



# Zeta Performance - Vehicle Technologies

## Pull Down Rig Testing & Vehicle Development

Zeta Performance provides our customers with proven methods of data collection and pull down rig operation. Suspension dynamics are maximized for optimum performance based on known wheel loads and/or shock travels.

### Features:

- Fine-tune coil-bind and bump stop/spring set-ups
- Additional data acquisition and control capabilities
- Proprietary fixturing and actuation method to engage the lift bar (or pull bar) via the rear end housing for dirt oval market
  - "This system properly applies simulated drive torque ensuring repeatability and accuracy"
- Computer controlled hydraulic chassis and wheel actuators, accurate to .003" and capable of over 4,500-lbf load
- Built-in turnplates
- Rigid frame construction for minimal deflection and maximum repeatability

#### Benefits:

- Simulate attitude and vertical forces generated on track
- Evaluate clearances, alignment and compliance of individual chassis components
- Accurately analyze camber, bump steer and vertical compliance
- Monitor and log sensors to measure forces and displacements
- Data easily exported into Excel for comparison and analyzation
- Load vs shock and wheel travel graphs
- Bump Stop/Spring load graphs
- · Allow us to create and perform specialized tests to solve your chassis development problems
- Bump Steer Graphs
- Camber Curve Graphs

### Options:

- Pull Chassis down or Push Wheels up
- Lift bar (or pull bar) actuating in Dirt applications
- 4-bar and bump stop load cells





Pull Down Rig Shown

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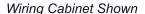
## Advantages of Testing with Zeta Performance:

Our staff of engineers and technicians:

- Years of experience across the premiere forms of professional motorsports around the world.
- Work with you to create a test plan to make the best use of your time on the rig.
- Available for both setup and chassis development consultation and assistance.
- Specializes in vehicle development and can help provide support and resources to both individual teams and chassis manufacturers.
- Tailor programs to meet your needs.



Truck mounted on Rig Shown





- Our on-site design staff and fabrication shop can create specialized fixturing for different vehicles and custom fixturing for specialty testing.
- Our in-house data acquisition department is available for everything from consultation to track support, including system rental, to gain the data necessary to make the most of the rig.

#### Get that Winning Edge

As the world leader in suspension technology, we have won numerous races and championships in F1, ALMS, Indy Car, GARRS, and NASCAR.

Our shocks are hand-built, tailored to your driving preferences or car setup, and dyno tested to ensure the highest attention is paid to detail, consistency, and performance.

