



## FREQUENTLY ASKED QUESTIONS

### *Chassis Questions*

1. **What is Toe?** Toe is the relationship between the front wheels, from a frontal view. *Toe-In* refers to the front wheels being closer together in front. *Toe-Out* refers to the front wheels being closer together in the rear. As a general rule on your ATV you should run a small amount of toe-in (5-10mm). For more information on specific settings for your ATV consult your OEM service manual or contact your aftermarket chassis manufacture.
2. **What is Camber?** Camber is a wheels inward or outward tilt from vertical, measured in degrees. On ATVs with a solid straight rear axle only the front wheels will have camber. Viewed from the front or rear of the ATV, if wheels are closed at the top than at the ground camber is *negative*. If it is farther apart at the top, camber is *positive*. As a general rule, most sport ATVs run 1-2 degrees of negative camber.
3. **What is Caster?** Caster is the angle between a line drawn vertically through the wheel's centerline and the axis around which the wheel is steered. Caster is considered positive when the steering axis is inclined rearward at the top.
4. **What is Bump Steer?** Bump steer is the slight turning of a wheel away from its normal direction, as it moves through its suspension travel. In reference to the front end, bump steer is associated with the tie-rod/linkage-arm relationship.
5. **What is oversteer?** Oversteer is a handling characteristic in which less steering lock is required as vehicle speed increases around a constant radius turn. When a vehicle is oversteering, the rear tires are the first to slide because the rear tires run at larger slip angles than the front tires. Race drivers/riders will say an oversteering vehicle is "loose" because the rear end tends to swing wide.
6. **What is understeer?** Understeer is a handling characteristic in which more steering lock is required as vehicle speed increases around a constant radius turn. A vehicle that is under steering breaks away at the front end first because the front tires run at larger slip angles than the rear tires. This condition is also referred to as a "push"
7. **Drive Chain O-Ring or Non O-Ring?** It is an old myth that o-ring chains rob horsepower. In the ATV industry we have never seen prove that o-ring chains rob horsepower. But without a doubt in too many cases to list we have seen an o-ring chain prove itself considerably stronger and more durable against the elements than a non o-ring chain. For ATV usage we recommend using an o-ring chain for all applications.
8. **When should rear carrier bearings be replaced?** The timetable for rear carrier bearing replacement will vary depending on the riding application. For general all around type riding in average climate they should be inspected approximately every 50 hours and replaced every 100 hours. If riding in excessive water or mud



the maintenance check should be accelerated. For serious motocross racers the bearings should be checked approximately every 10 hours, and replaced each season. For Desert and Cross Country racers the bearings should be checked after every event to ensure maximum reliability, replace as necessary. Replacement notes; Always use bearings recommended by manufacture. Always install new seals. For roller bearing type carriers do not beat the bearing in and out of the housing. Use heat or warmth in selected areas to assist in bearing removal and replacement.

