



Pure Machine Tool

ISOPur Fluid Technologies saves product yields by purifying hydraulic oil in a high-precision machine tool application

Hydraulically driven forming machinery at a manufacturing company runs 20 hours a day, seven days a week and supports the whole product line in creating highly precise devices. The hydraulic machine tool is valued at approximately \$500,000, making replacement extremely costly.

The Challenge

The hydraulically driven forming machine was experiencing drifting within a year of purchase. After three years of use, the forming arm would not hold the required tolerance. The drifting of the head was directly responsible for fatal product defects. The company initially compensated for the drift but decided it would be more cost effective to find and remedy the source of the problem. Maintenance review and oil analysis showed that the lubricating oil was contaminated. The company had not been changing the oil regularly and seals were leaking on the press. Control valves and solenoids also needed regular replacement. The company's need for oil purification justified a cutting-edge solution, which made ISOPur's proven purification efficiency the optimal choice. ISOPur reduces dependence on foreign oil, protects the environment by dramatically reducing the need to dispose of billions of gallons of used oil a year while protecting billions of dollars worth of equipment throughout the world.

The Solution

In August of 2001, an ISOPur fluid purification unit, which utilizes the patented Balanced Charge Purification (BCP) technology, was installed onto the essential forming machine. Oil samples were taken and analyzed. After 90 days of operation with the ISOPur unit, the previously contaminated oil within the hydraulically driven forming machinery was now testing at better than new oil standards. The drifting problem simultaneously disappeared. The benefits derived from installation of the ISOPur units were numerous -- clean servo valves, elimination of machine drift; removal of buildup on the internals of the machinery; removal of small particles which had caused the leakage problem. Moreover, the company noted that the ISOPur unit required minimal maintenance and that the rare filter change was effortless.

The Return on Investment

Prior to installing the ISOPur unit, the company experienced eight to 12 days per year of downtime due to contaminated lubricating oil. After the ISOPur unit was installed, downtime was virtually eliminated. Due to the machine drift issue, 32,000 end-product units had been lost per year, costing the company approximately \$300,000. After installing the ISOPur unit, the company achieved first year savings from eliminating product loss of more than \$225,000. In addition, productivity increased as a result of eliminating the daily two hours of engineering time that had been lost to maintain the machine tools. "The money spent on the ISOPur unit has been the best insurance policy for the company," said the company's VP of Operations. "The investment in ISOPur fluid purification systems has been returned 10 times."

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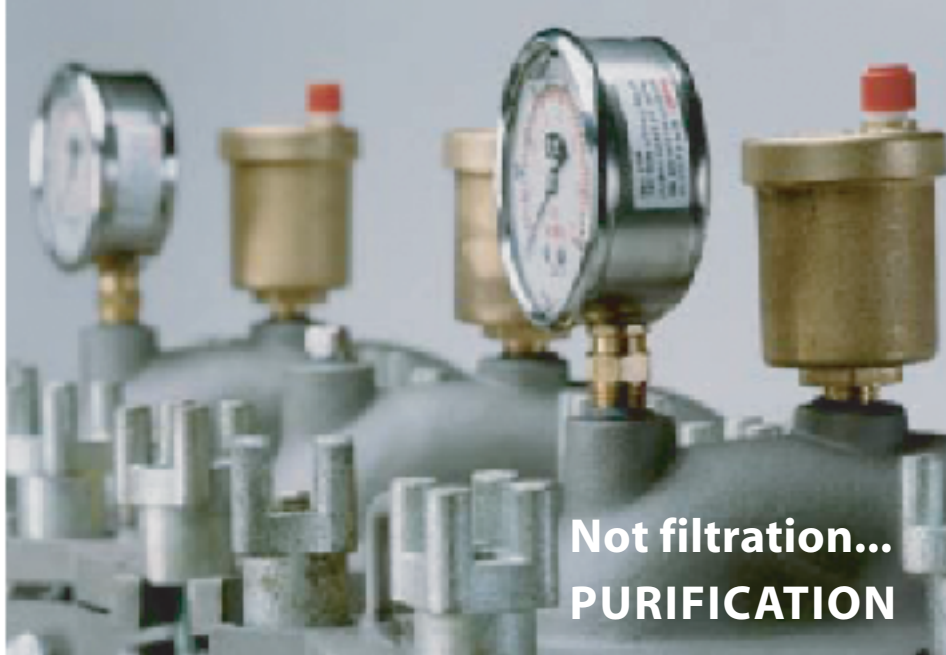
- VP of operations

Before ISOPur:

- *Forming arm drift*
- *High product defects*
- *Leaking seals and maintenance*

After ISOPur:

- *Drift eliminated*
- *Clean servo valves*
- *Leakage eliminated*
- *Higher product yields*



Not filtration... PURIFICATION

ISOPur Fluid Technologies, Inc. develops advanced purification systems for hydraulic oil, lubricating oil, and diesel fuel used in high-performance, mission-critical industrial machinery. Through its patented Balanced Charge Purification (BCP) technology, ISOPur is able to achieve a level of fluid purity unattainable by traditional filtration or centrifugal systems. ISOPur not only continuously purifies oil and fuel to a better than new condition, BCP also scours the internals of the machinery as well. ISOPur can provide a dramatic return on investment by improving plant uptime, reducing maintenance costs, extending the life of expensive capital equipment, and reducing fluid consumption and waste disposal.

ISOPur is committed to defining the fluid purification industry. In an effort to conserve what is quickly becoming a capital resource, non-conducting fluids, the ISOPur BCA technology is able to keep these fluids like new, year after year - *without replacement.*

Discover the **Power of Purity** with ISOPur Fluid Technologies.



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