GENERAL FASTENERS COMPANY

MNP CORPORATION

Engineering Center
Madison Heights, Michigan

Product Notes

Applications & Solutions

Bolt Retainer

Pre-assembled plastic retainer and bolt can be easily inserted and retained in a bore.

Application Need:
Plant needs to pull time and cost out of flanged component assembly involving the location and placement of many bolts on the flange.

Solution:
Parts may be supplied by a Tier source with bolts in place and ready for attachment to mating part(s).

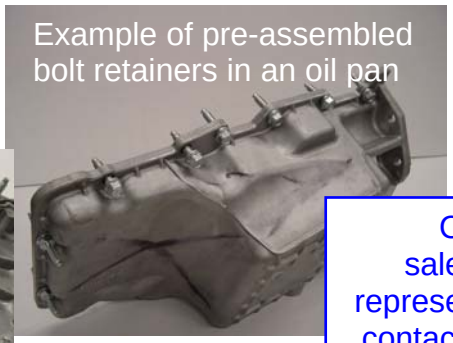
Benefits:

- Reduction in part numbers handled by end customer
- Reduction in vendors
- Reduction in inventory maintenance
- Reduction in capital equipment
- Reduction in floor space on the line and labor (cycle time).
- Low piece cost for added total value

NET COST SAVINGS!!!

How it works:
The bolt or fastener is inserted into the plastic annular retainer with a diameter slightly larger than the hole. It retains the bolt within a smooth-walled bore of a workpiece. Its holding power can withstand vigorous handling while still allowing the fastener to move freely for ease of assembly to mating parts.

Currently tried and proven in a number of automotive and industrial applications



Example of pre-assembled bolt retainers in an oil pan

Contact your sales/engineering representative directly or contact the Engineering Center at 248-307-0567.

The Bolt Retainer is a proprietary design that is exclusively licensed for assembly with MNP/Genfast product.

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Design Information

Bolt Retainer Requirements

1. Specific hole size
2. Burr-free holes
3. Shipping dunnage must not contact retained fasteners
4. Parent material must be free of any lubricants and metal chips

Hole Sizing Dimensions

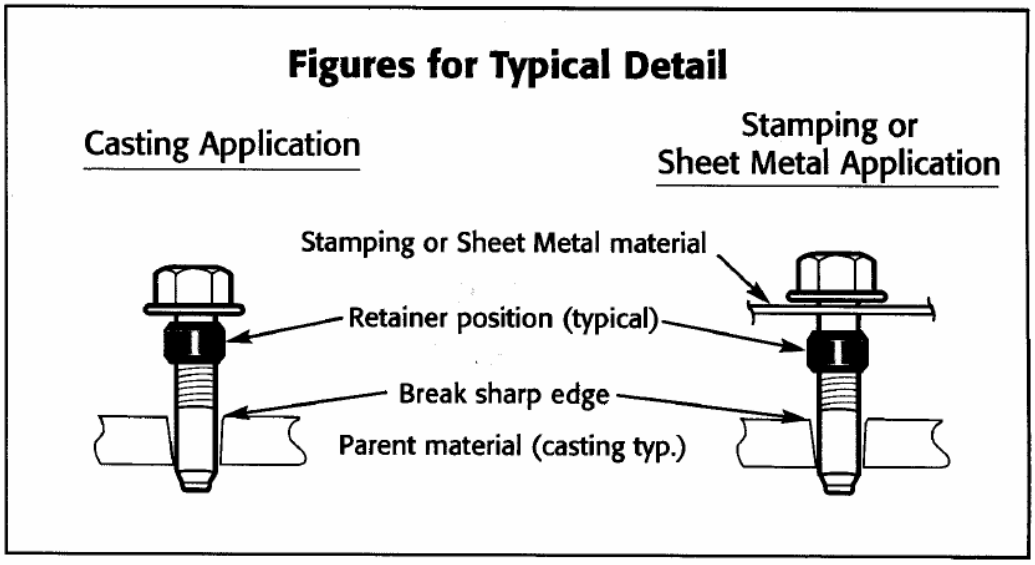
M6:	8.5 +/- 0.1mm	2 deg. maximum taper	Minimum depth 5.0 mm
M8:	10.7 +/- 0.1mm	2 deg. maximum taper	Minimum depth 7.0 mm

M10 and larger

Tooling and application hole size in development (TBD / Pending release)

Holes may be drilled or cast. It is recommended that sharp edges be de-burred to eliminate shaving or pinching of the retainer during assembly

Figures for Typical Detail



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