

FTPublicity Client: **CROSS MANUFACTURING CO (1938) LTD.**  
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## Thread inserts lock in on plastics – all is revealed, says Cross

Following last year's announcement that Spirallock® thread inserts manufactured by Cross unexpectedly demonstrate a locking performance in plastic that is equal to that in metal, Chairman Rodney Cross wisely observed: "We don't really know why it works, but the fact that it does work is worth knowing."

Since then the company has spent a lot of time and energy trying to find out why. Summarising the outcome of extensive additional testing, Spirallock® insert test engineer Chris Whittock is now able to announce:

"The secret appears to be in the 30° angle of the ramp on the Spirallock® thread insert. The tensile force caused by the tightening of the bolt is carried as a radial load in the thread insert. It only works when the Spirallock® profile is on the wire thread insert. Using the Spirallock® profile on the plastic itself is ineffective."

In layman's terms this means that the special profile of the Spirallock® insert thread locks the bolt and distributes the load on the entire wedge spiral, rather than concentrating the stress on the first few engaged threads as a conventional thread form does. Tightening the bolt creates a radial load which, in turn, compresses the insert between the bolt and the plastic material, pushing the insert into the surrounding area and further increasing the resistance to movement. The combination of the locking property of the Spirallock® thread profile and the radial force in the insert produces the excellent vibration resisting performance demonstrated by extensive testing, even in low grade PET plastic.

Summing up, Mr. Whittock explains:

"The test results we originally obtained were excellent but baffling, however we now think that we can explain them. The important thing is that the insert really does work in plastics and this should open up a whole new area of locking and vibration resisting applications for a product which had traditionally only been used with metals.

This should be particularly attractive to manufacturers of plastic products when it is also remembered that only the Spirallock® locking thread profile offers a free-running performance with a durable locking ability."

**END**

Spirallock® is a registered trademark of Spirallock Corporation.

Photo sheet attached

Issued on behalf of:  
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# PHOTO SHEET

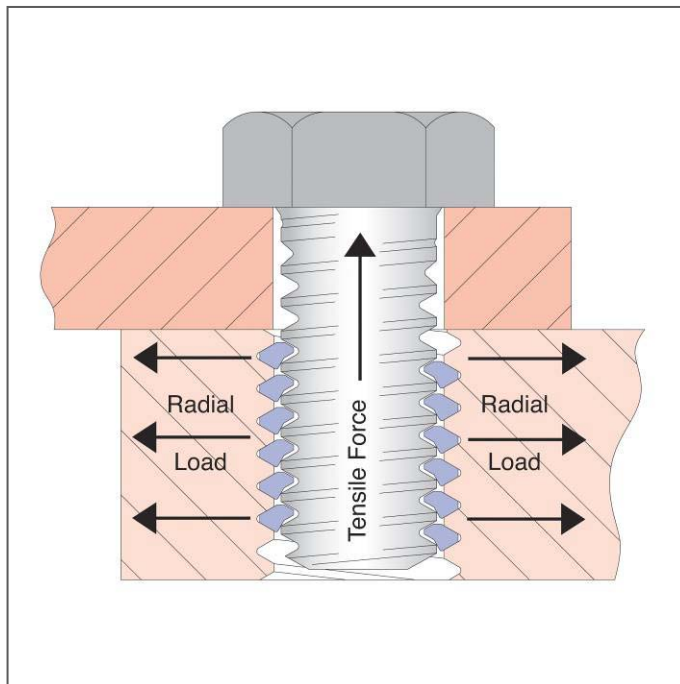
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**Ref: 2007/010/S1**



**Ref: 2007/010/S2**

