

2.007 Kit Part: Large Aluminum Sheet

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1 Aluminum Sheet

18" x 18" x 1/16"

Weight - 2lbs.

5052 Aluminum Alloy

E - 10 E6 psi [69 GPa]

Y - 50 E3 psi [350 kPa]

Possible uses:

1. Chassis for vehicle
2. Angle brackets
3. Structures
4. Curved surfaces
5. Motor mounts
6. Leaf springs
7. Channels for objects
8. Sandwich structure with basswood

Tips:

When laying out your part, take a piece of paper and draw or plot all the holes and bends you need to make. Use spray tack and stick your drawing to the aluminum sheet. Now use those lines and holes to align the notcher, shear, punch and other tools to make an accurate part.

Make all your holes and cuts before bending. Make sure you have verified that your bending sequence will work. Talk to an instructor for help if you need it.

Aluminum does not make a very good bearing surface. If your parts are going to slide relative to one another you should consider using plastic or steel.

Aluminum is an excellent electrical conductor. Be careful not to short out any electrical wires by touching bare aluminum.

Bending your parts will make them stiffer in the direction of the bend.

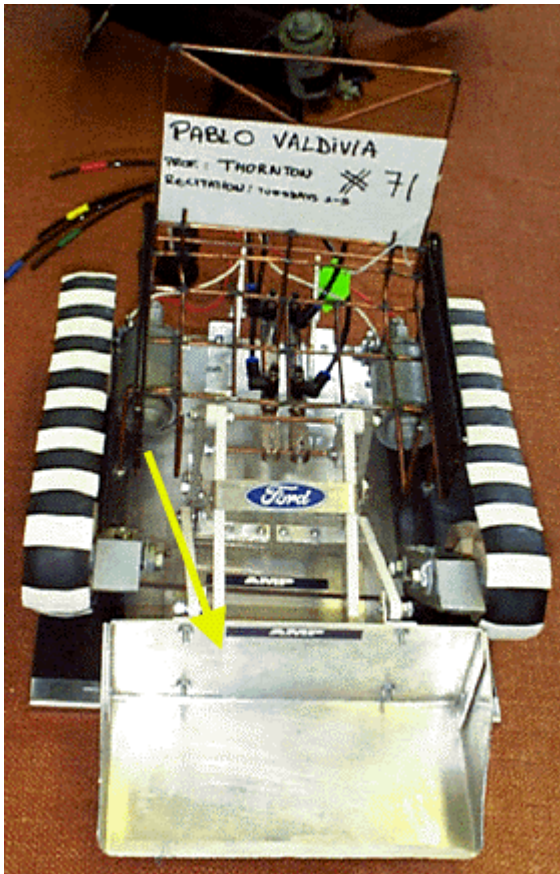
Tools:

To modify you can use the following tools: Brake, Punch, Sander, Shear, Roller

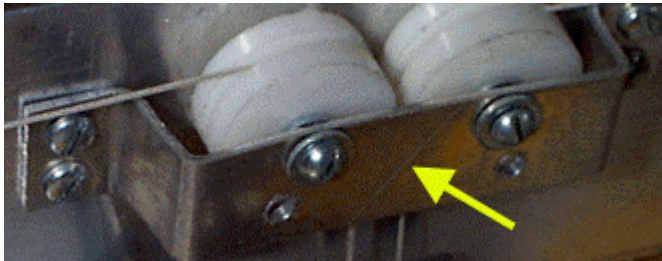
You should be careful when using: Drill press with large drills, Bandsaw (use a scrap piece as a backing)

You should not use: Milling machine, Lathe, Grinder, Taps or dies.

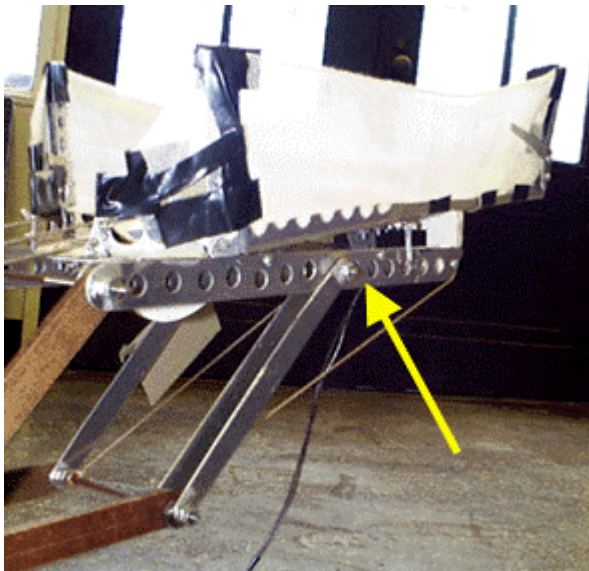
Example:



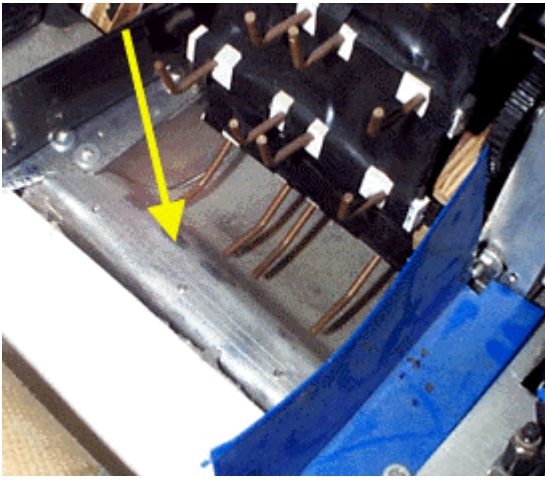
The aluminum sheet cut and bent to make a scoop.



The aluminum sheet used to make a pulley bracket.



The aluminum sheet cut into bars for a set of lazy tongs.



Aluminum Sheet bent to curves to form a cowling.