



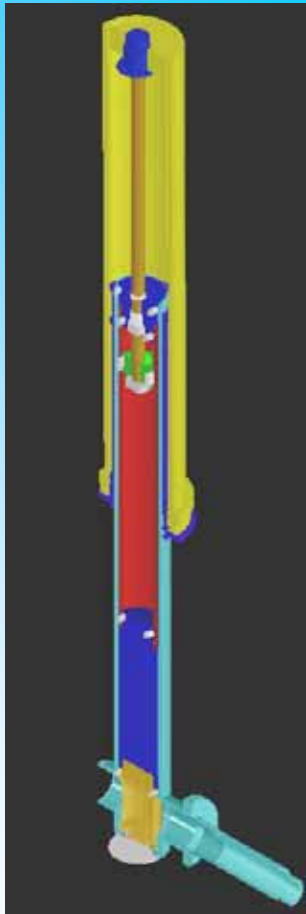
*High Response  
Dynamic Drop Test  
Simulator*

HH-65A Dolphin

# Challenge:

Develop a system to test and measure the high response parameters of a new energy absorption technology

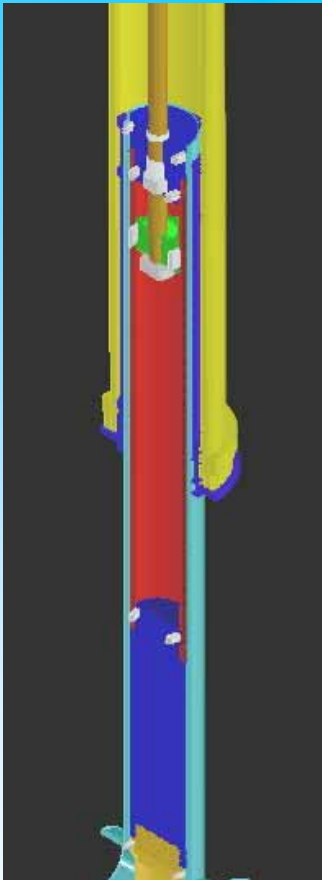
# Challenge: Technology



## Silicone Liquid Energy Absorption Cartridge (SLEAC)

- *Improved damping performance*
- *Elimination of hydraulic fluid*
- *Improved thermal performance*
- *Reduced Maintenance*
- *Ease of Retrofit*

# Challenge: Technology



## Damping Characteristics

- *Velocity Squared*
- *Viscous*
- *Dashpot*

*Predominant mode is a function of compression or rebound velocity*

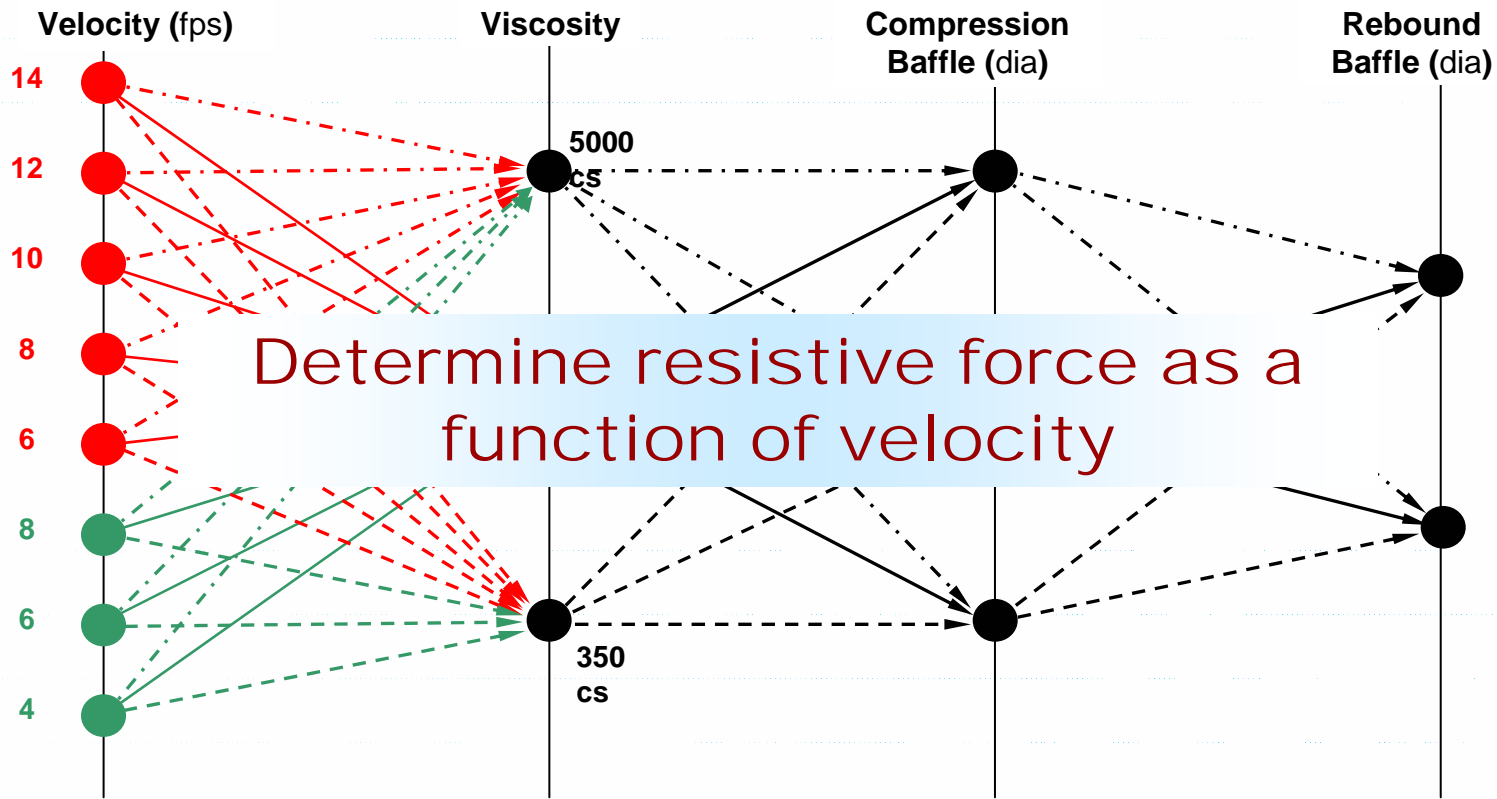
# *Challenge: Testing*



## Requirements

- *Measure quasi-steady state motion*
- *Maximize 'stroke'*
- *High sampling rate*
- *Quick data processing*
- *Facilitate configuration evaluation*

# Challenge: Testing



# *Challenge: Testing*



## Controls

- *Actuator Stroke*
- *Bi-directional velocities*
- *Sampling rate*
- *Pulse shape (rise & fall)*

## Automated Functions

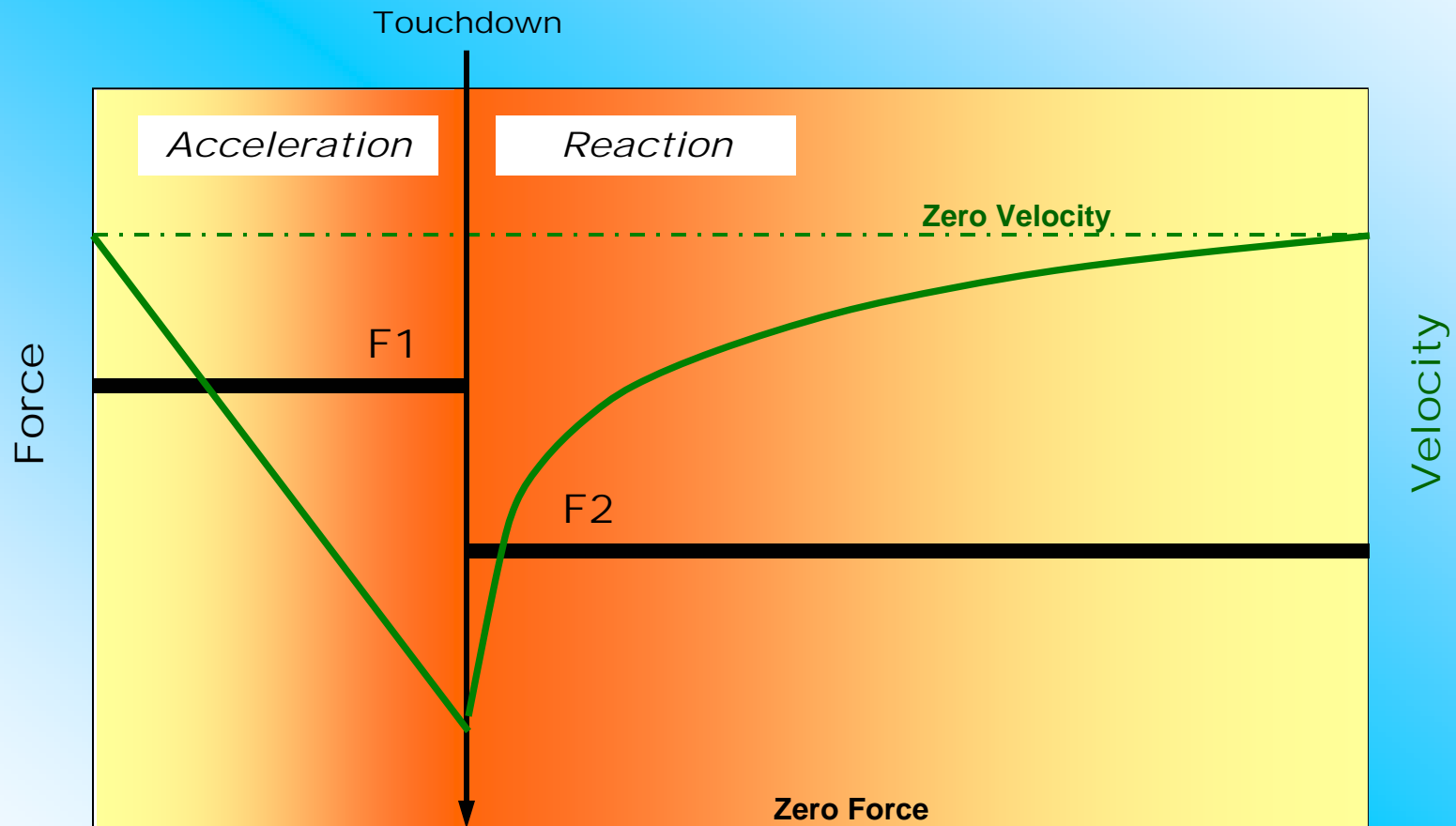
- *Compression – rebound*
- *Oscillation (freq. & ampl.)*
- *Drop parameters*

# *Challenge: Drop Testing*

Upgraded Capability



# Challenge: Drop Testing





Sey Tec  CW Aerotech