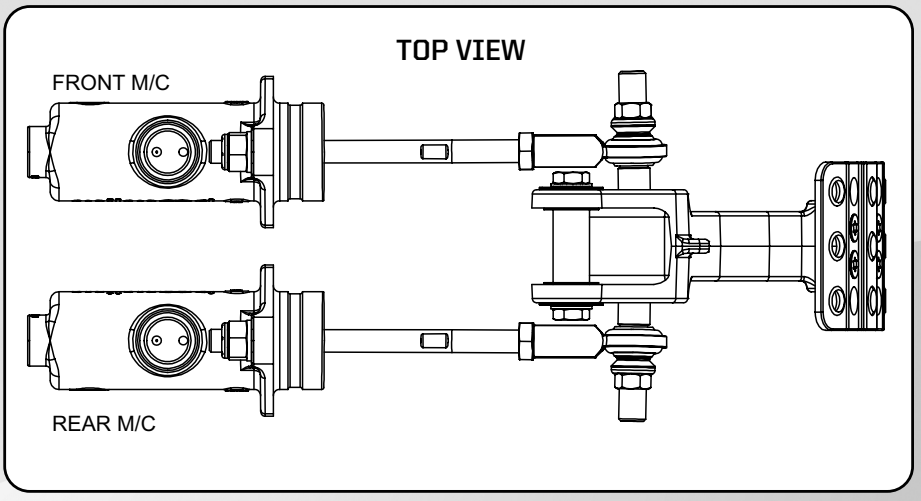
TUNING A TRU-BAR BALANCE BAR

The Tru-Bar balance bar adjusts front-to-rear brake bias by moving leverage between the front and rear master cylinders. Rotating the bar increases brake force to the side closer to the pedal pivot and decreases force to the opposite side.



Bias adjustment is limited to four turns from center in either direction to prevent potential binding and damage from side loading the master cylinder pistons. If additional bias change is needed, use different master cylinder sizes, caliper piston sizes, or an inline proportioning valve.

Important: Do not remove the stop spacers. They prevent over-adjustment, premature master cylinder wear, and potential balance bar damage.

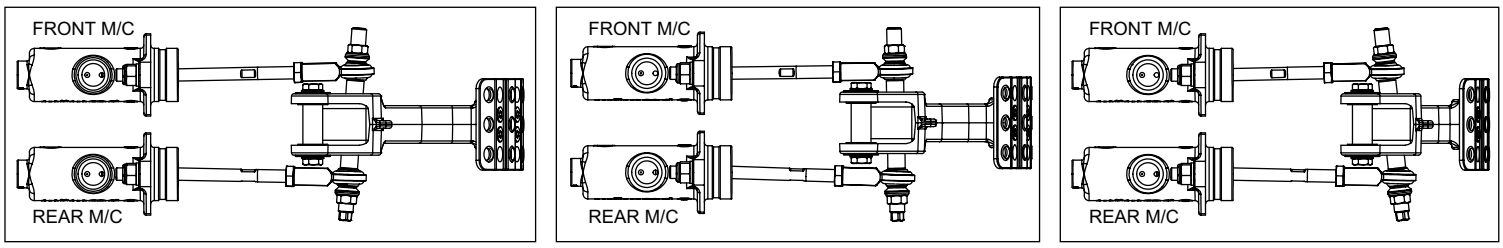
SETUP VIDEO

For split-bias systems, pushrod lengths must be adjusted to compensate for differences in front and rear master cylinder stroke. The balance bar should be square to the pushrods at approximately half pedal travel. Observe the differences in stroke between the front and rear cylinders, and then adjust the pushrods to equalize the amount of angle change in the balance bar from fully released, to intermediate, to heavy pedal effort.

When adjusting pushrod length, lengthen one pushrod only by shortening the other the same amount. This prevents pressure from being applied to either master cylinder at rest. Only make adjustments when the pedal is fully retracted against the stop.

Pushrod length does not affect brake bias. Brake bias can only be changed by repositioning the balance bar.

In 50/50 bias systems with equal caliper and master cylinder sizes front and rear, equal pushrod lengths may be used (see Figure 2). Most split-bias systems require different pushrod lengths.



NO PEDAL EFFORT | MODERATE PEDAL EFFORT | HEAVY PEDAL EFFORT

NOTE:
THE PUSHROD ADJUSTMENT DEPICTED IN THIS FIGURE IS REPRESENTATIVE OF A TYPICAL ASPHALT APPLICATION.
THAT IS, LARGE CALIPER PISTONS IN FRONT, SMALL CALIPER PISTONS IN THE REAR.

Diagram above shows a typical **Rear Wheel Drive**, front-biased system as used on pavement oval track or road course cars, and the subsequent changes in the balance bar that occur through the full range of pedal travel. In this scenario, the front master cylinder pushrod is adjusted longer. For other configurations using a higher rear bias, the pushrod length settings would be the opposite.