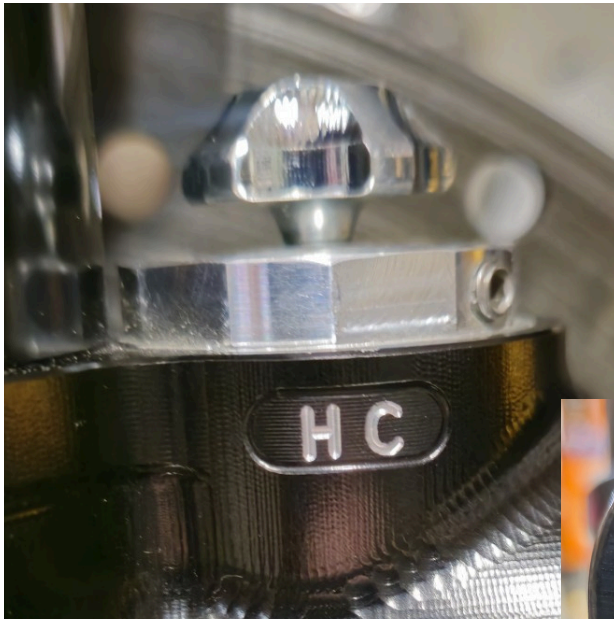




Mach 7 R Setup / Adjustment Procedure

American Suspension's Mach 7R fork legs feature four separate external adjusters—High-Speed Compression (HSC), Low-Speed Compression (LSC), High-Speed Rebound (HSR), and Low-Speed Rebound (LSR)—each labeled from 1 to 8. On this scale, 1 represents the softest (fastest oil flow) setting, and 8 is the firmest (most restricted oil flow) setting. Below is an overview of how each adjuster affects your front suspension and how to fine-tune it for your riding style.





UNDERSTANDING the Four-Way External Adjustments

High-Speed Compression (HSC)

- Purpose: Controls the fork's behavior over sharp, sudden impacts (e.g., potholes, square-edged bumps, landing from a jump).
 - Adjustment Range 12 CLICKS: ALL THE WAY IN = 1, FREER FLOWING VALVING
 - Lower Numbers (1–3): Allows more oil flow, softer feel on big hits, but can risk bottoming on severe bumps.
 - Higher Numbers (8–12): Restricts oil flow, providing a firmer ride to resist bottoming and reduce sudden front-end dip on harsh impacts.

Low-Speed Compression (LSC)

- Purpose: Affects gradual fork movement—like braking dive, cornering loads, or rolling bumps.
- Adjustment Range: 1 (softest) to 8 (firmest).
 - Lower Numbers (1–3): Softer low-speed damping, more comfort over gentle undulations, but more fork dive under braking.
 - Higher Numbers (6–8): Stiffer feel, reducing front-end dive and offering a more planted sensation, though it may feel harsher on small bumps.

High-Speed Rebound (HSR)

- Purpose: Determines how quickly the fork returns (rebounds) after a sudden compression (e.g., hitting a sharp bump).
 - Adjustment Range 12 CLICKS: ALL THE WAY IN = 1. THIS IS SLOWEST FLOWING VALVING
 - HIGHER Numbers (8-12): FASTER rebound, which can improve comfort over repeated, high-speed bumps but risks 'topping out' or reducing traction if it's too fast.
 - LOWER Numbers (1-4): Slows rebound, preventing the front end from snapping back too quickly and helping keep the tire planted, but excessive slowing can cause a "dead" feel.

Low-Speed Rebound (LSR)

- Purpose: Controls how fast the fork extends after slower or more gradual compression (e.g., braking or cornering loads).
- Adjustment Range: 1 (fastest rebound) to 8 (slowest rebound).
 - Lower Numbers (1–3): Quicker extension, giving a more lively feel but potentially leading to instability or harshness if overdone.
 - Higher Numbers (6–8): More controlled, gradual extension, improving stability and traction but possibly feeling too dull if set too high.



Identifying/Setting the Adjusters

1. **LOW SPEED COMPRESSION/ REBOUND:** These are labeled, “LC” (Low-Speed Compression) and “LR” (Low-Speed Rebound) from the front of the motorcycle.
 - Numbered Scale (1–8): You’ll see each dial marked from 1 to 8. Matching the dial’s number to an alignment mark or arrow on the fork body allows you to track your current setting.
2. **HIGH SPEED COMPRESSION/ REBOUND:** These are labeled, “HC”(High-speed compression) and “HR”(High-Speed rebound).
 - These do not have a depicted numbered scale, and are set based off on “fully in” or “fully out”. These have 12 click each, 1 being the first click from all the way in. This is adding the most pressure on the the valve shim stacks, stiffening the compression and rebound. 12 being the softest pressure on the valve shim stacks, softening the compression and rebound.

Baseline Setup: A common starting point might be setting all four adjusters around the mid-range (e.g., 3–4). From there, you can make small changes (e.g., one step at a time) based on feel.



General Tuning Tips

1. **Start in the Middle**
 - Choose a moderate setting (around 3–4) for all four adjustments.
 - Ride to get a feel for the fork's performance, then adjust incrementally.
2. **Address One Adjuster at a Time**
 - If your fork is bottoming out on big hits, adjust High-Speed Compression first.
 - If it dives excessively under braking, tackle Low-Speed Compression.
3. **Remember Adjuster Overlap**
 - High-Speed adjusters (HSC/HSR) mainly affect sharp, sudden bumps.
 - Low-Speed adjusters (LSC/LSR) primarily impact rolling bumps, braking dive, and cornering stability.
4. **Small Moves, Big Differences**
 - Going from 3 to 4 or 4 to 5 can make a noticeable change. Try one step at a time and keep notes.
 - If you need less damping (a “softer” feel), reduce the number; if you need more damping (“firmer” feel), go to a higher number.

Common Symptoms and the Likely Adjustment

- **Excessive Brake Dive**
 - Increase LSC (move toward 5–8 range).
- **Harsh Over Sharp Bumps**
 - Decrease HSC (move toward 1–3 range) or check if HSR is too slow (set HSR to a smaller number).
- **Fork Feels “Springy” or Bounces Too Quickly**
 - Increase Rebound (either HSR or LSR, depending on the situation). Go from, say, 3 to 4 or 4 to 5.
- **Front Feels ‘Dead’ or Overly Sluggish**
 - Decrease Rebound (HSR/LSR). Move from a higher number (e.g., 6) to a lower number (e.g., 4).
- **Tire Chatter / Traction Loss**
 - Often means Rebound is too slow—reduce HSR or LSR (e.g., from 5 down to 3).

Final Thoughts

With four externally adjustable circuits—from 1 (fastest/softest) to 8 (slowest/firmer)—the Mach 7 R system lets you precisely tailor fork performance to different road surfaces, riding styles, and personal preferences. Work methodically, changing one setting at a time, and record your impressions after each adjustment to achieve the ideal blend of comfort, control, and confidence.