts), where the competitive fluid had historically been well degraded by this time (>4 pts).
- Significant downtime was incurred from the previous fluid due to valve & filter plugging from wax-like substances. This was eliminated after conversion.

- **Right fluid for the right application**
- **Better proven fire protection**
Castrol Anvol SWX does not contain polymers or droplet size control materials and therefore is very shear stable. There is no resultant loss of viscosity over time due to shearing and no component plugging due to breakdown of the polymer.

*Formerly known as Anvol SWX 68 FM

RECOMMENDATIONS

Servo valves are high precision instruments which allow for excellent process controls, but they are very sensitive to dirt, varnish and other oil degradation by-products. The previous fluid broke down rapidly (within 6 months) leading to sticking and plugged servos. In addition, the oil supplier did not provide oil cleanliness recommendations or routine oil analysis to aid in improving reliability of the systems.

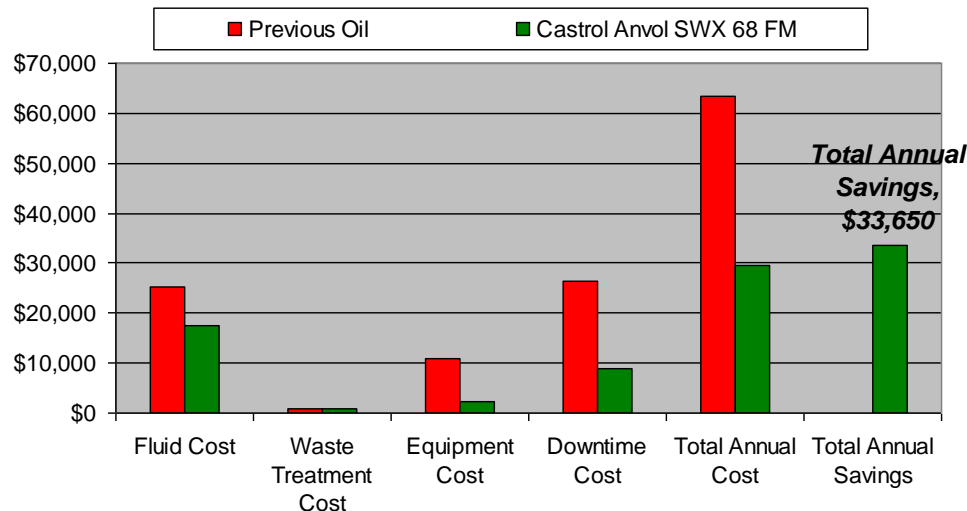
CONCLUSION

Castrol Anvol SWX coupled with Castrol's technical expertise exceeded all expectations of the customer in this application. They achieved all key goals including extended oil life, longer servo valve life, lower maintenance costs, and less downtime.

The overall result was an annual cost savings of \$33,650 plus greatly improved equipment reliability.



Annual Cost Comparison



OTHER POTENTIAL APPLICATIONS

Anvol SWX is a Factory Mutual approved, synthetic polyol ester fire-resistant fluid. It was formulated with a highly saturated ester without the use of polymers to prevent varnish, shearing, and component plugging that are inherent to many competitive fluids.

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