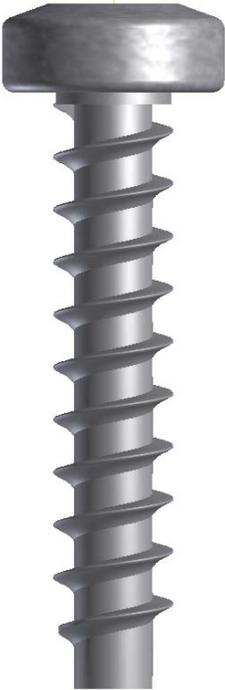




**REMFORM® II™ SCREWS**

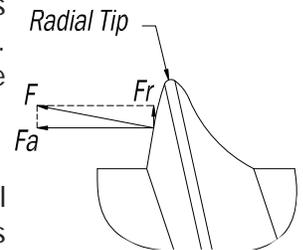


There have been several special thread forming screws for plastics developed over the years. Each design incorporates the two basic tenants for a thread forming screw for plastic parts; a narrow thread angle and relatively wide thread spacing.

The primary purpose of these basic design goals was to reduce hoop stress which could be generated in the plastic during thread forming. The thread form used on most screw designs has been the common symmetrical trapezoidal shape.

The asymmetrical thread design of the original REMFORM® screw was developed to utilize methods where forces can be generated and transmitted in a way favorable to the plastic component.

The asymmetrical thread of REMFORM® screws allows the force couples to be used to best advantage on the contact face of the trailing flank, which is the pressure flank of the thread (see Figure 1). The leading thread face of REMFORM® screws is a smooth concave form, which produces forces of variable directions. These variable forces react against the direction of the force produced by the trailing flank. It is the reaction of these forces, to each other, that creates the "force couples" that produce the resulting benefits (See Figure 2).



**Figure 1**

REMFORM® II™ screws (U.S. and other patents pending) have been developed using all of the benefits achieved with the original REMFORM® screw. REMFORM® II™ screws provide additional advantages from a redesign of the thread tip and the trailing flank profile face.

*(cont. on Page 3)*



**Leaders in Lowering  
the Cost of Assembly**

**REMINC STAFF**

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| John Reynolds    | Manager - Fastener Engineering            |
| Dennis Boyer     | Senior Project Engineer                   |
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| 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 MATTHIAS JOKISCH**

Matthias Jokisch joined REMINC's sister company CONTI in 2008 as a Market Development Engineer. Prior to joining CONTI, Matthias worked for Acument/Avdel for 13 years in several key R&D and Application Engineering positions with a concentration on developing and applying solutions to customer assembly problems. Matthias well understands the "In-Place Cost-Savings Philosophy" and total fastener solution concept that CONTI has successfully promoted for 49 years. He holds a "Dipl.-Ing." Degree in Manufacturing and Process Engineering from the University of Rostock in Germany. During the past 3½ years Matthias has substantially strengthened the CONTI team by providing valuable technical and marketing support to our licensees and end-users of TRILOBULAR® and REMFORM® fasteners.



R E G I S T E R

## **PRESIDENT'S PERSPECTIVE - MULTIPLE SOURCING GLOBALLY** by Tim Egan



We continue to find that the current market environment demands that fasteners be available from multiple sources globally, a dramatic contrast to the situation when the TRILOBULAR® Licensing Program was launched 54 years ago. In 1958, when REMINC was formed, our newly-introduced TAPTITE®

fastener earned early recognition and acceptance in the United States, primarily in the automotive industry. Soon thereafter, U.S. automotive companies opened satellite operations in Canada and our U.S. licensees migrated north. At about the same time, CONTI Fasteners AG was formed in Switzerland to orchestrate a mirrored licensee program in the major European countries. This Program eventually morphed into an expanded presence with the eventual formation of the European Union. And while this expansion was occurring, CONTI's licensing activity expanded into Japan and Australia. Consequently, by the mid-1960's, the TRILOBULAR® Program had established a real global presence, albeit limited to 9 highly-industrialized countries. This licensee base was very effective in developing a market for our proprietary fasteners on a country-by-country basis. At that time, inter-country commerce in the automotive, appliance and electronics industries was in its infancy, so our Program well satisfied the prevailing demand.

In 2012, we find ourselves in very different circumstances. Most prominent manufacturers and end-users have multiple locations on a global scale and consequently have vastly different requirements. In many cases manufacturers are assembling nearly identical platforms or models in several countries, requiring identical fasteners. These companies generally demand not only local but also multiple

sourcing from highly qualified suppliers. Meeting this need is where our Licensing Program excels. In all the major geographic markets we have established authorized licensees that have the capability of satisfying local demands.

As the market changed, we initiated an aggressive agenda to expand and strengthen our global licensee coverage in 2005, to the point that we now have 60 fastener companies licensed, with numerous facilities in North America, South America, Europe, Asia and Australia. Our licensees are fulfilling local product demand and are actively expanding cost-saving assembly applications. These fastener producers are supported by regional tooling licensees for heading and thread-rolling dies. But there is much more to our Program than just having "boots on the ground". Our global licensees utilize our confidential fastener and tooling specifications to produce fasteners of high and uniform quality. All licensees, wherever located, are subject to our strict Quality Certification procedure, again providing quality assurance. Our 19 employees, associates and representatives are strategically stationed globally, and several of them regularly travel to all geographic regions, providing on-site technical training and support to licensees as well as end-users. Additionally, we maintain registration of all our active Patents and Trademarks in most industrialized countries, providing extra protection against non-authorized counterfeit products.

The net result of our collective activities and support is a guarantee to companies using our products that they can procure with confidence genuine trade-marked fasteners from authorized licensed producers world-wide. Our 7-year Program expansion has met all our objectives, by being a highly functional global operation, one that satisfies the contemporary demands of manufacturers and end-users.

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

***Q. What makes REMFORM® II™ screws so unique?***

A. The asymmetrical thread form of the REMFORM® II™ screw consists of a steep pressure flank toward the head of the screw in combination with a leading Unique Radius Flank™ toward the point of the screw, while the crest of the screw has a narrow tip angle. REMFORM® II™ screws have radius relief areas that aid in reducing the amount of hoop stress generated in the plastic during thread forming.

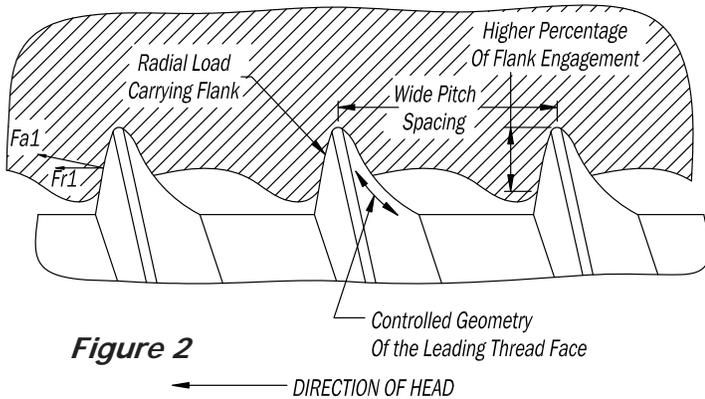
***Q. How does this unique thread form work?***

A. The leading Unique Radius Flank™ promotes efficient material displacement and material flow. The steep pressure flank is engineered to resist pull-out forces whether applied by a tensile load or induced by torque.

***Q. How much screw engagement is required when using REMFORM® II™ screws in today's wide range of plastics?***

A. Across the board for all plastics, our recommendation for thread engagement for REMFORM® II™ screws would be a minimum of 2 times the screw diameter. Contact REMINC/CONTI engineers to assist you in designing a REMFORM® II™ screw application.

## REMFORM® II™ SCREWS (cont. from Page 1)



**Figure 2**

The objective of having a radiused trailing pressure flank is that the assembled mating threads can be subjected to higher clamp loads. An additional benefit is that the induced stress under clamp load will be more multi-directional and will provide improved overall stress distribution with the plastic nut member material.

The second significant change has been to ensure that the thread profile is not the cause of increased hoop stress during thread forming.

The radius thread tip and the trailing flank features also make manufacturing easier. Changes in the REMFORM® II™ roll thread tooling were made to enhance the manufacturing process. The new features and tooling enhancements result in a cleaner looking product with fewer discontinuities in the thread root area.

REMFORM® II™ screws will perform the same or better in pilot holes designed for the original REMFORM® screws. The use of REMFORM® II™ screws should be considered a quality improvement and can be implemented as a running change in current REMFORM® applications.

The manufacturers of plastic components worldwide are using more high strength blended and filled thermoplastics. These materials present a greater challenge achieving effective screw assemblies. The design of REMFORM® II™ screws can meet this challenge. REMFORM® II™ screws should be the preferred choice for all new plastic assembly applications.

For more information or application assistance, contact the engineers at REMINC or your REMFORM® screw source.

### Non-Authorized Products

We live in a world where non-authorized "copy-cat" products pervade our global markets. We have to go no further than one's computer or smart phone to find websites that offer "knock-offs", whether we are searching for clothing, personal accessories, DVD's, watches, shoes, sunglasses or fasteners. Some items are even being sold as "genuine replicas". The problem here is that most of these products infringe Patents, Trademarks or Trade Secrets, and are illegal.

Our caution to prospective buyers and consumers of fasteners is: Buyer Beware! Buying and using non-authorized screws and bolts can be problematic. These products are often reverse-engineered and fail to meet the strict quality standards of the genuine trademarked products. Therefore, although "knock-off" pricing might be attractive, the prospective buyer cannot be assured of consistent or satisfactory performance. The result can be that an expensive assembly is seriously compromised by an inexpensive "knock-off". We have investigated many such instances over the years and have generally resolved the problem by having the end-user obtain genuine product. It generally holds true that genuine trademarked fasteners provide a far better value because they can be used with the confidence that they

conform to specifications only available to licensed producers and will perform as they were designed to do. Genuine Trademarked Products are always the better choice.

As licensors of proprietary thread-forming fasteners, REMINC and CONTI have serious concerns with this illegal commerce in counterfeit alternatives, but we do have the means to combat it. One solution is to argue the numerous merits of employing genuine trademarked products. An additional approach is to stop counterfeit products from entering your country. That effort can be accomplished by registering with your government department of Customs and Border Protection Enforcement. In the United States, and in many other countries, this department will confiscate imports at the point of entry if they are counterfeit and imported in significant quantities. Prior notification of the applicable registered Trademarks and Patents with the department is required. Non-authorized "knock-off" fasteners are illegal and steal value from their rightful owners. They can cause assembly problems and result in warranty claims. However, this illicit activity can be stopped or minimized by working with your border protection agency. Being pro-active is the answer to this problem.

## REMINC Training / Brochure Request Form

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

## 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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