

JNI ARMOR

TECHNICAL BULLETIN

Ballistic Bolt Installation Guidelines for Ballistic Shields

Date May 19, 2026

Thread M8

Applies to JNI Armor ballistic bolts

Application Ballistic shield assemblies

PRODUCT FUNCTION

JNI Armor ballistic bolts are purpose-built ballistic fasteners that form part of a proprietary energy-dissipating shield system. They are not conventional structural bolts and must be installed within the specified torque and system limits.



1. Purpose

This bulletin provides recommended installation practices for JNI Armor ballistic bolts used in ballistic shield assemblies. Proper installation is necessary to achieve the intended structural retention and ballistic performance of the complete fastening system.

2. Product Overview

Material	Hardened steel (JNI proprietary)
Thread	M8
Typical applications	Handles, forearm straps, viewport frames, and approved shield accessories
Protective finish	Powder coat

3. Installation Torque Specification

MAXIMUM INSTALLATION TORQUE

10 N·m (88.5 in-lb). DO NOT EXCEED THIS VALUE.

Over-torque may damage threads or coatings and may reduce system performance. Do not increase bolt torque in an attempt to create additional holding strength.

4. Installation Guidance

4.1 Hole Preparation

- Minimum hole diameter for this bolt guideline: 10.5 mm (0.413 in.).
- Produce holes using a waterjet cutting process; holes must be flat, clean, and perpendicular to the shield surface.
- Do not drill ballistic composite. Improper hole preparation can cause composite damage or contribute to fastener-stem failure during a ballistic event.

Complete-system note: When installing the complete JNI Armor Ballistic Bolt System with the JNI Threaded Insert, follow the separate Ballistic Bolt Installation Procedure, which specifies an 11.0 mm (0.433 in.) waterjet-cut opening.

4.2 Functional Design and Retention

The threaded insert system provides the primary mechanical retention of the handle, forearm strap, viewport frame, or other approved accessory. At certain projectile-impact angles, the threaded stem may fracture near the bolt-head-to-shield interface. The threaded insert and rear hardware are intended to continue retaining the mounted component.

DO NOT USE BOLT TORQUE AS THE PRIMARY CLAMPING METHOD

The ballistic bolt head is designed primarily for ballistic impact resistance and energy management—not as the primary source of structural clamping force.

4.3 Coating Protection

JNI Armor ballistic bolts are powder coated. Avoid chipping, scratching, or otherwise damaging the protective coating during handling and installation.

4.4 Recommended Tools

- Use polymer or other non-metallic, non-marring tools when practical.
- Do not grip coated surfaces with unprotected metal tools.
- Contact a JNI Armor Technical Sales Representative for recommended installation tools.

5. Thread-Locking Recommendation

Apply Loctite 243 (Blue), or a JNI-approved equivalent, to both the ballistic-bolt threads and applicable rear-nut threads. Follow the threadlocker manufacturer's surface-preparation, application, and curing instructions before placing the assembly into service.

6. Installation Summary

Torque	10 N·m (88.5 in-lb) maximum
Bolt hole	10.5 mm (0.413 in.) minimum
Complete insert system	11.0 mm (0.433 in.) opening per system procedure
Hole process	Waterjet cut; do not drill
Thread locking	Loctite 243 or JNI-approved equivalent
Tooling	Use non-marring polymer tools where practical

7. Pre-Service Verification

- ☐ Hole size and waterjet-cut condition verified.
- ☐ No visible composite delamination or loose fibers.
- ☐ Ballistic bolt and associated components correctly oriented.
- ☐ Loctite 243 applied as specified.
- ☐ Ballistic bolt torque verified at 10 N·m maximum.
- ☐ No visible coating damage.
- ☐ Complete fastening system validated for the intended shield configuration.

SYSTEM-LEVEL VALIDATION

JNI Armor ballistic bolts are components of a complete fastening system. Validate the bolt, washer, insert, rear hardware, mounted equipment, and shield composite together through application-specific ballistic testing before production use. Contact your JNI Armor Technical Sales Representative for application or installation support.