

# CASE STUDY

## LUBSOIL® SYNTHETIC CUTTING FLUID – LUBSCUT 3395

Screw Machine Shop – Southeastern U.S.  
Multiple Applications

### APPLICATIONS

Cutting, drilling, forming, and threading on screw machines manufactured by Browne & Sharpe and Acme, as well as Swiss-made C&C Machines. Metals used in the various processes include 17-4 and 304 stainless steel, brass, aluminum, 4140 alloy steel, and others.

### CHALLENGES

Facilities staff expressed concerns over the multiple products being used from multiple sources. Due to the various number of cutting fluids on the shop floor, cross contamination of fluids was an issue. There was also significant confusion around which fluids to use in which machines. The composition of current cutting fluids was creating an overwhelming and unsatisfactory sulfur smell throughout the facility. Shortened tool life and less than average production quantities were increasing costs and decreasing efficiency of the shop.

### ACTIONS TAKEN

Tulco Oils supervised an onsite evaluation to compare performance of a stock Lubsoil® cutting fluid to the major branded cutting fluid that was currently in use. Improvements were noticeable with the Lubsoil® cutting fluid, however further tests were coordinated in an effort to provide the most efficient cutting fluid. These tests focused on a series of different metalworking additives that could be used in the formulation. After the additional trials, one additive package improved production quantities drastically – by more than 35%. Test results and data were submitted to Tulco Oils Research and Development group to finalize a Lubsoil® designed lubricant.

### TULCO OILS LUBSOIL® SOLUTION

Lubscut 3395 was created and put to use in all appropriate applications.

### RESULTS

After introducing Lubsoil® Lubscut 3395 operations reported more than a 50% increase in tool life. Acme Screw Machines realized a 40% increase in production increasing output from 500 parts per day to more than 700 parts per day. The Browne & Sharpe Screw Machines more than doubled production increasing from 1,500 parts per day, to more than 3,500 parts per day. In addition, the state-of-the-art additive technology eliminated the adverse sulfur smell. Lubsoil® Lubscut 3395 improved this organizations efficiency, decreased fluid, tool, and maintenance costs, and resulted in an overall increase in production of 130%.



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