

Polaris XTRA-10:

The Polaris XTRA-10 suspension is a rising rate two-way coupled suspension. The black scissor stop blocks on both the front and rear sides of the rear arm provide the limiting mechanism that provides the coupling. It delivers real nice performance in the big bump environment, but compromises much of the lower speed ride quality. Our impressions are that the calibration is intentionally set more for the high speed big bump environment. The adjustability of the coupling blocks on the lower section of the rear arm could be considered a strength but knowing what to do with these blocks when can be a task. One weaknesses of this suspension arrangement is that there's little in terms of friction reduction on the shafts and bushings. In a stutter bump environment the ride quality is just not there in comparison to other coupled designs.

Polaris XTRA-12:

The Polaris XTRA-12 rear suspension is a falling rate two-way coupled system. The obvious strength of this system is the ride quality which seems to be calibrated exactly the opposite of the XTRA-10. Polaris does not seem to be able to get the best of both worlds in one package so they have decided to develop two systems, one for each end of the spectrum. While the XTRA-12 appears to be a parallelogram, the most obvious difference with this arrangement is that the XTRA-12 doesn't have a shock on the front arm. When it comes to comfort, diminishing the effect of the spring and shock on the front arm can afford you much ride quality. By going with this design (eliminating the spring and shock on the front arm) the comfort level has definitely been improved. Initially this design decision may have been more of an attempt at cost reduction as the original XTRA-14 used only one shock in the entire skid frame. What Polaris likely found out with this pilot build of XTRA-14s was that they couldn't get enough work done with only one shock where it was located. In an effort to give the suspension greater bump absorption, a second shock was added to the rear arm to control the energy. What has been gained in comfort by not having a front shock seems to have been lost is resistance to bottoming of the front arm. It may be great for running 40 mph through the stutters, but if you want to go faster through the great big whoops it just can't handle it. Excellent for trail speeds and ride quality, but high speed control and resistance to bottoming is not a strength. Recent tweaks to this design has reduced the ride height of the machines so equipped, reducing the center of gravity and body roll, resulting in noticeable handling improvements. In certain conditions this can be the smoothest riding suspension available; as the speeds and/or the bump size increases, the attractiveness of this suspension diminishes and you will quickly find the limits of the suspension.