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Model: 860-015

PRODUCT OVERVIEW

The Dorman 860-015 is a high-quality Grade 8 hex head cap screw, designed for demanding fastening applications. This robust fastener features a 1/4-20 thread size and a length of 1-1/2 inches, making it suitable for a wide range of automotive, industrial, and general mechanical uses where high strength and durability are critical.

Manufactured by Dorman, a trusted name in automotive aftermarket solutions, this cap screw adheres to stringent quality standards, ensuring reliable performance and a secure connection.



Image: The Dorman 860-015 Hex Head Cap Screw, showcasing its hexagonal head and threaded shaft.

INSTALLATION AND SETUP

Proper installation is crucial for the performance and longevity of the Dorman 860-015 cap screw. Follow these guidelines

for secure fastening:

1. **Preparation:** Ensure that the mating surfaces are clean, dry, and free from debris, rust, or old threadlocker. Verify that the tapped hole or nut thread matches the 1/4-20 thread size of the screw.
2. **Tool Selection:** Use an appropriately sized wrench or socket for the hex head. For Grade 8 fasteners, a high-quality, well-fitting tool is essential to prevent rounding the head.
3. **Thread Engagement:** Ensure sufficient thread engagement. Ideally, the screw should engage at least 1.5 times its diameter in the mating material for full strength.
4. **Lubrication (Optional):** For specific applications, a small amount of thread lubricant or anti-seize compound may be applied to the threads to prevent galling and ensure consistent torque, especially in stainless steel or high-temperature applications. Consult application-specific guidelines.
5. **Torque Application:** Tighten the screw to the recommended torque specification for your specific application. Over-tightening can strip threads or stretch the bolt, while under-tightening can lead to loosening. Refer to the equipment manufacturer's service manual for precise torque values.
6. **Threadlocker (Optional):** For applications subject to vibration or repeated stress, a medium-strength threadlocker may be applied to the threads before installation to prevent loosening.

Safety Note: Always wear appropriate personal protective equipment (PPE) such as safety glasses when working with tools and fasteners.

OPERATING AND APPLICATION

The Dorman 860-015 Grade 8 hex head cap screw is designed for applications requiring high tensile strength and resistance to shear forces. Its primary function is to create a strong, secure, and often removable joint between two or more components.

Typical applications include:

- Automotive chassis and engine components
- Heavy machinery and equipment assembly
- Structural steel connections
- Industrial equipment and tooling
- Any application where a high-strength, durable fastener is required.

Grade 8 fasteners are heat-treated carbon alloy steel, offering superior strength compared to lower grades. They are identifiable by six radial lines on the head.

MAINTENANCE AND INSPECTION

While cap screws are generally low-maintenance components, periodic inspection can help ensure continued safety and performance, especially in critical applications:

- **Visual Inspection:** Regularly check for signs of corrosion, rust, or physical damage to the screw head or threads.
- **Tightness Check:** Periodically verify that the screw remains properly torqued. Fasteners can loosen over time due to vibration, thermal expansion/contraction, or dynamic loads. Re-torque if necessary, following original specifications.
- **Environmental Factors:** In corrosive environments, consider applying protective coatings or using thread compounds designed for such conditions.
- **Replacement:** If a screw shows signs of significant wear, thread damage, head deformation, or stretching, it should be replaced immediately. Do not reuse fasteners that have been over-torqued or subjected to extreme stress.

TROUBLESHOOTING COMMON ISSUES

Here are some common issues that may arise with fasteners and how to address them:

- Stripped Threads:**

Symptom: Screw spins freely without tightening, or material flakes off during tightening.

Solution: This indicates damage to either the screw threads or the mating hole threads. The screw or the mating component (nut or tapped hole) must be replaced. For tapped holes, consider re-tapping to a larger size or using a thread repair insert (e.g., Helicoil).

- Rounded Head:**

Symptom: The hex corners of the screw head are worn down, preventing a wrench or socket from gripping.

Solution: Use a properly sized, high-quality tool. If the head is already rounded, specialized tools like bolt extractors may be required for removal. Prevent by ensuring the tool is fully seated before applying torque.

- Loosening Over Time:**

Symptom: Fastener becomes loose after initial installation, often due to vibration or dynamic loads.

Solution: Ensure proper torque during installation. Consider using a threadlocker, lock washer, or self-locking nut for applications prone to vibration. Re-torque periodically as part of maintenance.

- Corrosion/Rust:**

Symptom: Visible rust or corrosion on the screw, especially in exposed or humid environments.

Solution: Clean affected areas and apply a rust-inhibiting coating. For severe corrosion, replace the fastener. Consider using fasteners with corrosion-resistant coatings or materials (e.g., stainless steel) if the environment is highly corrosive.

SPECIFICATIONS

Attribute	Value
Brand	Dorman
Model Number	860-015
Product Name	Cap Screw-Hex Head-Grade 8-1/4-20 x 1-1/2 In.
Grade Rating	Grade 8
Thread Size	1/4 Inch-20
Exterior Finish	Machined
Head Style	Hex
Fastener Type	Hexagon Bolt
Thread Type	UNC (Unified National Coarse)
Thread Style	Right Hand
Item Hardness	Grade 8
Item Weight	10.9 ounces
Product Dimensions	3.63 x 2.38 x 2.19 inches (Package)

Country of Origin	CANADA
UPC	194958601508, 019495860150

WARRANTY INFORMATION

Dorman products are manufactured to high standards of quality and durability. Specific warranty terms and conditions for the Dorman 860-015 Cap Screw are typically provided by the manufacturer at the time of purchase or can be found on the official Dorman website. Please retain your proof of purchase for any warranty claims.

For detailed warranty information, please visit the official Dorman website or contact their customer service department.

CUSTOMER SUPPORT

For further assistance, technical questions, or support regarding the Dorman 860-015 Hex Head Cap Screw, please refer to the following resources:

- **Dorman Official Website:** www.dormanproducts.com
- **Contact Dorman:** Refer to the "Contact Us" section on their official website for phone numbers, email addresses, or online inquiry forms.
- **Authorized Retailers:** Your point of purchase may also offer support or direct you to appropriate resources.

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