

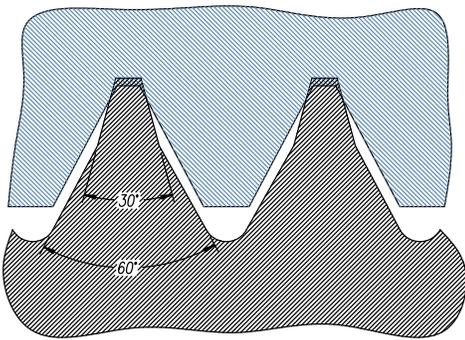


**POWERLOK® SCREWS**

REMINC's POWERLOK® screw is an all metal locking fastener. It has a TRILOBULAR™ body with a 60° thread form and a 30° addendum. POWERLOK® screws are designed to be used in pre-threaded nut members.

The locking action or resistance to vibrational loosening, is generated through several facets of the design.

- Interference in the root of the nut thread
- Nut material relaxation between the lobes
- Material relaxation along the thread helix
- Spring action from the deflection of the 30° addendum



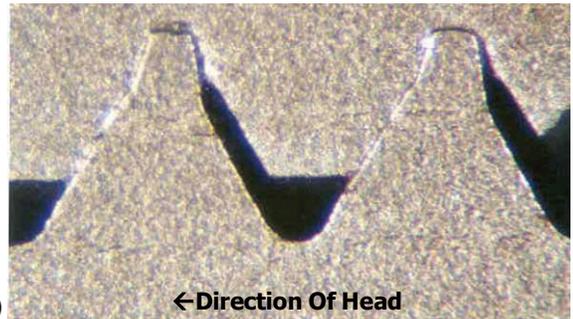
**Figure 1**

The combination of these features creates a prevailing torque that lasts over several in-and-out cycles.

Interference in the root of the nut thread is created by the 30° addendum which resides on top of a standard 6g thread. The addendum is sized to create a controlled level of interference as shown in Figure 1.

The spring action of the 30° addendum occurs when the assembly is tightened and the pressure flank of the screw thread is drawn toward the screw head. The 30° addendum deflects elastically as it moves due to the tightening process.

Figure 2 shows a sectioned assembly which is still under clamp load. The deflection of the 30° addendum deflects to accommodate the movement required during tightening of the joint. This deflection is elastic and is retained over several in-and-out cycles. This feature is evident during transverse vibration testing where POWERLOK® screws resist losing clamp load when compared to equivalent machine screws under controlled conditions.



**Figure 2**

*(cont. on Page 3)*

**REMINC STAFF**

Laurie Mandly	Chairman & CEO
Tim Egan	President
Ken Gomes	VP - Engineering/Product Development
John Reynolds	Manager - Fastener Engineering
Dennis Boyer	Senior Project Engineer
Bill St. Angelo	Director - Marketing and Licensing
Bob Budziszek	Lab Technician
Suzanne Lilly	Administrator - Intellectual Properties
Beth Rondeau	Director of Financial Administration
Marena Boyadjian	Executive Assistant
Ralph Barton	Associate
Don Fosmoen	F5 Inc., Representative



**SPOTLIGHT ON LAURIE MANDLY**



Laurie Mandly is Chairman and Chief Executive Officer of REMINC and CONTI. Laurie, a graduate of Boston College, has been associated with the two companies since her late father, Art Bancroft, acquired them in 1985. In her senior management position, Laurie oversees all company operations and directs corporate financial matters.

## **CHAIRMAN'S CORNER - LITTLE THINGS COUNT** by Laurie Mandly

My experience tells me that quite often little things count! I remember that many years ago, in 1979, the Three Mile Island nuclear power plant located in Pennsylvania, US, melted down because one small valve, a minor component in the multi-billion dollar complex, stuck open and leaked millions of gallons of radioactive cooling water, causing the core to melt and the entire system to fail. Another very recent example of this common expression comes to mind; the one that EADS Airbus uncovered in January 2012. Their A380 aircraft, with a €300,000,000 (US\$390,000,000) price tag, a take-off weight of 550 tons, capable of carrying up to 850 single-class passengers, which cruises at 900 Km/hr (560 Mph), with a range of 15000 Km(9000 Mi), had a "little" problem. Some, if not all, of the 67 A380's then in operation, had developed small cracks in the aluminum wing-rib brackets, totaling 4000 per craft, which attach the upper and lower wing "skins" to the "rib cage". The cracks were apparently related to the combination of high stress levels and special interference-fit connectors. Airbus maintained that these cracks did not compromise the air worthiness of the A380 and proceeded to initiate repairs; therefore passengers can be comforted that the aircraft is safe. That's good news for all of us that might be scheduled for future A380 travel.

What jumps out at me here is that a few minute cracks jeopardized the serviceability of this huge aircraft comprised of thousands of assembly components. I guess this is a real life example of

why quite often "little things *do* count". This expression certainly has its application in our business and probably in yours as well. Those of us involved with fasteners know that screws and bolts are often erroneously singled out to be the cause of an assembly problem. On the other hand, fasteners can be the vehicle for cost-savings. In my experience this is the more common situation. We know for example that our proprietary thread-forming fastener products are employed every day in thousands of assembly applications, only for one reason- they provide cost-savings. At a moment in time when the global economy is fragile and competition is more challenging than ever, fasteners can gain the respect of engineers by not only providing a secure assembly joint but also significant savings in the cost of assembly. It seems that almost every week we receive reports from our licensees and end-users that TAPTITE® and REMFORM® fasteners are replacing conventional screw and bolt designs solely due to engineering and economic justification. Contrary to our fasteners causing any problems, we find that they consistently *provide solutions*, while at the same time *save assembly costs*. To support our contention we have a collection of actual cost-saving applications in booklet form, all of which are available for your inspection and review. In 2011 our proprietary product sales grew, despite the harsh global economic climate. We continue to be convinced that "little things count".

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## **LICENSEE RECOGNITION**

The REMINC/CONTI TRILOBULAR™ Fastener Licensing Program is celebrating its 54th year and we would like to recognize those licensees that are celebrating their "5-year" anniversaries. In 2012, we have the following licensees celebrating their 5th, 10th and 25th anniversaries in the TRILOBULAR™ Fastener Program.

### **5 Years**

JP Tool Company (Header Tools and Rolling Dies)  
Ying-Ming Industry Co., Ltd. (Fasteners)

### **10 Years**

MNP Corporation (Fasteners)

### **25 Years**

Ford Tool (Header Tools)  
Kamax LP (formerly G.B. Dupont) (Fasteners)  
OSG-Sterling Die, Inc. (Rolling Dies)

We sincerely appreciate the contribution these companies have made to our success.

## **POWERLOK® SCREWS (cont. from Page 1)**

POWERLOK® screws provide advantages over machine screws with nylon patches or adhesives.

- Not limited by high-temperature applications
- No messy chemicals required
- Performance is consistent and reliable
- Locking feature is not location-dependent; exists on entire length of the shank
- Reusable over several cycles

When an existing application requires a locking screw, the use of POWERLOK® screws provide advantages.

- No special taps necessary – original hole size not critical to performance
- Easy running change – just substitute with POWERLOK® screws
- No change required for the tapped holes
- Inherently is cross-thread resistant
- Standard gaging of holes
- Works in blind or through holes

Using POWERLOK® screws is a cost effective way to introduce a locking screw into an application. POWERLOK® screws can be produced to any required grade strength with any head style and screw finish or coating required.

For more details related to POWERLOK® fasteners visit our website at [www.tapitite.com](http://www.tapitite.com) or contact us at [reminc@reminc.net](mailto:reminc@reminc.net) or [conti@contifasteners.ch](mailto:conti@contifasteners.ch).

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### **REMINC RESPONDS! FIELDING THE QUESTIONS**

**Q. *What is the basic difference between a standard machine screw and a POWERLOK® screw?***

A. The POWERLOK® thread form is the same as a standard machine screw except with the addition of a 30° addendum. Also, the body of the POWERLOK® fastener is TRILOBULAR™.

**Q. *Can pitch diameter be measured on a POWERLOK® fastener?***

A. Yes, the pitch diameter on POWERLOK® fasteners can be checked the same as you would a machine screw; however, special rolls are required to clear the 30° addendum of the POWERLOK® fastener. The values, measured at the "C" position of a POWERLOK® fastener, should be equal to that of a machine screw.

**Q. *What creates the locking action using POWERLOK® screws?***

A. The locking action of POWERLOK® fasteners comes from three features: interference in the root of the nut thread, material relaxation between the lobes of the TRILOBULAR™ shape, material relaxation along the thread helix and spring action from the addendum deflection when the fastener is tightened.

**Q. *I have a machine screw application where the screw is constantly coming loose. What would REMINC suggest?***

A. POWERLOK® fasteners would be the fastener of choice for this application. It is our all metal TRILOBULAR™ fastener for use in tapped nut members. The POWERLOK® screw achieves enhanced locking ability through the combination of a novel 60°-30° thread form and a TRILOBULAR™ thread body. The 30° addendum penetrates the root of the nut thread as the thread form locking feature. They resist vibration even when unseated, as the locking feature extends the entire length of the fastener; therefore, POWERLOK® fasteners would make excellent adjusting screws.

**Q. *I need a locking screw to be installed into a tapped hole, but the tapped hole is contaminated with paint. Could you help me?***

A. KLEERLOK® is a fastener specifically designed for this application. It is a POWERLOK® fastener with a paint-clearing feature added to the point to scrape away the paint as it is driven.

**Q. *What are the differences between POWERLOK® and TAPTITE 2000® fasteners?***

A. POWERLOK® fasteners are designed for use in tapped holes as a locking fastener and TAPTITE 2000® are fasteners which form their own threads in un-tapped nut members.

## REMINC Training / Brochure Request Form

Name:

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Company:

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Address:

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Please Check:

- Contact me regarding a training visit
- REMINC General Products Catalog
- TAPTITE 2000® Products Application Guide
- TAPTITE 2000® Product Brochure
- REMFORM® Product Brochure
- TRU-START® Product Brochure
- FASTITE® 2000™ Product Brochure
- "54 Ways TAPTITE 2000® Fasteners Lower the Cost of Assembly" Request Form
- Receive Newsletter by e-mail

Mail this form to REMINC at 55 Hammarlund Way, Tech II, Middletown, RI 02842 USA or fax it to (401) 841-5008

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**1958 - 2012**  
**Celebrating 54 Years Lowering  
the Cost of Assembly**

