HDC

Impact Step Bumper

ABumper™ Pat. Pend.

It ain't braggin' if you can back it up.

What is ABumper?

ABumper™ is a rubber impact step bumper.

How Effective Is ABumper™?

ABumper™ is independently tested to show the effectiveness of its application in the following ways:

- -Pole and flat barrier impact tests from 1-6 mph with no damage to bumper or vehicle.
- -Test results show ABumper™ drastically reduces the jerk or abruptness of an impact. This significantly reduces damage to a vehicle and possible injuries.
- -ABumper's™ compound, EPDM, is ideal due to its elastic qualities and superior environmental resistant properties.

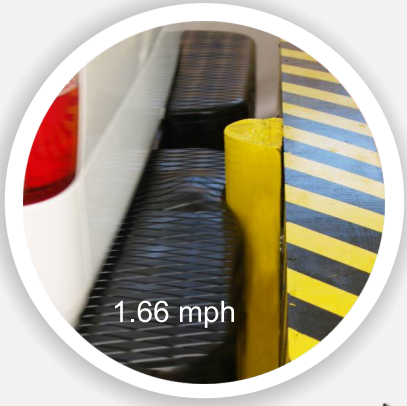
Test data is provided in print as well as on the web at www.poplocks.com/abumper.html

See It For Yourself:

Watch an actual impact yourself and see how ABumper's™ crush cells take the hit and "bump" up your savings. Visit www.poplocks.com/abumper.html and click on ABumper's™ test footage link.

Additional ABumper™ Benefits:

- -Non-skid step top reduces slip accidents
- -Reduces injuries to occupants
- -Reduces repair and collision costs
- -Reduces vehicle down time
- -Ice/snow do not bond to ABumper™
- -Resistant to oil, gas, and acid
- -Rust and corrosion proof



Pat. Pend.

ABumper™ mounted on a Ford F-Series (Frame not provided)

Pat. Pend.

Front View Shown Mounted (Frame Not Provided)

(512) 301-0303 - www.poplocks.com

5 mph Rear Impact Repair Cost

Vehicle w/ Stock Bumper	Rear into flat barrier	Rear into Pole	Source
2004 Ford F-150	$1,606	$2,041	IIHS
2001 Ford F-150	$1,127	$1,711	IIHS
2002 Dodge Ram 1500	$989	$1,123	IIHS
2001 Dodge Ram 1500	$1,557	$2,190	IIHS

Vehicle w/ A-Bumper	Rear into flat barrier	Rear into Pole
2006 Ford F-150	$0	$0

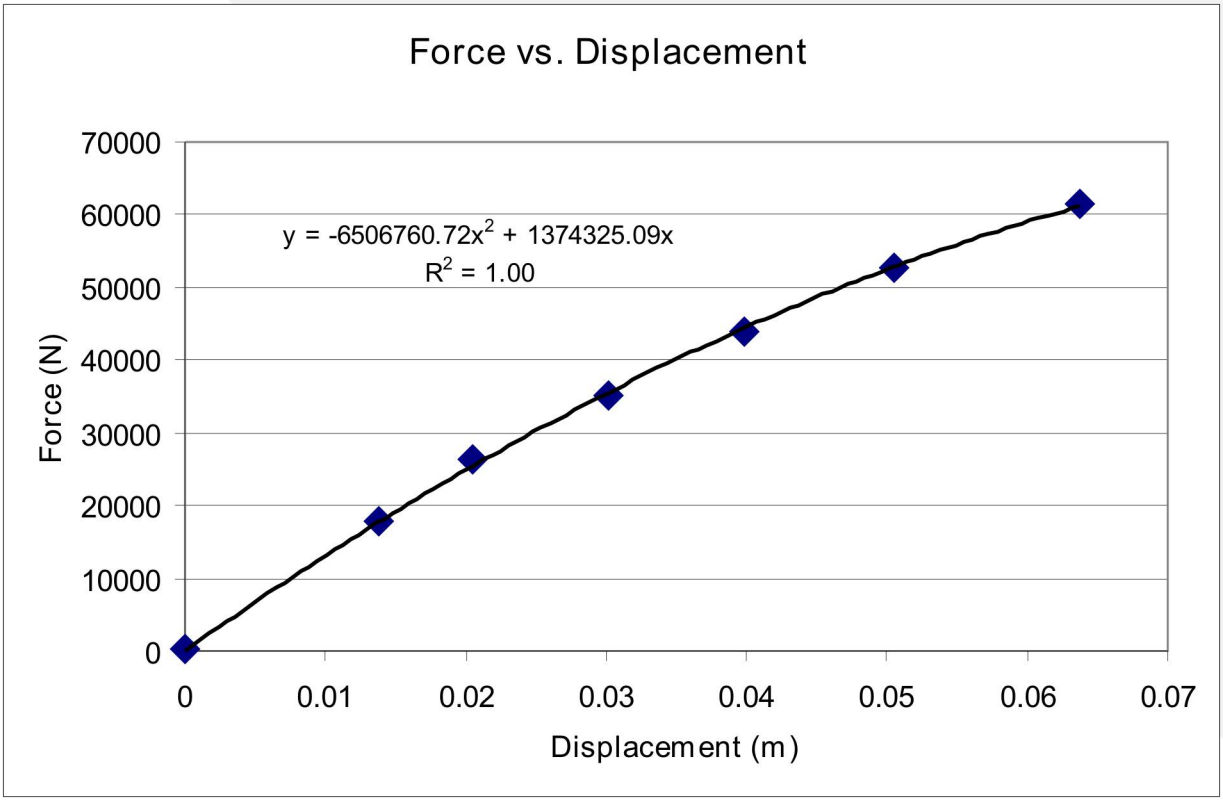
Abumper mounted for a Ford F Series
Frame not provided

Front View

Rear Under View

Impact Testing Conducted by The University of Texas in Austin Mechanical Engineering Dept.

ABumper™ Hydraulic Pressure Testing



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ABumper™ Displacement

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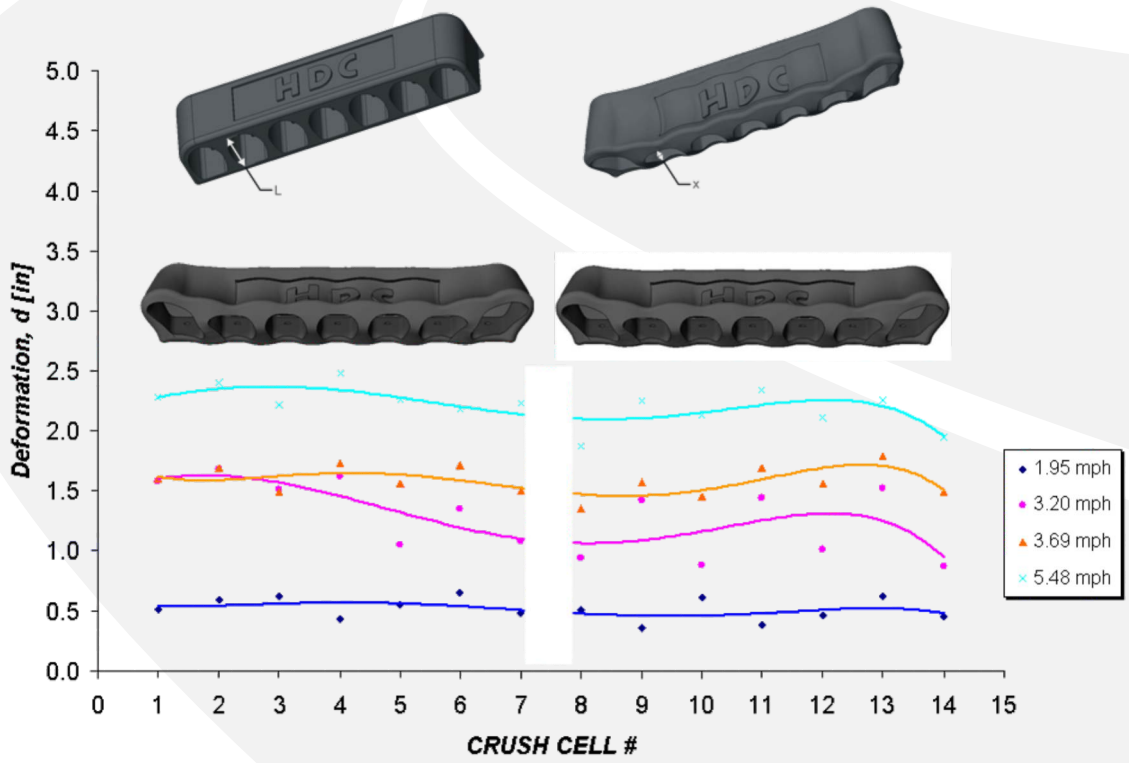
Test #2 (A-Bumper at 1.95 mph) & Test #7 (Stock Bumper at 1.62 mph)

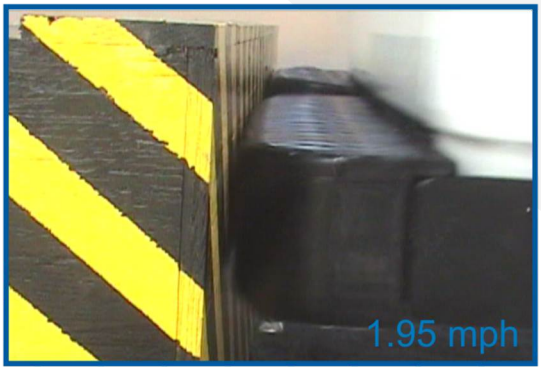
Stock Bumper

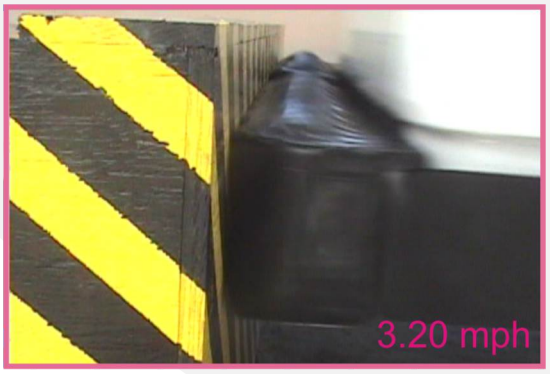
ABumper

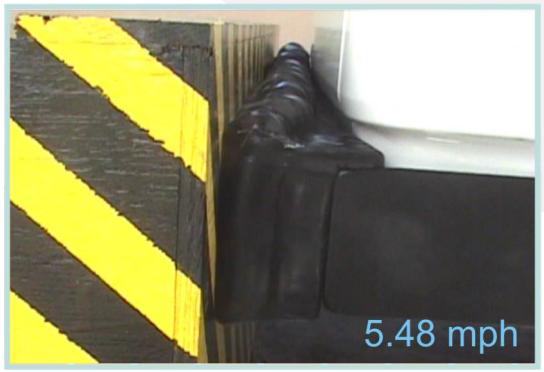
ABumper™ vs. Stock Bumper

Cell Deformation: Tests #2 (1.95 mph) to #5 (5.48 mph)









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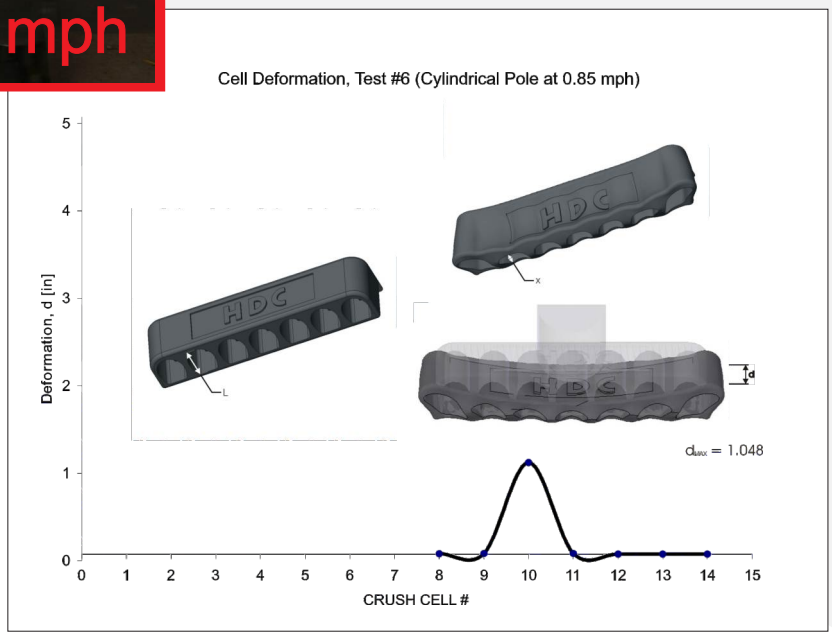
ABumper™ vs. Stock Bumper

Repeated Impact at speed under 5 mph cause no damage to elasticity of Abumper

Pole Impact Test



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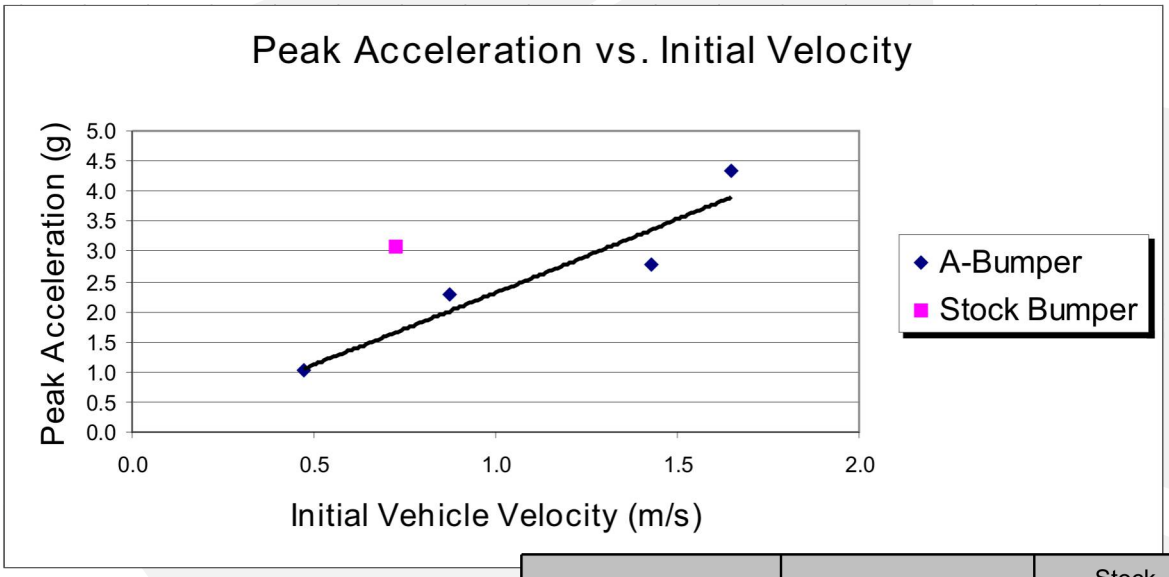
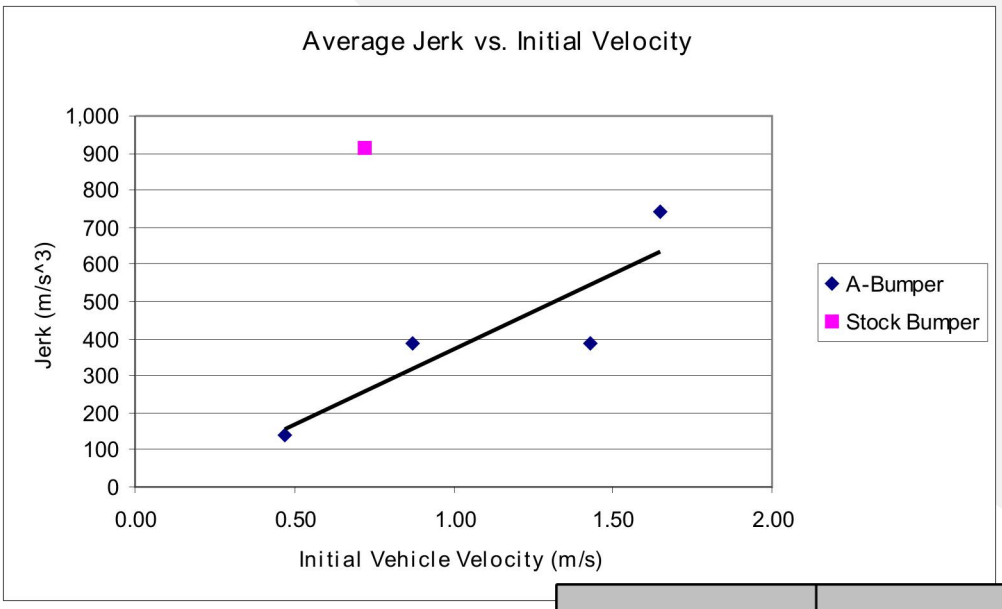
Peak Acceleration Comparison



Parameter	A Bumper	Stock Bumper	% Diff
Peak Acceleration (m/s^2)	15.64	29.73	47.38%
Impact Duration (s)	0.146	0.116	26.06%



ABumper increases impact duration by 26%. This decreases the abruptness (jerk) of impact by over 71%. These percentages reduce injuries and their costs to involved parties or fragile cargo.

Parameter	A-Bumper	Stock Bumper	% Diff
Average Jerk (m/s^3)	256.70	912.88	71.88%
Impact Duration (s)	0.146	0.116	26.06%

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