Introduction

- Our Design
- Changes to Design
- Final Product
- Budget
- Manufacturing Schedule
Designs Currently Available

- Platform
- Scissor
Downsides To These Designs

- Do not allow for easy access
- Do not lift weight off of tires
Original Design

- Disassembles
  - Lifting Posts
  - Roller Assemblies
  - Base Frame
- Adjustable Lifting Arms
- ATV Storage
Design Overview

- Pin Locations
- Cable Routing
- Winch Mounting
Roller Assembly

- Operation
- Connections
- Telescopic Arms
Changes in Design

- After the original design was made, it was not as stable as was desired.
  - Top Bar
  - Diagonal Supports
  - Additional Pulley
  - Added Support for the Base
  - Teflon Sliders
Top Bar and Diagonal Supports
Additional Pulley
Added Support for Base
Teflon Sliders
**Budget**

- **Winch**
  - $70.14

- **Steel**
  - 3x3x$3/16$ Tubing
  - 2½x2½x¼ Tubing
  - ¼ Plate
  - $205.84 $137.16

- **Aluminum**
  - 4x4x$1/8$ Tubing
  - 3x3x$1/8$ Tubing
  - 2x4x$1/8$ Tubing
  - $150 $135

**Total Material**

- $425.98 $342.3
Budget

- Hardware
  - 12 Pillow Block Bearings
  - 50ft ¼” Coated Cable
  - 7 3½” Pulleys
  - 4 Wire Rope Clips
  - 2 Wire Rope Thimbles
  - 2 Eye Bolts
  - 2 Anchor Shackle
  - Miscellaneous

Total Budget

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<thead>
<tr>
<th></th>
<th>$850.98</th>
<th>$788.91</th>
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<tr>
<td>Hardware</td>
<td>$425</td>
<td>$446.61</td>
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Schedule

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<tr>
<th>Task</th>
<th>Duration</th>
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<tr>
<td>Order Material</td>
<td>1 wk</td>
</tr>
<tr>
<td>Write Programs</td>
<td>3 days</td>
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<tr>
<td>Machine Parts, Prepare for Welding</td>
<td>3 wks</td>
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<tr>
<td>Component set up for Welding</td>
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<tr>
<td>Weld Sub Frame</td>
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<tr>
<td>Weld Roller Assembly</td>
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<tr>
<td>Assembly of Sub frame to Rollers</td>
<td>1 day</td>
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<tr>
<td>Instlation of Winch, Cable, Hardware</td>
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<tr>
<td>Test Prototype</td>
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<tr>
<td>Finalize Assembly (adjust components as needed)</td>
<td>1 wk</td>
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Special Thanks To

- Spencer Hewett
- Cale Polkinghorne
- Dr. Marlor
- Mr. Martin
- Josh Anttonen
Questions?

- Comments?
- Concerns?