

## Battery Test:

### Out of Water:

#### Minn Kota:

- Peak = 6Amps
- Run current: 2.3Amps

#### Motor Guide:

- Peak: 6Amps
- Run Current: 2.1Amps

### In Water:

#### Minn Kota:

- Peak: 29Amps
- Run Current: 23Amps

#### Motor Guide:

- Peak: 25Amps
- Run Current: 20Amps



## Li-ion vs. Lead Acid

#### Li-ion

- lighter
- easier to place
- smaller
- more efficient

#### Lead Acid

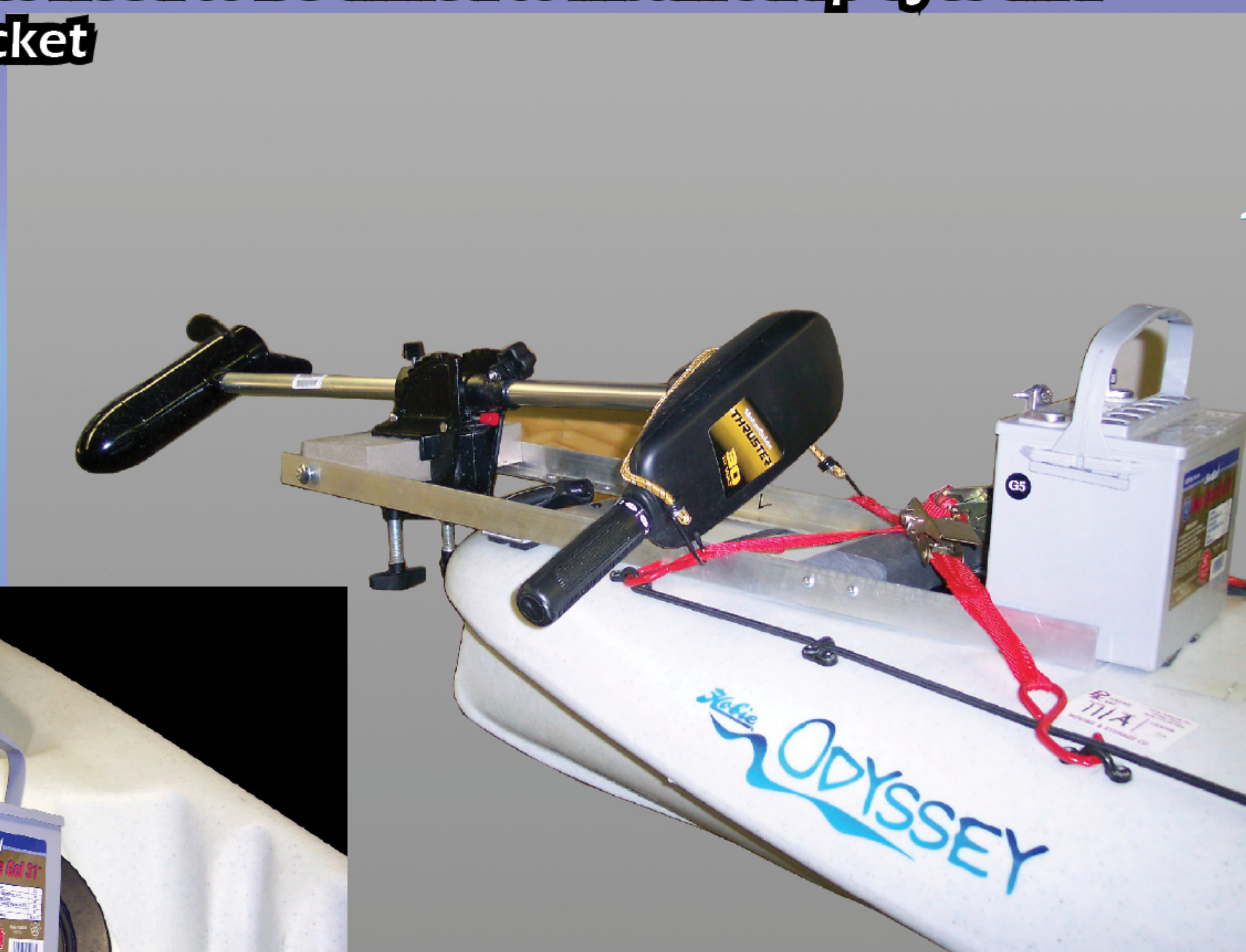
- cheaper
- wider availability

# Design

## Kayak Trolling Motor

### Mounting Features:

- Universal Design fits most sit-on-top kayaks, single and tandem
- Easy to install
- Trolling Motor is easily attachable/detachable from mount
- Mount is easily attachable/detachable from kayak
- Motor is easily lifted out of the water for regular paddling, and easily drops back down for motoring
- For use with all 12 Volt trolling motors with 28-35 lbs. of thrust
- All rivets, screws, bolts, nuts, strap eyes, and mounting straps included
- Bungee cord to hold motor in up position included
- Battery mounting area designed for new battery technologies, small, light-weight batteries
- At most 12 holes need to be drilled to install strap eyes and mounting bracket



## Material Choices:

- Aluminum brackets will not rust in water
- Aluminum is much lighter than steel without a significant loss of strength
- Unlike a common wood block, durawood will not rot and weaken when subjected to wet/dry cycles



## Design Choices:

- Brackets can be removed from boat for transport or when motor is not desired
- Nylon tie-downs will hold to existing hooks on boat, reducing the necessary number of holes to be drilled
- Motor can swing out of water when not in use.
- Designed for future battery technologies, such as the lighter lithium ion batteries





# IPRO 353

POWER ASSIST KAYAK

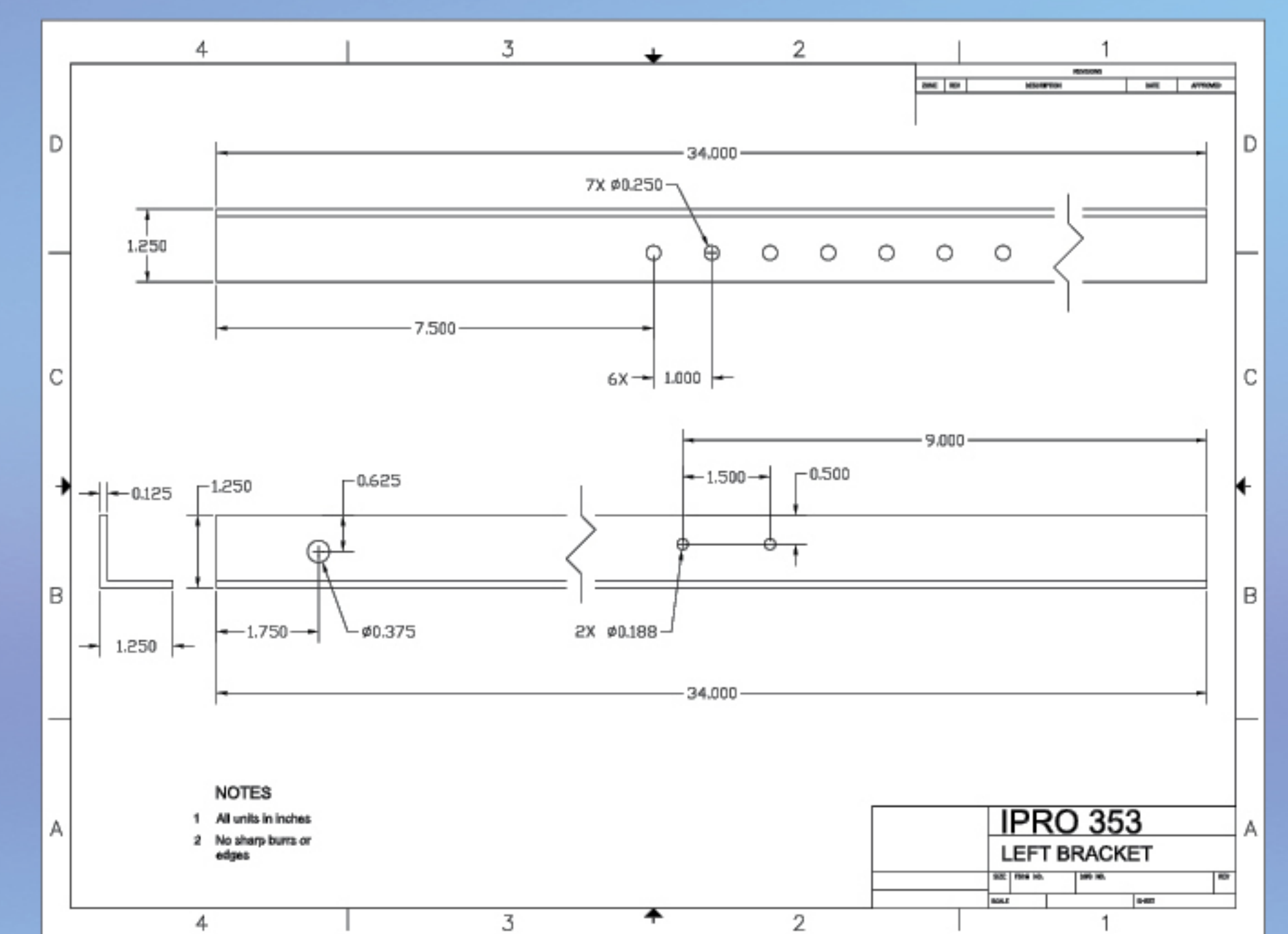
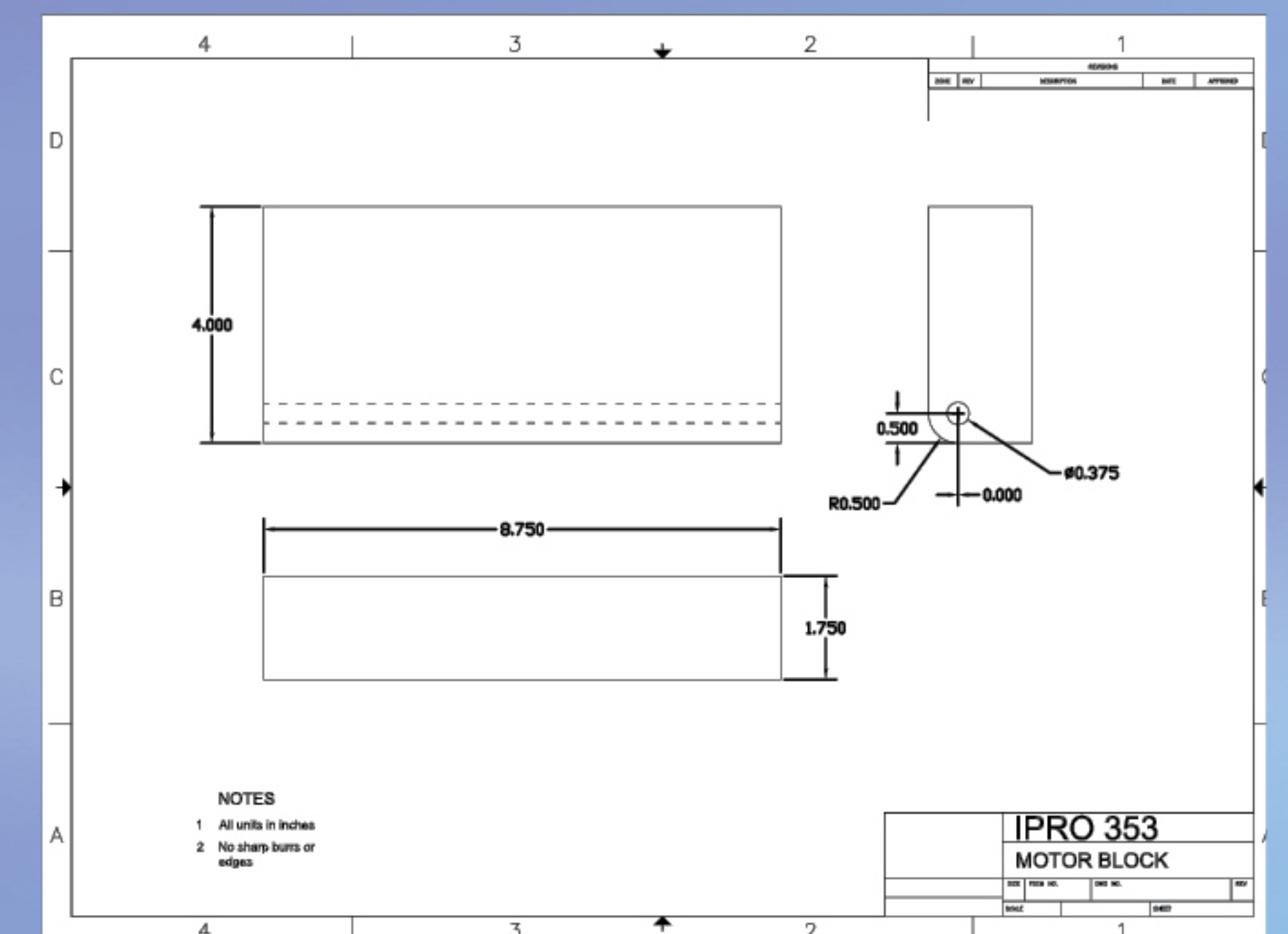
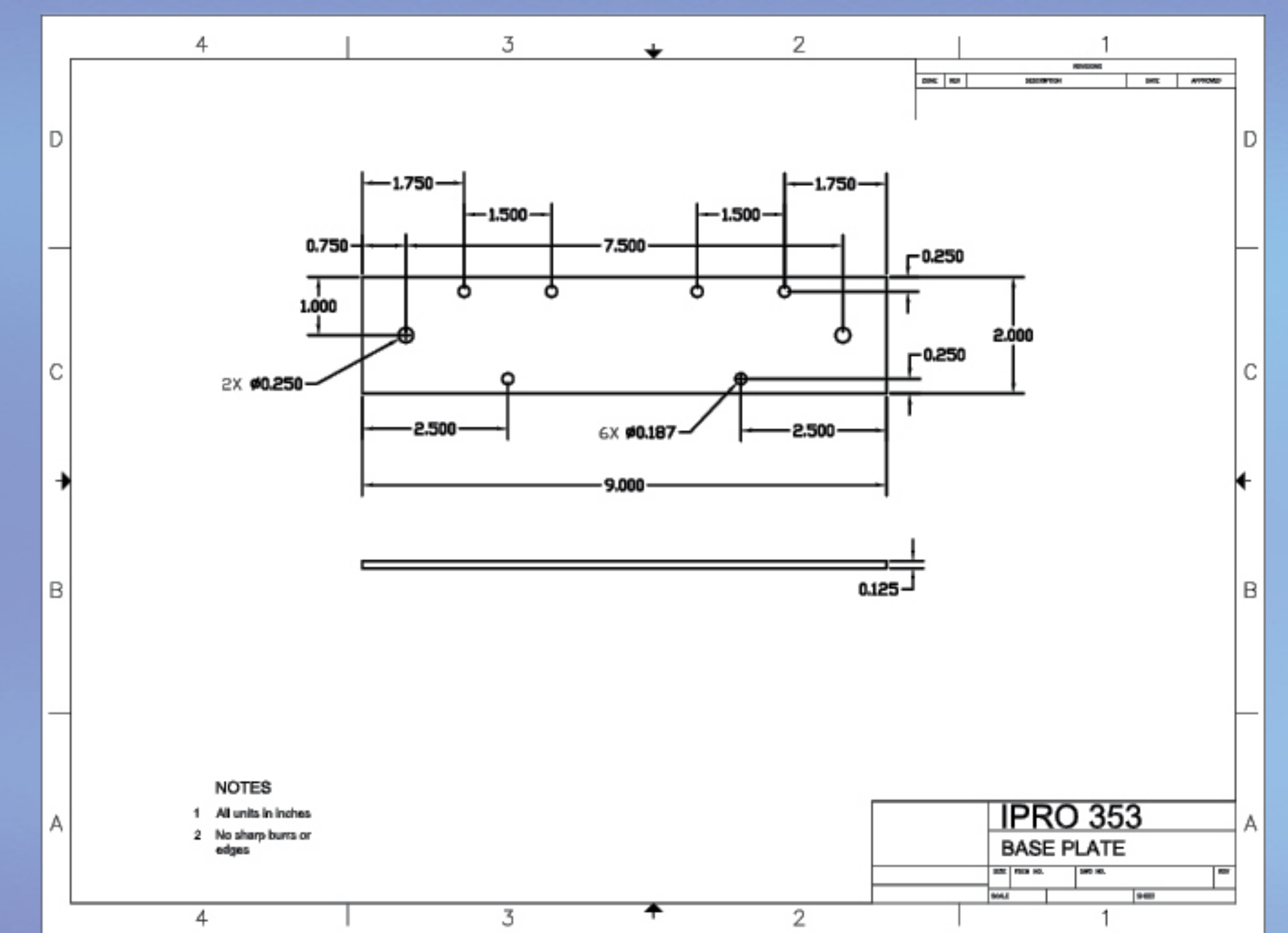
ADAPT-A-YAK



Team Members

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## Existing Motor Mounts



Custom built kayak and motor mount



Old Town Canoe Mounts - up to \$99.99



Malibu tandem specific trolling motor mount - \$59.99



Inflatable kayak motor mount - \$49.99

# Marketing

## Market Segmentation

Market (per year - approximates)

- 337,000 kayaks
- 77,000 sit-on-top kayaks
- 15,000 tandem
- 45% willing to modify

Buyers from past 5 years potential customers

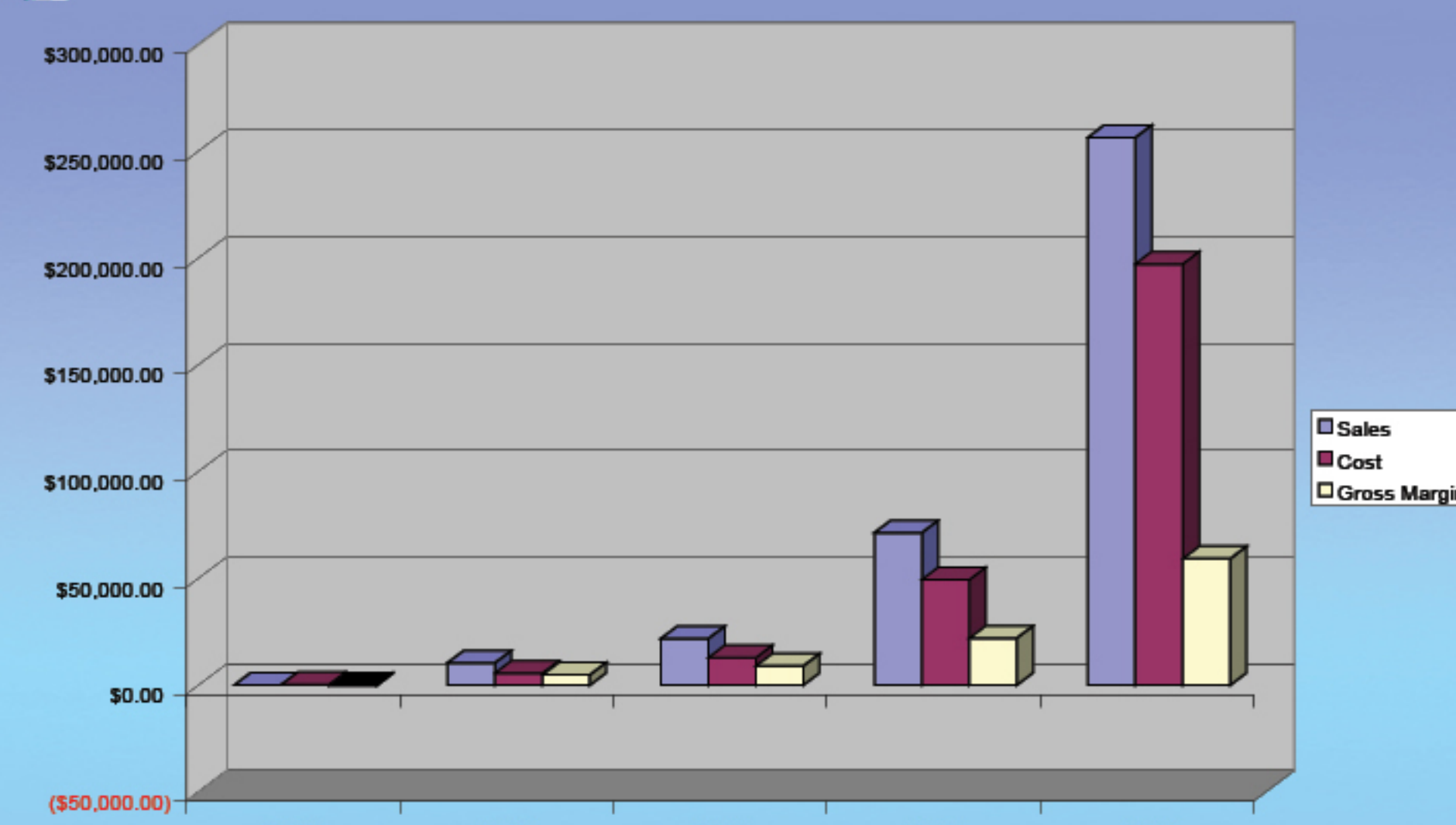
Kayakers spend \$1,200 over the course of 2 years on kayak and accessories

Market Share

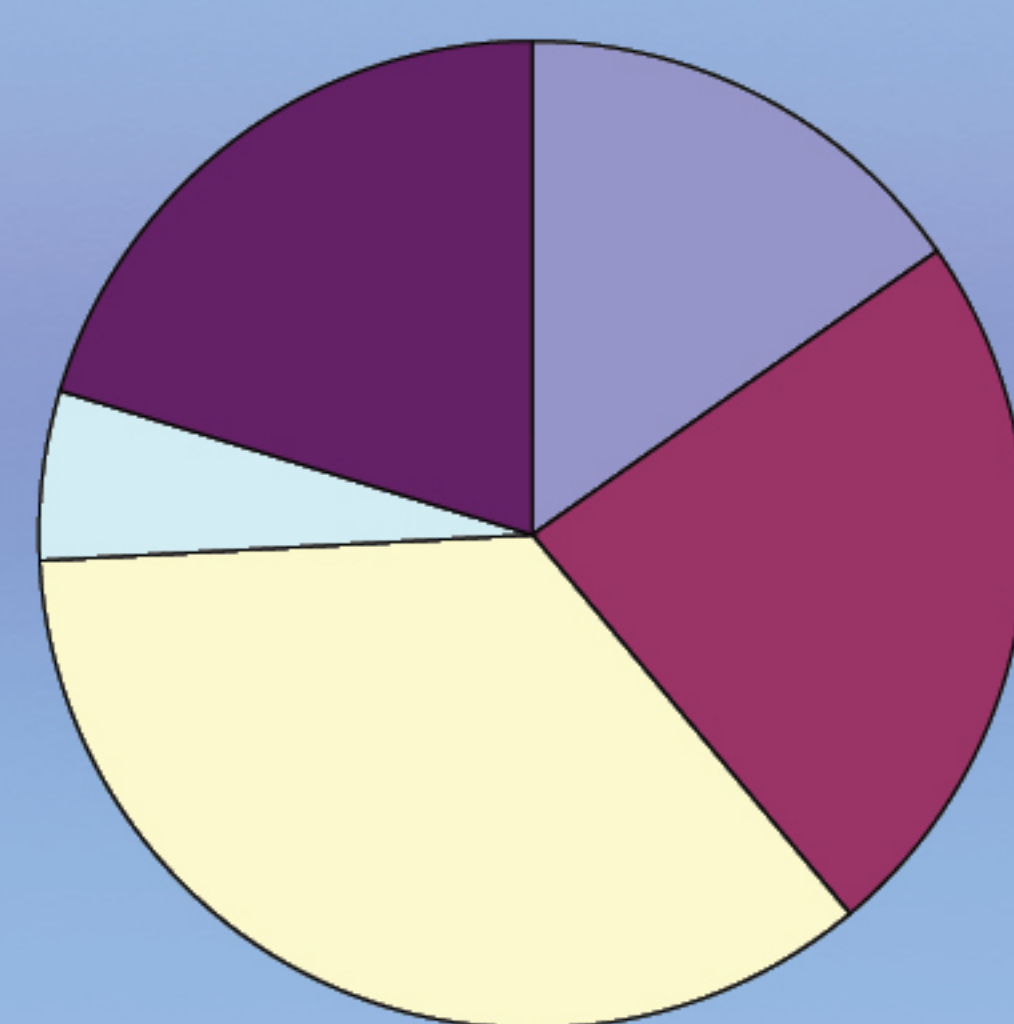
- Ocean ~44%
- Cobra ~18%
- Wilderness ~12%
- Hobie ~12%
- Heritage ~10%
- Perception ~4%

	Motor Mount	Motor	Battery	Complete System
Price	\$64.99	\$99.99	\$149.99	\$309.99
Gross Margin Before Commission	\$34.99	\$40.00	\$40.00	\$110.01

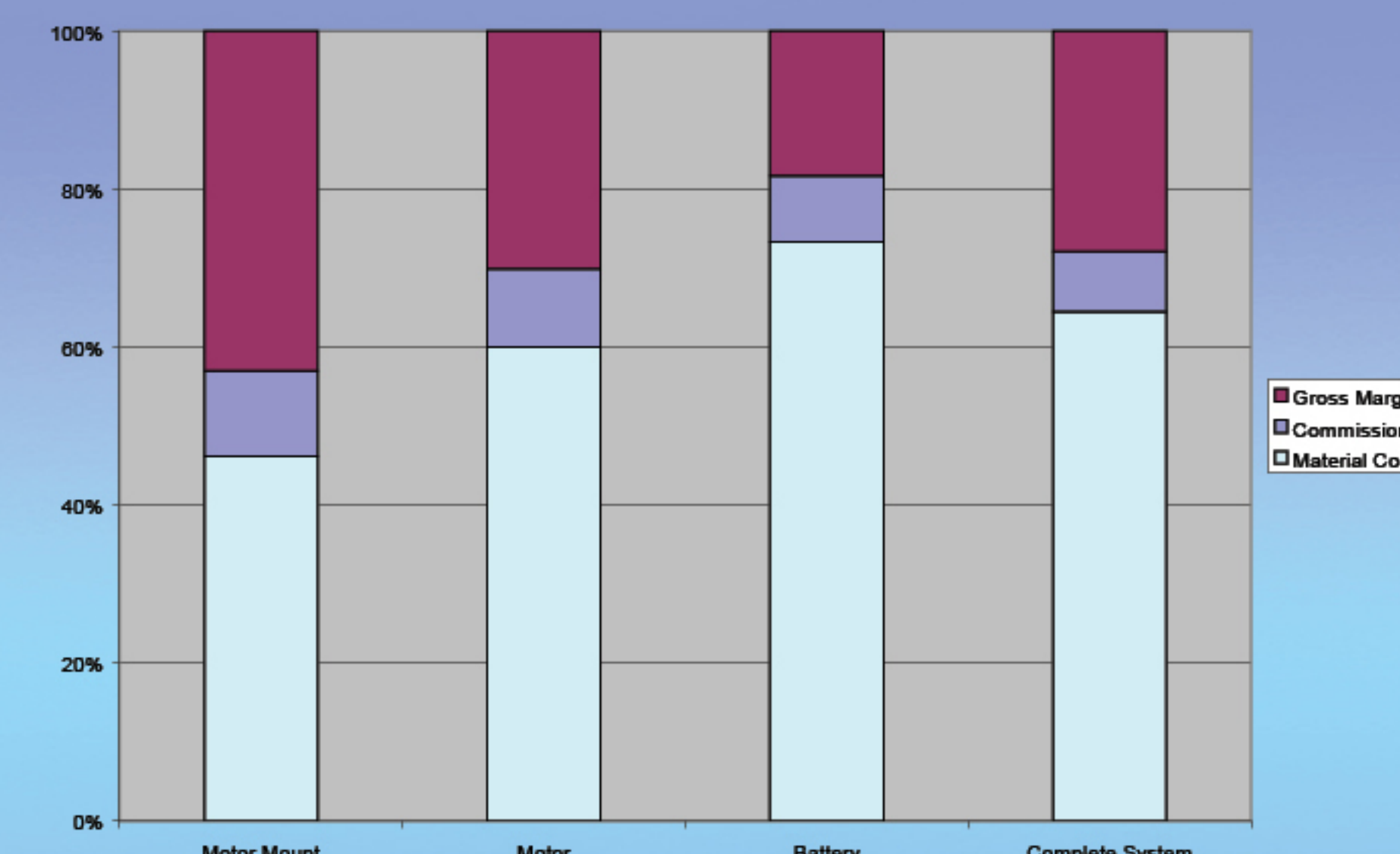
## Financial Projections



Projected yearly breakdown of sales and cost of goods sold



Slice-by-slice breakdown of costs and profits from sales of complete system



Percentage breakdown of costs, sales margin, and commissions for all four products

## Power Alternatives



Escape - \$2,499



Hobie Mirage - \$375



Sneak Boat - \$638



Sail add-on - \$270