

## **A – Z of TRUCKING TERMS**

*The following information may help collectors with many of the abbreviations used today in magazines and general road user information.*

### **ABS (Antilock Braking System)**

Computer, sensors and solenoid valves which together monitor wheel speed and modulate braking force if wheel lockup is sensed during braking. Helps the driver retain control of the vehicle during heavy braking on slippery roads.

### **AFV (Alternative Fuelled Vehicle)**

Vehicle powered by a fuel other than petrol or diesel.

### **Air Ride Suspension**

Suspension which supports the load on air-filled rubber bags rather than steel springs. Compressed air is supplied by the same engine-driven air compressor and reservoir tanks which provide air to the air brake system.

### **ATC (Automatic Traction Control)**

Usually an optional feature based on ABS, it prevents spinning of the drive wheels under power on slippery surfaces by braking individual wheels and/or reducing engine throttle. Also called AST, an acronym sometimes loosely translated from the German as anti-spin regulation.

### **ATV (All Terrain Vehicle)**

Vehicle designed for any type of terrain.

### **AVI (Automatic Vehicle Identification)**

System combining an on-board transponder with roadside receivers to automate identification of vehicles. Uses include electronic toll collection and stolen vehicle detection. (see IVHS)

### **AVL (Automated Vehicle Location)**

Class of technologies designed to locate vehicles for fleet management purposes and for stolen vehicle recovery. Infrastructure can be land-based radio towers or satellites. (see IVHS)

### **Axle**

Structural component to which wheels, brakes and suspension are attached.

- Drive axles are those with powered wheels.
- Front axle is usually called the steer axle.
- Pusher axles are unpowered and go ahead of drive axles.
- Rear axles may be drive, tag or pusher types.
- Tag axles are unpowered and go behind drive axles. (lazy axle)

## ---“B”---

### **Bartlett Balls**

A device used to tow trailers with fixed draw bars where the down load exceeds one tonne.

### **BBC**

Distance from a truck's front bumper to the back of its cab.

### **Bill of Lading**

Itemised list of goods contained in a shipment.

### **Blind Spot**

Areas around a commercial vehicle that are not visible to the driver either through the windshield, side windows or mirrors.

### **Bobtail**

Prime mover operative without a trailer.

### **Bogie (also spelled bogey)**

Assembly of two or more axles, usually a pair in tandem.

### **Brake Horsepower (bhp)**

Engine horsepower rating as determined by brake dynamometer testing (see horsepower).

**Bridge Formula**

A bridge protection formula used by federal and state governments to regulate the amount of weight that can be put on each of a vehicle's axles, and how far apart the axles (or groups of axles) must be to legally carry a given weight.

**Bunk**

See Sleeper.

---“C”---

**Cabover (Cab-Over-Engine, COE)**

Truck design in which the cab sits over the engine on the chassis.

**Cargo Weight**

Combined weight of all loads, gear and supplies on a vehicle.

**Cast Spoke Wheel**

Wheel with five or six spokes originating from a centre hub. The spoked portion, usually made of cast steel, is bolted to a multiple-piece steel rim (see Demountable Rim: Disc Wheel).

**CB (Citizens Band Radio)**

Two-way radio for which no license is required by the Federal Communications Commission (FCC). Long beyond its heyday in the 70's CB is still used by truckers and motorists for everything from traffic condition reports to emergency calls to idle chatter.

**CE (CF, LP)**

Distance from back of a truck's cab to the end of its chassis.

**CG (Centre of Gravity)**

Weight centre or balance point of an object, such as a truck body. Calculated to help determine optimum placement of truck bodies on chassis to give correct axle loading.

**Chassis Weight (Curb Weight, Tare Weight)**

Weight of the empty truck, without occupants or load. (This can be confusing as it generally does not include fuel, spare tyres) See Shipping weight.

**CNG**

Compressed natural gas.

**COE**

See Cabover.

**Common Carrier**

Freight transportation company which serves the general public. May be regular route service (over designated highways on a regular basis) or irregular route (between various points on an unscheduled basis).

**Container (Shipping Container)**

Standard-sized rectangular box used to transport freight by ship, rail and highway. International shipping containers are 20 or 40 feet long, conform to International Standards Organisation (ISO) standards and are designed to fit in ships' holds. Containers are transported on public roads atop a trailer with special hold down fittings towed by a prime mover.

**Container Chassis**

Single-purpose semi trailer designed to carry a shipping container.

**Converter Dolly (Dolly)**

Auxiliary axle assembly equipped with a fifth wheel (coupling device), towed by a semi trailer and supporting the front of, and towing, another semi trailer as in a road train.

**Cube (Cubic Capacity)**

Interior volume of a truck body, semi trailer, measured in cubic feet or cubic metres.

**Curb Weight**

See Chassis Weight.

---“D”---

**Demountable Rim**

Multi piece steel wheel rim assembly which is bolted to a spoke hub. Demountable rims are still in use, though they have been replaced in many applications by the simpler disc wheel. (see Cast Spoke Wheel)

***Disc Wheel***

Single piece rim/wheel assembly of stamped and welded steel or forged aluminium, anchored by 5, 6, 8 or 10 nuts to a hub. A “Budd Wheel” is a ten-hole, stud-piloted disc wheel; a design originated by the Budd Corporation.

***Displacement (Piston Displacement)***

Sum of the volumes swept by an engine’s pistons as they travel up and down in their cylinders. Based upon bore (diameter of cylinder) and stroke (distance travelled by piston). Expressed in litres or cubic inches.

***Dolly***

See Converter Dolly

***Doubles (Twins, Twin Trailers)***

Combination of a prime mover and two semi trailers connected in tandem by a converter dolly. (see Converter Dolly; Pintie Hook).

***Driveline***

All the components which together transmit power from the transmission to the drive axle(s). These consist of at least one driveshaft (propeller shaft) with a universal joint at each end.

***Drivetrain (Powertrain)***

All the components, excluding engine, which transmit the engine’s power to the rear wheels; clutch, transmission, driveline and drive axle(s), (See Powertrain).

---“E”---

***EDI (Electronic Data Interchange)***

The business-to-business interconnection of computers for the rapid exchange of a wide variety of documents, from bills of lading to build tickets at auto plants.

***Escape Ramp***

See Runaway Truck Ramp

***EV (Electric Vehicle)***

Vehicle powered by electric motor(s) rather than by an internal combustion engine. Most common source of electricity is chemical storage batteries.

---“F”---

***Fifth Wheel (Turntable)***

Coupling device attached to a prime mover or dolly which supports the front of a semi trailer and locks it to the prime mover or dolly. The fifth wheel’s centre is designed to accept a trailer’s kingpin, around which the trailer and prime mover or dolly pivot.

***Fixed Tandem***

Assembly of two axles and suspension that is attached to the chassis in one place, and cannot be moved fore and aft (see Sliding Tandem).

---“G”---

***GAWR (Gross Axle Weight Rating)***

Maximum weight an axle is rated to carry by the manufacturer. Includes both the weight of the axle and the portion of a vehicle’s weight carried by the axle.

***GCW (Gross Combination Weight)***

Total weight of a loaded combination vehicle, such as a prime mover-semitrailer or truck and full trailer(s).

***Gear Speed***

Calculated vehicle speed at the engine's governed rpm in each transmission gear, or (commonly) in top gear.

***Gear Ratio***

Number, usually expressed as a decimal fraction, representing how many turns of the input shaft cause exactly one revolution of the output shaft. Applies to transmissions, power takeoffs, power dividers and rear axles. Example: If 2.5 revolutions of an input shaft cause one revolution of the output shaft, the gear ratio is 2.5:1.

***Grade***

Steepness of a grade, expressed as a percentage. Example: A truck with a gradeability of 5% at 60mph can maintain 60mph on a grade with a rise of 5%.

***GVW (Gross Vehicle Weight)***

Total weight of a vehicle and everything aboard, including its load.

***GVWR (Gross Vehicle Weight Rating)***

Total weight a vehicle is rated to carry by the manufacturer, including its own weight and the weight of its load.

---“**H**”---

***Headache Rack***

Heavy protective barrier mounted behind the prime mover's cab. Designed to prevent “headaches” caused by load shifting forward from the trailer and crushing the cab.

***HCFC***

Hydrochlorofluorocarbon

***Horsepower (hp)***

Measure of power (the amount of work that can be done over a given amount of time). One horsepower is defined as 33,000 foot-pounds of work in one minute. Example: Lifting 33,000 pounds one foot in one minute, or lifting 3300 pounds ten feet in one minute.

***Horsepower, Gross Laboratory***

Tested horsepower of a “bare” engine without fan, water pump, alternator, exhaust system or any other accessories.

***Horsepower, SAE Net***

Horsepower capability of an engine with full accessories and exhaust system. Test procedures per standards of Society of Automotive Engineers (SAE).

---“**I**”---

***Independent Trucks***

See Owner Operator.

***ITS (Intelligent Transportation Systems)***

See IVHS

***IVHS (Intelligent Vehicle Highway Systems)***

Blanket term for a wide array of technologies, including electronic sensors, computer hardware and software and radio communications. The purpose of IVHS is to increase efficiency of use of existing highways, reducing travel time, fuel consumption, air pollution and accidents. There are five functional areas:

- Advanced Public Transportation Systems (APTS)
- Advance Traffic Management Systems (ATMS)
- Advance Traveller Information Systems (ATIS)

- Advanced Vehicle Control Systems (AVCS)

A more recently coined term, Intelligent Transportation Systems (ITS), encompasses both IVHS and modes of transportation other than highway, such as rail (see AVI, AVL, WIM).

### ---“J”---

#### ***Jackknife***

To place the trailer at a very sharp angle to the prime mover or cause damage to the prime mover because of trailer hitting the cabin.

#### ***Jake Brake***

See Retarder.

#### ***JIT (Just-In-Time)***

Manufacturing system which depends on frequent, small deliveries of parts and supplies to keep on-site inventory to a minimum.

### ---“K”---

#### ***Kingpin (axle)***

Pin around which a steer axle's wheels pivot.

#### ***Kingpin (trailer)***

Anchor pin at the centre of a semi trailer's upper coupler which is captured by the locking jaws of a prime mover's fifth wheel to attach the prime mover to the semi trailer.

### ---“L”---

#### ***Landing Gear***

Retracting legs which support the front of a semi trailer when it is not coupled to a tractor.

#### ***Lazy Axle (sometimes called tagaxle)***

Non driving and go behind drive axle.

#### ***Lift Axle***

Extra, unpowered axle needed only when the vehicle is loaded, allowing it to meet federal and state vehicle weight standards. The lift axle is mounted to an air spring suspension that raises the axle when it is not required.

#### ***LPG***

Liquid propane gas.

#### ***Load range (Tyres)***

Letter code system for the weight carrying capacity of tyres. Comparable ply ratings are shown below.

LR PR LR PR A

...2E....10B....4F....12C....6G....14D....8H....16 (LR = Load Range PR = Ply Rating).

#### ***Logbook***

Book carried by truck drivers in which they record their hours of service and duty status for each 24 hour period.

#### ***Lowboy (low Loader or Stepdeck)***

Open flat-bed trailer with a deck height very low to the ground, used to haul construction equipment or bulky or heavy loads.

### ---“O”---

#### ***On Board Computer***

See Trip Recorder

**Overdrive**

Gearing in which less than one revolution of a transmission's input shaft causes one turn of the output shaft. The purpose of overdrive is to reduce engine rpm in high gear for better fuel economy.

Example: A transmission with an overdrive top gear has a ratio of 0.70 to one. Turning the input shaft 0.7 revolutions causes 1.0 revolution of the output shaft.

**Owner-Operator**

Trucker who owns and operates his own truck(s).

**---“P”---****Payload**

Weight of the cargo being hauled.

**Pigtail (Suzy Coil)**

Cable used to transmit electrical power from the prime mover to the trailer. So named because it is coiled like a pig's tail.

**Piggyback**

Semi trailer or prime mover carried on top of another vehicle or loaded on a railroad flatcar (see TOFC)

**Pintle Hook**

Coupling device used in double trailer, triple trailer and truck-trailer combinations. It has a curved, fixed towing horn and an upper latch that opens to accept the drawbar eye of a trailer or dolly. (Today this task is generally done with a ring feeder).

**Piston Displacement**

See Displacement

**Ply Rating (PR)**

Relative measure of tyre casing strength (see Load Range)

**Power Train**

See Drivetrain

**Private Carrier**

Business which operates trucks primarily for the purpose of transporting its own products and raw materials. The principal business activity of a private carrier is not transportation (see For-Hire Carrier).

**PSI (Pounds per Square Inch)**

In trucking, unit of measurement for tyre air pressure, air brake system pressure and turbocharger boost.

**PTO (Power Takeoff)**

Device used to transmit engine power to auxiliary equipment. A PTO often drives a hydraulic pump, which can power a dump body, concrete mixer or refuse packer. Some designs mount to a standard opening on the transmission, while others attach at the front or rear of the engine.

**Pup Trailer**

Short semitrailer, usually between 26 and 32 feet long, with a single axle.

**Pusher Axle**

See Axle.

**---“R”---****Reefer (US Term)**

Refrigerated trailer with insulated walls and a self powered refrigeration unit. Most commonly used for transporting food.

**Retarder**

Device used to assist brakes in slowing the vehicle. The most common type of retarder on over-the-road trucks manipulates the engine's valves to create engine drag. (This type is commonly referred to as "Jake Brake" because the predominant manufacturer is Jacobs Vehicle Equipment Co.). Other types of retarders include exhaust retarders, transmission-mounted hydraulic retarders and axle-mounted electromagnetic retarders.

***Ring Feeder***

A quick hitch device used to tow trailers or multiple trailers, road trains which have pivoting draw bars.

***Road Railer***

Semi trailer specially designed to travel both on highways and on rails.

***Rolling Radius***

Tyre dimension from centre of the axle to the ground; measured with tyre loaded to rated capacity. Used in calculating geared speed.

***RPM (Revolutions Per Minute)***

Measure of the speed at which a shaft spins. Most often used to describe engine crankshaft speed. Indicated by a tachometer.

***Runaway Truck Ramp***

Emergency area adjacent to a steep downgrade that a heavy truck can steer into after losing braking power. Usually two or three lanes wide and several hundred feet long, the ramp is a soft, gravel-filled pathway which absorbs the truck's forward momentum, bringing it to a safe stop. Depending on the surrounding terrain, the ramp may be level or run up or down hill.

--- "S" ---

***Semitrailer***

Truck trailer supported at the rear by its own wheels and at the front by a fifth wheel mounted to a tractor or dolly.

***Setback Axle***

Front steering axle moved rearward from the generally accepted standard position. Advantages: Shorter turning radius and more of a vehicle's weight shifted to front axle.

***Shipping Weight***

"Dry" weight of a truck including all standard equipment, but excluding fuel and coolant.

***Sleeper***

Sleeping compartment mounted behind a truck cab, sometimes attached to the cab or even designed to be an integral part of it.

***Sliding Fifth Wheel (Turntable)***

Fifth wheel mounted to a mechanism that allows it to be moved back and forth for the purpose of adjusting the distribution of weight on the prime mover's axles. Also provides the capability to vary vehicle combination lengths.

***Sliding Tandem***

Mechanism that allows a tandem axle suspension to be moved back and forth at the rear of a semi trailer, for the purpose of adjusting the distribution of weight between the axles and fifth wheel.

***Speedability***

Top speed a vehicle can attain as determined by engine power, engine governed speed, gross weight, driveline efficiency, air resistance, grade and load.

***Spoke Wheel***

See Cast Spoke Wheel.

***Spread Axle (Spread Tandem)***

Tandem axle assembly spaced further apart than the standard spacing of 54 inches.

***Synchronized Transmission***

Transmission with built-in mechanisms to automatically “equalise” the speed of its gears to allow smooth shifting without the need to double-clutch.

### ---“T”---

***Tag Axle***

See Axle

***Tare Weight***

See Chassis Weight

***Tandem Axle (Tandems)***

Pair of axles and associated suspension usually located close together. (see Spread Axle).

***TOFC (Trailer on Flatcar)***

Method of moving cargo which involves transporting semitrailers on railroad flat cars (see Piggyback).

***Tractor (term used in the US)***

Truck designed primarily to pull a semi trailer by means of a fifth wheel mounted over the rear axle(s). Sometimes call a truck tractor or highway tractor to differentiate it from a farm tractor. Australian terminology is a prime mover.

***Tri-Axle***

Truck, prime mover or trailer with three axles grouped together at the rear.

***Trip Recorder (On Board Computer)***

Cab-mounted device which electronically or mechanically records data such a truck speed, engine rpm, idle time and other information useful to trucking management.

***Truck***

Vehicle which carries cargo in a body mounted to its chassis, rather than on a trailer towed by the vehicle.

***Turntable***

See fifth wheel.

***Twins (Twin Trailers)***

See doubles.

### ---“U”---

***ULEV***

Ultra-low emissions vehicle.

### ---“V”---

***VIN (Vehicle Identification Number)***

Assigned by the manufacturer, this number is unique to each vehicle and appears on the vehicle’s registration and title.

***VMRS (Vehicle Maintenance Reporting Standards)***

Set of codes developed to facilitate computerised tracking of parts and labour used in equipment repair.

### ---“W”---

***Walking Beam Suspension***



Type of truck and prime mover rear suspension consisting of two beams, one at each side of the chassis, which pivot in the centre and connect at the front to one axle of a tandem and at the rear to the other axle.

**WIM (*Weigh-In-Motion*)**

Technology for determining a vehicle's weight without requiring it to come to a complete stop.

---“Y”---

***Yard Jockey***

Person who operates a yard tractor.

***Yard Tractor (Yard Mule)***

Special tractor used to move trailers around a terminal, warehouse, distribution centre, etc.