

NATIONAL MOBILITY EQUIPMENT DEALERS ASSOCIATION



Adaptive Equipment Transportation Industry Terminology

TERMINOLOGY DESCRIPTIONS



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Accessory Controls: Switches regulating the environment of the vehicle (i.e. heater, air conditioning, power windows, radio, etc.).

Actuator: A mechanical device used to cause movement.

Adapted Key Holder: A device which by design will improve both grip and turning leverage. (Also referred to as a quad key.)

A.D.E.D.: Association for Driver Rehabilitation Specialists. Previously known as Association of Driver Educators for people with disabilities.

Aesthetically: A pleasing appearance or effect.

Aftermarket: Components used to modify a motor vehicle after the vehicle is purchased from the OEM.

Alterer: Someone who takes a completed vehicle out of compliance from OEM and recertifies it for first retail sale.

Amputee Steering Device: See Steering Devices.

Anchorage: A means of securing something; something that provides a secure hold.

A.N.S.I.: American National Standards Institute.

Audible: To hear; be heard or capable of being heard.

Automatic Lift: The raising, lowering, stowing and deploying of the lift is performed by a power source, other than manually.

Automatic Securement: A tie down that locks and releases through an automatic electric/mechanical latching device.

Automatic Tie Down: See Automatic Securement.

A.W.S.: American Welding Society (www.aws.org) phone number: 800-443-9353

Backing Plate: A reinforcement designed to relieve stress and strengthen a specific area of a modification.

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Backup System: A reserve or substitute source of energy in the event of a failure in the primary equipment.

Beltline: The line running around a car's body formed by the bottom edges of its glass panels.

Body Mount: A device insulating and/or securing the vehicle floor from/to the motor vehicle frame. Body mounts are an integral component of a body on frame vehicle.

Booster: An auxiliary device for increasing force, power, pressure or effectiveness.

Camber: A slight convexity or curvature. A setting of the wheels relative to the vertical centerline that describes the distance between the top and bottom of the wheels.

Car Top Carrier: An integrated wheelchair lift and storage for a manual wheelchair. The wheelchair is lifted with a system of chains, cables or straps, while folding the wheelchair and storing it in a storage compartment on the roof of the vehicle.

Center Lowered Floor: The OEM floor is removed and lowered from the rear of the driver/passenger seats to the front of the rear wheel wells and to the side entry of the vehicle. Also referred to as cargo lowered floor.

Certified Driver Rehabilitation Specialists (CDRS): An individual who has obtained the necessary knowledge base and experience in the field of driver rehabilitation and who has successfully obtained and maintained certification.

Certified Welder: A person qualified to perform welds using welding methods as per established recommended processes by American Welding Society or Canadian Welding Bureau.

Collapsibility: The action of collapsing; to fold down into a more compact shape.

Column Extension - Add-On: A spacer is added between the steering wheel and steering column. This spacer will bring the steering wheel closer to the driver and shall not be over 6" in length.

Column Extension - Integral: The original steering column is cut and a spacer is welded into the column. SHALL be performed by a certified welder. This will bring the steering wheel closer to the driver.

- Both methods of steering column extension may affect driver's proximity to secondary switches and their OEM operation.

Commercially Licensed Vehicle: A vehicle licensed and tagged to a company for commercial use.

Crossover Gear Shift Extension: A device that attaches to the OEM column mounted gear selector and crosses over to the left of the steering column. (See also gear shift extension).

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Dash Panel (Previously known as Firewall): A partition separating the engine compartment from the passenger compartment in a vehicle.

Deep Dish Steering Wheel: An aftermarket steering wheel with the rim closer to the driver. Generally cannot accommodate use with an airbag.

Dexterity: Skill and ease in using the hands.

Door Control: See Remote Switches.

Double Lowered or Double Dropped Floor: Generally refers to a floor modification that includes both a driver, passenger and center lowered floor area.

Driver's Lowered Floor: Lowered motor vehicle floor extending from the driver's compartment to the front of the rear wheel wells, excluding the front passenger compartment.

Driver Rehabilitation Specialist: As used in this document is any individual, center, hospital or business that evaluates and/or trains people with disabilities for their transportation requirements as a driver and/or passenger.

Driving Pan: See Power Pan.

Dropped Floor: See Center Lowered Floor or Driver's Lowered Floor, Passenger Lowered Floor or Double Lowered Floor.

Electric Parking Brake: A motor or actuator to set and release the parking brake electrically. See also Powered Parking Brake.

Electrical/Mechanical Lift: A lift powered by an electrical motor and accompanying components.

Emergency Release: A pin, lever, handle or other device to allow for a manual release in the event of a power failure.

Engineering Practices: Terminology referring to the process of analyzing and/or evaluating proper technical procedures. Usually refers to an existing process or set of standards.

Fastener: Bolt, screw, pin, tie, clamp, or other securing device.

Final Fitting: Inspection of equipment to verify installation and appropriate functional fitting and interface with the client.

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Final-Stage Manufacturer: means a person who performs such manufacturing operations on an incomplete vehicle that it becomes a completed vehicle.

Flat Floor: A smooth stable surface, replacing or covering the OEM corrugated flooring.

FMVSS/CMVSS: Federal Motor Vehicle Safety Standard (www.access.gpo.gov/nara/cfr/).

Foot Steering: A modification of the OEM steering, enabling the steering to be performed with the driver's foot or feet.

Forward Facing: The wheelchair and occupant face forward in the vehicle and parallel to the sides of the vehicle.

Four Point Securement: A wheelchair securement that attaches to the four points of the wheelchair frame and to four points of the vehicle.

Four Point Tie-Down: See Four Point Securement.

Framed Vehicle: A motor vehicle with an independent or separate body on frame.

Full Lowered Floor: See Floor Lowering.

Gear Shift Extension: A device that attaches to the OEM gear selector and offers additional leverage for shifter operation.

Ground Strap: A cable connecting the negative terminal of a battery to the vehicle body to maintain a continuous current path equal to the mobility equipment power supply.

GAWR: Gross Axle Weight Rating (See Vehicle Weight Rating).

GVWR: Gross Vehicle Weight Rating (See Vehicle Weight Rating).

H-Point: The mechanically hinged hip point of a manikin, which simulates the actual pivot center of the human torso and thigh.

HVAC: Heating, ventilation and air conditioning.

Hand Held Pendant: A control harness which operates adaptive/mobility equipment.

Hand Held Remote: A hand held device that emits a signal to a receiver within a motor vehicle for operation of adaptive/mobility equipment.

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Heat Shield: An insulating shield installed between the exhaust system, catalytic converter, muffler and floor of the motor vehicle to minimize heat transfer to other components and into the vehicle's interior compartment.

Horizontal Steering: A replacement steering column, which is powered up and down, for the purpose of relocating the steering wheel to a horizontal plane. NOT to be used in conjunction with an air bag.

Hydraulic: Operated by the resistance offered or the pressure transmitted when a quantity of fluid (oil or water) is forced through a comparatively small orifice or through a tube.

Hydraulic Lift: A lift using a hydraulic pump as the power source for lifting and lowering the wheelchair platform.

Incomplete Vehicle Manufacturer: means a person who manufactures an incomplete vehicle by assembling components, none of which taken separately, constitute an incomplete vehicle.

Integral: Formed as a unit with another part; composed of integral parts.

Intermediate Manufacturer: means a person, other than the incomplete vehicle manufacturer or the final-stage manufacturer, who performs manufacturing operations on an incomplete vehicle.

I.S.O.: International Standards Organization.

Joystick Control: A system designed to activate multiple functions by means of a single lever.

Keyless Entry: A magnetic or remote switch to open or close a vehicle door without a key.

Keyless Ignition: A remote switch that enables the vehicle's engine to start or be turned off without a key.

Kneeling System: Commonly found on lowered floor minivans. Allows a lower floor to ground height, thus decreasing the angle of a ramp entry system.

Lap Restraint: See Lap Seat Belt.

Lap Seat Belt: The seat belt which crosses over the lap.

Lateral Support: A device installed on a wheelchair to allow the user greater stability. Often required for wheelchair drivers. May also reference custom seat modifications. (See also Upper Torso Positioning Belt).

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Left Foot Accelerator: A device installed in a motor vehicle to the left of the brake pedal to allow the operation of the accelerator pedal by the left foot of the driver. (See also Pedal Block and Hand Controls).

Lift Platform: The area the wheelchair sits on, to be raised and lowered during the operation of the lift.

Lintel: Structure carrying the load above the door(s) opening.

Low Effort Braking: A modification that reduces the braking force to 7-11 foot-pounds.

Low Effort Steering: A steering system modification wherein the effort to steer the vehicle is reduced.

Lower Torso Restraint: See Lap Seat Belt.

Magnetic Switch: Switch that is activated with a magnet.

Malfunction: To function imperfectly or badly; fail to operate in the normal or usual manner.

Mandatory: Containing or constituting a command. No choice. (SHALL)

Manual Hand Controls: A device to operate the accelerator and/or brake on a vehicle manually, using the driver's hand rather than the driver's foot.

Manual Parking Brake Extension: A handle, which enables the driver to set the parking brake with their hand.

Manual Release: See Emergency Release.

Manual Securement: A device that secures the wheelchair. This device requires a second person or attendant to properly fasten and release the securement.

Manual Tie Down: See Manual Securement.

Maximum Reduced Effort Steering: Formerly known as Zero Effort Steering: the minimum effort obtainable based on a specific vehicle chassis.

Minimal Effort Braking: A modification that reduces the braking force to below 7 foot-pounds.

Mobility Equipment Dealer: As used in this document is any individual or business that installs equipment or modifies vehicles for use by people with disabilities as a driver and/or passenger.

Momentary: Continuing only a moment; operative or recurring at every moment.

Shall: Required or compelled to do (SHALL).

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N.H.T.S.A.: National Highway Traffic Safety Administration (www.ntsha.dot.gov) phone number: (800) 424-9393.

Non-disabled: A person who does not require adaptive equipment to safely operate a motor vehicle.

Occupied: To take up space. To have a person present in the seat of a wheelchair.

Occupied Restraint: See Occupied Securement.

Occupied Securement: A device to secure the wheelchair during movement of the vehicle while transporting the wheelchair and occupant. Shall include a lap belt. In addition, a shoulder belt shall be provided when an occupant is placed at a designated outboard seat location.

Occupied Tie-Down: See Occupied Securement.

OEM: Original Equipment Manufacturer.

Outboard Barrier: See Safety Flap.

Outside Control Switch: Exterior mounted switch to operate adaptive/mobility equipment.

Palm Grip Steering Device: See Steering Devices.

Para Hand Controls: See Manual Hand Controls.

Para Transit Vehicle: A motor vehicle modified to transport multiple wheelchair users, generally for commercial use.

Passenger Lowered Floor: The lowering of a motor vehicle floor extending from the passenger compartment to the front of the rear wheel wells, excluding the driver's compartment.

Payload: See GVWR.

Pedal Block: A device installed in a motor vehicle to prevent access to the accelerator pedal and/or brake pedal. (See also Left Foot Accelerator and Hand Controls).

Pedal Extensions: Devices mounted to the brake and/or accelerator for use by a short stature driver. (See also Powered Pedals).

Pelvic Restraint: See Lap Seat Belt.

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Personally Licensed Vehicle: A vehicle licensed and tagged to an individual for private use.

Pillar: See Illustration section page 1.

Platform Lift: Wheelchair lift having the area the wheelchair fits onto store in a vertical position, or under the van.

Pneumatic: Adapted for holding or inflated with compressed air, moved or worked by air pressure.

Power Door Opener: A device to open and close the vehicle door electrically by a remote switch.

Powered Gas and Brake Systems: A device which uses power from an energy source of the vehicle to supplement the force and motions made by the driver to control acceleration, velocity, and braking of a vehicle.

Power Pan: The portion of the floor in the driver area that will raise and lower by a lifting device.

Powered Pedals: Vehicles equipped with OEM powered adjustable pedals (gas and brake) shall have the powered pedal mechanism disabled by the mobility dealer prior to the installation of mechanical or servo hand controls or installation of a left foot accelerator pedal. Additionally, at the point that the pedals are disabled, a permanent tag shall be attached that describes why the system has been rendered inoperative.

Power Seat Base: An electrically powered base mounted between the floor of the vehicle and the OEM or after market seat. This base may be moved in combination of needed directions.

Power Seat Base - 4 Way: This seat base electronically moves in four directions, up, down, fore and aft. (See Power Seat Base).

Power Seat Base - 6 Way: This seat base electronically moves in six directions, up, down, fore, aft, and swivels left and right. (See Power Seat Base).

Power Seat Base - 8 Way: This seat base electronically moves in eight directions, up, down, fore, aft, tilt forward, tilt back, and swivels left and right. (See Power Seat Base).

Powered Gearshift Selector: A servo control activating the gear selection by a switching device.

Powered Parking Brake: An actuation device to set and release the OEM parking brake electrically. (See also Electric Parking Brake).

Primary Controls: The fundamental controls of the vehicle (i.e. acceleration, braking and steering).

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Proof Load: See Static Test Load.

Push/Pull Hand Control: A device to operate the accelerator and brake pedals by hand. Push/Pull operation is push down toward floor to brake and pull to accelerate.

Push/Right Angle Pull Hand Control: A device to operate the accelerator and brake pedals by hand. The Push/ Right Angle Pull operation is push toward the floor to brake and pull down toward the lap to accelerate.

Push/Rock Hand Control: A device to operate the accelerator and brake pedals by hand. The Push/Rock operation requires a push of the control handle forward toward the brake pedal for braking and rocking an upright handle rearward toward the user for acceleration.

Push/Twist Hand Control: A device to operate the accelerator and brake pedals by hand. The Push/ Twist operation is push down toward the floor to brake and twist the handle (much like a motorcycle) to accelerate.

QAP: The NMEDA Quality Assurance Program.

Quad Hand Controls: Hand controls manufactured specifically for use by a driver with limited hand and/or wrist strength, control or dexterity. Generally these controls offer additional hand and/or wrist support.

Quick Release: A method to remove or disengage without the use of tools.

Raised Door(s): The OEM door(s) are modified to extend the door(s) height. This modification permits additional door entry height for ingress and egress to the motor vehicle.

Raised Fiberglass Roof: The OEM roof is removed and replaced with an aftermarket raised fiberglass roof to allow headroom inside the van. (See also Roof Support Structure).

Ramp: Inclined plane providing access between two levels.

Rated Load: The weight tested for normal and customary use.

Recommended: To endorse as competent; acceptable.

Reduced Effort Braking: See Low Effort Braking.

Reduced Effort Steering: See Low Effort Steering.

Reinforcement Cage: A structure that prevents or limits the collapse of the motor vehicle roof. (See also Roof Support Structure).

Remote: Acting, acted on, or controlled indirectly from a distance.

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Remote Switches: Relocation of control operation to a location other than the OEM.

Removable Seat Base: A device or modification that allows a factory seat to be removed or repositioned while still maintaining OEM specifications.

Roll Stop Barrier: A device that retains the wheelchair within fixed parameters on a wheelchair lift platform.

Roof Support Structure: A structure that prevents or limits the collapse of the motor vehicle roof. (See also Reinforcement Cage).

Rotary Lift: A wheelchair lift with a platform that rotates into and out of the van and stows in the cargo area (center) of the van.

S.A.E.: Society of Automotive Engineers (www.sae.org).

Secondary Controls: All motor vehicle controls with exception of primary controls. (See Primary Controls).

Semi-Automatic Lift: The raising and lowering of the lift platform is performed by a power source, The stowing and deploying of the platform to and from a horizontal position is performed manually.

Servo: A power source to control the action of a mechanical device.

Servo Controls: Controls powered by an auxiliary source (i.e. electric, hydraulic, or vacuum diaphragm) reducing the necessary amount of strength needed by the driver.

Shall: Terminology used to denote "mandatory."

Should: Terminology to denote "advised" or "advisory."

Spinner Knob Steering Device: See Steering Devices.

Static Test Load: The weight of a stationary load for the purpose of testing.

Steering Devices:

Knob: A steering wheel device with a knob type grip.

Tri-Pin: A steering wheel device with three upright pins to stabilize the hand and wrist of the driver.

U or V: A steering wheel device with two vertical pins to stabilize the hand of a driver.

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Cuff: A steering wheel device with a curved oval shape that fits around the hand of a driver.

Amputee: A steering wheel device that integrates with a driver's prosthesis. **Custom:** A steering device designed by the Driver Rehabilitation Specialist and designed by the vendor when a standard steering device is ineffective.

Structural Reinforcement for Tops: See Roof Support Structure.

Swing Lift: See Rotary Lift.

Switch: A device used to open or close an electrical circuit. (May be momentary or latched). Switches may be adapted with a variety of interfaces to suit the client's needs i.e.: loop, ring, hook, t-handle, etc.

Push/Pull: Controlled with an in/out motion.

Rocker: Controlled with a pivoting motion.

Rotary: Controlled with a clockwise/counter clockwise motion.

Toggle Switch: Controlled by a lever that moves through an arc motion.

Three Point Seat Belt: A seat belt system that incorporates the lap and shoulder belt.

Touch Pads: A specified area of contact(s) that opens or closes an electrical circuit.

Transfer Bars: A bar, handle or strap to assist an individual in movement and/or balance.

Transfer Handles: See Transfer Bars.

Transfer Seat Base: See Powered Seat Base.

Transport Van: Vehicle for transporting a non-driver wheelchair occupant.

Tri-Pin Spinner Device: See Steering Devices.

Turn Signal Extension: A device that attaches to the OEM turn signal lever to allow a different location for activation.

UHMW: Ultra High Molecular Weight.

UVW: Unloaded Vehicle Weight (See Vehicle Weight Rating).

U-Grip Steering Device: See Steering Devices.

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Under the Floor Lift: A wheelchair lift having the storage area under the body carriage of the van between the floor and the frame.

Under the Vehicle Lift: A wheelchair lift having the storage area under the frame of the van.

Undercoating: A protective coating applied to the underside of the vehicle.

Unibody: The body serves as the frame of the vehicle, no separate chassis involved.

Unoccupied: A seating position in a vehicle not designed for use while the vehicle is in motion.

Unoccupied Restraint: See Unoccupied Securement.

Unoccupied Securement: A system or device to stabilize an empty wheelchair, scooter, etc. while the vehicle is in motion.

Unoccupied Tie-Down: See Unoccupied Securement.

Unoccupied Wheelchair Tie-Down: See Unoccupied Securement.

Upper Torso Positioning Belt: A belt system designed to prevent excessive upper torso and/or shoulder movement. (See also Lateral Support).

Vehicle Weight Rating:

Gross Axle Weight Rating (GAWR): The value specified by the vehicle manufacturer as the maximum weight allowed when a single axle of a fully loaded vehicle (all occupants, all cargo, full fuel tank, etc.) is weighed.

Gross Vehicle Weight Rating (GVWR): The value specified by the manufacturer as the maximum weight allowed when a fully loaded vehicle (all occupants, all cargo, full fuel tank, etc.) is weighed.

Unloaded Vehicle Weight (UVW): The weight of a vehicle with maximum capacity of all fluids necessary for operation of the vehicle (full fuel tank etc.), but without cargo, any occupant or accessories that are ordinarily removed from the vehicle when they are not in use.

Typically, the Gross Vehicle Weight Rating (GVWR) is the sum of the unloaded vehicle weight, rated cargo load, and 150 pounds times the vehicle's designated seating capacity. When a vehicle is being altered, especially when the structure is modified, extreme care shall be taken to assure the GAWR and the GVWR are not exceeded. The OEM weight label is normally located on the driver door shut-face. This label provides the GVWR (Gross Vehicle Weight Rating) and GAWR (Gross Axle Weight Rating) information. Vehicles whose GAWR and/or GVWR are exceeded may not brake, steer or handle as engineered and tested by the OEM and may not meet FMVSS/CMVSS regulations.

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1. The vehicle's GVWR rating shall not be exceeded.
2. Neither the vehicle's front nor rear axle ratings shall be exceeded.

V-Grip Steering Device: See Steering Devices.

Vacuum: A space devoid of air pressure.

Visual: Done or executed by sight only.

Warp: A twist or curve that has developed in something originally flat or straight.

Weatherproof: Capable of withstanding exposure to weather without damage.

Wheelchair Restraints: See Wheelchair Securement

Wheelchair Securement: A system to control wheelchair movement in a moving vehicle.

Wheelchair Sub Floor: The material used to make a smooth surface for a wheelchair to roll on.

Wiring Harness: A grouping of wires contained and protected by an outer encasement.

WTORS: The SAE acronym for Wheelchair Tie-down Occupant Restraint System.

Zero Effort Steering: See Maximum Reduced Effort Steering.

For additional automotive definitions see the following web link:
www.cartrackers.com/auto_glossary