

**BELOW-THE-HOOK LIFTING DEVICE**  
**Engineering Note Cover Page**

Lifting Device Numbers:

FNAL Site No/ NA Div. Specific No. 165 Asset No. NA  
 If applicable If applicable If applicable

ASME B30.20 Group:  
 (check one)

- Group I Structural and Mechanical Lifting Devices  
 Group II Vacuum Lifting Devices  
 Group III Magnets, Close Proximity Operated  
 Group IV Magnets, Remote Operated

Device Name or Description

CDF Shielding Block Lifting Fixture

Device was  Purchased from a Commercial Lifting  
 Device Manufacturer. Mfg Name \_\_\_\_\_

(check all  Designed and Built at Fermilab  
 applicable)

Designed by Fermilab and Built by a  
 Vendor. Assy drawing number \_\_\_\_\_

Provided by a User or other Laboratory

Other: Describe \_\_\_\_\_

Engineering Note Prepared by Dave Pushka Date 1-30-08

Engineering Note Reviewed by Del Allspach Date 5-8-08

Lifting Device Data:

Capacity 7000 lbs

Fixture Weight 25 lbs

Service:  normal  heavy  severe (refer to B30.20 for definitions)

Duty Cycle NA 8, 16 or 24 hour rating (applicable to groups III, and IV)

Inspections Frequency Annual

Rated Load Test by FNAL (if applicable) Date 5-6-08 Load 8750 lbs

Check if Load Test was by Vendor and attach the certificate

Satisfactory Load Test Witnessed by: Del Allspach 5-6-08

Signature (of Load Test Witness) Del Allspach 5-6-08

Notes or Special Information:

This lifting fixture is to be used with Grade 8 bolts. It may use either a Hoist Ring (McMaster PN 3145T7) or an eye bolt (McMaster PN 3103T35). See catalog pages attached.



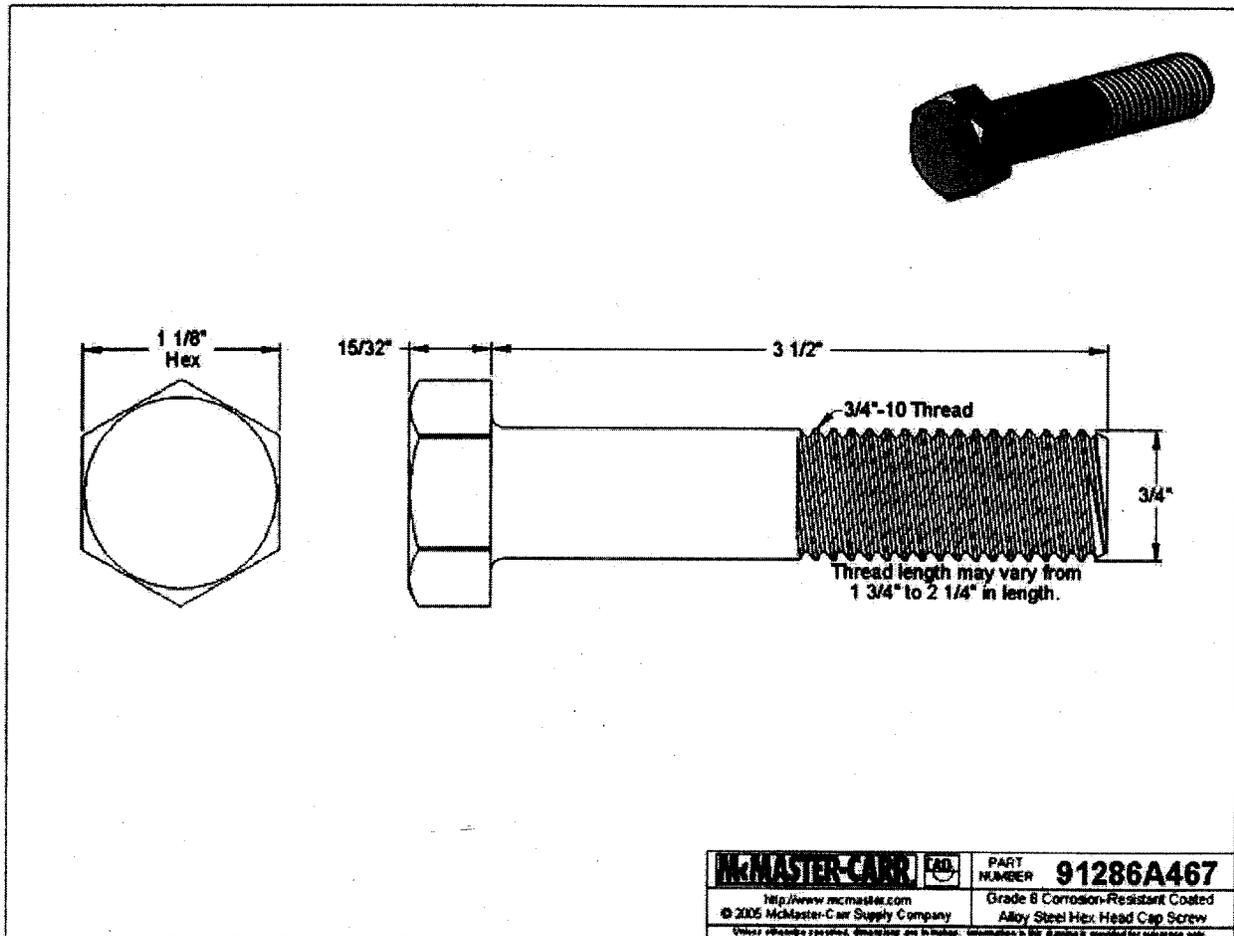
# Cap Screws



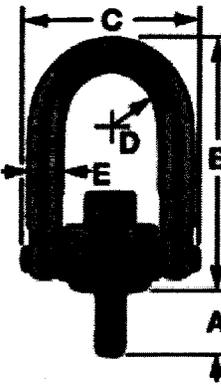
Part Number: **91286A467**

\$13.66 per Pack of 5

Head Style	Standard Hex
Material Type	Steel
Finish	Ultra Corrosion-Resistant Coated
Grade/Class	Grade 8
System of Measurement	Inch
Inch Thread Size	3/4"-10
Length	3-1/2"
Head Width	1-1/8"
Head Height	15/32"
Thread Style	Right Handed
Thread Length	Partially Threaded
Thread Fit	Class 2A
Minimum Thread Length	1-3/4"
Maximum Thread Length	2-1/4"
Rockwell Hardness	C33-C39
Minimum Tensile Strength	150,000 psi
Specifications Met	Society of Automotive Engineers (SAE)
SAE Specification	SAE J429
Screw Quantity	Individual Screw



# Hoist Rings



Part Number: **3145T75**

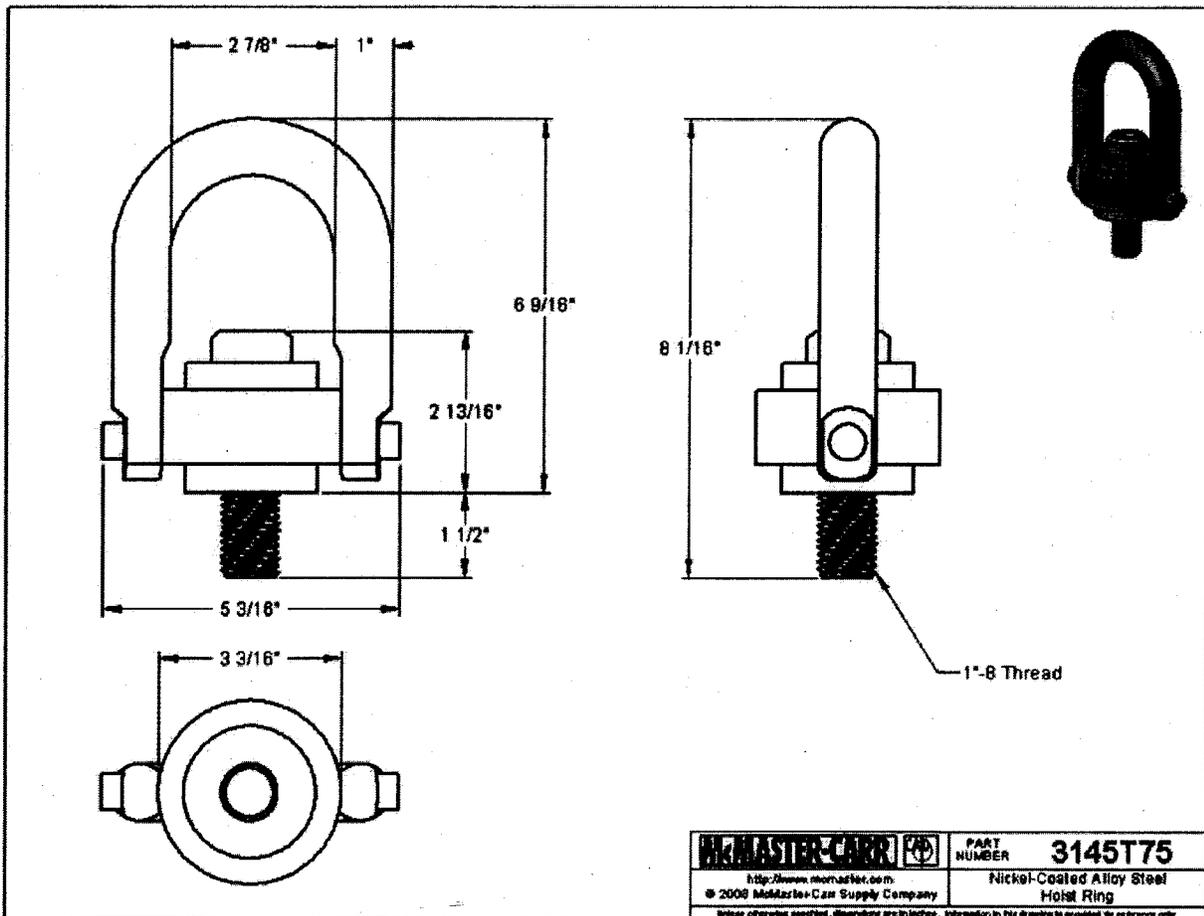
\$266.51 Each

Type	Standard Hoist Rings
Material Type	Alloy Steel
Finish	Nickel-Coated
Thread Size/Bolt Hole Diameter	1"-8
Work Load Limit	10,000 lbs.
Dimension A	1-1/2"
Dimension B	6-9/16"
Dimension C	5-3/16"
Dimension D	1-7/16"
Dimension E	1"

**Safety Note**  
Install the hoist ring base flush to the mounting surface and tighten to the recommended torque shown on the ring. Some loosening may develop after prolonged service. Retighten the mounting bolt periodically to maintain specified torque.

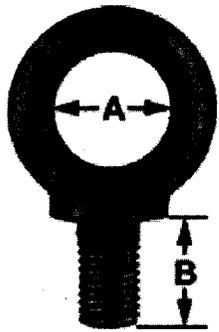
**WARNING**  
Never exceed work load limits.

**Compatible Replacement Bolt**  
**3145T751**



<b>McMASTER-CARR</b>	<b>PART NUMBER</b>	<b>3145T75</b>
<a href="http://www.mcmaster.com">http://www.mcmaster.com</a>	Nickel-Coated Alloy Steel Hoist Ring	
© 2008 McMaster-Carr Supply Company	Unless otherwise specified, dimensions are in inches. Information in this drawing is provided for reference only.	

# Eyebolts and Eye Nuts



Part Number: 3103T35

\$127.98 Each

Type	Eyebolts
Shoulder Type	With Shoulder
Thread Type	Fully Threaded
Material Type	Titanium
Finish	Plain
Thread Size	1"-8
Work Load Limit	8,800 lbs.
Dimension A	2"
Dimension B	1-3/4"
Specifications Met	Not Rated

**WARNING**

Do not exceed work load limits for this item. Any eyebolt that has been modified from its original design will have a reduced work load limit and should be discarded.

