



APPLICATION NOTES

THE FLEXIBLE, VERSATILE RETAINING RING

Retaining rings are not only known for replacing traditional fasteners and reducing installation and material costs, but also for the many unique and creative ways they can be used.

Take the suppliers of this fuel pump repair kit for a typical lawn tractor, seen on the right. The body of the fuel pump contains two openings designed to accommodate the fittings for the fuel hoses. This requires depressing two tabs on either side of the openings so that the fittings can be inserted.

Designers wanted to come up with a method for making this as easy as possible for the consumer. To be effective, they had to find a way to keep pressure on both tabs with a minimum of effort so that the fittings could be installed.

They knew that a retaining ring is designed to be released in a groove and the elastic properties of the ring exerts a specific force in that groove to retain parts in a housing or on a shaft. They intended to use this feature concentrating on the force in one specific portion of the ring (the lugs) to accomplish this task.



The inverted lugs of the HOI ring are expanded and installed on two tabs of the opening of this fuel pump repair kit



The fitting for the fuel hoses can now be inserted as shown above

After careful consideration, they chose an [HOI retaining ring](#). The inverted lugs of this ring fit perfectly into the tab slots. By expanding the internal ring (just the opposite if it were going to be installed in a housing) and inserting the lugs into the tabs as shown, the ring depresses the tabs sufficiently so that the fittings can be easily installed. Once the ring is removed, the fittings are locked into place and ready to accept the hoses connected to the fuel supply.

In the past, retaining rings have been used in applications as diverse as retaining bearings in jump

rope handles and holding a sleeve in place to protect a rubber transmission cable. Their use to solve complex fastener problems is limited only by the imagination of the designer.

Let your imagination run wild for your next fastener application.

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