

Front anti-dive is used as a tuning aid to run a softer front spring rate without introducing a tendency to dive downward too much in the front under braking. In order to prevent 100% of the cars weight transfer force from being exerted onto the softer springs anti-dive is used to allow a certain percentage of the weight transfer to be absorbed by the front lower arms.

Pro-dive (front kickup) is used as a tuning aid to increase corner entry and exit steering. Pro-dive angles the arms to where more pressure is exerted onto the springs off-power as the car's weight shifts forward. In addition, the angle increases overall caster and therefore corner exit steering is also increased.

Either option is accomplished by angling the front lower arms so that the rear hinge is positioned higher (anti-dive) or lower (pro-dive) - compared to the front hinge - when looked at from the side of the car.

EFFECTS OF FRONT DIVE ADJUSTMENT

Anti-dive - the FRONT arms are angled DOWNWARD from the center forward with the rear suspension holder mounted higher than the front suspension holder:

<p>ANTI-DIVE</p> <p>front arms angled DOWNWARD</p>	<ul style="list-style-type: none"> • The front suspension resists compressing on corner entry. Off-power steering and front end grip is reduced by transferring less weight forward on corner entry. • The front suspension takes longer to reach its maximum roll point allowed by the springs in the corner. Mid-corner steering and front end grip is reduced until the throttle is applied. • The front suspension will promote compression on corner exit. However, on-power steering is decreased due to reduction in caster. On-power steering will increase only if C-hub caster is increased to compensate. • Reduces the ability for the front suspension to handle large or successive bumps. This can be countered by using softer front springs. • Works well for cars with a forward weight bias when grip is medium-to-high.
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Pro-dive or "front kick-up" - the FRONT arms are angled UPWARD from the center forward with the front suspension holder mounted higher than the rear suspension holder:

<p>PRO-DIVE / KICK-UP</p> <p>front arms angled UPWARD</p>	<ul style="list-style-type: none"> • Off-power steering and front end grip is increased on corner entry by transferring more weight forward on corner entry. • Mid corner steering and front end grip is increased. • On-power steering and front end grip is increased on corner exit if C-hub caster remains unchanged and there is minimal front droop to allow the front end to lift. This is due to the fact that the overall caster is increased by the arms' new angle. • Increases the ability for the front suspension to handle large or successive bumps.
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ADJUSTING FRONT DIVE

Front dive is adjusted by using different eccentric suspension holders. There are three different eccentric holders marked with a dot. Always use same suspension holders on left and right sides.

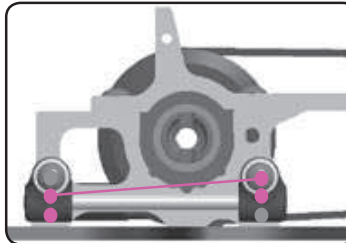


LOWER
Pin Position:
-0.75mm

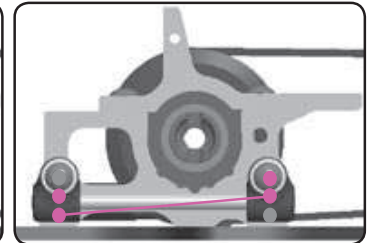
STANDARD
Pin Position:
0mm

HIGHER
Pin Position:
+0.75mm

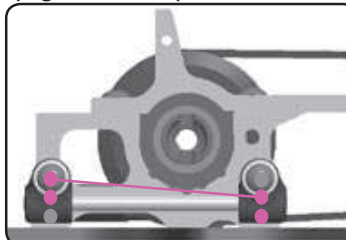
ANTI-DIVE (high roll center)



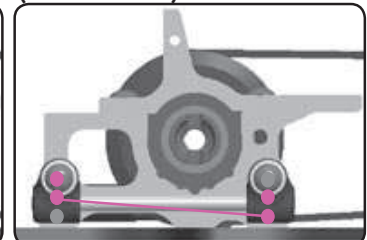
ANTI-DIVE (low roll center)



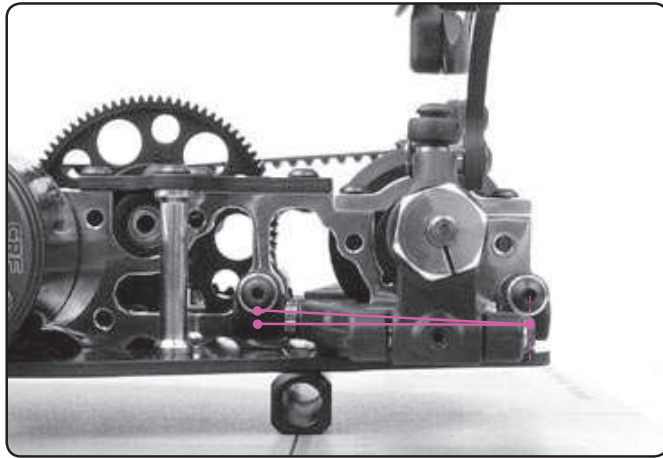
PRO-DIVE / KICK-UP (high roll center)



PRO-DIVE / KICK-UP (low roll center)



SQUAT (REAR)



Rear anti-squat is used as a tuning aid primarily when cars need to run a soft rear spring rate and they have a tendency for the rear end to squat down too much under acceleration. An added benefit of anti-squat is quicker initial acceleration at the start of a race. In order to prevent 100% of the car's weight transfer force from being exerted onto the softer springs, anti-squat is used to allow a certain percentage of the weight transfer to be absorbed by the rear lower arm motion.

Pro-squat is used as a tuning aid to increase corner entry steering and corner exit rear grip. This is a useful option for low grip asphalt conditions.

Either option is accomplished by angling the rear lower arms so the rear hinge is positioned higher (pro-squat) or lower (anti-squat) - compared to the front hinge - when looked at from the side of the car.

EFFECTS OF REAR SQUAT ADJUSTMENT

Anti-squat - the REAR arms are angled DOWNWARD from the center rearward with the front suspension holder mounted higher than the rear suspension holder:

<p>ANTI-SQUAT (REAR KICK-UP)</p> <p>rear arms angled DOWNWARD</p>	<ul style="list-style-type: none"> • The rear suspension resists lifting on corner entry. Off-power steering may be reduced when using a stiffer front spring and little rear droop. • The rear suspension will reach its maximum roll point more quickly. Mid-corner steering is reduced until the throttle is applied. • The rear suspension will resist squatting on corner exit. On-power steering is increased immediately after the throttle is applied by transferring less weight rearward and reducing rear end grip on corner exit. • Increases the ability for the rear suspension to handle large or successive bumps.
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Pro-squat - the REAR arms are angled UPWARD from the center rearward with the front suspension holder mounted lower than the rear suspension holder:

<p>PRO-SQUAT</p> <p>rear arms angled UPWARD</p>	<ul style="list-style-type: none"> • Off-power steering is increased significantly by transferring more weight forward and reducing rear end grip on corner entry, unless there is minimal rear droop to allow the rear end to lift. • Mid-corner steering is increased by reducing rear end grip until the throttle is applied. • On-power steering is reduced immediately after the throttle is applied by transferring more weight rearward and increasing rear end grip on corner exit. • Decreases the ability for the rear suspension to handle large or successive bumps. • Works well for rubber tires on low-grip smooth asphalt.
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All of these options usually make the car's steering more responsive to throttle changes in the corner. Increasing or decreasing droop at the end of the car where you have implemented anti/pro-dive/squat, will have an effect on whether the arms' angle creates the affects stated above during on-throttle, off-throttle or both. Keep in mind that if your rear ride height is higher than the front, then your arms are already tilted in relation to the track surface which gives you a small effect similar to anti-dive and pro-squat on corner entry only. The more rear droop you have, the more the effect. But since the rear springs are usually softer and compress more under acceleration, there is no mid-corner or on-power effect that you would have with actual anti-dive and pro-squat.

ADJUSTING REAR SQUAT

Rear squat is adjusted by using different eccentric suspension holders. There are three different eccentric holders marked with a dot. Always use the same suspension holders on left and right sides.

