

APEX SADDLE

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Our Goal

4.66

User Rating

OUR MISSION

Develop a dirt bike inspired downhill mountain bike seat that offers:

- Increased comfort, safety, and stability
- Full frame-length seat for increased thigh grip, different sitting positions, and crash pad

SPECIFICATIONS & REQUIREMENTS

- 2 lb. Net Weight Addition
- ✓ Lifespan of 3 Years with Regular Use
- Rider can Assume Multiple Riding Positions
- Attractive and Marketable
- ✓ 30 Minute Install Time
- X Factor of Safety of 3 under 750 lb. Load Condition
- Universal Front and Rear Connections
- Ability to be Manufactured at Scale
- Material Cost Less than \$300

Roller Bearing and Support Plate

- 6061-T6 Aluminum
- Acted as Bearing Housing

Upper Connection

- 6061-T6 Aluminum
- Hole for Angle Adjustment

Headset Bearing

- Angled Contact Bearing
- Interfaces to Connections

Lower Connection

- 6061-T6 Aluminum
- Sized to Head Tube

Bike Frame

- Trek Session 8
- XL Bike Frame

FRONT CONNECTION

DESIGN CONCEPT REAR CONNECTION Seat Cover Rail End Blocks Synthetic Vinyl - Staples into UHMW Rails - Capped Chromoly Rails - Screwed into Seat Base Seat Foam **Connection Rails** Closed Cell EPDM - 4130 Chromoly Steel Double Layer for Support - Custom Bent Profiles Seat Post Assembly Sheet Metal Base - Universalizable Connection - ±12° of Rotation Adjustment - 6061-T6 Aluminium - Riveted into UHMW Rails **ANALYSIS Factor of Safety** Seat > 3.0 > 2.0 > 1.0 Base Front > 2.0 > 1.0 > 3.0 Connection Rear > 3.0 > 2.0 > 1.0 Connection **USER FEEDBACK** Support Rails - 6061-T6 Aluminum - Riveted into Seat Base

Comfort

Aesthetic

Plastic Seat Rails

UHMW Polyurethane

- Riveted into Seat Base