**AVID Racing, LLC**
497 W Bedford Ave Ste 101
Fresno, CA 93711
(559) 512-2550

INSTALLATION TIPS + TECHNICAL GUIDES

# Check and Adjust Axle Plunge

Measure axle plunge range and check for binding through suspension travel when adjusting non-fixed radius rods. This reference covers lower radius rod adjustment; CV-specific plunge and operating-angle requirements must also be considered.

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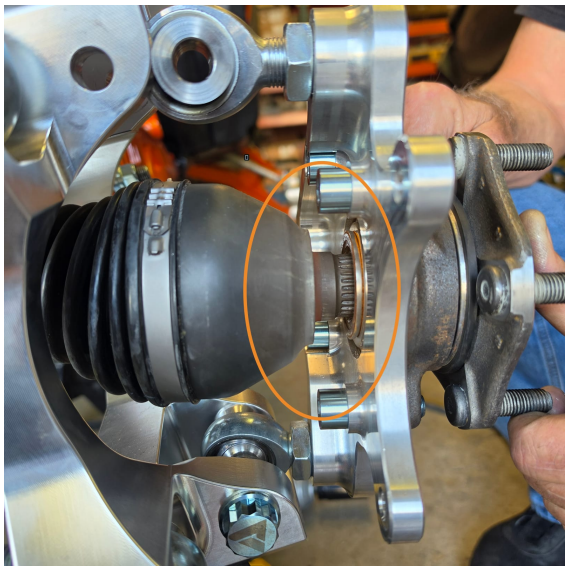
## Before you begin

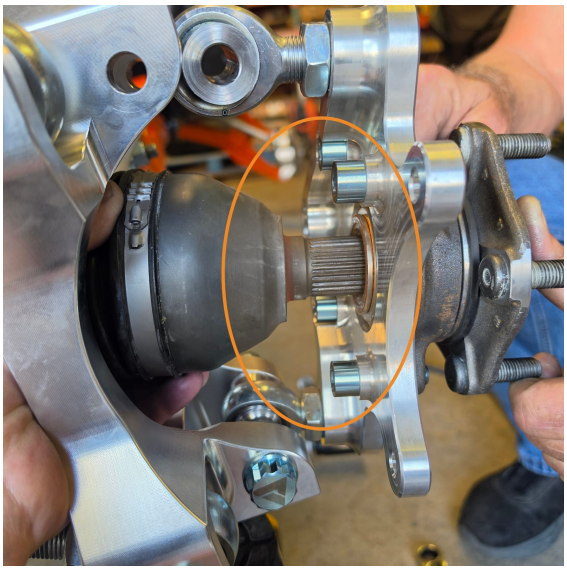
### Required tools

- Length-measuring tool
- Digital angle gauge

## Axle Plunge Measurement and Adjustment

## Step 1: Measure Axle Plunge Range





With the axle nut off, extend the trailling arm outward away from the car so the axle shaft and CV  can reach its fully extended position lenght while still not seated into the wheel bearing. fix the trailling arm so that it cannot move during this process. while pulling the ccv outward, stretching the axle to its fully extended lenght, Measure the distance between the two mating faces between the cv joint and wheel bearing. then compress the axle fully inward to make the axle lenght at its shortest lenght. take a second measurement using the same reference points between the cv and wheel bearing. The difference calculated here  is the axle's plunge range. The axle shown in the example picture has about 0.8 in of range.

## Step 2: Adjust the Lower Radius Rod




Leave the axle nut off during adjustment. Set camber to the target angle of the suspension or intended design, . Set toe as closely as possible by visual alignment; exact toe is difficult to establish at this stage. Adjust the lower radius rod to position the axle within its measured plunge range. In the illustrated setup, roughly 0.25 in of axle shaft shows through the wheel bearing with the axle compressed, and camber is 0.5°. These are example settings, not universal targets.

## Step 3: Cycle the Full Suspension Travel




Cycle the suspension through its full travel and identify the position requiring the greatest axle extension. This is full droop on the illustrated vehicle, but it is not always full droop on other setups. At that position, measure the remaining plunge with the axle resting without pressure and check for binding. The illustrated setup has 0.125 in of remaining plunge at its most demanding position. Its demonstration axle angle is about 33°, which is beyond AVID's recommended operating angle; this example suspension will be limited to 29–30°. Do not use the demonstration angle as an operating target.

## Step 4: Account for CV Angle and Binding

Review the plunge and binding-angle requirements of the CV design being used. CV angle can affect usable axle plunge. Some CVs require the axle to be almost fully extended at full angle to prevent the shaft from binding against the cup. Account for these requirements separately from the general plunge measurement and lower radius rod adjustment covered here.

### Important notice

Verify the approved installation guide revision before beginning work.