



Eaton US Engine Valve

Scope

US Engine Valve in SC had 16 small washing systems that were used to wash parts after machining with straight oil as the metalworking lubricant. These wash tanks were dumped and recharged weekly and the oil concentration in the washers climbed between cycles to 5% before dumping at the end of the week. During this cycle, the part tolerance measuring equipment could be adversely affected as the oil levels would rise, sometimes resulting in parts rejections and rewashing.

Solution

After an onsite survey and lab testing by the water filtration and recycling specialists from Separation Dynamics, the manufacturer conducted a 2-month trial to verify the process and cost saving benefits of installing an Extran™ Ultrafiltration unit. The onsite trial proved successful as the rewashing issues were eliminated and the wash bath maintenance was reduced considerably.

Results

Reduced Waste Hauling by 80%

Reduced Cleaner Usage by 80%

Reduced Labor by 80%

Wash Bath Life Extended from 1 week to 6 months

	Previous	Recycling
Volume of waste (gal/year)	113,520	22,704
Volume of cleaner (gal/year)	4,541	908
Cost of cleaner (\$/year)	\$43,139	\$8628
Cost of waste (\$/year)	\$10,217	\$2,043
Cost of Labor (\$/year)	\$5,160	\$1,032
Total Annual Costs	\$58,516	\$11,703



Annual Savings:
\$46,813