

Isolater Bolt

Pre-assembled plastic retainer and bolt can be easily inserted and retained in a bore. The retainer includes an isolation material to seal the hole and protect the joint from vibration and thermal cycles.

Application Need:

Engine components are often subject to extreme vibration and thermal cycling. When dissimilar materials are assembled, there is often a need to limit material compression and allow for some material expansion in service without the loss of clamping force. Examples include intake manifold joints and valve covers. Costly features such as compression limiting inserts or costly washers with special bore features are often used.

Solution:

A shoulder bolt with a bolt retainer and bonded rubber isolator meet application requirements with minimal cost.



Benefits:

For Preassembly:

- Reduction in part numbers handled in final assembly
- Reduction in vendors & in inventory maintenance
- Reduction in capital equipment
- Reduction in floor space on the line and labor (cycle time).
- No special features required in mating hole

For Isolation:

- Isolation material and retainer bonded in low cost process
- Eliminates need for separate special washer or insert
- Isolation material improves NVH & provides ability to accommodate creep and thermal expansion.
- Provides a tight seal

LOW PIECE COST FOR ADDED VALUE!!!

How it works:

The bolt manufacturer pre-installs the plastic annular retainer/bonded rubber onto the bolt. It is supplied to the component manufacturer as a one piece assembly. The retainer has an outside diameter slightly larger than the drilled, cast or punched hole of the workpiece, providing retention to the component. Its holding power can withstand vigorous handling while still allowing the fastener to move freely for ease of assembly to mating parts. The fastener can be designed with a shoulder to provide a compression limit for the mating material (usually a composite or soft metal material with a gasket).



Contact your
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contact the Engineering
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The Bolt Retainer is a proprietary design that is exclusively licensed for assembly with MNP product.

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