

CHAPTER 1
KEY WORDS AND TERMINOLOGY
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CHAPTER 1

KEY WORDS AND TERMINOLOGY

1. GENERAL. This chapter provides definitions of key words and terminology used to describe enforcement driving dynamics.

2. DEFINITIONS.
 - a. Anti-Lock Brake System. Computer-controlled brake system designed to prevent wheel lock-up during heavy braking.
 - b. Apex (or Low Side). The lowest portion of a vehicle's path through a curve.
 - c. Balanced Hand Position. Maintaining a wide grip on a vehicle's steering wheel.
 - d. Brake Fade. The loss of braking efficiency normally due to heat build-up resulting from excessive use of brakes.
 - e. Centrifugal Force (Center Fleeing). The force that propels an object outward from the center of rotation.
 - f. Centripetal Force (Center Seeking). The force that is necessary to keep an object moving in a circular path and is directed inward toward the center of rotation.
 - g. Code 3. The operation of a patrol vehicle with red lights and siren activated, in compliance with California Vehicle Code Section 21055.
 - h. Coefficient of Friction. The measurement of cohesion between two surfaces.
 - i. Cohesion. The sticking power between two surfaces.
 - j. Countersteer. Turning the front wheels of a vehicle in the direction the rear of the vehicle is sliding.
 - k. Electronic Stability Control System. Computerized technology that improves a vehicle's stability by detecting and reducing loss of traction.
 - l. Front End Swing. The action of the front end of the vehicle when backing: the front end swings to the right when backing to the left; the front end swings to the left when backing to the right.

- m. High Side. The outside of a curve in a roadway.
- n. Hydroplaning. Occurs when water on a road's surface causes the tires of a vehicle to lose contact with it.
- o. Impending Skid. A preliminary skid caused by maximum pressure on a vehicle's brake pedal short of locking the brakes.
- p. Kinetic Energy. The energy possessed by a body in motion.
- q. Momentum. The property of a moving body that determines the length of time required to bring it to rest when under the action of a constant force or movement.
- r. Oversteer. The characteristic of a vehicle to tighten its turning radius as the rear end slips or skids toward the outside of a curve.
- s. Potential Energy. The energy a body possesses by virtue of its position (e.g., a vehicle parked on a hill), or by virtue of displacement (e.g., the energy stored in a vehicle's springs as they are stretched or compressed while the vehicle is traveling through a curve).
- t. Power Slide (Four-Wheel Drift). The controlled lateral skidding of a vehicle when the limits of cohesion are exceeded by all four tires.
- u. Rear End Cheat. When turning left, a vehicle's rear tires track to the left of the front tires. When a vehicle is turning right, the rear tires track to the right of the front tires.
- v. Rolling Friction. The front wheels of a vehicle must be rolling, thereby creating rolling friction, in order to steer the vehicle.
- w. Slip Angle. The turning radius of a vehicle becomes larger as the contact patch of each tire is distorted by increasing cornering force.
- x. Space Cushion. The open area surrounding a vehicle in motion that provides an escape route to the front, rear, and sides.
- y. Threshold Braking. Application of braking force to the point just prior to wheel lock-up. This braking technique is more efficient at slowing a vehicle than locked-wheel braking.
- z. Throttle. The vehicle's accelerator pedal.

- aa. Time Spatial Judgment (Rate of Closure). Judging the proper rate of deceleration necessary to successfully negotiate a curve or to avoid a hazard.
- bb. Tire Footprint. The contact area of a tire tread with the roadway.
- cc. Understeer. The tendency for a vehicle to continue in a straight line and resist turning from a direct course of travel.
- dd. Visual Horizon. The area and distance viewed by the driver of a vehicle when looking ahead.
- ee. Weight Transfer. Weight transfer to the rear axle of a vehicle caused by forward acceleration.
- ff. Longitudinal Weight Transfer. Weight transfer to the front axle of a vehicle caused by braking or deceleration.
- gg. Lateral Weight Transfer. Weight transfer of the front axle to the left when turning the vehicle to the right, and weight transfer of the front axle to the right when turning the vehicle to the left.

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