

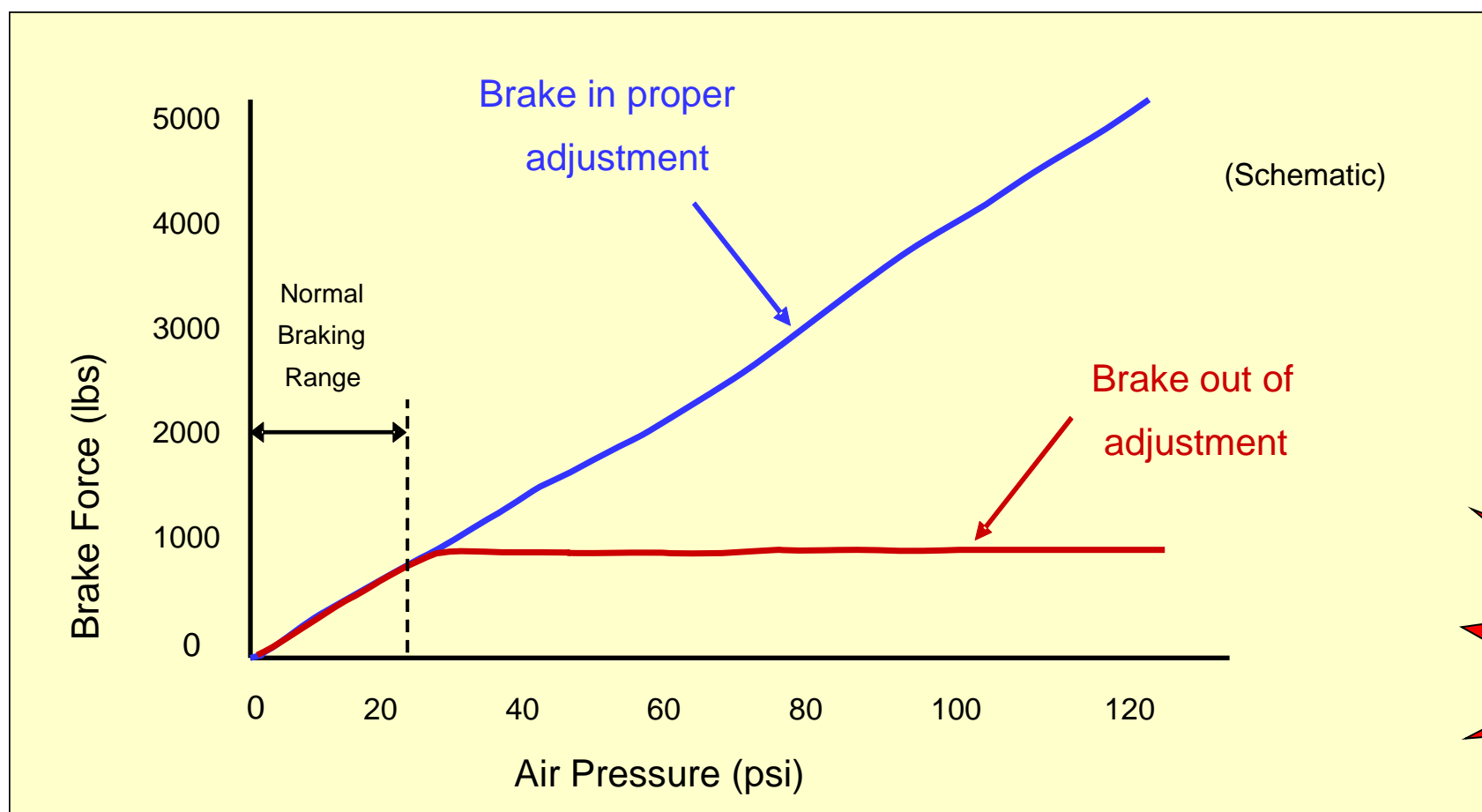
The Importance of Brake Adjustment



In Adjustment Brakes Prevent Crashes that could be caused by a Lack of Sufficient Braking Force

Air Brake Adjustment." CVSA. 23 Jul 2009 <http://www.cvsa.org/documents/Air_Brake_Brochure.pdf>.

Drivers can't feel a brake Out of Adjustment



VanderZwaag, Rolf. *Practical Airbrakes: Brake Adjustment*. Richmond Hill, Ontario: Techni-Com Inc., 2005.

Estimated Number of Trucks in Crashes in which :

29.4%

Brake Failure, out of adjustment, etc. was an associated factor.

U.S. Department of Transportation, Federal Motor Carrier Safety Administration. *Report to Congress on the Large Truck Crash Causation Study*. Springfield, VA: National Technical Information Service, March 2006.

Stopping Distance Depends on...

❖ **Available Brake force**

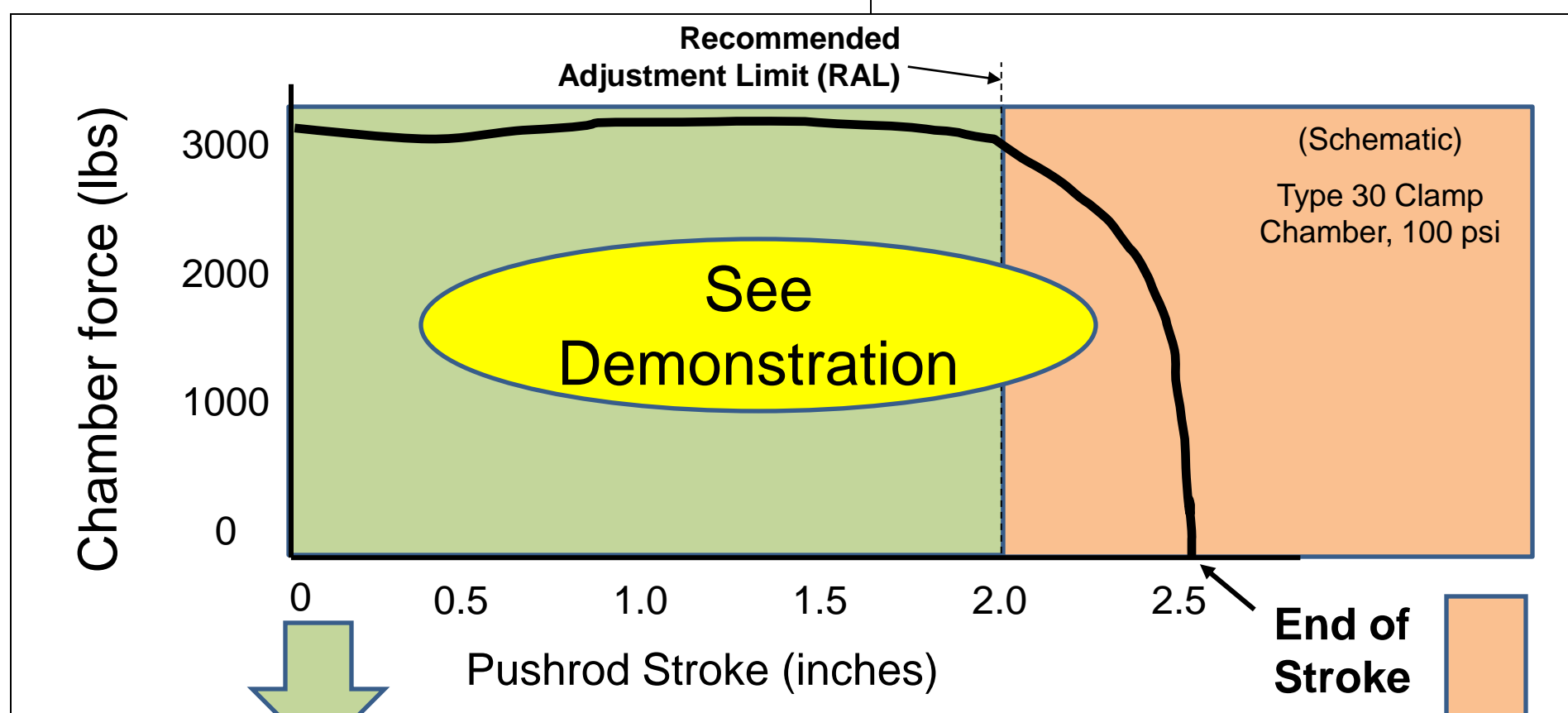
- ❖ Speed
- ❖ Weight
- ❖ Driver Reaction Time
- ❖ Brake System Activation Time
- ❖ Road Conditions (slope, friction)
- ❖ Tire Conditions (wear, pressure)

Brakes In Adjustment

Max. Available Brake Force

Brakes Out of Adjustment

Reduced Brake Force



Brake Force (Avg. Per Wheel)

Calculated Stopping Distance (from 60 mph)

3000 lbs

321 ft



Stopping time = 7.3 seconds

Assumptions: 80,000 lb vehicle, Brake Force is the same at all wheels, Instantaneous and Constant Deceleration, Dry Concrete, No Brake Fade

1000 lbs

962 ft



Stopping time = 21.9 seconds