

LOCTITE*Adhesives for more
reliable assemblies***APPLICATION CASE HISTORY****No. 225****Buford Bros. Relies On PST® 567 Pipe Sealant To
Eliminate Leaks In Compressed Air Systems***Air Leaks Can Cost Over \$12,500 A Year In Wasted Energy***Situation:**

Buford Brothers Compressor Department specializes in sales and service of Quincy Air Compressors to middle Tennessee.

Air compressors develop high pressures and temperatures and when coupled with vibration, air leaks and fastener loosening can occur anywhere throughout the system. According to Joe Venardi, Buford Brothers Outside Sales Representative, conventional threadsealing and threadlocking methods just don't hold up.

"When a customer goes to connect their air piping to their newly purchased air compressor and don't use the proper chemical sealants, an air leak will show up very quickly," he says.

A single 1/4" hole can lose 104 cfm (cubic foot per minute) of air. At a line pressure of 100 psig (lbs. per square inch-gauge), this amount is equivalent to a 25 hp loss in the total output of a compressor. At an industrial plant operating at 8000 hours a year (at 8 cents/kwh), 25 hp equals more than \$12,500 in wasted energy. Multiply that cost by the number of potential leaking threaded fittings in a typical air system, and it doesn't take long for the loss to rob the plant of operating cost efficiencies. *(See reverse.)*

Solution:

Loctite® PST® 567 Pipe Sealant is a high performance anaerobic that locks and seals metal, tapered pipe threads and fittings like those found on air compressors. It's ideal for stainless steel, aluminum, galvanized metal and other inert metals. PST 567 has excellent solvent resistance and withstands temperatures up to 400°F. It provides an instant seal up to 1000 psi and seals up to 10,000 psi when fully cured. This fast cure time allows quick assembly and prevents galling. And while PST 567 holds the seal, disassembly is easy with standard hand tools.

To reassure that the nuts and bolts on flanges stay secure, Loctite® 242® Threadlocker or Loctite® 262 Threadlocker is recommended. Loctite 242 is used on fasteners up to 3/4" and is removable with standard hand tools. Use Loctite 262 to permanently secure fasteners up to 1 inch.

Results:

"There are a lot of sealant products on the market that just don't work as well as the Loctite products. Loctite 567 is the best at providing long-lasting, reliable seals," said Joe. "We always use Loctite Threadlockers and PST 567 when we're setting up a new system, and we always keep a supply on our service trucks for proactive maintenance."

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The Impact Of Various Size Air Leaks From A 100 psig Air System To The Atmosphere:

Diameter of Opening (in inches)	Cubic Feet of Air Loss per Month at 100 psi
1/32	69,850
1/16	278,700
1/8	111,480
1/4	4,450,000
3/8	9,980,000
1/2	17,800,000

Typical Air System

