



## TECHNICAL BULLETIN #32 Solutions for High Lubricating Oil Temperatures

We are often asked the question: Why does Tuthill Pneumatics recommend lube systems when the competition doesn't?

The answer is that all blowers have the same oil temperature problems, and only Tuthill Pneumatics has the solutions to offer.

**When to apply:**

	Discharge Temperature	
	250-300° F (120-150° C)	300-400° F (150-205° C)
Synthetic lubricant	X	
Cooling coils	X	
Water cooled end plates	X	X
External lubrication system (without oil cooler)	X	
External lubrication system (with cooler)	X	X
Integral lube system	X	X

Oil temperature protection systems may not be necessary if any of the following situations exist:

- Operation of less than 4 hours per day
- Run cycles of 2 hours or less, with 4 or more hours of shutdown between cycles
- Blower longevity is not important to the user
- Normal operation is expected to be less strenuous on the blower than the conditions for which the blower application design point

**PLUSES AND MINUSES:**

**Synthetic Lubricant**

- + No additional equipment costs
- Lubricant is more expensive
- Availability
- Some synthetic lubricants do not work well as a blower lubricant

**Cooling Coils**

- + Small additional equipment cost
- Can freeze in cold temperatures, requiring replacement of coils and possibly require overhaul of blower
- Not as effective as other oil temperature reduction systems such as lube systems or water cooled end plates
- Not available on some models

**Water Cooled End Plates**

- + Isolates oil from blower heat of compression, preventing oil from ever getting too hot
- + Small additional equipment cost
- Can freeze in cold temperatures; may require complete replacement of blower
- Not available on many models

**External or Integral Lubrication Systems**

- + Filtration of oil
- + Cool oil delivered to bearings
- + Larger oil reserve
- + Larger circulation rate on bearings
- + Longer periods between oil changes
- Higher equipment cost