

CASE STUDY

MOVING YOUR WORLD



Water Miscible Machining Fluid for Electronic Brake Systems

Application: Threading, Turning, Drilling, Tapping, Reaming, Milling

Location: USA

Challenge

Reducing vehicle weight, also known as lightweighting, has been a leading strategy for OEMs looking to improve fuel efficiency in gas powered vehicles and extend range in electric vehicles. Aluminum can provide 60% weight savings compared even to the lightest high-strength steel.

An Automotive OEM was in search of a new metal machining fluid for their stand alone and central recirculating systems used in the manufacture of 6000 series aluminum components for electronic brake systems. The fluid they had been using previously showed signs of biologic growth and was difficult to filter. They also noticed an increase in part residues and carry off.

Solution

ECOCOOL 7978 is a low foaming heavy duty coolant for use in a wide range of non-ferrous metalworking applications. It is formulated to control foam in very soft water and retain emulsion stability in very hard water (2000 ppm).

This coolant features a sophisticated lubricity package that provides excellent lubrication for cutting, grinding, drilling, milling and sawing operations to give excellent surface finishes and extended tool life. As a low

Advantages

Coolant Usage Reduced 40%

30% Cost Per Gallon Savings

Improved Cleanliness



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foaming fluid, ECOCOOL 7978 is ideal for high pressure (>1000 psi) fluid delivery in through-tool operations on various aluminum, titanium, stainless steel and aerospace alloys.

Results

ECOCOOL 7978 was able to improve system and part cleanliness to improve the overall surface finish of the brake components. With no significant bacteria or fungus, they no longer experienced filter compatibility issues and were able to increase their sump life. After eight months, the results spoke for themselves:

- **Coolant usage reduction of 40%**
- **Cost per gallon savings of 30%**
- **20% tool usage reduction**

With these cost savings, the customer documented 30% savings greater than their spend!

Technology that pays back!