



# DirectFlex®

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System Performance  
Testing

Vehicle Component Manufacturing  
A Division of BettsHD Engineering Department

# Testing Overview

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- **Flap Joint Strength Test**

Load test to compare joint strength of the DirectFlex® System with poly ChannelFlap™ against square bar style hanger with standard poly flap

- **Curb Pinch Test**

Pinch test to compare durability of the DirectFlex® System with poly ChannelFlap™ against square bar style hanger with standard poly flap

# Flap Joint Strength Test

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BettsHD-VCM in Conjunction with  
California State University, Fresno CA

# Flap Joint Strength Test

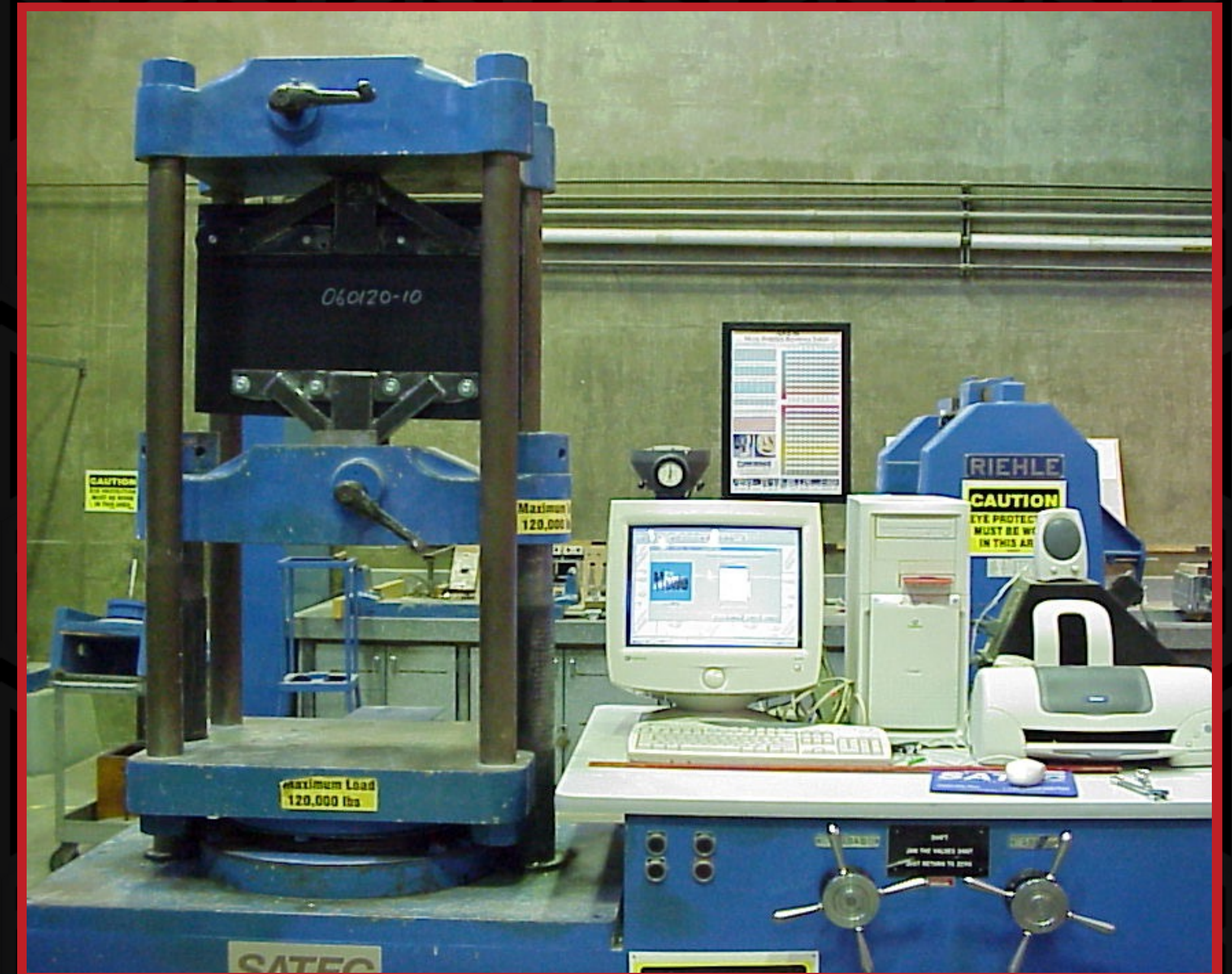
Load test to compare joint strength between mud flap and hanger

Used 120,000 lbf Riehle Tensile Tester

Data points collected by Satec's Partner Software

Tested Square Bar with Standard Poly Flap

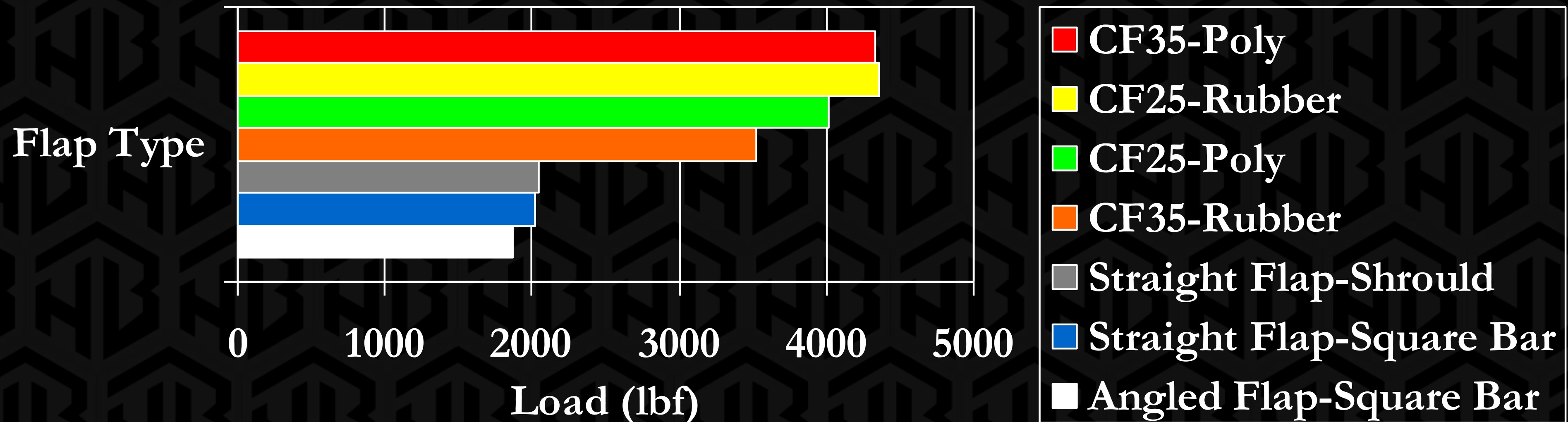
Tested DirectFlex® Bar with Poly ChannelFlap™



# Flap Joint Strength Test: RESULTS

DirectFlex® ChannelFlap™ withstood on average twice as much load than a standard poly flap before complete failure

Maximum average load of the BettsHD Poly ChannelFlap™ was 4,021 pounds of force



# Curb Pinch Test

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BettsHD-VCM, Fresno CA

# Curb Pinch Test

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DirectFlex® System was compared to square bar style hangers with standard poly flaps

Flaps were repeatedly pinched between a curb and rear axle tires



# Curb Pinch Test, Square Bar: RESULTS

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The standard poly flap began failing after the first curb pinch

The standard poly flap completely failed on average after only 4 curb pinches

# Curb Pinch Test, DirectFlex®: RESULTS

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Results showed the DirectFlex® System endured over 170 curb pinches without failure

The channel feature on the flap creates a far superior joint between the flap and hanger





# Curb Pinch Test: RESULTS

