



*Body Builders Layout Book*

DEFINITIONS  
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## DEFINITIONS TERMINOLOGY

The following definitions are from Title 49, Code of Federal Regulations (49CFR), Parts 567.3, 568.3 and 571.3 where noted. Canadian definitions are from Canada Motor Vehicle Safety Regulations (CMVSR), Section 2(1), and are in italics. Ford Motor Company definitions are for the purpose of this publication only. Some terms are followed by an abbreviation that is used throughout this publication.

**Alterer** — a person who alters by addition, substitution, or removal of components (other than readily attachable components) a certified vehicle before the first purchase of the vehicle other than for resale. (49CFR567.3)

**Ambulance** — a vehicle for emergency medical care which provides: a driver's compartment; a patient compartment to accommodate an Emergency Medical Technician (EMT), Paramedic, and two litter patients (one patient on the primary cot and secondary patient on a folding litter located on the squad bench) so positioned that the primary patient can be given intensive life-support during transit; equipment and supplies for emergency care at the scene as well as during transport; two-way radio communication; and, when necessary, equipment for light rescue/extrication procedures. The Ambulance shall be designed and constructed to afford safety, comfort, and avoid aggravation of the patient's injury or illness. (From Federal Specification KKK-A-1822-F). Ford Motor Company also includes within its definition of ambulance any vehicle that is used for transporting life-support equipment, for rescue operations, or for non-emergency patient transfer if the engine of the vehicle is equipped with a "throttle kicker" device, which enables an operator to increase engine speed over normal idle speed when the vehicle is not moving. (Ford Motor Company)

**B-Pillar** — the vehicle body structure located directly rearward of each front door. This structure will include the outer panel, all inner panels or reinforcements which support the door opening, the door latching system and/or the roof structure. (Ford Motor Company)

**Basic (Stripped) Chassis** — an incomplete vehicle, without occupant compartment, that requires the addition of an occupant compartment and cargo-carrying, work performing, or load-bearing components to perform its intended function. (Ford Motor Company)

**Bus** — a motor vehicle with motive power, except a trailer, designed for carrying more than 10 persons. (49CFR571.3)

**Bus (Canada)** — a vehicle having a designated seating capacity of more than 10, but does not include a trailer or a vehicle imported temporarily for special purposes. (*autobus*)

**Chassis Cab** — an incomplete vehicle, with completed occupant compartment, that requires only the addition of cargo-carrying, work-performing or load-bearing components to perform its intended functions. (49CFR567.3)

**Completed Vehicle** — a vehicle that requires no further manufacturing operations to perform its intended function. (49CFR567.3)

**Critical Control Item** — a component or procedure which may affect compliance with a Federal regulation nor, which could directly affect the safe operation of the vehicle. The identifying symbol is an inverted delta (∇). (Ford Motor Company)

**Cutaway Chassis** — an incomplete vehicle that has the back of the cab cut out for the intended installation of a structure that permits access from the driver's area to the back of the completed vehicle. (Ford Motor Company)

**Cutaway Chassis (Canada)** — an incomplete vehicle that has the back of the cab cut out for the intended installation of a structure that permits access from the driver's area to the back of the completed vehicle. (*châssis tronqué*)

**Designated Seating Position** — a seat location that has a seating surface width, as described in §571.10(c) of this part, of at least 330 mm (13 inches). The number of designated seating positions at a seat location is determined according to the procedure set forth in §571.10(b) of this part. However, for trucks and multipurpose passenger vehicles with a gross vehicle weight rating greater than 10,000 lbs, police vehicles as defined in S7 of FMVSS 208, firefighting vehicles, ambulances, and motor homes, a seating location that is labeled in accordance with S4.4 of FMVSS 207 will not be considered a designated seating position. For the sole purpose of determining the classification of any vehicle sold or introduced into interstate commerce for purposes that include carrying students to and from school or related events, any location in such a vehicle intended for securement of an occupied wheelchair during vehicle operation is regarded as four designated seating positions. (49CFR571.3)

**Designated Seating Position (Canada)** — a location in a vehicle that is likely to be used as a seating position and that has a seating surface width of at least 330 mm; (*place assise désignée*)

**Final-Stage Manufacturer** — a person who [company that (CMVSR)] performs such manufacturing operations on an incomplete vehicle that it becomes a completed vehicle. (49CFR567.3)

**Firefighting Vehicle** — a vehicle designed exclusively for the purpose of fighting fires. (49CFR571.3)

**Gross Axle Weight Rating (GAWR)** — the value specified by the vehicle manufacturer as the load-carrying capacity of a single axle system, as measured at the tire-ground interfaces. (49CFR571.3)

**Gross Combination Weight Rating (GCWR)** — the value specified by the manufacturer as the loaded weight of a combination vehicle. (49CFR571.3)

**Gross Vehicle Weight Rating (GVWR)** — the value specified by the manufacturer as the loaded weight of a single vehicle. (49CFR571.3)

**H-Point** — the mechanically hinged hip point of a manikin which simulated the actual pivot center of the human torso and thigh, described in SAE Recommended Practice J826, "Manikins For Use in Defining Vehicle Seating Accommodation," November 1962. (49CFR571.3)

**H-Point (Canada)** — the mechanically hinged hip point of a manikin that simulates the actual pivot centre of the human torso and thigh, described in SAE Standard J826APR80, Devices for Use in Defining and Measuring Vehicle Seating Accommodation. (*point H*)

**Incomplete Vehicle** — an assemblage consisting, as a minimum, of chassis (including the frame) structure, power train, steering system, suspension system, and braking system, to the state that those systems are to be part of the completed vehicle, but requires further manufacturing operations to become a completed vehicle. (49CFR567.3)

**Incomplete Vehicle (Canada)** — a vehicle (a) other than a vehicle imported temporarily for special purposes, that is capable of being driven and that consists, at a minimum, of a chassis structure, powertrain, steering system, suspension system, and braking system in the state in which those systems are to be part of the completed vehicle, but requires further manufacturing operations to become a completed vehicle or (b) that is an incomplete trailer. (*véhicule incomplet*)

**Incomplete Vehicle Manufacturer** — a person [company that (CMVSR)] who manufactures an incomplete vehicle by assembling components none of which, taken separately, constitute an incomplete vehicle. (49CFR567.3)

**Intermediate Manufacturer** — a person [company that (CMVSR)], other than the incomplete vehicle manufacturer or the final stage manufacturer, who performs manufacturing operations on an incomplete vehicle. (49CFR567.3)

**Motor Home** — a multi-purpose vehicle with motive power that is designed to provide temporary residential accommodations, as evidenced by the presence of at least four of the following facilities: cooking; refrigeration or ice box; self-contained toilet; heating and/or airconditioning [system that can function independently of the vehicle engine (CMVSR)]; a potable water supply system including a faucet and a sink; and a separate 110-125 volt electrical power supply and/or an LP gas supply. (49CFR571.3)

**Multifunction School Activity Bus (MFSAB)** — a school bus whose purposes do not include transporting students to and from home or school bus stops. (49CFR571.3)

**Multipurpose Passenger Vehicle (MPV)** — a motor vehicle with motive power, except a low-speed vehicle or trailer, designed to carry 10 persons or less which is constructed either on a truck chassis or with special features for occasional off-road operation. (49CFR571.3)

**Multipurpose Passenger Vehicle (MPV) (Canada)** — a vehicle having a designated seating capacity of 10 or less that is constructed either on a truck chassis or with special features for occasional off-road operation, but does not include an air cushion vehicle, an all-terrain vehicle, a golf cart, a low-speed vehicle, a passenger car, a truck or a vehicle imported temporarily for special purposes. (*véhicule de tourisme à usages multiples*)

**Pickup Box Delete** — a chassis cab incomplete vehicle created by ordering a Pickup Box Delete option on an otherwise completed vehicle. (Ford Motor Company)

**School Bus** — a bus that is sold, or introduced in interstate commerce, for purposes that include carrying students to and from school or related events, but does not include a bus designed and sold for operation as a common carrier in urban transportation. (49CFR571.3)

**School Bus (Canada)** — a bus designed or equipped primarily to carry students to and from school. (*autobusscolaire*)



## DEFINITIONS TERMINOLOGY (Cont'd)

**Seating Reference Point** — the unique design H-point, as defined in SAE J1100 (June 1984), which:

- a) establishes the rearmost normal design driving or riding position of each designated seating position in a vehicle;
- b) has X, Y, and Z coordinates established relative to the designed vehicle structure;
- c) simulated the position of the pivot center of the human torso and thigh; and
- d) is the reference point employed to position the two-dimensional drafting template described in SAE J826 (May 1987)  
(abbreviated by Ford Motor Company)

**Seating Reference Point (Canada)** — the unique Design H-point, as defined in section 2.2.11.1 of SAE Recommended Practice J1100 (June 1993), that:

- a) establishes the rearmost normal design driving or riding position of each designated seating position, taking into account all modes of adjustment - horizontal, vertical and tilt - in a vehicle,
- b) has X, Y, and Z coordinates, as defined in section 2.2.3 of SAE Recommended Practice J1100 (June 1993), established relative to the designed vehicle structure,
- c) simulates the position of the pivot centre of the human torso and thigh, and
- d) is the reference point employed to position the H-point template with the 95th percentile leg, as described in section 3.1 of SAE Standard J826 (June 1992), or, if that drafting template cannot be positioned, the reference point when the seat is in its rearmost adjustment position  
(*point de référence de position assise*)

**Second Unit Body (SUB)** — consists of the body structure and/or all the cargo carrying, work performing, and/or load bearing components and/or equipment installed by a subsequent stage manufacturer on an incomplete vehicle, such that the incomplete vehicle becomes a completed vehicle. (Ford Motor Company)

**Service Body** — a second unit body typically consisting of a box enclosure that extends below the frame level to a height above ground approximately level with the center of the rear axle and the rear bumper. (Ford Motor Company)

**Subsequent Stage Manufacturer** — a term which means either intermediate or final stage manufacturers or both. (Ford Motor Company)

**Trimmed Seat** — a complete functional seat assembly including the seat pedestal, seat track, seat base frame, seat back, recliner mechanism, seat padding, all attaching hardware, and the final trim material (i.e., cloth, leather, or vinyl). (Ford Motor Company)

**Truck** — a motor vehicle with motive power, except a trailer, designed primarily for the transportation of property or special purpose equipment. (49CFR571.3)

**Truck (Canada)** — a vehicle designed primarily for the transportation of property or special-purpose equipment, but does not include a competition vehicle, a crawler-mounted vehicle, a trailer, a work vehicle, a vehicle imported temporarily for special purposes or a vehicle designed for operation exclusively off-road. (*camion*)

**Truck Tractor** — a truck designed primarily for drawing other motor vehicles and not so constructed as to carry a load other than a part of the weight of the vehicle and the load so drawn. (49CFR571.2)

**Truck Tractor (Canada)** — a truck designed primarily for drawing other vehicles and not constructed for carrying any load other than part of the weight of the vehicles and load drawn, and includes a vehicle designed to accept a fifth-wheel coupling, but does not include a crane-equipped breakdown vehicle. (*camion tracteur*)

**Unloaded Vehicle Weight (UVW)** — the weight of a vehicle with maximum capacity of all fluids necessary for operation of the vehicle, but without cargo, occupants, or accessories that are ordinarily removed from the vehicle when it is not in use. (49CFR571.3)

**Unloaded Vehicle Weight (UVW) (Canada)** — the weight of a vehicle equipped with the containers for the fluids necessary for the operation of the vehicle filled to their maximum capacity, but without cargo or occupants. (*poids du véhicule sans charge*)

**Untrimmed Seat** — the structure including the seat pedestal, seat track, seat base frame, seat back, recliner mechanism, seat padding and all attaching hardware required for a functional seat assembly without the final trim material (e.g., cloth, leather or vinyl) and trim material attaching components. (Ford Motor Company)

**Walk-In Van** — a special cargo/mail delivery vehicle that has only one designated seating position. That designated seating position must be forward facing and for use only by the driver. The vehicle usually has a thin and light sliding (or folding) side door for easy operation and a high roof clearance that a person of medium stature can enter the passenger compartment area in an up-right position. (49CFR571.214)

**Walk-In Van (Canada)** — a van type of truck in which a person having a height of 1700 mm can enter the occupant compartment in an upright position by a front door. (*fourgon à accès en position debout*)

### COMPONENTS:

#### CAUTION:

**Any connection to the PCM-V system (i.e., wiring, components) or alterations to the system may adversely affect vehicle operation (transmission and/or engine).**

**BPP** Brake Pedal Position Switch: Supplies the processor a signal for converter clutch operation. A connection here may have an adverse effect on transmission operation. Refer to the ELECTRICAL WIRING SECTION "ADDING LIGHTS OR ELECTRICAL DEVICES" for guidelines.

#### BARO/MAP

Barometer Pressure Sensor/Manifold Absolute Pressure Sensor: Must be physically in a higher location than the intake manifold and angled with the vacuum nipple at least 4 degrees downwards. MAP vacuum line must have a downward slope to the manifold without any potential kinking or twisting. BARO has no vacuum line.

**DTR** Digital Transmission Range Sensor: Located on the outside of the automatic transmission at the manual lever on all models except 6.0L diesel engines. The DTR sensor provides the position of the manual lever (P, R, N, D, 2, 1) to various vehicle circuits. Do not tap into or splice any wire attached to the DTR sensor or engine and transmission damage may occur.

**HO<sub>2</sub>** Heated Oxygen Sensor: Pigtail wire must be at least 4 inches from the exhaust pipe and exhaust manifold. If necessary, a clip should be used to secure its location.

**PCM** Powertrain Control Module: Location must be completely shielded from weather and case grounded to sheet metal. It should be oriented such that no moisture can accumulate in the 104-way connector. The ambient temperature at the PCM module should not exceed 80° Centigrade (176° Fahrenheit). Exterior surface shall not exceed 140° F.

#### NOTE:

The powertrain control module requires battery power to be supplied at all times to maintain the keep-alive memory. Keep this in mind when installing load disconnect switches or solenoids.

**TP** Throttle Position Sensor: Supplies a throttle position signal to the PCM processor. Do not tap into or splice any wire to the TP Sensor.

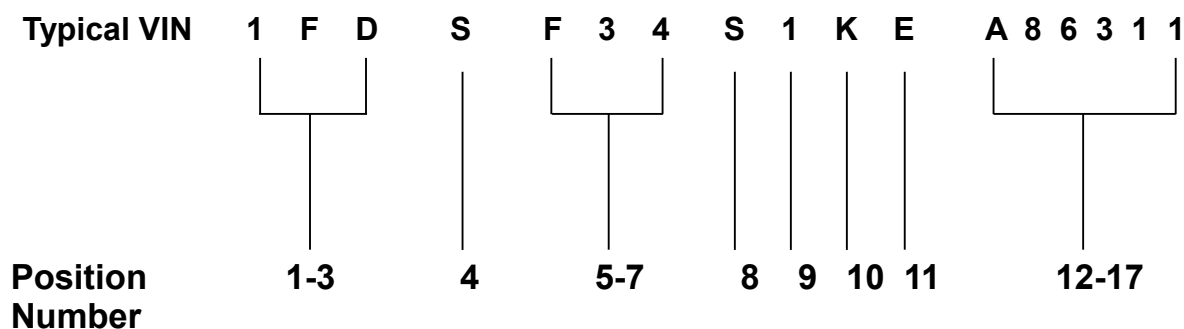
**VSS** Vehicle Speed Sensor: The source varies by model. Sources include the Anti-Lock Brake System (ABS) module, a transmission speed sensor or the Transfer Case Speed Sensor (TCSS) for 4x4 model equipped with a manual transfer case. The vehicle speed signal is either a speed variable frequency AC signal, or a SCP Data message depending on the source. The vehicle speed signal must be operational for key sub-systems and the vehicle diagnostics to operate properly. Do not tap into or splice any VSS signal wire or sensors or engine and transmission damage may occur.



## DEFINITIONS VIN CODING INFORMATION

### VIN – What it Means

- Universal Vehicle Identification Numbers (VINs) have 17 “positions”. There is a number or a letter in each position (see example below).
- A “VIN Decoder” is accessible on the Ford Fleet web site under the “Parts & Service” tab at: [www.fleet.ford.com](http://www.fleet.ford.com)



Positions	1-3	World Manufacturer Identifier
Position	4	Restraint System Type (Passenger Car Only); Brake Type, GVWR Class, and Restraint System Type (Trucks, MPVs and Buses)
Positions	5-7	Line, Series, Body Type
Position	8	Engine Type
Position	9	Check Digit
Position	10	Model Year
Position	11	Assembly Plant
Positions	12-17	Production Sequence Number

For a direct interpretation of a specific VIN, see the reference material at your dealership for the years of your specific interest (the specific meanings of some of the codes used in the VIN can change from year to year.)