

FRC Bumpers

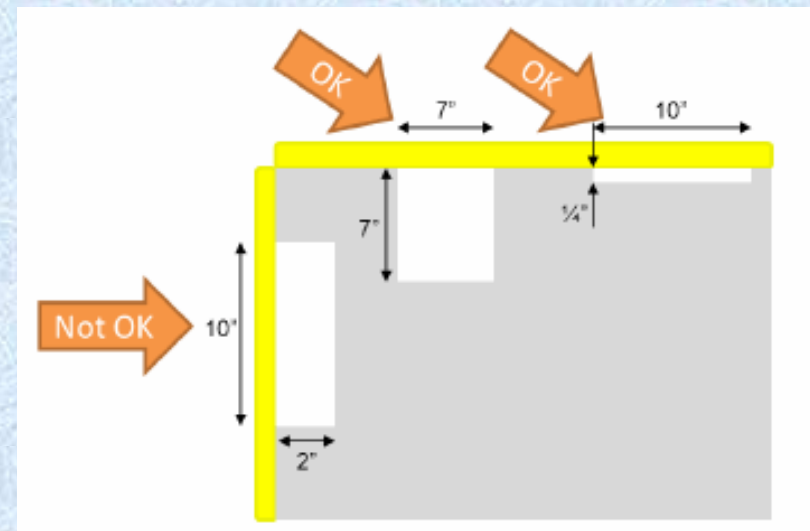
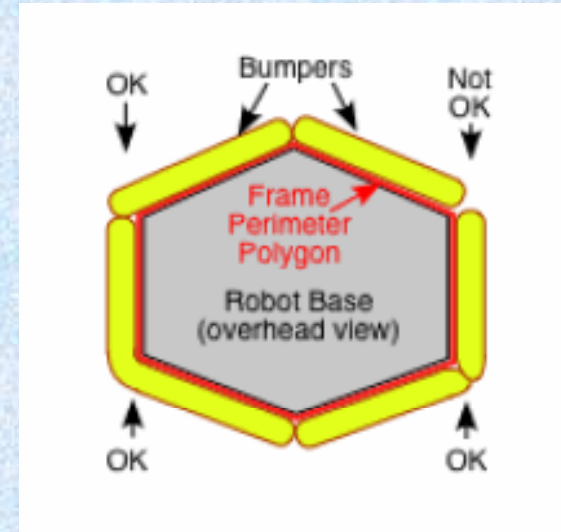
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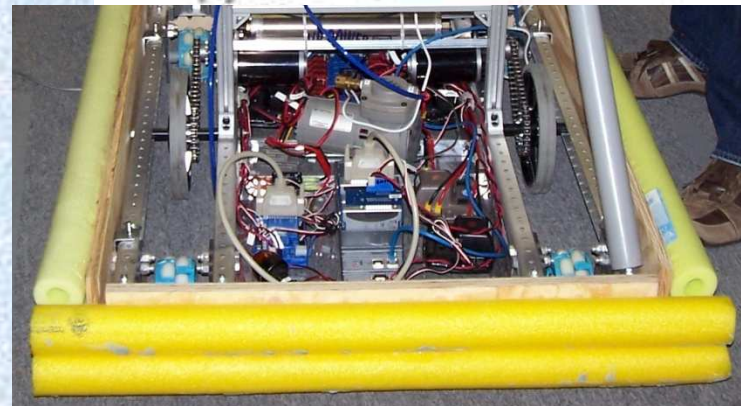
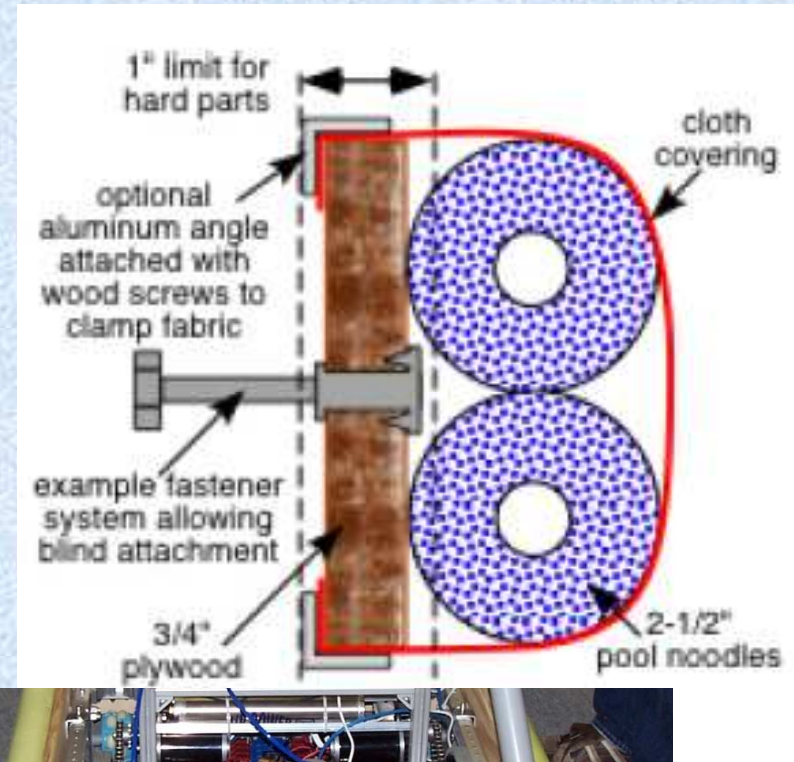
Bumpers - Coverage

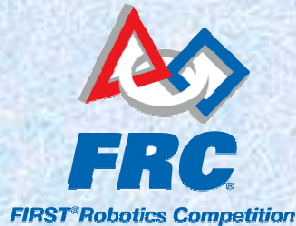
- Mind the Gaps
- Back Up with Solid Structure
- Amount of Frame Perimeter Covered
- Minimum Segment Length
- Distance from Floor (Bumper Zone)



Bumper Rules - Construction

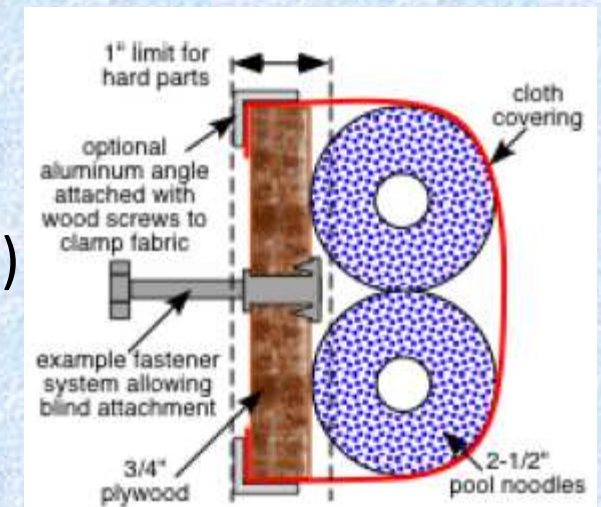
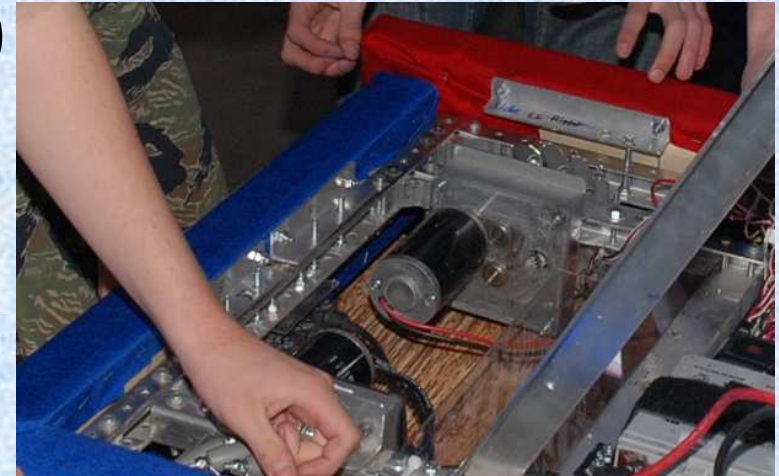
- $\frac{3}{4}$ " by 5" Plywood Backing
- 2.5" Pool Noodle with Center Hole
- Hard Parts < 1" from Chassis
- Soft Parts < 3.5" from Chassis
- 1000 Denier Cordura Plus[®] for the Bumper cover
- Aluminum Angle ($\frac{3}{4}$ " x $\frac{1}{16}$ " or $\frac{1}{8}$ ") on Top and Bottom Edges

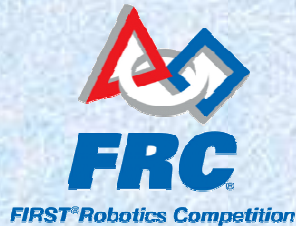




Bumper/Chassis Interface

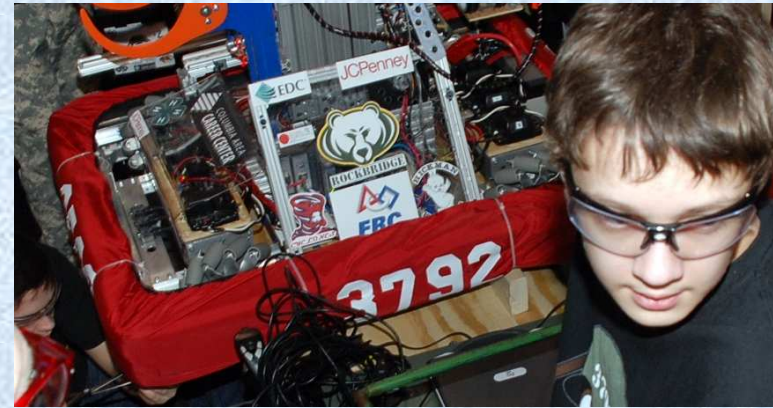
- Distance from Floor (Bumper Zone)
- Change Color in 5 Minutes
 - Two Sets of Bumpers
 - Bumper Cover
- Fastening Approach
 - Quick Change Segments (**Access**)
 - Nut (B) & Bolt (C)
 - Nut/Stud (B) & Wing Nut (C)
 - Nut/U Bracket (B) & Pin (C)
 - Nut/Angle (B) & Stud (C)
 - Quick Change One Piece (Robot Clearance)
 - Corner Webs Rest on Chassis Corners
 - Semi-Permanent with Cover (Appearance)
 - Cover with Elastic or Draw String



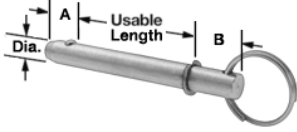


Bumpers – Team Number

- Only Team Number on Bumper
- Location - 4 Sides About 90deg Apart
- Size - 4" High with $\frac{3}{4}$ " Stroke
- Application
 - Embroidered
 - Appliqué
 - Painted
 - Iron On
 - Before Wrapping



Bumper Materials



McMaster-Carr

Pin Type	Quick-Release Pins
Quick Release Pin Type	Shoulder-Style
Quick Release Pin Mechanism	Spring-Loaded
Shoulder-Style Quick Release Pin Type	Ring-Grip
System of Measurement	Inch
Diameter	1/4"
Usable Length	1.6"
Dimension A	.312"
Dimension B	.720"
Specifications Met	Not Rated

[Material](#) — [Material comparison chart](#)

Material Type	Finish
Steel	Plain
Stainless Steel	Zinc-Plated

These 2 products match your selections

Material Type	Finish	Each
Steel	Zinc-Plated	98485A136 \$1.63

1000 Denier Cordura

11 oz. per sq yd. A very heavy weight nylon with a urethane coating. It has excellent tear strength and is very abrasion resistant. This fabric is amazingly tough and versatile.

Uses: heavy duffel bags or packs, soft-sided luggage, camera cases, and musical instrument cases, gaiters and go-kart racing suits.

Width: 60"

Colors: Red, International Orange, Gold, Teal, Forest, Navy Blue, Wine, Electric Blue, Purple, Mariner Blue, White, Silver, Charcoal, Black, Chocolate, Wheat, Olive, Yellow, Blaze Orange (add \$1.50/yd for Fluorescent colors), Fluorescent Pink (add \$1.50/yd for Fluorescent colors), Fluorescent Green (add \$1.50/yd for Fluorescent colors), Fluorescent Yellow (add \$1.50/yd for Fluorescent colors), Woodland Camouflage (add \$1.50/yd for camo)

\$13.50/yd (add \$1.50/yd for fluorescent or camouflage colors)

[\\$4.00 for a Sample Pack](#)

Seattle Fabrics

1

Colors

U-Bracket am-0317



Item# am-0317

\$7.00

[Add to cart](#)

Product Description

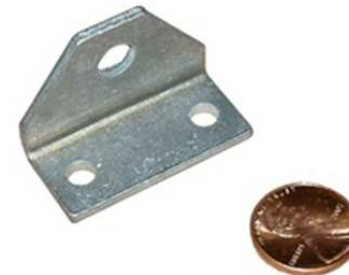
This is a C-shaped bracket that fits over the C-Channel aluminum structural item.

AndyMark.com

Specifications

- Material: 5052 aluminum
- Length: 3 inches
- Material thickness: 1/8 inch
- Weight: 0.13

3 Hole Bracket (am-0572)



Price: \$4.00

Stock Status:
In Stock

Product Code: AM-0572