Eye Bolt Safety and Inspection Requirements

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Applicable Safety Standards

Standard	Title	Scope
ASME B30.26	Rigging Hardware	Requirements for below-the-hook lifting devices including eye bolts
OSHA 1910.184	Slings	Regulations for slings and rigging hardware in general industry
ASME B18.15	Forged Eyebolts	Dimensional and strength requirements for forged eyebolts
FF-B-575E	Federal Spec	Specifications for bolts, hooks, and forged eyebolts
ANSI Z359	Fall Protection	Requirements when eye bolts used as fall arrest anchors (5,000 lb min)

Inspection Requirements

Before EACH Use - Visual Inspection:

- · Visual inspection for cracks, especially at eye-to-shank junction
- · Check for bent or deformed eye opening
- Inspect threads for damage, cross-threading, or deformation
- Verify shoulder is fully seated against mounting surface
- Check for corrosion, pitting, or material loss
- Ensure proper eye orientation with load direction
- Verify load rating markings are legible
- Confirm correct eye bolt type for application (shoulder vs screw)
- Check for any signs of previous overloading

Periodic Inspection (Minimum Annually):

- · Comprehensive visual inspection as above
- Dimensional measurement (wear exceeding 10% requires removal)
- Non-destructive testing (magnetic particle or dye penetrant) for critical applications
- · Review load history and document any incidents
- Verify proper installation per manufacturer specifications
- · Update inspection records and apply date tags

■ Immediate Removal from Service Criteria

Remove eye bolt from service IMMEDIATELY if any of the following conditions exist:

- X ANY visible cracks (especially at eye-to-shank transition)
- X Bent or permanently deformed eye opening
- X Bent shank or damaged threads
- X Wear exceeding 10% of original dimension
- X Evidence of shock loading or overloading (permanent deformation)
- X Corrosion causing pitting, material loss, or structural compromise
- X Illegible or missing identification markings on rated eye bolts
- X Weld cracks on welded eye bolts
- X Eye bolt was dropped from significant height
- X Unknown load history or installation date
- X ANY doubt about the eye bolt's condition, history, or suitability

CRITICAL: Never attempt to repair damaged eye bolts. Replace them with new, properly rated hardware.

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Identification and Marking Requirements

Required Marking	Purpose	Location
Manufacturer ID	Traceability to source	Eye or shank
Working Load Limit (WLL)	Maximum safe load rating	Eye or shank stamped
Material Grade (if applicable)	Material strength indication	Shank or tag
Traceability Code	Quality certification link	Varies by manufacturer
Country of Origin	Regulatory compliance	Tag or marking

Warning: Eye bolts without proper identification markings should NOT be used for overhead lifting unless full load testing and certification documentation is available.

Documentation and Record Keeping

For overhead lifting applications, maintain the following records:

- · Manufacturer load rating charts and certifications
- Installation date, location, and installer identification
- Initial installation inspection documentation
- Periodic inspection logs (minimum annual, or per company policy)
- Proof testing certificates (if load testing performed)
- Any incident reports involving the eye bolt
- Removal from service documentation with reason and date
- Replacement records showing new installation details

Safe Operating Practices

Practice	Requirement
Load Direction	Align with eye orientation; shoulder eye bolts max 45°, screw eye bolts vertical only
Side Loading	NEVER side load screw eye bolts; minimize side loads on shoulder eye bolts
Dynamic Loads	Reduce WLL by 50% minimum for shock loading, swinging, or sudden stops
Multiple Attachment	Calculate actual load distribution (not equal in multi-leg slings)
Working Load Limit	NEVER exceed WLL under any circumstances

Practice	Requirement
Inspection	Inspect before EACH use; remove from service at first sign of damage
Training	Only trained personnel should install, inspect, or use eye bolts for lifting
Edge Protection	Protect eye from sharp edges that could cut or damage

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