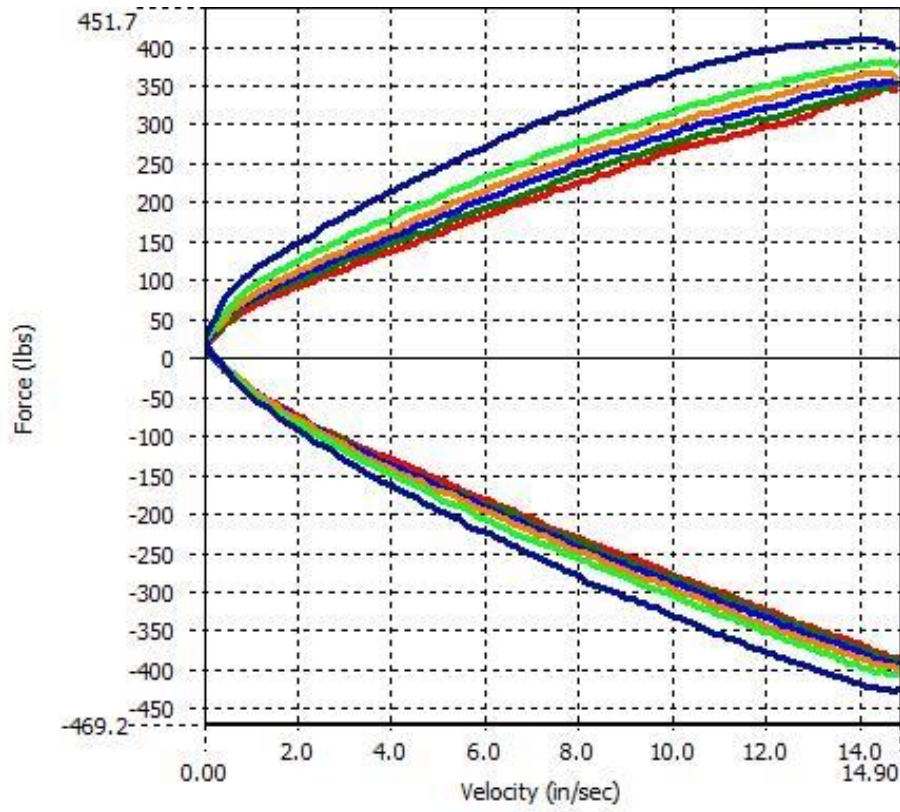




MXT Needle System

I have prepared the following Dyno Graphs to outline the advantages of the needle system. Below is the MXT run @ 10mm increments. (The Dyno is set for 50mm of stroke).

85 PDS.CVP
85 PDS 10.CVP
85 PDS 20.CVP
85 PDS 30.CVP
85 PDS 40.CVP
85 PDS 50.CVP

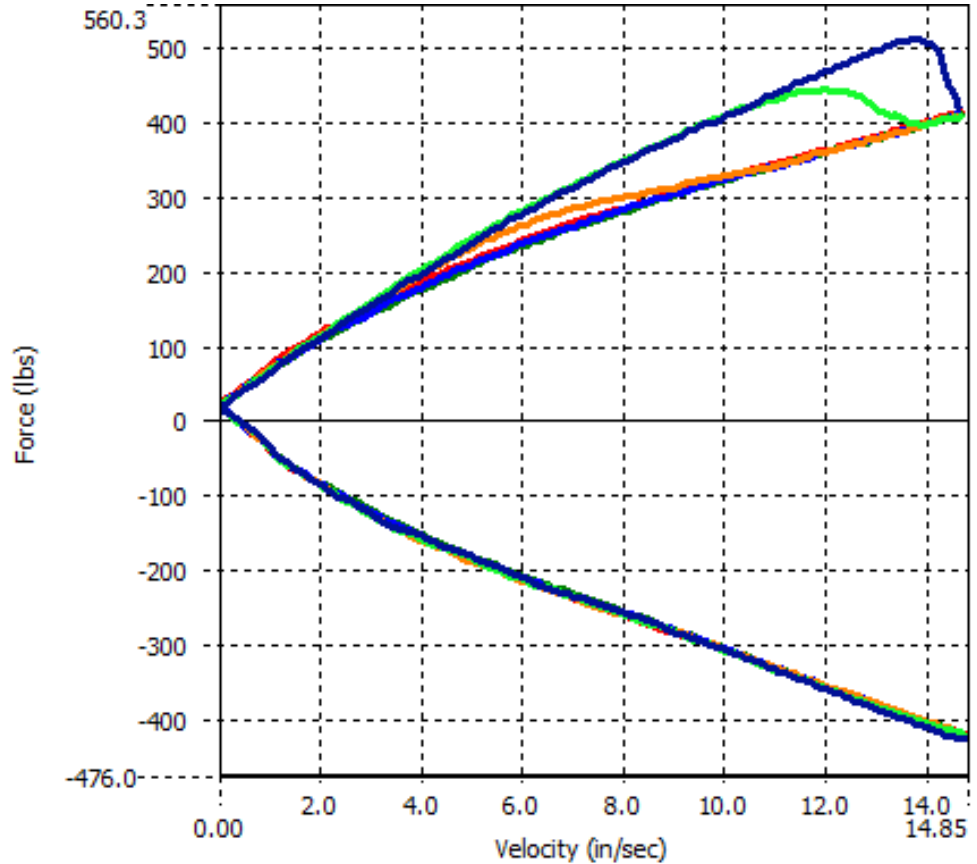


What I'd like you to notice is that each 10mm of additional stroke results a small but predictable change in damping force at even the lowest speeds, yet the change remains linear with respect to speed. This would be consistent with the change in damping force at constant vertical wheel movement you would find with a linkage system.



OEM WP 1.5 Design

KTM85 SX 0.CVP
KTM 85 SX 10.CVP
KTM85 SX 20.CVP
KTM85 SX 30.CVP
KTM85 SX 40.CVP
KTM85 SX 50.CVP



What I'd like you to notice on this graph of stock shock test is that the damping force is not consistently changing as the shock moves through its stroke (lack of rising rate). Making matters worse is that the system is very speed dependent, notice how that after 50% of the stroke has been used the speeds above 6 Inches/sec produce increasing changes in damping force with respect to speed. This means the shock will be soft in terms of controlling motions related to steering or control, and stiff in terms of absorbing of bumps and edges on the track surface. This is the worst case from a tuners perspective, or a riders comfort and feel.

Suspension Tuners will struggle to balance stiffness for control and handling with plushness for absorbing bumps.

Tuning info: We recommend the use of progressive springs with the system as well. The lack of rising rate also manifests itself as a lack of leverage change equally. For this reason the spring force should increase or decrease as the suspension travels through its stroke.